



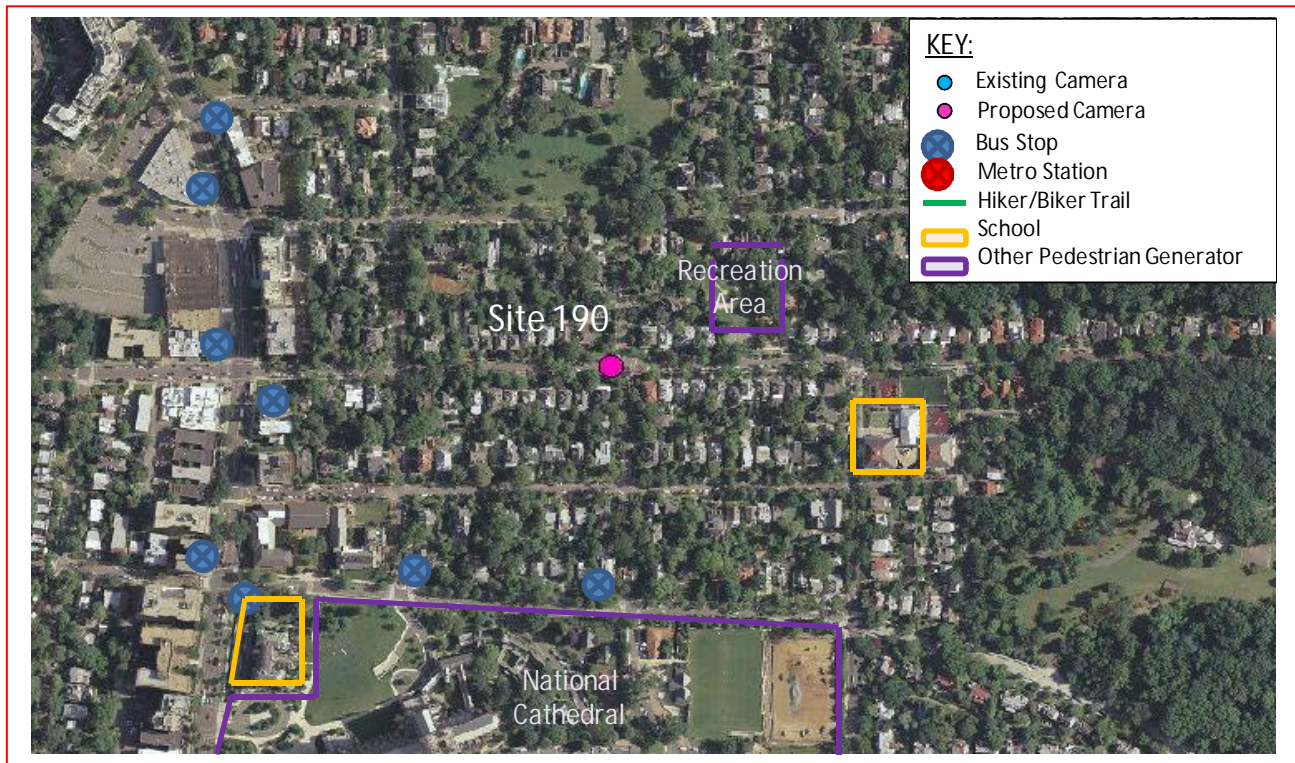
District Department of Transportation

Speed Limit and Safety Nexus Studies for Automated Enforcement Locations in the District of Columbia

35th Street at Macomb Street NW

Study Area and Location

District	PSA	Ward	ANC	Phase	Description
2	203/204	3	3C	Proposed	35 th Street at Macomb Street Northwest



This *proposed* speed camera will be located in Ward 3 at the intersection of 35th Street and Macomb Street Northwest. This segment of 35th Street runs from Newark Street Northwest to the north to Woodley Road to the south. Macomb Street runs from Massachusetts Avenue Northwest to the west to Connecticut Avenue Northwest to the east. The posted speed limit is 25 MPH.

W3 - 573





District Department of Transportation

35th Street at Macomb Street NW

Field Assessment Summary

35th Street is assumed to run in the North-South direction, and is classified as a local road. Macomb Street is assumed to run in the East-West direction and is classified as a collector. This site has the following characteristics:

- This is a residential area with houses and driveways on both sides of all legs.
- The location is four-way stop controlled. There is on-street parking on both sides of all legs.
- There are sidewalks on all sides and crosswalks on all legs. There are new ADA ramps on all corners.
- The pavement is in good condition and there is curb and gutter drainage. There are no lane pavement markings.
- Observation: Most cars do not make a full stop at the intersection.
- There are three schools in the area: Eaton Elementary School, St. Albans School, and the National Cathedral Elementary School.
- There is one recreational facility in the area: Macomb Playground.
- The National Cathedral is also in the area.



