

## National Freight Advisory Committee

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June 12, 2014

The Honorable Anthony Foxx, Secretary  
U.S. Department of Transportation  
1200 New Jersey Ave., SE  
Washington, DC 20590

Dear Secretary Foxx:

On behalf of the National Freight Advisory Committee (NFAC) it is our pleasure to submit to you and the U.S. Department of Transportation recommendations for consideration in the development of the National Freight Strategic Plan. These recommendations reflect the hard work of the NFAC members who originally considered over 90 recommendations and gained full consensus on 81 recommendations.


We sincerely appreciate the support of the Designated Federal Officer, Ms. Tretha Chromey, as well as the engaging collaboration with other U.S.DOT leadership and staff who participated in numerous meeting and phone conferences, and provided technical support and research assistance to the NFAC.

The NFAC looks forward to reviewing the Department's proposed legislation of the MAP-21 Reauthorization later this summer and appreciate the opportunity to provide further recommendations.

Sincerely,



Ann L. Schneider  
Chair



Mortimer L. Downey, III  
Vice Chair

cc: Hon. Victor Mendez  
Hon. Peter Rogoff

Attachment: *Recommendations to the U.S. Department of Transportation for the Development of the National Freight Strategic Plan*

**NATIONAL FREIGHT  
ADVISORY COMMITTEE**

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**Recommendations to  
U.S. Department of Transportation  
for the Development of the  
National Freight Strategic Plan**

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**June 12, 2014**



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## INTRODUCTION

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The National Freight Advisory Committee (NFAC or Committee) appointed by the Secretary of Transportation, includes 47 members representing a wide range of private and public interests in the future of the national freight system. Members come from all modal carriers, operators of infrastructure, units of government, labor organizations, academia and public interest groups.

The Committee is pleased to present recommendations contained in this report to the U.S. Department of Transportation (U.S. DOT or Department) for consideration in the development of the National Freight Strategic Plan (NFSP or Plan) that will implement and advance the National Freight Policy and Goals established under the Moving Ahead for Progress in the 21st Century Act (MAP-21). Except for a small number of recommendations, they represent a consensus of Committee membership. Where there was disagreement, members were provided an opportunity to present alternative views that are included in the appendix of this report.

This report reflects the hard work of six established Subcommittees which originally presented over 90 recommendations to the full Committee. The six Subcommittees under the NFAC are as follows:

1. Conditions, Performance, and Data
2. Safety, Security, and Environment
3. Project Delivery and Operations
4. Research, Innovation, and Technology
5. International Freight Strategies and Operations
6. First and Last Mile

These Subcommittees conducted a SWOT (Strengths, Weaknesses, Opportunities, & Threats) analysis related to their Subcommittee's charge. The results of the analyses were used to formulate recommendations related to the following three elements outlined in MAP-21.

- ☑ **Barriers:** An assessment of statutory, regulatory, technological, institutional, financial, and other barriers to improved freight transportation performance (including opportunities for overcoming the barriers);
- ☑ **Best Practices:** To improve the performance of the national freight network; and
- ☑ **Best Practices:** To mitigate the impacts of freight movement on communities.

Over a period of six months, the Subcommittees held numerous teleconferences, webinars, face-to-face meetings, freight facility tours, and sought input from private and public sector freight



transportation stakeholders throughout the nation. Given time constraints facing the Department in drafting the Plan and proposing a draft Reauthorization Bill of MAP-21 to Congress, the NFAC moved quickly in finalizing these recommendations for the Department to consider. The recommendations contained in this report reflect an overall consensus from the NFAC membership. Furthermore, because these recommendations reflect a compilation of submissions from six Subcommittees, the writing style may vary across recommendations. Members of the NFAC and U.S. DOT staff felt it was essential to avoid significant editing to better ensure that the full intention and meaning of the original Subcommittee work remained intact.

The recommendations are categorized accordingly to the three elements by the following Part and Chapter:

1. Recommendations Related to Assessment of Barriers to Improved Freight System Performance (Part I: Recommendations B1 to B37)
2. Recommendations Related to Best Practices for Improving the Performance of the Freight Network (Part II: Recommendations P1 to P25)
3. Recommendations Related to Best Practices to Mitigate Community Impacts (Recommendations (Part II: Recommendations C1 to C19)

This report is a compilation of both Parts I and II. Part I are the recommendations related to assessment of barriers which achieved consensus during a public webinar meeting held on April 29, 2014. Part II are the recommendations related to best practices as outlined in Chapters 2 and 3 which achieved consensus during a public webinar meeting held on May 29, 2014.

As discussed in this report, the NFAC also proposes submitting future recommendations to the U.S. DOT regarding streamlining efforts for state and local planning compliance and reporting requirements, developing goals related to freight safety, and additional recommendations related to workforce development as the Department develops the National Freight Strategic Plan.

As the Department works to prepare the Plan, the NFAC looks forward to future tasks including the review of the Department's proposed legislation of the MAP-21 Reauthorization later this summer and appreciates the opportunity to provide further recommendations.



## PART I

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### Chapter 1: Recommendations Related to Assessment of Barriers

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#### *Summary*

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As provided in MAP-21, the national freight strategic plan shall include “an assessment of statutory, regulatory, technological, institutional, financial, and other barriers to improved freight transportation performance (including opportunities for overcoming the barriers)”.

The nation’s freight transportation system depends on multi-modal networks (rail, air, highway, waterways) and both public and private sectors. All levels of government serve a vital role in freight and goods movement, from regulation of interstate commerce at the federal level to provision of truck loading zones at the local level. The complexity of players and stakeholders, as well as the interdependencies involved in modern supply chains, calls for better and more effective coordination.

The nation’s freight system faces many barriers to improved system performance. This chapter takes a look at the various barriers challenging the nation’s freight industry and proposes recommendations to remove these barriers to and maximize our nation’s global competitiveness, while meeting national goals of safety, security and sustainability.

Barriers assessed include statutory, regulatory, technological, institutional, financial, and other barriers. The barrier list below is not complete, but rather provides a high level summary of the barriers and trends identified by the National Freight Advisory Committee:

**Statutory:** Lack of surface transportation legislation that is multimodal and fully addresses freight as well as passenger transport (MAP21 remains highway and transit centric); Lack of an explicit national freight policy or plan.

**Regulatory:** Different regulatory structures exist across modes; Different regulatory authority exists across government entities; Lack of agreement regarding effectiveness of various regulations (e.g. hours of service); Fragmented regulatory environment (e.g. truck size, truck emissions, heavy load permits, credentialing programs); Changing or unclear regulations concerning air quality, water quality and traffic; Regulatory barriers that may delay projects and increase costs or lead to productivity losses.

**Technological:** Lack of interoperability and standards across modes and diverse systems; High implementation costs for system-wide tech changes; Limited technology development/demonstration programs for freight systems; Lack of workforce technical capacity.

**Institutional:** Complexity of institutions, public and private participation in freight system; Mismatch of federal modal structure with intermodal nature of freight system.



**Financial:** Anticipated insolvency of the Highway Trust Fund and its impact on planning and investment decision-making; Limited funding for freight specific projects that are multimodal and crosses jurisdictional boundaries; Complexity and challenges of Private-Public Partnerships; Aging and deteriorating infrastructure across all most modes (rail possible exception); Use of collected tax revenues for their intended purposes (i.e., Harbor Maintenance Tax).

**Other:** Limited investment in medium and long-term research; Legacy system problems (e.g. outdated and aging infrastructure); Lack of data for monitoring and analyzing freight system; Limited planning for future freight demand; Congestion and bottlenecks due to capacity and/or regulatory constraints.

In presenting recommendations to address the identified barriers, the Committee has organized the report around key themes, including recommendations that may have come from various Subcommittees. The themes pertinent to the assessment of barriers include:

1. Safety and Security
2. Funding
3. Streamlining
4. Harmonization of Policy, Regulation and Programs
5. Data, Research and Education
6. Technology Implementation

The recommendations of the National Freight Advisory Committee (NFAC) prepared for the Secretary of Transportation for the purpose of addressing the most significant barriers facing our national freight system are presented in the sections that follow.



## *Recommendations*

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### **SAFETY AND SECURITY**

The safety of the transportation system has been, and continues to be cited as a top priority for the entire freight industry and Department of Transportation agencies, yet a wide gap remains between this priority and the reality of the yearly high average number of freight related fatalities and injuries. In 2011, there were approximately 5,000 fatalities and 100,000 injuries associated with freight movement with the majority associated with freight delivered on highways and roadways. Proven and verified technologies and practices to improve the safety of our freight system are available to reduce the adverse impact of freight movement on the American public and freight workers both now and as we prepare for the projected steep increase in freight demand.

