

APPENDIX A
GENERAL PLAN BUILDOUT POST-PROCESSING
WORKSHEETS



Memorandum

To: Sunny Y. Patel, LLG Engineers

From: Janet Harvey, Iteris, Inc.
Luke Yang, Iteris, Inc.

Date: April 24, 2009

Re: City of Corona Buildout Traffic Forecast Data for TTM # 34760 Residential Development Project Using City Travel Demand Model with RTP Projects and the Riverside – Orange County Connection

JIP No.: J09-0000

The purpose of this memo is to summarize the results and the methodology used by Iteris, Inc. to generate future turning volumes from the travel demand model developed for the City of Corona Circulation Element update. **Note that these are based on data from the Revised Travel Demand Model of the City of Corona's General Plan, with selected regional projects from the SCAG Regional Transportation Plan (RTP) as well as the Riverside County-to-Orange County Connection.** Also provided in the memo is the requested model projected peak hour volume data for LLG, Engineers at the following locations:

TTM #34760 Residential Development:

1. Mountain Gate Drive (n/s) @ Lincoln Avenue/Upper Drive (e/w)
2. Main Street (n/s) @ Upper Drive (e/w)

The methodology compares the existing model volumes to the future model volumes to calculate projected traffic growth.

Volume Adjustment and B-turn Methodology

Using the City of Corona General Plan Buildout transportation model (revised as noted above) with selected SCAG RTP projects added as well as the Riverside County-to-Orange County Connection, projected traffic volumes were obtained for each intersection. The model produces peak period and off-peak period volumes (6 AM - 9 AM, 9 AM – 3 PM, 3 PM – 7 PM and 7 PM – 6 AM). Before converting the model peak period link volumes to future turning movement volumes for analysis, the model volumes must be reviewed and adjusted.

The first step is to obtain the approach and departure volumes from the model for each leg of the analyzed intersections. The next step converts the model approach and departure volumes from AM and PM peak period volumes to peak hour volumes. The AM peak hour volumes are calculated by multiplying the AM peak period volumes by 38%. Similarly, the PM peak hour

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volumes are calculated by multiplying the PM period volumes by 28%. These are the percentages of vehicles that are assumed to occur in the peak hour of the peak period. These factors are derived from SCAG research. The next step is to determine the difference between the base year peak hour model volumes and the buildout peak hour model volumes. This “difference” represents the projected growth in traffic on each approach to the buildout of the General Plan using the SCAG 2025 CTP model.

The following tables provide the model-generated growth for the AM and PM peak hours (inbound and outbound) for the requested intersections.

**Temescal Industrial Phase I Project
 Buildout Year - AM Peak Hour Traffic Volume Growth
 (With RTP and Riverside County-to-Orange County Connector)**

Intersection ⁽¹⁾	Approach				Departure			
	NL	EL	SL	WL	NL	EL	SL	WL
1. Mountain Gate Dr / Lincoln Ave-Upper Dr	0	63	34	5	19	4	5	75
2. Main St / Upper Dr	17	64	51	56	73	31	10	74

NL=North Leg, EL=East Leg, SL=South Leg, WL=West Leg
 Note: (1) Bolded roads represent north-south links at the intersections.

**Temescal Industrial Phase I Project
 Buildout Year - PM Peak Hour Traffic Volume Growth
 (With RTP and Riverside County-to-Orange County Connector)**

Intersection ⁽¹⁾	Approach				Departure			
	NL	EL	SL	WL	NL	EL	SL	WL
3. Mountain Gate Dr / Lincoln Ave-Upper Dr	21	14	17	95	27	64	36	19
4. Main St / Upper Dr	83	34	22	67	29	68	55	55

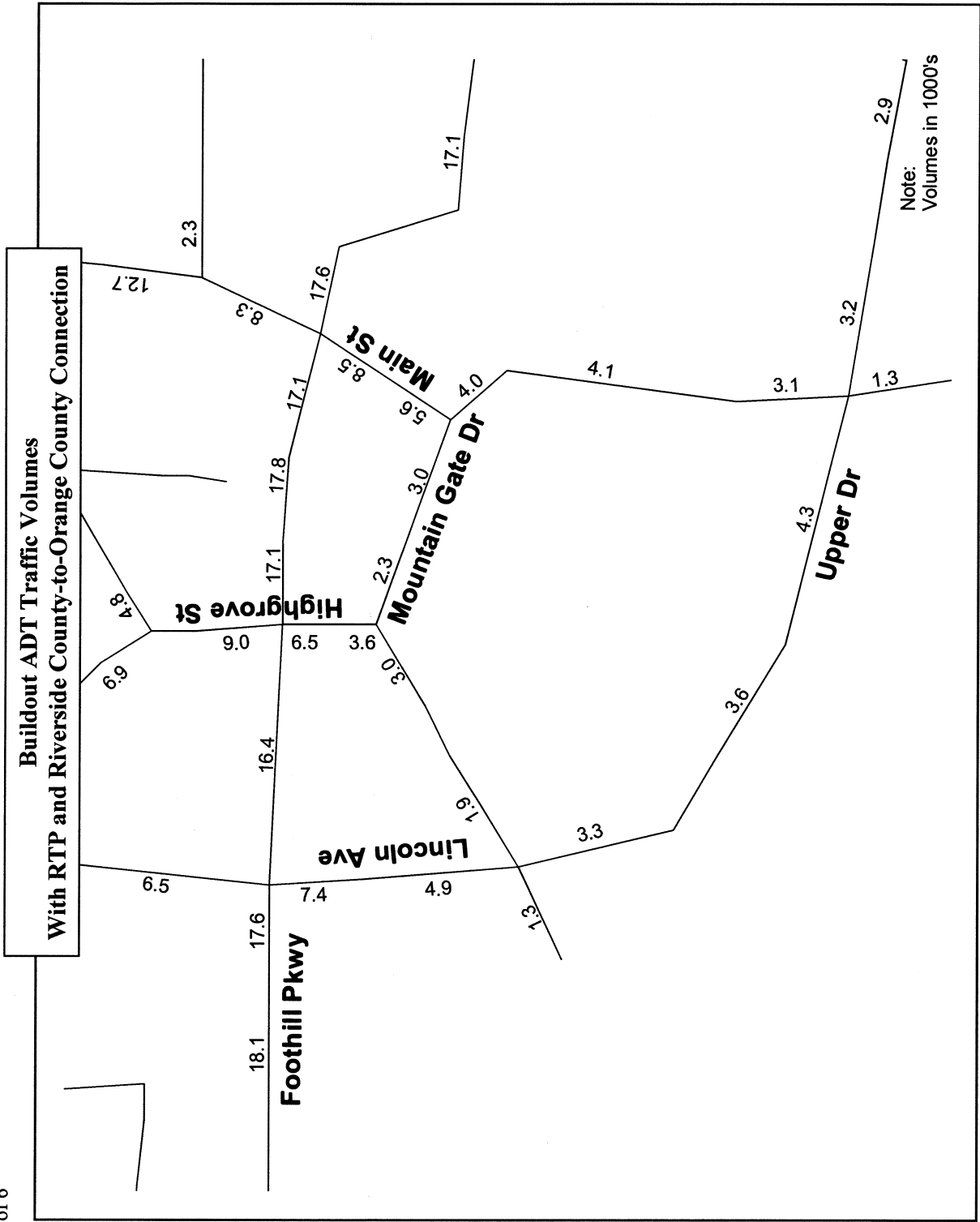
NL=North Leg, EL=East Leg, SL=South Leg, WL=West Leg
 Note: (1) Bolded roads represent north-south links at the intersections.

