



Monitoring Vehicle and Visitor Traffic on the Cadillac Mountain Summit Road: 2013 - 2014



Bus Descending Cadillac Mountain

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Executive Summary

The traffic counter at the bottom of the Cadillac Mountain Summit Road was resurrected in 2013 and used to count vehicles **ascending** Cadillac Mountain in 2013 and **descending** Cadillac Mountain in 2014. We used a three person multiplier to estimate the number of visitors to the summit and applied it to all vehicles knowing that some were buses carrying many more passengers than three. We did this because of the uncertainty of the vehicle classification data. Thus the visitor numbers below are underestimated.

- In 2013, we estimated 558,090 visitors to Cadillac Mountain between May 23 and October 31. The mean number of vehicles **ascending** per day in August was 1,847, representing 5,541 visitors. The peak number of vehicles **ascending** per day in August was 2,837 representing 8,511 visitors, and this was the highest for the year. There were 12 days in August with greater than 2,000 vehicles **ascending** per day.
- August 2013 had 47 hours with greater than 200 vehicles per hour **ascending** Cadillac Mountain. Peak hourly traffic **ascending** Cadillac Mountain for August was 295 vehicles and it occurred on August 10 between 10:00 a.m. and 11:00 a.m. The highest hourly traffic **ascending** Cadillac in 2013 was 304 on September 1 (Sunday of Labor Day weekend) from 6:00 p.m. to 7:00 p.m. for the sunset. On this date there were eight consecutive hours with greater than 200 vehicles per hour, the highest number for the year.
- In 2014, we estimated 682,671 visitors to Cadillac Mountain between June 1 and October 31. The mean number of vehicles **descending** per day in August was 1,944 representing 5,832 visitors. The peak number of vehicles **descending** per day in August was 2,633 representing 7,899 visitors. However, the peak number of vehicles **descending** per day for the year was 2,933 on October 12 (Sunday of Columbus Day weekend) representing 8,799 visitors. There were 16 days in August with greater than 2,000 vehicles **descending** per day.
- August 2014 had 79 hours with greater than 200 vehicles per hour **descending** Cadillac Mountain. Peak hourly traffic **descending** Cadillac Mountain for August was 391 vehicles and it occurred on August 30 (Saturday of the Labor Day weekend) between 7:00 p.m. and 8:00 p.m. On October 12 (Sunday of Columbus Day weekend), there were eight consecutive hours with greater than 200 vehicles **descending** per hour, the highest number for the year. We should note that **descending** traffic volumes are higher at sunset as most visitors head down at the same time.
- Sunrise traffic in 2013 was more than 100/hour from 4:00 a.m. - 5:00 a.m. for nine days in July and 17 days in August for either the 4:00 a.m. - 5:00 a.m. or 5:00 a.m. - 6:00 a.m. hour.
- Sunrise is followed by a 3-4 hour “lull” in traffic. In July and August, hourly traffic does not begin to consistently exceed 100 vehicles/hour until 10:00 a.m.
- Sunset traffic in July peaked from 7:00 p.m. to 8:00 p.m. in 2013. On 19 of 31 days traffic exceeded 100 vehicles/hour during this hour, with a peak of 269 vehicles/hour on July 5.
- Sunset traffic in August 2013 peaked from 6:00 p.m. to 7:00 p.m. On 26 of 31 days traffic exceeded 100 vehicles/hour during this hour, with a peak of 254 vehicles/hour on Saturday August 30 (Labor Day weekend). There were four other days with traffic more than 200 vehicles over that same hour.
- From 10:00 a.m. to 8:00 p.m. in August 2013, traffic seldom dropped below 100 vehicles/hour.

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INTRODUCTION

As the highest point on the east coast and with a road to the top, Cadillac Mountain is the focal point for Acadia National Park visitors because it offers sweeping views of an island-dotted landscape in all directions. A recent study reported that 75% of visitors went to the summit during their stay (Manni 2010).

