

DECEMBER 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 December 2019. Volume was computed using all monthly data.

System Calibration

WIM #27 was most recently calibrated on 2015-06-17. 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: 188652 | Passenger Vehicles: 153847 | Heavy Commercial Vehicles: 34805

Monthly Average Daily Traffic (MADT): 5766 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 1123

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 Mondays. 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 02 PM and 04 PM. Similarly, WB PVs peaked in volume between 02 PM and 04 PM

Heavy Commercial Vehicles (HCVs)

Volume trends. On an average 24-hour day, HCVs traveling EB typically reached peak volume levels between 02 PM and 04 PM, while volume going WB peaked between 02 PM and 04 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 34805 HCVs, 5904 of them were overweight ³. These overweight HCVs contributed to 3.3% of total monthly volume, and 17.8% of total monthly

HCV volume. EB overweight vehicles typically reached highest numbers on Thursdays, with lowest volumes reported on Saturdays. WB overweight vehicles tended to reach highest volumes on Thursdays, with lowest volumes reported on Saturdays. 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 97.3% 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 December.

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 ,3017 EB vehicles exceeded 88,000 pounds (2638 vehicles were Class 9's; 155 vehicles were Class 10's). Of vehicles traveling WB,

11 EB vehicles exceeded 88,000 pounds (9 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 December 2019.

Loaded vs. Unloaded HCVs. Figure 10 shows the GVW distributions of Class 9s and 10s in December 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 338746 tons of freight was recorded to have crossed the WIM. More freight was shipped EB (69.1%) than WB (30.9%). 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 188652 vehicles with a combined GVW of 2353343 kips (1 kip = 1,000 pounds = 0.5 tons) in December 2019. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

Pavement Design. A total of 90703 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 92.2% of all ESALs were recorded EB while 7.8% was observed WB. In particular, 63% of all ESALs were generated by the Class 14's (Class 14's were also responsible for generating % of total GVW observed this month). See Table 6 and Figures 14-15 for more information on ESALs (Table 6 also provides flexible ESAL factors for each vehicle class using a terminal serviceability of 2.5 and a structural number of 5).

#####WIM monthly reports can be found at:

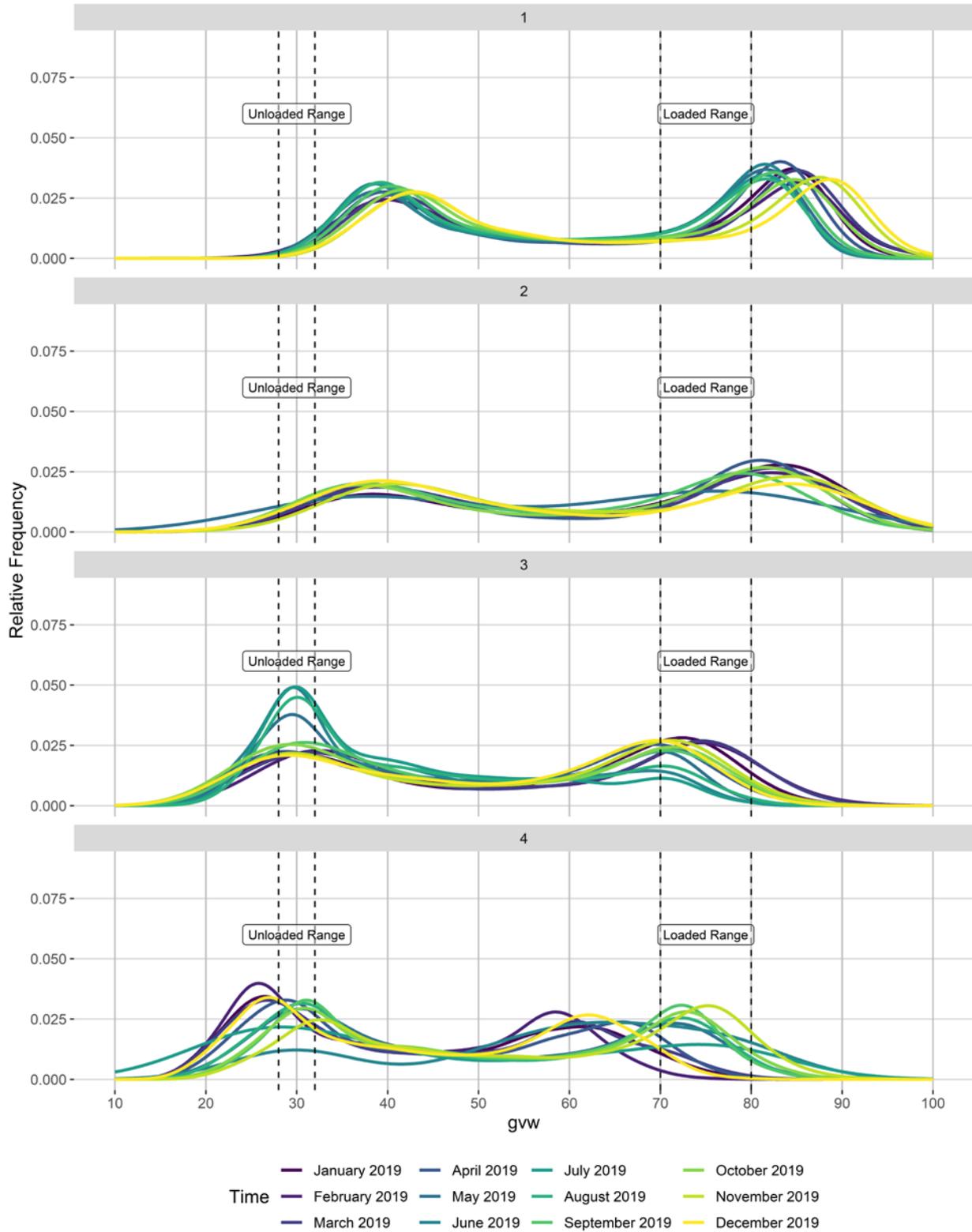
<http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html> MnDOT's vehicle

