

ADDENDUM

To: Bryan Cuffee
Gold Key PHR

From: Karen McPherson, PE
McPherson Consulting

Date: August 31, 2016

Subject: Gold Key Cavalier Oceanfront – Traffic Impact Analysis Additional Data

Following the initial submittal for the traffic impact study (TIA) in early August, the City requested that true “summer” peak season turning movement counts be taken along Pacific Avenue for the study area intersections.

Turning movement counts were performed on August 16, 2016 from 4:00 pm – 6:00 pm at the following intersections

- Pacific Avenue and 42nd Street
- Pacific Avenue and Atlantic Avenue
- Pacific Avenue and 40th Street
- Pacific Avenue and 39th Street

The actual summer counts were less than the projected TMC data used in the submitted summary. Therefore, the results outlined in the TIA represent a worst case scenario and actual operations should be improved over those identified in the reports.

Based on the updated count data, the recommendations provided in the report are still valid, a minor clarification is noted for Scenario 2: Pacific Avenue/40th Street intersection.

Scenario 1: Proposed signal at Pacific Avenue / 39th Street (with traditional signal operations and multimodal accommodations)

Atlantic Avenue / 42nd Street

- Construct a proposed signal
- Construct northbound left-turn lane

Pacific Avenue / Atlantic Avenue (Cavalier Oceanfront entrance)

- Remove signal
- Maintain existing laneage along northbound Pacific Avenue and southbound Atlantic Avenue
- Construct westbound approach to include a shared left/right-turn lane

Pacific Avenue / 40th Street

- Maintain existing laneage and unsignalized operations

Pacific Avenue / 39th Street

- Construct a proposed signal
- Maintain existing laneage along northbound and southbound Pacific Avenue
- Remove on street parking from the north side of 39th Street and restripe the westbound approach to include an exclusive left-turn and right-turn lane

Atlantic Avenue / 40th Street

- Maintain existing laneage

Scenario 2: Proposed signal at Pacific Avenue / 40th Street (with non-standard signal operations and alternate multimodal connections)

Atlantic Avenue / 42nd Street

- Same as Scenario 1

Pacific Avenue / Atlantic Avenue (Cavalier Oceanfront entrance)

- Same as Scenario 1

Pacific Avenue / 40th Street

- Construct a proposed signal
 - Prohibit the northbound left-turn phase by time of day. The proposed restriction should occur during the AM and PM peak hour conditions (approximately 1-2 hours) Monday – Friday during the peak summer season, only.
 - Southbound right-turn movements do not have any restrictions.
 - Eastbound (outbound) movements do not have any restrictions.
 - Consideration should be given to developing special event timing plans for services or late evening events, that would not adversely affect the flow of traffic along Pacific Avenue
- Maintain existing laneage along northbound and southbound Pacific Avenue
- Remove on street parking along both sides of 40th Street
 - Restripe the westbound approach to include an exclusive left-turn and right-turn lane.
 - Restripe the eastbound approach to include an exclusive left-turn and right-turn lane

