



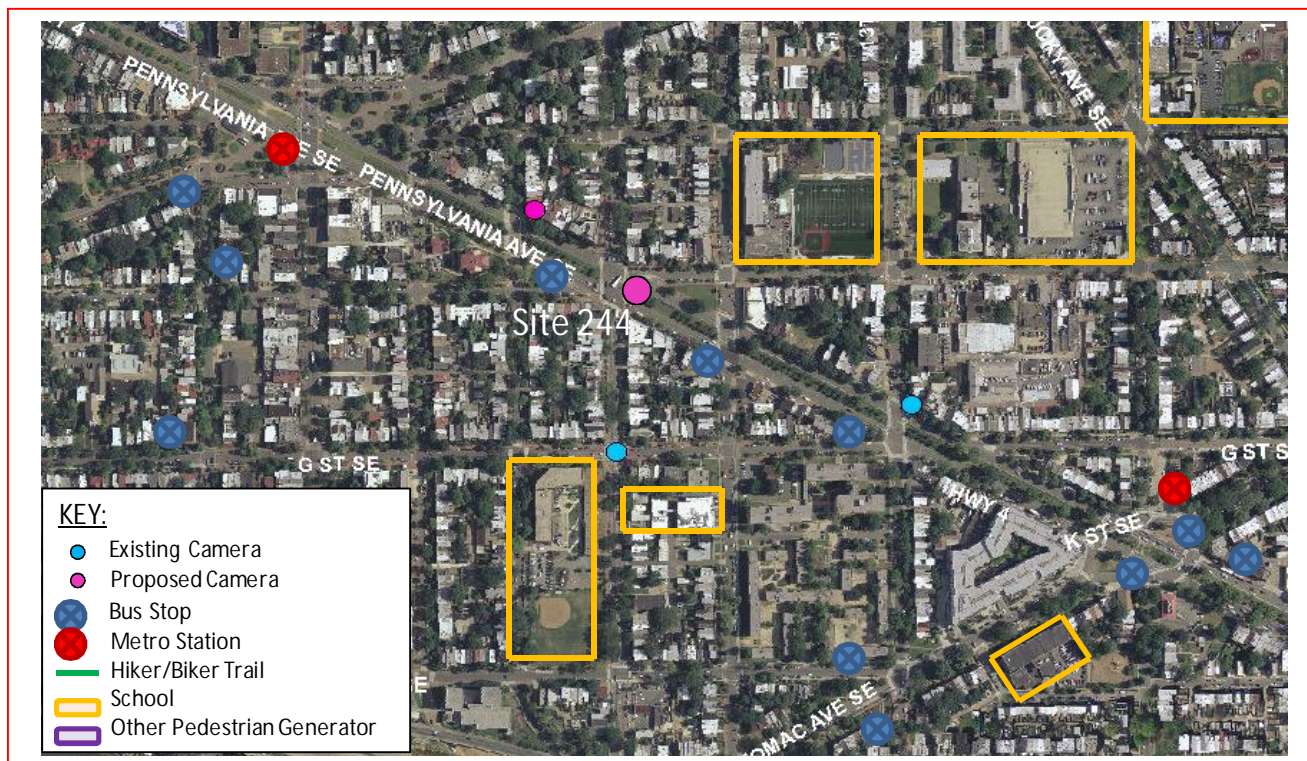
District Department of Transportation

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

### Pennsylvania Avenue at 11th Street SE

#### Study Area and Location

District	PSA	Ward	ANC	Phase	Description
1	107	6	6B	Proposed	Pennsylvania Avenue Eastbound at 11 <sup>th</sup> Street Southeast



The *proposed* speed camera will be located in Ward 6 at the intersection of Pennsylvania Ave at 11<sup>th</sup> Street Southeast for the eastbound traffic. Pennsylvania Avenue runs between Independence Avenue Southeast to the northwest and Barney Circle Southeast and points east of the Anacostia River to the southeast. The posted speed limit is 30 MPH.

W6 - 261





District Department of Transportation

## Pennsylvania Avenue at 11th Street SE

### Field Assessment Summary

Pennsylvania Avenue is assumed to run in a northwest to southeast direction and is classified as a principal arterial. Pennsylvania Ave has four travel lanes in each direction. This site has the following characteristics:

- The site is located in a residential area with retail stores.
- The roadway pavement is in fair condition with curb and gutter and sidewalks on both sides and a curbed grass median in the middle.
- There are several bus stops and one Metrorail Station in the area that generate pedestrian activity
- There are 6 schools in the area: Tyler Elementary School, Cesar Chavez Public Charter Schools for Public Policy, Chamberlain Elementary, Watkins Elementary School, International Graduate University and Payne Elementary School.



