

SEPTEMBER 2018



**WIM #30  
MN 61, MP 16.3  
TWO HARBORS,  
MN**

**MONTHLY  
REPORT**



*Your Destination...Our Priority*



## WIM Site Location

WIM #30 is located on MN 61 near Two Harbors in Lake county.

## System Operation

WIM #30 was operational for the entire month of September 2018. Volume was computed using all monthly data.

## System Calibration

WIM #30 was most recently calibrated on 2017-01-20. 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. 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: 313915 | Passenger Vehicles: 295806 | Heavy Commercial Vehicles: 18109

Monthly Average Daily Traffic (MADT): 10464 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 604

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 Sundays, 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), NB PVs generally reached peak volume levels between 02 PM and 04 PM. Similarly, SB PVs peaked in volume between 12 PM and 04 PM

### Heavy Commercial Vehicles (HCVs)

**Volume trends.** On an average 24-hour day, HCVs traveling NB typically reached peak volume levels between 02 PM and 04 PM, while volume going SB peaked between 12 PM and 04 PM. See Figure 6. Out of all HCVs, the two highest traffic volumes were generated by Class 5's and Class 9's.

## Overweight HCVs

**Volume trends.** Of a total of 18109 HCVs, 2513 of them were overweight<sup>3</sup>. These overweight HCVs contributed to 0.8% of total monthly volume, and 14% of total monthly HCV volume. NB overweight vehicles typically reached highest numbers on Wednesdays, with lowest volumes reported on Sundays. SB overweight vehicles tended to reach highest volumes on Wednesdays, 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 61.7% of all overweight vehicles traveling NB 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 March.

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 ,502 NB vehicles exceeded 88,000 pounds (238 vehicles were Class 9's; 198 vehicles were Class 10's). Of vehicles traveling SB,

432 NB vehicles exceeded 88,000 pounds (357 vehicles were Class 10's; 32 vehicles were Class 9's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from September 2018.

**Loaded vs. Unloaded HCVs.** Figure 10 shows the GVW distributions of Class 9s and 10s in September 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 135896 tons of freight was recorded to have crossed the WIM. More freight was shipped NB (55.5%) than SB (44.5%). See Table 4 and Figure 11 for more freight information.

## Infrastructure Considerations

**Bridge.** Bridges No. 9341 and No. 9339, which are respectively on the NB and SB side of MN 61, are approximately 1.5 miles north of WIM #30. Bridge No. 9333 (a box culvert) is approximately 1.8 miles south of WIM #30. WIM #30 recorded a total of 313915 vehicles with a combined GVW of 2119672 kips (1 kip = 1,000 pounds = 0.5 tons) in September 2018. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

**Pavement Design.** A total of 13615 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 56.5% of all ESALs were recorded NB while 43.5% was observed SB. In particular, 45% of all ESALs were generated by the Class 9's (Class 9's were also responsible for generating 13% 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).

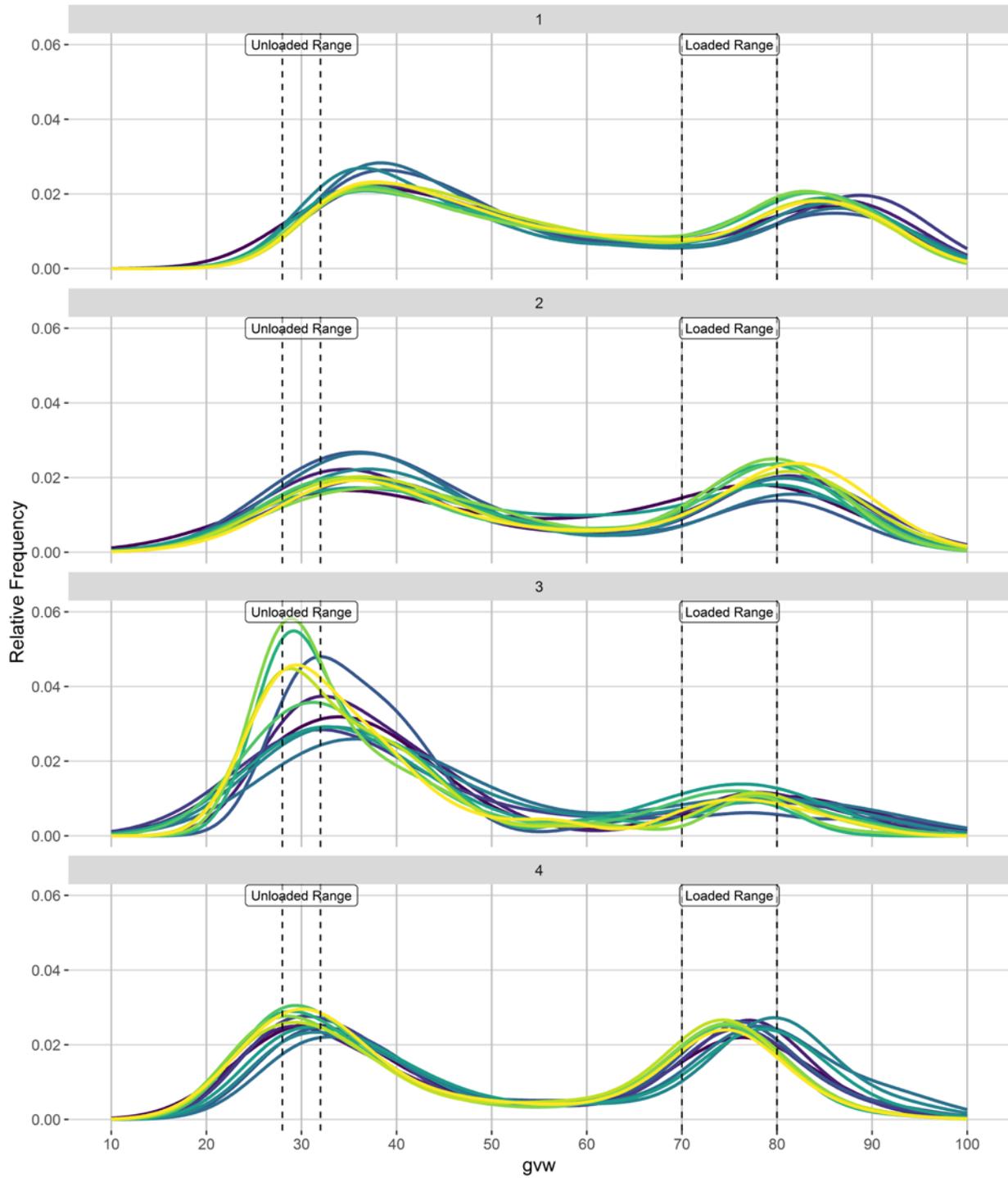
*WIM monthly reports can be found at: <http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html>*

