



District Department of Transportation

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

1300 Block Pennsylvania Avenue SE

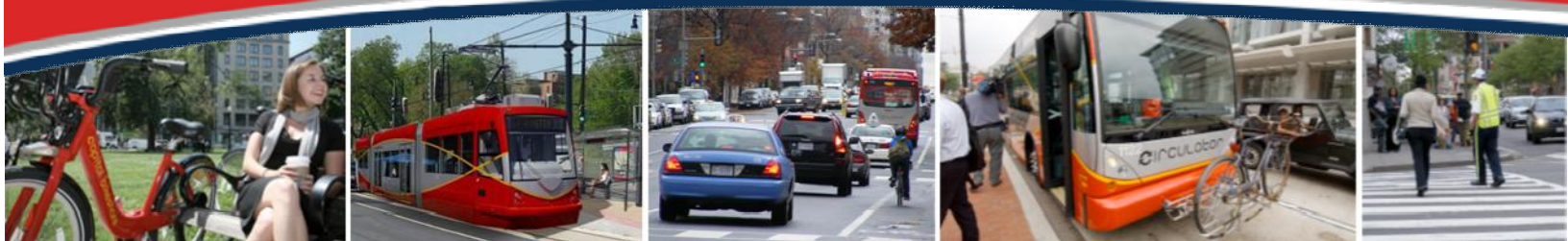
Study Area and Location

District	PSA	Ward	ANC	Phase	Description
1	108	6	6B	Planned	1300 Block Pennsylvania Avenue Southeast Southeast-bound



The *planned* speed camera is located in Ward 6 at the 1300 block Pennsylvania Avenue Southeast in the southeastbound direction. 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.

W6-180



District Department of Transportation

55 M Street, SE, Suite 400

Washington, DC 20003



District Department of Transportation

1300 Block Pennsylvania Avenue SE

Field Assessment Summary

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

- This is a residential and commercial area with apartments, houses, and retail stores.
- There are four schools in this area: Tyler Elementary School, Cesar Chavez PCS Capitol Hill Campus, International Graduate University, and Chamberlain Elementary.
- There is also the Tiger Woods Learning Center and Watkins Recreation Center in the area.
- There is a grassy median and traffic signals with pedestrian signals and crosswalks at 13th Street and Potomac Avenue.
- There is sidewalk and on-street parking on both sides of the street. The pavement is in good condition and there is curb and gutter with drainage inlets.
- There is a bus stop westbound at 13th Street.



Looking Northwest-bound

W6-181



District Department of Transportation

1300 Block Pennsylvania Avenue SE



Looking Southeast-bound

Speed Data Analysis

Posted Speed Limit (MPH)	30
Mean Speed (MPH)	23
85th Percentile Speed (MPH)	30
10 MPH Pace Speed (MPH)	22-31
ADT	9,846

The mean speed is lower than the posted speed limit by 7 MPH and the 85th percentile speed is the same as 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 44 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 Swiped (24 crashes) and Right Angle (5 crashes). The other collision types had four crashes or less each.