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

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

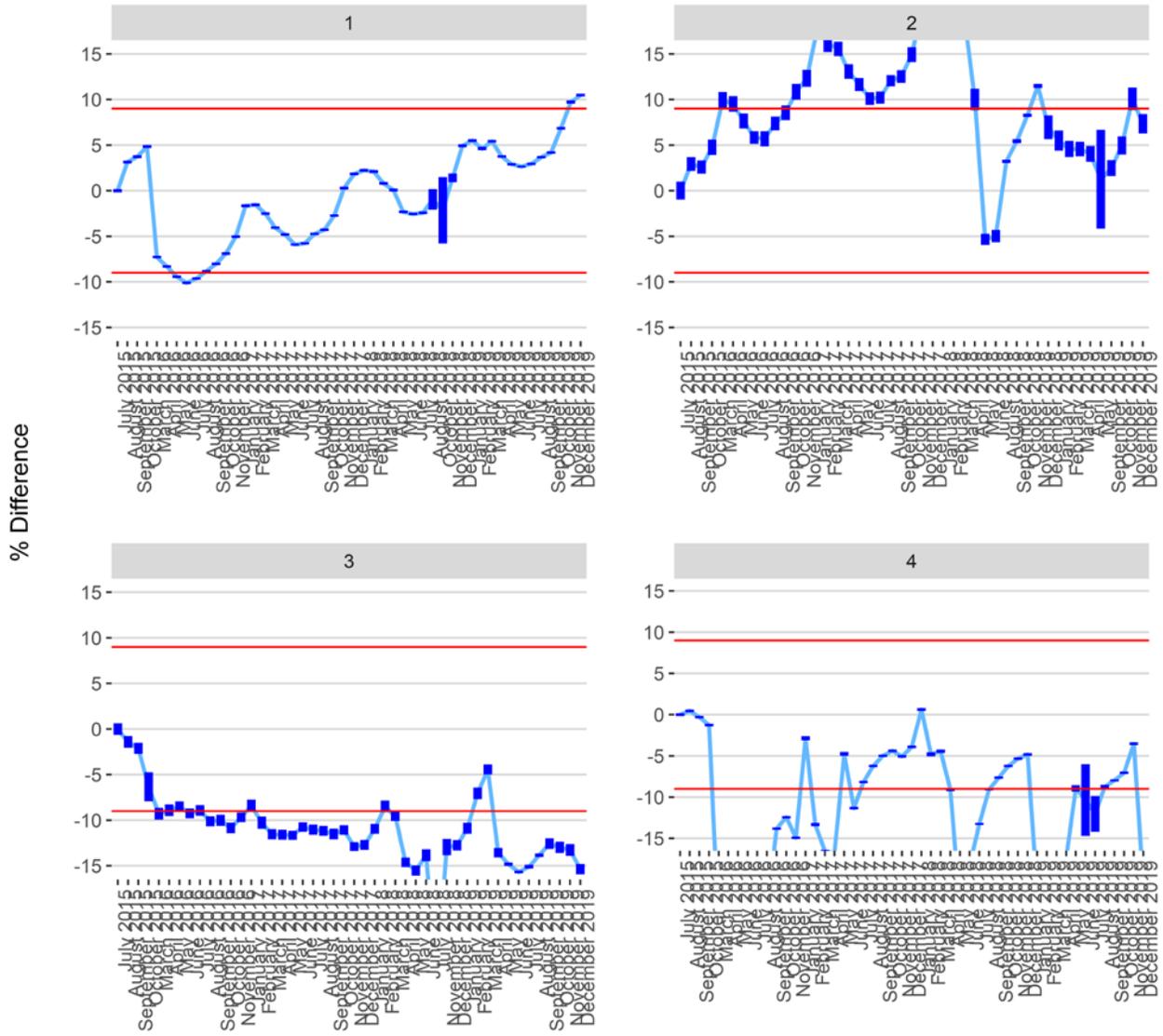
To request this document in an alternative format, please call 651-366-4718 or 1-800-657-3774, or email your request to ADArequest.dot@state.mn.us. Please request at least one week in advance.

