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Utilizing priced managed lanes to improve mobility

PMLs can be an effective tool to reduce congestion in critical corridors

As critical transportation projects are shelved due to funding shortfalls across the country deal with aging roadways and increasing congestion, transportation leaders must find a variety of ways to create the funding necessary to operate, maintain and modernize transportation systems while making travel more efficient. According to a [2018 HNTB America THINKS survey](#), 79 percent of Americans expressed a willingness to pay tolls to avoid congestion and have more predictable travel times, even when free alternatives are available. One tool that agencies can consider to address critical needs along with answering to strong public sentiment are priced managed lanes.

Managing supply and demand

PMLs work by tolling some lanes in an urban corridor while also offering a free alternative, and are most impactful when there is acute, recurring congestion. The PML toll rate varies to ensure a reliable travel speed is maintained and the lanes function without congestion. With PMLs, not all lanes in a corridor are tolled, thus providing a mobility option for motorists, who have the choice to pay for a reliable, predictable trip, depending on their circumstances or needs.

There are more than 60 PML facilities operating in the U.S., including Atlanta, Washington, D.C., Dallas, Houston, Miami, Fort Lauderdale, Denver, Minneapolis and Los Angeles.

Variable pricing in action

In California, HNTB worked alongside the San Diego Association of Governments to develop and design the world's first fully dynamic variable pricing along 20 miles of I-15. Express lanes were constructed in the median, widening a two-lane facility to four lanes, along with a moveable barrier. A unique algorithm updates prices displayed at various entry points every three to six minutes based on traffic volume and

analyzes travel time saved. This provides users with the information they need to decide on whether to utilize the express lanes at an additional cost or stay in a non-tolled lane.

PMLs also can help create multimodal solutions. An example of this is the 95 Express Lanes in Miami. HNTB assisted the Florida Department of Transportation as program manager for the first phase of a project that electronically collects tolls that fluctuate based on traffic levels. This has helped address congestion by allowing for registered high-occupancy vehicles and fixed bus rapid transit to operate in the lanes.

Offsetting costs, maximizing capacity

While managed lanes can help transportation agencies address reliability, revenue and capacity, they should not be seen as significant revenue producers. The real benefit of PMLs is congestion relief and providing a choice to customers of a predictable, reliable travel time when necessary. The revenue produced typically helps offset capital and operational costs.

The enhanced capacity offered by managed lanes offers additional benefits to support the core mission of transportation agencies, including lower congestion, improved mobility and higher quality of life.

A viable alternative

At a time when transportation agencies face growing congestion, limited solutions and a gap between needs and resources, priced managed lanes are an alternative worth considering, especially given the fact that multiple delivery options, including design-bid-build, design-build or P3 procurements can deliver PMLs. With smart planning and the right situation, PMLs allow agencies to further leverage current roadways in a more effective and efficient manner. ■



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