



District Department of Transportation

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

4200 Block South Capitol Street SW

Study Area and Location

District	PSA	Ward	ANC	Phase	Description
7	708	8	8D	Existing	4200 Block South Capitol Street Southwest, Southbound



The existing speed camera is located in Ward 8 in the 4200 block of South Capitol Street Southwest in the southbound direction. South Capitol Street runs between Independence Avenue Southeast to the north and Southern Avenue Southeast to the south. The posted speed limit is 30 MPH. The speed camera was installed in November 2012.





District Department of Transportation

4200 Block South Capitol Street SW

Field Assessment Summary

South Capitol Street is assumed to run in a north-south direction, and is classified as a minor arterial. South Capitol Street has two travel lanes in each direction. This site has the following characteristics:

- This is a residential area with apartments.
- There are two schools in the area: Leckie Elementary School and Patterson Elementary School.
- There is a traffic signal with pedestrian signals and crosswalks at Chesapeake Street.
- There is a crosswalk at Danbury Street.
- There is sidewalk on both sides of the street and on-street parking on east side of the street.
- The pavement is in good condition and there is curb and gutter with drainage inlets.
- There is a bus stop northbound after Danbury Street.



Looking Northbound



District Department of Transportation

4200 Block South Capitol Street SW



Looking Southbound

Speed Data Analysis

Posted Speed Limit (MPH)	30
Mean Speed (MPH)	35
85th Percentile Speed (MPH)	48
10 MPH Pace Speed	33-42
ADT	10,171

The mean speed and the 85th percentile speed are both higher than the posted speed limit at this location. The 85th percentile speed is 18 MPH over the posted speed limit. Due to the residential nature, this location may benefit from additional speed enforcement.

Crash Data Analysis

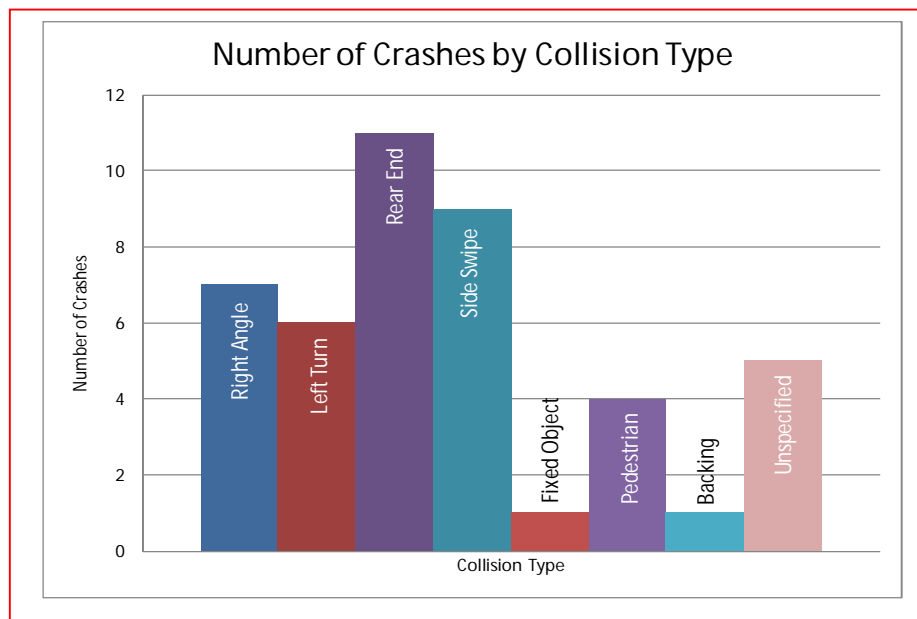
From the Accident Summary Report provided for the dates between January 1, 2010 and December 31, 2012, there were a total of 44 crashes at this location. A breakdown of number of crashes by collision type can be found in the chart on the next page. The most common types of collision at this location were Rear End (11 crashes), Side Swipe (9 crashes), Left Turn (6 crashes), Right Angle (7 crashes), Pedestrian Involved (4 crashes), and Unspecified (6 crashes). The other collision types had 1 crash or less each. Furthermore, this site experienced a high frequency (25 crashes) of injury-related crashes.