Figure 1 - Monthly Class 9 GVW Histogram



Months that have not passed QC parameters are not displayed

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



Months that have not passed QC parameters are not displayed

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

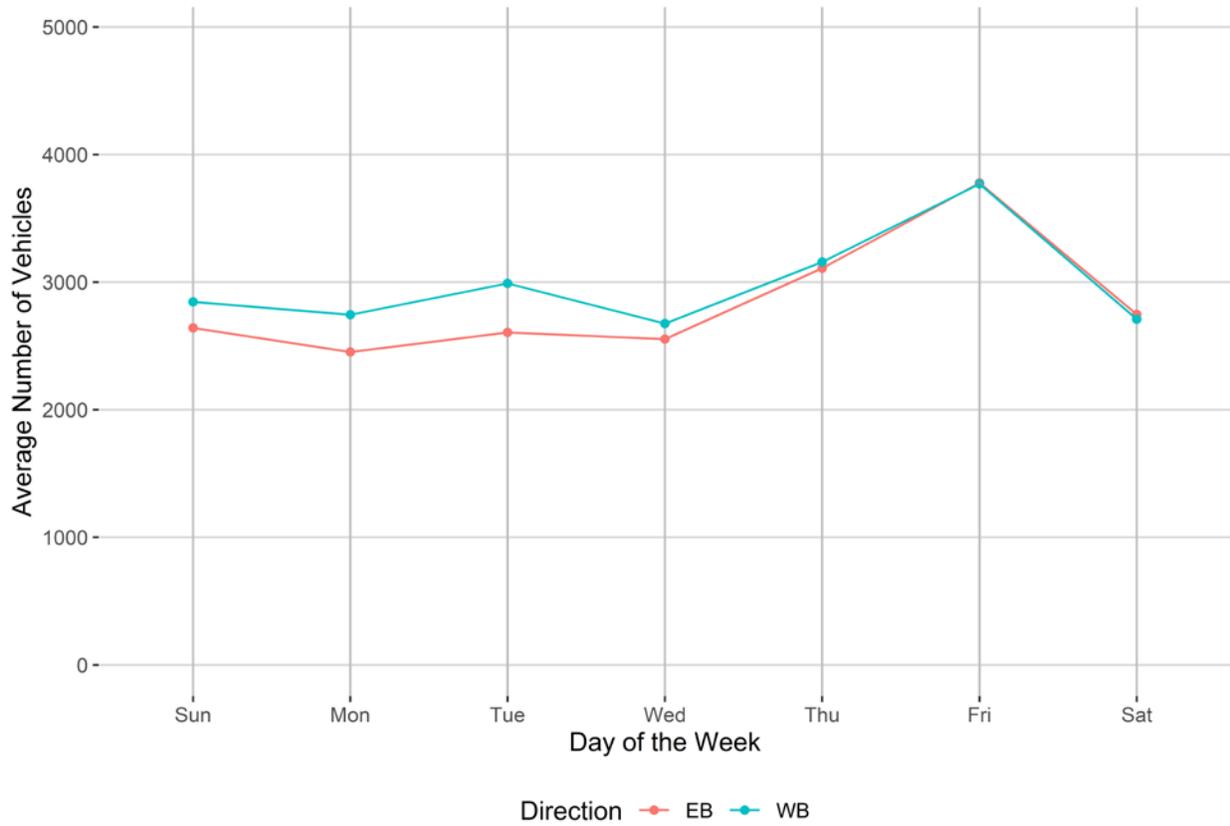


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

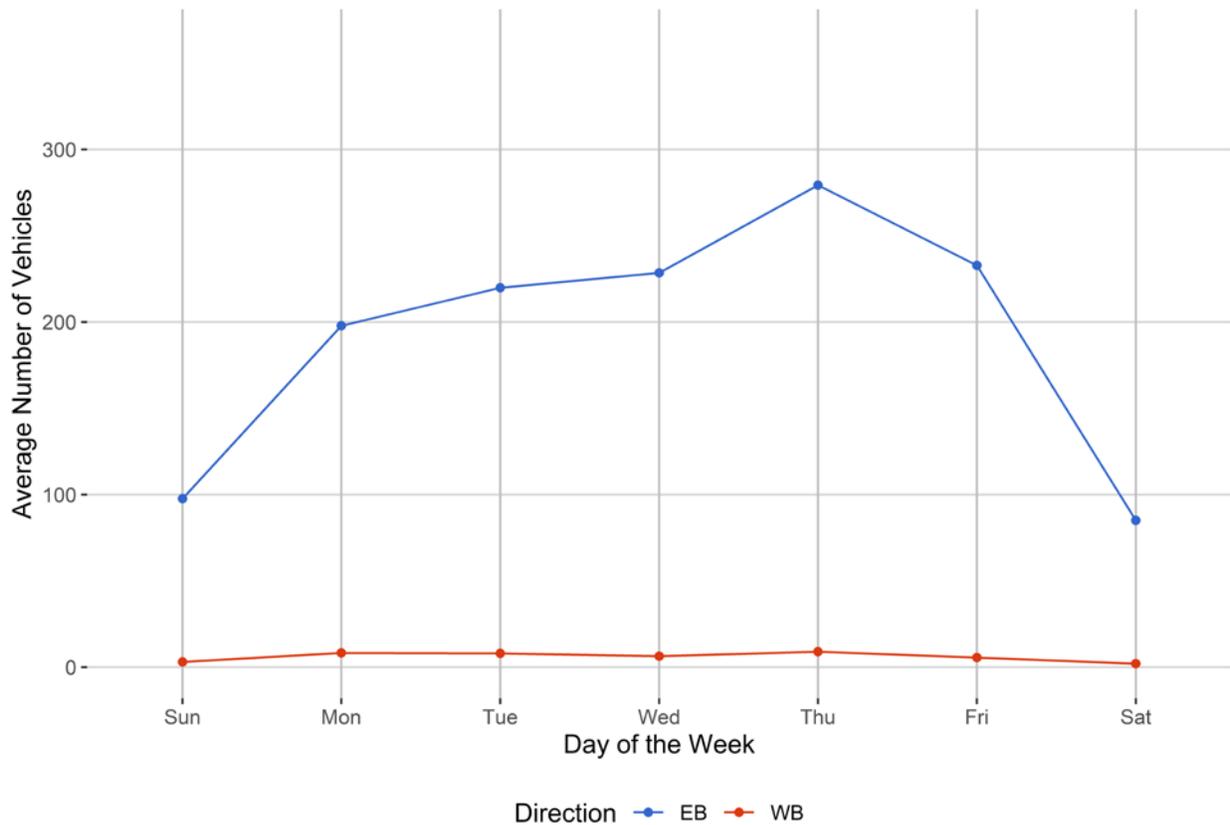


Figure 4 - Passenger Vehicles vs. Hour of the Day

