APPENDIX C

TRAFFIC IMPACT STUDY

Nelson & Pope

January 2008

TRAFFIC IMPACT STUDY

THE PRESERVE AT ISLANDIA

Town of Islip

March 2008

N & P JOB NO. 07246

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PURPOSE OF REPORT

Nelson & Pope has investigated the potential traffic impacts associated with the proposed residential development "The Preserve @ Islandia" to be located on the eastside of Old Nichols Road south of Dean Street in the Village of Islandia, Town of Islip, Suffolk County, New York. The proposed residential development will be located on a parcel of land designated as District 504, Section 17, Block 03, Lots 7 & 8 on the Suffolk County Tax maps and comprised of a total of 72 Residential Condominium units (47 age restricted units and 25 non age restricted units). The site currently contains an Equestrian Center.

Access to the site will be provided via one full movement driveway on Old Nichols Road.

This report summarizes the results of a detailed investigation of the traffic impacts of the proposed development by reviewing the area's existing roadway characteristics and traffic conditions, estimating the vehicular volume and pattern that the proposed development will generate during peak hours, and analyzing the effect of the additional volume on the surrounding roadway network.

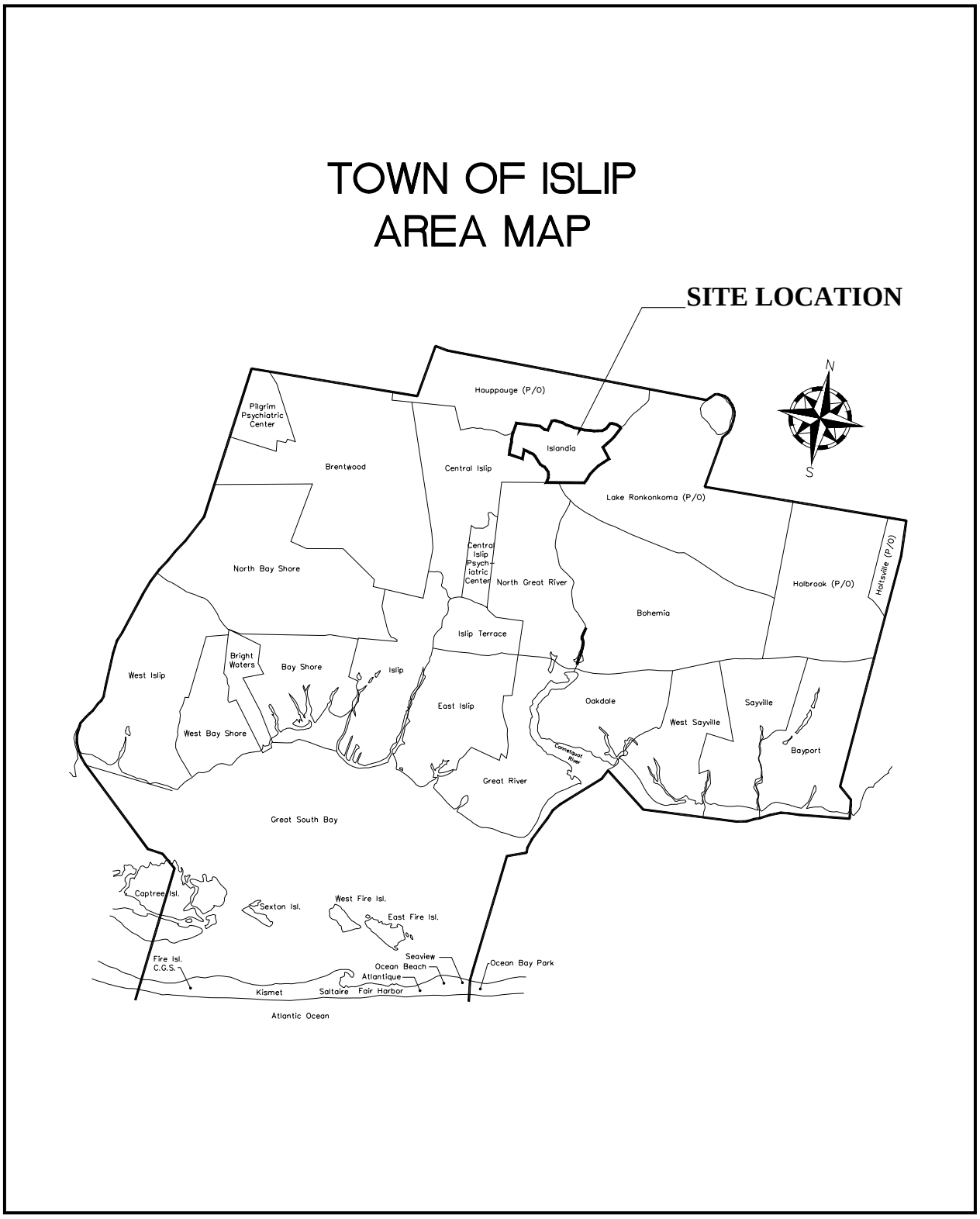
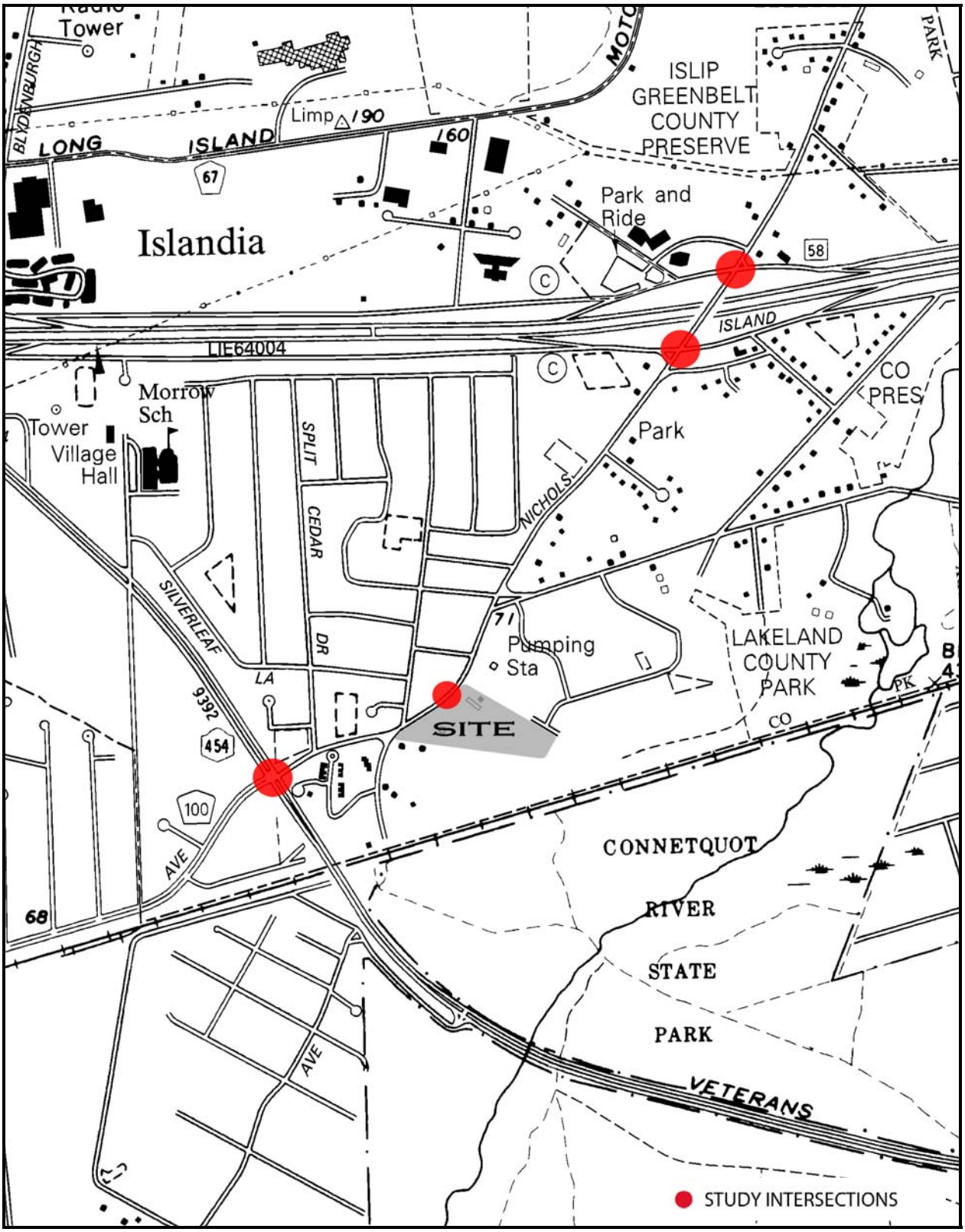


Figure 1: Area Map



SOURCE: USGS MIDDLE ISLAND 1991

Figure 2: Location Map

STUDY METHODOLOGY

The study assesses the traffic impacts associated with the proposed development and identifies appropriate mitigation, if necessary. In executing the scope of work, the following steps were undertaken.

- A detailed field inspection was conducted to obtain an inventory of existing roadway geometry, location/geometry of existing driveways and intersections along with signing, signal timings, phasing and cycle lengths. The field inspection was reviewed to determine which intersections to be studied. From the field inspection, it was determined that, even though Johnson Avenue is a significant location within the study area, it should not attract traffic from the proposed residential development due to its residential nature. The site generated traffic anticipated to traverse the intersection of Old Nichols Road and Johnson Avenue will be through traffic and should not significantly impact the intersection. Therefore the intersection of Old Nichols Road and Johnson Avenue was not studied.

- Turning movement volume counts were conducted during the weekday morning (7:00 AM to 9:00AM), weekday evening (4:00 PM to 6:00 PM) and Saturday midday (11:00 AM to 2:00 PM) peak periods at the following intersections which were considered to be most likely impacted by the proposed residential development:

    - Veterans Highway (NYS Route 454) at Old Nichols Road/East Suffolk Avenue (CR 100)
    - Old Nichols Road at Long Island Expressway (LIE) South Service Road
    - Old Nichols Road at Long Island Expressway (LIE) North Service Road

- Hourly traffic volumes collected on Veterans Highway (NYS Route 454) and LIE North and South Service Roads in the vicinity of Old Nichols Road were obtained from the New York State Department of Transportation (NYSDOT).

- Accident data for the study intersections and roadways in the vicinity of the site was obtained from the New York State Department of Transportation (NYSDOT).

- The Town of Islip Department of Planning was contacted to obtain information on other planned projects in the nearby area that may affect the study intersections.

- An annual growth factor of 1.2% obtained from the NYSDOT LITP2000 Study for the Town of Islip was applied to the existing traffic volumes to estimate the increase in background traffic that would occur in 2009. These traffic volumes are referred to as Ambient Traffic Volumes.
- The 2009 No Build Volumes were developed by adding the other planned projects traffic to the ambient traffic volumes.

- Estimates of traffic that would be generated by the proposed development was prepared utilizing traffic volume data collected at the Silver Woods condominium development south of the proposed site and trip generation data published by the Institute of Transportation Engineers (ITE) publication, *Trip Generation, Seventh Edition*. The site-generated traffic volumes were assigned to the adjacent street system based upon the anticipated directional trip distribution forecasted by Nelson & Pope.

- The 2009 Build Condition volumes for the proposed development were developed by adding the site generated traffic to the 2009 No Build Condition volumes.

- Capacity analyses were performed at the study intersections identified above for the Existing Condition, No Build Condition and Build Condition for the weekday AM, PM and Saturday midday peak hours. Capacity analyses were also conducted at the site driveway for the Build Condition during the weekday AM, PM and Saturday midday peak hours.

- The results of the analyses for the 2009 No Build Conditions and the 2009 Build Conditions were compared to identify any significant impact associated with the proposed development.

- In accordance with the findings of the capacity computations, where appropriate, recommendations were made to mitigate the project traffic impacts.

EXISTING CONDITION

Land Use

As previously discussed the proposed residential development "The Preserve @ Islandia" will be located on the eastside of Old Nichols Road on a parcel of land designated as District 504, Section 17, Block 03, Lots 7 & 8 on the Suffolk County Tax maps in the Village of Islandia, Town of Islip, New York. The site currently contains an Equestrian Center.

Roadway Conditions

The following is a list of roadways included in the study network surrounding the site. The greatest portion of the traffic generated by the proposed developments will be distributed throughout the network. The general descriptions listed here refer only to the sections of the roadways that exist near the site. Their cross-section may vary further away from the site. The Average Annual Daily Traffic (AADT) is listed for each roadway where available in the most recent NYDOT Local Highway Traffic Volumes Report.

Veterans Highway (NYS Route 454) is a principal arterial under the jurisdiction of the New York State Department of Transportation (NYSDOT) with a general northwest/southeast orientation in the Vicinity of Nichols Road. However, for the purpose of this study, Veterans Highway is considered an east/west roadway. Veterans Highway in the vicinity of Old Nichols Road is a four-lane, divided roadway with exclusive turn lanes at key intersection and a posted speed limit of 55 miles per hour. This section of NYS Route 454, between the Long Island Expressway and Suffolk Avenue (CR 100), has an average annual daily traffic (AADT) volume of approximately 33,456 vehicles per day (source: NYSDOT Traffic Volume Report 2006) and NYS Route 454 between Suffolk Avenue (CR 100) and Lakeland Avenue, has an average annual daily traffic (AADT) volume of approximately 40,900 vehicles per day (source: NYSDOT Traffic Volume Report 2004).

The ***Long Island Expressway North Service Road*** is a principal arterial under the jurisdiction of the Suffolk County Department of Public Works (SCDPW) in the vicinity of Old Nichols Road and is a two-lane westbound one-way roadway with a posted speed limit of 40 miles per hour. This section of the North Service Road, between Old Nichols Road and Terry Road, has an

AADT of approximately 4,936 vehicles per day (source: NYSDOT Traffic Volume Report 2005).

The ***Long Island Expressway South Service Road*** is a principal arterial under the jurisdiction of the SCDPW in the vicinity of Old Nichols Road and is a two-lane, eastbound one-way roadway with a posted speed limit of 40 miles per hour. This section of the South Service Road, between Veterans Highway and Old Nichols Road, has an AADT of approximately 5,445 vehicles per day (source: NYSDOT Traffic Volume Report 2005).

Old Nichols Road is a collector roadway under the jurisdiction of the Village of Islandia and provides one lane per travel direction in the vicinity of the site. Nichols Road is generally a northeast/southwest roadway; however, for the purpose of this study it is considered a north/south roadway. The posted speed limit on Old Nichols Road in the vicinity of the site is 30 miles per hour.

Table 1 summarizes the lane configurations and traffic controls at the study intersections.

Table 1: Intersection Geometry

Intersection	Approach	Lane Designation*	Traffic Control
Veterans Highway (NYS Route 454) at Old Nichols Road/East Suffolk Avenue (CR 100)	EB WB NB SB	L-2T-R L-2T-R L-2T-R L-T-TR	Traffic Signal
Old Nichols Road at LIE South Service Road	EB NB SB	2L-T-TR 2T-R 2L-2T	Traffic Signal
Old Nichols Road at LIE North Service Road	WB NB SB	2L-2T-TR 2L-2T 2T-TR-R	Traffic Signal

** L = Left turn lane; T = through lane; R = Right turn lane*

Bicycle and Transit Facilities

The Central Islip station of the Long Island Railroad (LIRR) is located on Suffolk Avenue approximately 1.5 miles from the proposed site. Suffolk County Bus Route 3D, Brentwood to Stony Brook Railroad, runs along Suffolk Avenue and Old Nichols Road with two designated stops in the vicinity of the site. Suffolk County Bus Route S54, Patchogue Railroad to Walt Whitman Mall runs along Veterans Memorial Highway in the vicinity of the site with a stop at the intersection of Old Nichols Road/Suffolk

Avenue and Veterans Memorial Highway. Also Nichols Road is a signed bicycle route. The bicycle route extends from Johnson Avenue to Veterans Memorial Highway, connecting with the state bicycle route on Veteran Memorial Highway and continues westerly on to Suffolk Avenue.

Traffic Volume Data

Weekday turning movement counts were collected at the study intersections on Wednesday and Thursday November 14 and 15, 2007 during the AM (7:00-9:00 AM) and PM (4:00-6:00 PM) peak periods. The weekend turning movement counts were collected on Saturday, November 17, 2007 during the Saturday midday peak period (11:00 AM – 2:00 PM). The volume data was tabulated to identify the peak hours at the study intersection.

Seasonal adjustment factors of 1.025 and 0.856 for weekday and weekend respectively for the month of November (month of counts) were obtained from data contained in the 2006 NYSDOT Traffic Data Report. These seasonal adjustment factors were developed from NYSDOT continuous data collected for a three year period. Applying the weekday normalization factor for the month of November to the traffic count data collected would effectively reduce the existing peak hour volumes. Therefore to be conservative, the weekday peak hour traffic volumes collected during the month of November were not normalized. However, applying the weekend normalization factor to the weekend volumes will increase the weekend volumes, hence the weekend volumes were normalized. The existing intersection peak hour volumes are shown on Figures 3, 4, and 5 and detailed data are contained in Appendix A.

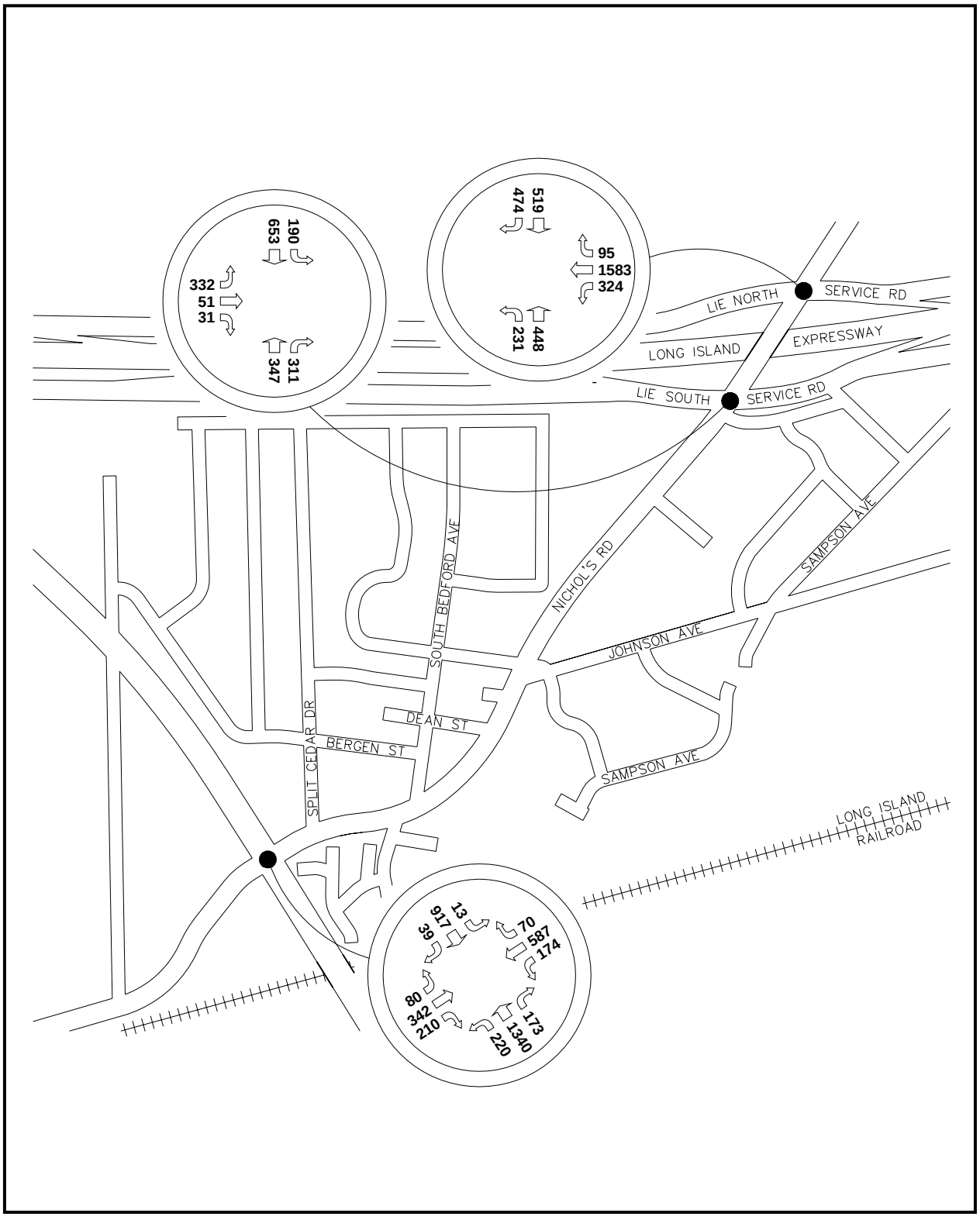


Figure 3: Existing AM Peak Hour Traffic Volumes

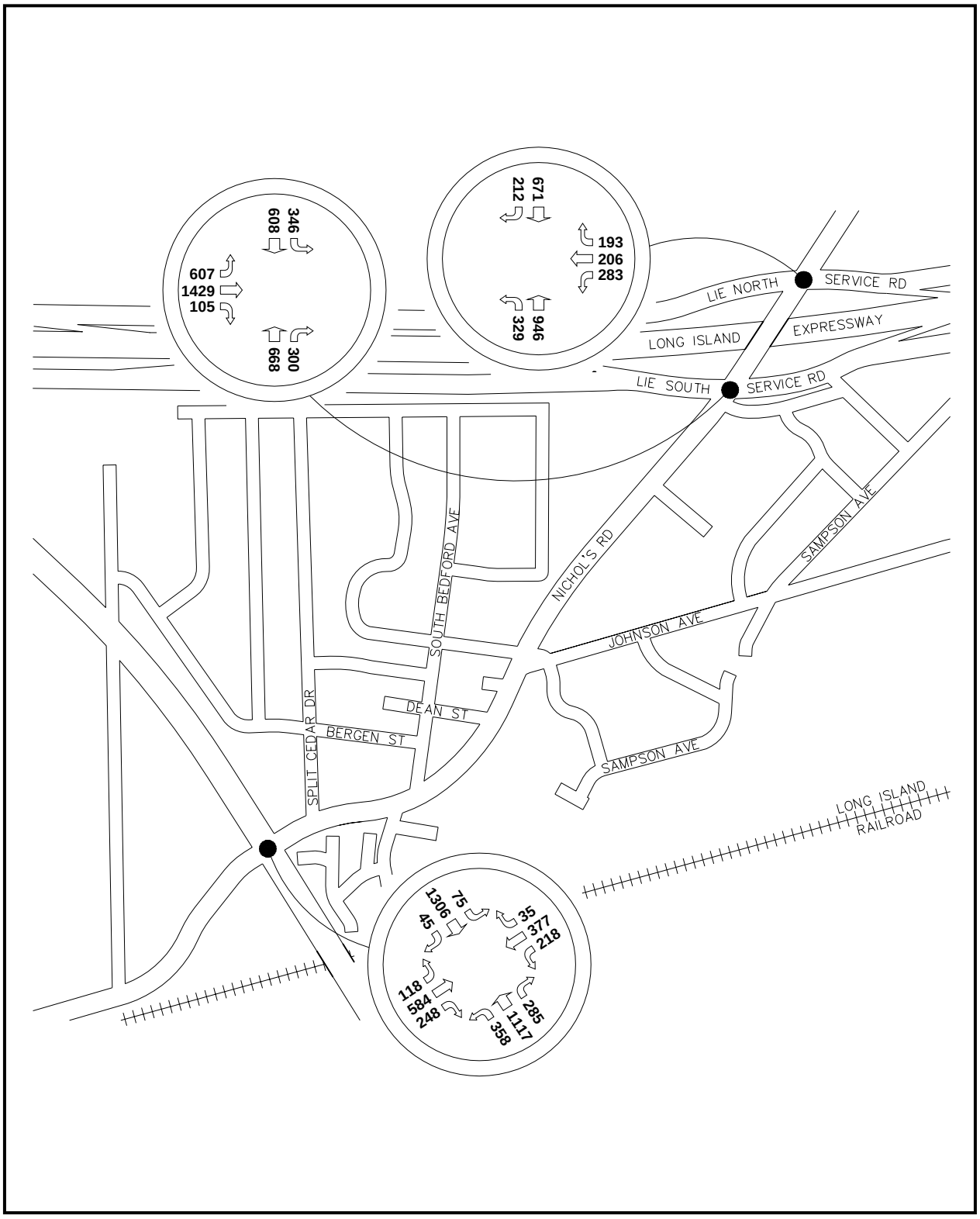


Figure 4: Existing PM Peak Hour Traffic Volumes

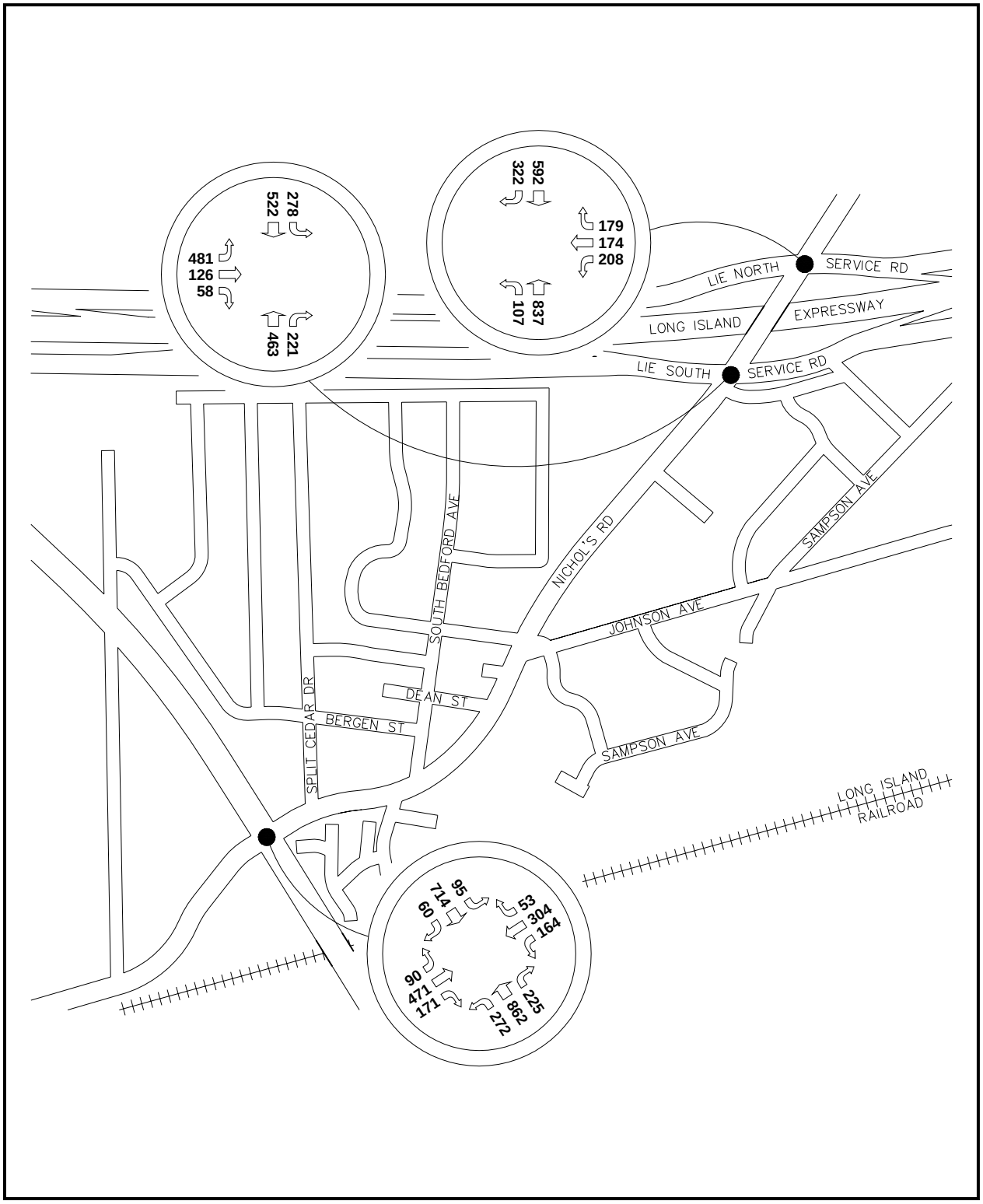


Figure 5: Existing Saturday Peak Hour Traffic Volumes

Accident History

Accident data for the sections of roadways and intersections in the vicinity of the site was obtained from the NYSDOT. The most recent data available was from July 2004 to June 2007 (3 year period). The data was reviewed and summarized in the following tables.

Table 2: Accident Summary by Severity

Location	Accident Severity				
	Fatality	Injury	Property Damage	Non-Reportable	TOTAL
LIE North Service Road at Old Nichols Road	-	-	2	-	2
Old Nichols Road between LIE North Service Road and LIE South Service Road	-	4	1	-	5
LIE South Service Road at Old Nichols Road	-	-	-	-	0
Old Nichols Road between LIE South Service Road and Hancock Street	-	-	-	-	0
Old Nichols Road at Hancock Street	-	-	-	-	0
Old Nichols Road between Hancock Street and Halsey Street	-	-	-	-	0
Old Nichols Road at Johnson Avenue	-	3	2	-	5
Old Nichols Road between Johnson Avenue and Dean Street	-	-	1	-	1
Old Nichols Road at Dean Street	-	-	-	-	0
Old Nichols Road between Dean Street and Bedford Drive	1	-	-	-	1
Old Nichols Road at Bedford Drive	-	-	1	-	1
Old Nichols Road between Bedford Drive and Ernhardht Way	-	-	-	-	0
Nichols Road at Ernhardht Way	-	-	-	-	0
Old Nichols Road between Ernhardht Way and Split Cedar Drive	-	-	-	-	0
Old Nichols Road at Split Cedar Drive	-	2	2	-	4
Old Nichols Road between Split Cedar Drive and NYS Route 454 (Veterans Memorial Highway)	-	-		-	-
Old Nichols Road at NYS Route 454 (Veterans Memorial Highway)	1	34	22	2	59
Total	2 *3%*	43 *55%*	31 *39%*	2 *3%*	78 *100%*

Table 2 indicates a total of 78 accidents occurred at or in the vicinity of the study intersections during the analysis period. A total of two accidents involved fatalities during the study period,

one of them resulting in two fatalities which occurred at the intersection of Nichols Road and Veterans Road (NYS Route 454). This accident involved a vehicle making a right turn onto Nichols Road form westbound Veterans Road and a bus traveling north on Suffolk Avenue/Nichols Road. Driver inattention was attributed to the accident. The other fatal accident resulting in one fatality occurred on Old Nichols Road between Dean Street and Bedford Drive and involved a pedestrian. The location with the greatest number of accidents is the intersection of Old Nichols Road and Veterans Parkway (NYS Route454).

Table 3: Accident Summary by Type of Collision

Location	Accident Type										
	Right Angle	Rear End	Head On	Left Turn	Right Turn	Fixed Object	Ped/ Bicycle	Parked Vehicle	Over-Taking	Other/ Unknown	Total
LIE North Service Road at Old Nichols Road	-	1	-	-	1	-	-	-	-	-	2
Old Nichols Road between LIE North Service Road and LIE South Service Road	1	1	-	1	-	-	-	-	1	1	5
LIE South Service Road at Old Nichols Road	-	-	-	-	-	-	-	-	-	-	0
Old Nichols Road between LIE South Service Road and Hancock Street	-	-	-	-	-	-	-	-	-	-	0
Old Nichols Road at Hancock Street	-	-	-	-	-	-	-	-	-	-	0
Old Nichols Road between Hancock Street and Halsey Street	-	-	-	-	-	-	-	-	-	-	0
Old Nichols Road at Johnson Avenue	-	2	-	1	-	-	-	-	-	2	5
Old Nichols Road between Johnson Avenue and Dean Street	-	1	-	-	-	-	-	-	-	-	1
Old Nichols Road at Dean Street	-	-	-	-	-	-	-	-	-	-	0
Old Nichols Road between Dean Street and Bedford Drive	-	-	-	-	-	-	1	-	-	-	1
Old Nichols Road at Bedford Drive	-	-	-	-	-	1	-	-	-	-	1

Location	Accident Type										
	Right Angle	Rear End	Head On	Left Turn	Right Turn	Fixed Object	Ped/ Bicycle	Parked Vehicle	Over-Taking	Other/ Unknown	Total
Old Nichols Road between Bedford Drive and Ernhardht Way	-	-	-	-	-	-	-	-	-	-	0
Old Nichols Road at Ernhardht Way	-	-	-	-	-	-	-	-	-	-	0
Old Nichols Road between Ernhardht Way and Split Cedar Drive	-	-	-	-	-	-	-	-	-	-	0
Old Nichols Road at Split Cedar Drive	-	-	-	2	-	-	-	-	1	1	4
Old Nichols Road between Split Cedar Drive and NYS Route 454 (Veterans Memorial Highway)	-	-	-	-	-	-	-	-	-	-	0
Old Nichols Road at NYS Route 454 (Veterans Memorial Highway)	5	18	-	11	1	1	-	-	3	20	59
Total	6 *8%*	23 *29%*	0 *0%*	15 *19%*	2 *3%*	2 *3%*	1 *1%*	0 *0%*	5 *6%*	24 *31%*	78 *100%*

A review of Table 3 indicates that a plurality of the accidents (31%) involved unknown type of accidents, the second most frequent reportable accidents (29%) involved rear-end accidents and the third most frequent accidents (19%) involved left turn accidents. A majority of the accidents (76%) occurred at the intersection of Old Nichols Road and Veterans Parkway (NYS Route 454).

LEVEL OF SERVICE DESCRIPTION

While traffic volumes provide an important measure of activity on the adjacent roadway network, evaluating how well that network accommodates those volumes is also important. Therefore, a comparison of peak hour traffic volumes with available roadway capacity is prepared. Capacity, by definition, represents the maximum number of vehicles that can be accommodated given the constraints of roadway geometry, traffic characteristics and controls. Intersections primarily control capacity in roadway networks, since conflicts exist at these points between through, crossing and turning traffic. Because of these conflicts, congestion is most likely to occur at intersections. Therefore, intersections are studied most often when determining the quality of traffic flow.

Level of service and capacity analyses for the study intersections were performed using Highway Capacity Software *(HCS+) Release 5.21,* prepared by the Federal Highway Administration. HCS+ is a series of computer programs strictly adhering to the guidelines set forth in *Highway Capacity Manual 2000 (HCM2000). HCM2000* contains procedures and methodologies for estimating capacity and determining level of service for many transportation facilities and modes including signalized and unsignalized intersections.

An intersection's level of service (LOS) describes its quality of traffic flow. It ranges in grade from LOS "A" (relatively congestion-free) to LOS "F" (very congested). The level of service definition, as well as the threshold values for each level, varies according to whether the intersection is controlled by a signal or a stop sign. A brief description is given here and a more detailed definition is found in Appendix C.

The capacity of a signalized intersection is evaluated in terms of the ratio of demand flow rate to capacity (V/C ratio). The capacity for each approach represents the maximum rate of flow (for the subject approach) which may pass through the intersection under prevailing traffic, roadway and signal conditions. The level of service of a signalized intersection is evaluated on the basis of average control-delay measured in seconds per vehicle (sec/veh). The control-delay is calculated using an equation that combines the stopped-delay with the vehicle acceleration/deceleration delay that is caused by the signalized intersection. At the signalized

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

EXISTING CONDITION ANALYSIS

The 2007 existing peak hour traffic volumes depicted in Figures 3, 4 and 5 were used to determine the existing capacity and LOS of the study intersections. Table 4 contains the LOS summary for the Existing Condition calculated through the HCS software described previously. The detailed analysis worksheets are in Appendix D.

Table 4: Existing Condition LOS Summary

Location (Signalized Intersections)	AM Peak Hour		PM Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Veterans Highway (NYS Route 454) at Old Nichols Road/East Suffolk Avenue (CR 100)	36.8	D	65.8	E	37.0	D
Old Nichols Road at LIE South Service Road	20.0	B	45.8	D	19.8	B
Old Nichols Road at LIE North Service Road	34.6	C	24.1	C	19.0	B

Veterans Highway (NYS Route 454) at Old Nichols Road/East Suffolk Avenue (CR 100)

The signalized intersection of Veterans Highway at Old Nichols Road/East Suffolk Avenue currently operates at LOS D, E and D during the weekday AM, PM and Saturday midday peak hours respectively.

Old Nichols Road at LIE South Service Road

The signalized intersection of Old Nichols Road at LIE South Service Road currently operates at LOS B, D and B during the weekday AM, PM and Saturday midday peak hours respectively.

Old Nichols Road at LIE North Service Road

The signalized intersection of Old Nichols Road at LIE North Service Road currently operates at LOS C, C and B during the weekday AM, PM and Saturday midday peak hours respectively.

NO BUILD CONDITION

The No Build Condition represents traffic conditions expected at the study intersections in the future year 2009 without the construction of the proposed project. The No Build Condition traffic volumes are estimated based on two factors as follows:

- Increases in traffic due to general population growth and developments outside of the immediate project area. This traffic increase is referred to as ambient growth.
- Other planned projects located near the project site that may affect traffic levels and patterns at the study intersections in this report.

Traffic Growth

A 1.2% annual growth factor was obtained from the NYSDOT. The existing traffic volumes were increased by this factor for a period of 2 years to project volumes to the year 2009.

Other Planned Projects

Planned projects to be constructed prior to the proposed project that may significantly influence the traffic flow through the study intersections would be considered as part of the No Build analysis. The Town of Islip and Village of Islandia were contacted to obtain information on any planned projects in the area. At the time this study was conducted, no other planned projects were identified. The 2009 No Build traffic volumes are shown on figures 6, 7 and 8.

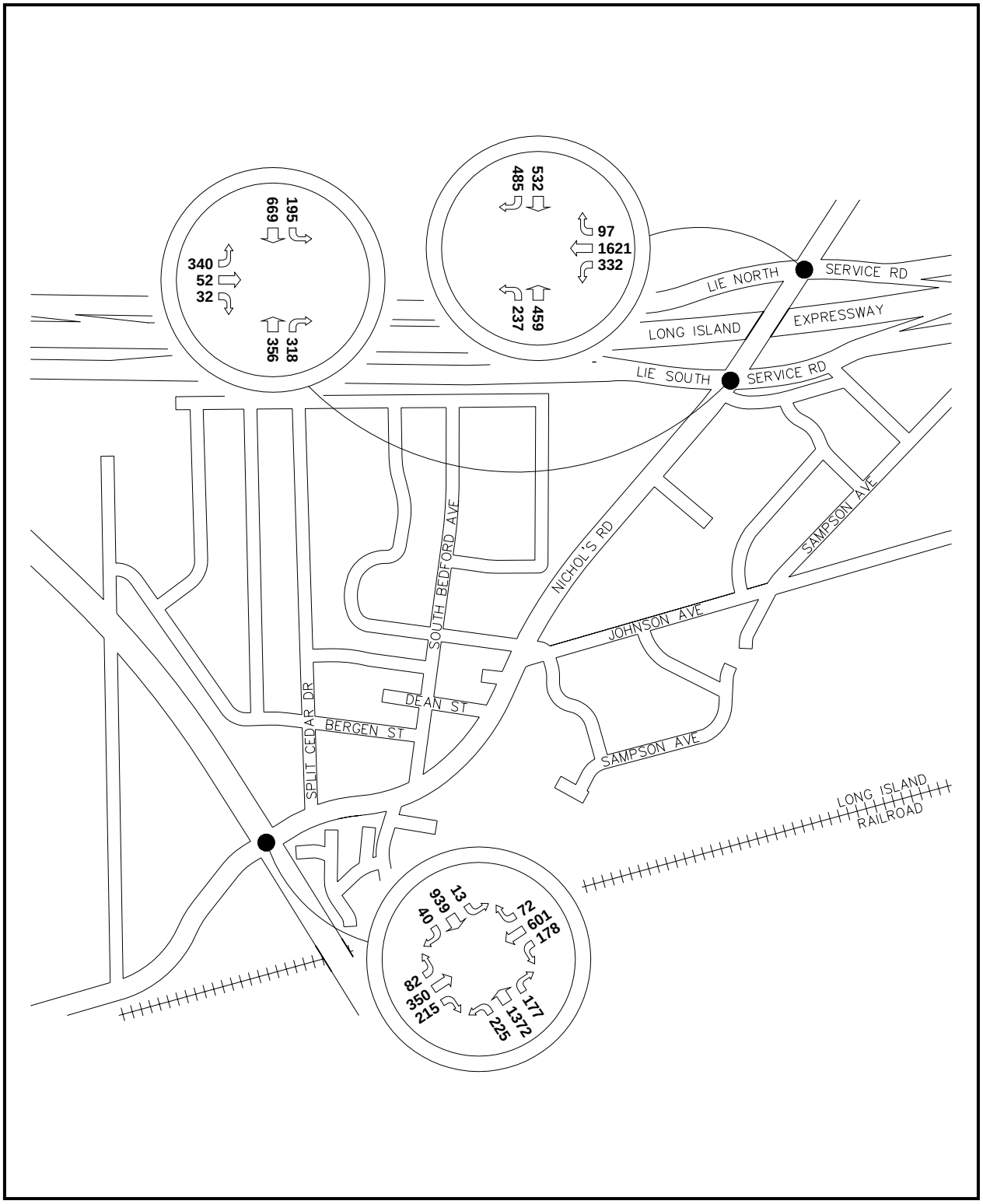


Figure 6: 2009 No Build AM Peak Hour Traffic Volumes

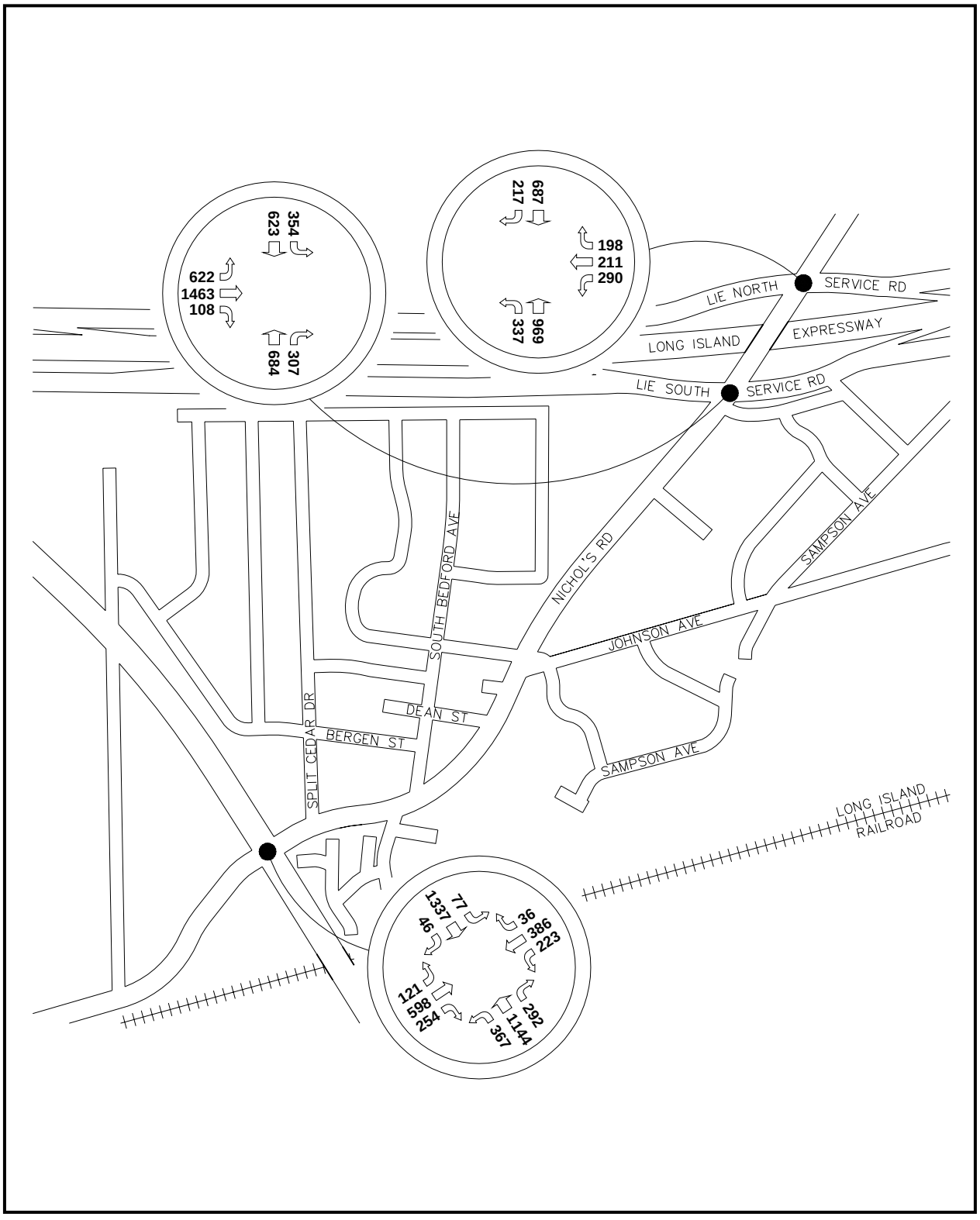


Figure 7: 2009 No Build PM Peak Hour Traffic Volumes

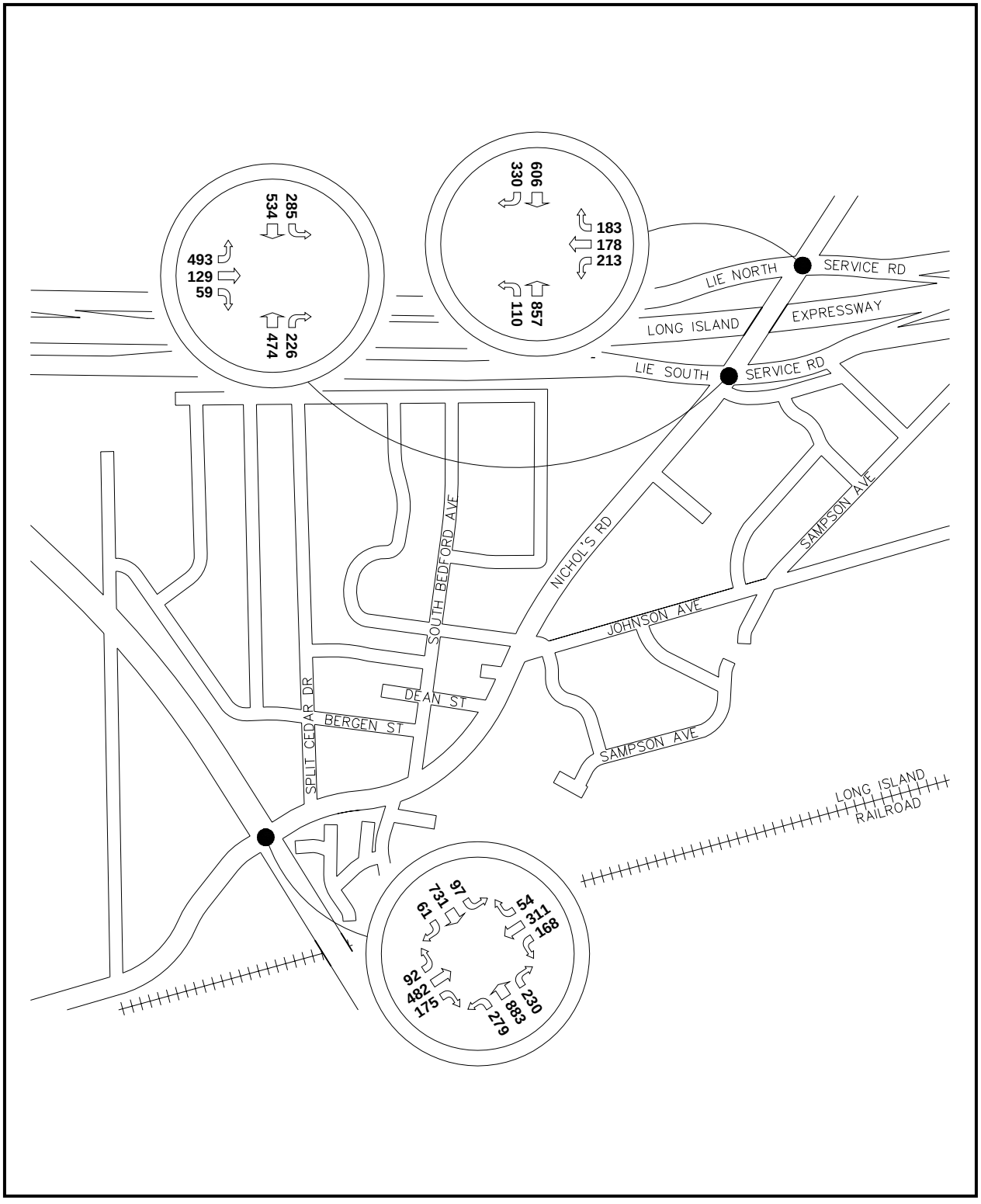


Figure 8: 2009 No Build Saturday Midday Peak Hour Traffic Volumes

PROPOSED DEVELOPMENT

Site Access

As depicted on the site plan, access to the site will be provided via one full movement driveway on Old Nichols Road in the vicinity of the existing access to the equestrian center on the site. As requested by the Village of Islandia, an alternative access off of Old Nichols Road via the existing Schley Place right-of-way was considered. These two driveway locations were analyzed from the standpoint of safety, location and design. Sight distance measurements were performed at both access points and compared with the recommendations contained in the reference, *A Policy on Geometric Design of Highways and Street* published in 2004 by the American Association of State Highway and Transportation Officials (AASHTO). It was determined from the review of the sight distance data that, the measured sight distances from both driveways will exceed the recommended sight distance criteria for left turn and right turn vehicles exiting the site. However the Schley Place right-of –way location will provide better sight lines for left turn vehicles exiting the site.

