

JULY 2018



**WIM #49  
I-90,  
MP 42.6  
WORTHINGTON,  
MN**

**MONTHLY  
REPORT**



*Your Destination...Our Priority*



## WIM Site Location

WIM #49 is located on I-90 near Worthington in Nobles county.

## System Operation

WIM #49 was operational for the entire month of July 2018. Volume was computed using all monthly data.

## System Calibration

WIM #49 was most recently calibrated on 2017-12-15. 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: 433111 | Passenger Vehicles: 370548 | Heavy Commercial Vehicles: 62563

Monthly Average Daily Traffic (MADT): 13971 | Monthly Heavy Commercial Average Daily Traffic (MHCADT): 2018

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 Wednesdays. WB vehicles typically reached highest volume levels on Sundays, with lowest volumes reported on Tuesdays (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 62563 HCVs, 7517 of them were overweight<sup>3</sup>. These overweight HCVs contributed to 1.8% of total monthly volume, and 12.3% of total monthly HCV volume. EB overweight vehicles typically reached highest numbers on Wednesdays, with lowest volumes reported on Sundays. WB overweight vehicles tended to reach highest volumes on Fridays, with lowest volumes reported on Sundays. See Figure 3 .

The top two overweight violators by class were the class 9 and class 4 vehicles . Overall, overweight vehicles tended to reach peak volume concentrations during typical business hours, with 85.1% of all overweight vehicles traveling WB 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 January.

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 ,146 EB vehicles exceeded 88,000 pounds (106 vehicles were Class 9's; 20 vehicles were Class 13's). Of vehicles traveling WB,

243 EB vehicles exceeded 88,000 pounds (115 vehicles were Class 9's; 66 vehicles were Class 10's). Refer to Table 3 for the Top 10 highest recorded GVWs from Classes 9 and 10 from July 2018.

**Loaded vs. Unloaded HCVs.** Figure 10 shows the GVW distributions of Class 9s and 10s in July 2018. Data suggests that there were greater numbers of fully\_loaded Class 9's than empty Class 9's traveling EB, while there were more fully\_loaded Class 9's than empty 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 617905 tons of freight was recorded to have crossed the WIM. More freight was shipped WB (58.2%) than EB (41.8%). See Table 4 and Figure 11 for more freight information.

## Infrastructure Considerations

**Bridge.** Bridge No. 53815 and 53816 (Prestressed Beam Span) are approximately .18 miles east of WIM #49. Bridge No. 53813 and 53814 (Prestressed Beam Span) are approximately .43 miles west of WIM #49. WIM #49 recorded a total of 433111 vehicles with a combined GVW of 4740692 kips (1 kip = 1,000 pounds = 0.5 tons) in July 2018. See Table 5 and Figures 12-13 for GVW information by vehicle class and lane.

**Pavement Design.** A total of 55954 equivalent single axle loads (ESALs) passed over the pavement at this site. Approximately 61.7% of all ESALs were recorded WB while 38.3% was observed EB. In particular, 84% of all ESALs were generated by the Class 9's (Class 9's were also responsible for generating 50% 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).

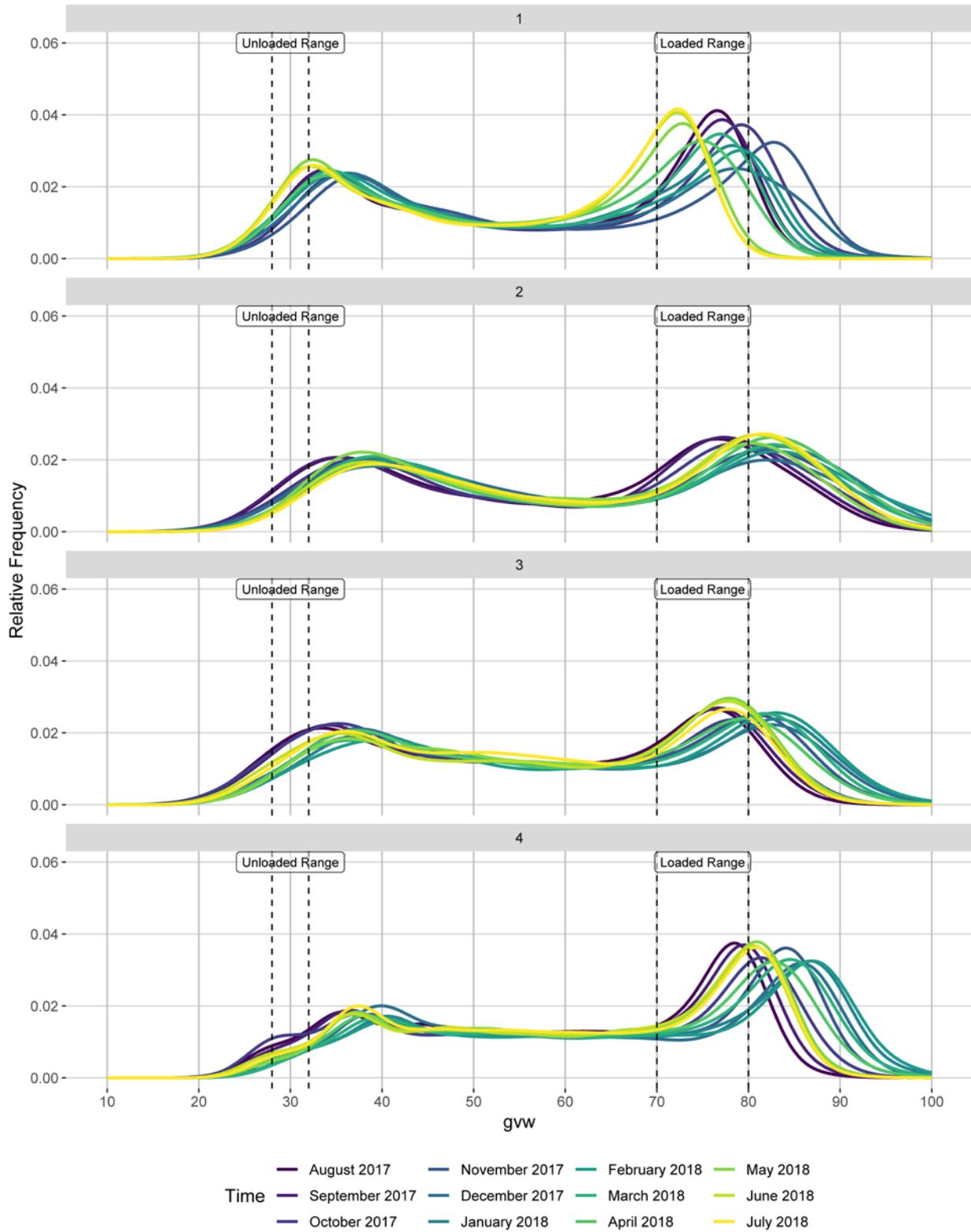
*WIM monthly reports can be found at: <http://www.dot.state.mn.us/traffic/data/reports-monthly-wim.html>*

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.

