

CONGESTION REPORT

3rd Quarter 2021

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

September 2021



National Capital Region
Transportation Planning Board

CONGESTION REPORT

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ABOUT THE TPB

The National Capital Region Transportation Planning Board (TPB) is the federally designated metropolitan planning organization (MPO) for metropolitan Washington. It is responsible for developing and carrying out a continuing, cooperative, and comprehensive transportation planning process in the metropolitan area. Members of the TPB include representatives of the transportation agencies of the states of Maryland and Virginia and the District of Columbia, 24 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 at the Metropolitan Washington Council of Governments (COG).

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CONGESTION – TRAVEL TIME INDEX (TTI)

Interstate System

TTI 3rd Quarter 2021: **1.24** ↑13.1% or 0.14¹
 TTI Trailing 4 Quarters: **1.17** ↓0.7% or -0.01²

Non-Interstate NHS³

TTI 3rd Quarter 2021: **1.12** ↑4.4% or 0.05
 TTI Trailing 4 Quarters: **1.11** ↓0.7% or -0.01

Transit-Significant⁴

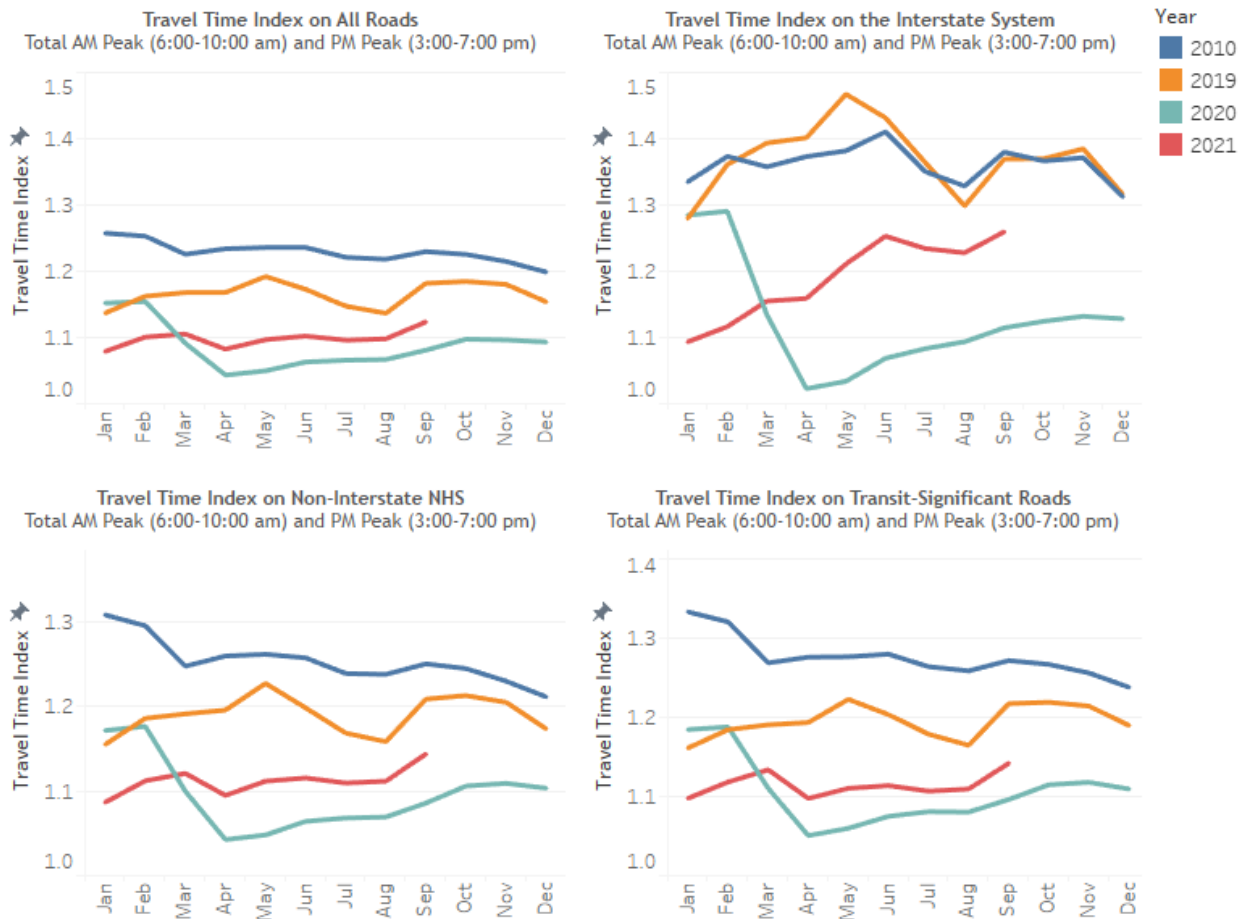
TTI 3rd Quarter 2021: **1.12** ↑3.1% or 0.03
 TTI Trailing 4 Quarters: **1.11** ↓1.3% or -0.01

All Roads

TTI 3rd Quarter 2021: **1.11** ↑3.2% or 0.04
 TTI Trailing 4 Quarters: **1.10** ↓0.9% or -0.01

¹ Compared to 3rd Quarter 2020; 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)



