

A high-angle, slightly blurred photograph of a red car driving on a dark asphalt road. The car is positioned in the upper right quadrant, moving towards the bottom. White lane markings, including a double line and a diamond-shaped sign, are visible on the road surface. The overall scene is dynamic and focused on transportation infrastructure.

LANE CHANGE

Signaling a shift in how it responds to congestion, the Georgia Department of Transportation is the first state organization to implement not one managed lane, but a system of managed lanes — 310 centerline miles of urban interstate at full build-out. The pioneering plan, more than two years in the making, promises to preserve metro Atlanta's mobility in the face of skyrocketing population and employment growth.

BUILDING GENERAL-PURPOSE LANES FOR CONGESTION RELIEF ON URBAN FREEWAYS IS FAST BECOMING PASSÉ.

Intended to add new capacity, these lanes fill up as they meet latent demand, becoming nothing more than billion-dollar temporary fixes.

With this traditional approach now cost-prohibitive and unsustainable, departments of transportation are considering other options, and many are coming to the same conclusion: If we can't build our way out of congestion, we'll manage our way out.

Many cities are looking to managed lanes as the solution. At last count, 23 U.S. metropolitan areas now are operating or implementing managed lanes, considering managed lane proposals or studying their feasibility.

BIRTHING A TREND

Calling managed lanes the “wave of the future,” Robert Poole, director of transportation policy for the Reason Foundation, explains the growing attraction.

“Managed lanes recognize that people have very different values of time, and that they often are willing to pay to get someplace quickly and reliably,” he said. “And, unlike general-purpose lanes, they are sustainable. Variable pricing keeps them free-flowing.”

Further, managed lanes have a built-in funding source, so they more cost-effectively deliver additional capacity while supporting the initial capital expenditure and long-term operating and maintenance costs, according to Cherian George, head of the Americas/managing director for Fitch Ratings Global Infrastructure and Project Finance team.

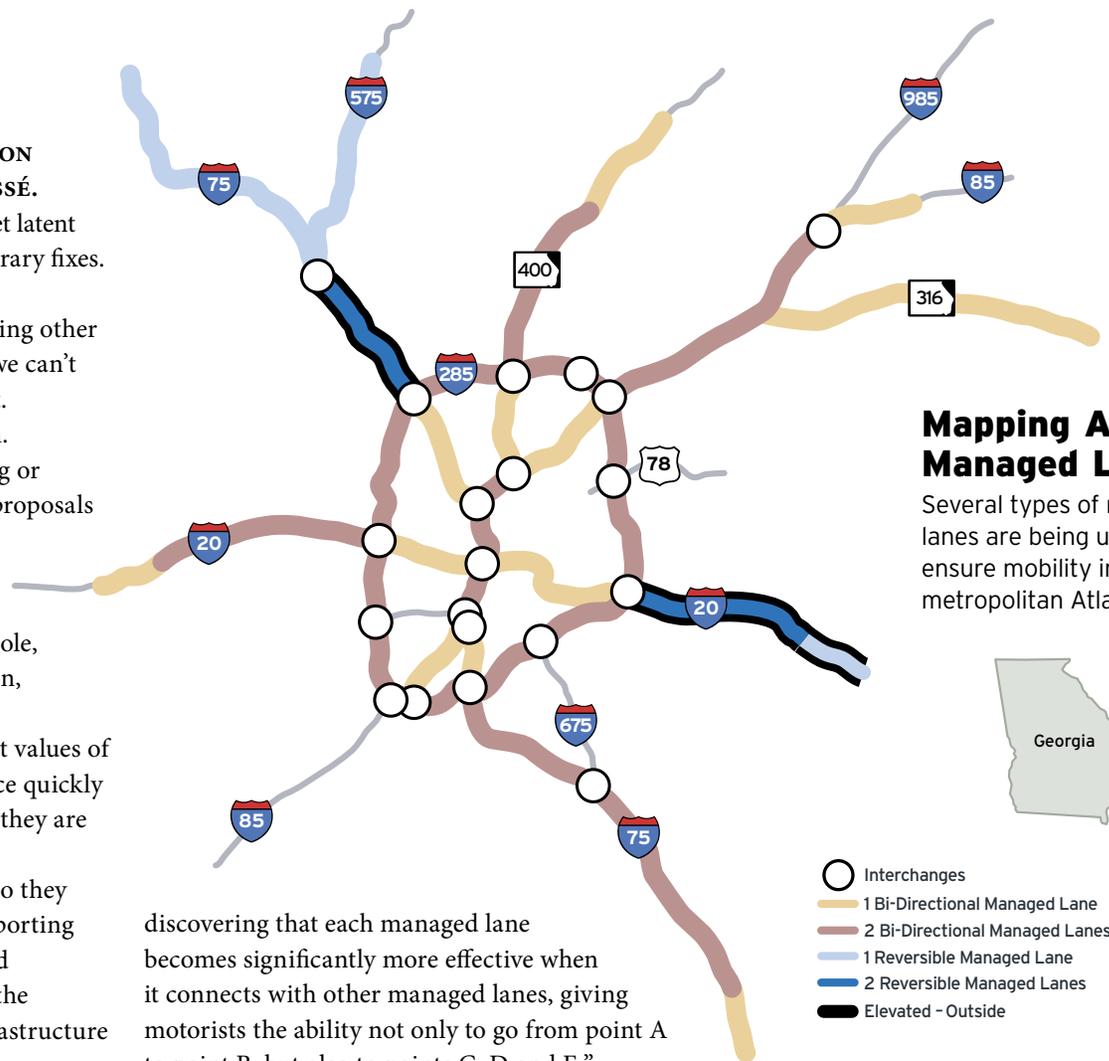
“Depending on the way in which the asset is delivered, a managed lane may have excess revenue available for other purposes, including managing and investing in the surrounding general-purpose lanes,” he said.

