BRIEFING ON THE DRAFT 2020 CONGESTION MANAGEMENT PROCESS (CMP) TECHNICAL REPORT

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Introduction

- A Congestion Management Process (CMP) is a requirement in metropolitan transportation planning
  - Many generations of federal regulations for metropolitan planning have addressed CMP requirements, including FAST Act
- The official CMP component is wholly integrated into the overall long-range transportation plan (Visualize 2045)
  - The CMP Technical Report is a supporting document developed biennially since 2008
- Draft 2020 CMP Technical Report being made available for review now, for Technical Committee acceptance as final at the July 10 meeting
  - Comments/corrections by June 19 to ameese@mwcog.org

Outline of the CMP Technical Report

- Executive Summary
- Chapter 1. Introduction
- Chapter 2. State of Congestion
- Chapter 3. Consideration and Implementation of Congestion Management Strategies
- Chapter 4. Studies of Congestion Management Strategies
- Chapter 5. How Results of The CMP Are Integrated into the Long-Range Plan
- Chapter 6. Conclusions
- Appendices

Congestion and Strategies

- Chapter 2 – State of Congestion
  - Regional Travel Trends
  - Congestion on Highways; Transit Systems
  - National Comparison of the Washington Region's Congestion
  - Performance Analysis of Visualize 2045
- Chapter 3 – Consideration/Implementation of Strategies
  - Demand Management Strategies (especially Commuter Connections)
  - Operational Management and Integrative/Multi-Modal Strategies
- Chapter 4 – Studies of Congestion Management Strategies

Outcomes

- Chapter 5 – How Results of the CMP Are Integrated into the Long-Range Plan
- Chapter 6 – Conclusions
  - Key Findings of the 2020 CMP Technical Report
    - 8 Key Findings
  - Recommendations for the Congestion Management Process
    - 18 Recommendations

Key Findings

1. Congestion analysis (similar)
2. Reliability analysis (similar)
3. Bottlenecks (similar)
4. Travel demand management continues its importance
5. Walking/biking continue to grow
6. Variably priced lanes offer travel options
7. MATOC continues its importance
8. Real-time information availability continues its importance

Report Recommendations (1 of 2)

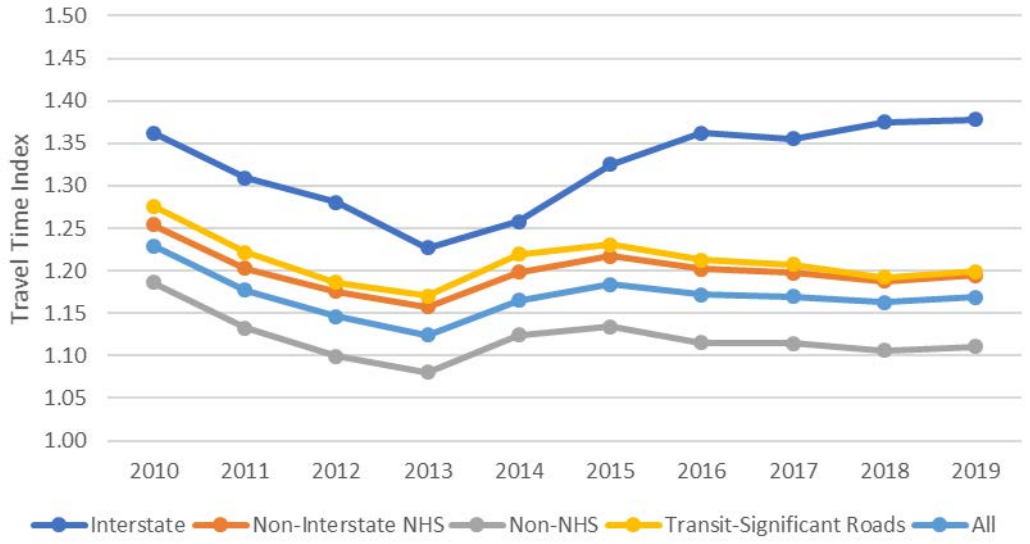
1. Continue Commuter Connections
2. Continue MATOC
3. Consider Congestion Management Plan
4. Coordinate PBPP and CMP
5. Encourage integration of operations and travel demand components of congestion management
6. Pursue sufficient investment in the existing transportation system
7. Consider variable pricing and other management strategies
8. Encourage transit and explore transit priority strategies
9. Encourage congestion management for major construction projects

