

2021

# Vehicle Activated Signs (VAS) data: Monk Fryston



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Monk Fryston Parish Council

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## **BACKGROUND**

The village of Monk Fryston currently benefits from two Vehicle Activated Signs (VAS). These are located at the West entrance to the village (on the A63 shortly after crossing the railway bridge) and at the East entrance to the village (on the A63 opposite The Meadows).

The VAS signs light up, alerting drivers if they are entering the village above the 30mph speed limit.

The VAS signs also record and store a large amount of traffic-related data, including traffic volumes and average speeds.

This report provides a snapshot of data recorded by both VAS signs between 1<sup>st</sup> September 2021 – 30<sup>th</sup> September 2021.

## **WEST ENTRANCE VAS**

### **Average speeds**

- The average speed of drivers passing the VAS during September was 28.6mph.
- The highest average speeds recorded were during the early hours of the morning. The highest average speeds were on a weekend between 1-2am at 32.4mph.

### **85<sup>th</sup> percentile speeds**

- The 85<sup>th</sup> percentile<sup>1</sup> speed during September was 33.9mph
- The highest 85<sup>th</sup> percentile speeds recorded were during the early hours of the morning. The highest 85<sup>th</sup> percentile speeds were on a weekday between 2-3am at 39mph.
- Between the hours of 7am – 9pm, the 85<sup>th</sup> percentile speed remained below 35mph for the duration of September.
- 85<sup>th</sup> percentile speeds during school-run times (8am – 9am / 3pm – 4pm) were a maximum of 34.2pmh during September.
- 85<sup>th</sup> percentile speeds remained below 40mph at all times during September.

### **Volume by speed**

- Over 90% of drivers pass the VAS below 35mph.

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<sup>1</sup> The '85th percentile' speed is a speed at which 85% of traffic will be travelling at, or below, along a street or road (under free flow conditions). It's typically associated with the setting of speed limits.

- Over 65% of drivers pass the VAS below 30mph.

### Maximum recorded speed

- A speed of 60mph was recorded. This occurred in the early hours of the morning (shortly after 2am) and only one occurrence of this speed was recorded during September.

### Total traffic volumes

- During September, a total of 125,252 vehicles were recorded by the VAS
- This is an average of 4,175 vehicles per day

Day of the week	Average vehicle count per day
Monday	4309
Tuesday	4185
Wednesday	4627
Thursday	4227
Friday	4573
Saturday	3972
Sunday	3206

Day of the week	Average 7am-7pm vehicle count per day
Monday	3501
Tuesday	3343
Wednesday	3714
Thursday	3391
Friday	3677
Saturday	3192
Sunday	2549

- The busiest time of day is weekdays between 5pm-6pm, with an average of 470 cars during that hour (7.8 vehicles per minute)

### EAST ENTRANCE VAS

#### Average speeds

- The average speed of drivers passing the VAS during September was 26.4mph.
- The highest average speeds recorded were during the early hours of the morning. The highest average speeds were on a weekday between 2am-3am and 3am-4am at 31.6mph.

#### 85<sup>th</sup> percentile speeds

- The 85<sup>th</sup> percentile speed during September was 30.6mph

- The highest 85<sup>th</sup> percentile speeds recorded were during the early hours of the morning. The highest 85<sup>th</sup> percentile speeds were on a weekday between 2-3am at 39mph.
- Between the hours of 7am – 9pm, the 85<sup>th</sup> percentile speed remained below 32mph for the duration of September.
- 85<sup>th</sup> percentile speeds during school-run times (8am – 9am / 3pm – 4pm) were a maximum of 30.4pmh during September.
- 85<sup>th</sup> percentile speeds remained below 40mph at all times during September.

### **Volume by speed**

- Over 96% of drivers pass the VAS below 35mph.
- Over 83% of drivers pass the VAS below 30mph.

### **Maximum recorded speed**

- Speeds of up to 60mph were recorded. Six occasions of speeds exceeding 60mph were recorded during September, with the fastest speed being recorded shortly after 3:30am.

### **Total traffic volumes**

- During September, a total of 170,299 vehicles were recorded by the VAS
- This is an average of 5,677 vehicles per day

Day of the week	Average vehicle count per day
Monday	5710
Tuesday	5822
Wednesday	5985
Thursday	5976
Friday	6200
Saturday	5428
Sunday	4465

Day of the week	Average 7am-7pm vehicle count per day
Monday	4521
Tuesday	4617
Wednesday	4762
Thursday	4750
Friday	4973
Saturday	4455
Sunday	3758

The busiest time of day is weekdays between 7am-8am, with an average of 566 cars during that hour (9.4 vehicles per minute)

## CONTEXT TO DATA

Please note the following when considering the data in this report:

- There is only one entrance to Monk Fryston in the East of the village (via the A63). In the West of the village, there are two entrances to the village (via the A63 or Lumby Lane). This largely explains the significant differences in traffic volume passing each VAS.
- September 2021 contained 5 Wednesdays, 5 Thursdays, and 4 of every other day of the week. This is important information when understanding the calculations derived from the data in the appendix.
- At the East entrance to the village, there are two VAS signs in quick succession. The data in this report is provided by the VAS opposite The Meadows. However, for traffic entering from the East, a preceding VAS sign is situated opposite the Cemetery and was active during September. Therefore, any traffic passing the VAS sign referred to in this report had been prompted to consider their speed several seconds before arrival at this VAS.

## BRIEF COMMENTARY

- Average vehicle speeds were below the 30mph speed limit for both the East and West VAS. This provides an indication that the majority of traffic observes the speed limit when travelling through Monk Fryston.
- 85<sup>th</sup> percentile speeds were below 34mph for both the East and West VAS. This provides an indication that the vast majority of traffic travels at less than 34mph when travelling through Monk Fryston. The 85<sup>th</sup> percentile is a standard metric used when considering traffic speeds at a location.
- Speeds of up to 60mph were recorded by both VAS during September. This is double the speed limit. At least seven occurrences of 60mph were recorded during the month, and these appear to have largely occurred in the early hours of the morning (between 2am-4am).
- In an attempt to demonstrate particular risks to pedestrians, this report has provided details of 85<sup>th</sup> percentile speeds between the hours of 7am-9pm (most likely pedestrian hours). The 85<sup>th</sup> percentile speed remained below 35mph at both VAS during these hours throughout September.

