

Moving the Kansas Economy

Identifying Significant Multimodal Freight Corridors

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What we will cover today:

- MAFC Coalition
- Why is everyone so interested in freight and corridors?
- Identifying, characterizing, prioritizing freight corridors

MID-AMERICA



FREIGHT COALITION

Mid-America Freight Coalition

– Ten States



- ✓ 22% of total population
- ✓ 23% of Country's total truck tonnage
- ✓ 63% of Nation's total rail tonnage
- ✓ Inland waterway system –about all of it!



Previous Corridor Work that has Laid the Foundation

- The Interstate system - 1956
- The National Network – 1982
- Major Freight Corridors and the National Freight Network – 2007-2012
- Corridors of Commerce
- Corridors of the Future -2007



FHWA Recognized Corridor Coalitions



Domestic

- [Alameda Corridor Transportation Authority](#)
- [Central Corridors Freight Committee](#)
- [Continental One Trade Corridor](#)
- [Eastern Border Transportation Coalition](#)
- [Fast Corridor](#)
- [I-5 Golden State Gateway Coalition](#)
- [I-10](#)
- [I-69 Mid-Continent Highway Coalition](#)
- [I-70 Coalition](#)
- [I-80 Coalition](#)
- [I-81 Corridor Coalition](#)
- [I-95 Corridor Coalition](#)
- [Lake Michigan Interstate Gateway Alliance](#)
- [Mid-America Freight Coalition \(MAFC\)](#)
- [Ports-to-Plains Trade Corridor](#)
- [West Coast Corridor Coalition](#)

International

- [Border Trade Alliance](#)
- [Can/Am Border Trade Alliance](#)
- [Canamex](#)
- [Central North American Trade Corridor Association](#)
- [North America's Super Corridor Coalition, Inc.](#)

Freight Corridors

The Economy and Jobs, Congestion, Industry Involvement, Environment and Fuel issues, and Policy have driven the renewed interest in identifying, characterizing and prioritizing freight corridors.



Driving the Economy: Freight Corridors Concentrate Economic Development



Freight corridors are multi-state, multi-modal economic networks.



The Evidence on Transportation and Economic Development

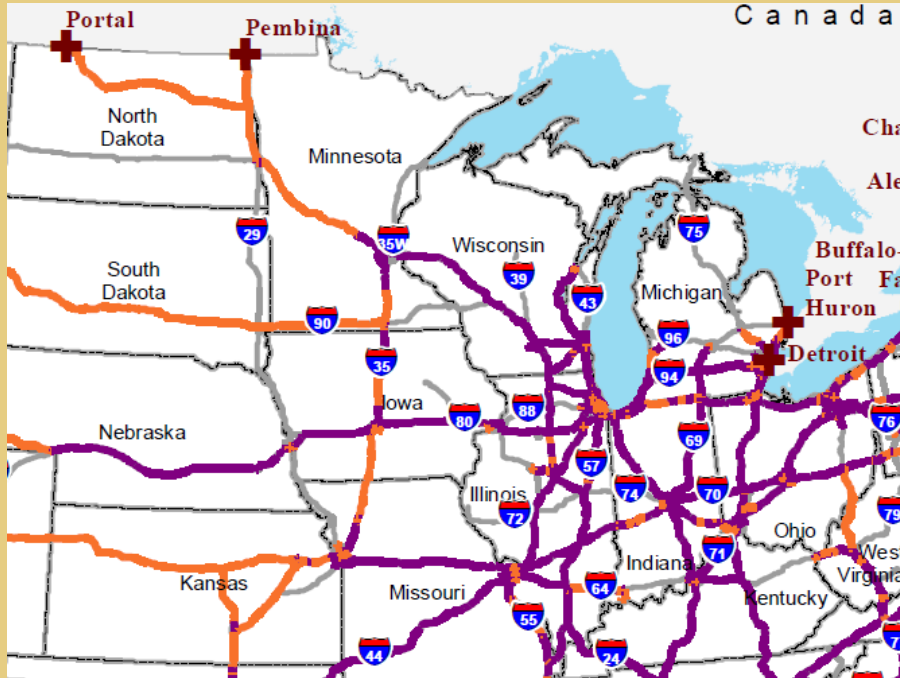
2 and 4-lane Economic Study

- ✓ **Compared Counties with 15 miles of four lane highway**
- ✓ **Differences in 6 socioeconomic factors range from 10% to 180%**
- ✓ **Accelerated growth rates – over 12% for number of businesses**
- ✓ **Bypass studies**



Value

Employment w/in 3 miles each side of corridor



	Businesses	Employees
MAFC Region	2,606,162	32,458,110
Corridor	920,809	13,637,546
Percentage	35%	42%

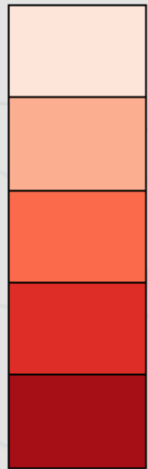
Corridor	Combined MSA GDP (millions)
I-94	\$1,023,926
I-80	\$768,315
I-90	\$689,712
I-65	\$652,225
I-55	\$621,375

	Nation	MAFC	%
FHWA Major Freight Corridor Miles	29,417	6,508	22%
2009 GDP (billions)	\$13,974	\$2,813	20%
2010 GDP (billions)	\$14,499	\$2,936	20%
2011 GDP (billions)	\$15,076	\$3,049	20%





