

RES2016-30: THE USE OF FREIGHT ADVISORY COMMITTEES IN RESPONDING TO SUPPLY CHAIN DISRUPTION

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PROBLEM STATEMENT

Supply chains are by their nature a complex web of private and public enterprises. The private sector includes producers, shippers, receivers, retailers, freight providers, and all manner of intermediaries including warehouse/terminal operators and virtual transaction managers like forwarders and brokers. In the public sector, there are the owners and managers/maintainers of much of the infrastructure from all levels of government – federal, state, and local. All of this occurs across geographically dispersed and interconnected multimodal networks. When disruptions occur, whether the result of manmade or natural events, all of these parties need to effectively engage before, during, and after the events. Unfortunately, there is no good model for effective engagement of freight advisory groups as part of disruption response even though they bring together the very stakeholders needed to address supply chain disruptions. This research will explore opportunities to use existing institutionalized structures of the State and Regional Freight Advisory Committees to provide such capacity in Tennessee.

OBJECTIVES

The objective of this research project is to develop and test approaches that can be adopted by TDOT to empower its state and regional freight advisory committees to serve as coordinating bodies in the event of disruptions within the state or in surrounding states that will have an adverse impact on the supply chains of shippers critical to the vitality of Tennessee's economy. The research will begin with a review and benchmarking of efforts underway in Tennessee and other states. With these reviews completed, relevant supply chain disruption scenarios will be catalogued, and response/coordination strategies subsequently developed and reviewed with TDOT's existing state and regional advisory committees. The culmination of this research effort will be a report that describes project findings and recommendations.

SCOPE

Successful completion of this project will involve performing the following tasks:

Task 1. Review and Benchmark of Existing Supply Chain Response Coordination Efforts
Vanderbilt will perform a literature review and benchmarking of supply chain disruption response efforts underway in other states. In parallel with this external review, existing response approaches in Tennessee at the state and local levels will be identified and evaluated with respect to two important benchmarks: 1) the involvement of the various stakeholder groups that form the supply chain, and 2) the coverage/consideration of geographically dispersed impacts beyond those in the local geographic area directly affected by a disruption. The deliverable associated with this task will be a letter report summarizing task findings.

Task 2. Create Catalog of Supply Chain Disruption Scenarios Most Relevant in Tennessee
On the basis of the Task 1 results, Vanderbilt will develop a set of supply chain disruption scenarios that are considered plausible and offer the potential to significant impact supply chain

activities in Tennessee. Each scenario will be described in sufficient detail in terms of type of event occurrence, roles and responsibilities of affected stakeholders, and the likely consequences in the event of the lack of an effective coordinated response. The deliverable associated with this task will be a letter report describing each supply chain disruption scenario.

Task 3. Use State and Regional Freight Advisory Committees to Develop List of Scenario-Driven Supply Chain Disruption Response Strategies

For each of the supply chain disruption scenarios identified in Task 2, Vanderbilt will develop, in concert with members of TDOT's regional and state freight advisory committees, coordinated institutional and operational strategies among affected stakeholders that are directed at reducing the likelihood of occurrence of the disruption and/or enabling a more rapid recovery from the disruption should it occur. No deliverable is anticipated with completion of this task as it will be included in the final report that will be immediately prepared thereafter.

Task 4. Prepare Final Report

Vanderbilt will prepare a final report that will include narrative: 1) identifying potential stakeholders who influence or are influenced by supply chain disruption, 2) describing various supply chain disruption scenarios that have the potential to occur, 3) discussing institutional and operational strategies with the potential to reduce the likelihood of occurrence of the disruption and/or enable more rapid recovery from the disruption should it occur, and 4) providing recommendations for TDOT to consider going forward. This report will initially be prepared as a draft document and circulated to TDOT staff and freight advisory committee members for review and comment. Based on this feedback, a final version of the report will be produced and made available for circulation through electronic means.

In addition to these activities, an ongoing task throughout the entire project will be coordination with TDOT to discuss study results and planned activities, report preparation, and other engagement, as appropriate. For this reason, such coordination is not listed as an independent task, but rather embedded in the performance of each of the aforementioned tasks.

TIME PERIOD

The proposed period for this research project will be 12 months, with an anticipated start date of August 15, 2016. The time period will include review and approval of the final guidebook.