






















HCM 2010 Signalized Intersection Summary 6-074 Papillion City Park Expansion/Lincoln St TIA  
 84: 84th St & Lincoln St 9/1/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	279	87	93	110	138	134	57	570	12	63	471	132
Future Volume (veh/h)	279	87	93	110	138	134	57	570	12	63	471	132
Number	7	4	14	3	8	18	5	2	12	1	6	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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	358	119	137	180	192	176	76	600	16	95	673	159
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.78	0.73	0.68	0.61	0.72	0.76	0.75	0.95	0.75	0.66	0.70	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	320	303	349	322	194	178	327	1741	46	394	1750	994
Arrive On Green	0.13	0.38	0.38	0.22	0.22	0.22	0.49	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	1774	791	911	1119	896	822	657	3522	94	803	3539	1583
Grp Volume(v), veh/h	358	0	256	180	0	368	76	301	315	95	673	159
Grp Sat Flow(s),veh/h/ln	1774	0	1702	1119	0	1718	657	1770	1846	803	1770	1583
Q Serve(g_s), s	12.0	0.0	9.8	13.5	0.0	19.2	7.3	9.3	9.3	7.4	10.7	3.7
Cycle Q Clear(g_c), s	12.0	0.0	9.8	13.5	0.0	19.2	18.0	9.3	9.3	16.7	10.7	3.7
Prop In Lane	1.00		0.54	1.00		0.48	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	320	0	652	322	0	372	327	875	913	394	1750	994
V/C Ratio(X)	1.12	0.00	0.39	0.56	0.00	0.99	0.23	0.34	0.34	0.24	0.38	0.16
Avail Cap(c_a), veh/h	320	0	652	322	0	372	327	875	913	394	1750	994
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	24.7	0.0	20.1	32.9	0.0	35.1	19.8	13.9	13.9	19.0	14.2	6.9
Incr Delay (d2), s/veh	86.7	0.0	0.4	2.1	0.0	43.5	1.7	1.1	1.0	1.4	0.6	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	9.7	0.0	4.7	4.3	0.0	13.6	1.5	4.8	5.0	1.8	5.3	1.7
LnGrp Delay(d),s/veh	111.3	0.0	20.5	35.1	0.0	78.7	21.5	14.9	14.9	20.4	14.8	7.3
LnGrp LOS	F		C	D		E	C	B	B	C	B	A
Approach Vol, veh/h		614			548			692			927	
Approach Delay, s/veh		73.5			64.3			15.6			14.1	
Approach LOS		E			E			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		50.0		40.0		50.0	15.0	25.0				
Change Period (Y+Rc), s		5.5		5.5		5.5	3.0	5.5				
Max Green Setting (Gmax), s		44.5		34.5		44.5	12.0	19.5				
Max Q Clear Time (g_c+I1), s		20.0		11.8		18.7	14.0	21.2				
Green Ext Time (p_c), s		12.3		2.9		12.6	0.0	0.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			37.5									
HCM 2010 LOS			D									

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	411	25	7	322	2	21	0	36	3	1	1
Future Vol, veh/h	3	411	25	7	322	2	21	0	36	3	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	86	63	58	83	50	58	100	75	38	25	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	478	40	12	388	4	36	0	48	8	4	4
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	392	0	0	518	0	0	924	922	498	944	940	390
Stage 1	-	-	-	-	-	-	506	506	-	414	414	-
Stage 2	-	-	-	-	-	-	418	416	-	530	526	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1167	-	-	1048	-	-	250	270	572	242	264	658
Stage 1	-	-	-	-	-	-	549	540	-	616	593	-
Stage 2	-	-	-	-	-	-	612	592	-	533	529	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1167	-	-	1048	-	-	242	265	572	218	259	658
Mov Cap-2 Maneuver	-	-	-	-	-	-	242	265	-	218	259	-
Stage 1	-	-	-	-	-	-	546	537	-	613	584	-
Stage 2	-	-	-	-	-	-	595	583	-	486	526	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.3			18			18.9		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	361	1167	-	-	1048	-	-	275				
HCM Lane V/C Ratio	0.233	0.003	-	-	0.012	-	-	0.058				
HCM Control Delay (s)	18	8.1	0	-	8.5	0	-	18.9				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.9	0	-	-	0	-	-	0.2				

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	411	25	7	322	2	21	0	36	3	1	1
Future Vol, veh/h	3	411	25	7	322	2	21	0	36	3	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	447	27	8	350	2	23	0	39	3	1	1
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	352	0	0	474	0	0	834	834	460	852	846	351
Stage 1	-	-	-	-	-	-	467	467	-	366	366	-
Stage 2	-	-	-	-	-	-	367	367	-	486	480	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1207	-	-	1088	-	-	288	304	601	280	299	692
Stage 1	-	-	-	-	-	-	576	562	-	653	623	-
Stage 2	-	-	-	-	-	-	653	622	-	563	554	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1207	-	-	1088	-	-	284	300	601	259	295	692
Mov Cap-2 Maneuver	-	-	-	-	-	-	284	300	-	259	295	-
Stage 1	-	-	-	-	-	-	574	560	-	651	617	-
Stage 2	-	-	-	-	-	-	645	616	-	525	552	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.2			14.9			17		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	426	1207	-	-	1088	-	-	305				
HCM Lane V/C Ratio	0.145	0.003	-	-	0.007	-	-	0.018				
HCM Control Delay (s)	14.9	8	0	-	8.3	0	-	17				
HCM Lane LOS	B	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0.1				

**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	3	296	9	20	314	2	19	1	54	6	2	1
Future Vol, veh/h	3	296	9	20	314	2	19	1	54	6	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	38	78	45	45	80	50	79	25	59	50	25	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	379	20	44	393	4	24	4	92	12	8	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	397	0	0	399	0	0	894	890	389	936	898	395
Stage 1	-	-	-	-	-	-	405	405	-	483	483	-
Stage 2	-	-	-	-	-	-	489	485	-	453	415	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1162	-	-	1160	-	-	262	282	659	245	279	654
Stage 1	-	-	-	-	-	-	622	598	-	565	553	-
Stage 2	-	-	-	-	-	-	561	552	-	586	592	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1162	-	-	1160	-	-	243	266	659	199	263	654
Mov Cap-2 Maneuver	-	-	-	-	-	-	243	266	-	199	263	-
Stage 1	-	-	-	-	-	-	616	593	-	560	526	-
Stage 2	-	-	-	-	-	-	522	525	-	497	587	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.8	15.2	21.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	473	1162	-	-	1160	-	-	248
HCM Lane V/C Ratio	0.253	0.007	-	-	0.038	-	-	0.097
HCM Control Delay (s)	15.2	8.1	0	-	8.2	0	-	21.1
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1	0	-	-	0.1	-	-	0.3

**Intersection**

Int Delay, s/veh 0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	296	15	15	314	14	15
Future Vol, veh/h	296	15	15	314	14	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	322	16	16	341	15	16

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	338	704
Stage 1	-	-	330
Stage 2	-	-	374
Critical Hdwy	-	4.12	7.12
Critical Hdwy Stg 1	-	-	6.12
Critical Hdwy Stg 2	-	-	6.12
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1221	352
Stage 1	-	-	683
Stage 2	-	-	647
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1221	348
Mov Cap-2 Maneuver	-	-	348
Stage 1	-	-	683
Stage 2	-	-	637

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	13.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	473	-	-	1221	-
HCM Lane V/C Ratio	0.067	-	-	0.013	-
HCM Control Delay (s)	13.2	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

**Intersection**

Int Delay, s/veh 2.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	270	11	13	335	56	53
Future Vol, veh/h	270	11	13	335	56	53
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	76	92	65	85	70	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	355	12	20	394	80	68

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	367
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1192
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1192
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	16.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	451	-	-	1192	-
HCM Lane V/C Ratio	0.328	-	-	0.017	-
HCM Control Delay (s)	16.8	-	-	8.1	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.4	-	-	0.1	-

**Intersection**

Int Delay, s/veh 0.8






















Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	270	5	5	335	20	20
Future Vol, veh/h	270	5	5	335	20	20
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	293	5	5	364	22	22

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	299	671
Stage 1	-	-	296
Stage 2	-	-	375
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1262	422
Stage 1	-	-	755
Stage 2	-	-	695
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1262	420
Mov Cap-2 Maneuver	-	-	420
Stage 1	-	-	755
Stage 2	-	-	692

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	12.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	537	-	-	1262	-
HCM Lane V/C Ratio	0.081	-	-	0.004	-
HCM Control Delay (s)	12.3	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

HCM 2010 Signalized Intersection Summary 6-074 Papillion City Park Expansion/Lincoln St TIA  
 96: 96th St & Lincoln St 9/1/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	10	4	169	4	271	12	862	113	123	540	15
Future Volume (veh/h)	2	10	4	169	4	271	12	862	113	123	540	15
Number	7	4	14	3	8	18	5	2	12	1	6	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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	8	16	12	228	8	311	20	1014	164	148	635	32
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.25	0.63	0.33	0.74	0.50	0.87	0.60	0.85	0.69	0.83	0.85	0.47
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	110	83	391	379	412	484	1656	268	330	1996	101
Arrive On Green	0.01	0.11	0.11	0.10	0.20	0.20	0.02	0.54	0.54	0.06	0.58	0.58
Sat Flow, veh/h	1774	990	742	1774	1863	1583	1774	3052	493	1774	3429	173
Grp Volume(v), veh/h	8	0	28	228	8	311	20	587	591	148	327	340
Grp Sat Flow(s),veh/h/ln	1774	0	1732	1774	1863	1583	1774	1770	1776	1774	1770	1832
Q Serve(g_s), s	0.4	0.0	1.3	9.0	0.3	16.3	0.5	20.4	20.5	3.1	8.5	8.6
Cycle Q Clear(g_c), s	0.4	0.0	1.3	9.0	0.3	16.3	0.5	20.4	20.5	3.1	8.5	8.6
Prop In Lane	1.00		0.43	1.00		1.00	1.00		0.28	1.00		0.09
Lane Grp Cap(c), veh/h	212	0	193	391	379	412	484	960	964	330	1030	1067
V/C Ratio(X)	0.04	0.00	0.15	0.58	0.02	0.75	0.04	0.61	0.61	0.45	0.32	0.32
Avail Cap(c_a), veh/h	296	0	279	391	383	416	552	960	964	446	1030	1067
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	0.0	36.1	30.8	28.7	30.6	8.9	14.1	14.1	11.1	9.6	9.6
Incr Delay (d2), s/veh	0.1	0.0	0.3	2.2	0.0	7.6	0.0	2.9	2.9	1.0	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	0.2	0.0	0.6	5.1	0.2	8.0	0.2	10.7	10.8	1.6	4.4	4.6
LnGrp Delay(d),s/veh	35.1	0.0	36.5	33.0	28.7	38.2	9.0	17.0	17.0	12.1	10.5	10.4
LnGrp LOS	D		D	C	C	D	A	B	B	B	B	B
Approach Vol, veh/h		36			547			1198			815	
Approach Delay, s/veh		36.2			35.9			16.9			10.7	
Approach LOS		D			D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.1	54.3	12.0	15.5	4.6	57.9	3.7	23.8				
Change Period (Y+Rc), s	3.0	5.5	3.0	5.5	3.0	5.5	3.0	5.5				
Max Green Setting (Gmax), s	11.0	38.5	9.0	14.5	5.0	44.5	5.0	18.5				
Max Q Clear Time (g_c+I1), s	5.1	22.5	11.0	3.3	2.5	10.6	2.4	18.3				
Green Ext Time (p_c), s	0.2	9.8	0.0	0.9	0.0	14.7	0.0	0.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			19.2									
HCM 2010 LOS			B									



**Intersection**

Int Delay, s/veh 0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	4.12	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	2.218	-
Pot Cap-1 Maneuver	-	1622	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1622	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1622	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Intersection Delay, s/veh	0
Intersection LOS	-

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	0	0	0
HCM LOS	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

**Intersection**

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	0	0	0
Future Vol, veh/h	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	0	0	0
Number of Lanes	0	0	1	0

**Approach** SB

Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	0
HCM LOS	-

**Intersection**

Int Delay, s/veh 3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	49	0	16	0	0	0	33	265	0	0	52	58
Future Vol, veh/h	49	0	16	0	0	0	33	265	0	0	52	58
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	64	100	50	100	100	100	43	85	100	100	68	52
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	77	0	32	0	0	0	77	312	0	0	76	112

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	597	597	132	613	653	312	188	0	0	312	0	0
Stage 1	132	132	-	465	465	-	-	-	-	-	-	-
Stage 2	465	465	-	148	188	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	415	416	917	405	387	728	1386	-	-	1248	-	-
Stage 1	871	787	-	578	563	-	-	-	-	-	-	-
Stage 2	578	563	-	855	745	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	394	388	917	371	361	728	1386	-	-	1248	-	-
Mov Cap-2 Maneuver	394	388	-	371	361	-	-	-	-	-	-	-
Stage 1	813	787	-	539	525	-	-	-	-	-	-	-
Stage 2	539	525	-	825	745	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.8	0	1.5	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1386	-	-	474	-	1248	-
HCM Lane V/C Ratio	0.055	-	-	0.229	-	-	-
HCM Control Delay (s)	7.8	0	-	14.8	0	0	-
HCM Lane LOS	A	A	-	B	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.9	-	0	-

**Intersection**

Int Delay, s/veh 1.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↓	↑	↓	↑
Traffic Vol, veh/h	56	39	2	95	50	1
Future Vol, veh/h	56	39	2	95	50	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	-	-	200	-	200	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	56	81	25	68	89	25
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	100	48	8	140	56	4

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	148
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1434
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1434
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	725	927	-	-	1434	-
HCM Lane V/C Ratio	0.077	0.004	-	-	0.006	-
HCM Control Delay (s)	10.4	8.9	-	-	7.5	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-

**Intersection**

Int Delay, s/veh 0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶		↷	↶	↷	↶
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	200	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1622
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1622
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	-	1622	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-

**Intersection**

Int Delay, s/veh 3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	0	9	4	1	47	72	302	10	26	180	28
Future Vol, veh/h	6	0	9	4	1	47	72	302	10	26	180	28
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	100	45	33	25	69	78	86	63	65	88	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	0	20	12	4	68	92	351	16	40	205	36

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	882	854	222	856	864	359	240	0	0	367	0	0
Stage 1	302	302	-	544	544	-	-	-	-	-	-	-
Stage 2	580	552	-	312	320	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	267	296	818	278	292	685	1327	-	-	1192	-	-
Stage 1	707	664	-	523	519	-	-	-	-	-	-	-
Stage 2	500	515	-	699	652	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	215	260	818	246	256	685	1327	-	-	1192	-	-
Mov Cap-2 Maneuver	215	260	-	246	256	-	-	-	-	-	-	-
Stage 1	645	638	-	477	474	-	-	-	-	-	-	-
Stage 2	408	470	-	655	627	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.5	13.4	1.6	1.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1327	-	-	454	513	1192	-	-
HCM Lane V/C Ratio	0.07	-	-	0.062	0.164	0.034	-	-
HCM Control Delay (s)	7.9	0	-	13.5	13.4	8.1	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	0.6	0.1	-	-

**Intersection**

Int Delay, s/veh 0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗	↕		↖	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1	0	1
Stage 1	-	-	1
Stage 2	-	-	0
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1622	-	1022
Stage 1	-	-	1022
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1622	-	1022
Mov Cap-2 Maneuver	-	-	933
Stage 1	-	-	1022
Stage 2	-	-	-






