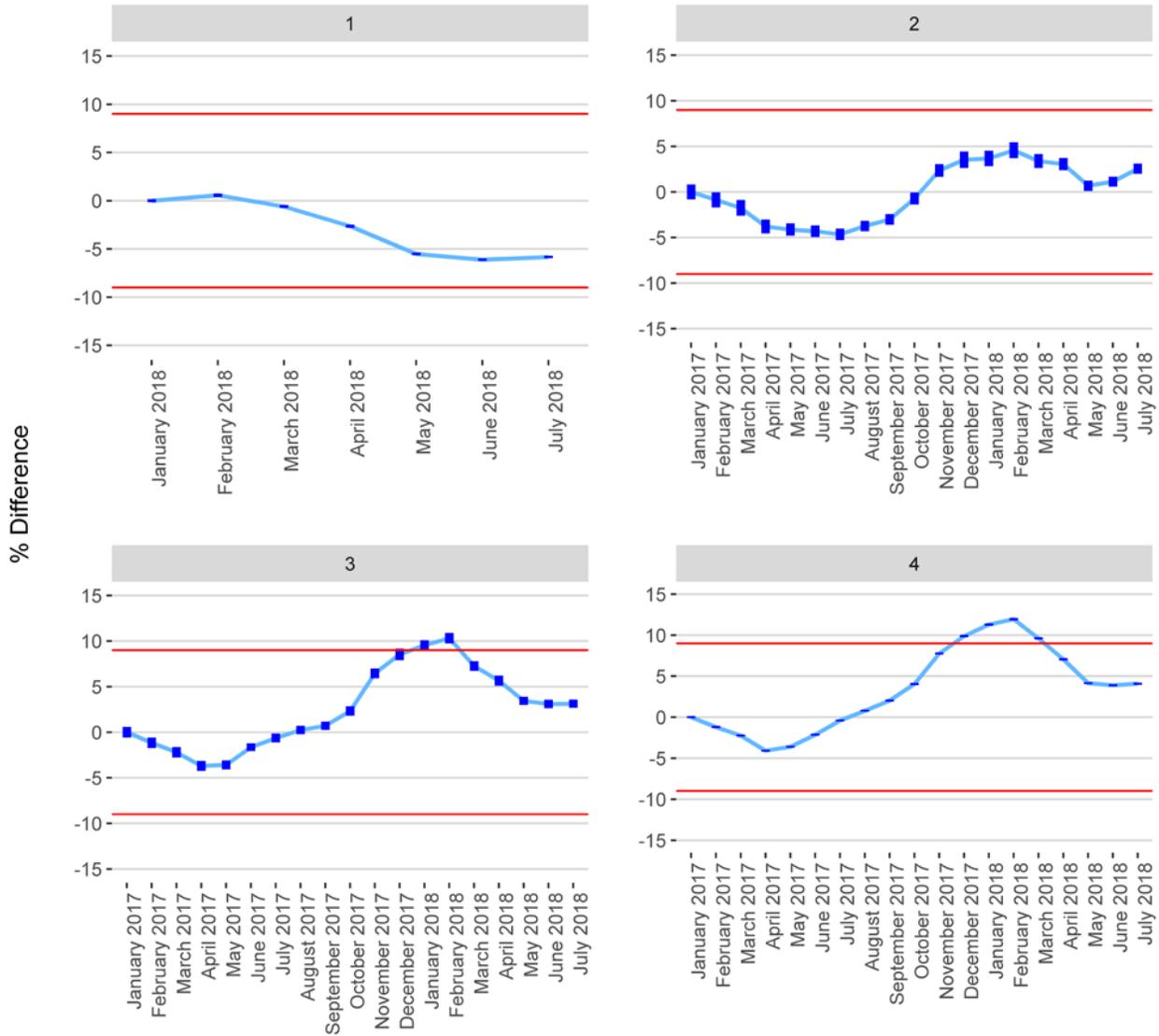
**To request this document in an alternative format, please call 651-366-4718 or 1-800-657-3774, or email your request to [ADArequest.dot@state.mn.us](mailto:ADArequest.dot@state.mn.us). Please request at least one week in advance.**

