

APPENDIX G

**EXISTING WITH PROJECT TRAFFIC CONDITIONS
INTERSECTION LEVEL OF SERVICE CALCULATION
WORKSHEETS**

APPENDIX G-1

EXISTING WITH PROJECT TRAFFIC CONDITIONS

**INTERSECTION CAPACITY UTILIZATION
CALCULATION WORKSHEET**

PROJECT:		Anaheim						
ANALYSIS CONDITION:		ARTIC- Existing plus Project						
INTERSECTION:		1 Manchester/ Katella						
MOVEMENT	LANES	CAPACITY	AM PEAK HOUR			PM PEAK HOUR		
			VOLUME	V/C	CAPACITY	VOLUME	V/C	
NBL	1.5	1700	55	0.03 *	1700	38	0.02 *	
NBT	0	0	0	0.00	0	0	0.00	
NBR	1.5	3400	504	0.15 *	3400	161	0.05	
SBL	2	3400	22	0.01	3400	25	0.01	
SBT	2	3400	91	0.03 *	3400	54	0.02 *	
SBR	1	1700	16	0.01	1700	2	0.00	
EBL	0		0	*		0	*	
EBT	3	5100	915	0.18	5100	997	0.20	
EBR	1	1700	558	0.33 *	1700	552	0.32 *	
WBL	2	3400	122	0.04	3400	329	0.10	
WBT	3	5100	1253	0.25 *	5100	1697	0.33 *	
WBR	0		0			0		
Split Phase		N/S Movements		0.06			0.04	
		E/W Movements		0.25			0.33	
		Rt. Turn Component		0.23			0.11	
		Yellow Clearance		0.05			0.05	
TOTAL CAPACITY UTILIZATION				0.584		0.528		
LEVEL OF SERVICE (LOS)				A		A		

**INTERSECTION CAPACITY UTILIZATION
CALCULATION WORKSHEET**

PROJECT:		Anaheim						
ANALYSIS CONDITION:		ARTIC- Existing plus Project						
INTERSECTION:		2 Anaheim Way/ Katella						
MOVEMENT	LANES	CAPACITY	AM PEAK HOUR			PM PEAK HOUR		
			VOLUME	V/C	CAPACITY	VOLUME	V/C	
NBL	1.5	3400	508	0.15 *	2994	659	0.22	
NBT	3	3400	361	0.11	5115	1126	0.22	
NBR	0.5	1700	308	0.18 *	391	86	0.22	
SBL	0		0			0		
SBT	0		0	0.00 *		0	0.00	
SBR	0		0			0		
EBL	2	3400	39	0.01	3400	39	0.01 *	
EBT	3	5100	1387	0.27 *	5100	1155	0.23	
EBR	0		0			0		
WBL	0		0	*		0		
WBT	3.5	6800	906	0.13	6800	1468	0.22 *	
WBR	1.5	1700	48	0.03 *	1700	105	0.06 *	
N-S split adjstment		N/S Movements		0.18			0.22	
		E/W Movements		0.27			0.23	
		Rt. Turn Component		0.00			0.00	
		Yellow Clearance		0.05			0.05	
TOTAL CAPACITY UTILIZATION				0.503			0.497	
LEVEL OF SERVICE (LOS)				A			A	

**INTERSECTION CAPACITY UTILIZATION
CALCULATION WORKSHEET**

PROJECT:		Anaheim				
ANALYSIS CONDITION:		ARTIC- Existing plus Project				
INTERSECTION:		3 Lewis/ Katella				
MOVEMENT	LANES	CAPACITY	AM PEAK HOUR		PM PEAK HOUR	
			VOLUME	V/C	VOLUME	V/C
NBL	1	1700	10	0.01	26	0.02
NBT	1	1700	40	0.03 *	82	0.07 *
NBR	0		10		31	
SBL	1	1700	42	0.02 *	62	0.04 *
SBT	1	1700	7	0.00	11	0.01
SBR	1	1700	132	0.08	391	0.23 *
EBL	1	1700	353	0.21 *	135	0.08 *
EBT	3	5100	1184	0.23	968	0.19
EBR	0		12		19	
WBL	1	1700	22	0.01	19	0.01
WBT	3	5100	825	0.17 *	1356	0.28 *
WBR	0		61		55	
		N/S Movements		0.05		0.10
		E/W Movements		0.38		0.36
		Rt. Turn Component		0.00		0.14
		Yellow Clearance		0.05		0.05
TOTAL CAPACITY UTILIZATION				0.485	0.653	
LEVEL OF SERVICE (LOS)				A	B	

