

APRIL 2019



**WIM #27  
MN 60,  
MP 64.8  
ST. JAMES, MN**

**MONTHLY  
REPORT**



*Your Destination...Our Priority*



## WIM Site Location

WIM #27 is located on MN 60 near St. James in Watonwan county.

## System Operation

WIM #27 was operational for the entire month of April 2019. Volume was computed using all monthly data.

## System Calibration

WIM #27 was most recently calibrated on 2018-04-18. Table 1 summarizes the front axle weights of class 9s by lane <sup>1</sup>. Figure 1 shows the distribution of gross vehicle weights (GVW) in Class 9 vehicles at this site for the last 12 months of operation <sup>2</sup>. 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: 181026 | Passenger Vehicles: 150536 | Heavy Commercial Vehicles: 30490

Monthly Average Daily Traffic (MADT): 6034 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 1016

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 Sundays, with lowest volumes reported on Wednesdays. WB vehicles typically reached highest volume levels on Fridays, 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 03 PM 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 03 PM 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 30490 HCVs, 6191 of them were overweight <sup>3</sup>. These overweight HCVs contributed to 3.7% of total monthly volume, and 21.9% of total monthly

HCV volume. EB overweight vehicles typically reached highest numbers on Tuesdays, with lowest volumes reported on Saturdays. WB overweight vehicles tended to reach highest volumes on Tuesdays, with lowest volumes reported on Saturdays. See Figure 3 .

The top two overweight violators by class were the class 9 and class 13 vehicles . Overall, overweight vehicles tended to reach peak volume concentrations during typical business hours, with 97.9% 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 November.

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 <sup>4</sup>.

Using normal load limits ,970 EB vehicles exceeded 88,000 pounds (398 vehicles were Class 9's; 292 vehicles were Class 13's). Of vehicles traveling WB,

12 EB vehicles exceeded 88,000 pounds (10 vehicles were Class 13's; 2 vehicles were Class 10's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from April 2019.

**Loaded vs. Unloaded HCVs.** Figure 10 shows the GVW distributions of Class 9s and 10s in April 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 309628 tons of freight was recorded to have crossed the WIM. More freight was shipped EB (77%) than WB (23%). See Table 4 and Figure 11 for more freight information.

### Infrastructure Considerations

**Bridge.** Bridge No. 93716, an arch pipe, is approximately 3.0 miles west of WIM #27 and Bridge No. 83030 is approximately 8.1 miles east of WIM #27. WIM #27 recorded a total of 181026 vehicles with a combined GVW of 2118218 kips (1 kip = 1,000 pounds = 0.5 tons) in April 2019. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

**Pavement Design.** A total of 37098 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 86.2% of all ESALs were recorded EB while 13.8% was observed WB. In particular, 66% of all ESALs were generated by the Class 9's (Class 9's were also responsible for generating 54% 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).

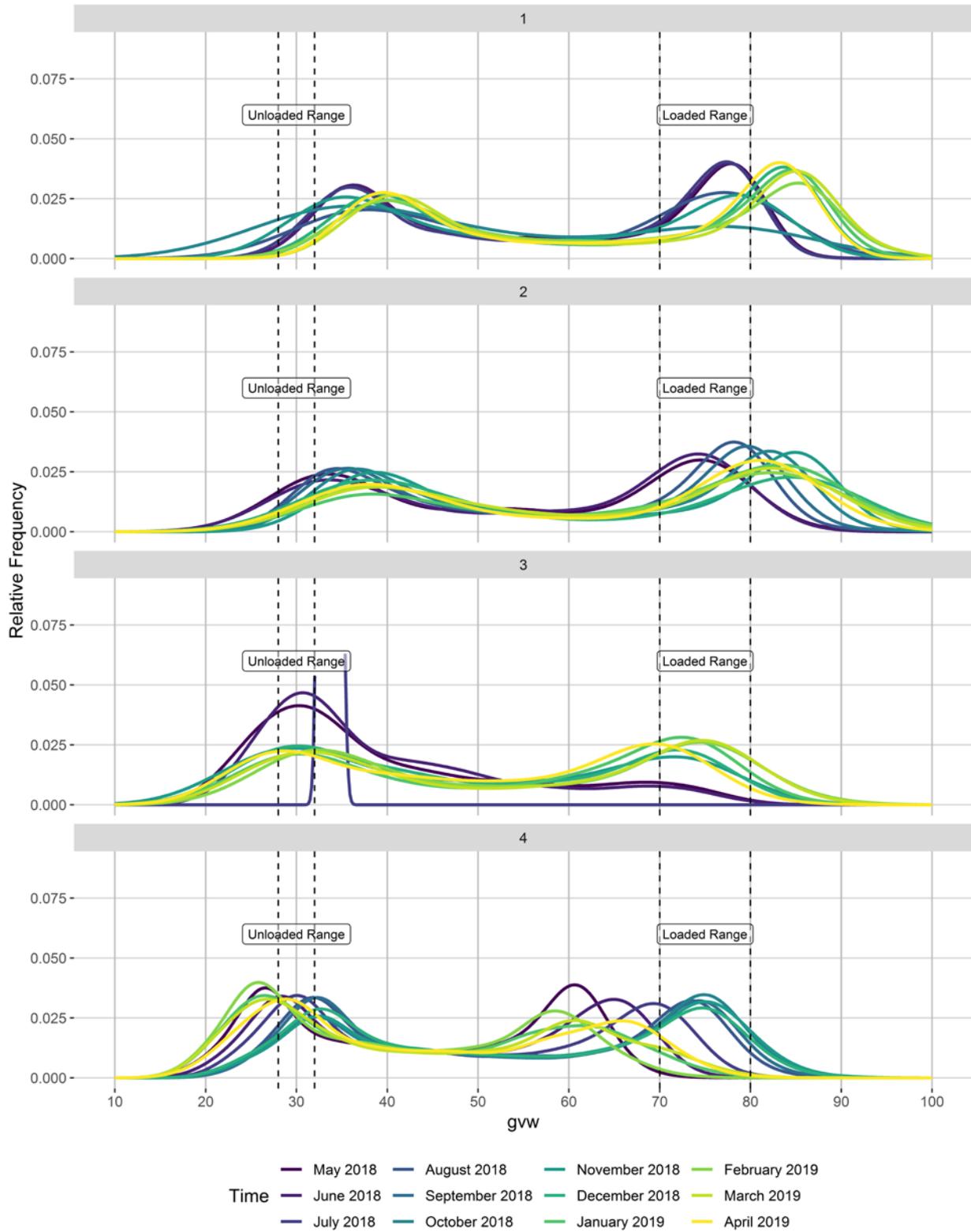
WIM monthly reports can be found at: <http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html>

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>

- <sup>1</sup> 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
- <sup>2</sup> 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.
- <sup>3</sup> 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](http://www.mrr.dot.state.mn.us/research/seasonal_load_limits/sllindex.asp)
- <sup>4</sup> 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.

