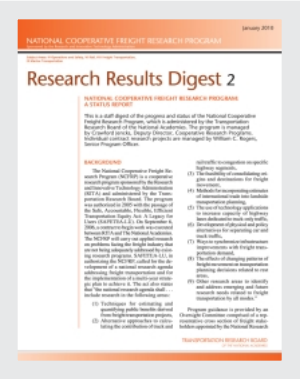

National Cooperative Freight Research Program: A Status Report

DETAILS

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AUTHORS

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NATIONAL COOPERATIVE FREIGHT RESEARCH PROGRAM
Sponsored by the Research and Innovative Technology Administration

Subject Areas: IV Operations and Safety, VII Rail, VIII Freight Transportation, IX Marine Transportation

Research Results Digest 2

NATIONAL COOPERATIVE FREIGHT RESEARCH PROGRAM: A STATUS REPORT

This is a staff digest of the progress and status of the National Cooperative Freight Research Program, which is administered by the Transportation Research Board of the National Academies. The program is managed by Crawford Jencks, Deputy Director, Cooperative Research Programs. Individual contract research projects are managed by William C. Rogers, Senior Program Officer.

BACKGROUND

The National Cooperative Freight Research Program (NCFRP) is a cooperative research program sponsored by the Research and Innovative Technology Administration (RITA) and administered by the Transportation Research Board. The program was authorized in 2005 with the passage of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). On September 6, 2006, a contract to begin work was executed between RITA and The National Academies. The NCFRP will carry out applied research on problems facing the freight industry that are not being adequately addressed by existing research programs. SAFETEA-LU, in authorizing the NCFRP, called for the development of a national research agenda addressing freight transportation and for the implementation of a multi-year strategic plan to achieve it. The act also states that "the national research agenda shall . . . include research in the following areas:

(1) Techniques for estimating and quantifying public benefits derived from freight transportation projects,
(2) Alternative approaches to calculating the contribution of truck and rail traffic to congestion on specific highway segments,
(3) The feasibility of consolidating origins and destinations for freight movement,
(4) Methods for incorporating estimates of international trade into landside transportation planning,
(5) The use of technology applications to increase capacity of highway lanes dedicated to truck-only traffic,
(6) Development of physical and policy alternatives for separating car and truck traffic,
(7) Ways to synchronize infrastructure improvements with freight transportation demand,
(8) The effects of changing patterns of freight movement on transportation planning decisions related to rest areas,
(9) Other research areas to identify and address emerging and future research needs related to freight transportation by all modes."

Program guidance is provided by an Oversight Committee comprised of a representative cross section of freight stakeholders appointed by the National Research

Council of The National Academies. The NCFRP Oversight Committee meets annually to formulate the research program by identifying the highest priority projects and defining funding levels and expected products. Research problem statements recommending research needs for consideration by the Oversight Committee are solicited annually, but may be submitted to TRB at any time. See NCFRP website www.TRB.org/NCFRP.

INTRODUCTION

America's freight transportation system makes critical contributions to the nation's economy, security, and quality of life. More than $660 billion (about 6.4 percent of the U.S. Gross Domestic Product) is spent annually to move freight, and the cost and volume of goods movement are crucial to the productivity of the entire U.S. economy.

The freight transportation system in the United States is a complex, decentralized, and dynamic network of private and public entities, involving all modes of transportation—trucking, rail, waterways, air, and pipelines. In recent years, the demand for freight transportation service has been increasing fueled by growth in international trade; however, bottlenecks or congestion points in the system are exposing the inadequacies of current infrastructure and operations to meet the growing demand for freight. U.S. domestic freight, measured by ton mileage, is expected to grow by some 50 percent in the next 20 years. Strategic operational and investment decisions by governments at all levels will be necessary to maintain freight system performance, and will in turn require sound technical guidance based on research.

The NCFRP will produce a series of research reports and other products such as guidebooks for practitioners. Primary emphasis will be placed on disseminating NCFRP results to the intended end-users of the research: freight shippers and carriers, service providers, suppliers, and public officials. Relevant industry associations will play a key role in making research information available through their committee structures. The NCFRP may arrange for workshops, training aids, field visits, technology scans, and other activities to ensure that results are implemented by practitioners.

THE NCFRP

The NCFRP is managed using procedures modeled after those used by TRB in managing the National Cooperative Highway Research Program and other cooperative research programs. TRB solicits potential research problem statements from all parties. The NCFRP Oversight Committee selects and prioritizes these research needs based on the funding available. Each selected project is assigned to a panel, appointed by TRB, which provides technical guidance and counsel throughout the life of the project. Heavy emphasis is placed on including members representing the intended users of the research products. The panels prepare requests for proposals (RFPs) and select contractors, guide the projects, and review reports. Day-to-day program management is provided by NCFRP staff and includes the following tasks:

- Assisting the Oversight Committee in identifying and prioritizing research needs;
- Appointing and coordinating expert technical panels to guide research projects;
- Developing and distributing RFPs;
- Processing and evaluating proposals to select the best qualified research agencies;
- Executing contracts with the selected researchers;
- Guiding the research;
- Reviewing research reports;
- Publishing and disseminating research reports; and
- Promoting the application of research results.

SELECTION OF RESEARCH PROJECTS

The NCFRP Oversight Committee meets annually to select research projects that will inform investment and operations decisions affecting the performance of the freight transportation system. The membership of this committee is given in Table 1.

The Oversight Committee has met four times and selected 40 projects for funding. Table 2 is a list of the projects—see the NCFRP website for details.

