

cityofnovi.org

CITY of NOVI CITY COUNCIL

Agenda Item G
November 23, 2009

SUBJECT: Approval of Traffic Control Orders 09-14 for the implementation of 35 mph speed limit on Lewis Drive from Cabot Drive to Haggerty Road, and 09-15 for the implementation of 30 mph speed limit on Cabot Drive from 12 Mile Road to 1000 feet north of 12 Mile and implementation of 35 mph speed limit on Cabot Drive from 1000 feet north of 12 Mile to 13 Mile.

SUBMITTING DEPARTMENT: ^{R4} Department of Public Services, Engineering Division ^{B1C}
 Police Department

CITY MANAGER APPROVAL: 

BACKGROUND INFORMATION:

Speed limits are governed by the Michigan Vehicle Code (MVC) and the Michigan Manual of Traffic Control Devices (MMUTCD). The MVC provides a standard "prima facie" speed based on the number of access points on a roadway. The MVC allows the local agency to adjust the speed limit based on a traffic engineering study. The MMUTCD requires an engineering study to determine the speed limit in accordance with established traffic engineering practices and that the limit must be adopted by the local agency in the form of a traffic control order. The engineering study identifies the 85th percentile speed, or the speed at which 85 percent of the traffic is traveling at or below that speed. Drivers that are ticketed for violating a speed limit can challenge the ticket if a valid traffic control order (supported by an engineering study) is not on file.

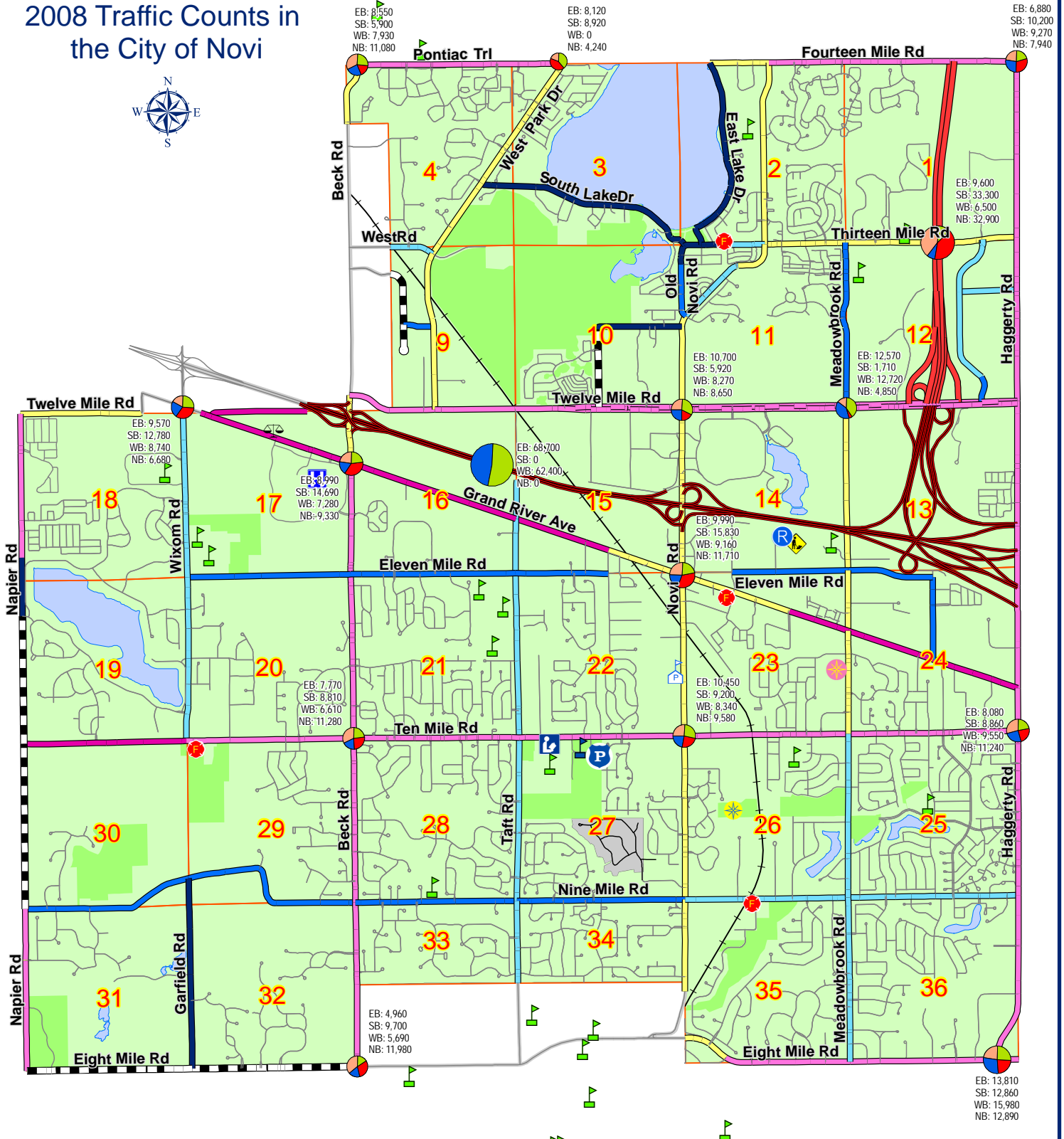
The review of the speed limit on Cabot Drive and Lewis Drive was initiated by a complaint from a motorist who works in Haggerty Corridor Corporate Park. It was determined that the existing 25 mph speed limit was not supported by an engineering study or a traffic control order. Therefore, a speed limit study was conducted by the City's traffic consultant, Birchler Arroyo. The study recommends a speed limit of 35 miles per hour on Lewis Drive, and on Cabot Drive from 1000 feet north of 12 Mile Road to 13 Mile Road. A speed limit of 30 miles per hour is recommended for Cabot Drive from 12 Mile Road to 1000 feet north of 12 Mile Road due to the existing roadway geometrics (see Birchler's October 29, 2009 study, attached).

