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U.S. SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

SUBCOMMMITTEE ON SURFACE TRANSPORTATION AND MERCHANT MARINE INFRASTRUCTURE, SAFETY, AND SECURITY

KEEPING AMERICA MOVING: NATIONAL STRATEGIES FOR EFFICIENT FREIGHT MOVEMENT

WASHINGTON, DC

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Chairman Lautenberg, Ranking Member Smith, and Members of the Subcommittee, I am grateful for the opportunity to come before you today to testify on National Strategies for Efficient Freight Movement.

The United States (U.S.) freight transportation system is efficient, reliable, safe, and secure. The freight system underpins the nation's continued economic growth, and historically the U.S. has led the world in freight system design and management. Yet dramatically increasing freight flows have created congestion in some sectors of the transportation system, imposing costs on shippers, consumers, and the environment. This statement will focus on current and future challenges facing the efficient movement of freight throughout the nation's transportation system, including in ports, on railroads, and by commercial motor vehicles, and will also address new technological developments that could help improve the efficiency of freight transportation.

The U.S. transportation system must not only be able to handle both growth in the volume of freight and passenger movement, but as new markets and trade routes emerge, it must enable increasingly complex supply chains to operate. The Interstate Highway System was a critical innovation that helped fuel the unprecedented growth of 20th century, post-war America, enabling the movement of freight arriving at our ports from overseas and goods manufactured in our large cities to small towns across the country. The Interstate Highway System provided an infrastructure that not only offered the interconnectivity for economic expansion, but acted as a catalyst for it. However, the highway system we are using today must handle very different dynamics.

Changes in demographics, manufacturing, and warehousing, and a dramatic increase in imported manufactured goods and foods, have caused freight funneling at major gateway ports, leading to congestion on the highways and at the rail connections as containers are reloaded on trucks and rail cars. Private sector changes in inventory management and

production operations are placing demands on the transportation system that go beyond connectivity to speed, reliability, and throughput. Logistics costs have been rising for some time. As reported by the Council of Supply Chain Management Professionals, logistics costs as a percent of gross domestic product have increased 63 percent since the beginning of 2004. In 2006, inventory carrying costs jumped 13.5 percent, while transportation costs were up 9.4 percent over 2005 levels, and the trends are expected to continue. To make maximum use of the entire transportation system, it is imperative to develop better and smarter approaches to moving cargo and people through the entire intermodal system, from origin to destination.

The United States is part of an unprecedented, global economy that transcends borders. Telecommunications and computing technology have evolved to meet the demands of consumers, industry, and government in a world that is vastly more connected on a daily basis than when the Interstate Highway System was built. Each day, an estimated 50 million tons of freight, worth $36 billion dollars, moves over our highways, roads, bridges, rail, ports, coastal and inland waterways, or Marine highways, ports and pipelines. Current analysis clearly shows the predominant corridors through which freight is moving, and the connection between freight flows and metropolitan areas.

The Department estimates that the total tonnage of domestic and foreign freight traveling along the U.S. transportation system will almost double by 2035, with international shipments, most of which move by water, growing at a somewhat faster rate than domestic shipments. The U.S. freight system faces significant capacity constraints at key freight gateways, and it is straining to move the current volume of freight quickly, reliably, and economically in order to sustain growth. The difficulties posed by increased cargo volumes are compounded by environmental challenges, a limited supply of land on which to expand transportation facilities, congested road and rail linkages, and increasing fuel costs. Effective policy solutions will require coordinated and collaborative action by both public and private parties. To be credible and achievable, these solutions require input and buy-in from the broader freight sector, including both public and private sector interests. The Department has begun the process of soliciting such input, and DOT looks forward to working with its partners to further develop the freight framework.

It is clear that the public and private sectors will need to closely coordinate to address modern freight challenges. The private sector owns and operates the mobile assets, controlling when, where, and how goods are moved on public and private transportation facilities. Trucks, rail cars, and ships are privately owned. Maritime terminals are predominantly operated by private entities, with only a few publicly operated.

This largely private-sector ownership of the components of the transportation network has been extremely effective in increasing transportation productivity and reducing transportation costs to shippers. From 1987 to 1999, productivity in rail freight transportation – the freight mode (other than pipelines) that is most completely in private hands – increased by 48 percent, and rail freight rates fell by 18 percent. Trucking productivity rose by 15 percent during the same period, and airline productivity rose by 16 percent – all more than the overall 10-percent increase in U.S. private business

productivity. Moreover, all the freight modes have responded effectively to shipper requirements, providing more frequent service of smaller shipments to accommodate their demands for Just-in-Time deliveries of freight that allow reductions in inventories and logistics costs.

