



MRRPC REGIONAL    

FREIGHT
STRATEGY

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Stakeholder Engagement, Project Prioritization and Recommendations

Stakeholder Engagement

The Mississippi River Regional Planning Commission (MRRPC), WisDOT, and the technical advisory committee (TAC) conducted outreach to a variety of public and private sector stakeholders to supplement the extensive outreach efforts concurrently underway for the development of the Wisconsin Statewide Freight Plan.

Agencies, associations, and businesses participating in the MRRPC Regional Freight Strategy or public participants of the SurveyMonkey survey have discussed a range of transportation concerns and as a result, the MRRPC has and will continue to identify opportunities to address these concerns and pair qualitative feedback with the data-driven and quantitative approach to project identification designated above.

Additionally, some of the identified concerns will be addressed through maintenance, operational traffic changes (signals, etc.) and previously scheduled improvements included in WisDOT's six-year construction program. Where stakeholders indicated a desire for more costly large-scale infrastructure projects to address business needs, staff will consider this feedback in future long-range plans, analyzing it against project criteria developed for this plan, such as pavement condition metrics, traffic volumes, safety, and highway context (i.e., urban, or rural environment), as well as against state and federal funding constraints.

WikiMap Survey

WikiMap is an online tool utilized for identifying key locations and focus areas for our project. The WikiMap was available online from August 2022 through January 2023 and received six total responses, identifying five improvement opportunity locations, and one issue location. The map below identifies the priority locations for either issues or improvements, including the response comment. Overall, feedback typically consisted of safety and traffic flow concerns and often included suggested improvement opportunities.

Commented [JS1]: Could we get this map into a similar format as the other maps? I don't see any road labels, for example. We should be using the same map extent and symbology for our state borders as well. Let me know if you'd like to discuss.

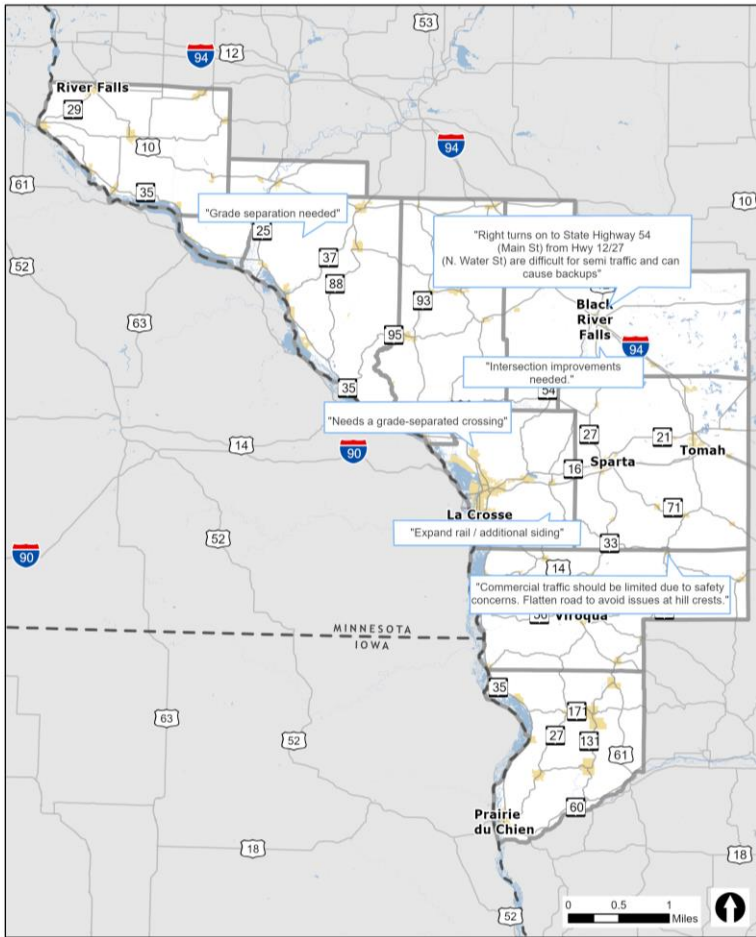
Commented [GK2R1]: Check Erik's basemaps to start from

Commented [GK3R1]: (should have labels that we need)