RECOMMENDED ACTION: Approval of Traffic Control Orders 09-14 for the implementation of 35 mph speed limit on Lewis Drive from Cabot Drive to Haggerty Road, and 09-15 for the implementation of 30 mph speed limit on Cabot Drive from 12 Mile Road to 1000 feet north of 12 Mile and implementation of 35 mph speed limit on Cabot Drive from 1000 feet north of 12 Mile to 13 Mile.

	1	2	Y	N
Mayor Landry				
Mayor Pro Tem Gatt				
Council Member Crawford				
Council Member Fischer				

	1	2	Y	N
Council Member Margolis				
Council Member Mutch				
Council Member Staudt				

Speed Limits & Selected 2008 Traffic Counts in the City of Novi



Map Author: Christopher Blough, GIS Manager
 Date: November 18, 2009
 Project: Speed Limits and Selected 2008 Traffic Counts
 Version #: 1.0

MAP INTERPRETATION NOTICE

Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent, accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.

Map Legend

- | | | | |
|-----------------------|--|----------------------------|--------------------|
| Traffic Counts | | Posted Speed Limits | |
| | Traffic Volume is Proportionate to Size of Pie | | Expressway/Ramp 35 |
| | = 270,000 ADT | | Unposted (55 MPH) |
| | Eastbound Traffic | | 55 |
| | Southbound Traffic | | 50 |
| | Westbound Traffic | | 40 |
| | Northbound Traffic | | 25 |
| | | | Residential 25 |
| | | | Railroad |
| | | | Parks |



City of Novi
 Geographic Information Services
 Department of Information Technology
 45175 W Ten Mile Rd
 Novi, MI 48375
 cityofnovi.org



1 inch = 4,400 feet

CITY OF NOVI
TRAFFIC CONTROL ORDER

X SPEED
PARKING
OTHER

DATE OF ORDER: November 13, 2009

CONTROL NUMBER: 09-15

PURSUANT TO CHAPTER NO. 33 OF THE CODE OF ORDINANCES OF THE CITY OF NOVI, MICHIGAN, SAME BEING THE UNIFORM TRAFFIC CODE FOR CITIES, TOWNSHIPS AND VILLAGES OF MICHIGAN AND IN THE INTEREST OF PUBLIC SAFETY AND CONVENIENCE THE FOLLOWING TRAFFIC CONTROL ORDER IS HEREBY ISSUED BY BRIAN COBURN, SENIOR CIVIL ENGINEER, DULY AUTHORIZED AS TRAFFIC ENGINEER, BY SEC. 33.141 OF THE AFORESAID CHAPTER.