The security of the nation's freight system has changed significantly since the terrorist attacks of September 11, 2001. Because of the complexity of the transportation systems sector, risk considerations encompass a wide range of physical, human, and cyber elements. Recognizing the risk to our nation's transportation system, the Federal Government, in partnership with state and local government and the private sector, has set about addressing security gaps and reducing vulnerabilities to terrorist attacks that could significantly disrupt our national freight system.

Based on the age of our nation's transportation infrastructure and differences in ownership and funding mechanisms across modes, the degree in which safety and security requirements have been implemented into design and regulations varies greatly which impacts the level of reduction in risk across the entire system.

*Promote improved safety practices.*

**Recommendation B1: Encourage safety practices beyond minimum compliance.**

**Recommendation B2: Support analysis of and, where warranted from a safety standpoint considering cost, a more rapid adoption of, safety technologies including those recommended by the National Transportation Safety Board (NTSB).**

*Ensure safety and security in the national freight system*

**Recommendation B3: From an operational perspective, the U.S. DOT should strive to achieve safety and security regulations in such a way as to minimize, where possible the impact on an efficient supply chain.**

**Recommendation B4: Safety, Security and resiliency factors need to be considered and built into transportation infrastructure design and investment decisions.**

**Recommendation B5: Employ a greater degree of risk-based management in approach to security within our freight transportation systems' operations.**





### FUNDING

There is a true sense of urgency regarding how our nation will invest in its national freight network. There are many challenges to addressing the funding needs of the freight sector. First, the anticipated insolvency of the Highway Trust Fund (HTF) increases the competition for scarce funding and reduces the likelihood of expanding funding for freight projects through the HTF. Second, other funding programs or sources such as the Harbor Maintenance Tax need to be fully applied to their intended uses (maintenance of federal navigation channels at authorized and constructed depths and widths). Third, freight projects do not always score well in local, regional or state competitive planning grant processes, partly because their benefits spread nationally or regionally, beyond the boundaries of the funding entity. Finally, freight projects can be particularly costly, because they are often located in aging industrial zones where the supporting infrastructure (storm water, utilities, etc.) must be extensively upgraded.

Consistent and reliable funding is vital to certainty of project implementation and completion and keeping the national freight system in a state of good repair. It is critical to the nation's global competitiveness and the health of the U.S. economy.

*Make Investment in the multi-modal national freight network a national priority.*

**Recommendation B6:** In order to ensure continued technological and innovative improvement in the nation's freight transportation system, any National Freight Policy should recognize that adequate federal funding for research efforts must be provided.

**Recommendation B7:** Protect the existing Airport Improvement Program (AIP) trust fund grants spending levels and ensure AIP is used only for aviation-related purposes as authorized including air cargo.

**Recommendation B8:** Create a new dedicated fund for multi-modal freight projects. First and last mile segments of regional and national significance must be included in a comprehensive freight funding program to assure freight movement is seamless across jurisdictions, modes, ports and intermodal connectors.

**Recommendation B9:** Promote consistent funding from Inland Waterway Trust Fund and Harbor Maintenance Trust Fund for locks & dams, dredging and other projects.

It is well reported that the aging lock and dam infrastructure on the inland waterways is in dire need of modernization, repairs and maintenance. Future growth will place a greater demand on the performance of the navigable waterway infrastructure and will be a continual barrier until significant investment is provided. It is recommended that proper federal funding from the Inland Waterways Trust Fund be allocated for those locks and dam projects that are already authorized, but have not received appropriations from Congress. Also, operational needs and maintenance of lock and dam facilities must receive proper awareness and attention so that transportation stakeholders can have a greater trust in reliability and dependability of a viable inland waterway network. Due to the lack of consistent funding for operations and maintenance,



ensuring a safe and navigable channel for inland waterway transport will continue to be a barrier to product delivery. It is important to have a stable source of funding from the Inland Waterways Trust Fund for dredging and maintenance efforts throughout the inland waterway system, so that the Corps can adequately maintain the channels for safe and reliable navigation.

**Recommendation B10: The Short Line Tax Credit (“45G”) should be reauthorized permanently (or at least on a 5-year basis) for the efficient and effective capital and infrastructure deployment of these freight connectors.**



### STREAMLINING

There are many procedural and regulatory barriers that impede the efficiency of project development and investment, as well as system operation. Examples include lengthy applications processes that add to project costs, fragmented permitting and approval processes, and restrictions on fund expenditures. Other barriers can delay the adoption of new technologies or products that could improve the efficiency, safety or sustainability of the freight system. In addition, user funded programs that are operated by the Federal Government may involve lengthy scheduling and programming that reduce program efficiency.

Sustainability of the U.S. transport system is a major policy goal. Social equity, economic competitiveness, and environmental sustainability are often termed “the three Es”, which are to be pursued together. However, policies and practices to achieve environmental and community goals may provide challenges. For example, delays associated with the environmental review process are associated with escalating project costs and lost opportunities.

The NFAC has identified specific barriers with respect to competitions and applications for federal funding, the project approval process, the National Environmental Policy Act (NEPA) process, spending authority, certification processes, and federal operations. Streamlining these processes and operations will improve the performance of the U.S. freight system by reducing project costs, accelerating implementation, and increasing operational efficiency. NFAC makes the following streamlining recommendations.

#### *Streamline the Federal Process and Other Provisions Related to NEPA and Categorical Exclusions*

#### **Recommendation B11: Establish a “One-Stop Shop” Permitting & Compliance Division within U.S. DOT that is empowered to coordinate permitting reviews within U.S. DOT and across other federal agencies to be reportable and accessible via a web-based Dashboard.**

The new Division shall be allowed to identify, after consultation with other federal and state governmental and non-governmental stakeholders, those freight projects having national and regional significance to freight mobility. The Secretary should be permitted to give priority consideration to these identified freight projects in coordinating and facilitating the permit review process and advancing project delivery objectives when there is duplicity of processes. For those projects that involve multiple agencies, the Secretary shall designate one lead federal agency or modal Administrator within the Department whom shall serve as the primary point of contact and shall actively monitor and identify the progress of the permitting process. While the NFAC supports adequate staffing and operations funding levels to be included in this proposal so that proper office personnel and operations can fulfill this important role, all attempts should be made to restructure existing resources within U.S. DOT, as practically as it is feasible, to fund the operations of the new Division. Furthermore, this new Division is not intended to create another layer of bureaucracy, but rather an office that can serve to reduce redundant levels across all modal Administrations that could be consolidated or streamlined to enhance efficiency. The



new Division shall also take steps to accelerate project review for other projects in addition to those of national or regional significance.

**Recommendation B12: Air quality and climate impacts should be considered up front in planning new transportation infrastructure.**

The streamlining of environmental permitting as discussed in Recommendation B12 should not be allowed to circumvent community concerns, environmental justice issues, or environmental protection.

**Recommendation B13: Extend MAP-21 streamlining provisions to pertain to all modal Administrations within U.S. DOT. These should also include all other federal agencies within the Administration that deal with freight mobility.**

**Recommendation B14: Impose similar categorical exclusion provisions for all U.S. DOT modal agencies so that roadway, seaport, waterway, rail, and airport freight-related projects receive the same treatment regardless of the sponsoring agency within the U.S. DOT.**

**Recommendation B15: Increase the monetary thresholds annually for Categorical Exclusions (CE) for projects with minor impacts. To keep the thresholds at the defined MAP-21 levels, we recommend allowing adjustments in the thresholds based on an agreed-upon index (such as the construction cost index) for Categorical Exclusions (CE) for projects with minor impacts.**

*Streamline Transportation Investment Generating Economic Recovery (TIGER) Grant Program Applications*

**Recommendation B16: U.S. DOT should rewrite grant applications to be more streamlined so as not to discourage applicants.**

The cost to develop a TIGER application or other funding opportunity can be extremely costly and has discouraged applicants from applying. Additionally, a staged review process that requires (only) incremental development of project plans for each approval level so that grant probability can be determined before significant financial commitments are required should be implemented. This could increase participation in the program and provide greater likelihood for attracting a wide variety of candidate projects.