Report Recommendations (2 of 2)

10. Encourage access to non-auto modes
11. Continue and enhance traveler information
12. Look for safe public engagement through mobile/social media
13. Encourage connectivity within/between Activity Centers
14. Multiple data sources for congestion monitoring
15. Monitor freight trends
16. Collaborative planning for connected/autonomous vehicles
17. Monitor and enhance interactions with shared mobility services
18. Encourage Traffic Incident Management (TIM)

Peak Period Congestion – Travel Time Index

- Peak period congestion decreased between 2010 and 2012, but more recently has increased moderately
  - Travel Time Index* (TTI) decreased by 8.5% between 2010 and 2013 and increased by 3.9% between 2013 and 2019.
  - Interstates remained the most congested highway category, followed by Transit-Significant roads**, non-Interstate NHS, and non-NHS.

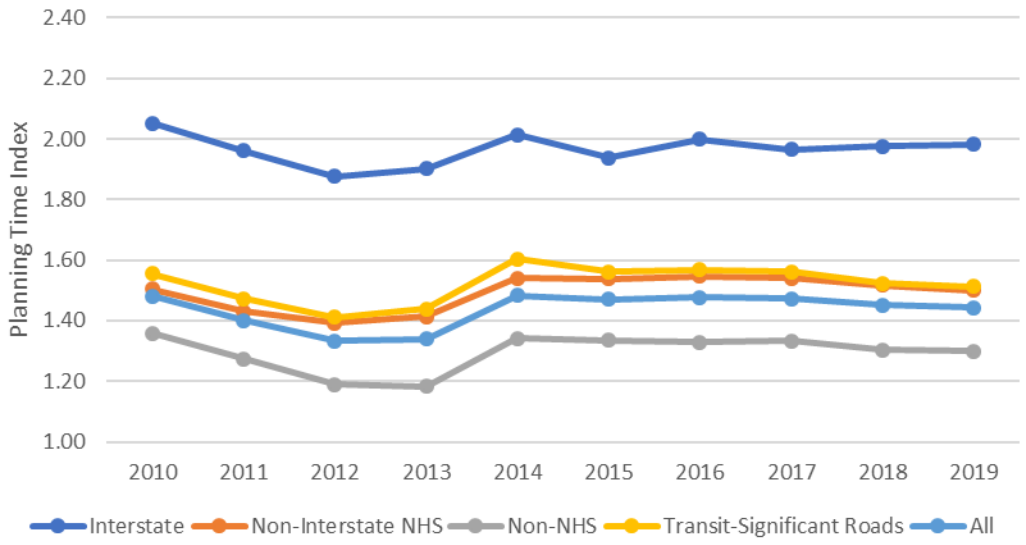


*Travel Time Index = Actual travel time / Free flow travel time.

** Transit-Significant Roads: Directional toad segments with at least 6 buses running in the AM peak hour.

Peak Period Travel Time Reliability

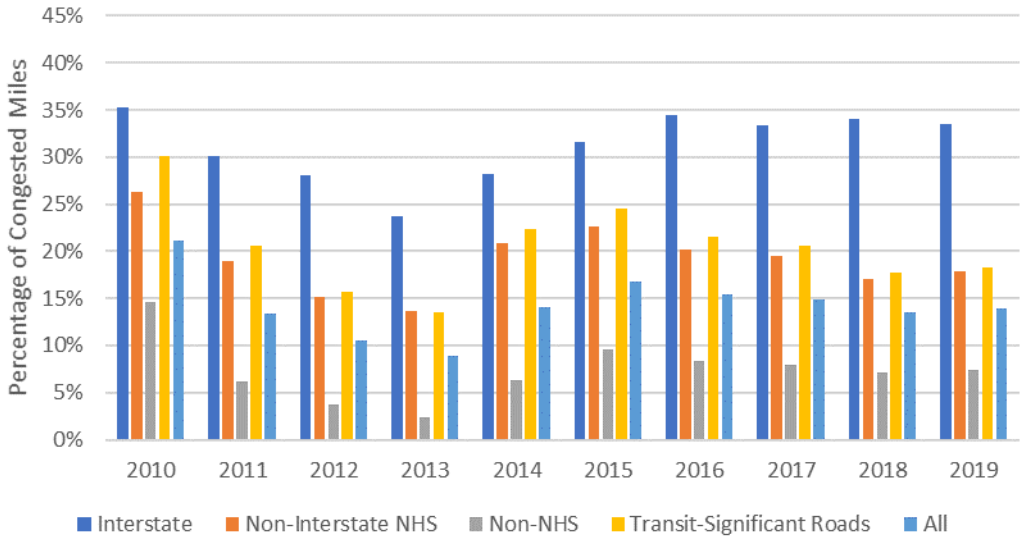
- Peak period travel time reliability improved between 2010 and 2012, but more recently has decreased moderately, almost to the 2010 level
  - Planning Time Index* (PTI) improved 10% between 2010 and 2012; the trend went down about 3% from 1.48 in 2014 to 1.44 in 2019
  - Most unreliable category is Interstates, followed by Transit-Significant Roads, non-Interstate NHS, and non-NHS