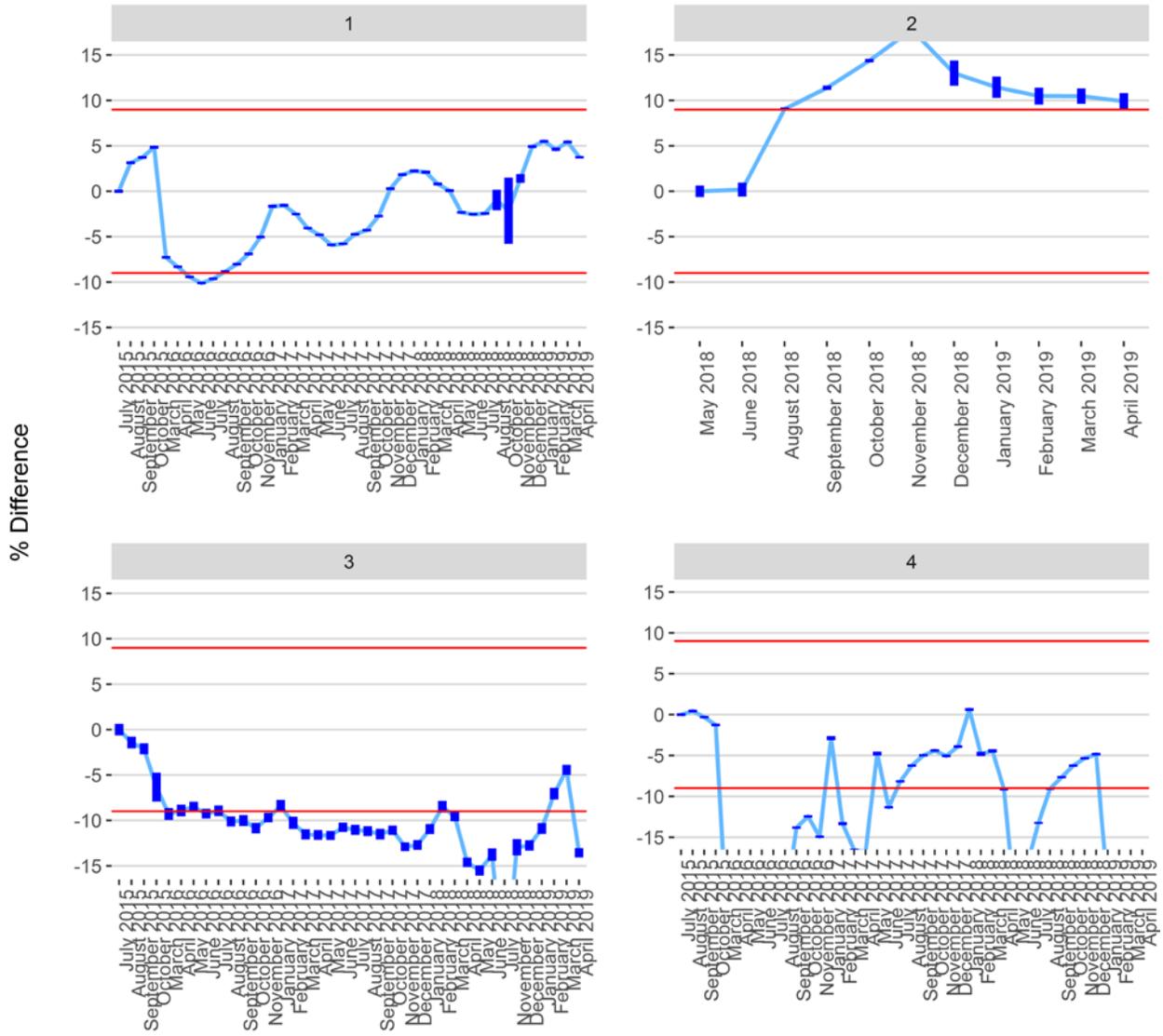
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Figure 1 - Monthly Class 9 GVW Histogram