Parking

A total of 151 parking spaces (driveway and garage) will be provided for the 72 condominiums and 19 parking spaces will be provided for the 3,750 SF recreation building. The parking calculations as shown on the site plan indicate that 151 and 19 parking spaces are required to support the 72 condominiums and 3,750 SF Recreation building respectively in accordance with the Village of Islandia parking code. Therefore the parking requirements are met.

Trip Generation

In order to identify the impacts the proposed development will have on the adjacent street system, it is necessary to estimate the magnitude of traffic volume to be generated during the peak hours and to estimate the directional distribution of the site traffic when entering and exiting the subject property. As requested by the Village of Islandia, Nelson & Pope has conducted traffic counts at the Silver Woods condominium development similar to the proposed development located on Erhardht Way south of the proposed site in the Village of Islandia. The data was collected by means of manual turning movement counts at the driveway of the Silver

Woods development for the weekday AM (7-9AM) peak period, weekday PM (4-6PM) peak period and Saturday midday (11AM -2PM) peak period. Silver Woods contains 68 non-age restricted residential condominium units. The site data indicates rates of 0.41, 0.29 and 0.39 trips per unit during the weekday AM, PM and Saturday midday peak hours of the adjacent street respectively. Utilizing the Silver Woods trip generation rates, trip generation estimates were conducted for the proposed development. The following table summarizes the trips anticipated to be generated by the proposed 72 residential condominium units. The data collected at Silver Woods is included in Appendix B.

Table 5: Trip Generation estimates based on Silver Wood rates

Land Use	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
68 condominium units	6	22	28	13	7	20	14	12	26
Trip generation rates (trips/unit)	*0.09*	*0.32*	*0.41*	*0.19*	*0.10*	*0.29*	*0.21*	*0.18*	*0.39*
72 condominium units (based on Silver Woods trip generation rates)	**7**	**23**	**30**	**14**	**7**	**21**	**15**	**13**	**28**

Source: Traffic Counts collected at Silver Woods, Village of Islandia, NY

Trip generation estimate for the proposed residential development (47 age restricted and 25 non age restricted residential condominium units) was also prepared utilizing data found under Land Use Code 251-Senior Housing Detached and Land Use Code 230-Residential Condominium/Townhouse within the Institute of Transportation Engineers' (ITE) publication, *Trip Generation, Seventh Edition*. This publication sets forth trip generation data obtained by traffic counts conducted at sites throughout the country. The following Table summarizes the trip generation estimates for the proposed project obtained from ITE. Appendix B contains the trip generation worksheets.

Table 6: Trip Generation estimates based on ITE

Time Period	Distribution	47 Senior Housing Units (ITE LUC 251)	25 Condominium/ Townhouse Units (ITE LUC 230)	Total
Weekday AM Peak Hour	Enter	6	3	9
	Exit	9	14	23
	Total	**15**	**17**	**32**
Weekday PM Peak Hour	Enter	17	13	30
	Exit	11	6	17
	Total	**28**	**19**	**47**
Saturday Midday Peak Hour	Enter	6	27	33
	Exit	7	23	30
	Total	**13**	**50**	**63**

Source: Trip Generation, 7th Edition, published by ITE

As can be seen from Tables 5 and 6 above, the trip generation estimates from ITE are higher than those from the Silver Woods rates. In order to perform a conservative analysis the trip generation obtained from ITE was utilized in this study. It can be seen from Table 6 that, the proposed project will generate 32 trips (9 entering and 23 exiting) during the weekday AM peak hour, 47 trips (30 entering and 17 exiting) during the weekday PM peak hour and 63 trips (33 entering and 30 exiting) during the Saturday midday peak hour.

Trip Distribution and Assignment

The volume of site traffic that would travel through the study intersections during peak hours was distributed and assigned to each movement based on the existing roadway and travel patterns. The nature of the proposed land use and its associated travel patterns were considered as well. Figure 9 depicts the trip distribution for the proposed project. Figures 10, 11 and 12 depict the site generated volumes for the weekday AM, PM, and Saturday midday peak hours. The site generated volumes were then added to the weekday AM, PM and Saturday midday No Build Condition volumes resulting in the Build Condition volumes. The Build volumes are depicted in Figures 13, 14 and 15.

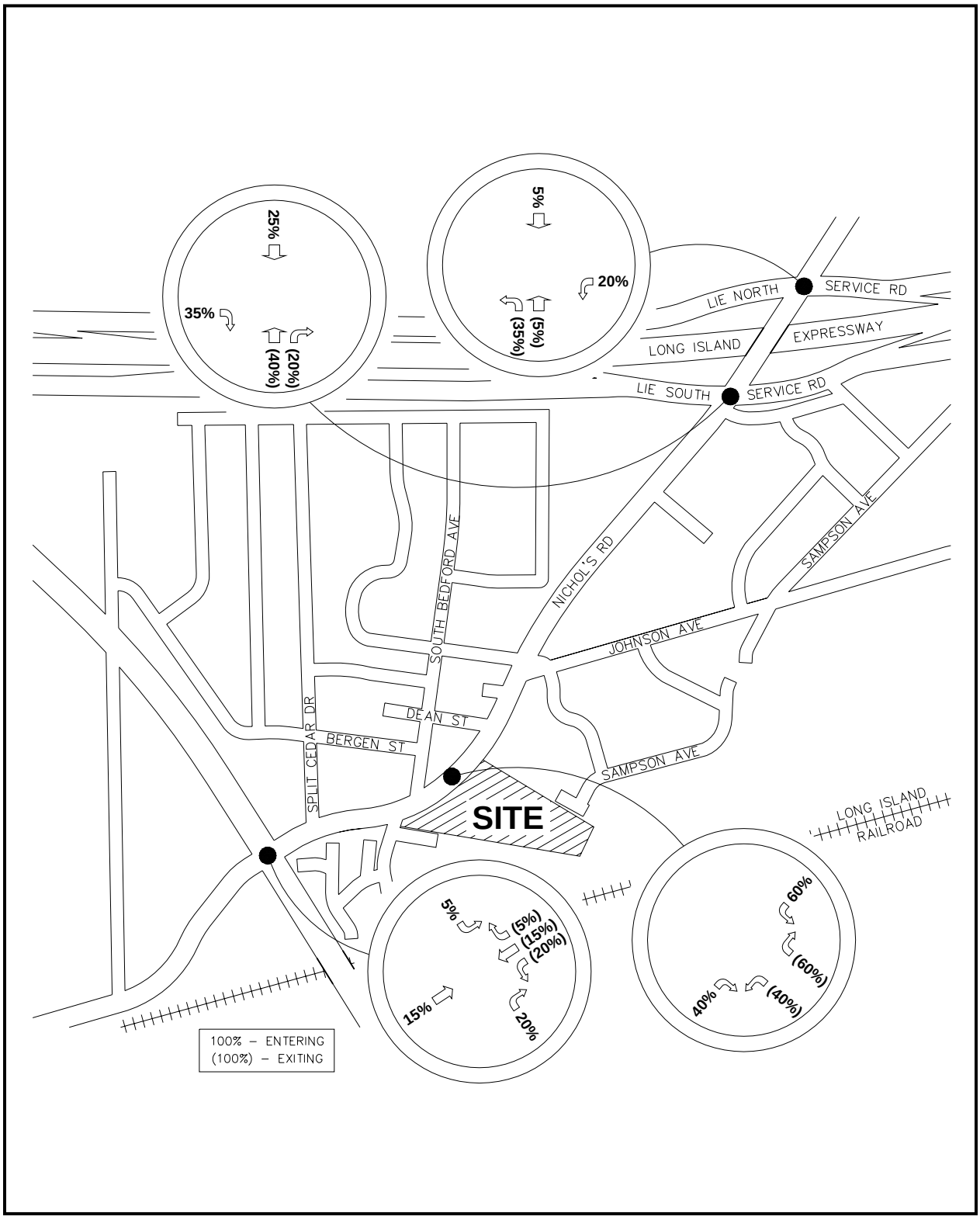


Figure 9: Site Generated Trip Distribution

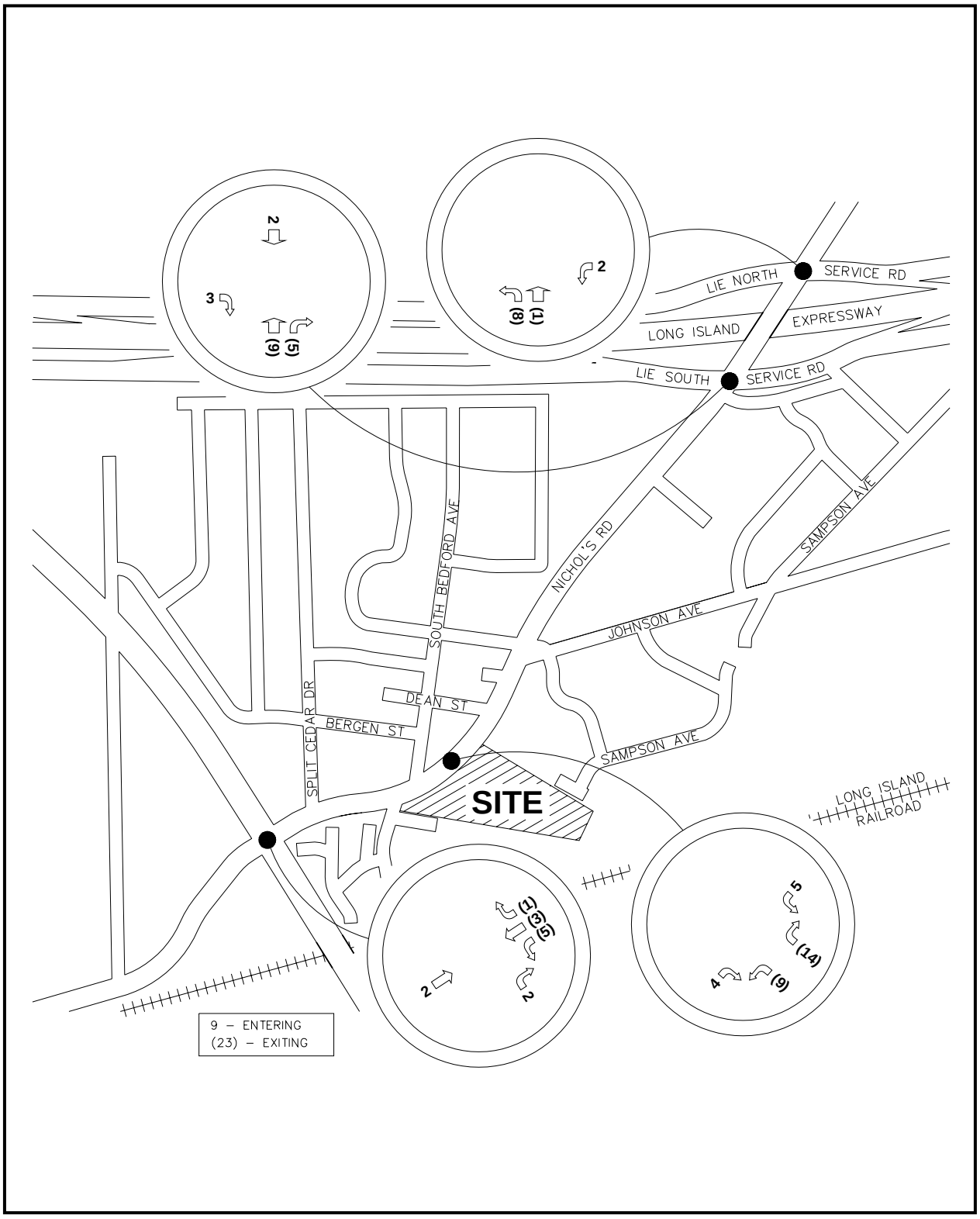


Figure 10: Site Generated AM Peak Hour Traffic Volumes

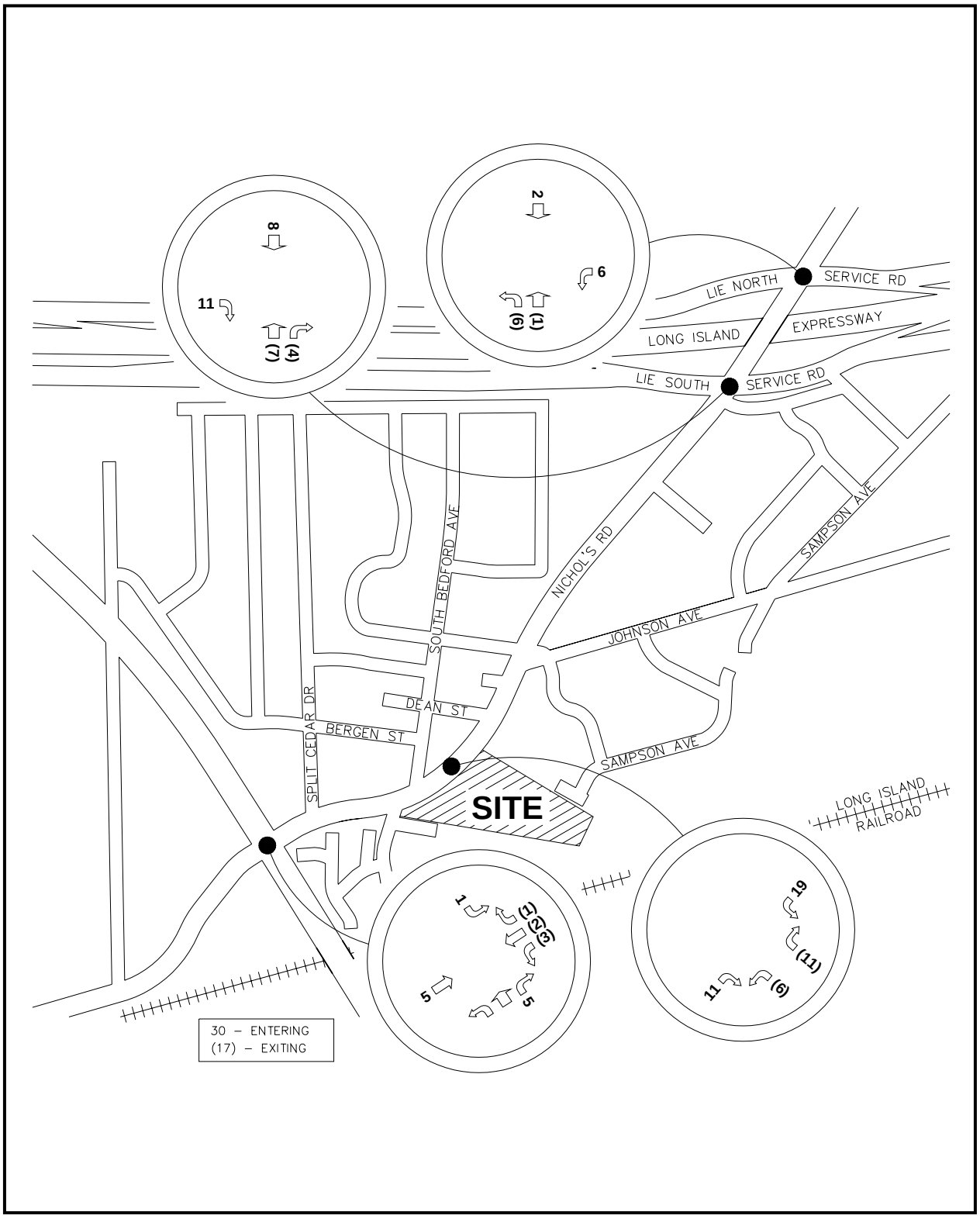


Figure 11: Site Generated PM Peak Hour Traffic Volumes

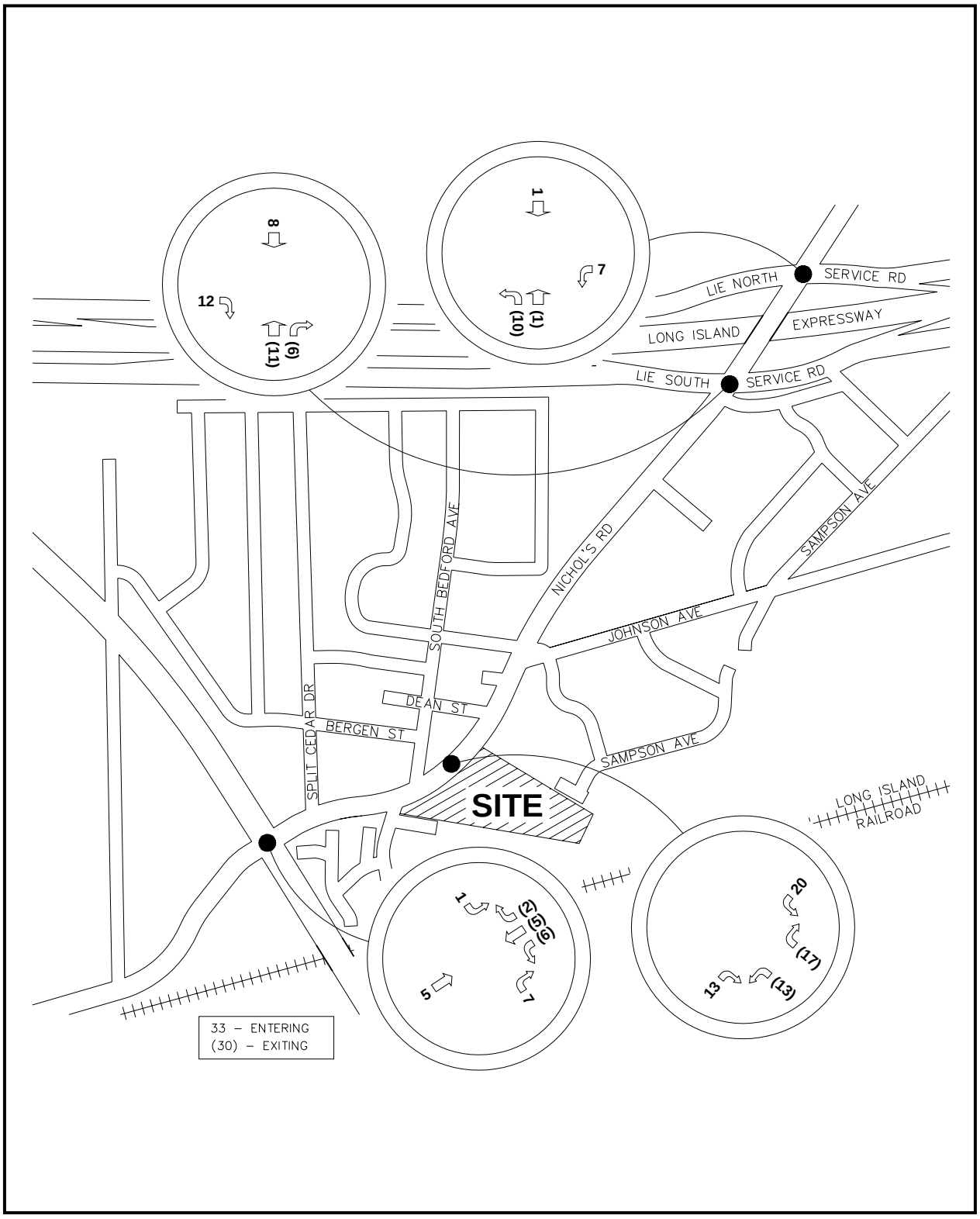


Figure 12: Site Generated Saturday Peak Hour Traffic Volumes

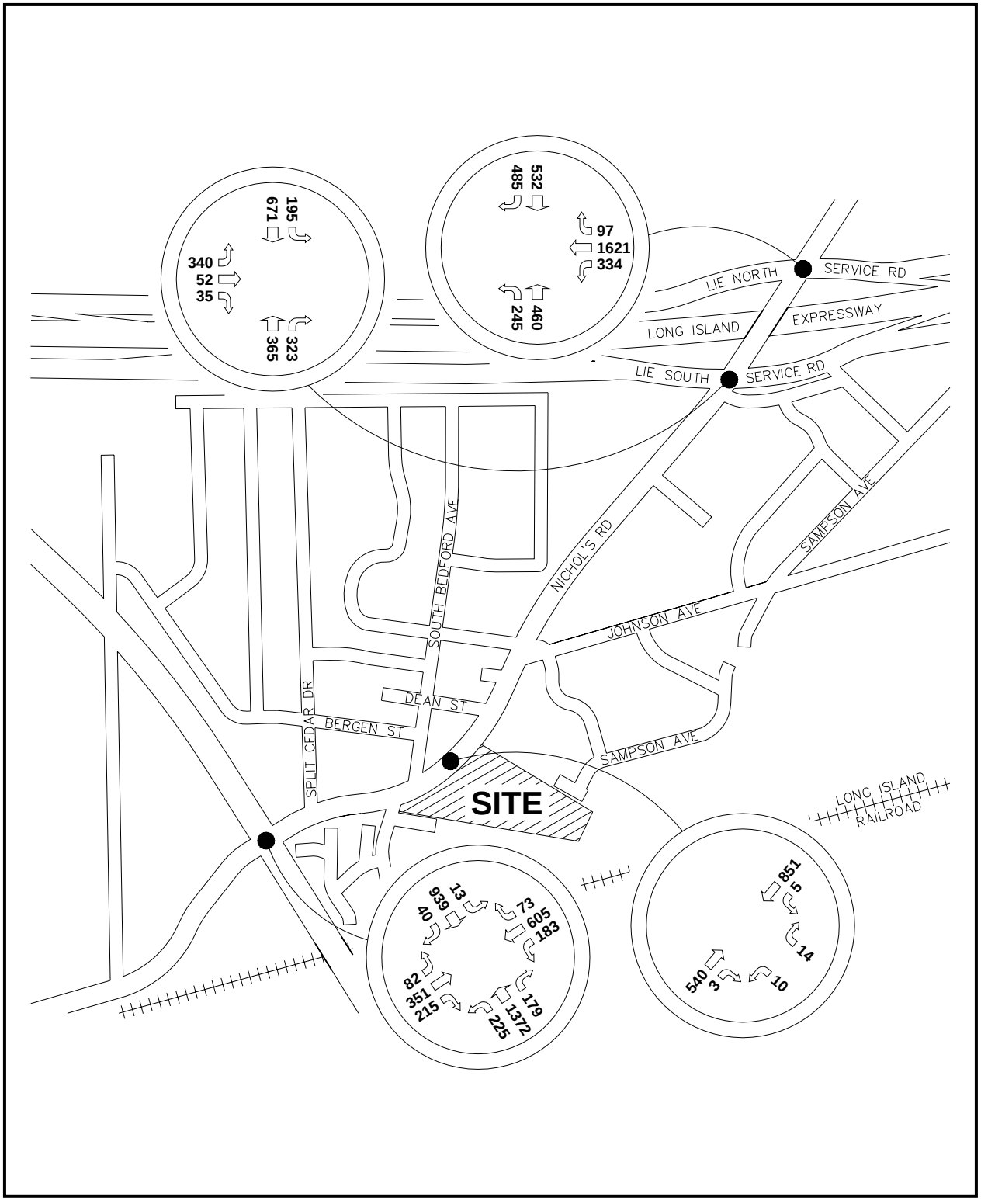


Figure 13: 2009 Build AM Peak Hour Traffic Volumes

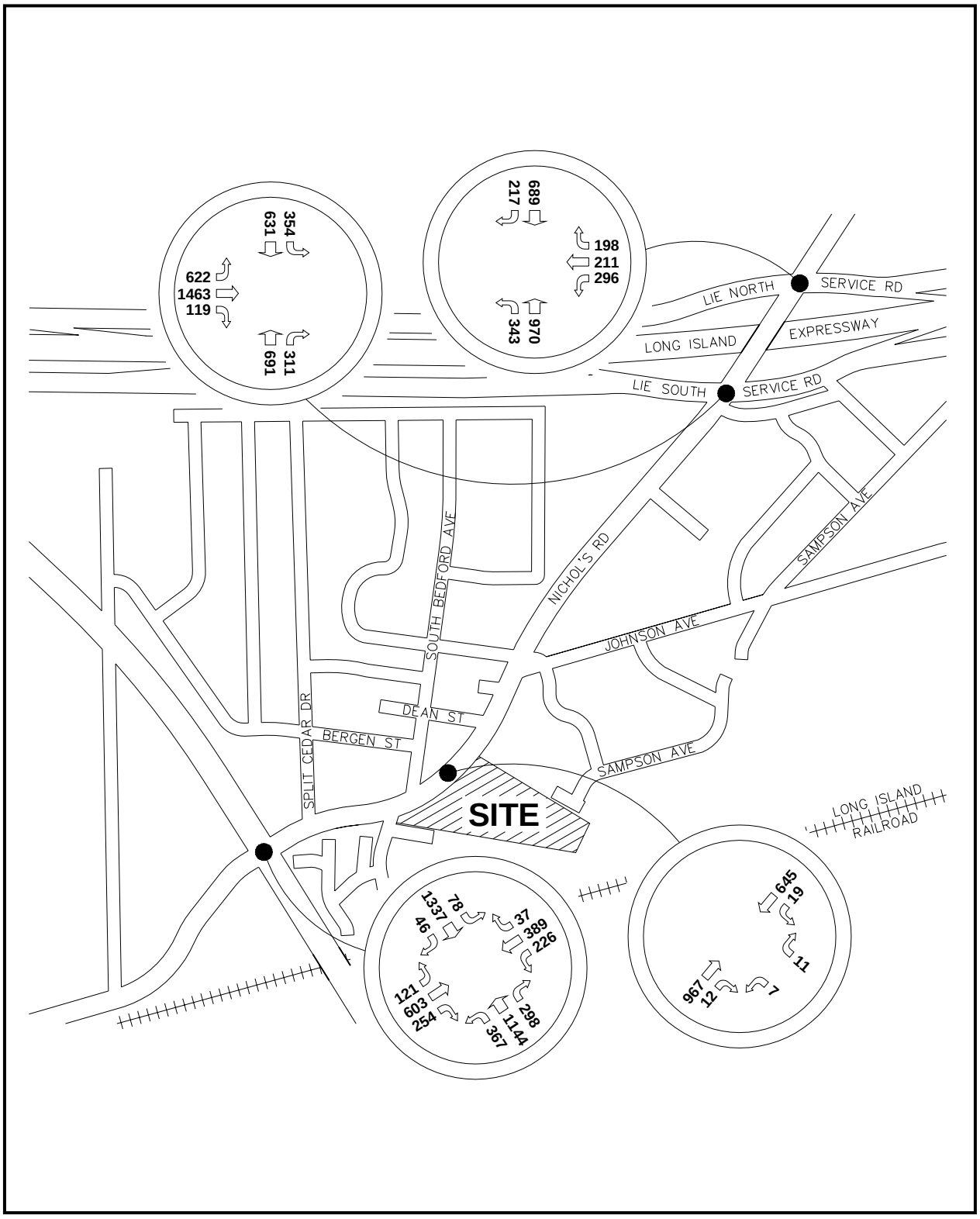


Figure 14: 2009 Build PM Peak Hour Traffic Volumes

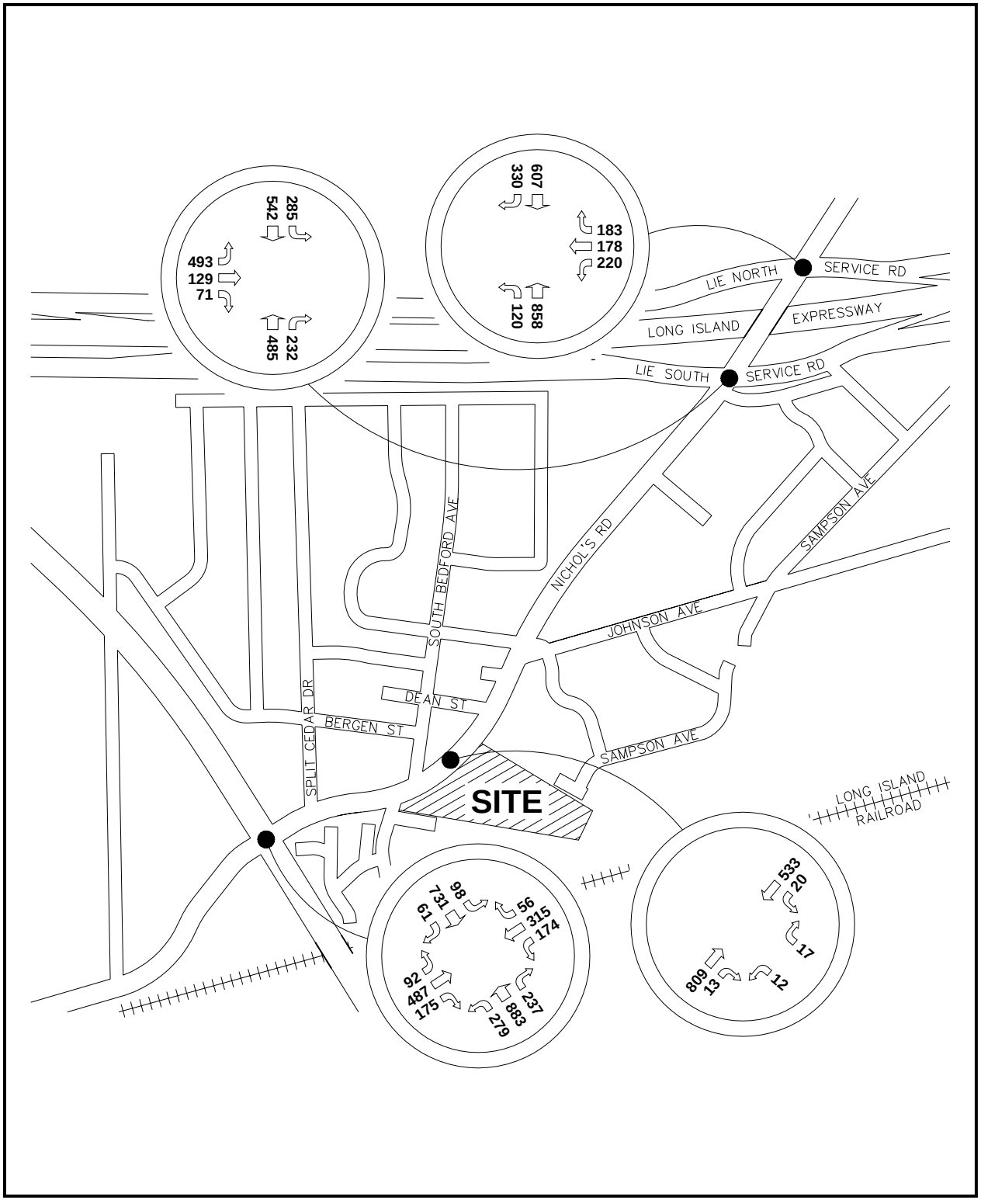


Figure 15: 2009 Build Saturday Peak Hour Traffic Volumes

TRAFFIC IMPACT ANALYSIS

As stated previously, the intersection capacity and level-of-service (LOS) analyses were based on the procedures and guidelines presented in the *HCM 2000*, published by the Transportation Research Board. The *HCS+, Release 5.21* was used to analyze the study intersections and provide a LOS measurement of the intersections operation. The six classes of LOS, ranging from LOS A (excellent) to F (worst), are defined in Appendix C.

Table 7: Level of Service Summary (Signalized)

Signalized Intersections	Condition	AM Peak Hour		PM Peak Hour		Saturday Midday Peak Hour	
		LOS	Delay	LOS	Delay	LOS	Delay
Veterans Highway (NYS Route 454) at Old Nichols Road/East Suffolk Avenue (CR 100)	Existing	D	38.6	E	65.8	D	37.0
	No Build	D	40.0	E	72.1	D	37.8
	Build	D	40.4	E	72.6	D	37.8
Old Nichols Road at LIE South Service Road	Existing	B	20.0	D	45.8	B	19.8
	No Build	C	20.1	D	49.9	B	19.9
	Build	C	20.1	D	51.3	B	20.0
Old Nichols Road at LIE North Service Road	Existing	C	34.6	C	24.1	B	19.0
	No Build	D	36.1	C	24.2	B	19.2
	Build	D	36.2	C	24.3	B	19.3

Notes: LOS = Level of Service, Delay = seconds/vehicle,

Table 8: Level of Service Summary (Unsignalized)

Unsignalized Intersections	Condition	Approach/ Movmnt.	AM Peak Hour		PM Peak Hour		Saturday Midday Peak Hour	
			LOS	Delay	LOS	Delay	LOS	Delay
Old Nichols Road at Site Driveway	Build	SB-L	A	8.6	B	11.5	A	9.8
		WB- LR	C	22.1	E	40.9	D	26.3

Notes: LOS = Level of Service, Delay = seconds/vehicle

Veterans Highway (NYS Route 454) at Old Nichols Road/East Suffolk Avenue (CR 100)

During the No Build Condition, the signalized intersection of Veterans Highway (NYS Route 454) at Old Nichols Road/East Suffolk Avenue (CR 100) will operate at LOS D, E, D during the weekday AM, PM and Saturday midday peak hours respectively. After the completion of the project, the intersection will continue to operate at No Build LOS conditions during the analyzed

peak periods. Therefore, no significant impacts are created and no mitigation measures are proposed at this intersection.

Old Nichols Road at LIE South Service Road

During the No Build Condition, the signalized intersection of Old Nichols Road at LIE South Service Road will operate at LOS C, D, B during the weekday AM, PM and Saturday midday peak hours respectively. After the completion of the project, the intersection will continue to operate at No Build LOS conditions during the analyzed peak periods. Therefore, no significant impacts are created and no mitigation measures are proposed at this intersection.

Old Nichols Road at LIE North Service Road

During the No Build Condition, the signalized intersection of Old Nichols Road at LIE North Service Road will operate at LOS D, C, B during the weekday AM, PM and Saturday midday peak hours respectively. After the completion of the project, the intersection will continue to operate at No Build LOS conditions during the analyzed peak periods. Therefore, no significant impacts are created and no mitigation measures are proposed at this intersection.

Old Nichols Road at Site Driveway

The site driveway analyses at any of the two locations considered will be the same since the traffic volumes will be same at either of these locations after the construction of the project. After the completion of the project, the southbound Old Nichols Road left turn movement at the intersection of Old Nichols Road and site driveway will operate at LOS A, B, and A during the weekday AM, PM and Saturday midday peak hours. The westbound site driveway approach will operate at LOS C, E and D during the weekday AM, PM and Saturday midday peak hours respectively.

TRAFFIC IMPACT OF CONSTRUCTION PHASE

Information obtained from the client indicates that, between 20 and 30 vehicles are anticipated to utilize the site per day during the peak phase of the construction period. Construction work will be done on a 7:00 AM to 3:00 PM shift, meaning most of the workers will be on site on or before 7:00 AM (before the AM peak hour) and will vacate the site before the PM peak hour. The traffic anticipated to be generated by the proposed project as shown in the traffic study is higher than the number of vehicles anticipated utilizing the site during construction. It is our opinion that the construction phase will not significantly impact the operation of the roadways in the vicinity of the site since the findings of the traffic impact study indicated the same for the traffic generated by the project after construction.

CONCLUSION

Nelson & Pope has investigated the potential traffic impacts associated with the proposed Residential development "The Preserve at Islandia" to be located on the eastside of Old Nichols Road south of Deans Street in the Village of Islandia, Town of Islip, Suffolk County, New York. The proposed residential development will be located on a parcel of land designated as District 504, Section 17, Block 03, Lots 7 & 8 on the Suffolk County Tax maps and comprised of a total of 72 Residential Condominium units (47 age restricted units and 25 non age restricted units). The site currently contains an Equestrian Center. The following is a summary of this investigation and the findings thereof:

1. The following intersections were studied:
    - Veterans Highway (NYS Route 454) at Old Nichols Road/East Suffolk Avenue (CR 100)
    - Old Nichols Road at Long Island Expressway (LIE) South Service Road
    - Old Nichols Road at Long Island Expressway (LIE) North Service Road

2. Existing volumes were counted in November 2007. Future No Build traffic volumes were determined by applying a 1.2% NYSDOT annual growth factor to the existing traffic volumes. The site-generated traffic was estimated and distributed to the study intersections and then added to the No Build traffic volumes to generate the future Build traffic volumes.
3. The proposed Residential development is projected to generate 32 trips during the AM peak hour (9 entering, 23 exiting), 47 trips during the PM peak hour (30 entering, 17 exiting) and 63 trips during the Saturday midday peak hour (33 entering, 30 exiting).
4. As depicted on the site plan, access to the proposed development will be provided via one full movement driveway on Old Nichols Road.
5. Capacity analyses were conducted at all the study intersections during the weekday AM, weekday PM and Saturday midday peak hours.
6. After the completion of the project all the study intersections will continue to operate at No Build LOS during the weekday AM, PM and Saturday midday peak hours.

7. The traffic anticipated to be generated during the construction phase will be less than the traffic anticipated to be generated by the proposed project after construction. Therefore the traffic from the construction phase will not significantly impact the operation of the roadways in the vicinity of the site since the findings of the traffic impact study indicated the same for the traffic generated by the project after construction.

Based on the results of the Traffic Impact Study as detailed in the body of this report, it is the professional opinion of Nelson & Pope that, the construction of proposed Residential development will not result in an adverse traffic impact at the study intersections.