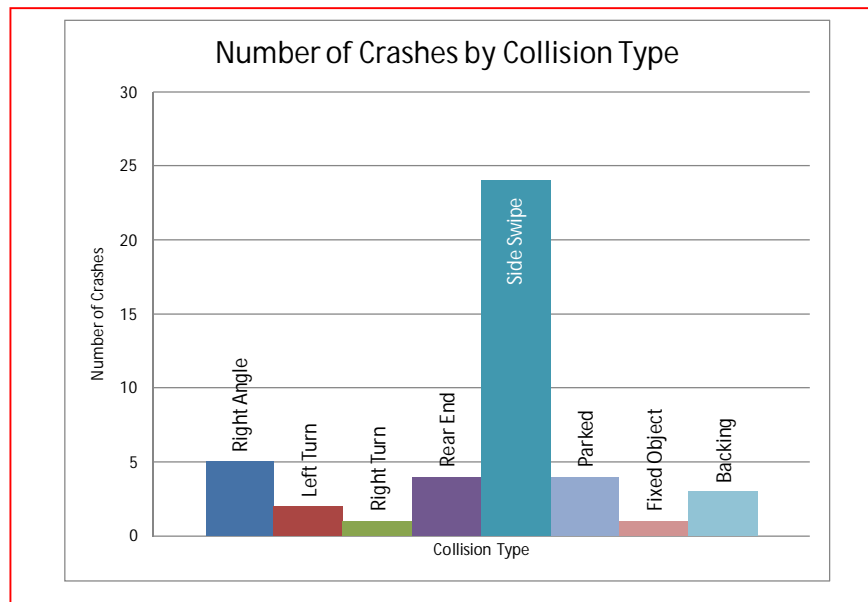
W6-182



District Department of Transportation

1300 Block Pennsylvania Avenue SE

Severity			Weather			Surface condition			Light Condition		
Total	44										
Fatal	0	0.0%	Clear	39	88.6%	Dry	39	88.6%	Day	33	75.0%
Injury	7	15.9%	Rain	4	9.1%	Wet	4	9.1%	Night	10	22.7%
Bus	19	43.2%	Snow	0	0.0%	Snow/Ice	1	2.3%			
Truck	9	20.5%									



There was an elevated number of speed related crashes at this location, including side swipe crashes. The 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”¹ as two errors leading to sideswipe crashes. Both of these errors can be decreased with a decrease in travel speed.

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)*².

¹ AASHTO Highway Safety Manual, 1st Edition, 2010; Volume 1, page 2-13

² DDOT, TRAFFIC SAFETY STATISTICS REPORT FOR THE DISTRICT OF COLUMBIA (2009-2011), pg. 80.



District Department of Transportation

1300 Block Pennsylvania Avenue SE

Safety Nexus

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

1. Speed Data – The 85th percentile speed is the same as the posted speed limit at this location.
2. Crash Data – There was an elevated number of speed-related crashes at this location, including side swipe collisions. There were seven injury-related crashes at this location. The Pennsylvania Avenue Corridor is listed as one of the top ten high frequency crash corridors from 2009 to 2011.
3. Field Assessment – The following site characteristics suggest a need for a safer travel environment:
 - a. There is a residential and commercial area with apartments, houses and retail stores.
 - b. There are four schools in this area: Tyler Elementary School, Cesar Chavez PCS Capitol Hill Campus, International Graduate University, and Chamberlain Elementary.
 - c. The Tiger Woods Learning Center and Watkins Recreation Center in the area which generate pedestrian and bicycle activity.
 - d. There are several bus stops and one Metrorail station in the area which generate pedestrian activity.
 - e. There is on-street parking on both sides of the roadway.

Although the speed data analysis revealed the 85th percentile speed to be the same as the posted speed limit, due to the elevated number of speed-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.

W6-184

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

1300 Block of Pennsylvania Ave SE, SEB Speed

SEB															
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	
01/15/08	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
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	90	49	197	270	127	23	2	0	0	0	0	0	0	0	758
23:00	106	84	284	314	84	11	3	0	0	0	0	0	0	0	886
Total	196	133	481	584	211	34	5	0	0	0	0	0	0	0	1644

