



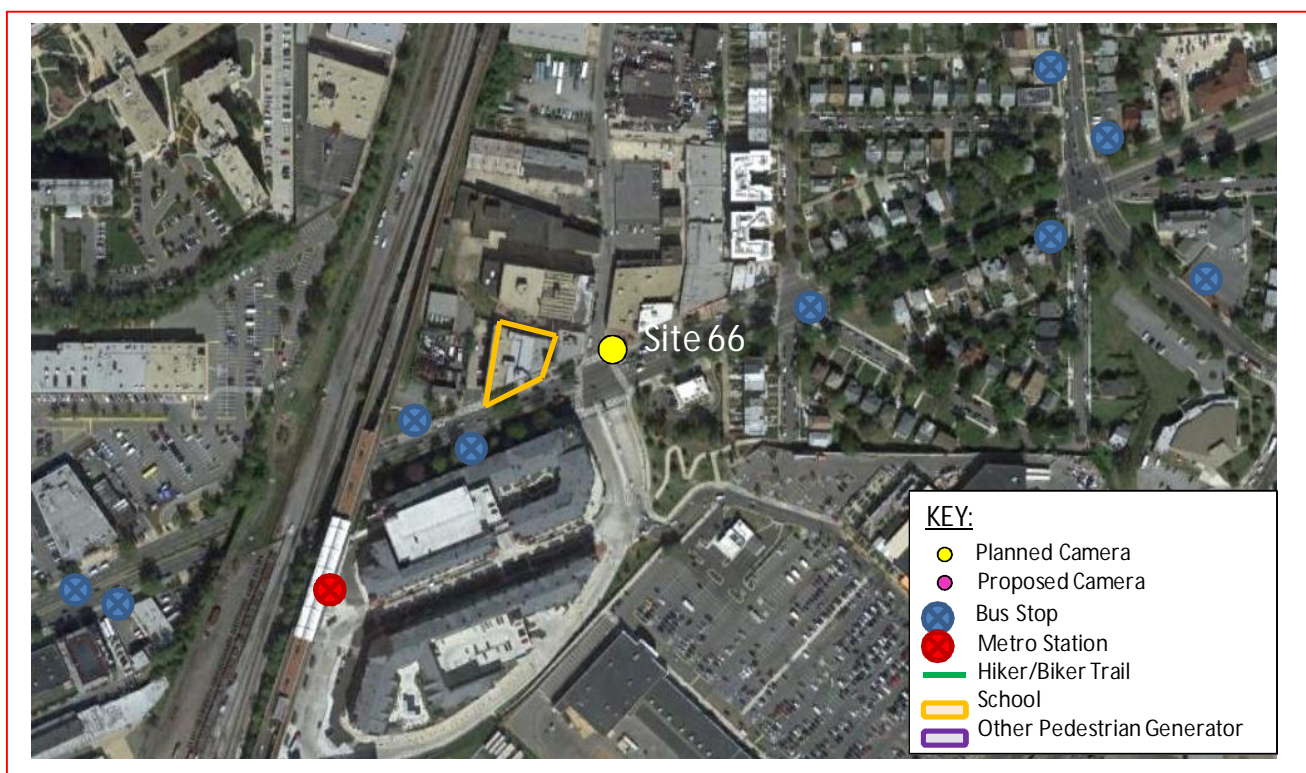
District Department of Transportation

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

Rhode Island Avenue at Reed Street NE

Study Area and Location

District	PSA	Ward	ANC	Phase	Description
5	504/505	5	5B	Planned	Rhode Island Avenue Southwest-bound at Reed Street Northeast



This *planned* speed camera will be located in Ward 5 at the intersection of Rhode Island Avenue and Reed Street Northeast. Rhode Island Avenue runs between Hyattsville, Maryland to the east and Connecticut Avenue Northwest to the west. The posted speed limit is 30 MPH.

W5 - 242





District Department of Transportation

Rhode Island Avenue at Reed Street NE

Field Assessment Summary

Rhode Island Avenue is assumed to run in an East-West direction, and is classified as Principal Arterial. Rhode Island Avenue has two through lanes, a shared through /right turn lane, and a left turn lane westbound and a through lane, shared through/ right turn lane, and shared through/left turn lane eastbound. Reed Street has one lane southbound and one through lane, one right turn lane, and one left turn lane northbound. This site has the following characteristics:

- This site is located in a commercial area with entrances and driveways.
- There is one school in the area: Calvary Christian Academy.
- There are sidewalks on both sides of the street.
- The intersection has concrete medians on the west and south legs.
- The intersection has a traffic signal and crosswalks with pedestrian signals.
- There is on-street parking on the north side of the east and west legs and the south side of the east leg.



