

# Research Need Statement 615

## I. Need Statement Champions and Information

### I.A. Need Statement Champion Information

I.A.1. First and Last Name of Research Champion: Francis Loetterle

I.A.2. Research Champion's Office: MnDOT OFCVO

I.A.3. Research Champion's Phone Number: 651-366-3194

I.A.4. Research Champion's Email: [francis.loetterle@state.mn.us](mailto:francis.loetterle@state.mn.us)

### I.B. Research Co-Champion

I.A.1. First and Last Name of Research Co-Champion: Andrew Andrusko

I.A.2. Research Co-Champion's Office: MnDOT OFCVO

I.A.3. Research Co-Champion's Phone Number: 651-366-3644

I.A.4. Research Co-Champion's Email: [andrew.andrusko@state.mn.us](mailto:andrew.andrusko@state.mn.us)

I.C. Research Needs Title (115 Characters): **Identify Best Types of Commodity Flow Data for Freight, Railroad, Ports and Waterways Studies**

I.D. Project Sponsor: **MnDOT Research Program**

## II. Research Need Background and Description

### II.A. Research Need Background

II.A.1. Describe the problem or opportunity.

**Freight data across various modes is important to future infrastructure decision making. Understanding where the different types of commodities are moving and being able to predict their future movements will help to ensure that infrastructure investments have a high return on investment.**

II.A.2. If applicable, describe how this project will build on previous research.

II.A.3. If applicable, include the title/s or previous research.

II.A.4. What is the **objective** of the proposed research?

The objective of this research is to develop an analysis of various types of commodity flow data, waybill data, commercial data (such as InfoUSA) and to determine which of these data are the most helpful for planning, programming and design of future infrastructure on the truck freight, railroad, and ports and waterways networks within Minnesota and surrounding states. This research will also evaluate and recommend methodologies for the generation and collection of freight data, freight trip generation, and service trips within the context of MnDOT's freight studies.

### III. Strategic Priorities, Benefits, and Expected Outcomes

**Section III. is for MnDOT sponsored and co-sponsored projects only; all LRRB projects proceed to section IV.**

#### III.A. MnDOT Strategic Priorities

*Instructions:* Briefly describe how the project aligns with the following MnDOT Research Strategic Priorities. Complete all that apply.

III.A.1. Innovation & Future Needs: **This research will to increase innovation in Minnesota's responses to and coordination with freight businesses, manufacturers and federal partners such as the Federal Bank of Minneapolis. In addition, this research will help to identify future freight data needs as we look to future planning and decision making efforts centered around freight, railroads and waterways.**

III.A.2. Advancing Equity:

III.A.3. Asset Management:

III.A.4. Safety:

III.A.5 Climate Change & Environment:

#### III.B. Expected Outcomes

*Instructions:* Check all expected direct outcomes of this research.

- New or improved technical standard, plan, or specification
- New or improved manual, handbook, guidelines, or training
- New or improved policy, rules, or regulations
- New or improved business practices, procedure, or process
- New or improved tool or equipment
- New or improved decision support tool, simulation, or model/algorithm (software)
- Evaluation of a new commercial product
- New or improved technical standard, plan, or specification
- Other. Please specify below:

III.C. Expected Benefits

*Instructions:* Select all expected benefits that may be realized if the findings and recommendations from this research is adopted or implemented

III.C.1. Construction Savings Choose an item.

III.C.2. Decrease Engineering/Administrative Costs Choose an item.

III.C.3. Environmental Aspects Choose an item.

III.C.4. MnDOT Policy Choose an item.

III.C.5. Lifecycle Choose an item.

III.C.6. Operations and Maintenance Savings Choose an item.

III.C.7. Reduce Risk Choose an item.

III.C.8. Reduce Road User Cost Choose an item.

III.C.9. Safety Choose an item.

III.C.10. Technology Choose an item.

III.C.11. Other, please describe below:

**This research will benefit the state by providing guidance on which types of commodity flow data will be helpful in identifying future freight needs and long term trends/risks affecting multiple modes in the future. It will also help to inform peer agencies such as the Department of Employment and Economic Development on where cargo movements are occurring and the economic value of future improvements in programs such as the TED program.**

## IV. Technical Advisory Panel

*Instructions:* Please list the name and affiliation of individuals to consider for the Technical Advisory Panel.

Gene Hicks, Traffic Data Manager, Office of Transportation System Management

Julie Whitcher, Weigh Station and Rail Safety Manager, Office of Freight and Commercial Vehicle Operations

Jason Craig, CH. Robinson, Minnesota Freight Advisory Committee Chair

Meg Duncan, Koch Logistics, Minnesota Freight Advisory Committee Co-Chair

Patrick Phenow, MnDOT Ports and Waterways Manager, Office of Freight and Commercial Vehicle Operations

Robert Clarksen, Freight and Rail Planner, Office of Freight and Commercial Vehicle Operations

Hally Turner, Planning Director for Statewide Policy Planning, Office of Transportation System Management

Your assigned Project Advisor is available to answer questions and provide guidance (assigned by the Office of Research & Innovation).

Your Project Advisor is: Marcus Bekele, [marcus.bekele@state.mn.us](mailto:marcus.bekele@state.mn.us)