Managed lanes began much like high-occupancy lanes did — as isolated spot projects. But, just as HOV lanes have evolved to more effective HOV systems, so are managed lanes evolving into networks.

“We are witnessing the birth of a trend,” said Jack Finn, chair HNTB toll services.

Finn is referring to 2G — the second generation of managed lanes. The first generation, demonstration projects funded by the Federal Highway Administration's Value Pricing Program, generally involved low-cost and/or conversion projects.

“2G is more systematic. It is typically new capacity focused on partnerships, such as public-private partnerships, that leverage limited state and local dollars,” Finn said. “The industry is



Mapping Atlanta's Managed Lanes

Several types of managed lanes are being used to ensure mobility in the growing metropolitan Atlanta.

discovering that each managed lane becomes significantly more effective when it connects with other managed lanes, giving motorists the ability not only to go from point A to point B, but also to points C, D and E.”

According to Poole, plans for managed lane systems have been accepted and approved in some of the country's most congested cities, including Houston, Dallas, Seattle and San Diego.

LEADING THE PACK

Two corridors in Washington, D.C., the Capital Beltway and I-95/I-395, will feature initial managed lane systems, while San Francisco is considering an expansive network of managed lanes throughout the Bay Area. Leading the pack, however, is the Georgia Department of Transportation. It now is implementing one of the nation's first comprehensive systemwide evaluations of urban-area managed lanes.

The Atlanta Regional Managed Lane System Plan, approved by Georgia's transportation board last December, will preserve the region's free-flow mobility during peak traffic hours just as traffic

threatens to strangle the state's economic competitiveness and quality of life.

"Transportation is no longer an entitlement," said Todd Long, director of planning for GDOT. "Rather, it's a commodity for which the user receives value in return for a fee. Implementing a system of managed lanes — where some motorists pay a fee to use the facility — would create the means to meet motorists' demand for reliable travel time, every time."

Although there is no official target date for full system build-out, when the MLSP is completed, GDOT will have 310 centerline miles of freeway managed lanes.

Award-Winning Plan

The Georgia Department of Transportation received the 2010 Transportation Planning Excellence Award for its Atlanta Regional Managed Lane System Plan. The Transportation Planning Excellence Awards is a biennial program developed by the Federal Highway Administration and the Federal Transit Administration to recognize outstanding initiatives across the country that develop, plan and implement innovative transportation planning practices. The American Planning Association co-sponsors the award.

FACT: The Managed Lane System Plan will save the Atlanta metro region \$47 billion in reduced traffic delay over 35 years.

TAKING THE POLICY WHEEL

In 2003, Georgia's state lawmakers approved groundbreaking public-private initiatives legislation, which are now referred to as public-private partnerships or P3s. Subsequently, GDOT began receiving unsolicited proposals from the private sector, each attempting to prescribe policy for Atlanta freeways.

"Those proposals, which suggested everything from high-occupancy toll lanes and truck-only lanes to express toll lanes, put GDOT at a disadvantage because it did not have a strong negotiating position," said Tim Heilmeier, HNTB project director of GDOT's P3 program.

