

Santa Cruz County

October 2014 Bicycle, Pedestrian, Vehicle Occupancy and Motor Vehicle Count Report

Santa Cruz County Regional Transportation Commission

February 2015

INTRODUCTION

The Santa Cruz County Regional Transportation Commission (RTC) performed bicycle, pedestrian and motor vehicle counts at 10 locations throughout the county (**Figure 1**) on Thursday, October 16, 2014. This data was collected in order to measure bicycle ridership and pedestrian trends, plan for bicycle and pedestrian infrastructure improvements, and monitor the progress of our county in moving towards a more sustainable transportation system. Vehicle occupancy counts and truck volumes were also counted on Thursday, October 16, 2014 on Highway 1 and Highway 17 at peak am and pm time periods to assess average vehicle occupancy, percentage single occupant vehicles and truck volumes.

METHODOLOGY

Mode Split Counts

A consultant was hired to take bicycle and pedestrian counts by installing cameras at the 10 intersections to record the bicycle and pedestrian activity. Bike and pedestrian counts were tallied by the consultant by viewing the videos after the data was collected. Bicycle and pedestrian counts recorded the direction from which bicyclists travel and their turning movement through the intersection broken down into 15 minute intervals (**Figure 2**). Motor vehicle counts using hoses were also collected at these 10 intersections at the same times as the bicyclist and pedestrian counts to provide mode split data.

Vehicle Occupancy Counts

A consultant was hired to take vehicle occupancy counts on Highway 1 between Soquel Ave and 41st Ave and on Highway 17 at the summit on Thursday, October 16, 2014. Counts were taken manually by two observers in each direction, one observing the fast lane and the other observing the slow lane for a period of three hours (am peak -6:45 to 9:45am and pm peak - 3:30 to 6:30pm). Vehicle occupancy counts provide a means for monitoring the rate of carpooling in a corridor.

Truck Volumes

Truck volumes were also taken by a consultant on Thursday, October 16, 2014 Highway 1 between Soquel Ave and 41st Ave and on Highway 17 at the summit. Counts were taken manually by one observer in each direction for a period of three hours (am peak -6:45 to 9:45am and pm peak - 3:30 to 6:30pm). For the purposes of these counts, only commercial trucks with more than two axles were categorized as trucks. Pickups and small trucks were not included in the counts.

RESULTS

The key findings from this data collection effort are:

- The top three intersections with the greatest number of bicyclists counted during the October 2014 count were Bay Dr. and High St.(UCSC); Seabright Ave. and Murray St.; and Front St. and Laurel St. **(Figure 2)**.
- Average mode share at the 20 locations measured was 94.3% motor vehicle, 1.8% bike and 3.8% pedestrian. **(Figure 3)**.
- The highest bicycle mode share (7.1%) was on Bay Dr (south of High St) in the City of Santa Cruz. **(Figure 4)**.
- The highest pedestrian mode share (16.2%) was on Union St (north of Maple Ave) in the City of Watsonville. **(Figure 4)**.
- The total bike counts at all 10 locations were lower in October 2014 than in the Community Traffic Safety Coalition May 2014 Count **(Figure 5)**. The complete list of bike counts from the 2003 through 2014 Community Traffic Safety Coalition May-June surveys is included in this table.
- The change in total motor vehicle count volumes compared to May 2012 data was a minor decrease of 1.2% **(Figure 6)**.
- Vehicle occupancy counts were lower in the am peak period versus the pm and there were a greater percentage of single occupant vehicles (with the exception of Hwy 17 SB) and truck volumes in the am peak period **(Figures 7 and 8)**.

