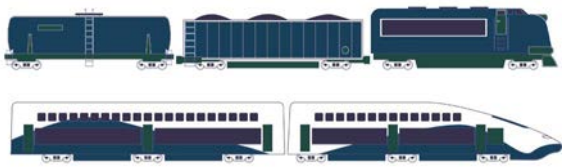
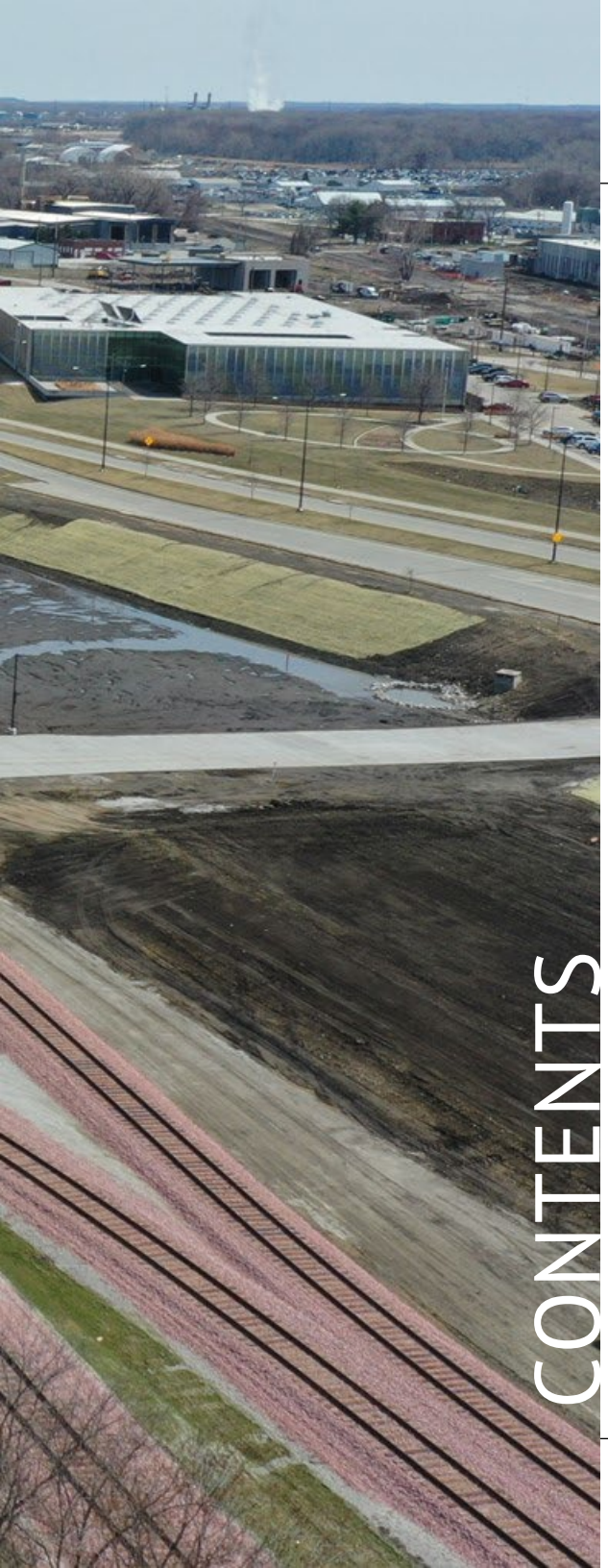
IOWA | DOT

STATE RAIL PLAN

DRAFT 2025





CONTENTS

EXECUTIVE SUMMARY

Iowa State Rail Plan

An important component of multimodal transportation planning to ensure Iowa's future transportation system meets the needs of both passengers and freight and helps Iowa maintain a strong economy and high quality of life. The Plan guides Iowa DOT in its activities of supporting access to rail transportation, helping to improve the freight and passenger systems, and promoting improved safety on the rail network where it interacts with people and other transportation modes.

Rail Transportation Vision

A safe and efficient rail system that provides Iowa with economic growth opportunities and competitiveness by maintaining the rail infrastructure, ensuring connectivity for people and goods in an environmentally sustainable manner.

Goals

- Safety and Security
- Infrastructure
- Economic Development
- Connecting Industries
- Efficiency
- Connecting People
- Environmental Impact and Resiliency

Iowa's Railroad Network

3,801 miles of mainline railroad tracks

17 operating freight railroad companies carrying over **270 million** tons of cargo

2 Amtrak passenger rail routes with **6** stations carrying over **40,000** passengers

Economic Impact of Rail Transportation

TRACKING THE BENEFITS OF RAIL TRANSPORTATION IN IOWA

TOTAL OUTPUT
$22.5 BILLION

Rail industries generated **$22.5b** in output, all from freight rail operations.

LABOR INCOME
$6.1 BILLION

Rail industries contributed **$6.1b** in earnings, including compensation and income.

EMPLOYMENT
63,700 JOBS

Rail transportation supports **28,900** direct jobs, and over **63,700** when including indirect jobs.

TAX REVENUE
$669.8 MILLION

Rail industries generated **$669.8m** in tax revenue, mainly from freight.

VALUE ADDED
$10.2 BILLION

Rail added **$10.2b** to Iowa's economy, 4.3% of the state's gdp.

BASED ON 2022 DATA

- The Role of Rail in Statewide Transportation
- Passenger Rail Inventory and Performance
- Freight Rail Inventory and Performance
- Rail Planning Considerations
- Rail Service and Investment Program
- Coordination and Review

Needs and Opportunities

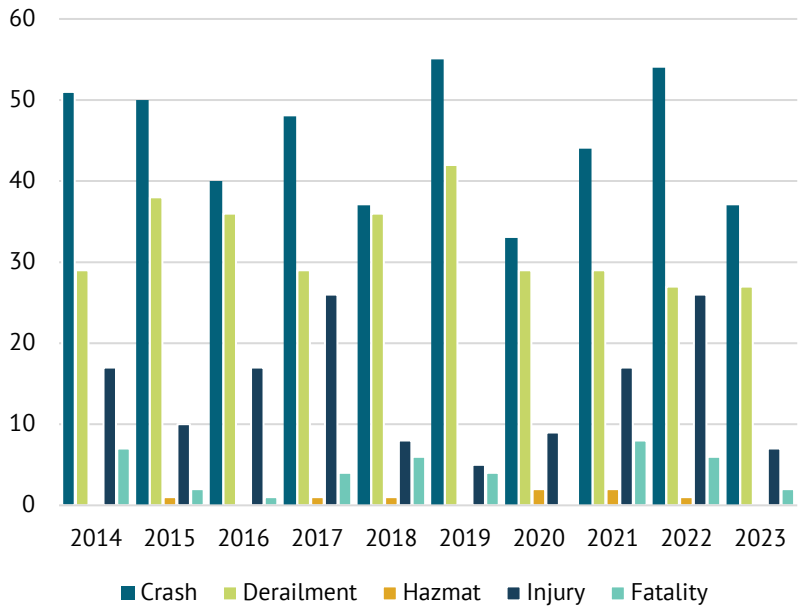
Identified as part of Rail Planning Considerations using passenger and freight transportation inventories, performance, trends, and impacts. Items are summarized into six categories.

Key Issues

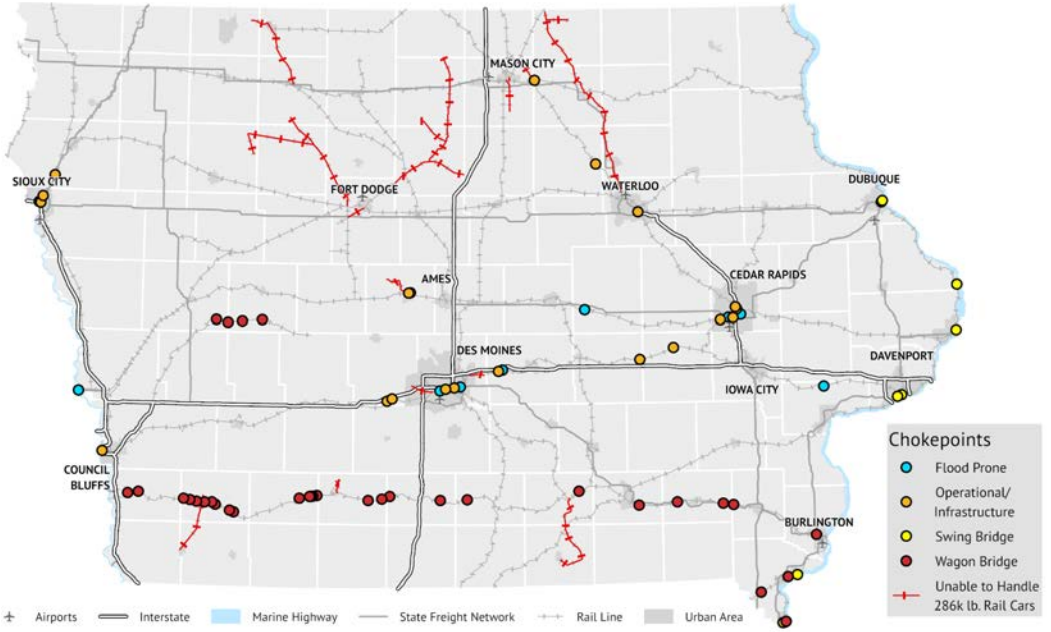
1. Safety
2. Community continuity and safety
3. Hazardous materials
4. Chokepoints
5. Freight opportunities and growth limitations
6. Passenger rail service

Hazardous Materials Routes

Iowa Railroad Safety Statistics



Chokepoints



Service and Investment Program

Includes listings of current and potential passenger rail and freight rail studies and projects categorized by short-term and long-term, as well as focused implementation strategies categorized by policy, implementation, and research and partnership and collaboration.

	Short-range (1-4 years)	Long-range (5-20 years)
Passenger Rail	3 studies, $9,900,000	11 studies, $10,725,000
	2 projects, $18,800,000	12 projects, $1,081,750,000
Freight Rail	11 studies, $4,772,550	3 studies, $ TBD
	63 projects, $550,742,936	60 projects, $738,819,000

Grade Crossing Safety

- Maintain focus on reducing grade crossing safety incidents.
- Pursue funding efforts for grade separation studies and construction projects.
- Consider methods to reduce railroad trespassing incidents.
- Seek transportation funding innovations.
- Advocate to minimize grade crossing accidents/incidents through increased enforcement.
- Promote Operation Lifesaver education material and campaigns.
- Increase public awareness of grade crossing safety.

Train Length

- Increase awareness of emergency response and highway operations related to longer trains
- Provide information and research correlation of rail safety and train length
- Monitor Transportation Research Board's Long Train Study for policy recommendations
- Consider methods to discuss railroad train lengths and operations in Iowa
- Partner with emergency services to understand impacts to emergency response related to increased train lengths
- Increased focused inspections on Hazmat rail lines

Blocked Crossings

- Support local and railroad coordination to reduce blocked crossing conflicts.
- Expand awareness of Iowa Code 327G.32 to local jurisdictions.
- Increase awareness of FRA's Blocked Crossing Reporting Tool.
- Review and monitor recommendations of 2006 FRA Report- Impact of Blocked Crossings on Emergency and First Responders.
- Consider and research new technology software to identify and communicate when a crossing is blocked to emergency management.
- Discuss priorities for multimodal transportation system.
- Facilitate discussions with local communities and railroad staff.
- Increase public and law enforcement awareness of RR Emergency Notification Signs (ENS) and procedures.

Railroad Agreement Process

- Enhance agreement process to improve schedule and cost predictability.
- Modify DOT Design manual to better meet railroad grade separation guidelines and provide easy access to design information.
- Maintain the internally developed annual Railroad Safety Awareness Training for employees to encourage cross discipline learning and information sharing.
- Participate in FHWA's Community of Interest (COI) which provides opportunities for members and railroads to network/share knowledge.
- Conduct monthly conference calls and annual in-person meeting to foster communication and coordination with rail partners.
- Consider methods to improve agreement review and process timelines.
- Post letting DOT engineering support.

1. ROLE OF RAIL IN STATEWIDE TRANSPORTATION

Iowa has a robust and thriving rail transportation system that has 3,801 miles of mainline track. Stretched end to end, that length is equivalent to the distance from Iowa to Ireland. This system is a critical component of Iowa's agriculture and manufacturing economies and allows Iowa businesses to send or receive shipments around the world through connections with the multimodal transportation system.

This document was developed by the Iowa Department of Transportation (DOT) to serve as Iowa's State Rail Plan (SRP). The Iowa SRP provides an overview of the state's rail network, examines the ongoing development of infrastructure by railroads, and provides a pathway for the future of rail transportation in the state.

The Iowa SRP was created in compliance with the federal Passenger Rail Investment and Improvement Act of 2008 (PRIIA), as amended by the Infrastructure Investments and Jobs Act of 2021 (IIJA).

The SRP is one of several long-range plans that Iowa DOT develops. These plans, along with other components of the planning, programming, and project development process, all function within the framework established by Iowa's long-range transportation plan.

1.1 Iowa's Objectives for the Multimodal Transportation System

State Long-Range Transportation Plan (SLRTP)

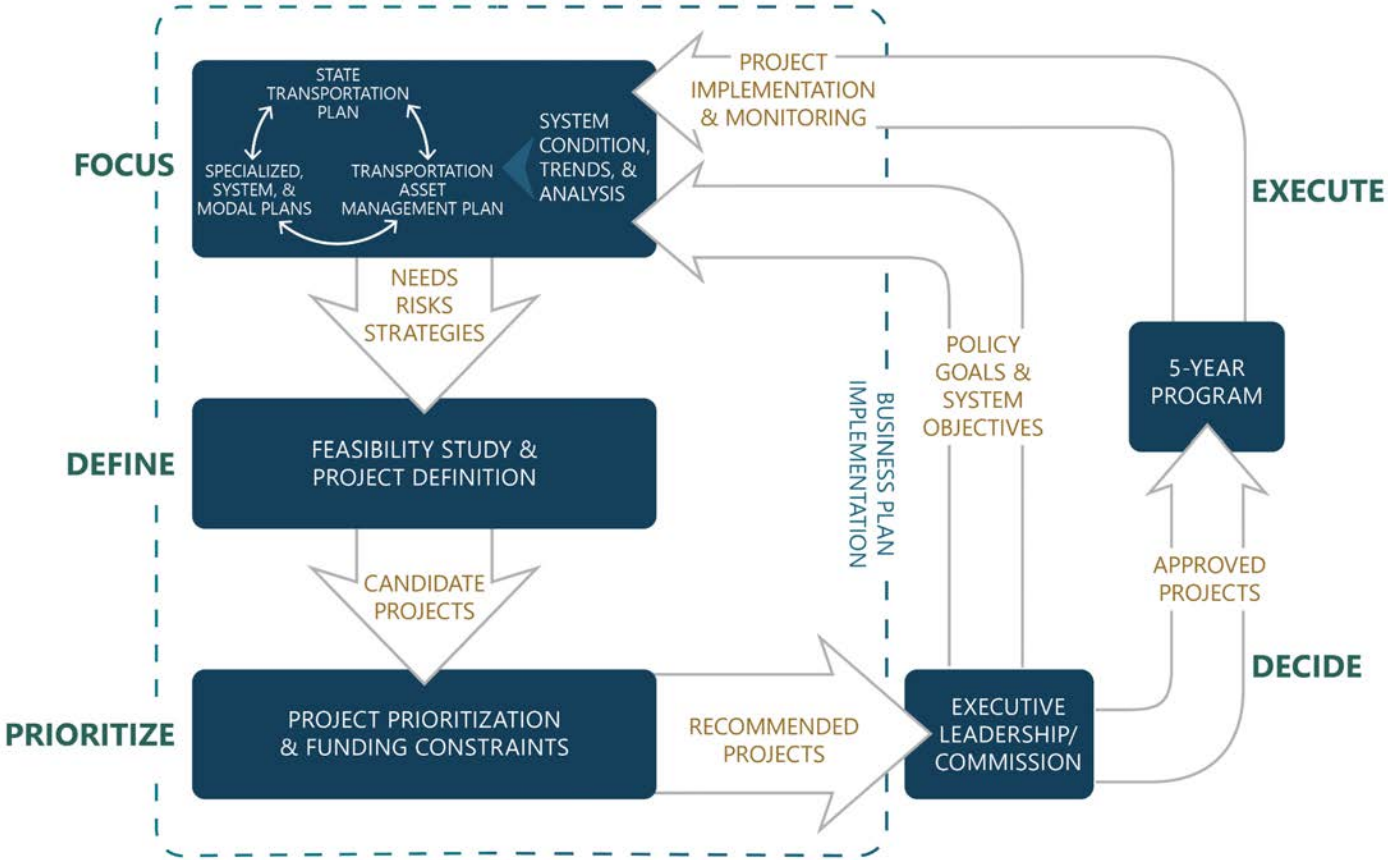
Iowa DOT's 2022 statewide transportation plan, Iowa in Motion 2050, established a transportation system vision of "A safe and efficient multimodal transportation system that enables the social and economic wellbeing of all Iowans, provides enhanced access and mobility for people and freight, and accommodates the unique needs of urban and rural areas in a sustainable manner." The plan notes that the ultimate purpose of the transportation system is to get people and goods where they need to go, or more simply, mobility. The plan defines mobility through four system objectives – safety, sustainability, accessibility, and flow – and sets up a performance management framework for Iowa DOT planning and programming processes to ensure a unified approach to developing the transportation system. This is visualized in Figure 1.1.

Figure 1.1: Iowa DOT system objectives

Source: Iowa in Motion 2050

In the overall planning and programming process, the SRP, along with Iowa in Motion 2050 and other system and modal plans, plays a role in helping to focus attention and priorities based on system needs, risks, and strategies. Figure 1.2 shows how these broader planning efforts help guide the planning and project development process that ultimately leads to the Five-Year Program (5YP), which identifies specific investments over the next five years. While not shown on Figure 1.2, the 5YP is incorporated into the Statewide Transportation Improvement Program (STIP), which includes federal funding programmed for transportation improvements in the state.

Figure 1.2: Iowa DOT planning and programming documents and processes



Source: Iowa in Motion 2050

Related Planning Documents

State Freight Plan (SFP)

The 2022 SFP documents the immediate and long-range freight planning activities and investments in the state, including rail. IIJA requires that the state's freight plan include a description of how the plan will improve the ability of the state to meet the National Multimodal Freight Policy goals in 49 U.S.C. 70101(b) and the National Highway Freight Program (NHFP) goals described in 23 U.S.C. 167. These were summarized in a single list to be addressed throughout the SFP (see Table 1.2). These goals relate strongly to the goals and objectives established for rail transportation in the state, which are discussed in Chapter 5, Rail Service and Investment Program.

- To identify and invest in infrastructure improvements, policies, and operational innovations.
- To improve the safety, security, efficiency, and resiliency of multimodal freight transportation.
- The achieve, maintain, and improve the state of good repair on the National Multimodal Freight Network (NMFN).
- To use innovation and advanced technology to improve the safety, efficiency, and reliability of the NMFN.
- To improve the economic efficiency and productivity of the NMFN.
- To improve the reliability of freight transportation.
- To improve the short – and long – distance movement of goods.
- To improve the flexibility of states to support multi-state corridor planning and the creation of multi-State organizations to increase the ability of states to address multimodal freight connectivity.
- To reduce the adverse environmental impacts of freight movement on the NMFN.
- To pursue the goals described in this subsection in a manner that is not burdensome to state and local governments.

Five-Year Program (5YP)

The 5YP is developed and approved annually by the Iowa Transportation Commission (Commission) and includes specific highway and bridge projects anticipated to be constructed over the next five years on the state highway system. The 5YP also documents the Commission's actions to award projects through various state and federal transportation formula and grant programs. This includes several rail transportation funding programs that are discussed throughout the SRP. The 5YP is approved each June for the following State Fiscal Year (July 1 – June 30). However, the Commission acts on the award of rail funds throughout the year based on each program's application cycle.

