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1 EXECUTIVE SUMMARY

Based on crash data and observation provided by the city, 5 locations were selected for School Zone Speed Enforcement studies, and 7 locations for Park Speed Studies.

SUPPORT FOR AUTOMATED CAMERAS

Police Departments are facing many new challenges today, and maintaining adequate staffing tops the list for most departments in America. Traffic stops have become one of the most unpredictable and challenging Police/Community interactions of all. Many departments have reduced their traffic enforcement units, especially during COVID. Adding to the challenge, to be truly effective as a deterrent, traffic enforcement in school zones and dangerous roadways requires consistent officer presence and attention. Most Police Departments are too short-handed to be able to effectively patrol problematic roadways and handle calls for service. Speed cameras offer several benefits in school zone enforcement. Cameras are impartial. They offer equal application of speed laws to be applied to all speeding vehicles. It allows consistent enforcement of violations, not just when officers have time between other duties. There are no tricks or surprises for drivers. Signage and/or flashing beacons announce the presence of the speed cameras upon approach.

SPEED STUDY RESULTS

The purpose of this study is to capture vehicle speeds and volumes traveling along roadways that have become a concern for law enforcement and the Community. In school zones, the data 30 mins before school, and 30 mins after school when flashing yellow beacons were activated, or when children were likely to be present. The collected traffic speed data provides insight on current conditions, and for consideration of possible future traffic safety improvements and initiatives. Determining the extent of a perceived traffic problem is a challenging task. Data collection is a critical first step in determining the extent of the problem and offers the means to implement solutions that have measurable impacts. These surveys are often difficult for local Law Enforcement and City Engineers/Public Works who frequently lack the resources, equipment, or time.



1.1 SCHOOL ZONE SPEED

The selected locations are listed below.

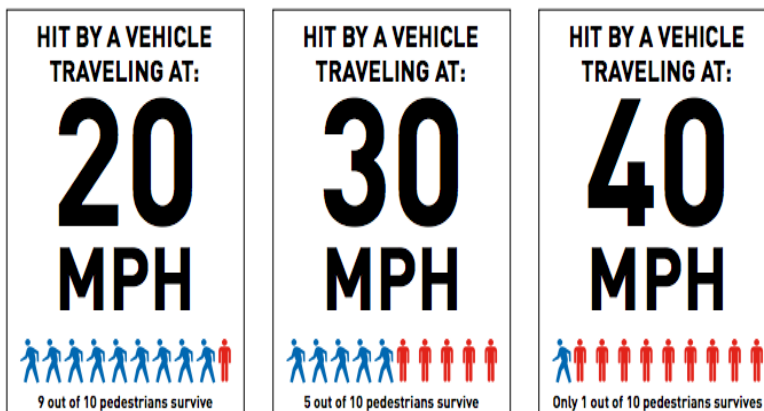
Location #	Location
1	Redmond High School
2	Rosehill Middle School (NE 75 th St.)
3	Rosehill Middle School (NE 140 th Ave.)
4	Redmond Elementary School
5	Redmond Middle School

1.2 PARK ZONE SPEED

The selected locations are listed below.

1	Grasslawn Park – Old Redmond Road
2	Idylwood Park
3	Marymoor Park
4	Anderson Park on NE 79th
5	Anderson Park on Redmond Way
6	60 Acres Park
7	Esterra Park - Turing St. (between 152nd-156th Ave NE)

It is statistically shown that a collision with a pedestrian at 20 mph has a 10% risk for the pedestrian to die. While at 30 mph there is a 50% chance of the pedestrian dying and the chances of surviving at 40 mph decreases to only 10%.



2 EVENT DATA

2.1 SCHOOL ZONE SPEED

For all speed studies, we used a radar-based system to record all passing vehicles. The date and time are shown per speed bracket in the tables below.