- In an attempt to demonstrate particular risks to young pedestrians, this report has provided details of 85<sup>th</sup> percentile speeds during school drop-off hours (8am-9am and 3pm-4pm). The 85<sup>th</sup> percentile speed remained below 34.2mph at both VAS during these hours throughout September.
- The busiest hour at the East VAS during September was 7am-8am on a weekday. The busiest hour at the West VAS during September was 5pm-6pm on a weekday. This most likely indicates that commuters generally travel through the village in the direction of Leeds on a morning, and return on an evening.
- There is no pedestrian crossing in Monk Fryston, and relatively short-length visibility for pedestrians wishing to cross the A63. During the busiest of times, an average of 9.4 vehicles per minute travels through Monk Fryston from East to West. When combined with traffic moving in the opposite direction, it can be deduced that crossing the A63 is extremely difficult to achieve safely for pedestrians during busy times.

### **QUESTIONS FOR ROAD SAFETY POLICY MAKERS**

In the opinion of the author, this report poses the following questions:

1. Should pedestrians be better supported in Monk Fryston?

With no pedestrian crossing, short-length visibility, and a constant flow of traffic (particularly at the busiest hours), there is no safe method by which pedestrians can cross the A63. Should this be addressed?

2. With no pedestrian crossing, are the 85<sup>th</sup> percentile speeds acceptable, or does the speed limit require greater scrutiny?

Overall, average 85<sup>th</sup> percentile speeds do not exceed 34mh (though notably higher in night-time hours). Average speeds do not appear to be excessive, and it is reassuring that the vast majority of traffic maintains a reasonable speed. However, in the context of there being no pedestrian crossing, could these average speeds still be considered too high?

3. What possible innovative traffic calming and/or pedestrian-friendly features could be introduced in Monk Fryston?

In July 2021, Selby District Council published their [Monk Fryston Conservation Area Appraisal](#) (produced by Alan Baxter Associates in conjunction with Selby District Council). The Appraisal acknowledged that the A63 is a "substantial negative feature" of the village, and also noted that there are "no traffic calming

measures or formalised crossing points across the A63”.

The Appraisal goes on to conclude that traffic through Monk Fryston is “extremely heavy” and it is “challenging to cross the road”. The Appraisal makes a very strong recommendation, stating that it is “essential... that the situation is ameliorated through traffic calming and formal pedestrian crossings”.

**Suggestions made in the Appraisal include the introduction of a 20mph speed limit and the installation of traffic calming measures, as well as stating “the traffic controls in Cawood are a possible model worth examining.”**

Hambleton (a village to the east of Monk Fryston, also situated on the A63) benefits from pedestrian islands, enabling safer road crossing:



## APPENDICES

### Appendix A: Vehicle Counts (West VAS)

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week Day Avg	Weekend Avg	Week Day 85% Avg Speed
0 - 1	70	99	147	139	89	140	196	108.8	168	37.2
1 - 2	32	58	76	69	60	70	94	59	82	38.9
2 - 3	24	49	53	76	52	56	52	50.8	54	39
3 - 4	27	36	46	58	33	37	46	40	41.5	37.4
4 - 5	72	59	104	70	83	59	49	77.6	54	37.6
5 - 6	265	222	303	321	264	141	109	275	125	37.6
6 - 7	582	622	816	693	600	387	258	662.6	322.5	35.9
7 - 8	1152	1207	1479	1357	1136	414	309	1266.2	361.5	34.3
8 - 9	947	1086	1397	1319	1152	694	343	1180.2	518.5	34
9 - 10	754	910	1208	1023	871	908	504	953.2	706	33.7
10 - 11	847	864	1026	1002	871	1053	694	922	873.5	33.5
11 - 12	884	894	1129	1029	983	1145	923	983.8	1034	33.4
12 - 13	953	902	1248	1177	1075	1335	1094	1071	1214.5	33.3
13 - 14	941	887	1248	1272	1101	1267	1112	1089.8	1189.5	33.4
14 - 15	1034	1020	1443	1379	1288	1287	1097	1232.8	1192	33.5
15 - 16	1376	1090	1732	1524	1441	1291	1124	1432.6	1207.5	33.3
16 - 17	1840	1523	2361	2083	1727	1210	1155	1906.8	1182.5	33
17 - 18	2013	1794	2579	2149	1799	1129	1010	2066.8	1069.5	33.1
18 - 19	1261	1193	1723	1639	1265	1033	831	1416.2	932	33.4
19 - 20	752	742	1000	932	817	744	727	848.6	735.5	33.7
20 - 21	566	526	771	741	556	482	524	632	503	34.2
21 - 22	425	414	611	490	426	380	266	473.2	323	35.2
22 - 23	272	347	395	394	345	362	191	350.6	276.5	35.4
23 - 24	148	194	241	198	259	265	117	208	191	36.3
Totals	17237	16738	23136	21134	18293	15889	12825			
% of Total	13.8%	13.4%	18.5%	16.9%	14.6%	12.7%	10.2%			