TRANSPORTATION EQUIPMENT MANUFACTURING EMPLOYEES



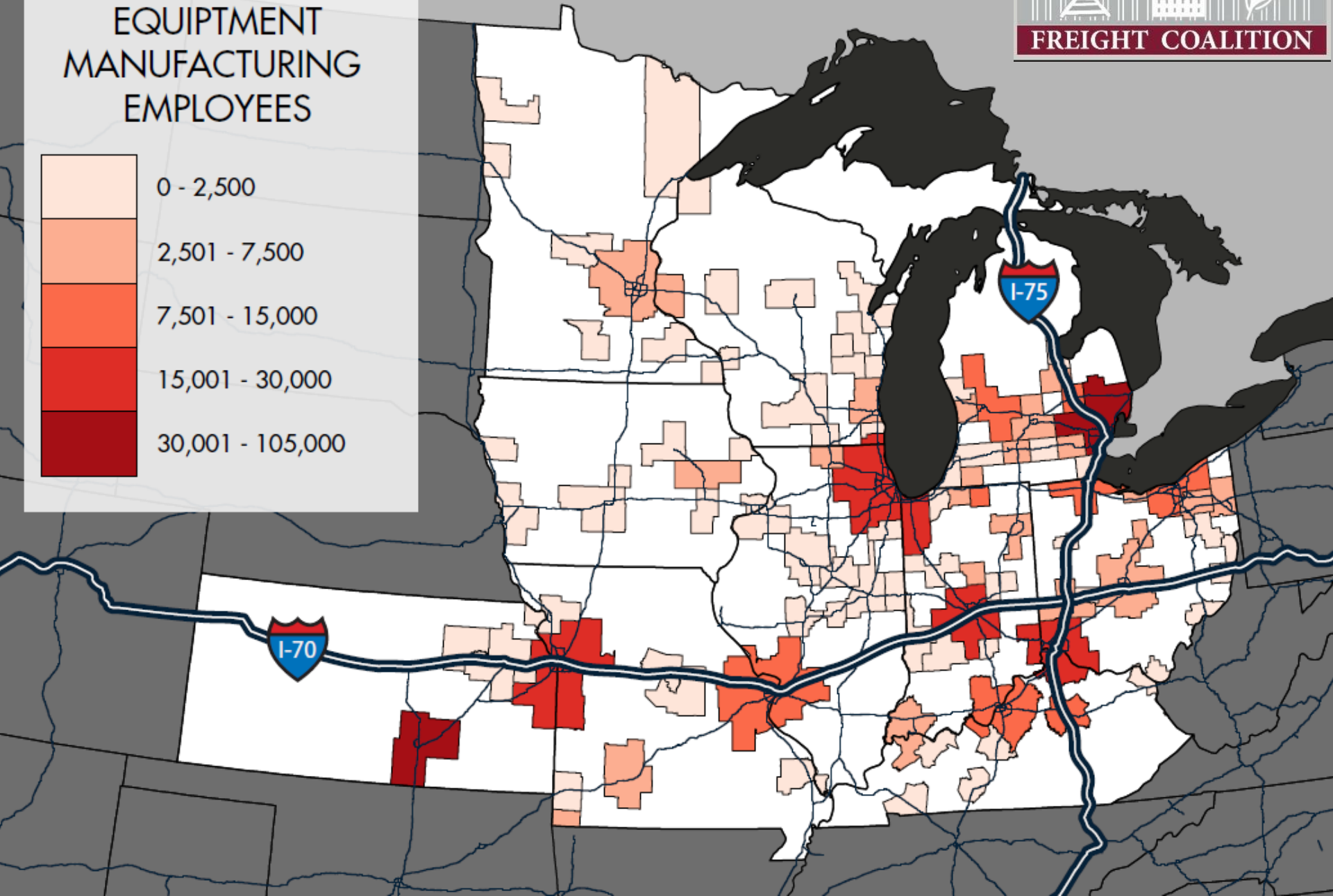
0 - 2,500

2,501 - 7,500

7,501 - 15,000

15,001 - 30,000

30,001 - 105,000



Multimodal Freight Systems

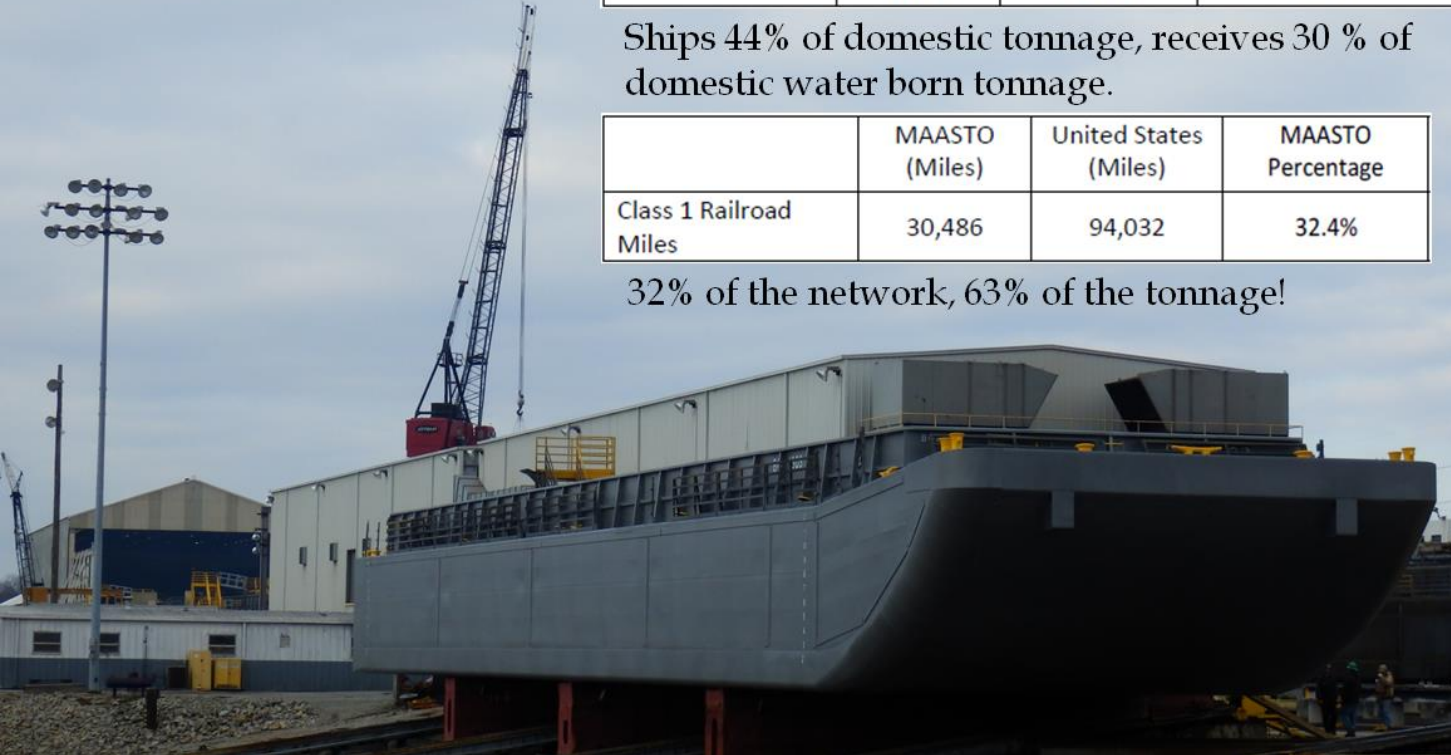
✓ Multimodal Economic Network

	MAASTO (Miles)	United States (Miles)	MAASTO Percentage
Inland Waterways	5,001	26,406	18.9%

Ships 44% of domestic tonnage, receives 30 % of domestic water born tonnage.

	MAASTO (Miles)	United States (Miles)	MAASTO Percentage
Class 1 Railroad Miles	30,486	94,032	32.4%

