

CONGESTION REPORT

1st Quarter 2017

A quarterly update of the National Capital Region's traffic congestion, travel time reliability, top-10 bottlenecks and featured spotlight

May 4, 2018



National Capital Region
Transportation Planning Board

ABOUT TPB

Transportation planning at the regional level is coordinated in the Washington area by the National Capital Region Transportation Planning Board (TPB). Members of the TPB include representatives of the transportation agencies of the states of Maryland and Virginia, and the District of Columbia, local governments, the Washington Metropolitan Area Transit Authority, the Maryland and Virginia General Assemblies, and nonvoting members from the Metropolitan Washington Airports Authority and federal agencies. The TPB is staffed by the Department of Transportation Planning of the Metropolitan Washington Council of Governments.

CREDITS

Author: Jan-Mou Li, Daivamani Sivasailam

Project Management: Andrew J. Meese

Oversight: Kanti Srikanth

Data/Tools: I-95 Corridor Coalition Vehicle Probe Project; INRIX, Inc.;
CATT Lab of University of Maryland

ACCOMMODATIONS

Alternative formats of this document are available upon request; visit www.mwcog.org/accommodations or call (202) 962-3300 or (202) 962-3213 (TDD).

Copyright © 2018 by the Metropolitan Washington Council of Governments

CONGESTION REPORT

1st Quarter 2017

Table of Contents

2	CONGESTION – TRAVEL TIME INDEX (TTI)
3	RELIABILITY – PLANNING TIME INDEX (PTI)
4	TOP 10 BOTTLENECKS
10	CONGESTION MAPS
12	2017Q1 SPOTLIGHT

CONGESTION – TRAVEL TIME INDEX (TTI)

Interstate System

TTI 1st Quarter 2017: 1.30 ↓0.2% or -0.003¹
 TTI Trailing 4 Quarters: 1.35 ↑1.6% or 0.021²

Non-Interstate NHS³

TTI 1st Quarter 2017: 1.19 ↑0.6% or 0.01
 TTI Trailing 4 Quarters: 1.20 ↓1.3% or -0.02

Transit-Significant⁴

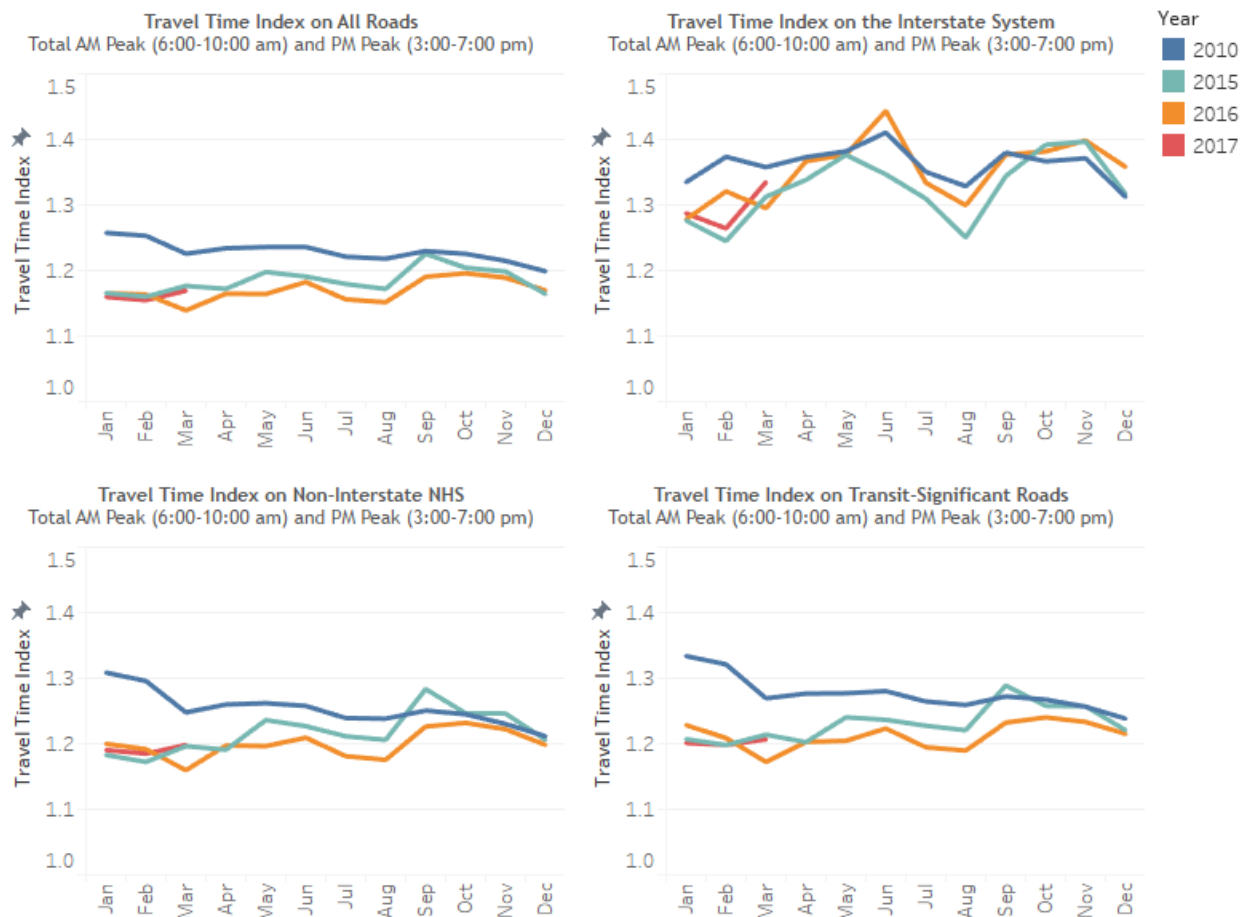
TTI 1st Quarter 2017: 1.20 ↓0.1% or -0.001
 TTI Trailing 4 Quarters: 1.21 ↓1.5% or -0.02

All Roads

TTI 1st Quarter 2017: 1.16 ↑0.4% or 0.01
 TTI Trailing 4 Quarters: 1.17 ↓0.9% or -0.01

¹ Compared to 1st Quarter 2016; ² Compared to one year earlier; ³ NHS: National Highway System; ⁴ See “Background” section.

