MARCH 2019

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 March 2019. 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]. 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: 438978 | Passenger Vehicles: 407281 | Heavy Commercial Vehicles: 31697

Monthly Average Daily Traffic (MADT): 14161 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 1022

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 Fridays, with lowest volumes reported on Sundays (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 31697 HCVs, 3681 of them were overweight [3]. These overweight HCVs contributed to 0.8% of total monthly volume, and 11.7% of total monthly

HCV volume. EB overweight vehicles typically reached highest numbers on Wednesdays, with lowest volumes reported on Saturdays. WB overweight vehicles tended to reach highest volumes on Tuesdays, 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 85.7% 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 October.

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 report [4].

Using normal load limits ,1471 EB vehicles exceeded 88,000 pounds (1046 vehicles were Class 9's; 260 vehicles were Class 10's). Of vehicles traveling WB,

130 EB vehicles exceeded 88,000 pounds (96 vehicles were Class 13's; 28 vehicles were Class 10's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from March 2019.

Loaded vs. Unloaded HCVs. Figure 10 shows the GVW distributions of Class 9s and 10s in March 2019. 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 228260 tons of freight was recorded to have crossed the WIM. More freight was shipped EB (64.7%) than WB (35.3%). 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 438978 vehicles with a combined GVW of 3096901 kips (1 kip = 1,000 pounds = 0.5 tons) in March 2019. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

Pavement Design. A total of 22053 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 73.2% of all ESALs were recorded EB while 26.8% was observed WB. In particular, 66% of all ESALs were generated by the Class 9's (Class 9's were also responsible for generating 24% 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.

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Figure 1 - Monthly Class 9 GVW Histogram

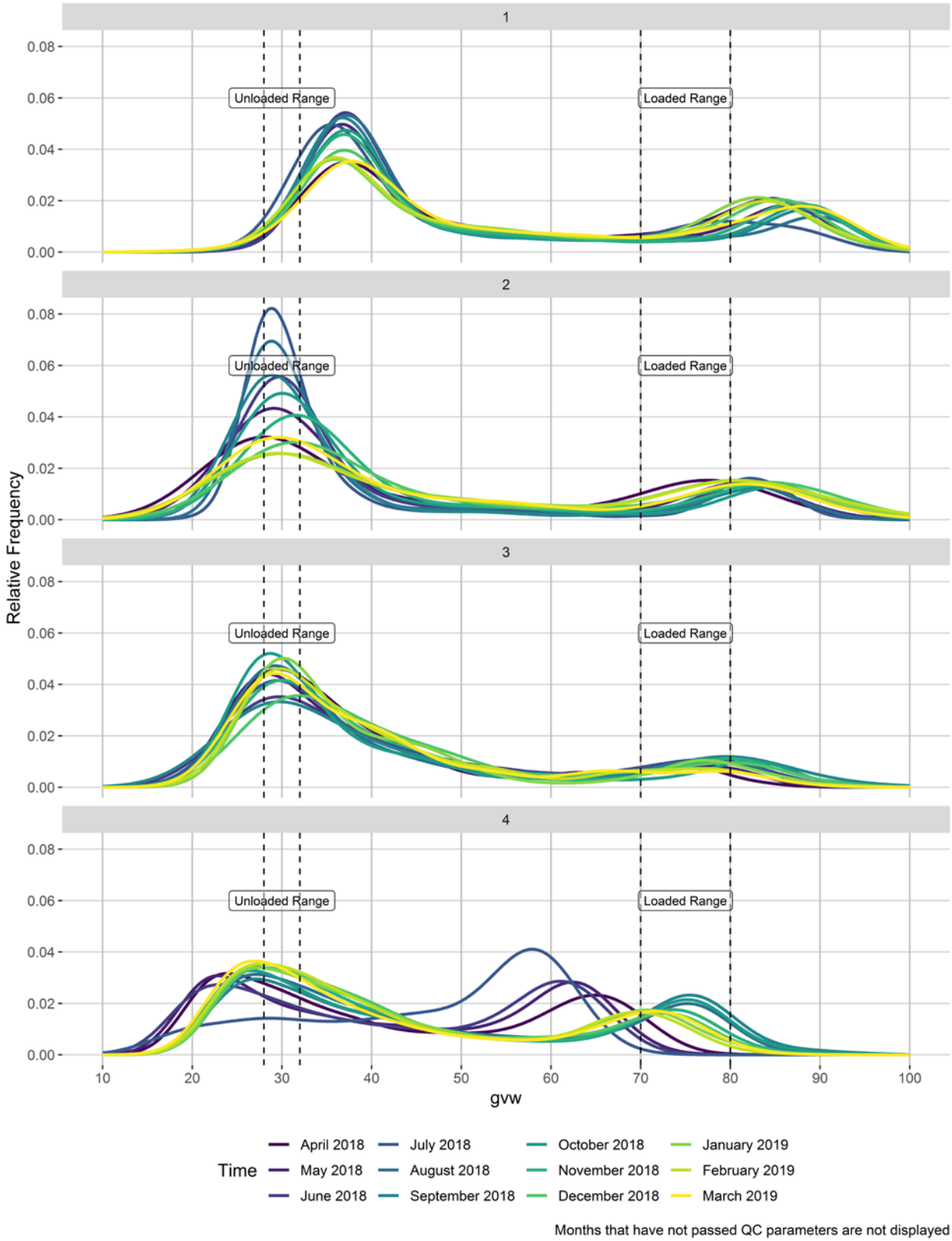
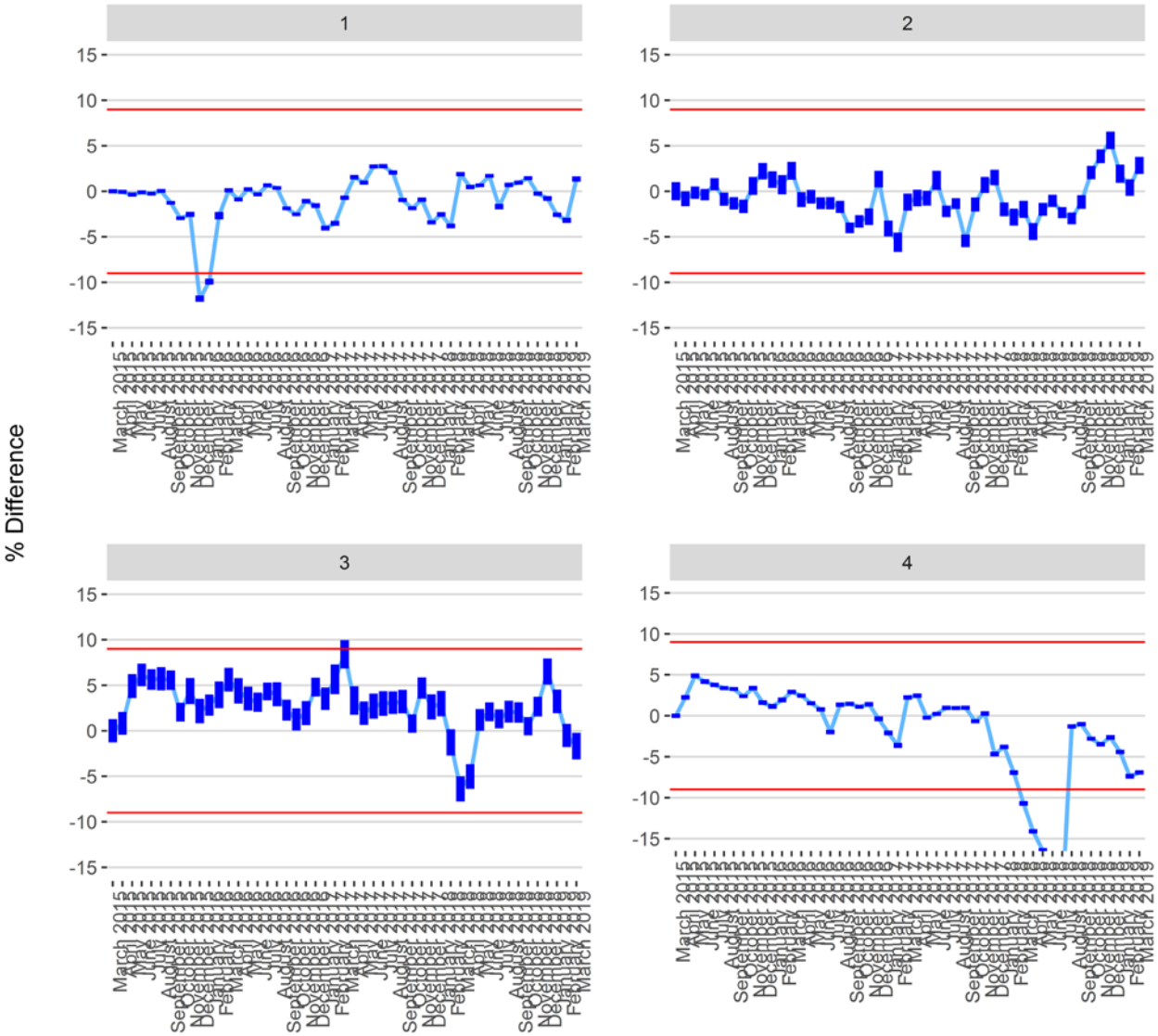