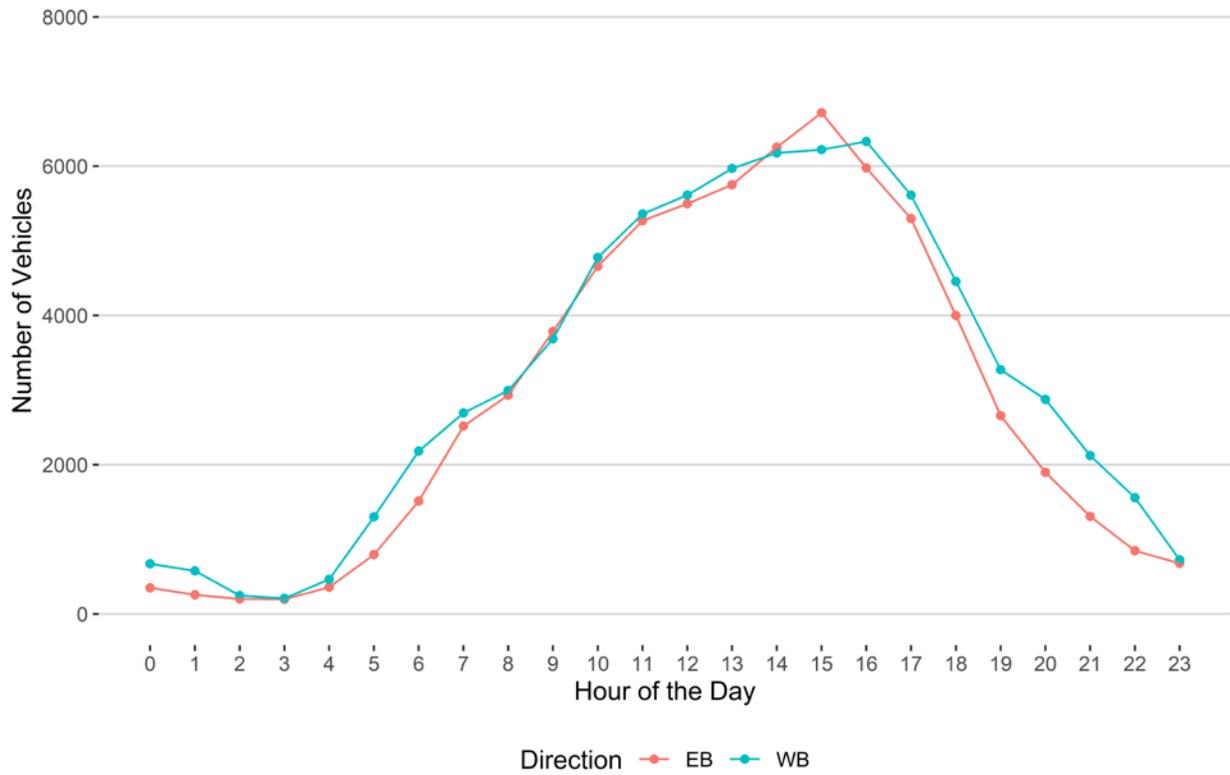


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

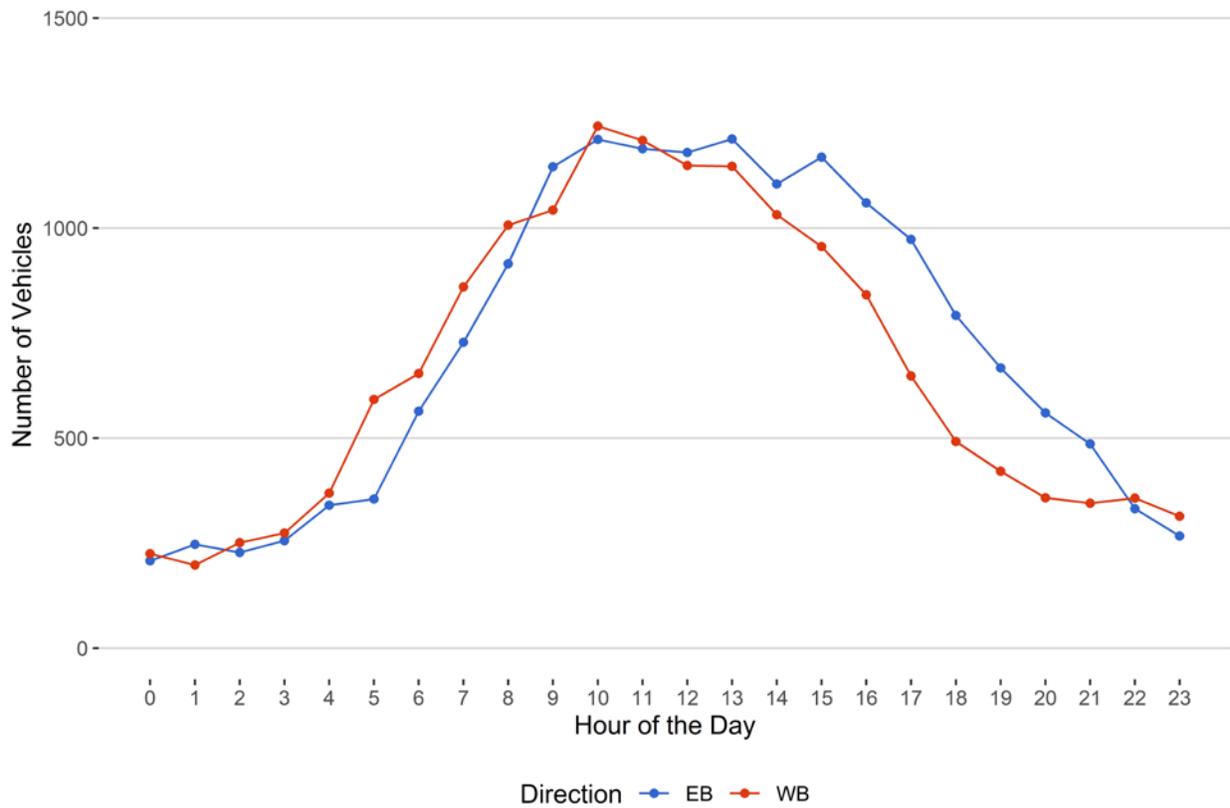


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

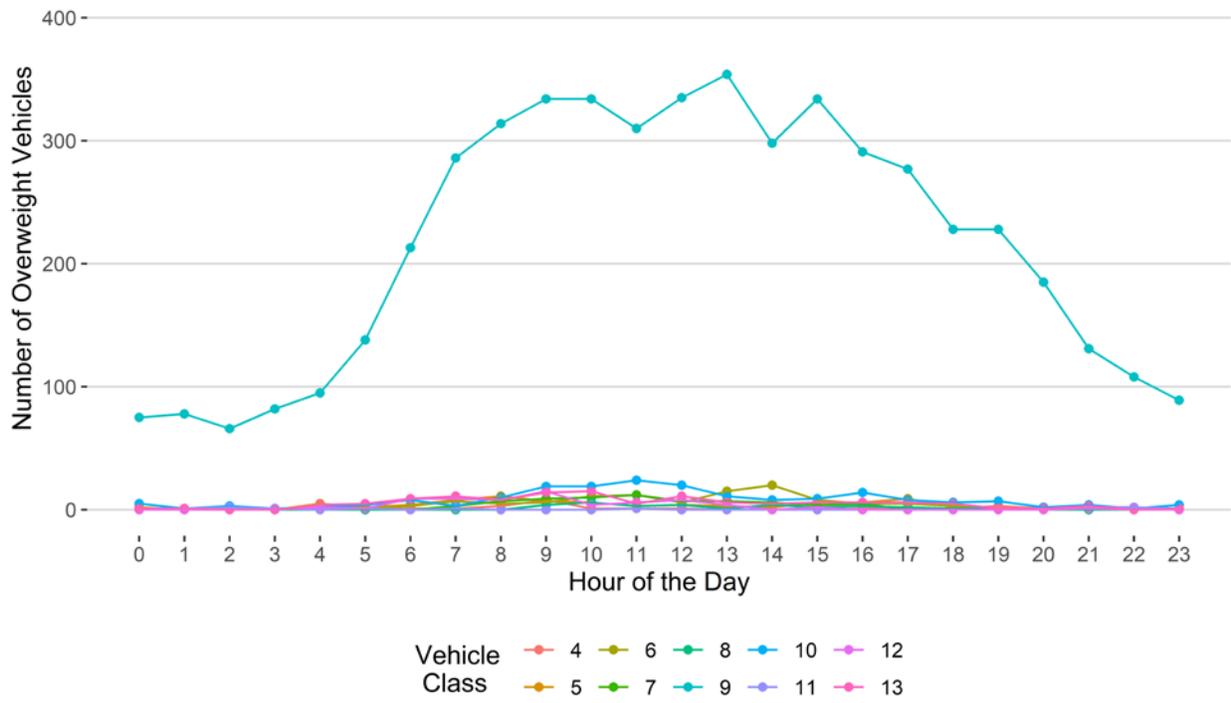


Figure 7 - Overweight Vehicles by Direction
Hour of the Day

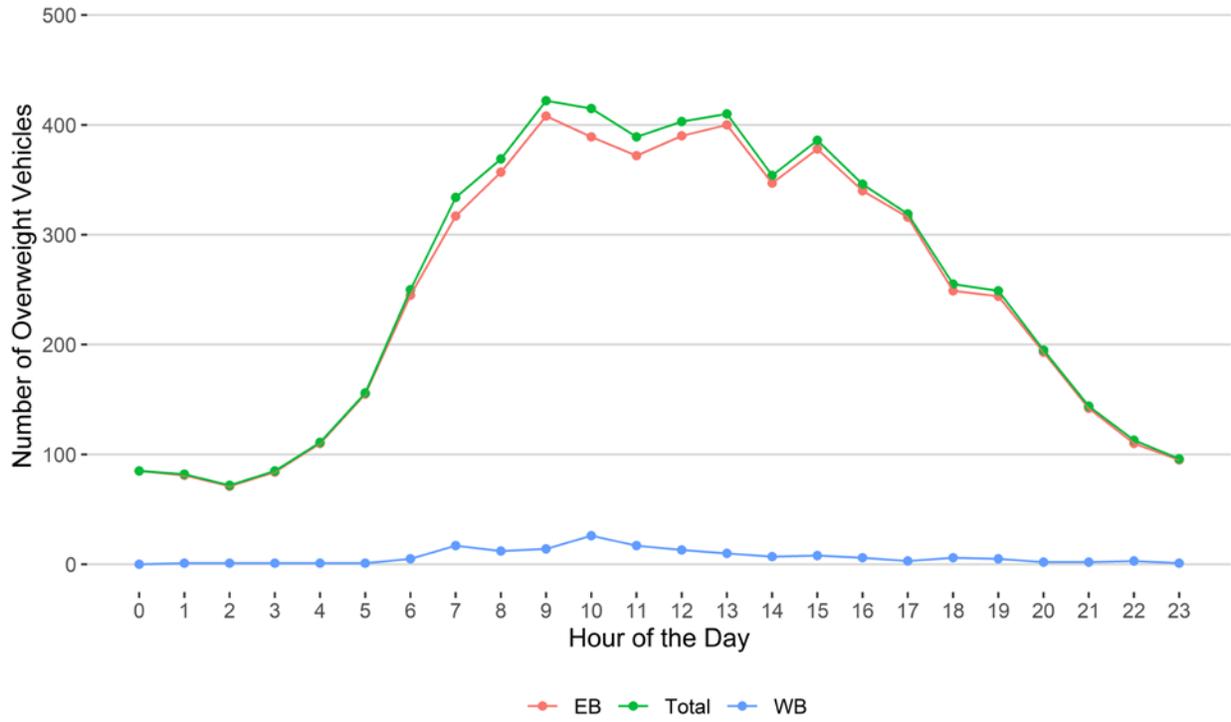
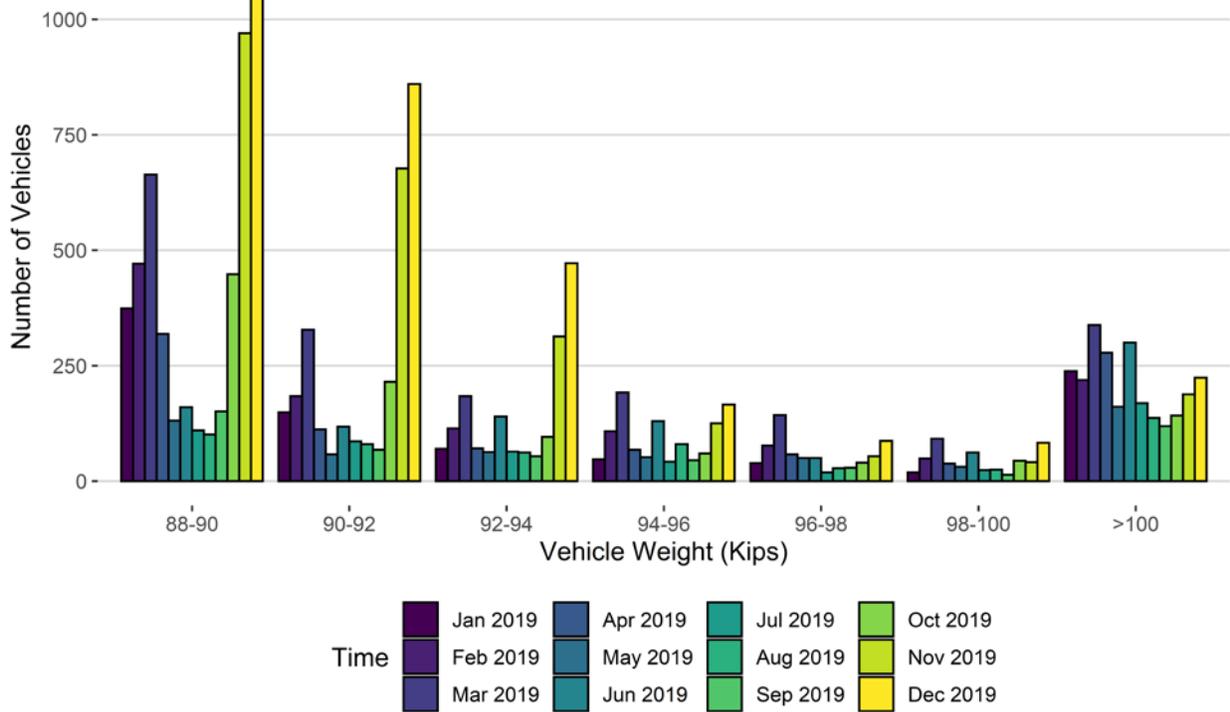
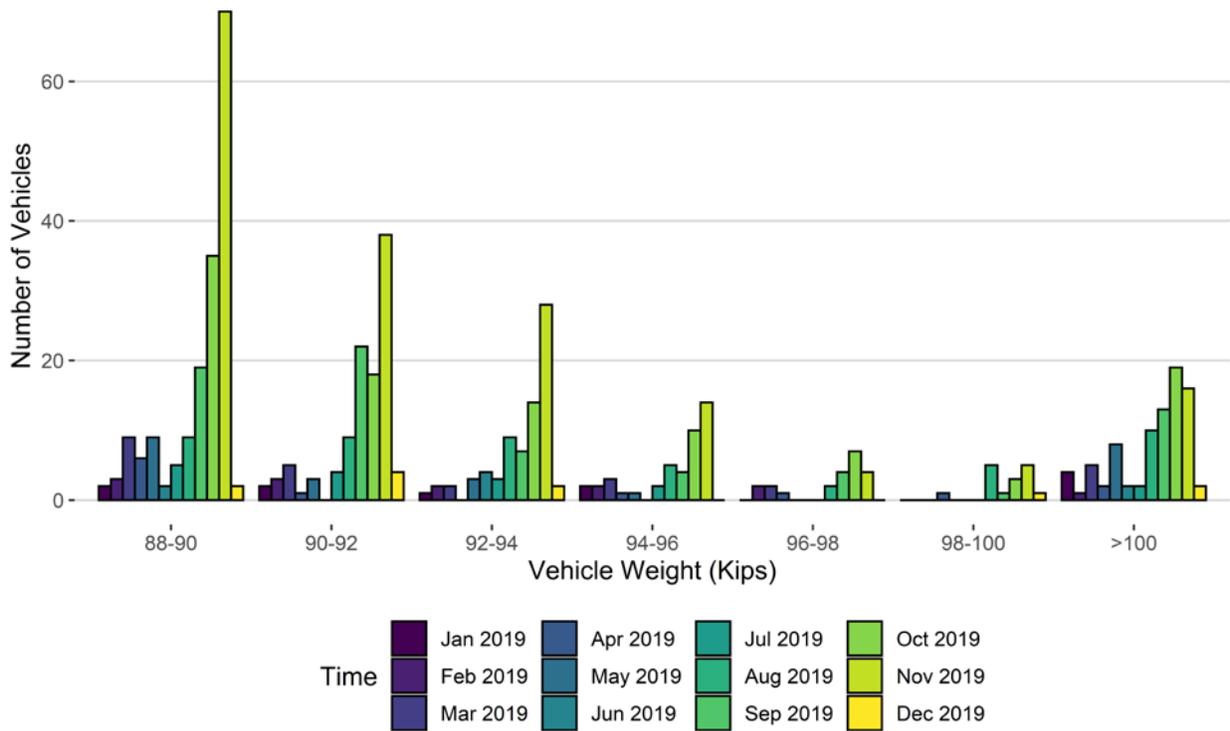