Looking Southeast



District Department of Transportation

## Pennsylvania Avenue at 11th Street SE



Looking Northwest

### Speed Data Analysis

Posted Speed Limit (MPH)	30
Mean Speed (MPH)	21
85th Percentile Speed (MPH)	29
10 MPH Pace Speed	21-30
ADT	10,627

The mean speed is 9 MPH lower than the posted speed limit and the 85<sup>th</sup> percentile speed is 1 MPH lower than the posted speed limit at this location.

### 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 49 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 Swiped (16), Right Angle (9), Left Turn (6) and Rear End (6). There were two (2) crashes where vehicular speeding was the contributing factor. Furthermore, the site experienced a high frequency (15 crashes) of injury-related crashes.

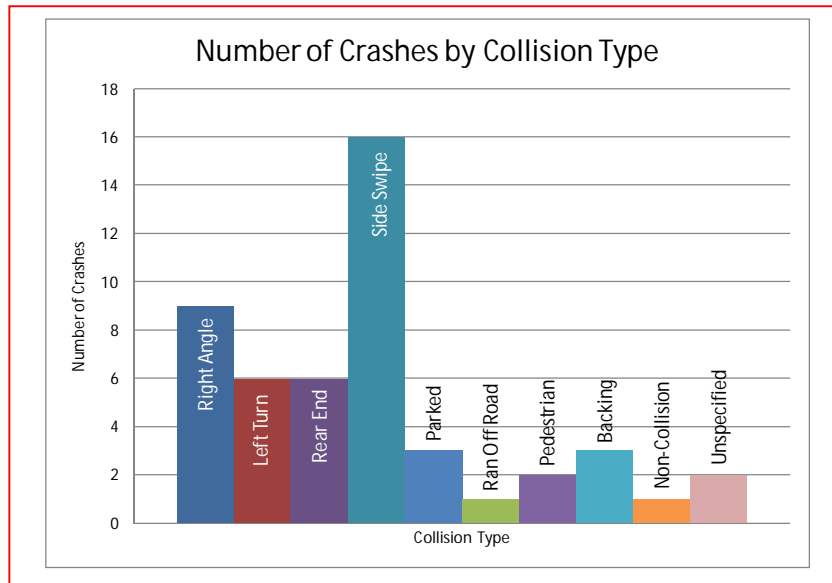
W6 - 263



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## Pennsylvania Avenue at 11th Street SE

Severity			Weather			Surface condition			Light Condition		
Total	49										
Fatal	0	0.0%	Clear	44	89.8%	Dry	44	89.8%	Day	36	73.5%
Injury	15	30.6%	Rain	5	10.2%	Wet	4	8.2%	Night	11	22.4%
Bus	13	26.5%	Snow	0	0.0%	Snow/Ice	1	2.0%			
Truck	9	18.4%									



The Pennsylvania Avenue Corridor is listed as one of the top ten high frequency crash corridors from 2009 to 2011, according to the report *TRAFFIC SAFETY STATISTICS REPORT FOR THE DISTRICT OF COLUMBIA (2009-2011)*<sup>1</sup>.

### 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 travel speeds being lower than the posted speed limit.
2. Crash Data – This location experienced a high frequency (15 crashes) of injury-related crashes. There were two (2) crashes where vehicular speeding was the contributing factor. The Pennsylvania Avenue Corridor is listed as one of the top ten high frequency crash corridors from 2009 to 2011.

<sup>1</sup> *TRAFFIC SAFETY STATISTICS REPORT FOR THE DISTRICT OF COLUMBIA (2009-2011)*, pg. 80.



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## Pennsylvania Avenue at 11th Street SE

3. Field Assessment – The following site characteristics suggest a need for a safer travel environment:
  - a. The site is located in a residential area with retail stores.
  - b. There are several bus stops and one Metrorail Station in the area that generate pedestrian activity.
  - c. There are 6 schools in the area: Tyler Elementary School, Cesar Chavez Public Charter Schools for Public Policy, Chamberlain Elementary, Watkins Elementary School, International Graduate University and Payne Elementary School.

Although the speed data analysis showed the mean and 85th percentile speeds to be lower than the posted speed limit, due to the elevated number of injury-related crashes, 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.

# SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD  
MOUNT AIRY, MD 21771

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## Pennsylvania Ave EB at 11th St SE Speed

EB

Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
11/24/13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
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	32	6	32	70	43	9	0	2	0	0	1	0	0	0	195
23:00	17	5	20	59	45	12	4	0	0	1	1	0	0	0	164
Total	49	11	52	129	88	21	4	2	0	1	2	0	0	0	359

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1515 RISING RIDGE ROAD  
MOUNT AIRY, MD 21771

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## Pennsylvania Ave EB at 11th St SE Speed