The Preserve at Islandia

TOWN OF ISLIP

APPENDIX

March, 2008

N&P JOB NO. 07246

Appendix A: Existing Traffic Volume

TURNING MOVEMENT DATA

NELSON & POPE

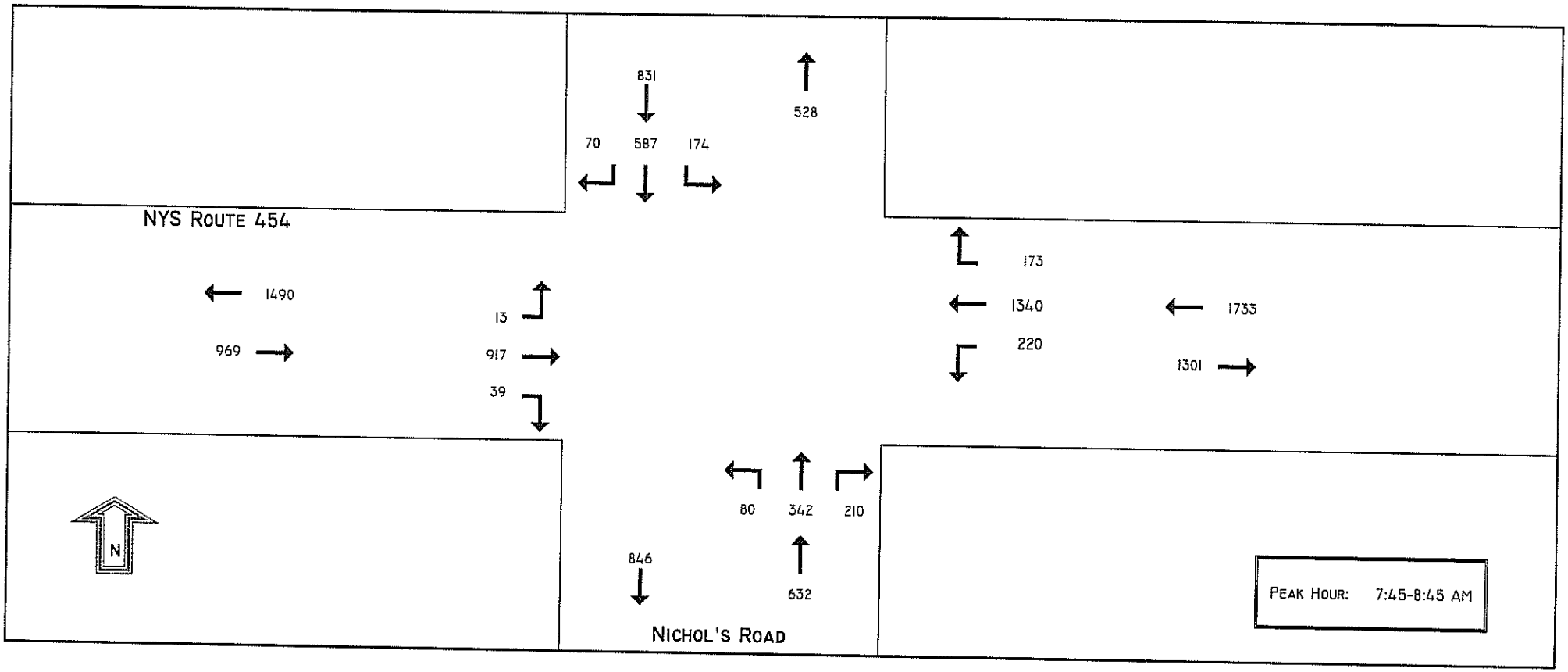
INTERSECTION: NYS ROUTE 454 @ NICHOL'S ROAD

PROJECT TITLE: THE PRESERVE @ ISLANDIA

DATE COLLECTED: 11/14/07 WEDNESDAY

JURISDICTION: VILLAGE OF ISLANDIA

START TIME	EASTBOUND						WESTBOUND						NORTHBOUND						SOUTHBOUND						TOTAL	CUM. HOURLY
	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL		
7:00 AM	0	5	133	5	0	143	0	67	299	21	0	387	0	18	79	65	0	162	0	37	133	8	0	178	870	
7:15 AM	0	5	156	7	0	168	0	80	322	25	1	428	0	22	81	65	0	168	0	37	145	4	0	186	950	
7:30 AM	0	5	177	13	0	195	0	68	335	33	0	436	0	24	78	82	1	185	0	52	132	13	0	197	1013	
7:45 AM	0	5	241	7	0	253	0	56	396	30	0	482	0	10	115	83	2	210	0	54	155	19	0	228	1173	4006
8:00 AM	0	1	197	4	0	202	0	46	294	40	0	380	0	20	58	48	1	127	0	46	161	16	0	223	932	4068
8:15 AM	0	7	244	14	0	265	0	36	271	66	2	375	0	19	92	25	1	137	0	40	133	16	0	189	966	4084
8:30 AM	0	0	235	14	0	249	0	82	379	34	1	496	0	31	77	50	0	158	0	34	138	19	0	191	1094	4165
8:45 AM	0	7	201	16	0	224	0	62	377	23	0	462	0	40	73	64	0	177	0	42	125	7	0	174	1037	4029
PEAK HOUR: 7:45-8:45 AM	0	13	917	39	0	969	0	220	1340	170	3	1733	0	80	342	206	4	632	0	174	587	70	0	831	4165	
PHF						0.91						0.87						0.75						0.91		



TURNING MOVEMENT DATA

NELSON & POPE

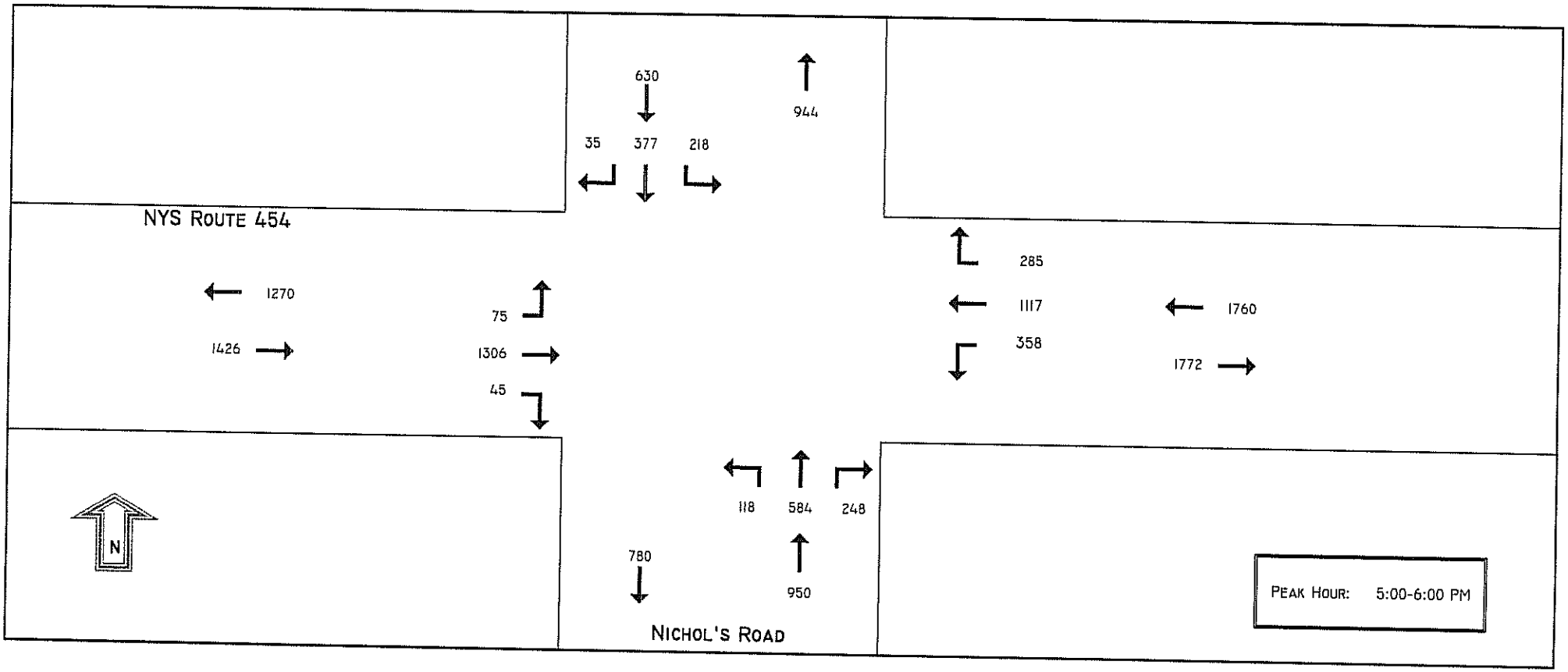
INTERSECTION: NYS ROUTE 454 @ NICHOL'S ROAD

PROJECT TITLE: THE PRESERVE @ ISLANDIA

DATE COLLECTED: 11/15/07 THURSDAY

JURISDICTION: VILLAGE OF ISLANDIA

START TIME	EASTBOUND						WESTBOUND						NORTHBOUND						SOUTHBOUND						TOTAL	CUM. HOURLY
	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL		
4:00 PM	0	34	318	13	0	365	0	63	241	70	1	375	0	22	180	41	32	275	0	40	86	13	0	139	1154	
4:15 PM	0	20	299	15	0	334	0	85	233	55	0	373	0	24	144	55	37	260	0	42	84	6	0	132	1099	
4:30 PM	0	13	253	15	0	281	0	71	232	62	0	365	0	25	148	34	29	236	0	40	59	4	0	103	985	
4:45 PM	0	16	256	12	0	284	0	134	214	67	0	415	0	42	183	36	35	296	0	43	37	1	0	81	1076	4314
5:00 PM	0	23	354	14	5	396	0	103	278	88	8	477	0	18	142	28	34	222	0	55	94	7	0	156	1251	4411
5:15 PM	0	11	285	7	1	304	0	88	295	84	2	469	0	31	157	45	31	264	0	58	112	8	0	178	1215	4527
5:30 PM	0	24	359	8	5	396	0	88	255	38	11	392	0	29	141	24	29	223	0	59	86	10	0	155	1166	4708
5:45 PM	0	17	308	5	0	330	0	79	289	52	2	422	0	40	144	27	30	241	0	46	85	10	0	141	1134	4766
PEAK HOUR: 5:00-6:00 PM	0	75	1306	34	11	1426	0	358	1117	262	23	1760	0	118	584	124	124	950	0	218	377	35	0	630	4766	
PHF						0.90						0.92						0.90						0.88		



TURNING MOVEMENT DATA

NELSON & POPE

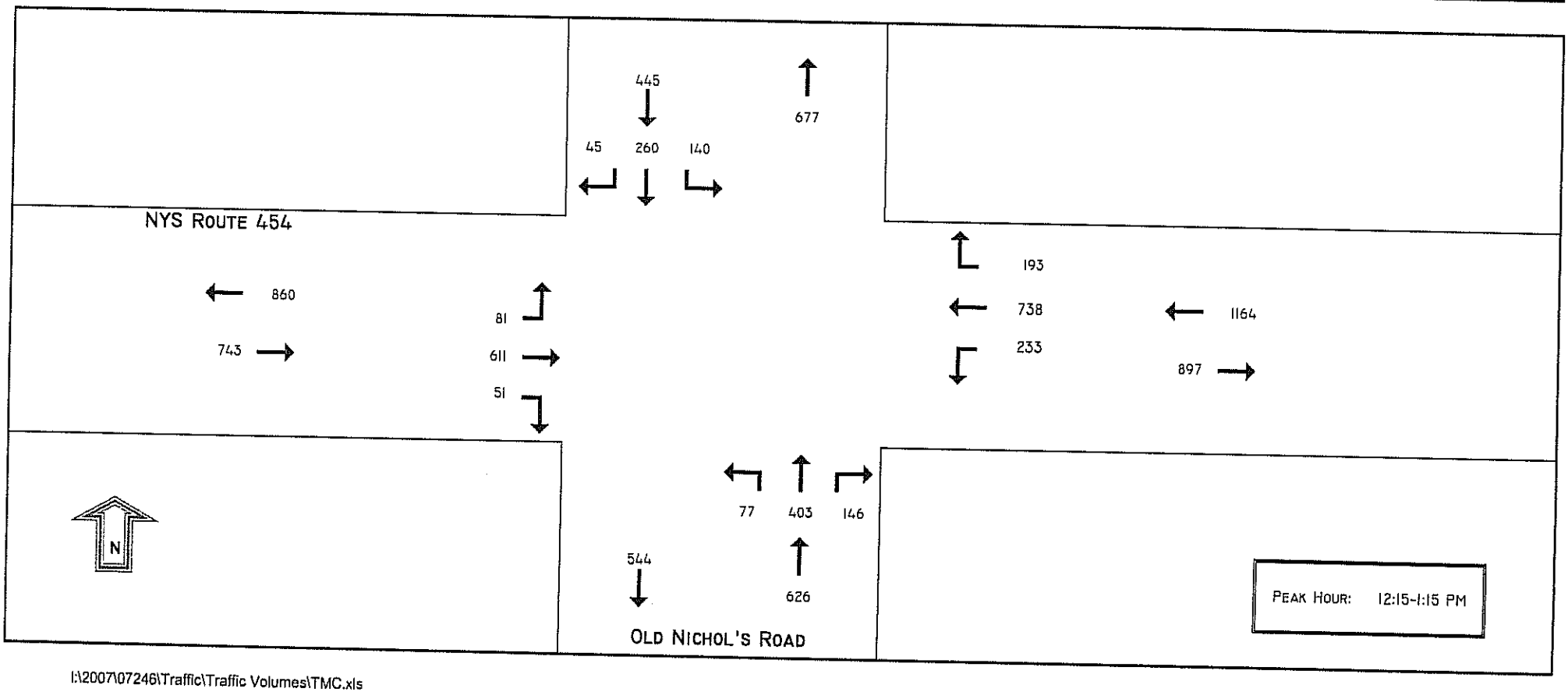
INTERSECTION: NYS ROUTE 454 @ OLD NICHOL'S ROAD

DATE COLLECTED: 11/17/07 SATURDAY

PROJECT TITLE: THE PRESERVE @ ISLANDIA

JURISDICTION: VILLAGE OF ISLANDIA

START TIME	EASTBOUND						WESTBOUND						NORTHBOUND						SOUTHBOUND						TOTAL	CUM. HOURLY
	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL		
11:00 AM	0	29	137	14	0	180	0	53	157	27	0	237	0	15	100	23	0	138	0	38	55	9	0	102	657	
11:15 AM	0	21	155	11	0	187	0	54	170	47	0	271	0	19	64	50	0	133	0	49	76	15	0	140	731	
11:30 AM	0	20	151	9	0	180	0	55	187	47	4	293	0	17	77	48	0	142	0	31	73	24	0	128	743	
11:45 AM	0	30	116	15	0	161	0	31	187	38	2	258	0	21	82	47	1	151	0	46	71	17	0	134	704	2835
12:00 PM	0	17	126	8	0	151	0	95	135	35	0	265	0	18	99	33	0	150	0	28	60	23	0	111	677	2855
12:15 PM	0	16	178	11	0	205	0	65	178	46	0	289	0	27	105	35	0	167	0	36	62	10	0	108	769	2893
12:30 PM	0	13	118	14	0	145	0	51	177	35	0	263	0	15	111	41	0	167	0	42	65	14	0	121	696	2846
12:45 PM	0	24	166	12	0	202	0	60	175	53	0	288	0	16	99	32	1	148	0	38	79	9	0	126	764	2906
1:00 PM	0	28	149	14	0	191	0	57	208	59	0	324	0	19	88	37	0	144	0	24	54	12	0	90	749	2978
1:15 PM	0	22	145	10	0	177	0	47	171	40	0	258	0	16	92	25	0	133	0	51	64	14	0	129	697	2906
1:30 PM	0	16	129	6	0	151	0	29	189	36	0	254	0	20	90	39	0	149	0	23	71	5	0	99	653	2863
1:45 PM	0	23	112	14	0	149	0	43	170	42	0	255	0	28	87	33	0	148	0	30	63	11	0	104	656	2755
PEAK HOUR: 12:15-1:15 PM	0	81	611	51	0	743	0	233	738	193	0	1164	0	77	403	145	1	626	0	140	260	45	0	445	2978	
PHF						0.91						0.90						0.94						0.88		



I:\2007\07246\Traffic\Traffic Volumes\TMC.xls

TURNING MOVEMENT DATA

NELSON & POPE

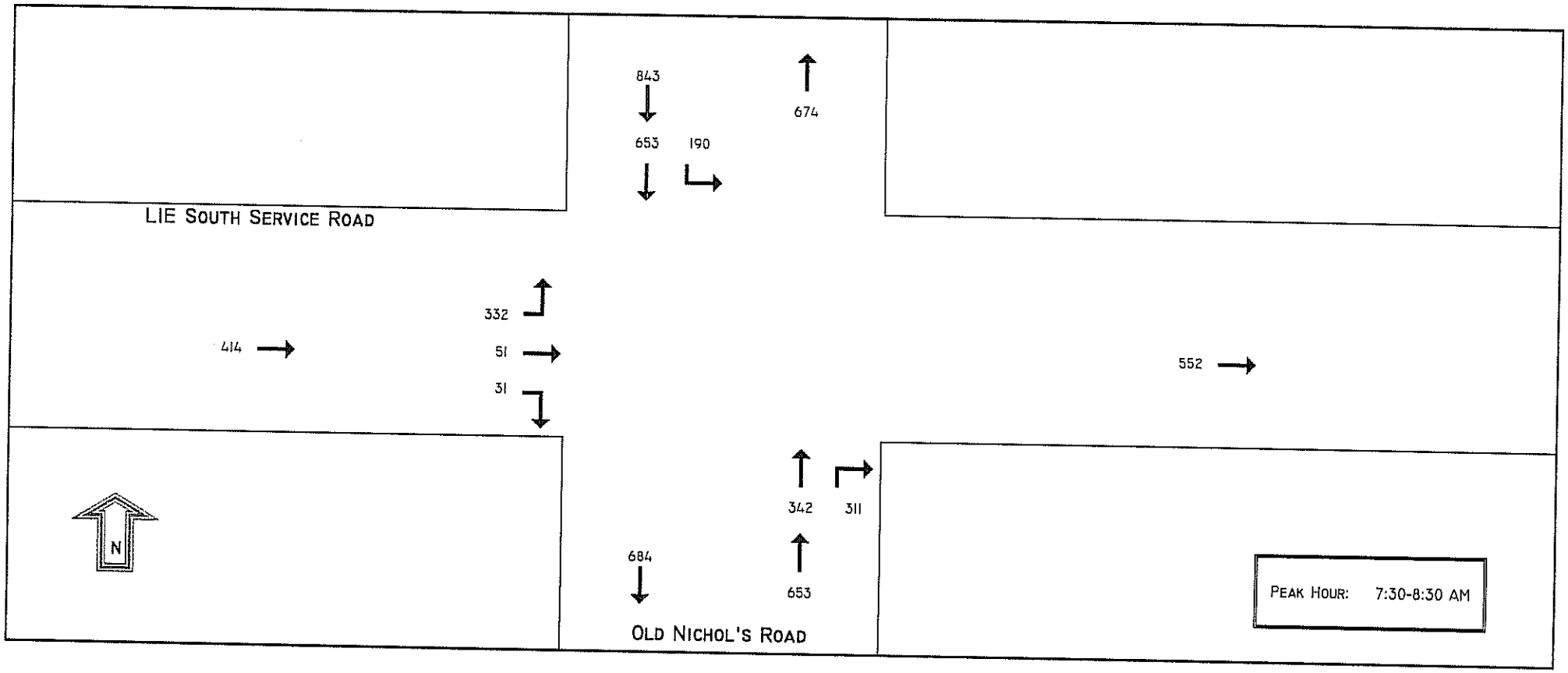
INTERSECTION: LIE SOUTH SERVICE ROAD @ OLD NICHOL'S ROAD

PROJECT TITLE: THE PRESERVE @ ISLANDIA

DATE COLLECTED: 11/14/07 WEDNESDAY

JURISDICTION: VILLAGE OF ISLANDIA

START TIME	EASTBOUND						WESTBOUND						NORTHBOUND						SOUTHBOUND						TOTAL	CUM. HOURLY
	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL		
7:00 AM	0	35	12	2	3	52	0	0	0	0	0	0	0	0	79	44	10	133	0	26	144	0	0	170	355	
7:15 AM	0	44	14	3	4	65	0	0	0	0	0	0	0	0	76	31	48	155	0	34	155	0	0	189	409	
7:30 AM	0	63	18	3	6	90	0	0	0	0	0	0	0	0	86	32	49	167	0	63	174	0	0	237	494	
7:45 AM	0	80	12	0	6	98	0	0	0	0	0	0	0	0	76	28	58	162	0	46	159	0	0	205	465	1723
8:00 AM	0	95	9	5	3	112	0	0	0	0	0	0	0	0	90	33	35	158	0	48	147	0	0	195	465	1833
8:15 AM	0	94	12	2	6	114	0	0	0	0	0	0	0	0	90	17	59	166	0	33	173	0	0	206	486	1910
8:30 AM	0	87	13	1	4	105	0	0	0	0	0	0	0	0	79	16	28	123	0	43	148	0	0	191	419	1835
8:45 AM	0	97	18	3	8	126	0	0	0	0	0	0	0	0	98	26	29	153	0	38	158	0	0	196	475	1845
PEAK HOUR: 7:30-8:30 AM	0	332	51	10	21	414	0	0	0	0	0	0	0	0	342	110	201	653	0	190	653	0	0	843	1910	
PHF						0.91						####						0.98						0.89		



TURNING MOVEMENT DATA

NELSON & POPE

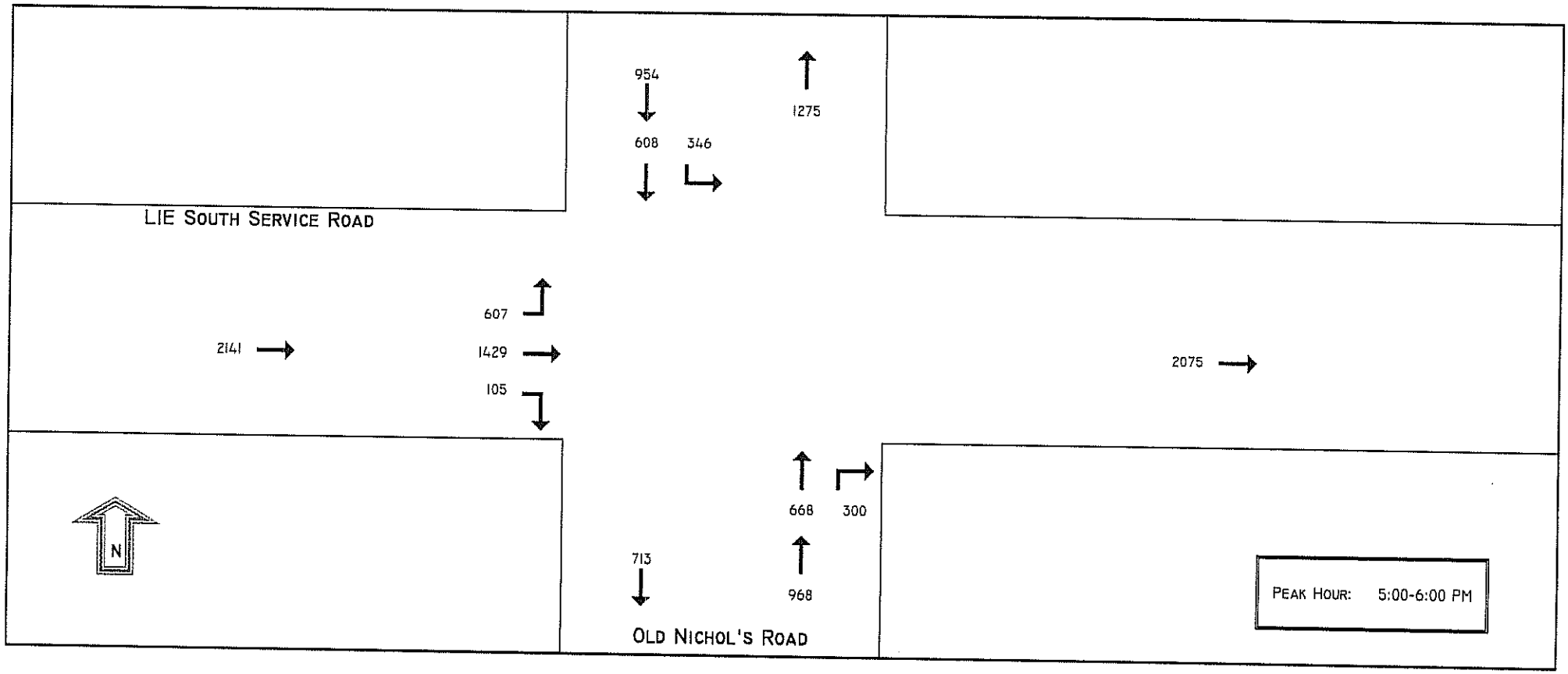
INTERSECTION: LIE SOUTH SERVICE ROAD @ OLD NICHOL'S ROAD

PROJECT TITLE: THE PRESERVE @ ISLANDIA

DATE COLLECTED: 11/14/07 WEDNESDAY

JURISDICTION: VILLAGE OF ISLANDIA

START TIME	EASTBOUND						WESTBOUND						NORTHBOUND						SOUTHBOUND						TOTAL	CUM. HOURLY
	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL		
4:00 PM	0	100	215	4	7	326	0	0	0	0	0	0	0	0	105	56	42	203	0	73	117	0	0	190	719	
4:15 PM	0	136	285	13	2	436	0	0	0	0	0	0	0	0	109	50	21	180	0	86	123	0	0	209	825	
4:30 PM	0	127	306	13	0	446	0	0	0	0	0	0	0	0	100	52	31	183	0	62	177	0	0	239	868	
4:45 PM	0	137	297	19	0	453	0	0	0	0	0	0	0	0	86	34	25	145	0	73	154	0	0	227	825	3237
5:00 PM	0	156	350	29	0	535	0	0	0	0	0	0	0	0	155	67	5	227	0	109	207	0	0	316	1078	3596
5:15 PM	0	138	390	15	8	551	0	0	0	0	0	0	0	0	195	93	11	299	0	68	142	0	0	210	1060	3831
5:30 PM	0	158	369	19	5	551	0	0	0	0	0	0	0	0	184	44	22	250	0	71	138	0	0	209	1010	3973
5:45 PM	0	155	320	19	10	504	0	0	0	0	0	0	0	0	134	40	18	192	0	98	121	0	0	219	915	4063
PEAK HOUR: 5:00-6:00 PM	0	607	1429	82	23	2141	0	0	0	0	0	0	0	0	668	244	56	968	0	346	608	0	0	954	4063	
PHF						0.97						####						0.81						0.75		



TURNING MOVEMENT DATA

NELSON & POPE

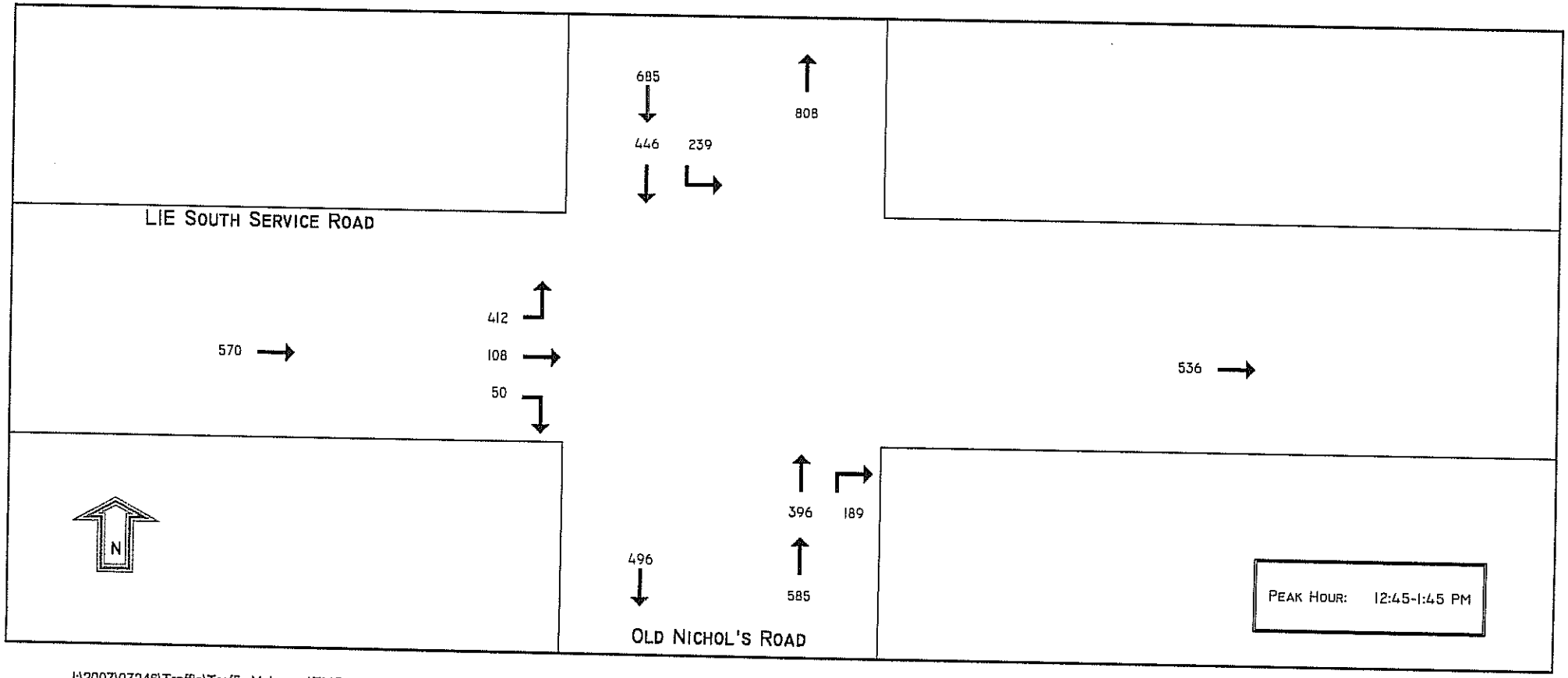
INTERSECTION: LIE SOUTH SERVICE ROAD @ OLD NICHOL'S ROAD

PROJECT TITLE: THE PRESERVE @ ISLANDIA

DATE COLLECTED: 11/17/07 SATURDAY

JURISDICTION: VILLAGE OF ISLANDIA

START TIME	EASTBOUND						WESTBOUND						NORTHBOUND						SOUTHBOUND						TOTAL	CUM. HOURLY
	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL		
11:00 AM	0	66	19	5	3	93	0	0	0	0	0	0	0	0	57	19	19	95	0	62	106	0	0	168	356	
11:15 AM	0	91	27	7	2	127	0	0	0	0	0	0	0	0	88	18	22	128	0	47	98	0	0	145	400	
11:30 AM	0	85	21	4	5	115	0	0	0	0	0	0	0	0	82	27	17	126	0	62	111	0	0	173	414	
11:45 AM	0	89	20	6	3	118	0	0	0	0	0	0	0	0	96	24	14	134	0	49	103	0	0	152	404	1574
12:00 PM	0	101	24	8	9	142	0	0	0	0	0	0	0	0	90	29	19	138	0	53	102	0	0	155	435	1653
12:15 PM	0	106	30	4	3	143	0	0	0	0	0	0	0	0	105	40	10	155	0	73	119	0	0	192	490	1743
12:30 PM	0	85	20	8	5	118	0	0	0	0	0	0	0	0	82	32	13	127	0	58	123	0	0	181	426	1755
12:45 PM	0	102	27	8	6	143	0	0	0	0	0	0	0	0	98	25	23	146	0	54	118	0	0	172	461	1812
1:00 PM	0	106	20	2	11	139	0	0	0	0	0	0	0	0	87	29	13	129	0	64	91	0	0	155	423	1800
1:15 PM	0	116	29	4	7	156	0	0	0	0	0	0	0	0	103	37	17	157	0	55	121	0	0	176	489	1799
1:30 PM	0	88	32	6	6	132	0	0	0	0	0	0	0	0	108	34	11	153	0	66	116	0	0	182	467	1840
1:45 PM	0	99	29	4	9	141	0	0	0	0	0	0	0	0	96	31	11	138	0	64	111	0	0	175	454	1833
PEAK HOUR: 12:45-1:45 PM	0	412	108	20	30	570	0	0	0	0	0	0	0	0	396	125	64	585	0	239	446	0	0	685	1840	
PHF						0.91						####						0.93						0.94		



TURNING MOVEMENT DATA

NELSON & POPE

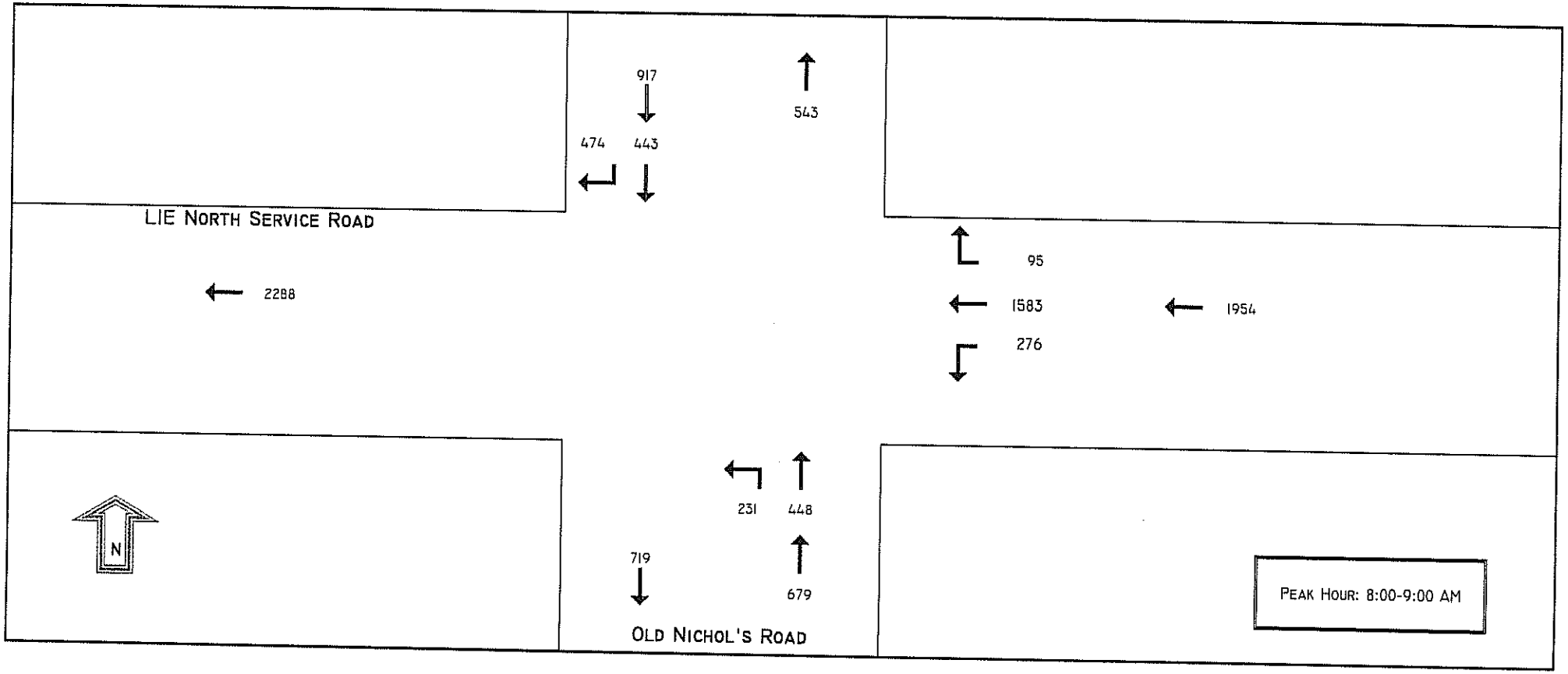
INTERSECTION: LIE NORTH SERVICE ROAD @ OLD NICHOL'S ROAD

PROJECT TITLE: THE PRESERVE @ ISLANDIA

DATE COLLECTED: 11/14/07 WEDNESDAY

JURISDICTION: VILLAGE OF ISLANDIA

START TIME	EASTBOUND						WESTBOUND						NORTHBOUND						SOUTHBOUND						TOTAL	CUM. HOURLY
	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL		
7:00 AM	0	0	0	0	0	0	0	64	260	17	2	343	0	33	46	0	0	79	0	0	93	87	0	180	602	
7:15 AM	0	0	0	0	0	0	0	63	318	9	2	392	0	32	77	0	0	109	0	0	129	127	1	257	758	
7:30 AM	0	0	0	0	0	0	0	47	337	16	2	402	0	32	93	0	0	125	0	0	131	119	0	250	777	
7:45 AM	0	0	0	0	0	0	0	70	360	25	0	453	0	48	102	0	0	150	0	0	115	76	0	191	794	2931
8:00 AM	0	0	0	0	0	0	0	70	395	20	1	486	0	62	112	0	0	174	0	0	115	129	0	244	904	3233
8:15 AM	0	0	0	0	0	0	0	68	415	25	0	508	0	69	101	0	0	170	0	0	105	134	0	239	917	3392
8:30 AM	0	0	0	0	0	0	0	69	411	24	0	504	0	52	112	0	0	164	0	0	130	91	0	221	889	3504
8:45 AM	0	0	0	0	0	0	0	69	362	22	3	456	0	48	123	0	0	171	0	0	93	120	0	213	840	3550
PEAK HOUR: 8:00-9:00 AM	0	0	0	0	0	0	0	276	1583	91	4	1954	0	231	448	0	0	679	0	0	443	474	0	917	3550	
PHF						####						0.96						0.98						0.94		



TURNING MOVEMENT DATA

NELSON & POPE

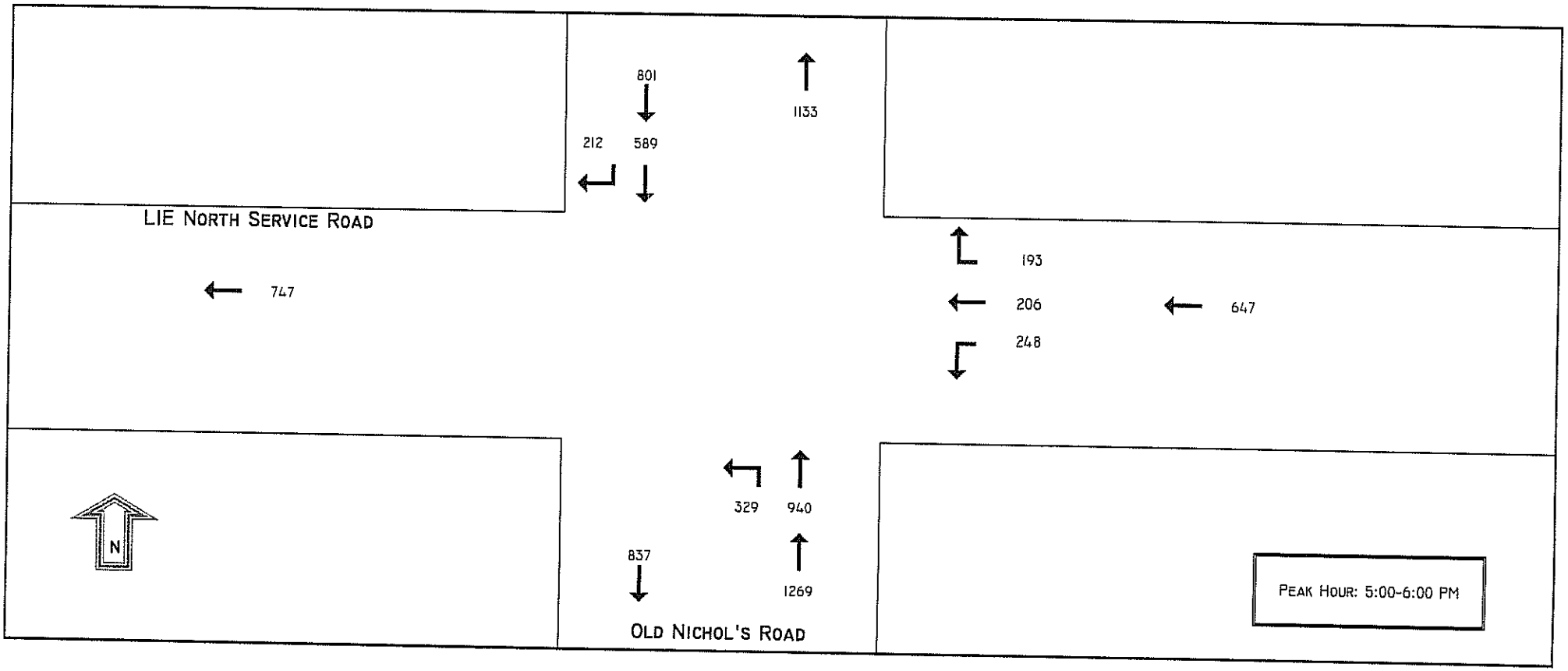
INTERSECTION: LIE NORTH SERVICE ROAD @ OLD NICHOL'S ROAD

PROJECT TITLE: THE PRESERVE @ ISLANDIA

DATE COLLECTED: 11/14/07 WEDNESDAY

JURISDICTION: VILLAGE OF ISLANDIA

START TIME	EASTBOUND						WESTBOUND						NORTHBOUND						SOUTHBOUND						TOTAL	CUM. HOURLY
	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL		
4:00 PM	0	0	0	0	0	0	0	35	49	20	9	113	0	26	168	0	0	194	0	0	125	62	0	187	494	
4:15 PM	0	0	0	0	0	0	0	48	66	15	13	142	0	21	227	0	0	248	0	0	131	53	0	184	574	
4:30 PM	0	0	0	0	0	0	0	60	51	30	15	156	0	10	217	0	0	227	0	0	124	50	0	174	557	
4:45 PM	0	0	0	0	0	0	0	51	53	28	16	148	0	26	195	0	0	221	0	0	109	39	0	148	517	2142
5:00 PM	0	0	0	0	0	0	0	65	41	46	14	166	0	81	237	0	0	318	0	0	130	52	0	182	666	2314
5:15 PM	0	0	0	0	0	0	0	66	75	30	9	180	0	122	227	0	0	349	0	0	144	64	0	208	737	2477
5:30 PM	0	0	0	0	0	0	0	55	38	41	19	153	0	82	234	0	0	316	0	0	140	40	0	180	649	2569
5:45 PM	0	0	0	0	0	0	0	62	52	29	5	148	0	44	242	0	0	286	0	0	175	56	0	231	665	2717
PEAK HOUR: 5:00-6:00 PM	0	0	0	0	0	0	0	248	206	146	47	647	0	329	940	0	0	1269	0	0	589	212	0	801	2717	
PHF					####						0.90						0.91						0.87			



TURNING MOVEMENT DATA

NELSON & POPE

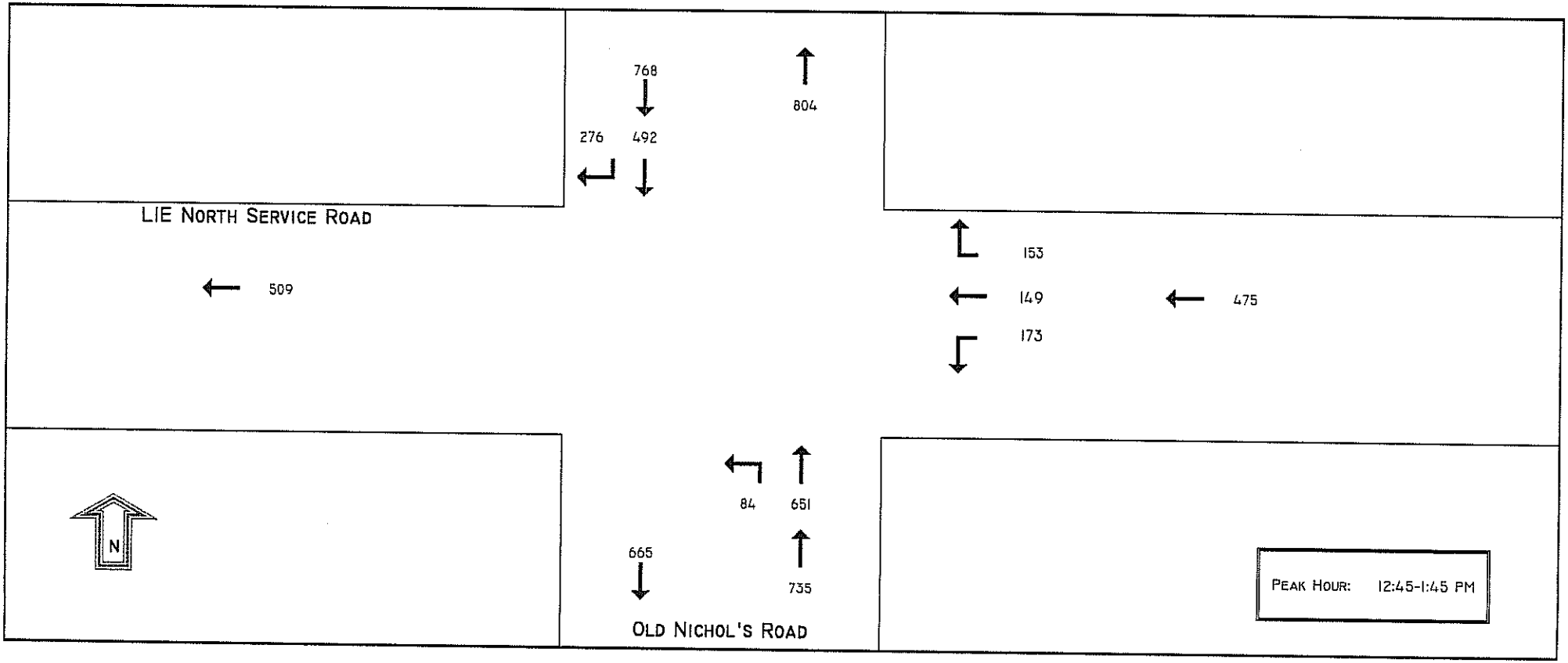
INTERSECTION: LIE NORTH SERVICE ROAD @ OLD NICHOL'S ROAD

PROJECT TITLE: THE PRESERVE @ ISLANDIA

DATE COLLECTED: 11/17/07 SATURDAY

JURISDICTION: VILLAGE OF ISLANDIA

START TIME	EASTBOUND						WESTBOUND						NORTHBOUND						SOUTHBOUND						TOTAL	CUM. HOURLY
	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL	U-TURN	LEFT	THRU	RIGHT	RTOR	TOTAL		
11:00 AM	0	0	0	0	0	0	0	40	39	31	20	130	0	22	118	0	0	140	0	0	128	77	0	205	475	
11:15 AM	0	0	0	0	0	0	0	38	53	32	18	141	0	12	145	0	0	157	0	0	111	59	0	170	468	
11:30 AM	0	0	0	0	0	0	0	38	25	24	17	104	0	11	126	0	0	137	0	0	121	67	0	188	429	
11:45 AM	0	0	0	0	0	0	0	40	32	22	13	107	0	24	148	0	0	172	0	0	104	56	0	160	439	1811
12:00 PM	0	0	0	0	0	0	0	41	34	32	19	126	0	9	176	0	0	185	0	0	104	65	1	170	481	1817
12:15 PM	0	0	0	0	0	0	0	48	30	32	13	123	0	16	163	0	0	179	0	0	137	50	0	187	489	1838
12:30 PM	0	0	0	0	0	0	0	56	37	18	19	130	0	12	126	0	0	138	0	0	121	71	11	203	471	1880
12:45 PM	0	0	0	0	0	0	0	48	42	32	14	136	0	24	164	0	0	188	0	0	122	80	0	202	526	1967
1:00 PM	0	0	0	0	0	0	0	39	26	22	20	107	0	22	158	0	0	180	0	0	112	52	0	164	451	1937
1:15 PM	0	0	0	0	0	0	0	42	46	27	12	127	0	21	166	0	0	187	0	0	127	67	1	195	509	1957
1:30 PM	0	0	0	0	0	0	0	44	35	17	9	105	0	17	163	0	0	180	0	0	131	75	1	207	492	1978
1:45 PM	0	0	0	0	0	0	0	52	32	22	9	115	0	14	144	0	0	158	0	0	120	62	0	182	455	1907
PEAK HOUR: 12:45-1:45 PM	0	0	0	0	0	0	0	173	149	98	55	475	0	84	651	0	0	735	0	0	492	274	2	768	1978	
PHF						####						0.87						0.98						0.93		



I:\2007\07246\Traffic\Traffic Volumes\TMC.xls

Appendix B: Trip Generation

Summary of Trip Generation Calculation
For 25 Dwelling Units of Residential Condominium / Townhouse
March 26, 2008

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	7.90	0.00	1.00	198
7-9 AM Peak Hour Enter	0.12	0.00	1.00	3
7-9 AM Peak Hour Exit	0.57	0.00	1.00	14
7-9 AM Peak Hour Total	0.68	0.00	1.00	17
4-6 PM Peak Hour Enter	0.52	0.00	1.00	13
4-6 PM Peak Hour Exit	0.25	0.00	1.00	6
4-6 PM Peak Hour Total	0.77	0.00	1.00	19
AM Pk Hr, Generator, Enter	0.12	0.00	1.00	3
AM Pk Hr, Generator, Exit	0.54	0.00	1.00	14
AM Pk Hr, Generator, Total	0.66	0.00	1.00	17
PM Pk Hr, Generator, Enter	1.20	0.00	1.00	30
PM Pk Hr, Generator, Exit	0.67	0.00	1.00	17
PM Pk Hr, Generator, Total	1.87	0.00	1.00	47
Saturday 2-Way Volume	20.74	0.00	1.00	518
Saturday Peak Hour Enter	1.08	0.00	1.00	27
Saturday Peak Hour Exit	0.92	0.00	1.00	23
Saturday Peak Hour Total	2.00	0.00	1.00	50
Sunday 2-Way Volume	17.42	0.00	1.00	436
Sunday Peak Hour Enter	1.09	0.00	1.00	27
Sunday Peak Hour Exit	1.14	0.00	1.00	28
Sunday Peak Hour Total	2.23	0.00	1.00	56

Note: A zero indicates no data available.
The above rates were calculated from these equations:

24-Hr. 2-Way Volume:	LN(T) = .85LN(X) + 2.55, R^2 = 0.83
7-9 AM Peak Hr. Total:	LN(T) = .8LN(X) + .26
	R^2 = 0.76 , 0.17 Enter, 0.83 Exit
4-6 PM Peak Hr. Total:	LN(T) = .82LN(X) + .32
	R^2 = 0.8 , 0.67 Enter, 0.33 Exit
AM Gen Pk Hr. Total:	LN(T) = .82LN(X) + .17
	R^2 = 0.8 , 0.18 Enter, 0.82 Exit
PM Gen Pk Hr. Total:	T = .34(X) + 38.31
	R^2 = 0.83 , 0.64 Enter, 0.36 Exit
Sat. 2-Way Volume:	T = 3.62(X) + 427.93, R^2 = 0.84
Sat. Pk Hr. Total:	T = .29(X) + 42.63
	R^2 = 0.84 , 0.54 Enter, 0.46 Exit
Sun. 2-Way Volume:	T = 3.13(X) + 357.26, R^2 = 0.88
Sun. Pk Hr. Total:	T = .23(X) + 50.01
	R^2 = 0.78 , 0.49 Enter, 0.51 Exit

Source: Institute of Transportation Engineers
Trip Generation, 7th Edition, 2003.

