



District Department of Transportation

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

4100 Block Alabama Avenue SE

Study Area and Location

District	PSA	Ward	ANC	Phase	Description
6	605	7	7B	Proposed	4100 Block Alabama Avenue Southeast, Westbound



The *proposed* speed camera will be located in Ward 7 at the 4100 block of Alabama Avenue Southeast in the westbound direction. Alabama Avenue Southeast runs between E Street Southeast to the north and Martin Luther King, Jr. Avenue Southeast to the south. The posted speed limit is 30 MPH.

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District Department of Transportation

4100 Block Alabama Avenue SE

Field Assessment Summary

Alabama Avenue Southeast runs in an east-west direction and is classified as a minor arterial. Alabama Avenue Southeast has one travel lane in each direction. This site has the following characteristics:

- This is a residential area with houses and driveways on the south side of the street and Fort Circle Park on the north side of the street.
- There is one school in the area: Dupont Park Adventist School.
- There is a sidewalk on the south side of the street and on-street parking on both sides of the street.
- There is a bike lane in both directions.
- The pavement is in good condition and there is curb and gutter with drainage inlets.



Looking Eastbound

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District Department of Transportation

4100 Block Alabama Avenue SE



Looking Westbound

Speed Data Analysis

Posted Speed Limit (MPH)	30
Mean Speed (MPH)	29
85th Percentile Speed (MPH)	34
10 MPH Pace Speed	25-34
ADT	3,923

The mean speed is 1 MPH lower than the posted speed limit, and the 85th percentile speed is 4 MPH higher 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 25 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 (12 crashes), Side Swipe (7 crashes), and Head On (2 crashes). The other collision types had 1 crash or less each. There was 1 crash where vehicular speeding was the contributing factor. Furthermore, the site experienced 8 injury-related crashes.

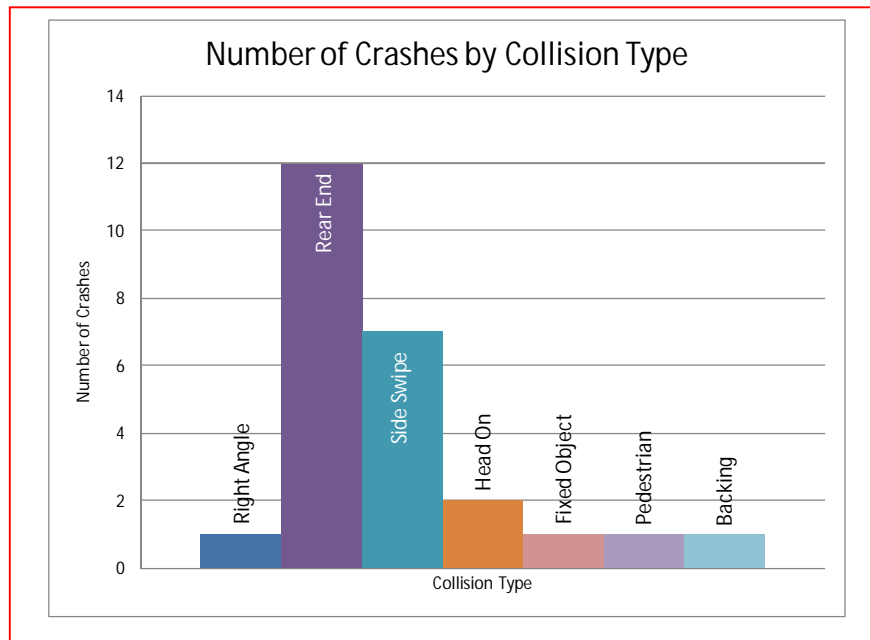
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District Department of Transportation

4100 Block Alabama Avenue SE

Severity			Weather			Surface condition			Light Condition		
Total	25										
Fatal	0	0.0%	Clear	18	72.0%	Dry	21	84.0%	Day	10	40.0%
Injury	8	32.0%	Rain	4	16.0%	Wet	3	12.0%	Night	14	56.0%
Truck	1	4.0%	Snow	0	0.0%	Snow/Ice	0	0.0%			
Taxi	1	4.0%									



There were an elevated number of speed-related crashes at this location, including Rear End 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” as two errors leading to Rear End crashes. Both of these errors can be reduced with a decrease in travel speed.¹

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 higher than the posted speed limit at this location.

¹ AASHTO, *Highway Safety Manual*, 1st Edition, 2010; Volume 1, pages 2-13.



District Department of Transportation

4100 Block Alabama Avenue SE

2. Crash Data – There was an elevated number of speed-related crashes including Rear End collisions at this location, as well as 8 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 houses and driveways on the south side of the street and Fort Circle Park on the north side of the street.
 - b. There is one school in the area: Dupont Park Adventist School.
 - c. Fort Circle Park is on the north side of the street which generates pedestrian and bicycle activity.
 - d. There is on-street parking on both sides of the street.