Figure 2 - Percent Difference of Front Axle Weight from Last Calibration (+/- 95% CI)



Months that have not passed QC parameters are not displayed

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

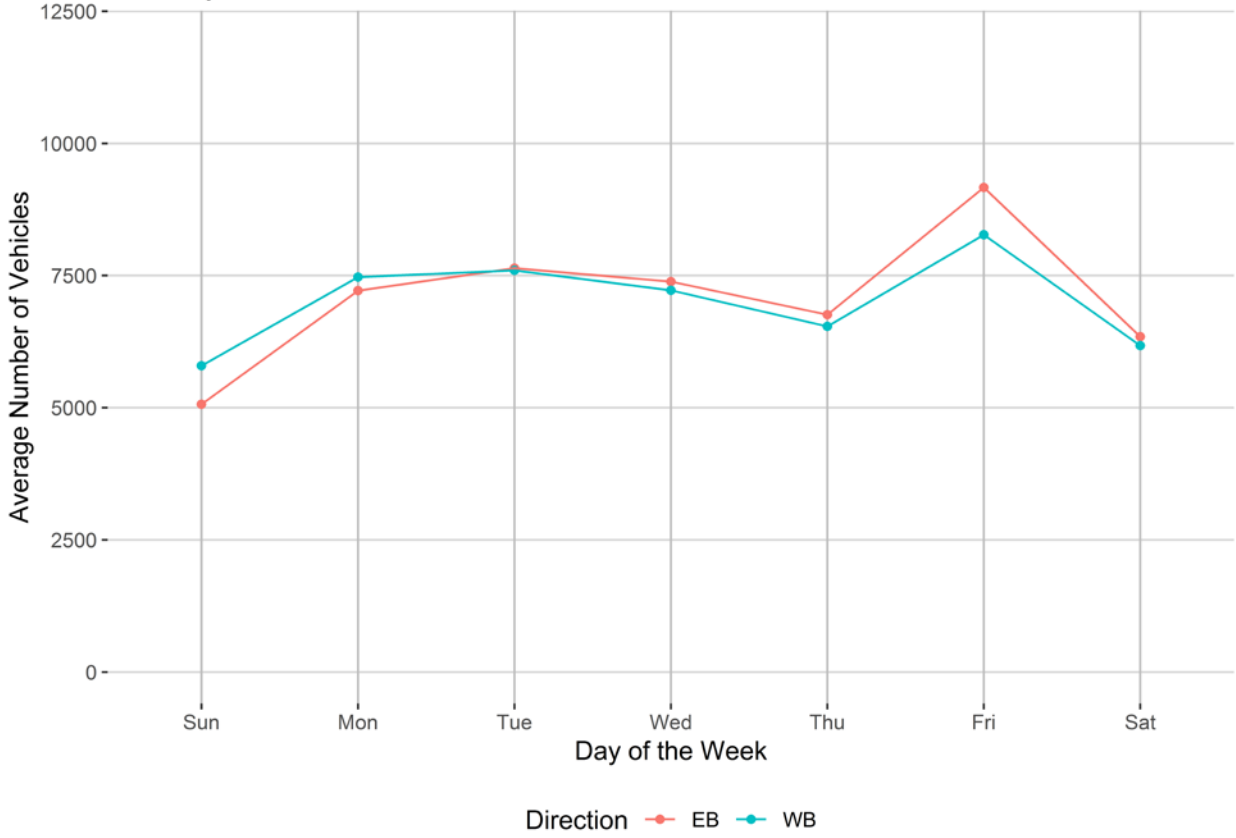