Statewide Transportation Improvement Program (STIP)

The STIP is a federally required listing of projects for which federal-aid funding is proposed for the next four years. The STIP is adopted each October 1 for the following Federal Fiscal Year (October 1 – September 30) and incorporates projects from the 5YP as well as from Metropolitan Planning Organization (MPO) and Regional Planning Affiliation (RPA) Transportation Improvement Programs (TIP). The STIP identifies projects funded by the Federal Highway Administration (FHWA), including highway-railroad grade crossing safety projects, and by the Federal Transit Administration (FTA). These projects may have a potential intersection with the Iowa railroad network. Rail projects in the state have also been added to the STIP in the past for illustrative purposes to support applications for federal grant funding.

Planning Factors

IIJA maintained the ten transportation planning factors that were included in the prior federal surface transportation bill, the Fixing America's Surface Transportation (FAST) Act. The system objectives and planning considerations discussed in Iowa in Motion 2050 are closely aligned with the ten federal planning factors. These planning factors help guide Iowa's multimodal planning process, including for rail transportation.

1. Support **economic vitality**, especially by enabling global competitiveness, productivity, and efficiency.
2. Increase the **safety** of the transportation system for motorized and nonmotorized users.
3. Increase the **security** of the transportation system for motorized and nonmotorized users.
4. Increase the **accessibility and mobility** of people and for freight.
5. Protect and enhance the **environment**, promote **energy conservation**, improve the **quality of life**, and promote **consistency** between transportation improvements and state and local planned growth and economic development patterns.
6. Enhance the integration and **connectivity** of the transportation system, across and between modes, for people and freight.
7. Promote **efficient system management and operation**.
8. Emphasize the **preservation** of the existing transportation system.
9. Improve the **resiliency and reliability** of the transportation system and reduce or mitigate stormwater impacts of surface transportation.
10. Enhance **travel and tourism**.

1.2 Rail Transportation's Role within the State's Transportation System

Iowa's rail network provides connections to national and international destinations for freight and passengers throughout the state and region. The system and services continue to evolve, driven by changes in the rail industry and demand from shippers and passengers. Iowa's 160,000-mile multimodal freight transportation system is comprised of multiple aviation facilities, a well-developed highway system, an extensive rail network, a large web of pipelines, two bordering navigable waterways, and hundreds of freight-related facilities to assist in the movement of commodities. Although rail competes with other transportation modes, it also complements them as an essential part of an optimized transportation network.

Although rail accounts for about three percent of the freight network's mileage, it carries roughly nine percent of Iowa's freight tonnage. The rail network performs an important role in moving bulk commodities produced and consumed in the state to and from local, regional, and national processors, livestock feeders, and river terminals, as well as ports for international export. The rail network's ability to haul large volumes over long distances at low costs will continue to be a major factor in moving freight and improving the economy of Iowa.

In addition to freight rail transportation, Iowa has two passenger rail routes operated by Amtrak that stop at six stations through the state and serve long-distance destinations between Chicago and California. As metropolitan areas throughout Iowa continue to grow, the need to consider a diverse network of passenger transportation options that will accommodate this growth will continue to be a factor. Passenger rail contributes significantly to economic growth and can strengthen a state's service and tourism industries.

1.3 Iowa's Vision for Rail Transportation

Iowa's rail vision statement is: "A safe and efficient rail system that provides Iowa with economic growth opportunities and competitiveness by maintaining the rail infrastructure, ensuring connectivity for people and goods in an environmentally sustainable manner." Goals and objectives were developed to support this vision. Goals are shown in Figure 1.3. Additional discussion of the vision, goals, and objectives is included in Chapter 5, Iowa's Rail Service and Investment Program, and the process for developing them is documented in Chapter 6, Coordination and Review.

Figure 1.3: Iowa's vision and goals for rail transportation

Source: Iowa DOT

1.4 Institutional Governance Structure of Iowa Rail Programs

Iowa Transportation Commission (Commission)

The Commission was created for the purpose of developing comprehensive transportation policy and planning within the state of Iowa. The Commission has final approval authority on funding allocations, including the Railroad Revolving Loan and Grant (RRLG) Program, federally funded highway-railroad grade crossing safety projects, and highway-railroad grade crossing surface repair projects.

Commission membership is comprised of seven transportation commissioners, who are appointed by the Iowa Governor and confirmed by the Iowa Senate. The Commission hosts monthly meetings, with eight held in Ames and four held in various other locations around the state annually.

Iowa Department of Transportation (DOT)

Iowa DOT does not own or operate rail facilities but is responsible for coordinating the overall state rail transportation improvement strategy. The department is primarily responsible for rail planning, crossing safety programs, and project development activities, including development of the SRP.

Iowa DOT is Iowa's State Rail Transportation Authority (SRTAA) and State Rail Plan Approval Authority (SRPAA). Furthermore, Iowa complies with the requirements of 49 U.S.C. §22102, which stipulates eligibility requirements for the long-established Federal Rail Administration (FRA) rail freight grant assistance program pertaining to state planning and administration.

Iowa DOT is the primary rail regulator within the state of Iowa. However, Iowa DOT has limited regulatory authority. Iowa DOT participates in the railroad abandonment process and offers comment on federal rail legislation and rulemaking. Iowa DOT also provides an avenue for rail-related citizen complaints that are covered in Iowa Code Chapter 327G, such as issues with fencing, private crossings, and blocked crossings. When applicable under Iowa Code 327C and Iowa Code 327D, Iowa DOT can facilitate service disputes between shippers and carriers through the Iowa Department of Inspections and Appeals.

Iowa DOT is also involved in efforts related to state and federal financing. This can involve loans and grants for construction and maintenance of track, safety improvements at highway-rail crossings, and developing new spur tracks to support economic development.

Modal Transportation Bureau

The Modal Transportation Bureau includes three teams – Aviation, Public Transit, and Rail Transportation. The Rail Transportation Team has the primary responsibility for rail planning at Iowa DOT. The team administers various rail-related programs, including:

- Rail policy and legislation development
- Advocacy and communications
- Railroad Revolving Loan and Grant (RRLG) Program
- Highway/railroad project agreements
- Crossing safety
- Surface repair
- Passenger and freight rail planning
- Track inspection

The Public Transit Team administers federal and state transit grants and provides technical assistance to Iowa's 19 urban public transit systems and 16 regional public transit systems. Every county in Iowa is served by public transit to ensure Iowans have transportation to work, medical facilities, meal sites, and leisure activities. This team will have a role in ensuring that any future intercity passenger rail services are coordinated with local transit.

The Aviation Team advocates for and delivers services that promote and enhance a healthy air transportation system. Activities include administering state and federal aviation funding programs; managing the Iowa aircraft registration program; inspecting and certifying all public use airports; statewide aviation weather reporting; communications, outreach, and educational activities; aviation system planning, data collection, and analysis; and pavement inspections at federally funded airports.

Systems Planning Bureau

A primary function of the Systems Planning Bureau is to prepare comprehensive, intermodal, and modal transportation system plans for the state. These plans are used to direct transportation investments. The bureau also maintains data and mapping related to railroads in the state.

District Transportation Planners

There are six Iowa DOT districts statewide. Each district has a District Transportation Planner who is involved in multimodal transportation planning. These planners also regularly engage with MPOs and RPAs on local transportation planning, including freight and passenger rail considerations.

Iowa Economic Development Authority (IEDA)

IEDA's mission is to strengthen economic and community vitality by building partnerships and leveraging resources to make Iowa the choice for people and business. Through its two main divisions – business development and community development – IEDA administers several state and federal programs to meet its goals of assisting individuals, communities, and businesses.

IEDA also provides financial assistance programs to aid in the attraction of new industries along the state's rail lines through initiatives including tax credits and, in some instances, financial assistance for projects such as track rehabilitation and the construction of spur tracks to industries.

1.5 Authority to Conduct Rail Planning and Investment

State Authority for Rail Planning

Iowa Code Title VIII (Transportation) Chapter 307 assigns powers to Iowa DOT to plan and implement transportation system improvements. Iowa DOT's rail-related responsibilities are detailed in Iowa Code §307.26. These include the following:

1. Conducting research on basic railroad problems and identification of present capability of railroads to provide acceptable levels of service.
2. Development of rail transportation systems for expansion of passenger of freight services.
3. Development of programs in anticipation of railroad abandonment.
4. Development and maintenance of a federal-state relationship of programs relating to railroad safety enforcement, track standards, rail equipment, operating rules, and transportation of hazardous materials.
5. Conducting research on railroad-highway grade crossings and development of a safety program in order to reduce injuries or fatalities.
6. Applying for, accepting, and expending federal, state, or private funds for the improvement of rail transportation.
7. Studies for coordination of railway service with that of other transportation modes.
8. Studies of regulatory changes deemed necessary to effectuate economical and efficient railroad service.
9. Provision of advice and assistance regarding agreements with railroads for the restoration, conservation, or improvements of railroads.
10. Administration of various responsibilities including: supervision and regulation of rail carriers, railway corporations – powers, construction, and operations of railways, railroad rights-of-way, crossings, tracks and fencing, and railway assistance, per Title VIII §327C through H.
11. Performing other duties and responsibilities as may be assigned by the Iowa DOT Director and the Iowa Transportation Commission.
12. Advising and assisting in the establishment and development of railroad districts upon request.
13. Conducting innovative experimental programs relating to rail transportation problems within the state.
14. Performance of the role of "applicant" pursuant to the Railroad Revitalization and Regulatory Reform Act of 1976.
15. Identification of those segments of railroad trackage, which, if improved, may provide increased transportation services for Iowans.

State Authority for Grant, Loan, and Other Rail Financing

Iowa has utilized both federal and state transportation funding programs for rail infrastructure improvements where eligible and appropriate. State-sponsored rail investment in Iowa has been provided through Iowa DOT and other state economic development agencies.

Title VIII Chapter 327H of the Iowa Code allows Iowa DOT to administer a Railroad Revolving Loan and Grant (RRLG) Program for the following purposes:

- To provide assistance for the restoration, conservation, improvement, and construction of railroad main lines, branch lines, switching yards, sidings, rail connections, intermodal yards, highway grade separations, and other rail-related improvements.
- For rail economic development projects that improve rail facilities, including the construction of branch lines, sidings, rail connections, intermodal yards, and other rail-related improvements that spur economic development and job growth.

Title VIII Chapter 327J of the Iowa Code created a Passenger Rail Service Revolving Fund that could be used to pay the costs associated with the initiation, operation, and maintenance of passenger rail service.
Other state-sponsored rail investment programs include:

- Highway-Railroad Grade Crossing Safety Program – This federally funded program provides financial assistance to states for safety improvements at highway-railroad crossings.
- Grade Crossing Safety Program – This state-funded program assists railroads with funding to defray a portion of the signal maintenance costs at signals installed under the Highway-Railroad Grade Crossing Safety Program since 1973.
- Highway-Railroad Grade Crossing Surface Repair Program – This state-funded program is designed to assist city and county highway authorities and railroads with surface improvements at highway-railroad crossings.
- Primary Road Highway-Railroad Grade Crossing Repair Program – This state-funded program is designed to assist with surface improvements at highway-railroad crossings on the Primary Road System.

Additional details on these rail and rail safety related funding programs appear in Chapter 3, Freight Inventory and Performance and Chapter 5, Iowa's Rail Service and Investment Program.

1.6 SRP Organization

The SRP is organized as follows.

1.The Role of Rail in Statewide Transportation
This chapter highlights the state's objectives for the transportation system, rail's role within the system and the vision for rail transportation within the state, the institutional governance structure of state rail programs, and the state's authority for rail financing.

2. Passenger Rail Inventory and Performance
This chapter provides an overview of passenger rail in Iowa, including a description and inventory of current service, performance information, and proposed improvements and investments.

3. Freight Rail Inventory and Performance
This chapter provides an overview of freight rail in Iowa, including a description and inventory of current service, performance information, and proposed improvements and investments.

4. Rail Planning Considerations
This chapter highlights trends, their impacts, and rail service needs and opportunities.

5. Rail Service and Investment Program
This chapter provides the vision, goals, and objectives for rail transportation in Iowa. It highlights program coordination, rail agencies, program effects, passenger and freight components, rail studies and reports, and outlines the passenger and freight rail capital program.

6. Coordination and Review
This chapter discusses public and agency participation in plan development, coordination with neighboring states, stakeholder involvement and feedback, and coordination with other planning programs.

7. Appendices
The appendices include passenger stations, freight railroad profiles, freight facilities, freight railroad improvements and investments, vehicle miles traveled calculations, commodity flows, and economic impact of railroads.

The SRP will guide Iowa DOT in its activities of promoting access to rail transportation, helping to improve the freight railroad transportation system, expanding passenger rail service, and promoting improved safety on the rail system and where the rail system interacts with people and other transportation modes. The SRP is an important component of multimodal transportation planning to ensure Iowa's future transportation system meets the needs of both passengers and freight and helps Iowa maintain a strong economy and high quality of life.

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2. PASSENGER INVENTORY AND PERFORMANCE

2.1 System Description and Inventory

Passenger Network

Iowa has a rich history of passenger rail with services starting 160 years ago. Although these services used to be widely used, ridership has declined over the years due mostly to competing modes of transportation, such as personal vehicles on the highway system and air travel. As shown in Figure 2.1, Iowa is currently served by two Amtrak lines, the California Zephyr (Chicago, IL to San Francisco, CA) and the Southwest Chief (Chicago, IL to Los Angeles, CA). Amtrak also offers Thruway bus service to and from Davenport connecting with the California Zephyr and the Southwest Chief at Galesburg, IL. Iowa is also researching potential new routes to provide service in the state and maintaining historical tourism rail efforts.

The Southwest Chief provides once daily round-trip service between Chicago and Los Angeles, making one stop in Iowa at Fort Madison. Intermediate stops outside Iowa include Kansas City, MO; Albuquerque, NM; and Flagstaff, AZ. The Southwest Chief's route on the BNSF line through Iowa is 20 miles long.

The California Zephyr provides once daily round-trip service between Chicago and Emeryville (San Francisco), making multiple stops in Iowa at Burlington, Mount Pleasant, Ottumwa, Osceola, and Creston. Intermediate stops outside Iowa include Omaha, NE; Denver, CO; Salt Lake City, UT; and Reno, NV. The California Zephyr's route on BNSF's line through Iowa is 274 miles long.

Passenger Stations

Each of Iowa's six passenger rail stations is serviced twice daily. All stations are Americans with Disabilities Act (ADA) accessible; however, not all the facilities in the stations are ADA accessible. Table 2.1 identifies select characteristics for each passenger rail station in Iowa. These stations saw total boardings and alightings of about 41,000 passengers in 2023. While this reflects an increasing ridership trend since the COVID-19 pandemic, it is lower than pre-pandemic ridership which averaged almost 58,000 boardings and alightings per year from 2015-2019. See Appendix A for additional details for each station.

Figure 2.1: Iowa passenger rail network

Source: Iowa DOT

Table 2.1: Iowa passenger rail station characteristics

Characteristics	Fort Madison	Burlington	Mount Pleasant	Ottumwa	Osceola	Creston
Address	1601 20th St	300 S Main St	418 N Adams St	210 W Main St	143 E Webster St	100 W Adams St
Ownership	BNSF	BNSF owns platform and track; City of Burlington owns facility and parking lot	BNSF	BNSF owns platform and track; Wapello County owns facility and parking lot	BNSF owns platform and track; City of Osceola owns facility and parking lot	BNSF
Served by	*Southwest Chief*	*California Zephyr*	*California Zephyr*	*California Zephyr*	*California Zephyr*	*California Zephyr*
Service Frequency	Twice Daily (EB AM; WB PM)	Twice Daily (EB AM; WB PM)	Twice Daily (EB AM; WB PM)	Twice Daily (EB AM; WB PM)	Twice Daily (EB AM; WB PM)	Twice Daily (EB AM; WB PM)
Depot Hours	10:00 AM – 1:00 PM and 5:00 PM – 6:30 PM M-F; closed weekends and holidays; lobby open daily	8:00 AM – 6:00 PM Daily	9:30 AM - 1:30 PM and 2:30 PM - 6:15 PM MTuWF; 9:30 AM – 3:45 PM and 4:45 PM – 6:15 PM Th; closed weekends and holidays	8:30 AM – 11:30 AM and 5:30 PM – 8:00 PM	7:00 AM – 10:00 AM and 7:00 PM – 9:00 PM daily	No Station Hours
Station Location Type	Urban	Urban	Urban	Urban	Urban	Urban
Parking	49 spaces (2 ADA)	40 spaces (2 ADA)	100 spaces (2 ADA)	30 spaces (3 ADA)	63 spaces (3 ADA)	19 spaces (2 ADA)
Shared Use	BNSF Facility	No	No	Wapello County Historical Museum	No	BNSF Facility
Intermodal and Non-Motorized Transportation Access	SEIRPC dial-a-ride service	SEIBUS local fixed route bus service and SEIRPC dial-a-ride service and bike racks	SEIRPC dial-a-ride service	Ottumwa transit fixed route local service	Southern Iowa Trolley dial-a-ride service	Southern Iowa Trolley dial-a-ride service
FY 23 Boardings and Alightings	4,841	6,184	8,578	7,803	11,495	2,145

Source: Amtrak

2.2 Performance

Service Objectives

Current intercity passenger rail services are long-distance trains operated by Amtrak on rail lines owned by BNSF, which limits Iowa's ability to directly impact specific service levels. Since Iowa does not have any state sponsored passenger rail efforts, all service objectives align with Amtrak's long-distance objectives. Table 2.2 shows Iowa's passenger rail service objectives for service frequency, train miles, ridership, and on-time performance (OTP) by route. These goals and objectives are set by Amtrak on a national level for each route, so the Iowa Department of Transportation (DOT) establishes the same goals and objectives for these routes.

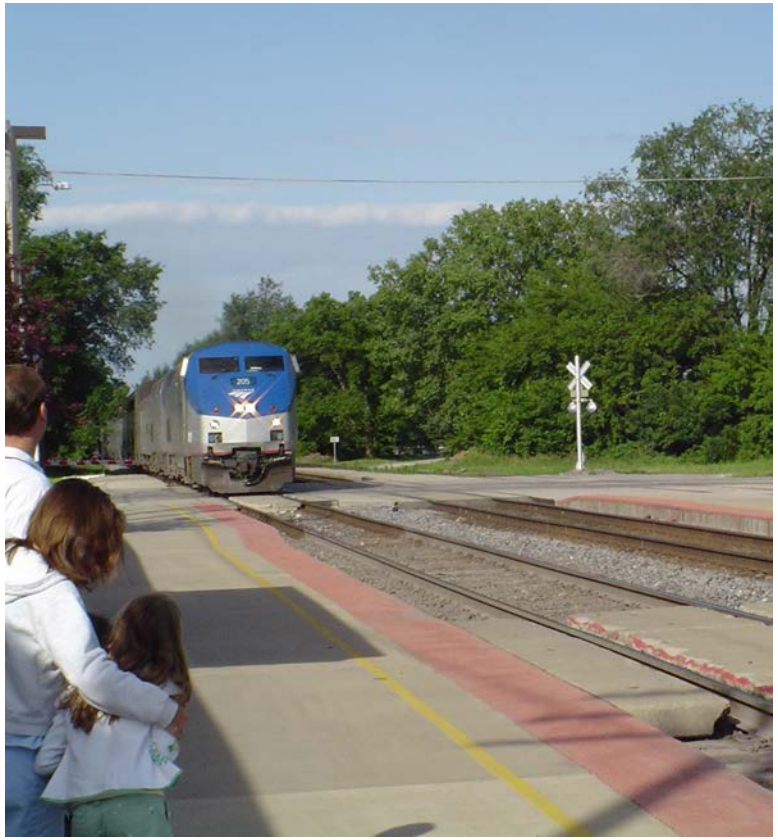


Table 2.2: Iowa's goals and objectives for passenger rail performance

	Southwest Chief	California Zephyr
Service Frequency	Twice Daily	Twice Daily
Train Miles	1.7 million	1.6 million
Ridership	294,000	361,000
On-Time Performance	80%	80%

Source: Amtrak

Southwest Chief Performance Evaluation

The Southwest Chief's OTP slowly decreased from about 47% in Fiscal Year (FY) 2018 to 25% in FY 2022, as shown in Figure 2.2. The route's national average OTP was 27% in 2022, which indicates the Chief's performance in Iowa is on-par with the national average. Table 2.3 shows the leading causes of delay per 10,000 train miles for this route. The leading causes are slow orders (restrictions on speed) and freight train interferences, which make up over half of the total delays for the Chief.

