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Freight & Logistics

MEASURING FREIGHT ACCESSIBILITY IN SMALL- AND MEDIUM-SIZED COMMUNITIES

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In today's global economy, access to regional, national, and international markets is critical to the ability of small- and medium-sized communities to attract and sustain business activity. Understanding your community's place within a larger freight transportation network is more important than ever. This paper will present a step-by-step process developed for the Federal Highway Administration (FHWA) and American Association of State Highway and Transportation Officials (AASHTO) that practitioners can use to measure freight accessibility.

Freight accessibility is an important indicator of regional economic development potential. The performance and availability of highway, rail, and marine transportation systems directly impacts businesses' ability to access material inputs and deliver their final products to market. And because supply chains are increasingly global in nature, transportation planners in small and medium-sized communities, especially, may feel powerless in their ability to influence and even understand the flow of goods to, from, and through their region. This need not be the case, however; using readily available data sources and basic analytical techniques, communities can measure freight accessibility just like any other performance based metric. Using this information, policymakers can make transportation planning decisions accordingly. The process presented in this paper encourages analysis of transportation performance relative to the needs of freight generators (i.e., businesses). Rather than simply tracking travel delay, road conditions, or congestion at the infrastructure level, analysis through the lens of freight accessibility allows planners to understand and measure the degree to which their local transportation system meets the needs of export industries. In addition, this tool will help planners understand potential gains and risks to consider under different growth and investment scenarios.

Offering practical guidance to practitioners, this paper will (1) define available types of freight accessibility metrics and their appropriate uses, keeping in mind data and resource constraints; (2) outline an approach for evaluating freight accessibility; and (3) present case examples involving the use of real-world data.