



District Department of Transportation

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

4100 Block East Capitol Street SE

Study Area and Location

District	PSA	Ward	ANC	Phase	Description
6	603	7	7A	Proposed	4100 Block East Capitol Street Southeast, Eastbound



This *proposed* speed camera will be located in Ward 7 at the 4100 block of East Capitol Street Southeast in the eastbound direction. East Capitol Street Southeast runs between Southern Avenue Southeast to the east and C Street Northeast to the west. The posted speed limit is 35 MPH.

W7 - 399





District Department of Transportation

4100 Block East Capitol Street SE

Field Assessment Summary

East Capitol Street Southeast is assumed to run in an east-west direction, and is classified as a principal arterial. East Capitol Street Southeast has three travel lanes in each direction. This site has the following characteristics:

- This is a residential area with houses and apartments on the north side of the street and Fort Chaplin Park on the south side of the street which has a bike trail.
- There are three schools in the area: the Seed School, DC Prep, and Plummer Elementary School.
- There is the Benning Soddert Recreational Center and a Boys and Girls Club of America close to the site.
- There is a grassy median and sidewalk on both sides of the street.
- There is on-street parking on the north side of the street.
- The pavement is in good condition and there is curb and gutter with drainage inlets.
- There is a crosswalk at 41st Street. There is a bus stop in both directions at 41st Street.



Looking Eastbound

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District Department of Transportation

4100 Block East Capitol Street SE



Looking Westbound

Speed Data Analysis

	Eastbound
Posted Speed Limit (MPH)	35
Mean Speed (MPH)	36
85th Percentile Speed (MPH)	44
10 MPH Pace Speed	33-42
ADT	10,340

The mean speed is higher than the posted speed limit by 1 MPH, and the 85th percentile speed is higher than the posted speed limit by 9 MPH 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 40 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 Rear End (14 crashes), Side Swipe (8 crashes), Fixed Object (5 crashes), and Backing (3 crashes). The other collision types had 2 crashes or less each. There were 2 crashes where vehicular speeding was the contributing factor. Furthermore, the site experienced a high frequency (17 crashes) of injury-related crashes.

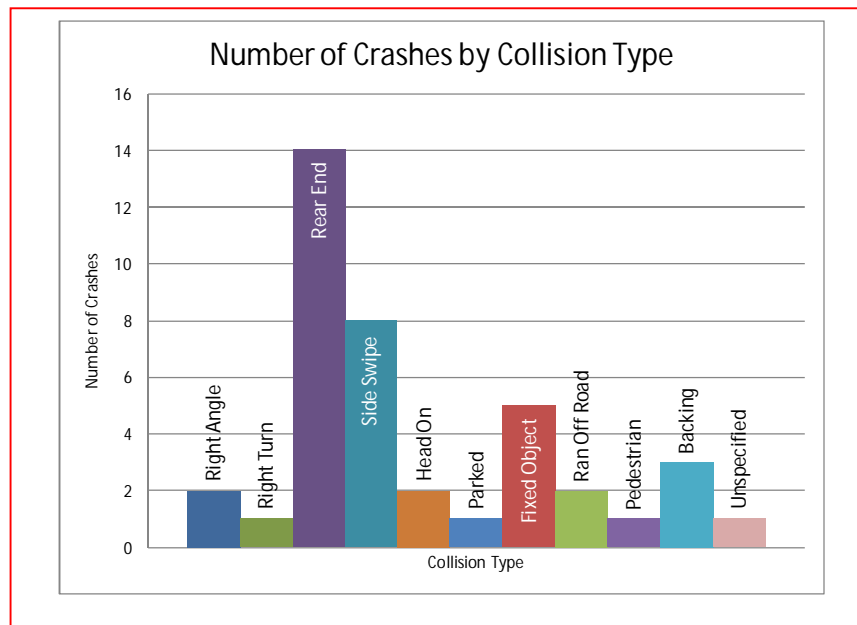
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District Department of Transportation

4100 Block East Capitol Street SE

Severity			Weather			Surface condition			Light Condition		
Total	40										
Fatal	0	0.0%	Clear	33	82.5%	Dry	32	80.0%	Day	21	52.5%
Injury	17	42.5%	Rain	5	12.5%	Wet	5	12.5%	Night	14	35.0%
Truck	3	7.5%	Snow	0	0.0%	Snow/Ice	1	2.5%			
Emergency	3	7.5%									



Safety Nexus

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

1. Speed Data – The 85th percentile speed is much higher than the posted speed limit at this location.
2. Crash Data – This location experienced a high frequency (17 crashes) of injury-related crashes. There were also two crashes where vehicular speeding was the contributing factor.
3. Field Assessment – The following site characteristics suggest a need for a safer travel environment:
 - a. This is a residential area with houses and apartments.
 - b. There are three schools in the area: the Seed School, DC Prep, and Plummer Elementary School.
 - c. There is the Benning Soddert Recreational Center and a Boys and Girls Club of America close to the site.