Next, the base year turning movement counts (adjusted to 2002) for each intersection must be converted to approach and departure volumes for each leg of the intersection. Once the base counts are in this format, the difference between the buildout model and base model are then added to the base year counts for each corresponding approach and departure volume. This step provides the adjusted volumes that will be used to determine the buildout turning movement volumes. The next process in the forecasting of future turning volumes applies the B-turn methodology. The B-turn methodology is generally described in the “National Cooperative Highway Research Program Report (NCHRP) 255: Highway Traffic Data for Urbanized Area Project Planning and Design”, Chapter 8. The B-turn method uses the base year turning percentages (from traffic counts) and proceeds through an iterative computational technique to produce a final set of future year turning volumes. The computations involve alternatively balancing the rows (approaches) and the columns (departures) of a turning movement matrix until an acceptable convergence is obtained. Future year link volumes are fixed using this method and the turning movements are adjusted to match. The results must be checked for reasonableness, and manual adjustments are sometimes necessary. Iteris has herein provided model growth but has not applied B-turns.

Note that all provided volumes are from a Citywide General Plan level model that was not specifically developed for analysis of individual intersection turning movements. Therefore, please review each projected volume carefully and apply adjustments as warranted based on local conditions and professional judgment.

Buildout ADT Traffic Volumes

As requested, the Buildout ADT traffic volumes using the Revised City Travel Demand Model with RTP Projects as well as the Riverside County-to-Orange County Connection are shown on selected links in the following graphic:



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City of Corona Buildout Traffic Forecast Data
April 27, 2009
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Please do not hesitate to let us know if you have any questions or comments regarding the methodology or results.

cc: File

APPENDIX E
DATA FORMULATION FOR POST PROCESSING
AM PEAK HOUR
TTM NO. 34760 RESIDENTIAL DEVELOPMENT, CORONA

Existing Count (2007 Conditions)				Model Growth Between Year 2007 & Year 2025			Related Projects Traffic Not Accounted For In Model			Year 2025 Cumulative to be Post Process	
				Factor = 0.78							
				Growth (2002-2025)	Growth (2007-2025)	Total					
1. Mountain Gate Drive at Lincoln Crive/Upper Drive											
NL	61	NBA	156	34	27	27	NL	0	0	NBA	183
NT	88	SBD	87	5	4	4	NT	0	0	SBD	91
NR	7						NR	0			
SL	55	SBA	205	0	0	0	SL	0	0	SBA	205
ST	61	NBD	224	19	15	15	ST	0	0	NBD	239
SR	89						SR	0			
EL	67	EBA	165	5	4	4	EL	0	0	EBA	169
ET	81	WBD	349	75	59	59	ET	0	0	WBD	408
ER	17						ER	0			
WL	9	WBA	277	63	49	49	WL	0	0	WBA	326
WT	199	EBD	143	4	3	3	WT	0	0	EBD	146
WR	69						WR	0			
2. Malaga Street at Upper Drive											
NL	16	NBA	33	0	0	0	NL	0	0	NBA	33
NT	0	SBD	16	0	0	0	NT	0	0	SBD	16
NR	17						NR	0			
SL	0	SBA	0	0	0	0	SL	0	0	SBA	0
ST	0	NBD	0	0	0	0	ST	0	0	NBD	0
SR	0						SR	0			
EL	0	EBA	143	56	44	44	EL	0	0	EBA	187
ET	135	WBD	282	74	58	58	ET	0	0	WBD	340
ER	8						ER	0			
WL	8	WBA	274	74	58	58	WL	0	0	WBA	332
WT	266	EBD	152	56	44	44	WT	0	0	EBD	196
WR	0						WR	0			
3. Main Street at Upper Drive											
NL	10	NBA	58	51	40	40	NL	0	0	NBA	98
NT	34	SBD	51	10	8	8	NT	0	0	SBD	59
NR	14						NR	0			
SL	92	SBA	180	17	13	13	SL	0	0	SBA	193
ST	23	NBD	438	73	57	57	ST	0	0	NBD	495
SR	65						SR	0			
EL	104	EBA	189	56	44	44	EL	0	0	EBA	233
ET	69	WBD	219	74	58	58	ET	0	0	WBD	277
ER	16						ER	0			
WL	12	WBA	456	64	50	50	WL	0	0	WBA	506
WT	144	EBD	175	31	24	24	WT	0	0	EBD	199
WR	300						WR	0			

1. Mountain Gate Drive at Lincoln Crive/Upper Drive

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH	LEFT	61	NORTHBOUND	
BOUND	THRU	88	IN ...	183
	RIGHT	7	OUT ...	91
SOUTH	LEFT	55	SOUTHBOUND	
BOUND	THRU	61	IN ...	205
	RIGHT	89	OUT ...	239
EAST	LEFT	67	EASTBOUND	
BOUND	THRU	81	IN ...	169
	RIGHT	17	OUT ...	408
WEST	LEFT	9	WESTBOUND	
BOUND	THRU	199	IN ...	326
	RIGHT	69	OUT ...	146

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH	LEFT	61	76
BOUND	THRU	88	98
	RIGHT	7	8
SOUTH	LEFT	55	55
BOUND	THRU	61	62
	RIGHT	89	91
EAST	LEFT	67	67
BOUND	THRU	81	85
	RIGHT	17	19
WEST	LEFT	9	11
BOUND	THRU	199	241
	RIGHT	69	75

1. Mountain Gate Drive at Lincoln Crive/Upper Drive

AM PEAK HOUR

***** SEVENTH ROW ITERATION FOLLOWS *****

OUTBOUND LINK

	1	2	3	4	5	6	FUT. IN-FLOW
INBOUND	1	0	65.88	84.55	18.57	0	169
	2	90.48	0	52.99	61.52	0	205
	3	240.69	74.51	0	10.8	0	326
LINK	4	76.35	98.34	8.3	0	0	183
	5	0	0	0	0	0	0
	6	0	0	0	0	0	0
ADJ.FUT.OUTFLOW	407.53	238.73	145.84	90.9	0	0	883
FUTURE OUTFLOW	408	239	146	91	0	0	884
DIFFERENCE (%)	-0.1155	-0.1128	-0.1083	-0.1111	0	0	