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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-



HCM 2010 Signalized Intersection Summary 6-074 Papillion City Park Expansion/Lincoln St TIA  
 84: 84th St & Lincoln St

9/1/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	221	60	122	21	49	68	59	604	14	92	789	347
Future Volume (veh/h)	221	60	122	21	49	68	59	604	14	92	789	347
Number	7	4	14	3	8	18	5	2	12	1	6	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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	243	72	152	32	68	96	104	664	16	151	887	408
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.91	0.83	0.80	0.66	0.72	0.71	0.57	0.91	0.88	0.61	0.89	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	357	157	332	226	89	126	269	2063	50	449	2067	1136
Arrive On Green	0.13	0.29	0.29	0.13	0.13	0.13	0.58	0.58	0.58	0.58	0.58	0.58
Sat Flow, veh/h	1774	535	1129	1152	700	988	424	3532	85	757	3539	1583
Grp Volume(v), veh/h	243	0	224	32	0	164	104	333	347	151	887	408
Grp Sat Flow(s),veh/h/ln	1774	0	1664	1152	0	1688	424	1770	1848	757	1770	1583
Q Serve(g_s), s	10.2	0.0	9.9	2.2	0.0	8.5	16.2	8.7	8.7	11.5	12.5	8.8
Cycle Q Clear(g_c), s	10.2	0.0	9.9	2.2	0.0	8.5	28.8	8.7	8.7	20.2	12.5	8.8
Prop In Lane	1.00		0.68	1.00		0.59	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	357	0	489	226	0	215	269	1033	1079	449	2067	1136
V/C Ratio(X)	0.68	0.00	0.46	0.14	0.00	0.76	0.39	0.32	0.32	0.34	0.43	0.36
Avail Cap(c_a), veh/h	357	0	638	330	0	366	269	1033	1079	449	2067	1136
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	27.6	0.0	25.9	35.3	0.0	38.0	18.4	9.6	9.6	14.8	10.4	4.8
Incr Delay (d2), s/veh	5.2	0.0	0.7	0.3	0.0	5.6	4.2	0.8	0.8	2.0	0.7	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	5.5	0.0	4.6	0.7	0.0	4.3	2.2	4.4	4.6	2.6	6.2	4.1
LnGrp Delay(d),s/veh	32.8	0.0	26.6	35.5	0.0	43.6	22.5	10.4	10.4	16.8	11.0	5.7
LnGrp LOS	C		C	D		D	C	B	B	B	B	A
Approach Vol, veh/h		467			196			784			1446	
Approach Delay, s/veh		29.8			42.2			12.0			10.1	
Approach LOS		C			D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		58.1		31.9		58.1	15.0	16.9				
Change Period (Y+Rc), s		5.5		5.5		5.5	3.0	5.5				
Max Green Setting (Gmax), s		44.5		34.5		44.5	12.0	19.5				
Max Q Clear Time (g_c+I1), s		30.8		11.9		22.2	12.2	10.5				
Green Ext Time (p_c), s		11.0		1.4		16.1	0.0	1.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			16.0									
HCM 2010 LOS			B									

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	383	3	10	366	72	11	7	24	10	1	2
Future Vol, veh/h	7	383	3	10	366	72	11	7	24	10	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	58	87	38	83	92	41	69	44	75	50	25	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	440	8	12	398	176	16	16	32	20	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	573	0	0	448	0	0	982	1066	444	1002	982	486
Stage 1	-	-	-	-	-	-	468	468	-	510	510	-
Stage 2	-	-	-	-	-	-	514	598	-	492	472	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1000	-	-	1112	-	-	228	222	614	221	249	581
Stage 1	-	-	-	-	-	-	575	561	-	546	538	-
Stage 2	-	-	-	-	-	-	543	491	-	558	559	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1000	-	-	1112	-	-	218	215	614	193	241	581
Mov Cap-2 Maneuver	-	-	-	-	-	-	218	215	-	193	241	-
Stage 1	-	-	-	-	-	-	566	552	-	537	529	-
Stage 2	-	-	-	-	-	-	527	483	-	505	550	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.2	19	23.7
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	320	1000	-	-	1112	-	-	220
HCM Lane V/C Ratio	0.2	0.012	-	-	0.011	-	-	0.127
HCM Control Delay (s)	19	8.6	0	-	8.3	0	-	23.7
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.7	0	-	-	0	-	-	0.4

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	383	3	10	366	72	11	7	24	10	1	2
Future Vol, veh/h	7	383	3	10	366	72	11	7	24	10	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	416	3	11	398	78	12	8	26	11	1	2
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	476	0	0	420	0	0	893	931	418	909	894	437
Stage 1	-	-	-	-	-	-	433	433	-	459	459	-
Stage 2	-	-	-	-	-	-	460	498	-	450	435	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1086	-	-	1139	-	-	262	267	635	256	280	620
Stage 1	-	-	-	-	-	-	601	582	-	582	566	-
Stage 2	-	-	-	-	-	-	581	544	-	589	580	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1086	-	-	1139	-	-	256	261	635	236	274	620
Mov Cap-2 Maneuver	-	-	-	-	-	-	256	261	-	236	274	-
Stage 1	-	-	-	-	-	-	595	576	-	576	559	-
Stage 2	-	-	-	-	-	-	570	537	-	552	574	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.2			15.5			19.4		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	390	1086	-	-	1139	-	-	264				
HCM Lane V/C Ratio	0.117	0.007	-	-	0.01	-	-	0.054				
HCM Control Delay (s)	15.5	8.3	0	-	8.2	0	-	19.4				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0.2				

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	327	14	49	259	7	12	3	37	7	2	5
Future Vol, veh/h	6	327	14	49	259	7	12	3	37	7	2	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	81	50	77	91	35	75	75	66	88	50	42
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	404	28	64	285	20	16	4	56	8	4	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	305	0	0	432	0	0	872	874	418	894	878	295
Stage 1	-	-	-	-	-	-	442	442	-	422	422	-
Stage 2	-	-	-	-	-	-	430	432	-	472	456	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1256	-	-	1128	-	-	271	288	635	262	287	744
Stage 1	-	-	-	-	-	-	594	576	-	609	588	-
Stage 2	-	-	-	-	-	-	603	582	-	573	568	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1256	-	-	1128	-	-	247	265	635	222	264	744
Mov Cap-2 Maneuver	-	-	-	-	-	-	247	265	-	222	264	-
Stage 1	-	-	-	-	-	-	586	569	-	601	548	-
Stage 2	-	-	-	-	-	-	549	542	-	512	561	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	1.4	14.6	15.8
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	452	1256	-	-	1128	-	-	356
HCM Lane V/C Ratio	0.168	0.01	-	-	0.056	-	-	0.067
HCM Control Delay (s)	14.6	7.9	0	-	8.4	0	-	15.8
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.6	0	-	-	0.2	-	-	0.2

**Intersection**

Int Delay, s/veh 0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	327	14	15	259	13	15
Future Vol, veh/h	327	14	15	259	13	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	355	15	16	282	14	16

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	371
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1188
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1188
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	12.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	522	-	-	1188	-
HCM Lane V/C Ratio	0.058	-	-	0.014	-
HCM Control Delay (s)	12.3	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

**Intersection**

Int Delay, s/veh 1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	323	42	49	218	18	28
Future Vol, veh/h	323	42	49	218	18	28
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	85	81	88	80	64	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	380	52	56	273	28	40

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	432	790
Stage 1	-	-	406
Stage 2	-	-	384
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1128	359
Stage 1	-	-	673
Stage 2	-	-	688
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1128	338
Mov Cap-2 Maneuver	-	-	338
Stage 1	-	-	673
Stage 2	-	-	647

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	14
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	469	-	-	1128	-
HCM Lane V/C Ratio	0.145	-	-	0.049	-
HCM Control Delay (s)	14	-	-	8.4	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.2	-

**Intersection**

Int Delay, s/veh 0.7






















Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	350	20	20	218	10	14
Future Vol, veh/h	350	20	20	218	10	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	380	22	22	237	11	15

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	402	671
Stage 1	-	-	391
Stage 2	-	-	280
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1157	422
Stage 1	-	-	683
Stage 2	-	-	767
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1157	413
Mov Cap-2 Maneuver	-	-	413
Stage 1	-	-	683
Stage 2	-	-	750

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	12.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	528	-	-	1157	-
HCM Lane V/C Ratio	0.049	-	-	0.019	-
HCM Control Delay (s)	12.2	-	-	8.2	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

HCM 2010 Signalized Intersection Summary 6-074 Papillion City Park Expansion/Lincoln St TIA  
 96: 96th St & Lincoln St 9/1/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	18	2	85	5	120	0	603	67	294	1041	3
Future Volume (veh/h)	13	18	2	85	5	120	0	603	67	294	1041	3
Number	7	4	14	3	8	18	5	2	12	1	6	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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	20	20	4	120	12	148	0	670	80	316	1084	8
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.65	0.90	0.50	0.71	0.42	0.81	1.00	0.90	0.84	0.93	0.96	0.38
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	167	69	14	268	202	313	388	1898	226	584	2587	19
Arrive On Green	0.02	0.05	0.05	0.08	0.11	0.11	0.00	0.60	0.60	0.09	0.72	0.72
Sat Flow, veh/h	1774	1508	302	1774	1863	1583	1774	3185	380	1774	3601	27
Grp Volume(v), veh/h	20	0	24	120	12	148	0	372	378	316	533	559
Grp Sat Flow(s),veh/h/ln	1774	0	1810	1774	1863	1583	1774	1770	1796	1774	1770	1858
Q Serve(g_s), s	1.0	0.0	1.2	5.6	0.5	7.4	0.0	9.7	9.7	5.7	10.9	10.9
Cycle Q Clear(g_c), s	1.0	0.0	1.2	5.6	0.5	7.4	0.0	9.7	9.7	5.7	10.9	10.9
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.21	1.00		0.01
Lane Grp Cap(c), veh/h	167	0	83	268	202	313	388	1054	1070	584	1271	1335
V/C Ratio(X)	0.12	0.00	0.29	0.45	0.06	0.47	0.00	0.35	0.35	0.54	0.42	0.42
Avail Cap(c_a), veh/h	235	0	292	303	383	466	485	1054	1070	643	1271	1335
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	0.0	41.5	35.1	36.0	31.9	0.0	9.3	9.3	6.1	5.1	5.1
Incr Delay (d2), s/veh	0.3	0.0	1.9	1.2	0.1	1.1	0.0	0.9	0.9	0.8	1.0	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	0.6	2.8	0.3	3.4	0.0	4.9	5.0	2.8	5.5	5.8
LnGrp Delay(d),s/veh	40.2	0.0	43.4	36.2	36.1	33.1	0.0	10.2	10.2	6.8	6.1	6.1
LnGrp LOS	D		D	D	D	C		B	B	A	A	A
Approach Vol, veh/h		44			280			750			1408	
Approach Delay, s/veh		42.0			34.6			10.2			6.3	
Approach LOS		D			C			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	59.1	10.2	9.6	0.0	70.1	4.6	15.3				
Change Period (Y+Rc), s	3.0	5.5	3.0	5.5	3.0	5.5	3.0	5.5				
Max Green Setting (Gmax), s	11.0	38.5	9.0	14.5	5.0	44.5	5.0	18.5				
Max Q Clear Time (g_c+I1), s	7.7	11.7	7.6	3.2	0.0	12.9	3.0	9.4				
Green Ext Time (p_c), s	0.3	13.0	0.0	0.4	0.0	14.0	0.0	0.3				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			11.3									
HCM 2010 LOS			B									



**Intersection**

Int Delay, s/veh 0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1622
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1622
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1622	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Intersection Delay, s/veh	0
Intersection LOS	-

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	0	0	0
HCM LOS	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

**Intersection**

Intersection Delay, s/veh  
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	0	0	0
Future Vol, veh/h	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	0	0	0
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	0
HCM LOS	-

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	49	0	14	0	0	0	2	109	0	0	169	85
Future Vol, veh/h	49	0	14	0	0	0	2	109	0	0	169	85
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	100	70	100	100	100	25	85	100	100	80	73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	60	0	20	0	0	0	8	128	0	0	211	116

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	413	413	269	423	472	128	328	0	0	128	0	0
Stage 1	269	269	-	144	144	-	-	-	-	-	-	-
Stage 2	144	144	-	279	328	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	549	529	770	541	490	922	1232	-	-	1458	-	-
Stage 1	737	687	-	859	778	-	-	-	-	-	-	-
Stage 2	859	778	-	728	647	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	546	525	770	524	487	922	1232	-	-	1458	-	-
Mov Cap-2 Maneuver	546	525	-	524	487	-	-	-	-	-	-	-
Stage 1	732	687	-	853	773	-	-	-	-	-	-	-
Stage 2	853	773	-	709	647	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.1	0	0.5	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1232	-	-	589	-	1458	-
HCM Lane V/C Ratio	0.006	-	-	0.135	-	-	-
HCM Control Delay (s)	7.9	0	-	12.1	0	0	-
HCM Lane LOS	A	A	-	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.5	-	0	-

**Intersection**

Int Delay, s/veh 2.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↓	↑	↓	↑
Traffic Vol, veh/h	53	20	7	46	35	0
Future Vol, veh/h	53	20	7	46	35	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	200	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	45	58	72	73	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	64	44	12	64	48	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	108	174
Stage 1	-	-	86
Stage 2	-	-	88
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1483	816
Stage 1	-	-	937
Stage 2	-	-	935
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1483	809
Mov Cap-2 Maneuver	-	-	794
Stage 1	-	-	937
Stage 2	-	-	927

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	794	-	-	-	1483	-
HCM Lane V/C Ratio	0.06	-	-	-	0.008	-
HCM Control Delay (s)	9.8	0	-	-	7.4	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	-	0	-

**Intersection**

Int Delay, s/veh 0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↻		↻	↻	↻	↻
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	200	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1622
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1622
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	-	1622	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	27	1	64	9	1	30	4	195	12	42	284	2
Future Vol, veh/h	27	1	64	9	1	30	4	195	12	42	284	2
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	25	59	75	25	83	33	92	75	75	83	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	4	108	12	4	36	12	212	16	56	342	4
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	720	708	344	756	702	220	346	0	0	228	0	0
Stage 1	456	456	-	244	244	-	-	-	-	-	-	-
Stage 2	264	252	-	512	458	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	343	360	699	325	362	820	1213	-	-	1340	-	-
Stage 1	584	568	-	760	704	-	-	-	-	-	-	-
Stage 2	741	698	-	545	567	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	309	338	699	259	339	820	1213	-	-	1340	-	-
Mov Cap-2 Maneuver	309	338	-	259	339	-	-	-	-	-	-	-
Stage 1	578	538	-	752	696	-	-	-	-	-	-	-
Stage 2	697	690	-	433	538	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	14.6			12.9			0.4			1.1		
HCM LOS	B			B								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1213	-	-	524	510	1340	-	-				
HCM Lane V/C Ratio	0.01	-	-	0.283	0.102	0.042	-	-				
HCM Control Delay (s)	8	0	-	14.6	12.9	7.8	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	1.2	0.3	0.1	-	-				

**Intersection**

Int Delay, s/veh 0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↑	↕		↔	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0






















Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1	0	1
Stage 1	-	-	1
Stage 2	-	-	0
Critical Hdwy	4.12	-	7.12
Critical Hdwy Stg 1	-	-	6.12
Critical Hdwy Stg 2	-	-	6.12
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1622	-	1022
Stage 1	-	-	1022
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1622	-	1022
Mov Cap-2 Maneuver	-	-	933
Stage 1	-	-	1022
Stage 2	-	-	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A



HCM 2010 Signalized Intersection Summary 6-074 Papillion City Park Expansion/Lincoln St TIA  
 84: 84th St & Lincoln St 9/1/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	243	33	103	13	19	67	62	530	14	63	549	194
Future Volume (veh/h)	243	33	103	13	19	67	62	530	14	63	549	194
Number	7	4	14	3	8	18	5	2	12	1	6	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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	256	35	108	14	20	71	65	558	15	66	578	204
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	1
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	354	100	310	183	30	106	463	2212	59	547	2223	1206
Arrive On Green	0.13	0.25	0.25	0.08	0.08	0.08	0.63	0.63	0.63	0.63	0.63	0.63
Sat Flow, veh/h	1774	402	1241	1240	360	1277	688	3521	95	836	3539	1583
Grp Volume(v), veh/h	256	0	143	14	0	91	65	280	293	66	578	204
Grp Sat Flow(s),veh/h/ln	1774	0	1644	1240	0	1637	688	1770	1846	836	1770	1583
Q Serve(g_s), s	11.6	0.0	6.4	0.9	0.0	4.9	4.2	6.3	6.3	3.4	6.5	3.2
Cycle Q Clear(g_c), s	11.6	0.0	6.4	0.9	0.0	4.9	10.7	6.3	6.3	9.7	6.5	3.2
Prop In Lane	1.00		0.76	1.00		0.78	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	354	0	410	183	0	136	463	1112	1160	547	2223	1206
V/C Ratio(X)	0.72	0.00	0.35	0.08	0.00	0.67	0.14	0.25	0.25	0.12	0.26	0.17
Avail Cap(c_a), veh/h	354	0	630	349	0	355	463	1112	1160	547	2223	1206
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	30.8	0.0	27.8	38.3	0.0	40.1	9.8	7.4	7.4	9.5	7.4	2.9
Incr Delay (d2), s/veh	7.1	0.0	0.5	0.2	0.0	5.6	0.6	0.5	0.5	0.5	0.3	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	6.3	0.0	3.0	0.3	0.0	2.4	0.9	3.2	3.3	0.9	3.2	1.5
LnGrp Delay(d),s/veh	37.9	0.0	28.3	38.5	0.0	45.7	10.4	7.9	7.9	10.0	7.7	3.2
LnGrp LOS	D		C	D		D	B	A	A	A	A	A
Approach Vol, veh/h		399			105			638			848	
Approach Delay, s/veh		34.5			44.7			8.2			6.8	
Approach LOS		C			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		62.0		28.0		62.0	15.0	13.0				
Change Period (Y+Rc), s		5.5		5.5		5.5	3.0	5.5				
Max Green Setting (Gmax), s		44.5		34.5		44.5	12.0	19.5				
Max Q Clear Time (g_c+I1), s		12.7		8.4		11.7	13.6	6.9				
Green Ext Time (p_c), s		12.0		0.8		12.2	0.0	0.6				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				14.8								
HCM 2010 LOS				B								

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	4	354	3	10	219	46	6	0	15	22	0	1
Future Vol, veh/h	4	354	3	10	219	46	6	0	15	22	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	412	3	12	255	53	7	0	17	26	0	1
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	308	0	0	415	0	0	728	754	413	736	729	281
Stage 1	-	-	-	-	-	-	423	423	-	305	305	-
Stage 2	-	-	-	-	-	-	305	331	-	431	424	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1253	-	-	1144	-	-	339	338	639	335	350	758
Stage 1	-	-	-	-	-	-	609	588	-	705	662	-
Stage 2	-	-	-	-	-	-	705	645	-	603	587	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1253	-	-	1144	-	-	334	332	639	321	344	758
Mov Cap-2 Maneuver	-	-	-	-	-	-	334	332	-	321	344	-
Stage 1	-	-	-	-	-	-	606	585	-	701	653	-
Stage 2	-	-	-	-	-	-	695	637	-	584	584	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.3			12.5			16.9		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	507	1253	-	-	1144	-	-	329				
HCM Lane V/C Ratio	0.048	0.004	-	-	0.01	-	-	0.081				
HCM Control Delay (s)	12.5	7.9	0	-	8.2	0	-	16.9				
HCM Lane LOS	B	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.3				

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	4	354	3	10	219	46	6	0	15	22	0	1
Future Vol, veh/h	4	354	3	10	219	46	6	0	15	22	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	385	3	11	238	50	7	0	16	24	0	1
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	288	0	0	388	0	0	680	705	386	688	682	263
Stage 1	-	-	-	-	-	-	395	395	-	285	285	-
Stage 2	-	-	-	-	-	-	285	310	-	403	397	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1274	-	-	1170	-	-	365	361	662	360	372	776
Stage 1	-	-	-	-	-	-	630	605	-	722	676	-
Stage 2	-	-	-	-	-	-	722	659	-	624	603	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1274	-	-	1170	-	-	360	356	662	347	366	776
Mov Cap-2 Maneuver	-	-	-	-	-	-	360	356	-	347	366	-
Stage 1	-	-	-	-	-	-	627	603	-	719	669	-
Stage 2	-	-	-	-	-	-	713	652	-	606	601	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.3			12			15.9		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	534	1274	-	-	1170	-	-	356				
HCM Lane V/C Ratio	0.043	0.003	-	-	0.009	-	-	0.07				
HCM Control Delay (s)	12	7.8	0	-	8.1	0	-	15.9				
HCM Lane LOS	B	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2				

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	300	10	20	195	5	10	5	25	5	5	5
Future Vol, veh/h	5	300	10	20	195	5	10	5	25	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	81	50	77	91	35	75	75	66	88	50	42
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	370	20	26	214	14	13	7	38	6	10	12
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	229	0	0	390	0	0	684	681	380	696	683	221
Stage 1	-	-	-	-	-	-	400	400	-	273	273	-
Stage 2	-	-	-	-	-	-	284	281	-	423	410	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1339	-	-	1169	-	-	363	373	667	356	372	819
Stage 1	-	-	-	-	-	-	626	602	-	733	684	-
Stage 2	-	-	-	-	-	-	723	678	-	609	595	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1339	-	-	1169	-	-	341	360	667	322	359	819
Mov Cap-2 Maneuver	-	-	-	-	-	-	341	360	-	322	359	-
Stage 1	-	-	-	-	-	-	620	596	-	726	666	-
Stage 2	-	-	-	-	-	-	684	660	-	562	589	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.8			13			13.3		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	506	1339	-	-	1169	-	-	459				
HCM Lane V/C Ratio	0.114	0.007	-	-	0.022	-	-	0.06				
HCM Control Delay (s)	13	7.7	0	-	8.2	0	-	13.3				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-	-	0.2				

**Intersection**

Int Delay, s/veh 0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	250	13	15	170	13	15
Future Vol, veh/h	250	13	15	170	13	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	272	14	16	185	14	16

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	286
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1276
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1276
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	11
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	630	-	-	1276	-
HCM Lane V/C Ratio	0.048	-	-	0.013	-
HCM Control Delay (s)	11	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

**Intersection**

Int Delay, s/veh 1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	200	25	25	145	20	25
Future Vol, veh/h	200	25	25	145	20	25
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	85	81	88	80	64	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	235	31	28	181	31	36

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	266
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1298
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1298
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	11.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	639	-	-	1298	-
HCM Lane V/C Ratio	0.105	-	-	0.022	-
HCM Control Delay (s)	11.3	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

**Intersection**

Int Delay, s/veh 1.5






















Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	160	20	20	140	20	19
Future Vol, veh/h	160	20	20	140	20	19
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	174	22	22	152	22	21

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	196
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1377
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1377
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	710	-	-	1377	-
HCM Lane V/C Ratio	0.06	-	-	0.016	-
HCM Control Delay (s)	10.4	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

HCM 2010 Signalized Intersection Summary 6-074 Papillion City Park Expansion/Lincoln St TIA  
 96: 96th St & Lincoln St 9/1/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	18	2	45	6	98	4	396	26	127	454	4
Future Volume (veh/h)	13	18	2	45	6	98	4	396	26	127	454	4
Number	7	4	14	3	8	18	5	2	12	1	6	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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	14	19	2	47	6	102	4	412	27	132	473	4
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	186	107	11	212	156	202	696	2262	148	748	2553	22
Arrive On Green	0.01	0.06	0.06	0.03	0.08	0.08	0.00	0.67	0.67	0.04	0.71	0.71
Sat Flow, veh/h	1774	1657	174	1774	1863	1583	1774	3373	220	1774	3597	30
Grp Volume(v), veh/h	14	0	21	47	6	102	4	215	224	132	233	244
Grp Sat Flow(s),veh/h/ln	1774	0	1832	1774	1863	1583	1774	1770	1824	1774	1770	1857
Q Serve(g_s), s	0.7	0.0	1.0	2.2	0.3	5.4	0.1	4.1	4.1	1.9	4.0	4.0
Cycle Q Clear(g_c), s	0.7	0.0	1.0	2.2	0.3	5.4	0.1	4.1	4.1	1.9	4.0	4.0
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.12	1.00		0.02
Lane Grp Cap(c), veh/h	186	0	118	212	156	202	696	1187	1223	748	1256	1318
V/C Ratio(X)	0.08	0.00	0.18	0.22	0.04	0.51	0.01	0.18	0.18	0.18	0.19	0.19
Avail Cap(c_a), veh/h	261	0	295	332	383	394	787	1187	1223	888	1256	1318
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.6	0.0	39.8	37.0	37.9	36.6	4.8	5.6	5.6	3.6	4.4	4.4
Incr Delay (d2), s/veh	0.2	0.0	0.7	0.5	0.1	2.0	0.0	0.3	0.3	0.1	0.3	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	0.5	1.1	0.1	2.5	0.0	2.1	2.2	0.9	2.1	2.2
LnGrp Delay(d),s/veh	38.7	0.0	40.5	37.6	38.0	38.6	4.8	5.9	5.9	3.7	4.7	4.7
LnGrp LOS	D		D	D	D	D	A	A	A	A	A	A
Approach Vol, veh/h		35			155			443			609	
Approach Delay, s/veh		39.8			38.2			5.9			4.5	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.9	65.9	5.9	11.3	3.4	69.4	4.2	13.1				
Change Period (Y+Rc), s	3.0	5.5	3.0	5.5	3.0	5.5	3.0	5.5				
Max Green Setting (Gmax), s	11.0	38.5	9.0	14.5	5.0	44.5	5.0	18.5				
Max Q Clear Time (g_c+I1), s	3.9	6.1	4.2	3.0	2.1	6.0	2.7	7.4				
Green Ext Time (p_c), s	0.2	5.4	0.0	0.2	0.0	5.5	0.0	0.2				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			10.2									
HCM 2010 LOS			B									



**Intersection**

Int Delay, s/veh 0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	1	2
Stage 1	-	-	1
Stage 2	-	-	1
Critical Hdwy	-	4.12	7.12
Critical Hdwy Stg 1	-	-	6.12
Critical Hdwy Stg 2	-	-	6.12
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1622	1020
Stage 1	-	-	1022
Stage 2	-	-	1022
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1622	1020
Mov Cap-2 Maneuver	-	-	1020
Stage 1	-	-	1022
Stage 2	-	-	1022

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1622	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Intersection Delay, s/veh	0
Intersection LOS	-

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	0	0	0
HCM LOS	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

**Intersection**

Intersection Delay, s/veh  
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	0	0	0
Future Vol, veh/h	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	0	0	0
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	0
HCM LOS	-

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	100	70	100	100	100	25	85	100	100	80	73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1	1	1	1	1	0	1	0	0	0	0	0
Stage 1	1	1	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	1	1	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	1022	895	1084	1022	895	-	1622	-	-	-	-	-
Stage 1	1022	895	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	1022	895	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	895	1084	1022	895	-	1622	-	-	-	-	-
Mov Cap-2 Maneuver	-	895	-	1022	895	-	-	-	-	-	-	-
Stage 1	1022	895	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	1022	895	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			0			0		
HCM LOS	A			A								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1622	-	-	-	-	-	-	-				
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-				
HCM Control Delay (s)	0	-	-	0	0	0	-	-				
HCM Lane LOS	A	-	-	A	A	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	-	-	-	-	-				

**Intersection**

Int Delay, s/veh 0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↓	↑	↓	↑
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	200	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	45	58	72	73	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	-	1
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	0	1622
Stage 1	-	0	-
Stage 2	-	0	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1622
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	WBL	WBT
Capacity (veh/h)	-	-	-	1622	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	0	-	0	-
HCM Lane LOS	A	A	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

**Intersection**

Int Delay, s/veh 0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↻		↻	↻	↻	↻
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	200	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1622
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1622
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	-	1622	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-

**Intersection**

Int Delay, s/veh 0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	25	59	75	25	83	33	92	75	75	83	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1	1	1	1	1	0	1	0	0	0	0	0
Stage 1	1	1	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	1	1	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	1022	895	1084	1022	895	-	1622	-	-	-	-	-
Stage 1	1022	895	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	1022	895	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	895	1084	1022	895	-	1622	-	-	-	-	-
Mov Cap-2 Maneuver	-	895	-	1022	895	-	-	-	-	-	-	-
Stage 1	1022	895	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	1022	895	-	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	0	0	-
HCM Lane LOS	A	-	-	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	-	-	-

**Intersection**

Int Delay, s/veh 0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗	↕		↖	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1	0	1
Stage 1	-	-	1
Stage 2	-	-	0
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1622	-	1022
Stage 1	-	-	1022
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1622	-	1022
Mov Cap-2 Maneuver	-	-	933
Stage 1	-	-	1022
Stage 2	-	-	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-



HCM 2010 Signalized Intersection Summary 6-074 Papillion City Park Expansion/Lincoln St TIA  
 84: 84th St & Lincoln St 9/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	295	91	108	110	146	134	86	570	12	63	471	161
Future Volume (veh/h)	295	91	108	110	146	134	86	570	12	63	471	161
Number	7	4	14	3	8	18	5	2	12	1	6	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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	321	99	117	120	159	146	93	620	13	68	512	175
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	347	286	338	313	180	165	402	1809	38	401	1806	1019
Arrive On Green	0.13	0.37	0.37	0.20	0.20	0.20	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	1774	779	921	1161	895	822	752	3545	74	791	3539	1583
Grp Volume(v), veh/h	321	0	216	120	0	305	93	309	324	68	512	175
Grp Sat Flow(s),veh/h/ln	1774	0	1700	1161	0	1718	752	1770	1850	791	1770	1583
Q Serve(g_s), s	12.0	0.0	8.3	8.3	0.0	15.5	7.3	9.3	9.3	5.0	7.5	4.0
Cycle Q Clear(g_c), s	12.0	0.0	8.3	8.3	0.0	15.5	14.7	9.3	9.3	14.4	7.5	4.0
Prop In Lane	1.00		0.54	1.00		0.48	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	347	0	625	313	0	345	402	903	944	401	1806	1019
V/C Ratio(X)	0.93	0.00	0.35	0.38	0.00	0.88	0.23	0.34	0.34	0.17	0.28	0.17
Avail Cap(c_a), veh/h	347	0	652	331	0	372	402	903	944	401	1806	1019
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	25.7	0.0	20.6	32.1	0.0	35.0	16.8	13.1	13.1	17.3	12.6	6.4
Incr Delay (d2), s/veh	30.1	0.0	0.3	0.8	0.0	20.5	1.3	1.0	1.0	0.9	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	5.0	0.0	4.0	2.7	0.0	9.3	1.6	4.8	5.0	1.2	3.7	1.8
LnGrp Delay(d),s/veh	55.8	0.0	21.0	32.8	0.0	55.5	18.2	14.1	14.1	18.3	13.0	6.8
LnGrp LOS	E		C	C		E	B	B	B	B	B	A
Approach Vol, veh/h		537			425			726			755	
Approach Delay, s/veh		41.8			49.1			14.6			12.0	
Approach LOS		D			D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		51.4		38.6		51.4	15.0	23.6				
Change Period (Y+Rc), s		5.5		5.5		5.5	3.0	5.5				
Max Green Setting (Gmax), s		44.5		34.5		44.5	12.0	19.5				
Max Q Clear Time (g_c+I1), s		16.7		10.3		16.4	14.0	17.5				
Green Ext Time (p_c), s		11.4		2.2		11.5	0.0	0.5				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			25.8									
HCM 2010 LOS			C									