The Southwest Chief stops at one station in Iowa, so total Iowa ridership is equal to the ridership at Fort Madison. Prior to 2020, the Chief experienced a slow decline in usage. During 2020 to 2021, there was a dramatic drop in ridership due to the COVID-19 pandemic. Since then, ridership has been on the rise as shown in Figure 2.3. While the Chief's total utilization has not yet exceeded pre-pandemic numbers, the current rate of growth suggests a full recovery will happen. Nationally, the Southwest Chief's average monthly passenger miles were 18.3 million in FY 2024, with an annual total of 219.0 million.

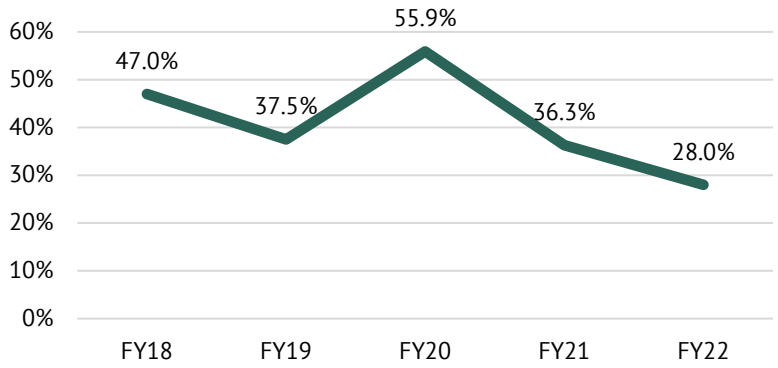
In 2023, the Chief failed to meet Amtrak's national service objectives set for OTP but did meet the objectives for service frequency.

Table 2.3: Southwest Chief leading causes of delay per 10,000 train miles nationally

	Slow Order	Freight Train Interference	Other Cause	Total
Total Delay (min)	245	241	275	**761**

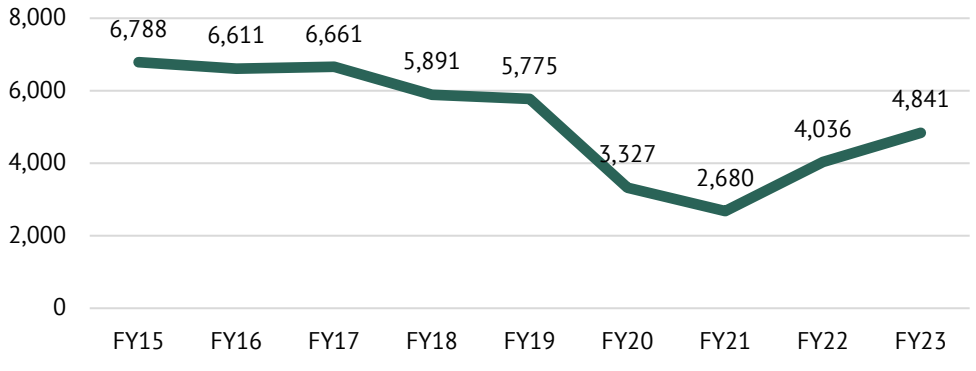
Source: Amtrak

Figure 2.2: Southwest Chief OTP in Iowa, FY 2018-2022



Source: Amtrak

Figure 2.3: Southwest Chief ridership in Iowa, FY 2015-2023



Source: Amtrak

California Zephyr Performance Evaluation

The California Zephyr's OTP slowly decreased from roughly 49% in FY 2018 to 29% in FY 2022, as shown in Figure 2.4. In 2022, the Zephyr had a national average OTP rate of 25%, which indicates that the Zephyr performed slightly above average in Iowa compared to nationally. Table 2.4 shows the leading causes of delay per 10,000 train miles for this route. Slow orders and freight train interferences make up over half of the total delays for the Zephyr.

Figure 2.5 shows the California Zephyr's ridership in Iowa by station since FY 2015. The Zephyr experienced decreases in ridership from 2016 through 2021, including a dramatic decrease in 2020 due to the COVID-19 pandemic. Since then, the Zephyr has seen a steady rise although it has not made it back to pre-pandemic levels. All stations in Iowa follow roughly the same trend year to year. Ottumwa has the most ridership, Creston sees the least ridership, and the annual change of usage rates for each station remain relatively the same. Nationally, the California Zephyr's average monthly passenger miles were 20.1 million in FY 2024, with an annual total of 240.9 million.

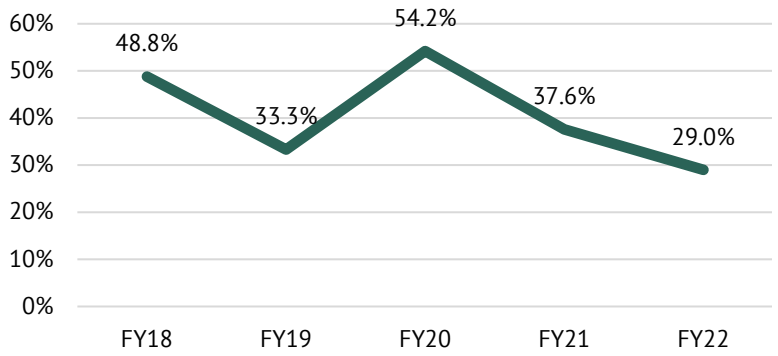
In 2023, the Zephyr failed to meet Amtrak's national service objectives set for OTP but did meet the objectives for service frequency.

Table 2.4: California Zephyr leading causes of delay per 10,000 train miles nationally

	Slow Order	Freight Train Interference	Other Cause	Total
Total Delay (min)	321	201	200	**722**

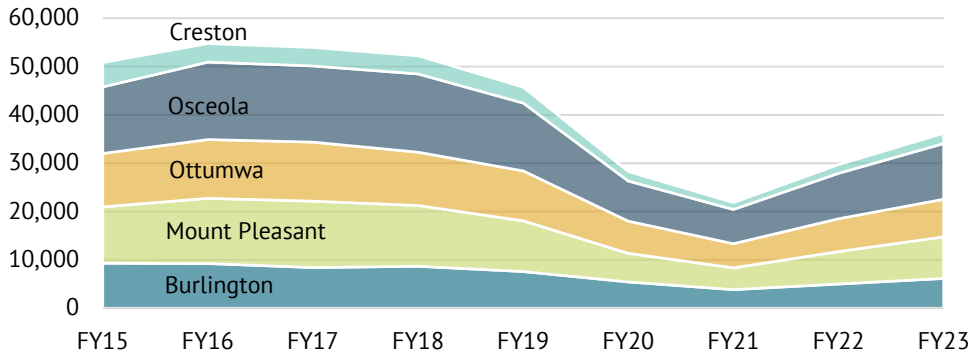
Source: Amtrak

Figure 2.4: California Zephyr OTP in Iowa, FY 2018-2022



Source: Amtrak

Figure 2.5: California Zephyr ridership in Iowa, FY 2015-2023



Source: Amtrak

2.3 Passenger Rail Improvements and Investments

This section provides an overview of ongoing or proposed passenger rail initiatives across Iowa. These include intercity passenger rail efforts and proposed commuter rail services, special events and tourism rail, and other passenger rail efforts that have been recently completed or are underway.

Improvements to Existing Services

Long-Distance Routes

Current projects and initiatives to improve existing long-distance Amtrak services are solely on the BNSF southern route across the state over which the California Zephyr operates in Iowa. Recently completed improvements include the Burlington Bridge Replacement over the Mississippi River at Burlington, the Ottumwa Subdivision Crossover Improvement Project between Burlington and Ottumwa, and various station improvements. The ongoing implementation of Positive Train Control (PTC) on the BNSF network, including on the southern route across Iowa, will have positive impacts to Amtrak services in the state.

Stations

Fort Madison

Amtrak joined the City of Fort Madison in celebrating the opening of the historic Santa Fe Depot, which was restored after a multi-year fundraising and design effort to replace the Amtrak station in an industrial area on the west side of town. The city secured $3.2 million in grants and commitments from several sources, including Iowa DOT, BNSF, Amtrak, and the regional riverboat commission, to finance the relocation and necessary construction. The historic Santa Fe Depot, in use until 1968, and adjacent freight house were elevated above the 500-year flood stage, the depot interior was renovated, and a new ADA-compliant passenger platform was constructed. The complex, designated as the Steve Ireland Transportation Center, is very close to the Mississippi River, separated by a park and the railroad. It will also remain the home of the North Lee County Historical Society.

Burlington

In 2017, the City of Burlington restored the Great Room of the historic depot used by Amtrak. The city secured an Iowa DOT Public Transportation Infrastructure Grant (PTIG) award for $480,000 to rehabilitate the public portions of the depot. With the support of the local Friends of the Burlington Depot group, the community is moving forward with a vision for a reactivated civic space in the imposing mid-century modern structure that includes a restaurant and intermodal transportation center. Amtrak broke ground in summer 2022 on a complete platform and canopy reconstruction to bring the two station boarding platforms into ADA compliance. Amtrak is funding the $12 million project.

Mount Pleasant

Amtrak plans to modify the station to ensure ADA compliance. This will include providing an accessible route from the public right of way to the platform, constructing a new platform with associated ramps, stairs, railings, and signage, and providing platform city identifier signs.

Ottumwa

Amtrak has completed the design for a historically respectful replacement of the two 1940s era station boarding platforms, to bring them into ADA compliance. Amtrak broke ground in summer 2022. Amtrak has offered design assistance and guidance as the community begins conceptualizing a new multimodal ground transportation center at the historic CB&Q Railroad Depot, the present site of Amtrak service.

Osceola

Amtrak plans to modify the station to ensure ADA compliance. This will include providing an accessible route from the public right of way to the platform, constructing a new platform with associated ramps, stairs, railings, and signage, and providing platform city identifier signs. Designs for this platform have gone through many variations, and construction is projected to begin in 2025.

Creston

Amtrak completed improvements to the historic Chicago, Burlington, and Quincy Railroad (CB&Q) Depot structure, now used as Creston City Hall, to bring the facility's historic waiting room, doorways, restrooms, and pathway to the train platform into ADA compliance. The depot is listed on the National Register of Historic Places and has resumed its historic role as the community's passenger rail station. Before the renovation, rail passengers waited for trains in a 1960s modular, manufactured building that was used by freight railroad crews. Amtrak and Creston local officials and residents celebrated the historic depot's return as a railroad station during the community's summer 2019 sesquicentennial celebration. In 2024, Creston was working on building a new platform to service this station with all its required amenities.

Proposed New Intercity Service

Figure 2.6 highlights existing passenger rail in Iowa along with routes that have been studied or identified as conceptual corridors. Each of the potential routes is discussed in the following section.

Figure 2.6: Existing and potential passenger rail efforts in Iowa

Source: Iowa DOT

Studied Routes

Chicago to Council Bluffs-Omaha

The Chicago to Council Bluffs-Omaha rail corridor through Iowa and Illinois has been explored through various studies since 2004 for its potential for implementing new intercity passenger rail service. In 2004, the Midwest Regional Rail System Executive Report identified this route as a fundamental component of the regional system. In 2008, Amtrak developed its Feasibility Report on Proposed Amtrak Service, and identified the route as feasible and able to proceed with development.

The basic service concept between Chicago and the Quad Cities (Moline, IL), was adopted as Phase 1. In 2009, the states of Iowa and Illinois partnered to also study and pursue funding for implementation of an intercity passenger rail service from the Quad Cities to Iowa City.

In 2010, the state partnership completed the Chicago to Iowa City High-Speed Intercity Passenger Rail Program Service Development Plan and applied for a federal High Speed Intercity Passenger Rail (HSIPR) grant. The partnership received $230 million in HSIPR funds from the Federal Railroad Administration (FRA), which were jointly awarded to the states of Iowa and Illinois. The funds were split between the states in 2011 to allow for phased service implementation, with $177 million obligated to Illinois to complete Phase 1 of the corridor between Chicago and Moline. The remaining $53 million was left for Iowa to complete Phase 2 of the corridor between Moline and Iowa City, but due to challenges associated with progressing Phase 2, Iowa completed a Corridor Study and the remaining funds were de-obligated.

Iowa DOT launched a broader review of new intercity passenger rail service in 2012 by studying the potential for implementation on the remainder of the corridor to Omaha, NE. In 2015, the City of Moline began construction of an intermodal train station, where Phase 1 of the line would terminate. Construction of this facility was completed in 2017, however, no passenger rail service has been added.

In December 2023, the FRA accepted an application by Illinois DOT to enter the Chicago–Moline route into its Corridor Identification and Development Program. The program grants $500,000 toward service planning and prioritizes the route for future federal funding.

There is still no passenger rail service connecting to the Quad Cities as of 2024. As delays continue, potential alternatives to the route will be further studied.

Chicago to Dubuque

Passenger rail service between Chicago, IL and Dubuque was operated by Amtrak until it was discontinued in 1981. The Chicago to Dubuque project aims to restore intercity passenger rail service in the corridor incrementally. In the first phase, service would be implemented from Chicago to Rockford, IL. Improvements would include upgrading tracks, capacity improvements, a layover facility, bridge improvements, and new stations. It is anticipated that the proposed service will be provided by Amtrak, with future plans to extend service west to Freeport, IL, Galena, IL, and Dubuque in a second phase. This would serve as an extension of Metra, the primary commuter rail service in the Chicagoland area.

In 2007, Amtrak studied multiple routing options in the corridor in its Feasibility Report on Proposed Amtrak Service, Chicago-Rockford-Galena-Dubuque.

In October 2009, Illinois DOT submitted a grant application for the Chicago to Dubuque service, seeking $140 million in American Recovery and Reinvestment Act (ARRA) funding under the HSIPR discretionary program. The funding request was to support environmental impact analyses, track structure improvements, layover facility construction, equipment acquisition, and station improvements. Total capital costs were estimated at $147 million, and ridership was forecasted at 82,700 per year. The application was not selected for award. That proposal assumed use of a CN line between Chicago and Dubuque.

The project received $223 million from the Illinois Jobs Now! Capital Program in 2014. The money was to be used to upgrade the UP line between Rockford and a new connection with Metra at Elgin, a western suburb of Chicago. The service would then share tracks with Metra from Elgin to Chicago Union Station. Plans called for corridor improvements to be completed and the start-up of state-sponsored Amtrak service in 2016, but the project is now on hold and under administrative review while the state of Illinois addresses comprehensive budgeting for all state programs. The East Central Intergovernmental Association (ECIA) applied for planning funds through Illinois DOT and completed a study for service from Dubuque to Rockford in 2022.

Conceptual Routes

Dubuque to Sioux City

This conceptual route would extend the Chicago to Dubuque service to Sioux City. The service would stop in Waterloo and Fort Dodge with an additional stop in Iowa Falls that could serve as a potential connection to the proposed Twin Cities to Des Moines service. This route's potential and viability remains to be studied.

Twin Cities to Des Moines

The March 2015 Minnesota GO State Rail Plan identified a potential intercity route from the Twin Cities to Des Moines. This corridor is proposed to run up to four round trips per day at 79 mph. This route was only evaluated from the Twin Cities to Albert Lea, MN. This proposed route is a Phase 1 project, which has a 0 to 20 year implementation estimate. The route to Des Moines and potentially Kansas City, MO has yet to be evaluated.

Twin Cities to Kansas City

This conceptual route would link three major metropolitan areas (St. Paul, MN; Des Moines; and Kansas City, MO) on a 478 mile north-south route through Iowa. In 2024, the FRA Amtrak Daily Long-Distance Service Study identified this route as a preferred route for their extended network. This line would start in the Twin Cities and continue south to San Antonio, TX, making intermittent stops in Des Moines; Kansas City, MO; Tulsa, OK; and Dallas, TX. Further analysis and identification of funding after completion of the study would be necessary to advance the preferred routes through project planning and development activities prior to implementation.

Twin Cities to Sioux City

The Minnesota GO State Rail Plan also proposed service between the Twin Cities and Sioux City. The route would include stops in Mankato, MN; Worthington, MN; Sheldon; and Le Mars. The Twin Cities to Mankato segment has been evaluated as a Phase 1 Project, which has a 0 to 20-year implementation estimate. This service was envisioned with up to four daily round trips at a maximum speed of 79 mph. The extension from Mankato to Sioux City has been evaluated as a Phase 2 project, which has a 20+ year implementation estimate. The Minnesota plan envisioned that this service could continue south to Omaha, NE in subsequent phases.

The Minnesota plan developed implementation cost estimates for the service between the Twin Cities and Mankato. The route to Sioux City has yet to be evaluated. In 2024, the FRA Amtrak Daily Long-Distance Service Study identified this route as a preferred route for their extended network. This line would start in the Twin Cities and continue south to Phoenix, AZ making intermittent stops in Sioux Falls, SD; Omaha, NE; Kansas City, MO; Newton, KS; Amarillo, TX; Albuquerque, NM; and Flagstaff, AZ. Further analysis and identification of funding after completion of the study would be necessary to advance the preferred routes through project planning and development activities prior to implementation.

Proposed Commuter Rail Service

Cedar Rapids to Iowa City Area Commuter Service

A 2015 study sponsored by the Cedar Rapids and Iowa City Railway (CRANDIC), Iowa DOT, and other local stakeholders revisited potential passenger rail implementation options for the CRANDIC's Cedar Rapids to Iowa City corridor. The purpose was to provide stakeholders with an understanding of the different modes that are available for passenger rail service in the corridor, to understand the probable capital and operating and maintenance costs for each mode, and to consider service frequencies, capacities, and the regulatory and funding environment for implementing a passenger rail service in the corridor. The study area was 20.5 miles of CRANDIC's line between Cedar Rapids and Iowa City with a connection to the Eastern Iowa Airport.

The report discussed three different modal options – streetcar, light rail transit, and commuter rail – and provided high-level, conceptual capital, operating, and maintenance cost information. For all modes, annual operations and maintenance costs were estimated at between $275,000 and $325,000 per mile and between $5.6 million and $6.7 million per year for the 20.5-mile route. No recommendations were made, and this study concluded that project stakeholders would need to revisit the feasibility of this potential commuter rail corridor at a later date. In 2022, the owners of CRANDIC stated that they were no longer interested in partnering with local governments to revive a commuter rail line, but they would not preclude local governments from reviving the efforts on their own while using their line. A Bus-Rapid Transit (BRT) study was completed in 2024 to determine its feasibility as a potential alternative to commuter rail service.

In 2024, Pop-Up Metro proposed an exploratory service from Iowa City to North Liberty on 8.2 miles of CRANDIC line. This hypothetical service, which could launch relatively quickly, has been placed on hold at the time being but may be explored further in the future. Metro is a railway and management company that provides a turnkey "kit" that includes battery propelled passenger cars and necessary equipment via an annual lease. This provides a way for communities to pilot commuter rail service in an area without as large of investment or as long of development timeline as typically required to initiate rail service.

This project would be implemented in two phases, connecting downtown Iowa City to Coralville, and then extending to North Liberty. Pop-Up Metro has identified seven temporary stops along this 8-mile line and have developed mock schedules for the service. The next steps would be to hold stakeholder briefings, conduct track and crossing inspections, validate their proposed services, identify a public sponsor, and configure a realistic funding strategy and timeline.

Des Moines Area Commuter Service

The June 2000 Commuter Rail Feasibility Study investigated a commuter rail concept for the Des Moines metropolitan area. There would be three routes running from a central location at the Des Moines Station downtown to final stops in Altoona, Waukee, and Urbandale.

Ridership forecasts were developed assuming 15-, 30-, 45-, and 60-minute peak period, peak direction frequencies. The forecasts calculated 1,300 passenger trips per weekday assuming 45-minute peak period frequencies in 2005, with an implementation cost estimate of $63.2 million. This includes track improvements, stations, grade crossing protection, rolling stock, and feeder buses and park-and-ride facilities.

Estimated operating costs for the 45-minute frequency totaled $7.5 million per year, while the annual ticket revenue would be $533,000. The annual subsidy requirement would be $7 million, which would be a subsidy per passenger trip of $21 as opposed to subsidies of $7 for comparable services. The study also noted that the service would only return a 7% fare box recovery ratio, which is far below the average fare box recovery ratios of comparable services.