***** SEVENTH COLUMN ITERATION FOLLOWS *****

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

Modified by: COMSIS Corp. (M. Roskin) 2/13/86

*** RESULTS ***

	1	2	OUTBOUND LINK		5	ADJ FUTURE INFLOW	START FUTURE INFLOW (%)	DIFF	
	1	2	3	4	5	6			
INBOUND	1	0	66	85	19	0	169	169	0.1
	2	91	0	53	62	0	205	205	0.1
	3	241	75	0	11	0	326	326	0.1
LINK	4	76	98	8	0	0	183	183	0.1
	5	0	0	0	0	0	0	0	0.0
	6	0	0	0	0	0	0	0	0.0
OUTFLOWS:									
STARTING	408	239	146	91	0	0	884	883	

	BALANCING APPROACH	BALANCING DEPARTURE	DIFFERENCE (APP. -DEP.)
NBL	76	76	0
NBT	98	98	0
NBR	8	8	0
SBL	53	53	0
SBT	62	62	0
SBR	90	91	0
EBL	66	66	0
EBT	85	85	0
EBR	19	19	0
WBL	11	11	0
WBT	241	241	0
WBR	75	75	0

2. Malaga Street at Upper Drive

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH	LEFT	16	NORTHBOUND	
BOUND	THRU	0	IN ...	33
	RIGHT	17	OUT ...	16
SOUTH	LEFT	0	SOUTHBOUND	
BOUND	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
EAST	LEFT	0	EASTBOUND	
BOUND	THRU	135	IN ...	187
	RIGHT	8	OUT ...	340
WEST	LEFT	8	WESTBOUND	
BOUND	THRU	266	IN ...	332
	RIGHT	0	OUT ...	196

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH	LEFT	16	16
BOUND	THRU	0	0
	RIGHT	17	17
SOUTH	LEFT	0	0
BOUND	THRU	0	0
	RIGHT	0	0
EAST	LEFT	0	0
BOUND	THRU	135	179
	RIGHT	8	8
WEST	LEFT	8	8
BOUND	THRU	266	324
	RIGHT	0	0

2. Malaga Street at Upper Drive
AM PEAK HOUR

***** SEVENTH ROW ITERATION FOLLOWS *****
OUTBOUND LINK

	1	2	3	4	5	6	FUT. IN- FLOW	
INBOUND	1	0	0	178.73	8.27	0	0	187
	2	0	0	0	0	0	0	0
	3	324.27	0	0	7.73	0	0	332
LINK	4	15.87	0	17.13	0	0	0	33
	5	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0
ADJ.FUT.OUTFLOW	340.14	0	195.86	16	0	0	0	552
FUTURE OUTFLOW	340	0	196	16	0	0	0	552
DIFFERENCE (%)	0.0419	0	-0.0713	-0.0178	0	0	0	

***** SEVENTH COLUMN ITERATION FOLLOWS *****

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
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*** RESULTS ***

	1	2	3	4	5	6	ADJ FUTURE INFLOW	START FUTURE (%) INFLOW DIFF		
INBOUND	1	0	0	179	8	0	0	187	187	0.1
	2	0	0	0	0	0	0	0	0	0.0
	3	324	0	0	8	0	0	332	332	0.0
LINK	4	16	0	17	0	0	0	33	33	0.0
	5	0	0	0	0	0	0	0	0	0.0
	6	0	0	0	0	0	0	0	0	0.0
OUTFLOWS: STARTING	340	0	196	16	0	0	0	552		552

	BALANCING APPROACH	BALANCING DEPARTURE	DIFFERENCE (APP. -DEP.)
NBL	16	16	0
NBT	0	0	0
NBR	17	17	0
SBL	0	0	0
SBT	0	0	0
SBR	0	0	0
EBL	0	0	0
EBT	179	179	0
EBR	8	8	0
WBL	8	8	0
WBT	324	324	0
WBR	0	0	0

3. Main Street at Upper Drive

AM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH	LEFT	10	NORTHBOUND	
BOUND	THRU	34	IN ...	98
	RIGHT	14	OUT ...	59
SOUTH	LEFT	92	SOUTHBOUND	
BOUND	THRU	23	IN ...	193
	RIGHT	65	OUT ...	495
EAST	LEFT	104	EASTBOUND	
BOUND	THRU	69	IN ...	233
	RIGHT	16	OUT ...	277
WEST	LEFT	12	WESTBOUND	
BOUND	THRU	144	IN ...	506
	RIGHT	300	OUT ...	199

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH	LEFT	10	20
BOUND	THRU	34	55
	RIGHT	14	23
SOUTH	LEFT	92	92
BOUND	THRU	23	24
	RIGHT	65	77
EAST	LEFT	104	127
BOUND	THRU	69	85
	RIGHT	16	21
WEST	LEFT	12	13
BOUND	THRU	144	180
	RIGHT	300	312

**3. Main Street at Upper Drive
AM PEAK HOUR**

***** SEVENTH ROW ITERATION FOLLOWS *****
OUTBOUND LINK

	1	2	3	4	5	6	FUT. IN- FLOW
INBOUND	0	127.18	84.75	21.07	0	0	233
	77.2	0	91.32	24.48	0	0	193
LINK	180.19	312.36	0	13.45	0	0	506
	19.6	55.46	22.94	0	0	0	98
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
ADJ.FUT.OUTFLOW	277	495	199	59	0	0	1030
FUTURE OUTFLOW	277	495	199	59	0	0	1030
DIFFERENCE (%)	-0.0001	-0.0002	0.0005	0.0004	0	0	

***** SEVENTH COLUMN ITERATION FOLLOWS *****

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
Modified by: COMSIS Corp. (M. Roskin) 2/13/86

*** RESULTS ***

	1	2	3	4	5	6	ADJ FUTURE INFLOW	START FUTURE (%) INFLOW DIFF
INBOUND	0	127	85	21	0	0	233	233 0.0
	77	0	91	24	0	0	193	193 0.0
LINK	180	312	0	13	0	0	506	506 0.0
	20	55	23	0	0	0	98	98 0.0
	0	0	0	0	0	0	0	0 0.0
	0	0	0	0	0	0	0	0 0.0
OUTFLOWS: STARTING	277	495	199	59	0	0	1,030	1,030