Figure 1. Bicycle, Pedestrian and Motor Vehicle Count Locations - October 2014



Figure 2. Example Bicycle and Pedestrian Count Tally Sheet for One 15 Minute Interval

4:00-4:15

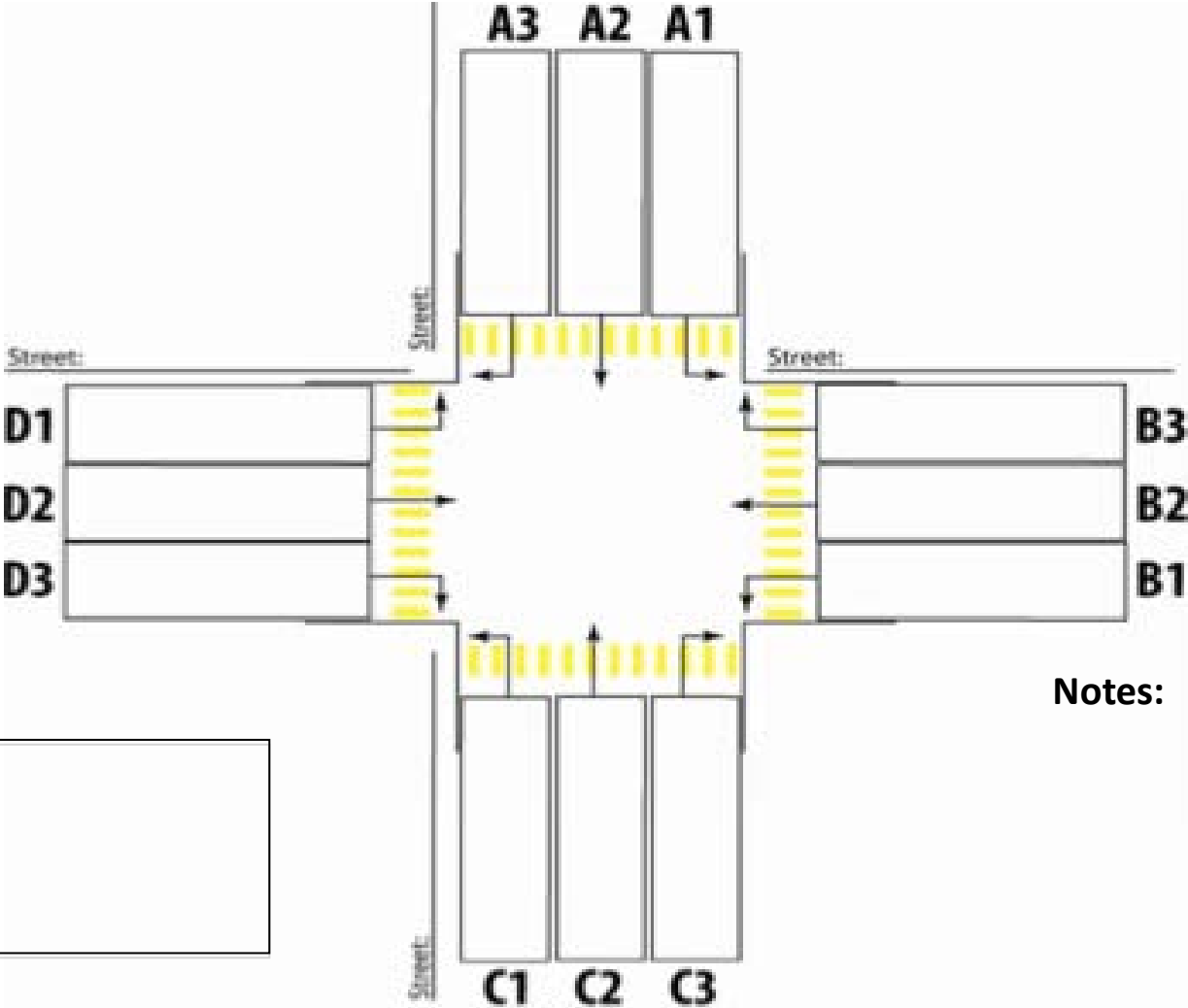