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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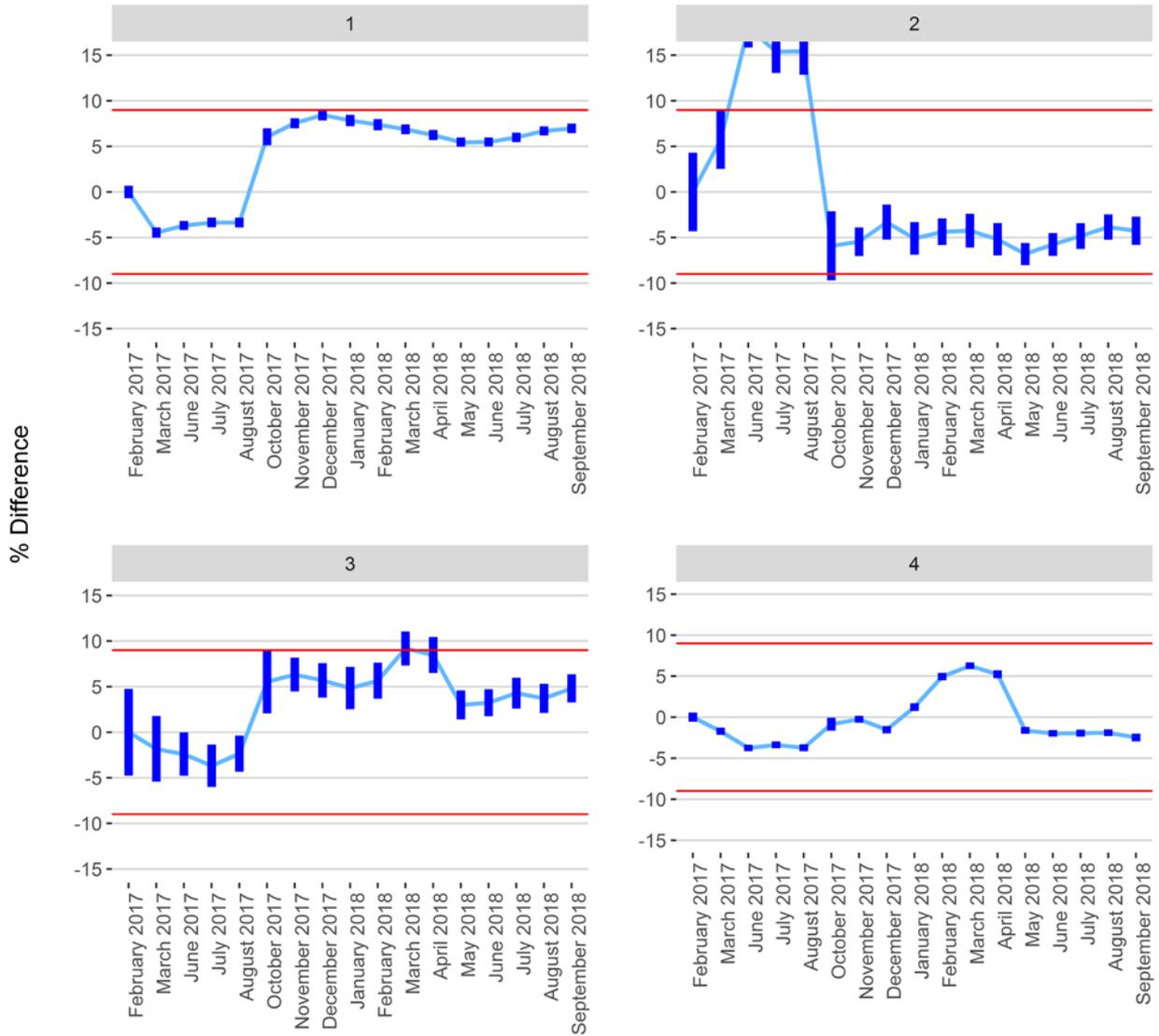
Figure 1 - Monthly Class 9 GVW Histogram



October 2017	January 2018	April 2018	July 2018
November 2017	February 2018	May 2018	August 2018
December 2017	March 2018	June 2018	September 2018