Source: TPB

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 3rd Quarter 2021: **1.62** ↑18.9% or 0.26¹
 PTI Trailing 4 Quarters: **1.49** ↑0.2% or -0.00²

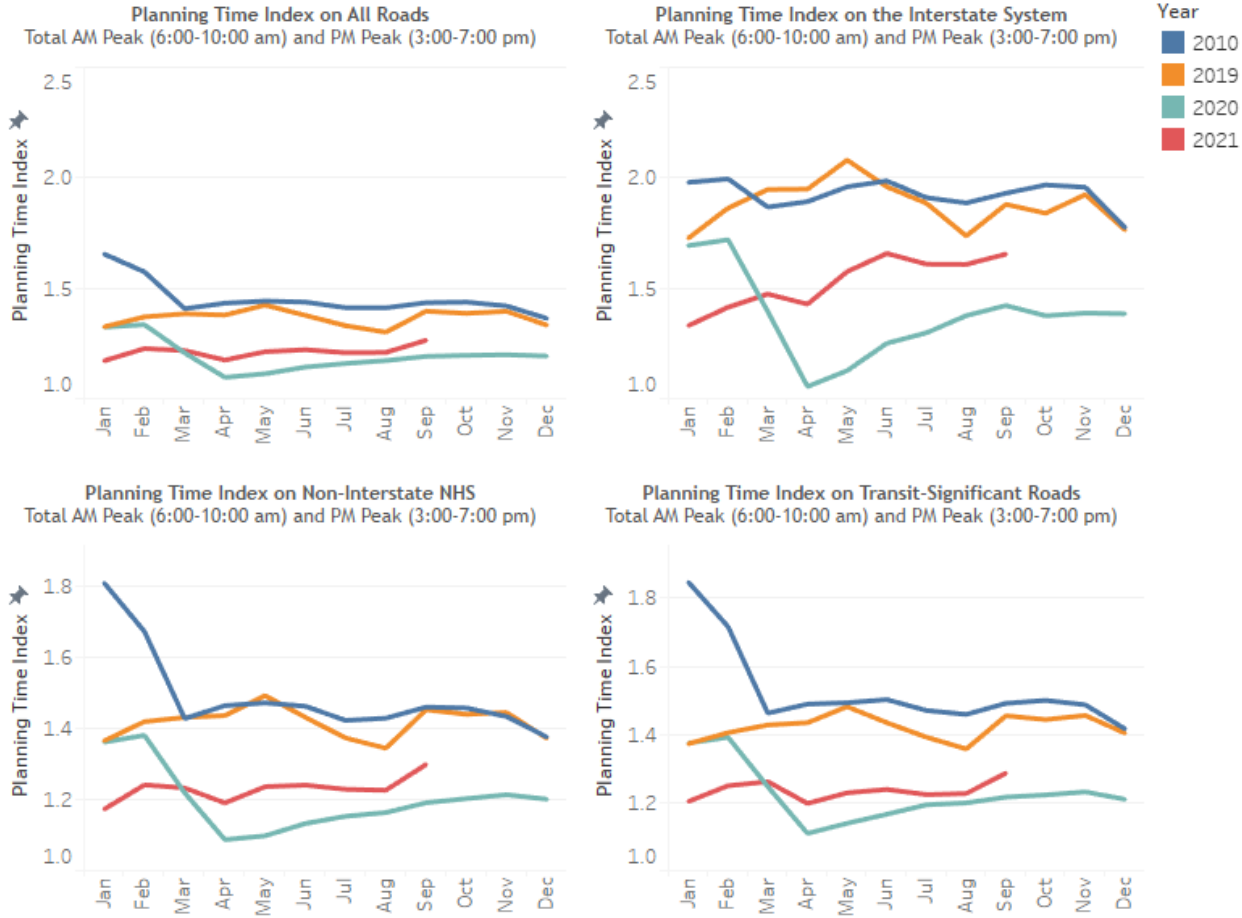
Non-Interstate NHS³
 PTI 3rd Quarter 2021: **1.25** ↑7.0% or 0.08
 PTI Trailing 4 Quarters: **1.22** ↓2.4% or -0.03

Transit-Significant⁴
 PTI 3rd Quarter 2021: **1.25** ↑3.5% or 0.04
 PTI Trailing 4 Quarters: **1.23** ↓3.7% or -0.05

All Roads
 PTI 3rd Quarter 2021: **1.23** ↑4.5% or 0.05
 PTI Trailing 4 Quarters: **1.21** ↓2.4% or -0.03

¹ Compared to 3rd Quarter 2020; 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)