	BALANCING APPROACH	BALANCING DEPARTURE	DIFFERENCE (APP. -DEP.)
NBL	20	20	0
NBT	55	55	0
NBR	23	23	0
SBL	91	91	0
SBT	24	24	0
SBR	77	77	0
EBL	127	127	0
EBT	85	85	0
EBR	21	21	0
WBL	13	13	0
WBT	180	180	0
WBR	312	312	0

APPENDIX E
DATA FORMULATION FOR POST PROCESSING
PM PEAK HOUR
TTM NO. 34760 RESIDENTIAL DEVELOPMENT, CORONA

Existing Count (2007 Conditions)				Model Growth Between Year 2007 & Year 2025			Related Projects Traffic Not Accounted For In Model			Year 2025 Cumulative to be Post Process	
				Factor = 0.78							
				Growth (2002-2025)	Growth (2007-2025)	Total					
1. Mountain Gate Drive at Lincoln Crive/Upper Drive											
NL	19	NBA	68	17	13	13	NL	0	0	NBA	81
NT	41	SBD	91	36	28	28	NT	0	0	SBD	119
NR	8						NR	0			
SL	7	SBA	92	21	16	16	SL	0	0	SBA	108
ST	58	NBD	102	27	21	21	ST	0	0	NBD	123
SR	27						SR	0			
EL	44	EBA	313	95	74	74	EL	0	0	EBA	387
ET	240	WBD	129	19	15	15	ET	0	0	WBD	144
ER	29						ER	0			
WL	4	WBA	104	14	11	11	WL	0	0	WBA	115
WT	83	EBD	255	64	50	50	WT	0	0	EBD	305
WR	17						WR	0			
						Total					
2. Malaga Street at Upper Drive											
NL	9	NBA	24	0	0	0	NL	0	0	NBA	24
NT	0	SBD	30	0	0	0	NT	0	0	SBD	30
NR	15						NR	0			
SL	0	SBA	0	0	0	0	SL	0	0	SBA	0
ST	0	NBD	0	0	0	0	ST	0	0	NBD	0
SR	0						SR	0			
EL	0	EBA	259	67	52	52	EL	0	0	EBA	311
ET	250	WBD	106	55	43	43	ET	0	0	WBD	149
ER	9						ER	0			
WL	21	WBA	118	55	43	43	WL	0	0	WBA	161
WT	97	EBD	265	67	52	52	WT	0	0	EBD	317
WR	0						WR	0			
						Total					
3. Main Street at Upper Drive											
NL	7	NBA	42	22	17	17	NL	0	0	NBA	59
NT	13	SBD	54	55	43	43	NT	0	0	SBD	97
NR	22						NR	0			
SL	111	SBA	212	83	65	65	SL	0	0	SBA	277
ST	33	NBD	131	29	23	23	ST	0	0	NBD	154
SR	68						SR	0			
EL	43	EBA	268	67	52	52	EL	0	0	EBA	320
ET	213	WBD	162	55	43	43	ET	0	0	WBD	205
ER	12						ER	0			
WL	9	WBA	171	34	27	27	WL	0	0	WBA	198
WT	87	EBD	346	68	53	53	WT	0	0	EBD	399
WR	75						WR	0			

1. Mountain Gate Drive at Lincoln Crive/Upper Drive

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH	LEFT	19	NORTHBOUND	
BOUND	THRU	41	IN ...	81
	RIGHT	8	OUT ...	119
SOUTH	LEFT	7	SOUTHBOUND	
BOUND	THRU	58	IN ...	108
	RIGHT	27	OUT ...	123
EAST	LEFT	44	EASTBOUND	
BOUND	THRU	240	IN ...	387
	RIGHT	29	OUT ...	144
WEST	LEFT	4	WESTBOUND	
BOUND	THRU	83	IN ...	115
	RIGHT	17	OUT ...	305

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH	LEFT	19	23
BOUND	THRU	41	49
	RIGHT	8	9
SOUTH	LEFT	7	7
BOUND	THRU	58	72
	RIGHT	27	29
EAST	LEFT	44	56
BOUND	THRU	240	289
	RIGHT	29	42
WEST	LEFT	4	5
BOUND	THRU	83	92
	RIGHT	17	18

1. Mountain Gate Drive at Lincoln Crive/Upper Drive

PM PEAK HOUR

***** SEVENTH ROW ITERATION FOLLOWS *****
 OUTBOUND LINK

	1	2	3	4	5	6	FUT. IN-FLOW
INBOUND	0	55.62	289.02	42.35	0	0	387
LINK	29.28	0	7.13	71.59	0	0	108
	91.52	18.47	0	5.02	0	0	115
	23.01	48.9	9.09	0	0	0	81
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
ADJ.FUT.OUTFLOW	143.81	123	305.24	118.96	0	0	691
FUTURE OUTFLOW	144	123	305	119	0	0	691
DIFFERENCE (%)	-0.1352	-0.0038	0.0787	-0.0341	0	0	

***** SEVENTH COLUMN ITERATION FOLLOWS *****

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

Modified by: COMSIS Corp. (M. Roskin) 2/13/86

*** RESULTS ***

	1	2	3	4	5	6	ADJ FUTURE INFLOW	START FUTURE (%) INFLOW DIFF
INBOUND	0	56	289	42	0	0	387	387 -0.1
LINK	29	0	7	72	0	0	108	108 0.1
	92	18	0	5	0	0	115	115 0.1
	23	49	9	0	0	0	81	81 0.0
	0	0	0	0	0	0	0	0 0.0
	0	0	0	0	0	0	0	0 0.0
OUTFLOWS: STARTING	144	123	305	119	0	0	691	691

	BALANCING APPROACH	BALANCING DEPARTURE	DIFFERENCE (APP. -DEP.)
NBL	23	23	0
NBT	49	49	0
NBR	9	9	0
SBL	7	7	0
SBT	72	72	0
SBR	29	29	0
EBL	56	56	0
EBT	289	289	0
EBR	42	42	0
WBL	5	5	0
WBT	92	92	0
WBR	18	18	0

2. Malaga Street at Upper Drive

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH	LEFT	9	NORTHBOUND	
BOUND	THRU	0	IN ...	24
	RIGHT	15	OUT ...	30
SOUTH	LEFT	0	SOUTHBOUND	
BOUND	THRU	0	IN ...	0
	RIGHT	0	OUT ...	0
EAST	LEFT	0	EASTBOUND	
BOUND	THRU	250	IN ...	311
	RIGHT	9	OUT ...	149
WEST	LEFT	21	WESTBOUND	
BOUND	THRU	97	IN ...	161
	RIGHT	0	OUT ...	317

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH	LEFT	9	9
BOUND	THRU	0	0
	RIGHT	15	15
SOUTH	LEFT	0	0
BOUND	THRU	0	0
	RIGHT	0	0
EAST	LEFT	0	0
BOUND	THRU	250	302
	RIGHT	9	9
WEST	LEFT	21	22
BOUND	THRU	97	140
	RIGHT	0	0