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

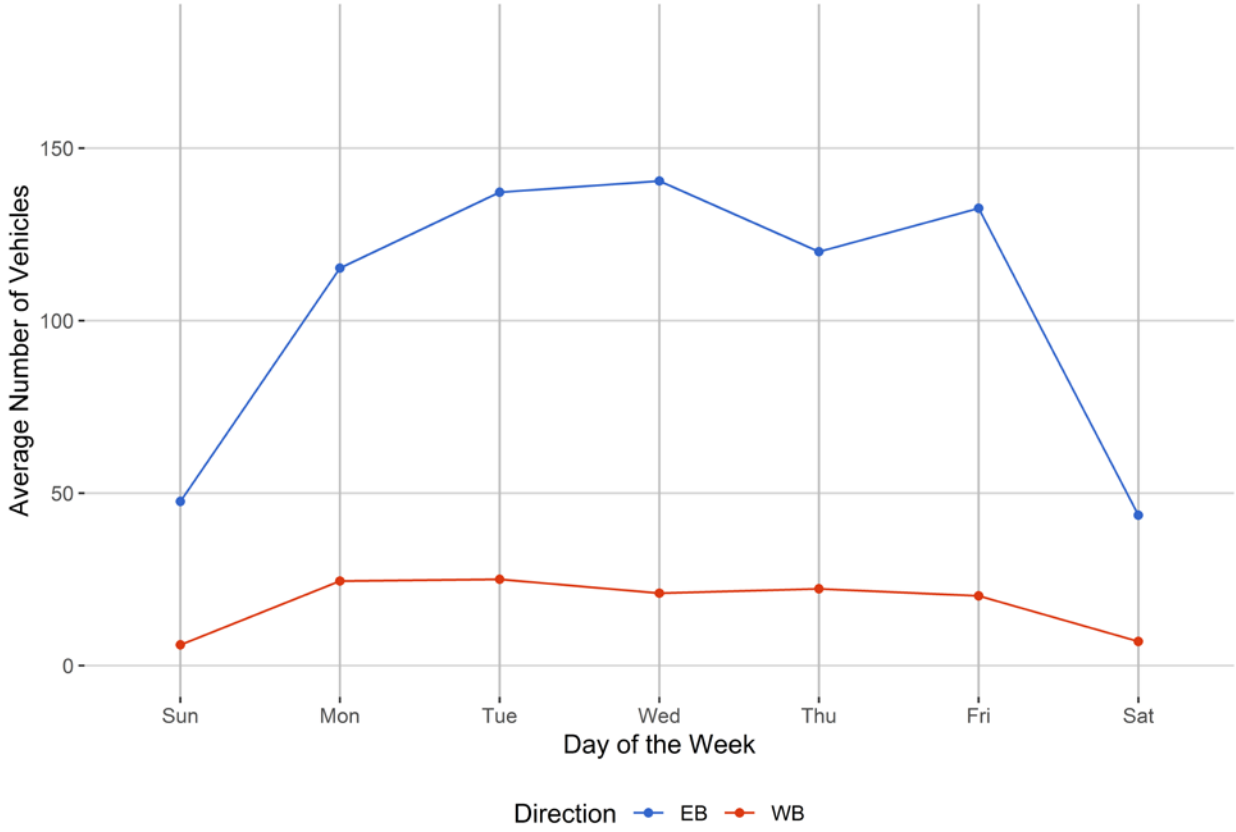


Figure 4 - Passenger Vehicles vs. Hour of the Day

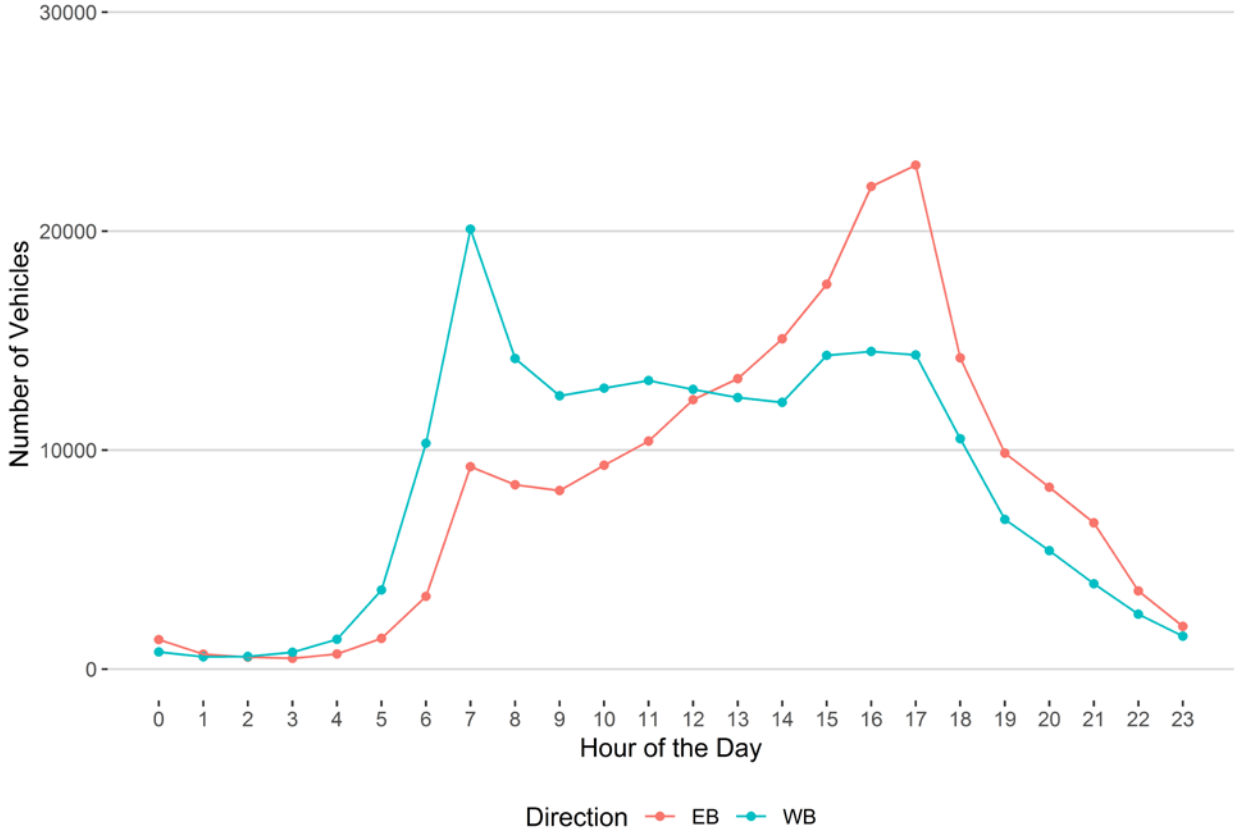


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