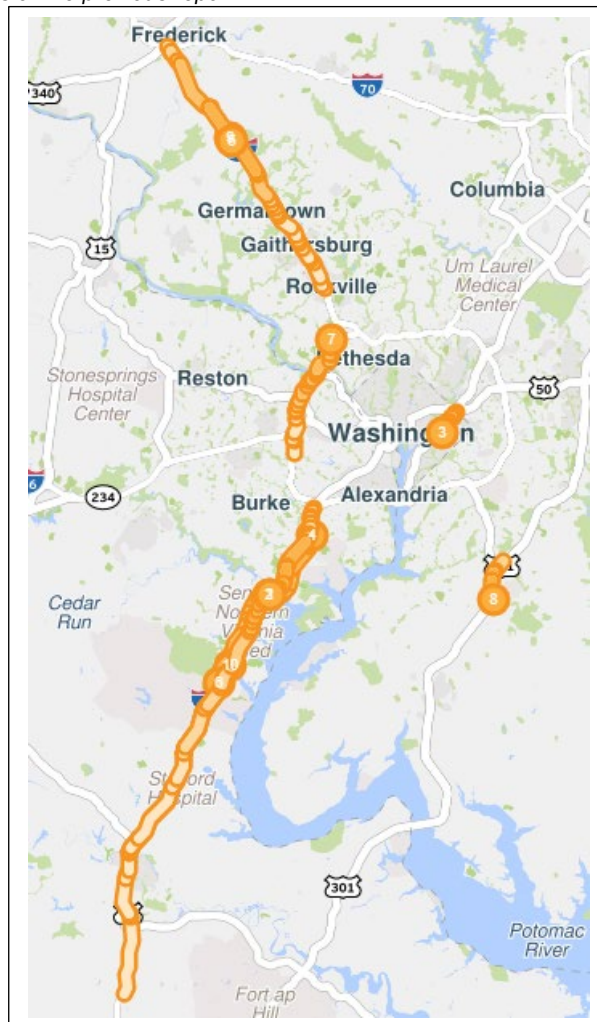
Source: TPB

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 must 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

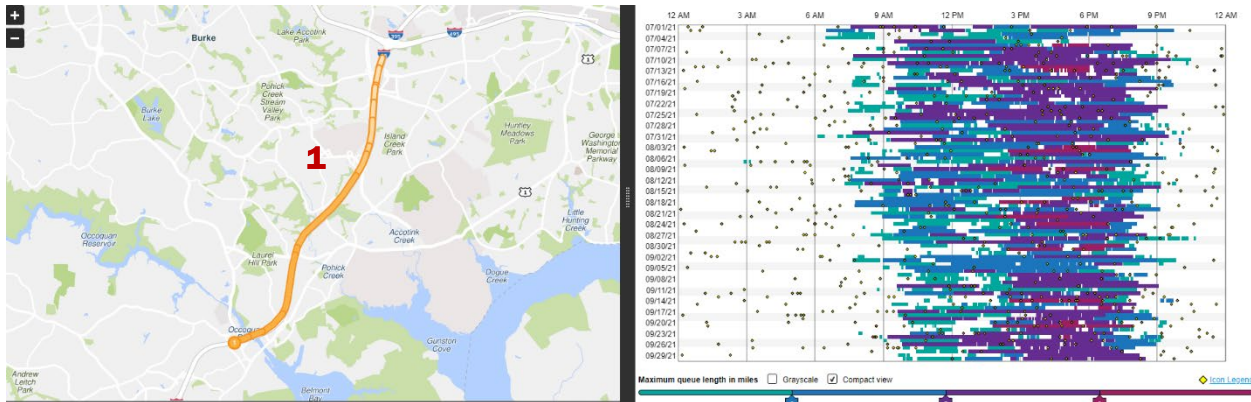
Rank (Last Quarter Rank)	Location	Average duration	Average max length (miles)	Total duration	Impact factor
1 (1)	I-95 S @ VA-123/EXIT 160	9 h 34 m	3.7	36 d 16 h 15 m	145,520
2 (2)	I-95 N @ VA-123/EXIT 160	5 h 35 m	4.3	21 d 10 h 54 m	128,130
3 (4)	DC-295 S @ E CAPITOL ST	10 h 39 m	1.57	40 d 21 h	86,987
4 (3)	I-95 N @ VA-617/BACKLICK RD/EXIT 167	3 h 10 m	3.97	12 d 4 h 13 m	65,915
5 (12)	I-270 S @ MD-109/EXIT 22	2 h 37 m	3.83	10 d 1 h 26 m	54,679
6 (10)	I-95 S @ VA-619/EXIT 150	2 h 27 m	4.72	9 d 10 h 12 m	53,368
7 (8)	I-495 CW @ I-270-SPUR	1 h 34 m	6.1	6 d 1 h 29 m	52,932
8 (6)	US-301 S @ MCKENDREE RD/CEDARVILLE RD	4 h	2.47	15 d 8 h 31 m	51,975
9 (7)	I-270 N @ MD-109/EXIT 22	2 h 5 m	4.62	7 d 23 h 49 m	50,286
10 (**)	I-95 N @ VA-234/EXIT 152	1 h 34 m	5.83	6 d 19 m	44,843

