

Appendix F

Transportation – Traffic Counts, LOS Worksheets, and Trip Distribution

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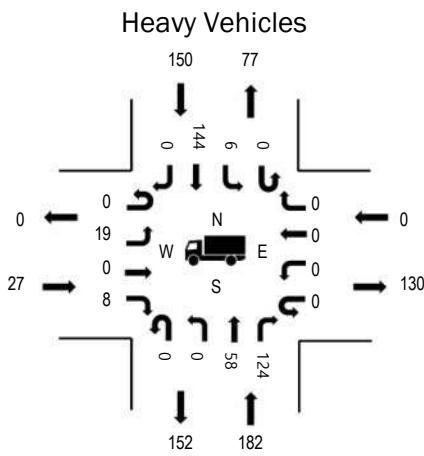
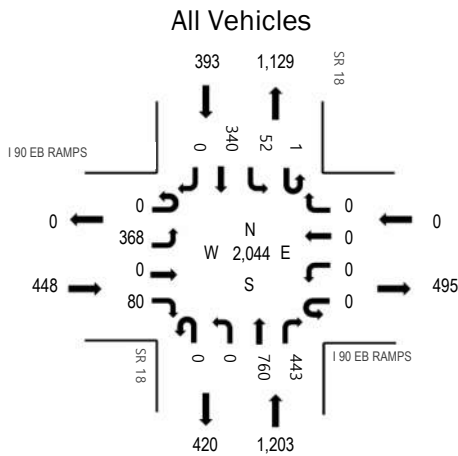
Traffic Counts



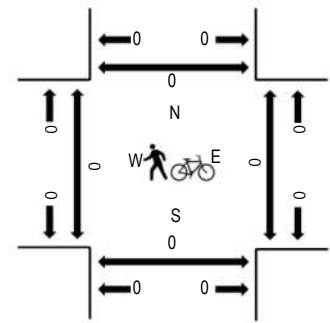
Location: 1 SR 18 & I 90 EB RAMPS AM
 Date and Start Time: Thursday, February 8, 2018
 Peak Hour: 07:45 AM - 08:45 AM

(303) 216-2439
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Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	6.0%	0.80
WB	0.0%	0.00
NB	15.1%	0.97
SB	38.2%	0.94
All	17.6%	0.96

Traffic Counts - All Vehicles

Interval Start Time	I 90 EB RAMPS Eastbound				I 90 EB RAMPS Westbound				SR 18 Northbound				SR 18 Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	62	0	18	0	0	0	0	0	0	183	85	0	22	96	0	466	1,939
7:15 AM	0	86	0	14	0	0	0	0	0	0	181	92	0	24	80	0	477	1,954
7:30 AM	0	72	0	18	0	0	0	0	0	0	193	87	0	8	87	0	465	1,991
7:45 AM	0	115	0	25	0	0	0	0	0	0	193	102	0	9	87	0	531	2,044
8:00 AM	0	80	0	16	0	0	0	0	0	0	185	106	0	11	83	0	481	2,001
8:15 AM	0	84	0	19	0	0	0	0	0	0	189	117	0	17	88	0	514	
8:30 AM	0	89	0	20	0	0	0	0	0	0	193	118	1	15	82	0	518	
8:45 AM	0	78	0	28	0	0	0	0	0	0	159	123	0	25	75	0	488	
Count Total	0	666	0	158	0	0	0	0	0	0	1,476	830	1	131	678	0	3,940	
Peak Hour	0	368	0	80	0	0	0	0	0	0	760	443	1	52	340	0	2,044	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

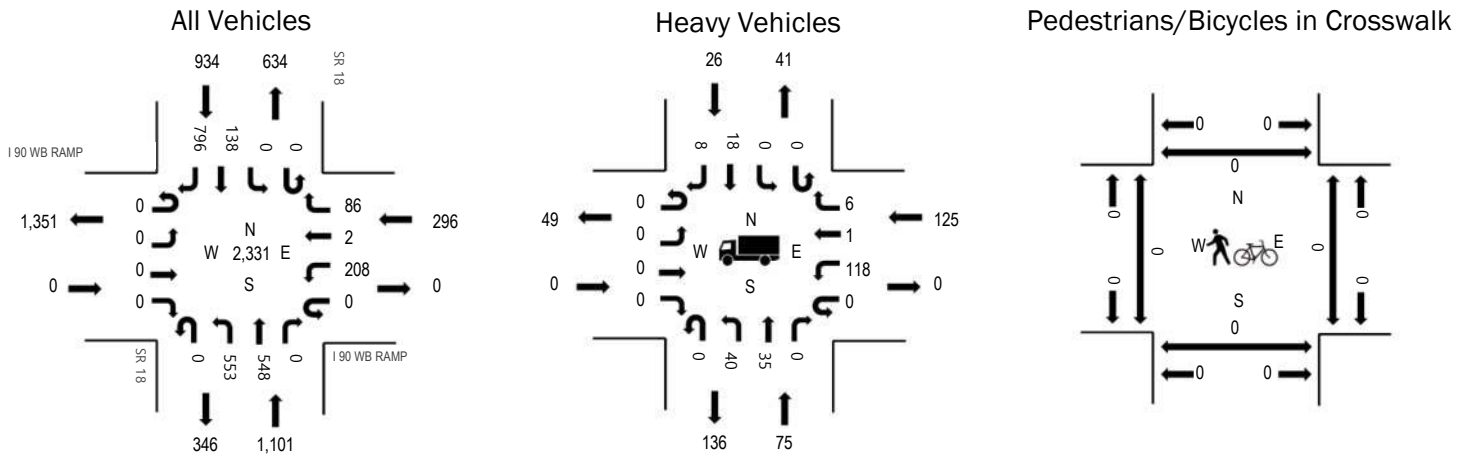
Interval Start Time	Heavy Vehicles					Total	Interval Start Time	Pedestrians/Bicycles on Crosswalk					Total
	EB	NB	WB	SB				EB	NB	WB	SB		
7:00 AM	1	35	0	36	72	7:00 AM	0	0	0	0	0	0	
7:15 AM	5	33	0	27	65	7:15 AM	0	0	0	0	0	0	
7:30 AM	7	31	0	31	69	7:30 AM	0	0	0	0	0	0	
7:45 AM	8	41	0	37	86	7:45 AM	0	0	0	0	0	0	
8:00 AM	4	48	0	39	91	8:00 AM	0	0	0	0	0	0	
8:15 AM	8	47	0	37	92	8:15 AM	0	0	0	0	0	0	
8:30 AM	7	46	0	37	90	8:30 AM	0	0	0	0	0	0	
8:45 AM	10	47	0	26	83	8:45 AM	0	0	0	0	0	0	
Count Total	50	328	0	270	648	Count Total	0	0	0	0	0	0	
Peak Hour	27	182	0	150	359	Peak Hour	0	0	0	0	0	0	



Location: 2 SR 18 & I 90 WB RAMP AM
 Date and Start Time: Thursday, February 8, 2018
 Peak Hour: 07:15 AM - 08:15 AM

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Peak Hour



	HV%	PHF
EB	0.0%	0.00
WB	42.2%	0.88
NB	6.8%	0.85
SB	2.8%	0.91
All	9.7%	0.95

Traffic Counts - All Vehicles

Interval Start Time	I 90 WB RAMP Eastbound				I 90 WB RAMP Westbound				SR 18 Northbound				SR 18 Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	0	0	0	0	55	0	13	0	140	92	0	0	0	40	207	547	2,327
7:15 AM	0	0	0	0	0	48	0	10	0	146	139	0	0	0	42	214	599	2,331
7:30 AM	0	0	0	0	0	56	0	28	0	132	112	0	0	0	32	207	567	2,293
7:45 AM	0	0	0	0	0	49	1	25	0	152	171	0	0	0	28	188	614	2,312
8:00 AM	0	0	0	0	0	55	1	23	0	123	126	0	0	0	36	187	551	2,227
8:15 AM	0	0	0	0	0	57	0	27	0	149	117	0	0	0	39	172	561	
8:30 AM	0	0	0	0	0	59	2	23	0	141	149	0	0	0	33	179	586	
8:45 AM	0	0	0	0	0	61	1	17	0	102	137	0	0	0	34	177	529	
Count Total	0	0	0	0	0	440	5	166	0	1,085	1,043	0	0	0	284	1,531	4,554	
Peak Hour	0	0	0	0	0	208	2	86	0	553	548	0	0	0	138	796	2,331	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Total	Interval Start Time	Pedestrians/Bicycles on Crosswalk					Total
	EB	NB	WB	SB				EB	NB	WB	SB		
7:00 AM	0	12	29	10	51		7:00 AM	0	0	0	0	0	0
7:15 AM	0	17	25	6	48		7:15 AM	0	0	0	0	0	0
7:30 AM	0	18	35	7	60		7:30 AM	0	0	0	0	0	0
7:45 AM	0	23	28	4	55		7:45 AM	0	0	0	0	0	0
8:00 AM	0	17	37	9	63		8:00 AM	0	0	0	0	0	0
8:15 AM	0	20	35	7	62		8:15 AM	0	0	0	0	0	0
8:30 AM	0	19	35	6	60		8:30 AM	0	0	0	0	0	0
8:45 AM	0	16	31	12	59		8:45 AM	0	0	0	0	0	0
Count Total	0	142	255	61	458		Count Total	0	0	0	0	0	0
Peak Hour	0	75	125	26	226		Peak Hour	0	0	0	0	0	0



Location: 3 SNOQUALIME PKWY & SE 99TH ST AM

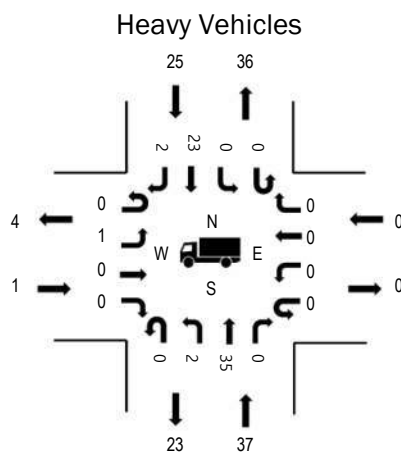
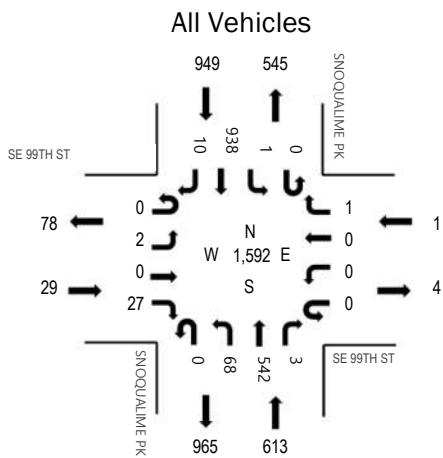
Date and Start Time: Thursday, February 8, 2018

Peak Hour: 07:00 AM - 08:00 AM

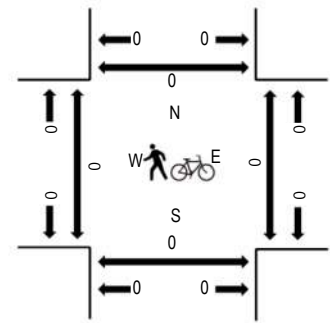
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Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	3.4%	0.81
WB	0.0%	0.25
NB	6.0%	0.77
SB	2.6%	0.92
All	4.0%	0.95

Traffic Counts - All Vehicles

Interval Start Time	SE 99TH ST Eastbound				SE 99TH ST Westbound				SNOQUALIME PKWY Northbound				SNOQUALIME PKWY Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	0	0	7	0	0	0	0	0	20	105	1	0	0	256	1	390	1,592
7:15 AM	0	0	0	9	0	0	0	1	0	17	126	1	0	1	232	4	391	1,558
7:30 AM	0	1	0	5	0	0	0	0	0	11	134	0	0	0	241	1	393	1,574
7:45 AM	0	1	0	6	0	0	0	0	0	20	177	1	0	0	209	4	418	1,554
8:00 AM	0	1	0	2	0	0	0	0	0	4	123	0	0	1	224	1	356	1,498
8:15 AM	0	2	0	1	0	0	0	0	0	6	162	0	0	0	231	5	407	
8:30 AM	0	0	0	1	0	0	0	0	0	13	153	0	0	1	204	1	373	
8:45 AM	0	2	0	3	0	0	0	0	0	11	135	0	0	0	205	6	362	
Count Total	0	7	0	34	0	0	0	1	0	102	1,115	3	0	3	1,802	23	3,090	
Peak Hour	0	2	0	27	0	0	0	1	0	68	542	3	0	1	938	10	1,592	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Total	Interval Start Time	Pedestrians/Bicycles on Crosswalk					Total
	EB	NB	WB	SB				EB	NB	WB	SB		
7:00 AM	0	3	0	10	13	7:00 AM	0	0	0	0	0	0	
7:15 AM	0	7	0	5	12	7:15 AM	0	0	0	0	0	0	
7:30 AM	0	16	0	6	22	7:30 AM	0	0	0	0	0	0	
7:45 AM	1	11	0	4	16	7:45 AM	0	0	0	0	0	0	
8:00 AM	1	8	0	7	16	8:00 AM	0	0	0	0	0	0	
8:15 AM	2	9	0	6	17	8:15 AM	0	0	0	0	0	0	
8:30 AM	0	11	0	7	18	8:30 AM	0	0	0	0	0	0	
8:45 AM	1	13	0	8	22	8:45 AM	0	0	0	0	0	0	
Count Total	5	78	0	53	136	Count Total	0	0	0	0	0	0	
Peak Hour	1	37	0	25	63	Peak Hour	0	0	0	0	0	0	



Location: 4 SNOQUALMIE PKWY & SE JACOBIA ST AM

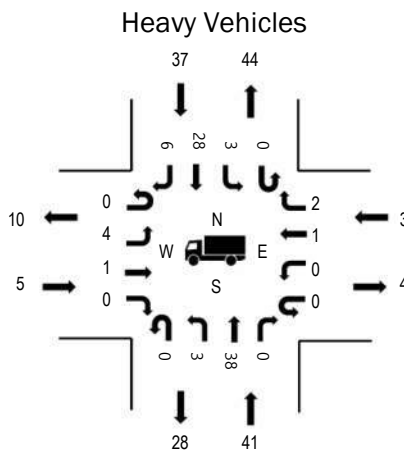
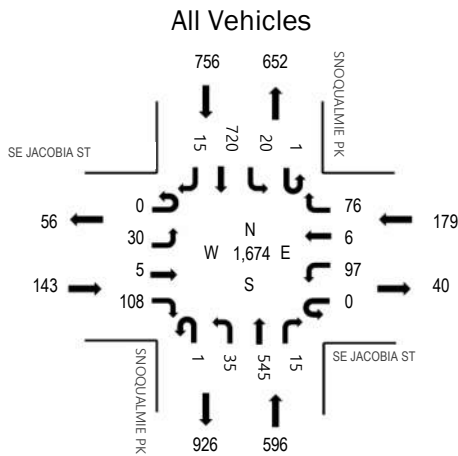
Date and Start Time: Thursday, February 8, 2018

Peak Hour: 08:00 AM - 09:00 AM

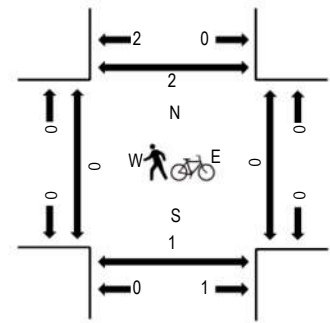
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Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	3.5%	0.72
WB	1.7%	0.83
NB	6.9%	0.87
SB	4.9%	0.95
All	5.1%	0.91

Traffic Counts - All Vehicles

Interval Start Time	SE JACOBIA ST Eastbound				SE JACOBIA ST Westbound				SNOQUALMIE PKWY Northbound				SNOQUALMIE PKWY Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	5	0	24	0	22	0	9	1	9	93	4	0	4	215	1	387	1,569
7:15 AM	0	1	0	24	0	26	2	15	0	10	100	1	0	1	173	5	358	1,576
7:30 AM	0	2	0	17	0	17	0	10	0	8	146	4	0	3	204	2	413	1,648
7:45 AM	0	6	0	20	0	23	1	4	0	15	162	4	0	4	168	4	411	1,627
8:00 AM	0	6	3	28	0	23	1	14	0	10	105	5	0	6	188	5	394	1,674
8:15 AM	0	9	0	24	0	25	3	13	0	4	161	7	0	3	181	0	430	
8:30 AM	0	3	0	20	0	28	1	17	0	11	135	1	0	4	168	4	392	
8:45 AM	0	12	2	36	0	21	1	32	1	10	144	2	1	7	183	6	458	
Count Total	0	44	5	193	0	185	9	114	2	77	1,046	28	1	32	1,480	27	3,243	
Peak Hour	0	30	5	108	0	97	6	76	1	35	545	15	1	20	720	15	1,674	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Total	Interval Start Time	Pedestrians/Bicycles on Crosswalk					Total
	EB	NB	WB	SB				EB	NB	WB	SB		
7:00 AM	1	3	0	11	15	15	7:00 AM	0	0	0	0	0	0
7:15 AM	0	6	0	9	15	15	7:15 AM	0	0	0	1	1	1
7:30 AM	1	15	1	5	22	22	7:30 AM	0	0	0	0	0	0
7:45 AM	3	12	0	4	19	19	7:45 AM	0	0	0	0	0	0
8:00 AM	1	7	0	8	16	16	8:00 AM	0	0	0	2	2	2
8:15 AM	1	11	0	7	19	19	8:15 AM	0	0	0	0	0	0
8:30 AM	0	11	2	10	23	23	8:30 AM	0	1	0	0	1	1
8:45 AM	3	12	1	12	28	28	8:45 AM	0	0	0	0	0	0
Count Total	10	77	4	66	157	157	Count Total	0	1	0	3	4	4
Peak Hour	5	41	3	37	86	86	Peak Hour	0	1	0	2	3	3



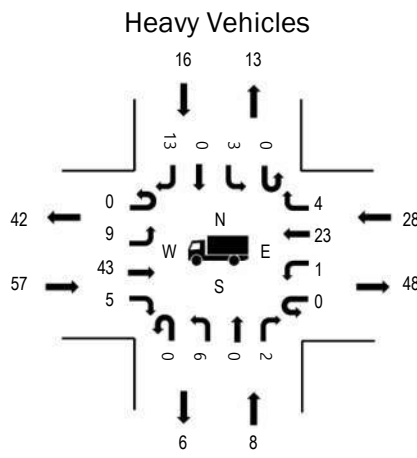
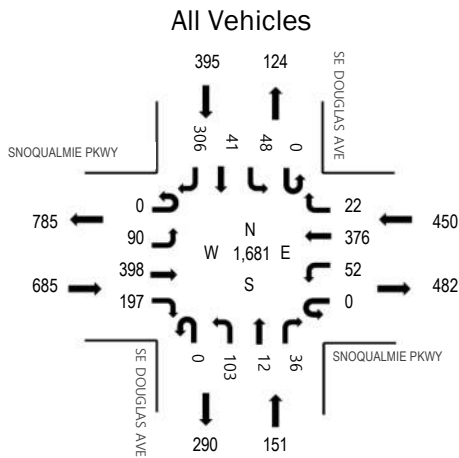
Location: 5 SE DOUGLAS AVE & SNOQUALMIE PKWY AM

Date and Start Time: Thursday, February 8, 2018

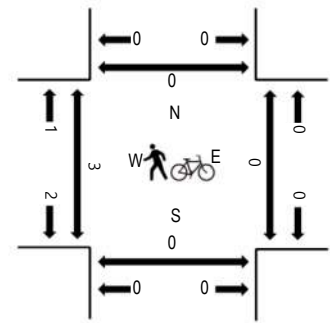
Peak Hour: 08:00 AM - 09:00 AM

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Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	8.3%	0.81
WB	6.2%	0.92
NB	5.3%	0.92
SB	4.1%	0.89
All	6.5%	0.87

Traffic Counts - All Vehicles

Interval Start Time	SNOQUALMIE PKWY Eastbound				SNOQUALMIE PKWY Westbound				SE DOUGLAS AVE Northbound				SE DOUGLAS AVE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	7:00 AM	0	7	95	32	0	15	144	3	0	24	7	4	0	25	8		
7:15 AM	0	10	114	36	0	17	97	2	0	24	0	5	0	20	8	54	387	1,591
7:30 AM	0	12	73	49	0	5	119	10	0	30	5	4	0	5	6	69	387	1,576
7:45 AM	0	16	81	57	0	12	126	7	0	21	4	6	0	16	7	58	411	1,608
8:00 AM	0	20	100	45	0	13	98	3	0	28	1	8	0	7	12	71	406	1,681
8:15 AM	0	20	89	39	0	5	84	7	0	28	4	9	0	9	8	70	372	
8:30 AM	0	25	82	54	0	22	90	6	0	23	3	7	0	16	11	80	419	
8:45 AM	0	25	127	59	0	12	104	6	0	24	4	12	0	16	10	85	484	
Count Total	0	135	761	371	0	101	862	44	0	202	28	55	0	114	70	559	3,302	
Peak Hour	0	90	398	197	0	52	376	22	0	103	12	36	0	48	41	306	1,681	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Total	Interval Start Time	Pedestrians/Bicycles on Crosswalk					Total
	EB	NB	WB	SB	U-Turn			EB	NB	WB	SB	U-Turn	
7:00 AM	12	1	5	9	27	7:00 AM	0	0	0	0	0	0	
7:15 AM	8	5	6	1	20	7:15 AM	0	0	0	0	0	0	
7:30 AM	9	2	4	1	16	7:30 AM	0	0	0	0	0	0	
7:45 AM	9	1	6	2	18	7:45 AM	4	0	1	1	6		
8:00 AM	9	2	3	1	15	8:00 AM	0	0	0	0	0	0	
8:15 AM	12	2	12	3	29	8:15 AM	0	0	0	0	0	0	
8:30 AM	19	3	8	8	38	8:30 AM	1	0	0	0	1		
8:45 AM	17	1	5	4	27	8:45 AM	2	0	0	0	2		
Count Total	95	17	49	29	190	Count Total	7	0	1	1	9		
Peak Hour	57	8	28	16	109	Peak Hour	3	0	0	0	3		



Location: 6 SE CENTER ST & SNOQUALIME PKWY AM

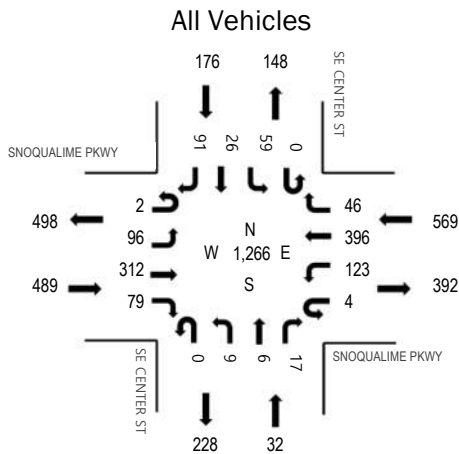
Date and Start Time: Thursday, February 8, 2018

Peak Hour: 08:00 AM - 09:00 AM

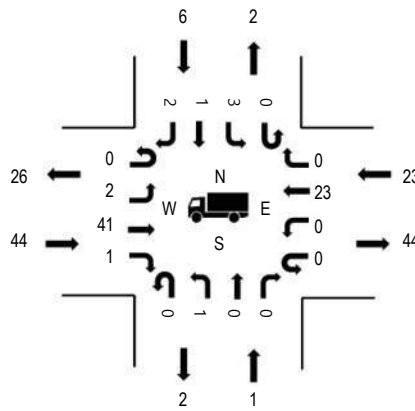
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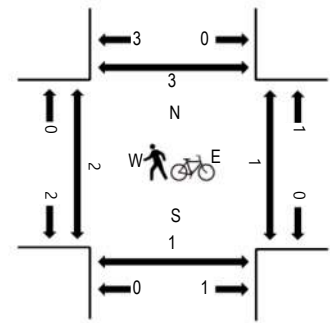
Peak Hour



Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	9.0%	0.80
WB	4.0%	0.89
NB	3.1%	0.80
SB	3.4%	0.83
All	5.8%	0.89

Traffic Counts - All Vehicles

Interval Start Time	SNOQUALIME PKWY Eastbound				SNOQUALIME PKWY Westbound				SE CENTER ST Northbound				SE CENTER ST Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	7:00 AM	1	14	81	14	2	15	105	3	0	1	0	1	0	19	3		
7:15 AM	0	15	103	25	0	22	108	11	0	2	0	1	0	11	2	19	319	1,258
7:30 AM	0	24	72	22	1	39	125	14	0	0	1	4	0	12	2	16	332	1,254
7:45 AM	1	22	75	23	1	33	116	6	0	3	0	3	0	10	5	26	324	1,236
8:00 AM	1	21	76	19	1	25	92	9	0	1	0	3	0	8	3	24	283	1,266
8:15 AM	1	22	61	26	0	43	102	14	0	2	2	6	0	14	5	17	315	
8:30 AM	0	20	73	17	2	24	106	11	0	2	0	6	0	22	5	26	314	
8:45 AM	0	33	102	17	1	31	96	12	0	4	4	2	0	15	13	24	354	
Count Total	4	171	643	163	8	232	850	80	0	15	7	26	0	111	38	173	2,521	
Peak Hour	2	96	312	79	4	123	396	46	0	9	6	17	0	59	26	91	1,266	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Total	Interval Start Time	Pedestrians/Bicycles on Crosswalk					Total
	EB	NB	WB	SB				EB	NB	WB	SB		
7:00 AM	16	1	4	1	22	7:00 AM	9	0	0	3	12		
7:15 AM	2	0	3	0	5	7:15 AM	0	0	1	0	1		
7:30 AM	9	0	7	0	16	7:30 AM	3	0	0	0	3		
7:45 AM	13	2	1	1	17	7:45 AM	0	0	0	0	0		
8:00 AM	11	0	4	2	17	8:00 AM	1	0	0	0	1		
8:15 AM	10	0	7	2	19	8:15 AM	0	0	0	0	0		
8:30 AM	8	0	9	2	19	8:30 AM	0	0	0	3	3		
8:45 AM	15	1	3	0	19	8:45 AM	1	1	1	0	3		
Count Total	84	4	38	8	134	Count Total	14	1	2	6	23		
Peak Hour	44	1	23	6	74	Peak Hour	2	1	1	3	7		



Location: 7 FISHER AVE SE & SNOQUALMIE PKWY AM

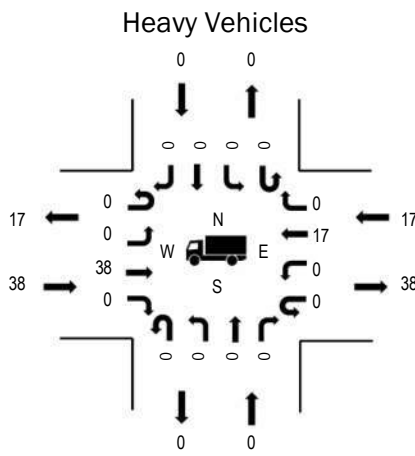
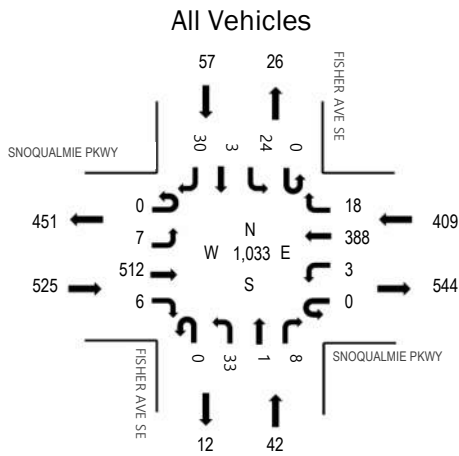
Date and Start Time: Thursday, February 8, 2018

Peak Hour: 07:00 AM - 08:00 AM

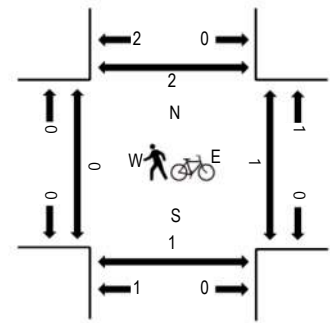
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Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	7.2%	0.67
WB	4.2%	0.71
NB	0.0%	0.81
SB	0.0%	0.59
All	5.3%	0.78

Traffic Counts - All Vehicles

Interval Start Time	SNOQUALMIE PKWY Eastbound				SNOQUALMIE PKWY Westbound				FISHER AVE SE Northbound				FISHER AVE SE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	7:00 AM	0	4	139	1	0	0	56	2	0	6	1	1	0	8	1		
7:15 AM	0	0	193	3	0	1	95	3	0	6	0	4	0	12	1	11	329	981
7:30 AM	0	1	98	2	0	2	133	10	0	11	0	2	0	1	0	4	264	886
7:45 AM	0	2	82	0	0	0	104	3	0	10	0	1	0	3	1	9	215	883
8:00 AM	0	4	90	1	0	0	66	1	0	2	0	0	0	1	0	8	173	917
8:15 AM	0	2	84	4	0	1	113	4	0	7	0	4	0	2	0	13	234	
8:30 AM	0	6	116	7	0	0	100	0	0	7	0	7	0	5	1	12	261	
8:45 AM	0	4	124	1	0	2	87	0	0	5	0	9	0	8	0	9	249	
Count Total	0	23	926	19	0	6	754	23	0	54	1	28	0	40	4	72	1,950	
Peak Hour	0	7	512	6	0	3	388	18	0	33	1	8	0	24	3	30	1,033	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	16	0	5	0	21	7:00 AM	0	0	0	1	1
7:15 AM	2	0	7	0	9	7:15 AM	0	0	1	0	1
7:30 AM	7	0	4	0	11	7:30 AM	0	1	0	1	2
7:45 AM	13	0	1	0	14	7:45 AM	0	0	0	0	0
8:00 AM	10	0	6	0	16	8:00 AM	0	0	0	0	0
8:15 AM	10	1	16	0	27	8:15 AM	0	0	0	1	1
8:30 AM	10	0	11	2	23	8:30 AM	0	0	0	1	1
8:45 AM	15	1	2	0	18	8:45 AM	0	0	0	3	3
Count Total	83	2	52	2	139	Count Total	0	1	1	7	9
Peak Hour	38	0	17	0	55	Peak Hour	0	1	1	2	4



Location: 8 DWY & SNOQUALMIE PKWY AM
 Date and Start Time: Thursday, February 8, 2018
 Peak Hour: 07:00 AM - 08:00 AM

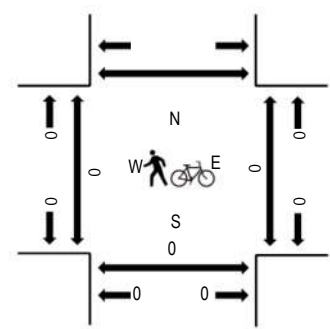
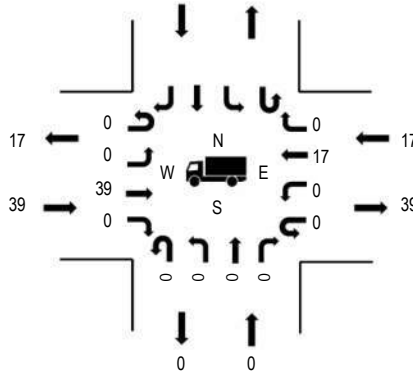
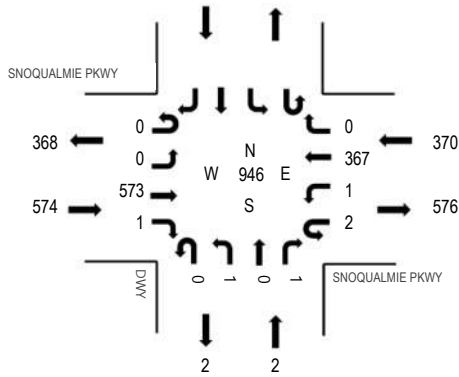
(303) 216-2439
 www.alltrafficdata.net

Peak Hour

All Vehicles

Heavy Vehicles

Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	6.8%	0.64
WB	4.6%	0.69
NB	0.0%	0.50
SB		
All	5.9%	0.78

Traffic Counts - All Vehicles

Interval Start Time	SNOQUALMIE PKWY Eastbound				SNOQUALMIE PKWY Westbound				DWY Northbound				Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	7:00 AM	0	0	131	1	1	0	46	0	0	0	0	1					
7:15 AM	0	0	225	0	0	0	78	0	0	0	0	0					303	914
7:30 AM	0	0	132	0	1	0	133	0	0	0	0	0					266	821
7:45 AM	0	0	85	0	0	1	110	0	0	1	0	0					197	751
8:00 AM	0	0	87	0	0	0	61	0	0	0	0	0					148	802
8:15 AM	0	0	100	0	0	0	110	0	0	0	0	0					210	
8:30 AM	2	0	106	3	0	0	83	0	0	1	0	1					196	
8:45 AM	0	0	159	0	0	0	88	0	0	0	0	1					248	
Count Total	2	0	1,025	4	2	1	709	0	0	2	0	3					1,748	
Peak Hour	0	0	573	1	2	1	367	0	0	1	0	1					946	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Total	Interval Start Time	Pedestrians/Bicycles on Crosswalk					Total
	EB	NB	WB	SB	EB			NB	WB	SB			
7:00 AM	18	0	6			24	7:00 AM	0	0	0			0
7:15 AM	3	0	7			10	7:15 AM	0	0	0			0
7:30 AM	6	0	3			9	7:30 AM	0	0	0			0
7:45 AM	12	0	1			13	7:45 AM	0	0	0			0
8:00 AM	9	0	6			15	8:00 AM	0	0	0			0
8:15 AM	8	0	14			22	8:15 AM	0	0	0			0
8:30 AM	20	1	12			33	8:30 AM	0	0	0			0
8:45 AM	10	0	4			14	8:45 AM	0	0	0			0
Count Total	86	1	53			140	Count Total	0	0	0			0
Peak Hour	39	0	17			56	Peak Hour	0	0	0			0



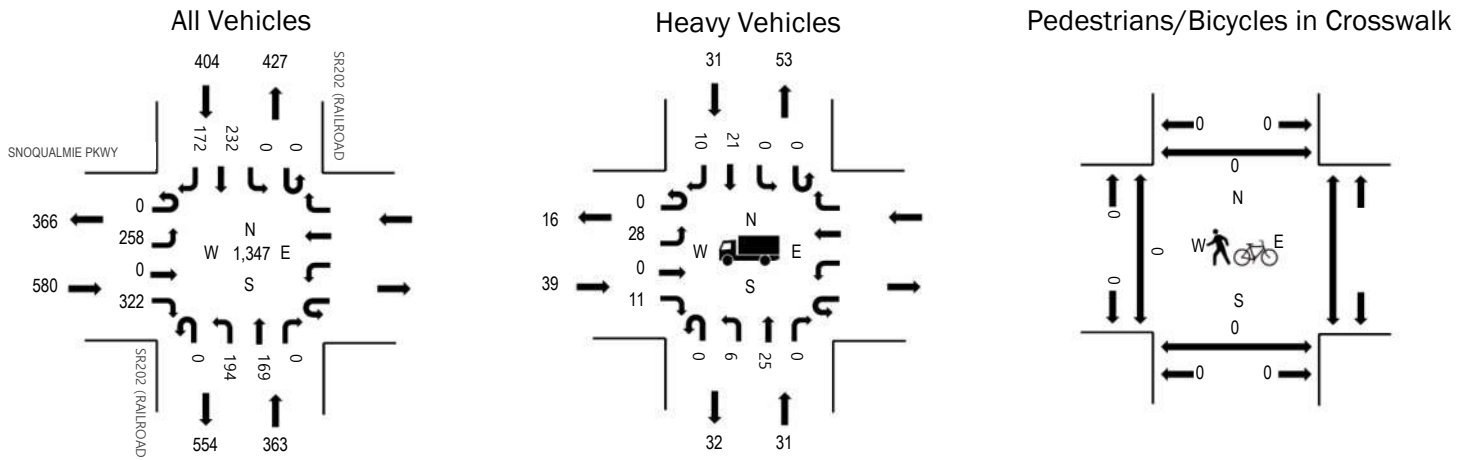
Location: 9 SR202 (RAILROAD AVE) & SNOQUALMIE PKWY AM

Date and Start Time: Thursday, February 8, 2018

Peak Hour: 07:00 AM - 08:00 AM

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Peak Hour



	HV%	PHF
EB	6.7%	0.62
WB		
NB	8.5%	0.71
SB	7.7%	0.86
All	7.5%	0.80

Traffic Counts - All Vehicles

Interval Start Time	SNOQUALMIE PKWY				SR202 (RAILROAD AVE)				SR202 (RAILROAD AVE)				Total	Rolling Hour				
	Eastbound				Westbound				Northbound						Southbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			U-Turn	Left	Thru	Right
7:00 AM	0	70	0	71	0	23	45	0	0	0	63	27	299	1,347				
7:15 AM	0	73	0	161	0	48	42	0	0	0	63	33	420	1,266				
7:30 AM	0	58	0	63	0	82	45	0	0	0	55	62	365	1,164				
7:45 AM	0	57	0	27	0	41	37	0	0	0	51	50	263	1,079				
8:00 AM	0	49	0	31	0	23	35	0	0	0	43	37	218	1,163				
8:15 AM	0	46	0	51	0	66	42	0	0	0	56	57	318					
8:30 AM	0	53	0	69	0	37	32	0	0	0	56	33	280					
8:45 AM	0	54	0	95	0	53	55	0	0	0	47	43	347					
Count Total	0	460	0	568	0	373	333	0	0	0	434	342	2,510					
Peak Hour	0	258	0	322	0	194	169	0	0	0	232	172	1,347					

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

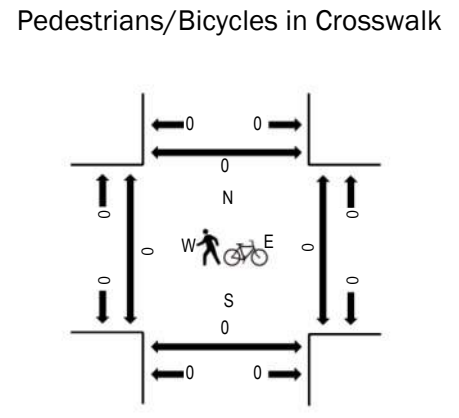
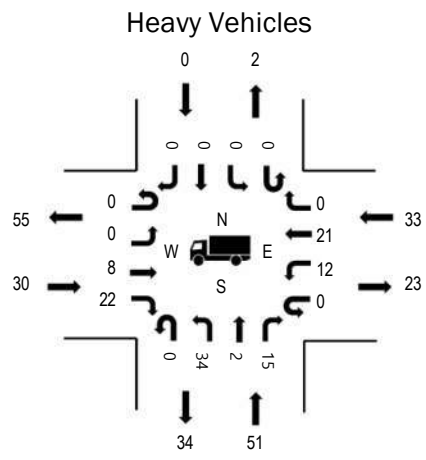
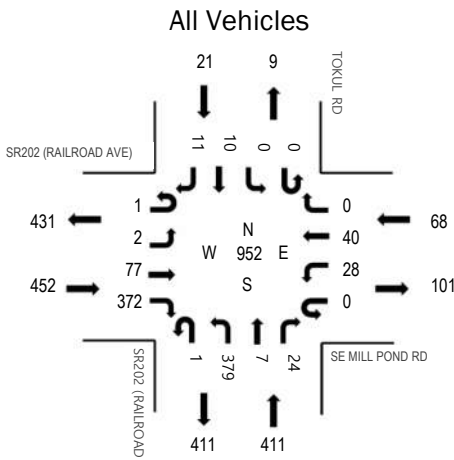
Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	19	9		7	35	7:00 AM	0	0		0	0
7:15 AM	3	11		11	25	7:15 AM	0	0		0	0
7:30 AM	5	6		8	19	7:30 AM	0	0		0	0
7:45 AM	12	5		5	22	7:45 AM	0	0		0	0
8:00 AM	9	11		9	29	8:00 AM	0	0		0	0
8:15 AM	8	12		9	29	8:15 AM	0	0		0	0
8:30 AM	17	7		17	41	8:30 AM	0	0		0	0
8:45 AM	13	10		14	37	8:45 AM	0	0		0	0
Count Total	86	71		80	237	Count Total	0	0		0	0
Peak Hour	39	31		31	101	Peak Hour	0	0		0	0



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Location: 10 SR202 (RAILROAD AVE) & SE MILL POND RD AM
Date and Start Time: Thursday, February 8, 2018
Peak Hour: 07:00 AM - 08:00 AM

Peak Hour



	HV%	PHF
EB	6.6%	0.84
WB	48.5%	0.81
NB	12.4%	0.83
SB	0.0%	0.66
All	12.0%	0.85

Traffic Counts - All Vehicles

Interval Start Time	SR202 (RAILROAD AVE) Eastbound				SE MILL POND RD Westbound				SR202 (RAILROAD AVE) Northbound				TOKUL RD Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	7:00 AM	1	0	14	73	0	7	6	0	0	95	0	4	0	0	4		
7:15 AM	0	0	40	94	0	10	11	0	1	116	1	6	0	0	1	1	281	929
7:30 AM	0	2	15	110	0	5	11	0	0	85	3	7	0	0	2	4	244	877
7:45 AM	0	0	8	95	0	6	12	0	0	83	3	7	0	0	3	2	219	830
8:00 AM	0	1	15	63	0	2	4	0	2	80	2	11	0	0	3	2	185	842
8:15 AM	1	1	16	105	0	6	9	0	1	70	6	6	0	0	7	1	229	
8:30 AM	0	1	11	83	0	9	10	0	0	67	2	9	0	0	2	3	197	
8:45 AM	0	2	12	82	0	7	16	0	0	100	1	9	0	0	2	0	231	
Count Total	2	7	131	705	0	52	79	0	4	696	18	59	0	0	24	17	1,794	
Peak Hour	1	2	77	372	0	28	40	0	1	379	7	24	0	0	10	11	952	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Total	Interval Start Time	Pedestrians/Bicycles on Crosswalk					Total
	EB	NB	WB	SB				EB	NB	WB	SB		
7:00 AM	5	17	5	0	27	27	7:00 AM	0	0	0	0	0	0
7:15 AM	10	12	9	0	31	31	7:15 AM	0	0	0	0	0	0
7:30 AM	10	10	9	0	29	29	7:30 AM	0	0	0	0	0	0
7:45 AM	5	12	10	0	27	27	7:45 AM	0	0	0	0	0	0
8:00 AM	18	16	4	1	39	39	8:00 AM	0	0	0	0	0	0
8:15 AM	17	7	7	2	33	33	8:15 AM	0	0	0	0	0	0
8:30 AM	11	14	16	0	41	41	8:30 AM	0	0	0	0	0	0
8:45 AM	21	14	13	0	48	48	8:45 AM	0	0	0	0	0	0
Count Total	97	102	73	3	275	275	Count Total	0	0	0	0	0	0
Peak Hour	30	51	33	0	114	114	Peak Hour	0	0	0	0	0	0



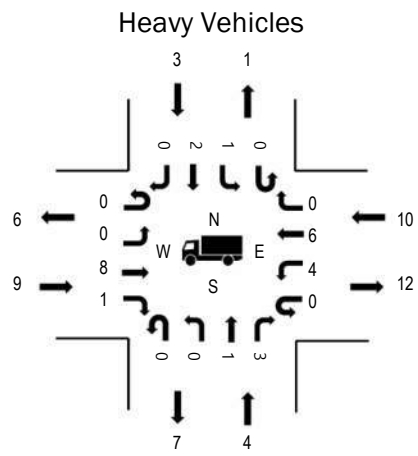
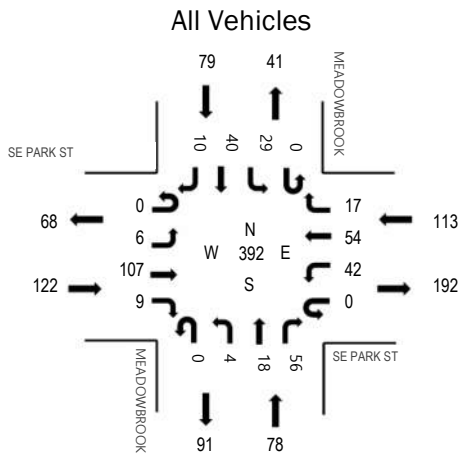
Location: 11 MEADOWBROOK WAY SE & SE PARK ST AM

Date and Start Time: Thursday, February 8, 2018

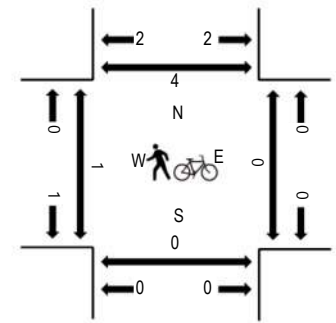
Peak Hour: 08:00 AM - 09:00 AM

(303) 216-2439
www.alltrafficdata.net

Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	7.4%	0.55
WB	8.8%	0.37
NB	5.1%	0.49
SB	3.8%	0.66
All	6.6%	0.49

Traffic Counts - All Vehicles

Interval Start Time	SE PARK ST Eastbound				SE PARK ST Westbound				MEADOWBROOK WAY SE Northbound				MEADOWBROOK WAY SE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	7:00 AM	0	1	5	8	0	6	5	3	0	2	5	2	0	2	22		
7:15 AM	0	4	7	36	0	20	5	2	0	2	3	8	0	6	45	13	151	354
7:30 AM	0	3	10	23	0	13	4	3	0	3	2	6	0	4	21	11	103	259
7:45 AM	0	5	3	3	0	2	4	3	0	2	7	6	0	3	9	5	52	243
8:00 AM	0	0	9	3	0	8	2	3	0	2	3	6	0	2	7	3	48	392
8:15 AM	0	1	7	2	0	5	10	2	0	0	7	8	0	2	8	4	56	
8:30 AM	0	5	37	3	0	3	3	1	0	0	2	10	0	9	13	1	87	
8:45 AM	0	0	54	1	0	26	39	11	0	2	6	32	0	16	12	2	201	
Count Total	0	19	132	79	0	83	72	28	0	13	35	78	0	44	137	46	766	
Peak Hour	0	6	107	9	0	42	54	17	0	4	18	56	0	29	40	10	392	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	1	1	2	0	4	7:00 AM	0	0	0	1	1
7:15 AM	2	1	0	2	5	7:15 AM	0	0	0	0	0
7:30 AM	2	0	0	0	2	7:30 AM	0	0	0	0	0
7:45 AM	1	2	1	2	6	7:45 AM	0	0	0	0	0
8:00 AM	0	2	2	1	5	8:00 AM	0	0	0	2	2
8:15 AM	1	1	0	0	2	8:15 AM	0	0	0	1	1
8:30 AM	6	0	0	2	8	8:30 AM	0	0	0	0	0
8:45 AM	2	1	8	0	11	8:45 AM	1	0	0	1	2
Count Total	15	8	13	7	43	Count Total	1	0	0	5	6
Peak Hour	9	4	10	3	26	Peak Hour	1	0	0	4	5



Location: 12 MEADOWBROOK WAY SE & SE REINIG RD AM

Date and Start Time: Thursday, February 8, 2018

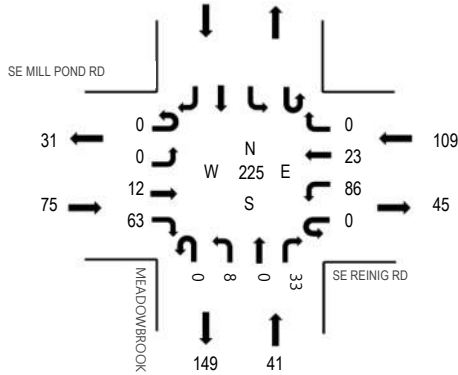
Peak Hour: 07:00 AM - 08:00 AM

(303) 216-2439

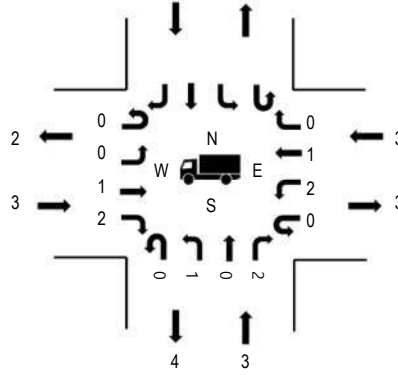
www.alltrafficdata.net

Peak Hour

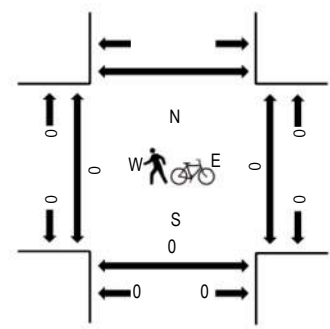
All Vehicles



Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	4.0%	0.46
WB	2.8%	0.85
NB	7.3%	0.73
SB		
All	4.0%	0.69

Traffic Counts - All Vehicles

Interval Start Time	SE MILL POND RD Eastbound				SE REINIG RD Westbound				MEADOWBROOK WAY WE Northbound				Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	7:00 AM	0	0	5	10	0	21	5	0	0	2	0	7	0	0	0		
7:15 AM	0	0	1	40	0	26	6	0	0	2	0	7	0	0	0	0	82	197
7:30 AM	0	0	4	10	0	23	5	0	0	2	0	7	0	0	0	0	51	138
7:45 AM	0	0	2	3	0	16	7	0	0	2	0	12	0	0	0	0	42	122
8:00 AM	0	0	1	2	0	12	2	0	0	0	0	5	0	0	0	0	22	133
8:15 AM	0	0	1	2	0	8	2	0	0	3	0	7	0	0	0	0	23	
8:30 AM	0	0	1	8	0	17	2	0	0	1	0	6	0	0	0	0	35	
8:45 AM	0	0	3	2	0	26	6	0	0	7	0	9	0	0	0	0	53	
Count Total	0	0	18	77	0	149	35	0	0	19	0	60	0	0	0	0	358	
Peak Hour	0	0	12	63	0	86	23	0	0	8	0	33	0	0	0	0	225	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

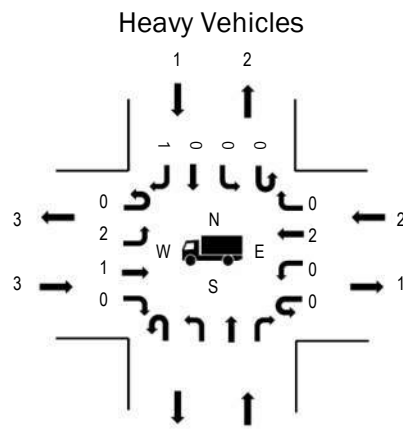
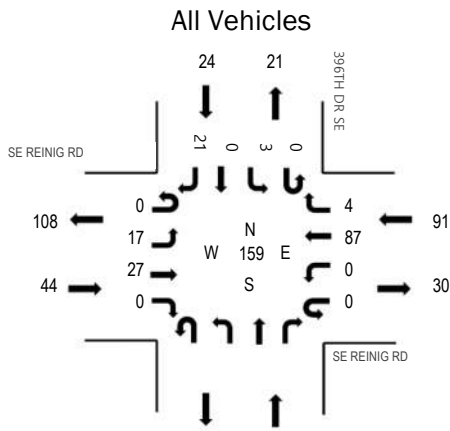
Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	1	2	0		3	7:00 AM	0	0	0		0
7:15 AM	1	0	1		2	7:15 AM	0	0	0		0
7:30 AM	0	0	1		1	7:30 AM	0	0	0		0
7:45 AM	1	1	1		3	7:45 AM	0	0	0		0
8:00 AM	1	1	0		2	8:00 AM	0	0	0		0
8:15 AM	1	0	0		1	8:15 AM	0	0	0		0
8:30 AM	0	0	2		2	8:30 AM	0	0	0		0
8:45 AM	0	0	1		1	8:45 AM	0	0	0		0
Count Total	5	4	6		15	Count Total	0	0	0		0
Peak Hour	3	3	3		9	Peak Hour	0	0	0		0



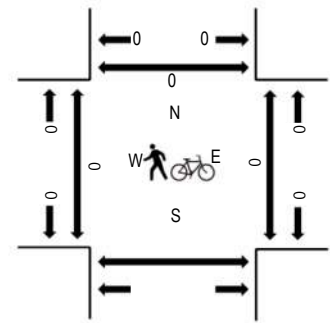
Location: 13 396TH DR SE & SE REINIG RD AM
 Date and Start Time: Thursday, February 8, 2018
 Peak Hour: 07:00 AM - 08:00 AM

(303) 216-2439
 www.alltrafficdata.net

Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	6.8%	0.85
WB	2.2%	0.91
NB		
SB	4.2%	0.67
All	3.8%	0.95

Traffic Counts - All Vehicles

Interval Start Time	SE REINIG RD Eastbound				SE REINIG RD Westbound				Northbound				396TH DR SE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	5	7	0	0	0	22	1					0	1	0	6	42	159
7:15 AM	0	2	5	0	0	0	20	1					0	0	0	9	37	139
7:30 AM	0	5	7	0	0	0	24	1					0	0	0	3	40	122
7:45 AM	0	5	8	0	0	0	21	1					0	2	0	3	40	111
8:00 AM	0	3	4	0	0	0	11	1					0	1	0	2	22	113
8:15 AM	0	2	6	0	0	0	8	0					0	2	0	2	20	
8:30 AM	0	3	4	0	0	0	15	1					0	1	0	5	29	
8:45 AM	0	4	7	0	0	0	22	0					0	1	0	8	42	
Count Total	0	29	48	0	0	0	143	6					0	8	0	38	272	
Peak Hour	0	17	27	0	0	0	87	4					0	3	0	21	159	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	2		0	0	2	7:00 AM	0		0	0	0
7:15 AM	0		0	1	1	7:15 AM	0		0	0	0
7:30 AM	0		1	0	1	7:30 AM	0		0	0	0
7:45 AM	1		1	0	2	7:45 AM	0		0	0	0
8:00 AM	1		0	0	1	8:00 AM	0		0	0	0
8:15 AM	1		0	1	2	8:15 AM	0		0	0	0
8:30 AM	0		1	1	2	8:30 AM	0		0	0	0
8:45 AM	0		1	0	1	8:45 AM	0		0	0	0
Count Total	5		4	3	12	Count Total	0		0	0	0
Peak Hour	3		2	1	6	Peak Hour	0		0	0	0



Location: 1 SR 202 (RAILROAD AVE) & MEADOWBROOK WAY S3 AM

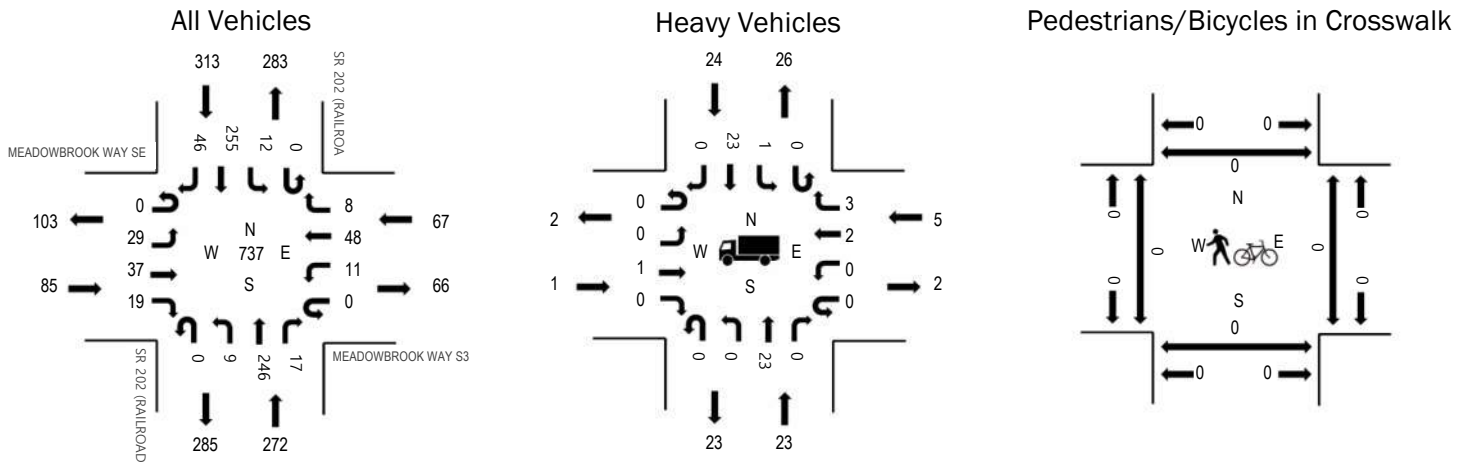
Date and Start Time: Tuesday, July 17, 2018

Peak Hour: 08:00 AM - 09:00 AM

(303) 216-2439

www.alltrafficdata.net

Peak Hour



	HV%	PHF
EB	1.2%	0.79
WB	7.5%	0.80
NB	8.5%	0.82
SB	7.7%	0.66
All	7.2%	0.74

Traffic Counts - All Vehicles

Interval Start Time	MEADOWBROOK WAY SE				MEADOWBROOK WAY S3				SR 202 (RAILROAD AVE)				SR 202 (RAILROAD AVE)				Total	Rolling Hour
	Eastbound				Westbound				Northbound				Southbound					
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	2	4	0	0	2	21	3	0	4	47	0	0	0	28	19	130	598
7:15 AM	0	9	14	3	0	3	16	0	0	2	51	2	0	1	28	20	149	621
7:30 AM	0	8	6	4	0	3	16	4	0	2	45	4	0	0	45	21	158	633
7:45 AM	0	1	11	4	0	2	10	2	0	3	59	4	0	3	45	17	161	649
8:00 AM	0	8	10	1	0	1	10	1	0	3	50	5	0	2	51	11	153	737
8:15 AM	0	5	9	1	0	3	12	3	0	2	58	3	0	3	50	12	161	
8:30 AM	0	9	12	3	0	3	12	1	0	0	61	7	0	2	54	10	174	
8:45 AM	0	7	6	14	0	4	14	3	0	4	77	2	0	5	100	13	249	
Count Total	0	49	72	30	0	21	111	17	0	20	448	27	0	16	401	123	1,335	
Peak Hour	0	29	37	19	0	11	48	8	0	9	246	17	0	12	255	46	737	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Total	Interval Start Time	Pedestrians/Bicycles on Crosswalk					Total
	EB	NB	WB	SB				EB	NB	WB	SB		
7:00 AM	0	2	1	5	8	8	7:00 AM	0	1	1	0	2	
7:15 AM	2	10	0	4	16	16	7:15 AM	0	0	0	0	0	
7:30 AM	0	7	3	6	16	16	7:30 AM	0	0	0	0	0	
7:45 AM	0	7	2	3	12	12	7:45 AM	0	0	1	0	1	
8:00 AM	0	8	1	4	13	13	8:00 AM	0	0	0	0	0	
8:15 AM	1	8	3	6	18	18	8:15 AM	0	0	0	0	0	
8:30 AM	0	3	0	6	9	9	8:30 AM	0	0	0	0	0	
8:45 AM	0	4	1	8	13	13	8:45 AM	0	0	0	0	0	
Count Total	3	49	11	42	105	105	Count Total	0	1	2	0	3	
Peak Hour	1	23	5	24	53	53	Peak Hour	0	0	0	0	0	



Location: 1 SE SNOQUALMIE PKWY & SE 96TH ST AM

Date: Tuesday, January 28, 2020

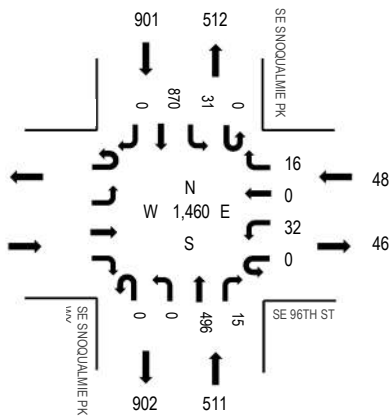
Peak Hour: 07:15 AM - 08:15 AM

(303) 216-2439

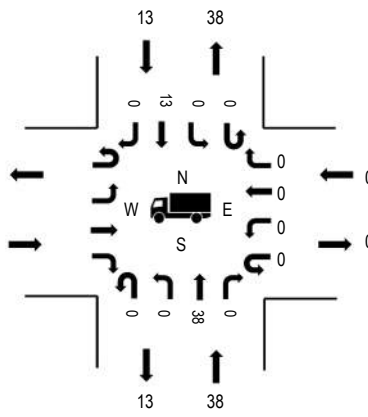
www.alltrafficdata.net

Peak Hour

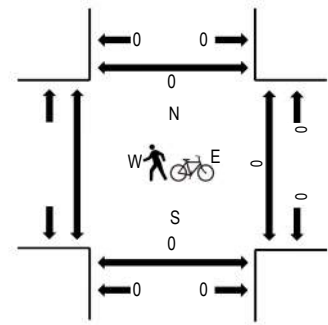
Motorized Vehicles



Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB		
WB	0.0%	0.92
NB	7.4%	0.83
SB	1.4%	0.89
All	3.5%	0.98

Traffic Counts - Motorized Vehicles

Interval Start Time	Eastbound				SE 96TH ST Westbound				SE SNOQUALMIE PKWY Northbound				SE SNOQUALMIE PKWY Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM					0	11	0	4	0	0	91	2	2	3	244	0	357	1,455
7:15 AM					0	11	0	1	0	0	117	0	0	5	229	0	363	1,460
7:30 AM					0	9	0	4	0	0	94	3	0	10	243	0	363	1,457
7:45 AM					0	7	0	5	0	0	140	4	0	6	210	0	372	1,429
8:00 AM					0	5	0	6	0	0	145	8	0	10	188	0	362	1,448
8:15 AM					0	8	0	10	0	0	153	7	0	17	165	0	360	
8:30 AM					0	11	0	14	0	0	120	10	0	7	173	0	335	
8:45 AM					0	7	0	12	0	0	135	6	0	16	215	0	391	
Count Total					0	69	0	56	0	0	995	40	2	74	1,667	0	2,903	
Peak Hour					0	32	0	16	0	0	496	15	0	31	870	0	1,460	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM		6	0	8	14	7:00 AM		0	0	0	0
7:15 AM		6	0	4	10	7:15 AM		0	0	0	0
7:30 AM		10	0	2	12	7:30 AM		0	0	0	0
7:45 AM		12	0	4	16	7:45 AM		0	0	0	0
8:00 AM		10	0	3	13	8:00 AM		0	0	0	0
8:15 AM		18	0	5	23	8:15 AM		0	0	0	0
8:30 AM		14	1	15	30	8:30 AM		0	0	0	0
8:45 AM		11	0	9	20	8:45 AM		0	0	0	0
Count Total		87	1	50	138	Count Total		0	0	0	0
Peak Hour		38	0	13	51	Peak Hour		0	0	0	0



Location: 2 SE SNOQUALMIE PKWY & SE SWENSON DR AM

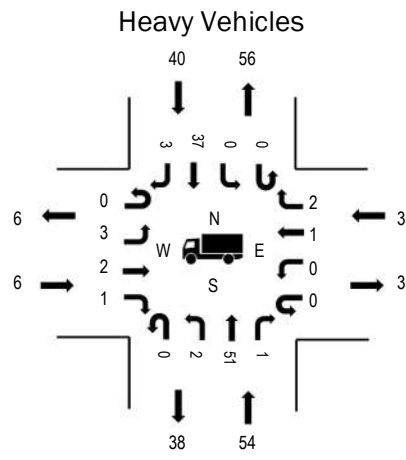
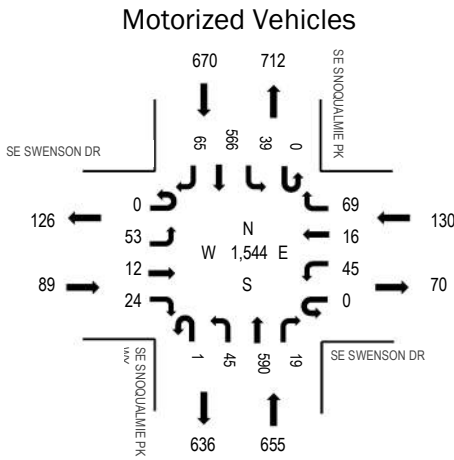
Date: Tuesday, January 28, 2020

Peak Hour: 08:00 AM - 09:00 AM

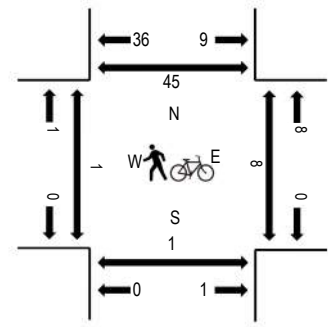
(303) 216-2439

www.alltrafficdata.net

Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	6.7%	0.65
WB	2.3%	0.88
NB	8.2%	0.98
SB	6.0%	0.86
All	6.7%	0.89

Traffic Counts - Motorized Vehicles

Interval Start Time	SE SWENSON DR Eastbound				SE SWENSON DR Westbound				SE SNOQUALMIE PKWY Northbound				SE SNOQUALMIE PKWY Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	8	0	6	0	8	2	16	0	3	104	3	0	4	186	7	347	1,448
7:15 AM	0	18	0	9	0	8	0	21	0	5	128	1	0	3	158	11	362	1,474
7:30 AM	0	7	2	6	0	12	0	16	0	1	117	0	0	3	186	13	363	1,473
7:45 AM	0	7	1	5	0	6	0	17	0	9	129	1	0	10	169	22	376	1,488
8:00 AM	0	9	2	3	0	10	3	14	0	8	153	6	0	8	142	15	373	1,544
8:15 AM	0	16	1	3	0	11	2	19	0	9	152	2	0	5	124	17	361	
8:30 AM	0	10	7	4	0	13	7	14	1	13	140	4	0	12	138	15	378	
8:45 AM	0	18	2	14	0	11	4	22	0	15	145	7	0	14	162	18	432	
Count Total	0	93	15	50	0	79	18	139	1	63	1,068	24	0	59	1,265	118	2,992	
Peak Hour	0	53	12	24	0	45	16	69	1	45	590	19	0	39	566	65	1,544	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Total	Interval Start Time	Pedestrians/Bicycles on Crosswalk					Total
	EB	NB	WB	SB	U-Turn			EB	NB	WB	SB	U-Turn	
7:00 AM	2	8	3	8	21	21	7:00 AM	0	0	0	0	0	0
7:15 AM	1	4	1	4	10	10	7:15 AM	0	0	0	0	0	0
7:30 AM	0	14	0	4	18	18	7:30 AM	0	0	0	0	0	0
7:45 AM	0	11	0	9	20	20	7:45 AM	0	1	0	0	0	1
8:00 AM	0	11	1	3	15	15	8:00 AM	0	0	0	1	1	1
8:15 AM	0	15	0	7	22	22	8:15 AM	0	0	0	0	0	0
8:30 AM	6	14	1	17	38	38	8:30 AM	0	0	0	0	0	0
8:45 AM	0	14	1	13	28	28	8:45 AM	1	1	8	44	54	54
Count Total	9	91	7	65	172	172	Count Total	1	2	8	45	56	56
Peak Hour	6	54	3	40	103	103	Peak Hour	1	1	8	45	55	55



Location: 3 FAIRWAY AVE SE & SE SNOQUALMIE PKWY AM

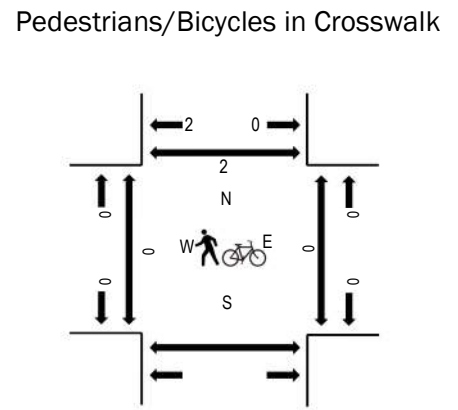
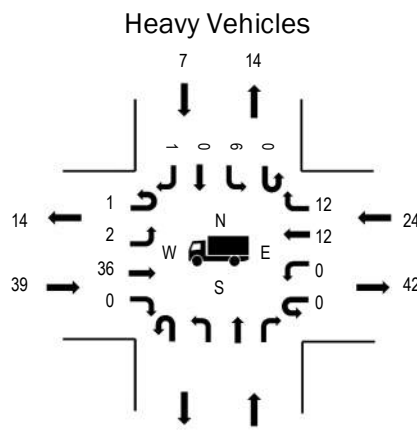
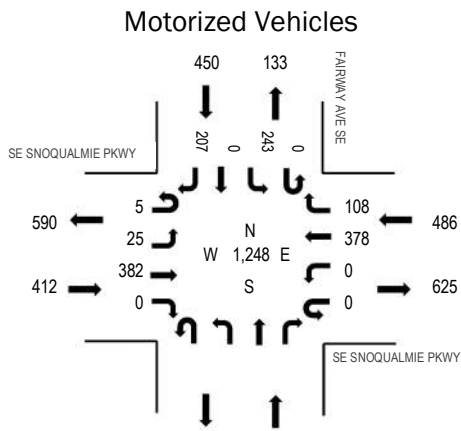
Date: Tuesday, January 28, 2020

Peak Hour: 07:00 AM - 08:00 AM

(303) 216-2439

www.alltrafficdata.net

Peak Hour



	HV%	PHF
EB	9.5%	0.79
WB	4.9%	0.84
NB		
SB	1.6%	0.79
All	5.2%	0.90

Traffic Counts - Motorized Vehicles

Interval Start Time	SE SNOQUALMIE PKWY Eastbound				SE SNOQUALMIE PKWY Westbound				Northbound				FAIRWAY AVE SE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	7:00 AM	0	5	91	0	0	0	90	22					0	67	0		
7:15 AM	0	6	124	0	0	0	76	27					0	90	0	53	376	1,247
7:30 AM	4	8	96	0	0	0	110	34					0	65	0	53	370	1,094
7:45 AM	1	6	71	0	0	0	102	25					0	21	0	49	275	977
8:00 AM	0	9	70	0	0	0	62	14					0	28	0	43	226	1,003
8:15 AM	0	8	74	0	0	0	82	10					0	12	0	37	223	
8:30 AM	1	7	75	0	0	0	93	18					0	19	0	40	253	
8:45 AM	0	10	90	0	0	0	116	15					0	25	0	45	301	
Count Total	6	59	691	0	0	0	731	165					0	327	0	372	2,351	
Peak Hour	5	25	382	0	0	0	378	108					0	243	0	207	1,348	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	8		7	2	17	7:00 AM	0		0	0	0
7:15 AM	9		4	2	15	7:15 AM	0		0	0	0
7:30 AM	14		8	2	24	7:30 AM	0		0	0	0
7:45 AM	8		5	1	14	7:45 AM	0		0	2	2
8:00 AM	10		1	0	11	8:00 AM	0		0	0	0
8:15 AM	9		8	0	17	8:15 AM	0		0	0	0
8:30 AM	19		18	1	38	8:30 AM	0		0	0	0
8:45 AM	11		10	2	23	8:45 AM	0		0	0	0
Count Total	88		61	10	159	Count Total	0		0	2	2
Peak Hour	39		24	7	70	Peak Hour	0		0	2	2



Location: 4 ORCHARD AVE SE & SE SNOQUALMIE PKWY AM

Date: Tuesday, January 28, 2020

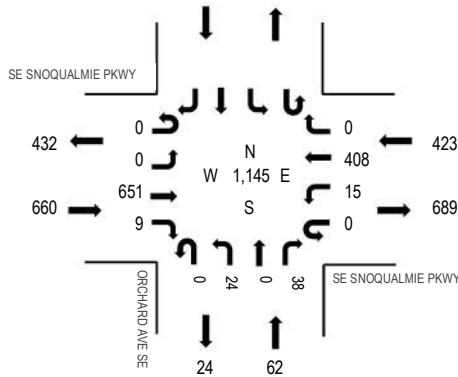
Peak Hour: 07:00 AM - 08:00 AM

(303) 216-2439

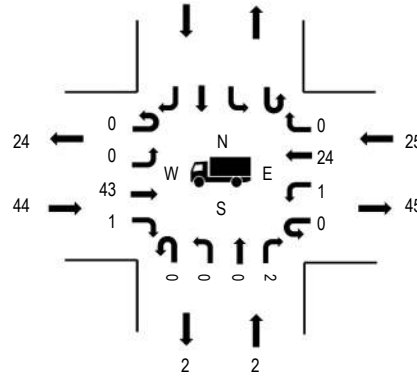
www.alltrafficdata.net

Peak Hour

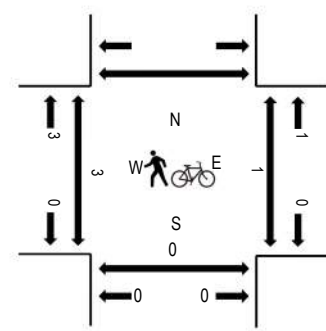
Motorized Vehicles



Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	6.7%	0.73
WB	5.9%	0.87
NB	3.2%	0.74
SB		
All	6.2%	0.87

Traffic Counts - Motorized Vehicles

Interval Start Time	SE SNOQUALMIE PKWY Eastbound				SE SNOQUALMIE PKWY Westbound				ORCHARD AVE SE Northbound				Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	7:00 AM	0	0	158	3	0	4	92	0	0	8	0	13					
7:15 AM	0	0	223	2	0	3	87	0	0	4	0	11					330	1,031
7:30 AM	0	0	180	1	0	3	119	0	0	5	0	7					315	881
7:45 AM	0	0	90	3	0	5	110	0	0	7	0	7					222	765
8:00 AM	0	0	96	0	0	2	61	0	0	3	0	2					164	792
8:15 AM	0	0	91	2	0	0	80	0	0	6	0	1					180	
8:30 AM	0	0	93	3	0	1	94	0	0	5	0	3					199	
8:45 AM	0	0	117	4	0	1	106	0	0	12	0	9					249	
Count Total	0	0	1,048	18	0	19	749	0	0	50	0	53					1,937	
Peak Hour	0	0	651	9	0	15	408	0	0	24	0	38					1,145	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	8	1	10		19	7:00 AM	3	0	1		4
7:15 AM	12	1	2		15	7:15 AM	0	0	0		0
7:30 AM	13	0	9		22	7:30 AM	0	0	0		0
7:45 AM	11	0	4		15	7:45 AM	0	0	0		0
8:00 AM	8	0	1		9	8:00 AM	0	0	0		0
8:15 AM	9	0	8		17	8:15 AM	0	0	0		0
8:30 AM	18	0	17		35	8:30 AM	0	0	0		0
8:45 AM	13	1	12		26	8:45 AM	0	0	0		0
Count Total	92	3	63		158	Count Total	3	0	1		4
Peak Hour	44	2	25		71	Peak Hour	3	0	1		4



Location: 5 ALLMAN AVE SE & SE SNOQUALMIE PKWY AM

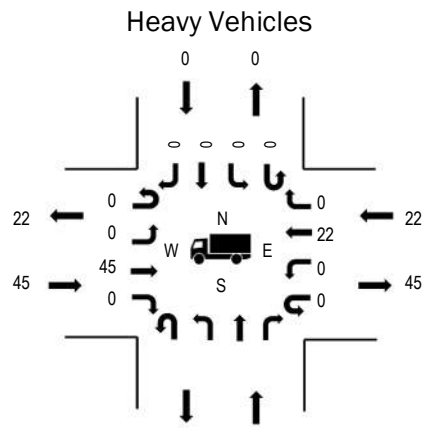
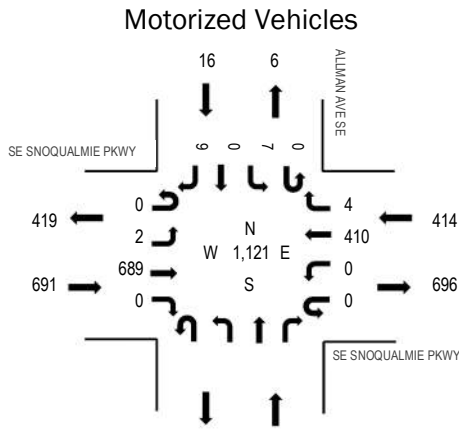
Date: Tuesday, January 28, 2020

Peak Hour: 07:00 AM - 08:00 AM

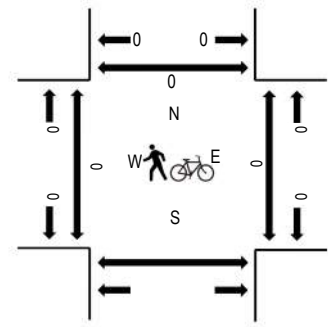
(303) 216-2439

www.alltrafficdata.net

Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	6.5%	0.76
WB	5.3%	0.89
NB		
SB	0.0%	0.67
All	6.0%	0.87

Traffic Counts - Motorized Vehicles

Interval Start Time	SE SNOQUALMIE PKWY Eastbound				SE SNOQUALMIE PKWY Westbound				Northbound				ALLMAN AVE SE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	7:00 AM	0	0	170	0	0	0	92	0	0	2	0	2	0	2	0		
7:15 AM	0	0	227	0	0	0	91	1	0	3	0	1	0	3	0	1	323	1,021
7:30 AM	0	2	197	0	0	0	113	1	0	2	0	4	0	2	0	4	319	884
7:45 AM	0	0	95	0	0	0	114	2	0	0	0	2	0	0	0	2	213	738
8:00 AM	0	0	101	0	0	0	63	0	0	1	0	1	0	1	0	1	166	765
8:15 AM	0	0	94	0	0	0	89	1	0	1	0	1	0	1	0	1	186	
8:30 AM	0	1	88	0	0	0	83	0	0	1	0	0	0	1	0	0	173	
8:45 AM	0	1	125	0	0	0	108	1	0	4	0	1	0	4	0	1	240	
Count Total	0	4	1,097	0	0	0	753	6	0	14	0	12	0	14	0	12	1,886	
Peak Hour	0	2	689	0	0	0	410	4	0	7	0	9	0	7	0	9	1,121	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	7		8	0	15	7:00 AM	0		0	0	0
7:15 AM	16		2	0	18	7:15 AM	0		0	0	0
7:30 AM	13		8	0	21	7:30 AM	0		0	0	0
7:45 AM	9		4	0	13	7:45 AM	0		0	0	0
8:00 AM	11		1	0	12	8:00 AM	0		0	0	0
8:15 AM	10		12	0	22	8:15 AM	0		0	0	0
8:30 AM	17		14	0	31	8:30 AM	0		0	0	0
8:45 AM	14		12	1	27	8:45 AM	0		0	0	0
Count Total	97		61	1	159	Count Total	0		0	0	0
Peak Hour	45		22	0	67	Peak Hour	0		0	0	0



Location: 6 BETTER WAY SE & SNOQUALMIE PKWY AM

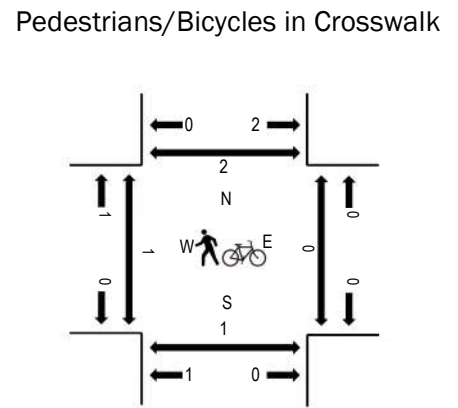
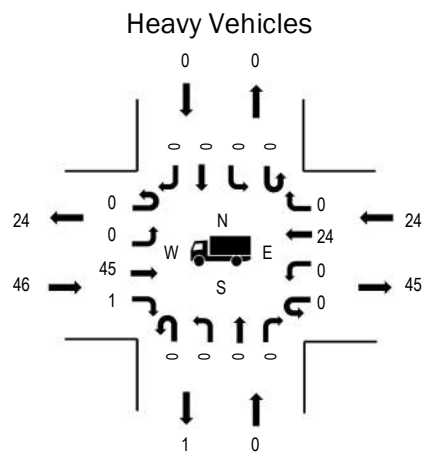
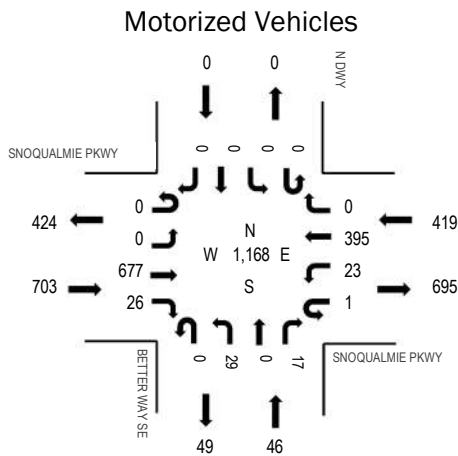
Date: Tuesday, January 28, 2020

Peak Hour: 07:00 AM - 08:00 AM

(303) 216-2439

www.alltrafficdata.net

Peak Hour



	HV%	PHF
EB	6.5%	0.75
WB	5.7%	0.91
NB	0.0%	0.77
SB	0.0%	0.00
All	6.0%	0.85

Traffic Counts - Motorized Vehicles

Interval Start Time	SNOQUALMIE PKWY Eastbound				SNOQUALMIE PKWY Westbound				BETTER WAY SE Northbound				N DWY Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	7:00 AM	0	0	173	4	1	6	84	0	0	12	0	3	0	0	0		
7:15 AM	0	0	224	9	0	4	95	0	0	3	0	7	0	0	0	0	342	1,065
7:30 AM	0	0	193	5	0	5	110	0	0	8	0	5	0	0	0	0	326	906
7:45 AM	0	0	87	8	0	8	106	0	0	6	0	2	0	0	0	0	217	760
8:00 AM	0	0	92	11	1	2	64	0	0	6	0	4	0	0	0	0	180	787
8:15 AM	0	0	86	7	0	5	70	0	0	13	0	2	0	0	0	0	183	
8:30 AM	0	0	81	7	0	4	69	0	0	14	0	4	0	1	0	0	180	
8:45 AM	0	0	121	6	0	6	103	0	0	4	0	3	0	0	1	0	244	
Count Total	0	0	1,057	57	2	40	701	0	0	66	0	30	0	1	1	0	1,955	
Peak Hour	0	0	677	26	1	23	395	0	0	29	0	17	0	0	0	0	1,168	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	8	0	10	0	18	7:00 AM	0	0	0	0	0
7:15 AM	16	0	2	0	18	7:15 AM	0	1	0	1	2
7:30 AM	13	0	8	0	21	7:30 AM	0	0	0	0	0
7:45 AM	9	0	4	0	13	7:45 AM	1	0	0	1	2
8:00 AM	8	0	1	0	9	8:00 AM	0	0	0	0	0
8:15 AM	9	0	13	0	22	8:15 AM	0	0	0	0	0
8:30 AM	15	1	10	1	27	8:30 AM	0	0	0	0	0
8:45 AM	16	1	13	1	31	8:45 AM	0	0	0	0	0
Count Total	94	2	61	2	159	Count Total	1	1	0	2	4
Peak Hour	46	0	24	0	70	Peak Hour	1	1	0	2	4



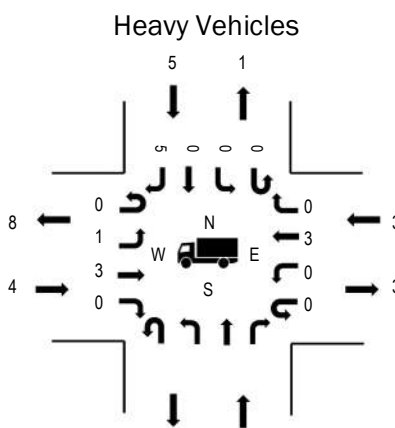
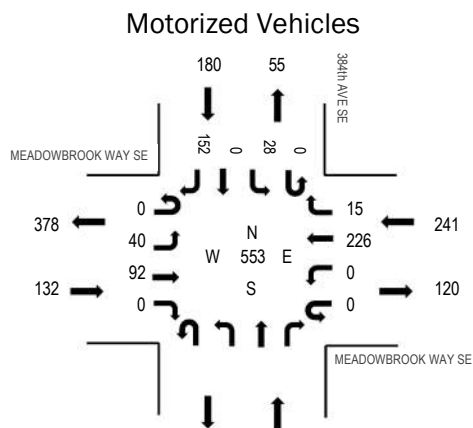
Location: 7 384th AVE SE & MEADOWBROOK WAY SE AM

Date: Tuesday, January 28, 2020

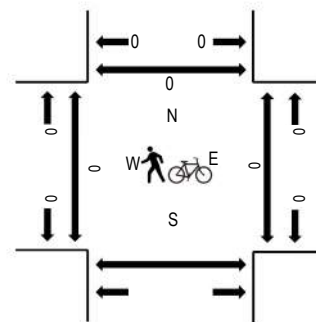
Peak Hour: 07:00 AM - 08:00 AM

(303) 216-2439
www.alltrafficdata.net

Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	3.0%	0.77
WB	1.2%	0.68
NB		
SB	2.8%	0.82
All	2.2%	0.82

Traffic Counts - Motorized Vehicles

Interval Start Time	MEADOWBROOK WAY SE Eastbound				MEADOWBROOK WAY SE Westbound				Northbound				384th AVE SE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	7:00 AM	0	11	19	0	0	0	46	2	0	11	0	44	133	553			
7:15 AM	0	5	26	0	0	0	82	7	0	11	0	38	169	511				
7:30 AM	0	16	27	0	0	0	56	5	0	5	0	36	145	450				
7:45 AM	0	8	20	0	0	0	42	1	0	1	0	34	106	408				
8:00 AM	0	14	20	0	0	0	31	0	0	1	0	25	91	386				
8:15 AM	0	21	31	0	0	0	35	0	0	1	0	20	108					
8:30 AM	0	13	25	0	0	0	32	0	0	2	0	31	103					
8:45 AM	0	7	27	0	0	0	25	2	0	3	0	20	84					
Count Total	0	95	195	0	0	0	349	17	0	35	0	248	939					
Peak Hour	0	40	92	0	0	0	226	15	0	28	0	152	553					

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	1		1	2	4	7:00 AM	0		0	0	0
7:15 AM	1		0	2	3	7:15 AM	0		0	0	0
7:30 AM	1		0	1	2	7:30 AM	0		0	0	0
7:45 AM	1		2	0	3	7:45 AM	0		0	0	0
8:00 AM	3		4	4	11	8:00 AM	0		0	0	0
8:15 AM	3		4	3	10	8:15 AM	0		0	0	0
8:30 AM	7		0	3	10	8:30 AM	0		0	0	0
8:45 AM	2		1	0	3	8:45 AM	0		0	0	0
Count Total	19		12	15	46	Count Total	0		0	0	0
Peak Hour	4		3	5	12	Peak Hour	0		0	0	0



Location: 8 SE NORTH BEND WAY & MEADOWBROOK WAY SE AM

Date: Tuesday, January 28, 2020

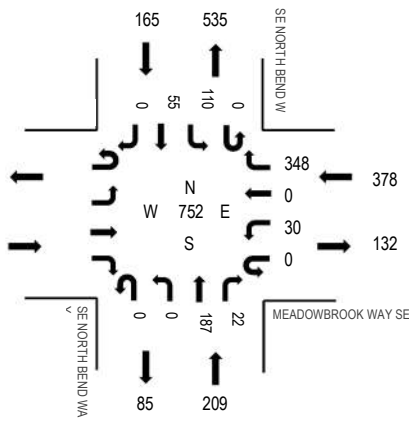
Peak Hour: 07:00 AM - 08:00 AM

(303) 216-2439

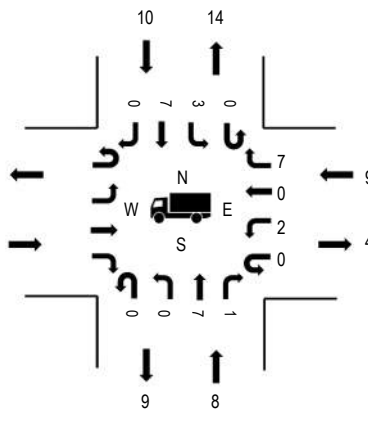
www.alltrafficdata.net

Peak Hour

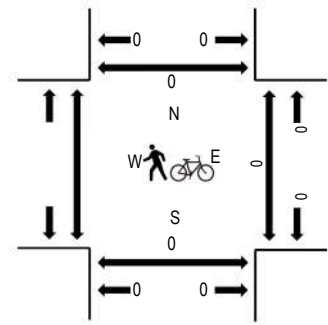
Motorized Vehicles



Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB		
WB	2.4%	0.79
NB	3.8%	0.80
SB	6.1%	0.81
All	3.6%	0.92

Traffic Counts - Motorized Vehicles

Interval Start Time	Eastbound				MEADOWBROOK WAY SE Westbound				SE NORTH BEND WAY Northbound				SE NORTH BEND WAY Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM					0	12	0	78	0	0	60	5	0	26	9	0	190	752
7:15 AM					0	9	0	111	0	0	42	1	0	29	13	0	205	687
7:30 AM					0	4	0	87	0	0	44	8	0	35	16	0	194	630
7:45 AM					0	5	0	72	0	0	41	8	0	20	17	0	163	594
8:00 AM					0	7	0	47	0	0	29	4	0	30	8	0	125	555
8:15 AM					0	3	0	46	0	0	33	6	0	43	17	0	148	
8:30 AM					0	11	0	54	0	0	33	6	0	32	22	0	158	
8:45 AM					0	9	0	36	0	0	29	8	0	27	15	0	124	
Count Total					0	60	0	531	0	0	311	46	0	242	117	0	1,307	
Peak Hour					0	30	0	348	0	0	187	22	0	110	55	0	752	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

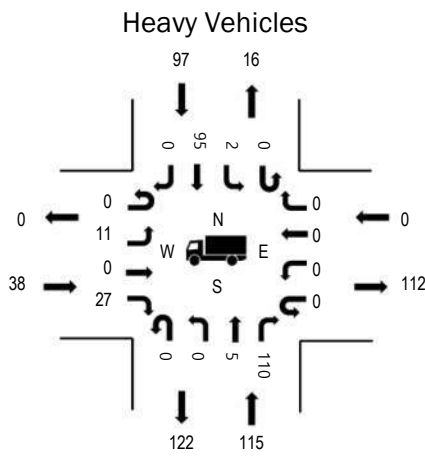
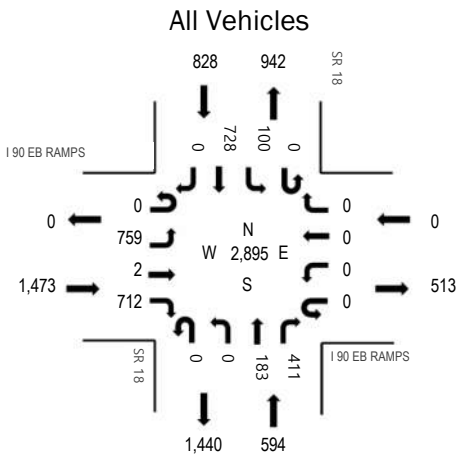
Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM		3	3	1	7	7:00 AM	0	0	0	0	0
7:15 AM		1	2	5	8	7:15 AM	0	0	0	0	0
7:30 AM		2	2	2	6	7:30 AM	0	0	0	0	0
7:45 AM		2	2	2	6	7:45 AM	0	0	0	0	0
8:00 AM		0	6	3	9	8:00 AM	0	0	0	0	0
8:15 AM		1	6	6	13	8:15 AM	0	0	0	0	0
8:30 AM		6	2	8	16	8:30 AM	0	0	0	0	0
8:45 AM		1	1	4	6	8:45 AM	0	0	0	0	0
Count Total		16	24	31	71	Count Total	0	0	0	0	0
Peak Hour		8	9	10	27	Peak Hour	0	0	0	0	0



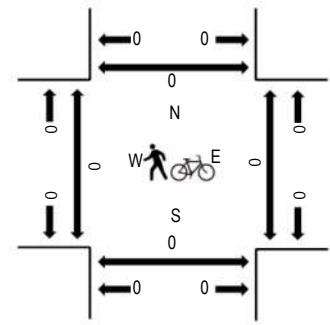
(303) 216-2439
www.alltrafficdata.net

Location: 1 SR 18 & I 90 EB RAMPS PM
Date and Start Time: Thursday, February 8, 2018
Peak Hour: 04:00 PM - 05:00 PM

Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	2.6%	0.95
WB	0.0%	0.00
NB	19.4%	0.87
SB	11.7%	0.95
All	8.6%	0.97

Traffic Counts - All Vehicles

Interval Start Time	I 90 EB RAMPS Eastbound				I 90 EB RAMPS Westbound				SR 18 Northbound				SR 18 Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	181	2	176	0	0	0	0	0	0	37	99	0	30	188	0	713	2,895
4:15 PM	0	168	0	178	0	0	0	0	0	0	58	113	0	25	179	0	721	2,893
4:30 PM	0	216	0	173	0	0	0	0	0	0	43	105	0	28	178	0	743	2,885
4:45 PM	0	194	0	185	0	0	0	0	0	0	45	94	0	17	183	0	718	2,790
5:00 PM	0	223	0	158	0	0	0	0	0	0	48	84	0	25	173	0	711	2,708
5:15 PM	0	259	0	153	0	0	0	0	0	0	38	86	0	8	169	0	713	
5:30 PM	0	204	0	139	0	0	0	0	0	0	51	87	0	20	147	0	648	
5:45 PM	0	232	0	141	0	0	0	0	0	0	39	74	0	25	125	0	636	
Count Total	0	1,677	2	1,303	0	0	0	0	0	0	359	742	0	178	1,342	0	5,603	
Peak Hour	0	759	2	712	0	0	0	0	0	0	183	411	0	100	728	0	2,895	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

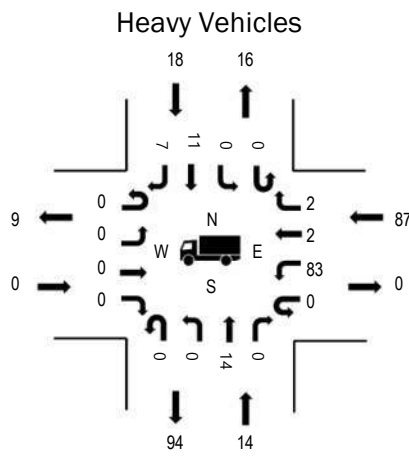
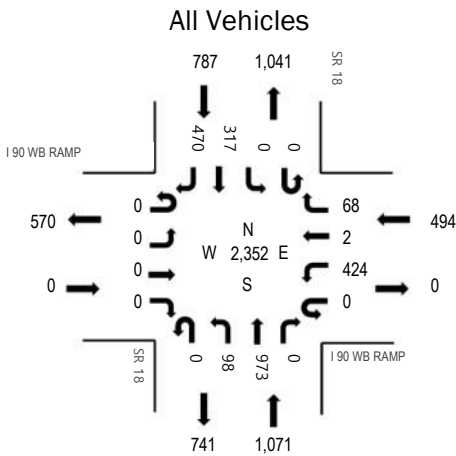
Interval Start Time	Heavy Vehicles					Total	Interval Start Time	Pedestrians/Bicycles on Crosswalk					Total
	EB	NB	WB	SB	EB			NB	WB	SB			
4:00 PM	9	33	0	29	71	4:00 PM	0	0	0	0	0		
4:15 PM	6	30	0	23	59	4:15 PM	0	0	0	0	0		
4:30 PM	8	29	0	14	51	4:30 PM	0	0	0	0	0		
4:45 PM	15	23	0	31	69	4:45 PM	0	0	0	0	0		
5:00 PM	5	12	0	22	39	5:00 PM	0	0	0	0	0		
5:15 PM	4	20	0	24	48	5:15 PM	0	0	0	0	0		
5:30 PM	6	14	0	27	47	5:30 PM	0	0	0	0	0		
5:45 PM	1	10	0	18	29	5:45 PM	0	0	0	0	0		
Count Total	54	171	0	188	413	Count Total	0	0	0	0	0		
Peak Hour	38	115	0	97	250	Peak Hour	0	0	0	0	0		



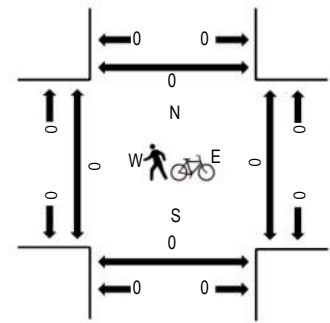
Location: 2 SR 18 & I 90 WB RAMP PM
 Date and Start Time: Thursday, February 8, 2018
 Peak Hour: 04:30 PM - 05:30 PM

(303) 216-2439
 www.alltrafficdata.net

Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	0.0%	0.00
WB	17.6%	0.91
NB	1.3%	0.89
SB	2.3%	0.90
All	5.1%	0.97

Traffic Counts - All Vehicles

Interval Start Time	I 90 WB RAMP Eastbound				I 90 WB RAMP Westbound				SR 18 Northbound				SR 18 Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	0	0	0	0	112	0	26	0	17	204	0	0	0	101	138	598	2,351
4:15 PM	0	0	0	0	0	117	0	27	0	34	193	0	0	0	80	136	587	2,331
4:30 PM	0	0	0	0	0	110	1	21	0	23	230	0	0	0	101	117	603	2,352
4:45 PM	0	0	0	0	0	105	0	12	0	28	218	0	0	0	74	126	563	2,290
5:00 PM	0	0	0	0	0	116	0	20	0	25	246	0	0	0	69	102	578	2,245
5:15 PM	0	0	0	0	0	93	1	15	0	22	279	0	0	0	73	125	608	
5:30 PM	0	0	0	0	0	95	1	17	0	20	230	0	0	0	59	119	541	
5:45 PM	0	0	0	0	0	83	1	11	0	21	249	0	0	0	58	95	518	
Count Total	0	0	0	0	0	831	4	149	0	190	1,849	0	0	0	615	958	4,596	
Peak Hour	0	0	0	0	0	424	2	68	0	98	973	0	0	0	317	470	2,352	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

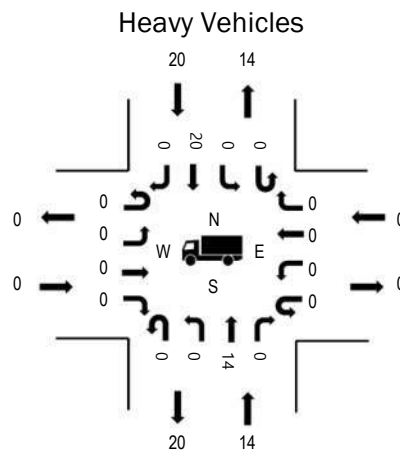
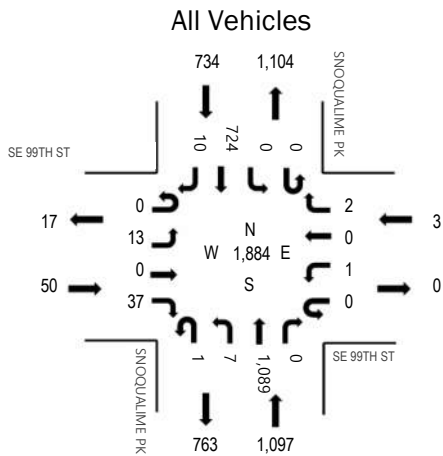
Interval Start Time	Heavy Vehicles					Total	Interval Start Time	Pedestrians/Bicycles on Crosswalk					Total
	EB	NB	WB	SB				EB	NB	WB	SB		
4:00 PM	0	5	22	7	34	4:00 PM	0	0	0	0	0	0	
4:15 PM	0	6	15	5	26	4:15 PM	0	0	0	0	0	0	
4:30 PM	0	4	20	4	28	4:30 PM	0	0	0	0	0	0	
4:45 PM	0	3	21	6	30	4:45 PM	0	0	0	0	0	0	
5:00 PM	0	4	23	5	32	5:00 PM	0	0	0	0	0	0	
5:15 PM	0	3	23	3	29	5:15 PM	0	0	0	0	0	0	
5:30 PM	0	3	21	5	29	5:30 PM	0	0	0	0	0	0	
5:45 PM	0	0	23	1	24	5:45 PM	0	0	0	0	0	0	
Count Total	0	28	168	36	232	Count Total	0	0	0	0	0	0	
Peak Hour	0	14	87	18	119	Peak Hour	0	0	0	0	0	0	



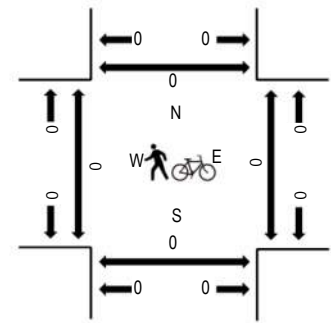
(303) 216-2439
www.alltrafficdata.net

Location: 3 SNOQUALIME PKWY & SE 99TH ST PM
Date and Start Time: Thursday, February 8, 2018
Peak Hour: 04:45 PM - 05:45 PM

Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	0.0%	0.69
WB	0.0%	0.38
NB	1.3%	0.95
SB	2.7%	0.90
All	1.8%	0.95

Traffic Counts - All Vehicles

Interval Start Time	SE 99TH ST Eastbound				SE 99TH ST Westbound				SNOQUALIME PKWY Northbound				SNOQUALIME PKWY Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	2	0	16	0	1	0	0	0	2	209	0	0	0	216	0	446	1,817
4:15 PM	0	1	0	9	0	0	0	0	0	2	236	0	0	0	212	0	460	1,832
4:30 PM	0	6	0	15	0	0	0	0	0	3	235	0	0	0	194	0	453	1,866
4:45 PM	0	2	0	11	0	1	0	1	1	3	234	0	0	0	202	3	458	1,884
5:00 PM	0	7	0	11	0	0	0	0	0	2	280	0	0	0	161	0	461	1,822
5:15 PM	0	4	0	8	0	0	0	1	0	1	287	0	0	0	189	4	494	
5:30 PM	0	0	0	7	0	0	0	0	0	1	288	0	0	0	172	3	471	
5:45 PM	0	4	0	4	0	0	0	0	0	4	236	0	0	0	145	3	396	
Count Total	0	26	0	81	0	2	0	2	1	18	2,005	0	0	0	1,491	13	3,639	
Peak Hour	0	13	0	37	0	1	0	2	1	7	1,089	0	0	0	724	10	1,884	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	3	0	8	11	4:00 PM	0	0	0	0	0
4:15 PM	0	4	0	6	10	4:15 PM	0	0	0	0	0
4:30 PM	0	4	0	4	8	4:30 PM	0	0	0	0	0
4:45 PM	0	3	0	6	9	4:45 PM	0	0	0	0	0
5:00 PM	0	4	0	5	9	5:00 PM	0	0	0	0	0
5:15 PM	0	4	0	5	9	5:15 PM	0	0	0	0	0
5:30 PM	0	3	0	4	7	5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	1	1	5:45 PM	0	0	0	0	0
Count Total	0	25	0	39	64	Count Total	0	0	0	0	0
Peak Hour	0	14	0	20	34	Peak Hour	0	0	0	0	0



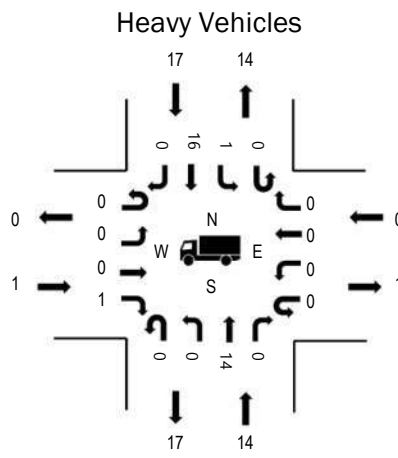
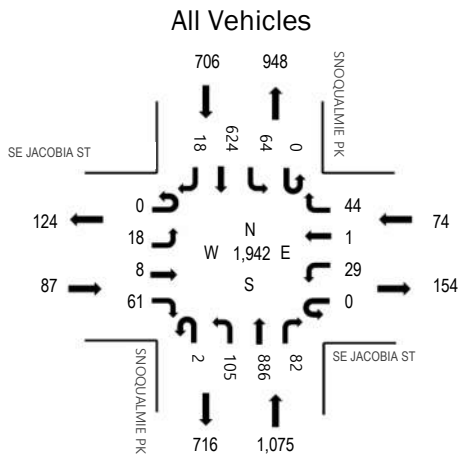
(303) 216-2439
www.alltrafficdata.net

Location: 4 SNOQUALMIE PKWY & SE JACOBIA ST PM

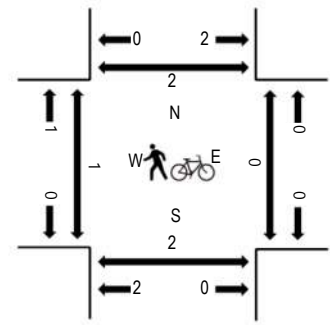
Date and Start Time: Thursday, February 8, 2018

Peak Hour: 04:45 PM - 05:45 PM

Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	1.1%	0.84
WB	0.0%	0.74
NB	1.3%	0.93
SB	2.4%	0.90
All	1.6%	0.94

Traffic Counts - All Vehicles

Interval Start Time	SE JACOBIA ST Eastbound				SE JACOBIA ST Westbound				SNOQUALMIE PKWY Northbound				SNOQUALMIE PKWY Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	4:00 PM	0	3	0	9	0	5	1	8	0	16	179	20	0	8	204		
4:15 PM	0	7	0	8	0	8	2	8	0	16	195	25	1	9	203	3	485	1,882
4:30 PM	0	2	1	17	0	5	0	5	0	19	205	21	0	9	187	5	476	1,911
4:45 PM	0	5	4	15	0	4	0	8	1	16	192	17	0	15	174	5	456	1,942
5:00 PM	0	5	3	10	0	5	1	10	0	35	235	18	0	11	128	4	465	1,902
5:15 PM	0	4	0	15	0	13	0	8	1	25	230	22	0	21	170	5	514	
5:30 PM	0	4	1	21	0	7	0	18	0	29	229	25	0	17	152	4	507	
5:45 PM	0	7	1	15	0	3	2	10	1	26	182	25	0	9	131	4	416	
Count Total	0	37	10	110	0	50	6	75	3	182	1,647	173	1	99	1,349	33	3,775	
Peak Hour	0	18	8	61	0	29	1	44	2	105	886	82	0	64	624	18	1,942	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Total	Interval Start Time	Pedestrians/Bicycles on Crosswalk					Total
	EB	NB	WB	SB	Count			EB	NB	WB	SB	Count	
4:00 PM	0	3	0	6	9	9	4:00 PM	1	0	0	2	3	
4:15 PM	0	4	0	6	10	10	4:15 PM	0	0	0	3	3	
4:30 PM	0	3	0	3	6	6	4:30 PM	0	0	0	0	0	
4:45 PM	0	3	0	6	9	9	4:45 PM	0	0	0	0	0	
5:00 PM	0	4	0	5	9	9	5:00 PM	1	0	0	1	2	
5:15 PM	1	4	0	2	7	7	5:15 PM	0	2	0	1	3	
5:30 PM	0	3	0	4	7	7	5:30 PM	0	0	0	0	0	
5:45 PM	0	0	0	1	1	1	5:45 PM	0	1	0	0	1	
Count Total	1	24	0	33	58	58	Count Total	2	3	0	7	12	
Peak Hour	1	14	0	17	32	32	Peak Hour	1	2	0	2	5	



Location: 5 SE DOUGLAS AVE & SNOQUALMIE PKWY PM

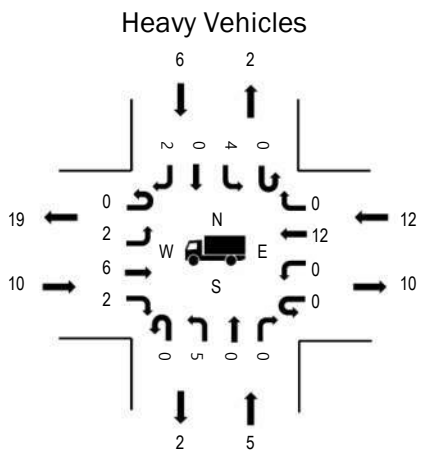
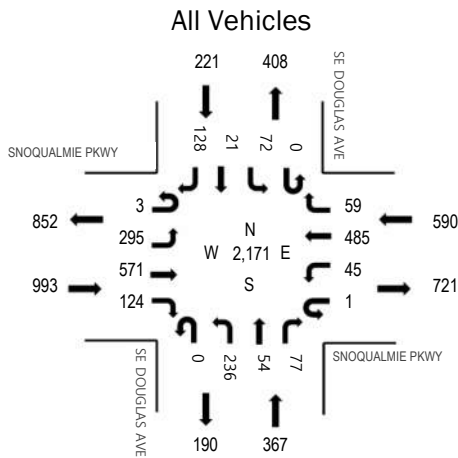
Date and Start Time: Thursday, February 8, 2018

Peak Hour: 04:30 PM - 05:30 PM

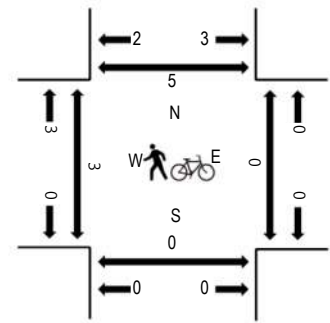
(303) 216-2439

www.alltrafficdata.net

Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	1.0%	0.97
WB	2.0%	0.81
NB	1.4%	0.81
SB	2.7%	0.88
All	1.5%	0.97

Traffic Counts - All Vehicles

Interval Start Time	SNOQUALMIE PKWY Eastbound				SNOQUALMIE PKWY Westbound				SE DOUGLAS AVE Northbound				SE DOUGLAS AVE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	4:00 PM	0	42	113	33	0	9	104	6	0	57	8	22	0	11	6		
4:15 PM	0	55	121	29	0	10	103	13	0	68	10	20	0	15	4	28	476	2,097
4:30 PM	0	73	134	32	0	13	152	16	0	58	10	16	0	20	3	35	562	2,171
4:45 PM	0	69	144	30	1	12	116	11	0	43	12	21	0	21	4	38	522	2,113
5:00 PM	1	78	142	33	0	9	100	16	0	76	18	19	0	12	8	25	537	2,055
5:15 PM	2	75	151	29	0	11	117	16	0	59	14	21	0	19	6	30	550	
5:30 PM	0	77	140	23	1	12	94	14	0	52	16	13	0	22	11	29	504	
5:45 PM	0	58	114	17	0	15	112	11	0	48	18	15	0	16	10	30	464	
Count Total	3	527	1,059	226	2	91	898	103	0	461	106	147	0	136	52	239	4,050	
Peak Hour	3	295	571	124	1	45	485	59	0	236	54	77	0	72	21	128	2,171	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Total	Interval Start Time	Pedestrians/Bicycles on Crosswalk					Total
	EB	NB	WB	SB	EB			NB	WB	SB			
4:00 PM	2	5	4	0	11	4:00 PM	0	0	0	0	0	0	
4:15 PM	1	2	3	0	6	4:15 PM	0	0	0	0	0	0	
4:30 PM	5	2	4	3	14	4:30 PM	1	0	0	1	2	2	
4:45 PM	2	1	3	1	7	4:45 PM	0	0	0	0	0	0	
5:00 PM	1	2	2	1	6	5:00 PM	1	0	0	2	3	3	
5:15 PM	2	0	3	1	6	5:15 PM	1	0	0	2	3	3	
5:30 PM	3	2	1	2	8	5:30 PM	0	0	0	0	0	0	
5:45 PM	0	0	1	1	2	5:45 PM	0	0	0	0	0	0	
Count Total	16	14	21	9	60	Count Total	3	0	0	5	8	8	
Peak Hour	10	5	12	6	33	Peak Hour	3	0	0	5	8	8	



Location: 6 SE CENTER ST & SNOQUALIME PKWY PM

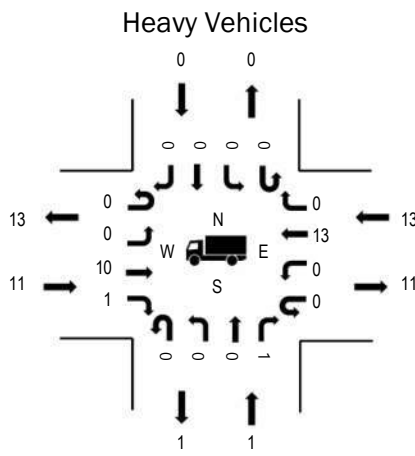
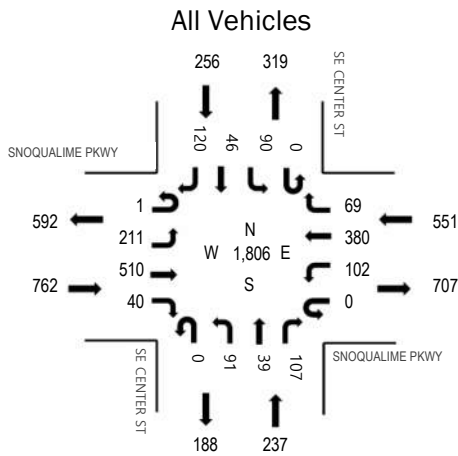
Date and Start Time: Thursday, February 8, 2018

Peak Hour: 04:45 PM - 05:45 PM

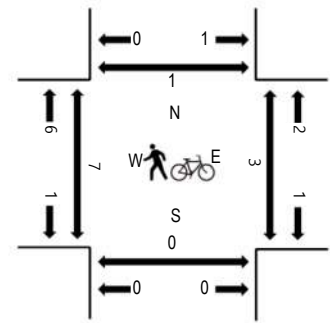
(303) 216-2439

www.alltrafficdata.net

Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	1.4%	0.92
WB	2.4%	0.93
NB	0.4%	0.94
SB	0.0%	0.82
All	1.4%	0.96

Traffic Counts - All Vehicles

Interval Start Time	SNOQUALIME PKWY Eastbound				SNOQUALIME PKWY Westbound				SE CENTER ST Northbound				SE CENTER ST Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	4:00 PM	0	41	100	7	0	19	98	17	0	32	6	32	0	20	6		
4:15 PM	0	49	118	9	0	24	108	20	0	29	11	32	0	20	14	21	455	1,789
4:30 PM	0	41	110	5	1	20	92	18	0	29	16	30	0	18	9	32	421	1,802
4:45 PM	0	64	118	11	0	29	98	19	0	26	7	26	0	23	17	26	464	1,806
5:00 PM	0	45	129	5	0	26	100	22	0	21	9	33	0	25	6	28	449	1,710
5:15 PM	0	58	133	17	0	29	83	17	0	24	6	23	0	26	16	36	468	
5:30 PM	1	44	130	7	0	18	99	11	0	20	17	25	0	16	7	30	425	
5:45 PM	2	57	122	8	1	18	67	13	0	11	5	11	0	19	10	24	368	
Count Total	3	399	960	69	2	183	745	137	0	192	77	212	0	167	85	223	3,454	
Peak Hour	1	211	510	40	0	102	380	69	0	91	39	107	0	90	46	120	1,806	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Total	Interval Start Time	Pedestrians/Bicycles on Crosswalk					Total
	EB	NB	WB	SB	EB			NB	WB	SB			
4:00 PM	2	0	3	1	6	4:00 PM	6	0	2	1	9		
4:15 PM	3	2	2	0	7	4:15 PM	0	0	0	0	0		
4:30 PM	1	0	3	0	4	4:30 PM	1	0	1	1	3		
4:45 PM	4	0	5	0	9	4:45 PM	3	0	2	0	5		
5:00 PM	2	0	3	0	5	5:00 PM	1	0	1	1	3		
5:15 PM	3	0	2	0	5	5:15 PM	3	0	0	0	3		
5:30 PM	2	1	3	0	6	5:30 PM	0	0	0	0	0		
5:45 PM	0	0	1	0	1	5:45 PM	0	0	0	2	2		
Count Total	17	3	22	1	43	Count Total	14	0	6	5	25		
Peak Hour	11	1	13	0	25	Peak Hour	7	0	3	1	11		



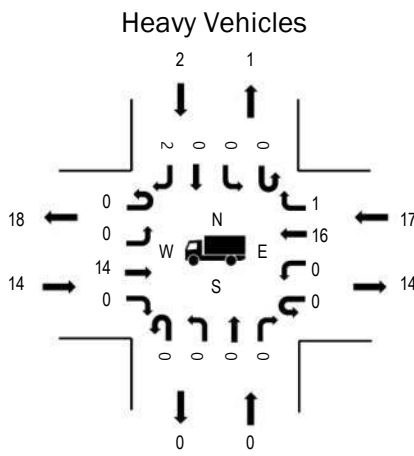
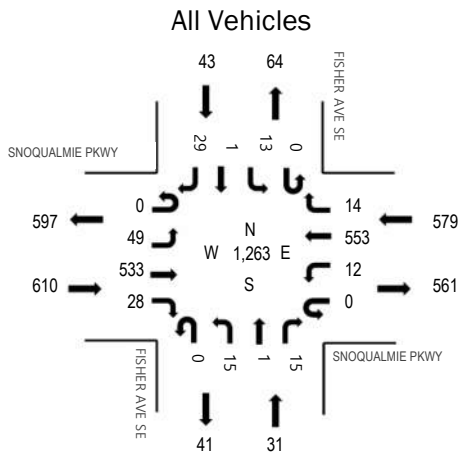
Location: 7 FISHER AVE SE & SNOQUALMIE PKWY PM

Date and Start Time: Thursday, February 8, 2018

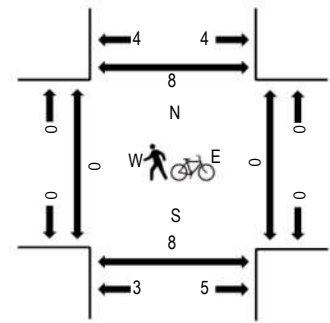
Peak Hour: 04:15 PM - 05:15 PM

(303) 216-2439
www.alltrafficdata.net

Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	2.3%	0.88
WB	2.9%	0.90
NB	0.0%	0.78
SB	4.7%	0.72
All	2.6%	0.88

Traffic Counts - All Vehicles

Interval Start Time	SNOQUALMIE PKWY Eastbound				SNOQUALMIE PKWY Westbound				FISHER AVE SE Northbound				FISHER AVE SE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	4:00 PM	0	4	115	6	0	4	128	1	0	2	0	1	0	3	0		
4:15 PM	0	5	134	4	0	2	131	3	0	5	0	5	0	2	0	7	298	1,263
4:30 PM	0	10	118	8	0	7	146	4	0	2	0	2	0	4	0	8	309	1,250
4:45 PM	0	19	129	10	0	1	121	3	0	4	0	4	0	2	0	5	298	1,221
5:00 PM	0	15	152	6	0	2	155	4	0	4	1	4	0	5	1	9	358	1,176
5:15 PM	0	9	133	7	0	0	122	2	0	2	0	1	0	3	0	6	285	
5:30 PM	0	13	130	5	0	3	117	1	0	2	0	0	0	2	0	7	280	
5:45 PM	0	17	111	13	0	2	92	3	0	2	0	1	0	4	0	8	253	
Count Total	0	92	1,022	59	0	21	1,012	21	0	23	1	18	0	25	1	57	2,352	
Peak Hour	0	49	533	28	0	12	553	14	0	15	1	15	0	13	1	29	1,263	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	4	0	1	0	5	4:00 PM	0	2	0	0	2
4:15 PM	1	0	4	0	5	4:15 PM	0	3	0	0	3
4:30 PM	4	0	5	1	10	4:30 PM	0	0	0	1	1
4:45 PM	8	0	5	1	14	4:45 PM	0	4	0	5	9
5:00 PM	1	0	3	0	4	5:00 PM	0	1	0	2	3
5:15 PM	3	0	4	0	7	5:15 PM	0	2	0	2	4
5:30 PM	3	0	2	0	5	5:30 PM	1	0	0	3	4
5:45 PM	0	0	2	0	2	5:45 PM	0	0	0	1	1
Count Total	24	0	26	2	52	Count Total	1	12	0	14	27
Peak Hour	14	0	17	2	33	Peak Hour	0	8	0	8	16

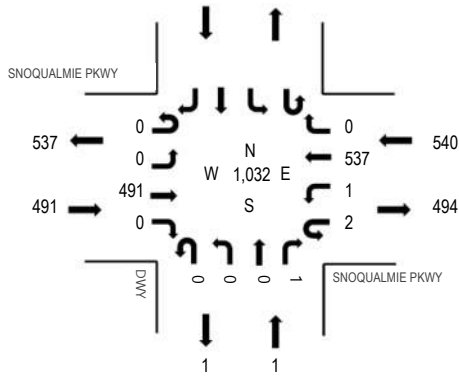


Location: 8 DWY & SNOQUALMIE PKWY PM
 Date and Start Time: Thursday, February 8, 2018
 Peak Hour: 04:30 PM - 05:30 PM

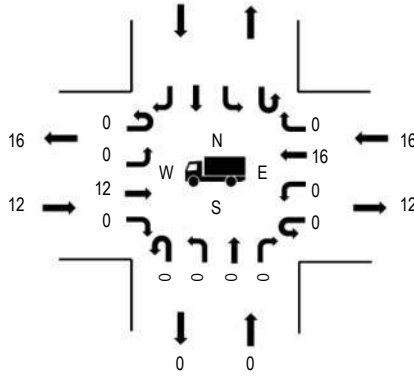
(303) 216-2439
 www.alltrafficdata.net

Peak Hour

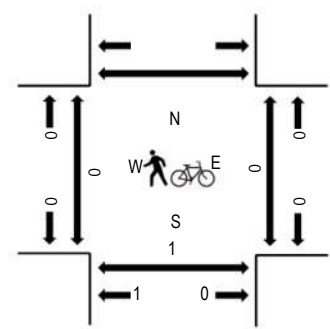
All Vehicles



Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	2.4%	0.94
WB	3.0%	0.88
NB	0.0%	0.25
SB		
All	2.7%	0.92

Traffic Counts - All Vehicles

Interval Start Time	SNOQUALMIE PKWY Eastbound				SNOQUALMIE PKWY Westbound				DWY Northbound				Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	4:00 PM	2	0	116	0	0	0	124	0	0	0	0	0	0	0	0		
4:15 PM	0	0	113	0	1	0	137	0	0	0	0	0	0	0	0	0	251	1,028
4:30 PM	0	0	127	0	0	0	153	0	0	0	0	0	0	0	0	0	280	1,032
4:45 PM	0	0	113	0	0	0	110	0	0	0	0	0	0	0	0	0	223	980
5:00 PM	0	0	121	0	1	0	152	0	0	0	0	0	0	0	0	0	274	967
5:15 PM	0	0	130	0	1	1	122	0	0	0	0	0	0	0	1	0	255	
5:30 PM	1	0	107	0	0	0	120	0	0	0	0	0	0	0	0	0	228	
5:45 PM	1	0	112	0	0	0	97	0	0	0	0	0	0	0	0	0	210	
Count Total	4	0	939	0	3	1	1,015	0	0	0	0	1					1,963	
Peak Hour	0	0	491	0	2	1	537	0	0	0	0	1					1,032	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Total	Interval Start Time	Pedestrians/Bicycles on Crosswalk					Total
	EB	NB	WB	SB				EB	NB	WB	SB		
4:00 PM	11	0	1			12	4:00 PM	0	0	0	0	0	0
4:15 PM	2	0	5			7	4:15 PM	0	0	0	0	0	0
4:30 PM	4	0	4			8	4:30 PM	0	1	0	0	1	1
4:45 PM	4	0	6			10	4:45 PM	0	0	0	0	0	0
5:00 PM	1	0	3			4	5:00 PM	0	0	0	0	0	0
5:15 PM	3	0	3			6	5:15 PM	0	0	0	0	0	0
5:30 PM	2	0	3			5	5:30 PM	0	0	0	0	0	0
5:45 PM	1	0	2			3	5:45 PM	0	0	0	0	0	0
Count Total	28	0	27			55	Count Total	0	1	0	0	1	1
Peak Hour	12	0	16			28	Peak Hour	0	1	0	0	1	1



Location: 9 SR202 (RAILROAD AVE) & SNOQUALMIE PKWY PM

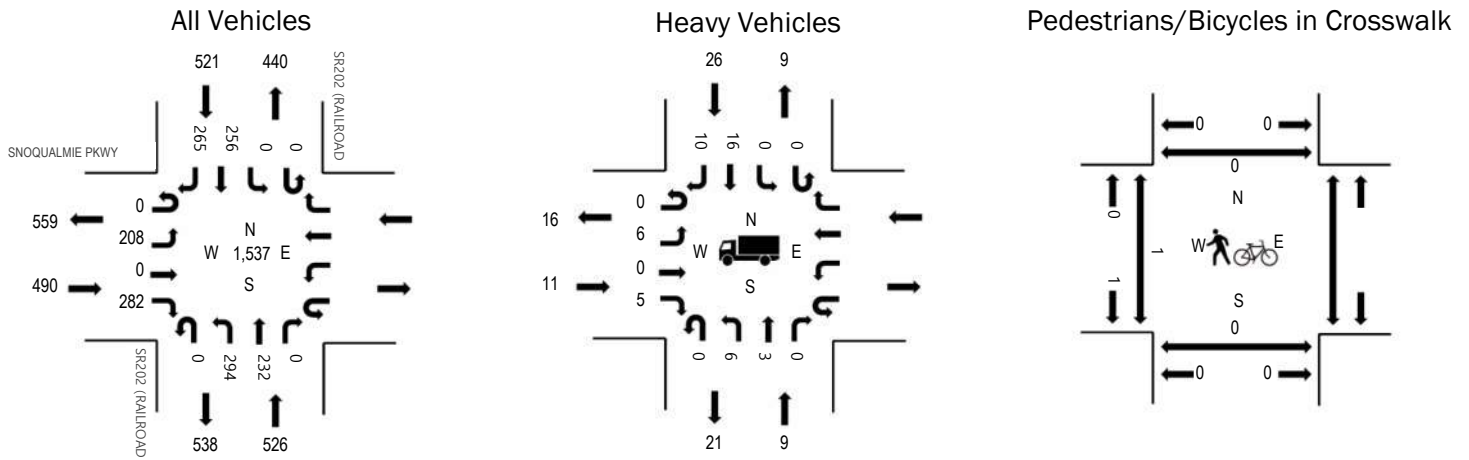
Date and Start Time: Thursday, February 8, 2018

Peak Hour: 04:15 PM - 05:15 PM

(303) 216-2439

www.alltrafficdata.net

Peak Hour



	HV%	PHF
EB	2.2%	0.91
WB		
NB	1.7%	0.79
SB	5.0%	0.82
All	3.0%	0.91

Traffic Counts - All Vehicles

Interval Start Time	SNOQUALMIE PKWY				SR202 (RAILROAD AVE)				SR202 (RAILROAD AVE)				Total	Rolling Hour				
	Eastbound				Westbound				Northbound						Southbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			U-Turn	Left	Thru	Right
4:00 PM	0	62	0	57					0	70	48	0	0	0	63	53	353	1,479
4:15 PM	0	46	0	74					0	65	66	0	0	0	58	79	388	1,537
4:30 PM	0	53	0	72					0	84	57	0	0	0	89	69	424	1,489
4:45 PM	0	45	0	66					0	49	38	0	0	0	54	62	314	1,394
5:00 PM	0	64	0	70					0	96	71	0	0	0	55	55	411	1,390
5:15 PM	0	48	0	70					0	62	52	0	0	0	49	59	340	
5:30 PM	0	37	0	71					0	59	50	0	0	0	54	58	329	
5:45 PM	0	37	0	72					0	54	36	0	0	0	61	50	310	
Count Total	0	392	0	552					0	539	418	0	0	0	483	485	2,869	
Peak Hour	0	208	0	282					0	294	232	0	0	0	256	265	1,537	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	5	5		4	14	4:00 PM	1	0		0	1
4:15 PM	2	1		6	9	4:15 PM	0	0		0	0
4:30 PM	4	3		12	19	4:30 PM	0	0		0	0
4:45 PM	5	2		5	12	4:45 PM	1	0		0	1
5:00 PM	0	3		3	6	5:00 PM	0	0		0	0
5:15 PM	3	1		1	5	5:15 PM	1	0		0	1
5:30 PM	2	0		3	5	5:30 PM	0	0		0	0
5:45 PM	1	1		5	7	5:45 PM	0	0		0	0
Count Total	22	16		39	77	Count Total	3	0		0	3
Peak Hour	11	9		26	46	Peak Hour	1	0		0	1



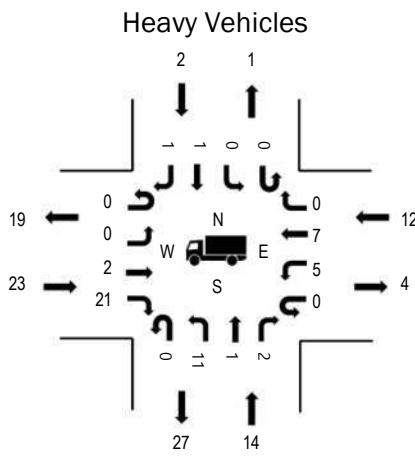
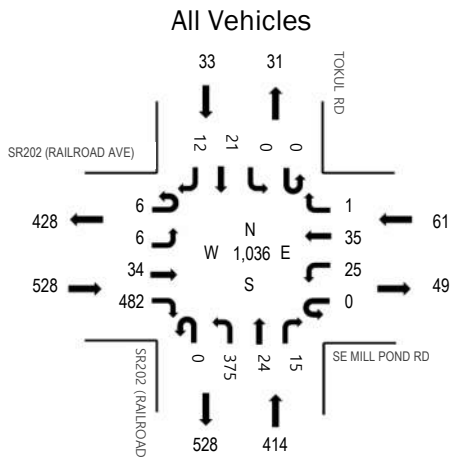
(303) 216-2439
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Location: 10 SR202 (RAILROAD AVE) & SE MILL POND RD PM

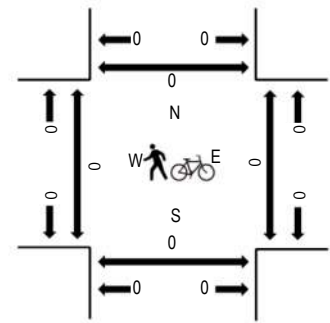
Date and Start Time: Thursday, February 8, 2018

Peak Hour: 04:00 PM - 05:00 PM

Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	4.4%	0.80
WB	19.7%	0.90
NB	3.4%	0.86
SB	6.1%	0.63
All	4.9%	0.85

Traffic Counts - All Vehicles

Interval Start Time	SR202 (RAILROAD AVE) Eastbound				SE MILL POND RD Westbound				SR202 (RAILROAD AVE) Northbound				TOKUL RD Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	4:00 PM	1	0	10	104	0	8	9	0	0	105	4	6	0	0	8		
4:15 PM	1	0	9	121	0	6	10	0	0	87	8	5	0	0	7	2	256	1,025
4:30 PM	2	3	9	151	0	4	8	0	0	113	5	2	0	0	6	1	304	1,005
4:45 PM	2	3	6	106	0	7	8	1	0	70	7	2	0	0	0	4	216	919
5:00 PM	1	1	5	102	0	10	4	0	0	116	3	5	0	0	2	0	249	906
5:15 PM	0	1	4	101	0	4	3	1	0	108	6	4	0	0	3	1	236	
5:30 PM	0	3	5	106	0	6	5	0	0	78	4	3	0	0	7	1	218	
5:45 PM	0	1	11	102	0	5	5	0	0	71	4	3	0	0	1	0	203	
Count Total	7	12	59	893	0	50	52	2	0	748	41	30	0	0	34	14	1,942	
Peak Hour	6	6	34	482	0	25	35	1	0	375	24	15	0	0	21	12	1,036	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	5	8	3	0	16	4:00 PM	0	0	0	0	0
4:15 PM	4	2	4	2	12	4:15 PM	0	0	0	0	0
4:30 PM	12	2	1	0	15	4:30 PM	0	0	0	0	0
4:45 PM	2	2	4	0	8	4:45 PM	0	0	0	0	0
5:00 PM	4	1	1	0	6	5:00 PM	0	0	0	0	0
5:15 PM	2	2	0	0	4	5:15 PM	0	0	0	0	0
5:30 PM	4	2	0	1	7	5:30 PM	0	0	0	0	0
5:45 PM	4	0	1	0	5	5:45 PM	0	0	0	1	1
Count Total	37	19	14	3	73	Count Total	0	0	0	1	1
Peak Hour	23	14	12	2	51	Peak Hour	0	0	0	0	0



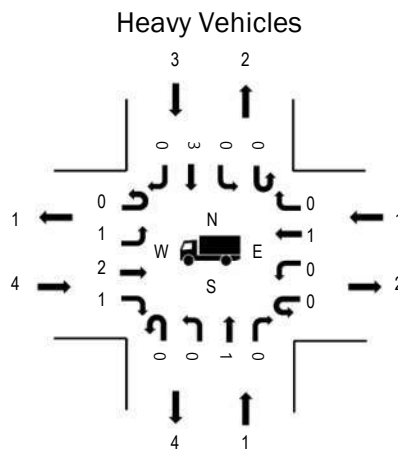
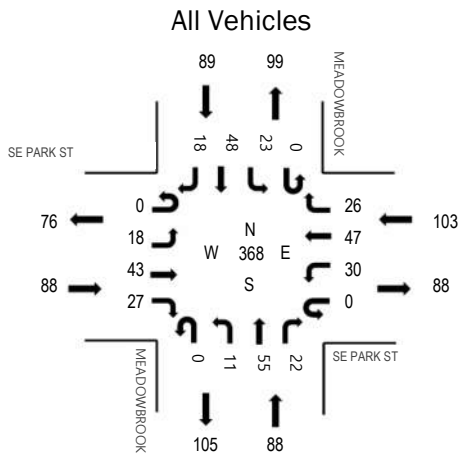
Location: 11 MEADOWBROOK WAY SE & SE PARK ST PM

Date and Start Time: Thursday, February 8, 2018

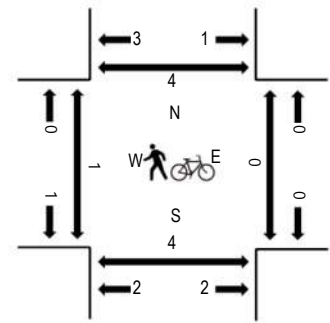
Peak Hour: 04:00 PM - 05:00 PM

(303) 216-2439
www.alltrafficdata.net

Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	4.5%	0.76
WB	1.0%	0.56
NB	1.1%	0.79
SB	3.4%	0.86
All	2.4%	0.84

Traffic Counts - All Vehicles

Interval Start Time	SE PARK ST Eastbound				SE PARK ST Westbound				MEADOWBROOK WAY SE Northbound				MEADOWBROOK WAY SE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	8	14	5	0	6	16	10	0	1	7	5	0	5	18	2	97	368
4:15 PM	0	4	15	10	0	7	3	4	0	3	14	9	0	7	11	8	95	347
4:30 PM	0	3	6	8	0	15	22	9	0	4	19	5	0	7	8	3	109	331
4:45 PM	0	3	8	4	0	2	6	3	0	3	15	3	0	4	11	5	67	305
5:00 PM	0	6	9	1	0	9	6	2	0	4	14	6	0	0	12	7	76	301
5:15 PM	0	9	9	2	0	5	3	10	0	3	19	5	0	2	7	5	79	
5:30 PM	0	6	6	2	0	4	14	7	0	2	15	4	0	3	12	8	83	
5:45 PM	0	5	6	2	0	2	10	3	0	2	17	2	0	4	5	5	63	
Count Total	0	44	73	34	0	50	80	48	0	22	120	39	0	32	84	43	669	
Peak Hour	0	18	43	27	0	30	47	26	0	11	55	22	0	23	48	18	368	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Total	Interval Start Time	Pedestrians/Bicycles on Crosswalk					Total
	EB	NB	WB	SB				EB	NB	WB	SB		
4:00 PM	3	0	1	3	7	7	4:00 PM	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	4:15 PM	1	2	0	1	4	
4:30 PM	1	1	0	0	2	2	4:30 PM	0	0	0	2	2	
4:45 PM	0	0	0	0	0	0	4:45 PM	0	2	0	1	3	
5:00 PM	1	0	0	2	3	3	5:00 PM	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	5:15 PM	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	5:30 PM	1	2	3	1	7	
5:45 PM	0	1	0	0	1	1	5:45 PM	1	0	0	0	1	
Count Total	5	2	1	5	13	13	Count Total	3	6	3	5	17	
Peak Hour	4	1	1	3	9	9	Peak Hour	1	4	0	4	9	



Location: 12 MEADOWBROOK WAY SE & SE REINIG RD PM

Date and Start Time: Thursday, February 8, 2018

Peak Hour: 04:00 PM - 05:00 PM

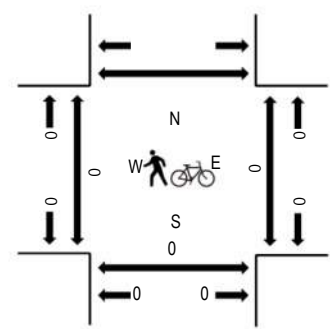
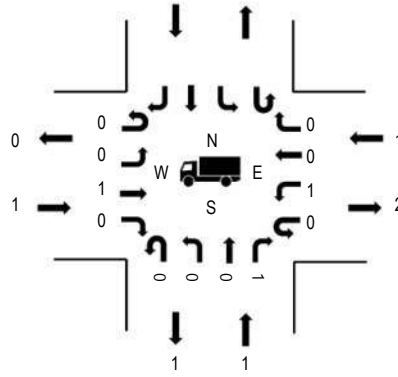
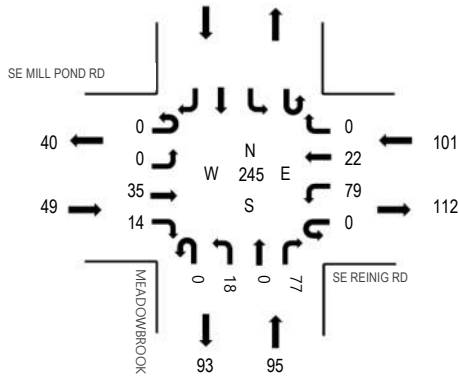
(303) 216-2439
www.alltrafficdata.net

Peak Hour

All Vehicles

Heavy Vehicles

Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	2.0%	0.82
WB	1.0%	0.90
NB	1.1%	0.79
SB		
All	1.2%	0.94

Traffic Counts - All Vehicles

Interval Start Time	SE MILL POND RD Eastbound				SE REINIG RD Westbound				MEADOWBROOK WAY WE Northbound				Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	4:00 PM	0	0	10	5	0	23	3	0	0	7	0	17					
4:15 PM	0	0	10	5	0	20	8	0	0	1	0	19					63	233
4:30 PM	0	0	7	1	0	15	5	0	0	6	0	24					58	222
4:45 PM	0	0	8	3	0	21	6	0	0	4	0	17					59	218
5:00 PM	0	0	8	3	0	11	8	0	0	3	0	20					53	205
5:15 PM	0	0	7	3	0	10	2	0	0	1	0	29					52	
5:30 PM	1	0	3	2	0	20	6	0	0	4	0	18					54	
5:45 PM	0	0	9	4	0	8	4	0	0	2	0	19					46	
Count Total	1	0	62	26	0	128	42	0	0	28	0	163					450	
Peak Hour	0	0	35	14	0	79	22	0	0	18	0	77					245	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

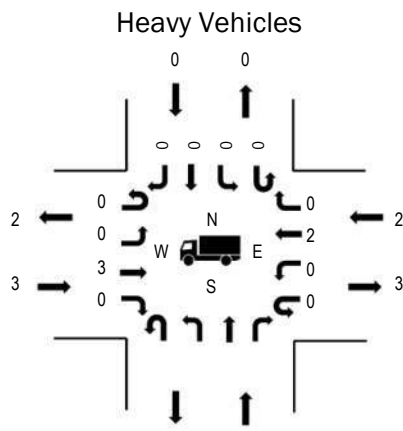
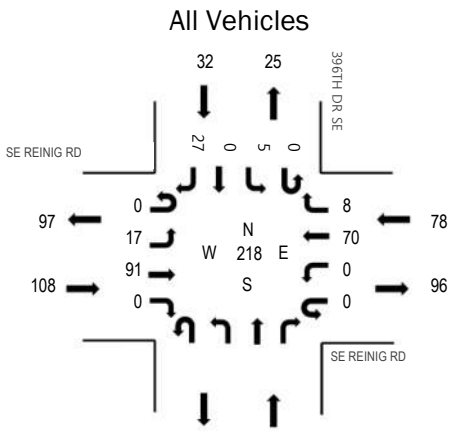
Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	1	1		2	4:00 PM	0	0	0		0
4:15 PM	0	0	0		0	4:15 PM	0	0	0		0
4:30 PM	1	0	0		1	4:30 PM	0	0	0		0
4:45 PM	0	0	0		0	4:45 PM	0	0	0		0
5:00 PM	0	1	2		3	5:00 PM	0	0	0		0
5:15 PM	0	0	0		0	5:15 PM	0	0	0		0
5:30 PM	0	0	0		0	5:30 PM	0	0	0		0
5:45 PM	0	0	0		0	5:45 PM	0	0	0		0
Count Total	1	2	3		6	Count Total	0	0	0		0
Peak Hour	1	1	1		3	Peak Hour	0	0	0		0



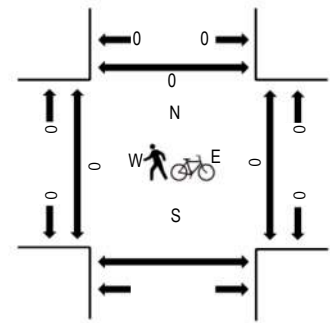
Location: 13 396TH DR SE & SE REINIG RD PM
 Date and Start Time: Thursday, February 8, 2018
 Peak Hour: 04:00 PM - 05:00 PM

(303) 216-2439
 www.alltrafficdata.net

Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	2.8%	0.82
WB	2.6%	0.81
NB		
SB	0.0%	0.73
All	2.3%	0.96

Traffic Counts - All Vehicles

Interval Start Time	SE REINIG RD Eastbound				SE REINIG RD Westbound				Northbound				396TH DR SE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	4	22	0	0	0	21	3					0	2	0	5	57	218
4:15 PM	0	5	23	0	0	0	15	2					0	1	0	10	56	208
4:30 PM	0	4	29	0	0	0	12	2					0	1	0	7	55	203
4:45 PM	0	4	17	0	0	0	22	1					0	1	0	5	50	196
5:00 PM	1	2	27	0	0	0	9	1					0	0	0	7	47	183
5:15 PM	0	9	27	0	0	0	9	1					0	1	0	4	51	
5:30 PM	0	3	18	0	0	0	20	1					0	0	0	6	48	
5:45 PM	0	2	23	0	0	0	9	0					0	0	0	3	37	
Count Total	1	33	186	0	0	0	117	11					0	6	0	47	401	
Peak Hour	0	17	91	0	0	0	70	8					0	5	0	27	218	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	1		2	0	3	4:00 PM	0		0	0	0
4:15 PM	1		0	0	1	4:15 PM	0		0	0	0
4:30 PM	0		0	0	0	4:30 PM	0		0	0	0
4:45 PM	1		0	0	1	4:45 PM	0		0	0	0
5:00 PM	0		0	2	2	5:00 PM	0		0	0	0
5:15 PM	0		0	0	0	5:15 PM	0		0	0	0
5:30 PM	0		0	0	0	5:30 PM	0		0	0	0
5:45 PM	0		0	0	0	5:45 PM	0		0	0	0
Count Total	3		2	2	7	Count Total	0		0	0	0
Peak Hour	3		2	0	5	Peak Hour	0		0	0	0



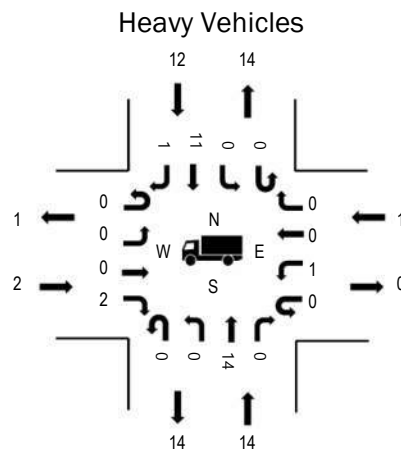
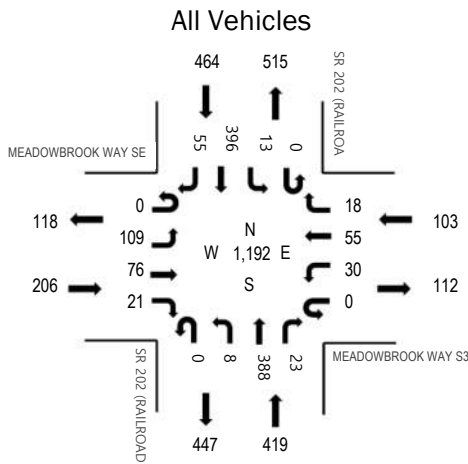
(303) 216-2439
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Location: 1 SR 202 (RAILROAD AVE) & MEADOWBROOK WAY S3 PM

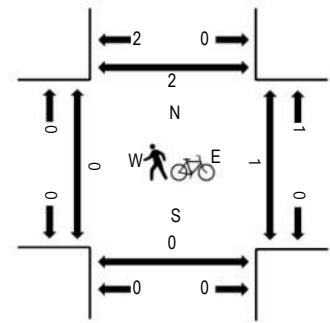
Date and Start Time: Tuesday, July 17, 2018

Peak Hour: 04:15 PM - 05:15 PM

Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	1.0%	0.94
WB	1.0%	0.68
NB	3.3%	0.92
SB	2.6%	0.92
All	2.4%	0.93

Traffic Counts - All Vehicles

Interval Start Time	MEADOWBROOK WAY SE				MEADOWBROOK WAY S3				SR 202 (RAILROAD AVE)				SR 202 (RAILROAD AVE)				Total	Rolling Hour
	Eastbound				Westbound				Northbound				Southbound					
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	31	27	6	0	19	21	11	0	4	82	8	0	5	77	12	303	1,188
4:15 PM	0	24	20	5	0	13	16	4	0	2	104	7	0	3	107	16	321	1,192
4:30 PM	0	25	17	6	0	1	11	5	0	1	82	4	0	6	93	14	265	1,137
4:45 PM	0	27	20	8	0	3	9	3	0	3	107	4	0	3	98	14	299	1,120
5:00 PM	0	33	19	2	0	13	19	6	0	2	95	8	0	1	98	11	307	1,045
5:15 PM	0	25	22	0	0	4	18	0	0	2	91	3	0	3	90	8	266	
5:30 PM	0	31	17	3	0	5	11	5	0	3	66	3	0	0	90	14	248	
5:45 PM	0	17	11	2	0	7	6	2	0	3	78	3	0	1	85	9	224	
Count Total	0	213	153	32	0	65	111	36	0	20	705	40	0	22	738	98	2,233	
Peak Hour	0	109	76	21	0	30	55	18	0	8	388	23	0	13	396	55	1,192	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Total	Interval Start Time	Pedestrians/Bicycles on Crosswalk					Total
	EB	NB	WB	SB				EB	NB	WB	SB		
4:00 PM	2	0	1	2	5	5	4:00 PM	0	0	0	1	1	
4:15 PM	1	2	1	3	7	7	4:15 PM	0	0	0	0	0	
4:30 PM	0	3	0	5	8	8	4:30 PM	0	0	0	0	0	
4:45 PM	1	6	0	2	9	9	4:45 PM	0	0	1	2	3	
5:00 PM	0	3	0	2	5	5	5:00 PM	0	0	0	0	0	
5:15 PM	0	4	0	3	7	7	5:15 PM	0	0	0	3	3	
5:30 PM	0	1	0	0	1	1	5:30 PM	0	0	0	1	1	
5:45 PM	1	1	0	5	7	7	5:45 PM	0	0	0	0	0	
Count Total	5	20	2	22	49	49	Count Total	0	0	1	7	8	
Peak Hour	2	14	1	12	29	29	Peak Hour	0	0	1	2	3	



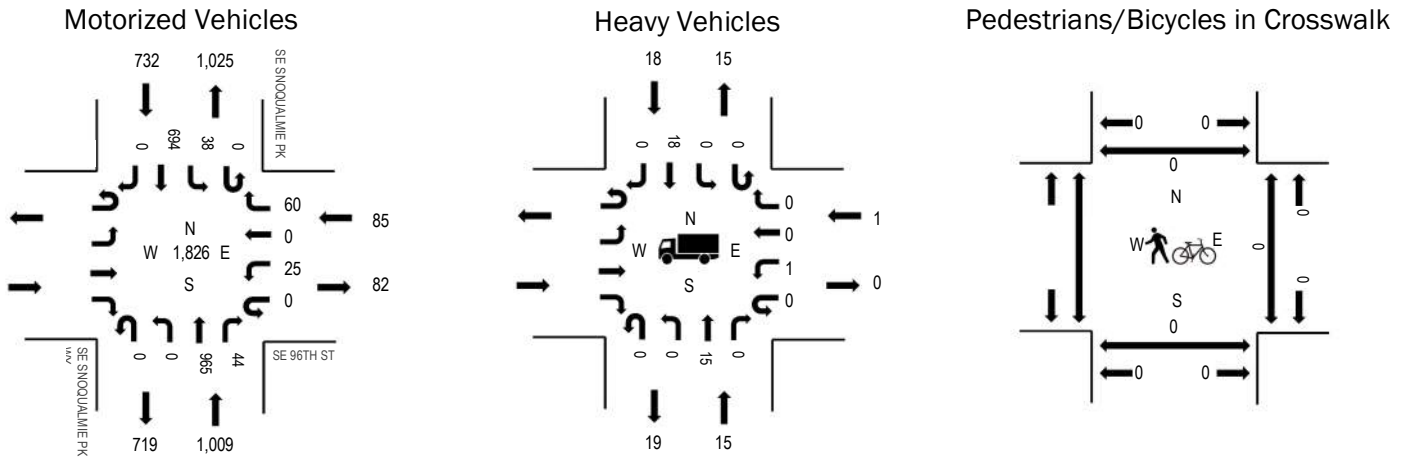
Location: 1 SE SNOQUALMIE PKWY & SE 96TH ST PM

Date: Tuesday, January 28, 2020

Peak Hour: 04:45 PM - 05:45 PM

(303) 216-2439
www.alltrafficdata.net

Peak Hour



	HV%	PHF
EB		
WB	1.2%	0.82
NB	1.5%	0.91
SB	2.5%	0.85
All	1.9%	0.88

Traffic Counts - Motorized Vehicles

Interval Start Time	Eastbound				SE 96TH ST Westbound				SE SNOQUALMIE PKWY Northbound				SE SNOQUALMIE PKWY Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM					0	3	0	10	0	0	166	5	0	12	175	0	371	1,615
4:15 PM					0	1	0	10	0	0	208	6	0	7	179	0	411	1,763
4:30 PM					0	2	0	9	0	0	195	8	0	12	176	0	402	1,797
4:45 PM					0	8	0	13	0	0	231	14	0	9	156	0	431	1,826
5:00 PM					0	7	0	19	0	0	265	12	0	11	205	0	519	1,793
5:15 PM					0	3	0	15	0	0	222	9	0	9	187	0	445	
5:30 PM					0	7	0	13	0	0	247	9	0	9	146	0	431	
5:45 PM					0	5	0	8	0	0	232	9	0	6	138	0	398	
Count Total					0	36	0	97	0	0	1,766	72	0	75	1,362	0	3,408	
Peak Hour					0	25	0	60	0	0	965	44	0	38	694	0	1,826	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	4	1	7	12	4:00 PM	0	0	0	0	0	
4:15 PM	3	0	11	14	4:15 PM	0	0	0	0	0	
4:30 PM	5	0	5	10	4:30 PM	0	0	0	0	0	
4:45 PM	6	0	3	9	4:45 PM	0	0	0	0	0	
5:00 PM	6	0	8	14	5:00 PM	0	0	0	0	0	
5:15 PM	0	0	3	3	5:15 PM	0	0	0	0	0	
5:30 PM	3	1	4	8	5:30 PM	0	0	0	0	0	
5:45 PM	0	0	5	5	5:45 PM	0	0	0	0	0	
Count Total	27	2	46	75	Count Total	0	0	0	0	0	
Peak Hour	15	1	18	34	Peak Hour	0	0	0	0	0	



Location: 2 SE SNOQUALMIE PKWY & SE SWENSON DR PM

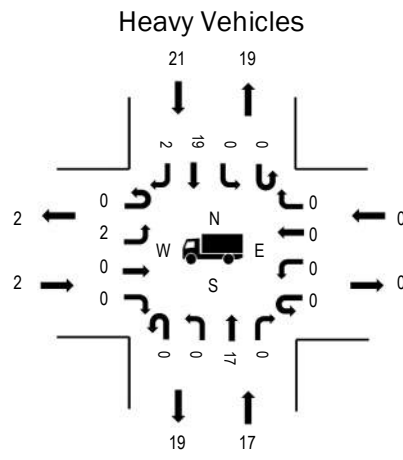
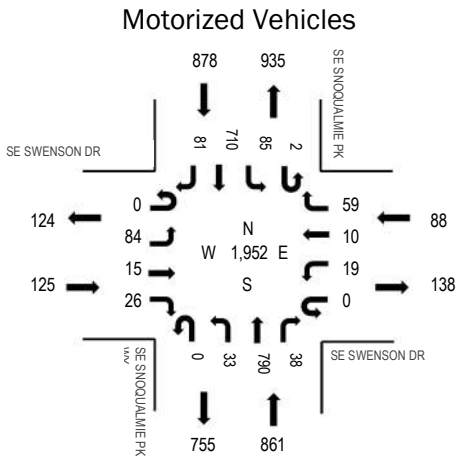
Date: Tuesday, January 28, 2020

Peak Hour: 04:30 PM - 05:30 PM

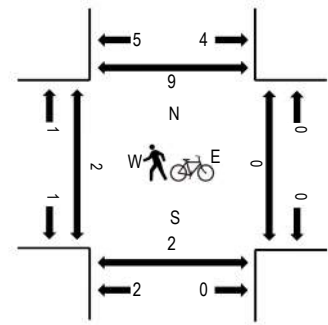
(303) 216-2439

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Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	1.6%	0.68
WB	0.0%	0.88
NB	2.0%	0.82
SB	2.4%	0.90
All	2.0%	0.93

Traffic Counts - Motorized Vehicles

Interval Start Time	SE SWENSON DR Eastbound				SE SWENSON DR Westbound				SE SNOQUALMIE PKWY Northbound				SE SNOQUALMIE PKWY Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	4:00 PM	0	26	1	5	0	5	1	21	2	1	180	6	0	18	170		
4:15 PM	0	14	0	7	0	4	1	12	0	5	170	14	0	18	168	15	428	1,860
4:30 PM	0	13	1	5	0	7	0	17	0	6	174	8	0	18	176	17	442	1,952
4:45 PM	0	30	2	7	0	3	5	14	0	11	183	8	0	18	163	22	466	1,946
5:00 PM	0	26	6	14	0	6	3	16	0	6	193	10	0	20	196	28	524	1,893
5:15 PM	0	15	6	0	0	3	2	12	0	10	240	12	2	29	175	14	520	
5:30 PM	0	14	3	5	0	3	3	15	0	10	183	9	0	12	159	20	436	
5:45 PM	0	16	4	1	0	4	3	9	0	8	193	10	1	9	136	19	413	
Count Total	0	154	23	44	0	35	18	116	2	57	1,516	77	3	142	1,343	145	3,675	
Peak Hour	0	84	15	26	0	19	10	59	0	33	790	38	2	85	710	81	1,952	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	1	6	0	10	17	4:00 PM	0	0	0	2	2
4:15 PM	1	3	1	11	16	4:15 PM	0	1	0	1	2
4:30 PM	0	6	0	4	10	4:30 PM	0	0	0	3	3
4:45 PM	0	7	0	4	11	4:45 PM	0	0	0	1	1
5:00 PM	2	4	0	11	17	5:00 PM	1	0	0	4	5
5:15 PM	0	0	0	2	2	5:15 PM	1	2	0	1	4
5:30 PM	0	3	0	3	6	5:30 PM	1	0	0	2	3
5:45 PM	0	1	0	5	6	5:45 PM	0	0	0	0	0
Count Total	4	30	1	50	85	Count Total	3	3	0	14	20
Peak Hour	2	17	0	21	40	Peak Hour	2	2	0	9	13



Location: 3 FAIRWAY AVE SE & SE SNOQUALMIE PKWY PM

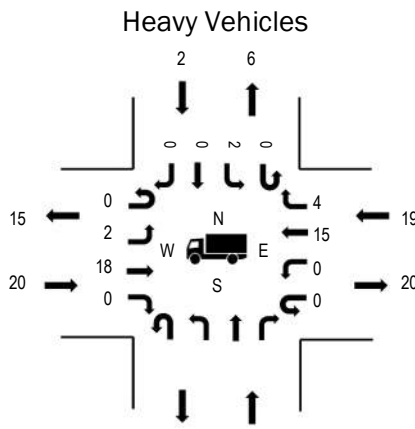
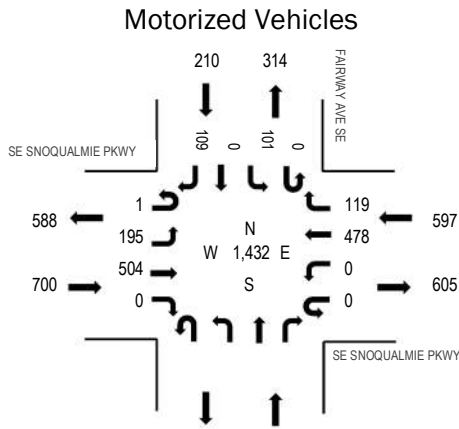
Date: Tuesday, January 28, 2020

Peak Hour: 04:30 PM - 05:30 PM

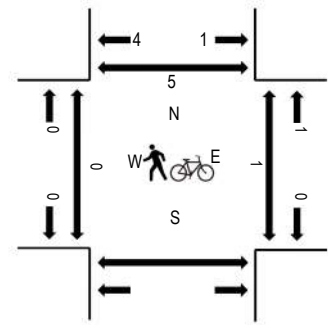
(303) 216-2439

www.alltrafficdata.net

Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	2.9%	0.93
WB	3.2%	0.88
NB		
SB	1.0%	0.92
All	2.7%	0.93