ISSUANCE OF THIS TRAFFIC CONTROL ORDER WAS PRECEDED BY STUDY AND INVESTIGATION OF TRAFFIC CONDITIONS ON THE FOLLOWING PUBLIC ROAD OR ROADS IN THE CITY OF NOVI, MICHIGAN.

CABOT DR

AND AFTER SAID INVESTIGATION, IT IS HEREBY ORDERED AND DIRECTED THAT THE DEPARTMENT OF PUBLIC SERVICES ERECT AND MAINTAIN THE SPEED LIMIT SIGN (S) IN ACCORDANCE WITH THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AS REQUIRED BY SEC. 33.217 OF THE AFORESAID CHAPTER, SAID SIGNS TO GIVE NOTICE OF THE FOLLOWING DETERMINATION:

SPEED LIMIT FOR CABOT DR NORTH OF TWELVE MILE THE FIRST 1000 FEET TO BE 30 MPH AND 1000 FEET SOUTH OF 13 MILE TO BE 35 MPH



TRAFFIC ENGINEER-BRIAN COBURN

DATED: 11/13/2009

APPROVED BY CITY COUNCIL

TRAFFIC CONTROL ORDER NUMBER 09-15 HAVING BEEN PRESENTED TO THE COUNCIL OF THE CITY OF NOVI, MICHIGAN FOR STUDY AND APPROVAL, IS HEREBY APPROVED AND IT IS HEREBY ORDEED AND DIRECTED THAT THIS ORDER BE FILED IN THE OFFICE OF THE CITY CLERK AND A COP THEREOF IN THE OFFICE OF THE CHIEF OF POLICE OF SAID CITY.

IT IS FURTHER ORDERED AND DIRECTED THAT THIS ORDER SHALL BECOME EFFECTIVE UPON BEING FILED WITH THE CLERK AND UPON ERECTION OF ADEQUATE SIGNS GIVING NOTICE OF THE EXISTENCE OF AFORESAID,

SPEED LIMIT FOR CABOT DR NORTH OF TWELVE MILE THE FIRST 1000 FEET TO BE 30 MPH AND 1000 FEET SOUTH OF 13 MILE TO BE 35 MPH

ADOPTED AT THE REGULAR MEETING
OF COUNCIL ON _____

BY: _____
Mayor - David Landry

By: _____
City Clerk - Maryanne Cornelius

CITY OF NOVI
TRAFFIC CONTROL ORDER

SPEED
 PARKING
 OTHER

DATE OF ORDER: November 13, 2009

CONTROL NUMBER: 09-14

PURSUANT TO CHAPTER NO. 33 OF THE CODE OF ORDINANCES OF THE CITY OF NOVI, MICHIGAN, SAME BEING THE UNIFORM TRAFFIC CODE FOR CITIES, TOWNSHIPS AND VILLAGES OF MICHIGAN AND IN THE INTEREST OF PUBLIC SAFETY AND CONVENIENCE THE FOLLOWING TRAFFIC CONTROL ORDER IS HEREBY ISSUED BY BRIAN COBURN, SENIOR CIVIL ENGINEER, DULY AUTHORIZED AS TRAFFIC ENGINEER, BY SEC. 33.141 OF THE AFORESAID CHAPTER.

ISSUANCE OF THIS TRAFFIC CONTROL ORDER WAS PRECEDED BY STUDY AND INVESTIGATION OF TRAFFIC CONDITIONS ON THE FOLLOWING PUBLIC ROAD OR ROADS IN THE CITY OF NOVI, MICHIGAN.