Commented [GK4R1]: Turn off improvements and issues

Commented [GK5R1]: Justin will send revised text for comment boxes

FIGURE 1. WIKIMAP ENGAGEMENT RESULTS



SRF WikiMap Engagement Results
Mississippi River Regional Planning Commission

SurveyMonkey

The online SurveyMonkey was open between August 2022 through January 2023 and sent out to a range of freight stakeholders that utilize the regional transportation infrastructure in the MRRPC. The Survey closed with a total of 14 responses received. Questions and topics that were asked included the following:

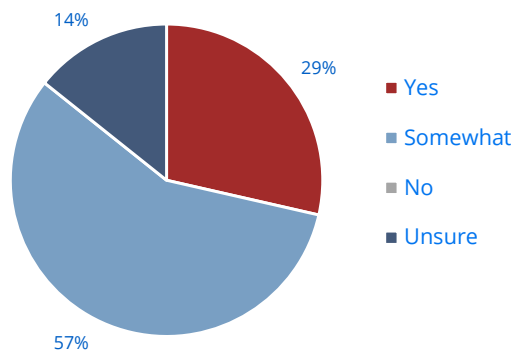
- Agency/ business of work
- Freight transportation topics that impact you the most
- Which of the following freight planning outcomes is of most importance to you?
- What are the most critical freight challenges/issues/deficiencies you encounter?
- What technologies should the MRRPC and WisDOT support to enhance freight mobility?

What are the most important needs or opportunities to improve freight operations in the 9-County Region? What are some potential solutions to remedy existing conditions and issues?

- *"In our area we've seen road construction cause delays to our facility (located in Galesville, WI) from every possible direction in the past year or two. This is due to the lack of any real preventative maintenance measures & the lack of distributed funds for these practices. Rather than wait until it requires you to tear up major portions of every in-road to an area, maybe schedule those ops at varying times to avoid congestion from every direction."*
- *"Many freight congestion issues are around harvest season. County roads in particular become very congested and cause delays on morning and evening commutes. Freight trucks should also be limited to major highways whenever possible rather than taking town/county roads that passenger vehicles use on a daily basis. It can be unsafe to have such large vehicles on certain roads."*

Do you feel the freight transportation system in western Wisconsin functions efficiently?

FIGURE 2. SURVEY QUESTION 1 RESULTS



Workshop

In October 2022 the project team conducted a virtual workshop with various members of the project staff and stakeholders. The workshop consisted of a presentation and two rounds of breakout session discussions. Topics discussed during the workshop included the following: key determining factors for driving industrial site location, demand for intermodal or transload facilities in western Wisconsin, long-term waterway transportation needs/enhancements, and policy-driven access to market for shippers seeking access to international gateways. This workshop was integral in identifying and discussing some needs and issues throughout the project area.

Participants discussed the following topics:

- Key factors that drive industrial site location and market access for international shippers
- Improving first and last mile site access
- Broader group discussion on the port of Prairie du Chein
- The Mississippi River's importance for tourism and nature, studying potential commercial impacts of the river
- Demand for intermodal or transload facilities

Freight System Needs and Issues

This section summarizes information on preliminary findings of prioritized freight transportation needs and issues in the MRRPC. The following sections summarize preliminary recommendations for potential projects, policies, and programs that MRRPC could utilize to improve freight movement in the region. **FIGURE 3** illustrates the identification process.

Commented [GK6]: More detail, dive into some of the topics (key factors that drive industrial site location, etc.

Commented [JS7]: Consistency. Let's spell out the entire thing the first time, then go with MRRPC throughout.

FIGURE 3. REGIONAL NEEDS AND ISSUES IDENTIFICATION PROCESS



The MRRPC regional freight network consists primarily of waterways, highways, and railroads, and each of these modal networks has individual needs and issues. However, the MRRPC and WisDOT can primarily influence the investment and operation of the highway network, so most of the analysis conducted for this project focused on highway-centric needs and issues. Each need and issue were identified through a review of past studies, current conditions and industry trends, and stakeholder input.