Figure 1 Monthly Travel Time Index for Total AM peak (6:00-10:00 am) and PM peak (3:00-7:00 pm)



Travel Time Index (TTI), defined as the ratio of actual travel time to free-flow travel time, measures the intensity of congestion. The higher the index, the more congested traffic conditions it represents, e.g., TTI = 1.00 means free flow conditions, while TTI = 1.30 indicates the actual travel time is 30% longer than the free-flow travel time.

RELIABILITY – PLANNING TIME INDEX (PTI)

Interstate System

PTI 1st Quarter 2017: 1.77 ↓4.6% or -0.09¹
 PTI Trailing 4 Quarters: 1.88 ↑0.9% or 0.02²

Non-Interstate NHS³

PTI 1st Quarter 2017: 1.45 ↑1.6% or 0.02
 PTI Trailing 4 Quarters: 1.46 ↓0.5% or -0.01

Transit-Significant⁴

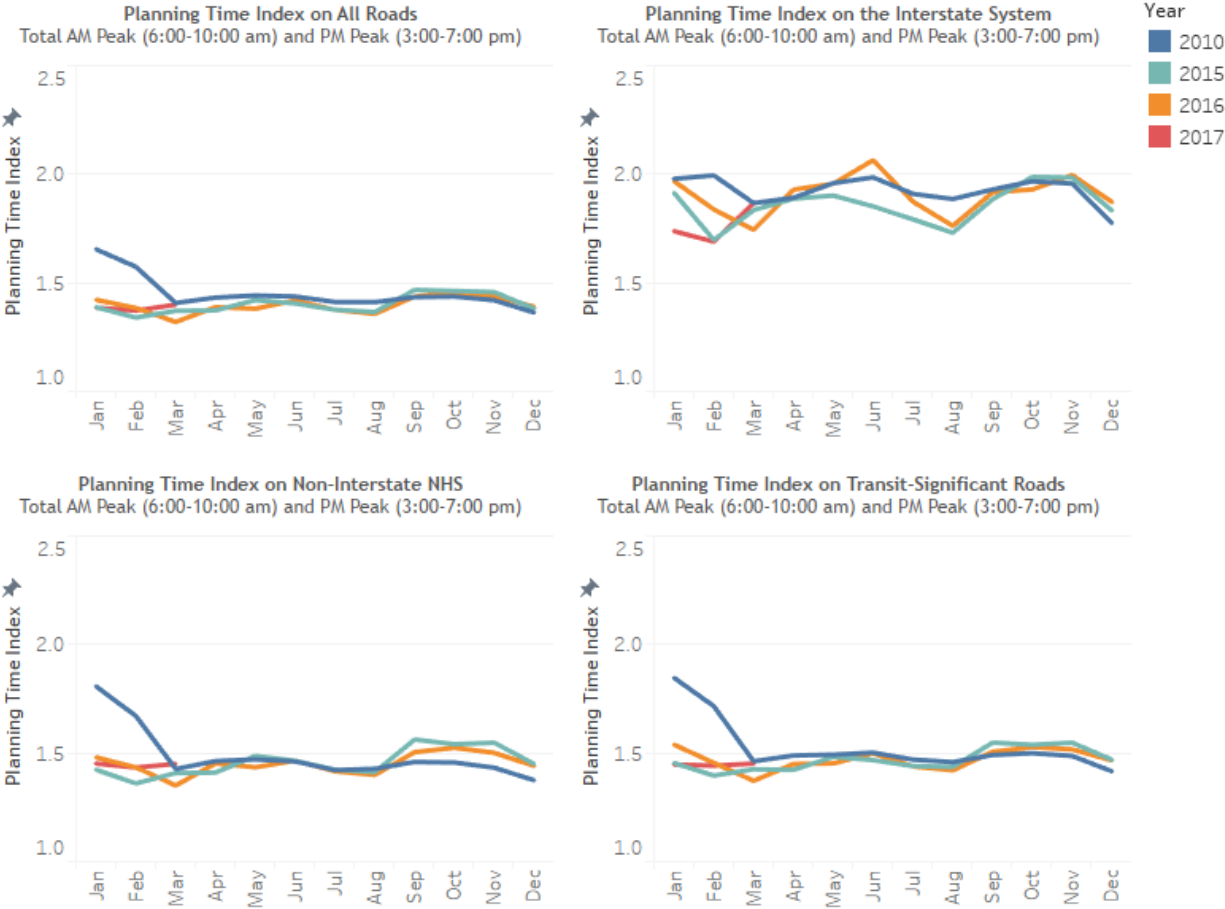
PTI 1st Quarter 2017: 1.45 ↓0.6% or -0.01
 PTI Trailing 4 Quarters: 1.47 ↓0.6% or -0.01

All Roads

PTI 1st Quarter 2017: 1.39 ↑0.8% or 0.01
 PTI Trailing 4 Quarters: 1.40 ↓0.2% or -0.003

¹ Compared to 1st Quarter 2016; ² Compared to one year earlier; ³ NHS: National Highway System; ⁴ See “Background” section.