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

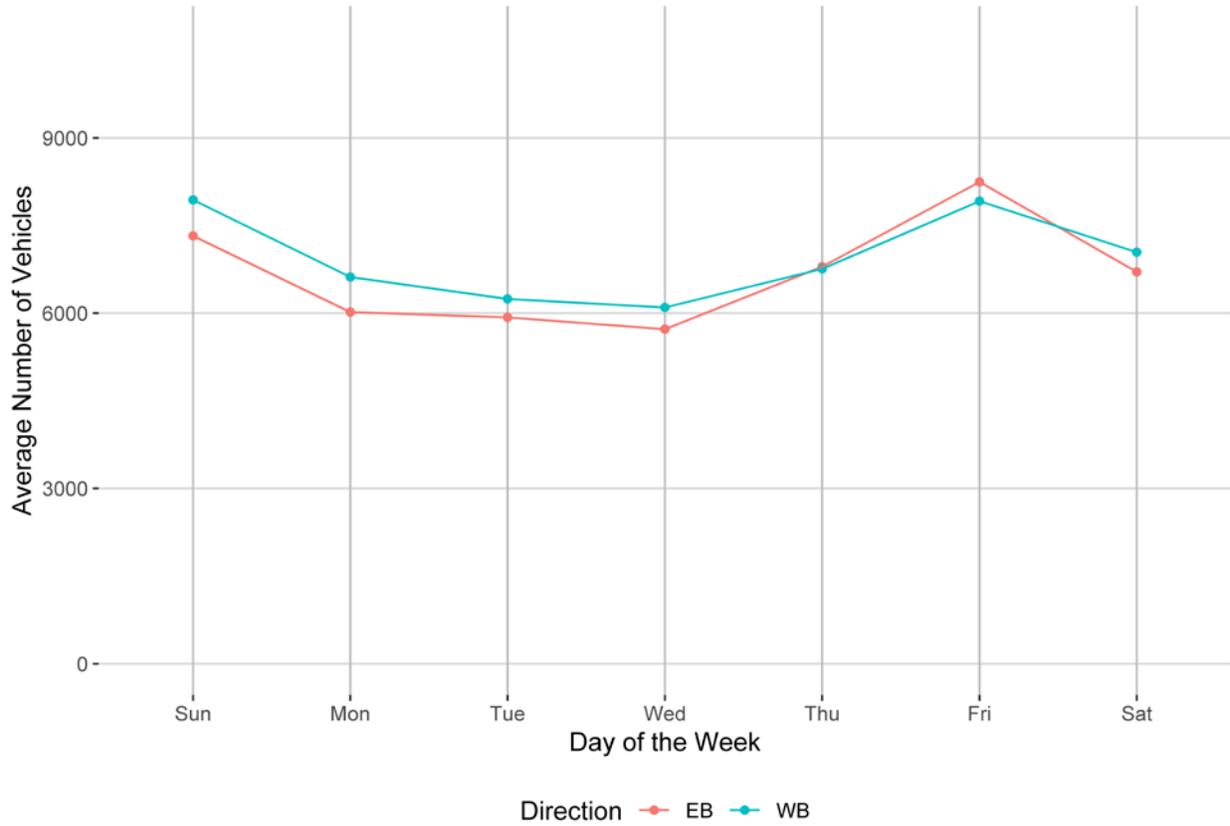


Figure 3 - Average Overweight Vehicle Volume vs. Day of the Week

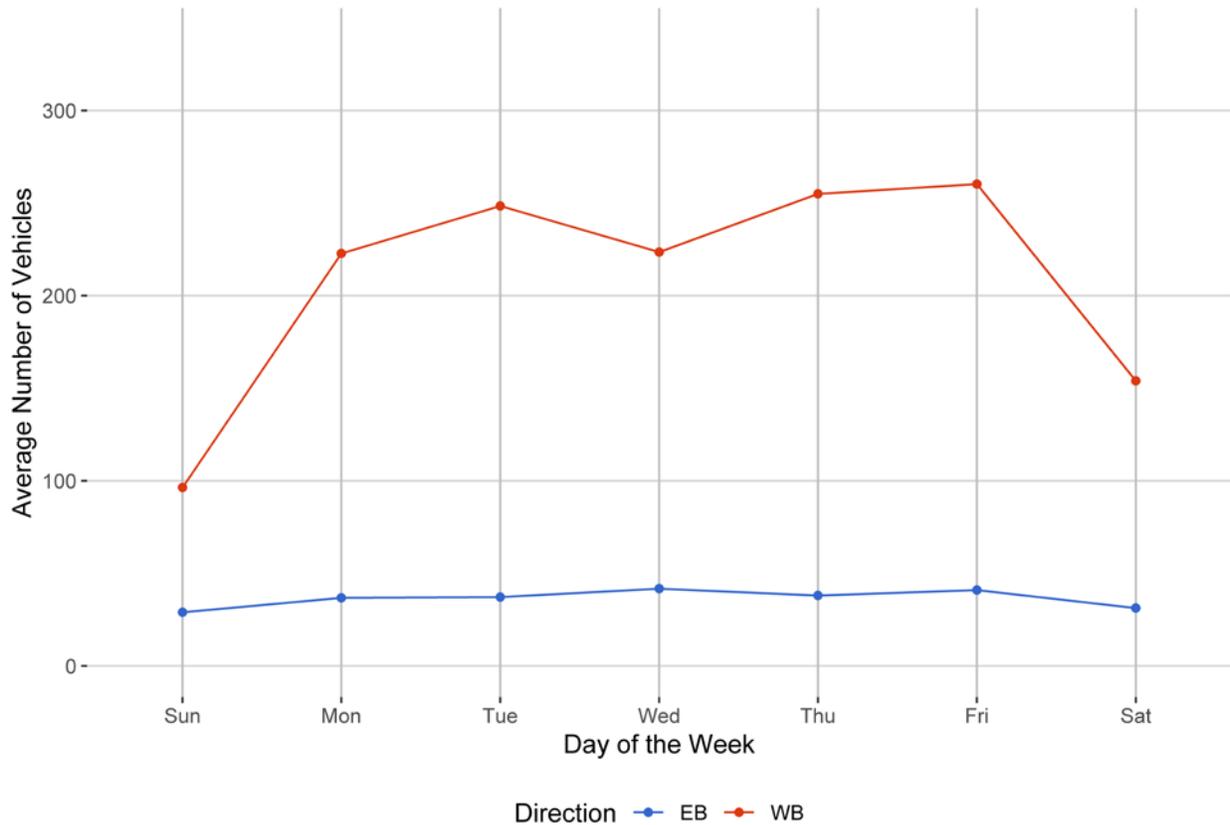


