





















HCM Signalized Intersection Capacity Analysis
 16: E 8th St & J St

























Cumulative RES + Project with Mitigations
 AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	83	300	105	105	545	19	60	35	10	29	52	216
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frbp, ped/bikes	1.00	0.97		1.00	0.99			1.00	1.00		1.00	0.84
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.96		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.98	1.00
Satd. Flow (prot)	1770	1743		1583	1843			1806	1417		1796	1300
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00		0.98	1.00
Satd. Flow (perm)	1770	1743		1583	1843			1806	1417		1796	1300
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	98	353	124	124	641	22	71	41	12	34	61	254
RTOR Reduction (vph)	0	12	0	0	1	0	0	0	8	0	0	219
Lane Group Flow (vph)	98	465	0	124	662	0	0	112	4	0	95	35
Confl. Peds. (#/hr)	8		7	7		8	5					5
Confl. Bikes (#/hr)			78		1	163		6				49
Heavy Vehicles (%)	2%	2%	2%	14%	2%	2%	2%	2%	14%	2%	5%	4%
Turn Type	Prot			Prot			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			6
Actuated Green, G (s)	6.4	31.5		7.3	32.4			8.1	8.1		9.9	9.9
Effective Green, g (s)	6.4	31.5		7.3	32.4			8.1	8.1		9.9	9.9
Actuated g/C Ratio	0.09	0.43		0.10	0.45			0.11	0.11		0.14	0.14
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	156	754		159	820			201	158		244	177
v/s Ratio Prot	0.06	0.27		c0.08	c0.36			c0.06			c0.05	
v/s Ratio Perm									0.00			0.03
v/c Ratio	0.63	0.62		0.78	0.81			0.56	0.03		0.39	0.20
Uniform Delay, d1	32.1	16.0		32.0	17.5			30.7	28.8		28.7	27.9
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	7.7	1.5		21.1	5.9			3.3	0.1		1.0	0.5
Delay (s)	39.7	17.5		53.1	23.3			34.0	28.9		29.7	28.5
Level of Service	D	B		D	C			C	C		C	C
Approach Delay (s)		21.3			28.0			33.5			28.8	
Approach LOS		C			C			C			C	
Intersection Summary												
HCM Average Control Delay			26.4			HCM Level of Service			C			
HCM Volume to Capacity ratio			0.66									
Actuated Cycle Length (s)			72.8			Sum of lost time (s)		12.0				
Intersection Capacity Utilization			58.9%			ICU Level of Service			B			
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
19: Covell Blvd & Covell Village Dvwy

Cumulative RES + Project with Mitigations
AM Peak





















													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		 			 								
Volume (vph)	92	921	127	65	1294	10	60	55	50	120	340	239	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00	0.72	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.97	1.00		0.99	1.00	
Satd. Flow (prot)	1770	3539	1145	1770	3539	1583		1788	1583		1839	1583	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.97	1.00		0.99	1.00	
Satd. Flow (perm)	1770	3539	1145	1770	3539	1583		1788	1583		1839	1583	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.78	0.78	0.78	0.90	0.90	0.90	
Adj. Flow (vph)	102	1023	141	72	1438	11	77	71	64	133	378	266	
RTOR Reduction (vph)	0	0	11	0	0	4	0	0	21	0	0	185	
Lane Group Flow (vph)	102	1023	130	72	1438	7	0	148	43	0	511	81	
Confl. Peds. (#/hr)			78	78									
Confl. Bikes (#/hr)			4										
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	5%	2%	2%	2%	2%	2%	
Turn Type	Prot		Perm	Prot		Perm	Split		Perm	Split		Perm	
Protected Phases	7	4		3	8		2	2		6	6		
Permitted Phases			4			8			2			6	
Actuated Green, G (s)	6.0	43.1	43.1	4.7	41.8	41.8		13.6	13.6		29.0	29.0	
Effective Green, g (s)	6.0	43.1	43.1	4.7	41.8	41.8		13.6	13.6		29.0	29.0	
Actuated g/C Ratio	0.06	0.41	0.41	0.04	0.39	0.39		0.13	0.13		0.27	0.27	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	100	1434	464	78	1390	622		229	202		501	431	
v/s Ratio Prot	c0.06	0.29		0.04	c0.41			c0.08			c0.28		
v/s Ratio Perm			0.11			0.00			0.03			0.05	
v/c Ratio	1.02	0.71	0.28	0.92	1.03	0.01		0.65	0.21		1.02	0.19	
Uniform Delay, d1	50.2	26.5	21.2	50.7	32.3	19.7		44.1	41.6		38.7	29.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	95.5	1.7	0.3	75.7	33.5	0.0		6.1	0.5		45.3	0.2	
Delay (s)	145.7	28.2	21.6	126.4	65.8	19.7		50.3	42.1		84.0	29.9	
Level of Service	F	C	C	F	E	B		D	D		F	C	
Approach Delay (s)		36.9			68.4			47.8			65.5		
Approach LOS		D			E			D			E		
Intersection Summary													
HCM Average Control Delay			56.1		HCM Level of Service					E			
HCM Volume to Capacity ratio			0.97										
Actuated Cycle Length (s)			106.4		Sum of lost time (s)					16.0			
Intersection Capacity Utilization			84.9%		ICU Level of Service					E			
Analysis Period (min)			15										

