



Assessing Freight Network Performance and Resilience in Relation to Terminal Wholesale Produce Markets

Beginning in 2022, USDA's Agricultural Marketing Service (AMS) partnered with the U.S. Department of Transportation's Volpe National Transportation Systems Center to conduct a multi-year investigation and analysis into the relationship between regional wholesale terminal produce markets and the transportation networks that serve them. This effort was conducted in parallel to an AMS-funded assessment of the infrastructure needs of terminal markets by Cornell University. Together, these reports fill critical gaps in understanding how these markets operate within business and regional network contexts.

The full report can be found on the AMS website - [From Truck to Trade: Building Resilient Produce Markets](#).

PROJECT STRUCTURE & OVERVIEW

Terminal markets function as aggregation hubs that link farms, import points, and regional buyers. The continuity and cost of these flows are strongly influenced by regional infrastructure reliability, congestion, and accessibility.

For this study, the project team conducted interviews and site visits with a range of terminal markets across the U.S. These facilities varied in size and organizational structure, but their operators expressed strikingly consistent views: regional transportation networks were not part of their core responsibilities or concerns, which include leasing, maintenance, and facility operations. Researchers also reviewed a sample of metropolitan planning organization and state freight plans to further demonstrate that public agencies do not consider wholesale markets as key freight generators or stakeholders.

There are, however, benefits of considering the perspectives of both the terminal market and public sector together. To illustrate this, the project team used transportation network and hazard analysis tools in two case studies: the Los Angeles Terminal Market and the St. Louis Terminal Market.

These vulnerability assessments highlight how concentrated dependence on a handful of highways can expose supply chains to risk from hazards, closures, or other causes.

Together, the project findings suggest that wholesale produce markets and public agencies share an interest in maintaining reliable regional transportation access, even if this alignment is not always apparent. Strengthening this connection through targeted analysis, improved communication, and recognition of market-specific supply chain needs can preserve the resilience and competitiveness of regional food systems.

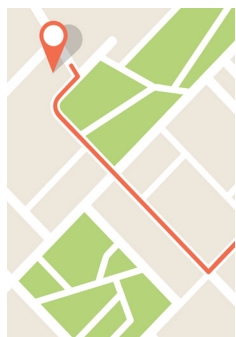
PROJECT INSIGHTS FOR STAKEHOLDERS TO CONSIDER

For Terminal Markets:



- Even if transportation is delegated to tenants and brokers, facility performance and competitiveness are directly shaped by regional access conditions.
- Delays or detours have disproportionate impacts on refrigerated and perishable products, increasing costs and food loss.
- Many of the most important transportation issues like interchange redesigns, signal timing, or congestion on key corridors, are not easily observed from within the market gates, but still affect operations.

For Transportation Planning Agencies:



- Wholesale terminal produce markets are rarely acknowledged in transportation plans, yet they handle substantial volumes of time-sensitive freight.
- Market supply often depends on a small number of regional corridors, creating potential single points of failure – particularly risky in hazard-prone regions.
- Analysis shows that strengthening specific routes or bridges can deliver outsized benefits to perishable supply chains. Agencies should consider replicating similar analyses during their regional programming and prioritization processes.
- Market operators may not have the bandwidth to proactively participate in planning processes, but their insights (often transmitted through tenants or brokers), can help agencies design projects that support both economic and community goals.

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The absence of terminal markets from planning processes has practical consequences. Infrastructure decisions made without market input...can inadvertently create new barriers for truck access.”

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