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

1300 Block of Pennsylvania Ave SE, SEB Speed

SEB	1	16	21	26	31	36	41	46	51	56	61	66	71	76	Total
Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	
01/16/08	220	165	293	127	32	1	0	0	0	0	0	0	0	0	838
01:00	291	145	147	47	9	0	0	0	0	0	0	0	0	0	639
02:00	114	70	261	344	92	7	2	0	0	0	0	0	0	0	890
03:00	37	15	140	317	115	15	2	0	0	0	0	0	0	0	641
04:00	16	9	104	209	97	13	1	0	0	0	0	0	0	0	449
05:00	12	7	105	176	60	12	1	0	0	0	0	0	0	0	373
06:00	12	8	87	117	55	7	0	0	0	0	0	0	0	0	286
07:00	5	6	42	90	31	10	2	2	0	0	0	0	0	0	188
08:00	1	3	29	45	10	6	0	1	0	0	0	0	0	0	95
09:00	1	3	11	20	13	3	1	0	0	0	0	0	0	0	52
10:00	1	2	7	17	3	2	0	0	0	0	0	0	0	0	32
11:00	1	3	9	9	4	2	1	0	0	0	0	0	0	0	29
12 PM	0	3	12	22	9	1	1	1	0	0	0	0	0	0	49
13:00	4	2	16	40	39	14	5	0	0	0	0	0	0	0	120
14:00	12	6	46	92	49	18	3	2	1	0	0	0	0	0	229
15:00	28	23	124	115	71	20	1	0	0	0	0	0	0	0	382
16:00	36	27	143	146	69	22	3	1	0	0	0	0	0	0	447
17:00	38	48	106	161	49	10	0	0	0	0	0	0	0	0	412
18:00	46	29	91	170	95	24	7	0	1	0	0	0	0	0	463
19:00	62	34	126	180	85	21	2	0	0	0	0	0	0	0	510
20:00	73	59	181	172	89	17	6	0	0	0	0	0	0	0	597
21:00	45	32	127	214	106	34	13	0	0	0	0	0	0	0	571
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	1055	699	2207	2830	1182	259	51	7	2	0	0	0	0	0	8292
Grand Total	1251	832	2688	3414	1393	293	56	7	2	0	0	0	0	0	9936

15th Percentile : 10 MPH
 50th Percentile : 23 MPH
 85th Percentile : 30 MPH
 95th Percentile : 34 MPH

Stats
 Mean Speed(Average) : 23 MPH
 10 MPH Pace Speed : 22-31 MPH
 Number in Pace : 4978
 Percent in Pace : 50.1%
 Number of Vehicles > 30 MPH : 1745
 Percent of Vehicles > 30 MPH : 17.6%

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

1300 Block of Pennsylvania Ave SE, SEB Volume

Start Time	Tue	15-Jan-08	Wed	16-Jan-08	Thu	17-Jan-08	Daily Average	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	*	*	224	5	*	*	224	5
12:15	*	*	207	7	*	*	207	7
12:30	*	*	237	18	*	*	237	18
12:45	*	*	170	19	*	*	170	19
01:00	*	*	146	15	*	*	146	15
01:15	*	*	133	33	*	*	133	33
01:30	*	*	205	36	*	*	205	36
01:45	*	*	155	36	*	*	155	36
02:00	*	*	208	37	*	*	208	37
02:15	*	*	221	58	*	*	221	58
02:30	*	*	234	56	*	*	234	56
02:45	*	*	227	78	*	*	227	78
03:00	*	*	181	92	*	*	181	92
03:15	*	*	172	88	*	*	172	88
03:30	*	*	146	93	*	*	146	93
03:45	*	*	142	109	*	*	142	109
04:00	*	*	111	99	*	*	111	99
04:15	*	*	120	115	*	*	120	115
04:30	*	*	108	118	*	*	108	118
04:45	*	*	110	115	*	*	110	115
05:00	*	*	103	97	*	*	103	97
05:15	*	*	114	104	*	*	114	104
05:30	*	*	78	102	*	*	78	102
05:45	*	*	78	109	*	*	78	109
06:00	*	*	85	127	*	*	85	127
06:15	*	*	69	106	*	*	69	106
06:30	*	*	57	117	*	*	57	117
06:45	*	*	75	113	*	*	75	113
07:00	*	*	52	116	*	*	52	116
07:15	*	*	51	116	*	*	51	116
07:30	*	*	40	126	*	*	40	126
07:45	*	*	45	152	*	*	45	152
08:00	*	*	30	147	*	*	30	147
08:15	*	*	27	127	*	*	27	127
08:30	*	*	20	156	*	*	20	156
08:45	*	*	18	162	*	*	18	162
09:00	*	*	9	155	*	*	9	155
09:15	*	*	14	152	*	*	14	152
09:30	*	*	11	135	*	*	11	135
09:45	*	*	18	123	*	*	18	123
10:00	*	158	10	0	*	*	10	79
10:15	*	198	9	*	*	*	9	198
10:30	*	204	8	*	*	*	8	204
10:45	*	198	5	*	*	*	5	198
11:00	*	212	7	*	*	*	7	212
11:15	*	216	10	*	*	*	10	216
11:30	*	225	9	*	*	*	9	225
11:45	*	233	3	*	*	*	3	233
Total	0	1644	4512	3769	0	0	4512	5334
Combined Total	1644		8281		0		9846	
Peak		11:00	02:00	08:30			02:00	11:00
Vol.		886	890	625			890	886
P.H.F.		0.951	0.939	0.965			0.939	0.951
ADT		ADT 9,846	AADT 9,846					