## Appendix B: Average Speeds (West VAS)

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week Day Avg	Weekend Avg	Week Day 85% Avg Speed
0 - 1	29.9	31.7	30.9	31.4	32	31.6	30.6	31.2	31	37.2
1 - 2	30.5	32	30.6	32.7	33.5	32.7	32.2	31.9	32.4	38.9
2 - 3	30.6	32	31.5	32.9	31.3	32.3	31.6	31.9	31.9	39
3 - 4	31	31.7	30.8	31.6	30.2	33.4	31.1	31.1	32.1	37.4
4 - 5	30.5	31.4	30.5	31.7	30.9	31.6	31	30.9	31.3	37.6
5 - 6	30.5	31.8	31	30	30.8	30.5	31.3	30.8	30.8	37.6
6 - 7	29.9	30.1	29.9	29.5	29.9	29.9	31	29.9	30.3	35.9
7 - 8	28.8	28.8	29	28.9	29.5	30.4	30.8	29	30.6	34.3
8 - 9	28.4	29	28.7	28.5	28.6	29.1	29.8	28.6	29.3	34
9 - 10	28.4	28.2	28.5	28.2	28.3	28.4	29.4	28.3	28.8	33.7
10 - 11	28.3	28.2	28.1	28.3	28.6	28.1	28.6	28.3	28.3	33.5
11 - 12	28.4	28	28	28.1	28	28.1	28.6	28.1	28.3	33.4
12 - 13	28.7	27.9	28.6	27.7	28	28.4	28.5	28.2	28.4	33.3
13 - 14	28.6	27.8	28.1	28.1	28.2	28.4	28.1	28.2	28.3	33.4
14 - 15	28.8	28.2	28.2	27.9	28.2	27.9	28.5	28.2	28.2	33.5
15 - 16	28.4	27.7	28	28	28.4	28.2	28.7	28.1	28.4	33.3
16 - 17	28.1	27.7	27.8	27.7	28	28.1	28.7	27.8	28.4	33
17 - 18	28.2	27.9	28.1	28	27.7	28.5	28.6	28	28.6	33.1
18 - 19	28.3	28.2	28.4	28	27.9	28.5	28.8	28.2	28.6	33.4
19 - 20	28.8	28.3	28.6	28.6	28.6	28.7	28.8	28.6	28.7	33.7
20 - 21	28.9	29	29	29.2	29.2	29.4	29.2	29.1	29.3	34.2
21 - 22	30.3	29.3	29.8	29.7	30.1	29.8	30.1	29.8	29.9	35.2
22 - 23	30.4	29.8	30.4	29.7	30.2	29.5	30.2	30.1	29.8	35.4
23 - 24	29.7	30.1	30.9	30.7	30.2	30.6	31	30.4	30.7	36.3
Totals	702.4	704.8	703.4	705.1	706.3	712.1	715.2			
% of Total	14.2%	14.2%	14.2%	14.2%	14.3%	14.4%	14.5%			

### Appendix C: 85<sup>th</sup> Percentile Speeds (West VAS)

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week Day Avg	Weekend Avg	Week Day 85% Avg Speed
0 - 1	35	38.3	36.8	37.5	38.3	37.9	36.9	37.2	37.4	37.2
1 - 2	37.5	40.6	36.2	40.7	39.4	40	38.6	38.9	39.3	38.9
2 - 3	37.5	39.1	39.3	40.7	38.5	39.6	37.1	39	38.4	39
3 - 4	36.7	38.3	36.9	38.1	37.2	39	37.2	37.4	38.1	37.4
4 - 5	37.5	37.7	37.1	37.8	38.1	39.4	39.4	37.6	39.4	37.6
5 - 6	37.9	38.1	37.8	37	37.3	37.4	38.7	37.6	38.1	37.6
6 - 7	36.3	36.6	35.4	34.7	36.5	36.4	37.5	35.9	37	35.9
7 - 8	34.3	34.2	34.2	34.2	34.8	36.6	36.8	34.3	36.7	34.3
8 - 9	33.7	34.2	34.2	33.8	34.2	34.6	34.9	34	34.8	34
9 - 10	33.7	33.5	34	33.6	33.7	33.8	34.4	33.7	34.1	33.7
10 - 11	33.5	33.3	33.5	33.4	33.8	33.3	33.8	33.5	33.6	33.5
11 - 12	33.7	33.3	33.4	33.4	33.4	33.4	33.8	33.4	33.6	33.4
12 - 13	34	33	33.7	32.8	33.1	33.6	33.5	33.3	33.6	33.3
13 - 14	33.8	32.9	33.5	33.3	33.4	33.5	33.4	33.4	33.5	33.4
14 - 15	34.1	33.3	33.5	33.1	33.4	33	33.7	33.5	33.4	33.5
15 - 16	33.5	32.9	33.2	33.2	33.6	33.3	33.6	33.3	33.5	33.3
16 - 17	33.3	32.8	33.1	32.8	33.2	33.3	33.7	33	33.5	33
17 - 18	33.3	32.8	33.3	33.2	32.9	33.6	33.7	33.1	33.7	33.1
18 - 19	33.5	33.4	33.6	33.3	33.1	33.7	34	33.4	33.9	33.4
19 - 20	33.8	33.6	33.8	33.7	33.7	33.9	33.9	33.7	33.9	33.7
20 - 21	34.1	34.3	34.4	34.1	34.3	34.7	34.6	34.2	34.7	34.2
21 - 22	36.4	34.7	34.9	34.7	35.2	34.8	34.9	35.2	34.9	35.2
22 - 23	36.1	34.9	35.9	35	35.3	34.6	34.9	35.4	34.8	35.4
23 - 24	36.4	35.4	37.7	36.9	35.3	36.1	36.9	36.3	36.5	36.3
Totals	839.6	841.2	839.4	841	841.7	849.5	849.9			
% of Total	14.2%	14.3%	14.2%	14.2%	14.3%	14.4%	14.4%			