REDMOND HIGH SCHOOL (NE 104 TH ST.)										
Posted Speed Limit - 20										
Date	Hour	Direction	Total Volume	≤20 MPH	21-25 MPH	26 MPH +	Highest Speed		TOTAL	
06/09/23 Friday	8AM – 9:35AM	EB	324	73	130	121	43	9:33AM	121	
		WB	448	94	172	182	46	8:50AM	182	
	2:05PM – 4:20PM	EB	867	190	316	361	40	2:23PM	361	
		WB	486	91	193	202	41	4:19PM	202	
TOTALS			2125			866			866	40%
06/12/23 Monday	8AM – 9:35AM	EB	328	72	129	127	40	9:13AM	127	
		WB	530	112	211	207	47	9:28AM	207	
	2:05PM – 4:20PM	EB	730	140	281	309	37	4:10PM	309	
		WB	602	101	244	257	43	4:10PM	257	
TOTALS			2190			900			900	41%

ROSEHILL MIDDLE SCHOOL (NE 75 TH ST.)										
Posted Speed Limit - 20										
Date	Hour	Direction	Total Volume	≤20 MPH	21-25 MPH	26 MPH +	Highest Speed		TOTAL	
06/06/23 Tuesday	7:20AM – 8:05AM	EB	171	98	62	11	31	7:31AM	11	
		WB	121	82	34	5	32	8:02AM	5	
	2:05PM – 2:50PM	EB	28	17	9	2	27	2:06PM	2	
		WB	69	50	14	5	34	2:12PM	5	
TOTALS			389			23			23	5.90%
06/08/23 Thursday	7:20AM – 8:05AM	EB	158	112	41	5	29	7:59AM	5	
		WB	128	87	35	6	37	7:26AM	6	
	2:05PM – 2:50PM	EB	38	24	11	3	26	2:05PM	3	
		WB	73	60	11	2	31	2:40PM	2	
TOTALS			397			16			16	4.00%



ROSEHILL MIDDLE SCHOOL (NE 140TH AVE.)

Posted Speed Limit - 20

Date	Hour	Direction	Total Volume	20 MPH >	21-25 MPH	26 MPH +	Highest Speed		TOTAL		
10/03/23 Tues	7:20AM – 8:05AM	NB	142	7	39	96	41	7:31AM	96		
		SB	156	98	49	9	40	7:55AM	9		
	2:05PM – 2:50PM	NB	198	10	62	126	45	2:14PM	126		
		SB	125	52	51	22	37	2:12PM	22		
TOTALS			621			253		253	253	40%	
10/04/23 Weds	7:20AM – 8:05AM	NB	131	8	23	100	42	8:03AM	100		
		SB	125	71	43	11	33	7:56AM	11		
	2:05PM – 2:50PM	NB	179	7	49	123	40	1:13PM	123		
		SB	150	3	6	141	45	1:07PM	141		
TOTALS			585			375		375	375	64%	
10/05/23 Thurs	7:20AM – 8:05AM	NB	163	13	60	90	38	7:51AM	90		
		SB	150	76	56	18	37	7:51AM	18		
	2:05PM – 2:50PM	NB	194	18	66	110	43	2:27PM	110		
		SB	129	76	34	19	44	2:22PM	19		
TOTALS			636			237		237	237	37%	
10/06/23 Fri	7:20AM – 8:05AM	NB	124	11	31	82	41	7:55AM	82		
		SB	115	67	39	9	34	7:56AM	9		
	2:05PM – 2:50PM	NB	225	14	83	128	41	2:18PM	128		
		SB	134	57	62	15	34	2:42PM	15		
TOTALS			598			234		234	234	39%	
									Daily Avg	275	45%



REDMOND ELEMENTARY SCHOOL (NE 80 TH ST.)										
Posted Speed Limit - 20										
Date	Day of the Week	Direction	Total Volume	20 MPH >	21-25 MPH	26 MPH +	Highest Speed		TOTAL	
06/20/23 Tues	8:50AM – 9:35AM	EB	103	73	22	8	31	8:54AM	8	
		WB	77	57	13	7	32	9:22AM	7	
	3:35PM – 4:20PM	EB	119	52	41	26	39	4:17PM	26	
		WB	85	45	22	18	33	4:18PM	18	
TOTALS			384			59			59	15%
06/22/23 Thurs	8:50AM – 9:35AM	EB	95	63	26	6	29	9:24AM	6	
		WB	71	52	11	8	32	9:28AM	8	
	3:35PM – 4:20PM	EB	115	58	33	24	37	4:11PM	24	
		WB	80	60	8	12	32	4:10PM	12	
TOTALS			361			50			50	13.80%

