TECHNICAL MEMORANDUM
DRAFT

Date: May 23, 2012

To: Alejandro Martinez, FDOT Project Manager

From: Fadi Emil Nassar, P.E., PTOE, Senior Transportation Engineer

Subject: NE 125 Street PD&E – Draft Traffic Analysis Memorandum

1. Introduction

Advanced Transportation Engineering Consultants, Inc., (ATEC) was retained by the Florida Department of Transportation (FDOT) District Six Office to perform a PD&E study for the five-leg intersection of SR 922/NE 125 Street, SR 915/NE 6 Avenue and SR 909/West Dixie Highway; and the intersection of SR 922/NE 125 Street/NE 7 Avenue, both located in North Miami, Florida. This memorandum documents the traffic analysis section of the PD&E study. The project location map is shown in **Figure 1**.

The 5-leg intersection is formed by the intersection of three state roads classified as urban minor arterials. This intersection has safety and operational deficiencies. Consistent with the PD&E scope of service, the existing operating condition was evaluated for the PM peak hour using SYNCHRO, whereas future conditions were evaluated using both SYNCHRO and VISSIM, with VISSIM being used to evaluate operational enhancements. The operational analysis evaluated the No-Build Alternative and the near-term concept improvement developed by Kittelson & Associates, Inc., (KAI) during the planning study for this intersection as well as enhancements to this alternative. The recommended improvements are described in Technical Memorandum #5, *Concept Operational Analysis and Preferred Alternative Selection*, dated November 4, 2010. The KAI recommended near-term concept is hereafter referred to as the "Planning Study Alternative".

The **Planning Study Alternative** consists of closing West Dixie Highway at NE 125 Street, rerouting traffic to NE 128 Street and NE 6 Avenue, converting NE 128 Street from a one-way westbound lane with parking on both sides to a 2-lane westbound and one-lane eastbound with parallel parking on the south side only, providing a median opening and signalizing the T-intersection of NE 6 Avenue and NE 128 Street, and adjusting the traffic signals within the study area to accommodate the new traffic patterns resulting from closing West Dixie Highway and rerouting traffic to NE 128 Street and NE 6 Avenue. The Planning Study Alternative adds an eastbound approach to the intersection of NE 128 Street and West Dixie Highway to accommodate traffic being rerouted from northbound Dixie Highway.

SR 922/NE 125th Street from NE 5th Avenue to NE 7th Avenue | Figure 1 Project Location Map

The **PD&E Preferred Alternative** was developed as a refinement to the Planning Study Alternative in an effort to address local concerns. Several meetings were held with City of North Miami staff, public officials, impacted residents, business owners, and homeowner associations to discuss preliminary findings and solicit their input. As a result of the public outreach efforts, the Planning Study Alternative was refined to minimize impacts on local businesses along West Dixie Highway and to improve safety at the intersection of NE 125 Street/NE 7 Avenue that is also on the FDOT's High Crash Locations list.

Since the objective is to minimize impacts on businesses along West Dixie Highway, the PD&E Preferred Alternative does not totally close West Dixie Highway leg of the 5-leg intersection, but maintains a northbound connection to West Dixie Highway. Northbound and southbound approaches on West Dixie Highway will be reduced to one lane per direction between NE 126 Street and NE 128 Street. This improves safety by reducing sideswipe accidents, providing convenient parallel parking along West Dixie Highway to serve local businesses, and increasing the opportunity for landscaping and green space.

Maintaining the northbound connection to West Dixie Highway maximizes the benefits to the community by maintaining access to local businesses, providing needed parking, adding pedestrian crosswalks, and improving landscaping and pedestrian features along West Dixie Highway such as the pedestrian plaza between NE 125 Street and NE 126 Street. The PD&E Preferred Alternative also recommends creating a new northbound left turn lane at the 5-leg intersection, prohibiting east-west left turns at the intersection of NE 125 Street and NE 7 Avenue and converting NE 7 Avenue to one-way southbound between NE 128 Street and NE 125 Street.

2. Existing Conditions Analysis

The existing traffic operation of the 5-leg intersection was observed in the field during the PM peak hours and evaluated using SYNCHRO and SIMTRAFFIC. The existing conditions analysis was performed using 2010 PM peak hour traffic volumes that were collected during the planning study. Within the study area, NE 125 Street is a four-lane undivided state road with a posted speed of 35 MPH. Exclusive east-west left and right turn lanes are provided at the 5-leg intersection and parallel parking is allowed east of the intersection to serve the businesses along NE 125 Street. NE 6 Avenue is a four-lane road with a posted speed of 30 MPH. An exclusive southbound left turn lane is provided at the 5-leg intersection but northbound left is prohibited. There are no exclusive right turn lanes. The stop bar for the southbound approach of NE 6 Avenue is offset about 120 feet from the intersection requiring additional clearance time. West Dixie Highway connects only from the north. It is a four-lane road with an exclusive left turn lane accommodating only 5 vehicles. The stop bar is offset about 170 feet from the intersection requiring additional clearance time. There are no pedestrian crossings on West Dixie Highway between NE 125 Street and NE 128 Street.

Similar to the planning study conclusion, the PD&E traffic analysis indicated that the 5-leg intersection operates during the PM peak hour in the peak season at a failing level of service with average delays of 94.9 seconds/vehicles and significant queues forming along several approaches. The most critical was the eastbound left turn movement causing queue spillbacks that obstructed the through lanes. Queues on the westbound approach extended to the intersection of NE 125 Street and NE 7 Avenue.

The layout of the 5-leg intersection also created unsafe conflict areas for cars, pedestrians and cyclists near the diagonal fifth leg. The stop bar for southbound West Dixie Highway and NE 6 Avenue are located at a distance from the intersection stop bar of 170 ft and 130 ft, respectively. The operational analysis accounted for the additional all-red clearance time for the offset approaches. The lane utilization factor was also adjusted for the southbound approach of NE 6 Avenue to reflect the unbalanced volumes on these lanes. The 2010 PM peak hour volumes adjusted for the peak season are shown in **Figure 2**. The PM peak hour operational analysis results for the existing condition are presented in **Table 1**. The traffic count data collected during the planning study is provided in **Appendix A**. The operational analysis outputs from SYNCHRO are provided in **Appendix B**.

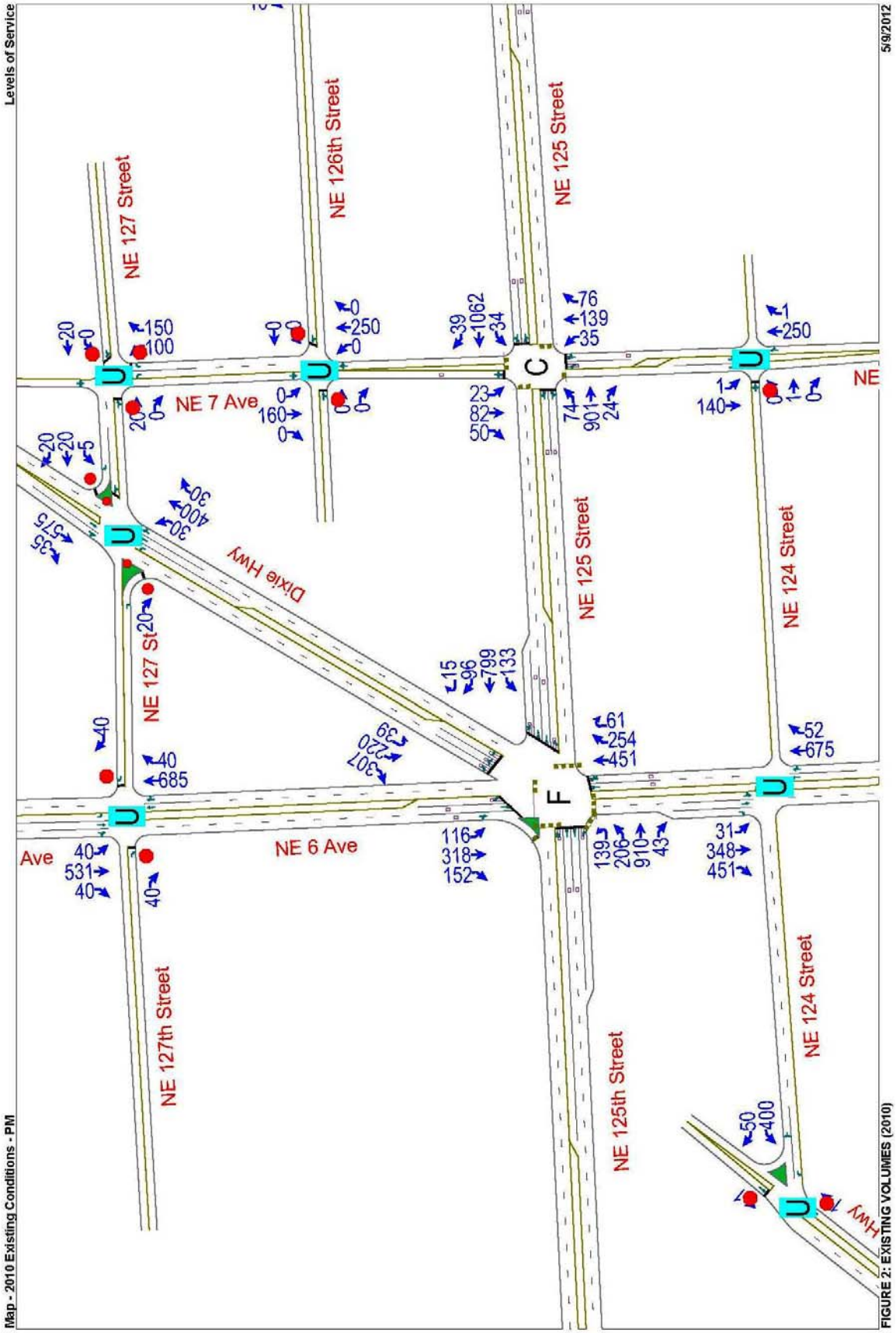

Levels of Service
5/9/2012
NE 127 Street
NE 126th Street
NE 125 Street
NE 7 Ave
Dixie Hwy
NE 125 Street
NE 124 Street
NE 127 St
NE 6 Ave
NE 127th Street
NE 125th Street
NE 124 Street
Ave
NE
HWY
Map - 2010 Existing Conditions - PM
FIGURE 2: EXISTING VOLUMES (2010)

TABLE 1
NE 125 STREET PD&E STUDY
EXISTING CONDITIONS - 2010 - PM PEAK HOUR

2010 EXISTING CONDITIONS	EB NE 125 Street		WB NE 125 Street		NB NE 6 Avenue		SB NE 6 Avenue		SW W. Dixie Hwy		All Approaches	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
NE 125 ST/NE 6 AVE/DIXIE	81.4	F	97.6	F	120.6	F	51.9	D	130.6	F	94.9	F
NE 125 STREET/NE 7 AVE	18.5	B	2.6	A	71.2	E	107.3	F			22.0	C

Note: Delay represents average delays measured in seconds per vehicle.

3. Traffic Projections for opening and design years

Consistent with the PD&E's scope of service, SERPM 6.5 was used to develop future traffic volumes for opening and design years. The project's influence area is located in four SERPM traffic analysis zones (TAZs): 2910, 2911, 2916 & 2917 as shown in **Figure 3**.

Figure 3: SERPM Traffic Analysis Zones for Study Area

The analysis identified coding errors and adjusted the roadway network, bus routes and connectors to significantly enhance model validation for the 2005 base year

model. The validated and cost feasible models had West Dixie Highway connected from the south to NE 125 Street and were corrected. The centroid connectors were reviewed and the zonal data was checked for residential and employment coding, as well as school locations and enrollments. Land use maps and aerials were also used to check the reasonableness of the zonal data. The Root Mean Square Error (RMSE) statistical parameter was used to compare the variance between the base year 2005 SERPM model projections and the 2005 traffic counts for roadway segments within the project influence area. The RMSE was reduced from 52.2% to 29.4% for the study area indicating a significant enhancement in model forecast accuracy within the study area. The model refinement results for the base year are shown in **Table 2**. The refinements to the SERPM 6.5 network and zonal data are summarized in **Table 3.**

Model enhancements were transferred to the 2035 SERPM Cost Feasible model and used to forecast future traffic demand. An annual growth rate was projected for each of NE 125 Street, NE 6 Avenue and West Dixie Highway. A regional growth rate based on weighted averages was calculated for the study area. After discussions with modeling experts at FDOT, engineering judgment was used to reduce the regional growth rate to what is appropriate for constrained developed urban areas when no additional through lanes are provided. This was justified considering the regional model allows unrealistic volume to capacity (v/c) ratios that are significantly higher than 1, and assumed the same trip patterns, average trip lengths and transit usage in future years when roadways are extremely congested. In reality, as congestion increases trips tend to become shorter as people relocate closer to work and new developments incorporate new-urbanism elements designed to reduce frequency and length of auto trips. Increased congestion also makes transit, ride sharing, flexible hours and telecommuting more attractive to commuters. Furthermore, chronic congestion results in a spreading of the peak period (lower K factors) that results in a lower traffic growth rate for peak hour compared to daily volumes. Therefore, the annual regional growth rate for this PD&E study was reduced from over 2% for daily to a reasonable 1.5% for the peak hour and was applied directly to peak hour turning volumes before traffic diversion. It should be noted that the planning study also used a 1.5% annual traffic growth rate.

Therefore, traffic volumes before traffic diversion were calculated for the opening year in 2016 and design year in 2036 using a 1.5% compounded annual growth rate applied directly to the 2010 PM peak hour and peak season turning movement volumes. This resulted in a total traffic growth of 9.3% in 2016 and 47.3% in 2036 which were determined to be more reasonable than unadjusted model forecasts.

TABLE 2

NE 125 SREET PD&E - SUBAREA MODEL REFINEMENT - ROOT MEAN SQUARE ERROR PERCENT (RMSE%)

SUBAREA MODEL REFINEMENT	FDOT COUNTS		SERPM 2005 VALIDATED			SERPM 2005 REFINED - RUN 5		
Road Section	FDOT Count Station	Count Station Volume	SERPM VAL 2005 Volume	Count / Val 2005 Ratio	Val 2005 RMSE $(\text{Count-Vol})^2$	SERPM Run 5 Volume	Count Run 5 Ratio	Run 5 RMSE $(\text{Count-Vol})^2$
NE 125 St	87-2535	33,000	26,706	1.24	39614436	27,350	1.21	31922500
	87-1024	40,500	19,639	2.06	435181321	34,451	1.18	36590401
	87-2560	34,500	19,639	1.76	220849321	29,704	1.16	23001616
	87-0126	39,000	25,356	1.54	186158736	27,018	1.44	143568324
NE 6 Ave	87-1010	14,200	18,824	0.75	21381376	16,753	0.85	6517809
	87-2539	17,500	8,449	2.07	81920601	13,329	1.31	17397241
	New	22,252	12,015	1.85	104796169	15,755	1.41	42211009
Dixie Hwy	87-2555	24,000	43,393	0.55	376088449	39,417	0.61	237683889
NE 135 St	87-1025	41,500	36,709	1.13	22953681	38,974	1.06	6380676
	87-0144	34,500	34,407	1.00	8649	35,081	0.98	337561
SR 924/Gratiny Dr	87-1219	22,000	25,435	0.86	11799225	21,393	1.03	368449
NE 2 Ave	New	20,000	15,610	1.28	19272100	16,813	1.19	10156969
N. Miami Ave	New	19,000	9,046	2.10	99082116	11,577	1.64	55100929
NW 2 Ave (+5 Ave)	New	4,000	14,643	0.27	113273449	10,620	0.38	43824400
Total		**365,952**	**309,871**	**1.18**		**338235**	**1.08**	
%RMSE	**N**	**14**	**%RMSE**	**=**	**52.2%**	**%RMSE**	**=**	**29.4%**

$$RMSE\ (\%) = \frac{\sqrt{\sum_{i=1}^{N}(Estimated_i - Observed_i)^2/(N-1)}}{\sum_{i=1}^{N} Observed_i/N} \times 100$$

N = Number of samples
Estimated = Model volumes
Observed = Traffic counts

TABLE 3
NE 125 STREET PD&E - SUMMARY OF SERPM MODEL REFINEMENTS

Roadway												
From	**To**	**FT**		**AT**		**2005 Lanes**		**2005 Capacity**		**2035 Lanes**	**2035 Capacity**	**Note**
NE 6 Ave												
Griffing Blvd	NE 123 St	61	Y	3	Y	2	Y	1300	N	2	1300	- PH capacity is low.
NE 123 St	NE 125 St	61	Y	3	N	2	Y	1300	N	2	1300	- Set AT to 2 - PH capacity is low.
NE 125 St	NE 135 St	61	Y	3	N	2	Y	1300	N	2	1300	- Set AT to 2 from NE 125 St to NE 129 St
NE 135 St	NE 149 St	61	Y	3	Y	2	Y	1300	N	2	1300	- PH capacity is low.
NE 125 St												
I-95	NE 2 Ave	41	Y	4	Y	2	Y	1626	Y	2	1626	
NE 2 Ave	NE 6 Ave	41	Y	3	N	2	Y	1626	Y	2	1626	- Set AT to 2
NE 6 Ave	NE 10 Ave	41	Y	3	N	2	Y	1626	Y	2	1626	- Set AT to 2
NE 10 Ave	NE 13 Pl/NE 14 Ave	41	Y	3	Y	2	Y	1712	Y	2	1712	
			Y				Y			2	1712	
W Dixie Hwy												
NE 2 Ave	NE 125 St	41	Y	3	Y	2	Y	1416	Y	2	1416	
NE 125 St	NE 151 St	41	Y	3	Y	2	Y	1888	Y	2	1888	
							Y			2	1888	
							Y			2	1888	
NE 135 St												
I-95	NW 2 Ave	61	Y	4	Y	2(EB)	Y	1800(EB)	Y	3(EB)	2700(EB)	
I-95	NW 3 Ave	61	Y	4	Y	3(WB)	Y	2700(WB)	Y	3(WB)	2700(WB)	
NW 3 Ave	NW 2 Ave	61	Y	4	Y	2(WB)	Y	1800(WB)	Y	2(WB)	1800(WB)	
NW 2 Ave	N Miami Ave	61	Y	4	Y	2	Y	1500	N	2	1300	- PH capacity is low.
N Miami Ave	Memorial Hwy	41	Y	4	Y	2	Y	1888	Y	2	1300	
Memorial Hwy	NE 4 Ave	41	Y	3	Y	2	Y	1888	Y	2	1300	
NE 4 Ave	NE 5 Ave	61	N	3	Y	2	Y	1300	N	2	1300	- Set FT to 41 - PH capacity is low.
NE 5 Ave	Arch Creek Rd	41	Y	3	Y	2	Y	1888	Y	2	1300	
										2	1300	
NE 2 Ave												
NE 107 St	W Dixie Hwy	61	Y	4	Y	2	Y	1125	Y	2	1125	
W Dixie Hwy	NE 125 St	61	Y	3	Y	1	Y	504	Y	1	504	
Griffing Blvd												
NE 107 St	NE 131 St	61	Y	3	Y	1	Y	662	Y	1	662	
NE 131 St	NE 141 St	61	Y	3	Y	1	Y	504	Y	1	504	
NE 141 St	NE 146 St	61	Y	4	Y	1	Y	504	Y	1	504	
I-95												
NE 115 St	NE 118 St	11+81	Y	3	Y	5	Y	10598	Y	6	12668	
NE 118 St	NE 143 St	11+81	Y	4	Y	5	Y	10598	Y	7(NB), 6(SB)	890(NB),12668(SB)	
							Y			6(NB), 7(SB)	668(NB),14890(SB)	
NW 2 Ave												
NW 111 St	NW 112 St	61	Y	3	Y	1	Y	600	Y	1	504	
NW 112 St	NW 143 St	61	Y	4	Y	1	Y	600	Y	1	600	
N Miami Ave												
NW 111 St	NW 135 St	61	Y	3	Y	1	Y	600	Y	1	600	
NW 135 St	NW 143 St	61	Y	4	Y	1	Y	600	Y	1	504	
							Y			1	600	
NE 9 Ave												
NE 107 St	NE 121 St	61	Y	3	Y	1	Y	504	Y	1	504	
NE 10 Ave												
NE 121 St	NE 149 St	61	Y	3	Y	1	Y	504	Y	1	504	
NE 12 Ave												
NE 125 St	NE 151 St	61	Y	3	Y	1	Y	504	Y	1	504	
							Y			1	504	
NE 107 St/NE 108 St												
Griffing Blvd	NE 9 Ave	61	Y	3	Y	1	Y	662	Y	1	662	
NE 9 Ave	US 1	61	Y	3	Y	1	Y	504	Y	1	504	
SR 924												
I-95	NW 2 Ave	61	Y	3	Y	2	Y	1300	N	2	1300	- PH capacity is low.
NW 2 Ave	NE 1 Ave	61	Y	4	Y	2	Y	1500	Y	2	1300	
NE 1 Ave	NE 2 Ave	61	Y	3	Y	2	Y	1300	N	2	1300	- PH capacity is low.
NW 143 St												
I-95	N Miami Ave	61	Y	4	Y	1	Y	600	Y	1	600	
							Y			1	504	
NE 151 St												
NE 6 Ave	NE 16 Ave	61	Y	3	Y	1	Y	504	Y	1	630	
NE 16 Ave	NE 18 Ave	61	Y	2	Y	1	Y	504	Y	1	630	

4. Study Alternatives

The operational analysis for future conditions was performed for the opening year in 2016 and the design year in 2036 consistent with the PD&E scope of service. The study alternatives included the No-Build, TSM and Preferred Alternatives.

Alternative 1: No Build / TSM

Alternative 2: PD&E Preferred Alternative

The evaluation of the **No-Build Alternative** and the **TSM Alternative** is required in the PD&E process. However, since there is no right of way for turn lane improvements (i.e., eastbound dual left turn lanes or southbound right turn lane at the 5-leg intersection, or east/west left turn lanes at the intersection of NE 125 Street/NE 7 Avenue), the TSM alternative operational improvements were limited to signal optimization which is also the case for the No-Build Alternative. Therefore, the No-Build and TSM alternatives are similar from a traffic operational perspective and are represented by **Alternative 1**. **Alternative 2** is the PD&E Preferred Alternative which is a refinement of the Planning Study Alternative that was modified to address local concerns.

The PD&E Preferred Alternative was developed as a result of comments received at public meetings with the main objectives of minimizing impacts on local businesses and improving safety. Access to businesses was enhanced by maintaining a northbound connection on West Dixie Highway and providing a northbound left turn lane on NE 6 Avenue to westbound NE 125 Street. Safety was enhanced by prohibiting east/west left turns at the intersection of NE 125 Street and NE 7 Avenue and converting NE 7 Avenue to one way southbound between NE 128 Street and NE 125 Street, and by replacing the southbound shared thru-right lane with an exclusive right turn lane at the 5-leg intersection. Beside those refinements, the PD&E Preferred Alternative is essentially similar to the Planning Study Alternative. In summary, the PD&E Preferred Alternative consists of the following:

1. Convert northbound and southbound approaches of West Dixie Highway between NE 125 Street and NE 128 Street to one lane per direction with parallel parking on both sides and green islands.

2. Close southbound West Dixie Highway between NE 126 Street and NE 125 Street to create a pedestrian plaza and divert southbound thru traffic to NE 128 Street and NE 6 Avenue. NE 128 Street will be restriped to provide two westbound lanes.

3. Install a traffic signal at NE 128 Street and NE 6 Avenue that will work in coordination with the signal on NE 128 Street and West Dixie Highway.

4. Construct a northbound left turn lane at the intersection of NE 6 Avenue and NE 125 Street to improve access to businesses west of the intersection and to provide a direct connection to I-95.

5. Expand the pedestrian plaza between NE 125 Street and NE 126 Street to include a bus bay, trees, benches, and aesthetic features such as colored pavement and public art; and provide pedestrian crosswalks, green space, trees, and shaded islands along West Dixie Highway.

6. Prohibit east/west left turn movements at the intersection of NE 125 Street and NE 7 Avenue and convert NE 7 Avenue to one way southbound between NE 128 Street and NE 125 Street.

7. Restripe the southbound approach at the 5-leg intersection to provide an exclusive right lane, a through lane and a left turn lane.

It should be noted that the PD&E Preferred Alternative can be implemented within existing right of way and pavement footprint. Therefore the construction of the recommended improvements will not require additional right of way.

5. Operational Analysis for Opening Year in 2016

The operational analysis for the opening year in 2016 was performed by applying a 1.5% annual growth rate to develop 2016 base volumes, diverting traffic for the Build Alternative, estimating the gas station peak hour inbound and outbound trips using ITE trip generation rates, and performing SYNCHRO analyses after traffic diversion. VISSIM micro-simulations were also performed for a more detailed level of analysis to evaluate the impacts of specific enhancements such as the impacts of the gas station driveway on traffic progression along West Dixie Highway and the conversion of the southbound shared thru-right lane with an exclusive right turn lane at the 5-leg intersection. However, the comparative analysis of the different alternatives was performed using SYNCHRO.

Traffic diversions for the Preferred Alternative were developed as follows:

1. No changes to traffic volumes on northbound West Dixie Highway expect adjusting for growth.

2. Southbound West Dixie Highway traffic will be diverted to NE 128 Street and then to NE 6 Avenue.

3. Prohibiting east/west left turn movements and northbound through at the intersection of NE 125 Street/NE 7 Avenue results in diverting these volumes equally to the corresponding movements at the two adjacent intersections of NE 125 Street/NE 6 Avenue and NE 125 Street/NE 8 Avenue.

The 2016 PM peak hour turning movement volumes are depicted in **Figure 4** for the No-Build and TSM Alternatives, and **Figure 5** for the PD&E Preferred Alternative. Snapshots from the VISSIM simulations are depicted in **Figure 6**. Volumes before and after traffic diversions are shown in **Figure 7.**

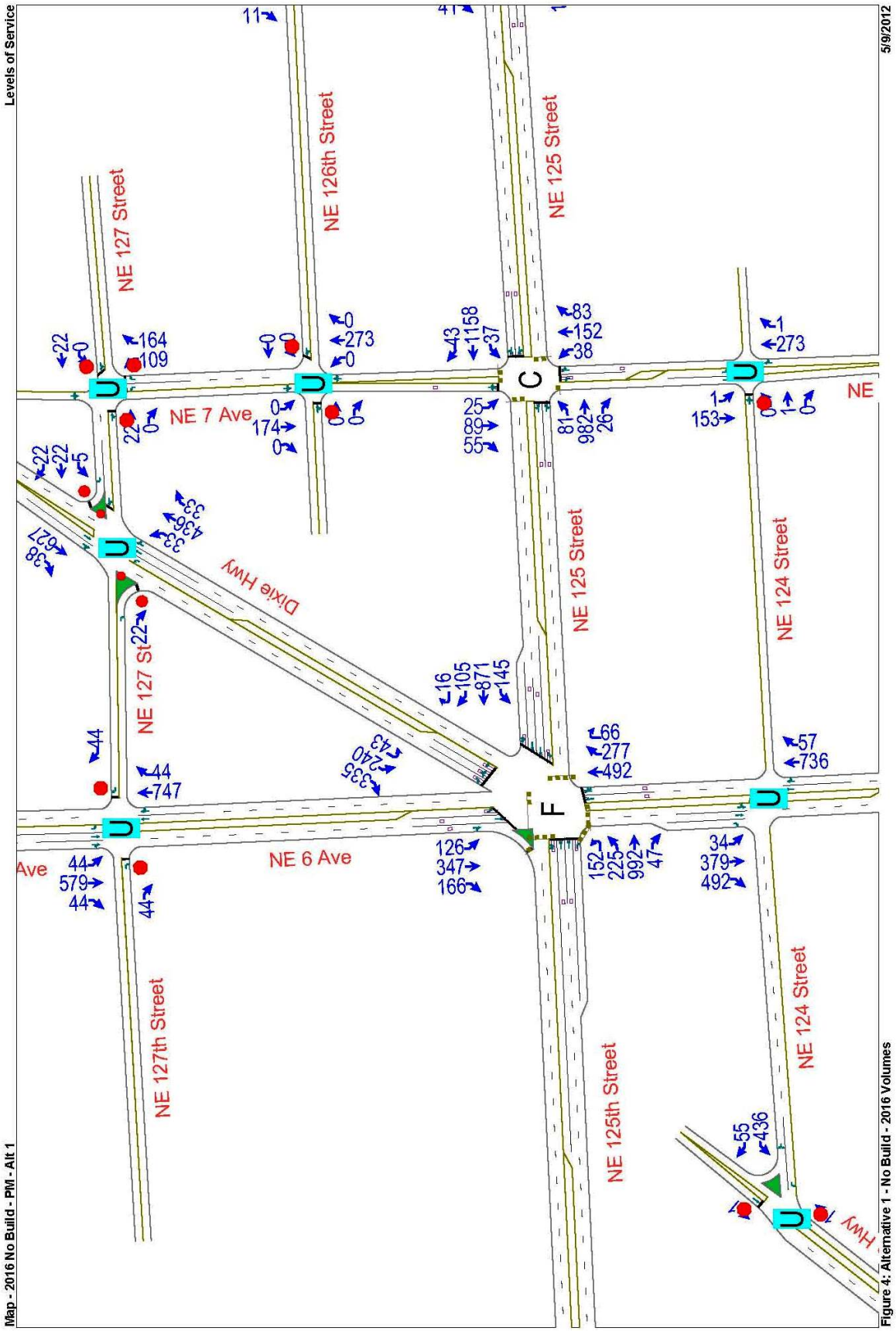


Figure 4: Alternative 1 - No Build - 2016 Volumes

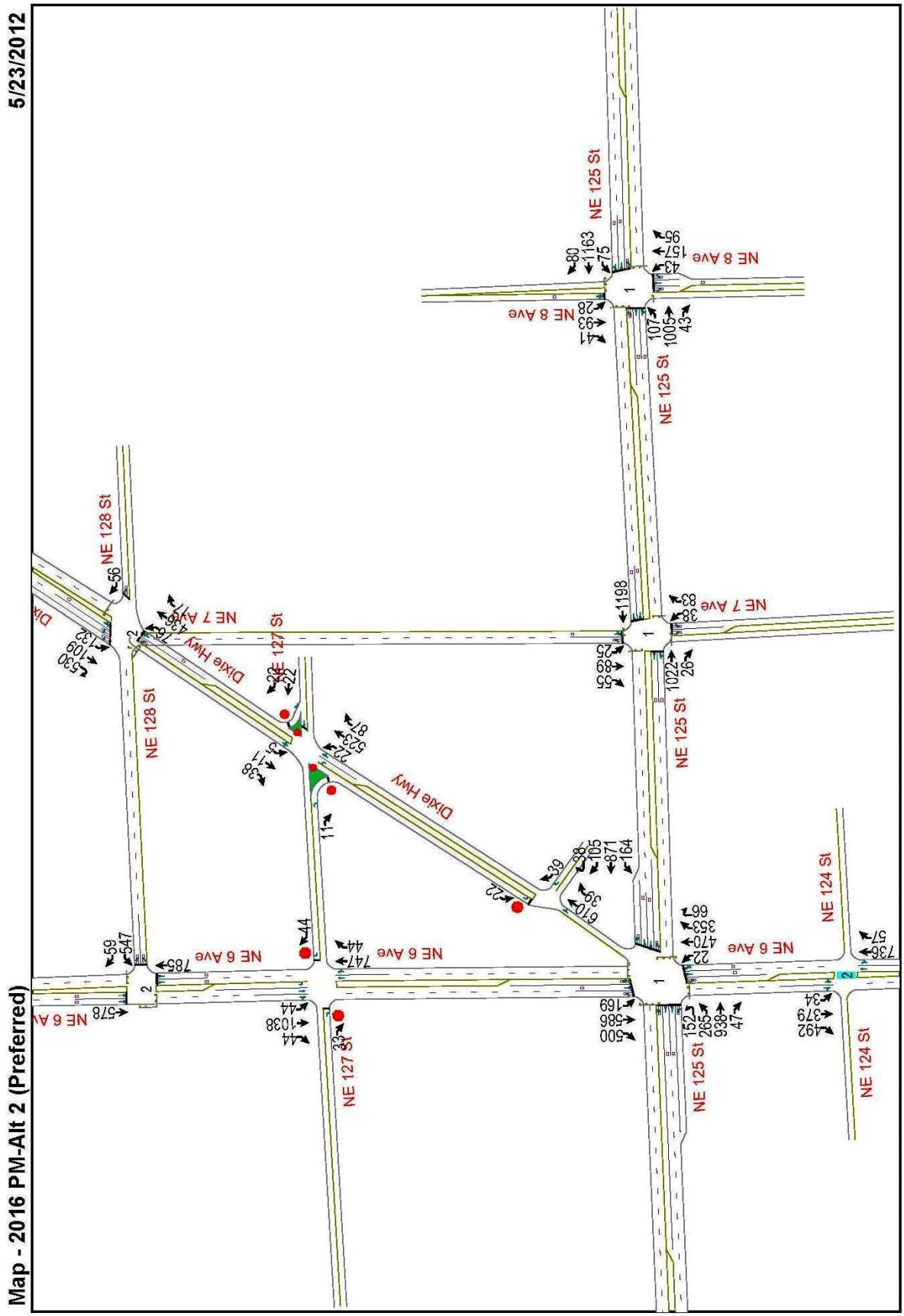
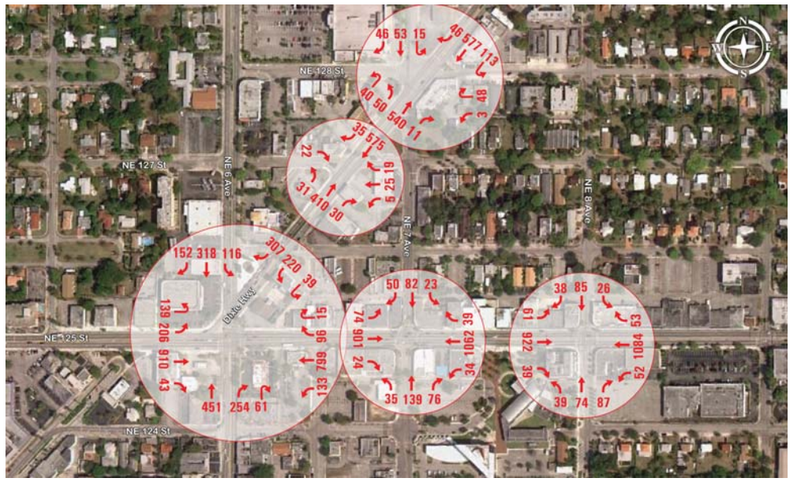


