



Project Number

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Deployment Strategies of Managed Lanes on Arterials

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Current Situation

Florida's continuing growth has often been attracted to areas where good highway infrastructure already exists. Traffic loads have developed to the point where widening existing highways is not sufficient, or perhaps impossible, to accommodate added traffic. One approach to more efficient highways is managed lanes, such as high-occupancy vehicle (HOV) lanes, high-occupancy/toll (HOT) lanes, express lanes, bus-only or truck-only lanes, reversible lanes, and contra-flow lanes.



Good roads attract development that places additional burdens until congestion becomes a serious problem.

Research Objectives

Project objectives were to examine types of managed lane strategies that can be successfully deployed on arterials, identify tools for evaluating their performance, and investigate ways to coordinate the deployment and operations of these lanes on a network of arterials and freeways.

Project Activities

To determine when and where to employ managed lanes on arterials, researchers reviewed state and national practices. They identified managed lane types appropriate for Florida, considering issues such as design, enforcement, and pricing. They summarized their findings in a flow chart to assist planners in selecting a managed-lane strategy. Information is presented about planning, financing, partnerships, and generating public and governmental support for managed lane projects.

Researchers reviewed practical steps for evaluating performance of managed lanes. They discussed setting operational objectives and policies which influence how managed lanes are evaluated. They surveyed literature for tools used in evaluating the effectiveness of managed lanes before and after implementation. These tools differ in model resolution, scale, accuracy, data need, resource availability, and can be used in sketch, project, and operational planning to analyze managed-lane strategies.

Finally, the researchers proposed two heuristic procedures, one for selecting arterials for managed lane implementations and the other for evaluating a plan for deploying a set of managed lanes on arterials. The project report concludes with case studies of how to deploy managed lanes on a road network in South Florida using synthetic demand data.

Project Benefits

Managed lanes have already been implemented on some interstate segments in Florida, with positive results. Extending this strategy to arterials can further improve the efficiency of busy Florida roads.

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