Figure 8 - Histogram of EB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019	Jul 2019	Aug 2019	Sep 2019	Oct 2019	Nov 2019	Dec 2019
88-90	374	471	664	319	131	160	110	101	151	448	970	1058
90-92	149	184	328	112	58	118	86	80	68	215	677	860
92-94	70	114	184	71	63	140	64	62	54	96	313	472
94-96	47	108	192	68	52	130	42	80	45	60	125	166
96-98	39	77	143	58	50	50	19	28	29	40	54	87
98-100	19	49	92	38	31	62	24	25	14	44	41	83
>100	238	219	338	278	161	300	169	137	119	142	188	224
Total	936	1222	1941	944	546	960	514	513	480	1045	2368	2950

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



Vehicle Weights (Kips)	Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	Jun 2019	Jul 2019	Aug 2019	Sep 2019	Oct 2019	Nov 2019	Dec 2019
88-90	2	3	9	6	9	2	5	9	19	35	70	2
90-92	2	3	5	1	3	0	4	9	22	18	38	4
92-94	1	2	2	0	3	4	3	9	7	14	28	2
94-96	2	2	3	1	1	0	2	5	4	10	14	0
96-98	0	2	2	1	0	0	0	2	4	7	4	0
98-100	0	0	0	1	0	0	0	5	1	3	5	1
>100	4	1	5	2	8	2	2	10	13	19	16	2
Total	11	13	26	12	24	8	16	49	70	106	175	11