*Allow for “Spend Ahead” Provisions in Grant Programs*

**Recommendation B17: Allow for “spend ahead” provisions for projects that have environmental clearance but are awaiting funding authorizations prior to advancing to the next stage of project planning and delivery.**

This would allow eligible projects to begin work at the owner’s risk, but not jeopardize federal reimbursement for this early work once the project has been formally authorized. In other words the project could commence prior to official “date of eligibility.” This could improve project



delivery by up to 12 months. Federal funding will not be granted until the project is deemed to be compliant. This would allow “spend ahead” provisions to be consistent in all modes.

*Include Personnel and Budget Impacts in Project Approval Processes & Include Multimodal/Intermodal emphasis and give priority in Streamlining Initiative Policy*

**Recommendation B18: U.S. DOT should assure that project approvals are not delayed due to personnel transfers and budget cycles at all modal Administration levels.**

**Recommendation B19: U.S. DOT should encourage Congress to include Multimodal/Intermodal Emphasis in Project Delivery Policy Declaration.**

Title 23 of the U.S. Code 101 provides for the Declaration of Policy and Project Delivery Initiative that in part, establishes policy directives to U.S. DOT for project delivery initiatives, purposes, administration, implementation, and promotes the use of best practices and innovative approaches. While this section is limited primarily to surface transportation projects, multimodal projects should be added to this directive by emphasizing the role intermodal connectors play in freight mobility among all transportation modes and further direct U.S. DOT to give priority for such freight projects that have far reaching freight connectivity benefits to national and global markets.

*Streamline processes for certification of new technologies, products or practices*

**Recommendation B20: U.S. DOT should streamline the certification process for new products or practices that increase the safety of the freight system, and efficiency or sustainability of the freight system if an equal or greater level of safety results.**

*Streamline processes for prioritizing, scheduling and implementing dredging projects.*

**Recommendation B21: Streamline lengthy process for U.S. Army Corps dredging projects; dredge when environmentally permitted “windows” are open and improve dredge disposal process.**



### **HARMONIZATION OF POLICY, REGULATION AND PROGRAMS**

Many government agencies have a regulatory responsibility for transportation or freight. Despite the government's best efforts, there are times when regulatory requirements and policies across the modes and industry sectors are not aligned. Consequences include duplicative requirements, additional costs, uncertainty regarding regulatory requirements, and possible distortions across modes or sectors. Now, several years removed from implementation of many regulations, policies and programs, the government should consider re-evaluating many of its regulations and programs to identify areas where efficiencies can be gained, costs of programs reduced, redundancy avoided, and regulations and policies harmonized across modes. Recommendations address various aspects of harmonization across planning and operations, as well as application of NEPA. Others address specific problems related to international trade.

*Build consistency and certainty into programs, regulation, and policy.*

**Recommendation B22: Regional freight planning should include collaboration and streamlined interstate policies (Hours of Service, truck weight, tolling, etc.) and procedures to ensure the expedited and unimpeded movement of freight in the aftermath of man-made or natural disasters.**

**Recommendation B23: Cross modal security programs, policies and regulations must be harmonized, including areas such as credentialing, to ensure consistency in the system and the seamless unimpeded movement of freight between modes.**

**Recommendation B24: There needs to be consistency and certainty in regulation across project development; Federal government and States need to have improved communication mechanisms to streamline project delivery and build consistency into regulatory requirements. Transportation projects should have federal and state personnel specifically designated to coordinate adequate communication, efficient problem solving, and timely project delivery.**

*Facilitate international trade by reducing barriers*

**Recommendation B25: The National Freight Policy should include a provision that specifically supports the maintenance and expansion of "open skies" agreements for the carriage of cargo that permit the liberal and flexible use of the world's airways to serve the needs of customers around the globe while considering security and job impacts.**

**Recommendation B26: U.S. DOT should identify and quantify the reasons for delay occurring at each major U.S./Mexican border crossing.**

The U.S. DOT, in cooperation with the U.S. Custom and Border Protection (CBP), the Transportation Security Administration (TSA), and their Mexican Government counterparts, should review procedures currently in place at each surface border crossing to identify and quantify the causes of delay at each location.



**Recommendation B27: Bring the necessary stakeholders and government regulators together to develop and prioritize solutions to rail border crossing delays specific to each port of entry with Mexico.**

The goal is to harmonize regulation to move traffic safely, securely and efficiently across the border similar to what is being done today with the Canadian crossing.

- a. Following identification and quantification of the unique circumstances causing delay at individual rail border crossings, FRA, the railroads, and the employee representatives of U.S. train crews should review existing waivers and develop a consensus regarding potential revisions to mitigate delays associated with railroad operations. Should these additional measures be found to be ineffective, the U.S. and Mexican Agencies, in cooperation with the affected U.S. and Mexican Railroads and the employee representatives of U.S. and Mexican train crews, should consult and use good faith and best efforts to reach agreement on secondary solutions tailored specifically to mitigating delays associated with railroad operations at individual rail border crossings.
- b. One size does not fit all due to traffic volume, track capacity, inspection capability and technology, operational characteristics, etc. Therefore, each rail border crossing should be viewed individually to determine the most effective and efficient combination of waivers and other secondary mitigation strategies necessary to improve cross border traffic flows.
- c. Accepted secondary mitigation strategies should be prioritized so that issues causing the longest delays are mitigated first, with subsequent mitigations following in order.



## DATA, RESEARCH, AND EDUCATION

### DATA

Freight data or lack thereof is a barrier for making informed decisions. Publicly available data is completely lacking or inadequate for measuring the current conditions and performance of the freight system. Certain types of data are reported differently depending on the mode of transportation. Data on freight movements are available in some areas, but not in others (rail, ports), creating significant data gaps.

The lack of sufficient funding and lack of access to industry raw or complete data has persistently undercut the timeliness and completeness of freight data as a basis for public and private sector decision-making.

There is a critical lack of knowledge about modal freight movements. The U.S. DOT relies on a range of models, some partial and proprietary, to estimate domestic movement of international trade, farm-based shipments, pipeline flows, and governmental shipments. It also relies on other models to tie region to region flows to specific routes and facilities. This weakness inhibits the ability to identify critical bottlenecks or other concerns which may adversely impact future freight policies. Additionally, improved data on imports and the movement of empty containers and trailers would facilitate the ability of the U.S. DOT to support efficient strategic multimodal freight flows.

*Improve and expand freight data collection to support research, performance monitoring, and system improvements*

**Recommendation B28: Freight transportation agencies must improve and expand safety data collection and analysis, and ensure that it is compatible and publicly accessible to promote accountability and better safety practices**

**Recommendation B29: U.S. DOT needs to address the inadequacy of multimodal freight flows (origin-destination), which are important inputs for the National Freight Strategic Plan and are not well understood.**

**Recommendation B30: Data collection needs to be comprehensive, coordinated among federal agencies (especially with the Department of Homeland Security (DHS) (TSA, USCG, CBP)) and complete by including information from all freight infrastructure owners and freight carriers to the extent that proprietary data is protected.**

**Recommendation B31: Strengthen data collection, including multimodal origin-destination freight flows, ports of entry performance, import bottlenecks and the repositioning of empty containers for exports. U.S. DOT should evaluate the benefit of purchasing 3rd party aggregator data to fill critical gaps.**





## RESEARCH

Today, the majority of freight research activity is housed in FHWA and hence has a highway focus. There is no freight research program that spans all the modes, yet there are many interdependencies between the modes, and many common challenges that could benefit from research. The one freight research program that was multimodal, NCFRP, was eliminated in MAP-21.

Freight research, like transportation research more generally, is woefully underfunded relative to its importance to the U.S. economy and economic competitiveness. The U.S. is far behind other high income nations in its transportation research investment. The lack of investment will have longer term negative impacts, as innovation in the U.S. falls behind and efficiency gains decline.

*Create and invest in a multi-modal freight research program*

**Recommendation B32: U.S. DOT should invest in a robust, multimodal, competitively awarded, unbiased, peer reviewed federal research program that covers the range of research, from basic (long range, high risk) to research development (short range) to deployment or implementation.**

- a. The research program should have as its priority basic and advanced research: long range, high risk research that other entities (States, local governments, private sector) are less well positioned to do.
- b. The research program should include applied research that responds to current problems and is produced in a timely manner. It should include research that generates innovations or new technologies, tests and demonstrations, and evaluations.
- c. The research program should include an active dissemination program to support a rapid path to implementation and broad adoption.
- d. The research program should be agnostic with respect to mode, researchers and focus on topics that are cross-cutting across freight industry sectors. It should be housed and managed outside of the modal agencies, for example within the Office of the Secretary of Transportation (OST).

