



Minnesota Statewide Freight System Plan

Strategic Freight Network
Ad Hoc Working Group Meeting #1
December 3, 2014

We all have a stake in **A  B**



Presentation Overview

- ▶ Welcome and Introductions
- ▶ Strategic Freight Network Overview
- ▶ Review and Discussion of Existing MnDOT Routes and Networks
 - Purpose of each network
 - Overlapping principles
 - Connectivity and applicability
 - Existing Gaps
- ▶ Summary and Next Steps



Why is Minnesota Developing a Freight Plan?

- ▶ Align with MAP-21 recommendations and other Federal and State guidelines (*including other statewide plans*)
- ▶ To integrate previous, independent MnDOT freight planning efforts
- ▶ Engage freight decision-makers/stakeholders during development, and beyond
- ▶ Enable MnDOT to evaluate and prioritize freight system investments
- ▶ Facilitate better integration of “freight” throughout MnDOT



Ad Hoc Working Groups

- ▶ Assembled to focus on specific topics
 - Performance Measurement
 - Minnesota's Strategic Freight Network
 - Institutionalizing Freight within MnDOT
- ▶ Types of tasks
 - Review current research and relevant reports
 - Identify and discuss data sources, availability and use
 - Identify and discuss gaps, deficiencies, opportunities
 - Develop Plan recommendations
 - Serve as a point of contact and resource during implementation
- ▶ In person meetings and online collaboration



MN Strategic Freight Network (SFN)

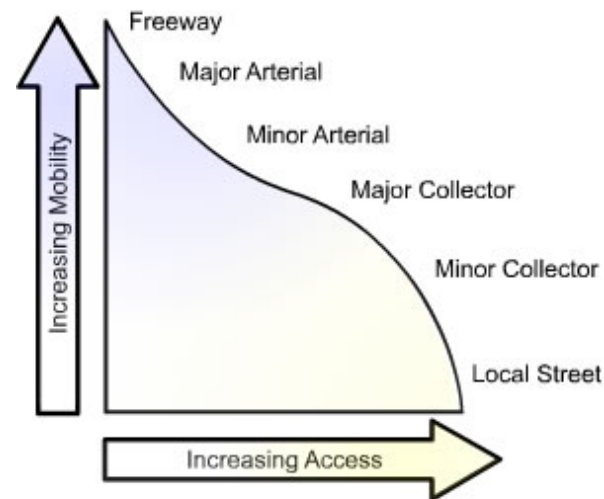
- ▶ What is a Strategic Freight Network?
- ▶ Why identify such a system?
- ▶ What will we do with this information?



What is a Strategic Freight Network?

► Multimodal system of inter-connected freight routes

- Highways
- Railroads
- Airports
- Ports
- Pipelines

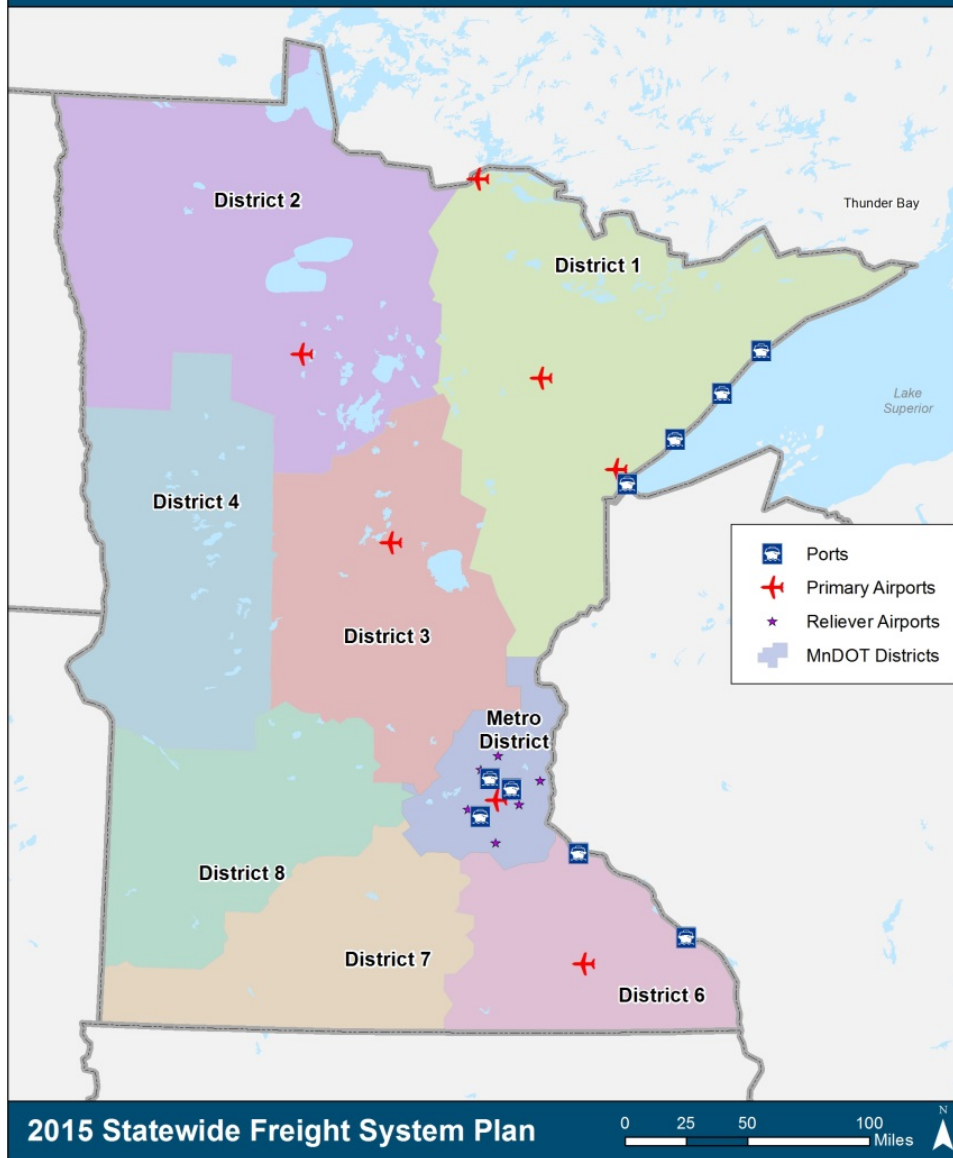


► Defining Strategic

- “useful or important in achieving a plan or strategy”