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

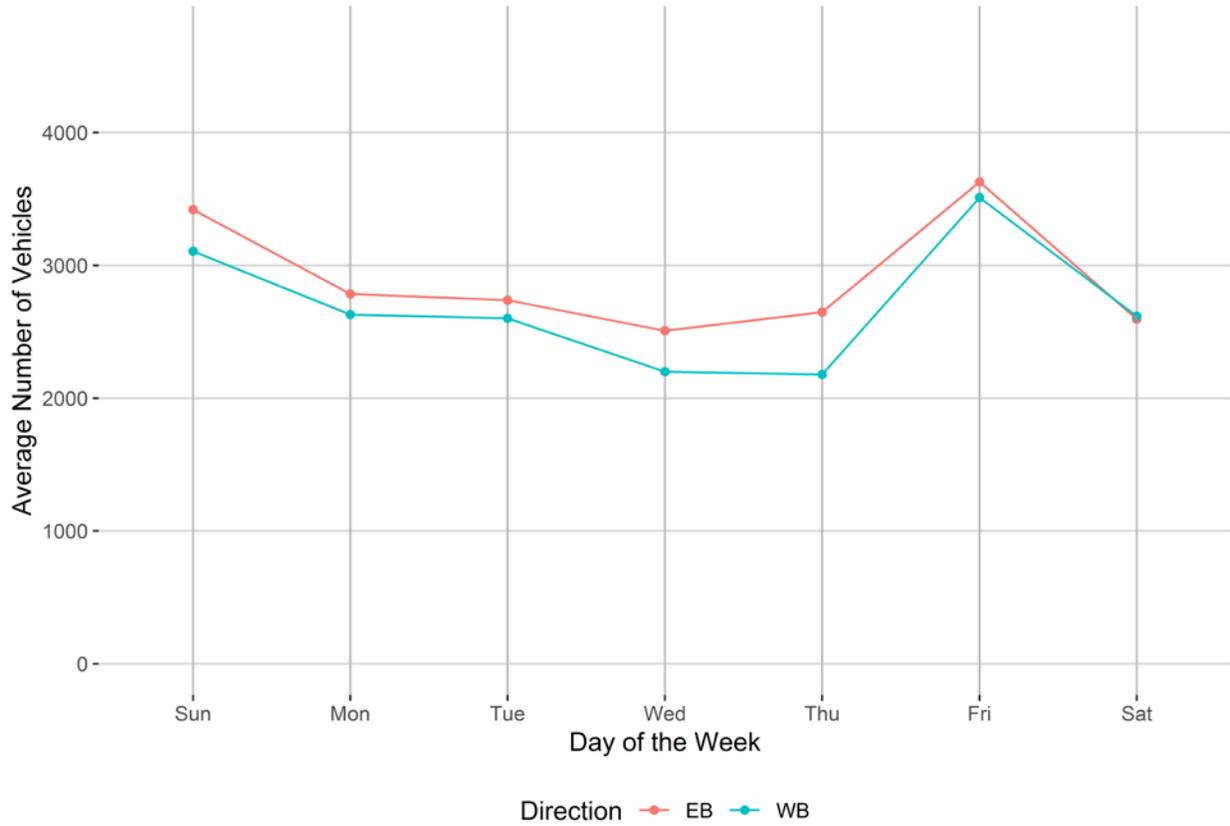


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

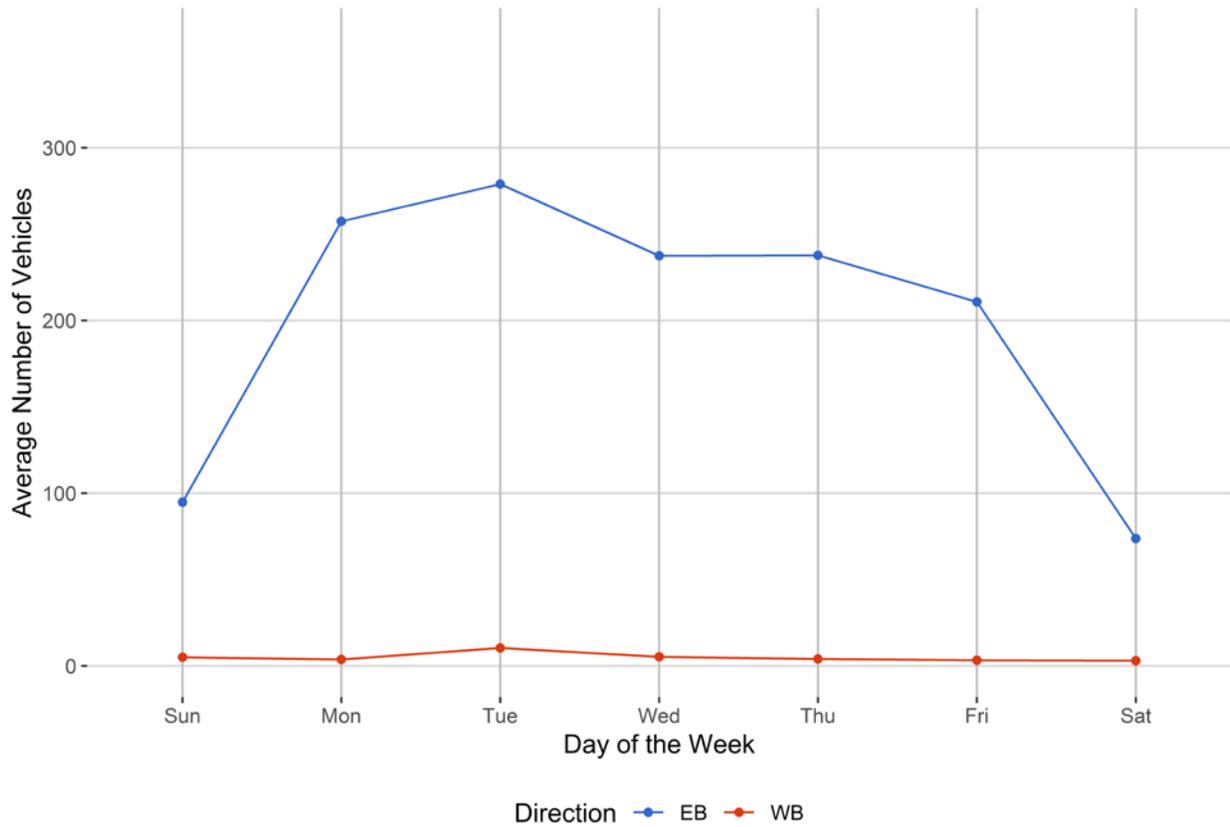


Figure 4 - Passenger Vehicles vs. Hour of the Day

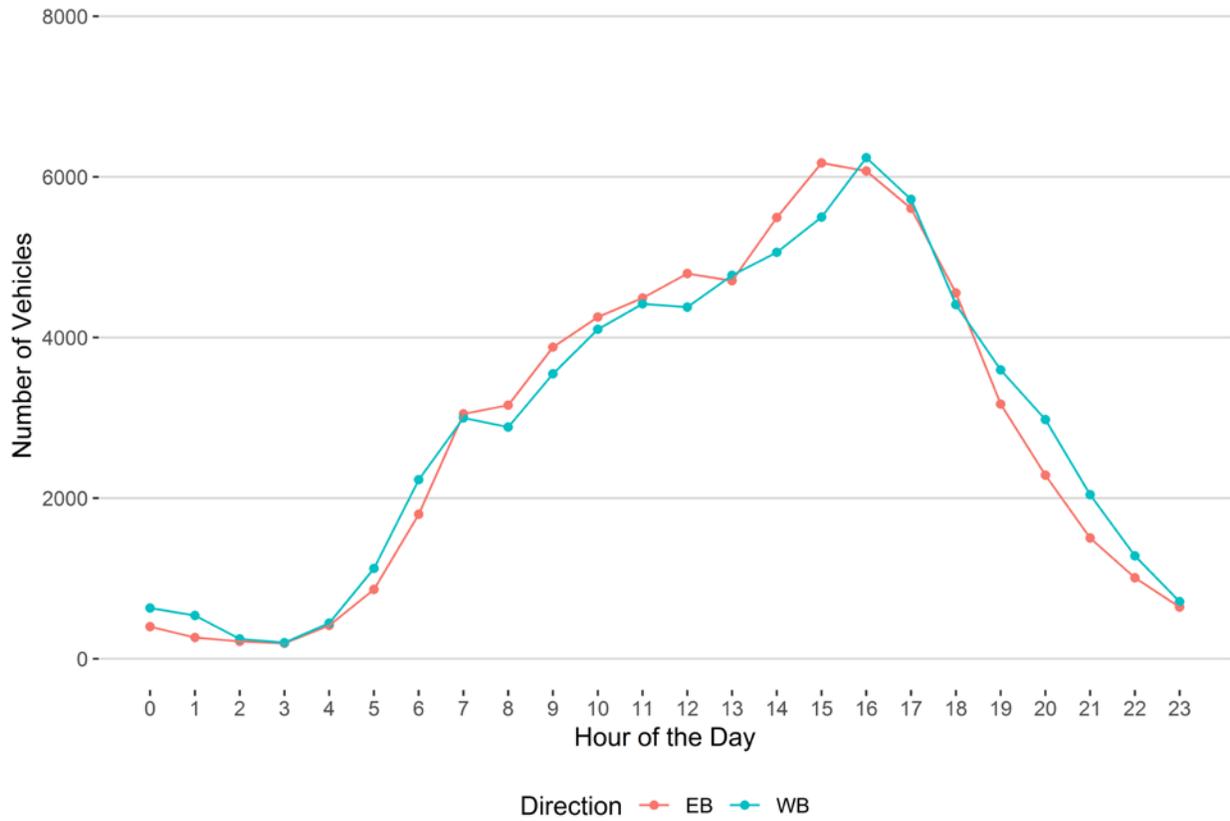


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

