WEBSTER

WEbster Based Signal Timing Evaluation Routine

For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

Euclid Ave @ I-10 EB Ramps **City of Ontario** **AM Peak Hour**

Input

	Eastbound			Westbound			Northbound			Southbound		
Movement Times	L	T	*R*	L	T	R	L	*T*	R	*L*	T	R
Movement 1: 21 secs	X		X									
Movement 2: 41 secs										X	X	
Movement 3: 48 secs								X	X		X	
Movement 4: 0 secs												
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	2		1					3	S	1	3	
Unadjusted Volume	602		384					1640	639	826	1373	
Peak Hour Factor (PHF)	1.00		1.00					1.00	1.00	1.00	1.00	
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)									Shrd			
Min. Time or Ped. Time	10		20					20	20	10	20	
Permissive Veh/Cycle												
Progression Adj. Factor (PAF)	1.00		1.00					1.00	-	1.00	1.00	

Parameter Values (using default set 'SANBAG (Existing)')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)	1700	1800
Sat Flow (2 Left lanes, vphg)	3200	3500
Sat Flow (1 Thru lane, vphg)	1800	1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

			***					***		***		
Pk. Hr. Vol. (vph)	602		384					1640	639	826	1373	
Saturation Flow (vph)	3200		1800					5400	Shrd	1700	5400	
X or V/C	1.09		1.24					1.01	-	1.37	0.32	
Effective green (sec)	19		19					46	-	39	87	
Split Time (sec)	21		21					48	-	41	89	
Min. Time or Ped. Time (sec)	10		20					20	-	10	20	
Delay - 15 min pk (sec/veh)	110		178					53	-	222	3	
Level of Service (LOS)	F		F					D-	-	F	A	
Average 'Q' (veh/ln)	9		13					15	-	27	3	
Design 'Q'- ft/ln	280		400					460	-	820	100	
Do Vehicles Clear?	NO		NO					NO	-	NO	YES	

Summary

Oversaturated - Mitigation Required

Whole Intersection

Weighted Avg Delay (sec) = 81
Level of Service - LOS = F

Critical Movements

Weighted Avg Delay (sec) = 107
Level of Service - LOS = F
Intersection Capacity Utilization - ICU = 1.19

Predetermined Cycle Length is 110 sec

Min./Ped. Times Satisfied

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For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

Euclid Ave @ I-10 EB Ramps **City of Ontario** **PM Peak Hour**

Input

	Eastbound			Westbound			Northbound			Southbound		
Movement Times	L	T	*R*	L	T	R	L	*T*	R	*L*	T	R
Movement 1: 30 secs	X		X									
Movement 2: 22 secs										X	X	
Movement 3: 28 secs								X	X		X	
Movement 4: 0 secs												
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	2		1					3	S	1	3	
Unadjusted Volume	789		625					1424	183	401	1105	
Peak Hour Factor (PHF)	1.00		1.00					1.00	1.00	1.00	1.00	
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)									Shrd			
Min. Time or Ped. Time	10		20					20	20	10	20	
Permissive Veh/Cycle												
Progression Adj. Factor (PAF)	1.00		1.00					1.00	-	1.00	1.00	

Parameter Values (using default set 'SANBAG (Existing)')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)	1700	1800
Sat Flow (2 Left lanes, vphg)	3200	3500
Sat Flow (1 Thru lane, vphg)	1800	1900
Sat F ow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

			***					***		***		
Pk. Hr. Vol. (vph)	789		625					1424	183	401	1105	
Saturation Flow (vph)	3200		1800					5400	Shrd	1700	5400	
X or V/C	0.70		0.99					0.92	-	0.94	0.34	
Effective green (sec)	28		28					26	-	20	48	
Split Time (sec)	30		30					28	-	22	50	
Min. Time or Ped. Time (sec)	10		20					20	-	10	20	
Delay - 15 min pk (sec/veh)	26		60					35	-	61	8	
Level of Service (LOS)	C		E+					C-	-	E	A	
Average 'Q' (veh/ln)	6		10					8	-	8	3	
Design 'Q'- ft/ln	180		300					240	-	240	100	
Do Vehicles Clear?	YES		NO					YES	-	NO	YES	

Summary

Intersection Unstable-Consider Mitigation

Whole Intersection

Weighted Avg Delay (sec) = 33
Level of Service - LOS = C-

Critical Movements

Weighted Avg Delay (sec) = 45
Level of Service - LOS = D
Intersection Capacity Utilization - ICU = 0.95

Predetermined Cycle Length is 80 sec

Min./Ped. Times Satisfied

Counts Unlimited Inc.
25424 Jaclyn Avenue
Moreno Valley, CA 92557
951-247-6716

City of Upland
N/S: Euclid Avenue
E/W: I-10 Eastbound On and Off Ramps
Weather: Sunny