Pacific Avenue / 39th Street

- Maintain existing laneage and unsignalized operations

Atlantic Avenue / 40th Street

- Same as Scenario 1

Data Collection Group

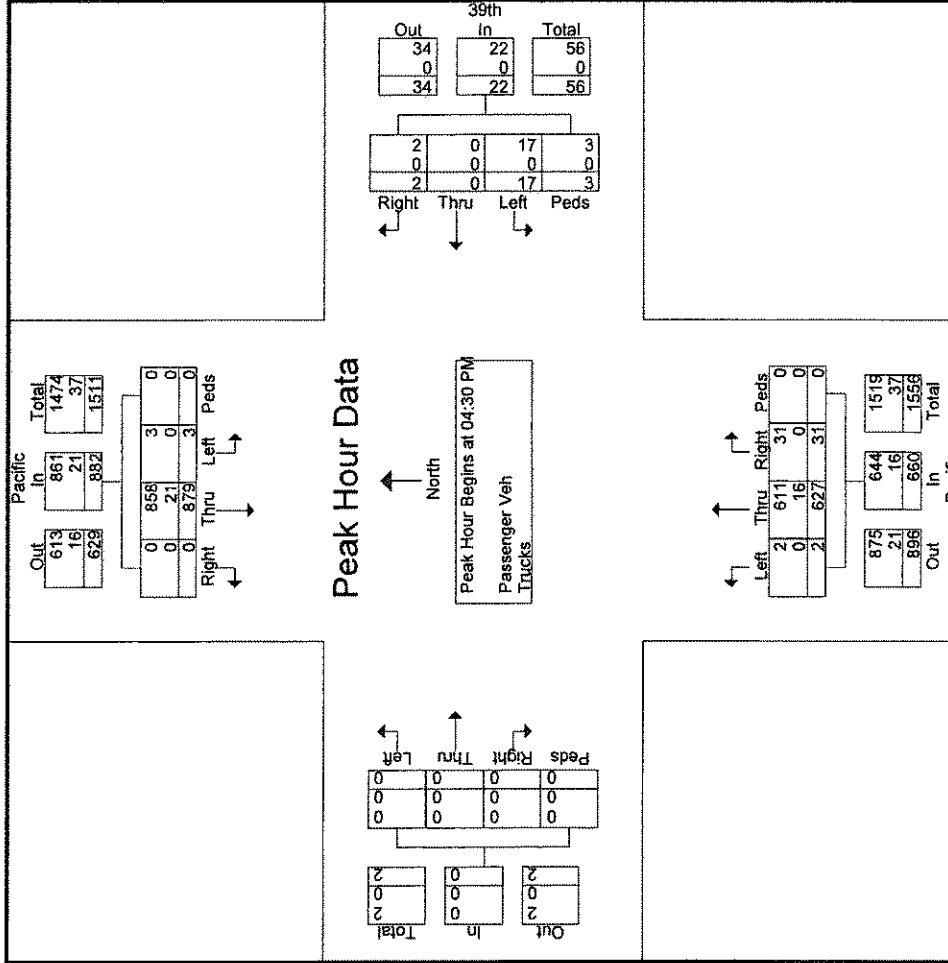
LSmith@DataCollectionGroup.net

File Name : Pacific and 39th PM
 Site Code : 00393939
 Start Date : 8/16/2016
 Page No : 1

Groups Printed- Passenger Veh - Trucks

Start Time	39th																					
	Pacific From North				From East				Pacific From South				From West									
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total	
04:00 PM	0	246	0	0	246	0	0	4	0	4	7	152	0	0	159	0	0	0	0	0	0	409
04:15 PM	0	206	1	0	207	1	0	9	4	14	6	134	0	0	140	0	0	0	0	0	0	361
04:30 PM	0	220	0	0	220	1	0	4	0	5	8	158	1	0	167	0	0	0	0	0	0	392
04:45 PM	0	199	1	0	200	0	0	2	2	4	4	150	0	0	154	0	0	0	0	0	0	358
Total	0	871	2	0	873	2	0	19	6	27	25	594	1	0	620	0	0	0	0	0	0	1520
05:00 PM	0	239	0	0	239	1	0	3	0	4	7	154	1	0	162	0	0	0	0	0	0	405
05:15 PM	0	221	2	0	223	0	0	8	1	9	12	165	0	0	177	0	0	0	0	0	0	409
05:30 PM	0	225	0	0	225	1	0	11	3	15	4	133	0	0	137	0	0	0	0	0	0	377
05:45 PM	0	180	2	1	183	1	0	5	0	6	7	151	2	0	160	0	0	0	0	0	0	349
Total	0	865	4	1	870	3	0	27	4	34	30	603	3	0	636	0	0	0	0	0	0	1540
Grand Total	0	1736	6	1	1743	5	0	46	10	61	55	1197	4	0	1256	0	0	0	0	0	0	3060
Approch %	0	99.6	0.3	0.1		8.2	0	75.4	16.4		4.4	95.3	0.3	0		0	0	0	0	0	0	
Total %	0	56.7	0.2	0	57	0.2	0	1.5	0.3	2	1.8	39.1	0.1	0	41	0	0	0	0	0	0	
Passenger Veh	0	1704	6	1	1711	5	0	46	10	61	54	1169	4	0	1227	0	0	0	0	0	0	2999
% Passenger Veh	0	98.2	100	100	98.2	100	0	100	100	100	98.2	97.7	100	0	97.7	0	0	0	0	0	0	98
Trucks	0	32	0	0	32	0	0	0	0	0	1	28	0	0	29	0	0	0	0	0	0	61
% Trucks	0	1.8	0	0	1.8	0	0	0	0	0	1.8	2.3	0	0	2.3	0	0	0	0	0	0	2