Figure 4 - Passenger Vehicles vs. Hour of the Day

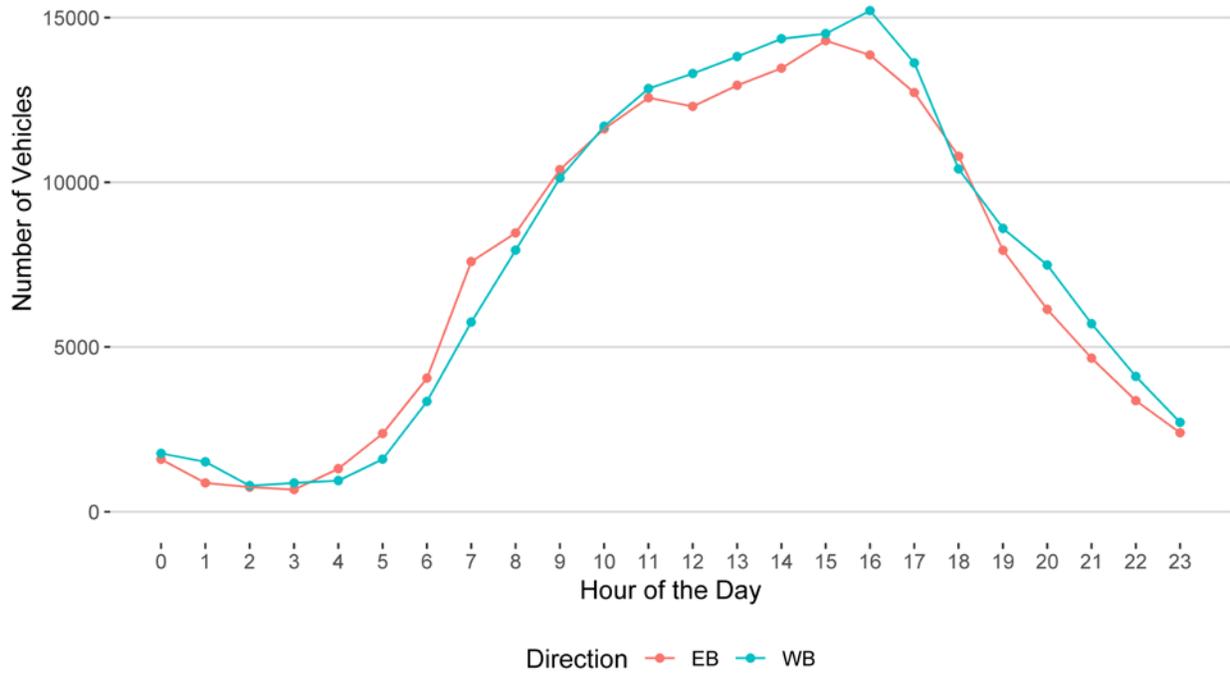


Figure 5 - Heavy Commercial Vehicles vs. Hour of the Day

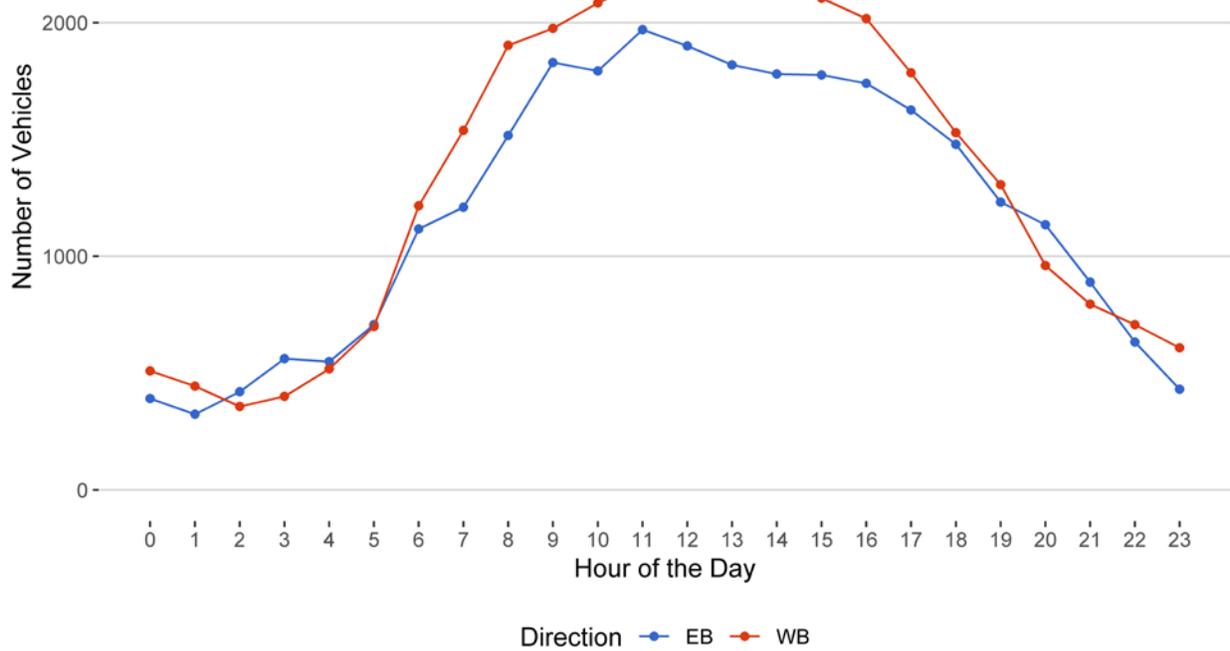


Figure 6 - Overweight Vehicles by Class vs. Hour of the Day

