

MAY 2018



**WIM #43
US 10,
MP 7.5
MOORHEAD,
MINNESOTA**

**MONTHLY
REPORT**



Your Destination...Our Priority



WIM Site Location

WIM #43 is located on US 10 near Moorhead in Clay county.

System Operation

WIM #43 was operational for the entire month of May 2018. Volume was computed using all monthly data.

System Calibration

WIM #43 was most recently calibrated on 2015-02-04. Table 1 summarizes the front axle weights of class 9s by lane ¹. Table 1 indicates that the class 9 front axle weights were all within +/- 9% of baseline calibration values for all lanes except lane 4. Figure 1 shows the distribution of gross vehicle weights (GVW) in Class 9 vehicles at this site for the last 12 months of operation ². Figure 2 depicts the average front axle weight as a percent difference from the first full month following calibration.

Summary of Volume Statistics

Total Monthly Volume: 584842 | Passenger Vehicles: 545195 | Heavy Commercial Vehicles: 39647

Monthly Average Daily Traffic (MADT): 18866 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 1279

See Table 2 for vehicle class breakdown

Passenger Vehicles (PVs) and Heavy Commercial Vehicles (HCVs)

Volume trends. EB vehicles typically reached highest volume levels on Fridays, with lowest volumes reported on Sundays. WB vehicles typically reached highest volume levels on Mondays, with lowest volumes reported on Wednesdays (see Figure 3 and 4).

Passenger Vehicles (PVs)

Volume trends. On an average 24-hour day (see Figure 5), EB PVs generally reached peak volume levels between 03 PM and 05 PM. Similarly, WB PVs peaked in volume between 07 AM and 05 PM

Heavy Commercial Vehicles (HCVs)

Volume trends. On an average 24-hour day, HCVs traveling EB typically reached peak volume levels between 03 PM and 05 PM, while volume going WB peaked between 07 AM and 05 PM. See Figure 6. Out of all HCVs, the two highest traffic volumes were generated by Class 9's and Class 5's.

Overweight HCVs

Volume trends. Of a total of 39647 HCVs, 4401 of them were overweight³. These overweight HCVs contributed to 0.8% of total monthly volume, and 11.5% of total monthly HCV volume. EB overweight vehicles typically reached highest numbers on Thursdays, with lowest volumes reported on Sundays. WB overweight vehicles tended to reach highest volumes on Thursdays, with lowest volumes reported on Sundays. See Figure 3 .

The top two overweight violators by class were the class 9 and class 10 vehicles . Overall, overweight vehicles tended to reach peak volume concentrations during typical business hours, with 96.1% of all overweight vehicles traveling EB this month (see Figure 7 & 8). Figure 9 shows the number of vehicles exceeding 88,000 pounds that crossed the WIM over the last 12 months. The highest number of 88,000+ vehicles within the last 12 months occurred in June.

WIMs are currently used as a screening tool for weight enforcement, and it is estimated that the WIM scales can measure gross vehicle weights (GVW) within 90-95% of static weight scale measurements. Due to the possibility of measurement error, vehicles exceeding 10% of their legal weight limits (or 1.1 times their legal weight limits) are considered overweight in this report⁴.

Using normal load limits ,1461 EB vehicles exceeded 88,000 pounds (913 vehicles were Class 9's; 340 vehicles were Class 10's). Of vehicles traveling WB,

18 EB vehicles exceeded 88,000 pounds (14 vehicles were Class 13's; 4 vehicles were Class 10's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from May 2018.

Loaded vs. Unloaded HCVs. Figure 10 shows the GVW distributions of Class 9s and 10s in May 2018. Data suggests that there were greater numbers of fully_loaded Class 9's than empty Class 9's traveling EB, while there were more empty Class 9's than fully_loaded traveling WB. Data also suggests that there were more fully_loaded Class 10's than empty traveling in the EB direction. In the WB direction, there were more fully_loaded class 10 vehicles.

Freight Totals. A total of 278839 tons of freight was recorded to have crossed the WIM. More freight was shipped EB (72.5%) than WB (27.5%). See Table 4 and Figure 11 for more freight information.

Infrastructure Considerations

Bridge. Bridge No. 8528 (a box culvert) is approximately 1.3 miles east of WIM #43. Bridges No. 14001 and 5854 are approximately 0.8 miles west of WIM #43. US 10 also crosses the Buffalo River, specifically via Bridges No. 14001 (carrying EB traffic) and 5854 (carrying WB traffic). WIM #43 recorded a total of 584842 vehicles with a combined GVW of 3895536 kips (1 kip = 1,000 pounds = 0.5 tons) in May 2018. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

Pavement Design. A total of 25292 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 84.5% of all ESALs were recorded EB while 15.5% was observed WB. In particular, 63% of all ESALs were generated by the Class 9's (Class 9's

were also responsible for generating 22% of total GVW observed this month). See Table 6 and Figures 14-15 for more information on ESALs (Table 6 also provides flexible ESAL factors for each vehicle class using a terminal serviceability of 2.5 and a structural number of 5).

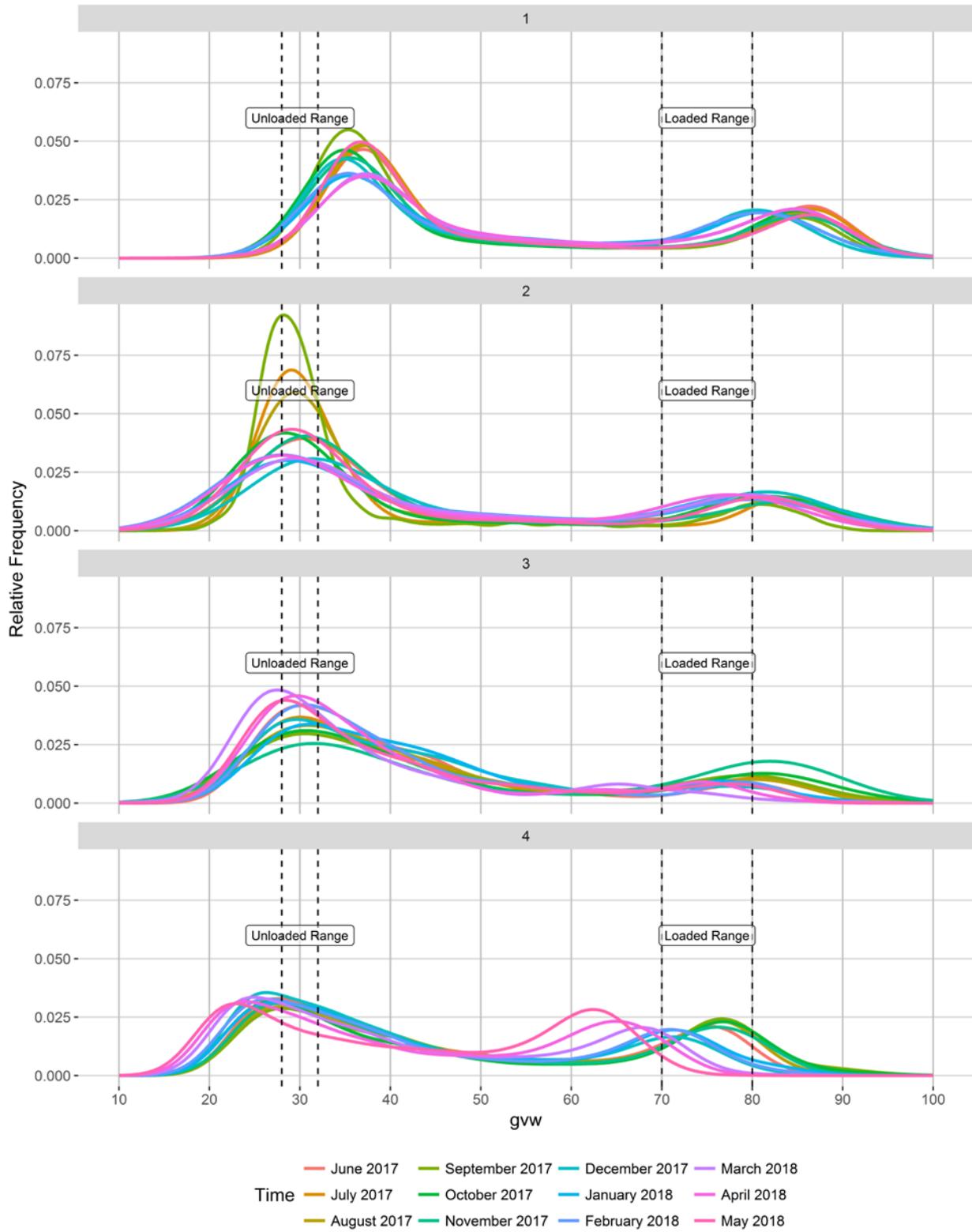
WIM monthly reports can be found at: <http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html>