The department responded by conducting a comprehensive investigation of managed lane investments. HNTB, GDOT's P3 technical adviser and program manager, assisted in defining the \$16 billion program, writing the master plan's scope and working with GDOT's office of planning to execute it.

"The Georgia Department of Transportation is very pleased with the services we have received from HNTB as technical advisers for our public-private partnership program, which includes our Managed Lane System Plan," said GDOT Commissioner Vance Smith.

"Having the MLSP puts GDOT in a proactive position," Long said. "It sends a great message to the marketplace: This is our plan, and this is what we are going to do. People can organize around that."

KEEPING IT REAL

In the works for more than two years, the MLSP is an exhaustive, pragmatic look at policy, planning, finance, delivery and implementation options. HNTB used traffic and revenue studies to keep the ambitious plan grounded in fiscal reality.

"Based on a variety of scenarios that included revenue bonds, Transportation Infrastructure Finance and Innovation Act loans and concessionaires' equity, we used proprietary HNTB tools to determine present-day dollar cumulative revenue streams and to calculate how much in present-day monies a 50-year revenue stream would generate," Heilmeier said.

Before, a DOT might have determined a project's cost and how much a given policy would collect in present-day dollars, but it would not have considered such things as debt service coverage ratios or mezzanine debt structures that, once added to the equation, often create funding gaps.

While the MLSP's policy framework does not optimize finances, it does take into account the implementation side of the house, which,

Managed Lane System Benefits

Improves mobility

- ◆ Increases average travel speeds
- ◆ Decreases delay
- ◆ Increases access to major activity centers
- ◆ Increases system efficiency

Maximizes throughput

- ◆ Decreases travel time variations
- ◆ Improves transit on-time performance

Minimizes environmental impacts

- ◆ Improves air quality/decreases pollutants
- ◆ Reduces impact to the built environment

Provides a financially feasible system

- ◆ Leverages and optimizes public cash outflows
- ◆ Incorporates a market-driven approach

Creates a flexible infrastructure for varying lane management

- ◆ Accommodates future lane management possibilities

until now, has never been done in a systemwide planning study, according to Andrew Smith, HNTB project manager for the MLSP.

"We were not optimizing a minimum public sector contribution or targeting a certain dollar value," he said. "Our goal was to attempt to balance and optimize financeable costs and public sector contributions with the overall general reduction in travel costs to citizens."

The result is a comprehensive roadmap for GDOT that establishes:

- Infrastructure and system development in 20 corridors
- The architecture and recommended schedule for a complete system build-out
- Funding requirements and limitations
- Appropriate policies
- The network's anticipated cost and revenue potential
- Access points
- Each managed lane's capacity limits

High-occupancy toll lanes emerged as the MLSP's recommended eligibility policy. Under the desired HOT3+ policy, high-occupancy vehicles with three or more occupants could travel the managed lanes at no charge, along with motorcycles, alternative fuel vehicles and emergency vehicles. Vehicles with one or two occupants would access the managed lanes by paying a toll. However, system level policies will be revisited, and potentially revised, on a corridor-by-corridor basis as projects evolve and implementation realities are understood.

FILLING THE P3 PIPELINE

"The MLSP serves as a blueprint for GDOT's managed lane projects, but it's also driving GDOT's P3 procurement pipeline," Heilmeier said.

GDOT plans to leverage those P3s to accelerate construction of priority corridors.

“It’s a challenging time for DOTs as resources are extremely limited and maintaining existing systems often takes priority over expansion,” Heilmeier said. “But, when they put a P3 project in place, for 50 years someone else has to take care of it — and assume most of the risk. That kind of transaction is appealing. And, if a DOT can deliver a billion-dollar project for, say, only \$300 million of its own money, that really resonates these days.”

Of the managed lane project’s \$16 billion price tag, GDOT expects the private sector to contribute \$9 billion in toll revenue bonding and equity. The rest will come from traditional federal and state programs.

PAYING DIVIDENDS

GDOT’s unprecedented investment in the MLSP is paying dividends. By 2016, the department plans to have three managed lane facilities in operation: the Interstate 85 HOV-to-HOT Lanes Project, the Interstate 75 Northwest Corridor Project and the I-75 project in Henry County.

Funded through the U.S. Department of Transportation’s Congestion Reduction Demonstration Program, the I-85 project converts 15 miles of existing high-occupancy vehicle lanes to HOT lanes. To keep the lanes free-flowing and provide reliable travel time, tolls will vary dynamically based on demand or the number of vehicles using the HOT lanes. The revamped lanes are scheduled to open in summer 2011.

