

DECEMBER 2018



**WIM #42  
US 61,  
MP 119.6  
COTTAGE  
GROVE,  
MINNESOTA**

**MONTHLY  
REPORT**



*Your Destination...Our Priority*



## WIM Site Location

WIM #42 is located on US 61 near Cottage Grove in Washington county.

## System Operation

WIM #42 was operational for the entire month of December 2018. Volume was computed using all monthly data.

## System Calibration

WIM #42 was most recently calibrated on 2016-08-04. Table 1 summarizes the front axle weights of class 9s by lane <sup>1</sup>. Table 1 indicates that the class 9 front axle weights were all within +/- 9% of baseline calibration values for all lanes except lane 2. 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: 921951 | Passenger Vehicles: 884226 | Heavy Commercial Vehicles: 37725

Monthly Average Daily Traffic (MADT): 30732 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 1217

See Table 2 for vehicle class breakdown

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

**Volume trends.** NB vehicles typically reached highest volume levels on Fridays, with lowest volumes reported on Sundays. SB 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), NB PVs generally reached peak volume levels between 03 PM and 05 PM. Similarly, SB PVs peaked in volume between 03 PM and 05 PM

### Heavy Commercial Vehicles (HCVs)

**Volume trends.** On an average 24-hour day, HCVs traveling NB typically reached peak volume levels between 03 PM and 05 PM, while volume going SB 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 37725 HCVs, 2590 of them were overweight<sup>3</sup>. These overweight HCVs contributed to 0.3% of total monthly volume, and 7% of total monthly HCV volume. NB overweight vehicles typically reached highest numbers on Thursdays, with lowest volumes reported on Sundays. SB overweight vehicles tended to reach highest volumes on Mondays, with lowest volumes reported on Saturdays. See Figure 3 .

The top two overweight violators by class were the class 9 and class 6 vehicles . Overall, overweight vehicles tended to reach peak volume concentrations during typical business hours, with 61.9% of all overweight vehicles traveling SB 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 July.

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 ,68 NB vehicles exceeded 88,000 pounds (42 vehicles were Class 10's; 16 vehicles were Class 9's). Of vehicles traveling SB,

76 NB vehicles exceeded 88,000 pounds (28 vehicles were Class 13's; 27 vehicles were Class 9's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from December 2018.

**Loaded vs. Unloaded HCVs.** Figure 10 shows the GVW distributions of Class 9s and 10s in December 2018. Data suggests that there were greater numbers of fully\_loaded Class 9's than empty Class 9's traveling NB, while there were more fully\_loaded Class 9's than empty traveling SB. Data also suggests that there were more fully\_loaded Class 10's than empty traveling in the NB direction. In the SB direction, there were more fully\_loaded class 10 vehicles.

**Freight Totals.** A total of 237729 tons of freight was recorded to have crossed the WIM. More freight was shipped NB (52.8%) than SB (47.2%). See Table 4 and Figure 11 for more freight information.

## Infrastructure Considerations

**Bridge.** Bridge No. 5895 (Hastings Bridge) is approximately 1.9 miles south of WIM #42, and Bridge No. 82J16 is 1.0 miles north of WIM #42. WIM #42 recorded a total of 921951 vehicles with a combined GVW of 5018252 kips (1 kip = 1,000 pounds = 0.5 tons) in December 2018. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

**Pavement Design.** A total of 20190 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 51.6% of all ESALs were recorded NB while 48.4% was observed SB. In particular, 63% of all ESALs were generated by the Class 9's (Class 9's were also responsible for generating 15% 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).

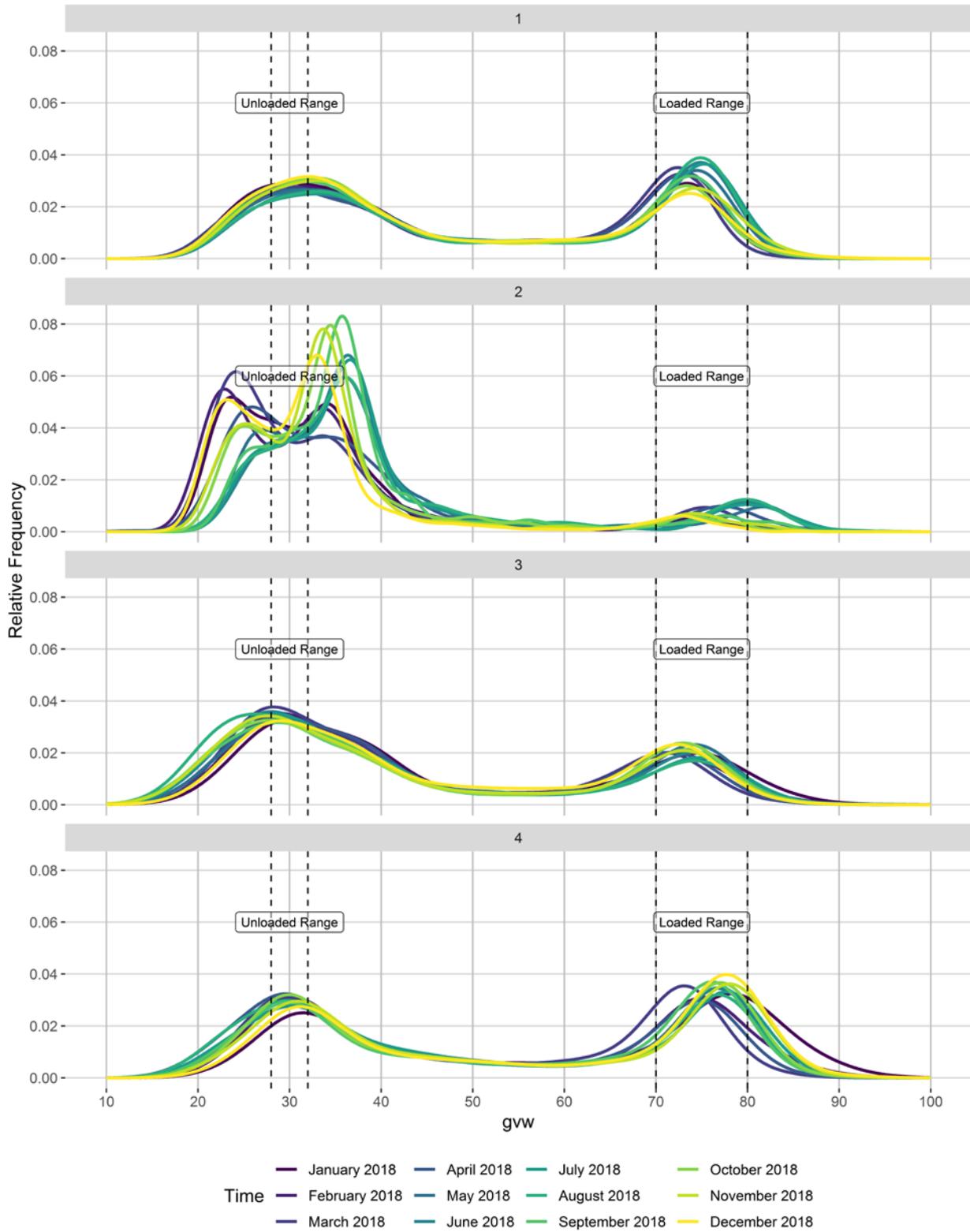
*WIM monthly reports can be found at: <http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html>*

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.

