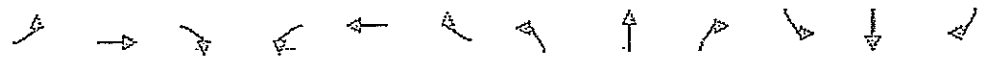
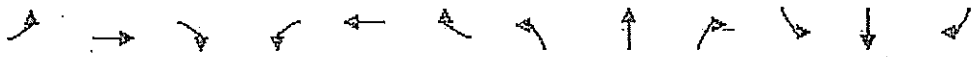


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	132	5	3	78	0	16	0	12	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	148	6	3	88	0	18	0	13	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	88			154			246	246	151	259	248	88
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	88			154			246	246	151	259	248	88
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			97	100	98	100	100	100
cM capacity (veh/h)	1508			1426			707	655	895	682	653	971

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	154	91	31	0
Volume Left	0	3	18	0
Volume Right	6	0	13	0
cSH	1508	1426	777	1700
Volume to Capacity	0.00	0.00	0.04	0.00
Queue Length 95th (ft)	0	0	3	0
Control Delay (s)	0.0	0.3	9.8	0.0
Lane LOS		A	A	A
Approach Delay (s)	0.0	0.3	9.8	0.0
Approach LOS			A	A

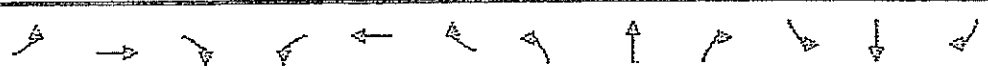
Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	17.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↑			↑	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	6	4	13	28	1	55	6	476	59	70	667	2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	7	4	14	31	1	61	7	529	66	78	741	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1502	1506	742	1488	1474	562	743			594		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1502	1506	742	1488	1474	562	743			594		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	92	96	97	65	99	88	99			92		
cM capacity (veh/h)	82	111	416	89	116	527	864			982		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	26	93	7	594	78	743
Volume Left	7	31	7	0	78	0
Volume Right	14	61	0	66	0	2
cSH	164	197	864	1700	982	1700
Volume to Capacity	0.16	0.47	0.01	0.35	0.08	0.44
Queue Length 95th (ft)	13	57	1	0	6	0
Control Delay (s)	31.0	38.7	9.2	0.0	9.0	0.0
Lane LOS	D	E	A		A	
Approach Delay (s)	31.0	38.7	0.1		0.9	
Approach LOS	D	E				

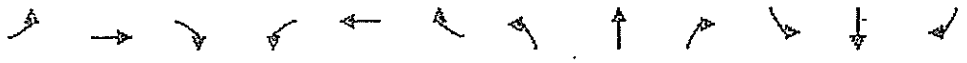
Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	55.9%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	132	11	7	94	0	19	0	9	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	148	12	8	106	0	21	0	10	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	106			161			276	276	154	286	282	106
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	106			161			276	276	154	286	282	106
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			97	100	99	100	100	100
cM capacity (veh/h)	1486			1418			674	628	891	656	623	949

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	161	113	31	0
Volume Left	0	8	21	0
Volume Right	12	0	10	0
cSH	1486	1418	731	1700
Volume to Capacity	0.00	0.01	0.04	0.00
Queue Length 95th (ft)	0	0	3	0
Control Delay (s)	0.0	0.6	10.1	0.0
Lane LOS		A	B	A
Approach Delay (s)	0.0	0.6	10.1	0.0
Approach LOS			B	A

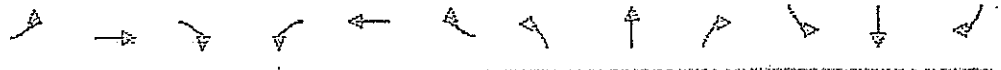
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	20.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	6	6	7	37	1	73	6	692	51	77	612	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	7	7	8	41	1	81	7	769	57	86	680	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1718	1693	683	1673	1667	797	686			826		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1718	1693	683	1673	1667	797	686			826		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	87	92	98	36	99	79	99			89		
cM capacity (veh/h)	51	82	449	64	86	386	908			805		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	21	123	7	826	86	686						
Volume Left	7	41	7	0	86	0						
Volume Right	8	81	0	57	0	6						
cSH	92	143	908	1700	805	1700						
Volume to Capacity	0.23	0.86	0.01	0.49	0.11	0.40						
Queue Length 95th (ft)	21	142	1	0	9	0						
Control Delay (s)	55.6	103.4	9.0	0.0	10.0	0.0						
Lane LOS	F	F	A		B							
Approach Delay (s)	55.6	103.4	0.1		1.1							
Approach LOS	F	F										

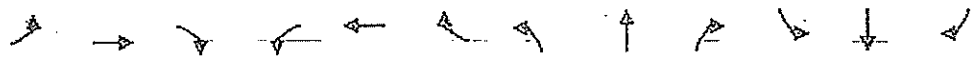
Intersection Summary			
Average Delay	8.5		
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	132	7	4	78	0	24	0	15	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	148	8	4	88	0	27	0	17	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	88			156			249	249	152	266	253	88
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	88			156			249	249	152	266	253	88
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			96	100	98	100	100	100
cM capacity (veh/h)	1508			1424			703	652	894	672	648	971

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	156	92	44	0
Volume Left	0	4	27	0
Volume Right	8	0	17	0
cSH	1508	1424	766	1700
Volume to Capacity	0.00	0.00	0.06	0.00
Queue Length 95th (ft)	0	0	5	0
Control Delay (s)	0.0	0.4	10.0	0.0
Lane LOS		A	A	A
Approach Delay (s)	0.0	0.4	10.0	0.0
Approach LOS			A	A

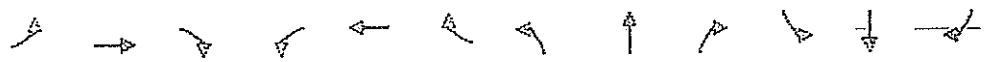
Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	17.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↑	↑		↑	↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	6	4	13	30	1	61	6	476	60	71	667	2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	7	4	14	33	1	68	7	529	67	79	741	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1511	1509	742	1491	1477	562	743			596		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1511	1509	742	1491	1477	562	743			596		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	92	96	97	63	99	87	99			92		
cM capacity (veh/h)	80	110	416	89	115	526	864			981		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	26	102	7	596	79	743
Volume Left	7	33	7	0	79	0
Volume Right	14	68	0	67	0	2
cSH	161	199	864	1700	981	1700
Volume to Capacity	0.16	0.51	0.01	0.35	0.08	0.44
Queue Length 95th (ft)	14	65	1	0	7	0
Control Delay (s)	31.6	40.7	9.2	0.0	9.0	0.0
Lane LOS	D	E	A		A	
Approach Delay (s)	31.6	40.7	0.1		0.9	
Approach LOS	D	E				

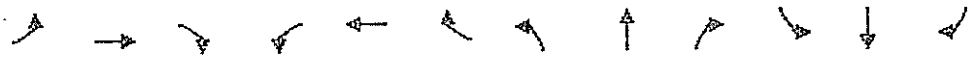
Intersection Summary			
Average Delay	3.7		
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	132	28	7	94	0	46	0	20	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	148	31	8	106	0	52	0	22	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	106			180			285	285	164	308	301	106
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	106			180			285	285	164	308	301	106
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			92	100	97	100	100	100
cM capacity (veh/h)	1486			1396			664	620	881	625	608	949

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	180	113	74	0
Volume Left	0	8	52	0
Volume Right	31	0	22	0
cSH	1486	1396	717	1700
Volume to Capacity	0.00	0.01	0.10	0.00
Queue Length 95th (ft)	0	0	9	0
Control Delay (s)	0.0	0.6	10.6	0.0
Lane LOS		A	B	A
Approach Delay (s)	0.0	0.6	10.6	0.0
Approach LOS			B	A

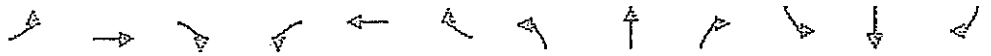
Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	21.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↑	↱		↑	↱
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	6	6	7	46	1	91	6	692	58	87	612	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	7	7	8	51	1	101	7	769	64	97	680	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1760	1723	683	1699	1693	801	686			833		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1760	1723	683	1699	1693	801	686			833		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	85	91	98	15	99	74	99			88		
cM capacity (veh/h)	43	78	449	60	81	384	908			800		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	21	153	7	833	97	686
Volume Left	7	51	7	0	97	0
Volume Right	8	101	0	64	0	6
cSH	82	137	908	1700	800	1700
Volume to Capacity	0.26	1.12	0.01	0.49	0.12	0.40
Queue Length 95th (ft)	23	217	1	0	10	0
Control Delay (s)	63.2	177.4	9.0	0.0	10.1	0.0
Lane LOS	F	F	A		B	
Approach Delay (s)	63.2	177.4	0.1		1.3	
Approach LOS	F	F				

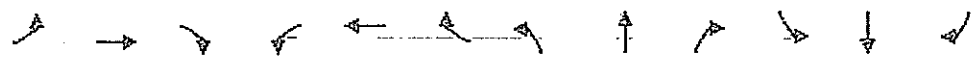
Intersection Summary			
Average Delay	16.5		
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	132	10	6	78	0	38	0	23	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	148	11	7	88	0	43	0	26	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	88			160			255	255	154	281	261	88
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	88			160			255	255	154	281	261	88
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			94	100	97	100	100	100
cM capacity (veh/h)	1508			1420			696	646	892	650	641	971

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	160	94	69	0
Volume Left	0	7	43	0
Volume Right	11	0	26	0
cSH	1508	1420	759	1700
Volume to Capacity	0.00	0.00	0.09	0.00
Queue Length 95th (ft)	0	0	7	0
Control Delay (s)	0.0	0.6	10.2	0.0
Lane LOS		A	B	A
Approach Delay (s)	0.0	0.6	10.2	0.0
Approach LOS			B	A

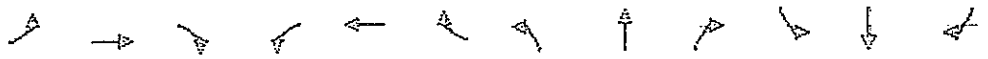
Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	19.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	6	4	13	35	1	70	6	476	61	173	667	2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	7	4	14	39	1	78	7	529	68	81	741	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1525	1514	742	1496	1482	563	743			597		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1525	1514	742	1496	1482	563	743			597		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	91	96	97	56	99	85	99			92		
cM capacity (veh/h)	76	109	416	88	114	526	864			980		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	26	118	7	597	81	743						
Volume Left	7	39	7	0	81	0						
Volume Right	14	78	0	68	0	2						
cSH	156	196	864	1700	980	1700						
Volume to Capacity	0.16	0.60	0.01	0.35	0.08	0.44						
Queue Length 95th (ft)	14	84	1	0	7	0						
Control Delay (s)	32.5	47.5	9.2	0.0	9.0	0.0						
Lane LOS	D	E	A		A							
Approach Delay (s)	32.5	47.5	0.1		0.9							
Approach LOS	D	E										

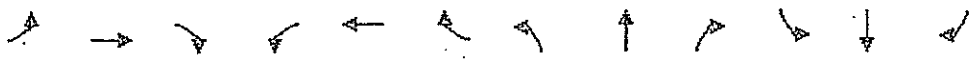
Intersection Summary				
Average Delay	4.6			
Intersection Capacity Utilization	57.8%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	132	34	17	94	0	57	0	26	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	148	38	19	106	0	64	0	29	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	106			187			311	311	167	340	330	106
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	106			187			311	311	167	340	330	106
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			90	100	97	100	100	100
cM capacity (veh/h)	1486			1388			635	595	877	587	581	949

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	187	125	93	0
Volume Left	0	19	64	0
Volume Right	38	0	29	0
cSH	1486	1388	695	1700
Volume to Capacity	0.00	0.01	0.13	0.00
Queue Length 95th (ft)	0	1	12	0
Control Delay (s)	0.0	1.3	11.0	0.0
Lane LOS		A	B	A
Approach Delay (s)	0.0	1.3	11.0	0.0
Approach LOS			B	A

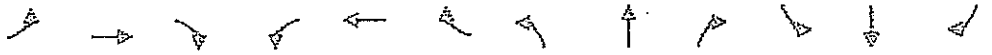
Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	29.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↑		↰	↑	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	6	6	7	50	1	98	6	692	60	91	612	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	7	7	8	56	1	109	7	769	67	101	680	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1777	1734	683	1709	1703	802	686			836		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1777	1734	683	1709	1703	802	686			836		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	84	91	98	6	99	72	99			87		
cM capacity (veh/h)	41	76	449	59	79	384	908			798		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	21	166	7	836	101	686
Volume Left	7	56	7	0	101	0
Volume Right	8	109	0	67	0	6
cSH	79	134	908	1700	798	1700
Volume to Capacity	0.27	1.24	0.01	0.49	0.13	0.40
Queue Length 95th (ft)	24	253	1	0	11	0
Control Delay (s)	66.7	218.9	9.0	0.0	10.2	0.0
Lane LOS	F	F	A		B	
Approach Delay (s)	66.7	218.9	0.1		1.3	
Approach LOS	F	F				

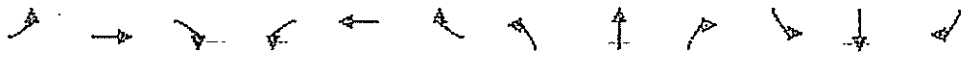
Intersection Summary			
Average Delay	21.3		
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	160	5	3	135	0	16	0	12	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	180	6	3	152	0	18	0	13	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	152			185			341	341	183	354	344	152
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	152			185			341	341	183	354	344	152
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			97	100	98	100	100	100
cM capacity (veh/h)	1429			1389			612	579	860	590	577	895

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	185	155	31	0
Volume Left	0	3	18	0
Volume Right	6	0	13	0
cSH	1429	1389	698	1700
Volume to Capacity	0.00	0.00	0.05	0.00
Queue Length 95th (ft)	0	0	4	0
Control Delay (s)	0.0	0.2	10.4	0.0
Lane LOS		A	B	A
Approach Delay (s)	0.0	0.2	10.4	0.0
Approach LOS			B	A

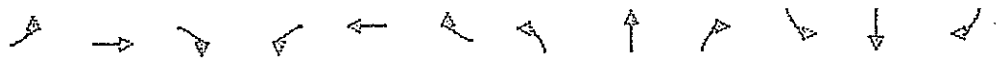
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	19.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	6	4	13	50	1	90	6	493	80	77	674	2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	7	4	14	56	1	100	7	548	89	86	749	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1583	1571	750	1542	1528	592	751			637		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1583	1571	750	1542	1528	592	751			637		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	90	96	96	31	99	80	99			91		
cM capacity (veh/h)	65	100	411	81	106	506	858			947		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	26	157	7	637	86	751
Volume Left	7	56	7	0	86	0
Volume Right	14	100	0	89	0	2
cSH	140	175	858	1700	947	1700
Volume to Capacity	0.18	0.89	0.01	0.37	0.09	0.44
Queue Length 95th (ft)	16	165	1	0	7	0
Control Delay (s)	36.4	95.8	9.2	0.0	9.2	0.0
Lane LOS	E	F	A		A	
Approach Delay (s)	36.4	95.8	0.1		0.9	
Approach LOS	E	F				

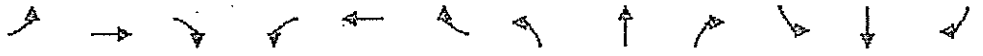
Intersection Summary			
Average Delay	10.1		
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	166	11	7	128	0	19	0	9	1	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	187	12	8	144	0	21	0	10	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	144			199			352	352	193	362	358	144
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	144			199			352	352	193	362	358	144
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			96	100	99	100	100	100
cM capacity (veh/h)	1439			1374			600	569	849	584	565	904

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	199	152	31	0
Volume Left	0	8	21	0
Volume Right	12	0	10	0
cSH	1439	1374	662	1700
Volume to Capacity	0.00	0.01	0.05	0.00
Queue Length 95th (ft)	0	0	4	0
Control Delay (s)	0.0	0.4	10.7	0.0
Lane LOS		A	B	A
Approach Delay (s)	0.0	0.4	10.7	0.0
Approach LOS			B	A