EB

Start Time	1	16	21	26	31	36	41	46	51	56	61	66	71	76	Total
	15	20	25	30	35	40	45	50	55	60	65	70	75	999	
11/25/13	18	6	22	40	22	6	0	0	1	0	0	0	0	0	115
01:00	3	1	10	18	15	4	0	0	0	0	0	0	0	0	51
02:00	5	2	5	8	8	0	1	1	0	0	0	0	0	0	30
03:00	6	3	10	11	10	1	1	0	0	0	0	0	0	0	42
04:00	7	2	14	20	5	2	0	0	0	0	0	0	0	0	50
05:00	6	2	12	41	16	6	3	0	0	0	0	0	0	0	86
06:00	25	7	44	87	39	15	1	0	0	0	0	0	0	0	218
07:00	49	39	115	153	44	5	0	0	0	0	0	0	0	0	405
08:00	67	60	157	171	46	4	0	0	0	0	0	0	0	0	505
09:00	67	65	161	189	49	6	0	0	0	0	0	0	0	0	537
10:00	61	47	148	195	59	2	1	0	0	0	0	0	0	0	513
11:00	37	38	151	187	93	15	2	0	0	0	0	0	0	0	523
12 PM	65	53	175	207	92	14	1	0	0	0	0	0	0	0	607
13:00	96	58	148	212	117	22	2	0	0	0	0	0	0	0	655
14:00	81	75	196	243	128	41	6	0	0	0	0	0	0	0	770
15:00	146	134	368	270	75	7	0	0	0	0	0	0	0	0	1000
16:00	196	201	414	245	31	5	0	0	0	0	0	0	0	0	1092
17:00	284	98	227	102	22	5	0	0	0	0	0	0	0	0	738
18:00	284	121	230	156	34	6	2	0	0	0	0	0	0	0	833
19:00	75	55	200	240	101	14	1	0	0	0	0	0	0	0	686
20:00	45	21	128	168	62	13	0	0	0	0	0	0	0	0	437
21:00	31	14	89	164	64	12	1	0	0	0	0	0	0	0	375
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	1654	1102	3024	3127	1132	205	22	1	1	0	0	0	0	0	10268
Grand Total	1703	1113	3076	3256	1220	226	26	3	1	1	2	0	0	0	10627

15th Percentile : 9 MPH  
 50th Percentile : 22 MPH  
 85th Percentile : 29 MPH  
 95th Percentile : 33 MPH

Stats  
 Mean Speed(Average) : 21 MPH  
 10 MPH Pace Speed : 21-30 MPH  
 Number in Pace : 4957  
 Percent in Pace : 46.6%  
 Number of Vehicles > 30 MPH : 1460  
 Percent of Vehicles > 30 MPH : 13.7%

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## Pennsylvania Ave EB at 11th St SE Volume

Start Time	Sun	24-Nov-13	Mon	25-Nov-13	Tue	26-Nov-13	Daily Average	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	*	*	33	158	*	*	33	158
12:15	*	*	36	143	*	*	36	143
12:30	*	*	21	146	*	*	21	146
12:45	*	*	25	160	*	*	25	160
01:00	*	*	13	167	*	*	13	167
01:15	*	*	18	151	*	*	18	151
01:30	*	*	7	167	*	*	7	167
01:45	*	*	13	170	*	*	13	170
02:00	*	*	10	179	*	*	10	179
02:15	*	*	11	189	*	*	11	189
02:30	*	*	5	199	*	*	5	199
02:45	*	*	4	203	*	*	4	203
03:00	*	*	6	241	*	*	6	241
03:15	*	*	8	265	*	*	8	265
03:30	*	*	6	268	*	*	6	268
03:45	*	*	22	226	*	*	22	226
04:00	*	*	13	284	*	*	13	284
04:15	*	*	12	<b>265</b>	*	*	12	<b>265</b>
04:30	*	*	12	<b>260</b>	*	*	12	<b>260</b>
04:45	*	*	13	<b>283</b>	*	*	13	<b>283</b>
05:00	*	*	18	<b>298</b>	*	*	18	<b>298</b>
05:15	*	*	24	246	*	*	24	246
05:30	*	*	24	107	*	*	24	107
05:45	*	*	20	87	*	*	20	87
06:00	*	*	48	139	*	*	48	139
06:15	*	*	53	240	*	*	53	240
06:30	*	*	49	223	*	*	49	223
06:45	*	*	68	231	*	*	68	231
07:00	*	*	101	194	*	*	101	194
07:15	*	*	85	183	*	*	85	183
07:30	*	*	103	158	*	*	103	158
07:45	*	*	116	151	*	*	116	151
08:00	*	*	113	121	*	*	113	121
08:15	*	*	133	115	*	*	133	115
08:30	*	*	<b>128</b>	98	*	*	<b>128</b>	98
08:45	*	*	<b>131</b>	103	*	*	<b>131</b>	103
09:00	*	*	<b>139</b>	97	*	*	<b>139</b>	97
09:15	*	*	<b>146</b>	94	*	*	<b>146</b>	94
09:30	*	*	105	105	*	*	105	105
09:45	*	*	147	79	*	*	147	79
10:00	*	46	132	*	*	*	132	46
10:15	*	<b>50</b>	124	*	*	*	124	50
10:30	*	<b>59</b>	130	*	*	*	130	59
10:45	*	<b>40</b>	127	*	*	*	127	40
11:00	*	<b>58</b>	132	*	*	*	132	58
11:15	*	39	109	*	*	*	109	39
11:30	*	27	130	*	*	*	130	27
11:45	*	40	152	*	*	*	152	40
Total	0	359	3075	7193	0	0	3075	7552
Combined Total	359		10268		0		10627	
Peak Vol.	10:15 207		08:30 544		04:15 1106		08:30 544	
P.H.F.	0.877		0.932		0.928		0.932	
ADT	ADT 10,627		AADT 10,627					



