

Technical Memorandum #7 Appendix

**Depoe Bay Transportation System Plan
Future Baseline Conditions**

April 23, 2014



2035 Highway Capacity Manual (HCM) Intersection Capacity Analysis Results

Summer Conditions























The following pages are the operational reports of signalized and unsignalized intersections in Depoe Bay.

HCM Unsignalized Intersection Capacity Analysis

Depoe Bay TSP

1: Lillian

4/23/2014











												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	0	10	80	0	80	5	1090	135	135	1040	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			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	0.95
Hourly flow rate (vph)	5	0	11	84	0	84	5	1147	142	142	1095	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage (veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2621	2679	1095	2547	2542	1147	1100			1289		
vC1, stage 1 conf vol	1379	1379		1158	1158							
vC2, stage 2 conf vol	1242	1300		1389	1384							
vCu, unblocked vol	2621	2679	1095	2547	2542	1147	1100			1289		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	36	100	96	18	100	65	99			74		
cM capacity (veh/h)	8	75	260	103	127	242	635			538		
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3		
Volume Total	5	11	84	84	5	1147	142	142	1095	5		
Volume Left	5	0	84	0	5	0	0	142	0	0		
Volume Right	0	11	0	84	0	0	142	0	0	5		
cSH	8	260	103	242	635	1700	1700	538	1700	1700		
Volume to Capacity	0.64	0.04	0.82	0.35	0.01	0.67	0.08	0.26	0.64	0.00		
Queue Length 95th (ft)	31	3	114	37	1	0	0	26	0	0		
Control Delay (s)	726.7	19.4	120.1	27.6	10.7	0.0	0.0	14.1	0.0	0.0		
Lane LOS	F	C	F	D	B			B				
Approach Delay (s)	255.2		73.9		0.0			1.6				
Approach LOS	F		F									
Intersection Summary												
Average Delay			6.8									
Intersection Capacity Utilization			91.9%		ICU Level of Service				F			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

Depoe Bay TSP

4/23/2014











2: Lane

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	5	5	1225	5	5	1150
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	5	1289	5	5	1211
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			TWLTL		
Median storage (veh)				2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2513	1292			1295	
vC1, stage 1 conf vol	1292					
vC2, stage 2 conf vol	1221					
vCu, unblocked vol	2513	1292			1295	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	97			99	
cM capacity (veh/h)	183	199			535	
Direction, Lane #	WB 1	NB 1	SB 1	SB 2		
Volume Total	11	1295	5	1211		
Volume Left	5	0	5	0		
Volume Right	5	5	0	0		
cSH	191	1700	535	1700		
Volume to Capacity	0.06	0.76	0.01	0.71		
Queue Length 95th (ft)	4	0	1	0		
Control Delay (s)	25.0	0.0	11.8	0.0		
Lane LOS	C		B			
Approach Delay (s)	25.0	0.0	0.1			
Approach LOS	C					
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			80.3%	ICU Level of Service	D	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

3: Harney

Depoe Bay TSP
4/23/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	5	5	5	1225	1145	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	5	5	1289	1205	5
Pedestrians	35					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	3					
Right turn flare (veh)						
Median type				TWLTL	None	
Median storage (veh)				2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2543	1243	1246			
vC1, stage 1 conf vol	1243					
vC2, stage 2 conf vol	1300					
vCu, unblocked vol	2543	1243	1246			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	97	99			
cM capacity (veh/h)	177	207	543			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1		
Volume Total	11	5	1289	1211		
Volume Left	5	5	0	0		
Volume Right	5	0	0	5		
cSH	191	543	1700	1700		
Volume to Capacity	0.06	0.01	0.76	0.71		
Queue Length 95th (ft)	4	1	0	0		
Control Delay (s)	25.0	11.7	0.0	0.0		
Lane LOS	C	B				
Approach Delay (s)	25.0	0.0		0.0		
Approach LOS	C					
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			80.0%	ICU Level of Service		D
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

4: Collins Street

Depoe Bay TSP
4/23/2014

	↙	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↖			↘
Volume (veh/h)	15	65	1165	40	45	1100
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	16	68	1226	42	47	1158
Pedestrians	387		87			81
Lane Width (ft)	12.0		12.0			12.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	32		7			7
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			473			
pX, platoon unblocked	0.72	0.72			0.72	
vC, conflicting volume	2395	1102			1655	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2162	372			1138	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	76			84	
cM capacity (veh/h)	15	285			298	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	84	818	451	433	772	
Volume Left	16	0	0	47	0	
Volume Right	68	0	42	0	0	
cSH	67	1700	1700	298	1700	
Volume to Capacity	1.26	0.48	0.27	0.16	0.45	
Queue Length 95th (ft)	171	0	0	14	0	
Control Delay (s)	303.2	0.0	0.0	5.7	0.0	
Lane LOS	F			A		
Approach Delay (s)	303.2	0.0		2.0		
Approach LOS	F					
Intersection Summary						
Average Delay			10.9			
Intersection Capacity Utilization			88.5%	ICU Level of Service	E	
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis

5: Bay Street

Depoe Bay TSP
4/23/2014



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WT		RT		LT	RT
Volume (vph)	85	105	1095	135	80	1025
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frbp, ped/bikes	0.91		0.94			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.93		0.98			1.00
Flt Protected	0.98		1.00			1.00
Satd. Flow (prot)	1410		2823			2870
Flt Permitted	0.98		1.00			0.74
Satd. Flow (perm)	1410		2823			2135
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	89	111	1153	142	84	1079
RTOR Reduction (vph)	10	0	16	0	0	0
Lane Group Flow (vph)	190	0	1279	0	0	1163
Confl. Peds. (#/hr)	95	139		385	385	
Confl. Bikes (#/hr)				2		
Parking (#/hr)			5	5		25
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	16.0		36.0			36.0
Effective Green, g (s)	16.0		36.0			36.0
Actuated g/C Ratio	0.27		0.60			0.60
Clearance Time (s)	4.0		4.0			4.0
Lane Grp Cap (vph)	376		1693			1281
v/s Ratio Prot	c0.13		0.45			
v/s Ratio Perm						c0.54
v/c Ratio	0.50		0.76			0.91
Uniform Delay, d1	18.6		8.8			10.5
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	4.8		3.2			11.0
Delay (s)	23.4		12.0			21.5
Level of Service	C		B			C
Approach Delay (s)	23.4		12.0			21.5
Approach LOS	C		B			C
Intersection Summary						
HCM 2000 Control Delay			17.0		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.78			
Actuated Cycle Length (s)			60.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			97.7%		ICU Level of Service	F
Analysis Period (min)			15			
c Critical Lane Group						

HCM Unsignalized Intersection Capacity Analysis

6: School House Street

Depoe Bay TSP
4/23/2014













Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶		↑	↷	↶	↷
Volume (veh/h)	10	55	1140	5	50	1015
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	11	58	1200	5	53	1068
Pedestrians			1			
Lane Width (ft)			12.0			
Walking Speed (ft/s)			4.0			
Percent Blockage			0			
Right turn flare (veh)						
Median type			None		TWLTL	
Median storage (veh)					2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1840	1200			1200	
vC1, stage 1 conf vol	1200					
vC2, stage 2 conf vol	640					
vCu, unblocked vol	1840	1200			1200	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	67			91	
cM capacity (veh/h)	217	177			577	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	68	1200	5	53	534	534
Volume Left	11	0	0	53	0	0
Volume Right	58	0	5	0	0	0
cSH	182	1700	1700	577	1700	1700
Volume to Capacity	0.38	0.71	0.00	0.09	0.31	0.31
Queue Length 95th (ft)	40	0	0	7	0	0
Control Delay (s)	36.1	0.0	0.0	11.9	0.0	0.0
Lane LOS	E			B		
Approach Delay (s)	36.1	0.0		0.6		
Approach LOS	E					
Intersection Summary						
Average Delay			1.3			
Intersection Capacity Utilization			76.1%		ICU Level of Service	D
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis












7: South Point Street

Depoe Bay TSP
4/23/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	20	5	10	1125	1010	20
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	21	5	11	1184	1063	21
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2280	1075	1085			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2280	1075	1085			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	51	98	98			
cM capacity (veh/h)	43	267	642			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1		
Volume Total	26	11	1184	1084		
Volume Left	21	11	0	0		
Volume Right	5	0	0	21		
cSH	52	642	1700	1700		
Volume to Capacity	0.51	0.02	0.70	0.64		
Queue Length 95th (ft)	48	1	0	0		
Control Delay (s)	131.8	10.7	0.0	0.0		
Lane LOS	F	B				
Approach Delay (s)	131.8	0.1		0.0		
Approach LOS	F					
Intersection Summary						
Average Delay			1.6			
Intersection Capacity Utilization			74.3%	ICU Level of Service		D
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 8: Singing Tree Street

Depoe Bay TSP
 4/23/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	15	10	10	1145	970	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	16	11	11	1205	1021	26
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2248	1022	1048			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2248	1022	1048			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	65	96	98			
cM capacity (veh/h)	45	286	663			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	26	11	1205	1021	26	
Volume Left	16	11	0	0	0	
Volume Right	11	0	0	0	26	
cSH	68	663	1700	1700	1700	
Volume to Capacity	0.39	0.02	0.71	0.60	0.02	
Queue Length 95th (ft)	37	1	0	0	0	
Control Delay (s)	88.0	10.5	0.0	0.0	0.0	
Lane LOS	F	B				
Approach Delay (s)	88.0	0.1		0.0		
Approach LOS	F					
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utilization			75.4%	ICU Level of Service		D
Analysis Period (min)			15			



2035 Highway Capacity Manual (HCM) Intersection Capacity Analysis Results

Average Weekday Conditions























The following pages are the operational reports of signalized and unsignalized intersections in Depoe Bay.