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis





















31: Picasso Ave & Pole Line Rd

Cumulative RES + Project with Mitigations
AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	20	120	94	5	30	20	546	104	45	866	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.87		1.00	0.87		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1624		1770	1620		1770	1818		1770	1860	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1624		1770	1620		1770	1818		1770	1860	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	22	130	102	5	33	22	593	113	49	941	11
RTOR Reduction (vph)	0	117	0	0	28	0	0	5	0	0	0	0
Lane Group Flow (vph)	43	35	0	102	10	0	22	701	0	49	952	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	3.8	8.8		8.9	13.9		1.3	51.8		3.9	54.4	
Effective Green, g (s)	3.8	8.8		8.9	13.9		1.3	51.8		3.9	54.4	
Actuated g/C Ratio	0.04	0.10		0.10	0.16		0.01	0.58		0.04	0.61	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	75	160		176	252		26	1053		77	1132	
v/s Ratio Prot	0.02	c0.02		c0.06	0.01		0.01	0.39		c0.03	c0.51	
v/s Ratio Perm												
v/c Ratio	0.57	0.22		0.58	0.04		0.85	0.67		0.64	0.84	
Uniform Delay, d1	42.0	37.1		38.5	32.1		44.0	12.9		42.1	14.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.2	0.7		4.6	0.1		109.6	1.6		16.0	5.8	
Delay (s)	52.2	37.8		43.0	32.1		153.6	14.5		58.0	19.8	
Level of Service	D	D		D	C		F	B		E	B	
Approach Delay (s)	41.0			40.1			18.7			21.7		
Approach LOS	D			D			B			C		
Intersection Summary												
HCM Average Control Delay			23.7	HCM Level of Service				C				
HCM Volume to Capacity ratio			0.74									
Actuated Cycle Length (s)			89.4	Sum of lost time (s)				16.0				
Intersection Capacity Utilization			69.8%	ICU Level of Service				C				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
32: Moore Blvd & Pole Line Rd





















Cumulative RES + Project with Mitigations
AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	20	70	198	5	150	10	503	99	65	579	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.88		1.00	0.85		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1646		1770	1592		1770	1744		1736	1806	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1646		1770	1592		1770	1744		1736	1806	
Peak-hour factor, PHF	0.92	0.92	0.92	0.78	0.78	0.78	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	43	22	76	254	6	192	11	559	110	72	643	11
RTOR Reduction (vph)	0	70	0	0	146	0	0	6	0	0	0	0
Lane Group Flow (vph)	43	28	0	254	52	0	11	663	0	72	654	0
Confl. Peds. (#/hr)									12	12		
Confl. Bikes (#/hr)									4		2	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	6%	2%	4%	5%	2%
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	3.0	6.3		16.5	19.8		0.7	38.2		5.0	42.5	
Effective Green, g (s)	3.0	6.3		16.5	19.8		0.7	38.2		5.0	42.5	
Actuated g/C Ratio	0.04	0.08		0.20	0.24		0.01	0.47		0.06	0.52	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	65	126		356	384		15	812		106	936	
v/s Ratio Prot	0.02	c0.02		c0.14	0.03		0.01	c0.38		c0.04	0.36	
v/s Ratio Perm												
v/c Ratio	0.66	0.22		0.71	0.14		0.73	0.82		0.68	0.70	
Uniform Delay, d1	39.0	35.5		30.5	24.4		40.6	18.9		37.7	14.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	22.5	0.9		6.6	0.2		103.2	6.4		15.9	2.3	
Delay (s)	61.5	36.4		37.2	24.6		143.8	25.2		53.6	17.2	
Level of Service	E	D		D	C		F	C		D	B	
Approach Delay (s)		44.1			31.6			27.1			20.8	
Approach LOS		D			C			C			C	
Intersection Summary												
HCM Average Control Delay			27.1			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			82.0			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			66.0%			ICU Level of Service				C		
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 16: E 8th St & J St

























