

# National Capital Region Transportation Planning Board

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## MEMORANDUM

Item 5

July 10, 2012

**TO:** Management, Operations and Intelligent Transportation Systems Policy Task Force and MOITS Technical Subcommittee

**FROM:** Wenjing Pu, Erin Morrow, Daivamani Sivasailam, and Andrew J. Meese  
Department of Transportation Planning

**SUBJECT:** Comments on the Draft 2012 Congestion Management Process (CMP) Technical Report and Staff Responses

The 2012 Congestion Management Process (CMP) Technical Report (Draft, dated June 12, 2012) was briefed to the MOITS Subcommittee and requested comments at the June 12 meeting. This memorandum summarizes the comments received and staff responses or actions taken.

### **Comments and Responses**

1. The recommendations of the report (page 29-30) seem to be very conservative. Take MATOC recommendation for example, it only recommends to continue, but it didn't recommend to expand by function or participation (e.g. including local jurisdictions). Recommendation #5 to "encourage" implementation of congestion management for major construction projects. I believe there is a federal requirement to implement CMP for major construction projects. Recommendation #8 can emphasize more on multi-modal similar to what MOITS strategic plan's recommendation. There are many challenges in working across agencies to offer multi-modal real-time traveler information to the public. Recommendation #9 can also include encouraging DOTs to actively manage their arterial along with their interstates. (Amy Tang McElwain, VDOT)

*The CMP Technical Report intends to focus on the technical side of the CMP in compiling congestion facts and congestion management strategies that have been deployed in the region. It tries to avoid policy-making recommendations as other planning documents should appropriately address the policies.*

*Staff revised the MATOC recommendation (#3) as: "3. Continue and enhance the MATOC program and support agency/jurisdictional transportation management activities including the Regional Incident Coordination (RIC) Program. The MATOC program/activities are key strategies of operational management in the National Capital Region. Future enhancements of the MATOC program should be considered when appropriate to expand the function and participation of the program."*

*Staff revised recommendation #5 as: "5. Encourage implementation of congestion management for major construction projects. The construction project-related congestion management has been very successful in the past such as the Woodrow Wilson Bridge and Springfield Interchange projects." The CMP report intends to highlight the successful past practice and encourage future implantations as many management strategies have been welcomed by local agencies and travelers.*

*Staff revised recommendation #8 as (now #9): “9. Continue and enhance providing real-time, historical, and multimodal traveler information. Providing travelers with information before and during their trips can help them to make decisions to avoid congestion and delays and better utilize the existing road and transit infrastructure. Website such as MATOC’s [www.trafficview.org](http://www.trafficview.org), [www.CapitalRegionUpdates.gov](http://www.CapitalRegionUpdates.gov), state DOTs’ 511 systems, and real-time transit information allow travelers to make more informed decisions for their trips. The value of real-time traveler information can be largely enriched by integrating historical travel information which can provide valuable travel time reliability measures. Agencies are encouraged to coordinate on providing multimodal information along a corridor (e.g., the outcome envisioned in the I-95/I-395 Integrated Corridor Management Initiative).”*

*Staff did not change recommendation #9 (now #10) as it aims specifically at TPB’s Arterial Congestion Monitoring Program. Staff added a separate recommendation (#8) addressing managing arterials along Interstate freeways as: “8. Continue to explore Integrated Corridor Management (ICM) systems and Active Traffic Management (ATM) strategies. State DOTs are encouraged to explore ATM strategies along congested freeways and actively manage arterials along freeways. Transportation agencies (including transit agencies) and stakeholders are encouraged to work collaboratively along a congested corridor to explore the feasibility of an ICM system.”*

2. Regarding the “encourage transit” recommendation (#6), there is a lack of actions instead of encouragement. (Wendy Jia, WMATA)

*Based on the same principle given above (the first paragraph of the above response), this recommendation is revised as: “6. Continue to encourage transit in the Washington region and explore transit priority strategies. The transit system in the Washington region serves as a major alternative to driving alone, and it is an important means of getting more out of existing infrastructure. Local jurisdictions are encouraged to work closely with transit agencies to explore appropriate transit priority strategies that could have positive impacts on travelers by all modes.”*

3. In the “Transit” section on page 18, WMATA's PCN operates on arterials, not "highways". Please expand on the importance/benefit of reducing bus travel congestion. Station congestion is a congestion of different nature, mostly due to limitations in design and circulation as well as ridership growth. (Wendy Jia, WMATA)