HCM Unsignalized Intersection Capacity Analysis

Depoe Bay TSP

4/23/2014

1: Lillian











												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	0	10	80	0	80	5	895	135	135	850	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			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	0.95
Hourly flow rate (vph)	5	0	11	84	0	84	5	942	142	142	895	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage (veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2216	2274	895	2142	2137	942	900			1084		
vC1, stage 1 conf vol	1179	1179		953	953							
vC2, stage 2 conf vol	1037	1095		1189	1184							
vCu, unblocked vol	2216	2274	895	2142	2137	942	900			1084		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	91	100	97	42	100	74	99			78		
cM capacity (veh/h)	58	119	340	144	169	319	755			643		
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3		
Volume Total	5	11	84	84	5	942	142	142	895	5		
Volume Left	5	0	84	0	5	0	0	142	0	0		
Volume Right	0	11	0	84	0	0	142	0	0	5		
cSH	58	340	144	319	755	1700	1700	643	1700	1700		
Volume to Capacity	0.09	0.03	0.58	0.26	0.01	0.55	0.08	0.22	0.53	0.00		
Queue Length 95th (ft)	7	2	75	26	1	0	0	21	0	0		
Control Delay (s)	72.8	15.9	59.9	20.3	9.8	0.0	0.0	12.2	0.0	0.0		
Lane LOS	F	C	F	C	A			B				
Approach Delay (s)	34.9		40.1		0.0			1.7				
Approach LOS	D		E									
Intersection Summary												
Average Delay			3.9									
Intersection Capacity Utilization			80.7%		ICU Level of Service				D			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

Depoe Bay TSP

4/23/2014












2: Lane

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	5	5	1025	5	5	955
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	5	1079	5	5	1005
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			TWLTL		
Median storage (veh)	2					
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2097	1082			1084	
vC1, stage 1 conf vol	1082					
vC2, stage 2 conf vol	1016					
vCu, unblocked vol	2097	1082			1084	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	98			99	
cM capacity (veh/h)	237	265			643	
Direction, Lane #	WB 1	NB 1	SB 1	SB 2		
Volume Total	11	1084	5	1005		
Volume Left	5	0	5	0		
Volume Right	5	5	0	0		
cSH	250	1700	643	1700		
Volume to Capacity	0.04	0.64	0.01	0.59		
Queue Length 95th (ft)	3	0	1	0		
Control Delay (s)	20.0	0.0	10.6	0.0		
Lane LOS	C		B			
Approach Delay (s)	20.0	0.0	0.1			
Approach LOS	C					
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			68.9%	ICU Level of Service	C	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

3: Harney












Depoe Bay TSP
4/23/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	5	5	5	1025	955	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	5	5	1079	1005	5
Pedestrians	35					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	3					
Right turn flare (veh)						
Median type				TWLTL	None	
Median storage (veh)				2		
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2132	1043	1046			
vC1, stage 1 conf vol	1043					
vC2, stage 2 conf vol	1089					
vCu, unblocked vol	2132	1043	1046			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	98	99			
cM capacity (veh/h)	228	270	646			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1		
Volume Total	11	5	1079	1011		
Volume Left	5	5	0	0		
Volume Right	5	0	0	5		
cSH	248	646	1700	1700		
Volume to Capacity	0.04	0.01	0.63	0.59		
Queue Length 95th (ft)	3	1	0	0		
Control Delay (s)	20.2	10.6	0.0	0.0		
Lane LOS	C	B				
Approach Delay (s)	20.2	0.1		0.0		
Approach LOS	C					
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			68.6%		ICU Level of Service	C
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

4: Collins Street

Depoe Bay TSP
4/23/2014

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Volume (veh/h)	15	50	980	35	40	915
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	16	53	1032	37	42	963
Pedestrians	387		87			81
Lane Width (ft)	12.0		12.0			12.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	32		7			7
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			473			
pX, platoon unblocked	0.82	0.82			0.82	
vC, conflicting volume	2090	1002			1455	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1886	556			1110	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	44	79			88	
cM capacity (veh/h)	28	245			346	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	68	688	381	363	642	
Volume Left	16	0	0	42	0	
Volume Right	53	0	37	0	0	
cSH	88	1700	1700	346	1700	
Volume to Capacity	0.78	0.40	0.22	0.12	0.38	
Queue Length 95th (ft)	100	0	0	10	0	
Control Delay (s)	125.5	0.0	0.0	4.2	0.0	
Lane LOS	F			A		
Approach Delay (s)	125.5	0.0		1.5		
Approach LOS	F					
Intersection Summary						
Average Delay			4.7			
Intersection Capacity Utilization			79.0%		ICU Level of Service	D
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis

5: Bay Street

Depoe Bay TSP
4/23/2014














Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑			↑
Volume (vph)	75	95	910	125	75	850
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frbp, ped/bikes	0.91		0.93			1.00
Flpb, ped/bikes	1.00		1.00			0.99
Frt	0.92		0.98			1.00
Flt Protected	0.98		1.00			1.00
Satd. Flow (prot)	1409		2799			2860
Flt Permitted	0.98		1.00			0.79
Satd. Flow (perm)	1409		2799			2260
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	100	958	132	79	895
RTOR Reduction (vph)	16	0	18	0	0	0
Lane Group Flow (vph)	163	0	1072	0	0	974
Confl. Peds. (#/hr)	95	139		385	385	
Confl. Bikes (#/hr)				2		
Parking (#/hr)			5	5		25
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	16.0		36.0			36.0
Effective Green, g (s)	16.0		36.0			36.0
Actuated g/C Ratio	0.27		0.60			0.60
Clearance Time (s)	4.0		4.0			4.0
Lane Grp Cap (vph)	375		1679			1356
v/s Ratio Prot	c0.12		0.38			
v/s Ratio Perm						c0.43
v/c Ratio	0.43		0.64			0.72
Uniform Delay, d1	18.2		7.8			8.4
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	3.6		1.9			3.3
Delay (s)	21.9		9.7			11.7
Level of Service	C		A			B
Approach Delay (s)	21.9		9.7			11.7
Approach LOS	C		A			B
Intersection Summary						
HCM 2000 Control Delay			11.5		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.63			
Actuated Cycle Length (s)			60.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			85.3%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

HCM Unsignalized Intersection Capacity Analysis

6: School House Street











Depoe Bay TSP
4/23/2014

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	10	45	970	5	40	845
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	11	47	1021	5	42	889
Pedestrians			1			
Lane Width (ft)			12.0			
Walking Speed (ft/s)			4.0			
Percent Blockage			0			
Right turn flare (veh)						
Median type			None		TWLTL	
Median storage (veh)					2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1551	1021			1021	
vC1, stage 1 conf vol	1021					
vC2, stage 2 conf vol	530					
vCu, unblocked vol	1551	1021			1021	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	80			94	
cM capacity (veh/h)	272	234			675	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	58	1021	5	42	445	445
Volume Left	11	0	0	42	0	0
Volume Right	47	0	5	0	0	0
cSH	240	1700	1700	675	1700	1700
Volume to Capacity	0.24	0.60	0.00	0.06	0.26	0.26
Queue Length 95th (ft)	23	0	0	5	0	0
Control Delay (s)	24.7	0.0	0.0	10.7	0.0	0.0
Lane LOS	C			B		
Approach Delay (s)	24.7	0.0		0.5		
Approach LOS	C					
Intersection Summary						
Average Delay			0.9			
Intersection Capacity Utilization			65.7%		ICU Level of Service	C
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

7: South Point Street












Depoe Bay TSP
4/23/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	15	5	10	960	840	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	16	5	11	1011	884	16
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1925	893	901			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1925	893	901			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	78	98	99			
cM capacity (veh/h)	72	340	754			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1		
Volume Total	21	11	1011	900		
Volume Left	16	11	0	0		
Volume Right	5	0	0	16		
cSH	90	754	1700	1700		
Volume to Capacity	0.23	0.01	0.59	0.53		
Queue Length 95th (ft)	21	1	0	0		
Control Delay (s)	56.8	9.8	0.0	0.0		
Lane LOS	F	A				
Approach Delay (s)	56.8	0.1		0.0		
Approach LOS	F					
Intersection Summary						
Average Delay			0.7			
Intersection Capacity Utilization			64.9%	ICU Level of Service		C
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

8: Singing Tree Street

Depoe Bay TSP
4/23/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	15	5	10	985	820	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	16	5	11	1037	863	16
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1922	864	880			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1922	864	880			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	78	99	99			
cM capacity (veh/h)	73	353	767			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	21	11	1037	863	16	
Volume Left	16	11	0	0	0	
Volume Right	5	0	0	0	16	
cSH	91	767	1700	1700	1700	
Volume to Capacity	0.23	0.01	0.61	0.51	0.01	
Queue Length 95th (ft)	21	1	0	0	0	
Control Delay (s)	56.4	9.8	0.0	0.0	0.0	
Lane LOS	F	A				
Approach Delay (s)	56.4	0.1		0.0		
Approach LOS	F					
Intersection Summary						
Average Delay			0.7			
Intersection Capacity Utilization			66.3%	ICU Level of Service		C
Analysis Period (min)			15			