



District Department of Transportation

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

### Dalecarlia Parkway, NB and SB

#### Study Area and Location

District	PSA	Ward	ANC	Phase	Description
2	205	3	3D	Proposed	Dalecarlia Parkway, NB and SB



The *proposed* speed camera is located in Ward 3 along Dalecarlia Parkway Northwest and is for the northbound and southbound traffic. Dalecarlia Parkway runs from Massachusetts Avenue Northwest to the north to Loughboro Road Northwest to the south. The posted speed limit is 40 MPH.

W3 - 542





District Department of Transportation

## Dalecarlia Parkway, NB and SB

### Field Assessment Summary

Dalecarlia Parkway is assumed to run in a north-south direction and is classified as minor arterial. Dalecarlia Parkway has two travel lanes in both directions. This site has the following characteristics:

- The pavement quality is in fair condition and has curb and gutter drainage features.
- Northbound has an upward grade and Southbound has a downward grade.
- There is a curbed grassy median that also has curb and gutter drainage features
- In some locations, there is w-beam traffic barrier even with the face of curb.
- There are several residential communities in the area.
- Sibley Memorial Hospital is in the area.
- The Dalecarlia Reservoir Grounds and Little Falls Park are in the vicinity.



Looking Northbound

W3 - 543





District Department of Transportation

## Dalecarlia Parkway, NB and SB



Looking Southbound

### Speed Data Analysis

	Northbound	Southbound
Posted Speed Limit (MPH)	40	40
Mean Speed (MPH)	24	42
85th Percentile Speed (MPH)	35	64
10 MPH Pace Speed	28-37	54-63
Sample Size	8,262	7,706
ADT	15,968	

The mean speed is lower than the posted speed limit in northbound direction and higher in the southbound direction. The 85th percentile speed is 5 MPH lower in the northbound direction and 24 MPH higher in the southbound direction than the posted speed limit at this location. The speed differential by direction is due to the roadway grades. The northbound direction at the site has an upward grade, thus resulting in slower speeds. The southbound direction at the site has a downward grade, thus resulting in higher speeds.

### 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 10 crashes at this location. A breakdown of collision type can be found in the chart on the

W3 - 544

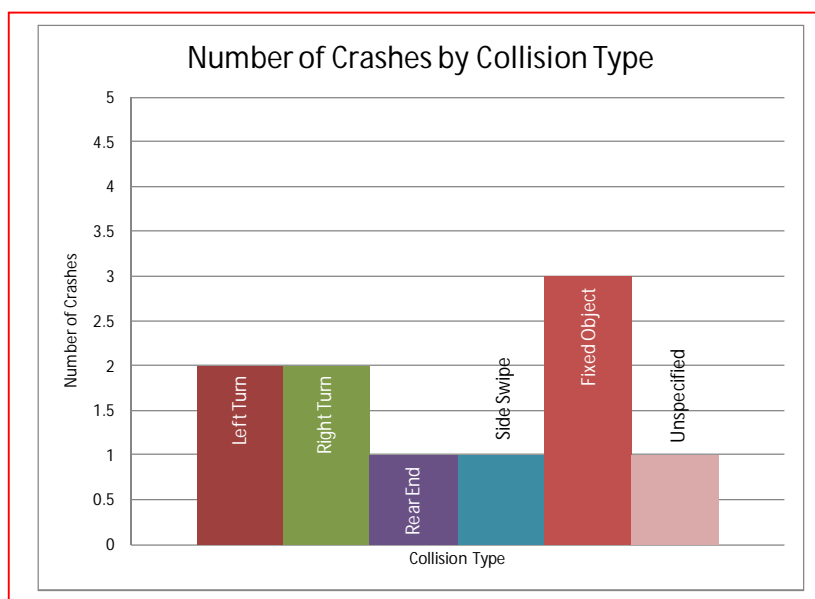


District Department of Transportation

## Dalecarlia Parkway, NB and SB

next page. The most common type of crashes at this location were Fixed Object (3 crashes), Left Turn (2 crashes), and Right Turn (2 crashes). The other collision types had one crash or less.

Severity			Weather			Surface condition			Light Condition		
Total	10										
Fatal	0	0.0%	Clear	6	60.0%	Dry	7	70.0%	Day	3	30.0%
Injury	3	30.0%	Rain	3	30.0%	Wet	3	30.0%	Night	7	70.0%
Bus	2	20.0%	Snow	1	10.0%	Snow/Ice	0	0.0%			
Truck	1	10.0%									



## Safety Nexus

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

1. Speed Data – The 85th percentile speed is much higher than the posted speed limit.
2. Crash Data – The crash data analysis shows that there were a low number of crashes at this location. There were three injury-related crashes at this location.
3. Field Assessment – The following site characteristics suggest a need for a safer travel environment:
  - a. There are several residential communities in the area.
  - b. The Dalecarlia Reservoir Grounds and Little Falls Park are in the vicinity, which are pedestrian generators.