TRIP GENERATION BY MICROTRANS

Summary of Trip Generation Calculation
For 47 Dwelling Units of Elderly Housing - Detached
March 26, 2008

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	6.06	0.00	1.00	285
7-9 AM Peak Hour Enter	0.12	0.00	1.00	6
7-9 AM Peak Hour Exit	0.19	0.00	1.00	9
7-9 AM Peak Hour Total	0.31	0.00	1.00	15
4-6 PM Peak Hour Enter	0.37	0.00	1.00	17
4-6 PM Peak Hour Exit	0.24	0.00	1.00	11
4-6 PM Peak Hour Total	0.61	0.00	1.00	29
AM Pk Hr, Generator, Enter	0.00	0.00	1.00	0
AM Pk Hr, Generator, Exit	0.00	0.00	1.00	0
AM Pk Hr, Generator, Total	0.00	0.00	1.00	0
PM Pk Hr, Generator, Enter	0.00	0.00	1.00	0
PM Pk Hr, Generator, Exit	0.00	0.00	1.00	0
PM Pk Hr, Generator, Total	0.00	0.00	1.00	0
Saturday 2-Way Volume	0.00	0.00	1.00	0
Saturday Peak Hour Enter	0.00	0.00	1.00	0
Saturday Peak Hour Exit	0.00	0.00	1.00	0
Saturday Peak Hour Total	0.00	0.00	1.00	0
Sunday 2-Way Volume	0.00	0.00	1.00	0
Sunday Peak Hour Enter	0.00	0.00	1.00	0
Sunday Peak Hour Exit	0.00	0.00	1.00	0
Sunday Peak Hour Total	0.00	0.00	1.00	0

Note: A zero indicates no data available.
The above rates were calculated from these equations:

24-Hr. 2-Way Volume:	LN(T) = .85LN(X) + 2.38, R^2 = 0.98
7-9 AM Peak Hr. Total:	LN(T) = .86LN(X) + -.63
	R^2 = 0.96 , 0.38 Enter, 0.62 Exit
4-6 PM Peak Hr. Total:	LN(T) = .72LN(X) + .58
	R^2 = 0.88 , 0.61 Enter, 0.39 Exit
AM Gen Pk Hr. Total:	0
	R^2 = 0 , 0 Enter, 0 Exit
PM Gen Pk Hr. Total:	0
	R^2 = 0 , 0 Enter, 0 Exit
Sat. 2-Way Volume:	0, R^2 = 0
Sat. Pk Hr. Total:	0
	R^2 = 0 , 0 Enter, 0 Exit
Sun. 2-Way Volume:	0, R^2 = 0
Sun. Pk Hr. Total:	0
	R^2 = 0 , 0 Enter, 0 Exit

Source: Institute of Transportation Engineers
Trip Generation, 7th Edition, 2003.

Summary of Trip Generation Calculation
For 47 Dwelling Units of Elderly Housing - Detached
March 26, 2008

	Average Rate	Standard Deviation	Adjustment Factor	Driveway Volume
Avg. Weekday 2-Way Volume	3.71	2.04	1.00	174
7-9 AM Peak Hour Enter	0.08	0.00	1.00	4
7-9 AM Peak Hour Exit	0.12	0.00	1.00	6
7-9 AM Peak Hour Total	0.20	0.45	1.00	9
4-6 PM Peak Hour Enter	0.16	0.00	1.00	8
4-6 PM Peak Hour Exit	0.10	0.00	1.00	5
4-6 PM Peak Hour Total	0.26	0.51	1.00	12
AM Pk Hr, Generator, Enter	0.16	0.00	1.00	8
AM Pk Hr, Generator, Exit	0.15	0.00	1.00	7
AM Pk Hr, Generator, Total	0.31	0.00	1.00	15
PM Pk Hr, Generator, Enter	0.21	0.00	1.00	10
PM Pk Hr, Generator, Exit	0.14	0.00	1.00	7
PM Pk Hr, Generator, Total	0.35	0.00	1.00	16
Saturday 2-Way Volume	2.77	0.00	1.00	130
Saturday Peak Hour Enter	0.13	0.00	1.00	6
Saturday Peak Hour Exit	0.14	0.00	1.00	7
Saturday Peak Hour Total	0.27	0.00	1.00	13
Sunday 2-Way Volume	2.33	0.00	1.00	110
Sunday Peak Hour Enter	0.11	0.00	1.00	5
Sunday Peak Hour Exit	0.10	0.00	1.00	5
Sunday Peak Hour Total	0.21	0.00	1.00	10

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation, 7th Edition, 2003.

TRIP GENERATION BY MICROTRANS

Appendix C: Level of Service Definitions

LEVEL OF SERVICE: SIGNALIZED INTERSECTIONS

Level of service for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The levels of service range between level of service A (relatively congestion-free) and level of service F (congested).

The delay experienced by a motorist is made up of a number of factors that relate to control, geometry, traffic, and incidents at an intersection. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during ideal conditions: in the absence of traffic control, in the absence of geometric delay, in the absence of any incidents, and when there are no other vehicles on the road. The portion of the total delay attributed to the control facility is called the control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Control delay may also be referred to as signal delay for signalized intersections.

Level of service criteria for signalized intersections is determined in terms of the average control delay per vehicle. The following average control delays are used to determine approach levels of service:

Level of Service A	$\leq$ 10.0 seconds per vehicle
Level of Service B	> 10.0 and $\leq$ 20.0 seconds per vehicle
Level of Service C	> 20.0 and $\leq$ 35.0 seconds per vehicle
Level of Service D	> 35.0 and $\leq$ 55.0 seconds per vehicle
Level of Service E	> 55.0 and $\leq$ 80.0 seconds per vehicle
Level of Service F	> 80.0 seconds per vehicle

Level of Service A describes operations with very low control delay. This occurs when progression is extremely favorable; most vehicles arrive during the green phase and do not stop at all. Short traffic signal cycles may contribute to low delay.

Level of Service B generally occurs with good progression and/or short traffic signal cycle lengths. More vehicles stop than for level of service A, causing higher average delays.

Level of Service C has higher delays than level of service B. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures, where motorists are required to wait through an entire signal cycle, may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.

Level of Service D At this level, 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 ratios. The proportion of stopping vehicles increases. Individual cycle failures are noticeable.

Level of Service E is considered the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths and high volume-to-capacity ratios. Individual cycle failures occur frequently.

Level of Service F is considered unacceptable to most drivers. This condition often occurs with over saturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may occur at volume to capacity ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

LEVEL OF SERVICE: TWO WAY STOP CONTROLLED INTERSECTIONS

The quality of traffic service at a two-way stop controlled, or "TWSC," intersection is measured according to the level of service and capacity of individual legs. The level of service ranges from LOS A to LOS F, just as with signalized intersections.

The right of way at the TWSC intersection is controlled by stop signs on two opposing legs of an intersection (on one leg of a "T"-type intersection). The capacity of a controlled leg is based on the distribution of gaps in the major street traffic flow, driver judgment in selecting a gap through which to execute the desired maneuver and the follow up time required by each driver in a queue.

The level of service for a TWSC intersection is determined by the computed or measured control delay and is defined for each minor movement. Level of service is not defined for the intersection as a whole. The delay experienced by a motorist is made up of a number of factors that relate to control, geometry, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during conditions with ideal geometry and in the absence of incidents, control, and traffic. This program only quantifies that portion of the total delay attributed to traffic control measures, either traffic signals or stop signs. This delay is called control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration. Average control delay for any particular minor movement is a function of the approach and the degree of saturation.

The expectation is that TWSC intersections are designed to carry smaller traffic volumes than signalized intersections. Therefore, the delay threshold times are lower for the same LOS grades. The following average control delays are used to determine approach levels of service:

Level of Service A	$\leq$ 10 seconds per vehicle
Level of Service B	$>$ 10 and $\leq$ 15 seconds per vehicle
Level of Service C	$>$ 15 and $\leq$ 25 seconds per vehicle
Level of Service D	$>$ 25 and $\leq$ 35 seconds per vehicle
Level of Service E	$>$ 35 and $\leq$ 50 seconds per vehicle
Level of Service F	$>$ 50 seconds per vehicle

Appendix D: Capacity Analysis/Level of Service Worksheets & Summary Tables

Detailed LOS Summary - AM Peak Hour Analysis

			Existing Condition			No Build Condition 2007			Build Condition 2007		
Intersection	**Approach**	**Movt.**	**V/C** Ratio	**Delay** Sec/Veh	**LOS**	**V/C** Ratio	**Delay** Sec/Veh	**LOS**	**V/C** Ratio	**Delay** Sec/Veh	**LOS**
LIE North Servce Road at Old Nichols Road	WB	L	0.25	20.4	C	0.25	20.5	C	0.25	20.5	C
		TR	0.87	32.9	C	0.89	34.2	C	0.89	34.2	C
	NB	L	0.67	48.3	D	0.69	49.0	D	0.71	50.1	D
		T	0.27	15.5	B	0.27	15.5	B	0.27	15.5	B
	SB	T	0.34	25.9	C	0.35	26.0	C	0.35	26.0	C
		R	0.99	70.4	E	1.01	76.7	E	1.01	76.7	E
		Overall		34.6	C		36.1	D		36.2	D
LIE South Servce Road at Old Nichols Road	EB	L	0.44	34.0	C	0.45	34.2	C	0.45	34.2	C
		TR	0.08	29.6	C	0.08	29.7	C	0.09	29.7	C
	NB	T	0.21	14.9	B	0.22	14.9	B	0.22	14.9	B
		R	0.16	14.5	B	0.17	14.5	B	0.17	14.6	B
	SB	L	0.59	45.2	D	0.61	45.7	D	0.61	45.7	D
		T	0.32	8.0	A	0.33	8.1	A	0.33	8.1	A
		Overall		20.0	B		20.1	C		20.1	C
NYS Route 454 at Nichols Road	EB	L	0.17	30.6	C	0.19	31.9	C	0.19	31.9	C
		T	0.72	37.9	D	0.74	38.5	D	0.74	38.5	D
		R	0.07	25.4	C	0.07	25.5	C	0.07	25.5	C
	WB	L	0.78	37.0	D	0.82	43.9	D	0.82	43.9	D
		T	0.79	25.5	C	0.80	26.3	C	0.80	26.3	C
		R	0.32	28.5	C	0.33	28.6	C	0.33	28.7	C
	NB	L	0.76	68.1	E	0.80	76.3	E	0.81	79.0	E
		T	0.48	43.6	D	0.49	42.8	D	0.50	43.8	D
		R	0.70	51.6	D	0.71	52.5	D	0.71	52.5	D
	SB	L	0.82	68.2	E	0.86	74.9	E	0.88	79.2	E
		TR	0.78	51.7	D	0.79	52.6	D	0.80	53.0	D
		Overall		38.6	D		40.0	D		40.4	D
Site Access at Nichols Road	SB	LT	-	-	-	-	-	-	0.00	8.6	A
	WB	LR	-	-	-	-	-	-	0.11	22.1	C

Detailed LOS Summary - PM Peak Hour Analysis

			Existing Condition			No Build Condition 2007			Build Condition 2007		
Intersection	**Approach**	**Movt.**	**V/C** Ratio	**Delay** Sec/Veh	**LOS**	**V/C** Ratio	**Delay** Sec/Veh	**LOS**	**V/C** Ratio	**Delay** Sec/Veh	**LOS**
LIE North Servce Road at Old Nichols Road	WB	L	0.30	27.7	C	0.31	27.8	C	0.32	27.9	C
		TR	0.27	27.2	C	0.28	27.3	C	0.28	27.3	C
	NB	L	0.45	33.2	C	0.46	33.3	C	0.47	33.4	C
		T	0.50	12.6	B	0.52	12.7	B	0.52	12.7	B
	SB	T	0.52	30.1	C	0.54	30.2	C	0.54	30.3	C
		R	0.53	31.0	C	0.54	31.2	C	0.54	31.2	C
	Overall			24.1	C		24.2	C		24.3	C
LIE South Servce Road at Old Nichols Road	EB	L	0.42	20.5	C	0.43	20.7	C	0.43	20.7	C
		TR	1.02	57.4	E	1.05	65.1	E	1.06	67.7	E
	NB	T	0.94	53.4	D	0.96	57.4	E	0.97	59.5	E
		R	0.79	45.6	D	0.82	47.9	D	0.83	49.3	D
	SB	L	0.96	73.3	E	0.98	78.9	E	0.98	78.9	E
		T	0.51	19.7	B	0.52	19.9	B	0.52	20.0+	C
	Overall			45.8	D		49.9	D		51.3	D
NYS Route 454 at Nichols Road	EB	L	0.41	26.6	C	0.44	27.2	C	0.45	27.2	C
		T	1.05	82.4	F	1.07	91.1	F	1.07	91.1	F
		R	0.06	27.5	C	0.07	27.6	C	0.07	27.6	C
	WB	L	1.18	136.8	F	1.21	172.6	F	1.21	172.6	F
		T	0.70	29.3	C	0.71	29.8	C	0.71	29.8	C
		R	0.38	22.8	C	0.39	22.9	C	0.40	23.0	C
	NB	L	0.61	57.9	E	0.64	60.0	E	0.64	60.5	E
		T	0.95	81.8	F	0.97	86.6	F	0.98	88.7	F
		R	0.48	55.1	E	0.50	55.5	E	0.50	55.5	E
	SB	L	1.02	107.2	F	1.04	113.0	F	1.05	117.8	F
		TR	0.50	47.3	D	0.52	47.5	D	0.52	47.6	D
	Overall			65.8	E		72.1	E		72.6	E
Site Access at Nichols Road	SB	LT	-	-	-	-	-	-	0.04	11.5	B
	WB	LR	-	-	-	-	-	-	0.16	40.9	E

Detailed LOS Summary - Saturday Peak Hour Analysis

			Existing Condition			No Build Condition 2007			Build Condition 2007		
Intersection	**Approach**	**Movt.**	**V/C** Ratio	**Delay** Sec/Veh	**LOS**	**V/C** Ratio	**Delay** Sec/Veh	**LOS**	**V/C** Ratio	**Delay** Sec/Veh	**LOS**
LIE North Servce Road at Old Nichols Road	WB	L	0.21	18.3	B	0.21	18.4	B	0.22	18.4	B
		TR	0.22	18.3	B	0.22	18.3	B	0.22	18.3	B
	NB	L	0.23	29.2	C	0.24	29.2	C	0.26	29.3	C
		T	0.47	12.1	B	0.48	12.2	B	0.48	12.2	B
	SB	T	0.42	21.4	C	0.43	21.5	C	0.43	21.5	C
		R	0.73	29.6	C	0.75	30.7	C	0.75	30.7	C
	Overall			19.0	B		19.2	B		19.3	B
LIE South Servce Road at Old Nichols Road	EB	L	0.46	21.0	C	0.47	21.2	C	0.47	21.2	C
		TR	0.16	17.9	B	0.16	17.9	B	0.17	18.0	B
	NB	T	0.48	21.9	C	0.50	22.0	C	0.51	22.1	C
		R	0.05	18.7	B	0.06	18.8	B	0.07	18.9	B
	SB	L	0.62	32.7	C	0.63	33.1	C	0.63	33.1	C
		T	0.30	10.6	B	0.31	10.7	B	0.32	10.7	B
	Overall			19.8	B		19.9	B		20.0-	B
NYS Route 454 at Nichols Road	EB	L	0.41	28.5	C	0.43	28.7	C	0.43	28.7	C
		T	0.82	48.0	D	0.84	49.2	D	0.84	49.2	D
		R	0.16	33.4	C	0.16	33.4	C	0.16	33.4	C
	WB	L	0.65	27.9	C	0.68	30.5	C	0.68	30.5	C
		T	0.66	28.5	C	0.67	28.9	C	0.67	28.9	C
		R	0.40	24.2	C	0.41	24.4	C	0.42	24.5	C
	NB	L	0.40	39.7	D	0.41	39.9	D	0.41	39.9	D
		T	0.74	49.9	D	0.75	50.6	D	0.76	51.0	D
		R	0.64	49.5	D	0.65	50.2	D	0.65	50.2	D
	SB	L	0.56	28.5	C	0.58	29.2	C	0.61	30.0	C
		TR	0.41	35.2	D	0.42	35.3	D	0.43	35.4	D
	Overall			37.0	D		37.8	D		37.8	D
Site Access at Nichols Road	SB	LT	-	-	-	-	-	-	0.03	9.8	A
	WB	LR	-	-	-	-	-	-	0.16	26.3	D

Existing Condition

FULL REPORT

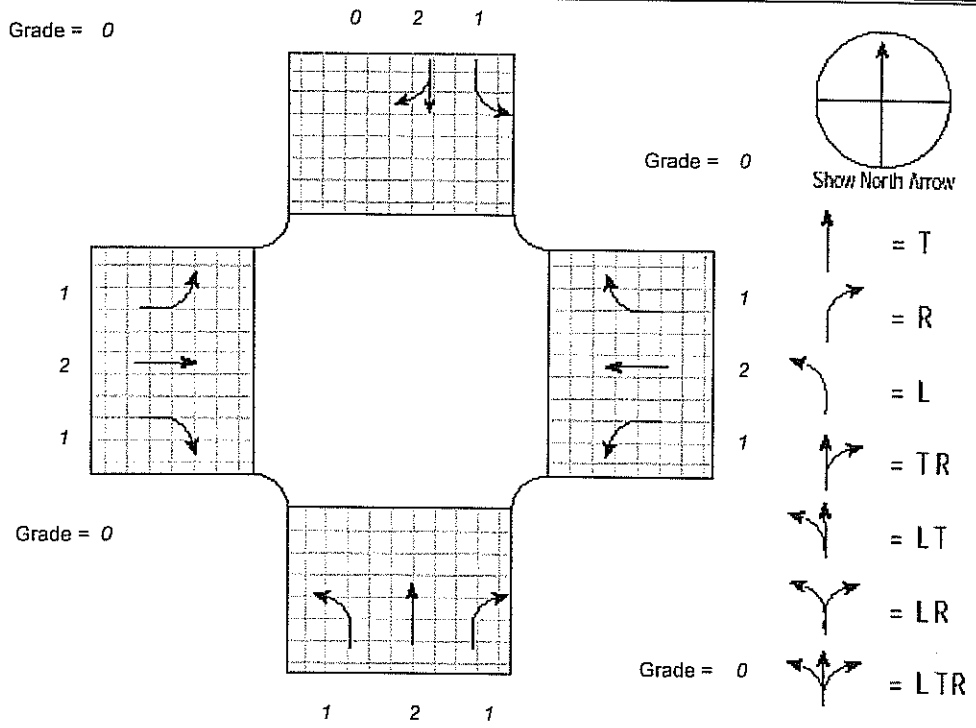
General Information

Analyst *MCM*
Agency or Co. *NELSON & POPE*
Date Performed *11/20/2007*
Time Period *EXISTING AM 2007*

Site Information

Intersection *NYS 454 @ NICHOLS RD*
Area Type *All other areas*
Jurisdiction
Analysis Year *2007*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)	13	917	39	220	1340	173	80	342	210	174	587	70
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.91	0.91	0.91	0.87	0.87	0.87	0.75	0.75	0.75	0.91	0.91	0.91
Actuated (P/A)	P	P	P	A	A	A	A	A	A	A	A	A
Startup Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Extension of Effective Green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Arrival Type	3	3	3	3	3	3	3	3	3	3	3	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	3	0	0	4	0	0	0
Lane Width	12.0	11.0	10.0	11.0	11.0	10.0	10.0	12.0	10.0	10.0	12.0	
Parking (Y or N)	N		N	N		N	N		N	N		N
Parking/Hour												
Bus Stops/Hour	0	0	0	0	0	0	0	0	0	0	0	
Pedestrian Timing	3.2			3.2			3.2			3.2		

	WB Only	EW Perm	03	04	Excl. Left	NS Perm	07	08
Timing	G = 17.9	G = 57.2	G =	G =	G = 5.6	G = 37.3	G =	G =
	Y = 5	Y = 6	Y =	Y =	Y = 5	Y = 6	Y =	Y =

Duration of Analysis (hrs) = 0.25

Cycle Length C = 140.0

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume	13	917	39	220	1340	173	80	342	210	174	587	70
PHF	0.91	0.91	0.91	0.87	0.87	0.87	0.75	0.75	0.75	0.91	0.91	0.91
Adjusted Flow Rate	14	1008	43	253	1540	195	107	456	275	191	645	77
Lane Group	L	T	R	L	T	R	L	T	R	L	TR	
Adjusted Flow Rate	14	1008	43	253	1540	195	107	456	275	191	722	
Proportion of LT or RT	1.000	--	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--	0.107

Saturation Flow Rate

Base Satflow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Number of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
f_W	1.000	0.967	0.933	0.967	0.967	0.933	0.933	1.000	0.933	0.933	1.000	
f_{HV}	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
f_g	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_p	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_{bb}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_a	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_{LU}	1.000	0.952	1.000	1.000	0.952	1.000	1.000	0.952	1.000	1.000	0.952	
f_{LT}	0.109	1.000	--	0.950	1.000	--	0.950	1.000	--	0.950	1.000	--
Secondary f_{LT}			--	0.129	0.129	--	0.139	0.139	--	0.311	0.311	--
f_{RT}	--	1.000	0.850	--	1.000	0.850	--	1.000	0.850	--	0.984	
f_{Lpb}	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--
f_{Rpb}	--	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--	1.000	
Adjusted Satflow	202	3428	1478	1711	3428	1478	1652	3547	1478	1652	3490	
Secondary Adjusted Satflow			--	233	444	--	241	492	--	541	1087	--

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB			SB		
Lane Group	L	T	R	L	T	R	L	T	R	L	TR	
Adjusted Flow Rate	14	1008	43	253	1540	195	107	456	275	191	722	
Satflow Rate	202	3428	1478	1711	3428	1478	1652	3547	1478	1652	3490	
Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Green Ratio	0.41	0.41	0.41	0.58	0.57	0.41	0.35	0.27	0.27	0.35	0.27	
Lane Group Capacity	83	1401	604	324	1961	604	141	945	394	233	930	
v/c Ratio	0.17	0.72	0.07	0.78	0.79	0.32	0.76	0.48	0.70	0.82	0.78	
Flow Ratio	0.07	0.29	0.03	0.13	0.45	0.13	0.04	0.13	0.19	0.04	0.21	
Critical Lane Group	N	N	N	N	Y	N	Y	N	N	N	N	
Sum Flow Ratios	0.72											
Lost Time/Cycle	12.00											
Critical v/c Ratio	0.79											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane Group	L	T	R	L	T	R	L	T	R	L	TR	
Adjusted Flow Rate	14	1008	43	253	1540	195	107	456	275	191	722	
Lane Group Capacity	83	1401	604	324	1961	604	141	945	394	233	930	
v/c Ratio	0.17	0.72	0.07	0.78	0.79	0.32	0.76	0.48	0.70	0.82	0.78	
Green Ratio	0.41	0.41	0.41	0.58	0.57	0.41	0.35	0.27	0.27	0.35	0.27	
Uniform Delay d_1	26.3	34.7	25.2	25.3	23.3	28.2	47.1	43.2	46.3	48.0	47.5	
Delay Factor k	0.50	0.50	0.50	0.33	0.33	0.11	0.31	0.11	0.26	0.36	0.33	
Incremental Delay d_2	4.3	3.2	0.2	11.7	2.2	0.3	21.0	0.4	5.4	20.2	4.2	
PF Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
Control Delay	30.6	37.9	25.4	37.0	25.5	28.5	68.1	43.6	51.6	68.2	51.7	
Lane Group LOS	C	D	C	D	C	C	E	D	D	E	D	
Approach Delay	37.3			27.2			49.4			55.1		
Approach LOS	D			C			D			E		
Intersection Delay	38.6			Intersection LOS						D		

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FULL REPORT

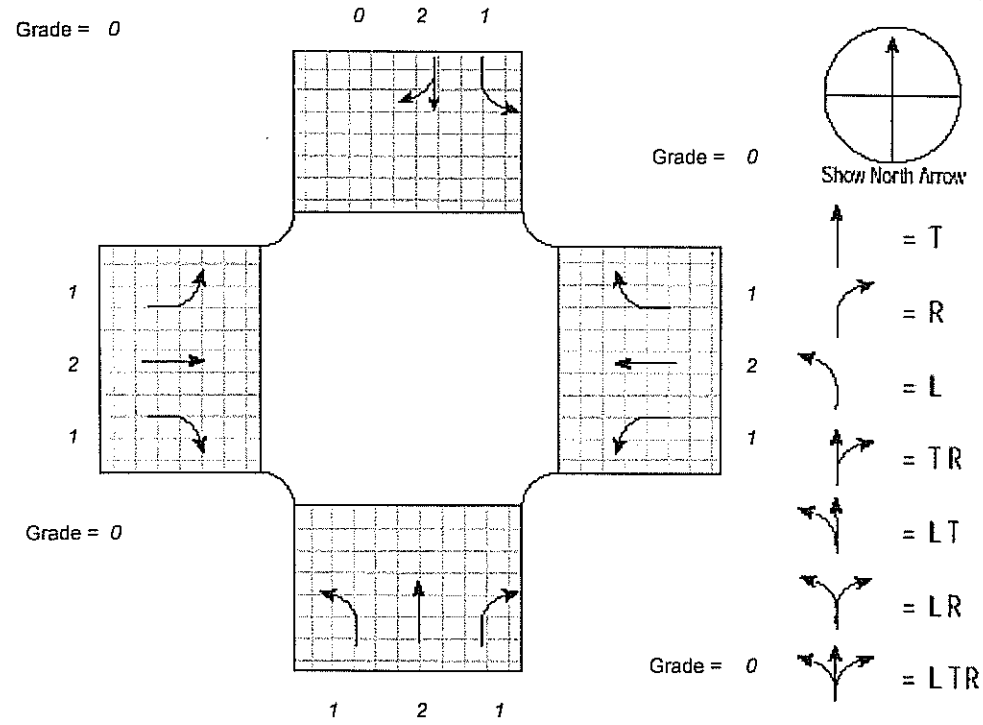
General Information

Analyst *MCM*
Agency or Co. *NELSON & POPE*
Date Performed *11/20/2007*
Time Period *EXISTING PM 2007*

Site Information

Intersection *NYS 454 @ NICHOLS RD*
Area Type *All other areas*
Jurisdiction
Analysis Year *2007*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)	75	1306	45	358	1117	285	118	584	248	218	377	35
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.90	0.90	0.90	0.88	0.88	0.88
Actuated (P/A)	A	P	P	A	A	A	A	A	A	A	A	A
Startup Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Extension of Effective Green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Arrival Type	3	3	3	3	3	3	3	3	3	3	3	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	0	0	11	0	0	23	0	0	124	0	0	0
Lane Width	12.0	11.0	10.0	11.0	11.0	10.0	10.0	12.0	10.0	10.0	12.0	
Parking (Y or N)	N		N	N		N	N		N	N		N
Parking/Hour												
Bus Stops/Hour	0	0	0	0	0	0	0	0	0	0	0	
Pedestrian Timing	3.2			3.2			3.2			3.2		

	Excl. Left	WB Only	EW Perm	04	Excl. Left	SB Only	NS Perm	08
Timing	G = 6.9	G = 12.7	G = 60.6	G =	G = 5.1	G = 7.7	G = 29.0	G =
	Y = 5	Y = 3	Y = 6	Y =	Y = 5	Y = 3	Y = 6	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 150.0		

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume	75	1306	45	358	1117	285	118	584	248	218	377	35
PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.90	0.90	0.90	0.88	0.88	0.88
Adjusted Flow Rate	83	1451	38	389	1214	285	131	649	138	248	428	40
Lane Group	L	T	R	L	T	R	L	T	R	L	TR	
Adjusted Flow Rate	83	1451	38	389	1214	285	131	649	138	248	468	
Proportion of LT or RT	1.000	–	1.000	1.000	–	1.000	1.000	–	1.000	1.000	–	0.085

Saturation Flow Rate

Base Satflow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Number of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
f_W	1.000	0.967	0.933	0.967	0.967	0.933	0.933	1.000	0.933	0.933	1.000	
f_{HV}	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
f_g	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_p	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_{bb}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_a	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_{LU}	1.000	0.952	1.000	1.000	0.952	1.000	1.000	0.952	1.000	1.000	0.952	
f_{LT}	0.950	1.000	–	0.950	1.000	–	0.950	1.000	–	0.950	1.000	–
Secondary f_{LT}	0.160	0.160	–	0.060	0.060	–	0.471	0.471	–	0.114	0.114	–
f_{RT}	–	1.000	0.850	–	1.000	0.850	–	1.000	0.850	–	0.987	
f_{Lpb}	1.000	1.000	–	1.000	1.000	–	1.000	1.000	–	1.000	1.000	–
f_{Rpb}	–	1.000	1.000	–	1.000	1.000	–	1.000	1.000	–	1.000	
Adjusted Satflow	1770	3428	1478	1711	3428	1478	1652	3547	1478	1652	3501	
Secondary Adjusted Satflow	299	550	–	108	206	–	820	1672	–	199	400	–

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB			SB		
Lane Group	L	T	R	L	T	R	L	T	R	L	TR	
Adjusted Flow Rate	83	1451	38	389	1214	285	131	649	138	248	468	
Satflow Rate	1770	3428	1478	1711	3428	1478	1652	3547	1478	1652	3501	
Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Green Ratio	0.45	0.40	0.40	0.61	0.51	0.51	0.23	0.19	0.19	0.35	0.26	
Lane Group Capacity	202	1385	597	329	1744	752	215	686	286	244	927	
v/c Ratio	0.41	1.05	0.06	1.18	0.70	0.38	0.61	0.95	0.48	1.02	0.50	
Flow Ratio	0.05	0.42	0.03	0.16	0.35	0.19	0.03	0.18	0.09	0.12	0.13	
Critical Lane Group	N	N	N	Y	N	N	N	N	N	Y	N	
Sum Flow Ratios	1.54											
Lost Time/Cycle	12.00											
Critical v/c Ratio	1.68											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane Group	L	T	R	L	T	R	L	T	R	L	TR	
Adjusted Flow Rate	83	1451	38	389	1214	285	131	649	138	248	468	
Lane Group Capacity	202	1385	597	329	1744	752	215	686	286	244	927	
v/c Ratio	0.41	1.05	0.06	1.18	0.70	0.38	0.61	0.95	0.48	1.02	0.50	
Green Ratio	0.45	0.40	0.40	0.61	0.51	0.51	0.23	0.19	0.19	0.35	0.26	
Uniform Delay d_1	25.3	44.7	27.3	28.0	28.0	22.4	52.9	59.7	53.8	45.3	46.8	
Delay Factor k	0.11	0.50	0.50	0.50	0.26	0.11	0.20	0.46	0.11	0.50	0.11	
Incremental Delay d_2	1.4	37.7	0.2	108.8	1.2	0.3	5.0	22.1	1.3	61.9	0.4	
PF Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
Control Delay	26.6	82.4	27.5	136.8	29.3	22.8	57.9	81.8	55.1	107.2	47.3	
Lane Group LOS	C	F	C	F	C	C	E	F	E	F	D	
Approach Delay	78.1			50.4			74.4			68.0		
Approach LOS	E			D			E			E		
Intersection Delay	65.8			Intersection LOS						E		

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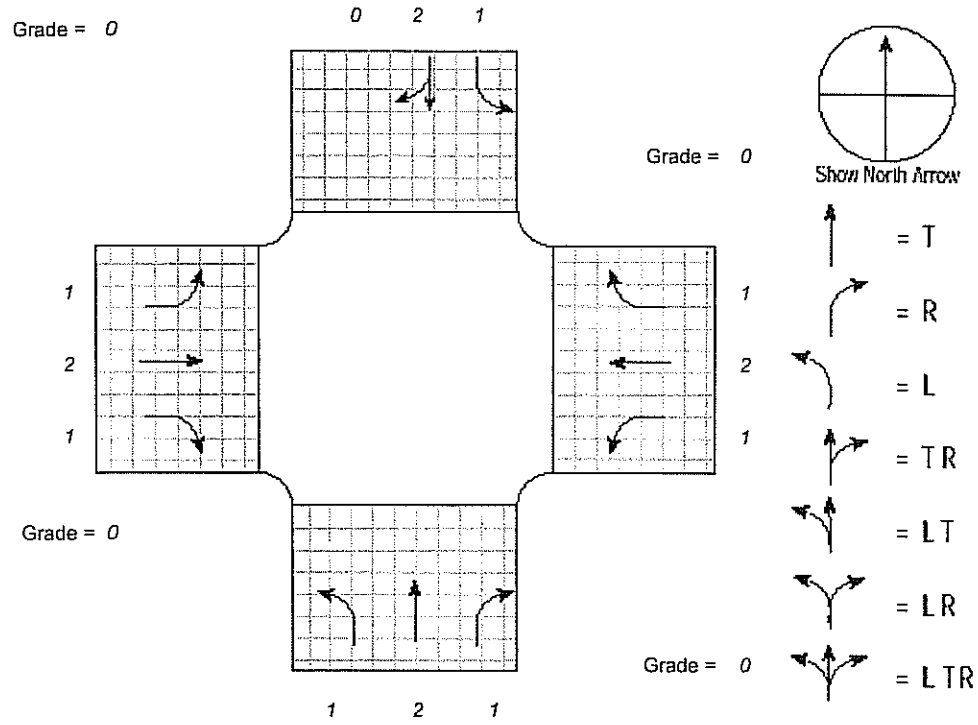
FULL REPORT

General Information		Site Information	
Analyst	*MCM*	Intersection	*NYS 454 @ NICHOLS RD*
Agency or Co.	*NELSON & POPE*	Area Type	*All other areas*
Date Performed	*11/20/2007*	Jurisdiction	
Time Period	*EXISTING SATURDAY 2007*	Analysis Year	*2007*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)	*95*	*714*	*60*	*272*	*862*	*225*	*90*	*471*	*171*	*164*	*304*	*53*
% Heavy Veh	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
PHF	*0.91*	*0.91*	*0.91*	*0.90*	*0.90*	*0.90*	*0.94*	*0.94*	*0.94*	*0.88*	*0.88*	*0.88*
Actuated (P/A)	*A*	*P*	*P*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*
Startup Lost Time	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	
Extension of Effective Green	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	
Arrival Type	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	
Unit Extension	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*0*
Lane Width	*12.0*	*11.0*	*10.0*	*11.0*	*11.0*	*10.0*	*10.0*	*12.0*	*10.0*	*10.0*	*12.0*	
Parking (Y or N)	*N*		*N*	*N*		*N*	*N*		*N*	*N*		*N*
Parking/Hour												
Bus Stops/Hour	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Pedestrian Timing	*3.2*			*3.2*			*3.2*			*3.2*		

	Excl. Left	WB Only	EW Perm	04	Excl. Left	SB Only	NS Perm	08
Timing	G = *7.8*	G = *14.5*	G = *33.6*	G =	G = *5.1*	G = *8.0*	G = *23.0*	G =
	Y = *5*	Y = *3*	Y = *6*	Y =	Y = *5*	Y = *3*	Y = *6*	Y =
Duration of Analysis (hrs) = *0.25*						Cycle Length C = *120.0*		

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume	95	714	60	272	862	225	90	471	171	164	304	53
PHF	0.91	0.91	0.91	0.90	0.90	0.90	0.94	0.94	0.94	0.88	0.88	0.88
Adjusted Flow Rate	104	785	66	302	958	250	96	501	181	186	345	60
Lane Group	L	T	R	L	T	R	L	T	R	L	TR	
Adjusted Flow Rate	104	785	66	302	958	250	96	501	181	186	405	
Proportion of LT or RT	1.000	–	1.000	1.000	–	1.000	1.000	–	1.000	1.000	–	0.148

Saturation Flow Rate

Base Satflow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Number of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
f_W	1.000	0.967	0.933	0.967	0.967	0.933	0.933	1.000	0.933	0.933	1.000	
f_{HV}	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
f_g	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_p	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_{bb}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_a	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_{LU}	1.000	0.952	1.000	1.000	0.952	1.000	1.000	0.952	1.000	1.000	0.952	
f_{LT}	0.950	1.000	–	0.950	1.000	–	0.950	1.000	–	0.950	1.000	–
Secondary f_{LT}	0.271	0.271	–	0.125	0.125	–	0.514	0.514	–	0.200	0.200	–
f_{RT}	–	1.000	0.850	–	1.000	0.850	–	1.000	0.850	–	0.978	
f_{Lpb}	1.000	1.000	–	1.000	1.000	–	1.000	1.000	–	1.000	1.000	–
f_{Rpb}	–	1.000	1.000	–	1.000	1.000	–	1.000	1.000	–	1.000	
Adjusted Satflow	1770	3428	1478	1711	3428	1478	1652	3547	1478	1652	3468	
Secondary Adjusted Satflow	504	928	–	225	428	–	894	1824	–	348	695	–

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB			SB		
Lane Group	L	T	R	L	T	R	L	T	R	L	TR	
Adjusted Flow Rate	104	785	66	302	958	250	96	501	181	186	405	
Satflow Rate	1770	3428	1478	1711	3428	1478	1652	3547	1478	1652	3468	
Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Green Ratio	0.34	0.28	0.28	0.56	0.43	0.43	0.23	0.19	0.19	0.39	0.28	
Lane Group Capacity	256	960	414	463	1460	629	241	680	283	333	983	
v/c Ratio	0.41	0.82	0.16	0.65	0.66	0.40	0.40	0.74	0.64	0.56	0.41	
Flow Ratio	0.06	0.23	0.04	0.18	0.28	0.17	0.04	0.14	0.12	0.11	0.12	
Critical Lane Group	N	Y	N	Y	N	N	N	Y	N	Y	N	
Sum Flow Ratios	0.66											
Lost Time/Cycle	24.00											
Critical v/c Ratio	0.82											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane Group	L	T	R	L	T	R	L	T	R	L	TR	
Adjusted Flow Rate	104	785	66	302	958	250	96	501	181	186	405	
Lane Group Capacity	256	960	414	463	1460	629	241	680	283	333	983	
v/c Ratio	0.41	0.82	0.16	0.65	0.66	0.40	0.40	0.74	0.64	0.56	0.41	
Green Ratio	0.34	0.28	0.28	0.56	0.43	0.43	0.23	0.19	0.19	0.39	0.28	
Uniform Delay d_1	27.4	40.3	32.6	24.6	27.5	23.8	38.6	45.7	44.7	26.4	34.9	
Delay Factor k	0.11	0.50	0.50	0.23	0.23	0.11	0.11	0.29	0.22	0.16	0.11	
Incremental Delay d_2	1.1	7.7	0.8	3.3	1.1	0.4	1.1	4.2	4.8	2.1	0.3	
PF Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
Control Delay	28.5	48.0	33.4	27.9	28.5	24.2	39.7	49.9	49.5	28.5	35.2	
Lane Group LOS	C	D	C	C	C	C	D	D	D	C	D	
Approach Delay	44.9			27.7			48.5			33.1		
Approach LOS	D			C			D			C		
Intersection Delay	37.0			Intersection LOS						D		

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FULL REPORT

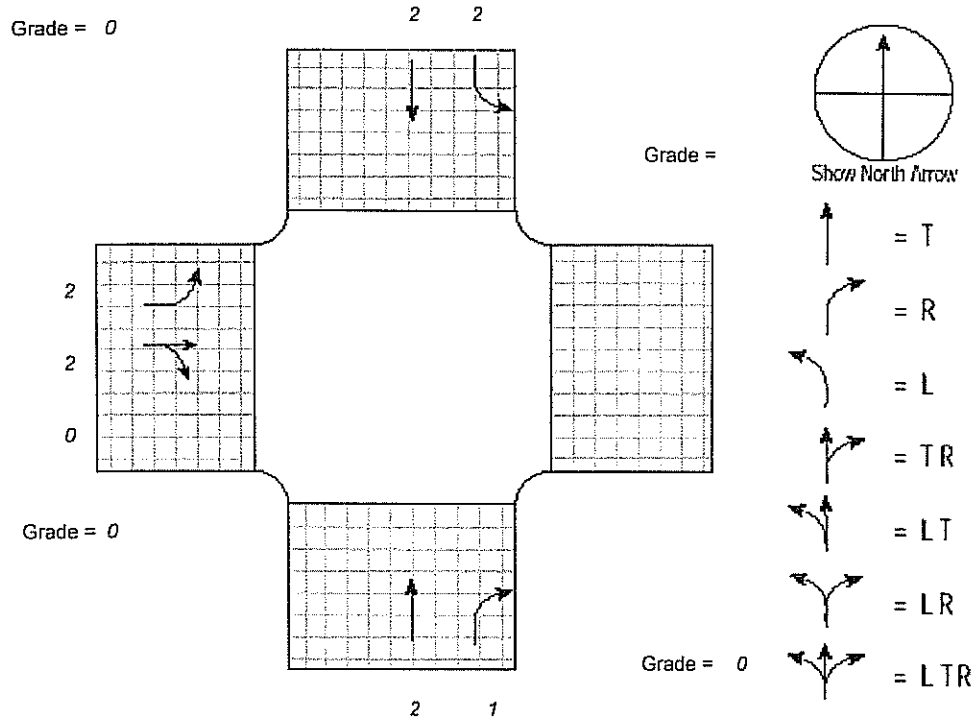
General Information

Analyst	*MCM*
Agency or Co.	*NELSON & POPE*
Date Performed	*11/20/2007*
Time Period	*EXISING AM 2007*

Site Information

Intersection	*OLD NICHOLS RD @ LIE SSR*
Area Type	*All other areas*
Jurisdiction	
Analysis Year	*2007*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)	*332*	*51*	*31*					*347*	*311*	*190*	*653*	
% Heavy Veh	*2*	*2*	*2*					*2*	*2*	*2*	*2*	
PHF	*0.91*	*0.91*	*0.91*					*0.98*	*0.98*	*0.89*	*0.89*	
Actuated (P/A)	*P*	*P*	*P*					*A*	*A*	*A*	*A*	
Startup Lost Time	*2.0*	*2.0*						*2.0*	*2.0*	*2.0*	*2.0*	
Extension of Effective Green	*2.0*	*2.0*						*2.0*	*2.0*	*2.0*	*2.0*	
Arrival Type	*3*	*3*						*3*	*3*	*3*	*3*	
Unit Extension	*3.0*	*3.0*						*3.0*	*3.0*	*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*0*	*0*	*21*				*0*	*0*	*201*	*0*	*0*	
Lane Width	*12.0*	*12.0*						*11.0*	*10.0*	*12.0*	*12.0*	
Parking (Y or N)	*N*		*N*				*N*		*N*	*N*		*N*
Parking/Hour												
Bus Stops/Hour	*0*	*0*						*0*	*0*	*0*	*0*	
Pedestrian Timing	*3.2*						*3.2*			*3.2*		

	EB Only	02	03	04	Thru & RT	SB Only	07	08
Timing	G = *24.0*	G =	G =	G =	G = *48.5*	G = *10.5*	G =	G =
	Y = *6*	Y =	Y =	Y =	Y = *5.5*	Y = *5.5*	Y =	Y =

Duration of Analysis (hrs) = *0.25*

Cycle Length C = *100.0*

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume	332	51	31					347	311	190	653	
PHF	0.91	0.91	0.91					0.98	0.98	0.89	0.89	
Adjusted Flow Rate	365	56	11					354	112	213	734	
Lane Group	L	TR						T	R	L	T	
Adjusted Flow Rate	365	67						354	112	213	734	
Proportion of LT or RT	1.000	--	0.164		--			--	1.000	1.000	--	0.000

Saturation Flow Rate

Base Satflow	1900	1900						1900	1900	1900	1900	
Number of Lanes	2	2	0					2	1	2	2	
f_W	1.000	1.000						0.967	0.933	1.000	1.000	
f_{HV}	0.980	0.980						0.980	0.980	0.980	0.980	
f_g	1.000	1.000						1.000	1.000	1.000	1.000	
f_p	1.000	1.000						1.000	1.000	1.000	1.000	
f_{bb}	1.000	1.000						1.000	1.000	1.000	1.000	
f_a	1.000	1.000						1.000	1.000	1.000	1.000	
f_{LU}	0.971	0.952						0.952	1.000	0.971	0.952	
f_{LT}	0.950	1.000	--			--		1.000	--	0.950	1.000	--
Secondary f_{LT}			--			--			--			--
f_{RT}	--	0.975		--			--	1.000	0.850	--	1.000	
f_{Lpb}	1.000	1.000	--			--		1.000	--	1.000	1.000	--
f_{Rpb}	--	1.000		--			--	1.000	1.000	--	1.000	
Adjusted Satflow	3437	3459						3428	1478	3437	3547	
Secondary Adjusted Satflow			--			--			--			--

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB		SB		
Lane Group	*L*	*TR*					*T*	*R*	*L*	*T*	
Adjusted Flow Rate	*365*	*67*					*354*	*112*	*213*	*734*	
Satflow Rate	*3437*	*3459*					*3428*	*1478*	*3437*	*3547*	
Lost Time	*2.0*	*2.0*					*2.0*	*2.0*	*2.0*	*2.0*	
Green Ratio	*0.24*	*0.24*					*0.49*	*0.49*	*0.10*	*0.64*	
Lane Group Capacity	*825*	*830*					*1663*	*717*	*361*	*2288*	
v/c Ratio	*0.44*	*0.08*					*0.21*	*0.16*	*0.59*	*0.32*	
Flow Ratio	*0.11*	*0.02*					*0.10*	*0.08*	*0.06*	*0.21*	
Critical Lane Group	*Y*	*N*					*N*	*N*	*N*	*Y*	
Sum Flow Ratios	*0.31*										
Lost Time/Cycle	*11.50*										
Critical v/c Ratio	*0.35*										

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB		SB		
Lane Group	*L*	*TR*					*T*	*R*	*L*	*T*	
Adjusted Flow Rate	*365*	*67*					*354*	*112*	*213*	*734*	
Lane Group Capacity	*825*	*830*					*1663*	*717*	*361*	*2288*	
v/c Ratio	*0.44*	*0.08*					*0.21*	*0.16*	*0.59*	*0.32*	
Green Ratio	*0.24*	*0.24*					*0.49*	*0.49*	*0.10*	*0.64*	
Uniform Delay d_1	*32.3*	*29.5*					*14.8*	*14.3*	*42.7*	*7.9*	
Delay Factor k	*0.50*	*0.50*					*0.11*	*0.11*	*0.18*	*0.11*	
Incremental Delay d_2	*1.7*	*0.2*					*0.1*	*0.1*	*2.6*	*0.1*	
PF Factor	*1.000*	*1.000*					*1.000*	*1.000*	*1.000*	*1.000*	
Control Delay	*34.0*	*29.6*					*14.9*	*14.5*	*45.2*	*8.0*	
Lane Group LOS	*C*	*C*					*B*	*B*	*D*	*A*	
Approach Delay	*33.3*						*14.8*		*16.4*		
Approach LOS	*C*						*B*		*B*		
Intersection Delay	*20.0*			Intersection LOS					*B*		