**INTERSECTION CAPACITY UTILIZATION
CALCULATION WORKSHEET**

PROJECT:		Anaheim						
ANALYSIS CONDITION:		ARTIC- Existing plus Project						
INTERSECTION:		4 State College/ Katella						
MOVEMENT	LANES	CAPACITY	AM PEAK HOUR			PM PEAK HOUR		
			VOLUME	V/C	CAPACITY	VOLUME	V/C	
NBL	2	3400	75	0.02	3400	110	0.03	
NBT	3	5100	447	0.12 *	5100	705	0.18 *	
NBR	0		160			207		
SBL	2	3400	154	0.05 *	3400	103	0.03 *	
SBT	3	5100	670	0.13	5100	640	0.13	
SBR	1	1700	136	0.08	1700	158	0.09	
EBL	2	3400	217	0.06	3400	197	0.06 *	
EBT	2.5	5100	827	0.16 *	5100	687	0.13	
EBR	1.5	1700	211	0.12	1700	125	0.07	
WBL	2	3400	235	0.07 *	3400	199	0.06	
WBT	3	5100	593	0.12	5100	1135	0.22 *	
WBR	1	1700	38	0.02	1700	121	0.07	
		N/S Movements		0.16			0.21	
		E/W Movements		0.23			0.28	
		Rt. Turn Component		0.00			0.00	
		Yellow Clearance		0.05			0.05	
TOTAL CAPACITY UTILIZATION				0.446				0.540
LEVEL OF SERVICE (LOS)				A				A

**INTERSECTION CAPACITY UTILIZATION
CALCULATION WORKSHEET**

PROJECT:		Anaheim						
ANALYSIS CONDITION:		ARTIC- Existing plus Project						
INTERSECTION:		5 Sportstown/ Katella						
MOVEMENT	LANES	CAPACITY	AM PEAK HOUR			PM PEAK HOUR		
			VOLUME	V/C	CAPACITY	VOLUME	V/C	
NBL	1	1700	23	0.01	1700	58	0.03	
NBT	0.5	1700	3	0.00 *	594	11	0.02 *	
NBR	1.5	1700	0	0.00	2806	52	0.02	
SBL	1	1700	50	0.03 *	1700	134	0.08 *	
SBT	1	1700	3	0.00	1700	3	0.00	
SBR	1	1700	70	0.04 *	1700	104	0.06 *	
EBL	1	1700	33	0.02	1700	19	0.01 *	
EBT	3	5100	1002	0.21 *	5100	894	0.19	
EBR	0		59			54		
WBL	1	1700	34	0.02 *	1700	0	0.00	
WBT	3	5100	809	0.16	5100	1292	0.25 *	
WBR	1	1700	102	0.06	1700	104	0.06	
		N/S Movements		0.03			0.10	
		E/W Movements		0.23			0.26	
		Rt. Turn Component		0.02			0.05	
		Yellow Clearance		0.05			0.05	
TOTAL CAPACITY UTILIZATION				0.329	0.460			
LEVEL OF SERVICE (LOS)				A	A			

**INTERSECTION CAPACITY UTILIZATION
CALCULATION WORKSHEET**

PROJECT:		Anaheim				
ANALYSIS CONDITION:		ARTIC- Existing plus Project				
INTERSECTION:		6 Howell/ Katella				
MOVEMENT	LANES	CAPACITY	AM PEAK HOUR		PM PEAK HOUR	
			VOLUME	V/C	VOLUME	V/C
NBL	1	1700	14	0.01	99	0.06
NBT	1	1700	8	0.00 *	29	0.02 *
NBR	1	1700	30	0.02	190	0.11 *
SBL	2	3400	201	0.06 *	311	0.09 *
SBT	1	1700	34	0.05	14	0.03
SBR	0		43		36	
EBL	2	3400	46	0.01 *	46	0.01 *
EBT	3	5100	942	0.20	956	0.20
EBR	0		66		47	
WBL	2	3400	150	0.04	69	0.02
WBT	3	5100	918	0.25 *	1275	0.31 *
WBR	0		358		297	
		N/S Movements		0.06		0.11
		E/W Movements		0.26		0.32
		Rt. Turn Component		0.00		0.07
		Yellow Clearance		0.05		0.05
TOTAL CAPACITY UTILIZATION				0.378	0.555	
LEVEL OF SERVICE (LOS)				A	A	