Start Time	Pacific From North					39th From East					Pacific From South					From West						
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	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	0	220	0	0	220	1	0	4	0	5	8	158	1	0	167	0	0	0	0	0	0	392
04:45 PM	0	199	1	0	200	0	0	2	2	4	4	150	0	0	154	0	0	0	0	0	0	358
05:00 PM	0	239	0	0	239	1	0	3	0	4	7	154	1	0	162	0	0	0	0	0	0	405
05:15 PM	0	221	2	0	223	0	0	8	1	9	12	165	0	0	177	0	0	0	0	0	0	409
Total Volume	0	879	3	0	882	2	0	17	3	22	31	627	2	0	660	0	0	0	0	0	0	1564
% App. Total	0	99.7	0.3	0	100.0	9.1	0	77.3	13.6	25.0	4.7	95	0.3	0	75.0	0	0	0	0	0	0	100.0
PHF	.000	.919	.375	.000	.923	.500	.000	.531	.375	.611	.646	.950	.500	.000	.932	.000	.000	.000	.000	.000	.000	.956
Passenger Veh	0	861	3	0	864	2	0	17	3	22	31	611	2	0	644	0	0	0	0	0	0	1527
% Passenger Veh	0	97.6	100	0	97.6	100	0	100	100	100	100	97.4	100	0	97.6	0	0	0	0	0	0	97.6
Trucks	0	21	0	0	21	0	0	0	0	0	0	16	0	0	16	0	0	0	0	0	0	37
% Trucks	0	2.4	0	0	2.4	0	0	0	0	0	0	2.6	0	0	2.4	0	0	0	0	0	0	2.4