In spite of the importance of the summit to the management of the park, there has never been a working traffic counter to track visitor use of the site. Several efforts in the early 2000s provide a little bit of a window on use of Cadillac Mountain. Park staff conducted one day censuses (5:00 a.m. to 8:00 p.m.) of traffic and made estimates of the number of park visitors on 8/14/2001 and 8/1/2002 to provide a snapshot of use on a busy August day (Jacobi 2001, Jacobi 2003). Results suggested that a busy August day might have 1,700 – 2,000 vehicles and 5,000 – 6,000 visitors. Work by Baldwin and LaPage (2003) in the summer of 2002 suggested that visitation to Cadillac from June to September averaged around 3,620 per day. This is reasonably consistent with the two censuses conducted around the same time. Note that 2001 – 2003 was just before the cruise ship bus traffic increased tremendously.

The Intelligent Transportation System (ITS) pilot project begun in 2000 included the installation of traffic loops and a traffic counter at the bottom of the summit road. This system was intended to provide real-time traffic information from many sites around the park via land lines and cell phones calling in to a central server/computer. After 13 years of contractor defaults, system failures, and other problems, park staff determined the project should end.

In 2013, with the decision to end the ITS project, park staff decided to try to resurrect the traffic counter at the bottom of Cadillac Mountain with a counter provided by A.J. Nedzesky, a contractor with the National Park Service Traffic Field Operations Technical Support Center (FOTSC). The loops, wiring, and solar panels were all still workable and the equipment cabinet intact. We were not interested in real-time traffic information, only traffic counts downloadable each month, just like the three other counters in the park managed by FOTSC. This report will summarize traffic data collected in 2013 and 2014 with some estimations of visitor use based on Public Use Statistics Office methods and our own best judgment.

METHODS

In 2013, Nedzesky came to Acadia at the end of May to install and validate the counter for us with the assistance of the park electrician. The counter was a Peek Model Automatic Data Recorder ADR-1000, identical to the three others in the park. We collected data from June 1 to October 31, 2013. After every month, we downloaded data from the counter onto a card, took the card to our Paradise Hill Road traffic counter site, and inserted it into the card reader slot on the counter. We then called Nedzesky and he dialed in to the site and downloaded the data from the card. We then removed the card and followed the same process for the next month of data.

Each month Nedzesky emailed two pdf data files to us. These files are named and identified as Station 4704, Cadillac Mountain. In addition to the vehicle count data by hour and date in a

format identical to what we receive from the three other Peek counters, the data included vehicle size classification broken down for vehicles less than 30 feet or thirty feet or more. The classification data also includes the direction of travel as either East (up) or West (down).

In 2014, Nedzesky sent us replacement counters, all Peek Sabre models, for Cadillac and the three other Acadia sites he manages. We installed the Cadillac Mountain counter in late May and removed it in November. We then downloaded the data and sent him the raw files. He processed the data and returned it for our analysis.

The vehicle counts reported on the regular Monthly Report appear to be good data that confirm our local knowledge, and we will report them here for both years. The classification data has a number of higher than expected counts for oversize vehicles in both years. It may be that the configuration of the embedded loops encourages vehicles to cross the center line confounding the classification counts. We will not report this classification data in the body of this report, but include it in Appendix 1. We will plan a more detailed validation effort in 2015 to determine the reliability of these classification counts.

Estimating the number of visitors based on the number of vehicles is straightforward but imperfect. We used a three person multiplier for **all** vehicles with the understanding that some number of them, perhaps more than 100 daily in some months, are buses with far more passengers. This is the same May – October monthly multiplier that has been used to estimate park visitation from passenger car traffic since 1990, and is based on research in the late 1980s. We assume these have not changed. Again, we applied this number to every vehicle counted, including all the oversize vehicles because of the classification problem described above. Thus visitor estimates are low by a few hundred to perhaps 1,000 – 2,000 per day when cruise ship buses are running. For example, 40 buses times ~40 passengers per bus equals 1,600 visitors that are counted as 40 times 3, or 120 visitors. In addition, there are up to several hundred hikers and perhaps 10-20 bicyclists arriving at the summit on any August day.

RESULTS

Tables 1 - 5 show the vehicle counts for the total, mean, and peak number of vehicles ascending and/or descending Cadillac Mountain from June 1 through October 31, 2013 and May 23 – October 31, 2014, as well as visitor estimates based on those counts. Estimates for 2013 are based on *ascending* traffic. Estimates for 2014 are based on *descending* traffic because ascending data was not available due to a programming error. Comparing the monthly and daily ascending and descending traffic is reasonable because the monthly differences between the two in 2013 were quite small: 136 vehicles for June; 28 for July, 58 for August; 22 for September; and 62 for the abbreviated October. Comparing *hourly* traffic figures for ascending and descending traffic must be made with more caution. Hourly traffic figures for descents are higher in the evening after sunset, as vehicles have been waiting for the light show and come down all at once when the show is over. In the future, we plan to compare and report only ascending traffic as that will better inform congestion management. Descending data will still be held and archived.