Looking Northbound

W3 - 574



District Department of Transportation

35th Street at Macomb Street NW



Looking Southbound

Speed Data Analysis

Direction	NB	SB
Posted Speed Limit (MPH)	25	25
Mean Speed (MPH)	22	14
85th Percentile Speed (MPH)	31	19
10 MPH Pace Speed	22-31	10-19
Sample Size	1,937	1,329
ADT	3,266	

The mean speeds and 85th percentile speeds in the southbound direction as well as the mean speed in the northbound direction are lower than the posted speed limit. The 85th percentile speed is 6 MPH higher than the speed limit in the northbound direction, and 6 MPH lower in the southbound direction.

Crash Data Analysis

Between January 1, 2010 and December 31, 2012, there were a total of three crashes at this location. A breakdown of number of crashes by collision type can be found in the chart below. There was one crash each of type Side Swipe, Head On, and Parked.

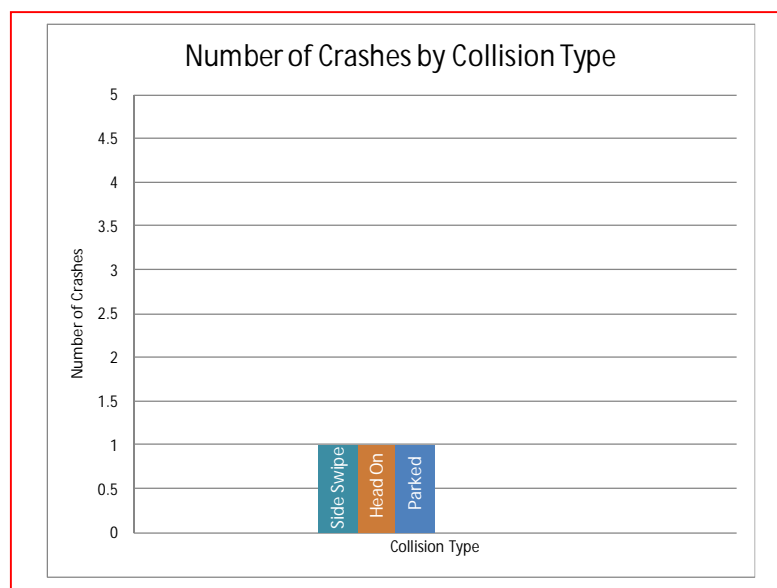
W3 - 575



District Department of Transportation

35th Street at Macomb Street NW

Severity			Weather			Surface condition			Light Condition		
Total	3										
Fatal	0	0.0%	Clear	1	33.3%	Dry	1	33.3%	Day	2	66.7%
Injury	0	0.0%	Rain	0	0.0%	Wet	1	33.3%	Night	1	33.3%
Taxi	0	0.0%	Snow	1	33.3%	Snow/Ice	0	0.0%			
Bus	0	0.0%									



Safety Nexus

This site presents the following safety considerations which may support the nexus between the speed camera installation and traffic safety:

1. Speed Data – The speed data analysis shows travel speeds being lower than the posted speed limit in the southbound direction and the 85th percentile speed is much higher than the posted speed limit at this location in the northbound direction.
2. Crash Data – The crash data analysis shows a low number of crashes at this location.
3. Field Assessment – The following site characteristics suggest a need for a safer travel environment:
 - a. This site is located in a residential area with houses and driveways on both sides of the street.
 - b. There are three schools in the area: Eaton Elementary School, St. Albans School, and the National Cathedral Elementary School.
 - c. There is one recreational facility and one other pedestrian generator in this area: Macomb Playground and The National Cathedral.

W3 - 576



District Department of Transportation

35th Street at Macomb Street NW

- d. There is on-street parking on both sides of the street at this location.
- e. There are multiple bus stops in the area which generate pedestrian activity.

Although the crash data analysis showed a low number of crashes at this location, the speed data analysis, the specific site characteristics of a residential area, the proximity of schools to the site, and other the pedestrian generators, there is a nexus between traffic safety and the speed camera at this location.