MnDOT's vehicle classification scheme and vehicle class groupings for traffic forecasting can be found at: <http://www.dot.state.mn.us/traffic/data/data-products.html#weight>

- ¹ Front axle weights of Class 9s are monitored on a monthly basis to assure performance between calibrations. The current goal of the WIM scale calibration is to have each individual axle weight stay within a range of ±9% of baseline calibration values
- ² Previous WIM research indicates that unloaded Class 9s typically weigh 28-32 kips, while loaded Class 9s generally fall in the 70-80 kip range. More recent data from several WIM sites suggests that the unloaded Class 9 range may have moved a little higher over time (due to increased presence of sleeper cabs, etc.), although these ranges are also thought to be site-specific.
- ³ An HCV is considered overweight during normal load limits in this report if they satisfy any of the following 1) exceed a gross vehicle weight (GVW) of 80,000 pounds, 2) exceed any of the legal weight maximums on any axle configurations (legal maximums are: single axle = 20,000 pounds; tandem axles spaced 8' or less = 34,000 pounds; tridem axles spaced 9' or less = 43,000 pounds; quad axles spaced 13' or less = 51,000 pounds). Monthly reports use this standard regardless of the time of year however, the Winter Load Increase (WLI) allows a 10% across the board increase in axle and gross vehicle weights without a permit on US, state routes, and county roads. An HCV is considered overweight during Winter Load Increase(WLI) if they satisfy any of the following 1) exceed a gross vehicle weight (GVW) of 88,000 pounds, 2) exceed any of the legal weight maximums on any axle configurations (legal maximums are: single axle = 22,000 pounds; tandem axles spaced 8' or less = 37,400 pounds; tridem axles spaced 9' or less = 47,300 pounds; quad axles spaced 13' or less = 56,100 pounds). An overweight HCV is only included once in the overweight volume calculations regardless of how many of the aforementioned conditions are violated. For information on MN weight limit dates and statutes: http://www.mrr.dot.state.mn.us/research/seasonal_load_limits/sllindex.asp
- ⁴ For example, Class 9s and 10s can legally have gross vehicle weights up to 80,000 lbs (with the exception of permitted loads) during normal load limits. To account for measurement error on the WIM scales, those exceeding 10% of the legal GVW maximum (or 1.1 times the legal GVW) should be screened (e.g., 80,000 lbs + 8,000 lbs = 88,000 lbs). Similarly during WLI vehicles weighing 96,800 lbs should be screened.

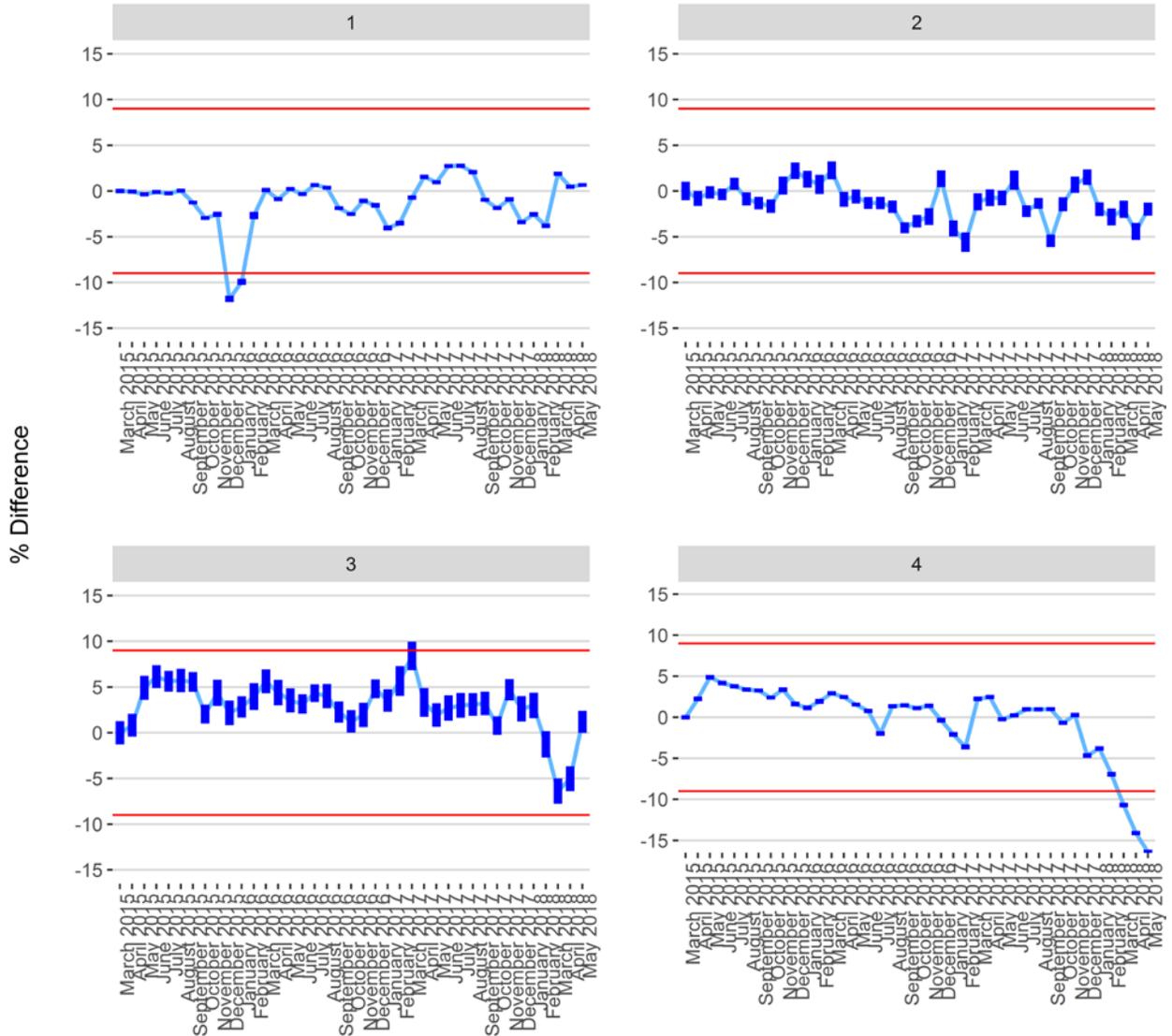
To request this document in an alternative format, please call 651-366-4718 or 1-800-657-3774, or email your request to ADArequest.dot@state.mn.us. Please request at least one week in advance.

Figure 1 - Monthly Class 9 GVW Histogram



Months that have not passed QC parameters are not displayed

Figure 2 - Percent Difference of Front Axle Weight from Last Calibration (+/- 95% CI)