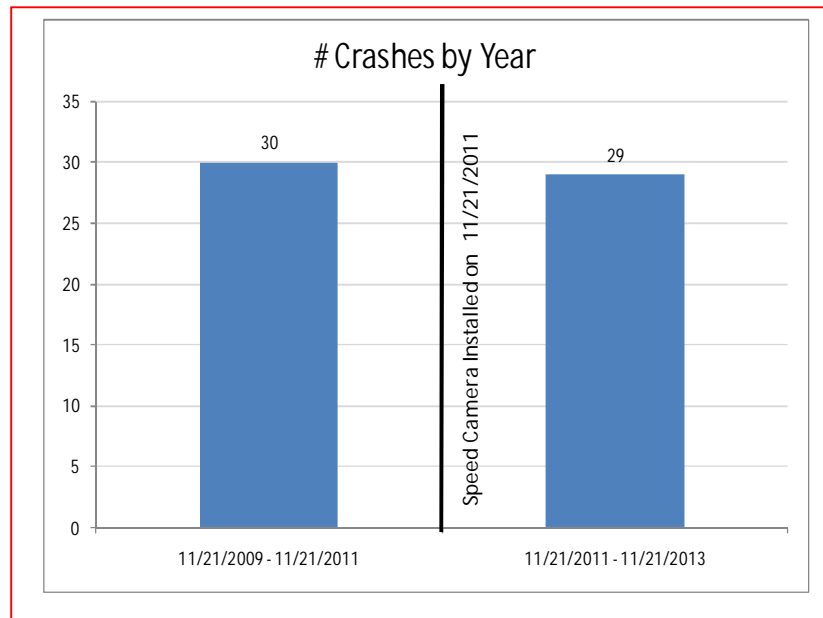
District Department of Transportation

4200 Block South Capitol Street SW

Severity			Weather			Surface condition			Light Condition		
Total	44										
Fatal	0	0.0%	Clear	41	93.2%	Dry	42	95.5%	Day	26	59.1%
Injury	25	56.8%	Rain	1	2.3%	Wet	2	4.5%	Night	17	38.6%
Truck	2	4.5%	Fog/Mist	1	2.3%	Slush	0	0.0%			
Police/EMS	2	4.5%									



The speed camera was installed on November 21, 2011. The graph on the next page shows the number of crashes in the 2 years prior to the speed camera's installation (30 crashes) and the 2 years after the speed camera's installation (29 crashes). There was a slight decrease but no major change seen in number of crashes after the installation of the camera. There were 17 injuries and no fatal crashes in the 2 years prior and after installing the speed camera. Both of these numbers remained unchanged after the installation.



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 (25 crashes) of injury-related crashes.
3. Field Assessment – The following site characteristics suggest a need for a safer travel environment:
 - a. This is a residential area with apartments.
 - b. There are two schools in the area: Leckie Elementary School and Patterson Elementary School. There are several bus stops in the area which generate pedestrian activity.
 - c. There is on-street parking on the east 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.

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

4200 block of South Capitol St SW SB Speed

SB

Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
11/22/13	1	0	1	10	18	28	22	26	20	18	7	5	1	5	162
01:00	1	0	2	1	7	9	18	17	10	8	6	0	3	7	89
02:00	3	2	1	3	13	10	6	11	8	7	5	3	2	2	76
03:00	1	0	0	4	5	7	9	11	8	4	3	2	2	4	60
04:00	2	0	0	2	4	2	6	6	5	2	4	2	1	0	36
05:00	10	0	0	8	12	14	15	13	11	9	3	2	2	5	104
06:00	2	1	5	6	23	28	23	24	17	11	4	9	6	4	163
07:00	12	0	4	25	42	48	46	26	17	13	5	5	6	6	255
08:00	17	0	13	26	65	61	51	55	28	17	7	3	3	8	354
09:00	11	5	7	37	62	71	56	54	29	11	8	1	3	7	362
10:00	11	1	10	35	69	91	79	52	34	19	12	9	2	5	429
11:00	18	5	12	35	58	64	88	63	41	33	13	5	4	5	444
12 PM	11	7	15	49	87	96	105	63	34	11	7	2	4	12	503
13:00	23	1	7	41	100	123	109	74	43	21	15	5	3	5	570
14:00	33	1	13	69	109	128	102	94	34	39	8	10	3	9	652
15:00	176	62	77	114	162	109	87	48	23	16	9	1	1	3	888
16:00	262	73	120	158	153	118	55	33	26	11	7	2	3	0	1021
17:00	145	38	102	148	185	176	111	55	24	14	4	2	2	0	1006
18:00	39	4	23	85	146	223	164	93	55	24	13	4	1	3	877
19:00	27	13	17	60	86	99	98	64	41	19	13	5	5	5	552
20:00	14	0	6	23	88	105	86	55	44	19	7	4	3	6	460
21:00	9	4	9	21	48	83	67	54	29	17	7	6	2	4	360
22:00	7	1	5	28	55	85	83	60	26	18	15	3	4	2	392
23:00	12	2	5	16	50	64	76	54	32	14	9	9	8	5	356
Total	847	220	454	1004	1647	1842	1562	1105	639	375	191	99	74	112	10171
Grand Total	847	220	454	1004	1647	1842	1562	1105	639	375	191	99	74	112	10171