**INTERSECTION CAPACITY UTILIZATION
CALCULATION WORKSHEET**

PROJECT:		Anaheim						
ANALYSIS CONDITION:		ARTIC- Existing plus Project						
INTERSECTION:		7 SR 57 SB Ramps/ Katella						
MOVEMENT	LANES	CAPACITY	AM PEAK HOUR			PM PEAK HOUR		
			VOLUME	V/C	CAPACITY	VOLUME	V/C	
NBL	0		0			0		
NBT	0		0	0.00 *		0	0.00 *	
NBR	0		0			0		
SBL	1.5	2526	523	0.21 *	1946	272	0.11 *	
SBT	0	0	0	0.00	0	0	0.00	
SBR	1.5	2574	533	0.21 *	3154	441	0.17 *	
EBL	0		0	*		0		
EBT	3	5100	873	0.17	5100	1060	0.21 *	
EBR (free)			149	0.00		349	0.00	
WBL	0		0			0		*
WBT	3	5100	937	0.18 *	5100	1019	0.20	
WBR (free)			266	0.00		557	0.00	
		N/S Movements		0.21			0.11	
		E/W Movements		0.18			0.21	
		Rt. Turn Component		0.00			0.06	
		Yellow Clearance		0.05			0.05	
TOTAL CAPACITY UTILIZATION				0.441			0.429	
LEVEL OF SERVICE (LOS)				A			A	

**INTERSECTION CAPACITY UTILIZATION
CALCULATION WORKSHEET**

PROJECT:		Anaheim						
ANALYSIS CONDITION:		ARTIC- Existing plus Project						
INTERSECTION:		8 SR 57 NB Ramps/ Katella						
MOVEMENT	LANES	CAPACITY	AM PEAK HOUR			PM PEAK HOUR		
			VOLUME	V/C	CAPACITY	VOLUME	V/C	
NBL	1.5	2374	397	0.17 *	1876	210	0.11 *	
NBT	0	0	0	0.00	0	0	0.00	
NBR	1.5	2726	456	0.17 *	3224	361	0.11 *	
SBL	0		0			0		
SBT	0		0	0.00 *		0	0.00 *	
SBR	0		0			0		
EBL	0		0			0	*	
EBT	3	5100	1138	0.22 *	5100	899	0.18	
EBR (free)			280	0.00		430	0.00	
WBL	0		0	*		0		
WBT	3	5100	849	0.17	5100	1384	0.27 *	
WBR (free)			205	0.00		397	0.00	
		N/S Movements		0.17			0.11	
		E/W Movements		0.22			0.27	
		Rt. Turn Component		0.00			0.00	
		Yellow Clearance		0.05			0.05	
TOTAL CAPACITY UTILIZATION				0.440	0.433			
LEVEL OF SERVICE (LOS)				A	A			

**INTERSECTION CAPACITY UTILIZATION
CALCULATION WORKSHEET**

PROJECT:		Anaheim						
ANALYSIS CONDITION:		ARTIC- Existing plus Project						
INTERSECTION:		9 Douglass/ Katella						
MOVEMENT	LANES	CAPACITY	AM PEAK HOUR			PM PEAK HOUR		
			VOLUME	V/C	CAPACITY	VOLUME	V/C	
NBL	1	1700	137	0.08 *	1700	476	0.28 *	
NBT	1	1700	24	0.03	1700	46	0.07	
NBR	0		25			72		
SBL	1	1700	106	0.06	1700	148	0.09	
SBT	0.5	1436	38	0.03 *	101	11	0.11 *	
SBR	1.5	1964	52	0.03	3299	361	0.11	
EBL	2	3400	355	0.10 *	3400	117	0.03 *	
EBT	3	5100	954	0.19	5100	893	0.18	
EBR	1	1700	353	0.21	1700	94	0.06	
WBL	2	3400	129	0.04	3400	54	0.02	
WBT	3	5100	896	0.18 *	5100	1076	0.21 *	
WBR	1	1700	95	0.06	1700	159	0.09	
		N/S Movements		0.11			0.39	
		E/W Movements		0.28			0.25	
		Rt. Turn Component		0.00			0.00	
		Yellow Clearance		0.05			0.05	
TOTAL CAPACITY UTILIZATION			0.437			0.685		
LEVEL OF SERVICE (LOS)			A			B		

