

dvrpc PROGRAM INTRODUCTIONS

CONGESTION MANAGEMENT PROCESS (CMP)



The CMP is a systematic process for managing congestion. It provides information on transportation system

performance and a range of strategies to minimize congestion and to help people and goods reach their destinations. The CMP advances the goals of DVRPC's Long-Range Plan and strengthens the connection between the Plan, the Transportation Improvement Program (TIP), and other Commission efforts.

LONG-RANGE PLAN



The Connections 2040 Plan for Greater Philadelphia (Publication #13042) was adopted by the DVRPC

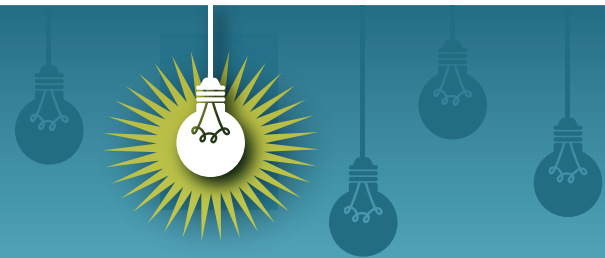
Board on July 25, 2013, as the long-range plan for the Greater Philadelphia region. The Connections Plan puts a strong emphasis on creating livable communities, managing growth and protecting resources, building an energy-efficient economy, and creating a modern multimodal transportation system. Metropolitan planning organizations like DVRPC are key actors in regions across the country, responsible for coordinated, comprehensive, and continuing transportation planning. For more information, visit www.dvrpc.org/Connections2040. The Connections 2045 Long-Range Plan update is currently underway. Check www.dvrpc.org/Connections2045 for ways in which you can contribute to its development.

TRANSPORTATION IMPROVEMENT PROGRAM (TIP)



The TIP is the regionally agreed-upon list of priority projects, as

required by federal law. The TIP must list all projects that intend to use federal funds, along with non-federally funded projects that are regionally significant. Projects address highway, transit, bicyclist, pedestrian, and freight-related needs. For more information, visit www.dvrpc.org/TIP.



WHAT DO YOU THINK?

This newsletter is part of a series that focuses on a selected subcorridor in the Delaware Valley. This is the fifth to focus on a subcorridor in Pennsylvania. The series includes an introduction to the CMP (Publication #NLO9007). Help make this a useful resource for other communities by sending any comments and feedback to public_affairs@dvrpc.org or **215.592.1800**.



LEFT
Construction on US 202



RIGHT
Congestion on I-76



Publication Number: NL14029
Abstract: The CMP newsletter series focuses on congested subcorridors in the Delaware Valley, alternating between New Jersey and Pennsylvania. This edition highlights three of the least reliable highway sections in the five Pennsylvania counties of the DVRPC region. For more information about any of the programs described in this newsletter, please visit www.dvrpc.org.