Ports and Airports

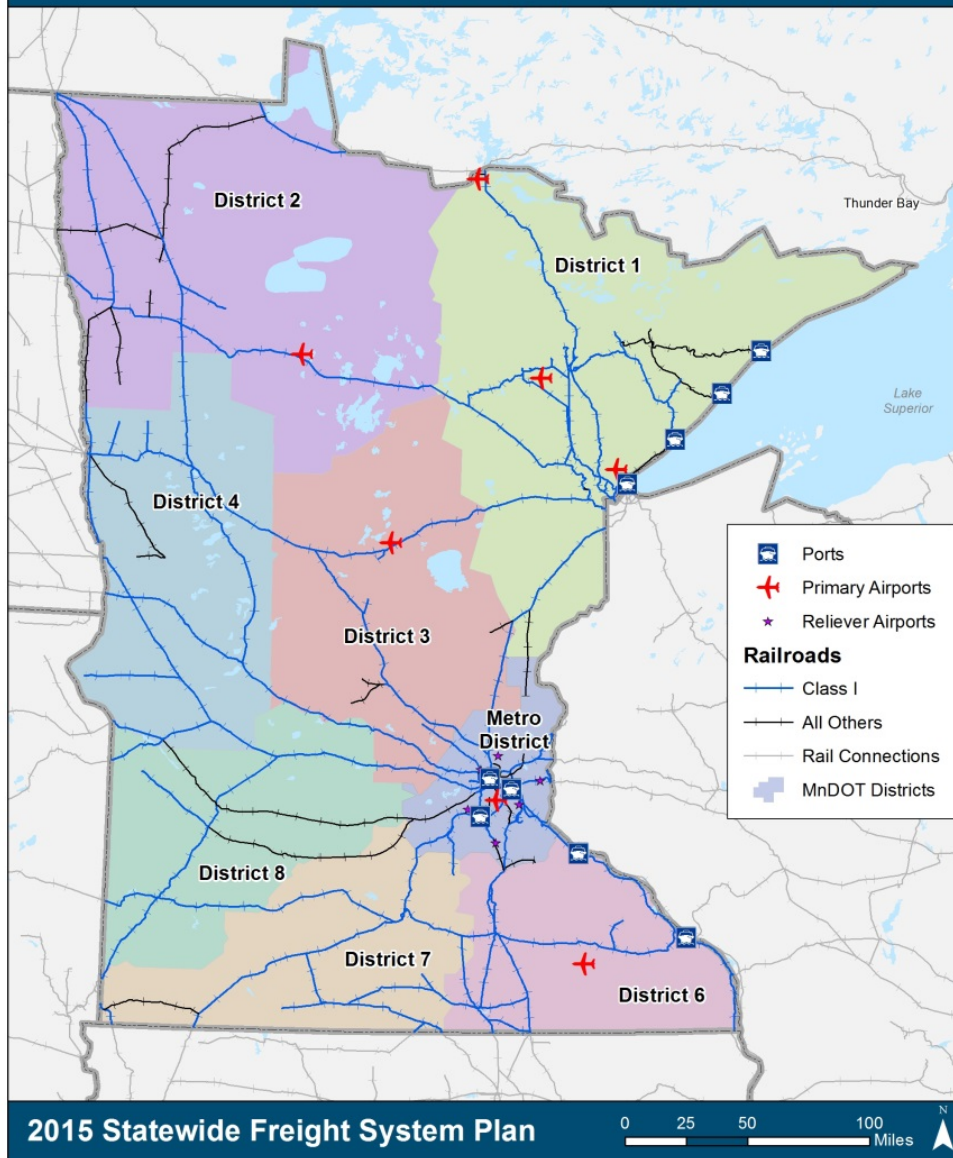


Minnesota's Freight System

- ▶ Water ports:
 - 5 on the Mississippi
 - 324 Navigable Miles
 - 4 on the Great Lakes
- ▶ Airports:
 - 8 with commercial service
 - 135 total