FIGURE 5: ALTERNATIVE 2 - 2016 TRAFFIC VOLUMES AFTER REROUTING

Figure 6: VISSIM Simulation Snapshots

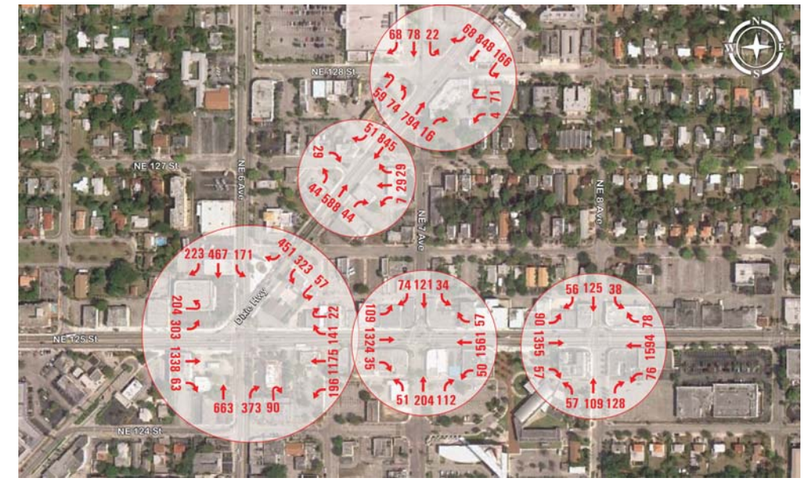
SR 922/NE 125th Street from NE 5th Avenue to NE 7th Avenue | Figure 7: Existing and Future Turning Movements

EXISTING CONDITIONS 2010 PM



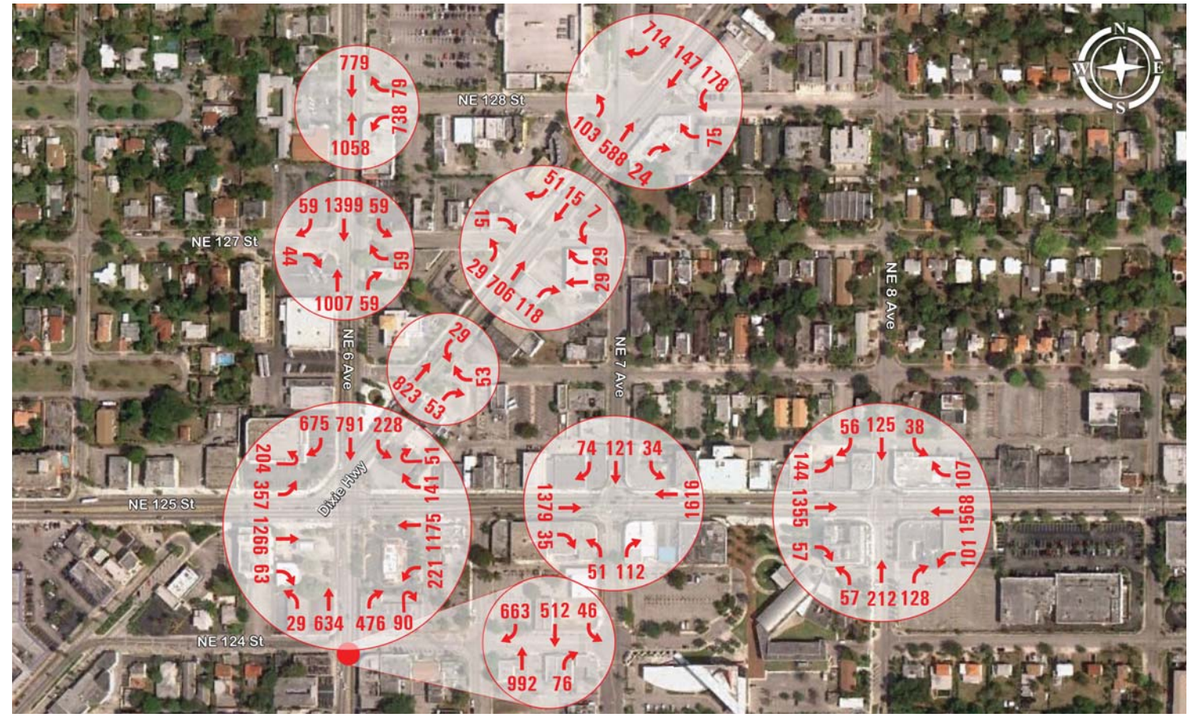
EXISTING CONDITIONS 2016 PM

EXISTING CONDITIONS 2036 PM



RECOMMENDED IMPROVEMENTS 2016 PM

RECOMMENDED IMPROVEMENTS 2036 PM



LEGEND (VPH)- # INTERSECTION -

The results of the operational analysis for the opening year in 2016 are summarized in **Table 4**. The SYNCHRO operational analysis printouts for 2016 are provided in **Appendix C**.

TABLE 4
NE 125 STREET PD&E STUDY
OPENNING YEAR 2016 - PM PEAK HOUR

Opening Year 2016 Improvement Alternatives	EB		WB		NB		SB		SW		All Approaches	
	NE 125 Street		NE 125 Street		NE 6 Avenue		NE 6 Avenue		W. Dixie Hwy			
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
NE 125 ST/NE 6 AVE/DIXIE												
Alt 1: No Build / TSM	99.5	F	116.6	F	162.4	F	56.5	E	159.3	F	117.0	F
Alt 2: Preferred Alt	51.5	D	52.9	D	66.2	E	48.8	D	N/A	N/A	54.0	D
YEAR 2016	**NE 125 Street**		**NE 125 Street**		**NE 7 Avenue**		**NE 7 Avenue**				**All Approaches**	
NE 125 STREET/ NE 7 Ave												
Alt 1: No Build / TSM	25.2	C	3.6	A	70.9	E	123.1	F			26.0	C
Alt 2: Preferred Alt	1.8	A	4.5	A	73.2	E	68.7	E			10.9	B

Note: Delay represents average delays measured in seconds per vehicle.

Table 4 indicates that without improvements (i.e., **No-Build Alternative)** the 5-leg intersection will operate at a failing level of service with average delays of 117 seconds/vehicle, significantly higher than the acceptable LOS E delays of less than 80 seconds/vehicle. These delays are 25% higher than existing conditions causing worsening traffic conditions and spillovers from the eastbound left lane blocking the through lanes. Some movements may require more than two cycles to clear the intersection.

On the other hand, the Build alternative in 2016 reduces the 5-leg intersection delays by over 54% and improves operations to an acceptable LOS D in 2016 while accommodating the same total traffic volume as the No-Build Alternative. The significant reduction in delays of the Build Alternative compared to the No-Build Alternative are caused by eliminating the phase to serve the fifth leg and redistributing the green time to other critical approaches, reducing the clearance time for southbound NE 6 Avenue as the stop bar will be placed closer to the intersection, and providing denser traffic volumes with higher flow rates as a result of combining approaches.

The operation of the intersection of NE 125 Street and NE 7 Avenue will also be enhanced with average delays reduced by more than half.

The analysis of **Alternative 2** (PD&E Preferred Alternative) with VISSIM and CORSIM indicated that converting the shared through-right turn lane into an exclusive right-turn lane will provide better lane utilization and a reduced need for lane changes leading to a smoother and safer operation. The reduced delays at the

southbound right turn of the 5-leg intersection will also help reduce traffic intrusion into residential neighborhoods east of NE 6 Avenue.

The southbound right turn traffic flow can be further improved by providing a right turn green arrow concurrent with the eastbound left phase. In addition, since the opportunity for southbound right-turn-on-red (RTOR) during the PM peak hour is very limited, it may be feasible to prohibit RTOR during peak hours for safety reasons and to reduce conflicts with pedestrians.

VISSIM was also used to evaluate the operational impacts of reducing the northbound approach of West Dixie Highway to one lane while maintaining access to the Chevron gas station. The traffic microsimulation did not identify any measurable operational impacts or traffic backup to the intersection due to traffic slowdown caused by vehicles entering or exiting the gas station. It should be noted that only the northern access to the gas station will remain open to traffic providing a buffer distance of over 170 feet between the driveway and the intersection.

In conclusion, the PM peak hour operational analysis for the opening year in 2016 indicates that the No-Build alternative fails in 2016 causing extended queues on all approaches, with the eastbound left lane queue spilling over and blocking the through lanes. The excessive delays will negatively impact mobility, accessibility, desirability and economic vitality of the businesses along NE 125 Street.

The analysis also indicates that the **PD&E preferred Alternative** will significantly reduce average delays at the intersections of NE 125 Street & NE 7 Avenue, and NE 125 Street and NE 6 Avenue. The intersection will operate at LOS D in 2016.

The operational analysis indicates that the **PD&E preferred Alternative** reduces conflicts in the southbound approach north of the intersection, and eliminates conflicts south of the intersection as traffic destined to West Dixie Highway via NE 124 Street can make easy lane changes and bypass a parked bus. Alignment south of the intersection is improved by eliminating the right lane add-on. Accessibility is enhanced by providing a northbound left turn lane an signal phase to better access to the businesses along NE 125 Street west of the 5-leg intersection as well as a direct link to I-95. It should be noted that the intersections of NE 6 Avenue/NE 128 Street and NE 128 Street/West Dixie Highway are projected to operate after traffic diversion at a very good level of service of “C” or better.

6. Operational Analysis for Design Year in 2036

The operational analysis for the design year in 2036 was performed by applying a 1.5% annual growth rate to develop 2036 base volumes, and applying traffic diversions as previously explained. Similar to the opening year analysis, VISSIM micro-simulations were also performed for a higher-level of analysis for 2036 to evaluate the impacts of channelizing the southbound thru-right lane into an exclusive right turn lane and evaluating the impacts of reducing the northbound West Dixie Highway approach to one lane and maintain access to the gas station.

The 2036 PM peak hour turning movement volumes are depicted in **Figure 7** for the No-Build Alternative and **Figure 8** for the PD&E Preferred Alternative.

The results of the operational analysis for the design year in 2036 are summarized in **Table 5**. All scenarios assume optimized signal timing using SYNCHRO. SYNCHRO operational analysis printouts for 2036 are provided in **Appendix D**.

TABLE 5
NE 125 STREET PD&E STUDY
DESIGN YEAR 2036 - PM PEAK HOUR

Design Year 2036 Improvement Alternative	EB NE 125 Street		WB NE 125 Street		NB NE 6 Avenue		SB NE 6 Avenue		SW W. Dixie Hwy		All Approaches	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
NE 125 ST/NE 6 AVE/DIXIE												
Alt 1: No Build / TSM	241.9	F	250.2	F	326.1	F	82.4	F	285.0	F	242.9	F
Alt 2: Preferred Alt	113.2	F	136.8	F	176.6	F	104.1	F	N/A	N/A	128.8	F
YEAR 2036	**NE 125 Street**		**NE 125 Street**		**NE 7 Avenue**		**NE 7 Avenue**				**All Approaches**	
NE 125 STREET/ NE 7 Ave												
Alt 1: No Build / TSM	112.7	F	18.0	B	63.9	E	156.8	F			68.2	E
Alt 2: Preferred Alt	1.9	A	2.5	A	101.7	F	71.5	E			11.6	B

Note: Delay represents average delays measured in seconds per vehicle.

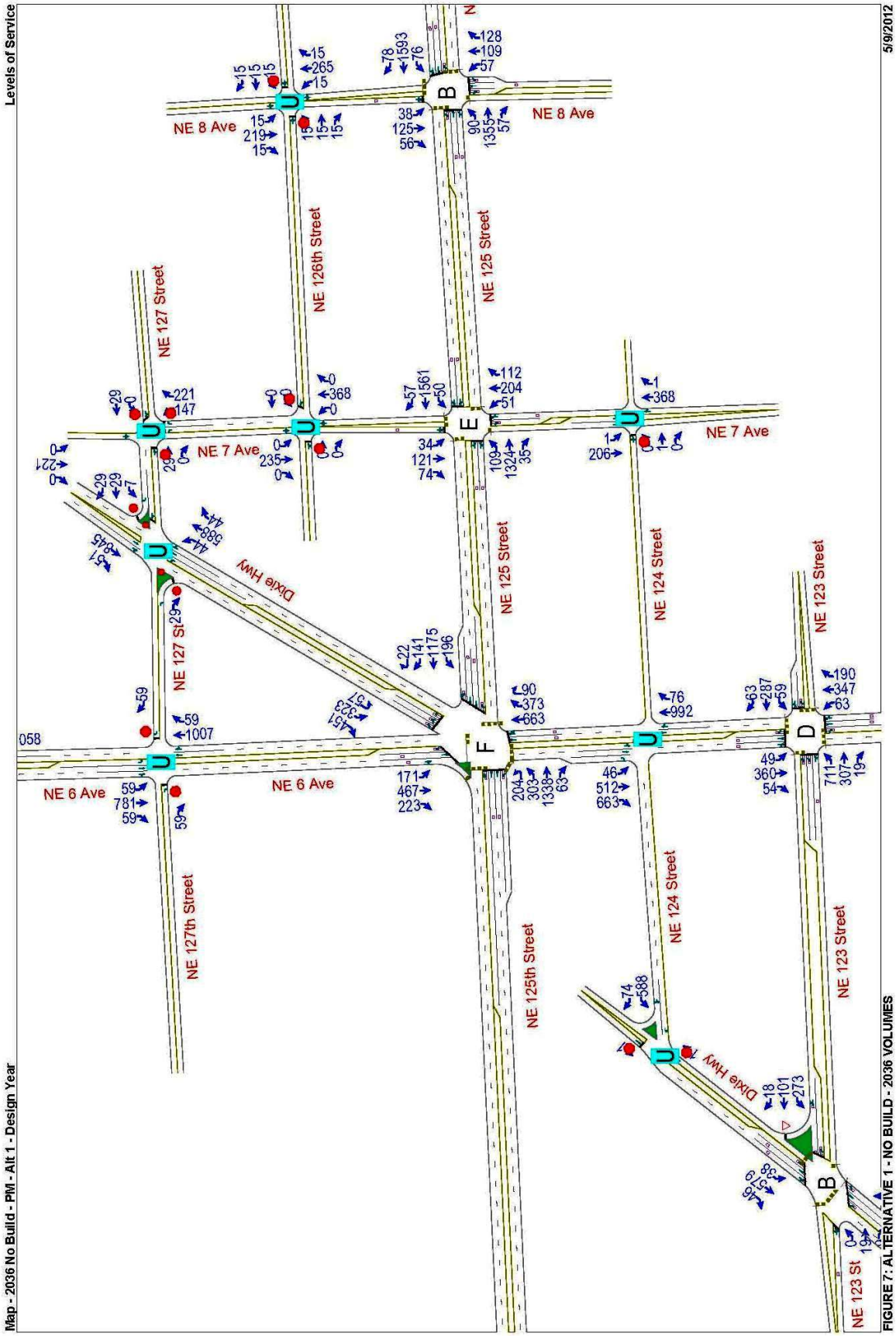


FIGURE 7: ALTERNATIVE 1 - NO BUILD - 2036 VOLUMES

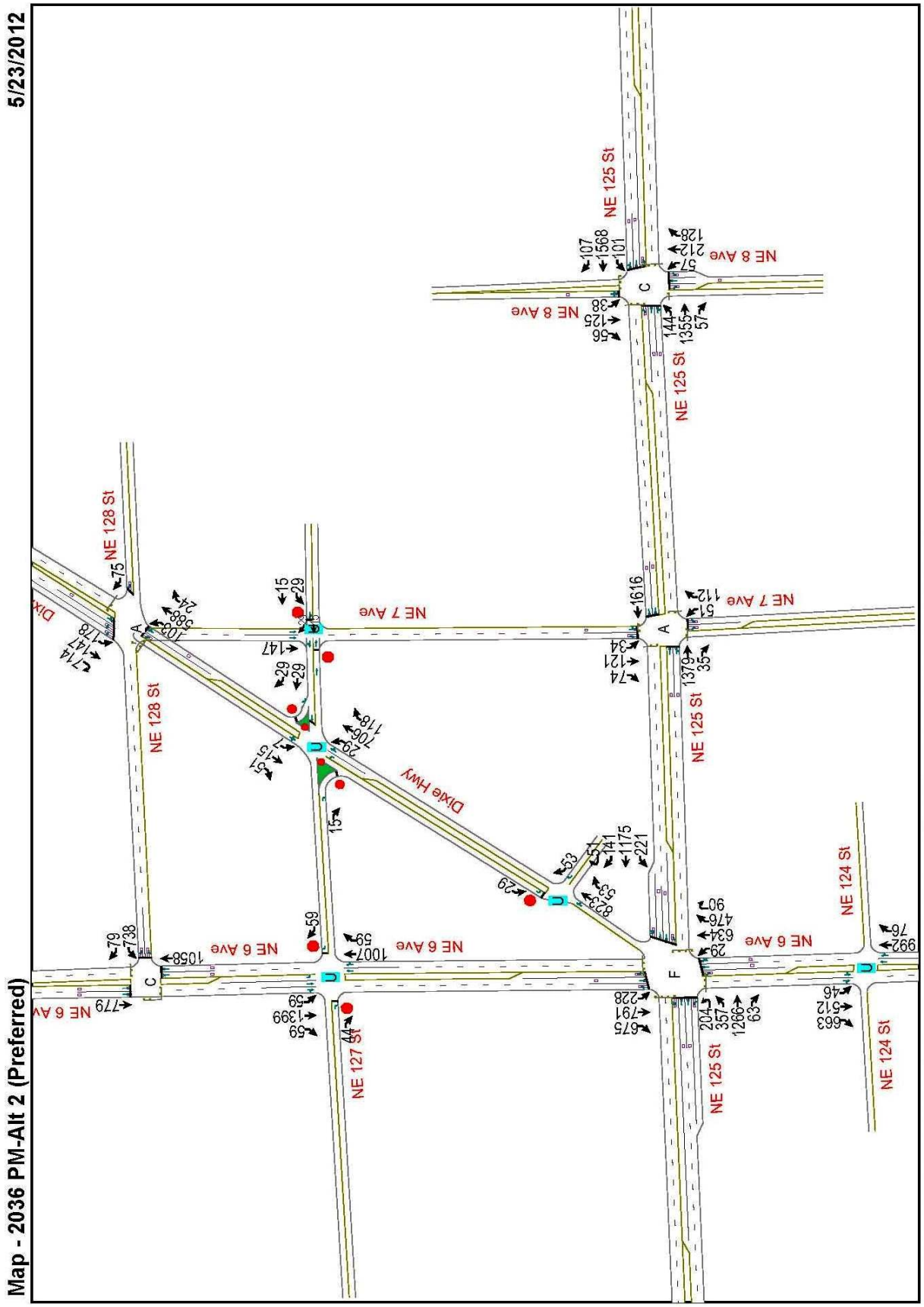


FIGURE 8: ALTERNATIVE 2 - 2036 TRAFFIC VOLUMES AFTER REROUTING

Generally few major intersections in Miami-Dade County can handle 47% increase in traffic and still operate at acceptable levels of service without the addition of through lanes. Nonetheless, the main purpose of the 2036 analysis is to evaluate the relative performance of the Build and No-Build Alternatives.

As expected, the 5-leg intersection will operate in 2036 at a failing level of service under both the Build and No-Build alternatives. The average delays for the No-Build Alternative are in excess of four minutes per vehicle. These delays are cut by half for the Build Alternative. The VISSIM micro-simulation analysis indicated that one northbound lane along West Dixie Highway is sufficient to accommodate the projected northbound peak hour traffic volume of around 850 vehicles per hour, including the diverted traffic from NE 7 Avenue due to prohibiting the east/west left turn and the northbound through movements.

In summary, The PM peak hour analysis indicates that the No-Build alternative fails miserably in 2036, not a surprising result considering it fails today before the estimated 47% increase in traffic. The Build Alternative also fails in 2036, but with delays slightly higher to what will be experienced at opening year. The operating conditions of the intersection of NE 125 Street and NE 7 Avenue improve significantly with the Build Alternative with delays being reduced by over 70%.

5. Conclusions and Recommendations

The PD&E traffic study evaluated the operation of the intersection of NE 125 Street/NE 6 Avenue/West Dixie Highway as well as the intersections of NE 125 Street/NE 7 Avenue, NE 6 Avenue/NE 128 Street, and West Dixie Highway/NE 128 Street. The analyses were performed for the PM peak hour for existing conditions in 2010, opening year in 2016 and design year in 2036. Opening and design year operational analyses were performed for the No-Build/TSM alternative (Alternative 1) as well as the PD&E Preferred Alternative (Alternative 2). The PD&E Preferred Alternative can be accommodated within existing right of way.

There are four important operational analysis conclusions:

1. The 5-leg intersection currently operates during the PM peak hours at a failing level of service with average delays in excess of 94 seconds/vehicle. If no improvements are implemented, average delays will increase by 25% in 2016 to 117 seconds/vehicle and will exceed 4 minutes per vehicle (240 seconds) in 2036. This will negatively impact mobility, accessibility, attractiveness of the business corridor, and economic vitality of businesses along NE 125 Street and West Dixie Highway.

2. The PD&E Preferred Alternative will reduce the average delay by 54% in 2016 and 48% in 2036. The 5-leg intersection will operate at an acceptable LOS D in 2016.

3. VISSIM analysis indicates that one northbound lane along West Dixie Highway is adequate to accommodate projected traffic volumes even when accounting for vehicles accessing the gas station from West Dixie Highway. VISSIM analysis also indicates that replacing the southbound shared through-right lane at the 5-leg intersection with an exclusive right turn lane will improve operations and reduce conflicts. However, if this enhancement is implemented, operating conditions should be monitored to insure the southbound through and left volumes do not exceed the capacity of one feeding lane.

4. The PD&E Preferred Alternative will significantly improve the operations of the intersection of NE 125 Street and NE 7 Avenue by prohibiting east/west left turns and converting the road section between NE 128 Street and NE 125 Street to a one-way traffic.

The recommendations of the traffic study are to implement the recommended improvements of the PD&E Preferred Alternative, restripe the southbound right turn lane from shared thru-right to an exclusive right turn lane, and monitor the traffic conditions to insure the capacity of the southbound through lane is not exceeded during peak hours.

APPENDIX A

COUNT DATA FROM PLANNING STUDY

Crossroads Engineering

13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 125TH@DIXIE
Site Code : 00000000
Start Date : 3/24/2010
Page No : 1

Groups Printed- AUTOS/HVY VEHICLES

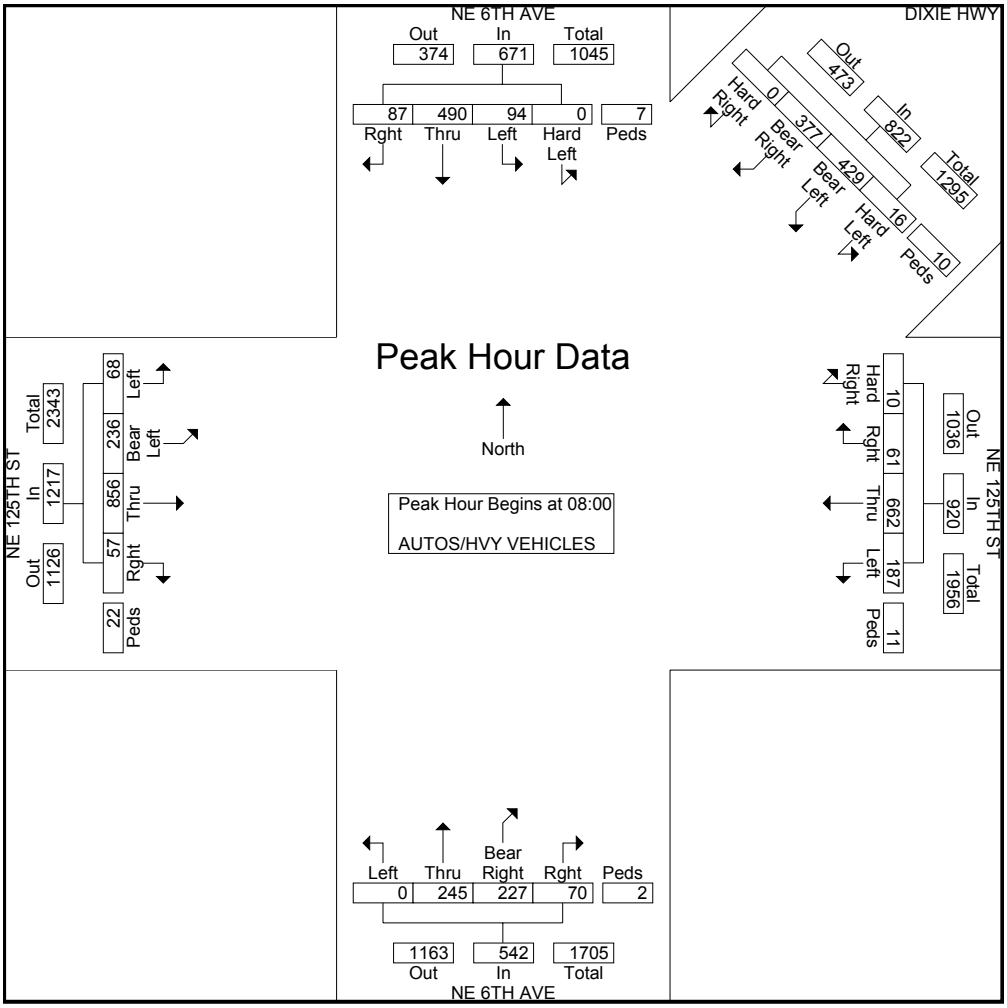
	NE 6TH AVE From North					DIXIE HWY From Northeast					NE 125TH ST From East					NE 6TH AVE From South					NE 125TH ST From West					
Start Time	Rght	Thru	Left	Hard Left	Peds	Hard Right	Bear Right	Bear Left	Hard Left	Peds	Hard Right	Rght	Thru	Left	Peds	Rght	Bear Right	Thru	Left	Peds	Rght	Thru	Bear Left	Left	Peds	Int. Total
07:00	3	69	18	0	0	0	51	64	2	0	1	9	123	39	0	1	27	49	0	0	1	108	55	11	2	633
07:15	14	101	15	0	0	0	118	74	0	2	0	12	116	43	0	12	59	38	0	0	14	182	87	25	0	912
07:30	15	98	24	0	3	0	92	69	0	6	1	11	179	57	0	5	32	35	0	1	11	184	58	15	4	900
07:45	19	127	33	0	0	0	90	96	3	0	0	13	151	49	0	20	44	50	0	3	20	196	65	6	0	985
Total	51	395	90	0	3	0	351	303	5	8	2	45	569	188	0	38	162	172	0	4	46	670	265	57	6	3430
08:00	26	107	15	0	0	0	94	88	7	5	1	16	177	53	6	17	60	58	0	0	15	218	65	16	4	1048
08:15	19	144	24	0	7	0	96	104	1	0	3	13	148	50	2	18	76	63	0	0	13	197	59	16	4	1057
08:30	18	114	27	0	0	0	107	132	4	3	0	15	175	49	0	15	50	63	0	0	17	200	61	24	3	1077
08:45	24	125	28	0	0	0	80	105	4	2	6	17	162	35	3	20	41	61	0	2	12	241	51	12	11	1042
Total	87	490	94	0	7	0	377	429	16	10	10	61	662	187	11	70	227	245	0	2	57	856	236	68	22	4224
*** BREAK ***																										
16:00	25	97	23	0	3	0	68	56	16	1	8	31	224	38	2	15	71	102	0	3	14	235	61	26	5	1124
16:15	36	92	25	0	3	0	114	65	8	1	8	16	185	36	2	21	59	106	0	9	21	204	70	23	8	1112
16:30	30	90	24	0	6	0	81	62	8	3	4	18	176	23	4	18	65	117	0	2	10	205	76	31	9	1062
16:45	23	71	21	0	9	0	70	61	11	10	7	20	207	38	2	20	58	98	0	4	14	200	66	22	2	1034
Total	114	350	93	0	21	0	333	244	43	15	27	85	792	135	10	74	253	423	0	18	59	844	273	102	24	4332
17:00	40	87	31	0	2	0	73	63	13	8	5	27	178	35	5	17	63	119	0	7	11	224	53	34	2	1097
17:15	35	74	27	0	4	0	75	59	7	2	2	22	212	25	3	15	64	110	0	8	4	221	45	36	10	1060
17:30	39	66	25	0	6	0	78	49	5	4	1	16	201	36	5	11	67	114	0	7	8	238	55	32	4	1067
17:45	38	91	33	0	2	0	81	49	14	4	7	31	208	37	7	18	60	108	0	15	20	227	53	37	5	1145
Total	152	318	116	0	14	0	307	220	39	18	15	96	799	133	20	61	254	451	0	37	43	910	206	139	21	4369
Grand Total	404	1553	393	0	45	0	1368	1196	103	51	54	287	2822	643	41	243	896	1291	0	61	205	3280	980	366	73	16355
Apprch %	16.9	64.8	16.4	0	1.9	0	50.3	44	3.8	1.9	1.4	7.5	73.4	16.7	1.1	9.8	36	51.8	0	2.4	4.2	66.9	20	7.5	1.5	
Total %	2.5	9.5	2.4	0	0.3	0	8.4	7.3	0.6	0.3	0.3	1.8	17.3	3.9	0.3	1.5	5.5	7.9	0	0.4	1.3	20.1	6	2.2	0.4	

Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 125TH@DIXIE
Site Code : 00000000
Start Date : 3/24/2010
Page No : 2

	NE 6TH AVE From North						DIXIE HWY From Northeast						NE 125TH ST From East						NE 6TH AVE From South						NE 125TH ST From West						
Start Time	Rght	Thru	Left	Hard Left	Peds	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	Peds	App. Total	Hard Right	Rght	Thru	Left	Peds	App. Total	Rght	Bear Right	Thru	Left	Peds	App. Total	Rght	Thru	Bear Left	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																															
Peak Hour for Entire Intersection Begins at 08:00																															
08:00	26	107	15	0	0	148	0	94	88	7	5	194	1	16	177	53	6	253	17	60	58	0	0	135	15	218	65	16	4	318	1048
08:15	19	144	24	0	7	194	0	96	104	1	0	201	3	13	148	50	2	216	18	76	63	0	0	157	13	197	59	16	4	289	1057
08:30	18	114	27	0	0	159	0	107	132	4	3	246	0	15	175	49	0	239	15	50	63	0	0	128	17	200	61	24	3	305	1077
08:45	24	125	28	0	0	177	0	80	105	4	2	191	6	17	162	35	3	223	20	41	61	0	2	124	12	241	51	12	11	327	1042
Total Volume	87	490	94	0	7	678	0	377	429	16	10	832	10	61	662	187	11	931	70	227	245	0	2	544	57	856	236	68	22	1239	4224
% App. Total	12.8	72.3	13.9	0	1		0	45.3	51.6	1.9	1.2		1.1	6.6	71.1	20.1	1.2		12.9	41.7	45	0	0.4		4.6	69.1	19	5.5	1.8		
PHF	.837	.851	.839	.000	.250	.874	.000	.881	.813	.571	.500	.846	.417	.897	.935	.882	.458	.920	.875	.747	.972	.000	.250	.866	.838	.888	.908	.708	.500	.947	.981