DC Department of Transportation - Traffic Accident Reporting and Analysis System

Accident Summary Report (R-8)

Corridor: PENNSYLVANIA AVE,NW,SE From G 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

		Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Accident:	44	Right Angle:	5	11.4%	Fixed Object:	1	2.3%
Total Number of Fatalities:	0	Left Turn:	2	4.5%	Ran Off Road:	0	0.0%
Total Number of Injuries:	9	Right Turn:	1	2.3%	Ped. Involved:	0	0.0%
Total Number of Disabling Injuries:	2	Rear End:	4	9.1%	Backing:	3	6.8%
Total Number of NonDisabling Injuries:	0	Side Swiped:	24	54.5%	Non Collision:	0	0.0%
Total Number of Pedestrians Involved:	2	Head On:	0	0.0%	Under/Over Ride:	0	0.0%
Total Number of Bicycles Involved:	0	Parked:	4	9.1%	Unspecified:	0	0.0%
Total Number of Motorcycles Involved:	0						

Time of Day	#ACC	%	Day of week	#ACC	%
07:30 ~ 09:30:	2	4.5%	Sunday:	2	4.5%
09:30 ~ 11:30:	5	11.4%	Monday:	7	15.9%
11:30 ~ 13:30:	4	9.1%	Tuesday:	8	18.2%
13:30 ~ 16:00:	12	27.3%	Wednesday:	7	15.9%
16:00 ~ 18:30:	11	25.0%	Thursday:	7	15.9%
18:30 ~ 07:30:	10	22.7%	Friday:	7	15.9%
Unspecified:	0	0.0%	Saturday:	6	13.6%

Weather Condition	#ACC	%	Surface Condition	#ACC	%
Clear:	39	88.6%	Dry:	39	88.6%
Rain:	4	9.1%	Wet:	4	9.1%
Snow:	0	0.0%	Snow/Ice:	1	2.3%
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	2.3%	Unspecified:	0	0.0%

Type of Vehicle	#VEH	%	Accident Severity Type	#ACC	%
Passenger Car:	54	60.0%	Fatal Collision:	0	0.0%
Bus:	19	21.1%	Injury Collision:	7	15.9%
Truck:	9	10.0%	PDO Collision:	37	84.1%
Taxi:	1	1.1%			
Minivan:	0	0.0%	Light Condition	#ACC	%
Police/Emergency Vehicle:	3	3.3%	Daylight:	33	75.0%
Motorcycle/Moped:	0	0.0%	Dawn/Dusk:	1	2.3%
Bicycle:	0	0.0%	Dark(Lighted):	9	20.5%
Fixed Object:	0	0.0%	Dark(Not Lighted):	1	2.3%
Unspecified:	4	4.4%	Dark(Unknown Lighting):	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:	23	25.6%	In Unmarked Crosswalk:	0	0.0%
Vehicle:	0	0.0%	Not in Crosswalk:	0	0.0%
Roadway:	1	1.1%	From Between Parked Cars:	0	0.0%
Unspecified:	66	73.3%	Unspecified:	1	100.0%

27 Records are not approved as of 9/15/2013 11:00:41 AM