**Table 1: Total Number of Vehicles and Visitors Ascending Cadillac Mountain
June 1 – October 31, 2013 and Descending Cadillac Mountain May 23 –October 31, 2014, by Month.**

Month	Total Number of Vehicles 2013	Total Number of Visitors 2013	Total Number of Vehicles 2014	Total Number of Visitors 2014
May	--	--	7,853 ¹	23,559 ²
June	28,157	84,471 ¹	30,622	91,866
July	49,888	149,664	51,690	155,070
August	57,264	171,792	60,276	180,828
September	42,027	126,081	42,616	127,848
October	8,694 ³	26,082	34,500	103,500
Total	186,030	558,090	227,557	682,671

1. Only last nine days of month including Holiday weekend.

2. Three-person multiplier applied to all vehicles regardless of size.

3. Government shutdown October 1-16 inclusive. No traffic.

**Table 2: Mean Number of Vehicles and Visitors Ascending Cadillac Mountain Daily
June 1 – October 31, 2013, by Month.**

Month	Weekday Mean # of Vehicles	Weekend Mean # of Vehicles	Overall Mean # of Vehicles	Overall Mean # of Visitors
May	--	--	--	--
June	864	1,088	939	2,817 ¹
July	1,561	1,747	1,609	4,827
August	1,739	2,113	1,847	5,541
September	1,292	1,655	1,401	4,203
October	497 ²	806	580	1,740

1. Three person per vehicle multiplier applied to all vehicles regardless of size.

2. Government shutdown October 1 – 16 inclusive. No traffic.

**Table 3: Mean Number of Vehicles and Visitors Descending Cadillac Mountain Daily
May 23 –October 31, 2014, by Month.**

Month	Weekday Mean # of Vehicles	Weekend Mean # of Vehicles	Overall Mean # of Vehicles	Overall Mean # of Visitors
May	622 ¹	1,443	906	2,718 ²
June	971	1,410	1,097	3,291
July	1,633	1,767	1,667	5,001
August	1,898	2,042	1,944	5,832
September	1,366	1,570	1,421	4,263
October	1,007	1,417	1,113	3,339

1. Only last nine days of month including Holiday weekend.

2. Three-person multiplier applied to all vehicles regardless of size.

**Table 4: Daily Peak Number of Vehicles and Visitors Ascending Cadillac Mountain
June 1 – October 31, 2013 by Month, with Date of Peak Use
and Number of Days with > 2,000 Vehicles.**

Month	Peak # of Vehicles	Peak # of Visitors	Date of Peak Use	# of Days with Daily Vehicle Traffic > 2,000
May	--	--	--	--
June	1,401	4,203 ¹	24-Jun-13	0
July	2,548	7,644	5-Jul-13	8
August	2,837	8,511	10-Aug-13	12
September	2,791	8,373	1-Sep-13	1
October	1,418 ²	4,254	19-Oct-13	0

1. Three-person multiplier applied to all vehicles regardless of size.

2. Government shutdown October 1 – 16 inclusive. No traffic.

**Table 5: Daily Peak Number of Vehicles and Visitors Descending Cadillac Mountain
May 23 – October 31, 2014, by Month, with Date of Peak Use
and Number of Days with > 2,000 Vehicles.**

Month	Peak # of Vehicles	Peak # of Visitors	Date of Peak Use	# of Days with Daily Vehicle Traffic > 2,000
May	2,111	6,333 ¹	25-May-14 ²	1
June	2,005	6,015	27-Jun-14	1
July	2,570	7,710	29-Jul-14	5
August	2,633	7,899	12-Aug-14 ³	16
September	2,123	6,369	27-Sep-14	2
October	2,933	8,799	12-Oct-14 ⁴	1

1. Three person per vehicle multiplier applied.

2. Saturday of Memorial Day Weekend.

3. A Tuesday.

4. Sunday of Columbus Day Weekend

Tables 6 and 7 show for each month and for ascending traffic in 2013 and descending traffic in 2014, the date and time of peak hourly use, peak hourly use by month, the number of hours each month with more than 200 vehicles per hour, and the highest number of consecutive hours each month with more than 200 vehicles per hour and the date and time of that use.

