

Guidelines for Multimodal Corridor Capacity Analysis

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Abstract

Transportation planners and analysts are concerned that sufficient capacity may not exist to handle the projected traffic growth in many corridors throughout the United States. There is a pressing need to address capacity problems not only on highways but on other modes such as rail, waterway and air. Passenger and freight movements on many of these corridors are expected to continue to increase in proportion to the demands for goods, services and mobility in both rural and urban areas.

In the past, growth in highway traffic has been handled by constructing new roadways or by expanding existing ones. Transportation agencies are now more frequently facing situations, particularly in urban areas, where it is impractical or impossible to increase highway capacity, because of physical barriers, environmental impacts and regulations, community opposition, or extraordinary cost.

Most transportation capacity analysis methods, e.g., the Highway Capacity Manual, tend to pertain to specific modes rather than concern multimodal corridor analysis. There is a need for a new, more encompassing definition of capacity and corresponding capacity analysis methods. The definition and analytical methods fundamentally should be multimodal/intermodal and have primacy over the capacity of specific modes. Multimodal capacity should be the key constraint in transportation planning and design — the capacity of particular modal facilities and equipment should be a secondary constraint.

This paper identifies some guidelines and procedure for characterizing, analyzing and solving capacity problems in multimodal corridors. The guidelines are the results of the National Cooperative Highway Research Program Project 8-31: *Long-Term Availability of Multimodal Corridor Capacity*. The objectives of this project were to evaluate the scope and severity of current and future capacity problems and constraints on transportation corridors, to recommend strategies to ensure the long-term availability of multimodal corridor capacity, and to identify analytic methods that address both supply and demand side aspects of the multimodal capacity problem.