Figure 3. October 16, 2014 Bicycle and Pedestrian Counts

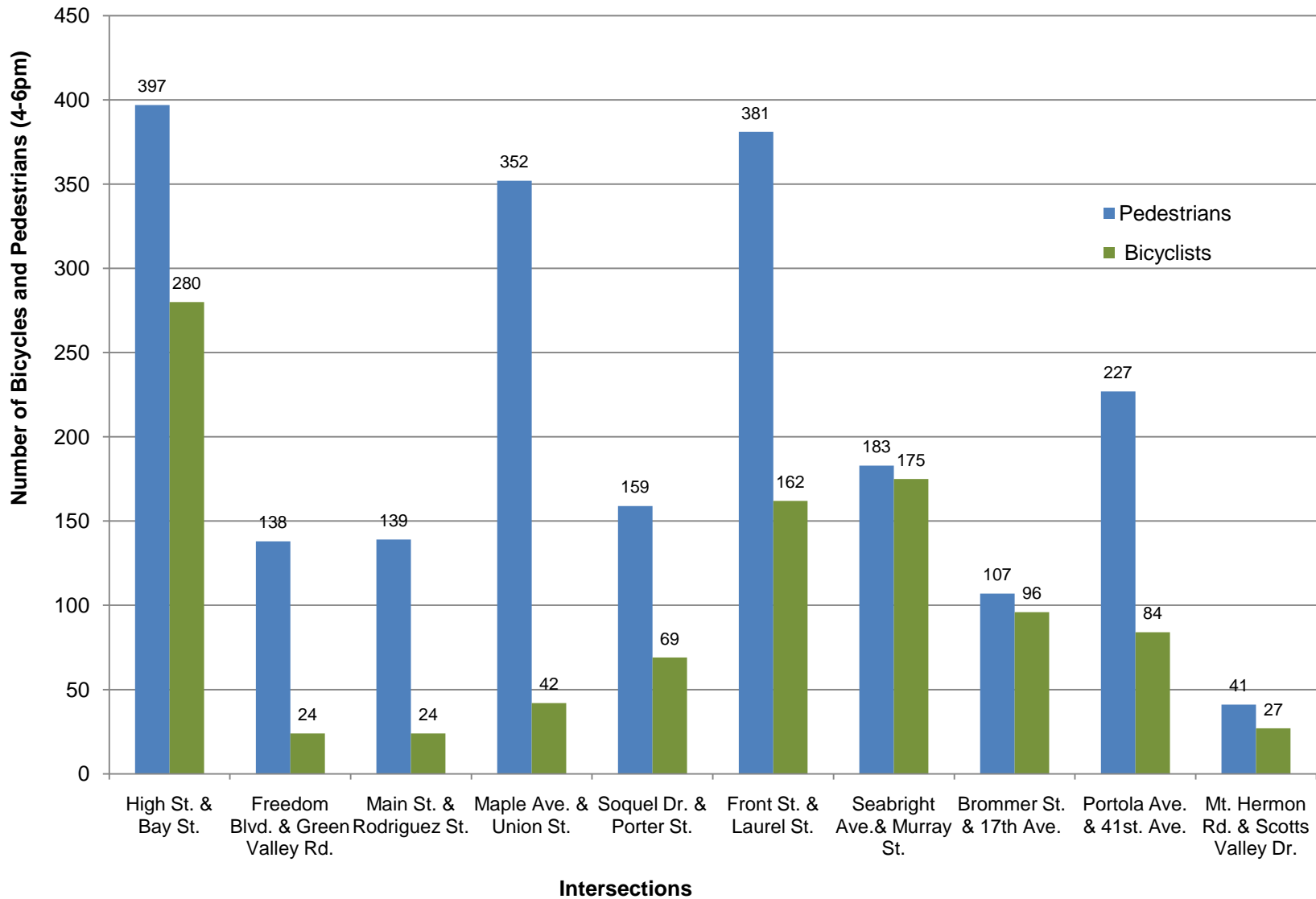


Figure 4. Santa Cruz County Mode Split Counts 2014
(Thurs., October 16th, 4-6pm)