The Department of Transportation's Framework for a National Freight Policy identifies seven objectives for addressing the congestion that has been created in the transportation system from dramatically increasing freight flows. With regard to capacity, these are to improve the operations of the existing freight transportation system, and add physical capacity to the freight transportation system in places where investment makes economic sense. A third objective is to use pricing to better align costs and benefits between users and owners of the freight system and to encourage deployment of productivity-enhancing technologies. It recommends actions be taken to reduce statutory, regulatory, and institutional barriers to improved freight transportation performance, and to proactively identify and address emerging transportation needs. The sixth objective is to maximize the safety and security of the freight transportation system. Lastly, the Framework recommends that actions should be taken to mitigate and better manage the environmental, health, energy, and community impacts of freight transportation. Effective policy solutions will require coordinated and collaborative action by both public and private parties.

Solutions that unlock the constraints of these complex, interwoven networks must extend beyond the jurisdiction, or authority, of any one entity. Effective solutions to these challenges will necessitate coordinated and collaborative efforts of all transportation stakeholders.

Here are some examples that exemplify this level of cooperation:

The National Cooperative Freight Research Program (NCFRP) is a multi-modal freight research program, guided by an oversight committee of industry representatives, academics, and public officials. Current NCFRP projects now underway, or being initiated, include mobility constraints, measuring operational performance, identifying investment needs, and assessing the environmental and economic impacts of freight transportation. This program is indicative of the potential found in cooperation between stakeholders.

Likewise, the University Transportation Centers (UTC) program is an investment, and cooperative endeavor, in our nation's institutions of higher education; to cultivate U.S. expertise in transportation research and technology transfer, offering a wealth of knowledge and innovation to the area of freight movement. Sixty UTC's are currently active, including the Alan M. Voorhees Transportation Center at Rutgers University, which is exploring the establishment of a Freight Transportation Center for Excellence.

The Freight Performance Measures program, another public-private effort, enables the Department to measure travel speeds and travel time reliability across two-thirds of the Interstate Highway System. This data is available through an arrangement with the

trucking industry. Many long-distance trucking firms use GPS transponders on their cabs to track their assets; this allows businesses to maintain continual awareness of asset movement. Through a collaborative agreement with the American Transportation Research Institute, we can tap into GPS data from over 350,000 trucks that are traversing our nation's roadways on any given day. We hope to expand this data to include over 400,000 trucks by 2009. We use this data to calculate travel speed and time reliability throughout twenty-five corridors across America. This helps the Department gain insight into system performance, so that we can better focus our efforts in increasing network capacity.

These system performance measures allow every entity involved in transportation, public and private, to better manage its resources. Performance measures are driven by data -- data that are absolutely vital for the Department to conduct accurate analysis, simulation, and modeling. The Department's Research and Innovative Technology Administration has several programs that have been critical to our efforts to collect data and assess our nation's freight movement performance and needs.

The largest of these data programs, the Commodity Flow Survey (CFS), provides primary national and state-level data and forecasting on domestic freight shipments and exports by American establishments, with the latest data expected to be released at the end of the year. The CFS is also the main data engine that supports the Federal Highway Administration's Freight Analysis Framework (FAF). The FAF commingles the CFS data with a broad array of publicly available freight data to create the complete picture of freight flows you see here.

We are also supporting private sector investment in freight transportation through our Private Activity bond program, authorized by section 11143 of SAFETEA-LU. This provision allows private investors to benefit from tax-exempt financing of transportation infrastructure. We have received three applications for intermodal freight transfer facilities totaling $2.2 billion, and capable of handling more than 2 million containers per year.

As noted earlier, the complexity of supply chains and the multi-jurisdictional nature of freight movement complicate our institutional ability to address stresses on the transportation system. As part of its Congestion Initiative, the Department announced the Corridors of the Future Program which will challenge agencies to work collaboratively to develop dynamic financial and operational mechanisms to improve the flow of goods and people.

The PierPass program in Southern California is an excellent example of how congestion pricing can improve to the flow of goods at our nation's ports. The PierPass program charges a traffic mitigation fee of $50/TEU (this equals a $100 charge for an average 40-foot container) to encourage the pick-up of containers during off-peak hours (6:00 pm to 3:00 am). The off-peak shift now handles about 65,000 truck trips a week, or 37 percent of the container moves at the two ports. Since its inception in July, 2005, over 8 million truck trips have shifted to off-peak hours.

The independent evaluators of this program from the University of Southern California noted: "Like the handful of experiments with congestion pricing, it demonstrates that price incentives are powerful tools for managing the transportation system."

Pipelines are a transportation system that can be used to relieve congestion on the railroads. Seventy percent of oil and petroleum products and close to one hundred percent of natural gas is transported by privately owned pipelines. Large volumes of anhydrous Ammonia, carbon dioxide, and other chemicals are moved by pipeline. It is expected that in the near future, large amounts of Ethanol, which is currently carried by rail, may be moved by pipeline as well.