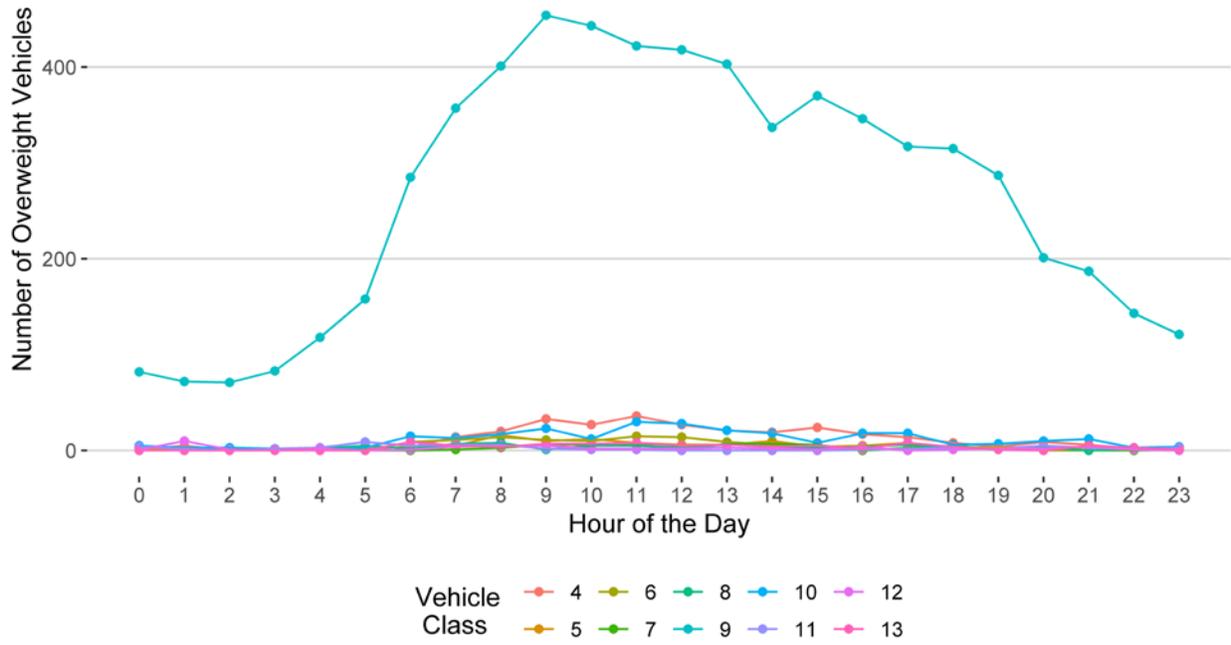


Figure 7 - Overweight Vehicles by Direction  
Hour of the Day

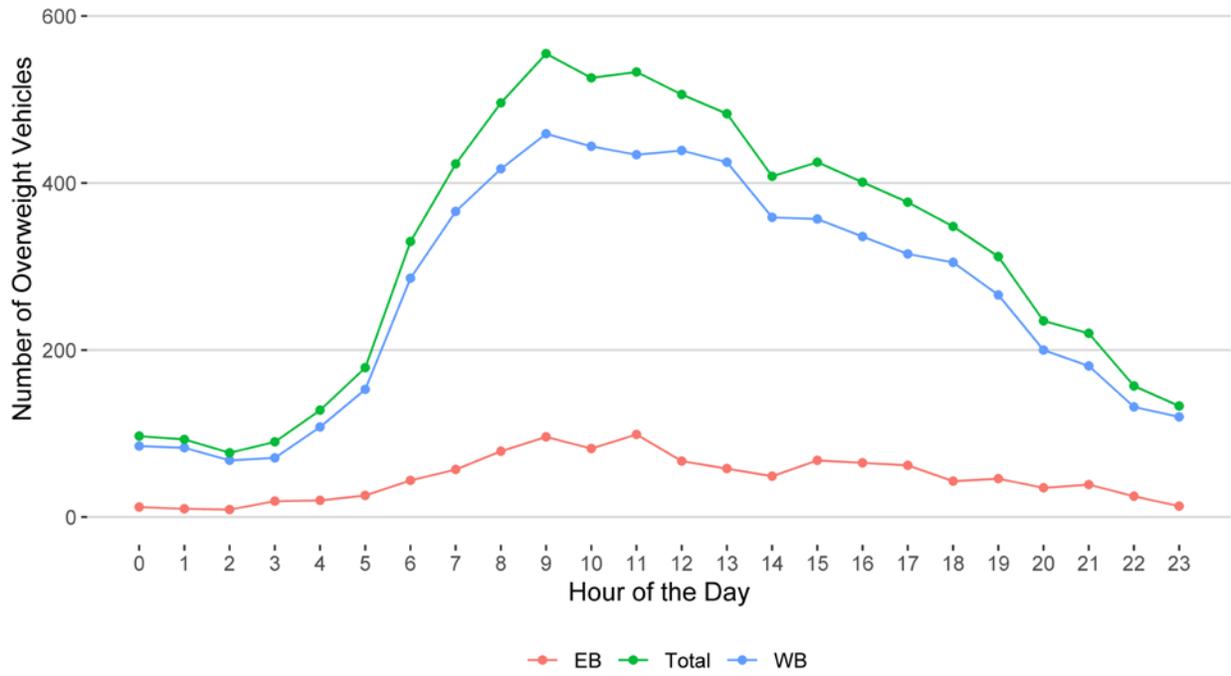
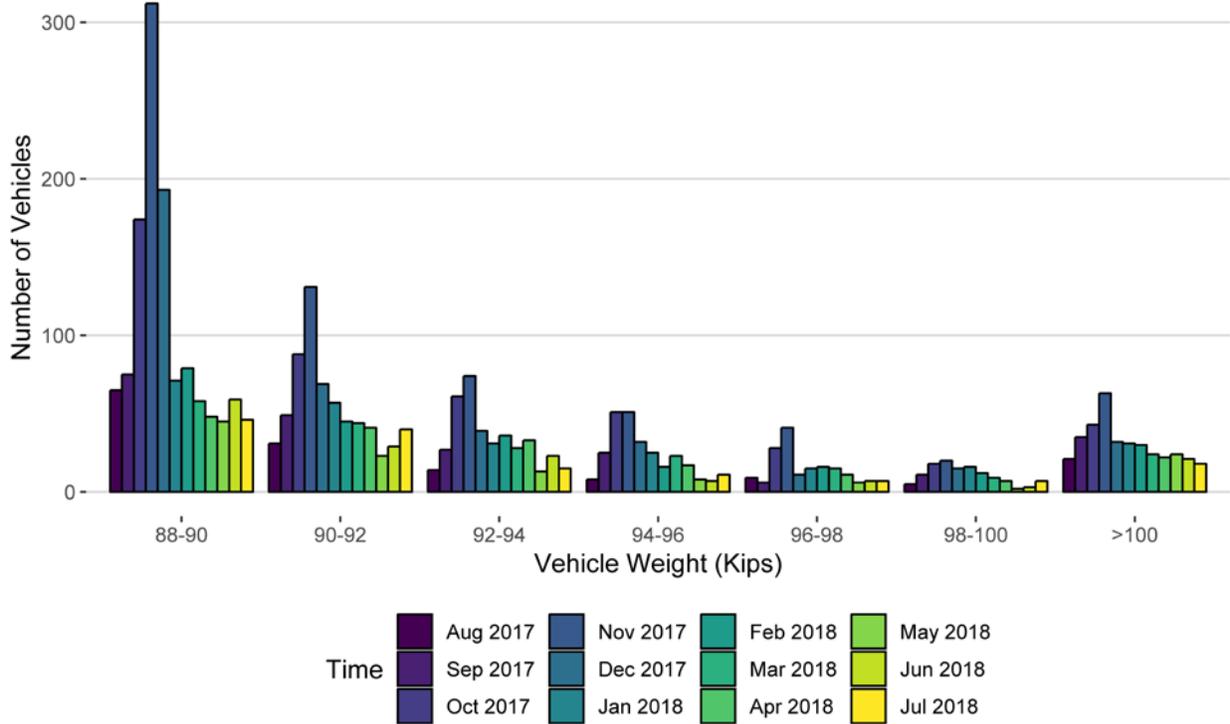
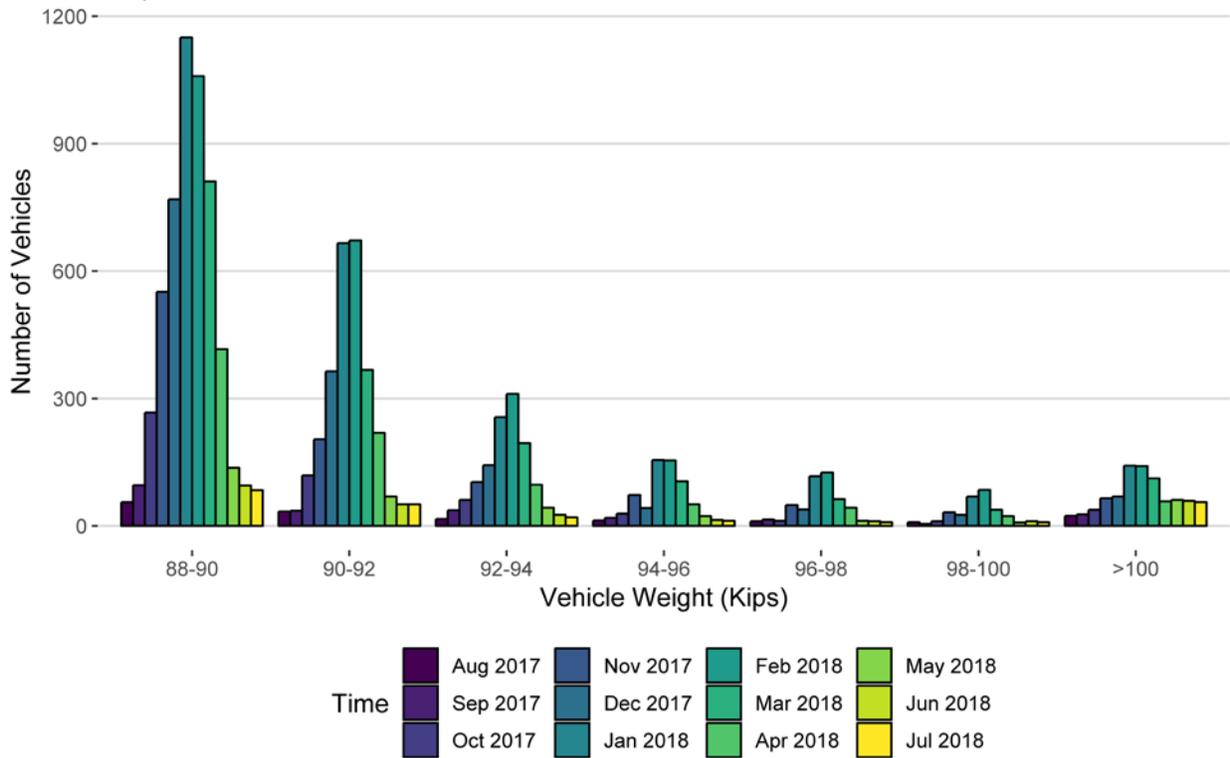