**Recommendation B33: U.S. DOT should support research on high priority national objectives of safety, efficiency and sustainability. The research should include demonstration and deployment of promising technologies and beneficial operational practices.**

**High priority areas include, but are not limited to:**

- a. **Alternative fuels for the freight sector that exceed current Environmental Protection Agency (EPA) standards and meet cost and efficiency requirements of industry, possibly in partnership with DOE.**
- b. **Better metropolitan and regional freight models, including supply chain based modeling approaches.**



- c. **Future forecasting that considers changes in demographics, buyer behavior, manufacturing practices, and other factors that could restructure current freight supply and demand patterns.**
- d. **Causal factors of accidents and crashes, including operator fatigue and hours of service regulations**
- e. **Identification and design of operational practices that minimize community impacts and improve environmental and safety conditions while fostering economic productivity and efficiency.**

### EDUCATION AND TRAINING

Attracting the next generation workforce is a growing challenge in many areas of the freight industry, even though the industry can offer the opportunity for good private and public sector jobs. For a variety of reasons, it is becoming difficult to hire sufficient numbers of workers to replace the aging baby boom generation. In addition, rapid technological change is changing the skill sets and knowledge requirements of many industry jobs. There is a need for both active recruitment of the next generation workforce and training programs to update the skills and capabilities of the current workforce. One of the critical actors in the freight system is the public sector. States operate the highway system, local agencies operate ports and airports, and government at all levels has regulatory authority on various aspects of freight operations. Technology adoption often depends on the technical expertise of the public sector. For example, time savings for truckers from bypassing truck enforcement stations is dependent upon effective technologies in the public sector that track permits and load data.

*Promote workforce development through training and education programs*

**Recommendation B34: U.S. DOT, the States and other freight system owners and operators should form partnerships with high schools, colleges and universities, community colleges, vocational schools, and workforce training and apprenticeship programs to promote careers in freight transportation.**



### TECHNOLOGY IMPLEMENTATION

Given the potential benefits of technology development, it makes sense to accelerate the process of development and deployment to the extent possible. By taking on some of the early cost (and risk) of technology development, the government makes possible more rapid adoption by the private sector. These early costs are eventually offset by productivity gains and economic growth. Intelligent Transportation Systems (ITS) research has generated many opportunities for freight efficiencies, from sophisticated real-time information systems to automated vehicles. Many of these technologies could be more rapidly scaled up and mainstreamed with federal support. In addition, common standards and policies will be required to facilitate interoperability and integration across modes and sectors.

*Facilitate and promote technology implementation through supportive policies*

**Recommendation B35:** U.S. DOT should invest in a technology research program that promotes technology improvements in the freight sector. Elements of a technology research program would include: 1) technologies to improve safety; 2) technologies that support interoperability and standards, 3) technologies to facilitate security and fraud inspections; 4) institutional barriers to technology adoption; 5) demonstration and evaluation projects; 6) fuel efficiency; 7) emissions reductions; 8) technologies for better real-time and near-real-time information; 9) asset management technologies; 10) technologies that support operational improvements; 11) technologies to mitigate congestion and facilitate freight flows.

**Recommendation B36:** With the recent decision to require Original Equipment Manufacturers to produce vehicles with the ability to be connected, policies and regulations need to be examined in order to take advantage of this emerging technology as it affects freight movement.

**Recommendation B37:** Many pilot programs and demonstrations have been undertaken by qualified researchers at the state, local and university level that may have broader applicability. U.S. DOT should identify and evaluate such promising research so that these results might be useful in other regions.



### PART II

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## Chapter 2: Recommendations Related to Best Practices for Improving the Performance of the Freight Network

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### *Summary*

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The national freight strategic plan shall include “best practices for improving the performance of the national freight network”.

The safe and efficient movement of goods on the Nation’s multimodal freight network directly impacts the daily lives of every American. Movement of freight is necessary but should not result in a reduction in health and safety of the American public or freight workers. From necessities, such as food and fuel, to the full spectrum of specialized goods, every product consumed in this country is shipped through the Nation’s highway network, airports, railways, ports and waterways. In addition, American manufacturers and businesses rely on the freight network to get their goods to domestic and international markets.

In developing the recommendations to identify best practice for improving the performance of the national freight network, the following five themes surfaced:

1. Funding
2. Streamlining
3. Data, Research, and Education
4. Planning
5. Capacity Enhancements/Efficiency

The recommendations of the National Freight Advisory Committee (NFAC) prepared for the Secretary of Transportation for the purpose of improving the performance our national freight system are presented in the following sections.



### *Recommendations*

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#### **FUNDING**

A strong freight transportation network is critical to the Nation's long-term competitiveness. A continued deterioration in the condition of the Nation's infrastructure will affect the safety of freight network users, including the largest user, the American public, the efficiency of goods movement and increase the overall costs associated with freight transportation. Without better management and increased public and private sector investments in the most critical freight infrastructure facilities, our Nation's long-term economic and business competitiveness will suffer.

These recommendations are proposed revisions to federal funding processes and key regulations to enable appropriate federal investments in alternatives to congested roadways, to streamline investments in intermodal freight projects, and to focus limited funds on critical investments.

#### **Recommendation P1: Encourage intermodal freight activity through streamlined investment.**

This streamlining process should align U.S. DOT modal programs (Maritime Administration (MARAD), Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and Federal Aviation Administration (FAA) and their funding criteria so that they can work together more effectively to produce intermodal solutions at ports and airports. These streamlining opportunities include augmenting core U.S. DOT formula programs, expanding funding and access to Transportation Infrastructure Finance and Innovation Act (TIFIA) credit assistance and Railroad Rehabilitation and Improvement Financing (RRIF), and expanding Private Activity Bonds.

This streamlined investment should seek the following outcomes:

- Give flexibility to invest in last mile and first mile projects outside freight gateways.
- Creates incentives to support communities in providing local investments along the multi-modal national freight system. Opportunities include provision of support facilities such as truck parking facilities and leveraging of passenger and freight rail investments.
- Encourage public and private partnerships including multi-jurisdictional actions to improve and harmonize the national freight system and its connectors to shippers and receivers.

#### **Recommendation P2: Revise federal policies to incentivize the efficient and effective use of available funding for freight projects.**

**Recommendation P3: Address aging infrastructure, bridge weight limitations, excepted rail track; generally poor road pavement conditions within heavy-haul corridors, etc. with a priority towards State of Good Repair and Asset Management.**



### STREAMLINING

The Nation's regulatory system and many procedural barriers often impede the efficiency of project development, investment, and overall freight system operations. These barriers can delay the adoption of new technologies or products that could improve the efficiency, safety or sustainability of the freight system. Streamlining many processes and operations will improve the performance of the U.S. freight system by reducing project costs, accelerating implementation, and increasing operational efficiency.

These recommendations are proposals to encourage innovative project delivery methods, to address specific permitting and project delivery needs for emergency projects, and to develop safety standards to expedite project delivery.

**Recommendation P4: U.S. DOT should continue to encourage innovative project delivery methods such as design-build by providing incentives to States. Further, U.S. DOT should assess key methods and practices that have led to project acceleration during emergencies and extenuating circumstances and identify opportunities for application to existing programs. Additionally, dredging project completion should be measured when 100 percent of the dredging is complete, not the current practice of measuring when 100 percent of the funding allocation is saturated.**

**Recommendation P5: U.S. DOT should continue to explore section (c) CE's" Categorical Exclusions for roadway, seaport, waterway, rail, and airport freight-related projects.**

**Recommendation P6: After all necessary approvals have been received, allow the recipients of federal funding to self-certify, at their own risk and responsibility, that their right-of-way acquisitions and project plans meet all federal requirements.**

Self-certification permits projects to advance to the construction phase sooner and depending on the complexity of the project, could save up to six months on project delivery. Federal funding will not be granted until the project is deemed to be compliant.

**Recommendation P7: The Railroad Rehabilitation and Improvement Financing (RRIF) loan process should include early indications to a potential applicant of potential 'no-go' issues before the applicant spends substantial funds on developing the total application.**

**Recommendation P8: Develop a list of preapproved "On- Call Contractors" available for emergency dredging.**

The U.S. Army Corps cannot respond quickly to dredging needs due to lengthy permitting and procurement processes. Should there be an emergency, the Corps does not have a response team. The Corps should go out to bid or pre-approve on-call dredge contractors who can respond to emergency situations.