File Name : UPEU10EAM
Site Code : 12823544
Start Date : 6/7/2007
Page No : 1

Groups Printed- Total Volume

	Euclid Avenue Southbound				I-10 Eastbound On Ramp Westbound				Euclid Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	117	211	0	328	0	0	0	0	0	201	62	263	84	3	52	139	730
07:15 AM	133	292	0	425	0	0	0	0	0	234	66	300	136	4	70	210	935
07:30 AM	168	302	0	470	0	0	0	0	0	298	112	410	120	2	81	203	1083
07:45 AM	178	296	0	474	0	0	0	0	0	339	132	471	132	3	84	219	1164
Total	596	1101	0	1697	0	0	0	0	0	1072	372	1444	472	12	287	771	3912
08:00 AM	206	253	0	459	0	0	0	0	0	279	72	351	148	1	79	228	1038
08:15 AM	160	204	0	364	0	0	0	0	0	216	63	279	128	1	83	212	855
08:30 AM	131	225	0	356	0	0	0	0	0	245	66	311	91	1	52	144	811
08:45 AM	119	217	0	336	0	0	0	0	0	223	64	287	100	2	108	210	833
Total	616	899	0	1515	0	0	0	0	0	963	265	1228	467	5	322	794	3537
Grand Total	1212	2000	0	3212	0	0	0	0	0	2035	637	2672	939	17	609	1565	7449
Apprch %	37.7	62.3	0		0	0	0		0	76.2	23.8		60	1.1	38.9		
Total %	16.3	26.8	0	43.1	0	0	0	0	0	27.3	8.6	35.9	12.6	0.2	8.2	21	

	Euclid Avenue Southbound				I-10 Eastbound On Ramp Westbound				Euclid Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	133	292	0	425	0	0	0	0	0	234	66	300	136	**4**	70	210	935
07:30 AM	168	**302**	0	470	0	0	0	0	0	298	112	410	120	2	81	203	1083
07:45 AM	178	296	0	**474**	0	0	0	0	0	**339**	**132**	**471**	132	3	**84**	219	**1164**
08:00 AM	**206**	253	0	459	0	0	0	0	0	279	72	351	**148**	1	79	**228**	1038
Total Volume	685	1143	0	1828	0	0	0	0	0	1150	382	1532	536	10	314	860	4220
% App. Total	37.5	62.5	0		0	0	0		0	75.1	24.9		62.3	1.2	36.5		
PHF	.831	.946	.000	.964	.000	.000	.000	.000	.000	.848	.723	.813	.905	.625	.935	.943	.906

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File Name : UPEU10EAM
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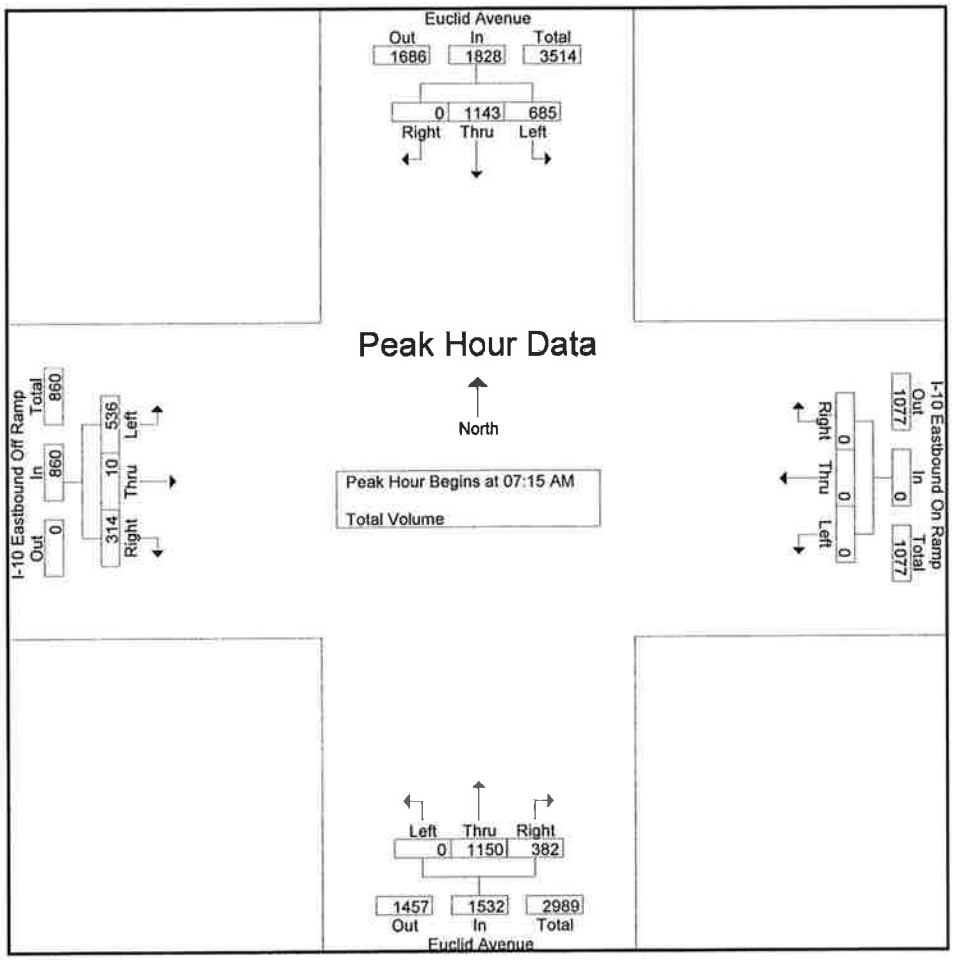
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:15 AM				07:30 AM			
+0 mins.	133	292	0	425	0	0	0	0	0	234	66	300	120	2	81	203
+15 mins.	168	**302**	0	470	0	0	0	0	0	298	112	410	132	**3**	**84**	219
+30 mins.	178	296	0	**474**	0	0	0	0	0	**339**	**132**	**471**	**148**	1	79	**228**
+45 mins.	**206**	253	0	459	0	0	0	0	0	279	72	351	128	1	83	212
Total Volume	685	1143	0	1828	0	0	0	0	0	1150	382	1532	528	7	327	862
% App. Total	37.5	62.5	0		0	0	0		0	75.1	24.9		61.3	0.8	37.9	
PHF	.831	.946	.000	.964	.000	.000	.000	.000	.000	.848	.723	.813	.892	.583	.973	.945