Congestion pricing is an excellent example of how businesses can change their patterns to use existing capacity more efficiently. While we are on our way to addressing the challenge of maintaining a resilient, secure, and efficient transportation system for the movement of freight, more has to be done to use our existing resources, and to develop innovations that will enable America's transportation system to support the growing demand for goods and services.

One such example is America's Marine highway, which includes our coastal waters, our inland waterway system and the Great Lakes. Although the United States already transports one billion tons of domestic cargo on our domestic waterways each year, this 25,000 mile network of navigable waters can help us expand our way out of landside congestion. The Energy Independence and Security Act of 2007 directed the Secretary of Transportation to establish a Marine Highway Program to encourage this transformation and identify the disincentives that keep the congestion on the highways and railroads. The Department of Transportation's Maritime Administration is working with their many stakeholders to implement this promising program as quickly as possible.

The key for our national freight strategy is to have a broader, more in-depth understanding of supply chains and the inter-state and multi-national dynamics that impact the flow of goods across the transportation network. This will take greater cooperation between stakeholders, better institutional arrangements for planning and implementing multi-state projects, effective performance measures, and operational improvements to the transportation system.

Thank you again for inviting me to testify. I would be happy to answer any questions that the Subcommittee members might have.

Freight in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: Legacy for Users (SAFETEA-LU)

P.L. 109-059

Table 1: Direct Expenditures for Freight Infrastructure in SAFETEA-LU

Projects of National/Regional Significance	$1.779 billion over 5 years	Rulemaking to solicit and select new projects in review; 20 of 25 originally identified projects underway or in review
National Corridor Infrastructure Improvement	$1.948 billion over 5 years	28 0f 33 identified projects underway or in review
Coordinated Border Infrastructure Program	$833 million over 5 years	Apportioned program to border states
Freight Intermodal Distribution Pilot Grant Program	$30 million over 5 years	3 of 6 identified projects underway or in review
Truck Parking	$25 million over 4 years	Multiple year funding combined into one request for proposals and projects submitted through the Corridors of the Future initiative
Total	$4.615 billion	

SOURCE: *USDOT, 2006 Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance*, page 14-7, at www.fhwa.dot.gov/policy/2006cpr/chap14.htm.

Table 2: Other Freight Provisions in SAFETEA-LU

Transportation Infrastructure Finance and Innovation Act (TIFIA) Program	Eligibility expanded for financing freight projects	Examples include Reno rail project ($51 million) and Louisiana highway access to water terminals ($66 million)
State Infrastructure Banks	Program extended	Example includes truck diesel retrofits on West Coast
Private Activity Bonds	Tax code modified to encourage up to $15 billion private investment in freight facilities	Examples include 3 intermodal yards ($2.2 billion) and the Miami port tunnel ($900 million)
Freight Professional Capacity Building	$3.5 million over 4 years	Several courses and distance-based learning programs initiated
National Cooperative Freight Research Program	$15 million over 4 years	Current projects listed in table 3
Hazardous Materials Cooperative Research Program	$5 million over 4 years	Current projects listed in table 3

SOURCE: *USDOT, 2006 Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance*, page 14-7, at www.fhwa.dot.gov/policy/2006cpr/chap14.htm.

Table 3: Cooperative Freight and Hazardous Materials Research Projects through 2008

NCFRP 01	Review and Analysis of Freight Transportation Markets and Relationships
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 06	Freight-Demand Modeling to Support Public-Sector Decision Making
NCFRP 09	Institutional Arrangements in the Freight Transportation System
NCFRP 10	Separation of Vehicles: Commercial Motor Vehicle Only Lanes
NCFRP 11	Current and Future Contributions to Freight Demand in North America
NCFRP 12	Specifications for Freight Transportation Data Architecture
NCFRP 13	Developing High Productivity Truck Corridors
NCFRP 14	Truck Drayage Practices
NCFRP 15	Understanding Urban Goods Movements
NCFRP 16	Representing Freight in Air Quality and Greenhouse Gas Models
NCFRP 17	Synthesis of Short Sea Shipping in North America
HMCRP 01	Hazardous Materials Commodity Flow Data and Analysis
HMCRP 02	Hazardous Materials Transportation Incident Data for Root Cause Analysis
HMCRP 03	A Guide for Assessing Emergency Response Needs and Capabilities for Hazardous Materials Releases
HMCRP 04	Emerging Technologies Applicable to Hazardous Materials Transportation Safety and Security
HMCRP 05	Evaluation of the Potential Benefits of Electronic Shipping Papers for Hazardous Materials Shipments
HMCRP 06	Assessing Soil and Groundwater Environmental Hazards from Hazardous Materials Transportation Incidents

SOURCE: www.trb.org/CPR/NCFPR/NCFRPProjects.asp and www.trb.org/CPR/HMCPR/HMCRPProjects.asp.