The Northwest Corridor Project will involve the addition of reversible managed lanes along I-75 and I-575. It will include two lanes on the west side of the existing general purpose lanes along I-75, between I-285 and I-575. The managed lanes will consist of a mix of roadway at-grade, on walls and as an elevated highway. In addition, one managed lane will be added along I-75 between I-575 and Hickory Grove Road and along I-575 to Sixes Road. These lanes will be at-grade and located in the median along the inside of the existing general purpose lanes. GDOT hopes to open the facility to traffic in 2016.

MAINTAINING A COMPETITIVE EDGE

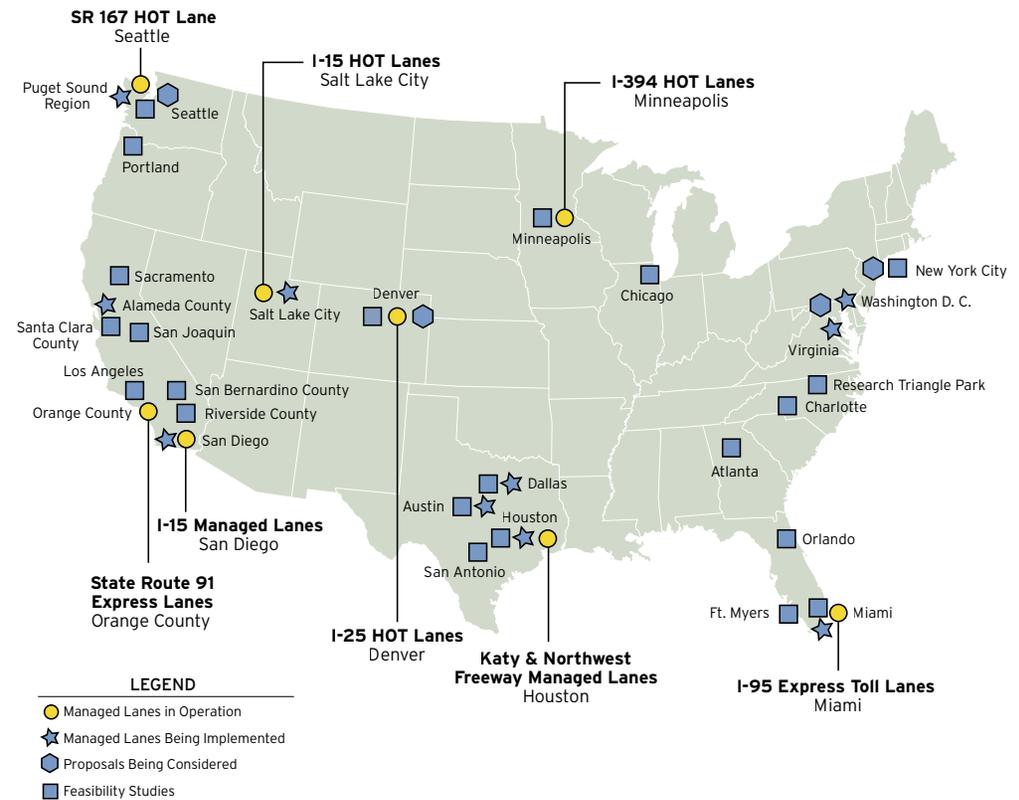
To maintain its state’s competitiveness, GDOT must enhance its transportation networks with strategic, sustainable assets.

“Through the MLSP, HNTB has shown us how to proactively exercise our management, delivery and financial toolboxes to provide congestion relief and make our state economically competitive,” Long said. “The impact of GDOT’s MLSP is not only a roadmap for metro Atlanta but a template that can be applied to any congested urban area in the United States.” ■

CONTACT:

ANDREW C. SMITH, HNTB Project Manager
(404) 946-5708 ■ asmith@hntb.com

MANAGED LANES ACROSS AMERICA



“I am very excited about the P3 program in Georgia and the benefit the program will bring to our citizens. During these economic times, we must look for methods to deliver the infrastructure that Georgia needs as a growing state. By forming a partnership with private industry, Georgia will receive a substantial return on our investment in the form of managed lanes, which will provide congestion relief and a more reliable trip time for our citizens.”

VANCE SMITH
COMMISSIONER
GEORGIA DEPARTMENT OF TRANSPORTATION