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

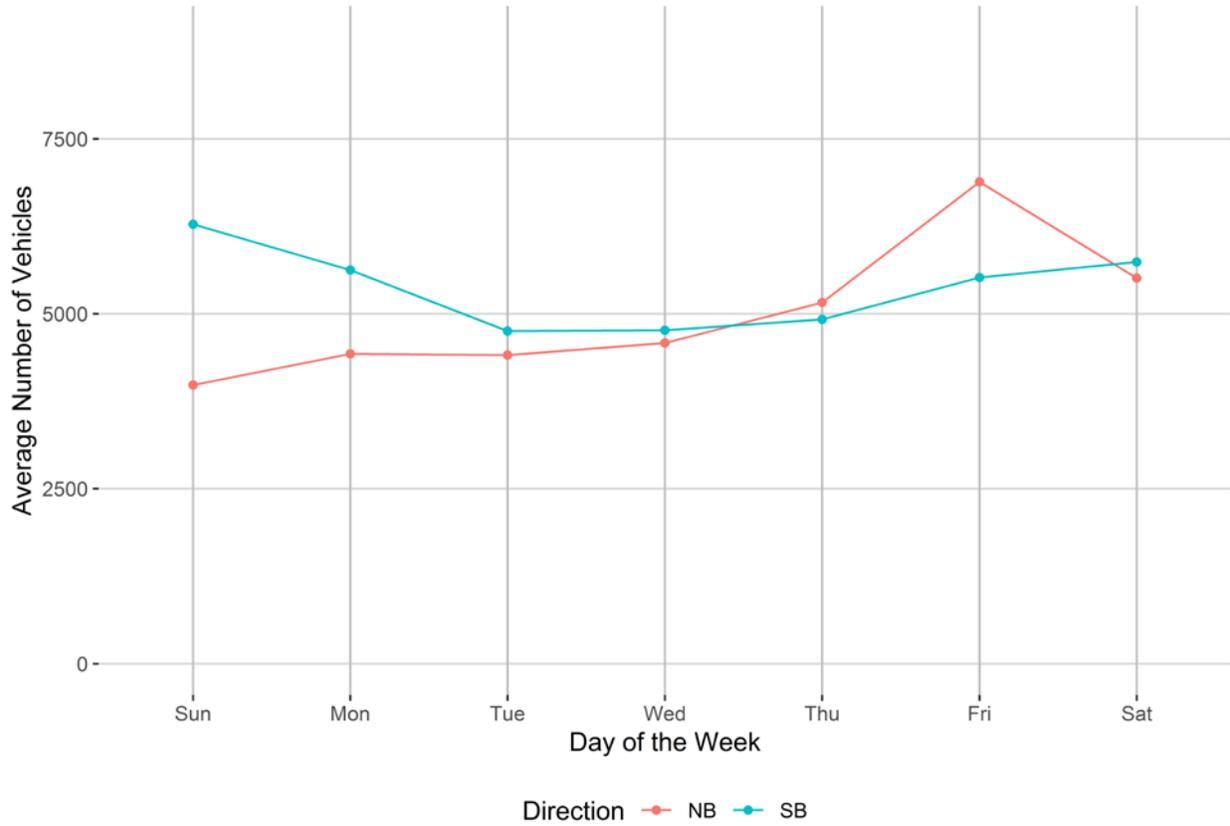


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

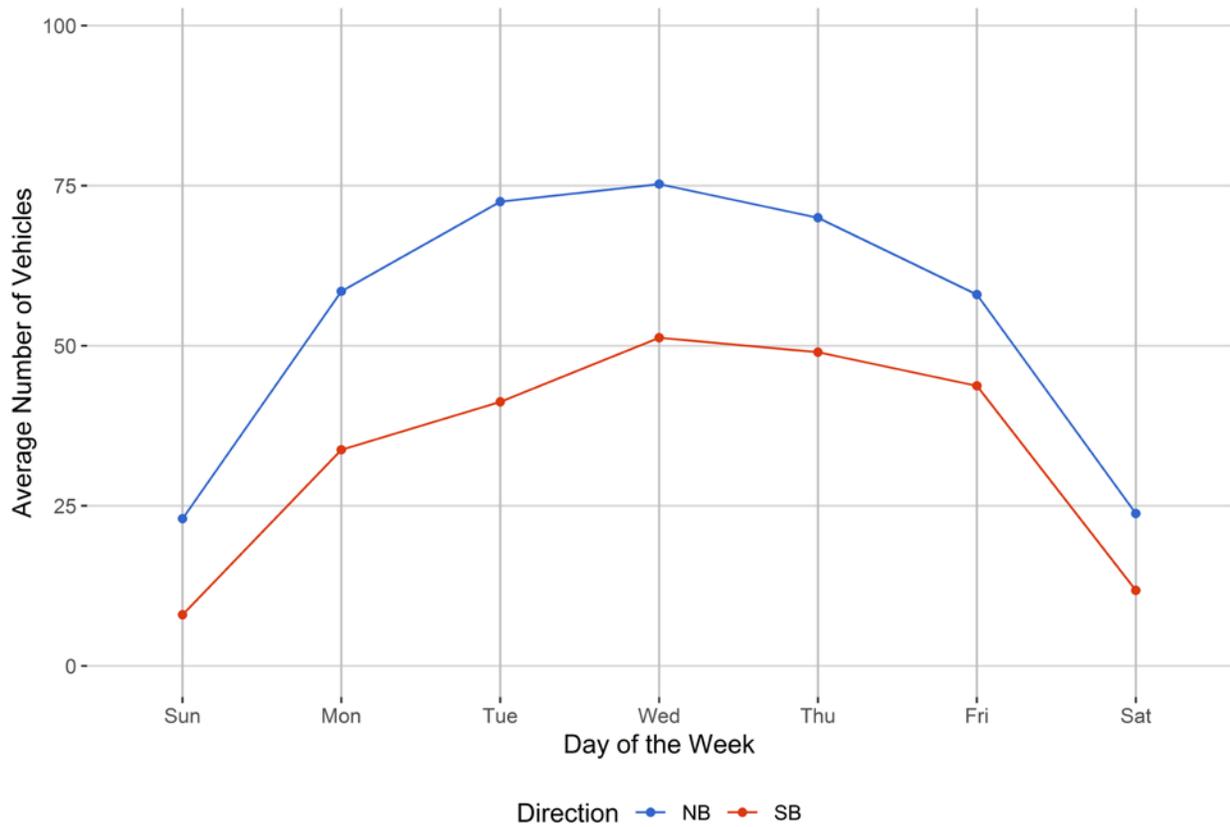


Figure 4 - Passenger Vehicles vs. Hour of the Day

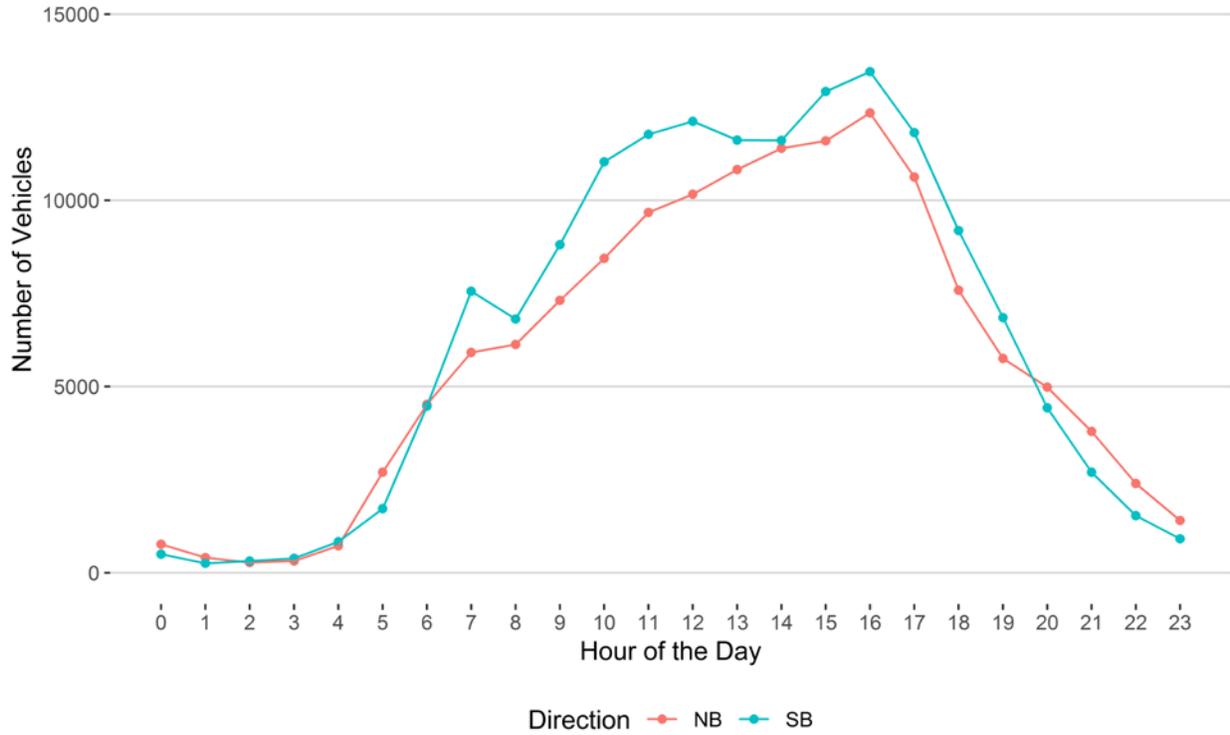


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

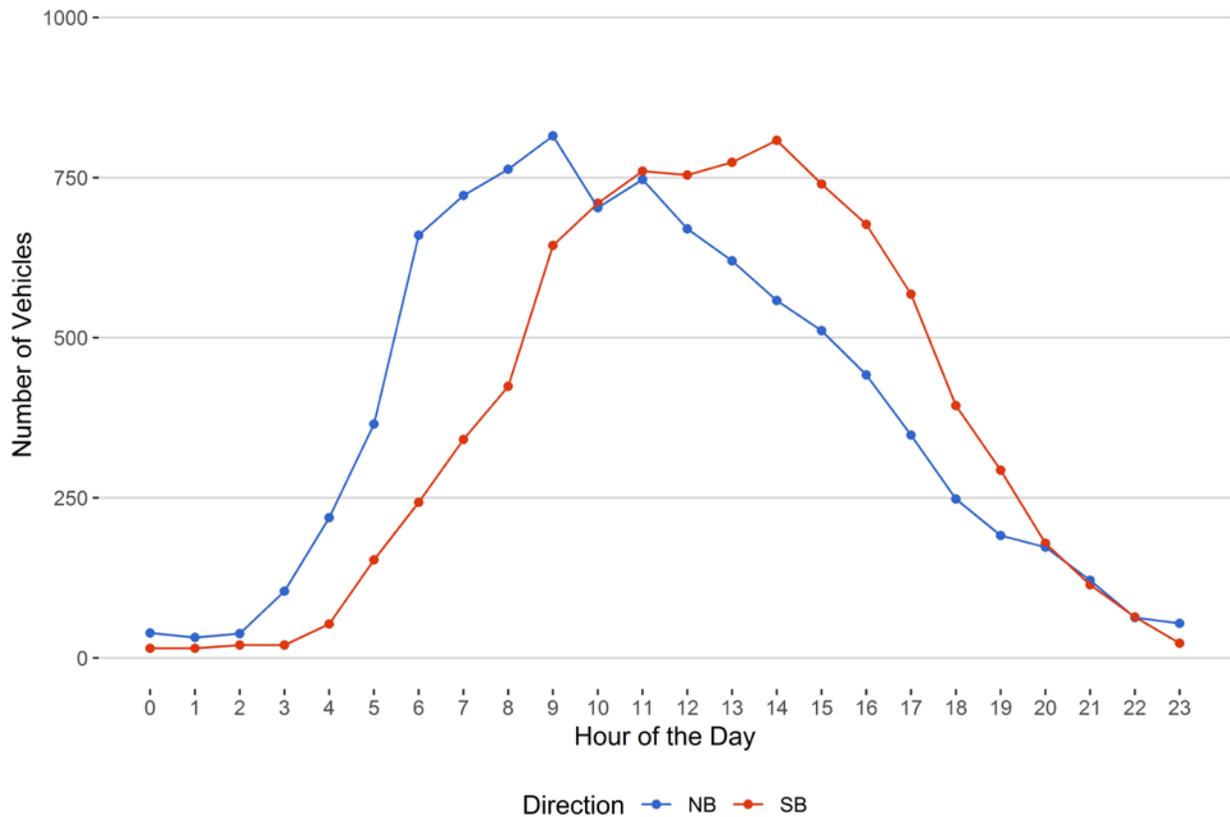


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

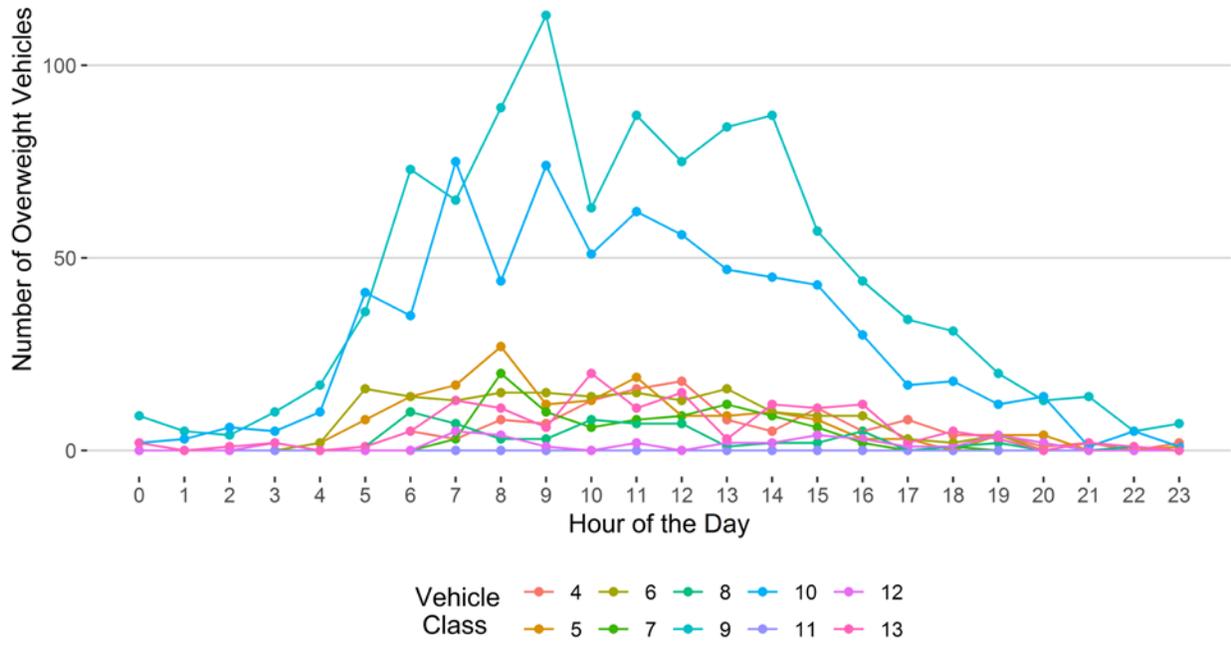


Figure 7 - Overweight Vehicles by Direction  