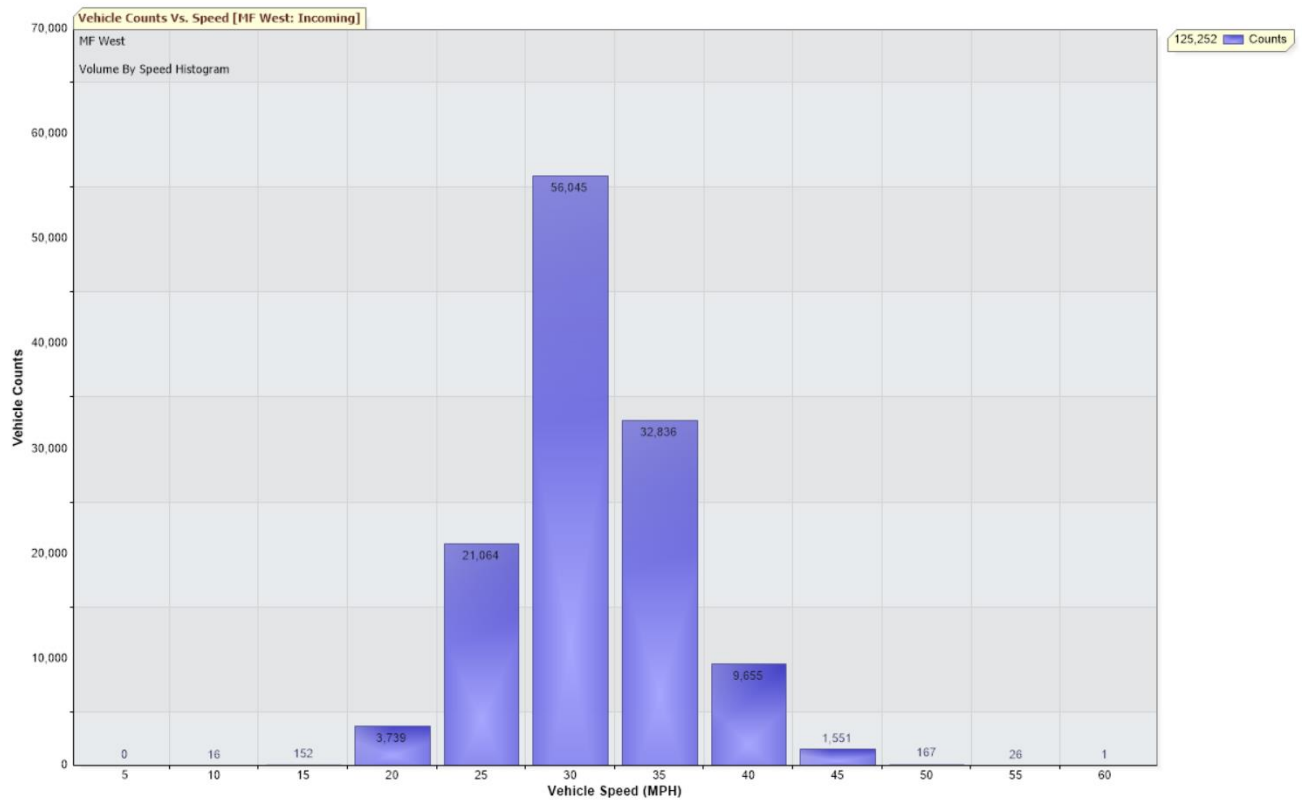
## Appendix D: Speeder Counts (West VAS)

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week Day Avg	Weekend Avg	Week Day 85% Avg Speed
0 - 1	40	59	88	88	59	87	103	66.8	95	37.2
1 - 2	20	35	46	49	47	45	62	39.4	53.5	38.9
2 - 3	12	30	29	50	32	35	36	30.6	35.5	39
3 - 4	15	21	27	38	15	30	33	23.2	31.5	37.4
4 - 5	40	34	58	42	44	35	26	43.6	30.5	37.6
5 - 6	140	138	160	145	141	77	60	144.8	68.5	37.6
6 - 7	271	304	397	311	284	171	146	313.4	158.5	35.9
7 - 8	439	486	642	548	503	218	171	523.6	194.5	34.3
8 - 9	342	485	573	505	454	276	178	471.8	227	34
9 - 10	259	315	465	365	313	354	236	343.4	295	33.7
10 - 11	293	285	360	334	325	342	260	319.4	301	33.5
11 - 12	313	284	366	343	328	373	338	326.8	355.5	33.4
12 - 13	360	275	483	343	338	475	408	359.8	441.5	33.3
13 - 14	373	269	452	407	376	449	383	375.4	416	33.4
14 - 15	411	332	506	438	430	404	392	423.4	398	33.5
15 - 16	479	329	581	495	523	428	442	481.4	435	33.3
16 - 17	624	464	778	610	568	399	435	608.8	417	33
17 - 18	695	522	863	703	556	417	390	667.8	403.5	33.1
18 - 19	446	390	641	545	402	382	324	484.8	353	33.4
19 - 20	283	260	406	352	302	272	296	320.6	284	33.7
20 - 21	228	223	327	331	252	201	232	272.2	216.5	34.2
21 - 22	224	179	313	242	203	183	139	232.2	161	35.2
22 - 23	146	157	221	184	175	170	102	176.6	136	35.4
23 - 24	81	93	135	101	130	134	65	108	99.5	36.3
Totals	6534	5969	8917	7569	6800	5957	5257			
% of Total	13.9%	12.7%	19%	16.1%	14.5%	12.7%	11.2%			

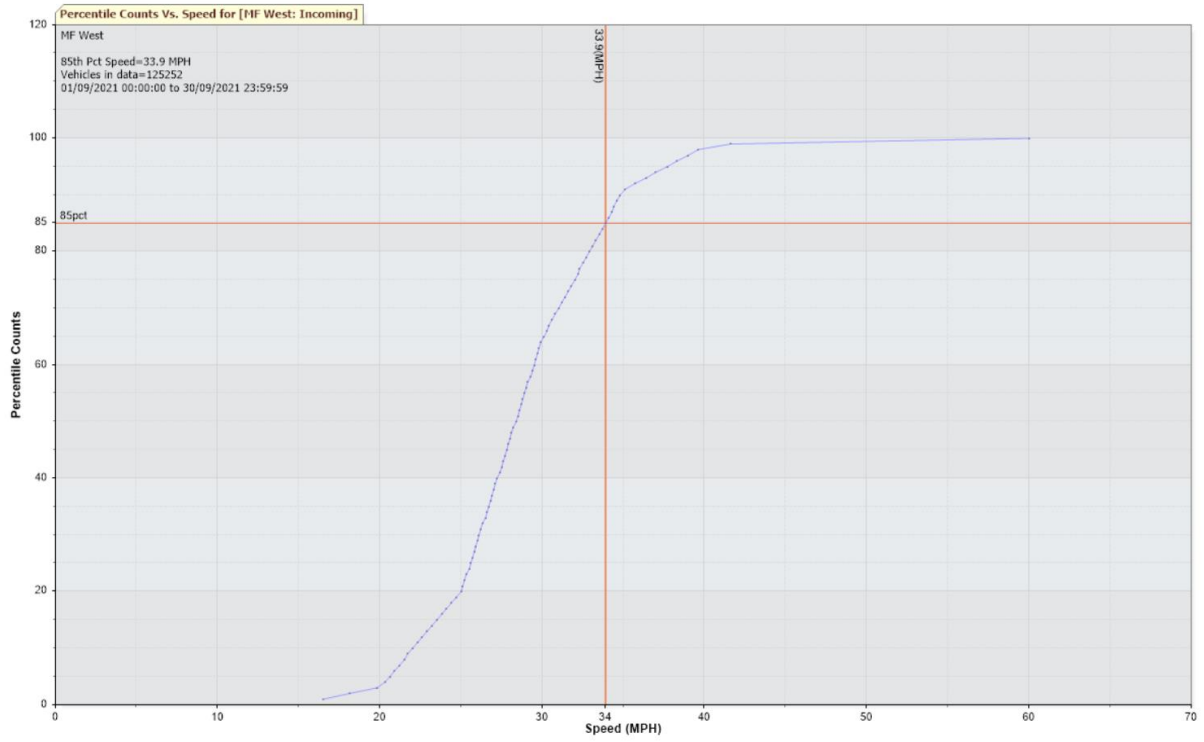
## Appendix E: Average Speeder (West VAS)