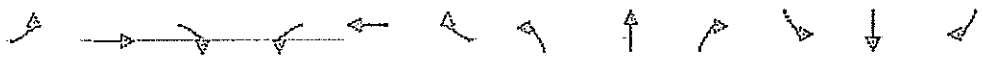
Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	22.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↑		↰	↑	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	6	6	7	55	1	89	6	709	70	92	629	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	7	7	8	61	1	99	7	788	78	102	699	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1807	1785	702	1754	1749	827	704			866		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1807	1785	702	1754	1749	827	704			866		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	83	91	98	0	98	73	99			87		
cM capacity (veh/h)	40	70	438	154	74	372	893			778		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	21	161	7	866	102	704
Volume Left	7	61	7	0	102	0
Volume Right	8	99	0	78	0	6
cSH	75	115	893	1700	778	1700
Volume to Capacity	0.28	1.41	0.01	0.51	0.13	0.41
Queue Length 95th (ft)	25	280	1	0	11	0
Control Delay (s)	70.5	295.6	9.1	0.0	10.3	0.0
Lane LOS	F	F	A		B	
Approach Delay (s)	70.5	295.6	0.1		1.3	
Approach LOS	F	F				

Intersection Summary			
Average Delay	27.0		
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	160	10	6	135	0	38	0	23	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	180	11	7	152	0	43	0	26	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	152			191			351	351	185	376	356	152
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	152			191			351	351	185	376	356	152
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			93	100	97	100	100	100
cM capacity (veh/h)	1429			1383			602	571	857	561	567	895

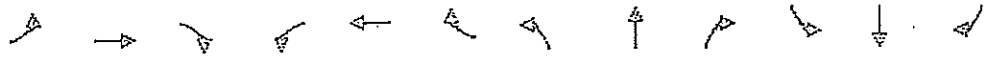
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	191	158	69	0
Volume Left	0	7	43	0
Volume Right	11	0	26	0
cSH	1429	1383	678	1700
Volume to Capacity	0.00	0.00	0.10	0.00
Queue Length 95th (ft)	0	0	8	0
Control Delay (s)	0.0	0.4	10.9	0.0
Lane LOS		A	B	A
Approach Delay (s)	0.0	0.4	10.9	0.0
Approach LOS			B	A

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	22.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↑	↑↓		↑	↑↓	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	6	4	13	57	1	105	6	493	82	80	674	2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	7	4	14	63	1	117	7	548	91	89	749	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1606	1580	750	1550	1536	593	751			639		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1606	1580	750	1550	1536	593	751			639		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	89	95	96	20	99	77	99			91		
cM capacity (veh/h)	60	98	411	80	104	505	858			945		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	26	181	7	639	89	751
Volume Left	7	63	7	0	89	0
Volume Right	14	117	0	91	0	2
cSH	133	175	858	1700	945	1700
Volume to Capacity	0.19	1.04	0.01	0.38	0.09	0.44
Queue Length 95th (ft)	17	216	1	0	8	0
Control Delay (s)	38.4	132.2	9.2	0.0	9.2	0.0
Lane LOS	E	F	A		A	
Approach Delay (s)	38.4	132.2	0.1		1.0	
Approach LOS	E	F				

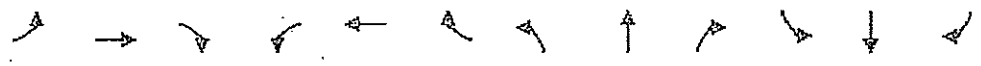
Intersection Summary			
Average Delay	15.2		
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	166	34	17	128	0	57	0	26	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	187	38	19	144	0	64	0	29	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	144			225			388	388	206	417	407	144
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	144			225			388	388	206	417	407	144
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			89	100	97	100	100	100
cM capacity (veh/h)	1439			1344			565	539	835	521	526	904

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	225	163	93	0
Volume Left	0	19	64	0
Volume Right	38	0	29	0
cSH	1439	1344	629	1700
Volume to Capacity	0.00	0.01	0.15	0.00
Queue Length 95th (ft)	0	1	13	0
Control Delay (s)	0.0	1.0	11.7	0.0
Lane LOS		A	B	A
Approach Delay (s)	0.0	1.0	11.7	0.0
Approach LOS			B	A

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	32.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↑	↱		↑	↱
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	6	6	7	68	1	114	6	709	79	106	629	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	7	7	8	76	1	127	7	788	88	118	699	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1866	1826	702	1791	1785	832	704			876		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1866	1826	702	1791	1785	832	704			876		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	79	90	98	0	98	66	99			85		
cM capacity (veh/h)	32	65	438	50	69	369	893			771		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	21	203	7	876	118	704						
Volume Left	7	76	7	0	118	0						
Volume Right	8	127	0	88	0	6						
cSH	64	109	893	1700	771	1700						
Volume to Capacity	0.33	1.87	0.01	0.52	0.15	0.41						
Queue Length 95th (ft)	30	412	1	0	13	0						
Control Delay (s)	87.3	491.5	9.1	0.0	10.5	0.0						
Lane LOS	F	F	A		B							
Approach Delay (s)	87.3	491.5	0.1		1.5							
Approach LOS	F	F										

Intersection Summary					
Average Delay	53.4				
Intersection Capacity Utilization	73.2%	ICU Level of Service		D	
Analysis Period (min)	15				

TABLE A-3
Approved Developments Trip Generation

Napa County: Approved Developments In The Vicinity of Raymond Winery

Napa County:	Facility Size (sq. ft.)	Production (gals./yr)	Daily Truck Trips	Visitors (per week)	Daily Visitor Trips	Employees	Daily Employee Trips	TOTAL TRIPS		Weekday Daily Trips on Zinfandel at Raymond Access
Kelham Winery	33,000	75,000	1	140	15	5.5	17	33	0.7	23
The Ranch Winery	443,000	12,500,000	98	15	2	85	259	359	0.7	251
Del Dotto Family Winery	15,000	48,000	1	15	2	4.5	14	16	0.1	2
Whitehall Lane Winery	25,000	50,000	1	500	55	4.5	14	70	0.1	7
Sullivan Family Estate	5,000	22,500	1	7	1	3.5	11	12	0.1	1
Franciscan Winery	119,000	1,200,000	1	3500	385	64.5	197	582	0.1	58
										343 Total

Source: Napa County, Planning Department, Ms. Kirsty Shelton, March 15, 2013.

Intersection: 1: Zinfandel Lane & Wheeler Lane

Movement	WB	NB
Directions Served	LTR	LR
Maximum Queue (ft)	8	54
Average Queue (ft)	0	18
95th Queue (ft)	5	46
Link Distance (ft)	1406	1145
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Zinfandel Lane & Hwy. 29

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	L
Maximum Queue (ft)	37	92	31	7	51
Average Queue (ft)	12	34	2	0	19
95th Queue (ft)	34	64	15	4	43
Link Distance (ft)	1414	1638		2063	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			90		120
Storage Blk Time (%)					
Queuing Penalty (veh)					

Nework Summary

Network wide Queuing Penalty: 0

Intersection: 1: Zinfandel Lane & Wheeler Lane

Movement	WB	NB
Directions Served	LTR	LR
Maximum Queue (ft)	26	48
Average Queue (ft)	1	21
95th Queue (ft)	9	47
Link Distance (ft)	1406	1145
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Zinfandel Lane & Hwy. 29

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	L
Maximum Queue (ft)	45	142	30	6	59
Average Queue (ft)	13	48	2	0	27
95th Queue (ft)	38	99	15	4	52
Link Distance (ft)	1414	1638		2063	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			90		120
Storage Blk Time (%)					
Queuing Penalty (veh)					

Nework Summary

Network wide Queuing Penalty: 0

Intersection: 1: Zinfandel Lane & Wheeler Lane

Movement	WB	NB
Directions Served	LTR	LR
Maximum Queue (ft)	8	54
Average Queue (ft)	0	21
95th Queue (ft)	5	48
Link Distance (ft)	1406	1145
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Zinfandel Lane & Hwy. 29

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	L
Maximum Queue (ft)	38	100	31	7	51
Average Queue (ft)	13	36	2	0	21
95th Queue (ft)	36	68	14	4	44
Link Distance (ft)	1414	1638		2063	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			90		120
Storage Blk Time (%)					
Queuing Penalty (veh)					

Nework Summary

Network wide Queuing Penalty: 0

Intersection: 1: Zinfandel Lane & Wheeler Lane

Movement	WB	NB
Directions Served	LTR	LR
Maximum Queue (ft)	27	54
Average Queue (ft)	1	31
95th Queue (ft)	11	52
Link Distance (ft)	1406	1145
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Zinfandel Lane & Hwy. 29

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	L
Maximum Queue (ft)	59	161	30	60
Average Queue (ft)	13	55	4	27
95th Queue (ft)	39	114	20	55
Link Distance (ft)	1414	1638		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			90	120
Storage Blk Time (%)				
Queuing Penalty (veh)				

Nework Summary

Network wide Queuing Penalty	0

Intersection: 1: Zinfandel Lane & Wheeler Lane

Movement	WB	NB
Directions Served	LTR	LR
Maximum Queue (ft)	18	59
Average Queue (ft)	1	28
95th Queue (ft)	9	50
Link Distance (ft)	1406	1145
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Zinfandel Lane & Hwy. 29

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	L
Maximum Queue (ft)	46	92	20	7	53
Average Queue (ft)	16	37	2	0	20
95th Queue (ft)	40	70	15	4	48
Link Distance (ft)	1414	1638		2063	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			90		120
Storage Blk Time (%)					
Queuing Penalty (veh)					

Nework Summary

Network wide Queuing Penalty: 0

Intersection: 1: Zinfandel Lane & Wheeler Lane

Movement	WB	NB
Directions Served	LTR	LR
Maximum Queue (ft)	26	61
Average Queue (ft)	1	34
95th Queue (ft)	10	58
Link Distance (ft)	1406	1145
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Zinfandel Lane & Hwy. 29

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	L
Maximum Queue (ft)	59	180	30	14	60
Average Queue (ft)	13	55	4	0	28
95th Queue (ft)	39	117	19	6	56
Link Distance (ft)	1414	1638		2063	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			90		120
Storage Blk Time (%)					
Queuing Penalty (veh)					

Nework Summary

Network wide Queuing Penalty: 0

Intersection: 1: Zinfandel Lane & Wheeler Lane

Movement	WB	NB
Directions Served	LTR	LR
Maximum Queue (ft)	8	47
Average Queue (ft)	0	18
95th Queue (ft)	5	47
Link Distance (ft)	1406	1145
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Zinfandel Lane & Hwy. 29

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	L
Maximum Queue (ft)	38	167	21	14	52
Average Queue (ft)	14	57	2	0	23
95th Queue (ft)	37	113	16	6	50
Link Distance (ft)	1414	1638		2063	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			90		120
Storage Blk Time (%)					
Queuing Penalty (veh)					

Nework Summary

Network wide Queuing Penalty: 0

Intersection: 1: Zinfandel Lane & Wheeler Lane

Movement	WB	NB
Directions Served	LTR	LR
Maximum Queue (ft)	18	47
Average Queue (ft)	1	20
95th Queue (ft)	9	47
Link Distance (ft)	1406	1145
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Zinfandel Lane & Hwy. 29

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	L
Maximum Queue (ft)	66	167	31	7	74
Average Queue (ft)	18	61	3	0	35
95th Queue (ft)	46	121	19	4	62
Link Distance (ft)	1414	1638		2063	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			90		120
Storage Blk Time (%)					
Queuing Penalty (veh)					

Nework Summary

Network wide Queuing Penalty: 0

Intersection: 1: Zinfandel Lane & Wheeler Lane

Movement	WB	NB
Directions Served	LTR	LR
Maximum Queue (ft)	18	66
Average Queue (ft)	1	30
95th Queue (ft)	7	54
Link Distance (ft)	1406	1145
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Zinfandel Lane & Hwy. 29

Movement	SEB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	L
Maximum Queue (ft)	52	151	32	31	46
Average Queue (ft)	16	61	3	1	21
95th Queue (ft)	42	114	17	12	47
Link Distance (ft)	1414	1638		2063	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			90		120
Storage Blk Time (%)					
Queuing Penalty (veh)					

Nework Summary

Network wide Queuing Penalty: 0

Intersection: 1: Zinfandel Lane & Wheeler Lane

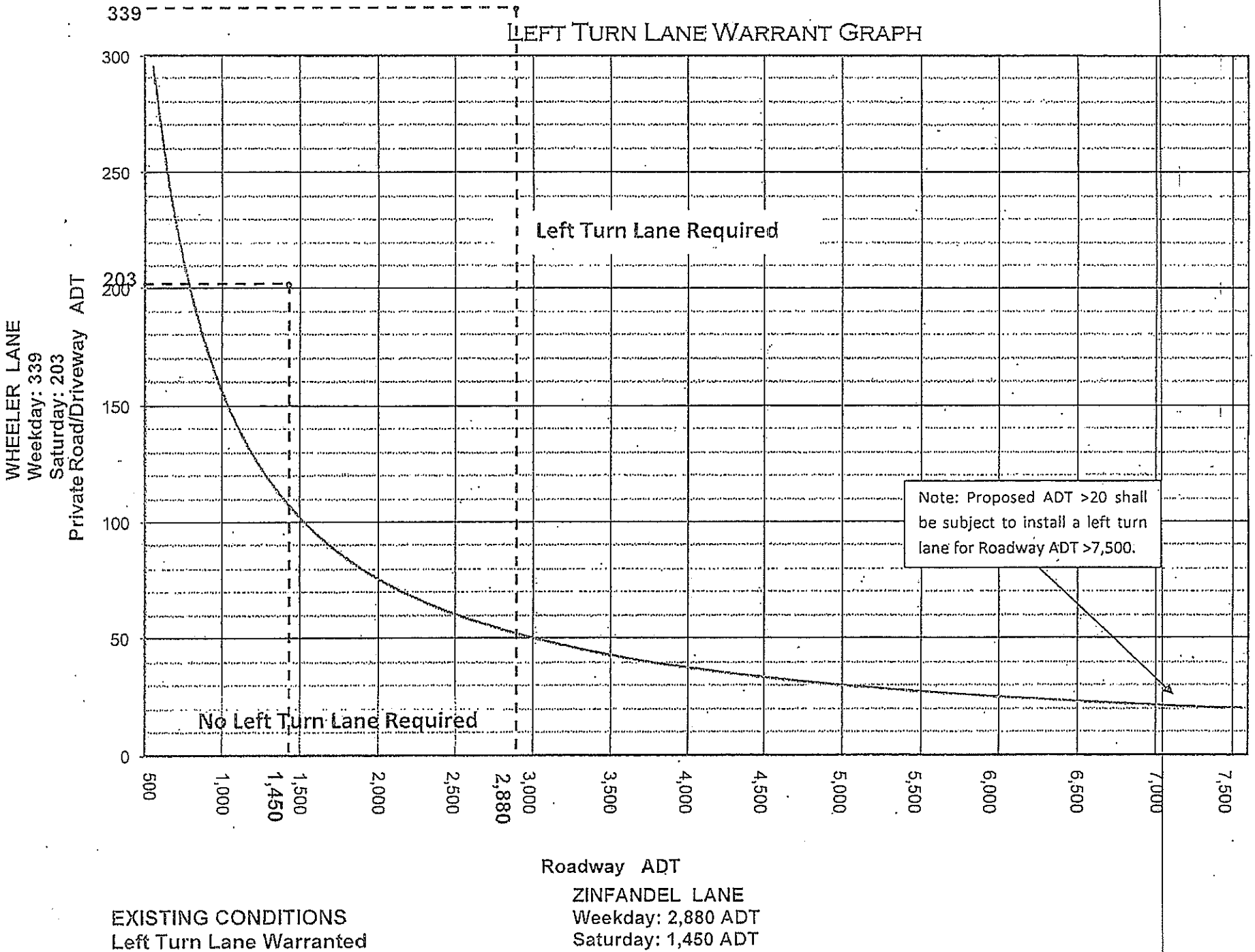
Movement	WB	NB
Directions Served	LTR	LR
Maximum Queue (ft)	36	62
Average Queue (ft)	3	36
95th Queue (ft)	18	60
Link Distance (ft)	1406	1145
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Zinfandel Lane & Hwy. 29

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	L
Maximum Queue (ft)	53	222	29	27	67
Average Queue (ft)	14	79	2	1	30
95th Queue (ft)	40	162	14	10	54
Link Distance (ft)	1414	1638		2063	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			90		120
Storage Blk Time (%)					
Queuing Penalty (veh)					

