RECURRING SEVERE CONGESTION

Recurring traffic congestion is predictable and usually happens on a daily basis. Congestion occurs when demand exceeds the capacity of a facility. Typical causes of recurring congestion include bottlenecks associated with geometric design deficiencies, weaving/merging locations, long-term construction work zones, poor traffic signal timing, and over-capacity locations. Here are some of the most severely congested areas during morning and evening hours:

- Morning observed congestion (<30 mph)
- Evening observed congestion (<30 mph)
- CDA projects

A VISION FOR THE FUTURE

HOV-Managed lanes

The managed lanes are all-electronic. Motorists may use electronic transponders such as a TOLLTag or TOLLTag eXpress, or they may use a pay-by-mail option and be billed at a higher rate than toll users for their trips.

- Why are prices different on managed lanes compared to toll roads?
  - Managed lanes are a traffic management strategy designed to keep traffic moving, even during peak hours. The 50 mph goal for travel in managed lanes means toll rates could be higher than on existing toll roads. Motorists can still choose to travel in “gas tax” lanes adjacent to the managed lanes.

Q: How will I know how much I am paying?

A: Managed lanes are all-electronic. Motorists may use electronic transponders such as a TOLLTag or TOLLTag eXpress, or they may use a pay-by-mail option and be billed at a higher rate than toll users for their trips.

Q: Will there be toll booths?

A: No, the managed lanes are all-electronic. Motorists may use electronic transponders such as a TOLLTag or TOLLTag eXpress, or they may use a pay-by-mail option and be billed at a higher rate than toll users for their trips.

Q: Do I need a different toll tag?

A: The North Texas Tollway Authority is expected to handle toll collection and customer service. If you already have a TOLLTag or TOLLTag eXpress, you do not need to do anything else.

Q: Why are prices different on managed lanes compared to toll roads?

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Q: How are there plans to build managed lanes throughout North Texas?

A: Managed lanes provide motorists a choice. They keep traffic and the North Texas economy moving. The planned network of managed lanes takes a long-term view to address congestion well into the future, including maintenance of the system.

Q: Aren’t these designed for the rich?

A: Studies show that all types of motorists use them at least occasionally. The choice is often based upon the importance of being at a specific destination on time. Managed lanes are not necessarily a 5-day-a-week commuting option.
LEVEL OF DEMAND

Why not just build more lanes?
Adding more lanes to a highway might provide short-term relief. Those new lanes would fill up quickly over time — most likely within a decade.

- In urban North Texas, an ambitious transportation network expansion program can’t entirely keep up with the rapid pace of population growth. We can’t build our way out of congestion.
- Today, the average cost per mile of the 13-mile North Tarrant Express is $1.62 billion. The cost is $143 million per mile for the DFW Connector and $207 million for the U.S.
- Demand to use UTA Freeway is so great that, if funding were available, 31 lanes could be built and then be filled up by 2030. A combination of 20 main lanes, managed lanes and frontage road lanes are all that can be built.

NORTH CENTRAL EXPRESSWAY

A 10-mile stretch from downtown Dallas to UTA Freeway was rebuilt in the 1990s, going from eight to 10 lanes (four main lanes and four frontage road lanes). From 2000 to 2008, traffic on Central at Northwest Highway has almost doubled in vehicles per day:

U.S. 75 in 2008 (280,000 vehicles per day)
- U.S. 75 in 2000 (146,000 vehicles per day)

AIR QUALITY

How do managed lanes help with air quality?
Keeping traffic moving at 50 mph on the managed lanes reduces vehicle emissions. And the addition of managed lanes will ease congestion on the other highway lanes and surrounding city streets.

- North Texas is a non-attainment area for ozone, putting the region at risk of losing Highway funding.
- North Texas’ air quality has improved in the past decade, but more improvement must be made to meet federal guidelines.
- High-occupancy vehicle (HOV) lanes are an important part of a regional clean-air plan.
  - Since 1991, North Texas has implemented HOV lanes to help improve air quality by encouraging carpooling and transit use.
  - As the region added population, leaders took the initiative to expand its HOV network and added managed lanes. The expanded network provides a commuting alternative and improves air quality by managing excess HOV capacity.

NEW LANES

What is the difference between a toll road and a highway with managed lanes?
The primary difference is to provide motorists a choice to pay for a higher level of service. Motorists can choose to drive in the managed lane or choose to drive in the main lanes. Additionally, a highway with managed lanes primarily features free lanes. Managed lanes are designed to keep traffic moving on at least a portion of the road at all hours of the day — even peak hours, which is achieved by responding to demand by increasing or decreasing the price. A toll road, on the other hand, features a static toll on all main lanes. Motorists may encounter congestion on all toll road lanes during peak hours.

- The region adds more than 100,000 new residents per year.
- North Texas, already home to 6.5 million people, will grow to 9 million residents by 2035.
- More residents mean more cars — and more vehicle emissions. More than 6.5 million vehicles are registered in the four urban counties. Based on current ownership rates, that number will grow to almost 9 million vehicles by 2035.
- At the same time, state and regional roadway-building plans call for adding 7,300 lane miles to the 12-county area by 2033, a 16 percent increase from the total of 46.167 lane miles in 2010.

EFFICIENCY OF HOV SYSTEM

How did we get to the need for managed lanes?
The high-occupancy vehicle lane system evolved from only allowing buses to include car-pools and van-pools. Still, HOV lanes had room for more vehicles, even during peak hours. Managed lanes are the most efficient way to use that capacity.

- Managed lanes make efficient use of excess HOV capacity by allowing drivers to choose to pay extra for a higher level of service. HOV and transit users still receive a discount.
- The price will vary depending on congestion levels, with the goal of a 50 mph trip.
- Managed lanes give motorists an option to get more quickly to their destinations — such as the airport, work, day care or other important appointments.
- Without managed lanes and their revenue, the NTE and UTA would not have had enough funding to be rebuilt. Developer teams take the financial risk for building and for operations and maintenance costs for 52 years.

SAFETY AND PREDICTABILITY

How will managed lanes help my commute?
They will be barrier-separated, with dedicated entrance and exit ramps. And they will feature electronic toll collection. All of these factors will result in a safe and reliable 50 mph trip.

- Barrier-separated lanes reduce a large portion of weaving and merging traffic. They separate local drivers entering and exiting a highway from motorists passing through the corridor.
- A managed lane system means a more predictable 50 mph commute for motorists.
- A higher percentage of managed-lane trips could be bus and vanpool users, lowering the demand for automobile usage.

HOW DO MANAGED LANES OPERATE?

Managed lanes are lanes where traffic is kept moving at a faster, more reliable speed (50 mph) by adjusting the toll rate up and down as the number of vehicles increases or decreases respectively. Drivers can enter and exit the managed lanes at select points along the roadway and pay a toll to ensure a faster, more predictable trip time.

GROUND-LEVEL LAYOUT

Improve Frontage Roads
- Reconstructed free lanes
- New managed lanes (Toll)
- Improved Frontage Roads
- Sub-Surface Layout
- Reconstructed free lanes
- Improved Frontage Roads

NOTE: Illustration depicts example managed lane design only.

Looking east on Northeast Loop 820 near U.S. 360 Drive
This level of congestion is all too familiar to drivers of the 214,000 vehicles a day that use it.

TxDOT graphic
TxDOT photo