



District Department of Transportation

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

### Irving Street NW

#### Study Area and Location

District	PSA	Ward	ANC	Phase	Description
4	408	1	1D	Proposed	Irving Street Northwest from Adams Mill Road to Mt. Pleasant Road



This *proposed* speed camera will be located in Ward 1 on Irving Street Northwest between Adams Mill Road and Mt. Pleasant Road. Irving Street runs from Klinge Road Northwest in the northwest to Michigan Avenue Northwest in the east. The posted speed limit is 25 MPH.

W1 - 113





District Department of Transportation

Irving Street NW

## Field Assessment Summary

Irving Street is assumed to run in an East-West direction and is classified as a local road. Irving Street is a one-way road with one travel lane in the eastbound direction. This site has the following characteristics:

- This site is located in a residential area with houses, driveways, sidewalks, and on-street parking on both sides.
- There is an existing bike lane on the north side of the street.
- There are two schools in this area: Academy for Advanced and Strategic Studies, Mundo Verde Bilingual Public Charter School, and Bell Multicultural High School.
- There are bus stops on the north side and in the surrounding area.



Looking Westbound



District Department of Transportation

Irving Street NW



Looking Eastbound

## Speed Data Analysis

Posted Speed Limit (MPH)	25
Mean Speed (MPH)	22
85th Percentile Speed (MPH)	31
10 MPH Pace Speed	23-32
ADT	5,067

The mean speed is 3 MPH less than the posted speed limit, and the 85<sup>th</sup> percentile speed is 6 MPH higher than the speed limit.

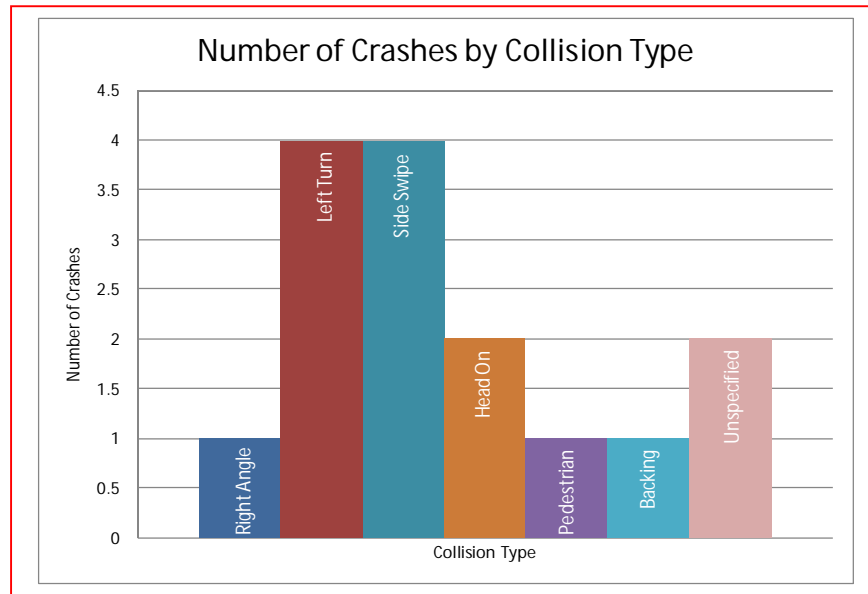
## Crash Data Analysis

From the Accident Summary Report provided for the dates between January 1, 2010 and December 31, 2012, there were a total of 15 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 collision at this location were Side Swipe (4 crashes), and Left Turn (4 crashes). Furthermore, this location experienced a high frequency (4 crashes) of injury-related crashes.

W1 - 115



Severity		Weather			Surface condition			Light Condition		
Total	15									
Fatal	0 0.0%	Clear	11	73.3%	Dry	11	73.3%	Day	11	73.3%
Injury	4 26.7%	Rain	2	13.3%	Wet	2	13.3%	Night	3	20.0%
Bus	5 33.3%	Fog/Mist	0	0.0%	Repairing	0	0.0%			
Truck	2 13.3%									



There were an elevated number of speed-related crashes at this location, including rear end and side swipe crashes. The AASHTO Highway Safety Manual lists “assuming the lead driver will go through a green or yellow light, but the lead driver stops” and “changing lanes to avoid a slowing or stopped vehicle”<sup>1</sup> as two errors leading to rear-end and sideswipe crashes. Both of these errors can be decreased with a decrease in travel speed.

## 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 85th percentile speed is much higher than the speed limit at this location.

