



District Department of Transportation

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

4700 Block MacArthur Boulevard NW

Study Area and Location

District	PSA	Ward	ANC	Phase	Description
2	205	3	3D	Existing	4700 Block MacArthur Boulevard Northwest Northbound



This existing speed camera is located in Ward 3 at the 4700 block of MacArthur Boulevard Northwest in the northbound direction. MacArthur Boulevard runs parallel to the Potomac River from the Maryland line in the north to Canal Road Northwest in the south. The posted speed limit is 25 MPH. This speed camera was installed in January 2005.

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District Department of Transportation

4700 Block MacArthur Boulevard NW

Field Assessment Summary

MacArthur Boulevard is assumed to run in the North-South direction, and is classified as a principal arterial. MacArthur Boulevard has two travel lanes in each direction. This site has the following characteristics:

- This site is located in a residential area with houses, driveways, and on-street parking on both sides of the street.
- There are sidewalks with a grass buffer zone, and curb and gutter on both sides of the street.
- The existing pavement is in good condition.
- There are two schools in the area: Our Lady of Victory School and the Lab School of Washington.
- There are multiple bus stops in the area.



Northbound



District Department of Transportation

4700 Block MacArthur Boulevard NW



Speed Data Analysis

Posted Speed Limit (MPH)	25
Mean Speed (MPH)	24
85th Percentile Speed (MPH)	28
10 PMH Pace Speed	21-30 MPH
ADT	6,093

The mean speed is 1 MPH lower than the posted speed limit, and the 85th percentile speed is 3 MPH higher than the posted speed limit.

Crash Data Analysis

From the Accident Summary Report provided for the dates between January 1, 2010 and December 31, 2012, there were a total of 11 crashes at this location. A breakdown of number of crashes by collision type can be found in the chart on the next page.

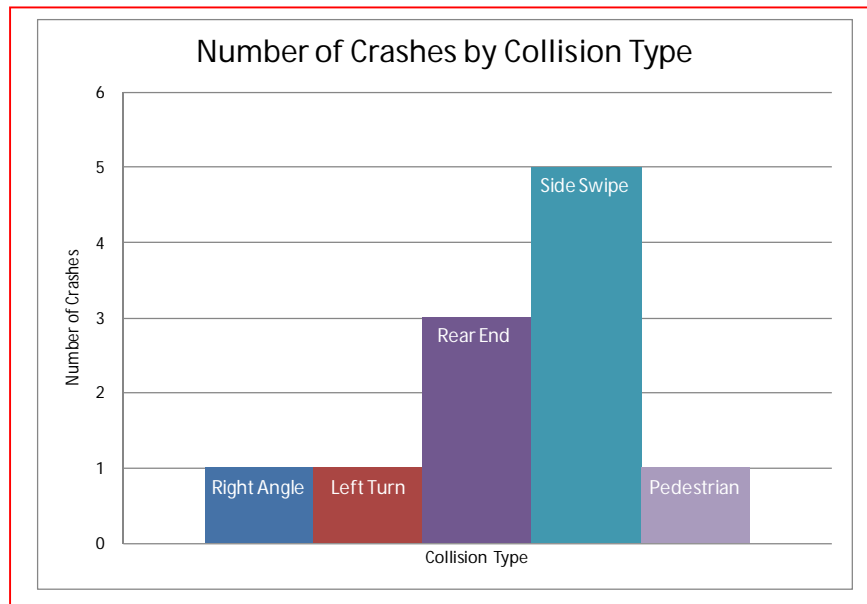
The most common types of crashes at this location were Side Swipe (5 crashes), and Rear End (3 crashes). Each of the other collision types had only one crash each.



District Department of Transportation

4700 Block MacArthur Boulevard NW

Severity			Weather			Surface condition			Light Condition		
Total	11										
Fatal	0	0.0%	Clear	10	90.9%	Dry	11	100.0%	Day	7	63.6%
Injury	5	45.5%	Crosswind	1	9.1%	Wet	0	0.0%	Night	1	9.1%
Truck	3	27.3%	Snow	0	0.0%	Snow/Ice	0	0.0%			
Bus	0	0.0%									