**Table 6: Date, Time, and Peak Hourly Number of Vehicles Ascending Cadillac Mountain
June 1 – October 31, 2013 by Month, with Other Peak Hourly Statistics.**

Month	Date of Peak Hourly Vehicle Use	Time of Peak Hourly Vehicle Use	Peak Hourly Vehicle Use	Hours/ Month with > 200 Vehicles/ Hour	Most Consecutive Hours With > 200 Vehicles/Hour	Date and Time of Most Consecutive Hours...
May	--	--	--	--	--	--
June	30-Jun-13	1100 -1200	165	0	0	--
July	24-Jul-13	1000 -1100	285	34	6	3-Jul-13, 10a-4p
August	10-Aug-13 ¹	1000 - 1100	295	47	7	10-Aug-13, 9a-4p
Sept.	1-Sep-13 ²	1800 - 1900	304	22	8	1-Sep-13, 11a-7p
Oct. ³	19-Oct-13 ³	1600 - 1700	171	0	0	--

1. Saturday

2. Sunday of Labor Day Weekend.

3. Government shutdown October 1 – 16 inclusive. No traffic.

**Table 7: Date, Time, and Peak Hourly Number of Vehicles Descending Cadillac Mountain
May 23 – October 31, 2014 by Month, with Other Peak Hourly Statistics.**

Month	Date of Peak Hourly Vehicle Use	Time of Peak Hourly Vehicle Use	Peak Hourly Vehicle Use	Hours/ Month with > 200 Vehicles/ Hour	Most Consecutive Hours With > 200 Vehicles/Hour	Date and Time of Most Consecutive Hours...
May	25-May-14 ¹	1900 - 2000	310	4	3	5-May-14 11a-2p
June	27-Jun-14	2000 - 2100	218	1	1	27-Jun-14
July	29-Jul-2014 ²	1500 – 1600	313	41	7	29-Jul-14 11a-6p
August	30-Aug-14 ³	1900 - 2000	391	79	6	12-Aug-14 12n-6p
Sept.	27-Sep-14 ⁴	1400-1500	266	12	3	27-Sep-14 2p-5p
Oct.	12-Oct-14 ⁵	1800-1900	367	31	8	12-Oct-14 11a-7p

1. Sunday of Memorial Day weekend.

2. A Tuesday, but not quite August.

3. Saturday of Labor Day Weekend.

4. Saturday.

5. Sunday of Columbus Day weekend.

These other facts can be gleaned about vehicle traffic *ascending* Cadillac Mountain in 2013.

- The three off-season holidays are just as busy as August if the weather is good.
- A visible increase in traffic for sunrise and sunset is seen for some to many days each month depending on the month.
- Sunrise traffic in 2013 was more than 100/hour from 4:00 a.m. - 5:00 a.m. for nine days in July and 17 days in August for either the 4:00 a.m. - 5:00 a.m. or 5:00 a.m. - 6:00 a.m. hour.
- On three mornings in August 2013, there were two consecutive hours of more than 100 vehicles/hour.
- The peak hourly sunrise traffic in 2013 was 213 from 4:00 a.m. - 5:00 a.m. on July 31.
- Sunrise is followed by a 3-4 hour “lull” in traffic. In July and August, hourly traffic does not begin to consistently exceed 100 vehicles/hour until 10:00 a.m.
- The earliest traffic reached 200 vehicles/hour (excluding sunrise) in July 2013 was 10:00 a.m. - 11:00 a.m. (n=6 days, peak of 285).
- The earliest traffic reached 200 vehicles/hour (excluding sunrise) in August 2013 was 9:00 a.m. - 10:00 a.m. (n=1 day, peak of 201).
- Sunset traffic in July peaked from 7:00 p.m. to 8:00 p.m. in 2013. On 19 of 31 days traffic exceeded 100 vehicles/hour during this hour, with a peak of 269 vehicles/hour on July 5 (and 241 on July 6).
- Traffic from 5:00 p.m. to 7:00 p.m. in July 2013 was generally under 100 vehicles/hour until the last week of the month when it began to exceed that rate.
- Sunset traffic in August 2013 peaked from 6:00 p.m. to 7:00 p.m. On 26 of 31 days traffic exceeded 100 vehicles/hour during this hour, with a peak of 254 vehicles/hour on Saturday August 30 (Labor Day weekend). There were four other days with traffic more than 200 vehicles over that same hour.
- From 10:00 a.m. to 8:00 p.m. in August 2013, traffic seldom dropped below 100 vehicles/hour.
- The peak hours in August 2013 were 10:00 a.m. to 7:00 p.m. with a very modest lull between 4:00 p.m. and 6:00 p.m.
- In July and August 2013 the highest ascending traffic was from 11:00 a.m. to 12:00 p.m.