Figure 2 Monthly Planning Time Index for Total AM peak (6:00-10:00 am) and PM peak (3:00-7:00 pm)

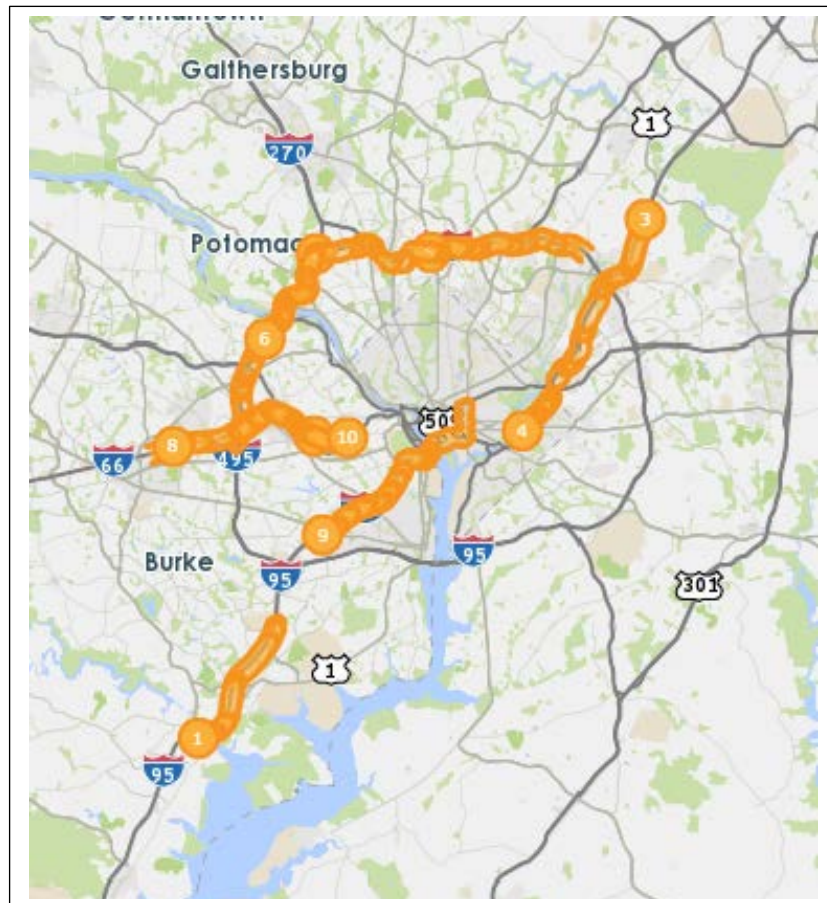


Planning Time Index (PTI), defined as the ratio of 95th percentile travel time to free flow travel time, measures travel time reliability. The higher the index, the less reliable traffic conditions it represents, e.g., PTI = 1.30 means a traveler has to budget 30% longer than the uncongested travel time to arrive on time 95% of the instances (i.e., 19 out of 20 trips).

TOP 10 BOTTLENECKS

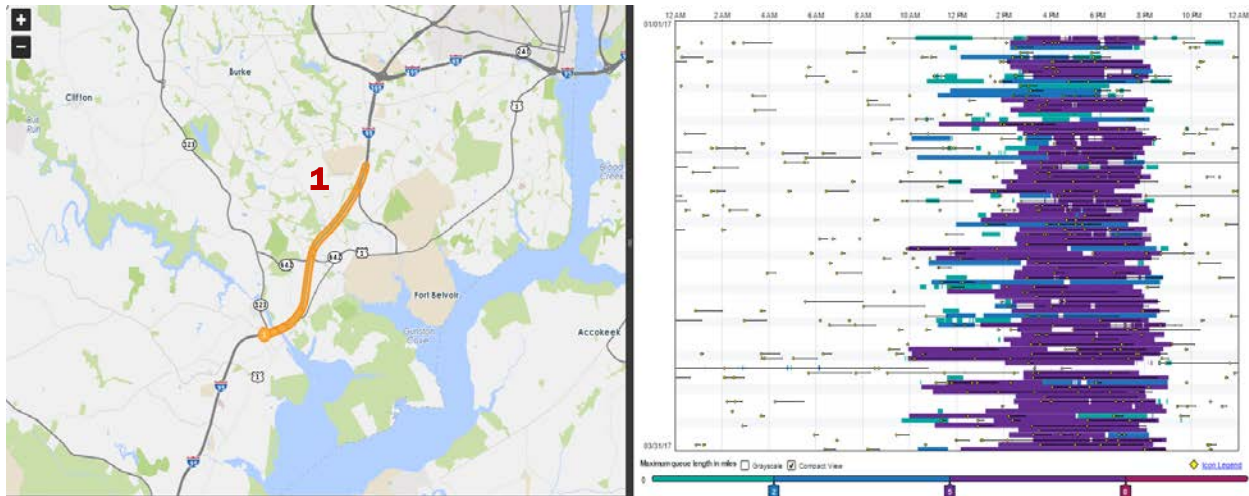
Rank (Last Quarter Rank)	Location	Average duration	Average max length (miles)	Total duration	Impact factor
1 (1)*	I-95 S @ VA-123/EXIT 160	6 h 20 m	3.91	23 d 19 h 13 m	122,494.88
2 (3)	I-495 CW @ I-270 SPUR	2 h 21 m	4.16	8 d 20 h 26 m	66,245.85
3 (4)	BALTIMORE-WASHINGTON PARKWAY N @ POWDER MILL RD	5 h 11 m	2.54	19 d 10 h 52 m	65,241.03
4 (9)	DC-295 S @ EAST CAPITOL ST	8 h 18 m	1.23	31 d 03 h 35 m	58,693.03
5 (7)	I-495 CCW @ MD-97/GEORGIA AVE/EXIT 31	2 h 50 m	2.96	10 d 15 h 43 m	58,427.19
6 (2)	I-495 CCW @ VA-193/GEORGETOWN PIKE/EXIT 13	2 h 55 m	2.19	10 d 23 h 16 m	57,895.81
7 (5)	I-66 E @ SYCAMORE ST/EXIT 69	5 h 08 m	1.78	19 d 06 h 44 m	51,012.26
8 (6)	I-66 W @ VADEN DR/EXIT 62	3 h 45 m	1.84	14 d 02 h 40 m	50,844.55
9 (18)	I-395 S @ VA-236/DUKE ST/EXIT 3	2 h 07 m	3.12	7 d 23 h 39 m	49,398.85
10 (15)	I-66 E @ FAIRFAX DR/EXIT 71	2 h 41 m	3.43	10 d 01 h 54 m	47,078.90