15th Percentile : 15 MPH
 50th Percentile : 36 MPH
 85th Percentile : 48 MPH
 95th Percentile : 57 MPH

Stats
 Mean Speed(Average) : 35 MPH
 10 MPH Pace Speed : 33-42 MPH
 Number in Pace : 3213
 Percent in Pace : 31.9%
 Number of Vehicles > 30 MPH : 6907
 Percent of Vehicles > 30 MPH : 68.7%

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

4200 block of South Capitol St SW SB Volume

Start Time	22-Nov-13		23-Nov-13		24-Nov-13		Daily Average	
	Fri A.M.	P.M.	Sat A.M.	P.M.	Sun A.M.	P.M.	A.M.	P.M.
12:00	54	121	*	*	*	*	54	121
12:15	39	124	*	*	*	*	39	124
12:30	40	123	*	*	*	*	40	123
12:45	29	135	*	*	*	*	29	135
01:00	33	149	*	*	*	*	33	149
01:15	21	130	*	*	*	*	21	130
01:30	15	138	*	*	*	*	15	138
01:45	20	153	*	*	*	*	20	153
02:00	20	158	*	*	*	*	20	158
02:15	15	141	*	*	*	*	15	141
02:30	19	171	*	*	*	*	19	171
02:45	22	182	*	*	*	*	22	182
03:00	23	234	*	*	*	*	23	234
03:15	11	175	*	*	*	*	11	175
03:30	13	224	*	*	*	*	13	224
03:45	13	255	*	*	*	*	13	255
04:00	8	283	*	*	*	*	8	283
04:15	8	259	*	*	*	*	8	259
04:30	7	245	*	*	*	*	7	245
04:45	13	234	*	*	*	*	13	234
05:00	16	260	*	*	*	*	16	260
05:15	26	262	*	*	*	*	26	262
05:30	21	262	*	*	*	*	21	262
05:45	41	222	*	*	*	*	41	222
06:00	36	229	*	*	*	*	36	229
06:15	37	258	*	*	*	*	37	258
06:30	49	208	*	*	*	*	49	208
06:45	41	182	*	*	*	*	41	182
07:00	66	153	*	*	*	*	66	153
07:15	63	149	*	*	*	*	63	149
07:30	57	129	*	*	*	*	57	129
07:45	69	121	*	*	*	*	69	121
08:00	86	142	*	*	*	*	86	142
08:15	80	114	*	*	*	*	80	114
08:30	89	106	*	*	*	*	89	106
08:45	99	98	*	*	*	*	99	98
09:00	79	87	*	*	*	*	79	87
09:15	85	87	*	*	*	*	85	87
09:30	108	95	*	*	*	*	108	95
09:45	90	91	*	*	*	*	90	91
10:00	112	110	*	*	*	*	112	110
10:15	104	108	*	*	*	*	104	108
10:30	117	89	*	*	*	*	117	89
10:45	96	85	*	*	*	*	96	85
11:00	99	101	*	*	*	*	99	101
11:15	118	87	*	*	*	*	118	87
11:30	120	88	*	*	*	*	120	88
11:45	107	80	*	*	*	*	107	80
Total	2534	7637	0	0	0	0	2534	7637
Combined Total	10171		0		0		10171	
Peak	11:00	03:45					11:00	03:45
Vol.	444	1042					444	1042
P.H.F.	0.925	0.920					0.925	0.920
ADT	ADT 10,171		AADT 10,171					

DC Department of Transportation - Traffic Accident Reporting and Analysis System

Accident Summary Report (R-8)

Corridor: SOUTH CAPITOL ST,BN From BRANDYWINE ST,BN TO DANBURY ST,BN

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:	7	15.9%	Fixed Object:	1	2.3%
Total Number of Fatalities:	0	Left Turn:	6	13.6%	Ran Off Road:	0	0.0%
Total Number of Injuries:	43	Right Turn:	0	0.0%	Ped. Involved:	4	9.1%
Total Number of Disabling Injuries:	3	Rear End:	11	25.0%	Backing:	1	2.3%
Total Number of NonDisabling Injuries:	6	Side Swiped:	9	20.5%	Non Collision:	0	0.0%
Total Number of Pedestrians Involved:	4	Head On:	0	0.0%	Under/Over Ride:	0	0.0%
Total Number of Bicycles Involved:	1	Parked:	0	0.0%	Unspecified:	5	11.4%
Total Number of Motorcycles Involved:	0						