Nework Summary

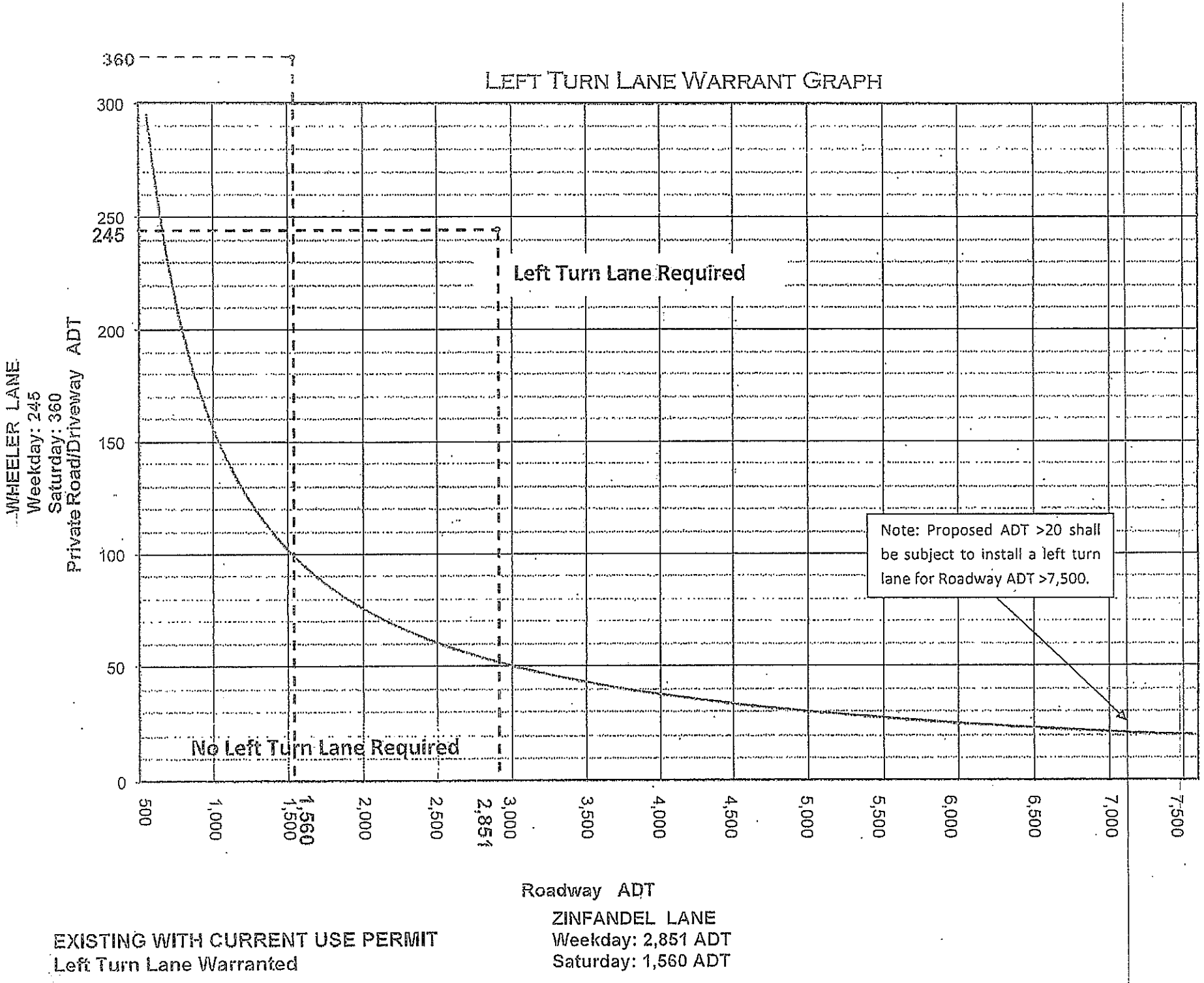
Network wide Queuing Penalty: 0



EXISTING CONDITIONS
Left Turn Lane Warranted

ZINFANDEL LANE
Weekday: 2,880 ADT
Saturday: 1,450 ADT

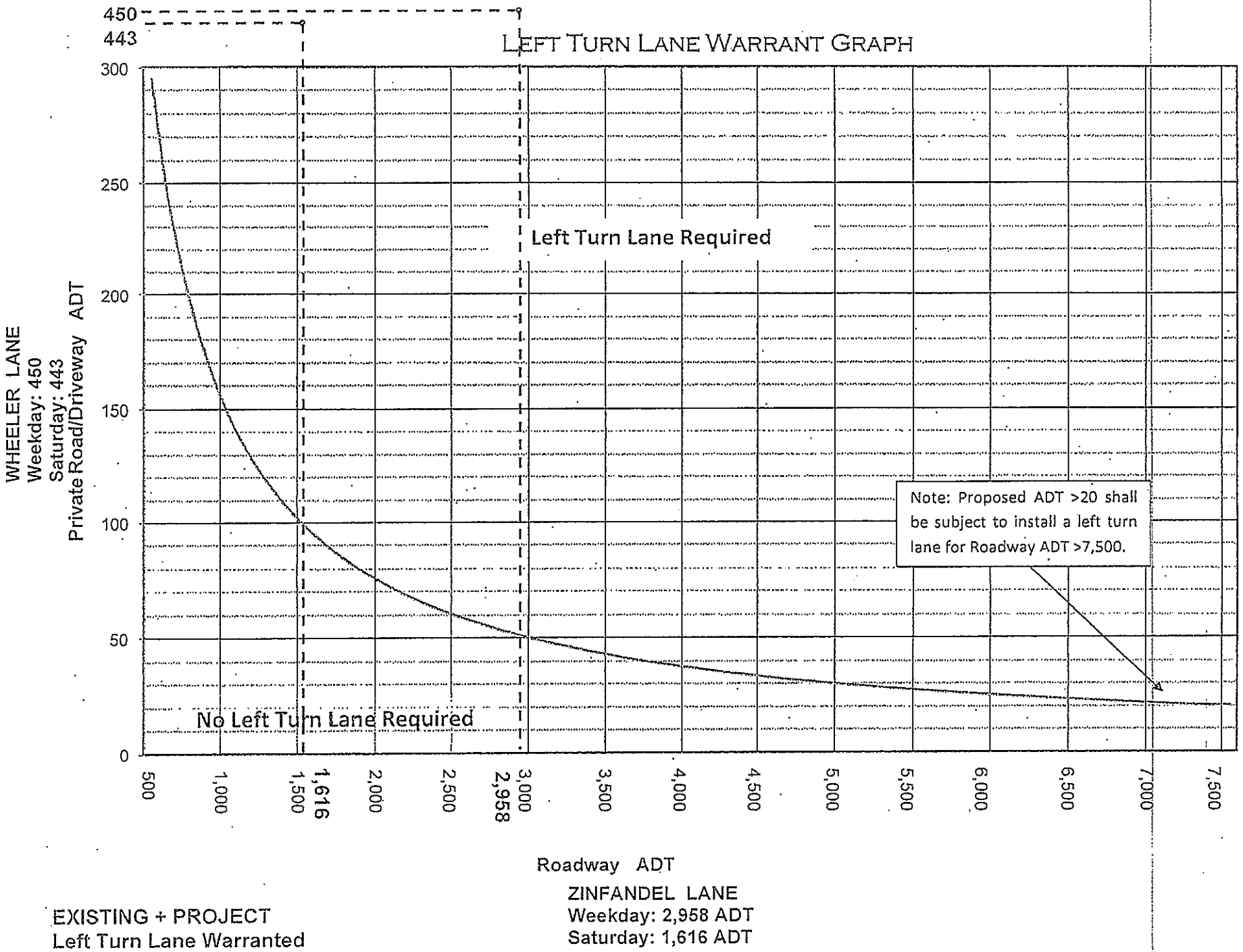
Napa County, *Adopted Road and Street Standards*, revised August 31, 2004.



ZINFANDEL LANE
Weekday: 2,851 ADT
Saturday: 1,560 ADT

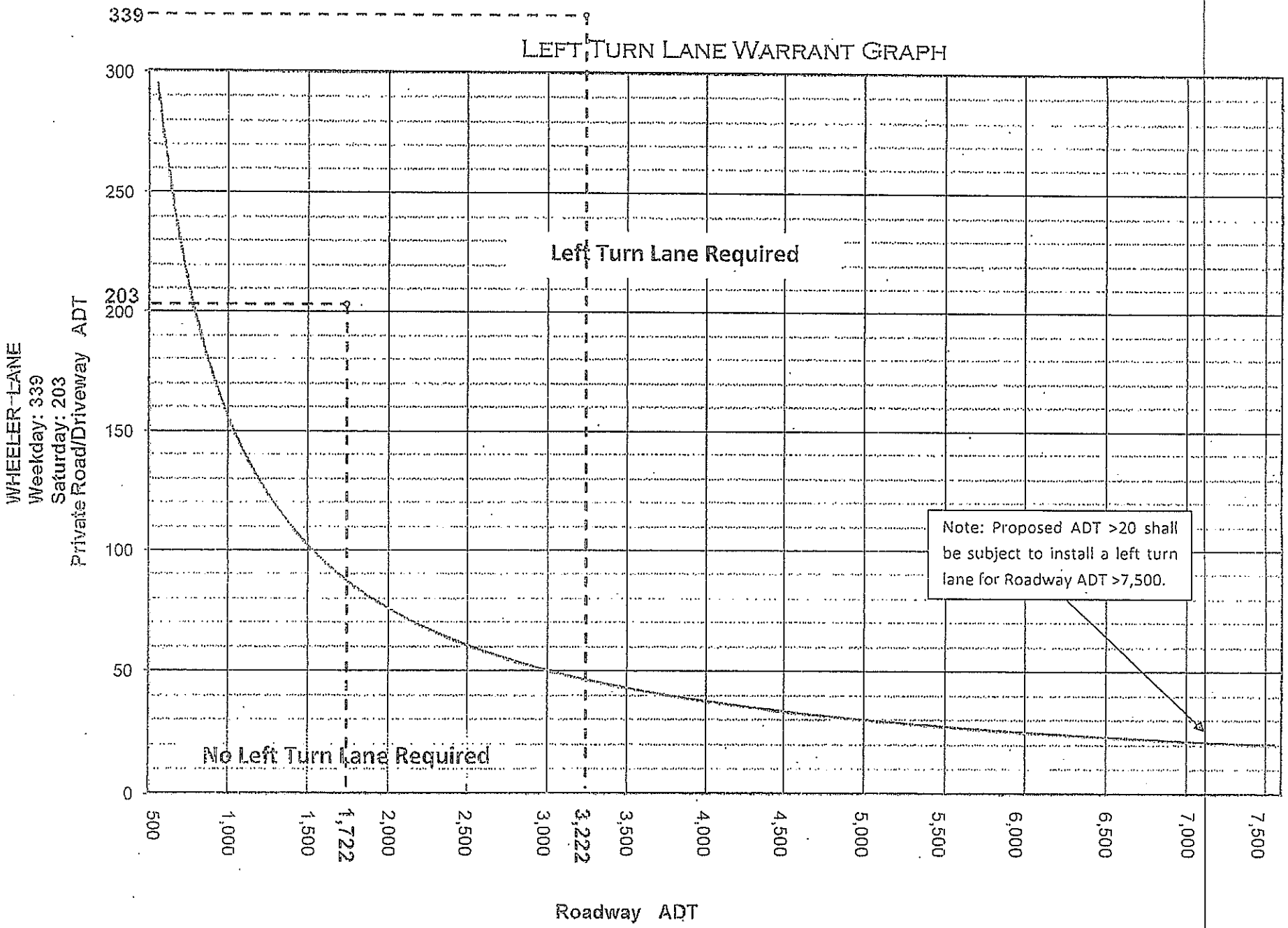
EXISTING WITH CURRENT USE PERMIT
Left Turn Lane Warranted

Napa County, *Adopted Road and Street Standards*, revised August 31, 2004.



EXISTING + PROJECT
Left Turn Lane Warranted

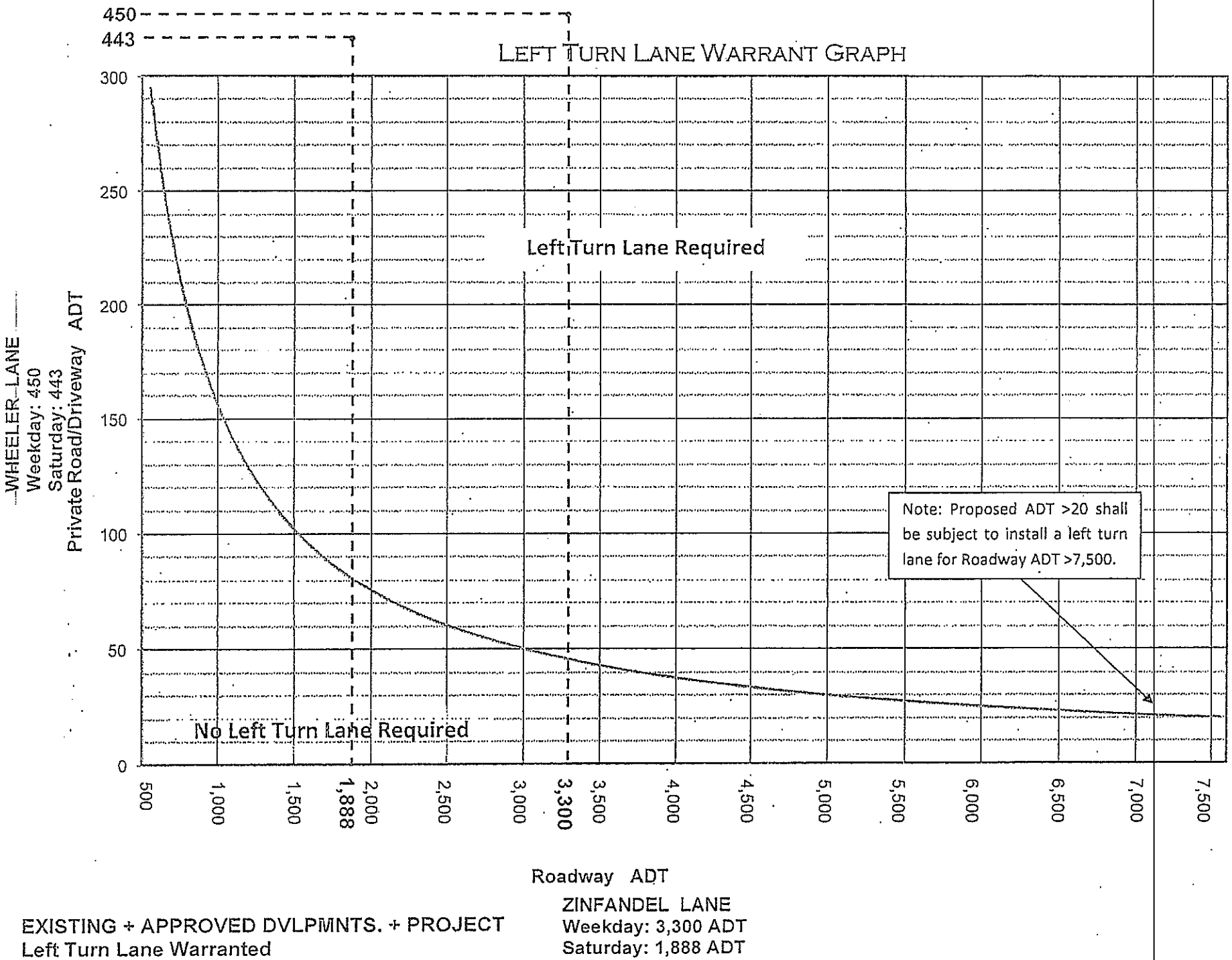
ZINFANDEL LANE
Weekday: 2,958 ADT
Saturday: 1,616 ADT



EXISTING + APPROVED DEVELOPMENTS
Left Turn Lane Warranted

ZINFANDEL LANE
Weekday: 3,222 ADT
Saturday: 1,722 ADT

Napa County, *Adopted Road and Street Standards*, revised August 31, 2004.