W3 - 577

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

35th St at Macomb St NW Speed

SB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
11/07/13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	6	4	1	0	0	0	0	0	0	0	0	0	0	0	11
06:00	0	12	5	0	0	0	0	0	0	0	0	0	0	0	17
07:00	42	39	11	0	0	0	0	0	0	0	0	0	0	0	92
08:00	41	16	3	0	0	0	0	0	0	0	0	0	0	0	60
09:00	22	39	8	0	0	0	0	0	0	0	0	0	0	0	69
10:00	22	34	9	0	0	0	0	0	0	0	0	0	0	0	65
11:00	14	42	10	0	0	0	0	0	0	0	0	0	0	0	66
12 PM	36	56	12	0	0	0	0	0	0	0	0	0	0	0	104
13:00	16	37	6	0	0	0	0	0	0	0	0	0	0	0	59
14:00	23	49	14	0	0	0	0	0	0	0	0	0	0	0	86
15:00	41	64	18	0	0	0	0	0	0	0	0	0	0	0	123
16:00	26	58	13	1	0	0	0	0	0	0	0	0	0	0	98
17:00	35	65	6	1	0	0	0	0	0	0	0	0	0	0	107
18:00	45	45	13	1	0	0	0	0	0	0	0	0	0	0	104
19:00	33	34	8	0	0	0	0	0	0	0	0	0	0	0	75
20:00	13	34	5	0	0	0	0	0	0	0	0	0	0	0	52
21:00	13	27	7	0	0	0	0	0	0	0	0	0	0	0	47
22:00	15	17	8	0	0	0	0	0	0	0	0	0	0	0	40
23:00	4	18	4	1	0	0	0	0	0	0	0	0	0	0	27
Total	447	690	161	4	0	0	0	0	0	0	0	0	0	0	1302

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SB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
11/08/13	2	9	2	0	0	0	0	0	0	0	0	0	0	0	13
01:00	0	3	4	0	0	0	0	0	0	0	0	0	0	0	7
02:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
03:00	1	2	1	0	0	0	0	0	0	0	0	0	0	0	4
04:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	4	15	8	0	0	0	0	0	0	0	0	0	0	0	27
Grand Total	451	705	169	4	0	0	0	0	0	0	0	0	0	0	1329

15th Percentile : 6 MPH
50th Percentile : 13 MPH
85th Percentile : 19 MPH
95th Percentile : 22 MPH

Stats
Mean Speed(Average) : 14 MPH
10 MPH Pace Speed : 10-19 MPH
Number in Pace : 785
Percent in Pace : 59.1%
Number of Vehicles > 25 MPH : 15
Percent of Vehicles > 25 MPH : 1.2%

SAMMAT ENGINEERING SERVICES, LLC

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MOUNT AIRY, MD 21771

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35th St at Macomb St NW Speed

NB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
11/07/13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	2	0	0	0	0	1	1	0	0	0	0	0	0	0	4
06:00	0	2	7	12	9	7	0	0	0	0	0	0	0	0	37
07:00	27	32	38	46	24	6	3	0	0	0	0	0	0	0	176
08:00	46	49	69	77	39	7	1	1	0	0	0	0	0	0	289
09:00	9	15	35	41	33	9	4	1	0	0	0	0	0	0	147
10:00	8	12	24	19	10	6	0	1	0	0	0	0	0	0	80
11:00	15	9	21	29	10	3	0	0	0	0	0	0	0	0	87
12 PM	34	12	24	22	20	2	0	0	0	0	0	0	0	0	114
13:00	4	7	13	23	19	5	2	0	0	0	0	0	0	0	73
14:00	15	16	39	41	14	3	0	0	0	0	0	0	0	0	128
15:00	15	24	36	40	30	5	0	0	0	0	0	0	0	0	150
16:00	9	17	45	42	17	8	0	0	0	0	0	0	0	0	138
17:00	23	15	20	34	15	4	1	0	0	0	0	0	0	0	112
18:00	24	39	25	29	16	6	1	0	0	0	0	0	0	0	140
19:00	20	8	16	22	9	3	1	0	0	0	0	0	0	0	79
20:00	8	11	13	24	15	0	0	0	0	0	0	0	0	0	71
21:00	2	3	15	10	5	2	1	1	0	0	0	0	0	0	39
22:00	3	1	6	14	4	6	2	0	0	0	0	0	0	0	36
23:00	1	0	3	5	2	0	0	0	0	0	0	0	0	0	11
Total	265	272	449	530	291	83	17	4	0	0	0	0	0	0	1911

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35th St at Macomb St NW Speed