A data-driven methodology, reflective of the **2022 Wisconsin State Freight Plan**, was developed and transportation needs were identified through an extensive process combining a quantitative evaluation of existing conditions and a qualitative analysis of public and stakeholder feedback. The needs identification process was aimed at answering the questions of how to quantify a freight system need and how to prioritize freight network improvement projects. Once a need was identified, they serve the goals and objectives of the regional freight strategy (see FIGURE 4)

Commented [JS8]: We may want to create a reference to this figure and title: Regional Needs and Issues Identification Process

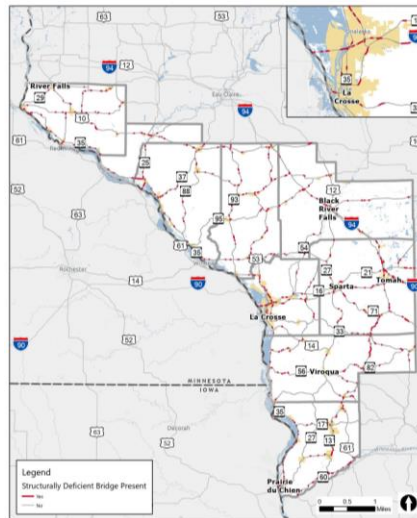
FIGURE 4. FREIGHT STRATEGY GOALS

MRRPC Freight Strategy Goals		MRRPC Freight Strategy Objectives	
1	Provide Equitable and Reliable Mobility for People and Goods	1	Improve Equitable Access to the Multimodal Freight Network and Strengthen Partnerships with Rural Communities to Access Key Markets
		2	Remove Institutional, Policy, and Funding Bottlenecks to Improve Multimodal First and Last-Mile Freight Accessibility Outcomes
2	Maintain a Multimodal Network to Enhance Communities	3	Promote and Increase Communication Between Inter-Regional & County Planning and Economic Development Organizations
		4	Strengthen Partnerships with Rail, Highway, Waterway, Air, and Pipeline Transportation Companies, Service Providers, and Facility Operators
3	Ensure a Safe Transportation Network	5	Utilize Multisource Data to Improve Analysis Processes and Procedures to Reduce Fatalities and Serious Injuries on All Multimodal Public Infrastructure
4	Promote a Reliable and Resilient Transportation Network	6	Reduce Congestion and Improve Truck Travel Time Reliability of the Network
		7	Improve the Resiliency and State of Good Repair of the Public Transportation Network
5	Ensure Economic Vitality in the MRRPC Region	8	Forge Partnerships between Public and Private Sector Stakeholders to Leverage Regional Economic Advantages
		9	Capitalize on Emerging Freight Technologies and Trends to Promote Economic Development
6	Improve Environmental Sustainability	10	Enhance the Performance of the Network While Protecting and Enhancing the Natural Environment
		11	Promote Alternately Fueled Vehicles

Examples of needs include a proposed highway rail-grade crossing project, truck parking projects, or corridor or intersection highway improvement projects. Each need has different criteria that should be assessed using the applicable performance measures.

Generally, the MRRPC's state highway system needs and issues are limited, while needs may be more acute on the local road network providing first and last-mile connectivity to the broader statewide network. Safety and mobility were key topics for the waterway, railway, and highway networks: intersection safety concerns focused on the intersection of trunk highways and smaller roads, while stakeholders also noted that highways needed improvements to continue to operate safely. Other road infrastructure needs and issues included low-clearance railroad bridges (a barrier to truck movements), and some pavement and bridge conditions concerns on local roads.

FIGURE 5. STRUCTURALLY DEFICIENT BRIDGES



Commented [JS9]: Let's try to include some maps in this section. We could add a figure reference and map showing the pavement and bridge needs here. I think we already have a map and I can help locate if needed.

FIGURE 6. TRUCK TRAVEL TIME RELIABILITY



In regard to highway operations, many stakeholders identified traffic congestion as an issue for freight shippers in the region's more urban areas like LaCrosse, Tomah, and Black River Falls. Another important consideration mentioned by stakeholders as well as WisDOT staff is the fact that many regional businesses ship goods through the Twin Cities or Chicago, and congestion in these areas can have major implications for the overall efficiency of freight movements in western Wisconsin. Therefore, findings and recommendations from future State and regional freight plans could have significant impacts on freight operations in the MRRPC.

Commented [JS10]: Let's add the NPMRDS map (Truck Travel Time Reliability - TTTR) here showing these low performing corridors from a freight operational perspective. Add a cross-reference in the text.