The study concluded that commuter rail in Des Moines is not feasible from an economic perspective. The study recommended keeping options open, monitoring demographic and traffic trends, and preserving rail corridors which may become important for passenger rail in the future.

Council Bluffs to Omaha Streetcar

The City of Omaha developed a Downtown Omaha Masterplan in 2009 that contained various transportation elements, including a BRT system, streetcar, and other non-car transit efforts. In 2022, the Greater Omaha Chamber developed the Omaha Urban Core Strategic Plan, which identified a streetcar as a key component to strengthen Omaha's urban core. This streetcar effort is currently underway and is estimated to be completed in 2027.

The Omaha-Council Bluffs Metropolitan Area Planning Agency (MAPA), in partnership with the City of Council Bluffs, is in its fledgling stages to set up a Multimodal Connection and Expansion Planning and Environmental Linkages (PEL) Study for Council Bluffs. The study will identify the purpose and need, potential alternatives, and proposed evaluation criteria for connections to existing and future multimodal networks.

First Avenue, a former rail corridor vacated in 2013, is located one block south of Council Bluffs' main thoroughfare. Roughly 60% of Council Bluffs residents live within one mile of this corridor. The West Broadway Corridor Plan (adopted in July 2015) proposed transforming the former rail line into a multimodal corridor featuring trails, transit, and redevelopment. The multimodal corridor would enhance the operation of West Broadway, make an essential link in the trail system, create a transit link to Downtown Omaha, and provide the opportunity for redevelopment of obsolete industrial properties. The vision of this study is to create a connected Omaha-Council Bluffs metro with transit that seamlessly provides residents access between their homes, jobs, education, healthcare, and entertainment.

Official design work has not been done but, the preliminary estimated cost is $100 million for a bridge and $75 million for the streetcar extension into Council Bluffs.

Special Event Trains and Tourism Rail

Unlike commuter rail, special event and/or tourist excursion passenger rail operations typically run at a profit or at least cover their costs. Any arrangement between a host freight railroad and a third party for the operation of future passenger excursion trains in Iowa would be subject to agreement between the parties.

The Hawkeye Express

The Hawkeye Express began passenger railroad operations over the IAIS in 2004 between Iowa City's Kinnick Stadium and outlying parking areas in nearby Coralville to transport football fans during University of Iowa Hawkeyes home football games. The train accommodated approximately 5,000 fans for each of the seven home games during the 2013 season and saw about the 3,700 riders per home game in the 2019 season. In 2020, the service was ceased due to the COVID-19. The decline in ridership and the emergence of alternative transportation options contributed to a decision not to resume the service in 2024.

Boone and Scenic Valley Railroad

The Boone and Scenic Valley Railroad (BSV) operates historic railroad equipment on daily excursions from spring through fall as well as a Dinner Train, Picnic Train, and other special tourist excursion services locally at Boone, Iowa, which use privately owned railroad museum trackage only and not a host railroad on the Iowa railroad network. Some of these services include The Wizarding Express, A Day Out with Thomas, Santa Express, Brunch Services, and various historical showings of antique locomotives. BSV also offers Rail Explorers tours – pedal powered rail vehicles with electric assist motors available for customers to use on portions of the BSV line.

Other Passenger Rail Efforts

Passenger Rail Forecasting Methods

iTRAM Statewide Passenger Rail Model

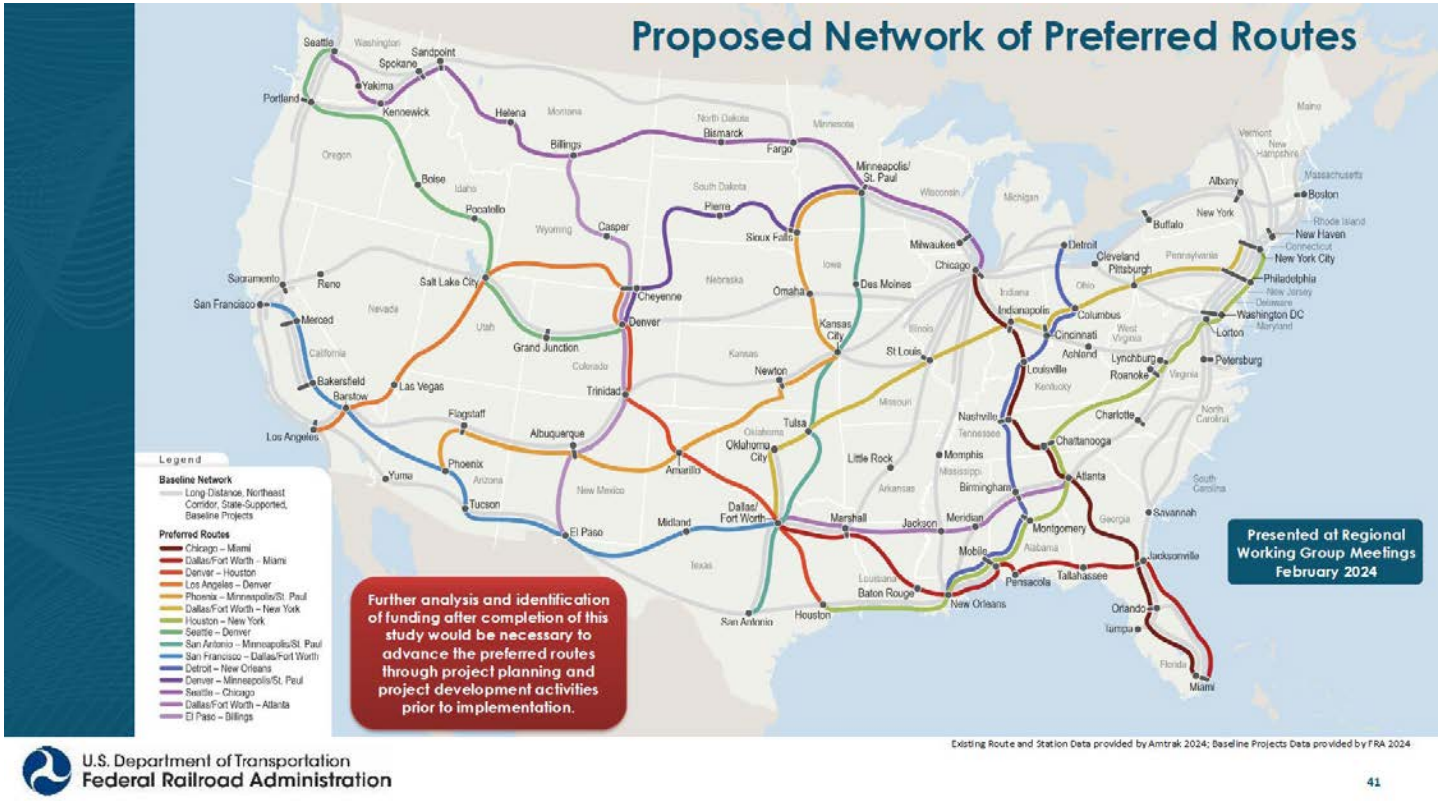
The Iowa Travel Analysis Model (iTRAM) has a passenger rail component that can be used to estimate the intercity rail demand for existing and new rail lines in Iowa. The model is a market area logit model with an independent rail network that is coordinated with the highway network by designating specific nodes within the iTRAM highway network as rail passenger stations. The model uses the long-distance work and long-distance non-work trip tables from the iTRAM Travel Demand Model as input. Passenger rail ridership forecasts are discussed in more detail in Chapter 4, Rail Planning Considerations and Appendix E.

Passenger Rail Studies

FRA Long Distance Rail Study

The purpose of this study is to evaluate the restoration and enhancement of Amtrak's long-distance intercity rail passenger service focusing on routes that have been discontinued or are operating on a non-daily basis. The results of the study were finalized in 2024. In Iowa, the study identified both the Twin Cities to Des Moines corridor (extending on to San Antonio, TX) and the Twin Cities to Omaha, NE (extending on to Phoenix, AZ) as priority routes. Further analysis and identification of funding after completion of this study would be necessary to advance the preferred routes through project planning and project development activities prior to implementation.

Figure 2.7: Proposed long-range routes



Source: FRA

3. FREIGHT INVENTORY AND PERFORMANCE

3.1 System Description and Inventory

Freight Network

Iowa has an extensive rail system for the safe and eco-friendly transport of large volumes of freight. Table 3.1 shows the total miles of freight railroad owned and operated by each railroad entity in Iowa, including lines owned/leased and operated under contract, trackage, and/or haulage rights. Individual profiles that include key physical and operational characteristics for each railroad are available in Appendix B. Figure 3.1 shows railroad service in Iowa.

Most revenue from rail service is generated by five Class I carriers. Union Pacific and BNSF carry the highest traffic volumes, operating on approximately 2,000 miles of total track in Iowa, including double tracks running east and west.

Class II and III railroads typically provide feeder service to Class I carriers. Iowa has one Class II railroad, Iowa Interstate Railroad, which has over 300 miles of track. Class III railroads have two operating categories – line haul and switching – that facilitate the interchange of rail shipments in urban areas. Switch operators are typically associated with Class I railroads and are common within Class III operations.

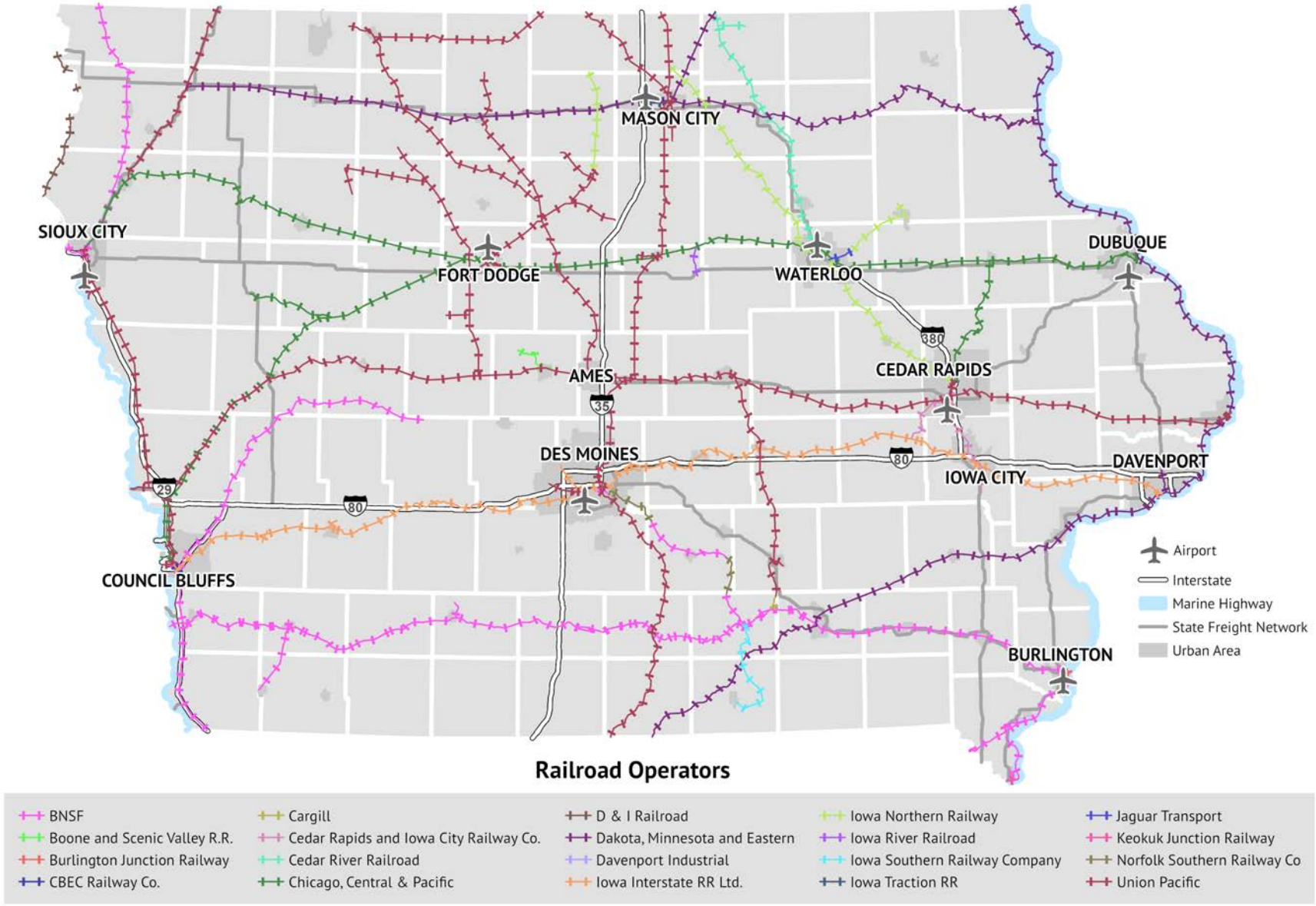
Table 3.1: Iowa railroad miles, 2023

Class	Railroad	Owned/ Leased	Trackage Rights	Total Operated
I	BNSF Railway (BNSF)	624.0	35.0	659.0
	Canadian National Railway (CN)[1]	596.3	19.3	615.7
	CPKC Railway (CPKC)[2]	649.8	38.9	688.7
	Norfolk Southern Railway (NS)	5.1	36.9	42.0
	Union Pacific (UP)	1,278.0	275.0	1,553.0
II	Iowa Interstate Railroad (IAIS)	305.3	27.3	332.6
III	Boone & Scenic Valley Railroad (BSV)	1.7	0.0	1.7
	Burlington Junction Railway (BJRY)	5.8	2.3	8.0
	CBEC Railway (CBRX)[3]	5.0	0.0	5.0
	Cedar Rapids & Iowa City Railway (CIC)	59.5	22.7	82.2
	D&I Railroad (DAIR)	0.0	42.0	42.0
	Iowa Northern Railway (IANR)[4]	174.3	43.0	217.4
	Iowa River Railroad (IARR)	11.0	0.0	11.0
	Iowa Southern Railroad (ISRY)	35.0	0.0	35.0
	Iowa Traction Railroad (IATR)	10.4	0.0	10.4
	Keokuk Junction Railway (KJRY)	1.0	0.0	1.0
	State of South Dakota (SD)[5]	39.0	0.0	39.0
	Total	**3,801.2**	**542.4**	**4,343.6**

1 CN operates via subsidiaries Chicago Central & Pacific (CCP) and Cedar River Railroad (CEDR).
2 CPKC operates via subsidiary Dakota, Minnesota & Eastern (DME). Canadian Pacific (CP) and Kansas City Southern (KCS) merged in 2023 to form CPKC, creating more connections for Iowa shippers.
3 CBEC trackage is operated by IAIS.
4 IANR is in the process of being acquired by CN.
5 SD-owned trackage in Iowa is operated by DAIR.

Source: Railroad companies

Figure 3.1: Iowa railroads



Source: Railroad companies

Network Designations

The most critical freight infrastructure in Iowa is designated as part of two freight networks - the National Multimodal Freight Network (NMFN), designated at the federal level, and the Iowa Multimodal Freight Network (IMFN), designated at the state level. Corridors of military significance are also designated on strategic networks.

The NMFN primarily consists of infrastructure of national and international significance. The rail portion of this network includes Class I railroads and other strategic Class II and III railroads. The IMFN consists of infrastructure critical to state and regional commerce. The rail portion of this network includes lines that handle 5 million tons per mile or provide direct connection to an intermodal container facility.

Strategic military networks, specifically the Strategic Highway Network (STRAHNET) and Strategic Rail Corridor Network (STRACNET), are designated to prioritize infrastructure and connectivity needs for national defense. The rail portion, or STRACNET, was established as part of the Railroad for National Defense (RND) Program that ensures the readiness capability of the national railroad network to support defense deployment and peacetime needs. The STRACNET is an interconnected and continuous rail line network consisting of over 36,000 miles of track serving over 120 defense installations. These lines provide main line corridor throughput capability as well as access to major defense contractors, logistics sites, and military facilities critical to national defense.

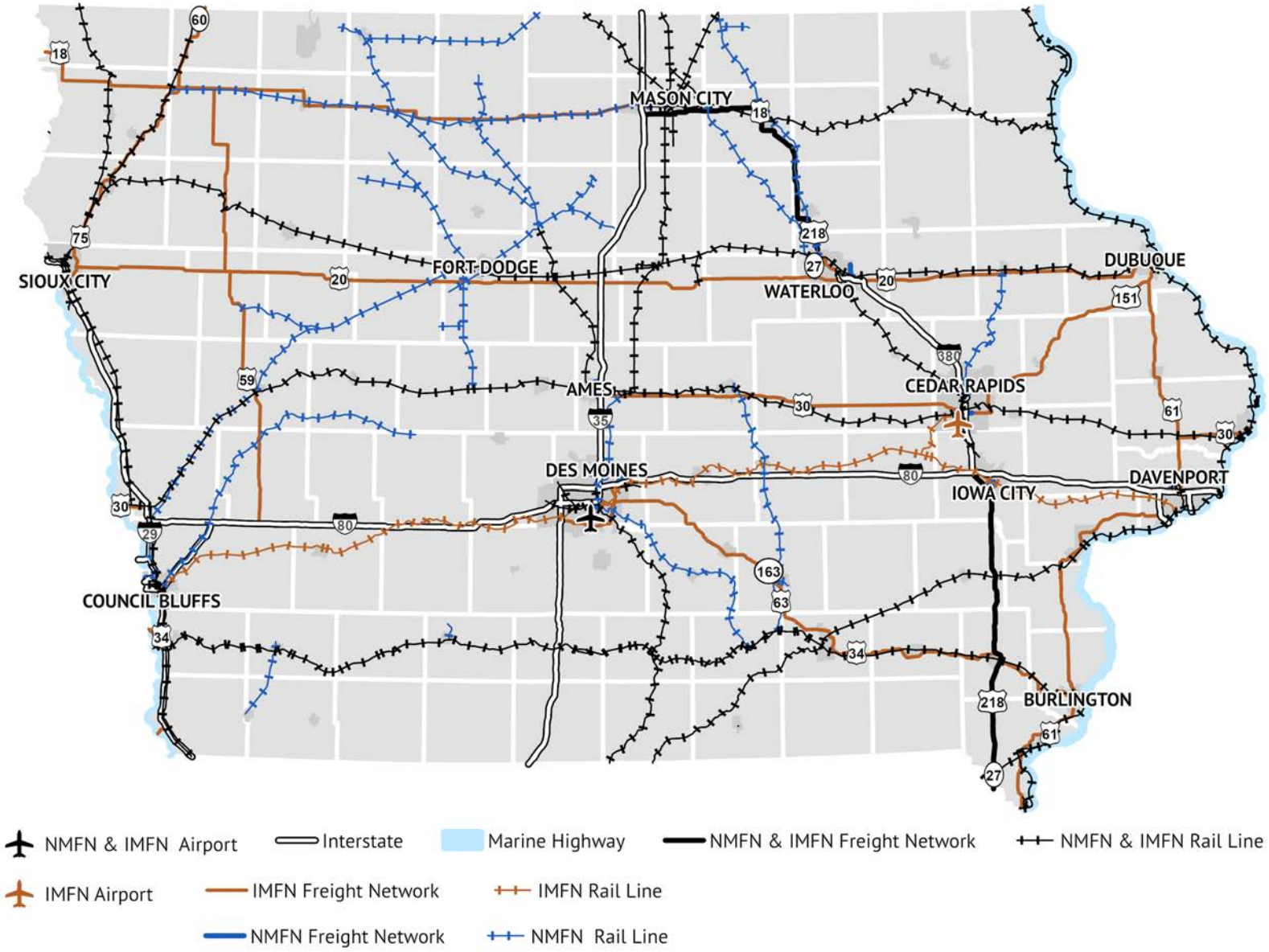
Table 3.2 and Figures 3.2 and 3.3 show Iowa designations that are part of each network.