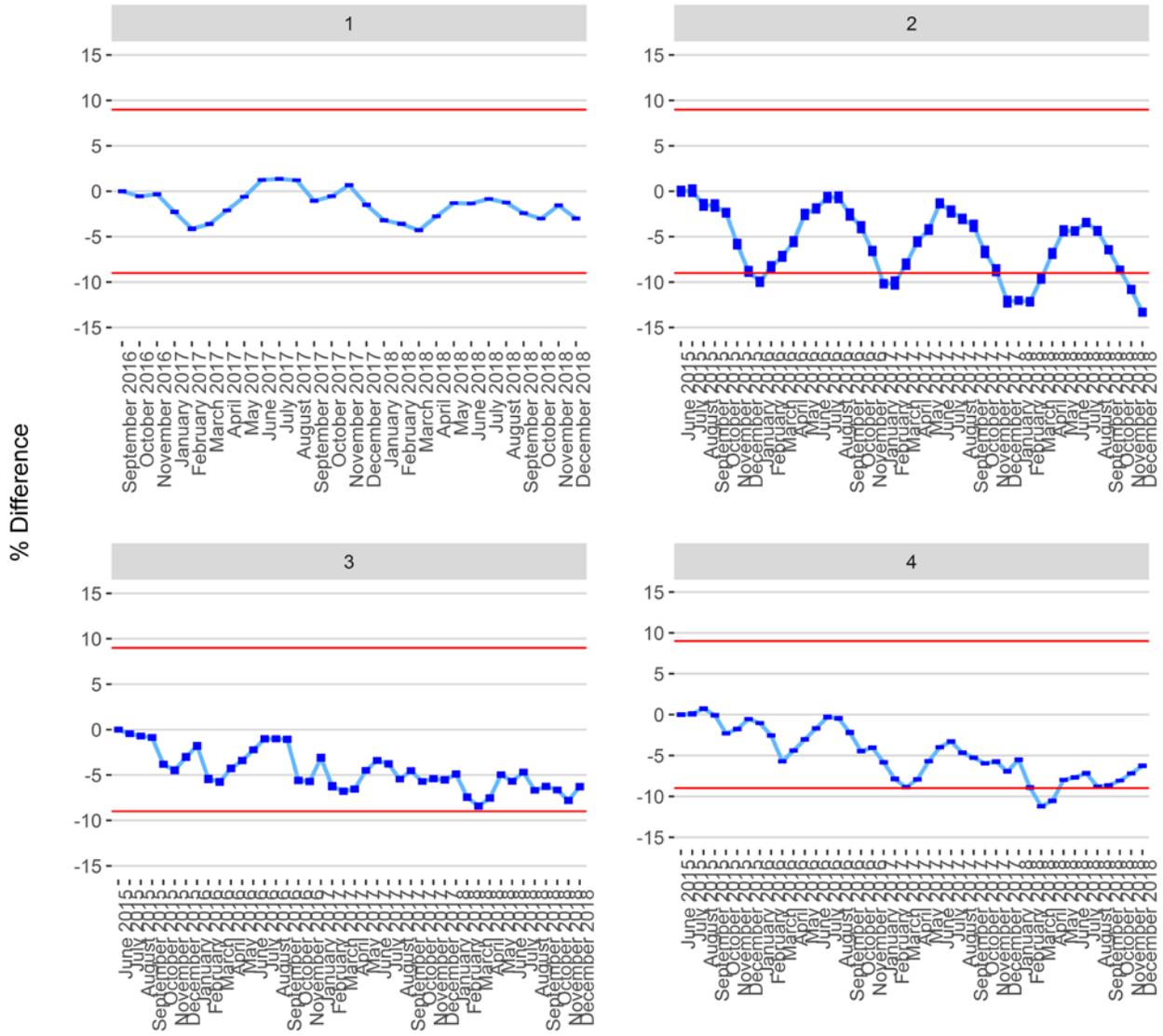
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Figure 1 - Monthly Class 9 GVW Histogram