<sup>1</sup> AASHTO Highway Safety Manual, 1<sup>st</sup> Edition, 2010; Volume 1, page 2-13



District Department of Transportation

Irving Street NW

2. Crash Data – There were an elevated number of speed-related crashes at this location, including rear end and side swipe crashes.
3. Field Assessment – The following site characteristics suggest a need for a safer travel environment:
  - a. Located in a residential area with houses and driveways on both sides of the street.
  - b. There are three schools in this area: Academy for Advanced and Strategic Studies, Mundo Verde Bilingual Public Charter School, and Bell Multicultural High School.
  - c. There is an existing bike lane on the north side of the street.
  - d. There is on-street parking on both sides of the street.
  - e. There are multiple bus stops which generate pedestrian activity.

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

W1 - 117

# SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD  
MOUNT AIRY, MD 21771

[www.sammateng.com](http://www.sammateng.com)

## Irving St NW from Adams Mill Rd to Mt. Pleasant Rd Speed

EB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total
11/03/13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
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	14	3	2	5	2	0	0	0	0	0	0	0	0	0	26
Total	14	3	2	5	2	0	0	0	0	0	0	0	0	0	26

Daily

15th Percentile : 5 MPH  
 50th Percentile : 10 MPH  
 85th Percentile : 26 MPH  
 95th Percentile : 28 MPH

Mean Speed(Average) : 14 MPH  
 10 MPH Pace Speed : 5-14 MPH  
 Number in Pace : 14  
 Percent in Pace : 53.8%  
 Number of Vehicles > 25 MPH : 4  
 Percent of Vehicles > 25 MPH : 17.2%

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## Irving St NW from Adams Mill Rd to Mt. Pleasant Rd Speed

EB

Start Time	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
11/04/13	3	0	6	7	7	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	
01:00	1	1	3	7	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	
02:00	5	1	2	1	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	
03:00	2	1	0	2	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	
04:00	8	1	2	19	21	13	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67	
05:00	26	1	11	50	63	23	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	178	
06:00	74	17	30	100	62	16	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	301	
07:00	107	24	46	134	54	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	378	
08:00	60	10	44	107	47	16	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	286	
09:00	51	8	50	80	43	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	240	
10:00	31	15	35	95	34	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	221	
11:00	27	15	61	65	48	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	222	
12 PM	33	14	69	84	36	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	245	
13:00	42	9	68	87	61	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	273	
14:00	43	17	95	121	60	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	344	
15:00	47	23	83	129	65	14	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	365	
16:00	113	13	71	155	46	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	406	
17:00	155	12	71	115	34	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	388	
18:00	60	15	78	150	43	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	352	
19:00	49	13	55	91	40	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	253	
20:00	23	8	32	81	23	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	174	
21:00	26	3	33	59	27	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	154	
22:00	19	5	15	36	26	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	109	
23:00	5	1	2	6	7	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	
Total	1010	227	962	1781	855	182	22	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5041	

Daily

15th Percentile : 7 MPH  
 50th Percentile : 24 MPH  
 85th Percentile : 31 MPH  
 95th Percentile : 34 MPH

Mean Speed(Average) : 22 MPH  
 10 MPH Pace Speed : 23-32 MPH  
 Number in Pace : 2283  
 Percent in Pace : 45.3%  
 Number of Vehicles > 25 MPH : 2320  
 Percent of Vehicles > 25 MPH : 46.0%

Grand Total	1024	230	964	1786	857	182	22	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5067
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Overall

15th Percentile : 7 MPH  
 50th Percentile : 24 MPH  
 85th Percentile : 31 MPH  
 95th Percentile : 34 MPH

Mean Speed(Average) : 22 MPH  
 10 MPH Pace Speed : 23-32 MPH  
 Number in Pace : 2286  
 Percent in Pace : 45.1%  
 Number of Vehicles > 25 MPH : 2322  
 Percent of Vehicles > 25 MPH : 45.8%

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1515 RISING RIDGE ROAD  
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## Irving St NW from Adams Mill Rd to Mt. Pleasant Rd Volume

