

Massachusetts Statewide Freight Plan

**Freight Advisory Committee
Meeting 3**

presented to
Freight Advisory
Committee

presented by
Massachusetts Department of
Transportation

Agenda

➤ Welcome and Review

Highway Administrator Thomas Tinlin
Massachusetts Department of Transportation (MassDOT) and
Gabe Sherman, MassDOT

➤ Vision and Goals

Highway Administrator Thomas Tinlin (MassDOT)

➤ Draft Recommendations

Nathan Higgins and John Kaliski, Cambridge Systematics (CS)

➤ Draft Freight Plan Outline

Nathan Higgins and John Kaliski, Cambridge Systematics (CS)



INTRODUCTIONS

The Freight Planning Team

- » Highway Division Administrator
Tom Tinlin
 - Chair, Freight Advisory Committee (FAC)

- » Gabe Sherman
 - Project Manager
 - Gabriel.Sherman@dot.ma.state.us

- » Trey Wadsworth
 - Manager of Capital Planning



P O R T S C A P E I N C

Our Work Plan

Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul

Synthesize 30+ reports
Analyze freight data
4 Agency Round Tables
25+ industry interviews

**4 FAC Meetings and
Open Houses**
Scenario planning to
articulate vision, goals,
objectives, and robust
strategies.

**2017
Freight
Plan**

REVISED PLAUSIBLE FUTURES

COMMONWEALTH QUO

Urbanization



- » City centers grow rapidly in population and employment
- » Suburban and rural areas plateau or grow slowly

Technology



- » New tech adopted fills important but niche markets
- » 3D printing for some products
- » Automation for some deliveries in and out of urban areas

Knowledge



- » Universities continue to educate a workforce that will be competitive in knowledge-based industries

Globalization



- » MA continues to attract international students and workforce
- » Globalization plateaus, exports remain strong, and hi-tech manufacturing comes to the US

INNOVATION ACCELERATION

Urbanization



- » People and jobs flow into smart city centers
- » Population in suburban and rural areas declines

Technology



- » New tech adopted rapidly and becomes ubiquitous
- » 3D printing dominates, supply chain and the routine tasks are increasingly automated

Knowledge



- » Universities continue to educate a workforce that will be competitive in knowledge-based industries
- » A strong cluster of service industries crop up

Globalization



- » Global trade dominates manufacturing patterns

PICKET FENCES

Urbanization



- » Urban living plateaus as millennials age and empty-nesters “depart”
- » Suburban and exurban populations increase

Technology



- » E-commerce and telepresence accelerate
- » Automation may accelerate in a suburban/exurban environment

Knowledge



- » MA continues focus on white collar jobs but increases focus on community colleges to develop a strong mid-level and service workforce

Globalization



- » Manufacturing returns to the US
- » Need for additional capacity to export goods from MA to other states

VISION AND GOALS

Whose Goals?



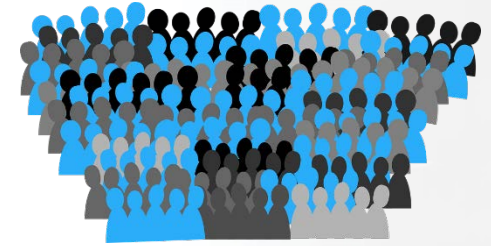
Industry
FAC, Interviews



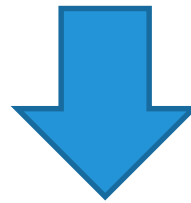
US Government
*FAST Act, FAC,
Working Groups*



MA Agencies
FAC, Working groups



**Transportation
System Users**
Workshops



Massachusetts Freight Plan

FAC: Survey Results

➤ Likelihood of plausible futures:

- » Commonwealth Quo = 6.5/10
- » Innovation Acceleration = 3.9/10
- » White Picket Fences (Return to Rural Roots) = 4.5/10

➤ Top 4 “no-brainer” solutions:

- » Keep freight network in a state-of-good-repair
- » Integrate freight into local planning
- » Identify rural areas suitable for distribution and freight use
- » Develop new truck stops and parking areas on primary truck routes

➤ 2 solutions ranked low

- » Regulate CO₂ emissions from freight vehicles (*kept in as it meets a stated Federal goal and a State directive*)
- » Peak pricing on primary truck routes (will not be included in Freight Plan)