Time of Day	#ACC	%	Day o fweek	#ACC	%
07:30 ~ 09:30:	5	11.4%	Sunday:	8	18.2%
09:30 ~ 11:30:	4	9.1%	Monday:	5	11.4%
11:30 ~ 13:30:	6	13.6%	Tuesday:	4	9.1%
13:30 ~ 16:00:	6	13.6%	Wednesday:	6	13.6%
16:00 ~18:30:	4	9.1%	Thursday:	7	15.9%
18:30 ~ 07:30:	19	43.2%	Friday:	8	18.2%
Unspecified:	0	0.0%	Saturday:	6	13.6%

Weather Condition	#ACC	%	Surface Condition	#ACC	%
Clear:	41	93.2%	Dry:	42	95.5%
Rain:	1	2.3%	Wet:	2	4.5%
Snow:	0	0.0%	Snow/Ice:	0	0.0%
Sleet/Hail:	0	0.0%	Slush:	0	0.0%
Fog/Mist:	1	2.3%	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:	75	87.2%	Fatal Collision:	0	0.0%
Bus:	1	1.2%	Injury Collision:	25	56.8%
Truck:	2	2.3%	PDO Collision:	19	43.2%
Taxi:	1	1.2%			
Minivan:	0	0.0%	Light Condition	#ACC	%
Police/Emergency Vehicle:	2	2.3%	Daylight:	26	59.1%
Motorcycle/Moped:	0	0.0%	Dawn/Dusk:	0	0.0%
Bicycle:	1	1.2%	Dark(Lighted):	16	36.4%
Fixed Object:	0	0.0%	Dark(Not Lighted):	1	2.3%
Unspecified:	4	4.7%	Dark(Unknown Lighting):	0	0.0%
			Unspecified:	1	2.3%

Contributing Factor	#VEH	%	Pedestrian Actions	#ACC	%
Driver: Speed:	2	2.3%	In Crosswalk with Signal:	0	0.0%
Driver: Alcohol/Drug:	3	3.5%	In Crosswalk against Signal:	1	25.0%
Driver: Electronic Device:	2	2.3%	In Crosswalk no Signal:	2	50.0%
Driver: Others:	11	12.8%	In Unmarked Crosswalk:	0	0.0%
Vehicle:	0	0.0%	Not in Crosswalk:	1	25.0%
Roadway:	4	4.7%	From Between Parked Cars:	0	0.0%
Unspecified:	64	74.4%	Unspecified:	0	0.0%

31 Records are not approved as of 9/15/2013 2:25:15 PM

DC Department of Transportation - Traffic Accident Reporting and Analysis System

Accident Summary Report (R-8)

Corridor: SOUTH CAPITOL ST,BN From BRANDYWINE ST,BN TO DANBURY ST,BN

Time Period Covered: From 11/20/2009 To 11/20/2011

Prepared By: Rahul Jain

Prepared Date: 11/18/2011

Total Number of Accident:	30	Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Fatalities:	0	Right Angle:	4	13.3%	Fixed Object:	1	3.3%
Total Number of Injuries:	27	Left Turn:	4	13.3%	Ran Off Road:	0	0.0%
Total Number of Disabling Injuries:	2	Right Turn:	0	0.0%	Ped. Involved:	3	10.0%
Total Number of NonDisabling Injuries:	3	Rear End:	10	33.3%	Backing:	1	3.3%
Total Number of Pedestrians Involved:	3	Side Swiped:	4	13.3%	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:	3	10.0%
Time of Day				#ACC	%	Day o fweek	
07:30 ~ 09:30:				2	6.7%	Sunday:	
09:30 ~ 11:30:				3	10.0%	Monday:	
11:30 ~ 13:30:				4	13.3%	Tuesday:	
13:30 ~ 16:00:				4	13.3%	Wednesday:	
16:00 ~18:30:				2	6.7%	Thursday:	
18:30 ~ 07:30:				15	50.0%	Friday:	
Unspecified:				0	0.0%	Saturday:	
Weather Condition				#ACC	%	Surface Condition	
Clear:				29	96.7%	Dry:	
Rain:				0	0.0%	Wet:	
Snow:				0	0.0%	Snow/Ice:	
Sleet/Hail:				0	0.0%	Slush:	
Fog/Mist:				1	3.3%	Water/Sand:	
Crosswind/Blowing Sand:				0	0.0%	Repairing:	
Unspecified:				0	0.0%	Unspecified:	
Type of Vehicle				#VEH	%	Accident Severity Type	
Passenger Car:				51	89.5%	Fatal Collision:	
Bus:				0	0.0%	Injury Collision:	
Truck:				1	1.8%	PDO Collision:	
Taxi:				1	1.8%		
Minivan:				0	0.0%	Light Condition	
Police/Emergency Vehicle:				1	1.8%	Daylight:	
Motorcycle/Moped:				0	0.0%	Dawn/Dusk:	
Bicycle:				0	0.0%	Dark(Lighted):	
Fixed Object:				0	0.0%	Dark(Not Lighted):	
Unspecified:				3	5.3%	Dark(Unknown Lighting):	
						Unspecified:	
Contributing Factor				#VEH	%	Pedestrian Actions	
Driver: Speed:				2	3.5%	In Crosswalk with Signal:	
Driver: Alcohol/Drug:				3	5.3%	In Crosswalk against Signal:	
Driver: Electronic Device:				1	1.8%	In Crosswalk no Signal:	
Driver: Others:				9	15.8%	In Unmarked Crosswalk:	
Vehicle:				0	0.0%	Not in Crosswalk:	
Roadway:				4	7.0%	From Between Parked Cars:	
Unspecified:				38	66.7%	Unspecified:	