Start Time	Sun	03-Nov-13	Mon	04-Nov-13	Tue	05-Nov-13	Daily Average	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	*	*	12	60	*	*	12	60
12:15	*	*	6	68	*	*	6	68
12:30	*	*	5	51	*	*	5	51
12:45	*	*	1	66	*	*	1	66
01:00	*	*	4	49	*	*	4	49
01:15	*	*	2	66	*	*	2	66
01:30	*	*	7	82	*	*	7	82
01:45	*	*	1	76	*	*	1	76
02:00	*	*	2	77	*	*	2	77
02:15	*	*	3	97	*	*	3	97
02:30	*	*	3	89	*	*	3	89
02:45	*	*	6	81	*	*	6	81
03:00	*	*	1	94	*	*	1	94
03:15	*	*	3	100	*	*	3	100
03:30	*	*	3	80	*	*	3	80
03:45	*	*	3	91	*	*	3	91
04:00	*	*	7	102	*	*	7	102
04:15	*	*	18	100	*	*	18	100
04:30	*	*	15	95	*	*	15	95
04:45	*	*	27	109	*	*	27	109
05:00	*	*	37	90	*	*	37	90
05:15	*	*	31	105	*	*	31	105
05:30	*	*	51	95	*	*	51	95
05:45	*	*	59	98	*	*	59	98
06:00	*	*	80	84	*	*	80	84
06:15	*	*	68	106	*	*	68	106
06:30	*	*	82	93	*	*	82	93
06:45	*	*	71	69	*	*	71	69
07:00	*	*	79	59	*	*	79	59
07:15	*	*	93	67	*	*	93	67
07:30	*	*	108	62	*	*	108	62
07:45	*	*	98	65	*	*	98	65
08:00	*	*	76	45	*	*	76	45
08:15	*	*	76	44	*	*	76	44
08:30	*	*	70	45	*	*	70	45
08:45	*	*	64	40	*	*	64	40
09:00	*	*	69	47	*	*	69	47
09:15	*	*	57	50	*	*	57	50
09:30	*	*	66	29	*	*	66	29
09:45	*	*	48	28	*	*	48	28
10:00	*	*	57	31	*	*	57	31
10:15	*	*	54	32	*	*	54	32
10:30	*	*	58	24	*	*	58	24
10:45	*	*	52	22	*	*	52	22
11:00	*	*	51	15	*	*	51	15
11:15	*	*	46	8	*	*	46	8
11:30	*	16	49	*	*	*	49	16
11:45	*	10	76	*	*	*	76	10
Total	0	26	1955	3086	0	0	1955	3112
Combined Total	26		5041		0		5067	
Peak Vol.			07:00 378	04:00 406			07:00 378	04:00 406
P.H.F.			0.875	0.931			0.875	0.931
ADT		ADT 5,067	AADT 5,067					



DC Department of Transportation - Traffic Accident Reporting and Analysis System

## Accident Summary Report (R-8)

**Corridor:** IRVING ST,NW,NE From ADAMS MILL RD,NW TO MOUNT PLEASANT 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:	15	<b>Collision Type</b>	<b>#ACC</b>	<b>%</b>	<b>Collision Type</b>	<b>#ACC</b>	<b>%</b>
Total Number of Fatalities:	0	Right Angle:	1	6.7%	Fixed Object:	0	0.0%
Total Number of Injuries:	4	Left Turn:	4	26.7%	Ran Off Road:	0	0.0%
Total Number of Disabling Injuries:	1	Right Turn:	0	0.0%	Ped. Involved:	1	6.7%
Total Number of NonDisabling Injuries:	1	Rear End:	0	0.0%	Backing:	1	6.7%
Total Number of Pedestrians Involved:	2	Side Swiped:	4	26.7%	Non Collision:	0	0.0%
Total Number of Bicycles Involved:	0	Head On:	2	13.3%	Under/Over Ride:	0	0.0%
Total Number of Motorcycles Involved:	0	Parked:	0	0.0%	Unspecified:	2	13.3%
<b>Time of Day</b>				<b>#ACC</b>	<b>%</b>	<b>Day o fweek</b>	
07:30 ~ 09:30:				4	26.7%	Sunday:	
09:30 ~ 11:30:				3	20.0%	Monday:	
11:30 ~ 13:30:				0	0.0%	Tuesday:	
13:30 ~ 16:00:				2	13.3%	Wednesday:	
16:00 ~18:30:				2	13.3%	Thursday:	
18:30 ~ 07:30:				4	26.7%	Friday:	
Unspecified:				0	0.0%	Saturday:	
<b>Weather Condition</b>				<b>#ACC</b>	<b>%</b>	<b>Surface Condition</b>	
Clear:				11	73.3%	Dry:	
Rain:				2	13.3%	Wet:	
Snow:				0	0.0%	Snow/Ice:	
Sleet/Hail:				0	0.0%	Slush:	
Fog/Mist:				0	0.0%	Water/Sand:	
Crosswind/Blowing Sand:				0	0.0%	Repairing:	
Unspecified:				2	13.3%	Unspecified:	
<b>Type of Vehicle</b>				<b>#VEH</b>	<b>%</b>	<b>Accident Severity Type</b>	
Passenger Car:				18	64.3%	Fatal Collision:	
Bus:				5	17.9%	Injury Collision:	
Truck:				2	7.1%	PDO Collision:	
Taxi:				1	3.6%	<b>Light Condition</b>	
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	7.1%	Unspecified:	
<b>Contributing Factor</b>				<b>#VEH</b>	<b>%</b>	<b>Pedestrian Actions</b>	
Driver: Speed:				0	0.0%	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:				6	21.4%	In Unmarked Crosswalk:	
Vehicle:				0	0.0%	Not in Crosswalk:	
Roadway:				2	7.1%	From Between Parked Cars:	
Unspecified:				20	71.4%	Unspecified:	

12 Records are not approved as of 9/16/2013 8:22:18 AM