TABLE A
TRAFFIC COUNT CONVERSION TO P.C.E.'S - 2007 AM PEAK HOUR
GRAND TERRACE TOWNE CENTER, GRAND TERRACE

3. Intersection: Barton Road at I-215 NB Ramps

Movements	Vehicles	Large 2-Axle Trucks			3-Axle Trucks			4+ Axle Trucks			Total
		Volume	Factor	P.C.E.	Volume	Factor	P.C.E.	Volume	Factor	P.C.E.	
NBL	54	1	1.5	1.5	1	2.0	2	7	3.0	21	79
NBT	0	0	1.5	0	0	2.0	0	0	3.0	0	0
NBR	192	3	1.5	4.5	2	2.0	4	0	3.0	0	201
SBL	0	0	1.5	0	0	2.0	0	0	3.0	0	0
SBT	0	0	1.5	0	0	2.0	0	0	3.0	0	0
SBR	0	0	1.5	0	0	2.0	0	0	3.0	0	0
EBL	73	6	1.5	9	2	2.0	4	13	3.0	39	125
EBT	418	6	1.5	9	3	2.0	6	6	3.0	18	451
EBR	0	0	1.5	0	0	2.0	0	0	3.0	0	0
WBL	0	0	1.5	0	0	2.0	0	0	3.0	0	0
WBT	625	7	1.5	10.5	5	2.0	10	1	3.0	3	649
WBR	313	5	1.5	7.5	1	2.0	2	2	3.0	6	329

4. Intersection: Barton Road at Michigan Avenue

Movements	Vehicles	Large 2-Axle Trucks			3-Axle Trucks			4+ Axle Trucks			Total
		Volume	Factor	P.C.E.	Volume	Factor	P.C.E.	Volume	Factor	P.C.E.	
NBL	353	3	1.5	4.5	0	2.0	0	0	3.0	0	358
NBT	0	0	1.5	0	0	2.0	0	0	3.0	0	0
NBR	70	2	1.5	3	0	2.0	0	0	3.0	0	73
SBL	0	0	1.5	0	0	2.0	0	0	3.0	0	0
SBT	0	0	1.5	0	0	2.0	0	0	3.0	0	0
SBR	0	0	1.5	0	0	2.0	0	0	3.0	0	0
EBL	0	0	1.5	0	0	2.0	0	0	3.0	0	0
EBT	402	11	1.5	16.5	4	2.0	8	6	3.0	18	445
EBR	173	1	1.5	1.5	0	2.0	0	0	3.0	0	175
WBL	53	0	1.5	0	0	2.0	0	0	3.0	0	53
WBT	586	4	1.5	6	9	2.0	18	3	3.0	9	619
WBR	0	0	1.5	0	0	2.0	0	0	3.0	0	0

TABLE A
TRAFFIC COUNT CONVERSION TO P.C.E.'S - 2007 PM PEAK HOUR
GRAND TERRACE TOWNE CENTER, GRAND TERRACE

3. Intersection: Barton Road at I-215 NB Ramps

		Large 2-Axle Trucks			3-Axle Trucks			4+ Axle Trucks			
Movements	Vehicles	Volume	Factor	P.C.E.	Volume	Factor	P.C.E.	Volume	Factor	P.C.E.	Total
NBL	24	2	1.5	3	1	2.0	2	3	3.0	9	38
NBT	0	0	1.5	0	0	2.0	0	0	3.0	0	0
NBR	368	2	1.5	3	1	2.0	2	0	3.0	0	373
SBL	0	0	1.5	0	0	2.0	0	0	3.0	0	0
SBT	0	0	1.5	0	0	2.0	0	0	3.0	0	0
SBR	0	0	1.5	0	0	2.0	0	0	3.0	0	0
EBL	158	1	1.5	1.5	6	2.0	12	4	3.0	12	184
EBT	685	3	1.5	4.5	1	2.0	2	1	3.0	3	695
EBR	0	0	1.5	0	0	2.0	0	0	3.0	0	0
WBL	0	0	1.5	0	0	2.0	0	0	3.0	0	0
WBT	502	3	1.5	4.5	2	2.0	4	0	3.0	0	511
WBR	235	2	1.5	3	1	2.0	2	1	3.0	3	243

4. Intersection: Barton Road at Michigan Avenue

		Large 2-Axle Trucks			3-Axle Trucks			4+ Axle Trucks			
Movements	Vehicles	Volume	Factor	P.C.E.	Volume	Factor	P.C.E.	Volume	Factor	P.C.E.	Total
NBL	212	4	1.5	6	0	2.0	0	0	3.0	0	218
NBT	0	0	1.5	0	0	2.0	0	0	3.0	0	0
NBR	103	2	1.5	3	0	2.0	0	0	3.0	0	106
SBL	0	0	1.5	0	0	2.0	0	0	3.0	0	0
SBT	0	0	1.5	0	0	2.0	0	0	3.0	0	0
SBR	0	0	1.5	0	0	2.0	0	0	3.0	0	0
EBL	0	0	1.5	0	0	2.0	0	0	3.0	0	0
EBT	820	4	1.5	6	7	2.0	14	1	3.0	3	843
EBR	253	6	1.5	9	0	2.0	0	0	3.0	0	262
WBL	79	0	1.5	0	0	2.0	0	0	3.0	0	79
WBT	482	2	1.5	3	4	2.0	8	0	3.0	0	493
WBR	0	0	1.5	0	0	2.0	0	0	3.0	0	0