32% of the network, 63% of the tonnage!



Leverage Multimodal assets to create new opportunities, spread out current loads, and find new access to rural and urban markets.

Freight Jobs Pay Well!

Sector	Wages	Fringe	Total
Rail Road	\$74,900	\$34,000	\$108,000
US Average	\$54,400	\$13,300	\$67,000



And if we fall behind, it costs dearly.....
 Average delay in large areas=52 hours,
 at a cost of \$1,128.00
 KC Area= 27 hours /year=\$584.00



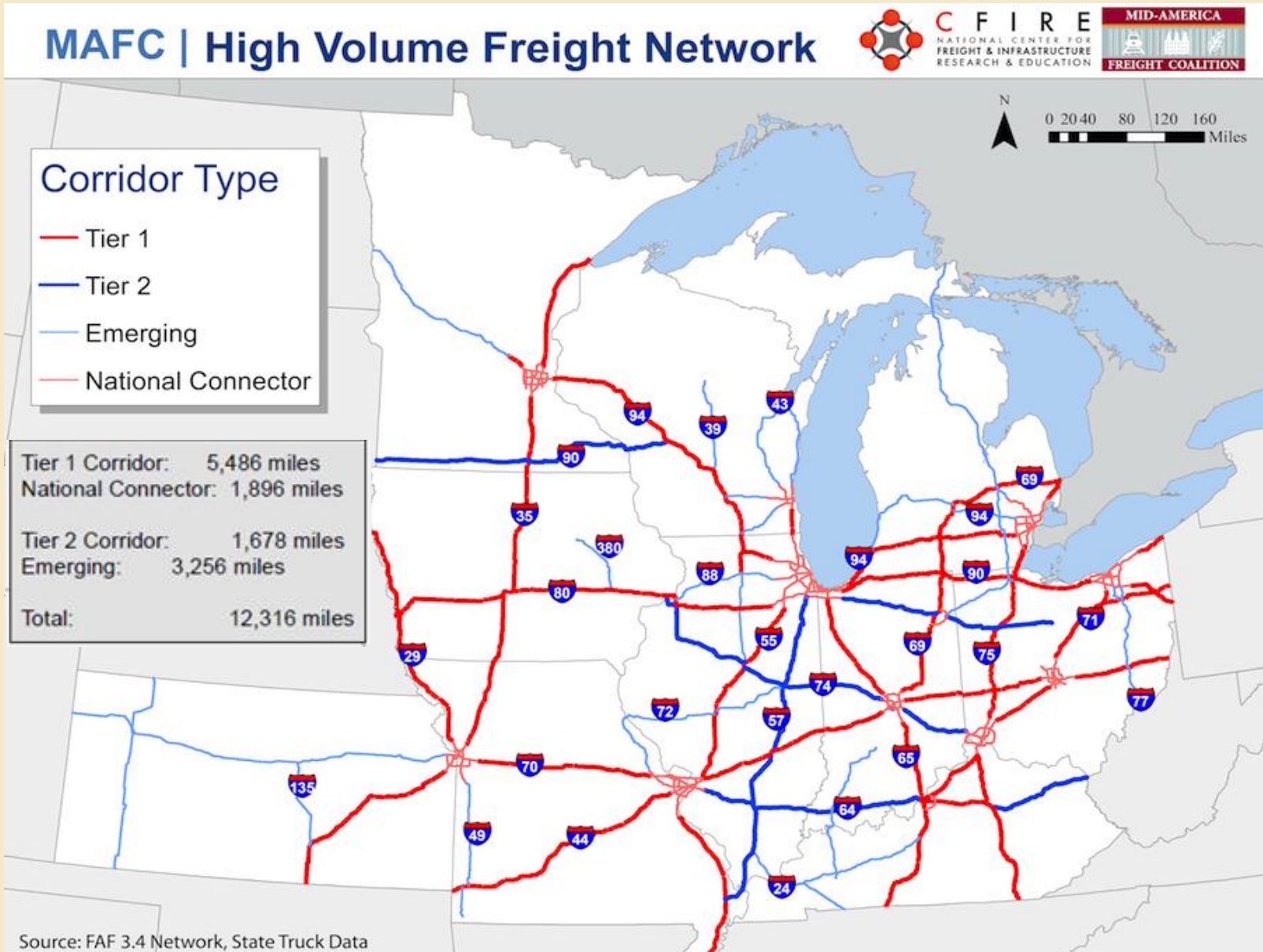
Table 1. Estimated Delay Time Cost per Crash (2010 Dollars)