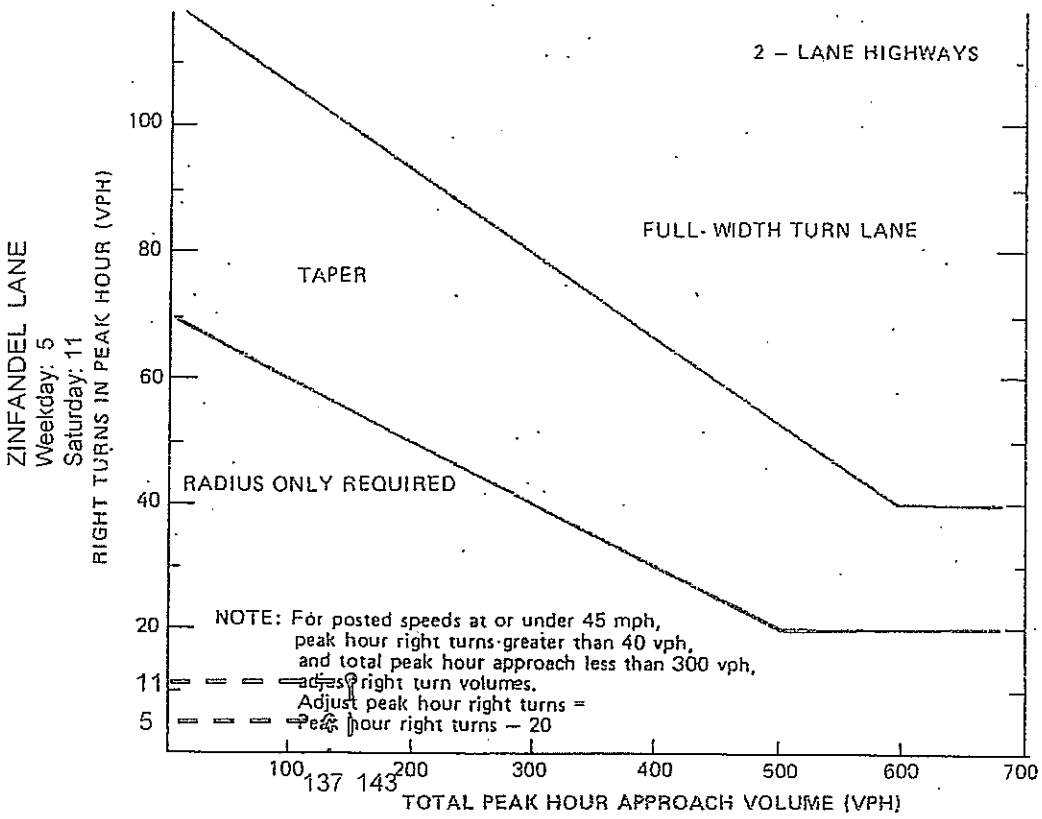


EXISTING + APPROVED DVLPMNTS. + PROJECT
Left Turn Lane Warranted

ZINFANDEL LANE
Weekday: 3,300 ADT
Saturday: 1,888 ADT

Napa County, *Adopted Road and Street Standards*, revised August 31, 2004.

CALTRANS RIGHT TURN LANE WARRANTS



ZINFANDEL LANE
Weekday: 137
Saturday: 143

Raymond Winery Project

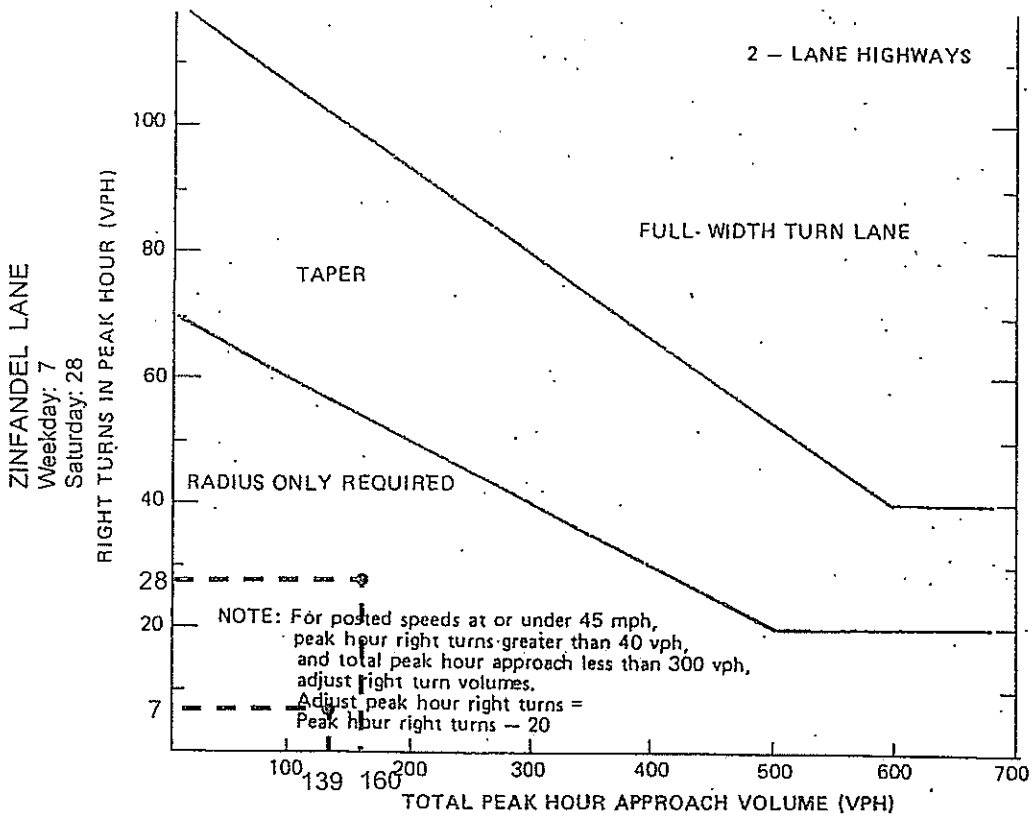
Zinfandel Ln. / Wheeler Ln. (Winery Access) Intersection

EXISTING WEEKDAY & WEEKEND PEAK HOURS

RIGHT TURN LANE NOT WARRANTED

Transportation Research Board, National Cooperative Highway Research Program Report 279, "Intersection Channelization Design Guide", November, 1985.

CALTRANS RIGHT TURN LANE WARRANTS



ZINFANDEL LANE
Weekday: 139
Saturday: 160

Raymond Winery Project

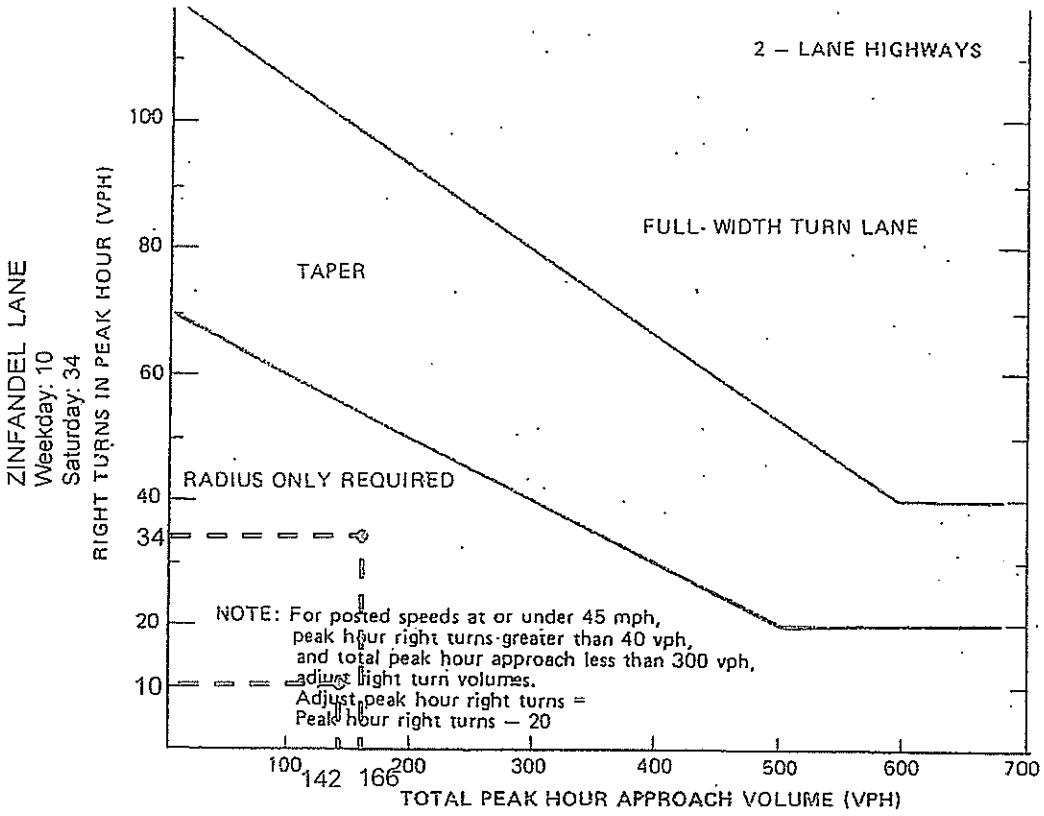
Zinfandel Ln. / Wheeler Ln. (Winery Access) Intersection

EXISTING WITH CURRENT USE PERMIT
WEEKDAY & WEEKEND PEAK HOURS

RIGHT TURN LANE NOT WARRANTED

Transportation Research Board, National Cooperative Highway Research Program Report 279, "Intersection Channelization Design Guide", November, 1985.

CALTRANS RIGHT TURN LANE WARRANTS



ZINFANDEL LANE
Weekday: 142
Saturday: 166

Raymond Winery Project

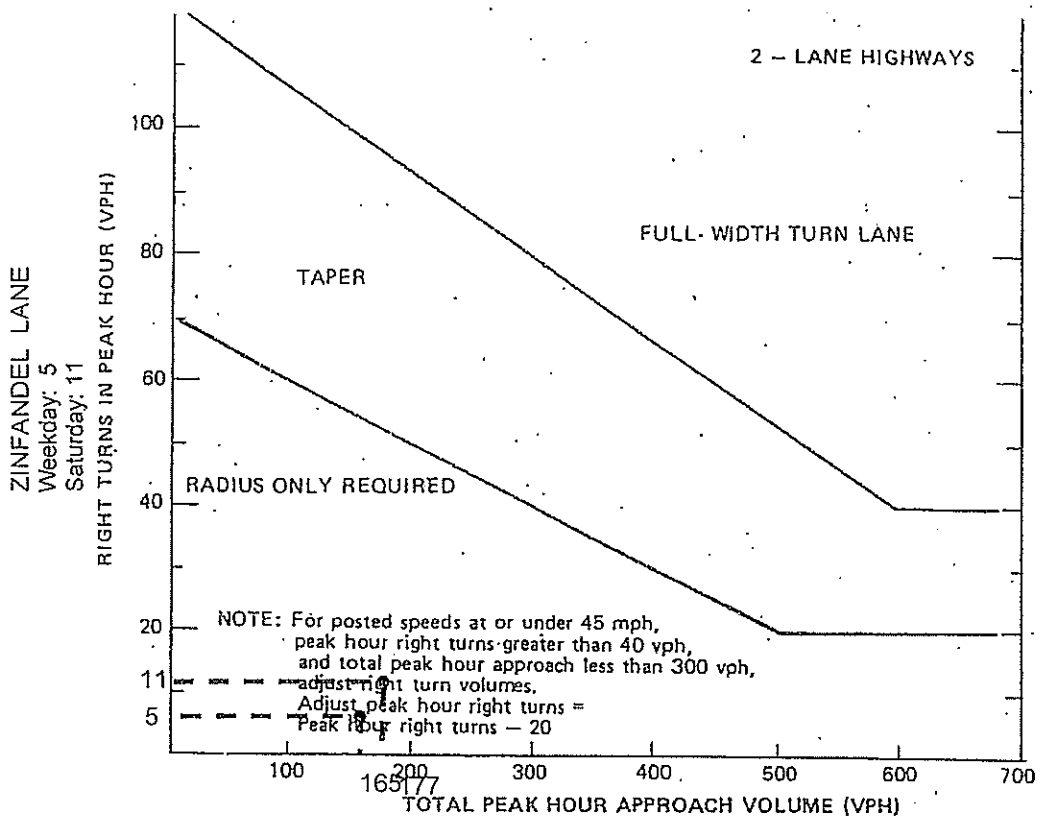
Zinfandel Ln. / Wheeler Ln. (Winery Access) Intersection

EXISTING + PROJECT
WEEKDAY & WEEKEND PEAK HOURS

RIGHT TURN LANE NOT WARRANTED

Transportation Research Board, National Cooperative Highway Research Program Report 279, "Intersection Channelization Design Guide", November, 1985.

CALTRANS RIGHT TURN LANE WARRANTS



ZINFANDEL LANE
Weekday: 165
Saturday: 177

Raymond Winery Project

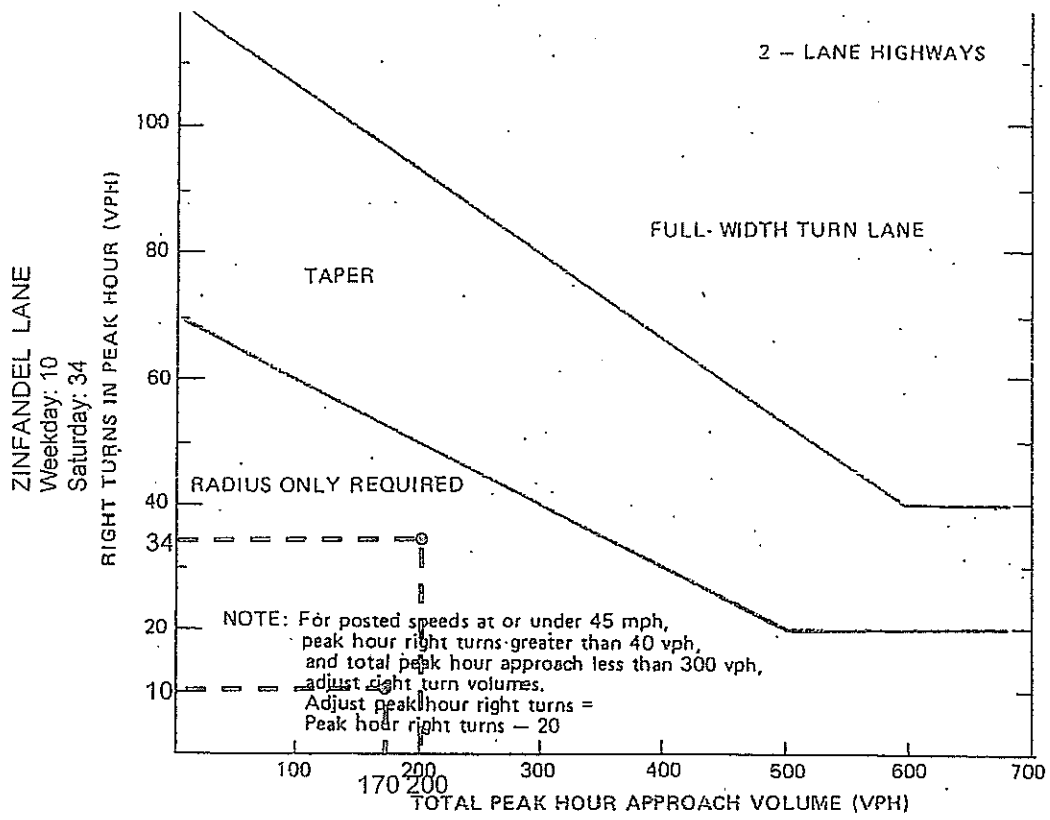
Zinfandel Ln. / Wheeler Ln. (Winery Access) Intersection

EXISTING + APPROVED DEVELOPMENTS
WEEKDAY & WEEKEND PEAK HOURS

RIGHT TURN LANE NOT WARRANTED

Transportation Research Board, National Cooperative Highway Research Program Report 279, "Intersection Channelization Design Guide", November, 1985.