Railroads

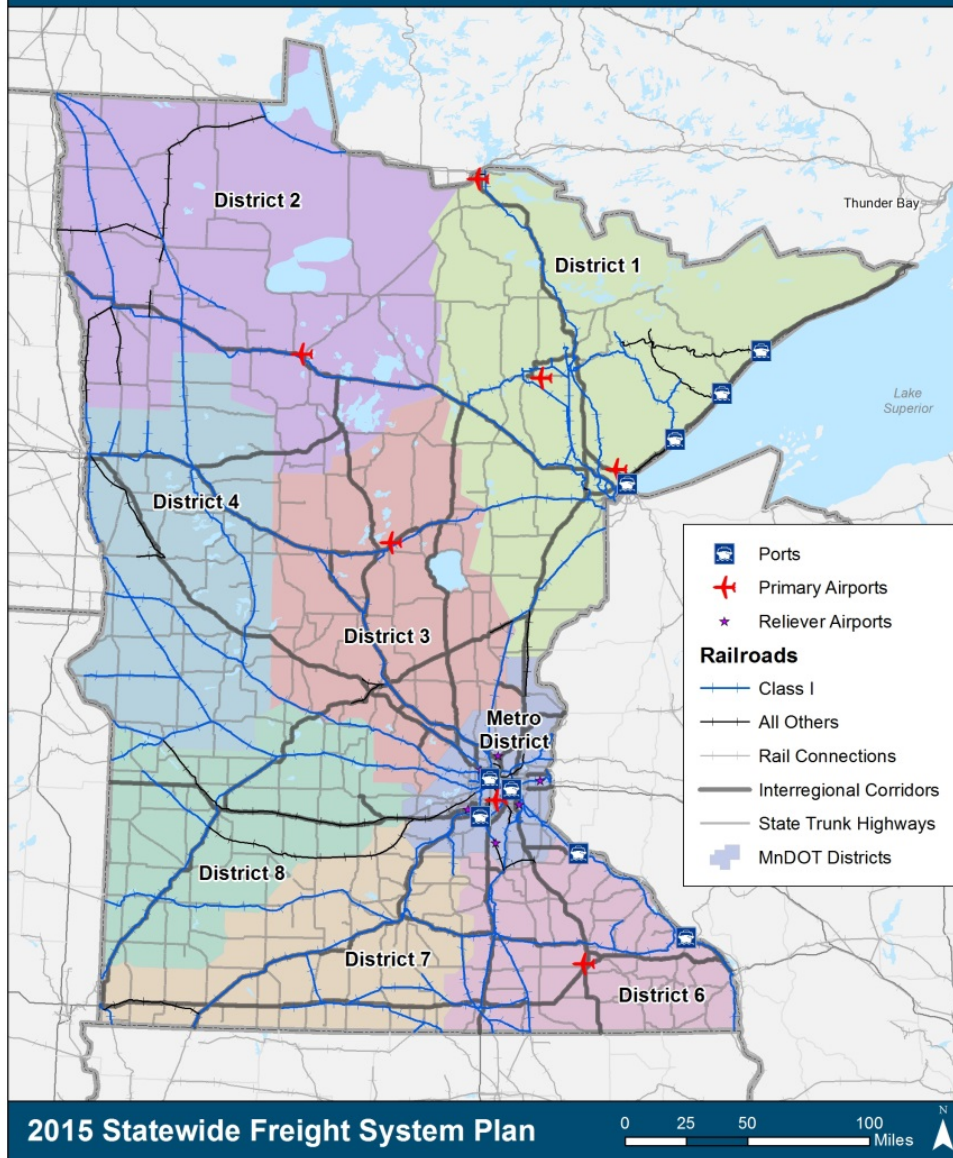


Minnesota's Freight System

- ▶ 4,623 Railroad Miles
- ▶ 4 Class I Railroads
 - BNSF
 - CP
 - CN
 - UP



Highways

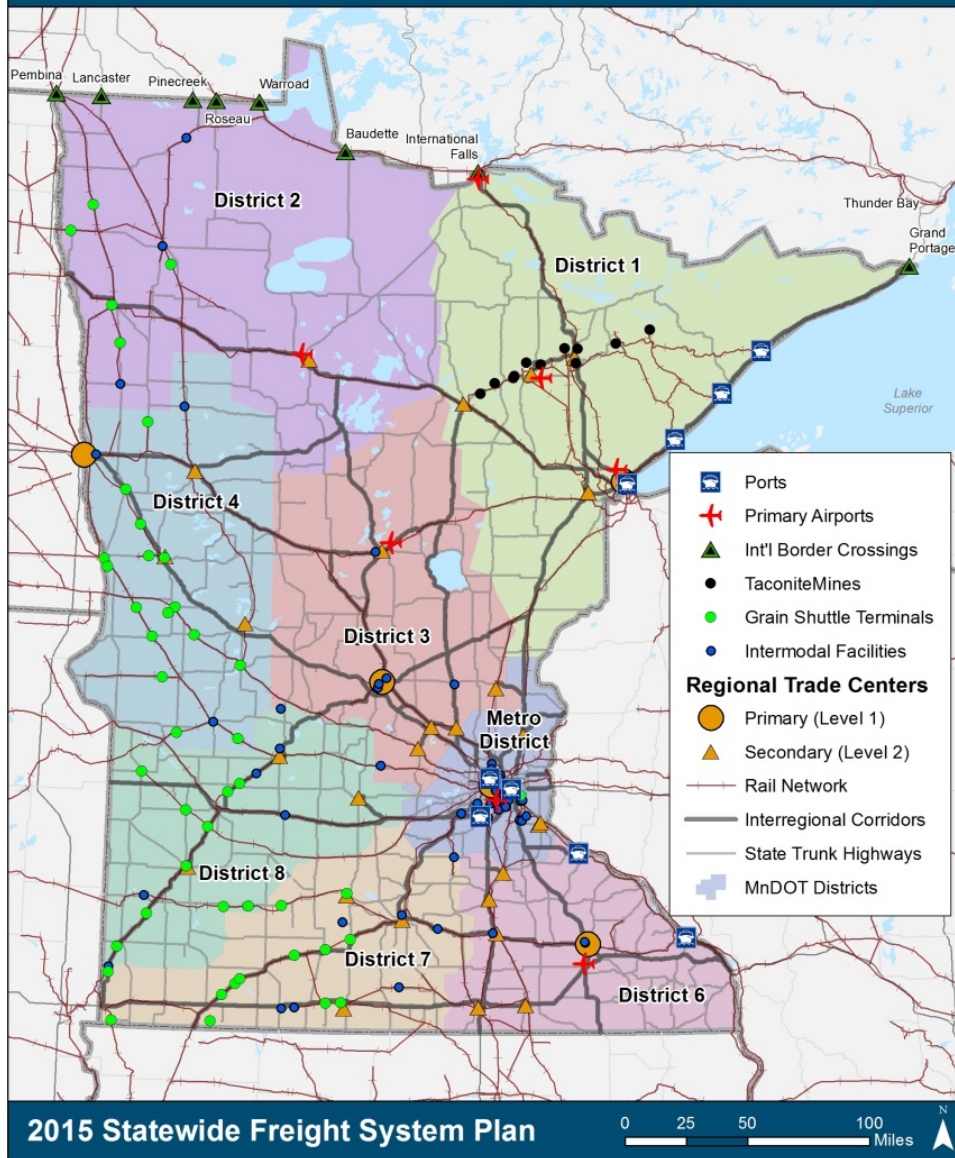


Minnesota's Freight System

- ▶ Highway System Miles: 12,000
- ▶ Minnesota's overlapping networks
 - Twin Trailer Network
 - Interregional Corridors
 - Etc.



Freight Hubs & Facilities



Minnesota's Freight System

- ▶ Hubs & Facilities
 - Intermodal facilities
 - Grain Shuttle Terminals
 - Taconite Mines
 - International Border Crossings
- ▶ Need for intermodal / multimodal connectivity