Months that have not passed QC parameters are not displayed

Figure 2 - Average Vehicle Volume vs. Day of the Week

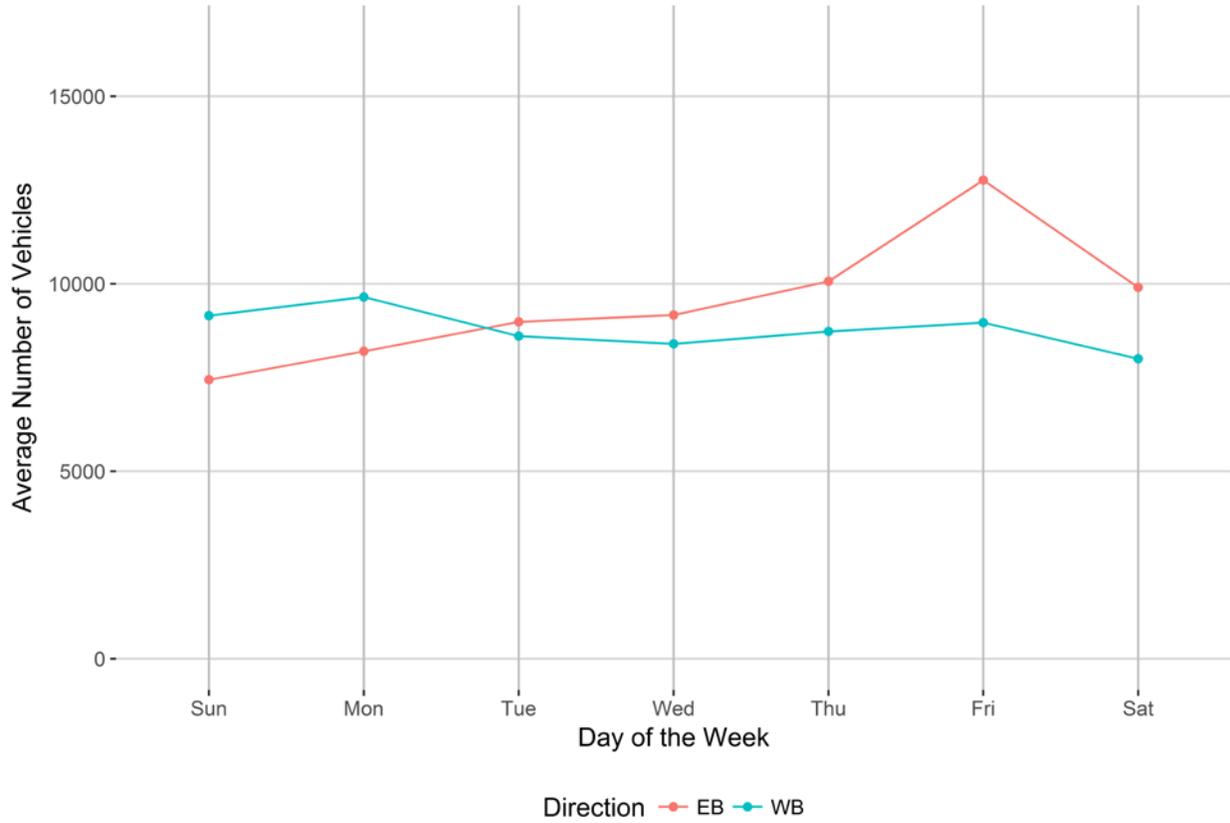


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

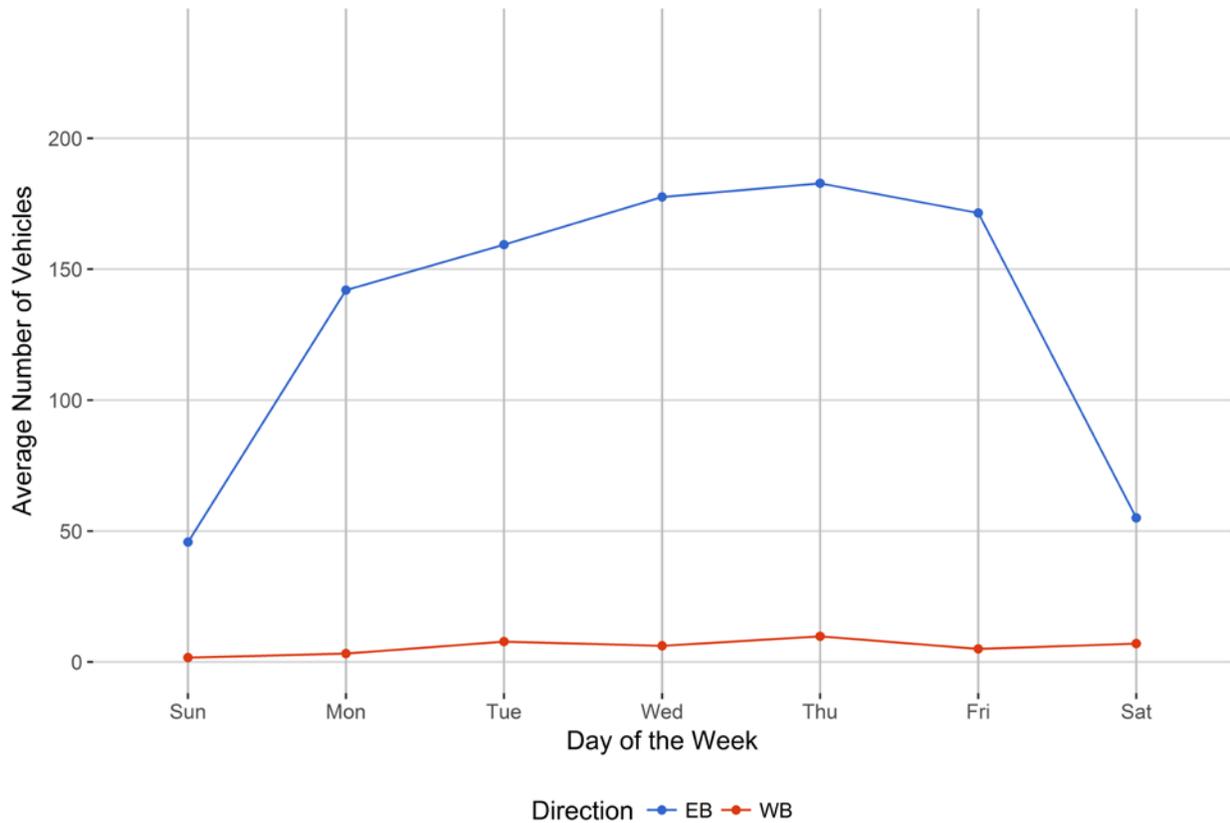


Figure 4 - Passenger Vehicles vs. Hour of the Day

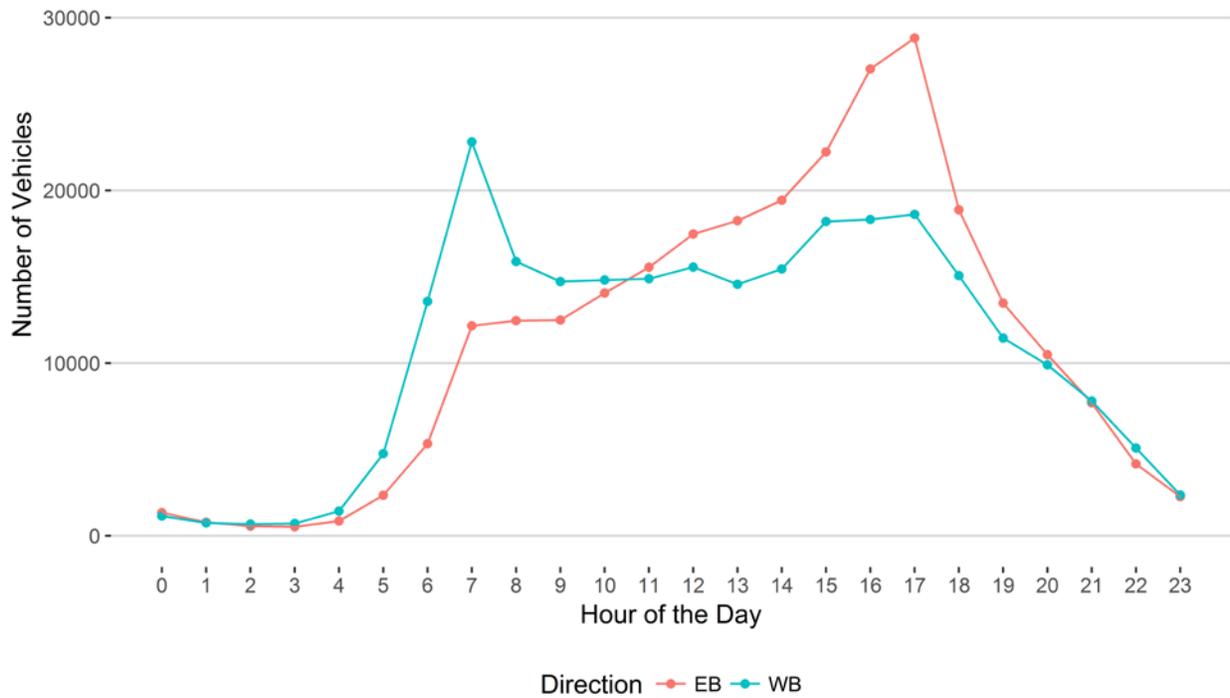


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

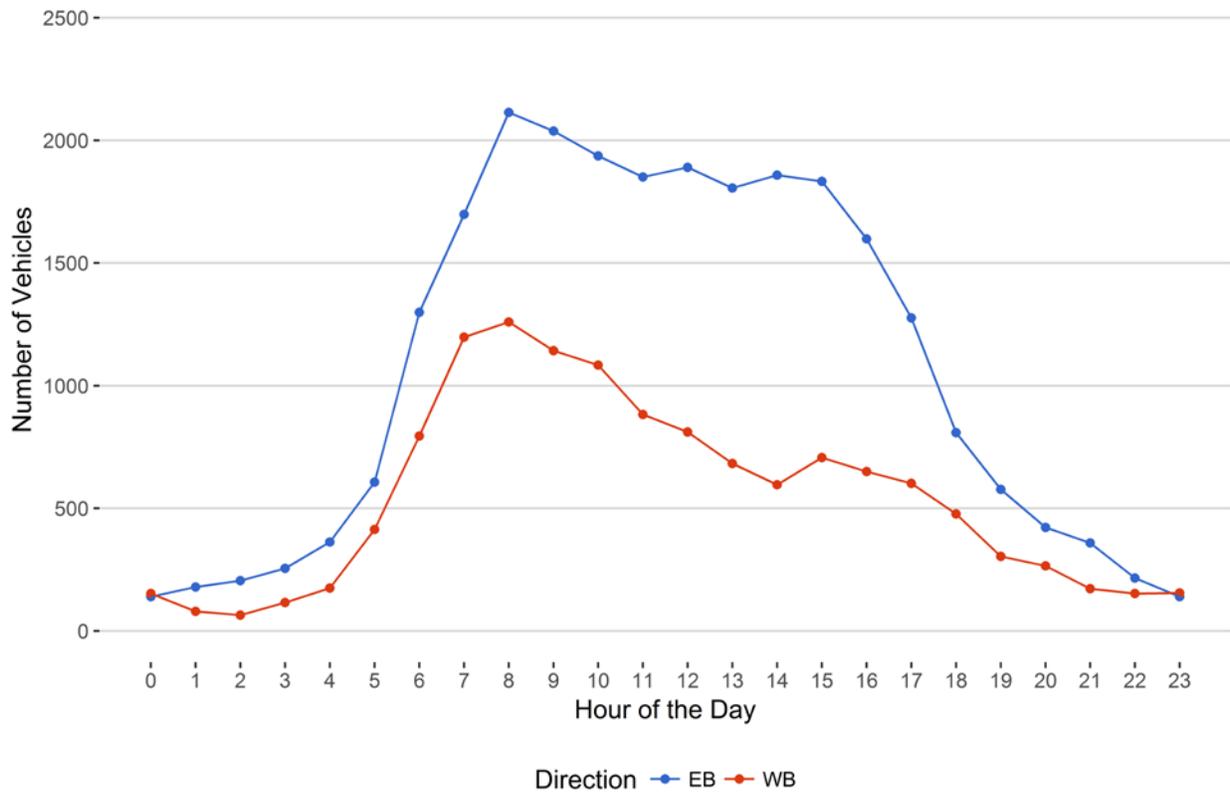


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

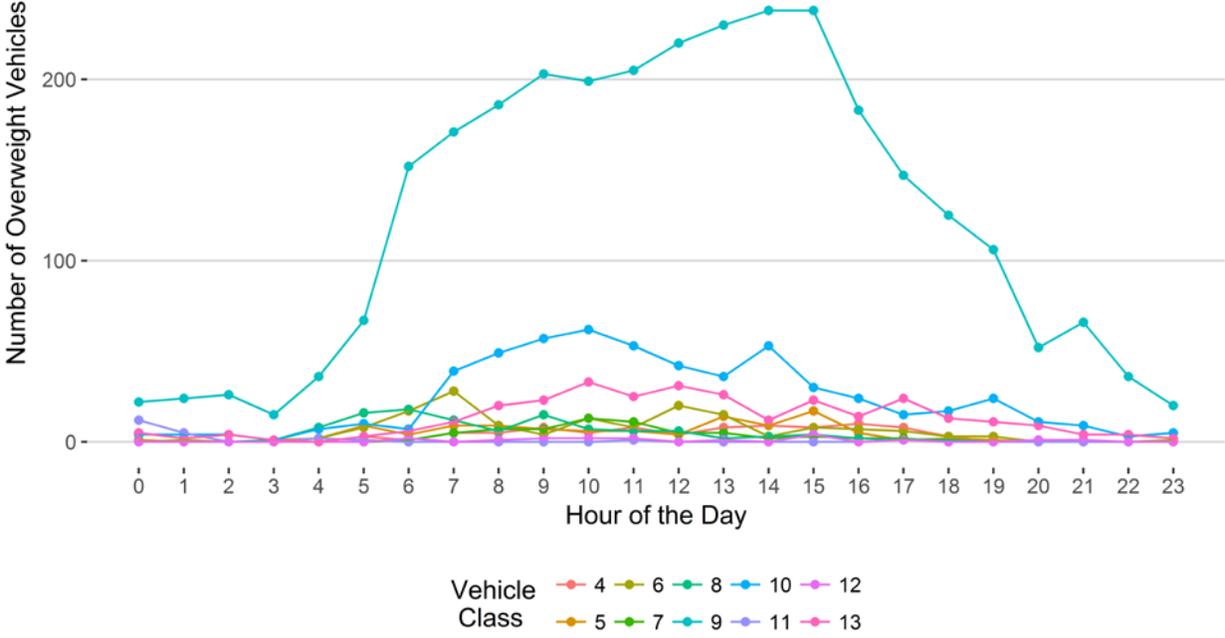