Commented [GK11R10]: + figure references

Commented [JS12]: consistency

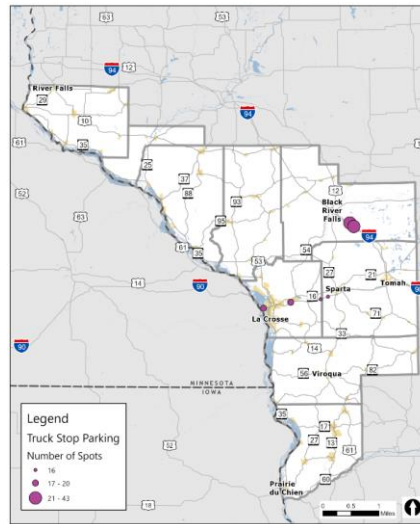
Regional stakeholders also discussed the need to invest in the maintenance of the current regional freight network. The MRRPC freight network requires proportional investment to maintain a state of good repair for roadways and bridges to sustain the

competitiveness of the freight system. Strategic improvements in multimodal freight system infrastructure to ensure critical segments and connections are both available and in a state of good repair are essential for the nine-county region to meet current and expected demand.

Regional stakeholders also reiterated the importance of truck parking to the regional and statewide freight movements. In the state of Wisconsin, truck parking typically includes public rest areas, safety weight enforcement facilities, and other private facilities (i.e., gas stations or trucks stops), and are a vital resource for freight operations. Adequate truck parking facilities ensure both driver and traffic safety and provides a safe location to stop during emergency needs, inclement weather, and a place to rest. Safety and weight enforcement facilities ensure that the truck meets requirements by the DOT.

The 2022 Wisconsin State Freight Plan identified gaps in truck parking and concluded that high areas of truck parking shortages included the I-94 corridor from Kenosha County to St. Croix County and the I-90 corridor from Rock County to La Crosse County. WisDOT has policies in place to support increasing truck parking availability and facilities. The State Freight Plan indicates that 157 additional truck parking spaces will be instituted by 2025.

FIGURE 7. REST AREA PARKING



Commented [GK13]: + figure reference

Commented [GK14R13]: + consistent map image sizes

Regarding the rail network, stakeholders did not specifically identify any grade crossing needs or issues in the MRRPC, but there are some actively- and passively- protected crossings with relatively high levels of assessed risk that were identified in the recent WisDOT Highway-Rail Grade Crossing State Action Plan. Rail mobility needs and issues identified in that plan primarily related to at-grade crossing improvements or recommended closures.

Regarding the waterway network in the MRRPC, and based on recent events, stakeholders expressed a desire to address port access channel depths, inland distribution capacity and modal choice, technology, emissions, and international market share.

Pipelines traversing the MRRPC region are governed by the federal government. In Wisconsin, intrastate pipelines are governed by the Public Service Commission. While WisDOT has no formal role in pipeline governance, pipelines do and could play a greater role in the movement of liquid and natural gas across the upper Midwest in the future.

Commented [JS15]: I would like to create a new map here illustrating the recommendations from the WisDOT SAP. The improvement summary memo and the final plan document are located here: <H:\Projects\14000\14224\Documents\DRAFT SAP>. We should map the instances where we make a recommendation in the SAP in a county that is one of our 9. Let me know if you would like to discuss.

Commented [GK16R15]: (either me or erik, use the table in that document and map all locations in our project area)

Commented [GK17R15]: Erik is making this today

The following sections of this technical memorandum will focus on scoring and ranking identified system needs, with the intention of selecting several project needs for advancement to pre-engineering feasibility studies. The goal of these pre-engineering studies will be to provide potential solutions to top unaddressed freight needs and issues in the MRRPC and create project concepts that can compete for funding in future state and federal freight-related funding solicitations.

Freight Project Prioritization

The freight project identification and prioritization process are the foundation for identifying, prioritizing, and programming freight projects for available funding in the MRRPC. The project team developed a data-driven and transparent methodology with guidance from the TAC that aligns with the overall goals and objectives of the study. Similarly, freight performance measures and evaluation criteria were developed to help characterize freight mobility and freight system user needs in the nine-county region. The methodology is defined in several steps as described in **FIGURE 8**. This methodology allows the MRRPC and WisDOT to retain control in determining how and when to program and implement specific freight projects pursuant to federal, state, and local funding programs. As described in Technical Memorandum 1, the complete process provides consistency with national multimodal freight policy goals, statewide multimodal goals, and local transportation planning and economic goals, which prepare the MRRPC and WisDOT with a quantitative and qualitative decision-making process that ensures projects with the greatest benefit to the regional freight system and economy are advanced.