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week Day Avg	Weekend Avg	Week Day 85% Avg Speed
0 - 1	34.5	35.8	34.9	35.6	35.5	35.3	35.2	35.3	35.2	37.2
1 - 2	35.5	37.2	34.9	36.6	36	37.1	35.7	36.1	36.3	38.9
2 - 3	37.1	37.2	37.8	37.2	37	37.9	34.9	37.3	36.4	39
3 - 4	34.8	35.8	34.9	35.5	35.5	35.8	34.5	35.3	35.1	37.4
4 - 5	35.6	35.3	35.2	35.2	35.7	36.4	36.3	35.4	36.4	37.6
5 - 6	35.7	35.5	35.7	35.6	35.3	35.6	35.9	35.5	35.7	37.6
6 - 7	35	35.1	34.6	34.4	35.1	35.5	35.4	34.8	35.4	35.9
7 - 8	34.2	34.1	34	34	34.4	35	35	34.1	35	34.3
8 - 9	33.9	34	34.1	33.9	34.3	34.6	34.3	34	34.5	34
9 - 10	34	33.9	34	33.8	34	33.9	34	34	33.9	33.7
10 - 11	33.7	33.7	33.8	33.7	34.1	33.9	33.8	33.8	33.8	33.5
11 - 12	33.9	33.8	33.8	33.8	33.8	33.8	33.9	33.8	33.8	33.4
12 - 13	34	33.6	33.8	33.8	33.7	33.8	33.4	33.8	33.6	33.3
13 - 14	33.8	33.5	33.7	34	33.6	33.7	33.7	33.7	33.7	33.4
14 - 15	34.1	33.8	33.7	33.7	33.7	33.5	33.9	33.8	33.7	33.5
15 - 16	33.8	33.6	33.6	33.6	33.7	33.7	33.7	33.7	33.7	33.3
16 - 17	33.5	33.3	33.4	33.5	33.6	33.8	33.7	33.5	33.7	33
17 - 18	33.5	33.5	33.6	33.5	33.5	33.7	33.7	33.5	33.7	33.1
18 - 19	33.7	33.8	33.7	33.7	33.7	33.9	34.1	33.7	34	33.4
19 - 20	34	33.7	33.7	33.9	33.8	34.1	33.7	33.8	33.9	33.7
20 - 21	34.1	33.9	34.3	34	34	34.6	34.3	34.1	34.5	34.2
21 - 22	34.8	34.3	34.3	34.5	34.8	34.2	34.5	34.5	34.3	35.2
22 - 23	34.6	34.7	34.4	34.6	34.6	34.5	34.8	34.6	34.6	35.4
23 - 24	34.9	34.9	35.4	35.1	34.5	34.7	34.9	35	34.7	36.3
Totals	826.7	828	825.3	827.2	827.9	833	827.3			
% of Total	14.3%	14.3%	14.2%	14.3%	14.3%	14.4%	14.3%			

## Appendix F: Volume By Speed (West VAS)



## Appendix G: Chart Percentile Speed (West VAS)



## **Appendix H: Key Stats (West VAS)**

85th Percentile Speed = 33.9 MPH

85th Percentile Vehicles = 106,464 counts

Max Speed = 60.0 MPH on 01/09/2021 02:05:00

Total Vehicles =125,252 counts

50th Percentile Speed: 28.4 MPH

Average Speed: 28.6 MPH

## Appendix I: Vehicle Counts (East VAS)

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week Day Avg	Weekend Avg	Week Day 85% Avg Speed
0 - 1	33	82	127	112	66	130	192	84	161	35.6
1 - 2	43	39	97	59	55	75	97	58.6	86	38.3
2 - 3	57	55	80	61	69	78	82	64.4	80	39
3 - 4	77	50	84	78	91	74	56	76	65	38.2
4 - 5	243	218	263	261	217	155	84	240.4	119.5	36.4
5 - 6	626	686	785	824	632	396	237	710.6	316.5	34.5
6 - 7	1490	1494	1761	1772	1256	514	325	1554.6	419.5	31.9
7 - 8	2293	2324	2791	2866	2178	885	464	2490.4	674.5	29.4
8 - 9	1832	2022	2499	2406	1963	1239	708	2144.4	973.5	29.3
9 - 10	1290	1525	1956	1944	1609	1714	1155	1664.8	1434.5	29.5
10 - 11	1351	1425	1770	1928	1585	1925	1537	1611.8	1731	29.8
11 - 12	1414	1410	1783	1778	1520	2084	1633	1581	1858.5	29.9
12 - 13	1404	1351	1736	1836	1551	1892	1703	1575.6	1797.5	30.2
13 - 14	1426	1292	1743	1724	1533	1668	1585	1543.6	1626.5	30
14 - 15	1324	1449	1834	1906	1651	1371	1312	1632.8	1341.5	29.9
15 - 16	1480	1494	2003	1883	1712	1233	1431	1714.4	1332	30.1
16 - 17	1611	1495	2018	1922	1692	1362	1294	1747.6	1328	30.1
17 - 18	1602	1460	2046	1928	1616	1318	1218	1730.4	1268	30.1
18 - 19	1216	1220	1630	1629	1282	1128	993	1395.4	1060.5	30.5
19 - 20	922	823	1189	1200	863	856	729	999.4	792.5	31.2
20 - 21	514	568	782	736	643	528	499	648.6	513.5	31.7
21 - 22	319	393	460	488	403	432	265	412.6	348.5	33.4
22 - 23	161	262	329	317	361	361	163	286	262	34.2
23 - 24	111	150	159	221	251	293	97	178.4	195	36.5
Totals	22839	23287	29925	29879	24799	21711	17859			
% of Total	13.4%	13.7%	17.6%	17.5%	14.6%	12.7%	10.5%			