*Planning Time Index = 95th percentile travel time / Free flow travel time

Peak Period Congestion – Percent of Congested Miles

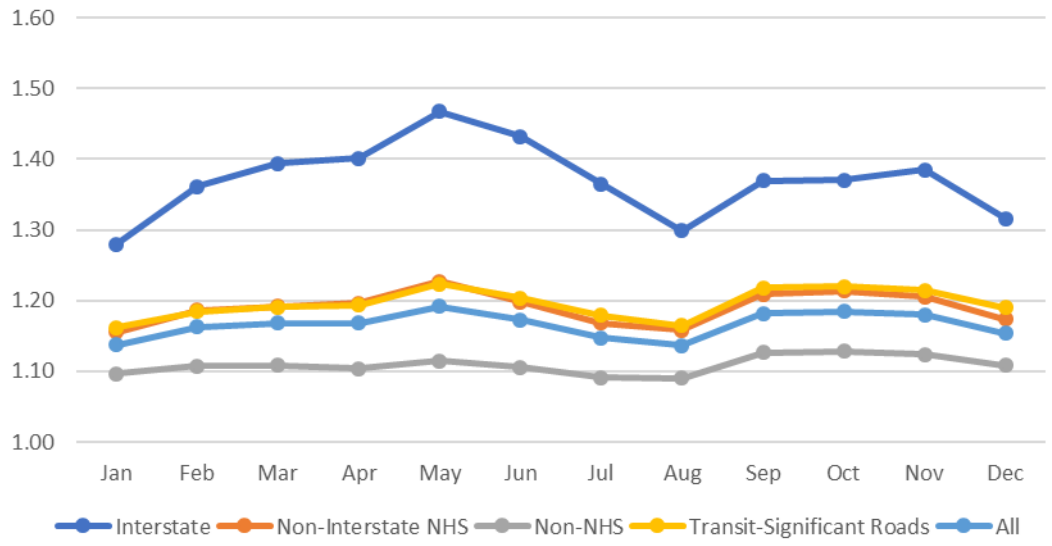
- On average, this region had 14% of roads congested during peak periods in recent years that was a slightly improvement from 17% in 2015. More specifically, 34% of Interstate, 18% of non-Interstate NHS, 7% of non-NHS, and 18% of transit-significant roads were congested in 2019.