FIGURE 8. PROJECT PRIORITIZATION PROCESS



Performance Measures

Performance measures were identified to quantify Freight Strategy Goals and Objectives by working with the Technical Advisory Committee (TAC). Ultimately, seven performance measures

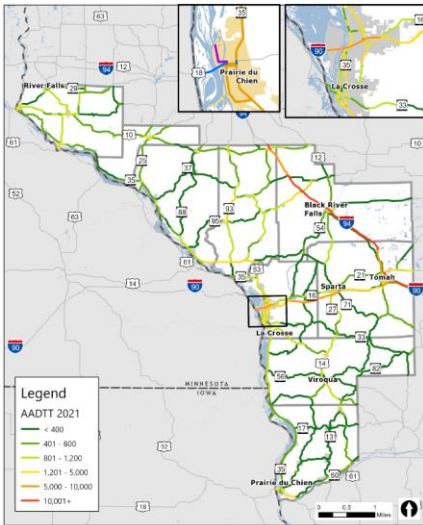
were selected to evaluate every quarter mile road segment in the study area. These measures used criterion which relate to stated freight goals and objectives for the region.

Freight Goals:

- Provide Equitable and Reliable Mobility for People and Goods
- Maintain a Multimodal Network to Enhance Communities
- Ensure a Safe Transportation Network
- Promote Reliable and Resilient Transportation Network
- Ensure Economic Vitality in the MRRPC Region
- Improve Environmental Sustainability

Each goal has 100 points available except for the first goal of providing equitable and reliable mobility for people and goods which has 200 points possible. Each performance measure has a score between 0 and 100 points depending on the measure. Therefore, each road segment in the study area was evaluated based on a total possible total score of 700 points. Essentially, the highest scoring roadway segments would be good candidates for recommended improvement areas.

FIGURE 9. AVERAGE ANNUAL DAILY TRUCK TRAFFIC



Goal 1: Provide Equitable and Reliable Mobility for People and Goods

Truck AADT was used to evaluate regional mobility because existing roads with high truck volumes are important to maintain to access rural communities.

TABLE 1. TRUCK AADT

Truck AADT	Score
0 – 1,000	0
1,001 – 2,500	20
2,501 – 5,000	40
5,001 – 7,500	60
7,501 – 10,000	80
>10,001	100

Commented [JS18]: Can we add a subheader here for "Goal 1" We don't need full page maps, but could we format this section to have a little bit less white space?

Goal 2: Maintain a Multimodal Network to Enhance Communities

The proximity to primary corridors criterion was used to recognize the importance of certain corridors including I-94 from Tomah to Eau Claire, US 53, WIS 16 northeast of La Crosse, and WIS 21 near Fort McCoy for transporting goods. Roads within ¼ mile of these corridors were given points because accesses to these corridors is important as well.

Proximity to Primary Transportation Corridors

Proximity to Primary Corridor	Score
None within ¼ mile	0
One within ¼ mile	50
Multiple within ¼ mile	100

Presence of Project on Local, Regional, or Statewide Programmed Project Lists

Programmed Project?	Score
No	0
Yes	50
Yes, a programmed project for CST in 2025, 2026, or 2027	100

Whether or not a corridor has a project programmed was selected as a criterion because TAC members wanted to give additional weight to potential projects that were expected to take place in the near term. Projects that were expected to take place sooner were given additional points.