Traffic Counts - Motorized Vehicles

Interval Start Time	SE SNOQUALMIE PKWY Eastbound				SE SNOQUALMIE PKWY Westbound				Northbound				FAIRWAY AVE SE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	4:00 PM	0	37	138	0	0	0	105	43	0	38	0	28	389	1,474			
4:15 PM	0	44	121	0	0	0	106	30	0	28	0	23	352	1,492				
4:30 PM	0	47	114	0	0	0	111	33	0	23	0	27	355	1,507				
4:45 PM	0	38	130	0	0	0	125	28	0	25	0	32	378	1,497				
5:00 PM	0	59	130	0	0	0	131	38	0	24	0	25	407	1,455				
5:15 PM	1	51	130	0	0	0	111	20	0	29	0	25	367					
5:30 PM	1	59	112	0	0	0	99	30	0	17	0	27	345					
5:45 PM	0	62	92	0	0	0	112	27	0	25	0	18	336					
Count Total	2	397	967	0	0	0	900	249	0	209	0	205	2,929					
Peak Hour	1	195	504	0	0	0	478	119	0	101	0	109	1,507					

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	6		3	6	15	4:00 PM	0		0	1	1
4:15 PM	7		8	1	16	4:15 PM	0		0	2	2
4:30 PM	8		1	1	10	4:30 PM	0		0	0	0
4:45 PM	6		8	1	15	4:45 PM	0		0	2	2
5:00 PM	3		8	0	11	5:00 PM	0		0	1	1
5:15 PM	3		2	0	5	5:15 PM	0		1	2	3
5:30 PM	1		1	0	2	5:30 PM	0		1	0	1
5:45 PM	0		5	1	6	5:45 PM	0		0	0	0
Count Total	34		36	10	80	Count Total	0		2	8	10
Peak Hour	20		19	2	41	Peak Hour	0		1	5	6



Location: 4 ORCHARD AVE SE & SE SNOQUALMIE PKWY PM

Date: Tuesday, January 28, 2020

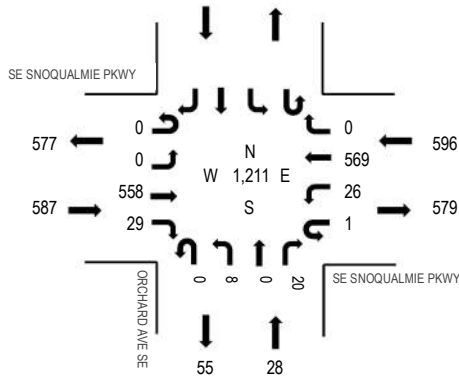
Peak Hour: 04:00 PM - 05:00 PM

(303) 216-2439

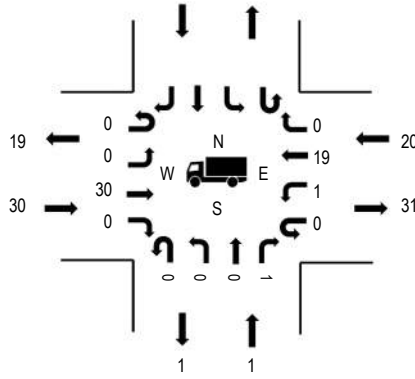
www.alltrafficdata.net

Peak Hour

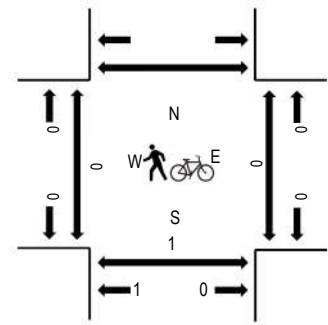
Motorized Vehicles



Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	5.1%	0.89
WB	3.4%	0.93
NB	3.6%	0.64
SB		
All	4.2%	0.92

Traffic Counts - Motorized Vehicles

Interval Start Time	SE SNOQUALMIE PKWY Eastbound				SE SNOQUALMIE PKWY Westbound				ORCHARD AVE SE Northbound				Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	4:00 PM	0	0	156	8	0	7	153	0	0	0	0	5					
4:15 PM	0	0	128	10	0	8	126	0	0	1	0	2					275	1,190
4:30 PM	0	0	141	2	1	5	143	0	0	4	0	5					301	1,209
4:45 PM	0	0	133	9	0	6	147	0	0	3	0	8					306	1,163
5:00 PM	0	0	129	7	0	5	155	0	0	7	0	5					308	1,097
5:15 PM	0	0	143	9	0	4	130	0	0	4	0	4					294	
5:30 PM	0	0	115	5	0	4	125	0	0	5	0	1					255	
5:45 PM	0	0	92	8	0	5	127	0	0	5	0	3					240	
Count Total	0	0	1,037	58	1	44	1,106	0	0	29	0	33					2,308	
Peak Hour	0	0	558	29	1	26	569	0	0	8	0	20					1,211	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	11	0	4		15	4:00 PM	0	0	0		0
4:15 PM	6	0	7		13	4:15 PM	0	0	0		0
4:30 PM	7	1	2		10	4:30 PM	0	0	0		0
4:45 PM	6	0	7		13	4:45 PM	0	1	0		1
5:00 PM	3	0	7		10	5:00 PM	0	0	0		0
5:15 PM	1	0	4		5	5:15 PM	1	0	0		1
5:30 PM	0	0	1		1	5:30 PM	0	0	0		0
5:45 PM	2	0	6		8	5:45 PM	0	0	0		0
Count Total	36	1	38		75	Count Total	1	1	0		2
Peak Hour	30	1	20		51	Peak Hour	0	1	0		1



Location: 5 ALLMAN AVE SE & SE SNOQUALMIE PKWY PM

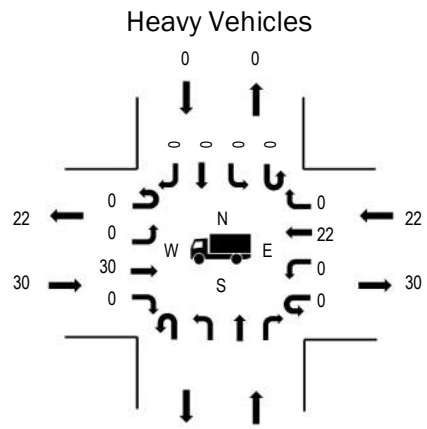
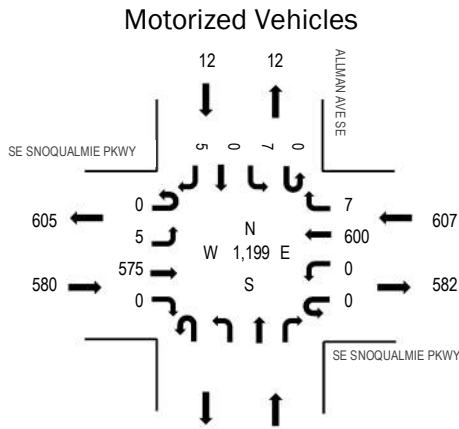
Date: Tuesday, January 28, 2020

Peak Hour: 04:00 PM - 05:00 PM

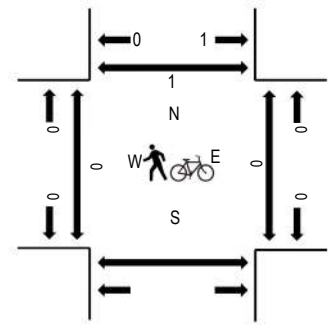
(303) 216-2439

www.alltrafficdata.net

Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	5.2%	0.91
WB	3.6%	0.91
NB		
SB	0.0%	0.43
All	4.3%	0.92

Traffic Counts - Motorized Vehicles

Interval Start Time	SE SNOQUALMIE PKWY Eastbound				SE SNOQUALMIE PKWY Westbound				Northbound				ALLMAN AVE SE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	4:00 PM	0	1	158	0	0	0	160	1	0	4	0	3	327	1,199			
4:15 PM	0	1	133	0	0	0	134	1	0	1	0	1	271	1,160				
4:30 PM	0	2	142	0	0	0	141	3	0	0	0	0	288	1,161				
4:45 PM	0	1	142	0	0	0	165	2	0	2	0	1	313	1,121				
5:00 PM	0	2	132	0	0	0	148	2	0	1	0	3	288	1,033				
5:15 PM	0	2	142	0	0	0	127	0	0	0	0	1	272					
5:30 PM	0	2	116	0	0	0	123	2	0	2	0	3	248					
5:45 PM	0	1	94	0	0	0	127	2	0	0	0	1	225					
Count Total	0	12	1,059	0	0	0	1,125	13	0	10	0	13	2,232					
Peak Hour	0	5	575	0	0	0	600	7	0	7	0	5	1,199					

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	9		6	0	15	4:00 PM	0		0	0	0
4:15 PM	7		5	0	12	4:15 PM	0		0	1	1
4:30 PM	8		2	0	10	4:30 PM	0		0	0	0
4:45 PM	6		9	0	15	4:45 PM	0		0	0	0
5:00 PM	3		5	0	8	5:00 PM	0		0	1	1
5:15 PM	2		2	0	4	5:15 PM	0		0	0	0
5:30 PM	0		1	0	1	5:30 PM	0		0	0	0
5:45 PM	2		5	0	7	5:45 PM	0		0	0	0
Count Total	37		35	0	72	Count Total	0		0	2	2
Peak Hour	30		22	0	52	Peak Hour	0		0	1	1



Location: 6 BETTER WAY SE & SNOQUALMIE PKWY PM

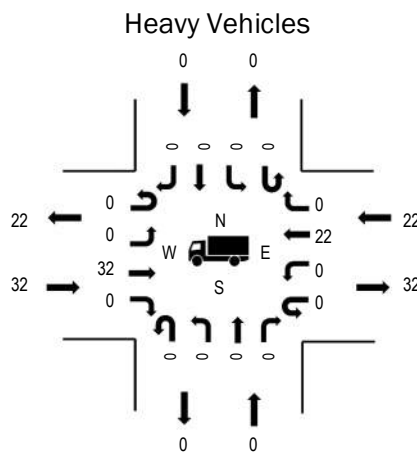
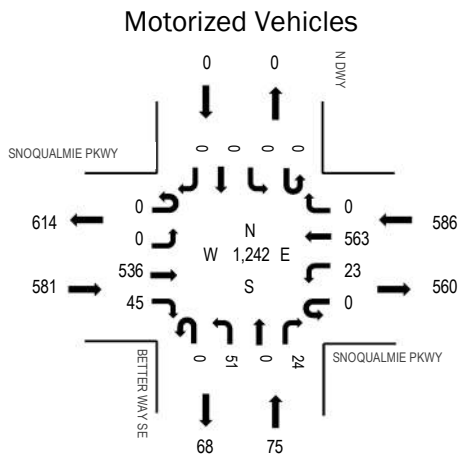
Date: Tuesday, January 28, 2020

Peak Hour: 04:00 PM - 05:00 PM

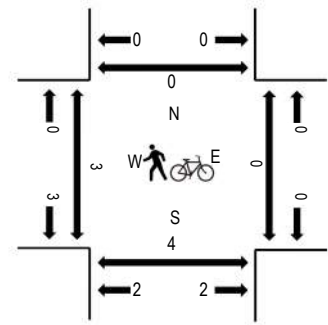
(303) 216-2439

www.alltrafficdata.net

Peak Hour



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB	5.5%	0.90
WB	3.8%	0.90
NB	0.0%	0.63
SB	0.0%	0.00
All	4.3%	0.95

Traffic Counts - Motorized Vehicles

Interval Start Time	SNOQUALMIE PKWY Eastbound				SNOQUALMIE PKWY Westbound				BETTER WAY SE Northbound				N DWY Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
	4:00 PM	0	0	156	5	0	3	150	0	0	11	0	3	0	0	0		
4:15 PM	0	0	122	11	0	6	132	0	0	7	0	6	0	0	0	0	284	1,203
4:30 PM	0	0	128	13	0	7	126	0	0	20	0	10	0	0	0	0	304	1,203
4:45 PM	0	0	130	16	0	7	155	0	0	13	0	5	0	0	0	0	326	1,168
5:00 PM	0	0	110	15	2	12	133	0	0	12	0	5	0	0	0	0	289	1,075
5:15 PM	0	0	118	24	1	2	116	0	0	14	0	9	0	0	0	0	284	
5:30 PM	0	0	103	20	0	8	109	0	0	18	0	11	0	0	0	0	269	
5:45 PM	0	0	84	7	0	4	117	0	0	15	0	6	0	0	0	0	233	
Count Total	0	0	951	111	3	49	1,038	0	0	110	0	55	0	0	0	0	2,317	
Peak Hour	0	0	536	45	0	23	563	0	0	51	0	24	0	0	0	0	1,242	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	11	0	6	0	17	4:00 PM	0	0	0	0	0
4:15 PM	7	0	5	0	12	4:15 PM	1	1	0	0	2
4:30 PM	8	0	2	0	10	4:30 PM	0	2	0	0	2
4:45 PM	6	0	9	0	15	4:45 PM	2	1	0	0	3
5:00 PM	3	0	6	0	9	5:00 PM	1	0	0	0	1
5:15 PM	1	0	3	0	4	5:15 PM	0	0	0	0	0
5:30 PM	0	0	1	0	1	5:30 PM	0	2	0	0	2
5:45 PM	2	1	6	0	9	5:45 PM	2	0	3	2	7
Count Total	38	1	38	0	77	Count Total	6	6	3	2	17
Peak Hour	32	0	22	0	54	Peak Hour	3	4	0	0	7



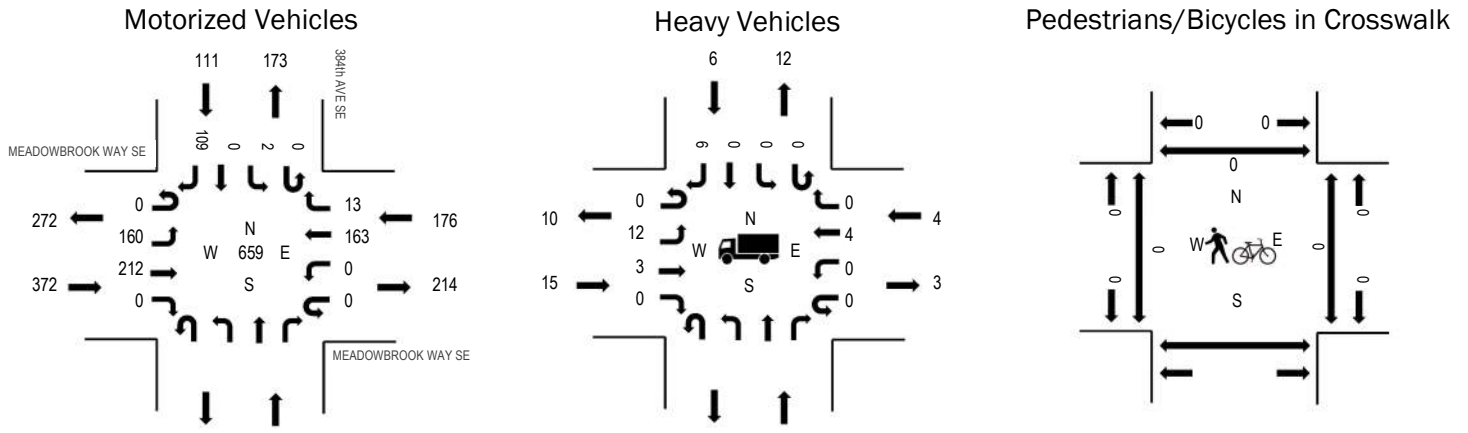
(303) 216-2439
www.alltrafficdata.net

Location: 7 384th AVE SE & MEADOWBROOK WAY SE PM

Date: Tuesday, January 28, 2020

Peak Hour: 04:15 PM - 05:15 PM

Peak Hour



	HV%	PHF
EB	4.0%	0.85
WB	2.3%	0.86
NB		
SB	5.4%	0.79
All	3.8%	0.87

Traffic Counts - Motorized Vehicles

Interval Start Time	MEADOWBROOK WAY SE Eastbound				MEADOWBROOK WAY SE Westbound				Northbound				384th AVE SE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	32	49	0	0	0	41	3					0	5	0	32	162	657
4:15 PM	0	49	60	0	0	0	45	2					0	0	0	33	189	659
4:30 PM	0	38	51	0	0	0	42	5					0	0	0	25	161	625
4:45 PM	0	45	51	0	0	0	27	4					0	1	0	17	145	572
5:00 PM	0	28	50	0	0	0	49	2					0	1	0	34	164	531
5:15 PM	0	40	49	0	0	0	34	4					0	1	0	27	155	
5:30 PM	0	25	34	0	0	0	26	2					0	1	0	20	108	
5:45 PM	1	31	35	0	0	0	19	1					0	0	0	17	104	
Count Total	1	288	379	0	0	0	283	23					0	9	0	205	1,188	
Peak Hour	0	160	212	0	0	0	163	13					0	2	0	109	659	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	5		0	0	5	4:00 PM	0		0	0	0
4:15 PM	4		3	3	10	4:15 PM	0		0	0	0
4:30 PM	5		1	0	6	4:30 PM	0		0	0	0
4:45 PM	2		0	1	3	4:45 PM	0		0	0	0
5:00 PM	4		0	2	6	5:00 PM	0		0	0	0
5:15 PM	1		1	0	2	5:15 PM	0		0	0	0
5:30 PM	2		1	0	3	5:30 PM	0		0	0	0
5:45 PM	0		0	0	0	5:45 PM	0		0	0	0
Count Total	23		6	6	35	Count Total	0		0	0	0
Peak Hour	15		4	6	25	Peak Hour	0		0	0	0



Location: 8 SE NORTH BEND WAY & MEADOWBROOK WAY SE PM

Date: Tuesday, January 28, 2020

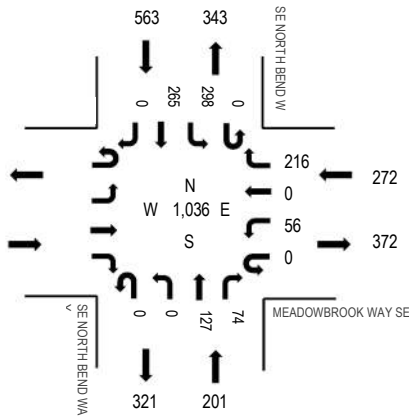
Peak Hour: 04:15 PM - 05:15 PM

(303) 216-2439

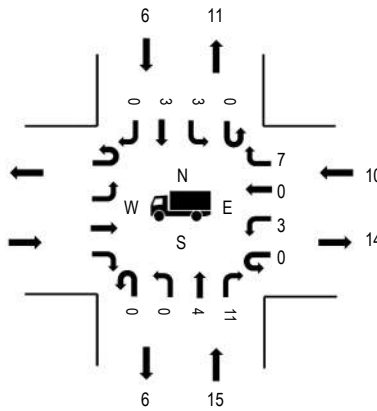
www.alltrafficdata.net

Peak Hour

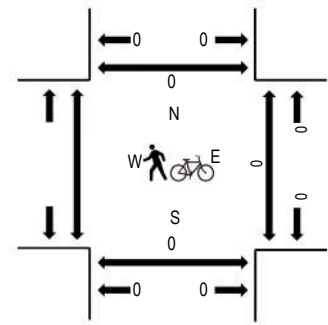
Motorized Vehicles



Heavy Vehicles



Pedestrians/Bicycles in Crosswalk



	HV%	PHF
EB		
WB	3.7%	0.84
NB	7.5%	0.88
SB	1.1%	0.86
All	3.0%	0.90

Traffic Counts - Motorized Vehicles

Interval Start Time	Eastbound				MEADOWBROOK WAY SE Westbound				SE NORTH BEND WAY Northbound				SE NORTH BEND WAY Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM					0	22	0	50	0	0	21	14	0	67	50	0	224	1,003
4:15 PM					0	17	0	62	0	0	27	19	0	90	74	0	289	1,036
4:30 PM					0	12	0	55	0	0	38	19	0	70	68	0	262	986
4:45 PM					0	13	0	32	0	0	23	21	0	75	64	0	228	896
5:00 PM					0	14	0	67	0	0	39	15	0	63	59	0	257	850
5:15 PM					0	14	0	49	0	0	28	12	0	76	60	0	239	
5:30 PM					0	14	0	32	0	0	24	9	0	51	42	0	172	
5:45 PM					0	9	0	27	0	0	27	11	1	55	52	0	182	
Count Total					0	115	0	374	0	0	227	120	1	547	469	0	1,853	
Peak Hour					0	56	0	216	0	0	127	74	0	298	265	0	1,036	

Traffic Counts - Heavy Vehicles and Pedestrians/Bicycles in Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	4	0	2		6	4:00 PM	0	0	0	0	0
4:15 PM	3	6	1		10	4:15 PM	0	0	0	0	0
4:30 PM	7	1	1		9	4:30 PM	0	0	0	0	0
4:45 PM	2	1	1		4	4:45 PM	0	0	0	0	0
5:00 PM	3	2	3		8	5:00 PM	0	0	0	0	0
5:15 PM	0	1	3		4	5:15 PM	0	0	0	0	0
5:30 PM	2	1	3		6	5:30 PM	0	0	0	0	0
5:45 PM	1	0	2		3	5:45 PM	0	0	0	0	0
Count Total	22	12	16		50	Count Total	0	0	0	0	0
Peak Hour	15	10	6		31	Peak Hour	0	0	0	0	0

LOS Worksheets

Existing
LOS Worksheets

Lanes, Volumes, Timings
1: SR-18 & I-90 EB Ramps

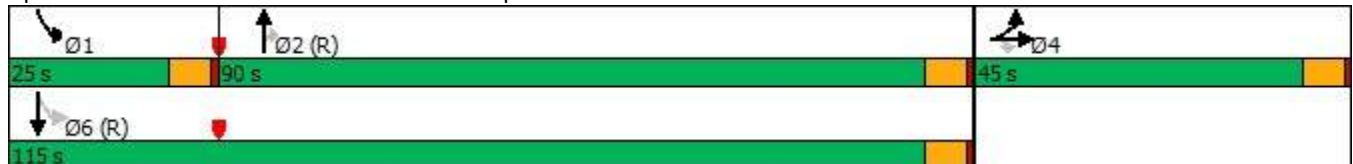
03/06/2020

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	368	0	80	0	0	0	0	760	443	53	340	0
Future Volume (vph)	368	0	80	0	0	0	0	760	443	53	340	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650		0	0		0	0		300	200		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			45				30
Link Distance (ft)		833			764			1837				778
Travel Time (s)		16.2			14.9			27.8				17.7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	0%	10%	0%	0%	0%	0%	8%	28%	12%	42%	0%
Shared Lane Traffic (%)	50%											
Turn Type	Split	NA	Perm					NA	Perm	pm+pt	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			4						2	6		
Detector Phase	4	4	4					2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					10.0	10.0	3.0	10.0	
Minimum Split (s)	29.0	29.0	29.0					16.0	16.0	9.0	23.0	
Total Split (s)	45.0	45.0	45.0					90.0	90.0	25.0	115.0	
Total Split (%)	28.1%	28.1%	28.1%					56.3%	56.3%	15.6%	71.9%	
Yellow Time (s)	5.0	5.0	5.0					5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0	1.0					1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0					6.0	6.0	6.0	6.0	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None					C-Min	C-Min	None	C-Min	

Intersection Summary

Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated





















Splits and Phases: 1: SR-18 & I-90 EB Ramps



HCM 6th Signalized Intersection Summary

1: SR-18 & I-90 EB Ramps

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	368	0	80	0	0	0	0	760	443	53	340	0
Future Volume (veh/h)	368	0	80	0	0	0	0	760	443	53	340	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1826	1900	1752				0	1781	1485	1722	1278	0
Adj Flow Rate, veh/h	383	0	0				0	792	0	55	354	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	0	10				0	8	28	12	42	0
Cap, veh/h	447	0					0	1318		412	1934	0
Arrive On Green	0.13	0.00	0.00				0.00	0.74	0.00	0.02	0.80	0.00
Sat Flow, veh/h	3478	0	1485				0	1781	1259	1640	2491	0
Grp Volume(v), veh/h	383	0	0				0	792	0	55	354	0
Grp Sat Flow(s),veh/h/ln	1739	0	1485				0	1781	1259	1640	1214	0
Q Serve(g_s), s	17.3	0.0	0.0				0.0	33.3	0.0	1.3	5.6	0.0
Cycle Q Clear(g_c), s	17.3	0.0	0.0				0.0	33.3	0.0	1.3	5.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	447	0					0	1318		412	1934	0
V/C Ratio(X)	0.86	0.00					0.00	0.60		0.13	0.18	0.00
Avail Cap(c_a), veh/h	848	0					0	1318		575	1934	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				0.00	1.00	0.00	0.84	0.84	0.00
Uniform Delay (d), s/veh	68.3	0.0	0.0				0.0	9.7	0.0	8.6	3.9	0.0
Incr Delay (d2), s/veh	4.9	0.0	0.0				0.0	2.0	0.0	0.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	0.0	0.0				0.0	12.2	0.0	0.4	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.2	0.0	0.0				0.0	11.8	0.0	8.7	4.0	0.0
LnGrp LOS	E	A					A	B		A	A	A
Approach Vol, veh/h		383	A					792	A		409	
Approach Delay, s/veh		73.2						11.8			4.7	
Approach LOS		E						B			A	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	9.1	124.4		26.5				133.5				
Change Period (Y+Rc), s	6.0	6.0		6.0				6.0				
Max Green Setting (Gmax), s	19.0	84.0		39.0				109.0				
Max Q Clear Time (g_c+I1), s	3.3	35.3		19.3				7.6				
Green Ext Time (p_c), s	0.1	16.3		1.3				6.3				
Intersection Summary												
HCM 6th Ctrl Delay			24.8									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

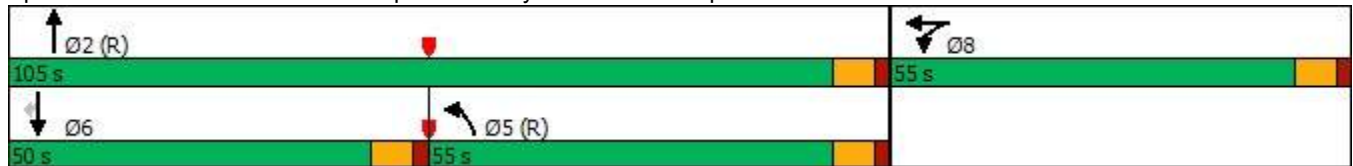
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	208	2	86	553	548	0	0	138	796
Future Volume (vph)	0	0	0	208	2	86	553	548	0	0	138	796
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	0		0
Storage Lanes	0		0	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30				30
Link Distance (ft)		893			705			778				878
Travel Time (s)		17.4			13.7			17.7				20.0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	57%	50%	7%	7%	6%	0%	0%	13%	1%
Shared Lane Traffic (%)				26%								
Turn Type				Split	NA		Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases												6
Detector Phase				8	8		5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	7.0			7.0	7.0
Minimum Split (s)				12.0	12.0		12.0	14.0			24.0	24.0
Total Split (s)				55.0	55.0		55.0	105.0			50.0	50.0
Total Split (%)				34.4%	34.4%		34.4%	65.6%			31.3%	31.3%
Yellow Time (s)				5.0	5.0		5.0	5.0			5.0	5.0
All-Red Time (s)				2.0	2.0		2.0	2.0			2.0	2.0
Lost Time Adjust (s)				0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)				7.0	7.0		7.0	7.0			7.0	7.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None		C-Max	C-Min			None	None

Intersection Summary




















Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 60 (38%), Referenced to phase 2:NBT and 5:NBL, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated

Splits and Phases: 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps























HCM 6th Signalized Intersection Summary
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	208	2	86	553	548	0	0	138	796
Future Volume (veh/h)	0	0	0	208	2	86	553	548	0	0	138	796
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No				No	
Adj Sat Flow, veh/h/ln				1055	1159	1055	1796	1811	0	0	1707	1885
Adj Flow Rate, veh/h				156	90	91	582	577	0	0	145	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				57	50	57	7	6	0	0	13	1
Cap, veh/h				202	106	107	513	2450	0	0	629	
Arrive On Green				0.20	0.20	0.20	0.10	0.23	0.00	0.00	0.37	0.00
Sat Flow, veh/h				1005	528	534	1711	3532	0	0	1707	1598
Grp Volume(v), veh/h				156	0	181	582	577	0	0	145	0
Grp Sat Flow(s),veh/h/ln				1005	0	1063	1711	1721	0	0	1707	1598
Q Serve(g_s), s				23.5	0.0	26.3	48.0	21.7	0.0	0.0	9.4	0.0
Cycle Q Clear(g_c), s				23.5	0.0	26.3	48.0	21.7	0.0	0.0	9.4	0.0
Prop In Lane				1.00		0.50	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				202	0	213	513	2450	0	0	629	
V/C Ratio(X)				0.77	0.00	0.85	1.13	0.24	0.00	0.00	0.23	
Avail Cap(c_a), veh/h				302	0	319	513	2450	0	0	629	
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	1.00	0.70	0.70	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				60.5	0.0	61.6	72.1	25.9	0.0	0.0	34.9	0.0
Incr Delay (d2), s/veh				20.3	0.0	27.6	76.7	0.2	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.1	0.0	8.7	33.2	10.1	0.0	0.0	4.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				80.8	0.0	89.2	148.7	26.1	0.0	0.0	35.2	0.0
LnGrp LOS				F	A	F	F	C	A	A	D	
Approach Vol, veh/h					337			1159			145	A
Approach Delay, s/veh					85.3			87.7			35.2	
Approach LOS					F			F			D	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		120.9			55.0	65.9		39.1				
Change Period (Y+Rc), s		7.0			7.0	7.0		7.0				
Max Green Setting (Gmax), s		98.0			48.0	43.0		48.0				
Max Q Clear Time (g_c+I1), s		23.7			50.0	11.4		28.3				
Green Ext Time (p_c), s		6.8			0.0	1.2		3.8				
Intersection Summary												
HCM 6th Ctrl Delay				82.6								
HCM 6th LOS				F								
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 3: Snoqualmie Pkwy & SE 99th St

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	27	0	0	1	68	542	3	1	938	10
Future Volume (vph)	2	0	27	0	0	1	68	542	3	1	938	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	0		0	0		0	125		0	25		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		989			884			878			457	
Travel Time (s)		27.0			24.1			20.0			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	50%	0%	0%	0%	0%	0%	3%	6%	0%	0%	2%	20%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕	↕		↕	↕
Traffic Vol, veh/h	2	0	27	0	0	1	68	542	3	1	938	10
Future Vol, veh/h	2	0	27	0	0	1	68	542	3	1	938	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	25	-	-
Veh in Median Storage, #-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	50	0	0	0	0	0	3	6	0	0	2	20
Mvmt Flow	2	0	28	0	0	1	72	571	3	1	987	11

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	1425	1713	499	1213	1717	287	998	0	0	574	0	0
Stage 1	995	995	-	717	717	-	-	-	-	-	-	-
Stage 2	430	718	-	496	1000	-	-	-	-	-	-	-
Critical Hdwy	8.5	6.5	6.9	7.5	6.5	6.9	4.16	-	-	4.1	-	-
Critical Hdwy Stg 1	7.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	4	4	3.3	3.5	4	3.3	2.23	-	-	2.2	-	-
Pot Cap-1 Maneuver	62	91	522	140	91	716	683	-	-	1009	-	-
Stage 1	187	325	-	391	437	-	-	-	-	-	-	-
Stage 2	462	436	-	529	324	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	57	81	522	122	81	716	683	-	-	1009	-	-
Mov Cap-2 Maneuver	57	81	-	122	81	-	-	-	-	-	-	-
Stage 1	167	325	-	350	391	-	-	-	-	-	-	-
Stage 2	413	390	-	500	324	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.9	10	1.2	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	683	-	-	334	716	1009	-
HCM Lane V/C Ratio	0.105	-	-	0.091	0.001	0.001	-
HCM Control Delay (s)	10.9	-	-	16.9	10	8.6	-
HCM Lane LOS	B	-	-	C	B	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.3	0	0	-

Lanes, Volumes, Timings
 4: Snoqualmie Pkwy & SE 96th St

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	32	16	496	15	31	870
Future Volume (vph)	32	16	496	15	31	870
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Link Speed (mph)	30		40			40
Link Distance (ft)	346		677			718
Travel Time (s)	7.9		11.5			12.2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	8%	0%	0%	2%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	32	16	496	15	31	870
Future Vol, veh/h	32	16	496	15	31	870
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #1	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	8	0	0	2
Mvmt Flow	33	16	506	15	32	888

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1022	261	0	0	521	0
Stage 1	514	-	-	-	-	-
Stage 2	508	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	235	744	-	-	1056	-
Stage 1	571	-	-	-	-	-
Stage 2	575	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	228	744	-	-	1056	-
Mov Cap-2 Maneuver	362	-	-	-	-	-
Stage 1	571	-	-	-	-	-
Stage 2	558	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.9	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	362	744	1056	-
HCM Lane V/C Ratio	-	-	0.09	0.022	0.03	-
HCM Control Delay (s)	-	-	15.9	9.9	8.5	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	0.1	-

Lanes, Volumes, Timings
5: Snoqualmie Pkwy & SE Jacobia St

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	5	108	97	6	76	36	545	15	21	720	15
Future Volume (vph)	30	5	108	97	6	76	36	545	15	21	720	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	250		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		653			474			718			617	
Travel Time (s)		17.8			12.9			12.2			10.5	
Confl. Peds. (#/hr)	2		1	1		2						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	13%	20%	0%	0%	17%	3%	9%	7%	0%	15%	4%	40%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	15.0		5.0	16.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		10.5	22.5		10.5	22.5	
Total Split (s)	25.0	25.0		40.0	40.0		15.5	65.5		15.5	65.5	
Total Split (%)	20.7%	20.7%		33.1%	33.1%		12.8%	54.1%		12.8%	54.1%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.5	4.5		4.5	4.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.5	5.5		5.5	5.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other

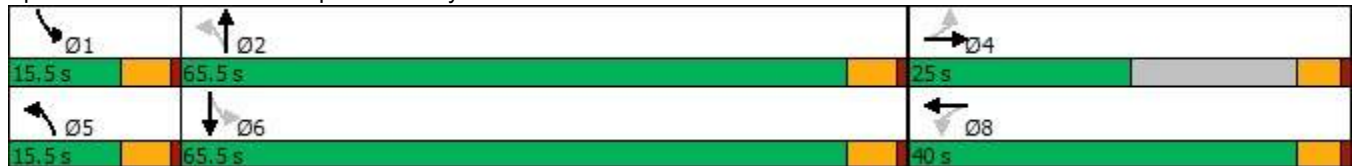
Cycle Length: 121

Actuated Cycle Length: 49.9

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Snoqualmie Pkwy & SE Jacobia St



HCM 6th Signalized Intersection Summary
5: Snoqualmie Pkwy & SE Jacobia St

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	5	108	97	6	76	36	545	15	21	720	15
Future Volume (veh/h)	30	5	108	97	6	76	36	545	15	21	720	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1604	1604	1900	1648	1648	1767	1796	1796	1678	1841	1841
Adj Flow Rate, veh/h	33	5	119	107	7	84	40	599	16	23	791	16
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	13	20	20	0	17	17	9	7	7	15	4	4
Cap, veh/h	355	12	294	340	24	292	364	1397	37	402	1387	28
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.04	0.41	0.41	0.03	0.40	0.40
Sat Flow, veh/h	1189	55	1309	1285	108	1301	1682	3396	91	1598	3506	71
Grp Volume(v), veh/h	33	0	124	107	0	91	40	301	314	23	395	412
Grp Sat Flow(s),veh/h/ln	1189	0	1364	1285	0	1410	1682	1706	1780	1598	1749	1828
Q Serve(g_s), s	1.1	0.0	3.7	3.7	0.0	2.5	0.6	6.0	6.0	0.4	8.4	8.4
Cycle Q Clear(g_c), s	3.7	0.0	3.7	7.4	0.0	2.5	0.6	6.0	6.0	0.4	8.4	8.4
Prop In Lane	1.00		0.96	1.00		0.92	1.00		0.05	1.00		0.04
Lane Grp Cap(c), veh/h	355	0	306	340	0	317	364	702	732	402	692	723
V/C Ratio(X)	0.09	0.00	0.40	0.31	0.00	0.29	0.11	0.43	0.43	0.06	0.57	0.57
Avail Cap(c_a), veh/h	588	0	574	997	0	1038	645	2153	2246	694	2207	2307
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.8	0.0	15.7	18.9	0.0	15.3	8.5	10.0	10.0	8.3	11.2	11.2
Incr Delay (d2), s/veh	0.1	0.0	0.9	0.5	0.0	0.5	0.0	0.6	0.6	0.0	1.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	1.1	1.1	0.0	0.8	0.2	1.7	1.8	0.1	2.6	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.9	0.0	16.6	19.4	0.0	15.8	8.5	10.6	10.6	8.3	12.3	12.2
LnGrp LOS	B	A	B	B	A	B	A	B	B	A	B	B
Approach Vol, veh/h		157			198			655			830	
Approach Delay, s/veh		16.7			17.7			10.5			12.1	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	25.1		15.7	7.6	24.3		15.7				
Change Period (Y+Rc), s	5.5	5.5		5.0	5.5	5.5		5.0				
Max Green Setting (Gmax), s	10.0	60.0		20.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	2.4	8.0		5.7	2.6	10.4		9.4				
Green Ext Time (p_c), s	0.0	5.9		0.7	0.0	8.4		0.9				
Intersection Summary												
HCM 6th Ctrl Delay				12.5								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
6: Snoqualmie Pkwy & SE Swenson Dr

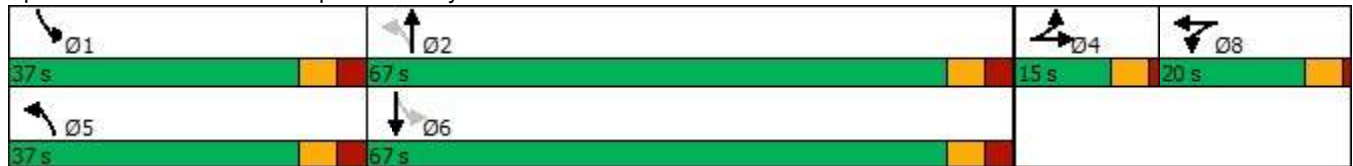
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	12	24	45	16	69	46	590	19	39	566	65
Future Volume (vph)	53	12	24	45	16	69	46	590	19	39	566	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	275		0	300		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			No
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		456			320			2254			367	
Travel Time (s)		10.4			7.3			38.4			6.3	
Confl. Peds. (#/hr)			1			45	1		8	8		1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	6%	17%	4%	0%	6%	3%	4%	9%	5%	0%	7%	5%
Shared Lane Traffic (%)												
Turn Type	Split	NA		Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		10.0	10.0		5.0	12.0		5.0	12.0	
Minimum Split (s)	38.0	38.0		38.0	38.0		12.0	28.0		12.0	28.0	
Total Split (s)	15.0	15.0		20.0	20.0		37.0	67.0		37.0	67.0	
Total Split (%)	10.8%	10.8%		14.4%	14.4%		26.6%	48.2%		26.6%	48.2%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		7.0	7.0		7.0	7.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary























Area Type: Other
 Cycle Length: 139
 Actuated Cycle Length: 83.8
 Natural Cycle: 120
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Snoqualmie Pkwy & SE Swenson Dr



HCM 6th Signalized Intersection Summary
6: Snoqualmie Pkwy & SE Swenson Dr

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	12	24	45	16	69	46	590	19	39	566	65
Future Volume (veh/h)	53	12	24	45	16	69	46	590	19	39	566	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.93	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1648	1648	1900	1811	1811	1841	1767	1767	1900	1796	1796
Adj Flow Rate, veh/h	60	13	27	51	18	78	52	663	21	44	636	73
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	17	17	0	6	6	4	9	9	0	7	7
Cap, veh/h	146	40	84	344	53	230	257	864	27	264	786	90
Arrive On Green	0.08	0.08	0.08	0.19	0.19	0.19	0.05	0.26	0.26	0.04	0.26	0.26
Sat Flow, veh/h	1725	477	990	1810	278	1207	1753	3319	105	1810	3080	353
Grp Volume(v), veh/h	60	0	40	51	0	96	52	335	349	44	352	357
Grp Sat Flow(s),veh/h/ln	1725	0	1467	1810	0	1485	1753	1678	1746	1810	1706	1726
Q Serve(g_s), s	1.9	0.0	1.5	1.3	0.0	3.2	1.2	10.5	10.5	1.0	11.0	11.1
Cycle Q Clear(g_c), s	1.9	0.0	1.5	1.3	0.0	3.2	1.2	10.5	10.5	1.0	11.0	11.1
Prop In Lane	1.00		0.68	1.00		0.81	1.00		0.06	1.00		0.20
Lane Grp Cap(c), veh/h	146	0	124	344	0	283	257	437	455	264	435	440
V/C Ratio(X)	0.41	0.00	0.32	0.15	0.00	0.34	0.20	0.77	0.77	0.17	0.81	0.81
Avail Cap(c_a), veh/h	303	0	257	476	0	391	1093	1766	1837	1136	1796	1817
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.8	0.0	24.6	19.2	0.0	20.0	15.4	19.5	19.5	15.3	19.9	19.9
Incr Delay (d2), s/veh	0.7	0.0	0.6	0.1	0.0	0.3	0.1	1.1	1.0	0.1	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.5	0.5	0.0	1.0	0.4	3.6	3.8	0.4	3.9	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.5	0.0	25.1	19.3	0.0	20.2	15.5	20.6	20.5	15.4	21.3	21.3
LnGrp LOS	C	A	C	B	A	C	B	C	C	B	C	C
Approach Vol, veh/h		100			147			736			753	
Approach Delay, s/veh		25.3			19.9			20.2			21.0	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	21.8		9.8	9.8	21.5		15.8				
Change Period (Y+Rc), s	7.0	7.0		5.0	7.0	7.0		5.0				
Max Green Setting (Gmax), s	30.0	60.0		10.0	30.0	60.0		15.0				
Max Q Clear Time (g_c+I1), s	3.0	12.5		3.9	3.2	13.1		5.2				
Green Ext Time (p_c), s	0.0	0.5		0.0	0.0	0.6		0.1				
Intersection Summary												
HCM 6th Ctrl Delay	20.8											
HCM 6th LOS	C											
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕	↗	↖	↕	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	90	398	197	52	376	22	103	12	36	48	41	306
Future Volume (vph)	90	398	197	52	376	22	103	12	36	48	41	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	175		0	0		150	0		100
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1285			1065			585			583	
Travel Time (s)		21.9			18.2			16.0			15.9	
Confl. Peds. (#/hr)												3
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	10%	11%	3%	2%	6%	18%	6%	0%	6%	6%	0%	4%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4			8					2			6
Detector Phase	7	4		3	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	35.3		9.5	30.3		36.5	36.5	36.5	36.5	36.5	36.5
Total Split (s)	34.5	55.3		14.5	55.3		44.5	44.5	44.5	44.5	44.5	44.5
Total Split (%)	19.3%	30.9%		8.1%	30.9%		24.9%	24.9%	24.9%	24.9%	24.9%	24.9%
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.3		4.5	5.3			4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None	None	None	None	None

Intersection Summary

Area Type: Other

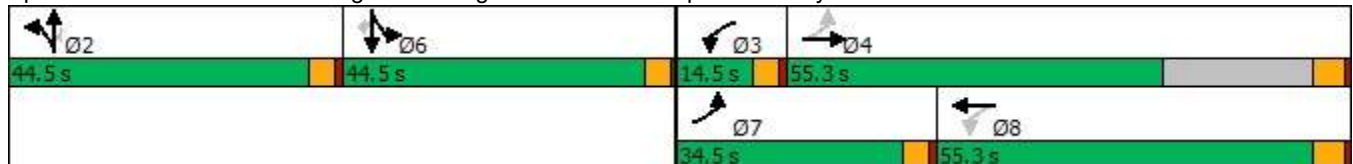
Cycle Length: 178.8

Actuated Cycle Length: 79.6

Natural Cycle: 120

Control Type: Actuated-Uncoordinated

Splits and Phases: 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	398	197	52	376	22	103	12	36	48	41	306
Future Volume (veh/h)	90	398	197	52	376	22	103	12	36	48	41	306
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1737	1737	1870	1811	1811	1900	1900	1811	1900	1900	1841
Adj Flow Rate, veh/h	103	457	226	60	432	25	118	14	0	55	47	234
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	10	11	11	2	6	6	0	0	6	0	0	4
Cap, veh/h	415	705	346	322	1035	60	169	20	159	205	175	319
Arrive On Green	0.07	0.33	0.33	0.05	0.31	0.31	0.10	0.10	0.00	0.21	0.21	0.21
Sat Flow, veh/h	1668	2145	1053	1781	3306	191	1626	193	1535	998	853	1553
Grp Volume(v), veh/h	103	351	332	60	224	233	132	0	0	102	0	234
Grp Sat Flow(s),veh/h/ln	1668	1650	1547	1781	1721	1777	1819	0	1535	1850	0	1553
Q Serve(g_s), s	2.5	11.0	11.1	1.3	6.2	6.3	4.3	0.0	0.0	2.8	0.0	8.6
Cycle Q Clear(g_c), s	2.5	11.0	11.1	1.3	6.2	6.3	4.3	0.0	0.0	2.8	0.0	8.6
Prop In Lane	1.00		0.68	1.00		0.11	0.89		1.00	0.54		1.00
Lane Grp Cap(c), veh/h	415	542	508	322	539	556	189	0	159	380	0	319
V/C Ratio(X)	0.25	0.65	0.65	0.19	0.42	0.42	0.70	0.00	0.00	0.27	0.00	0.73
Avail Cap(c_a), veh/h	1126	1359	1274	522	1417	1463	1198	0	1011	1219	0	1023
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.8	17.4	17.4	13.6	16.5	16.5	26.3	0.0	0.0	20.3	0.0	22.6
Incr Delay (d2), s/veh	0.3	1.9	2.0	0.3	0.7	0.7	4.6	0.0	0.0	0.4	0.0	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.8	3.7	0.5	2.2	2.3	2.0	0.0	0.0	1.2	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.1	19.2	19.5	13.9	17.2	17.2	30.9	0.0	0.0	20.6	0.0	25.8
LnGrp LOS	B	B	B	B	B	B	C	A	A	C	A	C
Approach Vol, veh/h		786			517			132				336
Approach Delay, s/veh		18.5			16.8			30.9				24.2
Approach LOS		B			B			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		10.8	7.7	25.2		17.0	8.6	24.3				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		40.0	10.0	50.0		40.0	30.0	50.0				
Max Q Clear Time (g_c+I1), s		6.3	3.3	13.1		10.6	4.5	8.3				
Green Ext Time (p_c), s		0.8	0.0	6.8		1.5	0.2	4.1				
Intersection Summary												
HCM 6th Ctrl Delay				20.0								
HCM 6th LOS				C								

Lanes, Volumes, Timings
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

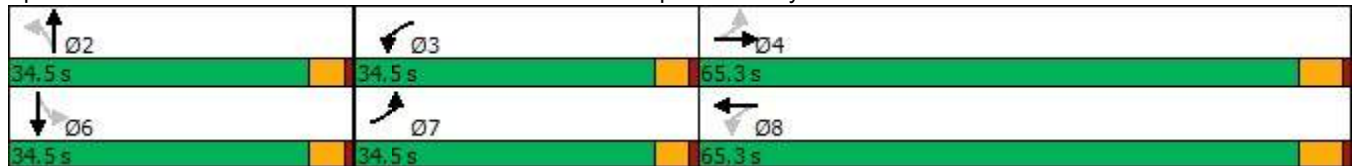
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	312	79	127	396	46	9	6	17	59	26	91
Future Volume (vph)	98	312	79	127	396	46	9	6	17	59	26	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	275		0	275		0	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1065			1064			511			626	
Travel Time (s)		18.2			18.1			13.9			17.1	
Confl. Peds. (#/hr)	3		1	1		3	2		1	1		2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	13%	1%	0%	6%	0%	11%	0%	0%	5%	4%	2%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2				6
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		2	2		6		6
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		5.0		5.0
Minimum Split (s)	9.5	34.3		9.5	34.3		36.5	36.5		36.5		36.5
Total Split (s)	34.5	65.3		34.5	65.3		34.5	34.5		34.5		34.5
Total Split (%)	25.7%	48.6%		25.7%	48.6%		25.7%	25.7%		25.7%		25.7%
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5		3.5		3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0		1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Total Lost Time (s)	4.5	5.3		4.5	5.3		4.5	4.5		4.5		4.5
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None		None

Intersection Summary

Area Type: Other
 Cycle Length: 134.3
 Actuated Cycle Length: 50
 Natural Cycle: 85
 Control Type: Actuated-Uncoordinated

Splits and Phases: 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	312	79	127	396	46	9	6	17	59	26	91
Future Volume (veh/h)	98	312	79	127	396	46	9	6	17	59	26	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1707	1900	1811	1811	1737	1900	1900	1826	1841	1841
Adj Flow Rate, veh/h	110	351	89	143	445	52	10	7	19	66	29	102
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	13	13	0	6	6	11	0	0	5	4	4
Cap, veh/h	605	989	248	639	1231	143	273	69	187	370	54	192
Arrive On Green	0.09	0.39	0.39	0.10	0.40	0.40	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	2568	643	1810	3104	361	1166	451	1223	1347	356	1253
Grp Volume(v), veh/h	110	220	220	143	246	251	10	0	26	66	0	131
Grp Sat Flow(s),veh/h/ln	1781	1622	1589	1810	1721	1744	1166	0	1674	1347	0	1609
Q Serve(g_s), s	1.4	3.8	3.9	1.7	4.0	4.0	0.3	0.0	0.5	1.8	0.0	3.0
Cycle Q Clear(g_c), s	1.4	3.8	3.9	1.7	4.0	4.0	3.3	0.0	0.5	2.3	0.0	3.0
Prop In Lane	1.00		0.40	1.00		0.21	1.00		0.73	1.00		0.78
Lane Grp Cap(c), veh/h	605	625	612	639	683	692	273	0	256	370	0	246
V/C Ratio(X)	0.18	0.35	0.36	0.22	0.36	0.36	0.04	0.00	0.10	0.18	0.00	0.53
Avail Cap(c_a), veh/h	1799	2461	2411	1831	2611	2647	979	0	1270	1186	0	1221
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.0	8.6	8.7	5.9	8.4	8.4	17.0	0.0	14.4	15.4	0.0	15.4
Incr Delay (d2), s/veh	0.1	0.5	0.5	0.2	0.5	0.5	0.1	0.0	0.2	0.2	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.0	1.0	0.4	1.0	1.1	0.1	0.0	0.2	0.5	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.2	9.1	9.2	6.1	8.9	8.9	17.0	0.0	14.6	15.6	0.0	17.2
LnGrp LOS	A	A	A	A	A	A	B	A	B	B	A	B
Approach Vol, veh/h		550			640			36				197
Approach Delay, s/veh		8.6			8.2			15.3				16.7
Approach LOS		A			A			B				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		10.5	8.5	20.5		10.5	8.0	21.0				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		30.0	30.0	60.0		30.0	30.0	60.0				
Max Q Clear Time (g_c+I1), s		5.3	3.7	5.9		5.0	3.4	6.0				
Green Ext Time (p_c), s		0.1	0.4	4.1		1.0	0.3	4.6				
Intersection Summary												
HCM 6th Ctrl Delay			9.7									
HCM 6th LOS			A									
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
 9: Snoqualmie Pkwy & Fairway Ave SE

03/06/2020

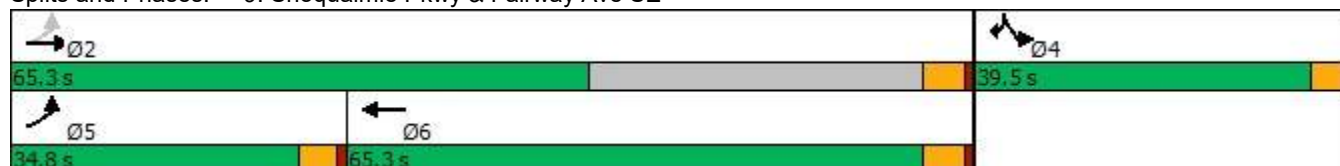


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	30	382	378	108	243	207
Future Volume (vph)	30	382	378	108	243	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	325			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		25	
Link Distance (ft)		1064	278		478	
Travel Time (s)		18.1	4.7		13.0	
Confl. Peds. (#/hr)	2			2		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	8%	9%	3%	11%	3%	1%
Shared Lane Traffic (%)						
Turn Type	pm+pt	NA	NA		Prot	Prot
Protected Phases	5	2	6		4	4
Permitted Phases	2					
Detector Phase	5	2	6		4	4
Switch Phase						
Minimum Initial (s)	5.0	12.0	12.0		5.0	5.0
Minimum Split (s)	9.8	23.3	26.3		36.5	36.5
Total Split (s)	34.8	65.3	65.3		39.5	39.5
Total Split (%)	24.9%	46.8%	46.8%		28.3%	28.3%
Yellow Time (s)	3.8	4.3	4.3		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.8	5.3	5.3		4.5	4.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	None	None		None	None

Intersection Summary

Area Type: Other
 Cycle Length: 139.6
 Actuated Cycle Length: 43.9
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated

Splits and Phases: 9: Snoqualmie Pkwy & Fairway Ave SE



HCM 6th Signalized Intersection Summary
 9: Snoqualmie Pkwy & Fairway Ave SE























03/06/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	30	382	378	108	243	207
Future Volume (veh/h)	30	382	378	108	243	207
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1767	1856	1856	1856	1885
Adj Flow Rate, veh/h	33	424	420	120	270	193
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	9	3	3	3	1
Cap, veh/h	431	1676	892	252	411	372
Arrive On Green	0.04	0.50	0.33	0.33	0.23	0.23
Sat Flow, veh/h	1697	3445	2803	767	1767	1598
Grp Volume(v), veh/h	33	424	272	268	270	193
Grp Sat Flow(s),veh/h/ln	1697	1678	1763	1715	1767	1598
Q Serve(g_s), s	0.4	2.6	4.5	4.6	5.1	3.9
Cycle Q Clear(g_c), s	0.4	2.6	4.5	4.6	5.1	3.9
Prop In Lane	1.00			0.45	1.00	1.00
Lane Grp Cap(c), veh/h	431	1676	580	564	411	372
V/C Ratio(X)	0.08	0.25	0.47	0.48	0.66	0.52
Avail Cap(c_a), veh/h	1757	5505	2891	2812	1691	1528
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.8	5.2	9.7	9.8	12.7	12.2
Incr Delay (d2), s/veh	0.1	0.1	0.6	0.6	1.8	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.4	1.2	1.2	1.8	3.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	6.9	5.3	10.3	10.4	14.5	13.4
LnGrp LOS	A	A	B	B	B	B
Approach Vol, veh/h		457	540		463	
Approach Delay, s/veh		5.4	10.4		14.0	
Approach LOS		A	B		B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		23.6		13.0	6.2	17.3
Change Period (Y+Rc), s		5.3		4.5	* 4.8	5.3
Max Green Setting (Gmax), s		60.0		35.0	* 30	60.0
Max Q Clear Time (g_c+I1), s		4.6		7.1	2.4	6.6
Green Ext Time (p_c), s		2.9		1.5	0.1	3.4
Intersection Summary						
HCM 6th Ctrl Delay			10.0			
HCM 6th LOS			A			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

Lanes, Volumes, Timings
 10: Fisher Ave SE & Snoqualmie Pkwy

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (vph)	7	512	6	3	388	18	33	1	8	24	3	30
Future Volume (vph)	7	512	6	3	388	18	33	1	8	24	3	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		458			1686			518			363	
Travel Time (s)		7.8			28.7			14.1			9.9	
Confl. Peds. (#/hr)	2		1	2		3	1		2	3		2
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	0%	7%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕			↕			↕	
Traffic Vol, veh/h	7	512	6	3	388	18	33	1	8	24	3	30
Future Vol, veh/h	7	512	6	3	388	18	33	1	8	24	3	30
Conflicting Peds, #/hr	2	0	1	2	0	3	1	0	2	3	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #-	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	7	0	0	4	0	0	0	0	0	0	0
Mvmt Flow	9	656	8	4	497	23	42	1	10	31	4	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	523	0	0	666	0	0	941	1211	337	870	1204	265
Stage 1	-	-	-	-	-	-	680	680	-	520	520	-
Stage 2	-	-	-	-	-	-	261	531	-	350	684	-
Critical Hdwy	4.1	-	-	4.1	-	-	9.5	8.5	7.9	9.5	8.5	7.9
Critical Hdwy Stg 1	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1054	-	-	933	-	-	131	94	605	153	95	687
Stage 1	-	-	-	-	-	-	282	311	-	384	401	-
Stage 2	-	-	-	-	-	-	629	394	-	531	309	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1051	-	-	931	-	-	118	92	602	147	93	684
Mov Cap-2 Maneuver	-	-	-	-	-	-	118	92	-	147	93	-
Stage 1	-	-	-	-	-	-	279	308	-	380	398	-
Stage 2	-	-	-	-	-	-	584	391	-	514	306	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			46.9			26.7		
HCM LOS	E			E			E			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	138	1051	-	-	931	-	-	238
HCM Lane V/C Ratio	0.39	0.009	-	-	0.004	-	-	0.307
HCM Control Delay (s)	46.9	8.5	-	-	8.9	-	-	26.7
HCM Lane LOS	E	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	1.7	0	-	-	0	-	-	1.3

Lanes, Volumes, Timings
 11: Orchard Ave SE & Snoqualmie Pkwy

03/06/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Traffic Volume (vph)	651	9	15	408	24	38
Future Volume (vph)	651	9	15	408	24	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	225		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	1686			1131	557	
Travel Time (s)	28.7			19.3	15.2	
Confl. Peds. (#/hr)		3	1		3	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	7%	11%	7%	6%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Vol, veh/h	651	9	15	408	24	38
Future Vol, veh/h	651	9	15	408	24	38
Conflicting Peds, #/hr	0	3	1	0	3	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	225	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	7	11	7	6	0	5
Mvmt Flow	748	10	17	469	28	44

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	761	0	1028
Stage 1	-	-	-	-	756
Stage 2	-	-	-	-	272
Critical Hdwy	-	-	4.24	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.27	-	3.5
Pot Cap-1 Maneuver	-	-	815	-	233
Stage 1	-	-	-	-	430
Stage 2	-	-	-	-	755
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	813	-	227
Mov Cap-2 Maneuver	-	-	-	-	227
Stage 1	-	-	-	-	429
Stage 2	-	-	-	-	737

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	17.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	368	-	-	813	-
HCM Lane V/C Ratio	0.194	-	-	0.021	-
HCM Control Delay (s)	17.1	-	-	9.5	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.7	-	-	0.1	-

Lanes, Volumes, Timings
 12: Snoqualmie Pkwy & Allman AveSE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	689	410	4	7	9
Future Volume (vph)	2	689	410	4	7	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		40	40		25	
Link Distance (ft)		679	1187		393	
Travel Time (s)		11.6	20.2		10.7	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	7%	5%	0%	0%	0%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑		↘	
Traffic Vol, veh/h	2	689	410	4	7	9
Future Vol, veh/h	2	689	410	4	7	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #-	0	0	0	0	0	0
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	7	5	0	0	0
Mvmt Flow	2	792	471	5	8	10

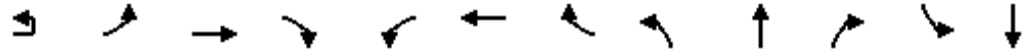
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	476	0	0	874	238
Stage 1	-	-	-	474	-
Stage 2	-	-	-	400	-
Critical Hdwy	4.1	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	3.5	3.3
Pot Cap-1 Maneuver	1097	-	-	293	769
Stage 1	-	-	-	598	-
Stage 2	-	-	-	652	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1097	-	-	292	769
Mov Cap-2 Maneuver	-	-	-	292	-
Stage 1	-	-	-	597	-
Stage 2	-	-	-	652	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1097	-	-	-	448
HCM Lane V/C Ratio	0.002	-	-	-	0.041
HCM Control Delay (s)	8.3	-	-	-	13.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Lanes, Volumes, Timings
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↓		↑↑		↖	↑↑			↑↓			↕
Traffic Volume (vph)	0	0	677	26	24	395	0	29	0	17	0	0
Future Volume (vph)	0	0	677	26	24	395	0	29	0	17	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0		0	200		0	0		0	0	
Storage Lanes		1		0	1		0	0		0	0	
Taper Length (ft)		25			25			25			25	
Right Turn on Red				Yes			Yes			Yes		
Link Speed (mph)			40			40			25			25
Link Distance (ft)			1187			833			535			291
Travel Time (s)			20.2			14.2			14.6			7.9
Confl. Peds. (#/hr)		2		1	1		2	1				
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	0%	7%	4%	0%	6%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt		NA		pm+pt	NA		Perm	NA			
Protected Phases	5		2		1	6			8			4
Permitted Phases	2				6			8			4	
Detector Phase	5		2		1	6		8	8		4	4
Switch Phase												
Minimum Initial (s)	5.0		15.0		5.0	14.0		5.0	5.0		30.0	30.0
Minimum Split (s)	10.0		20.0		10.0	29.0		36.0	36.0		36.0	36.0
Total Split (s)	35.0		65.0		35.0	65.0		36.0	36.0		36.0	36.0
Total Split (%)	25.7%		47.8%		25.7%	47.8%		26.5%	26.5%		26.5%	26.5%
Yellow Time (s)	4.0		4.0		4.0	4.0		5.0	5.0		5.0	5.0
All-Red Time (s)	1.0		1.0		1.0	1.0		1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0		5.0		5.0	5.0		6.0	6.0		6.0	6.0
Lead/Lag	Lead		Lag		Lead	Lag						
Lead-Lag Optimize?	Yes		Yes		Yes	Yes						
Recall Mode	Min		Min		None	None		None	None		None	None

Intersection Summary

Area Type: Other

Cycle Length: 136

Actuated Cycle Length: 40.3

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Splits and Phases: 13: Better Way SE & Snoqualmie Pkwy

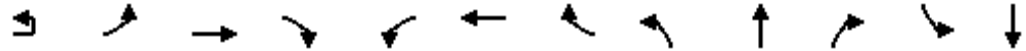




Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	0
Future Volume (vph)	0
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Right Turn on Red	Yes
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	1
Peak Hour Factor	0.85
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	
Intersection Summary	

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↰		↕		↱	↕			↕			↕
Traffic Volume (veh/h)	0	0	677	26	24	395	0	29	0	17	0	0
Future Volume (veh/h)	0	0	677	26	24	395	0	29	0	17	0	0
Initial Q (Qb), veh			0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach			No			No			No			No
Adj Sat Flow, veh/h/ln		0	1796	1796	1900	1811	1811	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		0	796	31	28	465	0	34	0	20	0	0
Peak Hour Factor		0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %		0	7	7	0	6	6	0	0	0	0	0
Cap, veh/h		0	1464	57	334	2123	0	230	0	35	0	119
Arrive On Green		0.00	0.44	0.44	0.03	0.62	0.00	0.06	0.00	0.06	0.00	0.00
Sat Flow, veh/h		0	3438	130	1810	3532	0	940	0	553	0	1900
Grp Volume(v), veh/h		0	406	421	28	465	0	54	0	0	0	0
Grp Sat Flow(s),veh/h/ln		0	1706	1773	1810	1721	0	1493	0	0	0	1900
Q Serve(g_s), s		0.0	6.0	6.0	0.2	2.1	0.0	1.2	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s		0.0	6.0	6.0	0.2	2.1	0.0	1.2	0.0	0.0	0.0	0.0
Prop In Lane		0.00		0.07	1.00		0.00	0.63		0.37	0.00	
Lane Grp Cap(c), veh/h		0	746	775	334	2123	0	264	0	0	0	119
V/C Ratio(X)		0.00	0.54	0.54	0.08	0.22	0.00	0.20	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h		0	2983	3099	1854	6016	0	1476	0	0	0	1661
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh		0.0	7.1	7.1	7.0	2.9	0.0	15.6	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh		0.0	0.6	0.6	0.1	0.1	0.0	0.4	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.0	1.2	1.3	0.1	0.1	0.0	0.4	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		0.0	7.8	7.7	7.2	3.0	0.0	16.0	0.0	0.0	0.0	0.0
LnGrp LOS		A	A	A	A	A	A	B	A	A	A	A
Approach Vol, veh/h			827			493			54			0
Approach Delay, s/veh			7.7			3.2			16.0			0.0
Approach LOS			A			A			B			
Timer - Assigned Phs	1	2		4		6			8			
Phs Duration (G+Y+Rc), s	6.2	20.0		8.1		26.2			8.1			
Change Period (Y+Rc), s	5.0	5.0		6.0		5.0			6.0			
Max Green Setting (Gmax), s	30.0	60.0		30.0		60.0			30.0			
Max Q Clear Time (g_c+I1), s	2.2	8.0		0.0		4.1			3.2			
Green Ext Time (p_c), s	0.0	5.7		0.0		3.2			0.2			

Intersection Summary

HCM 6th Ctrl Delay	6.4
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
 User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	0
Future Volume (veh/h)	0
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.85
Percent Heavy Veh, %	0
Cap, veh/h	0
Arrive On Green	0.00
Sat Flow, veh/h	0
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	0
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	0.00
Lane Grp Cap(c), veh/h	0
V/C Ratio(X)	0.00
Avail Cap(c_a), veh/h	0
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Lanes, Volumes, Timings
 14: Trail Access Road & Snoqualmie Pkwy

03/06/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (vph)	573	1	3	367	1	1
Future Volume (vph)	573	1	3	367	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	646			700	301	
Travel Time (s)	11.0			11.9	8.2	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	7%	0%	0%	5%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑↑	
Traffic Vol, veh/h	573	1	3	367	1	1
Future Vol, veh/h	573	1	3	367	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	7	0	0	5	0	0
Mvmt Flow	735	1	4	471	1	1

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	736	0	980
Stage 1	-	-	-	-	736
Stage 2	-	-	-	-	244
Critical Hdwy	-	-	4.1	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	879	-	251
Stage 1	-	-	-	-	440
Stage 2	-	-	-	-	780
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	879	-	250
Mov Cap-2 Maneuver	-	-	-	-	250
Stage 1	-	-	-	-	440
Stage 2	-	-	-	-	776

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	15.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	359	-	-	879	-
HCM Lane V/C Ratio	0.007	-	-	0.004	-
HCM Control Delay (s)	15.1	-	-	9.1	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
15: SR 202 & Snoqualmie Pkwy

03/06/2020

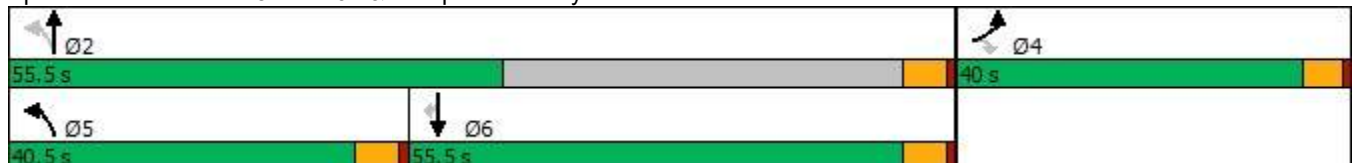


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	258	322	194	169	232	172
Future Volume (vph)	258	322	194	169	232	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	300			300
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Right Turn on Red		Yes				Yes
Link Speed (mph)	40			45	45	
Link Distance (ft)	700			1127	949	
Travel Time (s)	11.9			17.1	14.4	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	11%	3%	3%	15%	9%	6%
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	5.0	7.0	7.0	7.0
Minimum Split (s)	29.0	29.0	10.5	12.5	35.5	35.5
Total Split (s)	40.0	40.0	40.5	55.5	55.5	55.5
Total Split (%)	29.4%	29.4%	29.8%	40.8%	40.8%	40.8%
Yellow Time (s)	4.0	4.0	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	Min	Min	Min

Intersection Summary













Area Type: Other
 Cycle Length: 136
 Actuated Cycle Length: 73.3
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated

Splits and Phases: 15: SR 202 & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 15: SR 202 & Snoqualmie Pkwy

03/06/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	258	322	194	169	232	172
Future Volume (veh/h)	258	322	194	169	232	172
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00			1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1737	1856	1856	1678	1767	1811
Adj Flow Rate, veh/h	322	100	242	211	290	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	11	3	3	15	9	6
Cap, veh/h	420	399	511	847	413	359
Arrive On Green	0.25	0.25	0.14	0.50	0.23	0.00
Sat Flow, veh/h	1654	1572	1767	1678	1767	1535
Grp Volume(v), veh/h	322	100	242	211	290	0
Grp Sat Flow(s),veh/h/ln	1654	1572	1767	1678	1767	1535
Q Serve(g_s), s	7.8	2.2	4.0	3.1	6.5	0.0
Cycle Q Clear(g_c), s	7.8	2.2	4.0	3.1	6.5	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	420	399	511	847	413	359
V/C Ratio(X)	0.77	0.25	0.47	0.25	0.70	0.00
Avail Cap(c_a), veh/h	1330	1265	1677	1927	2029	1763
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.0	12.9	9.4	6.1	15.3	0.0
Incr Delay (d2), s/veh	3.0	0.3	0.7	0.2	2.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	1.0	0.6	2.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.0	13.3	10.1	6.3	17.5	0.0
LnGrp LOS	B	B	B	A	B	A
Approach Vol, veh/h	422			453	290	
Approach Delay, s/veh	16.9			8.3	17.5	
Approach LOS	B			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		27.5		16.1	11.8	15.7
Change Period (Y+Rc), s		5.5		5.0	5.5	5.5
Max Green Setting (Gmax), s		50.0		35.0	35.0	50.0
Max Q Clear Time (g_c+I1), s		5.1		9.8	6.0	8.5
Green Ext Time (p_c), s		1.2		1.3	0.7	1.6
Intersection Summary						
HCM 6th Ctrl Delay			13.7			
HCM 6th LOS			B			

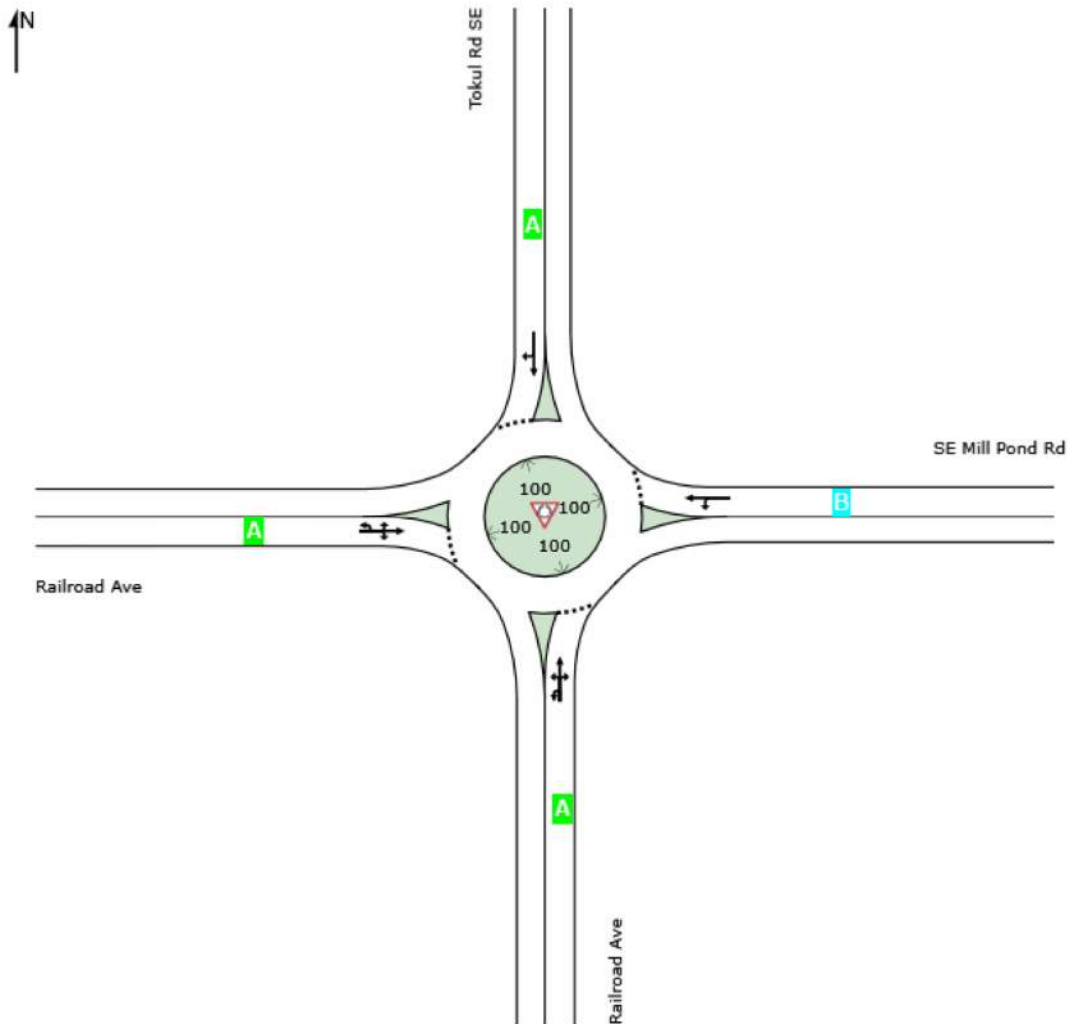
LANE LEVEL OF SERVICE

Lane Level of Service

Site: 16 [2018 Existing - AM Peak Hour]

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	B	A	A	A



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Signalised Intersections.
 Lane LOS values are based on average delay per lane.
 Intersection and Approach LOS values are based on average delay for all lanes.
 SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

LANE SUMMARY

 Site: 16 [2018 Existing - AM Peak Hour]

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

Lane Use and Performance													
	Demand Flows		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Veh	Queue Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
	Total veh/h	HV %											
South: Railroad Ave													
Lane 1 ^d	484	12.4	1082	0.447	100	9.2	LOS A	2.9	80.8	Full	1600	0.0	0.0
Approach	484	12.4		0.447		9.2	LOS A	2.9	80.8				
East: SE Mill Pond Rd													
Lane 1 ^d	80	48.5	531	0.151	100	11.2	LOS B	0.7	24.0	Full	1600	0.0	0.0
Approach	80	48.5		0.151		11.2	LOS B	0.7	24.0				
North: Tokul Rd SE													
Lane 1 ^d	25	0.0	852	0.029	100	6.6	LOS A	0.1	3.7	Full	1600	0.0	0.0
Approach	25	0.0		0.029		6.6	LOS A	0.1	3.7				
West: Railroad Ave													
Lane 1 ^d	532	6.6	1188	0.448	100	4.4	LOS A	3.2	84.6	Full	1600	0.0	0.0
Approach	532	6.6		0.448		4.4	LOS A	3.2	84.6				
Intersection	1120	12.0		0.448		7.0	LOS A	3.2	84.6				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

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Organisation: TENW | Processed: Tuesday, March 3, 2020 9:33:43 AM

Project: T:\Active Projects\Snoqualmie Mill - 5584\Planning - 5584\LOS\Snoqualmie Mill - Railroad Ave & Tokul Rd & SE Mill Pond Rd Roundabout.sip8



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	87	4	17	27	3	21
Future Volume (vph)	87	4	17	27	3	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45		35			35
Link Distance (ft)	458		1466			541
Travel Time (s)	6.9		28.6			10.5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	12%	4%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	5.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	87	4	17	27	3	21
Future Vol, veh/h	87	4	17	27	3	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	0	12	4	0	5
Mvmt Flow	92	4	18	28	3	22

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	60	32	0	0	46	0
Stage 1	32	-	-	-	-	-
Stage 2	28	-	-	-	-	-
Critical Hdwy	6.42	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	947	1048	-	-	1575	-
Stage 1	991	-	-	-	-	-
Stage 2	995	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	945	1048	-	-	1575	-
Mov Cap-2 Maneuver	945	-	-	-	-	-
Stage 1	991	-	-	-	-	-
Stage 2	993	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	949	1575
HCM Lane V/C Ratio	-	-	0.101	0.002
HCM Control Delay (s)	-	-	9.2	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	8	33	86	23	12	63
Future Volume (vph)	8	33	86	23	12	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		40	
Link Distance (ft)		502	1466		916	
Travel Time (s)		9.8	28.6		15.6	
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Heavy Vehicles (%)	13%	6%	2%	4%	8%	3%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	8	33	86	23	12	63
Future Vol, veh/h	8	33	86	23	12	63
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	69	69	69	69	69	69
Heavy Vehicles, %	13	6	2	4	8	3
Mvmt Flow	12	48	125	33	17	91
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	158	0	-	0	214	142
Stage 1	-	-	-	-	142	-
Stage 2	-	-	-	-	72	-
Critical Hdwy	4.23	-	-	-	6.48	6.23
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	2.317	-	-	-	3.572	3.327
Pot Cap-1 Maneuver	1357	-	-	-	761	903
Stage 1	-	-	-	-	870	-
Stage 2	-	-	-	-	936	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1357	-	-	-	754	903
Mov Cap-2 Maneuver	-	-	-	-	754	-
Stage 1	-	-	-	-	862	-
Stage 2	-	-	-	-	936	-
Approach	EB	WB	SB			
HCM Control Delay, s	1.5	0	9.7			
HCM LOS			A			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1357	-	-	-	-	875
HCM Lane V/C Ratio	0.009	-	-	-	-	0.124
HCM Control Delay (s)	7.7	0	-	-	-	9.7
HCM Lane LOS	A	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-	0.4

Lanes, Volumes, Timings
19: Meadowbrook Bridge

03/03/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	41	0	0	149
Future Volume (vph)	0	0	41	0	0	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			30
Link Distance (ft)	150		304			249
Travel Time (s)	3.4		6.9			5.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	7%	0%	0%	3%
Shared Lane Traffic (%)						
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Detector Phase			2			6
Switch Phase						
Minimum Initial (s)			5.0			5.0
Minimum Split (s)			19.0			19.0
Total Split (s)			44.0			44.0
Total Split (%)			50.0%			50.0%
Yellow Time (s)			4.0			4.0
All-Red Time (s)			10.0			10.0
Lost Time Adjust (s)			0.0			0.0
Total Lost Time (s)			14.0			14.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode			None			None

Intersection Summary

Area Type: Other

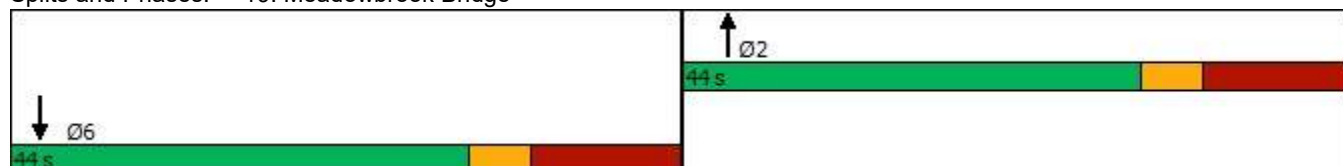
Cycle Length: 88

Actuated Cycle Length: 29.5

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Splits and Phases: 19: Meadowbrook Bridge



HCM Signalized Intersection Capacity Analysis
 19: Meadowbrook Bridge

03/03/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	41	0	0	149
Future Volume (vph)	0	0	41	0	0	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			14.0			14.0
Lane Util. Factor			1.00			1.00
Frt			1.00			1.00
Flt Protected			1.00			1.00
Satd. Flow (prot)			1776			1845
Flt Permitted			1.00			1.00
Satd. Flow (perm)			1776			1845
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	45	0	0	162
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	45	0	0	162
Heavy Vehicles (%)	0%	0%	7%	0%	0%	3%
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Actuated Green, G (s)			1.7			4.8
Effective Green, g (s)			1.7			4.8
Actuated g/C Ratio			0.05			0.14
Clearance Time (s)			14.0			14.0
Vehicle Extension (s)			2.0			2.0
Lane Grp Cap (vph)			87			256
v/s Ratio Prot			c0.03			c0.09
v/s Ratio Perm						
v/c Ratio			0.52			0.63
Uniform Delay, d1			16.0			14.0
Progression Factor			1.00			1.00
Incremental Delay, d2			2.2			3.7
Delay (s)			18.2			17.7
Level of Service			B			B
Approach Delay (s)	0.0		18.2			17.7
Approach LOS	A		B			B
Intersection Summary						
HCM 2000 Control Delay			17.8		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.60			
Actuated Cycle Length (s)			34.5		Sum of lost time (s)	28.0
Intersection Capacity Utilization			19.5%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Lanes, Volumes, Timings
 20: Meadowbrook Way SE & SE Park St

03/12/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	107	9	42	54	17	4	18	56	29	40	10
Future Volume (vph)	6	107	9	42	54	17	4	18	56	29	40	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		505			663			790			216	
Travel Time (s)		13.8			18.1			21.5			5.9	
Confl. Peds. (#/hr)	5		1			4	1			4		5
Peak Hour Factor	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Heavy Vehicles (%)	0%	7%	11%	10%	11%	0%	0%	6%	5%	3%	5%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

HCM 6th AWSC
20: Meadowbrook Way SE & SE Park St

03/12/2020

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	107	9	42	54	17	4	18	56	29	40	10
Future Vol, veh/h	6	107	9	42	54	17	4	18	56	29	40	10
Peak Hour Factor	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Heavy Vehicles, %	0	7	11	10	11	0	0	6	5	3	5	0
Mvmt Flow	12	218	18	86	110	35	8	37	114	59	82	20
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	10.9			11			9.5			10.3		
HCM LOS	B			B			A			B		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %		5%	5%	37%
Vol Thru, %		23%	88%	48%
Vol Right, %		72%	7%	15%
Sign Control		Stop	Stop	Stop
Traffic Vol by Lane		78	122	113
LT Vol		4	6	42
Through Vol		18	107	54
RT Vol		56	9	17
Lane Flow Rate		159	249	231
Geometry Grp		1	1	1
Degree of Util (X)		0.222	0.351	0.339
Departure Headway (Hd)		5.015	5.082	5.286
Convergence, Y/N		Yes	Yes	Yes
Cap		715	707	680
Service Time		3.049	3.112	3.316
HCM Lane V/C Ratio		0.222	0.352	0.34
HCM Control Delay		9.5	10.9	11
HCM Lane LOS		A	B	B
HCM 95th-tile Q		0.8	1.6	1.5

Lanes, Volumes, Timings
 21: Meadowbrook Way SE & SR 202

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	255	46	9	246	17	29	37	19	11	48	8
Future Volume (vph)	12	255	46	9	246	17	29	37	19	11	48	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	0		0	150		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			40			35				25
Link Distance (ft)		615			663			738				518
Travel Time (s)		14.0			11.3			14.4				14.1
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles (%)	8%	9%	0%	0%	9%	0%	0%	3%	0%	0%	4%	38%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	33.3	33.3		30.3	30.3		32.8	32.8		32.8	32.8	
Total Split (s)	71.3	71.3		71.3	71.3		40.8	40.8		40.8	40.8	
Total Split (%)	63.6%	63.6%		63.6%	63.6%		36.4%	36.4%		36.4%	36.4%	
Yellow Time (s)	4.3	4.3		4.3	4.3		3.8	3.8		3.8	3.8	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.3	6.3		6.3	6.3			5.8		5.8	5.8	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Min	Min		Min	Min		None	None		None	None	

Intersection Summary

Area Type: Other

Cycle Length: 112.1

Actuated Cycle Length: 36.3

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Splits and Phases: 21: Meadowbrook Way SE & SR 202



HCM 6th Signalized Intersection Summary
 21: Meadowbrook Way SE & SR 202

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	255	46	9	246	17	29	37	19	11	48	8
Future Volume (veh/h)	12	255	46	9	246	17	29	37	19	11	48	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1767	1767	1900	1767	1767	1856	1856	1856	1900	1841	1841
Adj Flow Rate, veh/h	16	345	62	12	332	23	39	50	26	15	65	11
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Percent Heavy Veh, %	8	9	9	0	9	9	3	3	3	0	4	4
Cap, veh/h	512	584	105	483	655	45	238	107	48	503	225	38
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	977	1458	262	994	1633	113	396	733	330	1344	1534	260
Grp Volume(v), veh/h	16	0	407	12	0	355	115	0	0	15	0	76
Grp Sat Flow(s),veh/h/ln	977	0	1719	994	0	1746	1458	0	0	1344	0	1794
Q Serve(g_s), s	0.3	0.0	5.0	0.3	0.0	4.1	1.1	0.0	0.0	0.0	0.0	1.0
Cycle Q Clear(g_c), s	4.4	0.0	5.0	5.2	0.0	4.1	2.1	0.0	0.0	0.2	0.0	1.0
Prop In Lane	1.00		0.15	1.00		0.06	0.34		0.23	1.00		0.14
Lane Grp Cap(c), veh/h	512	0	689	483	0	700	394	0	0	503	0	263
V/C Ratio(X)	0.03	0.00	0.59	0.02	0.00	0.51	0.29	0.00	0.00	0.03	0.00	0.29
Avail Cap(c_a), veh/h	2496	0	4181	2501	0	4246	2221	0	0	2066	0	2349
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.7	0.0	6.3	8.3	0.0	6.0	10.6	0.0	0.0	9.8	0.0	10.2
Incr Delay (d2), s/veh	0.0	0.0	1.0	0.0	0.0	0.7	0.4	0.0	0.0	0.0	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	1.0	0.0	0.0	0.6	0.5	0.0	0.0	0.1	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.7	0.0	7.3	8.4	0.0	6.7	11.1	0.0	0.0	9.8	0.0	10.8
LnGrp LOS	A	A	A	A	A	A	B	A	A	A	A	B
Approach Vol, veh/h		423			367			115			91	
Approach Delay, s/veh		7.3			6.8			11.1			10.6	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		17.0		9.7		17.0		9.7				
Change Period (Y+Rc), s		6.3		* 5.8		6.3		* 5.8				
Max Green Setting (Gmax), s		65.0		* 35		65.0		* 35				
Max Q Clear Time (g_c+I1), s		7.0		3.0		7.2		4.1				
Green Ext Time (p_c), s		3.8		0.5		2.8		0.6				
Intersection Summary												
HCM 6th Ctrl Delay				7.8								
HCM 6th LOS				A								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 22: Meadowbrook Way SE & 384th Ave SE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	40	92	226	15	28	152
Future Volume (vph)	40	92	226	15	28	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		25	
Link Distance (ft)		158	180		181	
Travel Time (s)		3.1	3.5		4.9	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	3%	3%	1%	0%	0%	3%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	40	92	226	15	28	152
Future Vol, veh/h	40	92	226	15	28	152
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	3	3	1	0	0	3
Mvmt Flow	49	112	276	18	34	185
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	294	0	0	495	285	
Stage 1	-	-	-	285	-	
Stage 2	-	-	-	210	-	
Critical Hdwy	4.13	-	-	6.4	6.23	
Critical Hdwy Stg 1	-	-	-	5.4	-	
Critical Hdwy Stg 2	-	-	-	5.4	-	
Follow-up Hdwy	2.227	-	-	3.5	3.327	
Pot Cap-1 Maneuver	1262	-	-	537	752	
Stage 1	-	-	-	768	-	
Stage 2	-	-	-	830	-	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	1262	-	-	515	752	
Mov Cap-2 Maneuver	-	-	-	515	-	
Stage 1	-	-	-	737	-	
Stage 2	-	-	-	830	-	
Approach	EB	WB	SB			
HCM Control Delay, s	2.4	0	12.4			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1262	-	-	-	702	
HCM Lane V/C Ratio	0.039	-	-	-	0.313	
HCM Control Delay (s)	8	0	-	-	12.4	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	1.3	

Lanes, Volumes, Timings
 23: SE North Bend Way & Meadowbrook Way SE

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	30	348	187	22	110	55
Future Volume (vph)	30	348	187	22	110	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	450	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Link Speed (mph)	35		50			50
Link Distance (ft)	158		253			593
Travel Time (s)	3.1		3.5			8.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	2%	4%	5%	3%	13%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary
 Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↘	↑	↘	↘	↑
Traffic Vol, veh/h	30	348	187	22	110	55
Future Vol, veh/h	30	348	187	22	110	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	Free	-	None
Storage Length	0	0	-	0	450	-
Veh in Median Storage, #1	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	7	2	4	5	3	13
Mvmt Flow	33	378	203	24	120	60

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	503	-	0	-	203
Stage 1	203	-	-	-	-
Stage 2	300	-	-	-	-
Critical Hdwy	6.47	-	-	-	4.13
Critical Hdwy Stg 1	5.47	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-
Follow-up Hdwy	3.563	-	-	-	2.227
Pot Cap-1 Maneuver	519	0	-	0	1363
Stage 1	819	0	-	0	-
Stage 2	740	0	-	0	-
Platoon blocked, %			-		-
Mov Cap-1 Maneuver	473	-	-	-	1363
Mov Cap-2 Maneuver	548	-	-	-	-
Stage 1	819	-	-	-	-
Stage 2	675	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12	0	5.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn	WBLn2	SBL	SBT
Capacity (veh/h)	-	548	-	1363
HCM Lane V/C Ratio	-	0.06	-	0.088
HCM Control Delay (s)	-	12	0	7.9
HCM Lane LOS	-	B	A	A
HCM 95th %tile Q(veh)	-	0.2	-	0.3

Lanes, Volumes, Timings
1: SR-18 & I-90 EB Ramps

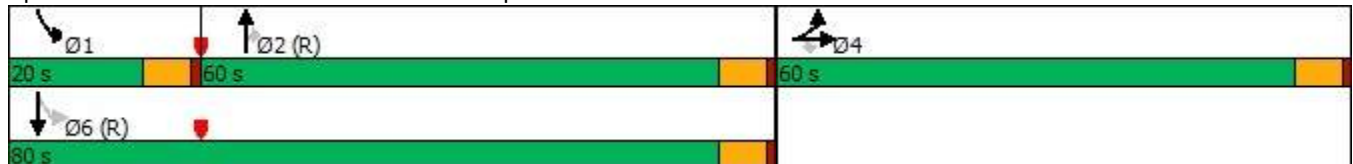
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	759	2	712	0	0	0	0	183	411	100	728	0
Future Volume (vph)	759	2	712	0	0	0	0	183	411	100	728	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650		0	0		0	0		300	200		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			45			30	
Link Distance (ft)		833			764			1837			778	
Travel Time (s)		16.2			14.9			27.8			17.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	1%	0%	4%	0%	0%	0%	0%	3%	27%	2%	13%	0%
Shared Lane Traffic (%)	50%											
Turn Type	Split	NA	Perm					NA	Perm	pm+pt	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			4						2	6		
Detector Phase	4	4	4					2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					10.0	10.0	3.0	10.0	
Minimum Split (s)	29.0	29.0	29.0					16.0	16.0	9.0	23.0	
Total Split (s)	60.0	60.0	60.0					60.0	60.0	20.0	80.0	
Total Split (%)	42.9%	42.9%	42.9%					42.9%	42.9%	14.3%	57.1%	
Yellow Time (s)	5.0	5.0	5.0					5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0	1.0					1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0					6.0	6.0	6.0	6.0	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None					C-Min	C-Min	None	C-Min	

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

Splits and Phases: 1: SR-18 & I-90 EB Ramps



HCM 6th Signalized Intersection Summary

1: SR-18 & I-90 EB Ramps

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	759	2	712	0	0	0	0	183	411	100	728	0
Future Volume (veh/h)	759	2	712	0	0	0	0	183	411	100	728	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1841				0	1856	1500	1870	1707	0
Adj Flow Rate, veh/h	783	0	0				0	189	0	103	751	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	0	4				0	3	27	2	13	0
Cap, veh/h	1094	0					0	977		688	1977	0
Arrive On Green	0.30	0.00	0.00				0.00	0.53	0.00	0.04	0.61	0.00
Sat Flow, veh/h	3591	0	1560				0	1856	1271	1781	3329	0
Grp Volume(v), veh/h	783	0	0				0	189	0	103	751	0
Grp Sat Flow(s),veh/h/ln	1795	0	1560				0	1856	1271	1781	1622	0
Q Serve(g_s), s	27.1	0.0	0.0				0.0	7.5	0.0	3.6	16.5	0.0
Cycle Q Clear(g_c), s	27.1	0.0	0.0				0.0	7.5	0.0	3.6	16.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1094	0					0	977		688	1977	0
V/C Ratio(X)	0.72	0.00					0.00	0.19		0.15	0.38	0.00
Avail Cap(c_a), veh/h	1385	0					0	977		794	1977	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				0.00	1.00	0.00	0.63	0.63	0.00
Uniform Delay (d), s/veh	43.3	0.0	0.0				0.0	17.5	0.0	13.4	13.9	0.0
Incr Delay (d2), s/veh	4.0	0.0	0.0				0.0	0.4	0.0	0.1	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.6	0.0	0.0				0.0	3.2	0.0	1.5	6.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.3	0.0	0.0				0.0	17.9	0.0	13.5	14.2	0.0
LnGrp LOS	D	A					A	B		B	B	A
Approach Vol, veh/h		783	A					189	A		854	
Approach Delay, s/veh		47.3						17.9			14.1	
Approach LOS		D						B			B	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	11.6	79.7		48.7				91.3				
Change Period (Y+Rc), s	6.0	6.0		6.0				6.0				
Max Green Setting (Gmax), s	14.0	54.0		54.0				74.0				
Max Q Clear Time (g_c+I1), s	5.6	9.5		29.1				18.5				
Green Ext Time (p_c), s	0.1	1.2		13.5				7.9				
Intersection Summary												
HCM 6th Ctrl Delay			28.7									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

03/06/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↕		↖	↕			↕	↖
Traffic Volume (vph)	0	0	0	424	2	68	98	973	0	0	317	470
Future Volume (vph)	0	0	0	424	2	68	98	973	0	0	317	470
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	0		0
Storage Lanes	0		0	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30				30
Link Distance (ft)		893			705			778				878
Travel Time (s)		17.4			13.7			17.7				20.0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	20%	100%	3%	0%	1%	0%	0%	3%	1%
Shared Lane Traffic (%)				41%								
Turn Type				Split	NA		Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases												6
Detector Phase				8	8		5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	7.0			7.0	7.0
Minimum Split (s)				12.0	12.0		12.0	14.0			24.0	24.0
Total Split (s)				70.0	70.0		27.0	70.0			43.0	43.0
Total Split (%)				50.0%	50.0%		19.3%	50.0%			30.7%	30.7%
Yellow Time (s)				5.0	5.0		5.0	5.0			5.0	5.0
All-Red Time (s)				2.0	2.0		2.0	2.0			2.0	2.0
Lost Time Adjust (s)				0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)				7.0	7.0		7.0	7.0			7.0	7.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None		C-Max	C-Min			None	None

Intersection Summary

Area Type: Other

Cycle Length: 140

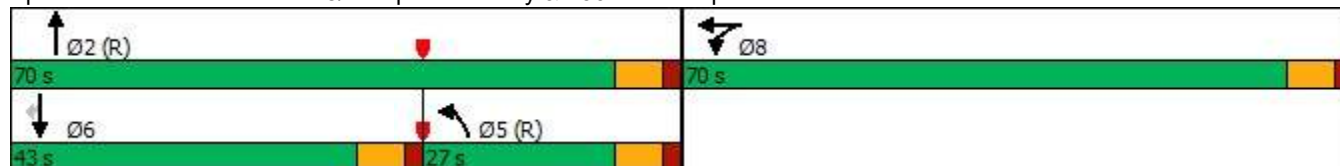
Actuated Cycle Length: 140

Offset: 53 (38%), Referenced to phase 2:NBT and 5:NBL, Start of Green

Natural Cycle: 60




















Control Type: Actuated-Coordinated

Splits and Phases: 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps





















HCM 6th Signalized Intersection Summary
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	424	2	68	98	973	0	0	317	470
Future Volume (veh/h)	0	0	0	424	2	68	98	973	0	0	317	470
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1604	418	1604	1900	1885	0	0	1856	1885
Adj Flow Rate, veh/h				504	0	0	101	1003	0	0	327	0
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				20	100	20	0	1	0	0	3	1
Cap, veh/h				660	90	0	193	2450	0	0	979	
Arrive On Green				0.22	0.00	0.00	0.07	0.46	0.00	0.00	0.53	0.00
Sat Flow, veh/h				3054	418	0	1810	3676	0	0	1856	1598
Grp Volume(v), veh/h				504	0	0	101	1003	0	0	327	0
Grp Sat Flow(s),veh/h/ln				1527	418	0	1810	1791	0	0	1856	1598
Q Serve(g_s), s				21.7	0.0	0.0	7.5	26.1	0.0	0.0	14.1	0.0
Cycle Q Clear(g_c), s				21.7	0.0	0.0	7.5	26.1	0.0	0.0	14.1	0.0
Prop In Lane				1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				660	90	0	193	2450	0	0	979	
V/C Ratio(X)				0.76	0.00	0.00	0.52	0.41	0.00	0.00	0.33	
Avail Cap(c_a), veh/h				1375	188	0	259	2450	0	0	979	
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	0.00	0.90	0.90	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				51.5	0.0	0.0	61.6	19.1	0.0	0.0	19.0	0.0
Incr Delay (d2), s/veh				6.5	0.0	0.0	2.4	0.5	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.9	0.0	0.0	3.7	12.0	0.0	0.0	6.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				58.1	0.0	0.0	64.0	19.5	0.0	0.0	19.3	0.0
LnGrp LOS				E	A	A	E	B	A	A	B	
Approach Vol, veh/h					504			1104			327	A
Approach Delay, s/veh					58.1			23.6			19.3	
Approach LOS					E			C			B	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		102.8			21.9	80.9		37.2				
Change Period (Y+Rc), s		7.0			7.0	7.0		7.0				
Max Green Setting (Gmax), s		63.0			20.0	36.0		63.0				
Max Q Clear Time (g_c+I1), s		28.1			9.5	16.1		23.7				
Green Ext Time (p_c), s		12.5			0.2	2.6		6.5				
Intersection Summary												
HCM 6th Ctrl Delay				31.8								
HCM 6th LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 3: Snoqualmie Pkwy & SE 99th St

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	0	37	1	0	2	8	1089	0	0	724	10
Future Volume (vph)	13	0	37	1	0	2	8	1089	0	0	724	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	0		0	0		0	125		0	25		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		989			884			878			457	
Travel Time (s)		27.0			24.1			20.0			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	3%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	13	0	37	1	0	2	8	1089	0	0	724	10
Future Vol, veh/h	13	0	37	1	0	2	8	1089	0	0	724	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	25	-	-
Veh in Median Storage, #-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	3	0
Mvmt Flow	14	0	39	1	0	2	8	1146	0	0	762	11

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1357	1930	387	1543	1935	573	773	0	0	1146	0	0
Stage 1	768	768	-	1162	1162	-	-	-	-	-	-	-
Stage 2	589	1162	-	381	773	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	110	67	617	80	67	468	851	-	-	617	-	-
Stage 1	365	414	-	211	272	-	-	-	-	-	-	-
Stage 2	466	272	-	619	412	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	109	66	617	74	66	468	851	-	-	617	-	-
Mov Cap-2 Maneuver	109	66	-	74	66	-	-	-	-	-	-	-
Stage 1	362	414	-	209	270	-	-	-	-	-	-	-
Stage 2	460	270	-	580	412	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB			
HCM Control Delay, s	20.9		26.7		0.1		0			
HCM LOS	C		D							

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	851	-	-	279	169	617	-
HCM Lane V/C Ratio	0.01	-	-	0.189	0.019	-	-
HCM Control Delay (s)	9.3	-	-	20.9	26.7	0	-
HCM Lane LOS	A	-	-	C	D	A	-
HCM 95th %tile Q(veh)	0	-	-	0.7	0.1	0	-

Lanes, Volumes, Timings
 4: Snoqualmie Pkwy & SE 96th St

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	25	60	965	44	38	694
Future Volume (vph)	25	60	965	44	38	694
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Link Speed (mph)	30		40			40
Link Distance (ft)	346		677			718
Travel Time (s)	7.9		11.5			12.2
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	2%	0%	0%	3%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	60	965	44	38	694
Future Vol, veh/h	25	60	965	44	38	694
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #1	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	2	0	0	3
Mvmt Flow	28	68	1097	50	43	789

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1603	574	0	0	1147
Stage 1	1122	-	-	-	-
Stage 2	481	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	98	467	-	-	616
Stage 1	277	-	-	-	-
Stage 2	593	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	91	467	-	-	616
Mov Cap-2 Maneuver	204	-	-	-	-
Stage 1	277	-	-	-	-
Stage 2	551	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.4	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	204	467	616	-
HCM Lane V/C Ratio	-	-	0.139	0.146	0.07	-
HCM Control Delay (s)	-	-	25.5	14	11.3	-
HCM Lane LOS	-	-	D	B	B	-
HCM 95th %tile Q(veh)	-	-	0.5	0.5	0.2	-

Lanes, Volumes, Timings
5: Snoqualmie Pkwy & SE Jacobia St

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	8	61	29	1	44	107	886	82	64	624	18
Future Volume (vph)	18	8	61	29	1	44	107	886	82	64	624	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	250		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		653			474			718			617	
Travel Time (s)		17.8			12.9			12.2			10.5	
Confl. Peds. (#/hr)	2		2	2		2	1					1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	0%	2%	0%	2%	3%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	15.0		5.0	16.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		10.5	22.5		10.5	22.5	
Total Split (s)	25.0	25.0		40.0	40.0		15.5	65.5		15.5	65.5	
Total Split (%)	20.7%	20.7%		33.1%	33.1%		12.8%	54.1%		12.8%	54.1%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.5	4.5		4.5	4.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.5	5.5		5.5	5.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other

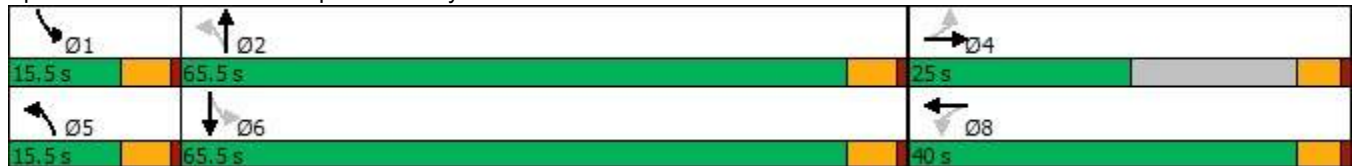
Cycle Length: 121

Actuated Cycle Length: 59.5

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Snoqualmie Pkwy & SE Jacobia St



HCM 6th Signalized Intersection Summary
 5: Snoqualmie Pkwy & SE Jacobia St

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	8	61	29	1	44	107	886	82	64	624	18
Future Volume (veh/h)	18	8	61	29	1	44	107	886	82	64	624	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1870	1870	1870	1856	1856
Adj Flow Rate, veh/h	19	9	65	31	1	47	114	943	87	68	664	19
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	2	2	2	3	3
Cap, veh/h	268	23	164	246	4	180	566	1625	150	418	1663	48
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.08	0.49	0.49	0.06	0.48	0.48
Sat Flow, veh/h	1373	199	1434	1342	33	1574	1810	3289	303	1781	3500	100
Grp Volume(v), veh/h	19	0	74	31	0	48	114	509	521	68	334	349
Grp Sat Flow(s),veh/h/ln	1373	0	1633	1342	0	1607	1810	1777	1815	1781	1763	1837
Q Serve(g_s), s	0.6	0.0	2.0	1.1	0.0	1.3	1.5	9.9	9.9	0.9	6.0	6.0
Cycle Q Clear(g_c), s	1.9	0.0	2.0	3.1	0.0	1.3	1.5	9.9	9.9	0.9	6.0	6.0
Prop In Lane	1.00		0.88	1.00		0.98	1.00		0.17	1.00		0.05
Lane Grp Cap(c), veh/h	268	0	187	246	0	184	566	878	897	418	837	873
V/C Ratio(X)	0.07	0.00	0.40	0.13	0.00	0.26	0.20	0.58	0.58	0.16	0.40	0.40
Avail Cap(c_a), veh/h	676	0	672	1059	0	1158	792	2195	2243	674	2178	2270
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.5	0.0	19.9	21.4	0.0	19.6	5.5	8.7	8.7	6.4	8.3	8.3
Incr Delay (d2), s/veh	0.1	0.0	1.4	0.2	0.0	0.7	0.1	0.9	0.9	0.1	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.8	0.3	0.0	0.5	0.3	2.7	2.8	0.2	1.6	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.6	0.0	21.3	21.6	0.0	20.4	5.6	9.6	9.6	6.4	8.7	8.7
LnGrp LOS	C	A	C	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		93			79			1144			751	
Approach Delay, s/veh		21.2			20.9			9.2			8.5	
Approach LOS		C			C			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.5	29.5		10.6	9.4	28.6		10.6				
Change Period (Y+Rc), s	5.5	5.5		5.0	5.5	5.5		5.0				
Max Green Setting (Gmax), s	10.0	60.0		20.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	2.9	11.9		4.0	3.5	8.0		5.1				
Green Ext Time (p_c), s	0.0	12.1		0.3	0.1	6.8		0.3				
Intersection Summary												
HCM 6th Ctrl Delay				9.9								
HCM 6th LOS				A								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
6: Snoqualmie Pkwy & SE Swenson Dr

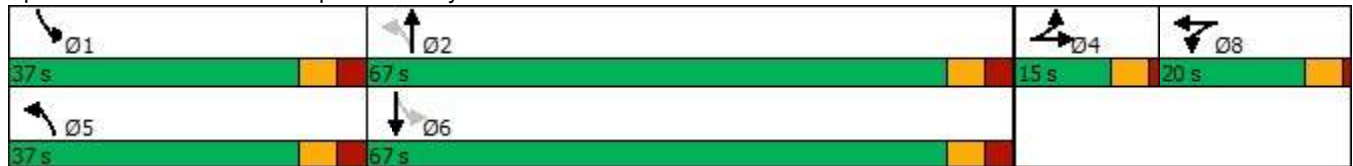
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	15	26	19	10	59	33	790	38	87	710	81
Future Volume (vph)	84	15	26	19	10	59	33	790	38	87	710	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	275		0	300		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			No
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		456			320			2254			367	
Travel Time (s)		10.4			7.3			38.4			6.3	
Confl. Peds. (#/hr)			2			9	2					2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%	0%	2%	0%	0%	3%	3%
Shared Lane Traffic (%)												
Turn Type	Split	NA		Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		10.0	10.0		5.0	12.0		5.0	12.0	
Minimum Split (s)	38.0	38.0		38.0	38.0		12.0	28.0		12.0	28.0	
Total Split (s)	15.0	15.0		20.0	20.0		37.0	67.0		37.0	67.0	
Total Split (%)	10.8%	10.8%		14.4%	14.4%		26.6%	48.2%		26.6%	48.2%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		7.0	7.0		7.0	7.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
 Cycle Length: 139
 Actuated Cycle Length: 78.2
 Natural Cycle: 120
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Snoqualmie Pkwy & SE Swenson Dr



HCM 6th Signalized Intersection Summary
6: Snoqualmie Pkwy & SE Swenson Dr

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	15	26	19	10	59	33	790	38	87	710	81
Future Volume (veh/h)	84	15	26	19	10	59	33	790	38	87	710	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1900	1900	1900	1900	1900	1870	1870	1900	1856	1856
Adj Flow Rate, veh/h	90	16	28	20	11	63	35	849	41	94	763	87
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	0	0	0	0	0	0	2	2	0	3	3
Cap, veh/h	165	57	100	259	35	198	255	978	47	277	999	114
Arrive On Green	0.09	0.09	0.09	0.14	0.14	0.14	0.04	0.28	0.28	0.07	0.31	0.31
Sat Flow, veh/h	1781	617	1081	1810	242	1383	1810	3450	167	1810	3188	363
Grp Volume(v), veh/h	90	0	44	20	0	74	35	437	453	94	422	428
Grp Sat Flow(s),veh/h/ln	1781	0	1698	1810	0	1625	1810	1777	1840	1810	1763	1789
Q Serve(g_s), s	2.8	0.0	1.4	0.6	0.0	2.4	0.8	13.6	13.6	2.1	12.5	12.5
Cycle Q Clear(g_c), s	2.8	0.0	1.4	0.6	0.0	2.4	0.8	13.6	13.6	2.1	12.5	12.5
Prop In Lane	1.00		0.64	1.00		0.85	1.00		0.09	1.00		0.20
Lane Grp Cap(c), veh/h	165	0	158	259	0	233	255	503	521	277	552	561
V/C Ratio(X)	0.54	0.00	0.28	0.08	0.00	0.32	0.14	0.87	0.87	0.34	0.76	0.76
Avail Cap(c_a), veh/h	307	0	292	468	0	420	1123	1836	1901	1090	1822	1849
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.2	0.0	24.5	21.5	0.0	22.3	14.7	19.8	19.8	14.8	18.0	18.0
Incr Delay (d2), s/veh	1.0	0.0	0.4	0.0	0.0	0.3	0.1	1.8	1.8	0.3	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.5	0.2	0.0	0.9	0.3	5.0	5.2	0.7	4.4	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.2	0.0	24.9	21.6	0.0	22.6	14.8	21.6	21.5	15.0	18.8	18.8
LnGrp LOS	C	A	C	C	A	C	B	C	C	B	B	B
Approach Vol, veh/h		134			94			925			944	
Approach Delay, s/veh		25.8			22.4			21.3			18.4	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.9	23.5		10.4	9.2	25.2		13.3				
Change Period (Y+Rc), s	7.0	7.0		5.0	7.0	7.0		5.0				
Max Green Setting (Gmax), s	30.0	60.0		10.0	30.0	60.0		15.0				
Max Q Clear Time (g_c+I1), s	4.1	15.6		4.8	2.8	14.5		4.4				
Green Ext Time (p_c), s	0.0	0.7		0.0	0.0	0.7		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				20.4								
HCM 6th LOS				C								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

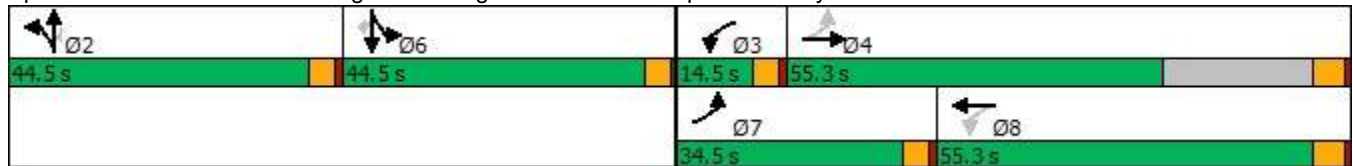
03/06/2020

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗			↖	↖		↖	↖
Traffic Volume (vph)	298	571	124	46	485	59	236	54	77	72	21	128
Future Volume (vph)	298	571	124	46	485	59	236	54	77	72	21	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	175		0	0		150	0		100
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25				25
Link Distance (ft)		1285			1065			585				583
Travel Time (s)		21.9			18.2			16.0				15.9
Confl. Peds. (#/hr)	5					5						3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	1%	1%	2%	0%	2%	0%	2%	0%	0%	6%	0%	2%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4			8					2			6
Detector Phase	7	4		3	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	35.3		9.5	30.3		36.5	36.5	36.5	36.5	36.5	36.5
Total Split (s)	34.5	55.3		14.5	55.3		44.5	44.5	44.5	44.5	44.5	44.5
Total Split (%)	19.3%	30.9%		8.1%	30.9%		24.9%	24.9%	24.9%	24.9%	24.9%	24.9%
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.3		4.5	5.3			4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None	None	None	None	None

Intersection Summary























Area Type: Other
 Cycle Length: 178.8
 Actuated Cycle Length: 105.9
 Natural Cycle: 120
 Control Type: Actuated-Uncoordinated

Splits and Phases: 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	298	571	124	46	485	59	236	54	77	72	21	128
Future Volume (veh/h)	298	571	124	46	485	59	236	54	77	72	21	128
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1870	1870	1900	1900	1900	1900	1900	1870
Adj Flow Rate, veh/h	307	589	128	47	500	61	243	56	31	74	22	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	0	2	2	0	0	0	0	0	2
Cap, veh/h	491	1077	234	344	812	99	320	74	347	120	36	135
Arrive On Green	0.16	0.37	0.37	0.04	0.25	0.25	0.22	0.22	0.22	0.09	0.09	0.00
Sat Flow, veh/h	1795	2923	634	1810	3186	387	1484	342	1610	1410	419	1585
Grp Volume(v), veh/h	307	360	357	47	278	283	299	0	31	96	0	0
Grp Sat Flow(s),veh/h/ln	1795	1791	1766	1810	1777	1796	1826	0	1610	1829	0	1585
Q Serve(g_s), s	7.5	10.4	10.5	1.2	9.1	9.1	10.1	0.0	1.0	3.3	0.0	0.0
Cycle Q Clear(g_c), s	7.5	10.4	10.5	1.2	9.1	9.1	10.1	0.0	1.0	3.3	0.0	0.0
Prop In Lane	1.00		0.36	1.00		0.22	0.81		1.00	0.77		1.00
Lane Grp Cap(c), veh/h	491	660	651	344	453	458	394	0	347	156	0	135
V/C Ratio(X)	0.62	0.55	0.55	0.14	0.61	0.62	0.76	0.00	0.09	0.61	0.00	0.00
Avail Cap(c_a), veh/h	1029	1365	1346	541	1354	1369	1113	0	982	1116	0	967
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.8	16.4	16.4	16.6	21.6	21.6	24.1	0.0	20.6	29.0	0.0	0.0
Incr Delay (d2), s/veh	1.3	1.0	1.0	0.2	1.9	1.9	3.0	0.0	0.1	3.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	3.9	3.8	0.5	3.6	3.7	4.5	0.0	0.4	1.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.1	17.4	17.4	16.8	23.5	23.6	27.2	0.0	20.7	32.8	0.0	0.0
LnGrp LOS	B	B	B	B	C	C	C	A	C	C	A	A
Approach Vol, veh/h		1024			608			330				96
Approach Delay, s/veh		16.7			23.0			26.6				32.8
Approach LOS		B			C			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		18.6	7.4	29.5		10.1	14.8	22.0				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		40.0	10.0	50.0		40.0	30.0	50.0				
Max Q Clear Time (g_c+I1), s		12.1	3.2	12.5		5.3	9.5	11.1				
Green Ext Time (p_c), s		2.1	0.0	7.0		0.6	0.8	5.2				
Intersection Summary												
HCM 6th Ctrl Delay				20.9								
HCM 6th LOS				C								

Lanes, Volumes, Timings

8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	212	510	40	102	380	69	91	39	107	90	46	120
Future Volume (vph)	212	510	40	102	380	69	91	39	107	90	46	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	275		0	275		0	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1065			1064			511			626	
Travel Time (s)		18.2			18.1			13.9			17.1	
Confl. Peds. (#/hr)	1					1	7		3	3		7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	3%	0%	3%	0%	0%	0%	1%	0%	0%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2				6
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		2	2		6		6
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		5.0		5.0
Minimum Split (s)	9.5	34.3		9.5	34.3		36.5	36.5		36.5		36.5
Total Split (s)	34.5	65.3		34.5	65.3		34.5	34.5		34.5		34.5
Total Split (%)	25.7%	48.6%		25.7%	48.6%		25.7%	25.7%		25.7%		25.7%
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5		3.5		3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0		1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Total Lost Time (s)	4.5	5.3		4.5	5.3		4.5	4.5		4.5		4.5
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None		None

Intersection Summary

Area Type: Other

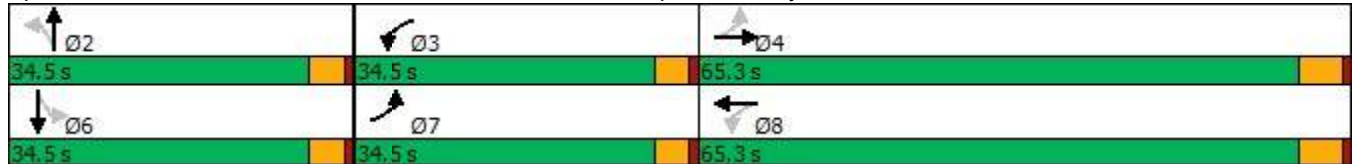
Cycle Length: 134.3

Actuated Cycle Length: 57.3

Natural Cycle: 85

























Control Type: Actuated-Uncoordinated

Splits and Phases: 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	212	510	40	102	380	69	91	39	107	90	46	120
Future Volume (veh/h)	212	510	40	102	380	69	91	39	107	90	46	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1900	1856	1856	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	221	531	42	106	396	72	95	41	111	94	48	125
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	0	3	3	0	0	0	0	0	0
Cap, veh/h	575	1208	95	500	944	170	363	117	316	381	120	313
Arrive On Green	0.12	0.36	0.36	0.08	0.32	0.32	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1810	3336	263	1810	2983	538	1224	450	1219	1248	464	1207
Grp Volume(v), veh/h	221	282	291	106	233	235	95	0	152	94	0	173
Grp Sat Flow(s),veh/h/ln	1810	1777	1823	1810	1763	1758	1224	0	1669	1248	0	1671
Q Serve(g_s), s	3.7	5.7	5.8	1.8	5.0	5.0	3.3	0.0	3.5	3.2	0.0	4.1
Cycle Q Clear(g_c), s	3.7	5.7	5.8	1.8	5.0	5.0	7.4	0.0	3.5	6.7	0.0	4.1
Prop In Lane	1.00		0.14	1.00		0.31	1.00		0.73	1.00		0.72
Lane Grp Cap(c), veh/h	575	644	660	500	558	556	363	0	432	381	0	433
V/C Ratio(X)	0.38	0.44	0.44	0.21	0.42	0.42	0.26	0.00	0.35	0.25	0.00	0.40
Avail Cap(c_a), veh/h	1486	2234	2292	1494	2217	2210	816	0	1049	843	0	1051
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.8	11.5	11.5	9.4	12.8	12.9	17.7	0.0	14.4	17.1	0.0	14.6
Incr Delay (d2), s/veh	0.4	0.7	0.7	0.2	0.7	0.7	0.4	0.0	0.5	0.3	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.8	1.9	0.6	1.6	1.7	0.9	0.0	1.3	0.9	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.3	12.2	12.2	9.6	13.6	13.6	18.0	0.0	14.9	17.5	0.0	15.2
LnGrp LOS	A	B	B	A	B	B	B	A	B	B	A	B
Approach Vol, veh/h		794			574			247			267	
Approach Delay, s/veh		11.4			12.8			16.1			16.0	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		16.9	8.3	22.6		16.9	10.5	20.4				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		30.0	30.0	60.0		30.0	30.0	60.0				
Max Q Clear Time (g_c+I1), s		9.4	3.8	7.8		8.7	5.7	7.0				
Green Ext Time (p_c), s		1.2	0.2	5.4		1.4	0.6	4.3				
Intersection Summary												
HCM 6th Ctrl Delay				13.1								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
 9: Snoqualmie Pkwy & Fairway Ave SE

03/06/2020

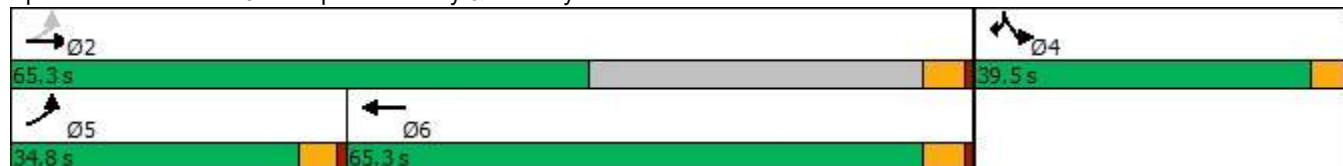


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	196	504	478	119	101	109
Future Volume (vph)	196	504	478	119	101	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	325			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		25	
Link Distance (ft)		1064	278		478	
Travel Time (s)		18.1	4.7		13.0	
Confl. Peds. (#/hr)	5			5	1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	4%	3%	3%	2%	0%
Shared Lane Traffic (%)						
Turn Type	pm+pt	NA	NA		Prot	Prot
Protected Phases	5	2	6		4	4
Permitted Phases	2					
Detector Phase	5	2	6		4	4
Switch Phase						
Minimum Initial (s)	5.0	12.0	12.0		5.0	5.0
Minimum Split (s)	9.8	23.3	26.3		36.5	36.5
Total Split (s)	34.8	65.3	65.3		39.5	39.5
Total Split (%)	24.9%	46.8%	46.8%		28.3%	28.3%
Yellow Time (s)	3.8	4.3	4.3		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.8	5.3	5.3		4.5	4.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	None	None		None	None

Intersection Summary

Area Type: Other
 Cycle Length: 139.6
 Actuated Cycle Length: 58.2
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated

Splits and Phases: 9: Snoqualmie Pkwy & Fairway Ave SE



HCM 6th Signalized Intersection Summary
 9: Snoqualmie Pkwy & Fairway Ave SE























03/06/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	196	504	478	119	101	109
Future Volume (veh/h)	196	504	478	119	101	109
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	1841	1856	1856	1870	1900
Adj Flow Rate, veh/h	211	542	514	128	109	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	4	3	3	2	0
Cap, veh/h	601	2171	992	246	168	152
Arrive On Green	0.13	0.62	0.35	0.35	0.09	0.00
Sat Flow, veh/h	1795	3589	2888	693	1781	1610
Grp Volume(v), veh/h	211	542	323	319	109	0
Grp Sat Flow(s),veh/h/ln	1795	1749	1763	1725	1781	1610
Q Serve(g_s), s	2.1	2.4	5.0	5.0	2.0	0.0
Cycle Q Clear(g_c), s	2.1	2.4	5.0	5.0	2.0	0.0
Prop In Lane	1.00			0.40	1.00	1.00
Lane Grp Cap(c), veh/h	601	2171	625	612	168	152
V/C Ratio(X)	0.35	0.25	0.52	0.52	0.65	0.00
Avail Cap(c_a), veh/h	1943	6108	3078	3013	1815	1640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	5.1	2.9	8.8	8.8	15.0	0.0
Incr Delay (d2), s/veh	0.3	0.1	0.7	0.7	4.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	1.2	1.2	0.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	5.5	3.0	9.4	9.5	19.2	0.0
LnGrp LOS	A	A	A	A	B	A
Approach Vol, veh/h		753	642		109	
Approach Delay, s/veh		3.7	9.4		19.2	
Approach LOS		A	A		B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		26.6		7.7	9.1	17.5
Change Period (Y+Rc), s		5.3		4.5	* 4.8	5.3
Max Green Setting (Gmax), s		60.0		35.0	* 30	60.0
Max Q Clear Time (g_c+I1), s		4.4		4.0	4.1	7.0
Green Ext Time (p_c), s		3.8		0.3	0.6	4.2
Intersection Summary						
HCM 6th Ctrl Delay			7.3			
HCM 6th LOS			A			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

Lanes, Volumes, Timings
 10: Fisher Ave SE & Snoqualmie Pkwy

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (vph)	49	533	28	12	553	14	15	1	15	13	1	29
Future Volume (vph)	49	533	28	12	553	14	15	1	15	13	1	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		458			1686			518			363	
Travel Time (s)		7.8			28.7			14.1			9.9	
Confl. Peds. (#/hr)	8		8	8		8	8		8	8		8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	3%	0%	0%	3%	7%	0%	0%	0%	0%	0%	7%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕			↕			↕	
Traffic Vol, veh/h	49	533	28	12	553	14	15	1	15	13	1	29
Future Vol, veh/h	49	533	28	12	553	14	15	1	15	13	1	29
Conflicting Peds, #/hr	8	0	8	8	0	8	8	0	8	8	0	8
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #-	0	0	-	0	0	-	0	-	0	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	3	0	0	3	7	0	0	0	0	0	7
Mvmt Flow	56	606	32	14	628	16	17	1	17	15	1	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	652	0	0	646	0	0	1093	1422	335	1096	1430	338
Stage 1	-	-	-	-	-	-	742	742	-	672	672	-
Stage 2	-	-	-	-	-	-	351	680	-	424	758	-
Critical Hdwy	4.1	-	-	4.1	-	-	9.5	8.5	7.9	9.5	8.5	8.04
Critical Hdwy Stg 1	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.37
Pot Cap-1 Maneuver	944	-	-	949	-	-	93	62	607	93	61	586
Stage 1	-	-	-	-	-	-	250	282	-	287	315	-
Stage 2	-	-	-	-	-	-	530	311	-	461	275	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	937	-	-	942	-	-	80	56	598	83	56	577
Mov Cap-2 Maneuver	-	-	-	-	-	-	80	56	-	83	56	-
Stage 1	-	-	-	-	-	-	233	263	-	268	308	-
Stage 2	-	-	-	-	-	-	487	304	-	416	256	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.2			40.8			30.2		
HCM LOS	E			E			E			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	135	937	-	-	942	-	-	191
HCM Lane V/C Ratio	0.261	0.059	-	-	0.014	-	-	0.256
HCM Control Delay (s)	40.8	9.1	-	-	8.9	-	-	30.2
HCM Lane LOS	E	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	1	0.2	-	-	0	-	-	1

Lanes, Volumes, Timings
 11: Orchard Ave SE & Snoqualmie Pkwy

03/06/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (vph)	558	29	27	569	8	20
Future Volume (vph)	558	29	27	569	8	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	225		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	1686			1131	557	
Travel Time (s)	28.7			19.3	15.2	
Confl. Peds. (#/hr)		1	1		1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	0%	4%	3%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Vol, veh/h	558	29	27	569	8	20
Future Vol, veh/h	558	29	27	569	8	20
Conflicting Peds, #/hr	0	1	1	0	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	225	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	0	4	3	0	0
Mvmt Flow	607	32	29	618	9	22

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	640	0	992
Stage 1	-	-	-	-	624
Stage 2	-	-	-	-	368
Critical Hdwy	-	-	4.18	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.24	-	3.5
Pot Cap-1 Maneuver	-	-	927	-	246
Stage 1	-	-	-	-	502
Stage 2	-	-	-	-	676
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	926	-	238
Mov Cap-2 Maneuver	-	-	-	-	238
Stage 1	-	-	-	-	501
Stage 2	-	-	-	-	654

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	13.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	444	-	-	926	-
HCM Lane V/C Ratio	0.069	-	-	0.032	-
HCM Control Delay (s)	13.7	-	-	9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Lanes, Volumes, Timings
 12: Snoqualmie Pkwy & Allman AveSE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	575	600	7	7	5
Future Volume (vph)	5	575	600	7	7	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		40	40		25	
Link Distance (ft)		679	1187		393	
Travel Time (s)		11.6	20.2		10.7	
Confl. Peds. (#/hr)	1			1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	5%	4%	0%	0%	0%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	575	600	7	7	5
Future Vol, veh/h	5	575	600	7	7	5
Conflicting Peds, #/hr	1	0	0	1	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #-	0	0	0	0	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	5	4	0	0	0
Mvmt Flow	5	625	652	8	8	5

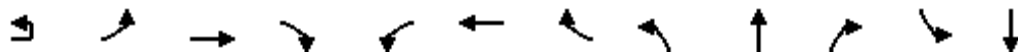
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	661	0	0	981	332
Stage 1	-	-	-	657	-
Stage 2	-	-	-	324	-
Critical Hdwy	4.1	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	3.5	3.3
Pot Cap-1 Maneuver	937	-	-	250	670
Stage 1	-	-	-	483	-
Stage 2	-	-	-	711	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	936	-	-	248	669
Mov Cap-2 Maneuver	-	-	-	248	-
Stage 1	-	-	-	480	-
Stage 2	-	-	-	710	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	16.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	936	-	-	-	336	-
HCM Lane V/C Ratio	0.006	-	-	-	0.039	-
HCM Control Delay (s)	8.9	-	-	-	16.1	-
HCM Lane LOS	A	-	-	-	C	-
HCM 95th %tile Q(veh)	0	-	-	-	0.1	-

Lanes, Volumes, Timings
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔		↕		↔	↕			↕			↕
Traffic Volume (vph)	0	0	536	45	23	563	0	51	0	24	0	0
Future Volume (vph)	0	0	536	45	23	563	0	51	0	24	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0		0	200		0	0		0	0	
Storage Lanes		1		0	1		0	0		0	0	
Taper Length (ft)		25			25			25			25	
Right Turn on Red				Yes			Yes			Yes		
Link Speed (mph)			40			40			25			25
Link Distance (ft)			1187			833			535			291
Travel Time (s)			20.2			14.2			14.6			7.9
Confl. Peds. (#/hr)				4	4			3				
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	6%	0%	0%	4%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt		NA		pm+pt	NA		Perm	NA			
Protected Phases	5		2		1	6			8			4
Permitted Phases	2				6			8			4	
Detector Phase	5		2		1	6		8	8		4	4
Switch Phase												
Minimum Initial (s)	5.0		15.0		5.0	14.0		5.0	5.0		30.0	30.0
Minimum Split (s)	10.0		20.0		10.0	29.0		36.0	36.0		36.0	36.0
Total Split (s)	35.0		65.0		35.0	65.0		36.0	36.0		36.0	36.0
Total Split (%)	25.7%		47.8%		25.7%	47.8%		26.5%	26.5%		26.5%	26.5%
Yellow Time (s)	4.0		4.0		4.0	4.0		5.0	5.0		5.0	5.0
All-Red Time (s)	1.0		1.0		1.0	1.0		1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0		5.0		5.0	5.0		6.0	6.0		6.0	6.0
Lead/Lag	Lead		Lag		Lead	Lag						
Lead-Lag Optimize?	Yes		Yes		Yes	Yes						
Recall Mode	Min		Min		None	None		None	None		None	None

Intersection Summary

Area Type: Other

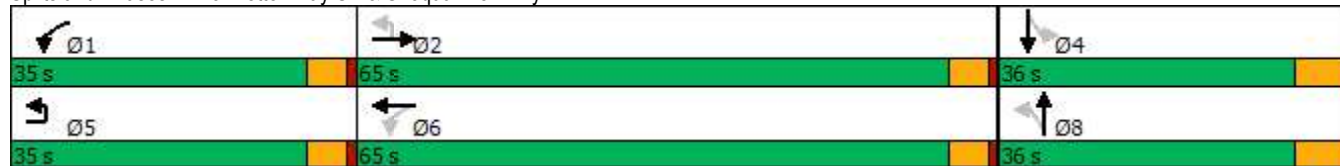
Cycle Length: 136

Actuated Cycle Length: 44

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Splits and Phases: 13: Better Way SE & Snoqualmie Pkwy



Lanes, Volumes, Timings
 13: Better Way SE & Snoqualmie Pkwy

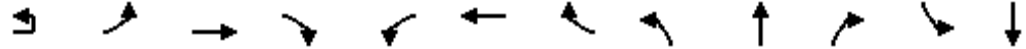
03/12/2020



Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	0
Future Volume (vph)	0
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Right Turn on Red	Yes
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	3
Peak Hour Factor	0.95
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	
Intersection Summary	

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↵		↕		↵	↕			↕			↕
Traffic Volume (veh/h)	0	0	536	45	23	563	0	51	0	24	0	0
Future Volume (veh/h)	0	0	536	45	23	563	0	51	0	24	0	0
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	0.99		0.99	1.00	
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach			No			No			No			No
Adj Sat Flow, veh/h/ln		0	1811	1811	1900	1841	1841	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		0	564	47	24	593	0	54	0	25	0	0
Peak Hour Factor		0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %		0	6	6	0	4	4	0	0	0	0	0
Cap, veh/h		0	1372	114	330	2095	0	261	0	41	0	167
Arrive On Green		0.00	0.43	0.43	0.03	0.60	0.00	0.09	0.00	0.09	0.00	0.00
Sat Flow, veh/h		0	3305	267	1810	3589	0	1009	0	467	0	1900
Grp Volume(v), veh/h		0	301	310	24	593	0	79	0	0	0	0
Grp Sat Flow(s),veh/h/ln		0	1721	1761	1810	1749	0	1476	0	0	0	1900
Q Serve(g_s), s		0.0	4.3	4.3	0.2	2.9	0.0	1.8	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s		0.0	4.3	4.3	0.2	2.9	0.0	1.8	0.0	0.0	0.0	0.0
Prop In Lane		0.00		0.15	1.00		0.00	0.68		0.32	0.00	
Lane Grp Cap(c), veh/h		0	735	752	330	2095	0	302	0	0	0	167
V/C Ratio(X)		0.00	0.41	0.41	0.07	0.28	0.00	0.26	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h		0	2938	3008	1821	5972	0	1433	0	0	0	1622
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)		0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh		0.0	7.0	7.0	7.2	3.4	0.0	15.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh		0.0	0.4	0.4	0.1	0.1	0.0	0.5	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.0	0.9	0.9	0.0	0.2	0.0	0.6	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		0.0	7.4	7.4	7.3	3.5	0.0	15.9	0.0	0.0	0.0	0.0
LnGrp LOS		A	A	A	A	A	A	B	A	A	A	A
Approach Vol, veh/h			611			617			79			0
Approach Delay, s/veh			7.4			3.6			15.9			0.0
Approach LOS			A			A			B			
Timer - Assigned Phs	1	2		4		6			8			
Phs Duration (G+Y+Rc), s	6.0	20.0		9.1		26.0			9.1			
Change Period (Y+Rc), s	5.0	5.0		6.0		5.0			6.0			
Max Green Setting (Gmax), s	30.0	60.0		30.0		60.0			30.0			
Max Q Clear Time (g_c+I1), s	2.2	6.3		0.0		4.9			3.8			
Green Ext Time (p_c), s	0.0	3.9		0.0		4.3			0.4			

Intersection Summary

HCM 6th Ctrl Delay	6.1
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
 User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	0
Future Volume (veh/h)	0
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.95
Percent Heavy Veh, %	0
Cap, veh/h	0
Arrive On Green	0.00
Sat Flow, veh/h	0
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	0
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	0.00
Lane Grp Cap(c), veh/h	0
V/C Ratio(X)	0.00
Avail Cap(c_a), veh/h	0
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Lanes, Volumes, Timings
 14: Trail Access Road & Snoqualmie Pkwy

03/06/2020

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↖	
Traffic Volume (vph)	491	0	3	537	0	1
Future Volume (vph)	491	0	3	537	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	646			700	301	
Travel Time (s)	11.0			11.9	8.2	
Confl. Peds. (#/hr)		1	1		1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	0%	0%	3%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Vol, veh/h	491	0	3	537	0	1
Future Vol, veh/h	491	0	3	537	0	1
Conflicting Peds, #/hr	0	1	1	0	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	0	0	3	0	0
Mvmt Flow	534	0	3	584	0	1

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	535	0	834 269
Stage 1	-	-	-	-	535 -
Stage 2	-	-	-	-	299 -
Critical Hdwy	-	-	4.1	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	1043	-	311 735
Stage 1	-	-	-	-	557 -
Stage 2	-	-	-	-	732 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1042	-	309 734
Mov Cap-2 Maneuver	-	-	-	-	309 -
Stage 1	-	-	-	-	556 -
Stage 2	-	-	-	-	729 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	734	-	-	1042	-
HCM Lane V/C Ratio	0.001	-	-	0.003	-
HCM Control Delay (s)	9.9	-	-	8.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
15: SR 202 & Snoqualmie Pkwy

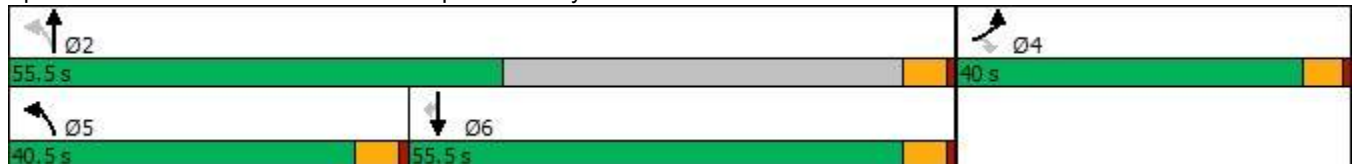
03/06/2020

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	208	282	294	232	256	265
Future Volume (vph)	208	282	294	232	256	265
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	300			300
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Right Turn on Red		Yes				Yes
Link Speed (mph)	40			45	45	
Link Distance (ft)	700			1127	949	
Travel Time (s)	11.9			17.1	14.4	
Confl. Peds. (#/hr)		1	1			1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	3%	2%	2%	1%	6%	4%
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	5.0	7.0	7.0	7.0
Minimum Split (s)	29.0	29.0	10.5	12.5	35.5	35.5
Total Split (s)	40.0	40.0	40.5	55.5	55.5	55.5
Total Split (%)	29.4%	29.4%	29.8%	40.8%	40.8%	40.8%
Yellow Time (s)	4.0	4.0	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	Min	Min	Min

Intersection Summary













Area Type: Other
 Cycle Length: 136
 Actuated Cycle Length: 69.4
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated

Splits and Phases: 15: SR 202 & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 15: SR 202 & Snoqualmie Pkwy

03/06/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	208	282	294	232	256	265
Future Volume (veh/h)	208	282	294	232	256	265
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00			1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1885	1811	1841
Adj Flow Rate, veh/h	229	0	323	255	281	39
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	2	2	1	6	4
Cap, veh/h	308	276	614	1057	428	368
Arrive On Green	0.17	0.00	0.19	0.56	0.24	0.24
Sat Flow, veh/h	1767	1585	1781	1885	1811	1557
Grp Volume(v), veh/h	229	0	323	255	281	39
Grp Sat Flow(s),veh/h/ln	1767	1585	1781	1885	1811	1557
Q Serve(g_s), s	4.9	0.0	4.6	2.7	5.6	0.8
Cycle Q Clear(g_c), s	4.9	0.0	4.6	2.7	5.6	0.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	308	276	614	1057	428	368
V/C Ratio(X)	0.74	0.00	0.53	0.24	0.66	0.11
Avail Cap(c_a), veh/h	1562	1401	1858	2380	2287	1966
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.5	0.0	7.8	4.4	13.7	11.8
Incr Delay (d2), s/veh	3.6	0.0	0.7	0.1	1.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	1.0	0.4	1.8	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.1	0.0	8.5	4.5	15.4	12.0
LnGrp LOS	B	A	A	A	B	B
Approach Vol, veh/h	229			578	320	
Approach Delay, s/veh	19.1			6.7	15.0	
Approach LOS	B			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		27.7		11.9	12.8	14.9
Change Period (Y+Rc), s		5.5		5.0	5.5	5.5
Max Green Setting (Gmax), s		50.0		35.0	35.0	50.0
Max Q Clear Time (g_c+I1), s		4.7		6.9	6.6	7.6
Green Ext Time (p_c), s		1.4		0.6	0.9	1.7
Intersection Summary						
HCM 6th Ctrl Delay			11.6			
HCM 6th LOS			B			

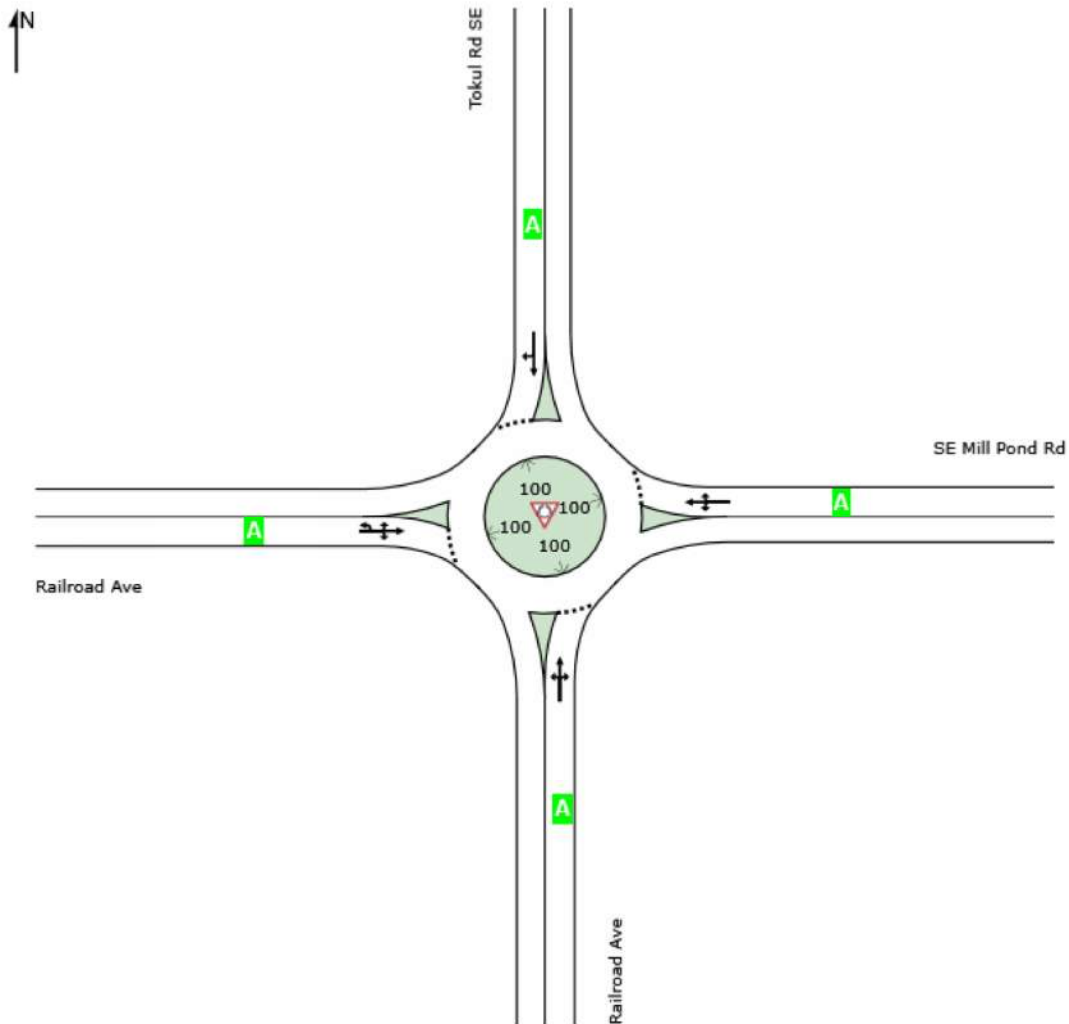
LANE LEVEL OF SERVICE

Lane Level of Service

Site: 16 [2018 Existing - PM Peak Hour]

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Signalised Intersections.
 Lane LOS values are based on average delay per lane.
 Intersection and Approach LOS values are based on average delay for all lanes.
 SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

LANE SUMMARY

 Site: 16 [2018 Existing - PM Peak Hour]

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

Lane Use and Performance													
	Demand Flows		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Veh	Queue Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
	Total veh/h	HV %											
South: Railroad Ave													
Lane 1 ^d	487	3.4	1236	0.394	100	8.5	LOS A	2.5	64.5	Full	1600	0.0	0.0
Approach	487	3.4		0.394		8.5	LOS A	2.5	64.5				
East: SE Mill Pond Rd													
Lane 1 ^d	72	19.7	738	0.097	100	9.4	LOS A	0.5	13.1	Full	1600	0.0	0.0
Approach	72	19.7		0.097		9.4	LOS A	0.5	13.1				
North: Tokul Rd SE													
Lane 1 ^d	39	6.1	840	0.046	100	6.5	LOS A	0.2	5.7	Full	1600	0.0	0.0
Approach	39	6.1		0.046		6.5	LOS A	0.2	5.7				
West: Railroad Ave													
Lane 1 ^d	621	4.4	1218	0.510	100	4.6	LOS A	3.9	99.9	Full	1600	0.0	0.0
Approach	621	4.4		0.510		4.6	LOS A	3.9	99.9				
Intersection	1219	4.9		0.510		6.5	LOS A	3.9	99.9				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

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Organisation: TENW | Processed: Tuesday, March 3, 2020 9:33:43 AM

Project: T:\Active Projects\Snoqualmie Mill - 5584\Planning - 5584\LOS\Snoqualmie Mill - Railroad Ave & Tokul Rd & SE Mill Pond Rd Roundabout.sip8



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	70	8	17	91	5	27
Future Volume (vph)	70	8	17	91	5	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45		35			35
Link Distance (ft)	458		1466			541
Travel Time (s)	6.9		28.6			10.5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	0%	0%	3%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	70	8	17	91	5	27
Future Vol, veh/h	70	8	17	91	5	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	0	0	3	0	0
Mvmt Flow	73	8	18	95	5	28

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	104	66	0	0	113	0
Stage 1	66	-	-	-	-	-
Stage 2	38	-	-	-	-	-
Critical Hdwy	6.43	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	892	1003	-	-	1489	-
Stage 1	954	-	-	-	-	-
Stage 2	982	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	889	1003	-	-	1489	-
Mov Cap-2 Maneuver	889	-	-	-	-	-
Stage 1	954	-	-	-	-	-
Stage 2	979	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	1.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	899	1489
HCM Lane V/C Ratio	-	-	0.09	0.003
HCM Control Delay (s)	-	-	9.4	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0

Lanes, Volumes, Timings

18: Meadowbrook Way SE/SE Reinig Rd & SE Mill Pond Rd

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	18	77	79	22	35	14
Future Volume (vph)	18	77	79	22	35	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		40	
Link Distance (ft)		502	1466		916	
Travel Time (s)		9.8	28.6		15.6	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	1%	0%	3%	0%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↖	↗		↖	↗
Traffic Vol, veh/h	18	77	79	22	35	14
Future Vol, veh/h	18	77	79	22	35	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	1	1	0	3	0
Mvmt Flow	19	82	84	23	37	15
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	107	0	0	216	96	
Stage 1	-	-	-	96	-	
Stage 2	-	-	-	120	-	
Critical Hdwy	4.1	-	-	6.43	6.2	
Critical Hdwy Stg 1	-	-	-	5.43	-	
Critical Hdwy Stg 2	-	-	-	5.43	-	
Follow-up Hdwy	2.2	-	-	3.527	3.3	
Pot Cap-1 Maneuver	1497	-	-	770	966	
Stage 1	-	-	-	925	-	
Stage 2	-	-	-	903	-	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	1497	-	-	760	966	
Mov Cap-2 Maneuver	-	-	-	760	-	
Stage 1	-	-	-	913	-	
Stage 2	-	-	-	903	-	
Approach	EB	WB	SB			
HCM Control Delay, s	1.4	0	9.8			
HCM LOS			A			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1497	-	-	-	809	-
HCM Lane V/C Ratio	0.013	-	-	-	0.064	-
HCM Control Delay (s)	7.4	0	-	-	9.8	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.2	-

Lanes, Volumes, Timings
19: Meadowbrook Bridge

03/03/2020

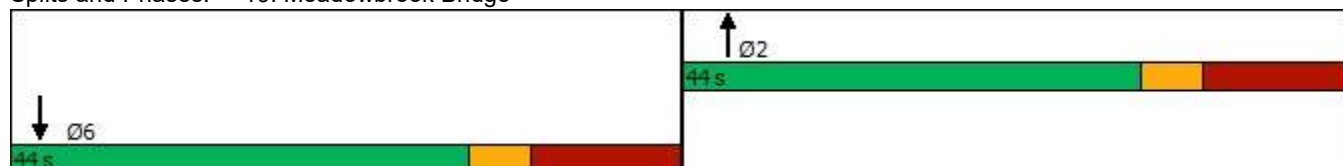


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	95	0	0	93
Future Volume (vph)	0	0	95	0	0	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			30
Link Distance (ft)	150		304			249
Travel Time (s)	3.4		6.9			5.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Shared Lane Traffic (%)						
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Detector Phase			2			6
Switch Phase						
Minimum Initial (s)			5.0			5.0
Minimum Split (s)			19.0			19.0
Total Split (s)			44.0			44.0
Total Split (%)			50.0%			50.0%
Yellow Time (s)			4.0			4.0
All-Red Time (s)			10.0			10.0
Lost Time Adjust (s)			0.0			0.0
Total Lost Time (s)			14.0			14.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode			None			None

Intersection Summary

Area Type: Other
 Cycle Length: 88
 Actuated Cycle Length: 37.6
 Natural Cycle: 40
 Control Type: Actuated-Uncoordinated

Splits and Phases: 19: Meadowbrook Bridge



HCM Signalized Intersection Capacity Analysis
 19: Meadowbrook Bridge

03/03/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	95	0	0	93
Future Volume (vph)	0	0	95	0	0	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			14.0			14.0
Lane Util. Factor			1.00			1.00
Flt			1.00			1.00
Flt Protected			1.00			1.00
Satd. Flow (prot)			1881			1881
Flt Permitted			1.00			1.00
Satd. Flow (perm)			1881			1881
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	103	0	0	101
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	103	0	0	101
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Actuated Green, G (s)			5.1			5.1
Effective Green, g (s)			5.1			5.1
Actuated g/C Ratio			0.13			0.13
Clearance Time (s)			14.0			14.0
Vehicle Extension (s)			2.0			2.0
Lane Grp Cap (vph)			251			251
v/s Ratio Prot			c0.05			c0.05
v/s Ratio Perm						
v/c Ratio			0.41			0.40
Uniform Delay, d1			15.2			15.2
Progression Factor			1.00			1.00
Incremental Delay, d2			0.4			0.4
Delay (s)			15.6			15.5
Level of Service			B			B
Approach Delay (s)	0.0		15.6			15.5
Approach LOS	A		B			B
Intersection Summary						
HCM 2000 Control Delay			15.6		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.41			
Actuated Cycle Length (s)			38.2		Sum of lost time (s)	28.0
Intersection Capacity Utilization			16.7%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Lanes, Volumes, Timings
 20: Meadowbrook Way SE & SE Park St

03/12/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	43	27	30	47	26	11	55	22	23	48	18
Future Volume (vph)	18	43	27	30	47	26	11	55	22	23	48	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		505			663			790			216	
Travel Time (s)		13.8			18.1			21.5			5.9	
Confl. Peds. (#/hr)	5		5	4		4	5		4	4		5
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	6%	5%	4%	0%	2%	0%	0%	2%	0%	0%	6%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

HCM 6th AWSC
20: Meadowbrook Way SE & SE Park St

03/12/2020

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	18	43	27	30	47	26	11	55	22	23	48	18
Future Vol, veh/h	18	43	27	30	47	26	11	55	22	23	48	18
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	6	5	4	0	2	0	0	2	0	0	6	0
Mvmt Flow	21	51	32	36	56	31	13	65	26	27	57	21
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	8.2			8.2			8.1			8.2		
HCM LOS	A			A			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %		12%	20%	29%
Vol Thru, %		62%	49%	46%
Vol Right, %		25%	31%	25%
Sign Control		Stop	Stop	Stop
Traffic Vol by Lane		88	88	103
LT Vol		11	18	30
Through Vol		55	43	47
RT Vol		22	27	26
Lane Flow Rate		105	105	123
Geometry Grp		1	1	1
Degree of Util (X)		0.129	0.13	0.15
Departure Headway (Hd)		4.416	4.478	4.408
Convergence, Y/N		Yes	Yes	Yes
Cap		813	801	814
Service Time		2.438	2.503	2.431
HCM Lane V/C Ratio		0.129	0.131	0.151
HCM Control Delay		8.1	8.2	8.2
HCM Lane LOS		A	A	A
HCM 95th-tile Q		0.4	0.4	0.5

Lanes, Volumes, Timings
21: Meadowbrook Way SE & SR 202

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	396	55	8	388	23	109	76	21	30	55	18
Future Volume (vph)	13	396	55	8	388	23	109	76	21	30	55	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	0		0	150		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			40			35			25	
Link Distance (ft)		615			663			738			518	
Travel Time (s)		14.0			11.3			14.4			14.1	
Confl. Peds. (#/hr)	1					1	2					2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	3%	2%	0%	4%	0%	0%	0%	10%	3%	0%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	33.3	33.3		30.3	30.3		32.8	32.8		32.8	32.8	
Total Split (s)	71.3	71.3		71.3	71.3		40.8	40.8		40.8	40.8	
Total Split (%)	63.6%	63.6%		63.6%	63.6%		36.4%	36.4%		36.4%	36.4%	
Yellow Time (s)	4.3	4.3		4.3	4.3		3.8	3.8		3.8	3.8	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	6.3	6.3		6.3	6.3			5.8		5.8	5.8	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Min	Min		Min	Min		None	None		None	None	

Intersection Summary

Area Type: Other

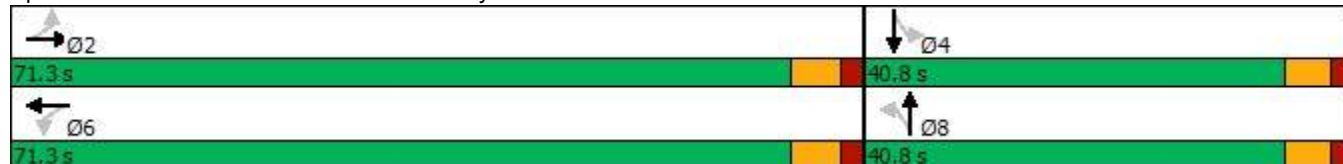
Cycle Length: 112.1

Actuated Cycle Length: 47.7

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Splits and Phases: 21: Meadowbrook Way SE & SR 202



HCM 6th Signalized Intersection Summary
 21: Meadowbrook Way SE & SR 202

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	396	55	8	388	23	109	76	21	30	55	18
Future Volume (veh/h)	13	396	55	8	388	23	109	76	21	30	55	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1856	1900	1841	1841	1900	1900	1900	1856	1900	1900
Adj Flow Rate, veh/h	14	426	59	9	417	25	117	82	23	32	59	19
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	3	3	0	4	4	0	0	0	3	0	0
Cap, veh/h	432	660	91	399	711	43	318	161	36	551	311	100
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	962	1595	221	925	1719	103	683	712	161	1275	1375	443
Grp Volume(v), veh/h	14	0	485	9	0	442	222	0	0	32	0	78
Grp Sat Flow(s),veh/h/ln	962	0	1815	925	0	1822	1557	0	0	1275	0	1818
Q Serve(g_s), s	0.4	0.0	7.2	0.3	0.0	6.3	3.1	0.0	0.0	0.0	0.0	1.2
Cycle Q Clear(g_c), s	6.7	0.0	7.2	7.4	0.0	6.3	4.3	0.0	0.0	0.5	0.0	1.2
Prop In Lane	1.00		0.12	1.00		0.06	0.53		0.10	1.00		0.24
Lane Grp Cap(c), veh/h	432	0	751	399	0	754	516	0	0	551	0	411
V/C Ratio(X)	0.03	0.00	0.65	0.02	0.00	0.59	0.43	0.00	0.00	0.06	0.00	0.19
Avail Cap(c_a), veh/h	1895	0	3513	1806	0	3526	1764	0	0	1592	0	1894
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.2	0.0	7.9	10.9	0.0	7.6	11.7	0.0	0.0	10.3	0.0	10.5
Incr Delay (d2), s/veh	0.0	0.0	1.1	0.0	0.0	0.9	0.6	0.0	0.0	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	1.9	0.0	0.0	1.4	1.1	0.0	0.0	0.2	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.3	0.0	9.0	10.9	0.0	8.5	12.2	0.0	0.0	10.3	0.0	10.7
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	B
Approach Vol, veh/h		499			451			222			110	
Approach Delay, s/veh		9.0			8.6			12.2			10.6	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.2		13.4		20.2		13.4				
Change Period (Y+Rc), s		6.3		* 5.8		6.3		* 5.8				
Max Green Setting (Gmax), s		65.0		* 35		65.0		* 35				
Max Q Clear Time (g_c+I1), s		9.2		3.2		9.4		6.3				
Green Ext Time (p_c), s		4.6		0.5		3.6		1.3				
Intersection Summary												
HCM 6th Ctrl Delay				9.6								
HCM 6th LOS				A								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 22: Meadowbrook Way SE & 384th Ave SE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	160	212	163	13	2	109
Future Volume (vph)	160	212	163	13	2	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		25	
Link Distance (ft)		158	180		181	
Travel Time (s)		3.1	3.5		4.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	8%	1%	3%	0%	0%	6%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	160	212	163	13	2	109
Future Vol, veh/h	160	212	163	13	2	109
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	8	1	3	0	0	6
Mvmt Flow	184	244	187	15	2	125
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	202	0	0	807	195	
Stage 1	-	-	-	195	-	
Stage 2	-	-	-	612	-	
Critical Hdwy	4.18	-	-	6.4	6.26	
Critical Hdwy Stg 1	-	-	-	5.4	-	
Critical Hdwy Stg 2	-	-	-	5.4	-	
Follow-up Hdwy	2.272	-	-	3.5	3.354	
Pot Cap-1 Maneuver	1335	-	-	354	836	
Stage 1	-	-	-	843	-	
Stage 2	-	-	-	545	-	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	1335	-	-	298	836	
Mov Cap-2 Maneuver	-	-	-	298	-	
Stage 1	-	-	-	709	-	
Stage 2	-	-	-	545	-	
Approach	EB	WB	SB			
HCM Control Delay, s	3.5	0	10.3			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1335	-	-	-	-	810
HCM Lane V/C Ratio	0.138	-	-	-	-	0.158
HCM Control Delay (s)	8.1	0	-	-	-	10.3
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0.5	-	-	-	-	0.6

Lanes, Volumes, Timings
 23: SE North Bend Way & Meadowbrook Way SE

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	56	216	127	74	298	265
Future Volume (vph)	56	216	127	74	298	265
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	450	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Link Speed (mph)	35		50			50
Link Distance (ft)	158		253			593
Travel Time (s)	3.1		3.5			8.1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	3%	3%	15%	1%	1%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	5.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↘	↑	↘	↘	↑
Traffic Vol, veh/h	56	216	127	74	298	265
Future Vol, veh/h	56	216	127	74	298	265
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	Free	-	None
Storage Length	0	0	-	0	450	-
Veh in Median Storage, #1	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	3	3	15	1	1
Mvmt Flow	62	240	141	82	331	294

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1097	-	0	-	141
Stage 1	141	-	-	-	-
Stage 2	956	-	-	-	-
Critical Hdwy	6.45	-	-	-	4.11
Critical Hdwy Stg 1	5.45	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-
Follow-up Hdwy	3.545	-	-	-	2.209
Pot Cap-1 Maneuver	233	0	-	0	1448
Stage 1	879	0	-	0	-
Stage 2	369	0	-	0	-
Platoon blocked, %			-		-
Mov Cap-1 Maneuver	180	-	-	-	1448
Mov Cap-2 Maneuver	247	-	-	-	-
Stage 1	879	-	-	-	-
Stage 2	284	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.4	0	4.4
HCM LOS	C		

Minor Lane/Major Mvmt	NB	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	247	-	1448	-
HCM Lane V/C Ratio	-	0.252	-	0.229	-
HCM Control Delay (s)	-	24.4	0	8.2	-
HCM Lane LOS	-	C	A	A	-
HCM 95th %tile Q(veh)	-	1	-	0.9	-