**2. Malaga Street at Upper Drive
PM PEAK HOUR**

***** SEVENTH ROW ITERATION FOLLOWS *****
OUTBOUND LINK

	1	2	3	4	5	6	FUT. IN- FLOW	
INBOUND	1	0	0	302.66	8.34	0	0	311
	2	0	0	0	0	0	0	0
	3	139.37	0	0	21.63	0	0	161
LINK	4	9.37	0	14.63	0	0	0	24
	5	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0
ADJ.FUT.OUTFLOW	148.75	0	317.29	29.97	0	0	0	496
FUTURE OUTFLOW	149	0	317	30	0	0	0	496
DIFFERENCE (%)	-0.171	0	0.0903	-0.1047	0	0	0	

***** SEVENTH COLUMN ITERATION FOLLOWS *****

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
Modified by: COMSIS Corp. (M. Roskin) 2/13/86

*** RESULTS ***

	1	2	3	4	5	6	ADJ FUTURE INFLOW	START FUTURE (%) INFLOW DIFF		
	OUTBOUND LINK									
INBOUND	1	0	0	302	8	0	0	311	311	-0.1
	2	0	0	0	0	0	0	0	0	0.0
	3	140	0	0	22	0	0	161	161	0.2
LINK	4	9	0	15	0	0	0	24	24	0.0
	5	0	0	0	0	0	0	0	0	0.0
	6	0	0	0	0	0	0	0	0	0.0
OUTFLOWS: STARTING	149	0	317	30	0	0	0	496	496	

	BALANCING APPROACH	BALANCING DEPARTURE	DIFFERENCE (APP. -DEP.)
NBL	9	9	0
NBT	0	0	0
NBR	15	15	0
SBL	0	0	0
SBT	0	0	0
SBR	0	0	0
EBL	0	0	0
EBT	303	302	0
EBR	8	8	0
WBL	22	22	0
WBT	139	140	0
WBR	0	0	0

3. Main Street at Upper Drive

PM PEAK HOUR

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86

Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	APPROACH	FY TOTAL
NORTH	LEFT	7	NORTHBOUND	
BOUND	THRU	13	IN ...	59
	RIGHT	22	OUT ...	97
SOUTH	LEFT	111	SOUTHBOUND	
BOUND	THRU	33	IN ...	277
	RIGHT	68	OUT ...	154
EAST	LEFT	43	EASTBOUND	
BOUND	THRU	213	IN ...	320
	RIGHT	12	OUT ...	205
WEST	LEFT	9	WESTBOUND	
BOUND	THRU	87	IN ...	198
	RIGHT	75	OUT ...	399

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)

*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH	LEFT	7	11
BOUND	THRU	13	19
	RIGHT	22	29
SOUTH	LEFT	111	126
BOUND	THRU	33	60
	RIGHT	68	91
EAST	LEFT	43	54
BOUND	THRU	213	244
	RIGHT	12	22
WEST	LEFT	9	14
BOUND	THRU	87	103
	RIGHT	75	81

**3. Main Street at Upper Drive
PM PEAK HOUR**

***** SEVENTH ROW ITERATION FOLLOWS *****
OUTBOUND LINK

	1	2	3	4	5	6	FUT. IN- FLOW	
	1	0	53.8	243.99	22.21	0	0	320
INBOUND	2	91.29	0	125.44	60.26	0	0	277
	3	102.41	81.18	0	14.41	0	0	198
LINK	4	11.02	18.82	29.16	0	0	0	59
	5	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0
ADJ.FUT.OUTFLOW	204.72	153.8	398.59	96.89	0	0	0	854
FUTURE OUTFLOW	205	154	399	97	0	0	0	855
DIFFERENCE (%)	-0.1348	-0.1284	-0.1034	-0.1169	0	0	0	

***** SEVENTH COLUMN ITERATION FOLLOWS *****

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
Modified by: COMSIS Corp. (M. Roskin) 2/13/86

*** RESULTS ***

	1	2	3	4	5	6	ADJ FUTURE INFLOW	START FUTURE (%) INFLOW DIFF		
	1	0	54	244	22	0	0	320	320	0.1
INBOUND	2	91	0	126	60	0	0	277	277	0.1
	3	103	81	0	14	0	0	198	198	0.1
LINK	4	11	19	29	0	0	0	59	59	0.1
	5	0	0	0	0	0	0	0	0	0.0
	6	0	0	0	0	0	0	0	0	0.0
OUTFLOWS: STARTING	205	154	399	97	0	0	0	855	854	

	BALANCING APPROACH	BALANCING DEPARTURE	DIFFERENCE (APP. -DEP.)
NBL	11	11	0
NBT	19	19	0
NBR	29	29	0
SBL	125	126	0
SBT	60	60	0
SBR	91	91	0
EBL	54	54	0
EBT	244	244	0
EBR	22	22	0
WBL	14	14	0
WBT	102	103	0
WBR	81	81	0

APPENDIX B
**GENERAL PLAN BUILDOUT INTERSECTION LEVEL OF
SERVICE CALCULATION WORKSHEETS**

GENERAL PLAN BUILDOUT TRAFFIC CONDITIONS

AM General Plan Buildout
 TTM No. 34760 Residential Development, Corona
 Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
 2000 HCM 4-Way Stop Method (Future Volume Alternative)

 Intersection #1 Mountain Gate Drive at Lincoln Drive/Upper Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.353
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 11.1
 Optimal Cycle: 0 Level Of Service: B

Street Name: Mountain Gate Drive Lincoln Drive/Upper Drive
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign
 Rights: Include Include Include Include
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
 Lanes: 0 0 1! 0 0 1 0 0 1 1 0 1 0 1 1 0

Volume Module:
 Base Vol: 76 98 8 55 62 91 67 85 19 11 241 75
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 76 98 8 55 62 91 67 85 19 11 241 75
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 76 98 8 55 62 91 67 85 19 11 241 75
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
 PHF Volume: 80 103 8 58 65 96 71 89 20 12 254 79
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 80 103 8 58 65 96 71 89 20 12 254 79
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 FinalVolume: 80 103 8 58 65 96 71 89 20 12 254 79

Saturation Flow Module:
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Lanes: 0.42 0.54 0.04 1.00 0.41 0.59 1.00 1.63 0.37 1.00 1.53 0.47
 Final Sat.: 227 293 24 506 237 348 477 845 193 507 851 274