Roadway Type	Fatal	Injury Only	Property Damage Only	Average for Road Type
Urban Interstate/Expressway	\$163,792	\$61,395	\$52,175	\$55,121
Urban Arterial	\$11,760	\$3,328	\$2,649	\$2,876
Urban Other	\$11,303	\$3,860	\$3,258	\$3,458
Rural Interstate/Principal Arterials	\$7,086	\$2,628	\$2,222	\$2,351
Rural Other	\$2,421	\$821	\$684	\$729
Average for All Roadway Types	\$39,602	\$14,508	\$12,280	\$12,996

How do we Identify our Significant, Multimodal Freight Corridors?



Development of the Corridor Profile Approach: A Corridor as a Dynamic, Multimodal Business Case



Past Approaches to Understanding Freight Corridors:

- ✓ Truck volume
- ✓ Freight value
- ✓ Warehousing
- ✓ Ports
- ✓ Rail lines
- ✓ Nation Building



What variables best reflect our concept and vision for our freight corridors?

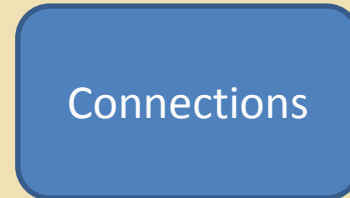
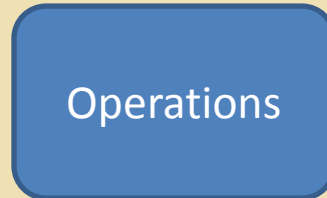
We need a way to characterize the function and the intensity



Characterization of Functions and Intensity

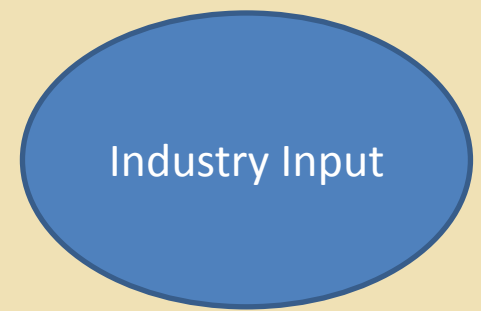
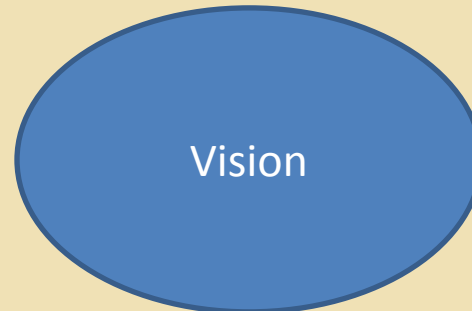
METRIC AREAS