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File Name : UPEU10EPM
Site Code : 12823544
Start Date : 6/7/2007
Page No : 1

Groups Printed- Total Volume

	Euclid Avenue Southbound				I-10 Eastbound On Ramp Westbound				Euclid Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	124	206	0	330	0	0	0	0	0	251	57	308	162	0	108	270	908
04:15 PM	82	191	0	273	0	0	0	0	0	290	64	354	171	1	123	295	922
04:30 PM	88	231	0	319	0	0	0	0	0	289	38	327	157	0	138	295	941
04:45 PM	86	237	0	323	0	0	0	0	0	296	38	334	173	0	137	310	967
Total	380	865	0	1245	0	0	0	0	0	1126	197	1323	663	1	506	1170	3738
05:00 PM	118	184	0	302	0	0	0	0	0	294	36	330	172	0	104	276	908
05:15 PM	90	190	0	280	0	0	0	0	0	335	37	372	133	1	143	277	929
05:30 PM	78	158	0	236	0	0	0	0	0	294	47	341	181	0	139	320	897
05:45 PM	86	166	0	252	0	0	0	0	0	285	39	324	184	5	115	304	880
Total	372	698	0	1070	0	0	0	0	0	1208	159	1367	670	6	501	1177	3614
Grand Total	752	1563	0	2315	0	0	0	0	0	2334	356	2690	1333	7	1007	2347	7352
Apprch %	32.5	67.5	0		0	0	0		0	86.8	13.2		56.8	0.3	42.9		
Total %	10.2	21.3	0	31.5	0	0	0	0	0	31.7	4.8	36.6	18.1	0.1	13.7	31.9	

	Euclid Avenue Southbound				I-10 Eastbound On Ramp Westbound				Euclid Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	88	231	0	319	0	0	0	0	0	289	**38**	327	157	0	138	295	941
04:45 PM	86	**237**	0	**323**	0	0	0	0	0	296	38	334	**173**	0	137	**310**	**967**
05:00 PM	**118**	184	0	302	0	0	0	0	0	294	36	330	172	0	104	276	908
05:15 PM	90	190	0	280	0	0	0	0	0	**335**	37	**372**	133	**1**	**143**	277	929
Total Volume	382	842	0	1224	0	0	0	0	0	1214	149	1363	635	1	522	1158	3745
% App. Total	31.2	68.8	0		0	0	0		0	89.1	10.9		54.8	0.1	45.1		
PHF	.809	.888	.000	.947	.000	.000	.000	.000	.000	.906	.980	.916	.918	.250	.913	.934	.968