Capacity Analysis Module:
 Vol/Sat: 0.35 0.35 0.35 0.11 0.28 0.28 0.15 0.11 0.10 0.02 0.30 0.29
 Crit Moves: **** **** ****
 Delay/Veh: 12.5 12.5 12.5 10.3 10.6 10.6 11.0 9.9 9.7 9.6 11.3 10.9
 Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 12.5 12.5 12.5 10.3 10.6 10.6 11.0 9.9 9.7 9.6 11.3 10.9
 LOS by Move: B B B B B B B A A A B B
 ApproachDel: 12.5 10.5 10.3 11.2
 Delay Adj: 1.00 1.00 1.00
 ApprAdjDel: 12.5 10.5 10.3 11.2
 LOS by Appr: B B B
 AllWayAvgQ: 0.5 0.5 0.5 0.1 0.3 0.3 0.2 0.1 0.1 0.0 0.4 0.4

AM General Plan Buildout
 TTM No. 34760 Residential Development, Corona
 Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
 2000 HCM Unsignalized Method (Future Volume Alternative)

 Intersection #2 Malaga Street at Upper Drive

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: B[11.0]

Street Name:	Malaga Street						Upper Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0 0	0	0	0 0 0	0	0	0 1 0	1	0	1 0 0

Volume Module:

Base Vol:	16	0	17	0	0	0	0	179	8	8	324	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	16	0	17	0	0	0	0	179	8	8	324	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	16	0	17	0	0	0	0	179	8	8	324	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	17	0	18	0	0	0	0	188	8	8	341	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	17	0	18	0	0	0	0	188	8	8	341	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	551	551	193	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	197	xxxx	xxxxx
Potent Cap.:	499	445	854	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1388	xxxx	xxxxx
Move Cap.:	497	443	854	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1388	xxxx	xxxxx
Volume/Cap:	0.03	0.00	0.02	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	633	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	11.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	*	*	*
ApproachDel:	11.0			xxxxxxx			xxxxxxx			xxxxxxx		
ApproachLOS:	B			*			*			*		

 Note: Queue reported is the number of cars per lane.

AM General Plan Buildout
 TTM No. 34760 Residential Development, Corona
 Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
 2000 HCM 4-Way Stop Method (Future Volume Alternative)

 Intersection #3 Main Street at Upper Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.779
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 16.9
 Optimal Cycle: 0 Level Of Service: C

Street Name:	Main Street						Upper Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	0	1	0	0

Volume Module:	Main Street			Main Street			Upper Drive			Upper Drive		
Base Vol:	20	55	23	92	24	77	127	85	21	13	180	312
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	55	23	92	24	77	127	85	21	13	180	312
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	20	55	23	92	24	77	127	85	21	13	180	312
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	21	58	24	97	25	81	134	89	22	14	189	328
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	21	58	24	97	25	81	134	89	22	14	189	328
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	21	58	24	97	25	81	134	89	22	14	189	328

Saturation Flow Module:	Main Street			Main Street			Upper Drive			Upper Drive		
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.71	0.29	1.00	0.24	0.76	1.00	0.80	0.20	1.00	0.37	0.63
Final Sat.:	449	347	145	467	128	412	526	464	115	557	243	422

Capacity Analysis Module:	Main Street			Main Street			Upper Drive			Upper Drive		
Vol/Sat:	0.05	0.17	0.17	0.21	0.20	0.20	0.25	0.19	0.19	0.02	0.78	0.78
Crit Moves:	****			****			****			****		
Delay/Veh:	10.4	10.5	10.5	11.6	10.2	10.2	11.4	10.0	10.0	9.1	23.6	23.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.4	10.5	10.5	11.6	10.2	10.2	11.4	10.0	10.0	9.1	23.6	23.6
LOS by Move:	B	B	B	B	B	B	B	A	A	A	C	C
ApproachDel:	10.5			10.8			10.8			23.2		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	10.5			10.8			10.8			23.2		
LOS by Appr:	B			B			B			C		
AllWayAvgQ:	0.0	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.0	2.9	2.9

PM General Plan Buildout
 TTM No. 34760 Residential Development, Corona
 Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
 2000 HCM 4-Way Stop Method (Future Volume Alternative)

 Intersection #1 Mountain Gate Drive at Lincoln Drive/Upper Drive

 Cycle (sec): 100 Critical Vol./Cap.(X): 0.266
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 9.6
 Optimal Cycle: 0 Level Of Service: A

Street Name: Mountain Gate Drive Lincoln Drive/Upper Drive
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign
 Rights: Include Include Include Include
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
 Lanes: 0 0 1! 0 0 1 0 0 1 1 0 1 0 1 1 0

Volume Module:
 Base Vol: 23 49 9 7 72 29 56 289 42 5 92 18
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 23 49 9 7 72 29 56 289 42 5 92 18
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 23 49 9 7 72 29 56 289 42 5 92 18
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
 PHF Volume: 24 52 9 7 76 31 59 304 44 5 97 19
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 24 52 9 7 76 31 59 304 44 5 97 19
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 FinalVolume: 24 52 9 7 76 31 59 304 44 5 97 19

Saturation Flow Module:
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Lanes: 0.28 0.61 0.11 1.00 0.71 0.29 1.00 1.75 0.25 1.00 1.67 0.33
 Final Sat.: 164 349 64 532 424 171 591 1144 169 529 974 195

Capacity Analysis Module:
 Vol/Sat: 0.15 0.15 0.15 0.01 0.18 0.18 0.10 0.27 0.26 0.01 0.10 0.10
 Crit Moves: **** *
 Delay/Veh: 9.8 9.8 9.8 9.2 9.5 9.5 9.2 9.9 9.7 9.2 9.2 9.0
 Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 9.8 9.8 9.8 9.2 9.5 9.5 9.2 9.9 9.7 9.2 9.2 9.0
 LOS by Move: A A A A A A A A A A A A
 ApproachDel: 9.8 9.5 9.8 9.1
 Delay Adj: 1.00 1.00 1.00
 ApprAdjDel: 9.8 9.5 9.8 9.1
 LOS by Appr: A A A
 AllWayAvgQ: 0.2 0.2 0.2 0.0 0.2 0.2 0.1 0.3 0.3 0.0 0.1 0.1

PM General Plan Buildout
 TTM No. 34760 Residential Development, Corona
 Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
 2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Malaga Street at Upper Drive

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: B[11.0]

Street Name: Malaga Street Upper Drive

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 1! 0 0 0 0 0 0 0 1 0 1 0 1 0 0

Volume Module:

Base Vol:	9	0	15	0	0	0	0	302	9	22	140	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	9	0	15	0	0	0	0	302	9	22	140	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	9	0	15	0	0	0	0	302	9	22	140	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	9	0	16	0	0	0	0	318	9	23	147	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	9	0	16	0	0	0	0	318	9	23	147	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx

Capacity Module:

Cnflct Vol:	516	516	323	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	327	xxxxx	xxxxx
Potent Cap.:	522	466	723	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	1244	xxxxx	xxxxx
Move Cap.:	515	457	723	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	1244	xxxxx	xxxxx
Volume/Cap:	0.02	0.00	0.02	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.02	xxxxx	xxxxx

Level Of Service Module:

2Way95thQ:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx
Control Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.9	xxxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxxx	628	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shrd ConDel:	xxxxx	11.0	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	*	*	*
ApproachDel:	11.0			xxxxxxx			xxxxxxx		xxxxxxx			
ApproachLOS:	B			*			*		*			*

Note: Queue reported is the number of cars per lane.