Table 3.2: Railroad portions of designated networks

Network	Designation Criteria	Iowa Designations
NMFN	Class I railroads and other strategic Class II and III railroads	3,153 miles of Class I rail lines
IMFN	5 million tons per mile or direct connection to intermodal container facility	Roughly 2,400 miles of Class I and II rail lines
STRACNET	Critical infrastructure for defense deployment and peacetime needs	Union Pacific (NE border at Council Bluffs to IL border at Clinton) Union Pacific (MO border at Lineville to MN border at Northwood) BNSF (MO border near Argyle to IL border at Fort Madison)

Source: Iowa DOT, U.S. DOT, and U.S. Military Surface Deployment and Distribution Command Transportation Engineering Agency

Figure 3.2: National and Iowa Multimodal Freight Networks



Source: Iowa DOT and U.S. DOT

Figure 3.3: Iowa freight and strategic rail network designations

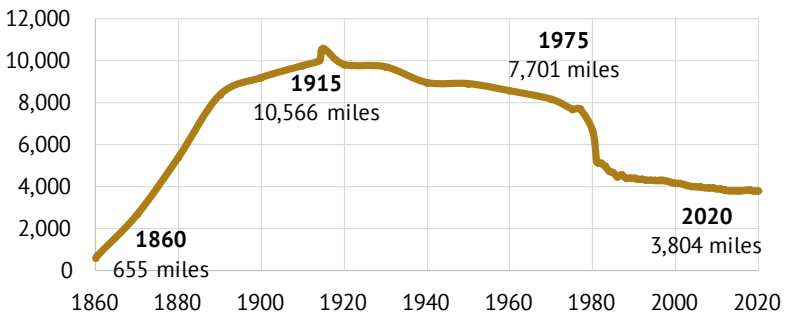
Source: Iowa DOT, U.S. DOT, and U.S. Military Surface Deployment and Distribution Command Transportation Engineering Agency

Railroad Abandonments and Railbanking

Federal law permits rail service discontinuance and abandonment when rail lines are no longer used for service. Railroad companies are required to obtain Surface Transportation Board (STB) permission to abandon rail lines. Railbanking preserves railroad rights of way on abandoned lines for future reactivation of rail service and protects transportation corridors from being completely lost for future transportation uses while also allowing for recreational uses. Iowa DOT participates in the STB abandonment process when required and provides educational information to communities where large abandonments are being considered. Figure 3.4 shows the historical mileage of Iowa's rail system and Figure 3.5 shows the chronology of rail abandonments in Iowa.

The Iowa Department of Transportation (DOT) also reviews potential rail abandonments for recreational use as part of the Federal Rails to Trails Act. Since the 1980s over 1,000 miles of abandoned rail lines in Iowa have been converted to trails for recreational use; some of the most popular rail trails are shown in Table 3.3. Iowa's statewide trail vision includes many abandoned rail lines as potential routes for future multi-use trails.

Figure 3.4: Historical rail mileage in Iowa



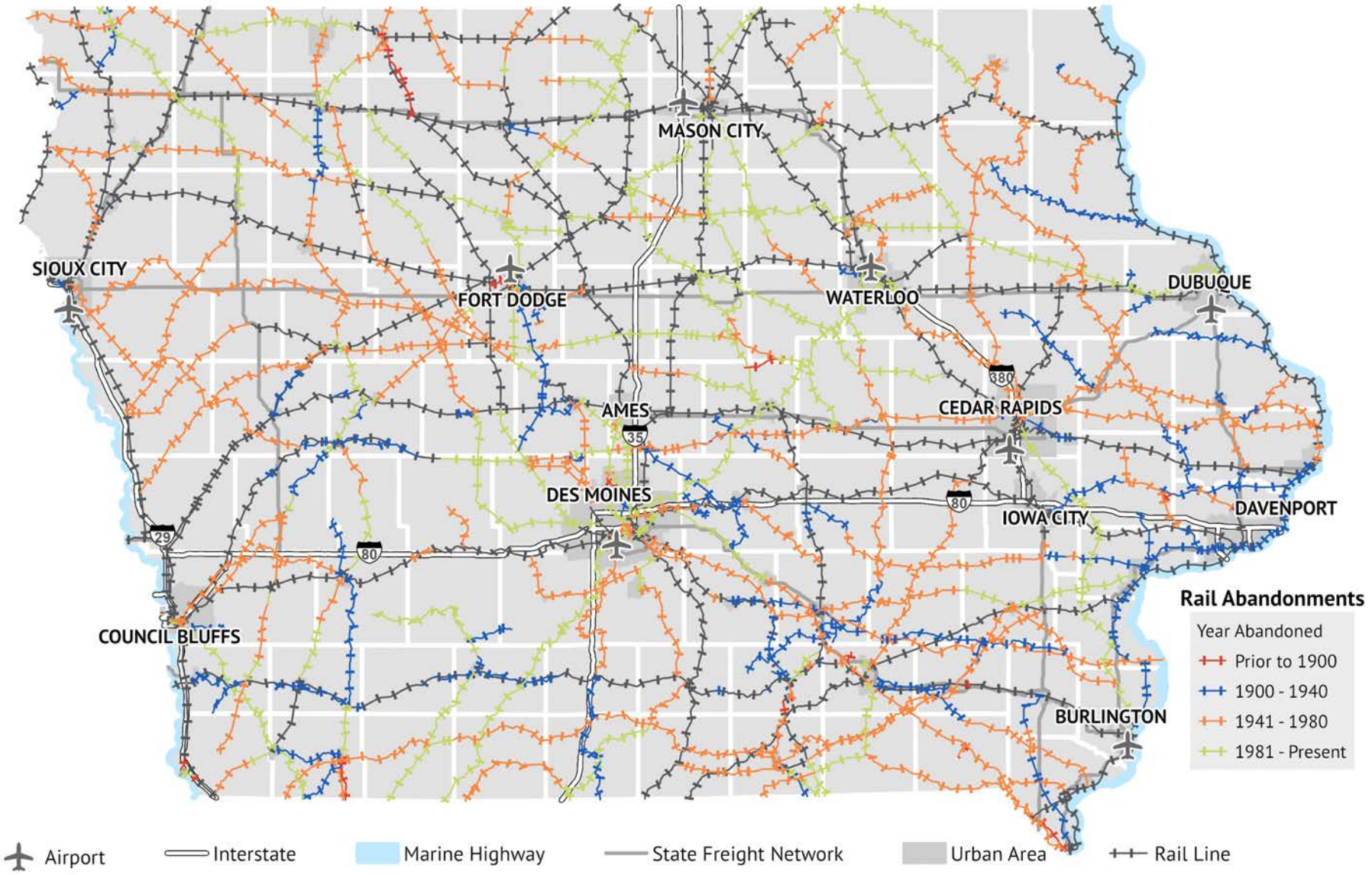
Source: Iowa DOT, Railroad companies

Table 3.3: Major Iowa rail trails

Trail Name	Length (mi)	Former Rail Right of Way	Location Description
Cedar Valley Nature Trail	67	Waterloo, Cedar Falls, and Northern Railroad	Evansdale to Hiawatha
Chichaqua Valley Trail	28	Chicago Great Western Railway	Bondurant to Baxter
Heart of Iowa Nature Trail	27	Chicago, Milwaukee, St. Paul, and Pacific Railroad	Slater to Rhodes
Heritage Trail	29	Chicago Great Western Railway	Dubuque to Dyersville
High Trestle Trail	25	Chicago and Northwestern Railway; Chicago, Milwaukee, St. Paul, and Pacific Railroad	Ankeny to Slater; Slater to Woodward
Hoover Nature Trail	24	Chicago, Rock Island, and Pacific Railroad	Cedar Rapids to Burlington
Raccoon River Valley Trail	90	Chicago, Milwaukee, St. Paul, and Pacific Railroad; Minneapolis and St. Louis Railway	Jefferson to Waukee and Herndon to Perry; Perry to Waukee
Rolling Prairie Trail	34	Chicago Great Western Railway	Allison to Shell Rock and Waverly to Readlyn
Sauk Rail Trail	35	Chicago and Northwestern Railway	Carroll to Lake View
T-Bone Trail	21	Chicago, Rock Island, and Pacific Railroad	Atlantic to Audubon
Wabash Trace Nature Trail	64	Wabash Railroad	Council Bluffs to Blanchard

Source: Iowa DOT

Figure 3.5: Chronology of railroad abandonments



Source: Iowa DOT

Freight Facilities

Iowa's freight system includes facilities that enable the smooth transfer of goods from one mode to another. These allow shippers to take advantage of the cost, speed, and capabilities of multiple modes. The following section provides a brief introduction to the common types of freight terminals in Iowa. Figure 3.6 shows the location of freight facilities in the state. See Appendix C for a comprehensive list of these facilities with rail access.

Intermodal Container Facilities

Intermodal refers to the transfer of freight using an intermodal container or trailer through multiple modes of transportation (rail, barge, and/or truck) without the handling of the freight itself when changing modes. This method improves security and transportation speed while reducing the damage and loss of goods. **Container transfer facilities** handle rail-to-truck and truck-to rail transfers in sealed units such as trailer-on-flatcar (TOFC) or container-on-flatcar (COFC).

Warehouses

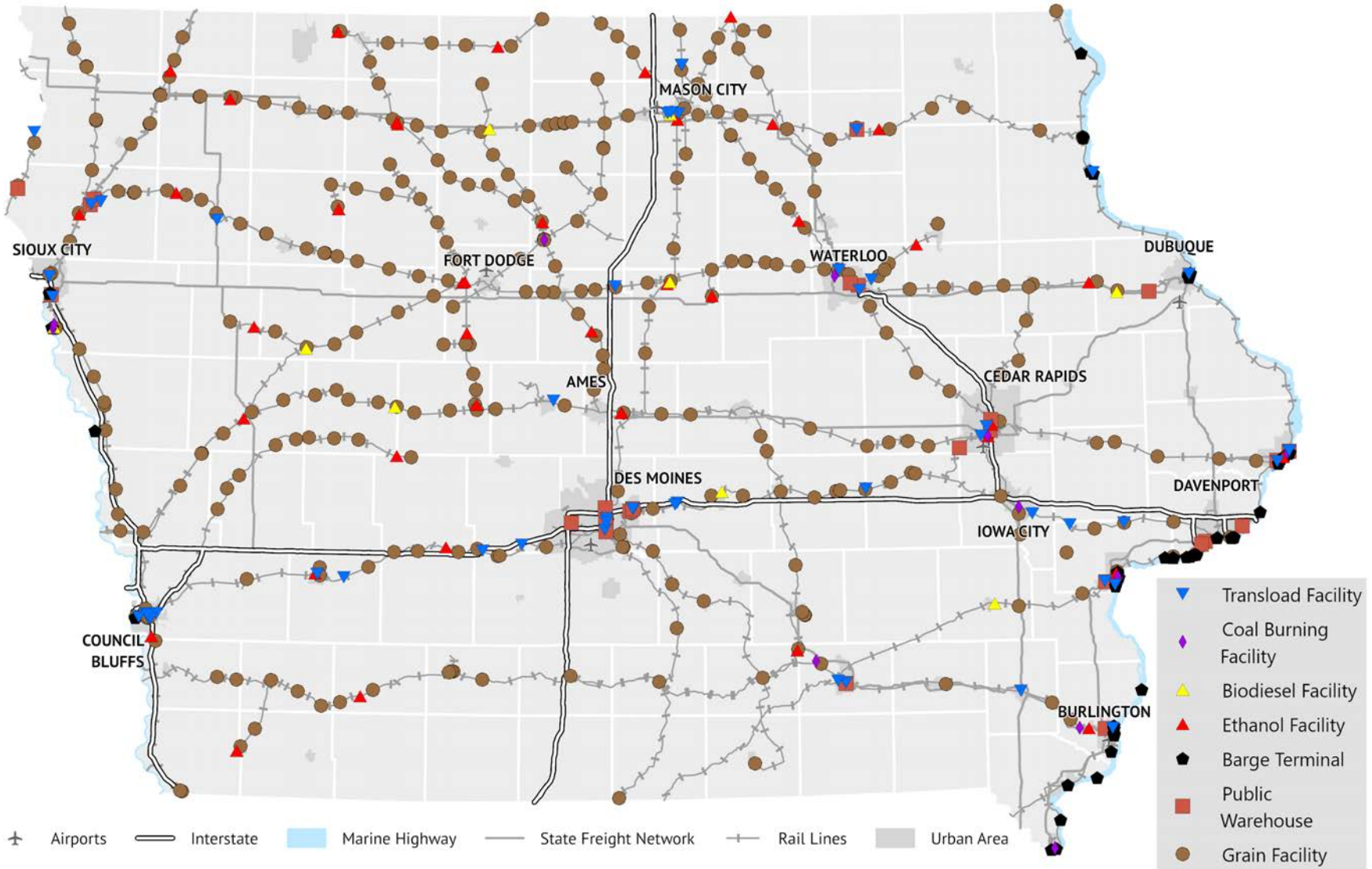
A warehouse is a commercial building for the storage of goods, which can include any raw materials, packing materials, spare parts, components, or finished goods associated with agriculture, manufacturing, and production. Warehouses are used by manufacturers, importers, exporters, wholesalers, and transport businesses, and some warehouses include transloading capabilities to offer short- and long-term storage and handling of goods.

Transload Facilities

Transloading refers to the transfer of freight shipments, typically bulk, from the vehicle/container of one mode to that of another at a terminal interchange point. Types of transload facilities include the following.

- **Team track**: A simple siding or spur track where rail cars are placed and available for use to load and unload freight. Once the cars are loaded, the railroad is notified to pick them up. Team tracks can be owned by a railroad or rail customer.
- **Cross-dock**: Locations where cargo is unloaded from an incoming truck or rail car and is reloaded directly into outbound trucks, trailers, containers, or rail cars. A cross-dock typically allows level loading between modes.
- **Barge terminals**: Locations where commodities are transferred from barges to trucks and/or rail cars. These terminals are a staple of industries moving bulk products by inland waterways.
- **Biorefineries**: Production facilities for renewable fuels made with corn and the byproducts of corn production. These locations typically receive raw materials by truck and ship finished biodiesel/ethanol by truck and/or rail. The opportunity to shift from one mode to another qualifies these locations as transloads.
- **Coal-burning facility**: Power plants that burn coal to generate energy. These facilities typically receive large amounts of coal via railroad or waterway.
- **Grain elevators**: Facilities that collect grain from farmers by tractor and trailer or truck. The grain is then stored and shipped to market via truck and/or rail. Iowa has a vast network of grain elevators to handle the large production of corn and soybeans each year before being transported elsewhere. As is the case with biorefineries, the multiple transportation options qualify these locations as transloads.

Figure 3.6: Iowa freight-generating facilities



This map is not a comprehensive representation of all Iowa's freight-generating facilities. Some existing facilities may not be operational and new facilities may not be represented.

Source: Iowa DOT, Leonard's Guide, Rail companies, and U.S. Army Corps of Engineers

3.2 Performance

Safety

Over the last ten years, there were 449 crashes between highway and railroad traffic, 322 train derailments[i], and eight hazardous materials incidents, with a relatively consistent number occurring each year. A total of 142 injuries and 81 fatalities resulted from those crashes and derailments, both with inconsistent trends by year. Additional railroad safety statistics and analysis is available in Chapter 4, Rail Planning Considerations.

Utilization

The activity on individual rail lines is measured in terms of density or gross ton-miles per mile. Gross ton-miles are defined as the total weight of all freight traveling on the rail line including the weight of freight-train cars and locomotives. While Iowa's rail miles have decreased slightly, the amount of gross tonnage moving over the network has been steadily increasing.

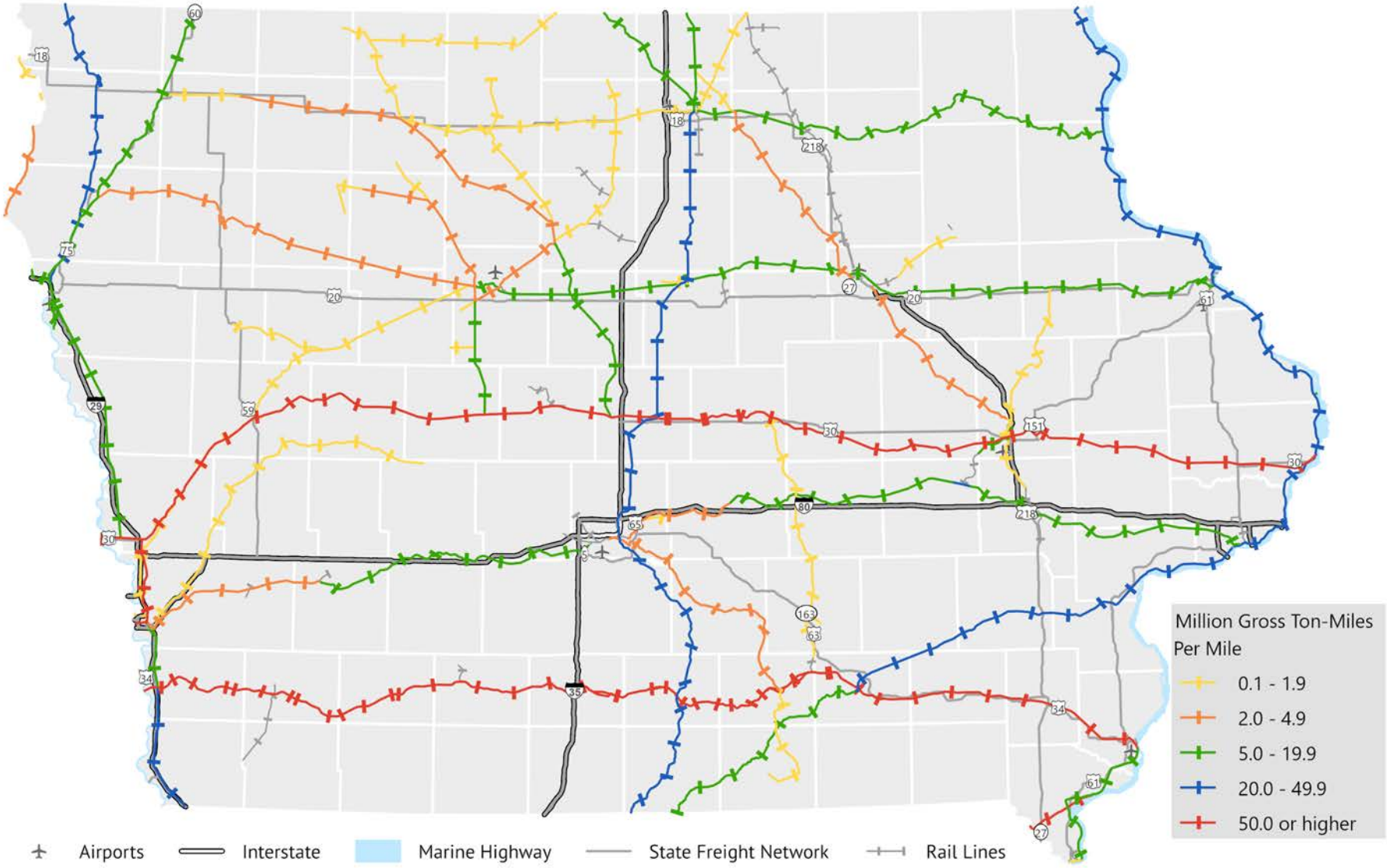
Class I carriers operate most of the rail mileage in the state and generate the most ton-miles. Iowa's two busiest rail lines are Union Pacific Railroad's Overland Route, an east-west double-track route passing through the center of Iowa (Clinton to Council Bluffs), and the BNSF Railway's line in southern Iowa, an east-west route that is partially double tracked (Burlington to west of Pacific Junction). The Class II and III railroads often provide feeder service to the Class I carriers, which results in smaller allocations of mileage and ton-miles. Figure 3.7 shows freight railroad traffic density in the state.

Chokepoints

Railroad bottleneck locations are usually referred to as "choke points" to avoid confusion with the more conventional railroad sector use of "bottleneck" to describe locations served by only one rail carrier (i.e., the "bottleneck carrier"). The choke points shown in Figure 3.8 and Table 3.4 were identified by surveying each of the rail companies operating trackage in the state. Locations primarily include structural choke points (e.g., low clearance areas and bridges with size restrictions), congested choke points (e.g., locations with operational issues or shared-use corridors), and low-lying areas at risk of flooding during heavy rains or high-water levels.