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

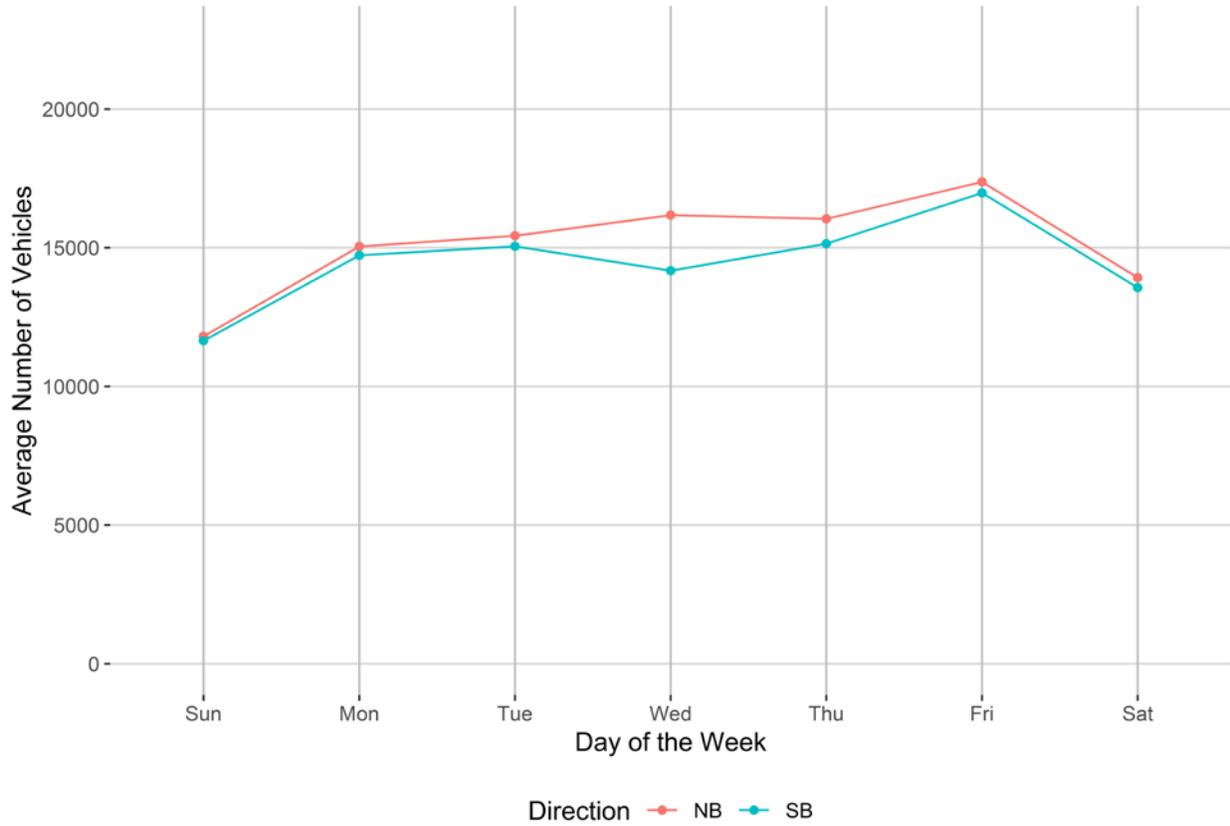


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

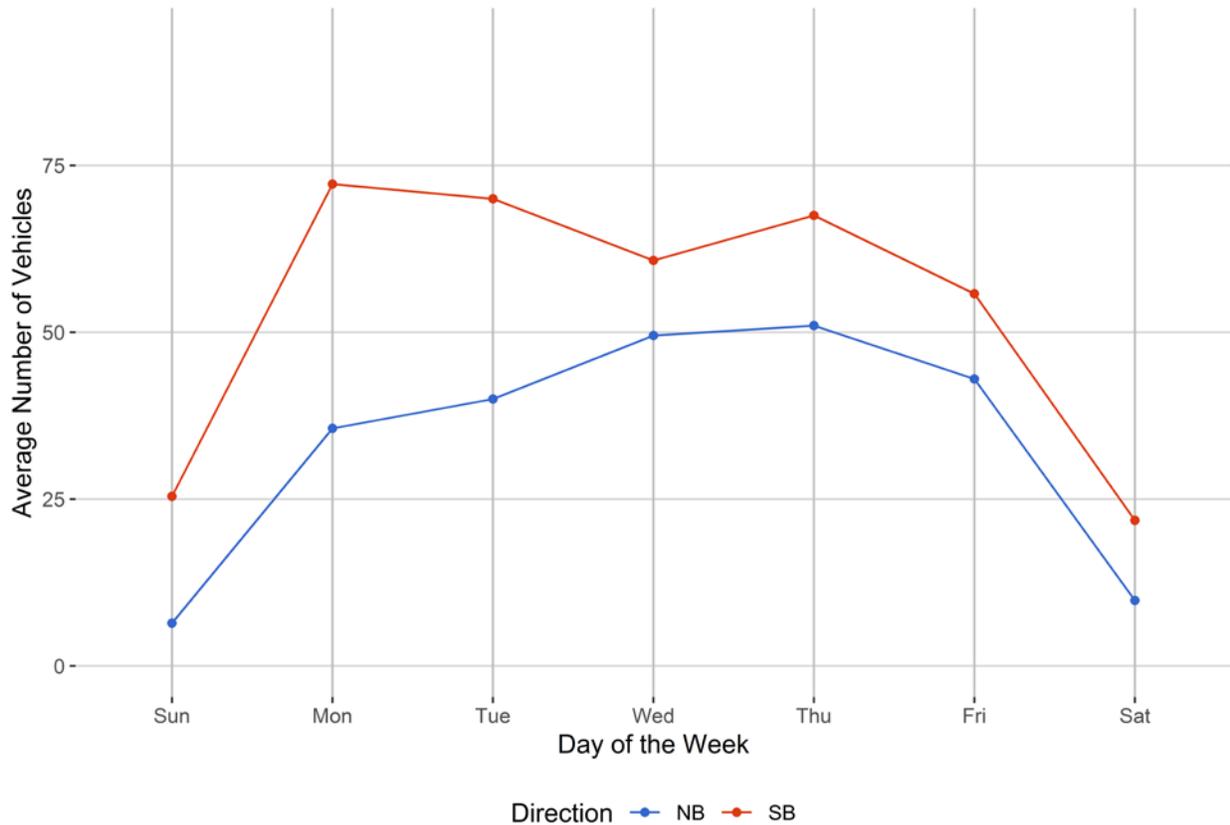


Figure 4 - Passenger Vehicles vs. Hour of the Day

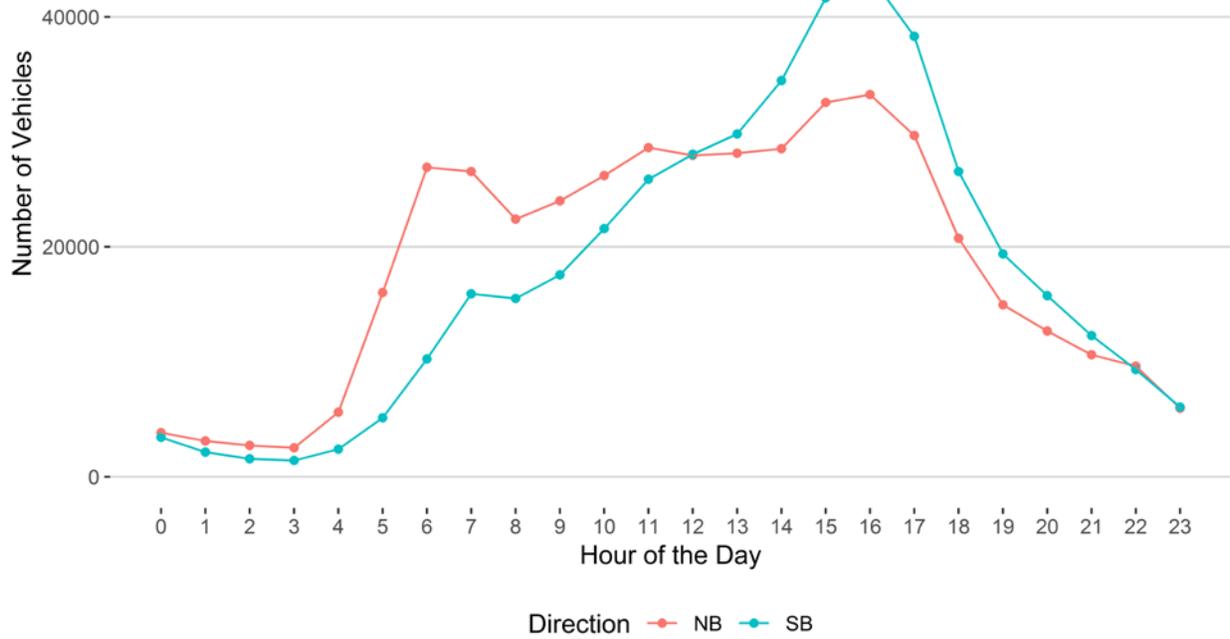


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