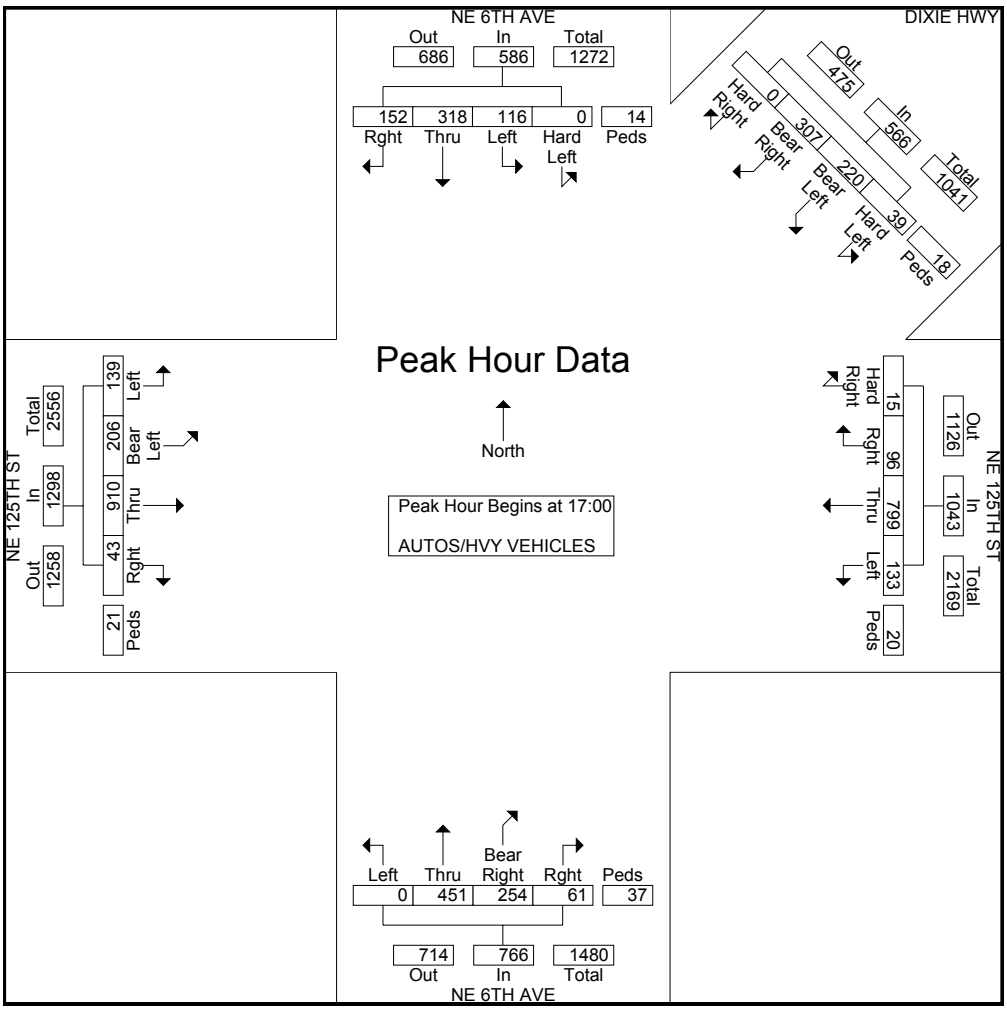


Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 125TH@DIXIE
Site Code : 00000000
Start Date : 3/24/2010
Page No : 3

	NE 6TH AVE From North						DIXIE HWY From Northeast						NE 125TH ST From East						NE 6TH AVE From South						NE 125TH ST From West						
Start Time	Rght	Thru	Left	Hard Left	Peds	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	Peds	App. Total	Hard Right	Rght	Thru	Left	Peds	App. Total	Rght	Bear Right	Thru	Left	Peds	App. Total	Rght	Thru	Bear Left	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																															
Peak Hour for Entire Intersection Begins at 17:00																															
17:00	40	87	31	0	2	160	0	73	63	13	8	157	5	27	178	35	5	250	17	63	119	0	7	206	11	224	53	34	2	324	1097
17:15	35	74	27	0	4	140	0	75	59	7	2	143	2	22	212	25	3	264	15	64	110	0	8	197	4	221	45	36	10	316	1060
17:30	39	66	25	0	6	136	0	78	49	5	4	136	1	16	201	36	5	259	11	67	114	0	7	199	8	238	55	32	4	337	1067
17:45	38	91	33	0	2	164	0	81	49	14	4	148	7	31	208	37	7	290	18	60	108	0	15	201	20	227	53	37	5	342	1145
Total Volume	152	318	116	0	14	600	0	307	220	39	18	584	15	96	799	133	20	1063	61	254	451	0	37	803	43	910	206	139	21	1319	4369
% App. Total	25.3	53	19.3	0	2.3		0	52.6	37.7	6.7	3.1		1.4	9	75.2	12.5	1.9		7.6	31.6	56.2	0	4.6		3.3	69	15.6	10.5	1.6		
PHF	.950	.874	.879	.000	.583	.915	.000	.948	.873	.696	.563	.930	.536	.774	.942	.899	.714	.916	.847	.948	.947	.000	.617	.975	.538	.956	.936	.939	.525	.964	.954



Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 123RD@DIXIE
Site Code : 00000000
Start Date : 3/24/2010
Page No : 1

Groups Printed- AUTOS - HEAVY VEHICLES

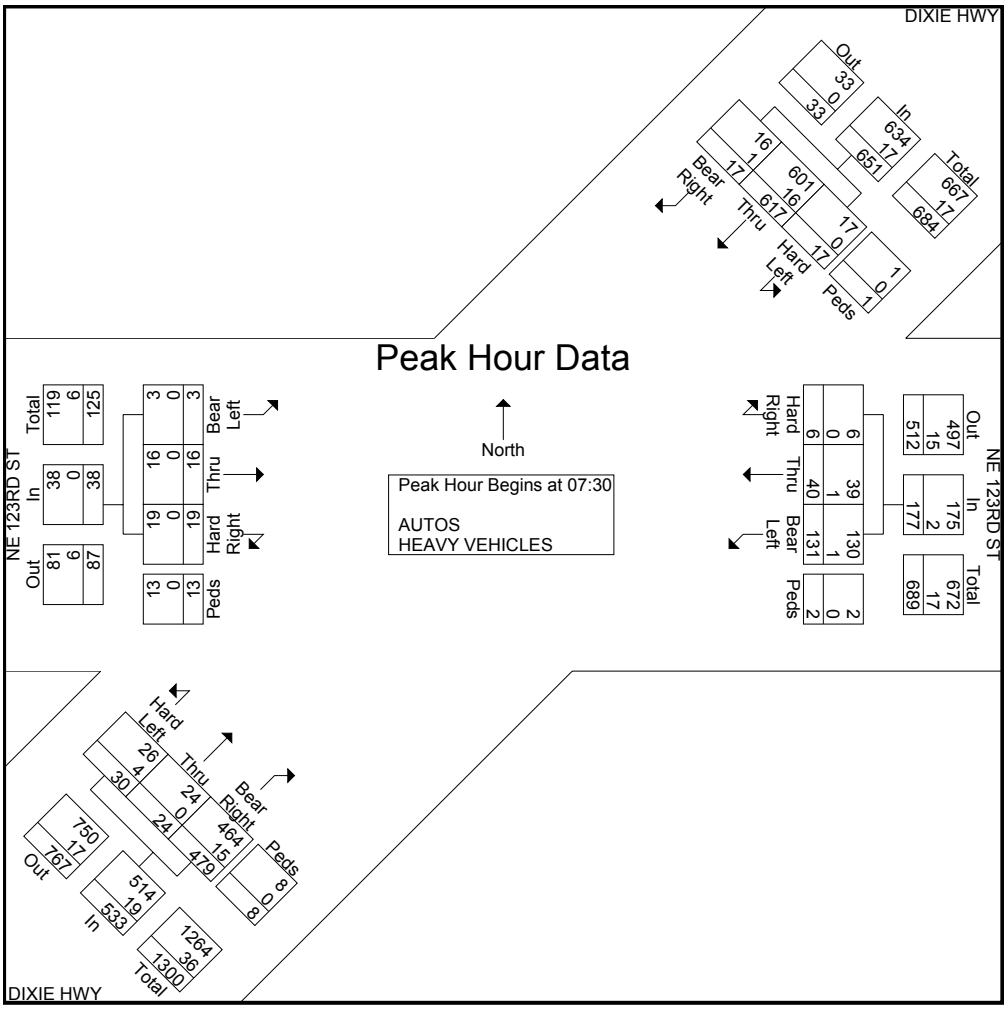
	DIXIE HWY From Northeast				NE 123RD ST From East				DIXIE HWY From Southwest				NE 123RD ST From West				
Start Time	Bear Right	Thru	Hard Left	Peds	Hard Right	Thru	Bear Left	Peds	Bear Right	Thru	Hard Left	Peds	Hard Right	Thru	Bear Left	Peds	Int. Total
07:00	3	148	1	0	3	12	25	1	75	4	9	0	1	2	0	0	284
07:15	3	140	1	0	0	10	33	0	74	5	12	1	2	5	0	0	286
07:30	3	162	0	0	1	5	46	0	112	0	9	1	3	2	0	6	350
07:45	4	147	3	1	1	12	23	1	110	7	8	7	6	2	0	0	332
Total	13	597	5	1	5	39	127	2	371	16	38	9	12	11	0	6	1252
08:00	3	174	8	0	1	12	31	0	130	10	7	0	6	6	3	5	396
08:15	7	134	6	0	3	11	31	1	127	7	6	0	4	6	0	2	345
08:30	3	132	3	1	1	10	38	1	119	8	5	0	0	3	0	1	325
08:45	3	119	5	0	2	8	28	0	79	6	5	1	3	2	5	0	266
Total	16	559	22	1	7	41	128	2	455	31	23	1	13	17	8	8	1332
*** BREAK ***																	
16:00	3	95	5	0	4	9	35	2	162	19	12	2	1	3	0	6	358
16:15	8	113	9	1	1	11	37	0	194	9	12	1	3	1	0	2	402
16:30	10	74	6	0	5	9	39	8	162	14	16	0	2	0	0	7	352
16:45	6	95	4	0	3	18	34	0	167	9	18	0	1	8	0	0	363
Total	27	377	24	1	13	47	145	10	685	51	58	3	7	12	0	15	1475
17:00	8	109	6	0	5	23	43	2	148	12	21	0	2	5	0	13	397
17:15	3	94	2	0	1	19	54	1	172	9	24	1	3	4	0	1	388
17:30	9	94	10	0	2	10	49	4	175	23	18	1	1	1	0	3	400
17:45	11	97	8	0	4	17	40	1	122	21	12	23	0	3	0	7	366
Total	31	394	26	0	12	69	186	8	617	65	75	25	6	13	0	24	1551
Grand Total	87	1927	77	3	37	196	586	22	2128	163	194	38	38	53	8	53	5610
Apprch %	4.2	92	3.7	0.1	4.4	23.3	69.7	2.6	84.3	6.5	7.7	1.5	25	34.9	5.3	34.9	
Total %	1.6	34.3	1.4	0.1	0.7	3.5	10.4	0.4	37.9	2.9	3.5	0.7	0.7	0.9	0.1	0.9	
AUTOS	82	1871	76	3	37	193	583	22	2079	159	187	37	38	49	8	53	5477
% AUTOS	94.3	97.1	98.7	100	100	98.5	99.5	100	97.7	97.5	96.4	97.4	100	92.5	100	100	97.6
HEAVY VEHICLES	5	56	1	0	0	3	3	0	49	4	7	1	0	4	0	0	133
% HEAVY VEHICLES	5.7	2.9	1.3	0	0	1.5	0.5	0	2.3	2.5	3.6	2.6	0	7.5	0	0	2.4

Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 123RD@DIXIE
Site Code : 00000000
Start Date : 3/24/2010
Page No : 2

	DIXIE HWY From Northeast					NE 123RD ST From East					DIXIE HWY From Southwest					NE 123RD ST From West					
Start Time	Bear Right	Thru	Hard Left	Peds	App. Total	Hard Right	Thru	Bear Left	Peds	App. Total	Bear Right	Thru	Hard Left	Peds	App. Total	Hard Right	Thru	Bear Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	3	162	0	0	165	1	5	46	0	52	112	0	9	1	122	3	2	0	6	11	350
07:45	4	147	3	1	155	1	12	23	1	37	110	7	8	7	132	6	2	0	0	8	332
08:00	3	174	8	0	185	1	12	31	0	44	130	10	7	0	147	6	6	3	5	20	396
08:15	7	134	6	0	147	3	11	31	1	46	127	7	6	0	140	4	6	0	2	12	345
Total Volume	17	617	17	1	652	6	40	131	2	179	479	24	30	8	541	19	16	3	13	51	1423
% App. Total	2.6	94.6	2.6	0.2		3.4	22.3	73.2	1.1		88.5	4.4	5.5	1.5		37.3	31.4	5.9	25.5		
PHF	.607	.886	.531	.250	.881	.500	.833	.712	.500	.861	.921	.600	.833	.286	.920	.792	.667	.250	.542	.638	.898
AUTOS	16	601	17	1	635	6	39	130	2	177	464	24	26	8	522	19	16	3	13	51	1385
% AUTOS	94.1	97.4	100	100	97.4	100	97.5	99.2	100	98.9	96.9	100	86.7	100	96.5	100	100	100	100	100	97.3
HEAVY VEHICLES	1	16	0	0	17	0	1	1	0	2	15	0	4	0	19	0	0	0	0	0	38
% HEAVY VEHICLES	5.9	2.6	0	0	2.6	0	2.5	0.8	0	1.1	3.1	0	13.3	0	3.5	0	0	0	0	0	2.7

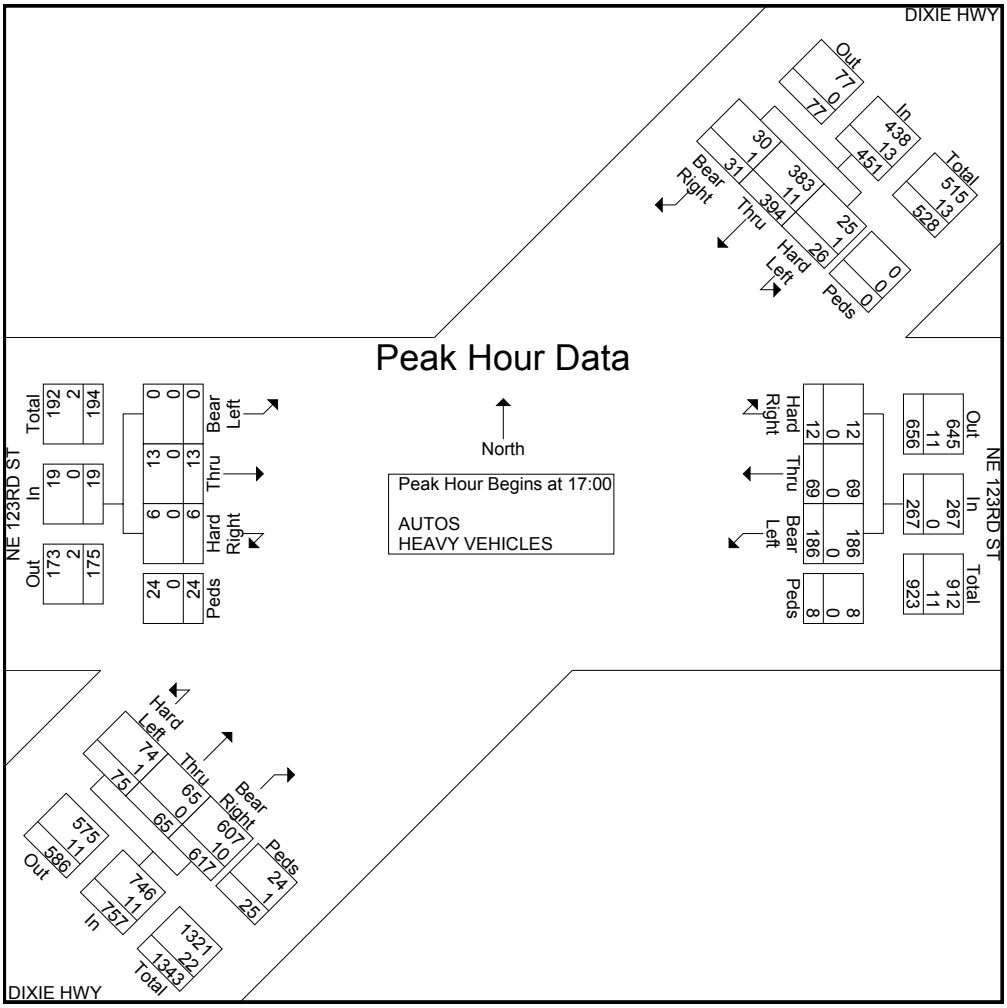


Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 123RD@DIXIE
Site Code : 00000000
Start Date : 3/24/2010
Page No : 3

	DIXIE HWY From Northeast					NE 123RD ST From East					DIXIE HWY From Southwest					NE 123RD ST From West					
Start Time	Bear Right	Thru	Hard Left	Peds	App. Total	Hard Right	Thru	Bear Left	Peds	App. Total	Bear Right	Thru	Hard Left	Peds	App. Total	Hard Right	Thru	Bear Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	8	109	6	0	123	5	23	43	2	73	148	12	21	0	181	2	5	0	13	20	397
17:15	3	94	2	0	99	1	19	54	1	75	172	9	24	1	206	3	4	0	1	8	388
17:30	9	94	10	0	113	2	10	49	4	65	175	23	18	1	217	1	1	0	3	5	400
17:45	11	97	8	0	116	4	17	40	1	62	122	21	12	23	178	0	3	0	7	10	366
Total Volume	31	394	26	0	451	12	69	186	8	275	617	65	75	25	782	6	13	0	24	43	1551
% App. Total	6.9	87.4	5.8	0		4.4	25.1	67.6	2.9		78.9	8.3	9.6	3.2		14	30.2	0	55.8		
PHF	.705	.904	.650	.000	.917	.600	.750	.861	.500	.917	.881	.707	.781	.272	.901	.500	.650	.000	.462	.538	.969
AUTOS	30	383	25	0	438	12	69	186	8	275	607	65	74	24	770	6	13	0	24	43	1526
% AUTOS	96.8	97.2	96.2	0	97.1	100	100	100	100	100	98.4	100	98.7	96.0	98.5	100	100	0	100	100	98.4
HEAVY VEHICLES	1	11	1	0	13	0	0	0	0	0	10	0	1	1	12	0	0	0	0	0	25
% HEAVY VEHICLES	3.2	2.8	3.8	0	2.9	0	0	0	0	0	1.6	0	1.3	4.0	1.5	0	0	0	0	0	1.6



Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 123RD@NE6
Site Code : 00000000
Start Date : 3/24/2010
Page No : 1

Groups Printed- AUTOS - HEAVY VEHICLES

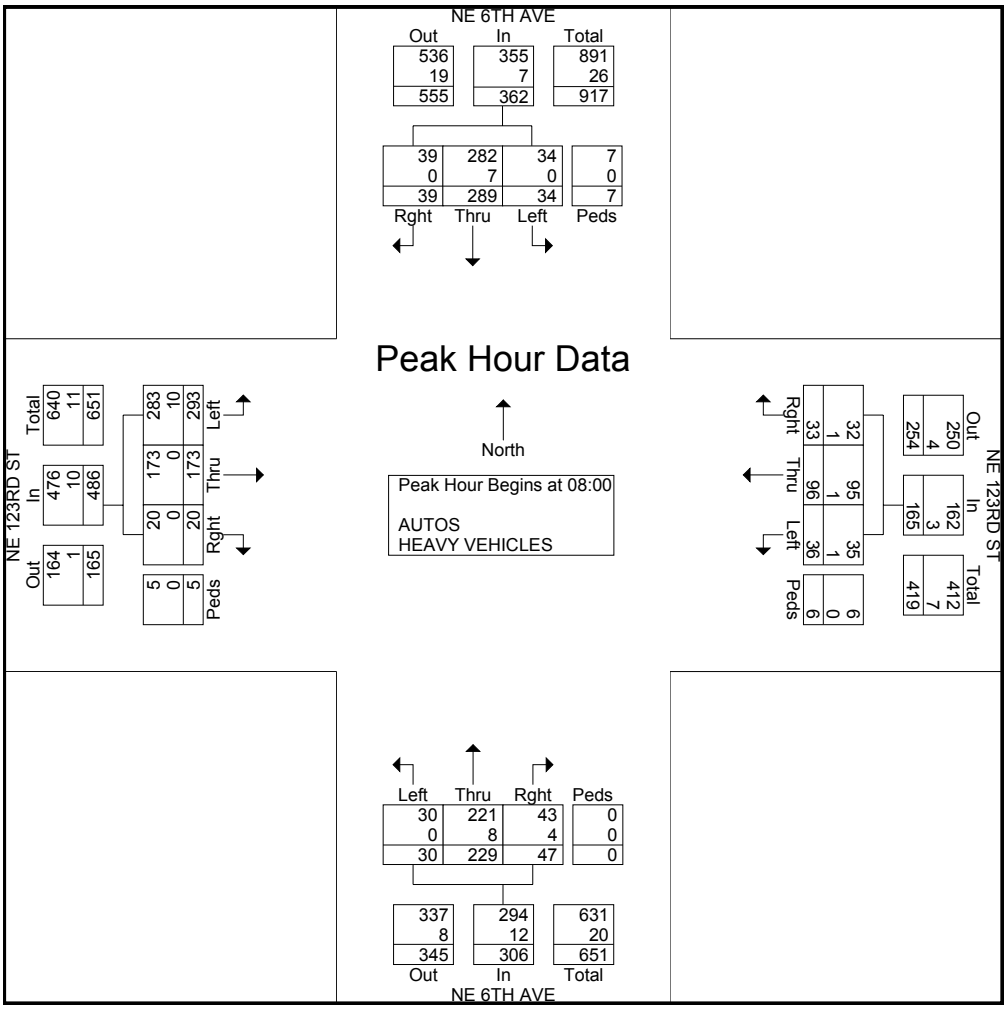
	NE 6TH AVE From North				NE 123RD ST From East				NE 6TH AVE From South				NE 123RD ST From West				
Start Time	Rght	Thru	Left	Peds	Rght	Thru	Left	Peds	Rght	Thru	Left	Peds	Rght	Thru	Left	Peds	Int. Total
07:00	14	35	2	1	2	6	1	3	5	43	3	0	1	26	58	2	202
07:15	13	68	1	0	4	15	2	4	2	45	8	0	4	20	58	0	244
07:30	13	83	6	0	3	28	4	4	9	37	7	0	1	21	59	1	276
07:45	11	66	4	1	3	31	5	5	8	44	8	1	4	42	76	4	313
Total	51	252	13	2	12	80	12	16	24	169	26	1	10	109	251	7	1035
08:00	7	74	4	4	2	19	5	4	12	69	4	0	3	41	66	5	319
08:15	13	67	15	3	14	25	13	2	10	49	6	0	8	46	77	0	348
08:30	10	84	7	0	9	22	10	0	15	55	11	0	4	39	81	0	347
08:45	9	64	8	0	8	30	8	0	10	56	9	0	5	47	69	0	323
Total	39	289	34	7	33	96	36	6	47	229	30	0	20	173	293	5	1337
*** BREAK ***																	
16:00	11	79	11	0	11	37	10	0	12	80	5	1	1	57	105	2	422
16:15	9	52	12	1	6	28	11	1	22	52	8	1	3	67	122	2	397
16:30	12	72	7	4	9	44	9	0	15	69	4	0	2	58	114	7	426
16:45	10	68	8	0	9	37	14	7	25	60	8	2	5	67	116	6	442
Total	42	271	38	5	35	146	44	8	74	261	25	4	11	249	457	17	1687
17:00	7	67	7	2	12	54	12	0	32	67	8	3	4	43	109	1	428
17:15	10	51	6	1	7	57	7	2	36	56	13	3	1	51	135	4	440
17:30	10	59	12	0	15	47	7	2	36	53	14	2	3	48	124	4	436
17:45	13	56	14	0	15	44	4	3	42	53	11	0	8	50	122	3	438
Total	40	233	39	3	49	202	30	7	146	229	46	8	16	192	490	12	1742
Grand Total	172	1045	124	17	129	524	122	37	291	888	127	13	57	723	1491	41	5801
Apprch %	12.7	77	9.1	1.3	15.9	64.5	15	4.6	22.1	67.3	9.6	1	2.5	31.3	64.5	1.8	
Total %	3	18	2.1	0.3	2.2	9	2.1	0.6	5	15.3	2.2	0.2	1	12.5	25.7	0.7	
AUTOS	170	1018	123	17	127	518	120	37	285	865	124	13	56	712	1447	41	5673
% AUTOS	98.8	97.4	99.2	100	98.4	98.9	98.4	100	97.9	97.4	97.6	100	98.2	98.5	97	100	97.8
HEAVY VEHICLES	2	27	1	0	2	6	2	0	6	23	3	0	1	11	44	0	128
% HEAVY VEHICLES	1.2	2.6	0.8	0	1.6	1.1	1.6	0	2.1	2.6	2.4	0	1.8	1.5	3	0	2.2

Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 123RD@NE6
Site Code : 00000000
Start Date : 3/24/2010
Page No : 2

	NE 6TH AVE From North					NE 123RD ST From East					NE 6TH AVE From South					NE 123RD ST From West					
Start Time	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00																					
08:00	7	74	4	4	89	2	19	5	4	30	12	69	4	0	85	3	41	66	5	115	319
08:15	13	67	15	3	98	14	25	13	2	54	10	49	6	0	65	8	46	77	0	131	348
08:30	10	84	7	0	101	9	22	10	0	41	15	55	11	0	81	4	39	81	0	124	347
08:45	9	64	8	0	81	8	30	8	0	46	10	56	9	0	75	5	47	69	0	121	323
Total Volume	39	289	34	7	369	33	96	36	6	171	47	229	30	0	306	20	173	293	5	491	1337
% App. Total	10.6	78.3	9.2	1.9		19.3	56.1	21.1	3.5		15.4	74.8	9.8	0		4.1	35.2	59.7	1		
PHF	.750	.860	.567	.438	.913	.589	.800	.692	.375	.792	.783	.830	.682	.000	.900	.625	.920	.904	.250	.937	.960
AUTOS	39	282	34	7	362	32	95	35	6	168	43	221	30	0	294	20	173	283	5	481	1305
% AUTOS	100	97.6	100	100	98.1	97.0	99.0	97.2	100	98.2	91.5	96.5	100	0	96.1	100	100	96.6	100	98.0	97.6
HEAVY VEHICLES	0	7	0	0	7	1	1	1	0	3	4	8	0	0	12	0	0	10	0	10	32
% HEAVY VEHICLES	0	2.4	0	0	1.9	3.0	1.0	2.8	0	1.8	8.5	3.5	0	0	3.9	0	0	3.4	0	2.0	2.4

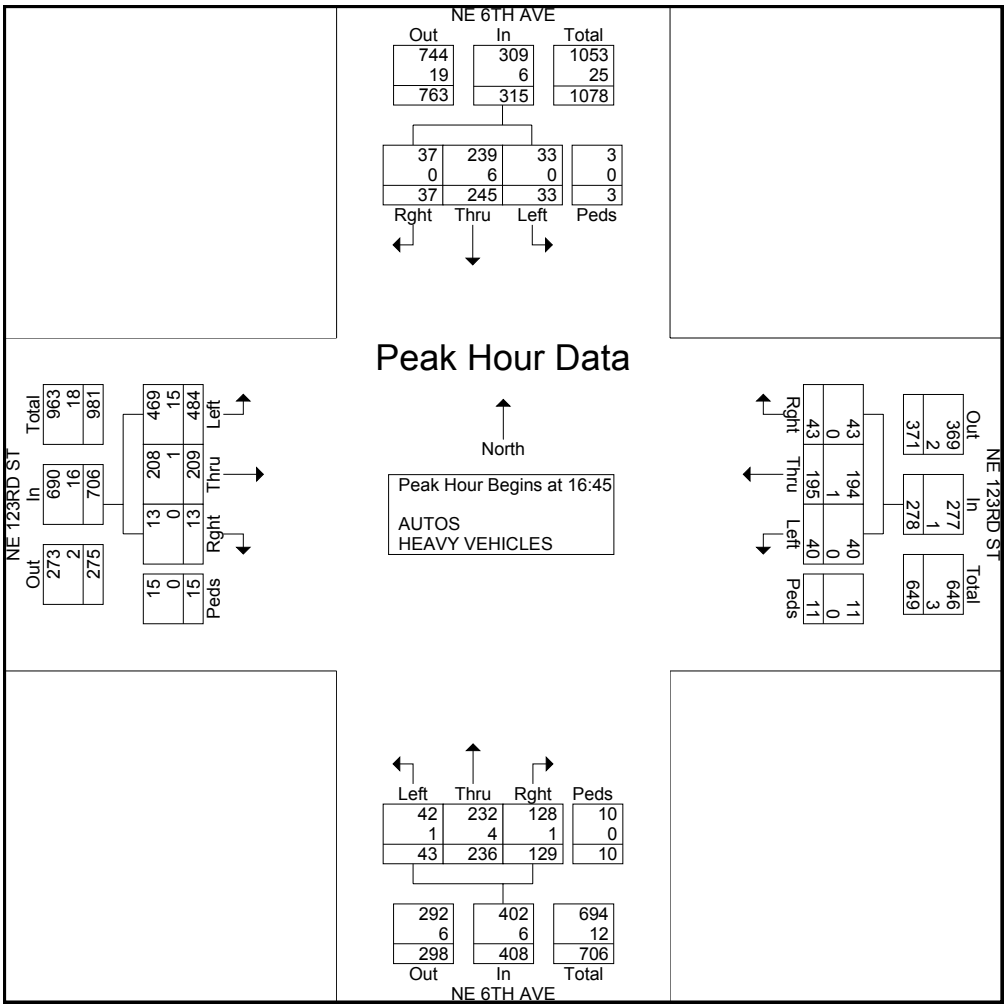


Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 123RD@NE6
Site Code : 00000000
Start Date : 3/24/2010
Page No : 3

	NE 6TH AVE From North					NE 123RD ST From East					NE 6TH AVE From South					NE 123RD ST From West					
Start Time	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	10	68	8	0	86	9	37	14	7	67	25	60	8	2	95	5	67	116	6	194	442
17:00	7	67	7	2	83	12	54	12	0	78	32	67	8	3	110	4	43	109	1	157	428
17:15	10	51	6	1	68	7	57	7	2	73	36	56	13	3	108	1	51	135	4	191	440
17:30	10	59	12	0	81	15	47	7	2	71	36	53	14	2	105	3	48	124	4	179	436
Total Volume	37	245	33	3	318	43	195	40	11	289	129	236	43	10	418	13	209	484	15	721	1746
% App. Total	11.6	77	10.4	0.9		14.9	67.5	13.8	3.8		30.9	56.5	10.3	2.4		1.8	29	67.1	2.1		
PHF	.925	.901	.688	.375	.924	.717	.855	.714	.393	.926	.896	.881	.768	.833	.950	.650	.780	.896	.625	.929	.988
AUTOS	37	239	33	3	312	43	194	40	11	288	128	232	42	10	412	13	208	469	15	705	1717
% AUTOS	100	97.6	100	100	98.1	100	99.5	100	100	99.7	99.2	98.3	97.7	100	98.6	100	99.5	96.9	100	97.8	98.3
HEAVY VEHICLES	0	6	0	0	6	0	1	0	0	1	1	4	1	0	6	0	1	15	0	16	29
% HEAVY VEHICLES	0	2.4	0	0	1.9	0	0.5	0	0	0.3	0.8	1.7	2.3	0	1.4	0	0.5	3.1	0	2.2	1.7



Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 124TH@NE6
Site Code : 00000000
Start Date : 3/24/2010
Page No : 1