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	3	446	26	7	387	3	22	0	36	3	1	1
Future Vol, veh/h	3	446	26	7	387	3	22	0	36	3	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	0	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	485	28	8	421	3	24	0	39	3	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	424	0	0	513	0	0	943	944	499	962	957	422
Stage 1	-	-	-	-	-	-	505	505	-	437	437	-
Stage 2	-	-	-	-	-	-	438	439	-	525	520	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1135	-	-	1052	-	-	243	262	572	235	258	632
Stage 1	-	-	-	-	-	-	549	540	-	598	579	-
Stage 2	-	-	-	-	-	-	597	578	-	536	532	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1135	-	-	1052	-	-	240	259	572	217	255	632
Mov Cap-2 Maneuver	-	-	-	-	-	-	368	371	-	343	366	-
Stage 1	-	-	-	-	-	-	548	539	-	596	575	-
Stage 2	-	-	-	-	-	-	590	574	-	498	531	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	13.8	14.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	473	1135	-	-	1052	-	-	348	632
HCM Lane V/C Ratio	0.133	0.003	-	-	0.007	-	-	0.012	0.002
HCM Control Delay (s)	13.8	8.2	-	-	8.4	-	-	15.5	10.7
HCM Lane LOS	B	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0	0

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↕	↕		↕	↕	
Traffic Vol, veh/h	7	304	11	13	395	7	56	0	53	3	0	4
Future Vol, veh/h	7	304	11	13	395	7	56	0	53	3	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	330	12	14	429	8	61	0	58	3	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	437	0	0	342	0	0	816	817	336	841	819	433
Stage 1	-	-	-	-	-	-	352	352	-	461	461	-
Stage 2	-	-	-	-	-	-	464	465	-	380	358	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1123	-	-	1217	-	-	296	311	706	284	310	623
Stage 1	-	-	-	-	-	-	665	632	-	581	565	-
Stage 2	-	-	-	-	-	-	578	563	-	642	628	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1123	-	-	1217	-	-	290	305	706	257	304	623
Mov Cap-2 Maneuver	-	-	-	-	-	-	407	405	-	379	404	-
Stage 1	-	-	-	-	-	-	660	627	-	577	559	-
Stage 2	-	-	-	-	-	-	567	557	-	585	624	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.3	14.1	12.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	513	1123	-	-	1217	-	-	488
HCM Lane V/C Ratio	0.231	0.007	-	-	0.012	-	-	0.016
HCM Control Delay (s)	14.1	8.2	-	-	8	-	-	12.5
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.9	0	-	-	0	-	-	0

HCM 2010 Signalized Intersection Summary 6-074 Papillion City Park Expansion/Lincoln St TIA  
 96: 96th St & Lincoln St 9/1/2016



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	28	4	187	8	289	12	862	146	156	540	15
Future Volume (veh/h)	2	28	4	187	8	289	12	862	146	156	540	15
Number	7	4	14	3	8	18	5	2	12	1	6	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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	2	30	4	203	9	314	13	937	159	170	587	16
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	195	171	23	379	380	422	518	1642	278	364	2086	57
Arrive On Green	0.00	0.11	0.11	0.10	0.20	0.20	0.01	0.54	0.54	0.06	0.59	0.59
Sat Flow, veh/h	1774	1610	215	1774	1863	1583	1774	3028	514	1774	3520	96
Grp Volume(v), veh/h	2	0	34	203	9	314	13	547	549	170	295	308
Grp Sat Flow(s),veh/h/ln	1774	0	1825	1774	1863	1583	1774	1770	1772	1774	1770	1846
Q Serve(g_s), s	0.1	0.0	1.5	9.0	0.3	16.3	0.3	18.5	18.5	3.6	7.3	7.3
Cycle Q Clear(g_c), s	0.1	0.0	1.5	9.0	0.3	16.3	0.3	18.5	18.5	3.6	7.3	7.3
Prop In Lane	1.00		0.12	1.00		1.00	1.00		0.29	1.00		0.05
Lane Grp Cap(c), veh/h	195	0	194	379	380	422	518	959	961	364	1049	1094
V/C Ratio(X)	0.01	0.00	0.18	0.54	0.02	0.74	0.03	0.57	0.57	0.47	0.28	0.28
Avail Cap(c_a), veh/h	290	0	294	379	383	425	594	959	961	469	1049	1094
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.8	0.0	36.6	30.3	28.7	30.2	9.0	13.7	13.7	10.4	9.0	9.0
Incr Delay (d2), s/veh	0.0	0.0	0.4	1.5	0.0	6.9	0.0	2.5	2.5	0.9	0.7	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	0.8	4.5	0.2	8.0	0.1	9.6	9.6	1.8	3.7	3.9
LnGrp Delay(d),s/veh	35.8	0.0	37.1	31.8	28.7	37.0	9.1	16.1	16.1	11.3	9.6	9.6
LnGrp LOS	D		D	C	C	D	A	B	B	B	A	A
Approach Vol, veh/h		36			526			1109			773	
Approach Delay, s/veh		37.0			34.9			16.0			10.0	
Approach LOS		D			C			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	54.3	12.0	15.0	4.1	58.8	3.2	23.8				
Change Period (Y+Rc), s	3.0	5.5	3.0	5.5	3.0	5.5	3.0	5.5				
Max Green Setting (Gmax), s	38.5	9.0	14.5	5.0	44.5	5.0	18.5					
Max Q Clear Time (g_c+1), s	20.5	11.0	3.5	2.3	9.3	2.1	18.3					
Green Ext Time (p_c), s	0.2	9.7	0.0	0.9	0.0	13.2	0.0	0.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			18.5									
HCM 2010 LOS			B									

**Intersection**

Int Delay, s/veh 1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	32	8	8	55	8	8
Future Vol, veh/h	32	8	8	55	8	8
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	9	9	60	9	9

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	43	116
Stage 1	-	-	39
Stage 2	-	-	77
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1566	880
Stage 1	-	-	983
Stage 2	-	-	946
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1566	875
Mov Cap-2 Maneuver	-	-	875
Stage 1	-	-	983
Stage 2	-	-	940

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	947	-	-	1566	-
HCM Lane V/C Ratio	0.018	-	-	0.006	-
HCM Control Delay (s)	8.9	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

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	2	42	2	2	58	2	2	1	2	2	1	2
Future Vol, veh/h	2	42	2	2	58	2	2	1	2	2	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	46	2	2	63	2	2	1	2	2	1	2
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	65	0	0	48	0	0	121	121	47	121	120	64
Stage 1	-	-	-	-	-	-	51	51	-	68	68	-
Stage 2	-	-	-	-	-	-	70	70	-	53	52	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1537	-	-	1559	-	-	854	769	1022	854	770	1000
Stage 1	-	-	-	-	-	-	962	852	-	942	838	-
Stage 2	-	-	-	-	-	-	940	837	-	960	852	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1537	-	-	1559	-	-	850	767	1022	850	768	1000
Mov Cap-2 Maneuver	-	-	-	-	-	-	850	767	-	850	768	-
Stage 1	-	-	-	-	-	-	961	851	-	941	837	-
Stage 2	-	-	-	-	-	-	936	836	-	956	851	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.2			9.1			9.1		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	891	1537	-	-	1559	-	-	884				
HCM Lane V/C Ratio	0.006	0.001	-	-	0.001	-	-	0.006				
HCM Control Delay (s)	9.1	7.3	0	-	7.3	0	-	9.1				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0				

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	57	26	23	22	21	18	37	270	11	15	64	71
Future Vol, veh/h	57	26	23	22	21	18	37	270	11	15	64	71
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	62	28	25	24	23	20	40	293	12	16	70	77
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	542	527	108	547	559	299	147	0	0	305	0	0
Stage 1	141	141	-	380	380	-	-	-	-	-	-	-
Stage 2	401	386	-	167	179	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	451	456	946	448	438	741	1435	-	-	1256	-	-
Stage 1	862	780	-	642	614	-	-	-	-	-	-	-
Stage 2	626	610	-	835	751	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	406	434	946	400	417	741	1435	-	-	1256	-	-
Mov Cap-2 Maneuver	406	434	-	400	417	-	-	-	-	-	-	-
Stage 1	833	769	-	620	593	-	-	-	-	-	-	-
Stage 2	566	589	-	772	740	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	15.1			13.9			0.9			0.8		
HCM LOS	C			B								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1435	-	-	472	470	1256	-	-				
HCM Lane V/C Ratio	0.028	-	-	0.244	0.141	0.013	-	-				
HCM Control Delay (s)	7.6	0	-	15.1	13.9	7.9	0	-				
HCM Lane LOS	A	A	-	C	B	A	A	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.9	0.5	0	-	-				

**Intersection**

Int Delay, s/veh 1.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↻		↻	↻	↻	↻
Traffic Vol, veh/h	92	40	4	125	52	4
Future Vol, veh/h	92	40	4	125	52	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	200	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	100	43	4	136	57	4

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	143	267
Stage 1	-	-	122
Stage 2	-	-	145
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1440	722
Stage 1	-	-	903
Stage 2	-	-	882
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1440	720
Mov Cap-2 Maneuver	-	-	735
Stage 1	-	-	903
Stage 2	-	-	880

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	735	929	-	-	1440	-
HCM Lane V/C Ratio	0.077	0.005	-	-	0.003	-
HCM Control Delay (s)	10.3	8.9	-	-	7.5	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-



**Intersection**

Int Delay, s/veh 1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↻		↻	↻	↻	↻
Traffic Vol, veh/h	40	4	2	38	6	3
Future Vol, veh/h	40	4	2	38	6	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	200	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	4	2	41	7	3

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	48	92
Stage 1	-	-	46
Stage 2	-	-	46
Critical Hdwy	-	4.12	7.12
Critical Hdwy Stg 1	-	-	6.12
Critical Hdwy Stg 2	-	-	6.12
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1559	892
Stage 1	-	-	968
Stage 2	-	-	968
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1559	891
Mov Cap-2 Maneuver	-	-	848
Stage 1	-	-	968
Stage 2	-	-	967

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	848	1023	-	-	1559	-
HCM Lane V/C Ratio	0.008	0.003	-	-	0.001	-
HCM Control Delay (s)	9.3	8.5	-	-	7.3	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	0	0	-	-	0	-

**Intersection**

Int Delay, s/veh 3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	2	12	22	5	64	74	316	28	45	183	30
Future Vol, veh/h	6	2	12	22	5	64	74	316	28	45	183	30
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	2	13	24	5	70	80	343	30	49	199	33

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	870	848	215	841	849	359	232	0	0	374	0	0
Stage 1	313	313	-	520	520	-	-	-	-	-	-	-
Stage 2	557	535	-	321	329	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	272	298	825	284	298	685	1336	-	-	1184	-	-
Stage 1	698	657	-	539	532	-	-	-	-	-	-	-
Stage 2	515	524	-	691	646	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	218	262	825	252	262	685	1336	-	-	1184	-	-
Mov Cap-2 Maneuver	218	262	-	252	262	-	-	-	-	-	-	-
Stage 1	645	625	-	498	492	-	-	-	-	-	-	-
Stage 2	423	484	-	645	615	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.5	15.1	1.4	1.4
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1336	-	-	402	455	1184	-
HCM Lane V/C Ratio	0.06	-	-	0.054	0.217	0.041	-
HCM Control Delay (s)	7.9	0	-	14.5	15.1	8.2	0
HCM Lane LOS	A	A	-	B	C	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.2	0.8	0.1	-

**Intersection**

Int Delay, s/veh 1.2






















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	40	38	2	3	6
Future Vol, veh/h	4	40	38	2	3	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	43	41	2	3	7

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	43	0	94
Stage 1	-	-	42
Stage 2	-	-	52
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1566	-	906
Stage 1	-	-	980
Stage 2	-	-	970
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1566	-	904
Mov Cap-2 Maneuver	-	-	857
Stage 1	-	-	980
Stage 2	-	-	968

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1566	-	-	-	964
HCM Lane V/C Ratio	0.003	-	-	-	0.01
HCM Control Delay (s)	7.3	-	-	-	8.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

HCM 2010 Signalized Intersection Summary 6-074 Papillion City Park Expansion/Lincoln St TIA  
 84: 84th St & Lincoln St 9/1/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	292	77	193	21	71	68	144	604	14	92	789	434
Future Volume (veh/h)	292	77	193	21	71	68	144	604	14	92	789	434
Number	7	4	14	3	8	18	5	2	12	1	6	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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	317	84	210	23	77	74	157	657	15	100	858	472
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	360	136	339	210	105	101	269	2090	48	459	2091	1147
Arrive On Green	0.13	0.29	0.29	0.12	0.12	0.12	0.59	0.59	0.59	0.59	0.59	0.59
Sat Flow, veh/h	1774	473	1182	1081	874	840	410	3537	81	763	3539	1583
Grp Volume(v), veh/h	317	0	294	23	0	151	157	329	343	100	858	472
Grp Sat Flow(s),veh/h/ln	1774	0	1654	1081	0	1714	410	1770	1848	763	1770	1583
Q Serve(g_s), s	12.0	0.0	13.9	1.7	0.0	7.6	30.1	8.4	8.4	6.8	11.8	10.5
Cycle Q Clear(g_c), s	12.0	0.0	13.9	1.7	0.0	7.6	41.9	8.4	8.4	15.2	11.8	10.5
Prop In Lane	1.00		0.71	1.00		0.49	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	360	0	475	210	0	206	269	1045	1092	459	2091	1147
V/C Ratio(X)	0.88	0.00	0.62	0.11	0.00	0.73	0.58	0.31	0.31	0.22	0.41	0.41
Avail Cap(c_a), veh/h	360	0	634	314	0	371	269	1045	1092	459	2091	1147
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	30.7	0.0	27.8	35.6	0.0	38.2	21.3	9.3	9.3	13.1	9.9	4.9
Incr Delay (d2), s/veh	21.4	0.0	1.3	0.2	0.0	4.9	9.0	0.8	0.8	1.1	0.6	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	4.1	0.0	6.5	0.5	0.0	3.9	4.1	4.3	4.5	1.6	5.9	4.9
LnGrp Delay(d),s/veh	52.1	0.0	29.1	35.8	0.0	43.1	30.3	10.0	10.0	14.2	10.5	6.0
LnGrp LOS	D		C	D		D	C	B	B	B	B	A
Approach Vol, veh/h		611			174			829			1430	
Approach Delay, s/veh		41.1			42.2			13.9			9.3	
Approach LOS		D			D			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		58.7		31.3		58.7	15.0	16.3				
Change Period (Y+Rc), s		5.5		5.5		5.5	3.0	5.5				
Max Green Setting (Gmax), s		44.5		34.5		44.5	12.0	19.5				
Max Q Clear Time (g_c+I1), s		43.9		15.9		17.2	14.0	9.6				
Green Ext Time (p_c), s		0.5		1.5		19.1	0.0	1.2				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			18.8									
HCM 2010 LOS			B									