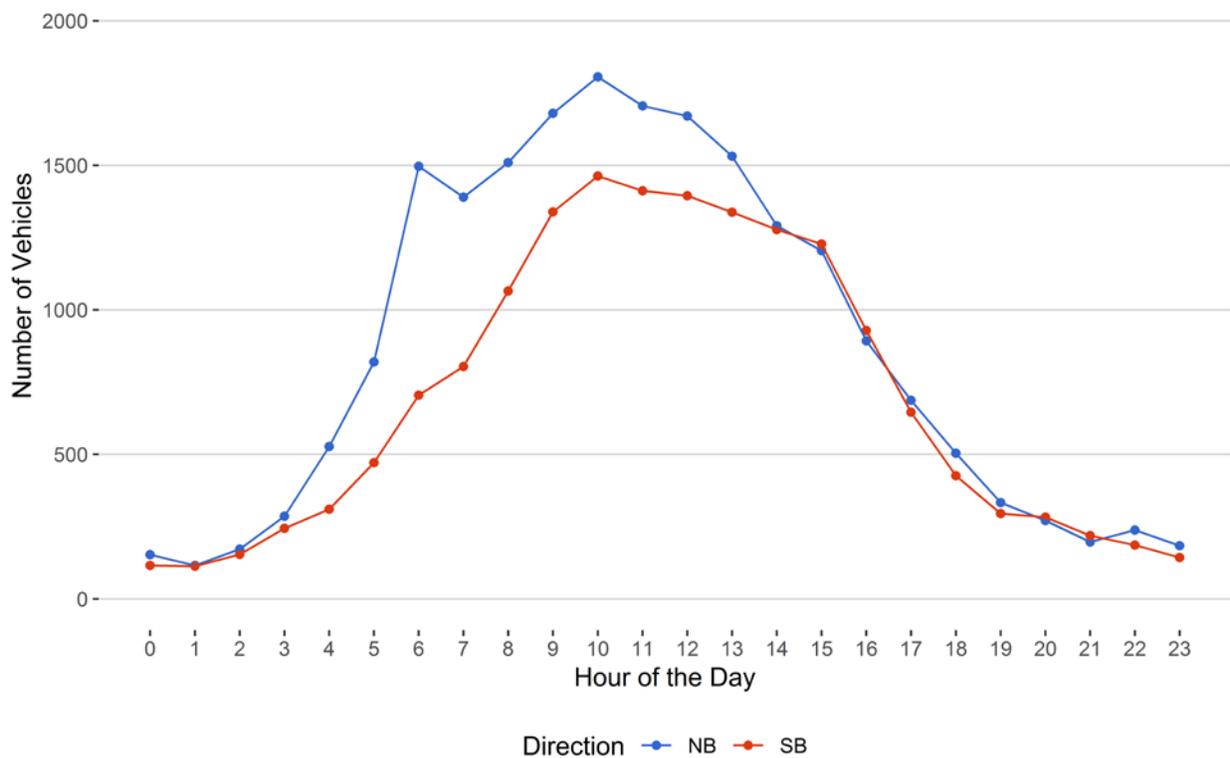


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

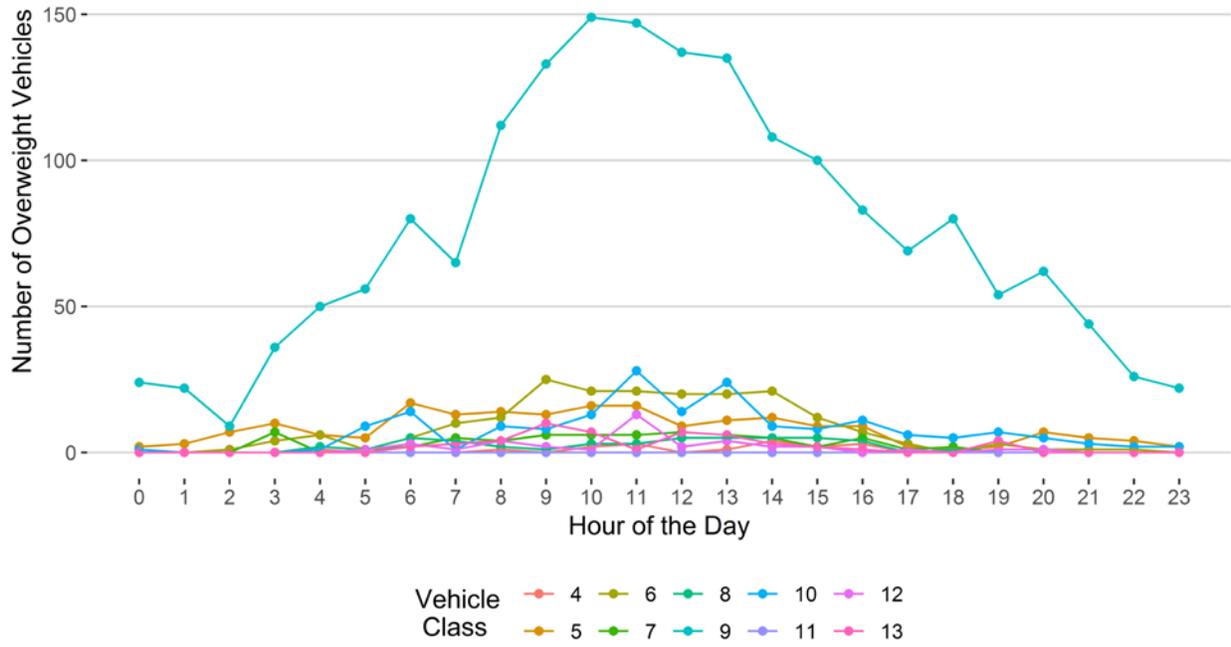


Figure 7 - Overweight Vehicles by Direction  
Hour of the Day

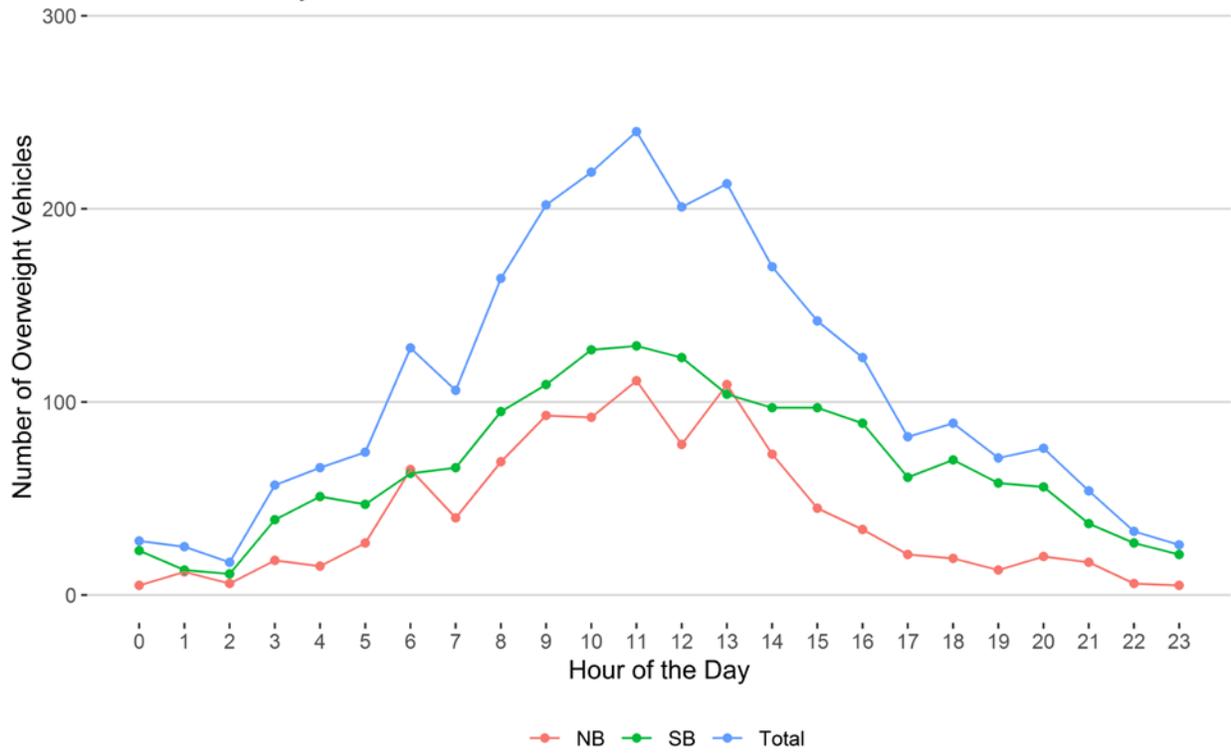
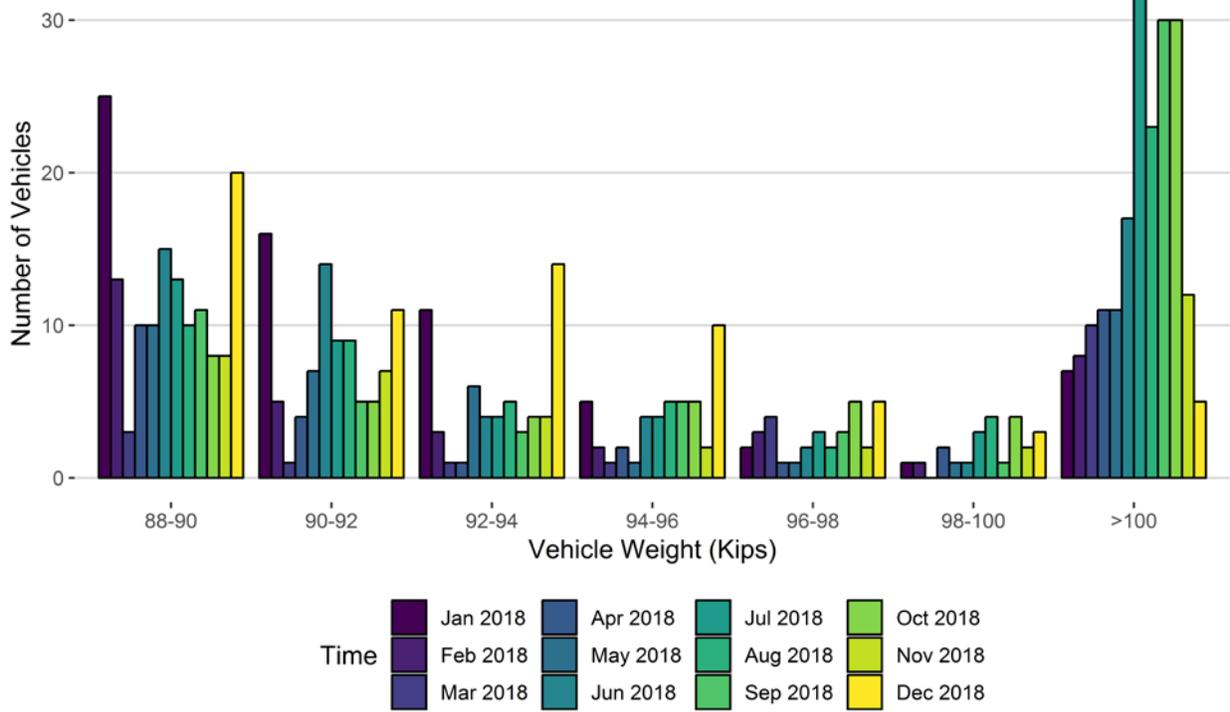
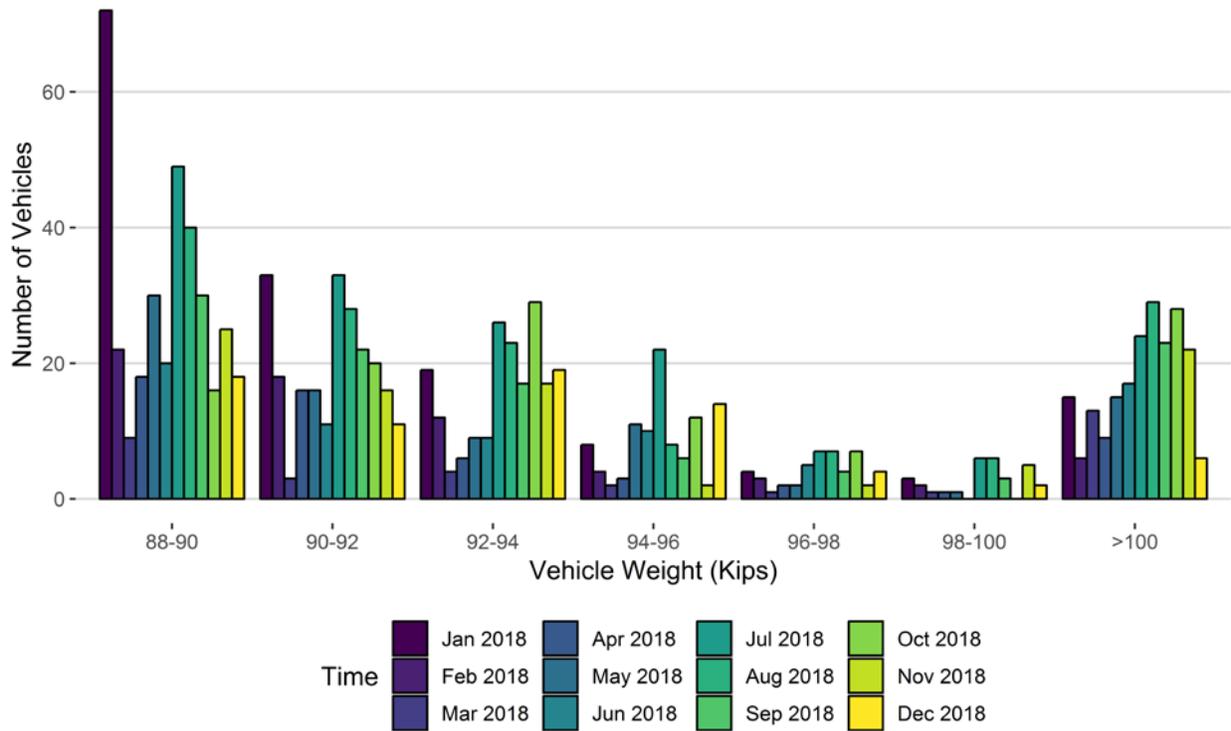