## Appendix J: Average Speeds (East VAS)

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week Day Avg	Weekend Avg	Week Day 85% Avg Speed
0 - 1	31.7	29.4	29	30.3	29.5	30.6	29.8	29.7	30.1	35.6
1 - 2	29.8	32.4	30	31.6	30.8	30.8	31.3	30.8	31.1	38.3
2 - 3	32.1	31.7	31.1	30.9	32.3	30.2	30.7	31.6	30.5	39
3 - 4	30.4	30.8	30.8	32.9	32.5	31	30.5	31.6	30.8	38.2
4 - 5	30.4	30	30.7	30.3	30.2	30.1	30.6	30.3	30.3	36.4
5 - 6	29	29	29	29.2	29.8	29.4	29.9	29.2	29.6	34.5
6 - 7	26.9	26.9	26.8	27.1	27.5	28.1	29.2	27	28.6	31.9
7 - 8	25.1	24.9	24.6	25.2	25.5	27.2	28.5	25.1	27.6	29.4
8 - 9	25	25.4	25.1	25.3	25.1	26.7	27.7	25.2	27.1	29.3
9 - 10	25	25.7	25.8	25.6	25.1	26.1	27	25.5	26.5	29.5
10 - 11	25.7	25.9	26.3	25.8	26	25.7	26.1	26	25.9	29.8
11 - 12	26.2	26.3	26.1	25.9	25.9	25.1	25.7	26	25.4	29.9
12 - 13	26.4	26.5	26.3	26.2	26.1	25.7	26.3	26.3	26	30.2
13 - 14	26.2	26.3	26.1	26	26	26.2	26.4	26.1	26.3	30
14 - 15	26.3	25.9	26	26.1	26.3	26.2	26.3	26.1	26.3	29.9
15 - 16	26.3	26.1	26.2	26.3	25.9	26.7	26.7	26.1	26.7	30.1
16 - 17	26.5	25.9	26.1	25.8	26.1	26.7	26.7	26.1	26.7	30.1
17 - 18	26.2	26	26.1	25.9	25.6	26.5	26.8	26	26.7	30.1
18 - 19	26.6	26.5	26.3	26.5	25.6	26.8	27.3	26.3	27.1	30.5
19 - 20	26.9	26.9	27	26.7	26.7	27.1	27.3	26.9	27.2	31.2
20 - 21	27.1	27	27.3	26.9	27.2	27.6	27.6	27.1	27.6	31.7
21 - 22	28.9	28.2	27.8	28.1	28.2	28.3	28.6	28.2	28.4	33.4
22 - 23	29.5	28.4	29	28.9	28.2	27.9	30.4	28.7	28.7	34.2
23 - 24	31.1	29.9	29.7	30.4	29.1	29	31.1	29.9	29.5	36.5
Totals	665.3	662	659.2	663.9	661.2	665.7	678.5			
% of Total	14.3%	14.2%	14.2%	14.3%	14.2%	14.3%	14.6%			

## Appendix K: 85<sup>th</sup> Percentile Speeds (East VAS)

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week Day Avg	Weekend Avg	Week Day 85% Avg Speed
0 - 1	37.9	35.6	34.3	36	34.2	37.1	36	35.6	36.6	35.6
1 - 2	37.1	39.1	37.3	39	39.2	37.3	39.6	38.3	38.5	38.3
2 - 3	40.6	39.3	38.8	37	39.2	36.4	37.7	39	37.1	39
3 - 4	36.7	37.5	37	40.6	39.3	37.7	35	38.2	36.4	38.2
4 - 5	37	35.7	36.8	36.2	36.1	36.9	36.7	36.4	36.8	36.4
5 - 6	34.3	34.3	34.2	34.6	35.2	34.7	35	34.5	34.9	34.5
6 - 7	31.7	31.8	31.6	32	32.5	33.8	35	31.9	34.4	31.9
7 - 8	29.3	29.3	29.1	29.5	29.6	32.3	33.7	29.4	33	29.4
8 - 9	29.3	29.4	29.4	29.3	29.3	31.3	32.9	29.3	32.1	29.3
9 - 10	29.3	29.6	29.7	29.6	29.4	30	31.2	29.5	30.6	29.5
10 - 11	29.6	29.7	30	29.7	29.8	29.8	29.9	29.8	29.9	29.8
11 - 12	30.2	29.9	29.8	29.7	29.8	29.6	29.8	29.9	29.7	29.9
12 - 13	30.2	30.1	30.4	30	30.1	29.6	30.1	30.2	29.9	30.2
13 - 14	30	29.9	30.3	29.9	29.8	30	30.5	30	30.3	30
14 - 15	30	29.8	29.8	29.8	30	30.3	30.3	29.9	30.3	29.9
15 - 16	30.4	29.9	30.3	30	29.8	30.7	31.2	30.1	31	30.1
16 - 17	30.6	29.9	30.5	29.7	29.9	30.8	30.8	30.1	30.8	30.1
17 - 18	30.3	30.2	30.2	29.8	29.8	30.9	31.3	30.1	31.1	30.1
18 - 19	31	30.7	30.6	30.4	29.7	31.6	32.1	30.5	31.9	30.5
19 - 20	31.3	31.1	31.5	30.6	31.3	32.1	32.3	31.2	32.2	31.2
20 - 21	31.5	31.8	32	31.2	32	32.4	32.6	31.7	32.5	31.7
21 - 22	33.9	33.2	33.2	33.3	33.5	33.5	34.2	33.4	33.9	33.4
22 - 23	34.9	34.3	34.4	34.1	33.3	33.1	37.2	34.2	35.2	34.2
23 - 24	37.6	37.5	35.7	36.9	34.8	34.7	37.5	36.5	36.1	36.5
Totals	784.7	779.6	776.9	778.9	777.6	786.6	802.6			
% of Total	14.3%	14.2%	14.2%	14.2%	14.2%	14.3%	14.6%			