Groups Printed- AUTOS - HEAVY VEHICLES

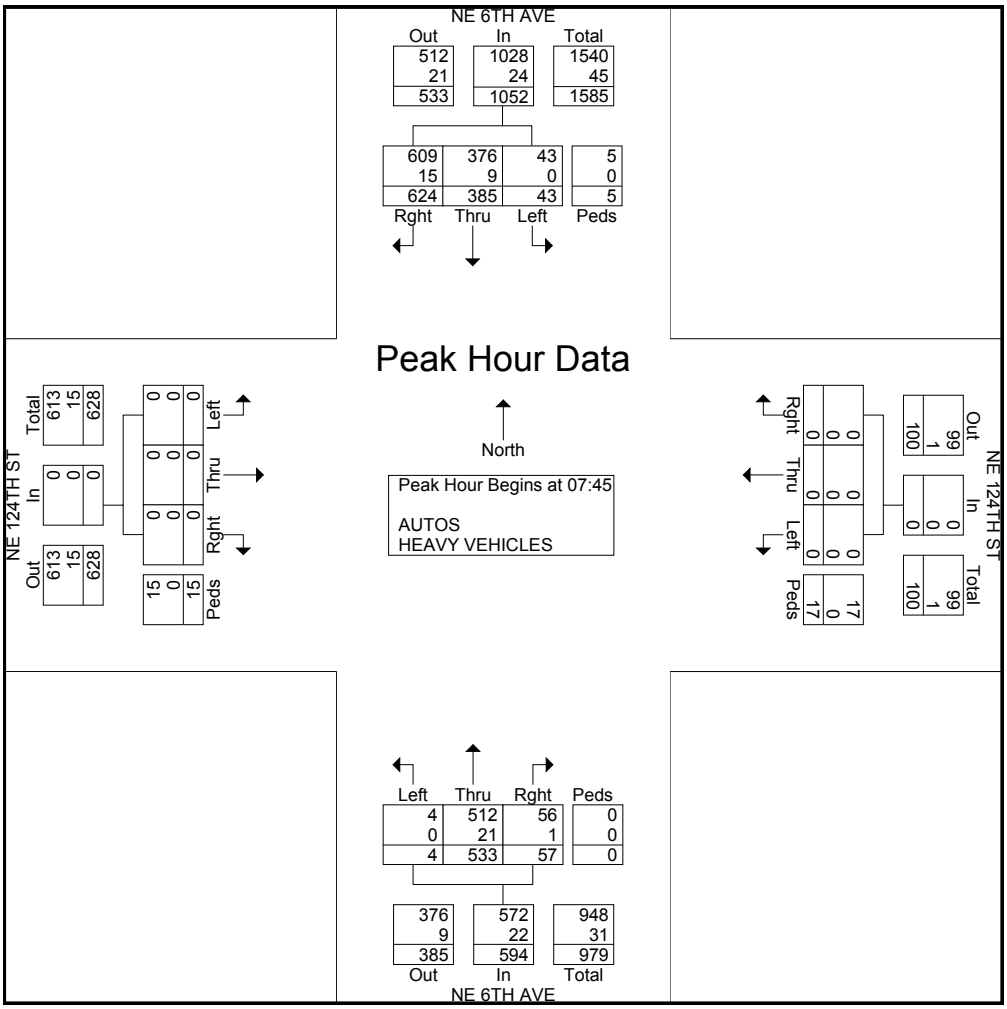
	NE 6TH AVE From North				NE 124TH ST From East				NE 6TH AVE From South				NE 124TH ST From West				
Start Time	Rght	Thru	Left	Peds	Rght	Thru	Left	Peds	Rght	Thru	Left	Peds	Rght	Thru	Left	Peds	Int. Total
07:00	86	72	5	0	0	0	0	0	6	90	0	0	0	0	0	3	262
07:15	143	80	6	1	0	0	0	0	8	97	1	0	0	0	0	5	341
07:30	155	96	5	2	0	0	0	12	8	79	0	0	0	0	0	8	365
07:45	169	87	14	2	0	0	0	1	11	130	1	0	0	0	0	7	422
Total	553	335	30	5	0	0	0	13	33	396	2	0	0	0	0	23	1390
08:00	147	96	8	3	0	0	0	6	13	123	0	0	0	0	0	2	398
08:15	153	98	8	0	0	0	0	2	9	131	1	0	0	0	0	4	406
08:30	155	104	13	0	0	0	0	8	24	149	2	0	0	0	0	2	457
08:45	136	97	11	4	0	0	0	3	14	126	1	0	0	0	0	9	401
Total	591	395	40	7	0	0	0	19	60	529	4	0	0	0	0	17	1662
*** BREAK ***																	
16:00	90	94	5	0	0	0	0	7	5	177	2	0	0	0	0	8	388
16:15	98	88	9	2	0	0	0	8	16	173	0	1	0	0	0	18	413
16:30	99	69	7	0	2	0	0	12	4	173	1	0	0	0	0	14	381
16:45	114	81	5	2	0	0	0	6	15	174	0	0	0	0	0	16	413
Total	401	332	26	4	2	0	0	33	40	697	3	1	0	0	0	56	1595
17:00	109	71	11	0	0	0	0	7	16	159	0	0	0	0	0	11	384
17:15	114	78	5	2	0	0	0	5	9	175	3	2	0	0	0	9	402
17:30	112	100	7	3	0	0	0	6	15	179	1	0	0	0	0	5	428
17:45	116	99	8	3	0	0	0	3	12	162	5	0	0	0	0	13	421
Total	451	348	31	8	0	0	0	21	52	675	9	2	0	0	0	38	1635
Grand Total	1996	1410	127	24	2	0	0	86	185	2297	18	3	0	0	0	134	6282
Apprch %	56.1	39.6	3.6	0.7	2.3	0	0	97.7	7.4	91.8	0.7	0.1	0	0	0	100	
Total %	31.8	22.4	2	0.4	0	0	0	1.4	2.9	36.6	0.3	0	0	0	0	2.1	
AUTOS	1939	1381	126	24	2	0	0	86	182	2228	18	3	0	0	0	134	6123
% AUTOS	97.1	97.9	99.2	100	100	0	0	100	98.4	97	100	100	0	0	0	100	97.5
HEAVY VEHICLES	57	29	1	0	0	0	0	0	3	69	0	0	0	0	0	0	159
% HEAVY VEHICLES	2.9	2.1	0.8	0	0	0	0	0	1.6	3	0	0	0	0	0	0	2.5

Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 124TH@NE6
Site Code : 00000000
Start Date : 3/24/2010
Page No : 2

	NE 6TH AVE From North					NE 124TH ST From East					NE 6TH AVE From South					NE 124TH ST From West					
Start Time	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45																					
07:45	169	87	14	2	272	0	0	0	1	1	11	130	1	0	142	0	0	0	7	7	422
08:00	147	96	8	3	254	0	0	0	6	6	13	123	0	0	136	0	0	0	2	2	398
08:15	153	98	8	0	259	0	0	0	2	2	9	131	1	0	141	0	0	0	4	4	406
08:30	155	104	13	0	272	0	0	0	8	8	24	149	2	0	175	0	0	0	2	2	457
Total Volume	624	385	43	5	1057	0	0	0	17	17	57	533	4	0	594	0	0	0	15	15	1683
% App. Total	59	36.4	4.1	0.5		0	0	0	100		9.6	89.7	0.7	0		0	0	0	100		
PHF	.923	.925	.768	.417	.972	.000	.000	.000	.531	.531	.594	.894	.500	.000	.849	.000	.000	.000	.536	.536	.921
AUTOS	609	376	43	5	1033	0	0	0	17	17	56	512	4	0	572	0	0	0	15	15	1637
% AUTOS	97.6	97.7	100	100	97.7	0	0	0	100	100	98.2	96.1	100	0	96.3	0	0	0	100	100	97.3
HEAVY VEHICLES	15	9	0	0	24	0	0	0	0	0	1	21	0	0	22	0	0	0	0	0	46
% HEAVY VEHICLES	2.4	2.3	0	0	2.3	0	0	0	0	0	1.8	3.9	0	0	3.7	0	0	0	0	0	2.7

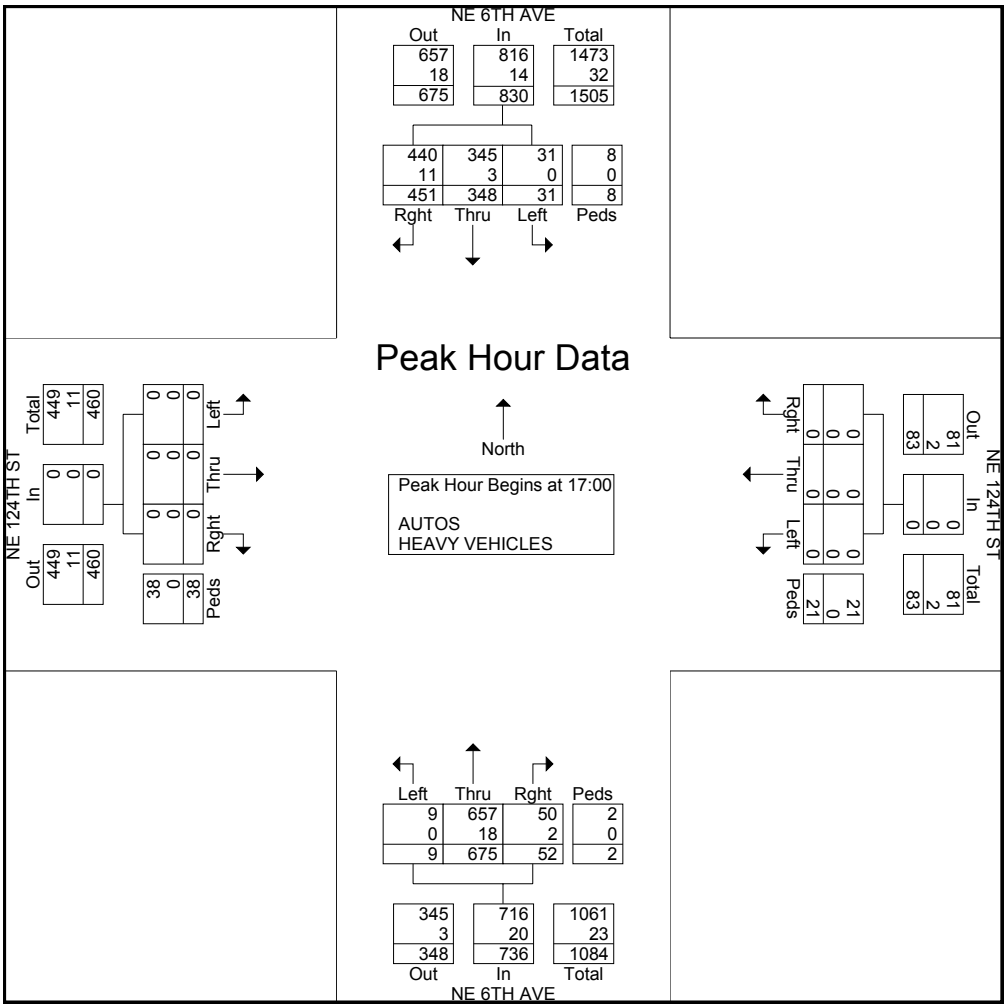


Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 124TH@NE6
Site Code : 00000000
Start Date : 3/24/2010
Page No : 3

	NE 6TH AVE From North					NE 124TH ST From East					NE 6TH AVE From South					NE 124TH ST From West					
Start Time	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 17:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	109	71	11	0	191	0	0	0	7	7	16	159	0	0	175	0	0	0	11	11	384
17:15	114	78	5	2	199	0	0	0	5	5	9	175	3	2	189	0	0	0	9	9	402
17:30	112	100	7	3	222	0	0	0	6	6	15	179	1	0	195	0	0	0	5	5	428
17:45	116	99	8	3	226	0	0	0	3	3	12	162	5	0	179	0	0	0	13	13	421
Total Volume	451	348	31	8	838	0	0	0	21	21	52	675	9	2	738	0	0	0	38	38	1635
% App. Total	53.8	41.5	3.7	1		0	0	0	100		7	91.5	1.2	0.3		0	0	0	100		
PHF	.972	.870	.705	.667	.927	.000	.000	.000	.750	.750	.813	.943	.450	.250	.946	.000	.000	.000	.731	.731	.955
AUTOS	440	345	31	8	824	0	0	0	21	21	50	657	9	2	718	0	0	0	38	38	1601
% AUTOS	97.6	99.1	100	100	98.3	0	0	0	100	100	96.2	97.3	100	100	97.3	0	0	0	100	100	97.9
HEAVY VEHICLES	11	3	0	0	14	0	0	0	0	0	2	18	0	0	20	0	0	0	0	0	34
% HEAVY VEHICLES	2.4	0.9	0	0	1.7	0	0	0	0	0	3.8	2.7	0	0	2.7	0	0	0	0	0	2.1



Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 125TH@NE7
Site Code : 00000000
Start Date : 3/24/2010
Page No : 1

Groups Printed- AUTOS - HEAVY VEHICLES

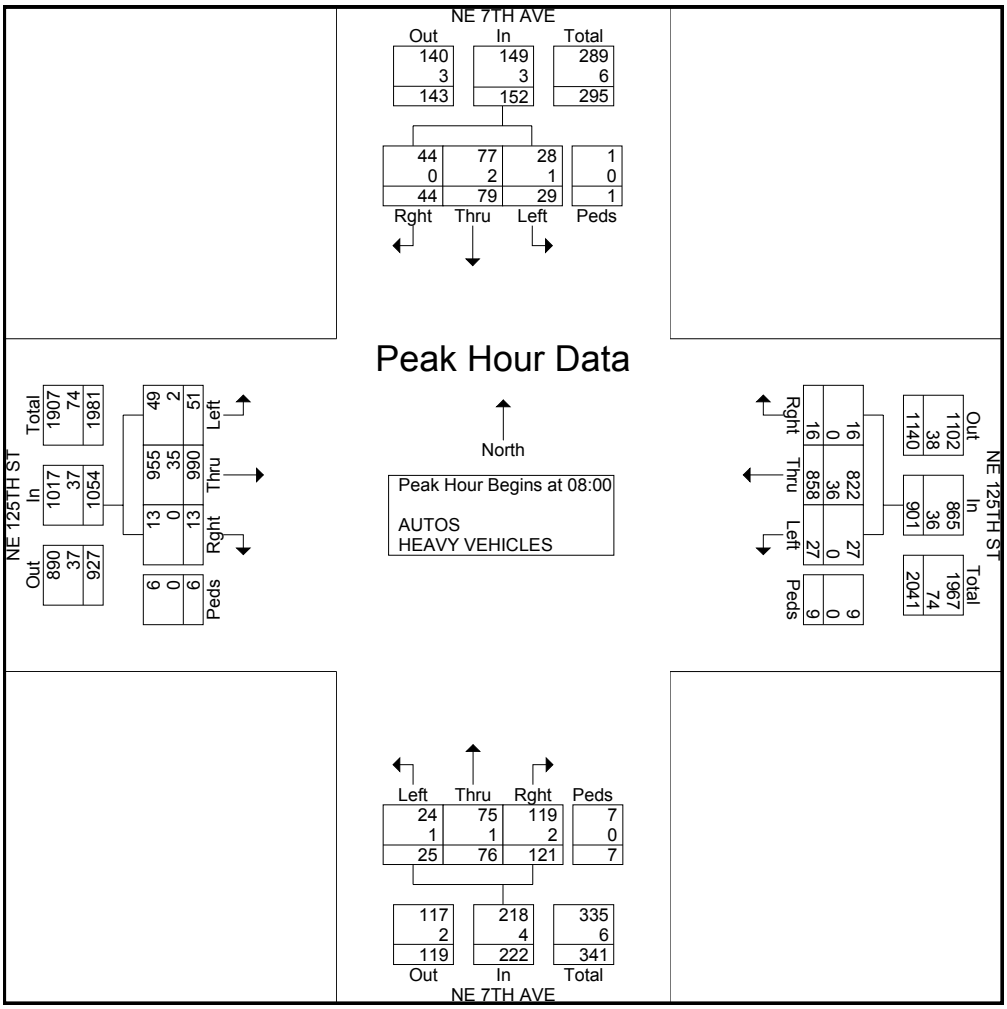
	NE 7TH AVE From North				NE 125TH ST From East				NE 7TH AVE From South				NE 125TH ST From West				
Start Time	Rght	Thru	Left	Peds	Rght	Thru	Left	Peds	Rght	Thru	Left	Peds	Rght	Thru	Left	Peds	Int. Total
07:00	4	4	1	2	1	139	2	2	7	3	3	0	1	160	9	0	338
07:15	15	6	4	0	4	194	4	0	5	5	0	0	0	142	5	2	386
07:30	13	17	9	0	3	214	0	2	7	4	3	0	4	181	6	0	463
07:45	7	39	5	0	2	217	2	0	3	8	4	0	3	205	10	4	509
Total	39	66	19	2	10	764	8	4	22	20	10	0	8	688	30	6	1696
08:00	10	21	6	0	0	198	6	2	17	11	6	2	5	225	13	1	523
08:15	16	19	7	1	4	225	7	2	23	11	5	2	2	248	12	1	585
08:30	10	18	5	0	4	220	9	5	43	34	9	0	2	216	16	4	595
08:45	8	21	11	0	8	215	5	0	38	20	5	3	4	301	10	0	649
Total	44	79	29	1	16	858	27	9	121	76	25	7	13	990	51	6	2352
*** BREAK ***																	
16:00	15	4	7	0	4	245	12	0	19	12	6	14	4	183	11	8	544
16:15	6	23	0	8	6	273	6	0	22	30	10	5	9	226	8	3	635
16:30	9	13	7	4	5	273	16	0	21	25	5	11	6	219	18	0	632
16:45	12	20	6	6	9	256	8	0	16	21	8	5	5	240	15	3	630
Total	42	60	20	18	24	1047	42	0	78	88	29	35	24	868	52	14	2441
17:00	15	27	4	0	5	266	9	0	17	28	9	5	6	217	12	1	621
17:15	11	18	6	5	8	266	14	0	19	46	9	16	5	215	19	0	657
17:30	16	23	8	8	11	269	5	9	19	29	13	10	8	231	19	3	681
17:45	8	14	5	0	15	261	6	0	21	36	4	17	5	238	24	0	654
Total	50	82	23	13	39	1062	34	9	76	139	35	48	24	901	74	4	2613
Grand Total	175	287	91	34	89	3731	111	22	297	323	99	90	69	3447	207	30	9102
Apprch %	29.8	48.9	15.5	5.8	2.3	94.4	2.8	0.6	36.7	39.9	12.2	11.1	1.8	91.8	5.5	0.8	
Total %	1.9	3.2	1	0.4	1	41	1.2	0.2	3.3	3.5	1.1	1	0.8	37.9	2.3	0.3	
AUTOS	173	283	89	34	88	3628	109	22	292	316	97	90	68	3347	202	30	8868
% AUTOS	98.9	98.6	97.8	100	98.9	97.2	98.2	100	98.3	97.8	98	100	98.6	97.1	97.6	100	97.4
HEAVY VEHICLES	2	4	2	0	1	103	2	0	5	7	2	0	1	100	5	0	234
% HEAVY VEHICLES	1.1	1.4	2.2	0	1.1	2.8	1.8	0	1.7	2.2	2	0	1.4	2.9	2.4	0	2.6

Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 125TH@NE7
Site Code : 00000000
Start Date : 3/24/2010
Page No : 2

	NE 7TH AVE From North					NE 125TH ST From East					NE 7TH AVE From South					NE 125TH ST From West					
Start Time	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00																					
08:00	10	21	6	0	37	0	198	6	2	206	17	11	6	2	36	5	225	13	1	244	523
08:15	16	19	7	1	43	4	225	7	2	238	23	11	5	2	41	2	248	12	1	263	585
08:30	10	18	5	0	33	4	220	9	5	238	43	34	9	0	86	2	216	16	4	238	595
08:45	8	21	11	0	40	8	215	5	0	228	38	20	5	3	66	4	301	10	0	315	649
Total Volume	44	79	29	1	153	16	858	27	9	910	121	76	25	7	229	13	990	51	6	1060	2352
% App. Total	28.8	51.6	19	0.7		1.8	94.3	3	1		52.8	33.2	10.9	3.1		1.2	93.4	4.8	0.6		
PHF	.688	.940	.659	.250	.890	.500	.953	.750	.450	.956	.703	.559	.694	.583	.666	.650	.822	.797	.375	.841	.906
AUTOS	44	77	28	1	150	16	822	27	9	874	119	75	24	7	225	13	955	49	6	1023	2272
% AUTOS	100	97.5	96.6	100	98.0	100	95.8	100	100	96.0	98.3	98.7	96.0	100	98.3	100	96.5	96.1	100	96.5	96.6
HEAVY VEHICLES	0	2	1	0	3	0	36	0	0	36	2	1	1	0	4	0	35	2	0	37	80
% HEAVY VEHICLES	0	2.5	3.4	0	2.0	0	4.2	0	0	4.0	1.7	1.3	4.0	0	1.7	0	3.5	3.9	0	3.5	3.4

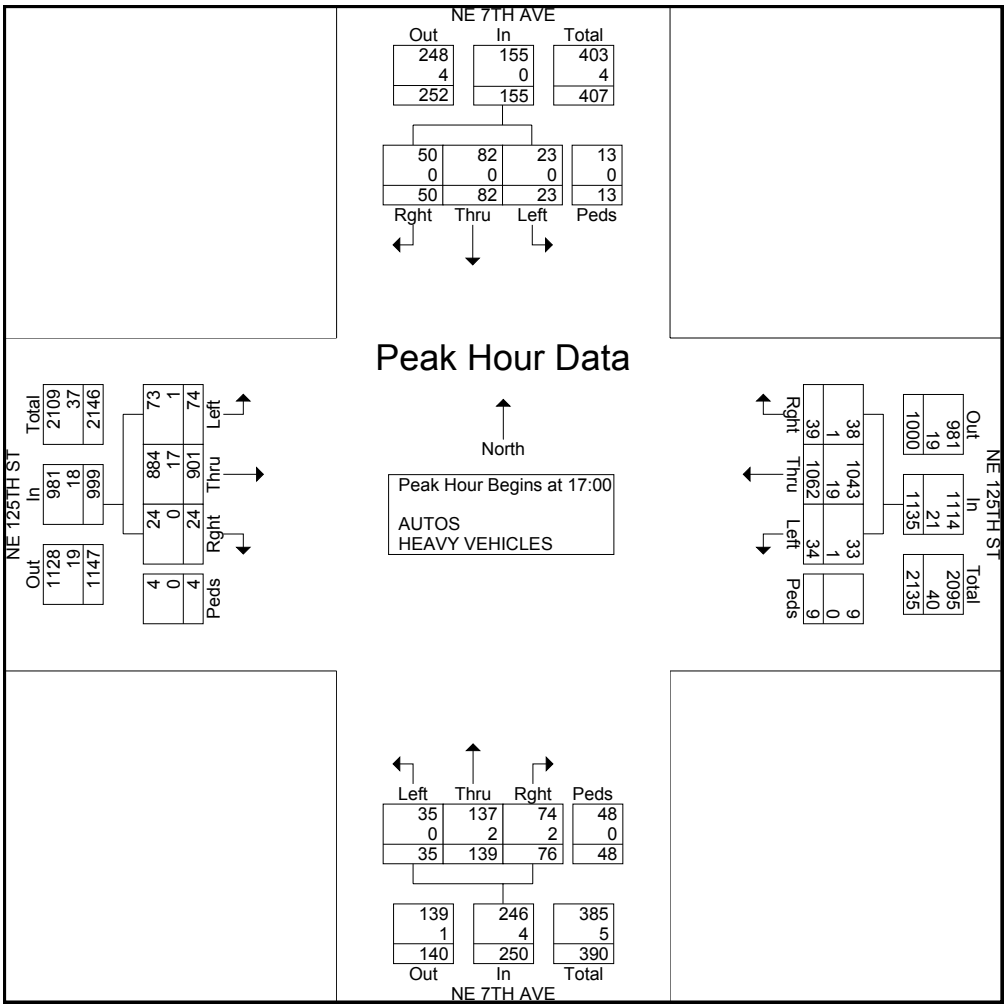


Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 125TH@NE7
Site Code : 00000000
Start Date : 3/24/2010
Page No : 3

	NE 7TH AVE From North					NE 125TH ST From East					NE 7TH AVE From South					NE 125TH ST From West					
Start Time	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	15	27	4	0	46	5	266	9	0	280	17	28	9	5	59	6	217	12	1	236	621
17:15	11	18	6	5	40	8	266	14	0	288	19	46	9	16	90	5	215	19	0	239	657
17:30	16	23	8	8	55	11	269	5	9	294	19	29	13	10	71	8	231	19	3	261	681
17:45	8	14	5	0	27	15	261	6	0	282	21	36	4	17	78	5	238	24	0	267	654
Total Volume	50	82	23	13	168	39	1062	34	9	1144	76	139	35	48	298	24	901	74	4	1003	2613
% App. Total	29.8	48.8	13.7	7.7		3.4	92.8	3	0.8		25.5	46.6	11.7	16.1		2.4	89.8	7.4	0.4		
PHF	.781	.759	.719	.406	.764	.650	.987	.607	.250	.973	.905	.755	.673	.706	.828	.750	.946	.771	.333	.939	.959
AUTOS	50	82	23	13	168	38	1043	33	9	1123	74	137	35	48	294	24	884	73	4	985	2570
% AUTOS	100	100	100	100	100	97.4	98.2	97.1	100	98.2	97.4	98.6	100	100	98.7	100	98.1	98.6	100	98.2	98.4
HEAVY VEHICLES	0	0	0	0	0	1	19	1	0	21	2	2	0	0	4	0	17	1	0	18	43
% HEAVY VEHICLES	0	0	0	0	0	2.6	1.8	2.9	0	1.8	2.6	1.4	0	0	1.3	0	1.9	1.4	0	1.8	1.6



Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 125@NE8TH
Site Code : 00000000
Start Date : 3/24/2010
Page No : 1

Groups Printed- AUTOS - HEAVY VEHICLES

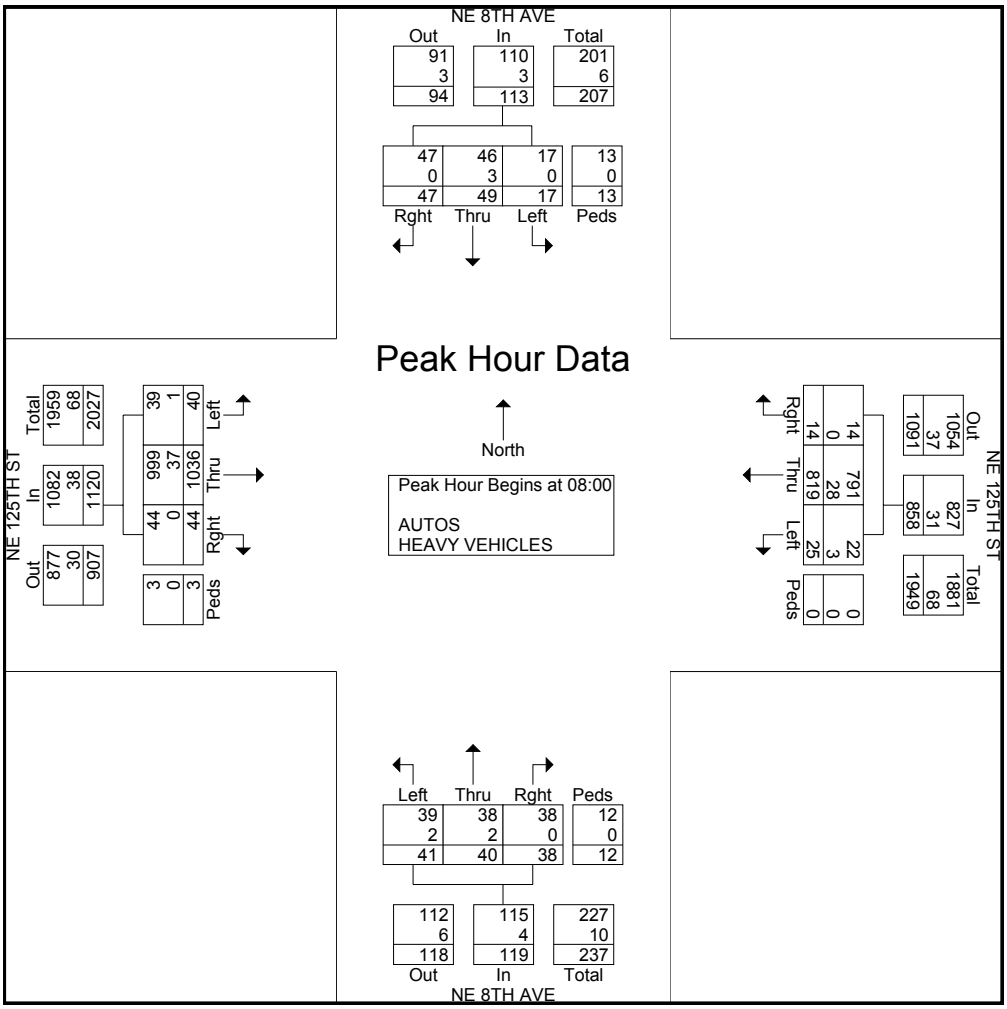
	NE 8TH AVE From North				NE 125TH ST From East				NE 8TH AVE From South				NE 125TH ST From West				
Start Time	Rght	Thru	Left	Peds	Rght	Thru	Left	Peds	Rght	Thru	Left	Peds	Rght	Thru	Left	Peds	Int. Total
07:00	8	5	2	4	7	163	0	1	7	10	3	0	8	154	1	0	373
07:15	13	15	7	4	7	171	6	0	6	20	4	6	7	186	7	0	459
07:30	9	16	3	2	1	203	5	0	7	5	4	2	8	172	4	4	445
07:45	11	17	1	5	1	221	10	0	4	2	8	3	8	226	6	1	524
Total	41	53	13	15	16	758	21	1	24	37	19	11	31	738	18	5	1801
08:00	9	9	1	3	1	190	7	0	16	14	11	3	15	235	7	0	521
08:15	18	11	6	1	5	214	5	0	8	8	7	4	12	258	11	0	568
08:30	10	16	4	6	3	214	6	0	3	9	15	1	9	263	12	3	574
08:45	10	13	6	3	5	201	7	0	11	9	8	4	8	280	10	0	575
Total	47	49	17	13	14	819	25	0	38	40	41	12	44	1036	40	3	2238
*** BREAK ***																	
16:00	8	10	6	6	19	272	13	0	15	28	10	8	9	239	13	10	666
16:15	11	18	13	7	8	239	15	0	16	15	12	3	14	222	5	4	602
16:30	11	15	8	8	14	200	23	6	19	16	11	4	14	235	14	2	600
16:45	13	10	5	2	10	245	18	2	32	19	11	10	7	216	9	9	618
Total	43	53	32	23	51	956	69	8	82	78	44	25	44	912	41	25	2486
17:00	9	14	8	12	13	278	13	4	18	24	12	3	5	237	13	4	667
17:15	8	15	5	4	15	265	13	0	21	15	8	5	10	243	10	5	642
17:30	10	27	6	13	14	280	14	4	23	19	9	7	13	223	19	2	683
17:45	11	29	7	10	11	261	12	1	25	16	10	8	11	219	19	3	653
Total	38	85	26	39	53	1084	52	9	87	74	39	23	39	922	61	14	2645
Grand Total	169	240	88	90	134	3617	167	18	231	229	143	71	158	3608	160	47	9170
Apprch %	28.8	40.9	15	15.3	3.4	91.9	4.2	0.5	34.3	34	21.2	10.5	4	90.8	4	1.2	
Total %	1.8	2.6	1	1	1.5	39.4	1.8	0.2	2.5	2.5	1.6	0.8	1.7	39.3	1.7	0.5	
AUTOS	167	232	87	90	132	3506	160	18	227	224	141	71	158	3510	157	47	8927
% AUTOS	98.8	96.7	98.9	100	98.5	96.9	95.8	100	98.3	97.8	98.6	100	100	97.3	98.1	100	97.4
HEAVY VEHICLES	2	8	1	0	2	111	7	0	4	5	2	0	0	98	3	0	243
% HEAVY VEHICLES	1.2	3.3	1.1	0	1.5	3.1	4.2	0	1.7	2.2	1.4	0	0	2.7	1.9	0	2.6

Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 125@NE8TH
Site Code : 00000000
Start Date : 3/24/2010
Page No : 2

	NE 8TH AVE From North					NE 125TH ST From East					NE 8TH AVE From South					NE 125TH ST From West					
Start Time	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00																					
08:00	9	9	1	3	22	1	190	7	0	198	16	14	11	3	44	15	235	7	0	257	521
08:15	18	11	6	1	36	5	214	5	0	224	8	8	7	4	27	12	258	11	0	281	568
08:30	10	16	4	6	36	3	214	6	0	223	3	9	15	1	28	9	263	12	3	287	574
08:45	10	13	6	3	32	5	201	7	0	213	11	9	8	4	32	8	280	10	0	298	575
Total Volume	47	49	17	13	126	14	819	25	0	858	38	40	41	12	131	44	1036	40	3	1123	2238
% App. Total	37.3	38.9	13.5	10.3		1.6	95.5	2.9	0		29	30.5	31.3	9.2		3.9	92.3	3.6	0.3		
PHF	.653	.766	.708	.542	.875	.700	.957	.893	.000	.958	.594	.714	.683	.750	.744	.733	.925	.833	.250	.942	.973
AUTOS	47	46	17	13	123	14	791	22	0	827	38	38	39	12	127	44	999	39	3	1085	2162
% AUTOS	100	93.9	100	100	97.6	100	96.6	88.0	0	96.4	100	95.0	95.1	100	96.9	100	96.4	97.5	100	96.6	96.6
HEAVY VEHICLES	0	3	0	0	3	0	28	3	0	31	0	2	2	0	4	0	37	1	0	38	76
% HEAVY VEHICLES	0	6.1	0	0	2.4	0	3.4	12.0	0	3.6	0	5.0	4.9	0	3.1	0	3.6	2.5	0	3.4	3.4

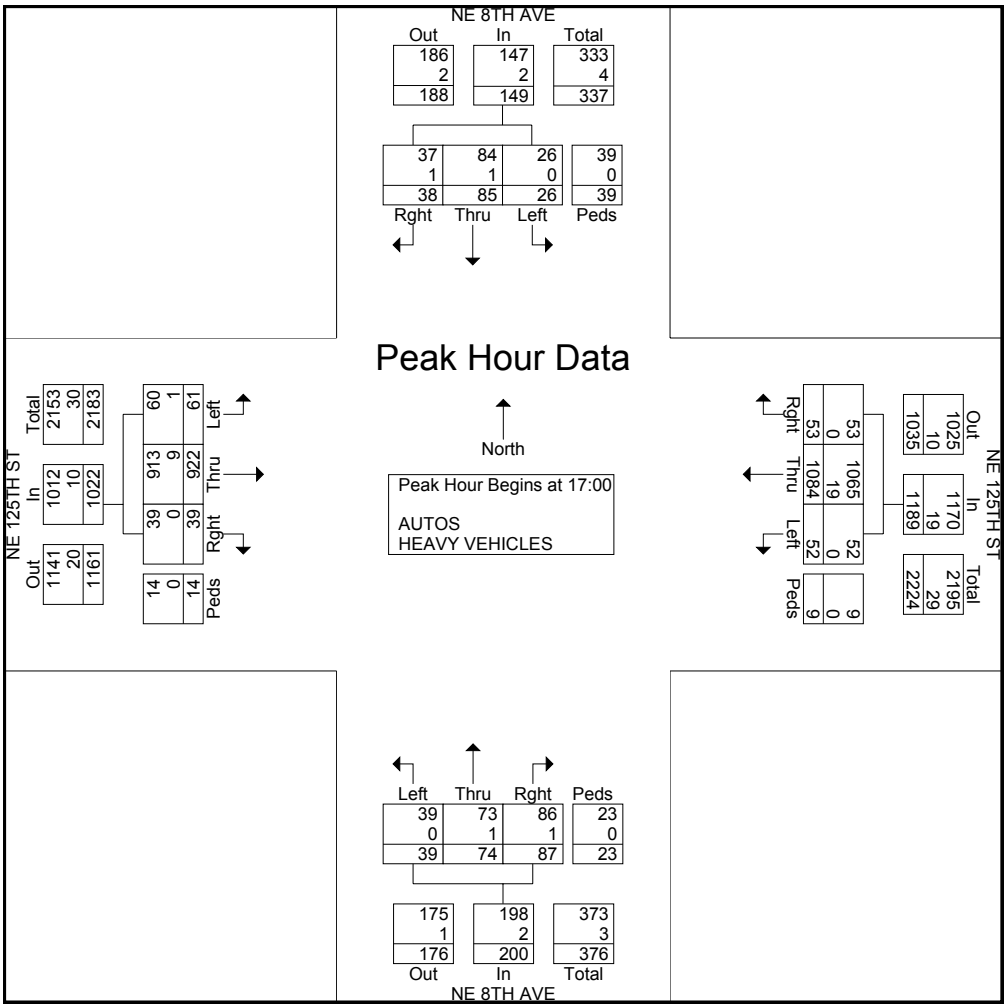


Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 125@NE8TH
Site Code : 00000000
Start Date : 3/24/2010
Page No : 3

	NE 8TH AVE From North					NE 125TH ST From East					NE 8TH AVE From South					NE 125TH ST From West					
Start Time	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	9	14	8	12	43	13	278	13	4	308	18	24	12	3	57	5	237	13	4	259	667
17:15	8	15	5	4	32	15	265	13	0	293	21	15	8	5	49	10	243	10	5	268	642
17:30	10	27	6	13	56	14	280	14	4	312	23	19	9	7	58	13	223	19	2	257	683
17:45	11	29	7	10	57	11	261	12	1	285	25	16	10	8	59	11	219	19	3	252	653
Total Volume	38	85	26	39	188	53	1084	52	9	1198	87	74	39	23	223	39	922	61	14	1036	2645
% App. Total	20.2	45.2	13.8	20.7		4.4	90.5	4.3	0.8		39	33.2	17.5	10.3		3.8	89	5.9	1.4		
PHF	.864	.733	.813	.750	.825	.883	.968	.929	.563	.960	.870	.771	.813	.719	.945	.750	.949	.803	.700	.966	.968
AUTOS	37	84	26	39	186	53	1065	52	9	1179	86	73	39	23	221	39	913	60	14	1026	2612
% AUTOS	97.4	98.8	100	100	98.9	100	98.2	100	100	98.4	98.9	98.6	100	100	99.1	100	99.0	98.4	100	99.0	98.8
HEAVY VEHICLES	1	1	0	0	2	0	19	0	0	19	1	1	0	0	2	0	9	1	0	10	33
% HEAVY VEHICLES	2.6	1.2	0	0	1.1	0	1.8	0	0	1.6	1.1	1.4	0	0	0.9	0	1.0	1.6	0	1.0	1.2



Crosroads Engineering Data, Inc.