2023 No Action
LOS Worksheets

Lanes, Volumes, Timings
1: SR-18 & I-90 EB Ramps

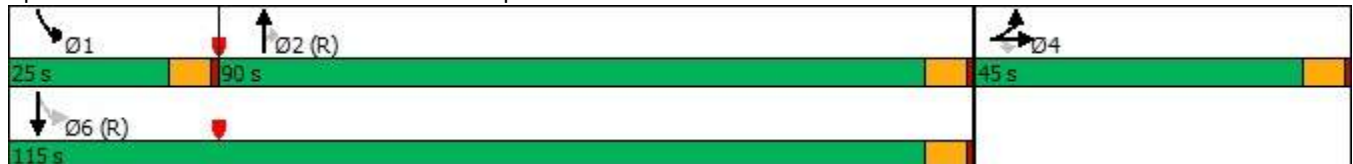
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	376	0	82	0	0	0	0	778	454	53	348	0
Future Volume (vph)	376	0	82	0	0	0	0	778	454	53	348	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650		0	0		0	0		300	200		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			45			30	
Link Distance (ft)		833			764			1837			778	
Travel Time (s)		16.2			14.9			27.8			17.7	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	0%	10%	0%	0%	0%	0%	8%	28%	12%	42%	0%
Shared Lane Traffic (%)	50%											
Turn Type	Split	NA	Perm					NA	Perm	pm+pt	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			4						2	6		
Detector Phase	4	4	4					2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					10.0	10.0	3.0	10.0	
Minimum Split (s)	29.0	29.0	29.0					16.0	16.0	9.0	23.0	
Total Split (s)	45.0	45.0	45.0					90.0	90.0	25.0	115.0	
Total Split (%)	28.1%	28.1%	28.1%					56.3%	56.3%	15.6%	71.9%	
Yellow Time (s)	5.0	5.0	5.0					5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0	1.0					1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0					6.0	6.0	6.0	6.0	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None					C-Min	C-Min	None	C-Min	

Intersection Summary

Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated





















Splits and Phases: 1: SR-18 & I-90 EB Ramps



HCM 6th Signalized Intersection Summary

1: SR-18 & I-90 EB Ramps

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	376	0	82	0	0	0	0	778	454	53	348	0
Future Volume (veh/h)	376	0	82	0	0	0	0	778	454	53	348	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00		1.00				1.00		1.00	1.00		1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1826	1900	1752				0	1781	1485	1722	1278	0
Adj Flow Rate, veh/h	392	0	0				0	810	0	55	362	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	0	10				0	8	28	12	42	0
Cap, veh/h	456	0					0	1313		398	1927	0
Arrive On Green	0.13	0.00	0.00				0.00	0.74	0.00	0.02	0.79	0.00
Sat Flow, veh/h	3478	0	1485				0	1781	1259	1640	2491	0
Grp Volume(v), veh/h	392	0	0				0	810	0	55	362	0
Grp Sat Flow(s),veh/h/ln	1739	0	1485				0	1781	1259	1640	1214	0
Q Serve(g_s), s	17.7	0.0	0.0				0.0	35.1	0.0	1.3	5.8	0.0
Cycle Q Clear(g_c), s	17.7	0.0	0.0				0.0	35.1	0.0	1.3	5.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	456	0					0	1313		398	1927	0
V/C Ratio(X)	0.86	0.00					0.00	0.62		0.14	0.19	0.00
Avail Cap(c_a), veh/h	848	0					0	1313		561	1927	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				0.00	1.00	0.00	0.85	0.85	0.00
Uniform Delay (d), s/veh	68.1	0.0	0.0				0.0	10.1	0.0	9.1	4.0	0.0
Incr Delay (d2), s/veh	4.9	0.0	0.0				0.0	2.2	0.0	0.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	0.0	0.0				0.0	12.9	0.0	0.5	1.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.9	0.0	0.0				0.0	12.3	0.0	9.3	4.2	0.0
LnGrp LOS	E	A					A	B		A	A	A
Approach Vol, veh/h		392	A					810	A		417	
Approach Delay, s/veh		72.9						12.3			4.8	
Approach LOS		E						B			A	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	9.1	124.0		27.0				133.0				
Change Period (Y+Rc), s	6.0	6.0		6.0				6.0				
Max Green Setting (Gmax), s	19.0	84.0		39.0				109.0				
Max Q Clear Time (g_c+I1), s	3.3	37.1		19.7				7.8				
Green Ext Time (p_c), s	0.1	16.7		1.3				6.5				
Intersection Summary												
HCM 6th Ctrl Delay			25.1									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

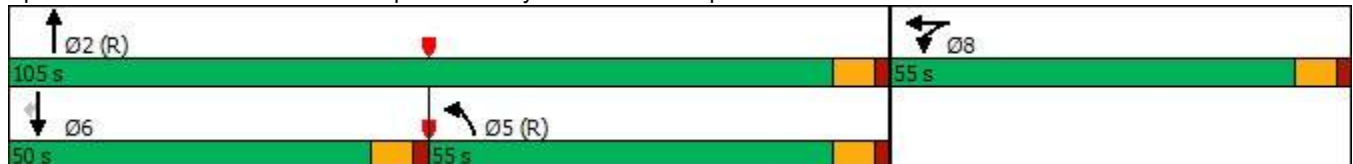
03/06/2020

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group												
Lane Configurations				↖	↕		↖	↕			↕	↖
Traffic Volume (vph)	0	0	0	213	2	87	567	560	0	0	140	815
Future Volume (vph)	0	0	0	213	2	87	567	560	0	0	140	815
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	0		0
Storage Lanes	0		0	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30				30
Link Distance (ft)		893			705			778				878
Travel Time (s)		17.4			13.7			17.7				20.0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	57%	50%	7%	7%	6%	0%	0%	13%	1%
Shared Lane Traffic (%)				27%								
Turn Type				Split	NA		Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases												6
Detector Phase				8	8		5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	7.0			7.0	7.0
Minimum Split (s)				12.0	12.0		12.0	14.0			24.0	24.0
Total Split (s)				55.0	55.0		55.0	105.0			50.0	50.0
Total Split (%)				34.4%	34.4%		34.4%	65.6%			31.3%	31.3%
Yellow Time (s)				5.0	5.0		5.0	5.0			5.0	5.0
All-Red Time (s)				2.0	2.0		2.0	2.0			2.0	2.0
Lost Time Adjust (s)				0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)				7.0	7.0		7.0	7.0			7.0	7.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None		C-Max	C-Min			None	None

Intersection Summary




















Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 60 (38%), Referenced to phase 2:NBT and 5:NBL, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated

Splits and Phases: 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps





















HCM 6th Signalized Intersection Summary
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	213	2	87	567	560	0	0	140	815
Future Volume (veh/h)	0	0	0	213	2	87	567	560	0	0	140	815
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No				No	
Adj Sat Flow, veh/h/ln				1055	1159	1055	1796	1811	0	0	1707	1885
Adj Flow Rate, veh/h				159	93	92	597	589	0	0	147	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				57	50	57	7	6	0	0	13	1
Cap, veh/h				205	109	108	513	2437	0	0	622	
Arrive On Green				0.20	0.20	0.20	0.10	0.23	0.00	0.00	0.36	0.00
Sat Flow, veh/h				1005	535	529	1711	3532	0	0	1707	1598
Grp Volume(v), veh/h				159	0	185	597	589	0	0	147	0
Grp Sat Flow(s),veh/h/ln				1005	0	1064	1711	1721	0	0	1707	1598
Q Serve(g_s), s				23.9	0.0	26.8	48.0	22.2	0.0	0.0	9.6	0.0
Cycle Q Clear(g_c), s				23.9	0.0	26.8	48.0	22.2	0.0	0.0	9.6	0.0
Prop In Lane				1.00		0.50	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				205	0	217	513	2437	0	0	622	
V/C Ratio(X)				0.77	0.00	0.85	1.16	0.24	0.00	0.00	0.24	
Avail Cap(c_a), veh/h				302	0	319	513	2437	0	0	622	
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	1.00	0.68	0.68	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				60.2	0.0	61.3	72.1	26.4	0.0	0.0	35.3	0.0
Incr Delay (d2), s/veh				20.1	0.0	27.6	87.7	0.2	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.2	0.0	8.9	34.8	10.4	0.0	0.0	4.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				80.3	0.0	89.0	159.8	26.6	0.0	0.0	35.6	0.0
LnGrp LOS				F	A	F	F	C	A	A	D	
Approach Vol, veh/h					344			1186			147	A
Approach Delay, s/veh					85.0			93.6			35.6	
Approach LOS					F			F			D	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		120.3			55.0	65.3		39.7				
Change Period (Y+Rc), s		7.0			7.0	7.0		7.0				
Max Green Setting (Gmax), s		98.0			48.0	43.0		48.0				
Max Q Clear Time (g_c+I1), s		24.2			50.0	11.6		28.8				
Green Ext Time (p_c), s		7.0			0.0	1.2		3.9				
Intersection Summary												
HCM 6th Ctrl Delay				86.8								
HCM 6th LOS				F								
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 3: Snoqualmie Pkwy & SE 99th St

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	28	0	0	1	70	555	3	1	960	10
Future Volume (vph)	2	0	28	0	0	1	70	555	3	1	960	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	0		0	0		0	125		0	25		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		989			884			878			457	
Travel Time (s)		27.0			24.1			20.0			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	50%	0%	0%	0%	0%	0%	3%	6%	0%	0%	2%	20%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	2	0	28	0	0	1	70	555	3	1	960	10
Future Vol, veh/h	2	0	28	0	0	1	70	555	3	1	960	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	25	-	-
Veh in Median Storage, #-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	50	0	0	0	0	0	3	6	0	0	2	20
Mvmt Flow	2	0	29	0	0	1	74	584	3	1	1011	11

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1459	1754	511	1242	1758	294	1022	0	0	587	0	0
Stage 1	1019	1019	-	734	734	-	-	-	-	-	-	-
Stage 2	440	735	-	508	1024	-	-	-	-	-	-	-
Critical Hdwy	8.5	6.5	6.9	7.5	6.5	6.9	4.16	-	-	4.1	-	-
Critical Hdwy Stg 1	7.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	4	4	3.3	3.5	4	3.3	2.23	-	-	2.2	-	-
Pot Cap-1 Maneuver	58	86	513	133	86	708	669	-	-	998	-	-
Stage 1	180	317	-	382	429	-	-	-	-	-	-	-
Stage 2	455	428	-	521	315	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	53	76	513	115	76	708	669	-	-	998	-	-
Mov Cap-2 Maneuver	53	76	-	115	76	-	-	-	-	-	-	-
Stage 1	160	317	-	340	381	-	-	-	-	-	-	-
Stage 2	404	380	-	491	315	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB			
HCM Control Delay, s	17.3		10.1		1.2		0			
HCM LOS	C		B							

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	669	-	-	325	708	998	-
HCM Lane V/C Ratio	0.11	-	-	0.097	0.001	0.001	-
HCM Control Delay (s)	11	-	-	17.3	10.1	8.6	-
HCM Lane LOS	B	-	-	C	B	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0.3	0	0	-

Lanes, Volumes, Timings
 4: Snoqualmie Pkwy & SE 96th St

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	32	16	503	15	31	883
Future Volume (vph)	32	16	503	15	31	883
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Link Speed (mph)	30		40			40
Link Distance (ft)	346		677			718
Travel Time (s)	7.9		11.5			12.2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	8%	0%	0%	2%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary
 Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↑↑		↔	↑↑
Traffic Vol, veh/h	32	16	503	15	31	883
Future Vol, veh/h	32	16	503	15	31	883
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #1	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	8	0	0	2
Mvmt Flow	33	16	513	15	32	901

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1036	264	0	0	528	0
Stage 1	521	-	-	-	-	-
Stage 2	515	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	231	741	-	-	1049	-
Stage 1	566	-	-	-	-	-
Stage 2	570	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	224	741	-	-	1049	-
Mov Cap-2 Maneuver	357	-	-	-	-	-
Stage 1	566	-	-	-	-	-
Stage 2	552	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.1	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	357	741	1049	-
HCM Lane V/C Ratio	-	-	0.091	0.022	0.03	-
HCM Control Delay (s)	-	-	16.1	10	8.5	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	0.1	-

Lanes, Volumes, Timings
5: Snoqualmie Pkwy & SE Jacobia St

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	5	111	99	6	78	36	556	15	21	736	15
Future Volume (vph)	31	5	111	99	6	78	36	556	15	21	736	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	250		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		653			474			718			617	
Travel Time (s)		17.8			12.9			12.2			10.5	
Confl. Peds. (#/hr)	2		1	1		2						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	13%	20%	0%	0%	17%	3%	9%	7%	0%	15%	4%	40%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	15.0		5.0	16.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		10.5	22.5		10.5	22.5	
Total Split (s)	25.0	25.0		40.0	40.0		15.5	65.5		15.5	65.5	
Total Split (%)	20.7%	20.7%		33.1%	33.1%		12.8%	54.1%		12.8%	54.1%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.5	4.5		4.5	4.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.5	5.5		5.5	5.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other

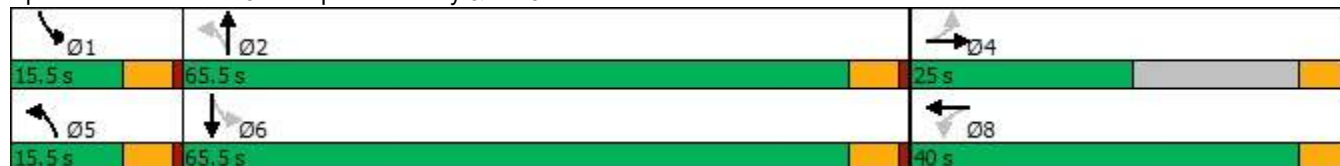
Cycle Length: 121

Actuated Cycle Length: 50.4

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Snoqualmie Pkwy & SE Jacobia St



HCM 6th Signalized Intersection Summary
5: Snoqualmie Pkwy & SE Jacobia St

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	5	111	99	6	78	36	556	15	21	736	15
Future Volume (veh/h)	31	5	111	99	6	78	36	556	15	21	736	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1604	1604	1900	1648	1648	1767	1796	1796	1678	1841	1841
Adj Flow Rate, veh/h	34	5	122	109	7	86	40	611	16	23	809	16
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	13	20	20	0	17	17	9	7	7	15	4	4
Cap, veh/h	354	12	298	338	24	296	359	1412	37	398	1404	28
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.04	0.42	0.42	0.03	0.40	0.40
Sat Flow, veh/h	1187	54	1310	1281	106	1303	1682	3398	89	1598	3508	69
Grp Volume(v), veh/h	34	0	127	109	0	93	40	307	320	23	403	422
Grp Sat Flow(s),veh/h/ln	1187	0	1364	1281	0	1409	1682	1706	1780	1598	1749	1828
Q Serve(g_s), s	1.2	0.0	3.9	3.8	0.0	2.7	0.7	6.2	6.2	0.4	8.7	8.7
Cycle Q Clear(g_c), s	3.8	0.0	3.9	7.7	0.0	2.7	0.7	6.2	6.2	0.4	8.7	8.7
Prop In Lane	1.00		0.96	1.00		0.92	1.00		0.05	1.00		0.04
Lane Grp Cap(c), veh/h	354	0	310	338	0	321	359	709	740	398	700	732
V/C Ratio(X)	0.10	0.00	0.41	0.32	0.00	0.29	0.11	0.43	0.43	0.06	0.58	0.58
Avail Cap(c_a), veh/h	572	0	562	970	0	1016	633	2108	2199	683	2160	2259
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.1	0.0	16.0	19.3	0.0	15.5	8.6	10.1	10.1	8.4	11.4	11.4
Incr Delay (d2), s/veh	0.1	0.0	0.9	0.5	0.0	0.5	0.1	0.6	0.6	0.0	1.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	1.2	1.1	0.0	0.8	0.2	1.8	1.9	0.1	2.7	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	0.0	16.8	19.8	0.0	16.0	8.6	10.7	10.7	8.4	12.4	12.4
LnGrp LOS	B	A	B	B	A	B	A	B	B	A	B	B
Approach Vol, veh/h		161			202			667			848	
Approach Delay, s/veh		16.9			18.1			10.6			12.3	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	25.7		16.0	7.6	24.9		16.0				
Change Period (Y+Rc), s	5.5	5.5		5.0	5.5	5.5		5.0				
Max Green Setting (Gmax), s	10.0	60.0		20.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	2.4	8.2		5.9	2.7	10.7		9.7				
Green Ext Time (p_c), s	0.0	6.1		0.7	0.0	8.7		0.9				
Intersection Summary												
HCM 6th Ctrl Delay				12.7								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
6: Snoqualmie Pkwy & SE Swenson Dr

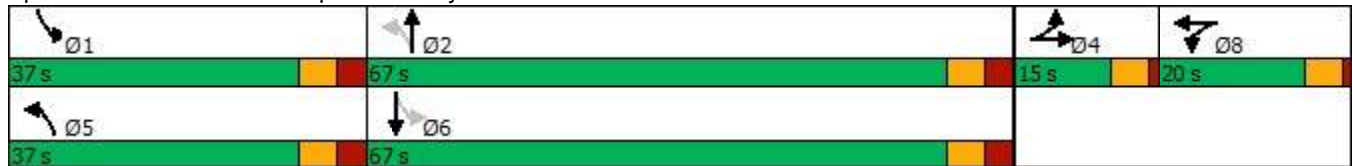
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	12	24	46	16	70	47	599	19	40	575	66
Future Volume (vph)	54	12	24	46	16	70	47	599	19	40	575	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	275		0	300		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			No
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		456			320			2254			367	
Travel Time (s)		10.4			7.3			38.4			6.3	
Confl. Peds. (#/hr)			1			45	1		8	8		1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	6%	17%	4%	0%	6%	3%	4%	9%	5%	0%	7%	5%
Shared Lane Traffic (%)												
Turn Type	Split	NA		Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		10.0	10.0		5.0	12.0		5.0	12.0	
Minimum Split (s)	38.0	38.0		38.0	38.0		12.0	28.0		12.0	28.0	
Total Split (s)	15.0	15.0		20.0	20.0		37.0	67.0		37.0	67.0	
Total Split (%)	10.8%	10.8%		14.4%	14.4%		26.6%	48.2%		26.6%	48.2%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		7.0	7.0		7.0	7.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
 Cycle Length: 139
 Actuated Cycle Length: 84.2
 Natural Cycle: 120
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Snoqualmie Pkwy & SE Swenson Dr



HCM 6th Signalized Intersection Summary
6: Snoqualmie Pkwy & SE Swenson Dr

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	12	24	46	16	70	47	599	19	40	575	66
Future Volume (veh/h)	54	12	24	46	16	70	47	599	19	40	575	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.93	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1648	1648	1900	1811	1811	1841	1767	1767	1900	1796	1796
Adj Flow Rate, veh/h	61	13	27	52	18	79	53	673	21	45	646	74
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	17	17	0	6	6	4	9	9	0	7	7
Cap, veh/h	146	40	84	343	52	229	256	873	27	263	794	91
Arrive On Green	0.08	0.08	0.08	0.19	0.19	0.19	0.05	0.26	0.26	0.04	0.26	0.26
Sat Flow, veh/h	1725	477	990	1810	275	1209	1753	3321	104	1810	3080	352
Grp Volume(v), veh/h	61	0	40	52	0	97	53	340	354	45	357	363
Grp Sat Flow(s),veh/h/ln	1725	0	1467	1810	0	1484	1753	1678	1746	1810	1706	1726
Q Serve(g_s), s	1.9	0.0	1.5	1.4	0.0	3.2	1.2	10.7	10.8	1.0	11.3	11.3
Cycle Q Clear(g_c), s	1.9	0.0	1.5	1.4	0.0	3.2	1.2	10.7	10.8	1.0	11.3	11.3
Prop In Lane	1.00		0.68	1.00		0.81	1.00		0.06	1.00		0.20
Lane Grp Cap(c), veh/h	146	0	124	343	0	282	256	441	459	263	440	445
V/C Ratio(X)	0.42	0.00	0.32	0.15	0.00	0.34	0.21	0.77	0.77	0.17	0.81	0.82
Avail Cap(c_a), veh/h	301	0	256	473	0	388	1086	1756	1827	1129	1785	1806
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.9	0.0	24.7	19.4	0.0	20.1	15.4	19.5	19.6	15.3	20.0	20.0
Incr Delay (d2), s/veh	0.7	0.0	0.6	0.1	0.0	0.3	0.1	1.1	1.1	0.1	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.5	0.5	0.0	1.1	0.4	3.7	3.9	0.4	4.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.6	0.0	25.3	19.5	0.0	20.4	15.5	20.6	20.6	15.4	21.4	21.4
LnGrp LOS	C	A	C	B	A	C	B	C	C	B	C	C
Approach Vol, veh/h		101			149			747			765	
Approach Delay, s/veh		25.5			20.1			20.3			21.1	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	22.1		9.8	9.9	21.8		15.9				
Change Period (Y+Rc), s	7.0	7.0		5.0	7.0	7.0		5.0				
Max Green Setting (Gmax), s	30.0	60.0		10.0	30.0	60.0		15.0				
Max Q Clear Time (g_c+I1), s	3.0	12.8		3.9	3.2	13.3		5.2				
Green Ext Time (p_c), s	0.0	0.6		0.0	0.0	0.6		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			20.9									
HCM 6th LOS			C									
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

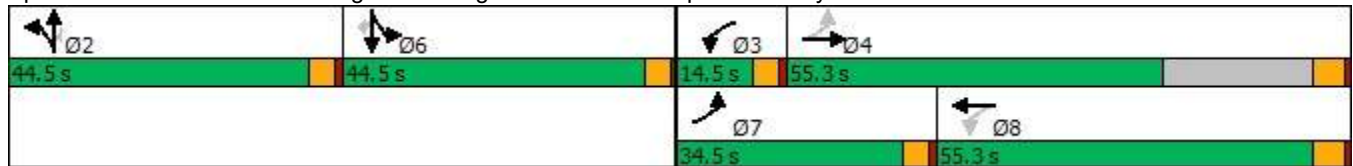
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	405	202	53	383	23	106	12	37	49	42	314
Future Volume (vph)	92	405	202	53	383	23	106	12	37	49	42	314
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	175		0	0		150	0		100
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1285			1065			585			583	
Travel Time (s)		21.9			18.2			16.0			15.9	
Confl. Peds. (#/hr)												3
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	10%	11%	3%	2%	6%	18%	6%	0%	6%	6%	0%	4%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4			8					2			6
Detector Phase	7	4		3	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	35.3		9.5	30.3		36.5	36.5	36.5	36.5	36.5	36.5
Total Split (s)	34.5	55.3		14.5	55.3		44.5	44.5	44.5	44.5	44.5	44.5
Total Split (%)	19.3%	30.9%		8.1%	30.9%		24.9%	24.9%	24.9%	24.9%	24.9%	24.9%
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.3		4.5	5.3			4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None	None	None	None	None

Intersection Summary























Area Type: Other
 Cycle Length: 178.8
 Actuated Cycle Length: 80.6
 Natural Cycle: 120
 Control Type: Actuated-Uncoordinated

Splits and Phases: 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	92	405	202	53	383	23	106	12	37	49	42	314
Future Volume (veh/h)	92	405	202	53	383	23	106	12	37	49	42	314
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1737	1737	1870	1811	1811	1900	1900	1811	1900	1900	1841
Adj Flow Rate, veh/h	106	466	232	61	440	26	122	14	0	56	48	239
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	10	11	11	2	6	6	0	0	6	0	0	4
Cap, veh/h	411	710	351	316	1046	62	174	20	163	207	177	323
Arrive On Green	0.07	0.33	0.33	0.05	0.32	0.32	0.11	0.11	0.00	0.21	0.21	0.21
Sat Flow, veh/h	1668	2139	1058	1781	3302	195	1631	187	1535	996	854	1553
Grp Volume(v), veh/h	106	359	339	61	229	237	136	0	0	104	0	239
Grp Sat Flow(s),veh/h/ln	1668	1650	1547	1781	1721	1776	1818	0	1535	1850	0	1553
Q Serve(g_s), s	2.6	11.6	11.7	1.4	6.5	6.6	4.5	0.0	0.0	2.9	0.0	9.0
Cycle Q Clear(g_c), s	2.6	11.6	11.7	1.4	6.5	6.6	4.5	0.0	0.0	2.9	0.0	9.0
Prop In Lane	1.00		0.68	1.00		0.11	0.90		1.00	0.54		1.00
Lane Grp Cap(c), veh/h	411	547	513	316	545	562	194	0	163	384	0	323
V/C Ratio(X)	0.26	0.66	0.66	0.19	0.42	0.42	0.70	0.00	0.00	0.27	0.00	0.74
Avail Cap(c_a), veh/h	1102	1324	1241	509	1380	1425	1167	0	985	1187	0	997
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.0	17.8	17.8	13.9	16.8	16.8	26.9	0.0	0.0	20.7	0.0	23.1
Incr Delay (d2), s/veh	0.3	1.9	2.1	0.3	0.7	0.7	4.6	0.0	0.0	0.4	0.0	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	4.1	3.9	0.5	2.3	2.4	2.1	0.0	0.0	1.3	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.3	19.7	19.9	14.2	17.5	17.5	31.5	0.0	0.0	21.1	0.0	26.5
LnGrp LOS	B	B	B	B	B	B	C	A	A	C	A	C
Approach Vol, veh/h		804			527			136			343	
Approach Delay, s/veh		18.9			17.1			31.5			24.8	
Approach LOS		B			B			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.1	7.8	26.0		17.5	8.7	25.0				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		40.0	10.0	50.0		40.0	30.0	50.0				
Max Q Clear Time (g_c+I1), s		6.5	3.4	13.7		11.0	4.6	8.6				
Green Ext Time (p_c), s		0.8	0.0	7.0		1.5	0.3	4.2				
Intersection Summary												
HCM 6th Ctrl Delay				20.5								
HCM 6th LOS				C								

Lanes, Volumes, Timings
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

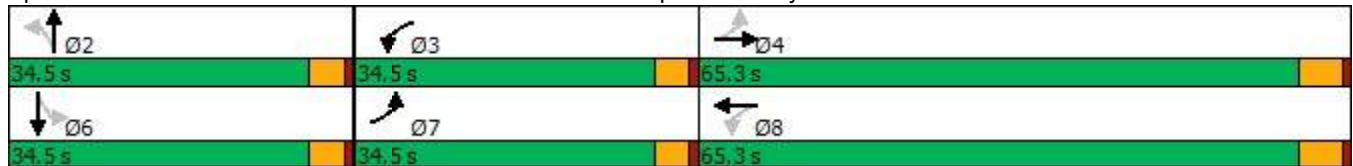
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	317	81	126	404	47	9	6	17	60	27	93
Future Volume (vph)	98	317	81	126	404	47	9	6	17	60	27	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	275		0	275		0	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1065			1064			511			626	
Travel Time (s)		18.2			18.1			13.9			17.1	
Confl. Peds. (#/hr)	3		1	1		3	2		1	1		2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	13%	1%	0%	6%	0%	11%	0%	0%	5%	4%	2%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	34.3		9.5	34.3		36.5	36.5		36.5	36.5	
Total Split (s)	34.5	65.3		34.5	65.3		34.5	34.5		34.5	34.5	
Total Split (%)	25.7%	48.6%		25.7%	48.6%		25.7%	25.7%		25.7%	25.7%	
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	5.3		4.5	5.3		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	

Intersection Summary
























Area Type: Other
 Cycle Length: 134.3
 Actuated Cycle Length: 50
 Natural Cycle: 85
 Control Type: Actuated-Uncoordinated

Splits and Phases: 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy



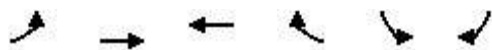
HCM 6th Signalized Intersection Summary
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (veh/h)	98	317	81	126	404	47	9	6	17	60	27	93
Future Volume (veh/h)	98	317	81	126	404	47	9	6	17	60	27	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1707	1900	1811	1811	1737	1900	1900	1826	1841	1841
Adj Flow Rate, veh/h	110	356	91	142	454	53	10	7	19	67	30	104
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	13	13	0	6	6	11	0	0	5	4	4
Cap, veh/h	599	985	248	633	1227	143	273	70	190	373	56	194
Arrive On Green	0.09	0.38	0.38	0.10	0.40	0.40	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	2563	647	1810	3104	361	1163	451	1223	1347	360	1250
Grp Volume(v), veh/h	110	224	223	142	251	256	10	0	26	67	0	134
Grp Sat Flow(s),veh/h/ln	1781	1622	1588	1810	1721	1745	1163	0	1674	1347	0	1610
Q Serve(g_s), s	1.4	3.9	4.0	1.7	4.1	4.1	0.3	0.0	0.5	1.8	0.0	3.0
Cycle Q Clear(g_c), s	1.4	3.9	4.0	1.7	4.1	4.1	3.4	0.0	0.5	2.3	0.0	3.0
Prop In Lane	1.00		0.41	1.00		0.21	1.00		0.73	1.00		0.78
Lane Grp Cap(c), veh/h	599	623	610	633	680	690	273	0	260	373	0	250
V/C Ratio(X)	0.18	0.36	0.37	0.22	0.37	0.37	0.04	0.00	0.10	0.18	0.00	0.54
Avail Cap(c_a), veh/h	1789	2455	2403	1822	2604	2640	973	0	1267	1183	0	1218
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.1	8.7	8.7	6.0	8.5	8.5	17.0	0.0	14.4	15.4	0.0	15.4
Incr Delay (d2), s/veh	0.1	0.5	0.5	0.2	0.5	0.5	0.1	0.0	0.2	0.2	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.0	1.0	0.4	1.1	1.1	0.1	0.0	0.2	0.5	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.2	9.2	9.3	6.1	9.0	9.0	17.0	0.0	14.5	15.6	0.0	17.2
LnGrp LOS	A	A	A	A	A	A	B	A	B	B	A	B
Approach Vol, veh/h		557			649			36				201
Approach Delay, s/veh		8.6			8.3			15.2				16.7
Approach LOS		A			A			B				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		10.7	8.5	20.5		10.7	8.0	21.0				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		30.0	30.0	60.0		30.0	30.0	60.0				
Max Q Clear Time (g_c+I1), s		5.4	3.7	6.0		5.0	3.4	6.1				
Green Ext Time (p_c), s		0.1	0.4	4.2		1.0	0.3	4.7				
Intersection Summary												
HCM 6th Ctrl Delay			9.8									
HCM 6th LOS			A									
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
 9: Snoqualmie Pkwy & Fairway Ave SE

03/06/2020

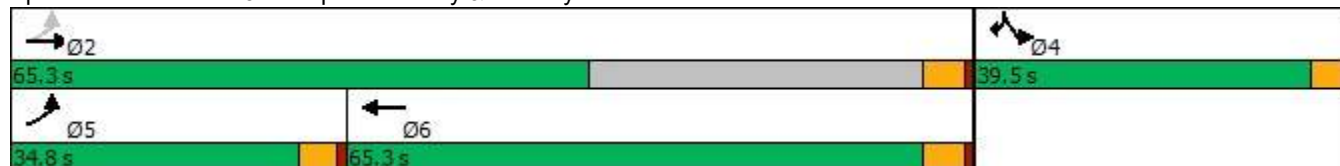


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	30	388	384	110	247	210
Future Volume (vph)	30	388	384	110	247	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	325			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		25	
Link Distance (ft)		1064	278		478	
Travel Time (s)		18.1	4.7		13.0	
Confl. Peds. (#/hr)	2			2		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	8%	9%	3%	11%	3%	1%
Shared Lane Traffic (%)						
Turn Type	pm+pt	NA	NA		Prot	Prot
Protected Phases	5	2	6		4	4
Permitted Phases	2					
Detector Phase	5	2	6		4	4
Switch Phase						
Minimum Initial (s)	5.0	12.0	12.0		5.0	5.0
Minimum Split (s)	9.8	23.3	26.3		36.5	36.5
Total Split (s)	34.8	65.3	65.3		39.5	39.5
Total Split (%)	24.9%	46.8%	46.8%		28.3%	28.3%
Yellow Time (s)	3.8	4.3	4.3		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.8	5.3	5.3		4.5	4.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	None	None		None	None

Intersection Summary

Area Type: Other
 Cycle Length: 139.6
 Actuated Cycle Length: 44.5
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated

Splits and Phases: 9: Snoqualmie Pkwy & Fairway Ave SE



HCM 6th Signalized Intersection Summary
 9: Snoqualmie Pkwy & Fairway Ave SE























03/06/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	30	388	384	110	247	210
Future Volume (veh/h)	30	388	384	110	247	210
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1767	1856	1856	1856	1885
Adj Flow Rate, veh/h	33	431	427	122	274	195
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	9	3	3	3	1
Cap, veh/h	426	1671	890	252	416	376
Arrive On Green	0.04	0.50	0.33	0.33	0.24	0.24
Sat Flow, veh/h	1697	3445	2803	767	1767	1598
Grp Volume(v), veh/h	33	431	276	273	274	195
Grp Sat Flow(s),veh/h/ln	1697	1678	1763	1715	1767	1598
Q Serve(g_s), s	0.4	2.7	4.6	4.7	5.2	3.9
Cycle Q Clear(g_c), s	0.4	2.7	4.6	4.7	5.2	3.9
Prop In Lane	1.00			0.45	1.00	1.00
Lane Grp Cap(c), veh/h	426	1671	579	563	416	376
V/C Ratio(X)	0.08	0.26	0.48	0.48	0.66	0.52
Avail Cap(c_a), veh/h	1747	5486	2881	2802	1685	1523
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.9	5.3	9.8	9.9	12.7	12.2
Incr Delay (d2), s/veh	0.1	0.1	0.6	0.6	1.8	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.5	1.2	1.2	1.9	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.0	5.4	10.4	10.5	14.5	13.3
LnGrp LOS	A	A	B	B	B	B
Approach Vol, veh/h		464	549		469	
Approach Delay, s/veh		5.5	10.5		14.0	
Approach LOS		A	B		B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		23.6		13.1	6.2	17.3
Change Period (Y+Rc), s		5.3		4.5	* 4.8	5.3
Max Green Setting (Gmax), s		60.0		35.0	* 30	60.0
Max Q Clear Time (g_c+I1), s		4.7		7.2	2.4	6.7
Green Ext Time (p_c), s		3.0		1.6	0.1	3.5
Intersection Summary						
HCM 6th Ctrl Delay			10.0			
HCM 6th LOS			B			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

Lanes, Volumes, Timings
 10: Fisher Ave SE & Snoqualmie Pkwy

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (vph)	7	522	6	3	396	18	34	1	8	25	3	31
Future Volume (vph)	7	522	6	3	396	18	34	1	8	25	3	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		458			1686			518			363	
Travel Time (s)		7.8			28.7			14.1			9.9	
Confl. Peds. (#/hr)	2		1	2		3	1		2	3		2
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	0%	7%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	522	6	3	396	18	34	1	8	25	3	31
Future Vol, veh/h	7	522	6	3	396	18	34	1	8	25	3	31
Conflicting Peds, #/hr	2	0	1	2	0	3	1	0	2	3	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #-	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	7	0	0	4	0	0	0	0	0	0	0
Mvmt Flow	9	669	8	4	508	23	44	1	10	32	4	40

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	534	0	0	679	0	0	959	1235	344	887	1228	271
Stage 1	-	-	-	-	-	-	693	693	-	531	531	-
Stage 2	-	-	-	-	-	-	266	542	-	356	697	-
Critical Hdwy	4.1	-	-	4.1	-	-	9.5	8.5	7.9	9.5	8.5	7.9
Critical Hdwy Stg 1	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1044	-	-	923	-	-	126	90	598	148	91	680
Stage 1	-	-	-	-	-	-	275	305	-	376	394	-
Stage 2	-	-	-	-	-	-	623	387	-	525	303	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1041	-	-	921	-	-	113	88	595	142	89	677
Mov Cap-2 Maneuver	-	-	-	-	-	-	113	88	-	142	89	-
Stage 1	-	-	-	-	-	-	272	302	-	372	391	-
Stage 2	-	-	-	-	-	-	577	384	-	508	300	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	50.6	28
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	132	1041	-	-	921	-	-	231
HCM Lane V/C Ratio	0.418	0.009	-	-	0.004	-	-	0.327
HCM Control Delay (s)	50.6	8.5	-	-	8.9	-	-	28
HCM Lane LOS	F	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	1.8	0	-	-	0	-	-	1.4

Lanes, Volumes, Timings
 11: Orchard Ave SE & Snoqualmie Pkwy

03/06/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (vph)	661	9	15	414	24	39
Future Volume (vph)	661	9	15	414	24	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	225		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	1686			1131	557	
Travel Time (s)	28.7			19.3	15.2	
Confl. Peds. (#/hr)		3	1		3	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	7%	11%	7%	6%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Vol, veh/h	661	9	15	414	24	39
Future Vol, veh/h	661	9	15	414	24	39
Conflicting Peds, #/hr	0	3	1	0	3	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	225	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	7	11	7	6	0	5
Mvmt Flow	760	10	17	476	28	45

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	773	0	1043
Stage 1	-	-	-	-	768
Stage 2	-	-	-	-	275
Critical Hdwy	-	-	4.24	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.27	-	3.5
Pot Cap-1 Maneuver	-	-	806	-	228
Stage 1	-	-	-	-	424
Stage 2	-	-	-	-	753
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	804	-	222
Mov Cap-2 Maneuver	-	-	-	-	222
Stage 1	-	-	-	-	423
Stage 2	-	-	-	-	735

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	17.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	364	-	-	804	-
HCM Lane V/C Ratio	0.199	-	-	0.021	-
HCM Control Delay (s)	17.3	-	-	9.6	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.7	-	-	0.1	-

Lanes, Volumes, Timings
 12: Snoqualmie Pkwy & Allman AveSE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	699	416	4	7	9
Future Volume (vph)	2	699	416	4	7	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		40	40		25	
Link Distance (ft)		679	1187		393	
Travel Time (s)		11.6	20.2		10.7	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	7%	5%	0%	0%	0%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	699	416	4	7	9
Future Vol, veh/h	2	699	416	4	7	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #-	0	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	7	5	0	0	0
Mvmt Flow	2	803	478	5	8	10

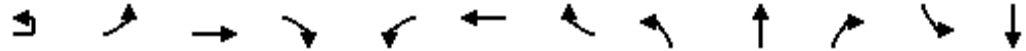
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	483	0	-	0	887 242
Stage 1	-	-	-	-	481 -
Stage 2	-	-	-	-	406 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver 1090	-	-	-	-	287 765
Stage 1	-	-	-	-	593 -
Stage 2	-	-	-	-	647 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver1090	-	-	-	-	286 765
Mov Cap-2 Maneuver	-	-	-	-	286 -
Stage 1	-	-	-	-	592 -
Stage 2	-	-	-	-	647 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1090	-	-	-	-	441
HCM Lane V/C Ratio	0.002	-	-	-	-	0.042
HCM Control Delay (s)	8.3	-	-	-	-	13.5
HCM Lane LOS	A	-	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	-	0.1

Lanes, Volumes, Timings
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↓		↑↑		↖	↑↑			↕			↕
Traffic Volume (vph)	0	0	687	26	24	401	0	29	0	17	0	0
Future Volume (vph)	0	0	687	26	24	401	0	29	0	17	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0		0	200		0	0		0	0	
Storage Lanes		1		0	1		0	0		0	0	
Taper Length (ft)		25			25			25			25	
Right Turn on Red				Yes			Yes			Yes		
Link Speed (mph)			40			40			25			25
Link Distance (ft)			1187			833			535			291
Travel Time (s)			20.2			14.2			14.6			7.9
Confl. Peds. (#/hr)		2		1	1		2	1				
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	0%	7%	4%	0%	6%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt		NA		pm+pt	NA		Perm	NA			
Protected Phases	5		2		1	6			8			4
Permitted Phases	2				6			8			4	
Detector Phase	5		2		1	6		8	8		4	4
Switch Phase												
Minimum Initial (s)	5.0		15.0		5.0	14.0		5.0	5.0		30.0	30.0
Minimum Split (s)	10.0		20.0		10.0	29.0		36.0	36.0		36.0	36.0
Total Split (s)	35.0		65.0		35.0	65.0		36.0	36.0		36.0	36.0
Total Split (%)	25.7%		47.8%		25.7%	47.8%		26.5%	26.5%		26.5%	26.5%
Yellow Time (s)	4.0		4.0		4.0	4.0		5.0	5.0		5.0	5.0
All-Red Time (s)	1.0		1.0		1.0	1.0		1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0		5.0		5.0	5.0		6.0	6.0		6.0	6.0
Lead/Lag	Lead		Lag		Lead	Lag						
Lead-Lag Optimize?	Yes		Yes		Yes	Yes						
Recall Mode	Min		Min		None	None		None	None		None	None

Intersection Summary

Area Type: Other

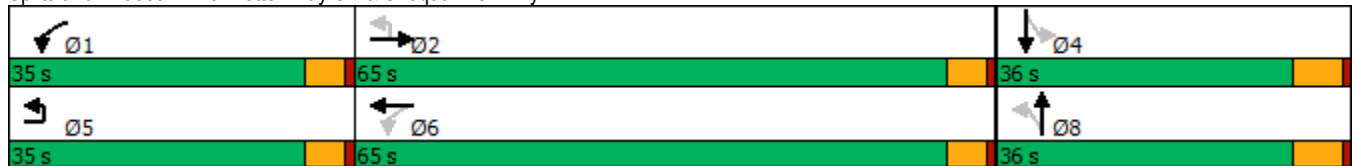
Cycle Length: 136

Actuated Cycle Length: 40.6

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Splits and Phases: 13: Better Way SE & Snoqualmie Pkwy

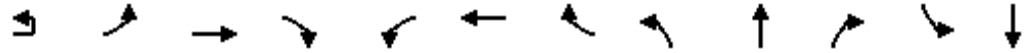




Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	0
Future Volume (vph)	0
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Right Turn on Red	Yes
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	1
Peak Hour Factor	0.85
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	
Intersection Summary	

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↱		↕		↖	↕			↕			↕
Traffic Volume (veh/h)	0	0	687	26	24	401	0	29	0	17	0	0
Future Volume (veh/h)	0	0	687	26	24	401	0	29	0	17	0	0
Initial Q (Qb), veh			0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach			No			No			No			No
Adj Sat Flow, veh/h/ln		0	1796	1796	1900	1811	1811	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		0	808	31	28	472	0	34	0	20	0	0
Peak Hour Factor		0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %		0	7	7	0	6	6	0	0	0	0	0
Cap, veh/h		0	1465	56	333	2123	0	230	0	35	0	119
Arrive On Green		0.00	0.44	0.44	0.03	0.62	0.00	0.06	0.00	0.06	0.00	0.00
Sat Flow, veh/h		0	3441	129	1810	3532	0	940	0	553	0	1900
Grp Volume(v), veh/h		0	411	428	28	472	0	54	0	0	0	0
Grp Sat Flow(s),veh/h/ln		0	1706	1773	1810	1721	0	1493	0	0	0	1900
Q Serve(g_s), s		0.0	6.1	6.1	0.2	2.1	0.0	1.2	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s		0.0	6.1	6.1	0.2	2.1	0.0	1.2	0.0	0.0	0.0	0.0
Prop In Lane		0.00		0.07	1.00		0.00	0.63		0.37	0.00	
Lane Grp Cap(c), veh/h		0	746	775	333	2123	0	264	0	0	0	119
V/C Ratio(X)		0.00	0.55	0.55	0.08	0.22	0.00	0.20	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h		0	2983	3100	1853	6016	0	1476	0	0	0	1661
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)		0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh		0.0	7.2	7.2	7.1	2.9	0.0	15.6	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh		0.0	0.6	0.6	0.1	0.1	0.0	0.4	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.0	1.2	1.3	0.1	0.1	0.0	0.4	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		0.0	7.8	7.8	7.2	3.0	0.0	16.0	0.0	0.0	0.0	0.0
LnGrp LOS		A	A	A	A	A	A	B	A	A	A	A
Approach Vol, veh/h			839			500			54			0
Approach Delay, s/veh			7.8			3.2			16.0			0.0
Approach LOS			A			A			B			
Timer - Assigned Phs	1	2		4		6			8			
Phs Duration (G+Y+Rc), s	6.2	20.0		8.1		26.2			8.1			
Change Period (Y+Rc), s	5.0	5.0		6.0		5.0			6.0			
Max Green Setting (Gmax), s	30.0	60.0		30.0		60.0			30.0			
Max Q Clear Time (g_c+I1), s	2.2	8.1		0.0		4.1			3.2			
Green Ext Time (p_c), s	0.0	5.8		0.0		3.3			0.2			

Intersection Summary

HCM 6th Ctrl Delay	6.5
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
 User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	0
Future Volume (veh/h)	0
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.85
Percent Heavy Veh, %	0
Cap, veh/h	0
Arrive On Green	0.00
Sat Flow, veh/h	0
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	0
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	0.00
Lane Grp Cap(c), veh/h	0
V/C Ratio(X)	0.00
Avail Cap(c_a), veh/h	0
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Lanes, Volumes, Timings
 14: Trail Access Road & Snoqualmie Pkwy

03/06/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (vph)	582	1	1	374	1	1
Future Volume (vph)	582	1	1	374	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	646			700	301	
Travel Time (s)	11.0			11.9	8.2	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	7%	0%	0%	5%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑↑	↑↑
Traffic Vol, veh/h	582	1	1	374	1	1
Future Vol, veh/h	582	1	1	374	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	7	0	0	5	0	0
Mvmt Flow	746	1	1	479	1	1

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	747	0	989
Stage 1	-	-	-	-	747
Stage 2	-	-	-	-	242
Critical Hdwy	-	-	4.1	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	870	-	247
Stage 1	-	-	-	-	434
Stage 2	-	-	-	-	782
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	870	-	247
Mov Cap-2 Maneuver	-	-	-	-	247
Stage 1	-	-	-	-	434
Stage 2	-	-	-	-	781

Approach	EB	WB	NB
HCM Control Delay, s	0	0	15.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	355	-	-	870	-
HCM Lane V/C Ratio	0.007	-	-	0.001	-
HCM Control Delay (s)	15.2	-	-	9.1	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
15: SR 202 & Snoqualmie Pkwy

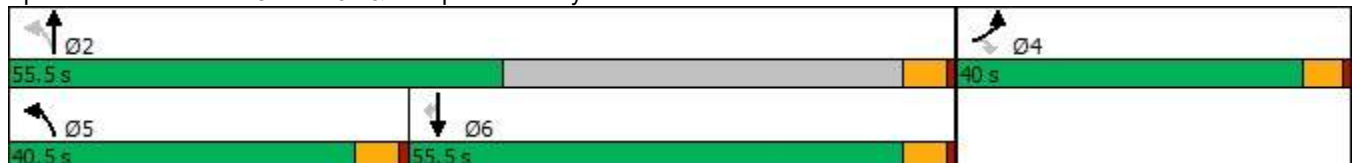
03/06/2020

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	262	330	204	173	239	189
Future Volume (vph)	262	330	204	173	239	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	300			300
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Right Turn on Red		Yes				Yes
Link Speed (mph)	40			45	45	
Link Distance (ft)	700			1127	949	
Travel Time (s)	11.9			17.1	14.4	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	11%	3%	3%	15%	9%	6%
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	5.0	7.0	7.0	7.0
Minimum Split (s)	29.0	29.0	10.5	12.5	35.5	35.5
Total Split (s)	40.0	40.0	40.5	55.5	55.5	55.5
Total Split (%)	29.4%	29.4%	29.8%	40.8%	40.8%	40.8%
Yellow Time (s)	4.0	4.0	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	Min	Min	Min

Intersection Summary













Area Type: Other
 Cycle Length: 136
 Actuated Cycle Length: 75.5
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated

Splits and Phases: 15: SR 202 & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 15: SR 202 & Snoqualmie Pkwy

03/06/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	262	330	204	173	239	189
Future Volume (veh/h)	262	330	204	173	239	189
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00			1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1737	1856	1856	1678	1767	1811
Adj Flow Rate, veh/h	328	93	255	216	299	10
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	11	3	3	15	9	6
Cap, veh/h	423	402	513	856	421	366
Arrive On Green	0.26	0.26	0.15	0.51	0.24	0.24
Sat Flow, veh/h	1654	1572	1767	1678	1767	1535
Grp Volume(v), veh/h	328	93	255	216	299	10
Grp Sat Flow(s),veh/h/ln	1654	1572	1767	1678	1767	1535
Q Serve(g_s), s	8.3	2.1	4.3	3.2	7.0	0.2
Cycle Q Clear(g_c), s	8.3	2.1	4.3	3.2	7.0	0.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	423	402	513	856	421	366
V/C Ratio(X)	0.78	0.23	0.50	0.25	0.71	0.03
Avail Cap(c_a), veh/h	1291	1227	1627	1870	1969	1711
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.5	13.2	9.6	6.2	15.7	13.1
Incr Delay (d2), s/veh	3.1	0.3	0.7	0.2	2.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	2.1	1.1	0.7	2.4	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.6	13.5	10.4	6.3	17.9	13.1
LnGrp LOS	B	B	B	A	B	B
Approach Vol, veh/h	421			471	309	
Approach Delay, s/veh	17.5			8.5	17.7	
Approach LOS	B			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		28.4		16.5	12.2	16.2
Change Period (Y+Rc), s		5.5		5.0	5.5	5.5
Max Green Setting (Gmax), s		50.0		35.0	35.0	50.0
Max Q Clear Time (g_c+I1), s		5.2		10.3	6.3	9.0
Green Ext Time (p_c), s		1.2		1.3	0.7	1.7
Intersection Summary						
HCM 6th Ctrl Delay			14.0			
HCM 6th LOS			B			

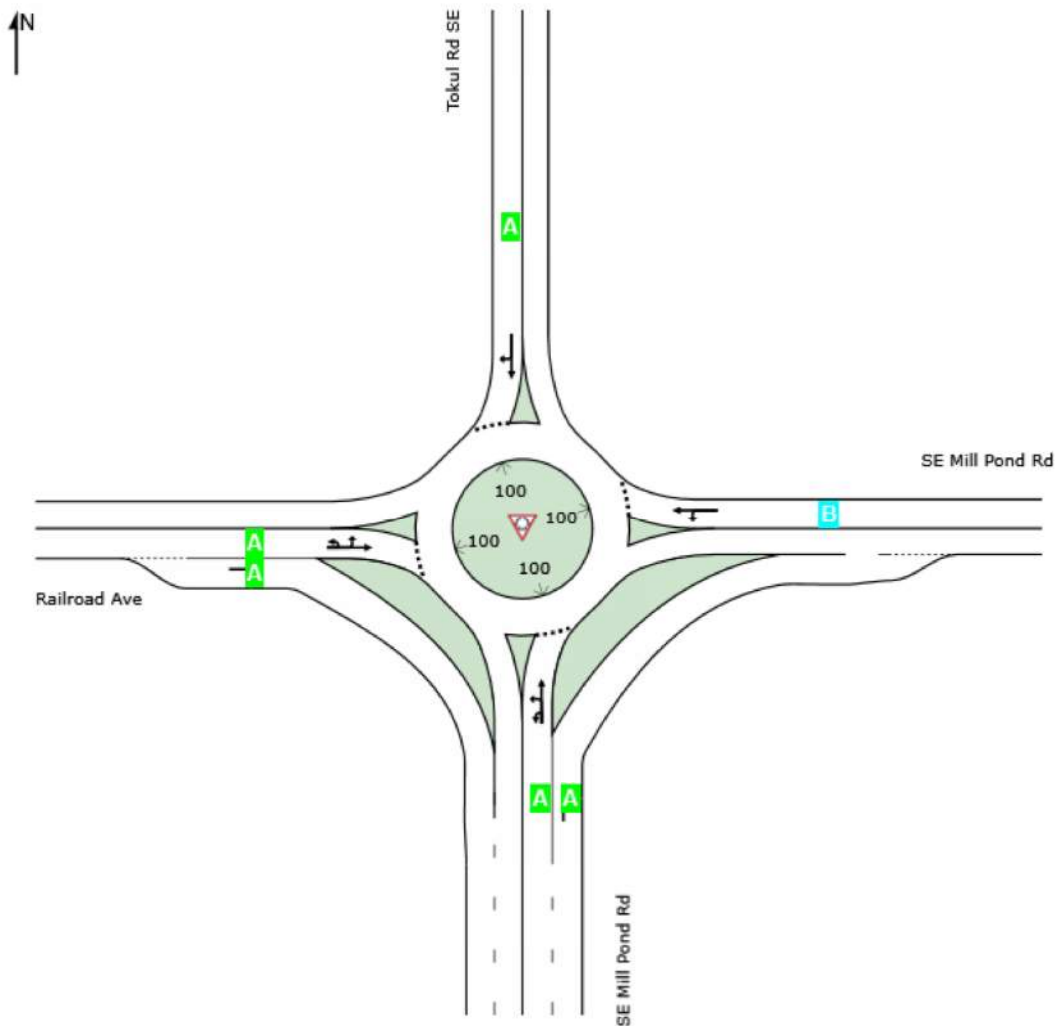
LANE LEVEL OF SERVICE

Lane Level of Service

 **Site: 16 [2023 No Action - AM Peak Hour]**

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	B	A	A	A



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Signalised Intersections.
 Lane LOS values are based on average delay per lane.
 Intersection and Approach LOS values are based on average delay for all lanes.
 SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

LANE SUMMARY

Site: 16 [2023 No Action - AM Peak Hour]

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

Lane Use and Performance													
	Demand Flows			Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue Veh	Queue Dist	Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	Cap. veh/h	v/c	%	sec			ft		ft	%	%
South: SE Mill Pond Rd													
Lane 1 ^d	467	9.3	1484	0.315	100	9.0	LOS A	1.8	47.4	Full	1600	0.0	0.0
Lane 2	29	62.5	1031	0.029	100	4.2	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	496	12.5		0.315		8.7	LOS A	1.8	47.4				
East: SE Mill Pond Rd													
Lane 1 ^d	84	48.6	616	0.136	100	10.5	LOS B	0.6	21.8	Full	1600	0.0	0.0
Approach	84	48.6		0.136		10.5	LOS B	0.6	21.8				
North: Tokul Rd SE													
Lane 1 ^d	27	0.0	977	0.028	100	6.3	LOS A	0.1	3.6	Full	1600	0.0	0.0
Approach	27	0.0		0.028		6.3	LOS A	0.1	3.6				
West: Railroad Ave													
Lane 1 ^d	99	10.0	1507	0.066	100	4.3	LOS A	0.3	8.5	Full	1600	0.0	0.0
Lane 2	452	5.9	1581	0.286	100	3.7	LOS A	0.0	0.0	Short	200	0.0	NA
Approach	551	6.6		0.286		3.8	LOS A	0.3	8.5				
Intersection	1158	12.0		0.315		6.4	LOS A	1.8	47.4				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	91	4	18	28	3	22
Future Volume (vph)	91	4	18	28	3	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45		35			35
Link Distance (ft)	458		1466			541
Travel Time (s)	6.9		28.6			10.5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	12%	4%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	5.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	91	4	18	28	3	22
Future Vol, veh/h	91	4	18	28	3	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	0	12	4	0	5
Mvmt Flow	96	4	19	29	3	23

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	63	34	0	0	48	0
Stage 1	34	-	-	-	-	-
Stage 2	29	-	-	-	-	-
Critical Hdwy	6.42	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	943	1045	-	-	1572	-
Stage 1	988	-	-	-	-	-
Stage 2	994	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	941	1045	-	-	1572	-
Mov Cap-2 Maneuver	941	-	-	-	-	-
Stage 1	988	-	-	-	-	-
Stage 2	992	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	945	1572
HCM Lane V/C Ratio	-	-	0.106	0.002
HCM Control Delay (s)	-	-	9.3	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	8	35	90	24	13	66
Future Volume (vph)	8	35	90	24	13	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		40	
Link Distance (ft)		502	1466		916	
Travel Time (s)		9.8	28.6		15.6	
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Heavy Vehicles (%)	13%	6%	2%	4%	8%	3%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↖	↗		↖	↗
Traffic Vol, veh/h	8	35	90	24	13	66
Future Vol, veh/h	8	35	90	24	13	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	69	69	69	69	69	69
Heavy Vehicles, %	13	6	2	4	8	3
Mvmt Flow	12	51	130	35	19	96
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	165	0	0	223	148	
Stage 1	-	-	-	148	-	
Stage 2	-	-	-	75	-	
Critical Hdwy	4.23	-	-	6.48	6.23	
Critical Hdwy Stg 1	-	-	-	5.48	-	
Critical Hdwy Stg 2	-	-	-	5.48	-	
Follow-up Hdwy	2.317	-	-	3.572	3.327	
Pot Cap-1 Maneuver	1349	-	-	752	896	
Stage 1	-	-	-	865	-	
Stage 2	-	-	-	933	-	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	1349	-	-	745	896	
Mov Cap-2 Maneuver	-	-	-	745	-	
Stage 1	-	-	-	857	-	
Stage 2	-	-	-	933	-	
Approach	EB	WB	SB			
HCM Control Delay, s	1.4	0	9.8			
HCM LOS			A			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1349	-	-	-	867	
HCM Lane V/C Ratio	0.009	-	-	-	0.132	
HCM Control Delay (s)	7.7	0	-	-	9.8	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.5	

Lanes, Volumes, Timings
19: Meadowbrook Bridge

03/02/2020

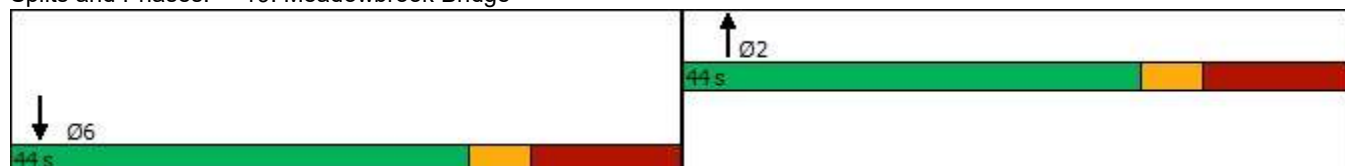


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	43	0	0	156
Future Volume (vph)	0	0	43	0	0	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			30
Link Distance (ft)	150		304			249
Travel Time (s)	3.4		6.9			5.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	7%	0%	0%	3%
Shared Lane Traffic (%)						
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Detector Phase			2			6
Switch Phase						
Minimum Initial (s)			5.0			5.0
Minimum Split (s)			19.0			19.0
Total Split (s)			44.0			44.0
Total Split (%)			50.0%			50.0%
Yellow Time (s)			4.0			4.0
All-Red Time (s)			10.0			10.0
Lost Time Adjust (s)			0.0			0.0
Total Lost Time (s)			14.0			14.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode			None			None

Intersection Summary

Area Type: Other
 Cycle Length: 88
 Actuated Cycle Length: 29.5
 Natural Cycle: 40
 Control Type: Actuated-Uncoordinated

Splits and Phases: 19: Meadowbrook Bridge



HCM Signalized Intersection Capacity Analysis
 19: Meadowbrook Bridge

03/02/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	43	0	0	156
Future Volume (vph)	0	0	43	0	0	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			14.0			14.0
Lane Util. Factor			1.00			1.00
Frt			1.00			1.00
Flt Protected			1.00			1.00
Satd. Flow (prot)			1776			1845
Flt Permitted			1.00			1.00
Satd. Flow (perm)			1776			1845
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	47	0	0	170
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	47	0	0	170
Heavy Vehicles (%)	0%	0%	7%	0%	0%	3%
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Actuated Green, G (s)			1.8			4.9
Effective Green, g (s)			1.8			4.9
Actuated g/C Ratio			0.05			0.14
Clearance Time (s)			14.0			14.0
Vehicle Extension (s)			2.0			2.0
Lane Grp Cap (vph)			92			260
v/s Ratio Prot			c0.03			c0.09
v/s Ratio Perm						
v/c Ratio			0.51			0.65
Uniform Delay, d1			16.0			14.1
Progression Factor			1.00			1.00
Incremental Delay, d2			2.0			4.4
Delay (s)			18.0			18.5
Level of Service			B			B
Approach Delay (s)	0.0		18.0			18.5
Approach LOS	A		B			B
Intersection Summary						
HCM 2000 Control Delay			18.4		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.61			
Actuated Cycle Length (s)			34.7		Sum of lost time (s)	28.0
Intersection Capacity Utilization			19.9%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Lanes, Volumes, Timings
 20: Meadowbrook Way SE & SE Park St

03/12/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	112	9	44	57	18	4	19	59	30	42	11
Future Volume (vph)	6	112	9	44	57	18	4	19	59	30	42	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		505			663			790			216	
Travel Time (s)		13.8			18.1			21.5			5.9	
Confl. Peds. (#/hr)	5		1			4	1			4		5
Peak Hour Factor	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Heavy Vehicles (%)	0%	7%	11%	10%	11%	0%	0%	6%	5%	3%	5%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	112	9	44	57	18	4	19	59	30	42	11
Future Vol, veh/h	6	112	9	44	57	18	4	19	59	30	42	11
Peak Hour Factor	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Heavy Vehicles, %	0	7	11	10	11	0	0	6	5	3	5	0
Mvmt Flow	12	229	18	90	116	37	8	39	120	61	86	22
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	11.3			11.4			9.8			10.6		
HCM LOS	B			B			A			B		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %		5%	5%	37%
Vol Thru, %		23%	88%	48%
Vol Right, %		72%	7%	15%
Sign Control		Stop	Stop	Stop
Traffic Vol by Lane		82	127	119
LT Vol		4	6	44
Through Vol		19	112	57
RT Vol		59	9	18
Lane Flow Rate		167	259	243
Geometry Grp		1	1	1
Degree of Util (X)		0.238	0.372	0.362
Departure Headway (Hd)		5.112	5.168	5.367
Convergence, Y/N		Yes	Yes	Yes
Cap		701	695	670
Service Time		3.152	3.203	3.403
HCM Lane V/C Ratio		0.238	0.373	0.363
HCM Control Delay		9.8	11.3	11.4
HCM Lane LOS		A	B	B
HCM 95th-tile Q		0.9	1.7	1.7

Lanes, Volumes, Timings
21: Meadowbrook Way SE & SR 202

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	265	46	9	256	18	28	39	20	12	50	8
Future Volume (vph)	13	265	46	9	256	18	28	39	20	12	50	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	0		0	150		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			40			35			25	
Link Distance (ft)		615			663			738			518	
Travel Time (s)		14.0			11.3			14.4			14.1	
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles (%)	8%	9%	0%	0%	9%	0%	0%	3%	0%	0%	4%	38%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	33.3	33.3		30.3	30.3		32.8	32.8		32.8	32.8	
Total Split (s)	71.3	71.3		71.3	71.3		40.8	40.8		40.8	40.8	
Total Split (%)	63.6%	63.6%		63.6%	63.6%		36.4%	36.4%		36.4%	36.4%	
Yellow Time (s)	4.3	4.3		4.3	4.3		3.8	3.8		3.8	3.8	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.3	6.3		6.3	6.3			5.8		5.8	5.8	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Min	Min		Min	Min		None	None		None	None	

Intersection Summary

Area Type: Other

Cycle Length: 112.1

Actuated Cycle Length: 36.8

Natural Cycle: 70




















Control Type: Actuated-Uncoordinated

Splits and Phases: 21: Meadowbrook Way SE & SR 202



HCM 6th Signalized Intersection Summary
 21: Meadowbrook Way SE & SR 202

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	265	46	9	256	18	28	39	20	12	50	8
Future Volume (veh/h)	13	265	46	9	256	18	28	39	20	12	50	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1767	1767	1900	1767	1767	1856	1856	1856	1900	1841	1841
Adj Flow Rate, veh/h	18	358	62	12	346	24	38	53	27	16	68	11
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Percent Heavy Veh, %	8	9	9	0	9	9	3	3	3	0	4	4
Cap, veh/h	505	599	104	478	667	46	230	112	49	499	227	37
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	964	1467	254	982	1633	113	373	761	336	1339	1546	250
Grp Volume(v), veh/h	18	0	420	12	0	370	118	0	0	16	0	79
Grp Sat Flow(s),veh/h/ln	964	0	1721	982	0	1746	1470	0	0	1339	0	1796
Q Serve(g_s), s	0.4	0.0	5.2	0.3	0.0	4.3	1.1	0.0	0.0	0.0	0.0	1.1
Cycle Q Clear(g_c), s	4.7	0.0	5.2	5.5	0.0	4.3	2.2	0.0	0.0	0.2	0.0	1.1
Prop In Lane	1.00		0.15	1.00		0.06	0.32		0.23	1.00		0.14
Lane Grp Cap(c), veh/h	505	0	703	478	0	713	391	0	0	499	0	264
V/C Ratio(X)	0.04	0.00	0.60	0.03	0.00	0.52	0.30	0.00	0.00	0.03	0.00	0.30
Avail Cap(c_a), veh/h	2414	0	4111	2423	0	4171	2189	0	0	2025	0	2310
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.8	0.0	6.3	8.4	0.0	6.0	10.8	0.0	0.0	10.0	0.0	10.4
Incr Delay (d2), s/veh	0.0	0.0	1.0	0.0	0.0	0.7	0.4	0.0	0.0	0.0	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	1.1	0.0	0.0	0.7	0.5	0.0	0.0	0.1	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.8	0.0	7.3	8.5	0.0	6.8	11.3	0.0	0.0	10.0	0.0	11.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	B
Approach Vol, veh/h		438			382			118				95
Approach Delay, s/veh		7.3			6.8			11.3				10.8
Approach LOS		A			A			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		17.4		9.8		17.4		9.8				
Change Period (Y+Rc), s		6.3		* 5.8		6.3		* 5.8				
Max Green Setting (Gmax), s		65.0		* 35		65.0		* 35				
Max Q Clear Time (g_c+I1), s		7.2		3.1		7.5		4.2				
Green Ext Time (p_c), s		3.9		0.5		3.0		0.6				
Intersection Summary												
HCM 6th Ctrl Delay				7.9								
HCM 6th LOS				A								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 22: Meadowbrook Way SE & 384th Ave SE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	41	95	233	15	29	157
Future Volume (vph)	41	95	233	15	29	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		25	
Link Distance (ft)		158	180		181	
Travel Time (s)		3.1	3.5		4.9	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	3%	3%	1%	0%	0%	3%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↖	↗		↖	↗
Traffic Vol, veh/h	41	95	233	15	29	157
Future Vol, veh/h	41	95	233	15	29	157
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	3	3	1	0	0	3
Mvmt Flow	50	116	284	18	35	191
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	302	0	-	0	509	293
Stage 1	-	-	-	-	293	-
Stage 2	-	-	-	-	216	-
Critical Hdwy	4.13	-	-	-	6.4	6.23
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.227	-	-	-	3.5	3.327
Pot Cap-1 Maneuver	1253	-	-	-	528	744
Stage 1	-	-	-	-	762	-
Stage 2	-	-	-	-	825	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1253	-	-	-	505	744
Mov Cap-2 Maneuver	-	-	-	-	505	-
Stage 1	-	-	-	-	729	-
Stage 2	-	-	-	-	825	-
Approach	EB	WB	SB			
HCM Control Delay, s	2.4	0	12.7			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1253	-	-	-	-	693
HCM Lane V/C Ratio	0.04	-	-	-	-	0.327
HCM Control Delay (s)	8	0	-	-	-	12.7
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	-	1.4

Lanes, Volumes, Timings
 23: SE North Bend Way & Meadowbrook Way SE

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	31	359	193	23	113	57
Future Volume (vph)	31	359	193	23	113	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	450	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Link Speed (mph)	35		50			50
Link Distance (ft)	158		253			593
Travel Time (s)	3.1		3.5			8.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	2%	4%	5%	3%	13%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary
 Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↘	↑	↘	↘	↑
Traffic Vol, veh/h	31	359	193	23	113	57
Future Vol, veh/h	31	359	193	23	113	57
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	Free	-	None
Storage Length	0	0	-	0	450	-
Veh in Median Storage, #1	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	7	2	4	5	3	13
Mvmt Flow	34	390	210	25	123	62

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	518	-	0	-	210
Stage 1	210	-	-	-	-
Stage 2	308	-	-	-	-
Critical Hdwy	6.47	-	-	-	4.13
Critical Hdwy Stg 1	5.47	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-
Follow-up Hdwy	3.563	-	-	-	2.227
Pot Cap-1 Maneuver	509	0	-	0	1355
Stage 1	813	0	-	0	-
Stage 2	734	0	-	0	-
Platoon blocked, %		-	-	-	-
Mov Cap-1 Maneuver	463	-	-	-	1355
Mov Cap-2 Maneuver	540	-	-	-	-
Stage 1	813	-	-	-	-
Stage 2	667	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.1	0	5.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	540	-	1355	-
HCM Lane V/C Ratio	-	0.062	-	0.091	-
HCM Control Delay (s)	-	12.1	0	7.9	-
HCM Lane LOS	-	B	A	A	-
HCM 95th %tile Q(veh)	-	0.2	-	0.3	-

Lanes, Volumes, Timings
1: SR-18 & I-90 EB Ramps

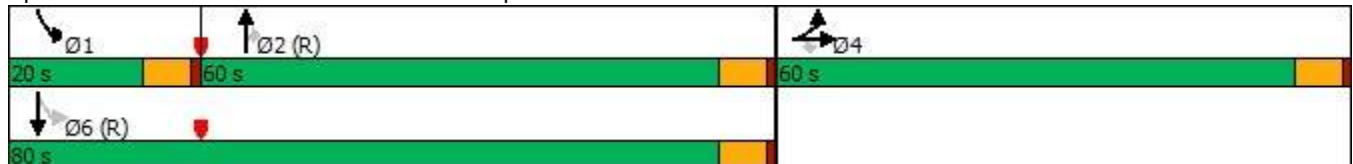
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	776	2	730	0	0	0	0	188	421	102	744	0
Future Volume (vph)	776	2	730	0	0	0	0	188	421	102	744	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650		0	0		0	0		300	200		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			45			30	
Link Distance (ft)		833			764			1837			778	
Travel Time (s)		16.2			14.9			27.8			17.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	1%	0%	4%	0%	0%	0%	0%	3%	27%	2%	13%	0%
Shared Lane Traffic (%)	50%											
Turn Type	Split	NA	Perm					NA	Perm	pm+pt	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			4						2	6		
Detector Phase	4	4	4					2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					10.0	10.0	3.0	10.0	
Minimum Split (s)	29.0	29.0	29.0					16.0	16.0	9.0	23.0	
Total Split (s)	60.0	60.0	60.0					60.0	60.0	20.0	80.0	
Total Split (%)	42.9%	42.9%	42.9%					42.9%	42.9%	14.3%	57.1%	
Yellow Time (s)	5.0	5.0	5.0					5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0	1.0					1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0					6.0	6.0	6.0	6.0	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None					C-Min	C-Min	None	C-Min	

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

Splits and Phases: 1: SR-18 & I-90 EB Ramps



HCM 6th Signalized Intersection Summary

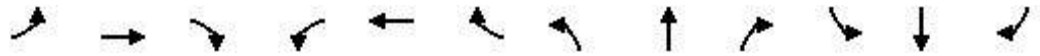
1: SR-18 & I-90 EB Ramps

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	776	2	730	0	0	0	0	188	421	102	744	0
Future Volume (veh/h)	776	2	730	0	0	0	0	188	421	102	744	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00		1.00				1.00		1.00	1.00		1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1841				0	1856	1500	1870	1707	0
Adj Flow Rate, veh/h	801	0	0				0	194	0	105	767	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	0	4				0	3	27	2	13	0
Cap, veh/h	1112	0					0	966		677	1961	0
Arrive On Green	0.31	0.00	0.00				0.00	0.52	0.00	0.04	0.60	0.00
Sat Flow, veh/h	3591	0	1560				0	1856	1271	1781	3329	0
Grp Volume(v), veh/h	801	0	0				0	194	0	105	767	0
Grp Sat Flow(s),veh/h/ln	1795	0	1560				0	1856	1271	1781	1622	0
Q Serve(g_s), s	27.7	0.0	0.0				0.0	7.8	0.0	3.7	17.1	0.0
Cycle Q Clear(g_c), s	27.7	0.0	0.0				0.0	7.8	0.0	3.7	17.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1112	0					0	966		677	1961	0
V/C Ratio(X)	0.72	0.00					0.00	0.20		0.16	0.39	0.00
Avail Cap(c_a), veh/h	1385	0					0	966		782	1961	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				0.00	1.00	0.00	0.63	0.63	0.00
Uniform Delay (d), s/veh	42.9	0.0	0.0				0.0	18.0	0.0	13.7	14.3	0.0
Incr Delay (d2), s/veh	4.0	0.0	0.0				0.0	0.5	0.0	0.1	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.9	0.0	0.0				0.0	3.4	0.0	1.5	6.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.0	0.0	0.0				0.0	18.4	0.0	13.8	14.7	0.0
LnGrp LOS	D	A					A	B		B	B	A
Approach Vol, veh/h		801	A					194	A		872	
Approach Delay, s/veh		47.0						18.4			14.6	
Approach LOS		D						B			B	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	11.8	78.9		49.4				90.6				
Change Period (Y+Rc), s	6.0	6.0		6.0				6.0				
Max Green Setting (Gmax), s	14.0	54.0		54.0				74.0				
Max Q Clear Time (g_c+I1), s	5.7	9.8		29.7				19.1				
Green Ext Time (p_c), s	0.1	1.3		13.6				8.1				
Intersection Summary												
HCM 6th Ctrl Delay			28.9									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

03/06/2020

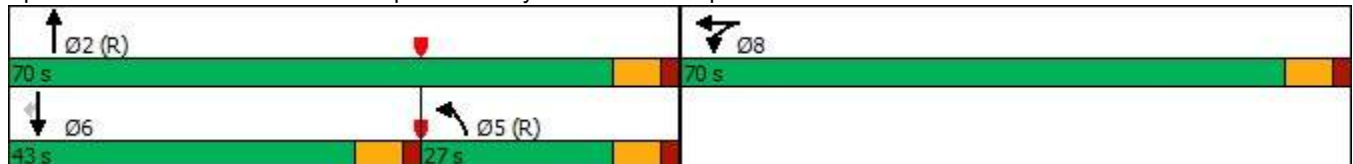


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↕		↖	↕			↕	↖
Traffic Volume (vph)	0	0	0	435	2	70	100	996	0	0	323	478
Future Volume (vph)	0	0	0	435	2	70	100	996	0	0	323	478
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	0		0
Storage Lanes	0		0	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30				30
Link Distance (ft)		893			705			778				878
Travel Time (s)		17.4			13.7			17.7				20.0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	20%	100%	3%	0%	1%	0%	0%	3%	1%
Shared Lane Traffic (%)				41%								
Turn Type				Split	NA		Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases												6
Detector Phase				8	8		5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	7.0			7.0	7.0
Minimum Split (s)				12.0	12.0		12.0	14.0			24.0	24.0
Total Split (s)				70.0	70.0		27.0	70.0			43.0	43.0
Total Split (%)				50.0%	50.0%		19.3%	50.0%			30.7%	30.7%
Yellow Time (s)				5.0	5.0		5.0	5.0			5.0	5.0
All-Red Time (s)				2.0	2.0		2.0	2.0			2.0	2.0
Lost Time Adjust (s)				0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)				7.0	7.0		7.0	7.0			7.0	7.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None		C-Max	C-Min			None	None

Intersection Summary




















Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 53 (38%), Referenced to phase 2:NBT and 5:NBL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps





















HCM 6th Signalized Intersection Summary
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	435	2	70	100	996	0	0	323	478
Future Volume (veh/h)	0	0	0	435	2	70	100	996	0	0	323	478
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1604	418	1604	1900	1885	0	0	1856	1885
Adj Flow Rate, veh/h				517	0	0	103	1027	0	0	333	0
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				20	100	20	0	1	0	0	3	1
Cap, veh/h				675	92	0	200	2432	0	0	962	
Arrive On Green				0.22	0.00	0.00	0.07	0.45	0.00	0.00	0.52	0.00
Sat Flow, veh/h				3054	418	0	1810	3676	0	0	1856	1598
Grp Volume(v), veh/h				517	0	0	103	1027	0	0	333	0
Grp Sat Flow(s),veh/h/ln				1527	418	0	1810	1791	0	0	1856	1598
Q Serve(g_s), s				22.2	0.0	0.0	7.7	27.1	0.0	0.0	14.7	0.0
Cycle Q Clear(g_c), s				22.2	0.0	0.0	7.7	27.1	0.0	0.0	14.7	0.0
Prop In Lane				1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				675	92	0	200	2432	0	0	962	
V/C Ratio(X)				0.77	0.00	0.00	0.51	0.42	0.00	0.00	0.35	
Avail Cap(c_a), veh/h				1375	188	0	259	2432	0	0	962	
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	0.00	0.89	0.89	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				51.1	0.0	0.0	61.2	19.6	0.0	0.0	19.8	0.0
Incr Delay (d2), s/veh				6.5	0.0	0.0	2.2	0.5	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				9.1	0.0	0.0	3.7	12.4	0.0	0.0	6.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				57.6	0.0	0.0	63.4	20.1	0.0	0.0	20.1	0.0
LnGrp LOS				E	A	A	E	C	A	A	C	
Approach Vol, veh/h					517			1130			333	A
Approach Delay, s/veh					57.6			24.1			20.1	
Approach LOS					E			C			C	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		102.1			22.5	79.6		37.9				
Change Period (Y+Rc), s		7.0			7.0	7.0		7.0				
Max Green Setting (Gmax), s		63.0			20.0	36.0		63.0				
Max Q Clear Time (g_c+I1), s		29.1			9.7	16.7		24.2				
Green Ext Time (p_c), s		12.8			0.2	2.6		6.7				
Intersection Summary												
HCM 6th Ctrl Delay				32.1								
HCM 6th LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 3: Snoqualmie Pkwy & SE 99th St

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	0	38	1	0	2	7	1114	0	0	736	10
Future Volume (vph)	13	0	38	1	0	2	7	1114	0	0	736	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	0		0	0		0	125		0	25		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		989			884			878			457	
Travel Time (s)		27.0			24.1			20.0			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	3%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕	↕		↕	↕
Traffic Vol, veh/h	13	0	38	1	0	2	7	1114	0	0	736	10
Future Vol, veh/h	13	0	38	1	0	2	7	1114	0	0	736	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	25	-	-
Veh in Median Storage, #-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	3	0
Mvmt Flow	14	0	40	1	0	2	7	1173	0	0	775	11

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1382	1968	393	1575	1973	587	786	0	0	1173	0	0
Stage 1	781	781	-	1187	1187	-	-	-	-	-	-	-
Stage 2	601	1187	-	388	786	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	105	63	612	76	63	458	842	-	-	603	-	-
Stage 1	358	408	-	203	264	-	-	-	-	-	-	-
Stage 2	459	264	-	613	406	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	104	62	612	71	62	458	842	-	-	603	-	-
Mov Cap-2 Maneuver	104	62	-	71	62	-	-	-	-	-	-	-
Stage 1	355	408	-	201	262	-	-	-	-	-	-	-
Stage 2	453	262	-	573	406	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB			
HCM Control Delay, s	21.4		27.5		0.1		0			
HCM LOS	C		D							

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	842	-	-	273	163	603	-
HCM Lane V/C Ratio	0.009	-	-	0.197	0.019	-	-
HCM Control Delay (s)	9.3	-	-	21.4	27.5	0	-
HCM Lane LOS	A	-	-	C	D	A	-
HCM 95th %tile Q(veh)	0	-	-	0.7	0.1	0	-

Lanes, Volumes, Timings
 4: Snoqualmie Pkwy & SE 96th St

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	25	61	980	45	39	704
Future Volume (vph)	25	61	980	45	39	704
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Link Speed (mph)	30		40			40
Link Distance (ft)	346		677			718
Travel Time (s)	7.9		11.5			12.2
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	2%	0%	0%	3%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↑↑		↔	↑↑
Traffic Vol, veh/h	25	61	980	45	39	704
Future Vol, veh/h	25	61	980	45	39	704
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #1	-	0	-	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	2	0	0	3
Mvmt Flow	28	69	1114	51	44	800

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1628	583	0	0	1165
Stage 1	1140	-	-	-	-
Stage 2	488	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	95	461	-	-	607
Stage 1	271	-	-	-	-
Stage 2	588	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	88	461	-	-	607
Mov Cap-2 Maneuver	200	-	-	-	-
Stage 1	271	-	-	-	-
Stage 2	546	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.6	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	200	461	607	-
HCM Lane V/C Ratio	-	-	0.142	0.15	0.073	-
HCM Control Delay (s)	-	-	26	14.2	11.4	-
HCM Lane LOS	-	-	D	B	B	-
HCM 95th %tile Q(veh)	-	-	0.5	0.5	0.2	-

Lanes, Volumes, Timings
5: Snoqualmie Pkwy & SE Jacobia St

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	8	63	30	1	45	108	906	84	66	634	18
Future Volume (vph)	18	8	63	30	1	45	108	906	84	66	634	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	250		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		653			474			718			617	
Travel Time (s)		17.8			12.9			12.2			10.5	
Confl. Peds. (#/hr)	2		2	2		2	1					1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	0%	2%	0%	2%	3%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	15.0		5.0	16.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		10.5	22.5		10.5	22.5	
Total Split (s)	25.0	25.0		40.0	40.0		15.5	65.5		15.5	65.5	
Total Split (%)	20.7%	20.7%		33.1%	33.1%		12.8%	54.1%		12.8%	54.1%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.5	4.5		4.5	4.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.5	5.5		5.5	5.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other

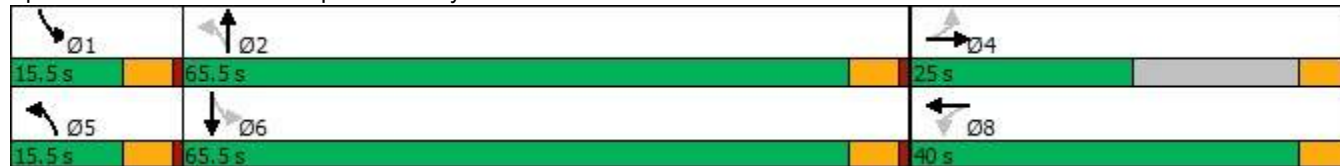
Cycle Length: 121

Actuated Cycle Length: 60.3

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Snoqualmie Pkwy & SE Jacobia St



HCM 6th Signalized Intersection Summary
 5: Snoqualmie Pkwy & SE Jacobia St

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	8	63	30	1	45	108	906	84	66	634	18
Future Volume (veh/h)	18	8	63	30	1	45	108	906	84	66	634	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1870	1870	1870	1856	1856
Adj Flow Rate, veh/h	19	9	67	32	1	48	115	964	89	70	674	19
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	2	2	2	3	3
Cap, veh/h	266	23	168	243	4	183	563	1643	152	412	1687	48
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.08	0.50	0.50	0.06	0.48	0.48
Sat Flow, veh/h	1372	193	1439	1339	33	1574	1810	3289	304	1781	3502	99
Grp Volume(v), veh/h	19	0	76	32	0	49	115	521	532	70	339	354
Grp Sat Flow(s),veh/h/ln	1372	0	1632	1339	0	1607	1810	1777	1815	1781	1763	1838
Q Serve(g_s), s	0.6	0.0	2.1	1.1	0.0	1.4	1.5	10.3	10.3	0.9	6.1	6.1
Cycle Q Clear(g_c), s	2.0	0.0	2.1	3.3	0.0	1.4	1.5	10.3	10.3	0.9	6.1	6.1
Prop In Lane	1.00		0.88	1.00		0.98	1.00		0.17	1.00		0.05
Lane Grp Cap(c), veh/h	266	0	190	243	0	187	563	888	907	412	849	885
V/C Ratio(X)	0.07	0.00	0.40	0.13	0.00	0.26	0.20	0.59	0.59	0.17	0.40	0.40
Avail Cap(c_a), veh/h	658	0	656	1029	0	1131	782	2143	2190	659	2126	2217
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.9	0.0	20.4	21.9	0.0	20.0	5.5	8.8	8.8	6.4	8.3	8.3
Incr Delay (d2), s/veh	0.1	0.0	1.4	0.2	0.0	0.7	0.1	0.9	0.9	0.1	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.8	0.3	0.0	0.5	0.3	2.8	2.9	0.2	1.7	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.1	0.0	21.7	22.1	0.0	20.8	5.6	9.7	9.7	6.5	8.7	8.7
LnGrp LOS	C	A	C	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		95			81			1168			763	
Approach Delay, s/veh		21.6			21.3			9.3			8.5	
Approach LOS		C			C			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	30.3		10.8	9.5	29.5		10.8				
Change Period (Y+Rc), s	5.5	5.5		5.0	5.5	5.5		5.0				
Max Green Setting (Gmax), s	10.0	60.0		20.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	2.9	12.3		4.1	3.5	8.1		5.3				
Green Ext Time (p_c), s	0.0	12.5		0.4	0.1	6.9		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				10.0								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
6: Snoqualmie Pkwy & SE Swenson Dr

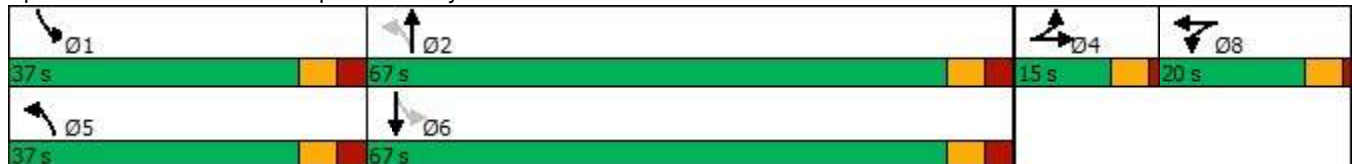
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	15	26	19	10	60	33	802	39	88	721	82
Future Volume (vph)	85	15	26	19	10	60	33	802	39	88	721	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	275		0	300		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			No
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		456			320			2254			367	
Travel Time (s)		10.4			7.3			38.4			6.3	
Confl. Peds. (#/hr)			2			9	2					2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%	0%	2%	0%	0%	3%	3%
Shared Lane Traffic (%)												
Turn Type	Split	NA		Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		10.0	10.0		5.0	12.0		5.0	12.0	
Minimum Split (s)	38.0	38.0		38.0	38.0		12.0	28.0		12.0	28.0	
Total Split (s)	15.0	15.0		20.0	20.0		37.0	67.0		37.0	67.0	
Total Split (%)	10.8%	10.8%		14.4%	14.4%		26.6%	48.2%		26.6%	48.2%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		7.0	7.0		7.0	7.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
 Cycle Length: 139
 Actuated Cycle Length: 78.7
 Natural Cycle: 120
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Snoqualmie Pkwy & SE Swenson Dr



HCM 6th Signalized Intersection Summary
6: Snoqualmie Pkwy & SE Swenson Dr

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	15	26	19	10	60	33	802	39	88	721	82
Future Volume (veh/h)	85	15	26	19	10	60	33	802	39	88	721	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1900	1900	1900	1900	1900	1870	1870	1900	1856	1856
Adj Flow Rate, veh/h	91	16	28	20	11	65	35	862	42	95	775	88
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	0	0	0	0	0	0	2	2	0	3	3
Cap, veh/h	165	57	100	260	34	200	254	989	48	275	1011	115
Arrive On Green	0.09	0.09	0.09	0.14	0.14	0.14	0.04	0.29	0.29	0.07	0.32	0.32
Sat Flow, veh/h	1781	617	1081	1810	235	1389	1810	3448	168	1810	3190	362
Grp Volume(v), veh/h	91	0	44	20	0	76	35	444	460	95	428	435
Grp Sat Flow(s),veh/h/ln	1781	0	1698	1810	0	1624	1810	1777	1839	1810	1763	1789
Q Serve(g_s), s	2.9	0.0	1.4	0.6	0.0	2.5	0.8	13.9	13.9	2.1	12.8	12.8
Cycle Q Clear(g_c), s	2.9	0.0	1.4	0.6	0.0	2.5	0.8	13.9	13.9	2.1	12.8	12.8
Prop In Lane	1.00		0.64	1.00		0.86	1.00		0.09	1.00		0.20
Lane Grp Cap(c), veh/h	165	0	157	260	0	233	254	510	528	275	559	567
V/C Ratio(X)	0.55	0.00	0.28	0.08	0.00	0.33	0.14	0.87	0.87	0.35	0.77	0.77
Avail Cap(c_a), veh/h	304	0	290	464	0	416	1114	1821	1885	1081	1807	1834
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.4	0.0	24.8	21.7	0.0	22.5	14.8	19.9	19.9	14.8	18.0	18.0
Incr Delay (d2), s/veh	1.1	0.0	0.4	0.0	0.0	0.3	0.1	1.9	1.8	0.3	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.6	0.2	0.0	0.9	0.3	5.1	5.3	0.7	4.5	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.5	0.0	25.1	21.8	0.0	22.8	14.8	21.7	21.7	15.1	18.9	18.9
LnGrp LOS	C	A	C	C	A	C	B	C	C	B	B	B
Approach Vol, veh/h		135			96			939			958	
Approach Delay, s/veh		26.0			22.6			21.4			18.5	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.9	23.8		10.4	9.2	25.6		13.4				
Change Period (Y+Rc), s	7.0	7.0		5.0	7.0	7.0		5.0				
Max Green Setting (Gmax), s	30.0	60.0		10.0	30.0	60.0		15.0				
Max Q Clear Time (g_c+I1), s	4.1	15.9		4.9	2.8	14.8		4.5				
Green Ext Time (p_c), s	0.0	0.7		0.0	0.0	0.7		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			20.5									
HCM 6th LOS			C									
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕	↘	↖	↕	↘	↖	↕	↘	↖	↕	↘
Traffic Volume (vph)	302	583	127	46	491	60	242	55	79	74	22	131
Future Volume (vph)	302	583	127	46	491	60	242	55	79	74	22	131
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	175		0	0		150	0		100
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1285			1065			585			583	
Travel Time (s)		21.9			18.2			16.0			15.9	
Confl. Peds. (#/hr)	5					5						3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	1%	1%	2%	0%	2%	0%	2%	0%	0%	6%	0%	2%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4			8					2			6
Detector Phase	7	4		3	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	35.3		9.5	30.3		36.5	36.5	36.5	36.5	36.5	36.5
Total Split (s)	34.5	55.3		14.5	55.3		44.5	44.5	44.5	44.5	44.5	44.5
Total Split (%)	19.3%	30.9%		8.1%	30.9%		24.9%	24.9%	24.9%	24.9%	24.9%	24.9%
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.3		4.5	5.3			4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None	None	None	None	None

Intersection Summary

Area Type: Other

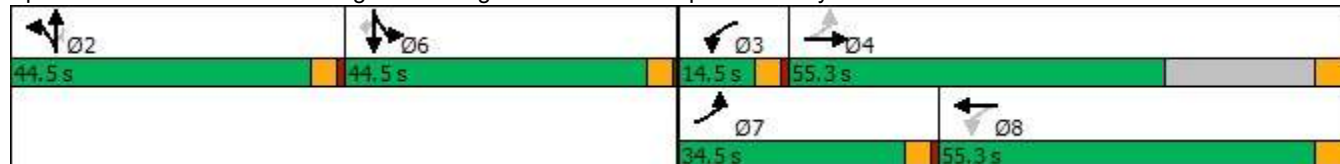
Cycle Length: 178.8

Actuated Cycle Length: 107.6

Natural Cycle: 120

Control Type: Actuated-Uncoordinated

Splits and Phases: 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	302	583	127	46	491	60	242	55	79	74	22	131
Future Volume (veh/h)	302	583	127	46	491	60	242	55	79	74	22	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1870	1870	1900	1900	1900	1900	1900	1870
Adj Flow Rate, veh/h	311	601	131	47	506	62	249	57	32	76	23	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	0	2	2	0	0	0	0	0	2
Cap, veh/h	488	1081	235	337	812	99	325	74	352	123	37	139
Arrive On Green	0.16	0.37	0.37	0.04	0.26	0.26	0.22	0.22	0.22	0.09	0.09	0.00
Sat Flow, veh/h	1795	2921	635	1810	3184	389	1486	340	1610	1405	425	1585
Grp Volume(v), veh/h	311	368	364	47	282	286	306	0	32	99	0	0
Grp Sat Flow(s),veh/h/ln	1795	1791	1766	1810	1777	1796	1826	0	1610	1830	0	1585
Q Serve(g_s), s	7.8	10.9	11.0	1.3	9.4	9.5	10.6	0.0	1.1	3.5	0.0	0.0
Cycle Q Clear(g_c), s	7.8	10.9	11.0	1.3	9.4	9.5	10.6	0.0	1.1	3.5	0.0	0.0
Prop In Lane	1.00		0.36	1.00		0.22	0.81		1.00	0.77		1.00
Lane Grp Cap(c), veh/h	488	663	654	337	453	458	399	0	352	160	0	139
V/C Ratio(X)	0.64	0.55	0.56	0.14	0.62	0.63	0.77	0.00	0.09	0.62	0.00	0.00
Avail Cap(c_a), veh/h	1006	1334	1315	528	1323	1338	1088	0	959	1090	0	944
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.1	16.8	16.8	17.0	22.1	22.2	24.6	0.0	20.9	29.5	0.0	0.0
Incr Delay (d2), s/veh	1.4	1.0	1.1	0.2	2.0	2.0	3.1	0.0	0.1	3.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	4.1	4.0	0.5	3.8	3.9	4.7	0.0	0.4	1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.5	17.8	17.8	17.2	24.1	24.2	27.7	0.0	21.0	33.4	0.0	0.0
LnGrp LOS	B	B	B	B	C	C	C	A	C	C	A	A
Approach Vol, veh/h		1043			615			338				99
Approach Delay, s/veh		17.1			23.6			27.1				33.4
Approach LOS		B			C			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		19.2	7.4	30.2		10.4	15.1	22.4				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		40.0	10.0	50.0		40.0	30.0	50.0				
Max Q Clear Time (g_c+I1), s		12.6	3.3	13.0		5.5	9.8	11.5				
Green Ext Time (p_c), s		2.2	0.0	7.2		0.6	0.8	5.3				
Intersection Summary												
HCM 6th Ctrl Delay				21.4								
HCM 6th LOS				C								

Lanes, Volumes, Timings
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

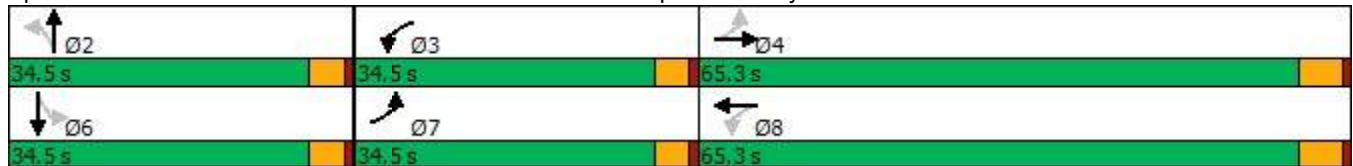
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	521	41	105	384	71	93	40	110	92	47	123
Future Volume (vph)	216	521	41	105	384	71	93	40	110	92	47	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	275		0	275		0	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1065			1064			511			626	
Travel Time (s)		18.2			18.1			13.9			17.1	
Confl. Peds. (#/hr)	1					1	7		3	3		7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	3%	0%	3%	0%	0%	0%	1%	0%	0%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	34.3		9.5	34.3		36.5	36.5		36.5	36.5	
Total Split (s)	34.5	65.3		34.5	65.3		34.5	34.5		34.5	34.5	
Total Split (%)	25.7%	48.6%		25.7%	48.6%		25.7%	25.7%		25.7%	25.7%	
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	5.3		4.5	5.3		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	

Intersection Summary

























Area Type: Other
 Cycle Length: 134.3
 Actuated Cycle Length: 57.7
 Natural Cycle: 85
 Control Type: Actuated-Uncoordinated

Splits and Phases: 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	216	521	41	105	384	71	93	40	110	92	47	123
Future Volume (veh/h)	216	521	41	105	384	71	93	40	110	92	47	123
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1900	1856	1856	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	225	543	43	109	400	74	97	42	115	96	49	128
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	0	3	3	0	0	0	0	0	0
Cap, veh/h	572	1204	95	493	933	171	363	117	321	380	121	317
Arrive On Green	0.13	0.36	0.36	0.08	0.31	0.31	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1810	3336	264	1810	2974	546	1220	446	1222	1242	463	1208
Grp Volume(v), veh/h	225	289	297	109	236	238	97	0	157	96	0	177
Grp Sat Flow(s),veh/h/ln	1810	1777	1822	1810	1763	1756	1220	0	1668	1242	0	1671
Q Serve(g_s), s	3.8	6.0	6.0	1.9	5.1	5.2	3.4	0.0	3.7	3.3	0.0	4.2
Cycle Q Clear(g_c), s	3.8	6.0	6.0	1.9	5.1	5.2	7.6	0.0	3.7	7.0	0.0	4.2
Prop In Lane	1.00		0.14	1.00		0.31	1.00		0.73	1.00		0.72
Lane Grp Cap(c), veh/h	572	641	658	493	553	551	363	0	438	380	0	438
V/C Ratio(X)	0.39	0.45	0.45	0.22	0.43	0.43	0.27	0.00	0.36	0.25	0.00	0.40
Avail Cap(c_a), veh/h	1470	2215	2272	1477	2198	2190	804	0	1040	829	0	1042
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.0	11.7	11.7	9.6	13.1	13.1	17.8	0.0	14.5	17.3	0.0	14.6
Incr Delay (d2), s/veh	0.4	0.7	0.7	0.2	0.7	0.8	0.4	0.0	0.5	0.3	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.9	2.0	0.6	1.7	1.7	0.9	0.0	1.3	0.9	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.4	12.4	12.4	9.8	13.8	13.9	18.2	0.0	15.0	17.6	0.0	15.2
LnGrp LOS	A	B	B	A	B	B	B	A	B	B	A	B
Approach Vol, veh/h		811			583			254				273
Approach Delay, s/veh		11.6			13.1			16.2				16.1
Approach LOS		B			B			B				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		17.1	8.3	22.7		17.1	10.6	20.4				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		30.0	30.0	60.0		30.0	30.0	60.0				
Max Q Clear Time (g_c+I1), s		9.6	3.9	8.0		9.0	5.8	7.2				
Green Ext Time (p_c), s		1.3	0.3	5.6		1.4	0.6	4.4				
Intersection Summary												
HCM 6th Ctrl Delay				13.3								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
 9: Snoqualmie Pkwy & Fairway Ave SE

03/06/2020

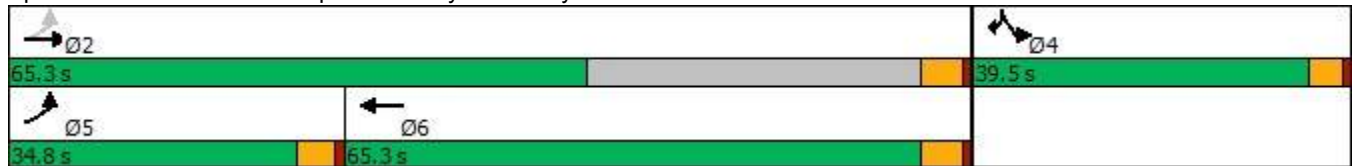


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	199	512	485	121	103	111
Future Volume (vph)	199	512	485	121	103	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	325			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		25	
Link Distance (ft)		1064	278		478	
Travel Time (s)		18.1	4.7		13.0	
Confl. Peds. (#/hr)	5			5	1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	4%	3%	3%	2%	0%
Shared Lane Traffic (%)						
Turn Type	pm+pt	NA	NA		Prot	Prot
Protected Phases	5	2	6		4	4
Permitted Phases	2					
Detector Phase	5	2	6		4	4
Switch Phase						
Minimum Initial (s)	5.0	12.0	12.0		5.0	5.0
Minimum Split (s)	9.8	23.3	26.3		36.5	36.5
Total Split (s)	34.8	65.3	65.3		39.5	39.5
Total Split (%)	24.9%	46.8%	46.8%		28.3%	28.3%
Yellow Time (s)	3.8	4.3	4.3		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.8	5.3	5.3		4.5	4.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	None	None		None	None

Intersection Summary

Area Type: Other
 Cycle Length: 139.6
 Actuated Cycle Length: 58.9
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated

Splits and Phases: 9: Snoqualmie Pkwy & Fairway Ave SE



HCM 6th Signalized Intersection Summary
 9: Snoqualmie Pkwy & Fairway Ave SE























03/06/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	199	512	485	121	103	111
Future Volume (veh/h)	199	512	485	121	103	111
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	1841	1856	1856	1870	1900
Adj Flow Rate, veh/h	214	551	522	130	111	-5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	4	3	3	2	0
Cap, veh/h	599	2175	993	246	165	149
Arrive On Green	0.13	0.62	0.36	0.36	0.09	0.00
Sat Flow, veh/h	1795	3589	2888	693	1781	1610
Grp Volume(v), veh/h	214	551	328	324	111	-5
Grp Sat Flow(s),veh/h/ln	1795	1749	1763	1725	1781	1610
Q Serve(g_s), s	2.1	2.4	5.1	5.1	2.1	0.0
Cycle Q Clear(g_c), s	2.1	2.4	5.1	5.1	2.1	0.0
Prop In Lane	1.00			0.40	1.00	1.00
Lane Grp Cap(c), veh/h	599	2175	626	613	165	149
V/C Ratio(X)	0.36	0.25	0.52	0.53	0.67	-0.03
Avail Cap(c_a), veh/h	1941	6114	3081	3016	1816	1642
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	5.1	2.9	8.8	8.8	15.1	0.0
Incr Delay (d2), s/veh	0.4	0.1	0.7	0.7	4.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	1.2	1.2	0.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	5.5	3.0	9.4	9.5	19.8	0.0
LnGrp LOS	A	A	A	A	B	A
Approach Vol, veh/h		765	652		106	
Approach Delay, s/veh		3.7	9.5		20.7	
Approach LOS		A	A		C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		26.6		7.7	9.2	17.5
Change Period (Y+Rc), s		5.3		4.5	* 4.8	5.3
Max Green Setting (Gmax), s		60.0		35.0	* 30	60.0
Max Q Clear Time (g_c+I1), s		4.4		4.1	4.1	7.1
Green Ext Time (p_c), s		3.9		0.3	0.6	4.3
Intersection Summary						
HCM 6th Ctrl Delay			7.3			
HCM 6th LOS			A			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

Lanes, Volumes, Timings
 10: Fisher Ave SE & Snoqualmie Pkwy

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (vph)	50	544	29	12	561	14	15	1	15	13	1	30
Future Volume (vph)	50	544	29	12	561	14	15	1	15	13	1	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		458			1686			518			363	
Travel Time (s)		7.8			28.7			14.1			9.9	
Confl. Peds. (#/hr)	8		8	8		8	8		8	8		8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	3%	0%	0%	3%	7%	0%	0%	0%	0%	0%	7%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕			↕			↕	
Traffic Vol, veh/h	50	544	29	12	561	14	15	1	15	13	1	30
Future Vol, veh/h	50	544	29	12	561	14	15	1	15	13	1	30
Conflicting Peds, #/hr	8	0	8	8	0	8	8	0	8	8	0	8
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #-	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	3	0	0	3	7	0	0	0	0	0	7
Mvmt Flow	57	618	33	14	638	16	17	1	17	15	1	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	662	0	0	659	0	0	1113	1447	342	1114	1455	343
Stage 1	-	-	-	-	-	-	757	757	-	682	682	-
Stage 2	-	-	-	-	-	-	356	690	-	432	773	-
Critical Hdwy	4.1	-	-	4.1	-	-	9.5	8.5	7.9	9.5	8.5	8.04
Critical Hdwy Stg 1	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.37
Pot Cap-1 Maneuver	936	-	-	939	-	-	89	59	600	89	58	581
Stage 1	-	-	-	-	-	-	243	275	-	281	310	-
Stage 2	-	-	-	-	-	-	525	306	-	454	268	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	929	-	-	932	-	-	76	54	591	79	53	572
Mov Cap-2 Maneuver	-	-	-	-	-	-	76	54	-	79	53	-
Stage 1	-	-	-	-	-	-	226	256	-	262	303	-
Stage 2	-	-	-	-	-	-	481	299	-	409	250	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.2			43.5			31.1		
HCM LOS							E			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	128	929	-	-	932	-	-	187
HCM Lane V/C Ratio	0.275	0.061	-	-	0.015	-	-	0.267
HCM Control Delay (s)	43.5	9.1	-	-	8.9	-	-	31.1
HCM Lane LOS	E	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	1	0.2	-	-	0	-	-	1

Lanes, Volumes, Timings
 11: Orchard Ave SE & Snoqualmie Pkwy

03/06/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (vph)	566	29	27	578	8	20
Future Volume (vph)	566	29	27	578	8	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	225		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	1686			1131	557	
Travel Time (s)	28.7			19.3	15.2	
Confl. Peds. (#/hr)		1	1		1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	0%	4%	3%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Vol, veh/h	566	29	27	578	8	20
Future Vol, veh/h	566	29	27	578	8	20
Conflicting Peds, #/hr	0	1	1	0	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	225	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	0	4	3	0	0
Mvmt Flow	615	32	29	628	9	22

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	648	0	1005
Stage 1	-	-	-	-	632
Stage 2	-	-	-	-	373
Critical Hdwy	-	-	4.18	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.24	-	3.5
Pot Cap-1 Maneuver	-	-	920	-	241
Stage 1	-	-	-	-	497
Stage 2	-	-	-	-	672
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	919	-	233
Mov Cap-2 Maneuver	-	-	-	-	233
Stage 1	-	-	-	-	497
Stage 2	-	-	-	-	650

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	13.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	438	-	-	919	-
HCM Lane V/C Ratio	0.069	-	-	0.032	-
HCM Control Delay (s)	13.8	-	-	9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Lanes, Volumes, Timings
 12: Snoqualmie Pkwy & Allman AveSE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	584	609	7	7	5
Future Volume (vph)	5	584	609	7	7	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		40	40		25	
Link Distance (ft)		679	1187		393	
Travel Time (s)		11.6	20.2		10.7	
Confl. Peds. (#/hr)	1			1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	5%	4%	0%	0%	0%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

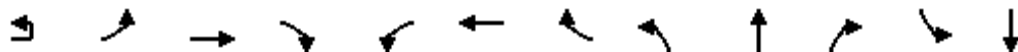
Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	584	609	7	7	5
Future Vol, veh/h	5	584	609	7	7	5
Conflicting Peds, #/hr	1	0	0	1	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #-	0	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	5	4	0	0	0
Mvmt Flow	5	635	662	8	8	5
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	671	0	-	0	996	337
Stage 1	-	-	-	-	667	-
Stage 2	-	-	-	-	329	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	929	-	-	-	245	665
Stage 1	-	-	-	-	477	-
Stage 2	-	-	-	-	707	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	928	-	-	-	243	664
Mov Cap-2 Maneuver	-	-	-	-	243	-
Stage 1	-	-	-	-	474	-
Stage 2	-	-	-	-	706	-
Approach	EB	WB	SB			
HCM Control Delay, s	0.1	0	16.4			
HCM LOS			C			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR SBLn1		
Capacity (veh/h)	928	-	-	-	330	
HCM Lane V/C Ratio	0.006	-	-	-	0.04	
HCM Control Delay (s)	8.9	-	-	-	16.4	
HCM Lane LOS	A	-	-	-	C	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

Lanes, Volumes, Timings
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↰		↕		↰	↕			↕			↕
Traffic Volume (vph)	0	0	544	46	23	571	0	52	0	24	0	0
Future Volume (vph)	0	0	544	46	23	571	0	52	0	24	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0		0	200		0	0		0	0	
Storage Lanes		1		0	1		0	0		0	0	
Taper Length (ft)		25			25			25			25	
Right Turn on Red				Yes			Yes			Yes		
Link Speed (mph)			40			40			25			25
Link Distance (ft)			1187			833			535			291
Travel Time (s)			20.2			14.2			14.6			7.9
Confl. Peds. (#/hr)				4	4			3				
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	6%	0%	0%	4%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt		NA		pm+pt	NA		Perm	NA			
Protected Phases	5		2		1	6		8	8			4
Permitted Phases	2				6			8			4	
Detector Phase	5		2		1	6		8	8		4	4
Switch Phase												
Minimum Initial (s)	5.0		15.0		5.0	14.0		5.0	5.0		30.0	30.0
Minimum Split (s)	10.0		20.0		10.0	29.0		36.0	36.0		36.0	36.0
Total Split (s)	35.0		65.0		35.0	65.0		36.0	36.0		36.0	36.0
Total Split (%)	25.7%		47.8%		25.7%	47.8%		26.5%	26.5%		26.5%	26.5%
Yellow Time (s)	4.0		4.0		4.0	4.0		5.0	5.0		5.0	5.0
All-Red Time (s)	1.0		1.0		1.0	1.0		1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0		5.0		5.0	5.0		6.0	6.0		6.0	6.0
Lead/Lag	Lead		Lag		Lead	Lag						
Lead-Lag Optimize?	Yes		Yes		Yes	Yes						
Recall Mode	Min		Min		None	None		None	None		None	None

Intersection Summary

Area Type: Other

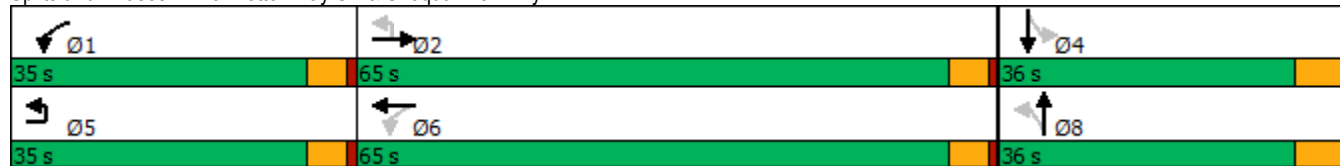
Cycle Length: 136

Actuated Cycle Length: 46.5

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Splits and Phases: 13: Better Way SE & Snoqualmie Pkwy

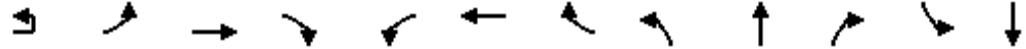




Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	0
Future Volume (vph)	0
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Right Turn on Red	Yes
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	3
Peak Hour Factor	0.95
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	
Intersection Summary	

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↰		↕		↱	↕			↕			↕
Traffic Volume (veh/h)	0	0	544	46	23	571	0	52	0	24	0	0
Future Volume (veh/h)	0	0	544	46	23	571	0	52	0	24	0	0
Initial Q (Qb), veh			0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	0.99		0.99	1.00	
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach			No			No			No			No
Adj Sat Flow, veh/h/ln		0	1811	1811	1900	1841	1841	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		0	573	48	24	601	0	55	0	25	0	0
Peak Hour Factor		0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %		0	6	6	0	4	4	0	0	0	0	0
Cap, veh/h		0	1371	115	329	2093	0	263	0	41	0	168
Arrive On Green		0.00	0.43	0.43	0.03	0.60	0.00	0.09	0.00	0.09	0.00	0.00
Sat Flow, veh/h		0	3304	269	1810	3589	0	1015	0	461	0	1900
Grp Volume(v), veh/h		0	306	315	24	601	0	80	0	0	0	0
Grp Sat Flow(s),veh/h/ln		0	1721	1761	1810	1749	0	1476	0	0	0	1900
Q Serve(g_s), s		0.0	4.4	4.4	0.2	2.9	0.0	1.8	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s		0.0	4.4	4.4	0.2	2.9	0.0	1.8	0.0	0.0	0.0	0.0
Prop In Lane		0.00		0.15	1.00		0.00	0.69		0.31	0.00	
Lane Grp Cap(c), veh/h		0	734	751	329	2093	0	304	0	0	0	168
V/C Ratio(X)		0.00	0.42	0.42	0.07	0.29	0.00	0.26	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h		0	2936	3005	1819	5968	0	1432	0	0	0	1621
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)		0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh		0.0	7.0	7.0	7.2	3.4	0.0	15.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh		0.0	0.4	0.4	0.1	0.1	0.0	0.5	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.0	0.9	0.9	0.0	0.2	0.0	0.6	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		0.0	7.4	7.4	7.3	3.5	0.0	15.9	0.0	0.0	0.0	0.0
LnGrp LOS		A	A	A	A	A	A	B	A	A	A	A
Approach Vol, veh/h			621			625			80			0
Approach Delay, s/veh			7.4			3.6			15.9			0.0
Approach LOS			A			A			B			
Timer - Assigned Phs	1	2		4		6			8			
Phs Duration (G+Y+Rc), s	6.0	20.0		9.1		26.0			9.1			
Change Period (Y+Rc), s	5.0	5.0		6.0		5.0			6.0			
Max Green Setting (Gmax), s	30.0	60.0		30.0		60.0			30.0			
Max Q Clear Time (g_c+I1), s	2.2	6.4		0.0		4.9			3.8			
Green Ext Time (p_c), s	0.0	3.9		0.0		4.3			0.4			

Intersection Summary

HCM 6th Ctrl Delay	6.1
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
 User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	0
Future Volume (veh/h)	0
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.95
Percent Heavy Veh, %	0
Cap, veh/h	0
Arrive On Green	0.00
Sat Flow, veh/h	0
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	0
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	0.00
Lane Grp Cap(c), veh/h	0
V/C Ratio(X)	0.00
Avail Cap(c_a), veh/h	0
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Lanes, Volumes, Timings
 14: Trail Access Road & Snoqualmie Pkwy

03/06/2020

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↖	
Traffic Volume (vph)	501	0	1	545	0	1
Future Volume (vph)	501	0	1	545	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	646			700	301	
Travel Time (s)	11.0			11.9	8.2	
Confl. Peds. (#/hr)		1	1		1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	0%	0%	3%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑↑	↑↑
Traffic Vol, veh/h	501	0	1	545	0	1
Future Vol, veh/h	501	0	1	545	0	1
Conflicting Peds, #/hr	0	1	1	0	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	0	0	3	0	0
Mvmt Flow	545	0	1	592	0	1

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	546	0	845	275
Stage 1	-	-	-	-	546	-
Stage 2	-	-	-	-	299	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1033	-	306	729
Stage 1	-	-	-	-	550	-
Stage 2	-	-	-	-	732	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1032	-	305	728
Mov Cap-2 Maneuver	-	-	-	-	305	-
Stage 1	-	-	-	-	549	-
Stage 2	-	-	-	-	731	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	728	-	-	1032	-
HCM Lane V/C Ratio	0.001	-	-	0.001	-
HCM Control Delay (s)	10	-	-	8.5	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
15: SR 202 & Snoqualmie Pkwy

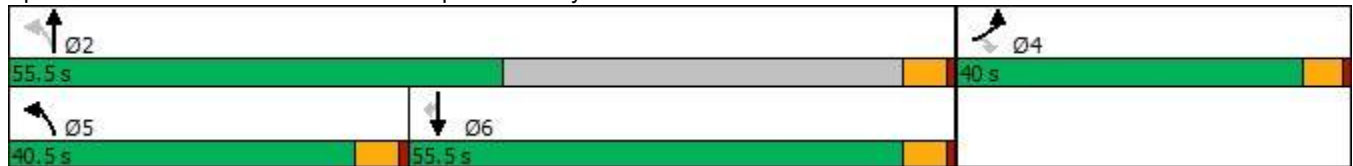
03/06/2020

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	211	289	309	239	263	273
Future Volume (vph)	211	289	309	239	263	273
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	300			300
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Right Turn on Red		Yes				Yes
Link Speed (mph)	40			45	45	
Link Distance (ft)	700			1127	949	
Travel Time (s)	11.9			17.1	14.4	
Confl. Peds. (#/hr)		1	1			1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	3%	2%	2%	1%	6%	4%
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	5.0	7.0	7.0	7.0
Minimum Split (s)	29.0	29.0	10.5	12.5	35.5	35.5
Total Split (s)	40.0	40.0	40.5	55.5	55.5	55.5
Total Split (%)	29.4%	29.4%	29.8%	40.8%	40.8%	40.8%
Yellow Time (s)	4.0	4.0	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	Min	Min	Min

Intersection Summary













Area Type: Other
 Cycle Length: 136
 Actuated Cycle Length: 71.2
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated

Splits and Phases: 15: SR 202 & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 15: SR 202 & Snoqualmie Pkwy

03/06/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	211	289	309	239	263	273
Future Volume (veh/h)	211	289	309	239	263	273
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00			1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1885	1811	1841
Adj Flow Rate, veh/h	232	0	340	263	289	43
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	2	2	1	6	4
Cap, veh/h	311	279	618	1068	434	373
Arrive On Green	0.18	0.00	0.19	0.57	0.24	0.24
Sat Flow, veh/h	1767	1585	1781	1885	1811	1557
Grp Volume(v), veh/h	232	0	340	263	289	43
Grp Sat Flow(s),veh/h/ln	1767	1585	1781	1885	1811	1557
Q Serve(g_s), s	5.1	0.0	5.0	2.9	5.9	0.9
Cycle Q Clear(g_c), s	5.1	0.0	5.0	2.9	5.9	0.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	311	279	618	1068	434	373
V/C Ratio(X)	0.75	0.00	0.55	0.25	0.67	0.12
Avail Cap(c_a), veh/h	1520	1363	1808	2316	2225	1912
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.9	0.0	7.9	4.4	14.0	12.1
Incr Delay (d2), s/veh	3.6	0.0	0.8	0.1	1.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	1.1	0.4	1.9	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.5	0.0	8.7	4.6	15.8	12.2
LnGrp LOS	B	A	A	A	B	B
Approach Vol, veh/h	232			603	332	
Approach Delay, s/veh	19.5			6.9	15.3	
Approach LOS	B			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		28.5		12.2	13.3	15.3
Change Period (Y+Rc), s		5.5		5.0	5.5	5.5
Max Green Setting (Gmax), s		50.0		35.0	35.0	50.0
Max Q Clear Time (g_c+I1), s		4.9		7.1	7.0	7.9
Green Ext Time (p_c), s		1.5		0.6	1.0	1.8
Intersection Summary						
HCM 6th Ctrl Delay			11.8			
HCM 6th LOS			B			

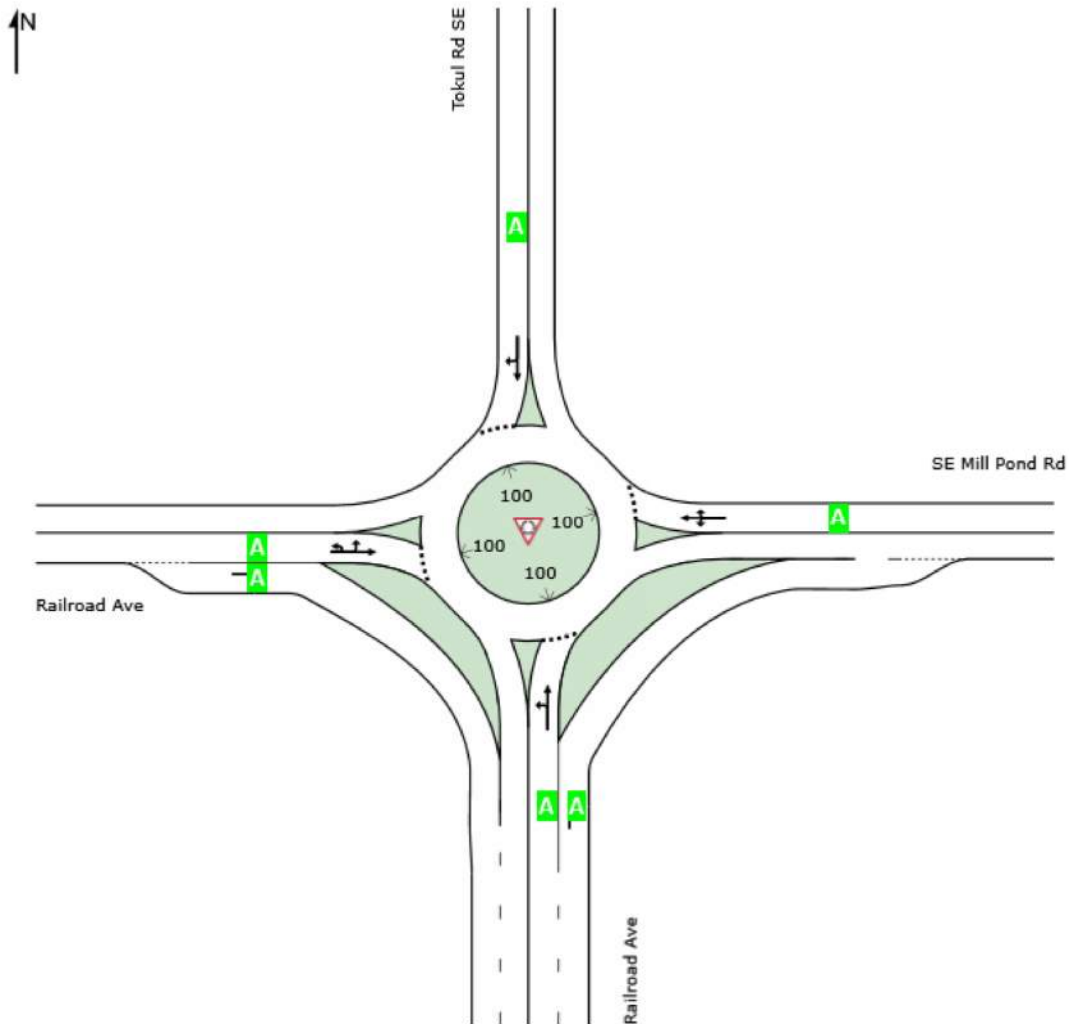
LANE LEVEL OF SERVICE

Lane Level of Service

 **Site: 16 [2023 No Action - PM Peak Hour]**

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Signalised Intersections.
 Lane LOS values are based on average delay per lane.
 Intersection and Approach LOS values are based on average delay for all lanes.
 SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

LANE SUMMARY

Site: 16 [2023 No Action - PM Peak Hour]

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

Lane Use and Performance													
	Demand Flows			Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue Veh	Queue Dist	Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	Cap. veh/h	v/c	%	sec			ft		ft	%	%
South: Railroad Ave													
Lane 1 ^d	484	3.0	1634	0.296	100	8.5	LOS A	1.6	41.5	Full	1600	0.0	0.0
Lane 2	19	13.3	1478	0.013	100	3.7	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	502	3.4		0.296		8.3	LOS A	1.6	41.5				
East: SE Mill Pond Rd													
Lane 1 ^d	75	19.7	847	0.089	100	9.0	LOS A	0.4	12.2	Full	1600	0.0	0.0
Approach	75	19.7		0.089		9.0	LOS A	0.4	12.2				
North: Tokul Rd SE													
Lane 1 ^d	41	6.1	962	0.043	100	6.2	LOS A	0.2	5.5	Full	1600	0.0	0.0
Approach	41	6.1		0.043		6.2	LOS A	0.2	5.5				
West: Railroad Ave													
Lane 1 ^d	51	4.9	1589	0.032	100	5.0	LOS A	0.1	3.7	Full	1600	0.0	0.0
Lane 2	587	4.4	1604	0.366	100	3.7	LOS A	0.0	0.0	Short	200	0.0	NA
Approach	638	4.4		0.366		3.8	LOS A	0.1	3.7				
Intersection	1256	5.0		0.366		6.0	LOS A	1.6	41.5				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	74	8	18	96	5	28
Future Volume (vph)	74	8	18	96	5	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45		35			35
Link Distance (ft)	458		1466			541
Travel Time (s)	6.9		28.6			10.5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	0%	0%	3%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	74	8	18	96	5	28
Future Vol, veh/h	74	8	18	96	5	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	0	0	3	0	0
Mvmt Flow	77	8	19	100	5	29

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	108	69	0	0	119	0
Stage 1	69	-	-	-	-	-
Stage 2	39	-	-	-	-	-
Critical Hdwy	6.43	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	887	1000	-	-	1482	-
Stage 1	951	-	-	-	-	-
Stage 2	981	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	884	1000	-	-	1482	-
Mov Cap-2 Maneuver	884	-	-	-	-	-
Stage 1	951	-	-	-	-	-
Stage 2	978	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	1.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	894	1482
HCM Lane V/C Ratio	-	-	0.096	0.004
HCM Control Delay (s)	-	-	9.5	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	19	81	83	23	37	15
Future Volume (vph)	19	81	83	23	37	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		40	
Link Distance (ft)		502	1466		916	
Travel Time (s)		9.8	28.6		15.6	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	1%	0%	3%	0%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	↕
Traffic Vol, veh/h	19	81	83	23	37	15
Future Vol, veh/h	19	81	83	23	37	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	1	1	0	3	0
Mvmt Flow	20	86	88	24	39	16

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	112	0	-	0	226 100
Stage 1	-	-	-	-	100 -
Stage 2	-	-	-	-	126 -
Critical Hdwy	4.1	-	-	-	6.43 6.2
Critical Hdwy Stg 1	-	-	-	-	5.43 -
Critical Hdwy Stg 2	-	-	-	-	5.43 -
Follow-up Hdwy	2.2	-	-	-	3.527 3.3
Pot Cap-1 Maneuver	1490	-	-	-	760 961
Stage 1	-	-	-	-	921 -
Stage 2	-	-	-	-	897 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1490	-	-	-	749 961
Mov Cap-2 Maneuver	-	-	-	-	749 -
Stage 1	-	-	-	-	908 -
Stage 2	-	-	-	-	897 -

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1490	-	-	-	-	800
HCM Lane V/C Ratio	0.014	-	-	-	-	0.069
HCM Control Delay (s)	7.4	0	-	-	-	9.8
HCM Lane LOS	A	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-	0.2

Lanes, Volumes, Timings
19: Meadowbrook Bridge

03/02/2020

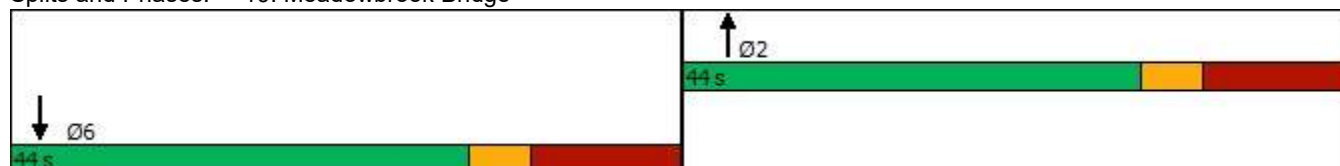


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	100	0	0	98
Future Volume (vph)	0	0	100	0	0	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			30
Link Distance (ft)	150		304			249
Travel Time (s)	3.4		6.9			5.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Shared Lane Traffic (%)						
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Detector Phase			2			6
Switch Phase						
Minimum Initial (s)			5.0			5.0
Minimum Split (s)			19.0			19.0
Total Split (s)			44.0			44.0
Total Split (%)			50.0%			50.0%
Yellow Time (s)			4.0			4.0
All-Red Time (s)			10.0			10.0
Lost Time Adjust (s)			0.0			0.0
Total Lost Time (s)			14.0			14.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode			None			None

Intersection Summary

Area Type: Other
 Cycle Length: 88
 Actuated Cycle Length: 37.9
 Natural Cycle: 40
 Control Type: Actuated-Uncoordinated

Splits and Phases: 19: Meadowbrook Bridge



HCM Signalized Intersection Capacity Analysis
 19: Meadowbrook Bridge

03/02/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	100	0	0	98
Future Volume (vph)	0	0	100	0	0	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			14.0			14.0
Lane Util. Factor			1.00			1.00
Flt			1.00			1.00
Flt Protected			1.00			1.00
Satd. Flow (prot)			1881			1881
Flt Permitted			1.00			1.00
Satd. Flow (perm)			1881			1881
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	109	0	0	107
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	109	0	0	107
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Actuated Green, G (s)			5.3			5.2
Effective Green, g (s)			5.3			5.2
Actuated g/C Ratio			0.14			0.14
Clearance Time (s)			14.0			14.0
Vehicle Extension (s)			2.0			2.0
Lane Grp Cap (vph)			258			254
v/s Ratio Prot			c0.06			c0.06
v/s Ratio Perm						
v/c Ratio			0.42			0.42
Uniform Delay, d1			15.2			15.3
Progression Factor			1.00			1.00
Incremental Delay, d2			0.4			0.4
Delay (s)			15.6			15.7
Level of Service			B			B
Approach Delay (s)	0.0		15.6			15.7
Approach LOS	A		B			B
Intersection Summary						
HCM 2000 Control Delay			15.6		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.42			
Actuated Cycle Length (s)			38.5		Sum of lost time (s)	28.0
Intersection Capacity Utilization			16.9%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Lanes, Volumes, Timings
 20: Meadowbrook Way SE & SE Park St

03/12/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	45	28	32	49	27	12	58	23	24	50	19
Future Volume (vph)	19	45	28	32	49	27	12	58	23	24	50	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		505			663			790			216	
Travel Time (s)		13.8			18.1			21.5			5.9	
Confl. Peds. (#/hr)	5		5	4		4	5		4	4		5
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	6%	5%	4%	0%	2%	0%	0%	2%	0%	0%	6%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	19	45	28	32	49	27	12	58	23	24	50	19
Future Vol, veh/h	19	45	28	32	49	27	12	58	23	24	50	19
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	6	5	4	0	2	0	0	2	0	0	6	0
Mvmt Flow	23	54	33	38	58	32	14	69	27	29	60	23
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.3	8.3	8.2	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	21%	30%	26%
Vol Thru, %	62%	49%	45%	54%
Vol Right, %	25%	30%	25%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	93	92	108	93
LT Vol	12	19	32	24
Through Vol	58	45	49	50
RT Vol	23	28	27	19
Lane Flow Rate	111	110	129	111
Geometry Grp	1	1	1	1
Degree of Util (X)	0.137	0.137	0.159	0.138
Departure Headway (Hd)	4.451	4.513	4.441	4.501
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	806	794	807	797
Service Time	2.477	2.541	2.468	2.528
HCM Lane V/C Ratio	0.138	0.139	0.16	0.139
HCM Control Delay	8.2	8.3	8.3	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.5	0.6	0.5

Lanes, Volumes, Timings
 21: Meadowbrook Way SE & SR 202

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	413	56	8	405	24	113	80	22	32	58	19
Future Volume (vph)	14	413	56	8	405	24	113	80	22	32	58	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	0		0	150		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			40			35			25	
Link Distance (ft)		615			663			738			518	
Travel Time (s)		14.0			11.3			14.4			14.1	
Confl. Peds. (#/hr)	1					1	2					2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	3%	2%	0%	4%	0%	0%	0%	10%	3%	0%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	33.3	33.3		30.3	30.3		32.8	32.8		32.8	32.8	
Total Split (s)	71.3	71.3		71.3	71.3		40.8	40.8		40.8	40.8	
Total Split (%)	63.6%	63.6%		63.6%	63.6%		36.4%	36.4%		36.4%	36.4%	
Yellow Time (s)	4.3	4.3		4.3	4.3		3.8	3.8		3.8	3.8	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	6.3	6.3		6.3	6.3			5.8		5.8	5.8	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Min	Min		Min	Min		None	None		None	None	

Intersection Summary

Area Type: Other

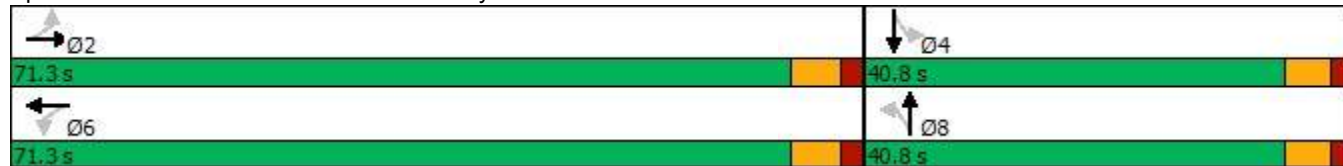
Cycle Length: 112.1

Actuated Cycle Length: 49.3

Natural Cycle: 70




















Control Type: Actuated-Uncoordinated

Splits and Phases: 21: Meadowbrook Way SE & SR 202



HCM 6th Signalized Intersection Summary
 21: Meadowbrook Way SE & SR 202

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	413	56	8	405	24	113	80	22	32	58	19
Future Volume (veh/h)	14	413	56	8	405	24	113	80	22	32	58	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1856	1900	1841	1841	1900	1900	1900	1856	1900	1900
Adj Flow Rate, veh/h	15	444	60	9	435	26	122	86	24	34	62	20
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	3	3	0	4	4	0	0	0	3	0	0
Cap, veh/h	419	674	91	386	724	43	315	165	37	542	320	103
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	945	1600	216	909	1719	103	679	710	160	1270	1375	443
Grp Volume(v), veh/h	15	0	504	9	0	461	232	0	0	34	0	82
Grp Sat Flow(s),veh/h/ln	945	0	1816	909	0	1822	1549	0	0	1270	0	1818
Q Serve(g_s), s	0.4	0.0	7.8	0.3	0.0	6.9	3.4	0.0	0.0	0.0	0.0	1.3
Cycle Q Clear(g_c), s	7.3	0.0	7.8	8.1	0.0	6.9	4.7	0.0	0.0	0.6	0.0	1.3
Prop In Lane	1.00		0.12	1.00		0.06	0.53		0.10	1.00		0.24
Lane Grp Cap(c), veh/h	419	0	765	386	0	767	518	0	0	542	0	423
V/C Ratio(X)	0.04	0.00	0.66	0.02	0.00	0.60	0.45	0.00	0.00	0.06	0.00	0.19
Avail Cap(c_a), veh/h	1777	0	3375	1692	0	3386	1691	0	0	1516	0	1819
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.7	0.0	8.1	11.3	0.0	7.8	12.0	0.0	0.0	10.5	0.0	10.8
Incr Delay (d2), s/veh	0.0	0.0	1.2	0.0	0.0	0.9	0.6	0.0	0.0	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	2.2	0.0	0.0	1.6	1.3	0.0	0.0	0.2	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.7	0.0	9.3	11.4	0.0	8.8	12.6	0.0	0.0	10.6	0.0	11.0
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	B
Approach Vol, veh/h		519			470			232			116	
Approach Delay, s/veh		9.3			8.8			12.6			10.9	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		21.0		13.9		21.0		13.9				
Change Period (Y+Rc), s		6.3		* 5.8		6.3		* 5.8				
Max Green Setting (Gmax), s		65.0		* 35		65.0		* 35				
Max Q Clear Time (g_c+I1), s		9.8		3.3		10.1		6.7				
Green Ext Time (p_c), s		4.8		0.6		3.8		1.4				
Intersection Summary												
HCM 6th Ctrl Delay			9.9									
HCM 6th LOS			A									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 22: Meadowbrook Way SE & 384th Ave SE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	165	218	168	13	2	112
Future Volume (vph)	165	218	168	13	2	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		25	
Link Distance (ft)		158	180		181	
Travel Time (s)		3.1	3.5		4.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	8%	1%	3%	0%	0%	6%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	165	218	168	13	2	112
Future Vol, veh/h	165	218	168	13	2	112
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	8	1	3	0	0	6
Mvmt Flow	190	251	193	15	2	129

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	208	0	-	0	832 201
Stage 1	-	-	-	-	201 -
Stage 2	-	-	-	-	631 -
Critical Hdwy	4.18	-	-	-	6.4 6.26
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.272	-	-	-	3.5 3.354
Pot Cap-1 Maneuver	1328	-	-	-	342 830
Stage 1	-	-	-	-	838 -
Stage 2	-	-	-	-	534 -
Platoon blocked, %	-	-	-	-	
Mov Cap-1 Maneuver	1328	-	-	-	285 830
Mov Cap-2 Maneuver	-	-	-	-	285 -
Stage 1	-	-	-	-	699 -
Stage 2	-	-	-	-	534 -

Approach	EB	WB	SB
HCM Control Delay, s	3.5	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1328	-	-	-	-	803
HCM Lane V/C Ratio	0.143	-	-	-	-	0.163
HCM Control Delay (s)	8.2	0	-	-	-	10.4
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0.5	-	-	-	-	0.6

Lanes, Volumes, Timings
 23: SE North Bend Way & Meadowbrook Way SE

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	58	223	131	76	307	273
Future Volume (vph)	58	223	131	76	307	273
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	450	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Link Speed (mph)	35		50			50
Link Distance (ft)	158		253			593
Travel Time (s)	3.1		3.5			8.1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	3%	3%	15%	1%	1%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	5.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↘	↑	↘	↘	↑
Traffic Vol, veh/h	58	223	131	76	307	273
Future Vol, veh/h	58	223	131	76	307	273
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	Free	-	None
Storage Length	0	0	-	0	450	-
Veh in Median Storage, #1	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	3	3	15	1	1
Mvmt Flow	64	248	146	84	341	303

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1131	-	0	-	146
Stage 1	146	-	-	-	-
Stage 2	985	-	-	-	-
Critical Hdwy	6.45	-	-	-	4.11
Critical Hdwy Stg 1	5.45	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-
Follow-up Hdwy	3.545	-	-	-	2.209
Pot Cap-1 Maneuver	222	0	-	0	1442
Stage 1	874	0	-	0	-
Stage 2	357	0	-	0	-
Platoon blocked, %			-		-
Mov Cap-1 Maneuver	170	-	-	-	1442
Mov Cap-2 Maneuver	237	-	-	-	-
Stage 1	874	-	-	-	-
Stage 2	273	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.8	0	4.4
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	237	-	1442	-
HCM Lane V/C Ratio	-	0.272	-	0.237	-
HCM Control Delay (s)	-	25.8	0	8.3	-
HCM Lane LOS	-	D	A	A	-
HCM 95th %tile Q(veh)	-	1.1	-	0.9	-

2023 Proposed Action – Planning Area 1
LOS Worksheets

Lanes, Volumes, Timings
1: SR-18 & I-90 EB Ramps

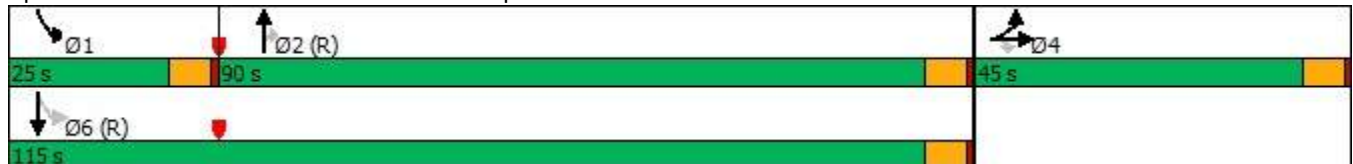
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	408	0	82	0	0	0	0	811	454	59	360	0
Future Volume (vph)	408	0	82	0	0	0	0	811	454	59	360	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650		0	0		0	0		300	200		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			45				30
Link Distance (ft)		833			764			1837				778
Travel Time (s)		16.2			14.9			27.8				17.7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	6%	0%	10%	0%	0%	0%	0%	8%	28%	10%	41%	0%
Shared Lane Traffic (%)	50%											
Turn Type	Split	NA	Perm					NA	Perm	pm+pt	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			4						2	6		
Detector Phase	4	4	4					2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					10.0	10.0	3.0	10.0	
Minimum Split (s)	29.0	29.0	29.0					16.0	16.0	9.0	23.0	
Total Split (s)	45.0	45.0	45.0					90.0	90.0	25.0	115.0	
Total Split (%)	28.1%	28.1%	28.1%					56.3%	56.3%	15.6%	71.9%	
Yellow Time (s)	5.0	5.0	5.0					5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0	1.0					1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0					6.0	6.0	6.0	6.0	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None					C-Min	C-Min	None	C-Min	

Intersection Summary

Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 1: SR-18 & I-90 EB Ramps



HCM 6th Signalized Intersection Summary

1: SR-18 & I-90 EB Ramps

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	408	0	82	0	0	0	0	811	454	59	360	0
Future Volume (veh/h)	408	0	82	0	0	0	0	811	454	59	360	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1811	1900	1752				0	1781	1485	1752	1292	0
Adj Flow Rate, veh/h	425	0	0				0	845	0	61	375	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	6	0	10				0	8	28	10	41	0
Cap, veh/h	489	0					0	1291		371	1923	0
Arrive On Green	0.14	0.00	0.00				0.00	0.72	0.00	0.02	0.78	0.00
Sat Flow, veh/h	3450	0	1485				0	1781	1259	1668	2520	0
Grp Volume(v), veh/h	425	0	0				0	845	0	61	375	0
Grp Sat Flow(s),veh/h/ln	1725	0	1485				0	1781	1259	1668	1228	0
Q Serve(g_s), s	19.3	0.0	0.0				0.0	39.7	0.0	1.5	6.3	0.0
Cycle Q Clear(g_c), s	19.3	0.0	0.0				0.0	39.7	0.0	1.5	6.3	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	489	0					0	1291		371	1923	0
V/C Ratio(X)	0.87	0.00					0.00	0.65		0.16	0.20	0.00
Avail Cap(c_a), veh/h	841	0					0	1291		534	1923	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				0.00	1.00	0.00	0.84	0.84	0.00
Uniform Delay (d), s/veh	67.2	0.0	0.0				0.0	11.5	0.0	10.9	4.4	0.0
Incr Delay (d2), s/veh	5.0	0.0	0.0				0.0	2.6	0.0	0.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	0.0	0.0				0.0	14.9	0.0	0.6	1.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.2	0.0	0.0				0.0	14.1	0.0	11.1	4.6	0.0
LnGrp LOS	E	A					A	B		B	A	A
Approach Vol, veh/h		425	A					845	A		436	
Approach Delay, s/veh		72.2						14.1			5.5	
Approach LOS		E						B			A	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	9.3	122.0		28.7				131.3				
Change Period (Y+Rc), s	6.0	6.0		6.0				6.0				
Max Green Setting (Gmax), s	19.0	84.0		39.0				109.0				
Max Q Clear Time (g_c+I1), s	3.5	41.7		21.3				8.3				
Green Ext Time (p_c), s	0.1	17.2		1.4				6.8				
Intersection Summary												
HCM 6th Ctrl Delay			26.4									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

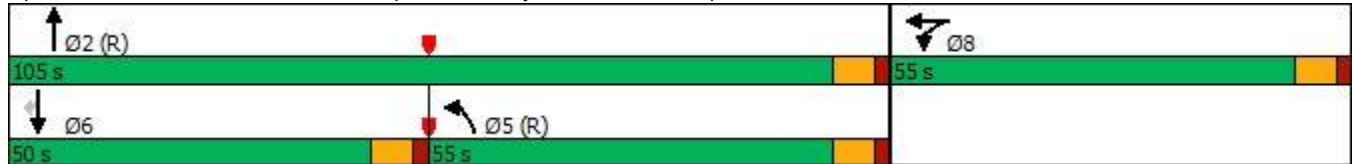
03/06/2020

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group												
Lane Configurations				↖	↕		↖	↕			↕	↖
Traffic Volume (vph)	0	0	0	213	2	103	567	625	0	0	158	826
Future Volume (vph)	0	0	0	213	2	103	567	625	0	0	158	826
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	0		0
Storage Lanes	0		0	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30				30
Link Distance (ft)		893			705			778				878
Travel Time (s)		17.4			13.7			17.7				20.0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	57%	50%	8%	7%	7%	0%	0%	12%	1%
Shared Lane Traffic (%)				23%								
Turn Type				Split	NA		Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases												6
Detector Phase				8	8		5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	7.0			7.0	7.0
Minimum Split (s)				12.0	12.0		12.0	14.0			24.0	24.0
Total Split (s)				55.0	55.0		55.0	105.0			50.0	50.0
Total Split (%)				34.4%	34.4%		34.4%	65.6%			31.3%	31.3%
Yellow Time (s)				5.0	5.0		5.0	5.0			5.0	5.0
All-Red Time (s)				2.0	2.0		2.0	2.0			2.0	2.0
Lost Time Adjust (s)				0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)				7.0	7.0		7.0	7.0			7.0	7.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None		C-Max	C-Min			None	None

Intersection Summary

Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 60 (38%), Referenced to phase 2:NBT and 5:NBL, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated

Splits and Phases: 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps





















HCM 6th Signalized Intersection Summary
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	213	2	103	567	625	0	0	158	826
Future Volume (veh/h)	0	0	0	213	2	103	567	625	0	0	158	826
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No				No	
Adj Sat Flow, veh/h/ln				1055	1159	1055	1796	1796	0	0	1722	1885
Adj Flow Rate, veh/h				167	82	108	597	658	0	0	166	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				57	50	57	7	7	0	0	12	1
Cap, veh/h				212	96	126	513	2394	0	0	616	
Arrive On Green				0.21	0.21	0.21	0.10	0.23	0.00	0.00	0.36	0.00
Sat Flow, veh/h				1005	454	598	1711	3503	0	0	1722	1598
Grp Volume(v), veh/h				167	0	190	597	658	0	0	166	0
Grp Sat Flow(s),veh/h/ln				1005	0	1051	1711	1706	0	0	1722	1598
Q Serve(g_s), s				25.2	0.0	27.8	48.0	25.3	0.0	0.0	11.0	0.0
Cycle Q Clear(g_c), s				25.2	0.0	27.8	48.0	25.3	0.0	0.0	11.0	0.0
Prop In Lane				1.00		0.57	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				212	0	222	513	2394	0	0	616	
V/C Ratio(X)				0.79	0.00	0.86	1.16	0.27	0.00	0.00	0.27	
Avail Cap(c_a), veh/h				302	0	315	513	2394	0	0	616	
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	1.00	0.63	0.63	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				59.7	0.0	60.8	72.1	28.1	0.0	0.0	36.5	0.0
Incr Delay (d2), s/veh				20.9	0.0	28.0	86.8	0.2	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.6	0.0	9.1	34.6	11.7	0.0	0.0	4.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				80.6	0.0	88.8	158.9	28.3	0.0	0.0	36.9	0.0
LnGrp LOS				F	A	F	F	C	A	A	D	
Approach Vol, veh/h					357			1255			166	A
Approach Delay, s/veh					85.0			90.4			36.9	
Approach LOS					F			F			D	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		119.2			55.0	64.2		40.8				
Change Period (Y+Rc), s		7.0			7.0	7.0		7.0				
Max Green Setting (Gmax), s		98.0			48.0	43.0		48.0				
Max Q Clear Time (g_c+I1), s		27.3			50.0	13.0		29.8				
Green Ext Time (p_c), s		8.0			0.0	1.4		3.9				
Intersection Summary												
HCM 6th Ctrl Delay				84.3								
HCM 6th LOS				F								
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 3: Snoqualmie Pkwy & SE 99th St

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	28	0	0	1	70	635	3	1	989	10
Future Volume (vph)	2	0	28	0	0	1	70	635	3	1	989	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	0		0	0		0	125		0	25		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		989			884			878			457	
Travel Time (s)		27.0			24.1			20.0			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	50%	0%	0%	0%	0%	0%	3%	7%	0%	0%	3%	20%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕	↕		↕	↕
Traffic Vol, veh/h	2	0	28	0	0	1	70	635	3	1	989	10
Future Vol, veh/h	2	0	28	0	0	1	70	635	3	1	989	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	25	-	-
Veh in Median Storage, #-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	50	0	0	0	0	0	3	7	0	0	3	20
Mvmt Flow	2	0	29	0	0	1	74	668	3	1	1041	11

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	1531	1868	526	1341	1872	336	1052	0	0	671	0	0
Stage 1	1049	1049	-	818	818	-	-	-	-	-	-	-
Stage 2	482	819	-	523	1054	-	-	-	-	-	-	-
Critical Hdwy	8.5	6.5	6.9	7.5	6.5	6.9	4.16	-	-	4.1	-	-
Critical Hdwy Stg 1	7.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	4	4	3.3	3.5	4	3.3	2.23	-	-	2.2	-	-
Pot Cap-1 Maneuver	50	73	502	113	73	666	651	-	-	929	-	-
Stage 1	171	307	-	340	393	-	-	-	-	-	-	-
Stage 2	426	392	-	510	305	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	46	65	502	97	65	666	651	-	-	929	-	-
Mov Cap-2 Maneuver	46	65	-	97	65	-	-	-	-	-	-	-
Stage 1	152	307	-	301	348	-	-	-	-	-	-	-
Stage 2	377	347	-	480	305	-	-	-	-	-	-	-

Approach	EB		WB			NB			SB		
HCM Control Delay, s	18.3		10.4			1.1			0		
HCM LOS	C		B								

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	651	-	-	302	666	929	-
HCM Lane V/C Ratio	0.113	-	-	0.105	0.002	0.001	-
HCM Control Delay (s)	11.2	-	-	18.3	10.4	8.9	-
HCM Lane LOS	B	-	-	C	B	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0.3	0	0	-

Lanes, Volumes, Timings
 4: Snoqualmie Pkwy & SE 96th St

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	32	16	583	15	31	912
Future Volume (vph)	32	16	583	15	31	912
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Link Speed (mph)	30		40			40
Link Distance (ft)	346		677			718
Travel Time (s)	7.9		11.5			12.2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	8%	0%	0%	2%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary
 Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑		↘	↑↑
Traffic Vol, veh/h	32	16	583	15	31	912
Future Vol, veh/h	32	16	583	15	31	912
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #1	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	8	0	0	2
Mvmt Flow	33	16	595	15	32	931

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1133	305	0	0	610	0
Stage 1	603	-	-	-	-	-
Stage 2	530	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	200	697	-	-	979	-
Stage 1	515	-	-	-	-	-
Stage 2	560	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	193	697	-	-	979	-
Mov Cap-2 Maneuver	329	-	-	-	-	-
Stage 1	515	-	-	-	-	-
Stage 2	542	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.8	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	329	697	979	-
HCM Lane V/C Ratio	-	-	0.099	0.023	0.032	-
HCM Control Delay (s)	-	-	17.1	10.3	8.8	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	0.1	-

Lanes, Volumes, Timings
5: Snoqualmie Pkwy & SE Jacobia St

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	5	111	99	6	81	36	636	15	24	765	18
Future Volume (vph)	33	5	111	99	6	81	36	636	15	24	765	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	250		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		653			474			718			617	
Travel Time (s)		17.8			12.9			12.2			10.5	
Confl. Peds. (#/hr)	2		1	1		2						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	12%	20%	0%	0%	17%	2%	8%	8%	0%	13%	4%	33%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	15.0		5.0	16.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		10.5	22.5		10.5	22.5	
Total Split (s)	25.0	25.0		40.0	40.0		15.5	65.5		15.5	65.5	
Total Split (%)	20.7%	20.7%		33.1%	33.1%		12.8%	54.1%		12.8%	54.1%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.5	4.5		4.5	4.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.5	5.5		5.5	5.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other

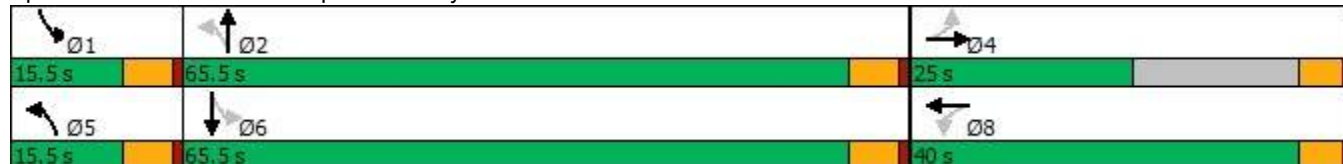
Cycle Length: 121

Actuated Cycle Length: 51.4

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Snoqualmie Pkwy & SE Jacobia St



HCM 6th Signalized Intersection Summary
 5: Snoqualmie Pkwy & SE Jacobia St

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	5	111	99	6	81	36	636	15	24	765	18
Future Volume (veh/h)	33	5	111	99	6	81	36	636	15	24	765	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1722	1604	1604	1900	1648	1648	1781	1781	1781	1707	1841	1841
Adj Flow Rate, veh/h	36	5	122	109	7	89	40	699	16	26	841	20
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	12	20	20	0	17	17	8	8	8	13	4	4
Cap, veh/h	347	12	297	332	23	296	353	1433	33	377	1436	34
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.04	0.42	0.42	0.03	0.41	0.41
Sat Flow, veh/h	1194	54	1310	1281	103	1306	1697	3382	77	1626	3491	83
Grp Volume(v), veh/h	36	0	127	109	0	96	40	350	365	26	421	440
Grp Sat Flow(s),veh/h/ln	1194	0	1364	1281	0	1409	1697	1692	1768	1626	1749	1826
Q Serve(g_s), s	1.3	0.0	4.0	4.0	0.0	2.8	0.7	7.5	7.5	0.5	9.3	9.4
Cycle Q Clear(g_c), s	4.1	0.0	4.0	7.9	0.0	2.8	0.7	7.5	7.5	0.5	9.3	9.4
Prop In Lane	1.00		0.96	1.00		0.93	1.00		0.04	1.00		0.05
Lane Grp Cap(c), veh/h	347	0	309	332	0	319	353	717	749	377	719	751
V/C Ratio(X)	0.10	0.00	0.41	0.33	0.00	0.30	0.11	0.49	0.49	0.07	0.59	0.59
Avail Cap(c_a), veh/h	553	0	545	938	0	985	620	2029	2119	652	2096	2189
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.8	0.0	16.5	19.9	0.0	16.1	8.6	10.5	10.5	8.4	11.4	11.4
Incr Delay (d2), s/veh	0.1	0.0	0.9	0.6	0.0	0.5	0.1	0.7	0.7	0.0	1.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	1.2	1.1	0.0	0.9	0.2	2.2	2.3	0.1	2.9	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.9	0.0	17.4	20.5	0.0	16.6	8.6	11.2	11.2	8.5	12.5	12.5
LnGrp LOS	B	A	B	C	A	B	A	B	B	A	B	B
Approach Vol, veh/h		163			205			755			887	
Approach Delay, s/veh		17.5			18.7			11.1			12.4	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.0	26.7		16.3	7.6	26.1		16.3				
Change Period (Y+Rc), s	5.5	5.5		5.0	5.5	5.5		5.0				
Max Green Setting (Gmax), s	10.0	60.0		20.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	2.5	9.5		6.1	2.7	11.4		9.9				
Green Ext Time (p_c), s	0.0	7.2		0.7	0.0	9.2		0.9				
Intersection Summary												
HCM 6th Ctrl Delay				12.9								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
6: Snoqualmie Pkwy & SE Swenson Dr

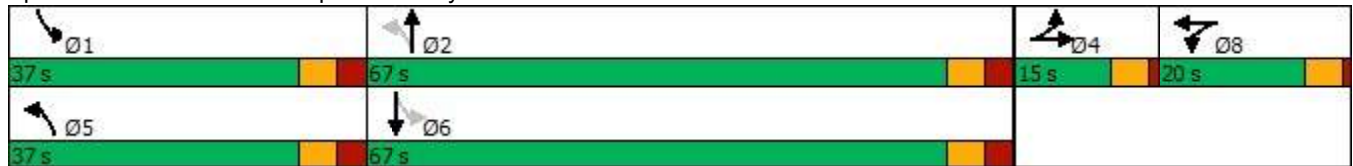
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	12	24	46	16	70	47	684	19	40	610	66
Future Volume (vph)	54	12	24	46	16	70	47	684	19	40	610	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	275		0	300		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			No
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		456			320			2254			367	
Travel Time (s)		10.4			7.3			38.4			6.3	
Confl. Peds. (#/hr)			1			45	1		8	8		1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	5%	15%	4%	0%	6%	3%	4%	9%	5%	0%	7%	4%
Shared Lane Traffic (%)												
Turn Type	Split	NA		Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		10.0	10.0		5.0	12.0		5.0	12.0	
Minimum Split (s)	38.0	38.0		38.0	38.0		12.0	28.0		12.0	28.0	
Total Split (s)	15.0	15.0		20.0	20.0		37.0	67.0		37.0	67.0	
Total Split (%)	10.8%	10.8%		14.4%	14.4%		26.6%	48.2%		26.6%	48.2%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		7.0	7.0		7.0	7.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
 Cycle Length: 139
 Actuated Cycle Length: 86.4
 Natural Cycle: 120
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Snoqualmie Pkwy & SE Swenson Dr



HCM 6th Signalized Intersection Summary
6: Snoqualmie Pkwy & SE Swenson Dr

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	12	24	46	16	70	47	684	19	40	610	66
Future Volume (veh/h)	54	12	24	46	16	70	47	684	19	40	610	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.93	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1678	1678	1900	1811	1811	1841	1767	1767	1900	1796	1796
Adj Flow Rate, veh/h	61	13	27	52	18	79	53	769	21	45	685	74
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	5	15	15	0	6	6	4	9	9	0	7	7
Cap, veh/h	145	40	84	339	52	226	253	916	25	243	836	90
Arrive On Green	0.08	0.08	0.08	0.19	0.19	0.19	0.05	0.27	0.27	0.04	0.27	0.27
Sat Flow, veh/h	1739	485	1008	1810	275	1208	1753	3336	91	1810	3102	335
Grp Volume(v), veh/h	61	0	40	52	0	97	53	387	403	45	377	382
Grp Sat Flow(s),veh/h/ln	1739	0	1493	1810	0	1483	1753	1678	1749	1810	1706	1730
Q Serve(g_s), s	1.9	0.0	1.5	1.4	0.0	3.3	1.2	12.7	12.7	1.0	12.1	12.1
Cycle Q Clear(g_c), s	1.9	0.0	1.5	1.4	0.0	3.3	1.2	12.7	12.7	1.0	12.1	12.1
Prop In Lane	1.00		0.68	1.00		0.81	1.00		0.05	1.00		0.19
Lane Grp Cap(c), veh/h	145	0	125	339	0	278	253	461	480	243	460	466
V/C Ratio(X)	0.42	0.00	0.32	0.15	0.00	0.35	0.21	0.84	0.84	0.19	0.82	0.82
Avail Cap(c_a), veh/h	297	0	255	464	0	380	1066	1722	1794	1091	1751	1775
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.5	0.0	25.2	19.9	0.0	20.7	15.3	20.0	20.0	15.5	20.0	20.0
Incr Delay (d2), s/veh	0.7	0.0	0.5	0.1	0.0	0.3	0.2	1.6	1.5	0.1	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.5	0.6	0.0	1.1	0.4	4.5	4.6	0.4	4.3	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.2	0.0	25.8	20.0	0.0	20.9	15.5	21.6	21.5	15.7	21.4	21.4
LnGrp LOS	C	A	C	B	A	C	B	C	C	B	C	C
Approach Vol, veh/h		101			149			843			804	
Approach Delay, s/veh		26.0			20.6			21.2			21.1	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	23.1		9.9	9.9	22.8		15.9				
Change Period (Y+Rc), s	7.0	7.0		5.0	7.0	7.0		5.0				
Max Green Setting (Gmax), s	30.0	60.0		10.0	30.0	60.0		15.0				
Max Q Clear Time (g_c+I1), s	3.0	14.7		3.9	3.2	14.1		5.3				
Green Ext Time (p_c), s	0.0	0.6		0.0	0.0	0.6		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				21.4								
HCM 6th LOS				C								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	490	202	58	418	29	106	12	44	57	42	314
Future Volume (vph)	92	490	202	58	418	29	106	12	44	57	42	314
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	175		0	0		150	0		100
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1285			1065			585			583	
Travel Time (s)		21.9			18.2			16.0			15.9	
Confl. Peds. (#/hr)												3
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	10%	11%	2%	2%	6%	14%	6%	0%	5%	5%	0%	4%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4			8					2			6
Detector Phase	7	4		3	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	35.3		9.5	30.3		36.5	36.5	36.5	36.5	36.5	36.5
Total Split (s)	34.5	55.3		14.5	55.3		44.5	44.5	44.5	44.5	44.5	44.5
Total Split (%)	19.3%	30.9%		8.1%	30.9%		24.9%	24.9%	24.9%	24.9%	24.9%	24.9%
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.3		4.5	5.3			4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None	None	None	None	None