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

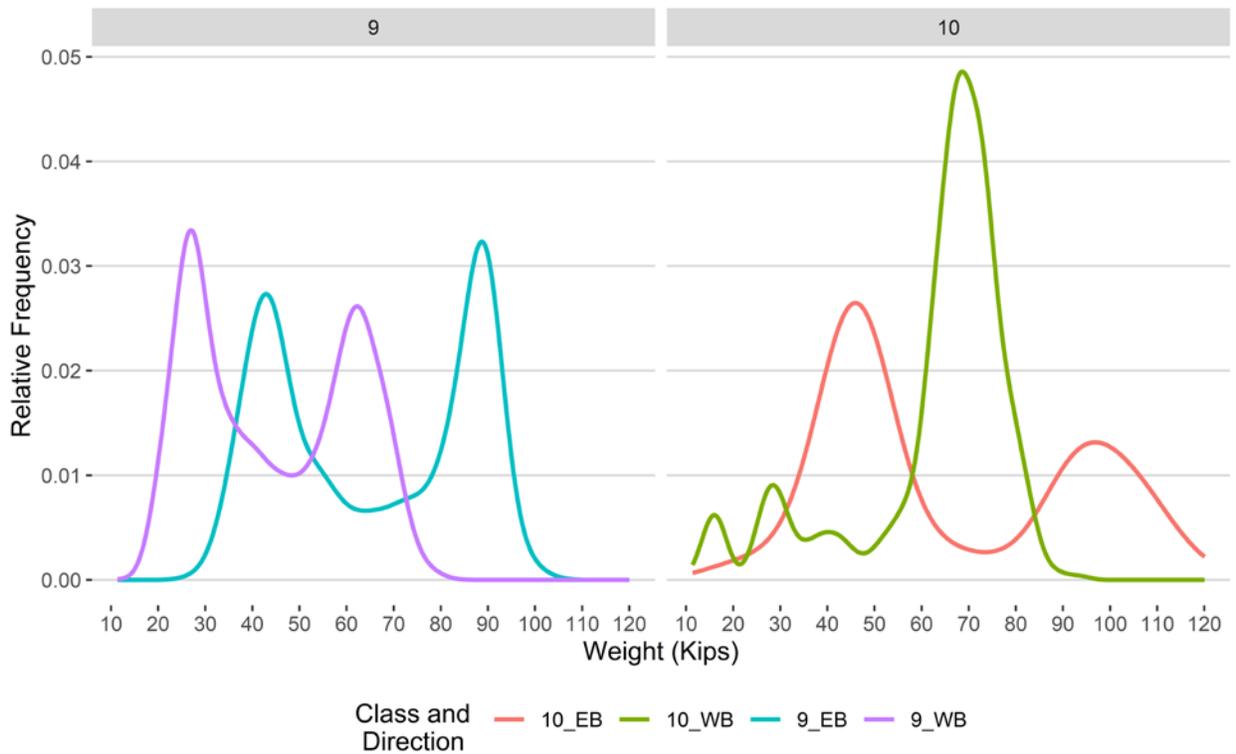


Figure 9 - Freight Percentage by Direction and Class

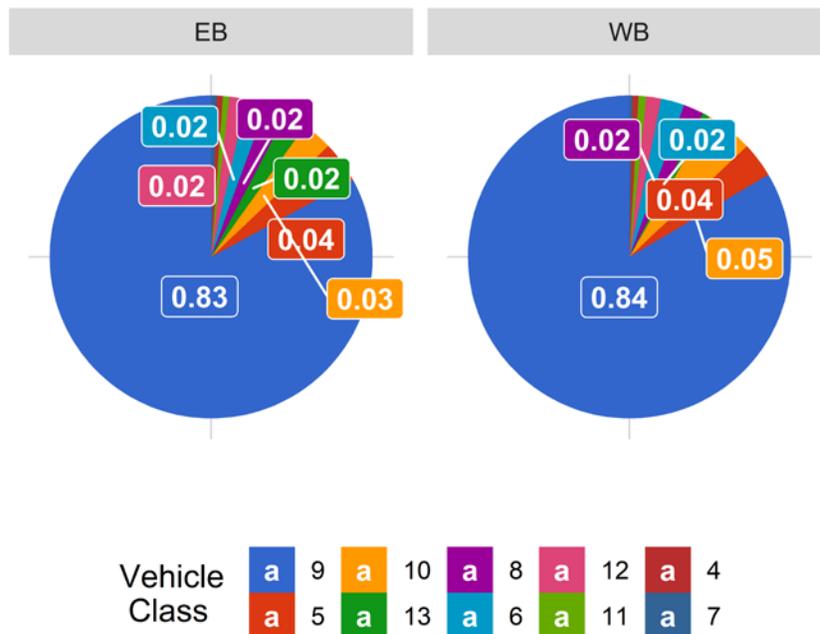


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

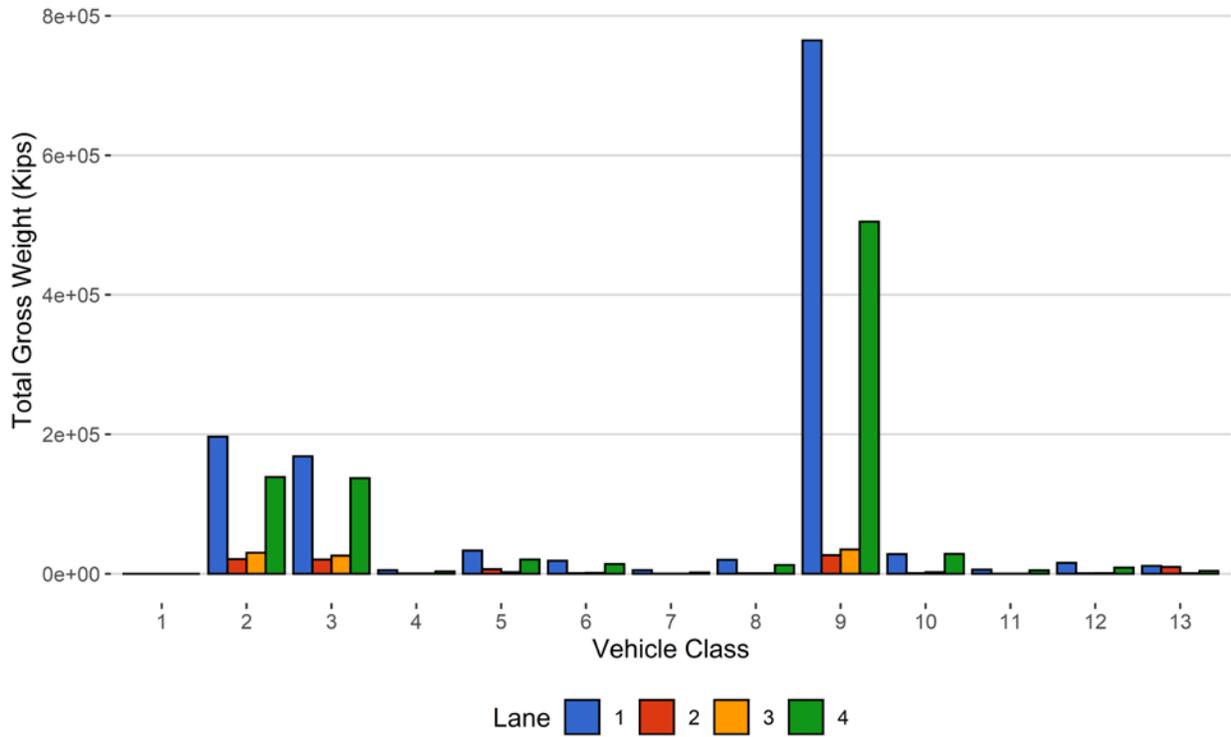


Figure 11 - Total Gross Vehicle Weight t

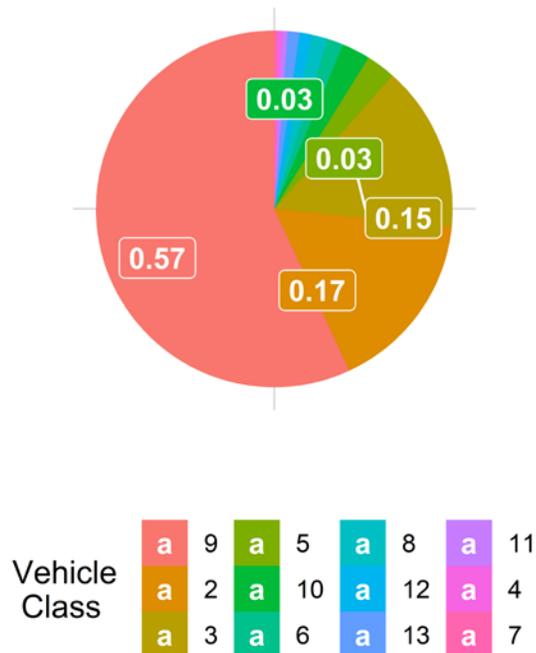


Figure 12 - Total ESALs by Class and Lane

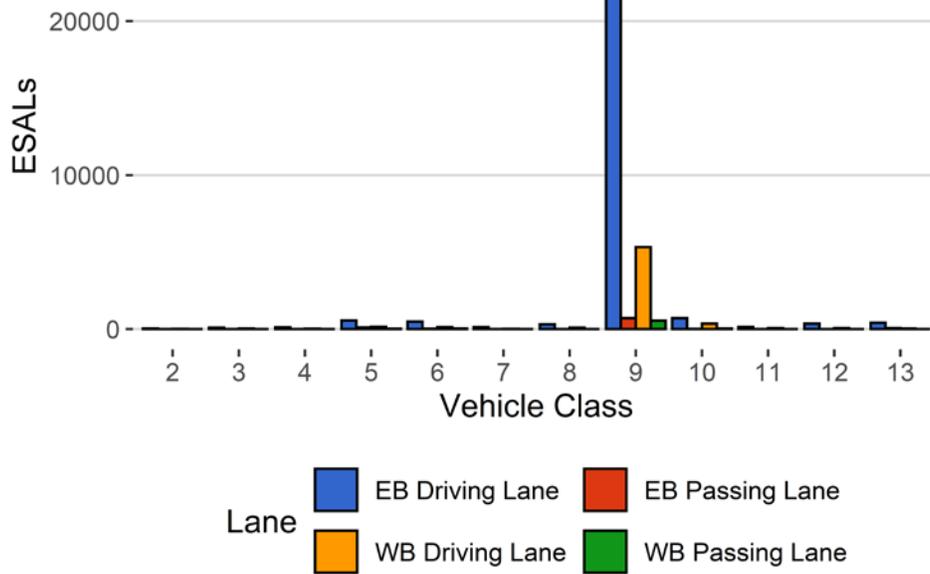


Figure 13 - ESALs by Class

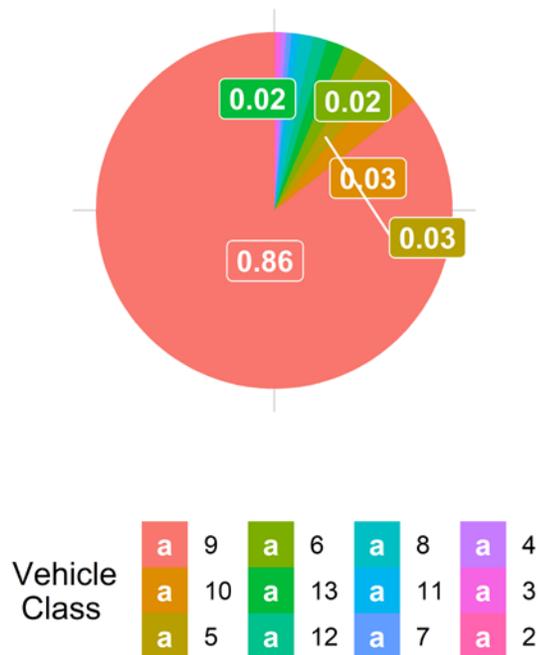


Table 1 Class 9 Front Axle Weight by Lane

<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	11.34	0.00	12.02	0.00	11.77	0.00
August 2015	11.58	3.14	11.67	2.91	11.85	-1.42	11.83	0.45
September 2015	11.64	3.73	11.63	2.59	11.77	-2.12	11.74	-0.31
October 2015	11.77	4.84	11.88	4.77	11.26	-6.34	11.63	-1.26
March 2016	10.41	-7.28	12.46	9.93	10.90	-9.29	8.69	-26.23
April 2016	10.29	-8.32	12.41	9.51	10.95	-8.90	8.97	-23.79
May 2016	10.17	-9.43	12.20	7.65	11.00	-8.51	8.92	-24.24
June 2016	10.09	-10.11	12.00	5.83	10.91	-9.26	8.54	-27.43
July 2016	10.14	-9.64	11.98	5.69	10.95	-8.93	8.69	-26.23
August 2016	10.23	-8.84	12.17	7.38	10.81	-10.12	9.00	-23.54
September 2016	10.33	-8.02	12.30	8.54	10.82	-10.01	10.15	-13.83
October 2016	10.45	-6.90	12.56	10.85	10.72	-10.86	10.31	-12.44
November 2016	10.66	-5.04	12.73	12.33	10.86	-9.69	10.02	-14.93
January 2017	11.04	-1.66	13.34	17.68	11.01	-8.41	11.44	-2.87
February 2017	11.05	-1.55	13.17	16.16	10.79	-10.28	10.20	-13.33
March 2017	10.94	-2.52	13.10	15.55	10.63	-11.54	9.82	-16.56
April 2017	10.77	-4.06	12.82	13.08	10.63	-11.60	9.80	-16.77
May 2017	10.69	-4.81	12.65	11.63	10.62	-11.66	11.21	-4.76
June 2017	10.56	-5.91	12.48	10.11	10.73	-10.76	10.44	-11.33
July 2017	10.58	-5.78	12.49	10.22	10.69	-11.05	10.81	-8.17
August 2017	10.69	-4.74	12.70	12.07	10.68	-11.18	11.04	-6.24
September 2017	10.75	-4.28	12.75	12.51	10.64	-11.51	11.19	-4.99