Cumulative RES + Project with Mitigations
 PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	181	535	45	45	455	34	75	162	20	39	71	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frbp, ped/bikes	1.00	0.99		1.00	0.99			1.00	0.96		1.00	0.91
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.98	1.00
Satd. Flow (prot)	1770	1824		1770	1831			1834	1523		1830	1419
Flt Permitted	0.95	1.00		0.95	1.00			0.98	1.00		0.98	1.00
Satd. Flow (perm)	1770	1824		1770	1831			1834	1523		1830	1419
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	201	594	50	50	506	38	83	180	22	43	79	104
RTOR Reduction (vph)	0	3	0	0	3	0	0	0	6	0	0	91
Lane Group Flow (vph)	201	641	0	50	541	0	0	263	16	0	122	13
Confl. Peds. (#/hr)	11		1	1		11	15		3	3		15
Confl. Bikes (#/hr)			117		3	43		6	5		5	9
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	4%
Turn Type	Prot			Prot			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			6
Actuated Green, G (s)	13.6	41.0		3.8	31.2			16.7	16.7		11.3	11.3
Effective Green, g (s)	13.6	41.0		3.8	31.2			16.7	16.7		11.3	11.3
Actuated g/C Ratio	0.15	0.46		0.04	0.35			0.19	0.19		0.13	0.13
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	271	842		76	643			345	286		233	181
v/s Ratio Prot	c0.11	0.35		0.03	c0.30			c0.14			c0.07	
v/s Ratio Perm									0.01			0.01
v/c Ratio	0.74	0.76		0.66	0.84			0.76	0.06		0.52	0.07
Uniform Delay, d1	35.9	19.8		41.9	26.5			34.2	29.6		36.2	34.1
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	10.4	4.1		18.7	9.8			9.6	0.1		2.1	0.2
Delay (s)	46.4	23.9		60.5	36.3			43.8	29.7		38.4	34.3
Level of Service	D	C		E	D			D	C		D	C
Approach Delay (s)		29.3			38.3			42.7			36.5	
Approach LOS		C			D			D			D	
Intersection Summary												
HCM Average Control Delay			34.8			HCM Level of Service			C			
HCM Volume to Capacity ratio			0.76									
Actuated Cycle Length (s)			88.8			Sum of lost time (s)		16.0				
Intersection Capacity Utilization			71.0%			ICU Level of Service			C			
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 19: Covell Blvd & Covell Village Dvwy





















Cumulative RES + Project with Mitigations
 PM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		 			 								
Volume (vph)	315	1357	121	115	1159	50	82	340	115	45	120	121	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00	0.86	1.00	1.00	1.00		1.00	0.91		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99	1.00		0.99	1.00	
Satd. Flow (prot)	1770	3539	1359	1770	3539	1583		1845	1444		1838	1583	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.99	1.00		0.99	1.00	
Satd. Flow (perm)	1770	3539	1359	1770	3539	1583		1845	1444		1838	1583	
Peak-hour factor, PHF	0.90	0.90	0.90	0.93	0.93	0.92	0.93	0.92	0.93	0.92	0.92	0.92	
Adj. Flow (vph)	350	1508	134	124	1246	54	88	370	124	49	130	132	
RTOR Reduction (vph)	0	0	7	0	0	22	0	0	12	0	0	116	
Lane Group Flow (vph)	350	1508	127	124	1246	32	0	458	112	0	179	16	
Confl. Peds. (#/hr)			32	32			32		32				
Confl. Bikes (#/hr)		4	7						7				
Turn Type	Prot		Perm	Prot		Perm	Split		Perm	Split		Perm	
Protected Phases	7	4		3	8		2	2		6	6		
Permitted Phases			4			8			2			6	
Actuated Green, G (s)	22.0	52.0	52.0	9.0	39.0	39.0		27.0	27.0		14.8	14.8	
Effective Green, g (s)	22.0	52.0	52.0	9.0	39.0	39.0		27.0	27.0		14.8	14.8	
Actuated g/C Ratio	0.19	0.44	0.44	0.08	0.33	0.33		0.23	0.23		0.12	0.12	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	328	1549	595	134	1162	520		419	328		229	197	
v/s Ratio Prot	c0.20	0.43		0.07	c0.35			c0.25			c0.10		
v/s Ratio Perm			0.09			0.02			0.08			0.01	
v/c Ratio	1.07	0.97	0.21	0.93	1.07	0.06		1.09	0.34		0.78	0.08	
Uniform Delay, d1	48.4	32.7	20.7	54.6	39.9	27.4		45.9	38.5		50.4	46.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	68.6	16.9	0.2	55.0	48.1	0.0		71.5	0.6		15.8	0.2	
Delay (s)	117.0	49.6	20.9	109.6	88.0	27.4		117.4	39.1		66.2	46.2	
Level of Service	F	D	C	F	F	C		F	D		E	D	
Approach Delay (s)		59.5			87.6			100.7			57.7		
Approach LOS		E			F			F			E		
Intersection Summary													
HCM Average Control Delay			74.2									HCM Level of Service	E
HCM Volume to Capacity ratio			1.03										
Actuated Cycle Length (s)			118.8									Sum of lost time (s)	16.0
Intersection Capacity Utilization			94.1%									ICU Level of Service	F
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis






















