New Visions 2050
Draft Regional Operations and Travel Reliability: CDTC's Congestion Management Process
Summary

The Regional Operations and Safety Advisory Committee was asked to examine issues relating to the operations, congestion and travel reliability for the New Visions Regional Transportation Plan update, and to make recommendations for policies and actions for the New Visions 2050 Plan. The topics considered include:

- Reliability of Travel
- Intelligent Transportation System Priority Network
- Congestion Management Process
- Use of a new data set to estimate performance measures

Many of these topics are already considered and supported in the New Visions 2040 Plan. This paper, when incorporated into the New Visions 2050 Plan, will serve as an update to the CDTC Congestion Management Process (CMP). The Advisory Committee considered ways in which the Plan could be updated and strengthened.

CDTC has studied traffic congestion and traffic operations in the Capital District. The New Visions Plan recognizes that managing traffic flows is critical for the health of the region. The New Visions Plan also recognizes that because it is not possible to eliminate all congestion, reliability of traffic flow is emphasized. Congestion Management must be consistent with the entire New Visions Plan and must support growth in economic activity and maintain the quality of life in the Capital District.

The National Performance Management Research Data Set (NPMRDS) uses anonymous data from variety of GPS devices carried by both trucks and cars to record highway speeds. Data is collected under contract with the Federal Highway Administration twenty-four hours a day, 365 days a year, for both passenger cars and trucks. The NPMRDS data can be used to better understand reliability. Non-recurring delay is more unacceptable to the average commuter because it is unexpected and disrupts plans, while predictable, recurring delay can be more tolerable. For example, the NPMRDS data shows that on an average day, in the PM peak period, average travel time from downtown Albany to Northway Exit 9 in Clifton Park is 29 minutes or 11 minutes longer than free flow. However, the 95th percentile travel time (incident related) is 51 minutes, which is 22 minutes longer than regular PM peak travel time. The incident related travel time is more disruptive. See the following page for charts demonstrating the NPMRDS data. The NPMRDS data has great potential for improving congestion management and operations in the CDTC region.

New recommendations include:

- **Community Traffic Engineering Services Program** – CDTC should explore the option of establishing a community traffic engineering services program.
- **Regional Traffic Signal Timing Program** – CDTC should establish a Regional Traffic Signal Timing Program to conduct a data-driven, performance measure-based screening of regional arterials to determine which would benefit most from timing optimization.
• **Traffic Incident Management Committee** – A Traffic Incident Management Committee should be formed that will meet regularly and assess management of recent incidents and plan for upcoming events. Emergency service providers, State Police, NYSDOT staff and others should be included.

• **Inventory of Signals and Signal Coordination Systems** – CDTC should develop a plan to inventory signals in the region and assess their level of operational capability for performance reporting purposes, and as a first step toward developing a Traffic Signal Management System.

• **ITS/TSMO Strategies Survey and Self-Assessment** – CDTC should work with regional operating agencies to compile a survey of ITS and TSMO strategies currently in use.

• **Classification of Signalized Arterials** – CDTC should adopt a data-driven approach to prioritizing corridors for traffic signal upgrades and transit ITS deployment. Signalized arterials should be mapped and classified based on traffic volumes, transit use, access management, signal delay, travel time reliability, safety, and other factors.

• **Automated Traffic Signal Performance Measures Pilot** – Signals with vehicle detection can record and archived high-resolution operations data when the appropriate software is installed on the controller. This data can be used for modeling purposes, signal retiming, and for planning future improvements.

• **Regional Transportation Systems Management Operations (TSMO) Plan** – CDTC will develop a Regional Transportation Systems Management Operations Plan. The TSMO Plan would be developed in accordance with Federal guidance on Advancing Metropolitan Planning for Operations.

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**Above:** Northbound travel time on the Northway during the PM peak period, every weekday for 2017 and 2018. The spikes indicate major delays, mainly caused by incidents.

**Below:** Southbound travel time is much more reliable during the PM period, as most traffic is heading north.