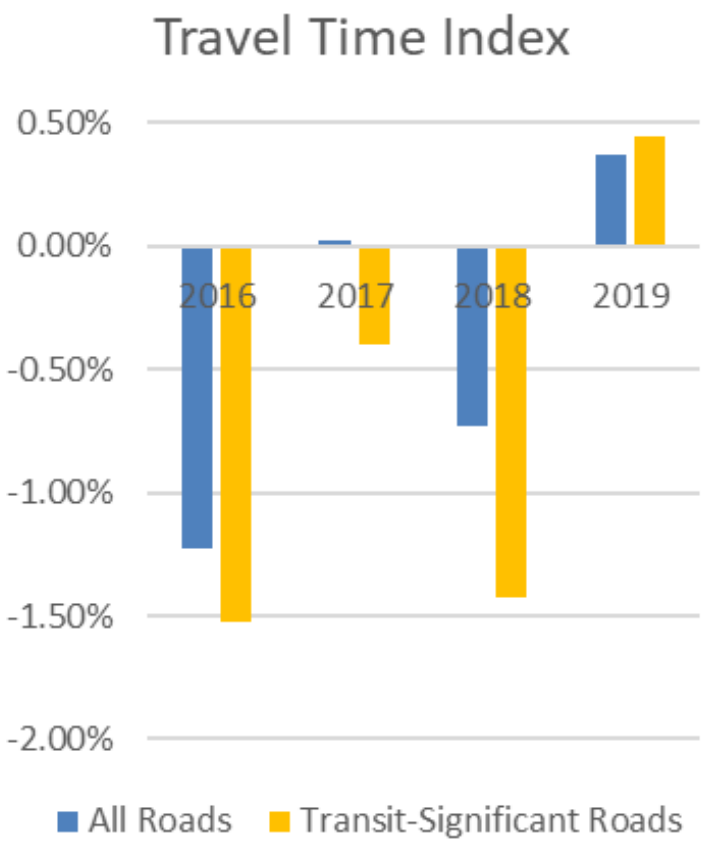
*Congestion is considered when Travel Time Index > 1.30.

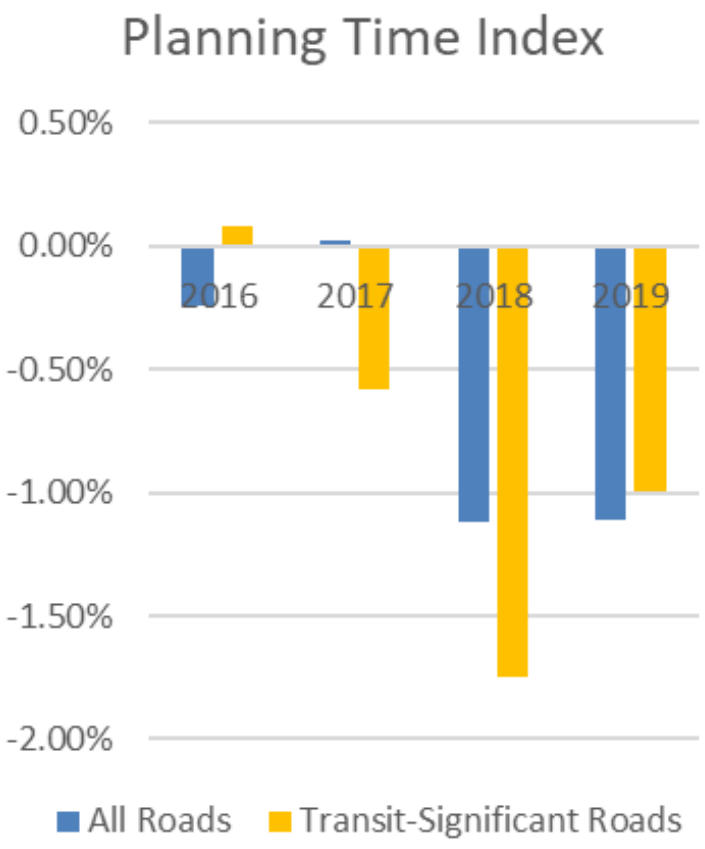
Monthly Variation of Congestion in 2019

- Monthly variations of congestion were most noticeable on the Interstate System, followed by the Transit-Significant Roads, the Non-Interstate NHS, and the Non-NHS.
- The region overall had increasing congestion from January to May, then decreasing congestion through August. October had the highest level of congestion, after that, congestion kept decreasing for the rest of year.