31: Picasso Ave & Pole Line Rd

Cumulative RES + Project with Mitigations
PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	5	40	129	5	140	80	764	119	45	760	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.87		1.00	0.85		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1612		1770	1592		1770	1825		1770	1849	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1612		1770	1592		1770	1825		1770	1849	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	5	43	140	5	152	87	830	129	49	826	43
RTOR Reduction (vph)	0	41	0	0	127	0	0	4	0	0	1	0
Lane Group Flow (vph)	22	7	0	140	30	0	87	955	0	49	868	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	1.7	4.5		12.4	15.2		6.3	55.3		2.9	51.9	
Effective Green, g (s)	1.7	4.5		12.4	15.2		6.3	55.3		2.9	51.9	
Actuated g/C Ratio	0.02	0.05		0.14	0.17		0.07	0.61		0.03	0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	33	80		241	266		122	1108		56	1053	
v/s Ratio Prot	0.01	0.00		c0.08	c0.02		c0.05	c0.52		0.03	0.47	
v/s Ratio Perm												
v/c Ratio	0.67	0.09		0.58	0.11		0.71	0.86		0.88	0.82	
Uniform Delay, d1	44.4	41.3		36.9	32.2		41.5	14.7		43.9	15.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	40.8	0.5		3.5	0.2		17.8	7.1		75.9	5.3	
Delay (s)	85.2	41.8		40.4	32.4		59.4	21.8		119.8	21.2	
Level of Service	F	D		D	C		E	C		F	C	
Approach Delay (s)		55.5			36.2			24.9			26.5	
Approach LOS		E			D			C			C	
Intersection Summary												
HCM Average Control Delay			27.9			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.74									
Actuated Cycle Length (s)			91.1			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			76.4%			ICU Level of Service				D		
Analysis Period (min)			15									
c Critical Lane Group												





















HCM Signalized Intersection Capacity Analysis
32: Moore Blvd & Pole Line Rd

Cumulative RES + Project with Mitigations
PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	5	20	144	5	70	50	617	208	190	657	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.88		1.00	0.86		1.00	0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1635		1770	1601		1770	1772		1770	1847	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1635		1770	1601		1770	1772		1770	1847	
Peak-hour factor, PHF	0.92	0.92	0.92	0.80	0.80	0.80	0.86	0.86	0.86	0.90	0.90	0.90
Adj. Flow (vph)	33	5	22	180	6	88	58	717	242	211	730	44
RTOR Reduction (vph)	0	21	0	0	78	0	0	9	0	0	1	0
Lane Group Flow (vph)	33	6	0	180	16	0	58	950	0	211	773	0
Confl. Peds. (#/hr)									6			
Confl. Bikes (#/hr)									6		5	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	3.5	4.1		12.0	12.6		6.7	63.0		14.0	70.3	
Effective Green, g (s)	3.5	4.1		12.0	12.6		6.7	63.0		14.0	70.3	
Actuated g/C Ratio	0.03	0.04		0.11	0.12		0.06	0.58		0.13	0.64	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	57	61		195	185		109	1023		227	1190	
v/s Ratio Prot	0.02	0.00		c0.10	c0.01		0.03	c0.54		c0.12	0.42	
v/s Ratio Perm												
v/c Ratio	0.58	0.10		0.92	0.09		0.53	0.93		0.93	0.65	
Uniform Delay, d1	52.1	50.7		48.1	43.1		49.7	21.0		47.1	11.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	13.5	0.7		43.1	0.2		4.9	13.9		40.2	1.2	
Delay (s)	65.5	51.4		91.1	43.3		54.6	34.9		87.3	13.1	
Level of Service	E	D		F	D		D	C		F	B	
Approach Delay (s)		59.2			74.7			36.1			29.0	
Approach LOS		E			E			D			C	
Intersection Summary												
HCM Average Control Delay			38.2			HCM Level of Service				D		
HCM Volume to Capacity ratio			0.86									
Actuated Cycle Length (s)			109.1			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			80.5%			ICU Level of Service				D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 16: E 8th St & J St