Looking Northeast-bound

W5 - 243



District Department of Transportation

Rhode Island Avenue at Reed Street NE



Looking Southwest-bound

Speed Data Analysis

Posted Speed Limit (MPH)	30
Mean Speed (MPH)	15
85th Percentile Speed (MPH)	22
10 MPH Pace Speed	6-15
ADT	10,988

Both the mean speed and the 85th percentile speed are lower than the posted speed limit at this location. The 85th percentile speed is 8 MPH lower than the posted speed limit.

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 163 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 (50 crashes), Side Swipe (43 crashes), Left Turn (17 crashes), Right Angle (12 crashes), and Right Turn (9 crashes). The other collision types had 7 crashes or less each. Furthermore, this location experienced a high frequency (60 crashes) of injury related crashes.

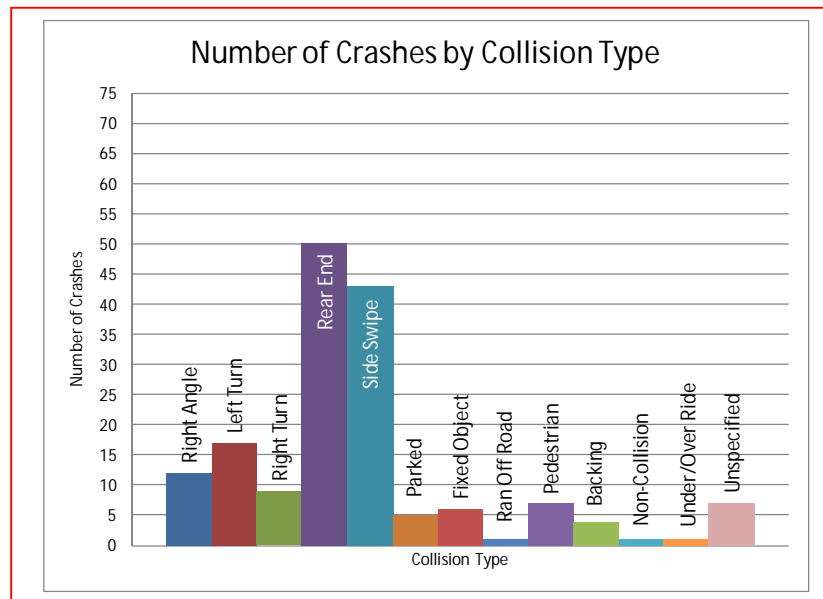
W5 - 244



District Department of Transportation

Rhode Island Avenue at Reed Street NE

Severity			Weather			Surface condition			Light Condition		
Total	163										
Fatal	0	0.0%	Clear	138	84.7%	Dry	140	85.9%	Day	130	79.8%
Injury	60	36.8%	Rain	17	10.4%	Wet	17	10.4%	Night	27	16.6%
Truck	34	20.9%	Snow	1	0.6%	Snow/Ice	1	0.6%			
Taxi	23	14.1%									



There was an elevated number of speed related crashes at this location, including rear end and 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 rear-end and sideswipe crashes. Both of these errors can be decreased with a decrease in travel speed.

The Rhode Island 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

Rhode Island Avenue at Reed Street NE

Safety Nexus

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

1. Speed Data – The speed data analysis shows travel speeds being lower than the posted speed limit.
2. Crash Data – There was an elevated number of speed related crashes at this location, including rear end and side swipe collisions as well as a high frequency (60 crashes) of injury related crashes.
3. Field Assessment – the following site characteristics suggest a need for a safer travel environment:
 - a. There is one school in the area: Calvary Christian Academy.
 - b. There are several bus stops and one metro station in the area which generate pedestrian activity.
 - c. There is on-street parking on the north side of the east and west legs and the south side of the east leg.