13284 SW 120th Street
Miami, Florida, 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 128@DIXIE
Site Code : 00000000
Start Date : 3/24/2010
Page No : 1

Groups Printed- AUTOS/HVY VEHICLES

	NE 7TH AVE From North						DIXIE HWY From Northeast						NE 128TH ST From East						NE 7TH AVENUE From South						DIXIE HWY From Southwest						NE 128TH ST From West						
Start Time	Hard Left	Left	Thru	Bear Right	Right	Peds	Hard Left	Bear Left	Thru	Bear Right	Hard Right	Peds	Left	Bear Left	Thru	Right	Hard Right	Peds	Hard Left	Left	Thru	Bear Right	Right	Peds	Hard Left	Bear Left	Thru	Bear Right	Hard Right	Peds	Left	Bear Left	Thru	Right	Hard Right	Peds	Int. Total
07:00 AM	0	0	5	9	2	0	6	0	126	5	0	2	0	0	0	0	3	0	0	0	0	0	0	0	3	11	78	1	0	1	0	0	0	0	0	0	252
07:15 AM	2	0	16	10	1	0	29	0	181	10	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	13	118	3	0	0	0	0	0	0	0	0	386
07:30 AM	2	0	14	6	0	0	34	0	155	10	0	1	0	0	0	0	1	0	0	0	0	0	0	0	6	3	104	2	0	0	0	0	0	0	0	0	338
07:45 AM	2	0	6	6	7	3	56	0	145	4	0	2	0	0	0	0	5	5	0	0	0	0	0	0	4	8	132	2	0	0	0	0	0	0	0	0	387
Total	6	0	41	31	10	3	125	0	607	29	0	6	0	0	0	0	10	5	0	0	0	0	0	0	14	35	432	8	0	1	0	0	0	0	0	0	1363
08:00 AM	2	0	16	4	5	0	23	0	163	10	0	1	0	0	0	0	4	1	0	0	0	0	0	0	3	10	109	0	0	0	0	0	0	0	0	0	351
08:15 AM	3	0	17	7	7	0	40	0	155	10	0	2	0	0	0	0	3	3	0	0	0	0	0	0	10	10	114	0	0	2	0	0	0	0	0	0	383
08:30 AM	3	0	16	5	8	0	26	0	143	11	0	1	0	0	0	0	7	1	0	0	0	0	0	0	13	9	137	5	0	2	0	0	0	0	0	0	387
08:45 AM	6	0	16	5	5	0	39	0	138	8	0	1	0	0	0	0	6	1	0	0	0	0	0	0	3	6	104	3	0	0	0	0	0	0	0	0	341
Total	14	0	65	21	25	0	128	0	599	39	0	5	0	0	0	0	20	6	0	0	0	0	0	0	29	35	464	8	0	4	0	0	0	0	0	0	1462
*** BREAK ***																																					
04:00 PM	3	0	15	8	0	6	18	0	137	14	0	8	0	0	0	0	6	3	0	0	0	0	0	0	7	8	140	8	0	3	0	0	0	0	0	0	384
04:15 PM	3	0	7	8	0	4	26	0	117	11	0	10	0	0	0	0	12	7	0	0	0	0	0	0	8	12	138	6	0	1	0	0	0	0	0	0	370
04:30 PM	6	0	16	8	0	5	20	0	113	12	0	3	0	0	0	0	15	9	0	0	0	0	0	0	7	6	123	2	0	3	0	0	0	0	0	0	348
04:45 PM	0	0	17	12	0	1	32	0	148	11	0	5	0	0	0	0	13	0	0	0	0	0	0	0	8	8	133	4	0	5	0	0	0	0	0	0	397
Total	12	0	55	36	0	16	96	0	515	48	0	26	0	0	0	0	46	19	0	0	0	0	0	0	30	34	534	20	0	12	0	0	0	0	0	0	1499
05:00 PM	4	0	12	14	0	0	21	0	139	11	0	5	0	2	0	0	15	0	0	0	0	0	0	0	8	12	144	3	0	2	0	0	0	0	0	0	392
05:15 PM	5	0	11	14	0	0	28	0	126	15	0	2	0	1	0	0	13	0	0	0	0	0	0	0	15	17	142	2	0	0	0	0	0	0	0	0	391
05:30 PM	6	0	13	6	0	4	32	0	164	9	0	4	0	0	0	0	7	0	0	0	0	0	0	0	9	13	121	2	0	1	0	0	0	0	0	0	391
05:45 PM	2	0	16	8	0	4	23	0	121	7	0	0	0	2	0	0	14	0	0	0	0	0	0	0	10	12	146	4	0	0	0	0	0	0	0	0	369
Total	17	0	52	42	0	8	104	0	550	42	0	11	0	5	0	0	49	0	0	0	0	0	0	0	42	54	553	11	0	3	0	0	0	0	0	0	1543
Grand Total	49	0	213	130	35	27	453	0	2271	158	0	48	0	5	0	0	125	30	0	0	0	0	0	0	115	158	1983	47	0	20	0	0	0	0	0	0	5867
Apprch %	10.8	0	46.9	28.6	7.7	5.9	15.5	0	77.5	5.4	0	1.6	0	3.1	0	0	78.1	18.8	0	0	0	0	0	0	5	6.8	85.4	2	0	0.9	0	0	0	0	0	0	
Total %	0.8	0	3.6	2.2	0.6	0.5	7.7	0	38.7	2.7	0	0.8	0	0.1	0	0	2.1	0.5	0	0	0	0	0	0	2	2.7	33.8	0.8	0	0.3	0	0	0	0	0	0	

Crosroads Engineering Data, Inc.

13284 SW 120th Street
Miami, Florida, 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 128@DIXIE
Site Code : 00000000
Start Date : 3/24/2010
Page No : 2

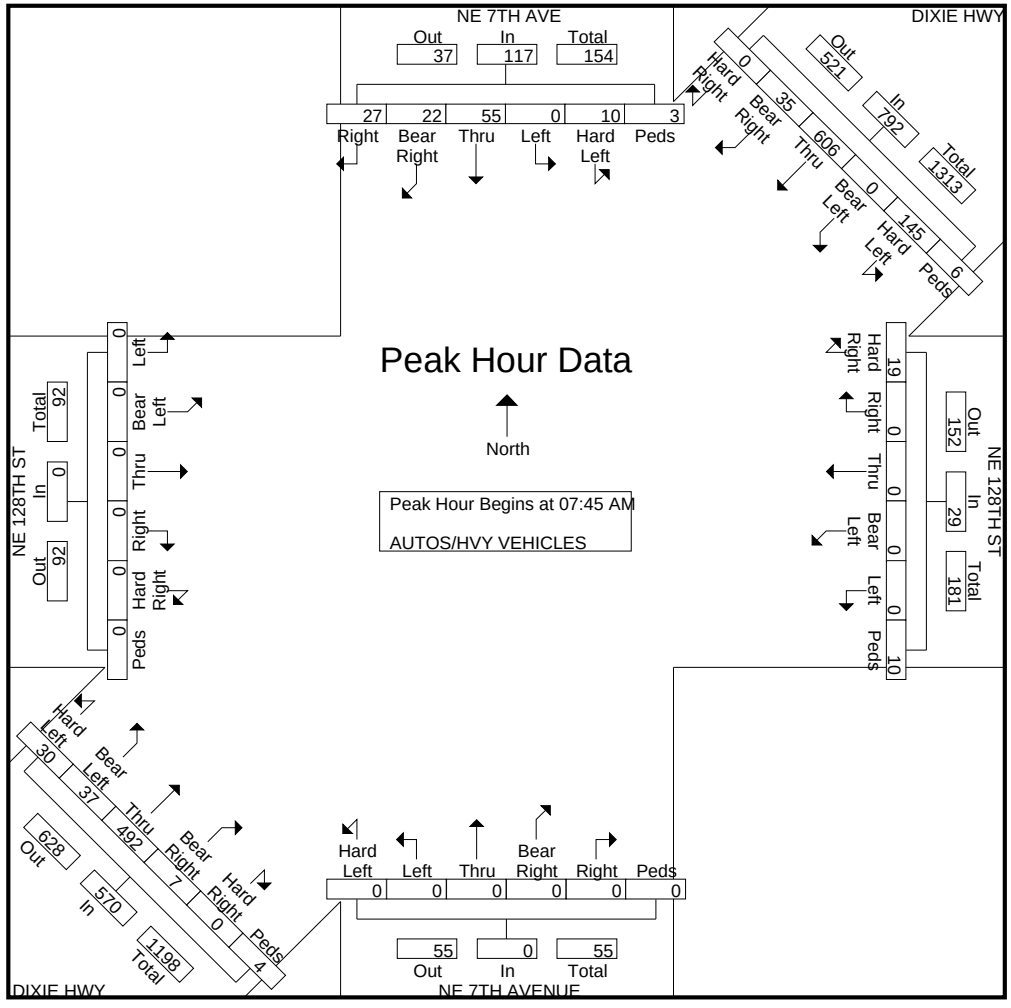
	NE 7TH AVE From North							DIXIE HWY From Northeast							NE 128TH ST From East							NE 7TH AVENUE From South							DIXIE HWY From Southwest							NE 128TH ST From West							
Start Time	Hard Left	Left	Thru	Bear Right	Right	Peds	App. Total	Hard Left	Bear Left	Thru	Bear Right	Hard Right	Peds	App. Total	Left	Bear Left	Thru	Right	Hard Right	Peds	App. Total	Hard Left	Left	Thru	Bear Right	Right	Peds	App. Total	Hard Left	Bear Left	Thru	Bear Right	Hard Right	Peds	App. Total	Left	Bear Left	Thru	Right	Hard Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																																												
Peak Hour for Entire Intersection Begins at 07:45 AM																																												
07:45 AM	2	0	6	6	7	3	24	56	0	145	4	0	2	207	0	0	0	0	5	5	10	0	0	0	0	0	0	0	4	8	132	2	0	0	146	0	0	0	0	0	0	0	387
08:00 AM	2	0	16	4	5	0	27	23	0	163	10	0	1	197	0	0	0	0	4	1	5	0	0	0	0	0	0	0	3	10	109	0	0	0	122	0	0	0	0	0	0	0	351
08:15 AM	3	0	17	7	7	0	34	40	0	155	10	0	2	207	0	0	0	0	3	3	6	0	0	0	0	0	0	0	10	10	114	0	0	2	136	0	0	0	0	0	0	0	383
08:30 AM	3	0	16	5	8	0	32	26	0	143	11	0	1	181	0	0	0	0	7	1	8	0	0	0	0	0	0	0	13	9	137	5	0	2	166	0	0	0	0	0	0	0	387
Total Volume	10	0	55	22	27	3	117	145	0	606	35	0	6	792	0	0	0	0	19	10	29	0	0	0	0	0	0	0	30	37	492	7	0	4	570	0	0	0	0	0	0	0	1508
% App. Total	8.5	0	47	18.8	23.1	2.6		18.3	0	76.5	4.4	0	0.8		0	0	0	0	65.5	34.5		0	0	0	0	0	0		5.3	6.5	86.3	1.2	0	0.7		0	0	0	0	0	0		
PHF	.833	.000	.809	.786	.844	.250	.860	.647	.000	.929	.795	.000	.750	.957	.000	.000	.000	.000	.679	.500	.725	.000	.000	.000	.000	.000	.000	.000	.577	.925	.898	.350	.000	.500	.858	.000	.000	.000	.000	.000	.000	.000	.974

Crosroads Engineering Data, Inc.

13284 SW 120th Street
Miami, Florida, 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 128@DIXIE
Site Code : 00000000
Start Date : 3/24/2010
Page No : 3



Crosroads Engineering Data, Inc.

13284 SW 120th Street
Miami, Florida, 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 128@DIXIE
Site Code : 00000000
Start Date : 3/24/2010
Page No : 4

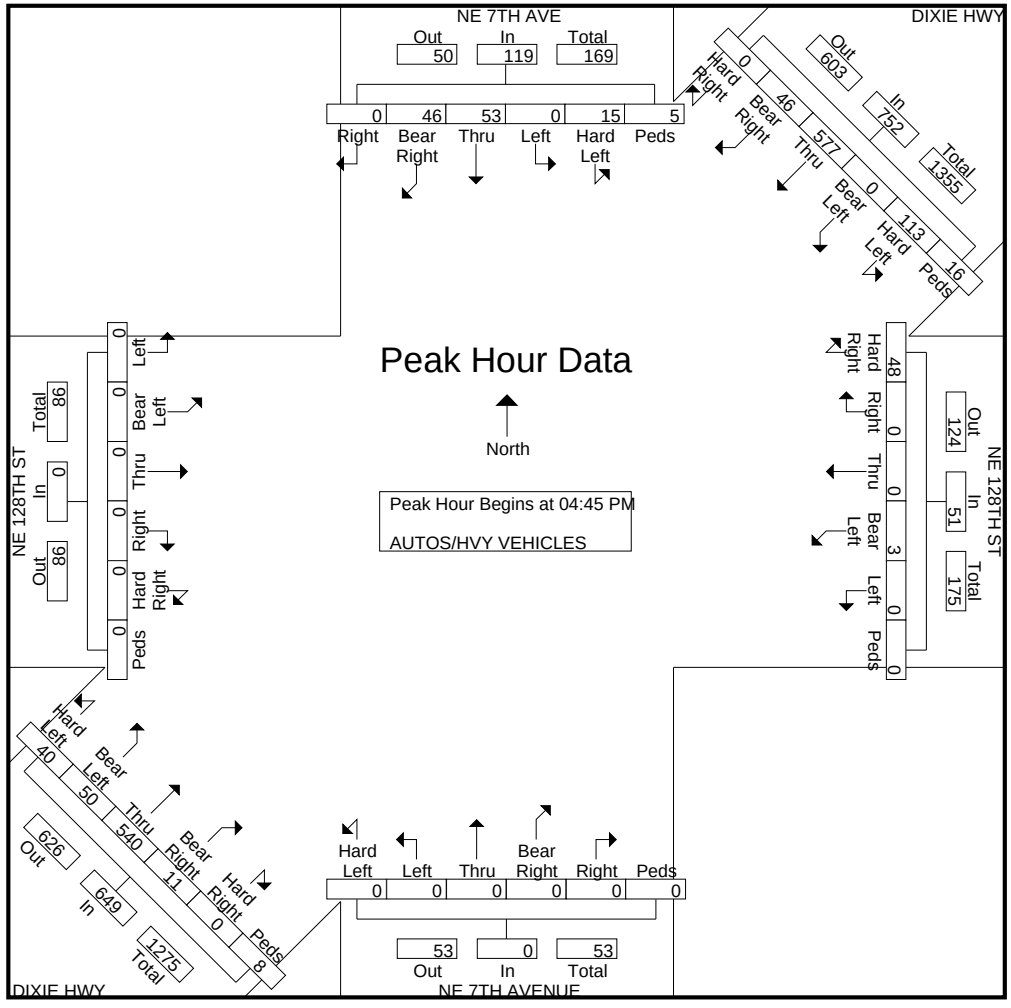
	NE 7TH AVE From North							DIXIE HWY From Northeast							NE 128TH ST From East							NE 7TH AVENUE From South							DIXIE HWY From Southwest							NE 128TH ST From West							
Start Time	Hard Left	Left	Thru	Bear Right	Right	Peds	App. Total	Hard Left	Bear Left	Thru	Bear Right	Hard Right	Peds	App. Total	Left	Bear Left	Thru	Right	Hard Right	Peds	App. Total	Hard Left	Left	Thru	Bear Right	Right	Peds	App. Total	Hard Left	Bear Left	Thru	Bear Right	Hard Right	Peds	App. Total	Left	Bear Left	Thru	Right	Hard Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																																												
Peak Hour for Entire Intersection Begins at 04:45 PM																																												
04:45 PM	0	0	17	12	0	1	30	32	0	148	11	0	5	196	0	0	0	0	13	0	13	0	0	0	0	0	0	0	8	8	133	4	0	5	158	0	0	0	0	0	0	0	397
05:00 PM	4	0	12	14	0	0	30	21	0	139	11	0	5	176	0	2	0	0	15	0	17	0	0	0	0	0	0	0	8	12	144	3	0	2	169	0	0	0	0	0	0	0	392
05:15 PM	5	0	11	14	0	0	30	28	0	126	15	0	2	171	0	1	0	0	13	0	14	0	0	0	0	0	0	0	15	17	142	2	0	0	176	0	0	0	0	0	0	0	391
05:30 PM	6	0	13	6	0	4	29	32	0	164	9	0	4	209	0	0	0	0	7	0	7	0	0	0	0	0	0	0	9	13	121	2	0	1	146	0	0	0	0	0	0	0	391
Total Volume	15	0	53	46	0	5	119	113	0	577	46	0	16	752	0	3	0	0	48	0	51	0	0	0	0	0	0	0	40	50	540	11	0	8	649	0	0	0	0	0	0	0	1571
% App. Total	12.6	0	44.5	38.7	0	4.2		15	0	76.7	6.1	0	2.1		0	5.9	0	0	94.1	0		0	0	0	0	0	0		6.2	7.7	83.2	1.7	0	1.2		0	0	0	0	0	0		
PHF	.625	.000	.779	.821	.000	.313	.992	.883	.000	.880	.767	.000	.800	.900	.000	.375	.000	.000	.800	.000	.750	.000	.000	.000	.000	.000	.000	.000	.667	.735	.938	.688	.000	.400	.922	.000	.000	.000	.000	.000	.000	.000	.989

Crosroads Engineering Data, Inc.

13284 SW 120th Street
Miami, Florida, 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 128@DIXIE
Site Code : 00000000
Start Date : 3/24/2010
Page No : 5



Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 129TH@NE6
Site Code : 00000000
Start Date : 3/24/2010
Page No : 1

Groups Printed- AUTOS - HEAVY VEHICLES

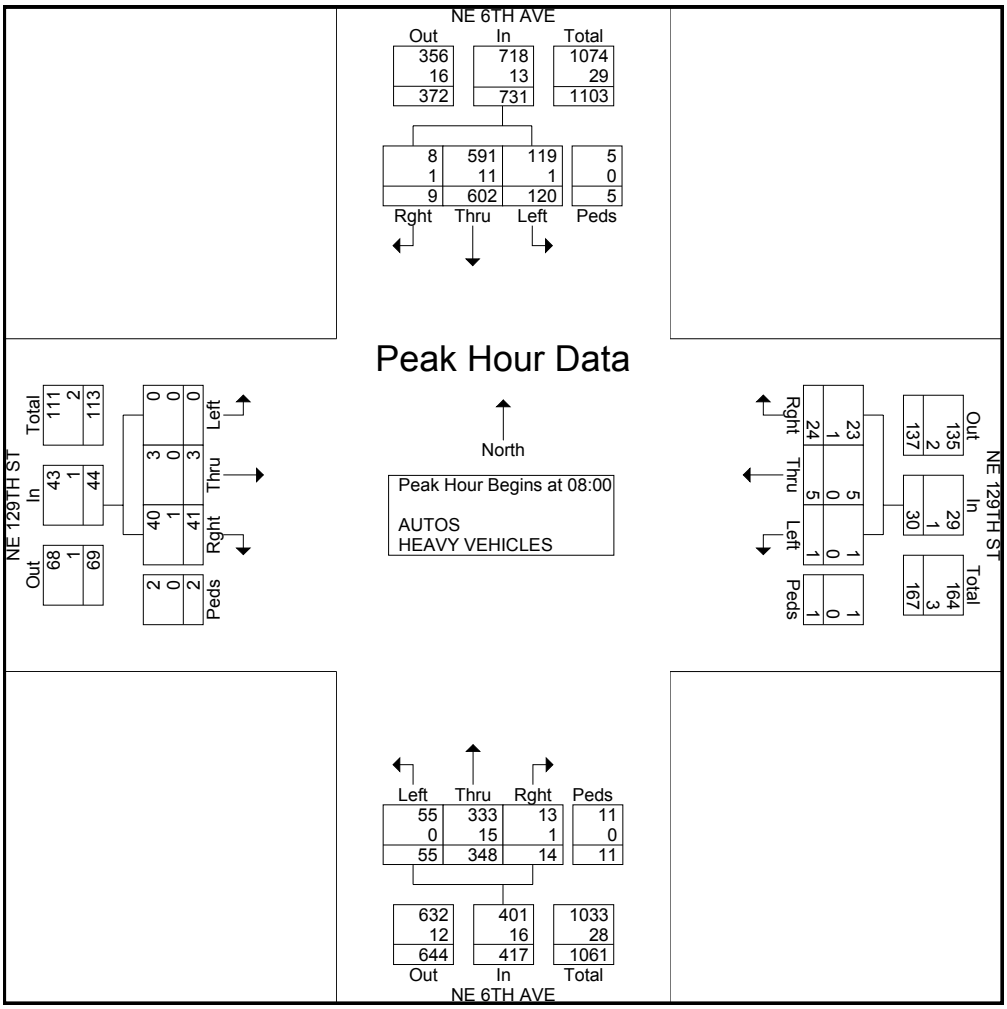
	NE 6TH AVE From North				NE 129TH ST From East				NE 6TH AVE From South				NE 129TH ST From West				
Start Time	Rght	Thru	Left	Peds	Rght	Thru	Left	Peds	Rght	Thru	Left	Peds	Rght	Thru	Left	Peds	Int. Total
07:00	1	87	10	1	3	0	0	0	3	72	6	0	5	0	0	5	193
07:15	1	134	23	4	7	1	1	0	5	75	15	0	6	2	1	1	276
07:30	2	128	22	3	7	0	1	0	5	48	15	1	5	0	0	1	238
07:45	2	137	23	3	5	0	0	0	6	85	8	4	7	1	0	2	283
Total	6	486	78	11	22	1	2	0	19	280	44	5	23	3	1	9	990
08:00	3	126	31	0	5	0	0	0	3	74	12	1	8	1	0	0	264
08:15	0	163	33	1	11	4	0	0	5	85	14	2	16	0	0	0	334
08:30	3	136	27	4	2	0	1	1	2	96	14	7	2	2	0	2	299
08:45	3	177	29	0	6	1	0	0	4	93	15	1	15	0	0	0	344
Total	9	602	120	5	24	5	1	1	14	348	55	11	41	3	0	2	1241
*** BREAK ***																	
16:00	3	127	29	5	9	0	0	7	7	151	33	8	19	0	0	2	400
16:15	0	119	21	3	14	0	0	0	7	144	19	1	9	0	1	1	339
16:30	1	107	17	4	9	0	0	4	7	175	14	7	13	0	0	0	358
16:45	0	104	37	6	10	0	1	0	9	154	16	3	14	0	0	0	354
Total	4	457	104	18	42	0	1	11	30	624	82	19	55	0	1	3	1451
17:00	4	119	19	1	9	1	0	0	7	165	20	2	15	1	0	1	364
17:15	2	130	27	7	9	0	1	0	9	177	30	3	20	0	0	0	415
17:30	3	117	30	8	10	1	1	2	8	162	22	6	7	1	0	1	379
17:45	2	104	23	1	8	0	0	3	13	152	28	3	17	2	0	0	356
Total	11	470	99	17	36	2	2	5	37	656	100	14	59	4	0	2	1514
Grand Total	30	2015	401	51	124	8	6	17	100	1908	281	49	178	10	2	16	5196
Apprch %	1.2	80.7	16.1	2	80	5.2	3.9	11	4.3	81.6	12	2.1	86.4	4.9	1	7.8	
Total %	0.6	38.8	7.7	1	2.4	0.2	0.1	0.3	1.9	36.7	5.4	0.9	3.4	0.2	0	0.3	
AUTOS	28	1981	398	51	119	8	6	17	96	1855	280	49	175	9	2	16	5090
% AUTOS	93.3	98.3	99.3	100	96	100	100	100	96	97.2	99.6	100	98.3	90	100	100	98
HEAVY VEHICLES	2	34	3	0	5	0	0	0	4	53	1	0	3	1	0	0	106
% HEAVY VEHICLES	6.7	1.7	0.7	0	4	0	0	0	4	2.8	0.4	0	1.7	10	0	0	2

Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 129TH@NE6
Site Code : 00000000
Start Date : 3/24/2010
Page No : 2

	NE 6TH AVE From North					NE 129TH ST From East					NE 6TH AVE From South					NE 129TH ST From West					
Start Time	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00																					
08:00	3	126	31	0	160	5	0	0	0	5	3	74	12	1	90	8	1	0	0	9	264
08:15	0	163	33	1	197	11	4	0	0	15	5	85	14	2	106	16	0	0	0	16	334
08:30	3	136	27	4	170	2	0	1	1	4	2	96	14	7	119	2	2	0	2	6	299
08:45	3	177	29	0	209	6	1	0	0	7	4	93	15	1	113	15	0	0	0	15	344
Total Volume	9	602	120	5	736	24	5	1	1	31	14	348	55	11	428	41	3	0	2	46	1241
% App. Total	1.2	81.8	16.3	0.7		77.4	16.1	3.2	3.2		3.3	81.3	12.9	2.6		89.1	6.5	0	4.3		
PHF	.750	.850	.909	.313	.880	.545	.313	.250	.250	.517	.700	.906	.917	.393	.899	.641	.375	.000	.250	.719	.902
AUTOS	8	591	119	5	723	23	5	1	1	30	13	333	55	11	412	40	3	0	2	45	1210
% AUTOS	88.9	98.2	99.2	100	98.2	95.8	100	100	100	96.8	92.9	95.7	100	100	96.3	97.6	100	0	100	97.8	97.5
HEAVY VEHICLES	1	11	1	0	13	1	0	0	0	1	1	15	0	0	16	1	0	0	0	1	31
% HEAVY VEHICLES	11.1	1.8	0.8	0	1.8	4.2	0	0	0	3.2	7.1	4.3	0	0	3.7	2.4	0	0	0	2.2	2.5

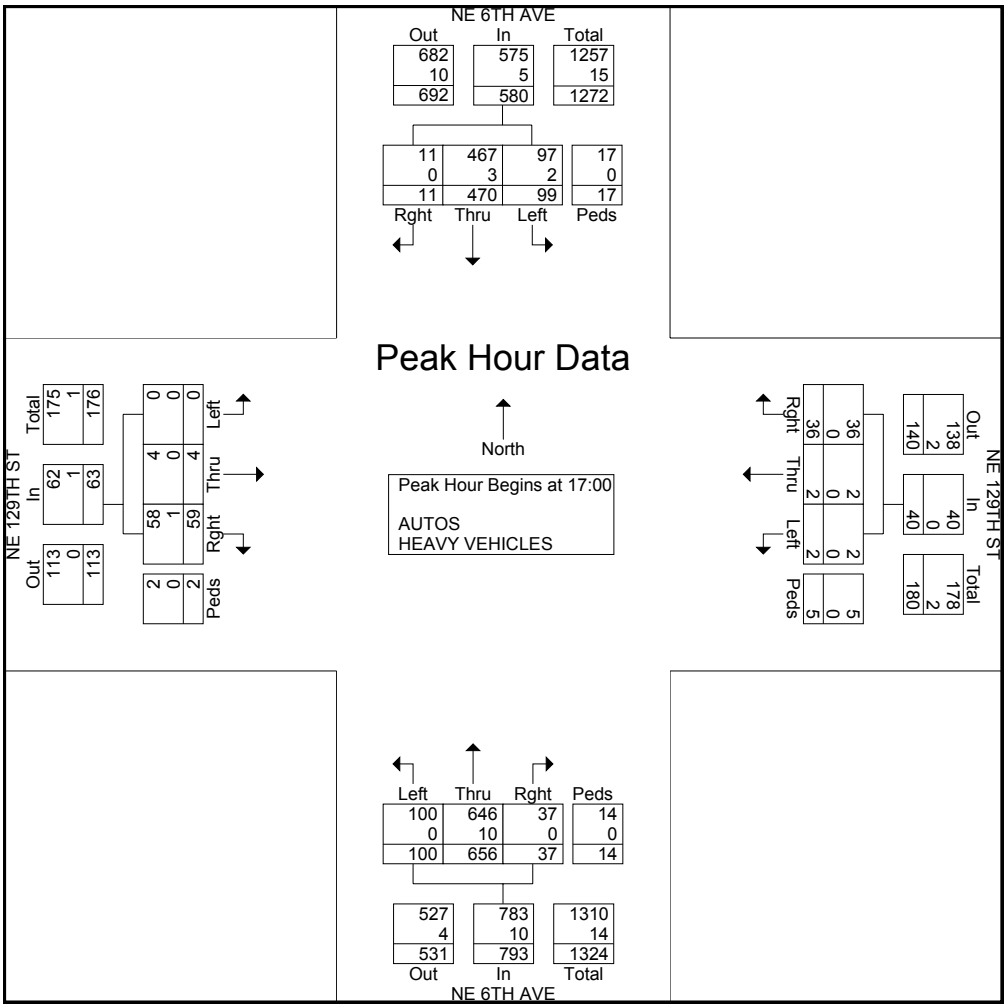


Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 129TH@NE6
Site Code : 00000000
Start Date : 3/24/2010
Page No : 3

	NE 6TH AVE From North					NE 129TH ST From East					NE 6TH AVE From South					NE 129TH ST From West					
Start Time	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Rght	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	4	119	19	1	143	9	1	0	0	10	7	165	20	2	194	15	1	0	1	17	364
17:15	2	130	27	7	166	9	0	1	0	10	9	177	30	3	219	20	0	0	0	20	415
17:30	3	117	30	8	158	10	1	1	2	14	8	162	22	6	198	7	1	0	1	9	379
17:45	2	104	23	1	130	8	0	0	3	11	13	152	28	3	196	17	2	0	0	19	356
Total Volume	11	470	99	17	597	36	2	2	5	45	37	656	100	14	807	59	4	0	2	65	1514
% App. Total	1.8	78.7	16.6	2.8		80	4.4	4.4	11.1		4.6	81.3	12.4	1.7		90.8	6.2	0	3.1		
PHF	.688	.904	.825	.531	.899	.900	.500	.500	.417	.804	.712	.927	.833	.583	.921	.738	.500	.000	.500	.813	.912
AUTOS	11	467	97	17	592	36	2	2	5	45	37	646	100	14	797	58	4	0	2	64	1498
% AUTOS	100	99.4	98.0	100	99.2	100	100	100	100	100	100	98.5	100	100	98.8	98.3	100	0	100	98.5	98.9
HEAVY VEHICLES	0	3	2	0	5	0	0	0	0	0	0	10	0	0	10	1	0	0	0	1	16
% HEAVY VEHICLES	0	0.6	2.0	0	0.8	0	0	0	0	0	0	1.5	0	0	1.2	1.7	0	0	0	1.5	1.1



Crossroads Engineering

13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 130TH@DIXIE
Site Code : 00000000
Start Date : 3/24/2010
Page No : 1