Cumulative LI + Project with Mitigations
 AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	118	405	80	75	545	19	60	40	10	59	52	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frbp, ped/bikes	1.00	0.98		1.00	0.99			1.00	1.00		1.00	0.84
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.98		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00		0.97	1.00
Satd. Flow (prot)	1770	1786		1583	1842			1809	1417		1790	1305
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00		0.97	1.00
Satd. Flow (perm)	1770	1786		1583	1842			1809	1417		1790	1305
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.72	0.72	0.72	0.80	0.80	0.80
Adj. Flow (vph)	131	450	89	83	606	21	83	56	14	74	65	182
RTOR Reduction (vph)	0	7	0	0	1	0	0	0	7	0	0	156
Lane Group Flow (vph)	131	532	0	83	626	0	0	139	7	0	139	26
Confl. Peds. (#/hr)	8		7	7		8	5					5
Confl. Bikes (#/hr)			78		1	163		6				49
Heavy Vehicles (%)	2%	2%	2%	14%	2%	2%	2%	2%	14%	2%	5%	4%
Turn Type	Prot			Prot			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			6
Actuated Green, G (s)	9.7	37.6		6.0	33.9			12.0	12.0		11.8	11.8
Effective Green, g (s)	9.7	37.6		6.0	33.9			12.0	12.0		11.8	11.8
Actuated g/C Ratio	0.12	0.45		0.07	0.41			0.14	0.14		0.14	0.14
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	206	805		114	749			260	204		253	185
v/s Ratio Prot	c0.07	c0.30		0.05	c0.34			c0.08			c0.08	
v/s Ratio Perm									0.01			0.02
v/c Ratio	0.64	0.66		0.73	0.84			0.53	0.04		0.55	0.14
Uniform Delay, d1	35.2	17.9		37.9	22.2			33.1	30.7		33.3	31.4
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	6.3	2.1		20.6	8.0			2.1	0.1		2.4	0.3
Delay (s)	41.5	20.0		58.5	30.3			35.2	30.8		35.8	31.7
Level of Service	D	B		E	C			D	C		D	C
Approach Delay (s)		24.2			33.6			34.8			33.5	
Approach LOS		C			C			C			C	
Intersection Summary												
HCM Average Control Delay			30.3			HCM Level of Service			C			
HCM Volume to Capacity ratio			0.74									
Actuated Cycle Length (s)			83.4			Sum of lost time (s)		20.0				
Intersection Capacity Utilization			59.2%			ICU Level of Service		B				
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 19: Covell Blvd & Covell Village Dvwy

Cumulative LI + Project with Mitigations
 AM Peak





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	652	856	127	185	1179	130	50	265	50	80	50	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.70	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99	1.00		0.97	1.00
Satd. Flow (prot)	3433	3539	1103	1770	3539	1583		1839	1583		1807	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.99	1.00		0.97	1.00
Satd. Flow (perm)	3433	3539	1103	1770	3539	1583		1839	1583		1807	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	724	951	141	206	1310	144	56	294	56	89	56	204
RTOR Reduction (vph)	0	0	11	0	0	56	0	0	7	0	0	180
Lane Group Flow (vph)	724	951	130	206	1310	88	0	350	49	0	145	24
Confl. Peds. (#/hr)			78	78								
Confl. Bikes (#/hr)			4									
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	5%	2%	2%	2%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	24.0	47.7	47.7	18.3	42.0	42.0		22.0	22.0		13.6	13.6
Effective Green, g (s)	24.0	47.7	47.7	18.3	42.0	42.0		22.0	22.0		13.6	13.6
Actuated g/C Ratio	0.20	0.41	0.41	0.16	0.36	0.36		0.19	0.19		0.12	0.12
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	701	1435	447	275	1264	565		344	296		209	183
v/s Ratio Prot	c0.21	0.27		0.12	c0.37			c0.19			c0.08	
v/s Ratio Perm			0.12			0.06			0.03			0.01
v/c Ratio	1.03	0.66	0.29	0.75	1.04	0.16		1.02	0.17		0.69	0.13
Uniform Delay, d1	46.8	28.4	23.6	47.5	37.8	25.7		47.8	40.1		50.0	46.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	42.7	1.2	0.4	10.6	35.2	0.1		53.0	0.3		9.6	0.3
Delay (s)	89.5	29.6	23.9	58.1	73.0	25.9		100.8	40.4		59.6	47.0
Level of Service	F	C	C	E	E	C		F	D		E	D
Approach Delay (s)		53.0			67.1			92.5			52.2	
Approach LOS		D			E			F			D	
Intersection Summary												
HCM Average Control Delay			62.3									E
HCM Volume to Capacity ratio			0.99									
Actuated Cycle Length (s)			117.6							16.0		
Intersection Capacity Utilization			88.3%									E
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis





