Figure 7 - Overweight Vehicles by Direction
Hour of the Day

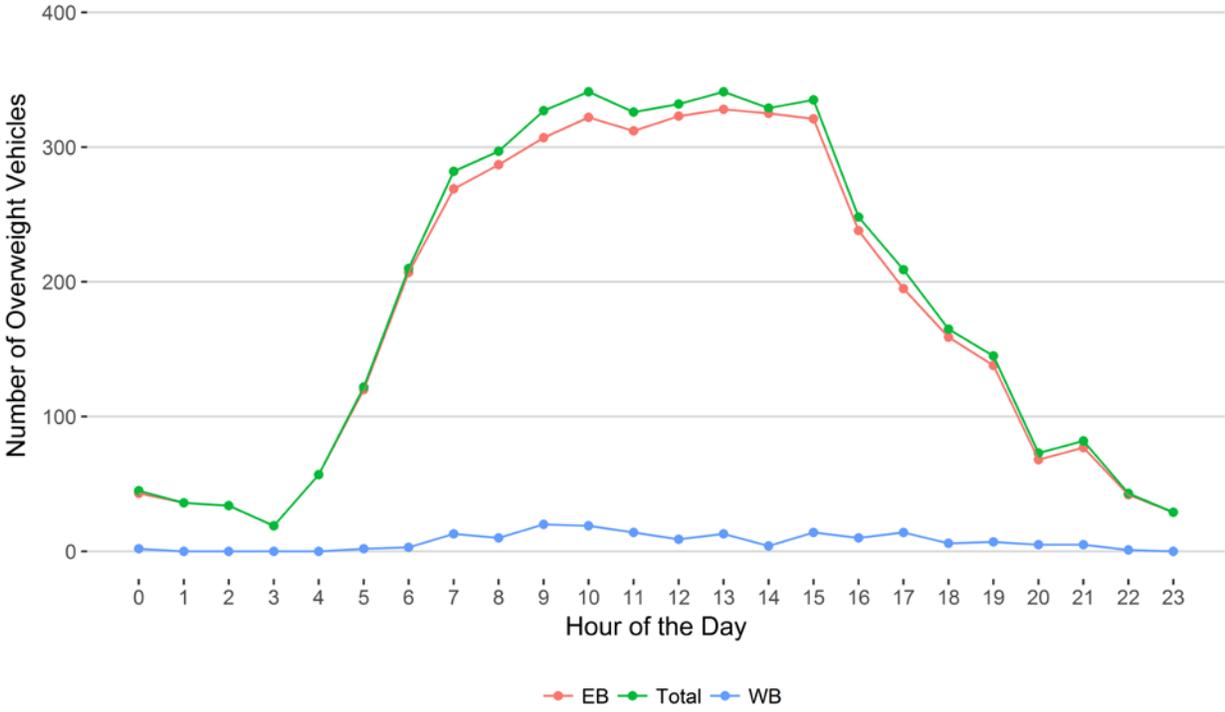
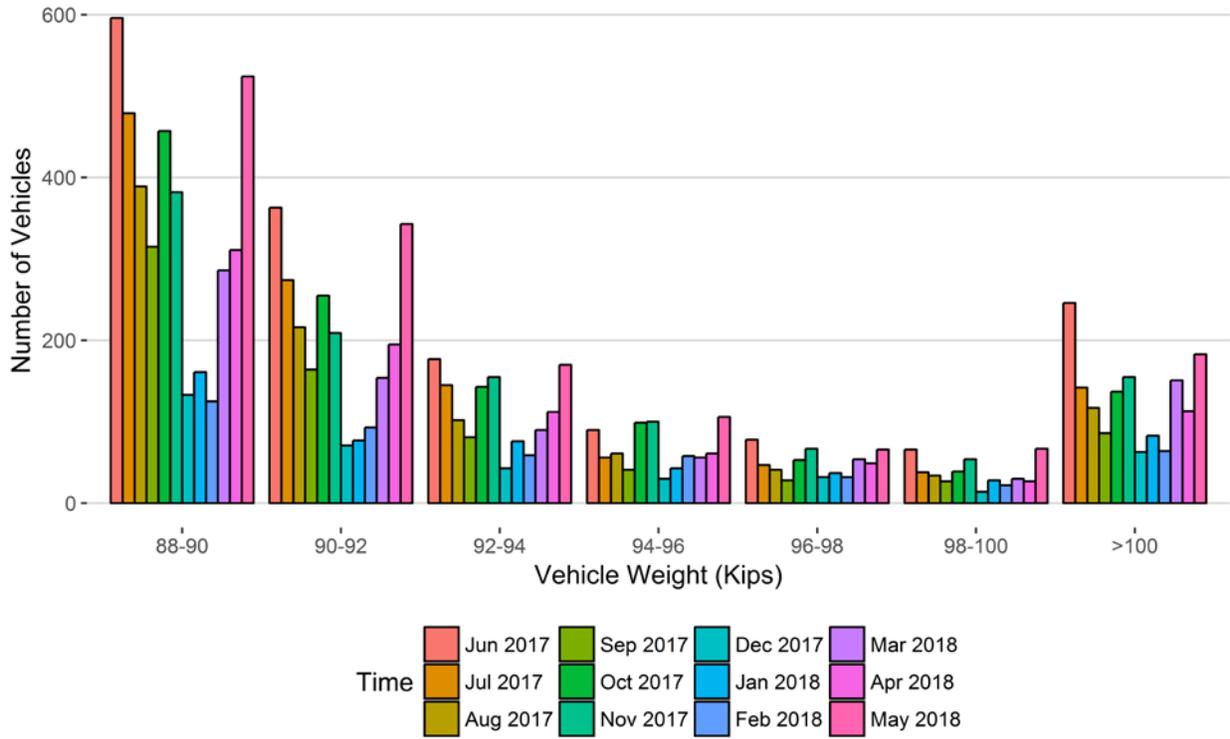
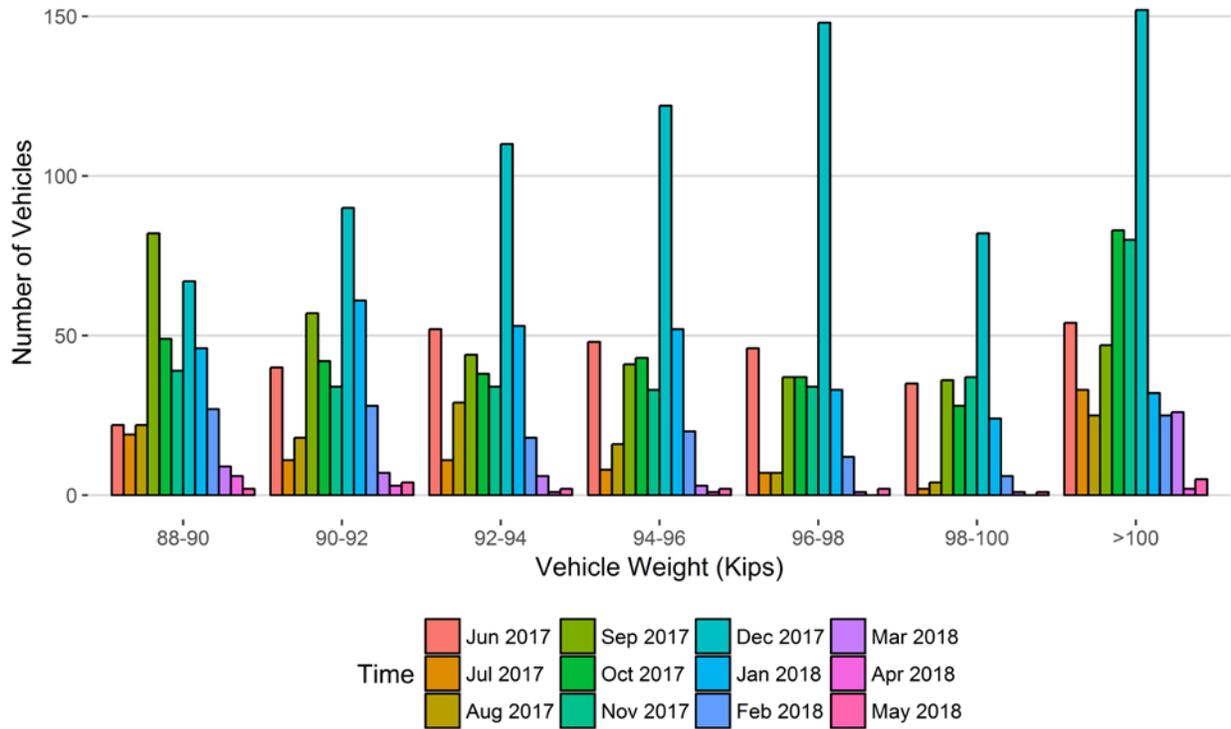


Figure 8 - Histogram of EB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018
88-90	596	479	389	315	457	382	133	161	125	286	311	524
90-92	363	274	216	164	255	209	71	77	93	154	195	343
92-94	177	145	102	81	143	155	43	76	59	90	112	170
94-96	90	56	61	41	99	100	30	43	58	56	61	106
96-98	78	47	41	28	53	67	32	37	32	54	49	66
98-100	66	38	34	27	39	54	14	28	22	30	27	67
>100	246	142	117	86	137	155	63	83	64	151	113	183
Total	1616	1181	960	742	1183	1122	386	505	453	821	868	1459

Figure 8 - Histogram of WB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018
88-90	22	19	22	82	49	39	67	46	27	9	6	2
90-92	40	11	18	57	42	34	90	61	28	7	3	4
92-94	52	11	29	44	38	34	110	53	18	6	1	2
94-96	48	8	16	41	43	33	122	52	20	3	1	2
96-98	46	7	7	37	37	34	148	33	12	1	0	2
98-100	35	2	4	36	28	37	82	24	6	1	0	1
>100	54	33	25	47	83	80	152	32	25	26	2	5
Total	297	91	121	344	320	291	771	301	136	53	13	18

