2020
Virginia Department of Transportation
Daily Traffic Volume Estimates
Including Vehicle Classification Estimates

where available

Special Locality Report
304

Town of Stephens City

Information in this report is included in Report

34

(Frederick County)

Prepared By

Virginia Department of Transportation
Traffic Engineering Division

In Cooperation With

U.S. Department of Transportation
Federal Highway Administration

The reported 2020 AADTs represent the best estimate of 2020 average daily traffic, however, this year's AADTs do vary from normal traffic in the years prior to 2020 due to COVID-19. The reported AADTs may not represent typical traffic for a given day or period within the year as the drastic seasonal variations were normalized through the factoring process. The 2020 publications are therefore colored to draw users attention to the fact that uses of the 2020 published estimates versus alternative data sources should be determined at users' discretion based on the objectives or nature of the analyses being performed.

The estimated 2020 DVMT for the entire state maintained network total to 208,000,000, which has trended down by 11 percent compared to the 2019 level of 234,000,000. For most traffic links across the state, the estimated 2020 AADTs are also seen to have decreased from their 2019 levels.

Virginia Department of Transportation
Traffic Engineering Division
Traffic Monitoring Section

The Virginia Department of Transportation (VDOT) conducts a program where traffic count data are gathered from sensors in or along streets and highways and other sources. From these data, estimates of the average number of vehicles that traveled each segment of road are calculated. VDOT periodically publishes booklets listing these estimates.

One of these booklets, titled "Average Daily Traffic Volumes with Vehicle Classification Data, on Interstate, Arterial and Primary Routes" includes a list of each Interstate and Primary highway segment with the estimated Annual Average Daily Traffic (AADT) for that segment. AADT is the total annual traffic estimate divided by the number of days in the year. This booklet also includes information such as estimates of the percentage of the AADT made up by 6 different vehicle types, ranging from cars to double trailer trucks; estimated Annual Average Weekday Traffic (AAWDT), which is the number of vehicles estimated to have traveled the segment of highway during a 24 hour weekday averaged over the year; as well as Peak Hour and Peak Direction factors used by planners to formulate design criteria.

In addition to the Primary and Interstate publication, one hundred books are published periodically, one for each of 100 areas across the state defined by VDOT for record-keeping purposes. These books include traffic volume estimates for roads within the county, cities, and towns within the area. These books are titled "Daily Traffic Volumes Including Vehicle Classification Estimates, where available; Jurisdiction Report numbers 00 through 99".

Also available are a number of reports summarizing the average Vehicle Miles Traveled (VMT) in selected jurisdictions and other categories of highways. There are many different ways to present traffic volume summary information. Because the user determines the value of each presentation, the reports have been redesigned based on user requests and feedback. The people of the VDOT Traffic Engineering Division Traffic Monitoring Section who produce these books welcome requests for other helpful ways of presenting the summary information.

A compact disc (CD) is available that includes files in the Adobe® Portable Document Format (PDF) that can be displayed, searched, and printed using common desktop computer equipment. The CD includes the publications described above as well as a number of other reports, including specialized VMT summaries and smaller AADT reports for each city and town separately.

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Publication Notes

Parallel Roads

For road inventory and management purposes, some roadways are counted separately by direction and have separately published traffic estimates for each direction of travel. Examples of such roadways are the interstate system and routes with separated facilities and (usually) one-way traffic facilities in urban areas. In these publications, they are referred to as parallel roads. As a convenience for the users of the publication, the listing for segments of roads with parallel segments are published with both the traffic estimates for their own direction of travel (e.g. I-95 Northbound) as well as the estimate of the total of all traffic on the same route including parallel roadways (all directions of I-95). The publication will have a "Combined Traffic Estimates for Parallel Roadways on this Route" or "Combined Traffic" identifiers for the combined direction of travel estimates.

Roadways such as I-395 with a North segment, a South segment and a separate Reversible lane segment will have the estimate for more than two parallel roadways included in the entire combined traffic estimate.

Some routes have very complicated paths through cities and towns. These parallel paths may be too complex to allow a relationship between nearby sections of the opposite direction on the same route. In this case, to indicate that the traffic estimates for such a road segment may not include all directions of traffic on that route, the line that would list the combined values will indicate "NA" for not available.

VDOT's traffic monitoring program includes more than 100,000 segments of roads and highways ranging from several mile sections of Interstate highways to very short sections of city streets. Due to problems experienced obtaining some traffic count data, and the level of quality necessary to maintain confidence in the data, no estimate is currently available for some segments of roadway. These segments are included in the publications indicating "NA" for not available. It is the intention of the VDOT Traffic Engineering Division Traffic Monitoring group to obtain the data necessary and to report traffic volume estimates on all road segments included in these publications.