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	7	528	6	10	539	93	15	7	24	24	1	2
Future Vol, veh/h	7	528	6	10	539	93	15	7	24	24	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	574	7	11	586	101	16	8	26	26	1	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	687	0	0	580	0	0	1251	1301	577	1267	1254	636
Stage 1	-	-	-	-	-	-	592	592	-	658	658	-
Stage 2	-	-	-	-	-	-	659	709	-	609	596	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	907	-	-	994	-	-	149	161	516	146	172	478
Stage 1	-	-	-	-	-	-	493	494	-	453	461	-
Stage 2	-	-	-	-	-	-	453	437	-	482	492	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	907	-	-	994	-	-	146	158	516	134	169	478
Mov Cap-2 Maneuver	-	-	-	-	-	-	277	279	-	263	290	-
Stage 1	-	-	-	-	-	-	489	490	-	449	456	-
Stage 2	-	-	-	-	-	-	445	432	-	447	488	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	16.4	19.6
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	366	907	-	-	994	-	-	264	478
HCM Lane V/C Ratio	0.137	0.008	-	-	0.011	-	-	0.103	0.005
HCM Control Delay (s)	16.4	9	-	-	8.7	-	-	20.2	12.6
HCM Lane LOS	C	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0.3	0

**Intersection**

Int Delay, s/veh 1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↕	↕		↕	↕	
Traffic Vol, veh/h	7	461	42	49	352	6	18	0	28	7	0	7
Future Vol, veh/h	7	461	42	49	352	6	18	0	28	7	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	501	46	53	383	7	20	0	30	8	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	389	0	0	547	0	0	1035	1035	524	1046	1054	386
Stage 1	-	-	-	-	-	-	539	539	-	492	492	-
Stage 2	-	-	-	-	-	-	496	496	-	554	562	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1170	-	-	1022	-	-	210	232	553	206	226	662
Stage 1	-	-	-	-	-	-	527	522	-	558	548	-
Stage 2	-	-	-	-	-	-	556	545	-	517	510	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1170	-	-	1022	-	-	198	218	553	186	213	662
Mov Cap-2 Maneuver	-	-	-	-	-	-	327	334	-	304	318	-
Stage 1	-	-	-	-	-	-	523	518	-	554	520	-
Stage 2	-	-	-	-	-	-	521	517	-	485	507	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1	14.3	14
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	435	1170	-	-	1022	-	-	417
HCM Lane V/C Ratio	0.115	0.007	-	-	0.052	-	-	0.036
HCM Control Delay (s)	14.3	8.1	-	-	8.7	-	-	14
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.4	0	-	-	0.2	-	-	0.1

HCM 2010 Signalized Intersection Summary 6-074 Papillion City Park Expansion/Lincoln St TIA  
 96: 96th St & Lincoln St 9/1/2016



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	40	2	170	22	202	0	603	166	395	1041	3
Future Volume (veh/h)	13	40	2	170	22	202	0	603	166	395	1041	3
Number	7	4	14	3	8	18	5	2	12	1	6	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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	14	43	2	185	24	220	0	655	180	429	1132	3
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	170	104	5	305	271	424	344	1456	400	548	2483	7
Arrive On Green	0.01	0.06	0.06	0.10	0.15	0.15	0.00	0.53	0.53	0.12	0.69	0.69
Sat Flow, veh/h	1774	1766	82	1774	1863	1583	1774	2746	754	1774	3621	10
Grp Volume(v), veh/h	14	0	45	185	24	220	0	422	413	429	553	582
Grp Sat Flow(s),veh/h/ln	1774	0	1848	1774	1863	1583	1774	1770	1730	1774	1770	1861
Q Serve(g_s), s	0.7	0.0	2.1	8.6	1.0	10.6	0.0	13.2	13.3	9.3	12.9	12.9
Cycle Q Clear(g_c), s	0.7	0.0	2.1	8.6	1.0	10.6	0.0	13.2	13.3	9.3	12.9	12.9
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.44	1.00		0.01
Lane Grp Cap(c), veh/h	170	0	108	305	271	424	344	938	917	548	1214	1276
V/C Ratio(X)	0.08	0.00	0.42	0.61	0.09	0.52	0.00	0.45	0.45	0.78	0.46	0.46
Avail Cap(c_a), veh/h	245	0	298	305	383	519	440	938	917	548	1214	1276
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	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.1	0.0	40.9	33.8	33.3	28.0	0.0	13.0	13.0	10.0	6.5	6.5
Incr Delay (d2), s/veh	0.2	0.0	2.5	3.4	0.1	1.0	0.0	1.6	1.6	7.3	1.2	1.2
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	0.3	0.0	1.2	4.5	0.5	4.8	0.0	6.9	6.7	6.1	6.6	6.9
LnGrp Delay(d),s/veh	39.3	0.0	43.4	37.2	33.4	29.0	0.0	14.6	14.6	17.3	7.7	7.6
LnGrp LOS	D		D	D	C	C		B	B	B	A	A
Approach Vol, veh/h		59			429			835			1564	
Approach Delay, s/veh		42.4			32.8			14.6			10.3	
Approach LOS		D			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.0	53.2	12.0	10.8	0.0	67.2	4.2	18.6				
Change Period (Y+Rc), s	3.0	5.5	3.0	5.5	3.0	5.5	3.0	5.5				
Max Green Setting (Gmax), s	38.5	9.0	14.5	5.0	44.5	5.0	18.5					
Max Q Clear Time (g_c+M), s	15.3	10.6	4.1	0.0	14.9	2.7	12.6					
Green Ext Time (p_c), s	0.0	13.1	0.0	0.7	0.0	15.0	0.0	0.5				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			15.6									
HCM 2010 LOS			B									

**Intersection**

Int Delay, s/veh 1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	53	8	8	44	8	8
Future Vol, veh/h	53	8	8	44	8	8
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	58	9	9	48	9	9

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	66	127
Stage 1	-	-	62
Stage 2	-	-	65
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1536	868
Stage 1	-	-	961
Stage 2	-	-	958
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1536	863
Mov Cap-2 Maneuver	-	-	863
Stage 1	-	-	961
Stage 2	-	-	952

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	928	-	-	1536	-
HCM Lane V/C Ratio	0.019	-	-	0.006	-
HCM Control Delay (s)	9	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



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	2	53	2	2	48	2	2	1	2	2	1	2
Future Vol, veh/h	2	53	2	2	48	2	2	1	2	2	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	58	2	2	52	2	2	1	2	2	1	2
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	54	0	0	60	0	0	122	122	59	123	122	53
Stage 1	-	-	-	-	-	-	63	63	-	58	58	-
Stage 2	-	-	-	-	-	-	59	59	-	65	64	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1551	-	-	1544	-	-	853	768	1007	852	768	1014
Stage 1	-	-	-	-	-	-	948	842	-	954	847	-
Stage 2	-	-	-	-	-	-	953	846	-	946	842	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1551	-	-	1544	-	-	849	766	1007	848	766	1014
Mov Cap-2 Maneuver	-	-	-	-	-	-	849	766	-	848	766	-
Stage 1	-	-	-	-	-	-	947	841	-	953	846	-
Stage 2	-	-	-	-	-	-	949	845	-	942	841	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.3			9.1			9.1		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	885	1551	-	-	1544	-	-	887				
HCM Lane V/C Ratio	0.006	0.001	-	-	0.001	-	-	0.006				
HCM Control Delay (s)	9.1	7.3	0	-	7.3	0	-	9.1				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0				

**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	59	25	19	17	25	11	4	124	19	8	178	96
Future Vol, veh/h	59	25	19	17	25	11	4	124	19	8	178	96
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	64	27	21	18	27	12	4	135	21	9	193	104

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	436	427	246	441	469	145	298	0	0	155	0	0
Stage 1	263	263	-	154	154	-	-	-	-	-	-	-
Stage 2	173	164	-	287	315	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	531	520	793	527	492	902	1263	-	-	1425	-	-
Stage 1	742	691	-	848	770	-	-	-	-	-	-	-
Stage 2	829	762	-	720	656	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	497	514	793	488	487	902	1263	-	-	1425	-	-
Mov Cap-2 Maneuver	497	514	-	488	487	-	-	-	-	-	-	-
Stage 1	740	685	-	845	768	-	-	-	-	-	-	-
Stage 2	787	760	-	668	651	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.4	12.5	0.2	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1263	-	-	538	539	1425	-
HCM Lane V/C Ratio	0.003	-	-	0.208	0.107	0.006	-
HCM Control Delay (s)	7.9	0	-	13.4	12.5	7.5	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.8	0.4	0	-

**Intersection**

Int Delay, s/veh 1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↻		↻	↻	↻	↻
Traffic Vol, veh/h	93	23	9	81	36	3
Future Vol, veh/h	93	23	9	81	36	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	200	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	101	25	10	88	39	3

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	126
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1460
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1460
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	763	939	-	-	1460	-
HCM Lane V/C Ratio	0.051	0.003	-	-	0.007	-
HCM Control Delay (s)	10	8.8	-	-	7.5	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-

**Intersection**

Int Delay, s/veh 0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↻		↻	↻	↻	↻
Traffic Vol, veh/h	43	5	3	38	4	3
Future Vol, veh/h	43	5	3	38	4	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	200	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	5	3	41	4	3

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	97
Stage 1	-	-	49
Stage 2	-	-	48
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1554	902
Stage 1	-	-	973
Stage 2	-	-	974
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1554	900
Mov Cap-2 Maneuver	-	-	855
Stage 1	-	-	973
Stage 2	-	-	972

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	855	1020	-	-	1554	-
HCM Lane V/C Ratio	0.005	0.003	-	-	0.002	-
HCM Control Delay (s)	9.2	8.5	-	-	7.3	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	0	0	-	-	0	-

**Intersection**

Int Delay, s/veh 4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	29	5	71	25	3	94	5	203	32	59	297	3
Future Vol, veh/h	29	5	71	25	3	94	5	203	32	59	297	3
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	5	77	27	3	102	5	221	35	64	323	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	755	719	324	743	703	238	326	0	0	255	0	0
Stage 1	453	453	-	249	249	-	-	-	-	-	-	-
Stage 2	302	266	-	494	454	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	325	354	717	331	362	801	1234	-	-	1310	-	-
Stage 1	586	570	-	755	701	-	-	-	-	-	-	-
Stage 2	707	689	-	557	569	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	268	331	717	277	339	801	1234	-	-	1310	-	-
Mov Cap-2 Maneuver	268	331	-	277	339	-	-	-	-	-	-	-
Stage 1	583	536	-	751	697	-	-	-	-	-	-	-
Stage 2	611	686	-	462	535	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15	13.3	0.2	1.3
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1234	-	-	472	564	1310	-	-
HCM Lane V/C Ratio	0.004	-	-	0.242	0.235	0.049	-	-
HCM Control Delay (s)	7.9	0	-	15	13.3	7.9	0	-
HCM Lane LOS	A	A	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.9	0.9	0.2	-	-

**Intersection**

Int Delay, s/veh 1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↑	↑	↑		↑	
Traffic Vol, veh/h	5	43	38	3	3	4
Future Vol, veh/h	5	43	38	3	3	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	47	41	3	3	4






















Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	45	0	43
Stage 1	-	-	43
Stage 2	-	-	58
Critical Hdwy	4.12	-	6.22
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.318
Pot Cap-1 Maneuver	1563	-	1027
Stage 1	-	-	979
Stage 2	-	-	965
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1563	-	1027
Mov Cap-2 Maneuver	-	-	851
Stage 1	-	-	979
Stage 2	-	-	962

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1563	-	-	-	943
HCM Lane V/C Ratio	0.003	-	-	-	0.008
HCM Control Delay (s)	7.3	-	-	-	8.8
HCM Lane LOS					

HCM 2010 Signalized Intersection Summary 6-074 Papillion City Park Expansion/Lincoln St TIA  
 84: 84th St & Lincoln St

9/1/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	315	50	175	13	35	51	122	530	14	63	549	254
Future Volume (veh/h)	315	50	175	13	35	51	122	530	14	63	549	254
Number	7	4	14	3	8	18	5	2	12	1	6	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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	342	54	190	14	38	55	133	576	15	68	597	276
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	359	92	322	177	59	86	427	2203	57	534	2212	1201
Arrive On Green	0.13	0.25	0.25	0.09	0.09	0.09	0.62	0.62	0.62	0.62	0.62	0.62
Sat Flow, veh/h	1774	362	1275	1131	689	998	632	3524	92	822	3539	1583
Grp Volume(v), veh/h	342	0	244	14	0	93	133	289	302	68	597	276
Grp Sat Flow(s),veh/h/ln	1774	0	1638	1131	0	1687	632	1770	1847	822	1770	1583
Q Serve(g_s), s	12.0	0.0	11.8	1.0	0.0	4.8	10.8	6.6	6.6	3.6	6.8	4.6
Cycle Q Clear(g_c), s	12.0	0.0	11.8	1.0	0.0	4.8	17.7	6.6	6.6	10.2	6.8	4.6
Prop In Lane	1.00		0.78	1.00		0.59	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	359	0	414	177	0	145	427	1106	1154	534	2212	1201
V/C Ratio(X)	0.95	0.00	0.59	0.08	0.00	0.64	0.31	0.26	0.26	0.13	0.27	0.23
Avail Cap(c_a), veh/h	359	0	628	325	0	365	427	1106	1154	534	2212	1201
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	33.9	0.0	29.5	38.1	0.0	39.8	11.6	7.6	7.6	9.9	7.6	3.2
Incr Delay (d2), s/veh	35.1	0.0	1.3	0.2	0.0	4.6	1.9	0.6	0.6	0.5	0.3	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	6.1	0.0	5.4	0.3	0.0	2.4	2.1	3.4	3.5	0.9	3.4	2.1
LnGrp Delay(d),s/veh	69.1	0.0	30.9	38.2	0.0	44.4	13.5	8.1	8.1	10.4	7.9	3.6
LnGrp LOS	E		C	D		D	B	A	A	B	A	A
Approach Vol, veh/h		586			107			724			941	
Approach Delay, s/veh		53.2			43.6			9.1			6.8	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		61.7		28.3		61.7	15.0	13.3				
Change Period (Y+Rc), s		5.5		5.5		5.5	3.0	5.5				
Max Green Setting (Gmax), s		44.5		34.5		44.5	12.0	19.5				
Max Q Clear Time (g_c+I1), s		19.7		13.8		12.2	14.0	6.8				
Green Ext Time (p_c), s		12.5		1.1		14.1	0.0	1.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			20.7									
HCM 2010 LOS			C									