LEWIS DR

AND AFTER SAID INVESTIGATION, IT IS HEREBY ORDERED AND DIRECTED THAT THE DEPARTMENT OF PUBLIC SERVICES ERECT AND MAINTAIN THE SPEED LIMIT SIGN (S) IN ACCORDANCE WITH THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AS REQUIRED BY SEC. 33.217 OF THE AFORESAID CHAPTER, SAID SIGNS TO GIVE NOTICE OF THE FOLLOWING DETERMINATION:

SPEED LIMIT FOR LEWIS DR WEST OF HAGGERTY TO EAST OF CABOT DR TO 35 MPH



TRAFFIC ENGINEER-BRIAN COBURN

DATED: 11/13/2009

APPROVED BY CITY COUNCIL

TRAFFIC CONTROL ORDER NUMBER 09-14 HAVING BEEN PRESENTED TO THE COUNCIL OF THE CITY OF NOVI, MICHIGAN FOR STUDY AND APPROVAL, IS HEREBY APPROVED AND IT IS HEREBY ORDEED AND DIRECTED THAT THIS ORDER BE FILED IN THE OFFICE OF THE CITY CLERK AND A COP THEREOF IN THE OFFICE OF THE CHIEF OF POLICE OF SAID CITY.

IT IS FURTHER ORDERED AND DIRECTED THAT THIS ORDER SHALL BECOME EFECTIVE UPON BEING FILED WITH THE CLERK AND UPON ERECTION OF ADEQUATE SIGNS GIVING NOTICE OF THE EXISTENCE OF AFORESAID,

SPEED LIMIT FOR LEWIS DR WEST OF HAGGERTY TO EAST OF CABOT DR TO 35 MPH

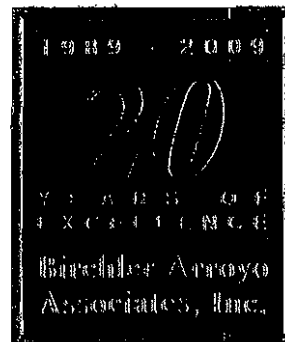
ADOPTED AT THE REGULAR MEETING
OF COUNCIL ON _____

BY: _____
Mayor - David Landry

By: _____
City Clerk - Maryanne Cornelius

October 29, 2009

Brian T. Coburn, P.E.
Engineering Div., Dept. of Public Services
City of Novi
26300 Delwal Drive
Novi, MI 48375
bcoburn@cityofnovi.org



Subject: Follow-Up Speed Study of Cabot and Lewis Drives

Dear Mr. Coburn:

In response to the recommendations in our two prior speed studies, dated April 30, 2009 and July 21, 2009, the City posted temporary speed limits of 30 mph near the south end of Cabot Drive and 35 mph on the balance of Cabot and all of Lewis Drive. These new limits represented 5-10 mph increases over the previous speed limit. At your request, we have evaluated the current speeds to see whether or not they reflect a significant change from those before the speed limit increase.

Recommendations

The 30-mph and 35-mph speed limits previously recommended and implemented should be made permanent and supported by an appropriate Traffic Control Order. The "Temporary" supplemental sign should be removed from each of the existing speed limit sign posts.

Supporting Analysis

Table 1 compares key speed statistics after the speed limit increase (in October) to those determined before the increase (in April with the old limits and no lane striping, and in July with the old limits and the striping of one through lane in each direction plus a center left-turn lane). The data collected in the three months are detailed in Tables 2a, 2b, and 2c (attached).

Table 1. 85th-Percentile Speed by Location

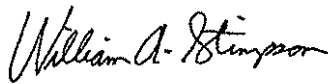
Sampling Location	85 th -Percentile Speed (mph) by Speed Limit & Delineation Status		
	April 2009 (25 mph, No Striping)	July 2009 (25 mph, Lane Striping)	October 2009 (30-35 mph, Lane Striping)
1 (Cabot South)	34.7	34.1	34.0
2 (Cabot Midpoint)	37.3	36.8	37.4
3 Cabot (North)	38.5	37.9	38.0
4 (Lewis)	36.1	35.4	37.2

Note that neither the lane striping nor the increase in speed limits significantly affected speeds.

Sincerely,
BIRCHLER ARROYO ASSOCIATES, INC.