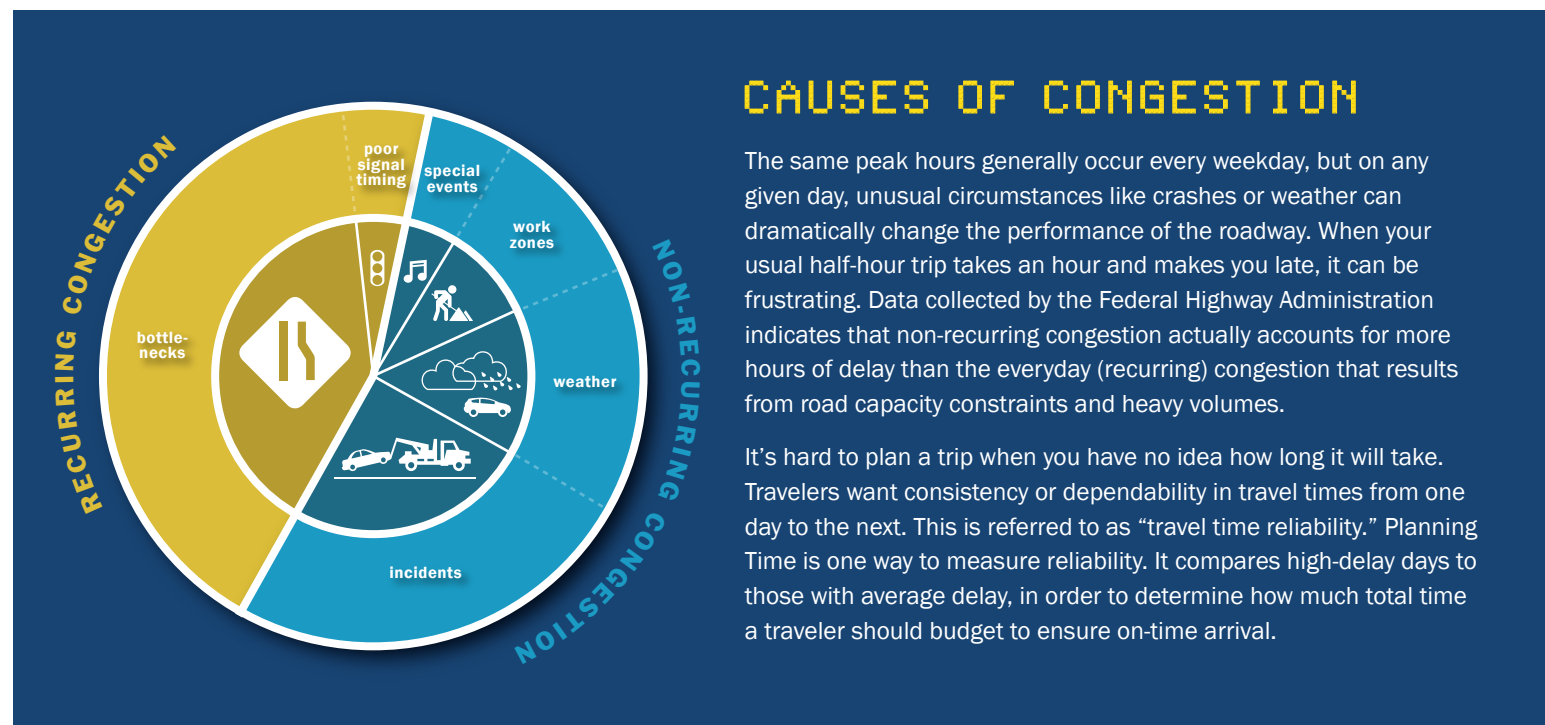
The Delaware Valley Regional Planning Commission is dedicated to uniting the region's elected officials, planning professionals and the public with a common vision of making a great region even greater. Shaping the way we live, work and play, DVRPC builds consensus on improving transportation, promoting smart growth, protecting the environment and enhancing the economy. We serve a diverse region of nine counties: Bucks, Chester, Delaware, Montgomery and Philadelphia in Pennsylvania; and Burlington, Camden, Gloucester and Mercer in New Jersey. DVRPC is the federally designated Metropolitan Planning Organization for the Greater Philadelphia Region - leading the way to a better future.

The Delaware Valley Regional Planning Commission (DVRPC) fully complies with Title VI of the Civil Rights Act of 1964 and related nondiscrimination statutes in all activities. For more information, visit www.dvrpc.org/GetInvolved/TitleVI.



UNDERSTANDING CONGESTION

ON PENNSYLVANIA'S HIGHWAYS



CAUSES OF CONGESTION

The same peak hours generally occur every weekday, but on any given day, unusual circumstances like crashes or weather can dramatically change the performance of the roadway. When your usual half-hour trip takes an hour and makes you late, it can be frustrating. Data collected by the Federal Highway Administration indicates that non-recurring congestion actually accounts for more hours of delay than the everyday (recurring) congestion that results from road capacity constraints and heavy volumes.

It's hard to plan a trip when you have no idea how long it will take. Travelers want consistency or dependability in travel times from one day to the next. This is referred to as "travel time reliability." Planning Time is one way to measure reliability. It compares high-delay days to those with average delay, in order to determine how much total time a traveler should budget to ensure on-time arrival.