FAST Act: State Freight Plans

- **Identify infrastructure improvements, policies, and operational innovations that:**
 - » Strengthen economic competitiveness (of the US)
 - » Reduce congestion and eliminate bottlenecks
 - » Increase productivity and create high-value jobs
- **Improve safety, security, efficiency, and resiliency**
- **Achieve and maintain a state-of-good-repair**
- **Use innovation and advanced technology to improve safety, efficiency, and reliability**

FAST Act: State Freight Plans

➤ **Improve:**

- » Economic efficiency and productivity
- » Reliability
- » Movement of goods across rural areas
- » Movement of goods between rural areas and population centers
- » Movement of goods between gateways and the freight network

➤ **Support multi-state corridor planning and the creation of multi-state organizations**

➤ **Reduce adverse environmental impacts of freight**

MassDOT Performance Goals



Customer Experience

Provide reliable and accessible services to MassDOT and MBTA customers and ensure that they are satisfied with the services provided.



System Condition

Ensure that the transportation system is well maintained and follows best practices for maintaining, preserving, and modernizing assets.



Budget and Capital Performance

Maximize capital investment effectively and efficiently by delivering programs and projects that produce the greatest benefits to the Commonwealth, its residents, and its visitors.



Safety

Provide and support a multi-modal transportation network that is safe for our workers and all users.



Healthy and Sustainable Transportation

Invest in and support a transportation system that promotes and protects the health of all users and the natural environment.

Other MA Agencies



Role

- Logan, Worcester airports
- Port of Boston
- South Boston Waterfront

Goals

- Seaport access for trucks
- Air freight capacity as passenger demand grows



Role

- Regulate emissions from vehicles, facilities

Goals

- Encourage shore power
- Vehicle emissions reduction

A map of Massachusetts and surrounding regions, color-coded to show different Metropolitan Planning Organizations (MPOs). The map includes labels for various regions: Montachusett (red), Northern Middlesex (yellow), Merrimack Valley (orange), Pioneer Valley (blue), Boston Region (purple), Old Colony (pink), and Massachusetts (green). A legend in the bottom left corner identifies the colors: blue for Metropolitan Planning Organization, red for Hampshire County Regional Planning Commission, green for Middlesex Regional Planning Commission, yellow for Worcester Regional Planning Commission, orange for Eastern Regional Planning Commission, pink for Southern Regional Planning Commission, and purple for Western Regional Planning Commission. A scale bar at the bottom indicates distances in miles (0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100).



Role

- # Goals

Role

- # Goals

- massDOT**
Massachusetts Department of Transportation

Vision and Guiding Principles

➤ **The Massachusetts Multimodal Freight System will:**

- » Be safe, secure, and resilient
- » Maintain a state-of-good-repair for key freight assets
- » Improve the economic competitiveness of Massachusetts
- » Provide efficient and reliable mobility within Massachusetts and to/from neighboring states
- » Support healthy and sustainable communities

➤ **Our Guiding Principles in Implementing this Vision:**

- » Consider the experience of **all** customers
- » Provide reliable, efficient service within budget constraints
- » Take advantage of innovations and technology
- » Support a well-trained workforce with good-paying jobs

STRATEGY RECOMMENDATIONS

Types of Strategies

**Infrastructure
Improvements**

**Operational
Innovations**

Policies and People

Robust Decision Making

	Lower Risk	Higher Risk
All Futures	Immediate Current or near-term need	
	Robust No-brainers	
Some Futures	Deferred No regret	Hedging Potential regret
		Shaping Influence the future
No futures	Dropped	

Survey Scoring

- First cut:
 - » >75% appropriate in all 3 scenarios: **Immediate**
 - » <50% appropriate in all 3 scenarios: Consider dropping
 - » Else: go to second cut
- Second cut:
 - » >50% in all 3 futures: **Robust**
 - » Meets a Federal or State priority: **Shape**, **Hedge**, or **Defer**
 - » Scores strongly in some futures: **Shape**, **Hedge**, or **Defer**
- Third cut: Use professional judgment to refine the definitions, language, and assignments