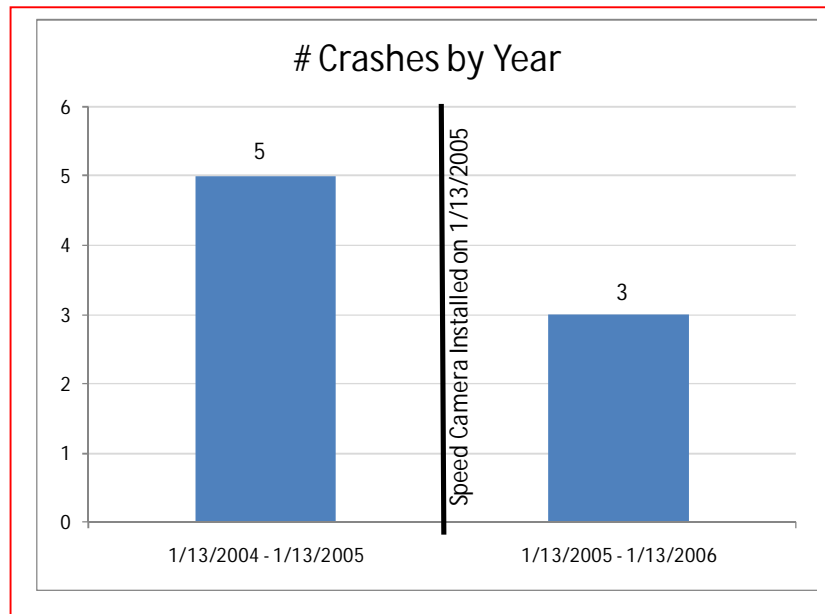


The speed camera was installed on 1/13/2005. The graph on the next page shows the number of crashes in the two years prior to the speed camera's installation (5 crashes) and the two years after the speed camera's installation (3 crashes). There was a slight decrease in the number of crashes after the installation of the camera.



District Department of Transportation

4700 Block MacArthur Boulevard NW



Safety Nexus

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

1. Speed Data – The speed data analysis shows 85th percentile speed was higher than the posted speed limit.
2. Crash Data – There was an elevated number of speed-related crashes at this location, including right angle and rear end collisions. Also, there was a reduction in the number of crashes since camera installation.
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 two schools in this area: Our Lady of Victory School and The Lab School of Washington.
 - c. There is on-street parking on both sides of the street.
 - d. There are multiple bus stops in the area which generate pedestrian activity.

Due to the 85th percentile speed data, the elevated number of speed-related crashes, and the specific site characteristics and pedestrian generators, there is a nexus between traffic safety and the speed camera at this location.

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SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

4700 block of MacArthur Blvd NW SB Speed

SB

Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
11/06/13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	10	2	21	16	2	0	0	0	0	0	0	0	0	0	51
06:00	13	5	78	69	11	0	2	0	0	0	0	0	0	0	178
07:00	18	15	286	281	38	0	0	0	0	0	0	0	0	0	638
08:00	24	28	416	326	30	2	0	0	0	0	0	0	0	0	826
09:00	27	17	267	213	25	0	0	0	0	0	0	0	0	0	549
10:00	16	20	139	104	15	1	0	0	0	0	0	0	0	0	295
11:00	19	7	96	92	22	2	1	0	0	0	0	0	0	0	239
12 PM	12	9	79	93	26	2	0	0	0	0	0	0	0	0	221
13:00	15	14	115	80	17	2	0	0	0	0	0	0	0	0	243
14:00	14	8	143	122	20	7	0	0	0	0	0	0	0	0	314
15:00	16	21	211	193	27	5	0	0	0	0	0	0	0	0	473
16:00	23	25	249	127	29	3	1	0	0	0	0	0	0	0	457
17:00	19	49	297	120	15	1	1	1	0	0	0	0	0	0	503
18:00	21	30	310	103	18	4	0	0	0	0	0	0	0	0	486
19:00	7	14	123	79	10	0	0	0	0	0	0	0	0	0	233
20:00	3	14	65	38	4	1	0	0	0	0	0	0	0	0	125
21:00	4	13	42	45	4	2	0	0	0	0	0	0	0	0	110
22:00	3	8	39	10	3	0	0	0	0	0	0	0	0	0	63
23:00	3	3	25	14	1	0	0	0	0	0	0	0	0	0	46
Total	267	302	3001	2125	317	32	5	1	0	0	0	0	0	0	6050