Many of the road segments in this program are local secondary roads. The amount and detail of data collected on these roads are not as great as the data collected on higher volume roads. The vehicle classification, average weekday traffic volumes, and the theoretical design hour traffic volumes are not calculated for these roads. The publications indicate "NA" for the information that is not available.

This publication is based on a traffic monitoring program initiated in 1997. Because the data collection techniques and statistical evaluation processes are different than those used in previous years, comparison with previous publications may be misleading.

Glossary of Terms:

Route: The Route Number assigned to this segment of roadway with the master inventory route number if this is an overlapping route, with official street or highway name if available.

Length: Length of the traffic segment in miles.

AADT: Annual Average Daily Traffic. The estimate of typical daily traffic on a road segment for all days of the week, Sunday through Saturday, over the period of one year.

QA: Quality of AADT:

- A Average of Complete Continuous Count Data
- B Average of Selected Continuous Count Data
- F Factored Short Term Traffic Count Data
- G Factored Short Term Traffic Count Data with Growth Element
- H Historical Estimate
- M Manual Uncounted Estimate
- N AADT of Similar Neighboring Traffic Link
- O Provided By External Source
- R Raw Traffic Count, Unfactored

4Tire: Percentage of the traffic volume made up of motorcycles, passenger cars, vans and pickup trucks.

Bus: Percentage of the traffic volume made up of buses.

2Axle Truck: Percentage of the traffic volume made up of 2 axle single unit trucks (not including pickups and vans).

3+Axle Truck: Percentage of the traffic volume made up of single unit trucks with three or more axles.

1Trail Truck: Percentage of the traffic volume made up of units with a single trailer.

2Trail Truck: Percentage of the traffic volume made up of units with more than one trailer.

QC: Quality of Classification Data:

- A Average of Complete Continuous Count Data
- B Average of Selected Continuous Count Data
- C Short Term Classified Traffic Count Data
- F Factored Short Term Traffic Count Data
- H Historical Estimate
- M Mass Collective Average
- N Classification Estimates of Similar Neighboring Traffic Link

K Factor: The estimate of the portion of the traffic volume traveling during the peak hour or design hour.

QK: Quality of the K Factor estimate:

- A Factor based on 30th Highest Hour Observed During at least 250 days of Continuous Traffic Data
- B Factor based on other Hour Observed During Less than 250 days of Continuous Traffic Data
- F Factor based on Highest Hour Collected at in a 48 Hour Weekday Period
- M Factor based on Manual Estimate of design hour
- N Design Hour Factor (K Factor) of Similar Neighboring Traffic Link
- O Provided by External Source

Dir Factor: The estimate of the portion of the traffic volume traveling in the peak direction during the peak hour..

AAWDT: Average Annual Weekday Traffic. The estimate of typical traffic over the period of one year for the days between Monday through Thursday inclusive.

QW: Quality of AAWDT:

- A Average of Complete Continuous Count Data
- B Average of Selected Continuous Count Data
- F Factored Short Term Traffic Count Data
- G Factored Short Term Traffic Count Data with Growth Element
- M Manual Uncounted Estimate
- N AAWDT of Similar Neighboring Traffic Link
- O Provided by External Source

Year: Year for which the published values are appropriate. If the Quality of AADT (QA) is "R", the year is the year that the raw traffic count was collected, and if available,

Route Shield Legend

Route Systems

Interstate Route

Traffic volume data for Interstate Routes and some other routes are reported separately by direction, as well as combined.

US Route

Virginia State Route

Frontage Road (F precedes frontage route number)

Secondary Route

Special Routes

Bus - Business Route
Bypas - Bypass Route
Truck - Truck Route

ALT - Alternate Route
Wye - Wye Route connector

P - Parallel Route; Southbound or Westbound direction lanes of a numbered route where they are on a different road facility than the other direction.

The VDOT Maintainenance Jurisdiction number is displayed below the Secondary Route Number if the Maintenance Jurisdiction is different than the jurisdiction in the title of the report.