Immediate Strategies

➤ **Infrastructure Improvements**

- » Keep freight network assets in a state-of-good-repair
- » New truck stops and parking areas on primary truck routes
- » Upgrade rail lines to the 286K standard and double-stack
- » “Shore power” at rail terminals and truck stops
- » Ensure that distribution centers linked efficiently to rail
- » Identify and preserve existing rural and industrial sites for warehousing and distribution development
- » Complete streets in urban areas that accommodate freight

Immediate Strategies

➤ Operational Innovations

- » Require side guards on trucks to protect cyclists
- » Intelligent Transportation Systems and active operations management on urban roads

➤ Policies and People

- » Support professional development in the trucking profession
- » Support policies to reduce CO2 emissions from all freight vehicles
- » Support local governments in integrating freight needs, distribution centers, and industrial uses into their planning processes
- » Include delivery strategies in building and zoning codes
- » Increase share of Massachusetts water imports and exports through Massachusetts ports (e.g., Boston, New Bedford)
- » Coordinate with freight planning in neighboring states

Robust Strategies

➤ Infrastructure Improvements

- » Protect freight facilities from potential climate change impacts
- » Build new intermodal rail terminals and/or make infrastructure improvements to those already operating
- » Maintain uncongested freight access to airports, seaports, and rail terminals in mixed-use urban settings
- » Build distribution centers outside of Route 128
- » Build consolidated freight villages
- » Develop public freight delivery areas (e.g., metered truck parking spaces) in urban areas and town centers

Robust Strategies

➤ Operational Innovations

- » Better integrate supply chain information to reduce administrative and regulatory delays
- » Review state regulations and practices that impact security clearance and chain-of-custody for imports and exports
- » Designate routes for automated trucking in anticipation of technology becoming commercially available
- » Leverage connected vehicle technology to maximize en-route efficiency

➤ Policies and People

- » Harmonize OS/OW permitting across New England
- » Ensure that distribution centers are surrounded by appropriate land uses

Hedging Strategies

➤ Hedging: Infrastructure Improvements

- » Increase domestic and international freight capacity at airports other than Logan and market them to carriers
- » Increase warehousing capacity near Logan by developing direct truck access roadways
- » Build distribution centers inside of Route 128

Shaping Strategies

➤ Operational Innovations

- » Build routing software for delivery vehicles that interfaces with non-freight traffic and respects management by local government

Deferred Strategies

➤ **Infrastructure Improvements**

- » Build standardized package drops (e.g., locked boxes) at homes for delivery of small packages
- » Complete streets in suburban areas that accommodate freight

➤ **Operational Innovations**

- » Intelligent Transportation Systems and active operations management on rural and suburban roads

Strategies Not in Freight Plan

➤ **Operational Innovations**

- » Peak pricing on primary truck routes

BREAKOUT GROUPS

Breakout Groups

➤ **Three groups for:**

- » Infrastructure Improvements
- » Operational Improvements
- » Policies and People

➤ **We're looking for:**

- » Major gaps?
- » Major revisions?
- » Major disagreements with our categorization?

➤ **Prepare to report back**

PROPOSED FREIGHT PLAN OUTLINE

Proposed Freight Plan Outline

Sections with greatest FAC input

➤ Chapter 1: Vision and Purpose

- » Federal requirements
- » State objectives
- » **Vision and guiding principles**

➤ Chapter 2: The Massachusetts Freight Network

- » Gateways
- » Corridors
- » The First and Last Mile
- » Full list of facilities on the network by MPO

➤ Chapter 3: Context

- » Existing conditions
- » Drivers of global change
- » **Plausible futures**

Proposed Freight Plan Outline

➤ Chapter 4: Recommended Strategies

- » Robust Decision Making (RDM) methodology
- » Development of strategies
- » **Immediate strategies**
- » **Robust strategies**
- » **Hedge, Shape, and Defer strategies**

➤ Chapter 5: Implementation

- » Responsible agencies and actors
- » **Implementation strategies by actor**

WHAT'S NEXT

And now...

- **Stick around to talk to the team**
 - » Questions about goals and strategies
 - » Questions about the Freight Plan's outline and structure
- **Public open house from 4:00 – 5:30 PM**

Coming soon...

Meeting	Goals and Strategies	Freight Plan
May 24 – New Bedford	Review added/modified strategies	Hear about plans for development, review, release

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