Contain Functions and Intensity



VISION and GOALS

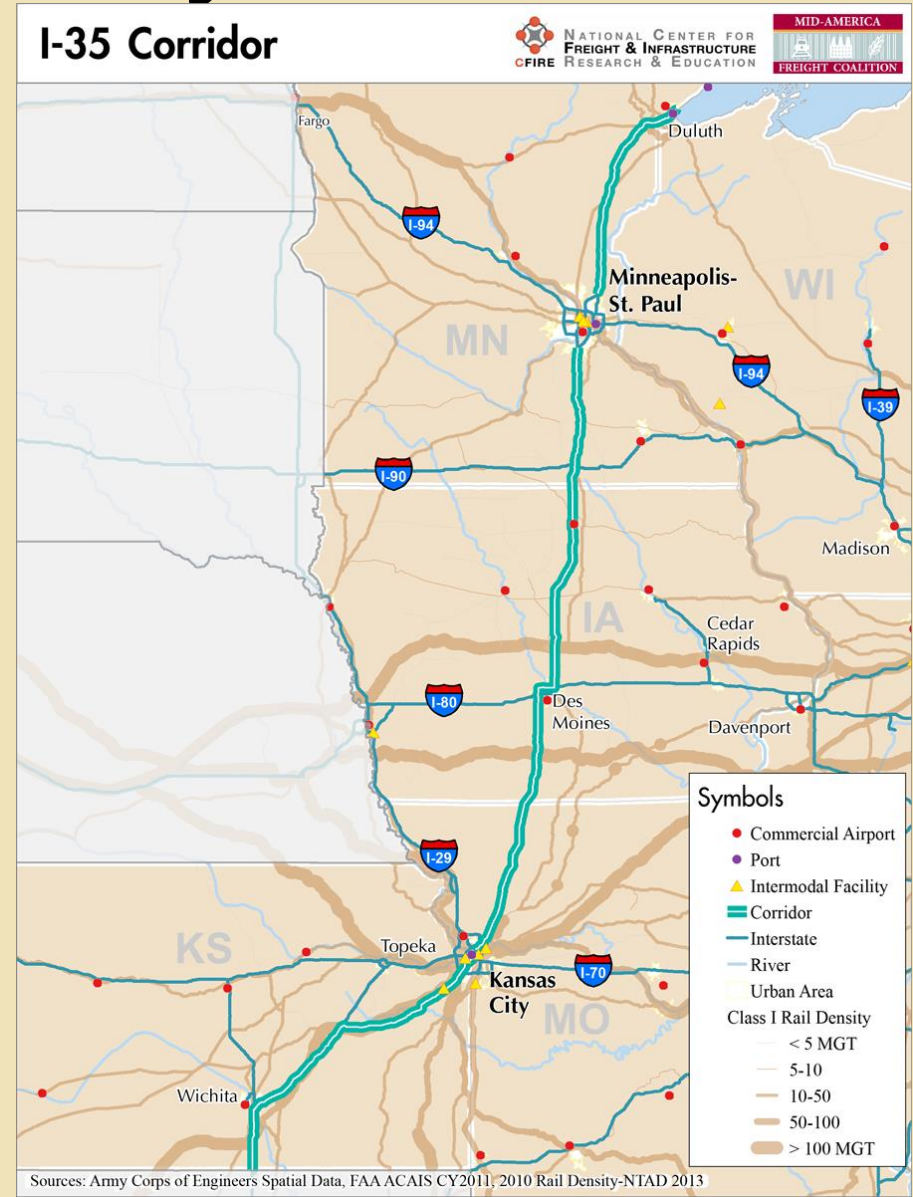
Provide the supporting environment to value functions and intensity.



Building the Business Case: Corridor Profile Analysis

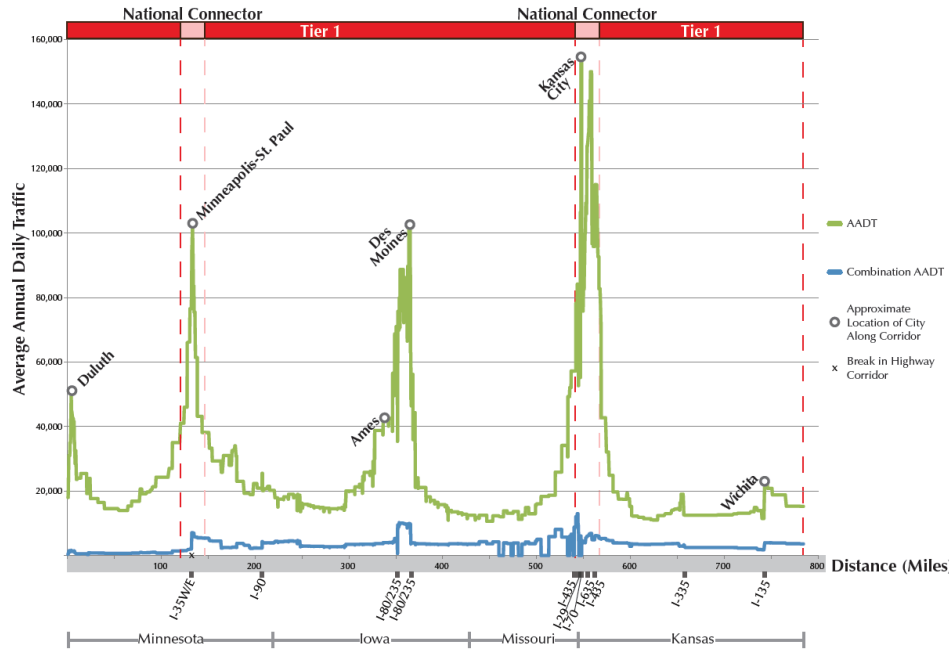
- **Operational characteristics**
 - Traffic Flows
 - Congestion
 - Condition
 - Safety
 - Parking

Corridor specific information in a regional context



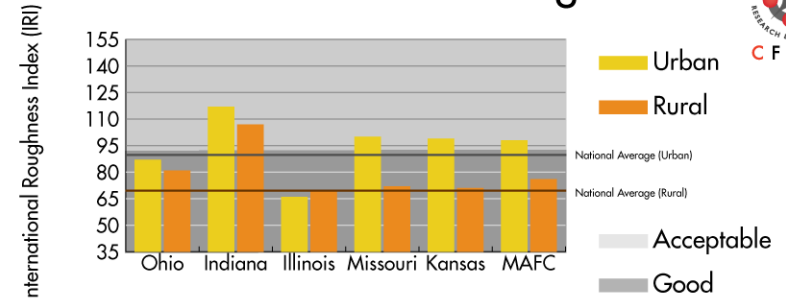
MAFC Corridor Profiles: Operations

I-35 Annual Average Daily Traffic Profile (AADT)