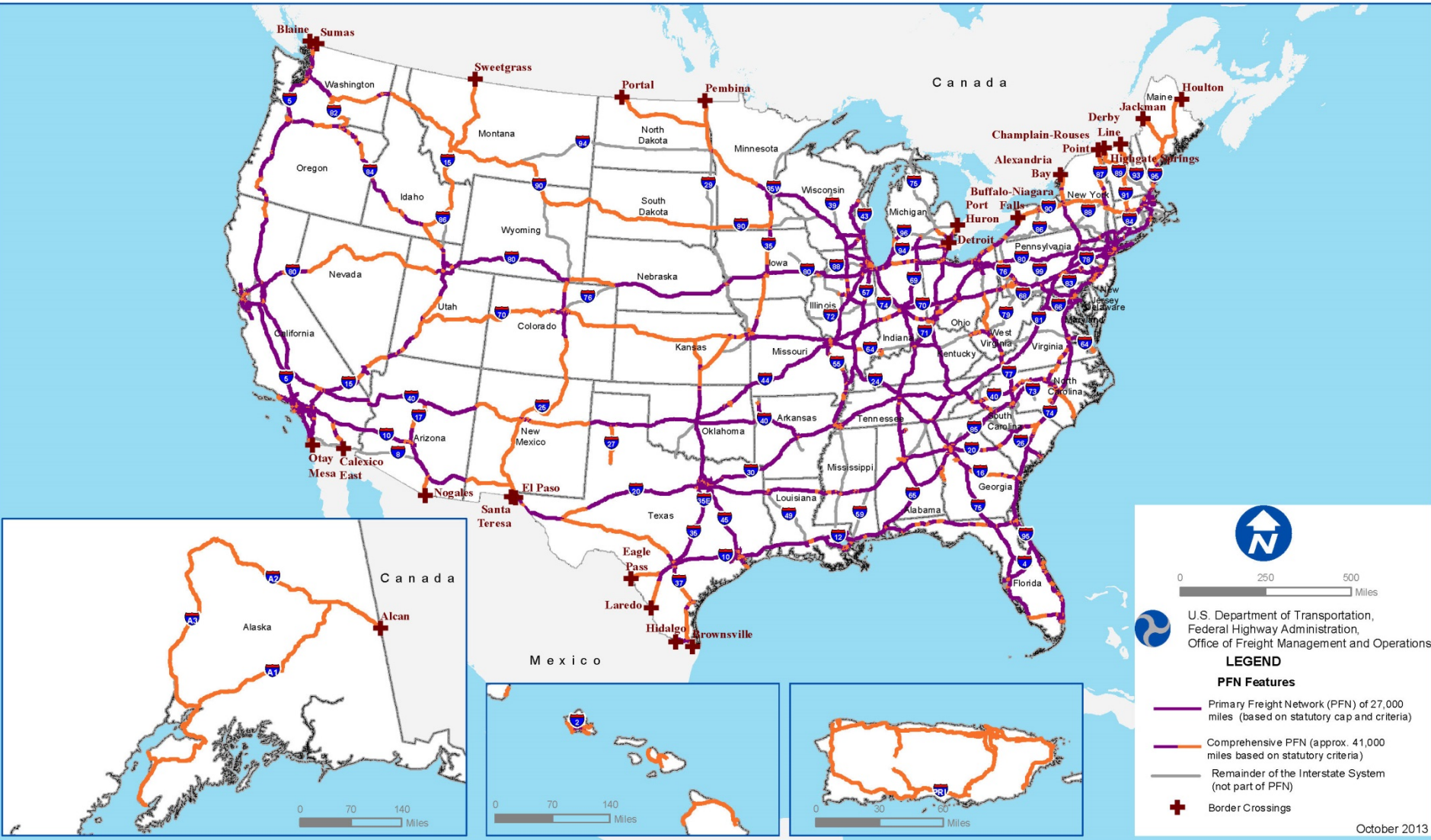


Primary Freight Network (PFN)

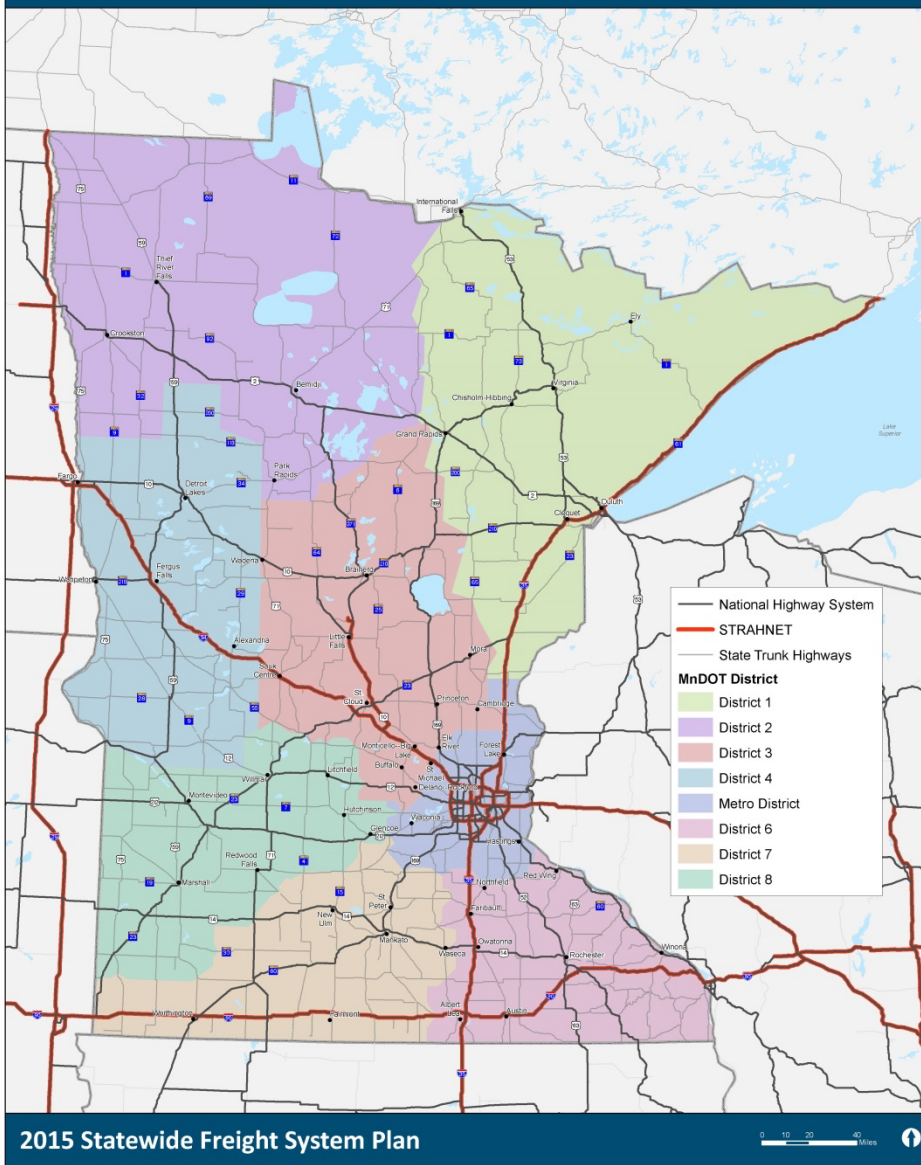
- ▶ MAP-21 required U.S. DOT to designate a national highway Primary Freight Network (PFN) consisting of up to **27,000 miles**
- ▶ Minnesota mileage currently **155 miles**
- ▶ Based on HCADT traffic volumes
- ▶ Minimal connectivity