31: Picasso Ave & Pole Line Rd

Cumulative LI + Project with Mitigations
AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	5	30	94	0	40	120	541	104	30	716	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.87		1.00	0.85		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1624		1770	1583		1770	1818		1770	1845	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1624		1770	1583		1770	1818		1770	1845	
Peak-hour factor, PHF	0.85	0.85	0.85	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	35	6	35	102	0	43	130	588	113	33	778	54
RTOR Reduction (vph)	0	34	0	0	38	0	0	5	0	0	2	0
Lane Group Flow (vph)	35	7	0	102	5	0	130	696	0	33	830	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	3.1	3.7		8.8	9.4		9.5	57.4		2.1	50.0	
Effective Green, g (s)	3.1	3.7		8.8	9.4		9.5	57.4		2.1	50.0	
Actuated g/C Ratio	0.04	0.04		0.10	0.11		0.11	0.65		0.02	0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	62	68		177	169		191	1186		42	1048	
v/s Ratio Prot	0.02	c0.00		c0.06	0.00		c0.07	0.38		0.02	c0.45	
v/s Ratio Perm												
v/c Ratio	0.56	0.11		0.58	0.03		0.68	0.59		0.79	0.79	
Uniform Delay, d1	41.8	40.6		37.8	35.2		37.8	8.6		42.7	14.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	11.2	0.7		4.5	0.1		9.6	0.7		62.3	4.2	
Delay (s)	53.0	41.3		42.3	35.3		47.4	9.4		105.0	19.1	
Level of Service	D	D		D	D		D	A		F	B	
Approach Delay (s)		46.7			40.2			15.3			22.4	
Approach LOS		D			D			B			C	
Intersection Summary												
HCM Average Control Delay			21.6			HCM Level of Service					C	
HCM Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			88.0			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			69.2%			ICU Level of Service					C	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
32: Moore Blvd & Pole Line Rd

Cumulative LI + Project with Mitigations
AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	5	10	198	5	150	20	483	99	70	514	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.86		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1682		1770	1593		1770	1743		1736	1768	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1682		1770	1593		1770	1743		1736	1768	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	33	6	11	220	6	167	22	537	110	78	571	133
RTOR Reduction (vph)	0	11	0	0	133	0	0	7	0	0	7	0
Lane Group Flow (vph)	33	6	0	220	40	0	22	640	0	78	697	0
Confl. Peds. (#/hr)									12	12		
Confl. Bikes (#/hr)									4		2	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	6%	2%	4%	5%	2%
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	1.8	2.1		14.2	14.5		1.2	34.2		5.2	38.2	
Effective Green, g (s)	1.8	2.1		14.2	14.5		1.2	34.2		5.2	38.2	
Actuated g/C Ratio	0.03	0.03		0.20	0.20		0.02	0.48		0.07	0.53	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	44	49		351	322		30	831		126	942	
v/s Ratio Prot	0.02	0.00		c0.12	c0.02		0.01	0.37		c0.04	c0.39	
v/s Ratio Perm												
v/c Ratio	0.75	0.13		0.63	0.12		0.73	0.77		0.62	0.74	
Uniform Delay, d1	34.7	33.9		26.3	23.4		35.1	15.5		32.3	12.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	51.4	1.2		3.5	0.2		63.0	4.4		8.7	3.1	
Delay (s)	86.1	35.1		29.8	23.6		98.1	19.9		41.0	16.0	
Level of Service	F	D		C	C		F	B		D	B	
Approach Delay (s)		68.8			27.1			22.5			18.5	
Approach LOS		E			C			C			B	
Intersection Summary												
HCM Average Control Delay			23.0									C
HCM Volume to Capacity ratio			0.66									
Actuated Cycle Length (s)			71.7						12.0			
Intersection Capacity Utilization			65.3%									C
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 16: E 8th St & J St