Comparative Congestion on Transit-Significant Roads

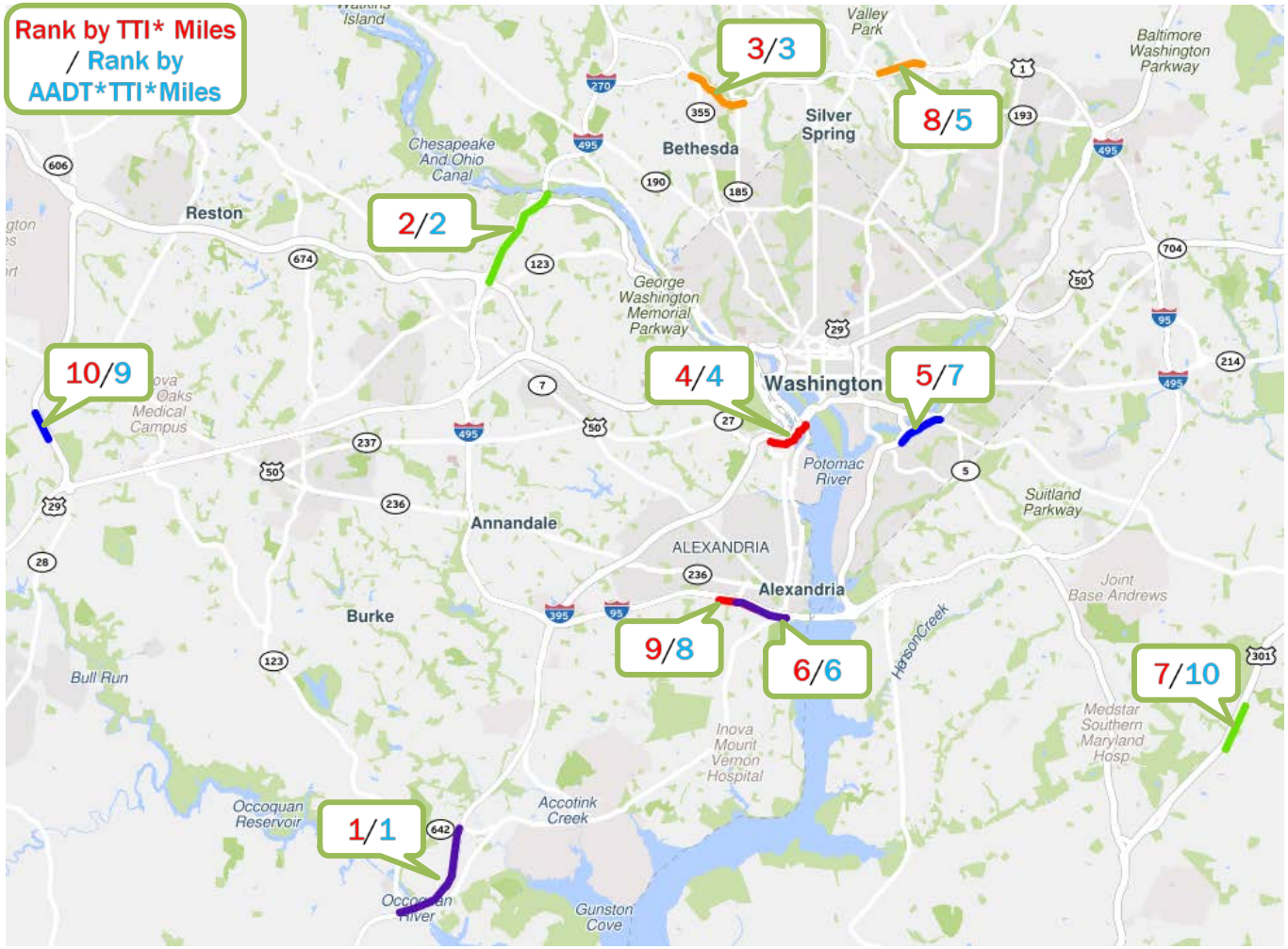




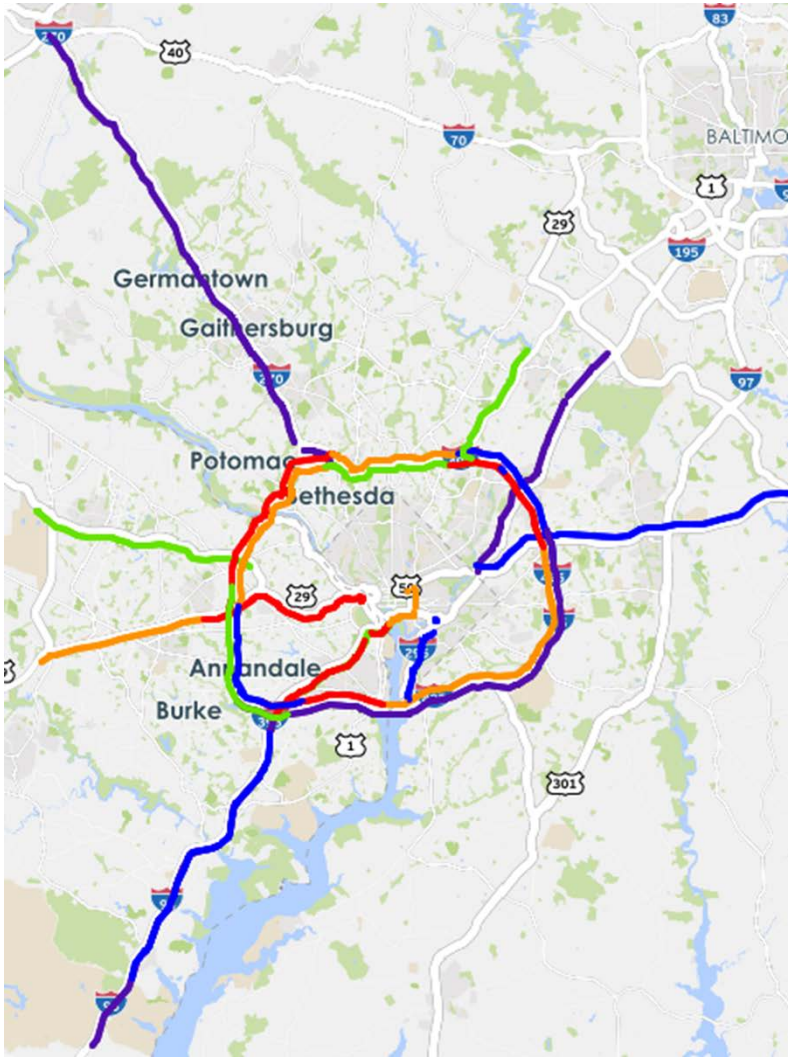
Top 10 Bottlenecks by Probe Data & AADT in 2019

Location	State	Ave. TTI	Length (miles)	TTI*Miles	Rank by TTI*Miles	AADT	AADT*TTI* Miles	Rank by AADT* TTI*Miles
I-95 SB between US-1/EXIT 161 and VA-123/EXIT 160	VA	1.90	3.32	6.32	1	229949	1452366	1
I-495 IL between VA-267/EXIT 12 and AMERICAN LEGION BRIDGE	VA	1.72	3.11	5.36	2	168182	901358	2
I-495 IL between MD-355/WISCONSIN AVE/EXIT 34 and MD-185/CONNECTICUT AVE/EXIT 33	MD	1.55	1.80	2.78	3	231860	645183	3
I-395 NB between EADS ST and MEMORIAL BRIDGE	VA	2.05	1.18	2.41	4	184291	444663	4
DC-295 NB between I-295/EXIT 4 and PENNSYLVANIA AVE	DC	1.74	1.36	2.35	5	124371	292666	7
I-95/I-495 EB near US-1/RICHMOND HWY/MILL RD	VA	1.54	1.50	2.32	6	154050	356977	6
US-301 NB near OLD INDIAN HEAD RD/ROSARYVILLE RD	MD	1.59	1.32	2.09	7	31871	66731	10
I-495 OL near MD-193/UNIVERSITY BLVD/EXIT 29	MD	1.55	1.25	1.94	8	213179	414513	5
I-495 OL between VA-241/TELEGRAPH RD/EXIT 2 and US-1/EXIT 1	VA	1.53	1.08	1.65	9	170664	281531	8
VA-28 SB near WESTFIELDS BLVD	VA	1.54	0.85	1.31	10	111293	145738	9

Top 10 Bottlenecks



Major Freeway Commute Routes (Data in Report)