Figure 8 - Histogram of NB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
88-90	25	13	3	10	10	15	13	10	11	8	8	20
90-92	16	5	1	4	7	14	9	9	5	5	7	11
92-94	11	3	1	1	6	4	4	5	3	4	4	14
94-96	5	2	1	2	1	4	4	5	5	5	2	10
96-98	2	3	4	1	1	2	3	2	3	5	2	5
98-100	1	1	0	2	1	1	3	4	1	4	2	3
>100	7	8	10	11	11	17	32	23	30	30	12	5
<b>Total</b>	<b>67</b>	<b>35</b>	<b>20</b>	<b>31</b>	<b>37</b>	<b>57</b>	<b>68</b>	<b>58</b>	<b>58</b>	<b>61</b>	<b>37</b>	<b>68</b>

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



Vehicle Weights (Kips)	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018
88-90	72	22	9	18	30	20	49	40	30	16	25	18
90-92	33	18	3	16	16	11	33	28	22	20	16	11
92-94	19	12	4	6	9	9	26	23	17	29	17	19
94-96	8	4	2	3	11	10	22	8	6	12	2	14
96-98	4	3	1	2	2	5	7	7	4	7	2	4
98-100	3	2	1	1	1	0	6	6	3	0	5	2
>100	15	6	13	9	15	17	24	29	23	28	22	6
Total	154	67	33	55	84	72	167	141	105	112	89	74