Groups Printed- AUTOS/HVY VEHICLES

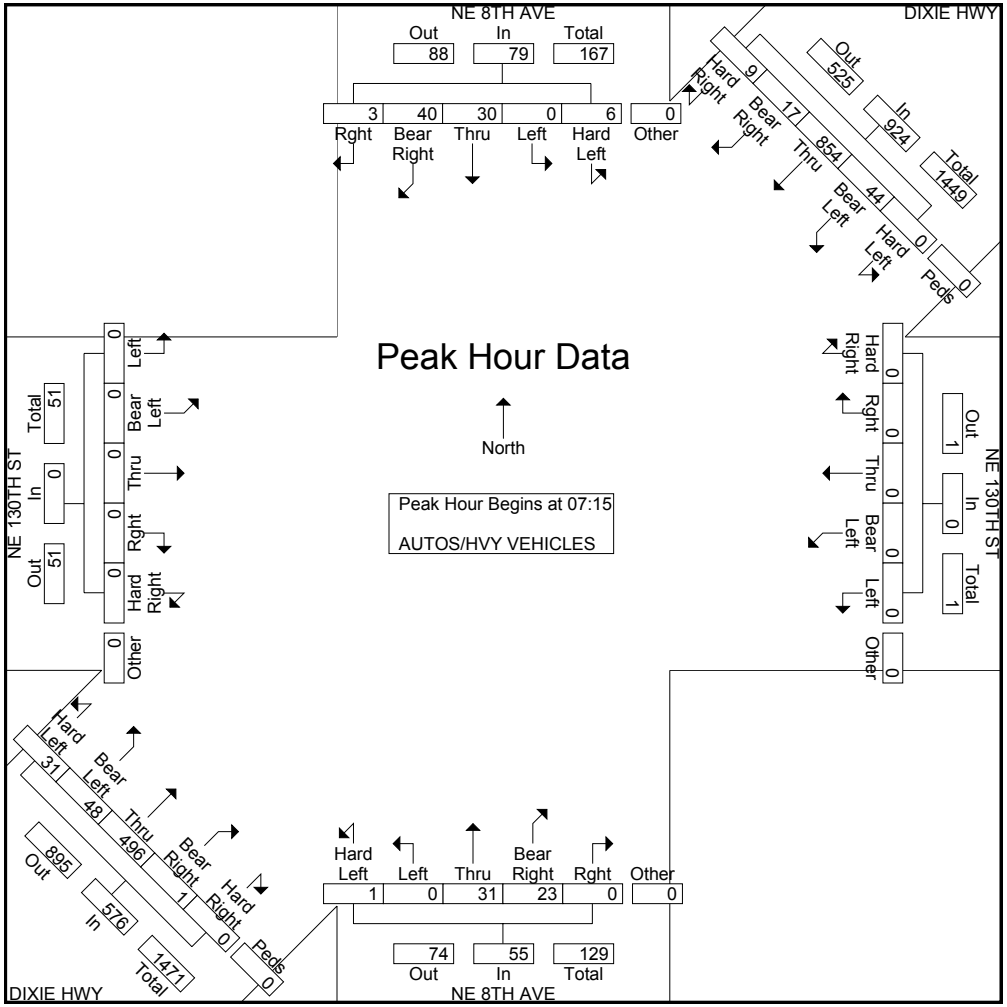
	NE 8TH AVE From North						DIXIE HWY From Northeast						NE 130TH ST From East						NE 8TH AVE From South						DIXIE HWY From Southwest						NE 130TH ST From West						
Start Time	Rght	Bear Right	Thru	Left	Hard Left	Other	Hard Right	Bear Right	Thru	Bear Left	Hard Left	Peds	Hard Right	Rght	Thru	Bear Left	Left	Other	Rght	Bear Right	Thru	Left	Hard Left	Other	Hard Right	Bear Right	Thru	Bear Left	Hard Left	Peds	Hard Right	Rght	Thru	Bear Left	Left	Other	Int. Total
07:00	1	13	4	0	2	0	1	5	113	11	0	0	0	0	0	0	0	0	2	2	13	0	0	0	0	0	72	15	8	0	0	0	0	0	0	0	262
07:15	0	33	18	0	3	0	0	7	201	15	0	0	0	0	0	0	0	0	0	7	19	0	0	0	0	0	86	42	14	0	0	0	0	0	0	0	445
07:30	3	6	6	0	0	0	1	2	222	10	0	0	0	0	0	0	0	0	0	6	3	0	1	0	0	0	102	3	6	0	0	0	0	0	0	0	371
07:45	0	1	3	0	0	0	0	5	223	10	0	0	0	0	0	0	0	0	0	7	4	0	0	0	0	0	151	2	5	0	0	0	0	0	0	0	411
Total	4	53	31	0	5	0	2	19	759	46	0	0	0	0	0	0	0	0	2	22	39	0	1	0	0	0	411	62	33	0	0	0	0	0	0	0	1489
08:00	0	0	3	0	3	0	8	3	208	9	0	0	0	0	0	0	0	0	0	3	5	0	0	0	0	1	157	1	6	0	0	0	0	0	0	0	407
08:15	0	7	7	0	3	0	1	5	204	12	0	0	0	0	0	0	0	0	0	2	3	0	0	0	0	1	138	4	4	0	0	0	0	0	0	0	391
08:30	0	3	6	0	3	0	1	3	178	9	0	0	0	0	0	0	0	0	0	6	2	0	0	0	0	0	148	3	10	0	0	0	0	0	0	0	372
08:45	0	1	1	0	0	0	1	4	186	16	0	0	0	0	0	0	0	0	0	5	6	0	1	0	0	0	158	7	3	0	0	0	0	0	0	0	389
Total	0	11	17	0	9	0	11	15	776	46	0	0	0	0	0	0	0	0	0	16	16	0	1	0	0	2	601	15	23	0	0	0	0	0	0	0	1559
*** BREAK ***																																					
16:00	0	2	8	0	0	0	0	3	155	14	0	0	0	0	0	0	0	0	1	18	12	0	1	0	0	0	156	0	4	0	0	0	0	0	0	0	374
16:15	0	1	7	0	1	0	0	5	190	9	0	0	0	0	0	0	0	0	0	22	12	0	0	0	0	1	168	7	15	0	0	0	0	0	0	0	438
16:30	1	0	4	0	0	0	0	3	188	9	0	0	0	0	0	0	0	0	2	12	9	1	1	0	0	0	169	1	6	0	0	0	0	0	0	0	406
16:45	1	3	4	0	0	0	0	0	194	8	0	0	0	0	0	0	0	0	1	10	4	2	0	0	0	1	223	2	10	0	0	0	0	0	0	0	463
Total	2	6	23	0	1	0	0	11	727	40	0	0	0	0	0	0	0	0	4	62	37	3	2	0	0	2	716	10	35	0	0	0	0	0	0	0	1681
17:00	0	3	6	0	0	0	0	2	164	14	0	0	0	0	0	0	0	0	0	8	13	0	0	0	0	0	191	6	13	0	0	0	0	0	0	0	420
17:15	0	1	2	0	0	0	0	2	205	8	0	0	0	0	0	0	0	0	0	11	9	2	1	0	0	1	198	5	10	0	0	0	0	0	0	0	455
17:30	0	7	5	0	2	0	0	4	215	16	0	0	0	0	0	0	0	0	1	16	6	0	4	0	0	0	177	5	12	0	0	0	0	0	0	0	470
17:45	0	3	8	0	0	0	0	3	180	11	0	0	0	0	0	0	0	0	3	20	4	0	0	0	0	1	148	6	17	0	0	0	0	0	0	0	404
Total	0	14	21	0	2	0	0	11	764	49	0	0	0	0	0	0	0	0	4	55	32	2	5	0	0	2	714	22	52	0	0	0	0	0	0	0	1749
Grand Total	6	84	92	0	17	0	13	56	3026	181	0	0	0	0	0	0	0	0	10	155	124	5	9	0	0	6	2442	109	143	0	0	0	0	0	0	0	6478
Apprch %	3	42.2	46.2	0	8.5	0	0.4	1.7	92.4	5.5	0	0	0	0	0	0	0	0	3.3	51.2	40.9	1.7	3	0	0	0.2	90.4	4	5.3	0	0	0	0	0	0	0	
Total %	0.1	1.3	1.4	0	0.3	0	0.2	0.9	46.7	2.8	0	0	0	0	0	0	0	0	0.2	2.4	1.9	0.1	0.1	0	0	0.1	37.7	1.7	2.2	0	0	0	0	0	0	0	

Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

File Name : 130TH@DIXIE
Site Code : 00000000
Start Date : 3/24/2010
Page No : 2

	NE 8TH AVE From North							DIXIE HWY From Northeast							NE 130TH ST From East							NE 8TH AVE From South							DIXIE HWY From Southwest							NE 130TH ST From West							
Start Time	Right	Bear Right	Thru	Left	Hard Left	Other	App. Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	Peds	App. Total	Hard Right	Right	Thru	Bear Left	Left	Other	App. Total	Rght	Bear Right	Thru	Left	Hard Left	Other	App. Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	Peds	App. Total	Hard Right	Right	Thru	Bear Left	Left	Other	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																																												
Peak Hour for Entire Intersection Begins at 07:15																																												
07:15	0	33	18	0	3	0	54	0	7	201	15	0	0	223	0	0	0	0	0	0	0	0	7	19	0	0	0	26	0	0	86	42	14	0	142	0	0	0	0	0	0	0	445
07:30	3	6	6	0	0	0	15	1	2	222	10	0	0	235	0	0	0	0	0	0	0	0	6	3	0	1	0	10	0	0	102	3	6	0	111	0	0	0	0	0	0	0	371
07:45	0	1	3	0	0	0	4	0	5	223	10	0	0	238	0	0	0	0	0	0	0	0	7	4	0	0	0	11	0	0	151	2	5	0	158	0	0	0	0	0	0	0	411
08:00	0	0	3	0	3	0	6	8	3	208	9	0	0	228	0	0	0	0	0	0	0	0	3	5	0	0	0	8	0	1	157	1	6	0	165	0	0	0	0	0	0	0	407
Total Volume	3	40	30	0	6	0	79	9	17	854	44	0	0	924	0	0	0	0	0	0	0	0	23	31	0	1	0	55	0	1	496	48	31	0	576	0	0	0	0	0	0	0	1634
% App. Total	3.8	50.6	38	0	7.6	0		1	1.8	92.4	4.8	0	0		0	0	0	0	0	0		0	41.8	56.4	0	1.8	0		0	0.2	86.1	8.3	5.4	0		0	0	0	0	0	0		
PHF	.250	.303	.417	.000	.500	.000	.366	.281	.607	.957	.733	.000	.000	.971	.000	.000	.000	.000	.000	.000	.000	.000	.821	.408	.000	.250	.000	.529	.000	.250	.790	.286	.554	.000	.873	.000	.000	.000	.000	.000	.000	.000	.918

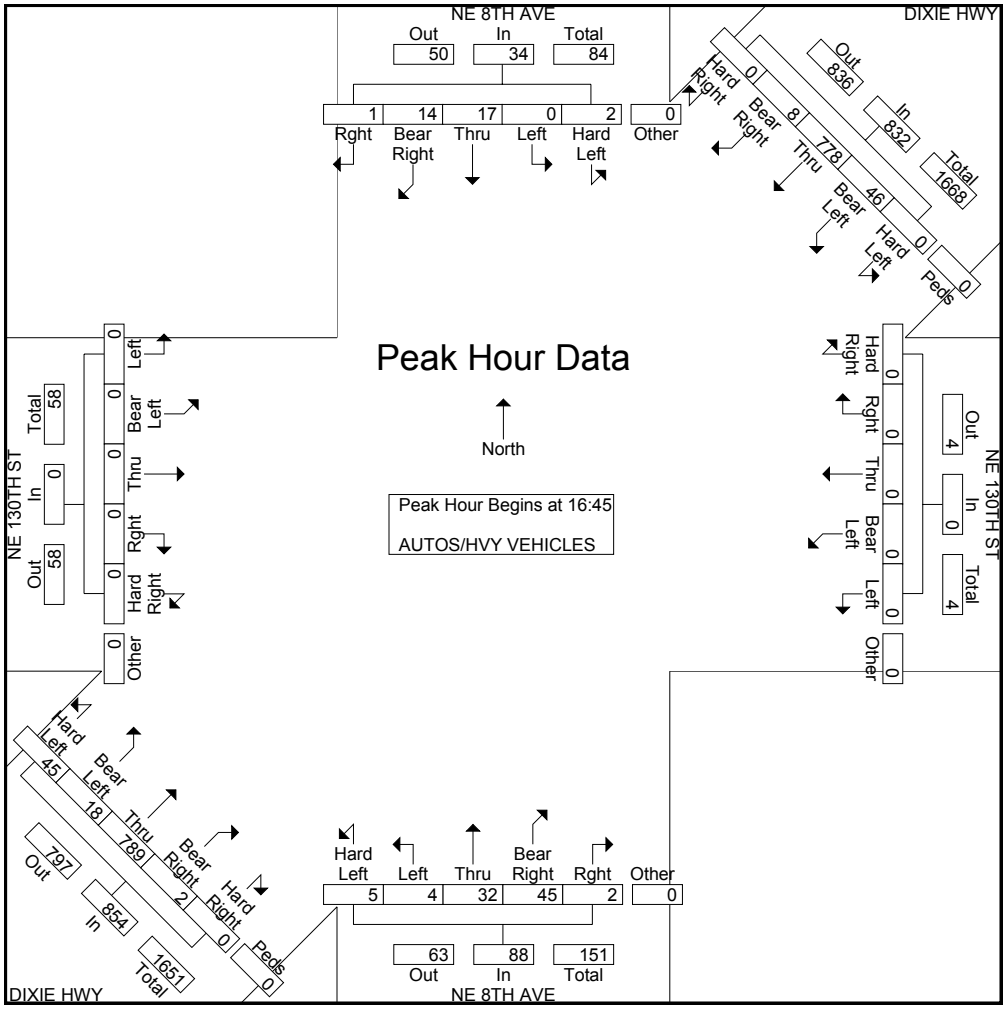


Crossroads Engineering
13284 SW 120th Street
Miami, Fl 33186
Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : JACOBS
JOB NO : 2009-019
PROJECT: CITY OF NORTH MIAMI DC
COUNTY : MIAMI-DADE

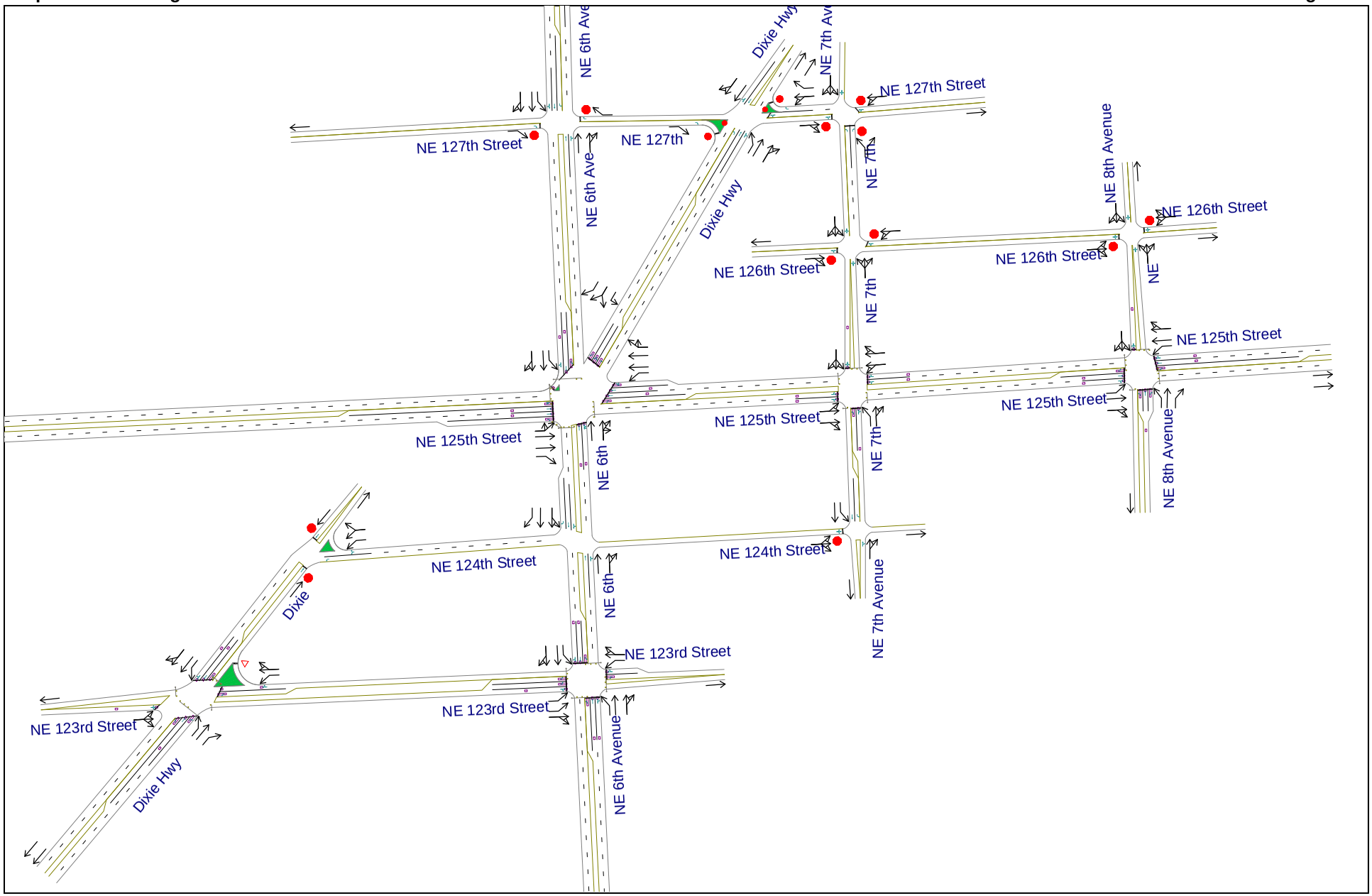
File Name : 130TH@DIXIE
Site Code : 00000000
Start Date : 3/24/2010
Page No : 3

	NE 8TH AVE From North							DIXIE HWY From Northeast							NE 130TH ST From East							NE 8TH AVE From South							DIXIE HWY From Southwest							NE 130TH ST From West							
Start Time	Rght	Bear Right	Thru	Left	Hard Left	Other	App. Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	Peds	App. Total	Hard Right	Rght	Thru	Bear Left	Left	Other	App. Total	Rght	Bear Right	Thru	Left	Hard Left	Other	App. Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	Peds	App. Total	Hard Right	Rght	Thru	Bear Left	Left	Other	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																																												
Peak Hour for Entire Intersection Begins at 16:45																																												
16:45	1	3	4	0	0	0	8	0	0	194	8	0	0	202	0	0	0	0	0	0	0	1	10	4	2	0	0	17	0	1	223	2	10	0	236	0	0	0	0	0	0	0	463
17:00	0	3	6	0	0	0	9	0	2	164	14	0	0	180	0	0	0	0	0	0	0	0	8	13	0	0	0	21	0	0	191	6	13	0	210	0	0	0	0	0	0	0	420
17:15	0	1	2	0	0	0	3	0	2	205	8	0	0	215	0	0	0	0	0	0	0	0	11	9	2	1	0	23	0	1	198	5	10	0	214	0	0	0	0	0	0	0	455
17:30	0	7	5	0	2	0	14	0	4	215	16	0	0	235	0	0	0	0	0	0	0	1	16	6	0	4	0	27	0	0	177	5	12	0	194	0	0	0	0	0	0	0	470
Total Volume	1	14	17	0	2	0	34	0	8	778	46	0	0	832	0	0	0	0	0	0	0	2	45	32	4	5	0	88	0	2	789	18	45	0	854	0	0	0	0	0	0	0	1808
% App. Total	2.9	41.2	50	0	5.9	0		0	1	93.5	5.5	0	0		0	0	0	0	0	0		2.3	51.1	36.4	4.5	5.7	0		0	0.2	92.4	2.1	5.3	0		0	0	0	0	0			
PHF	.250	.500	.708	.000	.250	.000	.607	.000	.500	.905	.719	.000	.000	.885	.000	.000	.000	.000	.000	.000	.000	.500	.703	.615	.500	.313	.000	.815	.000	.500	.885	.750	.865	.000	.905	.000	.000	.000	.000	.000	.000	.000	.962



APPENDIX B

SYNCHRO HCM ANALYSIS FOR EXISTING CONDITIONS


NE 127th Street
NE 6th Ave
NE 127th
Dixie Hwy
NE 7th Ave
NE 127th Street
NE 126th Street
NE 7th
NE 8th Avenue
NE 126th Street
NE 125th Street
NE 6th
NE 125th Street
NE 125th Street
NE 7th
NE 125th Street
NE 8th Avenue
NE 124th Street
NE 6th
NE 124th Street
NE 7th Avenue
Dixie
NE 123rd Street
NE 123rd Street
NE 123rd Street
Dixie Hwy
NE 6th Avenue

HCM Signalized Intersection Capacity Analysis
6: NE 125th Street & Dixie Hwy

2/7/2012

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL
Lane Configurations												
Volume (vph)	139	206	910	43	133	799	96	15	451	254	61	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5	5.8	5.8	3.5	5.8	5.8		5.8			5.8
Lane Util. Factor		1.00	0.95	1.00	1.00	0.95	1.00		0.95			1.00
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97		0.98			1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00
Frt		1.00	1.00	0.85	1.00	1.00	0.85		0.94			1.00
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00		1.00			0.95
Satd. Flow (prot)		1769	3539	1583	1768	3539	1537		3267			1769
Flt Permitted		0.10	1.00	1.00	0.14	1.00	1.00		1.00			0.11
Satd. Flow (perm)		188	3539	1583	253	3539	1537		3267			209
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	146	217	958	45	140	841	101	16	475	267	64	122
RTOR Reduction (vph)	0	0	0	23	0	0	4	0	4	0	0	0
Lane Group Flow (vph)	0	363	958	22	140	841	113	0	802	0	0	122
Confl. Peds. (#/hr)	14				37		14			20		20
Turn Type	pm+pt	pm+pt		Perm	pm+pt		Perm					pm+pt
Protected Phases	1	1	6		5	2			4			3
Permitted Phases	6	6		6	2		2					8
Actuated Green, G (s)		61.2	49.7	49.7	44.2	36.2	36.2		32.2			43.8
Effective Green, g (s)		61.2	49.7	49.7	44.2	36.2	36.2		32.2			43.8
Actuated g/C Ratio		0.41	0.33	0.33	0.29	0.24	0.24		0.21			0.29
Clearance Time (s)		3.5	5.8	5.8	3.5	5.8	5.8		5.8			5.8
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0		3.0			3.0
Lane Grp Cap (vph)		303	1173	525	155	854	371		701			146
v/s Ratio Prot		c0.17	0.27		0.05	0.24			c0.25			c0.05
v/s Ratio Perm		c0.32		0.01	0.22		0.07					0.20
v/c Ratio		1.20	0.82	0.04	0.90	0.98	0.31		1.14			0.84
Uniform Delay, d1		47.5	46.0	34.0	44.6	56.6	46.6		58.9			43.9
Progression Factor		1.00	1.00	1.00	1.56	1.31	1.37		0.70			1.00
Incremental Delay, d2		116.6	6.3	0.1	41.3	25.5	1.9		79.6			31.9
Delay (s)		164.1	52.3	34.1	111.2	99.7	65.8		120.6			75.8
Level of Service		F	D	C	F	F	E		F			E
Approach Delay (s)			81.4			97.6			120.6			
Approach LOS			F			F			F			

Intersection Summary			
HCM Average Control Delay	94.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	23.3
Intersection Capacity Utilization	114.1%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

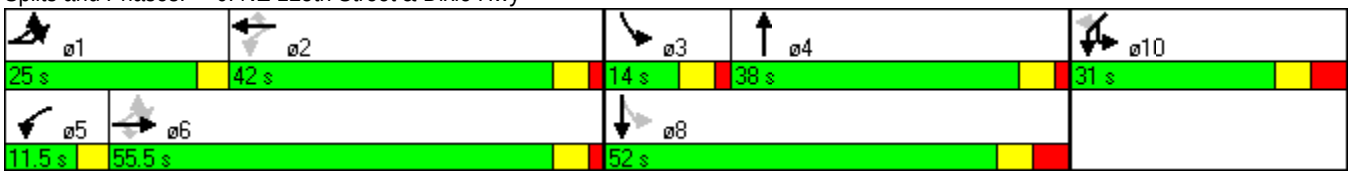
Movement	SBT	SBR	SWL2	SWL	SWR
Lane Configurations					
Volume (vph)	318	152	39	220	307
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Total Lost time (s)	8.2		8.2	8.2	8.2
Lane Util. Factor	*0.85		1.00	1.00	0.95
Frpb, ped/bikes	0.99		1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00
Frt	0.95		1.00	0.97	0.97
Flt Protected	1.00		0.95	0.96	1.00
Satd. Flow (prot)	2981		1770	1737	1717
Flt Permitted	1.00		0.95	0.96	1.00
Satd. Flow (perm)	2981		1770	1737	1717
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	335	160	41	232	323
RTOR Reduction (vph)	0	0	0	0	0
Lane Group Flow (vph)	495	0	41	290	265
Confl. Peds. (#/hr)		21			
Turn Type			Split		Perm
Protected Phases	8		10	10	
Permitted Phases					10
Actuated Green, G (s)	43.8		22.8	22.8	22.8
Effective Green, g (s)	43.8		22.8	22.8	22.8
Actuated g/C Ratio	0.29		0.15	0.15	0.15
Clearance Time (s)	8.2		8.2	8.2	8.2
Vehicle Extension (s)	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	870		269	264	261
v/s Ratio Prot	0.17		0.02	c0.17	
v/s Ratio Perm					0.15
v/c Ratio	0.57		0.15	1.10	1.02
Uniform Delay, d1	45.1		55.2	63.6	63.6
Progression Factor	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.9		0.3	84.3	59.7
Delay (s)	45.9		55.5	147.9	123.3
Level of Service	D		E	F	F
Approach Delay (s)	51.9			130.6	
Approach LOS	D			F	

Intersection Summary

Phase Number	1	2	3	4	5	6	8	10
Movement	EBL	WBTL	SBL	NBT	WBL	EBTL	SBTL	SWL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag		
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	25	42	14	38	11.5	55.5	52	31
Maximum Split (%)	16.7%	28.0%	9.3%	25.3%	7.7%	37.0%	34.7%	20.7%
Minimum Split (s)	8.5	22.8	14	21.5	8.5	22.8	24.2	21.5
Yellow Time (s)	3.5	4	4	4	3.5	4	4	4
All-Red Time (s)	0	1.8	1.8	1.8	0	1.8	4.2	4.2
Minimum Initial (s)	5	7	5	7	5	7	12	12
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	2	1	2	2.5	2	1	2	2.5
Time Before Reduce (s)	2	1	2	2.5	2	1	2	2.5
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)								
Flash Dont Walk (s)								
Dual Entry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	125	0	42	56	125	136.5	42	94
End Time (s)	0	42	56	94	136.5	42	94	125
Yield/Force Off (s)	146.5	36.2	50.2	88.2	133	36.2	85.8	116.8
Yield/Force Off 170(s)	146.5	36.2	50.2	88.2	133	36.2	85.8	116.8
Local Start Time (s)	125	0	42	56	125	136.5	42	94
Local Yield (s)	146.5	36.2	50.2	88.2	133	36.2	85.8	116.8
Local Yield 170(s)	146.5	36.2	50.2	88.2	133	36.2	85.8	116.8

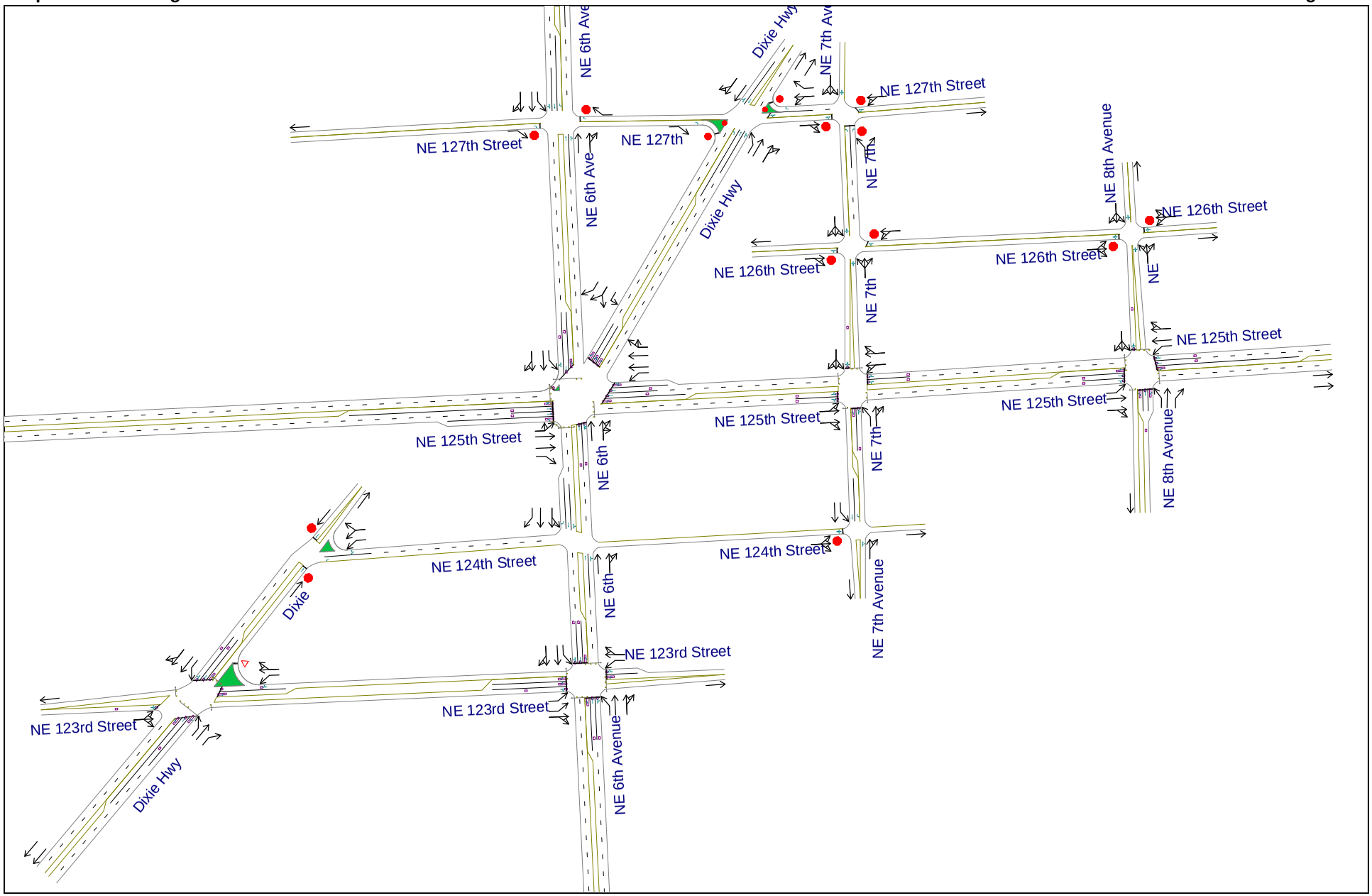
Intersection Summary	
Cycle Length	150
Control Type	Actuated-Coordinated
Natural Cycle	150
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	

Splits and Phases: 6: NE 125th Street & Dixie Hwy



APPENDIX C

SYNCHRO HCM ANALYSIS FOR OPENNING YEAR 2016


NE 127th Street
NE 6th Ave
NE 127th
Dixie Hwy
NE 7th Ave
NE 127th Street
NE 126th Street
NE 7th
NE 8th Avenue
NE 126th Street
NE 125th Street
NE 6th
NE 125th Street
NE 125th Street
NE 7th
NE 125th Street
NE 8th Avenue
NE 124th Street
NE 6th
NE 124th Street
NE 7th Avenue
Dixie
NE 123rd Street
NE 123rd Street
NE 123rd Street
Dixie Hwy
NE 6th Avenue

HCM Signalized Intersection Capacity Analysis
6: NE 125th Street & Dixie Hwy

2/7/2012

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL
Lane Configurations												
Volume (vph)	139	206	910	43	133	799	96	15	451	254	61	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5	5.8	5.8	3.5	5.8	5.8		5.8			5.8
Lane Util. Factor		1.00	0.95	1.00	1.00	0.95	1.00		0.95			1.00
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97		0.98			1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00
Frt		1.00	1.00	0.85	1.00	1.00	0.85		0.94			1.00
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00		1.00			0.95
Satd. Flow (prot)		1769	3539	1583	1769	3539	1537		3267			1769
Flt Permitted		0.10	1.00	1.00	0.11	1.00	1.00		1.00			0.11
Satd. Flow (perm)		188	3539	1583	206	3539	1537		3267			209
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%
Adj. Flow (vph)	159	236	1044	49	153	917	110	17	517	291	70	133
RTOR Reduction (vph)	0	0	0	24	0	0	4	0	4	0	0	0
Lane Group Flow (vph)	0	395	1044	25	153	917	123	0	874	0	0	133
Confl. Peds. (#/hr)	14				37		14			20		20
Turn Type	pm+pt	pm+pt		Perm	pm+pt		Perm					pm+pt
Protected Phases	1	1	6		5	2			4			3
Permitted Phases	6	6		6	2		2					8
Actuated Green, G (s)		61.2	48.2	48.2	45.7	36.2	36.2		32.2			43.8
Effective Green, g (s)		61.2	48.2	48.2	45.7	36.2	36.2		32.2			43.8
Actuated g/C Ratio		0.41	0.32	0.32	0.30	0.24	0.24		0.21			0.29
Clearance Time (s)		3.5	5.8	5.8	3.5	5.8	5.8		5.8			5.8
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0		3.0			3.0
Lane Grp Cap (vph)		303	1137	509	162	854	371		701			146
v/s Ratio Prot		c0.19	0.29		0.06	0.26			c0.27			c0.05
v/s Ratio Perm		c0.35		0.02	0.23		0.08					0.22
v/c Ratio		1.30	0.92	0.05	0.94	1.07	0.33		1.25			0.91
Uniform Delay, d1		47.6	49.0	35.1	43.6	56.9	46.9		58.9			45.4
Progression Factor		1.00	1.00	1.00	1.39	1.31	1.35		0.69			1.00
Incremental Delay, d2		158.6	13.1	0.2	48.8	50.3	2.0		121.5			48.7
Delay (s)		206.2	62.1	35.3	109.5	124.8	65.5		162.4			94.2
Level of Service		F	E	D	F	F	E		F			F
Approach Delay (s)			99.5			116.6			162.4			
Approach LOS			F			F			F			