FIGURE 10. PRIMARY CORRIDORS

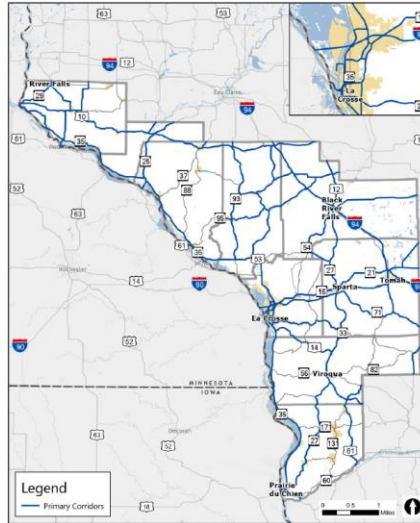
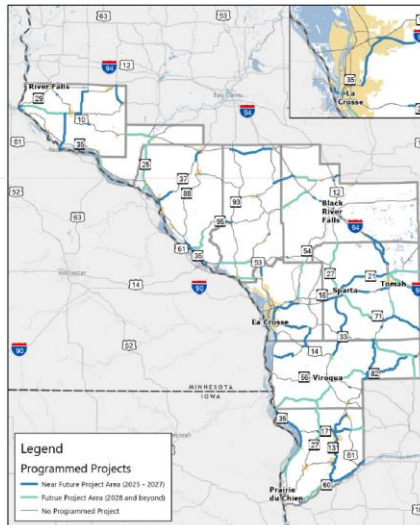
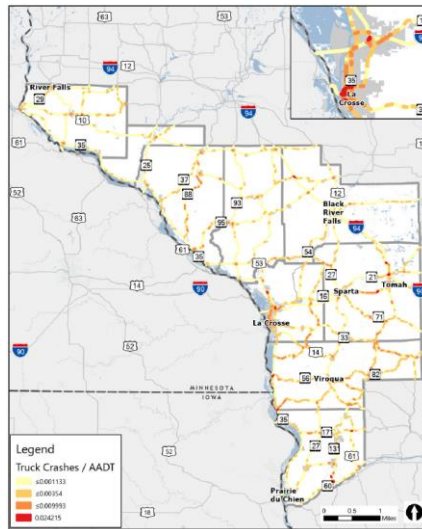


FIGURE 11. PROGRAMMED PROJECTS



Commented [JS19]: You've done a good job organizing this section, but I'd like to try and make some additions. For each of these sections below, let's try to add some language like I did for the section above eluding to how each of these "criterion" fit into our identified goals.

FIGURE 12. TRUCK CRASHES PER ANNUAL AVERAGE DAILY TRAFFIC



Goal 3: Ensure a Safe Transportation Network

Truck Crash Injury/ AADT

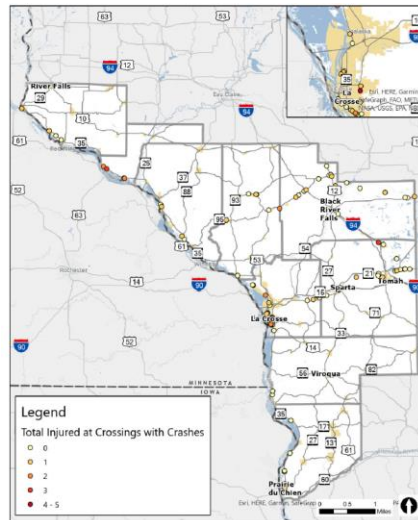
Above One Standard Deviation?	Score
No	0
Yes	50

Safety is a top priority and is reflected in this performance measure. There were many truck crashes throughout the region, including injuries at railroad crossings. Fulfilling Goal 3 includes utilizing multisource data to improve analysis processes and procedures to reduce fatalities and serious injuries on all multimodal public infrastructure.

Rail Crossing Injury

Has had an injury at a rail Crossing?	Score
No	0
Yes	50

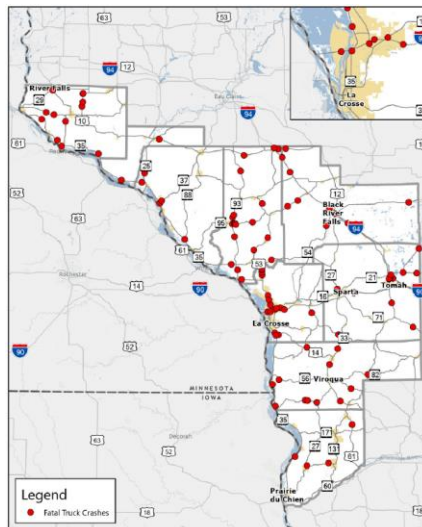
FIGURE 13. RAILROAD CROSSING INJURIES



Truck Fatal Crash

Has a fatal truck crash happened?	Score
No	0
Yes	25

FIGURE 14. FATAL TRUCK CRASHES



Goal 4. Promote a Reliable and Resilient Transportation Network

Roadways with Least Reliable Truck Travel Time

Acceptable TTR?	Score
No	50
Yes	0

Goal 4 includes reducing congestion and improving the Truck Travel Time Reliability of the Network. Additionally, improving the resiliency and state of good repair of the public transportation network.