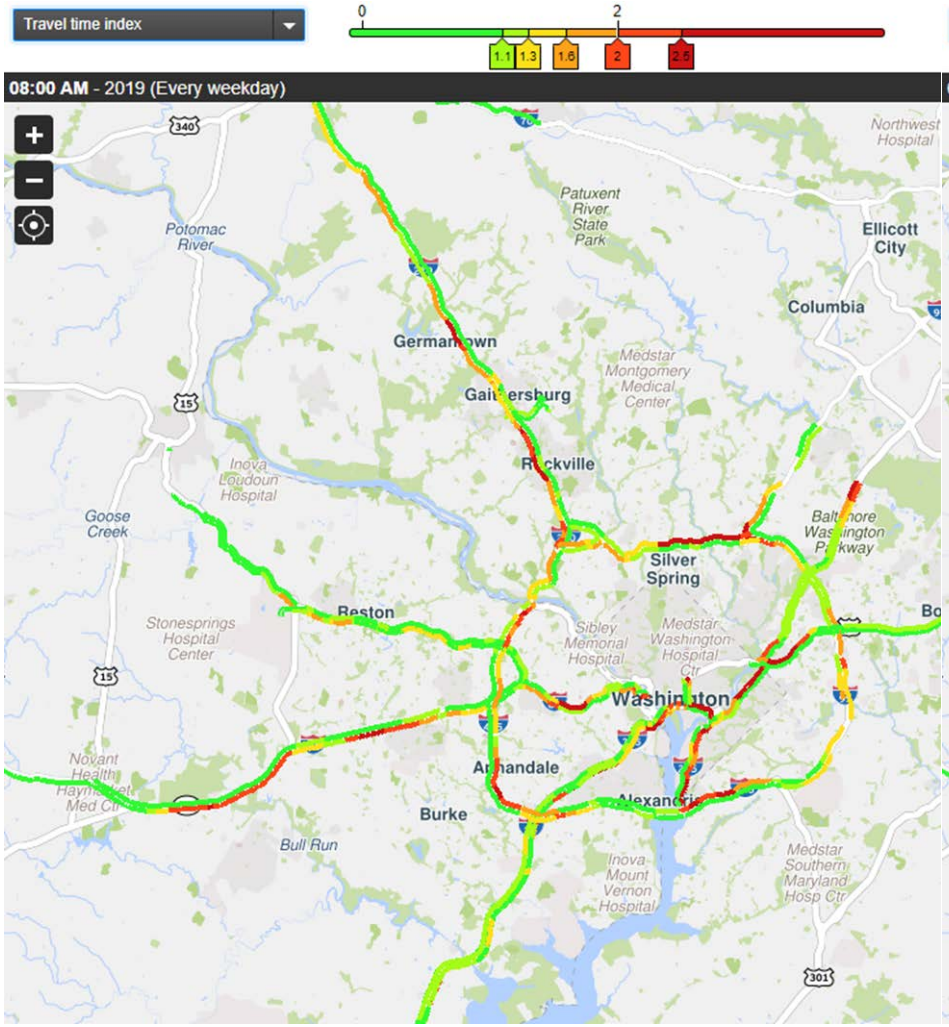
Route Code	Description
C1	I-270 between I-370/Sam Eig Hwy/Exit 9 and I-70/US-40
C2	I-270 between I-370/Sam Eig Hwy/Exit 9 and I-495/MD-355
C3	VA-267 between VA-28/Exit 9a and VA-123/Exit 19
C4	I-66 between VA-28/Exit 53 and I-495/Exit 64
C5	I-66 between I-495/Exit 64 and Theodore Roosevelt Memorial Bridge
C6	I-95 between VA-234/Exit 152 and Franconia Rd/Exit 169
C7	I-95 HOV between VA-234/Exit 152 and Franconia Rd/Exit 169
C8	I-395 between I-95 and H St
C9	I-395 HOV between I-95 and US-1
C10	US-50 between MD-295/Kenilworth Ave and US-301/Exit 13
C11	MD-295 between US-50/MD-201/Kenilworth Ave and MD-198
C12	I-95 between I-495/Exit 27-25 and MD-198/Exit 33
C13	I-495 between I-270/Exit 35 and I-95/Exit 27
C14	I-495 between I-95/Exit 27 and US-50/Exit 19
C15	I-495 between US-50/Exit 19 and I-95/I-395/Exit 57
C16	I-495 between I-95/I-395/Exit 57 and I-66/Exit 9
C17	I-495 between I-66/Exit 9 and I-270/Exit 35
C18	I-295 between I-495 and 11th St. Bridge