* See "Bottlenecks" section in the "Background" chapter for ranking variability from quarter to quarter.

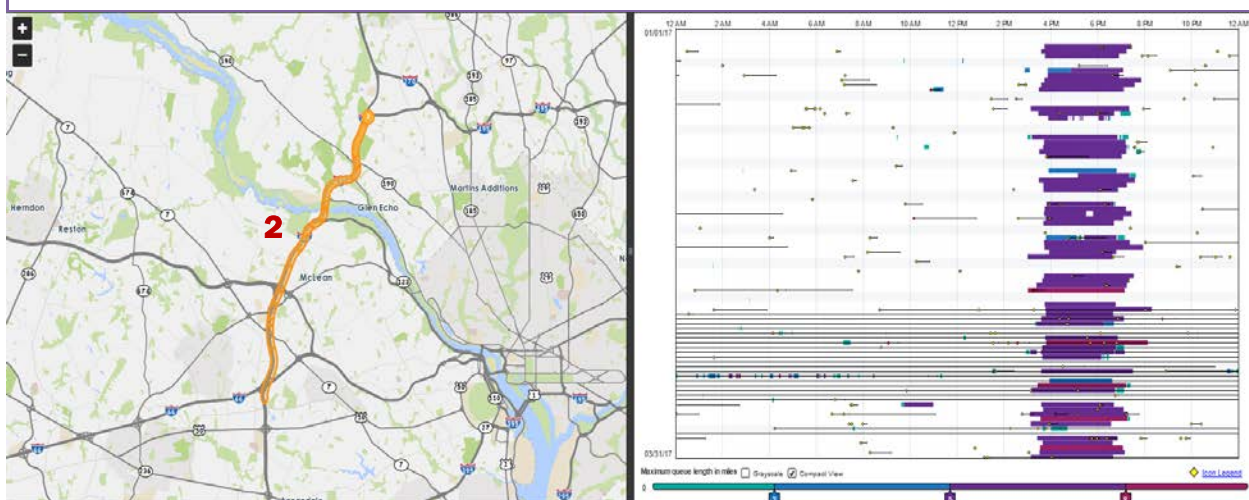


Rank	Location	Average duration	Average max length (miles)	Total duration	Impact factor*
1	I-95 S @ VA-123/EXIT 160	6 h 20 m	3.91	23 d 19 h 13 m	122,494.88

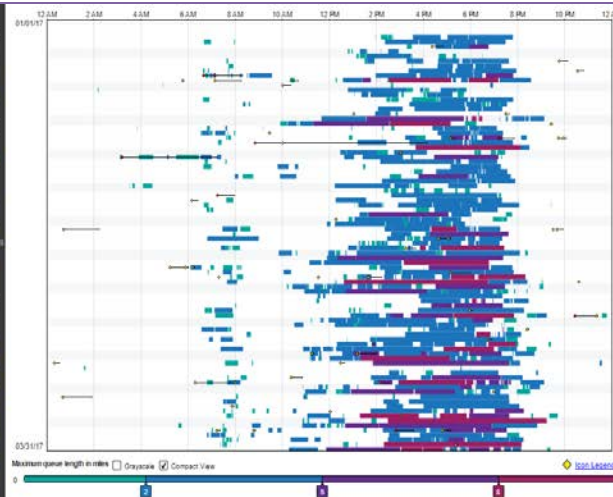
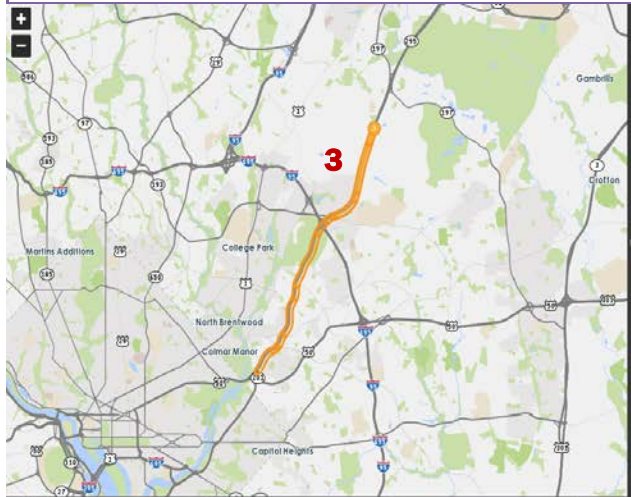
* The Impact Factor of a bottleneck is simply the product of the Average Duration (minutes), Average Max Length (miles) and the number of occurrences.