The highest and lowest traffic days for each month are shown in Table 8. Weather can be a strongly contributing factor if it rains on the same day for one or more weeks. The only apparent trend is that the highest traffic days are often on the weekend, in spite of the “Tuesdays in August” phenomenon. Although 2014 data is for descending traffic, that should not have influenced the order.

Finally, we took a look at 2013 data for some of the busiest days and calculated the difference between ascending and descending traffic for the busiest hours. The parking area capacity is 130 cars, and we wanted to see if the differences in hourly traffic on these busy days would provide a glimpse of potential congestion at the summit. A positive difference that approached or exceeded 130 cars would suggest a high level of competition for parking space, even with the understanding that the hour “window” is a long time for cars to come and go. Length of stay is a critical element contributing to congestion.

For three of the busiest days of 2013, July 5, August 10, and September 1 we found differences of +165 (7:00 p.m. – 8:00 p.m.), + 132 (10:00 a.m. – 11:00 a.m.), and +149 (5:00 p.m. – 6:00 p.m.) respectively. These were the only differences greater than 130 for the four days we checked. Only one other hour exceeded a difference of 100 vehicles.

Length of stay data from a 2009 visitor survey of Cadillac Mountain visitors conducted by the Park Studies Laboratory at the University of Vermont (2011) showed that the mean and median length of stay were 45 and 40 minutes respectively. That these numbers are under one hour suggests a reason why congestion on Cadillac Mountain is not worse—turnover is quick. But there is a cautionary note: nearly 1/3 of visitors surveyed stayed 1-2 hours.

Table 8: Highest and Lowest Traffic Days of the Week for 2013 and 2014 by Month.

Month	2013 Highest Traffic Day	2013 Lowest Traffic Day	2014 Highest Traffic Day	2014 Lowest Traffic Day
May	--	--	--	--
June	Sunday	Friday	Sunday	Thursday
July	Wednesday	Tuesday	Friday	Monday
August	Saturday ¹	Friday	Tuesday	Wednesday
Sept.	Saturday ²	Monday	Sunday ³	Tuesday
Oct.	--	--	Sunday	Wednesday

1. Sunday a close second. Tuesday was ranked 5th. The weather was poor on Tuesday August 13 judging by the low traffic.

2. Sunday a close second. Four of five weekdays had almost identical traffic levels just over 1,200 per day.

3. Sunday, Monday, Tuesday, and Saturday all had similar traffic volumes, averaging more than 2,000 vehicles per day.

SUMMARY AND RECOMMENDATIONS

For the past two seasons, we have worked our way through the problems of setting up and programming the Cadillac Summit Road traffic counter with help from FOTSC. The data confirm much of what we already knew intuitively and anecdotally about traffic and the number of visitors. As we gather data in succeeding years, trends may appear. If there was a surprise, it was that our past visitor estimates were quite low, and these estimates are still low because we are not counting visitors on buses adequately. With the inclusion of bus traffic visitation from cruise ships, local concessioners, and over-the-road tours, the 682,671 estimate of visitor use in 2014 would easily have reached 750,000.

This traffic data combined with the length of stay data from the Park Studies Laboratory (2009) sends a clear message to park managers: anything that increases the length of stay at the summit will increase congestion. This may explain why sunset is the most likely time for congestion. For example, on September 1, 2013, 409 vehicles descended Cadillac Mountain between 7:00 p.m. and 8:00 p.m.