**Not in the top 50 bottlenecks of the previous report.

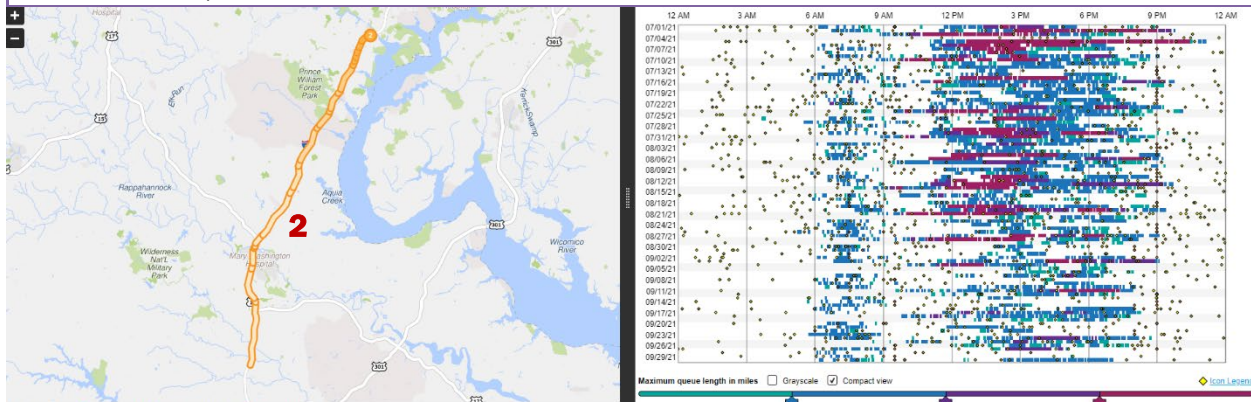


Rank	Location	Average duration	Average max length (miles)	Total duration	Impact factor*
1	I-95 S @ VA-123/EXIT 160	9 h 34 m	3.7	36 d 16 h 15 m	145,520

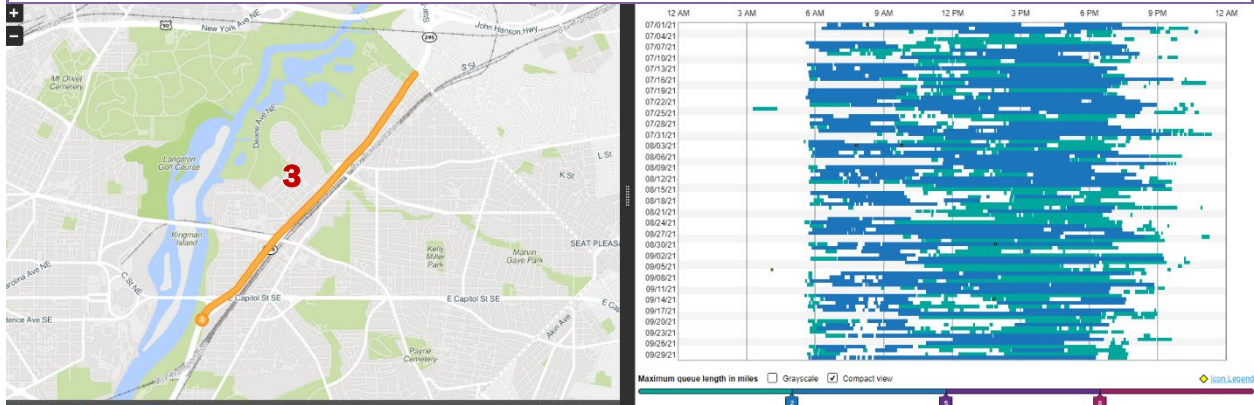
* The Impact Factor of a bottleneck is simply the product of the Average Duration (minutes), Average Max Length (miles) and the number of occurrences.



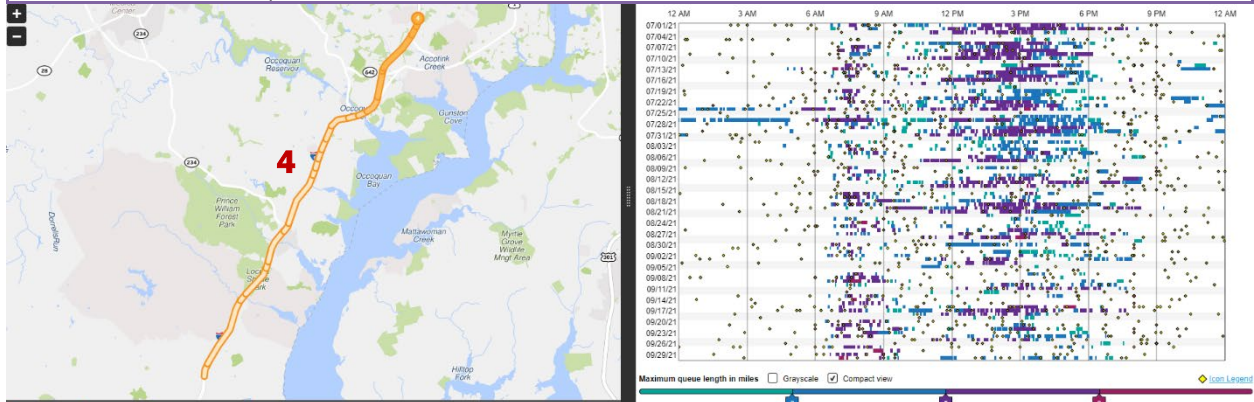
Rank	Location	Average duration	Average max length (miles)	Total duration	Impact factor
2	I-95 N @ VA-123/EXIT 160	5 h 35 m	4.3	21 d 10 h 54 m	128,130