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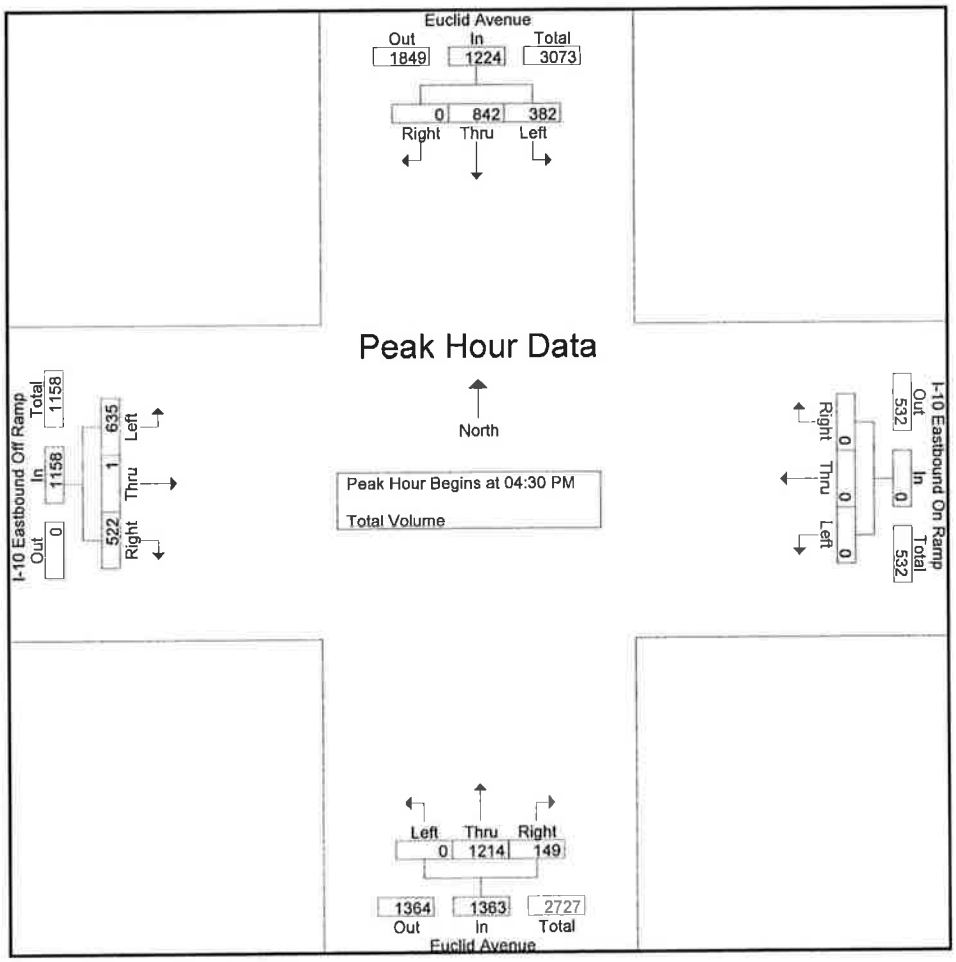

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:45 PM				04:45 PM			
+0 mins.	**124**	206	0	**330**	0	0	0	0	0	296	38	334	173	0	137	310
+15 mins.	82	191	0	273	0	0	0	0	0	294	36	330	172	0	104	276
+30 mins.	88	**231**	0	319	0	0	0	0	0	**335**	37	**372**	133	**1**	**143**	277
+45 mins.	86	**237**	0	323	0	0	0	0	0	294	**47**	341	**181**	0	139	**320**
Total Volume	380	865	0	1245	0	0	0	0	0	1219	158	1377	659	1	523	1183
% App. Total	30.5	69.5	0		0	0	0		0	88.5	11.5		55.7	0.1	44.2	
PHF	.766	.912	.000	.943	.000	.000	.000	.000	.000	.910	.840	.925	.910	.250	.914	.924