W3 - 545



District Department of Transportation

## Dalecarlia Parkway, NB and SB

Due to the site characteristics and the elevated 85<sup>th</sup> percentile speeds and the proximity to nearby recreation areas, there is a nexus between traffic safety and speed camera at this location.

W3 - 546

# SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD  
MOUNT AIRY, MD 21771

[www.sammateng.com](http://www.sammateng.com)

## Dalecarlia Pkwy NW Speed

SB

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
11/12/13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2
04:00	0	0	0	0	1	1	3	0	2	1	4	2	2	0	16
05:00	4	0	0	0	0	0	3	7	11	18	14	8	8	11	84
06:00	31	0	0	0	0	2	11	20	43	49	53	53	25	32	319
07:00	124	0	0	0	3	4	15	25	66	99	99	78	56	102	671
08:00	159	0	0	0	0	2	12	50	53	129	114	85	56	58	718
09:00	127	0	0	0	3	6	20	31	86	97	64	43	20	17	514
10:00	77	0	0	0	2	2	21	37	63	75	52	38	17	15	399
11:00	80	0	0	1	1	1	22	43	50	85	45	30	16	15	389
12 PM	96	0	1	1	0	6	16	43	60	75	57	36	19	9	419
13:00	79	0	0	0	1	8	16	31	68	72	50	42	27	16	410
14:00	86	0	0	2	3	5	10	34	78	92	71	60	36	26	503
15:00	126	0	0	0	2	2	19	28	56	93	88	52	28	24	518
16:00	117	0	0	0	1	6	14	43	78	121	95	73	38	41	627
17:00	137	0	0	0	3	8	12	50	78	135	128	62	42	46	701
18:00	98	0	0	0	0	3	11	54	71	107	109	75	42	53	623
19:00	66	0	0	0	2	6	12	29	57	57	39	31	15	11	325
20:00	30	0	0	0	0	2	15	18	32	30	28	16	5	5	181
21:00	15	0	0	0	0	1	6	13	26	34	26	7	7	6	141
22:00	10	0	0	0	1	1	6	12	16	20	9	3	5	5	88
23:00	5	0	0	0	0	0	1	3	4	6	5	1	0	1	26
Total	1467	0	1	4	23	66	245	571	999	1395	1150	795	465	493	7674

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SB

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
11/13/13	6	0	0	0	0	0	1	1	5	2	1	0	1	0	17
01:00	1	0	0	0	0	0	0	2	1	1	0	0	0	1	6
02:00	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2
03:00	2	0	0	0	1	0	0	1	1	1	0	1	0	0	7
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	10	0	0	0	1	0	1	4	8	4	1	1	1	1	32
Grand Total	1477	0	1	4	24	66	246	575	1007	1399	1151	796	466	494	7706

15th Percentile : 7 MPH  
50th Percentile : 52 MPH  
85th Percentile : 64 MPH  
95th Percentile : 69 MPH

Stats  
Mean Speed(Average) : 42 MPH  
10 MPH Pace Speed : 54-63 MPH  
Number in Pace : 2190  
Percent in Pace : 30.4%  
Number of Vehicles > 40 MPH : 4773  
Percent of Vehicles > 40 MPH : 66.2%

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NB

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
11/12/13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	1	0	2	2	0	0	0	0	0	0	0	0	0	0	5
04:00	5	0	1	1	2	2	1	0	0	0	0	0	0	0	12
05:00	25	0	2	3	22	6	0	0	0	0	0	0	0	0	58
06:00	86	0	2	34	78	40	10	0	0	0	0	0	0	0	250
07:00	196	2	1	49	220	148	15	0	0	0	0	0	0	0	631
08:00	213	7	24	100	275	157	12	1	0	0	2	0	0	0	791
09:00	130	0	1	64	261	132	17	1	0	0	0	0	0	0	606
10:00	102	0	1	75	185	75	4	1	0	0	0	0	0	0	443
11:00	98	0	7	74	187	56	6	1	0	0	0	0	0	0	429
12 PM	99	0	7	79	213	62	6	0	0	0	0	0	0	0	466
13:00	120	0	6	83	163	50	5	0	0	0	0	0	0	0	427
14:00	133	1	3	87	209	76	6	1	0	0	0	0	0	0	516
15:00	133	0	15	118	284	90	8	1	0	0	0	0	0	0	649
16:00	151	0	10	113	274	86	6	0	0	0	0	0	0	0	640
17:00	177	0	6	104	302	70	2	1	0	0	0	0	0	0	662
18:00	180	1	5	89	255	69	6	0	0	0	0	0	0	0	605
19:00	74	0	2	96	165	52	5	0	0	0	0	0	0	0	394
20:00	47	1	3	62	98	25	1	0	0	0	0	0	0	0	237
21:00	37	0	10	37	59	17	2	0	0	0	0	0	0	0	162
22:00	14	0	5	37	56	15	2	0	0	1	0	0	0	0	130
23:00	2	0	3	37	42	10	3	0	0	0	0	0	0	0	97
Total	2023	12	116	1344	3350	1238	117	7	0	1	2	0	0	0	8210