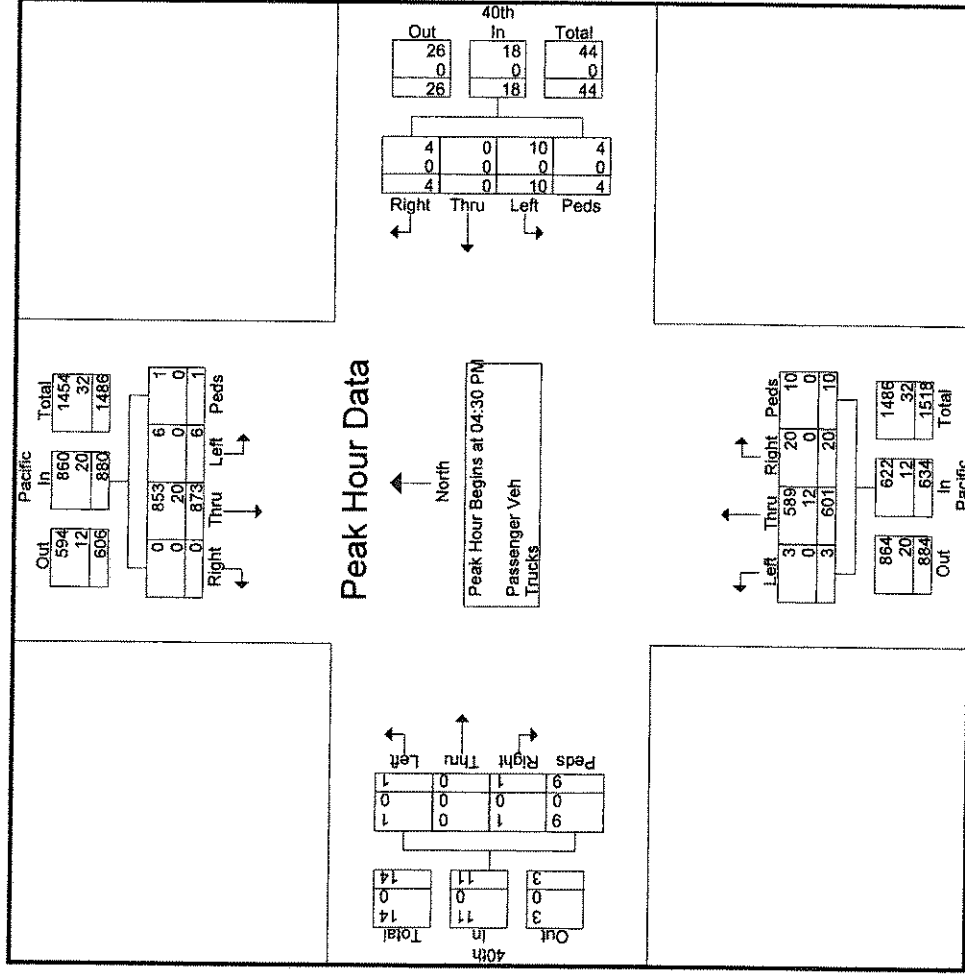


Data Collection Group

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File Name : Pacific and 40th PM
 Site Code : 00004040
 Start Date : 8/16/2016
 Page No : 2

Start Time	Pacific From North						40th From East						Pacific From South						40th From West											
	Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. 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	0	216	0	0	216		0	0	3	0	3		4	153	2	1	160		1	0	0	4	5		1	0	0	4	5	
04:45 PM	0	208	0	0	208		1	0	3	3	7		5	144	1	5	155		0	0	0	3	3		0	0	0	3	3	
05:00 PM	0	239	2	1	242		1	0	2	0	3		4	154	0	2	160		0	0	1	2	3		0	0	1	2	3	
05:15 PM	0	210	4	0	214		2	0	2	1	5		7	150	0	2	159		0	0	0	0	0		0	0	0	0	0	
Total Volume	0	873	6	1	880		4	0	10	4	18		20	601	3	10	634		9.1	0	1	9	11		1	0	1	9	11	
% App. Total	0	99.2	0.7	0.1			22.2	0	55.6	22.2			3.2	94.8	0.5	1.6			.250	.000	.250	.563			.250	.000	.250	.563		
PHF	.000	.913	.375	.250	.909		.500	.833	.333	.333	.643		.714	.976	.375	.500	.991						.550						.945	
Passenger Veh	0	853	6	1	860		4	0	10	4	18		20	589	3	10	622		1	0	1	9	11		1	0	1	9	11	
% Passenger Veh	0	97.7	100	100	97.7		100	0	100	100	100		100	98.0	100	100	98.1		100	0	100	100	100		100	0	100	100	100	
Trucks	0	20	0	0	20		0	0	0	0	0		0	12	0	0	12		0	0	0	0	0		0	0	0	0	0	
% Trucks	0	2.3	0	0	2.3		0	0	0	0	0		0	2.0	0	0	1.9		0	0	0	0	0		0	0	0	0	0	