Draft Highway Primary Freight Network

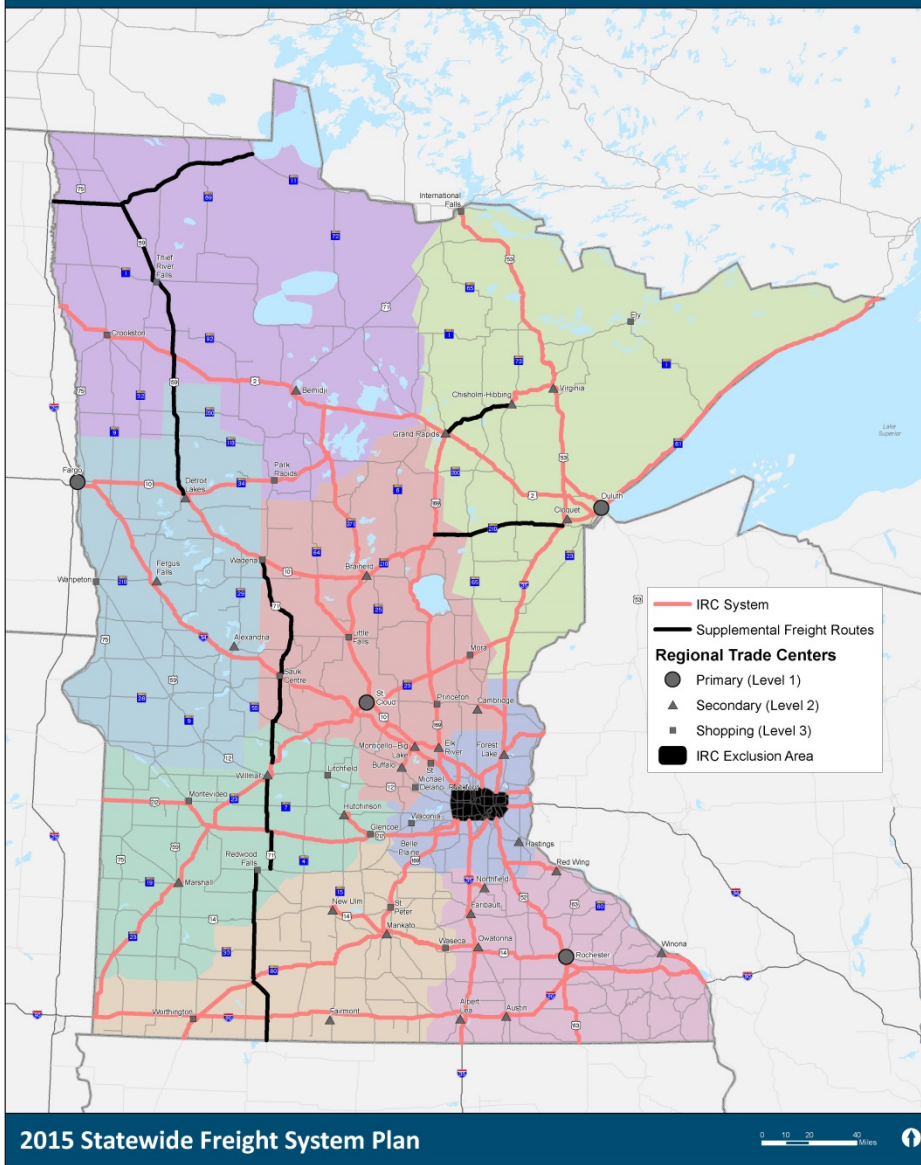






NHS/STRAHNET

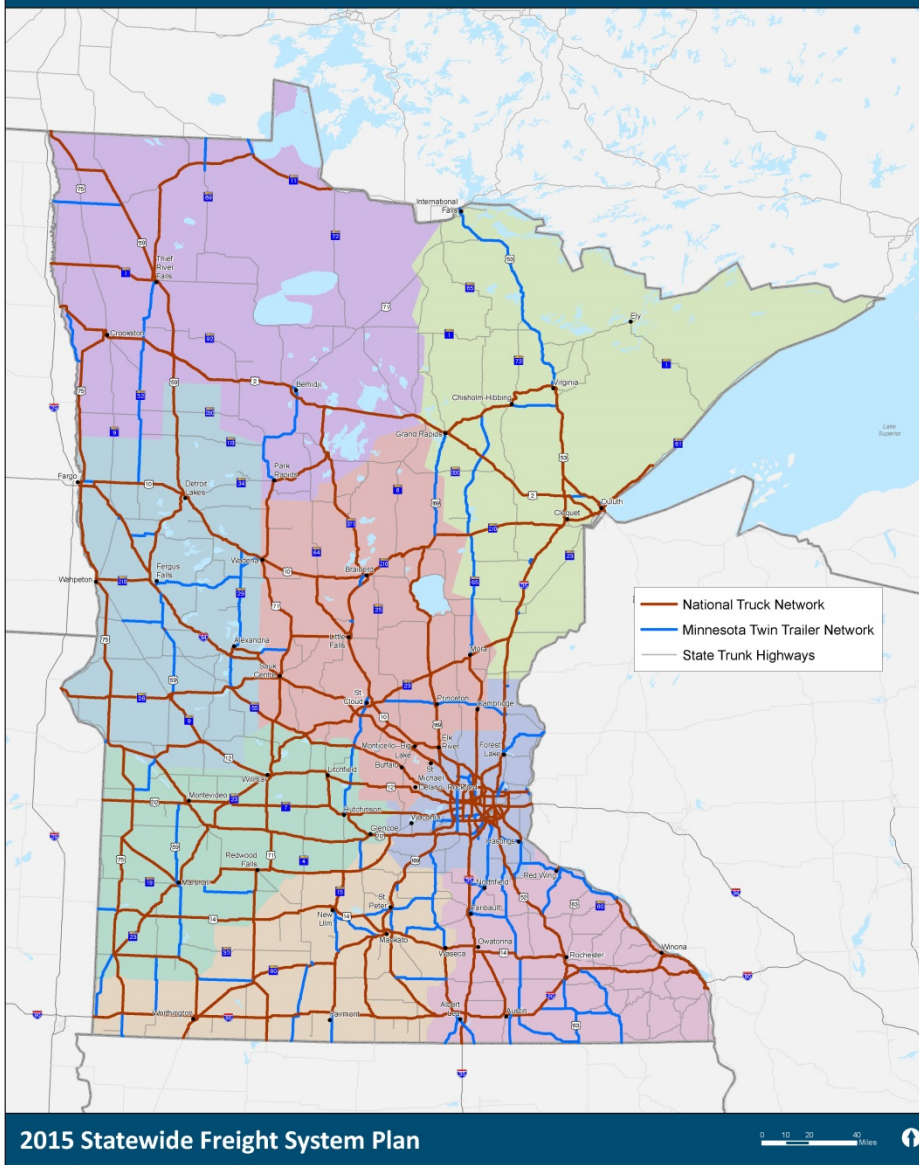
- ▶ NHS:
 - Important to the nation's economy, defense, and mobility
 - 3,964 miles in Minnesota
- ▶ STRAHNET:
 - Necessary for movement of U.S. military equipment