PM General Plan Buildout
 TTM No. 34760 Residential Development, Corona
 Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
 2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #3 Main Street at Upper Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.456
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 11.2
 Optimal Cycle: 0 Level Of Service: B

Street Name: Main Street Upper Drive
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	0	1	0	0

Volume Module:												
Base Vol:	11	19	29	126	60	91	54	244	22	14	103	81
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	11	19	29	126	60	91	54	244	22	14	103	81
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	19	29	126	60	91	54	244	22	14	103	81
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	12	20	31	133	63	96	57	257	23	15	108	85
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	12	20	31	133	63	96	57	257	23	15	108	85
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	12	20	31	133	63	96	57	257	23	15	108	85

Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.40	0.60	1.00	0.40	0.60	1.00	0.92	0.08	1.00	0.56	0.44
Final Sat.:	485	219	335	527	242	367	556	563	51	537	344	271

Capacity Analysis Module:												
Vol/Sat:	0.02	0.09	0.09	0.25	0.26	0.26	0.10	0.46	0.46	0.03	0.31	0.31
Crit Moves:	****			****			****			****		
Delay/Veh:	9.7	9.2	9.2	11.3	10.1	10.1	9.6	12.8	12.8	9.3	10.7	10.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.7	9.2	9.2	11.3	10.1	10.1	9.6	12.8	12.8	9.3	10.7	10.7
LOS by Move:	A	A	A	B	B	B	A	B	B	A	B	B
ApproachDel:	9.3			10.6			12.3			10.6		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	9.3			10.6			12.3			10.6		
LOS by Appr:	A			B			B			B		
AllWayAvgQ:	0.0	0.1	0.1	0.3	0.3	0.3	0.1	0.8	0.8	0.0	0.4	0.4

GENERAL PLAN BUILDOUT PLUS PROJECT TRAFFIC CONDITIONS

AM General Plan Buildout Plus Project
 TTM No. 34760 Residential Development, Corona
 Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
 2000 HCM 4-Way Stop Method (Future Volume Alternative)

 Intersection #1 Mountain Gate Drive at Lincoln Drive/Upper Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.356
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 11.2
 Optimal Cycle: 0 Level Of Service: B

Street Name: Mountain Gate Drive Lincoln Drive/Upper Drive
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign
 Rights: Include Include Include Include
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
 Lanes: 0 0 1! 0 0 1 0 0 1 1 0 1 0 1 1 0

Volume Module:
 Base Vol: 76 98 8 55 62 91 67 85 19 11 241 75
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 76 98 8 55 62 91 67 85 19 11 241 75
 Added Vol: 0 0 0 1 0 0 0 3 0 0 10 2
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 76 98 8 56 62 91 67 88 19 11 251 77
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
 PHF Volume: 80 103 8 59 65 96 71 93 20 12 264 81
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 80 103 8 59 65 96 71 93 20 12 264 81
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 FinalVolume: 80 103 8 59 65 96 71 93 20 12 264 81

Saturation Flow Module:
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Lanes: 0.42 0.54 0.04 1.00 0.41 0.59 1.00 1.64 0.36 1.00 1.53 0.47
 Final Sat.: 225 290 24 503 235 344 474 845 186 506 852 270

Capacity Analysis Module:
 Vol/Sat: 0.36 0.36 0.36 0.12 0.28 0.28 0.15 0.11 0.11 0.02 0.31 0.30
 Crit Moves: **** **** ****
 Delay/Veh: 12.6 12.6 12.6 10.3 10.6 10.6 11.0 10.0 9.8 9.7 11.5 11.1
 Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 12.6 12.6 12.6 10.3 10.6 10.6 11.0 10.0 9.8 9.7 11.5 11.1
 LOS by Move: B B B B B B B B A A B B
 ApproachDel: 12.6 10.6 10.4 11.3
 Delay Adj: 1.00 1.00 1.00
 ApprAdjDel: 12.6 10.6 10.4 11.3
 LOS by Appr: B B B
 AllWayAvgQ: 0.5 0.5 0.5 0.1 0.3 0.3 0.2 0.1 0.1 0.0 0.4 0.4

AM General Plan Buildout Plus Project
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 Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
 2000 HCM Unsignalized Method (Future Volume Alternative)

 Intersection #2 Malaga Street at Upper Drive

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: B[11.4]

Street Name:	Malaga Street						Upper Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1	0	0	0	0	0	0	1	0	0

Volume Module:

Base Vol:	16	0	17	0	0	0	0	179	8	8	324	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	16	0	17	0	0	0	0	179	8	8	324	0
Added Vol:	11	0	8	0	0	0	0	0	4	2	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	27	0	25	0	0	0	0	179	12	10	324	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	28	0	26	0	0	0	0	188	13	11	341	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	28	0	26	0	0	0	0	188	13	11	341	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	2.2	xxxx	xxxxxx

Capacity Module:

Cnflct Vol:	557	557	195	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	201	xxxx	xxxxxx
Potent Cap.:	495	442	852	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	1383	xxxx	xxxxxx
Move Cap.:	492	438	852	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	1383	xxxx	xxxxxx
Volume/Cap:	0.06	0.00	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	0.0	xxxx	xxxxxx
Control Del:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	7.6	xxxx	xxxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	617	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx
SharedQueue:	xxxxxx	0.3	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shrd ConDel:	xxxxxx	11.4	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	*	*	*
ApproachDel:	11.4			xxxxxxx			xxxxxxx			xxxxxxx		
ApproachLOS:	B				*			*			*	

 Note: Queue reported is the number of cars per lane.