Hour of the Day

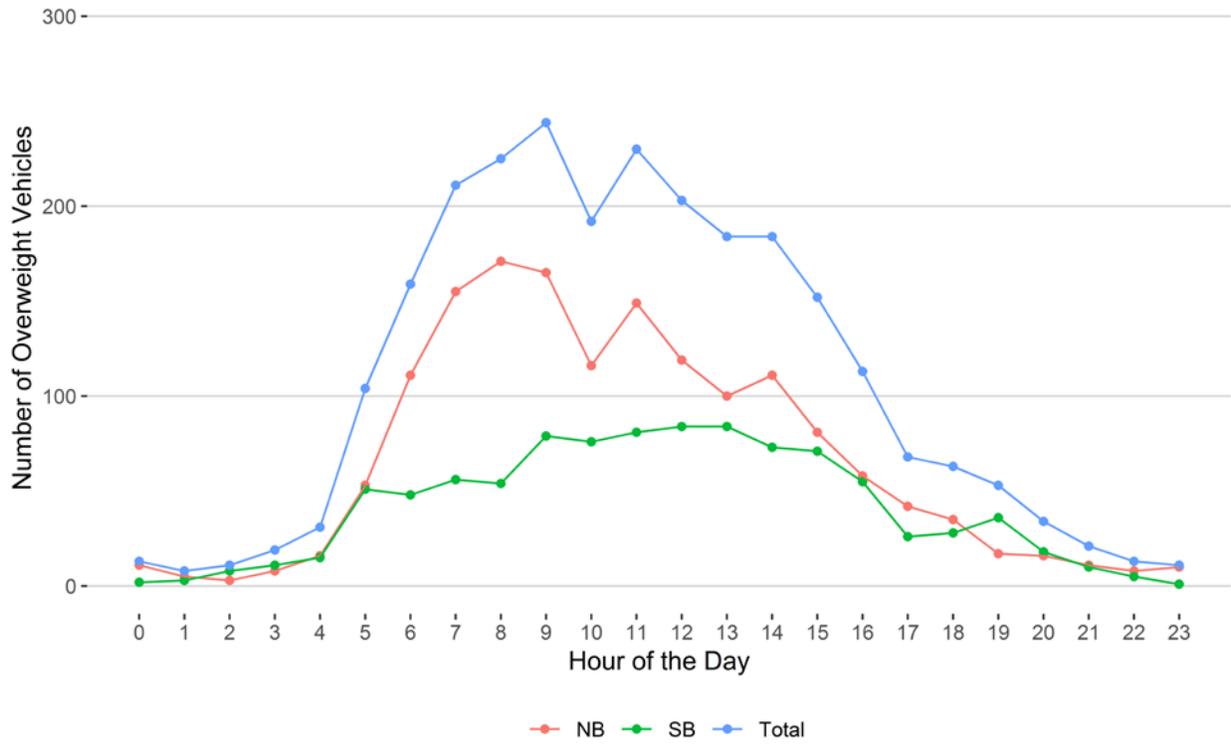
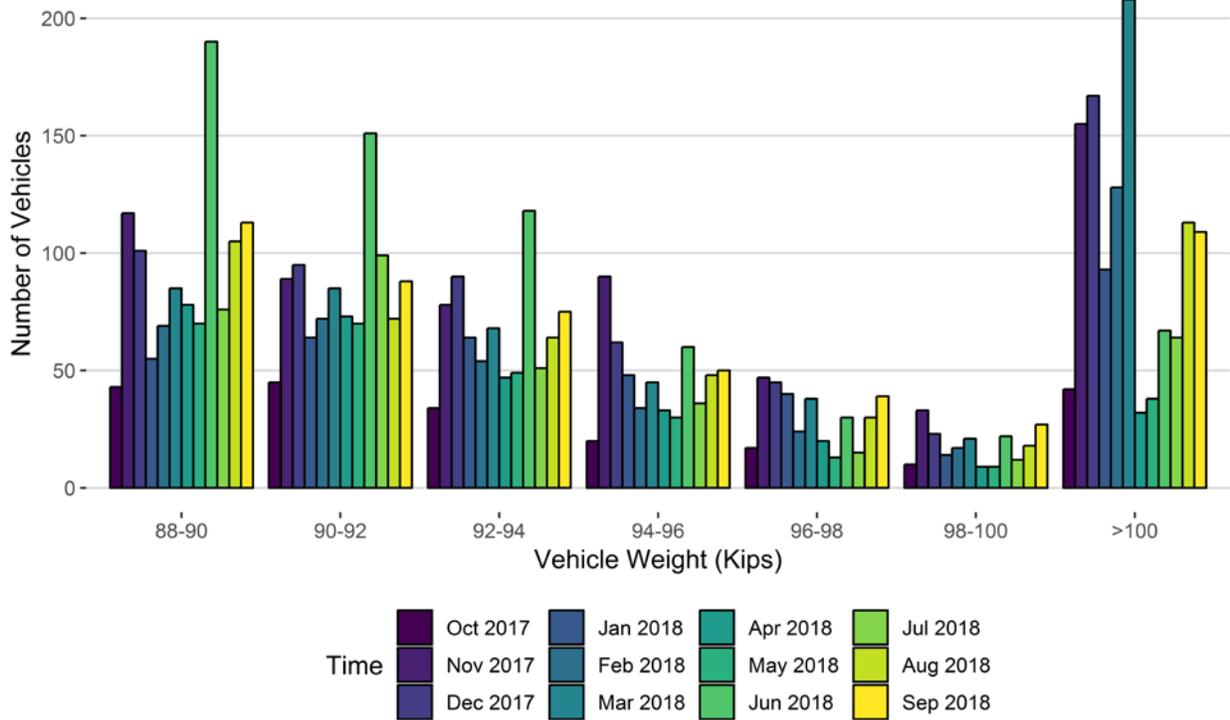
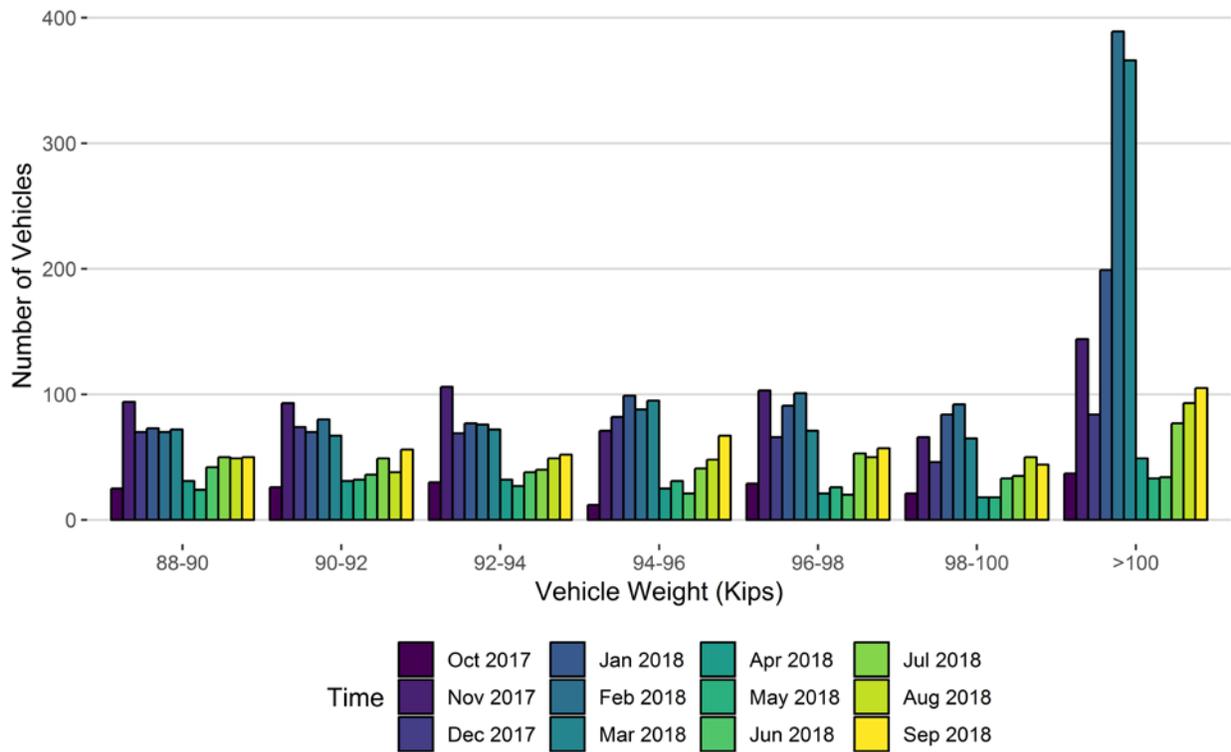


Figure 8 - Histogram of NB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018
88-90	43	117	101	55	69	85	78	70	190	76	105	113
90-92	45	89	95	64	72	85	73	70	151	99	72	88
92-94	34	78	90	64	54	68	47	49	118	51	64	75
94-96	20	90	62	48	34	45	33	30	60	36	48	50
96-98	17	47	45	40	24	38	20	13	30	15	30	39
98-100	10	33	23	14	17	21	9	9	22	12	18	27
>100	42	155	167	93	128	208	32	38	67	64	113	109
Total	211	609	583	378	398	550	292	279	638	353	450	501

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



Vehicle Weights (Kips)	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018
88-90	25	94	70	73	70	72	31	24	42	50	49	50
90-92	26	93	74	70	80	67	31	32	36	49	38	56
92-94	30	106	69	77	76	72	32	27	38	40	49	52
94-96	12	71	82	99	88	95	25	31	21	41	48	67
96-98	29	103	66	91	101	71	21	26	20	53	50	57
98-100	21	66	46	84	92	65	18	18	33	35	50	44
>100	37	144	84	199	389	366	49	33	34	77	93	105
Total	180	677	491	693	896	808	207	191	224	345	377	431