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 speed-related crashes and injury-related crashes, specific site characteristics, and 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

Rhode Island Ave SWB at Reed St NE Speed

SWB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
11/10/13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	28	19	27	10	1	0	0	0	0	0	0	0	0	0	85
Total	28	19	27	10	1	0	0	0	0	0	0	0	0	0	85

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

Rhode Island Ave SWB at Reed St NE Speed

SWB	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	Total
11/11/13	30	41	39	13	0	0	0	0	0	0	0	0	0	0	123
01:00	20	30	25	9	0	0	0	0	0	0	0	0	0	0	84
02:00	15	13	18	5	0	0	0	0	0	0	0	0	0	0	51
03:00	8	13	27	9	0	0	0	0	0	0	0	0	0	0	57
04:00	33	34	39	26	4	0	0	0	0	0	0	0	0	0	136
05:00	59	42	155	92	3	0	0	0	0	0	0	0	0	0	351
06:00	60	67	373	114	5	0	0	0	0	0	0	0	0	0	619
07:00	135	143	402	77	1	0	0	0	0	0	0	0	0	0	758
08:00	174	116	378	66	1	0	0	0	0	0	0	0	0	0	735
09:00	178	168	276	31	0	0	0	0	0	0	0	0	0	0	653
10:00	218	169	217	32	2	0	0	0	0	0	0	0	0	0	638
11:00	223	257	191	19	1	0	0	0	0	0	0	0	0	0	691
12 PM	247	238	168	29	0	0	0	0	0	0	0	0	0	0	682
13:00	243	211	141	20	1	0	0	0	0	0	0	0	0	0	616
14:00	334	198	154	29	1	0	0	0	0	0	0	0	0	0	716
15:00	368	138	134	27	0	0	0	0	0	0	0	0	0	0	667
16:00	360	147	128	20	1	0	0	0	0	0	0	0	0	0	656
17:00	389	130	129	15	0	0	0	0	0	0	0	0	0	0	663
18:00	273	124	125	16	1	0	0	0	0	0	0	0	0	0	539
19:00	255	103	55	15	1	0	0	0	0	0	0	0	0	0	429
20:00	213	86	55	24	0	0	0	0	0	0	0	0	0	0	378
21:00	135	91	65	15	3	0	0	0	0	0	0	0	0	0	309
22:00	113	71	44	34	2	0	0	0	0	0	0	0	0	0	264
23:00	31	27	17	11	2	0	0	0	0	0	0	0	0	0	88
Total	4114	2657	3355	748	29	0	0	0	0	0	0	0	0	0	10903
Grand Total	4142	2676	3382	758	30	0	0	0	0	0	0	0	0	0	10988

15th Percentile : 6 MPH
 50th Percentile : 13 MPH
 85th Percentile : 22 MPH
 95th Percentile : 25 MPH

Stats
 Mean Speed(Average) : 15 MPH
 10 MPH Pace Speed : 6-15 MPH
 Number in Pace : 5025
 Percent in Pace : 45.7%
 Number of Vehicles > 30 MPH : 82
 Percent of Vehicles > 30 MPH : 0.8%

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

Rhode Island Ave SWB at Reed St NE Volume

Start Time	Sun	10-Nov-13	Mon	11-Nov-13	Tue	12-Nov-13	Daily Average	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	*	*	33	154	*	*	33	154
12:15	*	*	34	182	*	*	34	182
12:30	*	*	26	164	*	*	26	164
12:45	*	*	30	182	*	*	30	182
01:00	*	*	22	154	*	*	22	154
01:15	*	*	18	160	*	*	18	160
01:30	*	*	24	143	*	*	24	143
01:45	*	*	20	159	*	*	20	159
02:00	*	*	14	167	*	*	14	167
02:15	*	*	5	179	*	*	5	179
02:30	*	*	22	183	*	*	22	183
02:45	*	*	10	187	*	*	10	187
03:00	*	*	15	170	*	*	15	170
03:15	*	*	12	163	*	*	12	163
03:30	*	*	16	172	*	*	16	172
03:45	*	*	14	162	*	*	14	162
04:00	*	*	25	180	*	*	25	180
04:15	*	*	25	153	*	*	25	153
04:30	*	*	47	166	*	*	47	166
04:45	*	*	39	157	*	*	39	157
05:00	*	*	38	169	*	*	38	169
05:15	*	*	77	173	*	*	77	173
05:30	*	*	103	172	*	*	103	172
05:45	*	*	133	149	*	*	133	149
06:00	*	*	130	144	*	*	130	144
06:15	*	*	139	134	*	*	139	134
06:30	*	*	181	119	*	*	181	119
06:45	*	*	169	142	*	*	169	142
07:00	*	*	180	110	*	*	180	110
07:15	*	*	195	110	*	*	195	110
07:30	*	*	189	108	*	*	189	108
07:45	*	*	194	101	*	*	194	101
08:00	*	*	186	116	*	*	186	116
08:15	*	*	193	86	*	*	193	86
08:30	*	*	196	94	*	*	196	94
08:45	*	*	160	82	*	*	160	82
09:00	*	*	153	82	*	*	153	82
09:15	*	*	169	78	*	*	169	78
09:30	*	*	182	76	*	*	182	76
09:45	*	*	149	73	*	*	149	73
10:00	*	*	171	61	*	*	171	61
10:15	*	*	179	69	*	*	179	69
10:30	*	*	131	58	*	*	131	58
10:45	*	*	157	76	*	*	157	76
11:00	*	*	166	48	*	*	166	48
11:15	*	*	185	40	*	*	185	40
11:30	*	46	175	*	*	*	175	46
11:45	*	39	165	*	*	*	165	39
Total	0	85	4896	6007	0	0	4896	6092
Combined Total	85		10903		0		10988	
Peak			07:45	02:15			07:45	02:15
Vol.			769	719			769	719
P.H.F.			0.981	0.961			0.981	0.961
ADT	ADT 10,988		AADT 10,988					