Figure 8 - Class 9's and 10's by Direction vs Gross Vehicle Weight

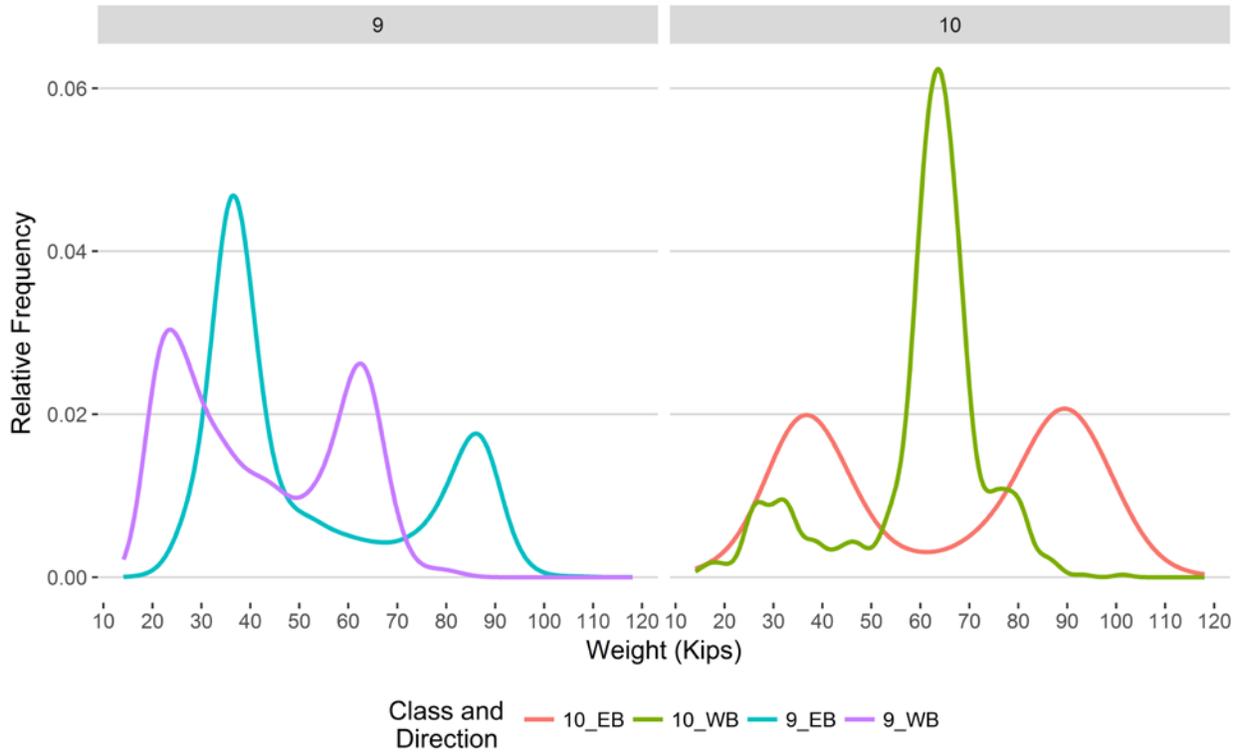


Figure 9 - Freight Percentage by Direction and Class

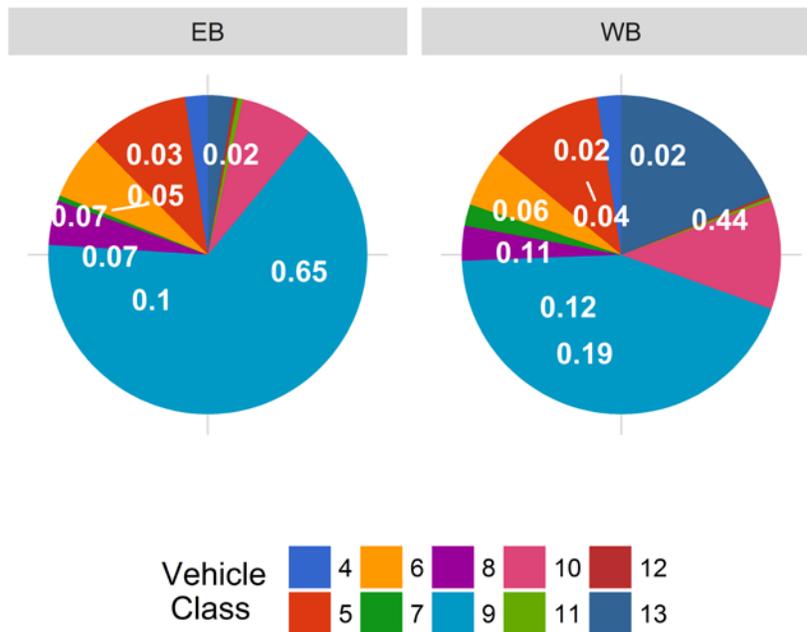


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

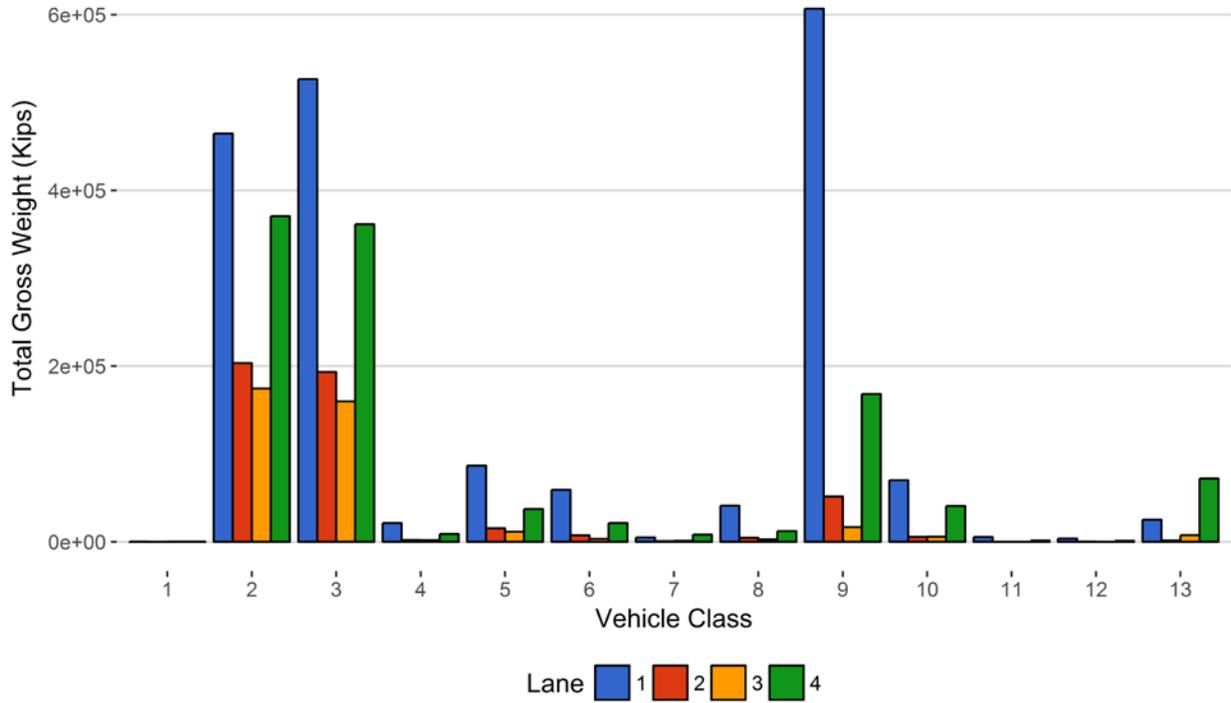


Figure 11 - Total Gross Vehicle Weight I

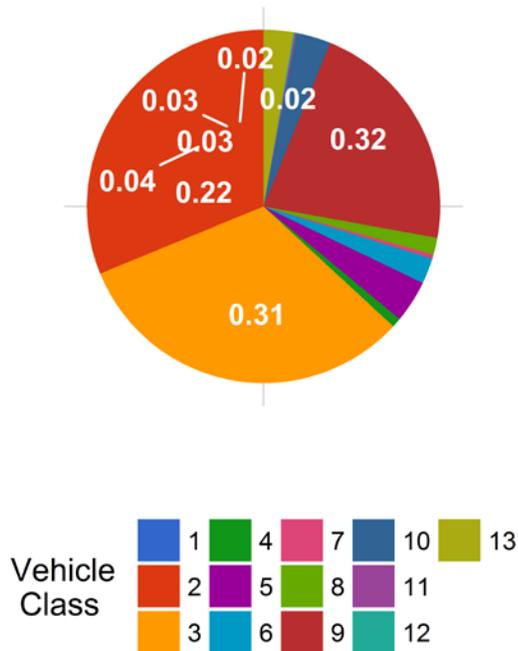


Figure 12 - Total ESALs by Class and Lane

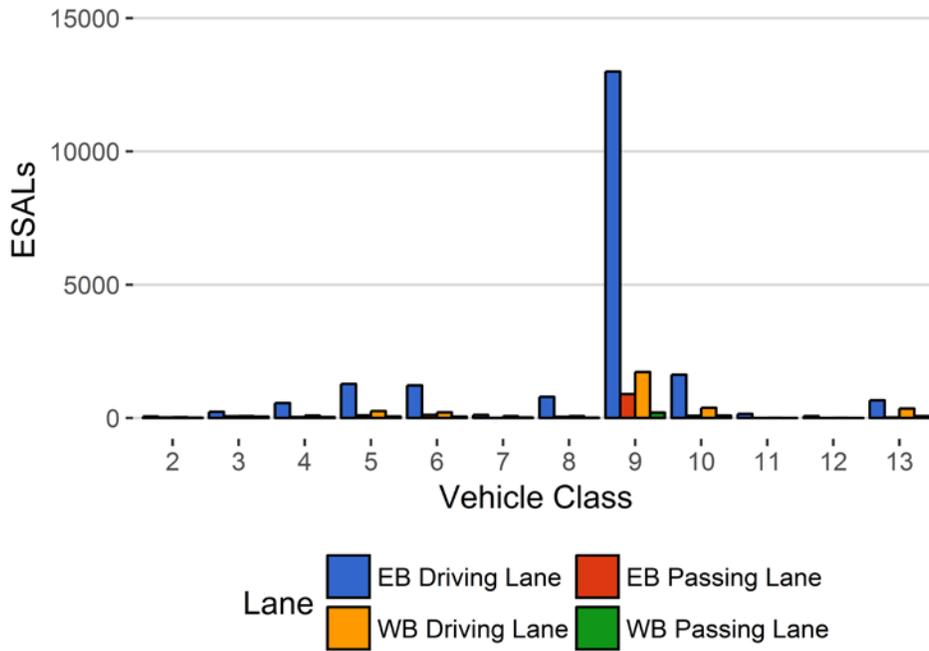


Figure 13 - ESALs by Class

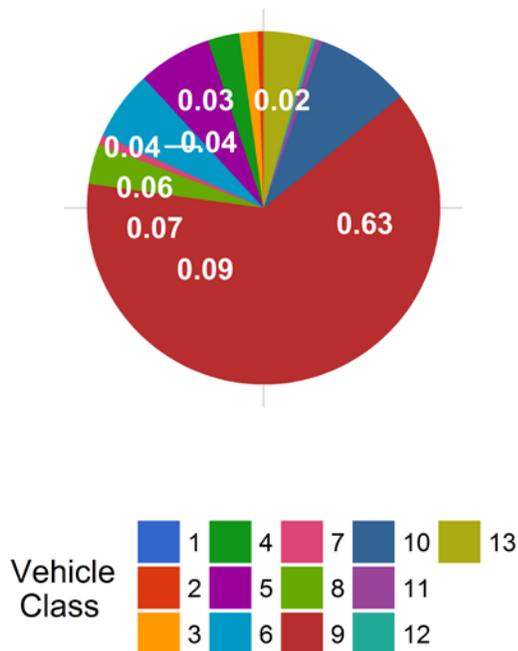


Table 1 Class 9 Front Axle Weight by Lane

<i>Month</i>	<i>Lane 1 (Kips)</i>	<i>Front Axle +/- 9%</i>	<i>Lane 2 (Kips)</i>	<i>Front Axle +/- 9%</i>	<i>Lane 3 (Kips)</i>	<i>Front Axle +/- 9%</i>	<i>Lane 4 (kips)</i>	<i>Front Axle +/- 9%</i>
March 2015	12.58	0.00	11.72	0.00	10.94	0.00	10.81	0.00
April 2015	12.58	-0.06	11.63	-0.82	11.03	0.81	11.05	2.25
May 2015	12.54	-0.36	11.70	-0.16	11.47	4.90	11.34	4.88
June 2015	12.57	-0.11	11.68	-0.38	11.61	6.13	11.26	4.17
July 2015	12.55	-0.25	11.81	0.79	11.55	5.63	11.22	3.77
August 2015	12.59	0.04	11.62	-0.86	11.56	5.72	11.18	3.38
September 2015	12.42	-1.27	11.57	-1.32	11.55	5.56	11.16	3.26
October 2015	12.21	-2.95	11.53	-1.66	11.16	2.04	11.07	2.39
November 2015	12.26	-2.55	11.79	0.60	11.41	4.37	11.18	3.37
December 2015	11.10	-11.79	11.98	2.22	11.18	2.18	10.99	1.62
January 2016	11.33	-9.93	11.87	1.28	11.25	2.82	10.93	1.14
February 2016	12.25	-2.68	11.81	0.72	11.37	3.95	11.02	1.94
March 2016	12.60	0.11	11.99	2.26	11.55	5.61	11.13	2.92
April 2016	12.47	-0.88	11.62	-0.91	11.42	4.39	11.08	2.45
May 2016	12.61	0.22	11.65	-0.59	11.32	3.54	10.98	1.54
June 2016	12.54	-0.34	11.57	-1.30	11.28	3.14	10.90	0.78
July 2016	12.67	0.66	11.57	-1.31	11.41	4.33	10.60	-1.98
August 2016	12.63	0.37	11.52	-1.72	11.38	4.01	10.96	1.35
September 2016	12.35	-1.88	11.25	-4.02	11.18	2.26	10.97	1.46
October 2016	12.26	-2.54	11.34	-3.30	11.07	1.24	10.93	1.10
November 2016	12.45	-1.08	11.40	-2.79	11.15	1.94	10.96	1.41
December 2016	12.39	-1.56	11.88	1.33	11.46	4.80	10.77	-0.36
January 2017	12.07	-4.05	11.24	-4.09	11.32	3.53	10.59	-2.09
February 2017	12.14	-3.51	11.07	-5.59	11.56	5.66	10.42	-3.61
March 2017	12.49	-0.72	11.58	-1.19	11.86	8.40	11.05	2.24

April 2017	12.78	1.54	11.64	-0.73	11.30	3.31	11.08	2.46
May 2017	12.70	0.96	11.63	-0.76	11.15	1.94	10.79	-0.24
June 2017	12.93	2.73	11.86	1.19	11.23	2.71	10.84	0.23
July 2017	12.93	2.77	11.46	-2.21	11.26	2.99	10.92	0.97
August 2017	12.84	2.05	11.56	-1.35	11.27	3.08	10.92	0.96
September 2017	12.46	-0.96	11.08	-5.44	11.29	3.21	10.92	0.99
October 2017	12.35	-1.86	11.55	-1.45	11.02	0.78	10.74	-0.67
November 2017	12.47	-0.91	11.80	0.69	11.45	4.70	10.84	0.27
December 2017	12.15	-3.41	11.90	1.51	11.22	2.62	10.31	-4.67
January 2018	12.26	-2.55	11.49	-1.99	11.26	2.98	10.40	-3.80
February 2018	12.10	-3.81	11.39	-2.84	10.80	-1.28	10.06	-6.93