Intersection Summary			
HCM Average Control Delay	117.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	23.3
Intersection Capacity Utilization	122.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

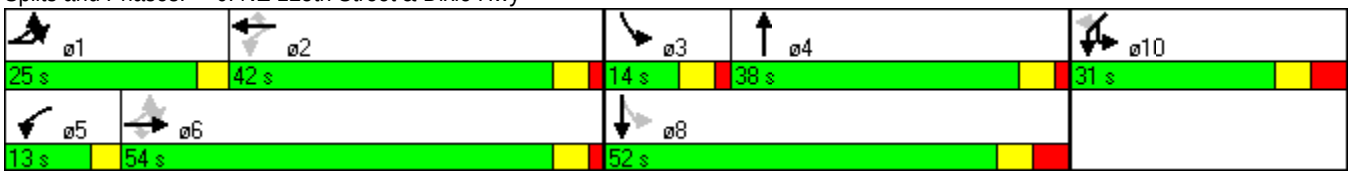
Movement	SBT	SBR	SWL2	SWL	SWR
Lane Configurations					
Volume (vph)	318	152	39	220	307
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Total Lost time (s)	8.2		8.2	8.2	8.2
Lane Util. Factor	*0.85		1.00	1.00	0.95
Frpb, ped/bikes	0.99		1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00
Frt	0.95		1.00	0.97	0.97
Flt Protected	1.00		0.95	0.96	1.00
Satd. Flow (prot)	2981		1770	1737	1717
Flt Permitted	1.00		0.95	0.96	1.00
Satd. Flow (perm)	2981		1770	1737	1717
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	109%	109%	109%	109%	109%
Adj. Flow (vph)	365	174	45	252	352
RTOR Reduction (vph)	0	0	0	0	0
Lane Group Flow (vph)	539	0	45	315	289
Confl. Peds. (#/hr)		21			
Turn Type			Split		Perm
Protected Phases	8		10	10	
Permitted Phases					10
Actuated Green, G (s)	43.8		22.8	22.8	22.8
Effective Green, g (s)	43.8		22.8	22.8	22.8
Actuated g/C Ratio	0.29		0.15	0.15	0.15
Clearance Time (s)	8.2		8.2	8.2	8.2
Vehicle Extension (s)	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	870		269	264	261
v/s Ratio Prot	0.18		0.03	c0.18	
v/s Ratio Perm					0.17
v/c Ratio	0.62		0.17	1.19	1.11
Uniform Delay, d1	45.9		55.3	63.6	63.6
Progression Factor	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.3		0.3	118.0	87.5
Delay (s)	47.2		55.6	181.6	151.1
Level of Service	D		E	F	F
Approach Delay (s)	56.5			159.3	
Approach LOS	E			F	

Intersection Summary

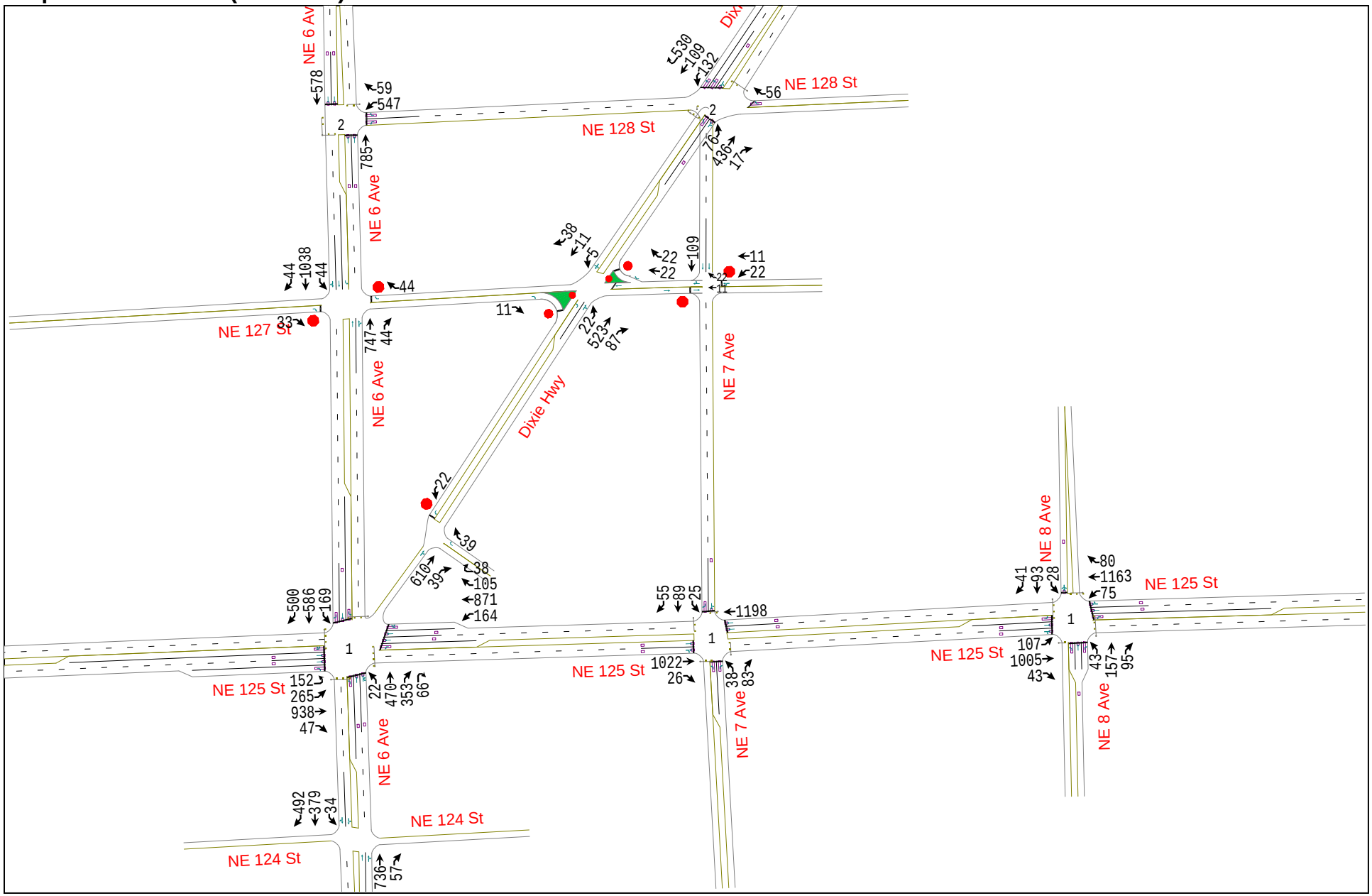
Phase Number	1	2	3	4	5	6	8	10
Movement	EBL	WBTL	SBL	NBT	WBL	EBTL	SBTL	SWL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag		
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	25	42	14	38	13	54	52	31
Maximum Split (%)	16.7%	28.0%	9.3%	25.3%	8.7%	36.0%	34.7%	20.7%
Minimum Split (s)	8.5	22.8	14	21.5	8.5	22.8	24.2	21.5
Yellow Time (s)	3.5	4	4	4	3.5	4	4	4
All-Red Time (s)	0	1.8	1.8	1.8	0	1.8	4.2	4.2
Minimum Initial (s)	5	7	5	7	5	7	12	12
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	2	1	2	2.5	2	1	2	2.5
Time Before Reduce (s)	2	1	2	2.5	2	1	2	2.5
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)								
Flash Dont Walk (s)								
Dual Entry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	125	0	42	56	125	138	42	94
End Time (s)	0	42	56	94	138	42	94	125
Yield/Force Off (s)	146.5	36.2	50.2	88.2	134.5	36.2	85.8	116.8
Yield/Force Off 170(s)	146.5	36.2	50.2	88.2	134.5	36.2	85.8	116.8
Local Start Time (s)	125	0	42	56	125	138	42	94
Local Yield (s)	146.5	36.2	50.2	88.2	134.5	36.2	85.8	116.8
Local Yield 170(s)	146.5	36.2	50.2	88.2	134.5	36.2	85.8	116.8

Intersection Summary	
Cycle Length	150
Control Type	Actuated-Coordinated
Natural Cycle	150
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	

Splits and Phases: 6: NE 125th Street & Dixie Hwy



Map - 2016 PM-Alt 2 (Preferred) **5/23/2012**



ALTERNATIVE 2 - PREFERRED - 2016 TRAFFIC VOLUMES AFTER REROUTING

Lane Group	EBT	WBT	NBL	NBR	SBT	SBR
Lane Configurations						
Volume (vph)	938	1099	35	76	82	50
Turn Type			custom	custom		Perm
Protected Phases	6!	2!			8	
Permitted Phases			2!	4		8
Detector Phase	6	2	2	4	8	8
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	19.1	19.1	19.1	24.4	24.4	24.4
Total Split (s)	100.6	100.6	100.6	24.6	24.8	24.8
Total Split (%)	67.1%	67.1%	67.1%	16.4%	16.5%	16.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.1	0.1	0.1	0.4	0.4	0.4
Lost Time Adjust (s)	-0.1	-0.1	-0.4	0.0	-0.4	0.0
Total Lost Time (s)	4.0	4.0	3.7	4.4	4.0	4.4
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	113.0	113.0	113.3	9.7	15.0	14.6
Actuated g/C Ratio	0.75	0.75	0.76	0.06	0.10	0.10
v/c Ratio	0.42	0.47	0.82	0.48	0.65	0.28
Control Delay	2.0	5.1	108.1	20.8	81.0	17.0
Queue Delay	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay	2.1	5.2	108.1	20.8	81.0	17.0
LOS	A	A	F	C	F	B
Approach Delay	2.1	5.2			60.4	
Approach LOS	A	A			E	

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 25 (17%), Referenced to phase 2:NBWB and 6:EBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 9.6 Intersection LOS: A
Intersection Capacity Utilization 64.0% ICU Level of Service B
Analysis Period (min) 15
! Phase conflict between lane groups.

Splits and Phases: 6: NE 125 St & NE 7 Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	938	24	0	1099	0	35	0	76	23	82	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		3.7		4.4		4.0	4.4
Lane Util. Factor		0.95			0.95		1.00		1.00		1.00	1.00
Frpb, ped/bikes		0.99			1.00		1.00		0.97		1.00	0.98
Flpb, ped/bikes		1.00			1.00		1.00		1.00		1.00	1.00
Frt		1.00			1.00		1.00		0.85		1.00	0.85
Flt Protected		1.00			1.00		0.95		1.00		0.99	1.00
Satd. Flow (prot)		3503			3539		1770		1533		1843	1550
Flt Permitted		1.00			1.00		0.04		1.00		0.99	1.00
Satd. Flow (perm)		3503			3539		66		1533		1843	1550
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%
Adj. Flow (vph)	0	1076	28	0	1261	0	40	0	87	26	94	57
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	81	0	0	51
Lane Group Flow (vph)	0	1103	0	0	1261	0	40	0	6	0	120	6
Confl. Peds. (#/hr)	13		48	48		13	4		9	9		4
Turn Type							custom		custom	Split		Perm
Protected Phases		6!			2!					8	8	
Permitted Phases							2!		4			8
Actuated Green, G (s)		112.8			112.8		112.8		9.7		14.6	14.6
Effective Green, g (s)		112.9			112.9		113.2		9.7		15.0	14.6
Actuated g/C Ratio		0.75			0.75		0.75		0.06		0.10	0.10
Clearance Time (s)		4.1			4.1		4.1		4.4		4.4	4.4
Vehicle Extension (s)		1.0			1.0		1.0		2.5		2.5	2.5
Lane Grp Cap (vph)		2637			2664		50		99		184	151
v/s Ratio Prot		0.31			0.36						c0.07	
v/s Ratio Perm							c0.61		c0.00			0.00
v/c Ratio		0.42			0.47		0.80		0.06		0.65	0.04
Uniform Delay, d1		6.7			7.1		11.4		65.9		65.0	61.3
Progression Factor		0.21			0.56		1.00		1.00		1.00	1.00
Incremental Delay, d2		0.3			0.5		77.4		0.2		7.2	0.1
Delay (s)		1.8			4.5		88.8		66.0		72.2	61.4
Level of Service		A			A		F		E		E	E
Approach Delay (s)		1.8			4.5			73.2			68.7	
Approach LOS		A			A			E			E	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.1
Intersection Capacity Utilization	64.0%	ICU Level of Service	B
Analysis Period (min)	15		

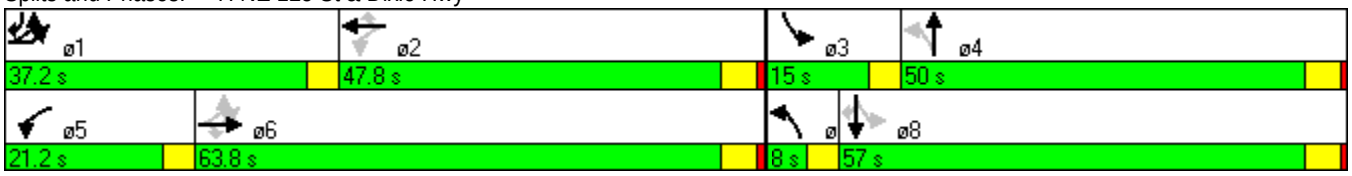
! Phase conflict between lane groups.
c Critical Lane Group

Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	139	243	861	43	150	799	96	20	431	155	538	459
Turn Type	pm+pt	pm+pt		Perm	pm+pt		Perm	pm+pt		pm+pt		pm+ov
Protected Phases	1	1	6		5	2		7	4	3	8	1
Permitted Phases	6	6		6	2		2	4		8		8
Detector Phase	1	1	6	6	5	2	2	7	4	3	8	1
Switch Phase												
Minimum Initial (s)	5.0	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	7.0	5.0
Minimum Split (s)	9.5	9.5	22.8	22.8	8.5	22.8	22.8	8.0	24.2	15.0	24.2	9.5
Total Split (s)	37.2	37.2	63.8	63.8	21.2	47.8	47.8	8.0	50.0	15.0	57.0	37.2
Total Split (%)	24.8%	24.8%	42.5%	42.5%	14.1%	31.9%	31.9%	5.3%	33.3%	10.0%	38.0%	24.8%
Yellow Time (s)	3.5	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	3.5	4.0	3.5
All-Red Time (s)	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	1.0	0.0
Lost Time Adjust (s)	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	3.5	5.0	5.0	3.5	5.0	5.0	3.5	5.0	3.5	5.0	3.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None
Act Effct Green (s)		81.6	63.5	63.5	57.5	42.9	42.9	50.9	44.9	61.4	55.1	90.3
Actuated g/C Ratio		0.54	0.42	0.42	0.38	0.29	0.29	0.34	0.30	0.41	0.37	0.60
v/c Ratio		0.97	0.66	0.07	0.63	0.91	0.33	0.21	0.97	0.96	0.90	0.56
Control Delay		79.7	37.7	9.9	38.2	52.2	29.0	31.4	74.3	94.1	62.9	19.5
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		79.7	37.7	9.9	38.2	52.2	29.0	31.4	74.3	94.1	62.9	19.5
LOS		E	D	A	D	D	C	C	E	F	E	B
Approach Delay			49.3			47.4			73.2		49.8	
Approach LOS			D			D			E		D	

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 48 (32%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 53.5 Intersection LOS: D
Intersection Capacity Utilization 98.9% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 7: NE 125 St & Dixie Hwy



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
Lane Configurations												
Volume (vph)	139	243	861	43	150	799	96	35	20	431	324	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5	5.0	5.0	3.5	5.0	5.0		3.5	5.0		
Lane Util. Factor		1.00	0.95	1.00	1.00	0.95	1.00		1.00	0.95		
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97		1.00	0.98		
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		
Frt		1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.93		
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		
Satd. Flow (prot)		1769	3539	1583	1767	3539	1541		1769	3209		
Flt Permitted		0.09	1.00	1.00	0.22	1.00	1.00		0.10	1.00		
Satd. Flow (perm)		166	3539	1583	408	3539	1541		184	3209		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%
Adj. Flow (vph)	159	279	988	49	172	917	110	40	23	495	372	70
RTOR Reduction (vph)	0	0	0	24	0	0	9	0	0	4	0	0
Lane Group Flow (vph)	0	438	988	25	172	917	141	0	23	933	0	0
Confl. Peds. (#/hr)	14				37		14		21		20	
Turn Type	pm+pt	pm+pt		Perm	pm+pt		Perm		pm+pt			
Protected Phases	1	1	6		5	2			7	4		
Permitted Phases	6	6		6	2		2		4			
Actuated Green, G (s)		78.7	62.1	62.1	54.6	41.5	41.5		49.0	46.3		
Effective Green, g (s)		78.7	62.1	62.1	54.6	41.5	41.5		49.0	46.3		
Actuated g/C Ratio		0.52	0.41	0.41	0.36	0.28	0.28		0.33	0.31		
Clearance Time (s)		3.5	5.0	5.0	3.5	5.0	5.0		3.5	5.0		
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)		447	1465	655	267	979	426		89	991		
v/s Ratio Prot		c0.22	0.28		0.06	0.26			0.00	0.29		
v/s Ratio Perm		c0.29		0.02	0.18		0.09		0.08			
v/c Ratio		0.98	0.67	0.04	0.64	0.94	0.33		0.26	0.94		
Uniform Delay, d1		47.4	35.7	26.2	34.1	53.0	43.2		38.8	50.5		
Progression Factor		1.00	1.00	1.00	1.37	0.77	0.69		1.00	1.00		
Incremental Delay, d2		36.8	2.5	0.1	4.7	15.7	1.9		1.5	16.3		
Delay (s)		84.3	38.2	26.3	51.6	56.6	31.8		40.4	66.8		
Level of Service		F	D	C	D	E	C		D	E		
Approach Delay (s)			51.5			52.9				66.2		
Approach LOS			D			D				E		

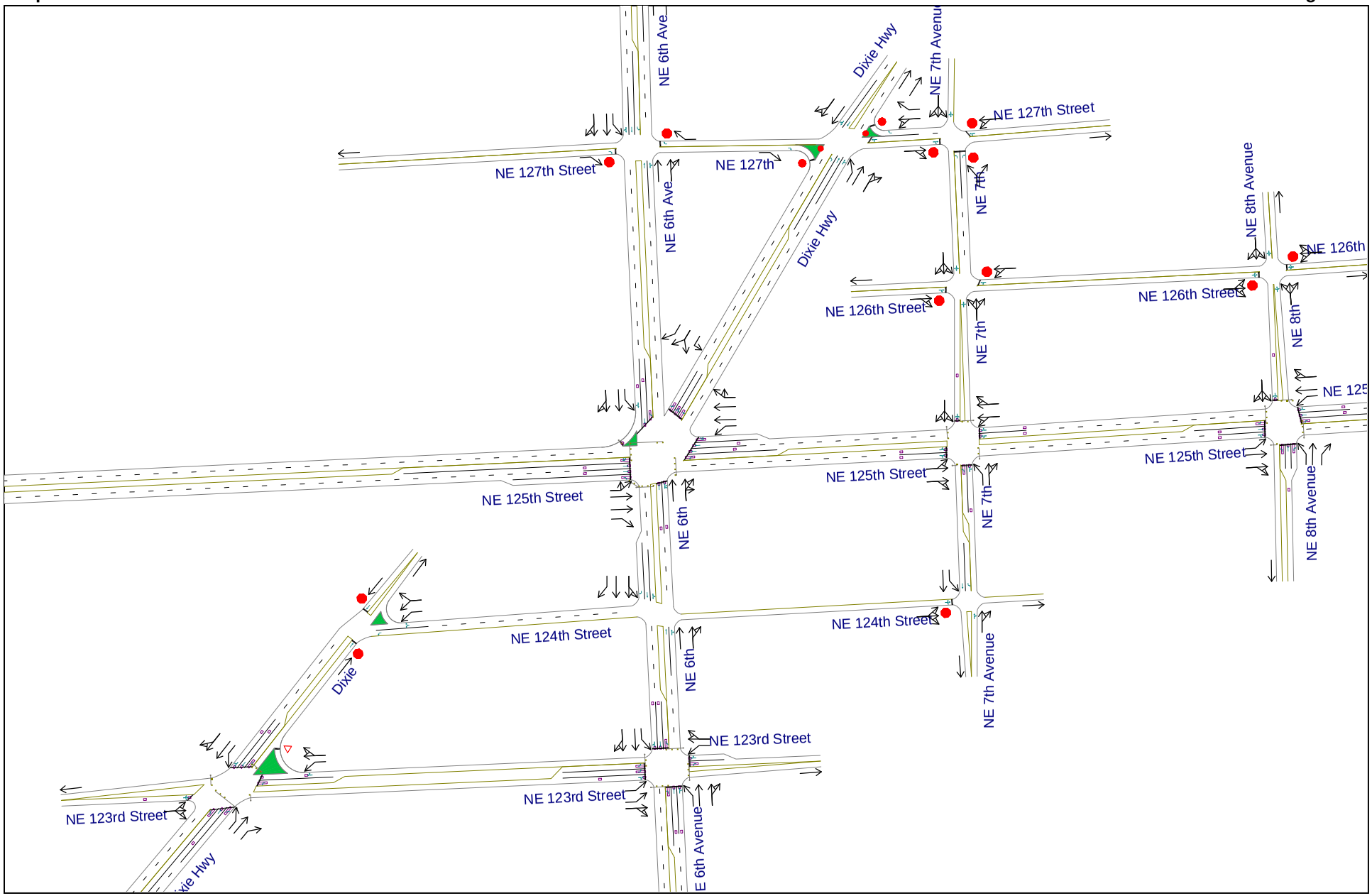
Intersection Summary			
HCM Average Control Delay	54.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR
Lane Configurations			
Volume (vph)	155	538	459
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	3.5	5.0	3.5
Lane Util. Factor	1.00	*1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00
Frt	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00
Satd. Flow (prot)	1769	1863	1561
Flt Permitted	0.08	1.00	1.00
Satd. Flow (perm)	150	1863	1561
Peak-hour factor, PHF	0.95	0.95	0.95
Growth Factor (vph)	109%	109%	109%
Adj. Flow (vph)	178	617	527
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	178	617	527
Confl. Peds. (#/hr)	20		21
Turn Type	pm+pt		pm+ov
Protected Phases	3	8	1
Permitted Phases	8		8
Actuated Green, G (s)	61.3	55.1	88.8
Effective Green, g (s)	61.3	55.1	88.8
Actuated g/C Ratio	0.41	0.37	0.59
Clearance Time (s)	3.5	5.0	3.5
Vehicle Extension (s)	3.0	3.0	3.0
Lane Grp Cap (vph)	185	684	924
v/s Ratio Prot	c0.07	0.33	0.13
v/s Ratio Perm	c0.32		0.21
v/c Ratio	0.96	0.90	0.57
Uniform Delay, d1	41.0	44.9	18.8
Progression Factor	1.00	1.00	1.00
Incremental Delay, d2	54.9	15.1	0.9
Delay (s)	95.8	60.0	19.7
Level of Service	F	E	B
Approach Delay (s)		48.8	
Approach LOS		D	

Intersection Summary

APPENDIX D

SYNCHRO HCM ANALYSIS FOR DESIGN YEAR 2036


NE 6th Ave
NE 127th Street
NE 6th Ave
NE 125th Street
NE 6th
NE 124th Street
Dixie
NE 6th
NE 123rd Street
NE 123rd Street
E 6th Avenue
xie Hwy
Dixie Hwy
NE 127th
Dixie Hwy
NE 7th Avenue
NE 127th Street
NE 7th
NE 126th Street
NE 7th
NE 125th Street
NE 7th
NE 124th Street
NE 7th Avenue
NE 8th Avenue
NE 126th
NE 126th Street
NE 8th
NE 125
NE 125th Street
NE 8th Avenue

HCM Signalized Intersection Capacity Analysis
6: NE 125th Street & Dixie Hwy

2/7/2012

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	NBR2	SBL
Lane Configurations												
Volume (vph)	139	206	910	43	133	799	96	15	451	254	61	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5	5.8	5.8	3.5	5.8	5.8		5.8			5.8
Lane Util. Factor		1.00	0.95	1.00	1.00	0.95	1.00		0.95			1.00
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97		0.98			1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00
Frt		1.00	1.00	0.85	1.00	1.00	0.85		0.94			1.00
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00		1.00			0.95
Satd. Flow (prot)		1769	3539	1583	1769	3539	1537		3268			1769
Flt Permitted		0.10	1.00	1.00	0.11	1.00	1.00		1.00			0.11
Satd. Flow (perm)		188	3539	1583	206	3539	1537		3268			204
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	147%	147%	147%	147%	147%	147%	147%	147%	147%	147%	147%	147%
Adj. Flow (vph)	215	319	1408	67	206	1236	149	23	698	393	94	179
RTOR Reduction (vph)	0	0	0	24	0	0	4	0	4	0	0	0
Lane Group Flow (vph)	0	534	1408	43	206	1236	168	0	1181	0	0	179
Confl. Peds. (#/hr)	14				37		14			20		20
Turn Type	pm+pt	pm+pt		Perm	pm+pt		Perm					pm+pt
Protected Phases	1	1	6		5	2			4			3
Permitted Phases	6	6		6	2		2					8
Actuated Green, G (s)		59.2	48.2	48.2	43.7	36.2	36.2		33.2			44.8
Effective Green, g (s)		59.2	48.2	48.2	43.7	36.2	36.2		33.2			44.8
Actuated g/C Ratio		0.39	0.32	0.32	0.29	0.24	0.24		0.22			0.30
Clearance Time (s)		3.5	5.8	5.8	3.5	5.8	5.8		5.8			5.8
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0		3.0			3.0
Lane Grp Cap (vph)		280	1137	509	138	854	371		723			146
v/s Ratio Prot		c0.25	0.40		0.07	0.35			c0.36			c0.07
v/s Ratio Perm		c0.51		0.03	0.36		0.11					0.30
v/c Ratio		1.91	1.24	0.08	1.49	1.45	0.45		1.63			1.23
Uniform Delay, d1		47.1	50.9	35.5	48.7	56.9	48.5		58.4			47.4
Progression Factor		1.00	1.00	1.00	1.29	1.15	1.13		0.64			1.00
Incremental Delay, d2		421.3	114.9	0.3	236.1	203.9	1.6		288.5			147.7
Delay (s)		468.4	165.8	35.8	298.8	269.1	56.5		326.1			195.1
Level of Service		F	F	D	F	F	E		F			F
Approach Delay (s)			241.9			250.2			326.1			
Approach LOS			F			F			F			

Intersection Summary			
HCM Average Control Delay	242.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.68		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	23.3
Intersection Capacity Utilization	155.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

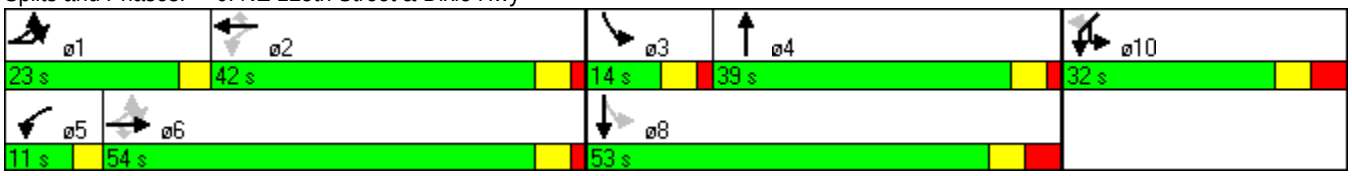
Movement	SBT	SBR	SWL2	SWL	SWR
Lane Configurations					
Volume (vph)	318	152	39	220	307
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Total Lost time (s)	8.2		8.2	8.2	8.2
Lane Util. Factor	*0.85		1.00	1.00	0.95
Frpb, ped/bikes	0.99		1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00
Frt	0.95		1.00	0.97	0.97
Flt Protected	1.00		0.95	0.96	1.00
Satd. Flow (prot)	2981		1770	1737	1717
Flt Permitted	1.00		0.95	0.96	1.00
Satd. Flow (perm)	2981		1770	1737	1717
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	147%	147%	147%	147%	147%
Adj. Flow (vph)	492	235	60	340	475
RTOR Reduction (vph)	0	0	0	0	0
Lane Group Flow (vph)	727	0	60	426	389
Confl. Peds. (#/hr)		21			
Turn Type			Split		Perm
Protected Phases	8		10	10	
Permitted Phases					10
Actuated Green, G (s)	44.8		23.8	23.8	23.8
Effective Green, g (s)	44.8		23.8	23.8	23.8
Actuated g/C Ratio	0.30		0.16	0.16	0.16
Clearance Time (s)	8.2		8.2	8.2	8.2
Vehicle Extension (s)	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	890		281	276	272
v/s Ratio Prot	0.24		0.03	c0.25	
v/s Ratio Perm					0.23
v/c Ratio	0.82		0.21	1.54	1.43
Uniform Delay, d1	48.8		54.9	63.1	63.1
Progression Factor	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.9		0.4	261.9	213.5
Delay (s)	54.7		55.3	325.0	276.6
Level of Service	D		E	F	F
Approach Delay (s)	82.4			285.0	
Approach LOS	F			F	

Intersection Summary

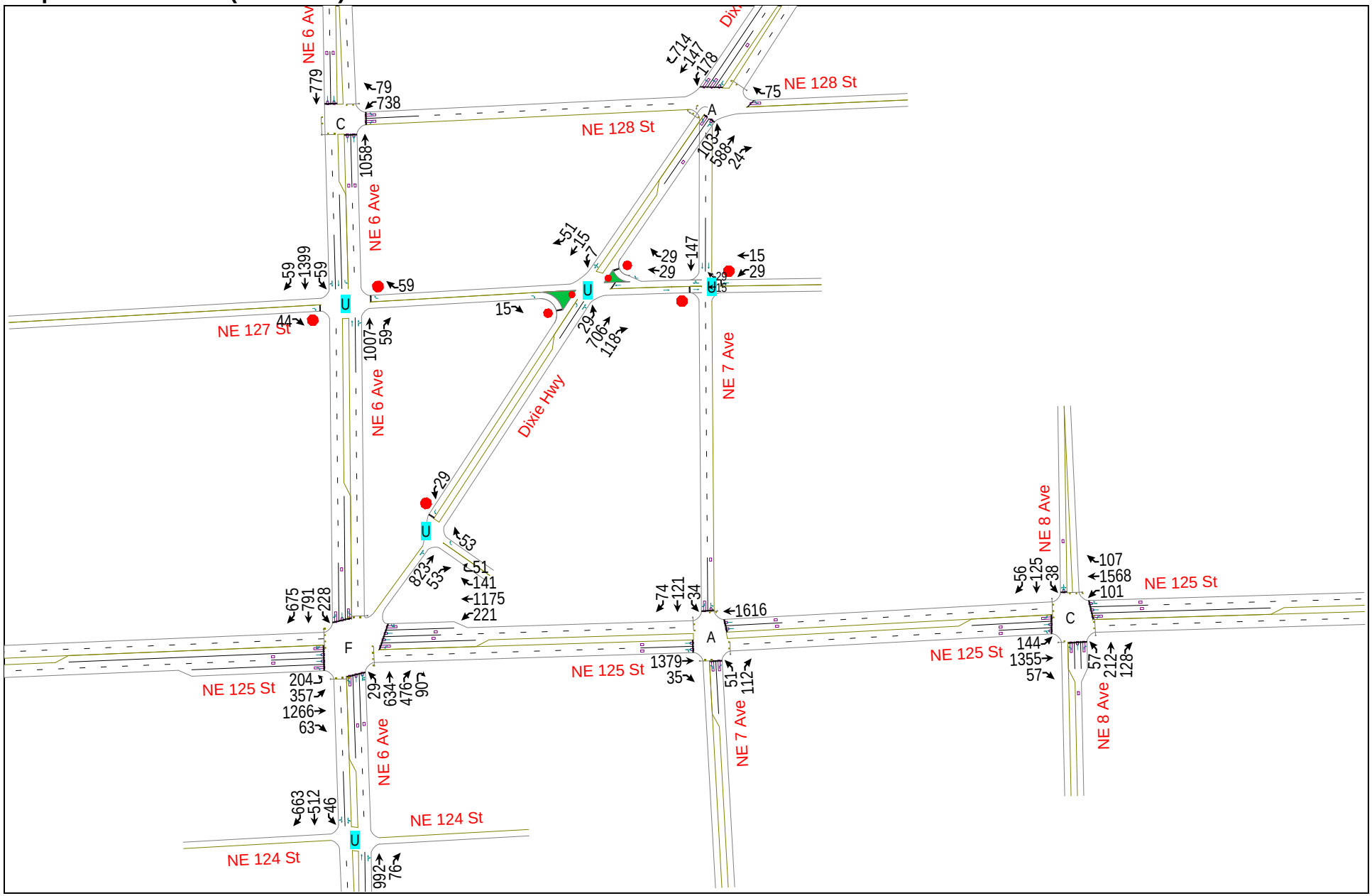
Phase Number	1	2	3	4	5	6	8	10
Movement	EBL	WBTL	SBL	NBT	WBL	EBTL	SBTL	SWL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag		
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	C-Max	None	None	None	C-Max	None	None
Maximum Split (s)	23	42	14	39	11	54	53	32
Maximum Split (%)	15.3%	28.0%	9.3%	26.0%	7.3%	36.0%	35.3%	21.3%
Minimum Split (s)	8.5	22.8	14	21.5	8.5	22.8	24.2	21.5
Yellow Time (s)	3.5	4	4	4	3.5	4	4	4
All-Red Time (s)	0	1.8	1.8	1.8	0	1.8	4.2	4.2
Minimum Initial (s)	5	7	5	7	5	7	12	12
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	2	1	2	2.5	2	1	2	2.5
Time Before Reduce (s)	2	1	2	2.5	2	1	2	2.5
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)								
Flash Dont Walk (s)								
Dual Entry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	127	0	42	56	127	138	42	95
End Time (s)	0	42	56	95	138	42	95	127
Yield/Force Off (s)	146.5	36.2	50.2	89.2	134.5	36.2	86.8	118.8
Yield/Force Off 170(s)	146.5	36.2	50.2	89.2	134.5	36.2	86.8	118.8
Local Start Time (s)	127	0	42	56	127	138	42	95
Local Yield (s)	146.5	36.2	50.2	89.2	134.5	36.2	86.8	118.8
Local Yield 170(s)	146.5	36.2	50.2	89.2	134.5	36.2	86.8	118.8

Intersection Summary	
Cycle Length	150
Control Type	Actuated-Coordinated
Natural Cycle	150
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	

Splits and Phases: 6: NE 125th Street & Dixie Hwy



Map - 2036 PM-Alt 2 (Preferred) **5/23/2012**



ALTERNATIVE 2 - PREFERRED - 2036 TRAFFIC VOLUMES AFTER REROUTING

Lane Group	EBT	WBT	NBL	NBR	SBT	SBR
Lane Configurations						
Volume (vph)	938	1099	35	76	82	50
Turn Type			custom	custom		Perm
Protected Phases	6!	2!			8	
Permitted Phases			2!	4		8
Detector Phase	6	2	2	4	8	8
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	19.1	19.1	19.1	24.4	24.4	24.4
Total Split (s)	101.0	101.0	101.0	24.4	24.6	24.6
Total Split (%)	67.3%	67.3%	67.3%	16.3%	16.4%	16.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.1	0.1	0.1	0.4	0.4	0.4
Lost Time Adjust (s)	-0.1	-0.1	-0.4	0.0	-0.4	0.0
Total Lost Time (s)	4.0	4.0	3.7	4.4	4.0	4.4
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	110.3	110.3	110.6	9.8	17.6	17.2
Actuated g/C Ratio	0.74	0.74	0.74	0.07	0.12	0.11
v/c Ratio	0.58	0.65	1.10	0.56	0.75	0.31
Control Delay	2.1	2.7	186.8	20.5	85.4	15.0
Queue Delay	0.2	0.1	0.0	0.0	0.0	0.0
Total Delay	2.3	2.8	186.8	20.5	85.4	15.0
LOS	A	A	F	C	F	B
Approach Delay	2.3	2.8			62.8	
Approach LOS	A	A			E	

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 40 (27%), Referenced to phase 2:NBWB and 6:EBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.10
Intersection Signal Delay: 10.0 Intersection LOS: A
Intersection Capacity Utilization 77.3% ICU Level of Service D
Analysis Period (min) 15
! Phase conflict between lane groups.