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4100 Block East Capitol Street SE

- d. Fort Chaplin Park is in the area which generates pedestrian and bicycle activity.
- e. There are several bus stops and one Metro station in the area which generate pedestrian activity.
- f. There is on-street parking on the north side of the street.

Due to the speed data analysis, 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.

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SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

4100 block of East Capitol St NE EB Speed

EB

Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
11/19/13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	0	0	1	5	17	13	5	4	1	0	1	0	0	0	47
02:00	0	0	0	2	9	9	4	3	1	1	1	0	1	2	33
03:00	0	0	0	3	10	8	3	3	1	0	0	1	0	0	29
04:00	0	0	1	6	13	10	2	3	1	0	0	0	0	0	36
05:00	0	0	4	12	27	20	16	7	0	1	0	0	0	0	87
06:00	4	0	0	8	28	55	36	17	11	4	0	2	0	0	165
07:00	20	0	2	10	48	62	48	22	19	2	2	0	1	0	236
08:00	24	0	4	13	48	76	50	31	17	4	2	0	0	1	270
09:00	7	0	1	10	49	101	85	52	20	7	3	0	0	0	335
10:00	8	0	1	15	76	97	72	29	13	7	5	1	0	0	324
11:00	10	0	3	9	67	117	89	42	12	3	2	0	0	0	354
12 PM	9	1	0	19	85	130	101	49	13	4	3	0	0	0	414
13:00	4	1	3	26	83	152	117	52	17	9	0	1	0	0	465
14:00	19	0	3	13	75	157	171	96	29	10	1	1	1	0	576
15:00	44	0	1	37	186	286	291	146	49	13	1	0	0	0	1054
16:00	73	0	11	72	287	451	302	122	33	9	1	0	0	0	1361
17:00	165	49	74	168	367	292	106	29	6	0	0	0	0	0	1256
18:00	55	3	8	121	393	410	174	54	4	1	1	1	0	0	1225
19:00	22	0	3	60	193	233	98	37	13	1	0	0	0	0	660
20:00	6	0	8	39	100	142	82	30	14	3	1	0	0	0	425
21:00	8	1	3	39	97	122	64	31	14	3	2	0	0	0	384
22:00	7	1	1	26	73	82	47	20	7	1	1	0	0	0	266
23:00	0	0	2	21	56	73	41	14	5	6	1	1	0	1	221
Total	485	56	134	734	2387	3098	2004	893	300	89	28	8	3	4	10223

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

4100 block of East Capitol St NE EB Speed

EB

Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
11/20/13	1	0	3	8	36	34	24	6	3	1	1	0	0	0	117
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	1	0	3	8	36	34	24	6	3	1	1	0	0	0	117
Grand Total	486	56	137	742	2423	3132	2028	899	303	90	29	8	3	4	10340

15th Percentile : 28 MPH
 50th Percentile : 36 MPH
 85th Percentile : 44 MPH
 95th Percentile : 49 MPH

Stats
 Mean Speed(Average) : 36 MPH
 10 MPH Pace Speed : 33-42 MPH
 Number in Pace : 5188
 Percent in Pace : 50.2%
 Number of Vehicles > 35 MPH : 6158
 Percent of Vehicles > 35 MPH : 59.6%

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

4100 block of East Capitol St NE EB Volume

Start Time	19-Nov-13		20-Nov-13		21-Nov-13		Daily Average	
	Tue A.M.	P.M.	Wed A.M.	P.M.	Thu A.M.	P.M.	A.M.	P.M.
12:00	*	98	33	*	*	*	33	98
12:15	*	103	31	*	*	*	31	103
12:30	*	111	31	*	*	*	31	111
12:45	*	102	22	*	*	*	22	102
01:00	22	111	*	*	*	*	22	111
01:15	13	137	*	*	*	*	13	137
01:30	9	96	*	*	*	*	9	96
01:45	3	121	*	*	*	*	3	121
02:00	10	137	*	*	*	*	10	137
02:15	7	123	*	*	*	*	7	123
02:30	9	154	*	*	*	*	9	154
02:45	7	162	*	*	*	*	7	162
03:00	7	184	*	*	*	*	7	184
03:15	5	240	*	*	*	*	5	240
03:30	6	289	*	*	*	*	6	289
03:45	11	341	*	*	*	*	11	341
04:00	11	303	*	*	*	*	11	303
04:15	8	386	*	*	*	*	8	386
04:30	7	297	*	*	*	*	7	297
04:45	10	375	*	*	*	*	10	375
05:00	15	375	*	*	*	*	15	375
05:15	11	388	*	*	*	*	11	388
05:30	20	176	*	*	*	*	20	176
05:45	41	317	*	*	*	*	41	317
06:00	30	363	*	*	*	*	30	363
06:15	31	357	*	*	*	*	31	357
06:30	43	292	*	*	*	*	43	292
06:45	61	213	*	*	*	*	61	213
07:00	66	214	*	*	*	*	66	214
07:15	72	185	*	*	*	*	72	185
07:30	57	135	*	*	*	*	57	135
07:45	41	126	*	*	*	*	41	126
08:00	31	113	*	*	*	*	31	113
08:15	69	116	*	*	*	*	69	116
08:30	61	95	*	*	*	*	61	95
08:45	109	101	*	*	*	*	109	101
09:00	92	104	*	*	*	*	92	104
09:15	88	85	*	*	*	*	88	85
09:30	77	85	*	*	*	*	77	85
09:45	78	110	*	*	*	*	78	110
10:00	63	76	*	*	*	*	63	76
10:15	82	81	*	*	*	*	82	81
10:30	94	60	*	*	*	*	94	60
10:45	85	49	*	*	*	*	85	49
11:00	94	64	*	*	*	*	94	64
11:15	76	50	*	*	*	*	76	50
11:30	93	56	*	*	*	*	93	56
11:45	91	51	*	*	*	*	91	51
Total	1916	8307	117	0	0	0	2033	8307
Combined Total	10223		117		0		10340	
Peak	08:45	04:30	12:00				08:45	04:30
Vol.	366	1435	117				366	1435
P.H.F.	0.839	0.925	0.886				0.839	0.925
ADT	ADT 10,340		AADT 10,340					