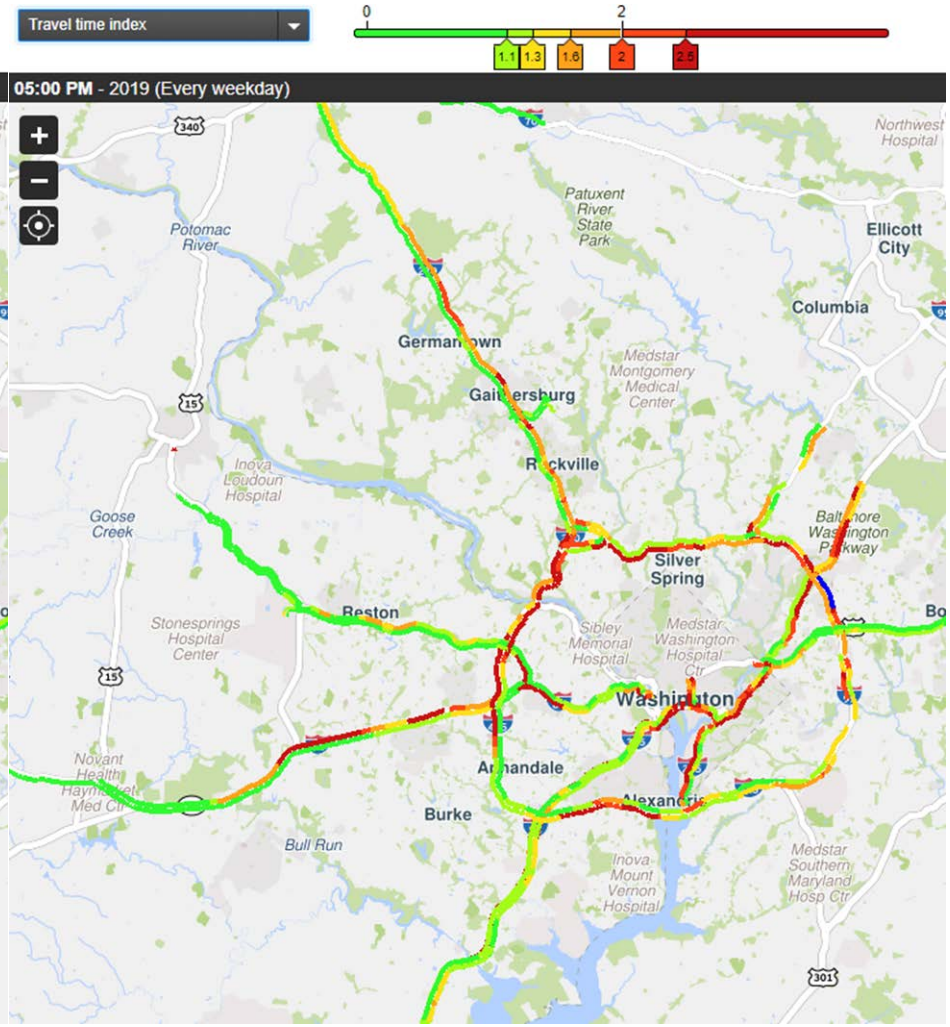
National Comparison of the Washington Region's Congestion

Texas A&M Transportation Institute (2017 data)			INRIX Traffic Scorecard (2019 data)			TomTom Traffic Index (2019 data)		
Annual Hours of Delay per Auto Commuter			Average Hours Wasted in Traffic			Extra Travel Time compared to Free Flow Conditions		
Metro Area	Value	Rank	Metro Area	Value	Rank	Metro Area	Value	Rank
Los Angeles	119	1	Boston	149	1	Los Angeles	47%	1
San Francisco	103	2	Chicago	145	2	New York	37%	2
Washington	102	3	Philadelphia	142	3	San Francisco	36%	3
New York	92	4	New York	140	4	San Jose	33%	4
San Jose	81	5	Washington	124	5	Seattle	31%	5
Boston	80	6	Los Angeles	103	6	Miami	31%	6
Seattle	78	7	San Francisco	97	7	Washington	29%	7
Atlanta	77	8	Portland, OR	89	8	Chicago	28%	8
Houston	75	9	Baltimore	84	9	Honolulu	28%	9
Chicago	73	10	Atlanta	82	10	Austin	27%	10

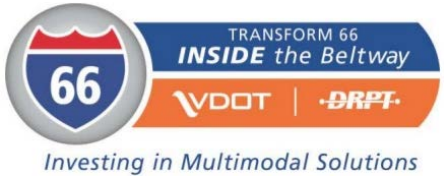
Source: Texas A&M Transportation Institute, Urban Mobility Scorecard; INRIX, Traffic Scorecard; TomTom, Traffic Index.

Example of 2019 Peak Hour TTI - Appendix A





Selected Congestion Management Strategies



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