Date	Location	Street	Motor Vehicles		Bicycles		Pedestrians	
			Total	%	Total	%	Total	%
10/16/2014	City of Santa Cruz	Bay Dr (S of High St)	2014	83.4%	172	7.1%	228	9.4%
10/16/2014	City of Santa Cruz	High St (E of Bay Dr)	1686	86.3%	102	5.2%	165	8.4%
10/16/2014	City of Santa Cruz	Front St (N of Laurel St)	1757	86.3%	77	3.8%	203	10.0%
10/16/2014	City of Santa Cruz	Laurel St (E of Front St)	3382	91.7%	108	2.9%	197	5.3%
10/16/2014	City of Santa Cruz	Seabright Ave (N of Murray St)	1607	90.9%	69	3.9%	91	5.1%
10/16/2014	City of Santa Cruz	Murray St (E of Seabright Ave)	3345	95.4%	119	3.4%	41	1.2%
10/16/2014	Live Oak	Brommer St (W of 17th Ave)	1466	93.4%	51	3.2%	53	3.4%
10/16/2014	Live Oak	17th Ave (N of Brommer St)	1650	94.8%	41	2.4%	50	2.9%
10/16/2014	Opal Cliffs	Portola Dr (W of 41st Ave)	2280	95.6%	42	1.8%	64	2.7%
10/16/2014	Opal Cliffs	41st Ave (N of Portola Dr)	1666	95.2%	42	2.4%	42	2.4%
10/16/2014	Scott's Valley	Mt Hermon Rd (NW of Scott's Valley Dr)	5935	99.3%	20	0.3%	19	0.3%
10/16/2014	Scott's Valley	Scott's Valley Dr (NE of Mt Hermon Rd)	3591	99.1%	6	0.2%	25	0.7%
10/16/2014	Soquel	Soquel Dr (W of Porter St)	3301	95.3%	49	1.4%	113	3.3%
10/16/2014	Soquel	Porter St (S of Soquel Dr)	1947	93.0%	19	0.9%	127	6.1%
10/16/2014	Watsonville	Maple Ave (W of Union St)	637	97.3%	9	1.4%	110	14.6%
10/16/2014	Watsonville	Union St (N of Maple Ave)	1205	81.4%	32	2.2%	243	16.4%
10/16/2014	Watsonville	Freedom Blvd (E of Green Valley Rd)	4503	98.2%	9	0.2%	73	1.6%
10/16/2014	Watsonville	Green Valley Rd (S of Freedom Blvd)	3389	97.7%	15	0.4%	66	1.9%
10/16/2014	Watsonville	Main St (W of Rodriguez St)	5212	97.5%	21	0.4%	112	2.1%
10/16/2014	Watsonville	Rodriguez St (S of Main St)	1099	94.0%	5	0.4%	65	5.6%
Total Mode Split			51672	94.3%	1008	1.8%	2087	3.8%

Figure 5. Santa Cruz County Bicycle Count Data by Location and Years

Note: Count data collected by Community Traffic Safety Coalition in May-June except for October 2014 RTC count

Site	Location	2003	2006	2007	2008	2009	2010	2012	2014	2014 (Oct)
Front Street & Laurel Street	City of Santa Cruz - Downtown	163		223	291	206	250	221	198	162
Laurel Street & Chestnut	City of Santa Cruz - Downtown	117	117	117	120	103	111	95	51	
Pacific & Laurel St	City of Santa Cruz - Downtown		267							
River Street & Encinal Street	City of Santa Cruz - Downtown	53	64	82	54	28	37	47	86	
Seabright & Murray	City of Santa Cruz - East Side	156	246	286	339	231	274	244	268	175
Soquel Avenue & Frederick St	City of Santa Cruz - East Side	112	139	129	176	144	124	152	114	
Soquel Drive & Winkle Avenue	City of Santa Cruz - East Side	35	51	48	70	54	59	46	61	
High Street & Bay (UCSC)	City of Santa Cruz - Westside	229	160	227	122	280	316	365	330	280
Mission Street & Western Drive	City of Santa Cruz - Westside	41	58	72	46	54	33	47	49	
Swift Street & Delaware	City of Santa Cruz - Westside	19	105	107	139	97	136	115	143	
Granite Creek & Scott's Valley Dr	Scotts Valley	32	34	40	22	21	25	30	28	
Mt. Herman & Scott's Valley Dr	Scotts Valley	8	18	37	35	24	29	46	27	27
Hwy 1 at Wilder Ranch	Unincorporated County - Davenport	97	95	84	43	78	79	80	67	
Brommer & 17th	Unincorporated County - Live Oak	71	114	104	122	123	101	127	140	96
East Cliff & 7th Ave.	Unincorporated County - Live Oak	152	163	106	82	112	153	126	123	
Portola Ave. & 41st, Capitola	Unincorporated County - Opal Cliffs	79	98	108	122	145	128	117	115	84
Hwy 9 & Graham Hill	Unincorporated County - SLV	7	12	19	15	21	20	24	11	
Soquel Dr. & Porter St., Soquel	Unincorporated County - Soquel	53	59	96	64	76	69	82	55	69
Freedom & Alta Vista	Watsonville	25	38	20	21	37	21	34	24	
Freedom Blvd. & Alta Vista Ave.	Watsonville	16	38	35	21	47	46	42	31	
Freedom Blvd. & Green Valley	Watsonville	34	40	46	50	21	32	38	23	24