REDMOND MIDDLE SCHOOL (NE 166 TH ST.)										
Posted Speed Limit - 20										
Date	Day of the Week	Direction	Total Volume	20 MPH >	21-25 MPH	26 MPH +	Highest Speed		TOTAL	
06/12/23 Mon	7:20AM – 8:05AM	NB	164	83	64	17	37	7:28AM	17	
		SB	254	121	117	16	34	7:59AM	16	
	2:05PM – 2:50PM	NB	224	72	122	30	44	2:27PM	30	
		SB	139	32	67	40	43	2:31PM	40	
TOTALS			781			103			103	13%
06/13/23 Tues	7:20AM – 8:05AM	NB	189	108	59	22	31	7:59AM	22	
		SB	123	63	49	11	35	7:51AM	11	
	2:05PM – 2:50PM	NB	248	137	86	25	42	2:12PM	25	
		SB	117	44	53	20	33	2:35PM	20	
TOTALS			677			78			78	11.50%
06/15/23 Thurs	7:20AM – 8:05AM	NB	184	107	64	13	39	7:28AM	13	
		SB	147	68	65	14	31	7:26AM	14	
	2:05PM – 2:50PM	NB	281	160	98	23	33	2:16PM	23	
		SB	111	45	45	21	33	2:17PM	21	
TOTALS			723			71			71	9.80%



2.2 PARK ZONE SPEED

Grasslawn Park - Old Redmond Road					
Posted Speed Limit - 30					
Date	Day of the Week (Park Hours - 6AM - 11PM)	Direction of Travel	Total Volume	35-40 MPH	41+ MPH
12/31/23	Sunday	WB	2120	675	74
		EB	2468	773	129
01/01/24	Monday	WB	1566	521	89
		EB	1996	665	100
01/02/24	Tuesday	WB	3786	1131	96
		EB	4059	1261	183
01/03/24	Wednesday	WB	4026	1074	120
		EB	4384	1287	186
01/04/24	Thursday	WB	3966	1221	104
		EB	4166	1296	197
01/05/24	Friday (6hrs)	WB	1016	283	37
		EB	1148	375	45
TOTAL					1360
Average daily violators					255



Idylwood Park - West Lake Sammamish PKWY NE					
Posted Speed Limit - 35					
Date	Day of the Week (Park Hours - 8AM - 8PM)	Direction of Travel	Total Volume	40-45 MPH	46+ MPH
12/31/23	Sunday	NB	1548	288	39
		SB	1442	347	33
01/01/24	Monday	NB	1338	261	40
		SB	1248	297	34
01/02/24	Tuesday	NB	2524	382	34
		SB	2529	573	52
01/03/24	Wednesday	NB	2669	420	48
		SB	2835	630	76
01/04/24	Thursday	NB	2698	398	35
		SB	2783	645	66
01/05/24	Friday (5hrs)	NB	1106	152	13
		SB	666	169	18
TOTAL					488
Average daily Violators					91

Marymoor Park - West Lake Sammamish PKWY NE					
Posted Speed Limit - 35					
Date	Day of the Week (Park Hours - 8AM – Dusk [4:30 PM])	Direction of Travel	Total Volume	40-45 MPH	46+ MPH
12/31/23	Sunday	NB	3686	1468	414
		SB	2370	1021	249
01/01/24	Monday	NB	2889	1254	357
		SB	1666	808	229
01/02/24	Tuesday	NB	5055	2102	503
		SB	3013	1354	320
01/03/24	Wednesday	NB	5292	2319	540
		SB	3435	1450	355
01/04/24	Thursday	NB	5275	2310	514
		SB	3350	1381	311
TOTAL					3792
Average daily Violators					758