NB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
11/08/13	0	2	1	5	3	0	0	0	0	0	0	0	0	0	11
01:00	0	0	1	3	3	0	0	1	0	0	0	0	0	0	8
02:00	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
03:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:00	0	1	0	0	3	0	0	0	0	0	0	0	0	0	4
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	1	3	2	9	10	0	0	1	0	0	0	0	0	0	26
Grand Total	266	275	451	539	301	83	17	5	0	0	0	0	0	0	1937

15th Percentile : 9 MPH
50th Percentile : 22 MPH
85th Percentile : 31 MPH
95th Percentile : 35 MPH

Stats
Mean Speed(Average) : 22 MPH
10 MPH Pace Speed : 22-31 MPH
Number in Pace : 799
Percent in Pace : 41.2%
Number of Vehicles > 25 MPH : 791
Percent of Vehicles > 25 MPH : 40.9%

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

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35th St at Macomb St NW Volume

Start Time	07-Nov-13		SB		NB		Combined		08-Nov-Fri	SB		NB		Combined	
	Thu		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00			*	29	*	28	*	57		5	*	4	*	9	*
12:15			*	18	*	34	*	52		4	*	3	*	7	*
12:30			*	23	*	23	*	46		2	*	1	*	3	*
12:45			*	34	*	29	*	63		2	*	3	*	5	*
01:00			*	11	*	20	*	31		4	*	3	*	7	*
01:15			*	15	*	9	*	24		2	*	4	*	6	*
01:30			*	18	*	26	*	44		1	*	0	*	1	*
01:45			*	15	*	18	*	33		0	*	1	*	1	*
02:00			*	24	*	25	*	49		2	*	2	*	4	*
02:15			*	17	*	30	*	47		0	*	0	*	0	*
02:30			*	23	*	29	*	52		0	*	0	*	0	*
02:45			*	22	*	44	*	66		0	*	0	*	0	*
03:00			*	17	*	42	*	59		1	*	0	*	1	*
03:15			*	20	*	41	*	61		1	*	0	*	1	*
03:30			*	52	*	34	*	86		2	*	1	*	3	*
03:45			*	34	*	33	*	67		0	*	0	*	0	*
04:00			*	23	*	47	*	70		0	*	1	*	1	*
04:15			*	21	*	35	*	56		0	*	0	*	0	*
04:30			*	28	*	27	*	55		1	*	1	*	2	*
04:45			*	26	*	29	*	55		0	*	2	*	2	*
05:00			0	27	0	28	0	55		*	*	*	*	*	*
05:15			0	20	0	24	0	44		*	*	*	*	*	*
05:30			4	33	1	33	5	66		*	*	*	*	*	*
05:45			7	27	3	27	10	54		*	*	*	*	*	*
06:00			3	24	1	34	4	58		*	*	*	*	*	*
06:15			2	31	7	36	9	67		*	*	*	*	*	*
06:30			6	23	11	30	17	53		*	*	*	*	*	*
06:45			6	26	18	40	24	66		*	*	*	*	*	*
07:00			14	24	22	22	36	46		*	*	*	*	*	*
07:15			22	19	32	17	54	36		*	*	*	*	*	*
07:30			34	20	42	26	76	46		*	*	*	*	*	*
07:45			22	12	80	14	102	26		*	*	*	*	*	*
08:00			20	12	79	19	99	31		*	*	*	*	*	*
08:15			12	17	73	18	85	35		*	*	*	*	*	*
08:30			14	15	74	14	88	29		*	*	*	*	*	*
08:45			14	8	63	20	77	28		*	*	*	*	*	*
09:00			12	12	40	8	52	20		*	*	*	*	*	*
09:15			19	8	39	10	58	18		*	*	*	*	*	*
09:30			23	12	32	10	55	22		*	*	*	*	*	*
09:45			15	15	36	11	51	26		*	*	*	*	*	*
10:00			14	5	21	9	35	14		*	*	*	*	*	*
10:15			15	14	24	8	39	22		*	*	*	*	*	*
10:30			15	11	15	14	30	25		*	*	*	*	*	*
10:45			21	10	20	5	41	15		*	*	*	*	*	*
11:00			9	9	16	3	25	12		*	*	*	*	*	*
11:15			12	6	22	2	34	8		*	*	*	*	*	*
11:30			13	9	21	5	34	14		*	*	*	*	*	*
11:45			32	3	28	1	60	4		*	*	*	*	*	*
Total			380	922	820	1091	1200	2013		27	0	26	0	53	0
Day Total			1302		1911		3213			27		26		53	
% Total			11.8%	28.7%	25.5%	34.0%				50.9%	0.0%	49.1%	0.0%		
Peak			07:15	03:30	07:45	02:45	07:45	03:15		12:00		12:00		12:00	
Vol.			98	130	306	161	374	284		13		11		24	
P.H.F.			0.721	0.625	0.956	0.915	0.917	0.826		0.650		0.688		0.667	
ADT			ADT 3,266		AADT 3,266										