Intersection Summary

Area Type: Other

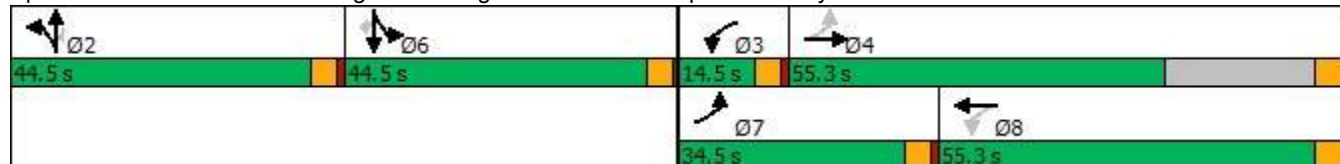
Cycle Length: 178.8

Actuated Cycle Length: 86.1

Natural Cycle: 120

Control Type: Actuated-Uncoordinated

Splits and Phases: 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	490	202	58	418	29	106	12	44	57	42	314
Future Volume (veh/h)	92	490	202	58	418	29	106	12	44	57	42	314
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1737	1737	1870	1811	1811	1900	1900	1826	1900	1900	1841
Adj Flow Rate, veh/h	106	563	232	67	480	33	122	14	8	66	48	239
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	10	11	11	2	6	6	0	0	5	0	0	4
Cap, veh/h	408	819	337	301	1138	78	174	20	165	219	159	318
Arrive On Green	0.06	0.36	0.36	0.05	0.35	0.35	0.11	0.11	0.11	0.20	0.20	0.20
Sat Flow, veh/h	1668	2281	938	1781	3267	224	1631	187	1547	1069	777	1553
Grp Volume(v), veh/h	106	407	388	67	252	261	136	0	8	114	0	239
Grp Sat Flow(s),veh/h/ln	1668	1650	1568	1781	1721	1771	1818	0	1547	1847	0	1553
Q Serve(g_s), s	2.7	14.2	14.3	1.6	7.6	7.6	4.9	0.0	0.3	3.6	0.0	9.8
Cycle Q Clear(g_c), s	2.7	14.2	14.3	1.6	7.6	7.6	4.9	0.0	0.3	3.6	0.0	9.8
Prop In Lane	1.00		0.60	1.00		0.13	0.90		1.00	0.58		1.00
Lane Grp Cap(c), veh/h	408	593	563	301	599	617	194	0	165	378	0	318
V/C Ratio(X)	0.26	0.69	0.69	0.22	0.42	0.42	0.70	0.00	0.05	0.30	0.00	0.75
Avail Cap(c_a), veh/h	1039	1215	1155	470	1267	1304	1071	0	911	1088	0	915
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.0	18.5	18.5	14.2	16.9	16.9	29.3	0.0	27.2	22.9	0.0	25.4
Incr Delay (d2), s/veh	0.3	2.0	2.1	0.4	0.7	0.7	4.5	0.0	0.1	0.4	0.0	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	5.1	4.8	0.6	2.8	2.8	2.3	0.0	0.1	1.5	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	20.5	20.7	14.5	17.6	17.6	33.8	0.0	27.4	23.3	0.0	29.0
LnGrp LOS	B	C	C	B	B	B	C	A	C	C	A	C
Approach Vol, veh/h		901			580			144			353	
Approach Delay, s/veh		19.8			17.2			33.5			27.2	
Approach LOS		B			B			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.7	8.1	29.7		18.4	8.8	29.0				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		40.0	10.0	50.0		40.0	30.0	50.0				
Max Q Clear Time (g_c+I1), s		6.9	3.6	16.3		11.8	4.7	9.6				
Green Ext Time (p_c), s		0.9	0.1	8.1		1.6	0.3	4.7				
Intersection Summary												
HCM 6th Ctrl Delay				21.3								
HCM 6th LOS				C								

Lanes, Volumes, Timings
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

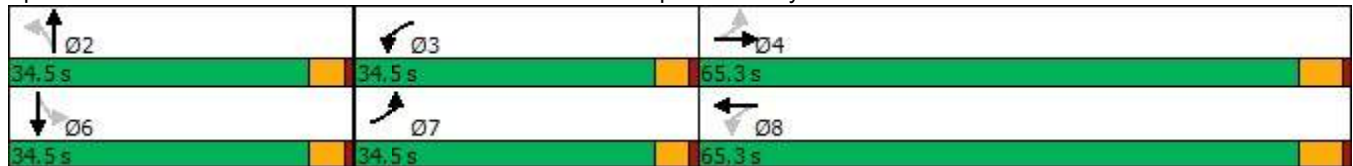
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	417	81	130	450	50	9	6	21	66	27	93
Future Volume (vph)	98	417	81	130	450	50	9	6	21	66	27	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	275		0	275		0	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1065			1064			511			626	
Travel Time (s)		18.2			18.1			13.9			17.1	
Confl. Peds. (#/hr)	3		1	1		3	2		1	1		2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	12%	1%	0%	6%	0%	11%	0%	0%	5%	4%	2%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2				6
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		2	2		6		6
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		5.0		5.0
Minimum Split (s)	9.5	34.3		9.5	34.3		36.5	36.5		36.5		36.5
Total Split (s)	34.5	65.3		34.5	65.3		34.5	34.5		34.5		34.5
Total Split (%)	25.7%	48.6%		25.7%	48.6%		25.7%	25.7%		25.7%		25.7%
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5		3.5		3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0		1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Total Lost Time (s)	4.5	5.3		4.5	5.3		4.5	4.5		4.5		4.5
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None		None

Intersection Summary

























Area Type: Other
 Cycle Length: 134.3
 Actuated Cycle Length: 53
 Natural Cycle: 85
 Control Type: Actuated-Uncoordinated

Splits and Phases: 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	98	417	81	130	450	50	9	6	21	66	27	93
Future Volume (veh/h)	98	417	81	130	450	50	9	6	21	66	27	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1722	1722	1900	1811	1811	1737	1900	1900	1826	1841	1841
Adj Flow Rate, veh/h	110	469	91	146	506	56	10	7	24	74	30	104
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	12	12	0	6	6	11	0	0	5	4	4
Cap, veh/h	574	1047	202	582	1234	136	275	59	202	370	57	196
Arrive On Green	0.09	0.38	0.38	0.10	0.40	0.40	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	2734	527	1810	3124	344	1163	375	1287	1341	360	1250
Grp Volume(v), veh/h	110	280	280	146	278	284	10	0	31	74	0	134
Grp Sat Flow(s),veh/h/ln	1781	1636	1625	1810	1721	1748	1163	0	1662	1341	0	1610
Q Serve(g_s), s	1.4	5.1	5.1	1.8	4.6	4.7	0.3	0.0	0.6	2.0	0.0	3.0
Cycle Q Clear(g_c), s	1.4	5.1	5.1	1.8	4.6	4.7	3.4	0.0	0.6	2.6	0.0	3.0
Prop In Lane	1.00		0.32	1.00		0.20	1.00		0.77	1.00		0.78
Lane Grp Cap(c), veh/h	574	626	622	582	680	691	275	0	261	370	0	253
V/C Ratio(X)	0.19	0.45	0.45	0.25	0.41	0.41	0.04	0.00	0.12	0.20	0.00	0.53
Avail Cap(c_a), veh/h	1759	2467	2450	1765	2595	2635	969	0	1254	1171	0	1214
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.2	9.1	9.2	6.2	8.7	8.7	17.0	0.0	14.4	15.5	0.0	15.4
Incr Delay (d2), s/veh	0.2	0.7	0.7	0.2	0.6	0.6	0.1	0.0	0.2	0.3	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.3	1.3	0.4	1.2	1.2	0.1	0.0	0.2	0.6	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.3	9.8	9.9	6.4	9.2	9.2	17.0	0.0	14.6	15.8	0.0	17.1
LnGrp LOS	A	A	A	A	A	A	B	A	B	B	A	B
Approach Vol, veh/h		670			708			41			208	
Approach Delay, s/veh		9.3			8.7			15.2			16.7	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		10.7	8.5	20.5		10.7	8.0	21.0				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		30.0	30.0	60.0		30.0	30.0	60.0				
Max Q Clear Time (g_c+I1), s		5.4	3.8	7.1		5.0	3.4	6.7				
Green Ext Time (p_c), s		0.1	0.4	5.4		1.0	0.3	5.4				
Intersection Summary												
HCM 6th Ctrl Delay				10.1								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
 9: Snoqualmie Pkwy & Fairway Ave SE

03/06/2020

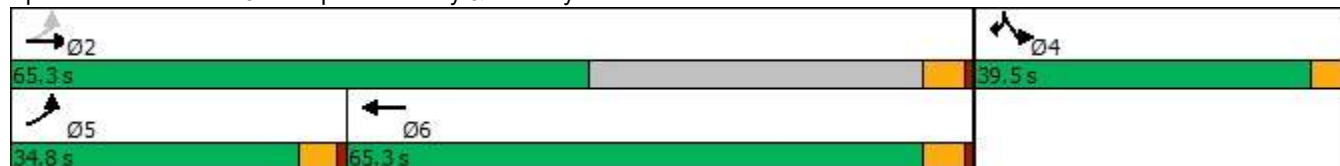


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	30	498	437	110	247	210
Future Volume (vph)	30	498	437	110	247	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	325			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		25	
Link Distance (ft)		1064	278		478	
Travel Time (s)		18.1	4.7		13.0	
Confl. Peds. (#/hr)	2			2		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	8%	9%	3%	11%	2%	1%
Shared Lane Traffic (%)						
Turn Type	pm+pt	NA	NA		Prot	Prot
Protected Phases	5	2	6		4	4
Permitted Phases	2					
Detector Phase	5	2	6		4	4
Switch Phase						
Minimum Initial (s)	5.0	12.0	12.0		5.0	5.0
Minimum Split (s)	9.8	23.3	26.3		36.5	36.5
Total Split (s)	34.8	65.3	65.3		39.5	39.5
Total Split (%)	24.9%	46.8%	46.8%		28.3%	28.3%
Yellow Time (s)	3.8	4.3	4.3		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.8	5.3	5.3		4.5	4.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	None	None		None	None

Intersection Summary

Area Type: Other
 Cycle Length: 139.6
 Actuated Cycle Length: 46.2
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated

Splits and Phases: 9: Snoqualmie Pkwy & Fairway Ave SE



HCM 6th Signalized Intersection Summary
 9: Snoqualmie Pkwy & Fairway Ave SE























03/06/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	30	498	437	110	247	210
Future Volume (veh/h)	30	498	437	110	247	210
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1767	1856	1856	1870	1885
Adj Flow Rate, veh/h	33	553	486	122	274	195
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	9	3	3	2	1
Cap, veh/h	407	1674	919	229	417	374
Arrive On Green	0.04	0.50	0.33	0.33	0.23	0.23
Sat Flow, veh/h	1697	3445	2886	697	1781	1598
Grp Volume(v), veh/h	33	553	306	302	274	195
Grp Sat Flow(s),veh/h/ln	1697	1678	1763	1728	1781	1598
Q Serve(g_s), s	0.4	3.6	5.2	5.2	5.1	3.9
Cycle Q Clear(g_c), s	0.4	3.6	5.2	5.2	5.1	3.9
Prop In Lane	1.00			0.40	1.00	1.00
Lane Grp Cap(c), veh/h	407	1674	580	568	417	374
V/C Ratio(X)	0.08	0.33	0.53	0.53	0.66	0.52
Avail Cap(c_a), veh/h	1728	5490	2883	2826	1699	1524
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.0	5.5	10.0	10.0	12.7	12.3
Incr Delay (d2), s/veh	0.1	0.1	0.7	0.8	1.8	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.6	1.4	1.4	1.9	3.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.1	5.6	10.7	10.8	14.5	13.4
LnGrp LOS	A	A	B	B	B	B
Approach Vol, veh/h		586	608		469	
Approach Delay, s/veh		5.7	10.8		14.0	
Approach LOS		A	B		B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		23.6		13.1	6.2	17.4
Change Period (Y+Rc), s		5.3		4.5	* 4.8	5.3
Max Green Setting (Gmax), s		60.0		35.0	* 30	60.0
Max Q Clear Time (g_c+I1), s		5.6		7.1	2.4	7.2
Green Ext Time (p_c), s		4.0		1.6	0.1	3.9
Intersection Summary						
HCM 6th Ctrl Delay			9.9			
HCM 6th LOS			A			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

Lanes, Volumes, Timings
 10: Fisher Ave SE & Snoqualmie Pkwy

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (vph)	7	632	6	3	449	19	34	1	8	26	3	31
Future Volume (vph)	7	632	6	3	449	19	34	1	8	26	3	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		458			1686			518			363	
Travel Time (s)		7.8			28.7			14.1			9.9	
Confl. Peds. (#/hr)	2		1	2		3	1		2	3		2
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	0%	8%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	5.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕			↕			↕	
Traffic Vol, veh/h	7	632	6	3	449	19	34	1	8	26	3	31
Future Vol, veh/h	7	632	6	3	449	19	34	1	8	26	3	31
Conflicting Peds, #/hr	2	0	1	2	0	3	1	0	2	3	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #-	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	8	0	0	4	0	0	0	0	0	0	0
Mvmt Flow	9	810	8	4	576	24	44	1	10	33	4	40

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	603	0	0	820	0	0	1134	1445	414	1026	1437	305
Stage 1	-	-	-	-	-	-	834	834	-	599	599	-
Stage 2	-	-	-	-	-	-	300	611	-	427	838	-
Critical Hdwy	4.1	-	-	4.1	-	-	9.5	8.5	7.9	9.5	8.5	7.9
Critical Hdwy Stg 1	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	984	-	-	818	-	-	85	60	528	108	61	640
Stage 1	-	-	-	-	-	-	210	243	-	330	354	-
Stage 2	-	-	-	-	-	-	584	347	-	459	241	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	981	-	-	816	-	-	75	59	525	102	60	637
Mov Cap-2 Maneuver	-	-	-	-	-	-	75	59	-	102	60	-
Stage 1	-	-	-	-	-	-	208	240	-	326	351	-
Stage 2	-	-	-	-	-	-	538	344	-	442	238	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			96.2			42.6		
HCM LOS							F			E		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	89	981	-	-	816	-	-	170
HCM Lane V/C Ratio	0.619	0.009	-	-	0.005	-	-	0.452
HCM Control Delay (s)	96.2	8.7	-	-	9.4	-	-	42.6
HCM Lane LOS	F	A	-	-	A	-	-	E
HCM 95th %tile Q(veh)	2.9	0	-	-	0	-	-	2.1

Lanes, Volumes, Timings
 11: Orchard Ave SE & Snoqualmie Pkwy

03/06/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (vph)	772	9	15	468	24	39
Future Volume (vph)	772	9	15	468	24	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	225		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	1686			1131	557	
Travel Time (s)	28.7			19.3	15.2	
Confl. Peds. (#/hr)		3	1		3	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	7%	11%	6%	6%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑↑	↑↑
Traffic Vol, veh/h	772	9	15	468	24	39
Future Vol, veh/h	772	9	15	468	24	39
Conflicting Peds, #/hr	0	3	1	0	3	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	225	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	7	11	6	6	0	5
Mvmt Flow	887	10	17	538	28	45

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	900	0	1201
Stage 1	-	-	-	-	895
Stage 2	-	-	-	-	306
Critical Hdwy	-	-	4.22	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.26	-	3.5
Pot Cap-1 Maneuver	-	-	726	-	180
Stage 1	-	-	-	-	364
Stage 2	-	-	-	-	726
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	724	-	175
Mov Cap-2 Maneuver	-	-	-	-	175
Stage 1	-	-	-	-	363
Stage 2	-	-	-	-	707

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	20.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	302	-	-	724	-
HCM Lane V/C Ratio	0.24	-	-	0.024	-
HCM Control Delay (s)	20.6	-	-	10.1	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-

Lanes, Volumes, Timings
 12: Snoqualmie Pkwy & Allman AveSE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	810	470	4	7	9
Future Volume (vph)	2	810	470	4	7	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		40	40		25	
Link Distance (ft)		679	1187		393	
Travel Time (s)		11.6	20.2		10.7	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	7%	5%	0%	0%	0%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	810	470	4	7	9
Future Vol, veh/h	2	810	470	4	7	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #-	0	0	0	0	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	7	5	0	0	0
Mvmt Flow	2	931	540	5	8	10

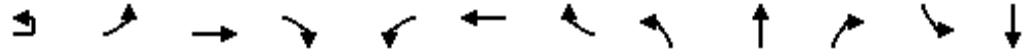
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	545	0	-	0	1013 273
Stage 1	-	-	-	-	543 -
Stage 2	-	-	-	-	470 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1034	-	-	-	239 731
Stage 1	-	-	-	-	552 -
Stage 2	-	-	-	-	601 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1034	-	-	-	239 731
Mov Cap-2 Maneuver	-	-	-	-	239 -
Stage 1	-	-	-	-	551 -
Stage 2	-	-	-	-	601 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1034	-	-	-	-	385
HCM Lane V/C Ratio	0.002	-	-	-	-	0.048
HCM Control Delay (s)	8.5	-	-	-	-	14.8
HCM Lane LOS	A	-	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	-	0.1

Lanes, Volumes, Timings
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↓		↑↑		↖	↑↑			↑↓			↗
Traffic Volume (vph)	0	0	798	26	24	455	0	29	0	17	0	0
Future Volume (vph)	0	0	798	26	24	455	0	29	0	17	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0		0	200		0	0		0	0	
Storage Lanes		1		0	1		0	0		0	0	
Taper Length (ft)		25			25			25			25	
Right Turn on Red				Yes			Yes			Yes		
Link Speed (mph)			40			40			25			25
Link Distance (ft)			1187			833			535			291
Travel Time (s)			20.2			14.2			14.6			7.9
Confl. Peds. (#/hr)		2		1	1		2	1				
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	0%	7%	4%	0%	6%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt		NA		pm+pt	NA		Perm	NA			
Protected Phases	5		2		1	6			8			4
Permitted Phases	2				6			8			4	
Detector Phase	5		2		1	6		8	8		4	4
Switch Phase												
Minimum Initial (s)	5.0		15.0		5.0	14.0		5.0	5.0		30.0	30.0
Minimum Split (s)	10.0		20.0		10.0	29.0		36.0	36.0		36.0	36.0
Total Split (s)	35.0		65.0		35.0	65.0		36.0	36.0		36.0	36.0
Total Split (%)	25.7%		47.8%		25.7%	47.8%		26.5%	26.5%		26.5%	26.5%
Yellow Time (s)	4.0		4.0		4.0	4.0		5.0	5.0		5.0	5.0
All-Red Time (s)	1.0		1.0		1.0	1.0		1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0		5.0		5.0	5.0		6.0	6.0		6.0	6.0
Lead/Lag	Lead		Lag		Lead	Lag						
Lead-Lag Optimize?	Yes		Yes		Yes	Yes						
Recall Mode	Min		Min		None	None		None	None		None	None

Intersection Summary

Area Type: Other

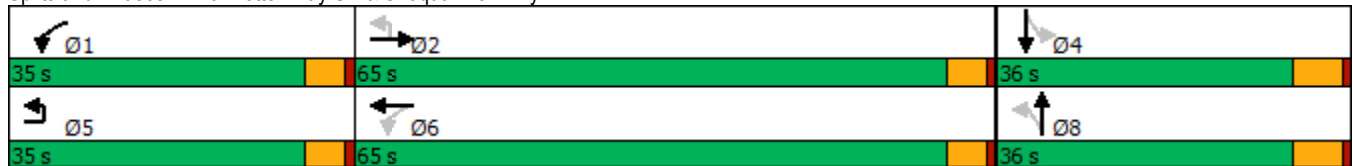
Cycle Length: 136

Actuated Cycle Length: 42.2

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Splits and Phases: 13: Better Way SE & Snoqualmie Pkwy

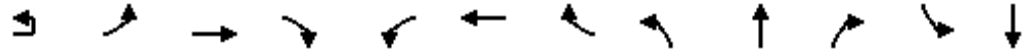




Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	0
Future Volume (vph)	0
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Right Turn on Red	Yes
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	1
Peak Hour Factor	0.85
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	
Intersection Summary	

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	⬇		⬆		⬆	⬆			⬆			⬆
Traffic Volume (veh/h)	0	0	798	26	24	455	0	29	0	17	0	0
Future Volume (veh/h)	0	0	798	26	24	455	0	29	0	17	0	0
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach			No			No			No			No
Adj Sat Flow, veh/h/ln		0	1796	1796	1900	1811	1811	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		0	939	31	28	535	0	34	0	20	0	0
Peak Hour Factor		0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %		0	7	7	0	6	6	0	0	0	0	0
Cap, veh/h		0	1553	51	314	2179	0	221	0	34	0	118
Arrive On Green		0.00	0.46	0.46	0.03	0.63	0.00	0.06	0.00	0.06	0.00	0.00
Sat Flow, veh/h		0	3461	111	1810	3532	0	940	0	553	0	1900
Grp Volume(v), veh/h		0	475	495	28	535	0	54	0	0	0	0
Grp Sat Flow(s),veh/h/ln		0	1706	1776	1810	1721	0	1493	0	0	0	1900
Q Serve(g_s), s		0.0	7.5	7.5	0.2	2.4	0.0	1.3	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s		0.0	7.5	7.5	0.2	2.4	0.0	1.3	0.0	0.0	0.0	0.0
Prop In Lane		0.00		0.06	1.00		0.00	0.63		0.37	0.00	
Lane Grp Cap(c), veh/h		0	786	818	314	2179	0	255	0	0	0	118
V/C Ratio(X)		0.00	0.60	0.60	0.09	0.25	0.00	0.21	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h		0	2839	2955	1758	5725	0	1404	0	0	0	1581
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)		0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh		0.0	7.3	7.3	7.6	2.9	0.0	16.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh		0.0	0.8	0.7	0.1	0.1	0.0	0.4	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.0	1.5	1.6	0.1	0.1	0.0	0.4	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		0.0	8.0	8.0	7.7	2.9	0.0	16.9	0.0	0.0	0.0	0.0
LnGrp LOS		A	A	A	A	A	A	B	A	A	A	A
Approach Vol, veh/h			970			563			54			0
Approach Delay, s/veh			8.0			3.2			16.9			0.0
Approach LOS			A			A			B			
Timer - Assigned Phs	1	2		4		6			8			
Phs Duration (G+Y+Rc), s	6.2	21.6		8.2		27.8			8.2			
Change Period (Y+Rc), s	5.0	5.0		6.0		5.0			6.0			
Max Green Setting (Gmax), s	30.0	60.0		30.0		60.0			30.0			
Max Q Clear Time (g_c+I1), s	2.2	9.5		0.0		4.4			3.3			
Green Ext Time (p_c), s	0.0	7.1		0.0		3.8			0.2			

Intersection Summary

HCM 6th Ctrl Delay	6.6
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
 User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	0
Future Volume (veh/h)	0
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.85
Percent Heavy Veh, %	0
Cap, veh/h	0
Arrive On Green	0.00
Sat Flow, veh/h	0
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	0
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	0.00
Lane Grp Cap(c), veh/h	0
V/C Ratio(X)	0.00
Avail Cap(c_a), veh/h	0
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Lanes, Volumes, Timings
 14: Trail Access Road & Snoqualmie Pkwy

03/06/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (vph)	693	1	1	428	1	1
Future Volume (vph)	693	1	1	428	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	646			700	301	
Travel Time (s)	11.0			11.9	8.2	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	7%	0%	0%	4%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑↑	↑↑
Traffic Vol, veh/h	693	1	1	428	1	1
Future Vol, veh/h	693	1	1	428	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	7	0	0	4	0	0
Mvmt Flow	888	1	1	549	1	1

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	889	0	1166
Stage 1	-	-	-	-	889
Stage 2	-	-	-	-	277
Critical Hdwy	-	-	4.1	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	771	-	190
Stage 1	-	-	-	-	367
Stage 2	-	-	-	-	751
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	771	-	190
Mov Cap-2 Maneuver	-	-	-	-	190
Stage 1	-	-	-	-	367
Stage 2	-	-	-	-	750

Approach	EB	WB	NB
HCM Control Delay, s	0	0	17.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	284	-	-	771	-
HCM Lane V/C Ratio	0.009	-	-	0.002	-
HCM Control Delay (s)	17.8	-	-	9.7	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
15: SR 202 & Snoqualmie Pkwy

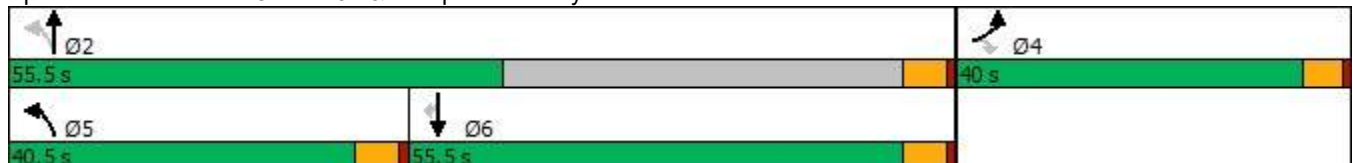
03/06/2020

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	373	330	204	209	260	243
Future Volume (vph)	373	330	204	209	260	243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	300			300
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Right Turn on Red		Yes				Yes
Link Speed (mph)	40			45	45	
Link Distance (ft)	700			1127	949	
Travel Time (s)	11.9			17.1	14.4	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	10%	3%	3%	14%	9%	6%
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	5.0	7.0	7.0	7.0
Minimum Split (s)	29.0	29.0	10.5	12.5	35.5	35.5
Total Split (s)	40.0	40.0	40.5	55.5	55.5	55.5
Total Split (%)	29.4%	29.4%	29.8%	40.8%	40.8%	40.8%
Yellow Time (s)	4.0	4.0	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	Min	Min	Min

Intersection Summary













Area Type: Other
 Cycle Length: 136
 Actuated Cycle Length: 92.1
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated

Splits and Phases: 15: SR 202 & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 15: SR 202 & Snoqualmie Pkwy

03/06/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	373	330	204	209	260	243
Future Volume (veh/h)	373	330	204	209	260	243
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00			1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1752	1856	1856	1693	1767	1811
Adj Flow Rate, veh/h	466	93	255	261	325	10
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	10	3	3	14	9	6
Cap, veh/h	546	515	456	819	426	370
Arrive On Green	0.33	0.33	0.14	0.48	0.24	0.24
Sat Flow, veh/h	1668	1572	1767	1693	1767	1535
Grp Volume(v), veh/h	466	93	255	261	325	10
Grp Sat Flow(s),veh/h/ln	1668	1572	1767	1693	1767	1535
Q Serve(g_s), s	14.5	2.3	5.4	5.2	9.5	0.3
Cycle Q Clear(g_c), s	14.5	2.3	5.4	5.2	9.5	0.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	546	515	456	819	426	370
V/C Ratio(X)	0.85	0.18	0.56	0.32	0.76	0.03
Avail Cap(c_a), veh/h	1052	991	1316	1524	1591	1382
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	13.4	12.5	8.8	19.6	16.1
Incr Delay (d2), s/veh	3.9	0.2	1.1	0.2	2.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.0	1.7	1.4	3.6	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.4	13.5	13.5	9.0	22.5	16.1
LnGrp LOS	C	B	B	A	C	B
Approach Vol, veh/h	559			516	335	
Approach Delay, s/veh	20.0			11.2	22.3	
Approach LOS	C			B	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		32.4		23.2	13.5	18.9
Change Period (Y+Rc), s		5.5		5.0	5.5	5.5
Max Green Setting (Gmax), s		50.0		35.0	35.0	50.0
Max Q Clear Time (g_c+I1), s		7.2		16.5	7.4	11.5
Green Ext Time (p_c), s		1.5		1.7	0.7	1.9
Intersection Summary						
HCM 6th Ctrl Delay			17.4			
HCM 6th LOS			B			

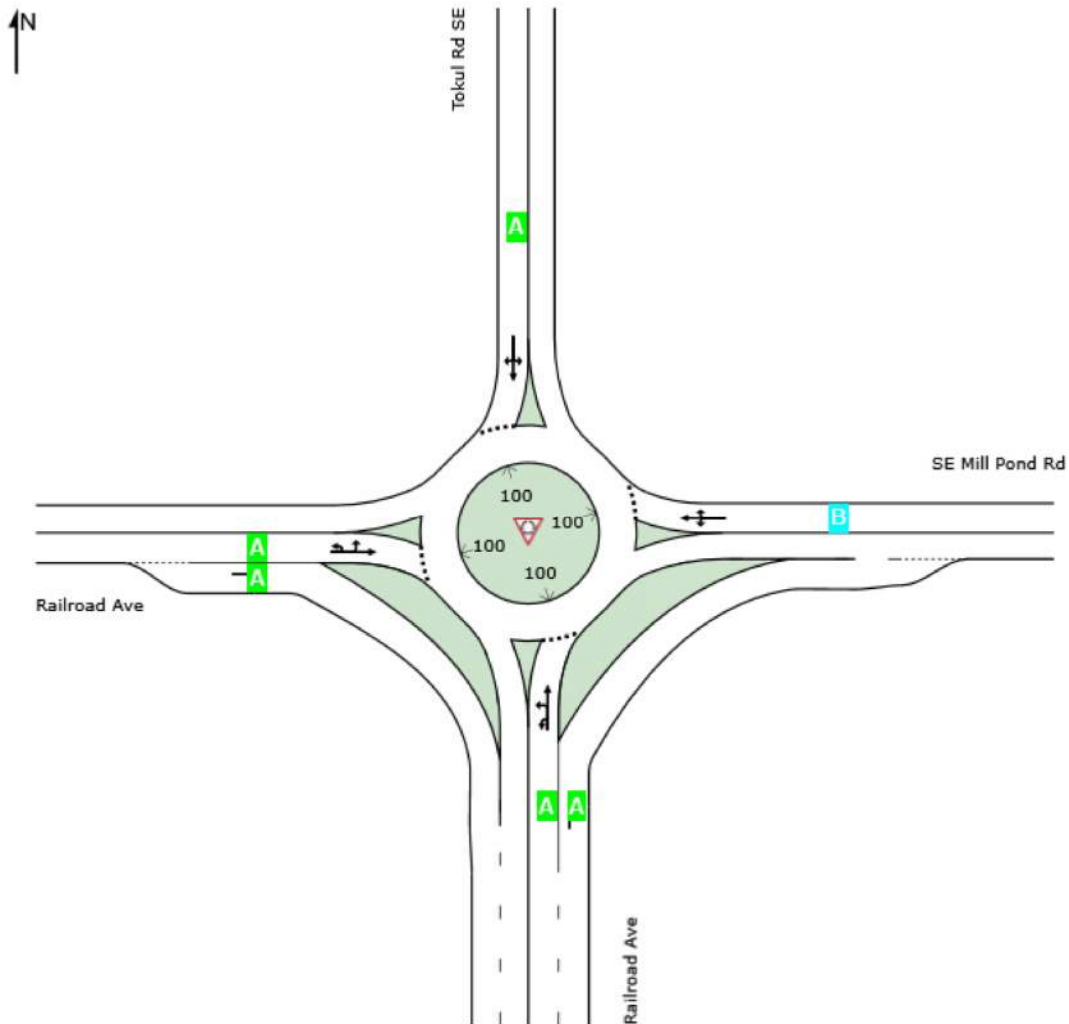
LANE LEVEL OF SERVICE

Lane Level of Service

Site: 16 [2023 With Planning Area 1 - AM Peak Hour]

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	B	A	A	A



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Signalised Intersections.
 Lane LOS values are based on average delay per lane.
 Intersection and Approach LOS values are based on average delay for all lanes.
 SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

LANE SUMMARY

Site: 16 [2023 With Planning Area 1 - AM Peak Hour]

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

Lane Use and Performance													
	Demand Flows			Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Queue Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
	Total veh/h	HV %	Cap. veh/h										
South: Railroad Ave													
Lane 1 ^d	448	9.7	1411	0.318	100	9.3	LOS A	1.9	50.2	Full	1600	0.0	0.0
Lane 2	221	16.0	1444	0.153	100	3.8	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	669	11.8		0.318		7.4	LOS A	1.9	50.2				
East: SE Mill Pond Rd													
Lane 1 ^d	233	19.2	835	0.279	100	10.5	LOS B	1.6	44.8	Full	1600	0.0	0.0
Approach	233	19.2		0.279		10.5	LOS B	1.6	44.8				
North: Tokul Rd SE													
Lane 1 ^d	31	0.0	881	0.035	100	8.1	LOS A	0.2	4.8	Full	1600	0.0	0.0
Approach	31	0.0		0.035		8.1	LOS A	0.2	4.8				
West: Railroad Ave													
Lane 1 ^d	161	8.0	1424	0.113	100	4.5	LOS A	0.6	15.8	Full	1600	0.0	0.0
Lane 2	434	6.1	1578	0.275	100	3.7	LOS A	0.0	0.0	Short	200	0.0	NA
Approach	595	6.6		0.275		3.9	LOS A	0.6	15.8				
Intersection	1528	10.7		0.318		6.5	LOS A	1.9	50.2				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

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Organisation: TENW | Processed: Tuesday, March 3, 2020 9:33:44 AM

Project: T:\Active Projects\Snoqualmie Mill - 5584\Planning - 5584\LOS\Snoqualmie Mill - Railroad Ave & Tokul Rd & SE Mill Pond Rd

Roundabout.sip8



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	91	4	18	28	3	22
Future Volume (vph)	91	4	18	28	3	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45		35			35
Link Distance (ft)	458		1466			541
Travel Time (s)	6.9		28.6			10.5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	11%	4%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	5.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	91	4	18	28	3	22
Future Vol, veh/h	91	4	18	28	3	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	0	11	4	0	5
Mvmt Flow	96	4	19	29	3	23

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	63	34	0	0	48	0
Stage 1	34	-	-	-	-	-
Stage 2	29	-	-	-	-	-
Critical Hdwy	6.42	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	943	1045	-	-	1572	-
Stage 1	988	-	-	-	-	-
Stage 2	994	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	941	1045	-	-	1572	-
Mov Cap-2 Maneuver	941	-	-	-	-	-
Stage 1	988	-	-	-	-	-
Stage 2	992	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	945	1572
HCM Lane V/C Ratio	-	-	0.106	0.002
HCM Control Delay (s)	-	-	9.3	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	43	35	90	24	13	90
Future Volume (vph)	43	35	90	24	13	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		40	
Link Distance (ft)		502	1466		916	
Travel Time (s)		9.8	28.6		15.6	
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Heavy Vehicles (%)	2%	6%	2%	4%	8%	2%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↖	↗		↖	↗
Traffic Vol, veh/h	43	35	90	24	13	90
Future Vol, veh/h	43	35	90	24	13	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	69	69	69	69	69	69
Heavy Vehicles, %	2	6	2	4	8	2
Mvmt Flow	62	51	130	35	19	130

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	165	0	-	0	323 148
Stage 1	-	-	-	-	148 -
Stage 2	-	-	-	-	175 -
Critical Hdwy	4.12	-	-	-	6.48 6.22
Critical Hdwy Stg 1	-	-	-	-	5.48 -
Critical Hdwy Stg 2	-	-	-	-	5.48 -
Follow-up Hdwy	2.218	-	-	-	3.572 3.318
Pot Cap-1 Maneuver	1413	-	-	-	659 899
Stage 1	-	-	-	-	865 -
Stage 2	-	-	-	-	841 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1413	-	-	-	629 899
Mov Cap-2 Maneuver	-	-	-	-	629 -
Stage 1	-	-	-	-	826 -
Stage 2	-	-	-	-	841 -

Approach	EB	WB	SB
HCM Control Delay, s	4.2	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1413	-	-	-	-	853
HCM Lane V/C Ratio	0.044	-	-	-	-	0.175
HCM Control Delay (s)	7.7	0	-	-	-	10.1
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	-	0.6

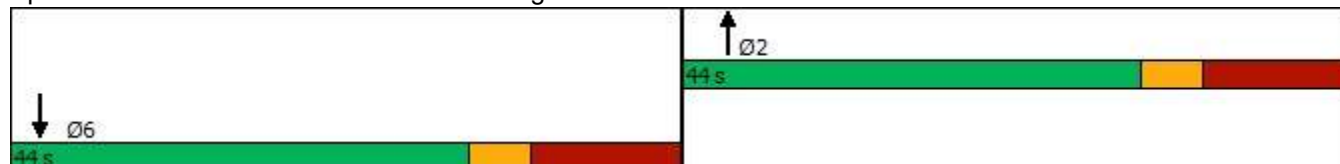


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	78	0	0	180
Future Volume (vph)	0	0	78	0	0	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			30
Link Distance (ft)	150		304			249
Travel Time (s)	3.4		6.9			5.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	4%	0%	0%	2%
Shared Lane Traffic (%)						
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Detector Phase			2			6
Switch Phase						
Minimum Initial (s)			5.0			5.0
Minimum Split (s)			19.0			19.0
Total Split (s)			44.0			44.0
Total Split (%)			50.0%			50.0%
Yellow Time (s)			4.0			4.0
All-Red Time (s)			10.0			10.0
Lost Time Adjust (s)			0.0			0.0
Total Lost Time (s)			14.0			14.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode			None			None

Intersection Summary

Area Type: Other
 Cycle Length: 88
 Actuated Cycle Length: 35.7
 Natural Cycle: 40
 Control Type: Actuated-Uncoordinated

Splits and Phases: 19: Meadowbrook Bridge



HCM Signalized Intersection Capacity Analysis
 19: Meadowbrook Bridge

03/02/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	78	0	0	180
Future Volume (vph)	0	0	78	0	0	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			14.0			14.0
Lane Util. Factor			1.00			1.00
Frt			1.00			1.00
Flt Protected			1.00			1.00
Satd. Flow (prot)			1827			1863
Flt Permitted			1.00			1.00
Satd. Flow (perm)			1827			1863
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	85	0	0	196
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	85	0	0	196
Heavy Vehicles (%)	0%	0%	4%	0%	0%	2%
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Actuated Green, G (s)			3.5			7.4
Effective Green, g (s)			3.5			7.4
Actuated g/C Ratio			0.09			0.19
Clearance Time (s)			14.0			14.0
Vehicle Extension (s)			2.0			2.0
Lane Grp Cap (vph)			164			354
v/s Ratio Prot			c0.05			c0.11
v/s Ratio Perm						
v/c Ratio			0.52			0.55
Uniform Delay, d1			16.9			14.3
Progression Factor			1.00			1.00
Incremental Delay, d2			1.2			1.1
Delay (s)			18.0			15.3
Level of Service			B			B
Approach Delay (s)	0.0		18.0			15.3
Approach LOS	A		B			B
Intersection Summary						
HCM 2000 Control Delay			16.1		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.54			
Actuated Cycle Length (s)			38.9		Sum of lost time (s)	28.0
Intersection Capacity Utilization			21.1%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Lanes, Volumes, Timings
 20: Meadowbrook Way SE & SE Park St

03/12/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	112	9	44	57	18	4	50	59	30	62	15
Future Volume (vph)	10	112	9	44	57	18	4	50	59	30	62	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		505			663			790			216	
Travel Time (s)		13.8			18.1			21.5			5.9	
Confl. Peds. (#/hr)	5		1			4	1			4		5
Peak Hour Factor	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Heavy Vehicles (%)	0%	7%	11%	9%	11%	0%	0%	2%	5%	3%	3%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	12.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	112	9	44	57	18	4	50	59	30	62	15
Future Vol, veh/h	10	112	9	44	57	18	4	50	59	30	62	15
Peak Hour Factor	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Heavy Vehicles, %	0	7	11	9	11	0	0	2	5	3	3	0
Mvmt Flow	20	229	18	90	116	37	8	102	120	61	127	31
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	12.6			12.5			11.5			12		
HCM LOS	B			B			B			B		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %		4%	8%	37%
Vol Thru, %		44%	85%	48%
Vol Right, %		52%	7%	15%
Sign Control		Stop	Stop	Stop
Traffic Vol by Lane		113	131	119
LT Vol		4	10	44
Through Vol		50	112	57
RT Vol		59	9	18
Lane Flow Rate		231	267	243
Geometry Grp		1	1	1
Degree of Util (X)		0.349	0.415	0.39
Departure Headway (Hd)		5.452	5.585	5.779
Convergence, Y/N		Yes	Yes	Yes
Cap		655	642	619
Service Time		3.524	3.651	3.847
HCM Lane V/C Ratio		0.353	0.416	0.393
HCM Control Delay		11.5	12.6	12.5
HCM Lane LOS		B	B	B
HCM 95th-tile Q		1.6	2	1.8

Lanes, Volumes, Timings
21: Meadowbrook Way SE & SR 202

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	271	52	9	271	30	41	52	20	23	53	14
Future Volume (vph)	19	271	52	9	271	30	41	52	20	23	53	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	150		0	0		0	200		0
Storage Lanes	1		0	1		1			0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			50			35				25
Link Distance (ft)		615			518			738				663
Travel Time (s)		14.0			7.1			14.4				18.1
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles (%)	5%	9%	2%	0%	9%	0%	7%	2%	0%	0%	4%	21%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2			6		6	8			4		
Detector Phase	2	2		6	6	6	8	8		4		4
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	5.0	5.0		5.0		5.0
Minimum Split (s)	33.3	33.3		30.3	30.3	30.3	32.8	32.8		32.8		32.8
Total Split (s)	71.3	71.3		71.3	71.3	71.3	40.8	40.8		40.8		40.8
Total Split (%)	63.6%	63.6%		63.6%	63.6%	63.6%	36.4%	36.4%		36.4%		36.4%
Yellow Time (s)	4.3	4.3		4.3	4.3	4.3	3.8	3.8		3.8		3.8
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0		2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	6.3	6.3		6.3		6.3		5.8		5.8		5.8
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Min	Min		Min	Min	Min	None	None		None		None

Intersection Summary

Area Type: Other

Cycle Length: 112.1

Actuated Cycle Length: 93.8

Natural Cycle: 70





















Control Type: Actuated-Uncoordinated

Splits and Phases: 21: Meadowbrook Way SE & SR 202



HCM 6th Signalized Intersection Summary
 21: Meadowbrook Way SE & SR 202

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	271	52	9	271	30	41	52	20	23	53	14
Future Volume (veh/h)	19	271	52	9	271	30	41	52	20	23	53	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1767	1767	1900	1900	1900	1870	1870	1870	1900	1841	1841
Adj Flow Rate, veh/h	26	366	70	12	366	41	55	70	27	31	72	19
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Percent Heavy Veh, %	5	9	9	0	0	0	2	2	2	0	4	4
Cap, veh/h	641	594	114	453	0	663	241	143	46	521	241	64
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	955	1441	276	968	0	1610	421	829	270	1319	1404	370
Grp Volume(v), veh/h	26	0	436	12	0	41	152	0	0	31	0	91
Grp Sat Flow(s),veh/h/ln	955	0	1717	968	0	1610	1520	0	0	1319	0	1774
Q Serve(g_s), s	0.5	0.0	5.8	0.3	0.0	0.4	1.5	0.0	0.0	0.0	0.0	1.3
Cycle Q Clear(g_c), s	0.5	0.0	5.8	6.1	0.0	0.4	2.8	0.0	0.0	0.4	0.0	1.3
Prop In Lane	1.00		0.16	1.00		1.00	0.36		0.18	1.00		0.21
Lane Grp Cap(c), veh/h	641	0	707	453	0	663	430	0	0	521	0	305
V/C Ratio(X)	0.04	0.00	0.62	0.03	0.00	0.06	0.35	0.00	0.00	0.06	0.00	0.30
Avail Cap(c_a), veh/h	2382	0	3838	2217	0	3599	2053	0	0	1882	0	2135
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.2	0.0	6.7	9.1	0.0	5.2	11.1	0.0	0.0	10.1	0.0	10.5
Incr Delay (d2), s/veh	0.0	0.0	1.1	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	1.3	0.0	0.0	0.0	0.7	0.0	0.0	0.1	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.2	0.0	7.8	9.2	0.0	5.2	11.6	0.0	0.0	10.2	0.0	11.1
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	B
Approach Vol, veh/h		462			53			152				122
Approach Delay, s/veh		7.7			6.1			11.6				10.8
Approach LOS		A			A			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		18.3		10.8		18.3		10.8				
Change Period (Y+Rc), s		6.3		* 5.8		6.3		* 5.8				
Max Green Setting (Gmax), s		65.0		* 35		65.0		* 35				
Max Q Clear Time (g_c+I1), s		7.8		3.3		8.1		4.8				
Green Ext Time (p_c), s		4.2		0.6		0.2		0.9				
Intersection Summary												
HCM 6th Ctrl Delay				8.8								
HCM 6th LOS				A								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 22: Meadowbrook Way SE & 384th Ave SE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	41	121	244	15	29	157
Future Volume (vph)	41	121	244	15	29	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		25	
Link Distance (ft)		158	180		181	
Travel Time (s)		3.1	3.5		4.9	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	2%	5%	2%	0%	0%	3%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	↕
Traffic Vol, veh/h	41	121	244	15	29	157
Future Vol, veh/h	41	121	244	15	29	157
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	5	2	0	0	3
Mvmt Flow	50	148	298	18	35	191

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	316	0	-	0	555 307
Stage 1	-	-	-	-	307 -
Stage 2	-	-	-	-	248 -
Critical Hdwy	4.12	-	-	-	6.4 6.23
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.218	-	-	-	3.5 3.327
Pot Cap-1 Maneuver	1244	-	-	-	496 731
Stage 1	-	-	-	-	751 -
Stage 2	-	-	-	-	798 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1244	-	-	-	474 731
Mov Cap-2 Maneuver	-	-	-	-	474 -
Stage 1	-	-	-	-	718 -
Stage 2	-	-	-	-	798 -

Approach	EB	WB	SB
HCM Control Delay, s	2	0	13
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1244	-	-	-	-	674
HCM Lane V/C Ratio	0.04	-	-	-	-	0.337
HCM Control Delay (s)	8	0	-	-	-	13
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	-	1.5

Lanes, Volumes, Timings
 23: SE North Bend Way & Meadowbrook Way SE

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	35	366	193	32	130	57
Future Volume (vph)	35	366	193	32	130	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	450	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Link Speed (mph)	35		50			50
Link Distance (ft)	158		253			593
Travel Time (s)	3.1		3.5			8.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	2%	4%	6%	4%	12%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↘	↑	↘	↘	↑
Traffic Vol, veh/h	35	366	193	32	130	57
Future Vol, veh/h	35	366	193	32	130	57
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	Free	-	None
Storage Length	0	0	-	0	450	-
Veh in Median Storage, #1	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	2	4	6	4	12
Mvmt Flow	38	398	210	35	141	62

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	554	-	0	-	210
Stage 1	210	-	-	-	-
Stage 2	344	-	-	-	-
Critical Hdwy	6.46	-	-	-	4.14
Critical Hdwy Stg 1	5.46	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-
Follow-up Hdwy	3.554	-	-	-	2.236
Pot Cap-1 Maneuver	487	0	-	0	1349
Stage 1	816	0	-	0	-
Stage 2	709	0	-	0	-
Platoon blocked, %		-	-	-	-
Mov Cap-1 Maneuver	436	-	-	-	1349
Mov Cap-2 Maneuver	517	-	-	-	-
Stage 1	816	-	-	-	-
Stage 2	635	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.5	0	5.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn	WBLn2	SBL	SBT
Capacity (veh/h)	-	517	-	1349
HCM Lane V/C Ratio	-	0.074	-	0.105
HCM Control Delay (s)	-	12.5	0	8
HCM Lane LOS	-	B	A	A
HCM 95th %tile Q(veh)	-	0.2	-	0.3

Lanes, Volumes, Timings
 24: SE Mill Pond Rd & NW Haul Road

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	22	176	12	95	231
Future Volume (vph)	3	22	176	12	95	231
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	804		935			756
Travel Time (s)	21.9		18.2			14.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	18%	19%	0%	18%	10%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	3	22	176	12	95	231
Future Vol, veh/h	3	22	176	12	95	231
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	18	19	0	18	10
Mvmt Flow	3	24	191	13	103	251

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	655	198	0	0	204	0
Stage 1	198	-	-	-	-	-
Stage 2	457	-	-	-	-	-
Critical Hdwy	6.4	6.38	-	-	4.28	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.462	-	-	2.362	-
Pot Cap-1 Maneuver	434	804	-	-	1278	-
Stage 1	840	-	-	-	-	-
Stage 2	642	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	393	804	-	-	1278	-
Mov Cap-2 Maneuver	393	-	-	-	-	-
Stage 1	840	-	-	-	-	-
Stage 2	582	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	2.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	714	1278
HCM Lane V/C Ratio	-	-	0.038	0.081
HCM Control Delay (s)	-	-	10.2	8.1
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0.3



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	6	25	163	8	41	193
Future Volume (vph)	6	25	163	8	41	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	796		476			935
Travel Time (s)	21.7		9.3			18.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	21%	0%	0%	12%
Shared Lane Traffic (%)						
Sign Control	Yield		Yield			Yield

Intersection Summary

Area Type: Other
 Control Type: Roundabout

Lanes, Volumes, Timings
 26: SE Mill Pond Rd & North Driveway

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	42	129	9	44	155
Future Volume (vph)	10	42	129	9	44	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	769		376			476
Travel Time (s)	21.0		7.3			9.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	49%	0%	0%	23%
Bus Blockages (#/hr)	0	0	26	0	0	15
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	10	42	129	9	44	155
Future Vol, veh/h	10	42	129	9	44	155
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	49	0	0	23
Mvmt Flow	11	46	140	10	48	168

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	409	145	0	0	150	0
Stage 1	145	-	-	-	-	-
Stage 2	264	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	602	908	-	-	1444	-
Stage 1	887	-	-	-	-	-
Stage 2	785	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	580	908	-	-	1444	-
Mov Cap-2 Maneuver	580	-	-	-	-	-
Stage 1	887	-	-	-	-	-
Stage 2	756	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	1.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	819	1444
HCM Lane V/C Ratio	-	-	0.069	0.033
HCM Control Delay (s)	-	-	9.7	7.6
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1

Lanes, Volumes, Timings
 27: SE Mill Pond Rd & South Driveway

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	9	41	97	9	44	121
Future Volume (vph)	9	41	97	9	44	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	721		317			376
Travel Time (s)	19.7		6.2			7.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	35%	0%	0%	20%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	9	41	97	9	44	121
Future Vol, veh/h	9	41	97	9	44	121
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	35	0	0	20
Mvmt Flow	10	45	105	10	48	132

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	338	110	0	0	115	0
Stage 1	110	-	-	-	-	-
Stage 2	228	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	662	949	-	-	1487	-
Stage 1	920	-	-	-	-	-
Stage 2	815	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	639	949	-	-	1487	-
Mov Cap-2 Maneuver	639	-	-	-	-	-
Stage 1	920	-	-	-	-	-
Stage 2	786	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	873	1487
HCM Lane V/C Ratio	-	-	0.062	0.032
HCM Control Delay (s)	-	-	9.4	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1

Lanes, Volumes, Timings
 28: SE Mill Pond Rd & SE Access Road

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	106	0	0	130
Future Volume (vph)	0	0	106	0	0	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	701		575			216
Travel Time (s)	19.1		11.2			4.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	32%	0%	18%	0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	0	0	106	0	0	130
Future Vol, veh/h	0	0	106	0	0	130
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	32	0	18	0
Mvmt Flow	0	0	115	0	0	141

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	256	115	0	0	115	0
Stage 1	115	-	-	-	-	-
Stage 2	141	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.28	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.362	-
Pot Cap-1 Maneuver	737	943	-	-	1380	-
Stage 1	915	-	-	-	-	-
Stage 2	891	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	737	943	-	-	1380	-
Mov Cap-2 Maneuver	737	-	-	-	-	-
Stage 1	915	-	-	-	-	-
Stage 2	891	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1380
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Lanes, Volumes, Timings
1: SR-18 & I-90 EB Ramps

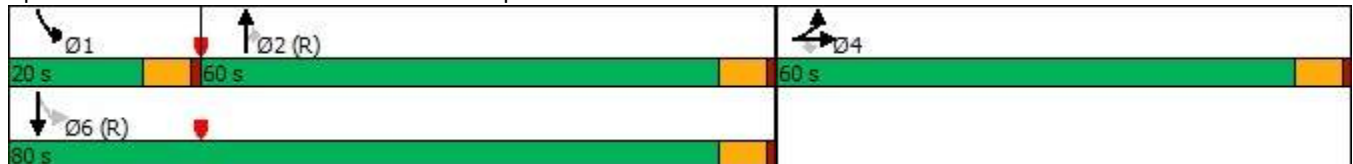
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	789	2	730	0	0	0	0	201	421	118	775	0
Future Volume (vph)	789	2	730	0	0	0	0	201	421	118	775	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650		0	0		0	0		300	200		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			45			30	
Link Distance (ft)		833			764			1837			778	
Travel Time (s)		16.2			14.9			27.8			17.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	0%	4%	0%	0%	0%	0%	3%	27%	3%	13%	0%
Shared Lane Traffic (%)	50%											
Turn Type	Split	NA	Perm					NA	Perm	pm+pt	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			4						2	6		
Detector Phase	4	4	4					2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					10.0	10.0	3.0	10.0	
Minimum Split (s)	29.0	29.0	29.0					16.0	16.0	9.0	23.0	
Total Split (s)	60.0	60.0	60.0					60.0	60.0	20.0	80.0	
Total Split (%)	42.9%	42.9%	42.9%					42.9%	42.9%	14.3%	57.1%	
Yellow Time (s)	5.0	5.0	5.0					5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0	1.0					1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0					6.0	6.0	6.0	6.0	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None					C-Min	C-Min	None	C-Min	

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated





















Splits and Phases: 1: SR-18 & I-90 EB Ramps



HCM 6th Signalized Intersection Summary

1: SR-18 & I-90 EB Ramps

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	789	2	730	0	0	0	0	201	421	118	775	0
Future Volume (veh/h)	789	2	730	0	0	0	0	201	421	118	775	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1841				0	1856	1500	1856	1707	0
Adj Flow Rate, veh/h	814	0	0				0	207	0	122	799	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	0	4				0	3	27	3	13	0
Cap, veh/h	1119	0					0	947		657	1947	0
Arrive On Green	0.31	0.00	0.00				0.00	0.51	0.00	0.05	0.60	0.00
Sat Flow, veh/h	3563	0	1560				0	1856	1271	1767	3329	0
Grp Volume(v), veh/h	814	0	0				0	207	0	122	799	0
Grp Sat Flow(s),veh/h/ln	1781	0	1560				0	1856	1271	1767	1622	0
Q Serve(g_s), s	28.4	0.0	0.0				0.0	8.6	0.0	4.4	18.3	0.0
Cycle Q Clear(g_c), s	28.4	0.0	0.0				0.0	8.6	0.0	4.4	18.3	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1119	0					0	947		657	1947	0
V/C Ratio(X)	0.73	0.00					0.00	0.22		0.19	0.41	0.00
Avail Cap(c_a), veh/h	1374	0					0	947		751	1947	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				0.00	1.00	0.00	0.61	0.61	0.00
Uniform Delay (d), s/veh	42.7	0.0	0.0				0.0	18.9	0.0	14.3	14.9	0.0
Incr Delay (d2), s/veh	4.1	0.0	0.0				0.0	0.5	0.0	0.1	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.1	0.0	0.0				0.0	3.8	0.0	1.8	6.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.8	0.0	0.0				0.0	19.4	0.0	14.3	15.2	0.0
LnGrp LOS	D	A					A	B		B	B	A
Approach Vol, veh/h		814	A					207	A		921	
Approach Delay, s/veh		46.8						19.4			15.1	
Approach LOS		D						B			B	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	12.5	77.5		50.0				90.0				
Change Period (Y+Rc), s	6.0	6.0		6.0				6.0				
Max Green Setting (Gmax), s	14.0	54.0		54.0				74.0				
Max Q Clear Time (g_c+I1), s	6.4	10.6		30.4				20.3				
Green Ext Time (p_c), s	0.2	1.4		13.6				8.6				
Intersection Summary												
HCM 6th Ctrl Delay			28.9									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

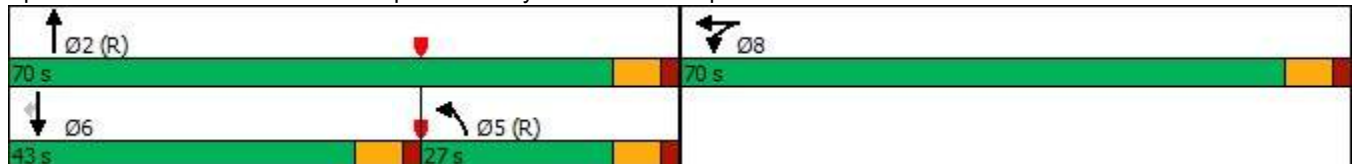
03/06/2020

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group												
Lane Configurations				↖	↕		↖	↕			↕	↖
Traffic Volume (vph)	0	0	0	435	2	76	100	1022	0	0	370	508
Future Volume (vph)	0	0	0	435	2	76	100	1022	0	0	370	508
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	0		0
Storage Lanes	0		0	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30				30
Link Distance (ft)		893			705			778				878
Travel Time (s)		17.4			13.7			17.7				20.0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	20%	100%	3%	0%	2%	0%	0%	5%	2%
Shared Lane Traffic (%)				40%								
Turn Type				Split	NA		Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases												6
Detector Phase				8	8		5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	7.0			7.0	7.0
Minimum Split (s)				12.0	12.0		12.0	14.0			24.0	24.0
Total Split (s)				70.0	70.0		27.0	70.0			43.0	43.0
Total Split (%)				50.0%	50.0%		19.3%	50.0%			30.7%	30.7%
Yellow Time (s)				5.0	5.0		5.0	5.0			5.0	5.0
All-Red Time (s)				2.0	2.0		2.0	2.0			2.0	2.0
Lost Time Adjust (s)				0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)				7.0	7.0		7.0	7.0			7.0	7.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None		C-Max	C-Min			None	None

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 53 (38%), Referenced to phase 2:NBT and 5:NBL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps





















HCM 6th Signalized Intersection Summary
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	435	2	76	100	1022	0	0	370	508
Future Volume (veh/h)	0	0	0	435	2	76	100	1022	0	0	370	508
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1604	418	1604	1900	1870	0	0	1826	1870
Adj Flow Rate, veh/h				522	0	0	103	1054	0	0	381	0
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				20	100	20	0	2	0	0	5	2
Cap, veh/h				681	93	0	181	2406	0	0	962	
Arrive On Green				0.22	0.00	0.00	0.07	0.45	0.00	0.00	0.53	0.00
Sat Flow, veh/h				3054	418	0	1810	3647	0	0	1826	1585
Grp Volume(v), veh/h				522	0	0	103	1054	0	0	381	0
Grp Sat Flow(s),veh/h/ln				1527	418	0	1810	1777	0	0	1826	1585
Q Serve(g_s), s				22.4	0.0	0.0	7.7	28.3	0.0	0.0	17.5	0.0
Cycle Q Clear(g_c), s				22.4	0.0	0.0	7.7	28.3	0.0	0.0	17.5	0.0
Prop In Lane				1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				681	93	0	181	2406	0	0	962	
V/C Ratio(X)				0.77	0.00	0.00	0.57	0.44	0.00	0.00	0.40	
Avail Cap(c_a), veh/h				1375	188	0	259	2406	0	0	962	
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	0.00	0.88	0.88	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				51.0	0.0	0.0	62.4	20.1	0.0	0.0	19.8	0.0
Incr Delay (d2), s/veh				6.4	0.0	0.0	3.0	0.5	0.0	0.0	0.4	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				9.1	0.0	0.0	3.8	12.9	0.0	0.0	7.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				57.4	0.0	0.0	65.4	20.6	0.0	0.0	20.2	0.0
LnGrp LOS				E	A	A	E	C	A	A	C	
Approach Vol, veh/h					522			1157			381	A
Approach Delay, s/veh					57.4			24.6			20.2	
Approach LOS					E			C			C	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		101.8			21.0	80.8		38.2				
Change Period (Y+Rc), s		7.0			7.0	7.0		7.0				
Max Green Setting (Gmax), s		63.0			20.0	36.0		63.0				
Max Q Clear Time (g_c+I1), s		30.3			9.7	19.5		24.4				
Green Ext Time (p_c), s		13.0			0.2	2.9		6.8				
Intersection Summary												
HCM 6th Ctrl Delay				32.1								
HCM 6th LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 3: Snoqualmie Pkwy & SE 99th St

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	0	38	1	0	2	7	1146	0	0	813	10
Future Volume (vph)	13	0	38	1	0	2	7	1146	0	0	813	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	0		0	0		0	125		0	25		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		989			884			878			457	
Travel Time (s)		27.0			24.1			20.0			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	3%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	13	0	38	1	0	2	7	1146	0	0	813	10
Future Vol, veh/h	13	0	38	1	0	2	7	1146	0	0	813	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	25	-	-
Veh in Median Storage, #-	0	0	-	0	0	-	0	-	0	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	3	0
Mvmt Flow	14	0	40	1	0	2	7	1206	0	0	856	11

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1479	2082	434	1648	2087	603	867	0	0	1206	0	0
Stage 1	862	862	-	1220	1220	-	-	-	-	-	-	-
Stage 2	617	1220	-	428	867	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	89	54	576	67	53	447	785	-	-	586	-	-
Stage 1	320	375	-	194	255	-	-	-	-	-	-	-
Stage 2	449	255	-	581	373	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	88	54	576	62	53	447	785	-	-	586	-	-
Mov Cap-2 Maneuver	88	54	-	62	53	-	-	-	-	-	-	-
Stage 1	317	375	-	192	253	-	-	-	-	-	-	-
Stage 2	443	253	-	541	373	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	24.4		30.2		0.1		0	
HCM LOS	C		D					

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	785	-	-	239	146	586	-
HCM Lane V/C Ratio	0.009	-	-	0.225	0.022	-	-
HCM Control Delay (s)	9.6	-	-	24.4	30.2	0	-
HCM Lane LOS	A	-	-	C	D	A	-
HCM 95th %tile Q(veh)	0	-	-	0.8	0.1	0	-

Lanes, Volumes, Timings
 4: Snoqualmie Pkwy & SE 96th St

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	25	61	1012	45	39	781
Future Volume (vph)	25	61	1012	45	39	781
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Link Speed (mph)	30		40			40
Link Distance (ft)	346		677			718
Travel Time (s)	7.9		11.5			12.2
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	4%	0%	2%	0%	0%	4%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↑↑		↔	↑↑
Traffic Vol, veh/h	25	61	1012	45	39	781
Future Vol, veh/h	25	61	1012	45	39	781
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #1	-	0	-	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	4	0	2	0	0	4
Mvmt Flow	28	69	1150	51	44	888

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1708	601	0	0	1201	0
Stage 1	1176	-	-	-	-	-
Stage 2	532	-	-	-	-	-
Critical Hdwy	6.88	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.88	-	-	-	-	-
Critical Hdwy Stg 2	5.88	-	-	-	-	-
Follow-up Hdwy	3.54	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	80	448	-	-	588	-
Stage 1	251	-	-	-	-	-
Stage 2	548	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	74	448	-	-	588	-
Mov Cap-2 Maneuver	182	-	-	-	-	-
Stage 1	251	-	-	-	-	-
Stage 2	507	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.5	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	182	448	588	-
HCM Lane V/C Ratio	-	-	0.156	0.155	0.075	-
HCM Control Delay (s)	-	-	28.4	14.5	11.6	-
HCM Lane LOS	-	-	D	B	B	-
HCM 95th %tile Q(veh)	-	-	0.5	0.5	0.2	-

Lanes, Volumes, Timings
5: Snoqualmie Pkwy & SE Jacobia St

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	8	63	30	1	49	108	938	84	70	711	22
Future Volume (vph)	23	8	63	30	1	49	108	938	84	70	711	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	250		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		653			474			718			617	
Travel Time (s)		17.8			12.9			12.2			10.5	
Confl. Peds. (#/hr)	2		2	2		2	1					1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	0%	2%	0%	1%	3%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	15.0		5.0	16.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		10.5	22.5		10.5	22.5	
Total Split (s)	25.0	25.0		40.0	40.0		15.5	65.5		15.5	65.5	
Total Split (%)	20.7%	20.7%		33.1%	33.1%		12.8%	54.1%		12.8%	54.1%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.5	4.5		4.5	4.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.5	5.5		5.5	5.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other

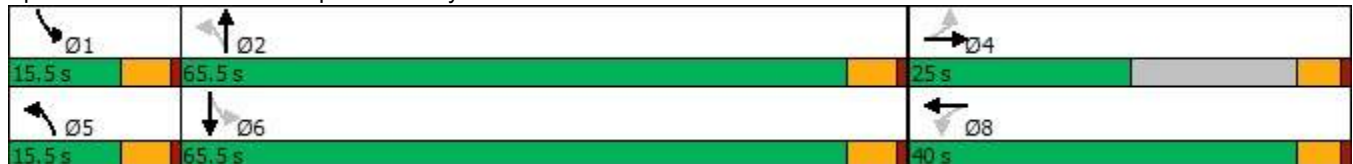
Cycle Length: 121

Actuated Cycle Length: 61.6

Natural Cycle: 75























Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Snoqualmie Pkwy & SE Jacobia St



HCM 6th Signalized Intersection Summary
5: Snoqualmie Pkwy & SE Jacobia St

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	8	63	30	1	49	108	938	84	70	711	22
Future Volume (veh/h)	23	8	63	30	1	49	108	938	84	70	711	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1870	1870	1885	1856	1856
Adj Flow Rate, veh/h	24	9	67	32	1	52	115	998	89	74	756	23
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	2	2	1	3	3
Cap, veh/h	259	23	169	239	4	185	530	1676	149	408	1721	52
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.08	0.51	0.51	0.06	0.49	0.49
Sat Flow, veh/h	1367	193	1439	1339	30	1576	1810	3300	294	1795	3493	106
Grp Volume(v), veh/h	24	0	76	32	0	53	115	537	550	74	381	398
Grp Sat Flow(s),veh/h/ln	1367	0	1632	1339	0	1607	1810	1777	1817	1795	1763	1836
Q Serve(g_s), s	0.8	0.0	2.2	1.2	0.0	1.5	1.5	11.0	11.0	1.0	7.2	7.2
Cycle Q Clear(g_c), s	2.4	0.0	2.2	3.4	0.0	1.5	1.5	11.0	11.0	1.0	7.2	7.2
Prop In Lane	1.00		0.88	1.00		0.98	1.00		0.16	1.00		0.06
Lane Grp Cap(c), veh/h	259	0	191	239	0	188	530	902	923	408	869	905
V/C Ratio(X)	0.09	0.00	0.40	0.13	0.00	0.28	0.22	0.60	0.60	0.18	0.44	0.44
Avail Cap(c_a), veh/h	631	0	635	995	0	1095	741	2075	2122	644	2059	2144
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.8	0.0	21.0	22.6	0.0	20.7	5.6	8.9	8.9	6.5	8.4	8.4
Incr Delay (d2), s/veh	0.2	0.0	1.3	0.3	0.0	0.8	0.1	0.9	0.9	0.1	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.9	0.4	0.0	0.6	0.3	3.1	3.1	0.2	2.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.9	0.0	22.3	22.8	0.0	21.5	5.7	9.8	9.8	6.5	8.9	8.9
LnGrp LOS	C	A	C	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		100			85			1202			853	
Approach Delay, s/veh		22.2			22.0			9.4			8.7	
Approach LOS		C			C			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	31.6		11.0	9.5	30.8		11.0				
Change Period (Y+Rc), s	5.5	5.5		5.0	5.5	5.5		5.0				
Max Green Setting (Gmax), s	10.0	60.0		20.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	3.0	13.0		4.4	3.5	9.2		5.4				
Green Ext Time (p_c), s	0.0	13.1		0.4	0.1	8.1		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				10.2								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
6: Snoqualmie Pkwy & SE Swenson Dr

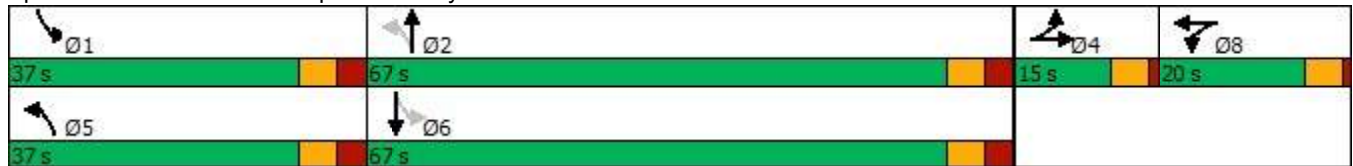
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	15	26	19	10	60	33	843	39	88	806	82
Future Volume (vph)	85	15	26	19	10	60	33	843	39	88	806	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	275		0	300		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			No
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		456			320			2254			367	
Travel Time (s)		10.4			7.3			38.4			6.3	
Confl. Peds. (#/hr)			2			9	2					2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%	0%	2%	0%	0%	3%	2%
Shared Lane Traffic (%)												
Turn Type	Split	NA		Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		10.0	10.0		5.0	12.0		5.0	12.0	
Minimum Split (s)	38.0	38.0		38.0	38.0		12.0	28.0		12.0	28.0	
Total Split (s)	15.0	15.0		20.0	20.0		37.0	67.0		37.0	67.0	
Total Split (%)	10.8%	10.8%		14.4%	14.4%		26.6%	48.2%		26.6%	48.2%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		7.0	7.0		7.0	7.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary























Area Type: Other
 Cycle Length: 139
 Actuated Cycle Length: 80.3
 Natural Cycle: 130
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Snoqualmie Pkwy & SE Swenson Dr



HCM 6th Signalized Intersection Summary
6: Snoqualmie Pkwy & SE Swenson Dr

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	15	26	19	10	60	33	843	39	88	806	82
Future Volume (veh/h)	85	15	26	19	10	60	33	843	39	88	806	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1900	1900	1900	1900	1900	1870	1870	1900	1856	1856
Adj Flow Rate, veh/h	91	16	28	20	11	65	35	906	42	95	867	88
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	0	0	0	0	0	0	2	2	0	3	3
Cap, veh/h	162	56	99	257	33	197	236	1029	48	270	1057	107
Arrive On Green	0.09	0.09	0.09	0.14	0.14	0.14	0.04	0.30	0.30	0.07	0.33	0.33
Sat Flow, veh/h	1781	617	1080	1810	235	1388	1810	3457	160	1810	3230	328
Grp Volume(v), veh/h	91	0	44	20	0	76	35	466	482	95	473	482
Grp Sat Flow(s),veh/h/ln	1781	0	1698	1810	0	1623	1810	1777	1841	1810	1763	1795
Q Serve(g_s), s	2.9	0.0	1.4	0.6	0.0	2.5	0.8	14.9	14.9	2.1	14.7	14.7
Cycle Q Clear(g_c), s	2.9	0.0	1.4	0.6	0.0	2.5	0.8	14.9	14.9	2.1	14.7	14.7
Prop In Lane	1.00		0.64	1.00		0.86	1.00		0.09	1.00		0.18
Lane Grp Cap(c), veh/h	162	0	155	257	0	231	236	529	548	270	577	588
V/C Ratio(X)	0.56	0.00	0.28	0.08	0.00	0.33	0.15	0.88	0.88	0.35	0.82	0.82
Avail Cap(c_a), veh/h	299	0	285	455	0	408	1079	1788	1852	1060	1774	1807
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.0	0.0	25.3	22.2	0.0	23.0	15.0	19.9	19.9	14.9	18.4	18.4
Incr Delay (d2), s/veh	1.1	0.0	0.4	0.0	0.0	0.3	0.1	1.9	1.9	0.3	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.6	0.2	0.0	0.9	0.3	5.5	5.7	0.7	5.2	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.1	0.0	25.6	22.2	0.0	23.3	15.1	21.9	21.8	15.2	19.6	19.5
LnGrp LOS	C	A	C	C	A	C	B	C	C	B	B	B
Approach Vol, veh/h		135			96			983			1050	
Approach Delay, s/veh		26.6			23.1			21.6			19.2	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	24.8		10.4	9.2	26.5		13.5				
Change Period (Y+Rc), s	7.0	7.0		5.0	7.0	7.0		5.0				
Max Green Setting (Gmax), s	30.0	60.0		10.0	30.0	60.0		15.0				
Max Q Clear Time (g_c+I1), s	4.1	16.9		4.9	2.8	16.7		4.5				
Green Ext Time (p_c), s	0.0	0.8		0.0	0.0	0.8		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				20.8								
HCM 6th LOS				C								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	302	624	127	55	576	70	242	55	89	84	22	131
Future Volume (vph)	302	624	127	55	576	70	242	55	89	84	22	131
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	175		0	0		150	0		100
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1285			1065			585			583	
Travel Time (s)		21.9			18.2			16.0			15.9	
Confl. Peds. (#/hr)	5					5						3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	1%	1%	2%	0%	4%	0%	2%	0%	0%	5%	0%	2%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4			8					2			6
Detector Phase	7	4		3	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	35.3		9.5	30.3		36.5	36.5	36.5	36.5	36.5	36.5
Total Split (s)	34.5	55.3		14.5	55.3		44.5	44.5	44.5	44.5	44.5	44.5
Total Split (%)	19.3%	30.9%		8.1%	30.9%		24.9%	24.9%	24.9%	24.9%	24.9%	24.9%
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.3		4.5	5.3			4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None	None	None	None	None

Intersection Summary

Area Type: Other

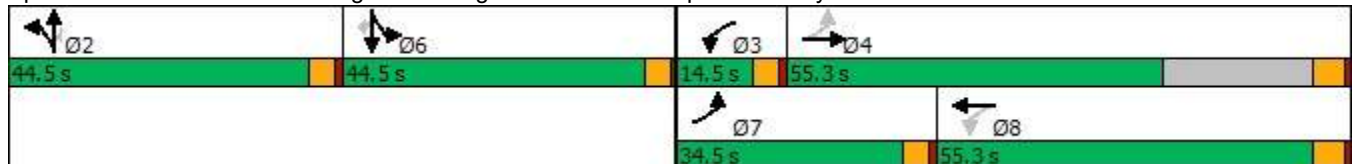
Cycle Length: 178.8

Actuated Cycle Length: 117.7

Natural Cycle: 120

Control Type: Actuated-Uncoordinated

Splits and Phases: 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	302	624	127	55	576	70	242	55	89	84	22	131
Future Volume (veh/h)	302	624	127	55	576	70	242	55	89	84	22	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1841	1841	1900	1900	1900	1900	1900	1870
Adj Flow Rate, veh/h	311	643	131	57	594	72	249	57	32	87	23	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	0	4	4	0	0	0	0	0	2
Cap, veh/h	459	1150	234	337	891	108	318	73	345	137	36	150
Arrive On Green	0.15	0.39	0.39	0.05	0.28	0.28	0.21	0.21	0.21	0.09	0.09	0.00
Sat Flow, veh/h	1795	2961	602	1810	3138	379	1486	340	1610	1446	382	1585
Grp Volume(v), veh/h	311	389	385	57	330	336	306	0	32	110	0	0
Grp Sat Flow(s),veh/h/ln	1795	1791	1772	1810	1749	1768	1826	0	1610	1828	0	1585
Q Serve(g_s), s	8.3	12.5	12.5	1.6	12.3	12.3	11.6	0.0	1.2	4.3	0.0	0.0
Cycle Q Clear(g_c), s	8.3	12.5	12.5	1.6	12.3	12.3	11.6	0.0	1.2	4.3	0.0	0.0
Prop In Lane	1.00		0.34	1.00		0.21	0.81		1.00	0.79		1.00
Lane Grp Cap(c), veh/h	459	695	688	337	497	502	391	0	345	173	0	150
V/C Ratio(X)	0.68	0.56	0.56	0.17	0.67	0.67	0.78	0.00	0.09	0.63	0.00	0.00
Avail Cap(c_a), veh/h	921	1219	1206	498	1190	1203	994	0	876	995	0	863
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.2	17.6	17.6	17.2	23.2	23.2	27.3	0.0	23.1	32.0	0.0	0.0
Incr Delay (d2), s/veh	1.8	1.0	1.0	0.2	2.2	2.2	3.4	0.0	0.1	3.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	4.7	4.7	0.6	4.9	5.0	5.3	0.0	0.4	2.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.9	18.6	18.6	17.4	25.4	25.4	30.7	0.0	23.3	35.8	0.0	0.0
LnGrp LOS	B	B	B	B	C	C	C	A	C	D	A	A
Approach Vol, veh/h		1085			723			338			110	
Approach Delay, s/veh		18.1			24.8			30.0			35.8	
Approach LOS		B			C			C			D	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		20.2	7.9	33.8		11.5	15.6	26.2				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		40.0	10.0	50.0		40.0	30.0	50.0				
Max Q Clear Time (g_c+I1), s		13.6	3.6	14.5		6.3	10.3	14.3				
Green Ext Time (p_c), s		2.1	0.0	7.7		0.6	0.8	6.3				
Intersection Summary												
HCM 6th Ctrl Delay				22.9								
HCM 6th LOS				C								

Lanes, Volumes, Timings
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

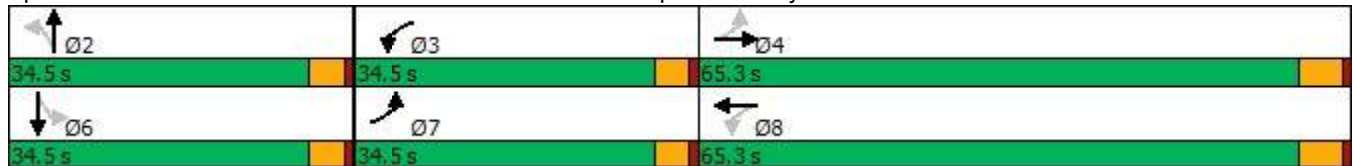
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	582	41	111	494	78	93	40	116	98	47	123
Future Volume (vph)	216	582	41	111	494	78	93	40	116	98	47	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	275		0	275		0	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1065			1064			511			626	
Travel Time (s)		18.2			18.1			13.9			17.1	
Confl. Peds. (#/hr)	1					1	7		3	3		7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	2%	0%	4%	0%	0%	0%	1%	0%	0%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	34.3		9.5	34.3		36.5	36.5		36.5	36.5	
Total Split (s)	34.5	65.3		34.5	65.3		34.5	34.5		34.5	34.5	
Total Split (%)	25.7%	48.6%		25.7%	48.6%		25.7%	25.7%		25.7%	25.7%	
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	5.3		4.5	5.3		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	

Intersection Summary

























Area Type: Other
 Cycle Length: 134.3
 Actuated Cycle Length: 59.4
 Natural Cycle: 85
 Control Type: Actuated-Uncoordinated

Splits and Phases: 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	216	582	41	111	494	78	93	40	116	98	47	123
Future Volume (veh/h)	216	582	41	111	494	78	93	40	116	98	47	123
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1900	1841	1841	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	225	606	43	116	515	81	97	42	121	102	49	128
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	0	4	4	0	0	0	0	0	0
Cap, veh/h	523	1206	85	470	949	149	364	113	325	376	122	318
Arrive On Green	0.13	0.36	0.36	0.08	0.31	0.31	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1810	3365	238	1810	3029	474	1220	429	1236	1236	463	1208
Grp Volume(v), veh/h	225	320	329	116	296	300	97	0	163	102	0	177
Grp Sat Flow(s),veh/h/ln	1810	1777	1827	1810	1749	1754	1220	0	1666	1236	0	1671
Q Serve(g_s), s	3.8	6.8	6.8	2.0	6.8	6.8	3.4	0.0	3.9	3.5	0.0	4.2
Cycle Q Clear(g_c), s	3.8	6.8	6.8	2.0	6.8	6.8	7.6	0.0	3.9	7.4	0.0	4.2
Prop In Lane	1.00		0.13	1.00		0.27	1.00		0.74	1.00		0.72
Lane Grp Cap(c), veh/h	523	637	655	470	548	550	364	0	438	376	0	439
V/C Ratio(X)	0.43	0.50	0.50	0.25	0.54	0.54	0.27	0.00	0.37	0.27	0.00	0.40
Avail Cap(c_a), veh/h	1420	2213	2275	1449	2178	2185	803	0	1037	820	0	1041
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.3	12.1	12.1	9.7	13.7	13.7	17.8	0.0	14.5	17.5	0.0	14.6
Incr Delay (d2), s/veh	0.6	0.9	0.9	0.3	1.2	1.2	0.4	0.0	0.5	0.4	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.2	2.3	0.6	2.3	2.3	0.9	0.0	1.4	1.0	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.8	13.0	12.9	9.9	14.9	14.9	18.2	0.0	15.0	17.9	0.0	15.2
LnGrp LOS	A	B	B	A	B	B	B	A	B	B	A	B
Approach Vol, veh/h		874			712			260			279	
Approach Delay, s/veh		12.2			14.1			16.2			16.2	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		17.2	8.4	22.6		17.2	10.6	20.4				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		30.0	30.0	60.0		30.0	30.0	60.0				
Max Q Clear Time (g_c+I1), s		9.6	4.0	8.8		9.4	5.8	8.8				
Green Ext Time (p_c), s		1.3	0.3	6.3		1.4	0.6	5.8				
Intersection Summary												
HCM 6th Ctrl Delay				13.8								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
 9: Snoqualmie Pkwy & Fairway Ave SE

03/06/2020

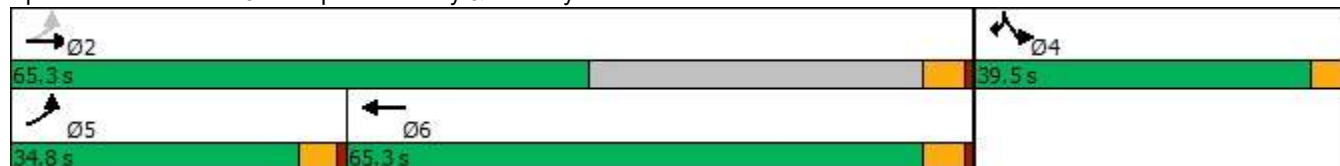


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	199	585	602	121	103	111
Future Volume (vph)	199	585	602	121	103	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	325			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		25	
Link Distance (ft)		1064	278		478	
Travel Time (s)		18.1	4.7		13.0	
Confl. Peds. (#/hr)	5			5	1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	3%	3%	4%	2%	0%
Shared Lane Traffic (%)						
Turn Type	pm+pt	NA	NA		Prot	Prot
Protected Phases	5	2	6		4	4
Permitted Phases	2					
Detector Phase	5	2	6		4	4
Switch Phase						
Minimum Initial (s)	5.0	12.0	12.0		5.0	5.0
Minimum Split (s)	9.8	23.3	26.3		36.5	36.5
Total Split (s)	34.8	65.3	65.3		39.5	39.5
Total Split (%)	24.9%	46.8%	46.8%		28.3%	28.3%
Yellow Time (s)	3.8	4.3	4.3		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.8	5.3	5.3		4.5	4.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	None	None		None	None

Intersection Summary

Area Type: Other
 Cycle Length: 139.6
 Actuated Cycle Length: 63
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated

Splits and Phases: 9: Snoqualmie Pkwy & Fairway Ave SE



HCM 6th Signalized Intersection Summary
 9: Snoqualmie Pkwy & Fairway Ave SE























03/06/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	199	585	602	121	103	111
Future Volume (veh/h)	199	585	602	121	103	111
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	1856	1856	1856	1870	1900
Adj Flow Rate, veh/h	214	629	647	130	111	-5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	3	3	3	2	0
Cap, veh/h	564	2249	1119	224	161	146
Arrive On Green	0.12	0.64	0.38	0.38	0.09	0.00
Sat Flow, veh/h	1795	3618	3015	586	1781	1610
Grp Volume(v), veh/h	214	629	390	387	111	-5
Grp Sat Flow(s),veh/h/ln	1795	1763	1763	1745	1781	1610
Q Serve(g_s), s	2.1	2.8	6.3	6.4	2.2	0.0
Cycle Q Clear(g_c), s	2.1	2.8	6.3	6.4	2.2	0.0
Prop In Lane	1.00			0.34	1.00	1.00
Lane Grp Cap(c), veh/h	564	2249	675	668	161	146
V/C Ratio(X)	0.38	0.28	0.58	0.58	0.69	-0.03
Avail Cap(c_a), veh/h	1835	5856	2928	2899	1726	1560
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	5.4	2.9	8.8	8.8	15.9	0.0
Incr Delay (d2), s/veh	0.4	0.1	0.8	0.8	5.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	1.6	1.6	1.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	5.8	2.9	9.6	9.6	21.0	0.0
LnGrp LOS	A	A	A	A	C	A
Approach Vol, veh/h		843	777		106	
Approach Delay, s/veh		3.7	9.6		22.0	
Approach LOS		A	A		C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		28.3		7.8	9.2	19.1
Change Period (Y+Rc), s		5.3		4.5	* 4.8	5.3
Max Green Setting (Gmax), s		60.0		35.0	* 30	60.0
Max Q Clear Time (g_c+I1), s		4.8		4.2	4.1	8.4
Green Ext Time (p_c), s		4.6		0.3	0.6	5.3
Intersection Summary						
HCM 6th Ctrl Delay			7.5			
HCM 6th LOS			A			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

Lanes, Volumes, Timings
 10: Fisher Ave SE & Snoqualmie Pkwy

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (vph)	50	617	29	12	678	17	15	1	15	16	1	30
Future Volume (vph)	50	617	29	12	678	17	15	1	15	16	1	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		458			1686			518			363	
Travel Time (s)		7.8			28.7			14.1			9.9	
Confl. Peds. (#/hr)	8		8	8		8	8		8	8		8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	3%	0%	0%	4%	6%	0%	0%	0%	0%	0%	7%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕			↕			↕	
Traffic Vol, veh/h	50	617	29	12	678	17	15	1	15	16	1	30
Future Vol, veh/h	50	617	29	12	678	17	15	1	15	16	1	30
Conflicting Peds, #/hr	8	0	8	8	0	8	8	0	8	8	0	8
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #-	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	3	0	0	4	6	0	0	0	0	0	7
Mvmt Flow	57	701	33	14	770	19	17	1	17	18	1	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	797	0	0	742	0	0	1262	1665	383	1289	1672	411
Stage 1	-	-	-	-	-	-	840	840	-	816	816	-
Stage 2	-	-	-	-	-	-	422	825	-	473	856	-
Critical Hdwy	4.1	-	-	4.1	-	-	9.5	8.5	7.9	9.5	8.5	8.04
Critical Hdwy Stg 1	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.37
Pot Cap-1 Maneuver	834	-	-	874	-	-	64	39	558	60	38	514
Stage 1	-	-	-	-	-	-	207	241	-	217	250	-
Stage 2	-	-	-	-	-	-	463	246	-	420	234	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	828	-	-	867	-	-	54	35	550	52	34	506
Mov Cap-2 Maneuver	-	-	-	-	-	-	54	35	-	52	34	-
Stage 1	-	-	-	-	-	-	191	223	-	201	244	-
Stage 2	-	-	-	-	-	-	420	240	-	374	216	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.2			65.6			57.8		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	93	828	-	-	867	-	-	119
HCM Lane V/C Ratio	0.379	0.069	-	-	0.016	-	-	0.449
HCM Control Delay (s)	65.6	9.7	-	-	9.2	-	-	57.8
HCM Lane LOS	F	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	1.5	0.2	-	-	0	-	-	2

Lanes, Volumes, Timings
 11: Orchard Ave SE & Snoqualmie Pkwy

03/06/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Traffic Volume (vph)	642	29	27	698	8	20
Future Volume (vph)	642	29	27	698	8	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	225		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	1686			1131	557	
Travel Time (s)	28.7			19.3	15.2	
Confl. Peds. (#/hr)		1	1		1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	0%	4%	4%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑↑	↑↑
Traffic Vol, veh/h	642	29	27	698	8	20
Future Vol, veh/h	642	29	27	698	8	20
Conflicting Peds, #/hr	0	1	1	0	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	225	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	0	4	4	0	5
Mvmt Flow	698	32	29	759	9	22

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	731	0	1154
Stage 1	-	-	-	-	715
Stage 2	-	-	-	-	439
Critical Hdwy	-	-	4.18	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.24	-	3.5
Pot Cap-1 Maneuver	-	-	856	-	193
Stage 1	-	-	-	-	451
Stage 2	-	-	-	-	623
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	855	-	186
Mov Cap-2 Maneuver	-	-	-	-	186
Stage 1	-	-	-	-	451
Stage 2	-	-	-	-	601

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	15.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	372	-	-	855	-
HCM Lane V/C Ratio	0.082	-	-	0.034	-
HCM Control Delay (s)	15.5	-	-	9.4	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Lanes, Volumes, Timings
 12: Snoqualmie Pkwy & Allman AveSE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	660	729	7	7	5
Future Volume (vph)	5	660	729	7	7	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		40	40		25	
Link Distance (ft)		679	1187		393	
Travel Time (s)		11.6	20.2		10.7	
Confl. Peds. (#/hr)	1			1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	5%	4%	0%	0%	0%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	660	729	7	7	5
Future Vol, veh/h	5	660	729	7	7	5
Conflicting Peds, #/hr	1	0	0	1	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #-		0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	5	4	0	0	0
Mvmt Flow	5	717	792	8	8	5

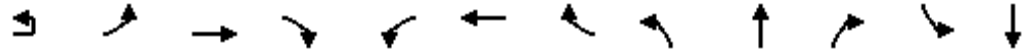
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	801	0	-	0	1167 402
Stage 1	-	-	-	-	797 -
Stage 2	-	-	-	-	370 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	831	-	-	-	190 604
Stage 1	-	-	-	-	409 -
Stage 2	-	-	-	-	675 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	830	-	-	-	188 603
Mov Cap-2 Maneuver	-	-	-	-	188 -
Stage 1	-	-	-	-	406 -
Stage 2	-	-	-	-	674 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	19.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	830	-	-	-	264
HCM Lane V/C Ratio	0.007	-	-	-	0.049
HCM Control Delay (s)	9.4	-	-	-	19.3
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Lanes, Volumes, Timings
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↵		↕↕		↵	↕↕			↕↕			↕↕
Traffic Volume (vph)	0	0	620	46	23	691	0	52	0	24	0	0
Future Volume (vph)	0	0	620	46	23	691	0	52	0	24	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0		0	200		0	0		0	0	
Storage Lanes		1		0	1		0	0		0	0	
Taper Length (ft)		25			25			25			25	
Right Turn on Red				Yes			Yes			Yes		
Link Speed (mph)			40			40			25			25
Link Distance (ft)			1187			833			535			291
Travel Time (s)			20.2			14.2			14.6			7.9
Confl. Peds. (#/hr)				4	4			3				
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	6%	0%	0%	4%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt		NA		pm+pt	NA		Perm	NA			
Protected Phases	5		2		1	6			8			4
Permitted Phases	2				6			8			4	
Detector Phase	5		2		1	6		8	8		4	4
Switch Phase												
Minimum Initial (s)	5.0		15.0		5.0	14.0		5.0	5.0		30.0	30.0
Minimum Split (s)	10.0		20.0		10.0	29.0		36.0	36.0		36.0	36.0
Total Split (s)	35.0		65.0		35.0	65.0		36.0	36.0		36.0	36.0
Total Split (%)	25.7%		47.8%		25.7%	47.8%		26.5%	26.5%		26.5%	26.5%
Yellow Time (s)	4.0		4.0		4.0	4.0		5.0	5.0		5.0	5.0
All-Red Time (s)	1.0		1.0		1.0	1.0		1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0		5.0		5.0	5.0		6.0	6.0		6.0	6.0
Lead/Lag	Lead		Lag		Lead	Lag						
Lead-Lag Optimize?	Yes		Yes		Yes	Yes						
Recall Mode	Min		Min		None	None		None	None		None	None

Intersection Summary

Area Type: Other

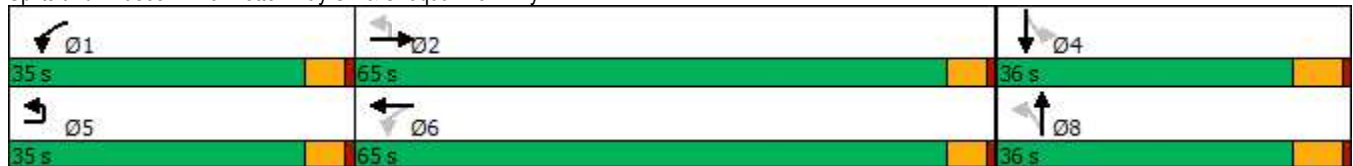
Cycle Length: 136

Actuated Cycle Length: 48

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Splits and Phases: 13: Better Way SE & Snoqualmie Pkwy

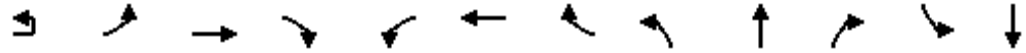




Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	0
Future Volume (vph)	0
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Right Turn on Red	Yes
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	3
Peak Hour Factor	0.95
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	
Intersection Summary	

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↱		↕		↖	↕			↕			↕
Traffic Volume (veh/h)	0	0	620	46	23	691	0	52	0	24	0	0
Future Volume (veh/h)	0	0	620	46	23	691	0	52	0	24	0	0
Initial Q (Qb), veh			0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	0.99		0.99	1.00	
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach			No			No			No			No
Adj Sat Flow, veh/h/ln		0	1811	1811	1900	1841	1841	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		0	653	48	24	727	0	55	0	25	0	0
Peak Hour Factor		0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %		0	6	6	0	4	4	0	0	0	0	0
Cap, veh/h		0	1386	102	324	2093	0	263	0	41	0	168
Arrive On Green		0.00	0.43	0.43	0.03	0.60	0.00	0.09	0.00	0.09	0.00	0.00
Sat Flow, veh/h		0	3339	239	1810	3589	0	1015	0	461	0	1900
Grp Volume(v), veh/h		0	346	355	24	727	0	80	0	0	0	0
Grp Sat Flow(s),veh/h/ln		0	1721	1767	1810	1749	0	1476	0	0	0	1900
Q Serve(g_s), s		0.0	5.1	5.1	0.2	3.7	0.0	1.8	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s		0.0	5.1	5.1	0.2	3.7	0.0	1.8	0.0	0.0	0.0	0.0
Prop In Lane		0.00		0.14	1.00		0.00	0.69		0.31	0.00	
Lane Grp Cap(c), veh/h		0	734	754	324	2093	0	304	0	0	0	168
V/C Ratio(X)		0.00	0.47	0.47	0.07	0.35	0.00	0.26	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h		0	2936	3015	1814	5968	0	1432	0	0	0	1621
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)		0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh		0.0	7.2	7.2	7.2	3.6	0.0	15.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh		0.0	0.5	0.5	0.1	0.1	0.0	0.5	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.0	1.1	1.1	0.0	0.3	0.0	0.6	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		0.0	7.7	7.7	7.3	3.7	0.0	15.9	0.0	0.0	0.0	0.0
LnGrp LOS		A	A	A	A	A	A	B	A	A	A	A
Approach Vol, veh/h			701			751			80			0
Approach Delay, s/veh			7.7			3.8			15.9			0.0
Approach LOS			A			A			B			
Timer - Assigned Phs	1	2		4		6			8			
Phs Duration (G+Y+Rc), s	6.0	20.0		9.1		26.0			9.1			
Change Period (Y+Rc), s	5.0	5.0		6.0		5.0			6.0			
Max Green Setting (Gmax), s	30.0	60.0		30.0		60.0			30.0			
Max Q Clear Time (g_c+I1), s	2.2	7.1		0.0		5.7			3.8			
Green Ext Time (p_c), s	0.0	4.6		0.0		5.5			0.4			

Intersection Summary

HCM 6th Ctrl Delay	6.2
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
 User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	0
Future Volume (veh/h)	0
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.95
Percent Heavy Veh, %	0
Cap, veh/h	0
Arrive On Green	0.00
Sat Flow, veh/h	0
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	0
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	0.00
Lane Grp Cap(c), veh/h	0
V/C Ratio(X)	0.00
Avail Cap(c_a), veh/h	0
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Lanes, Volumes, Timings
 14: Trail Access Road & Snoqualmie Pkwy

03/06/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↓		↙	↑↑	↘	
Traffic Volume (vph)	577	0	1	665	0	1
Future Volume (vph)	577	0	1	665	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	646			700	301	
Travel Time (s)	11.0			11.9	8.2	
Confl. Peds. (#/hr)		1	1		1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	0%	0%	4%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Vol, veh/h	577	0	1	665	0	1
Future Vol, veh/h	577	0	1	665	0	1
Conflicting Peds, #/hr	0	1	1	0	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	0	0	4	0	0
Mvmt Flow	627	0	1	723	0	1

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	628	0	993
Stage 1	-	-	-	-	628
Stage 2	-	-	-	-	365
Critical Hdwy	-	-	4.1	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	964	-	246
Stage 1	-	-	-	-	500
Stage 2	-	-	-	-	679
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	963	-	245
Mov Cap-2 Maneuver	-	-	-	-	245
Stage 1	-	-	-	-	500
Stage 2	-	-	-	-	678

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	685	-	-	963	-
HCM Lane V/C Ratio	0.002	-	-	0.001	-
HCM Control Delay (s)	10.3	-	-	8.7	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
 15: SR 202 & Snoqualmie Pkwy

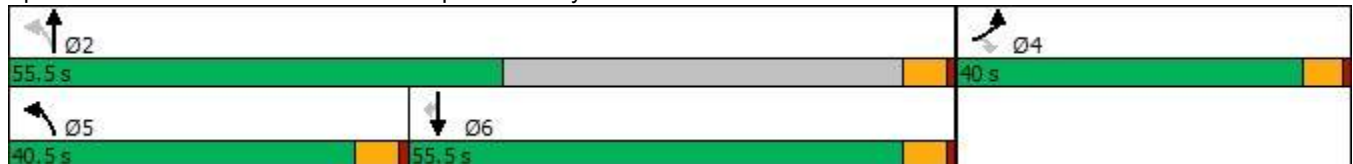
03/06/2020

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	287	289	309	275	312	393
Future Volume (vph)	287	289	309	275	312	393
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	300			300
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Right Turn on Red		Yes				Yes
Link Speed (mph)	40			45	45	
Link Distance (ft)	700			1127	949	
Travel Time (s)	11.9			17.1	14.4	
Confl. Peds. (#/hr)		1	1			1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	3%	2%	2%	1%	7%	5%
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	5.0	7.0	7.0	7.0
Minimum Split (s)	29.0	29.0	10.5	12.5	35.5	35.5
Total Split (s)	40.0	40.0	40.5	55.5	55.5	55.5
Total Split (%)	29.4%	29.4%	29.8%	40.8%	40.8%	40.8%
Yellow Time (s)	4.0	4.0	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	Min	Min	Min

Intersection Summary













Area Type: Other
 Cycle Length: 136
 Actuated Cycle Length: 83.3
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated

Splits and Phases: 15: SR 202 & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 15: SR 202 & Snoqualmie Pkwy

03/06/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	287	289	309	275	312	393
Future Volume (veh/h)	287	289	309	275	312	393
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00			1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1885	1796	1826
Adj Flow Rate, veh/h	315	0	340	302	343	83
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	2	2	1	7	5
Cap, veh/h	397	356	557	1052	474	407
Arrive On Green	0.22	0.00	0.18	0.56	0.26	0.26
Sat Flow, veh/h	1767	1585	1781	1885	1796	1544
Grp Volume(v), veh/h	315	0	340	302	343	83
Grp Sat Flow(s),veh/h/ln	1767	1585	1781	1885	1796	1544
Q Serve(g_s), s	8.1	0.0	5.9	4.1	8.4	2.0
Cycle Q Clear(g_c), s	8.1	0.0	5.9	4.1	8.4	2.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	397	356	557	1052	474	407
V/C Ratio(X)	0.79	0.00	0.61	0.29	0.72	0.20
Avail Cap(c_a), veh/h	1278	1146	1523	1947	1856	1595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.7	0.0	9.6	5.6	16.2	13.9
Incr Delay (d2), s/veh	3.6	0.0	1.1	0.1	2.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	1.6	0.9	3.0	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.3	0.0	10.7	5.8	18.3	14.1
LnGrp LOS	C	A	B	A	B	B
Approach Vol, veh/h	315			642	426	
Approach Delay, s/veh	21.3			8.4	17.5	
Approach LOS	C			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		32.5		15.9	14.3	18.3
Change Period (Y+Rc), s		5.5		5.0	5.5	5.5
Max Green Setting (Gmax), s		50.0		35.0	35.0	50.0
Max Q Clear Time (g_c+I1), s		6.1		10.1	7.9	10.4
Green Ext Time (p_c), s		1.7		0.9	1.0	2.2
Intersection Summary						
HCM 6th Ctrl Delay			14.1			
HCM 6th LOS			B			

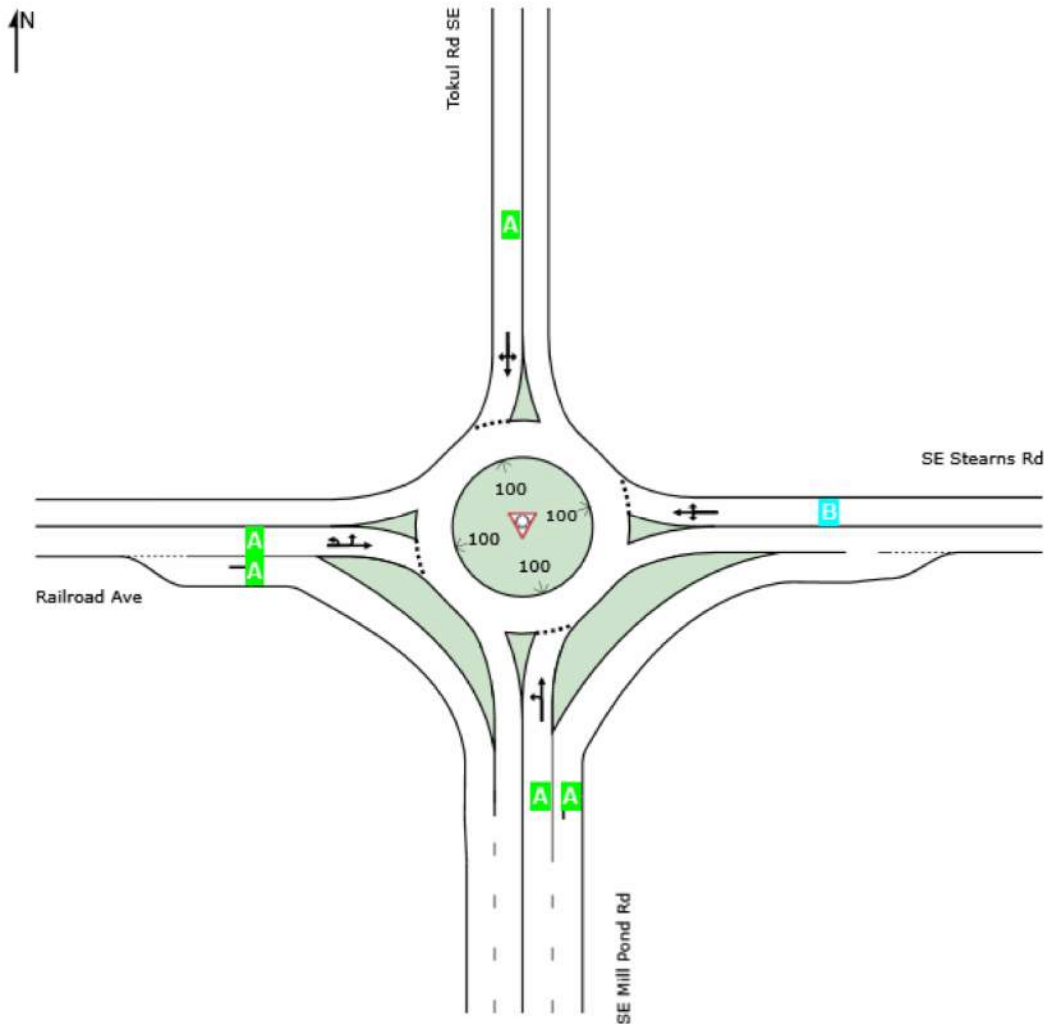
LANE LEVEL OF SERVICE

Lane Level of Service

Site: 16 [2023 With Planning Area 1 - PM Peak Hour]

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	B	A	A	A



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Signalised Intersections.
 Lane LOS values are based on average delay per lane.
 Intersection and Approach LOS values are based on average delay for all lanes.
 SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

LANE SUMMARY

Site: 16 [2023 With Planning Area 1 - PM Peak Hour]

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

Lane Use and Performance													
	Demand Flows			Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue Veh	Queue Dist	Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	Cap. veh/h	v/c	%	sec		ft	ft		ft	%	%
South: SE Mill Pond Rd													
Lane 1 ^d	455	3.3	1540	0.296	100	8.7	LOS A	1.8	45.3	Full	1600	0.0	0.0
Lane 2	179	3.3	1621	0.110	100	3.6	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	634	3.3		0.296		7.3	LOS A	1.8	45.3				
East: SE Stearns Rd													
Lane 1 ^d	412	8.3	964	0.427	100	10.5	LOS B	2.7	72.0	Full	1600	0.0	0.0
Approach	412	8.3		0.427		10.5	LOS B	2.7	72.0				
North: Tokul Rd SE													
Lane 1 ^d	45	5.3	713	0.063	100	9.5	LOS A	0.4	9.7	Full	1600	0.0	0.0
Approach	45	5.3		0.063		9.5	LOS A	0.4	9.7				
West: Railroad Ave													
Lane 1 ^d	127	2.7	1376	0.092	100	5.1	LOS A	0.5	13.0	Full	1600	0.0	0.0
Lane 2	553	4.6	1601	0.345	100	3.7	LOS A	0.0	0.0	Short	200	0.0	NA
Approach	680	4.3		0.345		3.9	LOS A	0.5	13.0				
Intersection	1771	4.9		0.427		6.8	LOS A	2.7	72.0				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

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Organisation: TENW | Processed: Tuesday, March 3, 2020 9:33:45 AM

Project: T:\Active Projects\Snoqualmie Mill - 5584\Planning - 5584\LOS\Snoqualmie Mill - Railroad Ave & Tokul Rd & SE Mill Pond Rd

Roundabout.sip8



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	74	8	18	96	5	28
Future Volume (vph)	74	8	18	96	5	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45		35			35
Link Distance (ft)	458		1466			541
Travel Time (s)	6.9		28.6			10.5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	0%	0%	3%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	74	8	18	96	5	28
Future Vol, veh/h	74	8	18	96	5	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	0	0	3	0	0
Mvmt Flow	77	8	19	100	5	29

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	108	69	0	0	119	0
Stage 1	69	-	-	-	-	-
Stage 2	39	-	-	-	-	-
Critical Hdwy	6.43	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	887	1000	-	-	1482	-
Stage 1	951	-	-	-	-	-
Stage 2	981	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	884	1000	-	-	1482	-
Mov Cap-2 Maneuver	884	-	-	-	-	-
Stage 1	951	-	-	-	-	-
Stage 2	978	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	1.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	894	1482
HCM Lane V/C Ratio	-	-	0.096	0.004
HCM Control Delay (s)	-	-	9.5	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	56	81	83	23	37	58
Future Volume (vph)	56	81	83	23	37	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		40	
Link Distance (ft)		502	1466		916	
Travel Time (s)		9.8	28.6		15.6	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	1%	0%	3%	0%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	↕
Traffic Vol, veh/h	56	81	83	23	37	58
Future Vol, veh/h	56	81	83	23	37	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	1	1	0	3	0
Mvmt Flow	60	86	88	24	39	62
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	112	0	-	0	306	100
Stage 1	-	-	-	-	100	-
Stage 2	-	-	-	-	206	-
Critical Hdwy	4.1	-	-	-	6.43	6.2
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.2	-	-	-	3.527	3.3
Pot Cap-1 Maneuver	1490	-	-	-	684	961
Stage 1	-	-	-	-	921	-
Stage 2	-	-	-	-	826	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1490	-	-	-	655	961
Mov Cap-2 Maneuver	-	-	-	-	655	-
Stage 1	-	-	-	-	882	-
Stage 2	-	-	-	-	826	-
Approach	EB	WB	SB			
HCM Control Delay, s	3.1	0	10.1			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1490	-	-	-	-	813
HCM Lane V/C Ratio	0.04	-	-	-	-	0.124
HCM Control Delay (s)	7.5	0	-	-	-	10.1
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	-	0.4

Lanes, Volumes, Timings
19: Meadowbrook Bridge

03/02/2020

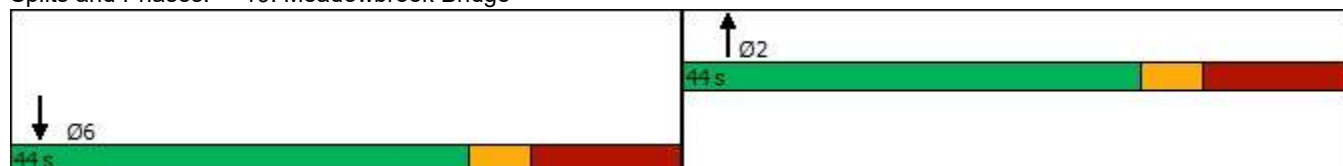


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	100	0	0	98
Future Volume (vph)	0	0	100	0	0	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			30
Link Distance (ft)	150		304			249
Travel Time (s)	3.4		6.9			5.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Shared Lane Traffic (%)						
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Detector Phase			2			6
Switch Phase						
Minimum Initial (s)			5.0			5.0
Minimum Split (s)			19.0			19.0
Total Split (s)			44.0			44.0
Total Split (%)			50.0%			50.0%
Yellow Time (s)			4.0			4.0
All-Red Time (s)			10.0			10.0
Lost Time Adjust (s)			0.0			0.0
Total Lost Time (s)			14.0			14.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode			None			None

Intersection Summary

Area Type: Other
 Cycle Length: 88
 Actuated Cycle Length: 37.9
 Natural Cycle: 40
 Control Type: Actuated-Uncoordinated

Splits and Phases: 19: Meadowbrook Bridge



HCM Signalized Intersection Capacity Analysis
 19: Meadowbrook Bridge

03/02/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	100	0	0	98
Future Volume (vph)	0	0	100	0	0	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			14.0			14.0
Lane Util. Factor			1.00			1.00
Frt			1.00			1.00
Flt Protected			1.00			1.00
Satd. Flow (prot)			1881			1881
Flt Permitted			1.00			1.00
Satd. Flow (perm)			1881			1881
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	109	0	0	107
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	109	0	0	107
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Actuated Green, G (s)			5.3			5.2
Effective Green, g (s)			5.3			5.2
Actuated g/C Ratio			0.14			0.14
Clearance Time (s)			14.0			14.0
Vehicle Extension (s)			2.0			2.0
Lane Grp Cap (vph)			258			254
v/s Ratio Prot			c0.06			c0.06
v/s Ratio Perm						
v/c Ratio			0.42			0.42
Uniform Delay, d1			15.2			15.3
Progression Factor			1.00			1.00
Incremental Delay, d2			0.4			0.4
Delay (s)			15.6			15.7
Level of Service			B			B
Approach Delay (s)	0.0		15.6			15.7
Approach LOS	A		B			B
Intersection Summary						
HCM 2000 Control Delay			15.6		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.42			
Actuated Cycle Length (s)			38.5		Sum of lost time (s)	28.0
Intersection Capacity Utilization			16.9%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Lanes, Volumes, Timings
 20: Meadowbrook Way SE & SE Park St

03/12/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	45	28	32	49	27	12	89	23	24	88	24
Future Volume (vph)	25	45	28	32	49	27	12	89	23	24	88	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		505			663			790			216	
Travel Time (s)		13.8			18.1			21.5			5.9	
Confl. Peds. (#/hr)	5		5	4		4	5		4	4		5
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	4%	4%	4%	0%	2%	0%	0%	1%	0%	0%	3%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	25	45	28	32	49	27	12	89	23	24	88	24
Future Vol, veh/h	25	45	28	32	49	27	12	89	23	24	88	24
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	4	4	4	0	2	0	0	1	0	0	3	0
Mvmt Flow	30	54	33	38	58	32	14	106	27	29	105	29
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	8.6			8.7			8.7			8.8		
HCM LOS	A			A			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %		10%	26%	30%
Vol Thru, %		72%	46%	45%
Vol Right, %		19%	29%	25%
Sign Control		Stop	Stop	Stop
Traffic Vol by Lane		124	98	108
LT Vol		12	25	32
Through Vol		89	45	49
RT Vol		23	28	27
Lane Flow Rate		148	117	129
Geometry Grp		1	1	1
Degree of Util (X)		0.188	0.153	0.167
Departure Headway (Hd)		4.58	4.723	4.671
Convergence, Y/N		Yes	Yes	Yes
Cap		781	757	766
Service Time		2.622	2.767	2.713
HCM Lane V/C Ratio		0.19	0.155	0.168
HCM Control Delay		8.7	8.6	8.7
HCM Lane LOS		A	A	A
HCM 95th-tile Q		0.7	0.5	0.6

Lanes, Volumes, Timings
 21: Meadowbrook Way SE & SR 202

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	432	74	8	422	39	120	88	22	47	74	26
Future Volume (vph)	22	432	74	8	422	39	120	88	22	47	74	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	150		0	0		0	200		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			40			35				25
Link Distance (ft)		615			518			738				663
Travel Time (s)		14.0			8.8			14.4				18.1
Confl. Peds. (#/hr)							2			1		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	3%	5%	0%	4%	0%	1%	0%	9%	2%	0%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	33.3	33.3		30.3	30.3		32.8	32.8		32.8	32.8	
Total Split (s)	71.3	71.3		71.3	71.3		40.8	40.8		40.8	40.8	
Total Split (%)	63.6%	63.6%		63.6%	63.6%		36.4%	36.4%		36.4%	36.4%	
Yellow Time (s)	4.3	4.3		4.3	4.3		3.8	3.8		3.8	3.8	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	6.3	6.3		6.3	6.3			5.8		5.8	5.8	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Min	Min		Min	Min		None	None		None	None	

Intersection Summary

Area Type: Other

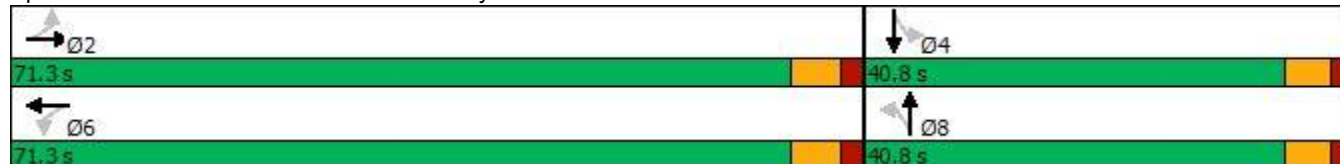
Cycle Length: 112.1

Actuated Cycle Length: 51.5

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Splits and Phases: 21: Meadowbrook Way SE & SR 202



HCM 6th Signalized Intersection Summary
 21: Meadowbrook Way SE & SR 202

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	432	74	8	422	39	120	88	22	47	74	26
Future Volume (veh/h)	22	432	74	8	422	39	120	88	22	47	74	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1856	1900	1841	1841	1900	1900	1900	1870	1900	1900
Adj Flow Rate, veh/h	24	465	80	9	454	42	129	95	24	51	80	28
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	3	3	0	4	4	0	0	0	2	0	0
Cap, veh/h	393	674	116	357	725	67	300	175	36	521	333	117
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	916	1542	265	875	1660	154	636	704	144	1270	1344	470
Grp Volume(v), veh/h	24	0	545	9	0	496	248	0	0	51	0	108
Grp Sat Flow(s),veh/h/ln	916	0	1808	875	0	1813	1484	0	0	1270	0	1814
Q Serve(g_s), s	0.8	0.0	9.3	0.3	0.0	8.1	4.1	0.0	0.0	0.0	0.0	1.8
Cycle Q Clear(g_c), s	9.0	0.0	9.3	9.7	0.0	8.1	5.9	0.0	0.0	1.1	0.0	1.8
Prop In Lane	1.00		0.15	1.00		0.08	0.52		0.10	1.00		0.26
Lane Grp Cap(c), veh/h	393	0	790	357	0	792	511	0	0	521	0	450
V/C Ratio(X)	0.06	0.00	0.69	0.03	0.00	0.63	0.49	0.00	0.00	0.10	0.00	0.24
Avail Cap(c_a), veh/h	1541	0	3057	1454	0	3066	1513	0	0	1361	0	1652
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.9	0.0	8.7	12.6	0.0	8.4	13.1	0.0	0.0	11.3	0.0	11.6
Incr Delay (d2), s/veh	0.1	0.0	1.3	0.0	0.0	1.0	0.7	0.0	0.0	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	2.7	0.1	0.0	2.0	1.6	0.0	0.0	0.3	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.9	0.0	10.0	12.6	0.0	9.4	13.8	0.0	0.0	11.4	0.0	11.8
LnGrp LOS	B	A	B	B	A	A	B	A	A	B	A	B
Approach Vol, veh/h		569			505			248				159
Approach Delay, s/veh		10.1			9.4			13.8				11.7
Approach LOS		B			A			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.1		15.3		23.1		15.3				
Change Period (Y+Rc), s		6.3		* 5.8		6.3		* 5.8				
Max Green Setting (Gmax), s		65.0		* 35		65.0		* 35				
Max Q Clear Time (g_c+I1), s		11.3		3.8		11.7		7.9				
Green Ext Time (p_c), s		5.5		0.8		4.2		1.5				
Intersection Summary												
HCM 6th Ctrl Delay				10.7								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 22: Meadowbrook Way SE & 384th Ave SE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	165	233	202	13	2	112
Future Volume (vph)	165	233	202	13	2	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		25	
Link Distance (ft)		158	180		181	
Travel Time (s)		3.1	3.5		4.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	8%	2%	3%	0%	0%	5%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	165	233	202	13	2	112
Future Vol, veh/h	165	233	202	13	2	112
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	8	2	3	0	0	5
Mvmt Flow	190	268	232	15	2	129
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	247	0	-	0	888	240
Stage 1	-	-	-	-	240	-
Stage 2	-	-	-	-	648	-
Critical Hdwy	4.18	-	-	-	6.4	6.25
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.272	-	-	-	3.5	3.345
Pot Cap-1 Maneuver	1285	-	-	-	317	792
Stage 1	-	-	-	-	805	-
Stage 2	-	-	-	-	524	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1285	-	-	-	262	792
Mov Cap-2 Maneuver	-	-	-	-	262	-
Stage 1	-	-	-	-	665	-
Stage 2	-	-	-	-	524	-
Approach	EB	WB	SB			
HCM Control Delay, s	3.4	0	10.7			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1285	-	-	-	-	765
HCM Lane V/C Ratio	0.148	-	-	-	-	0.171
HCM Control Delay (s)	8.3	0	-	-	-	10.7
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0.5	-	-	-	-	0.6

Lanes, Volumes, Timings
 23: SE North Bend Way & Meadowbrook Way SE

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	70	245	131	81	317	273
Future Volume (vph)	70	245	131	81	317	273
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	450	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Link Speed (mph)	35		50			50
Link Distance (ft)	158		253			593
Travel Time (s)	3.1		3.5			8.1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	6%	4%	3%	14%	1%	1%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	5.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↘	↑	↘	↘	↑
Traffic Vol, veh/h	70	245	131	81	317	273
Future Vol, veh/h	70	245	131	81	317	273
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	Free	-	None
Storage Length	0	0	-	0	450	-
Veh in Median Storage, #1	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	6	4	3	14	1	1
Mvmt Flow	78	272	146	90	352	303

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1153	-	0	-	146
Stage 1	146	-	-	-	-
Stage 2	1007	-	-	-	-
Critical Hdwy	6.46	-	-	-	4.11
Critical Hdwy Stg 1	5.46	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-
Follow-up Hdwy	3.554	-	-	-	2.209
Pot Cap-1 Maneuver	214	0	-	0	1442
Stage 1	872	0	-	0	-
Stage 2	347	0	-	0	-
Platoon blocked, %			-		-
Mov Cap-1 Maneuver	162	-	-	-	1442
Mov Cap-2 Maneuver	228	-	-	-	-
Stage 1	872	-	-	-	-
Stage 2	262	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	28.8	0	4.5
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	228	-	1442	-
HCM Lane V/C Ratio	-	0.341	-	0.244	-
HCM Control Delay (s)	-	28.8	0	8.3	-
HCM Lane LOS	-	D	A	A	-
HCM 95th %tile Q(veh)	-	1.4	-	1	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	11	93	257	4	24	235
Future Volume (vph)	11	93	257	4	24	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	804		935			756
Travel Time (s)	21.9		18.2			14.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	18%	5%	0%	2%	17%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	11	93	257	4	24	235
Future Vol, veh/h	11	93	257	4	24	235
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	18	5	0	2	17
Mvmt Flow	12	101	279	4	26	255

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	588	281	0	0	283	0
Stage 1	281	-	-	-	-	-
Stage 2	307	-	-	-	-	-
Critical Hdwy	6.4	6.38	-	-	4.12	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.462	-	-	2.218	-
Pot Cap-1 Maneuver	475	721	-	-	1279	-
Stage 1	771	-	-	-	-	-
Stage 2	751	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	464	721	-	-	1279	-
Mov Cap-2 Maneuver	464	-	-	-	-	-
Stage 1	771	-	-	-	-	-
Stage 2	733	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	0.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	681	1279
HCM Lane V/C Ratio	-	-	0.166	0.02
HCM Control Delay (s)	-	-	11.3	7.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	54	207	8	41	205
Future Volume (vph)	10	54	207	8	41	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	796		476			935
Travel Time (s)	21.7		9.3			18.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	6%	0%	0%	2%
Shared Lane Traffic (%)						
Sign Control	Yield		Yield			Yield

Intersection Summary

Area Type: Other

Control Type: Roundabout

Lanes, Volumes, Timings
 26: SE Mill Pond Rd & North Driveway

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	13	71	144	14	73	142
Future Volume (vph)	13	71	144	14	73	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	769		376			476
Travel Time (s)	21.0		7.3			9.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	9%	0%	0%	3%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	13	71	144	14	73	142
Future Vol, veh/h	13	71	144	14	73	142
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	9	0	0	3
Mvmt Flow	14	77	157	15	79	154

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	477	165	0	0	172	0
Stage 1	165	-	-	-	-	-
Stage 2	312	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	551	885	-	-	1417	-
Stage 1	869	-	-	-	-	-
Stage 2	747	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	517	885	-	-	1417	-
Mov Cap-2 Maneuver	517	-	-	-	-	-
Stage 1	869	-	-	-	-	-
Stage 2	701	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	2.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	797	1417
HCM Lane V/C Ratio	-	-	0.115	0.056
HCM Control Delay (s)	-	-	10.1	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.4	0.2

Lanes, Volumes, Timings
 27: SE Mill Pond Rd & South Driveway

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	72	86	15	72	83
Future Volume (vph)	12	72	86	15	72	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	721		317			376
Travel Time (s)	19.7		6.2			7.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	15%	0%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	12	72	86	15	72	83
Future Vol, veh/h	12	72	86	15	72	83
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	15	0	0	5
Mvmt Flow	13	78	93	16	78	90

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	347	101	0	0	109	0
Stage 1	101	-	-	-	-	-
Stage 2	246	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	654	960	-	-	1494	-
Stage 1	928	-	-	-	-	-
Stage 2	800	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	618	960	-	-	1494	-
Mov Cap-2 Maneuver	618	-	-	-	-	-
Stage 1	928	-	-	-	-	-
Stage 2	756	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	3.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	890	1494
HCM Lane V/C Ratio	-	-	0.103	0.052
HCM Control Delay (s)	-	-	9.5	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.2

Lanes, Volumes, Timings
 28: SE Mill Pond Rd & SE Access Road

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	101	0	0	95
Future Volume (vph)	0	0	101	0	0	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	701		575			216
Travel Time (s)	19.1		11.2			4.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	15%	0%	0%	4%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	0	0	101	0	0	95
Future Vol, veh/h	0	0	101	0	0	95
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	15	0	0	4
Mvmt Flow	0	0	110	0	0	103

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	213	110	0	0	110	0
Stage 1	110	-	-	-	-	-
Stage 2	103	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	780	949	-	-	1493	-
Stage 1	920	-	-	-	-	-
Stage 2	926	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	780	949	-	-	1493	-
Mov Cap-2 Maneuver	780	-	-	-	-	-
Stage 1	920	-	-	-	-	-
Stage 2	926	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1493
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

2032 No Action
LOS Worksheets

Lanes, Volumes, Timings
1: SR-18 & I-90 EB Ramps

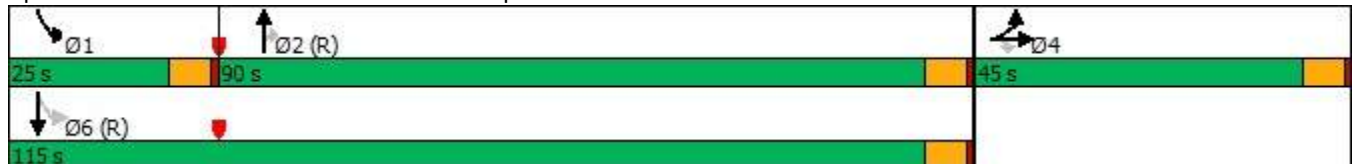
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	390	0	86	0	0	0	0	812	475	54	363	0
Future Volume (vph)	390	0	86	0	0	0	0	812	475	54	363	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650		0	0		0	0		300	200		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			45				30
Link Distance (ft)		833			764			1837				778
Travel Time (s)		16.2			14.9			27.8				17.7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	0%	10%	0%	0%	0%	0%	8%	28%	12%	42%	0%
Shared Lane Traffic (%)	50%											
Turn Type	Split	NA	Perm					NA	Perm	pm+pt	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			4						2	6		
Detector Phase	4	4	4					2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					10.0	10.0	3.0	10.0	
Minimum Split (s)	29.0	29.0	29.0					16.0	16.0	9.0	23.0	
Total Split (s)	45.0	45.0	45.0					90.0	90.0	25.0	115.0	
Total Split (%)	28.1%	28.1%	28.1%					56.3%	56.3%	15.6%	71.9%	
Yellow Time (s)	5.0	5.0	5.0					5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0	1.0					1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0					6.0	6.0	6.0	6.0	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None					C-Min	C-Min	None	C-Min	

Intersection Summary

Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated





















Splits and Phases: 1: SR-18 & I-90 EB Ramps



HCM 6th Signalized Intersection Summary

1: SR-18 & I-90 EB Ramps

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	390	0	86	0	0	0	0	812	475	54	363	0
Future Volume (veh/h)	390	0	86	0	0	0	0	812	475	54	363	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00	1.00	1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1826	1900	1752				0	1781	1485	1722	1278	0
Adj Flow Rate, veh/h	406	0	0				0	846	0	56	378	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	0	10				0	8	28	12	42	0
Cap, veh/h	470	0					0	1305		371	1917	0
Arrive On Green	0.14	0.00	0.00				0.00	0.73	0.00	0.02	0.79	0.00
Sat Flow, veh/h	3478	0	1485				0	1781	1259	1640	2491	0
Grp Volume(v), veh/h	406	0	0				0	846	0	56	378	0
Grp Sat Flow(s),veh/h/ln	1739	0	1485				0	1781	1259	1640	1214	0
Q Serve(g_s), s	18.3	0.0	0.0				0.0	38.7	0.0	1.3	6.2	0.0
Cycle Q Clear(g_c), s	18.3	0.0	0.0				0.0	38.7	0.0	1.3	6.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	470	0					0	1305		371	1917	0
V/C Ratio(X)	0.86	0.00					0.00	0.65		0.15	0.20	0.00
Avail Cap(c_a), veh/h	848	0					0	1305		534	1917	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				0.00	1.00	0.00	0.85	0.85	0.00
Uniform Delay (d), s/veh	67.7	0.0	0.0				0.0	10.9	0.0	10.3	4.2	0.0
Incr Delay (d2), s/veh	4.8	0.0	0.0				0.0	2.5	0.0	0.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	0.0	0.0				0.0	14.3	0.0	0.5	1.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.6	0.0	0.0				0.0	13.4	0.0	10.4	4.4	0.0
LnGrp LOS	E	A					A	B		B	A	A
Approach Vol, veh/h		406	A					846	A		434	
Approach Delay, s/veh		72.6						13.4			5.2	
Approach LOS		E						B			A	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	9.1	123.2		27.6				132.4				
Change Period (Y+Rc), s	6.0	6.0		6.0				6.0				
Max Green Setting (Gmax), s	19.0	84.0		39.0				109.0				
Max Q Clear Time (g_c+I1), s	3.3	40.7		20.3				8.2				
Green Ext Time (p_c), s	0.1	17.4		1.4				6.8				
Intersection Summary												
HCM 6th Ctrl Delay			25.5									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

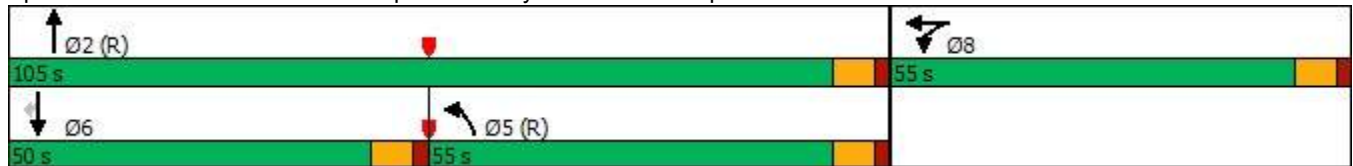
03/06/2020

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group												
Lane Configurations				↖	↕		↖	↕			↕	↖
Traffic Volume (vph)	0	0	0	223	2	91	593	579	0	0	144	848
Future Volume (vph)	0	0	0	223	2	91	593	579	0	0	144	848
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	0		0
Storage Lanes	0		0	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30				30
Link Distance (ft)		893			705			778				878
Travel Time (s)		17.4			13.7			17.7				20.0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	57%	50%	7%	7%	6%	0%	0%	13%	1%
Shared Lane Traffic (%)				27%								
Turn Type				Split	NA		Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases												6
Detector Phase				8	8		5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	7.0			7.0	7.0
Minimum Split (s)				12.0	12.0		12.0	14.0			24.0	24.0
Total Split (s)				55.0	55.0		55.0	105.0			50.0	50.0
Total Split (%)				34.4%	34.4%		34.4%	65.6%			31.3%	31.3%
Yellow Time (s)				5.0	5.0		5.0	5.0			5.0	5.0
All-Red Time (s)				2.0	2.0		2.0	2.0			2.0	2.0
Lost Time Adjust (s)				0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)				7.0	7.0		7.0	7.0			7.0	7.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None		C-Max	C-Min			None	None

Intersection Summary

Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 60 (38%), Referenced to phase 2:NBT and 5:NBL, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated

Splits and Phases: 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps





















HCM 6th Signalized Intersection Summary
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	223	2	91	593	579	0	0	144	848
Future Volume (veh/h)	0	0	0	223	2	91	593	579	0	0	144	848
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No				No	
Adj Sat Flow, veh/h/ln				1055	1159	1055	1796	1811	0	0	1707	1885
Adj Flow Rate, veh/h				166	98	96	624	609	0	0	152	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				57	50	57	7	6	0	0	13	1
Cap, veh/h				214	114	112	513	2409	0	0	608	
Arrive On Green				0.21	0.21	0.21	0.10	0.23	0.00	0.00	0.36	0.00
Sat Flow, veh/h				1005	538	527	1711	3532	0	0	1707	1598
Grp Volume(v), veh/h				166	0	194	624	609	0	0	152	0
Grp Sat Flow(s),veh/h/ln				1005	0	1064	1711	1721	0	0	1707	1598
Q Serve(g_s), s				24.9	0.0	28.1	48.0	23.1	0.0	0.0	10.1	0.0
Cycle Q Clear(g_c), s				24.9	0.0	28.1	48.0	23.1	0.0	0.0	10.1	0.0
Prop In Lane				1.00		0.49	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				214	0	226	513	2409	0	0	608	
V/C Ratio(X)				0.78	0.00	0.86	1.22	0.25	0.00	0.00	0.25	
Avail Cap(c_a), veh/h				302	0	319	513	2409	0	0	608	
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	1.00	0.64	0.64	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				59.4	0.0	60.7	72.1	27.4	0.0	0.0	36.4	0.0
Incr Delay (d2), s/veh				19.8	0.0	27.8	108.5	0.2	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.5	0.0	9.3	37.7	10.8	0.0	0.0	4.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				79.2	0.0	88.5	180.5	27.5	0.0	0.0	36.7	0.0
LnGrp LOS				E	A	F	F	C	A	A	D	
Approach Vol, veh/h					360			1233			152	A
Approach Delay, s/veh					84.2			105.0			36.7	
Approach LOS					F			F			D	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		119.0			55.0	64.0		41.0				
Change Period (Y+Rc), s		7.0			7.0	7.0		7.0				
Max Green Setting (Gmax), s		98.0			48.0	43.0		48.0				
Max Q Clear Time (g_c+I1), s		25.1			50.0	12.1		30.1				
Green Ext Time (p_c), s		7.3			0.0	1.2		3.9				
Intersection Summary												
HCM 6th Ctrl Delay				94.7								
HCM 6th LOS				F								
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 3: Snoqualmie Pkwy & SE 99th St

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	29	0	0	1	73	572	3	1	998	10
Future Volume (vph)	2	0	29	0	0	1	73	572	3	1	998	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	0		0	0		0	125		0	25		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		989			884			878			457	
Travel Time (s)		27.0			24.1			20.0			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	50%	0%	0%	0%	0%	0%	3%	6%	0%	0%	2%	20%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕	↕		↕	↕
Traffic Vol, veh/h	2	0	29	0	0	1	73	572	3	1	998	10
Future Vol, veh/h	2	0	29	0	0	1	73	572	3	1	998	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	25	-	-
Veh in Median Storage, #-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	50	0	0	0	0	0	3	6	0	0	2	20
Mvmt Flow	2	0	31	0	0	1	77	602	3	1	1051	11

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	1514	1818	531	1286	1822	303	1062	0	0	605	0	0
Stage 1	1059	1059	-	758	758	-	-	-	-	-	-	-
Stage 2	455	759	-	528	1064	-	-	-	-	-	-	-
Critical Hdwy	8.5	6.5	6.9	7.5	6.5	6.9	4.16	-	-	4.1	-	-
Critical Hdwy Stg 1	7.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	4	4	3.3	3.5	4	3.3	2.23	-	-	2.2	-	-
Pot Cap-1 Maneuver	52	79	498	124	78	699	646	-	-	983	-	-
Stage 1	169	304	-	370	418	-	-	-	-	-	-	-
Stage 2	444	418	-	507	302	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	47	70	498	106	69	699	646	-	-	983	-	-
Mov Cap-2 Maneuver	47	70	-	106	69	-	-	-	-	-	-	-
Stage 1	149	304	-	326	368	-	-	-	-	-	-	-
Stage 2	390	368	-	475	302	-	-	-	-	-	-	-

Approach	EB		WB			NB		SB			
HCM Control Delay, s	18.1		10.2			1.3		0			
HCM LOS	C		B								

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	646	-	-	308	699	983	-
HCM Lane V/C Ratio	0.119	-	-	0.106	0.002	0.001	-
HCM Control Delay (s)	11.3	-	-	18.1	10.2	8.7	-
HCM Lane LOS	B	-	-	C	B	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0.4	0	0	-

Lanes, Volumes, Timings
 4: Snoqualmie Pkwy & SE 96th St

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	33	17	526	16	32	924
Future Volume (vph)	33	17	526	16	32	924
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Link Speed (mph)	30		40			40
Link Distance (ft)	346		677			718
Travel Time (s)	7.9		11.5			12.2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	8%	0%	0%	2%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary
 Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	33	17	526	16	32	924
Future Vol, veh/h	33	17	526	16	32	924
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #1	-	0	-	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	8	0	0	2
Mvmt Flow	34	17	537	16	33	943

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1083	277	0	0	553	0
Stage 1	545	-	-	-	-	-
Stage 2	538	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	215	726	-	-	1027	-
Stage 1	551	-	-	-	-	-
Stage 2	555	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	208	726	-	-	1027	-
Mov Cap-2 Maneuver	343	-	-	-	-	-
Stage 1	551	-	-	-	-	-
Stage 2	537	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.4	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	343	726	1027	-
HCM Lane V/C Ratio	-	-	0.098	0.024	0.032	-
HCM Control Delay (s)	-	-	16.6	10.1	8.6	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	0.1	-

Lanes, Volumes, Timings
5: Snoqualmie Pkwy & SE Jacobia St

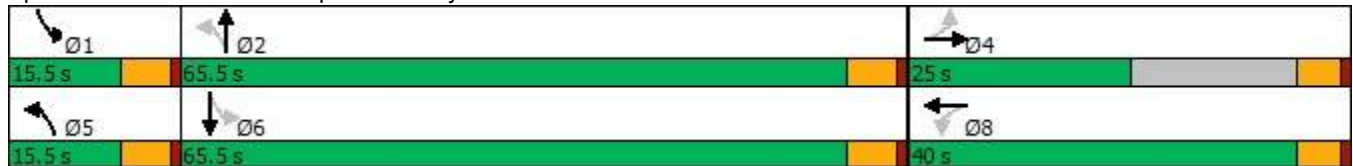
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	5	116	104	6	82	38	575	16	22	764	16
Future Volume (vph)	32	5	116	104	6	82	38	575	16	22	764	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	250		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		653			474			718			617	
Travel Time (s)		17.8			12.9			12.2			10.5	
Confl. Peds. (#/hr)	2		1	1		2						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	13%	20%	0%	0%	17%	3%	9%	7%	0%	15%	4%	40%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	15.0		5.0	16.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		10.5	22.5		10.5	22.5	
Total Split (s)	25.0	25.0		40.0	40.0		15.5	65.5		15.5	65.5	
Total Split (%)	20.7%	20.7%		33.1%	33.1%		12.8%	54.1%		12.8%	54.1%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.5	4.5		4.5	4.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.5	5.5		5.5	5.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
 Cycle Length: 121
 Actuated Cycle Length: 54.5
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Snoqualmie Pkwy & SE Jacobia St



HCM 6th Signalized Intersection Summary
 5: Snoqualmie Pkwy & SE Jacobia St

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	5	116	104	6	82	38	575	16	22	764	16
Future Volume (veh/h)	32	5	116	104	6	82	38	575	16	22	764	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1707	1604	1604	1900	1648	1648	1767	1796	1796	1678	1841	1841
Adj Flow Rate, veh/h	35	5	127	114	7	90	42	632	18	24	840	18
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	13	20	20	0	17	17	9	7	7	15	4	4
Cap, veh/h	350	12	306	334	24	304	350	1435	41	391	1427	31
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.04	0.42	0.42	0.03	0.41	0.41
Sat Flow, veh/h	1183	52	1312	1276	102	1307	1682	3389	96	1598	3501	75
Grp Volume(v), veh/h	35	0	132	114	0	97	42	318	332	24	420	438
Grp Sat Flow(s),veh/h/ln	1183	0	1363	1276	0	1409	1682	1706	1779	1598	1749	1827
Q Serve(g_s), s	1.3	0.0	4.2	4.2	0.0	2.9	0.7	6.7	6.7	0.4	9.5	9.5
Cycle Q Clear(g_c), s	4.2	0.0	4.2	8.4	0.0	2.9	0.7	6.7	6.7	0.4	9.5	9.5
Prop In Lane	1.00		0.96	1.00		0.93	1.00		0.05	1.00		0.04
Lane Grp Cap(c), veh/h	350	0	318	334	0	328	350	722	753	391	713	745
V/C Ratio(X)	0.10	0.00	0.42	0.34	0.00	0.30	0.12	0.44	0.44	0.06	0.59	0.59
Avail Cap(c_a), veh/h	541	0	538	917	0	972	608	2019	2105	661	2069	2162
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.7	0.0	16.5	20.1	0.0	16.0	8.8	10.4	10.4	8.6	11.7	11.7
Incr Delay (d2), s/veh	0.1	0.0	0.9	0.6	0.0	0.5	0.1	0.6	0.6	0.0	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	1.3	1.2	0.0	0.9	0.2	2.0	2.1	0.1	3.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.9	0.0	17.4	20.7	0.0	16.5	8.8	11.0	10.9	8.6	12.8	12.8
LnGrp LOS	B	A	B	C	A	B	A	B	B	A	B	B
Approach Vol, veh/h		167			211			692			882	
Approach Delay, s/veh		17.5			18.8			10.8			12.7	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	27.0		16.8	7.7	26.2		16.8				
Change Period (Y+Rc), s	5.5	5.5		5.0	5.5	5.5		5.0				
Max Green Setting (Gmax), s	10.0	60.0		20.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	2.4	8.7		6.2	2.7	11.5		10.4				
Green Ext Time (p_c), s	0.0	6.4		0.7	0.0	9.2		1.0				
Intersection Summary												
HCM 6th Ctrl Delay			13.1									
HCM 6th LOS			B									
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
6: Snoqualmie Pkwy & SE Swenson Dr

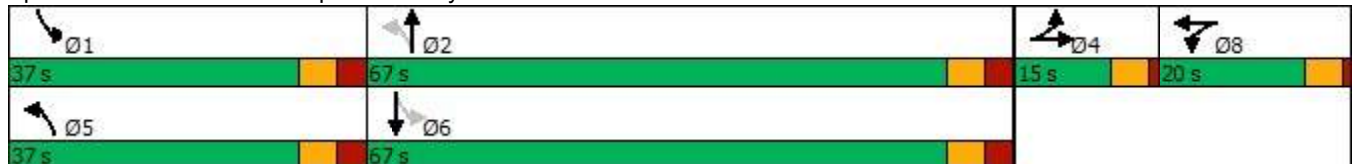
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	13	25	48	17	73	49	627	20	42	601	69
Future Volume (vph)	56	13	25	48	17	73	49	627	20	42	601	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	275		0	300		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			No
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		456			320			2254			367	
Travel Time (s)		10.4			7.3			38.4			6.3	
Confl. Peds. (#/hr)			1			45	1		8	8		1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	6%	17%	4%	0%	6%	3%	4%	9%	5%	0%	7%	5%
Shared Lane Traffic (%)												
Turn Type	Split	NA		Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		10.0	10.0		5.0	12.0		5.0	12.0	
Minimum Split (s)	38.0	38.0		38.0	38.0		12.0	28.0		12.0	28.0	
Total Split (s)	15.0	15.0		20.0	20.0		37.0	67.0		37.0	67.0	
Total Split (%)	10.8%	10.8%		14.4%	14.4%		26.6%	48.2%		26.6%	48.2%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		7.0	7.0		7.0	7.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
 Cycle Length: 139
 Actuated Cycle Length: 85.5
 Natural Cycle: 120
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Snoqualmie Pkwy & SE Swenson Dr



HCM 6th Signalized Intersection Summary
6: Snoqualmie Pkwy & SE Swenson Dr

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	13	25	48	17	73	49	627	20	42	601	69
Future Volume (veh/h)	56	13	25	48	17	73	49	627	20	42	601	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.93	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1648	1648	1900	1811	1811	1841	1767	1767	1900	1796	1796
Adj Flow Rate, veh/h	63	15	28	54	19	82	55	704	22	47	675	78
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	17	17	0	6	6	4	9	9	0	7	7
Cap, veh/h	147	44	82	341	53	227	253	897	28	260	816	94
Arrive On Green	0.09	0.09	0.09	0.19	0.19	0.19	0.05	0.27	0.27	0.05	0.27	0.27
Sat Flow, veh/h	1725	514	959	1810	279	1205	1753	3321	104	1810	3077	355
Grp Volume(v), veh/h	63	0	43	54	0	101	55	356	370	47	374	379
Grp Sat Flow(s),veh/h/ln	1725	0	1472	1810	0	1484	1753	1678	1746	1810	1706	1726
Q Serve(g_s), s	2.0	0.0	1.6	1.5	0.0	3.5	1.3	11.5	11.5	1.1	12.0	12.1
Cycle Q Clear(g_c), s	2.0	0.0	1.6	1.5	0.0	3.5	1.3	11.5	11.5	1.1	12.0	12.1
Prop In Lane	1.00		0.65	1.00		0.81	1.00		0.06	1.00		0.21
Lane Grp Cap(c), veh/h	147	0	125	341	0	280	253	453	471	260	452	458
V/C Ratio(X)	0.43	0.00	0.34	0.16	0.00	0.36	0.22	0.78	0.79	0.18	0.83	0.83
Avail Cap(c_a), veh/h	295	0	252	465	0	381	1065	1724	1794	1107	1753	1773
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.4	0.0	25.2	19.8	0.0	20.6	15.5	19.7	19.7	15.4	20.2	20.2
Incr Delay (d2), s/veh	0.7	0.0	0.6	0.1	0.0	0.3	0.2	1.1	1.1	0.1	1.5	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.6	0.6	0.0	1.1	0.5	4.0	4.1	0.4	4.3	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.1	0.0	25.8	19.9	0.0	20.9	15.6	20.9	20.9	15.5	21.7	21.7
LnGrp LOS	C	A	C	B	A	C	B	C	C	B	C	C
Approach Vol, veh/h		106			155			781			800	
Approach Delay, s/veh		26.0			20.6			20.5			21.3	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	22.8		10.0	10.0	22.5		16.0				
Change Period (Y+Rc), s	7.0	7.0		5.0	7.0	7.0		5.0				
Max Green Setting (Gmax), s	30.0	60.0		10.0	30.0	60.0		15.0				
Max Q Clear Time (g_c+I1), s	3.1	13.5		4.0	3.3	14.1		5.5				
Green Ext Time (p_c), s	0.0	0.6		0.0	0.0	0.6		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				21.2								
HCM 6th LOS				C								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings

7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	417	211	55	395	24	111	13	39	51	44	328
Future Volume (vph)	96	417	211	55	395	24	111	13	39	51	44	328
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	175		0	0		150	0		100
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1285			1065			585			583	
Travel Time (s)		21.9			18.2			16.0			15.9	
Confl. Peds. (#/hr)												3
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	10%	11%	3%	2%	6%	18%	6%	0%	6%	6%	0%	4%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4			8					2			6
Detector Phase	7	4		3	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	35.3		9.5	30.3		36.5	36.5	36.5	36.5	36.5	36.5
Total Split (s)	34.5	55.3		14.5	55.3		44.5	44.5	44.5	44.5	44.5	44.5
Total Split (%)	19.3%	30.9%		8.1%	30.9%		24.9%	24.9%	24.9%	24.9%	24.9%	24.9%
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.3		4.5	5.3			4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None	None	None	None	None

Intersection Summary

Area Type: Other

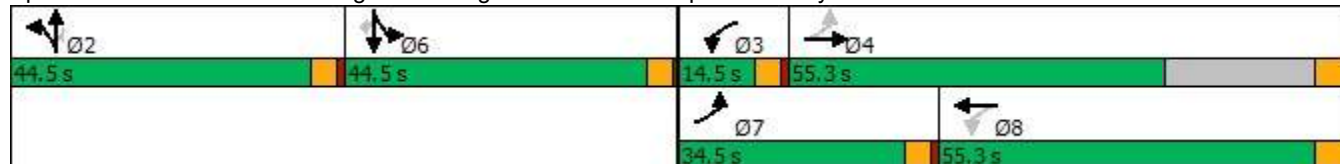
Cycle Length: 178.8

Actuated Cycle Length: 82.9

Natural Cycle: 120

Control Type: Actuated-Uncoordinated

Splits and Phases: 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	417	211	55	395	24	111	13	39	51	44	328
Future Volume (veh/h)	96	417	211	55	395	24	111	13	39	51	44	328
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1737	1737	1870	1811	1811	1900	1900	1811	1900	1900	1841
Adj Flow Rate, veh/h	110	479	243	63	454	28	128	15	0	59	51	251
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	10	11	11	2	6	6	0	0	6	0	0	4
Cap, veh/h	403	714	360	306	1057	65	181	21	170	212	183	332
Arrive On Green	0.07	0.34	0.34	0.05	0.32	0.32	0.11	0.11	0.00	0.21	0.21	0.21
Sat Flow, veh/h	1668	2123	1071	1781	3293	203	1628	191	1535	992	858	1553
Grp Volume(v), veh/h	110	372	350	63	237	245	143	0	0	110	0	251
Grp Sat Flow(s),veh/h/ln	1668	1650	1544	1781	1721	1775	1819	0	1535	1850	0	1553
Q Serve(g_s), s	2.8	12.6	12.8	1.5	7.1	7.1	5.0	0.0	0.0	3.3	0.0	9.9
Cycle Q Clear(g_c), s	2.8	12.6	12.8	1.5	7.1	7.1	5.0	0.0	0.0	3.3	0.0	9.9
Prop In Lane	1.00		0.69	1.00		0.11	0.90		1.00	0.54		1.00
Lane Grp Cap(c), veh/h	403	555	519	306	552	570	202	0	170	395	0	332
V/C Ratio(X)	0.27	0.67	0.68	0.21	0.43	0.43	0.71	0.00	0.00	0.28	0.00	0.76
Avail Cap(c_a), veh/h	1056	1261	1180	485	1314	1356	1111	0	938	1131	0	949
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.6	18.6	18.7	14.5	17.5	17.5	28.1	0.0	0.0	21.5	0.0	24.1
Incr Delay (d2), s/veh	0.4	2.0	2.2	0.3	0.8	0.7	4.5	0.0	0.0	0.4	0.0	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	4.5	4.3	0.6	2.6	2.7	2.3	0.0	0.0	1.4	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.9	20.6	20.8	14.8	18.2	18.2	32.6	0.0	0.0	21.9	0.0	27.7
LnGrp LOS	B	C	C	B	B	B	C	A	A	C	A	C
Approach Vol, veh/h		832			545			143			361	
Approach Delay, s/veh		19.8			17.9			32.6			25.9	
Approach LOS		B			B			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.8	7.9	27.3		18.5	8.9	26.3				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		40.0	10.0	50.0		40.0	30.0	50.0				
Max Q Clear Time (g_c+I1), s		7.0	3.5	14.8		11.9	4.8	9.1				
Green Ext Time (p_c), s		0.9	0.0	7.2		1.6	0.3	4.3				
Intersection Summary												
HCM 6th Ctrl Delay				21.4								
HCM 6th LOS				C								

Lanes, Volumes, Timings
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	325	85	132	417	49	9	6	18	63	28	97
Future Volume (vph)	102	325	85	132	417	49	9	6	18	63	28	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	275		0	275		0	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1065			1064			511			626	
Travel Time (s)		18.2			18.1			13.9			17.1	
Confl. Peds. (#/hr)	3		1	1		3	2		1	1		2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	13%	1%	0%	6%	0%	11%	0%	0%	5%	4%	2%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	34.3		9.5	34.3		36.5	36.5		36.5	36.5	
Total Split (s)	34.5	65.3		34.5	65.3		34.5	34.5		34.5	34.5	
Total Split (%)	25.7%	48.6%		25.7%	48.6%		25.7%	25.7%		25.7%	25.7%	
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	5.3		4.5	5.3		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	

Intersection Summary

Area Type: Other

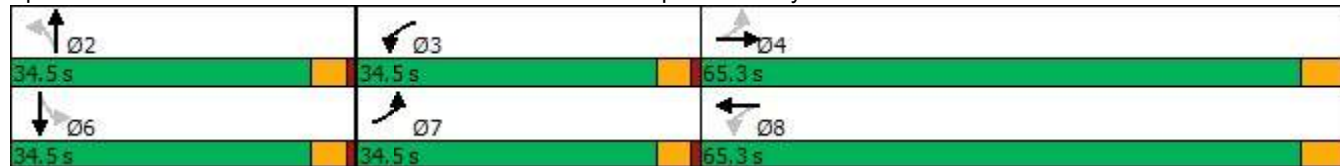
Cycle Length: 134.3

Actuated Cycle Length: 50.3

Natural Cycle: 85

























Control Type: Actuated-Uncoordinated

Splits and Phases: 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	102	325	85	132	417	49	9	6	18	63	28	97
Future Volume (veh/h)	102	325	85	132	417	49	9	6	18	63	28	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1707	1707	1900	1811	1811	1737	1900	1900	1826	1841	1841
Adj Flow Rate, veh/h	115	365	96	148	469	55	10	7	20	71	31	109
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	13	13	0	6	6	11	0	0	5	4	4
Cap, veh/h	589	970	252	623	1215	142	273	70	199	378	57	201
Arrive On Green	0.09	0.38	0.38	0.10	0.39	0.39	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	2546	661	1810	3103	362	1157	433	1238	1346	356	1253
Grp Volume(v), veh/h	115	231	230	148	259	265	10	0	27	71	0	140
Grp Sat Flow(s),veh/h/ln	1781	1622	1585	1810	1721	1744	1157	0	1672	1346	0	1610
Q Serve(g_s), s	1.5	4.1	4.2	1.8	4.3	4.4	0.3	0.0	0.6	1.9	0.0	3.2
Cycle Q Clear(g_c), s	1.5	4.1	4.2	1.8	4.3	4.4	3.5	0.0	0.6	2.5	0.0	3.2
Prop In Lane	1.00		0.42	1.00		0.21	1.00		0.74	1.00		0.78
Lane Grp Cap(c), veh/h	589	618	604	623	674	683	273	0	268	378	0	258
V/C Ratio(X)	0.20	0.37	0.38	0.24	0.38	0.39	0.04	0.00	0.10	0.19	0.00	0.54
Avail Cap(c_a), veh/h	1764	2434	2379	1798	2582	2617	956	0	1254	1171	0	1208
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.2	8.9	9.0	6.1	8.7	8.7	17.1	0.0	14.3	15.4	0.0	15.4
Incr Delay (d2), s/veh	0.2	0.5	0.6	0.2	0.5	0.5	0.1	0.0	0.2	0.2	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.0	1.0	0.4	1.1	1.2	0.1	0.0	0.2	0.5	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.4	9.5	9.5	6.3	9.2	9.2	17.1	0.0	14.5	15.6	0.0	17.2
LnGrp LOS	A	A	A	A	A	A	B	A	B	B	A	B
Approach Vol, veh/h		576			672			37				211
Approach Delay, s/veh		8.9			8.6			15.2				16.7
Approach LOS		A			A			B				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		10.9	8.5	20.5		10.9	8.1	21.0				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		30.0	30.0	60.0		30.0	30.0	60.0				
Max Q Clear Time (g_c+I1), s		5.5	3.8	6.2		5.2	3.5	6.4				
Green Ext Time (p_c), s		0.1	0.4	4.3		1.1	0.3	4.9				
Intersection Summary												
HCM 6th Ctrl Delay				10.0								
HCM 6th LOS				A								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
 9: Snoqualmie Pkwy & Fairway Ave SE

03/06/2020

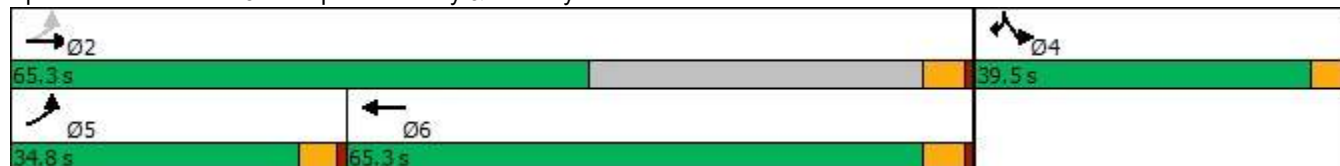


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	31	406	402	115	258	220
Future Volume (vph)	31	406	402	115	258	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	325			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		25	
Link Distance (ft)		1064	278		478	
Travel Time (s)		18.1	4.7		13.0	
Confl. Peds. (#/hr)	2			2		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	8%	9%	3%	11%	3%	1%
Shared Lane Traffic (%)						
Turn Type	pm+pt	NA	NA		Prot	Prot
Protected Phases	5	2	6		4	4
Permitted Phases	2					
Detector Phase	5	2	6		4	4
Switch Phase						
Minimum Initial (s)	5.0	12.0	12.0		5.0	5.0
Minimum Split (s)	9.8	23.3	26.3		36.5	36.5
Total Split (s)	34.8	65.3	65.3		39.5	39.5
Total Split (%)	24.9%	46.8%	46.8%		28.3%	28.3%
Yellow Time (s)	3.8	4.3	4.3		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.8	5.3	5.3		4.5	4.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	None	None		None	None

Intersection Summary

Area Type: Other
 Cycle Length: 139.6
 Actuated Cycle Length: 46
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated

Splits and Phases: 9: Snoqualmie Pkwy & Fairway Ave SE



HCM 6th Signalized Intersection Summary
 9: Snoqualmie Pkwy & Fairway Ave SE























03/06/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	31	406	402	115	258	220
Future Volume (veh/h)	31	406	402	115	258	220
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1767	1856	1856	1856	1885
Adj Flow Rate, veh/h	34	451	447	128	287	204
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	9	3	3	3	1
Cap, veh/h	412	1656	879	250	429	388
Arrive On Green	0.04	0.49	0.32	0.32	0.24	0.24
Sat Flow, veh/h	1697	3445	2801	769	1767	1598
Grp Volume(v), veh/h	34	451	290	285	287	204
Grp Sat Flow(s),veh/h/ln	1697	1678	1763	1714	1767	1598
Q Serve(g_s), s	0.4	2.9	4.9	5.0	5.5	4.1
Cycle Q Clear(g_c), s	0.4	2.9	4.9	5.0	5.5	4.1
Prop In Lane	1.00			0.45	1.00	1.00
Lane Grp Cap(c), veh/h	412	1656	572	556	429	388
V/C Ratio(X)	0.08	0.27	0.51	0.51	0.67	0.53
Avail Cap(c_a), veh/h	1714	5417	2845	2767	1664	1504
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.1	5.5	10.2	10.2	12.7	12.2
Incr Delay (d2), s/veh	0.1	0.1	0.7	0.7	1.8	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.5	1.4	1.4	2.0	3.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.2	5.6	10.8	10.9	14.5	13.3
LnGrp LOS	A	A	B	B	B	B
Approach Vol, veh/h		485	575		491	
Approach Delay, s/veh		5.7	10.9		14.0	
Approach LOS		A	B		B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		23.6		13.5	6.3	17.4
Change Period (Y+Rc), s		5.3		4.5	* 4.8	5.3
Max Green Setting (Gmax), s		60.0		35.0	* 30	60.0
Max Q Clear Time (g_c+I1), s		4.9		7.5	2.4	7.0
Green Ext Time (p_c), s		3.1		1.6	0.1	3.7
Intersection Summary						
HCM 6th Ctrl Delay			10.3			
HCM 6th LOS			B			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

Lanes, Volumes, Timings
 10: Fisher Ave SE & Snoqualmie Pkwy

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (vph)	7	539	6	3	408	19	36	1	8	26	3	32
Future Volume (vph)	7	539	6	3	408	19	36	1	8	26	3	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		458			1686			518			363	
Travel Time (s)		7.8			28.7			14.1			9.9	
Confl. Peds. (#/hr)	2		1	2		3	1		2	3		2
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	0%	7%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕			↕			↕	
Traffic Vol, veh/h	7	539	6	3	408	19	36	1	8	26	3	32
Future Vol, veh/h	7	539	6	3	408	19	36	1	8	26	3	32
Conflicting Peds, #/hr	2	0	1	2	0	3	1	0	2	3	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #-	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	7	0	0	4	0	0	0	0	0	0	0
Mvmt Flow	9	691	8	4	523	24	46	1	10	33	4	41

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	550	0	0	701	0	0	989	1273	355	913	1265	279
Stage 1	-	-	-	-	-	-	715	715	-	546	546	-
Stage 2	-	-	-	-	-	-	274	558	-	367	719	-
Critical Hdwy	4.1	-	-	4.1	-	-	9.5	8.5	7.9	9.5	8.5	7.9
Critical Hdwy Stg 1	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver 1030	-	-	-	905	-	-	118	83	586	139	85	670
Stage 1	-	-	-	-	-	-	264	294	-	365	385	-
Stage 2	-	-	-	-	-	-	614	378	-	514	292	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver1027	-	-	-	903	-	-	105	82	583	133	83	667
Mov Cap-2 Maneuver	-	-	-	-	-	-	105	82	-	133	83	-
Stage 1	-	-	-	-	-	-	261	291	-	361	382	-
Stage 2	-	-	-	-	-	-	567	375	-	497	289	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			58.5			30.5		
HCM LOS							F			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	122	1027	-	-	903	-	-	218
HCM Lane V/C Ratio	0.473	0.009	-	-	0.004	-	-	0.359
HCM Control Delay (s)	58.5	8.5	-	-	9	-	-	30.5
HCM Lane LOS	F	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	2.1	0	-	-	0	-	-	1.5

Lanes, Volumes, Timings
 11: Orchard Ave SE & Snoqualmie Pkwy

03/06/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (vph)	691	9	16	433	25	41
Future Volume (vph)	691	9	16	433	25	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	225		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	1686			1131	557	
Travel Time (s)	28.7			19.3	15.2	
Confl. Peds. (#/hr)		3	1		3	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	7%	11%	7%	6%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Vol, veh/h	691	9	16	433	25	41
Future Vol, veh/h	691	9	16	433	25	41
Conflicting Peds, #/hr	0	3	1	0	3	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	225	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	7	11	7	6	0	5
Mvmt Flow	794	10	18	498	29	47

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	807	0	1090
Stage 1	-	-	-	-	802
Stage 2	-	-	-	-	288
Critical Hdwy	-	-	4.24	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.27	-	3.5
Pot Cap-1 Maneuver	-	-	782	-	213
Stage 1	-	-	-	-	407
Stage 2	-	-	-	-	741
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	780	-	207
Mov Cap-2 Maneuver	-	-	-	-	207
Stage 1	-	-	-	-	406
Stage 2	-	-	-	-	722

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	18.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	346	-	-	780	-
HCM Lane V/C Ratio	0.219	-	-	0.024	-
HCM Control Delay (s)	18.3	-	-	9.7	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-

Lanes, Volumes, Timings
 12: Snoqualmie Pkwy & Allman AveSE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	731	435	4	7	9
Future Volume (vph)	2	731	435	4	7	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		40	40		25	
Link Distance (ft)		679	1187		393	
Travel Time (s)		11.6	20.2		10.7	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	7%	5%	0%	0%	0%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑		↘	
Traffic Vol, veh/h	2	731	435	4	7	9
Future Vol, veh/h	2	731	435	4	7	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #-	0	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	7	5	0	0	0
Mvmt Flow	2	840	500	5	8	10

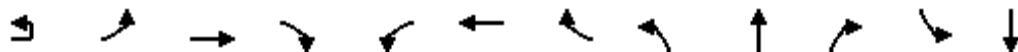
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	505	0	-	0	927 253
Stage 1	-	-	-	-	503 -
Stage 2	-	-	-	-	424 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1070	-	-	-	271 753
Stage 1	-	-	-	-	578 -
Stage 2	-	-	-	-	634 -
Platoon blocked, %	-	-	-	-	
Mov Cap-1 Maneuver	1070	-	-	-	270 753
Mov Cap-2 Maneuver	-	-	-	-	270 -
Stage 1	-	-	-	-	577 -
Stage 2	-	-	-	-	634 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1070	-	-	-	-	422
HCM Lane V/C Ratio	0.002	-	-	-	-	0.044
HCM Control Delay (s)	8.4	-	-	-	-	13.9
HCM Lane LOS	A	-	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	-	0.1

Lanes, Volumes, Timings
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↵		↕↕		↵	↕↕			↕↕			↕↕
Traffic Volume (vph)	0	0	719	27	24	419	0	30	0	18	0	0
Future Volume (vph)	0	0	719	27	24	419	0	30	0	18	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0		0	200		0	0		0	0	
Storage Lanes		1		0	1		0	0		0	0	
Taper Length (ft)		25			25			25			25	
Right Turn on Red				Yes			Yes			Yes		
Link Speed (mph)			40			40			25			25
Link Distance (ft)			1187			833			535			291
Travel Time (s)			20.2			14.2			14.6			7.9
Confl. Peds. (#/hr)		2		1	1		2	1				
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	0%	7%	4%	0%	6%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt		NA		pm+pt	NA		Perm	NA			
Protected Phases	5		2		1	6			8			4
Permitted Phases	2				6			8			4	
Detector Phase	5		2		1	6		8	8		4	4
Switch Phase												
Minimum Initial (s)	5.0		15.0		5.0	14.0		5.0	5.0		30.0	30.0
Minimum Split (s)	10.0		20.0		10.0	29.0		36.0	36.0		36.0	36.0
Total Split (s)	35.0		65.0		35.0	65.0		36.0	36.0		36.0	36.0
Total Split (%)	25.7%		47.8%		25.7%	47.8%		26.5%	26.5%		26.5%	26.5%
Yellow Time (s)	4.0		4.0		4.0	4.0		5.0	5.0		5.0	5.0
All-Red Time (s)	1.0		1.0		1.0	1.0		1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0		5.0		5.0	5.0		6.0	6.0		6.0	6.0
Lead/Lag	Lead		Lag		Lead	Lag						
Lead-Lag Optimize?	Yes		Yes		Yes	Yes						
Recall Mode	Min		Min		None	None		None	None		None	None

Intersection Summary

Area Type: Other

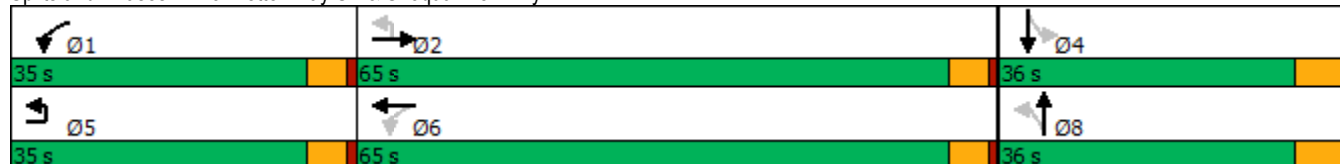
Cycle Length: 136

Actuated Cycle Length: 41

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Splits and Phases: 13: Better Way SE & Snoqualmie Pkwy

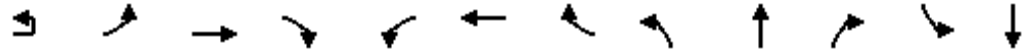




Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	0
Future Volume (vph)	0
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Right Turn on Red	Yes
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	1
Peak Hour Factor	0.85
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	
Intersection Summary	

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↯		↕		↯	↕			↕			↕
Traffic Volume (veh/h)	0	0	719	27	24	419	0	30	0	18	0	0
Future Volume (veh/h)	0	0	719	27	24	419	0	30	0	18	0	0
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach			No			No			No			No
Adj Sat Flow, veh/h/ln		0	1796	1796	1900	1811	1811	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		0	846	32	28	493	0	35	0	21	0	0
Peak Hour Factor		0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %		0	7	7	0	6	6	0	0	0	0	0
Cap, veh/h		0	1463	55	330	2119	0	230	0	36	0	122
Arrive On Green		0.00	0.44	0.44	0.03	0.62	0.00	0.06	0.00	0.06	0.00	0.00
Sat Flow, veh/h		0	3443	127	1810	3532	0	934	0	560	0	1900
Grp Volume(v), veh/h		0	431	447	28	493	0	56	0	0	0	0
Grp Sat Flow(s),veh/h/ln		0	1706	1773	1810	1721	0	1494	0	0	0	1900
Q Serve(g_s), s		0.0	6.5	6.5	0.2	2.2	0.0	1.3	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s		0.0	6.5	6.5	0.2	2.2	0.0	1.3	0.0	0.0	0.0	0.0
Prop In Lane		0.00		0.07	1.00		0.00	0.62		0.37	0.00	
Lane Grp Cap(c), veh/h		0	745	774	330	2119	0	266	0	0	0	122
V/C Ratio(X)		0.00	0.58	0.58	0.08	0.23	0.00	0.21	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h		0	2978	3095	1848	6005	0	1474	0	0	0	1658
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh		0.0	7.3	7.3	7.1	3.0	0.0	15.6	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh		0.0	0.7	0.7	0.1	0.1	0.0	0.4	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.0	1.3	1.4	0.1	0.1	0.0	0.4	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		0.0	8.0	8.0	7.2	3.0	0.0	16.0	0.0	0.0	0.0	0.0
LnGrp LOS		A	A	A	A	A	A	B	A	A	A	A
Approach Vol, veh/h			878			521			56			0
Approach Delay, s/veh			8.0			3.2			16.0			0.0
Approach LOS			A			A			B			
Timer - Assigned Phs	1	2		4		6			8			
Phs Duration (G+Y+Rc), s	6.2	20.0		8.2		26.2			8.2			
Change Period (Y+Rc), s	5.0	5.0		6.0		5.0			6.0			
Max Green Setting (Gmax), s	30.0	60.0		30.0		60.0			30.0			
Max Q Clear Time (g_c+I1), s	2.2	8.5		0.0		4.2			3.3			
Green Ext Time (p_c), s	0.0	6.2		0.0		3.4			0.3			

Intersection Summary

HCM 6th Ctrl Delay	6.6
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
 User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	0
Future Volume (veh/h)	0
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.85
Percent Heavy Veh, %	0
Cap, veh/h	0
Arrive On Green	0.00
Sat Flow, veh/h	0
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	0
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	0.00
Lane Grp Cap(c), veh/h	0
V/C Ratio(X)	0.00
Avail Cap(c_a), veh/h	0
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Lanes, Volumes, Timings
 14: Trail Access Road & Snoqualmie Pkwy

03/06/2020

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↖	
Traffic Volume (vph)	604	1	1	385	1	1
Future Volume (vph)	604	1	1	385	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	646			700	301	
Travel Time (s)	11.0			11.9	8.2	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	7%	0%	0%	5%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Vol, veh/h	604	1	1	385	1	1
Future Vol, veh/h	604	1	1	385	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	7	0	0	5	0	0
Mvmt Flow	774	1	1	494	1	1

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	775	0	1024
Stage 1	-	-	-	-	775
Stage 2	-	-	-	-	249
Critical Hdwy	-	-	4.1	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	850	-	235
Stage 1	-	-	-	-	420
Stage 2	-	-	-	-	775
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	850	-	235
Mov Cap-2 Maneuver	-	-	-	-	235
Stage 1	-	-	-	-	420
Stage 2	-	-	-	-	774

Approach	EB	WB	NB
HCM Control Delay, s	0	0	15.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	340	-	-	850	-
HCM Lane V/C Ratio	0.008	-	-	0.002	-
HCM Control Delay (s)	15.7	-	-	9.2	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
15: SR 202 & Snoqualmie Pkwy

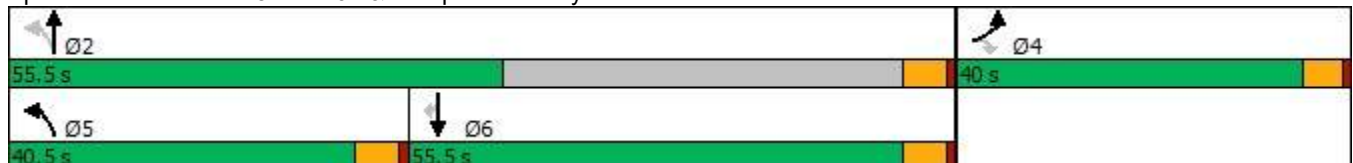
03/06/2020

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	267	345	223	177	249	190
Future Volume (vph)	267	345	223	177	249	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	300			300
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Right Turn on Red		Yes				Yes
Link Speed (mph)	40			45	45	
Link Distance (ft)	700			1127	949	
Travel Time (s)	11.9			17.1	14.4	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	11%	3%	3%	15%	9%	6%
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	5.0	7.0	7.0	7.0
Minimum Split (s)	29.0	29.0	10.5	12.5	35.5	35.5
Total Split (s)	40.0	40.0	40.5	55.5	55.5	55.5
Total Split (%)	29.4%	29.4%	29.8%	40.8%	40.8%	40.8%
Yellow Time (s)	4.0	4.0	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	Min	Min	Min

Intersection Summary













Area Type: Other
 Cycle Length: 136
 Actuated Cycle Length: 80
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated

Splits and Phases: 15: SR 202 & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 15: SR 202 & Snoqualmie Pkwy

03/06/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	267	345	223	177	249	190
Future Volume (veh/h)	267	345	223	177	249	190
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00			1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1737	1856	1856	1678	1767	1811
Adj Flow Rate, veh/h	334	82	279	221	311	-9
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	11	3	3	15	9	6
Cap, veh/h	424	403	521	871	428	372
Arrive On Green	0.26	0.26	0.16	0.52	0.24	0.00
Sat Flow, veh/h	1654	1572	1767	1678	1767	1535
Grp Volume(v), veh/h	334	82	279	221	311	-9
Grp Sat Flow(s),veh/h/ln	1654	1572	1767	1678	1767	1535
Q Serve(g_s), s	8.8	1.9	4.9	3.4	7.6	0.0
Cycle Q Clear(g_c), s	8.8	1.9	4.9	3.4	7.6	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	424	403	521	871	428	372
V/C Ratio(X)	0.79	0.20	0.54	0.25	0.73	-0.02
Avail Cap(c_a), veh/h	1237	1176	1562	1793	1888	1640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	16.2	13.6	9.9	6.2	16.3	0.0
Incr Delay (d2), s/veh	3.3	0.2	0.9	0.2	2.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	1.9	1.3	0.7	2.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.5	13.9	10.8	6.4	18.7	0.0
LnGrp LOS	B	B	B	A	B	A
Approach Vol, veh/h	416			500	302	
Approach Delay, s/veh	18.4			8.8	19.2	
Approach LOS	B			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		29.8		17.0	13.0	16.8
Change Period (Y+Rc), s		5.5		5.0	5.5	5.5
Max Green Setting (Gmax), s		50.0		35.0	35.0	50.0
Max Q Clear Time (g_c+I1), s		5.4		10.8	6.9	9.6
Green Ext Time (p_c), s		1.2		1.3	0.8	1.8
Intersection Summary						
HCM 6th Ctrl Delay			14.7			
HCM 6th LOS			B			

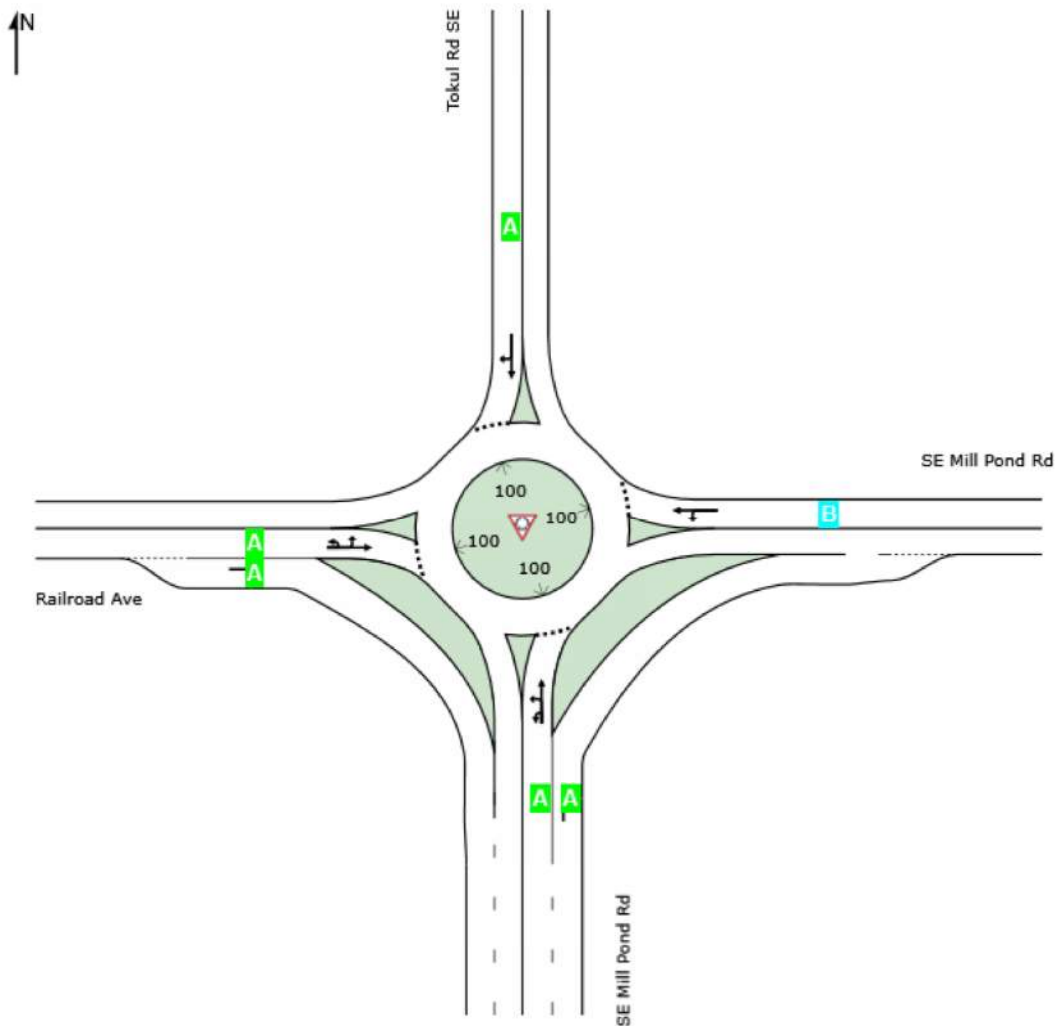
LANE LEVEL OF SERVICE

Lane Level of Service

 **Site: 16 [2032 No Action - AM Peak Hour]**

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	B	A	A	A



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Signalised Intersections.
 Lane LOS values are based on average delay per lane.
 Intersection and Approach LOS values are based on average delay for all lanes.
 SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

LANE SUMMARY

Site: 16 [2032 No Action - AM Peak Hour]

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

Lane Use and Performance													
	Demand Flows			Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue Veh	Queue Dist	Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	Cap. veh/h	v/c	%	sec			ft		ft	%	%
South: SE Mill Pond Rd													
Lane 1 ^d	488	9.4	1474	0.331	100	9.0	LOS A	1.9	50.9	Full	1600	0.0	0.0
Lane 2	32	62.5	1031	0.031	100	4.2	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	520	12.6		0.331		8.7	LOS A	1.9	50.9				
East: SE Mill Pond Rd													
Lane 1 ^d	91	48.5	603	0.150	100	10.8	LOS B	0.7	24.5	Full	1600	0.0	0.0
Approach	91	48.5		0.150		10.8	LOS B	0.7	24.5				
North: Tokul Rd SE													
Lane 1 ^d	29	0.0	952	0.031	100	6.5	LOS A	0.2	4.1	Full	1600	0.0	0.0
Approach	29	0.0		0.031		6.5	LOS A	0.2	4.1				
West: Railroad Ave													
Lane 1 ^d	108	10.1	1500	0.072	100	4.3	LOS A	0.4	9.5	Full	1600	0.0	0.0
Lane 2	482	5.9	1581	0.305	100	3.7	LOS A	0.0	0.0	Short	200	0.0	NA
Approach	591	6.7		0.305		3.8	LOS A	0.4	9.5				
Intersection	1231	12.1		0.331		6.5	LOS A	1.9	50.9				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

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Organisation: TENW | Processed: Tuesday, March 3, 2020 9:33:45 AM

Project: T:\Active Projects\Snoqualmie Mill - 5584\Planning - 5584\LOS\Snoqualmie Mill - Railroad Ave & Tokul Rd & SE Mill Pond Rd

Roundabout.sip8



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	100	4	20	31	3	24
Future Volume (vph)	100	4	20	31	3	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45		35			35
Link Distance (ft)	458		1466			541
Travel Time (s)	6.9		28.6			10.5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	12%	4%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	5.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	100	4	20	31	3	24
Future Vol, veh/h	100	4	20	31	3	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	0	12	4	0	5
Mvmt Flow	105	4	21	33	3	25

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	69	38	0	0	54	0
Stage 1	38	-	-	-	-	-
Stage 2	31	-	-	-	-	-
Critical Hdwy	6.42	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	936	1040	-	-	1564	-
Stage 1	984	-	-	-	-	-
Stage 2	992	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	934	1040	-	-	1564	-
Mov Cap-2 Maneuver	934	-	-	-	-	-
Stage 1	984	-	-	-	-	-
Stage 2	990	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	0.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	938	1564
HCM Lane V/C Ratio	-	-	0.117	0.002
HCM Control Delay (s)	-	-	9.3	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	9	38	98	26	14	72
Future Volume (vph)	9	38	98	26	14	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		40	
Link Distance (ft)		502	1466		916	
Travel Time (s)		9.8	28.6		15.6	
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Heavy Vehicles (%)	13%	6%	2%	4%	8%	3%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	9	38	98	26	14	72
Future Vol, veh/h	9	38	98	26	14	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	69	69	69	69	69	69
Heavy Vehicles, %	13	6	2	4	8	3
Mvmt Flow	13	55	142	38	20	104
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	180	0	0	242	161	
Stage 1	-	-	-	161	-	
Stage 2	-	-	-	81	-	
Critical Hdwy	4.23	-	-	6.48	6.23	
Critical Hdwy Stg 1	-	-	-	5.48	-	
Critical Hdwy Stg 2	-	-	-	5.48	-	
Follow-up Hdwy	2.317	-	-	3.572	3.327	
Pot Cap-1 Maneuver	1332	-	-	733	881	
Stage 1	-	-	-	853	-	
Stage 2	-	-	-	927	-	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	1332	-	-	726	881	
Mov Cap-2 Maneuver	-	-	-	726	-	
Stage 1	-	-	-	844	-	
Stage 2	-	-	-	927	-	
Approach	EB	WB	SB			
HCM Control Delay, s	1.5	0	10			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1332	-	-	-	851	
HCM Lane V/C Ratio	0.01	-	-	-	0.146	
HCM Control Delay (s)	7.7	0	-	-	10	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.5	

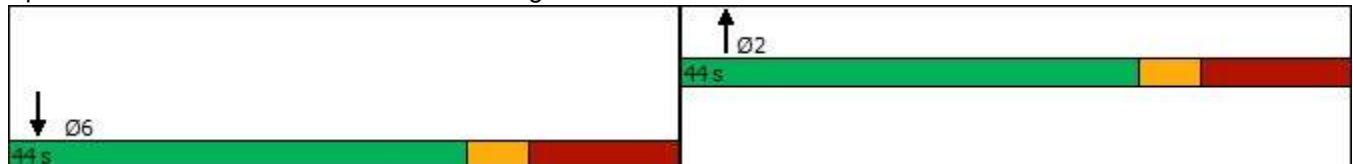


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	47	0	0	170
Future Volume (vph)	0	0	47	0	0	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			30
Link Distance (ft)	150		304			249
Travel Time (s)	3.4		6.9			5.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	7%	0%	0%	3%
Shared Lane Traffic (%)						
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Detector Phase			2			6
Switch Phase						
Minimum Initial (s)			5.0			5.0
Minimum Split (s)			19.0			19.0
Total Split (s)			44.0			44.0
Total Split (%)			50.0%			50.0%
Yellow Time (s)			4.0			4.0
All-Red Time (s)			10.0			10.0
Lost Time Adjust (s)			0.0			0.0
Total Lost Time (s)			14.0			14.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode			None			None

Intersection Summary

Area Type: Other
 Cycle Length: 88
 Actuated Cycle Length: 29.5
 Natural Cycle: 40
 Control Type: Actuated-Uncoordinated

Splits and Phases: 19: Meadowbrook Bridge



HCM Signalized Intersection Capacity Analysis
 19: Meadowbrook Bridge

03/02/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	47	0	0	170
Future Volume (vph)	0	0	47	0	0	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			14.0			14.0
Lane Util. Factor			1.00			1.00
Frt			1.00			1.00
Flt Protected			1.00			1.00
Satd. Flow (prot)			1776			1845
Flt Permitted			1.00			1.00
Satd. Flow (perm)			1776			1845
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	51	0	0	185
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	51	0	0	185
Heavy Vehicles (%)	0%	0%	7%	0%	0%	3%
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Actuated Green, G (s)			1.8			5.0
Effective Green, g (s)			1.8			5.0
Actuated g/C Ratio			0.05			0.14
Clearance Time (s)			14.0			14.0
Vehicle Extension (s)			2.0			2.0
Lane Grp Cap (vph)			91			265
v/s Ratio Prot			c0.03			c0.10
v/s Ratio Perm						
v/c Ratio			0.56			0.70
Uniform Delay, d1			16.1			14.2
Progression Factor			1.00			1.00
Incremental Delay, d2			4.6			6.3
Delay (s)			20.7			20.5
Level of Service			C			C
Approach Delay (s)	0.0		20.7			20.5
Approach LOS	A		C			C
Intersection Summary						
HCM 2000 Control Delay			20.6		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.66			
Actuated Cycle Length (s)			34.8		Sum of lost time (s)	28.0
Intersection Capacity Utilization			20.6%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Lanes, Volumes, Timings
 20: Meadowbrook Way SE & SE Park St

03/12/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	122	10	48	62	20	4	21	65	33	46	12
Future Volume (vph)	7	122	10	48	62	20	4	21	65	33	46	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		505			663			790			216	
Travel Time (s)		13.8			18.1			21.5			5.9	
Confl. Peds. (#/hr)	5		1			4	1			4		5
Peak Hour Factor	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Heavy Vehicles (%)	0%	7%	11%	10%	11%	0%	0%	6%	5%	3%	5%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	122	10	48	62	20	4	21	65	33	46	12
Future Vol, veh/h	7	122	10	48	62	20	4	21	65	33	46	12
Peak Hour Factor	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Heavy Vehicles, %	0	7	11	10	11	0	0	6	5	3	5	0
Mvmt Flow	14	249	20	98	127	41	8	43	133	67	94	24
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	12.3			12.4			10.4			11.3		
HCM LOS	B			B			B			B		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %		4%	5%	37%
Vol Thru, %		23%	88%	48%
Vol Right, %		72%	7%	15%
Sign Control		Stop	Stop	Stop
Traffic Vol by Lane		90	139	130
LT Vol		4	7	48
Through Vol		21	122	62
RT Vol		65	10	20
Lane Flow Rate		184	284	265
Geometry Grp		1	1	1
Degree of Util (X)		0.272	0.421	0.409
Departure Headway (Hd)		5.322	5.349	5.55
Convergence, Y/N		Yes	Yes	Yes
Cap		672	672	647
Service Time		3.38	3.4	3.601
HCM Lane V/C Ratio		0.274	0.423	0.41
HCM Control Delay		10.4	12.3	12.4
HCM Lane LOS		B	B	B
HCM 95th-tile Q		1.1	2.1	2

Lanes, Volumes, Timings
 21: Meadowbrook Way SE & SR 202

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	283	44	10	175	20	25	43	22	13	55	9
Future Volume (vph)	14	283	44	10	175	20	25	43	22	13	55	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	150		0	0		0	200		0
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			50			35				25
Link Distance (ft)		634			518			738				663
Travel Time (s)		14.4			7.1			14.4				18.1
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles (%)	8%	9%	0%	0%	9%	0%	0%	3%	0%	0%	4%	38%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2			6		6	8			4		
Detector Phase	2	2		6	6	6	8	8		4		4
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	5.0	5.0		5.0		5.0
Minimum Split (s)	33.3	33.3		30.3	30.3	30.3	32.8	32.8		32.8		32.8
Total Split (s)	71.3	71.3		71.3	71.3	71.3	40.8	40.8		40.8		40.8
Total Split (%)	63.6%	63.6%		63.6%	63.6%	63.6%	36.4%	36.4%		36.4%		36.4%
Yellow Time (s)	4.3	4.3		4.3	4.3	4.3	3.8	3.8		3.8		3.8
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0		2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	6.3	6.3		6.3		6.3		5.8		5.8		5.8
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Min	Min		Min	Min	Min	None	None		None		None

Intersection Summary

Area Type: Other

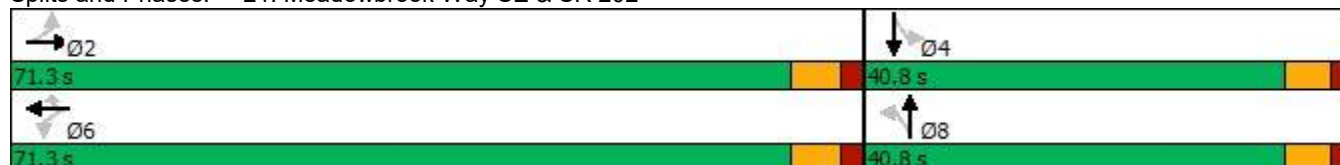
Cycle Length: 112.1

Actuated Cycle Length: 91.6

Natural Cycle: 70





















Control Type: Actuated-Uncoordinated

Splits and Phases: 21: Meadowbrook Way SE & SR 202



HCM 6th Signalized Intersection Summary
 21: Meadowbrook Way SE & SR 202

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	283	44	10	175	20	25	43	22	13	55	9
Future Volume (veh/h)	14	283	44	10	175	20	25	43	22	13	55	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1767	1767	1900	1900	1900	1856	1856	1856	1900	1841	1841
Adj Flow Rate, veh/h	19	382	59	14	236	27	34	58	30	18	74	12
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Percent Heavy Veh, %	8	9	9	0	0	0	3	3	3	0	4	4
Cap, veh/h	703	626	97	469	0	675	211	121	55	493	229	37
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1063	1494	231	963	0	1610	316	814	369	1330	1545	251
Grp Volume(v), veh/h	19	0	441	14	0	27	122	0	0	18	0	86
Grp Sat Flow(s),veh/h/ln	1063	0	1725	963	0	1610	1499	0	0	1330	0	1796
Q Serve(g_s), s	0.3	0.0	5.6	0.3	0.0	0.3	1.0	0.0	0.0	0.0	0.0	1.2
Cycle Q Clear(g_c), s	0.3	0.0	5.6	5.9	0.0	0.3	2.2	0.0	0.0	0.2	0.0	1.2
Prop In Lane	1.00		0.13	1.00		1.00	0.28		0.25	1.00		0.14
Lane Grp Cap(c), veh/h	703	0	723	469	0	675	387	0	0	493	0	266
V/C Ratio(X)	0.03	0.00	0.61	0.03	0.00	0.04	0.32	0.00	0.00	0.04	0.00	0.32
Avail Cap(c_a), veh/h	2731	0	4013	2306	0	3746	2149	0	0	1962	0	2249
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.8	0.0	6.3	8.6	0.0	4.8	11.1	0.0	0.0	10.2	0.0	10.7
Incr Delay (d2), s/veh	0.0	0.0	1.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	1.2	0.0	0.0	0.0	0.5	0.0	0.0	0.1	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.8	0.0	7.3	8.7	0.0	4.8	11.5	0.0	0.0	10.3	0.0	11.4
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	B
Approach Vol, veh/h		460			41			122			104	
Approach Delay, s/veh		7.2			6.1			11.5			11.2	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		18.0		9.9		18.0		9.9				
Change Period (Y+Rc), s		6.3		* 5.8		6.3		* 5.8				
Max Green Setting (Gmax), s		65.0		* 35		65.0		* 35				
Max Q Clear Time (g_c+I1), s		7.6		3.2		7.9		4.2				
Green Ext Time (p_c), s		4.1		0.5		0.2		0.7				
Intersection Summary												
HCM 6th Ctrl Delay				8.5								
HCM 6th LOS				A								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 22: Meadowbrook Way SE & 384th Ave SE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	45	104	255	16	32	172
Future Volume (vph)	45	104	255	16	32	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		25	
Link Distance (ft)		158	180		181	
Travel Time (s)		3.1	3.5		4.9	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	3%	3%	1%	0%	0%	3%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	5.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	45	104	255	16	32	172
Future Vol, veh/h	45	104	255	16	32	172
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	3	3	1	0	0	3
Mvmt Flow	55	127	311	20	39	210

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	331	0	-	0	558 321
Stage 1	-	-	-	-	321 -
Stage 2	-	-	-	-	237 -
Critical Hdwy	4.13	-	-	-	6.4 6.23
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.227	-	-	-	3.5 3.327
Pot Cap-1 Maneuver	1223	-	-	-	494 718
Stage 1	-	-	-	-	740 -
Stage 2	-	-	-	-	807 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1223	-	-	-	470 718
Mov Cap-2 Maneuver	-	-	-	-	470 -
Stage 1	-	-	-	-	704 -
Stage 2	-	-	-	-	807 -

Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	13.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1223	-	-	-	-	663
HCM Lane V/C Ratio	0.045	-	-	-	-	0.375
HCM Control Delay (s)	8.1	0	-	-	-	13.7
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	-	1.7

Lanes, Volumes, Timings
 23: SE North Bend Way & Meadowbrook Way SE

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	34	393	211	25	124	62
Future Volume (vph)	34	393	211	25	124	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	450	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Link Speed (mph)	35		50			50
Link Distance (ft)	158		253			593
Travel Time (s)	3.1		3.5			8.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	2%	4%	5%	3%	13%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary
 Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↘	↑	↘	↘	↑
Traffic Vol, veh/h	34	393	211	25	124	62
Future Vol, veh/h	34	393	211	25	124	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	Free	-	None
Storage Length	0	0	-	0	450	-
Veh in Median Storage, #1	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	7	2	4	5	3	13
Mvmt Flow	37	427	229	27	135	67

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	566	-	0	-	229
Stage 1	229	-	-	-	-
Stage 2	337	-	-	-	-
Critical Hdwy	6.47	-	-	-	4.13
Critical Hdwy Stg 1	5.47	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-
Follow-up Hdwy	3.563	-	-	-	2.227
Pot Cap-1 Maneuver	477	0	-	0	1333
Stage 1	797	0	-	0	-
Stage 2	712	0	-	0	-
Platoon blocked, %			-		-
Mov Cap-1 Maneuver	429	-	-	-	1333
Mov Cap-2 Maneuver	514	-	-	-	-
Stage 1	797	-	-	-	-
Stage 2	640	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.5	0	5.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn	WBLn2	SBL	SBT
Capacity (veh/h)	-	514	-	1333
HCM Lane V/C Ratio	-	0.072	-	0.101
HCM Control Delay (s)	-	12.5	0	8
HCM Lane LOS	-	B	A	A
HCM 95th %tile Q(veh)	-	0.2	-	0.3

Lanes, Volumes, Timings
1: SR-18 & I-90 EB Ramps

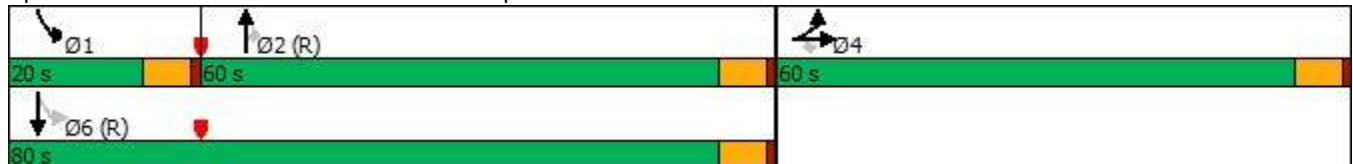
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	808	2	764	0	0	0	0	196	440	106	776	0
Future Volume (vph)	808	2	764	0	0	0	0	196	440	106	776	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650		0	0		0	0		300	200		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			45				30
Link Distance (ft)		833			764			1837				778
Travel Time (s)		16.2			14.9			27.8				17.7
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	1%	0%	4%	0%	0%	0%	0%	3%	27%	2%	13%	0%
Shared Lane Traffic (%)	50%											
Turn Type	Split	NA	Perm					NA	Perm	pm+pt	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			4						2	6		
Detector Phase	4	4	4					2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					10.0	10.0	3.0	10.0	
Minimum Split (s)	29.0	29.0	29.0					16.0	16.0	9.0	23.0	
Total Split (s)	60.0	60.0	60.0					60.0	60.0	20.0	80.0	
Total Split (%)	42.9%	42.9%	42.9%					42.9%	42.9%	14.3%	57.1%	
Yellow Time (s)	5.0	5.0	5.0					5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0	1.0					1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0					6.0	6.0	6.0	6.0	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None					C-Min	C-Min	None	C-Min	

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated

Splits and Phases: 1: SR-18 & I-90 EB Ramps



HCM 6th Signalized Intersection Summary

1: SR-18 & I-90 EB Ramps

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	808	2	764	0	0	0	0	196	440	106	776	0
Future Volume (veh/h)	808	2	764	0	0	0	0	196	440	106	776	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00		1.00				1.00		1.00	1.00		1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1841				0	1856	1500	1870	1707	0
Adj Flow Rate, veh/h	834	0	0				0	202	0	109	800	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	0	4				0	3	27	2	13	0
Cap, veh/h	1143	0					0	947		660	1934	0
Arrive On Green	0.32	0.00	0.00				0.00	0.51	0.00	0.04	0.60	0.00
Sat Flow, veh/h	3591	0	1560				0	1856	1271	1781	3329	0
Grp Volume(v), veh/h	834	0	0				0	202	0	109	800	0
Grp Sat Flow(s),veh/h/ln	1795	0	1560				0	1856	1271	1781	1622	0
Q Serve(g_s), s	28.9	0.0	0.0				0.0	8.4	0.0	3.9	18.5	0.0
Cycle Q Clear(g_c), s	28.9	0.0	0.0				0.0	8.4	0.0	3.9	18.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1143	0					0	947		660	1934	0
V/C Ratio(X)	0.73	0.00					0.00	0.21		0.17	0.41	0.00
Avail Cap(c_a), veh/h	1385	0					0	947		761	1934	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				0.00	1.00	0.00	0.62	0.62	0.00
Uniform Delay (d), s/veh	42.4	0.0	0.0				0.0	18.8	0.0	14.4	15.2	0.0
Incr Delay (d2), s/veh	4.1	0.0	0.0				0.0	0.5	0.0	0.1	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.4	0.0	0.0				0.0	3.6	0.0	1.6	6.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.5	0.0	0.0				0.0	19.3	0.0	14.4	15.6	0.0
LnGrp LOS	D	A					A	B		B	B	A
Approach Vol, veh/h		834	A					202	A		909	
Approach Delay, s/veh		46.5						19.3			15.4	
Approach LOS		D						B			B	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	12.0	77.5		50.6				89.4				
Change Period (Y+Rc), s	6.0	6.0		6.0				6.0				
Max Green Setting (Gmax), s	14.0	54.0		54.0				74.0				
Max Q Clear Time (g_c+I1), s	5.9	10.4		30.9				20.5				
Green Ext Time (p_c), s	0.1	1.3		13.7				8.6				
Intersection Summary												
HCM 6th Ctrl Delay			29.2									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

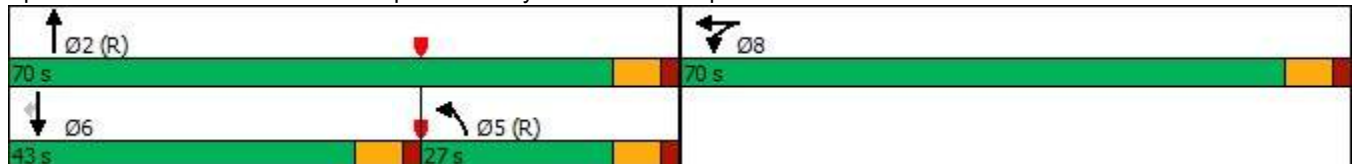
03/06/2020

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group												
Lane Configurations				↖	↕		↖	↕			↕	↖
Traffic Volume (vph)	0	0	0	455	2	72	105	1037	0	0	334	490
Future Volume (vph)	0	0	0	455	2	72	105	1037	0	0	334	490
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	0		0
Storage Lanes	0		0	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30				30
Link Distance (ft)		893			705			778				878
Travel Time (s)		17.4			13.7			17.7				20.0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	20%	100%	3%	0%	1%	0%	0%	3%	1%
Shared Lane Traffic (%)				41%								
Turn Type				Split	NA		Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases												6
Detector Phase				8	8		5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	7.0			7.0	7.0
Minimum Split (s)				12.0	12.0		12.0	14.0			24.0	24.0
Total Split (s)				70.0	70.0		27.0	70.0			43.0	43.0
Total Split (%)				50.0%	50.0%		19.3%	50.0%			30.7%	30.7%
Yellow Time (s)				5.0	5.0		5.0	5.0			5.0	5.0
All-Red Time (s)				2.0	2.0		2.0	2.0			2.0	2.0
Lost Time Adjust (s)				0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)				7.0	7.0		7.0	7.0			7.0	7.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None		C-Max	C-Min			None	None

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 53 (38%), Referenced to phase 2:NBT and 5:NBL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps





















HCM 6th Signalized Intersection Summary
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	455	2	72	105	1037	0	0	334	490
Future Volume (veh/h)	0	0	0	455	2	72	105	1037	0	0	334	490
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1604	418	1604	1900	1885	0	0	1856	1885
Adj Flow Rate, veh/h				539	0	0	108	1069	0	0	344	0
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				20	100	20	0	1	0	0	3	1
Cap, veh/h				701	96	0	213	2401	0	0	933	
Arrive On Green				0.23	0.00	0.00	0.08	0.45	0.00	0.00	0.50	0.00
Sat Flow, veh/h				3054	418	0	1810	3676	0	0	1856	1598
Grp Volume(v), veh/h				539	0	0	108	1069	0	0	344	0
Grp Sat Flow(s),veh/h/ln				1527	418	0	1810	1791	0	0	1856	1598
Q Serve(g_s), s				23.1	0.0	0.0	8.0	28.8	0.0	0.0	15.8	0.0
Cycle Q Clear(g_c), s				23.1	0.0	0.0	8.0	28.8	0.0	0.0	15.8	0.0
Prop In Lane				1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				701	96	0	213	2401	0	0	933	
V/C Ratio(X)				0.77	0.00	0.00	0.51	0.45	0.00	0.00	0.37	
Avail Cap(c_a), veh/h				1375	188	0	259	2401	0	0	933	
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	0.00	0.89	0.89	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				50.4	0.0	0.0	60.6	20.6	0.0	0.0	21.2	0.0
Incr Delay (d2), s/veh				6.3	0.0	0.0	2.0	0.5	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				9.4	0.0	0.0	3.9	13.2	0.0	0.0	7.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				56.8	0.0	0.0	62.6	21.2	0.0	0.0	21.6	0.0
LnGrp LOS				E	A	A	E	C	A	A	C	
Approach Vol, veh/h					539			1177			344	A
Approach Delay, s/veh					56.8			25.0			21.6	
Approach LOS					E			C			C	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		100.9			23.4	77.4		39.1				
Change Period (Y+Rc), s		7.0			7.0	7.0		7.0				
Max Green Setting (Gmax), s		63.0			20.0	36.0		63.0				
Max Q Clear Time (g_c+I1), s		30.8			10.0	17.8		25.1				
Green Ext Time (p_c), s		13.2			0.2	2.7		7.0				
Intersection Summary												
HCM 6th Ctrl Delay				32.7								
HCM 6th LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 3: Snoqualmie Pkwy & SE 99th St

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	0	40	1	0	2	7	1159	0	0	756	10
Future Volume (vph)	14	0	40	1	0	2	7	1159	0	0	756	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	0		0	0		0	125		0	25		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		989			884			878			457	
Travel Time (s)		27.0			24.1			20.0			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	3%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕	↕		↕	↕
Traffic Vol, veh/h	14	0	40	1	0	2	7	1159	0	0	756	10
Future Vol, veh/h	14	0	40	1	0	2	7	1159	0	0	756	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	25	-	-
Veh in Median Storage, #-	0	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	3	0
Mvmt Flow	15	0	42	1	0	2	7	1220	0	0	796	11

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	1426	2036	404	1632	2041	610	807	0	0	1220	0	0
Stage 1	802	802	-	1234	1234	-	-	-	-	-	-	-
Stage 2	624	1234	-	398	807	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	97	58	602	68	57	442	827	-	-	579	-	-
Stage 1	348	399	-	190	251	-	-	-	-	-	-	-
Stage 2	445	251	-	605	397	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	96	58	602	63	57	442	827	-	-	579	-	-
Mov Cap-2 Maneuver	96	58	-	63	57	-	-	-	-	-	-	-
Stage 1	345	399	-	188	249	-	-	-	-	-	-	-
Stage 2	439	249	-	563	397	-	-	-	-	-	-	-

Approach	EB		WB			NB		SB		
HCM Control Delay, s	23.2		30			0.1		0		
HCM LOS	C		D							

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	827	-	-	254	147	579	-
HCM Lane V/C Ratio	0.009	-	-	0.224	0.021	-	-
HCM Control Delay (s)	9.4	-	-	23.2	30	0	-
HCM Lane LOS	A	-	-	C	D	A	-
HCM 95th %tile Q(veh)	0	-	-	0.8	0.1	0	-

Lanes, Volumes, Timings
 4: Snoqualmie Pkwy & SE 96th St

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	26	64	1025	47	41	736
Future Volume (vph)	26	64	1025	47	41	736
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Link Speed (mph)	30		40			40
Link Distance (ft)	346		677			718
Travel Time (s)	7.9		11.5			12.2
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	2%	0%	0%	3%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary
 Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	64	1025	47	41	736
Future Vol, veh/h	26	64	1025	47	41	736
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #1	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	2	0	0	3
Mvmt Flow	30	73	1165	53	47	836

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1704	609	0	0	1218
Stage 1	1192	-	-	-	-
Stage 2	512	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	84	443	-	-	580
Stage 1	255	-	-	-	-
Stage 2	572	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	77	443	-	-	580
Mov Cap-2 Maneuver	187	-	-	-	-
Stage 1	255	-	-	-	-
Stage 2	526	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.5	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	187	443	580	-
HCM Lane V/C Ratio	-	-	0.158	0.164	0.08	-
HCM Control Delay (s)	-	-	27.8	14.7	11.7	-
HCM Lane LOS	-	-	D	B	B	-
HCM 95th %tile Q(veh)	-	-	0.5	0.6	0.3	-

Lanes, Volumes, Timings
5: Snoqualmie Pkwy & SE Jacobia St

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	8	66	31	1	47	113	942	88	69	649	19
Future Volume (vph)	19	8	66	31	1	47	113	942	88	69	649	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	250		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		653			474			718			617	
Travel Time (s)		17.8			12.9			12.2			10.5	
Confl. Peds. (#/hr)	2		2	2		2	1					1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	0%	2%	0%	2%	3%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	15.0		5.0	16.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		10.5	22.5		10.5	22.5	
Total Split (s)	25.0	25.0		40.0	40.0		15.5	65.5		15.5	65.5	
Total Split (%)	20.7%	20.7%		33.1%	33.1%		12.8%	54.1%		12.8%	54.1%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.5	4.5		4.5	4.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.5	5.5		5.5	5.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other

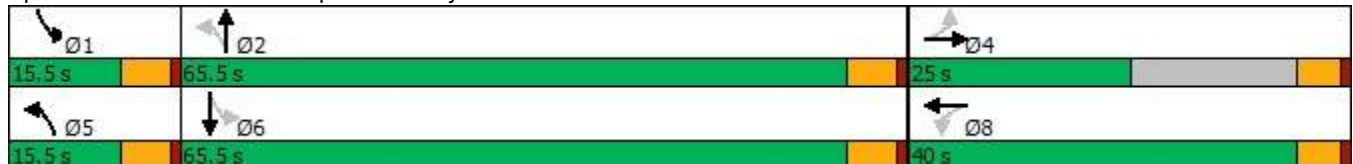
Cycle Length: 121

Actuated Cycle Length: 61.9

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Snoqualmie Pkwy & SE Jacobia St



HCM 6th Signalized Intersection Summary
 5: Snoqualmie Pkwy & SE Jacobia St

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	8	66	31	1	47	113	942	88	69	649	19
Future Volume (veh/h)	19	8	66	31	1	47	113	942	88	69	649	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1870	1870	1870	1856	1856
Adj Flow Rate, veh/h	20	9	70	33	1	50	120	1002	94	73	690	20
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	2	2	2	3	3
Cap, veh/h	262	22	172	238	4	187	559	1675	157	402	1726	50
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.08	0.51	0.51	0.06	0.49	0.49
Sat Flow, veh/h	1369	186	1445	1336	32	1575	1810	3283	308	1781	3499	101
Grp Volume(v), veh/h	20	0	79	33	0	51	120	542	554	73	348	362
Grp Sat Flow(s),veh/h/ln	1369	0	1631	1336	0	1607	1810	1777	1815	1781	1763	1837
Q Serve(g_s), s	0.7	0.0	2.3	1.2	0.0	1.5	1.6	11.2	11.2	1.0	6.5	6.5
Cycle Q Clear(g_c), s	2.2	0.0	2.3	3.5	0.0	1.5	1.6	11.2	11.2	1.0	6.5	6.5
Prop In Lane	1.00		0.89	1.00		0.98	1.00		0.17	1.00		0.06
Lane Grp Cap(c), veh/h	262	0	194	238	0	191	559	906	925	402	870	907
V/C Ratio(X)	0.08	0.00	0.41	0.14	0.00	0.27	0.21	0.60	0.60	0.18	0.40	0.40
Avail Cap(c_a), veh/h	627	0	629	980	0	1084	764	2055	2098	634	2038	2125
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.8	0.0	21.2	22.8	0.0	20.8	5.6	9.0	9.0	6.5	8.3	8.3
Incr Delay (d2), s/veh	0.1	0.0	1.4	0.3	0.0	0.7	0.1	0.9	0.9	0.1	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.9	0.4	0.0	0.6	0.4	3.1	3.2	0.2	1.8	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.9	0.0	22.5	23.1	0.0	21.5	5.6	9.9	9.9	6.6	8.7	8.7
LnGrp LOS	C	A	C	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		99			84			1216			783	
Approach Delay, s/veh		22.4			22.1			9.4			8.5	
Approach LOS		C			C			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	32.0		11.2	9.6	31.1		11.2				
Change Period (Y+Rc), s	5.5	5.5		5.0	5.5	5.5		5.0				
Max Green Setting (Gmax), s	10.0	60.0		20.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	3.0	13.2		4.3	3.6	8.5		5.5				
Green Ext Time (p_c), s	0.0	13.3		0.4	0.1	7.1		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				10.2								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
6: Snoqualmie Pkwy & SE Swenson Dr

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	16	27	20	10	63	35	839	41	92	754	86
Future Volume (vph)	89	16	27	20	10	63	35	839	41	92	754	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	275		0	300		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			No
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		456			320			2254			367	
Travel Time (s)		10.4			7.3			38.4			6.3	
Confl. Peds. (#/hr)			2			9	2					2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%	0%	2%	0%	0%	3%	3%
Shared Lane Traffic (%)												
Turn Type	Split	NA		Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		10.0	10.0		5.0	12.0		5.0	12.0	
Minimum Split (s)	38.0	38.0		38.0	38.0		12.0	28.0		12.0	28.0	
Total Split (s)	15.0	15.0		20.0	20.0		37.0	67.0		37.0	67.0	
Total Split (%)	10.8%	10.8%		14.4%	14.4%		26.6%	48.2%		26.6%	48.2%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		7.0	7.0		7.0	7.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other

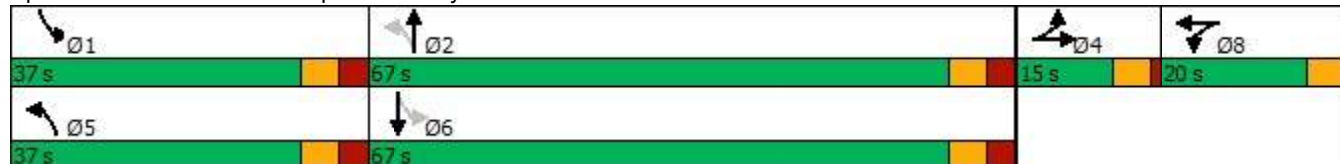
Cycle Length: 139

Actuated Cycle Length: 80.6

Natural Cycle: 120






















Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Snoqualmie Pkwy & SE Swenson Dr



HCM 6th Signalized Intersection Summary
6: Snoqualmie Pkwy & SE Swenson Dr

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	16	27	20	10	63	35	839	41	92	754	86
Future Volume (veh/h)	89	16	27	20	10	63	35	839	41	92	754	86
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1900	1900	1900	1900	1900	1870	1870	1900	1856	1856
Adj Flow Rate, veh/h	96	17	29	22	11	68	38	902	44	99	811	92
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	0	0	0	0	0	0	2	2	0	3	3
Cap, veh/h	164	58	98	261	33	201	250	1024	50	271	1037	118
Arrive On Green	0.09	0.09	0.09	0.14	0.14	0.14	0.04	0.30	0.30	0.07	0.33	0.33
Sat Flow, veh/h	1781	628	1071	1810	226	1396	1810	3448	168	1810	3190	362
Grp Volume(v), veh/h	96	0	46	22	0	79	38	465	481	99	448	455
Grp Sat Flow(s),veh/h/ln	1781	0	1700	1810	0	1622	1810	1777	1839	1810	1763	1789
Q Serve(g_s), s	3.1	0.0	1.5	0.6	0.0	2.6	0.9	15.0	15.0	2.2	13.8	13.8
Cycle Q Clear(g_c), s	3.1	0.0	1.5	0.6	0.0	2.6	0.9	15.0	15.0	2.2	13.8	13.8
Prop In Lane	1.00		0.63	1.00		0.86	1.00		0.09	1.00		0.20
Lane Grp Cap(c), veh/h	164	0	156	261	0	234	250	528	546	271	573	582
V/C Ratio(X)	0.59	0.00	0.29	0.08	0.00	0.34	0.15	0.88	0.88	0.37	0.78	0.78
Avail Cap(c_a), veh/h	297	0	283	452	0	405	1084	1776	1838	1053	1762	1788
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.2	0.0	25.4	22.3	0.0	23.1	14.8	20.1	20.1	15.1	18.3	18.3
Incr Delay (d2), s/veh	1.2	0.0	0.4	0.1	0.0	0.3	0.1	1.9	1.9	0.3	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.6	0.3	0.0	1.0	0.3	5.6	5.8	0.8	4.9	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.4	0.0	25.8	22.3	0.0	23.4	14.9	22.0	22.0	15.4	19.2	19.2
LnGrp LOS	C	A	C	C	A	C	B	C	C	B	B	B
Approach Vol, veh/h		142			101			984			1002	
Approach Delay, s/veh		26.9			23.2			21.7			18.8	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	24.8		10.5	9.3	26.5		13.6				
Change Period (Y+Rc), s	7.0	7.0		5.0	7.0	7.0		5.0				
Max Green Setting (Gmax), s	30.0	60.0		10.0	30.0	60.0		15.0				
Max Q Clear Time (g_c+I1), s	4.2	17.0		5.1	2.9	15.8		4.6				
Green Ext Time (p_c), s	0.0	0.8		0.0	0.0	0.8		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			20.8									
HCM 6th LOS			C									
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings

7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	316	604	133	48	500	63	253	58	83	77	23	137
Future Volume (vph)	316	604	133	48	500	63	253	58	83	77	23	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	175		0	0		150	0		100
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1285			1065			585			583	
Travel Time (s)		21.9			18.2			16.0			15.9	
Confl. Peds. (#/hr)	5					5						3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	1%	1%	2%	0%	2%	0%	2%	0%	0%	6%	0%	2%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4			8					2			6
Detector Phase	7	4		3	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	35.3		9.5	30.3		36.5	36.5	36.5	36.5	36.5	36.5
Total Split (s)	34.5	55.3		14.5	55.3		44.5	44.5	44.5	44.5	44.5	44.5
Total Split (%)	19.3%	30.9%		8.1%	30.9%		24.9%	24.9%	24.9%	24.9%	24.9%	24.9%
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.3		4.5	5.3			4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None	None	None	None	None

Intersection Summary

Area Type: Other

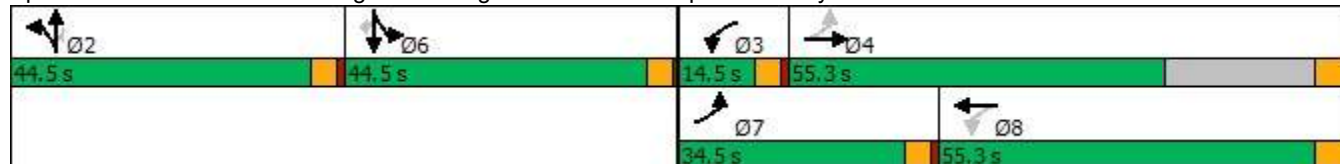
Cycle Length: 178.8

Actuated Cycle Length: 111.7

Natural Cycle: 120























Control Type: Actuated-Uncoordinated

Splits and Phases: 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	316	604	133	48	500	63	253	58	83	77	23	137
Future Volume (veh/h)	316	604	133	48	500	63	253	58	83	77	23	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1870	1870	1900	1900	1900	1900	1900	1870
Adj Flow Rate, veh/h	326	623	137	49	515	65	261	60	33	79	24	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	0	2	2	0	0	0	0	0	2
Cap, veh/h	487	1092	240	327	808	102	335	77	363	126	38	143
Arrive On Green	0.16	0.37	0.37	0.04	0.25	0.25	0.23	0.23	0.23	0.09	0.09	0.00
Sat Flow, veh/h	1795	2916	640	1810	3172	399	1485	341	1610	1403	426	1585
Grp Volume(v), veh/h	326	382	378	49	288	292	321	0	33	103	0	0
Grp Sat Flow(s),veh/h/ln	1795	1791	1765	1810	1777	1794	1826	0	1610	1830	0	1585
Q Serve(g_s), s	8.7	12.0	12.0	1.4	10.2	10.2	11.7	0.0	1.1	3.8	0.0	0.0
Cycle Q Clear(g_c), s	8.7	12.0	12.0	1.4	10.2	10.2	11.7	0.0	1.1	3.8	0.0	0.0
Prop In Lane	1.00		0.36	1.00		0.22	0.81		1.00	0.77		1.00
Lane Grp Cap(c), veh/h	487	671	661	327	453	457	411	0	363	165	0	143
V/C Ratio(X)	0.67	0.57	0.57	0.15	0.64	0.64	0.78	0.00	0.09	0.63	0.00	0.00
Avail Cap(c_a), veh/h	957	1269	1251	504	1259	1271	1035	0	913	1037	0	898
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.9	17.6	17.6	17.9	23.4	23.4	25.7	0.0	21.6	31.0	0.0	0.0
Incr Delay (d2), s/veh	1.6	1.1	1.1	0.2	2.1	2.1	3.2	0.0	0.1	3.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	4.5	4.5	0.5	4.1	4.2	5.2	0.0	0.4	1.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.5	18.6	18.7	18.2	25.5	25.5	28.9	0.0	21.7	34.8	0.0	0.0
LnGrp LOS	B	B	B	B	C	C	C	A	C	C	A	A
Approach Vol, veh/h		1086			629			354			103	
Approach Delay, s/veh		18.0			24.9			28.3			34.8	
Approach LOS		B			C			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		20.4	7.6	31.7		10.9	16.0	23.3				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		40.0	10.0	50.0		40.0	30.0	50.0				
Max Q Clear Time (g_c+I1), s		13.7	3.4	14.0		5.8	10.7	12.2				
Green Ext Time (p_c), s		2.3	0.0	7.5		0.6	0.9	5.4				
Intersection Summary												
HCM 6th Ctrl Delay				22.5								
HCM 6th LOS				C								

Lanes, Volumes, Timings

8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	226	539	43	110	388	74	97	42	115	96	49	129
Future Volume (vph)	226	539	43	110	388	74	97	42	115	96	49	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	275		0	275		0	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1065			1064			511			626	
Travel Time (s)		18.2			18.1			13.9			17.1	
Confl. Peds. (#/hr)	1					1	7		3	3		7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	3%	0%	3%	0%	0%	0%	1%	0%	0%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2				6
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		2	2		6		6
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		5.0		5.0
Minimum Split (s)	9.5	34.3		9.5	34.3		36.5	36.5		36.5		36.5
Total Split (s)	34.5	65.3		34.5	65.3		34.5	34.5		34.5		34.5
Total Split (%)	25.7%	48.6%		25.7%	48.6%		25.7%	25.7%		25.7%		25.7%
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5		3.5		3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0		1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Total Lost Time (s)	4.5	5.3		4.5	5.3		4.5	4.5		4.5		4.5
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None		None

Intersection Summary

Area Type: Other

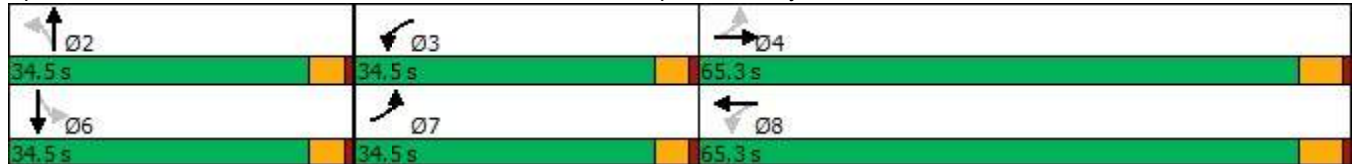
Cycle Length: 134.3

Actuated Cycle Length: 58.6

Natural Cycle: 85

























Control Type: Actuated-Uncoordinated

Splits and Phases: 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	226	539	43	110	388	74	97	42	115	96	49	129
Future Volume (veh/h)	226	539	43	110	388	74	97	42	115	96	49	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1900	1856	1856	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	235	561	45	115	404	77	101	44	120	100	51	134
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	0	3	3	0	0	0	0	0	0
Cap, veh/h	568	1196	96	482	911	172	362	120	328	380	124	325
Arrive On Green	0.13	0.36	0.36	0.08	0.31	0.31	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1810	3332	267	1810	2958	559	1212	448	1221	1235	461	1210
Grp Volume(v), veh/h	235	299	307	115	239	242	101	0	164	100	0	185
Grp Sat Flow(s),veh/h/ln	1810	1777	1822	1810	1763	1754	1212	0	1669	1235	0	1671
Q Serve(g_s), s	4.1	6.3	6.4	2.0	5.3	5.4	3.7	0.0	3.9	3.5	0.0	4.5
Cycle Q Clear(g_c), s	4.1	6.3	6.4	2.0	5.3	5.4	8.1	0.0	3.9	7.4	0.0	4.5
Prop In Lane	1.00		0.15	1.00		0.32	1.00		0.73	1.00		0.72
Lane Grp Cap(c), veh/h	568	638	654	482	543	540	362	0	448	380	0	449
V/C Ratio(X)	0.41	0.47	0.47	0.24	0.44	0.45	0.28	0.00	0.37	0.26	0.00	0.41
Avail Cap(c_a), veh/h	1438	2175	2230	1444	2158	2147	778	0	1022	804	0	1023
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.2	12.1	12.1	10.0	13.6	13.6	18.1	0.0	14.5	17.5	0.0	14.7
Incr Delay (d2), s/veh	0.5	0.8	0.7	0.3	0.8	0.8	0.4	0.0	0.5	0.4	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.1	2.1	0.6	1.8	1.8	1.0	0.0	1.4	0.9	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.7	12.9	12.9	10.2	14.4	14.4	18.5	0.0	15.0	17.9	0.0	15.4
LnGrp LOS	A	B	B	B	B	B	B	A	B	B	A	B
Approach Vol, veh/h		841			596			265				285
Approach Delay, s/veh		12.0			13.6			16.4				16.3
Approach LOS		B			B			B				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		17.7	8.5	22.9		17.7	11.0	20.4				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		30.0	30.0	60.0		30.0	30.0	60.0				
Max Q Clear Time (g_c+I1), s		10.1	4.0	8.4		9.4	6.1	7.4				
Green Ext Time (p_c), s		1.3	0.3	5.8		1.5	0.6	4.5				
Intersection Summary												
HCM 6th Ctrl Delay				13.7								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
 9: Snoqualmie Pkwy & Fairway Ave SE

03/06/2020

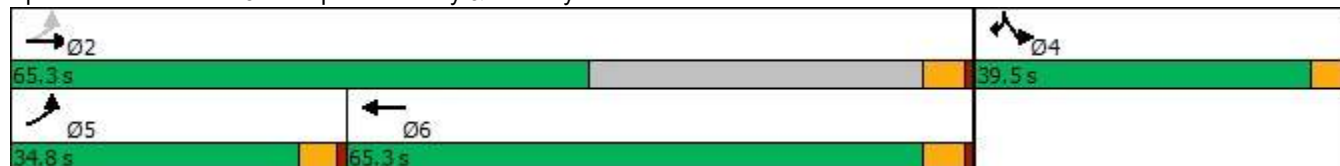


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	208	536	507	127	108	116
Future Volume (vph)	208	536	507	127	108	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	325			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		25	
Link Distance (ft)		1064	278		478	
Travel Time (s)		18.1	4.7		13.0	
Confl. Peds. (#/hr)	5			5	1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	4%	3%	3%	2%	0%
Shared Lane Traffic (%)						
Turn Type	pm+pt	NA	NA		Prot	Prot
Protected Phases	5	2	6		4	4
Permitted Phases	2					
Detector Phase	5	2	6		4	4
Switch Phase						
Minimum Initial (s)	5.0	12.0	12.0		5.0	5.0
Minimum Split (s)	9.8	23.3	26.3		36.5	36.5
Total Split (s)	34.8	65.3	65.3		39.5	39.5
Total Split (%)	24.9%	46.8%	46.8%		28.3%	28.3%
Yellow Time (s)	3.8	4.3	4.3		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.8	5.3	5.3		4.5	4.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	None	None		None	None

Intersection Summary

Area Type: Other
 Cycle Length: 139.6
 Actuated Cycle Length: 60.4
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated

Splits and Phases: 9: Snoqualmie Pkwy & Fairway Ave SE



HCM 6th Signalized Intersection Summary
 9: Snoqualmie Pkwy & Fairway Ave SE























03/06/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	208	536	507	127	108	116
Future Volume (veh/h)	208	536	507	127	108	116
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	1841	1856	1856	1870	1900
Adj Flow Rate, veh/h	224	576	545	137	116	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	4	3	3	2	0
Cap, veh/h	586	2165	983	246	174	157
Arrive On Green	0.13	0.62	0.35	0.35	0.10	0.10
Sat Flow, veh/h	1795	3589	2881	698	1781	1610
Grp Volume(v), veh/h	224	576	344	338	116	1
Grp Sat Flow(s),veh/h/ln	1795	1749	1763	1724	1781	1610
Q Serve(g_s), s	2.3	2.6	5.4	5.5	2.2	0.0
Cycle Q Clear(g_c), s	2.3	2.6	5.4	5.5	2.2	0.0
Prop In Lane	1.00			0.40	1.00	1.00
Lane Grp Cap(c), veh/h	586	2165	622	608	174	157
V/C Ratio(X)	0.38	0.27	0.55	0.56	0.67	0.01
Avail Cap(c_a), veh/h	1914	6065	3057	2990	1802	1629
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	5.4	3.0	9.0	9.0	15.1	14.1
Incr Delay (d2), s/veh	0.4	0.1	0.8	0.8	4.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	1.4	1.3	1.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	5.8	3.1	9.8	9.8	19.4	14.1
LnGrp LOS	A	A	A	A	B	B
Approach Vol, veh/h		800	682		117	
Approach Delay, s/veh		3.8	9.8		19.4	
Approach LOS		A	A		B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		26.7		7.9	9.2	17.5
Change Period (Y+Rc), s		5.3		4.5	* 4.8	5.3
Max Green Setting (Gmax), s		60.0		35.0	* 30	60.0
Max Q Clear Time (g_c+I1), s		4.6		4.2	4.3	7.5
Green Ext Time (p_c), s		4.1		0.3	0.6	4.5
Intersection Summary						
HCM 6th Ctrl Delay			7.5			
HCM 6th LOS			A			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

Lanes, Volumes, Timings
 10: Fisher Ave SE & Snoqualmie Pkwy

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (vph)	52	563	30	13	572	15	16	1	16	14	1	31
Future Volume (vph)	52	563	30	13	572	15	16	1	16	14	1	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		458			1686			518			363	
Travel Time (s)		7.8			28.7			14.1			9.9	
Confl. Peds. (#/hr)	8		8	8		8	8		8	8		8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	3%	0%	0%	3%	7%	0%	0%	0%	0%	0%	7%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕			↕			↕	
Traffic Vol, veh/h	52	563	30	13	572	15	16	1	16	14	1	31
Future Vol, veh/h	52	563	30	13	572	15	16	1	16	14	1	31
Conflicting Peds, #/hr	8	0	8	8	0	8	8	0	8	8	0	8
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #-	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	3	0	0	3	7	0	0	0	0	0	7
Mvmt Flow	59	640	34	15	650	17	18	1	18	16	1	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	675	0	0	682	0	0	1147	1488	353	1144	1497	350
Stage 1	-	-	-	-	-	-	783	783	-	697	697	-
Stage 2	-	-	-	-	-	-	364	705	-	447	800	-
Critical Hdwy	4.1	-	-	4.1	-	-	9.5	8.5	7.9	9.5	8.5	8.04
Critical Hdwy Stg 1	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.37
Pot Cap-1 Maneuver	926	-	-	920	-	-	83	55	588	83	54	573
Stage 1	-	-	-	-	-	-	231	264	-	273	303	-
Stage 2	-	-	-	-	-	-	517	299	-	441	257	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	919	-	-	913	-	-	71	50	579	73	49	564
Mov Cap-2 Maneuver	-	-	-	-	-	-	71	50	-	73	49	-
Stage 1	-	-	-	-	-	-	215	245	-	254	296	-
Stage 2	-	-	-	-	-	-	471	292	-	395	239	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.2			47.6			34.8		
HCM LOS							E			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	121	919	-	-	913	-	-	172
HCM Lane V/C Ratio	0.31	0.064	-	-	0.016	-	-	0.304
HCM Control Delay (s)	47.6	9.2	-	-	9	-	-	34.8
HCM Lane LOS	E	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	1.2	0.2	-	-	0	-	-	1.2

Lanes, Volumes, Timings
 11: Orchard Ave SE & Snoqualmie Pkwy

03/06/2020

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↖	
Traffic Volume (vph)	592	30	28	605	8	21
Future Volume (vph)	592	30	28	605	8	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	225		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	1686			1131	557	
Travel Time (s)	28.7			19.3	15.2	
Confl. Peds. (#/hr)		1	1		1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	0%	4%	3%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑↑	↑↑
Traffic Vol, veh/h	592	30	28	605	8	21
Future Vol, veh/h	592	30	28	605	8	21
Conflicting Peds, #/hr	0	1	1	0	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	225	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	0	4	3	0	0
Mvmt Flow	643	33	30	658	9	23

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	677	0	1051
Stage 1	-	-	-	-	661
Stage 2	-	-	-	-	390
Critical Hdwy	-	-	4.18	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.24	-	3.5
Pot Cap-1 Maneuver	-	-	897	-	226
Stage 1	-	-	-	-	481
Stage 2	-	-	-	-	659
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	896	-	218
Mov Cap-2 Maneuver	-	-	-	-	218
Stage 1	-	-	-	-	481
Stage 2	-	-	-	-	637

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	14.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	424	-	-	896	-
HCM Lane V/C Ratio	0.074	-	-	0.034	-
HCM Control Delay (s)	14.2	-	-	9.2	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Lanes, Volumes, Timings
 12: Snoqualmie Pkwy & Allman AveSE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	611	637	7	7	5
Future Volume (vph)	5	611	637	7	7	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		40	40		25	
Link Distance (ft)		679	1187		393	
Travel Time (s)		11.6	20.2		10.7	
Confl. Peds. (#/hr)	1			1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	5%	4%	0%	0%	0%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	611	637	7	7	5
Future Vol, veh/h	5	611	637	7	7	5
Conflicting Peds, #/hr	1	0	0	1	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #-	0	0	0	0	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	5	4	0	0	0
Mvmt Flow	5	664	692	8	8	5

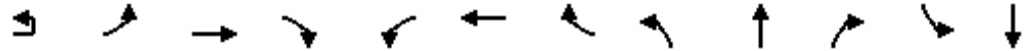
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	701	0	-	0	1040 352
Stage 1	-	-	-	-	697 -
Stage 2	-	-	-	-	343 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	905	-	-	-	229 650
Stage 1	-	-	-	-	461 -
Stage 2	-	-	-	-	696 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	904	-	-	-	227 649
Mov Cap-2 Maneuver	-	-	-	-	227 -
Stage 1	-	-	-	-	458 -
Stage 2	-	-	-	-	695 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	17.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	904	-	-	-	311
HCM Lane V/C Ratio	0.006	-	-	-	0.042
HCM Control Delay (s)	9	-	-	-	17.1
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Lanes, Volumes, Timings
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↵		↕		↵	↕			↕			↕
Traffic Volume (vph)	0	0	569	48	24	597	0	54	0	25	0	0
Future Volume (vph)	0	0	569	48	24	597	0	54	0	25	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0		0	200		0	0		0	0	
Storage Lanes		1		0	1		0	0		0	0	
Taper Length (ft)		25			25			25			25	
Right Turn on Red				Yes			Yes			Yes		
Link Speed (mph)			40			40			25			25
Link Distance (ft)			1187			833			535			291
Travel Time (s)			20.2			14.2			14.6			7.9
Confl. Peds. (#/hr)				4	4			3				
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	6%	0%	0%	4%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt		NA		pm+pt	NA		Perm	NA			
Protected Phases	5		2		1	6			8			4
Permitted Phases	2				6			8			4	
Detector Phase	5		2		1	6		8	8		4	4
Switch Phase												
Minimum Initial (s)	5.0		15.0		5.0	14.0		5.0	5.0		30.0	30.0
Minimum Split (s)	10.0		20.0		10.0	29.0		36.0	36.0		36.0	36.0
Total Split (s)	35.0		65.0		35.0	65.0		36.0	36.0		36.0	36.0
Total Split (%)	25.7%		47.8%		25.7%	47.8%		26.5%	26.5%		26.5%	26.5%
Yellow Time (s)	4.0		4.0		4.0	4.0		5.0	5.0		5.0	5.0
All-Red Time (s)	1.0		1.0		1.0	1.0		1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0		5.0		5.0	5.0		6.0	6.0		6.0	6.0
Lead/Lag	Lead		Lag		Lead	Lag						
Lead-Lag Optimize?	Yes		Yes		Yes	Yes						
Recall Mode	Min		Min		None	None		None	None		None	None

Intersection Summary

Area Type: Other

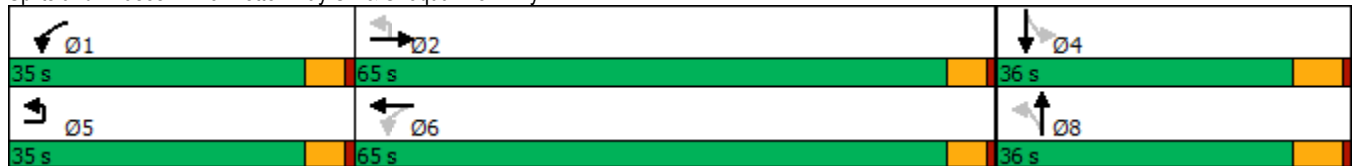
Cycle Length: 136

Actuated Cycle Length: 46.8

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Splits and Phases: 13: Better Way SE & Snoqualmie Pkwy

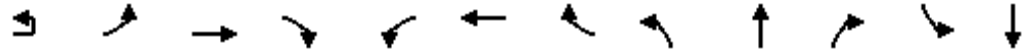




Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	0
Future Volume (vph)	0
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Right Turn on Red	Yes
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	3
Peak Hour Factor	0.95
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	
Intersection Summary	

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↰		↕		↱	↕			↕			↕
Traffic Volume (veh/h)	0	0	569	48	24	597	0	54	0	25	0	0
Future Volume (veh/h)	0	0	569	48	24	597	0	54	0	25	0	0
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	0.99		0.99	1.00	
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach			No			No			No			No
Adj Sat Flow, veh/h/ln		0	1811	1811	1900	1841	1841	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		0	599	51	25	628	0	57	0	26	0	0
Peak Hour Factor		0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %		0	6	6	0	4	4	0	0	0	0	0
Cap, veh/h		0	1364	116	329	2091	0	264	0	42	0	172
Arrive On Green		0.00	0.43	0.43	0.03	0.60	0.00	0.09	0.00	0.09	0.00	0.00
Sat Flow, veh/h		0	3299	273	1810	3589	0	1014	0	462	0	1900
Grp Volume(v), veh/h		0	321	329	25	628	0	83	0	0	0	0
Grp Sat Flow(s),veh/h/ln		0	1721	1760	1810	1749	0	1476	0	0	0	1900
Q Serve(g_s), s		0.0	4.6	4.7	0.2	3.1	0.0	1.9	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s		0.0	4.6	4.7	0.2	3.1	0.0	1.9	0.0	0.0	0.0	0.0
Prop In Lane		0.00		0.15	1.00		0.00	0.69		0.31	0.00	
Lane Grp Cap(c), veh/h		0	732	749	329	2091	0	306	0	0	0	172
V/C Ratio(X)		0.00	0.44	0.44	0.08	0.30	0.00	0.27	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h		0	2927	2994	1813	5949	0	1427	0	0	0	1616
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)		0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh		0.0	7.2	7.2	7.2	3.5	0.0	15.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh		0.0	0.4	0.4	0.1	0.1	0.0	0.5	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.0	1.0	1.0	0.1	0.2	0.0	0.6	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		0.0	7.6	7.6	7.3	3.6	0.0	15.9	0.0	0.0	0.0	0.0
LnGrp LOS		A	A	A	A	A	A	B	A	A	A	A
Approach Vol, veh/h			650			653			83			0
Approach Delay, s/veh			7.6			3.7			15.9			0.0
Approach LOS			A			A			B			
Timer - Assigned Phs	1	2		4		6			8			
Phs Duration (G+Y+Rc), s	6.1	20.0		9.2		26.1			9.2			
Change Period (Y+Rc), s	5.0	5.0		6.0		5.0			6.0			
Max Green Setting (Gmax), s	30.0	60.0		30.0		60.0			30.0			
Max Q Clear Time (g_c+I1), s	2.2	6.7		0.0		5.1			3.9			
Green Ext Time (p_c), s	0.0	4.2		0.0		4.6			0.4			

Intersection Summary

HCM 6th Ctrl Delay	6.3
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
 User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	0
Future Volume (veh/h)	0
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.95
Percent Heavy Veh, %	0
Cap, veh/h	0
Arrive On Green	0.00
Sat Flow, veh/h	0
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	0
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	0.00
Lane Grp Cap(c), veh/h	0
V/C Ratio(X)	0.00
Avail Cap(c_a), veh/h	0
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Lanes, Volumes, Timings
 14: Trail Access Road & Snoqualmie Pkwy

03/06/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (vph)	518	0	1	556	0	1
Future Volume (vph)	518	0	1	556	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	646			700	301	
Travel Time (s)	11.0			11.9	8.2	
Confl. Peds. (#/hr)		1	1		1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	0%	0%	3%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑↑	↑↑
Traffic Vol, veh/h	518	0	1	556	0	1
Future Vol, veh/h	518	0	1	556	0	1
Conflicting Peds, #/hr	0	1	1	0	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	0	0	3	0	0
Mvmt Flow	563	0	1	604	0	1













Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	564	0	869
Stage 1	-	-	-	-	564
Stage 2	-	-	-	-	305
Critical Hdwy	-	-	4.1	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1018	-	295
Stage 1	-	-	-	-	539
Stage 2	-	-	-	-	727
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1017	-	294
Mov Cap-2 Maneuver	-	-	-	-	294
Stage 1	-	-	-	-	538
Stage 2	-	-	-	-	726

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	718	-	-	1017	-
HCM Lane V/C Ratio	0.002	-	-	0.001	-
HCM Control Delay (s)	10	-	-	8.5	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
15: SR 202 & Snoqualmie Pkwy

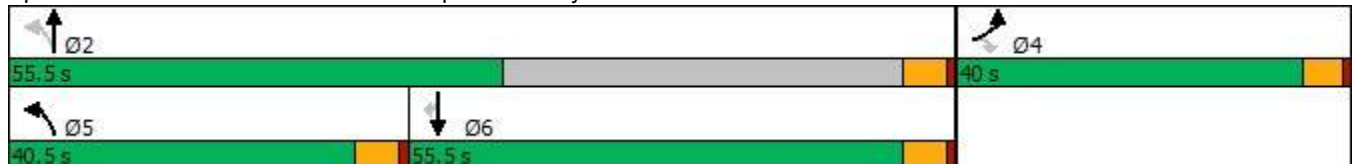
03/06/2020

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	215	302	338	249	275	285
Future Volume (vph)	215	302	338	249	275	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	300			300
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Right Turn on Red		Yes				Yes
Link Speed (mph)	40			45	45	
Link Distance (ft)	700			1127	949	
Travel Time (s)	11.9			17.1	14.4	
Confl. Peds. (#/hr)		1	1			1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	3%	2%	2%	1%	6%	4%
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	5.0	7.0	7.0	7.0
Minimum Split (s)	29.0	29.0	10.5	12.5	35.5	35.5
Total Split (s)	40.0	40.0	40.5	55.5	55.5	55.5
Total Split (%)	29.4%	29.4%	29.8%	40.8%	40.8%	40.8%
Yellow Time (s)	4.0	4.0	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	Min	Min	Min

Intersection Summary













Area Type: Other
 Cycle Length: 136
 Actuated Cycle Length: 74
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated

Splits and Phases: 15: SR 202 & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 15: SR 202 & Snoqualmie Pkwy

03/06/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	215	302	338	249	275	285
Future Volume (veh/h)	215	302	338	249	275	285
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00			1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1885	1811	1841
Adj Flow Rate, veh/h	236	0	371	274	302	44
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	2	2	1	6	4
Cap, veh/h	314	281	626	1086	442	380
Arrive On Green	0.18	0.00	0.20	0.58	0.24	0.24
Sat Flow, veh/h	1767	1585	1781	1885	1811	1557
Grp Volume(v), veh/h	236	0	371	274	302	44
Grp Sat Flow(s),veh/h/ln	1767	1585	1781	1885	1811	1557
Q Serve(g_s), s	5.4	0.0	5.7	3.1	6.4	0.9
Cycle Q Clear(g_c), s	5.4	0.0	5.7	3.1	6.4	0.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	314	281	626	1086	442	380
V/C Ratio(X)	0.75	0.00	0.59	0.25	0.68	0.12
Avail Cap(c_a), veh/h	1451	1302	1728	2212	2125	1826
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.6	0.0	8.2	4.5	14.6	12.5
Incr Delay (d2), s/veh	3.6	0.0	0.9	0.1	1.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	1.3	0.5	2.2	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.3	0.0	9.1	4.6	16.5	12.7
LnGrp LOS	C	A	A	A	B	B
Approach Vol, veh/h	236			645	346	
Approach Delay, s/veh	20.3			7.2	16.0	
Approach LOS	C			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		30.1		12.6	14.1	15.9
Change Period (Y+Rc), s		5.5		5.0	5.5	5.5
Max Green Setting (Gmax), s		50.0		35.0	35.0	50.0
Max Q Clear Time (g_c+I1), s		5.1		7.4	7.7	8.4
Green Ext Time (p_c), s		1.5		0.7	1.1	1.8
Intersection Summary						
HCM 6th Ctrl Delay			12.2			
HCM 6th LOS			B			

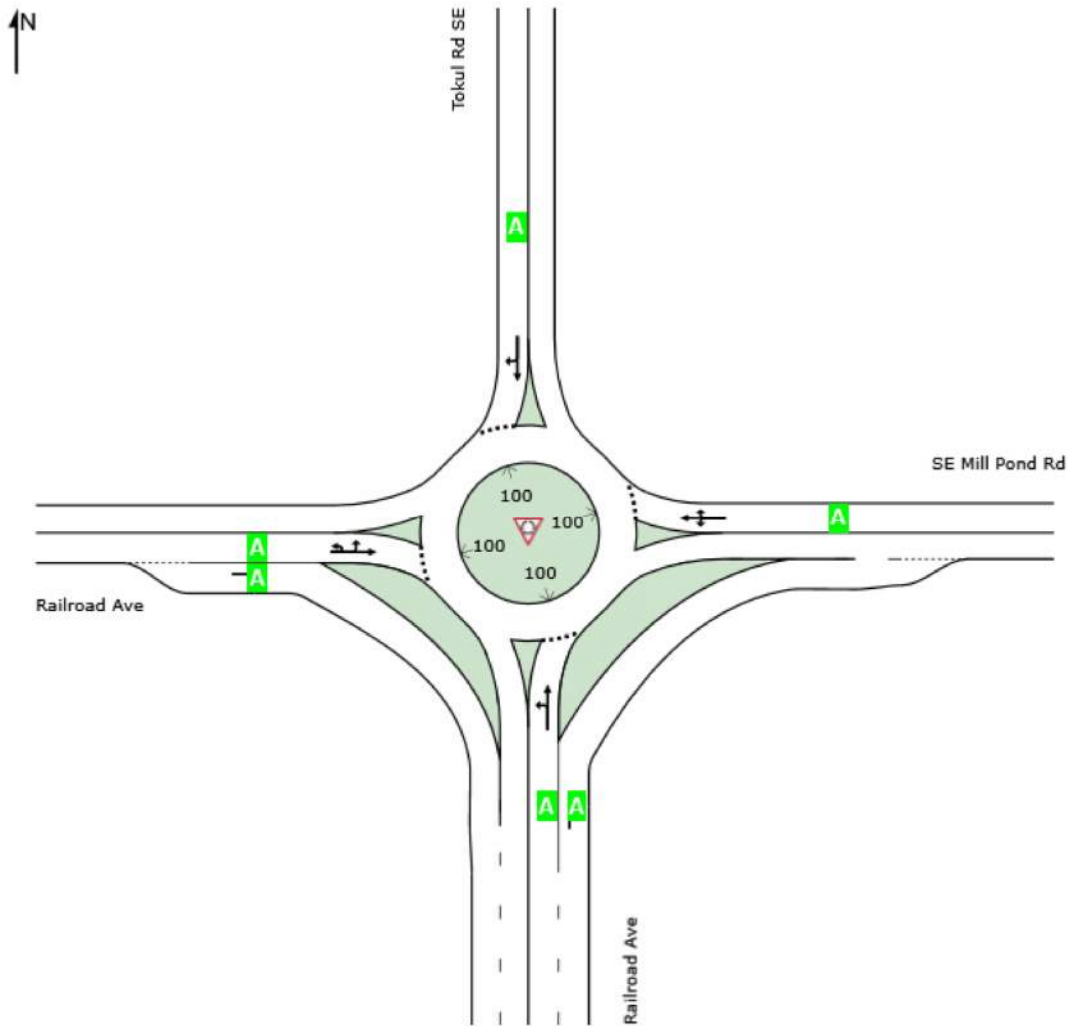
LANE LEVEL OF SERVICE

Lane Level of Service

 **Site: 16 [2032 No Action - PM Peak Hour]**

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Signalised Intersections.
 Lane LOS values are based on average delay per lane.
 Intersection and Approach LOS values are based on average delay for all lanes.
 SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

LANE SUMMARY

Site: 16 [2032 No Action - PM Peak Hour]

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

Lane Use and Performance													
	Demand Flows			Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue		Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
	Total veh/h	HV %	Cap. veh/h					Veh	Dist ft				
South: Railroad Ave													
Lane 1 ^d	508	3.0	1624	0.313	100	8.5	LOS A	1.8	44.9	Full	1600	0.0	0.0
Lane 2	20	13.3	1478	0.014	100	3.7	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	528	3.4		0.313		8.3	LOS A	1.8	44.9				
East: SE Mill Pond Rd													
Lane 1 ^d	81	19.7	825	0.098	100	9.2	LOS A	0.5	13.8	Full	1600	0.0	0.0
Approach	81	19.7		0.098		9.2	LOS A	0.5	13.8				
North: Tokul Rd SE													
Lane 1 ^d	45	6.1	936	0.048	100	6.4	LOS A	0.2	6.2	Full	1600	0.0	0.0
Approach	45	6.1		0.048		6.4	LOS A	0.2	6.2				
West: Railroad Ave													
Lane 1 ^d	61	4.3	1593	0.038	100	5.9	LOS A	0.2	4.5	Full	1600	0.0	0.0
Lane 2	606	4.4	1604	0.378	100	3.7	LOS A	0.0	0.0	Short	200	0.0	NA
Approach	667	4.4		0.378		3.9	LOS A	0.2	4.5				
Intersection	1321	5.0		0.378		6.1	LOS A	1.8	44.9				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

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Organisation: TENW | Processed: Tuesday, March 3, 2020 9:33:46 AM

Project: T:\Active Projects\Snoqualmie Mill - 5584\Planning - 5584\LOS\Snoqualmie Mill - Railroad Ave & Tokul Rd & SE Mill Pond Rd

Roundabout.sip8



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	81	9	20	105	5	31
Future Volume (vph)	81	9	20	105	5	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45		35			35
Link Distance (ft)	458		1466			541
Travel Time (s)	6.9		28.6			10.5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	0%	0%	3%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	81	9	20	105	5	31
Future Vol, veh/h	81	9	20	105	5	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	0	0	3	0	0
Mvmt Flow	84	9	21	109	5	32

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	118	76	0	0	130	0
Stage 1	76	-	-	-	-	-
Stage 2	42	-	-	-	-	-
Critical Hdwy	6.43	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	875	991	-	-	1468	-
Stage 1	944	-	-	-	-	-
Stage 2	978	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	872	991	-	-	1468	-
Mov Cap-2 Maneuver	872	-	-	-	-	-
Stage 1	944	-	-	-	-	-
Stage 2	975	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	883	1468
HCM Lane V/C Ratio	-	-	0.106	0.004
HCM Control Delay (s)	-	-	9.6	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0

Lanes, Volumes, Timings

18: Meadowbrook Way SE/SE Reinig Rd & SE Mill Pond Rd

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	21	89	91	25	40	16
Future Volume (vph)	21	89	91	25	40	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		40	
Link Distance (ft)		502	1466		916	
Travel Time (s)		9.8	28.6		15.6	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	1%	0%	3%	0%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	21	89	91	25	40	16
Future Vol, veh/h	21	89	91	25	40	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	1	1	0	3	0
Mvmt Flow	22	95	97	27	43	17
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	124	0	0	250	111	
Stage 1	-	-	-	111	-	
Stage 2	-	-	-	139	-	
Critical Hdwy	4.1	-	-	6.43	6.2	
Critical Hdwy Stg 1	-	-	-	5.43	-	
Critical Hdwy Stg 2	-	-	-	5.43	-	
Follow-up Hdwy	2.2	-	-	3.527	3.3	
Pot Cap-1 Maneuver	1475	-	-	736	948	
Stage 1	-	-	-	911	-	
Stage 2	-	-	-	885	-	
Platoon blocked, %	-	-	-	-	-	
Mov Cap-1 Maneuver	1475	-	-	724	948	
Mov Cap-2 Maneuver	-	-	-	724	-	
Stage 1	-	-	-	896	-	
Stage 2	-	-	-	885	-	
Approach	EB	WB	SB			
HCM Control Delay, s	1.4	0	10			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1475	-	-	-	776	
HCM Lane V/C Ratio	0.015	-	-	-	0.077	
HCM Control Delay (s)	7.5	0	-	-	10	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

Lanes, Volumes, Timings
19: Meadowbrook Bridge

03/02/2020

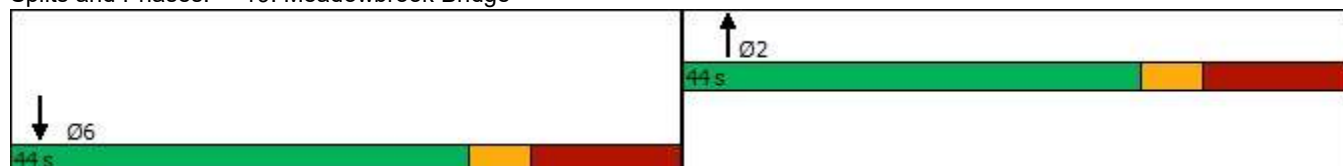


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	110	0	0	107
Future Volume (vph)	0	0	110	0	0	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			30
Link Distance (ft)	150		304			249
Travel Time (s)	3.4		6.9			5.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Shared Lane Traffic (%)						
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Detector Phase			2			6
Switch Phase						
Minimum Initial (s)			5.0			5.0
Minimum Split (s)			19.0			19.0
Total Split (s)			44.0			44.0
Total Split (%)			50.0%			50.0%
Yellow Time (s)			4.0			4.0
All-Red Time (s)			10.0			10.0
Lost Time Adjust (s)			0.0			0.0
Total Lost Time (s)			14.0			14.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode			None			None

Intersection Summary

Area Type: Other
 Cycle Length: 88
 Actuated Cycle Length: 38.4
 Natural Cycle: 40
 Control Type: Actuated-Uncoordinated

Splits and Phases: 19: Meadowbrook Bridge



HCM Signalized Intersection Capacity Analysis
 19: Meadowbrook Bridge

03/02/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	110	0	0	107
Future Volume (vph)	0	0	110	0	0	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			14.0			14.0
Lane Util. Factor			1.00			1.00
Flt			1.00			1.00
Flt Protected			1.00			1.00
Satd. Flow (prot)			1881			1881
Flt Permitted			1.00			1.00
Satd. Flow (perm)			1881			1881
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	120	0	0	116
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	120	0	0	116
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Actuated Green, G (s)			5.5			5.4
Effective Green, g (s)			5.5			5.4
Actuated g/C Ratio			0.14			0.14
Clearance Time (s)			14.0			14.0
Vehicle Extension (s)			2.0			2.0
Lane Grp Cap (vph)			265			261
v/s Ratio Prot			c0.06			c0.06
v/s Ratio Perm						
v/c Ratio			0.45			0.44
Uniform Delay, d1			15.3			15.4
Progression Factor			1.00			1.00
Incremental Delay, d2			0.4			0.4
Delay (s)			15.8			15.8
Level of Service			B			B
Approach Delay (s)	0.0		15.8			15.8
Approach LOS	A		B			B
Intersection Summary						
HCM 2000 Control Delay			15.8		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.45			
Actuated Cycle Length (s)			38.9		Sum of lost time (s)	28.0
Intersection Capacity Utilization			17.5%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Lanes, Volumes, Timings
 20: Meadowbrook Way SE & SE Park St

03/12/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	49	31	35	54	30	13	63	25	26	55	21
Future Volume (vph)	21	49	31	35	54	30	13	63	25	26	55	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		505			663			790			216	
Travel Time (s)		13.8			18.1			21.5			5.9	
Confl. Peds. (#/hr)	5		5	4		4	5		4	4		5
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	6%	5%	4%	0%	2%	0%	0%	2%	0%	0%	6%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	21	49	31	35	54	30	13	63	25	26	55	21
Future Vol, veh/h	21	49	31	35	54	30	13	63	25	26	55	21
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	6	5	4	0	2	0	0	2	0	0	6	0
Mvmt Flow	25	58	37	42	64	36	15	75	30	31	65	25
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.4	8.5	8.4	8.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %		13%	21%	29%
Vol Thru, %		62%	49%	45%
Vol Right, %		25%	31%	25%
Sign Control		Stop	Stop	Stop
Traffic Vol by Lane		101	101	119
LT Vol		13	21	35
Through Vol		63	49	54
RT Vol		25	31	30
Lane Flow Rate		120	120	142
Geometry Grp		1	1	1
Degree of Util (X)		0.151	0.153	0.177
Departure Headway (Hd)		4.528	4.583	4.509
Convergence, Y/N		Yes	Yes	Yes
Cap		791	782	795
Service Time		2.559	2.616	2.54
HCM Lane V/C Ratio		0.152	0.153	0.179
HCM Control Delay		8.4	8.4	8.5
HCM Lane LOS		A	A	A
HCM 95th-tile Q		0.5	0.5	0.6

Lanes, Volumes, Timings
 21: Meadowbrook Way SE & SR 202

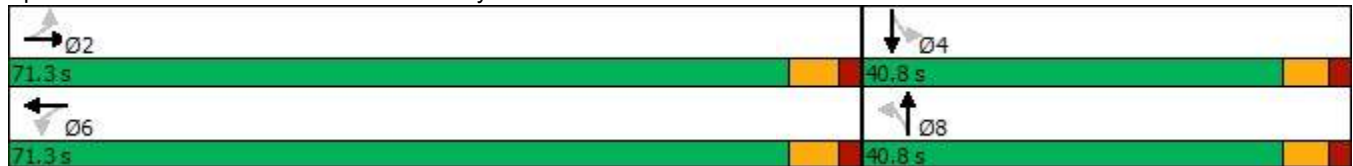
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	447	55	9	436	26	118	87	24	35	63	21
Future Volume (vph)	15	447	55	9	436	26	118	87	24	35	63	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	0		0	150		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			40			35			25	
Link Distance (ft)		615			589			738			595	
Travel Time (s)		14.0			10.0			14.4			16.2	
Confl. Peds. (#/hr)	1					1	2					2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	3%	2%	0%	4%	0%	0%	0%	10%	3%	0%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	33.3	33.3		30.3	30.3		32.8	32.8		32.8	32.8	
Total Split (s)	71.3	71.3		71.3	71.3		40.8	40.8		40.8	40.8	
Total Split (%)	63.6%	63.6%		63.6%	63.6%		36.4%	36.4%		36.4%	36.4%	
Yellow Time (s)	4.3	4.3		4.3	4.3		3.8	3.8		3.8	3.8	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	6.3	6.3		6.3	6.3			5.8		5.8	5.8	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Min	Min		Min	Min		None	None		None	None	

Intersection Summary

Area Type: Other
 Cycle Length: 112.1
 Actuated Cycle Length: 51.6
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated

Splits and Phases: 21: Meadowbrook Way SE & SR 202



HCM 6th Signalized Intersection Summary
 21: Meadowbrook Way SE & SR 202

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	447	55	9	436	26	118	87	24	35	63	21
Future Volume (veh/h)	15	447	55	9	436	26	118	87	24	35	63	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1856	1900	1841	1841	1900	1900	1900	1856	1900	1900
Adj Flow Rate, veh/h	16	481	59	10	469	28	127	94	26	38	68	23
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	3	3	0	4	4	0	0	0	3	0	0
Cap, veh/h	396	706	87	365	749	45	304	174	39	522	329	111
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	914	1621	199	879	1719	103	656	717	161	1258	1356	459
Grp Volume(v), veh/h	16	0	540	10	0	497	247	0	0	38	0	91
Grp Sat Flow(s),veh/h/ln	914	0	1819	879	0	1822	1534	0	0	1258	0	1815
Q Serve(g_s), s	0.5	0.0	9.0	0.3	0.0	8.0	3.9	0.0	0.0	0.0	0.0	1.5
Cycle Q Clear(g_c), s	8.5	0.0	9.0	9.3	0.0	8.0	5.4	0.0	0.0	0.8	0.0	1.5
Prop In Lane	1.00		0.11	1.00		0.06	0.51		0.11	1.00		0.25
Lane Grp Cap(c), veh/h	396	0	792	365	0	794	517	0	0	522	0	441
V/C Ratio(X)	0.04	0.00	0.68	0.03	0.00	0.63	0.48	0.00	0.00	0.07	0.00	0.21
Avail Cap(c_a), veh/h	1579	0	3145	1501	0	3150	1568	0	0	1388	0	1690
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.5	0.0	8.5	12.3	0.0	8.2	12.8	0.0	0.0	11.1	0.0	11.4
Incr Delay (d2), s/veh	0.0	0.0	1.3	0.0	0.0	1.0	0.7	0.0	0.0	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	2.6	0.1	0.0	2.0	1.5	0.0	0.0	0.2	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.6	0.0	9.8	12.3	0.0	9.2	13.5	0.0	0.0	11.1	0.0	11.6
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	B
Approach Vol, veh/h		556			507			247				129
Approach Delay, s/veh		9.8			9.3			13.5				11.4
Approach LOS		A			A			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.7		14.9		22.7		14.9				
Change Period (Y+Rc), s		6.3		* 5.8		6.3		* 5.8				
Max Green Setting (Gmax), s		65.0		* 35		65.0		* 35				
Max Q Clear Time (g_c+I1), s		11.0		3.5		11.3		7.4				
Green Ext Time (p_c), s		5.3		0.6		4.2		1.5				
Intersection Summary												
HCM 6th Ctrl Delay				10.4								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 22: Meadowbrook Way SE & 384th Ave SE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	180	238	184	14	2	122
Future Volume (vph)	180	238	184	14	2	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		25	
Link Distance (ft)		158	180		181	
Travel Time (s)		3.1	3.5		4.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	8%	1%	3%	0%	0%	6%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	180	238	184	14	2	122
Future Vol, veh/h	180	238	184	14	2	122
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	8	1	3	0	0	6
Mvmt Flow	207	274	211	16	2	140

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	227	0	-	0	907 219
Stage 1	-	-	-	-	219 -
Stage 2	-	-	-	-	688 -
Critical Hdwy	4.18	-	-	-	6.4 6.26
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.272	-	-	-	3.5 3.354
Pot Cap-1 Maneuver	1307	-	-	-	309 811
Stage 1	-	-	-	-	822 -
Stage 2	-	-	-	-	503 -
Platoon blocked, %	-	-	-	-	
Mov Cap-1 Maneuver	1307	-	-	-	251 811
Mov Cap-2 Maneuver	-	-	-	-	251 -
Stage 1	-	-	-	-	668 -
Stage 2	-	-	-	-	503 -

Approach	EB	WB	SB
HCM Control Delay, s	3.6	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1307	-	-	-	-	783
HCM Lane V/C Ratio	0.158	-	-	-	-	0.182
HCM Control Delay (s)	8.3	0	-	-	-	10.6
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0.6	-	-	-	-	0.7

Lanes, Volumes, Timings
 23: SE North Bend Way & Meadowbrook Way SE

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	63	244	143	83	336	299
Future Volume (vph)	63	244	143	83	336	299
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	450	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Link Speed (mph)	35		50			50
Link Distance (ft)	158		253			593
Travel Time (s)	3.1		3.5			8.1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	3%	3%	15%	1%	1%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	5.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↘	↑	↘	↘	↑
Traffic Vol, veh/h	63	244	143	83	336	299
Future Vol, veh/h	63	244	143	83	336	299
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	Free	-	None
Storage Length	0	0	-	0	450	-
Veh in Median Storage, #1	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	3	3	15	1	1
Mvmt Flow	70	271	159	92	373	332

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1237	-	0	-	159
Stage 1	159	-	-	-	-
Stage 2	1078	-	-	-	-
Critical Hdwy	6.45	-	-	-	4.11
Critical Hdwy Stg 1	5.45	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-
Follow-up Hdwy	3.545	-	-	-	2.209
Pot Cap-1 Maneuver	191	0	-	0	1427
Stage 1	862	0	-	0	-
Stage 2	322	0	-	0	-
Platoon blocked, %			-		-
Mov Cap-1 Maneuver	141	-	-	-	1427
Mov Cap-2 Maneuver	207	-	-	-	-
Stage 1	862	-	-	-	-
Stage 2	238	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	31	0	4.5
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	207	-	1427	-
HCM Lane V/C Ratio	-	0.338	-	0.262	-
HCM Control Delay (s)	-	31	0	8.4	-
HCM Lane LOS	-	D	A	A	-
HCM 95th %tile Q(veh)	-	1.4	-	1.1	-

2032 Proposed Action – Full Buildout
LOS Worksheets

Lanes, Volumes, Timings
1: SR-18 & I-90 EB Ramps

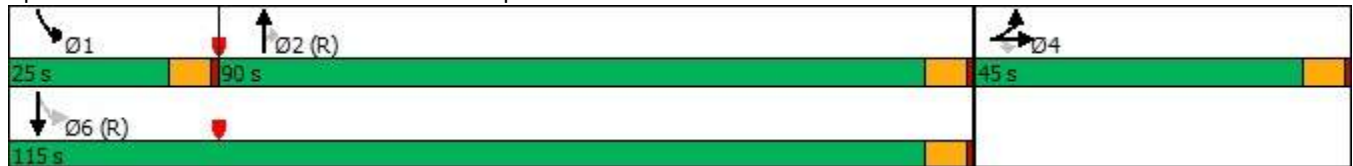
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	510	0	86	0	0	0	0	933	475	67	388	0
Future Volume (vph)	510	0	86	0	0	0	0	933	475	67	388	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650		0	0		0	0	300	200			0
Storage Lanes	1		1	0		0	0	1	1			0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			45				30
Link Distance (ft)		833			764			1837				778
Travel Time (s)		16.2			14.9			27.8				17.7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	0%	10%	0%	0%	0%	0%	8%	28%	9%	40%	0%
Shared Lane Traffic (%)	50%											
Turn Type	Split	NA	Perm					NA	Perm	pm+pt	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			4						2	6		
Detector Phase	4	4	4					2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					10.0	10.0	3.0	10.0	
Minimum Split (s)	29.0	29.0	29.0					16.0	16.0	9.0	23.0	
Total Split (s)	45.0	45.0	45.0					90.0	90.0	25.0	115.0	
Total Split (%)	28.1%	28.1%	28.1%					56.3%	56.3%	15.6%	71.9%	
Yellow Time (s)	5.0	5.0	5.0					5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0	1.0					1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0					6.0	6.0	6.0	6.0	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None					C-Min	C-Min	None	C-Min	

Intersection Summary

Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated





















Splits and Phases: 1: SR-18 & I-90 EB Ramps



HCM 6th Signalized Intersection Summary

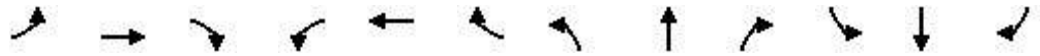
1: SR-18 & I-90 EB Ramps

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	510	0	86	0	0	0	0	933	475	67	388	0
Future Volume (veh/h)	510	0	86	0	0	0	0	933	475	67	388	0
Initial Q (Qb), veh	0	0	0					0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00					1.00	1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00					1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1826	1900	1752				0	1781	1485	1767	1307	0
Adj Flow Rate, veh/h	531	0	0				0	972	0	70	404	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	0	10				0	8	28	9	40	0
Cap, veh/h	598	0					0	1232		261	1870	0
Arrive On Green	0.17	0.00	0.00				0.00	0.69	0.00	0.02	0.75	0.00
Sat Flow, veh/h	3478	0	1485				0	1781	1259	1682	2549	0
Grp Volume(v), veh/h	531	0	0				0	972	0	70	404	0
Grp Sat Flow(s),veh/h/ln	1739	0	1485				0	1781	1259	1682	1242	0
Q Serve(g_s), s	23.9	0.0	0.0				0.0	59.3	0.0	1.9	7.7	0.0
Cycle Q Clear(g_c), s	23.9	0.0	0.0				0.0	59.3	0.0	1.9	7.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	598	0					0	1232		261	1870	0
V/C Ratio(X)	0.89	0.00					0.00	0.79		0.27	0.22	0.00
Avail Cap(c_a), veh/h	848	0					0	1232		420	1870	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				0.00	1.00	0.00	0.79	0.79	0.00
Uniform Delay (d), s/veh	64.7	0.0	0.0				0.0	16.8	0.0	19.6	5.8	0.0
Incr Delay (d2), s/veh	8.4	0.0	0.0				0.0	5.2	0.0	0.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	0.0	0.0				0.0	23.5	0.0	1.2	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.2	0.0	0.0				0.0	21.9	0.0	20.1	6.0	0.0
LnGrp LOS	E	A					A	C		C	A	A
Approach Vol, veh/h		531	A					972	A		474	
Approach Delay, s/veh		73.2						21.9			8.1	
Approach LOS		E						C			A	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	9.8	116.6		33.5				126.5				
Change Period (Y+Rc), s	6.0	6.0		6.0				6.0				
Max Green Setting (Gmax), s	19.0	84.0		39.0				109.0				
Max Q Clear Time (g_c+I1), s	3.9	61.3		25.9				9.7				
Green Ext Time (p_c), s	0.1	14.6		1.7				7.4				
Intersection Summary												
HCM 6th Ctrl Delay			32.4									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

03/06/2020

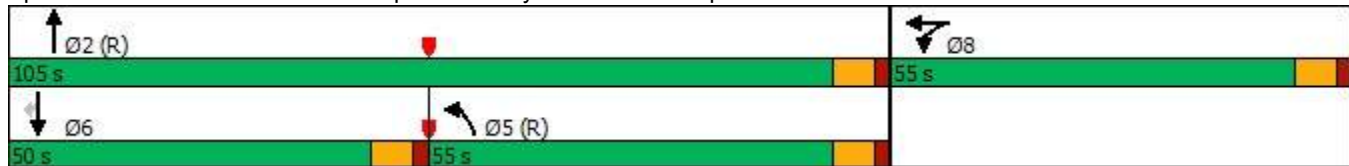


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↕		↖	↕			↕	↗
Traffic Volume (vph)	0	0	0	223	2	150	593	820	0	0	182	874
Future Volume (vph)	0	0	0	223	2	150	593	820	0	0	182	874
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	0		0
Storage Lanes	0		0	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30				30
Link Distance (ft)		893			705			778				878
Travel Time (s)		17.4			13.7			17.7				20.0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	57%	50%	7%	7%	6%	0%	0%	12%	1%
Shared Lane Traffic (%)				12%								
Turn Type				Split	NA		Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases												6
Detector Phase				8	8		5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	7.0			7.0	7.0
Minimum Split (s)				12.0	12.0		12.0	14.0			24.0	24.0
Total Split (s)				55.0	55.0		55.0	105.0			50.0	50.0
Total Split (%)				34.4%	34.4%		34.4%	65.6%			31.3%	31.3%
Yellow Time (s)				5.0	5.0		5.0	5.0			5.0	5.0
All-Red Time (s)				2.0	2.0		2.0	2.0			2.0	2.0
Lost Time Adjust (s)				0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)				7.0	7.0		7.0	7.0			7.0	7.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None		C-Max	C-Min			None	None

Intersection Summary




















Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 60 (38%), Referenced to phase 2:NBT and 5:NBL, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated

Splits and Phases: 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps





















HCM 6th Signalized Intersection Summary
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	223	2	150	593	820	0	0	182	874
Future Volume (veh/h)	0	0	0	223	2	150	593	820	0	0	182	874
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No		No		No
Adj Sat Flow, veh/h/ln				1055	1159	1055	1796	1811	0	0	1722	1885
Adj Flow Rate, veh/h				198	54	158	624	863	0	0	192	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				57	50	57	7	6	0	0	12	1
Cap, veh/h				238	62	180	513	2325	0	0	571	
Arrive On Green				0.24	0.24	0.24	0.10	0.22	0.00	0.00	0.33	0.00
Sat Flow, veh/h				1005	260	762	1711	3532	0	0	1722	1598
Grp Volume(v), veh/h				198	0	212	624	863	0	0	192	0
Grp Sat Flow(s),veh/h/ln				1005	0	1022	1711	1721	0	0	1722	1598
Q Serve(g_s), s				30.0	0.0	32.0	48.0	34.0	0.0	0.0	13.4	0.0
Cycle Q Clear(g_c), s				30.0	0.0	32.0	48.0	34.0	0.0	0.0	13.4	0.0
Prop In Lane				1.00		0.75	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				238	0	242	513	2325	0	0	571	
V/C Ratio(X)				0.83	0.00	0.88	1.22	0.37	0.00	0.00	0.34	
Avail Cap(c_a), veh/h				302	0	307	513	2325	0	0	571	
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	1.00	0.40	0.40	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				58.0	0.0	58.8	72.1	33.4	0.0	0.0	40.2	0.0
Incr Delay (d2), s/veh				24.2	0.0	29.7	104.5	0.2	0.0	0.0	0.5	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				9.2	0.0	10.2	37.2	15.9	0.0	0.0	5.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				82.2	0.0	88.5	176.6	33.6	0.0	0.0	40.7	0.0
LnGrp LOS				F	A	F	F	C	A	A	D	
Approach Vol, veh/h					410			1487			192	A
Approach Delay, s/veh					85.4			93.6			40.7	
Approach LOS					F			F			D	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		115.1			55.0	60.1		44.9				
Change Period (Y+Rc), s		7.0			7.0	7.0		7.0				
Max Green Setting (Gmax), s		98.0			48.0	43.0		48.0				
Max Q Clear Time (g_c+I1), s		36.0			50.0	15.4		34.0				
Green Ext Time (p_c), s		11.6			0.0	1.6		3.9				
Intersection Summary												
HCM 6th Ctrl Delay				87.1								
HCM 6th LOS				F								
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 3: Snoqualmie Pkwy & SE 99th St

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	29	0	0	1	73	872	3	1	1062	10
Future Volume (vph)	2	0	29	0	0	1	73	872	3	1	1062	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	0		0	0		0	125		0	25		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		989			884			878			457	
Travel Time (s)		27.0			24.1			20.0			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	50%	0%	0%	0%	0%	0%	3%	7%	0%	0%	3%	20%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	2	0	29	0	0	1	73	872	3	1	1062	10
Future Vol, veh/h	2	0	29	0	0	1	73	872	3	1	1062	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	25	-	-
Veh in Median Storage, #-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	50	0	0	0	0	0	3	7	0	0	3	20
Mvmt Flow	2	0	31	0	0	1	77	918	3	1	1118	11

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	1739	2201	565	1635	2205	461	1129	0	0	921	0	0
Stage 1	1126	1126	-	1074	1074	-	-	-	-	-	-	-
Stage 2	613	1075	-	561	1131	-	-	-	-	-	-	-
Critical Hdwy	8.5	6.5	6.9	7.5	6.5	6.9	4.16	-	-	4.1	-	-
Critical Hdwy Stg 1	7.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	4	4	3.3	3.5	4	3.3	2.23	-	-	2.2	-	-
Pot Cap-1 Maneuver	33	45	473	68	45	553	609	-	-	750	-	-
Stage 1	151	282	-	238	299	-	-	-	-	-	-	-
Stage 2	346	298	-	485	281	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	30	39	473	57	39	553	609	-	-	750	-	-
Mov Cap-2 Maneuver	30	39	-	57	39	-	-	-	-	-	-	-
Stage 1	132	282	-	208	261	-	-	-	-	-	-	-
Stage 2	302	260	-	453	281	-	-	-	-	-	-	-

Approach	EB		WB			NB		SB		
HCM Control Delay, s	22.2		11.5			0.9		0		
HCM LOS	C		B							

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	609	-	-	242	553	750	-
HCM Lane V/C Ratio	0.126	-	-	0.135	0.002	0.001	-
HCM Control Delay (s)	11.8	-	-	22.2	11.5	9.8	-
HCM Lane LOS	B	-	-	C	B	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0.5	0	0	-

Lanes, Volumes, Timings
 4: Snoqualmie Pkwy & SE 96th St

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	33	17	906	16	32	1017
Future Volume (vph)	33	17	906	16	32	1017
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Link Speed (mph)	30		40			40
Link Distance (ft)	346		677			718
Travel Time (s)	7.9		11.5			12.2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	7%	0%	0%	2%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary
 Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↑↑		↔	↑↑
Traffic Vol, veh/h	33	17	906	16	32	1017
Future Vol, veh/h	33	17	906	16	32	1017
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #1	-	0	-	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	7	0	0	2
Mvmt Flow	34	17	924	16	33	1038

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1517	470	0	0	940
Stage 1	932	-	-	-	-
Stage 2	585	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	112	545	-	-	737
Stage 1	348	-	-	-	-
Stage 2	526	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	107	545	-	-	737
Mov Cap-2 Maneuver	234	-	-	-	-
Stage 1	348	-	-	-	-
Stage 2	502	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.2	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	234	545	737	-
HCM Lane V/C Ratio	-	-	0.144	0.032	0.044	-
HCM Control Delay (s)	-	-	23	11.8	10.1	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	0.5	0.1	0.1	-

Lanes, Volumes, Timings
5: Snoqualmie Pkwy & SE Jacobia St

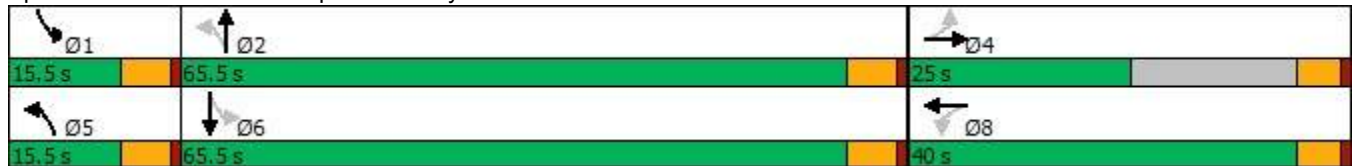
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	5	116	104	6	92	38	875	16	25	828	19
Future Volume (vph)	42	5	116	104	6	92	38	875	16	25	828	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	250		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		653			474			718			617	
Travel Time (s)		17.8			12.9			12.2			10.5	
Confl. Peds. (#/hr)	2		1	1		2						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	10%	20%	0%	0%	17%	2%	8%	7%	0%	12%	4%	32%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	15.0		5.0	16.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		10.5	22.5		10.5	22.5	
Total Split (s)	25.0	25.0		40.0	40.0		15.5	65.5		15.5	65.5	
Total Split (%)	20.7%	20.7%		33.1%	33.1%		12.8%	54.1%		12.8%	54.1%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.5	4.5		4.5	4.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.5	5.5		5.5	5.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary























Area Type: Other
 Cycle Length: 121
 Actuated Cycle Length: 59.4
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Snoqualmie Pkwy & SE Jacobia St



HCM 6th Signalized Intersection Summary
 5: Snoqualmie Pkwy & SE Jacobia St

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 			 	
Traffic Volume (veh/h)	42	5	116	104	6	92	38	875	16	25	828	19
Future Volume (veh/h)	42	5	116	104	6	92	38	875	16	25	828	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1604	1604	1900	1648	1648	1781	1796	1796	1722	1841	1841
Adj Flow Rate, veh/h	46	5	127	114	7	101	42	962	18	27	910	21
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	10	20	20	0	17	17	8	7	7	12	4	4
Cap, veh/h	329	12	302	318	21	303	341	1545	29	305	1533	35
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.04	0.45	0.45	0.03	0.44	0.44
Sat Flow, veh/h	1202	52	1312	1276	91	1316	1697	3427	64	1640	3494	81
Grp Volume(v), veh/h	46	0	132	114	0	108	42	479	501	27	455	476
Grp Sat Flow(s),veh/h/ln	1202	0	1363	1276	0	1407	1697	1706	1785	1640	1749	1826
Q Serve(g_s), s	1.8	0.0	4.6	4.6	0.0	3.6	0.7	11.9	11.9	0.5	11.0	11.0
Cycle Q Clear(g_c), s	5.4	0.0	4.6	9.2	0.0	3.6	0.7	11.9	11.9	0.5	11.0	11.0
Prop In Lane	1.00		0.96	1.00		0.94	1.00		0.04	1.00		0.04
Lane Grp Cap(c), veh/h	329	0	313	318	0	324	341	769	805	305	767	801
V/C Ratio(X)	0.14	0.00	0.42	0.36	0.00	0.33	0.12	0.62	0.62	0.09	0.59	0.59
Avail Cap(c_a), veh/h	486	0	492	830	0	888	574	1846	1931	551	1892	1976
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.1	0.0	18.2	22.1	0.0	17.8	8.8	11.6	11.6	9.1	11.8	11.8
Incr Delay (d2), s/veh	0.2	0.0	0.9	0.7	0.0	0.6	0.1	1.2	1.1	0.0	1.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	1.4	1.4	0.0	1.1	0.2	3.7	3.8	0.1	3.5	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.3	0.0	19.1	22.8	0.0	18.4	8.9	12.8	12.8	9.2	12.9	12.8
LnGrp LOS	C	A	B	C	A	B	A	B	B	A	B	B
Approach Vol, veh/h		178			222			1022			958	
Approach Delay, s/veh		19.4			20.7			12.6			12.7	
Approach LOS		B			C			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	30.5		17.8	7.9	29.8		17.8				
Change Period (Y+Rc), s	5.5	5.5		5.0	5.5	5.5		5.0				
Max Green Setting (Gmax), s	10.0	60.0		20.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	2.5	13.9		7.4	2.7	13.0		11.2				
Green Ext Time (p_c), s	0.0	11.1		0.7	0.0	10.3		1.0				
Intersection Summary												
HCM 6th Ctrl Delay				13.9								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
6: Snoqualmie Pkwy & SE Swenson Dr

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	12	24	46	16	70	47	1004	19	40	680	66
Future Volume (vph)	54	12	24	46	16	70	47	1004	19	40	680	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	275		0	300		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			No
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		456			320			2254			367	
Travel Time (s)		10.4			7.3			38.4			6.3	
Confl. Peds. (#/hr)			1			45	1		8	8		1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	6%	17%	4%	0%	6%	3%	4%	7%	5%	0%	6%	5%
Shared Lane Traffic (%)												
Turn Type	Split	NA		Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		10.0	10.0		5.0	12.0		5.0	12.0	
Minimum Split (s)	38.0	38.0		38.0	38.0		12.0	28.0		12.0	28.0	
Total Split (s)	15.0	15.0		20.0	20.0		37.0	67.0		37.0	67.0	
Total Split (%)	10.8%	10.8%		14.4%	14.4%		26.6%	48.2%		26.6%	48.2%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		7.0	7.0		7.0	7.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other

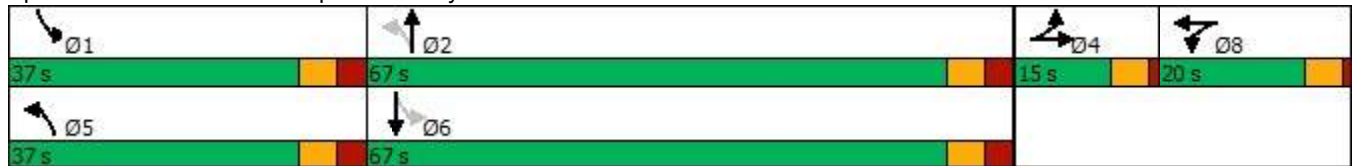
Cycle Length: 139

Actuated Cycle Length: 99.2

Natural Cycle: 140























Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Snoqualmie Pkwy & SE Swenson Dr



HCM 6th Signalized Intersection Summary
6: Snoqualmie Pkwy & SE Swenson Dr

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	12	24	46	16	70	47	1004	19	40	680	66
Future Volume (veh/h)	54	12	24	46	16	70	47	1004	19	40	680	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.92	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1648	1648	1900	1811	1811	1841	1796	1796	1900	1811	1811
Adj Flow Rate, veh/h	61	13	27	52	18	79	53	1128	21	45	764	74
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	17	17	0	6	6	4	7	7	0	6	6
Cap, veh/h	131	36	75	304	46	201	284	1229	23	205	1122	109
Arrive On Green	0.08	0.08	0.08	0.17	0.17	0.17	0.05	0.36	0.36	0.04	0.35	0.35
Sat Flow, veh/h	1725	476	990	1810	273	1199	1753	3427	64	1810	3166	307
Grp Volume(v), veh/h	61	0	40	52	0	97	53	562	587	45	415	423
Grp Sat Flow(s),veh/h/ln	1725	0	1466	1810	0	1472	1753	1706	1784	1810	1721	1752
Q Serve(g_s), s	2.3	0.0	1.8	1.7	0.0	4.0	1.3	21.3	21.3	1.0	13.9	13.9
Cycle Q Clear(g_c), s	2.3	0.0	1.8	1.7	0.0	4.0	1.3	21.3	21.3	1.0	13.9	13.9
Prop In Lane	1.00		0.68	1.00		0.81	1.00		0.04	1.00		0.17
Lane Grp Cap(c), veh/h	131	0	112	304	0	247	284	612	640	205	610	621
V/C Ratio(X)	0.46	0.00	0.36	0.17	0.00	0.39	0.19	0.92	0.92	0.22	0.68	0.68
Avail Cap(c_a), veh/h	255	0	217	401	0	327	980	1514	1583	931	1527	1555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.9	0.0	29.7	24.1	0.0	25.1	14.1	20.7	20.7	16.2	18.6	18.6
Incr Delay (d2), s/veh	0.9	0.0	0.7	0.1	0.0	0.4	0.1	2.5	2.4	0.2	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.6	0.7	0.0	1.3	0.4	7.7	8.0	0.4	4.9	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.9	0.0	30.4	24.2	0.0	25.4	14.2	23.2	23.1	16.4	19.1	19.1
LnGrp LOS	C	A	C	C	A	C	B	C	C	B	B	B
Approach Vol, veh/h		101			149			1202			883	
Approach Delay, s/veh		30.7			25.0			22.7			18.9	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.9	31.3		10.1	10.2	31.0		16.4				
Change Period (Y+Rc), s	7.0	7.0		5.0	7.0	7.0		5.0				
Max Green Setting (Gmax), s	30.0	60.0		10.0	30.0	60.0		15.0				
Max Q Clear Time (g_c+I1), s	3.0	23.3		4.3	3.3	15.9		6.0				
Green Ext Time (p_c), s	0.0	1.0		0.0	0.0	0.7		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				21.8								
HCM 6th LOS				C								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	737	211	63	465	32	111	13	60	77	44	328
Future Volume (vph)	96	737	211	63	465	32	111	13	60	77	44	328
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	175		0	0		150	0		100
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1285			1065			585			583	
Travel Time (s)		21.9			18.2			16.0			15.9	
Confl. Peds. (#/hr)												3
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	10%	9%	2%	2%	6%	13%	5%	0%	3%	4%	0%	4%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4			8					2			6
Detector Phase	7	4		3	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	35.3		9.5	30.3		36.5	36.5	36.5	36.5	36.5	36.5
Total Split (s)	34.5	55.3		14.5	55.3		44.5	44.5	44.5	44.5	44.5	44.5
Total Split (%)	19.3%	30.9%		8.1%	30.9%		24.9%	24.9%	24.9%	24.9%	24.9%	24.9%
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.3		4.5	5.3		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None	None	None	None	None

Intersection Summary

Area Type: Other

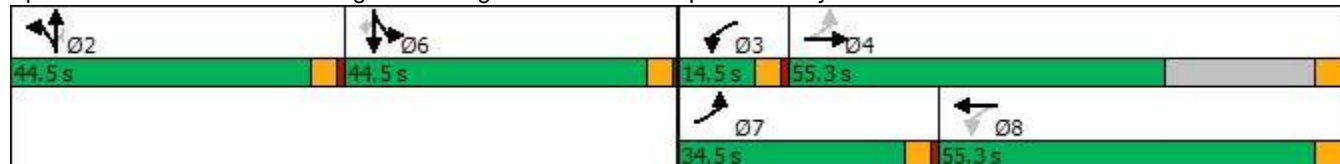
Cycle Length: 178.8

Actuated Cycle Length: 99

Natural Cycle: 130

Control Type: Actuated-Uncoordinated

Splits and Phases: 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	737	211	63	465	32	111	13	60	77	44	328
Future Volume (veh/h)	96	737	211	63	465	32	111	13	60	77	44	328
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1767	1767	1870	1811	1811	1900	1900	1856	1900	1900	1841
Adj Flow Rate, veh/h	110	847	243	72	534	37	128	15	24	89	51	251
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	10	9	9	2	6	6	0	0	3	0	0	4
Cap, veh/h	417	1095	314	241	1352	93	176	21	170	238	136	315
Arrive On Green	0.06	0.43	0.43	0.05	0.41	0.41	0.11	0.11	0.11	0.20	0.20	0.20
Sat Flow, veh/h	1668	2574	738	1781	3265	226	1628	191	1572	1171	671	1553
Grp Volume(v), veh/h	110	552	538	72	281	290	143	0	24	140	0	251
Grp Sat Flow(s),veh/h/ln	1668	1678	1634	1781	1721	1770	1819	0	1572	1841	0	1553
Q Serve(g_s), s	3.2	24.5	24.5	2.0	9.9	10.0	6.6	0.0	1.2	5.7	0.0	13.4
Cycle Q Clear(g_c), s	3.2	24.5	24.5	2.0	9.9	10.0	6.6	0.0	1.2	5.7	0.0	13.4
Prop In Lane	1.00		0.45	1.00		0.13	0.90		1.00	0.64		1.00
Lane Grp Cap(c), veh/h	417	714	695	241	712	733	197	0	170	374	0	315
V/C Ratio(X)	0.26	0.77	0.77	0.30	0.39	0.40	0.73	0.00	0.14	0.37	0.00	0.80
Avail Cap(c_a), veh/h	894	965	939	362	989	1018	837	0	723	847	0	714
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.6	21.4	21.4	16.8	17.8	17.9	37.5	0.0	35.1	29.9	0.0	33.0
Incr Delay (d2), s/veh	0.3	3.4	3.5	0.7	0.5	0.5	5.1	0.0	0.4	0.6	0.0	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	9.3	9.1	0.8	3.7	3.9	3.2	0.0	0.5	2.6	0.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.9	24.8	24.9	17.5	18.3	18.4	42.6	0.0	35.5	30.5	0.0	37.6
LnGrp LOS	B	C	C	B	B	B	D	A	D	C	A	D
Approach Vol, veh/h		1200			643			167			391	
Approach Delay, s/veh		23.8			18.3			41.6			35.0	
Approach LOS		C			B			D			D	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		13.9	8.6	42.3		22.1	9.6	41.3				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		40.0	10.0	50.0		40.0	30.0	50.0				
Max Q Clear Time (g_c+I1), s		8.6	4.0	26.5		15.4	5.2	12.0				
Green Ext Time (p_c), s		1.0	0.1	10.5		1.7	0.3	5.3				
Intersection Summary												
HCM 6th Ctrl Delay				25.4								
HCM 6th LOS				C								

Lanes, Volumes, Timings
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	692	85	136	503	53	9	6	34	78	28	97
Future Volume (vph)	102	692	85	136	503	53	9	6	34	78	28	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	275		0	275		0	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1065			1064			511			626	
Travel Time (s)		18.2			18.1			13.9			17.1	
Confl. Peds. (#/hr)	3		1	1		3	2		1	1		2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	9%	1%	0%	6%	0%	11%	0%	0%	4%	4%	2%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2				6
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		2	2		6		6
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		5.0		5.0
Minimum Split (s)	9.5	34.3		9.5	34.3		36.5	36.5		36.5		36.5
Total Split (s)	34.5	65.3		34.5	65.3		34.5	34.5		34.5		34.5
Total Split (%)	25.7%	48.6%		25.7%	48.6%		25.7%	25.7%		25.7%		25.7%
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5		3.5		3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0		1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Total Lost Time (s)	4.5	5.3		4.5	5.3		4.5	4.5		4.5		4.5
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None		None

Intersection Summary

Area Type: Other

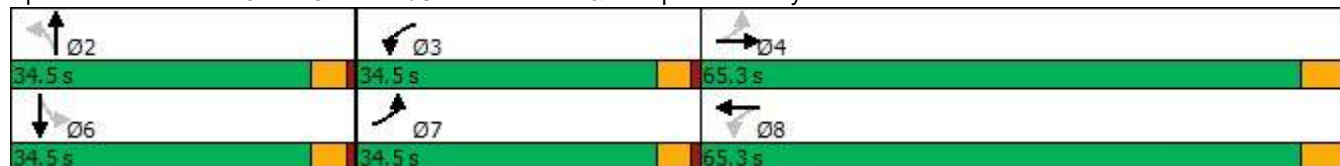
Cycle Length: 134.3

Actuated Cycle Length: 61.8

Natural Cycle: 85

























Control Type: Actuated-Uncoordinated

Splits and Phases: 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	102	692	85	136	503	53	9	6	34	78	28	97
Future Volume (veh/h)	102	692	85	136	503	53	9	6	34	78	28	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1767	1767	1900	1811	1811	1737	1900	1900	1841	1841	1841
Adj Flow Rate, veh/h	115	778	96	153	565	60	10	7	38	88	31	109
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	9	9	0	6	6	11	0	0	4	4	4
Cap, veh/h	566	1336	165	480	1423	151	246	41	222	335	57	201
Arrive On Green	0.08	0.44	0.44	0.09	0.45	0.45	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	3006	371	1810	3138	332	1157	256	1388	1335	356	1253
Grp Volume(v), veh/h	115	434	440	153	309	316	10	0	45	88	0	140
Grp Sat Flow(s),veh/h/ln	1781	1678	1698	1810	1721	1750	1157	0	1644	1335	0	1610
Q Serve(g_s), s	1.5	9.1	9.1	2.0	5.6	5.7	0.4	0.0	1.1	2.9	0.0	3.8
Cycle Q Clear(g_c), s	1.5	9.1	9.1	2.0	5.6	5.7	4.1	0.0	1.1	4.0	0.0	3.8
Prop In Lane	1.00		0.22	1.00		0.19	1.00		0.84	1.00		0.78
Lane Grp Cap(c), veh/h	566	746	755	480	780	794	246	0	263	335	0	258
V/C Ratio(X)	0.20	0.58	0.58	0.32	0.40	0.40	0.04	0.00	0.17	0.26	0.00	0.54
Avail Cap(c_a), veh/h	1554	2138	2164	1467	2192	2230	797	0	1047	972	0	1025
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.0	9.8	9.8	6.7	8.6	8.6	20.1	0.0	17.1	18.8	0.0	18.2
Incr Delay (d2), s/veh	0.2	1.0	1.0	0.4	0.5	0.5	0.1	0.0	0.3	0.4	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.5	2.5	0.5	1.5	1.6	0.1	0.0	0.4	0.8	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.1	10.8	10.8	7.1	9.0	9.0	20.2	0.0	17.4	19.2	0.0	20.0
LnGrp LOS	A	B	B	A	A	A	C	A	B	B	A	B
Approach Vol, veh/h		989			778			55				228
Approach Delay, s/veh		10.3			8.7			17.9				19.7
Approach LOS		B			A			B				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.0	8.8	26.2		12.0	8.4	26.7				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		30.0	30.0	60.0		30.0	30.0	60.0				
Max Q Clear Time (g_c+I1), s		6.1	4.0	11.1		6.0	3.5	7.7				
Green Ext Time (p_c), s		0.2	0.4	9.6		1.1	0.3	6.1				
Intersection Summary												
HCM 6th Ctrl Delay				10.9								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
 9: Snoqualmie Pkwy & Fairway Ave SE

03/06/2020

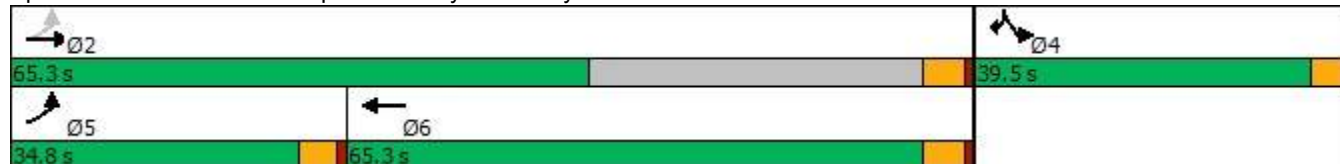


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	30	896	531	110	247	210
Future Volume (vph)	30	896	531	110	247	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	325			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		25	
Link Distance (ft)		1064	278		478	
Travel Time (s)		18.1	4.7		13.0	
Confl. Peds. (#/hr)	2			2		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	8%	6%	3%	12%	2%	1%
Shared Lane Traffic (%)						
Turn Type	pm+pt	NA	NA		Prot	Prot
Protected Phases	5	2	6		4	4
Permitted Phases	2					
Detector Phase	5	2	6		4	4
Switch Phase						
Minimum Initial (s)	5.0	12.0	12.0		5.0	5.0
Minimum Split (s)	9.8	23.3	26.3		36.5	36.5
Total Split (s)	34.8	65.3	65.3		39.5	39.5
Total Split (%)	24.9%	46.8%	46.8%		28.3%	28.3%
Yellow Time (s)	3.8	4.3	4.3		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.8	5.3	5.3		4.5	4.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	None	None		None	None

Intersection Summary

Area Type: Other
 Cycle Length: 139.6
 Actuated Cycle Length: 53.9
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated

Splits and Phases: 9: Snoqualmie Pkwy & Fairway Ave SE



HCM 6th Signalized Intersection Summary
 9: Snoqualmie Pkwy & Fairway Ave SE























03/06/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	30	896	531	110	247	210
Future Volume (veh/h)	30	896	531	110	247	210
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1811	1856	1856	1870	1885
Adj Flow Rate, veh/h	33	996	590	122	274	195
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	6	3	3	2	1
Cap, veh/h	381	1758	1006	208	412	370
Arrive On Green	0.04	0.51	0.35	0.35	0.23	0.23
Sat Flow, veh/h	1697	3532	3001	600	1781	1598
Grp Volume(v), veh/h	33	996	357	355	274	195
Grp Sat Flow(s),veh/h/ln	1697	1721	1763	1746	1781	1598
Q Serve(g_s), s	0.4	7.6	6.3	6.4	5.3	4.1
Cycle Q Clear(g_c), s	0.4	7.6	6.3	6.4	5.3	4.1
Prop In Lane	1.00			0.34	1.00	1.00
Lane Grp Cap(c), veh/h	381	1758	610	604	412	370
V/C Ratio(X)	0.09	0.57	0.59	0.59	0.66	0.53
Avail Cap(c_a), veh/h	1653	5429	2781	2754	1639	1470
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.1	6.4	10.2	10.2	13.3	12.8
Incr Delay (d2), s/veh	0.1	0.3	0.9	0.9	1.8	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.4	1.7	1.7	2.0	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.2	6.7	11.1	11.1	15.1	14.0
LnGrp LOS	A	A	B	B	B	B
Approach Vol, veh/h		1029	712		469	
Approach Delay, s/veh		6.7	11.1		14.6	
Approach LOS		A	B		B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		24.7		13.3	6.3	18.5
Change Period (Y+Rc), s		5.3		4.5	* 4.8	5.3
Max Green Setting (Gmax), s		60.0		35.0	* 30	60.0
Max Q Clear Time (g_c+I1), s		9.6		7.3	2.4	8.4
Green Ext Time (p_c), s		8.4		1.6	0.1	4.7
Intersection Summary						
HCM 6th Ctrl Delay			9.8			
HCM 6th LOS			A			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

Lanes, Volumes, Timings
 10: Fisher Ave SE & Snoqualmie Pkwy

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (vph)	7	937	6	3	502	21	36	1	8	30	3	32
Future Volume (vph)	7	937	6	3	502	21	36	1	8	30	3	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		458			1686			518			363	
Travel Time (s)		7.8			28.7			14.1			9.9	
Confl. Peds. (#/hr)	2		1	2		3	1		2	3		2
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	0%	6%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	26.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕			↕			↕	
Traffic Vol, veh/h	7	937	6	3	502	21	36	1	8	30	3	32
Future Vol, veh/h	7	937	6	3	502	21	36	1	8	30	3	32
Conflicting Peds, #/hr	2	0	1	2	0	3	1	0	2	3	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #-	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	6	0	0	4	0	0	0	0	0	0	0
Mvmt Flow	9	1201	8	4	644	27	46	1	10	38	4	41

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	674	0	0	1211	0	0	1559	1907	610	1291	1898	341
Stage 1	-	-	-	-	-	-	1225	1225	-	669	669	-
Stage 2	-	-	-	-	-	-	334	682	-	622	1229	-
Critical Hdwy	4.1	-	-	4.1	-	-	9.5	8.5	7.9	9.5	8.5	7.9
Critical Hdwy Stg 1	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	927	-	-	583	-	-	~ 33	24	373	60	24	601
Stage 1	-	-	-	-	-	-	98	128	-	288	317	-
Stage 2	-	-	-	-	-	-	547	310	-	316	128	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	924	-	-	582	-	-	~ 26	23	371	55	23	598
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 26	23	-	55	23	-
Stage 1	-	-	-	-	-	-	97	126	-	284	314	-
Stage 2	-	-	-	-	-	-	499	307	-	300	126	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	\$ 682	162.5
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	31	924	-	-	582	-	-	89
HCM Lane V/C Ratio	1.861	0.01	-	-	0.007	-	-	0.936
HCM Control Delay (s)	\$ 682	8.9	-	-	11.2	-	-	162.5
HCM Lane LOS	F	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	6.6	0	-	-	0	-	-	5.2

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
 11: Orchard Ave SE & Snoqualmie Pkwy

03/06/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (vph)	1204	9	16	583	25	41
Future Volume (vph)	1204	9	16	583	25	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	225		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	1686			1131	557	
Travel Time (s)	28.7			19.3	15.2	
Confl. Peds. (#/hr)		3	1		3	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	5%	11%	6%	5%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Vol, veh/h	1204	9	16	583	25	41
Future Vol, veh/h	1204	9	16	583	25	41
Conflicting Peds, #/hr	0	3	1	0	3	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	225	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	5	11	6	5	0	5
Mvmt Flow	1384	10	18	670	29	47

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1397	0	1766
Stage 1	-	-	-	-	1392
Stage 2	-	-	-	-	374
Critical Hdwy	-	-	4.22	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.26	-	3.5
Pot Cap-1 Maneuver	-	-	465	-	77
Stage 1	-	-	-	-	199
Stage 2	-	-	-	-	672
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	464	-	74
Mov Cap-2 Maneuver	-	-	-	-	74
Stage 1	-	-	-	-	198
Stage 2	-	-	-	-	644

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	53.1
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	147	-	-	464	-
HCM Lane V/C Ratio	0.516	-	-	0.04	-
HCM Control Delay (s)	53.1	-	-	13.1	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	2.5	-	-	0.1	-

Lanes, Volumes, Timings
 12: Snoqualmie Pkwy & Allman AveSE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	1244	585	4	7	9
Future Volume (vph)	2	1244	585	4	7	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		40	40		25	
Link Distance (ft)		679	1187		393	
Travel Time (s)		11.6	20.2		10.7	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	5%	5%	0%	0%	0%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑		↘	
Traffic Vol, veh/h	2	1244	585	4	7	9
Future Vol, veh/h	2	1244	585	4	7	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #-	0	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	5	5	0	0	0
Mvmt Flow	2	1430	672	5	8	10

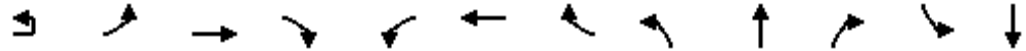
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	677	0	-	0	1394 339
Stage 1	-	-	-	-	675 -
Stage 2	-	-	-	-	719 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	924	-	-	-	135 663
Stage 1	-	-	-	-	473 -
Stage 2	-	-	-	-	449 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	924	-	-	-	135 663
Mov Cap-2 Maneuver	-	-	-	-	135 -
Stage 1	-	-	-	-	472 -
Stage 2	-	-	-	-	449 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	20.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	924	-	-	-	-	245
HCM Lane V/C Ratio	0.002	-	-	-	-	0.075
HCM Control Delay (s)	8.9	-	-	-	-	20.9
HCM Lane LOS	A	-	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	-	0.2

Lanes, Volumes, Timings
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↓		↑↑		↖	↑↑			↑↓			↕
Traffic Volume (vph)	0	0	1232	27	25	569	0	30	0	18	0	0
Future Volume (vph)	0	0	1232	27	25	569	0	30	0	18	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0		0	200		0	0		0	0	
Storage Lanes		1		0	1		0	0		0	0	
Taper Length (ft)		25			25			25			25	
Right Turn on Red				Yes			Yes			Yes		
Link Speed (mph)			40			40			25			25
Link Distance (ft)			1187			833			535			291
Travel Time (s)			20.2			14.2			14.6			7.9
Confl. Peds. (#/hr)		2		1	1		2	1				
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	0%	6%	4%	0%	5%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt		NA		pm+pt	NA		Perm	NA			
Protected Phases	5		2		1	6			8			4
Permitted Phases	2				6			8			4	
Detector Phase	5		2		1	6		8	8		4	4
Switch Phase												
Minimum Initial (s)	5.0		15.0		5.0	14.0		5.0	5.0		30.0	30.0
Minimum Split (s)	10.0		20.0		10.0	29.0		36.0	36.0		36.0	36.0
Total Split (s)	35.0		65.0		35.0	65.0		36.0	36.0		36.0	36.0
Total Split (%)	25.7%		47.8%		25.7%	47.8%		26.5%	26.5%		26.5%	26.5%
Yellow Time (s)	4.0		4.0		4.0	4.0		5.0	5.0		5.0	5.0
All-Red Time (s)	1.0		1.0		1.0	1.0		1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0		5.0		5.0	5.0		6.0	6.0		6.0	6.0
Lead/Lag	Lead		Lag		Lead	Lag						
Lead-Lag Optimize?	Yes		Yes		Yes	Yes						
Recall Mode	Min		Min		None	None		None	None		None	None

Intersection Summary

Area Type: Other

Cycle Length: 136

Actuated Cycle Length: 61.3

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Splits and Phases: 13: Better Way SE & Snoqualmie Pkwy



Lanes, Volumes, Timings
 13: Better Way SE & Snoqualmie Pkwy

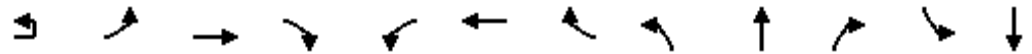
03/12/2020



Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	0
Future Volume (vph)	0
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Right Turn on Red	Yes
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	1
Peak Hour Factor	0.85
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	
Intersection Summary	

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↯		↕		↯	↕			↕			↕
Traffic Volume (veh/h)	0	0	1232	27	25	569	0	30	0	18	0	0
Future Volume (veh/h)	0	0	1232	27	25	569	0	30	0	18	0	0
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach			No			No			No			No
Adj Sat Flow, veh/h/ln		0	1811	1811	1900	1826	1826	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		0	1449	32	29	669	0	35	0	21	0	0
Peak Hour Factor		0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %		0	6	6	0	5	5	0	0	0	0	0
Cap, veh/h		0	2065	46	225	2532	0	167	0	32	0	109
Arrive On Green		0.00	0.60	0.60	0.03	0.73	0.00	0.06	0.00	0.06	0.00	0.00
Sat Flow, veh/h		0	3532	76	1810	3561	0	933	0	560	0	1900
Grp Volume(v), veh/h		0	724	757	29	669	0	56	0	0	0	0
Grp Sat Flow(s),veh/h/ln		0	1721	1797	1810	1735	0	1493	0	0	0	1900
Q Serve(g_s), s		0.0	15.0	15.0	0.2	3.3	0.0	1.9	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s		0.0	15.0	15.0	0.2	3.3	0.0	1.9	0.0	0.0	0.0	0.0
Prop In Lane		0.00		0.04	1.00		0.00	0.62		0.37	0.00	
Lane Grp Cap(c), veh/h		0	1032	1078	225	2532	0	199	0	0	0	109
V/C Ratio(X)		0.00	0.70	0.70	0.13	0.26	0.00	0.28	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h		0	1998	2088	1216	4029	0	980	0	0	0	1103
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh		0.0	7.1	7.1	13.6	2.3	0.0	23.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh		0.0	0.9	0.8	0.3	0.1	0.0	0.8	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.0	3.3	3.4	0.2	0.2	0.0	0.7	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		0.0	8.0	8.0	13.9	2.4	0.0	24.6	0.0	0.0	0.0	0.0
LnGrp LOS		A	A	A	B	A	A	C	A	A	A	A
Approach Vol, veh/h			1481			698			56			0
Approach Delay, s/veh			8.0			2.9			24.6			0.0
Approach LOS			A			A			C			
Timer - Assigned Phs	1	2		4		6			8			
Phs Duration (G+Y+Rc), s	6.7	36.0		9.0		42.7			9.0			
Change Period (Y+Rc), s	5.0	5.0		6.0		5.0			6.0			
Max Green Setting (Gmax), s	30.0	60.0		30.0		60.0			30.0			
Max Q Clear Time (g_c+I1), s	2.2	17.0		0.0		5.3			3.9			
Green Ext Time (p_c), s	0.0	13.9		0.0		5.0			0.2			

Intersection Summary

HCM 6th Ctrl Delay	6.8
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
 User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	0
Future Volume (veh/h)	0
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.85
Percent Heavy Veh, %	0
Cap, veh/h	0
Arrive On Green	0.00
Sat Flow, veh/h	0
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	0
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	0.00
Lane Grp Cap(c), veh/h	0
V/C Ratio(X)	0.00
Avail Cap(c_a), veh/h	0
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Lanes, Volumes, Timings
 14: Trail Access Road & Snoqualmie Pkwy

03/06/2020

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↖	
Traffic Volume (vph)	1006	1	1	481	1	1
Future Volume (vph)	1006	1	1	481	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	646			700	301	
Travel Time (s)	11.0			11.9	8.2	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	6%	0%	0%	5%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Vol, veh/h	1006	1	1	481	1	1
Future Vol, veh/h	1006	1	1	481	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	6	0	0	5	0	0
Mvmt Flow	1290	1	1	617	1	1

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1291	0	1602
Stage 1	-	-	-	-	1291
Stage 2	-	-	-	-	311
Critical Hdwy	-	-	4.1	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	544	-	98
Stage 1	-	-	-	-	226
Stage 2	-	-	-	-	722
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	544	-	98
Mov Cap-2 Maneuver	-	-	-	-	98
Stage 1	-	-	-	-	226
Stage 2	-	-	-	-	721

Approach	EB	WB	NB
HCM Control Delay, s	0	0	28
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	159	-	-	544	-
HCM Lane V/C Ratio	0.016	-	-	0.002	-
HCM Control Delay (s)	28	-	-	11.6	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
15: SR 202 & Snoqualmie Pkwy

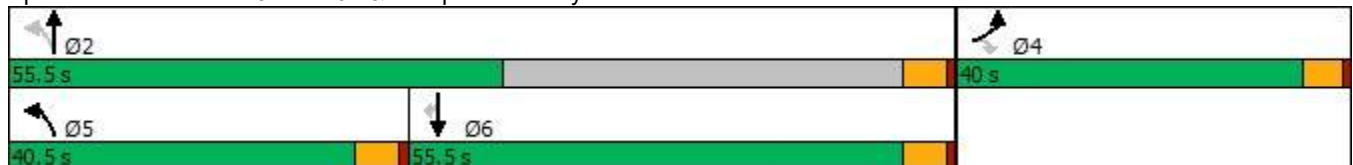
03/06/2020

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	669	345	223	366	286	286
Future Volume (vph)	669	345	223	366	286	286
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	300			300
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Right Turn on Red		Yes				Yes
Link Speed (mph)	40			45	45	
Link Distance (ft)	700			1127	949	
Travel Time (s)	11.9			17.1	14.4	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	7%	3%	3%	9%	9%	5%
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	5.0	7.0	7.0	7.0
Minimum Split (s)	29.0	29.0	10.5	12.5	35.5	35.5
Total Split (s)	40.0	40.0	40.5	55.5	55.5	55.5
Total Split (%)	29.4%	29.4%	29.8%	40.8%	40.8%	40.8%
Yellow Time (s)	4.0	4.0	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	Min	Min	Min

Intersection Summary













Area Type: Other
 Cycle Length: 136
 Actuated Cycle Length: 95.6
 Natural Cycle: 110
 Control Type: Actuated-Uncoordinated

Splits and Phases: 15: SR 202 & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 15: SR 202 & Snoqualmie Pkwy

03/06/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	669	345	223	366	286	286
Future Volume (veh/h)	669	345	223	366	286	286
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00			1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1796	1856	1856	1767	1767	1826
Adj Flow Rate, veh/h	836	82	279	458	358	43
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	7	3	3	9	9	5
Cap, veh/h	721	662	389	799	429	376
Arrive On Green	0.42	0.42	0.14	0.45	0.24	0.24
Sat Flow, veh/h	1711	1572	1767	1767	1767	1547
Grp Volume(v), veh/h	836	82	279	458	358	43
Grp Sat Flow(s),veh/h/ln	1711	1572	1767	1767	1767	1547
Q Serve(g_s), s	35.0	2.6	9.2	15.9	16.0	1.8
Cycle Q Clear(g_c), s	35.0	2.6	9.2	15.9	16.0	1.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	721	662	389	799	429	376
V/C Ratio(X)	1.16	0.12	0.72	0.57	0.83	0.11
Avail Cap(c_a), veh/h	721	662	880	1063	1063	931
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	14.7	19.7	16.8	29.9	24.5
Incr Delay (d2), s/veh	87.1	0.1	2.5	0.7	4.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	29.9	3.0	3.6	5.8	6.8	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	111.1	14.8	22.2	17.5	34.2	24.6
LnGrp LOS	F	B	C	B	C	C
Approach Vol, veh/h	918			737	401	
Approach Delay, s/veh	102.5			19.3	33.2	
Approach LOS	F			B	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		43.1		40.0	17.4	25.7
Change Period (Y+Rc), s		5.5		5.0	5.5	5.5
Max Green Setting (Gmax), s		50.0		35.0	35.0	50.0
Max Q Clear Time (g_c+I1), s		17.9		37.0	11.2	18.0
Green Ext Time (p_c), s		2.8		0.0	0.8	2.2
Intersection Summary						
HCM 6th Ctrl Delay			59.2			
HCM 6th LOS			E			

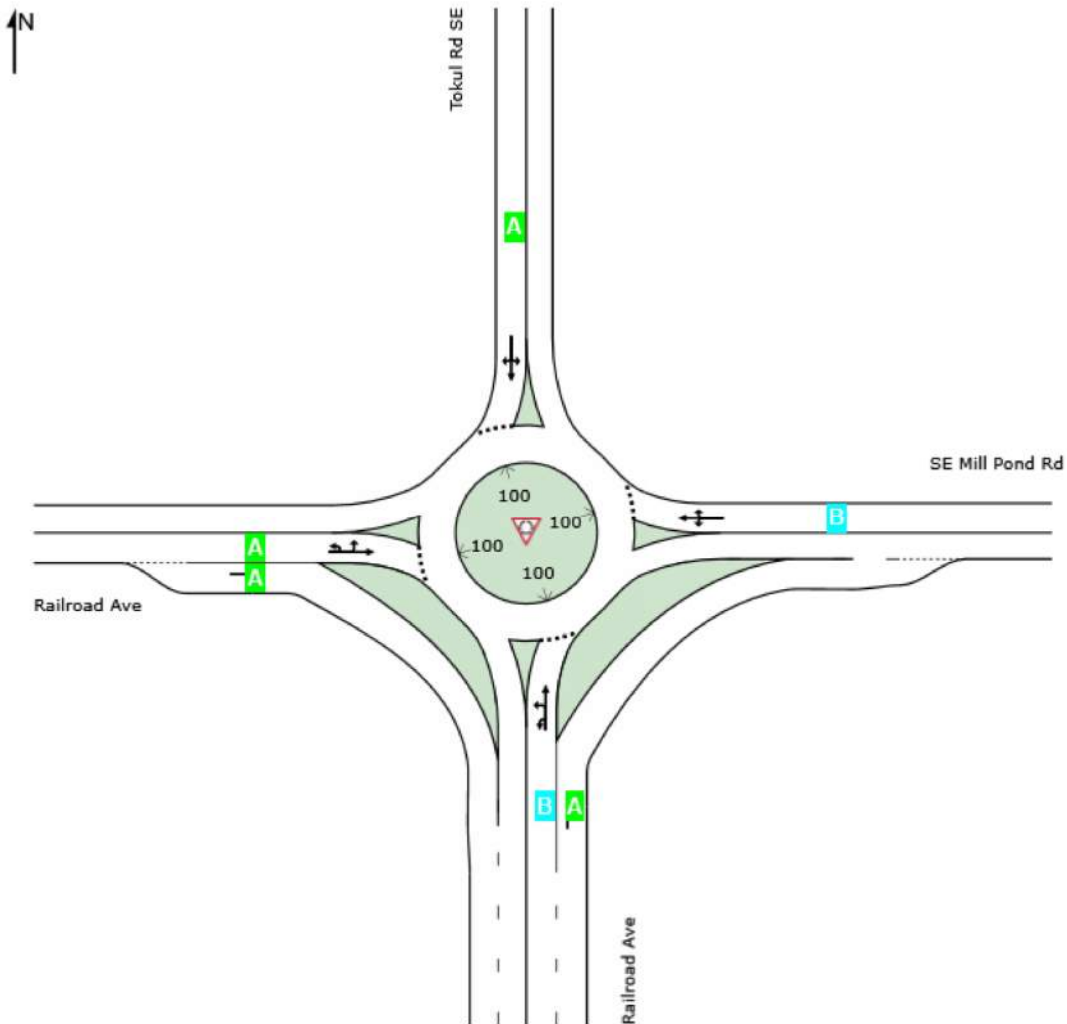
LANE LEVEL OF SERVICE

Lane Level of Service

Site: 16 [2032 With Planning Areas 1-3 - AM Peak Hour]