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

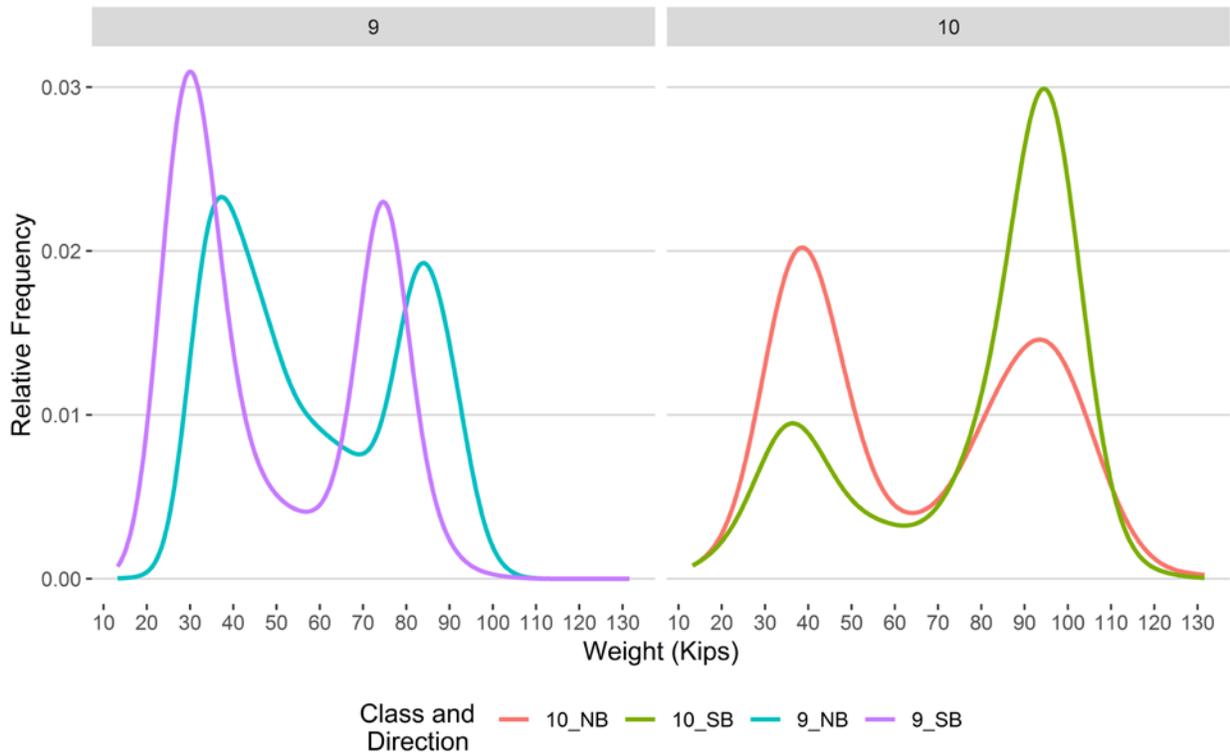


Figure 9 - Freight Percentage by Direction and Class

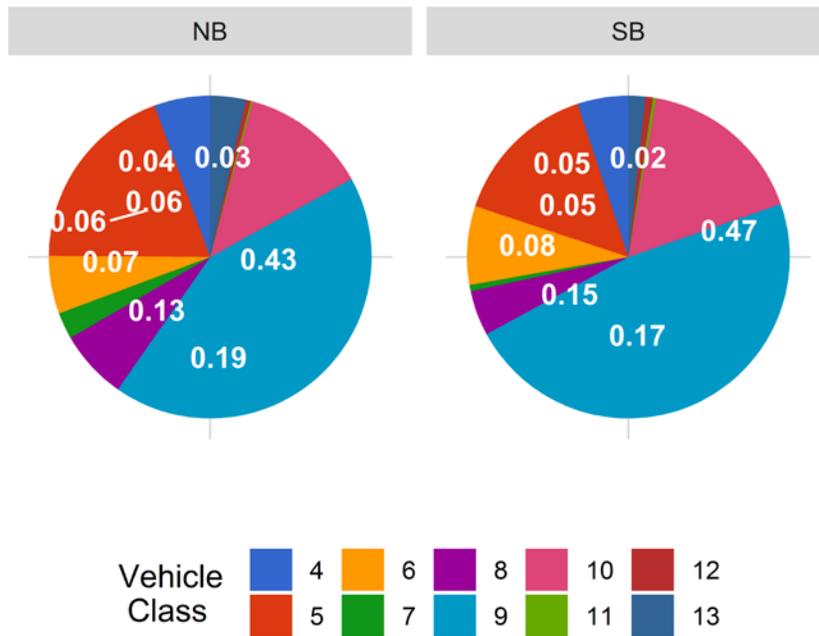


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

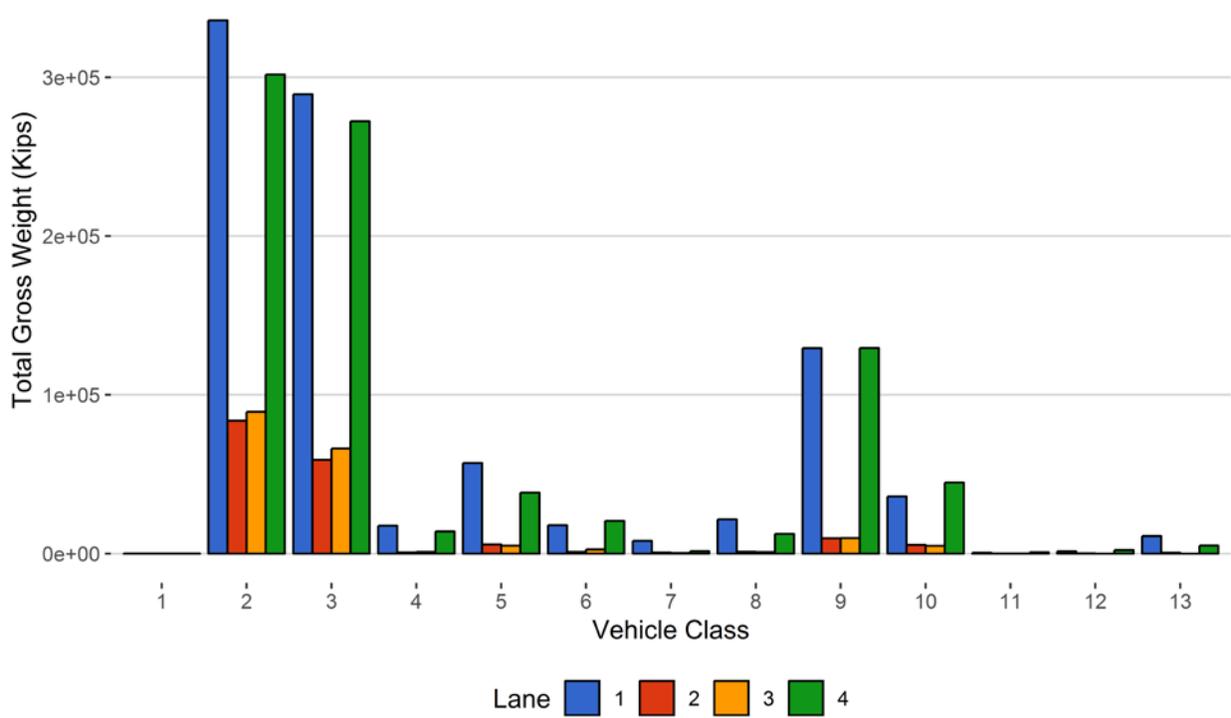


Figure 11 - Total Gross Vehicle Weight t

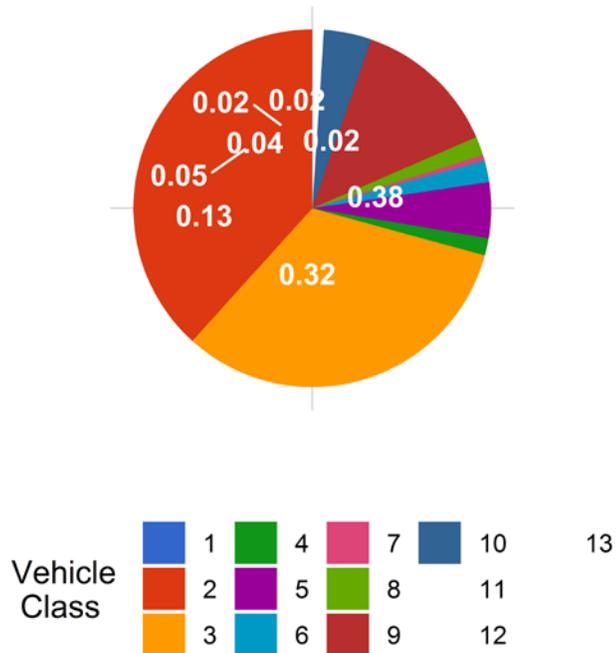


Figure 12 - Total ESALs by Class and Lane

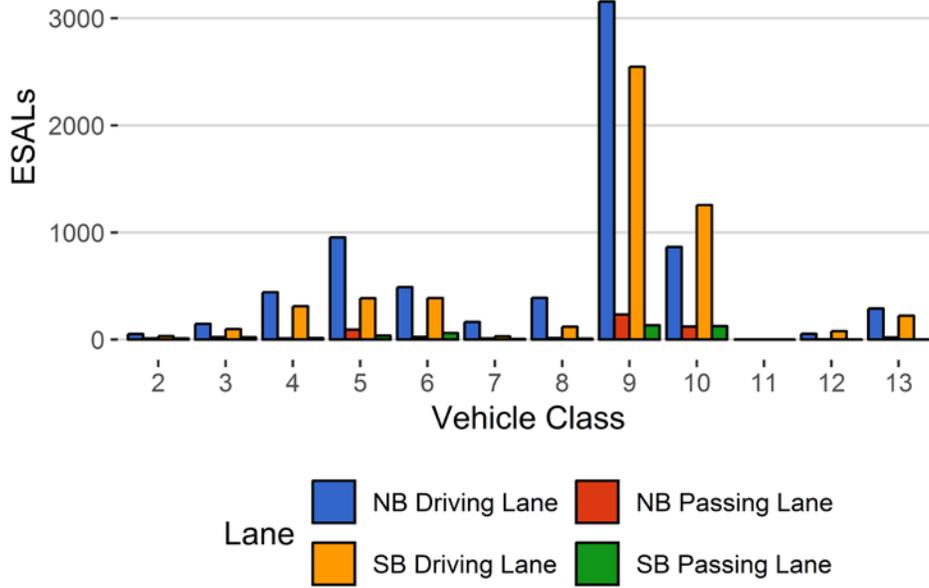
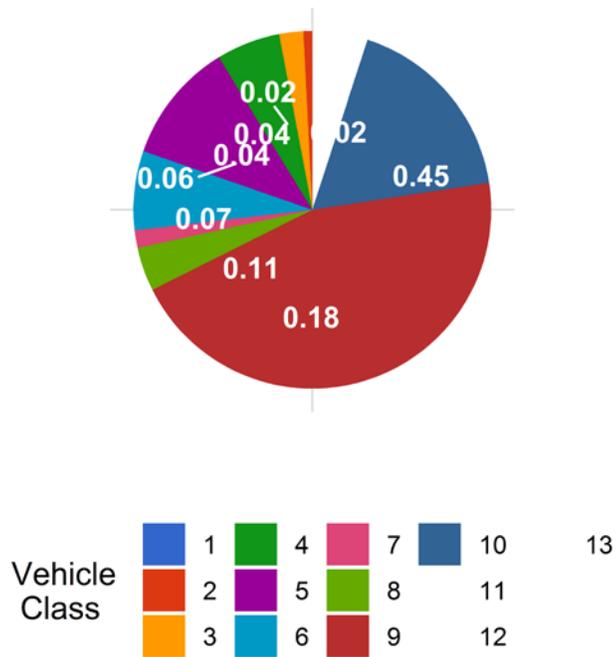


Figure 13 - ESALs by Class



**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>
February 2017	11.62	0.00	12.12	0.00	10.33	0.00	11.31	0.00
March 2017	11.10	-4.45	12.82	5.74	10.14	-1.83	11.11	-1.71
June 2017	11.19	-3.68	14.31	18.03	10.08	-2.40	10.88	-3.75
July 2017	11.23	-3.35	13.99	15.41	9.95	-3.68	10.93	-3.36
August 2017	11.23	-3.36	13.99	15.43	10.09	-2.35	10.89	-3.73
October 2017	12.32	6.06	11.40	-5.91	10.91	5.55	11.21	-0.85
November 2017	12.49	7.54	11.46	-5.46	10.99	6.32	11.28	-0.25
December 2017	12.60	8.45	11.72	-3.32	10.92	5.69	11.14	-1.52
January 2018	12.53	7.84	11.50	-5.10	10.83	4.84	11.45	1.24
February 2018	12.47	7.38	11.59	-4.37	10.92	5.64	11.87	4.95
March 2018	12.41	6.87	11.61	-4.25	11.28	9.19	12.01	6.26