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

4700 block of MacArthur Blvd NW SB Speed

SB

Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
11/07/13	2	1	10	4	0	0	0	0	0	0	0	0	0	0	17
01:00	2	3	3	0	0	0	0	0	0	0	0	0	0	0	8
02:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
03:00	1	0	2	1	0	0	0	0	0	0	0	0	0	0	4
04:00	6	1	5	0	0	0	0	0	0	0	0	0	0	0	12
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	12	5	21	5	0	0	0	0	0	0	0	0	0	0	43
Grand Total	279	307	3022	2130	317	32	5	1	0	0	0	0	0	0	6093

15th Percentile : 18 MPH
 50th Percentile : 23 MPH
 85th Percentile : 28 MPH
 95th Percentile : 31 MPH

Stats
 Mean Speed(Average) : 24 MPH
 10 MPH Pace Speed : 21-30 MPH
 Number in Pace : 4340
 Percent in Pace : 71.2%
 Number of Vehicles > 25 MPH : 2441
 Percent of Vehicles > 25 MPH : 40.1%

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

4700 block of MacArthur Blvd NW SB Volume

Start Time	Wed	06-Nov-13	Thu	07-Nov-13	Fri	08-Nov-13	Daily Average	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	*	64	7	*	*	*	7	64
12:15	*	62	7	*	*	*	7	62
12:30	*	43	1	*	*	*	1	43
12:45	*	52	2	*	*	*	2	52
01:00	*	56	2	*	*	*	2	56
01:15	*	50	2	*	*	*	2	50
01:30	*	74	1	*	*	*	1	74
01:45	*	63	3	*	*	*	3	63
02:00	*	79	1	*	*	*	1	79
02:15	*	66	0	*	*	*	0	66
02:30	*	75	0	*	*	*	0	75
02:45	*	94	1	*	*	*	1	94
03:00	*	90	1	*	*	*	1	90
03:15	*	116	0	*	*	*	0	116
03:30	*	139	1	*	*	*	1	139
03:45	*	128	2	*	*	*	2	128
04:00	*	118	3	*	*	*	3	118
04:15	*	105	2	*	*	*	2	105
04:30	*	105	1	*	*	*	1	105
04:45	*	129	6	*	*	*	6	129
05:00	9	124	*	*	*	*	9	124
05:15	6	141	*	*	*	*	6	141
05:30	10	119	*	*	*	*	10	119
05:45	26	119	*	*	*	*	26	119
06:00	22	130	*	*	*	*	22	130
06:15	37	144	*	*	*	*	37	144
06:30	53	102	*	*	*	*	53	102
06:45	66	110	*	*	*	*	66	110
07:00	93	81	*	*	*	*	93	81
07:15	121	61	*	*	*	*	121	61
07:30	202	51	*	*	*	*	202	51
07:45	222	40	*	*	*	*	222	40
08:00	202	36	*	*	*	*	202	36
08:15	214	25	*	*	*	*	214	25
08:30	195	23	*	*	*	*	195	23
08:45	215	41	*	*	*	*	215	41
09:00	153	38	*	*	*	*	153	38
09:15	135	35	*	*	*	*	135	35
09:30	136	13	*	*	*	*	136	13
09:45	125	24	*	*	*	*	125	24
10:00	91	24	*	*	*	*	91	24
10:15	73	19	*	*	*	*	73	19
10:30	83	9	*	*	*	*	83	9
10:45	48	11	*	*	*	*	48	11
11:00	54	13	*	*	*	*	54	13
11:15	65	11	*	*	*	*	65	11
11:30	63	10	*	*	*	*	63	10
11:45	57	12	*	*	*	*	57	12
Total	2776	3274	43	0	0	0	2819	3274
Combined Total	6050		43		0		6093	
Peak	07:30	04:45	12:00				07:30	04:45
Vol.	840	513	17				840	513
P.H.F.	0.946	0.910	0.607				0.946	0.910
ADT	ADT 6,093		AADT 6,093					

DC Department of Transportation - Traffic Accident Reporting and Analysis System

Accident Summary Report (R-8)