March 2018	12.82	1.88	11.49	-1.99	10.24	-6.39	9.66	-10.70
April 2018	12.64	0.47	11.20	-4.43	10.39	-5.03	9.29	-14.10
May 2018	12.67	0.66	11.49	-1.98	11.07	1.19	9.04	-16.43

Table 2 Vehicle Classification Data

<i>Vehicle Class</i>	<i>Monthly Average Daily Volume</i>	<i>Monthly Total Volume</i>	<i>Monthly Total Volume Percentage</i>	<i>Monthly Total Overweight Vehicles</i>	<i>Monthly Total Overweight Percentage</i>
1	9	268	0	0	0
2	10633	329610	56.4	0	0
3	6946	215317	36.8	0	0
4	36	1120	0.2	87	2
5	379	11762	2	108	2.5
6	99	3067	0.5	157	3.6
7	10	295	0.1	63	1.4
8	66	2044	0.3	108	2.5
9	566	17556	3	2967	67.4
10	65	2010	0.3	566	12.9
11	5	141	0	22	0.5
12	3	88	0	17	0.4
13	50	1565	0.3	306	7
TOTAL	18866	584842	100	4401	100

Table 3 Top 10 Gross Vehicle Weight, Class 9 and 10

<i>Date</i>	<i>Day of Week</i>	<i>Time</i>	<i>Vehicle Class</i>	<i>Direction</i>	<i>Lane</i>	<i>GVW (lbs)</i>
2018-05-15	Tuesday	07:27:23	9	EB	1	136.17
2018-05-06	Sunday	01:27:05	9	EB	1	118.06
2018-05-31	Thursday	05:31:19	10	EB	1	117.17
2018-05-04	Friday	15:11:34	10	EB	1	116.14
2018-05-16	Wednesday	10:48:10	10	EB	1	112.27
2018-05-16	Wednesday	19:08:19	10	EB	1	111.13
2018-05-05	Saturday	09:15:33	10	EB	1	110.63
2018-05-15	Tuesday	19:21:58	10	EB	1	108.93
2018-05-05	Saturday	20:33:12	9	EB	1	108.68
2018-05-08	Tuesday	18:45:00	9	EB	1	108.5

Table 4 Freight Summary

<i>Vehicle Class</i>	<i>Direction</i>	<i>Weight of Empty Vehicle (Kips)</i>	<i>Total Number of Vehicles</i>	<i>Number of Empty Vehicles</i>	<i>Percentage of Empty Vehicles</i>	<i>Total Weight of Vehicles with Freight (Kips)</i>	<i>Total Weight of Empty Vehicles (Kips)</i>	<i>Total Weight of Freight (Tons)</i>
4	EB	15	710	110	15.5	21799	1460	6400
5	EB	8	7012	521	7.4	98273	3804	23172
6	EB	19	2061	57	2.8	65451	1011	13688
7	EB	11.5	99	0	0	5554	0	2208
8	EB	31	1354	448	33.1	36751	8927	4332
9	EB	33	12637	1425	11.3	616344	42101	123174
10	EB	33.5	1166	142	12.2	71491	4062	18593
11	EB	36.5	100	15	15	5060	397	979
12	EB	36.5	60	1	1.7	3820	25	833
13	EB	31.5	271	2	0.7	26250	59	8888
TOTAL	****	****	25470	2721	****	950793	****	202268
<i>Vehicle Class</i>	<i>Direction</i>	<i>Weight of Empty Vehicle (Kips)</i>	<i>Total Number of Vehicles</i>	<i>Number of Empty Vehicles</i>	<i>Percentage of Empty Vehicles</i>	<i>Total Weight of Vehicles with Freight (Kips)</i>	<i>Total Weight of Empty Vehicles (Kips)</i>	<i>Total Weight of Freight (Tons)</i>
4	WB	15	375	90	24	9338	1065	2532
5	WB	8	4383	1579	36	38187	10531	7877
6	WB	19	910	220	24.2	21317	3334	4103
7	WB	11.5	187	1	0.5	9190	8	3525
8	WB	31	626	499	79.7	4613	10233	338
9	WB	33	4372	1758	40.2	141013	43680	27375
10	WB	33.5	781	83	10.6	44392	2273	10504
11	WB	36.5	37	17	45.9	794	504	32
12	WB	36.5	25	9	36	784	297	100
13	WB	31.5	1245	0	0	79584	0	20183
TOTAL	****	****	12941	4256	****	349212	****	76571
GRAND TOTAL	****	****	38411	6977	397	1300005	133770	278839