DC Department of Transportation - Traffic Accident Reporting and Analysis System

Accident Summary Report (R-8)

Corridor: EAST CAPITOL ST,BN From FORTIETH ST,BN TO TEXAS AVE,BN

Time Period Covered: From 01/01/2010 To 12/31/2012 **Prepared By:** Rahul Jain

Prepared Date: 11/25/2012

Total Number of Accident:	40	Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Fatalities:	0	Right Angle:	2	5.0%	Fixed Object:	5	12.5%
Total Number of Injuries:	27	Left Turn:	0	0.0%	Ran Off Road:	2	5.0%
Total Number of Disabling Injuries:	1	Right Turn:	1	2.5%	Ped. Involved:	1	2.5%
Total Number of NonDisabling Injuries:	5	Rear End:	14	35.0%	Backing:	3	7.5%
Total Number of Pedestrians Involved:	1	Side Swiped:	8	20.0%	Non Collision:	0	0.0%
Total Number of Bicycles Involved:	1	Head On:	2	5.0%	Under/Over Ride:	0	0.0%
Total Number of Motorcycles Involved:	1	Parked:	1	2.5%	Unspecified:	1	2.5%
Time of Day				Day of week			
	#ACC	%			#ACC	%	
07:30 ~ 09:30:	5	12.5%		Sunday:	8	20.0%	
09:30 ~ 11:30:	3	7.5%		Monday:	5	12.5%	
11:30 ~ 13:30:	1	2.5%		Tuesday:	4	10.0%	
13:30 ~ 16:00:	4	10.0%		Wednesday:	4	10.0%	
16:00 ~ 18:30:	8	20.0%		Thursday:	8	20.0%	
18:30 ~ 07:30:	19	47.5%		Friday:	2	5.0%	
Unspecified:	0	0.0%		Saturday:	9	22.5%	
Weather Condition				Surface Condition			
	#ACC	%			#ACC	%	
Clear:	33	82.5%		Dry:	32	80.0%	
Rain:	5	12.5%		Wet:	5	12.5%	
Snow:	0	0.0%		Snow/Ice:	1	2.5%	
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:	2	5.0%		Unspecified:	2	5.0%	
Type of Vehicle				Accident Severity Type			
	#VEH	%			#ACC	%	
Passenger Car:	67	88.2%		Fatal Collision:	0	0.0%	
Bus:	0	0.0%		Injury Collision:	17	42.5%	
Truck:	3	3.9%		PDO Collision:	23	57.5%	
Taxi:	0	0.0%		Light Condition			
Minivan:	0	0.0%			#ACC	%	
Police/Emergency Vehicle:	3	3.9%		Daylight:	21	52.5%	
Motorcycle/Moped:	1	1.3%		Dawn/Dusk:	3	7.5%	
Bicycle:	1	1.3%		Dark(Lighted):	13	32.5%	
Fixed Object:	0	0.0%		Dark(Not Lighted):	1	2.5%	
Unspecified:	1	1.3%		Dark(Unknown Lighting):	0	0.0%	
				Unspecified:	2	5.0%	
Contributing Factor				Pedestrian Actions			
	#VEH	%			#ACC	%	
Driver: Speed:	2	2.6%		In Crosswalk with Signal:	1	100.0%	
Driver: Alcohol/Drug:	2	2.6%		In Crosswalk against Signal:	0	0.0%	
Driver: Electronic Device:	0	0.0%		In Crosswalk no Signal:	0	0.0%	
Driver: Others:	13	17.1%		In Unmarked Crosswalk:	0	0.0%	
Vehicle:	1	1.3%		Not in Crosswalk:	0	0.0%	
Roadway:	1	1.3%		From Between Parked Cars:	0	0.0%	
Unspecified:	57	75.0%		Unspecified:	0	0.0%	

26 Records are not approved as of 11/25/2013 6:06:13 PM