Table 1 NCFRP Oversight Committee

Chair	Michael Huerta	Consultant
Vice Chair	C. Randal Mullet	Con-Way, Inc
Secretary	Christopher W. Jenks	TRB
Member	Lillian Borrone	Consultant
Member	Larry L. Brown	Mississippi DOT
Member	Thomas M. Corsi	University of Maryland
Member	Coty Dupre	Dupre Transport LLC
Member	Robert L. Flanagan	Consultant
Member	Emil Frankel	Consultant
Member	John T. Gray	Association of American Railroads
Member	Rodney Gregory	Department of Defense
Member	Jeffrey D. Holt	Consultant
Member	John Isbell	Consultant
Member	Gloria J. Jeff	Consultant
Member	Thomas Jensen	United Parcel Service
Member	Michael D. Meyer	Georgia Institute of Technology
Member	Paul Nowicki	BNSF Railway
Member	Craig Philip	Ingram Barge Line
Member	Cecil Selness	Minnesota DOT
Ex Officio Member	Peter Appel	Research and Innovative Technology Administration, U.S. DOT
Ex Officio Member	Anthony T. Furst	Federal Highway Administration, U.S. DOT
Ex Officio Member	Randolph R. Resor	Office of the Secretary of Transportation, U.S. DOT
Agency Liaison	Thomas Bolle	Research and Innovative Technology Administration, U.S. DOT
Agency Liaison	John Horsley	AASHTO
Agency Liaison	Joseph Nicklous	Pipeline and Hazardous Materials Safety Administration
Agency Liaison	Leo Penne	AASHTO
Agency Liaison	Caesar Singh	Research and Innovative Technology Administration, U.S. DOT
Agency Liaison	John Steinhoff	Federal Motor Carrier Safety Administration, U.S. DOT
Agency Liaison	Martin Walker	Federal Motor Carrier Safety Administration, U.S. DOT

Table 2 NCFRP Research Projects, FY 2006–2010*

NCFRP 01	Review and Analysis of Freight Transportation Markets and Relationships (completed)
NCFRP 02	Impacts of Public Policy on the Freight Transportation System
NCFRP 03	Performance Measures for Freight Transportation
NCFRP 04	Identifying and Using Low-Cost and Quickly Implementable Ways to Address Freight-System Mobility Constraints
NCFRP 05	Framework and Tools for Estimating Benefits of Specific Freight Network Investment Needs
NCFRP 5A	A Strategy for Investing in Priority Categories of Freight Projects
NCFRP 06	Freight Demand Modeling to Support Public-Sector Decision Making
NCFRP 6A	Design Competition for New Approaches to Freight Demand Modeling
NCFRP 6B	Peer Exchange on Developing Freight Modeling Capacity
NCFRP 09	Institutional Arrangements in the Freight Transportation System (completed)
NCFRP 10	Separation of Vehicles—CMV-only Lanes
NCFRP 11	Identification and Evaluation of Freight Demand Factors
NCFRP 12	Specifications for Freight Transportation Data Architecture
NCFRP 13	Developing High Productivity Truck Corridors (cancelled)
NCFRP 14	Truck Drayage Practices
NCFRP 15	Understanding Urban Goods Movement
NCFRP 16	Representing Freight in Air Quality and Greenhouse Gas Models
NCFRP 17	North American Marine Highway Operations
NCFRP 17A	Barriers and Constraints to North American Marine Highways
NCFRP 18	Synthesis of International Freight Scans
NCFRP 19	Truck Tolling—The Role of Freight Markets and Industry Characteristics in Decision Making
NCFRP 20	Resources and Procedures for Developing Local Commodity Flow Databases
NCFRP 21	Accessing Private Data for Transportation Planning: Effective Practices and Promising Options (cancelled)
NCFRP 22	Applications of Benefit-Cost Analysis to Freight Project Selection: Lessons from the Corps of Engineers
NCFRP 23	Understanding the Transportation Factors and Economics of Locating Freight Intermodal and Warehouse Distribution Facilities
NCFRP 24	Preserving and Protecting Freight Infrastructure and Routes
NCFRP 25	Generation and Attraction of Freight by Land Use Characteristics
NCFRP 26	Strategies for Measuring Costs of Freight Transportation
NCFRP 26A	Freight Transportation Cost Data Elements
NCFRP 27	Industry Benchmarking as a Tool to Promote Environmental Goals in Freight Transportation
NCFRP 28	Truck Idling Scoping Study
NCFRP 29	New Dedicated Revenue Mechanisms for Freight Transportation Investment
NCFRP 30	Web-Based Simulation Tool for Shared-Use Rail Corridors
NCFRP 31	Overcoming Barriers to Sharing Freight Transportation Data
NCFRP 32	Integrating Smart Growth into Activity-Based Modeling for Freight Transportation and Land Use
NCFRP 33	Impact of Environmental Regulations on the Supply Chain
NCFRP 34	Alternative Technologies for Container Freight Movements
NCFRP 35	The Great Lakes Region Impacts on the Intermodal Freight System
NCFRP 36	Quick Response for Special Needs
NCFRP 37	Port Resiliency in the Extended Intermodal Supply Chain

* See the NCFRP website for project status at www.trb.org/CRP/NCFRP/NCFRP.asp

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These digests are issued in order to increase awareness of research results emanating from projects in the Cooperative Research Programs (CRP). Persons wanting to pursue the project subject matter in greater depth should contact the CRP Staff, Transportation Research Board of the National Academies, 500 Fifth Street, NW, Washington, DC 20001.