Transportation Studies, Inc.
2680 Walnut Avenue
Suite C
Tustin, CA. 92780

A0806096N

City: ONTARIO
Location: VINEYARD AVENUE
Segment: N/O SR-60 WB RAMPS

NORTHBOUND1, NORTHBOUND2

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/04/08	0	6	0	0	1	0	0	0	2	0	1	0	0	10
00:15	0	10	2	0	3	1	0	0	0	0	0	0	0	16
00:30	0	3	5	0	1	0	0	0	1	0	0	0	0	10
00:45	0	4	3	0	0	0	0	0	2	0	0	0	0	9
	0	23	10	0	5	1	0	0	5	0	1	0	0	45
01:00	0	7	0	0	1	0	0	0	0	0	0	0	0	8
01:15	0	4	4	0	0	0	0	0	0	0	0	0	0	8
01:30	1	11	2	0	3	1	0	0	3	0	0	0	0	21
01:45	0	12	5	0	2	0	0	0	2	0	0	0	0	21
	1	34	11	0	6	1	0	0	5	0	0	0	0	58
02:00	0	6	3	0	2	0	0	0	3	0	0	0	0	14
02:15	0	10	4	0	0	0	0	0	1	0	0	0	0	15
02:30	0	11	2	0	1	0	0	0	3	0	2	0	0	19
02:45	0	15	4	0	0	0	0	0	0	0	0	0	0	19
	0	42	13	0	3	0	0	0	7	0	2	0	0	67
03:00	0	8	5	0	1	0	0	3	2	0	0	0	0	19
03:15	1	10	3	0	0	0	0	1	1	0	0	0	0	16
03:30	0	18	6	0	0	0	0	2	1	0	0	0	0	27
03:45	1	26	7	0	1	1	0	0	2	0	0	0	0	38
	2	62	21	0	2	1	0	6	6	0	0	0	0	100
04:00	0	20	10	0	0	0	0	2	0	0	0	0	0	32
04:15	0	20	18	0	3	2	0	2	6	0	0	0	0	51
04:30	0	64	18	0	3	0	0	2	0	0	0	0	0	87
04:45	2	79	29	3	5	2	0	2	3	0	0	0	0	125
	2	183	75	3	11	4	0	8	9	0	0	0	0	295
05:00	0	72	22	2	10	0	1	0	9	0	0	0	0	116
05:15	0	121	48	1	10	0	0	0	4	0	0	0	0	184
05:30	1	192	89	2	7	3	0	0	2	0	0	0	0	296
05:45	3	205	68	0	14	5	0	3	1	0	0	0	1	300
	4	590	227	5	41	8	1	3	16	0	0	0	1	896
06:00	1	111	65	2	13	4	0	3	2	0	0	0	0	201
06:15	0	160	60	1	26	6	0	6	6	2	0	0	0	267
06:30	1	188	57	1	21	4	0	10	3	0	0	0	0	285
06:45	0	228	74	2	8	3	0	3	1	0	0	0	1	320
	2	687	256	6	68	17	0	22	12	2	0	0	1	1073
07:00	2	139	46	0	11	4	0	2	5	0	0	0	0	209
07:15	0	194	46	0	16	1	0	1	1	0	0	0	0	259
07:30	1	198	60	1	22	4	2	2	0	0	0	0	0	290
07:45	0	260	69	0	5	5	0	6	2	0	2	0	0	349
	3	791	221	1	54	14	2	11	8	0	2	0	0	1107
08:00	3	169	58	1	11	5	0	7	3	0	0	0	0	257
08:15	1	196	53	3	10	9	0	2	3	0	1	0	0	278
08:30	1	153	48	1	10	3	0	4	6	0	0	0	0	226
08:45	0	126	40	0	11	2	1	1	7	0	0	0	0	188
	5	644	199	5	42	19	1	14	19	0	1	0	0	949
09:00	0	84	47	1	16	0	0	6	6	1	2	0	0	163
09:15	2	106	35	4	18	2	0	4	3	0	0	0	0	174
09:30	0	93	34	2	11	1	1	2	2	0	0	0	0	146
09:45	0	87	51	2	9	2	0	1	4	0	0	0	0	156
	2	370	167	9	54	5	1	13	15	1	2	0	0	639
10:00	0	88	40	0	14	1	0	3	1	0	1	0	0	148
10:15	2	103	36	3	8	2	0	0	7	0	0	0	0	161
10:30	1	96	32	0	14	0	0	1	2	0	0	0	0	146
10:45	0	92	32	3	10	1	0	6	4	0	0	0	0	148
	3	379	140	6	46	4	0	10	14	0	1	0	0	603
11:00	1	84	39	2	9	4	0	1	7	0	1	0	0	148
11:15	2	64	56	1	12	4	0	1	3	0	0	0	0	143
11:30	0	99	44	0	11	4	1	3	9	1	0	0	1	173
11:45	3	107	50	0	18	1	0	2	3	0	0	0	1	185
	6	354	189	3	50	13	1	7	22	1	1	0	2	649
Total	30	4159	1529	38	382	87	6	94	138	4	10	0	4	6481
Percent	0.5%	64.2%	23.6%	0.6%	5.9%	1.3%	0.1%	1.5%	2.1%	0.1%	0.2%	0.0%	0.1%	

