INDEX

1 EXECUTIVE SUMMARY

Based on crash data and observation provided by the city, 5 locations were selected for School Zone Speed Enforcement studies, and 3 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 75th St.)
3	Rosehill Middle School (NE 140th 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

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%.
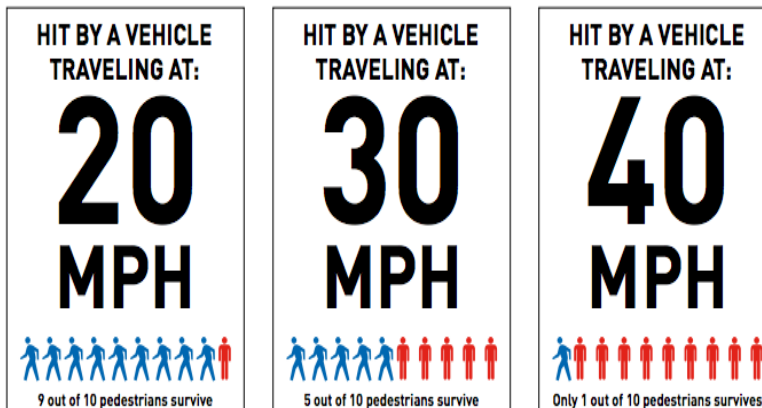
2 EVENT DATA

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 104TH 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 75TH 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 80TH 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 166TH 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

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

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

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

Redmond High School

Weekly: 4,415

Monthly: 17,160

Annually: 171,600

Rosehill Middle School (NE 75th St.)

Weekly: 97

Monthly: 388

Annually: 3,880

Rosehill Middle School (NE 140th Ave.)

Weekly: 1,373

Monthly: 5,492

Annually: 54,920

Redmond Elementary School

Weekly: 272

Monthly: 1,088

Annually: 10,880

Redmond Middle School

Weekly: 630

Monthly: 2,520

Annually: 25,200

Grasslawn Park

Weekly: 1,586

Monthly: 6,344

Annually: 76,128

Idylwood Park

Weekly: 569

Monthly: 2,276

Annually: 27,312

Marymoor Park

Weekly: 4,424

Monthly: 17,696

Annually: 212,352

Total number of violations after program commencement is dramatically reduced.