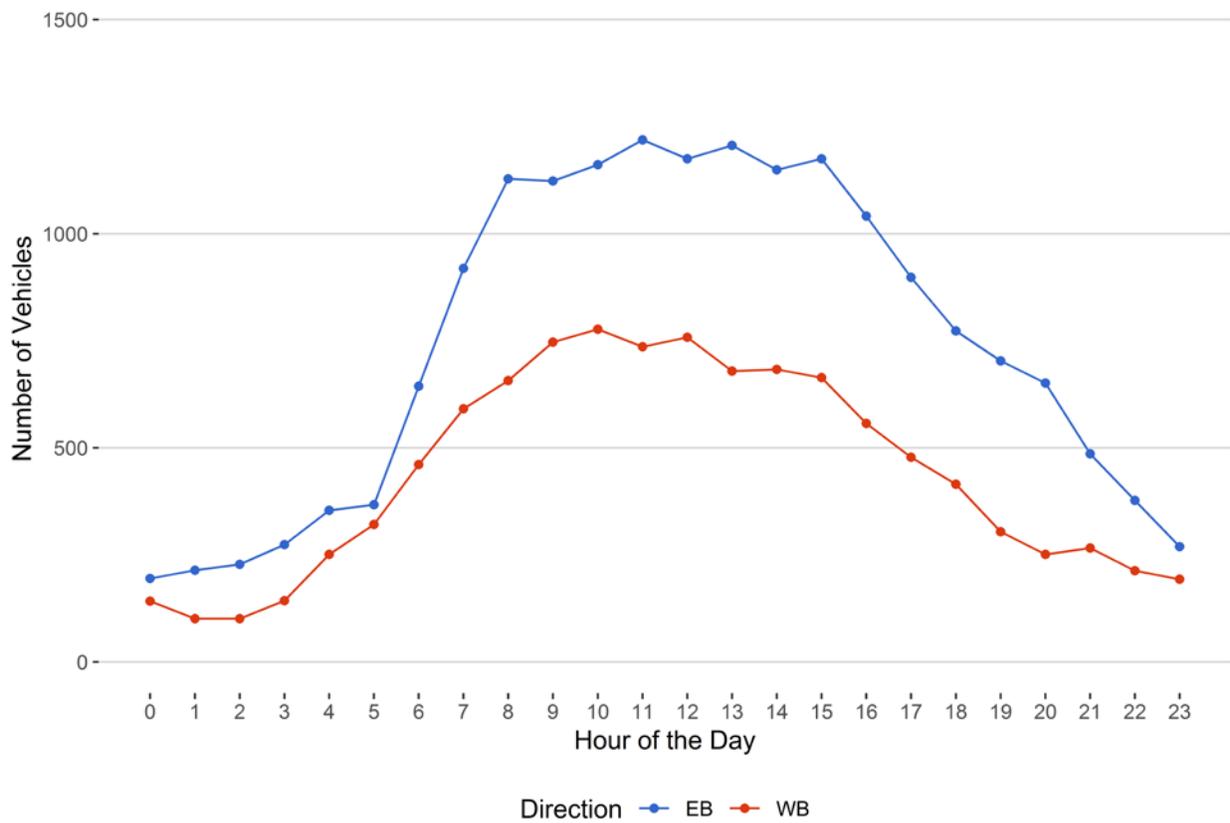


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

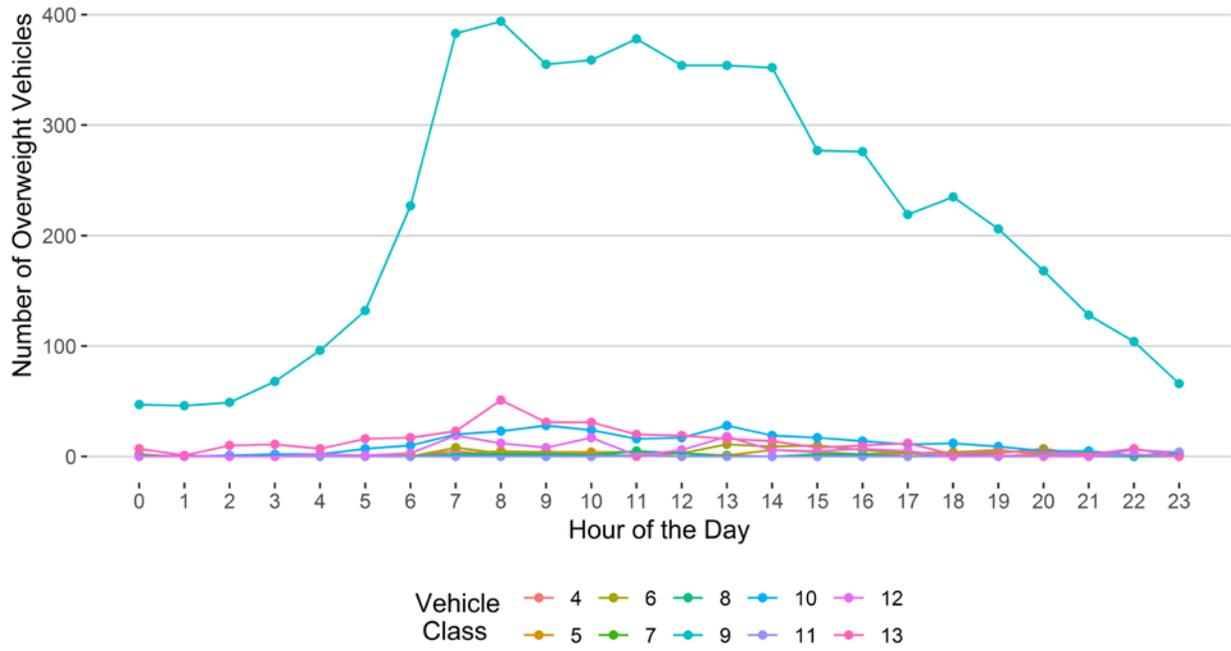


Figure 7 - Overweight Vehicles by Direction  
Hour of the Day

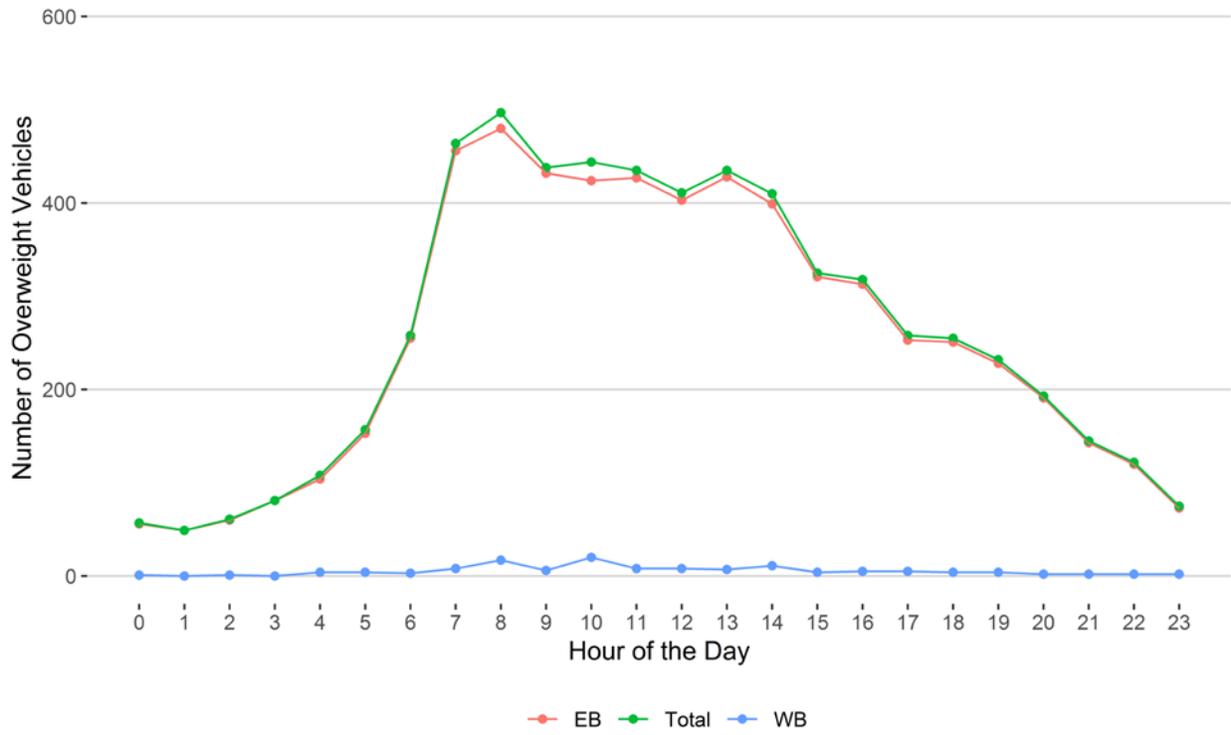
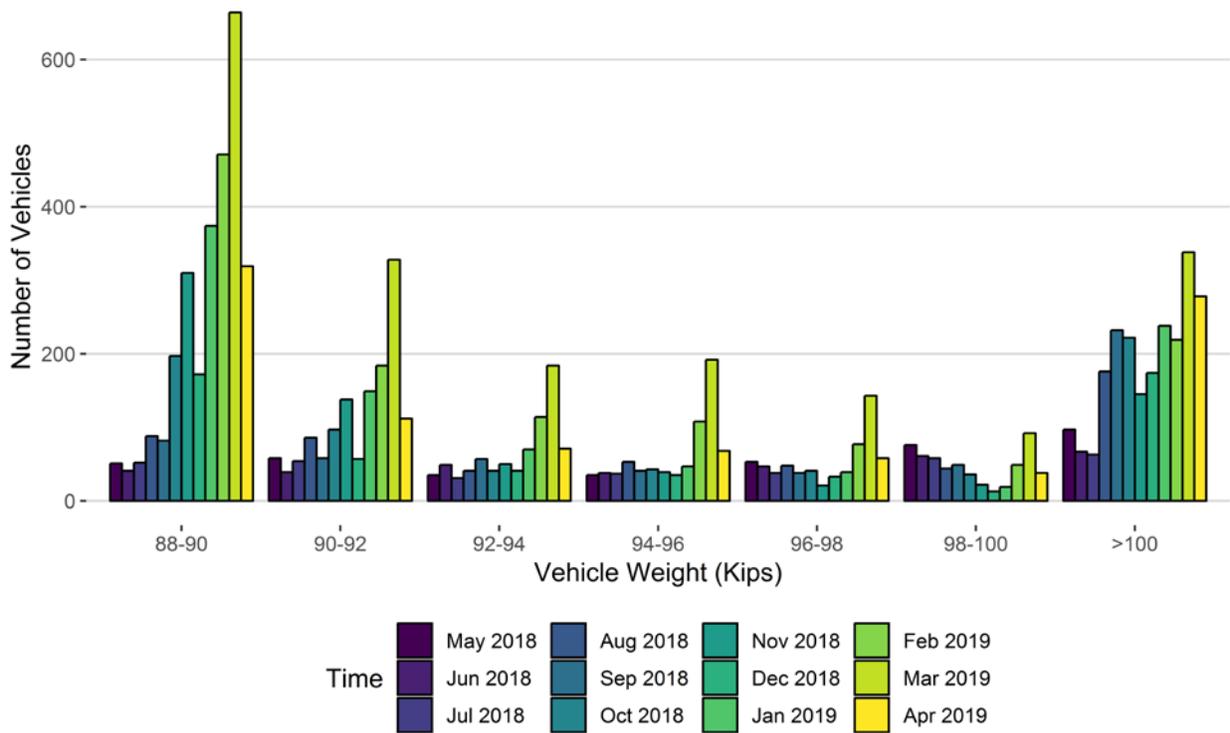
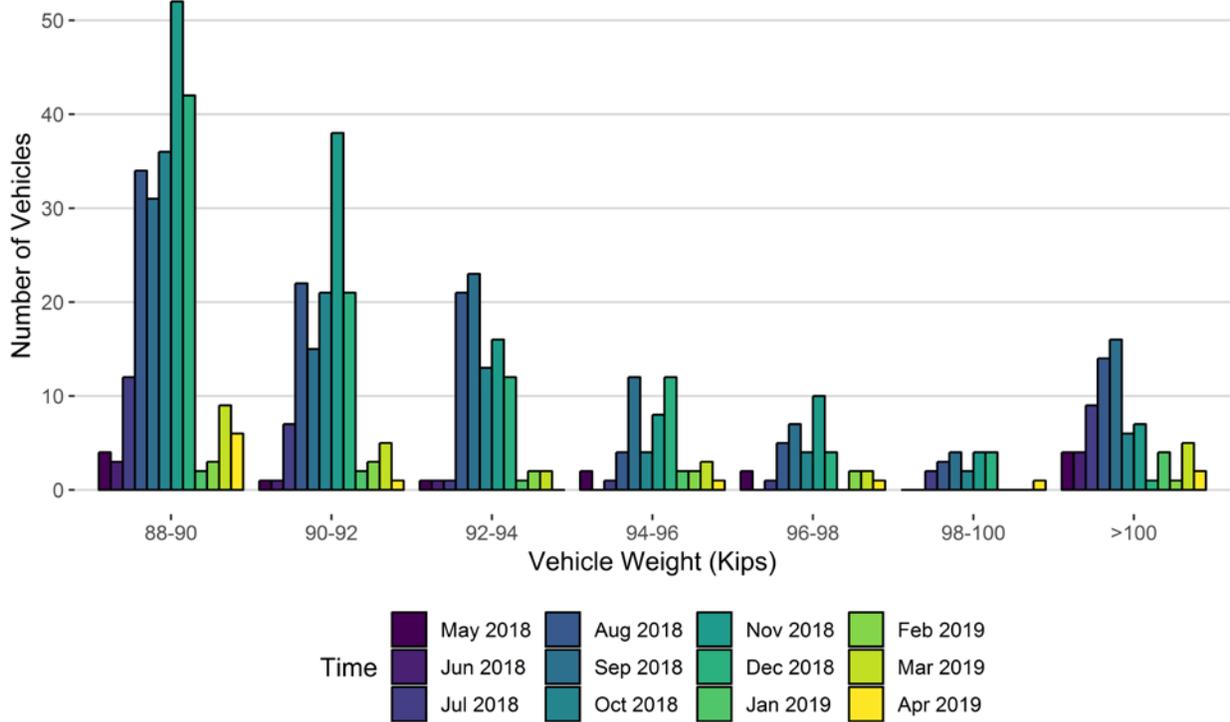