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	489	6	10	336	65	10	0	15	48	0	1
Future Vol, veh/h	4	489	6	10	336	65	10	0	15	48	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	532	7	11	365	71	11	0	16	52	0	1
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	436	0	0	538	0	0	965	1001	535	974	969	401
Stage 1	-	-	-	-	-	-	543	543	-	422	422	-
Stage 2	-	-	-	-	-	-	422	458	-	552	547	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1124	-	-	1030	-	-	234	243	545	231	254	649
Stage 1	-	-	-	-	-	-	524	520	-	609	588	-
Stage 2	-	-	-	-	-	-	609	567	-	518	517	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1124	-	-	1030	-	-	231	240	545	222	250	649
Mov Cap-2 Maneuver	-	-	-	-	-	-	359	354	-	347	360	-
Stage 1	-	-	-	-	-	-	522	518	-	607	582	-
Stage 2	-	-	-	-	-	-	601	561	-	501	515	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.2			13.5			17.1		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2			
Capacity (veh/h)	451	1124	-	-	1030	-	-	347	649			
HCM Lane V/C Ratio	0.06	0.004	-	-	0.011	-	-	0.15	0.002			
HCM Control Delay (s)	13.5	8.2	-	-	8.5	-	-	17.2	10.6			
HCM Lane LOS	B	A	-	-	A	-	-	C	B			
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.5	0			



**Intersection**

Int Delay, s/veh 1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	321	20	25	237	3	20	0	25	2	0	3
Future Vol, veh/h	3	321	20	25	237	3	20	0	25	2	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	349	22	27	258	3	22	0	27	2	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	261	0	0	371	0	0	681	681	360	694	691	259
Stage 1	-	-	-	-	-	-	366	366	-	314	314	-
Stage 2	-	-	-	-	-	-	315	315	-	380	377	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1303	-	-	1188	-	-	364	373	684	357	368	780
Stage 1	-	-	-	-	-	-	653	623	-	697	656	-
Stage 2	-	-	-	-	-	-	696	656	-	642	616	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1303	-	-	1188	-	-	356	364	684	336	359	780
Mov Cap-2 Maneuver	-	-	-	-	-	-	356	364	-	336	359	-
Stage 1	-	-	-	-	-	-	651	622	-	695	641	-
Stage 2	-	-	-	-	-	-	677	641	-	615	615	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.8	13.3	12.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	485	1303	-	-	1188	-	-	510
HCM Lane V/C Ratio	0.101	0.003	-	-	0.023	-	-	0.011
HCM Control Delay (s)	13.3	7.8	-	-	8.1	-	-	12.1
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0

HCM 2010 Signalized Intersection Summary 6-074 Papillion City Park Expansion/Lincoln St TIA  
 96: 96th St & Lincoln St 9/1/2016



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	23	8	127	23	182	4	396	92	196	454	4
Future Volume (veh/h)	6	23	8	127	23	182	4	396	92	196	454	4
Number	7	4	14	3	8	18	5	2	12	1	6	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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	7	25	9	138	25	198	4	430	100	213	493	4
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	159	75	27	293	261	329	622	1704	393	656	2373	19
Arrive On Green	0.01	0.06	0.06	0.09	0.14	0.14	0.00	0.60	0.60	0.07	0.66	0.66
Sat Flow, veh/h	1774	1309	471	1774	1863	1583	1774	2857	659	1774	3598	29
Grp Volume(v), veh/h	7	0	34	138	25	198	4	265	265	213	242	255
Grp Sat Flow(s),veh/h/ln	1774	0	1780	1774	1863	1583	1774	1770	1746	1774	1770	1858
Q Serve(g_s), s	0.3	0.0	1.7	6.3	1.1	10.2	0.1	6.4	6.5	3.9	4.9	4.9
Cycle Q Clear(g_c), s	0.3	0.0	1.7	6.3	1.1	10.2	0.1	6.4	6.5	3.9	4.9	4.9
Prop In Lane	1.00		0.26	1.00		1.00	1.00		0.38	1.00		0.02
Lane Grp Cap(c), veh/h	159	0	103	293	261	329	622	1055	1042	656	1167	1225
V/C Ratio(X)	0.04	0.00	0.33	0.47	0.10	0.60	0.01	0.25	0.25	0.32	0.21	0.21
Avail Cap(c_a), veh/h	245	0	287	311	383	432	713	1055	1042	753	1167	1225
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.5	0.0	40.7	33.7	33.7	32.3	7.2	8.6	8.6	5.6	6.0	6.0
Incr Delay (d2), s/veh	0.1	0.0	1.9	1.2	0.2	1.8	0.0	0.6	0.6	0.3	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	3.2	0.6	4.6	0.0	3.3	3.3	1.9	2.5	2.6
LnGrp Delay(d),s/veh	39.6	0.0	42.6	34.9	33.9	34.1	7.2	9.2	9.2	5.9	6.4	6.4
LnGrp LOS	D		D	C	C	C	A	A	A	A	A	A
Approach Vol, veh/h		41			361			534			710	
Approach Delay, s/veh		42.1			34.4			9.2			6.3	
Approach LOS		D			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.1	59.2	11.1	10.7	3.4	64.9	3.6	18.1				
Change Period (Y+Rc), s	3.0	5.5	3.0	5.5	3.0	5.5	3.0	5.5				
Max Green Setting (Gmax), s	38.5	9.0	14.5	5.0	44.5	5.0	18.5					
Max Q Clear Time (g_c+1), s	8.5	8.3	3.7	2.1	6.9	2.3	12.2					
Green Ext Time (p_c), s	0.3	6.2	0.0	0.6	0.0	6.4	0.0	0.4				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			14.3									
HCM 2010 LOS			B									

**Intersection**

Int Delay, s/veh 0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	4.12	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	2.218	-
Pot Cap-1 Maneuver	-	1622	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1622	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1622	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Intersection Delay, s/veh	0
Intersection LOS	-

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	0	0	0
HCM LOS	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

**Intersection**

Intersection Delay, s/veh  
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	0	0	0
Future Vol, veh/h	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	0	0	0
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	0
HCM LOS	-

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1	1	1	1	1	0	1	0	0	0	0	0
Stage 1	1	1	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	1	1	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	1022	895	1084	1022	895	-	1622	-	-	-	-	-
Stage 1	1022	895	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	1022	895	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	895	1084	1022	895	-	1622	-	-	-	-	-
Mov Cap-2 Maneuver	-	895	-	1022	895	-	-	-	-	-	-	-
Stage 1	1022	895	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	1022	895	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			0			0		
HCM LOS	A			A								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1622	-	-	-	-	-	-	-				
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-				
HCM Control Delay (s)	0	-	-	0	0	0	-	-				
HCM Lane LOS	A	-	-	A	A	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	-	-	-	-	-				

**Intersection**

Int Delay, s/veh 0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↓	↑	↓	↑
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	200	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	-	1
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	0	1622
Stage 1	-	0	-
Stage 2	-	0	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1622
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	WBL	WBT
Capacity (veh/h)	-	-	-	1622	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	0	-	0	-
HCM Lane LOS	A	A	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

**Intersection**

Int Delay, s/veh 0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↻		↻	↻	↻	↻
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	200	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1622
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1622
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	-	1622	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-



**Intersection**

Int Delay, s/veh 0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1	1	1	1	1	0	1	0	0	0	0	0
Stage 1	1	1	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	1	1	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	1022	895	1084	1022	895	-	1622	-	-	-	-	-
Stage 1	1022	895	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	1022	895	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	895	1084	1022	895	-	1622	-	-	-	-	-
Mov Cap-2 Maneuver	-	895	-	1022	895	-	-	-	-	-	-	-
Stage 1	1022	895	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	1022	895	-	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	0	0	-
HCM Lane LOS	A	-	-	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	-	-	-

**Intersection**

Int Delay, s/veh 0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↗	↕		↘	
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1	0	1
Stage 1	-	-	1
Stage 2	-	-	0
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1622	-	1022
Stage 1	-	-	1022
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1622	-	1022
Mov Cap-2 Maneuver	-	-	933
Stage 1	-	-	1022
Stage 2	-	-	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

HCM 2010 Signalized Intersection Summary 6-074 Papillion City Park Expansion/Lincoln St TIA  
 84: 84th St & Lincoln St 9/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	480	160	300	110	140	195	215	1035	55	115	950	325
Future Volume (veh/h)	480	160	300	110	140	195	215	1035	55	115	950	325
Number	7	4	14	3	8	18	5	2	12	1	6	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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	505	168	316	116	147	205	226	1089	58	121	1000	342
Adj No. of Lanes	2	1	0	1	1	0	1	2	0	1	2	1
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	535	177	333	179	145	202	276	1348	72	213	1239	554
Arrive On Green	0.16	0.31	0.31	0.04	0.21	0.21	0.09	0.39	0.39	0.04	0.35	0.35
Sat Flow, veh/h	3442	580	1091	1774	705	984	1774	3418	182	1774	3539	1583
Grp Volume(v), veh/h	505	0	484	116	0	352	226	564	583	121	1000	342
Grp Sat Flow(s),veh/h/ln	1721	0	1670	1774	0	1689	1774	1770	1831	1774	1770	1583
Q Serve(g_s), s	13.1	0.0	25.5	4.0	0.0	18.5	7.1	25.5	25.5	4.0	23.0	16.1
Cycle Q Clear(g_c), s	13.1	0.0	25.5	4.0	0.0	18.5	7.1	25.5	25.5	4.0	23.0	16.1
Prop In Lane	1.00		0.65	1.00		0.58	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	535	0	510	179	0	347	276	698	722	213	1239	554
V/C Ratio(X)	0.94	0.00	0.95	0.65	0.00	1.01	0.82	0.81	0.81	0.57	0.81	0.62
Avail Cap(c_a), veh/h	535	0	510	179	0	347	276	698	722	213	1239	554
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	37.6	0.0	30.6	30.9	0.0	35.8	20.5	24.2	24.2	21.1	26.5	24.3
Incr Delay (d2), s/veh	25.5	0.0	27.3	7.9	0.0	51.8	17.5	9.7	9.5	3.5	5.7	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	0.0	15.6	1.3	0.0	13.6	4.7	14.3	14.7	2.1	12.2	7.8
LnGrp Delay(d),s/veh	63.1	0.0	57.9	38.8	0.0	87.6	38.0	33.9	33.7	24.6	32.2	29.3
LnGrp LOS	E		E	D		F	D	C	C	C	C	C
Approach Vol, veh/h		989			468			1373			1463	
Approach Delay, s/veh		60.6			75.5			34.5			30.9	
Approach LOS		E			E			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	41.0	8.0	33.0	12.0	37.0	17.0	24.0				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	3.0	5.5				
Max Green Setting (Gmax), s	4.0	35.5	4.0	27.5	8.0	31.5	14.0	18.5				
Max Q Clear Time (g_c+I1), s	6.0	27.5	6.0	27.5	9.1	25.0	15.1	20.5				
Green Ext Time (p_c), s	0.0	7.1	0.0	0.0	0.0	5.8	0.0	0.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			43.7									
HCM 2010 LOS			D									

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	830	35	10	655	10	30	0	45	5	5	5
Future Vol, veh/h	5	830	35	10	655	10	30	0	45	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	874	37	11	689	11	32	0	47	5	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	700	0	0	911	0	0	1621	1624	892	1642	1637	695
Stage 1	-	-	-	-	-	-	903	903	-	716	716	-
Stage 2	-	-	-	-	-	-	718	721	-	926	921	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	897	-	-	748	-	-	83	102	341	80	101	442
Stage 1	-	-	-	-	-	-	332	356	-	421	434	-
Stage 2	-	-	-	-	-	-	420	432	-	322	349	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	897	-	-	748	-	-	79	100	341	68	99	442
Mov Cap-2 Maneuver	-	-	-	-	-	-	201	221	-	177	216	-
Stage 1	-	-	-	-	-	-	330	354	-	419	428	-
Stage 2	-	-	-	-	-	-	404	426	-	276	347	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			24			20.7		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2			
Capacity (veh/h)	267	897	-	-	748	-	-	195	442			
HCM Lane V/C Ratio	0.296	0.006	-	-	0.014	-	-	0.054	0.012			
HCM Control Delay (s)	24	9	-	-	9.9	-	-	24.5	13.2			
HCM Lane LOS	C	A	-	-	A	-	-	C	B			
HCM 95th %tile Q(veh)	1.2	0	-	-	0	-	-	0.2	0			

**Intersection**

Int Delay, s/veh 2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	645	25	25	645	15	65	0	65	5	0	5
Future Vol, veh/h	15	645	25	25	645	15	65	0	65	5	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	679	26	26	679	16	68	0	68	5	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	695	0	0	705	0	0	1466	1471	692	1497	1476	687
Stage 1	-	-	-	-	-	-	724	724	-	739	739	-
Stage 2	-	-	-	-	-	-	742	747	-	758	737	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	901	-	-	893	-	-	106	127	444	101	126	447
Stage 1	-	-	-	-	-	-	417	430	-	409	424	-
Stage 2	-	-	-	-	-	-	408	420	-	399	425	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	901	-	-	893	-	-	101	121	444	82	120	447
Mov Cap-2 Maneuver	-	-	-	-	-	-	225	241	-	195	238	-
Stage 1	-	-	-	-	-	-	410	422	-	402	412	-
Stage 2	-	-	-	-	-	-	391	408	-	332	417	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.3	26.8	18.8
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	299	901	-	-	893	-	-	272
HCM Lane V/C Ratio	0.458	0.018	-	-	0.029	-	-	0.039
HCM Control Delay (s)	26.8	9.1	-	-	9.2	-	-	18.8
HCM Lane LOS	D	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	2.3	0.1	-	-	0.1	-	-	0.1

HCM 2010 Signalized Intersection Summary 6-074 Papillion City Park Expansion/Lincoln St TIA  
 96: 96th St & Lincoln St 9/1/2016



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	100	142	250	150	340	355	1115	220	235	600	275
Future Volume (veh/h)	160	100	142	250	150	340	355	1115	220	235	600	275
Number	7	4	14	3	8	18	5	2	12	1	6	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	168	105	149	263	158	358	374	1174	232	247	632	289
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	1
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	259	172	146	339	275	386	525	1477	290	314	1645	736
Arrive On Green	0.07	0.09	0.09	0.12	0.15	0.15	0.13	0.50	0.50	0.10	0.46	0.46
Sat Flow, veh/h	1774	1863	1583	1774	1863	1583	1774	2951	579	1774	3539	1583
Grp Volume(v), veh/h	168	105	149	263	158	358	374	701	705	247	632	289
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1761	1774	1770	1583
Q Serve(g_s), s	6.0	4.9	8.3	11.0	7.1	13.3	9.2	29.5	30.0	6.4	10.5	10.8
Cycle Q Clear(g_c), s	6.0	4.9	8.3	11.0	7.1	13.3	9.2	29.5	30.0	6.4	10.5	10.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	259	172	146	339	275	386	525	886	881	314	1645	736
V/C Ratio(X)	0.65	0.61	1.02	0.77	0.57	0.93	0.71	0.79	0.80	0.79	0.38	0.39
Avail Cap(c_a), veh/h	259	172	146	339	275	386	665	886	881	400	1645	736
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	39.3	40.8	31.7	35.7	33.2	10.5	18.6	18.7	17.9	15.7	15.8
Incr Delay (d2), s/veh	5.6	6.2	80.0	10.7	2.9	28.1	2.6	7.2	7.5	7.8	0.7	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.2	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	2.8	6.9	2.1	3.9	11.7	4.8	16.0	16.3	3.8	5.2	5.0
LnGrp Delay(d),s/veh	41.6	45.5	121.0	42.4	38.6	61.4	13.2	25.8	26.3	25.7	16.4	17.3
LnGrp LOS	D	D	F	D	D	E	B	C	C	C	B	B
Approach Vol, veh/h		422			779			1780			1168	
Approach Delay, s/veh		70.6			50.3			23.3			18.6	
Approach LOS		E			D			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	50.5	14.0	13.8	14.9	47.3	9.0	18.8				
Change Period (Y+Rc), s	3.0	5.5	3.0	5.5	3.0	5.5	3.0	5.5				
Max Green Setting (Gmax), s	40.7	11.0	8.3	19.0	34.7	6.0	13.3					
Max Q Clear Time (g_c+1), s	32.0	13.0	10.3	11.2	12.8	8.0	15.3					
Green Ext Time (p_c), s	0.3	7.1	0.0	0.0	0.7	15.0	0.0	0.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			31.9									
HCM 2010 LOS			C									