Splits and Phases: 6: NE 125 St & NE 7 Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	938	24	0	1099	0	35	0	76	23	82	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		3.7		4.4		4.0	4.4
Lane Util. Factor		0.95			0.95		1.00		1.00		1.00	1.00
Frpb, ped/bikes		0.99			1.00		1.00		0.97		1.00	0.98
Flpb, ped/bikes		1.00			1.00		1.00		1.00		1.00	1.00
Frt		1.00			1.00		1.00		0.85		1.00	0.85
Flt Protected		1.00			1.00		0.95		1.00		0.99	1.00
Satd. Flow (prot)		3504			3539		1770		1533		1842	1550
Flt Permitted		1.00			1.00		0.04		1.00		0.99	1.00
Satd. Flow (perm)		3504			3539		67		1533		1842	1550
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	147%	147%	147%	147%	147%	147%	147%	147%	147%	147%	147%	147%
Adj. Flow (vph)	0	1451	37	0	1701	0	54	0	118	36	127	77
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	110	0	0	68
Lane Group Flow (vph)	0	1487	0	0	1701	0	54	0	8	0	163	9
Confl. Peds. (#/hr)	13		48	48		13	4		9	9		4
Turn Type							custom		custom	Split		Perm
Protected Phases		6!			2!					8	8	
Permitted Phases							2!		4			8
Actuated Green, G (s)		110.1			110.1		110.1		9.8		17.2	17.2
Effective Green, g (s)		110.2			110.2		110.5		9.8		17.6	17.2
Actuated g/C Ratio		0.73			0.73		0.74		0.07		0.12	0.11
Clearance Time (s)		4.1			4.1		4.1		4.4		4.4	4.4
Vehicle Extension (s)		1.0			1.0		1.0		2.5		2.5	2.5
Lane Grp Cap (vph)		2574			2600		49		100		216	178
v/s Ratio Prot		0.42			0.48						c0.09	
v/s Ratio Perm							c0.80		c0.01			0.01
v/c Ratio		0.58			0.65		1.10		0.08		0.75	0.05
Uniform Delay, d1		9.2			10.2		19.8		65.9		64.1	59.1
Progression Factor		0.19			0.17		1.00		1.00		1.00	1.00
Incremental Delay, d2		0.2			0.8		159.9		0.2		13.3	0.1
Delay (s)		1.9			2.5		179.6		66.1		77.4	59.2
Level of Service		A			A		F		E		E	E
Approach Delay (s)		1.9			2.5			101.7			71.5	
Approach LOS		A			A			F			E	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.1
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		

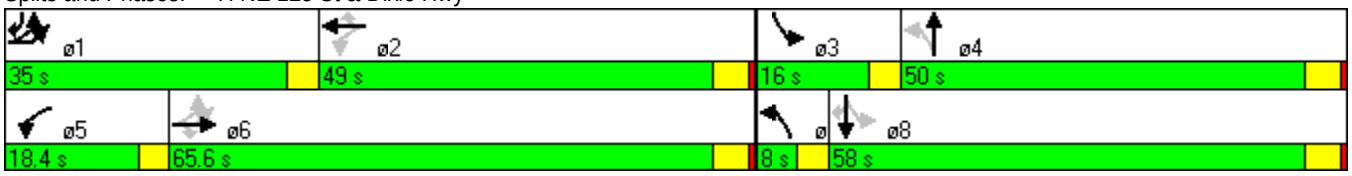
! Phase conflict between lane groups.
c Critical Lane Group

Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	139	243	861	43	150	799	96	20	431	155	538	459
Turn Type	pm+pt	pm+pt		Perm	pm+pt		Perm	pm+pt		pm+pt		pm+ov
Protected Phases	1	1	6		5	2		7	4	3	8	1
Permitted Phases	6	6		6	2		2	4		8		8
Detector Phase	1	1	6	6	5	2	2	7	4	3	8	1
Switch Phase												
Minimum Initial (s)	5.0	5.0	7.0	7.0	5.0	7.0	7.0	4.0	7.0	7.0	7.0	5.0
Minimum Split (s)	9.5	9.5	22.8	22.8	8.5	22.8	22.8	8.0	24.2	15.0	24.2	9.5
Total Split (s)	35.0	35.0	65.6	65.6	18.4	49.0	49.0	8.0	50.0	16.0	58.0	35.0
Total Split (%)	23.3%	23.3%	43.7%	43.7%	12.3%	32.7%	32.7%	5.3%	33.3%	10.7%	38.7%	23.3%
Yellow Time (s)	3.5	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	3.5	4.0	3.5
All-Red Time (s)	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	0.0	1.0	0.0
Lost Time Adjust (s)	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	3.5	5.0	5.0	3.5	5.0	5.0	3.5	5.0	3.5	5.0	3.5
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None
Act Effct Green (s)		80.5	60.6	60.6	60.4	44.0	44.0	51.0	45.0	62.5	56.2	89.2
Actuated g/C Ratio		0.54	0.40	0.40	0.40	0.29	0.29	0.34	0.30	0.42	0.37	0.59
v/c Ratio		1.39	0.93	0.10	1.01	1.19	0.44	0.30	1.31	1.22	1.19	0.77
Control Delay		225.4	55.1	12.8	111.6	132.9	36.9	34.2	186.8	169.9	141.0	28.2
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		225.4	55.1	12.8	111.6	132.9	36.9	34.2	186.8	169.9	141.0	28.2
LOS		F	E	B	F	F	D	C	F	F	F	C
Approach Delay			104.3			118.3			183.1		100.0	
Approach LOS			F			F			F		F	

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 63 (42%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.39
Intersection Signal Delay: 121.7 Intersection LOS: F
Intersection Capacity Utilization 127.8% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 7: NE 125 St & Dixie Hwy



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
Lane Configurations												
Volume (vph)	139	243	861	43	150	799	96	35	20	431	324	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.5	5.0	5.0	3.5	5.0	5.0		3.5	5.0		
Lane Util. Factor		1.00	0.95	1.00	1.00	0.95	1.00		1.00	0.95		
Frpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.97		1.00	0.98		
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		
Frt		1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.93		
Flt Protected		0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00		
Satd. Flow (prot)		1770	3539	1583	1769	3539	1541		1769	3209		
Flt Permitted		0.09	1.00	1.00	0.09	1.00	1.00		0.09	1.00		
Satd. Flow (perm)		162	3539	1583	175	3539	1541		161	3209		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	147%	147%	147%	147%	147%	147%	147%	147%	147%	147%	147%	147%
Adj. Flow (vph)	215	376	1332	67	232	1236	149	54	31	667	501	94
RTOR Reduction (vph)	0	0	0	25	0	0	9	0	0	4	0	0
Lane Group Flow (vph)	0	591	1332	42	232	1236	194	0	31	1258	0	0
Confl. Peds. (#/hr)	14				37		14		21		20	
Turn Type	pm+pt	pm+pt		Perm	pm+pt		Perm		pm+pt			
Protected Phases	1	1	6		5	2			7	4		
Permitted Phases	6	6		6	2		2		4			
Actuated Green, G (s)		77.6	59.2	59.2	57.5	42.6	42.6		49.1	46.4		
Effective Green, g (s)		77.6	59.2	59.2	57.5	42.6	42.6		49.1	46.4		
Actuated g/C Ratio		0.52	0.39	0.39	0.38	0.28	0.28		0.33	0.31		
Clearance Time (s)		3.5	5.0	5.0	3.5	5.0	5.0		3.5	5.0		
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)		421	1397	625	225	1005	438		82	993		
v/s Ratio Prot		c0.29	0.38		0.10	0.35			0.01	0.39		
v/s Ratio Perm		c0.43		0.03	0.29		0.13		0.12			
v/c Ratio		1.40	0.95	0.07	1.03	1.23	0.44		0.38	1.27		
Uniform Delay, d1		48.6	44.1	28.2	44.8	53.7	44.0		40.6	51.8		
Progression Factor		1.00	1.00	1.00	1.39	0.84	0.85		1.00	1.00		
Incremental Delay, d2		195.5	15.3	0.2	60.4	110.2	2.4		2.9	128.1		
Delay (s)		244.1	59.3	28.4	122.6	155.4	39.7		43.5	179.9		
Level of Service		F	E	C	F	F	D		D	F		
Approach Delay (s)			113.2			136.8				176.6		
Approach LOS			F			F				F		

Intersection Summary			
HCM Average Control Delay	128.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.28		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	127.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL	SBT	SBR
Lane Configurations			
Volume (vph)	155	538	459
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	3.5	5.0	3.5
Lane Util. Factor	1.00	*1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00
Frt	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1560
Flt Permitted	0.08	1.00	1.00
Satd. Flow (perm)	149	1863	1560
Peak-hour factor, PHF	0.95	0.95	0.95
Growth Factor (vph)	147%	147%	147%
Adj. Flow (vph)	240	832	710
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	240	832	710
Confl. Peds. (#/hr)	20		21
Turn Type	pm+pt		pm+ov
Protected Phases	3	8	1
Permitted Phases	8		8
Actuated Green, G (s)	62.4	56.2	87.7
Effective Green, g (s)	62.4	56.2	87.7
Actuated g/C Ratio	0.42	0.37	0.58
Clearance Time (s)	3.5	5.0	3.5
Vehicle Extension (s)	3.0	3.0	3.0
Lane Grp Cap (vph)	197	698	912
v/s Ratio Prot	c0.10	0.45	0.16
v/s Ratio Perm	c0.40		0.29
v/c Ratio	1.22	1.19	0.78
Uniform Delay, d1	44.6	46.9	23.7
Progression Factor	1.00	1.00	1.00
Incremental Delay, d2	135.3	100.2	4.2
Delay (s)	179.8	147.1	28.0
Level of Service	F	F	C
Approach Delay (s)		104.1	
Approach LOS		F	

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	98	922	69	1067	39	144	87	26	85
Turn Type	pm+pt		pm+pt		Perm		custom	Perm	
Protected Phases	1	6	5	2		4			8
Permitted Phases	6		2		4		2	8	
Detector Phase	1	6	5	2	4	4	2	8	8
Switch Phase									
Minimum Initial (s)	5.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	8.5	23.6	8.5	23.6	25.7	25.7	23.6	25.7	25.7
Total Split (s)	20.0	95.7	16.3	92.0	38.0	38.0	92.0	38.0	38.0
Total Split (%)	13.3%	63.8%	10.9%	61.3%	25.3%	25.3%	61.3%	25.3%	25.3%
Yellow Time (s)	3.5	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	0.6	0.0	0.6	0.7	0.7	0.6	0.7	0.7
Lost Time Adjust (s)	0.5	-0.6	0.5	-0.6	-0.7	-0.7	-0.6	-0.7	-0.7
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag			Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes		
Recall Mode	None	C-Max	None	C-Max	None	None	C-Max	None	None
Act Effct Green (s)	112.3	102.2	103.6	96.9	29.2	29.2	96.9		29.2
Actuated g/C Ratio	0.75	0.68	0.69	0.65	0.19	0.19	0.65		0.19
v/c Ratio	0.72	0.62	0.47	0.79	0.46	0.61	0.13		0.99
Control Delay	53.8	9.8	13.3	24.0	63.9	62.2	4.0		111.7
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay	53.8	9.9	13.3	24.0	63.9	62.2	4.0		111.7
LOS	D	A	B	C	E	E	A		F
Approach Delay		14.0		23.4		43.6			111.7
Approach LOS		B		C		D			F

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 36 (24%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 26.6 Intersection LOS: C
Intersection Capacity Utilization 95.4% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 8: NE 125 St & NE 8 Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	922	39	69	1067	73	39	144	87	26	85	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.97		0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1770	3502		1770	3467		1748	1863	1531		1761	
Flt Permitted	0.06	1.00		0.13	1.00		0.37	1.00	1.00		0.65	
Satd. Flow (perm)	107	3502		233	3467		672	1863	1531		1156	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	147%	147%	147%	147%	147%	147%	147%	147%	147%	147%	147%	147%
Adj. Flow (vph)	152	1427	60	107	1651	113	60	223	135	40	132	59
RTOR Reduction (vph)	0	2	0	0	3	0	0	0	37	0	9	0
Lane Group Flow (vph)	152	1485	0	107	1761	0	60	223	98	0	222	0
Confl. Peds. (#/hr)	39		23	23		39	14		9	9		14
Turn Type	pm+pt			pm+pt			Perm		custom	Perm		
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6			2			4		2	8		
Actuated Green, G (s)	112.2	101.6		103.4	96.3		28.5	28.5	96.3		28.5	
Effective Green, g (s)	111.7	102.2		102.4	96.9		29.2	29.2	96.9		29.2	
Actuated g/C Ratio	0.74	0.68		0.68	0.65		0.19	0.19	0.65		0.19	
Clearance Time (s)	3.5	4.6		3.5	4.6		4.7	4.7	4.6		4.7	
Vehicle Extension (s)	2.0	1.0		2.0	1.0		2.5	2.5	1.0		2.5	
Lane Grp Cap (vph)	212	2386		227	2240		131	363	989		225	
v/s Ratio Prot	c0.06	0.42		0.02	c0.51			0.12				
v/s Ratio Perm	0.48			0.30			0.09		0.06		c0.19	
v/c Ratio	0.72	0.62		0.47	0.79		0.46	0.61	0.10		0.99	
Uniform Delay, d1	37.0	13.2		11.8	19.1		53.4	55.2	10.0		60.2	
Progression Factor	1.42	0.61		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	7.8	1.0		0.6	2.9		1.8	2.6	0.2		55.9	
Delay (s)	60.3	9.2		12.3	22.0		55.2	57.9	10.2		116.1	
Level of Service	E	A		B	C		E	E	B		F	
Approach Delay (s)		13.9			21.4			42.1			116.1	
Approach LOS		B			C			D			F	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBR	NBL	NBT	SBL	SBT	SBR2
Lane Configurations						
Volume (vph)	51	70	400	121	100	486
Turn Type	custom	pm+pt		pm+pt		Prot
Protected Phases		5	2	1	6	6
Permitted Phases	8	2		6		
Detector Phase	8	5	2	1	6	6
Switch Phase						
Minimum Initial (s)	3.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	7.0	8.0	20.0	8.0	20.0	20.0
Total Split (s)	12.0	10.0	80.0	8.0	78.0	78.0
Total Split (%)	12.0%	10.0%	80.0%	8.0%	78.0%	78.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag		Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	8.0	82.0	76.0		78.0	74.0
Actuated g/C Ratio	0.08	0.82	0.76		0.78	0.74
v/c Ratio	0.15	0.12	0.46		0.44	0.33
Control Delay	0.6	1.7	5.6		3.9	0.7
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	0.6	1.7	5.6		3.9	0.7
LOS	A	A	A		A	A
Approach Delay			5.0		1.7	
Approach LOS			A		A	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 86 (86%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 40
Control Type: Pretimed
Maximum v/c Ratio: 0.46
Intersection Signal Delay: 3.0 Intersection LOS: A
Intersection Capacity Utilization Err% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 28: NE 128 St & Dixie Hwy

Movement	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations							
Volume (vph)	51	70	400	16	121	100	486
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor	1.00	1.00	1.00			1.00	0.88
Frt	0.86	1.00	0.99			1.00	0.85
Flt Protected	1.00	0.95	1.00			0.97	1.00
Satd. Flow (prot)	1611	1770	1852			1813	2787
Flt Permitted	1.00	0.56	1.00			0.51	1.00
Satd. Flow (perm)	1611	1034	1852			955	2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	147%	147%	147%	147%	147%	147%	147%
Adj. Flow (vph)	79	108	619	25	187	155	752
RTOR Reduction (vph)	73	0	1	0	0	0	196
Lane Group Flow (vph)	6	108	643	0	0	342	556
Turn Type	custom	pm+pt			pm+pt		Prot
Protected Phases		5	2		1	6	6
Permitted Phases	8	2			6		
Actuated Green, G (s)	8.0	82.0	76.0			78.0	74.0
Effective Green, g (s)	8.0	82.0	76.0			78.0	74.0
Actuated g/C Ratio	0.08	0.82	0.76			0.78	0.74
Clearance Time (s)	4.0	4.0	4.0			4.0	4.0
Lane Grp Cap (vph)	129	892	1408			779	2062
v/s Ratio Prot		c0.01	c0.35			c0.02	0.20
v/s Ratio Perm	c0.00	0.09				0.32	
v/c Ratio	0.05	0.12	0.46			0.44	0.27
Uniform Delay, d1	42.5	1.7	4.4			3.7	4.2
Progression Factor	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	0.7	0.3	1.1			1.8	0.3
Delay (s)	43.2	2.0	5.5			5.5	4.5
Level of Service	D	A	A			A	A
Approach Delay (s)			5.0			4.8	
Approach LOS			A			A	

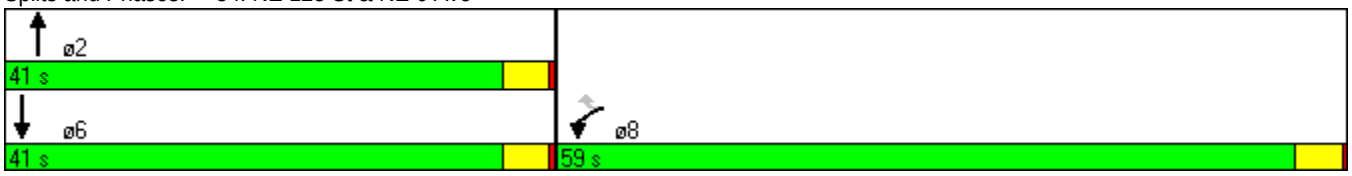
Intersection Summary			
HCM Average Control Delay	6.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBR	NBT	SBT
Lane Configurations				
Volume (vph)	502	54	720	530
Turn Type		Perm		
Protected Phases	8		2	6
Permitted Phases		8		
Detector Phase	8	8	2	6
Switch Phase				
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0
Total Split (s)	59.0	59.0	41.0	41.0
Total Split (%)	59.0%	59.0%	41.0%	41.0%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	Max	Max
Act Effct Green (s)	55.0	55.0	37.0	37.0
Actuated g/C Ratio	0.55	0.55	0.37	0.37
v/c Ratio	0.80	0.10	0.85	0.63
Control Delay	25.1	8.2	36.6	28.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	25.1	8.2	36.6	28.4
LOS	C	A	D	C
Approach Delay	23.5		36.6	28.4
Approach LOS	C		D	C

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 20 (20%), Referenced to phase 8:WBL, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 30.2 Intersection LOS: C
Intersection Capacity Utilization 76.8% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 34: NE 128 St & NE 6 Ave



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	502	54	720	0	0	530
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	1.00	1.00	0.95			0.95
Frt	1.00	0.85	1.00			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1770	1583	3539			3539
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	1770	1583	3539			3539
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	147%	147%	147%	147%	147%	147%
Adj. Flow (vph)	777	84	1114	0	0	820
RTOR Reduction (vph)	0	8	0	0	0	0
Lane Group Flow (vph)	777	76	1114	0	0	820
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	55.0	55.0	37.0			37.0
Effective Green, g (s)	55.0	55.0	37.0			37.0
Actuated g/C Ratio	0.55	0.55	0.37			0.37
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	974	871	1309			1309
v/s Ratio Prot	c0.44		c0.31			0.23
v/s Ratio Perm		0.05				
v/c Ratio	0.80	0.09	0.85			0.63
Uniform Delay, d1	18.0	10.6	29.0			25.8
Progression Factor	0.97	0.94	1.00			1.00
Incremental Delay, d2	6.6	0.2	7.1			2.3
Delay (s)	24.2	10.1	36.1			28.1
Level of Service	C	B	D			C
Approach Delay (s)	22.8		36.1			28.1
Approach LOS	C		D			C

Intersection Summary			
HCM Average Control Delay	29.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	98	922	69	1067	39	144	87	26	85
Turn Type	pm+pt		pm+pt		Perm		custom	Perm	
Protected Phases	1	6	5	2		4			8
Permitted Phases	6		2		4		2	8	
Detector Phase	1	6	5	2	4	4	2	8	8
Switch Phase									
Minimum Initial (s)	5.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	8.5	23.6	8.5	23.6	25.7	25.7	23.6	25.7	25.7
Total Split (s)	20.0	99.0	14.0	93.0	37.0	37.0	93.0	37.0	37.0
Total Split (%)	13.3%	66.0%	9.3%	62.0%	24.7%	24.7%	62.0%	24.7%	24.7%
Yellow Time (s)	3.5	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	0.6	0.0	0.6	0.7	0.7	0.6	0.7	0.7
Lost Time Adjust (s)	0.5	-0.6	0.5	-0.6	-0.7	-0.7	-0.6	-0.7	-0.7
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag			Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes		
Recall Mode	None	C-Max	None	C-Max	None	None	C-Max	None	None
Act Effct Green (s)	118.2	112.1	117.1	111.6	20.4	20.4	111.6		20.4
Actuated g/C Ratio	0.79	0.75	0.78	0.74	0.14	0.14	0.74		0.14
v/c Ratio	0.36	0.42	0.21	0.51	0.53	0.65	0.09		1.02
Control Delay	6.6	3.6	4.8	9.4	81.0	72.8	1.5		132.4
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay	6.6	3.6	4.8	9.4	81.0	72.8	1.5		132.4
LOS	A	A	A	A	F	E	A		F
Approach Delay		3.9		9.1		51.0			132.4
Approach LOS		A		A		D			F

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 37 (25%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 18.2 Intersection LOS: B
Intersection Capacity Utilization 77.2% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 8: NE 125 St & NE 8 Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	922	39	69	1067	73	39	144	87	26	85	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00		1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.97		0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00	1.00		1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1770	3502		1765	3467		1743	1863	1531		1760	
Flt Permitted	0.17	1.00		0.23	1.00		0.34	1.00	1.00		0.66	
Satd. Flow (perm)	321	3502		422	3467		624	1863	1531		1176	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%	109%
Adj. Flow (vph)	112	1058	45	79	1224	84	45	165	100	30	98	44
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	26	0	10	0
Lane Group Flow (vph)	112	1102	0	79	1306	0	45	165	74	0	162	0
Confl. Peds. (#/hr)	39		23	23		39	14		9	9		14
Turn Type	pm+pt			pm+pt			Perm		custom	Perm		
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6			2			4		2	8		
Actuated Green, G (s)	118.0	111.5		117.0	111.0		19.7	19.7	111.0		19.7	
Effective Green, g (s)	117.0	112.1		116.0	111.6		20.4	20.4	111.6		20.4	
Actuated g/C Ratio	0.78	0.75		0.77	0.74		0.14	0.14	0.74		0.14	
Clearance Time (s)	3.5	4.6		3.5	4.6		4.7	4.7	4.6		4.7	
Vehicle Extension (s)	2.0	1.0		2.0	1.0		2.5	2.5	1.0		2.5	
Lane Grp Cap (vph)	308	2617		376	2579		85	253	1139		160	
v/s Ratio Prot	c0.01	0.31		0.01	c0.38			0.09				
v/s Ratio Perm	0.27			0.16			0.07		0.05		c0.14	
v/c Ratio	0.36	0.42		0.21	0.51		0.53	0.65	0.07		1.02	
Uniform Delay, d1	5.8	7.0		4.8	7.9		60.3	61.4	5.2		64.8	
Progression Factor	1.01	0.41		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.2	0.5		0.1	0.7		4.5	5.3	0.1		75.3	
Delay (s)	6.1	3.3		4.9	8.6		64.8	66.7	5.3		140.1	
Level of Service	A	A		A	A		E	E	A		F	
Approach Delay (s)		3.6			8.4			46.6			140.1	
Approach LOS		A			A			D			F	

Intersection Summary			
HCM Average Control Delay	17.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBR	NBL	NBT	SBL	SBT	SBR2
Lane Configurations						
Volume (vph)	51	70	400	121	100	486
Turn Type	custom	pm+pt		pm+pt		Prot
Protected Phases		5	2	1	6	6
Permitted Phases	8	2		6		
Detector Phase	8	5	2	1	6	6
Switch Phase						
Minimum Initial (s)	3.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	7.0	8.0	20.0	8.0	20.0	20.0
Total Split (s)	16.0	15.0	76.0	8.0	69.0	69.0
Total Split (%)	16.0%	15.0%	76.0%	8.0%	69.0%	69.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag		Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	12.0	80.0	72.0		69.0	65.0
Actuated g/C Ratio	0.12	0.80	0.72		0.69	0.65
v/c Ratio	0.09	0.08	0.36		0.31	0.28
Control Delay	0.3	2.3	6.1		4.4	0.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	0.3	2.3	6.1		4.4	0.9
LOS	A	A	A		A	A
Approach Delay			5.6		2.0	
Approach LOS			A		A	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 40
Control Type: Pretimed
Maximum v/c Ratio: 0.36
Intersection Signal Delay: 3.3 Intersection LOS: A
Intersection Capacity Utilization Err% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 28: NE 128 St & Dixie Hwy

Movement	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations							
Volume (vph)	51	70	400	16	121	100	486
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor	1.00	1.00	1.00			1.00	0.88
Frt	0.86	1.00	0.99			1.00	0.85
Flt Protected	1.00	0.95	1.00			0.97	1.00
Satd. Flow (prot)	1611	1770	1852			1813	2787
Flt Permitted	1.00	0.60	1.00			0.63	1.00
Satd. Flow (perm)	1611	1121	1852			1168	2787
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	109%	109%	109%	109%	109%	109%	109%
Adj. Flow (vph)	59	80	459	18	139	115	558
RTOR Reduction (vph)	52	0	1	0	0	0	195
Lane Group Flow (vph)	7	80	476	0	0	254	363
Turn Type	custom	pm+pt			pm+pt		Prot
Protected Phases		5	2		1	6	6
Permitted Phases	8	2			6		
Actuated Green, G (s)	12.0	80.0	72.0			69.0	65.0
Effective Green, g (s)	12.0	80.0	72.0			69.0	65.0
Actuated g/C Ratio	0.12	0.80	0.72			0.69	0.65
Clearance Time (s)	4.0	4.0	4.0			4.0	4.0
Lane Grp Cap (vph)	193	968	1333			832	1812
v/s Ratio Prot		0.01	c0.26			c0.01	0.13
v/s Ratio Perm	c0.00	0.06				0.20	
v/c Ratio	0.04	0.08	0.36			0.31	0.20
Uniform Delay, d1	38.9	2.1	5.3			6.1	7.0
Progression Factor	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	0.4	0.2	0.7			0.9	0.2
Delay (s)	39.2	2.3	6.0			7.0	7.3
Level of Service	D	A	A			A	A
Approach Delay (s)			5.5			7.2	
Approach LOS			A			A	

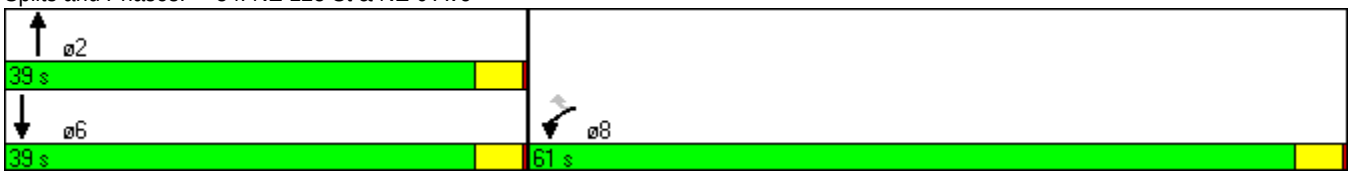
Intersection Summary			
HCM Average Control Delay	7.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBR	NBT	SBT
Lane Configurations				
Volume (vph)	502	54	720	530
Turn Type		Perm		
Protected Phases	8		2	6
Permitted Phases		8		
Detector Phase	8	8	2	6
Switch Phase				
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0
Total Split (s)	61.0	61.0	39.0	39.0
Total Split (%)	61.0%	61.0%	39.0%	39.0%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	Max	Max
Act Effct Green (s)	57.0	57.0	35.0	35.0
Actuated g/C Ratio	0.57	0.57	0.35	0.35
v/c Ratio	0.57	0.07	0.67	0.49
Control Delay	15.7	3.3	30.8	27.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	15.7	3.3	30.8	27.2
LOS	B	A	C	C
Approach Delay	14.5		30.8	27.2
Approach LOS	B		C	C

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 20 (20%), Referenced to phase 8:WBL, Start of Green
Natural Cycle: 40
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 24.7 Intersection LOS: C
Intersection Capacity Utilization 58.7% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 34: NE 128 St & NE 6 Ave



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	502	54	720	0	0	530
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	1.00	1.00	0.95			0.95
Frt	1.00	0.85	1.00			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1770	1583	3539			3539
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	1770	1583	3539			3539
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	109%	109%	109%	109%	109%	109%
Adj. Flow (vph)	576	62	826	0	0	608
RTOR Reduction (vph)	0	20	0	0	0	0
Lane Group Flow (vph)	576	42	826	0	0	608
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	57.0	57.0	35.0			35.0
Effective Green, g (s)	57.0	57.0	35.0			35.0
Actuated g/C Ratio	0.57	0.57	0.35			0.35
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	1009	902	1239			1239
v/s Ratio Prot	c0.33		c0.23			0.17
v/s Ratio Perm		0.03				
v/c Ratio	0.57	0.05	0.67			0.49
Uniform Delay, d1	13.7	9.5	27.6			25.5
Progression Factor	0.94	0.76	1.00			1.00
Incremental Delay, d2	2.3	0.1	2.9			1.4
Delay (s)	15.2	7.3	30.4			26.9
Level of Service	B	A	C			C
Approach Delay (s)	14.4		30.4			26.9
Approach LOS	B		C			C

Intersection Summary			
HCM Average Control Delay	24.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group