Figure 8 - Histogram of EB Vehicles Over 88,000 Pounds for Current Month



Vehicle Weights (Kips)	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018
88-90	65	75	174	312	193	71	79	58	48	45	59	46
90-92	31	49	88	131	69	57	45	44	41	23	29	40
92-94	14	27	61	74	39	31	36	28	33	13	23	15
94-96	8	25	51	51	32	25	16	23	17	8	7	11
96-98	9	6	28	41	11	15	16	15	11	6	7	7
98-100	5	11	18	20	15	16	12	9	7	2	3	7
>100	21	35	43	63	32	31	30	24	22	24	21	18
Total	153	228	463	692	391	246	234	201	179	121	149	144

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



Vehicle Weights (Kips)	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	Jun 2018	Jul 2018
88-90	56	96	267	551	769	1150	1059	811	416	137	95	84
90-92	34	36	119	204	364	666	672	367	219	69	51	51
92-94	16	37	61	103	143	256	311	195	97	43	26	20
94-96	13	19	29	73	42	155	154	105	51	23	14	12
96-98	11	15	12	49	39	117	126	63	43	12	11	9
98-100	9	5	11	32	26	69	85	38	23	8	11	9
>100	24	27	38	65	69	142	141	112	58	61	59	56
Total	163	235	537	1077	1452	2555	2548	1691	907	353	267	241