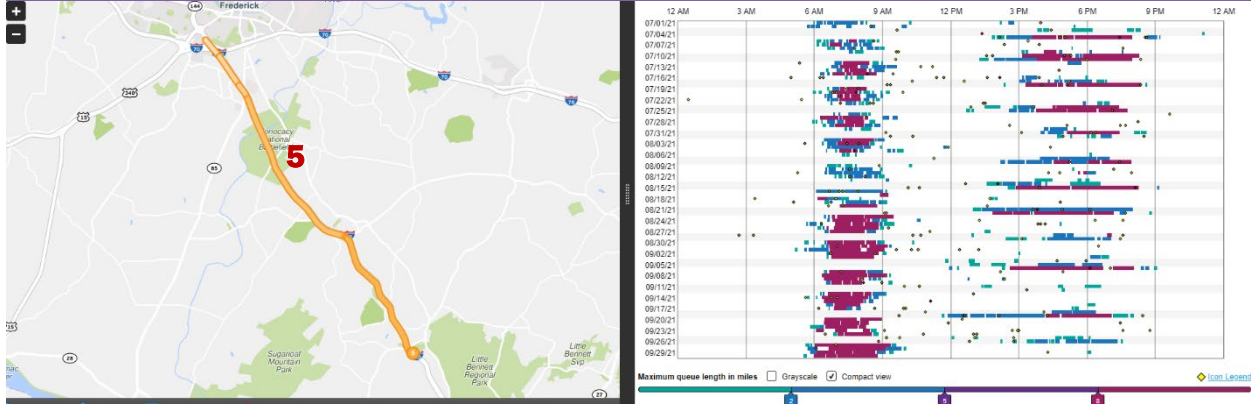
Rank	Location	Average duration	Average max length (miles)	Total duration	Impact factor
3	DC-295 S @ E CAPITOL ST	10 h 39 m	1.57	40 d 21 h	86,987



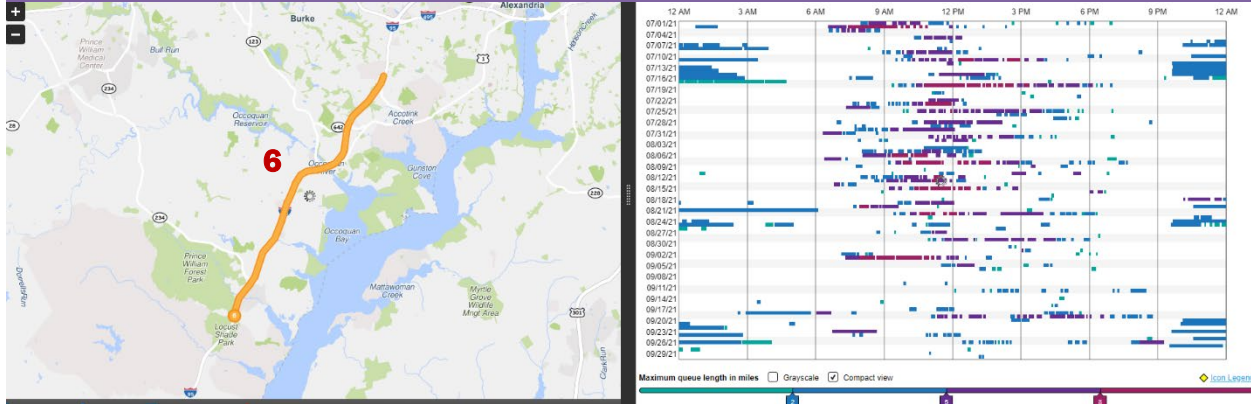
Rank	Location	Average duration	Average max length (miles)	Total duration	Impact factor
4	I-95 N @ VA-617/BACKLICK RD/EXIT 167	3 h 10 m	3.97	12 d 4 h 13 m	65,915

