massDOT
Massachusetts Department of Transportation

Transportation Research Special Edition

Providing highlights of MassDOT's transportation research Peer Exchange **2025**

"Peer recognition and peer-to-peer communication are closely linked and reinforce each other in the work environment, helping to ensure a positive working relationship between peers."

Penny Smith – Freelance Blog

AGENDA

Day 1

9:00-9:30am	Welcome and Introductory Remarks
9:30-10:15am	Research Solicitation
10:15-10:50am	Project Selection (Part 1)
10:50-11:00am	Break
11:00am-12:00	Project Selection (Part 2)
12:00-1:15pm	Lunch
1:15-2:45pm	Project Execution and Management
2:45-2:55	Break
2:55-4:25	Research Topics Showcase I
4:25-4:30	Wrap Up

Day 2

8:30-8:45am	Opening Remarks Day Overview
8:45-9:00am	TRB Research Overview
9:00-10:50am	Research Implementation & Funding
10:50-11:00am	Break
11:00am-12:15pm	Research Evaluation
12:15-1:20pm	Lunch
1:20-2:35pm	Research Topics Showcase II
2:35-2:45pm	Break
2;45-3:30pm	Next Steps

Survey Brief: Program Organization and Budget

US Department of Transportation's Volpe Center conducted a survey with all participants of the MassDOT Research Program's Peer Exchange event. Here are some highlights.

Budget and Staffing
Average research program budget among the participating states was $3.6 million with the average staff of 5.4 people, ranging from 1 to 10.

Strategic Planning
Two states, Kentucky and New Jersey had research strategies and State of Oregon had research advisory committee priorities that are aligned to agency strategic plan.

Research Manual
All the participating states had research manuals with an update range of one to eight years. New Jersey updates theirs annually, Colorado and Utah every five years and Kentucky every eight years.

Activity Cost Distribution
56% of average cost share was on Research activities. Five out of seven programs spend between 45% to 65% of their budget on research. 17% of the average cost share was on technology activities. Four out of seven programs spend less than 10%. MassDOT had the highest spending (56%) on technology activates. Average project cost was $175,000, with project duration ranging from one to three years.

Other Key Activities
CO, MD, OR contributed to TRB and NCHRP. MA, MD, KY, UT, CO, and OR contributed to pooled fund studies.

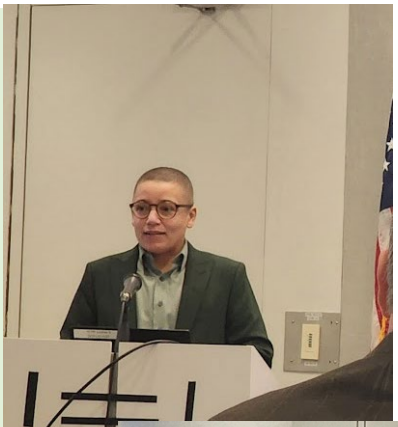
MassDOT Research Peer Exchange 2025

The MassDOT Research Program conducted a peer exchange with transportation research peers on March 12-13, 2025, at 10 Park Plaza. The peer exchange conducted in accordance with 23 CFR 420, which requires that agencies use a portion of State Planning and Research (SPR) Program funds to conduct periodic peer exchanges (every 5 years) to share and enhance their respective research program activities. MassDOT contracted the U.S. Department of Transportation's Volpe Center to facilitate the peer exchange.

This Research Peer Exchange brought together representatives from six other State DOTs, the FHWA Massachusetts Division, and the Transportation Research Board to identify innovative approaches and best practices in research solicitation, execution, implementation, and evaluation.

MassDOT Secretary and CEO, Monica Tibbits-Nutt gave the opening remarks on day one. MassDOT Highway Administrator Johnathan Gulliver and Chief Engineer Carrie Lavalle gave opening remarks on day two.

Participating state DOTs: Colorado, Kentucky, Maryland, New Jersey, Oregon, and Utah.