Transportation Studies, Inc.
2680 Walnut Avenue
Suite C
Tustin, CA. 92780

A0806096N

City: ONTARIO
Location: VINEYARD AVENUE
Segment: N/O SR-60 WB RAMPS

NORTHBOUND1, NORTHBOUND2

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12 PM	1	98	61	2	9	4	0	1	8	0	0	0	0	184
12:15	2	125	48	0	10	1	0	1	3	1	0	0	0	191
12:30	0	95	41	1	17	1	0	3	4	0	0	0	0	162
12:45	1	125	33	2	14	6	0	3	4	0	0	0	0	188
	4	443	183	5	50	12	0	8	19	1	0	0	0	725
13:00	0	126	37	2	15	2	0	1	8	0	0	0	0	191
13:15	2	110	41	0	12	0	0	5	4	0	0	0	0	174
13:30	2	115	36	1	9	3	0	5	7	0	0	0	0	178
13:45	1	119	40	1	6	0	0	1	4	0	0	0	0	172
	5	470	154	4	42	5	0	12	23	0	0	0	0	715
14:00	0	76	36	1	10	0	0	6	6	0	0	0	0	135
14:15	1	96	48	3	9	5	0	5	5	0	0	0	0	172
14:30	2	94	47	0	9	3	0	4	2	0	0	0	0	161
14:45	0	77	40	1	16	2	0	4	3	0	0	0	1	144
	3	343	171	5	44	10	0	19	16	0	0	0	1	612
15:00	0	82	43	2	18	6	0	2	3	0	1	1	0	158
15:15	1	107	39	1	14	1	0	4	5	0	0	0	0	172
15:30	2	73	41	2	12	2	0	2	2	0	0	0	0	136
15:45	0	99	30	2	8	1	0	1	2	0	0	0	0	143
	3	361	153	7	52	10	0	9	12	0	1	1	0	609
16:00	2	83	18	2	4	2	0	4	3	0	0	0	0	118
16:15	0	83	36	2	3	1	0	5	0	0	0	0	0	130
16:30	0	77	38	0	4	1	0	4	1	0	0	0	0	125
16:45	2	81	21	2	9	1	0	3	0	0	0	0	0	119
	4	324	113	6	20	5	0	16	4	0	0	0	0	492
17:00	0	65	23	4	9	0	0	2	2	0	0	0	0	105
17:15	0	70	17	0	3	1	0	1	1	1	2	0	0	96
17:30	1	66	38	0	2	3	0	1	0	0	0	0	0	111
17:45	1	52	19	0	8	0	0	2	5	0	0	0	0	87
	2	253	97	4	22	4	0	6	8	1	2	0	0	399
18:00	1	61	20	0	5	2	0	3	3	0	0	0	0	95
18:15	1	48	13	1	6	1	1	1	1	0	0	0	0	73
18:30	2	39	22	4	11	0	0	3	2	0	0	0	0	83
18:45	3	49	6	1	4	0	0	2	2	0	0	0	0	67
	7	197	61	6	26	3	1	9	8	0	0	0	0	318
19:00	2	34	2	3	6	3	0	1	6	0	0	0	0	57
19:15	0	42	3	0	2	0	0	3	0	0	0	0	0	50
19:30	1	44	8	0	1	0	0	1	0	0	0	0	0	55
19:45	0	25	11	1	1	0	0	0	1	0	0	0	0	39
	3	145	24	4	10	3	0	5	7	0	0	0	0	201
20:00	1	44	7	0	0	1	0	0	3	0	0	0	0	56
20:15	1	28	14	2	1	0	0	2	2	0	0	0	0	50
20:30	0	28	11	1	1	2	0	0	2	0	0	0	0	45
20:45	0	21	5	0	0	0	0	0	0	0	0	0	0	26
	2	121	37	3	2	3	0	2	7	0	0	0	0	177
21:00	1	27	5	2	0	2	0	0	2	0	0	0	0	39
21:15	0	28	3	0	0	0	0	0	1	0	0	0	0	32
21:30	1	25	3	0	1	0	0	0	1	0	0	0	0	31
21:45	0	24	6	0	0	0	0	0	0	0	0	0	0	30
	2	104	17	2	1	2	0	0	4	0	0	0	0	132
22:00	0	15	10	0	2	1	0	0	3	0	0	0	0	31
22:15	1	16	1	0	0	1	0	1	1	0	0	0	0	21
22:30	0	14	5	0	1	2	0	1	1	0	0	0	0	24
22:45	0	10	1	0	0	1	0	0	0	0	0	0	0	12
	1	55	17	0	3	5	0	2	5	0	0	0	0	88
23:00	0	5	0	0	2	0	0	0	1	0	0	0	0	8
23:15	2	10	4	0	1	1	0	1	1	0	0	0	0	20
23:30	0	8	0	0	2	0	0	2	3	0	2	0	0	17
23:45	0	11	4	0	2	0	0	2	0	0	0	0	0	19
	2	34	8	0	7	1	0	5	5	0	2	0	0	64
Total	38	2850	1035	46	279	63	1	93	118	2	5	1	1	4532
Percent	0.8%	62.9%	22.8%	1.0%	6.2%	1.4%	0.0%	2.1%	2.6%	0.0%	0.1%	0.0%	0.0%	
Grand Total	68	7009	2564	84	661	150	7	187	256	6	15	1	5	11013
Percent	0.6%	63.6%	23.3%	0.8%	6.0%	1.4%	0.1%	1.7%	2.3%	0.1%	0.1%	0.0%	0.0%	

