



## Speed Limit and Safety Nexus Studies for Automated Enforcement Locations in the District of Columbia 5700 Block MacArthur Boulevard NW N/B

Study Area and Location

District	PSA	Ward	ANC	Phase	Description	
2	205	3	3D	Existing	5700 Block MacArthur Boulevard Northwest	_
					Northbound	



This existing speed camera is located in Ward 3 at the 5700 block of MacArthur Boulevard Northwest in the northbound direction. MacArthur Boulevard runs parallel to the Potomac River from Maryland in the north to Canal Road Northwest in the south. The posted speed limit is 25 MPH. This speed camera was installed on June 2001.







### Field Assessment Summary

MacArthur Boulevard is assumed to run in the North-South direction, and is classified as a principal arterial. MacArthur Boulevard has two travel lanes in each direction. This site has the following characteristics:

- Located in a residential area with apartment buildings, houses, and driveways on both sides of the street.
- The Capital Crescent Trail and Chesapeake & Ohio Trail both run parallel to MacArthur Boulevard 0.15 miles to the West.
- Sibley Memorial Hospital is in the area.
- There is on street parking and sidewalks with curb and gutter on both sides of the street, as well as a center grass median in the middle of the street.
- There are bus stops on southwest and northeast corners as well as others in the area.
- The existing pavement is in fair condition.







## **Speed Data Analysis**

Posted Speed Limit (MPH)	25
Mean Speed (MPH)	25
85th Percentile Speed (MPH)	29
10 MPH Pace Speed	21-30
ADT	7,750

The 85<sup>th</sup> percentile speed is 4 MPH higher than the posted speed limit and the mean speed is the same as the posted speed limit.

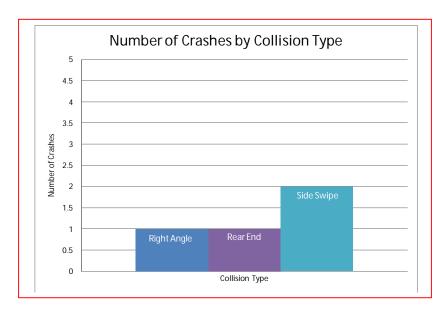
## Crash Data Analysis

From the Accident Summary Report provided for the dates between January 1, 2010 and December 31, 2012, there were a total of 4 crashes at this location. A breakdown of collision type can be found in the chart on the next page. The most common type of crash at this location was Side Swipe (2 crashes). There was also one Rear End and one Right Angle collision.



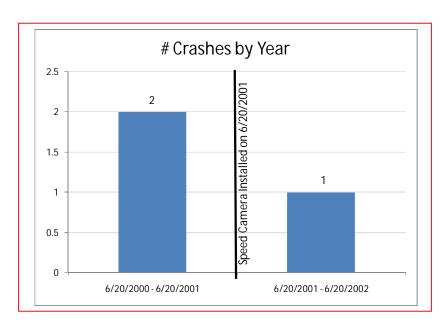


Severity			We	eather		Surface	condit	ion	Light Condition			
Total	4											
Fatal	0	0.0%	Clear	2	50.0%	Dry	2	50.0%	Day	3	75.0%	
Injury	2	50.0%	Rain	2	50.0%	Wet	2	50.0%	Night	1	25.0%	
Truck	1	25.0%	Snow	0	0.0%	Snow/Ice	0	0.0%				
Police/EMS	1	25.0%										



This speed camera was installed on 6/21/2001. A graph of the number of crashes by year for the year before and the year after the speed camera installation is shown on the next page.





### Safety Nexus

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

- 1. Speed Data The speed data analysis shows the 85<sup>th</sup> percentile speed higher than the posted speed limit.
- 2. Crash Data There was a reduction in the number of crashes since camera installation.
- 3. Field Assessment The following site characteristics suggest a need for a safer travel environment:
  - a. Located in a residential area with apartment buildings, houses, and driveways on both sides of the street.
  - b. The Capital Crescent Trail and Chesapeake & Ohio Trail both run parallel to MacArthur Boulevard 0.15 miles to the West which generates pedestrian activity.
  - c. There is on-street parking at this location.
  - d. There are multiple bus stops in the area which generate pedestrian activity.