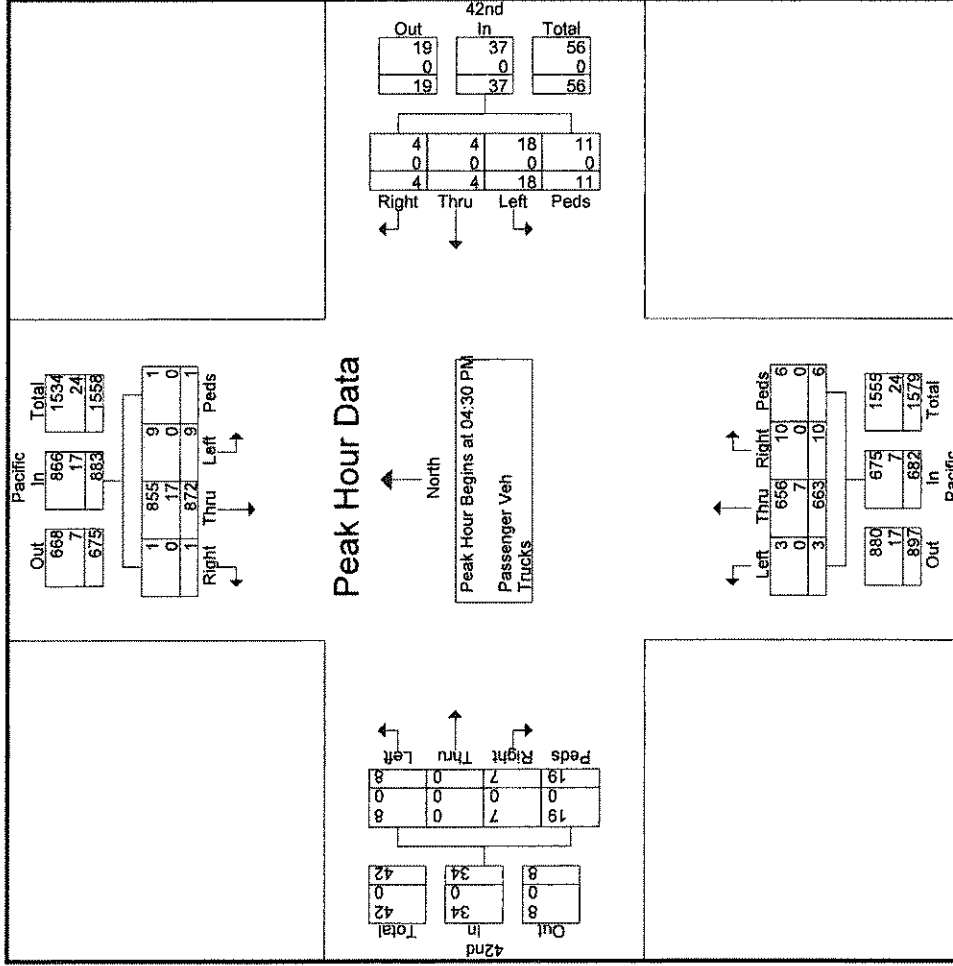
Data Collection Group

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File Name : Pacific and 42nd
 Site Code : 00004242
 Start Date : 8/16/2016
 Page No : 1

Start Time	Pacific												42nd													
	From North						From East						From South						From West							
	Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total		Right	Thru	Left	Peds	App. Total			
04:00 PM	0	212	1	0	213		0	2	5	0	7		2	158	2	14	176		6	0	0	10	16		412	
04:15 PM	1	190	1	0	192		3	0	4	3	10		2	145	2	0	149		3	1	0	2	6		357	
04:30 PM	0	221	4	0	225		3	2	6	4	15		2	171	1	5	179		1	0	0	7	8		427	
04:45 PM	1	202	0	0	203		0	2	6	1	9		4	162	1	1	168		4	0	5	2	11		391	
Total	2	825	6	0	833		6	6	21	8	41		10	636	6	20	672		14	1	5	21	41		1587	
05:00 PM	0	237	2	0	239		0	0	5	2	7		1	167	1	0	169		1	0	2	4	7		422	
05:15 PM	0	212	3	1	216		1	0	1	4	6		3	163	0	0	166		1	0	1	6	8		396	
05:30 PM	2	194	3	0	199		1	0	3	6	10		3	152	0	1	156		2	0	1	10	13		378	
05:45 PM	0	167	2	0	169		0	0	5	2	7		2	153	2	2	159		1	0	0	2	3		338	
Total	2	810	10	1	823		2	0	14	14	30		9	635	3	3	650		5	0	4	22	31		1534	
Grand Total	4	1635	16	1	1656		8	6	35	22	71		19	1271	9	23	1322		19	1	9	43	72		3121	
Approch %	0.2	98.7	1	0.1			11.3	8.5	49.3	31			1.4	96.1	0.7	1.7			26.4	1.4	12.5	59.7				
Total %	0.1	52.4	0.5	0	53.1		0.3	0.2	1.1	0.7	2.3		0.6	40.7	0.3	0.7	42.4		0.6	0	0.3	1.4	2.3			
Passenger Veh	4	1609	16	1	1630		8	5	35	22	70		19	1258	9	23	1309		19	1	9	43	72		3081	
% Passenger Veh	100	98.4	100	100	98.4		100	83.3	100	100	98.6		100	99	100	100	99		100	100	100	100	100	100		98.7
Trucks	0	26	0	0	26		0	1	0	0	1		0	13	0	0	13		0	0	0	0	0		40	
% Trucks	0	1.6	0	0	1.6		0	16.7	0	0	1.4		0	1	0	0	1		0	0	0	0	0		1.3	