October 2017	10.92	-2.73	13.03	14.92	10.69	-11.08	11.26	-4.39
November 2017	11.26	0.29	13.63	20.20	10.47	-12.89	11.18	-5.06
December 2017	11.43	1.83	13.73	21.08	10.49	-12.71	11.31	-3.91
January	11.48	2.24	13.94	23.01	10.70	-10.96	11.85	0.62

2018								
February 2018	11.46	2.10	13.98	23.31	11.00	-8.49	11.21	-4.81
March 2018	11.32	0.80	13.52	19.27	10.87	-9.56	11.25	-4.44
April 2018	11.23	0.07	12.47	10.01	10.26	-14.62	10.71	-9.08
May 2018	10.97	-2.33	10.73	-5.35	10.16	-15.52	8.99	-23.61
June 2018	10.94	-2.56	10.77	-4.98	10.36	-13.85	9.62	-18.28
July 2018	10.95	-2.42	NA	NA	8.76	-27.15	10.21	-13.26
August 2018	11.12	-0.96	11.70	3.22	NA	NA	10.71	-9.07
October 2018	10.99	-2.14	12.27	8.27	NA	NA	11.04	-6.24
November 2018	11.38	1.41	12.64	11.49	10.47	-12.95	11.15	-5.34
December 2018	11.78	4.92	12.12	6.96	10.49	-12.76	11.21	-4.83
January 2019	11.84	5.50	11.96	5.49	10.71	-10.89	9.24	-21.53
February 2019	11.75	4.62	11.85	4.57	11.17	-7.06	8.89	-24.48
March 2019	11.84	5.42	11.85	4.57	11.49	-4.43	9.54	-18.98
April 2019	11.65	3.74	11.79	4.04	10.39	-13.57	9.73	-17.34
May 2019	11.55	2.90	11.48	1.26	10.24	-14.82	10.72	-8.94
June 2019	11.52	2.65	NA	NA	10.14	-15.68	10.55	-10.36
July 2019	11.56	2.94	NA	NA	10.21	-15.10	10.36	-12.03
August 2019	11.64	3.68	NA	NA	10.36	-13.84	10.74	-8.74
September 2019	11.70	4.19	11.62	2.48	10.51	-12.57	10.84	-7.97
October 2019	11.99	6.84	11.90	4.96	10.46	-12.98	10.94	-7.05
November 2019	12.32	9.72	12.48	10.09	10.43	-13.26	11.36	-3.53
December 2019	12.40	10.48	12.17	7.35	10.17	-15.38	9.37	-20.46

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	0	0	0	0
2	3076	95346	50.5	0	0
3	1887	58500	31	0	0
4	12	373	0.2	24	0.4
5	142	4416	2.3	84	1.4
6	41	1263	0.7	111	1.9
7	4	119	0.1	71	1.2
8	34	1065	0.6	31	0.5
9	816	25297	13.4	5183	87.8
10	31	976	0.5	193	3.3
11	7	221	0.1	14	0.2
12	14	429	0.2	69	1.2
13	21	646	0.3	124	2.1
TOTAL	6086	188652	100	5904	100