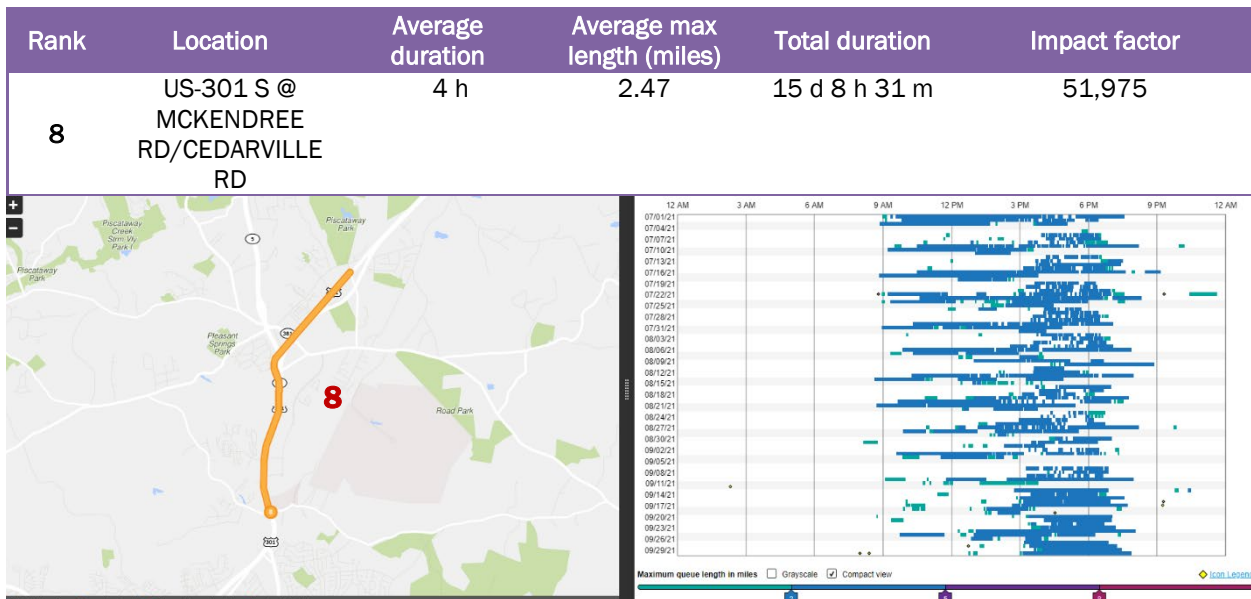
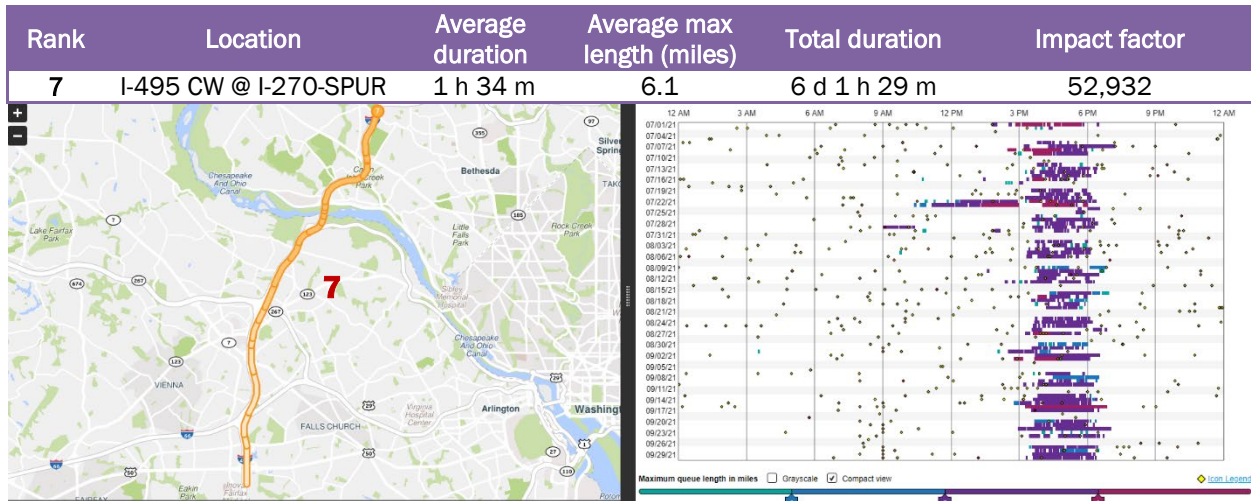


Rank	Location	Average duration	Average max length (miles)	Total duration	Impact factor
5	I-270 S @ MD-109/EXIT 22	2 h 37 m	3.83	10 d 1 h 26 m	54,679

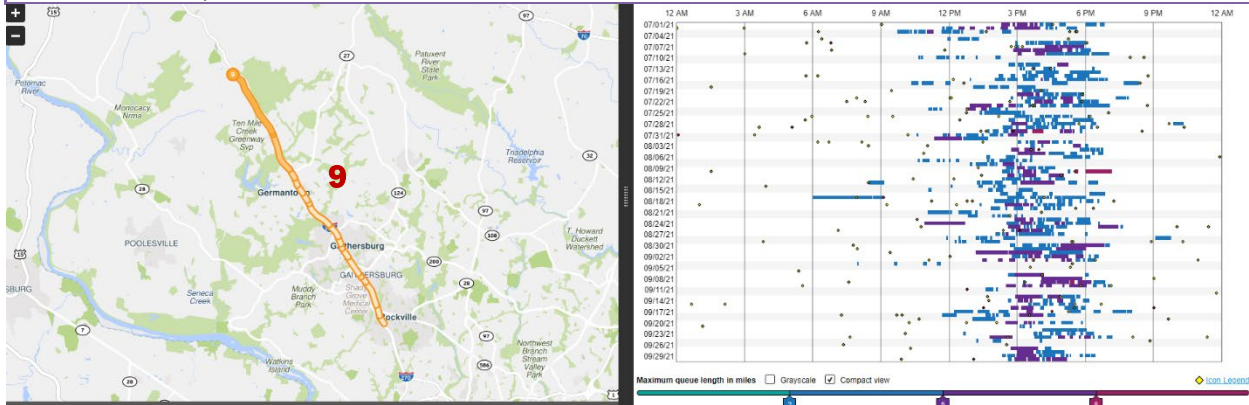


Rank	Location	Average duration	Average max length (miles)	Total duration	Impact factor
6	I-95 S @ VA-619/EXIT 150	2 h 27 m	4.72	9 d 10 h 12 m	53,368