UNDERSTANDING CONGESTION

ON PENNSYLVANIA'S HIGHWAYS

FOR MORE INFORMATION ON TECHNICAL TERMS USED SEE: WWW.DVRPC.ORG/CONGESTIONMANAGEMENT/ANALYSISDATA

WORK ZONE

- + WORK ZONES PEAK-HOUR CONGESTION
- = EXTRA DELAYS



SOUTHBOUND TRAVEL TIMES

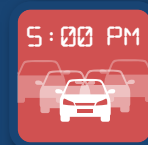
5.25 MILES



FREE-FLOW:
5 minutes,
30 seconds



PEAK TIME:
15 minutes,
30 seconds



PLANNING TIME:
30 minutes,
30 seconds

PROBLEM: When traffic is already congested during rush hour (recurring), even carefully managed construction activities can lead to non-recurring congestion and unreliable travel times.

POTENTIAL SOLUTIONS: The good news is, **construction projects eventually end!** The US 202 Section 300 widening and reconstruction project was completed in 2016. Congestion management strategies included Intelligent Transportation Systems, new express rail service, bus services and shuttle connections, and improvements for bicyclists and pedestrians. These **multimodal improvements help reduce congestion in both the short- and long-term.** The northbound section was constructed first, and as it wrapped up, travelers didn't need to plan for nearly as much extra time, as reliability improved by over seventy percent in two years.

BOTTLE-NECK

- + HEAVY PEAK-HOUR TRAFFIC OPERATIONAL DEFICIENCIES
- = RECURRING DELAYS



NORTHBOUND TRAVEL TIMES

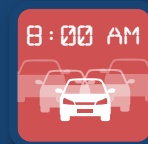
3.5 MILES



FREE-FLOW:
3 minutes,
30 seconds



PEAK TIME:
9 minutes



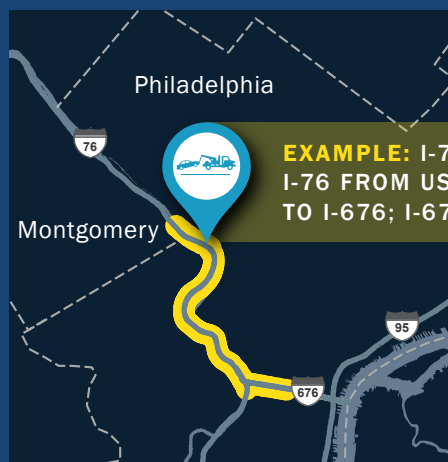
PLANNING TIME:
17 minutes

PROBLEM: Heavy peak-hour traffic can grind to a halt on an everyday basis when operational deficiencies are present, such as lane drops or difficult merge areas. When these bottleneck conditions are present, additional disruptions, such as incidents or bad weather can lead to dramatically longer delays.

POTENTIAL SOLUTIONS: Preliminary investigations are underway to develop a project to address this bottleneck. Ideas include extending acceleration and/or deceleration lanes, improved signage and lighting, and use of shoulders on I-476 to provide additional lanes during peak periods. Combining these **operational improvements with multimodal options and careful land use planning** should help reduce delays at this location.

BOTTLE-NECK & INCIDENTS

- + RECURRING CONGESTION CRASHES
- = UNPREDICTABLE TRAVEL TIMES



SOUTHBOUND TRAVEL TIMES

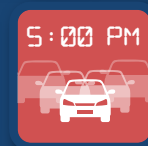
6.5 MILES



FREE-FLOW:
6 minutes,
50 seconds



PEAK TIME:
17 minutes,
3 seconds



PLANNING TIME:
39 minutes,
11 seconds

PROBLEM: In uncongested conditions, anything short of a major incident might cause little or no disruption, but even a stalled car on the shoulder of a congested road can produce major delays. When traffic volumes are high, it doesn't take much to go from bad to miserable.

POTENTIAL SOLUTIONS: An Integrated Corridor Management project is beginning the design process. Its goal is to **provide operational improvements on I-76 and supporting arterials to dynamically manage recurrent congestion and help reduce incidents.** For example, warning signs and variable speed limits could alert drivers that queues are present, in order to slow approaching traffic and prevent secondary incidents. Installation of devices to continuously monitor the roadway will help increase the effectiveness of ongoing efforts such as Safety Service Patrols and the Philadelphia and I-76/I-476 Crossroads Incident Management Task Forces. **Multimodal operational improvements such as enhanced coordination with parallel transit services,** including technologies to communicate transit options to motorists in real time, can help relieve congestion by reducing the number of vehicles on the road.