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

<i>Date</i>	<i>Day of Week</i>	<i>Time</i>	<i>Vehicle Class</i>	<i>Direction</i>	<i>Lane</i>	<i>GVW (lbs)</i>
2019-12-20	Friday	00:39:06	10	EB	1	120.05
2019-12-31	Tuesday	08:56:56	10	EB	1	118.72
2019-12-20	Friday	12:47:08	10	EB	1	118.71
2019-12-19	Thursday	14:03:45	10	EB	1	118.55
2019-12-31	Tuesday	12:06:11	10	EB	1	117.86
2019-12-20	Friday	10:45:40	10	EB	1	113.45
2019-12-17	Tuesday	23:53:25	10	EB	1	112.79
2019-12-19	Thursday	06:49:51	10	EB	1	112.61
2019-12-23	Monday	11:13:58	10	EB	1	112.33
2019-12-30	Monday	11:58:18	10	EB	1	112.07

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	184	5	2.7	5512	67	1413
5	EB	8	2426	35	1.4	39423	265	10147
6	EB	19	560	3	0.5	19468	55	4443
7	EB	11.5	77	0	0	5458	0	2286
8	EB	31	537	86	16	18734	1811	2377
9	EB	33	12071	115	1	787988	3557	196720
10	EB	33.5	441	20	4.5	28428	503	7162
11	EB	36.5	106	0	0	6181	0	1156
12	EB	36.5	232	0	0	16275	0	3903
13	EB	31.5	556	437	78.6	12560	8395	4406
TOTAL	****	****	17190	701	****	940026	****	234013
<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	172	44	25.6	3293	563	687
5	WB	8	1783	433	24.3	19795	3036	4497
6	WB	19	644	313	48.6	10220	4941	1966
7	WB	11.5	36	0	0	1926	0	756
8	WB	31	478	330	69	5357	7813	385
9	WB	33	12041	4340	36	425300	114568	85584
10	WB	33.5	489	56	11.5	29242	1341	7368
11	WB	36.5	105	2	1.9	5093	41	667
12	WB	36.5	177	2	1.1	9398	61	1505
13	WB	31.5	60	0	0	4526	0	1318
TOTAL	****	****	15985	5520	****	514152	****	104733
GRAND TOTAL	****	****	33175	6221	323	1454178	147015	338746

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>
2	196481	20945	30202	138607	386235	16.5
3	168387	20333	25986	137012	351719	15
4	5269	310	453	3403	9434	0.4
5	33195	6492	2414	20417	62518	2.7
6	18630	893	1321	13840	34684	1.5
7	5330	128	58	1868	7383	0.3
8	19956	589	659	12511	33715	1.4
9	764876	26669	34859	505009	1331413	56.9
10	28222	710	2279	28304	59515	2.5
11	6006	175	122	5012	11314	0.5
12	15748	527	728	8731	25734	1.1
13	11199	9756	463	4064	25482	1.1
TOTAL	1273299	87527	99543	878778	2339147	100
GVW/LANE	54.43	3.74	4.26	37.57	100	0

Table 6 ESALs by Class and Lane and Flexible ESAL Factors

<i>Vehicle Class</i>	<i>EB Driving Lane</i>	<i>EB Passing Lane</i>	<i>WB Passing Lane</i>	<i>WB Driving Lane</i>	<i>Total</i>	<i>Percentage</i>	<i>Flexible ESAL Factor</i>
2	37	5	3	12	58	0.17	0.0013
3	92	10	8	36	147	0.44	0.0053
4	117	2	6	28	153	0.46	0.86
5	568	109	24	158	860	2.58	0.41
6	484	32	36	128	681	2.04	1.13
7	135	6	1	23	164	0.49	2.79
8	319	8	4	97	428	1.28	0.85
9	21958	711	546	5320	28535	85.58	2.37
10	715	15	38	356	1124	3.37	2.41
11	145	11	2	63	222	0.67	2.05
12	357	5	6	67	436	1.31	2.1
13	412	69	6	48	535	1.6	1.72
TOTAL	25339	983	682	6337	33342	100	17
ESALS/LANE	76	2.9	2	19	100	-	-

Table 7 Site Summary: Volume and Vehicle Class

<i>Month</i>	<i>Total Volume</i>	<i>Monthly ADT</i>	<i>Monthly HCAD T</i>	<i>Passenger Vehicles</i>	<i>Passenger Vehicles %</i>	<i>Heavy Commercial Vehicles</i>	<i>Heavy Commercial Vehicles %</i>	<i>Heavy Commercial Vehicles in Driving Lane %</i>	<i>Heavy Commercial Vehicles in Passing Lane %</i>
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
May 2019	213594	6890	1085	179966	84.3	33628	15.7	67.9	32.1
Jun 2019	228705	7624	1036	197617	86.4	31087.6	13.6	67.8	32.2
Jul 2019	240734	7766	1013	209341	87	31392.7	13	69.4	30.6
Aug 2019	253765	8186	1244	215193	84.8	38572.2	15.2	76.7	23.3
Sep 2019	206755	6853	1294	167936	81.2	38818.6	18.8	93.5	6.5
Oct 2019	166363	6814	1107	132044	79.4	34319.1	20.6	92.5	7.5
Nov 2019	187005	6444	1164	152093	81.3	34911.7	18.7	91.1	8.9
Dec 2019	188652	5766	1123	153847	81.6	34805.4	18.4	92.8	7.2
TOTAL	2308140	-	-	1914028	-	394111	-	-	-
AVERAGE	192345	6422	1079	159502	83	32843	17	85	15

###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>
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
May 2019	23198	77	5065	1377	29717	83	17	5

Jun 2019	44270	0	10778	53	55101	80	20	4.2
Jul 2019	21800	0	6454	162	28416	77	23	4.9
Aug 2019	22546	0	6633	5013	34192	81	19	5.8
Sep 2019	20003	1217	803	13976	35998	94	6	6.8
Oct 2019	20075	5245	686	12445	38451	85	15	18.4
Nov 2019	24032	67495	743	13590	105859	36	64	52.7
Dec 2019	25384	58282	694	6343	90703	35	65	32.2
TOTAL	286245	292418	35790	69006	683459	-	-	-
AVERAGE	23854	24368	2982	5750	56955	64	36	17

###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>
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
May 19	1475893	3230	746759	115061	2340943
Jun 19	2969408	16	1530595	6134	4506154
Jul 19	1515563	35	795934	18538	2330070
Aug 19	1591834	48	686107	529080	2807070
Sep 19	1285187	103428	118216	1234680	2741511
Oct 19	1123981	104255	98223	1035988	2362447
Nov 19	1245093	115656	107551	1045894	2514194
Dec 19	1274251	99844	99941	879308	2353343
TOTAL	16914965	777049	4598648	7282807	29573469
AVERAGE	1409580	64754	383221	606901	2464456

###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 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
May 2019	5775	2.9	18.6	576	205
Jun 2019	11140	2.7	19.8	988	368
Jul 2019	5399	2.5	18.8	546	195
Aug 2019	6051	2.5	16.4	582	180
Sep 2019	6074	3	15.8	569	160

Oct 2019	6353	3.9	18.9	1180	234
Nov 2019	7755	4.4	23	2626	325
Dec 2019	6040	3.4	18	3028	368
TOTAL	77458	-	-	15381	3478
AVERAGE	6454.8	3.5	19.6	1281.8	289.8

###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>
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
May 2019	241828	82288	324116	74.6	25.4
Jun 2019	471667	114813	586480	80.4	19.6
Jul 2019	230355	56870	287225	80.2	19.8
Aug 2019	243224	124422	367646	66.2	33.8
Sep 2019	215713	177272	392986	54.9	45.1
Oct 2019	210450	155730	366180	57.5	42.5
Nov 2019	231689	162079	393768	58.8	41.2
Dec 2019	234013	104733	338746	69.1	30.9
TOTAL	2929259	1263257	4192516	-	-
AVERAGE	244104.9	105271.4	349376.3	70.1	29.9