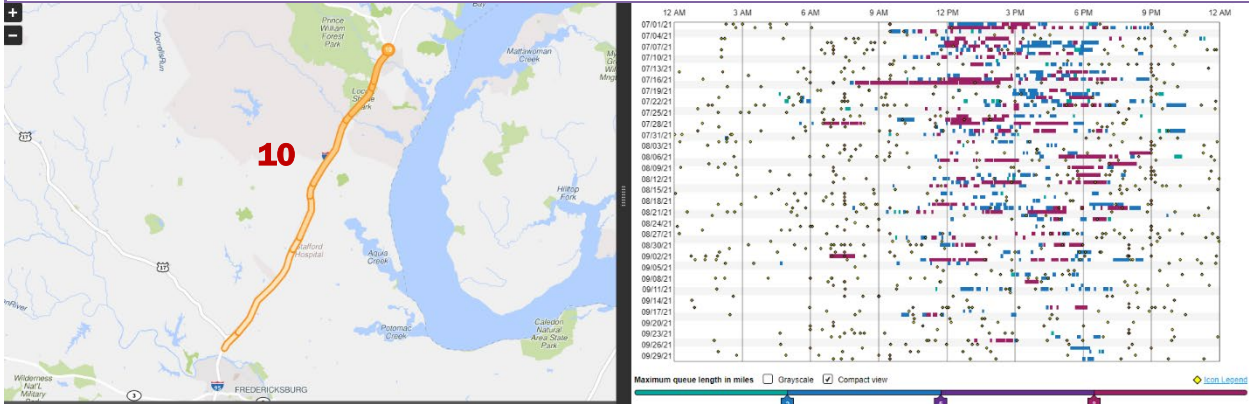




Rank	Location	Average duration	Average max length (miles)	Total duration	Impact factor
9	I-270 N @ MD-109/EXIT 22	2 h 5 m	4.62	7 d 23 h 49 m	50,286

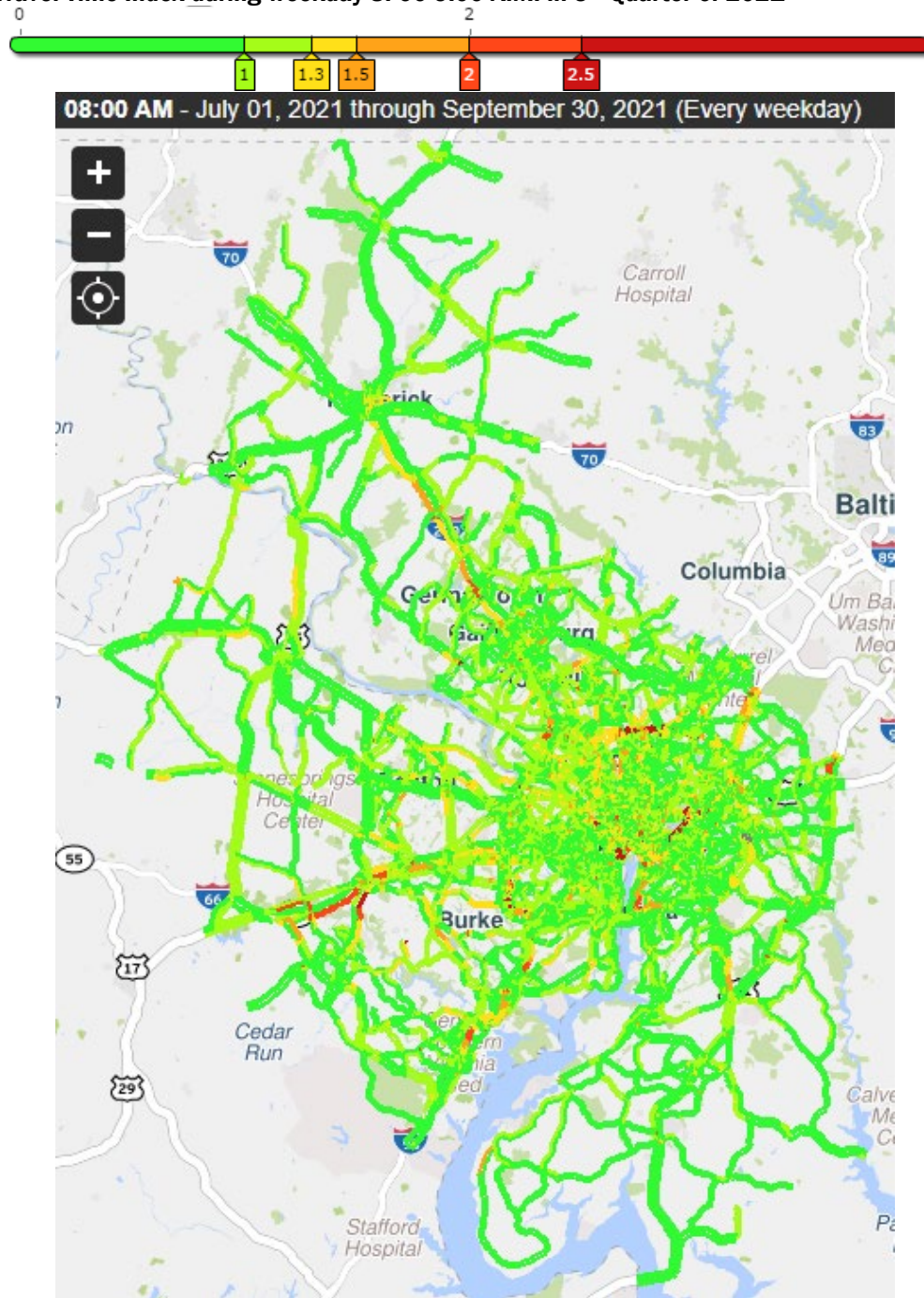


Rank	Location	Average duration	Average max length (miles)	Total duration	Impact factor
10	I-95 N @ VA-234/EXIT 152	1 h 34 m	5.83	6 d 19 m	44,843