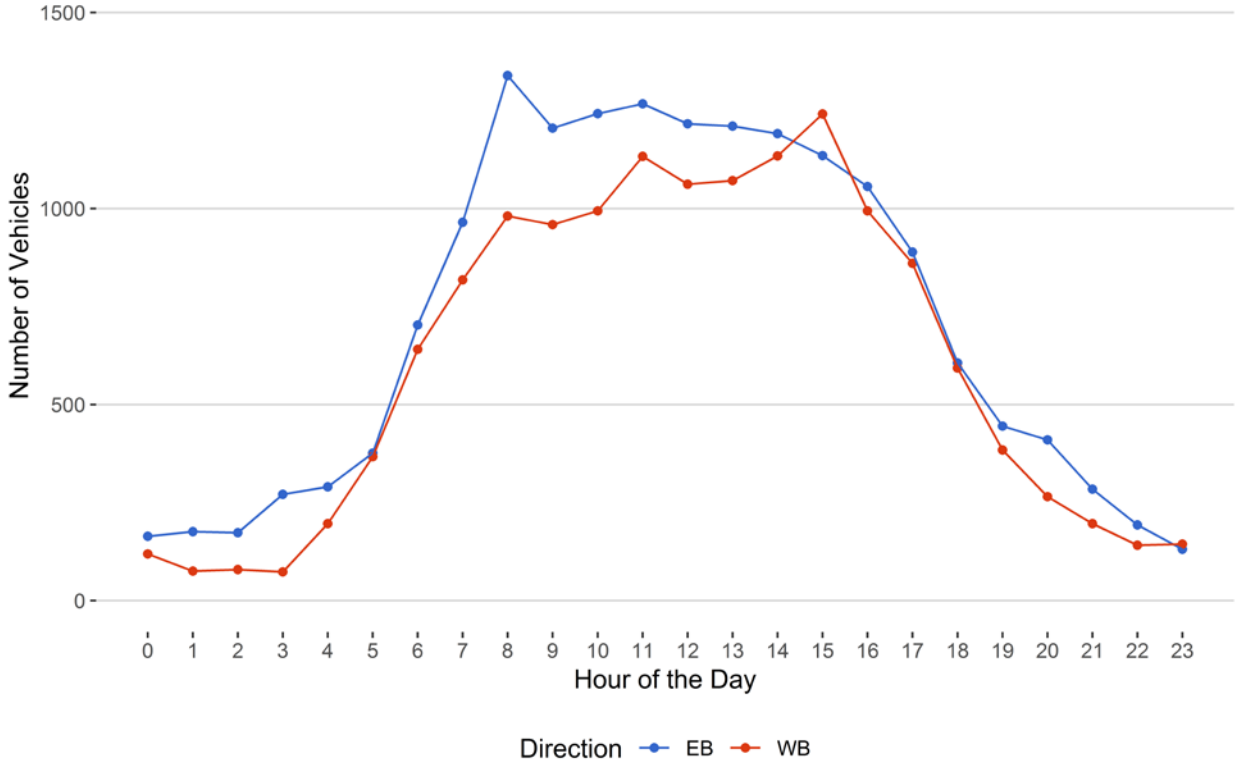


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

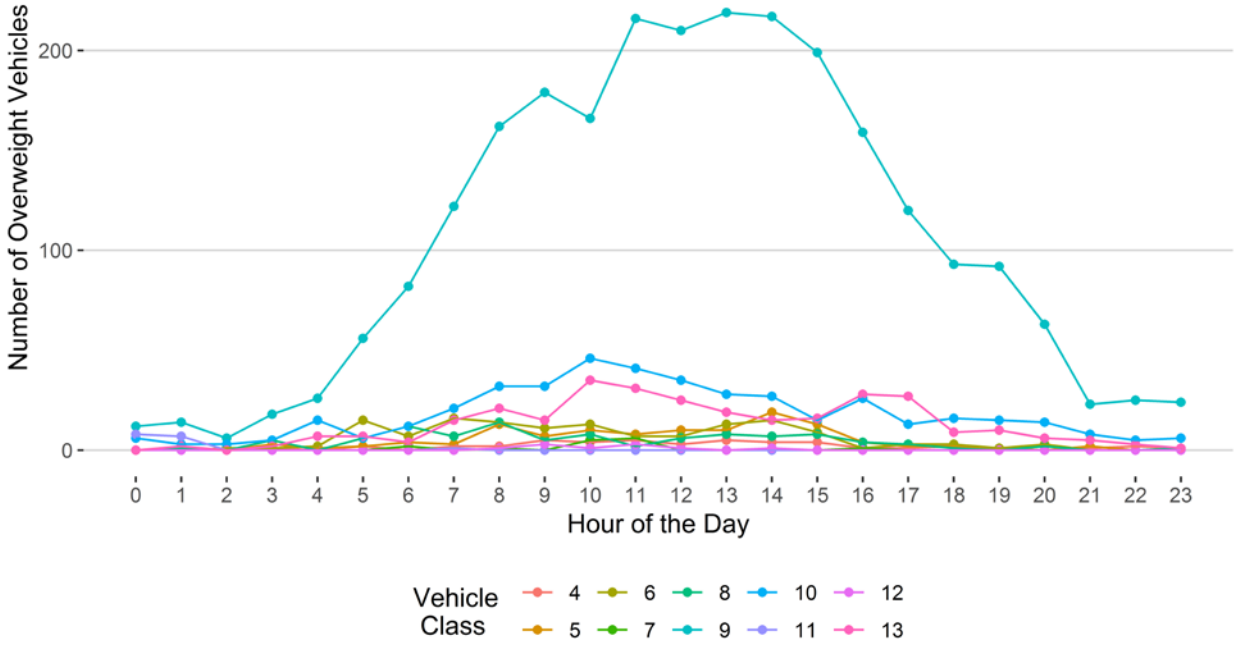
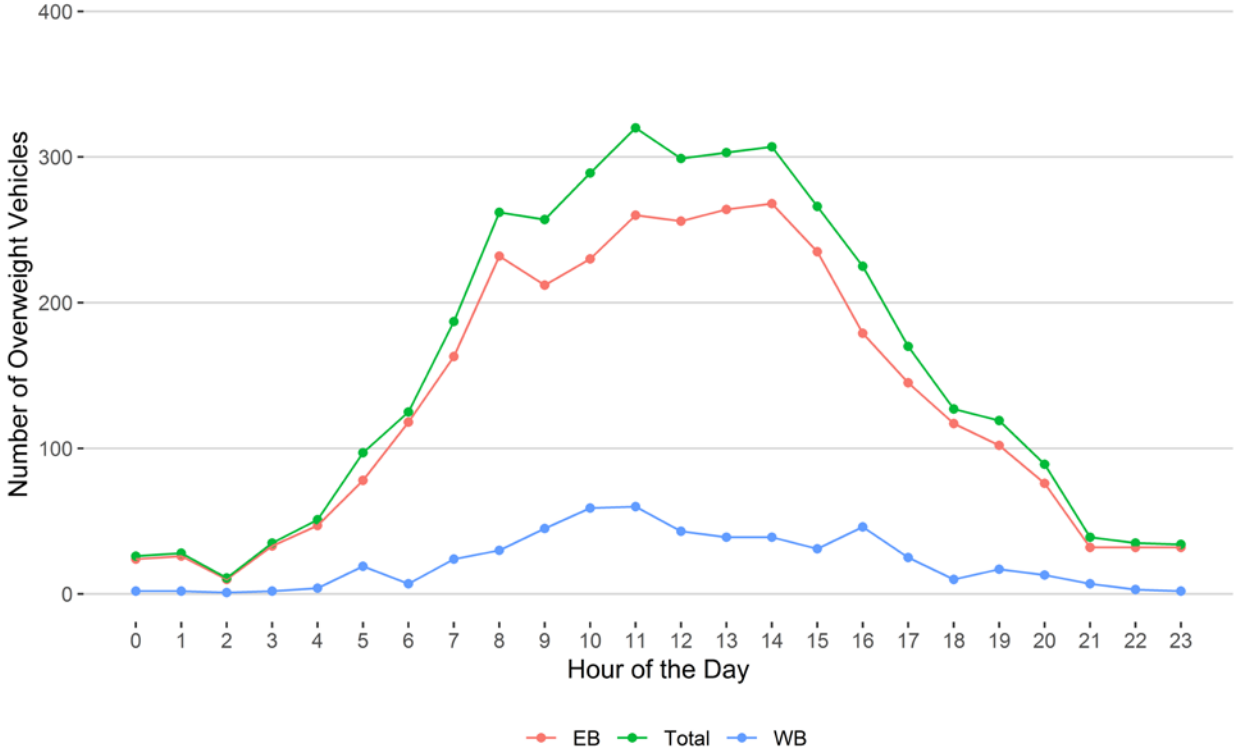
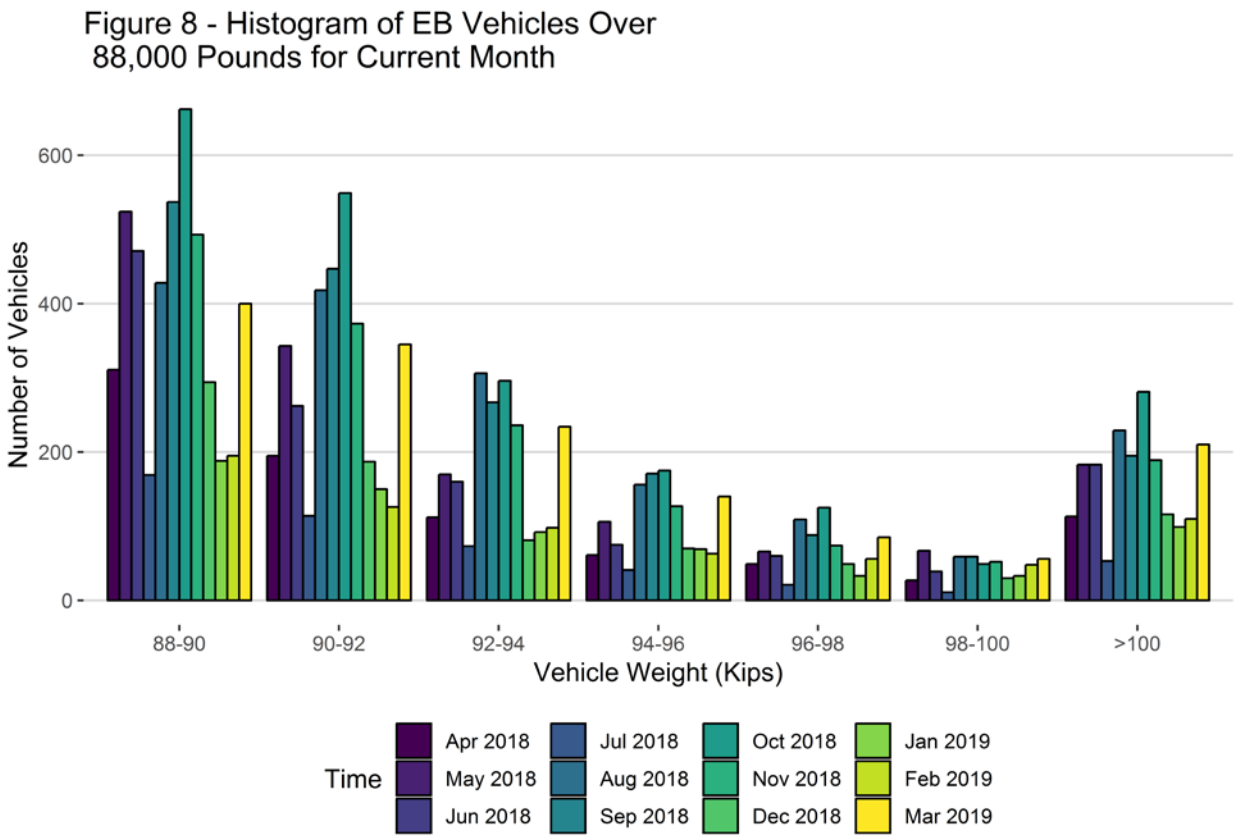