A-9

HCM LOS REPORT

General Information		Site Information	
Analyst:	LTT	Intersection:	4am2007-ex
Agency or Co.:	LLG Engineers	Area Type:	All other areas
Date Performed:	5/29/2007	Jurisdiction:	Grand Terrace
Time Period:	AM Peak Hour	Analysis Year:	2007
Project ID:	Existing Traffic Conditions	N/S Street:	Michigan Avenue
		E/W Street:	Barton Road

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2	0	1	2		1		1			
Lane Group		TR		L	T		L		R			
Volume (vph)		445	175	53	619		358		73			
% Heavy Vehicles		0	0	0	0		0		0			
PHF		0.95	0.95	0.95	0.95		0.95		0.95			
Pretimed/Actuated (P/A)		A	A	A	A		A		A			
Startup Lost Time		2.0		2.0	2.0		2.0		2.0			
Extension of Effective Green		2.0		2.0	2.0		2.0		2.0			
Unit Extension		3.0		3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0	0	0	0	0		0	0	0			
Lane Width		12.0		12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N			
Parking/Hour												
Bus Stops/Hour		0		0	0		0		0			
Minimum Pedestrian Time		3.2			3.2			3.2				

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 23.0	G = 47.0	G =	G =	G = 37.0	G =	G =	G =
	Y = 3	Y = 4	Y =	Y =	Y = 3	Y =	Y =	Y =
	AR = 1	AR = 1	AR = 0	AR = 0	AR = 1	AR = 0	AR = 0	AR = 0
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		652		56	652		377		77			
Lane Group Capacity		1410		326	2220		524		555			
Satflow Rate		3600		1700	3600		1700		1800			
v/c Ratio		0.46		0.17	0.29		0.72		0.14			
Green Ratio		0.39		0.19	0.62		0.31		0.31			
Uniform Delay d_1		27.1		40.5	10.8		36.9		30.0			
Delay Factor k		0.11		0.11	0.11		0.28		0.11			
Incremental Delay d_2		0.2		0.3	0.1		4.8		0.1			
PF Factor		1.000		1.000	1.000		1.000		1.000			
Control Delay		27.4		40.8	10.8		41.7		30.1			
Lane Group LOS		C		D	B		D		C			
Approach Delay	27.4			13.2			39.7					
Approach LOS	C			B			D					
Intersection Delay	24.9			X_c = 0.49			Intersection LOS			C		

Percentile Back of Queue (95th percentile)

$f_{B\%}$		1.9		2.0	1.9		1.8		2.0			
Back of Queue		16.2		3.4	10.6		22.5		4.0			

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HCM LOS REPORT

General Information		Site Information	
Analyst:	LTT	Intersection:	4pm2007-ex
Agency or Co.:	LLG Engineers	Area Type:	All other areas
Date Performed:	5/29/2007	Jurisdiction:	Grand Terrace
Time Period:	PM Peak Hour	Analysis Year:	2007
Project ID:	Existing Traffic Conditions	N/S Street:	Michigan Avenue
		E/W Street:	Barton Road

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		2	0	1	2		1		1			
Lane Group		TR		L	T		L		R			
Volume (vph)		843	262	79	493		218		106			
% Heavy Vehicles		0	0	0	0		0		0			
PHF		0.95	0.95	0.95	0.95		0.95		0.95			
Pretimed/Actuated (P/A)		A	A	A	A		A		A			
Startup Lost Time		2.0		2.0	2.0		2.0		2.0			
Extension of Effective Green		2.0		2.0	2.0		2.0		2.0			
Unit Extension		3.0		3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0	0	0	0	0		0	0	0			
Lane Width		12.0		12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N			
Parking/Hour												
Bus Stops/Hour		0		0	0		0		0			
Minimum Pedestrian Time		3.2			3.2			3.2				

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 21.0	G = 57.0	G =	G =	G = 29.0	G =	G =	G =
	Y = 3	Y = 4	Y =	Y =	Y = 3	Y =	Y =	Y =
	AR = 1	AR = 1	AR = 0	AR = 0	AR = 1	AR = 0	AR = 0	AR = 0
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		1163		83	519		229		112			
Lane Group Capacity		1710		297	2460		411		435			
Satflow Rate		3600		1700	3600		1700		1800			
v/c Ratio		0.68		0.28	0.21		0.56		0.26			
Green Ratio		0.47		0.17	0.68		0.24		0.24			
Uniform Delay d_1		24.4		42.9	7.0		39.9		36.8			
Delay Factor k		0.25		0.11	0.11		0.15		0.11			
Incremental Delay d_2		1.1		0.5	0.0		1.7		0.3			
PF Factor		1.000		1.000	1.000		1.000		1.000			
Control Delay		25.5		43.5	7.1		41.6		37.1			
Lane Group LOS		C		D	A		D		D			
Approach Delay	25.5			12.1			40.1					
Approach LOS	C			B			D					
Intersection Delay	24.1			X_c = 0.57			Intersection LOS			C		

Percentile Back of Queue (95th percentile)

$f_{B\%}$		1.7		2.0	2.0		1.9		2.0			
Back of Queue		28.8		5.2	6.9		13.8		6.4			

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