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NB

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
11/13/13	2	0	2	12	9	5	1	0	0	0	0	0	0	0	31
01:00	0	0	1	7	5	0	0	0	0	0	0	0	0	0	13
02:00	0	0	0	1	2	0	0	0	0	0	0	0	0	0	3
03:00	2	0	0	0	2	1	0	0	0	0	0	0	0	0	5
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	4	0	3	20	18	6	1	0	0	0	0	0	0	0	52
Grand Total	2027	12	119	1364	3368	1244	118	7	0	1	2	0	0	0	8262

15th Percentile : 7 MPH  
50th Percentile : 28 MPH  
85th Percentile : 35 MPH  
95th Percentile : 38 MPH

Stats  
Mean Speed(Average) : 24 MPH  
10 MPH Pace Speed : 28-37 MPH  
Number in Pace : 3913  
Percent in Pace : 47.4%  
Number of Vehicles > 40 MPH : 220  
Percent of Vehicles > 40 MPH : 2.7%

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## Dalecarlia Pkwy NW Volume

Start Time	12-Nov-13 Tue	SB		NB		Combined		13-Nov- Wed	SB		NB		Combined	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00		*	102	*	125	*	227		4	*	10	*	14	*
12:15		*	108	*	119	*	227		5	*	9	*	14	*
12:30		*	104	*	118	*	222		5	*	10	*	15	*
12:45		*	105	*	104	*	209		3	*	2	*	5	*
01:00		*	84	*	98	*	182		2	*	5	*	7	*
01:15		*	107	*	113	*	220		2	*	3	*	5	*
01:30		*	115	*	106	*	221		1	*	5	*	6	*
01:45		*	104	*	110	*	214		1	*	0	*	1	*
02:00		*	129	*	123	*	252		1	*	2	*	3	*
02:15		*	112	*	115	*	227		0	*	0	*	0	*
02:30		*	157	*	148	*	305		0	*	0	*	0	*
02:45		*	105	*	130	*	235		1	*	1	*	2	*
03:00		*	138	*	151	*	289		2	*	3	*	5	*
03:15		*	131	*	160	*	291		5	*	2	*	7	*
03:30		1	119	3	166	4	285		*	*	*	*	*	*
03:45		1	130	2	172	3	302		*	*	*	*	*	*
04:00		1	149	2	158	3	307		*	*	*	*	*	*
04:15		3	153	1	156	4	309		*	*	*	*	*	*
04:30		6	176	3	167	9	343		*	*	*	*	*	*
04:45		6	149	6	159	12	308		*	*	*	*	*	*
05:00		14	172	4	157	18	329		*	*	*	*	*	*
05:15		18	191	10	183	28	374		*	*	*	*	*	*
05:30		23	167	16	166	39	333		*	*	*	*	*	*
05:45		29	171	28	156	57	327		*	*	*	*	*	*
06:00		51	159	38	143	89	302		*	*	*	*	*	*
06:15		64	172	51	165	115	337		*	*	*	*	*	*
06:30		96	153	73	163	169	316		*	*	*	*	*	*
06:45		108	139	88	134	196	273		*	*	*	*	*	*
07:00		129	90	121	129	250	219		*	*	*	*	*	*
07:15		163	87	156	94	319	181		*	*	*	*	*	*
07:30		179	74	180	85	359	159		*	*	*	*	*	*
07:45		200	74	174	86	374	160		*	*	*	*	*	*
08:00		177	51	181	75	358	126		*	*	*	*	*	*
08:15		201	47	212	60	413	107		*	*	*	*	*	*
08:30		187	38	201	53	388	91		*	*	*	*	*	*
08:45		153	45	197	49	350	94		*	*	*	*	*	*
09:00		153	39	179	44	332	83		*	*	*	*	*	*
09:15		137	34	154	37	291	71		*	*	*	*	*	*
09:30		131	43	152	37	283	80		*	*	*	*	*	*
09:45		93	25	121	44	214	69		*	*	*	*	*	*
10:00		87	27	112	40	199	67		*	*	*	*	*	*
10:15		112	25	113	34	225	59		*	*	*	*	*	*
10:30		102	14	111	24	213	38		*	*	*	*	*	*
10:45		98	22	107	32	205	54		*	*	*	*	*	*
11:00		96	12	99	31	195	43		*	*	*	*	*	*
11:15		90	5	111	19	201	24		*	*	*	*	*	*
11:30		102	4	104	30	206	34		*	*	*	*	*	*
11:45		101	5	115	17	216	22		*	*	*	*	*	*
Total		3112	4562	3225	4985	6337	9547		32	0	52	0	84	0
Day Total		7674		8210		15884		32	32	0.0%	52	52	84	84
% Total		19.6%	28.7%	20.3%	31.4%			38.1%			61.9%	0.0%		
Peak		07:45	05:00	08:00	04:30	07:45	05:00		12:00		12:00		12:00	
Vol.		765	701	791	666	1533	1363		17		31		48	
P.H.F.		0.951	0.918	0.933	0.910	0.928	0.911		0.850		0.775		0.800	