**INTERSECTION CAPACITY UTILIZATION
CALCULATION WORKSHEET**

PROJECT:		Anaheim						
ANALYSIS CONDITION:		ARTIC- Existing plus Project						
INTERSECTION:		10 Struck/ Katella						
MOVEMENT	LANES	CAPACITY	AM PEAK HOUR			PM PEAK HOUR		
			VOLUME	V/C	CAPACITY	VOLUME	V/C	
NBL	1.5	3106	116	0.04	3219	356	0.11	
NBT	0.5	294	0	0.04	181	0	0.11	
NBR	0		11			20		
SBL	0		0			0		
SBT	0		0	0.00		0	0.00	
SBR	0		0			0		
EBL	0		0			0		
EBT	3	5100	934	0.18 *	5100	938	0.18 *	
EBR	1	1700	264	0.16	1700	208	0.12	
WBL	1	1700	23	0.01 *	1700	7	0.00 *	
WBT	3	5100	809	0.16	5100	945	0.19	
WBR	0		0			0		
		N/S Movements		0.04			0.11	
		E/W Movements		0.20			0.19	
		Rt. Turn Component		0.00			0.00	
		Yellow Clearance		0.05			0.05	
TOTAL CAPACITY UTILIZATION			0.284			0.349		
LEVEL OF SERVICE (LOS)			A			A		

**INTERSECTION CAPACITY UTILIZATION
CALCULATION WORKSHEET**

PROJECT:		Anaheim					
ANALYSIS CONDITION:		ARTIC- Existing plus Project					
INTERSECTION:		11 Main/ Katella					
MOVEMENT	LANES	CAPACITY	AM PEAK HOUR		PM PEAK HOUR		
			VOLUME	V/C	VOLUME	V/C	
NBL	2	3400	79	0.02 *	121	0.04	
NBT	2	3400	216	0.06	389	0.11 *	
NBR	1	1700	144	0.08	295	0.17	
SBL	1	1700	45	0.03	91	0.05 *	
SBT	2	3400	418	0.12 *	260	0.08	
SBR	1	1700	86	0.05	124	0.07	
EBL	1	1700	112	0.07	104	0.06	
EBT	3	5100	548	0.11 *	803	0.16 *	
EBR	1	1700	73	0.04	98	0.06	
WBL	1	1700	355	0.21 *	218	0.13 *	
WBT	3	5100	838	0.18	708	0.16	
WBR	0		63		127		
		N/S Movements		0.15		0.17	
		E/W Movements		0.32		0.29	
		Rt. Turn Component		0.00		0.00	
		Yellow Clearance		0.05		0.05	
TOTAL CAPACITY UTILIZATION				0.512	0.504		
LEVEL OF SERVICE (LOS)				A	A		

**INTERSECTION CAPACITY UTILIZATION
CALCULATION WORKSHEET**

PROJECT:		Anaheim				
ANALYSIS CONDITION:		ARTIC- Existing plus Project				
INTERSECTION:		12 Batavia/ Katella				
MOVEMENT	LANES	CAPACITY	AM PEAK HOUR		PM PEAK HOUR	
			VOLUME	V/C	VOLUME	V/C
NBL	1	1700	50	0.03 *	89	0.05
NBT	2	3400	229	0.07	308	0.09 *
NBR	1	1700	94	0.06	116	0.07
SBL	1	1700	96	0.06	119	0.07 *
SBT	2	3400	402	0.12 *	216	0.06
SBR	1	1700	140	0.08	129	0.08
EBL	1	1700	124	0.07 *	135	0.08
EBT	3	5100	444	0.10	1194	0.24 *
EBR	0		54		42	
WBL	1	1700	197	0.12	90	0.05 *
WBT	3	5100	1189	0.24 *	750	0.15
WBR	0		10		20	
Split Phase		N/S Movements		0.19		0.16
		E/W Movements		0.31		0.30
		Rt. Turn Component		0.00		0.00
		Yellow Clearance		0.05		0.05
TOTAL CAPACITY UTILIZATION				0.544	0.506	
LEVEL OF SERVICE (LOS)				A	A	

APPENDIX G-II

**EXISTING WITH PROJECT WITH MITIGATION TRAFFIC
CONDITIONS**

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