MassDOT Research Peer Exchange March 12-13, 2025

massDOT Massachusetts Department of Transportation

U.S. Department of Transportation Volpe Center

U.S. Department of Transportation Federal Highway Administration

Research Peer Exchange Session Summaries*

Project Selection

Peers described project selection as a complex and evolving process that requires careful consideration of research needs, available expertise (both internal and external), funding limitations, regulatory requirements, and the potential for successful implementation, while also navigating organizational structures and partner relationships.

Project Execution and Management

Overall, managing research projects involves navigating complex processes for contracting, budgeting, scheduling, coordinating diverse internal and external partners, and addressing challenges like staff turnover and institutional barriers, while also incorporating methods for tracking progress and performance. The peer group discussed their approaches and processes to address these challenges.

Project Implementation

Attendees described research implementation as a critical but often more challenging component of their work. Subsections included:

- Mechanisms and Strategies to Support Implementation
- Barriers to Implementation
- Recommendations to Prioritize and Support Implementation

Project Evaluation

Research Evaluation is recognized as crucial for program improvement and accountability. While some states utilize surveys, interviews, tracking, and formal reporting processes, they face challenges in obtaining honest feedback and ensuring the evaluation results lead to actionable change within the organization. The peer exchange highlighted different approaches and the shared goal of improving this phase of the research lifecycle.

*This section is partially taken from draft report prepared by the US Department of Transpiration VOLPE Center. Special thanks to the FHWA MA Division and the Transportation Research Board for their guidance, input and feedback!

The peer exchange focused on four major areas of the research cycle:

- Research project selection
- Research project management and execution
- Project implementation
- Project evaluation

Additionally, peers showcased emerging research areas to conclude both days of the event. These sessions highlighted expected growth areas for research and innovation across the DOTs in attendance.

Exchange Structure

Peers, including representatives from MassDOT, completed a 56-question survey in February 2025 to help prepare for the in-person discussions. The questionnaire asked attendees to provide details about their program sizes, funding, staffing structures, and specific questions about the four research cycle phases that were the focus of this peer exchange. The results were summarized and provided to attendees ahead of the event to prepare for on-site discussions.

The peers also completed a virtual pre-meeting in February 2025, during which each state presented a high-level overview of their research program. This virtual event allowed basic information and introductions to occur ahead of the in-person event which, along with the survey results, enabled peers to spend their in-person time deep diving a wide range of topics.

Peer Exchange Highlights

Project Solicitation Survey Brief: How Themes/Topics are Prioritized to Solicitation by State

Colorado

Prioritization by Research Implementation Council by need and benefit

Themes through Areas of Emphasis increase the flow of/promote/prioritize needs

Kentucky

Preliminary vote

Final leadership assessment by need area

Maryland

Ideas added to master list

The Research team works advisory board/leadership to rank and select Plans for themes/strategic emphasis areas

New Jersey

Based on the Research Oversight Committee priorities

Oregon

Approximately 100 problem statements received

Utah

Program supports 6+ or divisions/subject groups with their priority research needs

Each confirmed group portion of funding if they have needs

Project Selection Survey Brief: How Research Proposals are Evaluated by State

Colorado

Oversight team of SMEs prioritize/eliminate projects

Top subject subset evaluated by RIC, who advise OAR w/ DTD director/ CDOT chief engineer

Research office solicits/contracts vendor

Kentucky

Voting by Cabinet Employees

Final assessment on Cabinet needs by leadership.

State Highway and Deputy Secretary give final approval

Maryland

Research team provides initial evaluation

Leadership (Administrator and five chiefs) ranks/select ideas

Selected ideas go through RFP; tech team selects

New Jersey

Proposals reviewed/ evaluated

Research Bureau manager has final decision-making authority

Oregon

Initial project review

Expert Task Groups review/ nominate problem Statements

Research coordinator/project submitter develop stage 2 problem statement

Research Advisory Committee Review/prioritize/ vote

Utah

Teams evaluate/score topics based on subject groups

Exchange of voter questions

Workshops to prioritize prob. Statements

Director approves recommended list; added to annual work program