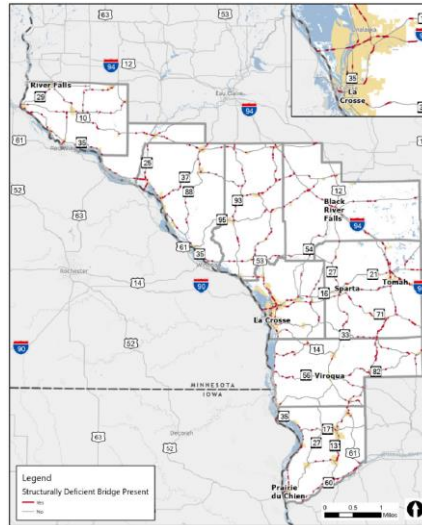
FIGURE 15. TRUCK TRAVEL TIME RELIABILITY



Presence of Structurally Deficient Bridges

Deficient Bridge	Score
No	0
Yes	25

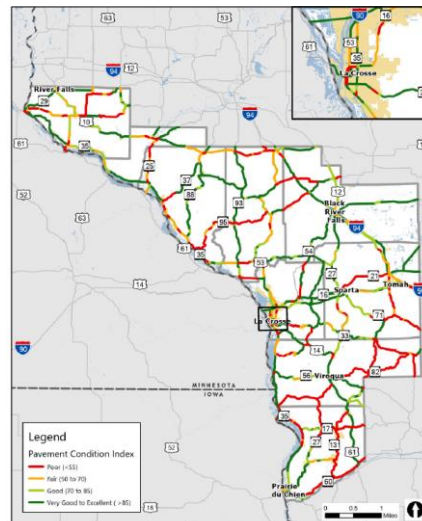
FIGURE 16. STRUCTURALLY DEFICIENT BRIDGES



Presence of Poor Pavement Conditions

Poor Pavement Conditions	Score
No	0
Yes	25

FIGURE 17. PAVEMENT CONDITION



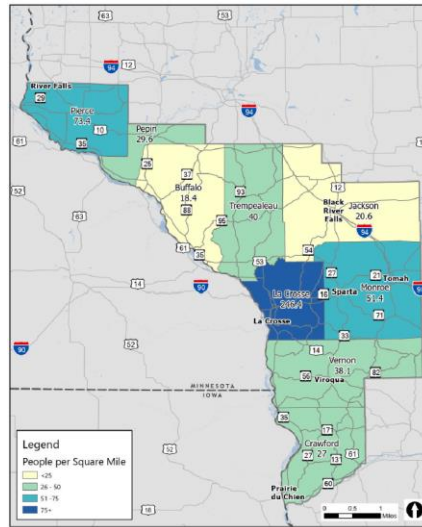
Goal 5. Ensure Economic Vitality in the MRRPC Region

County Population Density

Population Density	Score
0 - 50	0
51 - 100	20
101 - 150	30
151 - 200	40
>200	50

Ensuring economic vitality includes forging partnerships between public and private sector stakeholders to leverage regional economic advantages. Additionally, capitalizing on emerging freight technologies and trends to promote economic development is a key part in this goal.

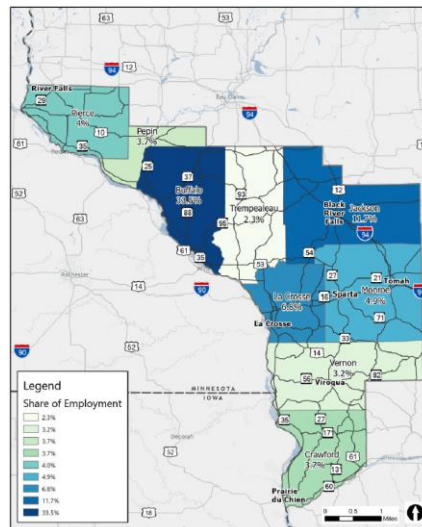
FIGURE 18. POPULATION DENSITY



Transportation and Warehousing Share of Total Employment

Share of Employment	Score
0 - 2%	0
2 - 4%	20
4 - 6%	30
6 - 8%	40
>8%	50

FIGURE 19. SHARE OF TOTAL EMPLOYMENT



Goal 6. Improve Environmental Sustainability

Roadways within 100 Year Flood Zone

Within Floodplain	Score
No	0
Yes	50

Improving environmental sustainability is to enhance the performance of the network while protecting and enhancing the natural environment, as well as promoting alternatively fueled vehicles.