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

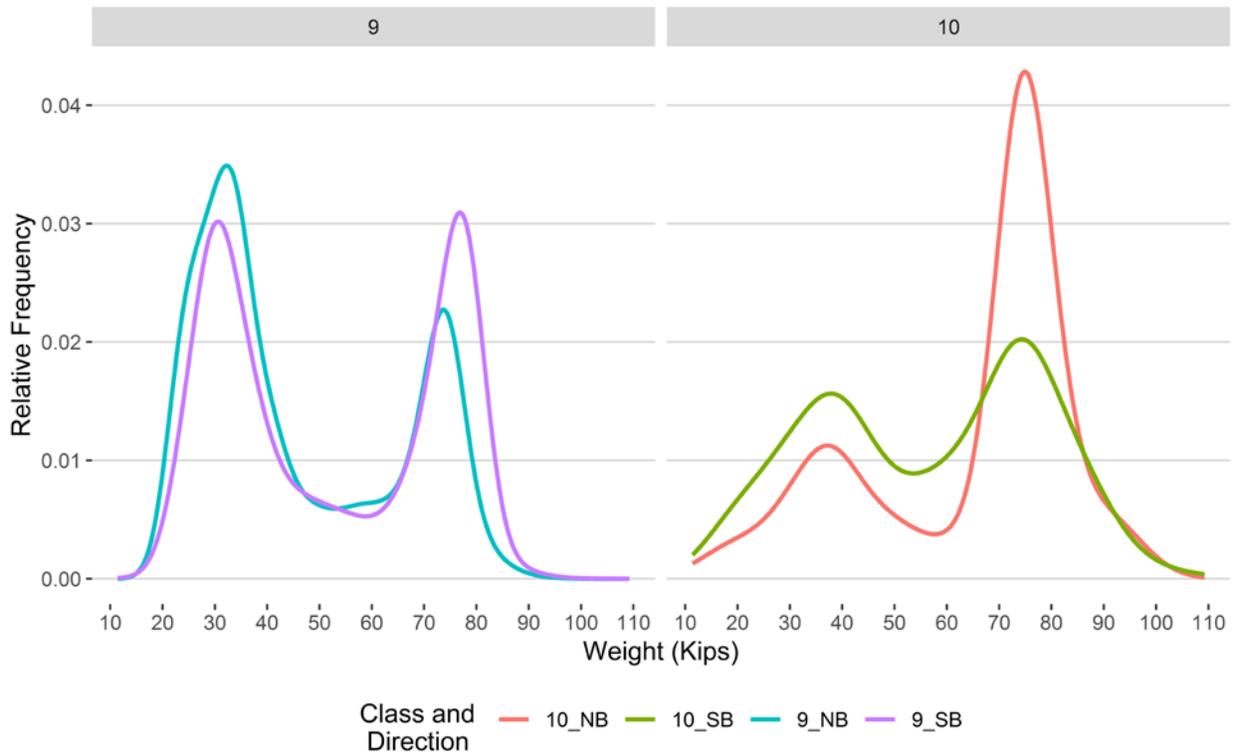


Figure 9 - Freight Percentage by Direction and Class

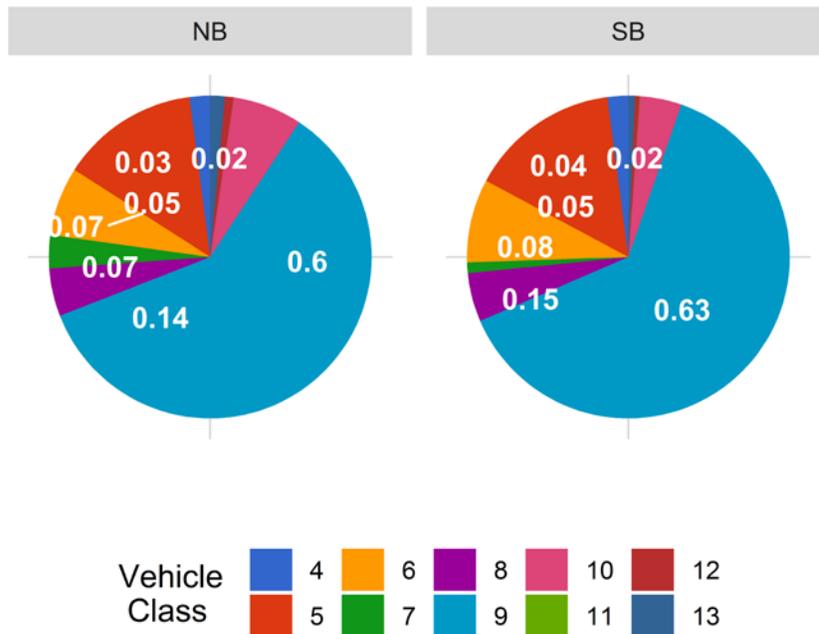


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

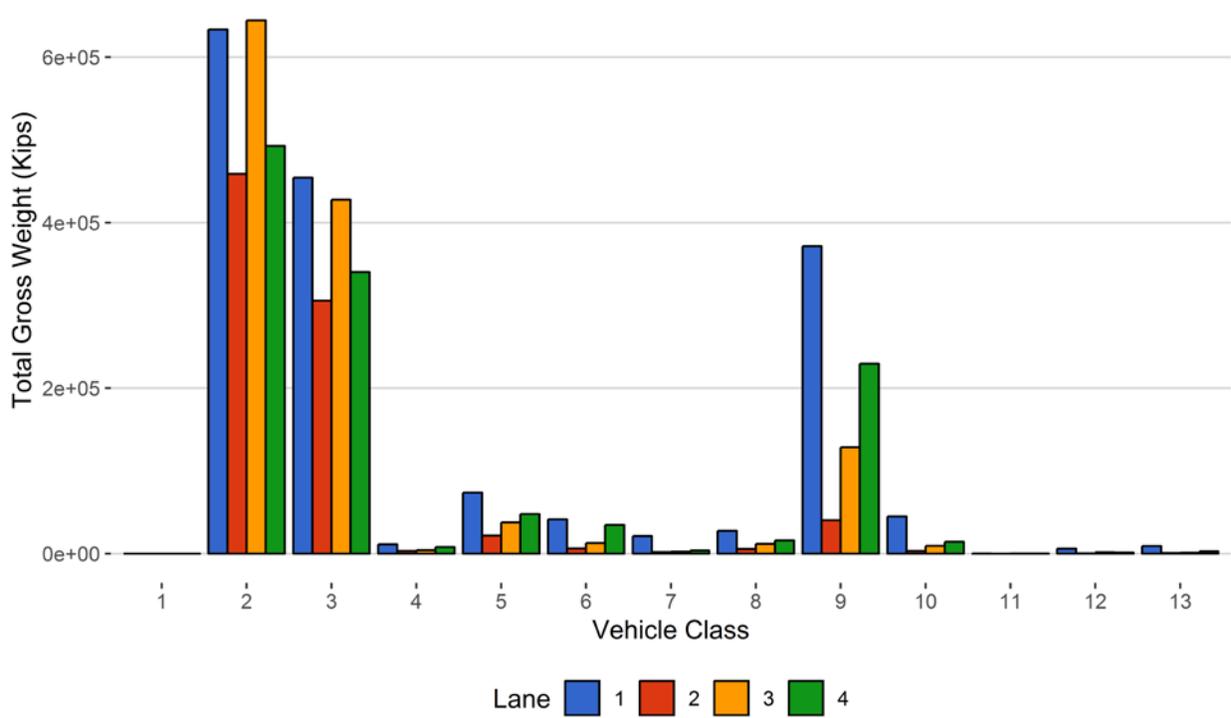


Figure 11 - Total Gross Vehicle Weight t

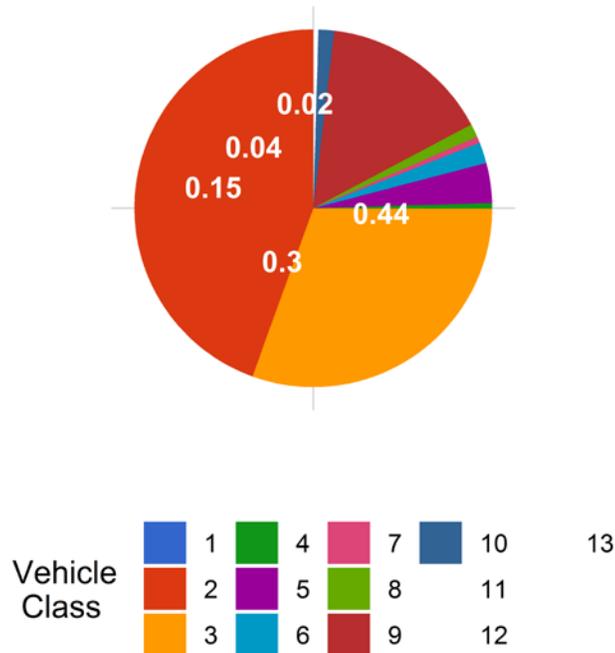


Figure 12 - Total ESALs by Class and Lane

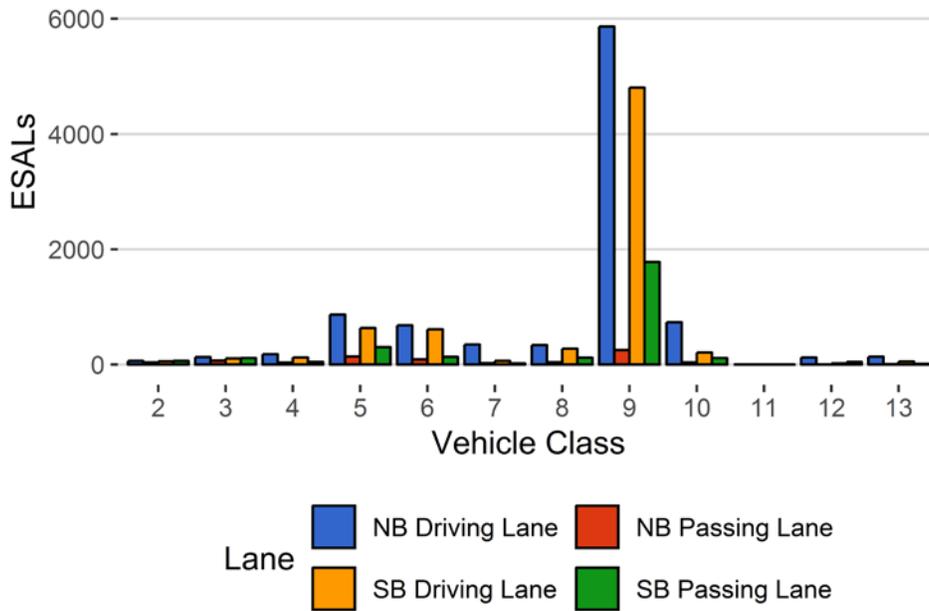
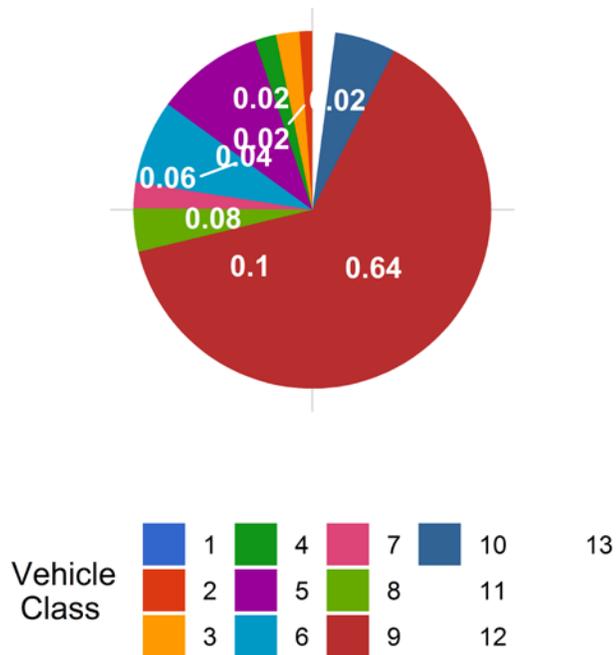