Figure 8 - Histogram of EB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019
88-90	51	41	52	88	82	197	310	172	374	471	664	319
90-92	58	39	54	86	58	97	138	57	149	184	328	112
92-94	35	49	31	41	57	41	50	41	70	114	184	71
94-96	35	38	37	53	41	43	39	35	47	108	192	68
96-98	53	47	38	48	38	41	21	33	39	77	143	58
98-100	76	61	58	44	49	36	22	13	19	49	92	38
>100	97	67	63	176	232	222	145	174	238	219	338	278
Total	405	342	333	536	557	677	725	525	936	1222	1941	944

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



Vehicle Weights (Kips)	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	Apr 2019
88-90	4	3	12	34	31	36	52	42	2	3	9	6
90-92	1	1	7	22	15	21	38	21	2	3	5	1
92-94	1	1	1	21	23	13	16	12	1	2	2	0
94-96	2	0	1	4	12	4	8	12	2	2	3	1
96-98	2	0	1	5	7	4	10	4	0	2	2	1
98-100	0	0	2	3	4	2	4	4	0	0	0	1
>100	4	4	9	14	16	6	7	1	4	1	5	2
<b>Total</b>	<b>14</b>	<b>9</b>	<b>33</b>	<b>103</b>	<b>108</b>	<b>86</b>	<b>135</b>	<b>96</b>	<b>11</b>	<b>13</b>	<b>26</b>	<b>12</b>