IRC

- Connects regional trade centers with each other, with neighboring states, and with Canada
- 3,486 miles

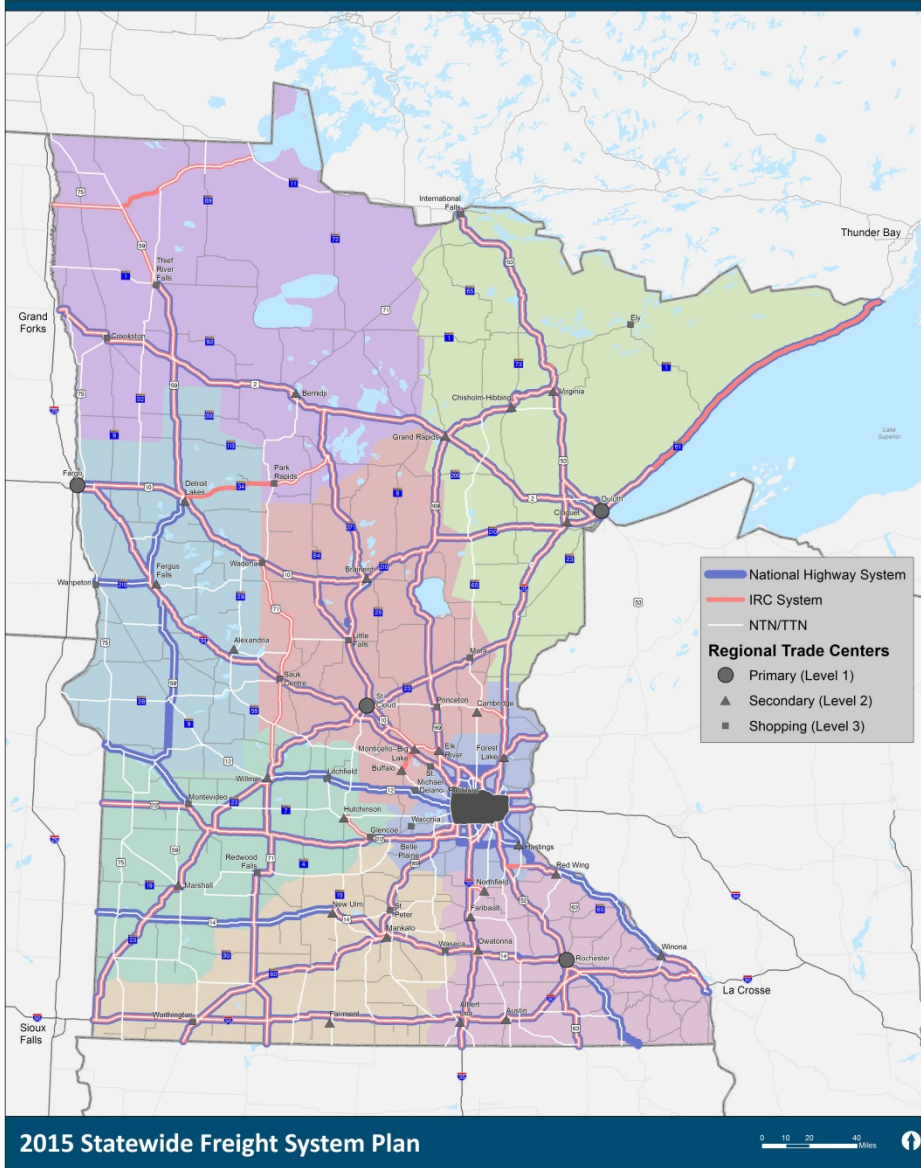




NTN/TTN

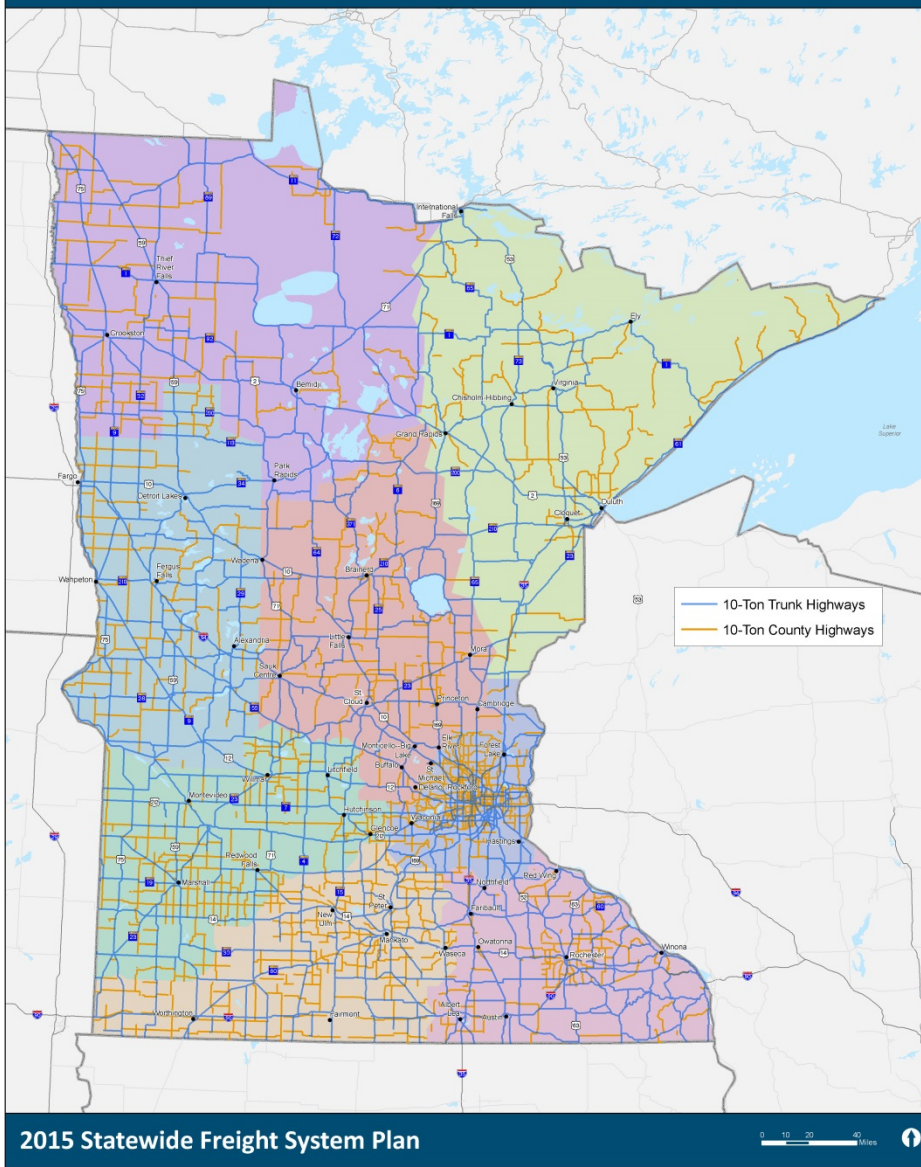
- ▶ NTN:
 - Regulates the maximum width and length of trucks on these roadways
- ▶ TTN:
 - Created to supplement the NTN with additional corridors
- ▶ 6,700 miles combined





Comparison of NHS, IRC, NTN/TTN