Start Time	Pacific From North					42nd From East					Pacific From South					42nd From West					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	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	0	221	4	0	225	3	2	6	4	15	2	171	1	5	179	1	0	0	7	8	427
04:45 PM	1	202	0	0	203	0	2	6	1	9	4	162	1	1	168	4	0	5	2	11	391
05:00 PM	0	237	2	0	239	0	0	5	2	7	1	167	1	0	169	1	0	2	4	7	422
05:15 PM	0	212	3	1	216	1	0	1	4	6	3	163	0	0	166	1	0	1	6	8	396
Total Volume	1	872	9	1	883	4	4	18	11	37	10	663	3	6	682	7	0	8	19	34	1636
% App. Total	0.1	98.8	1	0.1	924	10.8	10.8	48.6	29.7	617	1.5	97.2	0.4	0.9	953	20.6	0	23.5	55.9	773	958
PHF	.250	.920	.563	.250	.924	.333	.500	.750	.688	.617	.625	.969	.750	.300	.953	.438	.000	.400	.679	.773	958
Passenger Veh	1	855	9	1	866	4	4	18	11	37	10	656	3	6	675	7	0	8	19	34	1612
% Passenger Veh	100	98.1	100	100	98.1	100	100	100	100	100	100	98.9	100	100	99.0	100	0	100	100	100	98.5
Trucks	0	17	0	0	17	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	24
% Trucks	0	1.9	0	0	1.9	0	0	0	0	0	0	1.1	0	0	1.0	0	0	0	0	0	1.5



Data Collection Group

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File Name : Pacific and Atlantic
 Site Code : 00004141
 Start Date : 8/16/2016
 Page No : 2

Start Time	Pacific From North					Atlantic From East					Pacific From South					From West						
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	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	0	214	17	1	232	28	0	14	5	47	5	148	0	0	153	0	0	0	0	0	0	432
04:45 PM	0	196	15	0	211	28	0	8	5	41	6	139	0	0	145	0	0	0	0	0	0	397
05:00 PM	0	229	19	0	248	24	0	12	5	41	5	152	0	0	157	0	0	0	0	0	0	446
05:15 PM	0	202	18	1	221	21	0	14	2	37	8	144	0	0	152	0	0	0	0	0	0	410
Total Volume	0	841	69	2	912	101	0	48	17	166	24	583	0	0	607	0	0	0	0	0	0	1685
% App. Total	0	92.2	7.6	0.2		60.8	0	28.9	10.2		4	96	0	0		0	0	0	0	0	0	
PHF	.000	.918	.908	.500	.919	.902	.000	.857	.850	.883	.750	.959	.000	.000	.967	.000	.000	.000	.000	.000	.000	.945
Passenger Veh	0	823	68	2	893	99	0	48	17	164	16	578	0	0	594	0	0	0	0	0	0	1651
% Passenger Veh	0	97.9	98.6	100	97.9	98.0	0	100	100	98.8	66.7	99.1	0	0	97.9	0	0	0	0	0	0	98.0
Trucks	0	18	1	0	19	2	0	0	0	2	8	5	0	0	13	0	0	0	0	0	0	34
% Trucks	0	2.1	1.4	0	2.1	2.0	0	0	0	1.2	33.3	0.9	0	0	2.1	0	0	0	0	0	0	2.0