Figure 13 - ESALs by Class



**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>
June 2015	NA	NA	10.99	0.00	10.36	0.00	11.58	0.00
July 2015	NA	NA	11.00	0.07	10.31	-0.46	11.59	0.10
August 2015	NA	NA	10.83	-1.50	10.29	-0.71	11.66	0.73
September 2015	NA	NA	10.82	-1.58	10.27	-0.86	11.57	-0.07
October 2015	NA	NA	10.73	-2.36	9.96	-3.82	11.31	-2.30
November 2015	NA	NA	10.35	-5.82	9.90	-4.48	11.38	-1.76
December 2015	NA	NA	10.02	-8.82	10.05	-3.02	11.52	-0.54
January 2016	NA	NA	9.90	-9.96	10.18	-1.79	11.46	-1.04
February 2016	NA	NA	10.08	-8.33	9.80	-5.44	11.28	-2.55
March 2016	NA	NA	10.20	-7.17	9.76	-5.76	10.92	-5.71
April 2016	NA	NA	10.38	-5.54	9.92	-4.27	11.07	-4.40
May 2016	NA	NA	10.71	-2.55	10.01	-3.40	11.23	-3.03
June 2016	NA	NA	10.79	-1.89	10.13	-2.23	11.38	-1.68
July 2016	NA	NA	10.92	-0.67	10.25	-1.02	11.54	-0.30
August 2016	NA	NA	10.92	-0.66	10.26	-1.01	11.53	-0.45
September 2016	10.31	0.00	10.71	-2.56	10.25	-1.07	11.33	-2.18
October 2016	10.25	-0.56	10.56	-3.97	9.78	-5.60	11.06	-4.48
November 2016	10.27	-0.33	10.27	-6.58	9.77	-5.71	11.11	-4.04
January 2017	10.07	-2.27	9.87	-10.18	10.04	-3.10	10.90	-5.84
February 2017	9.88	-4.13	9.88	-10.10	9.71	-6.24	10.67	-7.87
March 2017	9.94	-3.61	10.11	-8.04	9.66	-6.79	10.55	-8.88
April 2017	10.09	-2.11	10.38	-5.55	9.68	-6.54	10.66	-7.92
May 2017	10.25	-0.61	10.53	-4.22	9.90	-4.48	10.92	-5.70
June 2017	10.44	1.25	10.85	-1.33	10.01	-3.39	11.12	-3.99
July 2017	10.45	1.36	10.75	-2.23	9.97	-3.77	11.20	-3.28
August 2017	10.43	1.22	10.66	-3.04	9.79	-5.46	11.04	-4.65

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September 2017	10.20	-1.06	10.57	-3.80	9.89	-4.52	10.97	-5.27
October 2017	10.25	-0.56	10.26	-6.68	9.77	-5.71	10.89	-5.98
November 2017	10.38	0.67	10.04	-8.70	9.80	-5.41	10.91	-5.75
December 2017	10.15	-1.49	9.66	-12.14	9.79	-5.54	10.78	-6.93
January 2018	9.98	-3.20	9.67	-12.02	9.85	-4.90	10.94	-5.52
February 2018	9.94	-3.60	9.66	-12.16	9.59	-7.44	10.55	-8.91
March 2018	9.87	-4.29	9.93	-9.63	9.49	-8.42	10.28	-11.21
April 2018	10.02	-2.76	10.24	-6.84	9.58	-7.54	10.36	-10.54
May 2018	10.17	-1.30	10.52	-4.34	9.85	-4.97	10.65	-7.99
June 2018	10.17	-1.35	10.51	-4.37	9.77	-5.69	10.69	-7.67
July 2018	10.22	-0.84	10.61	-3.45	9.88	-4.68	10.75	-7.17
August 2018	10.18	-1.25	10.51	-4.36	9.67	-6.69	10.56	-8.80
September 2018	10.06	-2.42	10.29	-6.44	9.71	-6.26	10.58	-8.65
October 2018	10.00	-3.01	10.04	-8.65	9.67	-6.65	10.64	-8.07
November 2018	10.15	-1.55	9.80	-10.82	9.55	-7.80	10.75	-7.18
December 2018	10.00	-3.01	9.53	-13.32	9.71	-6.29	10.85	-6.26

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**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	0	4	0	0	0
2	19463	603348	65.4	0	0
3	9060	280873	30.5	0	0
4	31	968	0.1	17	0.7
5	434	13457	1.5	195	7.5
6	103	3194	0.3	196	7.6
7	15	477	0.1	65	2.5
8	68	2117	0.2	46	1.8
9	517	16030	1.7	1803	69.6
10	38	1167	0.1	180	6.9
11	0	4	0	0	0
12	4	129	0	38	1.5
13	6	182	0	50	1.9
<b>TOTAL</b>	<b>29740</b>	<b>921951</b>	<b>100</b>	<b>2590</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>
2018-12-13	Thursday	08:07:10	9	NB	1	109.33
2018-12-21	Friday	05:49:51	10	SB	4	109.26
2018-12-07	Friday	10:58:26	9	NB	1	104.35
2018-12-13	Thursday	06:58:51	10	NB	1	103.13
2018-12-09	Sunday	11:15:42	10	NB	1	102.23
2018-12-09	Sunday	09:28:06	9	SB	3	102.14
2018-12-12	Wednesday	08:41:43	9	NB	1	101.91
2018-12-16	Sunday	20:43:42	10	SB	4	101.87
2018-12-12	Wednesday	07:36:06	9	NB	1	101.81
2018-12-16	Sunday	18:15:38	10	SB	3	101.1

**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	NB	15	541	102	18.9	12968	1271	3191
5	NB	8	7065	1410	20	85419	9925	20089
6	NB	19	1569	252	16.1	43424	4148	9200
7	NB	11.5	367	0	0	22848	0	9314
8	NB	31	1166	775	66.5	14910	18152	1394
9	NB	33	8993	3204	35.6	323658	88171	66310
10	NB	33.5	739	71	9.6	46081	1775	11851
11	NB	36.5	1	1	100	0	18	0
12	NB	36.5	91	1	1.1	6074	23	1394
13	NB	31.5	137	1	0.7	9917	23	2816
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>20669</b>	<b>5817</b>	<b>****</b>	<b>565298</b>	<b>****</b>	<b>125562</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	SB	15	414	54	13	11196	656	2898
5	SB	8	6216	936	15.1	78694	6724	18227
6	SB	19	1583	193	12.2	44202	3175	8896
7	SB	11.5	104	0	0	6120	0	2462
8	SB	31	923	522	56.6	15598	12037	1584
9	SB	33	6827	2021	29.6	300636	57401	71019
10	SB	33.5	413	73	17.7	21680	1865	5145
11	SB	36.5	3	0	0	158	0	24
12	SB	36.5	36	0	0	2716	0	701
13	SB	31.5	43	0	0	3778	0	1212
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>16562</b>	<b>3799</b>	<b>****</b>	<b>484778</b>	<b>****</b>	<b>112167</b>
<b>GRAND TOTAL</b>	<b>****</b>	<b>****</b>	<b>37231</b>	<b>9616</b>	<b>413</b>	<b>1050075</b>	<b>205364</b>	<b>237729</b>

**Table 5 Gross Vehicle Weight by Class and Lane**

<i>Vehicle Class</i>	<i>NB Driving Lane</i>	<i>NB Passing Lane</i>	<i>SB Passing Lane</i>	<i>SB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>
1	4	0	0	2	6	0
2	633370	458839	644522	492673	2229404	44.5
3	454274	305606	427710	340237	1527828	30.5
4	11154	3085	4098	7754	26091	0.5
5	73685	21659	37641	47777	180762	3.6
6	41387	6184	12776	34601	94949	1.9
7	21086	1762	2353	3767	28968	0.6
8	27549	5513	11795	15841	60698	1.2
9	371547	40281	128562	229475	769865	15.4
10	44783	3072	9390	14155	71400	1.4
11	18	0	45	113	176	0
12	5886	210	1552	1164	8812	0.2
13	9175	765	1001	2777	13718	0.3
<b>TOTAL</b>	<b>1693919</b>	<b>846978</b>	<b>1281446</b>	<b>1190334</b>	<b>5012677</b>	<b>100</b>
<b>GVW/LANE</b>	<b>33.79</b>	<b>16.9</b>	<b>25.56</b>	<b>23.75</b>	<b>100</b>	<b>0</b>