Due to the speed data analysis, the elevated number of speed-related crashes and 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 Alabama Ave SE, WB Speed

WB

Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
12/11/13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
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	2	5	41	82	44	13	0	0	0	0	0	0	0	0	187
21:00	2	0	10	66	57	11	2	0	0	0	0	0	0	0	148
22:00	2	2	15	41	24	10	1	1	0	0	0	0	0	0	96
23:00	0	1	13	26	23	6	3	1	0	0	0	0	0	0	73
Total	6	8	79	215	148	40	6	2	0	0	0	0	0	0	504

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

4100 Block of Alabama Ave SE, WB Speed

WB

Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
12/12/13	0	0	6	16	21	7	2	1	0	0	0	0	0	0	53
01:00	0	3	3	6	4	3	3	1	0	0	0	0	0	0	23
02:00	0	1	2	5	2	3	0	0	0	0	0	0	0	0	13
03:00	0	0	1	6	5	2	0	1	0	0	0	0	0	0	15
04:00	0	0	1	5	1	0	2	0	0	0	0	0	0	0	9
05:00	1	0	4	8	8	3	3	0	0	0	0	0	0	0	27
06:00	3	1	11	53	26	11	2	0	0	0	0	0	0	0	107
07:00	3	4	29	77	101	30	2	0	0	0	0	0	0	0	246
08:00	2	2	31	110	114	24	5	1	0	0	0	0	0	0	289
09:00	8	2	29	89	61	13	2	2	0	0	0	0	0	0	206
10:00	6	1	9	66	74	17	4	0	0	0	0	0	0	0	177
11:00	7	1	20	93	77	16	3	0	0	0	0	0	0	0	217
12 PM	6	2	22	70	67	27	4	0	0	0	0	0	0	0	198
13:00	4	3	20	83	100	13	2	1	0	0	0	0	0	0	226
14:00	1	1	18	78	80	28	4	0	0	0	0	0	0	0	210
15:00	6	7	41	125	103	26	3	0	0	0	0	0	0	0	311
16:00	8	7	49	141	90	13	1	0	0	0	0	0	0	0	309
17:00	8	3	40	155	72	14	1	0	0	0	0	0	0	0	293
18:00	3	3	46	136	78	17	0	2	1	0	0	0	0	0	286
19:00	24	3	34	83	55	5	0	0	0	0	0	0	0	0	204
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	90	44	416	1405	1139	272	43	9	1	0	0	0	0	0	3419
Grand Total	96	52	495	1620	1287	312	49	11	1	0	0	0	0	0	3923

15th Percentile : 23 MPH
 50th Percentile : 28 MPH
 85th Percentile : 34 MPH
 95th Percentile : 37 MPH

Stats
 Mean Speed(Average) : 29 MPH
 10 MPH Pace Speed : 25-34 MPH
 Number in Pace : 2597
 Percent in Pace : 66.2%
 Number of Vehicles > 30 MPH : 1657
 Percent of Vehicles > 30 MPH : 42.2%

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

4100 Block of Alabama Ave SE, WB Volume

Start Time	Wed	11-Dec-13	Thu	12-Dec-13	Fri	13-Dec-13	Daily Average	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	*	*	14	51	*	*	14	51
12:15	*	*	14	52	*	*	14	52
12:30	*	*	16	51	*	*	16	51
12:45	*	*	9	44	*	*	9	44
01:00	*	*	8	47	*	*	8	47
01:15	*	*	7	63	*	*	7	63
01:30	*	*	4	58	*	*	4	58
01:45	*	*	4	58	*	*	4	58
02:00	*	*	1	37	*	*	1	37
02:15	*	*	5	59	*	*	5	59
02:30	*	*	6	55	*	*	6	55
02:45	*	*	1	59	*	*	1	59
03:00	*	*	2	70	*	*	2	70
03:15	*	*	6	60	*	*	6	60
03:30	*	*	4	97	*	*	4	97
03:45	*	*	3	84	*	*	3	84
04:00	*	*	4	64	*	*	4	64
04:15	*	*	1	93	*	*	1	93
04:30	*	*	1	68	*	*	1	68
04:45	*	*	3	84	*	*	3	84
05:00	*	*	8	84	*	*	8	84
05:15	*	*	7	76	*	*	7	76
05:30	*	*	4	66	*	*	4	66
05:45	*	*	8	67	*	*	8	67
06:00	*	*	12	83	*	*	12	83
06:15	*	*	25	76	*	*	25	76
06:30	*	*	30	59	*	*	30	59
06:45	*	*	40	68	*	*	40	68
07:00	*	*	43	49	*	*	43	49
07:15	*	*	56	57	*	*	56	57
07:30	*	*	57	52	*	*	57	52
07:45	*	*	90	46	*	*	90	46
08:00	*	65	81	*	*	*	81	65
08:15	*	29	73	*	*	*	73	29
08:30	*	43	67	*	*	*	67	43
08:45	*	50	68	*	*	*	68	50
09:00	*	44	50	*	*	*	50	44
09:15	*	43	62	*	*	*	62	43
09:30	*	34	53	*	*	*	53	34
09:45	*	27	41	*	*	*	41	27
10:00	*	34	39	*	*	*	39	34
10:15	*	30	36	*	*	*	36	30
10:30	*	16	45	*	*	*	45	16
10:45	*	16	57	*	*	*	57	16
11:00	*	24	49	*	*	*	49	24
11:15	*	22	54	*	*	*	54	22
11:30	*	16	56	*	*	*	56	16
11:45	*	11	58	*	*	*	58	11
Total	0	504	1382	2037	0	0	1382	2541
Combined Total	504		3419		0		3923	
Peak	08:00		07:45	03:30			07:45	03:30
Vol.	187		311	338			311	338
P.H.F.	0.719		0.864	0.871			0.864	0.871
ADT	ADT 3,923		AADT 3,923					