DC Department of Transportation - Traffic Accident Reporting and Analysis System

Accident Summary Report (R-8)

Corridor: RHODE ISLAND AVE,NW,NE From FIFTH ST,NE TO BRYANT ST,NE

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

Prepared Date: 10/6/2013

		Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Accident:	163	Right Angle:	12	7.4%	Fixed Object:	6	3.7%
Total Number of Fatalities:	0	Left Turn:	17	10.4%	Ran Off Road:	1	0.6%
Total Number of Injuries:	87	Right Turn:	9	5.5%	Ped. Involved:	7	4.3%
Total Number of Disabling Injuries:	2	Rear End:	50	30.7%	Backing:	4	2.5%
Total Number of NonDisabling Injuries:	11	Side Swiped:	43	26.4%	Non Collision:	1	0.6%
Total Number of Pedestrians Involved:	5	Head On:	0	0.0%	Under/Over Ride:	1	0.6%
Total Number of Bicycles Involved:	5	Parked:	5	3.1%	Unspecified:	7	4.3%
Total Number of Motorcycles Involved:	2						

Time of Day	#ACC	%
07:30 ~ 09:30:	17	10.4%
09:30 ~ 11:30:	27	16.6%
11:30 ~ 13:30:	25	15.3%
13:30 ~ 16:00:	30	18.4%
16:00 ~18:30:	34	20.9%
18:30 ~ 07:30:	30	18.4%
Unspecified:	0	0.0%

Day o fweek	#ACC	%
Sunday:	12	7.4%
Monday:	19	11.7%
Tuesday:	32	19.6%
Wednesday:	25	15.3%
Thursday:	29	17.8%
Friday:	28	17.2%
Saturday:	18	11.0%

Weather Condition	#ACC	%
Clear:	138	84.7%
Rain:	17	10.4%
Snow:	1	0.6%
Sleet/Hail:	0	0.0%
Fog/Mist:	0	0.0%
Crosswind/Blowing Sand:	1	0.6%
Unspecified:	6	3.7%

Surface Condition	#ACC	%
Dry:	140	85.9%
Wet:	17	10.4%
Snow/Ice:	1	0.6%
Slush:	1	0.6%
Water/Sand:	0	0.0%
Repairing:	0	0.0%
Unspecified:	4	2.5%

Type of Vehicle	#VEH	%
Passenger Car:	219	69.1%
Bus:	12	3.8%
Truck:	34	10.7%
Taxi:	23	7.3%
Minivan:	0	0.0%
Police/Emergency Vehicle:	2	0.6%
Motorcycle/Moped:	3	0.9%
Bicycle:	5	1.6%
Fixed Object:	0	0.0%
Unspecified:	19	6.0%

Accident Severity Type	#ACC	%
Fatal Collision:	0	0.0%
Injury Collision:	60	36.8%
PDO Collision:	103	63.2%

Light Condition	#ACC	%
Daylight:	130	79.8%
Dawn/Dusk:	3	1.8%
Dark(Lighted):	27	16.6%
Dark(Not Lighted):	0	0.0%
Dark(Unknown Lighting):	0	0.0%
Unspecified:	3	1.8%

Contributing Factor	#VEH	%
Driver: Speed:	4	1.3%
Driver: Alcohol/Drug:	4	1.3%
Driver: Electronic Device:	0	0.0%
Driver: Others:	67	21.1%
Vehicle:	0	0.0%
Roadway:	2	0.6%
Unspecified:	240	75.7%

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:	3	60.0%
From Between Parked Cars:	0	0.0%
Unspecified:	2	40.0%

109 Records are not approved as of 10/6/2013 5:16:52 PM