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

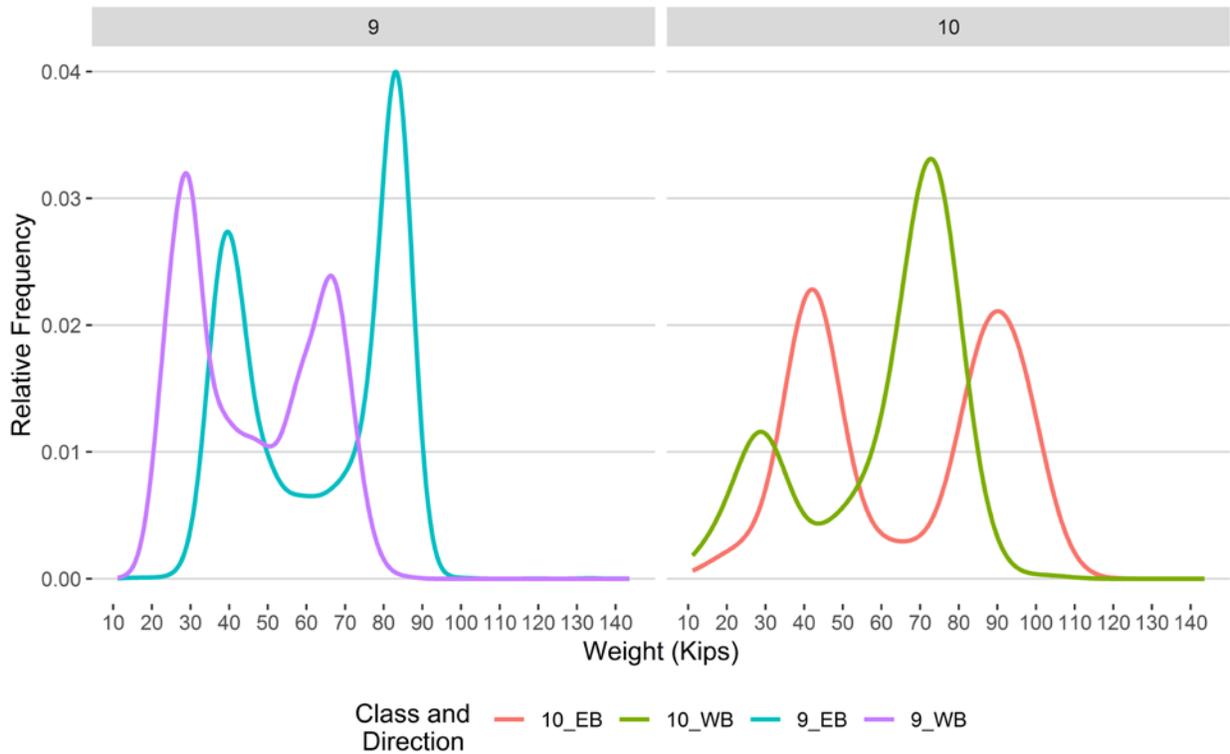


Figure 9 - Freight Percentage by Direction and Class

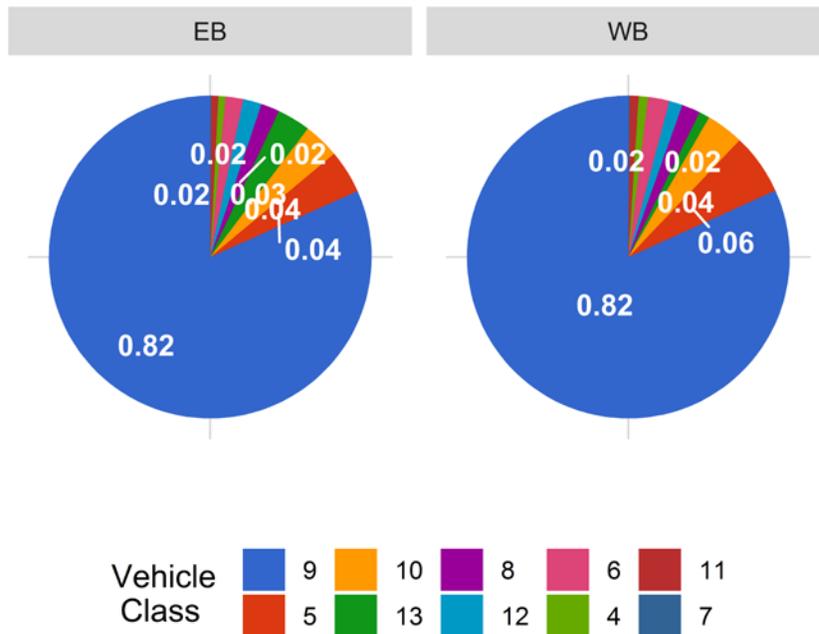


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

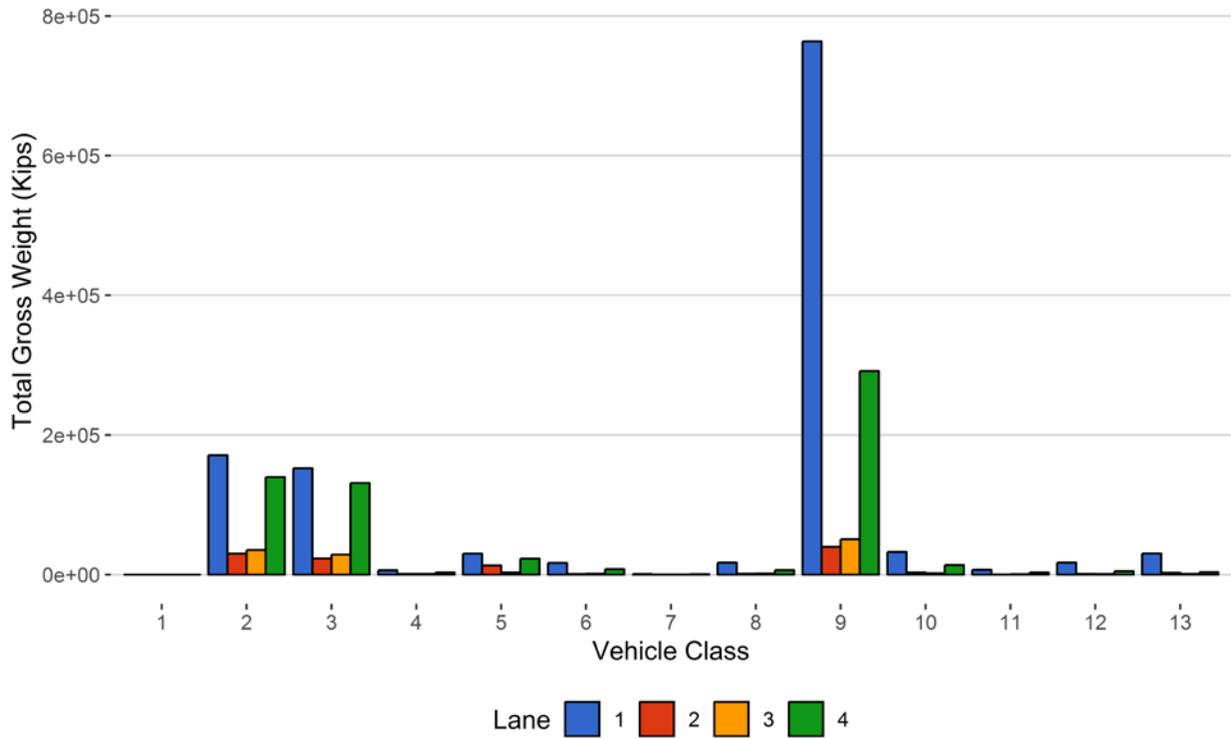


Figure 11 - Total Gross Vehicle Weight t

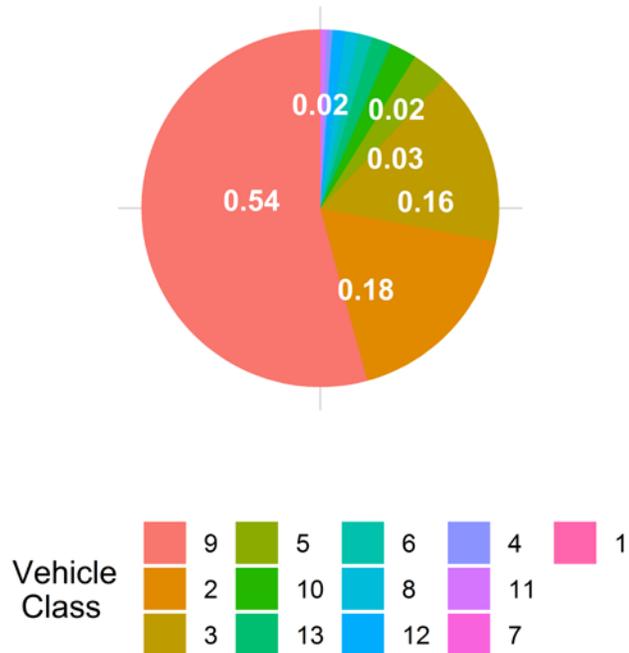


Figure 12 - Total ESALs by Class and Lane

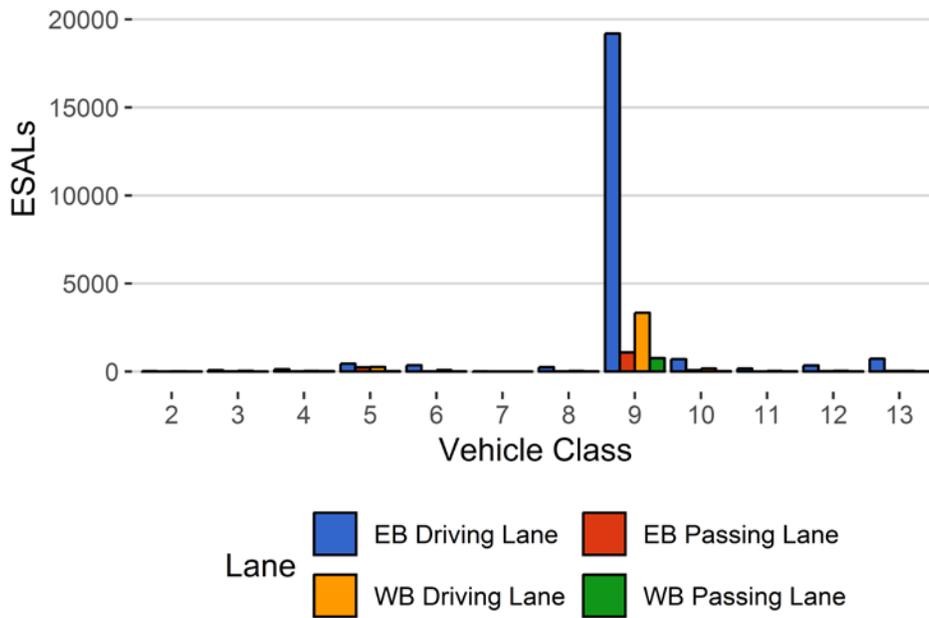
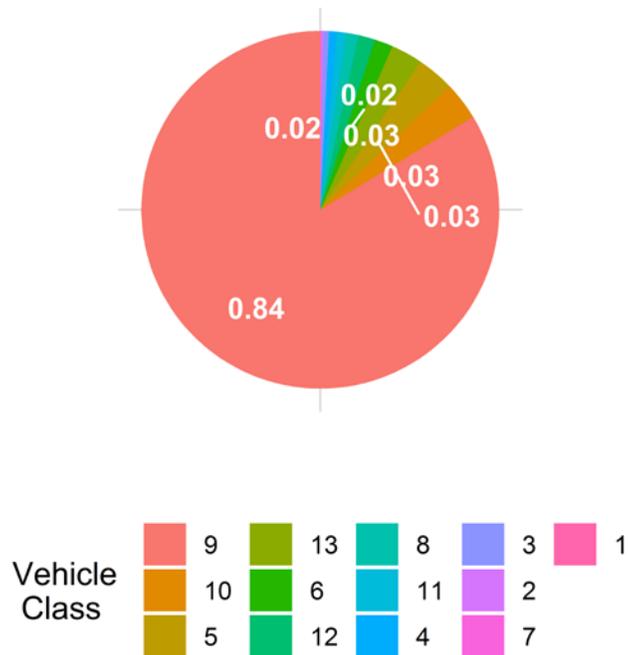