Table 5 Gross Vehicle Weight by Class and Lane

<i>Vehicle Class</i>	<i>EB Driving Lane</i>	<i>EB Passing Lane</i>	<i>WB Passing Lane</i>	<i>WB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>
1	82	46	65	120	313	0
2	464858	203404	174384	370591	1213238	31.2
3	526764	193174	159783	361382	1241104	31.9
4	21322	1937	1653	8751	33663	0.9
5	86678	15399	11478	37240	150795	3.9
6	59040	7422	3288	21363	91113	2.3
7	4919	635	1046	8152	14752	0.4
8	41172	4505	2635	12210	60523	1.6
9	606990	51454	16499	168195	843138	21.7
10	70025	5527	5838	40827	122217	3.1
11	5412	46	0	1298	6755	0.2
12	3701	143	0	1081	4926	0.1
13	24988	1321	7501	72083	105893	2.7
TOTAL	1915951	485015	384172	1103292	3888430	100
GVW/LANE	49.27	12.47	9.88	28.37	100	0

Table 6 ESALs by Class and Lane and Flexible ESAL Factors

<i>Vehicle Class</i>	<i>EB Driving Lane</i>	<i>EB Passing Lane</i>	<i>WB Passing Lane</i>	<i>WB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>	<i>Flexible ESAL Factor</i>
1	0	0	0	0	0	0	0.0038
2	63	25	19	29	135	0.54	9e-04
3	232	68	49	71	419	1.67	0.004
4	562	37	34	93	726	2.89	1.34
5	1279	100	61	257	1697	6.76	0.3
6	1220	119	49	209	1598	6.37	1.08
7	117	12	20	76	225	0.9	1.56
8	791	44	20	72	925	3.69	0.94
9	12993	902	205	1727	15826	63.06	1.86
10	1622	87	98	384	2191	8.73	2.25
11	153	0	0	6	159	0.63	2.22
12	72	2	0	6	81	0.32	1.79
13	661	24	75	355	1115	4.44	1.47
TOTAL	19763	1421	631	3284	25098	100	15
ESALS/LANE	78.7	5.7	2.5	13.1	100	--	--

Table 7 Site Summary: Volume and Vehicle Class

<i>Month</i>	<i>Total Volume</i>	<i>Monthly ADT</i>	<i>Monthly HCAD T</i>	<i>Passenger Vehicles</i>	<i>Passenger Vehicles %</i>	<i>Heavy Commercial Vehicles</i>	<i>Heavy Commercial Vehicles %</i>	<i>Heavy Commercial Vehicles in Driving Lane %</i>	<i>Heavy Commercial Vehicles in Passing Lane %</i>
Jun 2017	559773	18659	1524	514056	91.8	45717.4	8.2	91.9	8.1
Jul 2017	585047	18872	1372	542522	92.7	42524.9	7.3	88.3	11.7
Aug 2017	572828	18478	1444	528060	92.2	44768.4	7.8	85.8	14.2
Sep 2017	543718	18124	1510	498405	91.7	45313.1	8.3	89.3	10.7
Oct 2017	530968	17128	1588	481744	90.7	49224.1	9.3	89.2	10.8
Nov 2017	460963	15365	1276	422680	91.7	38282.8	8.3	89.8	10.2
Dec 2017	444435	14337	931	415573	93.5	28862	6.5	89.1	10.9
Jan 2018	421505	13597	893	393834	93.4	27670.6	6.6	89.4	10.6
Feb 2018	399681	14274	911	374175	93.6	25505.8	6.4	89.4	10.6
Mar 2018	441933	14256	921	413379	93.5	28553.8	6.5	90.2	9.8
Apr 2018	464908	15497	959	436131	93.8	28777.1	6.2	89.8	10.2
May 2018	584842	18866	1279	545195	93.2	39647	6.8	86.8	13.2
TOTAL	6010601	--	--	5565754	--	444847	--	--	--
AVERAGE	500883	16454	1217	463813	93	37071	7	89	11

ESALS

<i>Month</i>	<i>ESALS EB Passing Lane</i>	<i>ESALS EB Driving Lane</i>	<i>ESALS WB Driving Lane</i>	<i>ESALS WB Passing Lane</i>	<i>Total ESALS</i>	<i>Driving Lane ESALS %</i>	<i>Passing Lane ESALS %</i>	<i>Pavement Life Decrease Months</i>
Jun 2017	21224	974	445	11784	34427	96	4	26.4
Jul 2017	17260	1506	635	11781	31183	93	7	25.3
Aug 2017	16579	2177	798	12514	32068	91	9	21.3
Sep 2017	15635	1102	785	14097	31618	94	6	17.1
Oct 2017	19830	1849	879	14888	37446	93	7	23
Nov 2017	16359	1194	817	10596	28965	93	7	29.8
Dec 2017	10498	1048	518	6237	18301	91	9	12.9
Jan 2018	10573	891	407	5804	17674	93	7	21.9
Feb 2018	9827	797	311	4654	15589	93	7	21.3
Mar 2018	13593	813	233	3935	18574	94	6	28.9
Apr 2018	14038	759	286	3390	18474	94	6	26.8
May 2018	19915	1449	633	3295	25292	92	8	29.1
TOTAL	185330	14559	6745	102976	309611	--	--	--
AVERAGE	15444	1213	562	8581	25801	93	7	24

Gross Vehicle Weight

<i>Month</i>	<i>GVW EB Passing Lane</i>	<i>GVW EB Driving Lane</i>	<i>GVW WB Passing Lane</i>	<i>GVW WB Driving Lane</i>	<i>Total GVW Kips</i>
Jun 2017	1215655	297399	260387	1046064	2819505
Jul 2017	1146958	274818	231235	944277	2597288
Aug 2017	1366796	300326	243593	971462	2882177
Sep 2017	1429509	300988	258663	955064	2944223
Oct 2017	1919649	486092	384335	1105460	3895536
Nov 2017	1942194	392446	326223	1676176	4337040
Dec 2017	1757274	474905	375892	1727042	4335113
Jan 2018	1654557	563627	405742	1708224	4332151
Feb 2018	1696672	438152	373450	1711459	4219734
Mar 2018	1784400	439650	370191	1734206	4328447
Apr 2018	1508075	372555	315789	1404211	3600629
May 2018	1274512	341067	275284	1133309	3024172
TOTAL	18696253	4682024	3820785	16116954	43316016
AVERAGE	1558021	390169	318399	1343079	3609668

Overweight Vehicles

<i>Month</i>	<i>Total Number of Overweight Vehicles</i>	<i>Overweight / Total Volume</i>	<i>Overweight / Heavy Commercial Volume</i>	<i>Number Over 88,000 lbs</i>	<i>Number Over 98,000 lbs</i>
Jun 2017	5859	1.1	12.8	1920	403
Jul 2017	5175	0.9	12.2	1280	216
Aug 2017	5332	0.9	11.9	1093	180
Sep 2017	5227	1	11.6	1087	196
Oct 2017	7072	1.3	14.4	1505	287
Nov 2017	5725	1.3	15	1413	326
Dec 2017	3501	0.8	12.1	1157	311
Jan 2018	2988	0.7	10.8	806	167
Feb 2018	2472	0.6	9.7	591	119
Mar 2018	3071	0.7	10.7	874	208
Apr 2018	3136	0.7	10.9	881	142
May 2018	4427	0.8	11.4	1479	256
TOTAL	53985	--	--	14086	2811
AVERAGE	4498.8	0.9	12	1173.8	234.2

Freight

<i>Month</i>	<i>EB Freight Tons</i>	<i>WB Freight Tons</i>	<i>Total Freight</i>	<i>EB Freight %</i>	<i>WB Freight %</i>
Jun 2017	205673	184506	390179	52.7	47.3
Jul 2017	170681	187124	357805	47.7	52.3
Aug 2017	174415	190942	365356	47.7	52.3
Sep 2017	158341	222318	380659	41.6	58.4
Oct 2017	202975	224828	427804	47.4	52.6
Nov 2017	163802	166130	329932	49.6	50.4
Dec 2017	115489	96584	212072	54.5	45.5
Jan 2018	114301	79373	193674	59	41
Feb 2018	105266	64764	170030	61.9	38.1
Mar 2018	136515	61298	197813	69	31
Apr 2018	144385	57829	202213	71.4	28.6
May 2018	202268	76571	278839	72.5	27.5
TOTAL	1894110	1612268	3506378	--	--
AVERAGE	157842.5	134355.7	292198.1	56.3	43.7