Anderson Park on NE 79th							
Posted Speed Limit – 25							
Total number of lanes - 2, no center turn lane							
Park hours: 7 AM – 8 PM							
Date	Direction	Total Volume	0-25 MPH	26-35 MPH	36-45 MPH	45+ MPH	TOTAL
07/16/24 Tue	WB (incoming)	3.785	1.596	2152	37	0	37
	EB (outgoing)	3448	2230	1171	45	2	47
07/17/24 Wed	WB (incoming)	3.838	1.746	2056	36	0	36
	EB (outgoing)	3528	2427	1054	45	2	47
07/18/24 Thurs	WB (incoming)	3.836	1.644	2145	46	1	47
	EB (outgoing)	3400	2249	1106	45	0	45
07/19/24 Fri	WB (incoming)	3.054	1.502	1515	37	0	37
	EB (outgoing)	3460	2386	1023	49	2	51
07/20/24 Sat	WB (incoming)	2.603	1.056	1519	27	1	28
	EB (outgoing)	2821	1772	1007	42	0	42
07/21/24 Sun	WB (incoming)	2.414	1.077	1312	24	1	25
	EB (outgoing)	2537	1688	817	31	1	32
07/22/24 Mon	WB (incoming)	3.578	1.588	1961	29	0	29
	EB (outgoing)	3289	2044	1199	43	3	46
TOTAL							549
Average Daily Violators							78



Anderson Park on Redmond Way							
Posted Speed Limit – 30							
Total number of lanes - 2, no center turn lane							
Park hours: 7 AM – 8 PM							
Date	Direction	Total Volume	0-30 MPH	31-40 MPH	41-50 MPH	50+ MPH	TOTAL
07/16/24 Tue	WB (incoming)	3.785	3.347	435	3	0	4
	EB (outgoing)	3305	3077	223	5	0	5
07/17/24 Wed	WB (incoming)	3.838	3.427	405	6	0	6
	EB (outgoing)	3423	3184	234	5	0	5
07/18/24 Thurs	WB (incoming)	3.836	3.399	435	2	0	2
	EB (outgoing)	3312	3071	235	6	0	6
07/19/24 Fri	WB (incoming)	3.054	2.737	314	3	0	3
	EB (outgoing)	3391	3167	215	6	3	9
07/20/24 Sat	WB (incoming)	2.603	2.265	334	4	0	4
	EB (outgoing)	2784	2562	214	8	0	8
07/21/24 Sun	WB (incoming)	2.414	2.171	239	4	0	4
	EB (outgoing)	2551	2370	172	9	0	9
07/22/24 Mon	WB (incoming)	3.578	3.240	333	5	0	5
	EB (outgoing)	3190	2925	254	10	1	11
TOTAL							81
Average Daily Violators							12



60 Acres Park							
Posted Speed Limit – 35							
Total number of lanes - 2, no center turn lane							
Park hours: 24hrs							
Date	Direction	Total Volume	0-35 MPH	36-45 MPH	46-55 MPH	55+ MPH	TOTAL
07/25/24 Thurs	WB (incoming)	705	411	263	28	3	31
	EB (outgoing)	698	328	320	46	4	50
07/26/24 Fri	WB (incoming)	2.070	2.030	37	2	1	3
	EB (outgoing)	2345	2285	56	4	0	4
07/27/24 Sat	WB (incoming)	2.427	2.383	39	2	3	5
	EB (outgoing)	2608	2527	74	4	3	7
07/28/24 Sun	WB (incoming)	2.653	2.588	64	1	0	1
	EB (outgoing)	2275	2150	117	6	2	8
07/29/24 Mon	WB (incoming)	509	291	188	21	9	30
	EB (outgoing)	536	229	258	45	4	49
07/30/24 Tue	WB (incoming)	892	541	319	29	3	32
	EB (outgoing)	939	529	359	45	6	51
07/31/24 Wed	WB (incoming)	1.039	714	298	21	6	27
	EB (outgoing)	105	570	422	52	8	60
TOTAL							358
Average Daily Violators							51