Virginia Department of Transportation
Traffic Engineering Division
2020
Annual Average Daily Traffic Volume Estimates By Section of Route
Town of Stephens City

Route	Jurisdiction	Length	AADT	QA	4Tire	Bus	Truck 2Axle	Truck 3+Axle	Truck 1Trail	Truck 2Trail	QC	K Factor	QK	Dir Factor	AAWDT	QW
	From: SCL Stephens City															
11 Main St	Town of Stephens City (Maint: 34)	0.32	**5200**	**N**	94%	1%	1%	1%	2%	0%	N	0.097	F	0.554	5200	N
	To: SR 277 Fairfax Pike															
	From: SR 277 Fairfax Pike															
11 Main St	Town of Stephens City (Maint: 34)	0.71	**6500**	**F**	96%	1%	1%	1%	1%	0%	C	0.088	F	0.619	6800	F
	To: NCL Stephens City															
	From: SCL Stephens City															
North 81	Frederick County	0.10	**24000**	**A**	75%	1%	1%	1%	20%	2%	F	0.094	A		25000	A
	Combined Traffic Estimates for 2 Parallel Roadways on this Route:		**47000**	**A**	76%	1%	1%	1%	20%	2%	F	0.096	A	0.55	49000	A
	To: SR 277 Fairfax Pike; NCL Stephens City															
	From: SCL Stephens City															
South 81	Town of Stephens City (Maint: 34)	0.10	**23000**	**A**	76%	1%	1%	1%	19%	2%	F	0.105	A		24000	A
	Combined Traffic Estimates for 2 Parallel Roadways on this Route:		**47000**	**A**	76%	1%	1%	1%	20%	2%	F	0.096	A	0.55	49000	A
	To: NCL Stephens City															
	From: US 11 Main Street															
277 Fairfax Pike	Town of Stephens City (Maint: 34)	0.15	**7600**	**F**	94%	0%	1%	1%	4%	0%	C	0.088	F	0.523	8000	F
	To: ECL Stephens City															

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Route	Length	AADT	QA	4Tire	Bus	Truck 2Axle	Truck 3+Axle	Truck 1Trail	Truck 2Trail	QC	K Factor	QK	Dir Factor	AAWDT	QW	Year
Town of Stephens City																
631 34 Fairfax St	0.45	**4000**	**F**	96%	0%	2%	1%	1%	0%	F	0.083	F	0.599	4200	F	2020
From: WCL Stephens City																
To: US 11; SR 277																
648 34 Passage Rd	0.78	**120**	**R**								NA			NA		07/16/2014
From: SCL Stephens City																
To: NCL Stephens City																
1001 34 Martin St	0.27	**60**	**R**								NA			NA		09/23/2020
From: 34-1011 Grove St																
To: 34-1002 Mulberry St																
1002 34 Mulberry St	0.10	**1100**	**R**								NA			NA		08/01/2017
From: 34-1005 School St																
To: 34-1006 Green St																
1002 34 Mulberry St	0.30	**1600**	**R**								NA			NA		09/23/2020
From: 34-1006 Green St																
To: 34-1007 Locust St																
1002 34 Mulberry St	0.15	**60**	**R**								NA			NA		08/01/2017
From: 34-1007 Locust St																
To: Dead End																
1003 34 Laura Dr	0.50	**520**	**R**								NA			NA		09/23/2020
From: 34-1005 School St																
To: 34-1008 Filbert St																
1003 34 Laura Dr	0.10	**240**	**R**								NA			NA		08/01/2017
From: 34-1008 Filbert St																
To: 34-1009 Gap																
1003 34 Laura Dr	0.18	**100**	**R**								NA			NA		03/20/2020
From: 34-1016 Gap																
To: Dead End																
1004 34 Water St	0.10	**110**	**R**								NA			NA		08/01/2017
From: 34-631 Fairfax St																
To: 34-1001 Martin St																
1004 34 Water St	0.10	**40**	**R**								NA			NA		09/23/2020
From: 34-1001 Martin St																
To: 34-1007 Locust St																
1005 34 School St	0.10	**1100**	**R**								NA			NA		08/01/2017
From: 34-1002 Mulberry St																
To: 34-1003 Laura Dr																
1006 34 Green St	0.05	**80**	**R**								NA			NA		08/01/2017
From: Dead End																
To: 34-1003 Laura Dr																
1006 34 Green St	0.05	**300**	**R**								NA			NA		08/01/2017
From: 34-1003 Laura Dr																
To: US 11 Main St																
1006 34 Green St	0.05	**580**	**R**								NA			NA		08/01/2017
From: US 11 Main St																
To: 34-1002 Mulberry St																
1006 34 Green St	0.07	**30**	**R**								NA			NA		08/01/2017
From: 34-1002 Mulberry St																
To: Dead End																
1007 34 Locust St	0.05	**1300**	**R**								NA			NA		09/23/2020
From: US 11 Main St																
To: 34-1003 Laura Dr																
1007 34 Locust St	0.05	**460**	**R**								NA			NA		09/23/2020
From: 34-1003 Laura Dr																
To: 34-1004 Water St																
1007 34 Locust St	0.05	**310**	**R**								NA			NA		09/23/2020
From: 34-1004 Water St																
To: 34-1024 Chestnut Circle																
1007 34 Locust St	0.03	**430**	**R**								NA			NA		11/13/2014
From: 34-1024 Chestnut Circle																
To: 34-1011 Grove St																
1007 34 Locust St	0.09	**170**	**R**								NA			NA		09/23/2020
From: US 11 Main St																
To: 34-1003 Laura Dr																
1008 34 Filbert St	0.05	**600**	**R**								NA			NA		05/25/2011