Due to the 85<sup>th</sup> percentile speeds, the reduction in the number of crashes since camera installation, and the specific site characteristics of a residential area, 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

#### 5700 block of MacArthur Blvd NW NB Speed

NB															
Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76	
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
11/06/13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	0	3	49	46	16	2	0	0	0	0	0	0	0	0	116
06:00	12	11	148	140	34	2	0	0	0	0	0	0	0	0	347
07:00	19	43	271	262	43	3	1	0	0	0	0	0	0	0	642
08:00	33	51	357	292	44	3	1	0	0	0	0	0	0	0	781
09:00	17	18	249	261	51	5	1	0	0	0	0	0	0	0	602
10:00	4	22	135	141	47	5	0	0	0	0	0	0	0	0	354
11:00	9	21	141	158	40	6	1	0	0	0	0	0	0	0	376
12 PM	9	18	112	173	44	6	0	0	0	0	0	0	0	0	362
13:00	3	21	158	152	27	6	1	0	0	0	0	0	0	0	368
14:00	10	18	171	186	40	2	0	0	0	0	0	0	0	0	427
15:00	5	13	177	255	68	4	0	0	0	0	0	0	0	0	522
16:00	9	17	207	271	57	6	0	0	0	0	0	0	0	0	567
17:00	11	29	271	280	32	3	0	0	0	0	0	0	0	0	626
18:00	13	18	253	246	40	2	0	0	0	0	0	0	0	0	572
19:00	11	34	221	134	14	2	0	0	0	0	0	0	0	0	416
20:00	2	15	108	114	22	0	0	0	0	0	0	0	0	0	261
21:00	5	9	71	63	12	0	1	0	0	0	0	0	0	0	161
22:00	0	5	63	55	12	0	0	0	0	0	0	0	0	0	135
23:00	2	2	15	24	9	1	0	0	0	0	0	0	0	0	53
Total	174	368	3177	3253	652	58	6	0	0	0	0	0	0	0	7688

## SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD MOUNT AIRY, MD 21771

www.sammateng.com

#### 5700 block of MacArthur Blvd NW NB Speed

NB															
Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76	
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
11/07/13	0	1	8	4	4	1	0	0	0	0	0	0	0	0	18
01:00	0	1	2	1	2	0	0	0	0	0	0	0	0	0	6
02:00	0	1	2	1	0	0	0	0	0	0	0	0	0	0	4
03:00	0	1	2	1	3	0	0	0	0	1	0	0	0	0	8
04:00	0	1	12	10	2	1	0	0	0	0	0	0	0	0	26
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0	5	26	17	11	2	0	0	0	1	0	0	0	0	62
Grand Total	174	373	3203	3270	663	60	6	0	0	1	0	0	0	0	7750