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FULL REPORT

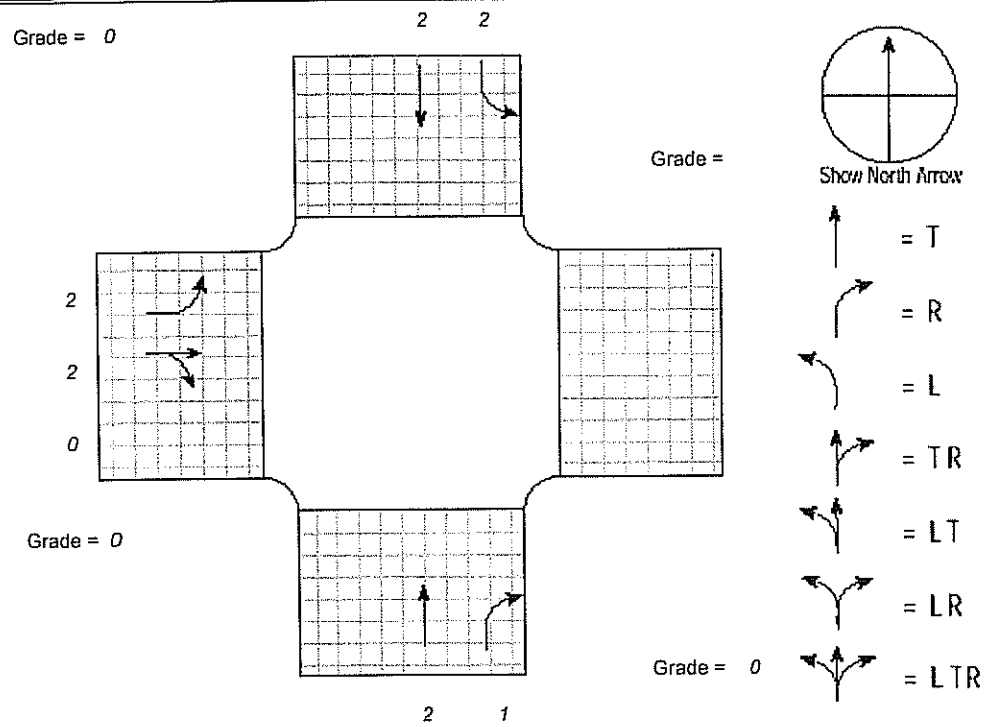
General Information

Analyst	*MCM*
Agency or Co.	*NELSON & POPE*
Date Performed	*11/20/2007*
Time Period	*EXISING PM 2007*

Site Information

Intersection	*OLD NICHOLS RD @ LIE SSR*
Area Type	*All other areas*
Jurisdiction	
Analysis Year	*2007*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)	*607*	*1429*	*105*					*668*	*300*	*346*	*608*	
% Heavy Veh	*2*	*2*	*2*					*2*	*2*	*2*	*2*	
PHF	*0.97*	*0.97*	*0.97*					*0.81*	*0.81*	*0.75*	*0.75*	
Actuated (P/A)	*P*	*P*	*P*					*A*	*A*	*A*	*A*	
Startup Lost Time	*2.0*	*2.0*						*2.0*	*2.0*	*2.0*	*2.0*	
Extension of Effective Green	*2.0*	*2.0*						*2.0*	*2.0*	*2.0*	*2.0*	
Arrival Type	*3*	*3*						*3*	*3*	*3*	*3*	
Unit Extension	*3.0*	*3.0*						*3.0*	*3.0*	*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*0*	*0*	*23*				*0*	*0*	*56*	*0*	*0*	
Lane Width	*12.0*	*12.0*						*11.0*	*10.0*	*12.0*	*12.0*	
Parking (Y or N)	*N*		*N*				*N*		*N*	*N*		*N*
Parking/Hour												
Bus Stops/Hour	*0*	*0*						*0*	*0*	*0*	*0*	
Pedestrian Timing	*3.2*						*3.2*			*3.2*		

	EB Only	02	03	04	Thru & RT	SB Only	07	08
Timing	G = *43.3*	G =	G =	G =	G = *25.7*	G = *14.0*	G =	G =
	Y = *6*	Y =	Y =	Y =	Y = *5.5*	Y = *5.5*	Y =	Y =
Duration of Analysis (hrs) = *0.25*						Cycle Length C = *100.0*		

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume	607	1429	105					668	300	346	608	
PHF	0.97	0.97	0.97					0.81	0.81	0.75	0.75	
Adjusted Flow Rate	626	1473	85					825	301	461	811	
Lane Group	L	TR						T	R	L	T	
Adjusted Flow Rate	626	1558						825	301	461	811	
Proportion of LT or RT	1.000	--	0.055		--			--	1.000	1.000	--	0.000

Saturation Flow Rate

Base Satflow	1900	1900						1900	1900	1900	1900	
Number of Lanes	2	2	0					2	1	2	2	
f_W	1.000	1.000						0.967	0.933	1.000	1.000	
f_{HV}	0.980	0.980						0.980	0.980	0.980	0.980	
f_g	1.000	1.000						1.000	1.000	1.000	1.000	
f_p	1.000	1.000						1.000	1.000	1.000	1.000	
f_{bb}	1.000	1.000						1.000	1.000	1.000	1.000	
f_a	1.000	1.000						1.000	1.000	1.000	1.000	
f_{LU}	0.971	0.952						0.952	1.000	0.971	0.952	
f_{LT}	0.950	1.000	--			--		1.000	--	0.950	1.000	--
Secondary f_{LT}			--			--			--			--
f_{RT}	--	0.992		--			--	1.000	0.850	--	1.000	
f_{Lpb}	1.000	1.000	--			--		1.000	--	1.000	1.000	--
f_{Rpb}	--	1.000		--			--	1.000	1.000	--	1.000	
Adjusted Satflow	3437	3518						3428	1478	3437	3547	
Secondary Adjusted Satflow			--			--			--			--

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB		SB		
Lane Group	*L*	*TR*					*T*	*R*	*L*	*T*	
Adjusted Flow Rate	*626*	*1558*					*825*	*301*	*461*	*811*	
Satflow Rate	*3437*	*3518*					*3428*	*1478*	*3437*	*3547*	
Lost Time	*2.0*	*2.0*					*2.0*	*2.0*	*2.0*	*2.0*	
Green Ratio	*0.43*	*0.43*					*0.26*	*0.26*	*0.14*	*0.45*	
Lane Group Capacity	*1488*	*1523*					*881*	*380*	*481*	*1603*	
v/c Ratio	*0.42*	*1.02*					*0.94*	*0.79*	*0.96*	*0.51*	
Flow Ratio	*0.18*	*0.44*					*0.24*	*0.20*	*0.13*	*0.23*	
Critical Lane Group	*N*	*Y*					*Y*	*N*	*Y*	*N*	
Sum Flow Ratios	*0.82*										
Lost Time/Cycle	*17.00*										
Critical v/c Ratio	*0.99*										

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB		SB		
Lane Group	*L*	*TR*					*T*	*R*	*L*	*T*	
Adjusted Flow Rate	*626*	*1558*					*825*	*301*	*461*	*811*	
Lane Group Capacity	*1488*	*1523*					*881*	*380*	*481*	*1603*	
v/c Ratio	*0.42*	*1.02*					*0.94*	*0.79*	*0.96*	*0.51*	
Green Ratio	*0.43*	*0.43*					*0.26*	*0.26*	*0.14*	*0.45*	
Uniform Delay d_1	*19.7*	*28.4*					*36.4*	*34.7*	*42.7*	*19.5*	
Delay Factor k	*0.50*	*0.50*					*0.45*	*0.34*	*0.47*	*0.11*	
Incremental Delay d_2	*0.9*	*29.1*					*17.0*	*10.9*	*30.6*	*0.3*	
PF Factor	*1.000*	*1.000*					*1.000*	*1.000*	*1.000*	*1.000*	
Control Delay	*20.5*	*57.4*					*53.4*	*45.6*	*73.3*	*19.7*	
Lane Group LOS	*C*	*E*					*D*	*D*	*E*	*B*	
Approach Delay	*46.8*						*51.3*		*39.2*		
Approach LOS	*D*						*D*		*D*		
Intersection Delay	*45.8*			Intersection LOS					*D*		

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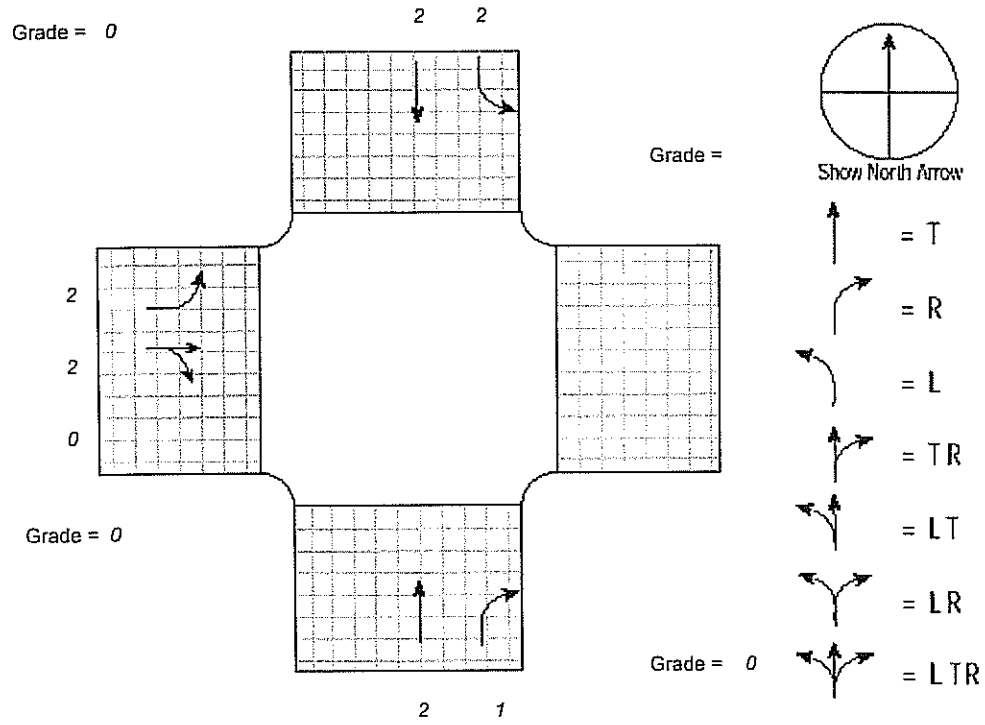
FULL REPORT

General Information		Site Information	
Analyst	*MCM*	Intersection	*OLD NICHOLS RD @ LIE SSR*
Agency or Co.	*NELSON & POPE*	Area Type	*All other areas*
Date Performed	*11/20/2007*	Jurisdiction	
Time Period	*EXISING SATURDAY 2007*	Analysis Year	*2007*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)	*481*	*126*	*58*					*463*	*221*	*278*	*521*	
% Heavy Veh	*2*	*2*	*2*					*2*	*2*	*2*	*2*	
PHF	*0.91*	*0.91*	*0.91*					*0.93*	*0.93*	*0.94*	*0.94*	
Actuated (P/A)	*P*	*P*	*P*					*A*	*A*	*A*	*A*	
Startup Lost Time	*2.0*	*2.0*						*2.0*	*2.0*	*2.0*	*2.0*	
Extension of Effective Green	*2.0*	*2.0*						*2.0*	*2.0*	*2.0*	*2.0*	
Arrival Type	*3*	*3*						*3*	*3*	*3*	*3*	
Unit Extension	*3.0*	*3.0*						*3.0*	*3.0*	*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*0*	*0*	*21*				*0*	*0*	*201*	*0*	*0*	
Lane Width	*12.0*	*12.0*						*11.0*	*10.0*	*12.0*	*12.0*	
Parking (Y or N)	*N*		*N*				*N*		*N*	*N*		*N*
Parking/Hour												
Bus Stops/Hour	*0*	*0*						*0*	*0*	*0*	*0*	
Pedestrian Timing	*3.2*						*3.2*			*3.2*		

	EB Only	02	03	04	Thru & RT	SB Only	07	08
Timing	G = *25.0*	G =	G =	G =	G = *22.5*	G = *10.5*	G =	G =
	Y = *6*	Y =	Y =	Y =	Y = *5.5*	Y = *5.5*	Y =	Y =
Duration of Analysis (hrs) = *0.25*						Cycle Length C = *75.0*		

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume	481	126	58					463	221	278	521	
PHF	0.91	0.91	0.91					0.93	0.93	0.94	0.94	
Adjusted Flow Rate	529	138	41					498	22	296	554	
Lane Group	L	TR						T	R	L	T	
Adjusted Flow Rate	529	179						498	22	296	554	
Proportion of LT or RT	1.000	--	0.229		--			--	1.000	1.000	--	0.000

Saturation Flow Rate

Base Satflow	1900	1900						1900	1900	1900	1900	
Number of Lanes	2	2	0					2	1	2	2	
f_W	1.000	1.000						0.967	0.933	1.000	1.000	
f_{HV}	0.980	0.980						0.980	0.980	0.980	0.980	
f_g	1.000	1.000						1.000	1.000	1.000	1.000	
f_p	1.000	1.000						1.000	1.000	1.000	1.000	
f_{bb}	1.000	1.000						1.000	1.000	1.000	1.000	
f_a	1.000	1.000						1.000	1.000	1.000	1.000	
f_{LU}	0.971	0.952						0.952	1.000	0.971	0.952	
f_{LT}	0.950	1.000	--			--		1.000	--	0.950	1.000	--
Secondary f_{LT}			--			--			--			--
f_{RT}	--	0.966		--			--	1.000	0.850	--	1.000	
f_{Lpb}	1.000	1.000	--			--		1.000	--	1.000	1.000	--
f_{Rpb}	--	1.000		--			--	1.000	1.000	--	1.000	
Adjusted Satflow	3437	3425						3428	1478	3437	3547	
Secondary Adjusted Satflow			--			--			--			--

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB		SB		
Lane Group	*L*	*TR*					*T*	*R*	*L*	*T*	
Adjusted Flow Rate	*529*	*179*					*498*	*22*	*296*	*554*	
Satflow Rate	*3437*	*3425*					*3428*	*1478*	*3437*	*3547*	
Lost Time	*2.0*	*2.0*					*2.0*	*2.0*	*2.0*	*2.0*	
Green Ratio	*0.33*	*0.33*					*0.30*	*0.30*	*0.14*	*0.51*	
Lane Group Capacity	*1146*	*1142*					*1028*	*443*	*481*	*1821*	
v/c Ratio	*0.46*	*0.16*					*0.48*	*0.05*	*0.62*	*0.30*	
Flow Ratio	*0.15*	*0.05*					*0.15*	*0.01*	*0.09*	*0.16*	
Critical Lane Group	*Y*	*N*					*Y*	*N*	*Y*	*N*	
Sum Flow Ratios	*0.39*										
Lost Time/Cycle	*17.00*										
Critical v/c Ratio	*0.50*										

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB		SB		
Lane Group	*L*	*TR*					*T*	*R*	*L*	*T*	
Adjusted Flow Rate	*529*	*179*					*498*	*22*	*296*	*554*	
Lane Group Capacity	*1146*	*1142*					*1028*	*443*	*481*	*1821*	
v/c Ratio	*0.46*	*0.16*					*0.48*	*0.05*	*0.62*	*0.30*	
Green Ratio	*0.33*	*0.33*					*0.30*	*0.30*	*0.14*	*0.51*	
Uniform Delay d_1	*19.7*	*17.6*					*21.5*	*18.7*	*30.3*	*10.5*	
Delay Factor k	*0.50*	*0.50*					*0.11*	*0.11*	*0.20*	*0.11*	
Incremental Delay d_2	*1.3*	*0.3*					*0.4*	*0.0*	*2.4*	*0.1*	
PF Factor	*1.000*	*1.000*					*1.000*	*1.000*	*1.000*	*1.000*	
Control Delay	*21.0*	*17.9*					*21.9*	*18.7*	*32.7*	*10.6*	
Lane Group LOS	*C*	*B*					*C*	*B*	*C*	*B*	
Approach Delay	*20.2*						*21.7*		*18.3*		
Approach LOS	*C*						*C*		*B*		
Intersection Delay	*19.8*			Intersection LOS					*B*		

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FULL REPORT

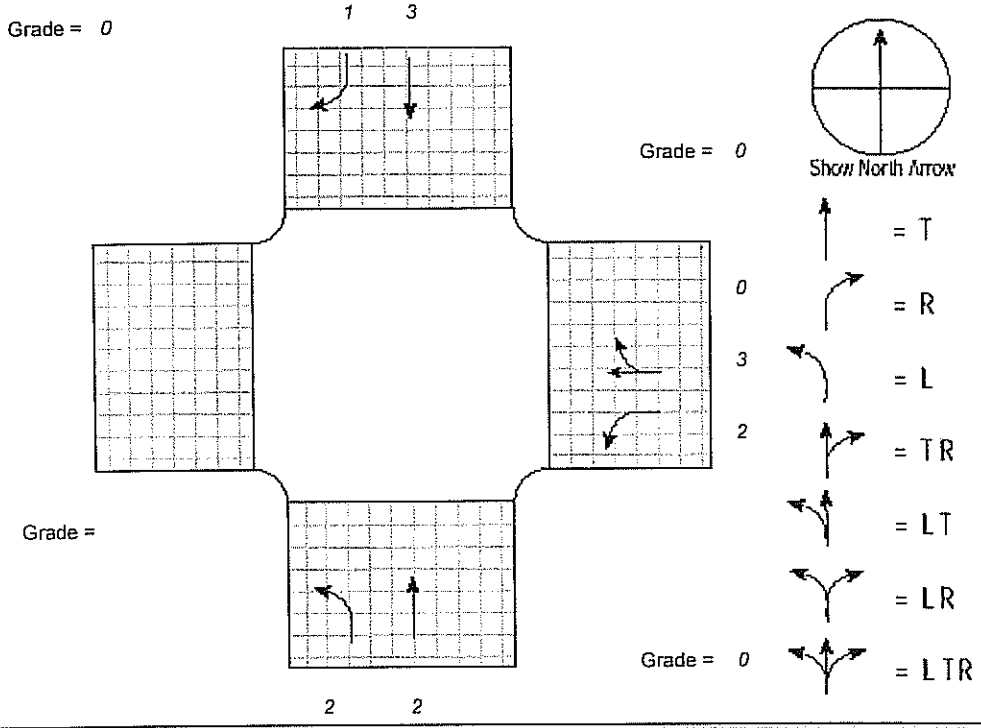
General Information

Analyst *MCM*
Agency or Co. *NELSON & POPE*
Date Performed *11/20/2007*
Time Period *EXISTING AM 2007*

Site Information

Intersection *OLD NICHOLS RD @ LIE NSR*
Area Type *All other areas*
Jurisdiction
Analysis Year *2007*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)				324	1583	95	231	448			519	474
% Heavy Veh				2	2	2	2	2			2	2
PHF				0.96	0.96	0.96	0.98	0.98			0.94	0.94
Actuated (P/A)				P	P	P	A	A			A	A
Startup Lost Time				2.0	2.0		2.0	2.0			2.0	2.0
Extension of Effective Green				2.0	2.0		2.0	2.0			2.0	2.0
Arrival Type				3	3		3	3			3	3
Unit Extension				3.0	3.0		3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume				0	0	4	0	0		0	0	0
Lane Width				12.0	12.0		12.0	12.0			12.0	12.0
Parking (Y or N)				N		N	N		N	N		N
Parking/Hour												
Bus Stops/Hour				0	0		0	0			0	0
Pedestrian Timing					3.2			3.2			3.2	

	WB Only	02	03	04	Thru & RT	NB Only	07	08
Timing	G = 40.0	G =	G =	G =	G = 32.2	G = 10.2	G =	G =
	Y = 6	Y =	Y =	Y =	Y = 5.8	Y = 5.8	Y =	Y =

Duration of Analysis (hrs) = 0.25
Cycle Length C = 100.0

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume				324	1583	95	231	448			519	474
PHF				0.96	0.96	0.96	0.98	0.98			0.94	0.94
Adjusted Flow Rate				338	1649	95	236	457			552	504
Lane Group				L	TR		L	T			T	R
Adjusted Flow Rate				338	1744		236	457			552	504
Proportion of LT or RT		--		1.000	--	0.054	1.000	--	0.000		--	1.000

Saturation Flow Rate

Base Satflow				1900	1900		1900	1900			1900	1900
Number of Lanes				2	3	0	2	2			3	1
f_W				1.000	1.000		1.000	1.000			1.000	1.000
f_{HV}				0.980	0.980		0.980	0.980			0.980	0.980
f_g				1.000	1.000		1.000	1.000			1.000	1.000
f_p				1.000	1.000		1.000	1.000			1.000	1.000
f_{bb}				1.000	1.000		1.000	1.000			1.000	1.000
f_a				1.000	1.000		1.000	1.000			1.000	1.000
f_{LU}				0.971	0.908		0.971	0.952			0.908	1.000
f_{LT}			--	0.950	1.000	--	0.950	1.000	--		1.000	--
Secondary f_{LT}			--			--			--			--
f_{RT}	--			--	0.992		--	1.000		--	1.000	0.850
f_{Lpb}			--	1.000	1.000	--	1.000	1.000	--		1.000	--
f_{Rpb}	--			--	1.000		--	1.000		--	1.000	1.000
Adjusted Satflow				3437	5033		3437	3547			5074	1583
Secondary Adjusted Satflow			--			--			--			--

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB			SB		
Lane Group				*L*	*TR*		*L*	*T*			*T*	*R*
Adjusted Flow Rate				*338*	*1744*		*236*	*457*			*552*	*504*
Satflow Rate				*3437*	*5033*		*3437*	*3547*			*5074*	*1583*
Lost Time				*2.0*	*2.0*		*2.0*	*2.0*			*2.0*	*2.0*
Green Ratio				*0.40*	*0.40*		*0.10*	*0.48*			*0.32*	*0.32*
Lane Group Capacity				*1375*	*2013*		*351*	*1710*			*1634*	*510*
v/c Ratio				*0.25*	*0.87*		*0.67*	*0.27*			*0.34*	*0.99*
Flow Ratio				*0.10*	*0.35*		*0.07*	*0.13*			*0.11*	*0.32*
Critical Lane Group				*N*	*Y*		*Y*	*N*			*N*	*Y*
Sum Flow Ratios	*0.73*											
Lost Time/Cycle	*17.60*											
Critical v/c Ratio	*0.89*											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane Group				*L*	*TR*		*L*	*T*			*T*	*R*
Adjusted Flow Rate				*338*	*1744*		*236*	*457*			*552*	*504*
Lane Group Capacity				*1375*	*2013*		*351*	*1710*			*1634*	*510*
v/c Ratio				*0.25*	*0.87*		*0.67*	*0.27*			*0.34*	*0.99*
Green Ratio				*0.40*	*0.40*		*0.10*	*0.48*			*0.32*	*0.32*
Uniform Delay d_1				*20.0*	*27.5*		*43.3*	*15.4*			*25.8*	*33.7*
Delay Factor k				*0.50*	*0.50*		*0.24*	*0.11*			*0.11*	*0.49*
Incremental Delay d_2				*0.4*	*5.3*		*5.0*	*0.1*			*0.1*	*36.7*
PF Factor				*1.000*	*1.000*		*1.000*	*1.000*			*1.000*	*1.000*
Control Delay				*20.4*	*32.9*		*48.3*	*15.5*			*25.9*	*70.4*
Lane Group LOS				*C*	*C*		*D*	*B*			*C*	*E*
Approach Delay				*30.8*			*26.6*			*47.1*		
Approach LOS				*C*			*C*			*D*		
Intersection Delay	*34.6*			Intersection LOS						*C*		

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FULL REPORT

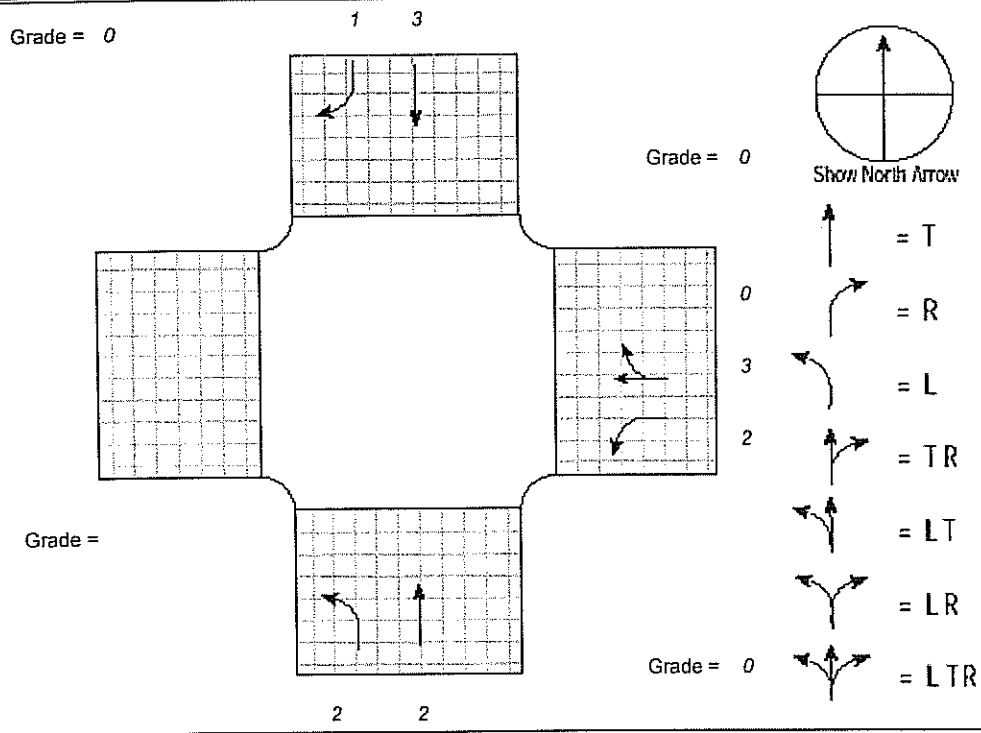
General Information

Analyst	*MCM*
Agency or Co.	*NELSON & POPE*
Date Performed	*11/20/2007*
Time Period	*EXISTING PM 2007*

Site Information

Intersection	*OLD NICHOLS RD @ LIE NSR*
Area Type	*All other areas*
Jurisdiction	
Analysis Year	*2007*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)				*283*	*206*	*193*	*329*	*946*			*671*	*212*
% Heavy Veh				*2*	*2*	*2*	*2*	*2*			*2*	*2*
PHF				*0.90*	*0.90*	*0.90*	*0.91*	*0.91*			*0.87*	*0.87*
Actuated (P/A)				*P*	*P*	*P*	*A*	*A*			*A*	*A*
Startup Lost Time				*2.0*	*2.0*		*2.0*	*2.0*			*2.0*	*2.0*
Extension of Effective Green				*2.0*	*2.0*		*2.0*	*2.0*			*2.0*	*2.0*
Arrival Type				*3*	*3*		*3*	*3*			*3*	*3*
Unit Extension				*3.0*	*3.0*		*3.0*	*3.0*			*3.0*	*3.0*
Ped/Bike/RTOR Volume				*0*	*0*	*47*	*0*	*0*		*0*	*0*	*0*
Lane Width				*12.0*	*12.0*		*12.0*	*12.0*			*12.0*	*12.0*
Parking (Y or N)				*N*		*N*	*N*		*N*	*N*		*N*
Parking/Hour												
Bus Stops/Hour				*0*	*0*		*0*	*0*			*0*	*0*
Pedestrian Timing				*3.2*			*3.2*			*3.2*		

	WB Only	02	03	04	Thru & RT	NB Only	07	08
Timing	G = *30.0*	G =	G =	G =	G = *29.0*	G = *23.4*	G =	G =
	Y = *6*	Y =	Y =	Y =	Y = *5.8*	Y = *5.8*	Y =	Y =

Duration of Analysis (hrs) = *0.25*

Cycle Length C = *100.0*

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume				283	206	193	329	946			671	212
PHF				0.90	0.90	0.90	0.91	0.91			0.87	0.87
Adjusted Flow Rate				314	229	162	362	1040			771	244
Lane Group				L	TR		L	T			T	R
Adjusted Flow Rate				314	391		362	1040			771	244
Proportion of LT or RT		--		1.000	--	0.414	1.000	--	0.000		--	1.000

Saturation Flow Rate

Base Satflow				1900	1900		1900	1900			1900	1900
Number of Lanes				2	3	0	2	2			3	1
f_W				1.000	1.000		1.000	1.000			1.000	1.000
f_{HV}				0.980	0.980		0.980	0.980			0.980	0.980
f_g				1.000	1.000		1.000	1.000			1.000	1.000
f_p				1.000	1.000		1.000	1.000			1.000	1.000
f_{bb}				1.000	1.000		1.000	1.000			1.000	1.000
f_a				1.000	1.000		1.000	1.000			1.000	1.000
f_{LU}				0.971	0.908		0.971	0.952			0.908	1.000
f_{LT}			--	0.950	1.000	--	0.950	1.000	--		1.000	--
Secondary f_{LT}			--			--			--			--
f_{RT}	--			--	0.938		--	1.000		--	1.000	0.850
f_{Lpb}			--	1.000	1.000	--	1.000	1.000	--		1.000	--
f_{Rpb}	--			--	1.000		--	1.000		--	1.000	1.000
Adjusted Satflow				3437	4759		3437	3547			5074	1583
Secondary Adjusted Satflow			--			--			--			--

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB			SB		
Lane Group				*L*	*TR*		*L*	*T*			*T*	*R*
Adjusted Flow Rate				*314*	*391*		*362*	*1040*			*771*	*244*
Satflow Rate				*3437*	*4759*		*3437*	*3547*			*5074*	*1583*
Lost Time				*2.0*	*2.0*		*2.0*	*2.0*			*2.0*	*2.0*
Green Ratio				*0.30*	*0.30*		*0.23*	*0.58*			*0.29*	*0.29*
Lane Group Capacity				*1031*	*1428*		*804*	*2064*			*1471*	*459*
v/c Ratio				*0.30*	*0.27*		*0.45*	*0.50*			*0.52*	*0.53*
Flow Ratio				*0.09*	*0.08*		*0.11*	*0.29*			*0.15*	*0.15*
Critical Lane Group				*Y*	*N*		*N*	*Y*			*N*	*N*
Sum Flow Ratios	*0.38*											
Lost Time/Cycle	*11.80*											
Critical v/c Ratio	*0.44*											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane Group				*L*	*TR*		*L*	*T*			*T*	*R*
Adjusted Flow Rate				*314*	*391*		*362*	*1040*			*771*	*244*
Lane Group Capacity				*1031*	*1428*		*804*	*2064*			*1471*	*459*
v/c Ratio				*0.30*	*0.27*		*0.45*	*0.50*			*0.52*	*0.53*
Green Ratio				*0.30*	*0.30*		*0.23*	*0.58*			*0.29*	*0.29*
Uniform Delay d_1				*27.0*	*26.7*		*32.8*	*12.4*			*29.7*	*29.8*
Delay Factor k				*0.50*	*0.50*		*0.11*	*0.11*			*0.13*	*0.13*
Incremental Delay d_2				*0.8*	*0.5*		*0.4*	*0.2*			*0.3*	*1.2*
PF Factor				*1.000*	*1.000*		*1.000*	*1.000*			*1.000*	*1.000*
Control Delay				*27.7*	*27.2*		*33.2*	*12.6*			*30.1*	*31.0*
Lane Group LOS				*C*	*C*		*C*	*B*			*C*	*C*
Approach Delay				*27.4*			*17.9*			*30.3*		
Approach LOS				*C*			*B*			*C*		
Intersection Delay	*24.1*			Intersection LOS						*C*		

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FULL REPORT

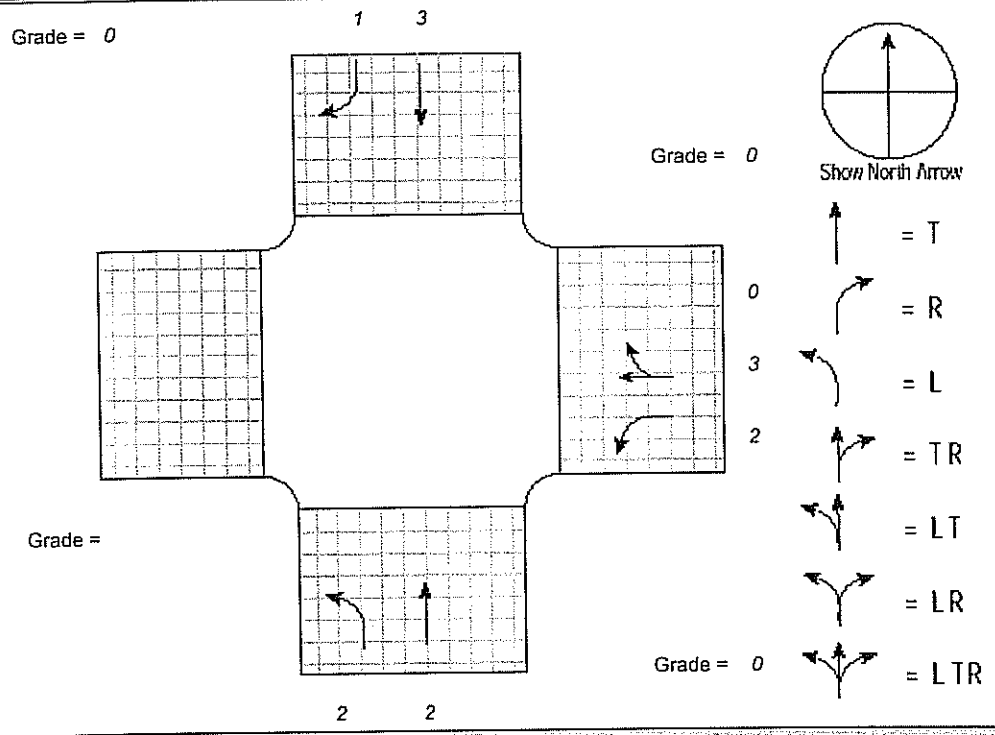
General Information

Analyst	*MCM*
Agency or Co.	*NELSON & POPE*
Date Performed	*11/20/2007*
Time Period	*EXISTING SATRUDAY 2007*

Site Information

Intersection	*OLD NICHOLS RD @ LIE NSR*
Area Type	*All other areas*
Jurisdiction	
Analysis Year	*2007*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)				*208*	*174*	*179*	*107*	*836*			*592*	*322*
% Heavy Veh				*2*	*2*	*2*	*2*	*2*			*2*	*2*
PHF				*0.87*	*0.87*	*0.87*	*0.98*	*0.98*			*0.93*	*0.93*
Actuated (P/A)				*P*	*P*	*P*	*A*	*A*			*A*	*A*
Startup Lost Time				*2.0*	*2.0*		*2.0*	*2.0*			*2.0*	*2.0*
Extension of Effective Green				*2.0*	*2.0*		*2.0*	*2.0*			*2.0*	*2.0*
Arrival Type				*3*	*3*		*3*	*3*			*3*	*3*
Unit Extension				*3.0*	*3.0*		*3.0*	*3.0*			*3.0*	*3.0*
Ped/Bike/RTOR Volume				*0*	*0*	*55*	*0*	*0*		*0*	*0*	*2*
Lane Width				*12.0*	*12.0*		*12.0*	*12.0*			*12.0*	*12.0*
Parking (Y or N)				*N*		*N*	*N*		*N*	*N*		*N*
Parking/Hour												
Bus Stops/Hour				*0*	*0*		*0*	*0*			*0*	*0*
Pedestrian Timing				*3.2*			*3.2*			*3.2*		

	WB Only	02	03	04	Thru & RT	NB Only	07	08
Timing	G = *25.0*	G =	G =	G =	G = *22.2*	G = *10.2*	G =	G =
	Y = *6*	Y =	Y =	Y =	Y = *5.8*	Y = *5.8*	Y =	Y =
Duration of Analysis (hrs) = *0.25*						Cycle Length C = *75.0*		

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume				*208*	*174*	*179*	*107*	*836*			*592*	*322*
PHF				*0.87*	*0.87*	*0.87*	*0.98*	*0.98*			*0.93*	*0.93*
Adjusted Flow Rate				*239*	*200*	*143*	*109*	*853*			*637*	*344*
Lane Group				*L*	*TR*		*L*	*T*			*T*	*R*
Adjusted Flow Rate				*239*	*343*		*109*	*853*			*637*	*344*
Proportion of LT or RT		--		*1.000*	--	*0.417*	*1.000*	--	*0.000*		--	*1.000*

Saturation Flow Rate

Base Satflow				*1900*	*1900*		*1900*	*1900*			*1900*	*1900*
Number of Lanes				*2*	*3*	*0*	*2*	*2*			*3*	*1*
f_W				*1.000*	*1.000*		*1.000*	*1.000*			*1.000*	*1.000*
f_{HV}				*0.980*	*0.980*		*0.980*	*0.980*			*0.980*	*0.980*
f_g				*1.000*	*1.000*		*1.000*	*1.000*			*1.000*	*1.000*
f_p				*1.000*	*1.000*		*1.000*	*1.000*			*1.000*	*1.000*
f_{bb}				*1.000*	*1.000*		*1.000*	*1.000*			*1.000*	*1.000*
f_a				*1.000*	*1.000*		*1.000*	*1.000*			*1.000*	*1.000*
f_{LU}				*0.971*	*0.908*		*0.971*	*0.952*			*0.908*	*1.000*
f_{LT}			--	*0.950*	*1.000*	--	*0.950*	*1.000*	--		*1.000*	--
Secondary f_{LT}			--			--			--			--
f_{RT}	--			--	*0.937*		--	*1.000*		--	*1.000*	*0.850*
f_{Lpb}			--	*1.000*	*1.000*	--	*1.000*	*1.000*	--		*1.000*	--
f_{Rpb}	--			--	*1.000*		--	*1.000*		--	*1.000*	*1.000*
Adjusted Satflow				*3437*	*4757*		*3437*	*3547*			*5074*	*1583*
Secondary Adjusted Satflow			--			--			--			--

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB			SB		
Lane Group				*L*	*TR*		*L*	*T*			*T*	*R*
Adjusted Flow Rate				*239*	*343*		*109*	*853*			*637*	*344*
Satflow Rate				*3437*	*4757*		*3437*	*3547*			*5074*	*1583*
Lost Time				*2.0*	*2.0*		*2.0*	*2.0*			*2.0*	*2.0*
Green Ratio				*0.33*	*0.33*		*0.14*	*0.51*			*0.30*	*0.30*
Lane Group Capacity				*1146*	*1586*		*467*	*1807*			*1502*	*469*
v/c Ratio				*0.21*	*0.22*		*0.23*	*0.47*			*0.42*	*0.73*
Flow Ratio				*0.07*	*0.07*		*0.03*	*0.24*			*0.13*	*0.22*
Critical Lane Group				*N*	*Y*		*Y*	*N*			*N*	*Y*
Sum Flow Ratios	*0.32*											
Lost Time/Cycle	*17.60*											
Critical v/c Ratio	*0.42*											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane Group				*L*	*TR*		*L*	*T*			*T*	*R*
Adjusted Flow Rate				*239*	*343*		*109*	*853*			*637*	*344*
Lane Group Capacity				*1146*	*1586*		*467*	*1807*			*1502*	*469*
v/c Ratio				*0.21*	*0.22*		*0.23*	*0.47*			*0.42*	*0.73*
Green Ratio				*0.33*	*0.33*		*0.14*	*0.51*			*0.30*	*0.30*
Uniform Delay d_1				*17.9*	*18.0*		*28.9*	*11.9*			*21.3*	*23.7*
Delay Factor k				*0.50*	*0.50*		*0.11*	*0.11*			*0.11*	*0.29*
Incremental Delay d_2				*0.4*	*0.3*		*0.3*	*0.2*			*0.2*	*5.9*
PF Factor				*1.000*	*1.000*		*1.000*	*1.000*			*1.000*	*1.000*
Control Delay				*18.3*	*18.3*		*29.2*	*12.1*			*21.4*	*29.6*
Lane Group LOS				*B*	*B*		*C*	*B*			*C*	*C*
Approach Delay				*18.3*			*14.0*			*24.3*		
Approach LOS				*B*			*B*			*C*		
Intersection Delay	*19.0*			Intersection LOS						*B*		

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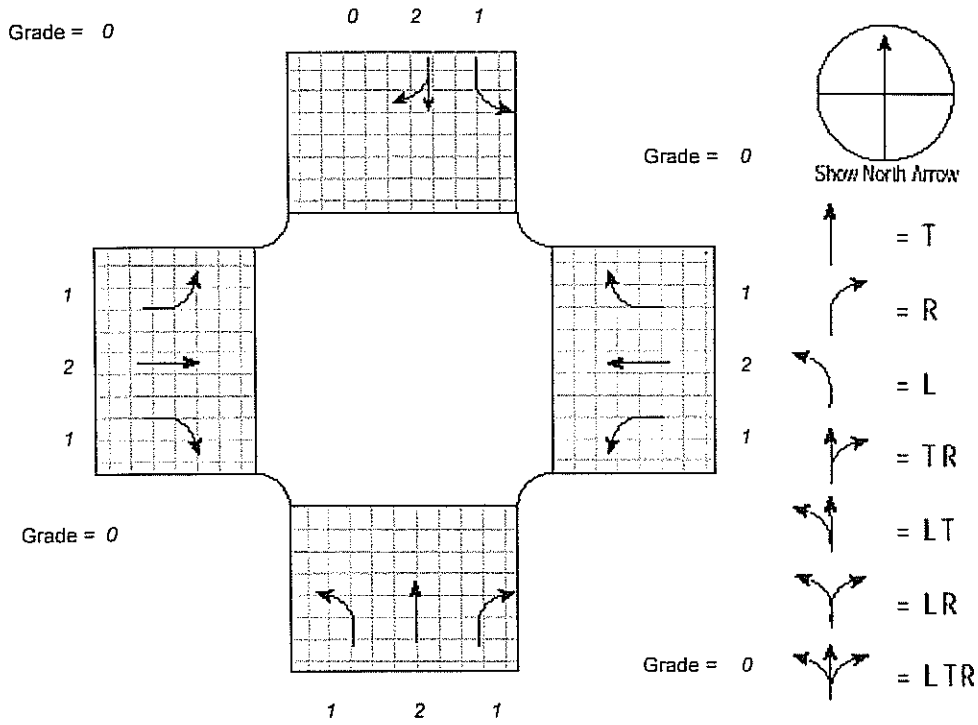
No Build Condition

FULL REPORT

General Information		Site Information	
Analyst	*MCM*	Intersection	*NYS 454 @ NICHOLS RD*
Agency or Co.	*NELSON & POPE*	Area Type	*All other areas*
Date Performed	*11/20/2007*	Jurisdiction	
Time Period	*NO BUILD AM 2009*	Analysis Year	*2009*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)	*13*	*939*	*40*	*225*	*1372*	*177*	*82*	*350*	*215*	*178*	*601*	*72*
% Heavy Veh	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
PHF	*0.91*	*0.91*	*0.91*	*0.87*	*0.87*	*0.87*	*0.75*	*0.75*	*0.75*	*0.91*	*0.91*	*0.91*
Actuated (P/A)	*P*	*P*	*P*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*
Startup Lost Time	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	
Extension of Effective Green	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	
Arrival Type	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	
Unit Extension	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*0*	*0*	*0*	*0*	*0*	*3*	*0*	*0*	*4*	*0*	*0*	*0*
Lane Width	*12.0*	*11.0*	*10.0*	*11.0*	*11.0*	*10.0*	*10.0*	*12.0*	*10.0*	*10.0*	*12.0*	
Parking (Y or N)	*N*		*N*	*N*		*N*	*N*		*N*	*N*		*N*
Parking/Hour												
Bus Stops/Hour	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Pedestrian Timing	*3.2*			*3.2*			*3.2*			*3.2*		

	WB Only	EW Perm	03	04	Excl. Left	NS Perm	07	08
Timing	G = *17.9*	G = *57.2*	G =	G =	G = *5.6*	G = *37.3*	G =	G =
	Y = *5*	Y = *6*	Y =	Y =	Y = *5*	Y = *6*	Y =	Y =

Duration of Analysis (hrs) = *0.25*

Cycle Length C = *140.0*

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume	13	939	40	225	1372	177	82	350	215	178	601	72
PHF	0.91	0.91	0.91	0.87	0.87	0.87	0.75	0.75	0.75	0.91	0.91	0.91
Adjusted Flow Rate	14	1032	44	259	1577	200	109	467	281	196	660	79
Lane Group	L	T	R	L	T	R	L	T	R	L	TR	
Adjusted Flow Rate	14	1032	44	259	1577	200	109	467	281	196	739	
Proportion of LT or RT	1.000	--	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--	0.107

Saturation Flow Rate

Base Satflow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Number of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
f_W	1.000	0.967	0.933	0.967	0.967	0.933	0.933	1.000	0.933	0.933	1.000	
f_{HV}	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
f_g	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_p	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_{bb}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_a	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_{LU}	1.000	0.952	1.000	1.000	0.952	1.000	1.000	0.952	1.000	1.000	0.952	
f_{LT}	0.099	1.000	--	0.950	1.000	--	0.950	1.000	--	0.950	1.000	--
Secondary f_{LT}			--	0.121	0.121	--	0.129	0.129	--	0.303	0.303	--
f_{RT}	--	1.000	0.850	--	1.000	0.850	--	1.000	0.850	--	0.984	
f_{Lpb}	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--
f_{Rpb}	--	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--	1.000	
Adjusted Satflow	184	3428	1478	1711	3428	1478	1652	3547	1478	1652	3490	
Secondary Adjusted Satflow			--	218	415	--	225	459	--	527	1058	--