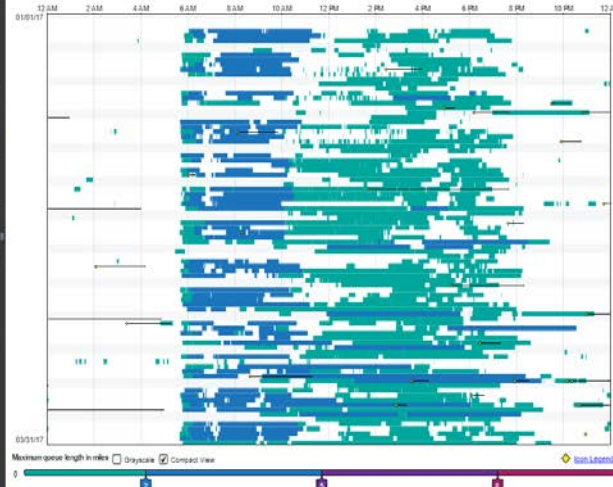
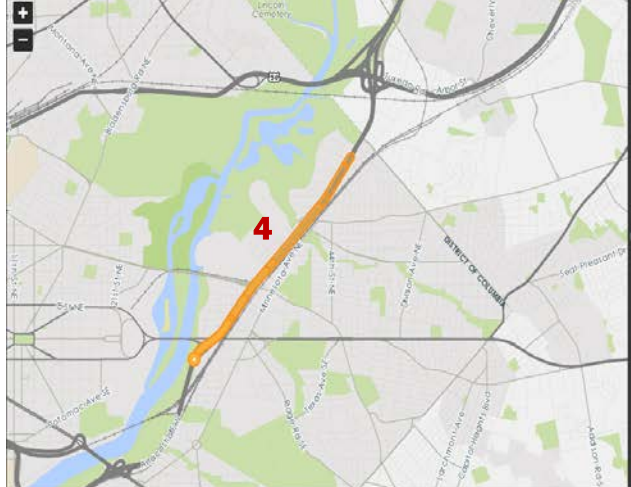
Rank	Location	Average duration	Average max length (miles)	Total duration	Impact factor
2	I-495 CW @ I-270 SPUR	2 h 21 m	4.16	8 d 20 h 26 m	66,245.85



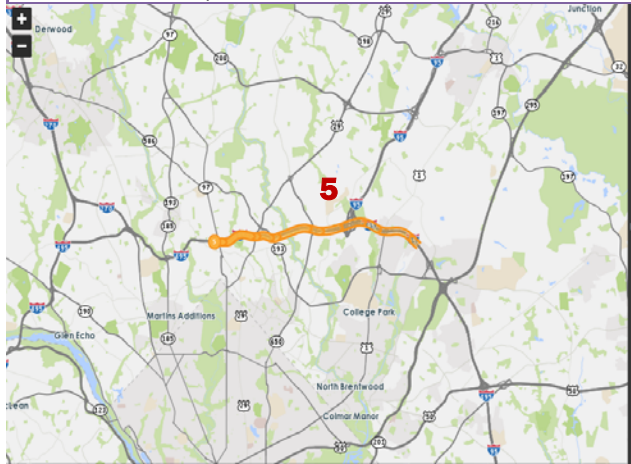
Rank	Location	Average duration	Average max length (miles)	Total duration	Impact factor
3	BALTIMORE-WASHINGTON PARKWAY N @ POWDER MILL RD	5 h 11 m	2.54	19 d 10 h 52 m	65,241.03



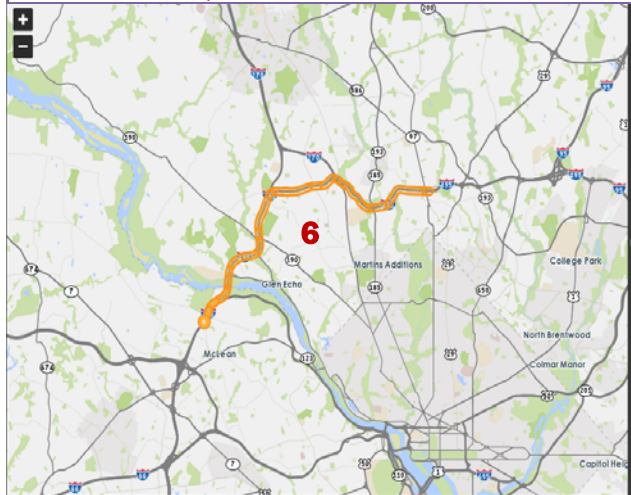
Rank	Location	Average duration	Average max length (miles)	Total duration	Impact factor
4	DC-295 S @ EAST CAPITOL ST	8 h 18 m	1.23	31 d 03 h 35 m	58,693.03