Corridor: MACARTHUR BLVD,NW From RESERVOIR RD (EAST),NW TO ELLIOT PL,NW

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

Prepared By: Rahul Jain

Prepared Date: 9/15/2013

Total Number of Accident:	11	Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Fatalities:	0	Right Angle:	1	9.1%	Fixed Object:	0	0.0%
Total Number of Injuries:	7	Left Turn:	1	9.1%	Ran Off Road:	0	0.0%
Total Number of Disabling Injuries:	0	Right Turn:	0	0.0%	Ped. Involved:	1	9.1%
Total Number of NonDisabling Injuries:	1	Rear End:	3	27.3%	Backing:	0	0.0%
Total Number of Pedestrians Involved:	1	Side Swiped:	5	45.5%	Non Collision:	0	0.0%
Total Number of Bicycles Involved:	0	Head On:	0	0.0%	Under/Over Ride:	0	0.0%
Total Number of Motorcycles Involved:	0	Parked:	0	0.0%	Unspecified:	0	0.0%
Time of Day				#ACC	%	Day of week	
07:30 ~ 09:30:				1	9.1%	Sunday:	
09:30 ~ 11:30:				3	27.3%	Monday:	
11:30 ~ 13:30:				1	9.1%	Tuesday:	
13:30 ~ 16:00:				3	27.3%	Wednesday:	
16:00 ~ 18:30:				1	9.1%	Thursday:	
18:30 ~ 07:30:				2	18.2%	Friday:	
Unspecified:				0	0.0%	Saturday:	
Weather Condition				#ACC	%	Surface Condition	
Clear:				10	90.9%	Dry:	
Rain:				0	0.0%	Wet:	
Snow:				0	0.0%	Snow/Ice:	
Sleet/Hail:				0	0.0%	Slush:	
Fog/Mist:				0	0.0%	Water/Sand:	
Crosswind/Blowing Sand:				1	9.1%	Repairing:	
Unspecified:				0	0.0%	Unspecified:	
Type of Vehicle				#VEH	%	Accident Severity Type	
Passenger Car:				20	80.0%	Fatal Collision:	
Bus:				0	0.0%	Injury Collision:	
Truck:				3	12.0%	PDO Collision:	
Taxi:				0	0.0%	Light Condition	
Minivan:				0	0.0%	Daylight:	
Police/Emergency Vehicle:				0	0.0%	Dawn/Dusk:	
Motorcycle/Moped:				0	0.0%	Dark(Lighted):	
Bicycle:				0	0.0%	Dark(Not Lighted):	
Fixed Object:				0	0.0%	Dark(Unknown Lighting):	
Unspecified:				2	8.0%	Unspecified:	
Contributing Factor				#VEH	%	Pedestrian Actions	
Driver: Speed:				1	4.0%	In Crosswalk with Signal:	
Driver: Alcohol/Drug:				0	0.0%	In Crosswalk against Signal:	
Driver: Electronic Device:				0	0.0%	In Crosswalk no Signal:	
Driver: Others:				4	16.0%	In Unmarked Crosswalk:	
Vehicle:				0	0.0%	Not in Crosswalk:	
Roadway:				0	0.0%	From Between Parked Cars:	
Unspecified:				20	80.0%	Unspecified:	

7 Records are not approved as of 9/15/2013 11:40:07 AM

DC Department of Transportation - Traffic Accident Reporting and Analysis System

Accident Summary Report (R-8)

Corridor: MACARTHUR BLVD,NW From RESERVOIR RD (EAST),NW TO ELLIOT PL,NW

Time Period Covered: From 01/01/2004 To 12/31/2004

Prepared By: Rahul Jain

Prepared Date: 11/19/201

		Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Accident:	5	Right Angle:	0	0.0%	Fixed Object:	0	0.0%
Total Number of Fatalities:	0	Left Turn:	0	0.0%	Ran Off Road:	0	0.0%
Total Number of Injuries:	3	Right Turn:	0	0.0%	Ped. Involved:	0	0.0%
Total Number of Disabling Injuries:	0	Rear End:	2	40.0%	Backing:	1	20.0%
Total Number of NonDisabling Injuries:	0	Side Swiped:	2	40.0%	Non Collision:	0	0.0%
Total Number of Pedestrians Involved:	0	Head On:	0	0.0%	Under/Over Ride:	0	0.0%
Total Number of Bicycles Involved:	0	Parked:	0	0.0%	Unspecified:	0	0.0%
Total Number of Motorcycles Involved:	0						