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

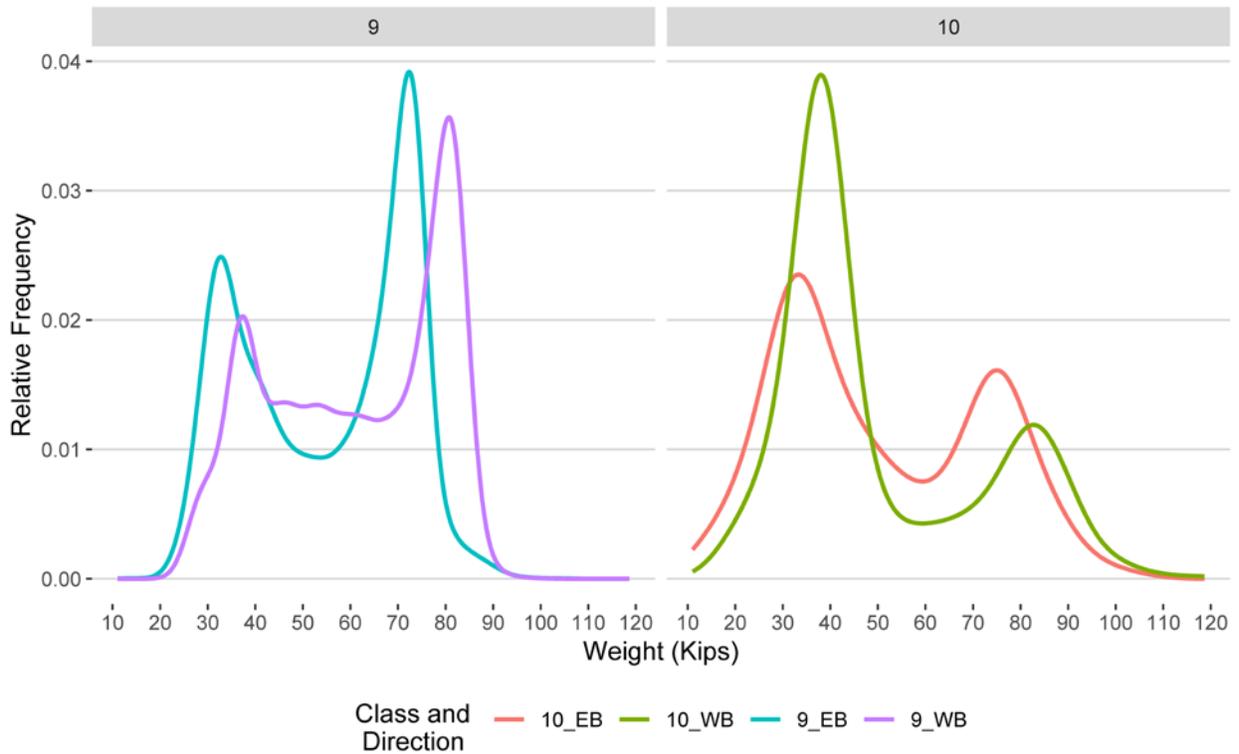


Figure 9 - Freight Percentage by Direction and Class

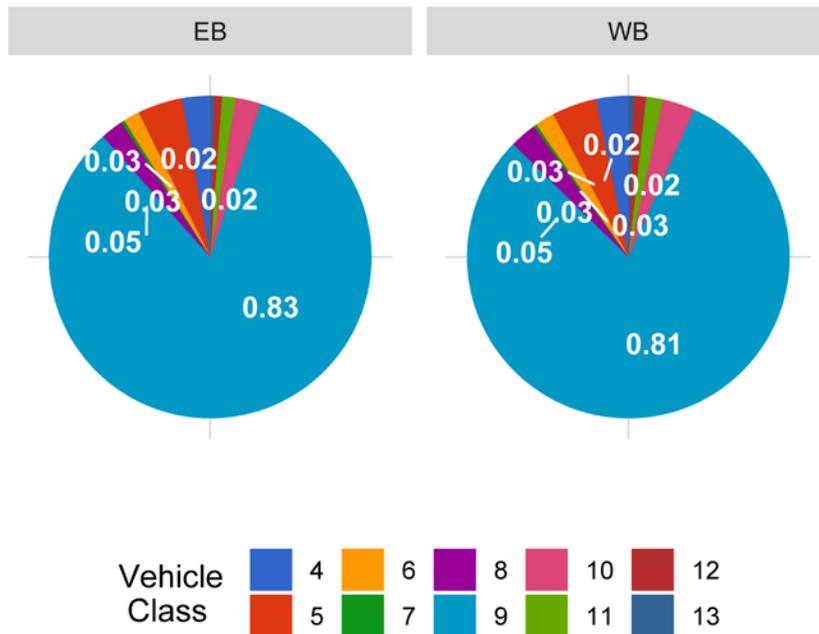


Figure 10 - Total Gross Vehicle Weight Percentage by Class and Lane

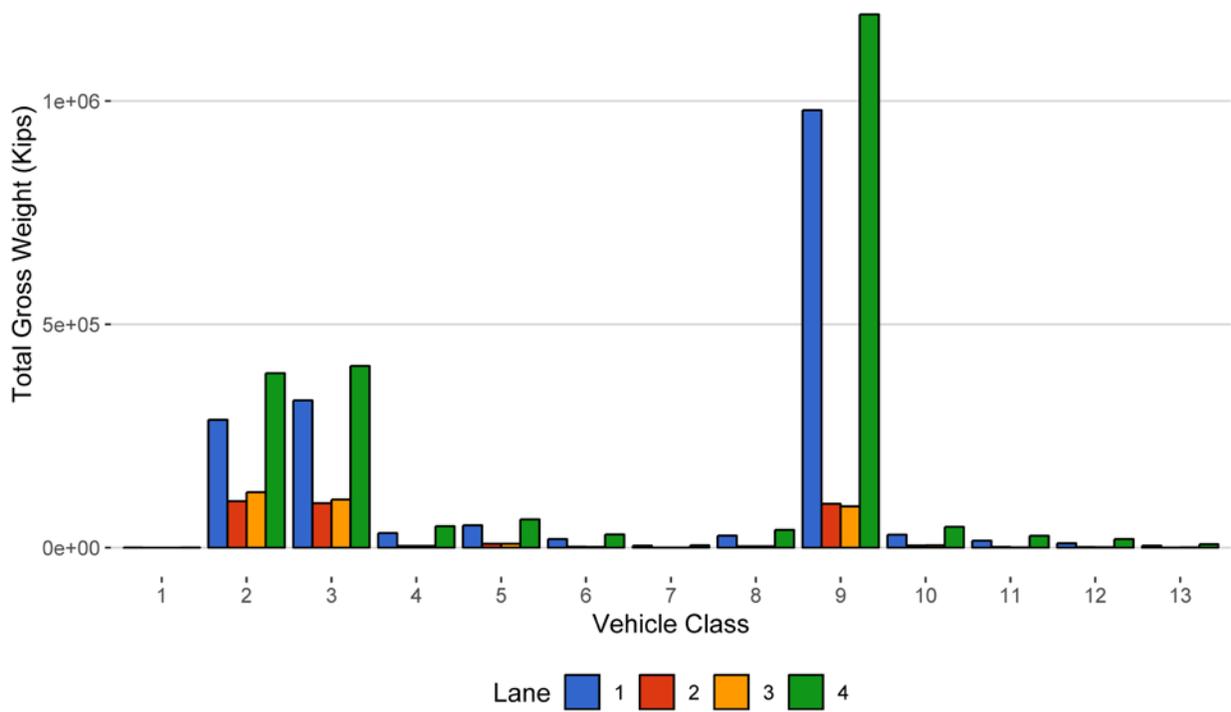


Figure 11 - Total Gross Vehicle Weight t

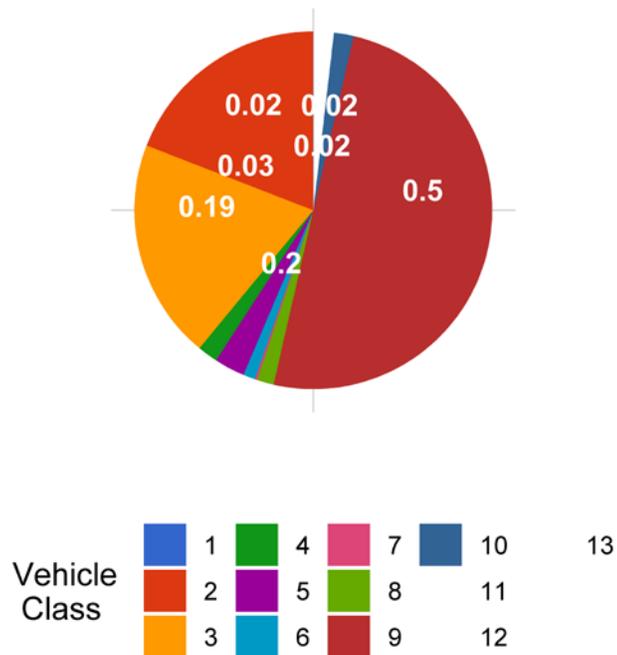


Figure 12 - Total ESALs by Class and Lane

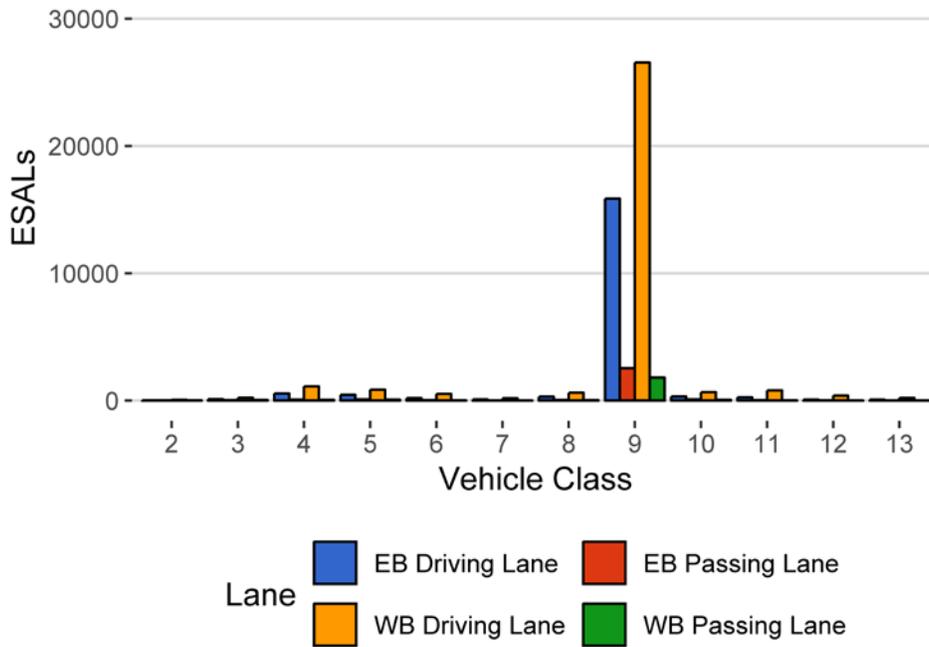
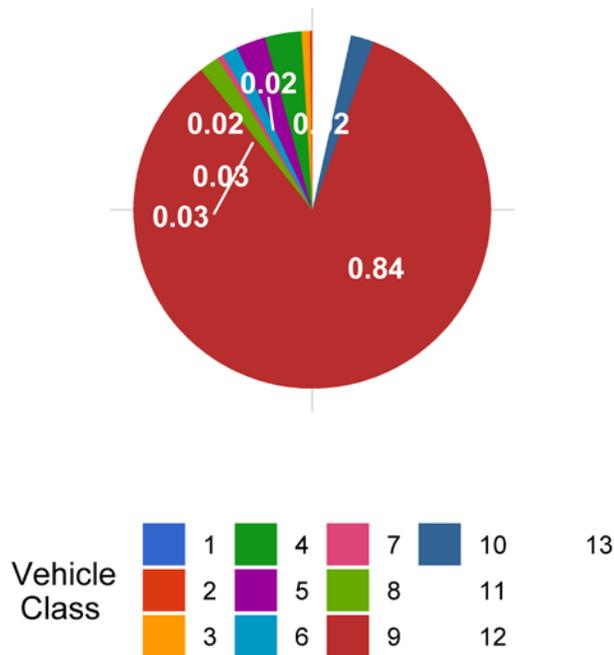


Figure 13 - ESALs by Class



**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>
January 2017	NA	NA	11.56	0.00	11.42	0.00	11.52	0.00
February 2017	NA	NA	11.46	-0.87	11.29	-1.15	11.38	-1.19
March 2017	NA	NA	11.36	-1.75	11.17	-2.20	11.26	-2.24
April 2017	NA	NA	11.13	-3.78	11.00	-3.69	11.05	-4.08
May 2017	NA	NA	11.09	-4.13	11.02	-3.59	11.11	-3.60
June 2017	NA	NA	11.07	-4.31	11.24	-1.64	11.28	-2.13
July 2017	NA	NA	11.02	-4.66	11.35	-0.64	11.48	-0.40
August 2017	NA	NA	11.13	-3.73	11.45	0.24	11.61	0.78
September 2017	NA	NA	11.21	-3.01	11.51	0.71	11.76	2.04
October 2017	NA	NA	11.48	-0.73	11.69	2.33	11.99	4.06
November 2017	NA	NA	11.83	2.35	12.16	6.46	12.42	7.77
December 2017	NA	NA	11.97	3.54	12.40	8.54	12.66	9.89
January 2018	10.89	0.00	11.99	3.67	12.51	9.54	12.82	11.29
February 2018	10.95	0.56	12.09	4.57	12.60	10.32	12.90	11.95
March 2018	10.82	-0.60	11.96	3.40	12.25	7.26	12.63	9.61
April 2018	10.60	-2.64	11.92	3.05	12.07	5.66	12.34	7.06
May 2018	10.29	-5.51	11.64	0.68	11.82	3.44	12.00	4.15
June 2018	10.22	-6.11	11.69	1.13	11.78	3.10	11.97	3.89
July 2018	10.25	-5.83	11.86	2.55	11.78	3.13	11.99	4.08

**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	178	0	0	0
2	7337	227445	52.5	0	0
3	4610	142925	33	0	0
4	108	3357	0.8	297	4
5	316	9795	2.3	111	1.5
6	62	1915	0.4	110	1.5
7	8	250	0.1	58	0.8
8	80	2466	0.6	70	0.9
9	1342	41612	9.6	6391	85
10	55	1718	0.4	280	3.7
11	26	811	0.2	61	0.8
12	16	500	0.1	55	0.7
13	4	139	0	84	1.1
<b>TOTAL</b>	<b>13971</b>	<b>433111</b>	<b>100</b>	<b>7517</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>
2018-07-18	Wednesday	12:24:45	10	WB	4	118.67
2018-07-30	Monday	16:31:43	10	WB	4	117.35
2018-07-27	Friday	14:49:51	10	WB	4	108.66
2018-07-30	Monday	17:42:26	10	WB	4	108.54
2018-07-07	Saturday	11:30:41	10	WB	4	107.74
2018-07-26	Thursday	07:05:33	9	EB	2	107.03
2018-07-30	Monday	15:26:50	9	WB	3	106
2018-07-28	Saturday	14:51:36	9	EB	2	105.43
2018-07-06	Friday	09:59:50	10	EB	2	104.58
2018-07-07	Saturday	10:53:00	9	EB	2	103.99