Rodney L. Arroyo, AICP
Vice President



William A. Stimpson, P.E.
Director of Traffic Engineering

Table 2a. Summary of April 2009 Speed Statistics for Cabot and Lewis Drives

Loc.	Dir.	Date	Sample Size	Speed (mph)			
				Average	85th %tile	10-mph Pace	% in Pace
1 (South End of Cabot)	NB	4-07-09 (pm)	509	29.1	33.7	25-35	80.9%
		4-08-09	1330	29.7	34.0	25-35	83.0%
		4-09-09 (am)	655	29.9	34.0	25-35	88.5%
		Average Day	1247	29.6	33.9	25-35	84.0%
	SB	4-07-09 (pm)	1068	31.3	35.1	25-35	79.6%
		4-08-09	1446	31.6	35.7	25-35	78.0%
		4-09-09 (am)	290	31.1	34.7	25-35	83.1%
		Average Day	1402	31.4	35.4	25-35	79.1%
	Both	Average Day	2649	30.6	34.7	25-35	81.4%
	2 (Mid-point of Cabot)	NB	4-07-09 (pm)	344	29.5	35.7	25-35
4-08-09			790	31.3	36.9	25-35	72.7%
4-09-09 (am)			364	31.4	36.4	25-35	75.0%
Average Day			749	30.9	36.5	25-35	71.3%
SB		4-07-09 (pm)	639	31.1	36.6	25-35	71.2%
		4-08-09	935	32.7	38.6	25-35	64.9%
		4-09-09 (am)	274	32.5	38.3	25-35	65.6%
		Average Day	924	32.1	37.9	25-35	67.2%
Both		Average Day	1673	31.6	37.3	25-35	69.0%
3 (North End of Cabot)		NB	4-07-09 (pm)	581	33.6	39.0	30-40
	4-08-09		756	34.2	39.4	30-40	75.9%
	4-09-09 (am)		146	34.2	39.3	30-40	75.3%
	Average Day		742	34.0	39.2	30-40	74.4%
	SB	4-07-09 (pm)	274	31.0	36.6	25-35	69.3%
		4-08-09	930	32.8	38.1	30-40	69.6%
		4-09-09 (am)	575	33.3	38.4	30-40	74.7%
		Average Day	890	32.7	38.0	30-40	-
	Both	Average Day	1631	33.3	38.5	30-40	-
	4 (Lewis)	EB	4-07-09 (pm)	294	30.0	36.4	25-35
4-08-09			496	30.9	36.9	25-35	67.1%
4-09-09 (am)			201	30.9	36.9	25-35	70.1%
Average Day			496	30.6	36.8	25-35	67.1%
WB		4-07-09 (pm)	324	30.7	36.3	25-35	69.7%
		4-08-09	590	30.2	34.8	25-35	74.0%
		4-09-09 (am)	258	31.2	35.9	25-35	75.5%
		Average Day	586	30.6	35.5	25-35	73.1%
Both		Average Day	1082	30.6	36.1	25-35	70.4%

Table 2b. Summary of July 2009 Speed Statistics for Cabot and Lewis Drives

Loc.	Dir.	Date	Sample Size	Speed (mph)			
				Average	85th %tile	10-mph Pace	% in Pace
1 (South End of Cabot)	NB	7-14-09 (>3 pm)	230	28.6	33.6	25-35	80.0%
		7-15-09	1193	29.5	33.8	25-35	84.7%
		7-16-09 (<3 pm)	921	29.4	33.8	25-35	84.0%
		Average Day	1172	29.4	33.8	25-35	84.0%
	SB	7-14-09 (>3 pm)	761	32.1	34.7	25-35	89.0%
		7-15-09	1341	30.9	34.3	25-35	91.7%
		7-16-09 (<3 pm)	558	31.1	34.3	25-35	92.2%
		Average Day	1330	31.3	34.4	25-35	91.0%
	Both	Average Day	2502	30.4	34.1	25-35	87.7%
	2 (Mid-point of Cabot)	NB	7-14-09 (>3 pm)	191	30.6	37.1	25-35
7-15-09			744	31.3	36.2	25-35	74.3%
7-16-09 (<3 pm)			538	31.5	36.9	25-35	72.1%
Average Day			737	31.3	36.6	25-35	72.5%
SB		7-14-09 (>3 pm)	428	31.5	36.6	25-35	73.3%
		7-15-09	934	31.7	36.9	25-35	73.6%
		7-16-09 (<3 pm)	499	31.7	37.3	25-35	71.3%
		Average Day	931	31.7	36.9	25-35	72.9%
Both		Average Day	1667	31.5	36.8	25-35	72.7%
3 (North End of Cabot)		NB	7-14-09 (>3 pm)	397	33.2	37.8	30-40
	7-15-09		749	33.1	38.0	30-40	77.8%
	7-16-09 (<3 pm)		350	33.2	37.9	30-40	80.8%
	Average Day		748	33.1	37.9	30-40	79.6%
	SB	7-14-09 (>3 pm)	82	31.1	36.1	25-35	71.9%
		7-15-09	855	32.3	37.8	25-35	67.7%
		7-16-09 (<3 pm)	778	32.9	38.2	30-40	71.9%
		Average Day	858	32.5	37.9	30-40	69.8%
	Both	Average Day	1606	32.8	37.9	30-40	74.4%
	4 (Lewis)	EB	7-14-09 (>3 pm)	161	27.8	33.2	20-30
7-15-09			483	29.0	34.1	25-35	71.6%
7-16-09 (<3 pm)			301	29.9	34.4	25-35	75.4%
Average Day			473	29.1	34.0	--	71.9%
WB		7-14-09 (>3 pm)	129	31.3	35.9	25-35	74.4%
		7-15-09	585	31.5	36.6	25-35	73.8%
		7-16-09 (<3 pm)	437	31.5	36.5	25-35	73.6%
		Average Day	576	31.5	36.5	25-35	73.8%
Both		Average Day	1048	30.4	35.4	25-35	72.9%