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Route	Length	AADT	QA	4Tire	Bus	Truck 2Axle	Truck 3+Axle	Truck 1Trail	Truck 2Trail	QC	K Factor	QK	Dir Factor	AAWDT	QW	Year
Town of Stephens City																
1008 34 Filbert St	0.15	**450**	**R**								NA			NA		05/25/2011
From: 34-1003 Laura Dr To: 34-1028 Ravenwood Rd																
1008 34 Filbert St	0.03	**5**	**R**								NA			NA		05/25/2011
From: 34-1028 Ravenwood Rd To: Dead End																
1009 34 Bell Air St	0.05	**230**	**R**								NA			NA		09/23/2020
From: 34-1003 Laura Dr To: 34-1017 Barley Dr																
1009 34 Bell Air St	0.09	**120**	**R**								NA			NA		09/23/2020
From: 34-1017 Barley Dr To: 34-1023 Highview Ave																
1010 34 Plymouth St	0.15	**530**	**R**								NA			NA		09/28/2020
From: Dead End To: US 11 Main St																
1011 34 Grove St	0.10	**160**	**R**								NA			NA		08/01/2017
From: 34-631 Fairfax St To: 34-1001 Martin St																
1011 34 Grove St	0.10	**150**	**R**								NA			NA		08/01/2017
From: 34-1001 Martin St To: 34-1007 Locust St																
1011 34 Grove St	0.14	**150**	**R**								NA			NA		08/01/2017
From: 34-1007 Locust St To: Dead End																
1013 34 Crooked Lane	0.15	**200**	**R**								NA			NA		11/13/2014
From: 34-631 Fairfax St To: Dead End																
1016 34 Farmview Dr	0.06	**180**	**R**								NA			NA		09/23/2020
From: US 11 Main St To: 34-1003 Laura Dr																
1016 34 Farmview Dr	0.06	**140**	**R**								NA			NA		09/23/2020
From: 34-1003 Laura Dr To: 34-1017 Barley Dr																
1016 34 Farmview Dr	0.08	**90**	**R**								NA			NA		09/23/2020
From: 34-1017 Barley Dr To: 34-1023 Highview Ave																
1017 34 Barley Dr	0.14	**150**	**R**								NA			NA		11/13/2014
From: 34-1009 Bell Air St To: 34-1016 Farmview Dr																
1017 34 Barley Dr	0.28	**260**	**R**								NA			NA		09/23/2020
From: 34-1016 Farmview Dr To: NCL Stephens City																
1019 34 Stephens Court	0.07	**110**	**R**								NA			NA		09/28/2020
From: Dead End To: 34-1014 Massie Lane																
1019 34 Stephens Court	0.07	**150**	**R**								NA			NA		09/28/2020
From: 34-1014 Massie Lane To: US 11 Main St																
1023 34 Highview Ave	0.16	**90**	**R**								NA			NA		11/13/2014
From: 34-1009 Bell Air St To: 34-1016 Farmview Dr																
1024 34 Chestnut Circle	0.04	**60**	**R**								NA			NA		05/25/2011
From: 34-1007 Locust St To: Cul-de-Sac																
1028 34 Ravenwood Rd	0.10	**220**	**R**								NA			NA		05/25/2011
From: 34-1008 Filbert St To: Cul-de-Sac																
1149 34 Rowe Lane	0.09	**46**	**R**								NA			NA		08/01/2017
From: 34-1013 Crooked Lane To: 34-1011 Grove St																
1449 34	0.08	**60**	**R**								NA			NA		05/25/2011
From: 34-1010 Plymouth St To: 34-1019 Stephens Court																