CALTRANS RIGHT TURN LANE WARRANTS



ZINFANDEL LANE
Weekday: 170
Saturday: 200

Raymond Winery Project

Zinfandel Ln. / Wheeler Ln. (Winery Access) Intersection

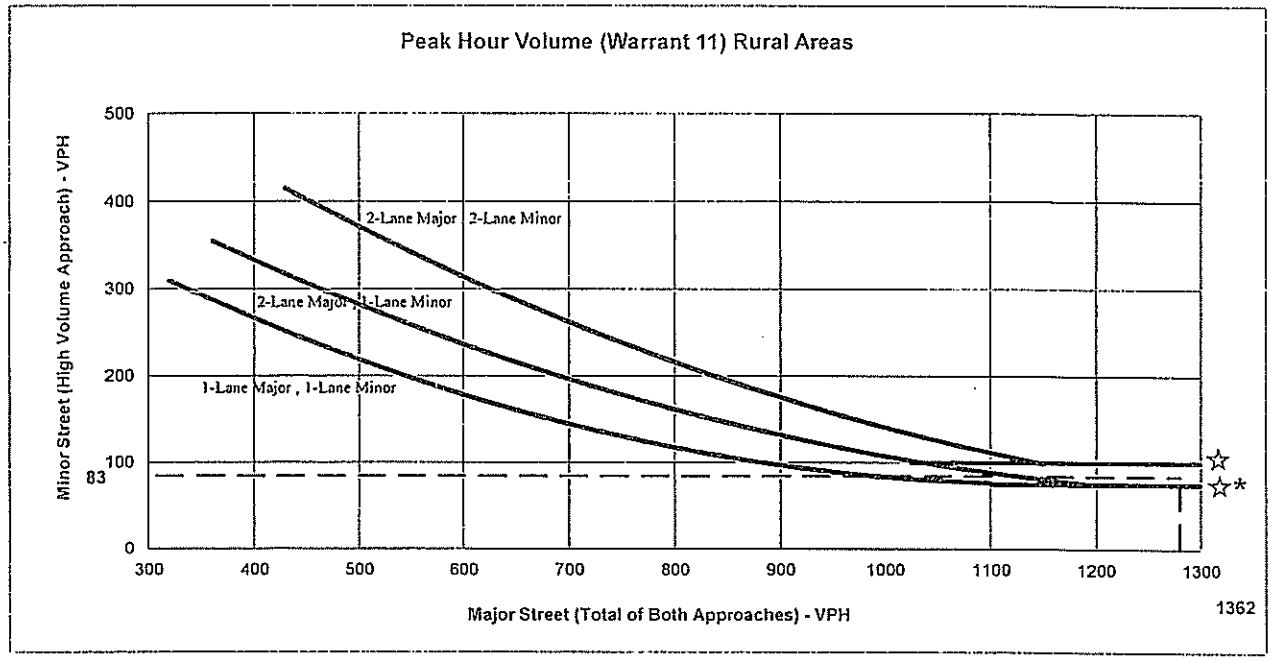
EXISTING + APPROVED DEVELOPMENTS + PROJECT
WEEKDAY & WEEKEND PEAK HOURS

RIGHT TURN LANE NOT WARRANTED

Transportation Research Board, National Cooperative Highway Research Program Report 279, "Intersection Channelization Design Guide", November, 1985.

Both 1 Lane Approaches		2 or more Lane and One Lane Approaches		Both 2 or more Lane Approaches	
Major Street Total of Both Approaches	Minor Street High Volume Approach	Major Street Total of Both Approaches	Minor Street High Volume Approach	Major Street Total of Both Approaches	Minor Street High Volume Approach
370	280				
400	270	460	297	430	410
500	215	500	290	500	380
600	185	600	230	600	310
700	140	700	198	700	265
800	115	800	170	800	210
900	99	900	125	900	180
1000	85	1000	105	1000	140
1100	75	1100	90	1100	110
1200	75	1200	75	1150	100
1300	75	1300	75	1300	100

** Note: Values in Table are approximate, actual curves based upon 2nd order polynomial equation*

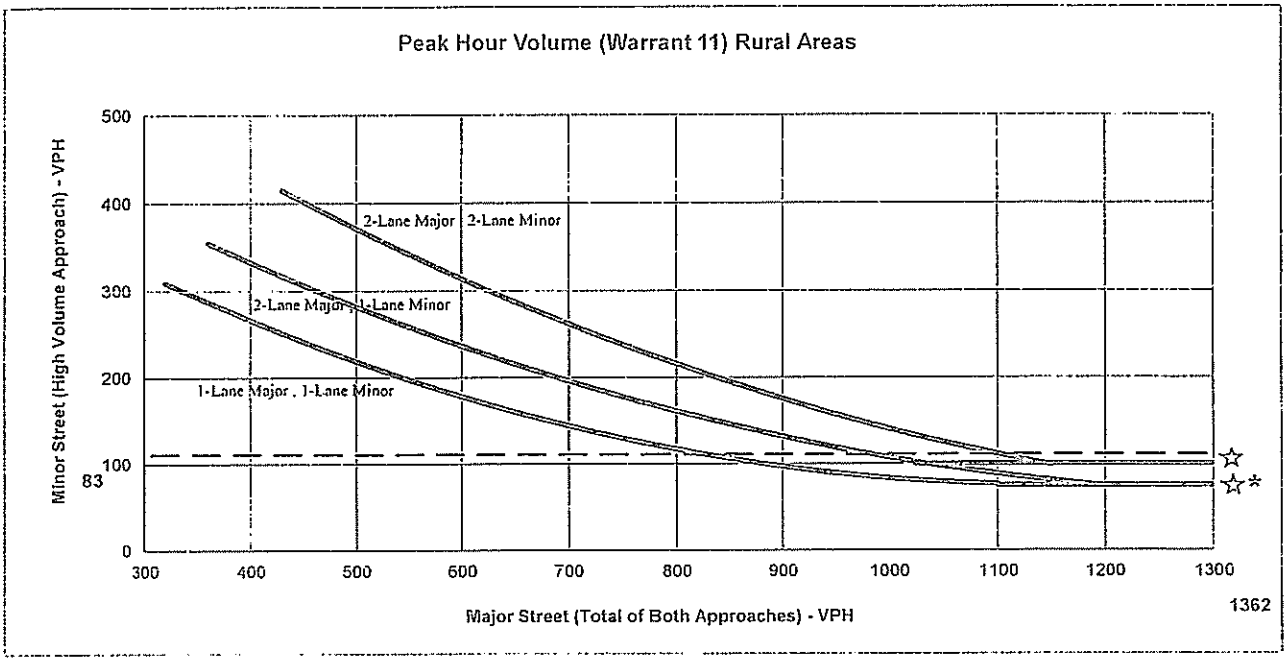


☆ NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Intersection:	Hwy. 29 / Zinfandel Lane
Scenario:	Existing Weekday Peak Hour Conditions
Minor St. Volume:	84
Major St. Volume:	1280
Warrant Met?:	Yes

Both 1 Lane Approaches		2 or more Lane and One Lane Approaches		Both 2 or more Lane Approaches	
Major Street Total of Both Approaches	Minor Street High Volume Approach	Major Street Total of Both Approaches	Minor Street High Volume Approach	Major Street Total of Both Approaches	Minor Street High Volume Approach
370	280				
400	270	460	297	430	410
500	215	500	290	500	380
600	185	600	230	600	310
700	140	700	198	700	265
800	115	800	170	800	210
900	99	900	125	900	180
1000	85	1000	105	1000	140
1100	75	1100	90	1100	110
1200	75	1200	75	1150	100
1300	75	1300	75	1300	100

** Note: Values in Table are approximate, actual curves based upon 2nd order polynomial equation*



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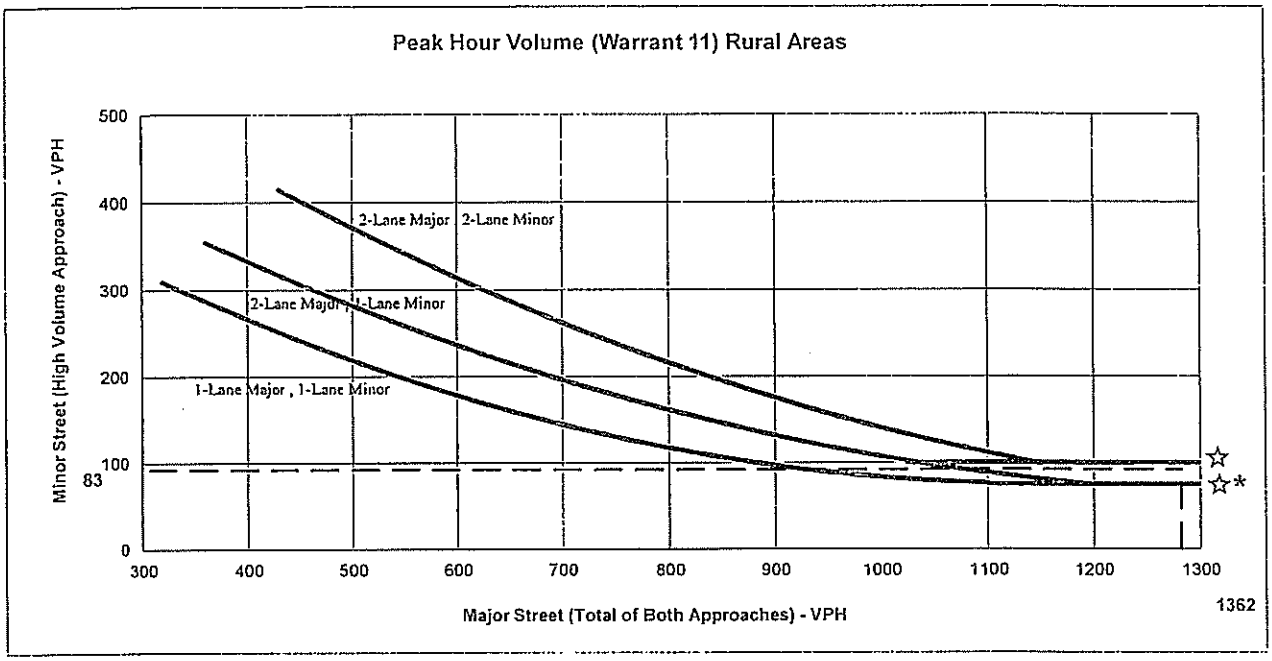
Intersection:	Hwy. 29 / Zinfandel Lane
Scenario:	Existing Saturday Peak Hour Conditions
Minor St. Volume:	111
Major St. Volume:	1443
Warrant Met?:	Yes

Both 1 Lane Approaches		2 or more Lane and One Lane Approaches		Both 2 or more Lane Approaches	
Major Street Total of Both Approaches	Minor Street High Volume Approach	Major Street Total of Both Approaches	Minor Street High Volume Approach	Major Street Total of Both Approaches	Minor Street High Volume Approach
370	280				
400	270	460	297	430	410
500	215	500	290	500	380
600	185	600	230	600	310
700	140	700	198	700	265
800	115	800	170	800	210
900	99	900	125	900	180
1000	85	1000	105	1000	140
1100	75	1100	90	1100	110
1200	75	1200	75	1150	100
1300	75	1300	75	1300	100

** Note: Values in Table are approximate, actual curves based upon 2nd order polynomial equation*



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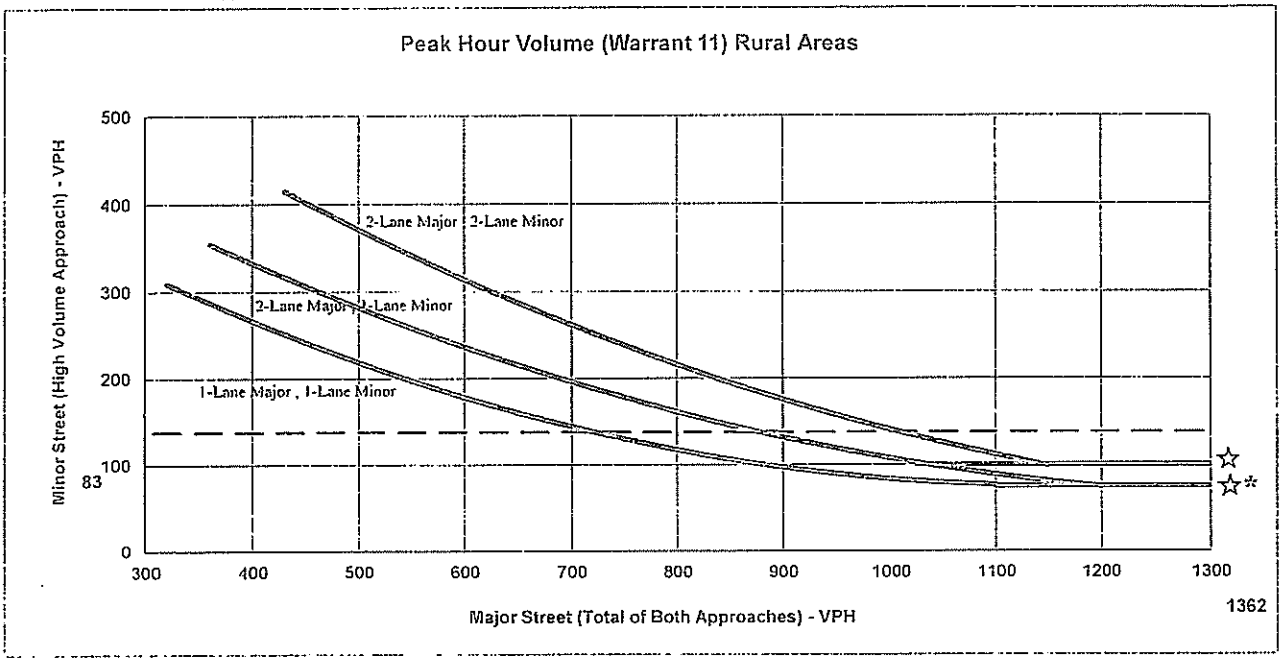
Intersection:	Hwy. 29 / Zinfandel Lane
Scenario:	Existing With Current Use Permit Weekday Peak Hour Conditions
Minor St. Volume:	92
Major St. Volume:	1282
Warrant Met?:	Yes

Both 1 Lane Approaches		2 or more Lane and One Lane Approaches		Both 2 or more Lane Approaches	
Major Street Total of Both Approaches	Minor Street High Volume Approach	Major Street Total of Both Approaches	Minor Street High Volume Approach	Major Street Total of Both Approaches	Minor Street High Volume Approach
370	280				
400	270	460	297	430	410
500	215	500	290	500	380
600	185	600	230	600	310
700	140	700	198	700	265
800	115	800	170	800	210
900	99	900	125	900	180
1000	85	1000	105	1000	140
1100	75	1100	90	1100	110
1200	75	1200	75	1150	100
1300	75	1300	75	1300	100

** Note: Values in Table are approximate, actual curves based upon 2nd order polynomial equation*



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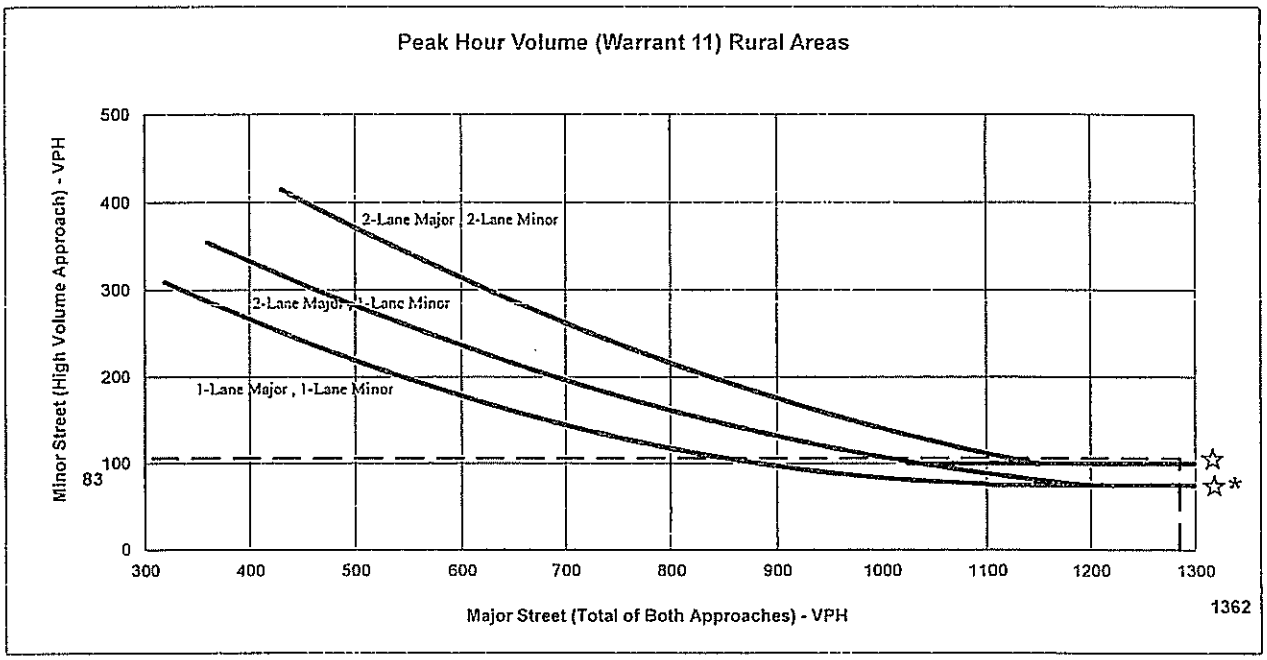
Intersection:	Hwy. 29 / Zinfandel Lane
Scenario:	Existing With Current Use Permit Saturday Peak Hour Conditions
Minor St. Volume:	138
Major St. Volume:	1460
Warrant Met?:	Yes