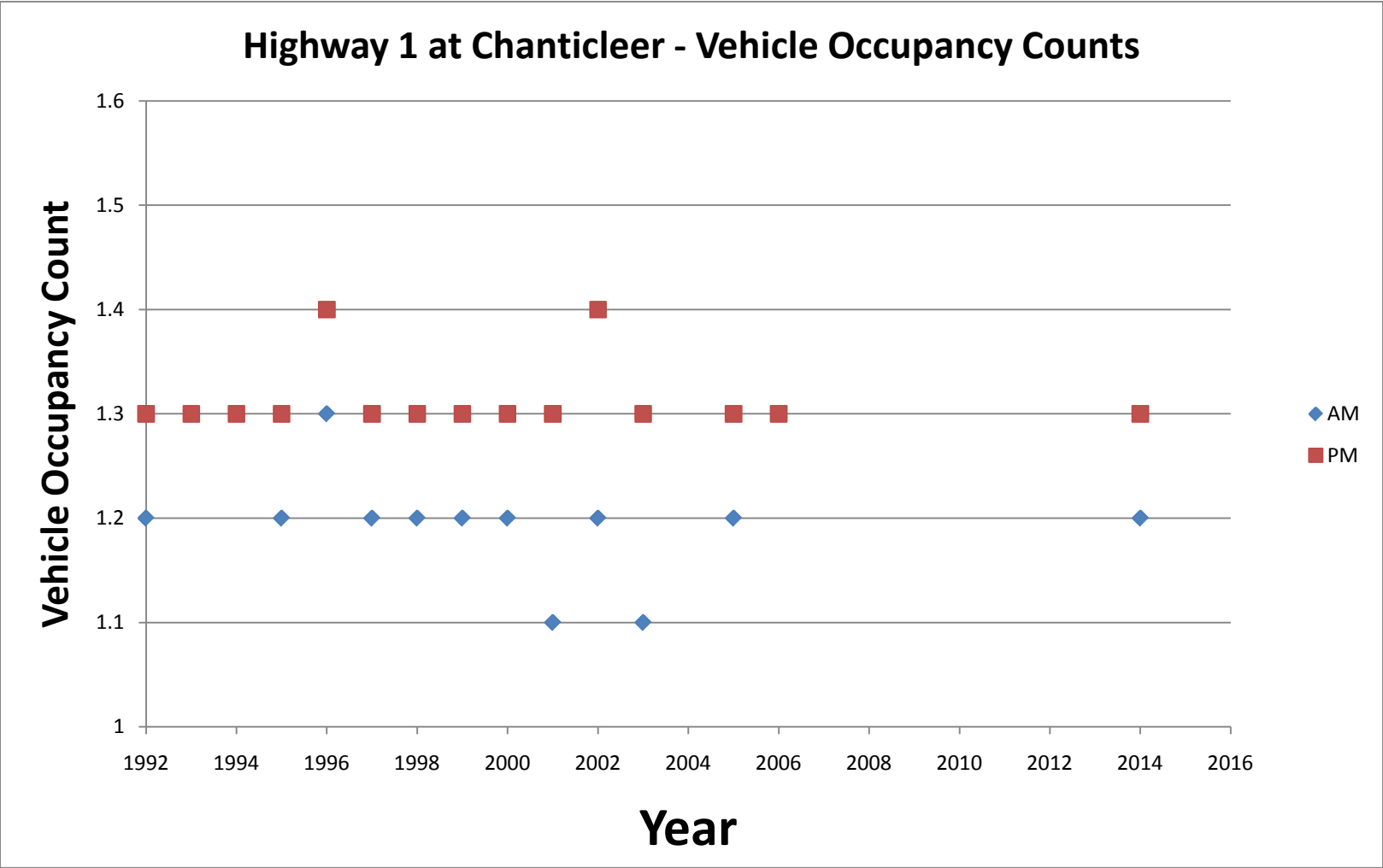
Figure 6. Santa Cruz County Motor Vehicle Count Data: 2014 versus 2012