Source: HPMS, 2011

I-70 Mean Pavement Roughness



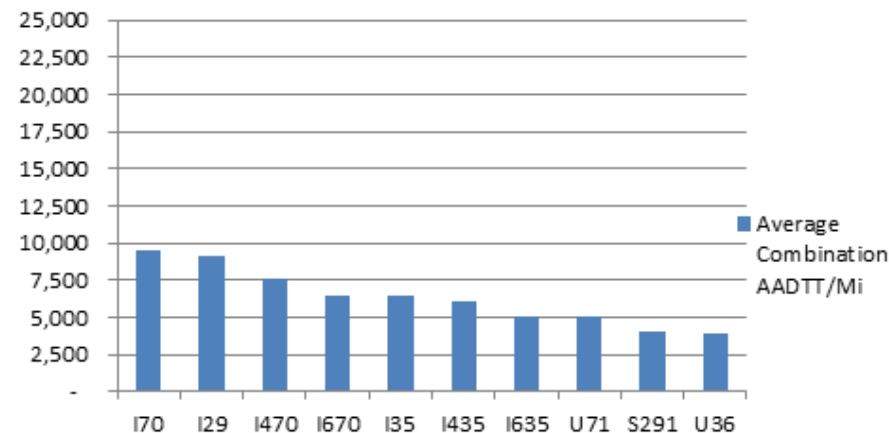
Source: FHWA Interstate Brief (2011), US Department of Transportation, Washington, DC



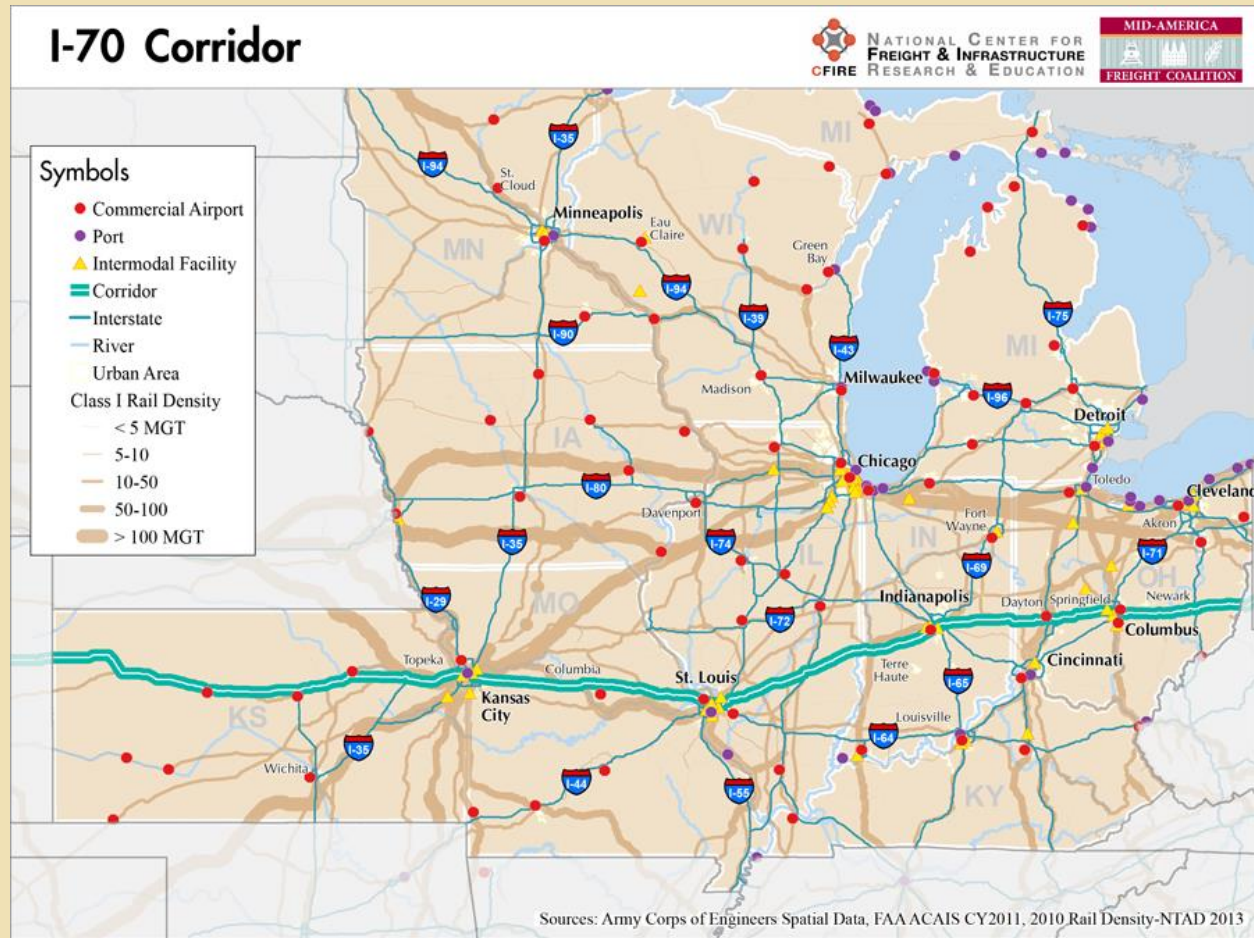
Greenhouse Gas Emissions

- Yearly tons of CO₂ assuming 4 mpg: 2,800,000
- Yearly tons of CO₂ assuming 7.5 mpg: 1,500,000

Kansas City



- **Connections**
 - **Metropolitan Statistical Areas**
 - **Intermodal yards**
 - **Airports**
 - **Waterway**
 - **Railroads**
 - **Export/Import**



Truck Traffic

I-70 is a 1,216-mile corridor that crosses five states in the MAFC: Ohio, Indiana, Illinois, Missouri, and Kansas.