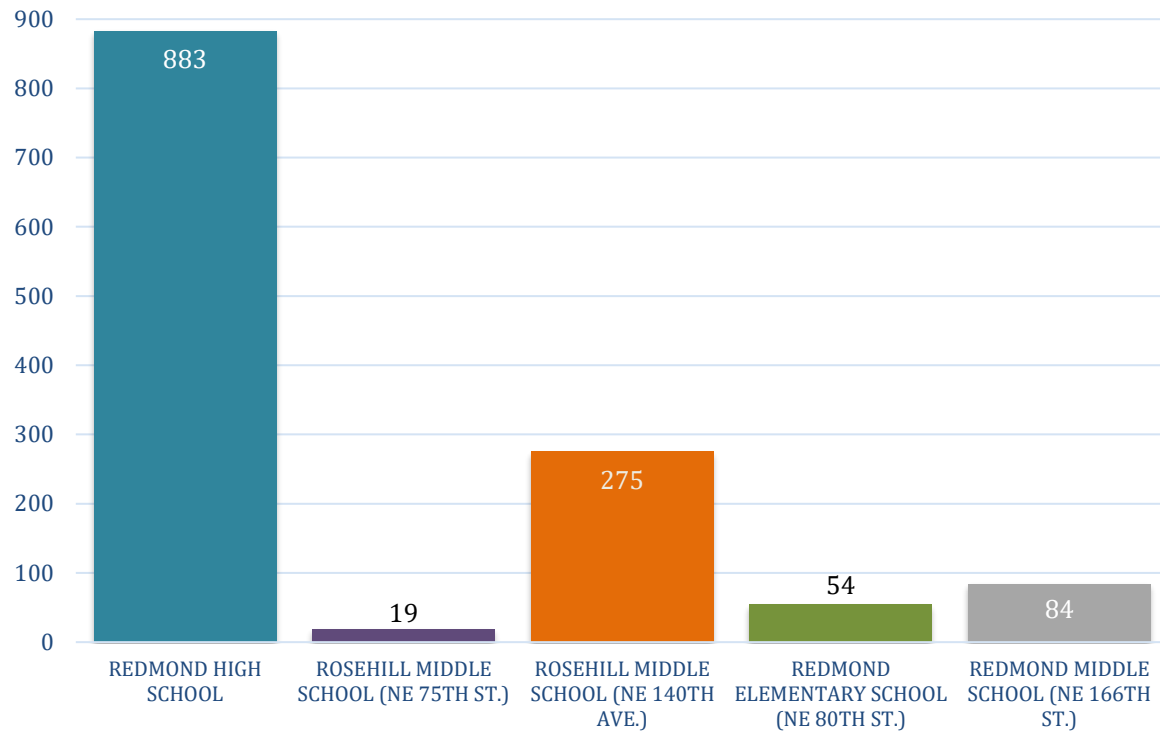
Esterra Park - Turing St. (between 152nd-156th Ave NE)

Posted Speed Limit – 25
 Total number of lanes - 2, no center turn lane
 Park hours: 24hrs