Table 2c. Summary of October 2009 Speed Statistics for Cabot and Lewis Drives

Loc.	Dir.	Date	Sample Size	Speed (mph)			
				Average	85th %tile	10-mph Pace	% in Pace
1 (South End of Cabot)	NB	10-20-09 (>11 am)	498	28.6	33.2	25-35	80.7%
		10-21-09	1029	28.8	33.3	25-35	83.1%
		10-22-09 (<11 am)	500	29.0	33.4	25-35	85.4%
		Average Day	1014	28.8	33.3	25-35	83.1%
	SB	10-20-09 (>11 am)	1135	30.5	34.5	25-35	80.3%
		10-21-09	1342	30.6	34.6	25-35	81.1%
		10-22-09 (<11 am)	168	29.8	34.5	25-35	76.7%
		Average Day	1323	30.5	34.6	25-35	80.5%
Both	Average Day	2336	29.8	34.0	25-35	81.6%	
2 (Mid-point of Cabot)	NB	10-13-09 (>11 am)	420	32.4	38.2	30-40	64.7%
		10-14-09	761	32.2	37.3	25-35	70.8%
		10-15-09 (<11 am)	310	32.2	36.0	25-35	79.3%
		Average Day	746	32.3	37.3	25-35	70.8%
	SB	10-13-09 (>11 am)	739	32.2	37.6	25-35	68.0%
		10-14-09	920	32.3	37.6	25-35	69.1%
		10-15-09 (<11 am)	197	32.0	37.4	25-35	70.0%
		Average Day	928	32.2	37.6	25-35	68.8%
Both	Average Day	1674	32.2	37.4	25-35	69.7%	
3 (North End of Cabot)	NB	10-13-09 (>11 am)	728	33.9	38.7	30-40	78.5%
		10-14-09	851	33.6	38.5	30-40	77.4%
		10-15-09 (<11 am)	85	32.2	37.9	30-40	69.4%
		Average Day	832	33.7	38.6	30-40	77.5%
	SB	10-13-09 (>11 am)	363	32.1	37.4	25-35	68.0%
		10-14-09	934	32.3	37.4	30-40	69.9%
		10-15-09 (<11 am)	521	32.8	37.6	30-40	73.3%
		Average Day	909	32.4	37.5	30-40	70.5%
Both	Average Day	1741	33.0	38.0	30-40	73.8%	
4 (Lewis)	EB	10-13-09 (>11 am)	361	32.0	37.8	25-35	63.1%
		10-14-09	546	31.3	36.9	25-35	68.4%
		10-15-09 (<11 am)	167	30.8	35.8	25-35	74.8%
		Average Day	537	31.5	37.0	25-35	67.6%
	WB	10-13-09 (>11 am)	332	31.8	37.9	25-35	60.8%
		10-14-09	468	31.4	36.9	25-35	67.3%
		10-15-09 (<11 am)	123	32.3	37.9	25-35	70.7%
		Average Day	462	31.7	37.4	25-35	65.4%
Both	Average Day	999	31.6	37.2	25-35	66.6%	