**Intersection**

Int Delay, s/veh 11.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	380	100	100	665	100	100
Future Vol, veh/h	380	100	100	665	100	100
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	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	400	105	105	700	105	105

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1364
Stage 1	-	-	453
Stage 2	-	-	911
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1060	163
Stage 1	-	-	640
Stage 2	-	-	392
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1060	147
Mov Cap-2 Maneuver	-	-	147
Stage 1	-	-	640
Stage 2	-	-	353





















Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	76.9
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	237	-	-	1060	-
HCM Lane V/C Ratio	0.888	-	-	0.099	-
HCM Control Delay (s)	76.9	-	-	8.8	-
HCM Lane LOS	F	-	-	A	-
HCM 95th %tile Q(veh)	7.4	-	-	0.3	-

Intersection												
Int Delay, s/veh	4.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	505	25	25	700	25	25	15	25	25	15	25
Future Vol, veh/h	25	505	25	25	700	25	25	15	25	25	15	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	532	26	26	737	26	26	16	26	26	16	26
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	763	0	0	558	0	0	1421	1413	545	1421	1414	750
Stage 1	-	-	-	-	-	-	597	597	-	803	803	-
Stage 2	-	-	-	-	-	-	824	816	-	618	611	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	850	-	-	1013	-	-	114	138	538	114	138	411
Stage 1	-	-	-	-	-	-	490	491	-	377	396	-
Stage 2	-	-	-	-	-	-	367	391	-	477	484	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	850	-	-	1013	-	-	93	130	538	94	130	411
Mov Cap-2 Maneuver	-	-	-	-	-	-	93	130	-	94	130	-
Stage 1	-	-	-	-	-	-	475	476	-	365	386	-
Stage 2	-	-	-	-	-	-	321	381	-	425	469	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.3			47.2			49.2		
HCM LOS	E			E			E			E		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	151	850	-	-	1013	-	-	147				
HCM Lane V/C Ratio	0.453	0.031	-	-	0.026	-	-	0.465				
HCM Control Delay (s)	47.2	9.4	-	-	8.6	-	-	49.2				
HCM Lane LOS	E	A	-	-	A	-	-	E				
HCM 95th %tile Q(veh)	2.1	0.1	-	-	0.1	-	-	2.1				



HCM 2010 Signalized Intersection Summary 6-074 Papillion City Park Expansion/Lincoln St TIA  
 114: 114th St & Lincoln St 9/1/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	310	100	260	250	220	85	330	135	185	195	210
Future Volume (veh/h)	140	310	100	260	250	220	85	330	135	185	195	210
Number	7	4	14	3	8	18	5	2	12	1	6	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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	147	326	105	274	263	232	89	347	142	195	205	221
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	325	608	196	382	411	363	333	524	214	296	342	369
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	899	1351	435	953	914	806	958	1257	515	904	821	885
Grp Volume(v), veh/h	147	0	431	274	0	495	89	0	489	195	0	426
Grp Sat Flow(s),veh/h/ln	899	0	1786	953	0	1720	958	0	1772	904	0	1707
Q Serve(g_s), s	9.1	0.0	10.5	16.5	0.0	13.3	4.8	0.0	13.3	11.7	0.0	11.6
Cycle Q Clear(g_c), s	22.4	0.0	10.5	27.0	0.0	13.3	16.4	0.0	13.3	25.0	0.0	11.6
Prop In Lane	1.00		0.24	1.00		0.47	1.00		0.29	1.00		0.52
Lane Grp Cap(c), veh/h	325	0	804	382	0	774	333	0	738	296	0	711
V/C Ratio(X)	0.45	0.00	0.54	0.72	0.00	0.64	0.27	0.00	0.66	0.66	0.00	0.60
Avail Cap(c_a), veh/h	325	0	804	382	0	774	333	0	738	296	0	711
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.4	0.0	12.0	22.1	0.0	12.7	20.0	0.0	14.1	24.8	0.0	13.6
Incr Delay (d2), s/veh	1.0	0.0	0.7	6.3	0.0	1.8	0.4	0.0	2.2	5.3	0.0	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	2.3	0.0	5.3	5.2	0.0	6.6	1.3	0.0	6.8	3.6	0.0	5.7
LnGrp Delay(d),s/veh	22.4	0.0	12.7	28.4	0.0	14.5	20.4	0.0	16.3	30.1	0.0	15.0
LnGrp LOS	C		B	C		B	C		B	C		B
Approach Vol, veh/h		578			769			578			621	
Approach Delay, s/veh		15.1			19.5			16.9			19.7	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		29.0		31.0		29.0		31.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		25.0		27.0		25.0		27.0				
Max Q Clear Time (g_c+I1), s		18.4		24.4		27.0		29.0				
Green Ext Time (p_c), s		3.8		1.9		0.0		0.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			18.0									
HCM 2010 LOS			B									

**Intersection**

Int Delay, s/veh 1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↻		↻	↻	↻	↻
Traffic Vol, veh/h	490	50	20	460	75	40
Future Vol, veh/h	490	50	20	460	75	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	200	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	516	53	21	484	79	42

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	568
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1004
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1004
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	15.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	375	540	-	-	1004	-
HCM Lane V/C Ratio	0.211	0.078	-	-	0.021	-
HCM Control Delay (s)	17.1	12.2	-	-	8.7	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.8	0.3	-	-	0.1	-

**Intersection**

Int Delay, s/veh 1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	485	50	20	460	75	40
Future Vol, veh/h	485	50	20	460	75	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	200	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	511	53	21	484	79	42

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	563
Stage 1	-	-	537
Stage 2	-	-	526
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1008	247
Stage 1	-	-	586
Stage 2	-	-	593
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1008	242
Mov Cap-2 Maneuver	-	-	377
Stage 1	-	-	586
Stage 2	-	-	581

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	15.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	377	544	-	-	1008	-
HCM Lane V/C Ratio	0.209	0.077	-	-	0.021	-
HCM Control Delay (s)	17.1	12.2	-	-	8.6	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.8	0.3	-	-	0.1	-

HCM 2010 Signalized Intersection Summary 6-074 Papillion City Park Expansion/Lincoln St TIA  
 132: 132nd St & Lynam Dr/Lincoln St 9/1/2016



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	10	20	40	225	50	250	100	470	220	250	220	50
Future Volume (veh/h)	10	20	40	225	50	250	100	470	220	250	220	50
Number	7	4	14	3	8	18	5	2	12	1	6	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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	11	21	42	237	53	263	105	495	232	263	232	53
Adj No. of Lanes	0	1	0	1	1	0	1	1	0	1	1	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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	74	59	95	417	65	324	680	576	270	371	780	178
Arrive On Green	0.11	0.11	0.11	0.07	0.24	0.24	0.05	0.48	0.48	0.10	0.53	0.53
Sat Flow, veh/h	121	559	892	1774	272	1352	1774	1201	563	1774	1468	335
Grp Volume(v), veh/h	74	0	0	237	0	316	105	0	727	263	0	285
Grp Sat Flow(s),veh/h/ln	1572	0	0	1774	0	1624	1774	0	1763	1774	0	1804
Q Serve(g_s), s	0.0	0.0	0.0	5.0	0.0	12.4	2.0	0.0	24.6	4.6	0.0	5.9
Cycle Q Clear(g_c), s	3.4	0.0	0.0	5.0	0.0	12.4	2.0	0.0	24.6	4.6	0.0	5.9
Prop In Lane	0.15		0.57	1.00		0.83	1.00		0.32	1.00		0.19
Lane Grp Cap(c), veh/h	229	0	0	417	0	390	680	0	846	371	0	958
V/C Ratio(X)	0.32	0.00	0.00	0.57	0.00	0.81	0.15	0.00	0.86	0.71	0.00	0.30
Avail Cap(c_a), veh/h	430	0	0	417	0	603	695	0	1099	480	0	1312
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	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.1	0.0	0.0	24.5	0.0	24.2	7.9	0.0	15.5	13.5	0.0	8.8
Incr Delay (d2), s/veh	0.8	0.0	0.0	1.8	0.0	4.8	0.1	0.0	5.6	3.3	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	1.3	0.0	0.0	1.8	0.0	6.0	1.0	0.0	13.2	2.8	0.0	3.0
LnGrp Delay(d),s/veh	28.9	0.0	0.0	26.3	0.0	28.9	8.0	0.0	21.1	16.8	0.0	9.0
LnGrp LOS	C			C		C	A		C	B		A
Approach Vol, veh/h		74			553			832			548	
Approach Delay, s/veh		28.9			27.8			19.5			12.7	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	10.9	36.3	9.0	11.2	7.4	39.8		20.2				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	42.0	5.0	16.0	4.0	49.0			25.0				
Max Q Clear Time (g_c+1), s	10.6	26.6	7.0	5.4	4.0	7.9		14.4				
Green Ext Time (p_c), s	0.3	5.7	0.0	1.8	0.0	7.8		1.8				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.3								
HCM 2010 LOS				C								

**Intersection**

Int Delay, s/veh 0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕↔			↕↕
Traffic Vol, veh/h	11	18	1595	20	0	1075
Future Vol, veh/h	11	18	1595	20	0	1075
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	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	19	1679	21	0	1132

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2255	850	0	0	-	-
Stage 1	1689	-	-	-	-	-
Stage 2	566	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	-	-
Pot Cap-1 Maneuver	35	304	-	-	0	-
Stage 1	135	-	-	-	0	-
Stage 2	532	-	-	-	0	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	35	304	-	-	-	-
Mov Cap-2 Maneuver	35	-	-	-	-	-
Stage 1	135	-	-	-	-	-
Stage 2	532	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	68.7		0		0
HCM LOS	F				

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBT
Capacity (veh/h)	-	-	35	304	-
HCM Lane V/C Ratio	-	-	0.331	0.062	-
HCM Control Delay (s)	-	-	152.2	17.6	-
HCM Lane LOS	-	-	F	C	-
HCM 95th %tile Q(veh)	-	-	1.1	0.2	-

**Intersection**






















Int Delay, s/veh 2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	50	480	460	20	40	75
Future Vol, veh/h	50	480	460	20	40	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	505	484	21	42	79

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	505	0	495
Stage 1	-	-	495
Stage 2	-	-	611
Critical Hdwy	4.12	-	6.22
Critical Hdwy Stg 1	-	-	6.12
Critical Hdwy Stg 2	-	-	6.12
Follow-up Hdwy	2.218	-	3.318
Pot Cap-1 Maneuver	1060	-	575
Stage 1	-	-	556
Stage 2	-	-	481
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1060	-	575
Mov Cap-2 Maneuver	-	-	306
Stage 1	-	-	528
Stage 2	-	-	457

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	16.3
HCM LOS			C

HCM 2010 Signalized Intersection Summary 6-074 Papillion City Park Expansion/Lincoln St TIA  
 84: 84th St & Lincoln St 9/1/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	375	100	300	25	60	80	235	1035	60	200	1570	600
Future Volume (veh/h)	375	100	300	25	60	80	235	1035	60	200	1570	600
Number	7	4	14	3	8	18	5	2	12	1	6	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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	395	105	316	26	63	84	247	1089	63	211	1653	632
Adj No. of Lanes	2	1	0	1	1	0	1	2	0	1	2	1
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	407	97	292	35	107	142	217	1676	97	328	1731	774
Arrive On Green	0.12	0.24	0.24	0.02	0.15	0.15	0.08	0.49	0.49	0.08	0.49	0.49
Sat Flow, veh/h	3442	410	1235	1774	725	967	1774	3401	197	1774	3539	1583
Grp Volume(v), veh/h	395	0	421	26	0	147	247	566	586	211	1653	632
Grp Sat Flow(s),veh/h/ln	1721	0	1645	1774	0	1692	1774	1770	1828	1774	1770	1583
Q Serve(g_s), s	12.6	0.0	26.0	1.6	0.0	8.9	9.0	26.3	26.3	6.4	49.2	37.3
Cycle Q Clear(g_c), s	12.6	0.0	26.0	1.6	0.0	8.9	9.0	26.3	26.3	6.4	49.2	37.3
Prop In Lane	1.00		0.75	1.00		0.57	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	407	0	389	35	0	249	217	872	901	328	1731	774
V/C Ratio(X)	0.97	0.00	1.08	0.74	0.00	0.59	1.14	0.65	0.65	0.64	0.95	0.82
Avail Cap(c_a), veh/h	407	0	389	65	0	277	217	872	901	382	1731	774
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	48.3	0.0	42.0	53.6	0.0	43.8	33.3	20.8	20.8	17.1	26.9	23.9
Incr Delay (d2), s/veh	37.0	0.0	69.7	25.2	0.0	2.7	102.7	3.7	3.6	2.9	13.3	9.3
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	8.1	0.0	19.3	1.0	0.0	4.4	12.8	13.7	14.1	3.4	27.1	18.2
LnGrp Delay(d),s/veh	85.3	0.0	111.7	78.8	0.0	46.5	136.0	24.6	24.5	20.0	40.2	33.2
LnGrp LOS	F		F	E		D	F	C	C	B	D	C
Approach Vol, veh/h		816			173			1399			2496	
Approach Delay, s/veh		98.9			51.4			44.2			36.7	
Approach LOS		F			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.6	59.7	6.2	31.5	13.0	59.3	16.0	21.7				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	3.0	5.5				
Max Green Setting (Gmax), s	12.0	49.0	4.0	26.0	9.0	52.0	13.0	18.0				
Max Q Clear Time (g_c+I1), s	8.4	28.3	3.6	28.0	11.0	51.2	14.6	10.9				
Green Ext Time (p_c), s	0.2	19.3	0.0	0.0	0.0	0.7	0.0	1.3				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			49.8									
HCM 2010 LOS			D									
<b>Notes</b>												

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	735	10	15	770	100	25	10	35	5	5	5
Future Vol, veh/h	10	735	10	15	770	100	25	10	35	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	774	11	16	811	105	26	11	37	5	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	916	0	0	784	0	0	1697	1747	779	1719	1700	863
Stage 1	-	-	-	-	-	-	800	800	-	895	895	-
Stage 2	-	-	-	-	-	-	897	947	-	824	805	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	745	-	-	834	-	-	73	86	396	71	92	354
Stage 1	-	-	-	-	-	-	379	397	-	335	359	-
Stage 2	-	-	-	-	-	-	334	340	-	367	395	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	745	-	-	834	-	-	69	83	396	60	89	354
Mov Cap-2 Maneuver	-	-	-	-	-	-	185	199	-	172	206	-
Stage 1	-	-	-	-	-	-	373	391	-	330	352	-
Stage 2	-	-	-	-	-	-	318	333	-	319	389	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.2			24.6			22		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2			
Capacity (veh/h)	256	745	-	-	834	-	-	187	354			
HCM Lane V/C Ratio	0.288	0.014	-	-	0.019	-	-	0.056	0.015			
HCM Control Delay (s)	24.6	9.9	-	-	9.4	-	-	25.4	15.3			
HCM Lane LOS	C	A	-	-	A	-	-	D	C			
HCM 95th %tile Q(veh)	1.2	0	-	-	0.1	-	-	0.2	0			



Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	720	50	45	500	10	15	0	35	15	0	15
Future Vol, veh/h	15	720	50	45	500	10	15	0	35	15	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	758	53	47	526	11	16	0	37	16	0	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	537	0	0	811	0	0	1450	1448	784	1460	1468	532
Stage 1	-	-	-	-	-	-	816	816	-	626	626	-
Stage 2	-	-	-	-	-	-	634	632	-	834	842	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1031	-	-	815	-	-	109	131	393	107	128	547
Stage 1	-	-	-	-	-	-	371	391	-	472	477	-
Stage 2	-	-	-	-	-	-	467	474	-	362	380	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1031	-	-	815	-	-	100	122	393	92	119	547
Mov Cap-2 Maneuver	-	-	-	-	-	-	222	241	-	196	225	-
Stage 1	-	-	-	-	-	-	365	385	-	465	449	-
Stage 2	-	-	-	-	-	-	427	447	-	323	374	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.8	18.5	19
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	319	1031	-	-	815	-	-	289
HCM Lane V/C Ratio	0.165	0.015	-	-	0.058	-	-	0.109
HCM Control Delay (s)	18.5	8.5	-	-	9.7	-	-	19
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.6	0	-	-	0.2	-	-	0.4

HCM 2010 Signalized Intersection Summary 6-074 Papillion City Park Expansion/Lincoln St TIA  
 96: 96th St & Lincoln St 9/1/2016



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	155	395	250	110	200	205	665	180	405	1480	305
Future Volume (veh/h)	230	155	395	250	110	200	205	665	180	405	1480	305
Number	7	4	14	3	8	18	5	2	12	1	6	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	242	163	416	263	116	211	216	700	189	426	1558	321
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	1
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	356	362	308	276	279	494	237	1100	297	489	1711	765
Arrive On Green	0.10	0.19	0.19	0.06	0.15	0.15	0.08	0.40	0.40	0.16	0.48	0.48
Sat Flow, veh/h	1774	1863	1583	1774	1863	1583	1774	2757	744	1774	3539	1583
Grp Volume(v), veh/h	242	163	416	263	116	211	216	449	440	426	1558	321
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1731	1774	1770	1583
Q Serve(g_s), s	9.0	7.0	17.5	5.0	5.1	9.5	6.5	18.4	18.4	11.9	36.6	11.8
Cycle Q Clear(g_c), s	9.0	7.0	17.5	5.0	5.1	9.5	6.5	18.4	18.4	11.9	36.6	11.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.43	1.00		1.00
Lane Grp Cap(c), veh/h	356	362	308	276	279	494	237	706	691	489	1711	765
V/C Ratio(X)	0.68	0.45	1.35	0.95	0.42	0.43	0.91	0.64	0.64	0.87	0.91	0.42
Avail Cap(c_a), veh/h	356	362	308	276	279	494	237	706	691	595	1711	765
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.9	32.0	36.3	37.1	34.7	24.6	20.9	21.8	21.8	15.8	21.5	15.1
Incr Delay (d2), s/veh	5.2	0.9	178.0	41.4	1.0	0.6	36.0	4.3	4.4	11.6	8.8	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	1.8	3.7	22.9	7.2	2.7	4.2	5.5	9.8	9.6	7.3	19.8	5.5
LnGrp Delay(d),s/veh	34.1	32.9	214.3	78.4	35.7	25.2	56.8	26.1	26.2	27.4	30.3	16.8
LnGrp LOS	C	C	F	E	D	C	E	C	C	C	C	B
Approach Vol, veh/h		821			590			1105			2305	
Approach Delay, s/veh		125.1			51.0			32.2			27.8	
Approach LOS		F			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.6	41.4	8.0	23.0	10.0	49.0	12.0	19.0				
Change Period (Y+Rc), s	3.0	5.5	3.0	5.5	3.0	5.5	3.0	5.5				
Max Green Setting (Gmax), s	20.0	30.5	5.0	17.5	7.0	43.5	9.0	13.5				
Max Q Clear Time (g_c+M), s	11.0	20.4	7.0	19.5	8.5	38.6	11.0	11.5				
Green Ext Time (p_c), s	0.7	8.9	0.0	0.0	0.0	4.6	0.0	0.8				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			48.2									
HCM 2010 LOS			D									

**Intersection**

Int Delay, s/veh 23.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔		↔	
Traffic Vol, veh/h	630	100	100	525	100	100
Future Vol, veh/h	630	100	100	525	100	100
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	663	105	105	553	105	105





















Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	768
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	846
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	846
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	175.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	179	-	-	846	-
HCM Lane V/C Ratio	1.176	-	-	0.124	-
HCM Control Delay (s)	175.3	-	-	9.9	0
HCM Lane LOS	F	-	-	A	A
HCM 95th %tile Q(veh)	11.1	-	-	0.4	-

Intersection												
Int Delay, s/veh	4.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	25	630	25	25	580	25	25	15	25	25	15	25
Future Vol, veh/h	25	630	25	25	580	25	25	15	25	25	15	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	663	26	26	611	26	26	16	26	26	16	26
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	637	0	0	689	0	0	1426	1418	676	1426	1418	624
Stage 1	-	-	-	-	-	-	729	729	-	676	676	-
Stage 2	-	-	-	-	-	-	697	689	-	750	742	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	947	-	-	905	-	-	113	137	453	113	137	485
Stage 1	-	-	-	-	-	-	414	428	-	443	453	-
Stage 2	-	-	-	-	-	-	431	446	-	403	422	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	947	-	-	905	-	-	90	125	453	90	125	485
Mov Cap-2 Maneuver	-	-	-	-	-	-	90	125	-	90	125	-
Stage 1	-	-	-	-	-	-	395	409	-	423	433	-
Stage 2	-	-	-	-	-	-	375	426	-	349	403	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.4			51.4			50.3		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	143	947	-	-	905	-	-	145				
HCM Lane V/C Ratio	0.478	0.028	-	-	0.029	-	-	0.472				
HCM Control Delay (s)	51.4	8.9	0	-	9.1	0	-	50.3				
HCM Lane LOS	F	A	A	-	A	A	-	F				
HCM 95th %tile Q(veh)	2.2	0.1	-	-	0.1	-	-	2.2				

HCM 2010 Signalized Intersection Summary 16-074 Papillion City Park Expansion/Lincoln St TIA  
 114: 114th St & Lincoln St 9/1/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	300	75	200	300	130	30	290	230	95	280	215
Future Volume (veh/h)	170	300	75	200	300	130	30	290	230	95	280	215
Number	7	4	14	3	8	18	5	2	12	1	6	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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	179	316	79	211	316	137	32	305	242	100	295	226
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	344	622	156	391	533	231	286	416	330	267	423	324
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	934	1439	360	985	1234	535	877	963	764	856	980	751
Grp Volume(v), veh/h	179	0	395	211	0	453	32	0	547	100	0	521
Grp Sat Flow(s),veh/h/ln	934	0	1799	985	0	1768	877	0	1728	856	0	1730
Q Serve(g_s), s	10.6	0.0	9.4	11.7	0.0	11.5	1.8	0.0	15.5	6.5	0.0	14.4
Cycle Q Clear(g_c), s	22.1	0.0	9.4	21.0	0.0	11.5	16.2	0.0	15.5	21.9	0.0	14.4
Prop In Lane	1.00		0.20	1.00		0.30	1.00		0.44	1.00		0.43
Lane Grp Cap(c), veh/h	344	0	778	391	0	764	286	0	746	267	0	747
V/C Ratio(X)	0.52	0.00	0.51	0.54	0.00	0.59	0.11	0.00	0.73	0.38	0.00	0.70
Avail Cap(c_a), veh/h	353	0	796	401	0	782	296	0	764	276	0	765
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.2	0.0	12.1	19.8	0.0	12.7	20.2	0.0	13.9	23.0	0.0	13.6
Incr Delay (d2), s/veh	1.3	0.0	0.5	1.4	0.0	1.2	0.2	0.0	3.6	0.9	0.0	2.7
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	2.9	0.0	4.7	3.3	0.0	5.8	0.4	0.0	8.0	1.6	0.0	7.4
LnGrp Delay(d),s/veh	22.5	0.0	12.7	21.2	0.0	13.9	20.3	0.0	17.5	23.9	0.0	16.3
LnGrp LOS	C		B	C		B	C		B	C		B
Approach Vol, veh/h		574			664			579			621	
Approach Delay, s/veh		15.7			16.2			17.6			17.5	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		29.4		29.4		29.4		29.4				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		26.0		26.0		26.0		26.0				
Max Q Clear Time (g_c+I1), s		18.2		24.1		23.9		23.0				
Green Ext Time (p_c), s		4.5		1.3		1.4		2.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				16.8								
HCM 2010 LOS				B								

**Intersection**

Int Delay, s/veh 1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↓	↑	↓	↑
Traffic Vol, veh/h	515	60	30	465	50	30
Future Vol, veh/h	515	60	30	465	50	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	200	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	542	63	32	489	53	32

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	605	1127
Stage 1	-	-	574
Stage 2	-	-	553
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	973	226
Stage 1	-	-	563
Stage 2	-	-	576
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	973	219
Mov Cap-2 Maneuver	-	-	356
Stage 1	-	-	563
Stage 2	-	-	557

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	15.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	356	518	-	-	973	-
HCM Lane V/C Ratio	0.148	0.061	-	-	0.032	-
HCM Control Delay (s)	16.9	12.4	-	-	8.8	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	0.2	-	-	0.1	-

**Intersection**

Int Delay, s/veh 1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↻		↻	↻	↻	↻
Traffic Vol, veh/h	515	60	30	460	50	30
Future Vol, veh/h	515	60	30	460	50	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	200	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	542	63	32	484	53	32

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	605
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	973
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	973
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	15.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	357	518	-	-	973	-
HCM Lane V/C Ratio	0.147	0.061	-	-	0.032	-
HCM Control Delay (s)	16.8	12.4	-	-	8.8	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	0.2	-	-	0.1	-

HCM 2010 Signalized Intersection Summary 6-074 Papillion City Park Expansion/Lincoln St TIA  
 132: 132nd St & Lynam Dr/Lincoln St 9/1/2016



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	50	45	150	200	20	250	20	295	250	250	440	10
Future Volume (veh/h)	50	45	150	200	20	250	20	295	250	250	440	10
Number	7	4	14	3	8	18	5	2	12	1	6	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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	53	47	158	211	21	263	21	311	263	263	463	11
Adj No. of Lanes	0	1	0	1	1	0	1	1	0	1	1	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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	94	69	178	407	40	502	422	391	331	376	916	22
Arrive On Green	0.19	0.19	0.19	0.10	0.34	0.34	0.02	0.42	0.42	0.10	0.51	0.51
Sat Flow, veh/h	231	364	939	1774	118	1483	1774	934	790	1774	1812	43
Grp Volume(v), veh/h	258	0	0	211	0	284	21	0	574	263	0	474
Grp Sat Flow(s),veh/h/ln	1534	0	0	1774	0	1601	1774	0	1723	1774	0	1855
Q Serve(g_s), s	10.2	0.0	0.0	8.0	0.0	12.4	0.6	0.0	25.3	6.9	0.0	14.8
Cycle Q Clear(g_c), s	14.2	0.0	0.0	8.0	0.0	12.4	0.6	0.0	25.3	6.9	0.0	14.8
Prop In Lane	0.21		0.61	1.00		0.93	1.00		0.46	1.00		0.02
Lane Grp Cap(c), veh/h	340	0	0	407	0	542	422	0	722	376	0	937
V/C Ratio(X)	0.76	0.00	0.00	0.52	0.00	0.52	0.05	0.00	0.79	0.70	0.00	0.51
Avail Cap(c_a), veh/h	349	0	0	407	0	552	471	0	722	435	0	937
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	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.2	0.0	0.0	23.1	0.0	23.1	14.3	0.0	22.0	16.7	0.0	14.3
Incr Delay (d2), s/veh	9.0	0.0	0.0	1.2	0.0	0.9	0.0	0.0	8.8	4.1	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	6.9	0.0	0.0	4.0	0.0	5.6	0.3	0.0	13.7	3.7	0.0	8.0
LnGrp Delay(d),s/veh	43.2	0.0	0.0	24.3	0.0	24.0	14.3	0.0	30.8	20.8	0.0	16.3
LnGrp LOS	D			C		C	B		C	C		B
Approach Vol, veh/h		258			495			595			737	
Approach Delay, s/veh		43.2			24.1			30.2			17.9	
Approach LOS		D			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	3.1	40.5	13.0	20.5	5.6	48.0		33.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	12.0	36.0	9.0	17.0	4.0	44.0		30.0				
Max Q Clear Time (g_c+1), s	10.0	27.3	10.0	16.2	2.6	16.8		14.4				
Green Ext Time (p_c), s	0.2	4.1	0.0	0.3	0.0	7.1		3.3				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				26.0								
HCM 2010 LOS				C								



**Intersection**

Int Delay, s/veh 7.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑			↑↑
Traffic Vol, veh/h	50	82	1035	61	0	2090
Future Vol, veh/h	50	82	1035	61	0	2090
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	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	86	1089	64	0	2200

Major/Minor	Minor1	Minor2	Major1	Major2	Major3	Major4
Conflicting Flow All	2222	577	0	0	-	-
Stage 1	1122	-	-	-	-	-
Stage 2	1100	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	-	-
Pot Cap-1 Maneuver	~ 37	460	-	-	0	-
Stage 1	273	-	-	-	0	-
Stage 2	280	-	-	-	0	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	~ 37	460	-	-	-	-
Mov Cap-2 Maneuver	~ 37	-	-	-	-	-
Stage 1	273	-	-	-	-	-
Stage 2	280	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	185	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBT
Capacity (veh/h)	-	-	37	460	-
HCM Lane V/C Ratio	-	-	1.422	0.188	-
HCM Control Delay (s)	-	-	\$ 464.4	14.6	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	5.5	0.7	-

**Notes**

~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

**Intersection**

Int Delay, s/veh 1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	60	515	455	30	30	50
Future Vol, veh/h	60	515	455	30	30	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	542	479	32	32	53

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	511	0	495
Stage 1	-	-	495
Stage 2	-	-	668
Critical Hdwy	4.12	-	6.22
Critical Hdwy Stg 1	-	-	6.12
Critical Hdwy Stg 2	-	-	6.12
Follow-up Hdwy	2.218	-	3.318
Pot Cap-1 Maneuver	1054	-	575
Stage 1	-	-	556
Stage 2	-	-	448
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1054	-	575
Mov Cap-2 Maneuver	-	-	286
Stage 1	-	-	523
Stage 2	-	-	421

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	15.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1054	-	-	-	417
HCM Lane V/C Ratio	0.06	-	-	-	0.202
HCM Control Delay (s)	8.6	-	-	-	15.8
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	0.7