Understanding traffic volumes, patterns, and vehicle classification for Cadillac Mountain has become even more important in 2015 with the start of a Transportation Plan for the park. To support this planning effort we will continue to monitor traffic from May 1 – October 31, and we will validate the oversize vehicle traffic in 2015 with the help of FOTSC.

LITERATURE CITED

Baldwin, E., and W. LaPage.

2003 Visitor behaviors and resource impacts at Cadillac Mountain, Acadia National Park, Part II: sign comparison study summer 2002. University of Maine Report prepared for the Acadia National Park Natural Resources Division. April. 65pp.

Jacobi, C.

2003 A census of vehicles and visitors to Cadillac Mountain, August 2, 2002. Acadia National Park Natural Resources Report Number 2003-5. March. 7pp.

Jacobi, C.

2003 A census of vehicles and visitors to Cadillac Mountain, August 14, 2001. Acadia National Park Natural Resources Report Number 2001-11. December. 7pp.

Manni, M. F., Littlejohn, M., and S. J. Hollinghorst

2010 Acadia National Park visitor study: summer 2009. Visitor Services Project Report 221. June 2010. Park Studies Unit, University of Idaho. 96pp.

University of Vermont, Park Studies Laboratory

2011 Research to support visitor management at Acadia National Park: 2004 – 2009. October. 850pp. Rubenstein School of Environment and Natural Resources, University of Vermont, Burlington, VT 05405.

APPENDIX 1: CLASSIFICATION DATA ANALYSIS

As mentioned in the report, we are including the classification data as an appendix because we are unsure of the accuracy of the counts. Oversize (and other) vehicles may cross the center line frequently due to the location of the loops. We plan to validate the classification this year. In addition, a programming error resulted in east traffic going unrecorded for June – October 2014. We totaled the monthly counts for east and west traffic and calculated the mean and peak daily use. We also calculated the percent difference between east and west oversize vehicle traffic, and the east traffic was 5% to 12% less for four of five months in 2013, with June the lone exception. We also calculated the percentage of oversize vehicles relative to all traffic for each month, and it was between 3% and 6%.

Table 1: Oversize Vehicle Traffic East and West on the Cadillac Summit Road June – October 2013

Jun-13	West	East			Jul-13	West	East			Aug-13	West	East			Sep-13	West	East			Oct-13	West	East		
1	47	47			1	33	34			1	68	64			1	150	138			1				
2	63	65			2	18	18			2	29	33			2	43	50			2				
3	18	26			3	47	39			3	94	87			3	53	50			3				
4	19	16			4	55	52			4	143	136			4	95	83			4				
5	25	33			5	76	70			5	61	52			5	29	26			5				
6	34	48			6	86	82			6	94	82			6	65	50			6				
7	23	19			7	110	103			7	92	88			7	77	64			7				
8	26	36			8	58	62			8	17	13			8	52	42			8				
9	42	34			9	21	20			9	121	128			9	45	35			9				
10	34	49			10	48	45			10	124	122			10	39	36			10				
11	7	11			11	31	25			11	99	94			11	93	85			11				
12	9	7			12	55	49			12	52	47			12	43	49			12				
13	36	39			13	64	65			13	55	49			13	10	11			13				
14	31	36			14	91	82			14	83	72			14	58	53			14				
15	70	60			15	65	59			15	69	60			15	98	79			15				
16	74	58			16	81	79			16	90	85			16	24	19			16				
17	83	104			17	77	81			17	85	71			17	125	98			17	46		48	
18	33	30			18	63	66			18	101	98			18	82	64			18	38		40	
19	58	46			19	55	55			19	79	48			19	49	41			19	68		61	
20	28	22			20	81	80			20	73	68			20	71	62			20	31		31	
21	66	46			21	110	103			21	65	60			21	49	32			21	35		40	
22	55	45			22	74	74			22	41	44			22	11	14			22	57		48	
23	88	87			23	15	17			23	70	67			23	17	14			23	25		23	
24	51	55			24	94	87			24	90	85			24	54	51			24	13		8	
25	69	88			25	60	56			25	83	82			25	77	72			25	28		32	
26	12	15			26	10	13			26	16	21			26	75	76			26	30		17	
27	16	26			27	78	76			27	46	38			27	93	86			27	12		9	
28	16	37			28	86	91			28	59	63			28	115	111			28	6		7	
29	16	19			29	47	50			29	14	12			29	93	84			29	39		30	
30	57	48			30	76	73			30	68	59			30	21	18			30	30		28	
Sum	1206	1252	3.67%		31	123	92			31	82	72			Sum	1906	1693			31	2		1	
Mean	40.2	41.73			Sum	1988	1898	-4.74%		Sum	2263	2100	-7.76%		Mean	63.53	56.43	-12.58%		Sum	460	423	-8.75%	
Peak	88	104			Mean	64.13	61.23			Mean	73	67.74			Peak	150	138			Mean	30.67	28.20		
					Peak	123	103			Peak	143	136								Peak	68	61		
	% Diff E-W				% Diff E-W					% Diff E-W					% Diff E-W					% Diff E-W				
	East is	3.67%	higher		East is	-4.74%	lower			East is	-7.76%	lower			East is	-12.58%	lower			East is	-8.75%	lower		
	Oversize Veh % of All Traffic				Oversize Veh % of All Traffic					Oversize Veh % of All Traffic					Oversize Veh % of All Traffic					Oversize Veh % of All Traffic				
	30+	1229	4.38%		30+	1943	3.90%			30+	2182	3.81%			30+	1800	4.32%			30+	442	5.10%		
	All	28089			All	49874				All	57293				All	41624				All	8663			