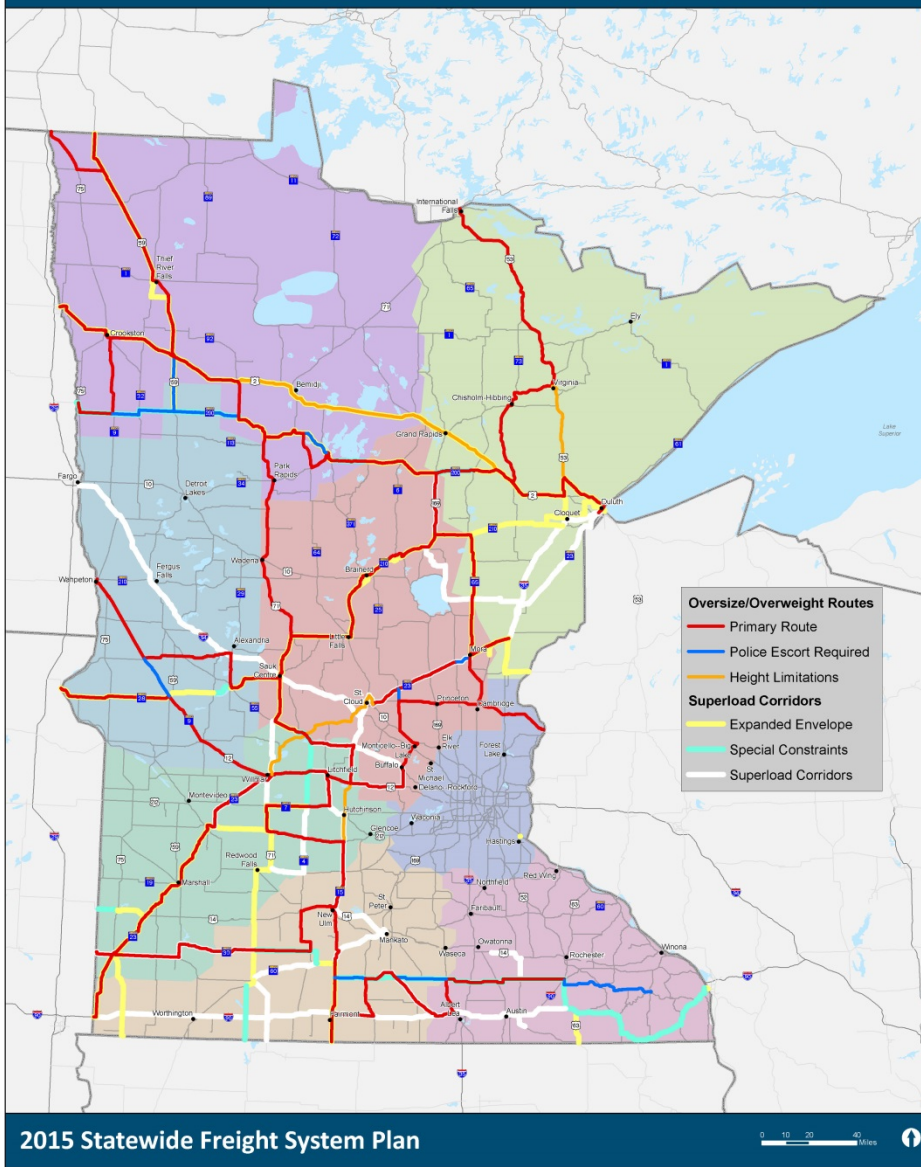
- ▶ 76% of MN Highways covered by at least one network
- ▶ 25% of MN Highways System covered by all 3 networks
- ▶ Many areas of overlap between IRC and NHS
- ▶ NTN/TTN is twice as extensive as IRC/NHS



10-Ton Network

- ▶ Maximum Weights:
 - 20,000 lbs. (single axle)
 - 10,000 lbs. (single wheel)
- ▶ Includes:
 - Interstates
 - US Highways
 - Majority of MN THs
 - Some County Roads