FIGURE 20. FLOOD ZONE

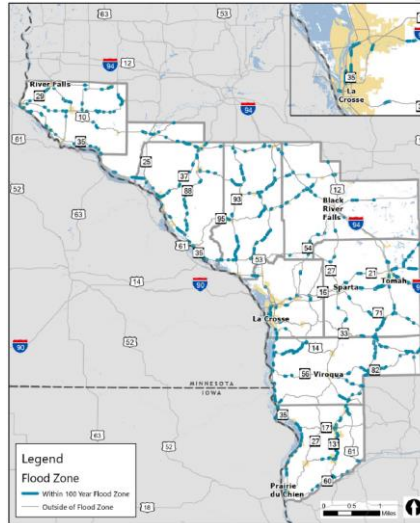
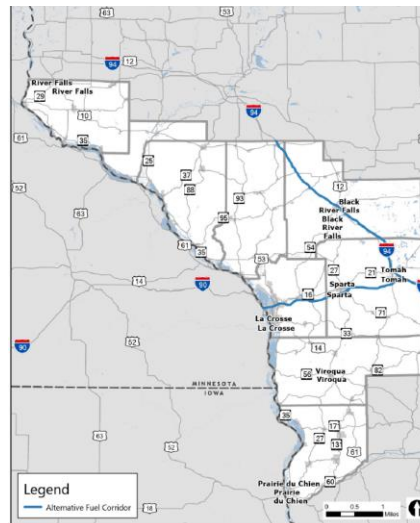


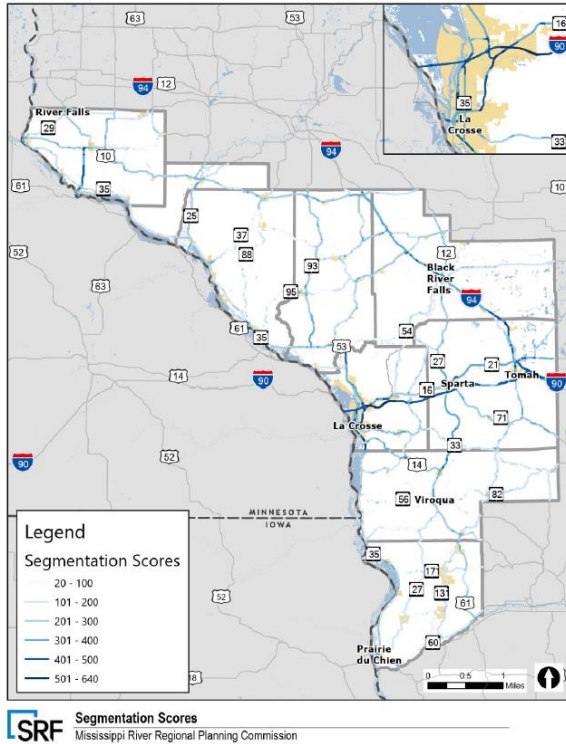
FIGURE 21. DESIGNATED ALTERNATIVE FUEL CORRIDORS



On Designated Alternative Fuel Corridors

On Alternative Fuel Corridor?	Score
No	0
Within 1/4 Mile of an Alternative Fuels Corridor	15
On a Designated Alternative Fuels Corridor	50

FIGURE 22. SEGMENTATION SCORES



Commented [JS20]: We need to add a figure header and add some text to describe this map. I can help with descriptive text if needed. Essentially, this is the combined segmentation scores for our analysis. Then we can move into the next section...Will is finalizing the tables into a presentable format and we will add those to the next section along with the two maps I sent out to the TAC summarizing intersection and corridor needs.

Commented [GK21R20]: Need some help adding more text

FIGURE 22 displays the combined segmentation scores for the project analysis. Scores were based on measuring how a freight goal met the strategy objectives.

Project Recommendations

The primary objective of the MRRPC Regional Freight Strategy is to ensure that the identified freight needs and gaps that have been identified in the region are addressed by future rounds of funding via local, state, or another annual federal grant program. One way to accomplish this is preparing pre-feasibility and conceptual analysis of key projects to organize locations for implementation when grant funding becomes available.

Table X summarizes the X projects and provides details of each issue identified for improvement and the proposed elements of each. The project locations are also illustrated in Figure X.

High Priority Intersection Projects

High Priority Corridor Projects

Figure: Planned and Programmed Projects Map

- o Programmed transportation improvements in the MRRPC:
 - [Construction Projects \(6 Year\) | Construction Projects \(6 Year\) | WisDOT Open Data \(arcgis.com\)](#)