Cumulative LI + Project with Mitigations
 PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	341	345	35	35	460	39	65	67	60	44	56	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frb, ped/bikes	1.00	0.99		1.00	0.99			1.00	0.96		1.00	0.91
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98	1.00		0.98	1.00
Satd. Flow (prot)	1770	1819		1770	1827			1818	1520		1822	1411
Flt Permitted	0.95	1.00		0.95	1.00			0.98	1.00		0.98	1.00
Satd. Flow (perm)	1770	1819		1770	1827			1818	1520		1822	1411
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.51	0.51	0.51	0.87	0.87	0.87
Adj. Flow (vph)	379	383	39	39	511	43	127	131	118	51	64	108
RTOR Reduction (vph)	0	3	0	0	3	0	0	0	29	0	0	95
Lane Group Flow (vph)	379	419	0	39	551	0	0	258	89	0	115	13
Confl. Peds. (#/hr)	11		1	1		11	15		3	3		15
Confl. Bikes (#/hr)			117		3	43		6	5		5	9
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	4%
Turn Type	Prot			Prot			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			6
Actuated Green, G (s)	22.0	50.2		3.5	31.7			15.6	15.6		11.3	11.3
Effective Green, g (s)	22.0	50.2		3.5	31.7			15.6	15.6		11.3	11.3
Actuated g/C Ratio	0.23	0.52		0.04	0.33			0.16	0.16		0.12	0.12
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	403	945		64	600			294	245		213	165
v/s Ratio Prot	c0.21	0.23		0.02	c0.30			c0.14			c0.06	
v/s Ratio Perm									0.06			0.01
v/c Ratio	0.94	0.44		0.61	0.92			0.88	0.36		0.54	0.08
Uniform Delay, d1	36.7	14.5		45.9	31.2			39.6	36.1		40.2	38.0
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	30.1	0.3		15.3	19.1			24.2	0.9		2.6	0.2
Delay (s)	66.7	14.8		61.2	50.3			63.7	37.0		42.8	38.2
Level of Service	E	B		E	D			E	D		D	D
Approach Delay (s)		39.4			51.0			55.3			40.6	
Approach LOS		D			D			E			D	
Intersection Summary												
HCM Average Control Delay			46.0			HCM Level of Service				D		
HCM Volume to Capacity ratio			0.86									
Actuated Cycle Length (s)			96.6			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			69.3%			ICU Level of Service				C		
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 19: Covell Blvd & Covell Village Dvwy

Cumulative LI + Project with Mitigations
 PM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	255	1372	121	130	1019	60	82	140	115	170	240	431	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00	0.86	1.00	1.00	1.00		1.00	0.91		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00		0.98	1.00	
Satd. Flow (prot)	3433	3539	1357	1770	3539	1583		1829	1436		1825	1583	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00		0.98	1.00	
Satd. Flow (perm)	3433	3539	1357	1770	3539	1583		1829	1436		1825	1583	
Peak-hour factor, PHF	0.90	0.90	0.90	0.93	0.93	0.92	0.93	0.92	0.93	0.92	0.92	0.92	
Adj. Flow (vph)	283	1524	134	140	1096	65	88	152	124	185	261	468	
RTOR Reduction (vph)	0	0	7	0	0	31	0	0	22	0	0	204	
Lane Group Flow (vph)	283	1524	127	140	1096	34	0	240	102	0	446	264	
Confl. Peds. (#/hr)			32	32			32		32				
Confl. Bikes (#/hr)		4	7						7				
Turn Type	Prot		Perm	Prot		Perm	Split		Perm	Split		Perm	
Protected Phases	7	4		3	8		2	2		6	6		
Permitted Phases			4			8			2			6	
Actuated Green, G (s)	11.9	50.0	50.0	10.0	48.1	48.1		16.0	16.0		28.0	28.0	
Effective Green, g (s)	11.9	50.0	50.0	10.0	48.1	48.1		16.0	16.0		28.0	28.0	
Actuated g/C Ratio	0.10	0.42	0.42	0.08	0.40	0.40		0.13	0.13		0.23	0.23	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	340	1475	565	148	1419	635		244	191		426	369	
v/s Ratio Prot	c0.08	c0.43		0.08	0.31			c0.13			c0.24		
v/s Ratio Perm			0.09			0.02			0.07			0.17	
v/c Ratio	0.83	1.03	0.22	0.95	0.77	0.05		0.98	0.54		1.05	0.72	
Uniform Delay, d1	53.1	35.0	22.5	54.7	31.2	22.0		51.9	48.5		46.0	42.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	15.8	32.4	0.2	57.3	2.7	0.0		52.7	2.9		56.4	6.5	
Delay (s)	68.9	67.4	22.7	112.1	33.9	22.1		104.5	51.4		102.4	48.8	
Level of Service	E	E	C	F	C	C		F	D		F	D	
Approach Delay (s)		64.6			41.7			86.4			75.0		
Approach LOS		E			D			F			E		
Intersection Summary													
HCM Average Control Delay			61.8									HCM Level of Service	E
HCM Volume to Capacity ratio			0.98										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	12.0
Intersection Capacity Utilization			93.3%									ICU Level of Service	F
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis

31: Picasso Ave & Pole Line Rd





















Cumulative LI + Project with Mitigations
PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	5	40	129	5	90	50	744	119	55	730	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.87		1.00	0.86		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1612		1770	1597		1770	1824		1770	1852	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1612		1770	1597		1770	1824		1770	1852	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	5	43	140	5	98	54	809	129	60	793	33
RTOR Reduction (vph)	0	41	0	0	86	0	0	4	0	0	1	0
Lane Group Flow (vph)	54	7	0	140	17	0	54	934	0	60	825	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	6.3	4.0		13.6	11.3		4.6	56.5		4.1	56.0	
Effective Green, g (s)	6.3	4.0		13.6	11.3		4.6	56.5		4.1	56.0	
Actuated g/C Ratio	0.07	0.04		0.14	0.12		0.05	0.60		0.04	0.59	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	118	68		256	192		86	1094		77	1101	
v/s Ratio Prot	0.03	0.00		c0.08	c0.01		0.03	c0.51		c0.03	0.45	
v/s Ratio Perm												
v/c Ratio	0.46	0.10		0.55	0.09		0.63	0.85		0.78	0.75	
Uniform Delay, d1	42.3	43.4		37.4	36.9		44.0	15.5		44.6	14.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.8	0.6		2.4	0.2		13.5	6.6		38.1	2.8	
Delay (s)	45.1	44.0		39.8	37.1		57.4	22.1		82.7	16.8	
Level of Service	D	D		D	D		E	C		F	B	
Approach Delay (s)		44.6			38.7			24.0			21.3	
Approach LOS		D			D			C			C	
Intersection Summary												
HCM Average Control Delay			25.5			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.69									
Actuated Cycle Length (s)			94.2			Sum of lost time (s)			8.0			
Intersection Capacity Utilization			66.9%			ICU Level of Service				C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

32: Moore Blvd & Pole Line Rd

Cumulative LI + Project with Mitigations
PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	5	20	144	70	5	20	607	208	185	627	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.88		1.00	0.99		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1635		1770	1843		1770	1771		1770	1835	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1635		1770	1843		1770	1771		1770	1835	
Peak-hour factor, PHF	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	87	5	22	160	78	6	22	674	231	206	697	78
RTOR Reduction (vph)	0	21	0	0	3	0	0	9	0	0	3	0
Lane Group Flow (vph)	87	6	0	160	81	0	22	896	0	206	772	0
Confl. Peds. (#/hr)									6			
Confl. Bikes (#/hr)									6		5	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	8.4	4.5		15.5	11.6		1.5	60.8		14.1	73.4	
Effective Green, g (s)	8.4	4.5		15.5	11.6		1.5	60.8		14.1	73.4	
Actuated g/C Ratio	0.08	0.04		0.14	0.10		0.01	0.55		0.13	0.66	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	134	66		247	193		24	971		225	1215	
v/s Ratio Prot	0.05	0.00		c0.09	c0.04		0.01	c0.51		c0.12	0.42	
v/s Ratio Perm												
v/c Ratio	0.65	0.09		0.65	0.42		0.92	0.92		0.92	0.64	
Uniform Delay, d1	49.8	51.2		45.1	46.5		54.6	22.9		47.8	10.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.4	0.6		5.7	1.5		145.1	13.8		37.4	1.1	
Delay (s)	60.2	51.8		50.9	48.0		199.7	36.7		85.2	12.0	
Level of Service	E	D		D	D		F	D		F	B	
Approach Delay (s)		58.2			49.9			40.6			27.4	
Approach LOS		E			D			D			C	
Intersection Summary												
HCM Average Control Delay			36.8			HCM Level of Service				D		
HCM Volume to Capacity ratio			0.83									
Actuated Cycle Length (s)			110.9			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			79.7%			ICU Level of Service				D		
Analysis Period (min)			15									
c Critical Lane Group												