18 Records are not approved as of 11/18/2013 3:51:57 PM

Accident Summary Report (R-8)**Corridor:** SOUTH CAPITOL ST,BN From BRANDYWINE ST,BN TO DANBURY ST,BN**Time Period Covered:** From 11/21/2011 To 11/21/2013**Prepared By:** Rahul Jain**Prepared Date:** 11/18/2013

		Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Accident:	29	Right Angle:	6	20.7%	Fixed Object:	0	0.0%
Total Number of Fatalities:	0	Left Turn:	3	10.3%	Ran Off Road:	0	0.0%
Total Number of Injuries:	32	Right Turn:	1	3.4%	Ped. Involved:	1	3.4%
Total Number of Disabling Injuries:	1	Rear End:	8	27.6%	Backing:	0	0.0%
Total Number of NonDisabling Injuries:	4	Side Swiped:	7	24.1%	Non Collision:	0	0.0%
Total Number of Pedestrians Involved:	1	Head On:	0	0.0%	Under/Over Ride:	0	0.0%
Total Number of Bicycles Involved:	1	Parked:	0	0.0%	Unspecified:	3	10.3%
Total Number of Motorcycles Involved:	0						

Time of Day	#ACC	%	Day of week	#ACC	%
07:30 ~ 09:30:	6	20.7%	Sunday:	3	10.3%
09:30 ~ 11:30:	3	10.3%	Monday:	2	6.9%
11:30 ~ 13:30:	2	6.9%	Tuesday:	3	10.3%
13:30 ~ 16:00:	6	20.7%	Wednesday:	8	27.6%
16:00 ~ 18:30:	6	20.7%	Thursday:	4	13.8%
18:30 ~ 07:30:	6	20.7%	Friday:	8	27.6%
Unspecified:	0	0.0%	Saturday:	1	3.4%

Weather Condition	#ACC	%	Surface Condition	#ACC	%
Clear:	20	69.0%	Dry:	22	75.9%
Rain:	6	20.7%	Wet:	7	24.1%
Snow:	0	0.0%	Snow/Ice:	0	0.0%
Sleet/Hail:	1	3.4%	Slush:	0	0.0%
Fog/Mist:	0	0.0%	Water/Sand:	0	0.0%
Crosswind/Blowing Sand:	1	3.4%	Repairing:	0	0.0%
Unspecified:	1	3.4%	Unspecified:	0	0.0%

Type of Vehicle	#VEH	%	Accident Severity Type	#ACC	%
Passenger Car:	56	87.5%	Fatal Collision:	0	0.0%
Bus:	2	3.1%	Injury Collision:	17	58.6%
Truck:	2	3.1%	PDO Collision:	12	41.4%
Taxi:	0	0.0%			
Minivan:	0	0.0%	Light Condition	#ACC	%
Police/Emergency Vehicle:	1	1.6%	Daylight:	23	79.3%
Motorcycle/Moped:	0	0.0%	Dawn/Dusk:	0	0.0%
Bicycle:	1	1.6%	Dark(Lighted):	6	20.7%
Fixed Object:	0	0.0%	Dark(Not Lighted):	0	0.0%
Unspecified:	2	3.1%	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:	1	1.6%	In Crosswalk no Signal:	1	100.0%
Driver: Others:	11	17.2%	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:	52	81.3%	Unspecified:	0	0.0%

17 Records are not approved as of 11/18/2013 3:50:49 PM