 15th Percentile:
 19 MPH

 50th Percentile:
 24 MPH

 85th Percentile:
 29 MPH

 95th Percentile:
 32 MPH

 Stats
 Mean Speed(Average) :
 25 MPH

 10 MPH Pace Speed :
 21-30 MPH

 Number in Pace :
 5586

 Number in Pace :
 5586

 Percent in Pace :
 72.1%

 Number of Vehicles > 25 MPH :
 3831

 Percent of Vehicles > 25 MPH :
 49.4%

## SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD MOUNT AIRY, MD 21771

www.sammateng.com

#### 5700 block of MacArthur Blvd NW NB Volume

 Start	Wed	06-Nov-13	Thu	07-Nov-13	Fri	08-Nov-13	Daily Av	erage
Time	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	*	100	7	*	*	*	7	100
12:15	*	74	7	*	*	*	7	74
12:30	*	88	2	*	*	*	2	88
12:45	*	100	2	*	*	*	2 2	100
01:00	*	89	2	*	*	*	2	89
01:15	*	89	2	*	*	*	2 2	89
01:30	*	92	1	*	*	*	1	92
01:45	*	98	1	*	*	*	1	98
02:00	*	85	1	*	*	*	1	85
02:15	*	88	2	*	*	*	2	88
02:30	*	121	0	*	*	*		121
02:45	*	133	1	*	*	*	0 1	133
03:00	*	135	2	*	*	*		135
03:15	*	130	2	*	*	*	2 2 2 2	130
03:30	*	127	2	*	*	*	2	127
03:45	*	130	2	*	*	*	2	130
04:00	*	136	5	*	*	*	5	136
04:15	*	142	4	*	*	*	5 4	142
04:30	*	146	8	*	*	*	8	146
04:45	*	143	9	*	*	*	8 9	143
05:00	16	147	*	*	*	*	16	147
05:15	27	156	*	*	*	*	27	156
05:30	26	154	*	*	*	*	26	154
05:45	47	169	*	*	*	*	47	169
06:00	46	133	*	*	*	*	46	133
06:00	71	151	*	*	*	*	71	151
06:30	104	141	*	*	*	*	104	141
06:45	126	147	*	*	*	*	126	141
07:00	120	105	*	*	*	*	120	105
07:00	153	129	*	*	*	*	153	129
07:13	172		*	*	*	*	172	
07:30	1/2	107	*	*	*	*	196	107
07:45 08:00	196 155	75 74	*	*	*	*	155	75 74
	100		*	*	*	*	209	
08:15	209	59		*	*	*		59
08:30	217	66			*	*	217	66
08:45	200	62	*	*	*	*	200	62
09:00	168	44	^ 	*	*	*	168	44
09:15	154	42	*	*	*	*	154	42
09:30	140	30	*	*	*	*	140	30
09:45	140	45	· .	*	*	*	140	45
10:00	115	41	•	•	•	*	115	41
10:15	92	35	*	*	*		92	35
10:30	66	32	*	*	*	*	66	32
10:45	81	27	*	*	*		81	27
11:00	92	25	*	*	*	*	92	25
11:15	92	10	*	*	*	*	92	10
11:30	97	7	*	*	*	*	97	7
11:45	95	11	*	*	*	*	95	11_
Total	3218	4470	62	0	0	0	3280	4470
 Combined Total	76	88	62	2	0		7750	
Peak	08:15	05:00	04:00				08:15	05:00
Vol.	794	626	26				794	626
P.H.F.	0.915	0.926	0.722	_			0.915	0.926
ADT		ADT 7,750	AADT 7,750					

# Accident Summary Report (R-8)

Time Period Covered: F	rom 01/01/2010	To 12/31/	2012 Prepar	ed By:	Rahul Jain	Prepared Da	te: 9	9/15/201
Total Number of Accident:		4	Collision Type	#ACC	%	Collision Type	#ACC	, ,
Total Number of Fatalities:		0	Right Angle:	1	25.0%	Fixed Object:	0	0.09
Total Number of Injuries:		4	Left Turn:	0	0.0%	Ran Off Road:	0	0.09
Total Number of Disabling I	njuries:	1	Right Turn:	0	0.0%	Ped. Involved:	0	0.09
Total Number of NonDisabl	ing Injuries:	1	Rear End:	1		Backing:	0	0.09
Total Number of Pedestrian		0	Side Swiped:	2	50.0%	Non Collision:	0	0.09
Total Number of Bicycles Ir		0	Head On:	0		Under/Over Ride:	0	0.09
Total Number of Motorcycle		0	Parked:	0		Inspecified:	0	0.0%
Time of Day	#ACC	%			Day o fweek	#AC	С	9,
07:30 ~ 09:30:	1	25.0%			Sunday:	0		0.09
09:30 ~ 11:30:	0	0.0%			Monday:	2		50.09
11:30 ~ 13:30:	1	25.0%			Tuesday:	0		0.09
13:30 ~ 16:00:	1	25.0%			Wednesday:	2		50.09
16:00 ~18:30:	0	0.0%			Thursday:	0		0.09
18:30 ~ 07:30:	1	25.0%			Friday:	0		0.0%
Unspecified:	0	0.0%			Saturday:	0		0.0%
Weather Condition	#ACC	%			Surface Condition	#AC	С.	9,
Clear:	2	50.0%			Dry:	2	•	50.09
Rain:	2	50.0%			Wet:	2		50.0%
Snow:	0	0.0%			Snow/Ice:	0		0.09
Sleet/Hail:	0	0.0%			Slush:	0		0.0%
Fog/Mist:	0	0.0%			Water/Sand:	0		0.07
Crosswind/Blowing Sand:	0	0.0%			Repairing:	0		0.07
Unspecified:	0	0.0%			Unspecified:	0		0.0%
Type of Vehicle	#VEH	%			Accident Severity	Type #AC	r:	9
Passenger Car:	8	80.0%			Fatal Collision:	0	•	0.0%
Bus:	0	0.0%			Injury Collision:	2		50.0%
Truck:	1	10.0%			PDO Collision:	2		50.0%
Taxi:	0	0.0%			FDO Collision.	۷		30.07
Minivan:	0	0.0%			Light Condition	#AC	С	9
Police/Emergency Vehicle:	1	10.0%			Daylight:	3		75.0%
		0.0%			Dawn/Dusk:	0		0.0%
Motorcycle/Moped:	0				Dark(Lighted):	1		25.0%
Bicycle:	0	0.0%			Dark(Not Lighted):	0		0.09
Fixed Object:	0	0.0%			Dark(Unknown Ligh	ting): 0		0.09
Unspecified:	0	0.0%			Unspecified:	0		0.0%
Contributing Factor	#VEH	%			Pedestrian Actions	s #AC	С	9,
Driver: Speed:	0	0.0%			In Crosswalk with S	ignal: 0		0.09
Driver: Alcohol/Drug:	0	0.0%			In Crosswalk agains	•		0.09
Driver: Electronic Device:	0	0.0%			In Crosswalk no Sig	-		0.09
Driver: Others:	1	10.0%			In Unmarked Cross			0.09
Vehicle:	0	0.0%			Not in Crosswalk:	0		0.09
Roadway:	0	0.0%			From Between Park			0.09
	~	0.070	I		Jili Dowooli i ali			0.07