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	B	A	A	A



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Signalised Intersections.
 Lane LOS values are based on average delay per lane.
 Intersection and Approach LOS values are based on average delay for all lanes.
 SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

LANE SUMMARY

Site: 16 [2032 With Planning Areas 1-3 - AM Peak Hour]

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

Lane Use and Performance													
	Demand Flows			Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue		Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
	Total veh/h	HV %	Cap. veh/h					Veh	Dist ft				
South: Railroad Ave													
Lane 1 ^d	474	9.5	1242	0.382	100	10.2	LOS B	2.5	67.5	Full	1600	0.0	0.0
Lane 2	741	7.1	1564	0.474	100	3.7	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	1215	8.0		0.474		6.3	LOS A	2.5	67.5				
East: SE Mill Pond Rd													
Lane 1 ^d	326	16.5	815	0.400	100	11.1	LOS B	2.5	72.0	Full	1600	0.0	0.0
Approach	326	16.5		0.400		11.1	LOS B	2.5	72.0				
North: Tokul Rd SE													
Lane 1 ^d	40	0.0	761	0.053	100	10.0	LOS A	0.3	8.1	Full	1600	0.0	0.0
Approach	40	0.0		0.053		10.0	LOS A	0.3	8.1				
West: Railroad Ave													
Lane 1 ^d	354	5.0	1389	0.255	100	4.8	LOS A	1.6	40.8	Full	1600	0.0	0.0
Lane 2	468	6.0	1580	0.296	100	3.7	LOS A	0.0	0.0	Short	200	0.0	NA
Approach	822	5.5		0.296		4.2	LOS A	1.6	40.8				
Intersection	2404	8.2		0.474		6.3	LOS A	2.5	72.0				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	100	4	20	31	3	24
Future Volume (vph)	100	4	20	31	3	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45		35			35
Link Distance (ft)	458		1466			541
Travel Time (s)	6.9		28.6			10.5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	10%	3%	0%	4%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	5.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	100	4	20	31	3	24
Future Vol, veh/h	100	4	20	31	3	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	0	10	3	0	4
Mvmt Flow	105	4	21	33	3	25

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	69	38	0	0	54	0
Stage 1	38	-	-	-	-	-
Stage 2	31	-	-	-	-	-
Critical Hdwy	6.42	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	936	1040	-	-	1564	-
Stage 1	984	-	-	-	-	-
Stage 2	992	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	934	1040	-	-	1564	-
Mov Cap-2 Maneuver	934	-	-	-	-	-
Stage 1	984	-	-	-	-	-
Stage 2	990	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	0.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	938	1564
HCM Lane V/C Ratio	-	-	0.117	0.002
HCM Control Delay (s)	-	-	9.3	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0

Lanes, Volumes, Timings

18: Meadowbrook Way SE/SE Reinig Rd & SE Mill Pond Rd

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	194	38	98	26	14	114
Future Volume (vph)	194	38	98	26	14	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		40	
Link Distance (ft)		502	1466		916	
Travel Time (s)		9.8	28.6		15.6	
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Heavy Vehicles (%)	1%	5%	2%	4%	7%	2%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	6.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	194	38	98	26	14	114
Future Vol, veh/h	194	38	98	26	14	114
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	69	69	69	69	69	69
Heavy Vehicles, %	1	5	2	4	7	2
Mvmt Flow	281	55	142	38	20	165
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	180	0	-	0	778	161
Stage 1	-	-	-	-	161	-
Stage 2	-	-	-	-	617	-
Critical Hdwy	4.11	-	-	-	6.47	6.22
Critical Hdwy Stg 1	-	-	-	-	5.47	-
Critical Hdwy Stg 2	-	-	-	-	5.47	-
Follow-up Hdwy	2.209	-	-	-	3.563	3.318
Pot Cap-1 Maneuver	1402	-	-	-	358	884
Stage 1	-	-	-	-	856	-
Stage 2	-	-	-	-	529	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1402	-	-	-	284	884
Mov Cap-2 Maneuver	-	-	-	-	284	-
Stage 1	-	-	-	-	679	-
Stage 2	-	-	-	-	529	-
Approach	EB	WB		SB		
HCM Control Delay, s	6.9	0		11.8		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1402	-	-	-	-	718
HCM Lane V/C Ratio	0.201	-	-	-	-	0.258
HCM Control Delay (s)	8.2	0	-	-	-	11.8
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0.7	-	-	-	-	1

Lanes, Volumes, Timings
19: Meadowbrook Bridge

03/02/2020

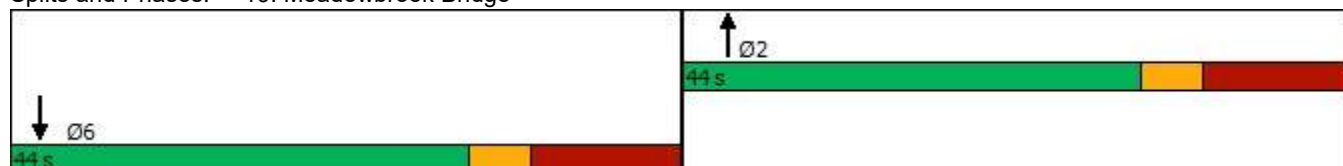


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	183	0	0	327
Future Volume (vph)	0	0	183	0	0	327
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			30
Link Distance (ft)	150		304			249
Travel Time (s)	3.4		6.9			5.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Shared Lane Traffic (%)						
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Detector Phase			2			6
Switch Phase						
Minimum Initial (s)			5.0			5.0
Minimum Split (s)			19.0			19.0
Total Split (s)			44.0			44.0
Total Split (%)			50.0%			50.0%
Yellow Time (s)			4.0			4.0
All-Red Time (s)			10.0			10.0
Lost Time Adjust (s)			0.0			0.0
Total Lost Time (s)			14.0			14.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode			None			None

Intersection Summary

Area Type: Other
 Cycle Length: 88
 Actuated Cycle Length: 53.5
 Natural Cycle: 55
 Control Type: Actuated-Uncoordinated

Splits and Phases: 19: Meadowbrook Bridge



HCM Signalized Intersection Capacity Analysis
 19: Meadowbrook Bridge

03/02/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	183	0	0	327
Future Volume (vph)	0	0	183	0	0	327
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			14.0			14.0
Lane Util. Factor			1.00			1.00
Frt			1.00			1.00
Flt Protected			1.00			1.00
Satd. Flow (prot)			1881			1881
Flt Permitted			1.00			1.00
Satd. Flow (perm)			1881			1881
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	199	0	0	355
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	199	0	0	355
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Actuated Green, G (s)			10.4			14.5
Effective Green, g (s)			10.4			14.5
Actuated g/C Ratio			0.20			0.27
Clearance Time (s)			14.0			14.0
Vehicle Extension (s)			2.0			2.0
Lane Grp Cap (vph)			369			515
v/s Ratio Prot			c0.11			c0.19
v/s Ratio Perm						
v/c Ratio			0.54			0.69
Uniform Delay, d1			19.1			17.2
Progression Factor			1.00			1.00
Incremental Delay, d2			0.8			3.1
Delay (s)			19.9			20.2
Level of Service			B			C
Approach Delay (s)	0.0		19.9			20.2
Approach LOS	A		B			C
Intersection Summary						
HCM 2000 Control Delay			20.1		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.63			
Actuated Cycle Length (s)			52.9		Sum of lost time (s)	28.0
Intersection Capacity Utilization			28.9%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Lanes, Volumes, Timings
 20: Meadowbrook Way SE & SE Park St

03/12/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	122	10	48	62	20	4	197	65	33	84	16
Future Volume (vph)	16	122	10	48	62	20	4	197	65	33	84	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		505			663			790			216	
Travel Time (s)		13.8			18.1			21.5			5.9	
Confl. Peds. (#/hr)	5		1			4	1			4		5
Peak Hour Factor	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Heavy Vehicles (%)	0%	7%	10%	10%	11%	0%	0%	1%	5%	3%	2%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	42.8
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	16	122	10	48	62	20	4	197	65	33	84	16
Future Vol, veh/h	16	122	10	48	62	20	4	197	65	33	84	16
Peak Hour Factor	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Heavy Vehicles, %	0	7	10	10	11	0	0	1	5	3	2	0
Mvmt Flow	33	249	20	98	127	41	8	402	133	67	171	33
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	23.6			21.8			74.8			20.8		
HCM LOS	C			C			F			C		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %		2%	11%	37%
Vol Thru, %		74%	82%	48%
Vol Right, %		24%	7%	15%
Sign Control		Stop	Stop	Stop
Traffic Vol by Lane		266	148	130
LT Vol		4	16	48
Through Vol		197	122	62
RT Vol		65	10	20
Lane Flow Rate		543	302	265
Geometry Grp		1	1	1
Degree of Util (X)		1.035	0.637	0.58
Departure Headway (Hd)		6.865	7.84	8.136
Convergence, Y/N		Yes	Yes	Yes
Cap		532	465	446
Service Time		4.865	5.84	6.136
HCM Lane V/C Ratio		1.021	0.649	0.594
HCM Control Delay		74.8	23.6	21.8
HCM Lane LOS		F	C	C
HCM 95th-tile Q		15.5	4.4	3.6

Lanes, Volumes, Timings
21: Meadowbrook Way SE & SR 202

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	301	56	10	380	121	89	105	22	35	65	15
Future Volume (vph)	27	301	56	10	380	121	89	105	22	35	65	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	0		0	150		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			40			35				25
Link Distance (ft)		615			663			738				518
Travel Time (s)		14.0			11.3			14.4				14.1
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles (%)	4%	9%	4%	0%	7%	0%	7%	1%	0%	0%	3%	20%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	33.3	33.3		30.3	30.3		32.8	32.8		32.8	32.8	
Total Split (s)	71.3	71.3		71.3	71.3		40.8	40.8		40.8	40.8	
Total Split (%)	63.6%	63.6%		63.6%	63.6%		36.4%	36.4%		36.4%	36.4%	
Yellow Time (s)	4.3	4.3		4.3	4.3		3.8	3.8		3.8	3.8	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.3	6.3		6.3	6.3			5.8		5.8	5.8	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Min	Min		Min	Min		None	None		None	None	

Intersection Summary

Area Type: Other

Cycle Length: 112.1

Actuated Cycle Length: 66.4

Natural Cycle: 70





















Control Type: Actuated-Uncoordinated

Splits and Phases: 21: Meadowbrook Way SE & SR 202



HCM 6th Signalized Intersection Summary
 21: Meadowbrook Way SE & SR 202

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	301	56	10	380	121	89	105	22	35	65	15
Future Volume (veh/h)	27	301	56	10	380	121	89	105	22	35	65	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1767	1767	1900	1796	1796	1885	1885	1885	1900	1856	1856
Adj Flow Rate, veh/h	36	407	76	14	514	164	120	142	30	47	88	20
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Percent Heavy Veh, %	4	9	9	0	7	7	1	1	1	0	3	3
Cap, veh/h	281	728	136	432	657	209	234	217	40	429	368	84
Arrive On Green	0.50	0.50	0.50	0.50	0.50	0.50	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	749	1448	270	927	1305	416	520	861	158	1232	1463	333
Grp Volume(v), veh/h	36	0	483	14	0	678	292	0	0	47	0	108
Grp Sat Flow(s),veh/h/ln	749	0	1718	927	0	1721	1539	0	0	1232	0	1796
Q Serve(g_s), s	2.0	0.0	9.6	0.5	0.0	15.9	6.4	0.0	0.0	0.0	0.0	2.4
Cycle Q Clear(g_c), s	18.0	0.0	9.6	10.1	0.0	15.9	8.7	0.0	0.0	1.7	0.0	2.4
Prop In Lane	1.00		0.16	1.00		0.24	0.41		0.10	1.00		0.19
Lane Grp Cap(c), veh/h	281	0	864	432	0	866	490	0	0	429	0	452
V/C Ratio(X)	0.13	0.00	0.56	0.03	0.00	0.78	0.60	0.00	0.00	0.11	0.00	0.24
Avail Cap(c_a), veh/h	891	0	2262	1186	0	2266	1205	0	0	993	0	1273
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.4	0.0	8.5	12.0	0.0	10.1	17.1	0.0	0.0	14.4	0.0	14.7
Incr Delay (d2), s/veh	0.2	0.0	0.7	0.0	0.0	1.9	1.2	0.0	0.0	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	2.8	0.1	0.0	4.4	2.8	0.0	0.0	0.4	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.7	0.0	9.2	12.0	0.0	12.0	18.2	0.0	0.0	14.6	0.0	15.0
LnGrp LOS	B	A	A	B	A	B	B	A	A	B	A	B
Approach Vol, veh/h		519			692			292			155	
Approach Delay, s/veh		9.8			12.0			18.2			14.8	
Approach LOS		A			B			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.1		18.2		31.1		18.2				
Change Period (Y+Rc), s		6.3		* 5.8		6.3		* 5.8				
Max Green Setting (Gmax), s		65.0		* 35		65.0		* 35				
Max Q Clear Time (g_c+I1), s		20.0		4.4		17.9		10.7				
Green Ext Time (p_c), s		4.9		0.8		6.7		1.7				
Intersection Summary												
HCM 6th Ctrl Delay				12.7								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 22: Meadowbrook Way SE & 384th Ave SE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	45	256	290	16	32	172
Future Volume (vph)	45	256	290	16	32	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		25	
Link Distance (ft)		158	180		181	
Travel Time (s)		3.1	3.5		4.9	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	2%	4%	2%	0%	0%	3%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↖	↗		↖	↗
Traffic Vol, veh/h	45	256	290	16	32	172
Future Vol, veh/h	45	256	290	16	32	172
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	4	2	0	0	3
Mvmt Flow	55	312	354	20	39	210

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	374	0	-	0	786 364
Stage 1	-	-	-	-	364 -
Stage 2	-	-	-	-	422 -
Critical Hdwy	4.12	-	-	-	6.4 6.23
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.218	-	-	-	3.5 3.327
Pot Cap-1 Maneuver	1184	-	-	-	364 679
Stage 1	-	-	-	-	707 -
Stage 2	-	-	-	-	666 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1184	-	-	-	344 679
Mov Cap-2 Maneuver	-	-	-	-	344 -
Stage 1	-	-	-	-	667 -
Stage 2	-	-	-	-	666 -

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	15.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1184	-	-	-	-	589
HCM Lane V/C Ratio	0.046	-	-	-	-	0.422
HCM Control Delay (s)	8.2	0	-	-	-	15.5
HCM Lane LOS	A	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	-	2.1

Lanes, Volumes, Timings
 23: SE North Bend Way & Meadowbrook Way SE

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	46	416	211	78	223	62
Future Volume (vph)	46	416	211	78	223	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	450	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Link Speed (mph)	35		50			50
Link Distance (ft)	158		253			593
Travel Time (s)	3.1		3.5			8.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	2%	4%	4%	3%	13%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↘	↑	↘	↘	↑
Traffic Vol, veh/h	46	416	211	78	223	62
Future Vol, veh/h	46	416	211	78	223	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	Free	-	None
Storage Length	0	0	-	0	450	-
Veh in Median Storage, #1	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	7	2	4	4	3	13
Mvmt Flow	50	452	229	85	242	67

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	780	-	0	-	229
Stage 1	229	-	-	-	-
Stage 2	551	-	-	-	-
Critical Hdwy	6.47	-	-	-	4.13
Critical Hdwy Stg 1	5.47	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-
Follow-up Hdwy	3.563	-	-	-	2.227
Pot Cap-1 Maneuver	357	0	-	0	1333
Stage 1	797	0	-	0	-
Stage 2	567	0	-	0	-
Platoon blocked, %			-		-
Mov Cap-1 Maneuver	292	-	-	-	1333
Mov Cap-2 Maneuver	384	-	-	-	-
Stage 1	797	-	-	-	-
Stage 2	464	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.8	0	6.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn	WBLn2	SBL	SBT
Capacity (veh/h)	-	384	-	1333	-
HCM Lane V/C Ratio	-	0.13	-	0.182	-
HCM Control Delay (s)	-	15.8	0	8.3	-
HCM Lane LOS	-	C	A	A	-
HCM 95th %tile Q(veh)	-	0.4	-	0.7	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	119	158	12	730	207
Future Volume (vph)	2	119	158	12	730	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	804		935			756
Travel Time (s)	21.9		18.2			14.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	23%	0%	5%	13%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	2	119	158	12	730	207
Future Vol, veh/h	2	119	158	12	730	207
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	23	0	5	13
Mvmt Flow	2	129	172	13	793	225

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1990	179	0	0	185	0
Stage 1	179	-	-	-	-	-
Stage 2	1811	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.15	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.245	-
Pot Cap-1 Maneuver	68	869	-	-	1372	-
Stage 1	857	-	-	-	-	-
Stage 2	145	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	23	869	-	-	1372	-
Mov Cap-2 Maneuver	23	-	-	-	-	-
Stage 1	857	-	-	-	-	-
Stage 2	49	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.8	0	8.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	540	1372
HCM Lane V/C Ratio	-	-	0.244	0.578
HCM Control Delay (s)	-	-	13.8	11.2
HCM Lane LOS	-	-	B	B
HCM 95th %tile Q(veh)	-	-	0.9	3.9



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	4	22	148	6	35	174
Future Volume (vph)	4	22	148	6	35	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	796		476			935
Travel Time (s)	21.7		9.3			18.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	25%	0%	0%	15%
Shared Lane Traffic (%)						
Sign Control	Yield		Yield			Yield

Intersection Summary

Area Type: Other

Control Type: Roundabout

Lanes, Volumes, Timings
 26: SE Mill Pond Rd & North Driveway

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	31	123	6	31	147
Future Volume (vph)	10	31	123	6	31	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35		35	
Link Distance (ft)	769		376		476	
Travel Time (s)	21.0		7.3		9.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	30%	0%	0%	18%
Shared Lane Traffic (%)						
Sign Control	Stop		Free		Free	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	10	31	123	6	31	147
Future Vol, veh/h	10	31	123	6	31	147
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	30	0	0	18
Mvmt Flow	11	34	134	7	34	160

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	366	138	0	0	141	0
Stage 1	138	-	-	-	-	-
Stage 2	228	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	638	916	-	-	1455	-
Stage 1	894	-	-	-	-	-
Stage 2	815	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	621	916	-	-	1455	-
Mov Cap-2 Maneuver	621	-	-	-	-	-
Stage 1	894	-	-	-	-	-
Stage 2	794	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	1.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	821	1455
HCM Lane V/C Ratio	-	-	0.054	0.023
HCM Control Delay (s)	-	-	9.6	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1

Lanes, Volumes, Timings
 27: SE Mill Pond Rd & South Driveway

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	8	31	98	7	29	128
Future Volume (vph)	8	31	98	7	29	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	721		317			376
Travel Time (s)	19.7		6.2			7.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	38%	0%	0%	20%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	8	31	98	7	29	128
Future Vol, veh/h	8	31	98	7	29	128
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	38	0	0	20
Mvmt Flow	9	34	107	8	32	139

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	314	111	0	0	115	0
Stage 1	111	-	-	-	-	-
Stage 2	203	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	683	948	-	-	1487	-
Stage 1	919	-	-	-	-	-
Stage 2	836	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	667	948	-	-	1487	-
Mov Cap-2 Maneuver	667	-	-	-	-	-
Stage 1	919	-	-	-	-	-
Stage 2	817	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	1.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	873	1487
HCM Lane V/C Ratio	-	-	0.049	0.021
HCM Control Delay (s)	-	-	9.3	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1

Lanes, Volumes, Timings
 28: SE Mill Pond Rd & SE Access Road

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	22	0	105	157	0	136
Future Volume (vph)	22	0	105	157	0	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	701		575			216
Travel Time (s)	19.1		11.2			4.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	35%	0%	0%	19%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	22	0	105	157	0	136
Future Vol, veh/h	22	0	105	157	0	136
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	35	0	0	19
Mvmt Flow	24	0	114	171	0	148

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	348	200	0	0	285	0
Stage 1	200	-	-	-	-	-
Stage 2	148	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	653	846	-	-	1289	-
Stage 1	838	-	-	-	-	-
Stage 2	884	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	653	846	-	-	1289	-
Mov Cap-2 Maneuver	653	-	-	-	-	-
Stage 1	838	-	-	-	-	-
Stage 2	884	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	653	1289
HCM Lane V/C Ratio	-	-	0.037	-
HCM Control Delay (s)	-	-	10.7	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Lanes, Volumes, Timings
1: SR-18 & I-90 EB Ramps

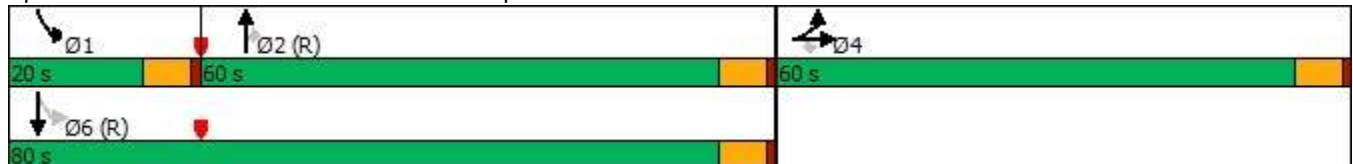
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	842	2	764	0	0	0	0	230	440	171	903	0
Future Volume (vph)	842	2	764	0	0	0	0	230	440	171	903	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650		0	0		0	0		300	200		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			45			30	
Link Distance (ft)		833			764			1837			778	
Travel Time (s)		16.2			14.9			27.8			17.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	0%	4%	0%	0%	0%	0%	3%	27%	5%	12%	0%
Shared Lane Traffic (%)	50%											
Turn Type	Split	NA	Perm					NA	Perm	pm+pt	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			4						2	6		
Detector Phase	4	4	4					2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					10.0	10.0	3.0	10.0	
Minimum Split (s)	29.0	29.0	29.0					16.0	16.0	9.0	23.0	
Total Split (s)	60.0	60.0	60.0					60.0	60.0	20.0	80.0	
Total Split (%)	42.9%	42.9%	42.9%					42.9%	42.9%	14.3%	57.1%	
Yellow Time (s)	5.0	5.0	5.0					5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0	1.0					1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0					6.0	6.0	6.0	6.0	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None					C-Min	C-Min	None	C-Min	

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated

Splits and Phases: 1: SR-18 & I-90 EB Ramps



HCM 6th Signalized Intersection Summary

1: SR-18 & I-90 EB Ramps

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	842	2	764	0	0	0	0	230	440	171	903	0
Future Volume (veh/h)	842	2	764	0	0	0	0	230	440	171	903	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1841				0	1856	1500	1826	1722	0
Adj Flow Rate, veh/h	869	0	0				0	237	0	176	931	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	0	4				0	3	27	5	12	0
Cap, veh/h	1168	0					0	887		614	1919	0
Arrive On Green	0.33	0.00	0.00				0.00	0.48	0.00	0.07	0.59	0.00
Sat Flow, veh/h	3563	0	1560				0	1856	1271	1739	3358	0
Grp Volume(v), veh/h	869	0	0				0	237	0	176	931	0
Grp Sat Flow(s),veh/h/ln	1781	0	1560				0	1856	1271	1739	1636	0
Q Serve(g_s), s	30.4	0.0	0.0				0.0	10.7	0.0	7.0	23.0	0.0
Cycle Q Clear(g_c), s	30.4	0.0	0.0				0.0	10.7	0.0	7.0	23.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1168	0					0	887		614	1919	0
V/C Ratio(X)	0.74	0.00					0.00	0.27		0.29	0.49	0.00
Avail Cap(c_a), veh/h	1374	0					0	887		674	1919	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				0.00	1.00	0.00	0.64	0.64	0.00
Uniform Delay (d), s/veh	41.8	0.0	0.0				0.0	21.9	0.0	15.9	16.7	0.0
Incr Delay (d2), s/veh	4.3	0.0	0.0				0.0	0.7	0.0	0.2	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.9	0.0	0.0				0.0	4.7	0.0	2.8	8.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.1	0.0	0.0				0.0	22.6	0.0	16.1	17.3	0.0
LnGrp LOS	D	A					A	C		B	B	A
Approach Vol, veh/h		869	A					237	A		1107	
Approach Delay, s/veh		46.1						22.6			17.1	
Approach LOS		D						C			B	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	15.2	72.9		51.9				88.1				
Change Period (Y+Rc), s	6.0	6.0		6.0				6.0				
Max Green Setting (Gmax), s	14.0	54.0		54.0				74.0				
Max Q Clear Time (g_c+I1), s	9.0	12.7		32.4				25.0				
Green Ext Time (p_c), s	0.2	1.6		13.5				10.5				
Intersection Summary												
HCM 6th Ctrl Delay			29.1									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

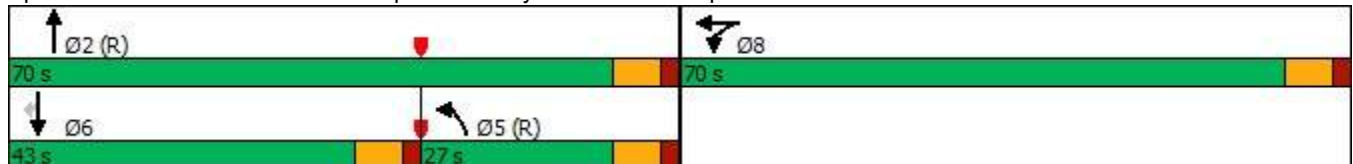
03/06/2020

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group												
Lane Configurations				↖	↕		↖	↕			↕	↖
Traffic Volume (vph)	0	0	0	455	2	89	105	1105	0	0	526	616
Future Volume (vph)	0	0	0	455	2	89	105	1105	0	0	526	616
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	0		0
Storage Lanes	0		0	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30				30
Link Distance (ft)		893			705			778				878
Travel Time (s)		17.4			13.7			17.7				20.0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	20%	100%	2%	0%	2%	0%	0%	5%	2%
Shared Lane Traffic (%)				39%								
Turn Type				Split	NA		Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases												6
Detector Phase				8	8		5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	7.0			7.0	7.0
Minimum Split (s)				12.0	12.0		12.0	14.0			24.0	24.0
Total Split (s)				70.0	70.0		27.0	70.0			43.0	43.0
Total Split (%)				50.0%	50.0%		19.3%	50.0%			30.7%	30.7%
Yellow Time (s)				5.0	5.0		5.0	5.0			5.0	5.0
All-Red Time (s)				2.0	2.0		2.0	2.0			2.0	2.0
Lost Time Adjust (s)				0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)				7.0	7.0		7.0	7.0			7.0	7.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None		C-Max	C-Min			None	None

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 53 (38%), Referenced to phase 2:NBT and 5:NBL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

Splits and Phases: 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps






















HCM 6th Signalized Intersection Summary
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	455	2	89	105	1105	0	0	526	616
Future Volume (veh/h)	0	0	0	455	2	89	105	1105	0	0	526	616
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1604	418	1604	1900	1870	0	0	1826	1870
Adj Flow Rate, veh/h				556	0	0	108	1139	0	0	542	0
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				20	100	20	0	2	0	0	5	2
Cap, veh/h				721	99	0	133	2359	0	0	987	
Arrive On Green				0.24	0.00	0.00	0.07	0.66	0.00	0.00	0.54	0.00
Sat Flow, veh/h				3054	418	0	1810	3647	0	0	1826	1585
Grp Volume(v), veh/h				556	0	0	108	1139	0	0	542	0
Grp Sat Flow(s),veh/h/ln				1527	418	0	1810	1777	0	0	1826	1585
Q Serve(g_s), s				23.8	0.0	0.0	8.2	22.2	0.0	0.0	27.2	0.0
Cycle Q Clear(g_c), s				23.8	0.0	0.0	8.2	22.2	0.0	0.0	27.2	0.0
Prop In Lane				1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				721	99	0	133	2359	0	0	987	
V/C Ratio(X)				0.77	0.00	0.00	0.81	0.48	0.00	0.00	0.55	
Avail Cap(c_a), veh/h				1375	188	0	259	2359	0	0	987	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	0.00	0.86	0.86	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				49.9	0.0	0.0	63.9	11.6	0.0	0.0	21.0	0.0
Incr Delay (d2), s/veh				6.2	0.0	0.0	11.6	0.6	0.0	0.0	0.8	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				9.7	0.0	0.0	4.2	8.7	0.0	0.0	11.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				56.1	0.0	0.0	75.5	12.3	0.0	0.0	21.9	0.0
LnGrp LOS				E	A	A	E	B	A	A	C	
Approach Vol, veh/h					556			1247			542	A
Approach Delay, s/veh					56.1			17.7			21.9	
Approach LOS					E			B			C	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		99.9			17.3	82.7		40.1				
Change Period (Y+Rc), s		7.0			7.0	7.0		7.0				
Max Green Setting (Gmax), s		63.0			20.0	36.0		63.0				
Max Q Clear Time (g_c+I1), s		24.2			10.2	29.2		25.8				
Green Ext Time (p_c), s		15.5			0.2	2.5		7.3				
Intersection Summary												
HCM 6th Ctrl Delay				27.8								
HCM 6th LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 3: Snoqualmie Pkwy & SE 99th St

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	0	40	1	0	2	7	1244	0	0	1074	10
Future Volume (vph)	14	0	40	1	0	2	7	1244	0	0	1074	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	0		0	0		0	125		0	25		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		989			884			878			457	
Travel Time (s)		27.0			24.1			20.0			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	2%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	14	0	40	1	0	2	7	1244	0	0	1074	10
Future Vol, veh/h	14	0	40	1	0	2	7	1244	0	0	1074	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	25	-	-
Veh in Median Storage, #-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	3	0	0	2	0
Mvmt Flow	15	0	42	1	0	2	7	1309	0	0	1131	11

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	1806	2460	571	1889	2465	655	1142	0	0	1309	0	0
Stage 1	1137	1137	-	1323	1323	-	-	-	-	-	-	-
Stage 2	669	1323	-	566	1142	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	51	31	469	44	31	413	619	-	-	535	-	-
Stage 1	218	279	-	168	228	-	-	-	-	-	-	-
Stage 2	418	228	-	481	278	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	50	31	469	40	31	413	619	-	-	535	-	-
Mov Cap-2 Maneuver	50	31	-	40	31	-	-	-	-	-	-	-
Stage 1	216	279	-	166	225	-	-	-	-	-	-	-
Stage 2	411	225	-	438	278	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	43.7	41.8	0.1	0
HCM LOS	E	E		

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	619	-	-	148	101	535	-
HCM Lane V/C Ratio	0.012	-	-	0.384	0.031	-	-
HCM Control Delay (s)	10.9	-	-	43.7	41.8	0	-
HCM Lane LOS	B	-	-	E	E	A	-
HCM 95th %tile Q(veh)	0	-	-	1.6	0.1	0	-

Lanes, Volumes, Timings
 4: Snoqualmie Pkwy & SE 96th St

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	25	61	1097	45	39	1099
Future Volume (vph)	25	61	1097	45	39	1099
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Link Speed (mph)	30		40			40
Link Distance (ft)	346		677			718
Travel Time (s)	7.9		11.5			12.2
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	2%	0%	0%	3%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↑↑		↔	↑↑
Traffic Vol, veh/h	25	61	1097	45	39	1099
Future Vol, veh/h	25	61	1097	45	39	1099
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #1	-	0	-	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	2	0	0	3
Mvmt Flow	28	69	1247	51	44	1249

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1986	649	0	0	1298
Stage 1	1273	-	-	-	-
Stage 2	713	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	55	417	-	-	540
Stage 1	231	-	-	-	-
Stage 2	452	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	51	417	-	-	540
Mov Cap-2 Maneuver	156	-	-	-	-
Stage 1	231	-	-	-	-
Stage 2	415	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.5	0	0.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	156	417	540	-
HCM Lane V/C Ratio	-	-	0.182	0.166	0.082	-
HCM Control Delay (s)	-	-	33.1	15.3	12.3	-
HCM Lane LOS	-	-	D	C	B	-
HCM 95th %tile Q(veh)	-	-	0.6	0.6	0.3	-

Lanes, Volumes, Timings
5: Snoqualmie Pkwy & SE Jacobia St

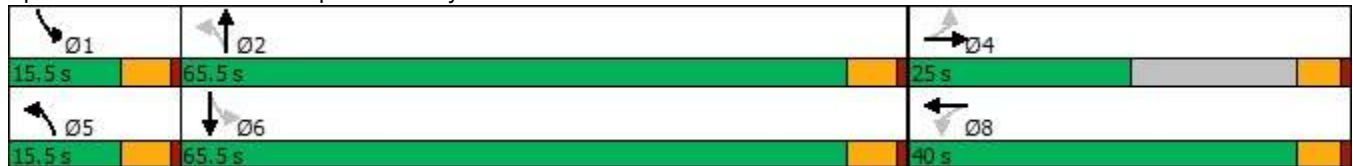
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	8	66	31	1	53	113	1027	88	80	967	30
Future Volume (vph)	24	8	66	31	1	53	113	1027	88	80	967	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	250		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		653			474			718			617	
Travel Time (s)		17.8			12.9			12.2			10.5	
Confl. Peds. (#/hr)	2		2	2		2	1					1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	0%	2%	0%	1%	4%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	15.0		5.0	16.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		10.5	22.5		10.5	22.5	
Total Split (s)	25.0	25.0		40.0	40.0		15.5	65.5		15.5	65.5	
Total Split (%)	20.7%	20.7%		33.1%	33.1%		12.8%	54.1%		12.8%	54.1%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.5	4.5		4.5	4.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.5	5.5		5.5	5.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
 Cycle Length: 121
 Actuated Cycle Length: 65.3
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Snoqualmie Pkwy & SE Jacobia St



HCM 6th Signalized Intersection Summary
5: Snoqualmie Pkwy & SE Jacobia St

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	8	66	31	1	53	113	1027	88	80	967	30
Future Volume (veh/h)	24	8	66	31	1	53	113	1027	88	80	967	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1870	1870	1885	1841	1841
Adj Flow Rate, veh/h	26	9	70	33	1	56	120	1093	94	85	1029	32
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	2	2	1	4	4
Cap, veh/h	245	22	172	227	3	187	437	1761	151	388	1807	56
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.08	0.53	0.53	0.07	0.52	0.52
Sat Flow, veh/h	1362	186	1445	1336	28	1578	1810	3311	285	1795	3462	108
Grp Volume(v), veh/h	26	0	79	33	0	57	120	586	601	85	520	541
Grp Sat Flow(s),veh/h/ln	1362	0	1631	1336	0	1606	1810	1777	1819	1795	1749	1821
Q Serve(g_s), s	1.0	0.0	2.5	1.3	0.0	1.8	1.6	13.0	13.0	1.2	11.4	11.4
Cycle Q Clear(g_c), s	2.8	0.0	2.5	3.8	0.0	1.8	1.6	13.0	13.0	1.2	11.4	11.4
Prop In Lane	1.00		0.89	1.00		0.98	1.00		0.16	1.00		0.06
Lane Grp Cap(c), veh/h	245	0	194	227	0	191	437	945	967	388	913	950
V/C Ratio(X)	0.11	0.00	0.41	0.15	0.00	0.30	0.27	0.62	0.62	0.22	0.57	0.57
Avail Cap(c_a), veh/h	568	0	580	899	0	999	622	1894	1939	590	1864	1941
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	0.0	23.0	24.8	0.0	22.7	6.4	9.2	9.2	6.7	9.2	9.2
Incr Delay (d2), s/veh	0.2	0.0	1.4	0.3	0.0	0.9	0.1	1.0	0.9	0.1	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	1.0	0.4	0.0	0.7	0.4	3.7	3.8	0.3	3.3	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.1	0.0	24.4	25.0	0.0	23.5	6.5	10.2	10.1	6.8	10.0	9.9
LnGrp LOS	C	A	C	C	A	C	A	B	B	A	A	A
Approach Vol, veh/h		105			90			1307			1146	
Approach Delay, s/veh		24.3			24.1			9.8			9.7	
Approach LOS		C			C			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	35.4		11.7	9.7	34.9		11.7				
Change Period (Y+Rc), s	5.5	5.5		5.0	5.5	5.5		5.0				
Max Green Setting (Gmax), s	10.0	60.0		20.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	3.2	15.0		4.8	3.6	13.4		5.8				
Green Ext Time (p_c), s	0.0	14.9		0.4	0.1	12.6		0.4				
Intersection Summary												
HCM 6th Ctrl Delay			10.8									
HCM 6th LOS			B									
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
6: Snoqualmie Pkwy & SE Swenson Dr

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	15	26	19	10	60	33	939	39	88	1146	82
Future Volume (vph)	85	15	26	19	10	60	33	939	39	88	1146	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	275		0	300		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			No
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		456			320			2254			367	
Travel Time (s)		10.4			7.3			38.4			6.3	
Confl. Peds. (#/hr)			2			9	2					2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%	0%	2%	0%	0%	3%	2%
Shared Lane Traffic (%)												
Turn Type	Split	NA		Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		10.0	10.0		5.0	12.0		5.0	12.0	
Minimum Split (s)	38.0	38.0		38.0	38.0		12.0	28.0		12.0	28.0	
Total Split (s)	15.0	15.0		20.0	20.0		37.0	67.0		37.0	67.0	
Total Split (%)	10.8%	10.8%		14.4%	14.4%		26.6%	48.2%		26.6%	48.2%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		7.0	7.0		7.0	7.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other

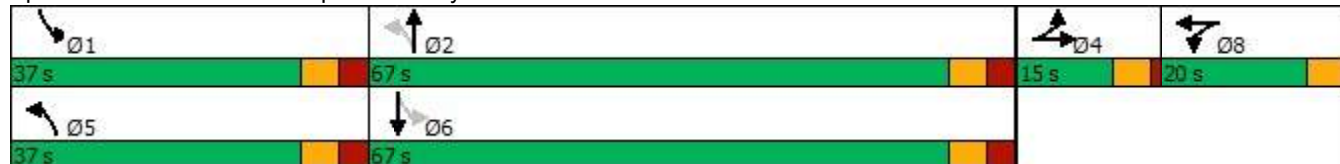
Cycle Length: 139

Actuated Cycle Length: 88.8

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Snoqualmie Pkwy & SE Swenson Dr



HCM 6th Signalized Intersection Summary
6: Snoqualmie Pkwy & SE Swenson Dr

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	15	26	19	10	60	33	939	39	88	1146	82
Future Volume (veh/h)	85	15	26	19	10	60	33	939	39	88	1146	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1900	1900	1900	1900	1900	1870	1870	1900	1856	1856
Adj Flow Rate, veh/h	91	16	28	20	11	65	35	1010	42	95	1232	88
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	0	0	0	0	0	0	2	2	0	3	3
Cap, veh/h	147	51	89	237	31	181	190	1298	54	280	1332	95
Arrive On Green	0.08	0.08	0.08	0.13	0.13	0.13	0.04	0.37	0.37	0.06	0.40	0.40
Sat Flow, veh/h	1781	617	1080	1810	234	1385	1810	3476	145	1810	3337	238
Grp Volume(v), veh/h	91	0	44	20	0	76	35	516	536	95	650	670
Grp Sat Flow(s),veh/h/ln	1781	0	1697	1810	0	1620	1810	1777	1844	1810	1763	1812
Q Serve(g_s), s	3.4	0.0	1.7	0.7	0.0	2.9	0.8	17.5	17.5	2.1	23.9	24.0
Cycle Q Clear(g_c), s	3.4	0.0	1.7	0.7	0.0	2.9	0.8	17.5	17.5	2.1	23.9	24.0
Prop In Lane	1.00		0.64	1.00		0.86	1.00		0.08	1.00		0.13
Lane Grp Cap(c), veh/h	147	0	140	237	0	212	190	663	689	280	703	723
V/C Ratio(X)	0.62	0.00	0.31	0.08	0.00	0.36	0.18	0.78	0.78	0.34	0.92	0.93
Avail Cap(c_a), veh/h	261	0	249	398	0	356	921	1564	1623	965	1551	1595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.2	0.0	29.5	26.0	0.0	27.0	16.1	18.9	18.9	14.2	19.5	19.5
Incr Delay (d2), s/veh	1.6	0.0	0.5	0.1	0.0	0.4	0.2	0.8	0.7	0.3	2.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.7	0.3	0.0	1.1	0.3	6.4	6.6	0.8	8.7	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.8	0.0	29.9	26.1	0.0	27.4	16.3	19.6	19.6	14.5	21.8	21.9
LnGrp LOS	C	A	C	C	A	C	B	B	B	B	C	C
Approach Vol, veh/h		135			96			1087			1415	
Approach Delay, s/veh		31.2			27.1			19.5			21.4	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.2	32.5		10.6	9.4	34.2		13.9				
Change Period (Y+Rc), s	7.0	7.0		5.0	7.0	7.0		5.0				
Max Green Setting (Gmax), s	30.0	60.0		10.0	30.0	60.0		15.0				
Max Q Clear Time (g_c+I1), s	4.1	19.5		5.4	2.8	26.0		4.9				
Green Ext Time (p_c), s	0.0	0.9		0.0	0.0	1.2		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				21.3								
HCM 6th LOS				C								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

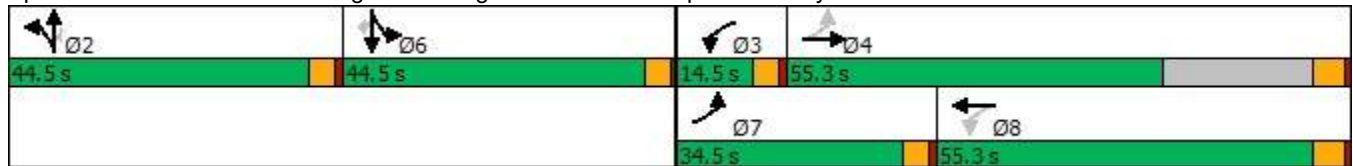
03/06/2020

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗			↖	↖		↖	↖
Traffic Volume (vph)	316	700	133	73	840	94	253	58	94	93	23	137
Future Volume (vph)	316	700	133	73	840	94	253	58	94	93	23	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	175		0	0		150	0		100
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25				25
Link Distance (ft)		1285			1065			585				583
Travel Time (s)		21.9			18.2			16.0				15.9
Confl. Peds. (#/hr)	5					5						3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	1%	1%	2%	0%	4%	0%	2%	0%	0%	4%	0%	1%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4			8					2			6
Detector Phase	7	4		3	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	35.3		9.5	30.3		36.5	36.5	36.5	36.5	36.5	36.5
Total Split (s)	34.5	55.3		14.5	55.3		44.5	44.5	44.5	44.5	44.5	44.5
Total Split (%)	19.3%	30.9%		8.1%	30.9%		24.9%	24.9%	24.9%	24.9%	24.9%	24.9%
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.3		4.5	5.3			4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None	None	None	None	None

Intersection Summary

Area Type: Other
 Cycle Length: 178.8
 Actuated Cycle Length: 146.3
 Natural Cycle: 140
 Control Type: Actuated-Uncoordinated

Splits and Phases: 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	316	700	133	73	840	94	253	58	94	93	23	137
Future Volume (veh/h)	316	700	133	73	840	94	253	58	94	93	23	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1841	1841	1900	1900	1900	1900	1900	1885
Adj Flow Rate, veh/h	326	722	137	75	866	97	261	60	44	96	24	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	0	4	4	0	0	0	0	0	1
Cap, veh/h	390	1349	256	336	1131	127	314	72	341	143	36	156
Arrive On Green	0.14	0.45	0.45	0.05	0.36	0.36	0.21	0.21	0.21	0.10	0.10	0.00
Sat Flow, veh/h	1795	3001	569	1810	3168	355	1485	341	1610	1462	365	1598
Grp Volume(v), veh/h	326	431	428	75	478	485	321	0	44	120	0	0
Grp Sat Flow(s),veh/h/ln	1795	1791	1779	1810	1749	1774	1826	0	1610	1827	0	1598
Q Serve(g_s), s	10.3	16.7	16.7	2.5	23.2	23.2	16.1	0.0	2.1	6.1	0.0	0.0
Cycle Q Clear(g_c), s	10.3	16.7	16.7	2.5	23.2	23.2	16.1	0.0	2.1	6.1	0.0	0.0
Prop In Lane	1.00		0.32	1.00		0.20	0.81		1.00	0.80		1.00
Lane Grp Cap(c), veh/h	390	805	800	336	624	633	387	0	341	178	0	156
V/C Ratio(X)	0.84	0.54	0.54	0.22	0.77	0.77	0.83	0.00	0.13	0.67	0.00	0.00
Avail Cap(c_a), veh/h	704	933	927	443	911	925	761	0	671	762	0	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	19.5	19.1	19.1	18.2	27.3	27.3	36.2	0.0	30.6	41.8	0.0	0.0
Incr Delay (d2), s/veh	4.8	0.8	0.8	0.3	3.1	3.1	4.6	0.0	0.2	4.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	6.6	6.6	1.0	9.6	9.7	7.6	0.0	0.8	3.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.3	19.9	19.9	18.6	30.4	30.4	40.8	0.0	30.8	46.1	0.0	0.0
LnGrp LOS	C	B	B	B	C	C	D	A	C	D	A	A
Approach Vol, veh/h		1185			1038			365			120	
Approach Delay, s/veh		21.1			29.5			39.6			46.1	
Approach LOS		C			C			D			D	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.8	8.8	48.4		13.9	17.7	39.6				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		40.0	10.0	50.0		40.0	30.0	50.0				
Max Q Clear Time (g_c+I1), s		18.1	4.5	18.7		8.1	12.3	25.2				
Green Ext Time (p_c), s		2.2	0.1	8.5		0.7	0.9	9.1				
Intersection Summary												
HCM 6th Ctrl Delay				27.9								
HCM 6th LOS				C								

Lanes, Volumes, Timings
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	226	662	43	128	784	92	97	42	124	105	49	129
Future Volume (vph)	226	662	43	128	784	92	97	42	124	105	49	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	275		0	275		0	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1065			1064			511			626	
Travel Time (s)		18.2			18.1			13.9			17.1	
Confl. Peds. (#/hr)	1					1	7		3	3		7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	2%	0%	4%	0%	0%	0%	1%	0%	0%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	34.3		9.5	34.3		36.5	36.5		36.5	36.5	
Total Split (s)	34.5	65.3		34.5	65.3		34.5	34.5		34.5	34.5	
Total Split (%)	25.7%	48.6%		25.7%	48.6%		25.7%	25.7%		25.7%	25.7%	
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	5.3		4.5	5.3		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	

Intersection Summary

Area Type: Other

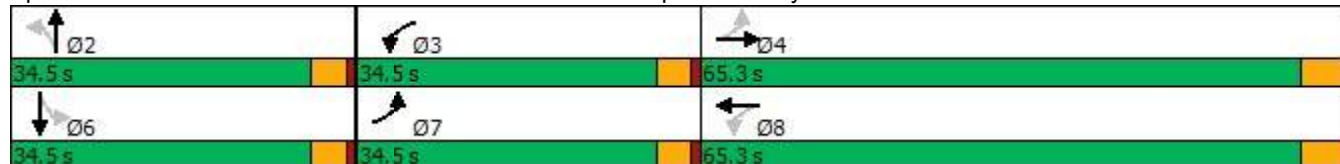
Cycle Length: 134.3

Actuated Cycle Length: 72.7

Natural Cycle: 85
























Control Type: Actuated-Uncoordinated

Splits and Phases: 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (veh/h)	226	662	43	128	784	92	97	42	124	105	49	129
Future Volume (veh/h)	226	662	43	128	784	92	97	42	124	105	49	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1900	1841	1841	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	235	690	45	133	817	96	101	44	129	109	51	134
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	0	4	4	0	0	0	0	0	0
Cap, veh/h	441	1502	98	468	1272	149	310	107	314	320	117	307
Arrive On Green	0.11	0.44	0.44	0.07	0.40	0.40	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1810	3386	221	1810	3152	370	1211	423	1241	1224	460	1210
Grp Volume(v), veh/h	235	362	373	133	453	460	101	0	173	109	0	185
Grp Sat Flow(s),veh/h/ln	1810	1777	1830	1810	1749	1774	1211	0	1664	1224	0	1670
Q Serve(g_s), s	4.5	8.8	8.8	2.6	12.9	12.9	4.7	0.0	5.4	5.1	0.0	5.8
Cycle Q Clear(g_c), s	4.5	8.8	8.8	2.6	12.9	12.9	10.5	0.0	5.4	10.4	0.0	5.8
Prop In Lane	1.00		0.12	1.00		0.21	1.00		0.75	1.00		0.72
Lane Grp Cap(c), veh/h	441	788	812	468	706	716	310	0	422	320	0	423
V/C Ratio(X)	0.53	0.46	0.46	0.28	0.64	0.64	0.33	0.00	0.41	0.34	0.00	0.44
Avail Cap(c_a), veh/h	1112	1719	1770	1212	1691	1715	589	0	805	602	0	808
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.5	12.1	12.1	9.6	14.9	14.9	23.9	0.0	19.3	23.6	0.0	19.4
Incr Delay (d2), s/veh	1.0	0.6	0.6	0.3	1.4	1.4	0.6	0.0	0.6	0.6	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	3.0	3.1	0.9	4.5	4.6	1.4	0.0	2.0	1.5	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.5	12.6	12.6	9.9	16.3	16.3	24.5	0.0	19.9	24.3	0.0	20.2
LnGrp LOS	B	B	B	A	B	B	C	A	B	C	A	C
Approach Vol, veh/h		970			1046			274			294	
Approach Delay, s/veh		12.4			15.5			21.6			21.7	
Approach LOS		B			B			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		20.2	9.0	32.8		20.2	11.5	30.3				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		30.0	30.0	60.0		30.0	30.0	60.0				
Max Q Clear Time (g_c+I1), s		12.5	4.6	10.8		12.4	6.5	14.9				
Green Ext Time (p_c), s		1.3	0.3	7.4		1.4	0.6	10.0				
Intersection Summary												
HCM 6th Ctrl Delay				15.7								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
 9: Snoqualmie Pkwy & Fairway Ave SE

03/06/2020

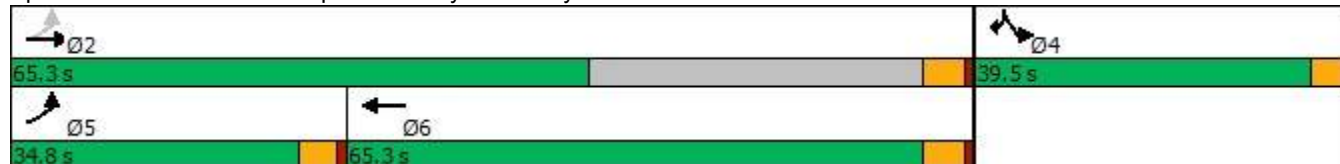


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	199	726	1034	121	103	111
Future Volume (vph)	199	726	1034	121	103	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	325			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		25	
Link Distance (ft)		1064	278		478	
Travel Time (s)		18.1	4.7		13.0	
Confl. Peds. (#/hr)	5			5	1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	3%	3%	3%	2%	0%
Shared Lane Traffic (%)						
Turn Type	pm+pt	NA	NA		Prot	Prot
Protected Phases	5	2	6		4	4
Permitted Phases	2					
Detector Phase	5	2	6		4	4
Switch Phase						
Minimum Initial (s)	5.0	12.0	12.0		5.0	5.0
Minimum Split (s)	9.8	23.3	26.3		36.5	36.5
Total Split (s)	34.8	65.3	65.3		39.5	39.5
Total Split (%)	24.9%	46.8%	46.8%		28.3%	28.3%
Yellow Time (s)	3.8	4.3	4.3		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.8	5.3	5.3		4.5	4.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	None	None		None	None

Intersection Summary

Area Type: Other
 Cycle Length: 139.6
 Actuated Cycle Length: 85.8
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated

Splits and Phases: 9: Snoqualmie Pkwy & Fairway Ave SE



HCM 6th Signalized Intersection Summary
 9: Snoqualmie Pkwy & Fairway Ave SE























03/06/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	199	726	1034	121	103	111
Future Volume (veh/h)	199	726	1034	121	103	111
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	1856	1856	1856	1870	1900
Adj Flow Rate, veh/h	214	781	1112	130	111	-5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	3	3	3	2	0
Cap, veh/h	441	2520	1646	192	147	133
Arrive On Green	0.10	0.71	0.52	0.52	0.08	0.00
Sat Flow, veh/h	1795	3618	3271	371	1781	1610
Grp Volume(v), veh/h	214	781	616	626	111	-5
Grp Sat Flow(s),veh/h/ln	1795	1763	1763	1787	1781	1610
Q Serve(g_s), s	2.2	3.9	12.5	12.6	2.9	0.0
Cycle Q Clear(g_c), s	2.2	3.9	12.5	12.6	2.9	0.0
Prop In Lane	1.00			0.21	1.00	1.00
Lane Grp Cap(c), veh/h	441	2520	913	925	147	133
V/C Ratio(X)	0.49	0.31	0.67	0.68	0.76	-0.04
Avail Cap(c_a), veh/h	1380	4378	2189	2219	1290	1167
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	7.4	2.5	8.6	8.6	21.7	0.0
Incr Delay (d2), s/veh	0.8	0.1	0.9	0.9	7.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.3	3.2	3.2	1.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	8.2	2.6	9.5	9.5	29.4	0.0
LnGrp LOS	A	A	A	A	C	A
Approach Vol, veh/h		995	1242		106	
Approach Delay, s/veh		3.8	9.5		30.8	
Approach LOS		A	A		C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		39.8		8.5	9.5	30.3
Change Period (Y+Rc), s		5.3		4.5	* 4.8	5.3
Max Green Setting (Gmax), s		60.0		35.0	* 30	60.0
Max Q Clear Time (g_c+I1), s		5.9		4.9	4.2	14.6
Green Ext Time (p_c), s		6.0		0.3	0.6	10.4
Intersection Summary						
HCM 6th Ctrl Delay			8.1			
HCM 6th LOS			A			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

Lanes, Volumes, Timings
 10: Fisher Ave SE & Snoqualmie Pkwy

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (vph)	52	704	30	13	1005	21	16	1	16	17	1	31
Future Volume (vph)	52	704	30	13	1005	21	16	1	16	17	1	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		458			1686			518			363	
Travel Time (s)		7.8			28.7			14.1			9.9	
Confl. Peds. (#/hr)	8		8	8		8	8		8	8		8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	3%	0%	0%	3%	5%	0%	0%	0%	0%	0%	6%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	13.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕			↕			↕	
Traffic Vol, veh/h	52	704	30	13	1005	21	16	1	16	17	1	31
Future Vol, veh/h	52	704	30	13	1005	21	16	1	16	17	1	31
Conflicting Peds, #/hr	8	0	8	8	0	8	8	0	8	8	0	8
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #-	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	3	0	0	3	5	0	0	0	0	0	6
Mvmt Flow	59	800	34	15	1142	24	18	1	18	19	1	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1174	0	0	842	0	0	1553	2147	433	1719	2152	599
Stage 1	-	-	-	-	-	-	943	943	-	1192	1192	-
Stage 2	-	-	-	-	-	-	610	1204	-	527	960	-
Critical Hdwy	4.1	-	-	4.1	-	-	9.5	8.5	7.9	9.5	8.5	8.02
Critical Hdwy Stg 1	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.36
Pot Cap-1 Maneuver	602	-	-	802	-	-	33	15	511	23	15	368
Stage 1	-	-	-	-	-	-	170	204	-	104	136	-
Stage 2	-	-	-	-	-	-	323	133	-	379	198	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	597	-	-	796	-	-	25	13	503	~ 19	13	362
Mov Cap-2 Maneuver	-	-	-	-	-	-	25	13	-	~ 19	13	-
Stage 1	-	-	-	-	-	-	152	182	-	93	132	-
Stage 2	-	-	-	-	-	-	281	129	-	325	177	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.8			0.1			233.8			\$ 342.4		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	44	597	-	-	796	-	-	46
HCM Lane V/C Ratio	0.852	0.099	-	-	0.019	-	-	1.21
HCM Control Delay (s)	233.8	11.7	-	-	9.6	-	-	\$ 342.4
HCM Lane LOS	F	B	-	-	A	-	-	F
HCM 95th %tile Q(veh)	3.4	0.3	-	-	0.1	-	-	5.2

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
 11: Orchard Ave SE & Snoqualmie Pkwy

03/06/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Traffic Volume (vph)	786	29	27	1136	8	20
Future Volume (vph)	786	29	27	1136	8	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	225		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	1686			1131	557	
Travel Time (s)	28.7			19.3	15.2	
Confl. Peds. (#/hr)		1	1		1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	0%	4%	3%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Vol, veh/h	786	29	27	1136	8	20
Future Vol, veh/h	786	29	27	1136	8	20
Conflicting Peds, #/hr	0	1	1	0	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	225	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	0	4	3	0	0
Mvmt Flow	854	32	29	1235	9	22

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	887	0	1548
Stage 1	-	-	-	-	871
Stage 2	-	-	-	-	677
Critical Hdwy	-	-	4.18	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.24	-	3.5
Pot Cap-1 Maneuver	-	-	747	-	107
Stage 1	-	-	-	-	375
Stage 2	-	-	-	-	472
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	746	-	103
Mov Cap-2 Maneuver	-	-	-	-	103
Stage 1	-	-	-	-	375
Stage 2	-	-	-	-	453

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	21.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	248	-	-	746	-
HCM Lane V/C Ratio	0.123	-	-	0.039	-
HCM Control Delay (s)	21.5	-	-	10	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

Lanes, Volumes, Timings
 12: Snoqualmie Pkwy & Allman AveSE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	804	1167	7	7	5
Future Volume (vph)	5	804	1167	7	7	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		40	40		25	
Link Distance (ft)		679	1187		393	
Travel Time (s)		11.6	20.2		10.7	
Confl. Peds. (#/hr)	1			1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	4%	4%	0%	0%	0%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	804	1167	7	7	5
Future Vol, veh/h	5	804	1167	7	7	5
Conflicting Peds, #/hr	1	0	0	1	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #-	0	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	4	4	0	0	0
Mvmt Flow	5	874	1268	8	8	5

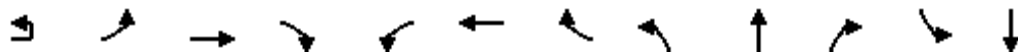
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1277	0	-	0	1721 640
Stage 1	-	-	-	-	1273 -
Stage 2	-	-	-	-	448 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	550	-	-	-	82 423
Stage 1	-	-	-	-	231 -
Stage 2	-	-	-	-	616 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	549	-	-	-	81 422
Mov Cap-2 Maneuver	-	-	-	-	81 -
Stage 1	-	-	-	-	229 -
Stage 2	-	-	-	-	615 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	38
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	549	-	-	-	122
HCM Lane V/C Ratio	0.01	-	-	-	0.107
HCM Control Delay (s)	11.6	-	-	-	38
HCM Lane LOS	B	-	-	-	E
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Lanes, Volumes, Timings
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↵		↕		↵	↕			↕			↕
Traffic Volume (vph)	0	0	764	46	23	1129	0	52	0	24	0	0
Future Volume (vph)	0	0	764	46	23	1129	0	52	0	24	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0		0	200		0	0		0	0	
Storage Lanes		1		0	1		0	0		0	0	
Taper Length (ft)		25			25			25			25	
Right Turn on Red				Yes			Yes			Yes		
Link Speed (mph)			40			40			25			25
Link Distance (ft)			1187			833			535			291
Travel Time (s)			20.2			14.2			14.6			7.9
Confl. Peds. (#/hr)				4	4			3				
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	5%	0%	0%	4%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt		NA		pm+pt	NA		Perm	NA			
Protected Phases	5		2		1	6			8			4
Permitted Phases	2				6			8			4	
Detector Phase	5		2		1	6		8	8		4	4
Switch Phase												
Minimum Initial (s)	5.0		15.0		5.0	14.0		5.0	5.0		30.0	30.0
Minimum Split (s)	10.0		20.0		10.0	29.0		36.0	36.0		36.0	36.0
Total Split (s)	35.0		65.0		35.0	65.0		36.0	36.0		36.0	36.0
Total Split (%)	25.7%		47.8%		25.7%	47.8%		26.5%	26.5%		26.5%	26.5%
Yellow Time (s)	4.0		4.0		4.0	4.0		5.0	5.0		5.0	5.0
All-Red Time (s)	1.0		1.0		1.0	1.0		1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0		5.0		5.0	5.0		6.0	6.0		6.0	6.0
Lead/Lag	Lead		Lag		Lead	Lag						
Lead-Lag Optimize?	Yes		Yes		Yes	Yes						
Recall Mode	Min		Min		None	None		None	None		None	None

Intersection Summary

Area Type: Other

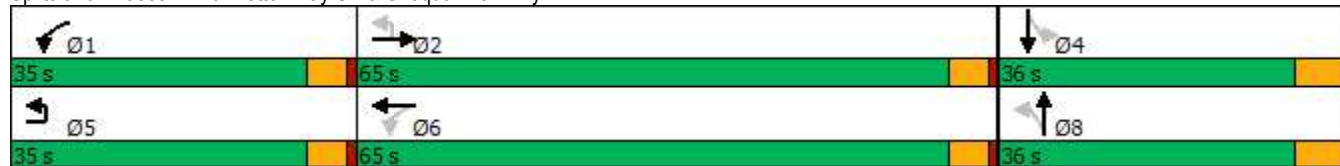
Cycle Length: 136

Actuated Cycle Length: 59.5

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Splits and Phases: 13: Better Way SE & Snoqualmie Pkwy

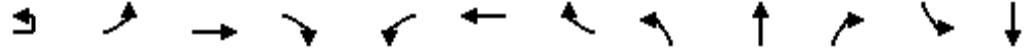




Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	0
Future Volume (vph)	0
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Right Turn on Red	Yes
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	3
Peak Hour Factor	0.95
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	
Intersection Summary	

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↯		↕		↯	↕			↕			↕
Traffic Volume (veh/h)	0	0	764	46	23	1129	0	52	0	24	0	0
Future Volume (veh/h)	0	0	764	46	23	1129	0	52	0	24	0	0
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	0.99		0.99	1.00	
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach			No			No			No			No
Adj Sat Flow, veh/h/ln		0	1826	1826	1900	1841	1841	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		0	804	48	24	1188	0	55	0	25	0	0
Peak Hour Factor		0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %		0	5	5	0	4	4	0	0	0	0	0
Cap, veh/h		0	1419	85	315	2093	0	263	0	41	0	168
Arrive On Green		0.00	0.43	0.43	0.03	0.60	0.00	0.09	0.00	0.09	0.00	0.00
Sat Flow, veh/h		0	3416	198	1810	3589	0	1015	0	461	0	1900
Grp Volume(v), veh/h		0	419	433	24	1188	0	80	0	0	0	0
Grp Sat Flow(s),veh/h/ln		0	1735	1789	1810	1749	0	1476	0	0	0	1900
Q Serve(g_s), s		0.0	6.4	6.4	0.2	7.3	0.0	1.8	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s		0.0	6.4	6.4	0.2	7.3	0.0	1.8	0.0	0.0	0.0	0.0
Prop In Lane		0.00		0.11	1.00		0.00	0.69		0.31	0.00	
Lane Grp Cap(c), veh/h		0	740	763	315	2093	0	304	0	0	0	168
V/C Ratio(X)		0.00	0.57	0.57	0.08	0.57	0.00	0.26	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h		0	2960	3053	1806	5968	0	1432	0	0	0	1621
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)		0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh		0.0	7.6	7.6	7.2	4.3	0.0	15.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh		0.0	0.7	0.7	0.1	0.2	0.0	0.5	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.0	1.4	1.4	0.0	0.6	0.0	0.6	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		0.0	8.3	8.3	7.3	4.5	0.0	15.9	0.0	0.0	0.0	0.0
LnGrp LOS		A	A	A	A	A	A	B	A	A	A	A
Approach Vol, veh/h			852			1212			80			0
Approach Delay, s/veh			8.3			4.6			15.9			0.0
Approach LOS			A			A			B			
Timer - Assigned Phs	1	2		4		6			8			
Phs Duration (G+Y+Rc), s	6.0	20.0		9.1		26.0			9.1			
Change Period (Y+Rc), s	5.0	5.0		6.0		5.0			6.0			
Max Green Setting (Gmax), s	30.0	60.0		30.0		60.0			30.0			
Max Q Clear Time (g_c+I1), s	2.2	8.4		0.0		9.3			3.8			
Green Ext Time (p_c), s	0.0	5.9		0.0		11.0			0.4			

Intersection Summary

HCM 6th Ctrl Delay	6.5
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
 User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	0
Future Volume (veh/h)	0
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.95
Percent Heavy Veh, %	0
Cap, veh/h	0
Arrive On Green	0.00
Sat Flow, veh/h	0
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	0
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	0.00
Lane Grp Cap(c), veh/h	0
V/C Ratio(X)	0.00
Avail Cap(c_a), veh/h	0
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Lanes, Volumes, Timings
 14: Trail Access Road & Snoqualmie Pkwy

03/06/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (vph)	662	0	1	994	0	1
Future Volume (vph)	662	0	1	994	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	646			700	301	
Travel Time (s)	11.0			11.9	8.2	
Confl. Peds. (#/hr)		1	1		1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	0%	0%	4%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑↑	
Traffic Vol, veh/h	662	0	1	994	0	1
Future Vol, veh/h	662	0	1	994	0	1
Conflicting Peds, #/hr	0	1	1	0	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	0	0	4	0	0
Mvmt Flow	720	0	1	1080	0	1

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	721	0	1264
Stage 1	-	-	-	-	721
Stage 2	-	-	-	-	543
Critical Hdwy	-	-	4.1	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	890	-	164
Stage 1	-	-	-	-	448
Stage 2	-	-	-	-	552
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	889	-	164
Mov Cap-2 Maneuver	-	-	-	-	164
Stage 1	-	-	-	-	448
Stage 2	-	-	-	-	551

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	640	-	-	889	-
HCM Lane V/C Ratio	0.002	-	-	0.001	-
HCM Control Delay (s)	10.6	-	-	9.1	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
15: SR 202 & Snoqualmie Pkwy

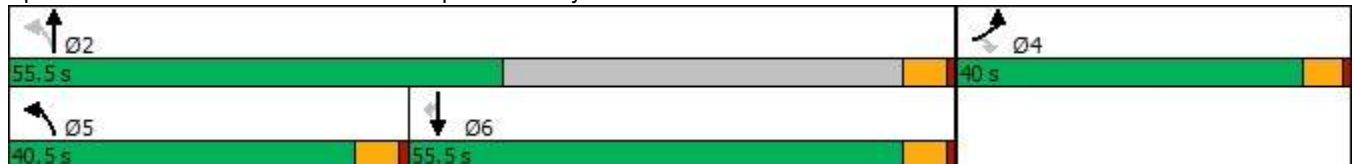
03/06/2020

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	359	302	338	321	502	723
Future Volume (vph)	359	302	338	321	502	723
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	300			300
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Right Turn on Red		Yes				Yes
Link Speed (mph)	40			45	45	
Link Distance (ft)	700			1127	949	
Travel Time (s)	11.9			17.1	14.4	
Confl. Peds. (#/hr)		1	1			1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	3%	2%	2%	2%	5%	4%
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	5.0	7.0	7.0	7.0
Minimum Split (s)	29.0	29.0	10.5	12.5	35.5	35.5
Total Split (s)	40.0	40.0	40.5	55.5	55.5	55.5
Total Split (%)	29.4%	29.4%	29.8%	40.8%	40.8%	40.8%
Yellow Time (s)	4.0	4.0	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	Min	Min	Min

Intersection Summary













Area Type: Other
 Cycle Length: 136
 Actuated Cycle Length: 117.3
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated

Splits and Phases: 15: SR 202 & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 15: SR 202 & Snoqualmie Pkwy

03/06/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	359	302	338	321	502	723
Future Volume (veh/h)	359	302	338	321	502	723
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00			1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1870	1826	1841
Adj Flow Rate, veh/h	395	0	371	353	552	526
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	2	2	2	5	4
Cap, veh/h	447	401	429	1154	729	622
Arrive On Green	0.25	0.00	0.15	0.62	0.40	0.40
Sat Flow, veh/h	1767	1585	1781	1870	1826	1558
Grp Volume(v), veh/h	395	0	371	353	552	526
Grp Sat Flow(s),veh/h/ln	1767	1585	1781	1870	1826	1558
Q Serve(g_s), s	17.4	0.0	9.1	7.2	21.0	24.8
Cycle Q Clear(g_c), s	17.4	0.0	9.1	7.2	21.0	24.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	447	401	429	1154	729	622
V/C Ratio(X)	0.88	0.00	0.87	0.31	0.76	0.85
Avail Cap(c_a), veh/h	765	687	933	1157	1130	964
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.0	0.0	15.4	7.3	20.9	22.0
Incr Delay (d2), s/veh	6.6	0.0	5.3	0.1	1.6	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	0.0	3.4	2.2	8.2	8.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	35.6	0.0	20.8	7.5	22.6	26.3
LnGrp LOS	D	A	C	A	C	C
Approach Vol, veh/h	395			724	1078	
Approach Delay, s/veh	35.6			14.3	24.4	
Approach LOS	D			B	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		55.4		25.4	17.6	37.7
Change Period (Y+Rc), s		5.5		5.0	5.5	5.5
Max Green Setting (Gmax), s		50.0		35.0	35.0	50.0
Max Q Clear Time (g_c+I1), s		9.2		19.4	11.1	26.8
Green Ext Time (p_c), s		2.0		1.1	1.1	5.5
Intersection Summary						
HCM 6th Ctrl Delay			23.1			
HCM 6th LOS			C			

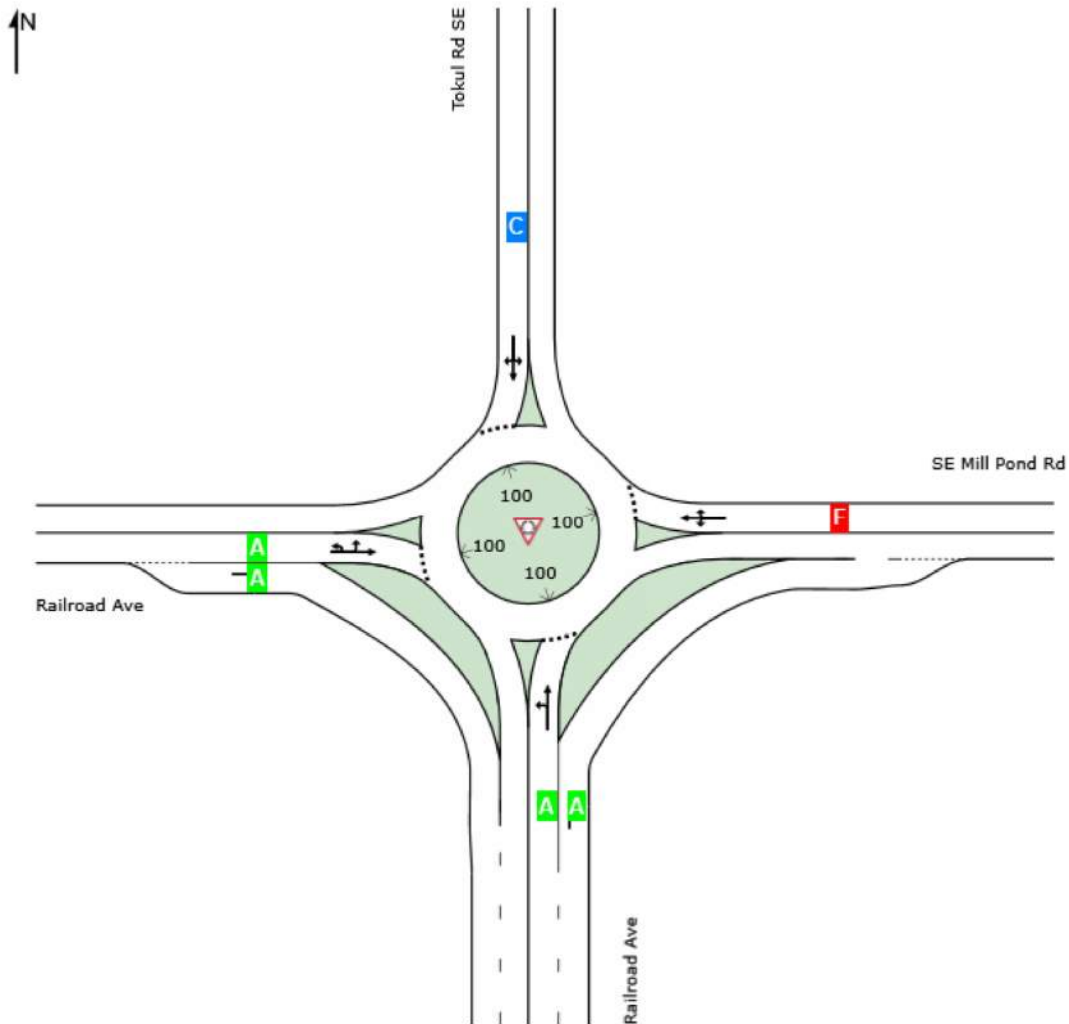
LANE LEVEL OF SERVICE

Lane Level of Service

Site: 16 [2032 With Planning Areas 1-3 - PM Peak Hour]

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	F	C	A	E



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Signalised Intersections.
 Lane LOS values are based on average delay per lane.
 Intersection and Approach LOS values are based on average delay for all lanes.
 SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

LANE SUMMARY

Site: 16 [2032 With Planning Areas 1-3 - PM Peak Hour]

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

Lane Use and Performance													
	Demand Flows			Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue		Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
	Total veh/h	HV %	Cap. veh/h					Veh	Dist ft				
South: Railroad Ave													
Lane 1 ^d	476	3.2	1452	0.328	100	9.0	LOS A	2.3	57.8	Full	1600	0.0	0.0
Lane 2	306	3.1	1624	0.188	100	3.6	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	782	3.2		0.328		6.9	LOS A	2.3	57.8				
East: SE Mill Pond Rd													
Lane 1 ^d	1200	4.6	967	1.240	100	127.4	LOS F	94.7	2455.5	Full	1600	0.0	19.6
Approach	1200	4.6		1.240		127.4	LOS F	94.7	2455.5				
North: Tokul Rd SE													
Lane 1 ^d	51	4.6	222	0.228	100	27.9	LOS C	1.7	44.1	Full	1600	0.0	0.0
Approach	51	4.6		0.228		27.9	LOS C	1.7	44.1				
West: Railroad Ave													
Lane 1 ^d	184	2.6	863	0.213	100	7.6	LOS A	1.7	43.2	Full	1600	0.0	0.0
Lane 2	566	4.6	1601	0.353	100	3.7	LOS A	0.0	0.0	Short	200	0.0	NA
Approach	749	4.1		0.353		4.6	LOS A	1.7	43.2				
Intersection	2782	4.1		1.240		58.6	LOS E	94.7	2455.5				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

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Organisation: TENW | Processed: Tuesday, March 3, 2020 9:33:49 AM

Project: T:\Active Projects\Snoqualmie Mill - 5584\Planning - 5584\LOS\Snoqualmie Mill - Railroad Ave & Tokul Rd & SE Mill Pond Rd

Roundabout.sip8



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	81	9	20	105	5	31
Future Volume (vph)	81	9	20	105	5	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45		35			35
Link Distance (ft)	458		1466			541
Travel Time (s)	6.9		28.6			10.5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	0%	0%	3%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	81	9	20	105	5	31
Future Vol, veh/h	81	9	20	105	5	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	0	0	3	0	0
Mvmt Flow	84	9	21	109	5	32

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	118	76	0	0	130	0
Stage 1	76	-	-	-	-	-
Stage 2	42	-	-	-	-	-
Critical Hdwy	6.42	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	878	991	-	-	1468	-
Stage 1	947	-	-	-	-	-
Stage 2	980	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	875	991	-	-	1468	-
Mov Cap-2 Maneuver	875	-	-	-	-	-
Stage 1	947	-	-	-	-	-
Stage 2	977	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	885	1468
HCM Lane V/C Ratio	-	-	0.106	0.004
HCM Control Delay (s)	-	-	9.5	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	94	89	91	25	40	236
Future Volume (vph)	94	89	91	25	40	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		40	
Link Distance (ft)		502	1466		916	
Travel Time (s)		9.8	28.6		15.6	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	1%	0%	3%	0%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	6.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	94	89	91	25	40	236
Future Vol, veh/h	94	89	91	25	40	236
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	1	1	0	3	0
Mvmt Flow	100	95	97	27	43	251
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	124	0	-	0	406	111
Stage 1	-	-	-	-	111	-
Stage 2	-	-	-	-	295	-
Critical Hdwy	4.1	-	-	-	6.43	6.2
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.2	-	-	-	3.527	3.3
Pot Cap-1 Maneuver	1475	-	-	-	599	948
Stage 1	-	-	-	-	911	-
Stage 2	-	-	-	-	753	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1475	-	-	-	556	948
Mov Cap-2 Maneuver	-	-	-	-	556	-
Stage 1	-	-	-	-	845	-
Stage 2	-	-	-	-	753	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.9	0		11.3		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1475	-	-	-	-	860
HCM Lane V/C Ratio	0.068	-	-	-	-	0.341
HCM Control Delay (s)	7.6	0	-	-	-	11.3
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	-	1.5

Lanes, Volumes, Timings
19: Meadowbrook Bridge

03/02/2020

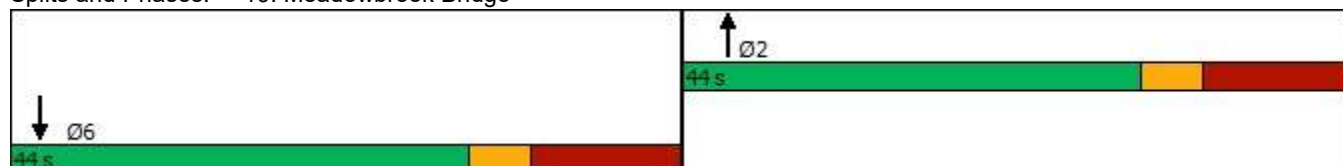


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	232	0	0	212
Future Volume (vph)	0	0	232	0	0	212
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			30
Link Distance (ft)	150		304			249
Travel Time (s)	3.4		6.9			5.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	0%	0%	2%
Shared Lane Traffic (%)						
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Detector Phase			2			6
Switch Phase						
Minimum Initial (s)			5.0			5.0
Minimum Split (s)			19.0			19.0
Total Split (s)			44.0			44.0
Total Split (%)			50.0%			50.0%
Yellow Time (s)			4.0			4.0
All-Red Time (s)			10.0			10.0
Lost Time Adjust (s)			0.0			0.0
Total Lost Time (s)			14.0			14.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode			None			None

Intersection Summary

Area Type: Other
 Cycle Length: 88
 Actuated Cycle Length: 50.7
 Natural Cycle: 50
 Control Type: Actuated-Uncoordinated

Splits and Phases: 19: Meadowbrook Bridge



HCM Signalized Intersection Capacity Analysis
 19: Meadowbrook Bridge

03/02/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	232	0	0	212
Future Volume (vph)	0	0	232	0	0	212
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			14.0			14.0
Lane Util. Factor			1.00			1.00
Flt			1.00			1.00
Flt Protected			1.00			1.00
Satd. Flow (prot)			1881			1863
Flt Permitted			1.00			1.00
Satd. Flow (perm)			1881			1863
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	252	0	0	230
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	252	0	0	230
Heavy Vehicles (%)	0%	0%	1%	0%	0%	2%
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Actuated Green, G (s)			11.3			10.8
Effective Green, g (s)			11.3			10.8
Actuated g/C Ratio			0.23			0.22
Clearance Time (s)			14.0			14.0
Vehicle Extension (s)			2.0			2.0
Lane Grp Cap (vph)			424			401
v/s Ratio Prot			c0.13			c0.12
v/s Ratio Perm						
v/c Ratio			0.59			0.57
Uniform Delay, d1			17.4			17.6
Progression Factor			1.00			1.00
Incremental Delay, d2			1.5			1.2
Delay (s)			18.8			18.8
Level of Service			B			B
Approach Delay (s)	0.0		18.8			18.8
Approach LOS	A		B			B
Intersection Summary						
HCM 2000 Control Delay			18.8		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.58			
Actuated Cycle Length (s)			50.1		Sum of lost time (s)	28.0
Intersection Capacity Utilization			23.9%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Lanes, Volumes, Timings
 20: Meadowbrook Way SE & SE Park St

03/12/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	49	31	35	54	30	13	128	25	26	258	38
Future Volume (vph)	29	49	31	35	54	30	13	128	25	26	258	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		505			663			790			216	
Travel Time (s)		13.8			18.1			21.5			5.9	
Confl. Peds. (#/hr)	5		5	4		4	5		4	4		5
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	3%	4%	3%	0%	2%	0%	0%	1%	0%	0%	1%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

HCM 6th AWSC
 20: Meadowbrook Way SE & SE Park St

03/12/2020

Intersection	
Intersection Delay, s/veh	11.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	29	49	31	35	54	30	13	128	25	26	258	38
Future Vol, veh/h	29	49	31	35	54	30	13	128	25	26	258	38
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	3	4	3	0	2	0	0	1	0	0	1	0
Mvmt Flow	35	58	37	42	64	36	15	152	30	31	307	45
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	10			10.1			10.2			13.2		
HCM LOS	A			B			B			B		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %		8%	27%	29%
Vol Thru, %		77%	45%	45%
Vol Right, %		15%	28%	25%
Sign Control		Stop	Stop	Stop
Traffic Vol by Lane		166	109	119
LT Vol		13	29	35
Through Vol		128	49	54
RT Vol		25	31	30
Lane Flow Rate		198	130	142
Geometry Grp		1	1	1
Degree of Util (X)		0.282	0.2	0.217
Departure Headway (Hd)		5.133	5.556	5.508
Convergence, Y/N		Yes	Yes	Yes
Cap		700	645	650
Service Time		3.166	3.6	3.551
HCM Lane V/C Ratio		0.283	0.202	0.218
HCM Control Delay		10.2	10	10.1
HCM Lane LOS		B	A	B
HCM 95th-tile Q		1.2	0.7	0.8

Lanes, Volumes, Timings
 21: Meadowbrook Way SE & SR 202

03/06/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	564	133	9	471	59	138	108	24	144	138	40
Future Volume (vph)	26	564	133	9	471	59	138	108	24	144	138	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	0		0	150		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			40			35				25
Link Distance (ft)		615			663			738				518
Travel Time (s)		14.0			11.3			14.4				14.1
Confl. Peds. (#/hr)	1					1	2					2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	2%	5%	0%	3%	0%	1%	0%	8%	1%	0%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	33.3	33.3		30.3	30.3		32.8	32.8		32.8	32.8	
Total Split (s)	71.3	71.3		71.3	71.3		40.8	40.8		40.8	40.8	
Total Split (%)	63.6%	63.6%		63.6%	63.6%		36.4%	36.4%		36.4%	36.4%	
Yellow Time (s)	4.3	4.3		4.3	4.3		3.8	3.8		3.8	3.8	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	6.3	6.3		6.3	6.3			5.8		5.8	5.8	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Min	Min		Min	Min		None	None		None	None	

Intersection Summary

Area Type: Other

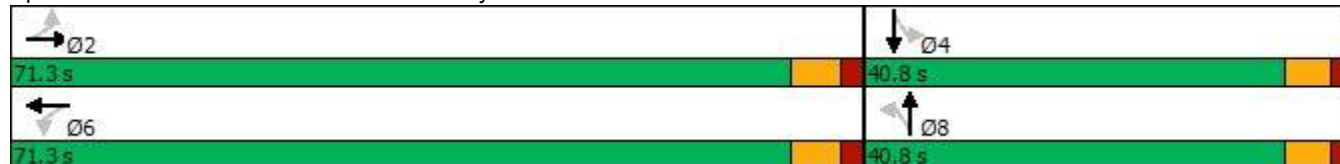
Cycle Length: 112.1

Actuated Cycle Length: 77.6

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Splits and Phases: 21: Meadowbrook Way SE & SR 202



HCM 6th Signalized Intersection Summary
 21: Meadowbrook Way SE & SR 202

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	564	133	9	471	59	138	108	24	144	138	40
Future Volume (veh/h)	26	564	133	9	471	59	138	108	24	144	138	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1900	1856	1856	1900	1900	1900	1885	1900	1900
Adj Flow Rate, veh/h	28	606	143	10	506	63	148	116	26	155	148	43
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	0	3	3	0	0	0	1	0	0
Cap, veh/h	364	750	177	237	830	103	243	174	33	429	416	121
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	856	1463	345	724	1618	201	533	591	111	1254	1414	411
Grp Volume(v), veh/h	28	0	749	10	0	569	290	0	0	155	0	191
Grp Sat Flow(s),veh/h/ln	856	0	1808	724	0	1819	1235	0	0	1254	0	1824
Q Serve(g_s), s	1.5	0.0	21.6	0.7	0.0	13.9	9.3	0.0	0.0	0.0	0.0	5.2
Cycle Q Clear(g_c), s	15.4	0.0	21.6	22.4	0.0	13.9	14.5	0.0	0.0	8.0	0.0	5.2
Prop In Lane	1.00		0.19	1.00		0.11	0.51		0.09	1.00		0.23
Lane Grp Cap(c), veh/h	364	0	927	237	0	933	450	0	0	429	0	537
V/C Ratio(X)	0.08	0.00	0.81	0.04	0.00	0.61	0.64	0.00	0.00	0.36	0.00	0.36
Avail Cap(c_a), veh/h	811	0	1871	615	0	1883	832	0	0	759	0	1017
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.3	0.0	12.7	22.0	0.0	10.8	21.5	0.0	0.0	18.4	0.0	17.5
Incr Delay (d2), s/veh	0.1	0.0	2.1	0.1	0.0	0.8	1.6	0.0	0.0	0.5	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	7.7	0.1	0.0	4.5	3.8	0.0	0.0	1.8	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.4	0.0	14.8	22.1	0.0	11.6	23.0	0.0	0.0	19.0	0.0	17.9
LnGrp LOS	B	A	B	C	A	B	C	A	A	B	A	B
Approach Vol, veh/h		777			579			290				346
Approach Delay, s/veh		14.8			11.8			23.0				18.4
Approach LOS		B			B			C				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		38.5		24.3		38.5		24.3				
Change Period (Y+Rc), s		6.3		* 5.8		6.3		* 5.8				
Max Green Setting (Gmax), s		65.0		* 35		65.0		* 35				
Max Q Clear Time (g_c+I1), s		23.6		10.0		24.4		16.5				
Green Ext Time (p_c), s		8.6		1.7		5.0		1.7				
Intersection Summary												
HCM 6th Ctrl Delay				15.8								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 22: Meadowbrook Way SE & 384th Ave SE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	165	274	355	13	2	112
Future Volume (vph)	165	274	355	13	2	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		25	
Link Distance (ft)		158	180		181	
Travel Time (s)		3.1	3.5		4.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	9%	2%	3%	0%	0%	6%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	165	274	355	13	2	112
Future Vol, veh/h	165	274	355	13	2	112
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	9	2	3	0	0	6
Mvmt Flow	190	315	408	15	2	129
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	423	0	-	0	1111	416
Stage 1	-	-	-	-	416	-
Stage 2	-	-	-	-	695	-
Critical Hdwy	4.19	-	-	-	6.4	6.26
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.281	-	-	-	3.5	3.354
Pot Cap-1 Maneuver 1100	-	-	-	-	233	628
Stage 1	-	-	-	-	670	-
Stage 2	-	-	-	-	499	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver1100	-	-	-	-	184	628
Mov Cap-2 Maneuver	-	-	-	-	184	-
Stage 1	-	-	-	-	530	-
Stage 2	-	-	-	-	499	-
Approach	EB	WB	SB			
HCM Control Delay, s	3.4	0	12.6			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1100	-	-	-	-	602
HCM Lane V/C Ratio	0.172	-	-	-	-	0.218
HCM Control Delay (s)	9	0	-	-	-	12.6
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0.6	-	-	-	-	0.8

Lanes, Volumes, Timings
 23: SE North Bend Way & Meadowbrook Way SE

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	124	344	131	95	344	273
Future Volume (vph)	124	344	131	95	344	273
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	450	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Link Speed (mph)	35		50			50
Link Distance (ft)	158		253			593
Travel Time (s)	3.1		3.5			8.1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	3%	4%	14%	1%	1%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary
 Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	10.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↘	↑	↘	↘	↑
Traffic Vol, veh/h	124	344	131	95	344	273
Future Vol, veh/h	124	344	131	95	344	273
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	Free	-	None
Storage Length	0	0	-	0	450	-
Veh in Median Storage, #1	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	3	4	14	1	1
Mvmt Flow	138	382	146	106	382	303

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1213	-	0	-	146
Stage 1	146	-	-	-	-
Stage 2	1067	-	-	-	-
Critical Hdwy	6.42	-	-	-	4.11
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	-	-	-	2.209
Pot Cap-1 Maneuver	201	0	-	0	1442
Stage 1	881	0	-	0	-
Stage 2	331	0	-	0	-
Platoon blocked, %			-		-
Mov Cap-1 Maneuver	148	-	-	-	1442
Mov Cap-2 Maneuver	212	-	-	-	-
Stage 1	881	-	-	-	-
Stage 2	243	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	48.9	0	4.7
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	212	-	1442	-
HCM Lane V/C Ratio	-	0.65	-	0.265	-
HCM Control Delay (s)	-	48.9	0	8.4	-
HCM Lane LOS	-	E	A	A	-
HCM 95th %tile Q(veh)	-	3.9	-	1.1	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	754	266	3	182	229
Future Volume (vph)	12	754	266	3	182	229
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	804		935			756
Travel Time (s)	21.9		18.2			14.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	5%	0%	4%	2%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	54.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	12	754	266	3	182	229
Future Vol, veh/h	12	754	266	3	182	229
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	5	0	4	2
Mvmt Flow	13	820	289	3	198	249

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	936	291	0	0	292	0
Stage 1	291	-	-	-	-	-
Stage 2	645	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.14	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.236	-
Pot Cap-1 Maneuver	297	~ 753	-	-	1258	-
Stage 1	763	-	-	-	-	-
Stage 2	526	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	243	~ 753	-	-	1258	-
Mov Cap-2 Maneuver	243	-	-	-	-	-
Stage 1	763	-	-	-	-	-
Stage 2	430	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	101.6	0	3.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	729	1258
HCM Lane V/C Ratio	-	-	1.142	0.157
HCM Control Delay (s)	-	-	101.6	8.4
HCM Lane LOS	-	-	F	A
HCM 95th %tile Q(veh)	-	-	25.3	0.6

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	55	214	8	38	203
Future Volume (vph)	10	55	214	8	38	203
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	796		476			935
Travel Time (s)	21.7		9.3			18.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	7%	0%	0%	2%
Shared Lane Traffic (%)						
Sign Control	Yield		Yield			Yield

Intersection Summary

Area Type: Other

Control Type: Roundabout

Lanes, Volumes, Timings
 26: SE Mill Pond Rd & North Driveway

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	14	73	149	13	71	142
Future Volume (vph)	14	73	149	13	71	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	769		376			476
Travel Time (s)	21.0		7.3			9.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	9%	0%	0%	3%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	14	73	149	13	71	142
Future Vol, veh/h	14	73	149	13	71	142
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	9	0	0	3
Mvmt Flow	15	79	162	14	77	154

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	477	169	0	0	176	0
Stage 1	169	-	-	-	-	-
Stage 2	308	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	551	880	-	-	1412	-
Stage 1	866	-	-	-	-	-
Stage 2	750	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	518	880	-	-	1412	-
Mov Cap-2 Maneuver	518	-	-	-	-	-
Stage 1	866	-	-	-	-	-
Stage 2	705	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	2.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	791	1412
HCM Lane V/C Ratio	-	-	0.12	0.055
HCM Control Delay (s)	-	-	10.2	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.4	0.2

Lanes, Volumes, Timings
 27: SE Mill Pond Rd & South Driveway

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	14	73	89	14	70	86
Future Volume (vph)	14	73	89	14	70	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	721		317			376
Travel Time (s)	19.7		6.2			7.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	16%	0%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	14	73	89	14	70	86
Future Vol, veh/h	14	73	89	14	70	86
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	16	0	0	5
Mvmt Flow	15	79	97	15	76	93

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	350	105	0	0	112	0
Stage 1	105	-	-	-	-	-
Stage 2	245	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	651	955	-	-	1490	-
Stage 1	924	-	-	-	-	-
Stage 2	800	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	616	955	-	-	1490	-
Mov Cap-2 Maneuver	616	-	-	-	-	-
Stage 1	924	-	-	-	-	-
Stage 2	757	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	3.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	877	1490
HCM Lane V/C Ratio	-	-	0.108	0.051
HCM Control Delay (s)	-	-	9.6	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.2

Lanes, Volumes, Timings
 28: SE Mill Pond Rd & SE Access Road

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	175	0	103	39	0	100
Future Volume (vph)	175	0	103	39	0	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	701		575			216
Travel Time (s)	19.1		11.2			4.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	14%	0%	0%	4%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	175	0	103	39	0	100
Future Vol, veh/h	175	0	103	39	0	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	14	0	0	4
Mvmt Flow	190	0	112	42	0	109

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	242	133	0	0	154	0
Stage 1	133	-	-	-	-	-
Stage 2	109	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	751	922	-	-	1439	-
Stage 1	898	-	-	-	-	-
Stage 2	921	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	751	922	-	-	1439	-
Mov Cap-2 Maneuver	751	-	-	-	-	-
Stage 1	898	-	-	-	-	-
Stage 2	921	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	751	1439
HCM Lane V/C Ratio	-	-	0.253	-
HCM Control Delay (s)	-	-	11.4	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1	0

2023 Redevelopment Alternative – Planning Area 1
LOS Worksheets

Lanes, Volumes, Timings
1: SR-18 & I-90 EB Ramps

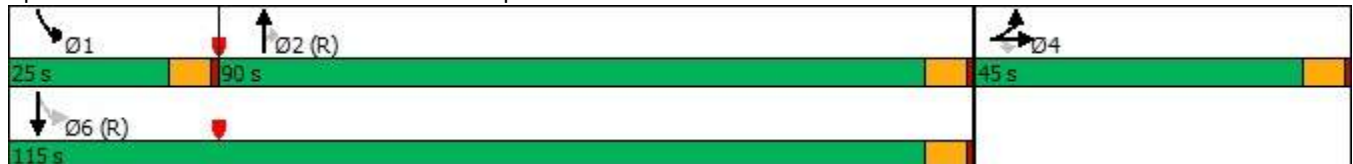
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	407	0	82	0	0	0	0	809	454	58	358	0
Future Volume (vph)	407	0	82	0	0	0	0	809	454	58	358	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650		0	0		0	0		300	200		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			45				30
Link Distance (ft)		833			764			1837				778
Travel Time (s)		16.2			14.9			27.8				17.7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	6%	0%	10%	0%	0%	0%	0%	8%	28%	10%	41%	0%
Shared Lane Traffic (%)	50%											
Turn Type	Split	NA	Perm					NA	Perm	pm+pt	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			4						2	6		
Detector Phase	4	4	4					2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					10.0	10.0	3.0	10.0	
Minimum Split (s)	29.0	29.0	29.0					16.0	16.0	9.0	23.0	
Total Split (s)	45.0	45.0	45.0					90.0	90.0	25.0	115.0	
Total Split (%)	28.1%	28.1%	28.1%					56.3%	56.3%	15.6%	71.9%	
Yellow Time (s)	5.0	5.0	5.0					5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0	1.0					1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0					6.0	6.0	6.0	6.0	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None					C-Min	C-Min	None	C-Min	

Intersection Summary

Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 1: SR-18 & I-90 EB Ramps



HCM 6th Signalized Intersection Summary

1: SR-18 & I-90 EB Ramps

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	407	0	82	0	0	0	0	809	454	58	358	0
Future Volume (veh/h)	407	0	82	0	0	0	0	809	454	58	358	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00	1.00	1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1811	1900	1752				0	1781	1485	1752	1292	0
Adj Flow Rate, veh/h	424	0	0				0	843	0	60	373	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	6	0	10				0	8	28	10	41	0
Cap, veh/h	488	0					0	1292		372	1924	0
Arrive On Green	0.14	0.00	0.00				0.00	0.73	0.00	0.02	0.78	0.00
Sat Flow, veh/h	3450	0	1485				0	1781	1259	1668	2520	0
Grp Volume(v), veh/h	424	0	0				0	843	0	60	373	0
Grp Sat Flow(s),veh/h/ln	1725	0	1485				0	1781	1259	1668	1228	0
Q Serve(g_s), s	19.2	0.0	0.0				0.0	39.5	0.0	1.4	6.2	0.0
Cycle Q Clear(g_c), s	19.2	0.0	0.0				0.0	39.5	0.0	1.4	6.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	488	0					0	1292		372	1924	0
V/C Ratio(X)	0.87	0.00					0.00	0.65		0.16	0.19	0.00
Avail Cap(c_a), veh/h	841	0					0	1292		536	1924	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				0.00	1.00	0.00	0.85	0.85	0.00
Uniform Delay (d), s/veh	67.2	0.0	0.0				0.0	11.5	0.0	10.8	4.4	0.0
Incr Delay (d2), s/veh	5.0	0.0	0.0				0.0	2.6	0.0	0.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	0.0	0.0				0.0	14.8	0.0	0.6	1.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.2	0.0	0.0				0.0	14.0	0.0	11.0	4.6	0.0
LnGrp LOS	E	A					A	B		B	A	A
Approach Vol, veh/h		424	A					843	A		433	
Approach Delay, s/veh		72.2						14.0			5.5	
Approach LOS		E						B			A	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	9.3	122.1		28.7				131.3				
Change Period (Y+Rc), s	6.0	6.0		6.0				6.0				
Max Green Setting (Gmax), s	19.0	84.0		39.0				109.0				
Max Q Clear Time (g_c+I1), s	3.4	41.5		21.2				8.2				
Green Ext Time (p_c), s	0.1	17.2		1.4				6.7				
Intersection Summary												
HCM 6th Ctrl Delay			26.4									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

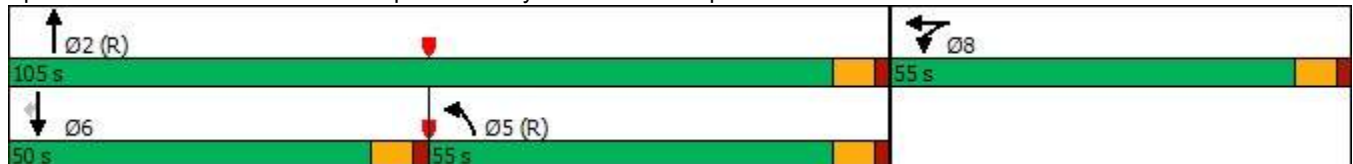
03/06/2020

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group												
Lane Configurations				↖	↕		↖	↕			↕	↖
Traffic Volume (vph)	0	0	0	213	2	103	567	622	0	0	155	827
Future Volume (vph)	0	0	0	213	2	103	567	622	0	0	155	827
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	0		0
Storage Lanes	0		0	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30				30
Link Distance (ft)		893			705			778				878
Travel Time (s)		17.4			13.7			17.7				20.0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	57%	50%	8%	7%	7%	0%	0%	12%	1%
Shared Lane Traffic (%)				23%								
Turn Type				Split	NA		Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases												6
Detector Phase				8	8		5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	7.0			7.0	7.0
Minimum Split (s)				12.0	12.0		12.0	14.0			24.0	24.0
Total Split (s)				55.0	55.0		55.0	105.0			50.0	50.0
Total Split (%)				34.4%	34.4%		34.4%	65.6%			31.3%	31.3%
Yellow Time (s)				5.0	5.0		5.0	5.0			5.0	5.0
All-Red Time (s)				2.0	2.0		2.0	2.0			2.0	2.0
Lost Time Adjust (s)				0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)				7.0	7.0		7.0	7.0			7.0	7.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None		C-Max	C-Min			None	None

Intersection Summary

Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 60 (38%), Referenced to phase 2:NBT and 5:NBL, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated

Splits and Phases: 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps





















HCM 6th Signalized Intersection Summary
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	213	2	103	567	622	0	0	155	827
Future Volume (veh/h)	0	0	0	213	2	103	567	622	0	0	155	827
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No				No	
Adj Sat Flow, veh/h/ln				1055	1159	1055	1796	1796	0	0	1722	1885
Adj Flow Rate, veh/h				167	82	108	597	655	0	0	163	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				57	50	57	7	7	0	0	12	1
Cap, veh/h				212	96	126	513	2394	0	0	616	
Arrive On Green				0.21	0.21	0.21	0.10	0.23	0.00	0.00	0.36	0.00
Sat Flow, veh/h				1005	454	598	1711	3503	0	0	1722	1598
Grp Volume(v), veh/h				167	0	190	597	655	0	0	163	0
Grp Sat Flow(s),veh/h/ln				1005	0	1051	1711	1706	0	0	1722	1598
Q Serve(g_s), s				25.2	0.0	27.8	48.0	25.2	0.0	0.0	10.7	0.0
Cycle Q Clear(g_c), s				25.2	0.0	27.8	48.0	25.2	0.0	0.0	10.7	0.0
Prop In Lane				1.00		0.57	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				212	0	222	513	2394	0	0	616	
V/C Ratio(X)				0.79	0.00	0.86	1.16	0.27	0.00	0.00	0.26	
Avail Cap(c_a), veh/h				302	0	315	513	2394	0	0	616	
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	1.00	0.63	0.63	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				59.7	0.0	60.8	72.1	28.0	0.0	0.0	36.4	0.0
Incr Delay (d2), s/veh				20.9	0.0	28.0	86.8	0.2	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.6	0.0	9.1	34.6	11.7	0.0	0.0	4.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				80.6	0.0	88.8	158.9	28.2	0.0	0.0	36.8	0.0
LnGrp LOS				F	A	F	F	C	A	A	D	
Approach Vol, veh/h					357			1252			163	A
Approach Delay, s/veh					85.0			90.5			36.8	
Approach LOS					F			F			D	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		119.2			55.0	64.2		40.8				
Change Period (Y+Rc), s		7.0			7.0	7.0		7.0				
Max Green Setting (Gmax), s		98.0			48.0	43.0		48.0				
Max Q Clear Time (g_c+I1), s		27.2			50.0	12.7		29.8				
Green Ext Time (p_c), s		8.0			0.0	1.3		3.9				
Intersection Summary												
HCM 6th Ctrl Delay				84.5								
HCM 6th LOS				F								
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 3: Snoqualmie Pkwy & SE 99th St

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	28	0	0	1	70	633	3	1	987	10
Future Volume (vph)	2	0	28	0	0	1	70	633	3	1	987	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	0		0	0		0	125		0	25		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		989			884			878			457	
Travel Time (s)		27.0			24.1			20.0			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	50%	0%	0%	0%	0%	0%	3%	7%	0%	0%	3%	20%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕	↕		↕	↕
Traffic Vol, veh/h	2	0	28	0	0	1	70	633	3	1	987	10
Future Vol, veh/h	2	0	28	0	0	1	70	633	3	1	987	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	25	-	-
Veh in Median Storage, #-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	50	0	0	0	0	0	3	7	0	0	3	20
Mvmt Flow	2	0	29	0	0	1	74	666	3	1	1039	11

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	1528	1864	525	1338	1868	335	1050	0	0	669	0	0
Stage 1	1047	1047	-	816	816	-	-	-	-	-	-	-
Stage 2	481	817	-	522	1052	-	-	-	-	-	-	-
Critical Hdwy	8.5	6.5	6.9	7.5	6.5	6.9	4.16	-	-	4.1	-	-
Critical Hdwy Stg 1	7.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	4	4	3.3	3.5	4	3.3	2.23	-	-	2.2	-	-
Pot Cap-1 Maneuver	51	74	502	113	73	667	653	-	-	931	-	-
Stage 1	172	308	-	341	393	-	-	-	-	-	-	-
Stage 2	427	393	-	511	306	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	46	66	502	97	65	667	653	-	-	931	-	-
Mov Cap-2 Maneuver	46	66	-	97	65	-	-	-	-	-	-	-
Stage 1	153	308	-	302	349	-	-	-	-	-	-	-
Stage 2	378	349	-	480	306	-	-	-	-	-	-	-

Approach	EB		WB			NB		SB		
HCM Control Delay, s	18.3		10.4			1.1		0		
HCM LOS	C		B							

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	653	-	-	302	667	931	-
HCM Lane V/C Ratio	0.113	-	-	0.105	0.002	0.001	-
HCM Control Delay (s)	11.2	-	-	18.3	10.4	8.9	-
HCM Lane LOS	B	-	-	C	B	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0.3	0	0	-

Lanes, Volumes, Timings
 4: Snoqualmie Pkwy & SE 96th St

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	32	16	581	15	31	910
Future Volume (vph)	32	16	581	15	31	910
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Link Speed (mph)	30		40			40
Link Distance (ft)	346		677			718
Travel Time (s)	7.9		11.5			12.2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	8%	0%	0%	2%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑		↘	↑↑
Traffic Vol, veh/h	32	16	581	15	31	910
Future Vol, veh/h	32	16	581	15	31	910
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #1	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	8	0	0	2
Mvmt Flow	33	16	593	15	32	929

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1130	304	0	0	608	0
Stage 1	601	-	-	-	-	-
Stage 2	529	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	201	698	-	-	980	-
Stage 1	516	-	-	-	-	-
Stage 2	561	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	194	698	-	-	980	-
Mov Cap-2 Maneuver	330	-	-	-	-	-
Stage 1	516	-	-	-	-	-
Stage 2	542	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.8	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	330	698	980	-
HCM Lane V/C Ratio	-	-	0.099	0.023	0.032	-
HCM Control Delay (s)	-	-	17.1	10.3	8.8	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	0.1	-

Lanes, Volumes, Timings
5: Snoqualmie Pkwy & SE Jacobia St

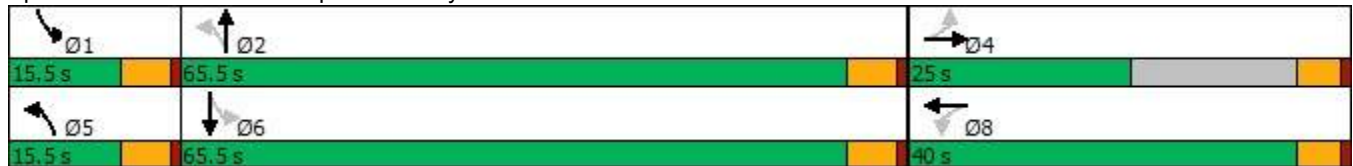
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	5	111	99	6	81	36	634	15	24	763	17
Future Volume (vph)	34	5	111	99	6	81	36	634	15	24	763	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	250		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			40				40
Link Distance (ft)		653			474			718				617
Travel Time (s)		17.8			12.9			12.2				10.5
Confl. Peds. (#/hr)	2		1	1		2						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	12%	20%	0%	0%	17%	2%	8%	8%	0%	13%	4%	33%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1		6
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1		6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	15.0		5.0		16.0
Minimum Split (s)	34.0	34.0		34.0	34.0		10.5	22.5		10.5		22.5
Total Split (s)	25.0	25.0		40.0	40.0		15.5	65.5		15.5		65.5
Total Split (%)	20.7%	20.7%		33.1%	33.1%		12.8%	54.1%		12.8%		54.1%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.5	4.5		4.5		4.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0		1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.5	5.5		5.5		5.5
Lead/Lag							Lead	Lag		Lead		Lag
Lead-Lag Optimize?							Yes	Yes		Yes		Yes
Recall Mode	None	None		None	None		None	Min		None		Min

Intersection Summary

Area Type: Other
 Cycle Length: 121
 Actuated Cycle Length: 51.3
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Snoqualmie Pkwy & SE Jacobia St



HCM 6th Signalized Intersection Summary
5: Snoqualmie Pkwy & SE Jacobia St

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	5	111	99	6	81	36	634	15	24	763	17
Future Volume (veh/h)	34	5	111	99	6	81	36	634	15	24	763	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1722	1604	1604	1900	1648	1648	1781	1781	1781	1707	1841	1841
Adj Flow Rate, veh/h	37	5	122	109	7	89	40	697	16	26	838	19
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	12	20	20	0	17	17	8	8	8	13	4	4
Cap, veh/h	347	12	297	333	23	296	354	1428	33	377	1433	32
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.04	0.42	0.42	0.03	0.41	0.41
Sat Flow, veh/h	1194	54	1310	1281	103	1306	1697	3382	78	1626	3496	79
Grp Volume(v), veh/h	37	0	127	109	0	96	40	349	364	26	419	438
Grp Sat Flow(s),veh/h/ln	1194	0	1364	1281	0	1409	1697	1692	1767	1626	1749	1826
Q Serve(g_s), s	1.3	0.0	4.0	4.0	0.0	2.8	0.7	7.5	7.5	0.5	9.3	9.3
Cycle Q Clear(g_c), s	4.1	0.0	4.0	7.9	0.0	2.8	0.7	7.5	7.5	0.5	9.3	9.3
Prop In Lane	1.00		0.96	1.00		0.93	1.00		0.04	1.00		0.04
Lane Grp Cap(c), veh/h	347	0	309	333	0	319	354	715	746	377	717	749
V/C Ratio(X)	0.11	0.00	0.41	0.33	0.00	0.30	0.11	0.49	0.49	0.07	0.58	0.58
Avail Cap(c_a), veh/h	556	0	547	941	0	988	622	2035	2126	654	2103	2197
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.7	0.0	16.5	19.8	0.0	16.0	8.6	10.5	10.5	8.4	11.4	11.4
Incr Delay (d2), s/veh	0.1	0.0	0.9	0.6	0.0	0.5	0.1	0.7	0.7	0.0	1.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	1.2	1.1	0.0	0.9	0.2	2.2	2.3	0.1	2.9	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.9	0.0	17.3	20.4	0.0	16.5	8.6	11.2	11.2	8.5	12.5	12.5
LnGrp LOS	B	A	B	C	A	B	A	B	B	A	B	B
Approach Vol, veh/h		164			205			753			883	
Approach Delay, s/veh		17.4			18.6			11.1			12.4	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.0	26.6		16.3	7.6	26.0		16.3				
Change Period (Y+Rc), s	5.5	5.5		5.0	5.5	5.5		5.0				
Max Green Setting (Gmax), s	10.0	60.0		20.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	2.5	9.5		6.1	2.7	11.3		9.9				
Green Ext Time (p_c), s	0.0	7.2		0.7	0.0	9.2		0.9				
Intersection Summary												
HCM 6th Ctrl Delay				12.9								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
6: Snoqualmie Pkwy & SE Swenson Dr

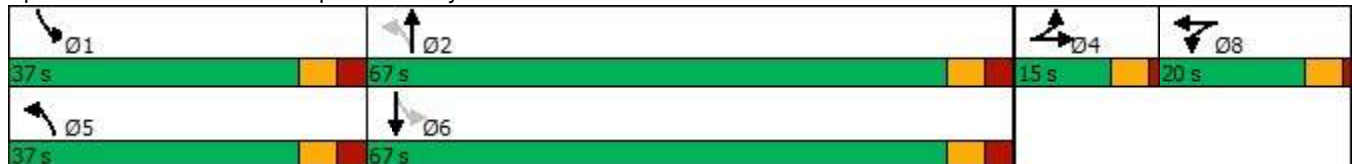
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	12	24	46	16	70	47	683	19	40	607	66
Future Volume (vph)	54	12	24	46	16	70	47	683	19	40	607	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	275		0	300		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			No
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		456			320			2254			367	
Travel Time (s)		10.4			7.3			38.4			6.3	
Confl. Peds. (#/hr)			1			45	1		8	8		1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	5%	15%	4%	0%	6%	3%	4%	9%	5%	0%	7%	4%
Shared Lane Traffic (%)												
Turn Type	Split	NA		Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		10.0	10.0		5.0	12.0		5.0	12.0	
Minimum Split (s)	38.0	38.0		38.0	38.0		12.0	28.0		12.0	28.0	
Total Split (s)	15.0	15.0		20.0	20.0		37.0	67.0		37.0	67.0	
Total Split (%)	10.8%	10.8%		14.4%	14.4%		26.6%	48.2%		26.6%	48.2%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		7.0	7.0		7.0	7.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
 Cycle Length: 139
 Actuated Cycle Length: 86.3
 Natural Cycle: 120
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Snoqualmie Pkwy & SE Swenson Dr



HCM 6th Signalized Intersection Summary
6: Snoqualmie Pkwy & SE Swenson Dr

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	12	24	46	16	70	47	683	19	40	607	66
Future Volume (veh/h)	54	12	24	46	16	70	47	683	19	40	607	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.93	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1678	1678	1900	1811	1811	1841	1767	1767	1900	1796	1796
Adj Flow Rate, veh/h	61	13	27	52	18	79	53	767	21	45	682	74
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	5	15	15	0	6	6	4	9	9	0	7	7
Cap, veh/h	145	41	84	339	52	226	253	914	25	243	834	90
Arrive On Green	0.08	0.08	0.08	0.19	0.19	0.19	0.05	0.27	0.27	0.04	0.27	0.27
Sat Flow, veh/h	1739	485	1008	1810	275	1208	1753	3336	91	1810	3100	336
Grp Volume(v), veh/h	61	0	40	52	0	97	53	386	402	45	375	381
Grp Sat Flow(s),veh/h/ln	1739	0	1493	1810	0	1483	1753	1678	1749	1810	1706	1730
Q Serve(g_s), s	1.9	0.0	1.5	1.4	0.0	3.3	1.2	12.7	12.7	1.0	12.0	12.1
Cycle Q Clear(g_c), s	1.9	0.0	1.5	1.4	0.0	3.3	1.2	12.7	12.7	1.0	12.0	12.1
Prop In Lane	1.00		0.68	1.00		0.81	1.00		0.05	1.00		0.19
Lane Grp Cap(c), veh/h	145	0	125	339	0	278	253	460	479	243	459	465
V/C Ratio(X)	0.42	0.00	0.32	0.15	0.00	0.35	0.21	0.84	0.84	0.18	0.82	0.82
Avail Cap(c_a), veh/h	298	0	256	465	0	381	1067	1724	1796	1092	1753	1777
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.4	0.0	25.2	19.9	0.0	20.6	15.3	20.0	20.0	15.5	20.0	20.0
Incr Delay (d2), s/veh	0.7	0.0	0.5	0.1	0.0	0.3	0.2	1.6	1.5	0.1	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.5	0.6	0.0	1.1	0.4	4.4	4.6	0.4	4.3	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.1	0.0	25.8	19.9	0.0	20.9	15.5	21.6	21.5	15.7	21.4	21.4
LnGrp LOS	C	A	C	B	A	C	B	C	C	B	C	C
Approach Vol, veh/h		101			149			841			801	
Approach Delay, s/veh		26.0			20.6			21.2			21.1	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	23.0		9.9	9.9	22.7		15.9				
Change Period (Y+Rc), s	7.0	7.0		5.0	7.0	7.0		5.0				
Max Green Setting (Gmax), s	30.0	60.0		10.0	30.0	60.0		15.0				
Max Q Clear Time (g_c+I1), s	3.0	14.7		3.9	3.2	14.1		5.3				
Green Ext Time (p_c), s	0.0	0.6		0.0	0.0	0.6		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				21.3								
HCM 6th LOS				C								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings

7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	489	202	58	415	29	106	12	44	58	42	314
Future Volume (vph)	92	489	202	58	415	29	106	12	44	58	42	314
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	175		0	0		150	0		100
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1285			1065			585			583	
Travel Time (s)		21.9			18.2			16.0			15.9	
Confl. Peds. (#/hr)												3
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	10%	11%	2%	2%	6%	14%	6%	0%	5%	5%	0%	4%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4			8					2			6
Detector Phase	7	4		3	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	35.3		9.5	30.3		36.5	36.5	36.5	36.5	36.5	36.5
Total Split (s)	34.5	55.3		14.5	55.3		44.5	44.5	44.5	44.5	44.5	44.5
Total Split (%)	19.3%	30.9%		8.1%	30.9%		24.9%	24.9%	24.9%	24.9%	24.9%	24.9%
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.3		4.5	5.3		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None	None	None	None	None

Intersection Summary

Area Type: Other

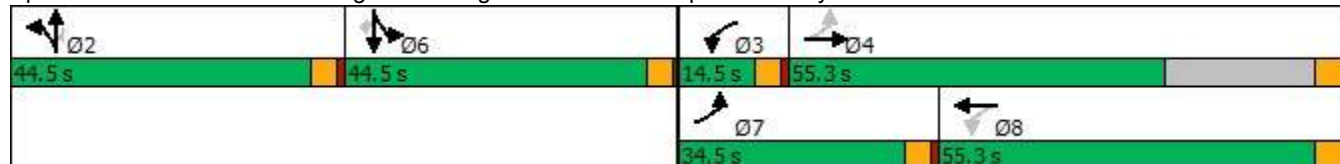
Cycle Length: 178.8

Actuated Cycle Length: 86.2

Natural Cycle: 120

Control Type: Actuated-Uncoordinated

Splits and Phases: 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	489	202	58	415	29	106	12	44	58	42	314
Future Volume (veh/h)	92	489	202	58	415	29	106	12	44	58	42	314
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1737	1737	1870	1811	1811	1900	1900	1826	1900	1900	1841
Adj Flow Rate, veh/h	106	562	232	67	477	33	122	14	8	67	48	239
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	10	11	11	2	6	6	0	0	5	0	0	4
Cap, veh/h	409	818	337	302	1136	78	174	20	165	220	158	318
Arrive On Green	0.06	0.36	0.36	0.05	0.35	0.35	0.11	0.11	0.11	0.20	0.20	0.20
Sat Flow, veh/h	1668	2279	939	1781	3266	225	1631	187	1547	1076	771	1553
Grp Volume(v), veh/h	106	406	388	67	251	259	136	0	8	115	0	239
Grp Sat Flow(s),veh/h/ln	1668	1650	1568	1781	1721	1771	1818	0	1547	1846	0	1553
Q Serve(g_s), s	2.7	14.2	14.3	1.6	7.5	7.6	4.9	0.0	0.3	3.6	0.0	9.8
Cycle Q Clear(g_c), s	2.7	14.2	14.3	1.6	7.5	7.6	4.9	0.0	0.3	3.6	0.0	9.8
Prop In Lane	1.00		0.60	1.00		0.13	0.90		1.00	0.58		1.00
Lane Grp Cap(c), veh/h	409	592	563	302	599	616	194	0	165	378	0	318
V/C Ratio(X)	0.26	0.69	0.69	0.22	0.42	0.42	0.70	0.00	0.05	0.30	0.00	0.75
Avail Cap(c_a), veh/h	1040	1216	1155	470	1267	1304	1072	0	912	1088	0	915
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.0	18.5	18.5	14.2	16.9	16.9	29.3	0.0	27.2	22.9	0.0	25.4
Incr Delay (d2), s/veh	0.3	2.0	2.1	0.4	0.7	0.7	4.5	0.0	0.1	0.4	0.0	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	5.1	4.8	0.6	2.7	2.8	2.3	0.0	0.1	1.6	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	20.5	20.7	14.5	17.6	17.6	33.8	0.0	27.3	23.3	0.0	29.0
LnGrp LOS	B	C	C	B	B	B	C	A	C	C	A	C
Approach Vol, veh/h		900			577			144			354	
Approach Delay, s/veh		19.8			17.2			33.4			27.1	
Approach LOS		B			B			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.7	8.1	29.7		18.4	8.8	28.9				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		40.0	10.0	50.0		40.0	30.0	50.0				
Max Q Clear Time (g_c+I1), s		6.9	3.6	16.3		11.8	4.7	9.6				
Green Ext Time (p_c), s		0.9	0.1	8.1		1.6	0.3	4.6				
Intersection Summary												
HCM 6th Ctrl Delay				21.3								
HCM 6th LOS				C								

Lanes, Volumes, Timings
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

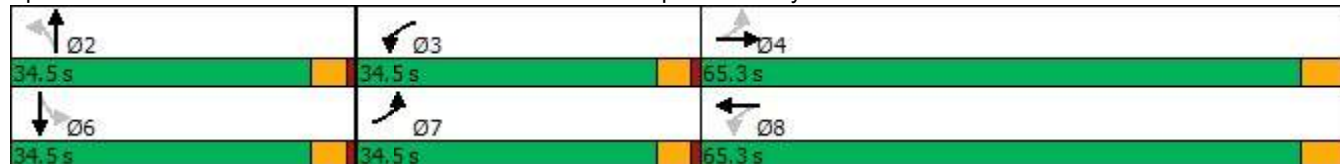
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	417	81	129	447	50	9	6	21	66	27	93
Future Volume (vph)	98	417	81	129	447	50	9	6	21	66	27	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	275		0	275		0	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1065			1064			511			626	
Travel Time (s)		18.2			18.1			13.9			17.1	
Confl. Peds. (#/hr)	3		1	1		3	2		1	1		2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	12%	1%	0%	6%	0%	11%	0%	0%	5%	4%	2%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2				6
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		2	2		6		6
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		5.0		5.0
Minimum Split (s)	9.5	34.3		9.5	34.3		36.5	36.5		36.5		36.5
Total Split (s)	34.5	65.3		34.5	65.3		34.5	34.5		34.5		34.5
Total Split (%)	25.7%	48.6%		25.7%	48.6%		25.7%	25.7%		25.7%		25.7%
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5		3.5		3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0		1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Total Lost Time (s)	4.5	5.3		4.5	5.3		4.5	4.5		4.5		4.5
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None		None

Intersection Summary

























Area Type: Other
 Cycle Length: 134.3
 Actuated Cycle Length: 53
 Natural Cycle: 85
 Control Type: Actuated-Uncoordinated

Splits and Phases: 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy



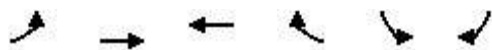
HCM 6th Signalized Intersection Summary
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	98	417	81	129	447	50	9	6	21	66	27	93
Future Volume (veh/h)	98	417	81	129	447	50	9	6	21	66	27	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1722	1722	1900	1811	1811	1737	1900	1900	1826	1841	1841
Adj Flow Rate, veh/h	110	469	91	145	502	56	10	7	24	74	30	104
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	12	12	0	6	6	11	0	0	5	4	4
Cap, veh/h	575	1047	202	582	1233	137	275	59	202	370	57	196
Arrive On Green	0.09	0.38	0.38	0.10	0.40	0.40	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	2734	527	1810	3121	347	1163	375	1287	1341	360	1250
Grp Volume(v), veh/h	110	280	280	145	276	282	10	0	31	74	0	134
Grp Sat Flow(s),veh/h/ln	1781	1636	1625	1810	1721	1747	1163	0	1662	1341	0	1610
Q Serve(g_s), s	1.4	5.1	5.1	1.8	4.6	4.6	0.3	0.0	0.6	2.0	0.0	3.0
Cycle Q Clear(g_c), s	1.4	5.1	5.1	1.8	4.6	4.6	3.4	0.0	0.6	2.6	0.0	3.0
Prop In Lane	1.00		0.32	1.00		0.20	1.00		0.77	1.00		0.78
Lane Grp Cap(c), veh/h	575	627	622	582	680	690	275	0	261	370	0	253
V/C Ratio(X)	0.19	0.45	0.45	0.25	0.41	0.41	0.04	0.00	0.12	0.20	0.00	0.53
Avail Cap(c_a), veh/h	1761	2468	2451	1765	2596	2636	969	0	1254	1171	0	1215
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.2	9.1	9.1	6.2	8.7	8.7	17.0	0.0	14.4	15.5	0.0	15.4
Incr Delay (d2), s/veh	0.2	0.7	0.7	0.2	0.6	0.6	0.1	0.0	0.2	0.3	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.3	1.3	0.4	1.2	1.2	0.1	0.0	0.2	0.6	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.3	9.8	9.9	6.4	9.2	9.2	17.0	0.0	14.6	15.8	0.0	17.1
LnGrp LOS	A	A	A	A	A	A	B	A	B	B	A	B
Approach Vol, veh/h		670			703			41			208	
Approach Delay, s/veh		9.3			8.6			15.2			16.7	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		10.7	8.5	20.5		10.7	8.0	21.0				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		30.0	30.0	60.0		30.0	30.0	60.0				
Max Q Clear Time (g_c+I1), s		5.4	3.8	7.1		5.0	3.4	6.6				
Green Ext Time (p_c), s		0.1	0.4	5.4		1.0	0.3	5.3				
Intersection Summary												
HCM 6th Ctrl Delay				10.1								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
 9: Snoqualmie Pkwy & Fairway Ave SE

03/06/2020

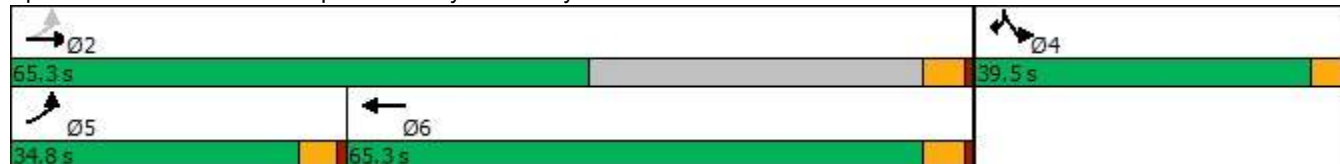


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	30	498	433	110	247	210
Future Volume (vph)	30	498	433	110	247	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	325			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		25	
Link Distance (ft)		1064	278		478	
Travel Time (s)		18.1	4.7		13.0	
Confl. Peds. (#/hr)	2			2		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	8%	9%	3%	11%	2%	1%
Shared Lane Traffic (%)						
Turn Type	pm+pt	NA	NA		Prot	Prot
Protected Phases	5	2	6		4	4
Permitted Phases	2					
Detector Phase	5	2	6		4	4
Switch Phase						
Minimum Initial (s)	5.0	12.0	12.0		5.0	5.0
Minimum Split (s)	9.8	23.3	26.3		36.5	36.5
Total Split (s)	34.8	65.3	65.3		39.5	39.5
Total Split (%)	24.9%	46.8%	46.8%		28.3%	28.3%
Yellow Time (s)	3.8	4.3	4.3		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.8	5.3	5.3		4.5	4.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	None	None		None	None

Intersection Summary

Area Type: Other
 Cycle Length: 139.6
 Actuated Cycle Length: 46.1
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated

Splits and Phases: 9: Snoqualmie Pkwy & Fairway Ave SE



HCM 6th Signalized Intersection Summary
 9: Snoqualmie Pkwy & Fairway Ave SE























03/06/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	30	498	433	110	247	210
Future Volume (veh/h)	30	498	433	110	247	210
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1767	1856	1856	1870	1885
Adj Flow Rate, veh/h	33	553	481	122	274	195
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	9	3	3	2	1
Cap, veh/h	408	1674	917	231	417	374
Arrive On Green	0.04	0.50	0.33	0.33	0.23	0.23
Sat Flow, veh/h	1697	3445	2880	702	1781	1598
Grp Volume(v), veh/h	33	553	303	300	274	195
Grp Sat Flow(s),veh/h/ln	1697	1678	1763	1727	1781	1598
Q Serve(g_s), s	0.4	3.6	5.1	5.2	5.1	3.9
Cycle Q Clear(g_c), s	0.4	3.6	5.1	5.2	5.1	3.9
Prop In Lane	1.00			0.41	1.00	1.00
Lane Grp Cap(c), veh/h	408	1674	580	568	417	374
V/C Ratio(X)	0.08	0.33	0.52	0.53	0.66	0.52
Avail Cap(c_a), veh/h	1730	5490	2883	2824	1700	1524
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.0	5.5	10.0	10.0	12.7	12.3
Incr Delay (d2), s/veh	0.1	0.1	0.7	0.8	1.8	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.6	1.4	1.4	1.9	3.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.1	5.6	10.7	10.8	14.5	13.4
LnGrp LOS	A	A	B	B	B	B
Approach Vol, veh/h		586	603		469	
Approach Delay, s/veh		5.7	10.7		14.0	
Approach LOS		A	B		B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		23.6		13.1	6.2	17.4
Change Period (Y+Rc), s		5.3		4.5	* 4.8	5.3
Max Green Setting (Gmax), s		60.0		35.0	* 30	60.0
Max Q Clear Time (g_c+I1), s		5.6		7.1	2.4	7.2
Green Ext Time (p_c), s		4.0		1.6	0.1	3.9
Intersection Summary						
HCM 6th Ctrl Delay			9.9			
HCM 6th LOS			A			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

Lanes, Volumes, Timings
 10: Fisher Ave SE & Snoqualmie Pkwy

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (vph)	7	632	6	3	445	19	34	1	8	27	3	31
Future Volume (vph)	7	632	6	3	445	19	34	1	8	27	3	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		458			1686			518			363	
Travel Time (s)		7.8			28.7			14.1			9.9	
Confl. Peds. (#/hr)	2		1	2		3	1		2	3		2
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	0%	8%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	5.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕			↕			↕	
Traffic Vol, veh/h	7	632	6	3	445	19	34	1	8	27	3	31
Future Vol, veh/h	7	632	6	3	445	19	34	1	8	27	3	31
Conflicting Peds, #/hr	2	0	1	2	0	3	1	0	2	3	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #-	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	8	0	0	4	0	0	0	0	0	0	0
Mvmt Flow	9	810	8	4	571	24	44	1	10	35	4	40

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	598	0	0	820	0	0	1132	1440	414	1021	1432	303
Stage 1	-	-	-	-	-	-	834	834	-	594	594	-
Stage 2	-	-	-	-	-	-	298	606	-	427	838	-
Critical Hdwy	4.1	-	-	4.1	-	-	9.5	8.5	7.9	9.5	8.5	7.9
Critical Hdwy Stg 1	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	989	-	-	818	-	-	86	60	528	110	61	643
Stage 1	-	-	-	-	-	-	210	243	-	333	357	-
Stage 2	-	-	-	-	-	-	586	350	-	459	241	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	986	-	-	816	-	-	76	59	525	104	60	640
Mov Cap-2 Maneuver	-	-	-	-	-	-	76	59	-	104	60	-
Stage 1	-	-	-	-	-	-	208	240	-	329	354	-
Stage 2	-	-	-	-	-	-	540	347	-	442	238	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	94.3	43
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	90	986	-	-	816	-	-	170
HCM Lane V/C Ratio	0.613	0.009	-	-	0.005	-	-	0.46
HCM Control Delay (s)	94.3	8.7	-	-	9.4	-	-	43
HCM Lane LOS	F	A	-	-	A	-	-	E
HCM 95th %tile Q(veh)	2.9	0	-	-	0	-	-	2.2

Lanes, Volumes, Timings
 11: Orchard Ave SE & Snoqualmie Pkwy

03/06/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Traffic Volume (vph)	773	9	15	464	24	39
Future Volume (vph)	773	9	15	464	24	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	225		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	1686			1131	557	
Travel Time (s)	28.7			19.3	15.2	
Confl. Peds. (#/hr)		3	1		3	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	7%	11%	6%	6%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑↑	↑↑
Traffic Vol, veh/h	773	9	15	464	24	39
Future Vol, veh/h	773	9	15	464	24	39
Conflicting Peds, #/hr	0	3	1	0	3	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	225	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	7	11	6	6	0	5
Mvmt Flow	889	10	17	533	28	45
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	902	0	1201	454
Stage 1	-	-	-	-	897	-
Stage 2	-	-	-	-	304	-
Critical Hdwy	-	-	4.22	-	6.8	7
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.26	-	3.5	3.35
Pot Cap-1 Maneuver	-	-	725	-	180	545
Stage 1	-	-	-	-	363	-
Stage 2	-	-	-	-	728	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	723	-	175	543
Mov Cap-2 Maneuver	-	-	-	-	175	-
Stage 1	-	-	-	-	362	-
Stage 2	-	-	-	-	708	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	0.3	20.7			
HCM LOS			C			
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	301	-	-	723	-	
HCM Lane V/C Ratio	0.241	-	-	0.024	-	
HCM Control Delay (s)	20.7	-	-	10.1	-	
HCM Lane LOS	C	-	-	B	-	
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-	

Lanes, Volumes, Timings
 12: Snoqualmie Pkwy & Allman AveSE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	811	466	4	7	9
Future Volume (vph)	2	811	466	4	7	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		40	40		25	
Link Distance (ft)		679	1187		393	
Travel Time (s)		11.6	20.2		10.7	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	7%	5%	0%	0%	0%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	811	466	4	7	9
Future Vol, veh/h	2	811	466	4	7	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #-	0	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	7	5	0	0	0
Mvmt Flow	2	932	536	5	8	10

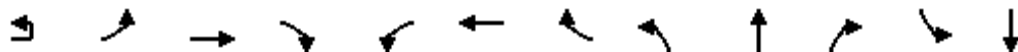
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	541	0	-	0	1009 271
Stage 1	-	-	-	-	539 -
Stage 2	-	-	-	-	470 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1038	-	-	-	240 733
Stage 1	-	-	-	-	555 -
Stage 2	-	-	-	-	601 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1038	-	-	-	240 733
Mov Cap-2 Maneuver	-	-	-	-	240 -
Stage 1	-	-	-	-	554 -
Stage 2	-	-	-	-	601 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1038	-	-	-	-	386
HCM Lane V/C Ratio	0.002	-	-	-	-	0.048
HCM Control Delay (s)	8.5	-	-	-	-	14.8
HCM Lane LOS	A	-	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	-	0.1

Lanes, Volumes, Timings
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↓		↑↑		↖	↑↑			↑↓			↕
Traffic Volume (vph)	0	0	799	26	24	451	0	29	0	17	0	0
Future Volume (vph)	0	0	799	26	24	451	0	29	0	17	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0		0	200		0	0		0	0	
Storage Lanes		1		0	1		0	0		0	0	
Taper Length (ft)		25			25			25			25	
Right Turn on Red				Yes			Yes			Yes		
Link Speed (mph)			40			40			25			25
Link Distance (ft)			1187			833			535			291
Travel Time (s)			20.2			14.2			14.6			7.9
Confl. Peds. (#/hr)		2		1	1		2	1				
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	0%	7%	4%	0%	6%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt		NA		pm+pt	NA		Perm	NA			
Protected Phases	5		2		1	6			8			4
Permitted Phases	2				6			8			4	
Detector Phase	5		2		1	6		8	8		4	4
Switch Phase												
Minimum Initial (s)	5.0		15.0		5.0	14.0		5.0	5.0		30.0	30.0
Minimum Split (s)	10.0		20.0		10.0	29.0		36.0	36.0		36.0	36.0
Total Split (s)	35.0		65.0		35.0	65.0		36.0	36.0		36.0	36.0
Total Split (%)	25.7%		47.8%		25.7%	47.8%		26.5%	26.5%		26.5%	26.5%
Yellow Time (s)	4.0		4.0		4.0	4.0		5.0	5.0		5.0	5.0
All-Red Time (s)	1.0		1.0		1.0	1.0		1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0		5.0		5.0	5.0		6.0	6.0		6.0	6.0
Lead/Lag	Lead		Lag		Lead	Lag						
Lead-Lag Optimize?	Yes		Yes		Yes	Yes						
Recall Mode	Min		Min		None	None		None	None		None	None

Intersection Summary

Area Type: Other

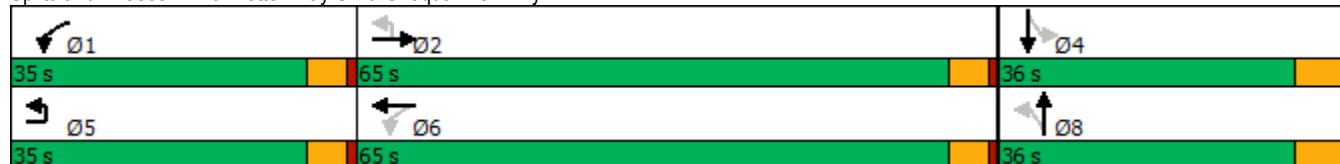
Cycle Length: 136

Actuated Cycle Length: 42.3

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Splits and Phases: 13: Better Way SE & Snoqualmie Pkwy

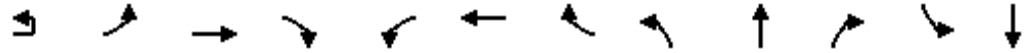




Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	0
Future Volume (vph)	0
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Right Turn on Red	Yes
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	1
Peak Hour Factor	0.85
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	
Intersection Summary	

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↯		↕		↯	↕			↕			↕
Traffic Volume (veh/h)	0	0	799	26	24	451	0	29	0	17	0	0
Future Volume (veh/h)	0	0	799	26	24	451	0	29	0	17	0	0
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach			No			No			No			No
Adj Sat Flow, veh/h/ln		0	1796	1796	1900	1811	1811	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		0	940	31	28	531	0	34	0	20	0	0
Peak Hour Factor		0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %		0	7	7	0	6	6	0	0	0	0	0
Cap, veh/h		0	1554	51	313	2179	0	221	0	34	0	118
Arrive On Green		0.00	0.46	0.46	0.03	0.63	0.00	0.06	0.00	0.06	0.00	0.00
Sat Flow, veh/h		0	3461	111	1810	3532	0	940	0	553	0	1900
Grp Volume(v), veh/h		0	476	495	28	531	0	54	0	0	0	0
Grp Sat Flow(s),veh/h/ln		0	1706	1776	1810	1721	0	1493	0	0	0	1900
Q Serve(g_s), s		0.0	7.5	7.5	0.2	2.4	0.0	1.3	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s		0.0	7.5	7.5	0.2	2.4	0.0	1.3	0.0	0.0	0.0	0.0
Prop In Lane		0.00		0.06	1.00		0.00	0.63		0.37	0.00	
Lane Grp Cap(c), veh/h		0	786	819	313	2179	0	255	0	0	0	118
V/C Ratio(X)		0.00	0.61	0.61	0.09	0.24	0.00	0.21	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h		0	2837	2953	1756	5721	0	1404	0	0	0	1580
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)		0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh		0.0	7.3	7.3	7.6	2.9	0.0	16.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh		0.0	0.8	0.7	0.1	0.1	0.0	0.4	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.0	1.5	1.6	0.1	0.1	0.0	0.4	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		0.0	8.0	8.0	7.8	2.9	0.0	16.9	0.0	0.0	0.0	0.0
LnGrp LOS		A	A	A	A	A	A	B	A	A	A	A
Approach Vol, veh/h			971			559			54			0
Approach Delay, s/veh			8.0			3.2			16.9			0.0
Approach LOS			A			A			B			
Timer - Assigned Phs	1	2		4		6			8			
Phs Duration (G+Y+Rc), s	6.2	21.6		8.2		27.9			8.2			
Change Period (Y+Rc), s	5.0	5.0		6.0		5.0			6.0			
Max Green Setting (Gmax), s	30.0	60.0		30.0		60.0			30.0			
Max Q Clear Time (g_c+I1), s	2.2	9.5		0.0		4.4			3.3			
Green Ext Time (p_c), s	0.0	7.1		0.0		3.8			0.2			

Intersection Summary

HCM 6th Ctrl Delay	6.6
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
 User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	0
Future Volume (veh/h)	0
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.85
Percent Heavy Veh, %	0
Cap, veh/h	0
Arrive On Green	0.00
Sat Flow, veh/h	0
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	0
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	0.00
Lane Grp Cap(c), veh/h	0
V/C Ratio(X)	0.00
Avail Cap(c_a), veh/h	0
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Lanes, Volumes, Timings
 14: Trail Access Road & Snoqualmie Pkwy

03/06/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (vph)	694	1	1	424	1	1
Future Volume (vph)	694	1	1	424	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	646			700	301	
Travel Time (s)	11.0			11.9	8.2	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	7%	0%	0%	4%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑↑	↑↑
Traffic Vol, veh/h	694	1	1	424	1	1
Future Vol, veh/h	694	1	1	424	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	7	0	0	4	0	0
Mvmt Flow	890	1	1	544	1	1

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	891	0	1165
Stage 1	-	-	-	-	891
Stage 2	-	-	-	-	274
Critical Hdwy	-	-	4.1	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	769	-	190
Stage 1	-	-	-	-	366
Stage 2	-	-	-	-	753
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	769	-	190
Mov Cap-2 Maneuver	-	-	-	-	190
Stage 1	-	-	-	-	366
Stage 2	-	-	-	-	752

Approach	EB	WB	NB
HCM Control Delay, s	0	0	17.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	284	-	-	769	-
HCM Lane V/C Ratio	0.009	-	-	0.002	-
HCM Control Delay (s)	17.8	-	-	9.7	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
15: SR 202 & Snoqualmie Pkwy

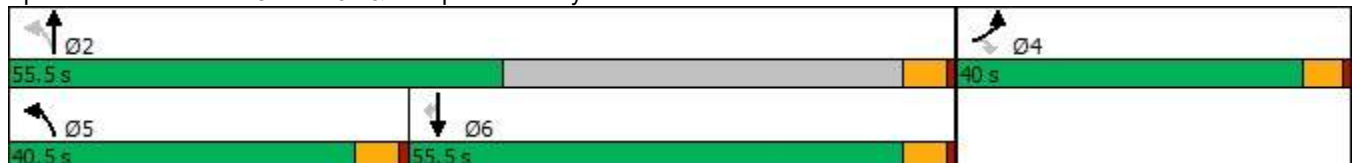
03/06/2020

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	374	330	204	207	257	239
Future Volume (vph)	374	330	204	207	257	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	300			300
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Right Turn on Red		Yes				Yes
Link Speed (mph)	40			45	45	
Link Distance (ft)	700			1127	949	
Travel Time (s)	11.9			17.1	14.4	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	10%	3%	3%	14%	9%	6%
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	5.0	7.0	7.0	7.0
Minimum Split (s)	29.0	29.0	10.5	12.5	35.5	35.5
Total Split (s)	40.0	40.0	40.5	55.5	55.5	55.5
Total Split (%)	29.4%	29.4%	29.8%	40.8%	40.8%	40.8%
Yellow Time (s)	4.0	4.0	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	Min	Min	Min

Intersection Summary













Area Type: Other
 Cycle Length: 136
 Actuated Cycle Length: 91.8
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated

Splits and Phases: 15: SR 202 & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 15: SR 202 & Snoqualmie Pkwy

03/06/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	374	330	204	207	257	239
Future Volume (veh/h)	374	330	204	207	257	239
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00			1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1752	1856	1856	1693	1767	1811
Adj Flow Rate, veh/h	468	93	255	259	321	5
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	10	3	3	14	9	6
Cap, veh/h	548	517	457	815	421	366
Arrive On Green	0.33	0.33	0.14	0.48	0.24	0.24
Sat Flow, veh/h	1668	1572	1767	1693	1767	1535
Grp Volume(v), veh/h	468	93	255	259	321	5
Grp Sat Flow(s),veh/h/ln	1668	1572	1767	1693	1767	1535
Q Serve(g_s), s	14.5	2.3	5.4	5.2	9.4	0.1
Cycle Q Clear(g_c), s	14.5	2.3	5.4	5.2	9.4	0.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	548	517	457	815	421	366
V/C Ratio(X)	0.85	0.18	0.56	0.32	0.76	0.01
Avail Cap(c_a), veh/h	1055	994	1320	1528	1595	1386
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.3	13.3	12.5	8.8	19.6	16.1
Incr Delay (d2), s/veh	3.9	0.2	1.1	0.2	2.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	2.4	1.7	1.4	3.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.3	13.4	13.5	9.0	22.5	16.1
LnGrp LOS	C	B	B	A	C	B
Approach Vol, veh/h	561			514	326	
Approach Delay, s/veh	20.0			11.3	22.4	
Approach LOS	B			B	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		32.2		23.2	13.5	18.7
Change Period (Y+Rc), s		5.5		5.0	5.5	5.5
Max Green Setting (Gmax), s		50.0		35.0	35.0	50.0
Max Q Clear Time (g_c+I1), s		7.2		16.5	7.4	11.4
Green Ext Time (p_c), s		1.5		1.7	0.7	1.8
Intersection Summary						
HCM 6th Ctrl Delay			17.3			
HCM 6th LOS			B			

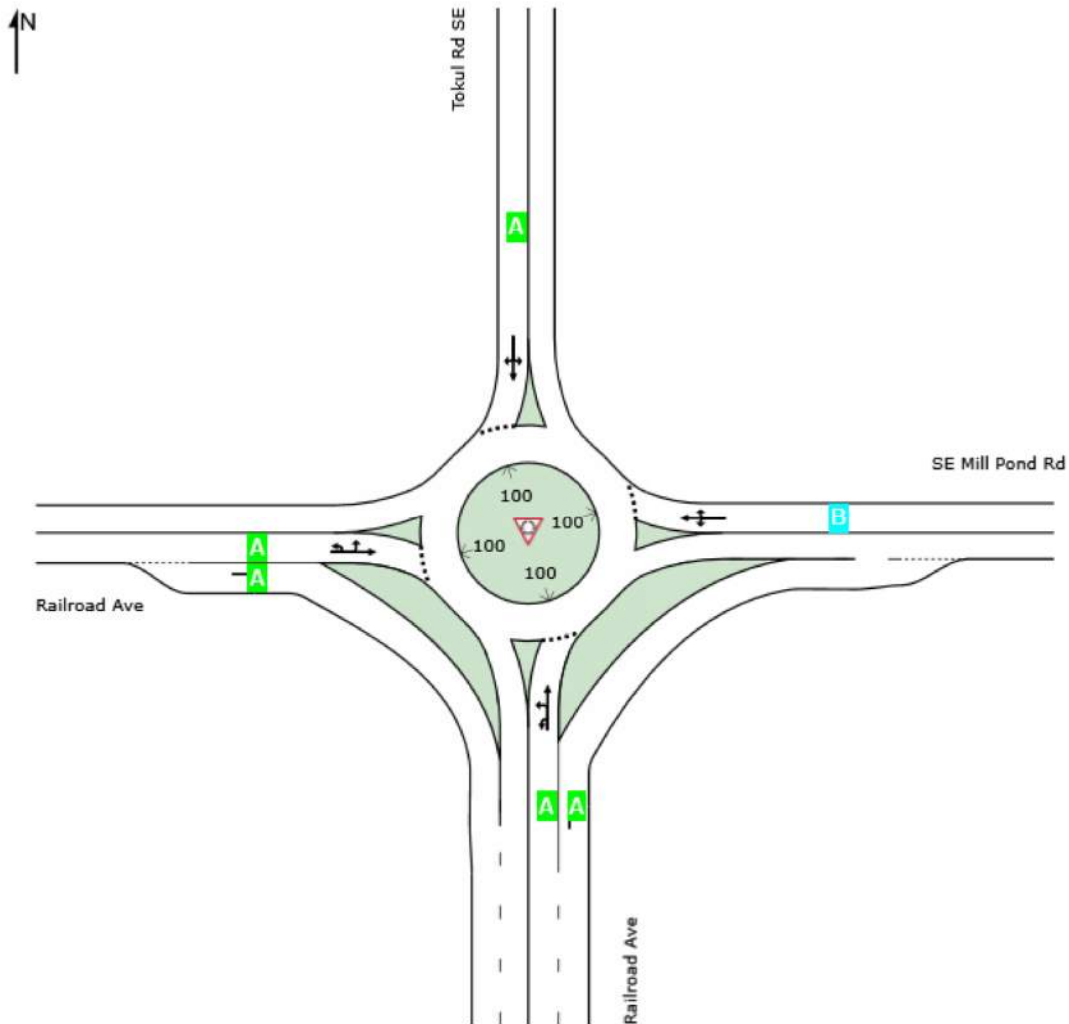
LANE LEVEL OF SERVICE

Lane Level of Service

Site: 16 [2023 With Redevelopment Alternative Planning Area 1 - AM Peak Hour]

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	B	A	A	A



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Signalised Intersections.
 Lane LOS values are based on average delay per lane.
 Intersection and Approach LOS values are based on average delay for all lanes.
 SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

LANE SUMMARY

Site: 16 [2023 With Redevelopment Alternative Planning Area 1 - AM Peak Hour]

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

Lane Use and Performance													
	Demand Flows			Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue Veh	Queue Dist	Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	Cap. veh/h	v/c	%	sec			ft		ft	%	%
South: Railroad Ave													
Lane 1 ^d	447	9.7	1413	0.316	100	9.2	LOS A	1.9	49.9	Full	1600	0.0	0.0
Lane 2	221	16.0	1444	0.153	100	3.8	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	668	11.8		0.316		7.4	LOS A	1.9	49.9				
East: SE Mill Pond Rd													
Lane 1 ^d	224	20.0	828	0.270	100	10.5	LOS B	1.5	43.1	Full	1600	0.0	0.0
Approach	224	20.0		0.270		10.5	LOS B	1.5	43.1				
North: Tokul Rd SE													
Lane 1 ^d	31	0.0	888	0.034	100	8.0	LOS A	0.2	4.8	Full	1600	0.0	0.0
Approach	31	0.0		0.034		8.0	LOS A	0.2	4.8				
West: Railroad Ave													
Lane 1 ^d	161	7.3	1441	0.112	100	4.5	LOS A	0.6	15.5	Full	1600	0.0	0.0
Lane 2	433	6.1	1578	0.274	100	3.7	LOS A	0.0	0.0	Short	200	0.0	NA
Approach	594	6.4		0.274		3.9	LOS A	0.6	15.5				
Intersection	1516	10.7		0.316		6.5	LOS A	1.9	49.9				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

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Organisation: TENW | Processed: Tuesday, March 3, 2020 9:33:50 AM

Project: T:\Active Projects\Snoqualmie Mill - 5584\Planning - 5584\LOS\Snoqualmie Mill - Railroad Ave & Tokul Rd & SE Mill Pond Rd

Roundabout.sip8



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	91	4	18	28	3	22
Future Volume (vph)	91	4	18	28	3	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45		35			35
Link Distance (ft)	458		1466			541
Travel Time (s)	6.9		28.6			10.5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	11%	4%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	5.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	91	4	18	28	3	22
Future Vol, veh/h	91	4	18	28	3	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	0	11	4	0	5
Mvmt Flow	96	4	19	29	3	23

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	63	34	0	0	48	0
Stage 1	34	-	-	-	-	-
Stage 2	29	-	-	-	-	-
Critical Hdwy	6.42	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	943	1045	-	-	1572	-
Stage 1	988	-	-	-	-	-
Stage 2	994	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	941	1045	-	-	1572	-
Mov Cap-2 Maneuver	941	-	-	-	-	-
Stage 1	988	-	-	-	-	-
Stage 2	992	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	945	1572
HCM Lane V/C Ratio	-	-	0.106	0.002
HCM Control Delay (s)	-	-	9.3	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0

Lanes, Volumes, Timings

18: Meadowbrook Way SE/SE Reinig Rd & SE Mill Pond Rd

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	41	35	90	24	13	88
Future Volume (vph)	41	35	90	24	13	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		40	
Link Distance (ft)		502	1466		916	
Travel Time (s)		9.8	28.6		15.6	
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Heavy Vehicles (%)	2%	6%	2%	4%	8%	2%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↖	↗		↖	↗
Traffic Vol, veh/h	41	35	90	24	13	88
Future Vol, veh/h	41	35	90	24	13	88
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	69	69	69	69	69	69
Heavy Vehicles, %	2	6	2	4	8	2
Mvmt Flow	59	51	130	35	19	128
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	165	0	-	0	317	148
Stage 1	-	-	-	-	148	-
Stage 2	-	-	-	-	169	-
Critical Hdwy	4.12	-	-	-	6.48	6.22
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	2.218	-	-	-	3.572	3.318
Pot Cap-1 Maneuver	1413	-	-	-	664	899
Stage 1	-	-	-	-	865	-
Stage 2	-	-	-	-	846	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1413	-	-	-	635	899
Mov Cap-2 Maneuver	-	-	-	-	635	-
Stage 1	-	-	-	-	828	-
Stage 2	-	-	-	-	846	-
Approach	EB	WB	SB			
HCM Control Delay, s	4.1	0	10.1			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1413	-	-	-	-	853
HCM Lane V/C Ratio	0.042	-	-	-	-	0.172
HCM Control Delay (s)	7.7	0	-	-	-	10.1
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	-	0.6

Lanes, Volumes, Timings
19: Meadowbrook Bridge

03/02/2020

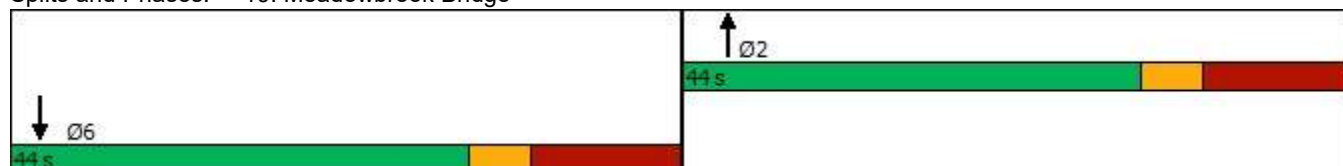


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	76	0	0	178
Future Volume (vph)	0	0	76	0	0	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			30
Link Distance (ft)	150		304			249
Travel Time (s)	3.4		6.9			5.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	4%	0%	0%	2%
Shared Lane Traffic (%)						
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Detector Phase			2			6
Switch Phase						
Minimum Initial (s)			5.0			5.0
Minimum Split (s)			19.0			19.0
Total Split (s)			44.0			44.0
Total Split (%)			50.0%			50.0%
Yellow Time (s)			4.0			4.0
All-Red Time (s)			10.0			10.0
Lost Time Adjust (s)			0.0			0.0
Total Lost Time (s)			14.0			14.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode			None			None

Intersection Summary

Area Type: Other
 Cycle Length: 88
 Actuated Cycle Length: 35.6
 Natural Cycle: 40
 Control Type: Actuated-Uncoordinated

Splits and Phases: 19: Meadowbrook Bridge



HCM Signalized Intersection Capacity Analysis
 19: Meadowbrook Bridge

03/02/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	76	0	0	178
Future Volume (vph)	0	0	76	0	0	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			14.0			14.0
Lane Util. Factor			1.00			1.00
Flt			1.00			1.00
Flt Protected			1.00			1.00
Satd. Flow (prot)			1827			1863
Flt Permitted			1.00			1.00
Satd. Flow (perm)			1827			1863
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	83	0	0	193
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	83	0	0	193
Heavy Vehicles (%)	0%	0%	4%	0%	0%	2%
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Actuated Green, G (s)			3.5			7.3
Effective Green, g (s)			3.5			7.3
Actuated g/C Ratio			0.09			0.19
Clearance Time (s)			14.0			14.0
Vehicle Extension (s)			2.0			2.0
Lane Grp Cap (vph)			164			350
v/s Ratio Prot			c0.05			c0.10
v/s Ratio Perm						
v/c Ratio			0.51			0.55
Uniform Delay, d1			16.8			14.3
Progression Factor			1.00			1.00
Incremental Delay, d2			0.9			1.1
Delay (s)			17.7			15.3
Level of Service			B			B
Approach Delay (s)	0.0		17.7			15.3
Approach LOS	A		B			B
Intersection Summary						
HCM 2000 Control Delay			16.1		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.54			
Actuated Cycle Length (s)			38.8		Sum of lost time (s)	28.0
Intersection Capacity Utilization			21.0%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Lanes, Volumes, Timings
 20: Meadowbrook Way SE & SE Park St

03/12/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	112	9	44	57	18	4	49	59	30	60	15
Future Volume (vph)	9	112	9	44	57	18	4	49	59	30	60	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		505			663			790			216	
Travel Time (s)		13.8			18.1			21.5			5.9	
Confl. Peds. (#/hr)	5		1			4	1			4		5
Peak Hour Factor	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Heavy Vehicles (%)	0%	7%	11%	9%	11%	0%	0%	2%	5%	3%	3%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	12.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	112	9	44	57	18	4	49	59	30	60	15
Future Vol, veh/h	9	112	9	44	57	18	4	49	59	30	60	15
Peak Hour Factor	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Heavy Vehicles, %	0	7	11	9	11	0	0	2	5	3	3	0
Mvmt Flow	18	229	18	90	116	37	8	100	120	61	122	31
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	12.5			12.5			11.4			11.9		
HCM LOS	B			B			B			B		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	7%	37%	29%
Vol Thru, %	44%	86%	48%	57%
Vol Right, %	53%	7%	15%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	112	130	119	105
LT Vol	4	9	44	30
Through Vol	49	112	57	60
RT Vol	59	9	18	15
Lane Flow Rate	229	265	243	214
Geometry Grp	1	1	1	1
Degree of Util (X)	0.345	0.41	0.388	0.343
Departure Headway (Hd)	5.43	5.56	5.752	5.768
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	658	645	622	619
Service Time	3.497	3.622	3.816	3.837
HCM Lane V/C Ratio	0.348	0.411	0.391	0.346
HCM Control Delay	11.4	12.5	12.5	11.9
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.5	2	1.8	1.5

Lanes, Volumes, Timings
 21: Meadowbrook Way SE & SR 202

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	270	51	9	269	30	41	51	20	22	53	13
Future Volume (vph)	19	270	51	9	269	30	41	51	20	22	53	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	150		0	0		0	200		0
Storage Lanes	1		0	1		1			0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			50			35				25
Link Distance (ft)		615			518			738				663
Travel Time (s)		14.0			7.1			14.4				18.1
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles (%)	5%	9%	2%	0%	9%	0%	7%	2%	0%	0%	4%	21%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2			6		6	8			4		
Detector Phase	2	2		6	6	6	8	8		4		4
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	5.0	5.0		5.0		5.0
Minimum Split (s)	33.3	33.3		30.3	30.3	30.3	32.8	32.8		32.8		32.8
Total Split (s)	71.3	71.3		71.3	71.3	71.3	40.8	40.8		40.8		40.8
Total Split (%)	63.6%	63.6%		63.6%	63.6%	63.6%	36.4%	36.4%		36.4%		36.4%
Yellow Time (s)	4.3	4.3		4.3	4.3	4.3	3.8	3.8		3.8		3.8
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0		2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	6.3	6.3		6.3		6.3		5.8		5.8		5.8
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Min	Min		Min	Min	Min	None	None		None		None