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB			SB		
Lane Group	L	T	R	L	T	R	L	T	R	L	TR	
Adjusted Flow Rate	14	1032	44	259	1577	200	109	467	281	196	739	
Satflow Rate	184	3428	1478	1711	3428	1478	1652	3547	1478	1652	3490	
Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Green Ratio	0.41	0.41	0.41	0.58	0.57	0.41	0.35	0.27	0.27	0.35	0.27	
Lane Group Capacity	75	1401	604	317	1961	604	136	945	394	229	930	
v/c Ratio	0.19	0.74	0.07	0.82	0.80	0.33	0.80	0.49	0.71	0.86	0.79	
Flow Ratio	0.08	0.30	0.03	0.13	0.46	0.14	0.04	0.13	0.19	0.04	0.21	
Critical Lane Group	N	N	N	N	Y	N	Y	N	N	N	N	
Sum Flow Ratios	0.75											
Lost Time/Cycle	12.00											
Critical v/c Ratio	0.82											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane Group	L	T	R	L	T	R	L	T	R	L	TR	
Adjusted Flow Rate	14	1032	44	259	1577	200	109	467	281	196	739	
Lane Group Capacity	75	1401	604	317	1961	604	136	945	394	229	930	
v/c Ratio	0.19	0.74	0.07	0.82	0.80	0.33	0.80	0.49	0.71	0.86	0.79	
Green Ratio	0.41	0.41	0.41	0.58	0.57	0.41	0.35	0.27	0.27	0.35	0.27	
Uniform Delay d_1	26.5	35.0	25.2	28.7	23.7	28.3	48.2	43.4	46.5	49.0	47.8	
Delay Factor k	0.50	0.50	0.50	0.36	0.35	0.11	0.35	0.11	0.28	0.39	0.34	
Incremental Delay d_2	5.4	3.5	0.2	15.3	2.5	0.3	28.1	0.4	6.0	25.9	4.8	
PF Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
Control Delay	31.9	38.5	25.5	43.9	26.3	28.6	76.3	43.8	52.5	74.9	52.6	
Lane Group LOS	C	D	C	D	C	C	E	D	D	E	D	
Approach Delay	37.9			28.8			50.8			57.3		
Approach LOS	D			C			D			E		
Intersection Delay	40.0			Intersection LOS						D		

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FULL REPORT

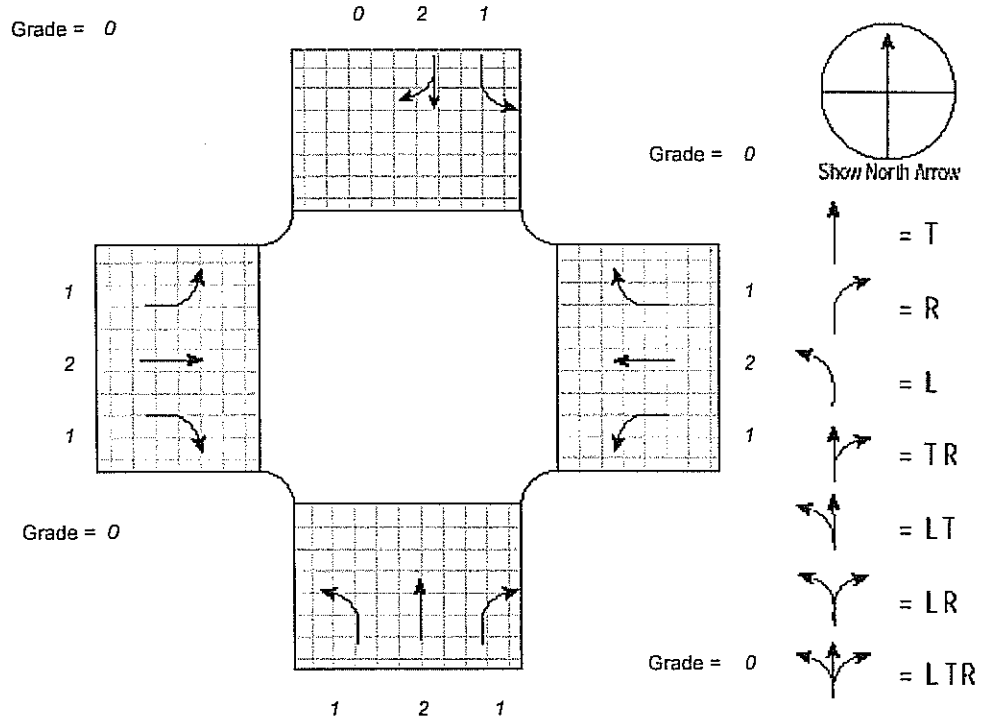
General Information

Analyst	*MCM*
Agency or Co.	*NELSON & POPE*
Date Performed	*11/20/2007*
Time Period	*NO BUILD PM 2009*

Site Information

Intersection	*NYS 454 @ NICHOLS RD*
Area Type	*All other areas*
Jurisdiction	
Analysis Year	*2009*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)	*77*	*1337*	*46*	*367*	*1144*	*292*	*121*	*598*	*254*	*223*	*386*	*36*
% Heavy Veh	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
PHF	*0.90*	*0.90*	*0.90*	*0.92*	*0.92*	*0.92*	*0.90*	*0.90*	*0.90*	*0.88*	*0.88*	*0.88*
Actuated (P/A)	*A*	*P*	*P*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*
Startup Lost Time	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	
Extension of Effective Green	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	
Arrival Type	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	
Unit Extension	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*0*	*0*	*11*	*0*	*0*	*23*	*0*	*0*	*124*	*0*	*0*	*0*
Lane Width	*12.0*	*11.0*	*10.0*	*11.0*	*11.0*	*10.0*	*10.0*	*12.0*	*10.0*	*10.0*	*12.0*	
Parking (Y or N)	*N*		*N*	*N*		*N*	*N*		*N*	*N*		*N*
Parking/Hour												
Bus Stops/Hour	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Pedestrian Timing	*3.2*			*3.2*			*3.2*			*3.2*		

	Excl. Left	WB Only	EW Perm	04	Excl. Left	SB Only	NS Perm	08
Timing	G = *6.9*	G = *12.7*	G = *60.6*	G =	G = *5.1*	G = *7.7*	G = *29.0*	G =
	Y = *5*	Y = *3*	Y = *6*	Y =	Y = *5*	Y = *3*	Y = *6*	Y =

Duration of Analysis (hrs) = *0.25*

Cycle Length C = *150.0*

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume	77	1337	46	367	1144	292	121	598	254	223	386	36
PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.90	0.90	0.90	0.88	0.88	0.88
Adjusted Flow Rate	86	1486	39	399	1243	292	134	664	144	253	439	41
Lane Group	L	T	R	L	T	R	L	T	R	L	TR	
Adjusted Flow Rate	86	1486	39	399	1243	292	134	664	144	253	480	
Proportion of LT or RT	1.000	--	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--	0.085

Saturation Flow Rate

Base Satflow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Number of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
f_W	1.000	0.967	0.933	0.967	0.967	0.933	0.933	1.000	0.933	0.933	1.000	
f_{HV}	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
f_g	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_p	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_{bb}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_a	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_{LU}	1.000	0.952	1.000	1.000	0.952	1.000	1.000	0.952	1.000	1.000	0.952	
f_{LT}	0.950	1.000	--	0.950	1.000	--	0.950	1.000	--	0.950	1.000	--
Secondary f_{LT}	0.150	0.150	--	0.060	0.060	--	0.457	0.457	--	0.114	0.114	--
f_{RT}	--	1.000	0.850	--	1.000	0.850	--	1.000	0.850	--	0.987	
f_{Lpb}	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--
f_{Rpb}	--	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--	1.000	
Adjusted Satflow	1770	3428	1478	1711	3428	1478	1652	3547	1478	1652	3501	
Secondary Adjusted Satflow	280	515	--	108	206	--	795	1622	--	199	400	--

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB			SB		
Lane Group	L	T	R	L	T	R	L	T	R	L	TR	
Adjusted Flow Rate	86	1486	39	399	1243	292	134	664	144	253	480	
Satflow Rate	1770	3428	1478	1711	3428	1478	1652	3547	1478	1652	3501	
Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Green Ratio	0.45	0.40	0.40	0.61	0.51	0.51	0.23	0.19	0.19	0.35	0.26	
Lane Group Capacity	194	1385	597	329	1744	752	210	686	286	244	927	
v/c Ratio	0.44	1.07	0.07	1.21	0.71	0.39	0.64	0.97	0.50	1.04	0.52	
Flow Ratio	0.05	0.43	0.03	0.16	0.36	0.20	0.03	0.19	0.10	0.12	0.14	
Critical Lane Group	N	N	N	Y	N	N	N	N	N	Y	N	
Sum Flow Ratios	1.66											
Lost Time/Cycle	12.00											
Critical v/c Ratio	1.81											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane Group	L	T	R	L	T	R	L	T	R	L	TR	
Adjusted Flow Rate	86	1486	39	399	1243	292	134	664	144	253	480	
Lane Group Capacity	194	1385	597	329	1744	752	210	686	286	244	927	
v/c Ratio	0.44	1.07	0.07	1.21	0.71	0.39	0.64	0.97	0.50	1.04	0.52	
Green Ratio	0.45	0.40	0.40	0.61	0.51	0.51	0.23	0.19	0.19	0.35	0.26	
Uniform Delay d_1	25.6	44.7	27.4	52.1	28.4	22.6	53.6	60.0	54.1	45.4	47.0	
Delay Factor k	0.11	0.50	0.50	0.50	0.28	0.11	0.22	0.47	0.11	0.50	0.12	
Incremental Delay d_2	1.6	46.4	0.2	120.5	1.4	0.3	6.3	26.5	1.4	67.6	0.5	
PF Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
Control Delay	27.2	91.1	27.6	172.6	29.8	22.9	60.0	86.6	55.5	113.0	47.5	
Lane Group LOS	C	F	C	F	C	C	E	F	E	F	D	
Approach Delay	86.1			58.2			78.0			70.1		
Approach LOS	F			E			E			E		
Intersection Delay	72.1			Intersection LOS						E		

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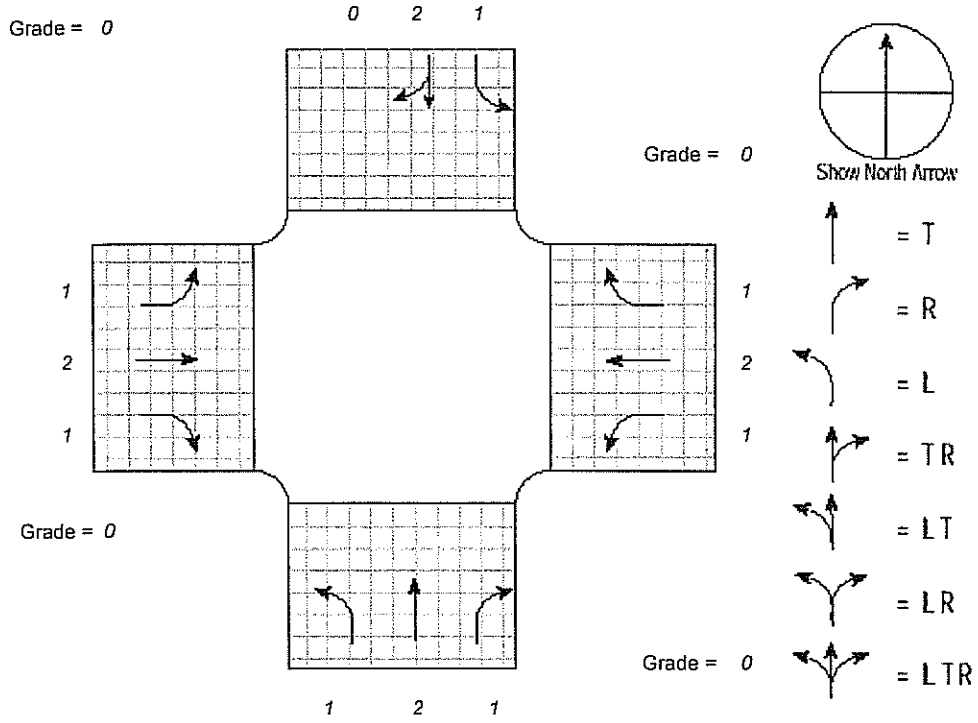
FULL REPORT

General Information		Site Information	
Analyst	*MCM*	Intersection	*NYS 454 @ NICHOLS RD*
Agency or Co.	*NELSON & POPE*	Area Type	*All other areas*
Date Performed	*11/20/2007*	Jurisdiction	
Time Period	*NO BUILD SATURDAY 2009*	Analysis Year	*2009*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)	*97*	*731*	*61*	*279*	*883*	*230*	*92*	*482*	*175*	*168*	*311*	*54*
% Heavy Veh	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
PHF	*0.91*	*0.91*	*0.91*	*0.90*	*0.90*	*0.90*	*0.94*	*0.94*	*0.94*	*0.88*	*0.88*	*0.88*
Actuated (P/A)	*A*	*P*	*P*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*
Startup Lost Time	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	
Extension of Effective Green	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	
Arrival Type	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	
Unit Extension	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*0*
Lane Width	*12.0*	*11.0*	*10.0*	*11.0*	*11.0*	*10.0*	*10.0*	*12.0*	*10.0*	*10.0*	*12.0*	
Parking (Y or N)	*N*		*N*	*N*		*N*	*N*		*N*	*N*		*N*
Parking/Hour												
Bus Stops/Hour	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Pedestrian Timing	*3.2*			*3.2*			*3.2*			*3.2*		

	Excl. Left	WB Only	EW Perm	04	Excl. Left	SB Only	NS Perm	08
Timing	G = *7.8*	G = *14.5*	G = *33.6*	G =	G = *5.1*	G = *8.0*	G = *23.0*	G =
	Y = *5*	Y = *3*	Y = *6*	Y =	Y = *5*	Y = *3*	Y = *6*	Y =

Duration of Analysis (hrs) = *0.25*

Cycle Length C = *120.0*

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume	97	731	61	279	883	230	92	482	175	168	311	54
PHF	0.91	0.91	0.91	0.90	0.90	0.90	0.94	0.94	0.94	0.88	0.88	0.88
Adjusted Flow Rate	107	803	67	310	981	256	98	513	185	191	353	61
Lane Group	L	T	R	L	T	R	L	T	R	L	TR	
Adjusted Flow Rate	107	803	67	310	981	256	98	513	185	191	414	
Proportion of LT or RT	1.000	--	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--	0.147

Saturation Flow Rate

Base Satflow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Number of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
f_W	1.000	0.967	0.933	0.967	0.967	0.933	0.933	1.000	0.933	0.933	1.000	
f_{HV}	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
f_g	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_p	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_{bb}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_a	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_{LU}	1.000	0.952	1.000	1.000	0.952	1.000	1.000	0.952	1.000	1.000	0.952	
f_{LT}	0.950	1.000	--	0.950	1.000	--	0.950	1.000	--	0.950	1.000	--
Secondary f_{LT}	0.257	0.257	--	0.116	0.116	--	0.510	0.510	--	0.190	0.190	--
f_{RT}	--	1.000	0.850	--	1.000	0.850	--	1.000	0.850	--	0.978	
f_{Lpb}	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--
f_{Rpb}	--	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--	1.000	
Adjusted Satflow	1770	3428	1478	1711	3428	1478	1652	3547	1478	1652	3468	
Secondary Adjusted Satflow	478	880	--	209	398	--	886	1808	--	331	661	--

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB			SB		
Lane Group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*TR*	
Adjusted Flow Rate	*107*	*803*	*67*	*310*	*981*	*256*	*98*	*513*	*185*	*191*	*414*	
Satflow Rate	*1770*	*3428*	*1478*	*1711*	*3428*	*1478*	*1652*	*3547*	*1478*	*1652*	*3468*	
Lost Time	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	
Green Ratio	*0.34*	*0.28*	*0.28*	*0.56*	*0.43*	*0.43*	*0.23*	*0.19*	*0.19*	*0.39*	*0.28*	
Lane Group Capacity	*249*	*960*	*414*	*458*	*1460*	*629*	*240*	*680*	*283*	*329*	*983*	
v/c Ratio	*0.43*	*0.84*	*0.16*	*0.68*	*0.67*	*0.41*	*0.41*	*0.75*	*0.65*	*0.58*	*0.42*	
Flow Ratio	*0.06*	*0.23*	*0.05*	*0.18*	*0.29*	*0.17*	*0.04*	*0.14*	*0.13*	*0.12*	*0.12*	
Critical Lane Group	*N*	*Y*	*N*	*Y*	*N*	*N*	*N*	*Y*	*N*	*Y*	*N*	
Sum Flow Ratios	*0.68*											
Lost Time/Cycle	*24.00*											
Critical v/c Ratio	*0.84*											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane Group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*TR*	
Adjusted Flow Rate	*107*	*803*	*67*	*310*	*981*	*256*	*98*	*513*	*185*	*191*	*414*	
Lane Group Capacity	*249*	*960*	*414*	*458*	*1460*	*629*	*240*	*680*	*283*	*329*	*983*	
v/c Ratio	*0.43*	*0.84*	*0.16*	*0.68*	*0.67*	*0.41*	*0.41*	*0.75*	*0.65*	*0.58*	*0.42*	
Green Ratio	*0.34*	*0.28*	*0.28*	*0.56*	*0.43*	*0.43*	*0.23*	*0.19*	*0.19*	*0.39*	*0.28*	
Uniform Delay d_1	*27.5*	*40.6*	*32.6*	*26.5*	*27.7*	*23.9*	*38.7*	*45.8*	*44.8*	*26.6*	*35.0*	
Delay Factor k	*0.11*	*0.50*	*0.50*	*0.25*	*0.24*	*0.11*	*0.11*	*0.31*	*0.23*	*0.17*	*0.11*	
Incremental Delay d_2	*1.2*	*8.6*	*0.8*	*4.0*	*1.2*	*0.4*	*1.1*	*4.8*	*5.3*	*2.6*	*0.3*	
PF Factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	
Control Delay	*28.7*	*49.2*	*33.4*	*30.5*	*28.9*	*24.4*	*39.9*	*50.6*	*50.2*	*29.2*	*35.3*	
Lane Group LOS	*C*	*D*	*C*	*C*	*C*	*C*	*D*	*D*	*D*	*C*	*D*	
Approach Delay	*45.9*			*28.5*			*49.2*			*33.4*		
Approach LOS	*D*			*C*			*D*			*C*		
Intersection Delay	*37.8*			Intersection LOS						*D*		

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FULL REPORT

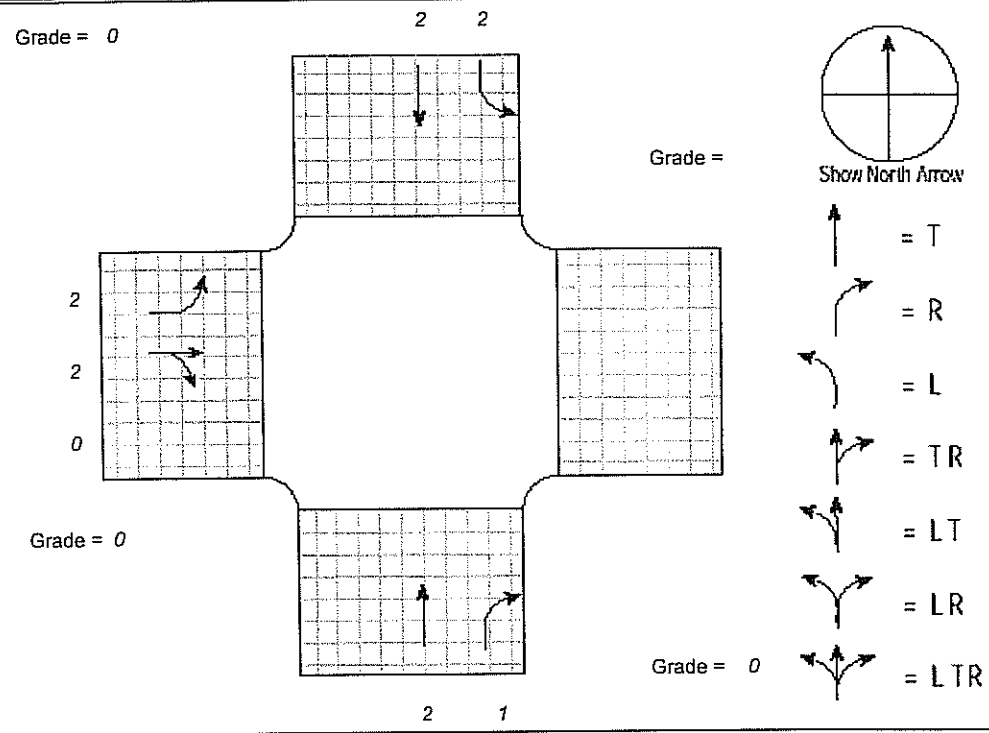
General Information

Analyst	*MCM*
Agency or Co.	*NELSON & POPE*
Date Performed	*11/20/2007*
Time Period	*NO BUILD AM 2009*

Site Information

Intersection	*OLD NICHOLS RD @ LIE SSR*
Area Type	*All other areas*
Jurisdiction	
Analysis Year	*2009*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)	*340*	*52*	*32*					*355*	*318*	*195*	*669*	
% Heavy Veh	*2*	*2*	*2*					*2*	*2*	*2*	*2*	
PHF	*0.91*	*0.91*	*0.91*					*0.98*	*0.98*	*0.89*	*0.89*	
Actuated (P/A)	*P*	*P*	*P*					*A*	*A*	*A*	*A*	
Startup Lost Time	*2.0*	*2.0*						*2.0*	*2.0*	*2.0*	*2.0*	
Extension of Effective Green	*2.0*	*2.0*						*2.0*	*2.0*	*2.0*	*2.0*	
Arrival Type	*3*	*3*						*3*	*3*	*3*	*3*	
Unit Extension	*3.0*	*3.0*						*3.0*	*3.0*	*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*0*	*0*	*21*				*0*	*0*	*201*	*0*	*0*	
Lane Width	*12.0*	*12.0*						*11.0*	*10.0*	*12.0*	*12.0*	
Parking (Y or N)	*N*		*N*				*N*		*N*	*N*		*N*
Parking/Hour												
Bus Stops/Hour	*0*	*0*						*0*	*0*	*0*	*0*	
Pedestrian Timing	*3.2*						*3.2*			*3.2*		

	EB Only	02	03	04	Thru & RT	SB Only	07	08
Timing	G = *24.0*	G =	G =	G =	G = *48.5*	G = *10.5*	G =	G =
	Y = *6*	Y =	Y =	Y =	Y = *5.5*	Y = *5.5*	Y =	Y =
Duration of Analysis (hrs) = *0.25*						Cycle Length C = *100.0*		

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume	340	52	32					355	318	195	669	
PHF	0.91	0.91	0.91					0.98	0.98	0.89	0.89	
Adjusted Flow Rate	374	57	12					362	119	219	752	
Lane Group	L	TR						T	R	L	T	
Adjusted Flow Rate	374	69						362	119	219	752	
Proportion of LT or RT	1.000	--	0.174		--			--	1.000	1.000	--	0.000

Saturation Flow Rate

Base Satflow	1900	1900						1900	1900	1900	1900	
Number of Lanes	2	2	0					2	1	2	2	
f_W	1.000	1.000						0.967	0.933	1.000	1.000	
f_{HV}	0.980	0.980						0.980	0.980	0.980	0.980	
f_g	1.000	1.000						1.000	1.000	1.000	1.000	
f_p	1.000	1.000						1.000	1.000	1.000	1.000	
f_{bb}	1.000	1.000						1.000	1.000	1.000	1.000	
f_a	1.000	1.000						1.000	1.000	1.000	1.000	
f_{LU}	0.971	0.952						0.952	1.000	0.971	0.952	
f_{LT}	0.950	1.000	--			--		1.000	--	0.950	1.000	--
Secondary f_{LT}			--			--			--			--
f_{RT}	--	0.974		--			--	1.000	0.850	--	1.000	
f_{Lpb}	1.000	1.000	--			--		1.000	--	1.000	1.000	--
f_{Rpb}	--	1.000		--			--	1.000	1.000	--	1.000	
Adjusted Satflow	3437	3454						3428	1478	3437	3547	
Secondary Adjusted Satflow			--			--			--			--

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB		SB		
Lane Group	*L*	*TR*					*T*	*R*	*L*	*T*	
Adjusted Flow Rate	*374*	*69*					*362*	*119*	*219*	*752*	
Satflow Rate	*3437*	*3454*					*3428*	*1478*	*3437*	*3547*	
Lost Time	*2.0*	*2.0*					*2.0*	*2.0*	*2.0*	*2.0*	
Green Ratio	*0.24*	*0.24*					*0.49*	*0.49*	*0.10*	*0.64*	
Lane Group Capacity	*825*	*829*					*1663*	*717*	*361*	*2288*	
v/c Ratio	*0.45*	*0.08*					*0.22*	*0.17*	*0.61*	*0.33*	
Flow Ratio	*0.11*	*0.02*					*0.11*	*0.08*	*0.06*	*0.21*	
Critical Lane Group	*Y*	*N*					*N*	*N*	*N*	*Y*	
Sum Flow Ratios	*0.32*										
Lost Time/Cycle	*11.50*										
Critical v/c Ratio	*0.36*										

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB		SB		
Lane Group	*L*	*TR*					*T*	*R*	*L*	*T*	
Adjusted Flow Rate	*374*	*69*					*362*	*119*	*219*	*752*	
Lane Group Capacity	*825*	*829*					*1663*	*717*	*361*	*2288*	
v/c Ratio	*0.45*	*0.08*					*0.22*	*0.17*	*0.61*	*0.33*	
Green Ratio	*0.24*	*0.24*					*0.49*	*0.49*	*0.10*	*0.64*	
Uniform Delay d_1	*32.4*	*29.5*					*14.8*	*14.4*	*42.8*	*8.0*	
Delay Factor k	*0.50*	*0.50*					*0.11*	*0.11*	*0.19*	*0.11*	
Incremental Delay d_2	*1.8*	*0.2*					*0.1*	*0.1*	*2.9*	*0.1*	
PF Factor	*1.000*	*1.000*					*1.000*	*1.000*	*1.000*	*1.000*	
Control Delay	*34.2*	*29.7*					*14.9*	*14.5*	*45.7*	*8.1*	
Lane Group LOS	*C*	*C*					*B*	*B*	*D*	*A*	
Approach Delay	*33.5*						*14.8*		*16.6*		
Approach LOS	*C*						*B*		*B*		
Intersection Delay	*20.1*			Intersection LOS					*C*		

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FULL REPORT

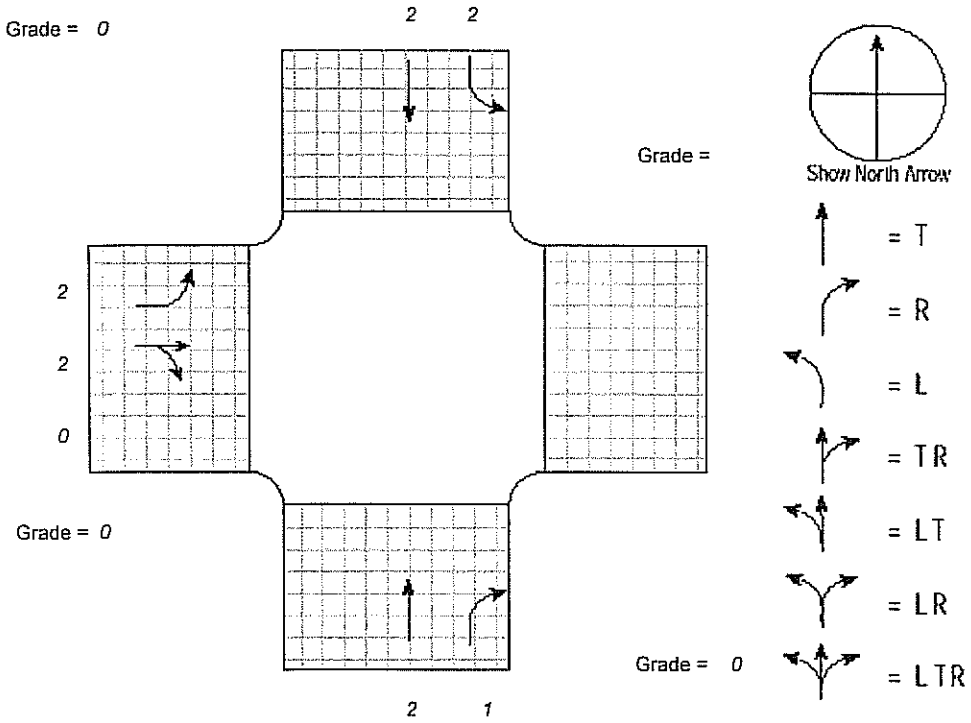
General Information

Analyst	*MCM*
Agency or Co.	*NELSON & POPE*
Date Performed	*11/20/2007*
Time Period	*NO BUILD PM 2009*

Site Information

Intersection	*OLD NICHOLS RD @ LIE SSR*
Area Type	*All other areas*
Jurisdiction	
Analysis Year	*2009*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)	*622*	*1463*	*108*					*684*	*307*	*354*	*623*	
% Heavy Veh	*2*	*2*	*2*					*2*	*2*	*2*	*2*	
PHF	*0.97*	*0.97*	*0.97*					*0.81*	*0.81*	*0.75*	*0.75*	
Actuated (P/A)	*P*	*P*	*P*					*A*	*A*	*A*	*A*	
Startup Lost Time	*2.0*	*2.0*						*2.0*	*2.0*	*2.0*	*2.0*	
Extension of Effective Green	*2.0*	*2.0*						*2.0*	*2.0*	*2.0*	*2.0*	
Arrival Type	*3*	*3*						*3*	*3*	*3*	*3*	
Unit Extension	*3.0*	*3.0*						*3.0*	*3.0*	*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*0*	*0*	*23*				*0*	*0*	*56*	*0*	*0*	
Lane Width	*12.0*	*12.0*						*11.0*	*10.0*	*12.0*	*12.0*	
Parking (Y or N)	*N*		*N*				*N*		*N*	*N*		*N*
Parking/Hour												
Bus Stops/Hour	*0*	*0*						*0*	*0*	*0*	*0*	
Pedestrian Timing	*3.2*						*3.2*			*3.2*		

	EB Only	02	03	04	Thru & RT	SB Only	07	08
Timing	G = *43.3*	G =	G =	G =	G = *25.7*	G = *14.0*	G =	G =
	Y = *6*	Y =	Y =	Y =	Y = *5.5*	Y = *5.5*	Y =	Y =

Duration of Analysis (hrs) = *0.25*

Cycle Length C = *100.0*

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume	622	1463	108					684	307	354	623	
PHF	0.97	0.97	0.97					0.81	0.81	0.75	0.75	
Adjusted Flow Rate	641	1508	88					844	310	472	831	
Lane Group	L	TR						T	R	L	T	
Adjusted Flow Rate	641	1596						844	310	472	831	
Proportion of LT or RT	1.000	--	0.055		--			--	1.000	1.000	--	0.000

Saturation Flow Rate

Base Satflow	1900	1900						1900	1900	1900	1900	
Number of Lanes	2	2	0					2	1	2	2	
f_W	1.000	1.000						0.967	0.933	1.000	1.000	
f_{HV}	0.980	0.980						0.980	0.980	0.980	0.980	
f_g	1.000	1.000						1.000	1.000	1.000	1.000	
f_p	1.000	1.000						1.000	1.000	1.000	1.000	
f_{bb}	1.000	1.000						1.000	1.000	1.000	1.000	
f_a	1.000	1.000						1.000	1.000	1.000	1.000	
f_{LU}	0.971	0.952						0.952	1.000	0.971	0.952	
f_{LT}	0.950	1.000	--			--		1.000	--	0.950	1.000	--
Secondary f_{LT}			--			--			--			--
f_{RT}	--	0.992		--			--	1.000	0.850	--	1.000	
f_{Lpb}	1.000	1.000	--			--		1.000	--	1.000	1.000	--
f_{Rpb}	--	1.000		--			--	1.000	1.000	--	1.000	
Adjusted Satflow	3437	3517						3428	1478	3437	3547	
Secondary Adjusted Satflow			--			--			--			--

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB			SB		
Lane Group	*L*	*TR*					*T*	*R*		*L*	*T*	
Adjusted Flow Rate	*641*	*1596*					*844*	*310*		*472*	*831*	
Satflow Rate	*3437*	*3517*					*3428*	*1478*		*3437*	*3547*	
Lost Time	*2.0*	*2.0*					*2.0*	*2.0*		*2.0*	*2.0*	
Green Ratio	*0.43*	*0.43*					*0.26*	*0.26*		*0.14*	*0.45*	
Lane Group Capacity	*1488*	*1523*					*881*	*380*		*481*	*1603*	
v/c Ratio	*0.43*	*1.05*					*0.96*	*0.82*		*0.98*	*0.52*	
Flow Ratio	*0.19*	*0.45*					*0.25*	*0.21*		*0.14*	*0.23*	
Critical Lane Group	*N*	*Y*					*Y*	*N*		*Y*	*N*	
Sum Flow Ratios	*0.84*											
Lost Time/Cycle	*17.00*											
Critical v/c Ratio	*1.01*											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane Group	*L*	*TR*					*T*	*R*		*L*	*T*	
Adjusted Flow Rate	*641*	*1596*					*844*	*310*		*472*	*831*	
Lane Group Capacity	*1488*	*1523*					*881*	*380*		*481*	*1603*	
v/c Ratio	*0.43*	*1.05*					*0.96*	*0.82*		*0.98*	*0.52*	
Green Ratio	*0.43*	*0.43*					*0.26*	*0.26*		*0.14*	*0.45*	
Uniform Delay d_1	*19.8*	*28.4*					*36.6*	*34.9*		*42.9*	*19.6*	
Delay Factor k	*0.50*	*0.50*					*0.47*	*0.36*		*0.49*	*0.12*	
Incremental Delay d_2	*0.9*	*36.7*					*20.8*	*12.9*		*36.1*	*0.3*	
PF Factor	*1.000*	*1.000*					*1.000*	*1.000*		*1.000*	*1.000*	
Control Delay	*20.7*	*65.1*					*57.4*	*47.9*		*78.9*	*19.9*	
Lane Group LOS	*C*	*E*					*E*	*D*		*E*	*B*	
Approach Delay	*52.4*						*54.8*			*41.3*		
Approach LOS	*D*						*D*			*D*		
Intersection Delay	*49.9*			Intersection LOS						*D*		

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FULL REPORT

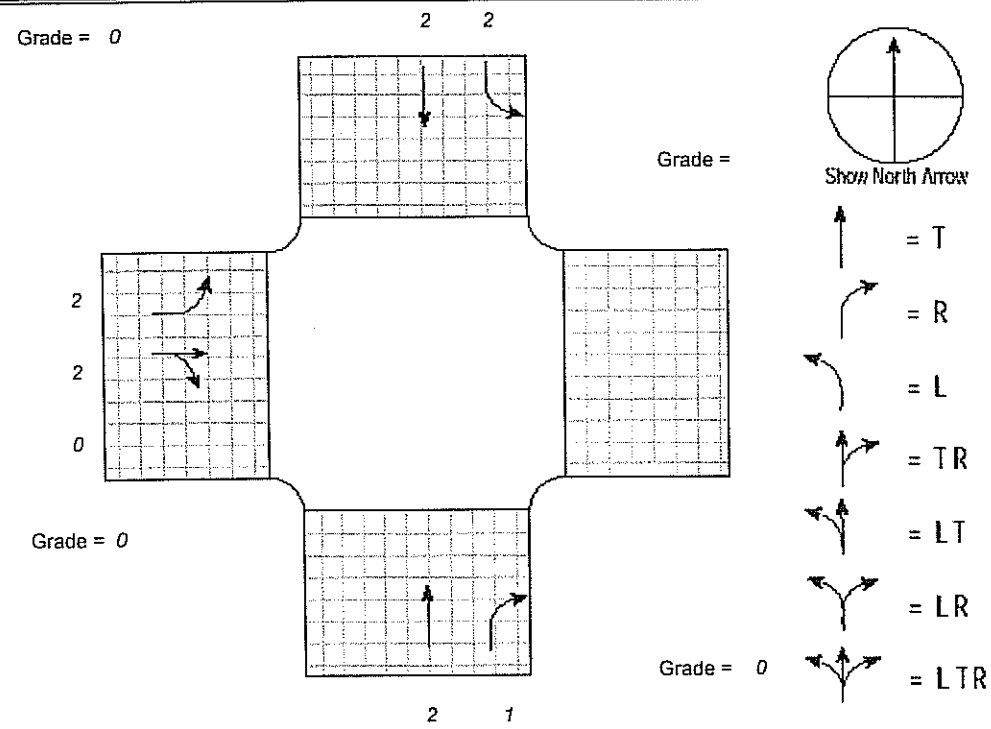
General Information

Analyst	*MCM*
Agency or Co.	*NELSON & POPE*
Date Performed	*11/20/2007*
Time Period	*NO BUILD SATURDAY 2007*

Site Information

Intersection	*OLD NICHOLS RD @ LIE SSR*
Area Type	*All other areas*
Jurisdiction	
Analysis Year	*2007*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)	493	129	59					474	226	285	534	
% Heavy Veh	2	2	2					2	2	2	2	
PHF	0.91	0.91	0.91					0.93	0.93	0.94	0.94	
Actuated (P/A)	P	P	P					A	A	A	A	
Startup Lost Time	2.0	2.0						2.0	2.0	2.0	2.0	
Extension of Effective Green	2.0	2.0						2.0	2.0	2.0	2.0	
Arrival Type	3	3						3	3	3	3	
Unit Extension	3.0	3.0						3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	0	0	21				0	0	201	0	0	
Lane Width	12.0	12.0						11.0	10.0	12.0	12.0	
Parking (Y or N)	N		N				N		N	N		N
Parking/Hour												
Bus Stops/Hour	0	0						0	0	0	0	
Pedestrian Timing	3.2						3.2			3.2		

	EB Only	02	03	04	Thru & RT	SB Only	07	08
Timing	G = 25.0	G =	G =	G =	G = 22.5	G = 10.5	G =	G =
	Y = 6	Y =	Y =	Y =	Y = 5.5	Y = 5.5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 75.0		

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume	493	129	59					474	226	285	534	
PHF	0.91	0.91	0.91					0.93	0.93	0.94	0.94	
Adjusted Flow Rate	542	142	42					510	27	303	568	
Lane Group	L	TR						T	R	L	T	
Adjusted Flow Rate	542	184						510	27	303	568	
Proportion of LT or RT	1.000	--	0.228		--			--	1.000	1.000	--	0.000

Saturation Flow Rate

Base Satflow	1900	1900						1900	1900	1900	1900	
Number of Lanes	2	2	0					2	1	2	2	
f_W	1.000	1.000						0.967	0.933	1.000	1.000	
f_{HV}	0.980	0.980						0.980	0.980	0.980	0.980	
f_g	1.000	1.000						1.000	1.000	1.000	1.000	
f_p	1.000	1.000						1.000	1.000	1.000	1.000	
f_{bb}	1.000	1.000						1.000	1.000	1.000	1.000	
f_a	1.000	1.000						1.000	1.000	1.000	1.000	
f_{LU}	0.971	0.952						0.952	1.000	0.971	0.952	
f_{LT}	0.950	1.000	--			--		1.000	--	0.950	1.000	--
Secondary f_{LT}			--			--			--			--
f_{RT}	--	0.966		--			--	1.000	0.850	--	1.000	
f_{Lpb}	1.000	1.000	--			--		1.000	--	1.000	1.000	--
f_{Rpb}	--	1.000		--			--	1.000	1.000	--	1.000	
Adjusted Satflow	3437	3425						3428	1478	3437	3547	
Secondary Adjusted Satflow			--			--			--			--

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB			SB		
Lane Group	*L*	*TR*					*T*	*R*		*L*	*T*	
Adjusted Flow Rate	*542*	*184*					*510*	*27*		*303*	*568*	
Satflow Rate	*3437*	*3425*					*3428*	*1478*		*3437*	*3547*	
Lost Time	*2.0*	*2.0*					*2.0*	*2.0*		*2.0*	*2.0*	
Green Ratio	*0.33*	*0.33*					*0.30*	*0.30*		*0.14*	*0.51*	
Lane Group Capacity	*1146*	*1142*					*1028*	*443*		*481*	*1821*	
v/c Ratio	*0.47*	*0.16*					*0.50*	*0.06*		*0.63*	*0.31*	
Flow Ratio	*0.16*	*0.05*					*0.15*	*0.02*		*0.09*	*0.16*	
Critical Lane Group	*Y*	*N*					*Y*	*N*		*Y*	*N*	
Sum Flow Ratios	*0.39*											
Lost Time/Cycle	*17.00*											
Critical v/c Ratio	*0.51*											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane Group	*L*	*TR*					*T*	*R*		*L*	*T*	
Adjusted Flow Rate	*542*	*184*					*510*	*27*		*303*	*568*	
Lane Group Capacity	*1146*	*1142*					*1028*	*443*		*481*	*1821*	
v/c Ratio	*0.47*	*0.16*					*0.50*	*0.06*		*0.63*	*0.31*	
Green Ratio	*0.33*	*0.33*					*0.30*	*0.30*		*0.14*	*0.51*	
Uniform Delay d_1	*19.8*	*17.6*					*21.6*	*18.7*		*30.4*	*10.6*	
Delay Factor k	*0.50*	*0.50*					*0.11*	*0.11*		*0.21*	*0.11*	
Incremental Delay d_2	*1.4*	*0.3*					*0.4*	*0.1*		*2.7*	*0.1*	
PF Factor	*1.000*	*1.000*					*1.000*	*1.000*		*1.000*	*1.000*	
Control Delay	*21.2*	*17.9*					*22.0*	*18.8*		*33.1*	*10.7*	
Lane Group LOS	*C*	*B*					*C*	*B*		*C*	*B*	
Approach Delay	*20.4*						*21.8*			*18.5*		
Approach LOS	*C*						*C*			*B*		
Intersection Delay	*19.9*			Intersection LOS						*B*		

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FULL REPORT

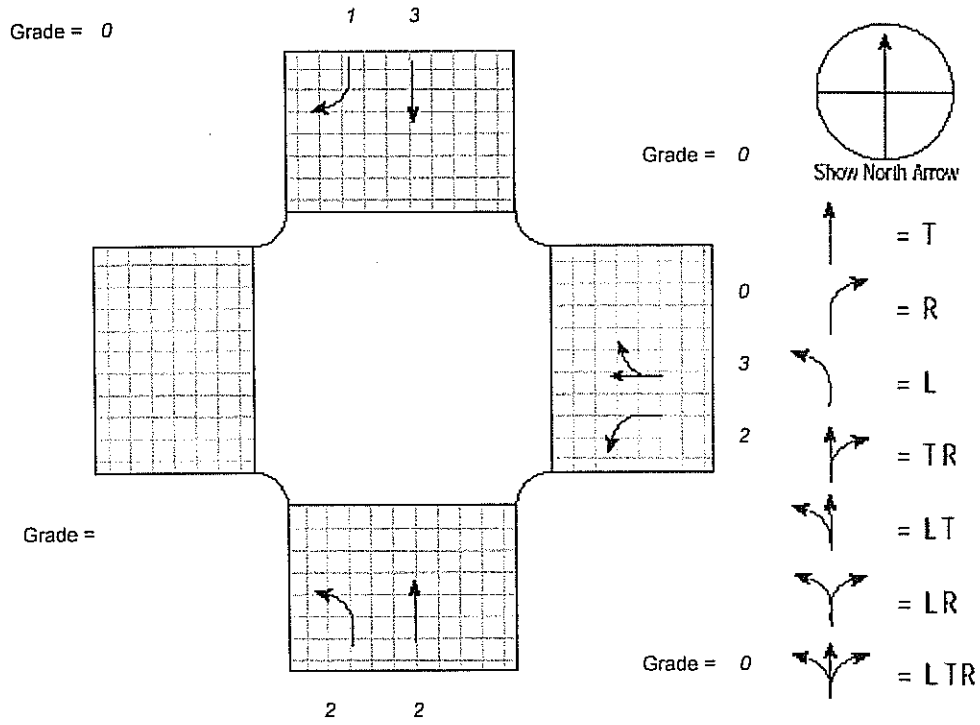
General Information

Analyst	*MCM*
Agency or Co.	*NELSON & POPE*
Date Performed	*11/20/2007*
Time Period	*NO BUILD AM 2009*

Site Information

Intersection	*OLD NICHOLS RD @ LIE NSR*
Area Type	*All other areas*
Jurisdiction	
Analysis Year	*2009*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)				*332*	*1621*	*97*	*237*	*459*			*531*	*485*
% Heavy Veh				*2*	*2*	*2*	*2*	*2*			*2*	*2*
PHF				*0.96*	*0.96*	*0.96*	*0.98*	*0.98*			*0.94*	*0.94*
Actuated (P/A)				*P*	*P*	*P*	*A*	*A*			*A*	*A*
Startup Lost Time				*2.0*	*2.0*		*2.0*	*2.0*			*2.0*	*2.0*
Extension of Effective Green				*2.0*	*2.0*		*2.0*	*2.0*			*2.0*	*2.0*
Arrival Type				*3*	*3*		*3*	*3*			*3*	*3*
Unit Extension				*3.0*	*3.0*		*3.0*	*3.0*			*3.0*	*3.0*
Ped/Bike/RTOR Volume				*0*	*0*	*4*	*0*	*0*		*0*	*0*	*0*
Lane Width				*12.0*	*12.0*		*12.0*	*12.0*			*12.0*	*12.0*
Parking (Y or N)				*N*		*N*	*N*		*N*	*N*		*N*
Parking/Hour												
Bus Stops/Hour				*0*	*0*		*0*	*0*			*0*	*0*
Pedestrian Timing				*3.2*			*3.2*			*3.2*		

	WB Only	02	03	04	Thru & RT	NB Only	07	08
Timing	G = *40.0*	G =	G =	G =	G = *32.2*	G = *10.2*	G =	G =
	Y = *6*	Y =	Y =	Y =	Y = *5.8*	Y = *5.8*	Y =	Y =
Duration of Analysis (hrs) = *0.25*						Cycle Length C = *100.0*		

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume				332	1621	97	237	459			531	485
PHF				0.96	0.96	0.96	0.98	0.98			0.94	0.94
Adjusted Flow Rate				346	1689	97	242	468			565	516
Lane Group				L	TR		L	T			T	R
Adjusted Flow Rate				346	1786		242	468			565	516
Proportion of LT or RT		--		1.000	--	0.054	1.000	--	0.000		--	1.000