**Recommendation P9: FHWA's Every Day Counts (EDC) initiative should be applied to all modal Administrations within the U.S. DOT.**



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Since its introduction in 2010, FHWA's Every Day Counts (EDC) initiative has united the collaboration and communication with State DOTs and Metropolitan Planning Organizations (MPOs) on efforts toward accelerating project delivery, enhancing safety, and protecting the environment through administrative channels. Clearly, underlying tenants and efforts of the EDC should also be applied to the other U.S. DOT Administrations (FRA, FAA, etc.) so that streamlining efforts could work in unison.

**Recommendation P10: To enhance project delivery of grade crossing improvements, there should be an approved safety and performance standard for smaller, more compact pedestrian gate designs that are suitable for sidewalk environments. FRA should engage in a research and design project to develop the design standard.**



### DATA, RESEARCH, AND EDUCATION

Data management and utilization is critical for developing freight performance measures of the Nation's freight system. Freight performance measures guide planning, programming, and investment decisions, and help to implement effective operational and infrastructure improvements for both the public and private sectors. The Nation's freight system needs performance measures to assess deficiencies in the freight transportation systems and to improve the efficiency of investments and improvement to the systems.

These recommendations are proposals to promote data and information sharing, to develop a program to study better management of container flows, and to facilitate data agreements with the private sector.

**Recommendation P11: The Freight Conditions and Performance Report and the National Freight Strategic Plan should be an interagency shared effort so that information and data sharing across the U.S. DOT agencies is facilitated more easily.**

**Recommendation P12: Data collection efforts should be tailored to performance measures that are in line with specific outcomes that the U.S. DOT and Congress want to obtain with the increased emphasis on the multimodal national freight system.**

**Recommendation P13: The movement of empty import International Standards Organization (ISO) containers should be studied to address the repositioning of empty containers, including those that return to their point of entry and those that are repositioned for export commodities.**

**Recommendation P14: U.S. DOT should partner with objective third party organizations to facilitate raw and complete data collection agreements with private industry.**

U.S. DOT should leverage or seek to expand the statutory language that permits the Bureau of Transportation Statistics to collect proprietary data as long as it is protected as provided for under its statutory authority cited below:

(e) PROHIBITION ON CERTAIN DISCLOSURES- Information compiled by the Bureau shall not be disclosed publicly in a manner that would reveal the personal identity of any individual, consistent with the Privacy Act of 1974 (5 U.S.C. 552a), or to reveal trade secrets or allow commercial or financial information provided by any person to be identified with such person.





### PLANNING

The effectiveness of the Nation's planning abilities is crucial for our transportation system. As both the global and the national economies have become increasingly integrated, the planning and delivery of large freight projects are of growing importance, and the process has become more complicated, because it can involve multiple jurisdictions and multiple modes. As the freight system evolves, the planning for the movement of freight and people require well-organized processes, tools and models.

These recommendations are the Committee's attempt to focus federal planning efforts, improve coordination among federal, state, regional and local entities, and coordinate public and private efforts.

**Recommendation P15: U.S. DOT should develop a comprehensive national freight transportation plan to improve network performance that minimize community impacts and improve environmental and safety conditions while fostering economic productivity and efficiency.**

In developing the national freight strategic plan, U.S. DOT should take into consideration the following elements: The need for a multi-modal approach that includes land as well as waterside connections, including navigation channels;

- a. The best approach to improving network performance is the designation of highest priority/critical domestic and international freight gateways and corridors of national and regional economic significance, not taking a highway centric approach;
- b. Evaluating the system and determining needs should be in the context of supply chain performance;
- c. The system needs a consideration of end to end freight needs;
- d. Enhance U.S. competitive position of how freight flows; international bench marking should be part of the plan;
- e. Resiliency is key, being responsive to dynamic freight system;
- f. Support future growth and changes in commerce (i.e., e-commerce.)

**Recommendation P16: In the development of a national freight system, U.S. DOT should require and fund the development of State Freight Plans that will contribute to the national freight strategic plan. U.S. DOT should set up mechanisms to ensure State DOT's interact with all transportation modes, users, regional and multi-state agencies, and MPOs. U.S. DOT should consider streamlining and integrating the planning process and required reports of the modal administrations, so that multimodal planning is achieved with common understanding of terms such as freight, first and last mile, etc.**

**Recommendation P17: Encourage and support the creation of regional, statewide, and/or multi-state institutions as appropriate with a single mission, the specialized staffing expertise to handle freight projects, and the authority to oversee, finance, and implement**



key initiatives could be beneficial to the expedient delivery of freight transportation projects.

**Recommendation P18:** Establish a workgroup of NFAC members with U.S. DOT support to develop a set of recommendations designed to equip State DOT and MPO planners with the training and tools they need to be more effective partners with private sector freight stakeholders and decision makers. This workgroup could provide recommendations that could help to develop and implement the planning processes recommended in P16.

Critical areas that should be addressed include supply chain issues, multi-modal freight modeling, multi-state corridors, mega region and international freight movements, system sustainability, and data availability. In addition, while 20 year long-range planning is part of the national freight strategic plan, the ability to adapt quickly to changes in market conditions/trends in the short term is just as important as planning for the long-term. Identifying ways to incorporate greater flexibility into the planning process should be addressed as well.

**Recommendation P19:** The U.S. DOT in conjunction with the private sector should provide education and training programs for MPO and State DOT planning staff to expand their understanding of supply chain issues, modeling freight movements, the dynamics of multi-state corridors and the economics of mega regions and international trading patterns, among other issues.



### CAPACITY ENHANCEMENTS/EFFICIENCY

The full utilization of the Nation's freight system's capacity and efficiency is the key for a strong future and economic success. Modifications to some existing programs and processes will improve the overall capabilities and effectiveness of the freight system, by making better use of the network, reducing congestion, and increasing border efficiencies.

These recommendations are the NFAC's proposals to expand the current network, create full utilization of the network by promoting off-peak usage, stimulate diversification across modes, (with an emphasis on better utilization of underused modes), reduce congestion on the system by promoting technology implementation that address capacity constraints, and support cross border freight movement efficiencies.

**Recommendation P20: Identify and invest in ports of national significance to meet national trade objectives, including increased exports and creating a competitive trade environment.**

**Recommendation P21: Expand the capacity of the freight system by encouraging the effective utilization of all modal and operational opportunities, e.g. off-peak cargo movements.**

**Recommendation P22: Expedite development and implementation of air space modernization (including NextGen initiatives) to relieve air space congestion and reduce delays in air cargo delivery. Air cargo tends to be high value freight and pays a premium for fast and reliable delivery. Delay and uncertainty are serious concerns.**

**Recommendation P23: Increase efficiencies along the supply chain by promoting electronic communications among all logistics supply chain business segments.**

Resources should be allocated towards implementing an adoption strategy for a common communication platform such as the U.S. DOT's Electronic Freight Management (EFM) solution. The adoption of a common communication platform with common standards, as part of a broader open source strategy, will enable the fluid electronic transfer of documents between and within modes, between various logistics providers, and to required government entities (U.S. DOT, Customs and Border Patrol (CBP), Department of Commerce (DOC), etc.).

**Recommendation P24: Support programs and policies that improve efficiencies of cross border freight movement without jeopardizing safety. Specifically, border crossing inspection technology should be updated with proven, state-of-the-art technology that will speed up throughput at heavily congested locations.**

Specific opportunities include:

- Facilitate international cooperation to expand benefits from electronic processing, coordinated security compliance and environmental standards;



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- Support technology development and deployment of integrated corridor management – the integration of intelligent transportation systems (ITS) along a corridor - across international borders to improve cross-border goods movements;
- Support integrated cargo security strategies aimed at resolving security concerns early in the supply chain by enabling inspections to occur prior to the cargo reaching the border, thus reducing congestion at the crossings;
- Specifically, the e-Manifest system used by carriers, freight forwarders and importers to electronically transmit advance commercial information to Canadian and U.S. border patrol currently does not process empty loads. Enabling e-Manifest to process empty loads will streamline and speed processing, and ease congestion at the border.

**Recommendation P25: U.S. DOT should work with the Department of Homeland Security (DHS) to establish detailed and efficient inspection procedures that use best technology. The DHS should develop better border staffing that is more responsive to freight traffic flows. CBP staffing at border crossings, airports and marine ports, as well as Transportation Security Administration (TSA) staffing at airports, should be increased to support the burgeoning requirements of cargo screening.**



### Chapter 3: Recommendations Related to Best Practices to Mitigate Community Impacts

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#### *Summary*

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The national freight strategic plan shall include “best practices to mitigate the impacts of freight movement on communities”.