Intersection Summary

Area Type: Other

Cycle Length: 112.1

Actuated Cycle Length: 93.9

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Splits and Phases: 21: Meadowbrook Way SE & SR 202



HCM 6th Signalized Intersection Summary
 21: Meadowbrook Way SE & SR 202

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	270	51	9	269	30	41	51	20	22	53	13
Future Volume (veh/h)	19	270	51	9	269	30	41	51	20	22	53	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1767	1767	1900	1900	1900	1870	1870	1870	1900	1841	1841
Adj Flow Rate, veh/h	26	365	69	12	364	41	55	69	27	30	72	18
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Percent Heavy Veh, %	5	9	9	0	0	0	2	2	2	0	4	4
Cap, veh/h	642	594	112	454	0	662	242	141	46	521	243	61
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	957	1444	273	970	0	1610	425	821	271	1320	1421	355
Grp Volume(v), veh/h	26	0	434	12	0	41	151	0	0	30	0	90
Grp Sat Flow(s),veh/h/ln	957	0	1717	970	0	1610	1517	0	0	1320	0	1777
Q Serve(g_s), s	0.5	0.0	5.8	0.3	0.0	0.4	1.5	0.0	0.0	0.0	0.0	1.3
Cycle Q Clear(g_c), s	0.5	0.0	5.8	6.1	0.0	0.4	2.7	0.0	0.0	0.4	0.0	1.3
Prop In Lane	1.00		0.16	1.00		1.00	0.36		0.18	1.00		0.20
Lane Grp Cap(c), veh/h	642	0	706	454	0	662	429	0	0	521	0	304
V/C Ratio(X)	0.04	0.00	0.61	0.03	0.00	0.06	0.35	0.00	0.00	0.06	0.00	0.30
Avail Cap(c_a), veh/h	2396	0	3855	2232	0	3614	2061	0	0	1891	0	2147
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.2	0.0	6.7	9.1	0.0	5.2	11.1	0.0	0.0	10.1	0.0	10.5
Incr Delay (d2), s/veh	0.0	0.0	1.1	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	1.3	0.0	0.0	0.0	0.7	0.0	0.0	0.1	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.2	0.0	7.8	9.1	0.0	5.2	11.6	0.0	0.0	10.2	0.0	11.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	B
Approach Vol, veh/h		460			53			151			120	
Approach Delay, s/veh		7.6			6.1			11.6			10.8	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		18.2		10.8		18.2		10.8				
Change Period (Y+Rc), s		6.3		* 5.8		6.3		* 5.8				
Max Green Setting (Gmax), s		65.0		* 35		65.0		* 35				
Max Q Clear Time (g_c+I1), s		7.8		3.3		8.1		4.7				
Green Ext Time (p_c), s		4.1		0.6		0.2		0.8				
Intersection Summary												
HCM 6th Ctrl Delay				8.8								
HCM 6th LOS				A								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 22: Meadowbrook Way SE & 384th Ave SE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	41	120	243	15	29	157
Future Volume (vph)	41	120	243	15	29	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		25	
Link Distance (ft)		158	180		181	
Travel Time (s)		3.1	3.5		4.9	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	2%	5%	2%	0%	0%	3%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	↕
Traffic Vol, veh/h	41	120	243	15	29	157
Future Vol, veh/h	41	120	243	15	29	157
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	5	2	0	0	3
Mvmt Flow	50	146	296	18	35	191

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	314	0	-	0	551 305
Stage 1	-	-	-	-	305 -
Stage 2	-	-	-	-	246 -
Critical Hdwy	4.12	-	-	-	6.4 6.23
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.218	-	-	-	3.5 3.327
Pot Cap-1 Maneuver	1246	-	-	-	499 732
Stage 1	-	-	-	-	752 -
Stage 2	-	-	-	-	800 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1246	-	-	-	477 732
Mov Cap-2 Maneuver	-	-	-	-	477 -
Stage 1	-	-	-	-	719 -
Stage 2	-	-	-	-	800 -

Approach	EB	WB	SB
HCM Control Delay, s	2	0	13
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1246	-	-	-	-	676
HCM Lane V/C Ratio	0.04	-	-	-	-	0.336
HCM Control Delay (s)	8	0	-	-	-	13
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	-	1.5

Lanes, Volumes, Timings
 23: SE North Bend Way & Meadowbrook Way SE

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	34	366	193	32	129	57
Future Volume (vph)	34	366	193	32	129	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	450	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Link Speed (mph)	35		50			50
Link Distance (ft)	158		253			593
Travel Time (s)	3.1		3.5			8.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	2%	4%	6%	4%	12%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↘	↑	↘	↘	↑
Traffic Vol, veh/h	34	366	193	32	129	57
Future Vol, veh/h	34	366	193	32	129	57
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	Free	-	None
Storage Length	0	0	-	0	450	-
Veh in Median Storage, #1	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	2	4	6	4	12
Mvmt Flow	37	398	210	35	140	62

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	552	-	0	-	210
Stage 1	210	-	-	-	-
Stage 2	342	-	-	-	-
Critical Hdwy	6.46	-	-	-	4.14
Critical Hdwy Stg 1	5.46	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-
Follow-up Hdwy	3.554	-	-	-	2.236
Pot Cap-1 Maneuver	488	0	-	0	1349
Stage 1	816	0	-	0	-
Stage 2	711	0	-	0	-
Platoon blocked, %			-		-
Mov Cap-1 Maneuver	437	-	-	-	1349
Mov Cap-2 Maneuver	518	-	-	-	-
Stage 1	816	-	-	-	-
Stage 2	637	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.5	0	5.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn	WBLn2	SBL	SBT
Capacity (veh/h)	-	518	-	1349
HCM Lane V/C Ratio	-	0.071	-	0.104
HCM Control Delay (s)	-	12.5	0	8
HCM Lane LOS	-	B	A	A
HCM 95th %tile Q(veh)	-	0.2	-	0.3



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	22	168	11	93	233
Future Volume (vph)	3	22	168	11	93	233
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	804		935			756
Travel Time (s)	21.9		18.2			14.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	18%	19%	0%	18%	10%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	3	22	168	11	93	233
Future Vol, veh/h	3	22	168	11	93	233
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	18	19	0	18	10
Mvmt Flow	3	24	183	12	101	253

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	644	189	0	0	195	0
Stage 1	189	-	-	-	-	-
Stage 2	455	-	-	-	-	-
Critical Hdwy	6.4	6.38	-	-	4.28	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.462	-	-	2.362	-
Pot Cap-1 Maneuver	440	814	-	-	1288	-
Stage 1	848	-	-	-	-	-
Stage 2	643	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	400	814	-	-	1288	-
Mov Cap-2 Maneuver	400	-	-	-	-	-
Stage 1	848	-	-	-	-	-
Stage 2	584	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	2.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	724	1288
HCM Lane V/C Ratio	-	-	0.038	0.078
HCM Control Delay (s)	-	-	10.2	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0.3



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	5	24	155	8	41	195
Future Volume (vph)	5	24	155	8	41	195
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	796		476			935
Travel Time (s)	21.7		9.3			18.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	21%	0%	0%	12%
Shared Lane Traffic (%)						
Sign Control	Yield		Yield			Yield

Intersection Summary

Area Type: Other

Control Type: Roundabout

Lanes, Volumes, Timings
 26: SE Mill Pond Rd & North Driveway

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	9	39	124	9	46	154
Future Volume (vph)	9	39	124	9	46	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	769		376			476
Travel Time (s)	21.0		7.3			9.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	49%	0%	0%	23%
Bus Blockages (#/hr)	0	0	26	0	0	15
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	9	39	124	9	46	154
Future Vol, veh/h	9	39	124	9	46	154
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	49	0	0	23
Mvmt Flow	10	42	135	10	50	167

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	407	140	0	0	145	0
Stage 1	140	-	-	-	-	-
Stage 2	267	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	604	913	-	-	1450	-
Stage 1	892	-	-	-	-	-
Stage 2	782	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	581	913	-	-	1450	-
Mov Cap-2 Maneuver	581	-	-	-	-	-
Stage 1	892	-	-	-	-	-
Stage 2	752	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	1.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	825	1450
HCM Lane V/C Ratio	-	-	0.063	0.034
HCM Control Delay (s)	-	-	9.7	7.6
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1

Lanes, Volumes, Timings
 27: SE Mill Pond Rd & South Driveway

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	9	37	96	8	44	119
Future Volume (vph)	9	37	96	8	44	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	721		317			376
Travel Time (s)	19.7		6.2			7.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	35%	0%	0%	20%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	2.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	9	37	96	8	44	119
Future Vol, veh/h	9	37	96	8	44	119
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	35	0	0	20
Mvmt Flow	10	40	104	9	48	129

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	334	109	0	0	113	0
Stage 1	109	-	-	-	-	-
Stage 2	225	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	665	950	-	-	1489	-
Stage 1	921	-	-	-	-	-
Stage 2	817	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	642	950	-	-	1489	-
Mov Cap-2 Maneuver	642	-	-	-	-	-
Stage 1	921	-	-	-	-	-
Stage 2	788	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	868	1489
HCM Lane V/C Ratio	-	-	0.058	0.032
HCM Control Delay (s)	-	-	9.4	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1

Lanes, Volumes, Timings
 28: SE Mill Pond Rd & SE Access Road

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	104	0	0	128
Future Volume (vph)	0	0	104	0	0	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	701		575			216
Travel Time (s)	19.1		11.2			4.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	32%	0%	18%	0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	0	0	104	0	0	128
Future Vol, veh/h	0	0	104	0	0	128
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	32	0	18	0
Mvmt Flow	0	0	113	0	0	139

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	252	113	0	0	113	0
Stage 1	113	-	-	-	-	-
Stage 2	139	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.28	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.362	-
Pot Cap-1 Maneuver	741	945	-	-	1383	-
Stage 1	917	-	-	-	-	-
Stage 2	893	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	741	945	-	-	1383	-
Mov Cap-2 Maneuver	741	-	-	-	-	-
Stage 1	917	-	-	-	-	-
Stage 2	893	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1383
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Lanes, Volumes, Timings
1: SR-18 & I-90 EB Ramps

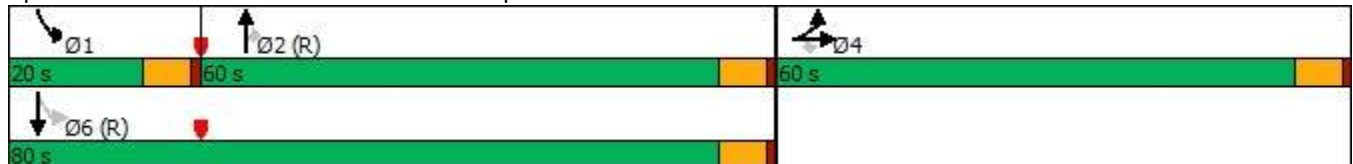
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	789	2	730	0	0	0	0	201	421	117	775	0
Future Volume (vph)	789	2	730	0	0	0	0	201	421	117	775	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650		0	0		0	0		300	200		0
Storage Lanes	1		1	0		0	0		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			45			30	
Link Distance (ft)		833			764			1837			778	
Travel Time (s)		16.2			14.9			27.8			17.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	0%	4%	0%	0%	0%	0%	3%	27%	3%	13%	0%
Shared Lane Traffic (%)	50%											
Turn Type	Split	NA	Perm					NA	Perm	pm+pt	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			4						2	6		
Detector Phase	4	4	4					2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					10.0	10.0	3.0	10.0	
Minimum Split (s)	29.0	29.0	29.0					16.0	16.0	9.0	23.0	
Total Split (s)	60.0	60.0	60.0					60.0	60.0	20.0	80.0	
Total Split (%)	42.9%	42.9%	42.9%					42.9%	42.9%	14.3%	57.1%	
Yellow Time (s)	5.0	5.0	5.0					5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0	1.0					1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0					6.0	6.0	6.0	6.0	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None					C-Min	C-Min	None	C-Min	

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

Splits and Phases: 1: SR-18 & I-90 EB Ramps



HCM 6th Signalized Intersection Summary

1: SR-18 & I-90 EB Ramps

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	789	2	730	0	0	0	0	201	421	117	775	0
Future Volume (veh/h)	789	2	730	0	0	0	0	201	421	117	775	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1841				0	1856	1500	1856	1707	0
Adj Flow Rate, veh/h	814	0	0				0	207	0	121	799	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	0	4				0	3	27	3	13	0
Cap, veh/h	1119	0					0	948		657	1947	0
Arrive On Green	0.31	0.00	0.00				0.00	0.51	0.00	0.05	0.60	0.00
Sat Flow, veh/h	3563	0	1560				0	1856	1271	1767	3329	0
Grp Volume(v), veh/h	814	0	0				0	207	0	121	799	0
Grp Sat Flow(s),veh/h/ln	1781	0	1560				0	1856	1271	1767	1622	0
Q Serve(g_s), s	28.4	0.0	0.0				0.0	8.6	0.0	4.4	18.3	0.0
Cycle Q Clear(g_c), s	28.4	0.0	0.0				0.0	8.6	0.0	4.4	18.3	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1119	0					0	948		657	1947	0
V/C Ratio(X)	0.73	0.00					0.00	0.22		0.18	0.41	0.00
Avail Cap(c_a), veh/h	1374	0					0	948		752	1947	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				0.00	1.00	0.00	0.61	0.61	0.00
Uniform Delay (d), s/veh	42.7	0.0	0.0				0.0	18.9	0.0	14.2	14.9	0.0
Incr Delay (d2), s/veh	4.1	0.0	0.0				0.0	0.5	0.0	0.1	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.1	0.0	0.0				0.0	3.7	0.0	1.8	6.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.8	0.0	0.0				0.0	19.4	0.0	14.3	15.2	0.0
LnGrp LOS	D	A					A	B		B	B	A
Approach Vol, veh/h		814	A					207	A		920	
Approach Delay, s/veh		46.8						19.4			15.1	
Approach LOS		D						B			B	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	12.5	77.5		50.0				90.0				
Change Period (Y+Rc), s	6.0	6.0		6.0				6.0				
Max Green Setting (Gmax), s	14.0	54.0		54.0				74.0				
Max Q Clear Time (g_c+I1), s	6.4	10.6		30.4				20.3				
Green Ext Time (p_c), s	0.2	1.4		13.6				8.6				
Intersection Summary												
HCM 6th Ctrl Delay			28.9									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

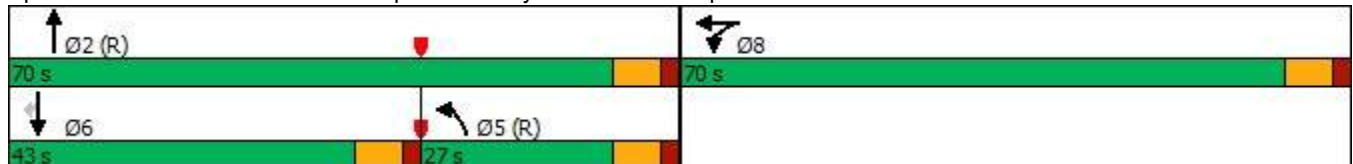
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	435	2	76	100	1022	0	0	369	509
Future Volume (vph)	0	0	0	435	2	76	100	1022	0	0	369	509
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	0		0
Storage Lanes	0		0	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30				30
Link Distance (ft)		893			705			778				878
Travel Time (s)		17.4			13.7			17.7				20.0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	20%	100%	3%	0%	2%	0%	0%	5%	2%
Shared Lane Traffic (%)				40%								
Turn Type				Split	NA		Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases												6
Detector Phase				8	8		5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	7.0			7.0	7.0
Minimum Split (s)				12.0	12.0		12.0	14.0			24.0	24.0
Total Split (s)				70.0	70.0		27.0	70.0			43.0	43.0
Total Split (%)				50.0%	50.0%		19.3%	50.0%			30.7%	30.7%
Yellow Time (s)				5.0	5.0		5.0	5.0			5.0	5.0
All-Red Time (s)				2.0	2.0		2.0	2.0			2.0	2.0
Lost Time Adjust (s)				0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)				7.0	7.0		7.0	7.0			7.0	7.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None		C-Max	C-Min			None	None

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 53 (38%), Referenced to phase 2:NBT and 5:NBL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps






















HCM 6th Signalized Intersection Summary
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	435	2	76	100	1022	0	0	369	509
Future Volume (veh/h)	0	0	0	435	2	76	100	1022	0	0	369	509
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1604	418	1604	1900	1870	0	0	1826	1870
Adj Flow Rate, veh/h				522	0	0	103	1054	0	0	380	0
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				20	100	20	0	2	0	0	5	2
Cap, veh/h				681	93	0	181	2406	0	0	962	
Arrive On Green				0.22	0.00	0.00	0.07	0.45	0.00	0.00	0.53	0.00
Sat Flow, veh/h				3054	418	0	1810	3647	0	0	1826	1585
Grp Volume(v), veh/h				522	0	0	103	1054	0	0	380	0
Grp Sat Flow(s),veh/h/ln				1527	418	0	1810	1777	0	0	1826	1585
Q Serve(g_s), s				22.4	0.0	0.0	7.7	28.3	0.0	0.0	17.4	0.0
Cycle Q Clear(g_c), s				22.4	0.0	0.0	7.7	28.3	0.0	0.0	17.4	0.0
Prop In Lane				1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				681	93	0	181	2406	0	0	962	
V/C Ratio(X)				0.77	0.00	0.00	0.57	0.44	0.00	0.00	0.40	
Avail Cap(c_a), veh/h				1375	188	0	259	2406	0	0	962	
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	0.00	0.88	0.88	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				51.0	0.0	0.0	62.4	20.1	0.0	0.0	19.8	0.0
Incr Delay (d2), s/veh				6.4	0.0	0.0	2.9	0.5	0.0	0.0	0.4	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				9.1	0.0	0.0	3.8	12.9	0.0	0.0	7.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				57.4	0.0	0.0	65.3	20.6	0.0	0.0	20.2	0.0
LnGrp LOS				E	A	A	E	C	A	A	C	
Approach Vol, veh/h					522			1157			380	A
Approach Delay, s/veh					57.4			24.6			20.2	
Approach LOS					E			C			C	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		101.8			21.0	80.7		38.2				
Change Period (Y+Rc), s		7.0			7.0	7.0		7.0				
Max Green Setting (Gmax), s		63.0			20.0	36.0		63.0				
Max Q Clear Time (g_c+I1), s		30.3			9.7	19.4		24.4				
Green Ext Time (p_c), s		13.0			0.2	2.9		6.8				
Intersection Summary												
HCM 6th Ctrl Delay				32.1								
HCM 6th LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 3: Snoqualmie Pkwy & SE 99th St

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	0	38	1	0	2	7	1146	0	0	813	10
Future Volume (vph)	13	0	38	1	0	2	7	1146	0	0	813	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	0		0	0		0	125		0	25		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		989			884			878			457	
Travel Time (s)		27.0			24.1			20.0			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	3%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	13	0	38	1	0	2	7	1146	0	0	813	10
Future Vol, veh/h	13	0	38	1	0	2	7	1146	0	0	813	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	25	-	-
Veh in Median Storage, #-	0	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	3	0
Mvmt Flow	14	0	40	1	0	2	7	1206	0	0	856	11

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1479	2082	434	1648	2087	603	867	0	0	1206	0	0
Stage 1	862	862	-	1220	1220	-	-	-	-	-	-	-
Stage 2	617	1220	-	428	867	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	89	54	576	67	53	447	785	-	-	586	-	-
Stage 1	320	375	-	194	255	-	-	-	-	-	-	-
Stage 2	449	255	-	581	373	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	88	54	576	62	53	447	785	-	-	586	-	-
Mov Cap-2 Maneuver	88	54	-	62	53	-	-	-	-	-	-	-
Stage 1	317	375	-	192	253	-	-	-	-	-	-	-
Stage 2	443	253	-	541	373	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	24.4	30.2	0.1	0
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	785	-	-	239	146	586	-
HCM Lane V/C Ratio	0.009	-	-	0.225	0.022	-	-
HCM Control Delay (s)	9.6	-	-	24.4	30.2	0	-
HCM Lane LOS	A	-	-	C	D	A	-
HCM 95th %tile Q(veh)	0	-	-	0.8	0.1	0	-

Lanes, Volumes, Timings
 4: Snoqualmie Pkwy & SE 96th St

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	25	61	1057	45	39	736
Future Volume (vph)	25	61	1057	45	39	736
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Link Speed (mph)	30		40			40
Link Distance (ft)	346		677			718
Travel Time (s)	7.9		11.5			12.2
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	4%	0%	2%	0%	0%	4%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary
 Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↑↑		↔	↑↑
Traffic Vol, veh/h	25	61	1057	45	39	736
Future Vol, veh/h	25	61	1057	45	39	736
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #1	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	4	0	2	0	0	4
Mvmt Flow	28	69	1201	51	44	836

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1733	626	0	0	1252
Stage 1	1227	-	-	-	-
Stage 2	506	-	-	-	-
Critical Hdwy	6.88	6.9	-	-	4.1
Critical Hdwy Stg 1	5.88	-	-	-	-
Critical Hdwy Stg 2	5.88	-	-	-	-
Follow-up Hdwy	3.54	3.3	-	-	2.2
Pot Cap-1 Maneuver	77	432	-	-	563
Stage 1	236	-	-	-	-
Stage 2	565	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	71	432	-	-	563
Mov Cap-2 Maneuver	175	-	-	-	-
Stage 1	236	-	-	-	-
Stage 2	521	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.1	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	175	432	563	-
HCM Lane V/C Ratio	-	-	0.162	0.16	0.079	-
HCM Control Delay (s)	-	-	29.5	14.9	11.9	-
HCM Lane LOS	-	-	D	B	B	-
HCM 95th %tile Q(veh)	-	-	0.6	0.6	0.3	-

Lanes, Volumes, Timings
5: Snoqualmie Pkwy & SE Jacobia St

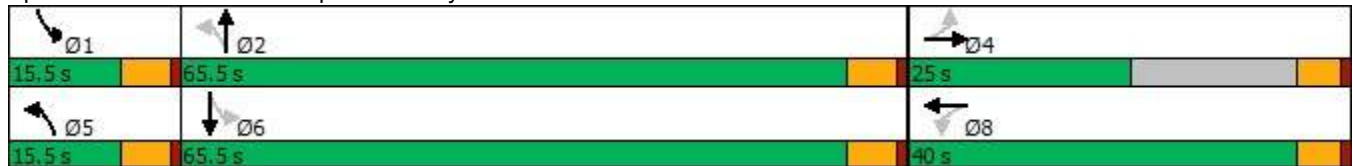
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	8	63	30	1	50	108	938	84	70	711	22
Future Volume (vph)	23	8	63	30	1	50	108	938	84	70	711	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	250		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		653			474			718			617	
Travel Time (s)		17.8			12.9			12.2			10.5	
Confl. Peds. (#/hr)	2		2	2		2	1					1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	0%	2%	0%	1%	3%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	15.0		5.0	16.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		10.5	22.5		10.5	22.5	
Total Split (s)	25.0	25.0		40.0	40.0		15.5	65.5		15.5	65.5	
Total Split (%)	20.7%	20.7%		33.1%	33.1%		12.8%	54.1%		12.8%	54.1%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.5	4.5		4.5	4.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.5	5.5		5.5	5.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary























Area Type: Other
 Cycle Length: 121
 Actuated Cycle Length: 61.6
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Snoqualmie Pkwy & SE Jacobia St



HCM 6th Signalized Intersection Summary
 5: Snoqualmie Pkwy & SE Jacobia St

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	8	63	30	1	50	108	938	84	70	711	22
Future Volume (veh/h)	23	8	63	30	1	50	108	938	84	70	711	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1870	1870	1885	1856	1856
Adj Flow Rate, veh/h	24	9	67	32	1	53	115	998	89	74	756	23
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	2	2	1	3	3
Cap, veh/h	259	23	169	240	3	185	530	1675	149	408	1721	52
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.08	0.51	0.51	0.06	0.49	0.49
Sat Flow, veh/h	1366	193	1439	1339	30	1577	1810	3300	294	1795	3493	106
Grp Volume(v), veh/h	24	0	76	32	0	54	115	537	550	74	381	398
Grp Sat Flow(s),veh/h/ln	1366	0	1632	1339	0	1607	1810	1777	1817	1795	1763	1836
Q Serve(g_s), s	0.8	0.0	2.2	1.2	0.0	1.6	1.5	11.0	11.0	1.0	7.2	7.2
Cycle Q Clear(g_c), s	2.4	0.0	2.2	3.4	0.0	1.6	1.5	11.0	11.0	1.0	7.2	7.2
Prop In Lane	1.00		0.88	1.00		0.98	1.00		0.16	1.00		0.06
Lane Grp Cap(c), veh/h	259	0	192	240	0	189	530	902	923	408	869	905
V/C Ratio(X)	0.09	0.00	0.40	0.13	0.00	0.29	0.22	0.60	0.60	0.18	0.44	0.44
Avail Cap(c_a), veh/h	630	0	635	994	0	1094	740	2074	2121	643	2058	2144
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.8	0.0	21.0	22.6	0.0	20.7	5.6	8.9	8.9	6.5	8.4	8.4
Incr Delay (d2), s/veh	0.2	0.0	1.3	0.2	0.0	0.8	0.1	0.9	0.9	0.1	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.9	0.4	0.0	0.6	0.3	3.1	3.2	0.2	2.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.0	0.0	22.3	22.8	0.0	21.5	5.7	9.8	9.8	6.5	8.9	8.9
LnGrp LOS	C	A	C	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		100			86			1202			853	
Approach Delay, s/veh		22.2			22.0			9.4			8.7	
Approach LOS		C			C			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	31.6		11.0	9.5	30.8		11.0				
Change Period (Y+Rc), s	5.5	5.5		5.0	5.5	5.5		5.0				
Max Green Setting (Gmax), s	10.0	60.0		20.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	3.0	13.0		4.4	3.5	9.2		5.4				
Green Ext Time (p_c), s	0.0	13.1		0.4	0.1	8.1		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				10.2								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
6: Snoqualmie Pkwy & SE Swenson Dr

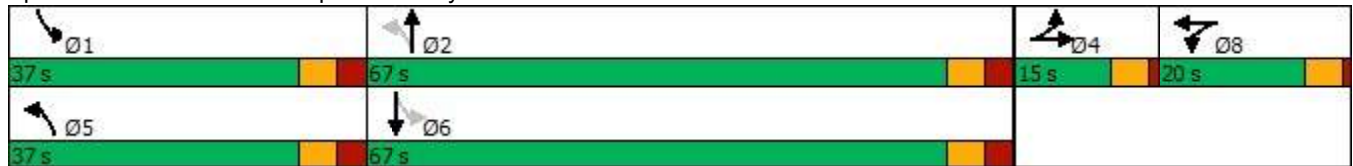
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	15	26	19	10	60	33	844	39	88	806	82
Future Volume (vph)	85	15	26	19	10	60	33	844	39	88	806	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	275		0	300		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			No
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		456			320			2254			367	
Travel Time (s)		10.4			7.3			38.4			6.3	
Confl. Peds. (#/hr)			2			9	2					2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%	0%	2%	0%	0%	3%	2%
Shared Lane Traffic (%)												
Turn Type	Split	NA		Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		10.0	10.0		5.0	12.0		5.0	12.0	
Minimum Split (s)	38.0	38.0		38.0	38.0		12.0	28.0		12.0	28.0	
Total Split (s)	15.0	15.0		20.0	20.0		37.0	67.0		37.0	67.0	
Total Split (%)	10.8%	10.8%		14.4%	14.4%		26.6%	48.2%		26.6%	48.2%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		7.0	7.0		7.0	7.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
 Cycle Length: 139
 Actuated Cycle Length: 80.3
 Natural Cycle: 130
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Snoqualmie Pkwy & SE Swenson Dr



HCM 6th Signalized Intersection Summary
6: Snoqualmie Pkwy & SE Swenson Dr

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	15	26	19	10	60	33	844	39	88	806	82
Future Volume (veh/h)	85	15	26	19	10	60	33	844	39	88	806	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1900	1900	1900	1900	1900	1870	1870	1900	1856	1856
Adj Flow Rate, veh/h	91	16	28	20	11	65	35	908	42	95	867	88
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	0	0	0	0	0	0	2	2	0	3	3
Cap, veh/h	162	56	98	257	33	197	236	1031	48	270	1059	107
Arrive On Green	0.09	0.09	0.09	0.14	0.14	0.14	0.04	0.30	0.30	0.07	0.33	0.33
Sat Flow, veh/h	1781	617	1080	1810	235	1388	1810	3458	160	1810	3230	328
Grp Volume(v), veh/h	91	0	44	20	0	76	35	467	483	95	473	482
Grp Sat Flow(s),veh/h/ln	1781	0	1698	1810	0	1623	1810	1777	1841	1810	1763	1795
Q Serve(g_s), s	2.9	0.0	1.4	0.6	0.0	2.5	0.8	14.9	14.9	2.1	14.7	14.7
Cycle Q Clear(g_c), s	2.9	0.0	1.4	0.6	0.0	2.5	0.8	14.9	14.9	2.1	14.7	14.7
Prop In Lane	1.00		0.64	1.00		0.86	1.00		0.09	1.00		0.18
Lane Grp Cap(c), veh/h	162	0	155	257	0	231	236	530	549	270	578	588
V/C Ratio(X)	0.56	0.00	0.28	0.08	0.00	0.33	0.15	0.88	0.88	0.35	0.82	0.82
Avail Cap(c_a), veh/h	298	0	285	455	0	408	1079	1786	1851	1059	1772	1805
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.0	0.0	25.3	22.2	0.0	23.0	14.9	19.9	19.9	14.9	18.4	18.4
Incr Delay (d2), s/veh	1.1	0.0	0.4	0.0	0.0	0.3	0.1	1.9	1.9	0.3	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.6	0.2	0.0	0.9	0.3	5.5	5.7	0.7	5.2	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.1	0.0	25.7	22.3	0.0	23.3	15.1	21.9	21.8	15.2	19.5	19.5
LnGrp LOS	C	A	C	C	A	C	B	C	C	B	B	B
Approach Vol, veh/h		135			96			985			1050	
Approach Delay, s/veh		26.6			23.1			21.6			19.1	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	24.8		10.4	9.2	26.6		13.5				
Change Period (Y+Rc), s	7.0	7.0		5.0	7.0	7.0		5.0				
Max Green Setting (Gmax), s	30.0	60.0		10.0	30.0	60.0		15.0				
Max Q Clear Time (g_c+I1), s	4.1	16.9		4.9	2.8	16.7		4.5				
Green Ext Time (p_c), s	0.0	0.8		0.0	0.0	0.8		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			20.8									
HCM 6th LOS			C									
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	302	625	127	57	576	73	242	55	88	85	22	131
Future Volume (vph)	302	625	127	57	576	73	242	55	88	85	22	131
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	175		0	0		150	0		100
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1285			1065			585			583	
Travel Time (s)		21.9			18.2			16.0			15.9	
Confl. Peds. (#/hr)	5					5						3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	1%	1%	2%	0%	4%	0%	2%	0%	0%	5%	0%	2%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4			8					2			6
Detector Phase	7	4		3	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	35.3		9.5	30.3		36.5	36.5	36.5	36.5	36.5	36.5
Total Split (s)	34.5	55.3		14.5	55.3		44.5	44.5	44.5	44.5	44.5	44.5
Total Split (%)	19.3%	30.9%		8.1%	30.9%		24.9%	24.9%	24.9%	24.9%	24.9%	24.9%
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.3		4.5	5.3			4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None	None	None	None	None

Intersection Summary

Area Type: Other

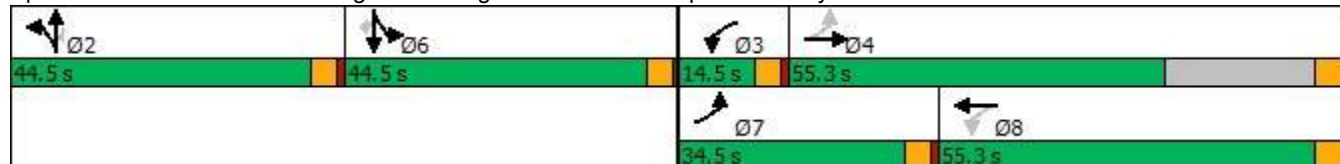
Cycle Length: 178.8

Actuated Cycle Length: 118

Natural Cycle: 120

Control Type: Actuated-Uncoordinated

Splits and Phases: 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	302	625	127	57	576	73	242	55	88	85	22	131
Future Volume (veh/h)	302	625	127	57	576	73	242	55	88	85	22	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1841	1841	1900	1900	1900	1900	1900	1870
Adj Flow Rate, veh/h	311	644	131	59	594	75	249	57	31	88	23	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	0	4	4	0	0	0	0	0	2
Cap, veh/h	458	1149	233	337	889	112	318	73	345	138	36	151
Arrive On Green	0.15	0.39	0.39	0.05	0.28	0.28	0.21	0.21	0.21	0.10	0.10	0.00
Sat Flow, veh/h	1795	2962	602	1810	3121	393	1486	340	1610	1449	379	1585
Grp Volume(v), veh/h	311	389	386	59	332	337	306	0	31	111	0	0
Grp Sat Flow(s),veh/h/ln	1795	1791	1772	1810	1749	1766	1826	0	1610	1828	0	1585
Q Serve(g_s), s	8.3	12.5	12.6	1.7	12.4	12.4	11.7	0.0	1.1	4.3	0.0	0.0
Cycle Q Clear(g_c), s	8.3	12.5	12.6	1.7	12.4	12.4	11.7	0.0	1.1	4.3	0.0	0.0
Prop In Lane	1.00		0.34	1.00		0.22	0.81		1.00	0.79		1.00
Lane Grp Cap(c), veh/h	458	695	688	337	498	503	391	0	345	175	0	151
V/C Ratio(X)	0.68	0.56	0.56	0.18	0.67	0.67	0.78	0.00	0.09	0.64	0.00	0.00
Avail Cap(c_a), veh/h	917	1214	1201	496	1185	1197	990	0	873	991	0	859
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.2	17.6	17.7	17.2	23.3	23.3	27.4	0.0	23.2	32.1	0.0	0.0
Incr Delay (d2), s/veh	1.8	1.0	1.0	0.2	2.2	2.2	3.5	0.0	0.1	3.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	4.8	4.7	0.7	4.9	5.0	5.3	0.0	0.4	2.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.0	18.7	18.7	17.4	25.5	25.5	30.8	0.0	23.3	35.9	0.0	0.0
LnGrp LOS	B	B	B	B	C	C	C	A	C	D	A	A
Approach Vol, veh/h		1086			728			337			111	
Approach Delay, s/veh		18.2			24.9			30.2			35.9	
Approach LOS		B			C			C			D	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		20.3	8.0	33.9		11.5	15.6	26.3				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		40.0	10.0	50.0		40.0	30.0	50.0				
Max Q Clear Time (g_c+I1), s		13.7	3.7	14.6		6.3	10.3	14.4				
Green Ext Time (p_c), s		2.1	0.0	7.7		0.7	0.8	6.4				
Intersection Summary												
HCM 6th Ctrl Delay				23.0								
HCM 6th LOS				C								

Lanes, Volumes, Timings
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

03/06/2020

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕	↘	↖	↕	↘	↖	↕	↘	↖	↕	↘
Traffic Volume (vph)	216	583	41	113	493	77	93	40	117	101	47	123
Future Volume (vph)	216	583	41	113	493	77	93	40	117	101	47	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	275		0	275		0	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1065			1064			511			626	
Travel Time (s)		18.2			18.1			13.9			17.1	
Confl. Peds. (#/hr)	1					1	7		3	3		7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	2%	0%	4%	0%	0%	0%	1%	0%	0%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2				6
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		2	2		6		6
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		5.0		5.0
Minimum Split (s)	9.5	34.3		9.5	34.3		36.5	36.5		36.5		36.5
Total Split (s)	34.5	65.3		34.5	65.3		34.5	34.5		34.5		34.5
Total Split (%)	25.7%	48.6%		25.7%	48.6%		25.7%	25.7%		25.7%		25.7%
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5		3.5		3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0		1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Total Lost Time (s)	4.5	5.3		4.5	5.3		4.5	4.5		4.5		4.5
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None		None

Intersection Summary

Area Type: Other

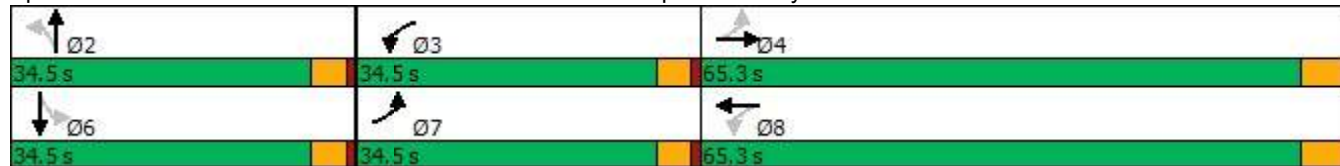
Cycle Length: 134.3

Actuated Cycle Length: 59.5

Natural Cycle: 85

























Control Type: Actuated-Uncoordinated

Splits and Phases: 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	216	583	41	113	493	77	93	40	117	101	47	123
Future Volume (veh/h)	216	583	41	113	493	77	93	40	117	101	47	123
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1900	1841	1841	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	225	607	43	118	514	80	97	42	122	105	49	128
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	0	4	4	0	0	0	0	0	0
Cap, veh/h	523	1204	85	470	950	147	364	112	326	375	122	318
Arrive On Green	0.13	0.36	0.36	0.08	0.31	0.31	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1810	3366	238	1810	3034	470	1220	426	1239	1234	463	1208
Grp Volume(v), veh/h	225	320	330	118	295	299	97	0	164	105	0	177
Grp Sat Flow(s),veh/h/ln	1810	1777	1827	1810	1749	1755	1220	0	1665	1234	0	1671
Q Serve(g_s), s	3.8	6.8	6.8	2.0	6.7	6.8	3.4	0.0	3.9	3.7	0.0	4.2
Cycle Q Clear(g_c), s	3.8	6.8	6.8	2.0	6.7	6.8	7.6	0.0	3.9	7.5	0.0	4.2
Prop In Lane	1.00		0.13	1.00		0.27	1.00		0.74	1.00		0.72
Lane Grp Cap(c), veh/h	523	636	654	470	548	550	364	0	439	375	0	440
V/C Ratio(X)	0.43	0.50	0.50	0.25	0.54	0.54	0.27	0.00	0.37	0.28	0.00	0.40
Avail Cap(c_a), veh/h	1419	2211	2274	1447	2176	2185	802	0	1036	818	0	1040
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.3	12.1	12.1	9.7	13.7	13.7	17.8	0.0	14.5	17.6	0.0	14.6
Incr Delay (d2), s/veh	0.6	0.9	0.9	0.3	1.2	1.2	0.4	0.0	0.5	0.4	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.2	2.3	0.6	2.3	2.3	0.9	0.0	1.4	1.0	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.8	13.0	13.0	10.0	14.9	14.9	18.2	0.0	15.0	18.0	0.0	15.2
LnGrp LOS	A	B	B	A	B	B	B	A	B	B	A	B
Approach Vol, veh/h		875			712			261			282	
Approach Delay, s/veh		12.2			14.1			16.2			16.3	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		17.2	8.5	22.5		17.2	10.6	20.4				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		30.0	30.0	60.0		30.0	30.0	60.0				
Max Q Clear Time (g_c+I1), s		9.6	4.0	8.8		9.5	5.8	8.8				
Green Ext Time (p_c), s		1.3	0.3	6.4		1.4	0.6	5.7				
Intersection Summary												
HCM 6th Ctrl Delay				13.8								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
 9: Snoqualmie Pkwy & Fairway Ave SE

03/06/2020

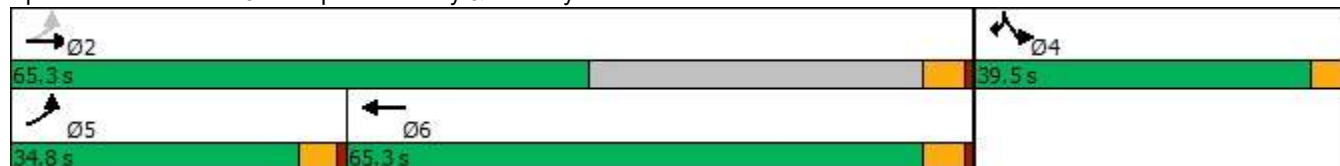


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	199	590	608	121	103	111
Future Volume (vph)	199	590	608	121	103	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	325			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		25	
Link Distance (ft)		1064	278		478	
Travel Time (s)		18.1	4.7		13.0	
Confl. Peds. (#/hr)	5			5	1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	3%	3%	4%	2%	0%
Shared Lane Traffic (%)						
Turn Type	pm+pt	NA	NA		Prot	Prot
Protected Phases	5	2	6		4	4
Permitted Phases	2					
Detector Phase	5	2	6		4	4
Switch Phase						
Minimum Initial (s)	5.0	12.0	12.0		5.0	5.0
Minimum Split (s)	9.8	23.3	26.3		36.5	36.5
Total Split (s)	34.8	65.3	65.3		39.5	39.5
Total Split (%)	24.9%	46.8%	46.8%		28.3%	28.3%
Yellow Time (s)	3.8	4.3	4.3		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.8	5.3	5.3		4.5	4.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	None	None		None	None

Intersection Summary

Area Type: Other
 Cycle Length: 139.6
 Actuated Cycle Length: 63.1
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated

Splits and Phases: 9: Snoqualmie Pkwy & Fairway Ave SE



HCM 6th Signalized Intersection Summary
 9: Snoqualmie Pkwy & Fairway Ave SE























03/06/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	199	590	608	121	103	111
Future Volume (veh/h)	199	590	608	121	103	111
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	1856	1856	1856	1870	1900
Adj Flow Rate, veh/h	214	634	654	130	111	-5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	3	3	3	2	0
Cap, veh/h	562	2254	1127	224	161	146
Arrive On Green	0.12	0.64	0.39	0.39	0.09	0.00
Sat Flow, veh/h	1795	3618	3021	581	1781	1610
Grp Volume(v), veh/h	214	634	393	391	111	-5
Grp Sat Flow(s),veh/h/ln	1795	1763	1763	1746	1781	1610
Q Serve(g_s), s	2.1	2.9	6.4	6.4	2.2	0.0
Cycle Q Clear(g_c), s	2.1	2.9	6.4	6.4	2.2	0.0
Prop In Lane	1.00			0.33	1.00	1.00
Lane Grp Cap(c), veh/h	562	2254	679	672	161	146
V/C Ratio(X)	0.38	0.28	0.58	0.58	0.69	-0.03
Avail Cap(c_a), veh/h	1828	5833	2916	2889	1719	1554
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	5.4	2.9	8.8	8.8	16.0	0.0
Incr Delay (d2), s/veh	0.4	0.1	0.8	0.8	5.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	1.6	1.6	1.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	5.8	2.9	9.6	9.6	21.1	0.0
LnGrp LOS	A	A	A	A	C	A
Approach Vol, veh/h		848	784		106	
Approach Delay, s/veh		3.7	9.6		22.1	
Approach LOS		A	A		C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		28.5		7.8	9.2	19.3
Change Period (Y+Rc), s		5.3		4.5	* 4.8	5.3
Max Green Setting (Gmax), s		60.0		35.0	* 30	60.0
Max Q Clear Time (g_c+I1), s		4.9		4.2	4.1	8.4
Green Ext Time (p_c), s		4.6		0.3	0.6	5.4
Intersection Summary						
HCM 6th Ctrl Delay			7.5			
HCM 6th LOS			A			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

Lanes, Volumes, Timings
 10: Fisher Ave SE & Snoqualmie Pkwy

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (vph)	50	622	29	12	684	16	15	1	15	15	1	30
Future Volume (vph)	50	622	29	12	684	16	15	1	15	15	1	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		458			1686			518			363	
Travel Time (s)		7.8			28.7			14.1			9.9	
Confl. Peds. (#/hr)	8		8	8		8	8		8	8		8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	3%	0%	0%	4%	6%	0%	0%	0%	0%	0%	7%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕			↕			↕	
Traffic Vol, veh/h	50	622	29	12	684	16	15	1	15	15	1	30
Future Vol, veh/h	50	622	29	12	684	16	15	1	15	15	1	30
Conflicting Peds, #/hr	8	0	8	8	0	8	8	0	8	8	0	8
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #-	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	3	0	0	4	6	0	0	0	0	0	7
Mvmt Flow	57	707	33	14	777	18	17	1	17	17	1	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	803	0	0	748	0	0	1271	1677	386	1298	1684	414
Stage 1	-	-	-	-	-	-	846	846	-	822	822	-
Stage 2	-	-	-	-	-	-	425	831	-	476	862	-
Critical Hdwy	4.1	-	-	4.1	-	-	9.5	8.5	7.9	9.5	8.5	8.04
Critical Hdwy Stg 1	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.37
Pot Cap-1 Maneuver	830	-	-	870	-	-	63	38	555	59	37	511
Stage 1	-	-	-	-	-	-	205	238	-	214	248	-
Stage 2	-	-	-	-	-	-	460	244	-	418	232	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	824	-	-	863	-	-	53	34	547	51	33	503
Mov Cap-2 Maneuver	-	-	-	-	-	-	53	34	-	51	33	-
Stage 1	-	-	-	-	-	-	189	220	-	198	242	-
Stage 2	-	-	-	-	-	-	417	238	-	372	214	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.2			67.6			56.4		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	91	824	-	-	863	-	-	120
HCM Lane V/C Ratio	0.387	0.069	-	-	0.016	-	-	0.436
HCM Control Delay (s)	67.6	9.7	-	-	9.2	-	-	56.4
HCM Lane LOS	F	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	1.6	0.2	-	-	0	-	-	1.9

Lanes, Volumes, Timings
 11: Orchard Ave SE & Snoqualmie Pkwy

03/06/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Traffic Volume (vph)	646	29	27	703	8	20
Future Volume (vph)	646	29	27	703	8	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	225		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	1686			1131	557	
Travel Time (s)	28.7			19.3	15.2	
Confl. Peds. (#/hr)		1	1		1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	0%	4%	4%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Vol, veh/h	646	29	27	703	8	20
Future Vol, veh/h	646	29	27	703	8	20
Conflicting Peds, #/hr	0	1	1	0	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	225	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	0	4	4	0	5
Mvmt Flow	702	32	29	764	9	22

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	735	0	1160
Stage 1	-	-	-	-	719
Stage 2	-	-	-	-	441
Critical Hdwy	-	-	4.18	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.24	-	3.5
Pot Cap-1 Maneuver	-	-	853	-	192
Stage 1	-	-	-	-	449
Stage 2	-	-	-	-	622
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	852	-	185
Mov Cap-2 Maneuver	-	-	-	-	185
Stage 1	-	-	-	-	449
Stage 2	-	-	-	-	600

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	15.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	371	-	-	852	-
HCM Lane V/C Ratio	0.082	-	-	0.034	-
HCM Control Delay (s)	15.6	-	-	9.4	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	664	734	7	7	5
Future Volume (vph)	5	664	734	7	7	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		40	40		25	
Link Distance (ft)		679	1187		393	
Travel Time (s)		11.6	20.2		10.7	
Confl. Peds. (#/hr)	1			1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	5%	4%	0%	0%	0%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	664	734	7	7	5
Future Vol, veh/h	5	664	734	7	7	5
Conflicting Peds, #/hr	1	0	0	1	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #-	0	0	0	0	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	5	4	0	0	0
Mvmt Flow	5	722	798	8	8	5

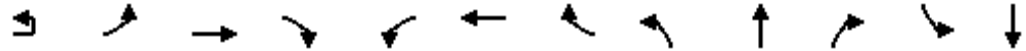
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	807	0	-	0	1175
Stage 1	-	-	-	-	803
Stage 2	-	-	-	-	372
Critical Hdwy	4.1	-	-	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	827	-	-	-	188
Stage 1	-	-	-	-	406
Stage 2	-	-	-	-	673
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	826	-	-	-	186
Mov Cap-2 Maneuver	-	-	-	-	186
Stage 1	-	-	-	-	403
Stage 2	-	-	-	-	672

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	19.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	826	-	-	-	261
HCM Lane V/C Ratio	0.007	-	-	-	0.05
HCM Control Delay (s)	9.4	-	-	-	19.5
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Lanes, Volumes, Timings
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↵		↕↕		↵	↕↕			↕↕			↕↕
Traffic Volume (vph)	0	0	624	46	23	696	0	52	0	24	0	0
Future Volume (vph)	0	0	624	46	23	696	0	52	0	24	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0		0	200		0	0		0	0	
Storage Lanes		1		0	1		0	0		0	0	
Taper Length (ft)		25			25			25			25	
Right Turn on Red				Yes			Yes			Yes		
Link Speed (mph)			40			40			25			25
Link Distance (ft)			1187			833			535			291
Travel Time (s)			20.2			14.2			14.6			7.9
Confl. Peds. (#/hr)				4	4			3				
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	6%	0%	0%	4%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt		NA		pm+pt	NA		Perm	NA			
Protected Phases	5		2		1	6			8			4
Permitted Phases	2				6			8			4	
Detector Phase	5		2		1	6		8	8		4	4
Switch Phase												
Minimum Initial (s)	5.0		15.0		5.0	14.0		5.0	5.0		30.0	30.0
Minimum Split (s)	10.0		20.0		10.0	29.0		36.0	36.0		36.0	36.0
Total Split (s)	35.0		65.0		35.0	65.0		36.0	36.0		36.0	36.0
Total Split (%)	25.7%		47.8%		25.7%	47.8%		26.5%	26.5%		26.5%	26.5%
Yellow Time (s)	4.0		4.0		4.0	4.0		5.0	5.0		5.0	5.0
All-Red Time (s)	1.0		1.0		1.0	1.0		1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0		5.0		5.0	5.0		6.0	6.0		6.0	6.0
Lead/Lag	Lead		Lag		Lead	Lag						
Lead-Lag Optimize?	Yes		Yes		Yes	Yes						
Recall Mode	Min		Min		None	None		None	None		None	None

Intersection Summary

Area Type: Other

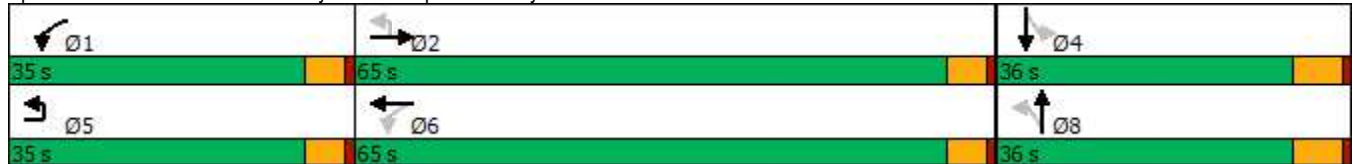
Cycle Length: 136

Actuated Cycle Length: 48.2

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Splits and Phases: 13: Better Way SE & Snoqualmie Pkwy

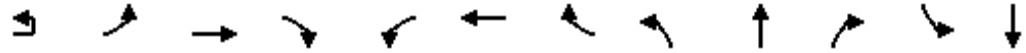




Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	0
Future Volume (vph)	0
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Right Turn on Red	Yes
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	3
Peak Hour Factor	0.95
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	
Intersection Summary	

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↰		↕		↗	↕			↕			↕
Traffic Volume (veh/h)	0	0	624	46	23	696	0	52	0	24	0	0
Future Volume (veh/h)	0	0	624	46	23	696	0	52	0	24	0	0
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	0.99		0.99	1.00	
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach			No			No			No			No
Adj Sat Flow, veh/h/ln		0	1811	1811	1900	1841	1841	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		0	657	48	24	733	0	55	0	25	0	0
Peak Hour Factor		0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %		0	6	6	0	4	4	0	0	0	0	0
Cap, veh/h		0	1387	101	324	2093	0	263	0	41	0	168
Arrive On Green		0.00	0.43	0.43	0.03	0.60	0.00	0.09	0.00	0.09	0.00	0.00
Sat Flow, veh/h		0	3341	237	1810	3589	0	1015	0	461	0	1900
Grp Volume(v), veh/h		0	347	358	24	733	0	80	0	0	0	0
Grp Sat Flow(s),veh/h/ln		0	1721	1767	1810	1749	0	1476	0	0	0	1900
Q Serve(g_s), s		0.0	5.1	5.1	0.2	3.7	0.0	1.8	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s		0.0	5.1	5.1	0.2	3.7	0.0	1.8	0.0	0.0	0.0	0.0
Prop In Lane		0.00		0.13	1.00		0.00	0.69		0.31	0.00	
Lane Grp Cap(c), veh/h		0	734	754	324	2093	0	304	0	0	0	168
V/C Ratio(X)		0.00	0.47	0.47	0.07	0.35	0.00	0.26	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h		0	2936	3015	1814	5968	0	1432	0	0	0	1621
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh		0.0	7.2	7.2	7.2	3.6	0.0	15.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh		0.0	0.5	0.5	0.1	0.1	0.0	0.5	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.0	1.1	1.1	0.0	0.3	0.0	0.6	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		0.0	7.7	7.7	7.3	3.7	0.0	15.9	0.0	0.0	0.0	0.0
LnGrp LOS		A	A	A	A	A	A	B	A	A	A	A
Approach Vol, veh/h			705			757			80			0
Approach Delay, s/veh			7.7			3.8			15.9			0.0
Approach LOS			A			A			B			
Timer - Assigned Phs	1	2		4		6			8			
Phs Duration (G+Y+Rc), s	6.0	20.0		9.1		26.0			9.1			
Change Period (Y+Rc), s	5.0	5.0		6.0		5.0			6.0			
Max Green Setting (Gmax), s	30.0	60.0		30.0		60.0			30.0			
Max Q Clear Time (g_c+I1), s	2.2	7.1		0.0		5.7			3.8			
Green Ext Time (p_c), s	0.0	4.6		0.0		5.6			0.4			

Intersection Summary

HCM 6th Ctrl Delay	6.2
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
 User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	0
Future Volume (veh/h)	0
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.95
Percent Heavy Veh, %	0
Cap, veh/h	0
Arrive On Green	0.00
Sat Flow, veh/h	0
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	0
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	0.00
Lane Grp Cap(c), veh/h	0
V/C Ratio(X)	0.00
Avail Cap(c_a), veh/h	0
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Lanes, Volumes, Timings
 14: Trail Access Road & Snoqualmie Pkwy

03/06/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↓		↙	↑↑	↘	
Traffic Volume (vph)	581	0	1	670	0	1
Future Volume (vph)	581	0	1	670	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	646			700	301	
Travel Time (s)	11.0			11.9	8.2	
Confl. Peds. (#/hr)		1	1		1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	0%	0%	4%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Vol, veh/h	581	0	1	670	0	1
Future Vol, veh/h	581	0	1	670	0	1
Conflicting Peds, #/hr	0	1	1	0	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	0	0	4	0	0
Mvmt Flow	632	0	1	728	0	1

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	633	0	1000
Stage 1	-	-	-	-	633
Stage 2	-	-	-	-	367
Critical Hdwy	-	-	4.1	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	960	-	243
Stage 1	-	-	-	-	497
Stage 2	-	-	-	-	677
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	959	-	242
Mov Cap-2 Maneuver	-	-	-	-	242
Stage 1	-	-	-	-	497
Stage 2	-	-	-	-	676

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	683	-	-	959	-
HCM Lane V/C Ratio	0.002	-	-	0.001	-
HCM Control Delay (s)	10.3	-	-	8.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
15: SR 202 & Snoqualmie Pkwy

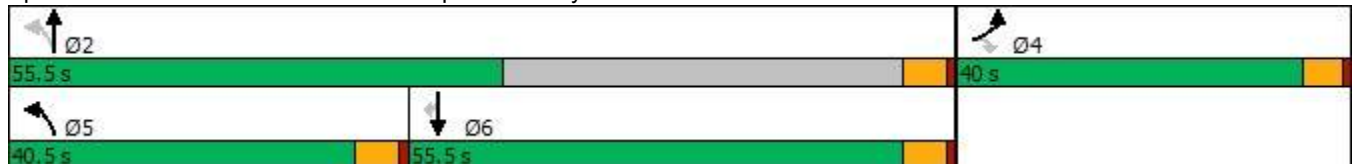
03/06/2020

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	291	289	309	276	315	398
Future Volume (vph)	291	289	309	276	315	398
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	300			300
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Right Turn on Red		Yes				Yes
Link Speed (mph)	40			45	45	
Link Distance (ft)	700			1127	949	
Travel Time (s)	11.9			17.1	14.4	
Confl. Peds. (#/hr)		1	1			1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	3%	2%	2%	1%	7%	5%
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	5.0	7.0	7.0	7.0
Minimum Split (s)	29.0	29.0	10.5	12.5	35.5	35.5
Total Split (s)	40.0	40.0	40.5	55.5	55.5	55.5
Total Split (%)	29.4%	29.4%	29.8%	40.8%	40.8%	40.8%
Yellow Time (s)	4.0	4.0	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	Min	Min	Min

Intersection Summary













Area Type: Other
 Cycle Length: 136
 Actuated Cycle Length: 84.1
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated

Splits and Phases: 15: SR 202 & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 15: SR 202 & Snoqualmie Pkwy

03/06/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	291	289	309	276	315	398
Future Volume (veh/h)	291	289	309	276	315	398
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00			1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1885	1796	1826
Adj Flow Rate, veh/h	320	0	340	303	346	88
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	2	2	1	7	5
Cap, veh/h	402	361	554	1052	476	410
Arrive On Green	0.23	0.00	0.18	0.56	0.27	0.27
Sat Flow, veh/h	1767	1585	1781	1885	1796	1544
Grp Volume(v), veh/h	320	0	340	303	346	88
Grp Sat Flow(s),veh/h/ln	1767	1585	1781	1885	1796	1544
Q Serve(g_s), s	8.4	0.0	5.9	4.1	8.6	2.2
Cycle Q Clear(g_c), s	8.4	0.0	5.9	4.1	8.6	2.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	402	361	554	1052	476	410
V/C Ratio(X)	0.80	0.00	0.61	0.29	0.73	0.21
Avail Cap(c_a), veh/h	1265	1134	1508	1927	1836	1579
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.8	0.0	9.7	5.7	16.4	14.0
Incr Delay (d2), s/veh	3.6	0.0	1.1	0.1	2.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	1.6	0.9	3.0	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.5	0.0	10.8	5.8	18.5	14.3
LnGrp LOS	C	A	B	A	B	B
Approach Vol, veh/h	320			643	434	
Approach Delay, s/veh	21.5			8.5	17.6	
Approach LOS	C			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		32.8		16.1	14.3	18.5
Change Period (Y+Rc), s		5.5		5.0	5.5	5.5
Max Green Setting (Gmax), s		50.0		35.0	35.0	50.0
Max Q Clear Time (g_c+I1), s		6.1		10.4	7.9	10.6
Green Ext Time (p_c), s		1.7		0.9	1.0	2.3
Intersection Summary						
HCM 6th Ctrl Delay			14.3			
HCM 6th LOS			B			

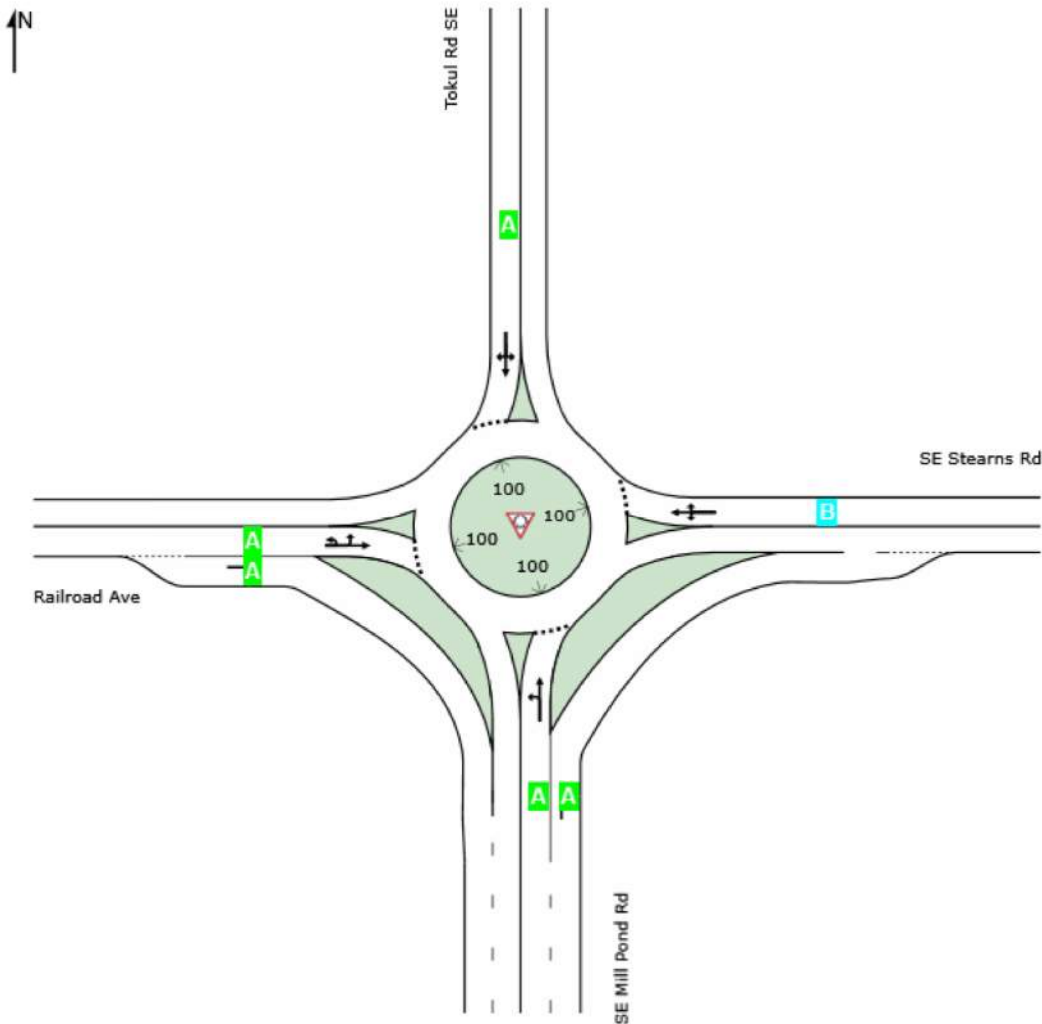
LANE LEVEL OF SERVICE

Lane Level of Service

Site: 16 [2023 With Redevelopment Alternative Planning Area 1 - PM Peak Hour]

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	B	A	A	A



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Signalised Intersections.
 Lane LOS values are based on average delay per lane.
 Intersection and Approach LOS values are based on average delay for all lanes.
 SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

LANE SUMMARY

Site: 16 [2023 With Redevelopment Alternative Planning Area 1 - PM Peak Hour]

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

Lane Use and Performance													
	Demand Flows			Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue Veh	Queue Dist	Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	Total veh/h	HV %	Cap. veh/h	v/c	%	sec		ft	ft		ft	%	%
South: SE Mill Pond Rd													
Lane 1 ^d	451	3.4	1523	0.296	100	8.8	LOS A	1.8	45.6	Full	1600	0.0	0.0
Lane 2	189	3.1	1624	0.117	100	3.6	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	640	3.3		0.296		7.3	LOS A	1.8	45.6				
East: SE Stearns Rd													
Lane 1 ^d	434	7.6	969	0.448	100	10.6	LOS B	2.9	76.8	Full	1600	0.0	0.0
Approach	434	7.6		0.448		10.6	LOS B	2.9	76.8				
North: Tokul Rd SE													
Lane 1 ^d	45	5.3	694	0.064	100	9.7	LOS A	0.4	10.1	Full	1600	0.0	0.0
Approach	45	5.3		0.064		9.7	LOS A	0.4	10.1				
West: Railroad Ave													
Lane 1 ^d	142	2.5	1366	0.104	100	5.4	LOS A	0.6	14.9	Full	1600	0.0	0.0
Lane 2	547	4.7	1599	0.342	100	3.7	LOS A	0.0	0.0	Short	200	0.0	NA
Approach	689	4.2		0.342		4.0	LOS A	0.6	14.9				
Intersection	1808	4.7		0.448		6.9	LOS A	2.9	76.8				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

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Organisation: TENW | Processed: Tuesday, March 3, 2020 9:33:50 AM

Project: T:\Active Projects\Snoqualmie Mill - 5584\Planning - 5584\LOS\Snoqualmie Mill - Railroad Ave & Tokul Rd & SE Mill Pond Rd

Roundabout.sip8



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	74	8	18	96	5	28
Future Volume (vph)	74	8	18	96	5	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45		35			35
Link Distance (ft)	458		1466			541
Travel Time (s)	6.9		28.6			10.5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	0%	0%	3%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	74	8	18	96	5	28
Future Vol, veh/h	74	8	18	96	5	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	0	0	3	0	0
Mvmt Flow	77	8	19	100	5	29

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	108	69	0	0	119	0
Stage 1	69	-	-	-	-	-
Stage 2	39	-	-	-	-	-
Critical Hdwy	6.43	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	887	1000	-	-	1482	-
Stage 1	951	-	-	-	-	-
Stage 2	981	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	884	1000	-	-	1482	-
Mov Cap-2 Maneuver	884	-	-	-	-	-
Stage 1	951	-	-	-	-	-
Stage 2	978	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	1.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	894	1482
HCM Lane V/C Ratio	-	-	0.096	0.004
HCM Control Delay (s)	-	-	9.5	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	57	81	83	23	37	61
Future Volume (vph)	57	81	83	23	37	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		40	
Link Distance (ft)		502	1466		916	
Travel Time (s)		9.8	28.6		15.6	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	1%	0%	3%	0%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↖	↗		↖	↗
Traffic Vol, veh/h	57	81	83	23	37	61
Future Vol, veh/h	57	81	83	23	37	61
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	1	1	0	3	0
Mvmt Flow	61	86	88	24	39	65
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	112	0	-	0	308	100
Stage 1	-	-	-	-	100	-
Stage 2	-	-	-	-	208	-
Critical Hdwy	4.1	-	-	-	6.43	6.2
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.2	-	-	-	3.527	3.3
Pot Cap-1 Maneuver	1490	-	-	-	682	961
Stage 1	-	-	-	-	921	-
Stage 2	-	-	-	-	824	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1490	-	-	-	653	961
Mov Cap-2 Maneuver	-	-	-	-	653	-
Stage 1	-	-	-	-	881	-
Stage 2	-	-	-	-	824	-
Approach	EB	WB	SB			
HCM Control Delay, s	3.1	0	10.1			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1490	-	-	-	-	816
HCM Lane V/C Ratio	0.041	-	-	-	-	0.128
HCM Control Delay (s)	7.5	0	-	-	-	10.1
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	-	0.4

Lanes, Volumes, Timings
19: Meadowbrook Bridge

03/02/2020

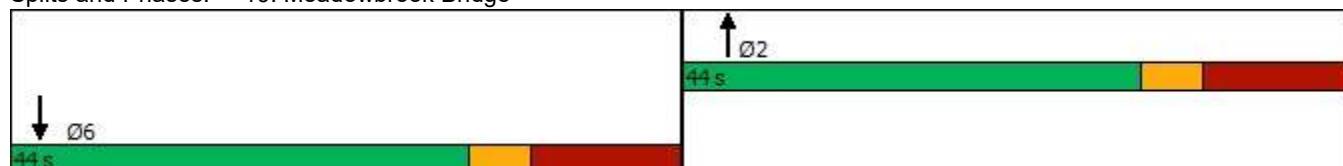


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	153	0	0	205
Future Volume (vph)	0	0	153	0	0	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			30
Link Distance (ft)	150		304			249
Travel Time (s)	3.4		6.9			5.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	0%	0%	2%
Shared Lane Traffic (%)						
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Detector Phase			2			6
Switch Phase						
Minimum Initial (s)			5.0			5.0
Minimum Split (s)			19.0			19.0
Total Split (s)			44.0			44.0
Total Split (%)			50.0%			50.0%
Yellow Time (s)			4.0			4.0
All-Red Time (s)			10.0			10.0
Lost Time Adjust (s)			0.0			0.0
Total Lost Time (s)			14.0			14.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode			None			None

Intersection Summary

Area Type: Other
 Cycle Length: 88
 Actuated Cycle Length: 44.1
 Natural Cycle: 45
 Control Type: Actuated-Uncoordinated

Splits and Phases: 19: Meadowbrook Bridge



HCM Signalized Intersection Capacity Analysis
 19: Meadowbrook Bridge

03/02/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	153	0	0	205
Future Volume (vph)	0	0	153	0	0	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			14.0			14.0
Lane Util. Factor			1.00			1.00
Flt			1.00			1.00
Flt Protected			1.00			1.00
Satd. Flow (prot)			1881			1863
Flt Permitted			1.00			1.00
Satd. Flow (perm)			1881			1863
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	166	0	0	223
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	166	0	0	223
Heavy Vehicles (%)	0%	0%	1%	0%	0%	2%
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Actuated Green, G (s)			6.9			10.4
Effective Green, g (s)			6.9			10.4
Actuated g/C Ratio			0.15			0.23
Clearance Time (s)			14.0			14.0
Vehicle Extension (s)			2.0			2.0
Lane Grp Cap (vph)			286			427
v/s Ratio Prot			c0.09			c0.12
v/s Ratio Perm						
v/c Ratio			0.58			0.52
Uniform Delay, d1			17.9			15.3
Progression Factor			1.00			1.00
Incremental Delay, d2			1.9			0.5
Delay (s)			19.8			15.8
Level of Service			B			B
Approach Delay (s)	0.0		19.8			15.8
Approach LOS	A		B			B
Intersection Summary						
HCM 2000 Control Delay			17.5		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.54			
Actuated Cycle Length (s)			45.3		Sum of lost time (s)	28.0
Intersection Capacity Utilization			22.5%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Lanes, Volumes, Timings
 20: Meadowbrook Way SE & SE Park St

03/12/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	45	28	32	49	27	12	90	23	24	90	25
Future Volume (vph)	25	45	28	32	49	27	12	90	23	24	90	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		505			663			790			216	
Travel Time (s)		13.8			18.1			21.5			5.9	
Confl. Peds. (#/hr)	5		5	4		4	5		4	4		5
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	4%	4%	4%	0%	2%	0%	0%	1%	0%	0%	3%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	25	45	28	32	49	27	12	90	23	24	90	25
Future Vol, veh/h	25	45	28	32	49	27	12	90	23	24	90	25
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	4	4	4	0	2	0	0	1	0	0	3	0
Mvmt Flow	30	54	33	38	58	32	14	107	27	29	107	30
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	8.7	8.7	8.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %		10%	26%	30%
Vol Thru, %		72%	46%	45%
Vol Right, %		18%	29%	25%
Sign Control		Stop	Stop	Stop
Traffic Vol by Lane		125	98	108
LT Vol		12	25	32
Through Vol		90	45	49
RT Vol		23	28	27
Lane Flow Rate		149	117	129
Geometry Grp		1	1	1
Degree of Util (X)		0.19	0.153	0.167
Departure Headway (Hd)		4.588	4.733	4.681
Convergence, Y/N		Yes	Yes	Yes
Cap		780	755	764
Service Time		2.628	2.78	2.727
HCM Lane V/C Ratio		0.191	0.155	0.169
HCM Control Delay		8.7	8.6	8.7
HCM Lane LOS		A	A	A
HCM 95th-tile Q		0.7	0.5	0.6

Lanes, Volumes, Timings
21: Meadowbrook Way SE & SR 202

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	435	74	8	422	40	121	88	22	49	74	26
Future Volume (vph)	22	435	74	8	422	40	121	88	22	49	74	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	150		0	0		0	200		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			40			35				25
Link Distance (ft)		615			518			738				663
Travel Time (s)		14.0			8.8			14.4				18.1
Confl. Peds. (#/hr)							2			1		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	3%	5%	0%	4%	0%	1%	0%	9%	2%	0%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8				4
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4		4
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	5.0		5.0		5.0
Minimum Split (s)	33.3	33.3		30.3	30.3		32.8	32.8		32.8		32.8
Total Split (s)	71.3	71.3		71.3	71.3		40.8	40.8		40.8		40.8
Total Split (%)	63.6%	63.6%		63.6%	63.6%		36.4%	36.4%		36.4%		36.4%
Yellow Time (s)	4.3	4.3		4.3	4.3		3.8	3.8		3.8		3.8
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0		2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0		0.0
Total Lost Time (s)	6.3	6.3		6.3	6.3			5.8		5.8		5.8
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Min	Min		Min	Min		None	None		None		None

Intersection Summary

Area Type: Other

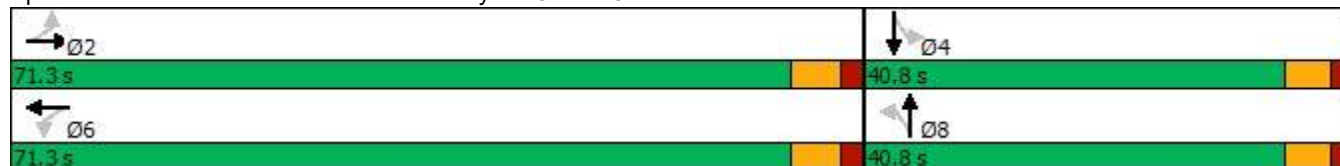
Cycle Length: 112.1

Actuated Cycle Length: 51.8

Natural Cycle: 70




















Control Type: Actuated-Uncoordinated

Splits and Phases: 21: Meadowbrook Way SE & SR 202



HCM 6th Signalized Intersection Summary
 21: Meadowbrook Way SE & SR 202

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	435	74	8	422	40	121	88	22	49	74	26
Future Volume (veh/h)	22	435	74	8	422	40	121	88	22	49	74	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1856	1900	1841	1841	1900	1900	1900	1870	1900	1900
Adj Flow Rate, veh/h	24	468	80	9	454	43	130	95	24	53	80	28
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	3	3	0	4	4	0	0	0	2	0	0
Cap, veh/h	393	677	116	355	726	69	301	174	36	519	334	117
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	915	1544	264	873	1656	157	639	700	143	1270	1344	470
Grp Volume(v), veh/h	24	0	548	9	0	497	249	0	0	53	0	108
Grp Sat Flow(s),veh/h/ln	915	0	1808	873	0	1812	1481	0	0	1270	0	1814
Q Serve(g_s), s	0.8	0.0	9.4	0.3	0.0	8.2	4.1	0.0	0.0	0.0	0.0	1.8
Cycle Q Clear(g_c), s	9.0	0.0	9.4	9.8	0.0	8.2	6.0	0.0	0.0	1.2	0.0	1.8
Prop In Lane	1.00		0.15	1.00		0.09	0.52		0.10	1.00		0.26
Lane Grp Cap(c), veh/h	393	0	792	355	0	794	510	0	0	519	0	451
V/C Ratio(X)	0.06	0.00	0.69	0.03	0.00	0.63	0.49	0.00	0.00	0.10	0.00	0.24
Avail Cap(c_a), veh/h	1530	0	3039	1440	0	3046	1502	0	0	1352	0	1642
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.9	0.0	8.8	12.7	0.0	8.4	13.1	0.0	0.0	11.3	0.0	11.6
Incr Delay (d2), s/veh	0.1	0.0	1.3	0.0	0.0	1.0	0.7	0.0	0.0	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	2.8	0.1	0.0	2.1	1.6	0.0	0.0	0.3	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.0	0.0	10.1	12.7	0.0	9.4	13.9	0.0	0.0	11.4	0.0	11.9
LnGrp LOS	B	A	B	B	A	A	B	A	A	B	A	B
Approach Vol, veh/h		572			506			249			161	
Approach Delay, s/veh		10.2			9.4			13.9			11.7	
Approach LOS		B			A			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.3		15.4		23.3		15.4				
Change Period (Y+Rc), s		6.3		* 5.8		6.3		* 5.8				
Max Green Setting (Gmax), s		65.0		* 35		65.0		* 35				
Max Q Clear Time (g_c+I1), s		11.4		3.8		11.8		8.0				
Green Ext Time (p_c), s		5.5		0.8		4.3		1.5				
Intersection Summary												
HCM 6th Ctrl Delay				10.7								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 22: Meadowbrook Way SE & 384th Ave SE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	165	234	202	13	2	112
Future Volume (vph)	165	234	202	13	2	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		25	
Link Distance (ft)		158	180		181	
Travel Time (s)		3.1	3.5		4.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	8%	2%	3%	0%	0%	5%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	165	234	202	13	2	112
Future Vol, veh/h	165	234	202	13	2	112
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	8	2	3	0	0	5
Mvmt Flow	190	269	232	15	2	129

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	247	0	-	0	889 240
Stage 1	-	-	-	-	240 -
Stage 2	-	-	-	-	649 -
Critical Hdwy	4.18	-	-	-	6.4 6.25
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.272	-	-	-	3.5 3.345
Pot Cap-1 Maneuver	1285	-	-	-	316 792
Stage 1	-	-	-	-	805 -
Stage 2	-	-	-	-	524 -
Platoon blocked, %	-	-	-	-	
Mov Cap-1 Maneuver	1285	-	-	-	261 792
Mov Cap-2 Maneuver	-	-	-	-	261 -
Stage 1	-	-	-	-	665 -
Stage 2	-	-	-	-	524 -

Approach	EB	WB	SB
HCM Control Delay, s	3.4	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1285	-	-	-	-	765
HCM Lane V/C Ratio	0.148	-	-	-	-	0.171
HCM Control Delay (s)	8.3	0	-	-	-	10.7
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0.5	-	-	-	-	0.6

Lanes, Volumes, Timings
 23: SE North Bend Way & Meadowbrook Way SE

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	70	245	131	82	317	273
Future Volume (vph)	70	245	131	82	317	273
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	450	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Link Speed (mph)	35		50			50
Link Distance (ft)	158		253			593
Travel Time (s)	3.1		3.5			8.1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	6%	4%	3%	14%	1%	1%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	5.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↘	↑	↘	↘	↑
Traffic Vol, veh/h	70	245	131	82	317	273
Future Vol, veh/h	70	245	131	82	317	273
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	Free	-	None
Storage Length	0	0	-	0	450	-
Veh in Median Storage, #1	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	6	4	3	14	1	1
Mvmt Flow	78	272	146	91	352	303

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1153	-	0	-	146
Stage 1	146	-	-	-	-
Stage 2	1007	-	-	-	-
Critical Hdwy	6.46	-	-	-	4.11
Critical Hdwy Stg 1	5.46	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-
Follow-up Hdwy	3.554	-	-	-	2.209
Pot Cap-1 Maneuver	214	0	-	0	1442
Stage 1	872	0	-	0	-
Stage 2	347	0	-	0	-
Platoon blocked, %			-		-
Mov Cap-1 Maneuver	162	-	-	-	1442
Mov Cap-2 Maneuver	228	-	-	-	-
Stage 1	872	-	-	-	-
Stage 2	262	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	28.8	0	4.5
HCM LOS	D		

Minor Lane/Major Mvmt	NB	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	228	-	1442	-
HCM Lane V/C Ratio	-	0.341	-	0.244	-
HCM Control Delay (s)	-	28.8	0	8.3	-
HCM Lane LOS	-	D	A	A	-
HCM 95th %tile Q(veh)	-	1.4	-	1	-

Lanes, Volumes, Timings
 24: SE Mill Pond Rd & NW Haul Road

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	91	278	4	23	253
Future Volume (vph)	10	91	278	4	23	253
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	804		935			756
Travel Time (s)	21.9		18.2			14.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	18%	5%	0%	2%	17%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	10	91	278	4	23	253
Future Vol, veh/h	10	91	278	4	23	253
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	18	5	0	2	17
Mvmt Flow	11	99	302	4	25	275

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	629	304	0	0	306	0
Stage 1	304	-	-	-	-	-
Stage 2	325	-	-	-	-	-
Critical Hdwy	6.4	6.38	-	-	4.12	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.462	-	-	2.218	-
Pot Cap-1 Maneuver	449	700	-	-	1255	-
Stage 1	753	-	-	-	-	-
Stage 2	737	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	438	700	-	-	1255	-
Mov Cap-2 Maneuver	438	-	-	-	-	-
Stage 1	753	-	-	-	-	-
Stage 2	719	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.5	0	0.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	661	1255
HCM Lane V/C Ratio	-	-	0.166	0.02
HCM Control Delay (s)	-	-	11.5	7.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	11	59	223	9	45	218
Future Volume (vph)	11	59	223	9	45	218
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	796		476			935
Travel Time (s)	21.7		9.3			18.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	6%	0%	0%	2%
Shared Lane Traffic (%)						
Sign Control	Yield		Yield			Yield

Intersection Summary

Area Type: Other

Control Type: Roundabout

Lanes, Volumes, Timings
 26: SE Mill Pond Rd & North Driveway

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	14	79	153	15	80	149
Future Volume (vph)	14	79	153	15	80	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	769		376			476
Travel Time (s)	21.0		7.3			9.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	9%	0%	0%	3%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	14	79	153	15	80	149
Future Vol, veh/h	14	79	153	15	80	149
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	9	0	0	3
Mvmt Flow	15	86	166	16	87	162

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	510	174	0	0	182	0
Stage 1	174	-	-	-	-	-
Stage 2	336	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	527	875	-	-	1405	-
Stage 1	861	-	-	-	-	-
Stage 2	728	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	491	875	-	-	1405	-
Mov Cap-2 Maneuver	491	-	-	-	-	-
Stage 1	861	-	-	-	-	-
Stage 2	678	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.3	0	2.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	783	1405
HCM Lane V/C Ratio	-	-	0.129	0.062
HCM Control Delay (s)	-	-	10.3	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.4	0.2

Lanes, Volumes, Timings
 27: SE Mill Pond Rd & South Driveway

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	14	81	87	15	79	84
Future Volume (vph)	14	81	87	15	79	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	721		317			376
Travel Time (s)	19.7		6.2			7.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	15%	0%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	14	81	87	15	79	84
Future Vol, veh/h	14	81	87	15	79	84
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	15	0	0	5
Mvmt Flow	15	88	95	16	86	91

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	366	103	0	0	111	0
Stage 1	103	-	-	-	-	-
Stage 2	263	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	638	957	-	-	1492	-
Stage 1	926	-	-	-	-	-
Stage 2	786	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	599	957	-	-	1492	-
Mov Cap-2 Maneuver	599	-	-	-	-	-
Stage 1	926	-	-	-	-	-
Stage 2	738	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	3.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	880	1492
HCM Lane V/C Ratio	-	-	0.117	0.058
HCM Control Delay (s)	-	-	9.6	7.6
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.2

Lanes, Volumes, Timings
 28: SE Mill Pond Rd & SE Access Road

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	102	0	0	98
Future Volume (vph)	0	0	102	0	0	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	701		575			216
Travel Time (s)	19.1		11.2			4.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	15%	0%	0%	4%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	0	0	102	0	0	98
Future Vol, veh/h	0	0	102	0	0	98
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	15	0	0	4
Mvmt Flow	0	0	111	0	0	107

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	218	111	0	0	111	0
Stage 1	111	-	-	-	-	-
Stage 2	107	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	775	948	-	-	1492	-
Stage 1	919	-	-	-	-	-
Stage 2	922	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	775	948	-	-	1492	-
Mov Cap-2 Maneuver	775	-	-	-	-	-
Stage 1	919	-	-	-	-	-
Stage 2	922	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1492
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

2032 Redevelopment Alternative – Full Buildout
LOS Worksheets

Lanes, Volumes, Timings
1: SR-18 & I-90 EB Ramps

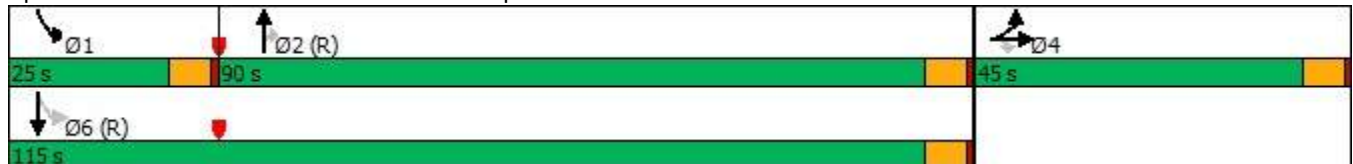
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	512	0	86	0	0	0	0	936	475	69	394	0
Future Volume (vph)	512	0	86	0	0	0	0	936	475	69	394	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650		0	0		0	0	300	200			0
Storage Lanes	1		1	0		0	0	1	1			0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			45				30
Link Distance (ft)		833			764			1837				778
Travel Time (s)		16.2			14.9			27.8				17.7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	0%	10%	0%	0%	0%	0%	8%	28%	9%	40%	0%
Shared Lane Traffic (%)	50%											
Turn Type	Split	NA	Perm					NA	Perm	pm+pt	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			4						2	6		
Detector Phase	4	4	4					2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					10.0	10.0	3.0	10.0	
Minimum Split (s)	29.0	29.0	29.0					16.0	16.0	9.0	23.0	
Total Split (s)	45.0	45.0	45.0					90.0	90.0	25.0	115.0	
Total Split (%)	28.1%	28.1%	28.1%					56.3%	56.3%	15.6%	71.9%	
Yellow Time (s)	5.0	5.0	5.0					5.0	5.0	5.0	5.0	
All-Red Time (s)	1.0	1.0	1.0					1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0					6.0	6.0	6.0	6.0	
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Recall Mode	None	None	None					C-Min	C-Min	None	C-Min	

Intersection Summary

Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated





















Splits and Phases: 1: SR-18 & I-90 EB Ramps



HCM 6th Signalized Intersection Summary

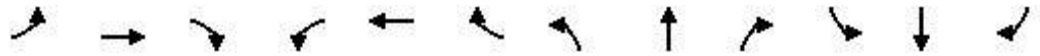
1: SR-18 & I-90 EB Ramps

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	512	0	86	0	0	0	0	936	475	69	394	0
Future Volume (veh/h)	512	0	86	0	0	0	0	936	475	69	394	0
Initial Q (Qb), veh	0	0	0					0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00					1.00	1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1826	1900	1752				0	1781	1485	1767	1307	0
Adj Flow Rate, veh/h	533	0	0				0	975	0	72	410	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	5	0	10				0	8	28	9	40	0
Cap, veh/h	600	0					0	1230		258	1869	0
Arrive On Green	0.17	0.00	0.00				0.00	0.69	0.00	0.02	0.75	0.00
Sat Flow, veh/h	3478	0	1485				0	1781	1259	1682	2549	0
Grp Volume(v), veh/h	533	0	0				0	975	0	72	410	0
Grp Sat Flow(s),veh/h/ln	1739	0	1485				0	1781	1259	1682	1242	0
Q Serve(g_s), s	24.0	0.0	0.0				0.0	59.9	0.0	1.9	7.8	0.0
Cycle Q Clear(g_c), s	24.0	0.0	0.0				0.0	59.9	0.0	1.9	7.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	600	0					0	1230		258	1869	0
V/C Ratio(X)	0.89	0.00					0.00	0.79		0.28	0.22	0.00
Avail Cap(c_a), veh/h	848	0					0	1230		417	1869	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				0.00	1.00	0.00	0.79	0.79	0.00
Uniform Delay (d), s/veh	64.7	0.0	0.0				0.0	16.9	0.0	20.0	5.9	0.0
Incr Delay (d2), s/veh	8.5	0.0	0.0				0.0	5.3	0.0	0.5	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	0.0	0.0				0.0	23.8	0.0	1.2	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.2	0.0	0.0				0.0	22.2	0.0	20.5	6.1	0.0
LnGrp LOS	E	A					A	C		C	A	A
Approach Vol, veh/h		533	A					975	A		482	
Approach Delay, s/veh		73.2						22.2			8.2	
Approach LOS		E						C			A	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	9.9	116.5		33.6				126.4				
Change Period (Y+Rc), s	6.0	6.0		6.0				6.0				
Max Green Setting (Gmax), s	19.0	84.0		39.0				109.0				
Max Q Clear Time (g_c+I1), s	3.9	61.9		26.0				9.8				
Green Ext Time (p_c), s	0.1	14.4		1.7				7.5				
Intersection Summary												
HCM 6th Ctrl Delay			32.5									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

03/06/2020

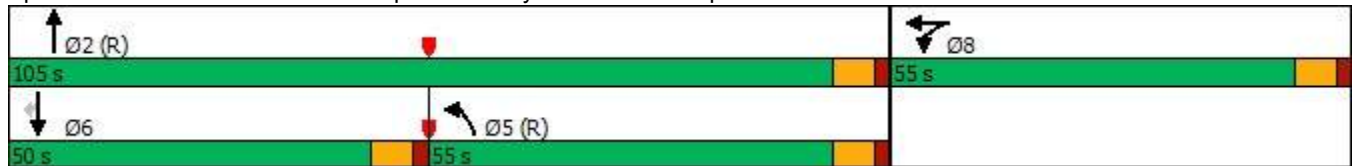


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↕		↖	↕			↕	↖
Traffic Volume (vph)	0	0	0	223	2	153	593	825	0	0	190	878
Future Volume (vph)	0	0	0	223	2	153	593	825	0	0	190	878
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	0		0
Storage Lanes	0		0	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		893			705			778			878	
Travel Time (s)		17.4			13.7			17.7			20.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	57%	50%	7%	7%	6%	0%	0%	12%	1%
Shared Lane Traffic (%)				11%								
Turn Type				Split	NA		Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases												6
Detector Phase				8	8		5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	7.0			7.0	7.0
Minimum Split (s)				12.0	12.0		12.0	14.0			24.0	24.0
Total Split (s)				55.0	55.0		55.0	105.0			50.0	50.0
Total Split (%)				34.4%	34.4%		34.4%	65.6%			31.3%	31.3%
Yellow Time (s)				5.0	5.0		5.0	5.0			5.0	5.0
All-Red Time (s)				2.0	2.0		2.0	2.0			2.0	2.0
Lost Time Adjust (s)				0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)				7.0	7.0		7.0	7.0			7.0	7.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None		C-Max	C-Min			None	None

Intersection Summary




















Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 60 (38%), Referenced to phase 2:NBT and 5:NBL, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated

Splits and Phases: 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps





















HCM 6th Signalized Intersection Summary
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	223	2	153	593	825	0	0	190	878
Future Volume (veh/h)	0	0	0	223	2	153	593	825	0	0	190	878
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No		No		No
Adj Sat Flow, veh/h/ln				1055	1159	1055	1796	1811	0	0	1722	1885
Adj Flow Rate, veh/h				199	52	161	624	868	0	0	200	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				57	50	57	7	6	0	0	12	1
Cap, veh/h				239	59	184	513	2321	0	0	569	
Arrive On Green				0.24	0.24	0.24	0.10	0.22	0.00	0.00	0.33	0.00
Sat Flow, veh/h				1005	249	771	1711	3532	0	0	1722	1598
Grp Volume(v), veh/h				199	0	213	624	868	0	0	200	0
Grp Sat Flow(s),veh/h/ln				1005	0	1020	1711	1721	0	0	1722	1598
Q Serve(g_s), s				30.1	0.0	32.2	48.0	34.2	0.0	0.0	14.1	0.0
Cycle Q Clear(g_c), s				30.1	0.0	32.2	48.0	34.2	0.0	0.0	14.1	0.0
Prop In Lane				1.00		0.76	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				239	0	243	513	2321	0	0	569	
V/C Ratio(X)				0.83	0.00	0.88	1.22	0.37	0.00	0.00	0.35	
Avail Cap(c_a), veh/h				302	0	306	513	2321	0	0	569	
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	1.00	0.39	0.39	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				57.9	0.0	58.7	72.1	33.6	0.0	0.0	40.6	0.0
Incr Delay (d2), s/veh				24.1	0.0	29.8	104.3	0.2	0.0	0.0	0.5	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				9.2	0.0	10.3	37.1	16.0	0.0	0.0	6.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				82.0	0.0	88.5	176.4	33.7	0.0	0.0	41.1	0.0
LnGrp LOS				F	A	F	F	C	A	A	D	
Approach Vol, veh/h					412			1492			200	A
Approach Delay, s/veh					85.4			93.4			41.1	
Approach LOS					F			F			D	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		114.9			55.0	59.9		45.1				
Change Period (Y+Rc), s		7.0			7.0	7.0		7.0				
Max Green Setting (Gmax), s		98.0			48.0	43.0		48.0				
Max Q Clear Time (g_c+I1), s		36.2			50.0	16.1		34.2				
Green Ext Time (p_c), s		11.7			0.0	1.6		3.9				
Intersection Summary												
HCM 6th Ctrl Delay				86.9								
HCM 6th LOS				F								
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 3: Snoqualmie Pkwy & SE 99th St

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	29	0	0	1	73	880	3	1	1074	10
Future Volume (vph)	2	0	29	0	0	1	73	880	3	1	1074	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	0		0	0		0	125		0	25		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		989			884			878			457	
Travel Time (s)		27.0			24.1			20.0			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	50%	0%	0%	0%	0%	0%	3%	7%	0%	0%	3%	20%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Traffic Vol, veh/h	2	0	29	0	0	1	73	880	3	1	1074	10
Future Vol, veh/h	2	0	29	0	0	1	73	880	3	1	1074	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	25	-	-
Veh in Median Storage, #-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	50	0	0	0	0	0	3	7	0	0	3	20
Mvmt Flow	2	0	31	0	0	1	77	926	3	1	1131	11

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1756	2222	571	1650	2226	465	1142	0	0	929	0	0
Stage 1	1139	1139	-	1082	1082	-	-	-	-	-	-	-
Stage 2	617	1083	-	568	1144	-	-	-	-	-	-	-
Critical Hdwy	8.5	6.5	6.9	7.5	6.5	6.9	4.16	-	-	4.1	-	-
Critical Hdwy Stg 1	7.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	4	4	3.3	3.5	4	3.3	2.23	-	-	2.2	-	-
Pot Cap-1 Maneuver	32	44	469	66	44	550	602	-	-	744	-	-
Stage 1	148	278	-	236	296	-	-	-	-	-	-	-
Stage 2	344	296	-	480	277	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	29	38	469	56	38	550	602	-	-	744	-	-
Mov Cap-2 Maneuver	29	38	-	56	38	-	-	-	-	-	-	-
Stage 1	129	278	-	206	258	-	-	-	-	-	-	-
Stage 2	299	258	-	448	277	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22.6	11.6	0.9	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	602	-	-	237	550	744	-
HCM Lane V/C Ratio	0.128	-	-	0.138	0.002	0.001	-
HCM Control Delay (s)	11.9	-	-	22.6	11.6	9.8	-
HCM Lane LOS	B	-	-	C	B	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0.5	0	0	-

Lanes, Volumes, Timings
 4: Snoqualmie Pkwy & SE 96th St

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	32	16	889	15	31	986
Future Volume (vph)	32	16	889	15	31	986
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Link Speed (mph)	30		40			40
Link Distance (ft)	346		677			718
Travel Time (s)	7.9		11.5			12.2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	7%	0%	0%	2%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑		↘	↑↑
Traffic Vol, veh/h	32	16	889	15	31	986
Future Vol, veh/h	32	16	889	15	31	986
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #1	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	7	0	0	2
Mvmt Flow	33	16	907	15	32	1006

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1482	461	0	0	922	0
Stage 1	915	-	-	-	-	-
Stage 2	567	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	118	553	-	-	749	-
Stage 1	356	-	-	-	-	-
Stage 2	537	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	113	553	-	-	749	-
Mov Cap-2 Maneuver	241	-	-	-	-	-
Stage 1	356	-	-	-	-	-
Stage 2	514	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.8	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	241	553	749	-
HCM Lane V/C Ratio	-	-	0.135	0.03	0.042	-
HCM Control Delay (s)	-	-	22.3	11.7	10	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	0.5	0.1	0.1	-

Lanes, Volumes, Timings
5: Snoqualmie Pkwy & SE Jacobia St

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	5	116	104	6	87	38	883	16	24	840	18
Future Volume (vph)	37	5	116	104	6	87	38	883	16	24	840	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	250		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		653			474			718			617	
Travel Time (s)		17.8			12.9			12.2			10.5	
Confl. Peds. (#/hr)	2		1	1		2						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	10%	20%	0%	0%	17%	2%	8%	7%	0%	12%	4%	32%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	15.0		5.0	16.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		10.5	22.5		10.5	22.5	
Total Split (s)	25.0	25.0		40.0	40.0		15.5	65.5		15.5	65.5	
Total Split (%)	20.7%	20.7%		33.1%	33.1%		12.8%	54.1%		12.8%	54.1%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.5	4.5		4.5	4.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.5	5.5		5.5	5.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other

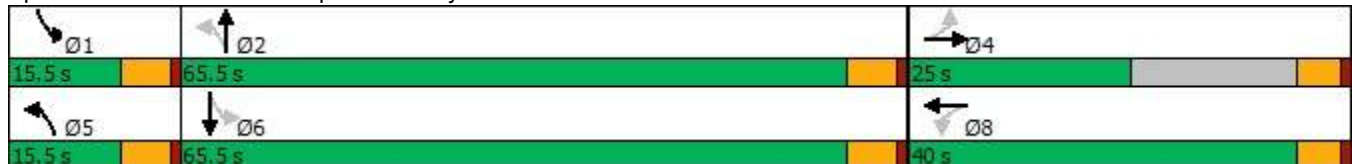
Cycle Length: 121

Actuated Cycle Length: 59.6

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Snoqualmie Pkwy & SE Jacobia St



HCM 6th Signalized Intersection Summary
 5: Snoqualmie Pkwy & SE Jacobia St

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	5	116	104	6	87	38	883	16	24	840	18
Future Volume (veh/h)	37	5	116	104	6	87	38	883	16	24	840	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1604	1604	1900	1648	1648	1781	1796	1796	1722	1841	1841
Adj Flow Rate, veh/h	41	5	127	114	7	96	42	970	18	26	923	20
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	10	20	20	0	17	17	8	7	7	12	4	4
Cap, veh/h	333	12	301	316	22	301	338	1555	29	303	1542	33
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.04	0.45	0.45	0.03	0.44	0.44
Sat Flow, veh/h	1207	52	1312	1275	96	1312	1697	3428	64	1640	3500	76
Grp Volume(v), veh/h	41	0	132	114	0	103	42	483	505	26	461	482
Grp Sat Flow(s),veh/h/ln	1207	0	1363	1275	0	1408	1697	1706	1785	1640	1749	1827
Q Serve(g_s), s	1.6	0.0	4.6	4.7	0.0	3.4	0.7	12.0	12.0	0.5	11.2	11.2
Cycle Q Clear(g_c), s	5.0	0.0	4.6	9.3	0.0	3.4	0.7	12.0	12.0	0.5	11.2	11.2
Prop In Lane	1.00		0.96	1.00		0.93	1.00		0.04	1.00		0.04
Lane Grp Cap(c), veh/h	333	0	312	316	0	323	338	774	810	303	770	805
V/C Ratio(X)	0.12	0.00	0.42	0.36	0.00	0.32	0.12	0.62	0.62	0.09	0.60	0.60
Avail Cap(c_a), veh/h	490	0	490	826	0	885	570	1839	1924	549	1885	1969
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.9	0.0	18.3	22.3	0.0	17.8	8.8	11.6	11.6	9.1	11.8	11.8
Incr Delay (d2), s/veh	0.2	0.0	0.9	0.7	0.0	0.6	0.1	1.2	1.1	0.0	1.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	1.4	1.4	0.0	1.1	0.2	3.7	3.9	0.1	3.6	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.1	0.0	19.2	23.0	0.0	18.4	8.9	12.8	12.7	9.2	12.9	12.9
LnGrp LOS	C	A	B	C	A	B	A	B	B	A	B	B
Approach Vol, veh/h		173			217			1030			969	
Approach Delay, s/veh		19.4			20.8			12.6			12.8	
Approach LOS		B			C			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	30.8		17.8	7.9	30.0		17.8				
Change Period (Y+Rc), s	5.5	5.5		5.0	5.5	5.5		5.0				
Max Green Setting (Gmax), s	10.0	60.0		20.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	2.5	14.0		7.0	2.7	13.2		11.3				
Green Ext Time (p_c), s	0.0	11.3		0.7	0.0	10.5		1.0				
Intersection Summary												
HCM 6th Ctrl Delay				13.9								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
6: Snoqualmie Pkwy & SE Swenson Dr

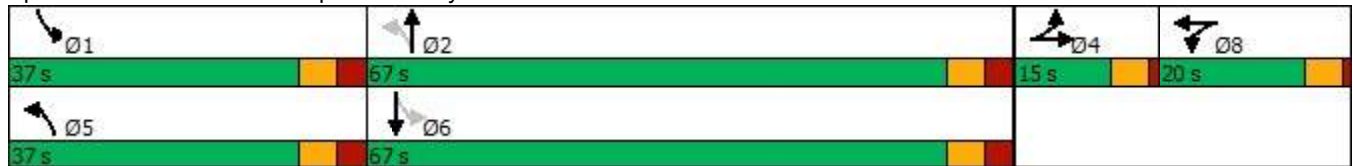
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	12	24	46	16	70	47	1001	19	40	687	66
Future Volume (vph)	54	12	24	46	16	70	47	1001	19	40	687	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	275		0	300		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			No
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		456			320			2254			367	
Travel Time (s)		10.4			7.3			38.4			6.3	
Confl. Peds. (#/hr)			1			45	1		8	8		1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	6%	17%	4%	0%	6%	3%	4%	7%	5%	0%	6%	5%
Shared Lane Traffic (%)												
Turn Type	Split	NA		Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		10.0	10.0		5.0	12.0		5.0	12.0	
Minimum Split (s)	38.0	38.0		38.0	38.0		12.0	28.0		12.0	28.0	
Total Split (s)	15.0	15.0		20.0	20.0		37.0	67.0		37.0	67.0	
Total Split (%)	10.8%	10.8%		14.4%	14.4%		26.6%	48.2%		26.6%	48.2%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		7.0	7.0		7.0	7.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary






















Area Type: Other
 Cycle Length: 139
 Actuated Cycle Length: 99.1
 Natural Cycle: 140
 Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Snoqualmie Pkwy & SE Swenson Dr



HCM 6th Signalized Intersection Summary
6: Snoqualmie Pkwy & SE Swenson Dr

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	12	24	46	16	70	47	1001	19	40	687	66
Future Volume (veh/h)	54	12	24	46	16	70	47	1001	19	40	687	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.92	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1648	1648	1900	1811	1811	1841	1796	1796	1900	1811	1811
Adj Flow Rate, veh/h	61	13	27	52	18	79	53	1125	21	45	772	74
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	17	17	0	6	6	4	7	7	0	6	6
Cap, veh/h	131	36	75	304	46	202	281	1227	23	205	1120	107
Arrive On Green	0.08	0.08	0.08	0.17	0.17	0.17	0.05	0.36	0.36	0.04	0.35	0.35
Sat Flow, veh/h	1725	476	990	1810	273	1199	1753	3426	64	1810	3169	304
Grp Volume(v), veh/h	61	0	40	52	0	97	53	560	586	45	419	427
Grp Sat Flow(s),veh/h/ln	1725	0	1466	1810	0	1472	1753	1706	1784	1810	1721	1752
Q Serve(g_s), s	2.3	0.0	1.7	1.7	0.0	4.0	1.3	21.2	21.2	1.0	14.1	14.1
Cycle Q Clear(g_c), s	2.3	0.0	1.7	1.7	0.0	4.0	1.3	21.2	21.2	1.0	14.1	14.1
Prop In Lane	1.00		0.68	1.00		0.81	1.00		0.04	1.00		0.17
Lane Grp Cap(c), veh/h	131	0	112	304	0	247	281	611	639	205	608	619
V/C Ratio(X)	0.46	0.00	0.36	0.17	0.00	0.39	0.19	0.92	0.92	0.22	0.69	0.69
Avail Cap(c_a), veh/h	255	0	217	402	0	327	979	1517	1585	933	1529	1557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.9	0.0	29.6	24.0	0.0	25.0	14.1	20.7	20.7	16.2	18.6	18.7
Incr Delay (d2), s/veh	0.9	0.0	0.7	0.1	0.0	0.4	0.1	2.4	2.4	0.2	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.6	0.7	0.0	1.3	0.4	7.7	8.0	0.4	5.0	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.8	0.0	30.3	24.1	0.0	25.4	14.2	23.2	23.1	16.4	19.2	19.2
LnGrp LOS	C	A	C	C	A	C	B	C	C	B	B	B
Approach Vol, veh/h		101			149			1199			891	
Approach Delay, s/veh		30.6			25.0			22.7			19.0	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	31.2		10.1	10.1	30.9		16.4				
Change Period (Y+Rc), s	7.0	7.0		5.0	7.0	7.0		5.0				
Max Green Setting (Gmax), s	30.0	60.0		10.0	30.0	60.0		15.0				
Max Q Clear Time (g_c+I1), s	3.0	23.2		4.3	3.3	16.1		6.0				
Green Ext Time (p_c), s	0.0	1.0		0.0	0.0	0.7		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				21.8								
HCM 6th LOS				C								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	735	211	61	475	33	111	13	51	66	44	328
Future Volume (vph)	96	735	211	61	475	33	111	13	51	66	44	328
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	175		0	0		150	0		100
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1285			1065			585			583	
Travel Time (s)		21.9			18.2			16.0			15.9	
Confl. Peds. (#/hr)												3
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	10%	9%	2%	2%	6%	13%	5%	0%	3%	4%	0%	4%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4			8					2			6
Detector Phase	7	4		3	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	35.3		9.5	30.3		36.5	36.5	36.5	36.5	36.5	36.5
Total Split (s)	34.5	55.3		14.5	55.3		44.5	44.5	44.5	44.5	44.5	44.5
Total Split (%)	19.3%	30.9%		8.1%	30.9%		24.9%	24.9%	24.9%	24.9%	24.9%	24.9%
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.3		4.5	5.3			4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None	None	None	None	None

Intersection Summary

Area Type: Other

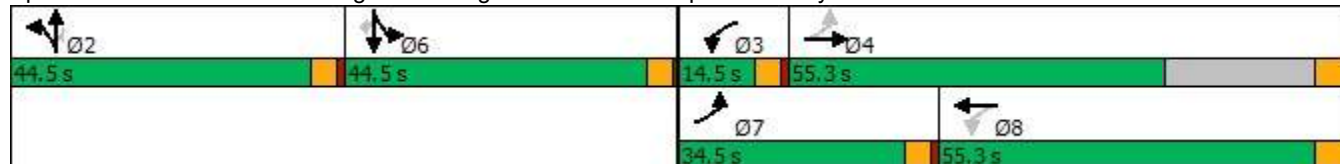
Cycle Length: 178.8

Actuated Cycle Length: 97.3

Natural Cycle: 130























Control Type: Actuated-Uncoordinated

Splits and Phases: 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	96	735	211	61	475	33	111	13	51	66	44	328
Future Volume (veh/h)	96	735	211	61	475	33	111	13	51	66	44	328
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1767	1767	1870	1811	1811	1900	1900	1856	1900	1900	1841
Adj Flow Rate, veh/h	110	845	243	70	546	38	128	15	14	76	51	251
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	10	9	9	2	6	6	0	0	3	0	0	4
Cap, veh/h	412	1095	315	242	1351	94	175	20	169	223	150	314
Arrive On Green	0.06	0.43	0.43	0.05	0.41	0.41	0.11	0.11	0.11	0.20	0.20	0.20
Sat Flow, veh/h	1668	2573	739	1781	3264	227	1628	191	1572	1104	741	1553
Grp Volume(v), veh/h	110	551	537	70	287	297	143	0	14	127	0	251
Grp Sat Flow(s),veh/h/ln	1668	1678	1634	1781	1721	1770	1819	0	1572	1845	0	1553
Q Serve(g_s), s	3.2	24.3	24.3	1.9	10.2	10.2	6.6	0.0	0.7	5.1	0.0	13.3
Cycle Q Clear(g_c), s	3.2	24.3	24.3	1.9	10.2	10.2	6.6	0.0	0.7	5.1	0.0	13.3
Prop In Lane	1.00		0.45	1.00		0.13	0.90		1.00	0.60		1.00
Lane Grp Cap(c), veh/h	412	714	695	242	712	733	195	0	169	373	0	314
V/C Ratio(X)	0.27	0.77	0.77	0.29	0.40	0.40	0.73	0.00	0.08	0.34	0.00	0.80
Avail Cap(c_a), veh/h	893	971	945	364	995	1024	842	0	728	854	0	719
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.6	21.2	21.2	16.7	17.8	17.8	37.4	0.0	34.7	29.5	0.0	32.8
Incr Delay (d2), s/veh	0.3	3.3	3.4	0.7	0.5	0.5	5.2	0.0	0.2	0.5	0.0	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	9.2	9.0	0.7	3.8	3.9	3.2	0.0	0.3	2.3	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.9	24.5	24.6	17.3	18.3	18.3	42.6	0.0	34.9	30.1	0.0	37.5
LnGrp LOS	B	C	C	B	B	B	D	A	C	C	A	D
Approach Vol, veh/h		1198			654			157			378	
Approach Delay, s/veh		23.6			18.2			41.9			35.0	
Approach LOS		C			B			D			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		13.8	8.6	42.1		22.0	9.6	41.1				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		40.0	10.0	50.0		40.0	30.0	50.0				
Max Q Clear Time (g_c+I1), s		8.6	3.9	26.3		15.3	5.2	12.2				
Green Ext Time (p_c), s		0.9	0.1	10.5		1.7	0.3	5.4				
Intersection Summary												
HCM 6th Ctrl Delay				25.1								
HCM 6th LOS				C								

Lanes, Volumes, Timings
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

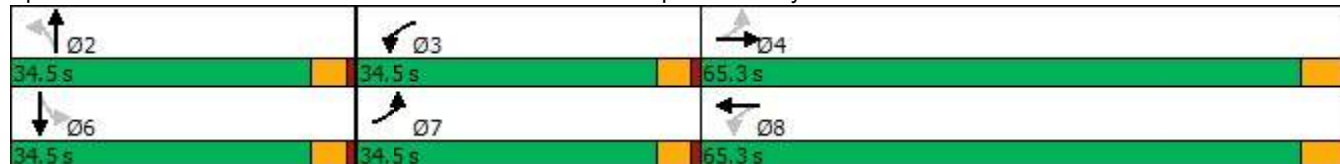
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	670	85	135	512	52	9	6	27	70	28	97
Future Volume (vph)	102	670	85	135	512	52	9	6	27	70	28	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	275		0	275		0	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1065			1064			511			626	
Travel Time (s)		18.2			18.1			13.9			17.1	
Confl. Peds. (#/hr)	3		1	1		3	2		1	1		2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	9%	1%	0%	6%	0%	11%	0%	0%	4%	4%	2%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	34.3		9.5	34.3		36.5	36.5		36.5	36.5	
Total Split (s)	34.5	65.3		34.5	65.3		34.5	34.5		34.5	34.5	
Total Split (%)	25.7%	48.6%		25.7%	48.6%		25.7%	25.7%		25.7%	25.7%	
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	5.3		4.5	5.3		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	

Intersection Summary

























Area Type: Other
 Cycle Length: 134.3
 Actuated Cycle Length: 60.5
 Natural Cycle: 85
 Control Type: Actuated-Uncoordinated

Splits and Phases: 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	102	670	85	135	512	52	9	6	27	70	28	97
Future Volume (veh/h)	102	670	85	135	512	52	9	6	27	70	28	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1767	1767	1900	1811	1811	1737	1900	1900	1841	1841	1841
Adj Flow Rate, veh/h	115	753	96	152	575	58	10	7	30	79	31	109
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	9	9	0	6	6	11	0	0	4	4	4
Cap, veh/h	564	1312	167	490	1413	142	245	49	209	341	56	196
Arrive On Green	0.08	0.44	0.44	0.09	0.45	0.45	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	2993	381	1810	3156	318	1157	313	1340	1345	356	1253
Grp Volume(v), veh/h	115	422	427	152	313	320	10	0	37	79	0	140
Grp Sat Flow(s),veh/h/ln	1781	1678	1696	1810	1721	1753	1157	0	1653	1345	0	1609
Q Serve(g_s), s	1.5	8.6	8.7	2.0	5.6	5.7	0.4	0.0	0.9	2.5	0.0	3.7
Cycle Q Clear(g_c), s	1.5	8.6	8.7	2.0	5.6	5.7	4.1	0.0	0.9	3.4	0.0	3.7
Prop In Lane	1.00		0.22	1.00		0.18	1.00		0.81	1.00		0.78
Lane Grp Cap(c), veh/h	564	735	743	490	770	785	245	0	258	341	0	251
V/C Ratio(X)	0.20	0.57	0.57	0.31	0.41	0.41	0.04	0.00	0.14	0.23	0.00	0.56
Avail Cap(c_a), veh/h	1581	2199	2222	1507	2254	2296	822	0	1083	1012	0	1054
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.9	9.7	9.7	6.5	8.5	8.5	19.7	0.0	16.7	18.1	0.0	17.9
Incr Delay (d2), s/veh	0.2	1.0	1.0	0.4	0.5	0.5	0.1	0.0	0.3	0.3	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.4	2.4	0.5	1.5	1.5	0.1	0.0	0.3	0.7	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.1	10.7	10.7	6.9	9.0	9.0	19.8	0.0	16.9	18.5	0.0	19.8
LnGrp LOS	A	B	B	A	A	A	B	A	B	B	A	B
Approach Vol, veh/h		964			785			47				219
Approach Delay, s/veh		10.1			8.6			17.5				19.3
Approach LOS		B			A			B				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.7	8.8	25.4		11.7	8.3	25.8				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		30.0	30.0	60.0		30.0	30.0	60.0				
Max Q Clear Time (g_c+I1), s		6.1	4.0	10.7		5.7	3.5	7.7				
Green Ext Time (p_c), s		0.2	0.4	9.2		1.1	0.3	6.2				
Intersection Summary												
HCM 6th Ctrl Delay				10.7								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
 9: Snoqualmie Pkwy & Fairway Ave SE

03/06/2020

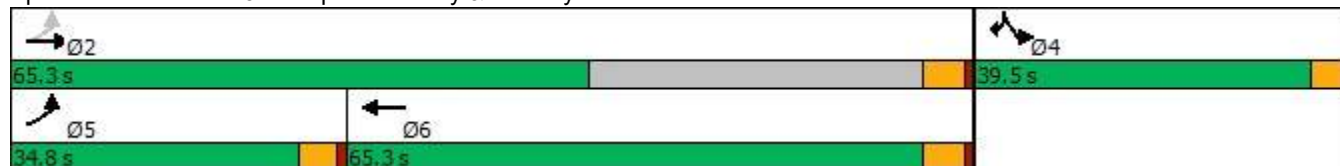


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	30	859	534	110	247	210
Future Volume (vph)	30	859	534	110	247	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	325			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		25	
Link Distance (ft)		1064	278		478	
Travel Time (s)		18.1	4.7		13.0	
Confl. Peds. (#/hr)	2			2		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	8%	6%	3%	12%	2%	1%
Shared Lane Traffic (%)						
Turn Type	pm+pt	NA	NA		Prot	Prot
Protected Phases	5	2	6		4	4
Permitted Phases	2					
Detector Phase	5	2	6		4	4
Switch Phase						
Minimum Initial (s)	5.0	12.0	12.0		5.0	5.0
Minimum Split (s)	9.8	23.3	26.3		36.5	36.5
Total Split (s)	34.8	65.3	65.3		39.5	39.5
Total Split (%)	24.9%	46.8%	46.8%		28.3%	28.3%
Yellow Time (s)	3.8	4.3	4.3		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.8	5.3	5.3		4.5	4.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	None	None		None	None

Intersection Summary

Area Type: Other
 Cycle Length: 139.6
 Actuated Cycle Length: 52.8
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated

Splits and Phases: 9: Snoqualmie Pkwy & Fairway Ave SE



HCM 6th Signalized Intersection Summary
 9: Snoqualmie Pkwy & Fairway Ave SE























03/06/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	30	859	534	110	247	210
Future Volume (veh/h)	30	859	534	110	247	210
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1811	1856	1856	1870	1885
Adj Flow Rate, veh/h	33	954	593	122	274	195
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	6	3	3	2	1
Cap, veh/h	380	1760	1010	207	412	370
Arrive On Green	0.04	0.51	0.35	0.35	0.23	0.23
Sat Flow, veh/h	1697	3532	3004	597	1781	1598
Grp Volume(v), veh/h	33	954	358	357	274	195
Grp Sat Flow(s),veh/h/ln	1697	1721	1763	1746	1781	1598
Q Serve(g_s), s	0.4	7.1	6.4	6.4	5.3	4.1
Cycle Q Clear(g_c), s	0.4	7.1	6.4	6.4	5.3	4.1
Prop In Lane	1.00			0.34	1.00	1.00
Lane Grp Cap(c), veh/h	380	1760	611	606	412	370
V/C Ratio(X)	0.09	0.54	0.59	0.59	0.66	0.53
Avail Cap(c_a), veh/h	1650	5418	2775	2749	1636	1467
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.1	6.3	10.2	10.2	13.3	12.8
Incr Delay (d2), s/veh	0.1	0.3	0.9	0.9	1.9	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.3	1.7	1.7	2.0	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.2	6.6	11.1	11.1	15.2	14.0
LnGrp LOS	A	A	B	B	B	B
Approach Vol, veh/h		987	715		469	
Approach Delay, s/veh		6.6	11.1		14.7	
Approach LOS		A	B		B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		24.8		13.3	6.3	18.5
Change Period (Y+Rc), s		5.3		4.5	* 4.8	5.3
Max Green Setting (Gmax), s		60.0		35.0	* 30	60.0
Max Q Clear Time (g_c+I1), s		9.1		7.3	2.4	8.4
Green Ext Time (p_c), s		7.9		1.6	0.1	4.8
Intersection Summary						
HCM 6th Ctrl Delay			9.8			
HCM 6th LOS			A			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

Lanes, Volumes, Timings
 10: Fisher Ave SE & Snoqualmie Pkwy

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (vph)	7	900	6	3	509	20	36	1	8	28	3	32
Future Volume (vph)	7	900	6	3	509	20	36	1	8	28	3	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		458			1686			518			363	
Travel Time (s)		7.8			28.7			14.1			9.9	
Confl. Peds. (#/hr)	2		1	2		3	1		2	3		2
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	0%	6%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	21.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	900	6	3	509	20	36	1	8	28	3	32
Future Vol, veh/h	7	900	6	3	509	20	36	1	8	28	3	32
Conflicting Peds, #/hr	2	0	1	2	0	3	1	0	2	3	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #-	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	6	0	0	4	0	0	0	0	0	0	0
Mvmt Flow	9	1154	8	4	653	26	46	1	10	36	4	41

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	682	0	0	1164	0	0	1517	1868	586	1276	1859	345
Stage 1	-	-	-	-	-	-	1178	1178	-	677	677	-
Stage 2	-	-	-	-	-	-	339	690	-	599	1182	-
Critical Hdwy	4.1	-	-	4.1	-	-	9.5	8.5	7.9	9.5	8.5	7.9
Critical Hdwy Stg 1	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	920	-	-	607	-	-	~ 36	26	390	62	26	597
Stage 1	-	-	-	-	-	-	107	139	-	284	313	-
Stage 2	-	-	-	-	-	-	542	306	-	330	138	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	917	-	-	606	-	-	~ 29	25	388	57	25	594
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 29	25	-	57	25	-
Stage 1	-	-	-	-	-	-	106	137	-	280	310	-
Stage 2	-	-	-	-	-	-	494	303	-	314	136	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			\$ 566.1			134.2		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	35	917	-	-	606	-	-	95
HCM Lane V/C Ratio	1.648	0.01	-	-	0.006	-	-	0.85
HCM Control Delay (s)	\$ 566.1	9	-	-	11	-	-	134.2
HCM Lane LOS	F	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	6.3	0	-	-	0	-	-	4.7

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
 11: Orchard Ave SE & Snoqualmie Pkwy

03/06/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (vph)	1136	9	15	566	24	39
Future Volume (vph)	1136	9	15	566	24	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	225		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	1686			1131	557	
Travel Time (s)	28.7			19.3	15.2	
Confl. Peds. (#/hr)		3	1		3	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	5%	11%	6%	5%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Vol, veh/h	1136	9	15	566	24	39
Future Vol, veh/h	1136	9	15	566	24	39
Conflicting Peds, #/hr	0	3	1	0	3	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	225	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	5	11	6	5	0	5
Mvmt Flow	1306	10	17	651	28	45

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1319	0	1677
Stage 1	-	-	-	-	1314
Stage 2	-	-	-	-	363
Critical Hdwy	-	-	4.22	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.26	-	3.5
Pot Cap-1 Maneuver	-	-	499	-	88
Stage 1	-	-	-	-	219
Stage 2	-	-	-	-	680
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	498	-	84
Mov Cap-2 Maneuver	-	-	-	-	84
Stage 1	-	-	-	-	218
Stage 2	-	-	-	-	655

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	43.3
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	164	-	-	498	-
HCM Lane V/C Ratio	0.442	-	-	0.035	-
HCM Control Delay (s)	43.3	-	-	12.5	-
HCM Lane LOS	E	-	-	B	-
HCM 95th %tile Q(veh)	2	-	-	0.1	-

Lanes, Volumes, Timings
 12: Snoqualmie Pkwy & Allman AveSE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	1174	568	4	7	9
Future Volume (vph)	2	1174	568	4	7	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		40	40		25	
Link Distance (ft)		679	1187		393	
Travel Time (s)		11.6	20.2		10.7	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	5%	5%	0%	0%	0%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑		↘	
Traffic Vol, veh/h	2	1174	568	4	7	9
Future Vol, veh/h	2	1174	568	4	7	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #-	0	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	5	5	0	0	0
Mvmt Flow	2	1349	653	5	8	10

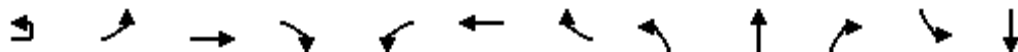
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	658	0	-	0	1335 329
Stage 1	-	-	-	-	656 -
Stage 2	-	-	-	-	679 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	939	-	-	-	148 673
Stage 1	-	-	-	-	483 -
Stage 2	-	-	-	-	471 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	939	-	-	-	148 673
Mov Cap-2 Maneuver	-	-	-	-	148 -
Stage 1	-	-	-	-	482 -
Stage 2	-	-	-	-	471 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	19.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	939	-	-	-	264
HCM Lane V/C Ratio	0.002	-	-	-	0.07
HCM Control Delay (s)	8.8	-	-	-	19.7
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Lanes, Volumes, Timings
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↓		↑↑		↖	↑↑			↑↓			↕
Traffic Volume (vph)	0	0	1162	26	24	553	0	29	0	17	0	0
Future Volume (vph)	0	0	1162	26	24	553	0	29	0	17	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0		0	200		0	0		0	0	
Storage Lanes		1		0	1		0	0		0	0	
Taper Length (ft)		25			25			25			25	
Right Turn on Red				Yes			Yes			Yes		
Link Speed (mph)			40			40			25			25
Link Distance (ft)			1187			833			535			291
Travel Time (s)			20.2			14.2			14.6			7.9
Confl. Peds. (#/hr)		2		1	1		2	1				
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	0%	6%	4%	0%	5%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt		NA		pm+pt	NA		Perm	NA			
Protected Phases	5		2		1	6			8			4
Permitted Phases	2				6			8			4	
Detector Phase	5		2		1	6		8	8		4	4
Switch Phase												
Minimum Initial (s)	5.0		15.0		5.0	14.0		5.0	5.0		30.0	30.0
Minimum Split (s)	10.0		20.0		10.0	29.0		36.0	36.0		36.0	36.0
Total Split (s)	35.0		65.0		35.0	65.0		36.0	36.0		36.0	36.0
Total Split (%)	25.7%		47.8%		25.7%	47.8%		26.5%	26.5%		26.5%	26.5%
Yellow Time (s)	4.0		4.0		4.0	4.0		5.0	5.0		5.0	5.0
All-Red Time (s)	1.0		1.0		1.0	1.0		1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0		5.0		5.0	5.0		6.0	6.0		6.0	6.0
Lead/Lag	Lead		Lag		Lead	Lag						
Lead-Lag Optimize?	Yes		Yes		Yes	Yes						
Recall Mode	Min		Min		None	None		None	None		None	None

Intersection Summary

Area Type: Other

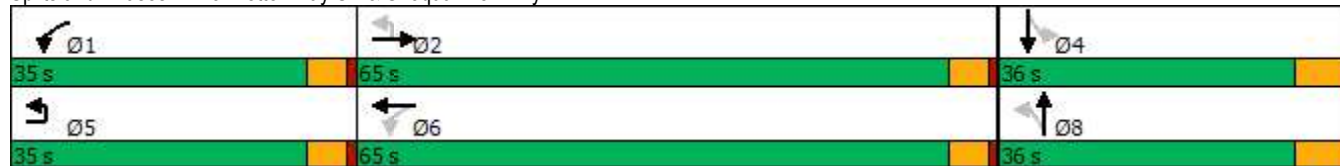
Cycle Length: 136

Actuated Cycle Length: 55.1

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Splits and Phases: 13: Better Way SE & Snoqualmie Pkwy

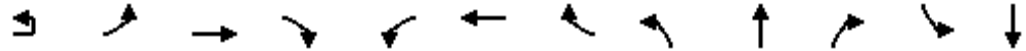




Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	0
Future Volume (vph)	0
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Right Turn on Red	Yes
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	1
Peak Hour Factor	0.85
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	
Intersection Summary	

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↱		↕		↖	↕			↕			↕
Traffic Volume (veh/h)	0	0	1162	26	24	553	0	29	0	17	0	0
Future Volume (veh/h)	0	0	1162	26	24	553	0	29	0	17	0	0
Initial Q (Qb), veh			0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach			No			No			No			No
Adj Sat Flow, veh/h/ln		0	1811	1811	1900	1826	1826	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		0	1367	31	28	651	0	34	0	20	0	0
Peak Hour Factor		0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %		0	6	6	0	5	5	0	0	0	0	0
Cap, veh/h		0	1996	45	236	2483	0	175	0	32	0	109
Arrive On Green		0.00	0.58	0.58	0.03	0.72	0.00	0.06	0.00	0.06	0.00	0.00
Sat Flow, veh/h		0	3530	78	1810	3561	0	939	0	553	0	1900
Grp Volume(v), veh/h		0	683	715	28	651	0	54	0	0	0	0
Grp Sat Flow(s),veh/h/ln		0	1721	1797	1810	1735	0	1492	0	0	0	1900
Q Serve(g_s), s		0.0	13.4	13.4	0.2	3.2	0.0	1.7	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s		0.0	13.4	13.4	0.2	3.2	0.0	1.7	0.0	0.0	0.0	0.0
Prop In Lane		0.00		0.04	1.00		0.00	0.63		0.37	0.00	
Lane Grp Cap(c), veh/h		0	998	1043	236	2483	0	206	0	0	0	109
V/C Ratio(X)		0.00	0.68	0.69	0.12	0.26	0.00	0.26	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h		0	2131	2225	1298	4296	0	1045	0	0	0	1177
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)		0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh		0.0	7.1	7.1	12.3	2.4	0.0	22.3	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh		0.0	0.8	0.8	0.2	0.1	0.0	0.7	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.0	2.9	3.0	0.2	0.2	0.0	0.6	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		0.0	7.9	7.9	12.5	2.5	0.0	23.0	0.0	0.0	0.0	0.0
LnGrp LOS		A	A	A	B	A	A	C	A	A	A	A
Approach Vol, veh/h			1398			679			54			0
Approach Delay, s/veh			7.9			2.9			23.0			0.0
Approach LOS			A			A			C			
Timer - Assigned Phs	1	2		4		6			8			
Phs Duration (G+Y+Rc), s	6.6	33.1		8.8		39.7			8.8			
Change Period (Y+Rc), s	5.0	5.0		6.0		5.0			6.0			
Max Green Setting (Gmax), s	30.0	60.0		30.0		60.0			30.0			
Max Q Clear Time (g_c+I1), s	2.2	15.4		0.0		5.2			3.7			
Green Ext Time (p_c), s	0.0	12.7		0.0		4.8			0.2			

Intersection Summary

HCM 6th Ctrl Delay	6.7
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
 User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	0
Future Volume (veh/h)	0
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.85
Percent Heavy Veh, %	0
Cap, veh/h	0
Arrive On Green	0.00
Sat Flow, veh/h	0
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	0
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	0.00
Lane Grp Cap(c), veh/h	0
V/C Ratio(X)	0.00
Avail Cap(c_a), veh/h	0
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Lanes, Volumes, Timings
 14: Trail Access Road & Snoqualmie Pkwy

03/06/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (vph)	967	1	1	487	1	1
Future Volume (vph)	967	1	1	487	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	646			700	301	
Travel Time (s)	11.0			11.9	8.2	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	6%	0%	0%	5%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Vol, veh/h	967	1	1	487	1	1
Future Vol, veh/h	967	1	1	487	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	6	0	0	5	0	0
Mvmt Flow	1240	1	1	624	1	1

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	1241	0	1555
Stage 1	-	-	-	-	1241
Stage 2	-	-	-	-	314
Critical Hdwy	-	-	4.1	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	568	-	106
Stage 1	-	-	-	-	240
Stage 2	-	-	-	-	720
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	568	-	106
Mov Cap-2 Maneuver	-	-	-	-	106
Stage 1	-	-	-	-	240
Stage 2	-	-	-	-	719

Approach	EB	WB	NB
HCM Control Delay, s	0	0	26.5
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	170	-	-	568	-
HCM Lane V/C Ratio	0.015	-	-	0.002	-
HCM Control Delay (s)	26.5	-	-	11.4	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
15: SR 202 & Snoqualmie Pkwy

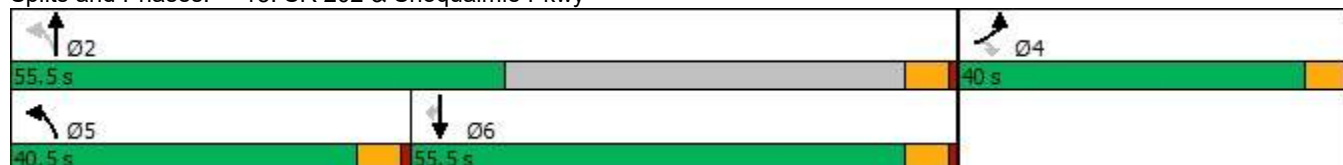
03/06/2020

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	630	345	223	293	281	292
Future Volume (vph)	630	345	223	293	281	292
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	300			300
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Right Turn on Red		Yes				Yes
Link Speed (mph)	40			45	45	
Link Distance (ft)	700			1127	949	
Travel Time (s)	11.9			17.1	14.4	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	7%	3%	3%	9%	9%	5%
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	5.0	7.0	7.0	7.0
Minimum Split (s)	29.0	29.0	10.5	12.5	35.5	35.5
Total Split (s)	40.0	40.0	40.5	55.5	55.5	55.5
Total Split (%)	29.4%	29.4%	29.8%	40.8%	40.8%	40.8%
Yellow Time (s)	4.0	4.0	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	Min	Min	Min

Intersection Summary













Area Type: Other
 Cycle Length: 136
 Actuated Cycle Length: 96
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated

Splits and Phases: 15: SR 202 & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 15: SR 202 & Snoqualmie Pkwy

03/06/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	630	345	223	293	281	292
Future Volume (veh/h)	630	345	223	293	281	292
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00			1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1796	1856	1856	1767	1767	1826
Adj Flow Rate, veh/h	788	82	279	366	351	50
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	7	3	3	9	9	5
Cap, veh/h	724	666	391	794	422	370
Arrive On Green	0.42	0.42	0.14	0.45	0.24	0.24
Sat Flow, veh/h	1711	1572	1767	1767	1767	1547
Grp Volume(v), veh/h	788	82	279	366	351	50
Grp Sat Flow(s),veh/h/ln	1711	1572	1767	1767	1767	1547
Q Serve(g_s), s	35.0	2.6	9.2	11.9	15.6	2.1
Cycle Q Clear(g_c), s	35.0	2.6	9.2	11.9	15.6	2.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	724	666	391	794	422	370
V/C Ratio(X)	1.09	0.12	0.71	0.46	0.83	0.14
Avail Cap(c_a), veh/h	724	666	884	1068	1068	936
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.8	14.5	19.7	15.8	29.9	24.7
Incr Delay (d2), s/veh	60.0	0.1	2.4	0.4	4.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.5	3.0	3.6	4.3	6.6	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	83.8	14.6	22.2	16.2	34.2	24.9
LnGrp LOS	F	B	C	B	C	C
Approach Vol, veh/h	870			645	401	
Approach Delay, s/veh	77.3			18.8	33.0	
Approach LOS	E			B	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		42.7		40.0	17.4	25.3
Change Period (Y+Rc), s		5.5		5.0	5.5	5.5
Max Green Setting (Gmax), s		50.0		35.0	35.0	50.0
Max Q Clear Time (g_c+I1), s		13.9		37.0	11.2	17.6
Green Ext Time (p_c), s		2.1		0.0	0.8	2.2
Intersection Summary						
HCM 6th Ctrl Delay			48.3			
HCM 6th LOS			D			

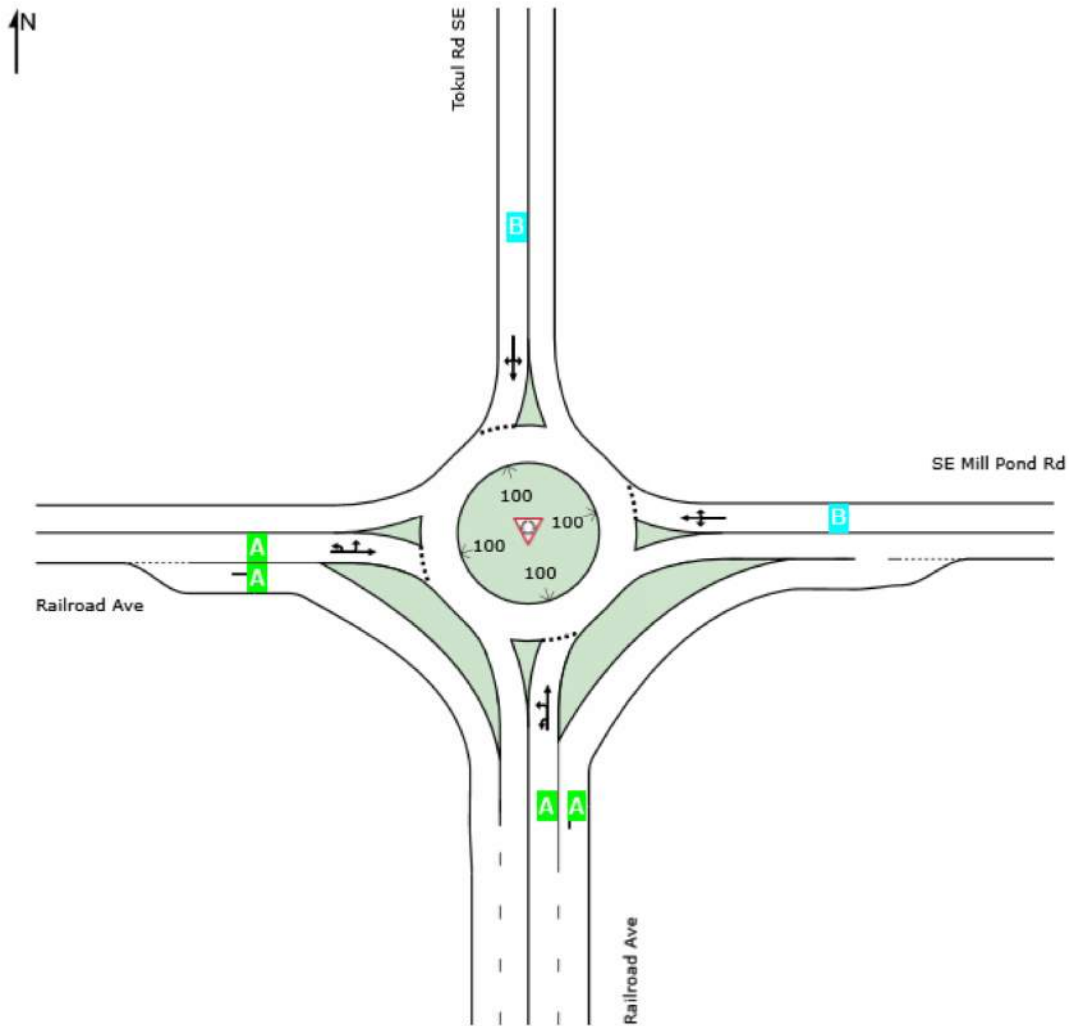
LANE LEVEL OF SERVICE

Lane Level of Service

Site: 16 [2032 With Redevelopment Alternative Planning Areas 1-3 - AM Peak Hour]

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	B	B	A	A



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Signalised Intersections.
 Lane LOS values are based on average delay per lane.
 Intersection and Approach LOS values are based on average delay for all lanes.
 SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

LANE SUMMARY

Site: 16 [2032 With Redevelopment Alternative Planning Areas 1-3 - AM Peak Hour]

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

Lane Use and Performance													
	Demand Flows			Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue		Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
	Total veh/h	HV %	Cap. veh/h					Veh	Dist ft				
South: Railroad Ave													
Lane 1 ^d	471	9.6	1295	0.363	100	9.9	LOS A	2.3	62.5	Full	1600	0.0	0.0
Lane 2	613	12.7	1486	0.413	100	3.8	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	1084	11.3		0.413		6.4	LOS A	2.3	62.5				
East: SE Mill Pond Rd													
Lane 1 ^d	327	19.0	802	0.408	100	11.3	LOS B	2.6	73.5	Full	1600	0.0	0.0
Approach	327	19.0		0.408		11.3	LOS B	2.6	73.5				
North: Tokul Rd SE													
Lane 1 ^d	39	0.0	761	0.051	100	10.1	LOS B	0.3	7.8	Full	1600	0.0	0.0
Approach	39	0.0		0.051		10.1	LOS B	0.3	7.8				
West: Railroad Ave													
Lane 1 ^d	275	9.9	1307	0.211	100	4.9	LOS A	1.2	33.3	Full	1600	0.0	0.0
Lane 2	465	6.1	1578	0.294	100	3.7	LOS A	0.0	0.0	Short	200	0.0	NA
Approach	740	7.5		0.294		4.1	LOS A	1.2	33.3				
Intersection	2189	11.0		0.413		6.4	LOS A	2.6	73.5				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

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Organisation: TENW | Processed: Tuesday, March 3, 2020 9:33:51 AM

Project: T:\Active Projects\Snoqualmie Mill - 5584\Planning - 5584\LOS\Snoqualmie Mill - Railroad Ave & Tokul Rd & SE Mill Pond Rd

Roundabout.sip8



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	100	4	20	31	3	24
Future Volume (vph)	100	4	20	31	3	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45		35			35
Link Distance (ft)	458		1466			541
Travel Time (s)	6.9		28.6			10.5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	0%	10%	3%	0%	4%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	5.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	100	4	20	31	3	24
Future Vol, veh/h	100	4	20	31	3	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	0	10	3	0	4
Mvmt Flow	105	4	21	33	3	25

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	69	38	0	0	54	0
Stage 1	38	-	-	-	-	-
Stage 2	31	-	-	-	-	-
Critical Hdwy	6.42	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	936	1040	-	-	1564	-
Stage 1	984	-	-	-	-	-
Stage 2	992	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	934	1040	-	-	1564	-
Mov Cap-2 Maneuver	934	-	-	-	-	-
Stage 1	984	-	-	-	-	-
Stage 2	990	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	0.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	938	1564
HCM Lane V/C Ratio	-	-	0.117	0.002
HCM Control Delay (s)	-	-	9.3	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	115	38	98	26	14	107
Future Volume (vph)	115	38	98	26	14	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		40	
Link Distance (ft)		502	1466		916	
Travel Time (s)		9.8	28.6		15.6	
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Heavy Vehicles (%)	1%	5%	2%	4%	7%	2%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	5.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	115	38	98	26	14	107
Future Vol, veh/h	115	38	98	26	14	107
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	69	69	69	69	69	69
Heavy Vehicles, %	1	5	2	4	7	2
Mvmt Flow	167	55	142	38	20	155

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	180	0	-	0	550 161
Stage 1	-	-	-	-	161 -
Stage 2	-	-	-	-	389 -
Critical Hdwy	4.11	-	-	-	6.47 6.22
Critical Hdwy Stg 1	-	-	-	-	5.47 -
Critical Hdwy Stg 2	-	-	-	-	5.47 -
Follow-up Hdwy	2.209	-	-	-	3.563 3.318
Pot Cap-1 Maneuver	1402	-	-	-	488 884
Stage 1	-	-	-	-	856 -
Stage 2	-	-	-	-	674 -
Platoon blocked, %	-	-	-	-	
Mov Cap-1 Maneuver	1402	-	-	-	428 884
Mov Cap-2 Maneuver	-	-	-	-	428 -
Stage 1	-	-	-	-	751 -
Stage 2	-	-	-	-	674 -

Approach	EB	WB	SB
HCM Control Delay, s	5.9	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1402	-	-	-	-	787
HCM Lane V/C Ratio	0.119	-	-	-	-	0.223
HCM Control Delay (s)	7.9	0	-	-	-	10.9
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0.4	-	-	-	-	0.9

Lanes, Volumes, Timings
19: Meadowbrook Bridge

03/02/2020

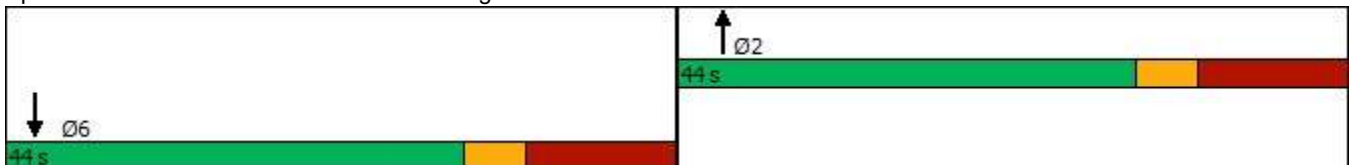


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	138	0	0	144
Future Volume (vph)	0	0	138	0	0	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			30
Link Distance (ft)	150		304			249
Travel Time (s)	3.4		6.9			5.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Shared Lane Traffic (%)						
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Detector Phase			2			6
Switch Phase						
Minimum Initial (s)			5.0			5.0
Minimum Split (s)			19.0			19.0
Total Split (s)			44.0			44.0
Total Split (%)			50.0%			50.0%
Yellow Time (s)			4.0			4.0
All-Red Time (s)			10.0			10.0
Lost Time Adjust (s)			0.0			0.0
Total Lost Time (s)			14.0			14.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode			None			None

Intersection Summary

Area Type: Other
 Cycle Length: 88
 Actuated Cycle Length: 40.3
 Natural Cycle: 40
 Control Type: Actuated-Uncoordinated

Splits and Phases: 19: Meadowbrook Bridge



HCM Signalized Intersection Capacity Analysis
 19: Meadowbrook Bridge

03/02/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	138	0	0	144
Future Volume (vph)	0	0	138	0	0	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			14.0			14.0
Lane Util. Factor			1.00			1.00
Flt			1.00			1.00
Flt Protected			1.00			1.00
Satd. Flow (prot)			1881			1881
Flt Permitted			1.00			1.00
Satd. Flow (perm)			1881			1881
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	150	0	0	157
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	150	0	0	157
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Actuated Green, G (s)			6.2			6.3
Effective Green, g (s)			6.2			6.3
Actuated g/C Ratio			0.15			0.16
Clearance Time (s)			14.0			14.0
Vehicle Extension (s)			2.0			2.0
Lane Grp Cap (vph)			287			292
v/s Ratio Prot			c0.08			c0.08
v/s Ratio Perm						
v/c Ratio			0.52			0.54
Uniform Delay, d1			15.8			15.8
Progression Factor			1.00			1.00
Incremental Delay, d2			0.8			1.0
Delay (s)			16.6			16.7
Level of Service			B			B
Approach Delay (s)	0.0		16.6			16.7
Approach LOS	A		B			B
Intersection Summary						
HCM 2000 Control Delay			16.6		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.53			
Actuated Cycle Length (s)			40.5		Sum of lost time (s)	28.0
Intersection Capacity Utilization			19.2%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Lanes, Volumes, Timings
 20: Meadowbrook Way SE & SE Park St

03/12/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	122	10	48	62	20	4	122	65	33	77	16
Future Volume (vph)	12	122	10	48	62	20	4	122	65	33	77	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		505			663			790			216	
Travel Time (s)		13.8			18.1			21.5			5.9	
Confl. Peds. (#/hr)	5		1			4	1			4		5
Peak Hour Factor	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Heavy Vehicles (%)	0%	7%	10%	10%	11%	0%	0%	1%	5%	3%	2%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	18.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	122	10	48	62	20	4	122	65	33	77	16
Future Vol, veh/h	12	122	10	48	62	20	4	122	65	33	77	16
Peak Hour Factor	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Heavy Vehicles, %	0	7	10	10	11	0	0	1	5	3	2	0
Mvmt Flow	24	249	20	98	127	41	8	249	133	67	157	33
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	17.5	17	21.5	16.1
HCM LOS	C	C	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %		2%	8%	37%
Vol Thru, %		64%	85%	48%
Vol Right, %		34%	7%	15%
Sign Control		Stop	Stop	Stop
Traffic Vol by Lane		191	144	130
LT Vol		4	12	48
Through Vol		122	122	62
RT Vol		65	10	20
Lane Flow Rate		390	294	265
Geometry Grp		1	1	1
Degree of Util (X)		0.676	0.544	0.509
Departure Headway (Hd)		6.239	6.67	6.906
Convergence, Y/N		Yes	Yes	Yes
Cap		577	538	517
Service Time		4.32	4.761	5
HCM Lane V/C Ratio		0.676	0.546	0.513
HCM Control Delay		21.5	17.5	17
HCM Lane LOS		C	C	C
HCM 95th-tile Q		5.1	3.2	2.9

Lanes, Volumes, Timings
 21: Meadowbrook Way SE & SR 202

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	295	57	10	323	62	79	92	22	26	66	16
Future Volume (vph)	24	295	57	10	323	62	79	92	22	26	66	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	0		0	150		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			40			35				25
Link Distance (ft)		615			663			738				518
Travel Time (s)		14.0			11.3			14.4				14.1
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles (%)	4%	9%	4%	0%	7%	0%	7%	1%	0%	0%	3%	20%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	33.3	33.3		30.3	30.3		32.8	32.8		32.8	32.8	
Total Split (s)	71.3	71.3		71.3	71.3		40.8	40.8		40.8	40.8	
Total Split (%)	63.6%	63.6%		63.6%	63.6%		36.4%	36.4%		36.4%	36.4%	
Yellow Time (s)	4.3	4.3		4.3	4.3		3.8	3.8		3.8	3.8	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.3	6.3		6.3	6.3			5.8		5.8	5.8	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Min	Min		Min	Min		None	None		None	None	

Intersection Summary

Area Type: Other

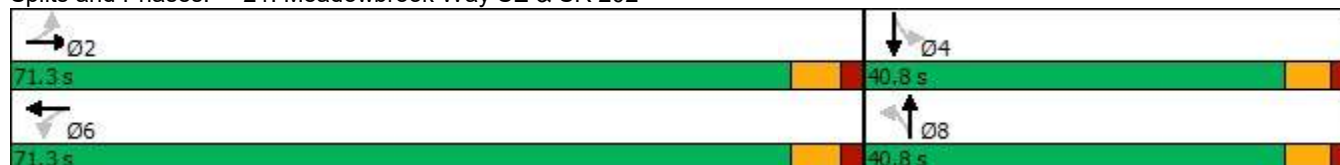
Cycle Length: 112.1

Actuated Cycle Length: 50.5

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Splits and Phases: 21: Meadowbrook Way SE & SR 202



HCM 6th Signalized Intersection Summary
 21: Meadowbrook Way SE & SR 202

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	295	57	10	323	62	79	92	22	26	66	16
Future Volume (veh/h)	24	295	57	10	323	62	79	92	22	26	66	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1767	1767	1900	1796	1796	1885	1885	1885	1900	1856	1856
Adj Flow Rate, veh/h	32	399	77	14	436	84	107	124	30	35	89	22
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Percent Heavy Veh, %	4	9	9	0	7	7	1	1	1	0	3	3
Cap, veh/h	367	637	123	401	647	125	255	212	43	507	347	86
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	868	1439	278	933	1464	282	507	877	180	1252	1437	355
Grp Volume(v), veh/h	32	0	476	14	0	520	261	0	0	35	0	111
Grp Sat Flow(s),veh/h/ln	868	0	1717	933	0	1746	1564	0	0	1252	0	1792
Q Serve(g_s), s	1.2	0.0	8.2	0.5	0.0	9.1	3.9	0.0	0.0	0.0	0.0	1.9
Cycle Q Clear(g_c), s	10.2	0.0	8.2	8.6	0.0	9.1	5.8	0.0	0.0	0.8	0.0	1.9
Prop In Lane	1.00		0.16	1.00		0.16	0.41		0.11	1.00		0.20
Lane Grp Cap(c), veh/h	367	0	759	401	0	772	510	0	0	507	0	433
V/C Ratio(X)	0.09	0.00	0.63	0.03	0.00	0.67	0.51	0.00	0.00	0.07	0.00	0.26
Avail Cap(c_a), veh/h	1456	0	2914	1572	0	2963	1559	0	0	1349	0	1638
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.5	0.0	8.2	11.6	0.0	8.5	13.2	0.0	0.0	11.3	0.0	11.7
Incr Delay (d2), s/veh	0.1	0.0	1.0	0.0	0.0	1.2	0.8	0.0	0.0	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	2.2	0.1	0.0	2.2	1.7	0.0	0.0	0.2	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.7	0.0	9.3	11.6	0.0	9.7	14.0	0.0	0.0	11.4	0.0	12.0
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	B
Approach Vol, veh/h		508			534			261			146	
Approach Delay, s/veh		9.5			9.8			14.0			11.9	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.2		15.1		23.2		15.1				
Change Period (Y+Rc), s		6.3		* 5.8		6.3		* 5.8				
Max Green Setting (Gmax), s		65.0		* 35		65.0		* 35				
Max Q Clear Time (g_c+I1), s		12.2		3.9		11.1		7.8				
Green Ext Time (p_c), s		4.7		0.8		4.6		1.6				
Intersection Summary												
HCM 6th Ctrl Delay				10.6								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 22: Meadowbrook Way SE & 384th Ave SE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	41	223	269	15	29	157
Future Volume (vph)	41	223	269	15	29	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		25	
Link Distance (ft)		158	180		181	
Travel Time (s)		3.1	3.5		4.9	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	2%	4%	2%	0%	0%	3%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	41	223	269	15	29	157
Future Vol, veh/h	41	223	269	15	29	157
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	4	2	0	0	3
Mvmt Flow	50	272	328	18	35	191

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	346	0	-	0	709 337
Stage 1	-	-	-	-	337 -
Stage 2	-	-	-	-	372 -
Critical Hdwy	4.12	-	-	-	6.4 6.23
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.218	-	-	-	3.5 3.327
Pot Cap-1 Maneuver	1213	-	-	-	404 703
Stage 1	-	-	-	-	728 -
Stage 2	-	-	-	-	702 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1213	-	-	-	384 703
Mov Cap-2 Maneuver	-	-	-	-	384 -
Stage 1	-	-	-	-	692 -
Stage 2	-	-	-	-	702 -

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	14.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1213	-	-	-	-	622
HCM Lane V/C Ratio	0.041	-	-	-	-	0.365
HCM Control Delay (s)	8.1	0	-	-	-	14.1
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	-	1.7

Lanes, Volumes, Timings
 23: SE North Bend Way & Meadowbrook Way SE

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	43	383	193	68	196	57
Future Volume (vph)	43	383	193	68	196	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	450	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Link Speed (mph)	35		50			50
Link Distance (ft)	158		253			593
Travel Time (s)	3.1		3.5			8.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	2%	4%	4%	3%	13%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↘	↑	↘	↘	↑
Traffic Vol, veh/h	43	383	193	68	196	57
Future Vol, veh/h	43	383	193	68	196	57
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	Free	-	None
Storage Length	0	0	-	0	450	-
Veh in Median Storage, #1	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	7	2	4	4	3	13
Mvmt Flow	47	416	210	74	213	62

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	698	-	0	-	210
Stage 1	210	-	-	-	-
Stage 2	488	-	-	-	-
Critical Hdwy	6.47	-	-	-	4.13
Critical Hdwy Stg 1	5.47	-	-	-	-
Critical Hdwy Stg 2	5.47	-	-	-	-
Follow-up Hdwy	3.563	-	-	-	2.227
Pot Cap-1 Maneuver	399	0	-	0	1355
Stage 1	813	0	-	0	-
Stage 2	607	0	-	0	-
Platoon blocked, %			-		-
Mov Cap-1 Maneuver	336	-	-	-	1355
Mov Cap-2 Maneuver	424	-	-	-	-
Stage 1	813	-	-	-	-
Stage 2	512	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.5	0	6.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn	WBLn2	SBL	SBT
Capacity (veh/h)	-	424	-	1355	-
HCM Lane V/C Ratio	-	0.11	-	0.157	-
HCM Control Delay (s)	-	14.5	0	8.2	-
HCM Lane LOS	-	B	A	A	-
HCM 95th %tile Q(veh)	-	0.4	-	0.6	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	111	167	10	529	232
Future Volume (vph)	2	111	167	10	529	232
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	804		935			756
Travel Time (s)	21.9		18.2			14.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	23%	0%	5%	13%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	2	111	167	10	529	232
Future Vol, veh/h	2	111	167	10	529	232
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	23	0	5	13
Mvmt Flow	2	121	182	11	575	252

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1590	188	0	0	193	0
Stage 1	188	-	-	-	-	-
Stage 2	1402	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.15	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.245	-
Pot Cap-1 Maneuver	120	859	-	-	1362	-
Stage 1	849	-	-	-	-	-
Stage 2	230	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	61	859	-	-	1362	-
Mov Cap-2 Maneuver	61	-	-	-	-	-
Stage 1	849	-	-	-	-	-
Stage 2	117	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	6.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	698	1362
HCM Lane V/C Ratio	-	-	0.176	0.422
HCM Control Delay (s)	-	-	11.3	9.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.6	2.1



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	6	22	155	6	37	197
Future Volume (vph)	6	22	155	6	37	197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	796		476			935
Travel Time (s)	21.7		9.3			18.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	25%	0%	0%	15%
Shared Lane Traffic (%)						
Sign Control	Yield		Yield			Yield

Intersection Summary

Area Type: Other
 Control Type: Roundabout

Lanes, Volumes, Timings
 26: SE Mill Pond Rd & North Driveway

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	8	36	125	9	41	162
Future Volume (vph)	8	36	125	9	41	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	769		376			476
Travel Time (s)	21.0		7.3			9.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	30%	0%	0%	18%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	8	36	125	9	41	162
Future Vol, veh/h	8	36	125	9	41	162
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	30	0	0	18
Mvmt Flow	9	39	136	10	45	176

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	407	141	0	0	146	0
Stage 1	141	-	-	-	-	-
Stage 2	266	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	604	912	-	-	1448	-
Stage 1	891	-	-	-	-	-
Stage 2	783	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	583	912	-	-	1448	-
Mov Cap-2 Maneuver	583	-	-	-	-	-
Stage 1	891	-	-	-	-	-
Stage 2	756	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	1.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	827	1448
HCM Lane V/C Ratio	-	-	0.058	0.031
HCM Control Delay (s)	-	-	9.6	7.6
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1

Lanes, Volumes, Timings
 27: SE Mill Pond Rd & South Driveway

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	8	35	99	9	42	128
Future Volume (vph)	8	35	99	9	42	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	721		317			376
Travel Time (s)	19.7		6.2			7.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	38%	0%	0%	20%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	8	35	99	9	42	128
Future Vol, veh/h	8	35	99	9	42	128
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	38	0	0	20
Mvmt Flow	9	38	108	10	46	139

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	344	113	0	0	118	0
Stage 1	113	-	-	-	-	-
Stage 2	231	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	657	945	-	-	1483	-
Stage 1	917	-	-	-	-	-
Stage 2	812	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	635	945	-	-	1483	-
Mov Cap-2 Maneuver	635	-	-	-	-	-
Stage 1	917	-	-	-	-	-
Stage 2	784	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	1.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	866	1483
HCM Lane V/C Ratio	-	-	0.054	0.031
HCM Control Delay (s)	-	-	9.4	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	15	0	108	75	0	136
Future Volume (vph)	15	0	108	75	0	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	701		575			216
Travel Time (s)	19.1		11.2			4.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	35%	0%	0%	19%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	15	0	108	75	0	136
Future Vol, veh/h	15	0	108	75	0	136
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	35	0	0	19
Mvmt Flow	16	0	117	82	0	148

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	306	158	0	0	199
Stage 1	158	-	-	-	-
Stage 2	148	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	690	893	-	-	1385
Stage 1	875	-	-	-	-
Stage 2	884	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	690	893	-	-	1385
Mov Cap-2 Maneuver	690	-	-	-	-
Stage 1	875	-	-	-	-
Stage 2	884	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	690	1385
HCM Lane V/C Ratio	-	-	0.024	-
HCM Control Delay (s)	-	-	10.3	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Lanes, Volumes, Timings
1: SR-18 & I-90 EB Ramps