April 2018	12.34	6.25	11.49	-5.19	11.21	8.47	11.90	5.24
May 2018	12.25	5.47	11.30	-6.81	10.64	3.00	11.12	-1.61
June 2018	12.25	5.47	11.42	-5.75	10.67	3.24	11.08	-1.97
July 2018	12.31	5.98	11.54	-4.83	10.78	4.29	11.09	-1.94
August 2018	12.39	6.70	11.65	-3.85	10.72	3.72	11.09	-1.88
September 2018	12.43	6.97	11.60	-4.27	10.83	4.82	11.03	-2.48

**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	6	169	0.1	0	0
2	6509	195262	62.2	0	0
3	3346	100374	32	0	0
4	39	1177	0.4	121	4.8
5	246	7393	2.4	163	6.5
6	41	1243	0.4	173	6.9
7	6	187	0.1	86	3.4
8	45	1341	0.4	60	2.4
9	173	5197	1.7	1042	41.5
10	43	1279	0.4	697	27.7
11	3	79	0	0	0
12	2	50	0	33	1.3
13	5	164	0.1	138	5.5
<b>TOTAL</b>	<b>10464</b>	<b>313915</b>	<b>100</b>	<b>2513</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>
2018-09-07	Friday	16:41:04	10	NB	1	131.6
2018-09-22	Saturday	22:15:47	10	NB	1	128.86
2018-09-13	Thursday	23:35:54	10	SB	4	121.57
2018-09-05	Wednesday	10:47:20	10	SB	4	119.98
2018-09-24	Monday	18:49:45	10	NB	1	118.42
2018-09-22	Saturday	11:03:05	10	NB	1	117.51
2018-09-03	Monday	05:07:57	10	NB	1	117.2
2018-09-04	Tuesday	07:10:02	10	NB	1	116.27
2018-09-07	Friday	05:53:28	10	SB	4	115.18
2018-09-22	Saturday	06:50:36	10	NB	1	114.84