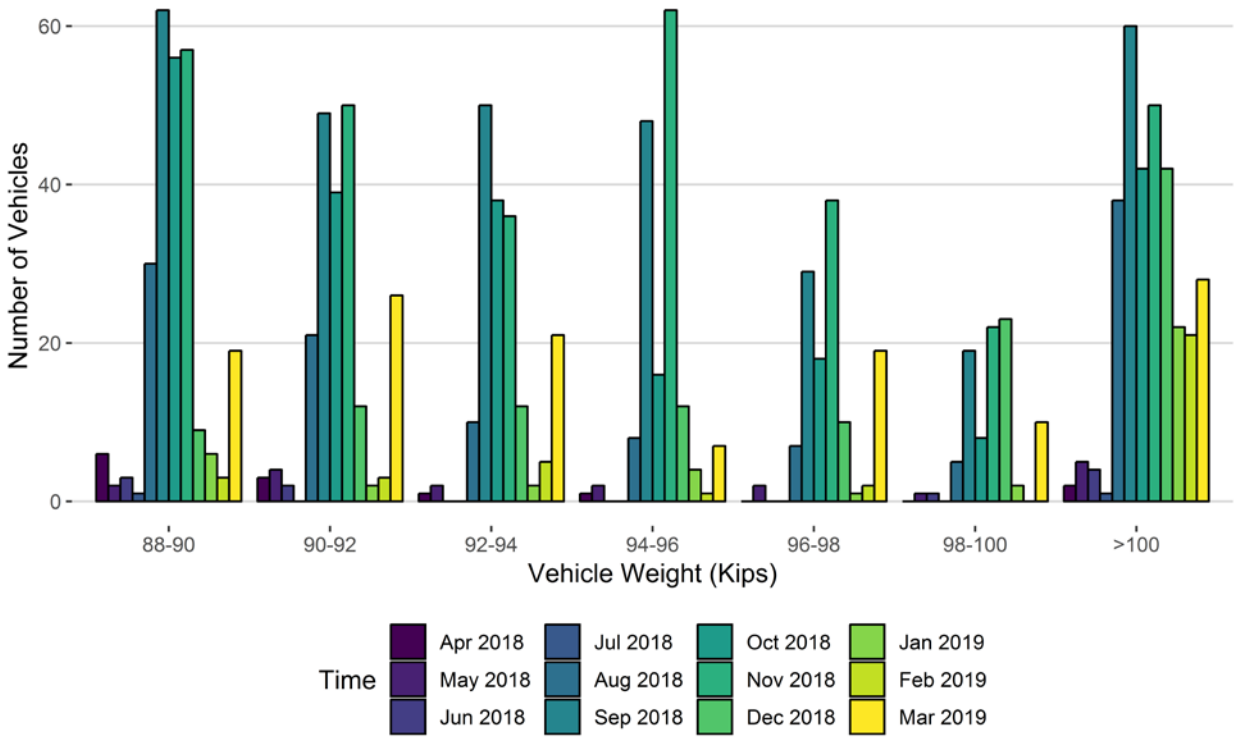
Figure 7 - Overweight Vehicles by Direction
Hour of the Day





Vehicle Weights (Kips)	*Apr 2018*	*May 2018*	*Jun 2018*	*Jul 2018*	*Aug 2018*	*Sep 2018*	*Oct 2018*	*Nov 2018*	*Dec 2018*	*Jan 2019*	*Feb 2019*	*Mar 2019*
88-90	311	524	471	169	428	537	662	493	294	188	195	400
90-92	195	343	262	114	418	447	549	373	187	150	126	345
92-94	112	170	160	73	306	267	296	236	81	92	98	234
94-96	61	106	75	41	156	171	175	127	70	69	63	140
96-98	49	66	60	21	109	88	125	74	49	33	56	85
98-100	27	67	39	11	59	59	49	52	30	33	48	56
>100	113	183	183	53	229	195	281	189	116	99	110	210
Total	868	1459	1250	482	1705	1764	2137	1544	827	664	696	1470

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



Vehicle Weights (Kips)	*Apr 2018*	*May 2018*	*Jun 2018*	*Jul 2018*	*Aug 2018*	*Sep 2018*	*Oct 2018*	*Nov 2018*	*Dec 2018*	*Jan 2019*	*Feb 2019*	*Mar 2019*
88-90	6	2	3	1	30	62	56	57	9	6	3	19
90-92	3	4	2	0	21	49	39	50	12	2	3	26
92-94	1	2	0	0	10	50	38	36	12	2	5	21
94-96	1	2	0	0	8	48	16	62	12	4	1	7
96-98	0	2	0	0	7	29	18	38	10	1	2	19
98-100	0	1	1	0	5	19	8	22	23	2	0	10
>100	2	5	4	1	38	60	42	50	42	22	21	28
Total	13	18	10	2	119	317	217	315	120	39	35	130