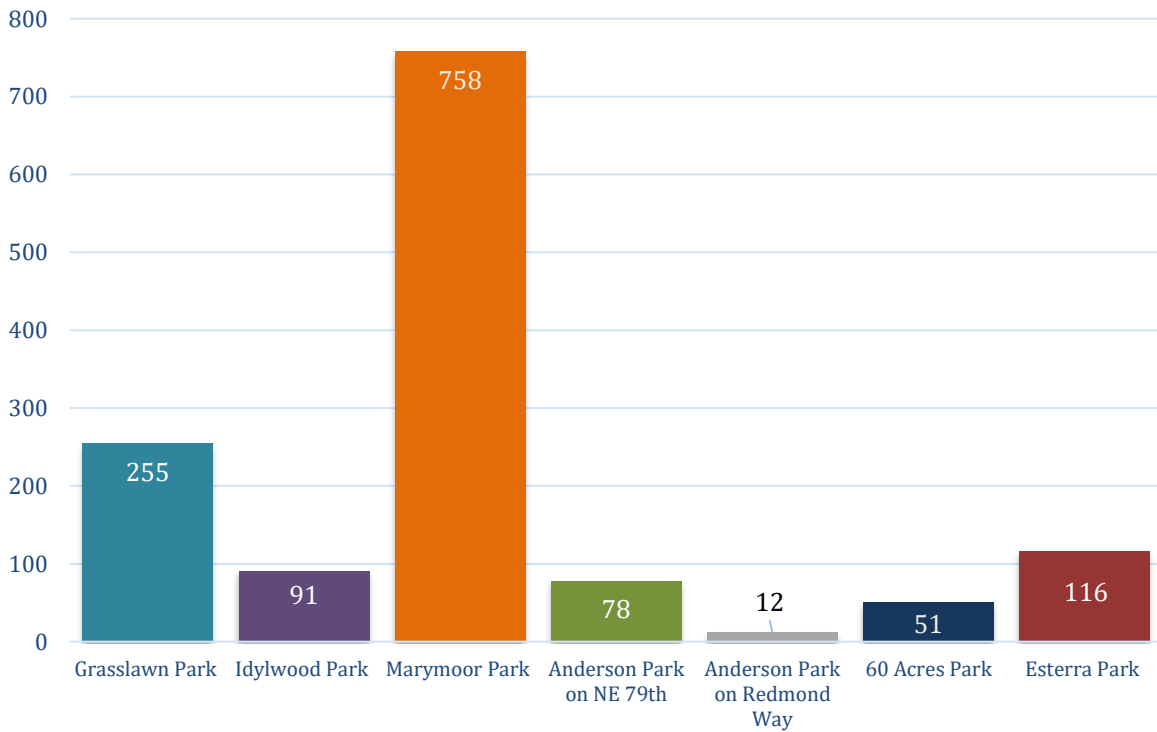
Date	Direction	Total Volume	0-25 MPH	26-35 MPH	36-45 MPH	45+ MPH	TOTAL
07/25/24 Thurs	WB (incoming)	1.929	1.082	818	26	3	29
	EB (outgoing)	2989	1647	1229	112	1	113
07/26/24 Fri	WB (incoming)	1.696	880	787	28	1	29
	EB (outgoing)	2650	1425	1144	79	2	81
07/27/24 Sat	WB (incoming)	1.313	719	576	18	0	18
	EB (outgoing)	2006	1173	769	60	4	64
07/28/24 Sun	WB (incoming)	1.254	669	568	17	0	17
	EB (outgoing)	1685	944	676	64	1	65
07/29/24 Mon	WB (incoming)	1.638	830	783	23	2	25
	EB (outgoing)	2570	1372	1097	98	3	101
07/30/24 Tue	WB (incoming)	1.825	1.004	796	24	1	25
	EB (outgoing)	2847	1544	1203	99	1	100
07/31/24 Wed	WB (incoming)	1.820	857	925	35	3	38
	EB (outgoing)	2910	1558	1243	106	3	109
TOTAL							814
Average Daily Violators							116



2.3 *AVERAGE DAILY VIOLATORS AT ALL STUDIED SCHOOL ZONES*



2.1 *AVERAGE DAILY VIOLATORS AT ALL STUDIED PARK ZONES*



Based on these results, the estimated number of violations without intervention would be:

SCHOOL ZONES:

Redmond High School



Weekly: 4,415



Monthly: 17,160



Annually: 171,600

Rosehill Middle School (NE 75th St.)



Weekly: 95



Monthly: 380



Annually: 3,800

Rosehill Middle School (NE 140th Ave.)



Weekly: 1,375



Monthly: 5,500



Annually: 55,000

Redmond Elementary School



Weekly: 270





Monthly: 1,080



Annually: 10,800

Redmond Middle School



Weekly: 420



Monthly: 1,680



Annually: 16,800



PARK ZONES:

Grasslawn Park



Weekly: 1,785



Monthly: 7,140



Annually: 86,680

Idylwood Park



Weekly: 637



Monthly: 2,548



Annually: 30,576

Marymoor Park



Weekly: 5,306



Monthly: 21,224



Annually: 254,688

Anderson Park on NE 79th



Weekly: 546





Monthly: 2,184



Annually: 26,208

Anderson Park on Redmond Way



Weekly: 84



Monthly: 336



Annually: 4,032

60 Acres Park



Weekly: 357



Monthly: 1,428



Annually: 17,136

Esterra Park



Weekly: 812



Monthly: 3,248



Annually: 38,976

Total number of violations after program commencement is dramatically reduced.