Transportation Studies, Inc.
2680 Walnut Avenue
Suite C
Tustin, CA. 92780

A0806096S

City: ONTARIO
Location: VINEYARD AVENUE
Segment: N/O SR-60 WB RAMPS

SOUTHBOUND1, SOUTHBOUND2

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
06/04/08	0	24	10	0	0	2	0	0	3	0	0	0	0	39
00:15	0	16	2	0	0	0	0	2	0	0	0	0	0	20
00:30	0	24	8	0	0	0	0	0	4	0	0	0	0	36
00:45	0	11	6	0	2	0	0	0	0	0	0	0	0	19
	0	75	26	0	2	2	0	2	7	0	0	0	0	114
01:00	0	28	5	0	2	0	0	0	2	0	0	0	0	37
01:15	0	12	3	0	2	0	0	0	3	0	0	0	0	20
01:30	0	19	7	0	0	0	0	0	4	0	0	0	0	30
01:45	0	8	0	0	0	0	0	0	2	0	0	0	0	10
	0	67	15	0	4	0	0	0	11	0	0	0	0	97
02:00	0	22	8	0	2	0	0	0	6	0	0	0	0	38
02:15	0	7	5	0	0	0	0	0	4	0	0	0	0	16
02:30	0	14	0	0	0	0	0	0	5	0	0	0	0	19
02:45	0	4	5	0	3	0	0	0	4	0	2	0	0	18
	0	47	18	0	5	0	0	0	19	0	2	0	0	91
03:00	0	5	2	0	0	0	0	0	11	0	0	0	0	18
03:15	2	5	2	0	0	2	0	2	4	0	0	0	0	17
03:30	0	7	2	0	0	0	0	0	2	0	0	0	0	11
03:45	0	12	3	0	2	0	0	0	5	0	0	0	0	22
	2	29	9	0	2	2	0	2	22	0	0	0	0	68
04:00	0	6	4	0	2	0	0	3	2	0	0	0	0	17
04:15	0	2	3	0	4	2	0	2	8	0	2	0	0	23
04:30	0	10	5	2	4	0	0	2	4	0	2	0	0	29
04:45	0	10	2	2	3	2	0	2	2	0	0	0	0	23
	0	28	14	4	13	4	0	9	16	0	4	0	0	92
05:00	0	12	2	0	4	0	0	4	6	0	0	0	0	28
05:15	0	7	6	0	0	0	0	3	0	0	0	0	0	16
05:30	0	28	5	4	4	2	0	3	2	0	0	0	0	48
05:45	0	29	9	0	3	0	0	2	9	0	0	0	0	52
	0	76	22	4	11	2	0	12	17	0	0	0	0	144
06:00	0	39	16	2	3	0	0	2	11	0	0	0	0	73
06:15	0	32	14	2	8	3	0	8	6	0	0	0	0	73
06:30	1	31	22	0	4	4	0	5	4	0	0	0	0	71
06:45	0	23	16	0	11	0	0	0	5	0	0	0	0	55
	1	125	68	4	26	7	0	15	26	0	0	0	0	272
07:00	1	55	24	0	8	3	0	4	12	0	0	0	0	107
07:15	0	39	29	0	4	3	0	0	6	0	0	0	0	81
07:30	2	51	32	2	11	0	0	2	3	0	0	0	0	103
07:45	1	52	24	2	9	4	0	5	8	0	2	0	0	107
	4	197	109	4	32	10	0	11	29	0	2	0	0	398
08:00	1	56	43	2	17	2	0	2	4	0	0	0	0	127
08:15	0	54	46	0	14	0	0	2	7	0	0	0	0	123
08:30	1	43	28	2	10	0	0	2	10	0	0	0	0	96
08:45	1	72	37	3	10	2	0	0	4	0	0	0	0	129
	3	225	154	7	51	4	0	6	25	0	0	0	0	475
09:00	1	72	24	3	15	3	0	2	12	0	0	0	0	132
09:15	1	68	46	4	12	0	0	4	14	2	0	0	0	151
09:30	0	71	40	0	21	4	0	2	13	0	0	0	0	151
09:45	0	72	43	1	13	0	0	2	4	0	0	0	0	135
	2	283	153	8	61	7	0	10	43	2	0	0	0	569
10:00	1	72	42	2	10	2	0	2	12	0	0	0	0	143
10:15	0	76	35	2	11	4	0	2	13	0	0	0	0	143
10:30	1	100	38	0	9	0	0	4	11	2	0	0	0	165
10:45	0	94	40	1	15	2	0	2	8	0	0	0	0	162
	2	342	155	5	45	8	0	10	44	2	0	0	0	613
11:00	3	135	55	1	12	2	0	5	7	0	0	0	0	220
11:15	1	142	56	2	12	4	0	8	8	0	0	0	0	233
11:30	1	132	52	1	12	2	0	2	11	0	0	0	2	215
11:45	0	150	55	1	13	0	0	5	5	0	0	0	0	229
	5	559	218	5	49	8	0	20	31	0	0	0	2	897
Total	19	2053	961	41	301	54	0	97	290	4	8	0	2	3830
Percent	0.5%	53.6%	25.1%	1.1%	7.9%	1.4%	0.0%	2.5%	7.6%	0.1%	0.2%	0.0%	0.1%	

Transportation Studies, Inc.
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A0806096S