Both 1 Lane Approaches		2 or more Lane and One Lane Approaches		Both 2 or more Lane Approaches	
Major Street Total of Both Approaches	Minor Street High Volume Approach	Major Street Total of Both Approaches	Minor Street High Volume Approach	Major Street Total of Both Approaches	Minor Street High Volume Approach
~~370~~	~~280~~				
400	270	460	297	430	410
500	215	500	290	500	380
600	185	600	230	600	310
700	140	700	198	700	265
800	115	800	170	800	210
900	99	900	125	900	180
1000	85	1000	105	1000	140
1100	75	1100	90	1100	110
1200	75	1200	75	1150	100
1300	75	1300	75	1300	100

** Note: Values in Table are approximate, actual curves based upon 2nd order polynomial equation*



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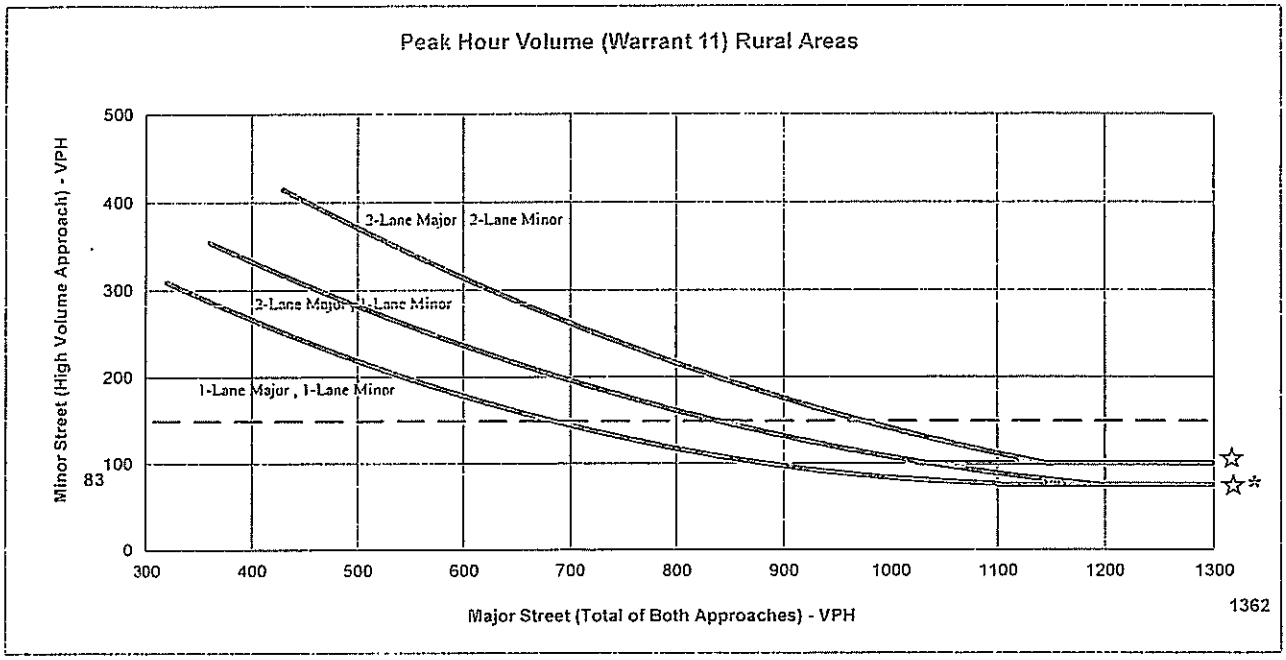
Intersection:	Hwy. 29 / Zinfandel Lane
Scenario:	Existing Plus Project Weekday Peak Hour Conditions
Minor St. Volume:	106
Major St. Volume:	1285
Warrant Met?:	Yes

Both 1 Lane Approaches		2 or more Lane and One Lane Approaches		Both 2 or more Lane Approaches	
Major Street Total of Both Approaches	Minor Street High Volume Approach	Major Street Total of Both Approaches	Minor Street High Volume Approach	Major Street Total of Both Approaches	Minor Street High Volume Approach
~~370~~	~~280~~				
400	270	460	297	430	410
500	215	500	290	500	380
600	185	600	230	600	310
700	140	700	198	700	265
800	115	800	170	800	210
900	99	900	125	900	180
1000	85	1000	105	1000	140
1100	75	1100	90	1100	110
1200	75	1200	75	1150	100
1300	75	1300	75	1300	100

** Note: Values in Table are approximate, actual curves based upon 2nd order polynomial equation*



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Intersection:	Hwy. 29 / Zinfandel Lane
Scenario:	Existing Plus Project Saturday Peak Hour Conditions
Minor St. Volume:	149
Major St. Volume:	1466
Warrant Met?:	Yes

Both 1 Lane Approaches		2 or more Lane and One Lane Approaches		Both 2 or more Lane Approaches	
Major Street Total of Both Approaches	Minor Street High Volume Approach	Major Street Total of Both Approaches	Minor Street High Volume Approach	Major Street Total of Both Approaches	Minor Street High Volume Approach
370	280				
400	270	460	297	430	410
500	215	500	290	500	380
600	185	600	230	600	310
700	140	700	198	700	265
800	115	800	170	800	210
900	99	900	125	900	180
1000	85	1000	105	1000	140
1100	75	1100	90	1100	110
1200	75	1200	75	1150	100
1300	75	1300	75	1300	100

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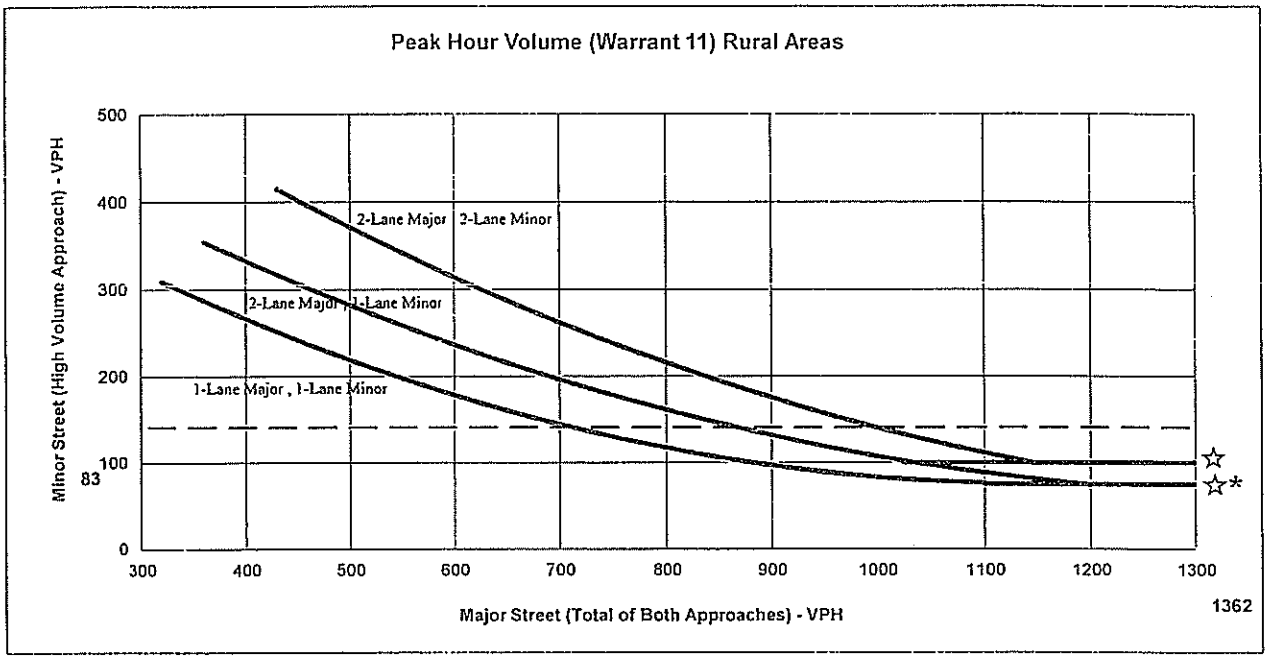

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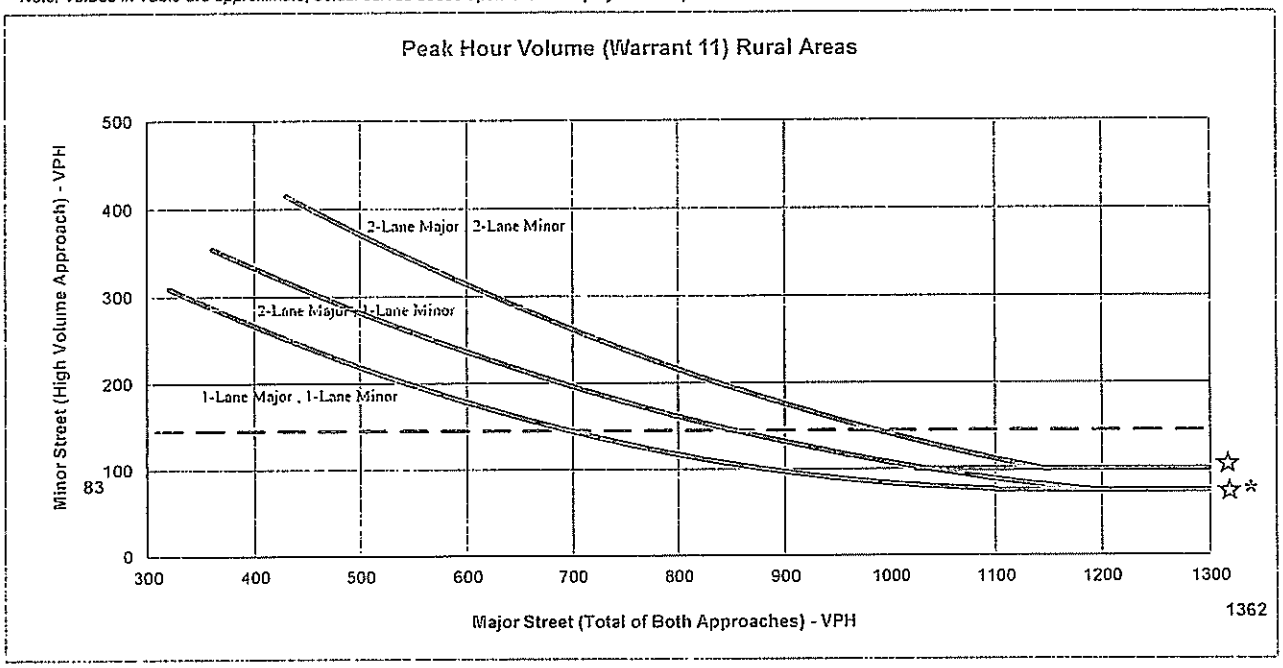
Intersection:	Hwy. 29 / Zinfandel Lane
Scenario:	Near Term (Existing + Approved Developments) Weekday Peak Hour Conditions
Minor St. Volume:	141
Major St. Volume:	1332
Warrant Met?:	Yes

Both 1 Lane Approaches		2 or more Lane and One Lane Approaches		Both 2 or more Lane Approaches	
Major Street Total of Both Approaches	Minor Street High Volume Approach	Major Street Total of Both Approaches	Minor Street High Volume Approach	Major Street Total of Both Approaches	Minor Street High Volume Approach
370	280				
400	270	460	297	430	410
500	215	500	290	500	380
600	185	600	230	600	310
700	140	700	198	700	265
800	115	800	170	800	210
900	99	900	125	900	180
1000	85	1000	105	1000	140
1100	75	1100	90	1100	110
1200	75	1200	75	1150	100
1300	75	1300	75	1300	100

** Note: Values in Table are approximate, actual curves based upon 2nd order polynomial equation*



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Intersection:	Hwy. 29 / Zinfandel Lane
Scenario:	Near Term (Existing + Approved Developments) Saturday Peak Hour Conditions
Minor St. Volume:	145
Major St. Volume:	1511
Warrant Met?.	Yes

Both 1-Lane Approaches		2 or more Lane and One Lane Approaches		Both 2 or more Lane Approaches	
Major Street Total of Both Approaches	Minor Street High Volume Approach	Major Street Total of Both Approaches	Minor Street High Volume Approach	Major Street Total of Both Approaches	Minor Street High Volume Approach
370	280				
400	270	460	297	430	410
500	215	500	290	500	380
600	185	600	230	600	310
700	140	700	198	700	265
800	115	800	170	800	210
900	99	900	125	900	180
1000	85	1000	105	1000	140
1100	75	1100	90	1100	110
1200	75	1200	75	1150	100
1300	75	1300	75	1300	100

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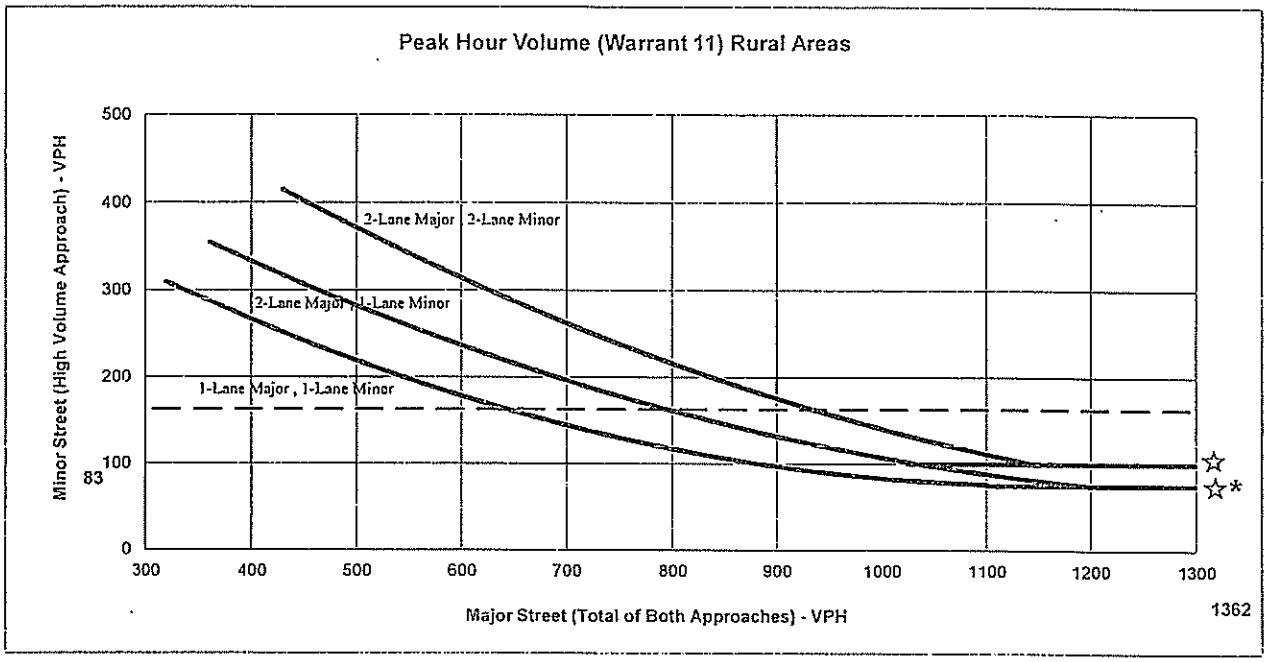

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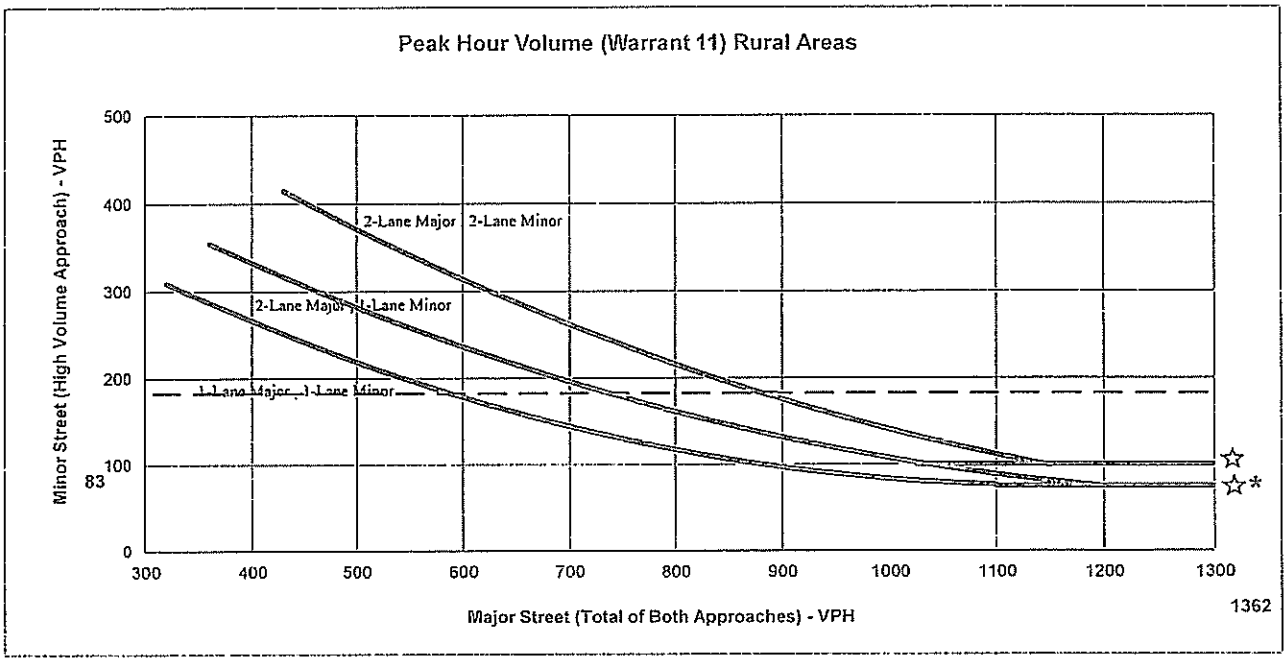
Intersection:	Hwy. 29 / Zinfandel Lane
Scenario:	Near Term (Existing + Approved Developments) Plus Project Weekday Peak Hour Conditions
Minor St. Volume:	163
Major St. Volume:	1337
Warrant Met?:	Yes