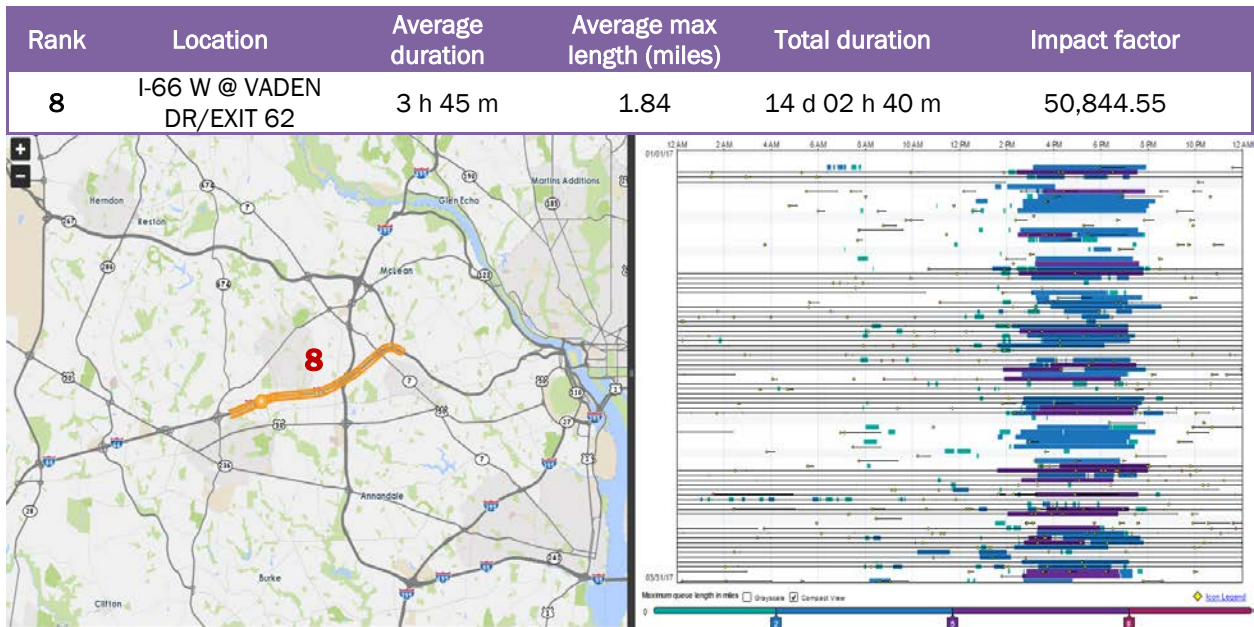
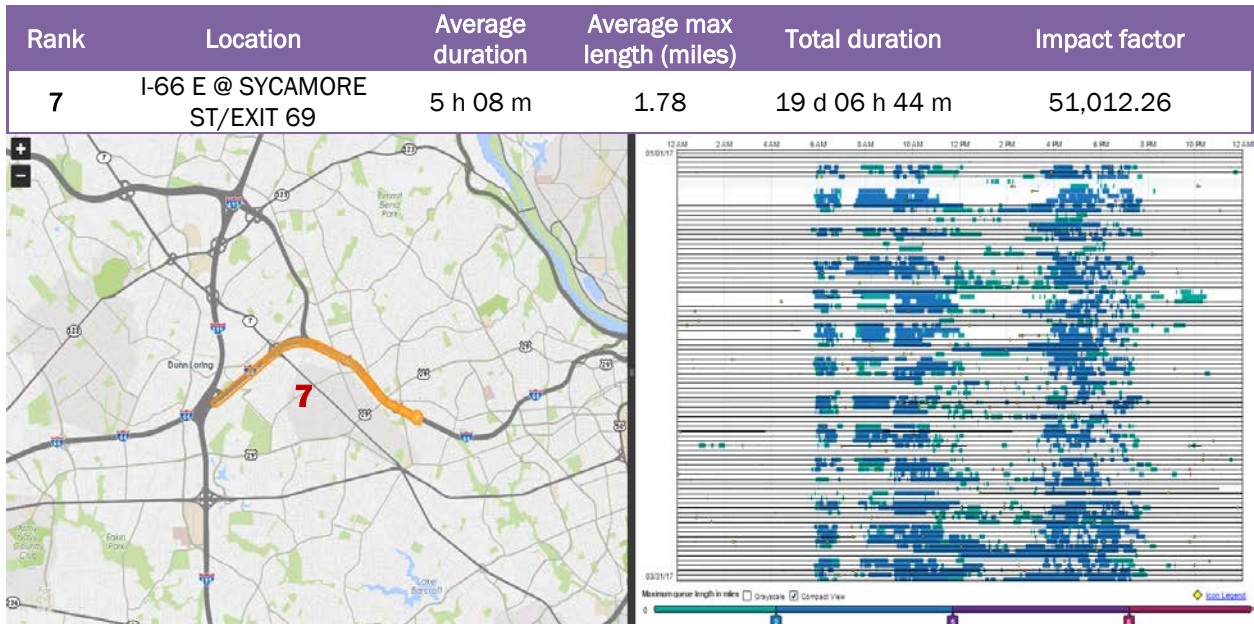


Rank	Location	Average duration	Average max length (miles)	Total duration	Impact factor
5	I-495 CCW @ MD-97/GEORGIA AVE/EXIT 31	2 h 50 m	2.96	10 d 15 h 43 m	58,427.19