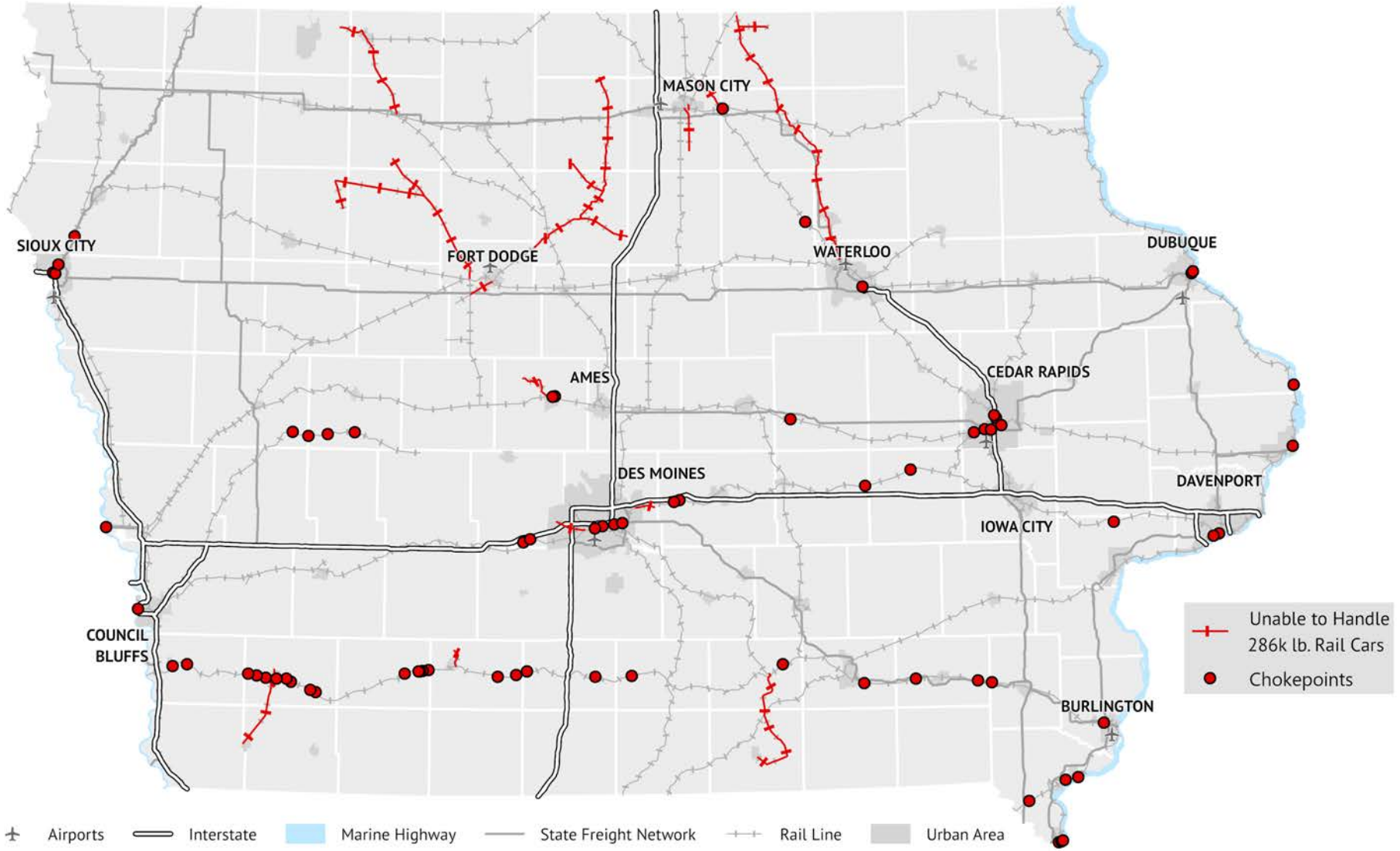
Additionally, railroads continue to focus their attention on heavier axle-load freight equipment and longer, heavier trains to lower costs. Using larger rail cars in 100-plus car unit trains allows the greatest savings and economic benefits, as well as keeping would-be truck traffic off the highways. The industry standard for rail car weight, which includes the weight of commodities and the rail car combined, is 286,000 pounds. Iowa has rail lines that are unable to carry the sizes and weights of railroad equipment that meet this threshold. Figure 3.8 also shows rail lines unable to handle 286,000 lb. rail cars.

Figure 3.7: Freight railroad traffic density, 2023 (gross tons per mile)



Source: Railroad companies

Figure 3.8: Freight railroad chokepoints



Source: Railroad companies

Table 3.4: Railroad chokepoints (section 1 of 4)

	Railroad(s)	Location	Freight mobility issue
1	CN and UP	Mainline between Sioux City and Le Mars	**Track congestion** exists from multiple rail companies operating over the same line.
2	BNSF	31st Street Rail Crossing at Sioux City	This highway-railroad crossing is located on the edge of a railyard resulting in the **roadway being regularly blocked by trains** which disrupts commercial and residential traffic. There is a need for a coordinated crossings analysis and mitigation plan.
3	BNSF, CN, DAIR, and UP	Terminal and Interchange Area at Sioux City	**Operational issues** exist where four railroads intersect at a major at-grade crossing of rail lines with trains operating at slow speeds in a terminal environment. Carload interchange between carriers is challenging as there are presently no designated interchange locations, and many of the carriers must operate in each other's yards to interchange cars.
4	BNSF	Gordon Drive viaduct at Sioux City	The Gordon Drive viaduct has a vertical clearance of 17' 6" above top of rail **that does not allow for the passage of double stack container trains.**
5	UP	West of Missouri Valley	**Flood prone area** is at risk of closure due to Missouri River flooding (e.g., 2011).
6	CN	UP rail bridge at Council Bluffs	CN uses a UP bridge over Missouri River at Council Bluffs to reach a customer in Omaha, NE **causing delays** for some UP trains.
7	BSV and UP	Interchange at Boone	Interchange regularly serves more cars than originally designed causing significantly **increased time for sorting and coordination** between railroads to accommodate.
8	BSV	Industrial Park at Boone	**Need to improve infrastructure** with additional siding, storage, and sorting capacity.
9	IAIS	Bridge 380.5 near DeSoto	This **bridge restricts the movement of high-wide loads** (e.g., wind tower components) due to the truss construction.
10	IAIS	Bridge 378.1 near Van Meter	This **bridge restricts the movement of high-wide loads** (e.g., wind tower components) due to the truss construction.
11	IAIS	Bridge 278.1 near Victor	This **bridge restricts the movement of high-wide loads** (e.g., wind tower components) due to the truss construction.
12	IAIS	Des Moines	**Flood prone area** from MP359.04 to MP362.25 near Edwards Avenue is at risk of closure due to Raccoon River flooding anytime the Fleur Drive flood gates close.
13	IAIS	Track conditions at Des Moines	The **density of crossings** in downtown Des Moines limits speeds to 10 mph for westward bound trains. To alleviate, crossing consolidations or track upgrades need to be considered.
14	IAIS and UP	UP Short Line Yard at Des Moines	There is currently **no dedicated through route** for IAIS along the UP-owned trackage and yard. Need a dedicated separate track to allow IAIS through movements to pass without restriction.
15	IAIS	Pleasant Hill	**Flood prone area** from MP352.25 to MP353 near Fairview Drive is at risk of closure due to Four Mile Creek flooding.

Table 3.4 (continued): Railroad chokepoints (section 2 of 4)

	Railroad(s)	Location	Freight mobility issue
16	IAIS	Bridge 329.5 near Colfax	This **bridge restricts the ability to carry high-wide loads** (e.g., wind tower components). Need to replace structure with through plate girder bridge.
17	IAIS	Colfax	**Flood prone area** from MP334.25 to MP336 near Walnut Street is at risk of closure due to Skunk River flooding.
18	CPKC and IANR	Interchange at Nora Springs	Increased traffic volumes at the interchange results in **insufficient track capacity**.
19	IANR	Butler Yard at Shell Rock	Traffic growth due to facility development has resulted in **operational challenges**.
20	IANR	Bryant Yard at Waterloo	Convergence of traffic from three subdivisions results in **insufficient classification space**.
21	UP	Montour	**Flood prone area** is at risk of closure due to large rain events (e.g., 2014).
22	IAIS	Bridge 268.2 near Marengo	This **bridge restricts the movement of high-wide loads** (e.g., wind tower components) due to the truss construction.
23	CIC and UP	Fairfax 3 at Fairfax	UP can only efficiently deliver one unit train at a time at this location due to **insufficient interchange track**.
24	UP	Cedar Rapids	**Flood prone area** where main line and UP Beverly Yard are at risk of closure due to Prairie Creek and area drainage ditches flooding (e.g., 2014).
25	CIC	Cedar Rapids bypass at SW Cedar Rapids	**Rail traffic currently moves through the ADM plant** greatly affecting services. A new single line that bypasses ADM would allow trains to travel around the plant more efficiently and minimize potential operating conflicts between trains.
26	CIC	900/950 Yard SW Cedar Rapids	**Insufficient capacity to accommodate interchanges** from multiple carriers while facilitating other yard switching activities.
27	CIC	Eighth Avenue SE curve Cedar Rapids	The **current 13-degree 55 ft. curve limits train size, specialized cars, and motive power options for train operations**, increasing the number of trains and causing vehicular congestion downtown.
28	CIC	ADM Plant North Leg	**Limits motive power** options and possibly specialized type cars with 14.5 degrees at the tightest point in the curve.
29	CIC	Cedar Rapids ADM Wet Mill bypass to connect directly to ADM's Dry Grind Plant	Rail traffic currently moves through a main thoroughfare near ADM's wet mill, up a 1.5-2% grade for 1.5 miles. All cars are shoved into ADM Dry Grind. **Loads/empties are pulled and shoved downgrade through multiple road crossings**.
30	UP	Cedar Rapids	**Flood prone area** where the entire industrial lead is at risk of closure due to Cedar River flooding (e.g., 2008).

Table 3.4 (continued): Railroad chokepoints (section 3 of 4)

	Railroad(s)	Location	Freight mobility issue
31	IAIS	Moscow	**Flood prone area** from MP211.75 to MP 212.75 near Noble Avenue at risk of closure due to Cedar River flooding.
32	CN	CN rail bridge at Dubuque	**Swing-span bridge over Mississippi River closes to rail traffic to accommodate barge passage on the river during navigation season**. The time required to stop trains, open the bridge for river traffic, return the bridge to its original position, and restore normal railroad operations causes delays.
33	CN and CPKC	South Port at Dubuque	**Lack of rail yard capacity**. Busy line due to multiple rail lines intersection.
34	CPKC	CP rail bridge at Sabula	**Swing-span bridge over Mississippi River closes to rail traffic to accommodate barge passage on the river during navigation season**. The time required to stop trains, open the bridge for river traffic, return the bridge to its original position, and restore normal railroad operations causes delays.
35	UP	UP rail bridge at Clinton	**Swing-span bridge over Mississippi River closes to rail traffic to accommodate barge passage on the river during navigation season**. The time required to stop trains, open the bridge for river traffic, return the bridge to its original position, and restore normal railroad operations causes delays.
36	BNSF and CPKC	Crescent Bridge at Davenport	**Swing-span bridge over Mississippi River closes to rail traffic to accommodate barge passage on the river during navigation season**, and the bridge is functionally obsolete. The time required to stop trains, open the bridge for river traffic, return the bridge to its original position, and restore normal railroad operations causes delays.
37	BNSF, CPKC, and IAIS	Government Bridge at Davenport	**Swing-span bridge over Mississippi River closes to rail traffic to accommodate barge passage on the river during navigation season**, and capacity is marginal for rail cars with a maximum allowable gross weight of 286,000 lb. The time required to stop trains, open the bridge for river traffic, return the bridge to its original position, and restore normal railroad operations causes delays.
38	BNSF	BNSF rail bridge at Fort Madison	**Swing-span bridge over Mississippi River closes to rail traffic to accommodate barge passage on the river during navigation season**. The time required to stop trains, open the bridge for river traffic, return the bridge to its original position, and restore normal railroad operations causes delays to rail and highway traffic that share the bridge.
39	KJRY	Twin Rivers Yard at Keokuk	**Insufficient storage and switching capacity**, as well as the inability to block rail traffic properly exists at this location. To alleviate the bottleneck, an increase in yard capacity is necessary.
40	KJRY	Keokuk	**Flood prone area** is at risk of closure due to Mississippi River flooding (e.g. 2008).
41	KJRY	KJRY rail bridge at Keokuk	**Swing-span bridge over Mississippi River closes to rail traffic to accommodate barge passage on the river during navigation season**. The time required to stop trains, open the bridge for river traffic, return the bridge to its original position, and restore normal railroad operations cause delays.

Table 3.4 (continued): Railroad chokepoints (section 4 of 4)

	Railroad(s)	Location	Freight mobility issue
42-74	BNSF	33 locations	**Timber Bridge with short spans, narrow portals, and a limited vertical clearance** which limits the ability to raise the track, creating low points and consistent slow orders due to mud and water. • Burlington – MP 209.7 • Rome – MP 241.75 • Lockridge – MP 245.35 • Batavia – MP 261.71 • Ottumwa – MP 275.19 • Avery – MP 299.25 • Lucas – MP 343.84 • Woodburn – MP 353.77 • Murray – MP 372.95 • Thayer – MP 375.92 • Afton – MP 380.78 • Cromwell/Creston – MP 399.51 • Cromwell/Creston – MP 401.02 • Cromwell/Creston – MP 401.7 • Cromwell/Creston – MP 402.03 • Prescott – MP 405.76 • Villisca – MP 431.51 • Villisca – MP 432.78 • Stanton – MP 432.78 • Stanton – MP 438.25 • Red Oak – MP 442.38 • Red Oak – MP 445.17 • Red Oak – MP 447.6 • Emerson – MP 449.9 • Malvern – MP 467.17 • Glenwood – MP 471.21 • Keokuk – MP 177.99 • Dedham – MP 401.7 • Templeton – MP 408.87 • Manning – MP 413.96 • Aspinwall – MP 418.2 • Fort Madison – MP 235.5 • Argyle – MP 246.3

Source: Railroad companies

3.3 Freight Rail Improvements and Investments

Class I

Class I railroad companies in Iowa are required to secure private funding for purchasing equipment (e.g., locomotives and railcars) and for making infrastructure modifications aimed at revitalizing, upgrading, or extending the state's rail network. These modifications include work on tracks, ties, bridges, and signal systems. For these investments to be feasible, a regulatory environment must exist that ensures a high enough rate of return on investment for the railroads.

Class I railroads can access funding for specific purposes such as job creation projects and rail network improvements through various state-run programs. The most notable of these programs is the Iowa Railroad Revolving Loan and Grant Program (RRLG). However, the funding provided by these programs is often insufficient or not attractive enough to support large-scale projects typically undertaken by Class I railroads. Every year, the Class I railroads budget funds to support continued capital investment in the state's rail network. The Class I railroads disclose systemwide capital expenditure budgets annually, which may or may not include particular rail projects by state or their estimated capital cost.

Since the 1980s, Class I railroads have consistently made significant capital investments in Iowa's rail network. Historically, these projects have predominantly focused on the following.

- **Expanding and Building New Terminal Facilities**: Enhancing the capacity and efficiency of rail operations within the state.
- **Upgrading Track Structures and Bridges**: Ensuring infrastructure can accommodate railcars with a maximum allowable gross weight of 286,000 pounds, which is crucial for modern freight operations.
- **Developing Capacity**: Improving the ability to efficiently handle both the rail traffic originating and terminating in Iowa and the rail traffic passing through the state. This includes managing the notable increase in intermodal traffic that began in the 1980s.

Over the past five years, Class I railroads have made significant investments in their networks in Iowa to improve capacity, efficiency, and the speed of through traffic, eliminate operational chokepoints, and handle necessary upgrades. Additionally, the Class I railroads have identified ongoing and upcoming projects in the state, further demonstrating their commitment to maintaining and enhancing Iowa's rail infrastructure.

BNSF

BNSF has made several capital investments in its Iowa network over the last five years to improve infrastructure, enhance safety, and increase efficiency. The company's $3.9 billion[ii] capital investment in 2023 included significant spending on various aspects of its network, such as maintenance and upgrades of existing tracks, adding new track capacity, and improvements to network and facility efficiency. BNSF customers and local economic development organizations invested $4.1 billion for new or expanded rail-served facilities and supported the creation of more than 4,200 new jobs in local communities in 2023. Additionally, three new BNSF Certified Sites were added in Fort Madison, Glenwood, and DeSoto, KS. BNSF's Site Certification Program identifies optimal rail-served sites and conducts in-depth reviews to determine economic development potential and readiness.

The company set a 2024 capital expenditure budget of $3.92 billion. The railway is allocating $2.88 billion to maintain its core network, nearly $600 million for expansion and efficiency projects, and $400 million for equipment acquisitions. The infrastructure maintenance work includes replacing 365 miles of rail and about 2.8 million ties.[iii]

BNSF is also supporting Iowa DOT's development of a concept for grade separation of US 75 and the Marshall Subdivision at Merrill. Iowa DOT submitted an application to the Federal Railroad Administration (FRA) for a study in fall 2024.

Specific future capital investments were not identified by BNSF for its network in Iowa during the development of this Plan. However, BNSF is currently revising its long-range plan.

CN

CN has made several capital investments in its Iowa network over the past five years to improve infrastructure, enhance safety, and increase efficiency. Types of investment have included track upgrades and maintenance, signal and communication systems, bridge improvements (e.g., replacement of bridges on the Osage Subdivision are scheduled to be finished in 2024), expansion projects, facility upgrades, and environmental initiatives. In 2024, CN plans to invest $3.52 billion in rail infrastructure to boost capacity, safety, and efficiency across its network, as well as equipment upgrades.

Specific future capital investments were not identified by CN for its network in Iowa during the development of this Plan. However, CN is currently experiencing fluid planning with a focus on increasing speeds around the Omaha/Council Bluffs area.

In December 2023, CN announced it will be acquiring Iowa Northern Railway (IANR) pending regulatory review of the transaction by the U.S. Surface Transportation Board (STB) which would likely impact future investments for both companies. This acquisition was not yet final at the time this Plan was completed.

CPKC

CPKC is investing in capacity and safety. In 2023, approximately 60 percent of CPKC's capital investment went to basic replacement and safety infrastructure. In addition to basic replacement, CPKC completed four of the capacity enhancement projects, including new sidings, extended sidings, and centralized traffic control installation in the corridor between Chicago and Laredo. CPKC finished 2023 with the lowest FRA reportable train accident frequency among Class I railroads. CPKC expects to invest around $2.75 billion in its overall network in 2024. The following projects were identified in Iowa.

- Clinton (Deer Creek) – siding extension to 11,000 ft. (January 2024)
- Washington – new 10,000 ft. siding (March 2024)
- Bellevue – new 10,000 ft. siding (late 2024)
- Camanche – siding extension to 10,000 ft. (late 2024)
- Turkey River – new 12,200 ft. siding (2025)
- Install Centralized Traffic Control (CTC) on 102 miles of the old Laredo subdivision (2025)
- Plans to move the crew change location from Ottumwa Yard Office to the west end of the Ottumwa siding, a location that will provide sufficient clearance to prevent southbound crew changes from interfering with BNSF track

NS

Over the previous five years, NS has undertaken capital investments in property additions, equipment (e.g., locomotives, freight cars, and intermodal equipment), track maintenance, traffic control, and environmental initiatives. The company announced its 2024 capital expenditure would be flat at $2.3 billion.

Specific future capital investments were not identified by NS for its network in Iowa during the development of this Plan.

UP

Recent UP investments aimed to address capacity restrictions and efficiency difficulties in its Iowa network, as well as to establish a PTC system to meet federal safety mandates. UP also completed a flood wall and gate project with the City of Cedar Rapids to protect industry track in the area and a bypass project at Missouri Valley will adjust track elevation in a flood-prone area.

UP has budgeted $3.4 billion for 2024 capital expenditure compared with $3.7 billion in 2023 and $3.4 billion in 2022. This year's spending plan includes $1.9 billion for rail infrastructure replacement work, $600 million for locomotive modernizations and freight-car acquisitions, $600 million for capacity and commercial facilities, and $300 million for technology and security projects.

Specific future capital investments were not identified by UP for its network in Iowa during the development of this Plan.

Class II and III

Class II and III railroads face distinct challenges compared to Class I railroads due to several factors. These companies typically operate with more limited budgets, which makes it difficult to invest in necessary upgrade and maintenance. They use smaller networks with less capacity, which restricts their ability to manage high traffic volumes and provide flexible service options. Also, aging infrastructure requires frequent repairs and updating, which leads to service disruptions and higher operating costs.