Figure 13 - ESALs by Class



**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>
July 2015	11.23	0.00	NA	NA	12.02	0.00	11.77	0.00
August 2015	11.58	3.14	NA	NA	11.85	-1.42	11.83	0.45
September 2015	11.64	3.73	NA	NA	11.77	-2.12	11.74	-0.31
October 2015	11.77	4.84	NA	NA	11.26	-6.34	11.63	-1.26
March 2016	10.41	-7.28	NA	NA	10.90	-9.29	8.69	-26.23
April 2016	10.29	-8.32	NA	NA	10.95	-8.90	8.97	-23.79
May 2016	10.17	-9.43	NA	NA	11.00	-8.51	8.92	-24.24
June 2016	10.09	-10.11	NA	NA	10.91	-9.26	8.54	-27.43
July 2016	10.14	-9.64	NA	NA	10.95	-8.93	8.69	-26.23
August 2016	10.23	-8.84	NA	NA	10.81	-10.12	9.00	-23.54
September 2016	10.33	-8.02	NA	NA	10.82	-10.01	10.15	-13.83
October 2016	10.45	-6.90	NA	NA	10.72	-10.86	10.31	-12.44
November 2016	10.66	-5.04	NA	NA	10.86	-9.69	10.02	-14.93
January 2017	11.04	-1.66	NA	NA	11.01	-8.41	11.44	-2.87
February 2017	11.05	-1.55	NA	NA	10.79	-10.28	10.20	-13.33
March 2017	10.94	-2.52	NA	NA	10.63	-11.54	9.82	-16.56
April 2017	10.77	-4.06	NA	NA	10.63	-11.60	9.80	-16.77
May 2017	10.69	-4.81	NA	NA	10.62	-11.66	11.21	-4.76
June 2017	10.56	-5.91	NA	NA	10.73	-10.76	10.44	-11.33
July 2017	10.58	-5.78	NA	NA	10.69	-11.05	10.81	-8.17
August 2017	10.69	-4.74	NA	NA	10.68	-11.18	11.04	-6.24
September 2017	10.75	-4.28	NA	NA	10.64	-11.51	11.19	-4.99
October 2017	10.92	-2.73	NA	NA	10.69	-11.08	11.26	-4.39
November 2017	11.26	0.29	NA	NA	10.47	-12.89	11.18	-5.06
December 2017	11.43	1.83	NA	NA	10.49	-12.71	11.31	-3.91
January	11.48	2.24	NA	NA	10.70	-10.96	11.85	0.62

2018								
February 2018	11.46	2.10	NA	NA	11.00	-8.49	11.21	-4.81
March 2018	11.32	0.80	NA	NA	10.87	-9.56	11.25	-4.44
April 2018	11.23	0.07	NA	NA	10.26	-14.62	10.71	-9.08
May 2018	10.97	-2.33	10.73	0.00	10.16	-15.52	8.99	-23.61
June 2018	10.94	-2.54	10.75	0.18	10.37	-13.77	9.61	-18.39
July 2018	10.95	-2.45	NA	NA	8.76	-27.15	10.21	-13.25
August 2018	11.12	-0.96	11.70	9.05	NA	NA	10.71	-9.07
October 2018	10.99	-2.14	12.27	14.38	NA	NA	11.04	-6.24
November 2018	11.38	1.41	12.64	17.79	10.47	-12.95	11.15	-5.34
December 2018	11.78	4.92	12.12	13.00	10.49	-12.76	11.21	-4.83
January 2019	11.84	5.50	11.96	11.45	10.71	-10.89	9.24	-21.53
February 2019	11.75	4.62	11.85	10.48	11.17	-7.06	8.89	-24.48
March 2019	11.84	5.42	11.85	10.47	11.49	-4.43	9.54	-18.98
April 2019	11.65	3.74	11.79	9.92	10.39	-13.57	9.73	-17.34

**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	1	17	0	0	0
2	3166	94966	52.5	0	0
3	1852	55553	30.7	0	0
4	14	418	0.2	28	0.5
5	155	4656	2.6	57	0.9
6	32	945	0.5	82	1.3
7	1	38	0	4	0.1
8	29	862	0.5	21	0.3
9	723	21680	12	5273	85.2
10	29	860	0.5	275	4.4
11	7	205	0.1	14	0.2
12	12	370	0.2	113	1.8
13	15	455	0.3	324	5.2
<b>TOTAL</b>	<b>6034</b>	<b>181026</b>	<b>100</b>	<b>6191</b>	<b>100</b>

**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>
2019-04-26	Friday	09:20:29	9	EB	2	143.6
2019-04-28	Sunday	13:52:17	9	EB	2	133.84
2019-04-27	Saturday	18:02:02	9	EB	2	133.2
2019-04-25	Thursday	20:17:01	9	EB	2	132.71
2019-04-25	Thursday	21:53:25	9	EB	2	119.37
2019-04-26	Friday	23:38:31	10	EB	1	107.02
2019-04-30	Tuesday	08:12:05	10	EB	1	105.39
2019-04-01	Monday	19:41:57	10	EB	1	104.42
2019-04-02	Tuesday	14:05:17	10	EB	1	104
2019-04-02	Tuesday	07:28:04	10	EB	1	103.24

**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	237	27	11.4	6667	357	1759
5	EB	8	2517	83	3.3	42304	607	11416
6	EB	19	527	11	2.1	17262	177	3729
7	EB	11.5	22	0	0	992	0	370
8	EB	31	512	118	23	15797	2521	1792
9	EB	33	12649	233	1.8	796622	7045	193447
10	EB	33.5	535	22	4.1	34934	511	8874
11	EB	36.5	120	3	2.5	6874	84	1302
12	EB	36.5	249	1	0.4	18182	33	4565
13	EB	31.5	361	58	16.1	31670	1040	11063
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>17729</b>	<b>556</b>	<b>****</b>	<b>971306</b>	<b>****</b>	<b>238316</b>
<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	150	27	18	3587	339	871
5	WB	8	1792	263	14.7	23770	1889	5769
6	WB	19	348	144	41.4	6568	2372	1346
7	WB	11.5	13	0	0	605	0	228
8	WB	31	286	205	71.7	2877	4911	183
9	WB	33	7416	2623	35.4	270751	71433	56291
10	WB	33.5	261	54	20.7	14306	1427	3686
11	WB	36.5	70	3	4.3	3588	87	571
12	WB	36.5	93	2	2.2	5491	70	1085
13	WB	31.5	60	1	1.7	4424	28	1283
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>10489</b>	<b>3322</b>	<b>****</b>	<b>335966</b>	<b>****</b>	<b>71312</b>
<b>GRAND TOTAL</b>	<b>****</b>	<b>****</b>	<b>28218</b>	<b>3878</b>	<b>275</b>	<b>1307273</b>	<b>94932</b>	<b>309628</b>