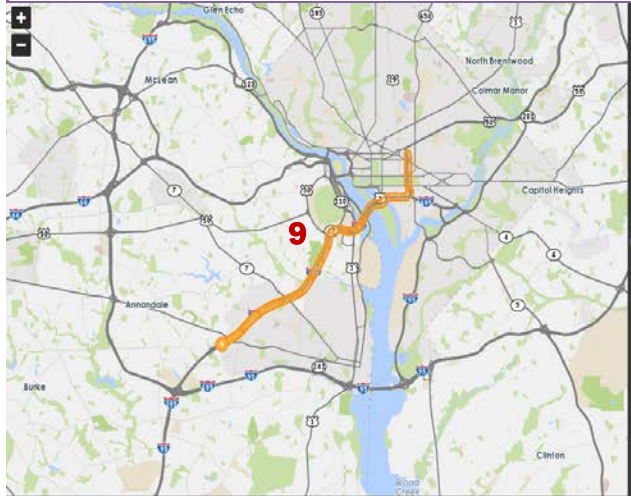


Rank	Location	Average duration	Average max length (miles)	Total duration	Impact factor
6	I-495 CCW @ VA-193/GEORGETOWN PIKE/EXIT 13	2 h 55 m	2.19	10 d 23 h 16 m	57,895.81

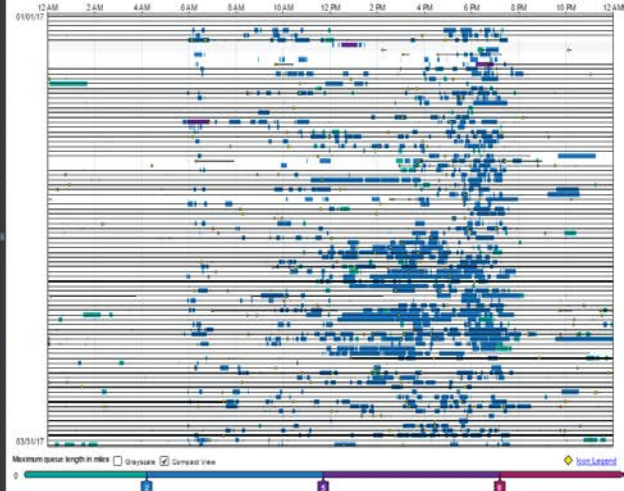




Rank	Location	Average duration	Average max length (miles)	Total duration	Impact factor
9	I-395 S @ VA-236/DUKE ST/EXIT 3	2 h 07 m	3.12	7 d 23 h 39 m	49,398.85



Rank	Location	Average duration	Average max length (miles)	Total duration	Impact factor
10	I-66 E @ FAIRFAX DR/EXIT 71	2 h 41 m	3.43	10 d 01 h 54 m	47,078.90



CONGESTION MAPS

Figure 3. Travel Time Index during weekday 8: 00-9:00 A.M. in 1st Quarter of 2017