The following set of recommendations has been developed as a way to keep communities safe and healthy while ensuring the efficient flow of freight via all modes of transportation. The recommendations range from very specific to very broad, but the common denominator is the need for government incentives to encourage improved freight planning and the desire to work collaboratively with all stakeholders to develop voluntary programs to drive further environmental improvements.

The recommendations have been grouped into the following areas:

1. Safety
2. Environmental Sustainability
3. Funding
4. Harmonization, Standards and Institutional Arrangements
5. Data, Research, Education and Reporting
6. Infrastructure Design
7. Regulation and Enforcement
8. Technology Implementation (Development, Demonstrations, Deployment)

The recommendations of the National Freight Advisory Committee (NFAC) prepared for the Secretary of Transportation for the purpose of mitigating freight movement impacts on communities are presented in the following sections.



### *Recommendations*

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#### **SAFETY**

The U.S. freight transportation network is an evolving system that changes in response to the U.S. public's transportation and goods movement needs. U.S. DOT should update safety regulations and create new safety regulations, as appropriate, to account for new information, new technologies, and new strains on our freight network.

**Recommendation C1: The NFAC encourages U.S. DOT to move forward with efforts to ensure existing safety regulations are current, and to promulgate new safety regulations, for all modes to mitigate community impacts.**

This includes ensuring that existing safety regulations address hazardous materials being safely transported through communities.

**Recommendation C2: U.S. DOT and the modal agencies should adopt zero fatalities resulting from the movement of freight as an ultimate vision with a sense of urgency.**

A roadmap focusing on continuous improvement utilizing SMART goals will help narrow the gap between the current state and the ultimate vision. U.S. DOT should establish a workgroup within the NFAC to assist in the development of SMART goals. (SMART – Specific, Measurable, Attainable, Relevant, Time-bound).



### ENVIRONMENTAL SUSTAINABILITY

Recognizing the significant contribution of heavy-duty mobile sources to our nation's air quality and climate change challenges, the United States should strive to minimize greenhouse gas and other pollution from freight transportation by working collaboratively with all stakeholders to develop voluntary programs and incentives to drive further environmental improvements.

**Recommendation C3: In order to address this environmental sustainability challenge, U.S. DOT should incentivize holistic, multi-modal freight planning and operational strategies, risk assessment, and collaborative problem solving that involves multiple stakeholders.**

This includes:

- a. policies, including grants, that support rapid deployment of verified technological advancements that improve safety, security, health, quality of life, and the environment, as well as, the efficiency of the freight network;
- b. policies that consider how government subsidies affect freight markets and the effect on local, regional, and national competitiveness including land-use, site selection, jobs, and both other directly affected items and externalities;
- c. policies that identify and prioritize projects with performance measures that demonstrate improved safety, security, health, quality of life, and the environment, as well as, the efficiency of the freight network; and
- d. publicly available research, data and tools to promote informed stakeholder engagement.
- e. encourage implementation of operational strategies that improve efficiency and reduce emissions of the freight system to minimize air quality impacts.



### FUNDING

Freight transportation through communities, often called first and last mile transportation, includes both delivery networks and freight corridors between major intermodal connectors. While freight movement along first and last mile connectors is regionally and nationally significant, those connectors do not necessarily benefit the jurisdictions that manage and maintain them. This leads to underinvestment in connectors, resulting in them being in poorer physical condition than other infrastructure, and often increases travel time – which further impacts the communities.

**Recommendation C4: Develop federal programs in a way that supports and prioritizes funding of first and last mile connectors that are part of systems with regional and national significance, including both urban and rural connectors.**

Potential programs include:

- a. A U.S. DOT discretionary and formula grant program that includes first and last mile connector projects. This funding must have broad eligibility, including both rural and urban connectors, as well as non-NHS mileage. Experience under the U.S. DOT Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant Program is a good example of this type of funding. For example, in 2010 the Port of Miami received almost \$23 million (out of about \$47 million) to establish a first and last mile intermodal container rail service. Over the next 20 years, this service will facilitate 6 million first and last mile short-line rail trips between the port and the Hialeah Rail Yard.
- b. Modify the Transportation Infrastructure Finance and Innovation Act (TIFIA) program to permit funding of smaller intermodal / first and last mile connector projects.

**Recommendation C5: Maintain the 23 USC 130 separate program for rail-highway grade crossing improvements; provide adequate funding to minimize safety and community impacts.**





### HARMONIZATION, STANDARDS AND INSTITUTIONAL ARRANGEMENTS

Freight and passengers share much of the same infrastructure (roads, railroads, airplanes). In metropolitan areas, freight and passengers compete for scarce road and rail capacity. In order to make the best use of our infrastructure, freight and passenger transportation planning should be integrated.

**Recommendation C6: U.S. DOT should encourage integrated freight and passenger transport planning, and encourage investment and operational solutions that maximize safety, and effectively utilize resources while minimizing environmental, energy, and local impacts.**

This can be accomplished by broadening the focus of freight policy so that it includes all stakeholders involved in supply chains, including shippers and receivers. Encourage collaboration between the freight industry and municipalities to optimize the first and last mile. Require Metropolitan Planning Organizations (MPOs) and other regional planning organizations to include a freight component via a freight advisor in their processes and address freight in all short- and long-term plans.



### DATA, RESEARCH, EDUCATION AND REPORTING

States, business, and local communities are implementing policies and practices to mitigate the negative community impacts of freight. These efforts represent a very broad range: from loading zone enforcement to constructing grade separated rail/highway crossings to alternative fuel delivery vehicles.

There is no comprehensive repository of these best practice efforts. Often locals look to neighboring cities, or seek information through their professional networks. As a result, local leaders may have limited information on how a given strategy has worked in other places, or may “re-invent the wheel.” If effective practices do exist, it is wasteful to try to solve problems without knowing about effective practices.

**Recommendation C7: The national freight strategic plan should develop a set of criteria for defining best practices to be shared with freight stakeholders through the establishment of a clearinghouse of freight best practices and a program for disseminating best practices.**

**Recommendation C8: U.S. DOT should continue to support the development of best practices toolkits for urban and rural freight transportation planning that seek to reduce freight related congestion, air emissions, parking issues, and impacts on the health and safety of transportation professionals and the public.**

**Recommendation C9: U.S. DOT should support research on high priority national objectives of safety, efficiency and sustainability. The research should include demonstration and deployment of promising technologies that minimize community impacts and improve environmental and safety conditions while fostering economic productivity and efficiency.**

High priority areas include:

- a. Alternative fuels and supporting infrastructure in strategic locations for the freight sector that exceed current Environmental Protection Agency (EPA) standards and meet cost and efficiency requirements of industry, possibly in partnership with DOE.
- b. Better metropolitan and regional freight models, including supply chain based modeling approaches.
- c. Future forecasting that considers changes in demographics, buyer behavior, manufacturing practices, and other factors that could restructure current freight supply and demand patterns.
- d. Causal factors of accidents and crashes, including operator fatigue and hours of service regulations.
- e. Evaluate various compensation structures for transportation workers to determine whether there is a detrimental impact on safety.
- f. Work with the States to collect and report data that will allow it to determine the classes of heavy-duty (Class 2b through 8) vehicles (commercial, non-commercial, and exempt) that are involved in fatal and non-fatal crashes.



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- g. The private sector conducts significant research, often in partnership with the public sector. The U.S. DOT should facilitate public/private research efforts, and the implementation of the results of these efforts. Examples from the air transport sector include the CLEEN program aimed at developing more efficient engines and aircraft structures, and the CAAFI program to develop alternative jet fuels.
- h. Identification and design of operational practices that minimize community impacts, improve environmental conditions, while fostering economic productivity and efficiency.

**Recommendation C10: Establish a workgroup of NFAC members with U.S. DOT support to develop a set of recommendations related to best practices of private and public sector workforce development in the freight industry. The recommendations should be based on research and analysis of the issues related to both the private and public sector workforce of the freight industry. This workgroup could provide recommendations that could help to develop and implement the partnership recommended in P16.**

As previously discussed in Chapter 1, it is critical that the U.S. DOT, states, and the freight system owners and operators consider the freight industry workforce. Every sector of business has to reinvent itself especially in today's work environment. The system operated today was established decades ago; while it may still work now, will it in the future? As technology continues to change the way business is done, the workforce needs to be educated and trained.

**Recommendation C11: Improve the effectiveness of various statutory "whistleblower" safety reporting protection mechanisms in all modes through improved awareness, education, and encouraging greater labor/management coordination in this area.**



### INFRASTRUCTURE DESIGN

When designing freight routes, there are many things to take into consideration from infrastructure to turning radii at intersections, adequate horizontal and vertical clearances, as well as bridge and pavement integrity to handle heavy loads. For example, signal timing plans on truck routes should account for the trucks' slower acceleration speeds to prevent repeated stopping once up to speed. Optimizing these and other operational factors improves the performance of the U.S. transportation system for all users.