**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	1429	164	11.5	33958	2118	7492
5	EB	8	4624	990	21.4	51610	6995	11269
6	EB	19	821	273	33.3	16270	4662	2929
7	EB	11.5	123	0	0	4541	0	1563
8	EB	31	1054	643	61	15626	13904	1442
9	EB	33	19500	2940	15.1	990008	87422	221764
10	EB	33.5	654	186	28.4	28068	5055	6195
11	EB	36.5	368	113	30.7	13953	3434	2323
12	EB	36.5	205	23	11.2	9970	670	1664
13	EB	31.5	51	0	0	4400	0	1397
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>28829</b>	<b>5332</b>	<b>****</b>	<b>1168406</b>	<b>****</b>	<b>258038</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	1842	98	5.3	50011	1328	11926
5	WB	8	4920	225	4.6	70152	1642	16296
6	WB	19	1045	62	5.9	29932	1094	5627
7	WB	11.5	121	0	0	5118	0	1863
8	WB	31	1349	574	42.6	30482	12186	3228
9	WB	33	21045	1210	5.7	1250950	35494	298197
10	WB	33.5	1020	133	13	47886	3562	9086
11	WB	36.5	422	45	10.7	25751	1086	5995
12	WB	36.5	282	12	4.3	19576	291	4861
13	WB	31.5	84	1	1.2	8190	28	2788
<b>TOTAL</b>	<b>****</b>	<b>****</b>	<b>32130</b>	<b>2360</b>	<b>****</b>	<b>1538047</b>	<b>****</b>	<b>359867</b>
<b>GRAND TOTAL</b>	<b>****</b>	<b>****</b>	<b>60959</b>	<b>7692</b>	<b>306</b>	<b>2706453</b>	<b>180971</b>	<b>617905</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	106	17	26	76	225	0
2	285959	103721	124158	390273	904111	19.1
3	329379	99218	107522	406712	942830	19.9
4	32413	3663	3638	47701	87415	1.8
5	49999	8607	8505	63289	130399	2.8
6	19056	1877	1705	29321	51958	1.1
7	4373	168	162	4956	9659	0.2
8	26679	2850	2996	39671	72197	1.5
9	979505	97925	92386	1194058	2363873	49.9
10	28565	4559	4989	46459	84571	1.8
11	15643	1745	699	26137	44223	0.9
12	9472	1168	754	19114	30508	0.6
13	4240	160	680	7538	12619	0.3
<b>TOTAL</b>	<b>1785388</b>	<b>325678</b>	<b>348221</b>	<b>2275304</b>	<b>4734590</b>	<b>100</b>
<b>GVW/LANE</b>	<b>37.71</b>	<b>6.88</b>	<b>7.35</b>	<b>48.06</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	0.0058
2	23	15	18	63	118	0.21	0.0011
3	108	43	44	230	425	0.76	0.0061
4	567	87	66	1115	1836	3.29	1.12
5	458	91	81	865	1494	2.68	0.31
6	201	40	20	533	793	1.42	0.85
7	97	8	6	189	300	0.54	2.42
8	304	50	35	624	1013	1.81	0.84
9	15868	2543	1811	26552	46774	83.75	2.31
10	320	95	67	674	1156	2.07	1.38
11	263	40	17	803	1123	2.01	2.82
12	84	16	13	395	508	0.91	2.06
13	81	2	12	214	310	0.55	4.28
<b>TOTAL</b>	<b>18374</b>	<b>3029</b>	<b>2190</b>	<b>32256</b>	<b>55849</b>	<b>100</b>	<b>18</b>
<b>ESALS/LANE</b>	<b>32.9</b>	<b>5.4</b>	<b>3.9</b>	<b>57.8</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>
Aug 2017	448501	14468	2187	380719	84.9	67782	15.1	91.4	8.6
Sep 2017	377524	12584	2057	315802	83.7	61721.5	16.3	92	8
Oct 2017	347110	11197	2003	285006	82.1	62103.7	17.9	92.6	7.4
Nov 2017	308779	10293	1764	255866	82.9	52913.4	17.1	93.2	6.8
Dec 2017	274327	8849	1455	229224	83.6	45103	16.4	93.6	6.4
Jan 2018	242457	7821	1502	195903	80.8	46554.3	19.2	93.8	6.2
Feb 2018	220990	7892	1584	176648	79.9	44341.7	20.1	93.4	6.6
Mar 2018	280298	9042	1611	230353	82.2	49945.1	17.8	93.2	6.8
Apr 2018	267156	8905	1586	219578	82.2	47578.5	17.8	92.6	7.4
May 2018	358888	11577	1879	300637	83.8	58251.1	16.2	92.1	7.9
Jun 2018	403413	13447	1991	343676	85.2	59737.3	14.8	91.1	8.9
Jul 2018	433111	13971	2018	370548	85.6	62563	14.4	91.2	8.8
<b>TOTAL</b>	<b>3962554</b>	<b>-</b>	<b>-</b>	<b>3303960</b>	<b>-</b>	<b>658595</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>AVERAGE</b>	<b>330213</b>	<b>10837</b>	<b>1803</b>	<b>275330</b>	<b>83</b>	<b>54883</b>	<b>17</b>	<b>93</b>	<b>7</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>
Aug 2017	28422	3815	2188	28759	63184	90	10	2
Sep 2017	27300	2308	1952	28402	59963	93	7	2.8
Oct 2017	30927	2292	1781	33278	68278	94	6	6.2
Nov 2017	30014	1995	1818	33423	67251	94	6	12.4
Dec 2017	18313	1169	1522	26742	47746	94	6	20.9
Jan 2018	20474	1415	2110	34986	58984	94	6	30.4
Feb 2018	18539	1460	2079	31208	53286	93	7	35.5
Mar 2018	20570	1668	2103	34246	58587	94	6	20.2
Apr 2018	17863	1980	1824	29657	51324	93	7	12.1
May 2018	18187	2207	2067	32166	54627	92	8	4.4
Jun 2018	18041	2590	2413	31030	54075	91	9	3.1
Jul 2018	18401	3035	2196	32322	55954	91	9	2.8
<b>TOTAL</b>	<b>267051</b>	<b>25934</b>	<b>24054</b>	<b>376220</b>	<b>693258</b>	-	-	-
<b>AVERAGE</b>	<b>22254</b>	<b>2161</b>	<b>2004</b>	<b>31352</b>	<b>57772</b>	<b>93</b>	<b>7</b>	<b>13</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>
Aug 2017	1414968	113169	175879	1708692	3412708
Sep 2017	1241034	103408	149769	1460708	2954919
Oct 2017	1505144	150289	200019	1792971	3648423
Nov 2017	1378927	161549	190965	1679683	3411124
Dec 2017	1667286	222811	267585	2071628	4229309
Jan 2018	1730907	271875	339657	2137868	4480307
Feb 2018	1788923	325935	348429	2277404	4740692
Mar 2018	2159200	302701	348466	2194196	5004563
Apr 2018	1980511	242897	280810	2018643	4522861
May 2018	1978058	217867	250525	2078389	4524840
Jun 2018	1785461	186160	211393	1888009	4071023
Jul 2018	1236687	118699	157811	1457196	2970393
<b>TOTAL</b>	<b>19867107</b>	<b>2417360</b>	<b>2921310</b>	<b>22765387</b>	<b>47971164</b>
<b>AVERAGE</b>	<b>1655592</b>	<b>201447</b>	<b>243442</b>	<b>1897116</b>	<b>3997597</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>
Aug 2017	8117	1.9	12.3	319	60
Sep 2017	9421	2.6	15.7	463	78
Oct 2017	13619	4.1	22.7	1001	110
Nov 2017	14594	4.9	28.4	1774	183
Dec 2017	9587	4.2	25.7	1846	144
Jan 2018	11324	4.9	25.2	2802	259
Feb 2018	10541	5.4	26.8	2785	271
Mar 2018	10805	4.1	22.8	1892	183
Apr 2018	8708	3.4	19.2	1087	111
May 2018	7621	2.2	13.4	479	99
Jun 2018	7233	1.8	12.4	417	95
Jul 2018	7532	1.8	12.3	389	93
<b>TOTAL</b>	<b>119102</b>	<b>-</b>	<b>-</b>	<b>15254</b>	<b>1686</b>
<b>AVERAGE</b>	<b>9925.2</b>	<b>3.4</b>	<b>19.7</b>	<b>1271.2</b>	<b>140.5</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>
Aug 2017	338549	341446	679995	49.8	50.2
Sep 2017	325609	329272	654880	49.7	50.3
Oct 2017	348879	359241	708120	49.3	50.7
Nov 2017	311790	342391	654181	47.7	52.3
Dec 2017	198068	263968	462036	42.9	57.1
Jan 2018	236169	334184	570353	41.4	58.6
Feb 2018	210407	293452	503859	41.8	58.2
Mar 2018	243395	341854	585249	41.6	58.4
Apr 2018	223199	309322	532521	41.9	58.1
May 2018	246347	360108	606455	40.6	59.4
Jun 2018	249273	351320	600593	41.5	58.5
Jul 2018	258038	359867	617905	41.8	58.2
<b>TOTAL</b>	<b>3189721</b>	<b>3986425</b>	<b>7176146</b>	-	-
<b>AVERAGE</b>	<b>265810.1</b>	<b>332202.1</b>	<b>598012.2</b>	<b>44.2</b>	<b>55.8</b>