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

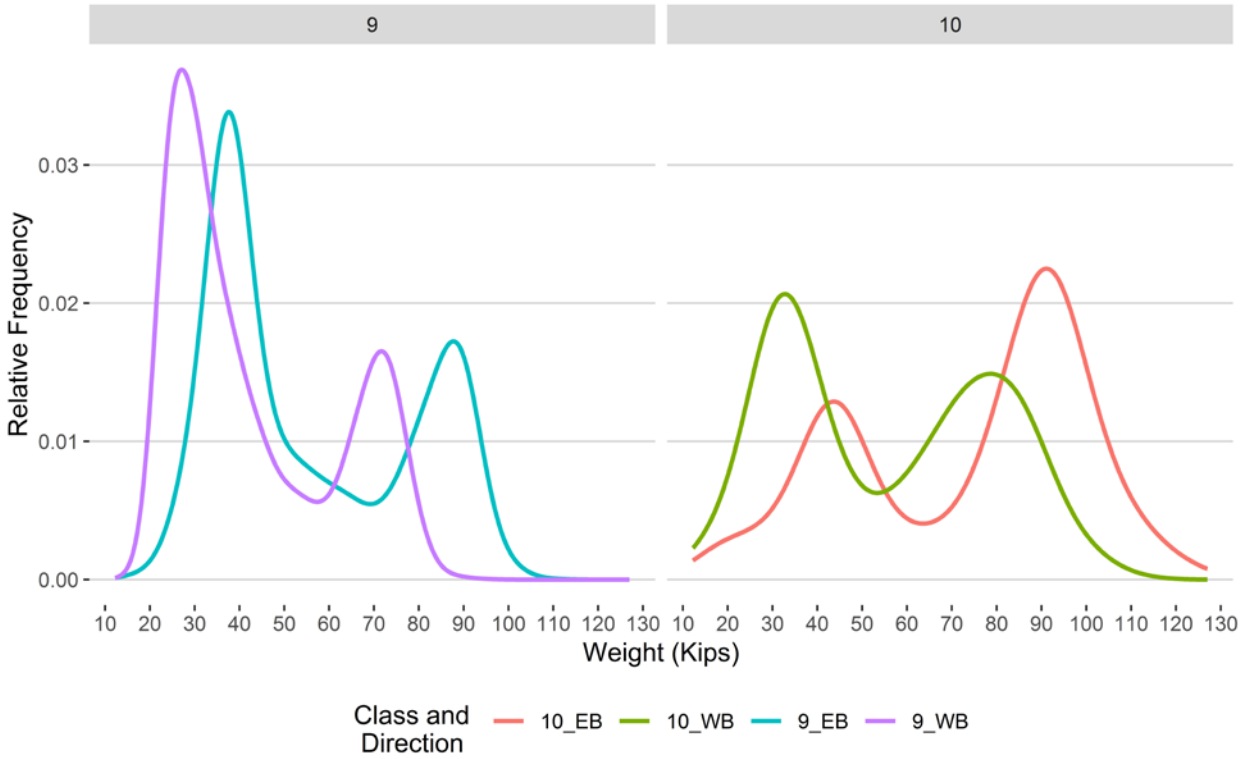


Figure 9 - Freight Percentage by Direction and Class

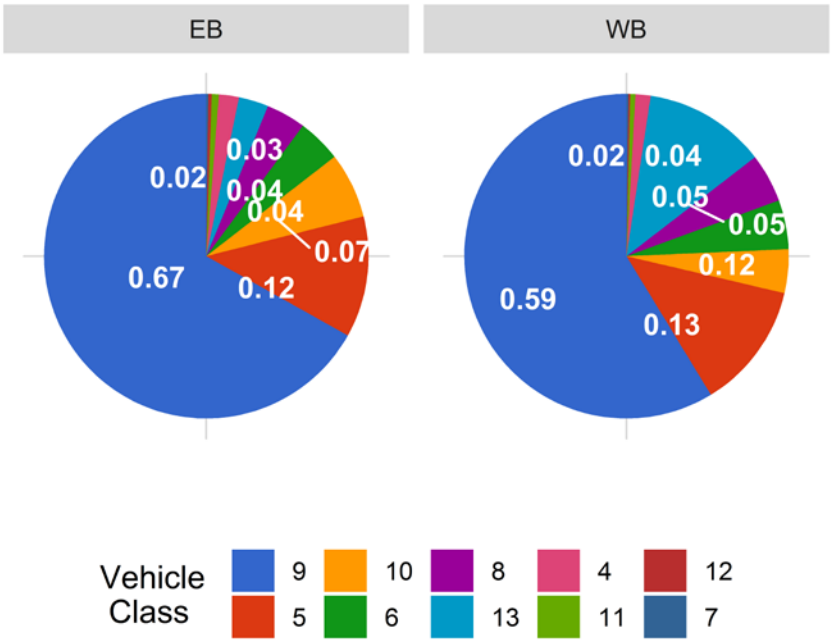


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

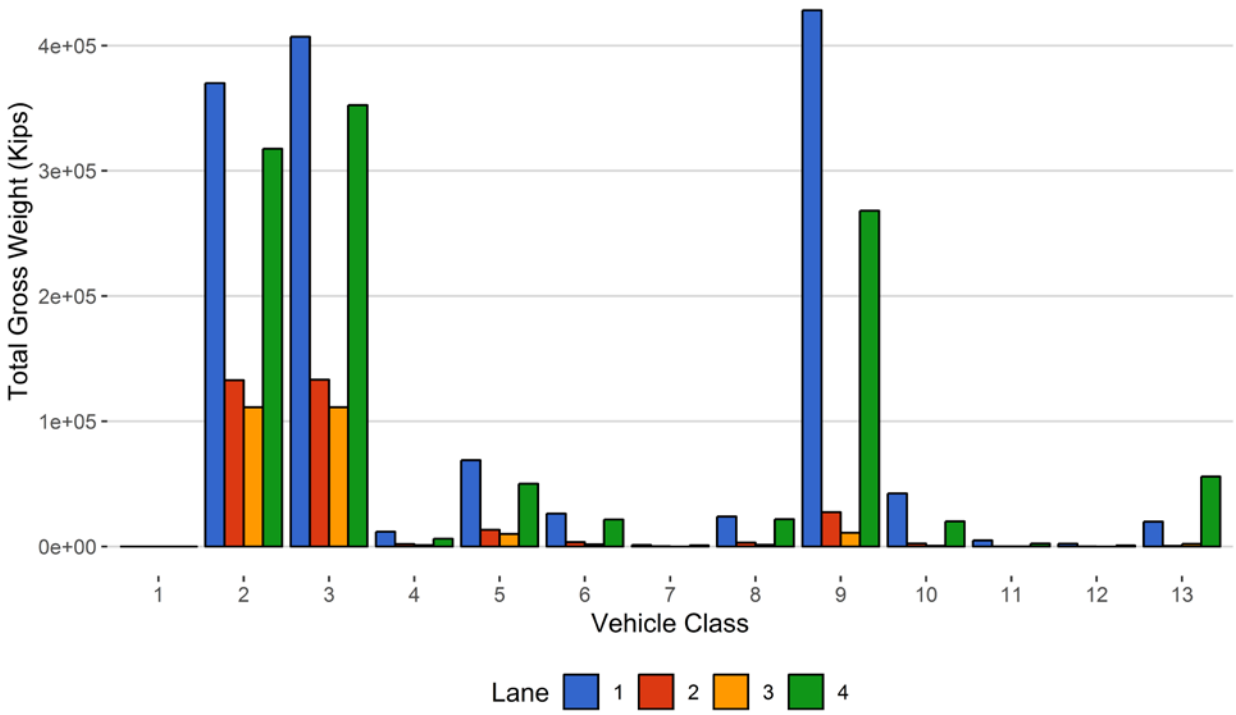


Figure 11 - Total Gross Vehicle Weight b

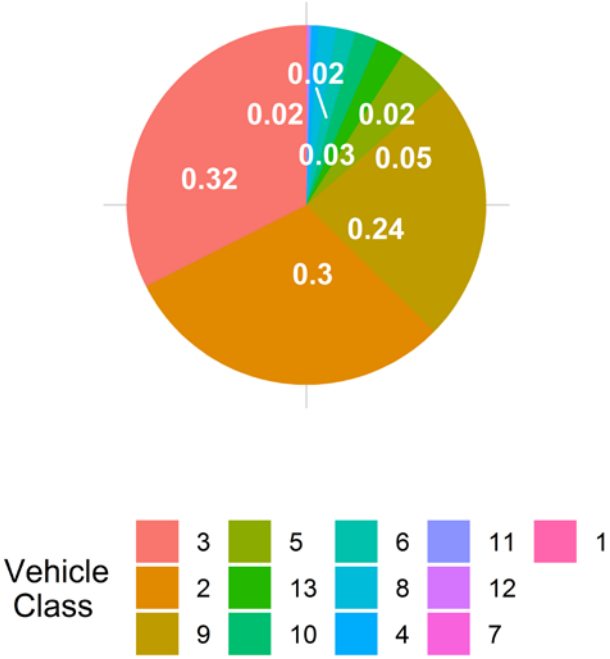


Figure 12 - Total ESALs by Class and Lane

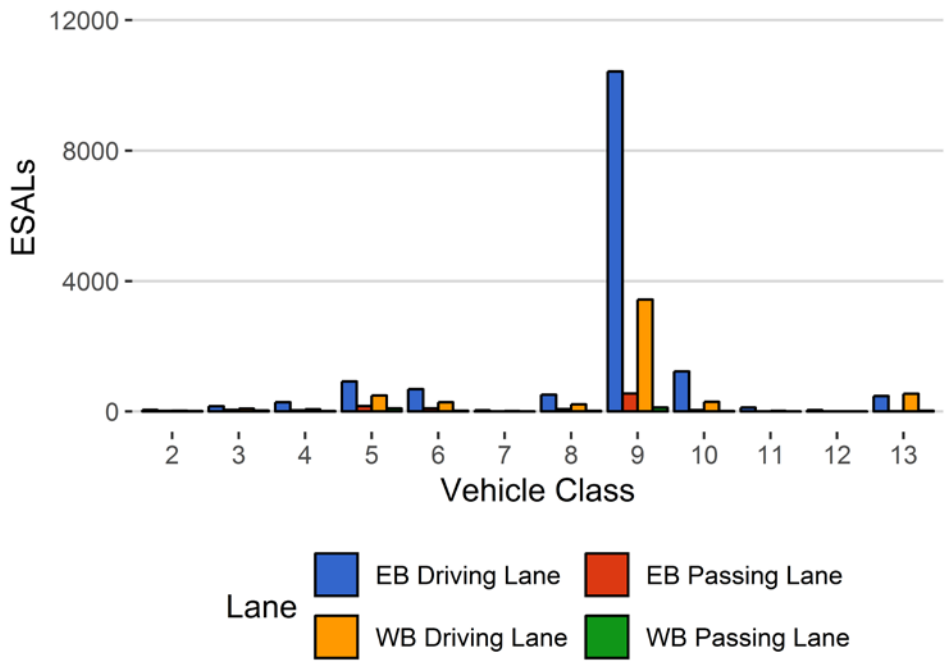


Figure 13 - ESALs by Class

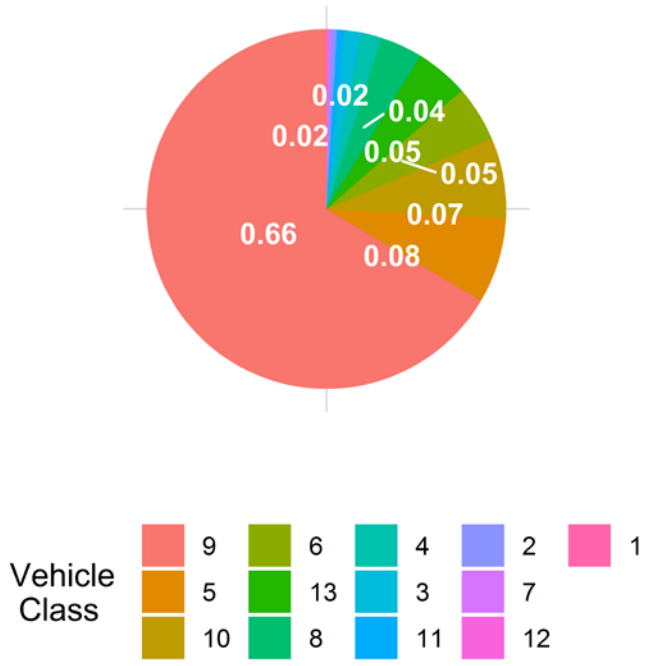


Table 1 Class 9 Front Axle Weight by Lane

Month	*Lane 1 (Kips)*	*Front Axle +/- 9%*	*Lane 2 (Kips)*	*Front Axle +/- 9%*	*Lane 3 (Kips)*	*Front Axle +/- 9%*	*Lane 4 (kips)*	*Front Axle +/- 9%*
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
June 2018	12.80	1.69	11.60	-1.05	11.16	2.08	8.86	-18.02
July 2018	12.37	-1.68	11.45	-2.34	11.08	1.30	8.36	-22.67
August 2018	12.67	0.70	11.37	-2.98	11.17	2.11	10.67	-1.31
September 2018	12.70	0.95	11.59	-1.17	11.16	2.01	10.70	-1.03
October 2018	12.76	1.44	11.96	2.05	10.99	0.51	10.51	-2.80
November 2018	12.55	-0.25	12.17	3.85	11.23	2.65	10.44	-3.47
December 2018	12.48	-0.78	12.38	5.60	11.65	6.51	10.53	-2.64
January 2019	12.26	-2.58	11.95	1.93	11.29	3.24	10.33	-4.42
February 2019	12.18	-3.19	11.77	0.41	10.88	-0.51	10.01	-7.38
March 2019	12.75	1.35	12.06	2.86	10.75	-1.68	10.06	-6.92

Table 2 Vehicle Classification Data

Vehicle Class	*Monthly Average Daily Volume*	*Monthly Total Volume*	*Monthly Total Volume Percentage*	*Monthly Total Overweight Vehicles*	*Monthly Total Overweight Percentage*
1	0	1	0	0	0
2	7700	238715	54.4	0	0
3	5438	168565	38.4	0	0
4	25	771	0.2	46	1.2
5	346	10727	2.4	115	3.1
6	55	1701	0.4	143	3.9
7	1	43	0	15	0.4
8	51	1566	0.4	100	2.7
9	475	14724	3.4	2503	68
10	32	983	0.2	430	11.7
11	5	146	0	16	0.4
12	2	57	0	10	0.3
13	32	977	0.2	303	8.2
TOTAL	**14161**	**438978**	**100**	**3681**	**100**

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