Class II and III railroads often use private or public funds (e.g., RRLG) to acquire equipment and develop infrastructure. Investments typically take place in the following areas.

- **Accommodating heavier railcars** with a maximum gross weight of 286,000 pounds can be challenging, particularly for railroads with older infrastructure that was not designed to handle these heavier loads. Railcars with a higher loading capacity improve operating efficiency by lowering labor, fuel, and maintenance costs while boosting capacity and synergy for rail operations and shippers. Most Class III railroads have legacy infrastructure designed for low-density operations and lighter-weight railcars (268,000 pounds or less). Class II and Class III railroads that are unable to undertake the necessary changes may face a competitive disadvantage and lose business to transportation competitors, specifically trucks or nearby Class I railroads capable of handling the 286,000-pound cars.
- **Operational chokepoints** such as limited operating capacity on main lines, in rail yards, and at interchange points can create bottlenecks that hinder efficient rail operations and limit the overall effectiveness of the rail network.
- **Insufficient yard capacity, switching, and staging** cars and sidings can hinder modern train operations, meet-pass events, and schedules. Some Class II and Class III railroads face delays due to interchanging railcars with other carriers or using trackage rights to access isolated segments of their network.

These problems not only impact rail transit times and safety but also contribute to congestion on main lines and in yards, affecting the quality of life in surrounding areas. Specifically, delays at highway-railroad crossings can cause significant delays for vehicles, including emergency vehicles, and increased emissions from idling automobiles and trains can negatively affect air quality in the vicinity. These issues highlight the broader consequences of infrastructure limitations, extending beyond operational inefficiencies to impact public health and local communities.

Specific future capital investments were not identified by all Class II and III railroads in Iowa during the development of this Plan. Those that were provided are listed below.

BSV

BSV has partially completed a multi-phase project at the Boone Industrial Park that includes installing a 1,700-foot siding track (including grading, ties, and ballasting) on a spur into the existing industrial park allowing the accommodation of 286,000 lb. rail cars; upgrading 4,200 feet of rail to 286,000 lb. standard to increase track availability to stage cars; increasing operational capacity at the UP interchange; and installing a new 900-foot spur to allow for improved sorting of customer rail cars. BSV is working on designs for a new interchange with UP and additional areas for rail served customers to accommodate anticipated growth.

CIC

CIC is planning the replacement of 70 percent of ties over a 28.4-mile corridor and 40 percent of ties over another 26.8-mile corridor. This includes the replacement of between 8,500-10,000 ties on the "Amana Line" used by the IAIS to interchange with CIC. This project is anticipated to be completed in fall 2024. A yard expansion of the 900 Yard will add five tracks that will be able to handle up to 175 cars, a railcar scale, and a locomotive service track. The Iowa River Bridge project will replace two existing steel truss spans and two existing through girder spans. An overhead UP bridge project will replace a 106-foot span bridge and timber trestles with 182-foot span and steel trusses with concrete piers.

IANR

IANR recently completed corridor improvements at Waterloo by adding welded rail and implementing enhanced signal/traffic light improvements along IANR right of way and U.S. 218. The company also installed continuous welded rail (CWR) over 47 miles of main track through the system. Additionally, the company is moving forward with development and delivery of virtual and in-person education and training courses, development of a customized learning platform to deliver those courses, and remote and in-person locomotive simulator education and training.

Intermodal Connections

Iowa's rail system is an integral component of a larger multimodal transportation network that interfaces with aviation, highways, and waterways. To enhance multimodal transportation prospects, investments in the following areas can be beneficial.

- Interconnection: Improving connections between railroad lines and other transportation modes, such as river ports, can facilitate smoother transfers and integration across the network.
- Capacity: Expanding rail infrastructure, including adding sidings, spurs, or yard tracks, can enhance railcar switching, staging, and storage capabilities, reducing congestion and improving operational efficiency.
- Environmental Sustainability: Investing in environmentally sustainable practices and infrastructure, such as energy-efficient technologies and green facilities, can help mitigate the environmental impact of transportation operations.
- Transload and Intermodal Facilities: Developing transload and intermodal facilities can enhance the efficiency of moving goods between different transportation modes, improving overall logistics and reducing transit times.

These investments are crucial for improving the functionality, efficiency, and sustainability of Iowa's transportation network, benefiting both the economy and the environment. Some recent examples of intermodal connection improvements that were provided during the development of this Plan include the following.

- CIC reported three tracks were recently built at CIC's sister company, Logistics Park Cedar Rapids, to support current transloading customers.
- BNSF noted recent transload/intermodal improvements in Sioux City.
- BJRY completed improvements and expanded capacity of a transload in the Le Mars Industrial Park to handle additional commodities.

Iowa DOT Improvement Programs

Highway-Rail Crossing and Safety Improvements

Iowa DOT invests around $7.3 million annually from several funding programs for highway-rail crossing enhancements to promote safety.

The **State Highway-Railroad Crossing Surface Repair Program** promotes safety through surface replacement at public highway railroad grade crossings. This program is funded through an annual allocation of $900,000 from Iowa's Road Use Tax Fund. Table 3.5 summarizes funds spent since 2019.

Table 3.5: State Highway-Railroad Crossing Surface Program projects, 2019-2024

2019	2020	2021	2022	2023	2024
$909,124	$901,145	$1,039,300	$1,103,956	$1,051,999	$1,078,386
13 projects	13 projects	13 projects	14 projects	13 projects	11 projects

Source: Iowa DOT

The **Federal Highway-Railroad Crossing Safety Program** is supported by the Federal Highway Safety Improvement Program (formerly Section 130 funds). These funds are primarily used to install or upgrade crossing signals. Other low-cost improvements may be funded such as crossbuck or yield signs, medians, or incentives for crossing closures. Funding is based on a benefit/cost calculation that considers a number of factors, including highway and train traffic, accident history, and project cost. Iowa DOT anticipates spending approximately $5.2 million per year through this program. Table 3.6 summarizes funds and projects since 2019.

Table 3.6: Federal Highway-Railroad Crossing Safety Program projects, 2019-2024

	2019	2020	2021	2022	2023	2024
Total Funding	**$8,315,748**	**$5,150,000**	**$4,366,500**	**$5,145,000**	**$5,132,000**	**$7,175,000**
Total Number of Projects	**40**	**18**	**17**	**17**	**16**	**17**
Projects upgrading crossings from passive warning devices including crossbucks **to active warning devices including flashing light signals and gate arms.**	11	12	4	4	7	5
Projects upgrading crossings from flashing light signals only **to flashing light signals and gate arms.**	27	6	13	13	8	12
Projects **upgrading circuitry** in a crossing protected by flashing light signals and gate arms.	2					
Project to **install an interconnected advanced warning sign**.					1	
Contribution to **crossing closures** statewide.	✓	✓	✓	✓	✓	✓

Source: Iowa DOT

The **State Highway-Railroad Crossing Safety Program** has provided funding since 1973 for a portion of the maintenance costs for traffic control devices including flashing light signals, flashing light signals with cantilever assemblies, and flashing light signals with automatic gate arms. These devices are activated by the approach or presence of a train. The program amount is $700,000 annually.

Appendix D includes full lists of State Highway-Railroad Crossing Surface Repair Program and Federal Highway-Railroad Crossing Safety Program enhancement projects for Fiscal Years (FY) 2019-2024, as well as the estimated capital cost of each.

Railroad Revolving Loan and Grant (RRLG) Program

The RRLG Program offers financial aid to enhance rail facilities for the creation of jobs, economic growth, and improved rail transportation in Iowa. The program assists in three categories.

- **Targeted Job Creation**: Rail projects that offer direct job opportunities are eligible for loans and grants. Grant funding is subject to the applicant's commitment to job creation and retention, while loans can be used to supplement grants if the project's cost exceeds the available grant funding. Both grants and loans require a local contribution.
- **Rail Network Improvement**: Rail projects that enhance existing rail lines or industrial access and do not create new jobs fall under this category. Loans are the only available funding option. These loans will be provided at a 0% interest rate for ten years. However, a matching contribution of 20% is required for loan requests.
- **Rail Port Planning and Development**: Funding is available for planning studies that provide information regarding the location, design, or funding needs for a rail port facility. These studies assist decision-makers in evaluating rail development options that promote industrial and business advancement while supporting economic growth. Grants of up to $100,000 are available with a 20% matching contribution required.

Funding availability for the program varies based on loan repayments and state appropriations. The Iowa Transportation Commission is responsible for approving projects. RRLG money is available to railroads, businesses, local governments, economic development agencies, and non-profit groups. Figure 3.9 summarizes RRLG accomplishments over time, Table 3.7 lists RRLG projects from 2019-2025, and Figure 3.10 depicts locations of projects since 2012.

Figure 3.9: RRLG accomplishments, 2006-2023

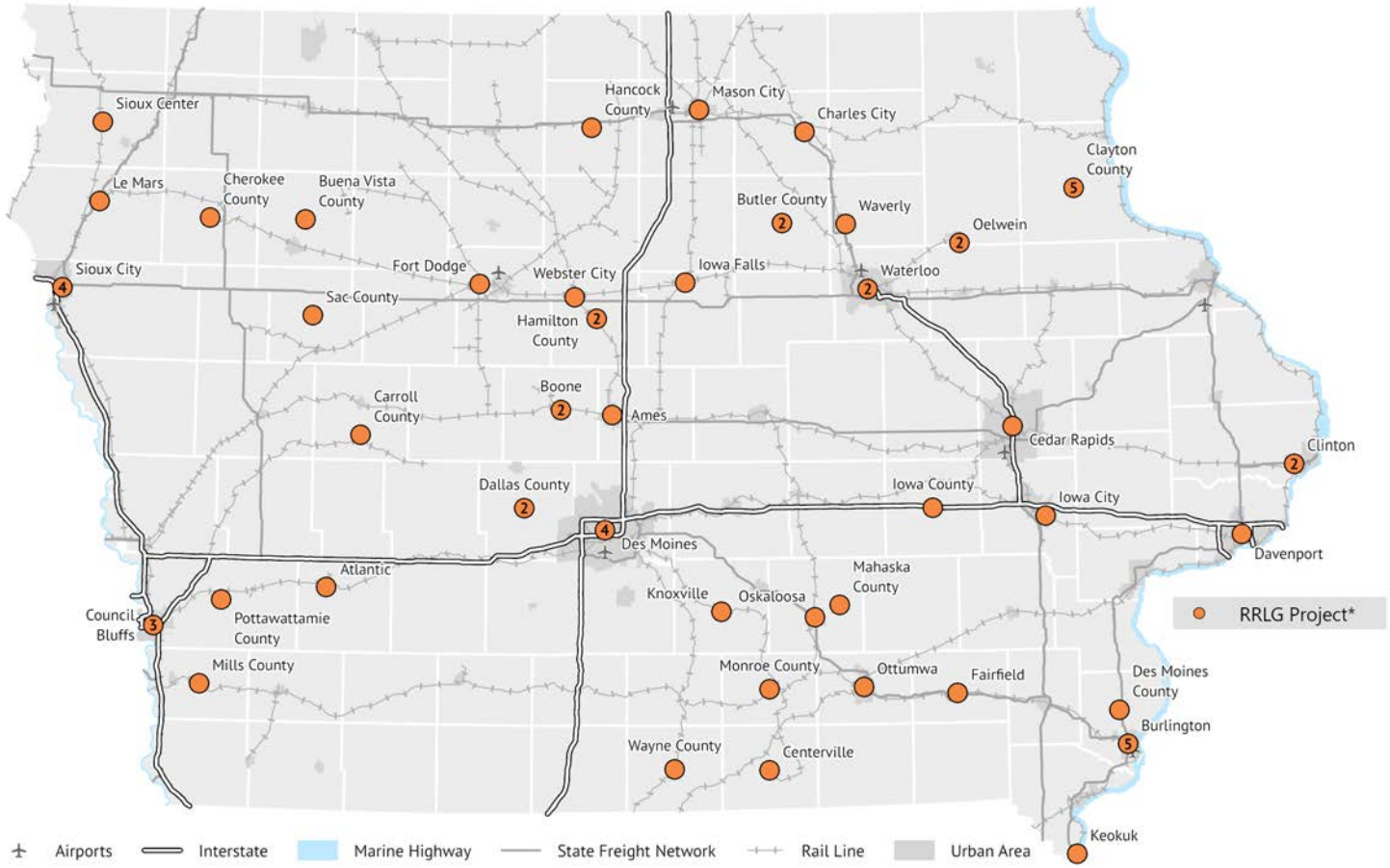
Source: Iowa DOT

Table 3.7: RRLG projects, 2019-2025

Year	Applicant	Location	Grant	Loan	Total Awarded
2019	City of Cedar Rapids Quaker Oats	Cedar Rapids	$1,028,000		$1,028,000
2019	Pattison Sand Phase III	Clayton	$564,000	$271,732	$835,732
2020	Trinity Rail, Butler	Shell Rock	$2,130,973		$2,130,973
2020	Sioux City 27 Flags Study, Woodbury	Sioux City	$32,000		$32,000
2020	Ottumwa/BJRY Rail Port Relocation, Wapello	Ottumwa	$80,000		$80,000
2021	BJRY Passing Track Relocation	Burlington		$207,029	$207,029
2021	IANR Bridge 330.17 Replacement, Black Hawk	Waterloo		$487,500	$487,500
2021	Western Iowa Energy Rail Spur, Sac	Wall Lake		$500,000	$500,000
2022	Charles City Transload, Floyd	Charles City	$240,000	$900,000	$1,140,000
2022	Cold Links Logistics, Woodbury	Sioux City	$687,933		$687,933
2022	Pattison Sand Expansion Phase IV	Clayton	$180,000	$200,000	$380,000
2022	Ten D/Merchants Distribution Central Iowa, Polk	Altoona		$1,500,000	$1,500,000
2022	BSVR Harrison-Meridian Rail Rehab, Boone	Boone		$391,416	$391,416
2022	Oskaloosa Industrial Park Transload, Mahaska	Oskaloosa	$75,600		$75,600
2023	Platinum Soybean Crush Plant, Buena Vista	Alta	$612,000	$2,000,000	$2,612,000
2023	Floyd Valley Transload, Woodbury	Sioux City	$120,000	$664,800	$784,800
2023	Ice Cap Cold Storage, Pottawattamie	Council Bluffs	$576,000	$503,315	$1,079,315
2023	Pattison Sand Project Phase V, Clayton	Garnavillo		$1,650,000	$1,650,000
2023	Booneville North Transload Facility, Dallas	Booneville	$100,000		$100,000
2023	Pacific Junction South Industrial Park Transload Facility, Mills	Pacific Junction	$82,440		$82,440
2023	Iowa Crossroads of Global Innovation Dual Rail Transload Study, Webster	Fort Dodge	$100,000		$100,000
2024	New Horizons Switching Track and Additions, Clinton	Clinton	$1,404,000	$715,000	$2,119,000
2025	A-line E.D.S. Rail Spur, Black Hawk Co	Waterloo	$60,000	$1,249,000	$1,309,000
2025	BJRY Rail Yard and Transload Expansion, Des Moines Co	Burlington		$257,349	$257,349
2025	Appanoose County Rail Extension, Appanoose Co	Centerville	$600,000		$600,000
2025	Heartland Co-op Greenfield Rail Loading Elevator, Wayne Co	Millerton		$1,840,000	$1,840,000
2025	City of Webster City Rail Port Planning Study, Hamilton Co	Webster City	$100,000		$100,000
2025	Reid Line LLC Dexter Rail Yard Improvements, Dallas Co	Dexter		$957,000	$957,000
		Total	**$8,772,946**	**$14,294,141**	**$23,067,087**

Source: Iowa DOT

Figure 3.10: RRLG project locations, 2012-2025



**Locations are not exact*

Source: Iowa DOT

Chapter Endnotes

[i] Derailments reported to the department include any derailment of ten or more rail cars and locomotives, derailment of any number of cars or locomotives when one or more are not upright, and/or derailment or other incident involving a railroad passenger train.

[ii] BNSF Railway - 2023 Impact Report

[iii] Progressive Railroading – Class Is' big capex spend still a trend in 2024

4. RAIL PLANNING CONSIDERATIONS

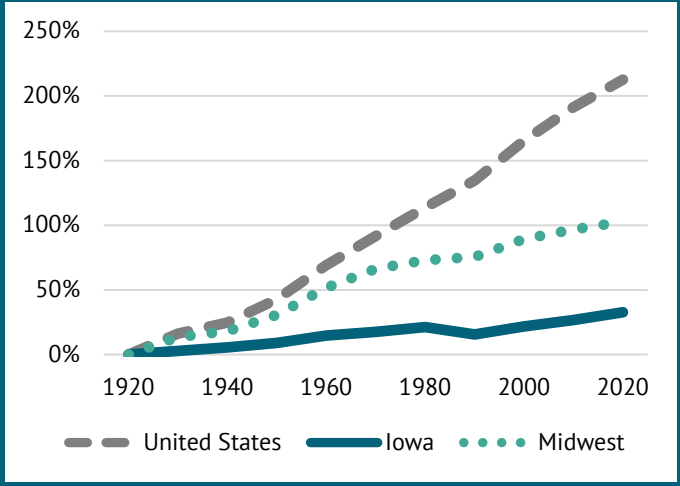
4.1 Trends and Forecasts

Demographic and Economic Trends

Iowa's population is growing at a slow pace

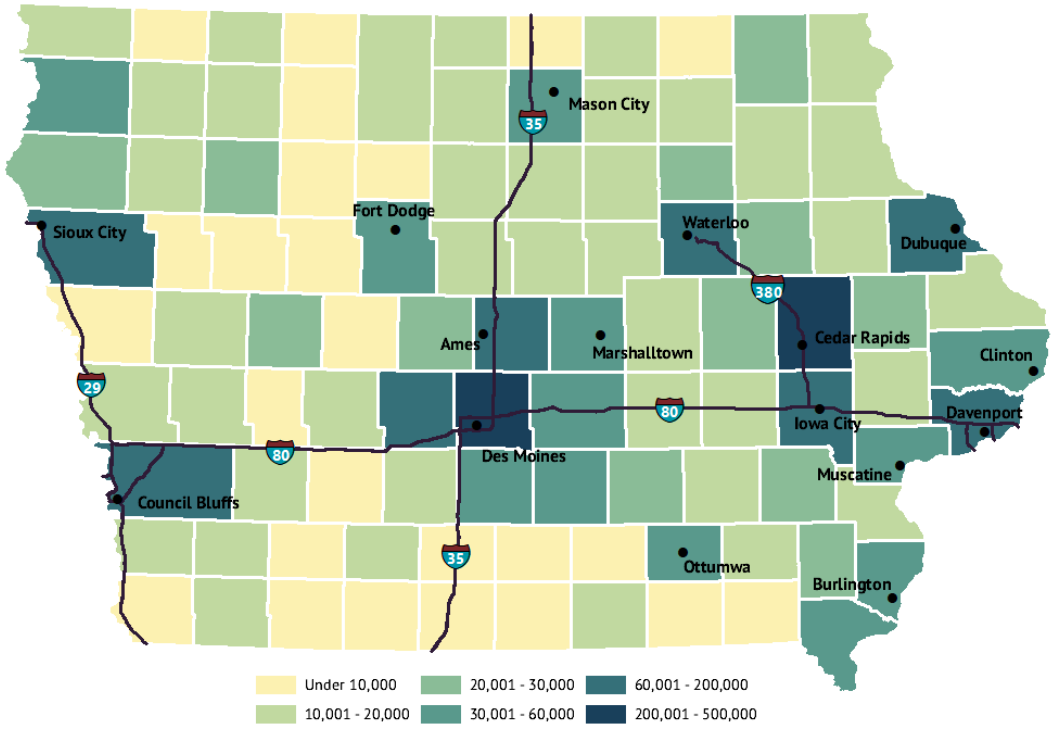
Iowa's population continues to slowly grow over time. Iowa's population growth rate is lower than that of other states in the Midwest and the United States overall, as shown in Figure 4.1. Almost a third of the state's population lives in the larger metropolitan areas, as shown in Figure 4.2. A growing population will require more transportation options such as passenger rail and access to goods that in turn must be moved on Iowa highways or rail lines.