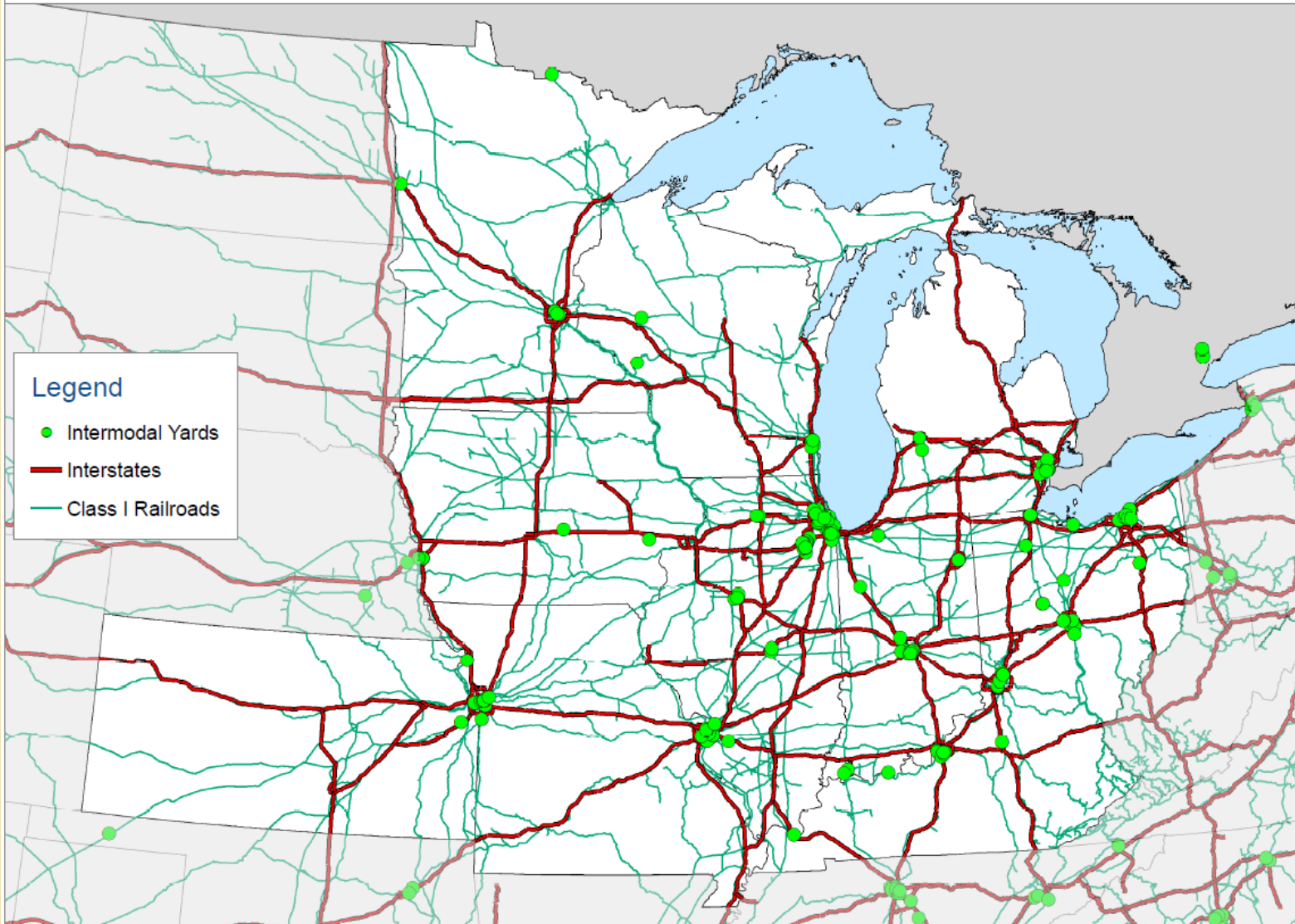
VMT 2007: 42,175,024

Truck VMT 2007: 11,759,747

Percent Truck VMT: 27.9 percent

Corridor Profiles: Connections

Mid-America Region | Intermodal Facilities



Economic Considerations: I-70 Corridor

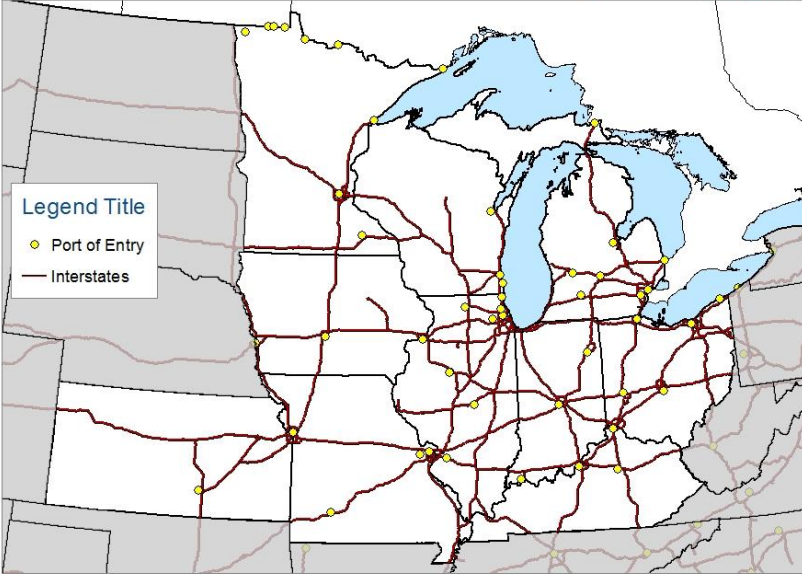
Business Case Attributes

Fuel and Truck Parking: There are 89 fueling stops that also offer truck parking along I-70. Ten truck stops have less than 25 parking spots, 34 have between 25-84 spots, and 45 have 85+ spots of parking capacity.

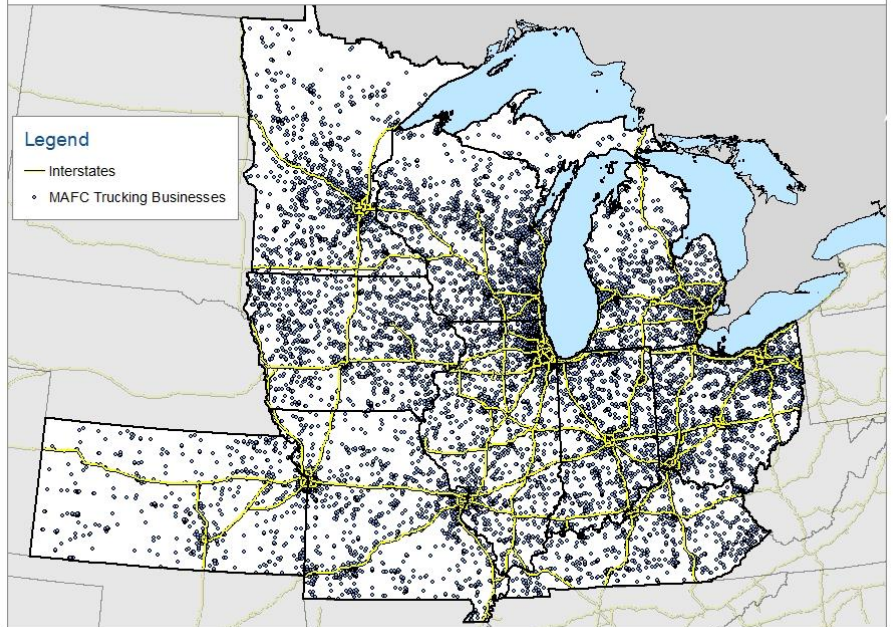


Freight Generators, Warehouses, and Distribution Centers

There are a total of 42,425 freight generators employing 723,809 people within three miles of the I-70 corridor, and a total of 87,958 freight generators employing 1,468,325 people within 10 miles of the corridor. If the extent of analysis focuses on the metropolitan statistical areas (MSAs) intersected by the I-70 corridor, there are a total of 118,947 freight generators employing 1,924,205 people.

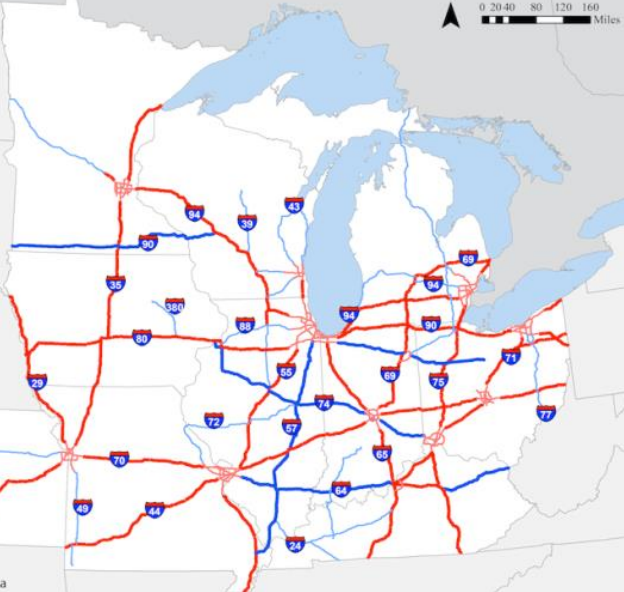


Additional Economic Considerations for Corridor Profiles



Corridor Type

- Tier 1
- Tier 2
- Emerging
- National Connector



Source: FAF 3.4 Network, State Truck Data

*24 different measures to reflect the:

- Operations,
- Connections and
- Economic activities on MAFC Freight Corridors.



MAFC RFS - Corridor Profiles to Support Network Development

Identifying Significant Freight Corridors

Best Practices –

1) Understand and
Prioritize Functions

(Operations,
Connections,
Economy)

2) Guide network
development

(Vision and industry
input)

3) Use the data

(Operations,
Connections,
Economy)



Freight Corridors are part of the package....,



Corridors...Freight Advisory Committees, Freight Plans and Programs aligned with economic and community development. The Institutionalization, or Integration of Freight as a major policy and program area in the U.S transportation system.



Building the policy and program framework, the relationships, and the data-driven rationale to support the development of a multimodal, economic freight network.

Thank you!

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<http://midamericafreight.org/>

