



Association for the Improvement
of American Infrastructure

Together, we move P3s forward.

Managed Lanes

“Express” or “Choice” Lanes are variably priced, separated lanes on highways designed to ensure reliable, free-flowing traffic at all times. More formally known as Managed Lanes (ML), Traffic Managed Lanes (TML) or High-Occupancy Toll (HOT) lanes, the corridors typically incorporate one or more of the following features:

- **Free Access for Private Vehicles with 3 or More Passengers**
- **Free Access for Transit Buses**
- **Variably Priced, Per-Mile User Fees or Tolls for Single Passenger Vehicles**
- **Added Vehicle Capacity in “Free” Lanes**

The goal of Express or Choice Lanes is to offer drivers a reliable option to get to their destination, at any hour of the day. These lanes maximize the efficiency of the corridor, encourage carpooling and public transportation usage, and reduce overall congestion and emissions. These lanes are often part of broader efforts to implement smart transportation solutions in urban and suburban areas.

Management Techniques

Variable Pricing

User fees or tolls vary based on traffic conditions, time of day, or demand. For example, when traffic congestion is high, the per-mile user fee or toll increases in the Express or Choice Lanes. This helps manage congestion by incentivizing travel during off-peak times or via transit or higher-occupancy vehicles (HOVs) which do not pay the user fees in the lanes.

Well Maintained Roadways

Generally, State governments have performance contracts with companies that guarantee a high standard of maintenance and overall condition of the Express or Choice Lane facility and/or the parallel “free” lanes.

Electronic Toll Collection

Using electronic systems to collect tolls without requiring vehicles to stop reduces congestion at toll points and ensures smooth traffic flow.

Benefits of Express/Choice Lanes

Managed lanes offer several benefits that contribute to improving overall transportation efficiency and user experience on highways and freeways:

Reduced Congestion

By providing a dedicated lane that encourages HOVs, buses, and toll-paying vehicles, managed lanes help alleviate congestion in the general-purpose lanes. This can lead to smoother traffic flow and reduced travel times for all users.

Improved Travel Time Reliability

Managed lanes often maintain a more consistent speed and travel time, especially during peak hours, compared to the unpredictable conditions of general-purpose lanes. This reliability is beneficial for commuters and businesses relying on timely transportation.

Encouragement of Carpooling and Transit Use

HOV lanes or HOV designations within managed lanes encourage carpooling and the use of public transit, reducing the number of single-occupant vehicles on the road. This not only decreases congestion but also promotes environmental sustainability by reducing emissions per person transported.

Revenue Generation

High-occupancy toll (HOT) lanes generate revenue from toll-paying vehicles, which can be reinvested into transportation infrastructure or used to fund public transit improvements. This revenue stream helps support the operations, maintenance and the possible future expansion of managed lane networks.

Flexibility and Adaptability

Some managed lanes are designed with variable tolling and dynamic use patterns that adjust in real-time based on traffic conditions. This flexibility optimizes lane usage and ensures efficient operation throughout the day.

Safety Improvements

Typically, managed lanes have fewer lane-changing maneuvers and reduced conflict points compared to general-purpose lanes, leading to improved safety outcomes for drivers and passengers.

Enhanced Public Transportation

By providing dedicated lanes or allowing free access to managed lanes for buses and other transit vehicles, managed lanes can enhance the reliability and attractiveness of public transportation options, encouraging more people to choose sustainable transit modes.

Optimized Use of Existing Infrastructure

Rather than constructing entirely new roadways, managed lanes can help maximize the capacity of existing infrastructure by better managing traffic flow and increasing throughput during peak periods.

Overall, managed lanes represent a strategic approach to managing urban and suburban traffic congestion while promoting sustainable transportation choices and enhancing overall transportation system efficiency. Using electronic systems to collect tolls without requiring vehicles to stop, reducing congestion at toll points and ensuring smooth traffic flow.

Examples of Express/Choice Lanes

The following examples demonstrate diverse approaches to managing traffic through managed lanes, tailored to specific regional needs and traffic patterns. They aim to enhance transportation efficiency, reduce congestion and promote sustainable options.

Interstate 95 (I-95) Express Lanes, Virginia



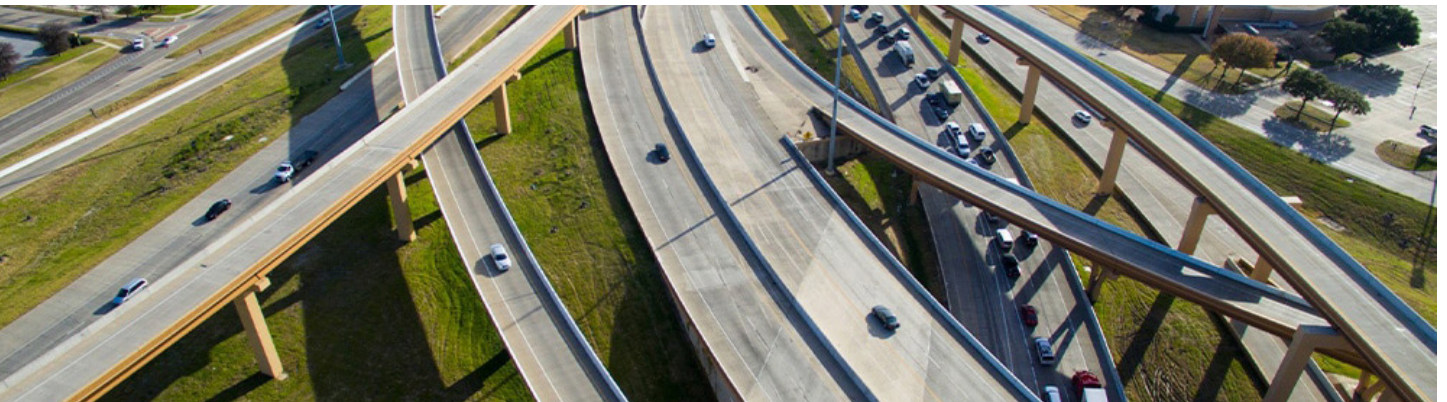
Dynamically tolled lanes along Interstate 95 provide a faster and more reliable travel option for users willing to pay a toll. The tolls vary based on traffic conditions to manage congestion.

495 Express Lanes, Northern Virginia



A set of express lanes on the Capital Beltway that use variable pricing to maintain free-flowing conditions.

North Tarrant Express, Texas



Managed toll lanes along I-35W and SH-138 in the Dallas Fort Worth area employ variable tolling to manage traffic flow.