**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	10	0	1	10	22	0
2	171049	29912	34984	139682	375627	17.8
3	152209	22973	28621	131210	335012	15.9
4	6112	912	1006	2920	10949	0.5
5	29830	13082	2944	22715	68571	3.2
6	16693	747	1286	7654	26380	1.2
7	822	170	109	496	1597	0.1
8	17025	1293	1443	6344	26106	1.2
9	763833	39835	50630	291554	1145852	54.2
10	32398	3047	1933	13800	51178	2.4
11	6765	193	658	3017	10633	0.5
12	17121	1094	834	4727	23776	1.1
13	30177	2533	1068	3384	37162	1.8
<b>TOTAL</b>	<b>1244045</b>	<b>115790</b>	<b>125518</b>	<b>627513</b>	<b>2112866</b>	<b>100</b>
<b>GVW/LANE</b>	<b>58.88</b>	<b>5.48</b>	<b>5.94</b>	<b>29.7</b>	<b>100</b>	<b>0</b>

**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	0.0588
2	26	5	4	17	52	0.18	0.0012
3	76	12	10	44	143	0.49	0.0056
4	135	17	22	34	208	0.71	1.08
5	447	248	30	268	993	3.41	0.46
6	358	20	18	92	488	1.67	1.12
7	20	5	2	6	33	0.11	1.76
8	254	17	12	40	322	1.11	0.81
9	19193	1095	770	3338	24396	83.7	2.44
10	716	79	28	180	1002	3.44	2.5
11	182	6	14	42	244	0.84	2.48
12	354	22	16	46	438	1.5	2.51
13	736	40	16	36	829	2.84	3.86
<b>TOTAL</b>	<b>22498</b>	<b>1566</b>	<b>941</b>	<b>4144</b>	<b>29148</b>	<b>100</b>	<b>19</b>
<b>ESALS/LANE</b>	<b>77.2</b>	<b>5.4</b>	<b>3.2</b>	<b>14.2</b>	<b>100</b>	<b>-</b>	<b>-</b>

**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>
May 2018	207718	6701	1087	174027	83.8	33690.6	16.2	91.7	8.3
Jun 2018	213966	7132	1169	178902	83.6	35064.1	16.4	93.5	6.5
Jul 2018	224589	7245	1193	187591	83.5	36998	16.5	99.8	0.2
Aug 2018	220967	7128	1271	181570	82.2	39396.8	17.8	50.3	49.7
Sep 2018	182915	6097	1161	148079	81	34835.9	19	45.5	54.5
Oct 2018	187358	6044	1146	151826	81	35532	19	49.1	50.9
Nov 2018	178317	5944	956	149623	83.9	28694.4	16.1	65.1	34.9
Dec 2018	167266	5396	909	139093	83.2	28172.8	16.8	91.7	8.3
Jan 2019	144335	4656	951	114866	79.6	29469	20.4	93.7	6.3
Feb 2019	129514	4626	925	103624	80	25889.8	20	92.1	7.9
Mar 2019	167692	5409	991	136965	81.7	30726.7	18.3	91.4	8.6
Apr 2019	181026	6034	1016	150536	83.2	30489.7	16.8	89.4	10.6
<b>TOTAL</b>	<b>2205663</b>	<b>-</b>	<b>-</b>	<b>1816702</b>	<b>-</b>	<b>388960</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>AVERAGE</b>	<b>183805</b>	<b>6034</b>	<b>1065</b>	<b>151392</b>	<b>82</b>	<b>32413</b>	<b>18</b>	<b>79</b>	<b>21</b>

## 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>
May 2018	16376	979	1737	4705	23796	89	11	2.1
Jun 2018	14800	727	1342	6525	23394	91	9	1.9
Jul 2018	16921	0	9	10572	27502	100	0	1.7
Aug 2018	251	26582	0	14273	41106	35	65	11
Sep 2018	0	211935	0	12648	224583	6	94	15.3
Oct 2018	64	63810	1	14608	78483	19	81	9.9
Nov 2018	2583	1168550	295	13398	1184826	1	99	14.7
Dec 2018	15873	578548	780	11257	606458	4	96	4.7
Jan 2019	19913	106314	845	4721	131793	19	81	6.3
Feb 2019	17996	30201	939	2581	51717	40	60	25.5
Mar 2019	24521	14098	1197	4598	44414	66	34	29.8
Apr 2019	22506	9489	954	4149	37098	72	28	10.2
<b>TOTAL</b>	<b>151805</b>	<b>2211233</b>	<b>8099</b>	<b>104034</b>	<b>2475170</b>	-	-	-
<b>AVERAGE</b>	<b>12650</b>	<b>184269</b>	<b>675</b>	<b>8670</b>	<b>206264</b>	<b>45</b>	<b>55</b>	<b>11</b>

## 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>
May 18	1202778	121874	163857	794674	2283183
Jun 18	1116868	95255	124481	879493	2216097
Jul 18	1338183	368	2272	1217015	2557839
Aug 18	16791	1381273	24	1330177	2728265
Sep 18	44	1368941	18	1126942	2495945
Oct 18	5928	1219407	64	1155637	2381036
Nov 18	213558	895490	45406	1067537	2221991
Dec 18	936084	155229	108977	929969	2130259
Jan 19	1044413	70226	87357	662346	1864342
Feb 19	928605	63483	81834	471789	1545712
Mar 19	1216422	96811	120190	656042	2089466
Apr 19	1244314	120017	125942	627946	2118218
<b>TOTAL</b>	<b>9263988</b>	<b>5588373</b>	<b>860423</b>	<b>10919567</b>	<b>26632352</b>
<b>AVERAGE</b>	<b>771999</b>	<b>465698</b>	<b>71702</b>	<b>909964</b>	<b>2219363</b>

## 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>
May 2018	3103	1.6	9.4	424	177
Jun 2018	2700	1.4	8.6	357	132
Jul 2018	3120	1.5	8.8	367	132
Aug 2018	4961	2.4	13.2	830	388
Sep 2018	6349	3.6	17.7	1374	825
Oct 2018	6442	3.8	19.6	918	383
Nov 2018	7311	4.6	23.9	2103	1234
Dec 2018	6426	4.1	22.5	1191	706
Jan 2019	5368	4.1	19.6	1056	357
Feb 2019	4531	4.1	20	1266	297
Mar 2019	6744	4.4	23.7	1982	448
Apr 2019	6228	3.7	22	982	341
<b>TOTAL</b>	<b>63283</b>	<b>-</b>	<b>-</b>	<b>12850</b>	<b>5420</b>
<b>AVERAGE</b>	<b>5273.6</b>	<b>3.3</b>	<b>17.4</b>	<b>1070.8</b>	<b>451.7</b>

## 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>
May 2018	196583	85794	282376	69.6	30.4
Jun 2018	177370	102298	279667	63.4	36.6
Jul 2018	193176	140629	333805	57.9	42.1
Aug 2018	207876	169241	377118	55.1	44.9
Sep 2018	207918	146232	354150	58.7	41.3
Oct 2018	195900	165435	361335	54.2	45.8
Nov 2018	148576	155750	304326	48.8	51.2
Dec 2018	160150	138035	298185	53.7	46.3
Jan 2019	197061	80711	277772	70.9	29.1
Feb 2019	176154	53112	229266	76.8	23.2
Mar 2019	238787	79915	318703	74.9	25.1
Apr 2019	238316	71312	309628	77	23
<b>TOTAL</b>	<b>2337868</b>	<b>1388463</b>	<b>3726331</b>	-	-
<b>AVERAGE</b>	<b>194822.3</b>	<b>115705.3</b>	<b>310527.6</b>	<b>63.4</b>	<b>36.6</b>