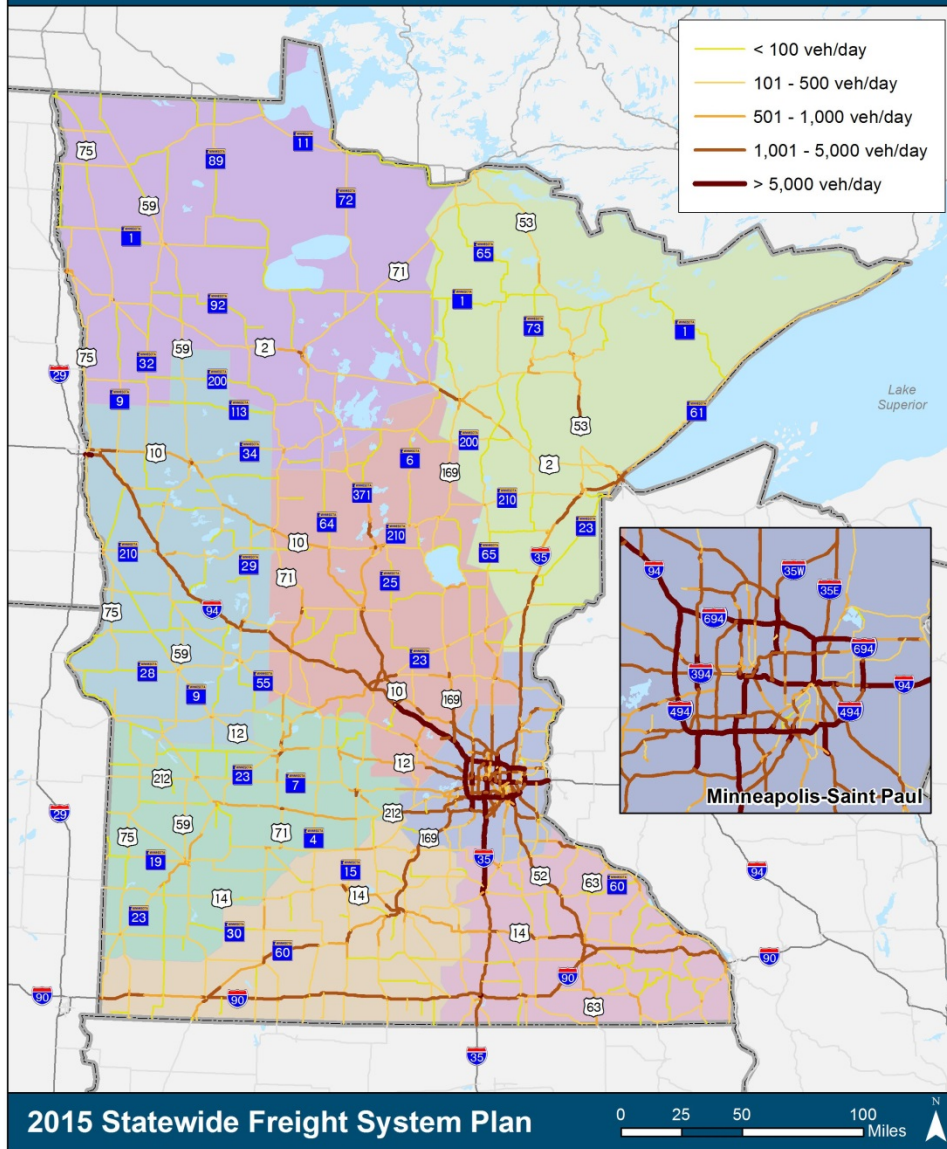




OSOW

- Preferred routes for loads exceeding vehicle width, length, height, or weight restrictions
- Lower volume roads





Truck Volumes

- ▶ Metro and interstate corridors carry majority of trucks
- ▶ Significant volumes between major centers
- ▶ Good geographic distribution



Strategic Freight Network: Descriptions and Priorities

Access/ Mobility Focus	Purpose	Routes of Focus	Description	Trip Type	Policy Focus	Maintenance/ Operations Priority
A. Highest Mobility	Connecting major metro areas and national ports	Key Interstates; Major Ports	High volume, high frequency movements that require efficient systems to accommodate large movements (safety, mobility, and reliability)	State to state flows and access to international destinations	Safety, mobility, efficiency (bottleneck removal), infrastructure conditions (pavement meeting FHS/MAP-21 standards)	Highest
B. High Mobility/ Low Access	Connecting major centers and shipping points to other major centers and facilities	Interstates and major THs; Access to ports and other shipping facilities	High to moderate volume movements that require efficient systems to accommodate large flows (safety, mobility, and reliability)	Some state to state travel and longer trips within states	Maximize safety and mobility/free flow, minimize stops/disruptions	High
C. Access/ Mobility Balance	Connecting major centers to smaller centers	Other THs; Provide access to larger facilities; Connect to destinations	Mid-lower volume routes; safety and reliability as well as ability for facility to carry loads are of primary importance.	primarily inter- state travel between small centers, origins, and final destinations	Focus on safety , pavement quality, and load carrying capacity	Mid
D. High Access/ Low Mobility	Lower volume THs and CRs to provide access	Collectors, some minor arterial THs and higher level CRs	Mid-lower volume routes; safety and reliability as well as ability for facility to carry loads are of primary importance	Shorter trips between suppliers and manufacturers; Local focus	Focus on safety , pavement quality, and load carrying capacity	Low
E. Highest Access	Local and Access Routes	Local Roads (City/County)	Lower volume access routes	Origin and Destination Access	Focus on safety and load carrying capacity; less emphasis on pavement smoothness	Lowest
F. Specialty (Oversize/ Overweight)	Allow passage of OSOW loads	Lower volume routes with ability to handle OSOW loads	Low volume; wider shoulders and no vertical and horizontal clearance restrictions	Longer specialty loads requiring OSOW permit	Limit any changes to corridor that would negatively <u>impact</u> envelope (height/width restrictions, roundabouts, etc.)	Bridge clear, roundabouts, shoulders, load capacity



Defining “Strategic”

- ▶ Connectivity
 - What does it connect?
 - A network, not individual links
- ▶ Scale
 - “If everything is important, nothing is.”
- ▶ Accessibility
 - How close is close enough?



How could the MN SFN be used?

- ▶ Operations
- ▶ Safety (Shoulders, Intersection Control, Design Speed, etc.)
- ▶ Level of Maintenance
- ▶ ITS improvements
- ▶ Design criteria
- ▶ Factors into funding priorities



Open Discussion Items

- ▶ Intent of the Network
- ▶ Size and Scale of the Strategic Freight Network
- ▶ Design and Policy Implications
- ▶ What information would help you determine the SFN?



Next Steps

- ▶ Meeting 2 will primarily focus on the non-highway components
- ▶ Meeting 3 will summarize findings and provide a slate of strategic freight network components
- ▶ Next meeting – tentatively in early January



Questions?