**Recommendation C12: U.S. DOT should support the development of definite freight delivery networks to expand delivery options across all modes and clearly designate truck routes to optimize safety and system performance and reduce community and environmental impacts.**

For example, New York City has had a designated truck route network for over 20 years - it is modified as needed to reflect changes in land use patterns and to optimize system performance.



### REGULATION AND ENFORCEMENT

Transportation through first and last mile corridors is vital to smooth performance of the U.S. economy and commerce. However, while the benefits of transportation through those corridors are national or regional in scope, the negative impacts are most often concentrated locally. Much of the freight transportation infrastructure and land development projects were built without freight transportation in mind. The lack of integrated freight and land use policies can have unintended consequences such as first mile pick-ups and last mile deliveries that operate in congestion, with business inefficiencies, with risk of property damage, and air and noise impacts for residents and businesses.

Policies set by MPOs or local governments in an attempt to reduce the impact of freight transportation through first and last mile corridors often lead to freight system inefficiencies which further contribute to congestion issues and traffic through residential areas. It is recognized that the planning and programming for such improvements are a local responsibility, but DOT can help resolve these issues through explicit requirements for coordination and consideration of freight movement in the planning processes mandated under Titles 23 and 49. Information sharing about best practices will help inform local decisions.

Freight volumes are anticipated to grow significantly in the future. However, we are confident that innovative planning, appropriate regulations, incentive programs, and the use of technology can help to mitigate any potential negative impacts, while increasing the safety of the system. The proposed recommendations are in this mindset.

**Recommendation C13: Use transportation policies and operational best practices such as strategic zoning, street design, building design and comprehensive land use policies that plan for freight activities without encroaching on freight right-of-way. The policies include economic development incentives and effective truck route planning to minimize the impacts of first and last mile freight transportation on surrounding communities.**

**Recommendation C14: Utilize policy best practices such as buffering freight activity centers from population centers. Freight generating land uses can potentially bring great benefits to a region by providing jobs, tax dollars, and proximity of goods to growing populations and businesses.**

Planning now for freight transportation associated with this growth will enable freight to fit seamlessly into the community fabric, allowing freight to provide benefits to their region while minimizing adverse impacts to local residents and the environment.

**Recommendation C15: Utilize operational best practices to encourage State and local authorities to employ a comprehensive approach to enhancing freight activity in First and Last Mile environments and corridors.**



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**Recommendation C16: Enhance worker safety and training requirements for all freight workers, including wellness and fatigue management. This can be accomplished by supporting scientific and evidence based comprehensive fatigue reduction initiatives to reduce operator and worker fatigue. Further, to protect the health and welfare of transportation workers and those they interact with, regulations can insure effective minimum levels of training are required for all entry-level and new workers required to operate transportation equipment, if not already provided.**



### **TECHNOLOGY IMPLEMENTATION (DEVELOPMENT, DEMONSTRATIONS, DEPLOYMENT)**

In the near future, Intelligent Transportation Systems (ITS) will be a crucial element of an urban freight strategy. Today, use of ITS applications at the municipal traffic-management level or for interfacing with local truck drivers is still rather uncommon. There are different categories of ITS applications for transport supervision in an urban environment. The most common applications are automatic road enforcement (plate-reading cameras); real-time information provided by variable message signs; traffic-light management; and electronic toll collection. Many other types of applications exist but are not widely used yet, such as car-to-car or car-to-infrastructure communications.

GPS and other mapping GIS technology is not built with first and last mile delivery vehicles and trucks in mind. This leads to these vehicles traveling through residential areas or getting stuck outside low tunnels and over-passes. These recommendations include the development of two systems to improve the movement of freight in and around communities.

**Recommendation C17: Expand the use of Intelligent Transportation Systems, technology, and innovation to improve the flow of freight that minimize community impacts and improve environmental and safety conditions while fostering economic productivity and efficiency.**

**Recommendation C18: Use technological solutions to address truck parking. There are technology companies that provide information regarding parking availability, reservation system, cashless payment and navigation information directly to the driver using smart phone technology.**

**Recommendation C19: Promote adoption of advanced technologies and compliance methods that support and encourage ideal workforce safety practices.**

Examples include:

- a. Expand the use of effective technologies and methods for improving pre-employment screening of prospective new hires for substance and alcohol abuse problems, untreated mental illness, and untreated medical conditions that can cause instant incapacitation.
- b. Promote the utilization of advanced compliance methods such as electronic logs, speed limiters, and telemetric monitoring, and establish a drug and alcohol clearinghouse for operators of all modes.
- c. Improve pre-employment background checks to reduce security risks to the transportation network. Causal factors of accidents and crashes, including driver hours regulation.



## APPENDICES

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### Appendix A: Minority Report

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As per the Bylaws of the National Freight Advisory Committee (NFAC), “if consensus is not truly achieved, the Secretary shall be so advised and each viewpoint will be documented and submitted.”

Below are additional recommendations that achieved consensus at the Subcommittee level but not by the full NFAC. It was requested by the Subcommittee that the recommendations be included “as an additional viewpoint”.

The recommendations below were discussed as part of *Assessment of Barriers and Best Practices to Mitigate Community Impacts*.

**Subcommittee Recommendation:** Remove financial disincentives to safety improvements by requiring that all modes are required to have adequate financial responsibility.

The degree to which a company can be required to pay for the losses it causes has a direct relationship to the extent to which it is willing to spend funds to prevent crashes. For example, the cost of entry in trucking is almost non-existent, and the required minimum insurance levels (for example, only \$750,000 for property carriers) in trucking were set by Congress more than 30 years ago. They have not been raised, not even for inflation, in spite of the fact that Congress merely set the minimum amounts and specifically gave the Secretary of Transportation the authority to increase the amounts as appropriate. Where most segments of all other modes have huge investments in equipment and heavy capitalization that make investment in available safety-related options, systems, technologies and training economically feasible, a very significant portion of the trucking industry is insufficiently capitalized and operates on minimal operating and profit margins. When companies that have adequate financial responsibility cause a crash which results in death or serious injury, these companies are held fully financially responsible for the damages they cause.

As a result of the lack of capitalization and lack of required adequate insurance coverage in certain segments of the trucking industry, significant portions of the industry are able to externalize catastrophic crash costs because they do not pay for the damages they cause. The result is that many trucking companies are effectively "subsidized" by under-compensated truck crash victims (and by government programs such as Medicare, Medicaid, Workers Compensation, and Social Security that assist in paying for part of these damages). By "externalizing" these costs, a large segment of the trucking industry does not include them in its pricing structures, which leads to artificially low shipping prices and to an industry culture that has historically accepted fatal crashes as part of the "cost of doing business."

Trucking companies that are adequately capitalized and insured are forced to compete with companies that are not pulling their own weight. In effect, these more responsible companies are





being penalized because they are not receiving the "subsidies" given to a substantial segment of the industry. The adequately capitalized and insured companies, often the larger operations, are purchasing the latest in safety systems and technology not only because they can afford to do so, but also because they cannot afford not to. The time to remove financial disincentives to safety improvements for all trucking companies is long overdue.

The Secretary of Transportation has the authority to require that industry participants are insured at an appropriate minimum level to cover a large percentage of the costs for the catastrophic losses and damage for which they are responsible. Cost allocation must be used to identify and eliminate or significantly reduce subsidies to freight transportation companies by undercompensated crash victims and through Medicare, Medicaid, Workers Compensation and Social Security. To improve safety practices, minimum financial responsibility levels for commercial motor vehicle carriers which were originally set by Congress in 1980 must be increased to levels commensurate with the financial and personal costs incurred in serious crashes, and past inflation. These levels of minimum insurance should include an automatic escalator to keep up with future inflation.

In addition, the cost-of-entry into the trucking industry is very low, and there are minimal financial or other requirements placed on those who are starting a trucking business. This practice needs to be evaluated to ensure that those entering the industry have the financial capacity and knowledge of the regulatory requirements to do so in a safe and responsible manner.

**Subcommittee Recommendation:** Transportation workers should be paid for all work performed (discussed as part of recommendations related to prioritize worker health and safety).