**Table 6 ESALs by Class and Lane and Flexible ESAL Factors**

<i>Vehicle Class</i>	<i>NB Driving Lane</i>	<i>NB Passing Lane</i>	<i>SB Passing Lane</i>	<i>SB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>	<i>Flexible ESAL Factor</i>
1	0	0	0	0	0	0	0.2
2	66	39	66	59	230	1.15	8e-04
3	131	67	116	109	423	2.12	0.0031
4	180	34	48	124	385	1.93	0.81
5	870	140	303	634	1947	9.75	0.29
6	682	90	133	612	1517	7.6	0.96
7	351	25	22	64	462	2.32	1.95
8	340	42	122	278	782	3.92	0.75
9	5865	254	1780	4808	12708	63.65	1.61
10	736	36	116	211	1100	5.51	1.91
11	0	0	0	2	2	0.01	1.04
12	124	2	47	21	193	0.97	2.88
13	137	9	14	56	216	1.08	2.31
<b>TOTAL</b>	<b>9481</b>	<b>739</b>	<b>2767</b>	<b>6977</b>	<b>19964</b>	<b>100</b>	<b>15</b>
<b>ESALS/LANE</b>	<b>47.5</b>	<b>3.7</b>	<b>13.9</b>	<b>34.9</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>
Jan 2018	872295	28138	1250	833551	95.6	38744	4.4	68.9	31.1
Feb 2018	821000	29321	1278	785225	95.6	35774.6	4.4	71.6	28.4
Mar 2018	973481	31403	1334	932126	95.8	41355	4.2	73.2	26.8
Apr 2018	951927	31731	1397	910012	95.6	41915.4	4.4	72.3	27.7
May 2018	1132671	36538	1759	1078136	95.2	54534.7	4.8	72.4	27.6
Jun 2018	1115053	37168	1796	1061160	95.2	53892.6	4.8	72	28
Jul 2018	1124798	36284	1799	1069022	95	55776	5	73.1	26.9
Aug 2018	1137438	36692	1873	1079387	94.9	58051	5.1	72.5	27.5
Sep 2018	1068437	35615	1806	1014244	94.9	54192.6	5.1	73.1	26.9
Oct 2018	1143679	36893	1913	1084361	94.8	59317.7	5.2	73.6	26.4
Nov 2018	980508	32684	1594	932691	95.1	47816.9	4.9	71.4	28.6
Dec 2018	921951	30732	1217	884226	95.9	37725.4	4.1	70.5	29.5
<b>TOTAL</b>	<b>12243238</b>	<b>-</b>	<b>-</b>	<b>11664141</b>	<b>-</b>	<b>579096</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>AVERA GE</b>	<b>1020270</b>	<b>33600</b>	<b>1585</b>	<b>972012</b>	<b>95</b>	<b>48258</b>	<b>5</b>	<b>72</b>	<b>28</b>

## ESALS

<i>Month</i>	<i>ESALS NB Passing Lane</i>	<i>ESALS NB Driving Lane</i>	<i>ESALS SB Driving Lane</i>	<i>ESALS SB Passing Lane</i>	<i>Total ESALS</i>	<i>Driving Lane ESALS %</i>	<i>Passing Lane ESALS %</i>	<i>Pavement Life Decrease Months</i>
Jan 2018	8928	843	3536	7448	20755	79	21	2.9
Feb 2018	9225	701	2769	5385	18081	81	19	1.9
Mar 2018	10255	816	2598	5993	19663	83	17	0.2
Apr 2018	10719	1003	2961	5887	20570	81	19	0.5
May 2018	15293	1316	4108	8413	29131	81	19	0.4
Jun 2018	16225	1468	3956	8512	30161	82	18	1
Jul 2018	16409	1565	3643	9784	31401	83	17	1.3
Aug 2018	16699	1569	3852	9882	32003	83	17	0.8
Sep 2018	13504	1314	3680	9789	28287	82	18	0.9
Oct 2018	14258	1193	3930	11360	30741	83	17	1
Nov 2018	11820	925	3283	9678	25705	84	16	0.7
Dec 2018	9672	743	2777	6999	20190	83	17	2.8
<b>TOTAL</b>	<b>153008</b>	<b>13457</b>	<b>41094</b>	<b>99130</b>	<b>306689</b>	-	-	-
<b>AVERAGE</b>	<b>12751</b>	<b>1121</b>	<b>3424</b>	<b>8261</b>	<b>25557</b>	<b>82</b>	<b>18</b>	<b>1</b>

## Gross Vehicle Weight

<i>Month</i>	<i>GVW NB Passing Lane</i>	<i>GVW NB Driving Lane</i>	<i>GVW SB Passing Lane</i>	<i>GVW SB Driving Lane</i>	<i>Total GVW Kips</i>
Jan 2018	1535621	819939	1217052	1168290	4740903
Feb 2018	1484466	720163	1090816	1068086	4363532
Mar 2018	1730276	868402	1235504	1263310	5097491
Apr 2018	1713918	884564	1241636	1225668	5065786
May 2018	2161183	1175039	1581054	1449968	6367245
Jun 2018	2164093	1193202	1560431	1483902	6401628
Jul 2018	2204255	1198396	1514059	1576436	6493146
Aug 2018	2205186	1193867	1552543	1615359	6566955
Sep 2018	1969077	1086805	1443718	1567916	6067516
Oct 2018	2199555	1175217	1576712	1711159	6662643
Nov 2018	1807476	940472	1377348	1453973	5579269
Dec 2018	1696068	847600	1282320	1192264	5018252
<b>TOTAL</b>	<b>22871174</b>	<b>12103668</b>	<b>16673193</b>	<b>16776331</b>	<b>68424366</b>
<b>AVERAGE</b>	<b>1905931</b>	<b>1008639</b>	<b>1389433</b>	<b>1398028</b>	<b>5702030</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>
Jan 2018	2776	0.3	7.1	224	28
Feb 2018	1765	0.2	4.9	102	17
Mar 2018	1311	0.1	3.2	53	24
Apr 2018	1746	0.2	4.1	86	23
May 2018	3351	0.3	6.3	121	28
Jun 2018	4036	0.4	7.6	129	35
Jul 2018	4531	0.4	8.3	235	65
Aug 2018	4223	0.4	7.4	199	62
Sep 2018	3238	0.3	6	163	57
Oct 2018	3746	0.3	6.4	173	62
Nov 2018	3672	0.4	7.8	127	42
Dec 2018	2606	0.3	6.9	144	17
<b>TOTAL</b>	<b>37001</b>	<b>-</b>	<b>-</b>	<b>1756</b>	<b>460</b>
<b>AVERAGE</b>	<b>3083.4</b>	<b>0.3</b>	<b>6.3</b>	<b>146.3</b>	<b>38.3</b>

## Freight

<i>Month</i>	<i>NB Freight Tons</i>	<i>SB Freight Tons</i>	<i>Total Freight</i>	<i>NB Freight %</i>	<i>SB Freight %</i>
Jan 2018	122668	121856	244524	50.2	49.8
Feb 2018	125964	95803	221767	56.8	43.2
Mar 2018	143515	109156	252670	56.8	43.2
Apr 2018	150002	107961	257962	58.1	41.9
May 2018	208896	150269	359165	58.2	41.8
Jun 2018	215733	147528	363262	59.4	40.6
Jul 2018	223930	159341	383271	58.4	41.6
Aug 2018	227868	162122	389990	58.4	41.6
Sep 2018	203714	164103	367817	55.4	44.6
Oct 2018	204388	178193	382582	53.4	46.6
Nov 2018	157880	147600	305480	51.7	48.3
Dec 2018	125562	112167	237729	52.8	47.2
<b>TOTAL</b>	<b>2110121</b>	<b>1656098</b>	<b>3766219</b>	-	-
<b>AVERAGE</b>	<b>175843.4</b>	<b>138008.2</b>	<b>313851.6</b>	<b>55.8</b>	<b>44.2</b>