Table 2: Oversize Vehicle Traffic East and West on the Cadillac Summit Road May – October 2014

May-14	West	East		Jun-14	West	East		Jul-14	West	East		Aug-14	West	East		Sep-14	West	East		Oct-14	West	East	
1				1	37			1	31			1	61			1	38			1	45		
2				2	26			2	36			2	28			2	23			2	52		
3				3	23			3	37			3	62			3	60			3	56		
4				4	9			4	72			4	59			4	36			4	10		
5				5	7			5	37			5	53			5	46			5	86		
6				6	20			6	76			6	45			6	50			6	61		
7				7	36			7	43			7	66			7	66			7	82		
8				8	58			8	53			8	86			8	45			8	144		
9				9	23			9	29			9	63			9	47			9	104		
10				10	15			10	41			10	49			10	49			10	91		
11				11	26			11	44			11	98			11	20			11	47		
12				12	22			12	40			12	113			12	50			12	201		
13				13	19			13	50			13	21			13	26			13	34		
14				14	26			14	42			14	39			14	74			14	66		
15				15	57			15	40			15	95			15	28			15	74		
16				16	31			16	149			16	115			16	42			16	29		
17				17	24			17	68			17	53			17	53			17	28		
18				18	43			18	84			18	74			18	93			18	33		
19				19	23			19	59			19	74			19	31			19	125		
20				20	35			20	62			20	92			20	40			20	109		
21				21	51			21	59			21	49			21	56			21	57		
22				22	74			22	64			22	43			22	27			22	7		
23	20	19		23	30			23	51			23	62			23	56			23	8		
24	48	49		24	35			24	36			24	70			24	61			24	28		
25	52	53		25	17			25	59			25	36			25	80			25	38		
26	30	30		26	7			26	50			26	57			26	86			26	24		
27	12	13		27	50			27	61			27	42			27	122			27	19		
28	13	11		28	44			28	25			28	35			28	72			28	36		
29	20	20		29	65			29	101			29	56			29	23			29	3		
30	26	27		30	38			30	81			30	131			30	50			30	50		
31	27	26		Sum	971			31	56			31	100			Sum	1550			31	30		
Sum	248	248		Mean	32.37			Sum	1736			Sum	2027			Mean	51.67			Sum	1777		
Mean	27.56	27.56		Peak	74			Mean	56.00			Mean	65.39			Peak	122			Mean	57.32		
Peak	52	53						Peak	149			Peak	131							Peak	201		
Oversize Veh % of All Traffic				Oversize Veh % of All Traffic				Oversize Veh % of All Traffic				Oversize Veh % of All Traffic				Oversize Veh % of All Traffic				Oversize Veh % of All Traffic			
30+	496	3.14%		30+	971	3.00%		30+	1736	3.36%		30+	2027	3.25%		30+	1530	3.59%		30+	1777	5.15%	
All	15784			All	32402			All	51690			All	62276			All	42616			All	34500		