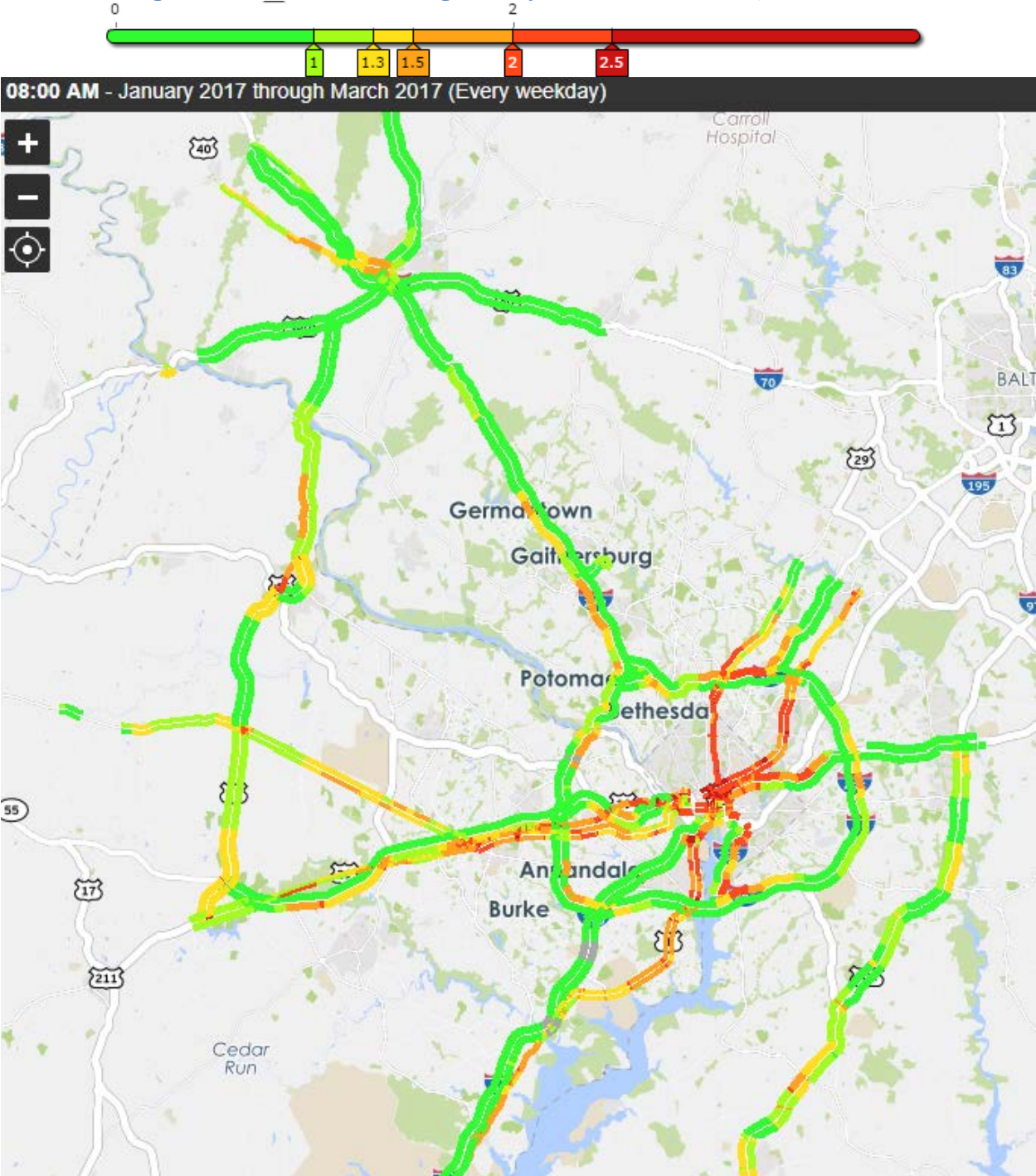
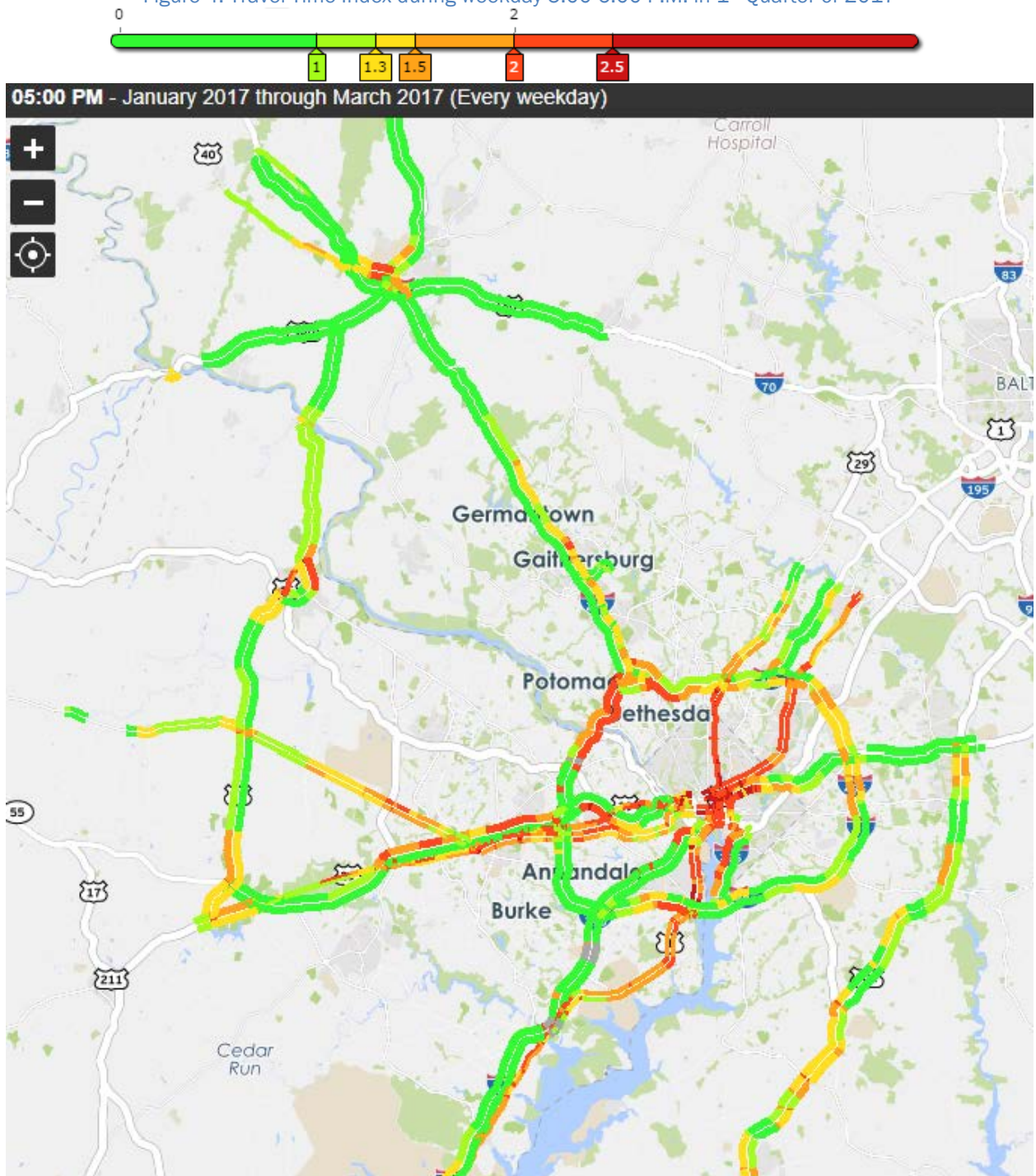


Figure 4. Travel Time Index during weekday 5:00-6:00 P.M. in 1st Quarter of 2017



2017Q1 SPOTLIGHT

The SPOTLIGHT section of the Regional Congestion Reports is on a hiatus for 2017, and will return during publication of the dashboard's 2018 reports.



National Capital Region
Transportation Planning Board

777 North Capitol Street NE, Suite 300
Washington, DC 20002

www.mwcog.org