AM General Plan Buildout Plus Project
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 Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
 2000 HCM 4-Way Stop Method (Future Volume Alternative)

 Intersection #3 Main Street at Upper Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.784
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 17.0
 Optimal Cycle: 0 Level Of Service: C

Street Name:	Main Street						Upper Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	0	1	0	0

Volume Module:	Main Street			Main Street			Upper Drive			Upper Drive		
Base Vol:	20	55	23	92	24	77	127	85	21	13	180	312
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	55	23	92	24	77	127	85	21	13	180	312
Added Vol:	0	0	0	0	0	2	5	3	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	20	55	23	92	24	79	132	88	21	13	181	312
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	21	58	24	97	25	83	139	93	22	14	191	328
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	21	58	24	97	25	83	139	93	22	14	191	328
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	21	58	24	97	25	83	139	93	22	14	191	328

Saturation Flow Module:	Main Street			Main Street			Upper Drive			Upper Drive		
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.71	0.29	1.00	0.23	0.77	1.00	0.81	0.19	1.00	0.37	0.63
Final Sat.:	447	346	145	466	125	413	525	466	111	555	243	419

Capacity Analysis Module:	Main Street			Main Street			Upper Drive			Upper Drive		
Vol/Sat:	0.05	0.17	0.17	0.21	0.20	0.20	0.26	0.20	0.20	0.02	0.78	0.78
Crit Moves:	****			****			****			****		
Delay/Veh:	10.4	10.6	10.6	11.6	10.3	10.3	11.5	10.1	10.1	9.2	24.0	24.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.4	10.6	10.6	11.6	10.3	10.3	11.5	10.1	10.1	9.2	24.0	24.0
LOS by Move:	B	B	B	B	B	B	B	B	B	A	C	C
ApproachDel:	10.6			10.9			10.9			23.6		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	10.6			10.9			10.9			23.6		
LOS by Appr:	B			B			B			C		
AllWayAvgQ:	0.0	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.0	2.9	2.9

PM General Plan Buildout Plus Project
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Level Of Service Computation Report
 2000 HCM 4-Way Stop Method (Future Volume Alternative)

 Intersection #1 Mountain Gate Drive at Lincoln Drive/Upper Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.277
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 9.7
 Optimal Cycle: 0 Level Of Service: A

Street Name: Mountain Gate Drive Lincoln Drive/Upper Drive
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign
 Rights: Include Include Include Include
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
 Lanes: 0 0 1! 0 0 1 0 0 1 1 0 1 0 1 1 0

Volume Module:
 Base Vol: 23 49 9 7 72 29 56 289 42 5 92 18
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 23 49 9 7 72 29 56 289 42 5 92 18
 Added Vol: 0 0 0 2 0 0 0 11 0 0 7 1
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 23 49 9 9 72 29 56 300 42 5 99 19
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
 PHF Volume: 24 52 9 9 76 31 59 316 44 5 104 20
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 24 52 9 9 76 31 59 316 44 5 104 20
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 FinalVolume: 24 52 9 9 76 31 59 316 44 5 104 20

Saturation Flow Module:
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Lanes: 0.28 0.61 0.11 1.00 0.71 0.29 1.00 1.75 0.25 1.00 1.68 0.32
 Final Sat.: 162 346 63 527 420 169 588 1142 163 526 969 190

Capacity Analysis Module:
 Vol/Sat: 0.15 0.15 0.15 0.02 0.18 0.18 0.10 0.28 0.27 0.01 0.11 0.11
 Crit Moves: **** **** **** ****
 Delay/Veh: 9.9 9.9 9.9 9.3 9.6 9.6 9.3 10.0 9.9 9.2 9.3 9.1
 Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 9.9 9.9 9.9 9.3 9.6 9.6 9.3 10.0 9.9 9.2 9.3 9.1
 LOS by Move: A A A A A A A B A A A A
 ApproachDel: 9.9 9.6 9.9 9.2
 Delay Adj: 1.00 1.00 1.00
 ApprAdjDel: 9.9 9.6 9.9 9.2
 LOS by Appr: A A A A
 AllWayAvgQ: 0.2 0.2 0.2 0.0 0.2 0.2 0.1 0.4 0.3 0.0 0.1 0.1

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Level Of Service Computation Report
 2000 HCM Unsignalized Method (Future Volume Alternative)

 Intersection #2 Malaga Street at Upper Drive

Average Delay (sec/veh): 1.3 Worst Case Level Of Service: B[11.5]

Street Name:	Malaga Street						Upper Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0 0	0	0	0 0 0	0	0	0 1 0	1	0	1 0 0

Volume Module:

Base Vol:	9	0	15	0	0	0	0	302	9	22	140	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	9	0	15	0	0	0	0	302	9	22	140	0
Added Vol:	8	0	5	0	0	0	0	0	13	9	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	17	0	20	0	0	0	0	302	22	31	140	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	18	0	21	0	0	0	0	318	23	33	147	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	18	0	21	0	0	0	0	318	23	33	147	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	542	542	329	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	341	xxxx	xxxxx
Potent Cap.:	505	450	717	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1229	xxxx	xxxxx
Move Cap.:	495	438	717	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1229	xxxx	xxxxx
Volume/Cap:	0.04	0.00	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.0	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	594	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	11.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	*	*	*
ApproachDel:	11.5			xxxxxxx			xxxxxxx			xxxxxxx		
ApproachLOS:	B			*			*			*		

 Note: Queue reported is the number of cars per lane.

PM General Plan Buildout Plus Project
 TTM No. 34760 Residential Development, Corona
 Linscott, Law and Greenspan, Engineers

Level Of Service Computation Report
 2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #3 Main Street at Upper Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.462
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 11.3
 Optimal Cycle: 0 Level Of Service: B

Street Name:	Main Street						Upper Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	0	1	0	0

Volume Module:

Base Vol:	11	19	29	126	60	91	54	244	22	14	103	81
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	11	19	29	126	60	91	54	244	22	14	103	81
Added Vol:	0	0	0	0	0	6	3	2	0	0	3	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	19	29	126	60	97	57	246	22	14	106	81
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	12	20	31	133	63	102	60	259	23	15	112	85
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	12	20	31	133	63	102	60	259	23	15	112	85
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	12	20	31	133	63	102	60	259	23	15	112	85

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.40	0.60	1.00	0.38	0.62	1.00	0.92	0.08	1.00	0.57	0.43
Final Sat.:	481	218	332	525	232	376	554	561	50	534	346	265

Capacity Analysis Module:

Vol/Sat:	0.02	0.09	0.09	0.25	0.27	0.27	0.11	0.46	0.46	0.03	0.32	0.32
Crit Moves:	****			****			****			****		
Delay/Veh:	9.8	9.2	9.2	11.3	10.3	10.3	9.7	13.0	13.0	9.3	10.8	10.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.8	9.2	9.2	11.3	10.3	10.3	9.7	13.0	13.0	9.3	10.8	10.8
LOS by Move:	A	A	A	B	B	B	A	B	B	A	B	B
ApproachDel:	9.3			10.7			12.4			10.7		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	9.3			10.7			12.4			10.7		
LOS by Appr:	A			B			B			B		
AllWayAvgQ:	0.0	0.1	0.1	0.3	0.3	0.3	0.1	0.8	0.8	0.0	0.4	0.4