Both 1-Lane Approaches		2 or more Lane and One Lane Approaches		Both 2 or more Lane Approaches	
Major Street Total of Both Approaches	Minor Street High Volume Approach	Major Street Total of Both Approaches	Minor Street High Volume Approach	Major Street Total of Both Approaches	Minor Street High Volume Approach
370	280				
400	270	460	297	430	410
500	215	500	290	500	380
600	185	600	230	600	310
700	140	700	198	700	265
800	115	800	170	800	210
900	99	900	125	900	180
1000	85	1000	105	1000	140
1100	75	1100	90	1100	110
1200	75	1200	75	1150	100
1300	75	1300	75	1300	100

** Note: Values in Table are approximate, actual curves based upon 2nd order polynomial equation*



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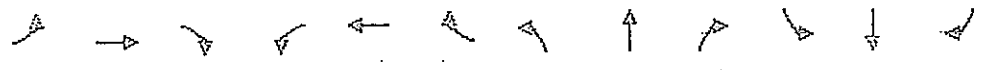
Intersection:	Hwy. 29 / Zinfandel Lane
Scenario:	Near Term (Existing + Approved Developments) Plus Project Saturday Peak Hour Conditions
Minor St. Volume:	183
Major St. Volume:	1534
Warrant Met?:	Yes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	132	5	3	78	0	16	0	12	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	148	6	3	88	0	18	0	13	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	88			154			246	246	151	259	248	88
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	88			154			246	246	151	259	248	88
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			97	100	98	100	100	100
cM capacity (veh/h)	1508			1426			707	655	895	682	653	971

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	154	91	31	0
Volume Left	0	3	18	0
Volume Right	6	0	13	0
cSH	1508	1426	777	1700
Volume to Capacity	0.00	0.00	0.04	0.00
Queue Length 95th (ft)	0	0	3	0
Control Delay (s)	0.0	0.3	9.8	0.0
Lane LOS		A	A	A
Approach Delay (s)	0.0	0.3	9.8	0.0
Approach LOS			A	A

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	17.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↑			↑	
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	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.97			0.96		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.92			0.91		1.00	0.98		1.00	1.00	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1643			1606		1770	1827		1770	1862	
Flt Permitted		0.94			0.88		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1562			1436		1770	1827		1770	1862	
Volume (vph)	6	4	13	28	1	55	6	476	59	70	667	2
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)	7	4	14	31	1	61	7	529	66	78	741	2
RTOR Reduction (vph)	0	13	0	0	55	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	12	0	0	38	0	7	590	0	78	743	0
Confl. Bikes (#/hr)			10			10			10			10
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		6.2			6.2		0.9	42.3		3.2	44.6	
Effective Green, g (s)		6.2			6.2		0.9	42.3		3.2	44.6	
Actuated g/C Ratio		0.10			0.10		0.01	0.66		0.05	0.70	
Clearance Time (s)		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	
Lane Grp Cap (vph)		152			140		25	1213		89	1304	
v/s Ratio Prot							0.00	0.32		c0.04	c0.40	
v/s Ratio Perm		0.01			c0.03							
v/c Ratio		0.08			0.27		0.28	0.49		0.88	0.57	
Uniform Delay, d1		26.2			26.7		31.1	5.3		30.1	4.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			1.0		6.0	0.3		56.4	0.6	
Delay (s)		26.4			27.7		37.1	5.6		86.4	5.3	
Level of Service		C			C		D	A		F	A	
Approach Delay (s)		26.4			27.7			6.0			13.0	
Approach LOS		C			C			A			B	

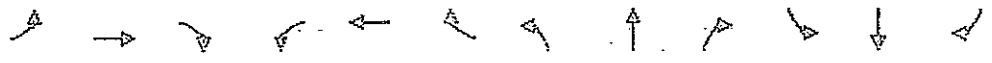
Intersection Summary				
HCM Average Control Delay	11.4	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.52			
Actuated Cycle Length (s)	63.7	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	55.9%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	132	11	7	91	0	19	0	9	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	148	12	8	106	0	21	0	10	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	106			161			276	276	154	286	282	106
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	106			161			276	276	154	286	282	106
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			97	100	99	100	100	100
cM capacity (veh/h)	1486			1418			674	628	891	656	623	949

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	161	113	31	0
Volume Left	0	8	21	0
Volume Right	12	0	10	0
cSH	1486	1418	731	1700
Volume to Capacity	0.00	0.01	0.04	0.00
Queue Length 95th (ft)	0	0	3	0
Control Delay (s)	0.0	0.6	10.1	0.0
Lane LOS		A	B	A
Approach Delay (s)	0.0	0.6	10.1	0.0
Approach LOS			B	A

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	20.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.98			0.96		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.91		1.00	0.99		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1710			1611		1770	1840		1770	1860	
Flt Permitted		0.92			0.88		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1601			1442		1770	1840		1770	1860	
Volume (vph)	6	6	7	37	1	73	6	692	51	77	612	5
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)	7	7	8	41	1	81	7	769	57	86	680	6
RTOR Reduction (vph)	0	7	0	0	72	0	0	3	0	0	0	0
Lane Group Flow (vph)	0	15	0	0	51	0	7	823	0	86	686	0
Confl. Bikes (#/hr)			10			10			10			10
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		8.0			8.0		0.9	47.7		3.9	50.7	
Effective Green, g (s)		8.0			8.0		0.9	47.7		3.9	50.7	
Actuated g/C Ratio		0.11			0.11		0.01	0.67		0.05	0.71	
Clearance Time (s)		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	
Lane Grp Cap (vph)		179			161		22	1226		96	1317	
v/s Ratio Prot							0.00	c0.45		c0.05	c0.37	
v/s Ratio Perm		0.01			c0.04							
v/c Ratio		0.08			0.32		0.32	0.67		0.90	0.52	
Uniform Delay, d1		28.5			29.3		35.0	7.2		33.6	4.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			1.1		8.2	1.5		58.9	0.4	
Delay (s)		28.7			30.4		43.2	8.7		92.5	5.2	
Level of Service		C			C		D	A		F	A	
Approach Delay (s)		28.7			30.4			9.0			14.9	
Approach LOS		C			C			A			B	

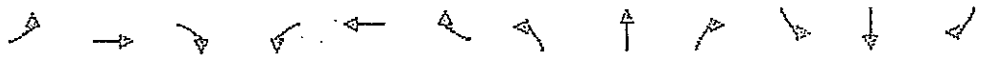
Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	71.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	32	7	4	78	0	24	0	151	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	148	8	4	88	0	27	0	170	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	88			156			249	249	152	266	253	88
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	88			156			249	249	152	266	253	88
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			96	100	98	100	100	100
cM capacity (veh/h)	1508			1424			703	652	894	672	648	971

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	156	92	44	0
Volume Left	0	4	27	0
Volume Right	8	0	17	0
cSH	1508	1424	766	1700
Volume to Capacity	0.00	0.00	0.06	0.00
Queue Length 95th (ft)	0	0	5	0
Control Delay (s)	0.0	0.4	10.0	0.0
Lane LOS		A	A	A
Approach Delay (s)	0.0	0.4	10.0	0.0
Approach LOS			A	A

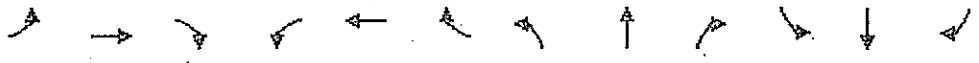
Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	17.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.97			0.96		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.92			0.91		1.00	0.98		1.00	1.00	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1643			1604		1770	1826		1770	1862	
Flt Permitted		0.93			0.88		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1552			1438		1770	1826		1770	1862	
Volume (vph)	6	4	13	30	1	61	6	476	60	71	667	2
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)	7	4	14	33	1	68	7	529	67	79	741	2
RTOR Reduction (vph)	0	13	0	0	61	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	12	0	0	41	0	7	591	0	79	743	0
Confl. Bikes (#/hr)			10			10			10			10
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		6.2			6.2		0.9	41.9		3.1	44.1	
Effective Green, g (s)		6.2			6.2		0.9	41.9		3.1	44.1	
Actuated g/C Ratio		0.10			0.10		0.01	0.66		0.05	0.70	
Clearance Time (s)		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	
Lane Grp Cap (vph)		152			141		25	1211		87	1299	
v/s Ratio Prot							0.00	0.32		c0.04	c0.40	
v/s Ratio Perm		0.01			c0.03							
v/c Ratio		0.08			0.29		0.28	0.49		0.91	0.57	
Uniform Delay, d1		25.9			26.5		30.8	5.3		29.9	4.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			1.1		6.0	0.3		66.1	0.6	
Delay (s)		26.1			27.6		36.9	5.6		96.0	5.4	
Level of Service		C			C		D	A		F	A	
Approach Delay (s)		26.1			27.6			6.0			14.1	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	63.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		

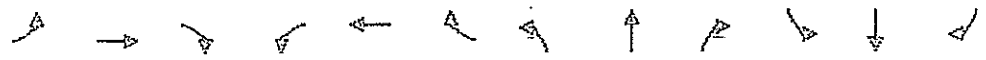
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	132	28	7	94	0	46	0	20	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	148	31	8	106	0	52	0	22	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	106			180			285	285	164	308	301	106
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	106			180			285	285	164	308	301	106
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			92	100	97	100	100	100
cM capacity (veh/h)	1486			1396			664	620	881	625	608	949

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	180	113	74	0
Volume Left	0	8	52	0
Volume Right	31	0	22	0
cSH	1486	1396	717	1700
Volume to Capacity	0.00	0.01	0.10	0.00
Queue Length 95th (ft)	0	0	9	0
Control Delay (s)	0.0	0.6	10.6	0.0
Lane LOS		A	B	A
Approach Delay (s)	0.0	0.6	10.6	0.0
Approach LOS			B	A

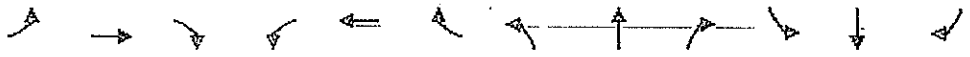
Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	21.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.98			0.97		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.91		1.00	0.99		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1710			1611		1770	1838		1770	1860	
Flt Permitted		0.88			0.88		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1537			1442		1770	1838		1770	1860	
Volume (vph)	6	6	7	46	1	91	6	692	58	87	612	5
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)	7	7	8	51	1	101	7	769	64	97	680	6
RTOR Reduction (vph)	0	7	0	0	90	0	0	3	0	0	0	0
Lane Group Flow (vph)	0	15	0	0	63	0	7	830	0	97	686	0
Confl. Bikes (#/hr)			10			10			10			10
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		7.5			7.5		0.7	42.1		4.3	45.7	
Effective Green, g (s)		7.5			7.5		0.7	42.1		4.3	45.7	
Actuated g/C Ratio		0.11			0.11		0.01	0.64		0.07	0.69	
Clearance Time (s)		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	
Lane Grp Cap (vph)		175			164		19	1174		115	1290	
v/s Ratio Prot							0.00	c0.45		c0.05	c0.37	
v/s Ratio Perm		0.01			c0.04							
v/c Ratio		0.09			0.39		0.37	0.71		0.84	0.53	
Uniform Delay, d1		26.1			27.1		32.4	7.8		30.5	4.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			1.5		11.7	2.0		40.0	0.4	
Delay (s)		26.3			28.6		44.1	9.8		70.5	5.3	
Level of Service		C			C		D	A		E	A	
Approach Delay (s)		26.3			28.6			10.1			13.4	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	65.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		

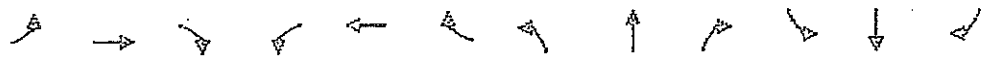
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	132	10	6	78	0	38	0	23	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	148	11	7	88	0	43	0	26	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	88			160			255	255	154	281	261	88
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	88			160			255	255	154	281	261	88
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			94	100	97	100	100	100
cM capacity (veh/h)	1508			1420			696	646	892	650	641	971

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	160	94	69	0
Volume Left	0	7	43	0
Volume Right	11	0	26	0
cSH	1508	1420	759	1700
Volume to Capacity	0.00	0.00	0.09	0.00
Queue Length 95th (ft)	0	0	7	0
Control Delay (s)	0.0	0.6	10.2	0.0
Lane LOS		A	B	A
Approach Delay (s)	0.0	0.6	10.2	0.0
Approach LOS			B	A

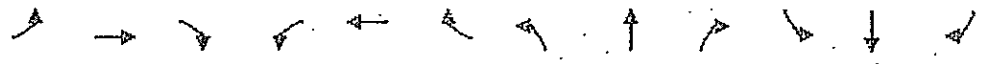
Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	19.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↑			↑	
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	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.97			0.97			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.92			0.91			1.00			1.00	
Flt Protected		0.99			0.98			0.95			0.95	
Satd. Flow (prot)		1651			1614			1770			1770	
Flt Permitted		0.94			0.88			0.95			0.95	
Satd. Flow (perm)		1575			1445			1770			1770	
Volume (vph)	6	4	13	35	1	70	6	476	61	73	667	2
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)	7	4	14	39	1	78	7	529	68	81	741	2
RTOR Reduction (vph)	0	12	0	0	68	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	13	0	0	50	0	7	592	0	81	743	0
Confl. Bikes (#/hr)			10			10			10			10
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		8.0			8.0		0.9	40.4		3.9	43.4	
Effective Green, g (s)		8.0			8.0		0.9	40.4		3.9	43.4	
Actuated g/C Ratio		0.12			0.12		0.01	0.63		0.06	0.67	
Clearance Time (s)		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	
Lane Grp Cap (vph)		196			180		25	1147		107	1257	
v/s Ratio Prot							0.00	0.32		c0.05	c0.40	
v/s Ratio Perm		0.01			c0.03							
v/c Ratio		0.07			0.28		0.28	0.52		0.76	0.59	
Uniform Delay, d1		24.8			25.5		31.4	6.6		29.7	5.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			0.8		6.0	0.4		25.9	0.8	
Delay (s)		25.0			26.4		37.4	7.0		55.6	6.4	
Level of Service		C			C		D	A		E	A	
Approach Delay (s)		25.0			26.4			7.3			11.2	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	64.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		

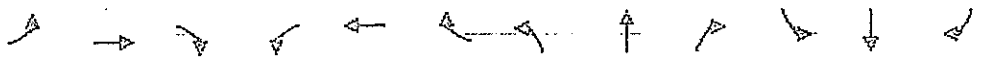
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	132	34	17	94	0	57	0	26	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	148	38	19	106	0	64	0	29	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	106			187			311	311	167	340	330	106
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	106			187			311	311	167	340	330	106
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			90	100	97	100	100	100
cM capacity (veh/h)	1486			1388			635	595	877	587	581	949

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	187	125	93	0
Volume Left	0	19	64	0
Volume Right	38	0	29	0
cSH	1486	1388	695	1700
Volume to Capacity	0.00	0.01	0.13	0.00
Queue Length 95th (ft)	0	1	12	0
Control Delay (s)	0.0	1.3	11.0	0.0
Lane LOS		A	B	A
Approach Delay (s)	0.0	1.3	11.0	0.0
Approach LOS			B	A