	NB	SB	EB	WB	AM	PM	Total	2012 counts	% Change 2012 to 2014
17th Ave (N of Brommer St)	4931	5250			3767	6414	10181	11262	11%
41st Ave (N of Portola Dr)	6308	5206			3901	7613	11514	11313	-2%
Bay Street (S of High St)	6036	6454			4152	8338	12490	11730	-6%
Brommer St (W of 17th Ave)			3678	3920	2561	5037	7598	7724	2%
Freedom Blvd (E of Green Valley Rd)			14619	14306	10761	18164	28925	27374	-5%
Front Street (N of Laurel Street)	5322	5658			3423	7557	10980	11936	9%
Green Valley Rd (S of Freedom Blvd)	10938	10955			7957	13936	21893	20919	-4%
High Street (E of Bay Street)			5658	5899	4446	7111	11557	11664	1%
Laurel Street (E of Front Street)			11056	10832	8200	13688	21888	20920	-4%
Main St (W of Rodriguez St)			15021	14728	9302	20447	29749	27868	-6%
Maple Ave (W of Union St)			1483	2003	1187	2299	3486	3218	-8%
Mt Hermon Rd (NW of Scott's Valley Dr)	19153	18875			13447	24581	38028	37150	-2%
Murray St (E of Seabright Ave)			9423	9073	6083	12413	18496	19590	6%
Porter St (S of Soquel Dr)	5378	6204			4409	7173	11582	11593	0%
Portola Dr (W of 41st Ave)			6351	7526	4729	9148	13877	15280	10%
Rodriguez St (S of Main St)	3443	3077			2235	4285	6520	6403	-2%
Scott's Valley Dr (NE of Mt Hermon Rd)			11142	11403	8242	14303	22545	22597	0%
Seabright Ave (N of Murray St)	5040	5022			3319	6743	10062	8813	-12%
Soquel Dr (W of Porter St)	9637	8458			6311	11784	18095	18662	3%
	3392	4049			2479	4962	7441	7132	-4%
TOTAL							316907	313148	-1.2%

Figure 7. Santa Cruz County Vehicle Occupancy Count, Single Occupant Vehicles and Truck Volume on Highways 1 and 17 - October 2014

	Average Vehicle Occupancy Count	Single Occupant Vehicles (%)	Truck Volume (%)
AM Peak			
Highway 1 NB	1.13	87.6%	4.5%
Highway 1 SB	1.22	82.3%	3.4%
Highway 17 NB	1.14	89.7%	2.7%
Highway 17 SB	1.25	78.4%	6.1%
PM Peak			
Highway 1 NB	1.24	78.2%	1.7%
Highway 1 SB	1.34	72.5%	2.2%
Highway 17 NB	1.32	75.1%	2.6%
Highway 17 SB	1.23	81.1%	1.3%

Figure 8. Santa Cruz County Vehicle Occupancy Count Trends – Highway 1 and Highway 17



Highway 17 at Summit - Vehicle Occupancy Counts