<sup>2</sup> Records are not approved as of 9/15/2013 12:09:51 PM

#### DC Department of Transportation - Traffic Accident Reporting and Analysis System

# Accident Summary Report (R-8)

Time Period Covered: F	rom 06/20/2000	To 06/20	/2001 Prepare	ed By:	Rahul Jain	Prepared Da	te: 1	1/19/20
Total Number of Accident:		2	Collision Type	#ACC	%	Collision Type	#ACC	9,
Total Number of Fatalities:		0	Right Angle:	0	0.0%	Fixed Object:	0	0.09
Total Number of Injuries:		1	Left Turn:	0	0.0%	Ran Off Road:	0	0.0%
Total Number of Disabling Ir	njuries:	1	Right Turn:	0	0.0%	Ped. Involved:	1	50.0%
Total Number of NonDisablin	ng Injuries:	0	Rear End:	0	0.0%	Backing:	0	0.0%
Total Number of Pedestrians	s Involved:	1	Side Swiped:	1	50.0%	Non Collision:	0	0.0%
Total Number of Bicycles Inv	volved:	0	Head On:	0	0.0%	Under/Over Ride:	0	0.0%
Total Number of Motorcycles	s Involved:	0	Parked:	0	0.0%	Unspecified:	0	0.0%
Time of Day	#ACC	%			Day o fweek	#AC	С	9
07:30 ~ 09:30:	0	0.0%			Sunday:	0		0.0%
09:30 ~ 11:30:	0	0.0%			Monday:	0		0.0%
11:30 ~ 13:30:	0	0.0%			Tuesday:	0		0.0%
13:30 ~ 16:00:	1	50.0%			Wednesday:	2		100.0%
16:00 ~18:30:	0	0.0%			Thursday:	0		0.0%
18:30 ~ 07:30:	1	50.0%			Friday:	0		0.0%
Unspecified:	0	0.0%			Saturday:	0		0.0%
Weather Condition	#ACC	%			Surface Condition	#AC	С	9/
Clear:	2	100.0%			Dry:	2		100.0%
Rain:	0	0.0%			Wet:	0		0.0%
Snow:	0	0.0%			Snow/Ice:	0		0.0%
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:	0	0.0%			Unspecified:	0		0.0%
Type of Vehicle	#VEH	%			Accident Severity	Type #AC	c	9/
Passenger Car:	3	100.0%			Fatal Collision:	0		0.0%
Bus:	0	0.0%			Injury Collision:	1		50.0%
Truck:	0	0.0%			PDO Collision:	1		50.0%
Taxi:	0	0.0%						
Minivan:	0	0.0%			Light Condition	#AC	С	%
Police/Emergency Vehicle:	0	0.0%			Daylight:	2		100.0%
Motorcycle/Moped:	0	0.0%			Dawn/Dusk:	0		0.0%
Bicycle:	0	0.0%			Dark(Lighted):	0		0.0%
Fixed Object:	0	0.0%			Dark(Not Lighted):	0		0.0%
Unspecified:	0	0.0%			Dark(Unknown Ligh	nting): 0		0.0%
					Unspecified:	0		0.0%
Contributing Factor	#VEH	%			Pedestrian Action	s #AC	С	9/
Driver: Speed:	1	33.3%			In Crosswalk with S	Signal: 0		0.0%
Driver: Alcohol/Drug:	0	0.0%			In Crosswalk agains	st Signal: 0		0.0%
Driver: Electronic Device:	0	0.0%			In Crosswalk no Sig	gnal: 0		0.0%
Driver: Others:	0	0.0%			In Unmarked Cross	walk: 0		0.0%
Vehicle:	0	0.0%			Not in Crosswalk:	0		0.0%
Roadway:	0	0.0%			From Between Park	ked Cars: 0		0.0%
Unspecified:	2	66.7%			Unspecified:	1		100.0%