DC Department of Transportation - Traffic Accident Reporting and Analysis System

## Accident Summary Report (R-8)

**Corridor:** PENNSYLVANIA AVE,NW,SE From TENTH ST,SE TO TWELFTH ST,SE

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

**Prepared By:** Rahul Jain

**Prepared Date:** 9/15/2013

Total Number of Accident:	49	<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:	9	18.4%	Fixed Object:	0	0.0%
Total Number of Injuries:	17	Left Turn:	6	12.2%	Ran Off Road:	1	2.0%
Total Number of Disabling Injuries:	0	Right Turn:	0	0.0%	Ped. Involved:	2	4.1%
Total Number of NonDisabling Injuries:	1	Rear End:	6	12.2%	Backing:	3	6.1%
Total Number of Pedestrians Involved:	3	Side Swiped:	16	32.7%	Non Collision:	1	2.0%
Total Number of Bicycles Involved:	0	Head On:	0	0.0%	Under/Over Ride:	0	0.0%
Total Number of Motorcycles Involved:	1	Parked:	3	6.1%	Unspecified:	2	4.1%
<b>Time of Day</b>				<b>Day o fweek</b>			
	<b>#ACC</b>	<b>%</b>			<b>#ACC</b>	<b>%</b>	
07:30 ~ 09:30:	4	8.2%		Sunday:	0	0.0%	
09:30 ~ 11:30:	8	16.3%		Monday:	8	16.3%	
11:30 ~ 13:30:	5	10.2%		Tuesday:	2	4.1%	
13:30 ~ 16:00:	5	10.2%		Wednesday:	7	14.3%	
16:00 ~18:30:	13	26.5%		Thursday:	10	20.4%	
18:30 ~ 07:30:	14	28.6%		Friday:	12	24.5%	
Unspecified:	0	0.0%		Saturday:	10	20.4%	
<b>Weather Condition</b>				<b>Surface Condition</b>			
	<b>#ACC</b>	<b>%</b>			<b>#ACC</b>	<b>%</b>	
Clear:	44	89.8%		Dry:	44	89.8%	
Rain:	5	10.2%		Wet:	4	8.2%	
Snow:	0	0.0%		Snow/Ice:	1	2.0%	
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%	
<b>Type of Vehicle</b>				<b>Accident Severity Type</b>			
	<b>#VEH</b>	<b>%</b>			<b>#ACC</b>	<b>%</b>	
Passenger Car:	63	66.3%		Fatal Collision:	0	0.0%	
Bus:	13	13.7%		Injury Collision:	15	30.6%	
Truck:	9	9.5%		PDO Collision:	34	69.4%	
Taxi:	3	3.2%		<b>Light Condition</b>			
Minivan:	0	0.0%			<b>#ACC</b>	<b>%</b>	
Police/Emergency Vehicle:	3	3.2%		Daylight:	36	73.5%	
Motorcycle/Moped:	1	1.1%		Dawn/Dusk:	2	4.1%	
Bicycle:	0	0.0%		Dark(Lighted):	10	20.4%	
Fixed Object:	0	0.0%		Dark(Not Lighted):	1	2.0%	
Unspecified:	3	3.2%		Dark(Unknown Lighting):	0	0.0%	
				Unspecified:	0	0.0%	
<b>Contributing Factor</b>				<b>Pedestrian Actions</b>			
	<b>#VEH</b>	<b>%</b>			<b>#ACC</b>	<b>%</b>	
Driver: Speed:	2	2.1%		In Crosswalk with Signal:	1	33.3%	
Driver: Alcohol/Drug:	0	0.0%		In Crosswalk against Signal:	1	33.3%	
Driver: Electronic Device:	0	0.0%		In Crosswalk no Signal:	1	33.3%	
Driver: Others:	23	24.2%		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:	70	73.7%		Unspecified:	0	0.0%	

31 Records are not approved as of 9/15/2013 8:37:58 PM