*Staff changed “highway” to “roadway”.*

*Staff revised the last sentence of the second paragraph of this section to expand the benefit of reducing bus travel congestion. It reads “Relieving roadway congestion will directly have a positive impact on bus operations, such as reducing travelers’ delay, reducing bus operations cost, improving bus reliability and increasing ridership.”*

*Staff added the following sentence to the third paragraph of this section: “Station congestion is a congestion of different nature, mostly due to limitations in design and circulation as well as ridership growth.”*

4. The roadway segment of I-66 from the Beltway to Rte 234 (nearly 20 miles) is not a homogeneous segment and needs to be split up into at least two or three smaller segments for a valid evaluation of the traffic conditions on that segment. (Curt McCullough, City of Fairfax)

*The segmentation of the I-66 is from Route 28 to the Beltway (11 miles) and from the Beltway to the DC line (10 miles), as described in Table 8 and 9 on pages 75-76.*

*One of the principles staff used to segment the freeway corridors was to focus on actual Origin – Destination (OD) points of actual travels, not facility-specific segments, in an attempt to provide customer-oriented travel information.*

5. Concerns on the INRIX arterial data quality. (Amy Tang McElwain, VDOT)

*Staff acknowledged the concerns and will “further verify the quality of data provided by different sources” as stated in recommendation #10: Continue and enhance the arterial congestion monitoring program.*

6. On page 161, regarding the “Imaging / video for surveillance and detection” bullet: Arlington County and City of Fairfax also deployed many cameras. (Amy Tang McElwain, VDOT)

*Staff added a sub-bullet to this section “Arlington County and City of Fairfax in Virginia also deployed many cameras”.*

7. On page 161, regarding the “Traffic Management Centers” bullet: Suggest to remove “loop” in your TMC statement. We have moved to the McConnell Public Safety Transportation Operation Center (MPSTOC) for a few years and no longer name our center Smart Traffic Center. A brief information about this center can be found online at: <http://www.fairfaxcounty.gov/westox/mpstoc/>. We have also changed our incident detection by integrating with VSP’s and local jurisdictions’ CAD data. The incident reported to police CAD is automatically made available to our ATMS system as incident alerts. We have been migrating our loop detectors to non-intrusive detectors and use the data for condition monitoring purpose, not for automatic incident detection. (Amy Tang McElwain, VDOT)

*Staff changed the VDOT sub-bullet to “VDOT’s McConnell Public Safety Transportation Operation Center (MPSTOC) operates Northern Region Transportation Operations Center (TOC) and Signal System. The TOC monitors traffic and incidents by using cameras and other information-gathering mechanisms to better manage day-to-day traffic flow and large incidents.*

8. On page 162, regarding the “Curve Speed Warning Systems” bullet: not sure what curve speed warning system in Virginia this is referring to. (Amy Tang McElwain, VDOT)

*Staff changed the sub-bullet to “Curve speed warning systems have been used on the Capital Beltway” in view of such a system did exist on the Virginia side of the Beltway in the past. Staff will further verify if such a system is still in operation.*

9. On page 162, regarding the “Adaptive Signal Control” bullet: Suggest to rename this title to actively manage traffic signal or something in that manner. Then you can introduce Arlington County’s adaptive signal system and VDOT’s signal/arterial management program. VDOT actively optimize traffic signal timing plans and launched a signal / arterial traffic management

control center located adjacent to the MPSTOC operating floor to proactively manage the arterial traffic. (Amy Tang McElwain, VDOT)

*Staff renamed the bullet to “Active Traffic Signal Management” and added the following sub bullet “VDOT’s signal/arterial management program: VDOT actively optimizes traffic signal timing plans and launched a signal/arterial traffic management control center located adjacent to the MPSTOC operating floor to proactively manage the arterial traffic.”*

10. On page 164, regarding the “Advanced Traveler Information Systems (ATIS)” bullet: Should include the DMS Travel Time that has been deployed in Virginia and Maryland in the sub-bullets. (Amy Tang McElwain, VDOT)

*Staff added the following sub-bullet “Both Virginia and Maryland deployed Dynamic Message Signs (DMSs) for mainly the freeway system.”*

11. On page 165, regarding the “Advanced Traffic Signal Systems” bullet: Similar to comments above. Adaptive signal is not the only advanced signal system. (Amy Tang McElwain, VDOT)