Date	*Day of Week*	*Time*	*Vehicle Class*	*Direction*	*Lane*	*GVW (lbs)*
2019-03-12	Tuesday	13:12:29	10	EB	1	127.02
2019-03-12	Tuesday	15:07:34	10	EB	1	126.41
2019-03-28	Thursday	13:06:35	10	EB	1	121.41
2019-03-08	Friday	10:48:27	10	EB	1	121.27
2019-03-20	Wednesday	09:49:29	10	EB	1	120.66
2019-03-26	Tuesday	12:01:42	10	EB	1	119.34
2019-03-05	Tuesday	13:52:01	10	EB	1	118.64
2019-03-30	Saturday	09:25:36	10	EB	1	118.18
2019-03-19	Tuesday	13:50:23	10	EB	1	116.63
2019-03-11	Monday	15:28:29	10	EB	1	116.17

Table 4 Freight Summary

Vehicle Class	*Direction*	*Weight of Empty Vehicle (Kips)*	*Total Number of Vehicles*	*Number of Empty Vehicles*	*Percentage of Empty Vehicles*	*Total Weight of Vehicles with Freight (Kips)*	*Total Weight of Empty Vehicles (Kips)*	*Total Weight of Freight (Tons)*
4	EB	15	450	80	17.8	12592	1062	3521
5	EB	8	5794	437	7.5	79092	3136	18118
6	EB	19	852	34	4	29109	592	6783
7	EB	11.5	23	0	0	1374	0	555
8	EB	31	760	215	28.3	22563	4330	2834
9	EB	33	8123	843	10.4	431177	24494	95469
10	EB	33.5	603	42	7	43613	1010	12410
11	EB	36.5	87	7	8	4596	221	838
12	EB	36.5	38	1	2.6	2233	31	441
13	EB	31.5	207	1	0.5	20144	30	6828
TOTAL	****	****	**16937**	**1660**	****	**646495**	****	**147797**
Vehicle Class	Direction	Weight of Empty Vehicle (Kips)	Total Number of Vehicles	Number of Empty Vehicles	Percentage of Empty Vehicles	Total Weight of Vehicles with Freight (Kips)	Total Weight of Empty Vehicles (Kips)	Total Weight of Freight (Tons)
4	WB	15	315	99	31.4	5991	1191	1376
5	WB	8	4852	1282	26.4	51056	8948	11248
6	WB	19	836	238	28.5	19275	3941	3957
7	WB	11.5	20	0	0	951	0	361
8	WB	31	794	487	61.3	11427	11673	955
9	WB	33	6490	2830	43.6	202855	76173	41037
10	WB	33.5	373	98	26.3	17951	2729	4369
11	WB	36.5	58	17	29.3	1850	555	177
12	WB	36.5	19	2	10.5	790	52	85
13	WB	31.5	763	0	0	57833	0	16899
TOTAL	****	****	**14520**	**5053**	****	**369979**	****	**80463**
GRAND TOTAL	****	****	**31457**	**6713**	**343**	**1016474**	**140168**	**228260**