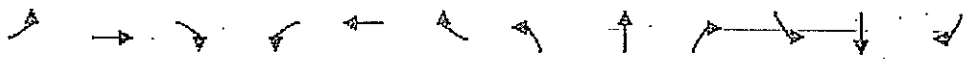
Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	29.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.98			0.97		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.91		1.00	0.99		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1713			1617		1770	1836		1770	1860	
Flt Permitted		0.91			0.88		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1579			1445		1770	1836		1770	1860	
Volume (vph)	6	6	7	50	1	98	6	692	60	91	612	5
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)	7	7	8	56	1	109	7	769	67	101	680	6
RTOR Reduction (vph)	0	7	0	0	95	0	0	4	0	0	0	0
Lane Group Flow (vph)	0	15	0	0	71	0	7	832	0	101	686	0
Confl. Bikes (#/hr)			10			10			10			10
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		8.5			8.5		0.7	38.9		5.1	43.3	
Effective Green, g (s)		8.5			8.5		0.7	38.9		5.1	43.3	
Actuated g/C Ratio		0.13			0.13		0.01	0.60		0.08	0.67	
Clearance Time (s)		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	
Lane Grp Cap (vph)		208			190		19	1107		140	1249	
v/s Ratio Prot							0.00	c0.45		c0.06	0.37	
v/s Ratio Perm		0.01			c0.05							
v/c Ratio		0.07			0.38		0.37	0.75		0.72	0.55	
Uniform Delay, d1		24.5			25.6		31.7	9.3		29.0	5.5	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			1.2		11.7	2.9		16.7	0.5	
Delay (s)		24.7			26.8		43.4	12.2		45.7	6.0	
Level of Service		C			C		D	B		D	A	
Approach Delay (s)		24.7			26.8			12.5			11.1	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	64.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

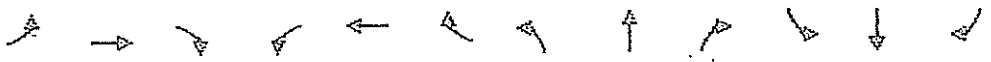
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	160	5	3	135	0	16	0	12	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	180	6	3	152	0	18	0	13	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	152			185			341	341	183	354	344	152
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	152			185			341	341	183	354	344	152
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			97	100	98	100	100	100
cM capacity (veh/h)	1429			1389			612	579	860	590	577	895

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	185	155	31	0
Volume Left	0	3	18	0
Volume Right	6	0	13	0
cSH	1429	1389	698	1700
Volume to Capacity	0.00	0.00	0.05	0.00
Queue Length 95th (ft)	0	0	4	0
Control Delay (s)	0.0	0.2	10.4	0.0
Lane LOS		A	B	A
Approach Delay (s)	0.0	0.2	10.4	0.0
Approach LOS			B	A

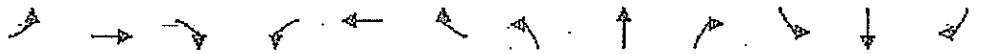
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	19.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↑			↑	
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	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.97			0.97		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.92			0.91		1.00	0.98		1.00	1.00	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1652			1622		1770	1817		1770	1862	
Flt Permitted		0.93			0.87		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1552			1439		1770	1817		1770	1862	
Volume (vph)	6	4	13	50	1	90	6	493	80	77	674	2
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)	7	4	14	56	1	100	7	548	89	86	749	2
RTOR Reduction (vph)	0	12	0	0	87	0	0	7	0	0	0	0
Lane Group Flow (vph)	0	13	0	0	70	0	7	630	0	86	751	0
Confl. Bikes (#/hr)			10			10			10			10
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		8.0			8.0		0.8	37.1		3.4	39.7	
Effective Green, g (s)		8.0			8.0		0.8	37.1		3.4	39.7	
Actuated g/C Ratio		0.13			0.13		0.01	0.61		0.06	0.66	
Clearance Time (s)		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	
Lane Grp Cap (vph)		205			190		23	1114		99	1222	
v/s Ratio Prot							0.00	0.35		c0.05	c0.40	
v/s Ratio Perm		0.01			c0.05							
v/c Ratio		0.06			0.37		0.30	0.57		0.87	0.61	
Uniform Delay, d1		23.0			23.9		29.6	6.9		28.3	6.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			1.2		7.4	0.7		50.4	0.9	
Delay (s)		23.1			25.2		36.9	7.6		78.7	6.9	
Level of Service		C			C		D	A		E	A	
Approach Delay (s)		23.1			25.2			7.9			14.3	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	60.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		

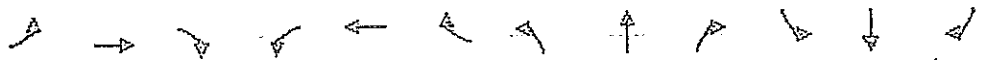
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	166	11	7	128	0	19	0	9	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	187	12	8	144	0	21	0	10	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	144			199			352	352	193	362	358	144
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	144			199			352	352	193	362	358	144
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			96	100	99	100	100	100
cM capacity (veh/h)	1439			1374			600	569	849	584	565	904

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	199	152	31	0
Volume Left	0	8	21	0
Volume Right	12	0	10	0
cSH	1439	1374	662	1700
Volume to Capacity	0.00	0.01	0.05	0.00
Queue Length 95th (ft)	0	0	4	0
Control Delay (s)	0.0	0.4	10.7	0.0
Lane LOS		A	B	A
Approach Delay (s)	0.0	0.4	10.7	0.0
Approach LOS			B	A

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	22.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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
Lane Util. Factor		1.00			1.00			1.00	1.00		1.00	1.00
Frpb, ped/bikes		0.98			0.97			1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00			1.00			1.00	1.00		1.00	1.00
Frt		0.95			0.92			1.00	0.99		1.00	1.00
Flt Protected		0.98			0.98			0.95	1.00		0.95	1.00
Satd. Flow (prot)		1710			1622			1770	1833		1770	1860
Flt Permitted		0.88			0.87			0.95	1.00		0.95	1.00
Satd. Flow (perm)		1524			1432			1770	1833		1770	1860
Volume (vph)	6	6	7	55	1	89	6	709	70	92	629	5
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)	7	7	8	61	1	99	7	788	78	102	699	6
RTOR Reduction (vph)	0	7	0	0	86	0	0	4	0	0	0	0
Lane Group Flow (vph)	0	15	0	0	75	0	7	862	0	102	705	0
Confl. Bikes (#/hr)			10			10			10			10
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		7.8			7.8		0.7	43.7		5.0	48.0	
Effective Green, g (s)		7.8			7.8		0.7	43.7		5.0	48.0	
Actuated g/C Ratio		0.11			0.11		0.01	0.64		0.07	0.70	
Clearance Time (s)		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	
Lane Grp Cap (vph)		174			163		18	1169		129	1303	
v/s Ratio Prot							0.00	c0.47		c0.06	0.38	
v/s Ratio Perm		0.01			c0.05							
v/c Ratio		0.09			0.46		0.39	0.74		0.79	0.54	
Uniform Delay, d1		27.2			28.4		33.7	8.5		31.2	4.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			2.1		13.4	2.5		27.2	0.5	
Delay (s)		27.4			30.4		47.0	10.9		58.5	5.4	
Level of Service		C			C		D	B		E	A	
Approach Delay (s)		27.4			30.4			11.2			12.1	
Approach LOS		C			C			B			B	

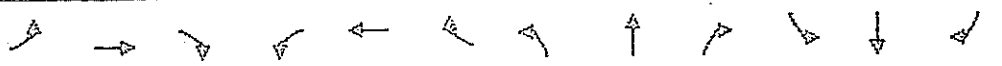
Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	68.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	160	10	6	135	0	38	0	23	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	180	11	7	152	0	43	0	26	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	152			191			351	351	185	376	356	152
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	152			191			351	351	185	376	356	152
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			93	100	97	100	100	100
cM capacity (veh/h)	1429			1383			602	571	857	561	567	895

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	191	158	69	0
Volume Left	0	7	43	0
Volume Right	11	0	26	0
cSH	1429	1383	678	1700
Volume to Capacity	0.00	0.00	0.10	0.00
Queue Length 95th (ft)	0	0	8	0
Control Delay (s)	0.0	0.4	10.9	0.0
Lane LOS		A	B	A
Approach Delay (s)	0.0	0.4	10.9	0.0
Approach LOS			B	A

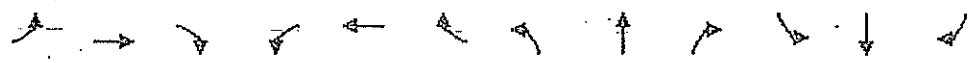
Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	22.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↑			↑	
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	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.97			0.97			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.92			0.91			1.00			1.00	
Flt Protected		0.99			0.98			0.95			0.95	
Satd. Flow (prot)		1653			1620			1770			1770	
Flt Permitted		0.91			0.87			0.95			0.95	
Satd. Flow (perm)		1527			1441			1770			1770	
Volume (vph)	6	4	13	57	1	105	6	493	82	80	674	2
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)	7	4	14	63	1	117	7	548	91	89	749	2
RTOR Reduction (vph)	0	12	0	0	101	0	0	7	0	0	0	0
Lane Group Flow (vph)	0	13	0	0	80	0	7	632	0	89	751	0
Confl. Bikes (#/hr)			10			10			10			10
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		7.7			7.7		0.7	33.6		3.1	36.0	
Effective Green, g (s)		7.7			7.7		0.7	33.6		3.1	36.0	
Actuated g/C Ratio		0.14			0.14		0.01	0.60		0.05	0.64	
Clearance Time (s)		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	
Lane Grp Cap (vph)		208			197		22	1082		97	1189	
v/s Ratio Prot							0.00	0.35		c0.05	c0.40	
v/s Ratio Perm		0.01			c0.06							
v/c Ratio		0.06			0.41		0.32	0.58		0.92	0.63	
Uniform Delay, d1		21.2			22.3		27.6	7.1		26.5	6.2	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			1.4		8.2	0.8		64.5	1.1	
Delay (s)		21.3			23.6		35.8	7.9		91.0	7.3	
Level of Service		C			C		D	A		F	A	
Approach Delay (s)		21.3			23.6			8.2			16.2	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	56.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		

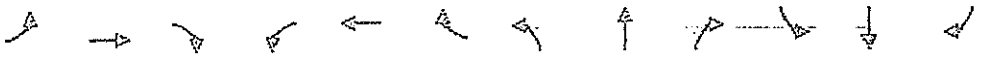
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	166	34	17	128	0	57	0	26	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	187	38	19	144	0	64	0	29	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	144			225			388	388	206	417	407	144
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	144			225			388	388	206	417	407	144
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			89	100	97	100	100	100
cM capacity (veh/h)	1439			1344			565	539	835	521	526	904

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	225	163	93	0
Volume Left	0	19	64	0
Volume Right	38	0	29	0
cSH	1439	1344	629	1700
Volume to Capacity	0.00	0.01	0.15	0.00
Queue Length 95th (ft)	0	1	13	0
Control Delay (s)	0.0	1.0	11.7	0.0
Lane LOS		A	B	A
Approach Delay (s)	0.0	1.0	11.7	0.0
Approach LOS			B	A

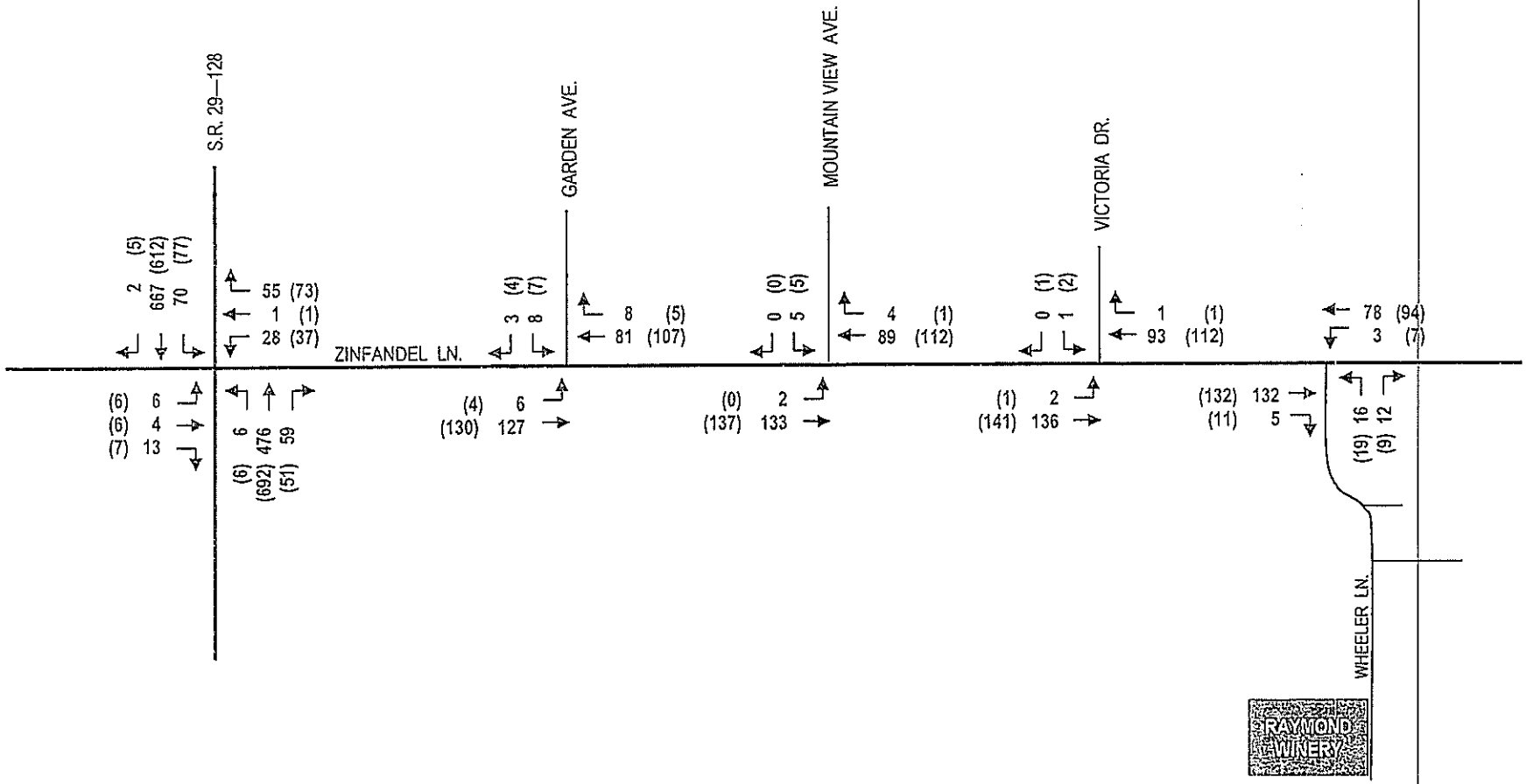
Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	32.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			↑			↑	
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	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.98			0.97		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.92		1.00	0.98		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1715			1628		1770	1830		1770	1860	
Flt Permitted		0.90			0.87		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1567			1440		1770	1830		1770	1860	
Volume (vph)	6	6	7	68	1	114	6	709	79	106	629	5
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)	7	7	8	76	1	127	7	788	88	118	699	6
RTOR Reduction (vph)	0	7	0	0	86	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	15	0	0	118	0	7	871	0	118	705	0
Confl. Bikes (#/hr)			10			10			10			10
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		10.2			10.2		0.7	40.6		6.1	46.0	
Effective Green, g (s)		10.2			10.2		0.7	40.6		6.1	46.0	
Actuated g/C Ratio		0.15			0.15		0.01	0.59		0.09	0.67	
Clearance Time (s)		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	
Lane Grp Cap (vph)		232			213		18	1078		157	1242	
v/s Ratio Prot							0.00	c0.48		c0.07	0.38	
v/s Ratio Perm		0.01			c0.08							
v/c Ratio		0.07			0.55		0.39	0.81		0.75	0.57	
Uniform Delay, d1		25.2			27.2		33.9	11.1		30.7	6.1	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			3.1		13.4	4.5		18.2	0.6	
Delay (s)		25.4			30.3		47.2	15.6		48.9	6.7	
Level of Service		C			C		D	B		D	A	
Approach Delay (s)		25.4			30.3			15.9			12.8	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	16.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	68.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Counts: 8/25/12, 8/28/12

Turning Volumes At Side Streets Surveyed During Existing Weekday PM and (Weekend) Peak Hour Counts

North

omni-means

figure A-1