DC Department of Transportation - Traffic Accident Reporting and Analysis System

Accident Summary Report (R-7)

Intersection: 35TH ST and MACOMB ST, NW

Time Period Covered: From 01/01/2010 To 12/31/2012

Prepared By: Rahul Jain

Prepared Date: 9/16/2013

Total Number of Accident:	3	Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Fatalities:	0	Right Angle:	0	0.0%	Fixed Object:	0	0.0%
Total Number of Injuries:	0	Left Turn:	0	0.0%	Ran Off Road:	0	0.0%
Total Number of Disabling Injuries:	0	Right Turn:	0	0.0%	Ped. Involved:	0	0.0%
Total Number of NonDisabling Injuries:	0	Rear End:	0	0.0%	Backing:	0	0.0%
Total Number of Pedestrians Involved:	0	Side Swiped:	1	33.3%	Non Collision:	0	0.0%
Total Number of Bicycles Involved:	0	Head On:	1	33.3%	Under/Over Ride:	0	0.0%
Total Number of Motorcycles Involved:	0	Parked:	1	33.3%	Unspecified:	0	0.0%

Time of Day	#ACC	%	Day of week	#ACC	%
07:30 ~ 09:30:	1	33.3%	Sunday:	1	33.3%
09:30 ~ 11:30:	0	0.0%	Monday:	0	0.0%
11:30 ~ 13:30:	0	0.0%	Tuesday:	1	33.3%
13:30 ~ 16:00:	0	0.0%	Wednesday:	0	0.0%
16:00 ~ 18:30:	1	33.3%	Thursday:	0	0.0%
18:30 ~ 07:30:	1	33.3%	Friday:	0	0.0%
Unspecified:	0	0.0%	Saturday:	1	33.3%

Weather Condition	#ACC	%	Surface Condition	#ACC	%
Clear:	1	33.3%	Dry:	1	33.3%
Rain:	0	0.0%	Wet:	1	33.3%
Snow:	1	33.3%	Snow/Ice:	0	0.0%
Sleet/Hail:	0	0.0%	Slush:	0	0.0%
Fog/Mist:	0	0.0%	Water/Sand:	0	0.0%
Crosswind/Blowing Sand:	0	0.0%	Repairing:	0	0.0%
Unspecified:	1	33.3%	Unspecified:	1	33.3%

Type of Vehicle	#VEH	%	Accident Severity Type	#ACC	%
Passenger Car:	5	83.3%	Fatal Collision:	0	0.0%
Bus:	0	0.0%	Injury Collision:	0	0.0%
Truck:	1	16.7%	PDO Collision:	3	100.0%
Taxi:	0	0.0%	Light Condition	#ACC	%
Minivan:	0	0.0%	Daylight:	2	66.7%
Police/Emergency Vehicle:	0	0.0%	Dawn/Dusk:	0	0.0%
Motorcycle/Moped:	0	0.0%	Dark(Lighted):	1	33.3%
Bicycle:	0	0.0%	Dark(Not Lighted):	0	0.0%
Fixed Object:	0	0.0%	Dark(Unknown Lighting):	0	0.0%
Unspecified:	0	0.0%	Unspecified:	0	0.0%

Contributing Factor	#VEH	%	Pedestrian Actions	#ACC	%
Driver: Speed:	0	0.0%	In Crosswalk with Signal:	0	0.0%
Driver: Alcohol/Drug:	0	0.0%	In Crosswalk against Signal:	0	0.0%
Driver: Electronic Device:	0	0.0%	In Crosswalk no Signal:	0	0.0%
Driver: Others:	1	16.7%	In Unmarked Crosswalk:	0	0.0%
Vehicle:	0	0.0%	Not in Crosswalk:	0	0.0%
Roadway:	0	0.0%	From Between Parked Cars:	0	0.0%
Unspecified:	5	83.3%	Unspecified:	0	0.0%

2 Records are not approved as of 9/16/2013 2:46:57 PM