Saturation Flow Rate

Base Satflow				1900	1900		1900	1900			1900	1900
Number of Lanes				2	3	0	2	2			3	1
f_W				1.000	1.000		1.000	1.000			1.000	1.000
f_{HV}				0.980	0.980		0.980	0.980			0.980	0.980
f_g				1.000	1.000		1.000	1.000			1.000	1.000
f_p				1.000	1.000		1.000	1.000			1.000	1.000
f_{bb}				1.000	1.000		1.000	1.000			1.000	1.000
f_a				1.000	1.000		1.000	1.000			1.000	1.000
f_{LU}				0.971	0.908		0.971	0.952			0.908	1.000
f_{LT}			--	0.950	1.000	--	0.950	1.000	--		1.000	--
Secondary f_{LT}			--			--			--			--
f_{RT}	--			--	0.992		--	1.000		--	1.000	0.850
f_{Lpb}			--	1.000	1.000	--	1.000	1.000	--		1.000	--
f_{Rpb}	--			--	1.000		--	1.000		--	1.000	1.000
Adjusted Satflow				3437	5033		3437	3547			5074	1583
Secondary Adjusted Satflow			--			--			--			--

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB			SB		
Lane Group				*L*	*TR*		*L*	*T*			*T*	*R*
Adjusted Flow Rate				*346*	*1786*		*242*	*468*			*565*	*516*
Satflow Rate				*3437*	*5033*		*3437*	*3547*			*5074*	*1583*
Lost Time				*2.0*	*2.0*		*2.0*	*2.0*			*2.0*	*2.0*
Green Ratio				*0.40*	*0.40*		*0.10*	*0.48*			*0.32*	*0.32*
Lane Group Capacity				*1375*	*2013*		*351*	*1710*			*1634*	*510*
v/c Ratio				*0.25*	*0.89*		*0.69*	*0.27*			*0.35*	*1.01*
Flow Ratio				*0.10*	*0.35*		*0.07*	*0.13*			*0.11*	*0.33*
Critical Lane Group				*N*	*Y*		*Y*	*N*			*N*	*Y*
Sum Flow Ratios	*0.75*											
Lost Time/Cycle	*17.60*											
Critical v/c Ratio	*0.91*											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane Group				*L*	*TR*		*L*	*T*			*T*	*R*
Adjusted Flow Rate				*346*	*1786*		*242*	*468*			*565*	*516*
Lane Group Capacity				*1375*	*2013*		*351*	*1710*			*1634*	*510*
v/c Ratio				*0.25*	*0.89*		*0.69*	*0.27*			*0.35*	*1.01*
Green Ratio				*0.40*	*0.40*		*0.10*	*0.48*			*0.32*	*0.32*
Uniform Delay d_1				*20.0*	*27.9*		*43.4*	*15.5*			*25.9*	*33.9*
Delay Factor k				*0.50*	*0.50*		*0.26*	*0.11*			*0.11*	*0.50*
Incremental Delay d_2				*0.4*	*6.3*		*5.6*	*0.1*			*0.1*	*42.8*
PF Factor				*1.000*	*1.000*		*1.000*	*1.000*			*1.000*	*1.000*
Control Delay				*20.5*	*34.2*		*49.0*	*15.5*			*26.0*	*76.7*
Lane Group LOS				*C*	*C*		*D*	*B*			*C*	*E*
Approach Delay				*31.9*			*27.0*			*50.2*		
Approach LOS				*C*			*C*			*D*		
Intersection Delay	*36.1*			Intersection LOS						*D*		

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FULL REPORT

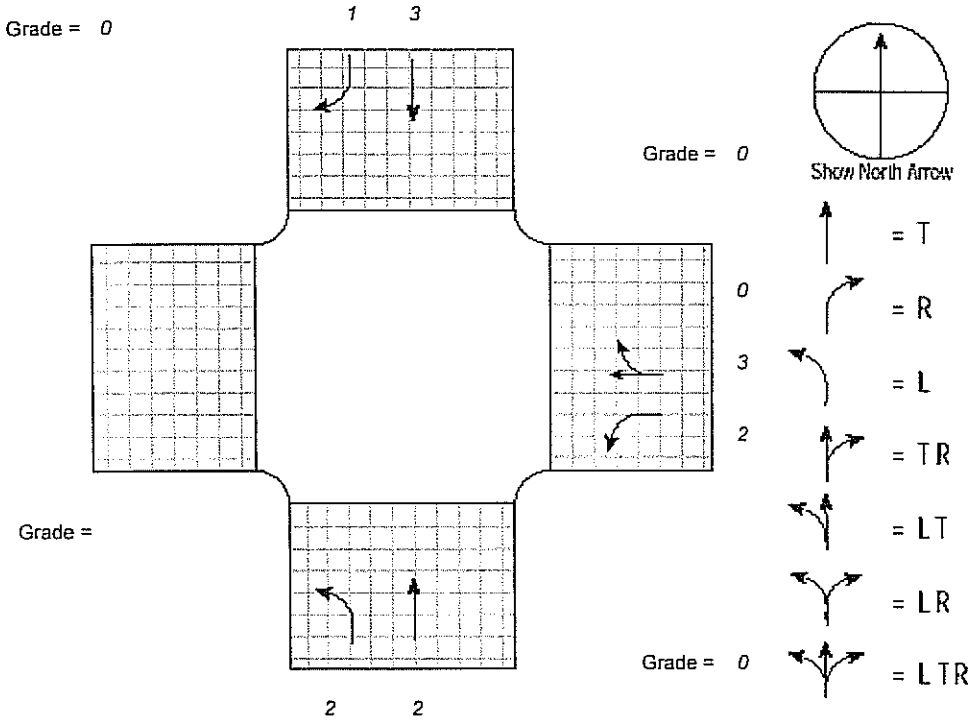
General Information

Analyst *MCM*
Agency or Co. *NELSON & POPE*
Date Performed *11/20/2007*
Time Period *NO BUILD PM 2009*

Site Information

Intersection *OLD NICHOLS RD @ LIE NSR*
Area Type *All other areas*
Jurisdiction
Analysis Year *2009*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)				290	211	198	337	969			687	217
% Heavy Veh				2	2	2	2	2			2	2
PHF				0.90	0.90	0.90	0.91	0.91			0.87	0.87
Actuated (P/A)				P	P	P	A	A			A	A
Startup Lost Time				2.0	2.0		2.0	2.0			2.0	2.0
Extension of Effective Green				2.0	2.0		2.0	2.0			2.0	2.0
Arrival Type				3	3		3	3			3	3
Unit Extension				3.0	3.0		3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume				0	0	47	0	0		0	0	0
Lane Width				12.0	12.0		12.0	12.0			12.0	12.0
Parking (Y or N)				N		N	N		N	N		N
Parking/Hour												
Bus Stops/Hour				0	0		0	0			0	0
Pedestrian Timing				3.2			3.2			3.2		

	WB Only	02	03	04	Thru & RT	NB Only	07	08
Timing	G = 30.0	G =	G =	G =	G = 29.0	G = 23.4	G =	G =
	Y = 6	Y =	Y =	Y =	Y = 5.8	Y = 5.8	Y =	Y =

Duration of Analysis (hrs) = *0.25*
Cycle Length C = *100.0*

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume				290	211	198	337	969			687	217
PHF				0.90	0.90	0.90	0.91	0.91			0.87	0.87
Adjusted Flow Rate				322	234	168	370	1065			790	249
Lane Group				L	TR		L	T			T	R
Adjusted Flow Rate				322	402		370	1065			790	249
Proportion of LT or RT		--		1.000	--	0.418	1.000	--	0.000		--	1.000

Saturation Flow Rate

Base Satflow				1900	1900		1900	1900			1900	1900
Number of Lanes				2	3	0	2	2			3	1
f_W				1.000	1.000		1.000	1.000			1.000	1.000
f_{HV}				0.980	0.980		0.980	0.980			0.980	0.980
f_g				1.000	1.000		1.000	1.000			1.000	1.000
f_p				1.000	1.000		1.000	1.000			1.000	1.000
f_{bb}				1.000	1.000		1.000	1.000			1.000	1.000
f_a				1.000	1.000		1.000	1.000			1.000	1.000
f_{LU}				0.971	0.908		0.971	0.952			0.908	1.000
f_{LT}			--	0.950	1.000	--	0.950	1.000	--		1.000	--
Secondary f_{LT}			--			--			--			--
f_{RT}	--			--	0.937		--	1.000		--	1.000	0.850
f_{Lpb}			--	1.000	1.000	--	1.000	1.000	--		1.000	--
f_{Rpb}	--			--	1.000		--	1.000		--	1.000	1.000
Adjusted Satflow				3437	4756		3437	3547			5074	1583
Secondary Adjusted Satflow			--			--			--			--

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB			SB		
Lane Group				*L*	*TR*		*L*	*T*			*T*	*R*
Adjusted Flow Rate				*322*	*402*		*370*	*1065*			*790*	*249*
Satflow Rate				*3437*	*4756*		*3437*	*3547*			*5074*	*1583*
Lost Time				*2.0*	*2.0*		*2.0*	*2.0*			*2.0*	*2.0*
Green Ratio				*0.30*	*0.30*		*0.23*	*0.58*			*0.29*	*0.29*
Lane Group Capacity				*1031*	*1427*		*804*	*2064*			*1471*	*459*
v/c Ratio				*0.31*	*0.28*		*0.46*	*0.52*			*0.54*	*0.54*
Flow Ratio				*0.09*	*0.08*		*0.11*	*0.30*			*0.16*	*0.16*
Critical Lane Group				*Y*	*N*		*N*	*Y*			*N*	*N*
Sum Flow Ratios	*0.39*											
Lost Time/Cycle	*11.80*											
Critical v/c Ratio	*0.45*											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane Group				*L*	*TR*		*L*	*T*			*T*	*R*
Adjusted Flow Rate				*322*	*402*		*370*	*1065*			*790*	*249*
Lane Group Capacity				*1031*	*1427*		*804*	*2064*			*1471*	*459*
v/c Ratio				*0.31*	*0.28*		*0.46*	*0.52*			*0.54*	*0.54*
Green Ratio				*0.30*	*0.30*		*0.23*	*0.58*			*0.29*	*0.29*
Uniform Delay d_1				*27.0*	*26.8*		*32.9*	*12.5*			*29.9*	*29.9*
Delay Factor k				*0.50*	*0.50*		*0.11*	*0.12*			*0.14*	*0.14*
Incremental Delay d_2				*0.8*	*0.5*		*0.4*	*0.2*			*0.4*	*1.3*
PF Factor				*1.000*	*1.000*		*1.000*	*1.000*			*1.000*	*1.000*
Control Delay				*27.8*	*27.3*		*33.3*	*12.7*			*30.2*	*31.2*
Lane Group LOS				*C*	*C*		*C*	*B*			*C*	*C*
Approach Delay				*27.5*			*18.0*			*30.5*		
Approach LOS				*C*			*B*			*C*		
Intersection Delay	*24.2*			Intersection LOS						*C*		

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FULL REPORT

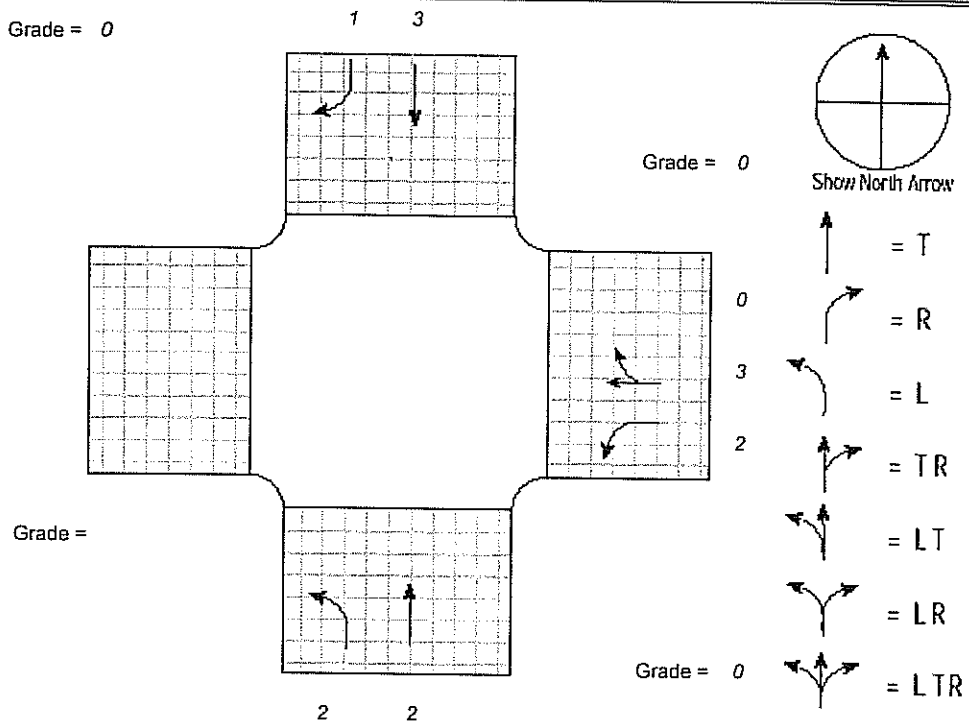
General Information

Analyst	*MCM*
Agency or Co.	*NELSON & POPE*
Date Performed	*11/20/2007*
Time Period	*NO BUILD SATRUDAY 2009*

Site Information

Intersection	*OLD NICHOLS RD @ LIE NSR*
Area Type	*All other areas*
Jurisdiction	
Analysis Year	*2009*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)				213	178	183	110	856			606	330
% Heavy Veh				2	2	2	2	2			2	2
PHF				0.87	0.87	0.87	0.98	0.98			0.93	0.93
Actuated (P/A)				P	P	P	A	A			A	A
Startup Lost Time				2.0	2.0		2.0	2.0			2.0	2.0
Extension of Effective Green				2.0	2.0		2.0	2.0			2.0	2.0
Arrival Type				3	3		3	3			3	3
Unit Extension				3.0	3.0		3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume				0	0	55	0	0		0	0	2
Lane Width				12.0	12.0		12.0	12.0			12.0	12.0
Parking (Y or N)				N		N	N		N	N		N
Parking/Hour												
Bus Stops/Hour				0	0		0	0			0	0
Pedestrian Timing					3.2			3.2			3.2	

	WB Only	02	03	04	Thru & RT	NB Only	07	08
Timing	G = 25.0	G =	G =	G =	G = 22.2	G = 10.2	G =	G =
	Y = 6	Y =	Y =	Y =	Y = 5.8	Y = 5.8	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 75.0		

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume				213	178	183	110	856			606	330
PHF				0.87	0.87	0.87	0.98	0.98			0.93	0.93
Adjusted Flow Rate				245	205	147	112	873			652	353
Lane Group				L	TR		L	T			T	R
Adjusted Flow Rate				245	352		112	873			652	353
Proportion of LT or RT		--		1.000	--	0.418	1.000	--	0.000		--	1.000

Saturation Flow Rate

Base Satflow				1900	1900		1900	1900			1900	1900
Number of Lanes				2	3	0	2	2			3	1
f_W				1.000	1.000		1.000	1.000			1.000	1.000
f_{HV}				0.980	0.980		0.980	0.980			0.980	0.980
f_g				1.000	1.000		1.000	1.000			1.000	1.000
f_p				1.000	1.000		1.000	1.000			1.000	1.000
f_{bb}				1.000	1.000		1.000	1.000			1.000	1.000
f_a				1.000	1.000		1.000	1.000			1.000	1.000
f_{LU}				0.971	0.908		0.971	0.952			0.908	1.000
f_{LT}			--	0.950	1.000	--	0.950	1.000	--		1.000	--
Secondary f_{LT}			--			--			--			--
f_{RT}	--			--	0.937		--	1.000		--	1.000	0.850
f_{Lpb}			--	1.000	1.000	--	1.000	1.000	--		1.000	--
f_{Rpb}	--			--	1.000		--	1.000		--	1.000	1.000
Adjusted Satflow				3437	4756		3437	3547			5074	1583
Secondary Adjusted Satflow			--			--			--			--

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB			SB		
Lane Group				*L*	*TR*		*L*	*T*			*T*	*R*
Adjusted Flow Rate				*245*	*352*		*112*	*873*			*652*	*353*
Satflow Rate				*3437*	*4756*		*3437*	*3547*			*5074*	*1583*
Lost Time				*2.0*	*2.0*		*2.0*	*2.0*			*2.0*	*2.0*
Green Ratio				*0.33*	*0.33*		*0.14*	*0.51*			*0.30*	*0.30*
Lane Group Capacity				*1146*	*1585*		*467*	*1807*			*1502*	*469*
v/c Ratio				*0.21*	*0.22*		*0.24*	*0.48*			*0.43*	*0.75*
Flow Ratio				*0.07*	*0.07*		*0.03*	*0.25*			*0.13*	*0.22*
Critical Lane Group				*N*	*Y*		*Y*	*N*			*N*	*Y*
Sum Flow Ratios	*0.33*											
Lost Time/Cycle	*17.60*											
Critical v/c Ratio	*0.43*											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane Group				*L*	*TR*		*L*	*T*			*T*	*R*
Adjusted Flow Rate				*245*	*352*		*112*	*873*			*652*	*353*
Lane Group Capacity				*1146*	*1585*		*467*	*1807*			*1502*	*469*
v/c Ratio				*0.21*	*0.22*		*0.24*	*0.48*			*0.43*	*0.75*
Green Ratio				*0.33*	*0.33*		*0.14*	*0.51*			*0.30*	*0.30*
Uniform Delay d_1				*17.9*	*18.0*		*28.9*	*12.0*			*21.3*	*23.9*
Delay Factor k				*0.50*	*0.50*		*0.11*	*0.11*			*0.11*	*0.31*
Incremental Delay d_2				*0.4*	*0.3*		*0.3*	*0.2*			*0.2*	*6.8*
PF Factor				*1.000*	*1.000*		*1.000*	*1.000*			*1.000*	*1.000*
Control Delay				*18.4*	*18.3*		*29.2*	*12.2*			*21.5*	*30.7*
Lane Group LOS				*B*	*B*		*C*	*B*			*C*	*C*
Approach Delay				*18.3*			*14.1*			*24.7*		
Approach LOS				*B*			*B*			*C*		
Intersection Delay	*19.2*			Intersection LOS						*B*		

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Build Condition

FULL REPORT

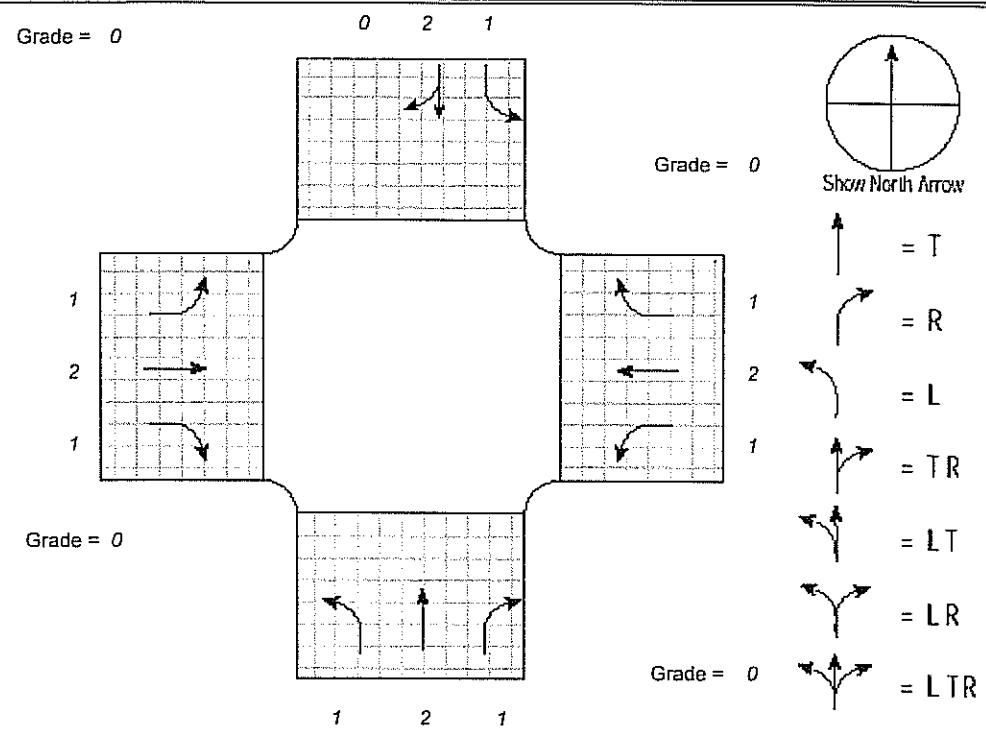
General Information

Analyst	*MCM*
Agency or Co.	*NELSON & POPE*
Date Performed	*11/20/2007*
Time Period	*BUILD AM 2009*

Site Information

Intersection	*NYS 454 @ NICHOLS RD*
Area Type	*All other areas*
Jurisdiction	
Analysis Year	*2009*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)	*13*	*939*	*40*	*225*	*1372*	*179*	*82*	*351*	*215*	*183*	*605*	*73*
% Heavy Veh	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
PHF	*0.91*	*0.91*	*0.91*	*0.87*	*0.87*	*0.87*	*0.75*	*0.75*	*0.75*	*0.91*	*0.91*	*0.91*
Actuated (P/A)	*P*	*P*	*P*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*
Startup Lost Time	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	
Extension of Effective Green	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	
Arrival Type	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	
Unit Extension	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*0*	*0*	*0*	*0*	*0*	*3*	*0*	*0*	*4*	*0*	*0*	*0*
Lane Width	*12.0*	*11.0*	*10.0*	*11.0*	*11.0*	*10.0*	*10.0*	*12.0*	*10.0*	*10.0*	*12.0*	
Parking (Y or N)	*N*		*N*	*N*		*N*	*N*		*N*	*N*		*N*
Parking/Hour												
Bus Stops/Hour	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Pedestrian Timing	*3.2*			*3.2*			*3.2*			*3.2*		

	WB Only	EW Perm	03	04	Excl. Left	NS Perm	07	08
Timing	G = *17.9*	G = *57.2*	G =	G =	G = *5.6*	G = *37.3*	G =	G =
	Y = *5*	Y = *6*	Y =	Y =	Y = *5*	Y = *6*	Y =	Y =

Duration of Analysis (hrs) = *0.25*

Cycle Length C = *140.0*

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume	13	939	40	225	1372	179	82	351	215	183	605	73
PHF	0.91	0.91	0.91	0.87	0.87	0.87	0.75	0.75	0.75	0.91	0.91	0.91
Adjusted Flow Rate	14	1032	44	259	1577	202	109	468	281	201	665	80
Lane Group	L	T	R	L	T	R	L	T	R	L	TR	
Adjusted Flow Rate	14	1032	44	259	1577	202	109	468	281	201	745	
Proportion of LT or RT	1.000	--	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--	0.107

Saturation Flow Rate

Base Satflow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Number of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
f_W	1.000	0.967	0.933	0.967	0.967	0.933	0.933	1.000	0.933	0.933	1.000	
f_{HV}	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
f_g	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_p	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_{bb}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_a	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_{LU}	1.000	0.952	1.000	1.000	0.952	1.000	1.000	0.952	1.000	1.000	0.952	
f_{LT}	0.099	1.000	--	0.950	1.000	--	0.950	1.000	--	0.950	1.000	--
Secondary f_{LT}			--	0.121	0.121	--	0.126	0.126	--	0.302	0.302	--
f_{RT}	--	1.000	0.850	--	1.000	0.850	--	1.000	0.850	--	0.984	
f_{Lpb}	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--
f_{Rpb}	--	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--	1.000	
Adjusted Satflow	184	3428	1478	1711	3428	1478	1652	3547	1478	1652	3490	
Secondary Adjusted Satflow			--	218	415	--	219	447	--	526	1055	--

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB			SB		
Lane Group	L	T	R	L	T	R	L	T	R	L	TR	
Adjusted Flow Rate	14	1032	44	259	1577	202	109	468	281	201	745	
Satflow Rate	184	3428	1478	1711	3428	1478	1652	3547	1478	1652	3490	
Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Green Ratio	0.41	0.41	0.41	0.58	0.57	0.41	0.35	0.27	0.27	0.35	0.27	
Lane Group Capacity	75	1401	604	317	1961	604	134	945	394	229	930	
v/c Ratio	0.19	0.74	0.07	0.82	0.80	0.33	0.81	0.50	0.71	0.88	0.80	
Flow Ratio	0.08	0.30	0.03	0.13	0.46	0.14	0.04	0.13	0.19	0.04	0.21	
Critical Lane Group	N	N	N	N	Y	N	N	N	N	Y	N	
Sum Flow Ratios	0.76											
Lost Time/Cycle	12.00											
Critical v/c Ratio	0.83											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane Group	L	T	R	L	T	R	L	T	R	L	TR	
Adjusted Flow Rate	14	1032	44	259	1577	202	109	468	281	201	745	
Lane Group Capacity	75	1401	604	317	1961	604	134	945	394	229	930	
v/c Ratio	0.19	0.74	0.07	0.82	0.80	0.33	0.81	0.50	0.71	0.88	0.80	
Green Ratio	0.41	0.41	0.41	0.58	0.57	0.41	0.35	0.27	0.27	0.35	0.27	
Uniform Delay d_1	26.5	35.0	25.2	28.7	23.7	28.4	48.5	43.4	46.5	49.6	47.9	
Delay Factor k	0.50	0.50	0.50	0.36	0.35	0.11	0.35	0.11	0.28	0.40	0.34	
Incremental Delay d_2	5.4	3.5	0.2	15.3	2.5	0.3	30.5	0.4	6.0	29.7	5.1	
PF Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
Control Delay	31.9	38.5	25.5	43.9	26.3	28.7	79.0	43.8	52.5	79.2	53.0	
Lane Group LOS	C	D	C	D	C	C	E	D	D	E	D	
Approach Delay	37.9			28.8			51.1			58.6		
Approach LOS	D			C			D			E		
Intersection Delay	40.4			Intersection LOS						D		

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FULL REPORT

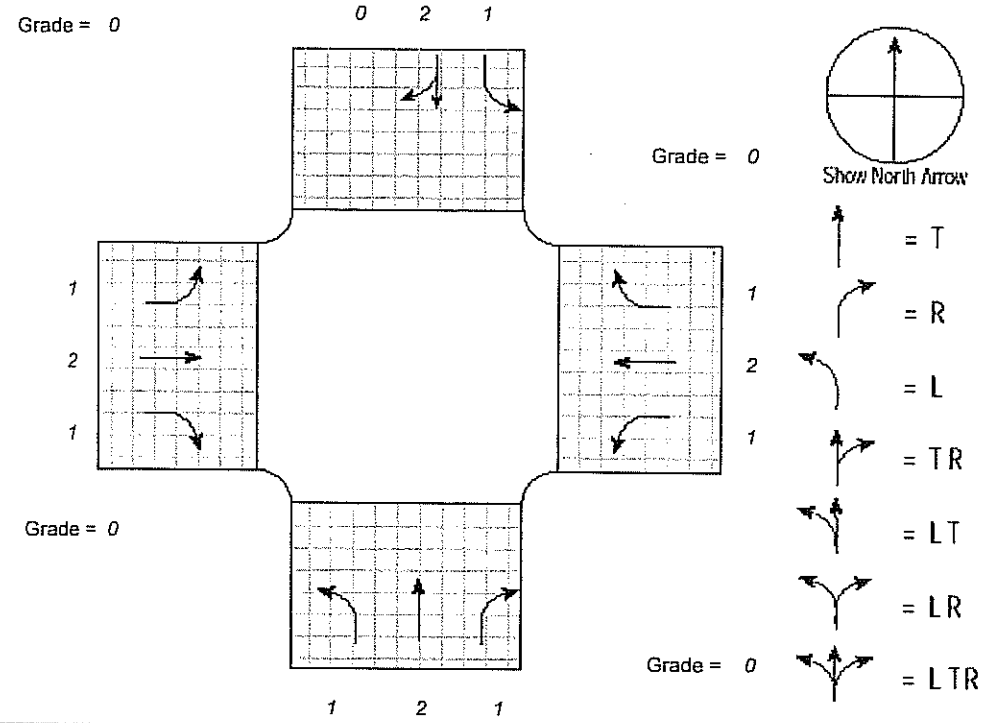
General Information

Analyst	*MCM*
Agency or Co.	*NELSON & POPE*
Date Performed	*11/20/2007*
Time Period	*BUILD PM 2009*

Site Information

Intersection	*NYS 454 @ NICHOLS RD*
Area Type	*All other areas*
Jurisdiction	
Analysis Year	*2009*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)	*78*	*1337*	*46*	*367*	*1144*	*298*	*121*	*603*	*254*	*226*	*389*	*37*
% Heavy Veh	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
PHF	*0.90*	*0.90*	*0.90*	*0.92*	*0.92*	*0.92*	*0.90*	*0.90*	*0.90*	*0.88*	*0.88*	*0.88*
Actuated (P/A)	*A*	*P*	*P*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*
Startup Lost Time	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	
Extension of Effective Green	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	
Arrival Type	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	
Unit Extension	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*0*	*0*	*11*	*0*	*0*	*23*	*0*	*0*	*124*	*0*	*0*	*0*
Lane Width	*12.0*	*11.0*	*10.0*	*11.0*	*11.0*	*10.0*	*10.0*	*12.0*	*10.0*	*10.0*	*12.0*	
Parking (Y or N)	*N*		*N*	*N*		*N*	*N*		*N*	*N*		*N*
Parking/Hour												
Bus Stops/Hour	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Pedestrian Timing	*3.2*			*3.2*			*3.2*			*3.2*		

	Excl. Left	WB Only	EW Perm	04	Excl. Left	SB Only	NS Perm	08
Timing	G = *6.9*	G = *12.7*	G = *60.6*	G =	G = *5.1*	G = *7.7*	G = *29.0*	G =
	Y = *5*	Y = *3*	Y = *6*	Y =	Y = *5*	Y = *3*	Y = *6*	Y =

Duration of Analysis (hrs) = *0.25*

Cycle Length C = *150.0*

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume	78	1337	46	367	1144	298	121	603	254	226	389	37
PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.90	0.90	0.90	0.88	0.88	0.88
Adjusted Flow Rate	87	1486	39	399	1243	299	134	670	144	257	442	42
Lane Group	L	T	R	L	T	R	L	T	R	L	TR	
Adjusted Flow Rate	87	1486	39	399	1243	299	134	670	144	257	484	
Proportion of LT or RT	1.000	--	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--	0.087

Saturation Flow Rate

Base Satflow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Number of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
f_W	1.000	0.967	0.933	0.967	0.967	0.933	0.933	1.000	0.933	0.933	1.000	
f_{HV}	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
f_g	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_p	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_{bb}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_a	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_{LU}	1.000	0.952	1.000	1.000	0.952	1.000	1.000	0.952	1.000	1.000	0.952	
f_{LT}	0.950	1.000	--	0.950	1.000	--	0.950	1.000	--	0.950	1.000	--
Secondary f_{LT}	0.150	0.150	--	0.060	0.060	--	0.453	0.453	--	0.114	0.114	--
f_{RT}	--	1.000	0.850	--	1.000	0.850	--	1.000	0.850	--	0.987	
f_{Lpb}	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--
f_{Rpb}	--	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--	1.000	
Adjusted Satflow	1770	3428	1478	1711	3428	1478	1652	3547	1478	1652	3501	
Secondary Adjusted Satflow	280	515	--	108	206	--	787	1606	--	199	400	--

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB			SB		
Lane Group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*TR*	
Adjusted Flow Rate	*87*	*1486*	*39*	*399*	*1243*	*299*	*134*	*670*	*144*	*257*	*484*	
Satflow Rate	*1770*	*3428*	*1478*	*1711*	*3428*	*1478*	*1652*	*3547*	*1478*	*1652*	*3501*	
Lost Time	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	
Green Ratio	*0.45*	*0.40*	*0.40*	*0.61*	*0.51*	*0.51*	*0.23*	*0.19*	*0.19*	*0.35*	*0.26*	
Lane Group Capacity	*194*	*1385*	*597*	*329*	*1744*	*752*	*208*	*686*	*286*	*244*	*927*	
v/c Ratio	*0.45*	*1.07*	*0.07*	*1.21*	*0.71*	*0.40*	*0.64*	*0.98*	*0.50*	*1.05*	*0.52*	
Flow Ratio	*0.05*	*0.43*	*0.03*	*0.16*	*0.36*	*0.20*	*0.03*	*0.19*	*0.10*	*0.12*	*0.14*	
Critical Lane Group	*N*	*N*	*N*	*Y*	*N*	*N*	*N*	*N*	*N*	*Y*	*N*	
Sum Flow Ratios	*1.68*											
Lost Time/Cycle	*12.00*											
Critical v/c Ratio	*1.83*											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane Group	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*T*	*R*	*L*	*TR*	
Adjusted Flow Rate	*87*	*1486*	*39*	*399*	*1243*	*299*	*134*	*670*	*144*	*257*	*484*	
Lane Group Capacity	*194*	*1385*	*597*	*329*	*1744*	*752*	*208*	*686*	*286*	*244*	*927*	
v/c Ratio	*0.45*	*1.07*	*0.07*	*1.21*	*0.71*	*0.40*	*0.64*	*0.98*	*0.50*	*1.05*	*0.52*	
Green Ratio	*0.45*	*0.40*	*0.40*	*0.61*	*0.51*	*0.51*	*0.23*	*0.19*	*0.19*	*0.35*	*0.26*	
Uniform Delay d_1	*25.6*	*44.7*	*27.4*	*52.1*	*28.4*	*22.7*	*53.8*	*60.2*	*54.1*	*45.4*	*47.1*	
Delay Factor k	*0.11*	*0.50*	*0.50*	*0.50*	*0.28*	*0.11*	*0.22*	*0.48*	*0.11*	*0.50*	*0.13*	
Incremental Delay d_2	*1.6*	*46.4*	*0.2*	*120.5*	*1.4*	*0.3*	*6.7*	*28.5*	*1.4*	*72.3*	*0.5*	
PF Factor	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	*1.000*	
Control Delay	*27.2*	*91.1*	*27.6*	*172.6*	*29.8*	*23.0*	*60.5*	*88.7*	*55.5*	*117.8*	*47.6*	
Lane Group LOS	*C*	*F*	*C*	*F*	*C*	*C*	*E*	*F*	*E*	*F*	*D*	
Approach Delay	*86.1*			*58.1*			*79.6*			*71.9*		
Approach LOS	*F*			*E*			*E*			*E*		
Intersection Delay	*72.6*			Intersection LOS						*E*		

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FULL REPORT

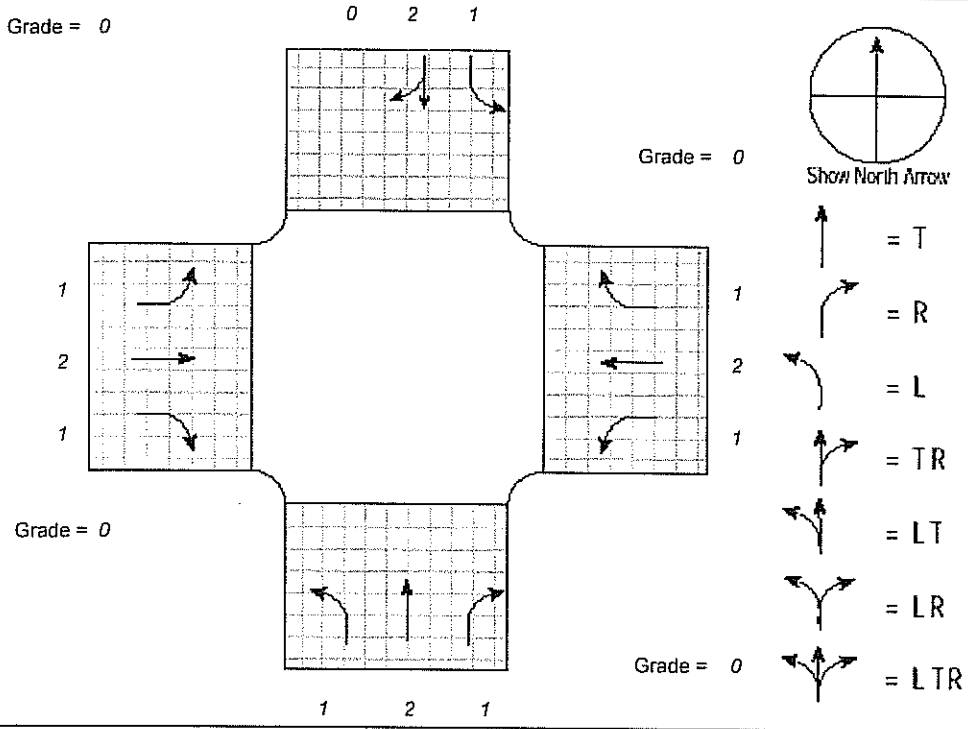
General Information

Analyst	*MCM*
Agency or Co.	*NELSON & POPE*
Date Performed	*11/20/2007*
Time Period	*BUILD SATURDAY 2009*

Site Information

Intersection	*NYS 454 @ NICHOLS RD*
Area Type	*All other areas*
Jurisdiction	
Analysis Year	*2009*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)	*98*	*731*	*61*	*279*	*883*	*237*	*92*	*487*	*175*	*174*	*315*	*56*
% Heavy Veh	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
PHF	*0.91*	*0.91*	*0.91*	*0.90*	*0.90*	*0.90*	*0.94*	*0.94*	*0.94*	*0.88*	*0.88*	*0.88*
Actuated (P/A)	*A*	*P*	*P*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*	*A*
Startup Lost Time	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	
Extension of Effective Green	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	
Arrival Type	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*3*	
Unit Extension	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*0*
Lane Width	*12.0*	*11.0*	*10.0*	*11.0*	*11.0*	*10.0*	*10.0*	*12.0*	*10.0*	*10.0*	*12.0*	
Parking (Y or N)	*N*		*N*	*N*		*N*	*N*		*N*	*N*		*N*
Parking/Hour												
Bus Stops/Hour	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
Pedestrian Timing	*3.2*			*3.2*			*3.2*			*3.2*		

	Excl. Left	WB Only	EW Perm	04	Excl. Left	SB Only	NS Perm	08
Timing	G = *7.8*	G = *14.5*	G = *33.6*	G =	G = *5.1*	G = *8.0*	G = *23.0*	G =
	Y = *5*	Y = *3*	Y = *6*	Y =	Y = *5*	Y = *3*	Y = *6*	Y =
Duration of Analysis (hrs) = *0.25*						Cycle Length C = *120.0*		

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume	98	731	61	279	883	237	92	487	175	174	315	56
PHF	0.91	0.91	0.91	0.90	0.90	0.90	0.94	0.94	0.94	0.88	0.88	0.88
Adjusted Flow Rate	108	803	67	310	981	263	98	518	185	198	358	64
Lane Group	L	T	R	L	T	R	L	T	R	L	TR	
Adjusted Flow Rate	108	803	67	310	981	263	98	518	185	198	422	
Proportion of LT or RT	1.000	--	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--	0.152

Saturation Flow Rate

Base Satflow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Number of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
f_W	1.000	0.967	0.933	0.967	0.967	0.933	0.933	1.000	0.933	0.933	1.000	
f_{HV}	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	0.980	
f_g	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_p	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_{bb}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_a	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
f_{LU}	1.000	0.952	1.000	1.000	0.952	1.000	1.000	0.952	1.000	1.000	0.952	
f_{LT}	0.950	1.000	--	0.950	1.000	--	0.950	1.000	--	0.950	1.000	--
Secondary f_{LT}	0.257	0.257	--	0.116	0.116	--	0.506	0.506	--	0.186	0.186	--
f_{RT}	--	1.000	0.850	--	1.000	0.850	--	1.000	0.850	--	0.977	
f_{Lpb}	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--
f_{Rpb}	--	1.000	1.000	--	1.000	1.000	--	1.000	1.000	--	1.000	
Adjusted Satflow	1770	3428	1478	1711	3428	1478	1652	3547	1478	1652	3466	
Secondary Adjusted Satflow	478	880	--	209	398	--	880	1794	--	324	646	--

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB			SB		
Lane Group	L	T	R	L	T	R	L	T	R	L	TR	
Adjusted Flow Rate	108	803	67	310	981	263	98	518	185	198	422	
Satflow Rate	1770	3428	1478	1711	3428	1478	1652	3547	1478	1652	3466	
Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Green Ratio	0.34	0.28	0.28	0.56	0.43	0.43	0.23	0.19	0.19	0.39	0.28	
Lane Group Capacity	249	960	414	458	1460	629	239	680	283	327	982	
v/c Ratio	0.43	0.84	0.16	0.68	0.67	0.42	0.41	0.76	0.65	0.61	0.43	
Flow Ratio	0.06	0.23	0.05	0.18	0.29	0.18	0.04	0.15	0.13	0.12	0.12	
Critical Lane Group	N	Y	N	Y	N	N	N	Y	N	Y	N	
Sum Flow Ratios	0.68											
Lost Time/Cycle	24.00											
Critical v/c Ratio	0.85											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane Group	L	T	R	L	T	R	L	T	R	L	TR	
Adjusted Flow Rate	108	803	67	310	981	263	98	518	185	198	422	
Lane Group Capacity	249	960	414	458	1460	629	239	680	283	327	982	
v/c Ratio	0.43	0.84	0.16	0.68	0.67	0.42	0.41	0.76	0.65	0.61	0.43	
Green Ratio	0.34	0.28	0.28	0.56	0.43	0.43	0.23	0.19	0.19	0.39	0.28	
Uniform Delay d_1	27.5	40.6	32.6	26.5	27.7	24.1	38.7	45.9	44.8	26.8	35.1	
Delay Factor k	0.11	0.50	0.50	0.25	0.24	0.11	0.11	0.31	0.23	0.19	0.11	
Incremental Delay d_2	1.2	8.6	0.8	4.0	1.2	0.5	1.1	5.1	5.3	3.2	0.3	
PF Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
Control Delay	28.7	49.2	33.4	30.5	28.9	24.5	39.9	51.0	50.2	30.0	35.4	
Lane Group LOS	C	D	C	C	C	C	D	D	D	C	D	
Approach Delay	45.9			28.5			49.4			33.7		
Approach LOS	D			C			D			C		
Intersection Delay	37.8			Intersection LOS						D		

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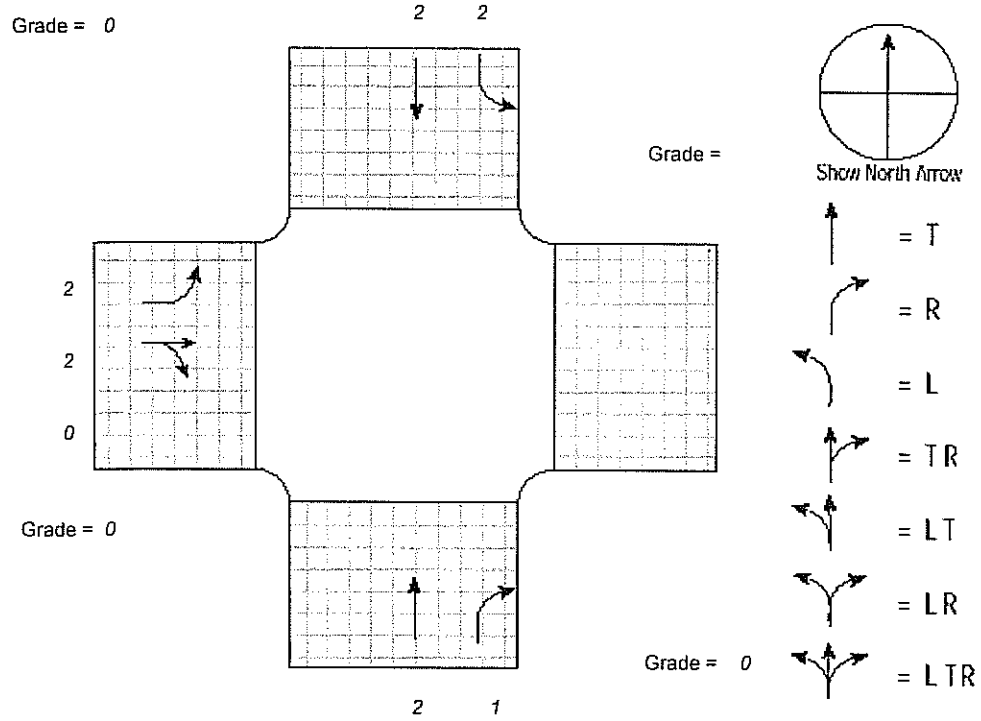
FULL REPORT

General Information		Site Information	
Analyst	*MCM*	Intersection	*OLD NICHOLS RD @ LIE SSR*
Agency or Co.	*NELSON & POPE*	Area Type	*All other areas*
Date Performed	*11/20/2007*	Jurisdiction	
Time Period	*BUILD AM 2009*	Analysis Year	*2009*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)	*340*	*52*	*35*					*364*	*323*	*195*	*671*	
% Heavy Veh	*2*	*2*	*2*					*2*	*2*	*2*	*2*	
PHF	*0.91*	*0.91*	*0.91*					*0.98*	*0.98*	*0.89*	*0.89*	
Actuated (P/A)	*P*	*P*	*P*					*A*	*A*	*A*	*A*	
Startup Lost Time	*2.0*	*2.0*						*2.0*	*2.0*	*2.0*	*2.0*	
Extension of Effective Green	*2.0*	*2.0*						*2.0*	*2.0*	*2.0*	*2.0*	
Arrival Type	*3*	*3*						*3*	*3*	*3*	*3*	
Unit Extension	*3.0*	*3.0*						*3.0*	*3.0*	*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*0*	*0*	*21*				*0*	*0*	*201*	*0*	*0*	
Lane Width	*12.0*	*12.0*						*11.0*	*10.0*	*12.0*	*12.0*	
Parking (Y or N)	*N*		*N*				*N*		*N*	*N*		*N*
Parking/Hour												
Bus Stops/Hour	*0*	*0*						*0*	*0*	*0*	*0*	
Pedestrian Timing	*3.2*						*3.2*			*3.2*		

	EB Only	02	03	04	Thru & RT	SB Only	07	08
Timing	G = *24.0*	G =	G =	G =	G = *48.5*	G = *10.5*	G =	G =
	Y = *6*	Y =	Y =	Y =	Y = *5.5*	Y = *5.5*	Y =	Y =
Duration of Analysis (hrs) = *0.25*						Cycle Length C = *100.0*		

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume	340	52	35					364	323	195	671	
PHF	0.91	0.91	0.91					0.98	0.98	0.89	0.89	
Adjusted Flow Rate	374	57	15					371	124	219	754	
Lane Group	L	TR						T	R	L	T	
Adjusted Flow Rate	374	72						371	124	219	754	
Proportion of LT or RT	1.000	--	0.208		--			--	1.000	1.000	--	0.000