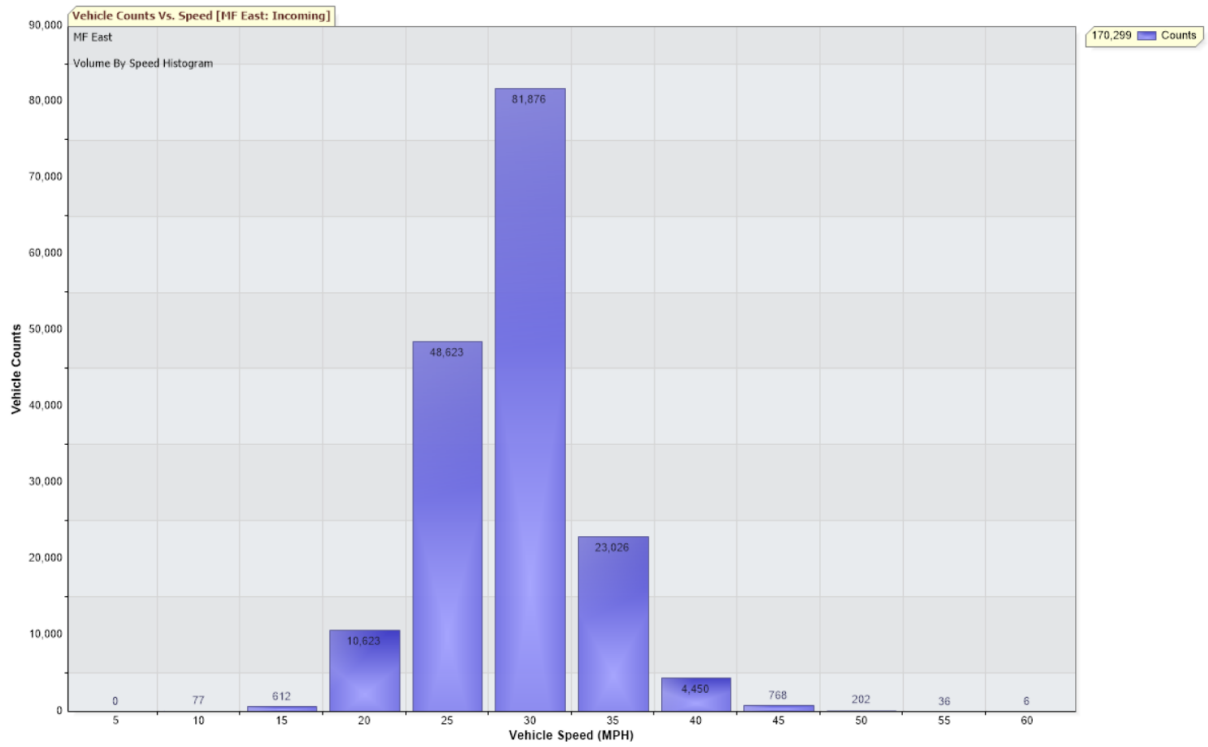
## Appendix L: Speeder Counts (East VAS)

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week Day Avg	Weekend Avg	Week Day 85% Avg Speed
0 - 1	25	31	45	54	37	69	92	38.4	80.5	35.6
1 - 2	22	25	42	38	22	44	52	29.8	48	38.3
2 - 3	32	32	40	33	40	39	43	35.4	41	39
3 - 4	38	25	46	49	63	39	32	44.2	35.5	38.2
4 - 5	124	106	149	131	110	65	46	124	55.5	36.4
5 - 6	246	261	315	336	293	163	108	290.2	135.5	34.5
6 - 7	321	332	388	404	335	174	121	356	147.5	31.9
7 - 8	231	232	244	328	282	212	163	263.4	187.5	29.4
8 - 9	173	203	248	226	185	258	201	207	229.5	29.3
9 - 10	124	179	256	223	166	265	224	189.6	244.5	29.5
10 - 11	158	182	283	238	225	263	224	217.2	243.5	29.8
11 - 12	227	198	253	227	210	263	233	223	248	29.9
12 - 13	229	218	294	286	254	228	282	256.2	255	30.2
13 - 14	216	198	296	252	219	251	282	236.2	266.5	30
14 - 15	214	196	259	270	261	236	228	240	232	29.9
15 - 16	249	228	334	295	240	218	281	269.2	249.5	30.1
16 - 17	281	219	343	248	249	243	239	268	241	30.1
17 - 18	269	239	332	274	221	248	247	267	247.5	30.1
18 - 19	238	224	300	280	170	243	234	242.4	238.5	30.5
19 - 20	190	163	245	216	181	201	176	199	188.5	31.2
20 - 21	104	124	180	140	146	135	125	138.8	130	31.7
21 - 22	111	115	141	150	135	130	97	130.4	113.5	33.4
22 - 23	70	93	128	125	101	95	76	103.4	85.5	34.2
23 - 24	58	55	62	102	89	99	58	73.2	78.5	36.5
Totals	3950	3878	5223	4925	4234	4181	3864			
% of Total	13.1%	12.8%	17.3%	16.3%	14%	13.8%	12.8%			