City: ONTARIO
Location: VINEYARD AVENUE
Segment: N/O SR-60 WB RAMPS

SOUTHBOUND1, SOUTHBOUND2

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
12 PM	2	197	77	2	18	0	0	5	7	0	0	0	0	308
12:15	0	109	54	2	8	4	0	5	5	0	2	0	2	191
12:30	1	145	62	4	22	2	0	2	6	0	0	0	0	244
12:45	2	121	32	0	12	4	0	4	14	0	0	0	0	189
	5	572	225	8	60	10	0	16	32	0	2	0	2	932
13:00	0	120	55	0	16	2	0	5	8	0	0	0	0	206
13:15	1	105	63	2	12	0	0	0	3	0	0	0	0	186
13:30	0	122	67	1	26	3	0	3	3	0	0	0	0	225
13:45	0	119	54	2	18	0	0	2	10	0	0	0	0	205
	1	466	239	5	72	5	0	10	24	0	0	0	0	822
14:00	0	130	45	2	15	2	0	0	8	0	0	0	0	202
14:15	0	134	64	0	16	0	0	3	11	0	0	0	0	228
14:30	2	250	84	0	10	0	0	2	4	0	2	0	0	354
14:45	1	132	44	2	16	2	0	0	2	0	0	0	0	199
	3	646	237	4	57	4	0	5	25	0	2	0	0	983
15:00	0	201	75	1	16	4	0	4	3	0	0	0	0	304
15:15	0	150	54	2	15	0	0	3	4	0	0	0	0	228
15:30	0	233	73	0	23	0	0	7	0	0	0	0	0	336
15:45	0	166	62	2	11	2	0	2	6	0	0	0	0	251
	0	750	264	5	65	6	0	16	13	0	0	0	0	1119
16:00	1	209	93	2	13	2	0	5	2	0	0	0	0	327
16:15	0	168	63	2	12	2	0	4	3	0	2	0	0	256
16:30	0	251	44	2	6	2	0	6	5	2	0	0	0	318
16:45	1	220	65	2	5	2	0	3	5	0	0	0	0	303
	2	848	265	8	36	8	0	18	15	2	2	0	0	1204
17:00	1	276	64	0	3	0	0	2	0	0	0	0	0	346
17:15	2	208	56	0	14	2	0	3	3	0	2	0	0	290
17:30	0	204	59	0	7	2	0	5	2	0	0	0	0	279
17:45	0	104	34	0	6	0	0	2	0	0	0	0	0	146
	3	792	213	0	30	4	0	12	5	0	2	0	0	1061
18:00	0	149	28	2	12	0	0	2	3	0	0	0	0	196
18:15	1	118	26	0	5	2	0	2	0	0	0	0	0	154
18:30	1	106	14	0	3	0	0	0	4	0	0	0	0	128
18:45	0	82	24	2	4	0	0	0	0	0	0	0	0	112
	2	455	92	4	24	2	0	4	7	0	0	0	0	590
19:00	1	104	28	0	9	2	0	2	2	0	0	0	0	148
19:15	0	62	10	2	5	3	0	0	0	0	0	0	0	82
19:30	2	74	27	0	2	0	0	2	5	0	0	0	0	112
19:45	0	63	15	0	3	0	0	0	0	0	0	0	0	81
	3	303	80	2	19	5	0	4	7	0	0	0	0	423
20:00	0	37	10	0	0	0	0	4	0	0	0	0	0	51
20:15	1	56	8	0	3	0	0	2	4	0	0	0	0	74
20:30	1	32	9	0	4	0	0	0	0	0	0	0	0	46
20:45	0	41	10	0	5	2	0	2	2	0	0	0	0	62
	2	166	37	0	12	2	0	8	6	0	0	0	0	233
21:00	0	36	9	0	3	0	0	5	4	0	0	0	0	57
21:15	2	48	13	0	0	0	0	0	3	0	0	0	0	66
21:30	0	36	6	0	0	0	0	2	2	0	0	0	0	46
21:45	0	36	6	2	2	0	0	2	2	0	0	0	0	50
	2	156	34	2	5	0	0	9	11	0	0	0	0	219
22:00	0	52	13	0	0	0	0	0	0	0	0	0	0	65
22:15	0	30	5	0	0	0	0	5	6	0	0	0	0	46
22:30	0	24	6	0	2	0	0	0	2	0	0	0	0	34
22:45	0	22	11	0	0	0	0	0	2	0	0	0	0	35
	0	128	35	0	2	0	0	5	10	0	0	0	0	180
23:00	0	24	12	0	0	0	0	0	0	0	0	0	0	36
23:15	0	16	5	0	0	0	0	0	3	0	0	0	0	24
23:30	0	34	12	0	2	0	0	0	2	0	0	0	0	50
23:45	0	14	0	0	0	0	0	0	2	0	0	0	0	16
	0	88	29	0	2	0	0	0	7	0	0	0	0	126
Total	23	5370	1750	38	384	46	0	107	162	2	8	0	2	7892
Percent	0.3%	68.0%	22.2%	0.5%	4.9%	0.6%	0.0%	1.4%	2.1%	0.0%	0.1%	0.0%	0.0%	
Grand Total	42	7423	2711	79	685	100	0	204	452	6	16	0	4	11722
Percent	0.4%	63.3%	23.1%	0.7%	5.8%	0.9%	0.0%	1.7%	3.9%	0.1%	0.1%	0.0%	0.0%	