Time of Day	#ACC	%	Day o fweek	#ACC	%
07:30 ~ 09:30:	0	0.0%	Sunday:	1	20.0%
09:30 ~ 11:30:	0	0.0%	Monday:	0	0.0%
11:30 ~ 13:30:	0	0.0%	Tuesday:	0	0.0%
13:30 ~ 16:00:	3	60.0%	Wednesday:	2	40.0%
16:00 ~18:30:	0	0.0%	Thursday:	1	20.0%
18:30 ~ 07:30:	2	40.0%	Friday:	1	20.0%
Unspecified:	0	0.0%	Saturday:	0	0.0%

Weather Condition	#ACC	%	Surface Condition	#ACC	%
Clear:	4	80.0%	Dry:	4	80.0%
Rain:	1	20.0%	Wet:	1	20.0%
Snow:	0	0.0%	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:	0	0.0%	Unspecified:	0	0.0%

Type of Vehicle	#VEH	%	Accident Severity Type	#ACC	%
Passenger Car:	5	45.5%	Fatal Collision:	0	0.0%
Bus:	1	9.1%	Injury Collision:	1	20.0%
Truck:	4	36.4%	PDO Collision:	4	80.0%
Taxi:	1	9.1%	Light Condition	#ACC	%
Minivan:	0	0.0%	Daylight:	3	60.0%
Police/Emergency Vehicle:	0	0.0%	Dawn/Dusk:	0	0.0%
Motorcycle/Moped:	0	0.0%	Dark(Lighted):	0	0.0%
Bicycle:	0	0.0%	Dark(Not Lighted):	0	0.0%
Fixed Object:	0	0.0%	Dark(Unknown Lighting):	2	40.0%
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	9.1%	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:	10	90.9%	Unspecified:	0	0.0%

5 Records are not approved as of 11/19/2013 2:33:42 PM

Accident Summary Report (R-8)

Corridor: MACARTHUR BLVD,NW From RESERVOIR RD (EAST),NW TO ELLIOT PL,NW

Time Period Covered: From 01/01/2006 To 12/31/2006

Prepared By: Rahul Jain

Prepared Date: 11/19/2013

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:	3	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:	1	Rear End:	0	0.0%	Backing:	0	0.0%
Total Number of Pedestrians Involved:	0	Side Swiped:	2	66.7%	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:	0	0.0%	Unspecified:	0	0.0%
Time of Day				Day of week			
	#ACC	%			#ACC	%	
07:30 ~ 09:30:	0	0.0%		Sunday:	0	0.0%	
09:30 ~ 11:30:	0	0.0%		Monday:	0	0.0%	
11:30 ~ 13:30:	1	33.3%		Tuesday:	1	33.3%	
13:30 ~ 16:00:	1	33.3%		Wednesday:	1	33.3%	
16:00 ~ 18:30:	1	33.3%		Thursday:	0	0.0%	
18:30 ~ 07:30:	0	0.0%		Friday:	1	33.3%	
Unspecified:	0	0.0%		Saturday:	0	0.0%	
Weather Condition				Surface Condition			
	#ACC	%			#ACC	%	
Clear:	3	100.0%		Dry:	2	66.7%	
Rain:	0	0.0%		Wet:	0	0.0%	
Snow:	0	0.0%		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:	0	0.0%		Unspecified:	1	33.3%	
Type of Vehicle				Accident Severity Type			
	#VEH	%			#ACC	%	
Passenger Car:	5	83.3%		Fatal Collision:	0	0.0%	
Bus:	0	0.0%		Injury Collision:	2	66.7%	
Truck:	0	0.0%		PDO Collision:	1	33.3%	
Taxi:	0	0.0%		Light Condition			
Minivan:	0	0.0%			#ACC	%	
Police/Emergency Vehicle:	0	0.0%		Daylight:	3	100.0%	
Motorcycle/Moped:	0	0.0%		Dawn/Dusk:	0	0.0%	
Bicycle:	0	0.0%		Dark(Lighted):	0	0.0%	
Fixed Object:	0	0.0%		Dark(Not Lighted):	0	0.0%	
Unspecified:	1	16.7%		Dark(Unknown Lighting):	0	0.0%	
				Unspecified:	0	0.0%	
Contributing Factor				Pedestrian Actions			
	#VEH	%			#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:	2	33.3%		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:	4	66.7%		Unspecified:	0	0.0%	

3 Records are not approved as of 11/19/2013 2:32:25 PM