



RESEARCH SERVICES

OFFICE OF POLICY ANALYSIS,
RESEARCH & INNOVATION

TECHNICAL SUMMARY

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PROJECT COST:

\$79,441



Driver fatigue is a factor in 15 percent of crashes involving large trucks, making adequate rest at readily available rest areas critical to roadway safety.

Minnesota Truck Parking Study (Phase 2)

What Was the Need?

Truck parking capacity has been a recognized problem since the mid-1990s, and Minnesota has worked with the private sector to expand truck parking facilities. [A previous Mn/DOT study](#) initiated to provide decision support for these efforts involved three major tasks: an inventory of available interstate truck parking in Minnesota, a survey of trucking companies with regard to their practices and attitudes toward truck parking, and an analysis of truck parking demand. The study identified several problem areas: Many facilities had significant capacity issues, and trucking companies did not, in most cases, provide parking location assistance or policy guidance to their drivers. Additional research was needed to identify potential remedies for these problems and improve truck parking over the coming years.

Researchers performed analyses, surveys and literature reviews to better understand Minnesota's truck parking capacity problems and identified specific, low-cost opportunities to expand capacity in the places where it is needed most.

What Was Our Goal?

Phase 2 of this research effort aimed to build on Phase 1 through additional investigation into available truck parking capacity solutions and the needs of Minnesota's freight industry. The objective of this study was to produce a menu of specific opportunities for expanding capacity throughout the state to guide Mn/DOT policy decisions.

What Did We Do?

Researchers focused their investigation on five areas:

- **Low-Cost, Marginal Capacity Enhancements.** Researchers gathered information about low-cost, easy-to-implement capacity expansion measures including restriping existing facilities to make more efficient use of the existing space, expanding surface pavement at rest areas, allowing overnight parking at weigh stations or creating simple parking along available portions of existing rights of way.
- **Development of Urban Parking in Other Areas.** Researchers reviewed actions taken in other metropolitan areas across the country in response to truck parking shortages. This information was gathered through telephone interviews with city planners, National Association of Truck Stop Operators officials and other large truck stop operators. Additionally, researchers performed a review of land development literature. They discovered that many other states have also begun conducting truck parking studies.
- **Need and Demand for Parking.** Researchers conducted a spatial analysis to better understand the relationships between truck traffic generation from the Twin Cities metropolitan area and consequent truck parking demand. The goal was to identify potential locations for strategically placed parking facilities.
- **Internal Review.** Through several technical advisory panel meetings, research results were reviewed by various Mn/DOT stakeholders, and potential solutions were discussed.
- **External Interview.** Toward the end of the project, researchers conducted interviews with several external stakeholders to discuss the project's results, including the kinds

“The researchers’ survey results were particularly useful and provided us with some very sound data from which to formulate practical, achievable recommendations.”

—Robert Gale,
Planner Principal
Transportation, Mn/DOT
Office of Freight and
Commercial Vehicle
Operations

“The consensus created among many stakeholders was of great value as well as the recognition of the balance needed between the State of Minnesota’s role in providing truck parking and the need for partnering with private truck parking operators.”

—Omar Smadi,
Research Scientist, Center
for Transportation
Research and Education,
Iowa State University

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Rank	Site Name (Direction)	Corridor	Mile Post	Truck Stalls	Auto Stalls	% Days At or Over Capacity
1	Elm Creek (E.B.)	I-94 West	215	10	30	65.2%
2	Marion (W.B.)	I-90 East	222	20	45	64.9%
3	Burgen Lake (W.B.)	I-94 West	105	12	30	59.5%
4	Albert Lea TIC (N.B.)	I-35 South	1	29	75	58.0%
5	St. Croix TIC (W.B.)	I-94 East	265	35	100	50.8%
6	Clear Lake (E.B.)	I-90 West	69	7	30	47.4%
7	Fuller Lake (W.B.)	I-94 West	177	17	80	45.8%
8	Lake Latoka (E.B.)	I-94 West	100	18	45	45.7%
9	Lake Iverson (E.B.)	I-94 West	60	11	50	45.0%
10	New Market (S.B.)	I-35 South	75	15	50	41.1%

Researchers identified 20 rest areas on Minnesota’s Interstate highway system as having capacity issues. The first five of these, marked in red in this partial list, are overcapacity more than 50 percent of the time.

of truck parking problems identified by the study and Mn/DOT’s proposed solutions. Interviewers solicited input on capacity problems and recommended solutions beyond those proposed by the researchers.

What Did We Learn?

Initially, researchers focused on ways in which truck parking could be expanded closer to the metropolitan area through partnerships with private truck stop operators. One of the barriers encountered when exploring opportunities for establishing new truck stop facilities within this region was the prohibitively high cost of land, especially in light of the recent economic recession. Researchers concluded that focusing on areas outside of the metropolitan area made more sense, and so began identifying areas most in need of parking and making low-cost, short-term and long-term recommendations.

Based on the results of the spatial analysis conducted to gauge truck parking demand, researchers determined that a truck parking facility located adjacent to the Interstate system would provide needed parking for a majority of trucking destinations. Locating additional facilities along either I-35 south of the Twin Cities or I-94 west or east of the Twin Cities would provide more parking relief. Through conversations with planners and traffic generators, researchers determined that the most feasible solution for the short term would be a site along I-35 south.

What’s Next?

This project produced a variety of recommendations for low-cost solutions to expand truck parking, including identification of abandoned or available hard-surface facilities that could be inexpensively converted to sleeping-mode facilities. Other options include increasing efficiency in existing facilities through such actions as redesigning parking layouts or restriping.

Longer term solutions include exploring and implementing methods of providing truckers with real-time information regarding current available capacity for an upcoming truck stop by using roadside electronic signs or even mobile phone applications. Several of these suggestions have now been embraced and are being worked into upcoming funding plans.