Saturation Flow Rate

Base Satflow	1900	1900						1900	1900	1900	1900	
Number of Lanes	2	2	0					2	1	2	2	
f_W	1.000	1.000						0.967	0.933	1.000	1.000	
f_{HV}	0.980	0.980						0.980	0.980	0.980	0.980	
f_g	1.000	1.000						1.000	1.000	1.000	1.000	
f_p	1.000	1.000						1.000	1.000	1.000	1.000	
f_{bb}	1.000	1.000						1.000	1.000	1.000	1.000	
f_a	1.000	1.000						1.000	1.000	1.000	1.000	
f_{LU}	0.971	0.952						0.952	1.000	0.971	0.952	
f_{LT}	0.950	1.000	--			--		1.000	--	0.950	1.000	--
Secondary f_{LT}			--			--			--			--
f_{RT}	--	0.969		--			--	1.000	0.850	--	1.000	
f_{Lpb}	1.000	1.000	--			--		1.000	--	1.000	1.000	--
f_{Rpb}	--	1.000		--			--	1.000	1.000	--	1.000	
Adjusted Satflow	3437	3436						3428	1478	3437	3547	
Secondary Adjusted Satflow			--			--			--			--

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB			SB		
Lane Group	*L*	*TR*						*T*	*R*	*L*	*T*	
Adjusted Flow Rate	*374*	*72*						*371*	*124*	*219*	*754*	
Satflow Rate	*3437*	*3436*						*3428*	*1478*	*3437*	*3547*	
Lost Time	*2.0*	*2.0*						*2.0*	*2.0*	*2.0*	*2.0*	
Green Ratio	*0.24*	*0.24*						*0.49*	*0.49*	*0.10*	*0.64*	
Lane Group Capacity	*825*	*825*						*1663*	*717*	*361*	*2288*	
v/c Ratio	*0.45*	*0.09*						*0.22*	*0.17*	*0.61*	*0.33*	
Flow Ratio	*0.11*	*0.02*						*0.11*	*0.08*	*0.06*	*0.21*	
Critical Lane Group	*Y*	*N*						*N*	*N*	*N*	*Y*	
Sum Flow Ratios	*0.32*											
Lost Time/Cycle	*11.50*											
Critical v/c Ratio	*0.36*											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane Group	*L*	*TR*						*T*	*R*	*L*	*T*	
Adjusted Flow Rate	*374*	*72*						*371*	*124*	*219*	*754*	
Lane Group Capacity	*825*	*825*						*1663*	*717*	*361*	*2288*	
v/c Ratio	*0.45*	*0.09*						*0.22*	*0.17*	*0.61*	*0.33*	
Green Ratio	*0.24*	*0.24*						*0.49*	*0.49*	*0.10*	*0.64*	
Uniform Delay d_1	*32.4*	*29.5*						*14.9*	*14.5*	*42.8*	*8.0*	
Delay Factor k	*0.50*	*0.50*						*0.11*	*0.11*	*0.19*	*0.11*	
Incremental Delay d_2	*1.8*	*0.2*						*0.1*	*0.1*	*2.9*	*0.1*	
PF Factor	*1.000*	*1.000*						*1.000*	*1.000*	*1.000*	*1.000*	
Control Delay	*34.2*	*29.7*						*14.9*	*14.6*	*45.7*	*8.1*	
Lane Group LOS	*C*	*C*						*B*	*B*	*D*	*A*	
Approach Delay	*33.5*						*14.9*			*16.6*		
Approach LOS	*C*						*B*			*B*		
Intersection Delay	*20.1*			Intersection LOS						*C*		

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FULL REPORT

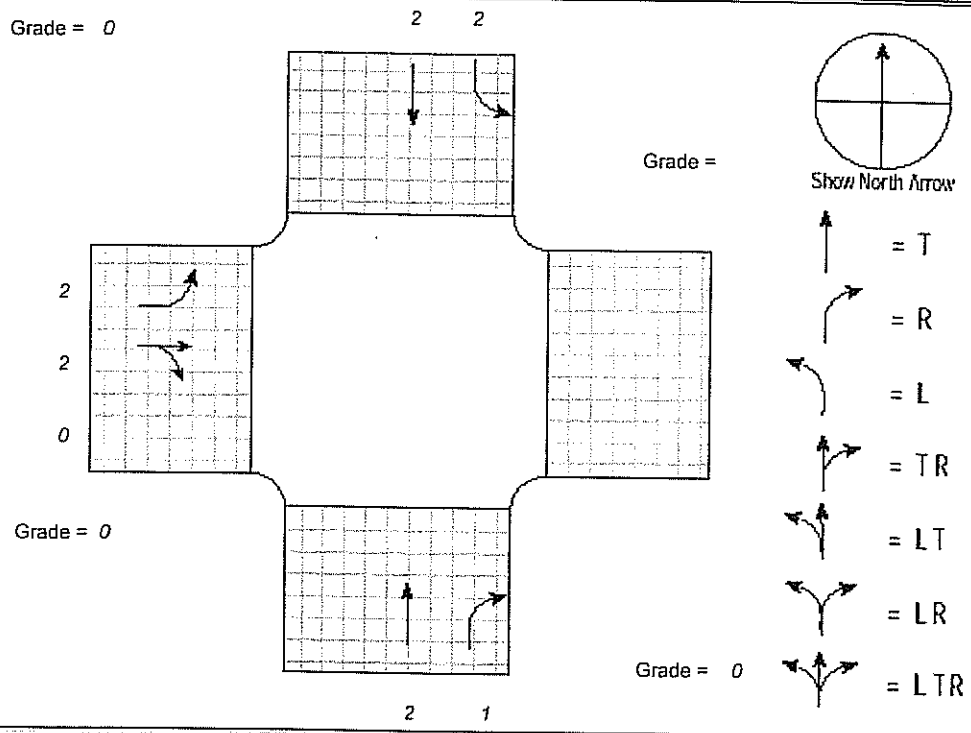
General Information

Analyst	*MCM*
Agency or Co.	*NELSON & POPE*
Date Performed	*11/20/2007*
Time Period	*BUILD PM 2009*

Site Information

Intersection	*OLD NICHOLS RD @ LIE SSR*
Area Type	*All other areas*
Jurisdiction	
Analysis Year	*2009*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)	*622*	*1463*	*119*					*691*	*311*	*354*	*631*	
% Heavy Veh	*2*	*2*	*2*					*2*	*2*	*2*	*2*	
PHF	*0.97*	*0.97*	*0.97*					*0.81*	*0.81*	*0.75*	*0.75*	
Actuated (P/A)	*P*	*P*	*P*					*A*	*A*	*A*	*A*	
Startup Lost Time	*2.0*	*2.0*						*2.0*	*2.0*	*2.0*	*2.0*	
Extension of Effective Green	*2.0*	*2.0*						*2.0*	*2.0*	*2.0*	*2.0*	
Arrival Type	*3*	*3*						*3*	*3*	*3*	*3*	
Unit Extension	*3.0*	*3.0*						*3.0*	*3.0*	*3.0*	*3.0*	
Ped/Bike/RTOR Volume	*0*	*0*	*23*				*0*	*0*	*56*	*0*	*0*	
Lane Width	*12.0*	*12.0*						*11.0*	*10.0*	*12.0*	*12.0*	
Parking (Y or N)	*N*		*N*				*N*		*N*	*N*		*N*
Parking/Hour												
Bus Stops/Hour	*0*	*0*						*0*	*0*	*0*	*0*	
Pedestrian Timing	*3.2*						*3.2*			*3.2*		

	EB Only	02	03	04	Thru & RT	SB Only	07	08
Timing	G = *43.3*	G =	G =	G =	G = *25.7*	G = *14.0*	G =	G =
	Y = *6*	Y =	Y =	Y =	Y = *5.5*	Y = *5.5*	Y =	Y =

Duration of Analysis (hrs) = *0.25*

Cycle Length C = *100.0*

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume	622	1463	119					691	311	354	631	
PHF	0.97	0.97	0.97					0.81	0.81	0.75	0.75	
Adjusted Flow Rate	641	1508	99					853	315	472	841	
Lane Group	L	TR						T	R	L	T	
Adjusted Flow Rate	641	1607						853	315	472	841	
Proportion of LT or RT	1.000	–	0.062		–			–	1.000	1.000	–	0.000

Saturation Flow Rate

Base Satflow	1900	1900						1900	1900	1900	1900	
Number of Lanes	2	2	0					2	1	2	2	
f_W	1.000	1.000						0.967	0.933	1.000	1.000	
f_{HV}	0.980	0.980						0.980	0.980	0.980	0.980	
f_g	1.000	1.000						1.000	1.000	1.000	1.000	
f_p	1.000	1.000						1.000	1.000	1.000	1.000	
f_{bb}	1.000	1.000						1.000	1.000	1.000	1.000	
f_a	1.000	1.000						1.000	1.000	1.000	1.000	
f_{LU}	0.971	0.952						0.952	1.000	0.971	0.952	
f_{LT}	0.950	1.000	–			–		1.000	–	0.950	1.000	–
Secondary f_{LT}			–			–			–			–
f_{RT}	–	0.991		–			–	1.000	0.850	–	1.000	
f_{Lpb}	1.000	1.000	–			–		1.000	–	1.000	1.000	–
f_{Rpb}	–	1.000		–			–	1.000	1.000	–	1.000	
Adjusted Satflow	3437	3514						3428	1478	3437	3547	
Secondary Adjusted Satflow			–			–			–			–

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB		SB		
Lane Group	*L*	*TR*					*T*	*R*	*L*	*T*	
Adjusted Flow Rate	*641*	*1607*					*853*	*315*	*472*	*841*	
Satflow Rate	*3437*	*3514*					*3428*	*1478*	*3437*	*3547*	
Lost Time	*2.0*	*2.0*					*2.0*	*2.0*	*2.0*	*2.0*	
Green Ratio	*0.43*	*0.43*					*0.26*	*0.26*	*0.14*	*0.45*	
Lane Group Capacity	*1488*	*1522*					*881*	*380*	*481*	*1603*	
v/c Ratio	*0.43*	*1.06*					*0.97*	*0.83*	*0.98*	*0.52*	
Flow Ratio	*0.19*	*0.46*					*0.25*	*0.21*	*0.14*	*0.24*	
Critical Lane Group	*N*	*Y*					*Y*	*N*	*Y*	*N*	
Sum Flow Ratios	*0.84*										
Lost Time/Cycle	*17.00*										
Critical v/c Ratio	*1.02*										

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB		SB		
Lane Group	*L*	*TR*					*T*	*R*	*L*	*T*	
Adjusted Flow Rate	*641*	*1607*					*853*	*315*	*472*	*841*	
Lane Group Capacity	*1488*	*1522*					*881*	*380*	*481*	*1603*	
v/c Ratio	*0.43*	*1.06*					*0.97*	*0.83*	*0.98*	*0.52*	
Green Ratio	*0.43*	*0.43*					*0.26*	*0.26*	*0.14*	*0.45*	
Uniform Delay d_1	*19.8*	*28.4*					*36.7*	*35.1*	*42.9*	*19.7*	
Delay Factor k	*0.50*	*0.50*					*0.48*	*0.37*	*0.49*	*0.13*	
Incremental Delay d_2	*0.9*	*39.4*					*22.8*	*14.2*	*36.1*	*0.3*	
PF Factor	*1.000*	*1.000*					*1.000*	*1.000*	*1.000*	*1.000*	
Control Delay	*20.7*	*67.7*					*59.5*	*49.3*	*78.9*	*20.0*	
Lane Group LOS	*C*	*E*					*E*	*D*	*E*	*C*	
Approach Delay	*54.3*						*56.8*		*41.2*		
Approach LOS	*D*						*E*		*D*		
Intersection Delay	*51.3*			Intersection LOS					*D*		

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FULL REPORT

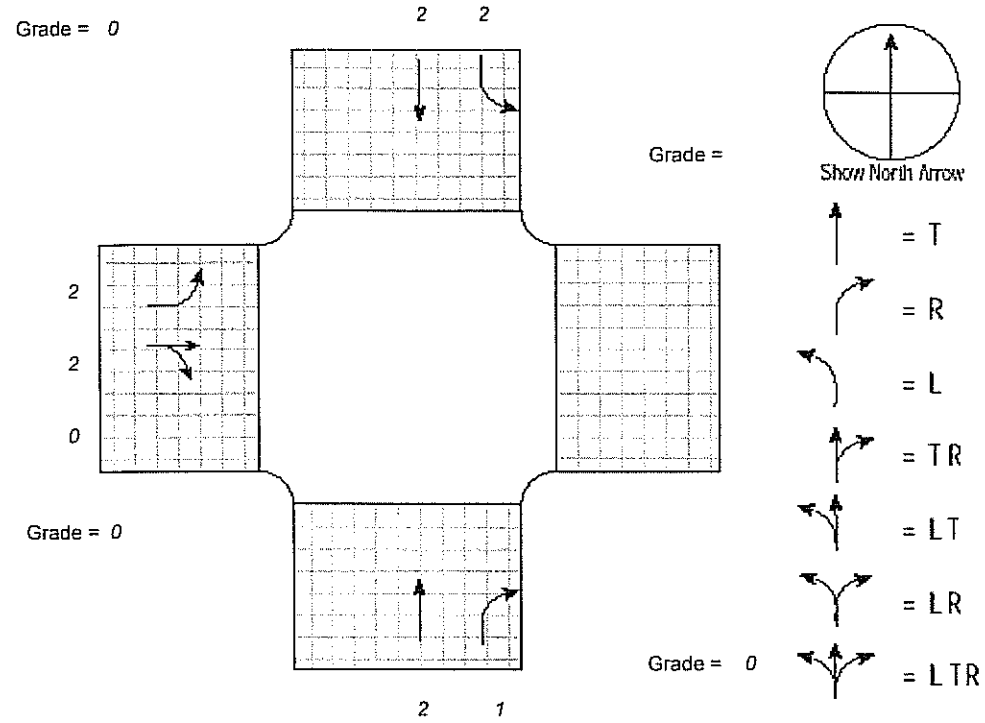
General Information

Analyst *MCM*
Agency or Co. *NELSON & POPE*
Date Performed *11/20/2007*
Time Period *BUILD SATURDAY 2009*

Site Information

Intersection *OLD NICHOLS RD @ LIE SSR*
Area Type *All other areas*
Jurisdiction
Analysis Year *2009*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)	493	129	71					485	232	285	542	
% Heavy Veh	2	2	2					2	2	2	2	
PHF	0.91	0.91	0.91					0.93	0.93	0.94	0.94	
Actuated (P/A)	P	P	P					A	A	A	A	
Startup Lost Time	2.0	2.0						2.0	2.0	2.0	2.0	
Extension of Effective Green	2.0	2.0						2.0	2.0	2.0	2.0	
Arrival Type	3	3						3	3	3	3	
Unit Extension	3.0	3.0						3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	0	0	21				0	0	201	0	0	
Lane Width	12.0	12.0						11.0	10.0	12.0	12.0	
Parking (Y or N)	N		N				N		N	N		N
Parking/Hour												
Bus Stops/Hour	0	0						0	0	0	0	
Pedestrian Timing	3.2						3.2			3.2		

	EB Only	02	03	04	Thru & RT	SB Only	07	08
Timing	G = 25.0	G =	G =	G =	G = 22.5	G = 10.5	G =	G =
	Y = 6	Y =	Y =	Y =	Y = 5.5	Y = 5.5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 75.0		

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume	493	129	71					485	232	285	542	
PHF	0.91	0.91	0.91					0.93	0.93	0.94	0.94	
Adjusted Flow Rate	542	142	55					522	33	303	577	
Lane Group	L	TR						T	R	L	T	
Adjusted Flow Rate	542	197						522	33	303	577	
Proportion of LT or RT	1.000	--	0.279		--			--	1.000	1.000	--	0.000

Saturation Flow Rate

Base Satflow	1900	1900						1900	1900	1900	1900	
Number of Lanes	2	2	0					2	1	2	2	
f_W	1.000	1.000						0.967	0.933	1.000	1.000	
f_{HV}	0.980	0.980						0.980	0.980	0.980	0.980	
f_g	1.000	1.000						1.000	1.000	1.000	1.000	
f_p	1.000	1.000						1.000	1.000	1.000	1.000	
f_{bb}	1.000	1.000						1.000	1.000	1.000	1.000	
f_a	1.000	1.000						1.000	1.000	1.000	1.000	
f_{LU}	0.971	0.952						0.952	1.000	0.971	0.952	
f_{LT}	0.950	1.000	--			--		1.000	--	0.950	1.000	--
Secondary f_{LT}			--			--			--			--
f_{RT}	--	0.958		--			--	1.000	0.850	--	1.000	
f_{Lpb}	1.000	1.000	--			--		1.000	--	1.000	1.000	--
f_{Rpb}	--	1.000		--			--	1.000	1.000	--	1.000	
Adjusted Satflow	3437	3398						3428	1478	3437	3547	
Secondary Adjusted Satflow			--			--			--			--

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB		SB		
Lane Group	*L*	*TR*					*T*	*R*	*L*	*T*	
Adjusted Flow Rate	*542*	*197*					*522*	*33*	*303*	*577*	
Satflow Rate	*3437*	*3398*					*3428*	*1478*	*3437*	*3547*	
Lost Time	*2.0*	*2.0*					*2.0*	*2.0*	*2.0*	*2.0*	
Green Ratio	*0.33*	*0.33*					*0.30*	*0.30*	*0.14*	*0.51*	
Lane Group Capacity	*1146*	*1133*					*1028*	*443*	*481*	*1821*	
v/c Ratio	*0.47*	*0.17*					*0.51*	*0.07*	*0.63*	*0.32*	
Flow Ratio	*0.16*	*0.06*					*0.15*	*0.02*	*0.09*	*0.16*	
Critical Lane Group	*Y*	*N*					*Y*	*N*	*Y*	*N*	
Sum Flow Ratios	*0.40*										
Lost Time/Cycle	*17.00*										
Critical v/c Ratio	*0.51*										

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB		SB		
Lane Group	*L*	*TR*					*T*	*R*	*L*	*T*	
Adjusted Flow Rate	*542*	*197*					*522*	*33*	*303*	*577*	
Lane Group Capacity	*1146*	*1133*					*1028*	*443*	*481*	*1821*	
v/c Ratio	*0.47*	*0.17*					*0.51*	*0.07*	*0.63*	*0.32*	
Green Ratio	*0.33*	*0.33*					*0.30*	*0.30*	*0.14*	*0.51*	
Uniform Delay d_1	*19.8*	*17.7*					*21.7*	*18.8*	*30.4*	*10.6*	
Delay Factor k	*0.50*	*0.50*					*0.12*	*0.11*	*0.21*	*0.11*	
Incremental Delay d_2	*1.4*	*0.3*					*0.4*	*0.1*	*2.7*	*0.1*	
PF Factor	*1.000*	*1.000*					*1.000*	*1.000*	*1.000*	*1.000*	
Control Delay	*21.2*	*18.0*					*22.1*	*18.9*	*33.1*	*10.7*	
Lane Group LOS	*C*	*B*					*C*	*B*	*C*	*B*	
Approach Delay	*20.3*						*21.9*		*18.4*		
Approach LOS	*C*						*C*		*B*		
Intersection Delay	*20.0*			Intersection LOS					*B*		

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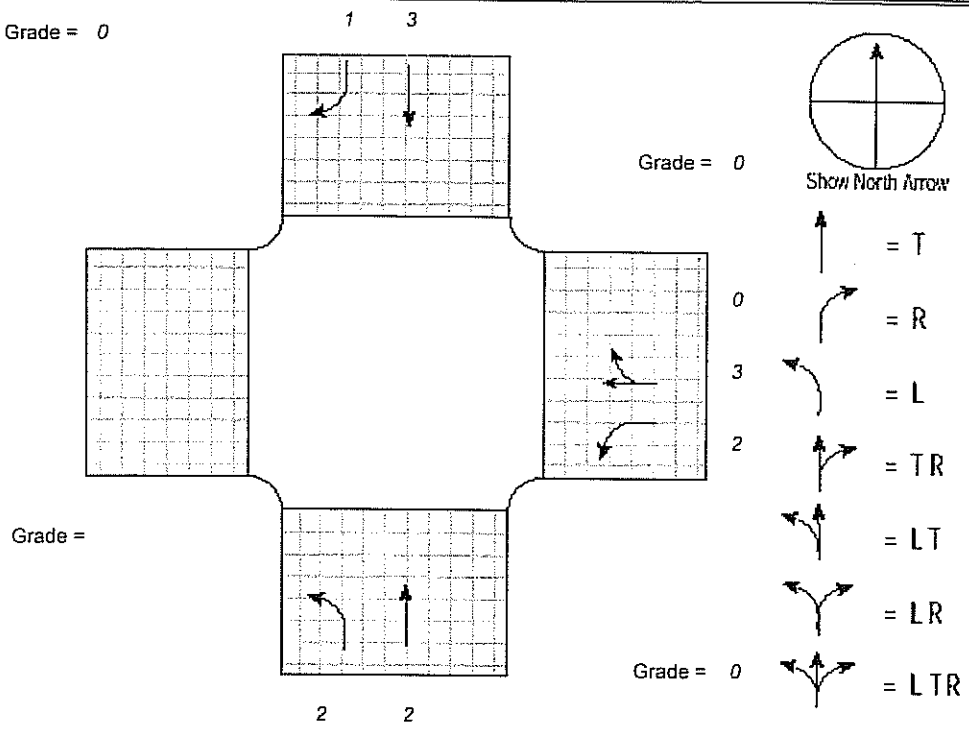
FULL REPORT

General Information		Site Information	
Analyst	*MCM*	Intersection	*OLD NICHOLS RD @ LIE NSR*
Agency or Co.	*NELSON & POPE*	Area Type	*All other areas*
Date Performed	*11/20/2007*	Jurisdiction	
Time Period	*BUILD AM 2009*	Analysis Year	*2009*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)				*334*	*1621*	*97*	*245*	*460*			*531*	*485*
% Heavy Veh				*2*	*2*	*2*	*2*	*2*			*2*	*2*
PHF				*0.96*	*0.96*	*0.96*	*0.98*	*0.98*			*0.94*	*0.94*
Actuated (P/A)				*P*	*P*	*P*	*A*	*A*			*A*	*A*
Startup Lost Time				*2.0*	*2.0*		*2.0*	*2.0*			*2.0*	*2.0*
Extension of Effective Green				*2.0*	*2.0*		*2.0*	*2.0*			*2.0*	*2.0*
Arrival Type				*3*	*3*		*3*	*3*			*3*	*3*
Unit Extension				*3.0*	*3.0*		*3.0*	*3.0*			*3.0*	*3.0*
Ped/Bike/RTOR Volume				*0*	*0*	*4*	*0*	*0*		*0*	*0*	*0*
Lane Width				*12.0*	*12.0*		*12.0*	*12.0*			*12.0*	*12.0*
Parking (Y or N)				*N*		*N*	*N*		*N*	*N*		*N*
Parking/Hour												
Bus Stops/Hour				*0*	*0*		*0*	*0*			*0*	*0*
Pedestrian Timing				*3.2*			*3.2*			*3.2*		

	WB Only	02	03	04	Thru & RT	NB Only	07	08
Timing	G = *40.0*	G =	G =	G =	G = *32.2*	G = *10.2*	G =	G =
	Y = *6*	Y =	Y =	Y =	Y = *5.8*	Y = *5.8*	Y =	Y =
Duration of Analysis (hrs) = *0.25*						Cycle Length C = *100.0*		

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume				334	1621	97	245	460			531	485
PHF				0.96	0.96	0.96	0.98	0.98			0.94	0.94
Adjusted Flow Rate				348	1689	97	250	469			565	516
Lane Group				L	TR		L	T			T	R
Adjusted Flow Rate				348	1786		250	469			565	516
Proportion of LT or RT		--		1.000	--	0.054	1.000	--	0.000		--	1.000

Saturation Flow Rate

Base Satflow				1900	1900		1900	1900			1900	1900
Number of Lanes				2	3	0	2	2			3	1
f_W				1.000	1.000		1.000	1.000			1.000	1.000
f_{HV}				0.980	0.980		0.980	0.980			0.980	0.980
f_g				1.000	1.000		1.000	1.000			1.000	1.000
f_p				1.000	1.000		1.000	1.000			1.000	1.000
f_{bb}				1.000	1.000		1.000	1.000			1.000	1.000
f_a				1.000	1.000		1.000	1.000			1.000	1.000
f_{LU}				0.971	0.908		0.971	0.952			0.908	1.000
f_{LT}			--	0.950	1.000	--	0.950	1.000	--		1.000	--
Secondary f_{LT}			--			--			--			--
f_{RT}	--			--	0.992		--	1.000		--	1.000	0.850
f_{Lpb}			--	1.000	1.000	--	1.000	1.000	--		1.000	--
f_{Rpb}	--			--	1.000		--	1.000		--	1.000	1.000
Adjusted Satflow				3437	5033		3437	3547			5074	1583
Secondary Adjusted Satflow			--			--			--			--

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB			SB		
Lane Group				*L*	*TR*		*L*	*T*			*T*	*R*
Adjusted Flow Rate				*348*	*1786*		*250*	*469*			*565*	*516*
Satflow Rate				*3437*	*5033*		*3437*	*3547*			*5074*	*1583*
Lost Time				*2.0*	*2.0*		*2.0*	*2.0*			*2.0*	*2.0*
Green Ratio				*0.40*	*0.40*		*0.10*	*0.48*			*0.32*	*0.32*
Lane Group Capacity				*1375*	*2013*		*351*	*1710*			*1634*	*510*
v/c Ratio				*0.25*	*0.89*		*0.71*	*0.27*			*0.35*	*1.01*
Flow Ratio				*0.10*	*0.35*		*0.07*	*0.13*			*0.11*	*0.33*
Critical Lane Group				*N*	*Y*		*Y*	*N*			*N*	*Y*
Sum Flow Ratios	*0.75*											
Lost Time/Cycle	*17.60*											
Critical v/c Ratio	*0.91*											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane Group				*L*	*TR*		*L*	*T*			*T*	*R*
Adjusted Flow Rate				*348*	*1786*		*250*	*469*			*565*	*516*
Lane Group Capacity				*1375*	*2013*		*351*	*1710*			*1634*	*510*
v/c Ratio				*0.25*	*0.89*		*0.71*	*0.27*			*0.35*	*1.01*
Green Ratio				*0.40*	*0.40*		*0.10*	*0.48*			*0.32*	*0.32*
Uniform Delay d_1				*20.0*	*27.9*		*43.5*	*15.5*			*25.9*	*33.9*
Delay Factor k				*0.50*	*0.50*		*0.28*	*0.11*			*0.11*	*0.50*
Incremental Delay d_2				*0.4*	*6.3*		*6.7*	*0.1*			*0.1*	*42.8*
PF Factor				*1.000*	*1.000*		*1.000*	*1.000*			*1.000*	*1.000*
Control Delay				*20.5*	*34.2*		*50.1*	*15.5*			*26.0*	*76.7*
Lane Group LOS				*C*	*C*		*D*	*B*			*C*	*E*
Approach Delay				*31.9*			*27.6*			*50.2*		
Approach LOS				*C*			*C*			*D*		
Intersection Delay	*36.2*			Intersection LOS						*D*		

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FULL REPORT

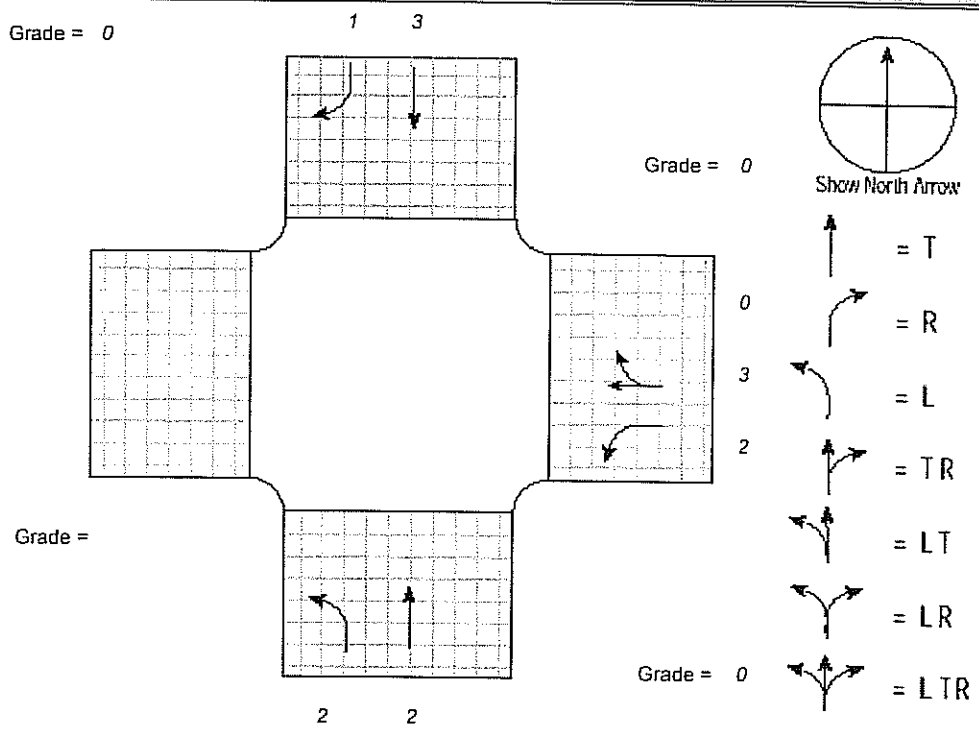
General Information

Analyst	*MCM*
Agency or Co.	*NELSON & POPE*
Date Performed	*11/20/2007*
Time Period	*BUILD PM 2009*

Site Information

Intersection	*OLD NICHOLS RD @ LIE NSR*
Area Type	*All other areas*
Jurisdiction	
Analysis Year	*2009*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)				296	211	198	343	970			689	217
% Heavy Veh				2	2	2	2	2			2	2
PHF				0.90	0.90	0.90	0.91	0.91			0.87	0.87
Actuated (P/A)				P	P	P	A	A			A	A
Startup Lost Time				2.0	2.0		2.0	2.0			2.0	2.0
Extension of Effective Green				2.0	2.0		2.0	2.0			2.0	2.0
Arrival Type				3	3		3	3			3	3
Unit Extension				3.0	3.0		3.0	3.0			3.0	3.0
Ped/Bike/RTOR Volume				0	0	47	0	0		0	0	0
Lane Width				12.0	12.0		12.0	12.0			12.0	12.0
Parking (Y or N)				N		N	N		N	N		N
Parking/Hour												
Bus Stops/Hour				0	0		0	0			0	0
Pedestrian Timing				3.2			3.2			3.2		

	WB Only	02	03	04	Thru & RT	NB Only	07	08
Timing	G = 30.0	G =	G =	G =	G = 29.0	G = 23.4	G =	G =
	Y = 6	Y =	Y =	Y =	Y = 5.8	Y = 5.8	Y =	Y =

Duration of Analysis (hrs) = 0.25

Cycle Length C = 100.0

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume				296	211	198	343	970			689	217
PHF				0.90	0.90	0.90	0.91	0.91			0.87	0.87
Adjusted Flow Rate				329	234	168	377	1066			792	249
Lane Group				L	TR		L	T			T	R
Adjusted Flow Rate				329	402		377	1066			792	249
Proportion of LT or RT		–		1.000	–	0.418	1.000	–	0.000		–	1.000

Saturation Flow Rate

Base Satflow				1900	1900		1900	1900			1900	1900
Number of Lanes				2	3	0	2	2			3	1
f_W				1.000	1.000		1.000	1.000			1.000	1.000
f_{HV}				0.980	0.980		0.980	0.980			0.980	0.980
f_g				1.000	1.000		1.000	1.000			1.000	1.000
f_p				1.000	1.000		1.000	1.000			1.000	1.000
f_{bb}				1.000	1.000		1.000	1.000			1.000	1.000
f_a				1.000	1.000		1.000	1.000			1.000	1.000
f_{LU}				0.971	0.908		0.971	0.952			0.908	1.000
f_{LT}			–	0.950	1.000	–	0.950	1.000	–		1.000	–
Secondary f_{LT}			–			–			–			–
f_{RT}	–			–	0.937		–	1.000		–	1.000	0.850
f_{Lpb}			–	1.000	1.000	–	1.000	1.000	–		1.000	–
f_{Rpb}	–			–	1.000		–	1.000		–	1.000	1.000
Adjusted Satflow				3437	4756		3437	3547			5074	1583
Secondary Adjusted Satflow			–			–			–			–

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB			SB		
Lane Group				*L*	*TR*		*L*	*T*			*T*	*R*
Adjusted Flow Rate				*329*	*402*		*377*	*1066*			*792*	*249*
Satflow Rate				*3437*	*4756*		*3437*	*3547*			*5074*	*1583*
Lost Time				*2.0*	*2.0*		*2.0*	*2.0*			*2.0*	*2.0*
Green Ratio				*0.30*	*0.30*		*0.23*	*0.58*			*0.29*	*0.29*
Lane Group Capacity				*1031*	*1427*		*804*	*2064*			*1471*	*459*
v/c Ratio				*0.32*	*0.28*		*0.47*	*0.52*			*0.54*	*0.54*
Flow Ratio				*0.10*	*0.08*		*0.11*	*0.30*			*0.16*	*0.16*
Critical Lane Group				*Y*	*N*		*N*	*Y*			*N*	*N*
Sum Flow Ratios	*0.40*											
Lost Time/Cycle	*11.80*											
Critical v/c Ratio	*0.45*											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane Group				*L*	*TR*		*L*	*T*			*T*	*R*
Adjusted Flow Rate				*329*	*402*		*377*	*1066*			*792*	*249*
Lane Group Capacity				*1031*	*1427*		*804*	*2064*			*1471*	*459*
v/c Ratio				*0.32*	*0.28*		*0.47*	*0.52*			*0.54*	*0.54*
Green Ratio				*0.30*	*0.30*		*0.23*	*0.58*			*0.29*	*0.29*
Uniform Delay d_1				*27.1*	*26.8*		*33.0*	*12.5*			*29.9*	*29.9*
Delay Factor k				*0.50*	*0.50*		*0.11*	*0.12*			*0.14*	*0.14*
Incremental Delay d_2				*0.8*	*0.5*		*0.4*	*0.2*			*0.4*	*1.3*
PF Factor				*1.000*	*1.000*		*1.000*	*1.000*			*1.000*	*1.000*
Control Delay				*27.9*	*27.3*		*33.4*	*12.7*			*30.3*	*31.2*
Lane Group LOS				*C*	*C*		*C*	*B*			*C*	*C*
Approach Delay				*27.6*			*18.1*			*30.5*		
Approach LOS				*C*			*B*			*C*		
Intersection Delay	*24.3*			Intersection LOS						*C*		

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FULL REPORT

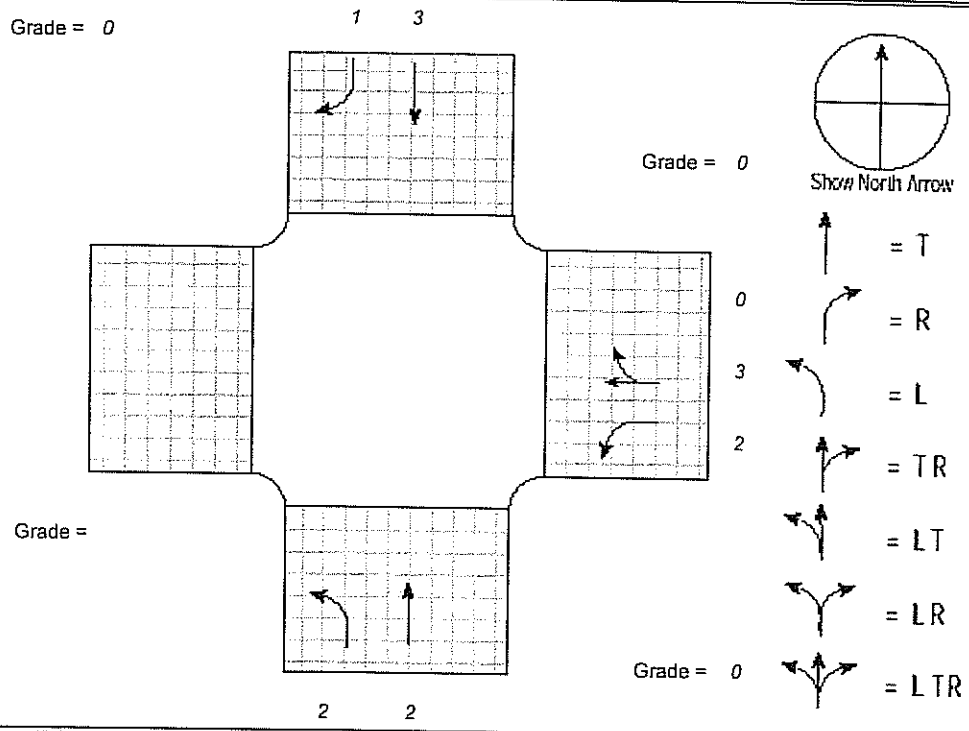
General Information

Analyst	*MCM*
Agency or Co.	*NELSON & POPE*
Date Performed	*11/20/2007*
Time Period	*BUILD SATRUDAY 2009*

Site Information

Intersection	*OLD NICHOLS RD @ LIE NSR*
Area Type	*All other areas*
Jurisdiction	
Analysis Year	*2009*

Intersection Geometry



Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph)				*220*	*178*	*183*	*120*	*857*			*607*	*330*
% Heavy Veh				*2*	*2*	*2*	*2*	*2*			*2*	*2*
PHF				*0.87*	*0.87*	*0.87*	*0.98*	*0.98*			*0.93*	*0.93*
Actuated (P/A)				*P*	*P*	*P*	*A*	*A*			*A*	*A*
Startup Lost Time				*2.0*	*2.0*		*2.0*	*2.0*			*2.0*	*2.0*
Extension of Effective Green				*2.0*	*2.0*		*2.0*	*2.0*			*2.0*	*2.0*
Arrival Type				*3*	*3*		*3*	*3*			*3*	*3*
Unit Extension				*3.0*	*3.0*		*3.0*	*3.0*			*3.0*	*3.0*
Ped/Bike/RTOR Volume				*0*	*0*	*55*	*0*	*0*		*0*	*0*	*2*
Lane Width				*12.0*	*12.0*		*12.0*	*12.0*			*12.0*	*12.0*
Parking (Y or N)				*N*		*N*	*N*		*N*	*N*		*N*
Parking/Hour												
Bus Stops/Hour				*0*	*0*		*0*	*0*			*0*	*0*
Pedestrian Timing				*3.2*			*3.2*			*3.2*		

	WB Only	02	03	04	Thru & RT	NB Only	07	08
Timing	G = *25.0*	G =	G =	G =	G = *22.2*	G = *10.2*	G =	G =
	Y = *6*	Y =	Y =	Y =	Y = *5.8*	Y = *5.8*	Y =	Y =

Duration of Analysis (hrs) = *0.25*

Cycle Length C = *75.0*

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Volume Adjustment

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume				220	178	183	120	857			607	330
PHF				0.87	0.87	0.87	0.98	0.98			0.93	0.93
Adjusted Flow Rate				253	205	147	122	874			653	353
Lane Group				L	TR		L	T			T	R
Adjusted Flow Rate				253	352		122	874			653	353
Proportion of LT or RT		--		1.000	--	0.418	1.000	--	0.000		--	1.000

Saturation Flow Rate

Base Satflow				1900	1900		1900	1900			1900	1900
Number of Lanes				2	3	0	2	2			3	1
f_W				1.000	1.000		1.000	1.000			1.000	1.000
f_{HV}				0.980	0.980		0.980	0.980			0.980	0.980
f_g				1.000	1.000		1.000	1.000			1.000	1.000
f_p				1.000	1.000		1.000	1.000			1.000	1.000
f_{bb}				1.000	1.000		1.000	1.000			1.000	1.000
f_a				1.000	1.000		1.000	1.000			1.000	1.000
f_{LU}				0.971	0.908		0.971	0.952			0.908	1.000
f_{LT}			--	0.950	1.000	--	0.950	1.000	--		1.000	--
Secondary f_{LT}			--			--			--			--
f_{RT}	--			--	0.937		--	1.000		--	1.000	0.850
f_{Lpb}			--	1.000	1.000	--	1.000	1.000	--		1.000	--
f_{Rpb}	--			--	1.000		--	1.000		--	1.000	1.000
Adjusted Satflow				3437	4756		3437	3547			5074	1583
Secondary Adjusted Satflow			--			--			--			--

CAPACITY AND LOS WORKSHEET

General Information

Project Description *THE PRESERVE @ ISLANDIA: 07246*

Capacity Analysis

	EB			WB			NB			SB		
Lane Group				*L*	*TR*		*L*	*T*			*T*	*R*
Adjusted Flow Rate				*253*	*352*		*122*	*874*			*653*	*353*
Satflow Rate				*3437*	*4756*		*3437*	*3547*			*5074*	*1583*
Lost Time				*2.0*	*2.0*		*2.0*	*2.0*			*2.0*	*2.0*
Green Ratio				*0.33*	*0.33*		*0.14*	*0.51*			*0.30*	*0.30*
Lane Group Capacity				*1146*	*1585*		*467*	*1807*			*1502*	*469*
v/c Ratio				*0.22*	*0.22*		*0.26*	*0.48*			*0.43*	*0.75*
Flow Ratio				*0.07*	*0.07*		*0.04*	*0.25*			*0.13*	*0.22*
Critical Lane Group				*N*	*Y*		*Y*	*N*			*N*	*Y*
Sum Flow Ratios	*0.33*											
Lost Time/Cycle	*17.60*											
Critical v/c Ratio	*0.43*											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane Group				*L*	*TR*		*L*	*T*			*T*	*R*
Adjusted Flow Rate				*253*	*352*		*122*	*874*			*653*	*353*
Lane Group Capacity				*1146*	*1585*		*467*	*1807*			*1502*	*469*
v/c Ratio				*0.22*	*0.22*		*0.26*	*0.48*			*0.43*	*0.75*
Green Ratio				*0.33*	*0.33*		*0.14*	*0.51*			*0.30*	*0.30*
Uniform Delay d_1				*18.0*	*18.0*		*29.0*	*12.0*			*21.3*	*23.9*
Delay Factor k				*0.50*	*0.50*		*0.11*	*0.11*			*0.11*	*0.31*
Incremental Delay d_2				*0.4*	*0.3*		*0.3*	*0.2*			*0.2*	*6.8*
PF Factor				*1.000*	*1.000*		*1.000*	*1.000*			*1.000*	*1.000*
Control Delay				*18.4*	*18.3*		*29.3*	*12.2*			*21.5*	*30.7*
Lane Group LOS				*B*	*B*		*C*	*B*			*C*	*C*
Approach Delay				*18.4*			*14.3*			*24.7*		
Approach LOS				*B*			*B*			*C*		
Intersection Delay	*19.3*			Intersection LOS						*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	MCM
Agency/Co.	NELSON & POPE
Date Performed	11/26/2007
Analysis Time Period	AM BUILD 2009

Site Information

Intersection	SITE ACCESS @ NICHOLS ROAD
Jurisdiction	
Analysis Year	2009

Project Description: THE PRESERVE AT ISLANDIA: 07246

East/West Street: SITE ACCESS | North/South Street: NICHOLS ROAD

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

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		540	3	5	851	
Peak-Hour Factor, PHF	1.00	0.98	0.98	0.91	0.91	1.00
Hourly Flow Rate, HFR (veh/h)	0	551	3	5	935	0
Percent Heavy Vehicles	0	--	--	2	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				10		14
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.90	1.00	0.90
Hourly Flow Rate, HFR (veh/h)	0	0	0	11	0	15
Percent Heavy Vehicles	0	0	0	2	0	2
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
v (veh/h)		5		26				
C (m) (veh/h)		1016		236				
v/c		0.00		0.11				
95% queue length		0.01		0.37				
Control Delay (s/veh)		8.6		22.1				
LOS		A		C				
Approach Delay (s/veh)	--	--	22.1					
Approach LOS	--	--	C					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*MCM*
Agency/Co.	*NELSON & POPE*
Date Performed	*11/26/2007*
Analysis Time Period	*PM BUILD 2009*

Site Information

Intersection	*SITE ACCESS @ NICHOLS ROAD*
Jurisdiction	
Analysis Year	*2009*

Project Description *THE PRESERVE AT ISLANDIA: 07246*

East/West Street: *SITE ACCESS* | North/South Street: *NICHOLS ROAD*

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

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*967*	*12*	*19*	*645*	
Peak-Hour Factor, PHF	*1.00*	*0.81*	*0.81*	*0.88*	*0.88*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*1193*	*14*	*21*	*732*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*7*		*11*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*0.90*	*1.00*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*7*	*0*	*12*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*0*	*2*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*21*		*19*				
C (m) (veh/h)		*578*		*119*				
v/c		*0.04*		*0.16*				
95% queue length		*0.11*		*0.55*				
Control Delay (s/veh)		*11.5*		*40.9*				
LOS		*B*		*E*				
Approach Delay (s/veh)	--	--	*40.9*					
Approach LOS	--	--	*E*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	MCM	Intersection	SITE ACCESS @ NICHOLS ROAD
Agency/Co.	NELSON & POPE	Jurisdiction	
Date Performed	11/26/2007	Analysis Year	2009
Analysis Time Period	SATURDAY BUILD 2009		

Project Description: THE PRESERVE AT ISLANDIA: 07246

East/West Street: SITE ACCESS | North/South Street: NICHOLS ROAD

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

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		809	13	20	533	
Peak-Hour Factor, PHF	1.00	0.93	0.93	0.88	0.88	1.00
Hourly Flow Rate, HFR (veh/h)	0	869	13	22	605	0
Percent Heavy Vehicles	0	–	–	2	–	–
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				12		17
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.90	1.00	0.90
Hourly Flow Rate, HFR (veh/h)	0	0	0	13	0	18
Percent Heavy Vehicles	0	0	0	2	0	2
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
v (veh/h)		22		31				
C (m) (veh/h)		767		200				
v/c		0.03		0.16				
95% queue length		0.09		0.54				
Control Delay (s/veh)		9.8		26.3				
LOS		A		D				
Approach Delay (s/veh)	–	–	26.3					
Approach LOS	–	–	D					

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