<sup>2</sup> Records are not approved as of 11/19/2013 12:12:14 PM

# Accident Summary Report (R-8)

Time Period Covered: Fr	om 06/21/2001	To 06/21	/2002 Prepare	ed By:	Rahul Jain	Prepared Da	te: ´	11/19/20
Total Number of Accident:		1	Collision Type	#ACC	; %	Collision Type	#ACC	; 9
Total Number of Fatalities:		0	Right Angle:	0	0.0%	Fixed Object:	0	0.0%
Total Number of Injuries:		1	Left Turn:	0	0.0% I	Ran Off Road:	0	0.0%
Total Number of Disabling In	juries:	0	Right Turn:	0	0.0% I	Ped. Involved:	0	0.0%
Total Number of NonDisablin	ig Injuries:	0	Rear End:	0	0.0%	Backing:	0	0.0%
Total Number of Pedestrians	Involved:	0	Side Swiped:	1	100.0% I	Non Collision:	0	0.0%
Total Number of Bicycles Inv	olved:	0	Head On:	0	0.0%	Jnder/Over Ride:	0	0.0%
Total Number of Motorcycles	Involved:	0	Parked:	0	0.0% L	Inspecified:	0	0.0%
Time of Day	#ACC	%			Day o fweek	#AC	c	%
07:30 ~ 09:30:	0	0.0%			Sunday:	0		0.0%
09:30 ~ 11:30:	1	100.0%			Monday:	0		0.0%
11:30 ~ 13:30:	0	0.0%			Tuesday:	0		0.0%
13:30 ~ 16:00:	0	0.0%			Wednesday:	0		0.0%
16:00 ~18:30:	0	0.0%			Thursday:	0		0.0%
18:30 ~ 07:30:	0	0.0%			Friday:	1		100.0%
Unspecified:	0	0.0%			Saturday:	0		0.0%
Weather Condition	#ACC	%			Surface Condition	#AC	c	%
Clear:	1	100.0%			Dry:	1		100.0%
Rain:	0	0.0%			Wet:	0		0.0%
Snow:	0	0.0%			Snow/Ice:	0		0.0%
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:	0	0.0%			Unspecified:	0		0.0%
Type of Vehicle	#VEH	%			Accident Severity	Type #AC	C	%
Passenger Car:	1	50.0%			Fatal Collision:	0		0.0%
Bus:	0	0.0%			Injury Collision:	1		100.0%
Truck:	1	50.0%			PDO Collision:	0		0.0%
Taxi:	0	0.0%			. 20 00			
Minivan:	0	0.0%			Light Condition	#AC	C	%
Police/Emergency Vehicle:	0	0.0%			Daylight:	1		100.0%
Motorcycle/Moped:	0	0.0%			Dawn/Dusk:	0		0.0%
Bicycle:	0	0.0%			Dark(Lighted):	0		0.0%
Fixed Object:	0	0.0%			Dark(Not Lighted):	0		0.0%
Unspecified:	0	0.0%			Dark(Unknown Ligh	ting): 0		0.0%
	· ·	0.070			Unspecified:	0		0.0%
Contributing Factor	#VEH	%			Pedestrian Actions	s #AC	С	%
Driver: Speed:	0	0.0%			In Crosswalk with S	ignal: 0		0.0%
Driver: Alcohol/Drug:	0	0.0%			In Crosswalk agains	t Signal: 0		0.0%
Driver: Electronic Device:	0	0.0%			In Crosswalk no Sig	nal: 0		0.0%
Driver: Others:	1	50.0%			In Unmarked Cross	walk: 0		0.0%
Vehicle:	0	0.0%			Not in Crosswalk:	0		0.0%
Roadway:	0	0.0%			From Between Park	ed Cars: 0		0.0%
Unspecified:	1	50.0%			Unspecified:	0		0.0%

<sup>1</sup> Records are not approved as of 11/19/2013 12:19:39 PM