ADT ADT 15,968 AADT 15,968

DC Department of Transportation - Traffic Accident Reporting and Analysis System

## Accident Summary Report (R-8)

**Corridor:** DALECARLIA PKWY,NW From LOUGHBORO RD,NW TO WESTMORELAND CIR,NW

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

**Prepared By:** Rahul Jain

**Prepared Date:** 12/27/2012

Total Number of Accident:	10	<b>Collision Type</b>	<b>#ACC</b>	<b>%</b>	<b>Collision Type</b>	<b>#ACC</b>	<b>%</b>
Total Number of Fatalities:	0	Right Angle:	0	0.0%	Fixed Object:	3	30.0%
Total Number of Injuries:	6	Left Turn:	2	20.0%	Ran Off Road:	0	0.0%
Total Number of Disabling Injuries:	0	Right Turn:	2	20.0%	Ped. Involved:	0	0.0%
Total Number of NonDisabling Injuries:	2	Rear End:	1	10.0%	Backing:	0	0.0%
Total Number of Pedestrians Involved:	0	Side Swiped:	1	10.0%	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:	1	10.0%

<b>Time of Day</b>	<b>#ACC</b>	<b>%</b>	<b>Day of week</b>	<b>#ACC</b>	<b>%</b>
07:30 ~ 09:30:	0	0.0%	Sunday:	1	10.0%
09:30 ~ 11:30:	1	10.0%	Monday:	1	10.0%
11:30 ~ 13:30:	0	0.0%	Tuesday:	1	10.0%
13:30 ~ 16:00:	2	20.0%	Wednesday:	1	10.0%
16:00 ~ 18:30:	0	0.0%	Thursday:	1	10.0%
18:30 ~ 07:30:	7	70.0%	Friday:	3	30.0%
Unspecified:	0	0.0%	Saturday:	2	20.0%

<b>Weather Condition</b>	<b>#ACC</b>	<b>%</b>	<b>Surface Condition</b>	<b>#ACC</b>	<b>%</b>
Clear:	6	60.0%	Dry:	7	70.0%
Rain:	3	30.0%	Wet:	3	30.0%
Snow:	1	10.0%	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%

<b>Type of Vehicle</b>	<b>#VEH</b>	<b>%</b>	<b>Accident Severity Type</b>	<b>#ACC</b>	<b>%</b>
Passenger Car:	13	81.3%	Fatal Collision:	0	0.0%
Bus:	2	12.5%	Injury Collision:	3	30.0%
Truck:	1	6.3%	PDO Collision:	7	70.0%
Taxi:	0	0.0%	<b>Light Condition</b>	<b>#ACC</b>	<b>%</b>
Minivan:	0	0.0%	Daylight:	3	30.0%
Police/Emergency Vehicle:	0	0.0%	Dawn/Dusk:	0	0.0%
Motorcycle/Moped:	0	0.0%	Dark(Lighted):	6	60.0%
Bicycle:	0	0.0%	Dark(Not Lighted):	1	10.0%
Fixed Object:	0	0.0%	Dark(Unknown Lighting):	0	0.0%
Unspecified:	0	0.0%	Unspecified:	0	0.0%

<b>Contributing Factor</b>	<b>#VEH</b>	<b>%</b>	<b>Pedestrian Actions</b>	<b>#ACC</b>	<b>%</b>
Driver: Speed:	1	6.3%	In Crosswalk with Signal:	0	0.0%
Driver: Alcohol/Drug:	0	0.0%	In Crosswalk against Signal:	0	0.0%
Driver: Electronic Device:	0	0.0%	In Crosswalk no Signal:	0	0.0%
Driver: Others:	2	12.5%	In Unmarked Crosswalk:	0	0.0%
Vehicle:	0	0.0%	Not in Crosswalk:	0	0.0%
Roadway:	1	6.3%	From Between Parked Cars:	0	0.0%
Unspecified:	12	75.0%	Unspecified:	0	0.0%

7 Records are not approved as of 12/27/2013 5:48:14 PM