*Staff added the following sub-bullet “VDOT actively optimizes traffic signal timing plans and launched a signal/arterial traffic management control center located adjacent to the MPSTOC operating floor to proactively manage the arterial traffic.”*

12. On page 165-166, regarding the “Lane Management” bullet: I don’t think the VSL is that widely deployed in our region. Suggest to combine with the Active Traffic Management (e.g. Lane Control, Queue Warning, Variable Speed Limits) on page 166. VDOT has been operating the shoulder lane on I-66 between I-495 and Rt. 50 for many years and the ATM project will include upgrade of the shoulder lane control system and enable dynamic usage of the shoulder. (Amy Tang McElwain, VDOT)

*Staff merged this bullet to the “Active Traffic Management” bullet and it now reads: “Active Traffic Management (ATM) (e.g. Lane Control, Queue Warning, Variable Speed Limits) – VDOT has been operating the shoulder lane on I-66 between I-495 and US-50 for many years. VDOT now is upgrading the ATM system on I-66, one of the most congested corridors not only in Virginia, but in the nation. Specific ATM strategies and technologies that fit the needs of the I-66 corridor have been identified and are being readied for roadway deployment. These include lane control signal systems, shoulder lane management systems, adaptive ramp metering, enhanced detection and camera systems, queue warning systems, and others. The I-66 ATM system will emphasize rapidly identifying and responding to incidents, using the shoulder lanes whenever conditions merit, and providing detailed traffic information to travelers. The section of roadway to be outfitted with ATM is 34 miles in length, extending from the District of Columbia to Haymarket in Prince William County. The 34 miles of roadway is divided into five segments, with different combinations of ATM treatments planned for each segment. Operation of the system will be managed by the VDOT Public Safety Transportation Operations Center (PSTOC).”*

13. On page 166, regarding the “Variable Message Signs” bullet: These signs are mainly used for posting incident information and some of them display real-time travel time information. VDOT has posted travel time on I-66 and I-95. If you will not discuss the non-travel time usage of the signs, this section can be combined with the Advanced Traveler Information System on page 164. (Amy Tang McElwain, VDOT)

*Staff removed this bullet as it is already added in the ATIS bullet on page 164.*

14. On page 167, regarding the “Regional ITS Architecture” bullet: Unsure what “department” the first statement is referring to. In addition to mention MWRITIS (need to spell out), this section should focus on the collaborated efforts among DOTs to bring consistency among their regional ITS architectures. (Amy Tang McElwain, VDOT)

*Staff revised this bullet as “Regional ITS Architecture – the TPB has developed a regional ITS architecture, the Metropolitan Washington Regional Intelligent Transportation Systems Architecture (MWRITSA). The Regional Architecture is intended to provide a regional ITS framework for the foreseeable future, to define and validate ITS operations of regional significance, and to address national and statewide conformity in accordance with federal law and guidance. The architecture aims to ensure knowledge of ITS operations across the region, encouraging appropriate systems integration and enhanced technical systems interoperability. In addition to describing the interrelationships among existing transportation technology systems, the MWRITSA can provide a starting point for identifying responsibility for ITS Projects and applicable standards. It can inform business cases for state and federal ITS investment in transportation improvement programs as well as other plans, programs, and projects. The three DOTs have worked collaboratively to bring consistency among their regional ITS architectures.”*

15. On page 167, regarding the “Integrated Corridor Management” bullet: VDOT’s current ICM project development focuses on I-95 and Rt. 1 corridor from the DC line to Fredericksburg. By the time this CMP report is released, VDOT would have finalized the strawman ICM, concept of operations, deployment strategy, and a deployment plan. (Amy Tang McElwain, VDOT)

*Staff revised this bullet as “Integrated Corridor Management (ICM) – VDOT is looking at new technologies and concepts that have been tested nationally or internationally to integrate operations to manage total corridor capacity including freeways, arterials, bus, rail, and parking systems. The purposes of the initiative include identifying innovative technologies to facilitate multi-modal local, regional, and national corridor travel, and indentifying tools to provide information to travelers related to travel times and parking. VDOT’s current ICM project development focuses on I-95 and US-1 corridor from the DC line to Fredericksburg. By the time this CMP report is released, VDOT would have finalized the strawman ICM, concept of operations, deployment strategy, and a deployment plan.”*