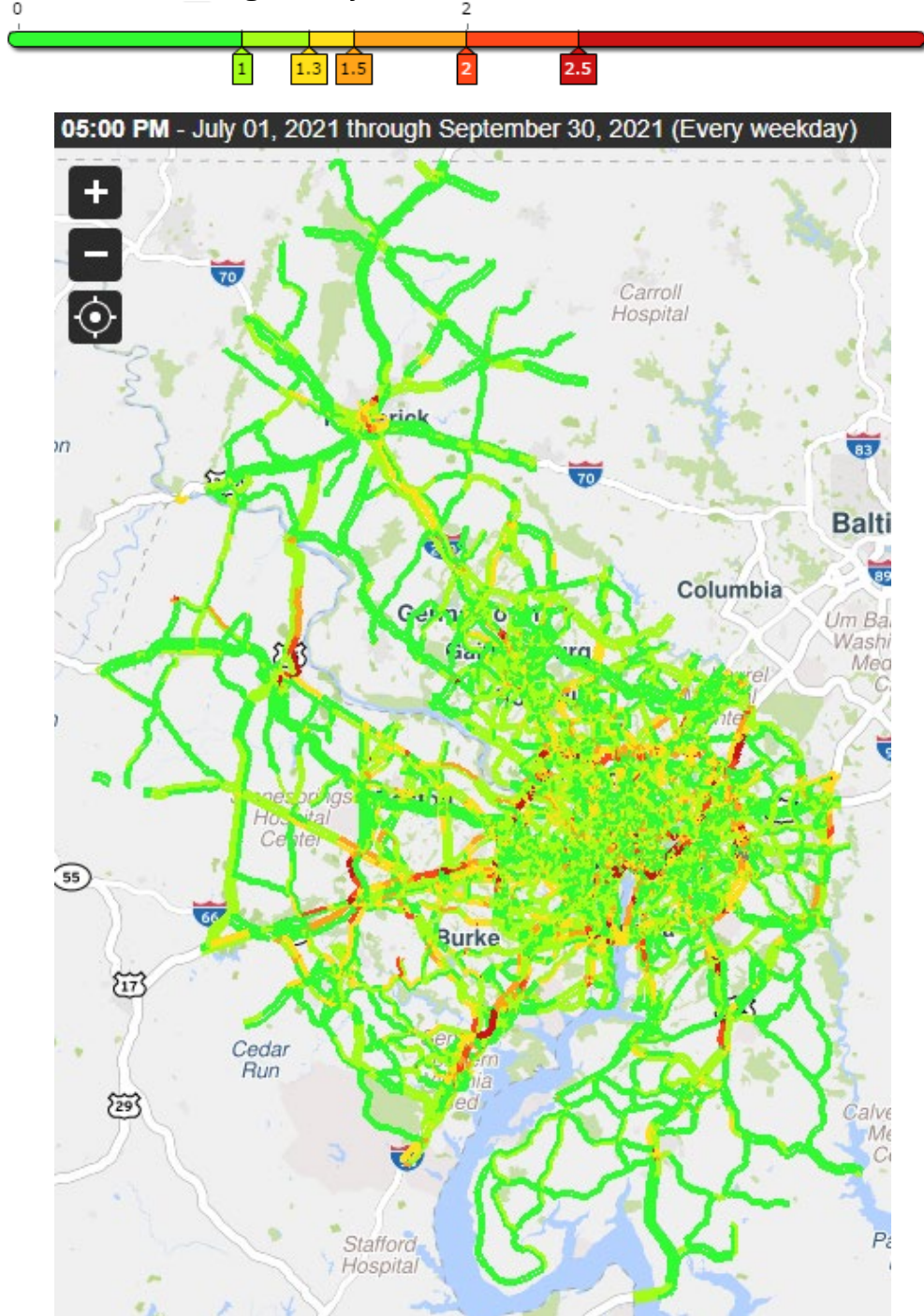
CONGESTION MAPS

Figure 3. Travel Time Index during weekday 8: 00-9:00 A.M. in 3rd Quarter of 2021



Source: University of Maryland CATT Lab

Figure 4. Travel Time Index during weekday 5:00-6:00 P.M. in 3rd Quarter of 2021



Source: University of Maryland CATT Lab

2021Q3 SPOTLIGHT

The third quarter includes two months that are considered the peak of the summer travel season (July and August) – and September which is considered a “back to work” month after the Labor Day weekend is concluded. Travel time index (TTI, see Figure 1) was relatively unchanged from June 2021 in the second quarter for the four highway networks analyzed, but trended up in September as some persons went back to work and some schools and colleges opened again. Similarly, planning time index (PTI, see Figure 2) as little changed in July and August but edged up in September.

Evidence of increased summertime travel and congestion may be found along I-95 south of Springfield, Virginia. The first entry is familiar – I-95 southbound south of Springfield. Four other entries on the list are from various segments of northbound and southbound I-95 south of Springfield.

Other entries may also be due to increased summertime travel, as all of them carry some degree of traffic crossing the TPB region or with one trip end outside the region and most show congestion outside the traditional weekday AM or PM commute periods.