## Appendix B: National Freight Advisory Committee

### Committee Members

Name	Title, Affiliation
Ann L. Schneider	<b>NFAC Chair</b> , Secretary, Illinois DOT
Mortimer L. Downey, III	<b>NFAC Vice Chair</b> , Chairman, Coalition for America’s Gateways and Trade Corridors
Stephen Alterman	President, Cargo Airline Association
Gregory A. Ballard	Mayor, City of Indianapolis
Kevin Brubaker	Deputy Director, Environmental Law and Policy Center
Jeffrey Burns	Board Member, Parents Against Tired Truckers
Terry Button	Board Member, Owner-Operator Independent Drivers Association
Anne P. Canby	Director/Consultant, OneRail
Joan Claybrook	President Emeritus, Public Citizen
Kristin Decas	CEO and Port Director, Port of Hueneme
John H. Eaves	Chairman, Fulton County Commission
John E. Fenton	President and CEO, Patriot Rail Company LLC
Karen Flynn	Vice President, Logistics and Goods and Services Purchasing, Arkema, Inc.
Carlos A. Gimenez	Mayor, Miami-Dade County
Genevieve Giuliano	Professor and Senior Associate Dean of Research and Technology, University of Southern California Sol Price School of Public Policy Technology
John Thomas Gray II	Senior Vice-President, Policy and Economics, Association of American Railroads
Rhonda Hamm-Niebruegge	Director of Airports and Chief Executive Officer, Lambert International Airport
Brad Hildebrand	Global Mode Lead – Rail/Barge, Cargill Transportation & Logistics
Stacey D. Hodge	Director, Office of Freight Mobility, New York City Department of Transportation



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Name	Title, Affiliation
James P. Hoffa	General President, International Brotherhood of Teamsters
José Holguín-Veras,	William H. Hart Professor, Rensselaer Polytechnic Institute
Jack A. Holmes	President, UPS Freight
Richard Inclima	Director of Safety, Brotherhood of Maintenance of Way Employees
Fran Inman	Senior VP, Majestic Realty Company, and Member CA Transportation Commission
Randy Iwasaki	Executive Director, Contra Costa Transportation Authority
Michael Jewell	President, Marine Engineers' Beneficial Association, AFL-CIO
Paul R. Kelly	Vice President, Intermodal Division, A&S Services Group
Paul LaMarre, III	Port Director, Port of Monroe
Michelle Livingstone	Vice President, The Home Depot
Bonnie Lowenthal	State Assembly Member, California
Andrew S. Lynn	Director, Planning and Regional Development, Port Authority of New York and New Jersey
C. Randal Mullett	Vice President, Government Relations and Public Affairs, Conway, Inc.
Rosa Navejar	President, The Rios Group, Inc
Michael Nutter	Mayor, City of Philadelphia
Gary A. Palmer	Senior Director, Transportation, True Value Company
Craig Philip	Chief Executive Officer, Ingram Barge Company
John Previsich	Assistant President and General Secretary and Treasurer, SMART – Transportation Division
William “Rob” Roberson	Materials and Logistics Manager Nucor Steel – Berkeley
Christopher T. Rodgers	Commissioner/President, Douglas County, National Association of Counties
Mark Savage	Major, Colorado State Patrol, and President, Commercial Vehicle Safety Alliance



## National Freight Advisory Committee

Name	Title, Affiliation
Karen Schmidt	Executive Director, Freight Mobility Strategic Investment Board
Ricky D. Smith	Director, Department of Port Control, Cleveland Airport
Mike Tooley	Director (CEO), Montana DOT
Peter G. Vigue	Chairman and CEO, The Cianbro Companies
C. Michael Walton	Ernest H. Cockrell Centennial Chair in Engineering The University of Texas at Austin
Leonard D. Waterworth	Executive Director, Port of Houston Authority
A C Wharton, Jr	Mayor, City of Memphis

### *Ex-Officio Members and Designees*

Name	Title, Affiliation
Victor Mendez	Acting Deputy Secretary of Transportation, U.S. DOT
Peter Rogoff	Acting Under Secretary for Transportation Policy, U.S. DOT
Daniel R. Elliott III, (Designee: David Kruschwitz)	Chairman, Surface Transportation Board
Gina McCarthy (Designee: Carlos R. Evans)	Administrator of the Environmental Protection Agency
Penny Pritzker, (Designee: David Long, )	Secretary, Department of Commerce
Jo-Ellen Darcy (Designee: Patricia Mutschler)	Assistant Secretary of the Army (Civil Works),
R. Gil Kerlikowske	Commissioner, U.S. Customs and Border Protection



## Appendix C: Acknowledgments

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### ***U.S. DOT & Other Federal Agencies***

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The National Freight Advisory Committee (NFAC) Members appreciate former U.S.DOT Secretary Ray LaHood's creation of the NFAC and are especially grateful for U.S. DOT Secretary Anthony Foxx's leadership and encouragement to the NFAC in completing this report. Special recognition is also warranted to Ms. Tretha Chromey, Designated Federal Officer, who diligently devoted her time and professional talents in serving the needs of the NFAC. The NFAC is also thankful for the contribution from Administrators and senior staff of U.S. DOT, U.S. Department of Commerce, U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, and other federal agencies, who provided valued insight and experience to the Committee.

### ***Subcommittee Co-Chairs***

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NFAC Chair Ann Schneider and Vice Chair Mort Downey would like to express their sincere gratitude to several members who helped lead the first task of the NFAC. As previously mentioned, this was a momentous task and it required the assistance and leadership from twelve members. We would like to convey our sincere appreciation to each of the subcommittee co-chairs:

#### **Co-Chairs for Conditions, Performance, and Data**

- Anne P. Canby, Director/Consultant, OneRail
- Jack A. Holmes, President, UPS Freight

#### **Co-Chairs for Safety, Security, and Environment**

- Kevin Brubaker, Deputy Director, Environmental Law and Policy Center
- Bonnie Lowenthal, State Assembly Member, California

#### **Co-Chairs for Project Delivery and Operations**

- Fran Inman, Senior VP, Majestic Realty Company, and Member CA Transportation Commission
- Karen Schmidt, Executive Director, Freight Mobility Strategic Investment Board

#### **Co-Chairs for Research, Innovation, and Technology**

- Terry Button, Board Member, Owner-Operator Independent Drivers Association
- Randy Iwasaki, Executive Director, Contra Costa Transportation Authority



## **Co-Chairs for International Freight Strategies and Operations**

- Carlos A. Gimenez, Mayor, Miami-Dade County
- Rhonda Hamm-Niebruegge, Director of Airports and Chief Executive Officer, Lambert International Airport

## **Co-Chairs for First and Last Mile**

- Stacey D. Hodge, Director, Office of Freight Mobility, New York City Department of Transportation
- Michelle Livingstone, Vice President, The Home Depot

## **NFAC Members Staff**

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NFAC Members would like to thank their staff who served as designated alternates, provided technical support, and assisted with the development of this report.

## **Designated Alternates and Support Staff**

- Alvarez, Victoria, State of California Legislature
- Beaty, Tim, International Brotherhood of Teamsters
- Blakey, Leslie, Coalition for America's Gateways and Trade Corridors
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- Cutler, Rina, City of Philadelphia
- Demers, John, Port of Hueneme
- Dewey-Mattia, Lisa, Port Authority of New York & New Jersey
- Eggerman, David, BASF Corporation
- Geldhof, Joe, Marine Engineers' Beneficial Association, AFL-CIO
- Gill, Tara, Truck Safety Coalition
- Grimes, Avery, Patriot Rail Corp
- Grow, Brent, Arkema Inc.
- Guzzi, Ron, The Home Depot
- Harrison, Robert, The University of Texas at Austin
- Keen, Dan, Association of American Railroads
- Keppler, Steve, Commercial Vehicle Safety Alliance
- Kildare, Shaun, Advocates for Highway and Auto Safety
- Lynskey, Kevin, Port of Miami
- Miser, Lori, Department of Public Works
- Monahan, Jessica, National Association of Counties
- Nam, Annie, Southern California Association of Governments



## National Freight Advisory Committee

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- Probart, Ashley, Freight Mobility Strategic Investment Board
- Pruitt, Lee, Brotherhood of Maintenance of Way Employees Division of the Teamster Rail Conference
- Roberson, Blake, Ingram Barge
- Rose, Yvette, Cargo Airline Association
- Schoeben, Kevin, Illinois Department of Transportation
- Srivastava, Pragati, Memphis MPO
- Sussman, Sabrina, Intelligent Transportation Society of America (ITS America)
- Tarr, Jennifer, Environmental Law & Policy Center
- Weakly, Tom, Owner-Operator Independent Drivers Association