Accident Summary Report (R-8)

Corridor: ALABAMA AVE,SE From MASSACHUSETTS AVE,SE TO Q ST,SE

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

Prepared By: Rahul Jain

Prepared Date: 9/16/2013

		Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Accident:	25	Right Angle:	1	4.0%	Fixed Object:	1	4.0%
Total Number of Fatalities:	0	Left Turn:	0	0.0%	Ran Off Road:	0	0.0%
Total Number of Injuries:	13	Right Turn:	0	0.0%	Ped. Involved:	1	4.0%
Total Number of Disabling Injuries:	0	Rear End:	12	48.0%	Backing:	1	4.0%
Total Number of NonDisabling Injuries:	3	Side Swiped:	7	28.0%	Non Collision:	0	0.0%
Total Number of Pedestrians Involved:	3	Head On:	2	8.0%	Under/Over Ride:	0	0.0%
Total Number of Bicycles Involved:	1	Parked:	0	0.0%	Unspecified:	0	0.0%
Total Number of Motorcycles Involved:	0						

Time of Day	#ACC	%
07:30 ~ 09:30:	2	8.0%
09:30 ~ 11:30:	0	0.0%
11:30 ~ 13:30:	2	8.0%
13:30 ~ 16:00:	4	16.0%
16:00 ~18:30:	3	12.0%
18:30 ~ 07:30:	14	56.0%
Unspecified:	0	0.0%

Day o fweek	#ACC	%
Sunday:	4	16.0%
Monday:	1	4.0%
Tuesday:	2	8.0%
Wednesday:	3	12.0%
Thursday:	2	8.0%
Friday:	6	24.0%
Saturday:	7	28.0%

Weather Condition	#ACC	%
Clear:	18	72.0%
Rain:	4	16.0%
Snow:	0	0.0%
Sleet/Hail:	0	0.0%
Fog/Mist:	0	0.0%
Crosswind/Blowing Sand:	0	0.0%
Unspecified:	3	12.0%

Surface Condition	#ACC	%
Dry:	21	84.0%
Wet:	3	12.0%
Snow/Ice:	0	0.0%
Slush:	0	0.0%
Water/Sand:	0	0.0%
Repairing:	0	0.0%
Unspecified:	1	4.0%

Type of Vehicle	#VEH	%
Passenger Car:	45	91.8%
Bus:	0	0.0%
Truck:	1	2.0%
Taxi:	1	2.0%
Minivan:	0	0.0%
Police/Emergency Vehicle:	0	0.0%
Motorcycle/Moped:	0	0.0%
Bicycle:	1	2.0%
Fixed Object:	0	0.0%
Unspecified:	1	2.0%

Accident Severity Type	#ACC	%
Fatal Collision:	0	0.0%
Injury Collision:	8	32.0%
PDO Collision:	17	68.0%

Light Condition	#ACC	%
Daylight:	10	40.0%
Dawn/Dusk:	0	0.0%
Dark(Lighted):	14	56.0%
Dark(Not Lighted):	0	0.0%
Dark(Unknown Lighting):	0	0.0%
Unspecified:	1	4.0%

Contributing Factor	#VEH	%
Driver: Speed:	1	2.0%
Driver: Alcohol/Drug:	2	4.1%
Driver: Electronic Device:	0	0.0%
Driver: Others:	10	20.4%
Vehicle:	0	0.0%
Roadway:	0	0.0%
Unspecified:	36	73.5%

Pedestrian Actions	#ACC	%
In Crosswalk with Signal:	0	0.0%
In Crosswalk against Signal:	0	0.0%
In Crosswalk no Signal:	0	0.0%
In Unmarked Crosswalk:	0	0.0%
Not in Crosswalk:	0	0.0%
From Between Parked Cars:	0	0.0%
Unspecified:	1	100.0%

16 Records are not approved as of 9/16/2013 10:38:51 AM