Table 5 Gross Vehicle Weight by Class and Lane

Vehicle Class	*EB Driving Lane*	*EB Passing Lane*	*WB Passing Lane*	*WB Driving Lane*	*Total*	*Percentage*
1	0	1	0	0	1	0
2	370041	132836	111163	317690	931729	30.1
3	407067	133196	111187	352482	1003932	32.5
4	11764	1890	1056	6126	20836	0.7
5	68950	13279	9948	50056	142232	4.6
6	26219	3482	1677	21539	52917	1.7
7	1184	190	0	951	2325	0.1
8	23883	3010	1311	21789	49992	1.6
9	428300	27371	10920	268108	734699	23.8
10	42310	2314	631	20049	65304	2.1
11	4767	50	50	2355	7222	0.2
12	2233	31	0	841	3106	0.1
13	19766	409	2053	55780	78008	2.5
TOTAL	**1406485**	**318056**	**249995**	**1117767**	**3092303**	**100**
GVW/LANE	**45.48**	**10.29**	**8.08**	**36.15**	**100**	**0**

Table 6 ESALs by Class and Lane and Flexible ESAL Factors

Vehicle Class	*EB Driving Lane*	*EB Passing Lane*	*WB Passing Lane*	*WB Driving Lane*	*Total*	*Percentage*	*Flexible ESAL Factor*
1	0	0	0	0	0	0	0.5
2	52	18	12	29	110	0.5	9e-04
3	165	47	32	94	338	1.55	0.0041
4	285	36	14	66	400	1.83	1.05
5	921	169	97	491	1679	7.68	0.32
6	688	95	25	288	1096	5.01	1.3
7	35	4	0	12	51	0.23	2.19
8	517	75	19	218	828	3.79	1.07
9	10427	550	121	3430	14528	66.48	1.99
10	1229	44	14	301	1587	7.26	3.24
11	123	1	0	18	142	0.65	1.9
12	41	0	0	4	45	0.21	1.49
13	473	6	24	544	1048	4.79	2.15
TOTAL	**14954**	**1044**	**358**	**5495**	**21852**	**100**	**17**
ESALS/LANE	**68.4**	**4.8**	**1.6**	**25.1**	**100**	**–**	**–**

Table 7 Site Summary: Volume and Vehicle Class

Month	*Total Volume*	*Monthly ADT*	*Monthly HCADT*	*Passenger Vehicles*	*Passenger Vehicles %*	*Heavy Commercial Vehicles*	*Heavy Commercial Vehicles %*	*Heavy Commercial Vehicles in Driving Lane %*	*Heavy Commercial Vehicles in Passing Lane %*
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
Jun 2018	595965	19866	1159	561188	94.2	34777.4	5.8	84.2	15.8
Jul 2018	631964	20386	805	606994	96	24969.5	4	77.4	22.6
Aug 2018	610595	19697	1555	562401	92.1	48194.3	7.9	88.8	11.2
Sep 2018	547486	18250	1506	502315	91.7	45170.6	8.3	89.3	10.7
Oct 2018	529466	17080	1570	480795	90.8	48670.8	9.2	89.9	10.1
Nov 2018	430849	15388	1183	395350	91.8	35498.8	8.2	89	11
Dec 2018	433085	14436	902	405135	93.5	27950	6.5	89.7	10.3
Jan 2019	406644	13118	916	378257	93	28386.7	7	89.3	10.7
Feb 2019	369962	13213	920	344189	93	25772.6	7	88.3	11.7
Mar 2019	438978	14161	1022	407281	92.8	31697	7.2	89.5	10.5
TOTAL	**6044744**	**–**	**–**	**5625231**	**–**	**419512**	**–**	**–**	**–**
AVERAGE	**503729**	**16663**	**1148**	**468769**	**93**	**34959**	**7**	**88**	**12**

ESALs

Month	*ESALS EB Passing Lane*	*ESALS EB Driving Lane*	*ESALS WB Driving Lane*	*ESALS WB Passing Lane*	*Total ESALS*	*Driving Lane ESALS %*	*Passing Lane ESALS %*	*Pavement Life Decrease Months*
Apr 2018	14038	759	286	3390	18474	94	6	26.8
May 2018	19915	1449	633	3295	25292	92	8	29.1
Jun 2018	17634	1549	856	1756	21795	89	11	25.5
Jul 2018	9545	1486	759	589	12378	82	18	16.5
Aug 2018	17346	1529	783	13764	33422	93	7	40.7
Sep 2018	18309	1493	802	13104	33709	93	7	40.7
Oct 2018	21183	1561	720	13103	36568	94	6	42.3
Nov 2018	16981	1449	650	8651	27730	92	8	38.1
Dec 2018	12116	983	430	5471	19000	93	7	29.2
Jan 2019	11889	941	448	5234	18512	92	8	26.3
Feb 2019	10649	1069	422	4110	16250	91	9	32.8
Mar 2019	15090	1062	361	5540	22053	94	6	44.2
TOTAL	**184695**	**15332**	**7149**	**78008**	**285184**	**–**	**–**	**–**
AVERAGE	**15391**	**1278**	**596**	**6501**	**23765**	**92**	**8**	**33**

Gross Vehicle Weight

Month	*GVW EB Passing Lane*	*GVW EB Driving Lane*	*GVW WB Passing Lane*	*GVW WB Driving Lane*	*Total GVW Kips*
Apr 18	1429509	300988	258663	955064	2944223
May 18	1919649	486092	384335	1105460	3895536
Jun 18	1873989	527355	405817	977118	3784280
Jul 18	1484105	532750	442390	949621	3408866
Aug 18	1827123	516522	412675	1913186	4669506
Sep 18	1772922	435625	369201	1713661	4291408
Oct 18	1828907	443941	363248	1696927	4333023
Nov 18	1535083	394342	304696	1360820	3594942
Dec 18	1310112	327610	267904	1120597	3026224
Jan 19	1229340	286706	250586	1044234	2810866
Feb 19	1126534	266155	229583	907774	2530046
Mar 19	1408617	318406	250134	1119744	3096901
TOTAL	**18745889**	**4836493**	**3939233**	**14864205**	**42385820**
AVERAGE	**1562157**	**403041**	**328269**	**1238684**	**3532152**

Overweight Vehicles

Month	*Total Number of Overweight Vehicles*	*Overweight / Total Volume*	*Overweight / Heavy Commercial Volume*	*Number Over 88,000 lbs*	*Number Over 98,000 lbs*
Apr 2018	3136	0.7	10.9	881	142
May 2018	4427	0.8	11.4	1479	256
Jun 2018	3884	0.7	11.5	1260	227
Jul 2018	2060	0.4	8.8	485	65
Aug 2018	5463	0.9	11.4	1825	331
Sep 2018	6002	1.1	13.3	2081	333
Oct 2018	6412	1.2	13.2	2356	381
Nov 2018	5096	1.1	13.3	1860	313
Dec 2018	3237	0.7	11.4	947	211
Jan 2019	3050	0.8	10.8	703	156
Feb 2019	2654	0.7	10.3	733	180
Mar 2019	3701	0.8	11.7	1601	305
TOTAL	**49122**	**–**	**–**	**16211**	**2900**
AVERAGE	**4093.5**	**0.8**	**11.5**	**1350.9**	**241.7**

Freight

Month	*EB Freight Tons*	*WB Freight Tons*	*Total Freight*	*EB Freight %*	*WB Freight %*
Apr 2018	144385	57829	202213	71.4	28.6
May 2018	202268	76571	278839	72.5	27.5
Jun 2018	179547	49025	228572	78.6	21.4
Jul 2018	111388	22324	133712	83.3	16.7
Aug 2018	173814	236610	410424	42.3	57.7
Sep 2018	177219	202462	379681	46.7	53.3
Oct 2018	205680	203542	409222	50.3	49.7
Nov 2018	168189	136273	304462	55.2	44.8
Dec 2018	123430	79692	203122	60.8	39.2
Jan 2019	122311	69881	192193	63.6	36.4
Feb 2019	110574	57944	168518	65.6	34.4
Mar 2019	147797	80463	228260	64.7	35.3
TOTAL	**1866602**	**1272616**	**3139218**	**–**	**–**
AVERAGE	**155550.2**	**106051.3**	**261601.5**	**62.9**	**37.1**