**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	594	36	6.1	17776	492	4703
5	NB	8	4072	131	3.2	61755	976	15113
6	NB	19	500	5	1	18767	84	4681
7	NB	11.5	142	1	0.7	8626	11	3502
8	NB	31	744	338	45.4	16609	6065	2012
9	NB	33	2351	200	8.5	132809	6177	30913
10	NB	33.5	635	65	10.2	39468	1930	10186
11	NB	36.5	29	29	100	0	652	0
12	NB	36.5	21	2	9.5	1520	42	413
13	NB	31.5	118	0	0	11628	0	3956
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>9206</b>	<b>807</b>	<b>****</b>	<b>308958</b>	<b>****</b>	<b>75479</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	575	117	20.3	13476	1509	3303
5	SB	8	3273	663	20.3	38702	4722	8911
6	SB	19	735	47	6.4	22316	808	4622
7	SB	11.5	44	0	0	1882	0	688
8	SB	31	588	471	80.1	4372	8904	373
9	SB	33	2812	1016	36.1	110910	28230	25821
10	SB	33.5	636	45	7.1	48401	1232	14301
11	SB	36.5	49	49	100	0	926	0
12	SB	36.5	29	6	20.7	2051	152	606
13	SB	31.5	45	1	2.2	4971	29	1792
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>8786</b>	<b>2415</b>	<b>****</b>	<b>247081</b>	<b>****</b>	<b>60417</b>
<b>GRAND TOTAL</b>	<b>****</b>	<b>****</b>	<b>17992</b>	<b>3222</b>	<b>478</b>	<b>556039</b>	<b>62943</b>	<b>135896</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	60	25	34	91	210	0
2	335869	83643	89225	301724	810461	38.3
3	289278	59025	66169	272271	686743	32.4
4	17527	741	1068	13917	33253	1.6
5	56986	5745	4974	38450	106156	5
6	17853	997	2555	20569	41975	2
7	8001	636	313	1569	10519	0.5
8	21531	1144	926	12350	35951	1.7
9	129358	9629	9712	129428	278127	13.1
10	35917	5480	4868	44765	91030	4.3
11	567	85	84	842	1578	0.1
12	1430	132	0	2202	3765	0.2
13	11047	581	0	5000	16628	0.8
<b>TOTAL</b>	<b>925424</b>	<b>167865</b>	<b>179928</b>	<b>843179</b>	<b>2116395</b>	<b>100</b>
<b>GVW/LANE</b>	<b>43.73</b>	<b>7.93</b>	<b>8.5</b>	<b>39.84</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	0.0059
2	53	12	11	32	108	0.8	0.0011
3	148	24	23	99	293	2.17	0.0059
4	442	12	15	311	780	5.78	1.34
5	955	94	37	387	1473	10.93	0.4
6	490	25	62	388	965	7.16	1.57
7	164	12	7	31	214	1.59	2.26
8	391	14	9	120	534	3.96	0.81
9	3156	234	134	2547	6071	45.03	2.36
10	866	123	126	1258	2372	17.59	3.73
11	1	0	0	1	2	0.01	0.16
12	54	2	0	80	137	1.01	4.62
13	290	20	0	225	535	3.97	6.17
<b>TOTAL</b>	<b>7010</b>	<b>572</b>	<b>424</b>	<b>5478</b>	<b>13483</b>	<b>100</b>	<b>23</b>
<b>ESALS/LANE</b>	<b>52</b>	<b>4.2</b>	<b>3.1</b>	<b>40.6</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>
Oct 2017	79225	7922	171	73909	93.3	5315.5	6.7	91.8	8.2
Nov 2017	214234	7141	488	199588	93.2	14646	6.8	92.7	7.3
Dec 2017	210731	6798	402	198277	94.1	12454.1	5.9	93.2	6.8
Jan 2018	203332	6559	416	190447	93.7	12885.2	6.3	94.4	5.6
Feb 2018	187761	6706	445	175314	93.4	12446.9	6.6	93.7	6.3
Mar 2018	227467	7338	458	213260	93.8	14206.9	6.2	93.5	6.5
Apr 2018	208109	6937	390	196423	94.4	11686.2	5.6	93.5	6.5
May 2018	275473	8886	486	260406	94.5	15066.6	5.5	91.8	8.2
Jun 2018	306452	10215	626	287683	93.9	18769.5	6.1	90.8	9.2
Jul 2018	350547	11308	574	332764	94.9	17782.9	5.1	90.2	9.8
Aug 2018	358059	11550	592	339709	94.9	18350	5.1	90.6	9.4
Sep 2018	313915	10464	604	295806	94.2	18109.5	5.8	90.9	9.1
<b>TOTAL</b>	<b>2935305</b>	<b>-</b>	<b>-</b>	<b>2763586</b>	<b>-</b>	<b>171719</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>AVERAGE</b>	<b>244609</b>	<b>8485</b>	<b>471</b>	<b>230299</b>	<b>94</b>	<b>14310</b>	<b>6</b>	<b>92</b>	<b>8</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>
Oct 2017	2404	157	213	1939	4714	92	8	40.8
Nov 2017	6711	379	332	6211	13634	95	5	53.5
Dec 2017	6031	297	262	4744	11333	95	5	62.1
Jan 2018	5226	297	153	5862	11538	96	4	70
Feb 2018	5255	266	317	7250	13089	96	4	91.1
Mar 2018	6638	321	340	7817	15116	96	4	71.8
Apr 2018	4677	226	180	4274	9357	96	4	29.7
May 2018	5870	397	196	4186	10649	94	6	19.6
Jun 2018	8117	587	372	5176	14252	93	7	29.4
Jul 2018	6965	535	336	5229	13065	93	7	23.1
Aug 2018	7274	628	412	5605	13919	93	7	29.6
Sep 2018	7125	574	424	5493	13615	93	7	31.5
<b>TOTAL</b>	<b>72293</b>	<b>4664</b>	<b>3538</b>	<b>63787</b>	<b>144282</b>	-	-	-
<b>AVERAGE</b>	<b>6024</b>	<b>389</b>	<b>295</b>	<b>5316</b>	<b>12024</b>	<b>94</b>	<b>6</b>	<b>46</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>
Oct 2017	642847	77552	51867	631608	1403875
Nov 2017	612031	73787	60261	626261	1372339
Dec 2017	725128	97474	95556	725911	1644069
Jan 2018	624365	79369	76549	597736	1378018
Feb 2018	805267	135068	123381	716964	1780680
Mar 2018	956809	179159	163542	840328	2139837
Apr 2018	989942	190861	199906	891495	2272204
May 2018	1029912	206482	199903	915971	2352268
Jun 2018	928245	167946	179934	843547	2119672
Jul 2018	246018	34262	43177	241343	564799
Aug 2018	698717	96530	89621	663298	1548165
Sep 2018	675664	81599	69056	602852	1429172
<b>TOTAL</b>	<b>8934944</b>	<b>1420089</b>	<b>1352752</b>	<b>8297314</b>	<b>20005100</b>
<b>AVERAGE</b>	<b>744579</b>	<b>118341</b>	<b>112729</b>	<b>691443</b>	<b>1667092</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>
Oct 2017	998	1.3	18.8	392	110
Nov 2017	2780	1.3	19	1289	398
Dec 2017	2132	1	17.2	1074	320
Jan 2018	2101	1.1	16.5	1071	390
Feb 2018	2416	1.3	19.6	1294	626
Mar 2018	2872	1.3	20.3	1363	661
Apr 2018	1663	0.8	14.3	499	108
May 2018	1827	0.7	12.2	470	98
Jun 2018	2892	1	15.4	866	157
Jul 2018	2415	0.7	13.6	700	189
Aug 2018	2476	0.7	13.5	830	275
Sep 2018	2546	0.8	14.1	934	286
<b>TOTAL</b>	<b>27118</b>	<b>-</b>	<b>-</b>	<b>10782</b>	<b>3618</b>
<b>AVERAGE</b>	<b>2259.8</b>	<b>1</b>	<b>16.2</b>	<b>898.5</b>	<b>301.5</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>
Oct 2017	25289	21734	47024	53.8	46.2
Nov 2017	65328	66591	131919	49.5	50.5
Dec 2017	55298	50890	106189	52.1	47.9
Jan 2018	49987	59879	109866	45.5	54.5
Feb 2018	48947	66785	115732	42.3	57.7
Mar 2018	61186	72833	134019	45.7	54.3
Apr 2018	46511	43976	90486	51.4	48.6
May 2018	61664	47687	109351	56.4	43.6
Jun 2018	88451	64157	152607	58	42
Jul 2018	72207	58420	130627	55.3	44.7
Aug 2018	73261	62083	135345	54.1	45.9
Sep 2018	75479	60417	135896	55.5	44.5
<b>TOTAL</b>	<b>723608</b>	<b>675451</b>	<b>1399060</b>	-	-
<b>AVERAGE</b>	<b>60300.7</b>	<b>56287.6</b>	<b>116588.3</b>	<b>51.6</b>	<b>48.4</b>