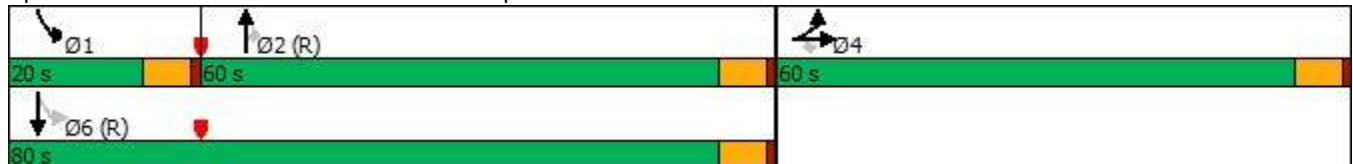
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	842	2	764	0	0	0	0	228	440	163	891	0	
Future Volume (vph)	842	2	764	0	0	0	0	228	440	163	891	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650		0	0		0	0		300	200			0
Storage Lanes	1		1	0		0	0		1	1			0
Taper Length (ft)	25			25			25			25			
Right Turn on Red			Yes			Yes			Yes				Yes
Link Speed (mph)		35			35			45				30	
Link Distance (ft)		833			764			1837				778	
Travel Time (s)		16.2			14.9			27.8				17.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	0%	4%	0%	0%	0%	0%	3%	27%	5%	12%	0%	
Shared Lane Traffic (%)	50%												
Turn Type	Split	NA	Perm					NA	Perm	pm+pt	NA		
Protected Phases	4	4						2		1	6		
Permitted Phases			4						2	6			
Detector Phase	4	4	4					2	2	1	6		
Switch Phase													
Minimum Initial (s)	5.0	5.0	5.0					10.0	10.0	3.0	10.0		
Minimum Split (s)	29.0	29.0	29.0					16.0	16.0	9.0	23.0		
Total Split (s)	60.0	60.0	60.0					60.0	60.0	20.0	80.0		
Total Split (%)	42.9%	42.9%	42.9%					42.9%	42.9%	14.3%	57.1%		
Yellow Time (s)	5.0	5.0	5.0					5.0	5.0	5.0	5.0		
All-Red Time (s)	1.0	1.0	1.0					1.0	1.0	1.0	1.0		
Lost Time Adjust (s)	0.0	0.0	0.0					0.0	0.0	0.0	0.0		
Total Lost Time (s)	6.0	6.0	6.0					6.0	6.0	6.0	6.0		
Lead/Lag								Lag	Lag	Lead			
Lead-Lag Optimize?								Yes	Yes	Yes			
Recall Mode	None	None	None					C-Min	C-Min	None	C-Min		

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated

Splits and Phases: 1: SR-18 & I-90 EB Ramps



HCM 6th Signalized Intersection Summary

1: SR-18 & I-90 EB Ramps

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	842	2	764	0	0	0	0	228	440	163	891	0
Future Volume (veh/h)	842	2	764	0	0	0	0	228	440	163	891	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1841				0	1856	1500	1826	1722	0
Adj Flow Rate, veh/h	869	0	0				0	235	0	168	919	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	0	4				0	3	27	5	12	0
Cap, veh/h	1168	0					0	892		614	1919	0
Arrive On Green	0.33	0.00	0.00				0.00	0.48	0.00	0.06	0.59	0.00
Sat Flow, veh/h	3563	0	1560				0	1856	1271	1739	3358	0
Grp Volume(v), veh/h	869	0	0				0	235	0	168	919	0
Grp Sat Flow(s),veh/h/ln	1781	0	1560				0	1856	1271	1739	1636	0
Q Serve(g_s), s	30.4	0.0	0.0				0.0	10.5	0.0	6.6	22.6	0.0
Cycle Q Clear(g_c), s	30.4	0.0	0.0				0.0	10.5	0.0	6.6	22.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1168	0					0	892		614	1919	0
V/C Ratio(X)	0.74	0.00					0.00	0.26		0.27	0.48	0.00
Avail Cap(c_a), veh/h	1374	0					0	892		679	1919	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				0.00	1.00	0.00	0.63	0.63	0.00
Uniform Delay (d), s/veh	41.8	0.0	0.0				0.0	21.6	0.0	15.8	16.6	0.0
Incr Delay (d2), s/veh	4.3	0.0	0.0				0.0	0.7	0.0	0.2	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.9	0.0	0.0				0.0	4.6	0.0	2.7	8.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.1	0.0	0.0				0.0	22.3	0.0	16.0	17.2	0.0
LnGrp LOS	D	A					A	C		B	B	A
Approach Vol, veh/h		869	A					235	A		1087	
Approach Delay, s/veh		46.1						22.3			17.0	
Approach LOS		D						C			B	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	14.8	73.3		51.9				88.1				
Change Period (Y+Rc), s	6.0	6.0		6.0				6.0				
Max Green Setting (Gmax), s	14.0	54.0		54.0				74.0				
Max Q Clear Time (g_c+I1), s	8.6	12.5		32.4				24.6				
Green Ext Time (p_c), s	0.2	1.6		13.5				10.3				
Intersection Summary												
HCM 6th Ctrl Delay			29.1									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

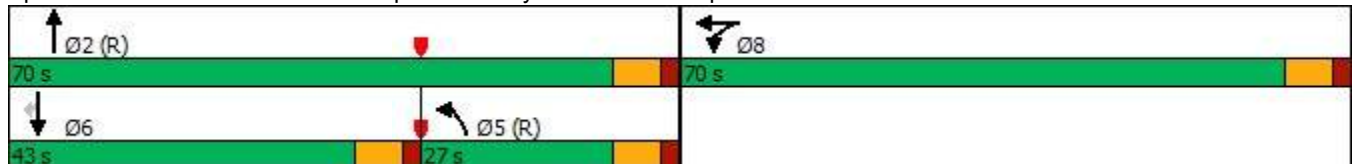
03/06/2020

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group												
Lane Configurations				↖	↕		↖	↕			↕	↖
Traffic Volume (vph)	0	0	0	455	2	89	105	1103	0	0	506	603
Future Volume (vph)	0	0	0	455	2	89	105	1103	0	0	506	603
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		0	0		0
Storage Lanes	0		0	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30				30
Link Distance (ft)		893			705			778				878
Travel Time (s)		17.4			13.7			17.7				20.0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	20%	100%	2%	0%	2%	0%	0%	5%	2%
Shared Lane Traffic (%)				39%								
Turn Type				Split	NA		Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases												6
Detector Phase				8	8		5	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	7.0			7.0	7.0
Minimum Split (s)				12.0	12.0		12.0	14.0			24.0	24.0
Total Split (s)				70.0	70.0		27.0	70.0			43.0	43.0
Total Split (%)				50.0%	50.0%		19.3%	50.0%			30.7%	30.7%
Yellow Time (s)				5.0	5.0		5.0	5.0			5.0	5.0
All-Red Time (s)				2.0	2.0		2.0	2.0			2.0	2.0
Lost Time Adjust (s)				0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)				7.0	7.0		7.0	7.0			7.0	7.0
Lead/Lag							Lag				Lead	Lead
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None		C-Max	C-Min			None	None

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 53 (38%), Referenced to phase 2:NBT and 5:NBL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps





















HCM 6th Signalized Intersection Summary
 2: SR-18/Snoqualmie Pkwy & I-90 WB Ramps

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	455	2	89	105	1103	0	0	506	603
Future Volume (veh/h)	0	0	0	455	2	89	105	1103	0	0	506	603
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1604	418	1604	1900	1870	0	0	1826	1870
Adj Flow Rate, veh/h				556	0	0	108	1137	0	0	522	0
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				20	100	20	0	2	0	0	5	2
Cap, veh/h				721	99	0	133	2359	0	0	987	
Arrive On Green				0.24	0.00	0.00	0.07	0.66	0.00	0.00	0.54	0.00
Sat Flow, veh/h				3054	418	0	1810	3647	0	0	1826	1585
Grp Volume(v), veh/h				556	0	0	108	1137	0	0	522	0
Grp Sat Flow(s),veh/h/ln				1527	418	0	1810	1777	0	0	1826	1585
Q Serve(g_s), s				23.8	0.0	0.0	8.2	22.1	0.0	0.0	25.8	0.0
Cycle Q Clear(g_c), s				23.8	0.0	0.0	8.2	22.1	0.0	0.0	25.8	0.0
Prop In Lane				1.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				721	99	0	133	2359	0	0	987	
V/C Ratio(X)				0.77	0.00	0.00	0.81	0.48	0.00	0.00	0.53	
Avail Cap(c_a), veh/h				1375	188	0	259	2359	0	0	987	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	0.00	0.86	0.86	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				49.9	0.0	0.0	63.9	11.6	0.0	0.0	20.7	0.0
Incr Delay (d2), s/veh				6.2	0.0	0.0	11.6	0.6	0.0	0.0	0.7	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				9.7	0.0	0.0	4.2	8.7	0.0	0.0	11.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				56.1	0.0	0.0	75.5	12.2	0.0	0.0	21.4	0.0
LnGrp LOS				E	A	A	E	B	A	A	C	
Approach Vol, veh/h					556			1245			522	A
Approach Delay, s/veh					56.1			17.7			21.4	
Approach LOS					E			B			C	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		99.9			17.3	82.7		40.1				
Change Period (Y+Rc), s		7.0			7.0	7.0		7.0				
Max Green Setting (Gmax), s		63.0			20.0	36.0		63.0				
Max Q Clear Time (g_c+I1), s		24.1			10.2	27.8		25.8				
Green Ext Time (p_c), s		15.5			0.2	2.8		7.3				
Intersection Summary												
HCM 6th Ctrl Delay				27.8								
HCM 6th LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
 3: Snoqualmie Pkwy & SE 99th St

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	0	40	1	0	2	7	1242	0	0	1041	10
Future Volume (vph)	14	0	40	1	0	2	7	1242	0	0	1041	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	0		0	0		0	125		0	25		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		989			884			878			457	
Travel Time (s)		27.0			24.1			20.0			10.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	2%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	14	0	40	1	0	2	7	1242	0	0	1041	10
Future Vol, veh/h	14	0	40	1	0	2	7	1242	0	0	1041	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	25	-	-
Veh in Median Storage, #-	0	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	3	0	0	2	0
Mvmt Flow	15	0	42	1	0	2	7	1307	0	0	1096	11

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	1770	2423	554	1869	2428	654	1107	0	0	1307	0	0
Stage 1	1102	1102	-	1321	1321	-	-	-	-	-	-	-
Stage 2	668	1321	-	548	1107	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	54	33	481	45	32	414	638	-	-	536	-	-
Stage 1	229	290	-	168	228	-	-	-	-	-	-	-
Stage 2	419	228	-	493	288	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	53	33	481	41	32	414	638	-	-	536	-	-
Mov Cap-2 Maneuver	53	33	-	41	32	-	-	-	-	-	-	-
Stage 1	226	290	-	166	225	-	-	-	-	-	-	-
Stage 2	412	225	-	450	288	-	-	-	-	-	-	-

Approach	EB		WB			NB		SB		
HCM Control Delay, s	41.1		41.1			0.1		0		
HCM LOS	E		E							

Minor Lane/Major Mvmt	NBL	NBT	NBREBLn	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	638	-	-	155	103	536	-
HCM Lane V/C Ratio	0.012	-	-	0.367	0.031	-	-
HCM Control Delay (s)	10.7	-	-	41.1	41.1	0	-
HCM Lane LOS	B	-	-	E	E	A	-
HCM 95th %tile Q(veh)	0	-	-	1.5	0.1	0	-

Lanes, Volumes, Timings
 4: Snoqualmie Pkwy & SE 96th St

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	25	61	1140	45	39	1021
Future Volume (vph)	25	61	1140	45	39	1021
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				25	
Link Speed (mph)	30		40			40
Link Distance (ft)	346		677			718
Travel Time (s)	7.9		11.5			12.2
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	2%	0%	0%	3%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↑↑		↔	↑↑
Traffic Vol, veh/h	25	61	1140	45	39	1021
Future Vol, veh/h	25	61	1140	45	39	1021
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	200	-
Veh in Median Storage, #1	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	2	0	0	3
Mvmt Flow	28	69	1295	51	44	1160

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1989	673	0	0	1346	0
Stage 1	1321	-	-	-	-	-
Stage 2	668	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	54	402	-	-	518	-
Stage 1	217	-	-	-	-	-
Stage 2	477	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	49	402	-	-	518	-
Mov Cap-2 Maneuver	152	-	-	-	-	-
Stage 1	217	-	-	-	-	-
Stage 2	436	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.1	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	152	402	518	-
HCM Lane V/C Ratio	-	-	0.187	0.172	0.086	-
HCM Control Delay (s)	-	-	34.1	15.8	12.6	-
HCM Lane LOS	-	-	D	C	B	-
HCM 95th %tile Q(veh)	-	-	0.7	0.6	0.3	-

Lanes, Volumes, Timings
5: Snoqualmie Pkwy & SE Jacobia St

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	8	66	31	1	52	113	1025	88	75	934	24
Future Volume (vph)	22	8	66	31	1	52	113	1025	88	75	934	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	150		0	250		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			40			40	
Link Distance (ft)		653			474			718			617	
Travel Time (s)		17.8			12.9			12.2			10.5	
Confl. Peds. (#/hr)	2		2	2		2	1					1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	0%	2%	0%	1%	4%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	15.0		5.0	16.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		10.5	22.5		10.5	22.5	
Total Split (s)	25.0	25.0		40.0	40.0		15.5	65.5		15.5	65.5	
Total Split (%)	20.7%	20.7%		33.1%	33.1%		12.8%	54.1%		12.8%	54.1%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.5	4.5		4.5	4.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.5	5.5		5.5	5.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other

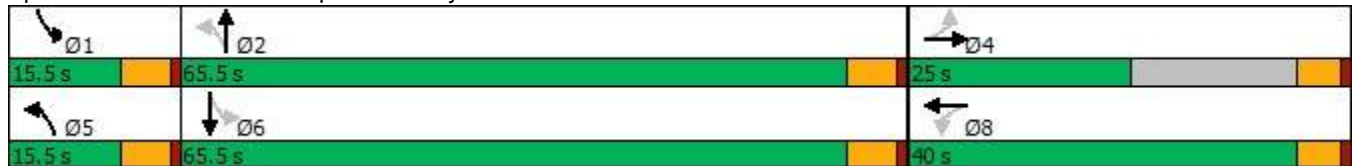
Cycle Length: 121

Actuated Cycle Length: 65.2

Natural Cycle: 80























Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Snoqualmie Pkwy & SE Jacobia St



HCM 6th Signalized Intersection Summary
 5: Snoqualmie Pkwy & SE Jacobia St

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	8	66	31	1	52	113	1025	88	75	934	24
Future Volume (veh/h)	22	8	66	31	1	52	113	1025	88	75	934	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1870	1870	1885	1841	1841
Adj Flow Rate, veh/h	23	9	70	33	1	55	120	1090	94	80	994	26
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	2	2	1	4	4
Cap, veh/h	247	22	171	227	3	187	450	1761	152	387	1810	47
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.08	0.53	0.53	0.06	0.52	0.52
Sat Flow, veh/h	1363	186	1445	1336	29	1578	1810	3310	285	1795	3482	91
Grp Volume(v), veh/h	23	0	79	33	0	56	120	585	599	80	499	521
Grp Sat Flow(s),veh/h/ln	1363	0	1631	1336	0	1607	1810	1777	1819	1795	1749	1824
Q Serve(g_s), s	0.9	0.0	2.5	1.3	0.0	1.8	1.6	12.8	12.9	1.1	10.7	10.7
Cycle Q Clear(g_c), s	2.7	0.0	2.5	3.8	0.0	1.8	1.6	12.8	12.9	1.1	10.7	10.7
Prop In Lane	1.00		0.89	1.00		0.98	1.00		0.16	1.00		0.05
Lane Grp Cap(c), veh/h	247	0	193	227	0	190	450	945	967	387	909	949
V/C Ratio(X)	0.09	0.00	0.41	0.15	0.00	0.29	0.27	0.62	0.62	0.21	0.55	0.55
Avail Cap(c_a), veh/h	573	0	583	905	0	1005	637	1906	1951	594	1876	1957
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.7	0.0	22.8	24.6	0.0	22.5	6.2	9.1	9.1	6.7	9.0	9.0
Incr Delay (d2), s/veh	0.2	0.0	1.4	0.3	0.0	0.9	0.1	0.9	0.9	0.1	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	1.0	0.4	0.0	0.7	0.4	3.7	3.7	0.3	3.1	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.9	0.0	24.2	24.9	0.0	23.4	6.3	10.1	10.1	6.8	9.8	9.7
LnGrp LOS	C	A	C	C	A	C	A	B	B	A	A	A
Approach Vol, veh/h		102			89			1304			1100	
Approach Delay, s/veh		24.2			23.9			9.7			9.5	
Approach LOS		C			C			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.1	35.3		11.6	9.7	34.6		11.6				
Change Period (Y+Rc), s	5.5	5.5		5.0	5.5	5.5		5.0				
Max Green Setting (Gmax), s	10.0	60.0		20.0	10.0	60.0		35.0				
Max Q Clear Time (g_c+I1), s	3.1	14.9		4.7	3.6	12.7		5.8				
Green Ext Time (p_c), s	0.0	14.9		0.4	0.1	11.8		0.4				
Intersection Summary												
HCM 6th Ctrl Delay	10.7											
HCM 6th LOS	B											
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
6: Snoqualmie Pkwy & SE Swenson Dr

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	15	26	19	10	60	33	935	39	88	1102	82
Future Volume (vph)	85	15	26	19	10	60	33	935	39	88	1102	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	275		0	300		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			No
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		456			320			2254			367	
Travel Time (s)		10.4			7.3			38.4			6.3	
Confl. Peds. (#/hr)			2			9	2					2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	0%	0%	0%	0%	0%	0%	2%	0%	0%	3%	2%
Shared Lane Traffic (%)												
Turn Type	Split	NA		Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		10.0	10.0		5.0	12.0		5.0	12.0	
Minimum Split (s)	38.0	38.0		38.0	38.0		12.0	28.0		12.0	28.0	
Total Split (s)	15.0	15.0		20.0	20.0		37.0	67.0		37.0	67.0	
Total Split (%)	10.8%	10.8%		14.4%	14.4%		26.6%	48.2%		26.6%	48.2%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		7.0	7.0		7.0	7.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other

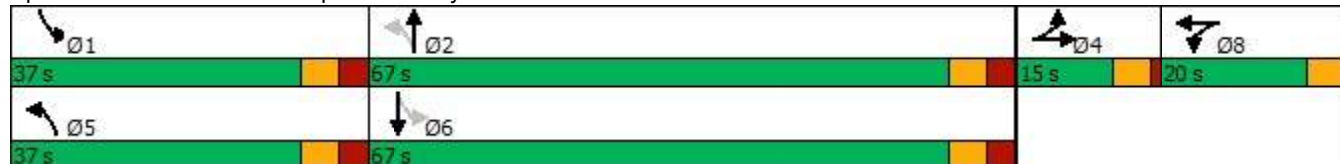
Cycle Length: 139

Actuated Cycle Length: 87.3

Natural Cycle: 140























Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Snoqualmie Pkwy & SE Swenson Dr



HCM 6th Signalized Intersection Summary
6: Snoqualmie Pkwy & SE Swenson Dr

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	15	26	19	10	60	33	935	39	88	1102	82
Future Volume (veh/h)	85	15	26	19	10	60	33	935	39	88	1102	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1900	1900	1900	1900	1900	1870	1870	1900	1856	1856
Adj Flow Rate, veh/h	91	16	28	20	11	65	35	1005	42	95	1185	88
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	0	0	0	0	0	0	2	2	0	3	3
Cap, veh/h	150	52	91	241	31	184	194	1253	52	275	1287	95
Arrive On Green	0.08	0.08	0.08	0.13	0.13	0.13	0.04	0.36	0.36	0.06	0.39	0.39
Sat Flow, veh/h	1781	617	1080	1810	235	1386	1810	3475	145	1810	3326	247
Grp Volume(v), veh/h	91	0	44	20	0	76	35	514	533	95	627	646
Grp Sat Flow(s),veh/h/ln	1781	0	1697	1810	0	1621	1810	1777	1844	1810	1763	1810
Q Serve(g_s), s	3.3	0.0	1.6	0.6	0.0	2.8	0.8	17.3	17.3	2.1	22.6	22.6
Cycle Q Clear(g_c), s	3.3	0.0	1.6	0.6	0.0	2.8	0.8	17.3	17.3	2.1	22.6	22.6
Prop In Lane	1.00		0.64	1.00		0.86	1.00		0.08	1.00		0.14
Lane Grp Cap(c), veh/h	150	0	142	241	0	215	194	640	665	275	682	700
V/C Ratio(X)	0.61	0.00	0.31	0.08	0.00	0.35	0.18	0.80	0.80	0.34	0.92	0.92
Avail Cap(c_a), veh/h	268	0	255	408	0	365	944	1601	1662	978	1589	1632
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.4	0.0	28.7	25.3	0.0	26.3	15.9	19.2	19.2	14.4	19.4	19.5
Incr Delay (d2), s/veh	1.5	0.0	0.5	0.1	0.0	0.4	0.2	0.9	0.9	0.3	2.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.7	0.3	0.0	1.1	0.3	6.3	6.5	0.8	8.2	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.9	0.0	29.1	25.4	0.0	26.6	16.1	20.1	20.0	14.7	21.7	21.7
LnGrp LOS	C	A	C	C	A	C	B	C	C	B	C	C
Approach Vol, veh/h		135			96			1082			1368	
Approach Delay, s/veh		30.3			26.4			19.9			21.2	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.1	31.0		10.6	9.4	32.7		13.9				
Change Period (Y+Rc), s	7.0	7.0		5.0	7.0	7.0		5.0				
Max Green Setting (Gmax), s	30.0	60.0		10.0	30.0	60.0		15.0				
Max Q Clear Time (g_c+I1), s	4.1	19.3		5.3	2.8	24.6		4.8				
Green Ext Time (p_c), s	0.0	0.9		0.0	0.0	1.1		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				21.3								
HCM 6th LOS				C								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	316	695	133	64	796	82	253	58	92	89	23	137
Future Volume (vph)	316	695	133	64	796	82	253	58	92	89	23	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	175		0	0		150	0		100
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1285			1065			585			583	
Travel Time (s)		21.9			18.2			16.0			15.9	
Confl. Peds. (#/hr)	5					5						3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	1%	1%	2%	0%	4%	0%	2%	0%	0%	4%	0%	1%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4			8					2			6
Detector Phase	7	4		3	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	35.3		9.5	30.3		36.5	36.5	36.5	36.5	36.5	36.5
Total Split (s)	34.5	55.3		14.5	55.3		44.5	44.5	44.5	44.5	44.5	44.5
Total Split (%)	19.3%	30.9%		8.1%	30.9%		24.9%	24.9%	24.9%	24.9%	24.9%	24.9%
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.3		4.5	5.3			4.5	4.5		4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None	None	None	None	None

Intersection Summary

Area Type: Other

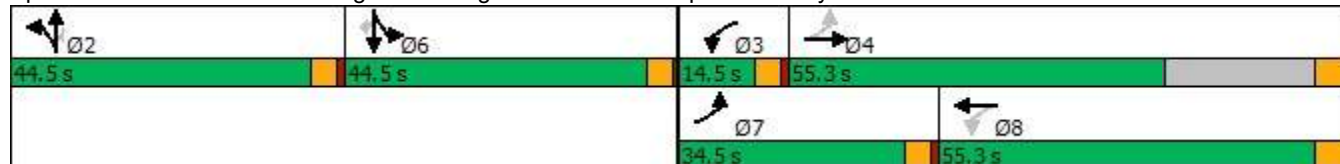
Cycle Length: 178.8

Actuated Cycle Length: 142.5

Natural Cycle: 140

Control Type: Actuated-Uncoordinated

Splits and Phases: 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 7: SE Douglas St/Douglas Ave SE & Snoqualmie Pkwy

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	316	695	133	64	796	82	253	58	92	89	23	137
Future Volume (veh/h)	316	695	133	64	796	82	253	58	92	89	23	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1841	1841	1900	1900	1900	1900	1900	1885
Adj Flow Rate, veh/h	326	716	137	66	821	85	261	60	42	92	24	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	0	4	4	0	0	0	0	0	1
Cap, veh/h	404	1319	252	333	1099	114	317	73	344	139	36	153
Arrive On Green	0.14	0.44	0.44	0.04	0.34	0.34	0.21	0.21	0.21	0.10	0.10	0.00
Sat Flow, veh/h	1795	2996	573	1810	3196	331	1485	341	1610	1449	378	1598
Grp Volume(v), veh/h	326	428	425	66	449	457	321	0	42	116	0	0
Grp Sat Flow(s),veh/h/ln	1795	1791	1778	1810	1749	1778	1826	0	1610	1828	0	1598
Q Serve(g_s), s	10.0	16.1	16.1	2.1	20.7	20.7	15.3	0.0	1.9	5.6	0.0	0.0
Cycle Q Clear(g_c), s	10.0	16.1	16.1	2.1	20.7	20.7	15.3	0.0	1.9	5.6	0.0	0.0
Prop In Lane	1.00		0.32	1.00		0.19	0.81		1.00	0.79		1.00
Lane Grp Cap(c), veh/h	404	788	783	333	601	611	390	0	344	175	0	153
V/C Ratio(X)	0.81	0.54	0.54	0.20	0.75	0.75	0.82	0.00	0.12	0.66	0.00	0.00
Avail Cap(c_a), veh/h	741	980	973	450	957	973	799	0	705	800	0	699
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.5	18.8	18.8	18.1	26.5	26.5	34.3	0.0	29.0	39.9	0.0	0.0
Incr Delay (d2), s/veh	3.8	0.8	0.8	0.3	2.7	2.6	4.4	0.0	0.2	4.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	6.3	6.3	0.9	8.5	8.6	7.2	0.0	0.7	2.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.4	19.6	19.7	18.4	29.1	29.1	38.7	0.0	29.2	44.1	0.0	0.0
LnGrp LOS	C	B	B	B	C	C	D	A	C	D	A	A
Approach Vol, veh/h		1179			972			363			116	
Approach Delay, s/veh		20.4			28.4			37.6			44.1	
Approach LOS		C			C			D			D	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.0	8.6	45.5		13.3	17.4	36.7				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		40.0	10.0	50.0		40.0	30.0	50.0				
Max Q Clear Time (g_c+I1), s		17.3	4.1	18.1		7.6	12.0	22.7				
Green Ext Time (p_c), s		2.2	0.0	8.5		0.7	0.9	8.7				
Intersection Summary												
HCM 6th Ctrl Delay				26.8								
HCM 6th LOS				C								

Lanes, Volumes, Timings
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

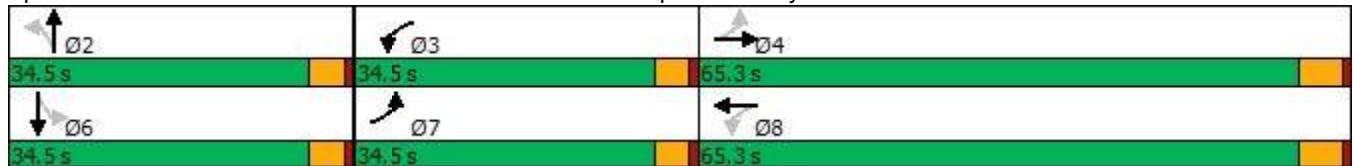
03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	226	651	43	121	719	84	97	42	123	103	49	129
Future Volume (vph)	226	651	43	121	719	84	97	42	123	103	49	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	275		0	275		0	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1065			1064			511			626	
Travel Time (s)		18.2			18.1			13.9			17.1	
Confl. Peds. (#/hr)	1					1	7		3	3		7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	2%	0%	4%	0%	0%	0%	1%	0%	0%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	34.3		9.5	34.3		36.5	36.5		36.5	36.5	
Total Split (s)	34.5	65.3		34.5	65.3		34.5	34.5		34.5	34.5	
Total Split (%)	25.7%	48.6%		25.7%	48.6%		25.7%	25.7%		25.7%	25.7%	
Yellow Time (s)	3.5	4.3		3.5	4.3		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	5.3		4.5	5.3		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	

Intersection Summary

























Area Type: Other
 Cycle Length: 134.3
 Actuated Cycle Length: 68.9
 Natural Cycle: 85
 Control Type: Actuated-Uncoordinated

Splits and Phases: 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 8: SE Center St/Center Blvd SE & Snoqualmie Pkwy

03/06/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	226	651	43	121	719	84	97	42	123	103	49	129
Future Volume (veh/h)	226	651	43	121	719	84	97	42	123	103	49	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1900	1841	1841	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	235	678	45	126	749	88	101	44	128	107	51	134
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	0	4	4	0	0	0	0	0	0
Cap, veh/h	461	1433	95	465	1201	141	322	109	318	333	118	311
Arrive On Green	0.12	0.42	0.42	0.07	0.38	0.38	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1810	3382	224	1810	3152	370	1211	426	1239	1226	461	1210
Grp Volume(v), veh/h	235	356	367	126	415	422	101	0	172	107	0	185
Grp Sat Flow(s),veh/h/ln	1810	1777	1830	1810	1749	1774	1211	0	1665	1226	0	1670
Q Serve(g_s), s	4.4	8.4	8.4	2.4	11.3	11.3	4.4	0.0	5.0	4.6	0.0	5.4
Cycle Q Clear(g_c), s	4.4	8.4	8.4	2.4	11.3	11.3	9.8	0.0	5.0	9.6	0.0	5.4
Prop In Lane	1.00		0.12	1.00		0.21	1.00		0.74	1.00		0.72
Lane Grp Cap(c), veh/h	461	753	775	465	666	676	322	0	428	333	0	429
V/C Ratio(X)	0.51	0.47	0.47	0.27	0.62	0.62	0.31	0.00	0.40	0.32	0.00	0.43
Avail Cap(c_a), veh/h	1178	1825	1879	1259	1796	1821	633	0	855	648	0	858
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.1	12.1	12.1	9.7	14.7	14.7	22.2	0.0	18.0	22.0	0.0	18.1
Incr Delay (d2), s/veh	0.9	0.7	0.6	0.3	1.4	1.4	0.5	0.0	0.6	0.6	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	2.8	2.9	0.8	3.9	4.0	1.2	0.0	1.9	1.3	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.0	12.8	12.8	10.0	16.0	16.0	22.8	0.0	18.6	22.5	0.0	18.8
LnGrp LOS	B	B	B	A	B	B	C	A	B	C	A	B
Approach Vol, veh/h		958			963			273				292
Approach Delay, s/veh		12.3			15.2			20.1				20.2
Approach LOS		B			B			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		19.5	8.9	30.1		19.5	11.4	27.6				
Change Period (Y+Rc), s		4.5	4.5	5.3		4.5	4.5	5.3				
Max Green Setting (Gmax), s		30.0	30.0	60.0		30.0	30.0	60.0				
Max Q Clear Time (g_c+I1), s		11.8	4.4	10.4		11.6	6.4	13.3				
Green Ext Time (p_c), s		1.3	0.3	7.3		1.4	0.6	8.9				
Intersection Summary												
HCM 6th Ctrl Delay				15.2								
HCM 6th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
 9: Snoqualmie Pkwy & Fairway Ave SE

03/06/2020

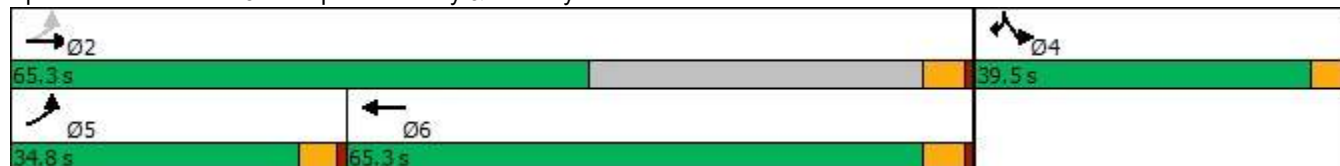


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	199	717	960	121	103	111
Future Volume (vph)	199	717	960	121	103	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	325			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		40	40		25	
Link Distance (ft)		1064	278		478	
Travel Time (s)		18.1	4.7		13.0	
Confl. Peds. (#/hr)	5			5	1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	3%	3%	3%	2%	0%
Shared Lane Traffic (%)						
Turn Type	pm+pt	NA	NA		Prot	Prot
Protected Phases	5	2	6		4	4
Permitted Phases	2					
Detector Phase	5	2	6		4	4
Switch Phase						
Minimum Initial (s)	5.0	12.0	12.0		5.0	5.0
Minimum Split (s)	9.8	23.3	26.3		36.5	36.5
Total Split (s)	34.8	65.3	65.3		39.5	39.5
Total Split (%)	24.9%	46.8%	46.8%		28.3%	28.3%
Yellow Time (s)	3.8	4.3	4.3		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.8	5.3	5.3		4.5	4.5
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	None	None		None	None

Intersection Summary

Area Type: Other
 Cycle Length: 139.6
 Actuated Cycle Length: 81.9
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated

Splits and Phases: 9: Snoqualmie Pkwy & Fairway Ave SE



HCM 6th Signalized Intersection Summary
 9: Snoqualmie Pkwy & Fairway Ave SE























03/06/2020



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	199	717	960	121	103	111
Future Volume (veh/h)	199	717	960	121	103	111
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	1856	1856	1856	1870	1900
Adj Flow Rate, veh/h	214	771	1032	130	111	-5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	3	3	3	2	0
Cap, veh/h	463	2479	1561	196	147	133
Arrive On Green	0.10	0.70	0.50	0.50	0.08	0.00
Sat Flow, veh/h	1795	3618	3241	396	1781	1610
Grp Volume(v), veh/h	214	771	577	585	111	-5
Grp Sat Flow(s),veh/h/ln	1795	1763	1763	1782	1781	1610
Q Serve(g_s), s	2.2	3.8	11.2	11.2	2.8	0.0
Cycle Q Clear(g_c), s	2.2	3.8	11.2	11.2	2.8	0.0
Prop In Lane	1.00			0.22	1.00	1.00
Lane Grp Cap(c), veh/h	463	2479	874	883	147	133
V/C Ratio(X)	0.46	0.31	0.66	0.66	0.76	-0.04
Avail Cap(c_a), veh/h	1458	4631	2316	2341	1365	1234
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	6.8	2.6	8.6	8.6	20.5	0.0
Incr Delay (d2), s/veh	0.7	0.1	0.9	0.9	7.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.2	2.9	2.9	1.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.5	2.6	9.5	9.5	28.2	0.0
LnGrp LOS	A	A	A	A	C	A
Approach Vol, veh/h		985	1162		106	
Approach Delay, s/veh		3.7	9.5		29.6	
Approach LOS		A	A		C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		37.4		8.3	9.5	27.9
Change Period (Y+Rc), s		5.3		4.5	* 4.8	5.3
Max Green Setting (Gmax), s		60.0		35.0	* 30	60.0
Max Q Clear Time (g_c+I1), s		5.8		4.8	4.2	13.2
Green Ext Time (p_c), s		5.9		0.3	0.6	9.4
Intersection Summary						
HCM 6th Ctrl Delay			7.9			
HCM 6th LOS			A			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

Lanes, Volumes, Timings
 10: Fisher Ave SE & Snoqualmie Pkwy

03/06/2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (vph)	52	690	30	13	925	18	16	1	16	18	1	31
Future Volume (vph)	52	690	30	13	925	18	16	1	16	18	1	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			10%			10%	
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		458			1686			518			363	
Travel Time (s)		7.8			28.7			14.1			9.9	
Confl. Peds. (#/hr)	8		8	8		8	8		8	8		8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	3%	0%	0%	3%	5%	0%	0%	0%	0%	0%	6%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	10.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	52	690	30	13	925	18	16	1	16	18	1	31
Future Vol, veh/h	52	690	30	13	925	18	16	1	16	18	1	31
Conflicting Peds, #/hr	8	0	8	8	0	8	8	0	8	8	0	8
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #-	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	10	-	-	10	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	3	0	0	3	5	0	0	0	0	0	6
Mvmt Flow	59	784	34	15	1051	20	18	1	18	20	1	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1079	0	0	826	0	0	1491	2036	425	1618	2043	552
Stage 1	-	-	-	-	-	-	927	927	-	1099	1099	-
Stage 2	-	-	-	-	-	-	564	1109	-	519	944	-
Critical Hdwy	4.1	-	-	4.1	-	-	9.5	8.5	7.9	9.5	8.5	8.02
Critical Hdwy Stg 1	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	8.5	7.5	-	8.5	7.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.36
Pot Cap-1 Maneuver	654	-	-	813	-	-	38	19	518	29	18	401
Stage 1	-	-	-	-	-	-	175	209	-	125	158	-
Stage 2	-	-	-	-	-	-	353	155	-	385	203	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	649	-	-	807	-	-	30	17	510	24	16	395
Mov Cap-2 Maneuver	-	-	-	-	-	-	30	17	-	24	16	-
Stage 1	-	-	-	-	-	-	158	189	-	113	154	-
Stage 2	-	-	-	-	-	-	311	151	-	333	183	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.1			168.2			243.9		
HCM LOS	F			F			F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	53	649	-	-	807	-	-	56
HCM Lane V/C Ratio	0.708	0.091	-	-	0.018	-	-	1.015
HCM Control Delay (s)	168.2	11.1	-	-	9.5	-	-	243.9
HCM Lane LOS	F	B	-	-	A	-	-	F
HCM 95th %tile Q(veh)	2.9	0.3	-	-	0.1	-	-	4.7

Lanes, Volumes, Timings
 11: Orchard Ave SE & Snoqualmie Pkwy

03/06/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (vph)	777	29	27	1058	8	20
Future Volume (vph)	777	29	27	1058	8	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	225		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	1686			1131	557	
Travel Time (s)	28.7			19.3	15.2	
Confl. Peds. (#/hr)		1	1		1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	0%	4%	3%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑↑	↑↑
Traffic Vol, veh/h	777	29	27	1058	8	20
Future Vol, veh/h	777	29	27	1058	8	20
Conflicting Peds, #/hr	0	1	1	0	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	225	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	0	4	3	0	0
Mvmt Flow	845	32	29	1150	9	22

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	878	0	1496
Stage 1	-	-	-	-	862
Stage 2	-	-	-	-	634
Critical Hdwy	-	-	4.18	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.24	-	3.5
Pot Cap-1 Maneuver	-	-	753	-	116
Stage 1	-	-	-	-	379
Stage 2	-	-	-	-	496
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	752	-	111
Mov Cap-2 Maneuver	-	-	-	-	111
Stage 1	-	-	-	-	379
Stage 2	-	-	-	-	476

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	20.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	261	-	-	752	-
HCM Lane V/C Ratio	0.117	-	-	0.039	-
HCM Control Delay (s)	20.6	-	-	10	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	795	1089	7	7	5
Future Volume (vph)	5	795	1089	7	7	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		40	40		25	
Link Distance (ft)		679	1187		393	
Travel Time (s)		11.6	20.2		10.7	
Confl. Peds. (#/hr)	1			1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	4%	4%	0%	0%	0%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	795	1089	7	7	5
Future Vol, veh/h	5	795	1089	7	7	5
Conflicting Peds, #/hr	1	0	0	1	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #-	0	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	4	4	0	0	0
Mvmt Flow	5	864	1184	8	8	5

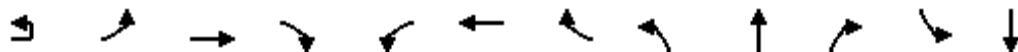
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1193	0	-	0	1632 598
Stage 1	-	-	-	-	1189 -
Stage 2	-	-	-	-	443 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	592	-	-	-	94 450
Stage 1	-	-	-	-	256 -
Stage 2	-	-	-	-	620 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	591	-	-	-	93 449
Mov Cap-2 Maneuver	-	-	-	-	93 -
Stage 1	-	-	-	-	254 -
Stage 2	-	-	-	-	619 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	33.6
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	591	-	-	-	-	139
HCM Lane V/C Ratio	0.009	-	-	-	-	0.094
HCM Control Delay (s)	11.1	-	-	-	-	33.6
HCM Lane LOS	B	-	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	-	0.3

Lanes, Volumes, Timings
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↵		↕		↵	↕			↕			↕
Traffic Volume (vph)	0	0	755	46	23	1051	0	52	0	24	0	0
Future Volume (vph)	0	0	755	46	23	1051	0	52	0	24	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0		0	200		0	0		0	0	
Storage Lanes		1		0	1		0	0		0	0	
Taper Length (ft)		25			25			25			25	
Right Turn on Red				Yes			Yes			Yes		
Link Speed (mph)			40			40			25			25
Link Distance (ft)			1187			833			535			291
Travel Time (s)			20.2			14.2			14.6			7.9
Confl. Peds. (#/hr)				4	4			3				
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	5%	0%	0%	4%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt		NA		pm+pt	NA		Perm	NA			
Protected Phases	5		2		1	6		8				4
Permitted Phases	2				6			8			4	
Detector Phase	5		2		1	6		8	8		4	4
Switch Phase												
Minimum Initial (s)	5.0		15.0		5.0	14.0		5.0	5.0		30.0	30.0
Minimum Split (s)	10.0		20.0		10.0	29.0		36.0	36.0		36.0	36.0
Total Split (s)	35.0		65.0		35.0	65.0		36.0	36.0		36.0	36.0
Total Split (%)	25.7%		47.8%		25.7%	47.8%		26.5%	26.5%		26.5%	26.5%
Yellow Time (s)	4.0		4.0		4.0	4.0		5.0	5.0		5.0	5.0
All-Red Time (s)	1.0		1.0		1.0	1.0		1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Lost Time (s)	5.0		5.0		5.0	5.0		6.0	6.0		6.0	6.0
Lead/Lag	Lead		Lag		Lead	Lag						
Lead-Lag Optimize?	Yes		Yes		Yes	Yes						
Recall Mode	Min		Min		None	None		None	None		None	None

Intersection Summary

Area Type: Other

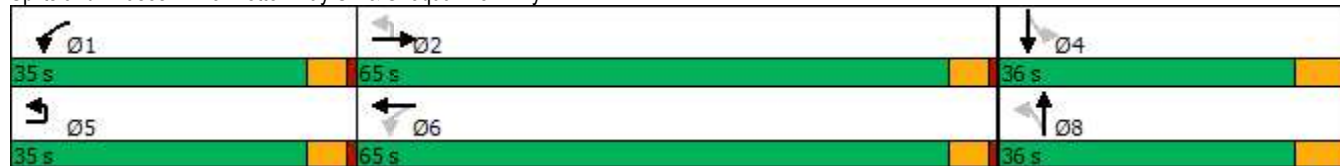
Cycle Length: 136

Actuated Cycle Length: 56.8

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Splits and Phases: 13: Better Way SE & Snoqualmie Pkwy

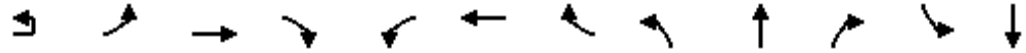




Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	0
Future Volume (vph)	0
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Right Turn on Red	Yes
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	3
Peak Hour Factor	0.95
Heavy Vehicles (%)	0%
Shared Lane Traffic (%)	
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	
Intersection Summary	

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↯		↕↔		↯	↕↔			↕↔			↕↔
Traffic Volume (veh/h)	0	0	755	46	23	1051	0	52	0	24	0	0
Future Volume (veh/h)	0	0	755	46	23	1051	0	52	0	24	0	0
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	0.99		0.99	1.00	
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach			No			No			No			No
Adj Sat Flow, veh/h/ln		0	1826	1826	1900	1841	1841	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		0	795	48	24	1106	0	55	0	25	0	0
Peak Hour Factor		0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %		0	5	5	0	4	4	0	0	0	0	0
Cap, veh/h		0	1418	86	316	2093	0	263	0	41	0	168
Arrive On Green		0.00	0.43	0.43	0.03	0.60	0.00	0.09	0.00	0.09	0.00	0.00
Sat Flow, veh/h		0	3414	201	1810	3589	0	1015	0	461	0	1900
Grp Volume(v), veh/h		0	415	428	24	1106	0	80	0	0	0	0
Grp Sat Flow(s),veh/h/ln		0	1735	1789	1810	1749	0	1476	0	0	0	1900
Q Serve(g_s), s		0.0	6.3	6.3	0.2	6.5	0.0	1.8	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s		0.0	6.3	6.3	0.2	6.5	0.0	1.8	0.0	0.0	0.0	0.0
Prop In Lane		0.00		0.11	1.00		0.00	0.69		0.31	0.00	
Lane Grp Cap(c), veh/h		0	740	763	316	2093	0	304	0	0	0	168
V/C Ratio(X)		0.00	0.56	0.56	0.08	0.53	0.00	0.26	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h		0	2960	3052	1806	5968	0	1432	0	0	0	1621
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)		0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh		0.0	7.6	7.6	7.2	4.1	0.0	15.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh		0.0	0.7	0.6	0.1	0.2	0.0	0.5	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.0	1.4	1.4	0.0	0.5	0.0	0.6	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		0.0	8.3	8.2	7.3	4.4	0.0	15.9	0.0	0.0	0.0	0.0
LnGrp LOS		A	A	A	A	A	A	B	A	A	A	A
Approach Vol, veh/h			843			1130			80			0
Approach Delay, s/veh			8.3			4.4			15.9			0.0
Approach LOS			A			A			B			
Timer - Assigned Phs	1	2		4		6			8			
Phs Duration (G+Y+Rc), s	6.0	20.0		9.1		26.0			9.1			
Change Period (Y+Rc), s	5.0	5.0		6.0		5.0			6.0			
Max Green Setting (Gmax), s	30.0	60.0		30.0		60.0			30.0			
Max Q Clear Time (g_c+I1), s	2.2	8.3		0.0		8.5			3.8			
Green Ext Time (p_c), s	0.0	5.8		0.0		9.9			0.4			

Intersection Summary

HCM 6th Ctrl Delay	6.4
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
 User approved ignoring U-Turning movement.

HCM 6th Signalized Intersection Summary
 13: Better Way SE & Snoqualmie Pkwy

03/12/2020

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	0
Future Volume (veh/h)	0
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	0
Peak Hour Factor	0.95
Percent Heavy Veh, %	0
Cap, veh/h	0
Arrive On Green	0.00
Sat Flow, veh/h	0
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	0
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	0.00
Lane Grp Cap(c), veh/h	0
V/C Ratio(X)	0.00
Avail Cap(c_a), veh/h	0
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Lanes, Volumes, Timings
 14: Trail Access Road & Snoqualmie Pkwy

03/06/2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (vph)	649	0	1	911	0	1
Future Volume (vph)	649	0	1	911	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Link Speed (mph)	40			40	25	
Link Distance (ft)	646			700	301	
Travel Time (s)	11.0			11.9	8.2	
Confl. Peds. (#/hr)		1	1		1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	0%	0%	4%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Traffic Vol, veh/h	649	0	1	911	0	1
Future Vol, veh/h	649	0	1	911	0	1
Conflicting Peds, #/hr	0	1	1	0	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	0	0	4	0	0
Mvmt Flow	705	0	1	990	0	1

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	706	0	1204
Stage 1	-	-	-	-	706
Stage 2	-	-	-	-	498
Critical Hdwy	-	-	4.1	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	902	-	180
Stage 1	-	-	-	-	456
Stage 2	-	-	-	-	582
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	901	-	179
Mov Cap-2 Maneuver	-	-	-	-	179
Stage 1	-	-	-	-	456
Stage 2	-	-	-	-	581

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	646	-	-	901	-
HCM Lane V/C Ratio	0.002	-	-	0.001	-
HCM Control Delay (s)	10.6	-	-	9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
15: SR 202 & Snoqualmie Pkwy

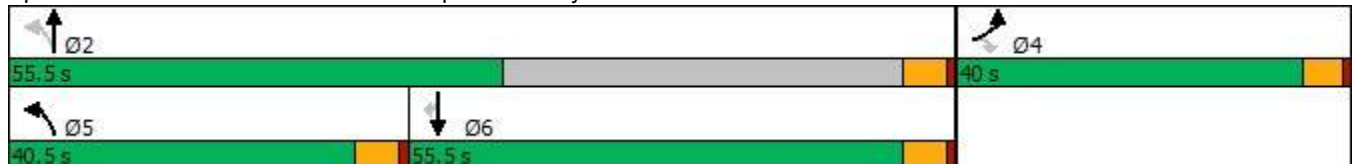
03/06/2020

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	346	302	338	302	407	640
Future Volume (vph)	346	302	338	302	407	640
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	300			300
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Right Turn on Red		Yes				Yes
Link Speed (mph)	40			45	45	
Link Distance (ft)	700			1127	949	
Travel Time (s)	11.9			17.1	14.4	
Confl. Peds. (#/hr)		1	1			1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	3%	2%	2%	2%	5%	4%
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	5.0	7.0	7.0	7.0
Minimum Split (s)	29.0	29.0	10.5	12.5	35.5	35.5
Total Split (s)	40.0	40.0	40.5	55.5	55.5	55.5
Total Split (%)	29.4%	29.4%	29.8%	40.8%	40.8%	40.8%
Yellow Time (s)	4.0	4.0	4.5	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	Min	Min	Min

Intersection Summary













Area Type: Other
 Cycle Length: 136
 Actuated Cycle Length: 104.4
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated

Splits and Phases: 15: SR 202 & Snoqualmie Pkwy



HCM 6th Signalized Intersection Summary
 15: SR 202 & Snoqualmie Pkwy

03/06/2020

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	346	302	338	302	407	640
Future Volume (veh/h)	346	302	338	302	407	640
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00			1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1870	1826	1841
Adj Flow Rate, veh/h	380	0	371	332	447	434
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	2	2	2	5	4
Cap, veh/h	443	397	487	1112	634	541
Arrive On Green	0.25	0.00	0.17	0.59	0.35	0.35
Sat Flow, veh/h	1767	1585	1781	1870	1826	1558
Grp Volume(v), veh/h	380	0	371	332	447	434
Grp Sat Flow(s),veh/h/ln	1767	1585	1781	1870	1826	1558
Q Serve(g_s), s	13.9	0.0	8.1	5.9	14.3	17.1
Cycle Q Clear(g_c), s	13.9	0.0	8.1	5.9	14.3	17.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	443	397	487	1112	634	541
V/C Ratio(X)	0.86	0.00	0.76	0.30	0.70	0.80
Avail Cap(c_a), veh/h	914	820	1114	1382	1349	1151
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	0.0	12.7	6.8	19.1	20.0
Incr Delay (d2), s/veh	4.9	0.0	2.5	0.1	1.4	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	0.0	2.7	1.7	5.4	5.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.1	0.0	15.2	6.9	20.5	22.8
LnGrp LOS	C	A	B	A	C	C
Approach Vol, veh/h	380			703	881	
Approach Delay, s/veh	29.1			11.3	21.6	
Approach LOS	C			B	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		45.7		21.9	16.7	29.0
Change Period (Y+Rc), s		5.5		5.0	5.5	5.5
Max Green Setting (Gmax), s		50.0		35.0	35.0	50.0
Max Q Clear Time (g_c+I1), s		7.9		15.9	10.1	19.1
Green Ext Time (p_c), s		1.9		1.1	1.1	4.4
Intersection Summary						
HCM 6th Ctrl Delay			19.4			
HCM 6th LOS			B			

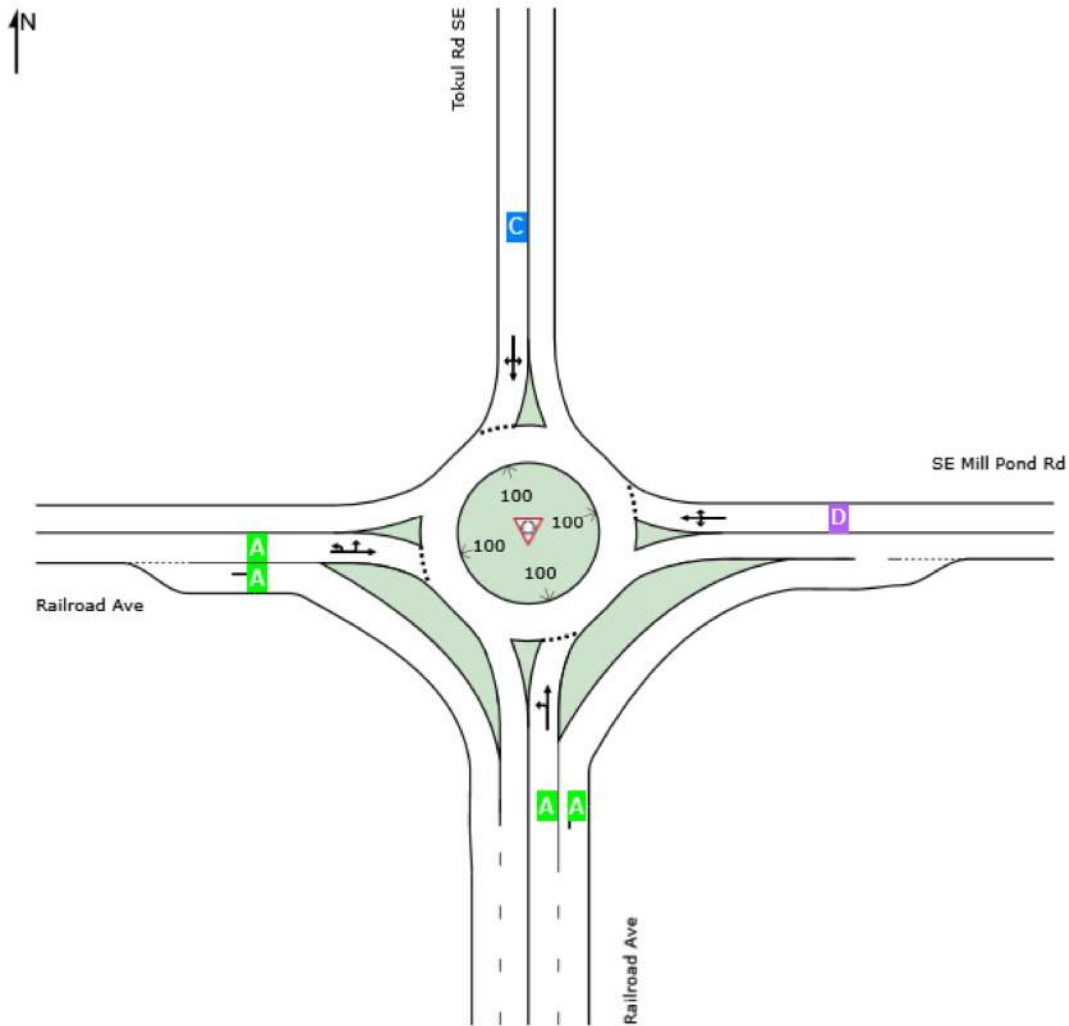
LANE LEVEL OF SERVICE

Lane Level of Service

Site: 16 [2032 With Redevelopment Alternative Planning Areas 1-3 - PM Peak Hour]

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	D	C	A	B



Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Signalised Intersections.
 Lane LOS values are based on average delay per lane.
 Intersection and Approach LOS values are based on average delay for all lanes.
 SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

LANE SUMMARY

Site: 16 [2032 With Redevelopment Alternative Planning Areas 1-3 - PM Peak Hour]

Snoqualmie Mill - Railroad Ave & Tokul Rd SE & SE Mill Pond Rd
 Site Category: (None)
 Roundabout

Lane Use and Performance													
	Demand Flows			Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue		Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
	Total veh/h	HV %	Cap. veh/h					Veh	Dist ft				
South: Railroad Ave													
Lane 1 ^d	478	3.2	1477	0.323	100	8.9	LOS A	2.2	56.7	Full	1600	0.0	0.0
Lane 2	267	6.2	1577	0.169	100	3.7	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	745	4.3		0.323		7.0	LOS A	2.2	56.7				
East: SE Mill Pond Rd													
Lane 1 ^d	920	9.7	917	1.003	100	40.2	LOS D	32.3	870.9	Full	1600	0.0	0.0
Approach	920	9.7		1.003		40.2	LOS D	32.3	870.9				
North: Tokul Rd SE													
Lane 1 ^d	48	4.9	231	0.209	100	27.2	LOS C	1.6	42.0	Full	1600	0.0	0.0
Approach	48	4.9		0.209		27.2	LOS C	1.6	42.0				
West: Railroad Ave													
Lane 1 ^d	161	4.4	870	0.185	100	7.2	LOS A	1.4	37.1	Full	1600	0.0	0.0
Lane 2	569	4.6	1601	0.356	100	3.7	LOS A	0.0	0.0	Short	200	0.0	NA
Approach	731	4.5		0.356		4.5	LOS A	1.4	37.1				
Intersection	2444	6.4		1.003		19.1	LOS B	32.3	870.9				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Lane LOS values are based on average delay per lane.

Intersection and Approach LOS values are based on average delay for all lanes.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	81	9	20	105	5	31
Future Volume (vph)	81	9	20	105	5	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	45		35			35
Link Distance (ft)	458		1466			541
Travel Time (s)	6.9		28.6			10.5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	0%	0%	3%	0%	0%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	81	9	20	105	5	31
Future Vol, veh/h	81	9	20	105	5	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	0	0	3	0	0
Mvmt Flow	84	9	21	109	5	32

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	118	76	0	0	130
Stage 1	76	-	-	-	-
Stage 2	42	-	-	-	-
Critical Hdwy	6.42	6.2	-	-	4.1
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.3	-	-	2.2
Pot Cap-1 Maneuver	878	991	-	-	1468
Stage 1	947	-	-	-	-
Stage 2	980	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	875	991	-	-	1468
Mov Cap-2 Maneuver	875	-	-	-	-
Stage 1	947	-	-	-	-
Stage 2	977	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	885	1468
HCM Lane V/C Ratio	-	-	0.106	0.004
HCM Control Delay (s)	-	-	9.5	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0

Lanes, Volumes, Timings

18: Meadowbrook Way SE/SE Reinig Rd & SE Mill Pond Rd

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	73	89	91	25	40	133
Future Volume (vph)	73	89	91	25	40	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		40	
Link Distance (ft)		502	1466		916	
Travel Time (s)		9.8	28.6		15.6	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	1%	0%	3%	0%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	5.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↖	↗		↖	↗
Traffic Vol, veh/h	73	89	91	25	40	133
Future Vol, veh/h	73	89	91	25	40	133
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	1	1	0	3	0
Mvmt Flow	78	95	97	27	43	141
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	124	0	-	0	362	111
Stage 1	-	-	-	-	111	-
Stage 2	-	-	-	-	251	-
Critical Hdwy	4.1	-	-	-	6.43	6.2
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.2	-	-	-	3.527	3.3
Pot Cap-1 Maneuver	1475	-	-	-	635	948
Stage 1	-	-	-	-	911	-
Stage 2	-	-	-	-	788	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1475	-	-	-	599	948
Mov Cap-2 Maneuver	-	-	-	-	599	-
Stage 1	-	-	-	-	860	-
Stage 2	-	-	-	-	788	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.4	0		10.5		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1475	-	-	-	-	835
HCM Lane V/C Ratio	0.053	-	-	-	-	0.22
HCM Control Delay (s)	7.6	0	-	-	-	10.5
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	-	0.8

Lanes, Volumes, Timings
19: Meadowbrook Bridge

03/02/2020

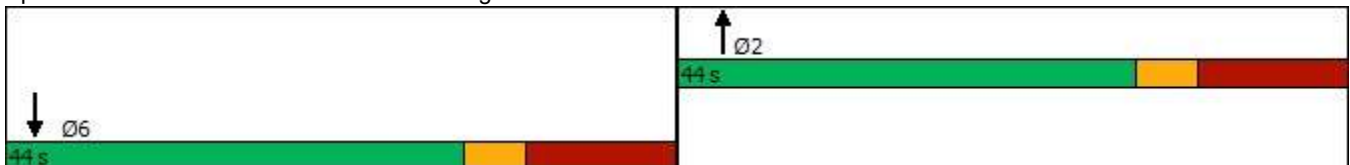


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	162	0	0	224
Future Volume (vph)	0	0	162	0	0	224
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			30
Link Distance (ft)	150		304			249
Travel Time (s)	3.4		6.9			5.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Shared Lane Traffic (%)						
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Detector Phase			2			6
Switch Phase						
Minimum Initial (s)			5.0			5.0
Minimum Split (s)			19.0			19.0
Total Split (s)			44.0			44.0
Total Split (%)			50.0%			50.0%
Yellow Time (s)			4.0			4.0
All-Red Time (s)			10.0			10.0
Lost Time Adjust (s)			0.0			0.0
Total Lost Time (s)			14.0			14.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode			None			None

Intersection Summary

Area Type: Other
 Cycle Length: 88
 Actuated Cycle Length: 48.2
 Natural Cycle: 45
 Control Type: Actuated-Uncoordinated

Splits and Phases: 19: Meadowbrook Bridge



HCM Signalized Intersection Capacity Analysis
 19: Meadowbrook Bridge

03/02/2020



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑			↑
Traffic Volume (vph)	0	0	162	0	0	224
Future Volume (vph)	0	0	162	0	0	224
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			14.0			14.0
Lane Util. Factor			1.00			1.00
Flt			1.00			1.00
Flt Protected			1.00			1.00
Satd. Flow (prot)			1881			1881
Flt Permitted			1.00			1.00
Satd. Flow (perm)			1881			1881
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	176	0	0	243
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	176	0	0	243
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Turn Type			NA			NA
Protected Phases			2			6
Permitted Phases						
Actuated Green, G (s)			9.1			10.7
Effective Green, g (s)			9.1			10.7
Actuated g/C Ratio			0.19			0.22
Clearance Time (s)			14.0			14.0
Vehicle Extension (s)			2.0			2.0
Lane Grp Cap (vph)			358			421
v/s Ratio Prot			c0.09			c0.13
v/s Ratio Perm						
v/c Ratio			0.49			0.58
Uniform Delay, d1			17.3			16.5
Progression Factor			1.00			1.00
Incremental Delay, d2			0.4			1.2
Delay (s)			17.7			17.7
Level of Service			B			B
Approach Delay (s)	0.0		17.7			17.7
Approach LOS	A		B			B
Intersection Summary						
HCM 2000 Control Delay			17.7		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.54			
Actuated Cycle Length (s)			47.8		Sum of lost time (s)	28.0
Intersection Capacity Utilization			23.5%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Lanes, Volumes, Timings
 20: Meadowbrook Way SE & SE Park St

03/12/2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	49	31	35	54	30	13	109	25	26	162	31
Future Volume (vph)	27	49	31	35	54	30	13	109	25	26	162	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		505			663			790			216	
Travel Time (s)		13.8			18.1			21.5			5.9	
Confl. Peds. (#/hr)	5		5	4		4	5		4	4		5
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	3%	4%	3%	0%	2%	0%	0%	1%	0%	0%	1%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	27	49	31	35	54	30	13	109	25	26	162	31
Future Vol, veh/h	27	49	31	35	54	30	13	109	25	26	162	31
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	3	4	3	0	2	0	0	1	0	0	1	0
Mvmt Flow	32	58	37	42	64	36	15	130	30	31	193	37
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	9.2			9.3			9.4			10.3		
HCM LOS	A			A			A			B		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	25%	29%	12%
Vol Thru, %	74%	46%	45%	74%
Vol Right, %	17%	29%	25%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	147	107	119	219
LT Vol	13	27	35	26
Through Vol	109	49	54	162
RT Vol	25	31	30	31
Lane Flow Rate	175	127	142	261
Geometry Grp	1	1	1	1
Degree of Util (X)	0.234	0.179	0.197	0.342
Departure Headway (Hd)	4.804	5.045	5.005	4.722
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	740	704	710	756
Service Time	2.88	3.129	3.088	2.792
HCM Lane V/C Ratio	0.236	0.18	0.2	0.345
HCM Control Delay	9.4	9.2	9.3	10.3
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.9	0.6	0.7	1.5

Lanes, Volumes, Timings
21: Meadowbrook Way SE & SR 202

03/06/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	497	119	9	458	44	138	104	24	76	117	33
Future Volume (vph)	26	497	119	9	458	44	138	104	24	76	117	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	0		0	150		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			40			35			25	
Link Distance (ft)		615			663			738			518	
Travel Time (s)		14.0			11.3			14.4			14.1	
Confl. Peds. (#/hr)	1					1	2					2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	2%	5%	0%	3%	0%	1%	0%	8%	1%	0%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	33.3	33.3		30.3	30.3		32.8	32.8		32.8	32.8	
Total Split (s)	71.3	71.3		71.3	71.3		40.8	40.8		40.8	40.8	
Total Split (%)	63.6%	63.6%		63.6%	63.6%		36.4%	36.4%		36.4%	36.4%	
Yellow Time (s)	4.3	4.3		4.3	4.3		3.8	3.8		3.8	3.8	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	6.3	6.3		6.3	6.3			5.8		5.8	5.8	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Min	Min		Min	Min		None	None		None	None	

Intersection Summary

Area Type: Other

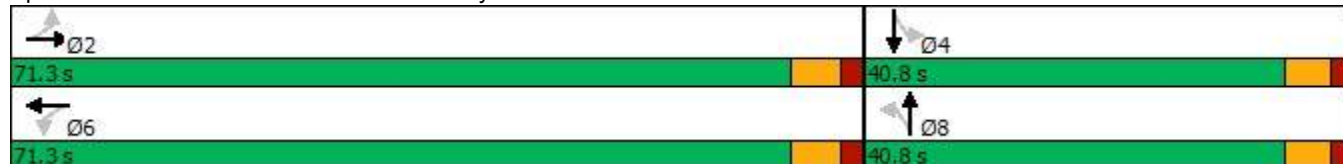
Cycle Length: 112.1

Actuated Cycle Length: 66.9

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Splits and Phases: 21: Meadowbrook Way SE & SR 202



HCM 6th Signalized Intersection Summary
 21: Meadowbrook Way SE & SR 202

03/06/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	497	119	9	458	44	138	104	24	76	117	33
Future Volume (veh/h)	26	497	119	9	458	44	138	104	24	76	117	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1900	1856	1856	1900	1900	1900	1885	1900	1900
Adj Flow Rate, veh/h	28	534	128	10	492	47	148	112	26	82	126	35
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	0	3	3	0	0	0	1	0	0
Cap, veh/h	371	700	168	281	801	76	270	181	35	466	408	113
Arrive On Green	0.48	0.48	0.48	0.48	0.48	0.48	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	880	1458	349	785	1667	159	577	633	121	1259	1430	397
Grp Volume(v), veh/h	28	0	662	10	0	539	286	0	0	82	0	161
Grp Sat Flow(s),veh/h/ln	880	0	1807	785	0	1827	1331	0	0	1259	0	1827
Q Serve(g_s), s	1.2	0.0	15.5	0.5	0.0	11.2	7.1	0.0	0.0	0.0	0.0	3.6
Cycle Q Clear(g_c), s	12.5	0.0	15.5	16.0	0.0	11.2	10.6	0.0	0.0	3.0	0.0	3.6
Prop In Lane	1.00		0.19	1.00		0.09	0.52		0.09	1.00		0.22
Lane Grp Cap(c), veh/h	371	0	868	281	0	877	486	0	0	466	0	521
V/C Ratio(X)	0.08	0.00	0.76	0.04	0.00	0.61	0.59	0.00	0.00	0.18	0.00	0.31
Avail Cap(c_a), veh/h	1057	0	2278	893	0	2303	1065	0	0	962	0	1240
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.5	0.0	11.0	17.6	0.0	9.9	17.3	0.0	0.0	14.2	0.0	14.4
Incr Delay (d2), s/veh	0.1	0.0	1.7	0.1	0.0	0.8	1.1	0.0	0.0	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	5.2	0.1	0.0	3.4	2.8	0.0	0.0	0.7	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.6	0.0	12.7	17.6	0.0	10.7	18.4	0.0	0.0	14.4	0.0	14.8
LnGrp LOS	B	A	B	B	A	B	B	A	A	B	A	B
Approach Vol, veh/h		690			549			286			243	
Approach Delay, s/veh		12.8			10.9			18.4			14.7	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.1		20.5		31.1		20.5				
Change Period (Y+Rc), s		6.3		* 5.8		6.3		* 5.8				
Max Green Setting (Gmax), s		65.0		* 35		65.0		* 35				
Max Q Clear Time (g_c+I1), s		17.5		5.6		18.0		12.6				
Green Ext Time (p_c), s		7.2		1.3		4.7		1.7				
Intersection Summary												
HCM 6th Ctrl Delay				13.4								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 22: Meadowbrook Way SE & 384th Ave SE

03/06/2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	165	271	320	13	2	112
Future Volume (vph)	165	271	320	13	2	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35	35		25	
Link Distance (ft)		158	180		181	
Travel Time (s)		3.1	3.5		4.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	9%	2%	3%	0%	0%	6%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	165	271	320	13	2	112
Future Vol, veh/h	165	271	320	13	2	112
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #-	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	9	2	3	0	0	6
Mvmt Flow	190	311	368	15	2	129

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	383	0	-	0	1067 376
Stage 1	-	-	-	-	376 -
Stage 2	-	-	-	-	691 -
Critical Hdwy	4.19	-	-	-	6.4 6.26
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.281	-	-	-	3.5 3.354
Pot Cap-1 Maneuver	1138	-	-	-	248 662
Stage 1	-	-	-	-	699 -
Stage 2	-	-	-	-	501 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1138	-	-	-	198 662
Mov Cap-2 Maneuver	-	-	-	-	198 -
Stage 1	-	-	-	-	558 -
Stage 2	-	-	-	-	501 -

Approach	EB	WB	SB
HCM Control Delay, s	3.3	0	12.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	1138	-	-	-	-	636
HCM Lane V/C Ratio	0.167	-	-	-	-	0.206
HCM Control Delay (s)	8.8	0	-	-	-	12.1
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0.6	-	-	-	-	0.8

Lanes, Volumes, Timings
 23: SE North Bend Way & Meadowbrook Way SE

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	111	322	131	95	341	273
Future Volume (vph)	111	322	131	95	341	273
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	450	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Link Speed (mph)	35		50			50
Link Distance (ft)	158		253			593
Travel Time (s)	3.1		3.5			8.1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	3%	4%	14%	1%	1%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	8.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↘	↑	↘	↘	↑
Traffic Vol, veh/h	111	322	131	95	341	273
Future Vol, veh/h	111	322	131	95	341	273
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	Free	-	None
Storage Length	0	0	-	0	450	-
Veh in Median Storage, #1	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	3	4	14	1	1
Mvmt Flow	123	358	146	106	379	303

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1207	-	0	-	146
Stage 1	146	-	-	-	-
Stage 2	1061	-	-	-	-
Critical Hdwy	6.42	-	-	-	4.11
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	-	-	-	2.209
Pot Cap-1 Maneuver	203	0	-	0	1442
Stage 1	881	0	-	0	-
Stage 2	333	0	-	0	-
Platoon blocked, %			-		-
Mov Cap-1 Maneuver	150	-	-	-	1442
Mov Cap-2 Maneuver	214	-	-	-	-
Stage 1	881	-	-	-	-
Stage 2	245	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	42.5	0	4.7
HCM LOS	E		

Minor Lane/Major Mvmt	NB	WBLn	WBLn2	SBL	SBT
Capacity (veh/h)	-	214	-	1442	-
HCM Lane V/C Ratio	-	0.576	-	0.263	-
HCM Control Delay (s)	-	42.5	0	8.4	-
HCM Lane LOS	-	E	A	A	-
HCM 95th %tile Q(veh)	-	3.2	-	1.1	-

Lanes, Volumes, Timings
 24: SE Mill Pond Rd & NW Haul Road

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	505	277	2	123	239
Future Volume (vph)	10	505	277	2	123	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	804		935			756
Travel Time (s)	21.9		18.2			14.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	5%	0%	4%	2%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	12.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	10	505	277	2	123	239
Future Vol, veh/h	10	505	277	2	123	239
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	5	0	4	2
Mvmt Flow	11	549	301	2	134	260

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	830	302	0	0	303	0
Stage 1	302	-	-	-	-	-
Stage 2	528	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.14	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.236	-
Pot Cap-1 Maneuver	343	742	-	-	1247	-
Stage 1	755	-	-	-	-	-
Stage 2	596	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	300	742	-	-	1247	-
Mov Cap-2 Maneuver	300	-	-	-	-	-
Stage 1	755	-	-	-	-	-
Stage 2	521	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.1	0	2.8
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	721	1247
HCM Lane V/C Ratio	-	-	0.776	0.107
HCM Control Delay (s)	-	-	25.1	8.2
HCM Lane LOS	-	-	D	A
HCM 95th %tile Q(veh)	-	-	7.6	0.4



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Volume (vph)	8	56	223	8	40	209
Future Volume (vph)	8	56	223	8	40	209
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	796		476			935
Travel Time (s)	21.7		9.3			18.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	7%	0%	0%	2%
Shared Lane Traffic (%)						
Sign Control	Yield		Yield			Yield

Intersection Summary

Area Type: Other

Control Type: Roundabout

Lanes, Volumes, Timings
 26: SE Mill Pond Rd & North Driveway

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	15	78	153	14	73	144
Future Volume (vph)	15	78	153	14	73	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	769		376			476
Travel Time (s)	21.0		7.3			9.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	9%	0%	0%	3%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	3.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	15	78	153	14	73	144
Future Vol, veh/h	15	78	153	14	73	144
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	9	0	0	3
Mvmt Flow	16	85	166	15	79	157

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	489	174	0	0	181	0
Stage 1	174	-	-	-	-	-
Stage 2	315	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	542	875	-	-	1407	-
Stage 1	861	-	-	-	-	-
Stage 2	744	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	509	875	-	-	1407	-
Mov Cap-2 Maneuver	509	-	-	-	-	-
Stage 1	861	-	-	-	-	-
Stage 2	699	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.3	0	2.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	784	1407
HCM Lane V/C Ratio	-	-	0.129	0.056
HCM Control Delay (s)	-	-	10.3	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.4	0.2

Lanes, Volumes, Timings
 27: SE Mill Pond Rd & South Driveway

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	15	78	89	14	74	85
Future Volume (vph)	15	78	89	14	74	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	721		317			376
Travel Time (s)	19.7		6.2			7.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	16%	0%	0%	5%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	15	78	89	14	74	85
Future Vol, veh/h	15	78	89	14	74	85
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	16	0	0	5
Mvmt Flow	16	85	97	15	80	92

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	357	105	0	0	112	0
Stage 1	105	-	-	-	-	-
Stage 2	252	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	645	955	-	-	1490	-
Stage 1	924	-	-	-	-	-
Stage 2	795	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	608	955	-	-	1490	-
Mov Cap-2 Maneuver	608	-	-	-	-	-
Stage 1	924	-	-	-	-	-
Stage 2	750	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	3.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	875	1490
HCM Lane V/C Ratio	-	-	0.116	0.054
HCM Control Delay (s)	-	-	9.7	7.6
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.2

Lanes, Volumes, Timings
 28: SE Mill Pond Rd & SE Access Road

03/06/2020



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	72	0	103	18	0	100
Future Volume (vph)	72	0	103	18	0	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		35			35
Link Distance (ft)	701		575			216
Travel Time (s)	19.1		11.2			4.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	14%	0%	0%	4%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	2.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	W	T
Traffic Vol, veh/h	72	0	103	18	0	100
Future Vol, veh/h	72	0	103	18	0	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #0	-	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	14	0	0	4
Mvmt Flow	78	0	112	20	0	109

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	231	122	0	0	132	0
Stage 1	122	-	-	-	-	-
Stage 2	109	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	762	935	-	-	1466	-
Stage 1	908	-	-	-	-	-
Stage 2	921	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	762	935	-	-	1466	-
Mov Cap-2 Maneuver	762	-	-	-	-	-
Stage 1	908	-	-	-	-	-
Stage 2	921	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	762	1466
HCM Lane V/C Ratio	-	-	0.103	-
HCM Control Delay (s)	-	-	10.3	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0

Trip Distribution Analysis for the Proposed Snoqualmie Mill Development
As Provided by Fehr & Peers



DRAFT MEMORANDUM

Date: August 7, 2018
To: Mark Hofman – City of Snoqualmie Community Development
From: Emily Alice Gerhart and Chris Breiland, PE – Fehr & Peers
Subject: Trip Distribution Analysis for the Proposed Snoqualmie Mill Development

SE18-0600

This memorandum documents the findings of Fehr & Peers' trip distribution analysis in support of the transportation impact study for the Snoqualmie Mill Development. The purpose of this effort is to provide travel forecasts and research that may inform the project trip distribution and internalization assumptions developed by TENW. This memorandum is a response to the TENW memorandum titled "Trip Generation & Traffic Scoping for the proposed Snoqualmie Mill Development" dated December 12, 2017.

BACKGROUND

The proposed Snoqualmie Mill development includes 1.8 million square feet (SF) of building area with multifamily housing, an industrial park (light industrial, manufacturing, and warehouse), specialty shopping, and office land uses. The project is planned in three phases, which will be analyzed according to approximate construction year. We developed travel behavior assumptions based on the following proposed land uses:

- Phase 1 Buildout (2020)
 - Multifamily housing
 - Industrial Park
 - Shopping Center / Retail
- Phases 2 and 3 Buildout (2032)
 - Office
 - Industrial Park



The project site is located east of the Snoqualmie River on the site of the former Weyerhaeuser sawmill, with vehicular access to the site provided by SR-202 and Mill Pond Road.

ANALYSIS METHODOLOGY

This section summarizes our analysis methodology; the following sections go into greater detail for each step.

1. Background Traffic Growth – We developed travel demand forecasts for background traffic in the AM and PM peak hours using a model refined by Fehr & Peers, built off the Puget Sound Regional Council (PSRC) 4k framework. Background traffic conditions represent the vehicles on area roadways caused by growth outside of the project area. This includes growth in Snoqualmie and the surrounding unincorporated communities as well as broader regional growth, which strongly influences traffic on major facilities like I-90, State Route (SR) 18, and SR 202. Based on discussions with City staff, we understood that there were concerns with the land use included in “off the shelf” PSRC regional model. Therefore, we further refined the model to more accurately reflect existing conditions, and worked with City staff to determine future land use inputs to the model based on projected growth assumptions in the City of Snoqualmie and North Bend. This effort served to more accurately capture growth occurring in and near Snoqualmie. We calculated the compound annual growth rates of key roadways, provided later in this memorandum in Table 1.
2. Trips External to Study Area – Steps 2-4 relate to how trips are distributed by the proposed development—TENW provided the trip generation estimates of the proposed development. To determine how project trips are distributed to the major roads that access regional centers (e.g., Fall City/North Snoqualmie Valley, North Bend, Renton/Maple Valley, Issaquah/Bellevue/Seattle), we added the project’s land use characteristics and re-ran the PSRC model. We ran the model for each individual land use, so not to confound characteristics of each land use. We performed a “select zone” analysis to track the peak hour distribution of all trips interacting with the proposed project site. The results of this analysis were then post-processed in Step 3.
3. Trips Within Study Area - We extracted the most recent available Longitudinal Employer-Household Dynamics (LEHD) data for industrial and office park areas in comparable communities. Based on discussion with City staff and the project team, Redmond, Woodinville, Dupont, and Canyon Park in were selected for their comparable qualities. The results of this extraction were used to further refine the travel model’s estimate of the



proportion of project employees that will live within the study area (greater Snoqualmie area), versus commuting outside the city limits. The results of the refined trip distribution estimates are provided later in this memo, in Table 2.

4. Project Trip Internalization - To quantify the likelihood of external project trip internalization, Fehr & Peers utilized our internal mixed-used trip generation (MXD+) tool. MXD+ is a proprietary tool that takes on-site and nearby land use characteristics (mix of use, density, walkability, etc.) into account to more accurately determine how many project-generated trips are expected to stay on-site. MXD+ has been peer reviewed by academics and is based on a database of more than 200 sites, more than other comparable methods. Based on the results of MXD+ we conclude that the trip internalization results provided by TENW (using a methodology published by the Institute of Traffic Engineers) are reasonable for this project.

BACKGROUND TRAFFIC GROWTH

In order to develop vehicular traffic growth rates for the roadways surrounding the project site, we reviewed and updated a Fehr & Peers model, built off the PSRC framework. We refined the roadway network to more accurately reflect conditions near the proposed project site in both the base year and future year scenarios. We reviewed regional traffic volumes under the base year conditions and compared them to existing counts, to ensure the reasonability of the base year model. We worked with City staff to determine land use growth inputs for the City and neighboring communities including North Bend and unincorporated King County. As part of the land use refinement, we confirmed that key projects were accounted for in the growth estimates, including the Salish Lodge expansion, the hotel and retail complex in the Snoqualmie Ridge Business Park, and affordable housing development in Snoqualmie Ridge near Eagle Point.

We calculated the compound annual growth rate for key roadways using the difference between the forecasted future volumes (without the project) and base year volumes. This rate can be applied to existing counts to forecast background volumes in 2020 and 2032.

Table 1 summarizes the results of the background traffic growth rates.



Table 1 - Background Trip Growth

Roadway	Compound Annual Growth Rate for Vehicular Traffic
SR-202 towards northern city limit	0.9%
SR-202 towards North Bend	1.0%
Historic Snoqualmie	0.6%-1.1% ¹
Snoqualmie Parkway near I-90	0.5%
SE North Bend Way towards I-90	2.1%
<p><u>Notes:</u> ¹ Based on locations within Snoqualmie, there is a range in growth on different roads. Source: Fehr & Peers, 2018.</p>	

TRIP DISTRIBUTION

After developing background growth rates, we performed a series of model runs to determine the project trip distribution. We added the project’s land use characteristics and re-ran the model for each individual land use so that we can isolate the trip distribution patterns. Land use data were supplied by the project applicant.

Per conversations with the applicant team, we used the following land use assumptions:

- Residential – 160 households with 303 residents in Planning Area 1
- Industrial park – 400,000 SF with 370 employees in Planning Area 1 and 400,000 SF with 190 employees in Planning Area 2
- Office – 800,000 SF with 2,670 employees in Planning Area 3
- Shopping Center / Specialty Retail / Event Space – 95,000 SF with 120 employees in Planning Area 1

After reviewing the results of each model run, we performed a “select zone” analysis to track the peak hour distribution of all trips interacting with the proposed project site.

Every forecasting exercise requires the modelling team to review the outputs carefully. Because the PSRC model framework is at a regional scale with large traffic analysis zones (TAZs) and less detail of low volume roadways, it is essential to post-process the results to form conclusions at a local level. We paid particular attention to the office and industrial park land uses, to capture the travel behavior characteristics of large employers in a community geographically isolated from a housing supply that would reasonably accommodate all workers.



In order to refine the estimate of the percentage of trips to city roadways and regional facilities, we extracted Longitudinal Employer-Household Dynamics (LEHD) census data using the “OnTheMap” webtool. Per discussions with City staff and the project team, we developed a list of comparable communities that share similar geographic and land use type similarities with the proposed project and surrounding community of Snoqualmie. We outlined one representative subarea of industrial/office park and extracted employee travel characteristics in the following locations:

- Redmond
- Woodinville
- Dupont
- Canyon Park in Bothell

Table 2 shows the percentage of workers that live and work within 3-5 miles in these communities.

Table 2 - Percentage of Workers that Live and Work within 3 to 5 Miles in Selected Communities

Location	Percentage of Workers that Live and Work within 3-5 Miles
Canyon Park	5%
Dupont	1%
Redmond	6%
Woodinville	3%
<u>Source:</u> U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2015).	

We then compared the percentage of office and industrial trips that the model showed staying within city limits to LEHD data and adjusted trip distribution percentages accordingly.

Specifically, the model originally had a lower percentage of industrial trips staying within the City, and based on the results in Table 2 and a discussion with City staff, we increased this percentage to five percent. While five percent of employees living within close proximity to home is higher than some of the other peer communities identified in Table 2, the team felt like the development characteristics of Canyon Park and Redmond were closer to what is proposed for the Mill Development in Snoqualmie.



Table 3 shows the distribution of project trips in the AM and PM peak hours. This distribution is for trips that are external to the site, and do not include internalized trips (i.e., trips that do not leave the project site).



Table 3 - Snoqualmie Mill Project Distribution by Land Use Type

Direction	North		Northwest		Southwest		South		South		East		Southeast	
	Reinig Road to 396th Drive SE		Via SR-202		Snoqualmie Ridge		Historic Snoqualmie		Via Snoqualmie Parkway (Towards I-90)		North Bend and Snoqualmie via Reinig Road to Meadowbrook & 428th Ave		Via Meadowbrook Way SE / SE North Bend Way	
Distribution ID	1		2		3		4		5		6		7	
Peak Hour	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Multifamily Housing	1%	1%	20%	20%	15%	21%	17%	14%	14%	10%	26%	25%	7%	9%
Industrial Park	1%	1%	16%	21%	3%	3%	2%	2%	54%	48%	7%	5%	17%	19%
Shopping Center / Retail	2%	2%	18%	19%	33%	29%	17%	16%	10%	10%	16%	18%	4%	6%
Office	1%	1%	22%	18%	11%	10%	4%	5%	23%	26%	27%	26%	12%	14%

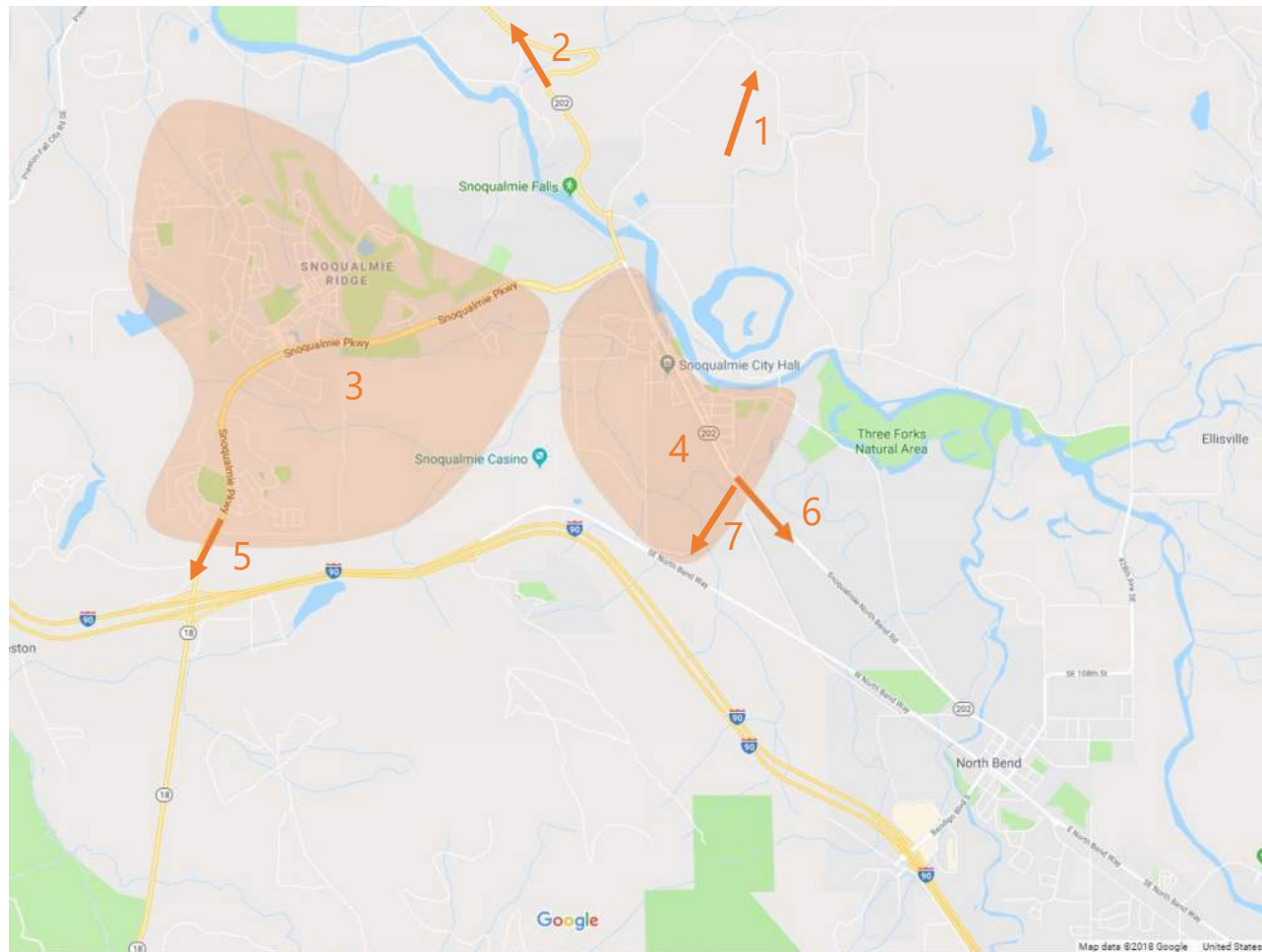
Source: Fehr & Peers, 2018.

Figure 1 shows the locations of the distribution IDs provided in Table 3.

Table 4 shows the number of net new project trips that use key roadways in the AM and PM peak hours. Net new project trips are presented for Phase 1 and Full Buildout, as per the trip generation estimates provided in TENW's "Trip Generation & Traffic Scoping for the proposed Snoqualmie Mill Development" dated December 12, 2017. The transportation impact study should provide trip assignment broken down further, by Phase 1, Phases 2 and 3, and Full Buildout.

Figure 2 shows the project study area map. The figure includes the project site, general geographic area that comprises trips within the study area (within city limits), and trips external to the study area that may impact regional roadways.

Figure 1 - Snoqualmie Mill Project Trip Distribution IDs



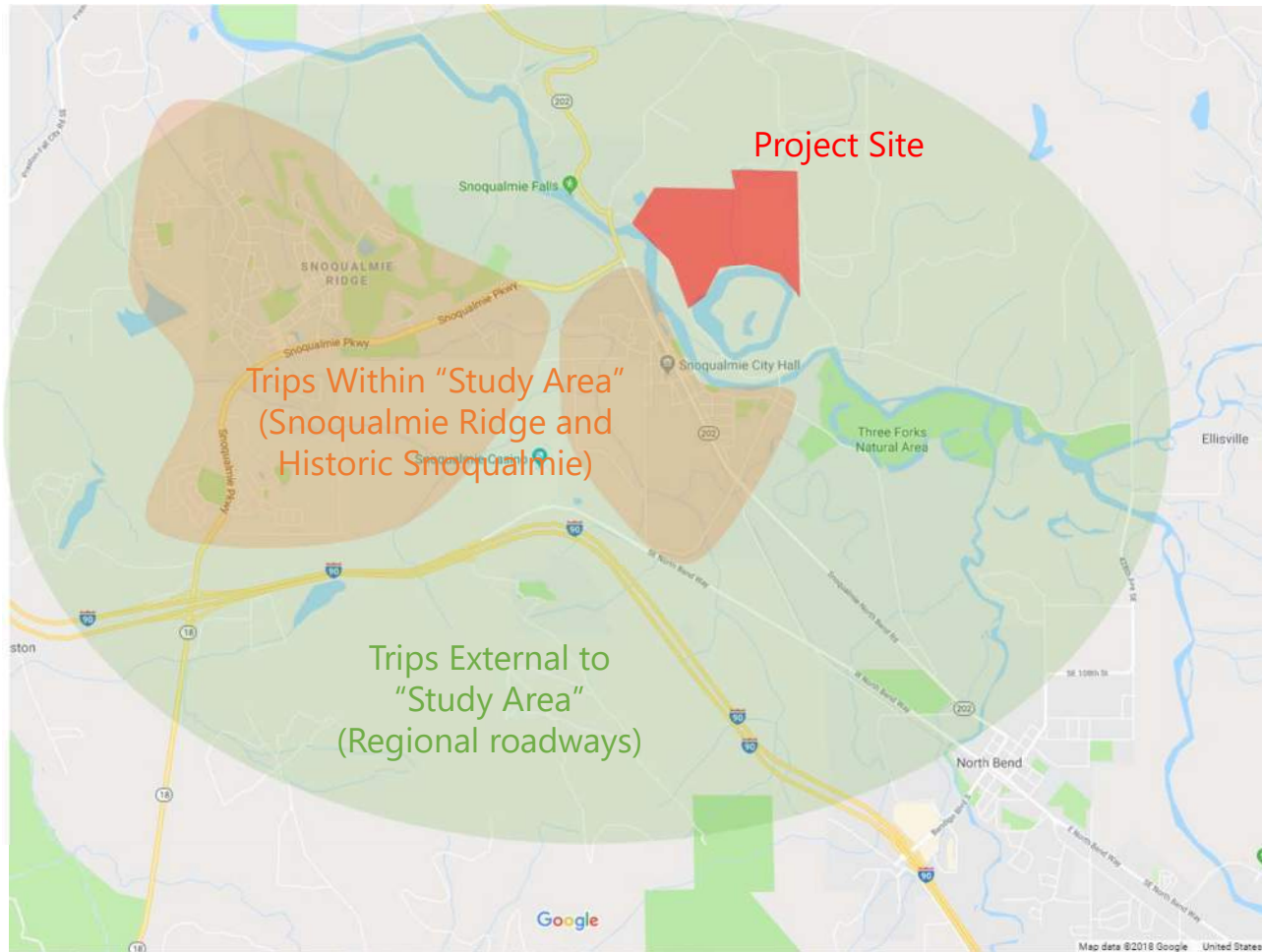
Note: Snoqualmie Ridge (#3) and Historic Snoqualmie (#4) boundaries are approximate.



Table 4 - Snoqualmie Mill Project Trip Assignment Estimates

Direction	North		Northwest		Southwest		South		South		East		Southeast		Total Net New Trips	
	Reinig Road to 396th Drive SE		Via SR-202		Snoqualmie Ridge		Historic Snoqualmie		Via Snoqualmie Parkway (Towards I-90)		North Bend and Snoqualmie via Reinig Road to Meadowbrook & 428th Ave		Via Meadowbrook Way SE / SE North Bend Way			
Distribution ID	1		2		3		4		5		6		7			
Peak Hour	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Phase 1 Build (2020)																
Multifamily Housing	1	0	11	8	8	8	8	5	8	4	14	10	4	4	54	39
Industrial Park	2	2	26	34	5	5	3	3	86	77	11	8	27	31	160	160
Shopping Center / Retail	3	5	22	48	41	74	21	41	12	26	20	46	5	15	124	255
Phase 1 Total	6	7	59	90	54	87	32	49	106	107	45	64	36	50	338	454
Full Buildout (2032)																
Multifamily Housing ¹	1	0	11	7	8	8	9	5	6	4	14	9	4	3	53	36
Industrial Park ²	3	3	51	68	10	11	6	7	173	155	22	16	55	60	320	320
Shopping Center / Retail ³	2	6	17	59	32	90	16	49	10	31	16	55	4	18	97	308
Office	7	8	159	143	80	75	29	40	167	206	195	210	87	111	724	793
Total	13	17	238	277	130	184	60	101	356	396	247	290	150	192	1,194	1,457
Percentage of total peak hour trips	1%	1%	20%	19%	11%	13%	5%	7%	30%	27%	21%	20%	13%	13%		
<p><u>Notes:</u> Trip generation estimates are based on the net new trips from TENW's "Trip Generation & Traffic Scoping for the proposed Snoqualmie Mill Development" dated December 12, 2017. Any changes to trip generation estimates should be reflected in trip assignment estimates.</p> <p>¹ Multifamily housing constructed in Phase 1.</p> <p>² Includes Phases 1, 2, and 3 buildout.</p> <p>³ Shopping Center / Retail constructed in Phase 1.</p> <p><u>Source:</u> Fehr & Peers, 2018.</p>																

Figure 2 - Snoqualmie Mill Project Study Area Map



Note: Boundaries are approximate.



Trips External to Study Area

Table 4 shows the external trips generated by the project that leave the study area and have the potential to impact regional roadways. This area is represented in Figure 2 in a green oval. As shown in Table 4, 84 percent of trips leave the City of Snoqualmie in the AM peak hour, and 80 percent of trips leave the City in the PM peak hour.

Trips Within Study Area

Trips within the study area refer to trips that start and end within city limits. Figure 2 shows a relative representation of this area, primarily including Snoqualmie Ridge and Historic Snoqualmie.

As shown in Table 4, 16 percent of external project trips stay within city limits in the AM peak hour, and 20 percent of trips stay within city limits in the PM peak hour. Of the employers, we estimated that about 5 percent of peak hour trips generated by the industrial park remain in the study area, and about 15 percent of office-related trips stay within the study area in the peak hours.

Trips Internal to Site

Trips internal to the site refer to the trips that do not leave the Mill Development site. These internalized trips do not impact local or regional roadways and are typically short drive, walking, or biking trips. To quantify the likelihood of project trip internalization, Fehr & Peers utilized the mixed-used trip generation (MXD+) tool. The MXD+ model was developed to more accurately estimate the external vehicular trip generation of mixed-use land development projects than prior methods (e.g., ITE internalization spreadsheet). The model considers various built environment variables such as land use density, regional location, proximity to transit, and various design variables when calculating the project's internal trips, and external trips made by auto, transit, and non-motorized modes.

The focus of this exercise was to evaluate the reasonability of the internalization rates provided by TENW in their memorandum titled "Trip Generation & Traffic Scoping for the proposed Snoqualmie Mill Development" dated December 12, 2017.

We conclude that results provided by TENW are reasonable to use for this project.

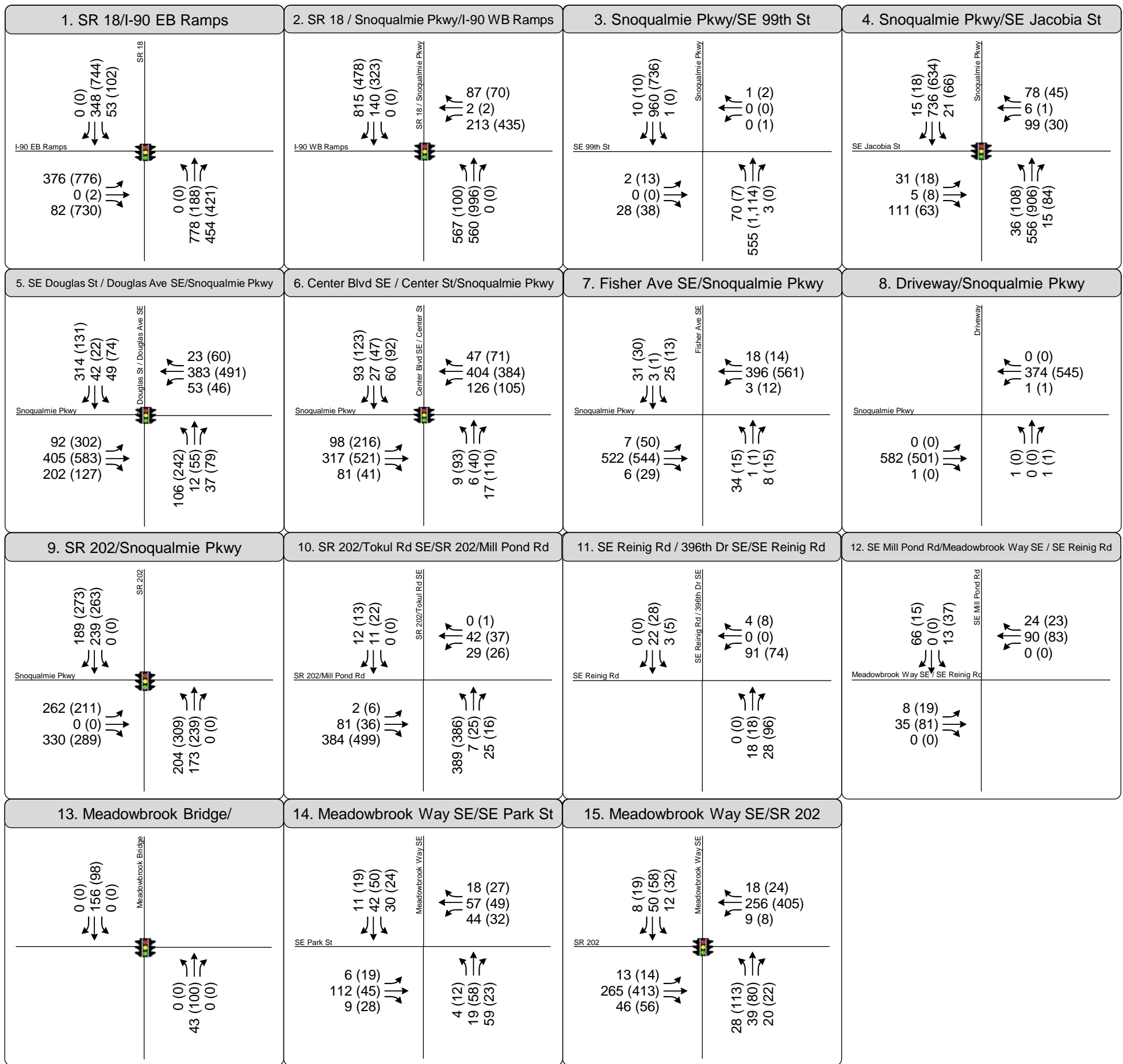


Figure 3
Peak Hour Traffic Volumes
2023 Volume after Salish Lodge Reduction
AM(PM)



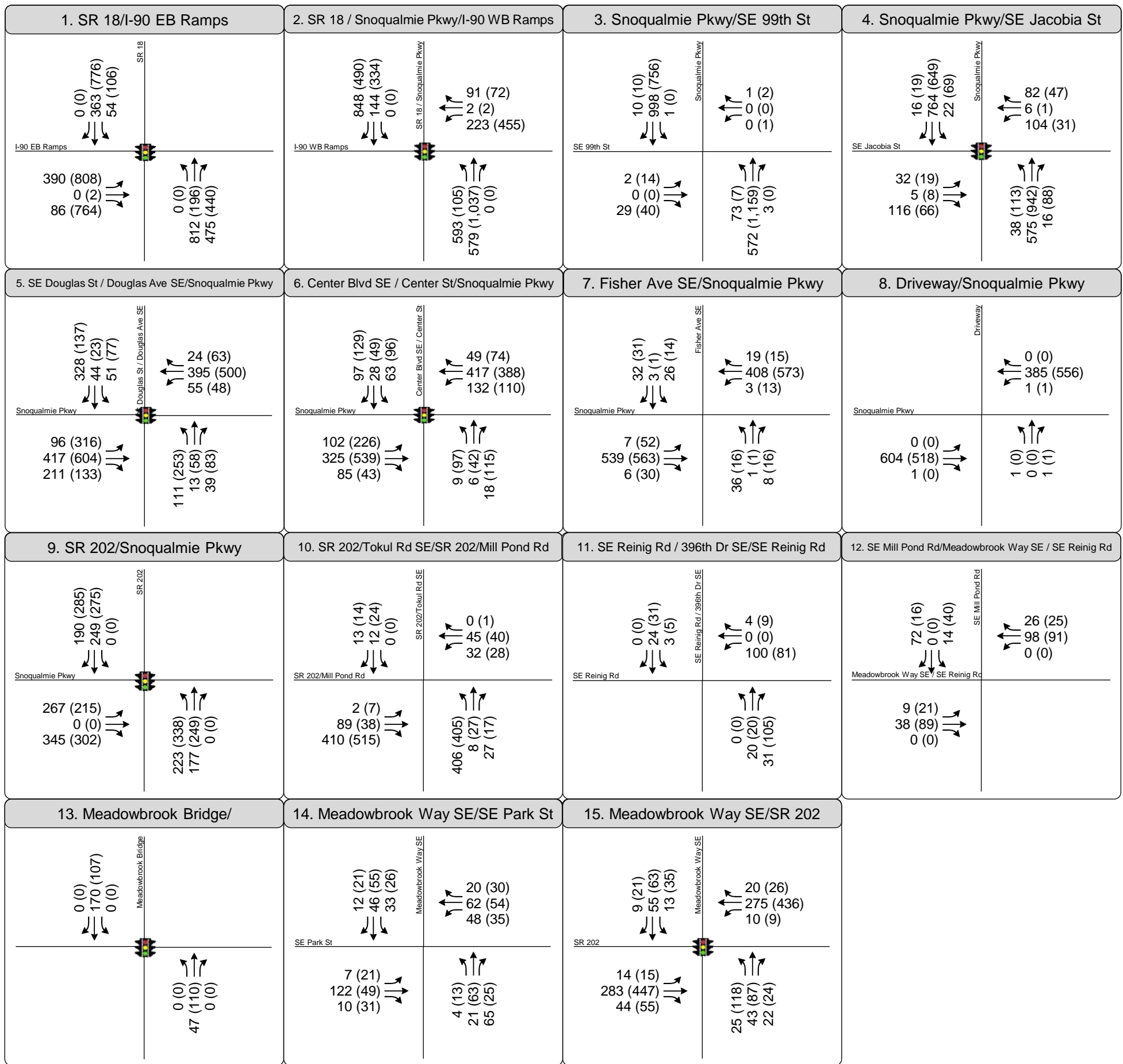


Figure 4
Peak Hour Traffic Volumes
2032 Volume after Salish Lodge Reduction
AM(PM)



Appendix E4

Trip Generation Calculations

**Snoqualmie Mill
Trip Generation Estimate (Planning Area 1)**

Land Use	Area	Units ¹	ITE LUC ²	Trip Rate ²	Directional Split ²		Trips Generated			Truck Trip Generation			Non-Truck Trip Generation				
					In	Out	In	Out	Total	Truck % ⁴	Enter	Exit	Total	Enter	Exit	Total	
WEEKDAY DAILY																	
Proposed Use:																	
Industrial Park	400,000	GFA	130	EQN	50%	50%	965	966	1,931	13%	125	126	251	840	840	1,680	
Shopping Center	70,000	GLA	820	EQN	50%	50%	2,359	2,358	4,717								
							-128	-140	-268								
							-757	-756	-1,513								
		34%					1,474	1,462	2,936								
Multifamily Housing (Low-Rise) ⁴	160	DU	220	EQN	50%	50%	585	584	1,169								
							-140	-128	-268								
							-445	-456	-901								
							Total Gross Weekday Daily Trips =	3,909	3,908	7,817							
							Total Weekday Daily Internal Trips =	-268	-268	-536							
							Total Weekday Daily Pass-By Trips =	-757	-756	-1,513							
NET NEW WEEKDAY DAILY TRIP GENERATION =							2,884	2,884	5,768		125	126	251	840	840	1,680	

Notes:

1. GFA = Gross Floor Area, GLA = Gross Leasable Area, DU = Dwelling Units.
2. Land Use Code, trip rates, and entering/exiting splits based on ITE Trip Generation Manual, 10th Edition, 2017.
3. Internal and pass-by trips based on ITE Trip Generation Handbook, 3rd Edition, 2017.
4. 160 units based on 133,600 SF and assumed 835 SF per unit.

**Snoqualmie Mill
Trip Generation Estimate (Planning Area 1)**

Land Use	Area	Units ¹	ITE LUC ²	Trip Rate ²	Directional Split ²		Trips Generated			Truck Trip Generation				Non-Truck Trip Generation			
					In	Out	In	Out	Total	Truck % ⁴	Enter	Exit	Total	Enter	Exit	Total	
WEEKDAY AM PEAK HOUR																	
Proposed Use:																	
Industrial Park	400,000	GFA	130	0.40	81%	19%	130	30	160	13%	17	4	21	113	26	139	
Shopping Center	70,000	GLA	820	EQN	62%	38%	116	71	187								
							Internal ³	-1	0	-1							
							Pass-By ³	34%	-39	-24	-63						
							76	47	123								
Multifamily Housing (Low-Rise) ⁴	160	DU	220	EQN	23%	77%	17	58	75								
							Internal ³	0	-1	-1							
								17	57	74							
							Total Gross Weekday AM Peak Hour Trips =	263	159	422							
							Total Weekday AM Peak Hour Internal Trips =	-1	-1	-2							
							Total Weekday AM Peak Hour Pass-By Trips =	-39	-24	-63							
NET NEW WEEKDAY AM PEAK HOUR TRIP GENERATION =							223	134	357		17	4	21	113	26	139	

Notes:

1. GFA = Gross Floor Area, GLA = Gross Leasable Area, DU = Dwelling Units.
2. Land Use Code, trip rates, and entering/exiting splits based on ITE Trip Generation Manual, 10th Edition, 2017.
3. Internal and pass-by trips based on ITE Trip Generation Handbook, 3rd Edition, 2017.
4. 160 units based on 133,600 SF and assumed 835 SF per unit.

**Snoqualmie Mill
Trip Generation Estimate (Planning Area 1)**

Land Use	Area	Units ¹	ITE LUC ²	Trip Rate ²	Directional Split ²		Trips Generated			Truck Trip Generation				Non-Truck Trip Generation			
					In	Out	In	Out	Total	Truck % ⁴	Enter	Exit	Total	Enter	Exit	Total	
WEEKDAY PM PEAK HOUR																	
Proposed Use:																	
Industrial Park	400,000	GFA	130	0.40	21%	79%	34	126	160	13%	4	17	21	30	109	139	
Shopping Center	70,000	GLA	820	EQN	48%	52%	200	217	417								
							Internal ³	-14	-26	-40							
							Pass-By ³	-63	-65	-128							
	34%						123	126	249								
Multifamily Housing (Low-Rise) ⁴	160	DU	220	EQN	63%	37%	57	33	90								
							Internal ³	-26	-14	-40							
								31	19	50							
							Total Gross Weekday PM Peak Hour Trips =	291	376	667							
							Total Weekday PM Peak Hour Internal Trips =	-40	-40	-80							
							Total Weekday PM Peak Hour Pass-By Trips =	-63	-65	-128							
NET NEW WEEKDAY PM PEAK HOUR TRIP GENERATION =							188	271	459		4	17	21	30	109	139	

Notes:

1. GFA = Gross Floor Area, GLA = Gross Leasable Area, DU = Dwelling Units.
2. Land Use Code, trip rates, and entering/exiting splits based on ITE Trip Generation Manual, 10th Edition, 2017.
3. Internal and pass-by trips based on ITE Trip Generation Handbook, 3rd Edition, 2017.
4. 160 units based on 133,600 SF and assumed 835 SF per unit.

**Snoqualmie Mill
Trip Generation Estimate (Planning Area 1)**

Land Use	Area	Units ¹	ITE LUC ²	Trip Rate ²	Directional Split ²		Trips Generated			Truck Trip Generation			Non-Truck Trip Generation				
					In	Out	In	Out	Total	Truck % ⁴	Enter	Exit	Total	Enter	Exit	Total	
SATURDAY DAILY																	
Proposed Use:																	
Industrial Park	400,000	GFA	130	2.54	50%	50%	508	508	1,016	13%	66	66	132	442	442	884	
Shopping Center	70,000	GLA	820	EQN	50%	50%	3,572	3,572	7,144								
							-189	-206	-395								
							-1,150	-1,144	-2,294								
	34%						2,233	2,222	4,455								
Multifamily Housing (Low-Rise) ⁴	160	DU	220	EQN	50%	50%	860	860	1,720								
							-206	-189	-395								
							654	671	1,325								
Total Gross Saturday Daily Trips =							4,432	4,432	8,864								
Total Saturday Daily Internal Trips =							-395	-395	-790								
Total Saturday Daily Pass-By Trips =							-1,150	-1,144	-2,294								
NET NEW SATURDAY DAILY TRIP GENERATION =							2,887	2,893	5,780		66	66	132	442	442	884	

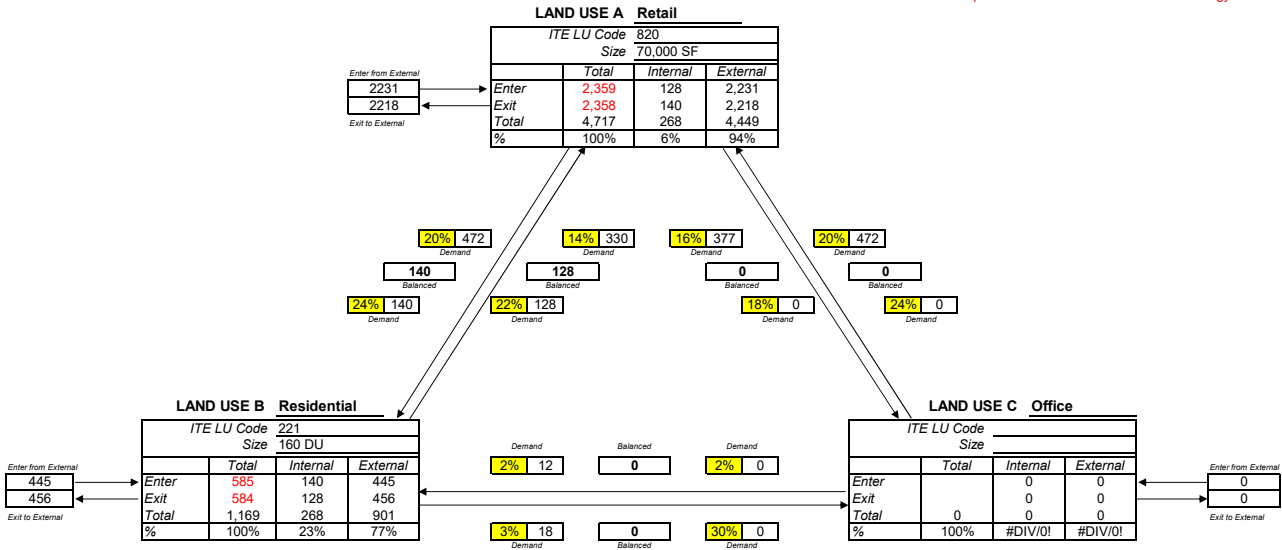
Notes:

1. GFA = Gross Floor Area, GLA = Gross Leasable Area, DU = Dwelling Units.
2. Land Use Code, trip rates, and entering/exiting splits based on ITE Trip Generation Manual, 10th Edition, 2017.
3. Internal and pass-by trips based on ITE Trip Generation Handbook, 3rd Edition, 2017.
4. 160 units based on 133,600 SF and assumed 835 SF per unit.

Analyst TENW
 Date 12/7/2017

Multi-Use Development Trip Generation and Internal Capture Summary - Daily

Project Name Snoqualmie Mill
 Time Period Weekday Daily
 Assumed Average of AM and PM internal capture rates from NCHRP 8-51 Methodology



NCHRP 8-51 Internal Trip Capture Estimation Tool				
Project Name:	Snoqualmie Mill		Organization:	TENW
Project Location:			Performed By:	SJH
Scenario Description:			Date:	
Analysis Year:			Checked By:	
Analysis Period:	AM Street Peak Hour		Date:	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	820	70,000	GLA	187	116	71
Restaurant				0		
Cinema/Entertainment				0		
Residential	221	160	DU	75	17	58
Hotel				0		
All Other Land Uses ²						
Total				262	133	129

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	1	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	262	133	129
Internal Capture Percentage	1%	1%	1%
External Vehicle-Trips ³	260	132	128
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	1%	0%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	0%	2%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Snoqualmie Mill
Analysis Period:	AM Street Peak Hour

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	116	116	1.00	71	71
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	17	17	1.00	58	58
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	21		9	0	10	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	1	12	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		37	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	9		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	20	0	0		0
Hotel	0	5	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	1	115	116	115	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	17	17	17	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	0	71	71	71	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	57	58	57	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A
²Person-Trips
³Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator
*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool				
Project Name:	Snoqualmie Mill		Organization:	TENW
Project Location:			Performed By:	SJH
Scenario Description:			Date:	
Analysis Year:			Checked By:	
Analysis Period:	PM Street Peak Hour		Date:	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	820	70,000	GLA	417	200	217
Restaurant				0		
Cinema/Entertainment				0		
Residential	221	160	DU	90	57	33
Hotel				0		
All Other Land Uses ²						
Total				507	257	250

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	26	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	14	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	507	257	250
Internal Capture Percentage	16%	16%	16%
External Vehicle-Trips ³	427	217	210
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	7%	12%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	46%	42%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Snoqualmie Mill
Analysis Period:	PM Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	200	200	1.00	217	217
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	57	57	1.00	33	33
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	4		63	9	56	11
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	14	7	0		1
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		16	0	0	2	0
Retail	0		0	0	26	0
Restaurant	0	100		0	9	0
Cinema/Entertainment	0	8	0		2	0
Residential	0	20	0	0		0
Hotel	0	4	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	14	186	200	186	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	26	31	57	31	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	26	191	217	191	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	14	19	33	19	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

²Person-Trips

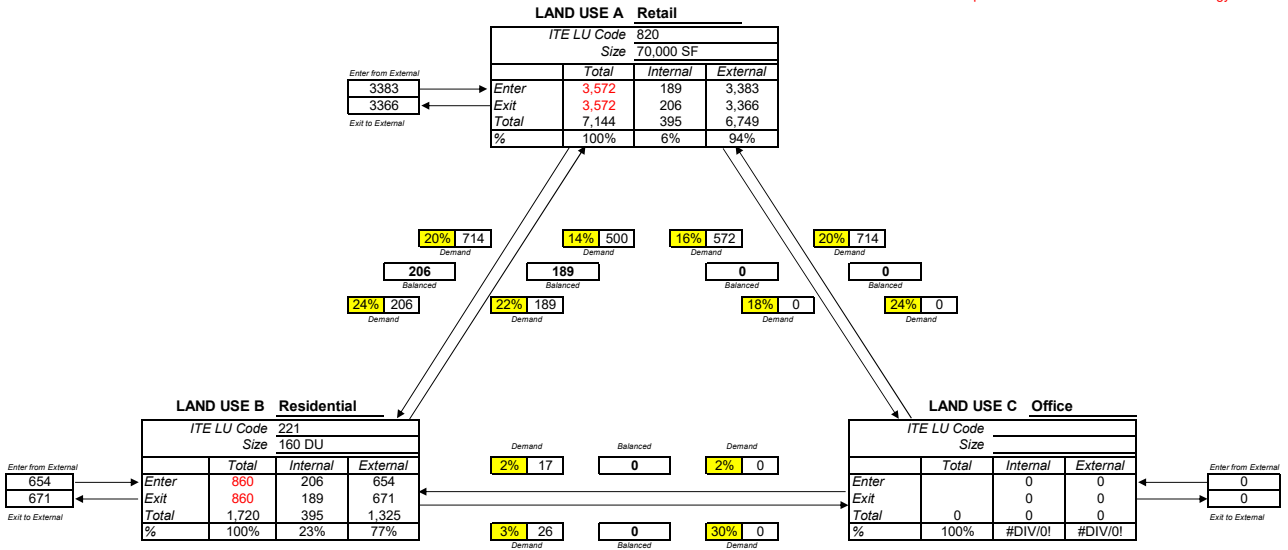
³Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Analyst TENW
 Date 3/8/2018

Multi-Use Development Trip Generation and Internal Capture Summary - Daily

Project Name Snoqualmie Mill
 Time Period Saturday Daily
 Assumed Average of AM and PM internal capture rates from NCHRP 8-51 Methodology



**Snoqualmie Mill
Trip Generation Estimate (Full Build)**

Land Use	Area	Units ¹	ITE LUC ²	Trip Rate ²	Directional Split ²		Trips Generated			Truck Trip Generation				Non-Truck Trip Generation			
					In	Out	In	Out	Total	Truck % ³	Enter	Exit	Total	Enter	Exit	Total	
WEEKDAY DAILY																	
Proposed Use:																	
Industrial Park	800,000	GFA	130	EQN	50%	50%	1,384	1,384	2,768	13%	180	180	360	1,204	1,204	2,408	
Shopping Center	95,000	GLA	820	EQN	50%	50%	2,903	2,903	5,806								
							-709	-604	-1,313								
							-764	-764	-1,528								
	34%						1,430	1,535	2,965								
Multifamily Housing (Low-Rise) ⁴	160	DU	220	EQN	50%	50%	585	584	1,169								
							-152	-146	-298								
							433	438	871								
Office	800,000	GFA	710	EQN	50%	50%	3,988	3,987	7,975								
							-482	-593	-1,075								
							3,506	3,394	6,900								
Total Gross Weekday Daily Trips =							8,860	8,858	17,718								
Total Weekday Daily Internal Trips =							-1,343	-1,343	-2,686								
Total Weekday Daily Pass-By Trips =							-764	-764	-1,528								
NET NEW WEEKDAY DAILY TRIP GENERATION =							6,753	6,751	13,504		180	180	360	1,204	1,204	2,408	

Notes:

1. GFA = Gross Floor Area. GLA = Gross Leasable Area, DU = Dwelling Units.
2. Land Use Code, trip rates, and entering/exiting splits based on ITE Trip Generation Manual, 10th Edition, 2017.
3. Internal and pass-by trips based on ITE Trip Generation Handbook, 3rd Edition, 2017.
4. 160 units based on 133,600 SF and assumed 835 SF per unit.

**Snoqualmie Mill
Trip Generation Estimate (Full Build)**

Land Use	Area	Units ¹	ITE LUC ²	Trip Rate ²	Directional Split ²		Trips Generated			Truck Trip Generation				Non-Truck Trip Generation			
					In	Out	In	Out	Total	Truck % ³	Enter	Exit	Total	Enter	Exit	Total	
WEEKDAY AM PEAK HOUR																	
Proposed Use:																	
Industrial Park	800,000	GFA	130	0.40	81%	19%	259	61	320	13%	34	8	42	225	53	278	
Shopping Center	95,000	GLA	820	EQN	62%	38%	123	76	199								
							Internal ³	-32	-22	-54							
							Pass-By ³	34%	-31	-18	-49						
							60	36	96								
Multifamily Housing (Low-Rise) ⁴	160	DU	220	EQN	23%	77%	17	58	75								
							Internal ³	0	-2	-2							
								17	56	73							
Office	800,000	GFA	710	EQN	86%	14%	669	109	778								
							Internal ³	-23	-31	-54							
								646	78	724							
Total Gross Weekday AM Peak Hour Trips =							1,068	304	1,372								
Total Weekday AM Peak Hour Internal Trips =							-55	-55	-110								
Total Weekday AM Peak Hour Pass-By Trips =							-31	-18	-49								
NET NEW WEEKDAY AM PEAK HOUR TRIP GENERATION =							982	231	1,213		34	8	42	225	53	278	

Notes:

1. GFA = Gross Floor Area. GLA = Gross Leasable Area, DU = Dwelling Units.
2. Land Use Code, Trip rates, and entering/exiting splits based on ITE Trip Generation Manual, 10th Edition, 2017.
3. Internal and pass-by trips based on ITE Trip Generation Handbook, 3rd Edition, 2017.
4. 160 units based on 133,600 SF and assumed 835 SF per unit.

**Snoqualmie Mill
Trip Generation Estimate (Full Build)**

Land Use	Area	Units ¹	ITE LUC ²	Trip Rate ²	Directional Split ²		Trips Generated			Truck Trip Generation				Non-Truck Trip Generation			
					In	Out	In	Out	Total	Truck % ³	Enter	Exit	Total	Enter	Exit	Total	
WEEKDAY PM PEAK HOUR																	
Proposed Use:																	
Industrial Park	800,000	GFA	130	0.40	21%	79%	67	253	320	13%	8	33	41	59	220	279	
Shopping Center	95,000	GLA	820	EQN	48%	52%	251	272	523								
							Internal ³	-34	-31	-65							
							Pass-By ³	34%	-74	-82	-156						
							143	159	302								
Multifamily Housing (Low-Rise) ⁴	160	DU	220	EQN	63%	37%	57	33	90								
							Internal ³	-28	-15	-43							
								29	18	47							
Office	800,000	GFA	710	EQN	16%	84%	131	690	821								
							-6	-22	-28								
							125	668	793								
Total Gross Weekday PM Peak Hour Trips =							506	1,248	1,754								
Total Weekday PM Peak Hour Internal Trips =							-68	-68	-136								
Total Weekday PM Peak Hour Pass-By Trips =							-74	-82	-156								
NET NEW WEEKDAY PM PEAK HOUR TRIP GENERATION =							364	1,098	1,462	8	33	41	59	220	279		

Notes:

1. GFA = Gross Floor Area. GLA = Gross Leasable Area, DU = Dwelling Units.
2. Land Use Code, trip rates, and entering/exiting splits based on ITE Trip Generation Manual, 10th Edition, 2017.
3. Internal and pass-by trips based on ITE Trip Generation Handbook, 3rd Edition, 2017.
4. 160 units based on 133,600 SF and assumed 835 SF per unit.

**Snoqualmie Mill
Trip Generation Estimate (Full Build)**

Land Use	Area	Units ¹	ITE LUC ²	Trip Rate ²	Directional Split ²		Trips Generated			Truck Trip Generation				Non-Truck Trip Generation		
					In	Out	In	Out	Total	Truck % ³	Enter	Exit	Total	Enter	Exit	Total
SATURDAY DAILY																
Proposed Use:																
Industrial Park	800,000	GFA	130	2.54	50%	50%	1,016	1,016	2,032	13%	132	132	264	884	884	1,768
Shopping Center	95,000	GLA	820	EQN	50%	50%	4,317	4,316	8,633							
							-401	-365	-766							
							-1,331	-1,343	-2,674							
	34%						2,585	2,608	5,193							
Multifamily Housing (Low-Rise) ⁴	160	DU	220	EQN	50%	50%	860	860	1,720							
							-223	-215	-438							
							637	645	1,282							
Office	800,000	GFA	710	2.21	50%	50%	884	884	1,768							
		Internal ³					-185	-229	-414							
							699	655	1,354							
Total Gross Saturday Daily Trips =							7,077	7,076	14,153							
Total Saturday Daily Internal Trips =							-809	-809	-1,618							
Total Saturday Daily Pass-By Trips =							-1,331	-1,343	-2,674							
NET NEW SATURDAY DAILY TRIP GENERATION =							4,937	4,924	9,861		132	132	264	884	884	1,768

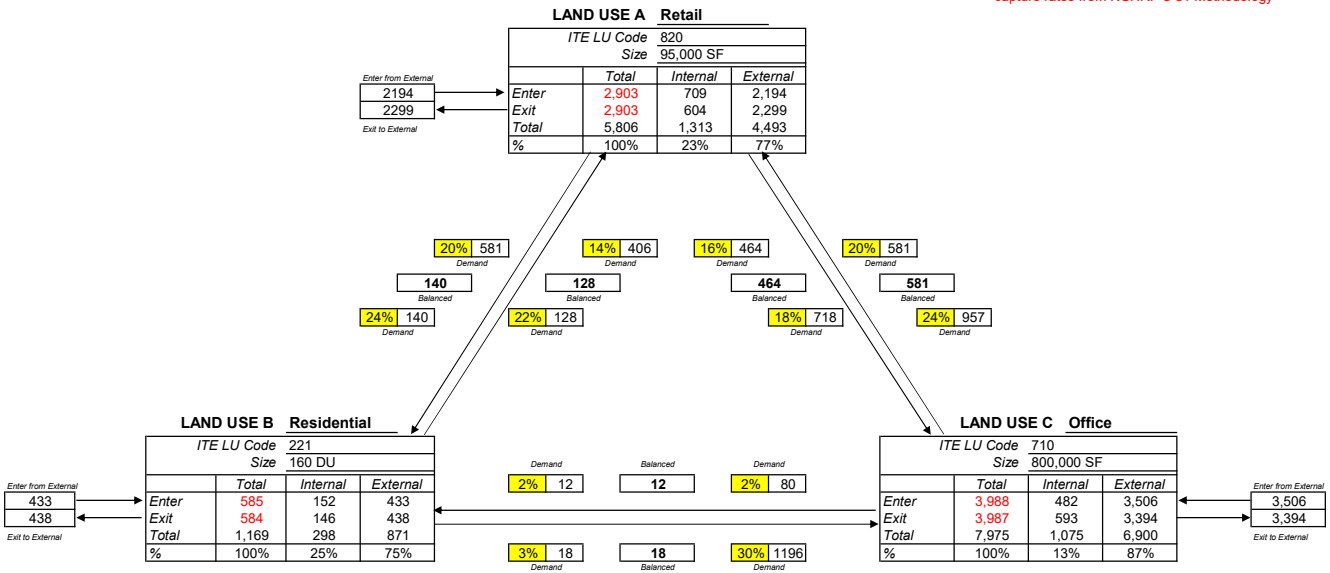
Notes:

1. GFA = Gross Floor Area. GLA = Gross Leasable Area, DU = Dwelling Units.
2. Land Use Code, trip rates, and entering/exiting splits based on ITE Trip Generation Manual, 10th Edition, 2017.
3. Internal and pass-by trips based on ITE Trip Generation Handbook, 3rd Edition, 2017.
4. 160 units based on 133,600 SF and assumed 835 SF per unit.

Analyst TENW
 Date 11/14/17

Multi-Use Development Trip Generation and Internal Capture Summary - Daily

Project Name Snoqualmie Mill
 Time Period Weekday Daily
 Assumed Average of AM and PM internal capture rates from NCHRP 8-51 Methodology



NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Snoqualmie Mill	Organization:	TENW
Project Location:		Performed By:	SJH
Scenario Description:		Date:	
Analysis Year:		Checked By:	
Analysis Period:	AM Street Peak Hour	Date:	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office	710	800,000	GFA	778	669	109
Retail	820	95,000	GLA	199	123	76
Restaurant				0		
Cinema/Entertainment				0		
Residential	221	160	DU	75	17	58
Hotel				0		
All Other Land Uses ²						
Total				1052	809	243

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		31	0	0	0	0
Retail	22		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	1	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	1,052	809	243
Internal Capture Percentage	10%	7%	23%
External Vehicle-Trips ³	942	754	188
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	3%	28%
Retail	26%	29%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	0%	3%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Snoqualmie Mill
Analysis Period:	AM Street Peak Hour

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	669	669	1.00	109	109
Retail	1.00	123	123	1.00	76	76
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	17	17	1.00	58	58
Hotel	1.00	0	0	1.00	0	0

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		31	69	0	1	0
Retail	22		10	0	11	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	1	12	0		0
Hotel	0	0	0	0	0	

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		39	0	0	0	0
Retail	27		0	0	0	0
Restaurant	94	10		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	20	21	0	0		0
Hotel	20	5	0	0	0	

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	23	646	669	646	0	0
Retail	32	91	123	91	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	17	17	17	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	31	78	109	78	0	0
Retail	22	54	76	54	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	2	56	58	56	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A
²Person-Trips
³Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator
*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool				
Project Name:	Snoqualmie Mill		Organization:	TENW
Project Location:			Performed By:	SJH
Scenario Description:			Date:	
Analysis Year:			Checked By:	
Analysis Period:	PM Street Peak Hour		Date:	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office	710	800,000	GFA	821	131	690
Retail	820	95,000	GLA	523	251	272
Restaurant				0		
Cinema/Entertainment				0		
Residential	221	160	DU	90	57	33
Hotel				0		
All Other Land Uses ²						
Total				1434	439	995

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		20	0	0	2	0
Retail	5		0	0	26	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	14	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	1,434	439	995
Internal Capture Percentage	9%	15%	7%
External Vehicle-Trips ³	1,298	371	927
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	5%	3%
Retail	14%	11%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	49%	45%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Snoqualmie Mill
Analysis Period:	PM Street Peak Hour

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	131	131	1.00	690	690
Retail	1.00	251	251	1.00	272	272
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	57	57	1.00	33	33
Hotel	1.00	0	0	1.00	0	0

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		138	28	0	14	0
Retail	5		79	11	71	14
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	14	7	0		1
Hotel	0	0	0	0	0	

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		20	0	0	2	0
Retail	41		0	0	26	0
Restaurant	39	126		0	9	0
Cinema/Entertainment	8	10	0		2	0
Residential	75	25	0	0		0
Hotel	0	5	0	0	0	

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	6	125	131	125	0	0
Retail	34	217	251	217	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	28	29	57	29	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

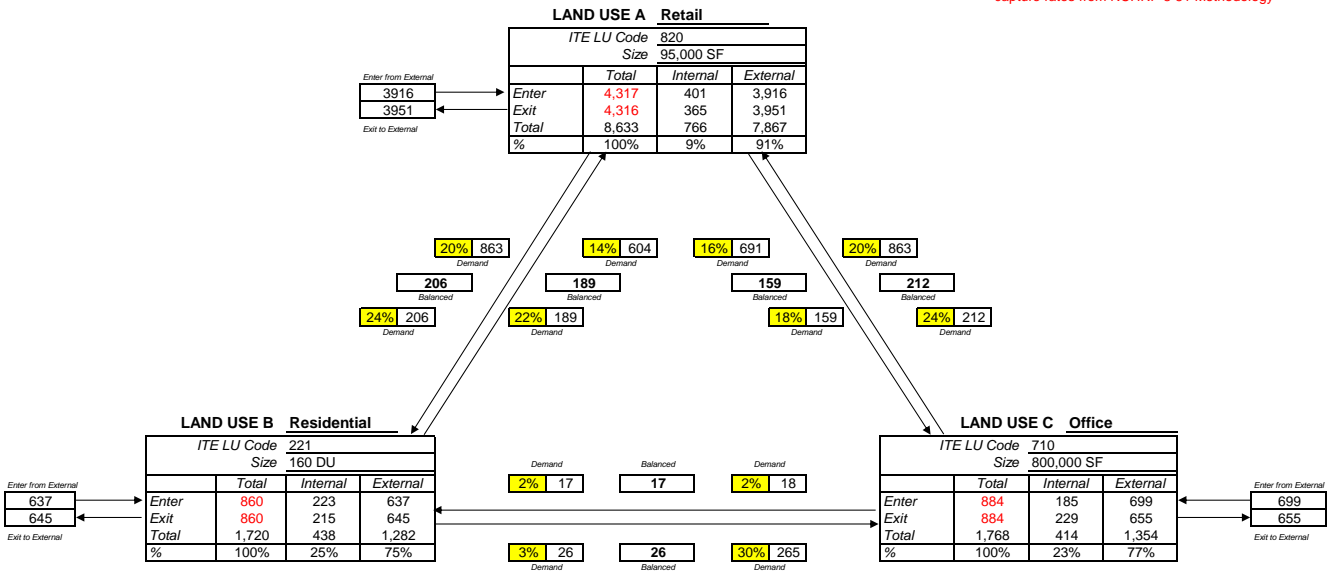
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	22	668	690	668	0	0
Retail	31	241	272	241	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	15	18	33	18	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P
²Person-Trips
³Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator
*Indicates computation that has been rounded to the nearest whole number.

Analyst TENW
 Date 3/8/2018

Multi-Use Development Trip Generation and Internal Capture Summary - Daily

Project Name Shoqualmie Mill
 Time Period Saturday Daily
 Assumed Average of AM and PM internal capture rates from NCHRP 8-51 Methodology



**Snoqualmie Mill
Trip Generation Estimate (Reduced Planning Area 1)**

Land Use	Area	Units ¹	ITE LUC ²	Trip Rate ²	Directional Split ²		Trips Generated			Truck Trip Generation				Non-Truck Trip Generation			
					In	Out	In	Out	Total	Truck % ⁴	Enter	Exit	Total	Enter	Exit	Total	
WEEKDAY AM PEAK HOUR																	
Proposed Use:																	
Industrial Park	390,000	GFA	130	0.40	81%	19%	126	30	156	13%	16	4	20	110	26	136	
Shopping Center	82,000	GLA	820	EQN	62%	38%	120	73	193								
							Internal ³	0	0	0							
							Pass-By ³	34%	-41	-25	-66						
							79	48	127								
Multifamily Housing (Low-Rise) ⁴	125	DU	220	EQN	23%	77%	14	45	59								
							Internal ³	0	0	0							
								14	45	59							
							Total Gross Weekday AM Peak Hour Trips =	260	148	408							
							Total Weekday AM Peak Hour Internal Trips =	0	0	0							
							Total Weekday AM Peak Hour Pass-By Trips =	-41	-25	-66							
NET NEW WEEKDAY AM PEAK HOUR TRIP GENERATION =							219	123	342	16	4	20	110	26	136		

Notes:

1. GFA = Gross Floor Area, GLA = Gross Leasable Area, DU = Dwelling Units.
2. Land Use Code, trip rates, and entering/exiting splits based on ITE Trip Generation Manual, 10th Edition, 2017.
3. Internal and pass-by trips based on ITE Trip Generation Handbook, 3rd Edition, 2017.
4. 125 units based on 104,000 SF and assumed 835 SF per unit.

**Snoqualmie Mill
Trip Generation Estimate (Reduced Planning Area 1)**

Land Use	Area	Units ¹	ITE LUC ²	Trip Rate ²	Directional Split ²		Trips Generated			Truck Trip Generation				Non-Truck Trip Generation			
					In	Out	In	Out	Total	Truck % ⁴	Enter	Exit	Total	Enter	Exit	Total	
WEEKDAY PM PEAK HOUR																	
Proposed Use:																	
Industrial Park	390,000	GFA	130	0.40	21%	79%	33	123	156	13%	4	16	20	29	107	136	
Shopping Center	82,000	GLA	820	EQN	48%	52%	225	244	469								
							Internal ³	-11	-21	-32							
							Pass-By ³	-73	-76	-149							
	34%						141	147	288								
Multifamily Housing (Low-Rise) ⁴	125	DU	220	EQN	63%	37%	45	27	72								
							Internal ³	-21	-11	-32							
								24	16	40							
							Total Gross Weekday PM Peak Hour Trips =	303	394	697							
							Total Weekday PM Peak Hour Internal Trips =	-32	-32	-64							
							Total Weekday PM Peak Hour Pass-By Trips =	-73	-76	-149							
NET NEW WEEKDAY PM PEAK HOUR TRIP GENERATION =							198	286	484		4	16	20	29	107	136	

Notes:

1. GFA = Gross Floor Area, GLA = Gross Leasable Area, DU = Dwelling Units.
2. Land Use Code, trip rates, and entering/exiting splits based on ITE Trip Generation Manual, 10th Edition, 2017.
3. Internal and pass-by trips based on ITE Trip Generation Handbook, 3rd Edition, 2017.
4. 125 units based on 104,000 SF and assumed 835 SF per unit.

**Snoqualmie Mill
Trip Generation Estimate (Reduced Planning Area 1)**

Land Use	Area	Units ¹	ITE LUC ²	Trip Rate ²	Directional Split ²		Trips Generated			Truck Trip Generation				Non-Truck Trip Generation			
					In	Out	In	Out	Total	Truck % ⁴	Enter	Exit	Total	Enter	Exit	Total	
SATURDAY DAILY																	
Proposed Use:																	
Industrial Park	390,000	GFA	130	2.54	50%	50%	496	495	991	13%	64	65	129	432	430	862	
Shopping Center	82,000	GLA	820	EQN	50%	50%	3,941	3,940	7,881								
							-189	-206	-395								
							-1,276	-1,270	-2,546								
	34%						2,476	2,464	4,940								
Multifamily Housing (Low-Rise) ⁴	160	DU	220	EQN	50%	50%	860	860	1,720								
							-206	-189	-395								
							654	671	1,325								
							Total Gross Saturday Daily Trips =	4,801	4,800	9,601							
							Total Saturday Daily Internal Trips =	-395	-395	-790							
							Total Saturday Daily Pass-By Trips =	-1,276	-1,270	-2,546							
NET NEW SATURDAY DAILY TRIP GENERATION =							3,130	3,135	6,265		64	65	129	432	430	862	

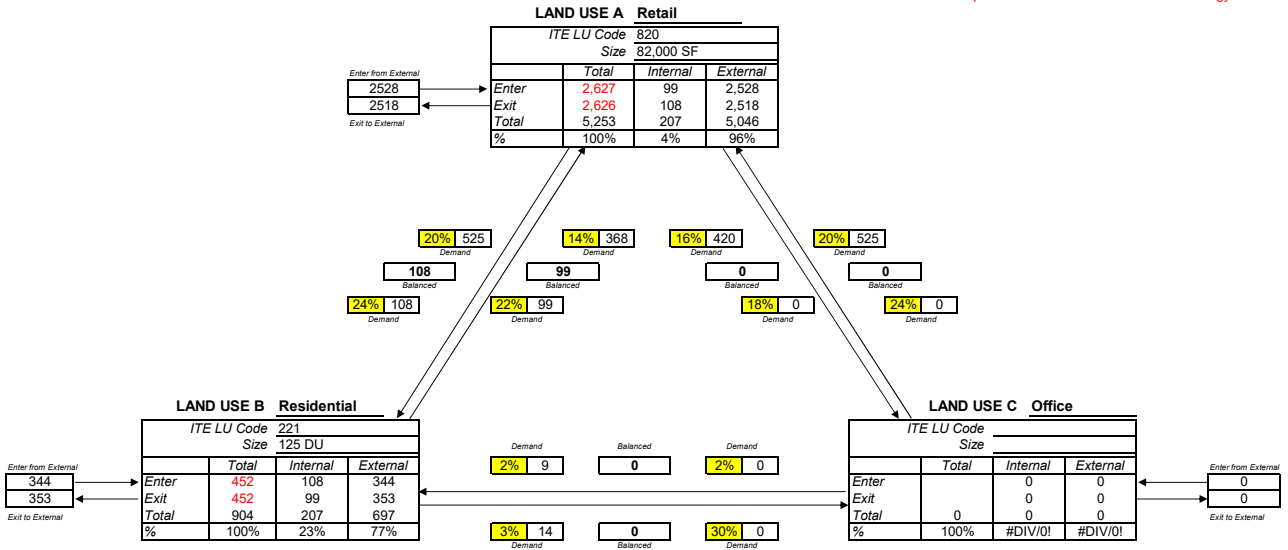
Notes:

1. GFA = Gross Floor Area, GLA = Gross Leasable Area, DU = Dwelling Units.
2. Land Use Code, trip rates, and entering/exiting splits based on ITE Trip Generation Manual, 10th Edition, 2017.
3. Internal and pass-by trips based on ITE Trip Generation Handbook, 3rd Edition, 2017.
4. 125 units based on 104,000 SF and assumed 835 SF per unit.

Analyst TENW
 Date 12/7/2017

Multi-Use Development Trip Generation and Internal Capture Summary - Daily

Project Name Snoqualmie Mill
 Time Period Weekday Daily
 Assumed Average of AM and PM internal capture rates from NCHRP 8-51 Methodology



NCHRP 8-51 Internal Trip Capture Estimation Tool				
Project Name:	Snoqualmie Mill		Organization:	TENW
Project Location:			Performed By:	SJH
Scenario Description:			Date:	
Analysis Year:			Checked By:	
Analysis Period:	AM Street Peak Hour		Date:	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	820	82,000	GLA	193	120	73
Restaurant				0		
Cinema/Entertainment				0		
Residential	221	125	DU	59	14	45
Hotel				0		
All Other Land Uses ²						
Total				252	134	118

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	252	134	118
Internal Capture Percentage	0%	0%	0%
External Vehicle-Trips ³	252	134	118
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	0%	0%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	0%	0%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Snoqualmie Mill
Analysis Period:	AM Street Peak Hour

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	120	120	1.00	73	73
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	14	14	1.00	45	45
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	21		9	0	10	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	0	9	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		38	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	10		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	20	0	0		0
Hotel	0	5	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	0	120	120	120	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	14	14	14	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	0	73	73	73	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	45	45	45	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A
²Person-Trips
³Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator
*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool				
Project Name:	Snoqualmie Mill		Organization:	TENW
Project Location:			Performed By:	SJH
Scenario Description:			Date:	
Analysis Year:			Checked By:	
Analysis Period:	PM Street Peak Hour		Date:	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	820	82,000	GLA	469	225	244
Restaurant				0		
Cinema/Entertainment				0		
Residential	221	125	DU	72	45	27
Hotel				0		
All Other Land Uses ²						
Total				541	270	271

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	21	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	11	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	541	270	271
Internal Capture Percentage	12%	12%	12%
External Vehicle-Trips ³	477	238	239
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	5%	9%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	47%	41%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Snoqualmie Mill
Analysis Period:	PM Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	225	225	1.00	244	244
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	45	45	1.00	27	27
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	5		71	10	63	12
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	11	6	0		1
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		18	0	0	2	0
Retail	0		0	0	21	0
Restaurant	0	113		0	7	0
Cinema/Entertainment	0	9	0		2	0
Residential	0	23	0	0		0
Hotel	0	5	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	11	214	225	214	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	21	24	45	24	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	21	223	244	223	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	11	16	27	16	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

²Person-Trips

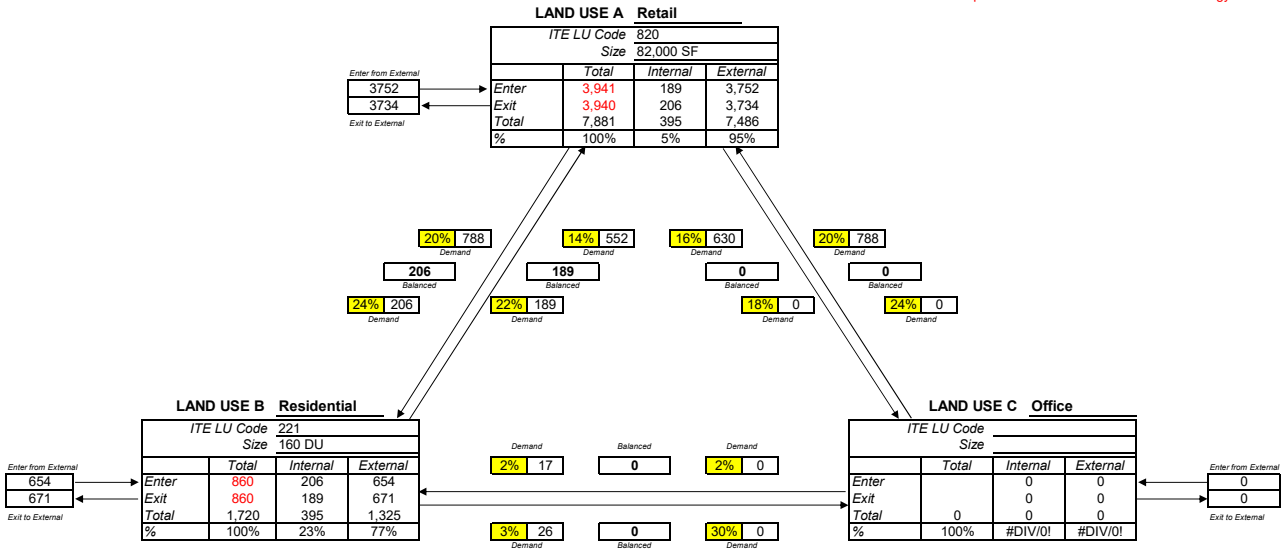
³Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Analyst TENW
 Date 3/8/2018

Multi-Use Development Trip Generation and Internal Capture Summary - Daily

Project Name Snoqualmie Mill
 Time Period Saturday Daily
 Assumed Average of AM and PM internal capture rates from NCHRP 8-51 Methodology



Snoqualmie Mill
Trip Generation Estimate (Redevelopment Alternative)

Land Use	Area	Units ¹	ITE LUC ²	Trip Rate ²	Directional Split ²		Trips Generated			Truck Trip Generation				Non-Truck Trip Generation		
					In	Out	In	Out	Total	Truck % ³	Enter	Exit	Total	Enter	Exit	Total
WEEKDAY DAILY																
Proposed Use:																
Industrial Park	1,500,000	GFA	130	EQN	50%	50%	1,919	1,920	3,839	13%	249	250	499	1,670	1,670	3,340
Shopping Center	82,000	GLA	820	EQN	50%	50%	2,627	2,626	5,253							
							-300	-259	-559							
							-798	-798	-1,596							
	34%						1,529	1,569	3,098							
Multifamily Housing (Low-Rise) ⁴	125	DU	220	EQN	50%	50%	452	452	904							
							-117	-113	-230							
							335	339	674							
Office	160,000	GFA	710	EQN	50%	50%	837	837	1,674							
		Internal ³					-165	-210	-375							
							672	627	1,299							
Total Gross Weekday Daily Trips =							5,835	5,835	11,670							
Total Weekday Daily Internal Trips =							-582	-582	-1,164							
Total Weekday Daily Pass-By Trips =							-798	-798	-1,596							
NET NEW WEEKDAY DAILY TRIP GENERATION =							4,455	4,455	8,910		249	250	499	1,670	1,670	3,340

Notes:

1. GFA = Gross Floor Area. GLA = Gross Leasable Area, DU = Dwelling Units.
2. Land Use Code, Trip rates, and entering/exiting splits based on ITE Trip Generation Manual, 10th Edition, 2017.
3. Internal and pass-by trips based on ITE Trip Generation Handbook, 3rd Edition, 2017.
4. 125 units based on 104,000 SF and assumed 835 SF per unit.

**Snoqualmie Mill
Trip Generation Estimate (Redevelopment Alternative)**

Land Use	Area	Units ¹	ITE LUC ²	Trip Rate ²	Directional Split ²		Trips Generated			Truck Trip Generation				Non-Truck Trip Generation			
					In	Out	In	Out	Total	Truck % ³	Enter	Exit	Total	Enter	Exit	Total	
WEEKDAY AM PEAK HOUR																	
Proposed Use:																	
Industrial Park	1,500,000	GFA	130	0.40	81%	19%	486	114	600	13%	63	15	78	423	99	522	
Shopping Center	82,000	GLA	820	EQN	62%	38%	120	73	193								
							-7	-6	-13								
							-38	-23	-61								
	34%						75	44	119								
Multifamily Housing (Low-Rise) ⁴	125	DU	220	EQN	23%	77%	14	45	59								
							0	-1	-1								
							14	44	58								
Office	160,000	GFA	710	EQN	86%	14%	152	25	177								
							-7	-7	-14								
							145	18	163								
Total Gross Weekday AM Peak Hour Trips =							772	257	1,029								
Total Weekday AM Peak Hour Internal Trips =							-14	-14	-28								
Total Weekday AM Peak Hour Pass-By Trips =							-38	-23	-61								
NET NEW WEEKDAY AM PEAK HOUR TRIP GENERATION =							720	220	940		63	15	78	423	99	522	

Notes:

1. GFA = Gross Floor Area. GLA = Gross Leasable Area, DU = Dwelling Units.
2. Land Use Code, Trip rates, and entering/exiting splits based on ITE Trip Generation Manual, 10th Edition, 2017.
3. Internal and pass-by trips based on ITE Trip Generation Handbook, 3rd Edition, 2017.
4. 125 units based on 104,000 SF and assumed 835 SF per unit.

**Snoqualmie Mill
Trip Generation Estimate (Redevelopment Alternative)**

Land Use	Area	Units ¹	ITE LUC ²	Trip Rate ²	Directional Split ²		Trips Generated			Truck Trip Generation				Non-Truck Trip Generation			
					In	Out	In	Out	Total	Truck % ³	Enter	Exit	Total	Enter	Exit	Total	
WEEKDAY PM PEAK HOUR																	
Proposed Use:																	
Industrial Park	1,500,000	GFA	130	0.40	21%	79%	126	474	600	13%	16	62	78	110	412	522	
Shopping Center	82,000	GLA	820	EQN	48%	52%	225	244	469								
							Internal ³	-29	-26	-55							
							Pass-By ³	34%	-67	-74	-141						
							129	144	273								
Multifamily Housing (Low-Rise) ⁴	125	DU	220	EQN	63%	37%	45	27	72								
							Internal ³	-23	-12	-35							
								22	15	37							
Office	160,000	GFA	710	EQN	16%	84%	28	150	178								
							-6	-20	-26								
							22	130	152								
							Total Gross Weekday PM Peak Hour Trips =	424	895	1,319							
							Total Weekday PM Peak Hour Internal Trips =	-58	-58	-116							
							Total Weekday PM Peak Hour Pass-By Trips =	-67	-74	-141							
NET NEW WEEKDAY PM PEAK HOUR TRIP GENERATION =							299	763	1,062	16	62	78	110	412	522		

Notes:

1. GFA = Gross Floor Area. GLA = Gross Leasable Area, DU = Dwelling Units.
2. Land Use Code, Trip rates, and entering/exiting splits based on ITE Trip Generation Manual, 10th Edition, 2017.
3. Internal and pass-by trips based on ITE Trip Generation Handbook, 3rd Edition, 2017.
4. 125 units based on 104,000 SF and assumed 835 SF per unit.

**Snoqualmie Mill
Trip Generation Estimate (Redevelopment Alternative)**

Land Use	Area	Units ¹	ITE LUC ²	Trip Rate ²	Directional Split ²		Trips Generated			Truck Trip Generation				Non-Truck Trip Generation			
					In	Out	In	Out	Total	Truck % ³	Enter	Exit	Total	Enter	Exit	Total	
SATURDAY DAILY																	
Proposed Use:																	
Industrial Park	1,500,000	GFA	130	2.54	50%	50%	1,905	1,905	3,810	13%	247	248	495	1,658	1,657	3,315	
Shopping Center	82,000	GLA	820	EQN	50%	50%	3,941	3,940	7,881								
							-177	-180	-357								
	Pass-By ³	34%															
							2,484	2,482	4,966								
Multifamily Housing (Low-Rise) ⁴	125	DU	220	EQN	50%	50%	615	615	1,230								
							-152	-153	-305								
							463	462	925								
Office	160,000	GFA	710	2.21	50%	50%	177	177	354								
							-50	-46	-96								
							127	131	258								
Total Gross Saturday Daily Trips =							6,638	6,637	13,275								
Total Saturday Daily Internal Trips =							-379	-379	-758								
Total Saturday Daily Pass-By Trips =							-1,280	-1,278	-2,558								
NET NEW SATURDAY DAILY TRIP GENERATION =							4,979	4,980	9,959		247	248	495	1,658	1,657	3,315	

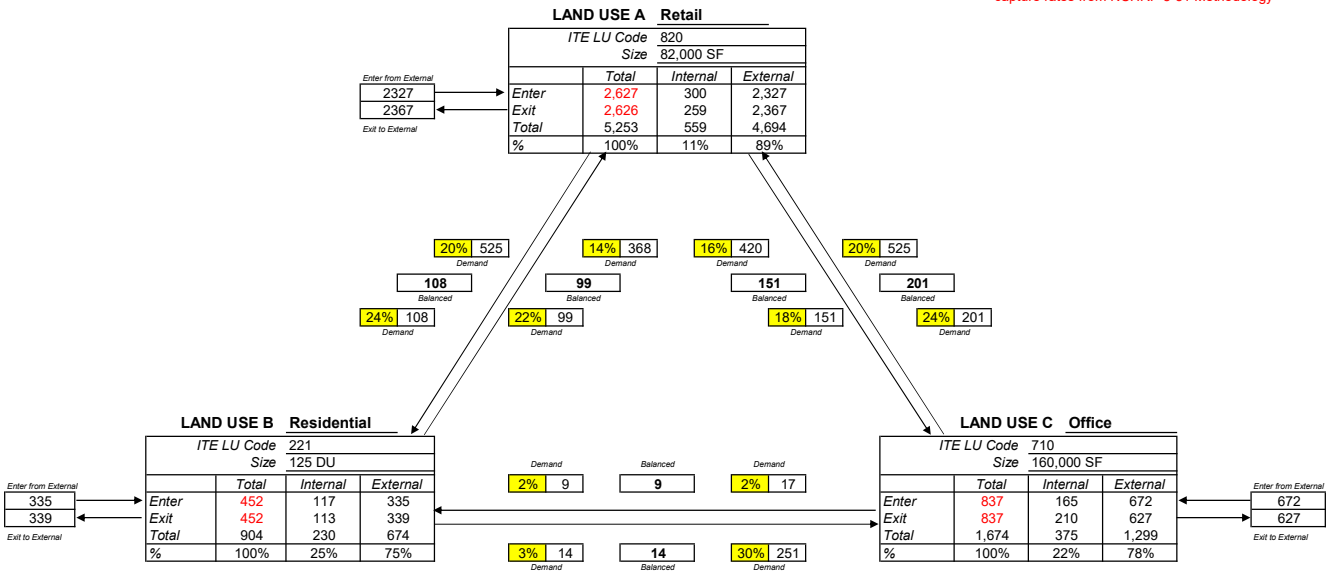
Notes:

1. GFA = Gross Floor Area. GLA = Gross Leasable Area, DU = Dwelling Units.
2. Land Use Code, Trip rates, and entering/exiting splits based on ITE Trip Generation Manual, 10th Edition, 2017.
3. Internal and pass-by trips based on ITE Trip Generation Handbook, 3rd Edition, 2017.
4. 125 units based on 104,000 SF and assumed 835 SF per unit.

Analyst TENW
 Date 11/14/17

Multi-Use Development Trip Generation and Internal Capture Summary - Daily

Project Name Snoqualmie Mill
 Time Period Weekday Daily
 Assumed Average of AM and PM internal capture rates from NCHRP 8-51 Methodology



NCHRP 8-51 Internal Trip Capture Estimation Tool				
Project Name:	Snoqualmie Mill		Organization:	TENW
Project Location:			Performed By:	SJH
Scenario Description:			Date:	
Analysis Year:			Checked By:	
Analysis Period:	AM Street Peak Hour		Date:	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office	710	160,000	GFA	177	152	25
Retail	820	82,000	GLA	193	120	73
Restaurant				0		
Cinema/Entertainment				0		
Residential	221	125	DU	59	14	45
Hotel				0		
All Other Land Uses ²						
Total				429	286	143

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		7	0	0	0	0
Retail	6		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	429	286	143
Internal Capture Percentage	7%	5%	10%
External Vehicle-Trips ³	401	272	129
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	5%	28%
Retail	6%	8%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	0%	2%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Snoqualmie Mill
Analysis Period:	AM Street Peak Hour

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	152	152	1.00	25	25
Retail	1.00	120	120	1.00	73	73
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	14	14	1.00	45	45
Hotel	1.00	0	0	1.00	0	0

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		7	16	0	0	0
Retail	21		9	0	10	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	0	9	0		0
Hotel	0	0	0	0	0	

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		38	0	0	0	0
Retail	6		0	0	0	0
Restaurant	21	10		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	5	20	0	0		0
Hotel	5	5	0	0	0	

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	7	145	152	145	0	0
Retail	7	113	120	113	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	14	14	14	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	7	18	25	18	0	0
Retail	6	67	73	67	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	44	45	44	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A
²Person-Trips
³Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator
*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool				
Project Name:	Snoqualmie Mill		Organization:	TENW
Project Location:			Performed By:	SJH
Scenario Description:			Date:	
Analysis Year:			Checked By:	
Analysis Period:	PM Street Peak Hour		Date:	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office	710	160,000	GFA	178	28	150
Retail	820	82,000	GLA	469	225	244
Restaurant				0		
Cinema/Entertainment				0		
Residential	221	125	DU	72	45	27
Hotel				0		
All Other Land Uses ²						
Total				719	298	421

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		18	0	0	2	0
Retail	5		0	0	21	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	11	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	719	298	421
Internal Capture Percentage	16%	19%	14%
External Vehicle-Trips ³	603	240	363
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	21%	13%
Retail	13%	11%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	51%	44%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Snoqualmie Mill
Analysis Period:	PM Street Peak Hour

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	28	28	1.00	150	150
Retail	1.00	225	225	1.00	244	244
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	45	45	1.00	27	27
Hotel	1.00	0	0	1.00	0	0

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		30	6	0	3	0
Retail	5		71	10	63	12
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	11	6	0		1
Hotel	0	0	0	0	0	

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		18	0	0	2	0
Retail	9		0	0	21	0
Restaurant	8	113		0	7	0
Cinema/Entertainment	2	9	0		2	0
Residential	16	23	0	0		0
Hotel	0	5	0	0	0	

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	6	22	28	22	0	0
Retail	29	196	225	196	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	23	22	45	22	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	20	130	150	130	0	0
Retail	26	218	244	218	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	12	15	27	15	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P
²Person-Trips
³Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator
*Indicates computation that has been rounded to the nearest whole number.

Analyst TENW
 Date 3/8/2018

Multi-Use Development Trip Generation and Internal Capture Summary - Daily

Project Name Shoqualmie Mill
 Time Period Saturday Daily
 Assumed Average of AM and PM internal capture rates from NCHRP 8-51 Methodology