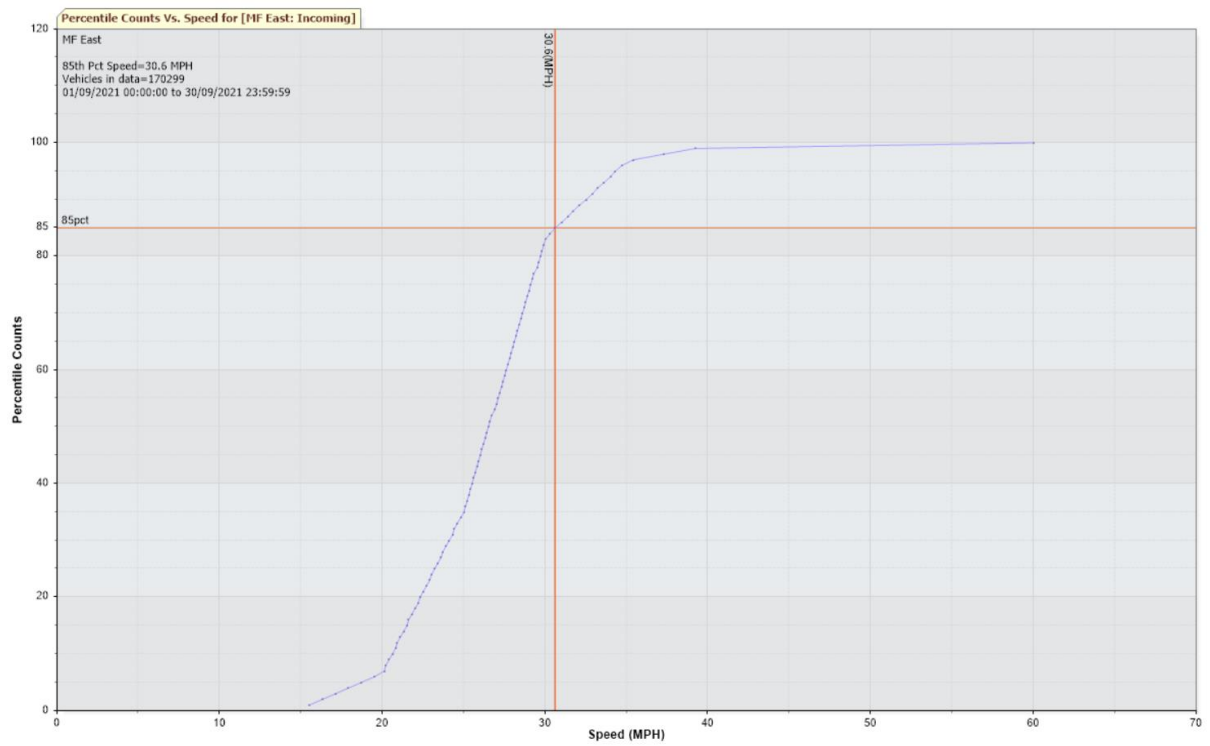
## Appendix M: Average Speeder (East VAS)

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Week Day Avg	Weekend Avg	Week Day 85% Avg Speed
0 - 1	35.3	35.9	35.8	36.1	34.5	35.5	34.9	35.6	35.2	35.6
1 - 2	35.2	36.9	36.7	36.1	38.9	35.6	37.1	36.7	36.4	38.3
2 - 3	37.5	36.7	37.3	36	36.4	35.7	35.9	36.8	35.8	39
3 - 4	35.8	35.9	35.3	37.5	36.4	35.4	34.7	36.3	35.1	38.2
4 - 5	35.4	35.3	35.2	35.2	35.2	35.9	35.4	35.3	35.7	36.4
5 - 6	34.2	34.2	34.1	34.7	34.6	34.7	34.9	34.4	34.8	34.5
6 - 7	33.6	33.6	33.5	33.8	33.7	34.4	35.1	33.7	34.7	31.9
7 - 8	33.2	33.1	33.1	33.1	33.2	33.8	34.1	33.2	33.9	29.4
8 - 9	33.1	33.1	32.9	32.9	33.1	33.5	33.7	33	33.6	29.3
9 - 10	33.1	33.1	33	32.9	33.2	33.2	33.5	33.1	33.3	29.5
10 - 11	33.1	33	33	33.2	33.3	33	33.3	33.1	33.1	29.8
11 - 12	33.2	33.4	33.3	33.1	33	33	33.3	33.2	33.2	29.9
12 - 13	33	33.3	33.1	33.2	33.2	33.2	33.2	33.2	33.2	30.2
13 - 14	33.1	33.5	33.2	33.3	33.5	33.2	33.2	33.3	33.2	30
14 - 15	33.2	33.2	33.3	33.3	33.4	33.1	33.3	33.3	33.2	29.9
15 - 16	33.2	33.4	33.3	33.3	33.2	33.4	33.4	33.3	33.4	30.1
16 - 17	33.2	33.3	33.3	33.4	33.3	33.6	33.4	33.3	33.5	30.1
17 - 18	33.1	33.1	33.3	33.6	33.2	33.5	33.5	33.3	33.5	30.1
18 - 19	33.1	33.6	33.5	33.5	33.6	33.5	33.8	33.4	33.6	30.5
19 - 20	33.6	33.3	33.9	33.6	33.4	33.7	34.2	33.6	34	31.2
20 - 21	34.4	34	34.5	34	34.3	33.8	34.3	34.3	34.1	31.7
21 - 22	34.6	34.8	34	34.1	34.3	34.9	35.2	34.3	35	33.4
22 - 23	36.1	35	35.1	34.6	34.8	34.7	35.8	35	35.2	34.2
23 - 24	35.9	36.8	35.7	35.7	35.7	35.2	35.5	35.9	35.3	36.5
Totals	819.2	821.5	819.3	820.2	821.4	819.5	824.7			
% of Total	14.3%	14.3%	14.3%	14.3%	14.3%	14.3%	14.4%			

## Appendix N: Volume By Speed (East VAS)



## Appendix O: Chart Percentile Speed (East VAS)



## **Appendix P: Key Stats (East VAS)**

### **Key stats**

85th Percentile Speed = 30.6 MPH  
85th Percentile Vehicles = 144,754 counts  
Max Speed = 60.0 MPH on 03/09/2021 03:40:00  
Total Vehicles =170,299 counts  
50th Percentile Speed: 26.5 MPH  
Average Speed: 26.4 MPH