Figure 4.1: Population growth indexed to 1920



Source: U.S. Census Bureau Decennial Censuses

Figure 4.2: Iowa's population by county, 2020

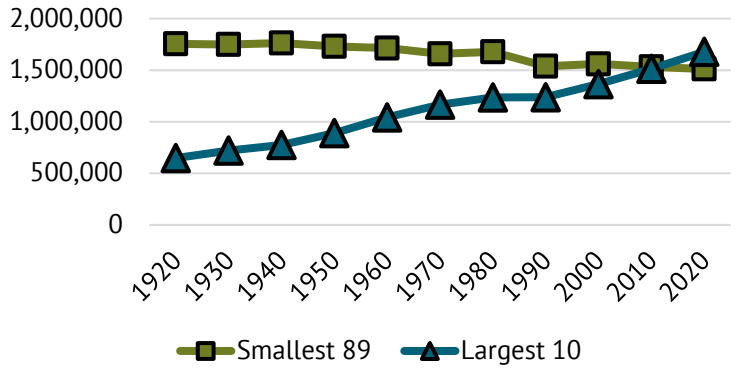


Source: U.S. Census Bureau Decennial Census

Iowa's urban population is growing

While the population of the state continues to grow steadily, the rate of growth is not felt uniformly. From 1990-2020, Iowa's overall population grew, but almost two thirds of Iowa counties lost population. Furthermore, as of 2011, more Iowans lived in the largest ten counties than the rest of the state for the first time in the state's history, as shown in Figure 4.3. This trend is expected to continue, further concentrating Iowa's population in cities and urban areas. Concentrated urban populations could benefit from increased passenger rail service.

Figure 4.3: Population difference between Iowa's ten largest counties and the other 89 counties



Source: U.S. Census Bureau Decennial Censuses

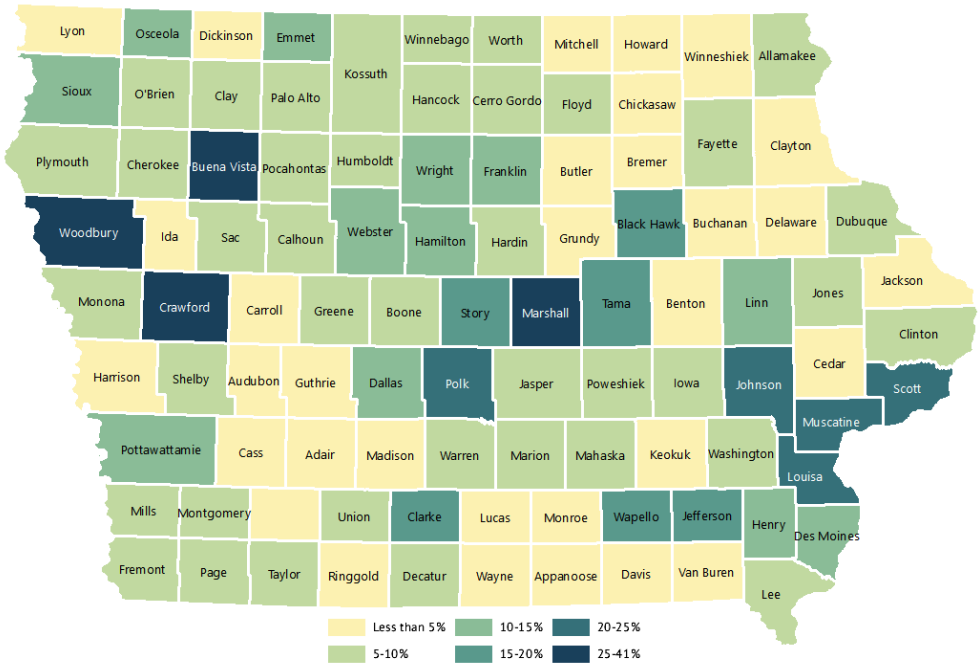
Iowa's ten largest counties by population

1. Polk
2. Linn
3. Scott
4. Johnson
5. Black Hawk
6. Woodbury
7. Dallas
8. Dubuque
9. Story
10. Pottawattamie

Iowa is becoming more diverse

Iowa continues to grow more diverse with increasing numbers of minority individuals choosing to live in the state. In 2020, 17% of the population was non-White race and/or Hispanic or Latino. By 2050, over one in four Iowans are projected to be part of a minority group. Figure 4.4 shows the state's minority population by county.

Figure 4.4: Percent of the population that is a racial minority and/or Hispanic or Latino

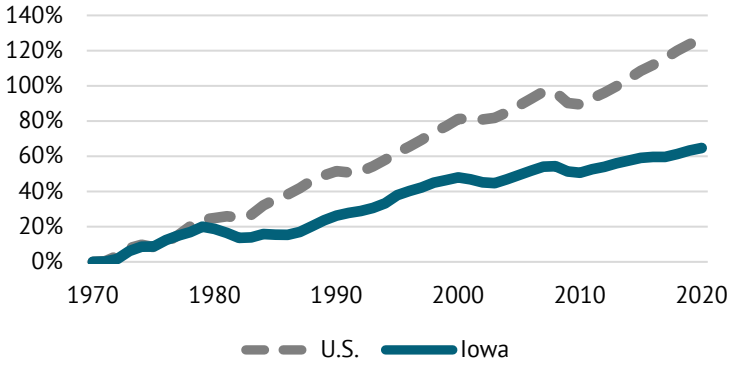


Source: U.S. Census Bureau 2015-2019 American Community Survey Estimates

Iowa's total employment continues to increase

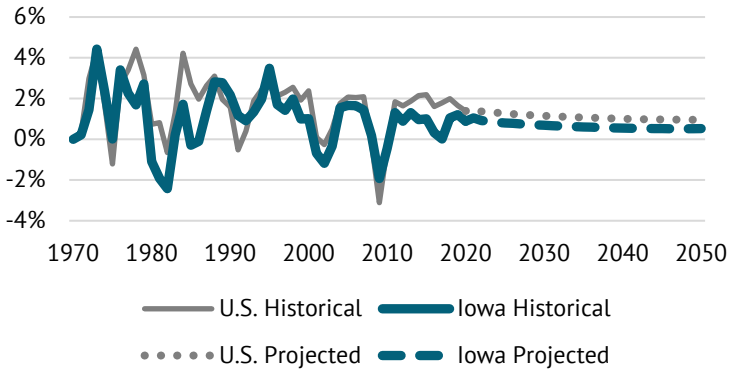
Iowa's employment has grown steadily over time. Figures 4.5 and 4.6 show the magnitude of change for Iowa and the U.S. from 1970-2020, and how jobs in Iowa have increased more slowly than the nation as a whole. The annual change in the number of jobs can vary substantially, though most years have experienced growth. Projected annual increases are generally small, averaging 1.1% per year for the U.S. and 0.6% per year for Iowa. Figure 4.7 shows the location of jobs in Iowa in 2020.

Figure 4.5: Employment growth indexed to 1970



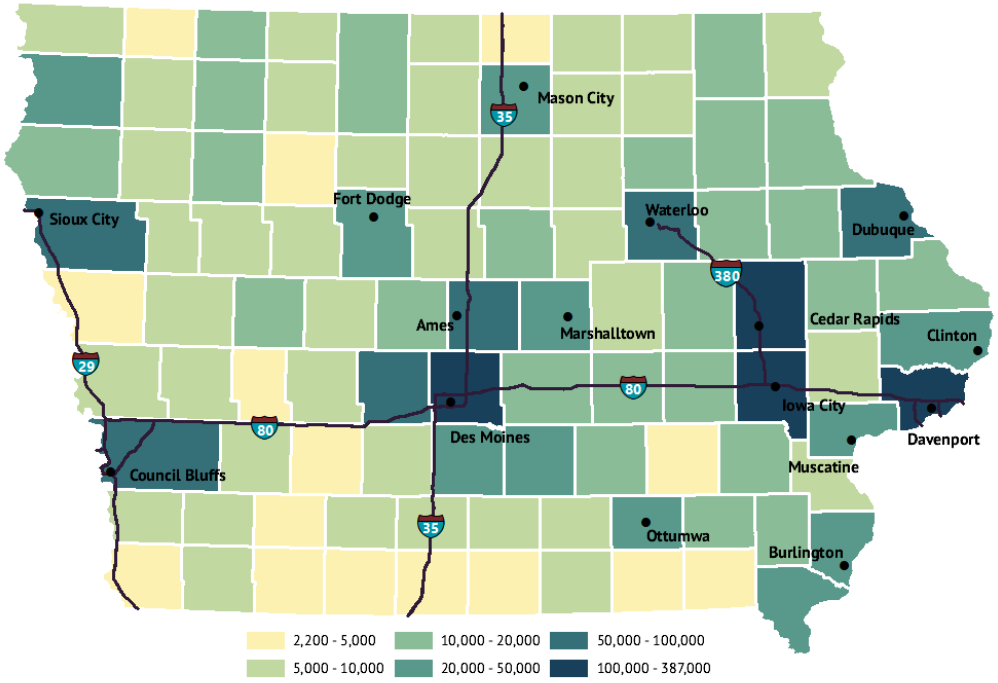
Source: Woods & Pool Economics, Inc.

Figure 4.6: Annual change in number of jobs



Source: Woods & Poole Economics, Inc.

Figure 4.7: Number of jobs per county, 2020

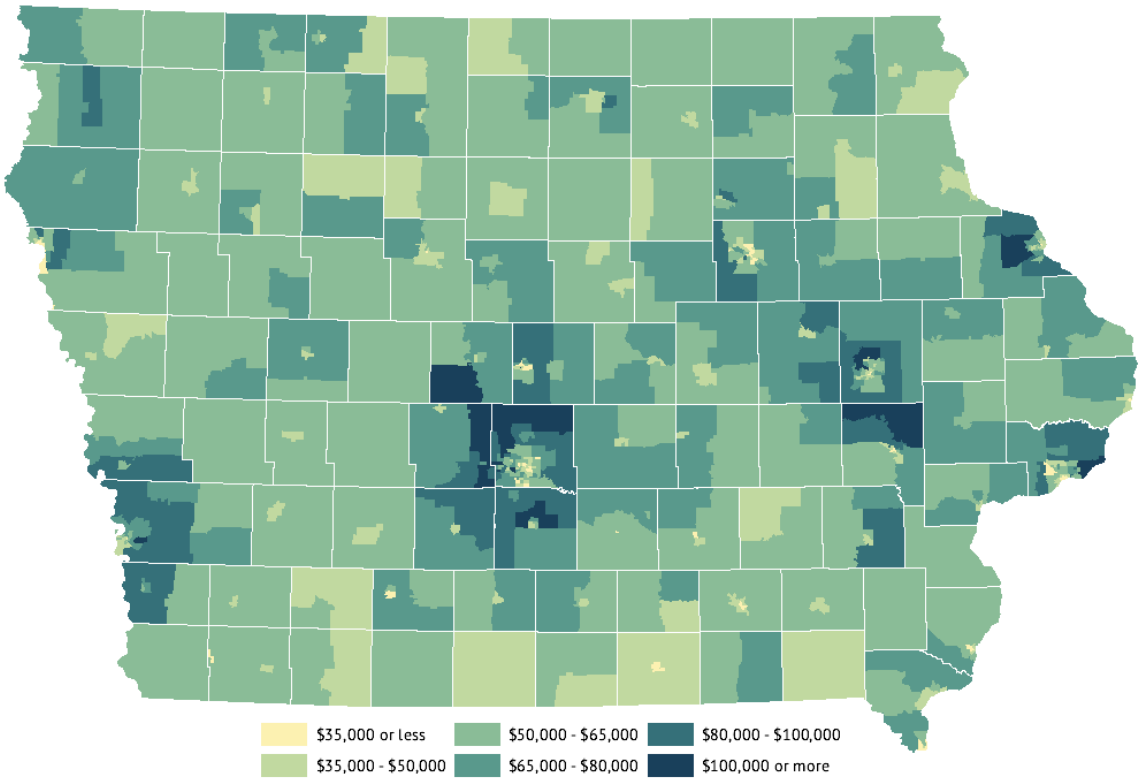


Source: Woods & Poole Economics, Inc.

Iowa's household incomes are increasing, but vary considerably

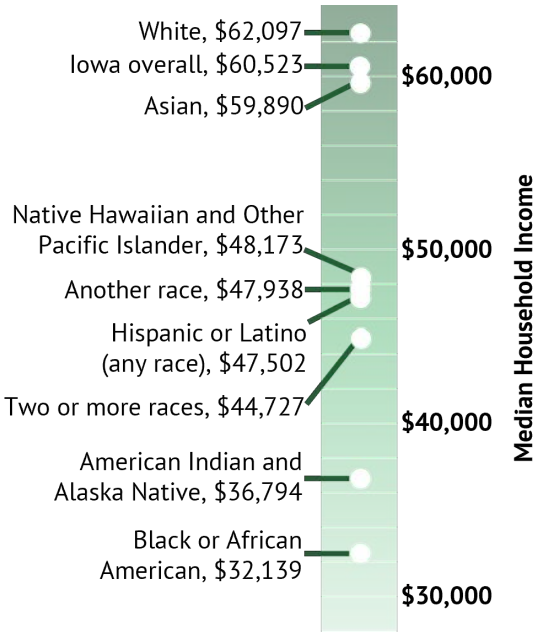
In 2020, Iowa's median household income was $60,523 which was slightly less than the national household income of $62,843. While the statewide median household income has been increasing over time, it varies considerably for different areas of the state and for different racial and ethnic groups, as shown in Figures 4.8 and 4.9. In general, the areas with the highest median household income are in or surrounding the state's metropolitan areas, though the core areas of most metropolitan areas tend to have lower median household incomes. Income varies substantially by race and ethnicity, with the median household income for Black households being just over half the median income for White households. Lower income households are more reliant on passenger transportation options.

Figure 4.8: Median household income by census tract



Source: U.S. Census Bureau 2015-2019 American Community Survey Estimates

Figure 4.9: Median household income in Iowa by race and ethnicity

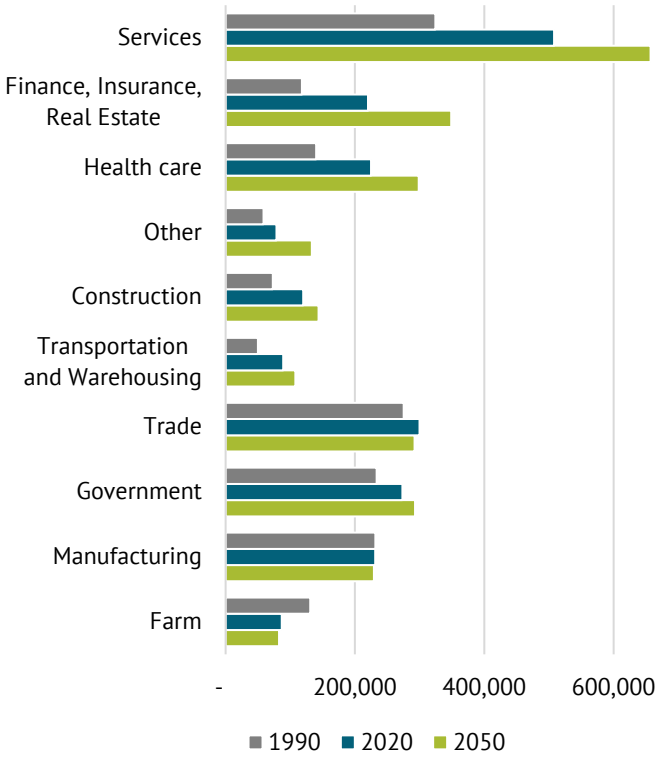


Source: U.S. Census Bureau 2015-2019 American Community Survey Estimates

Iowa's traditional employment sectors have changed

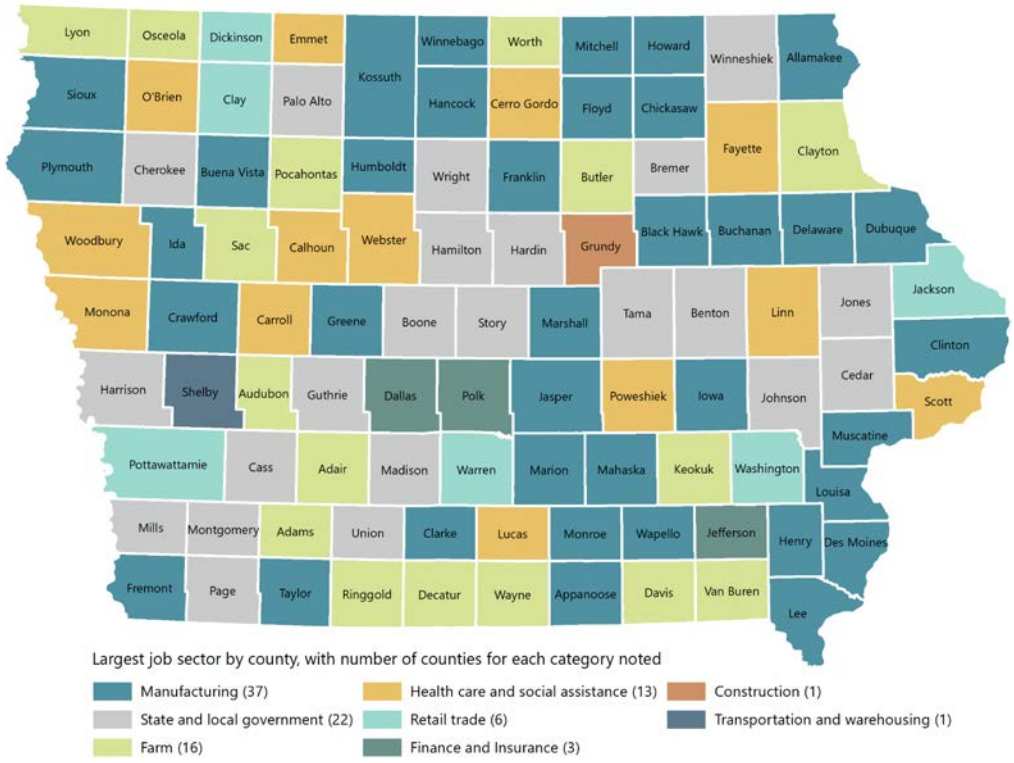
Historically, farming and manufacturing have been two of the primary employment sectors in Iowa. Technological advancements and economic diversification have changed this in recent years, as shown in Figure 4.10. Since 1990, the farm sector has decreased by more than 40,000 jobs, which represents a decline of 33% in total farm employment in Iowa. The number of manufacturing jobs is about the same in 2020 as it was in 1990, but manufacturing's share of jobs has decreased relative to other sectors. Despite these trends, farm and manufacturing jobs remain critical to the state, and account for the largest percentage of jobs in 54 of Iowa's 99 counties (see Figure 4.11). These sectors of the economy also consume and generate a significant amount of freight that is moved via Iowa's rail network, highways, and waterways.

Figure 4.10: Jobs by sector, 1990, 2020, and 2050



Source: Woods & Poole Economics, Inc.

Figure 4.11: Largest job sector by county, 2020

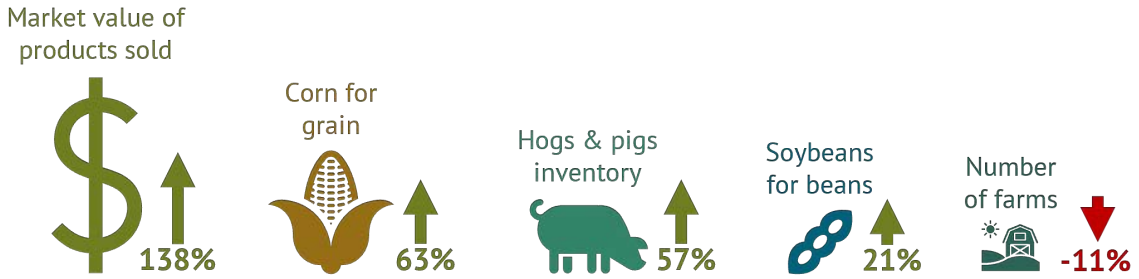


Source: Woods & Poole Economics, Inc.

Agricultural output continues to be critical to the state

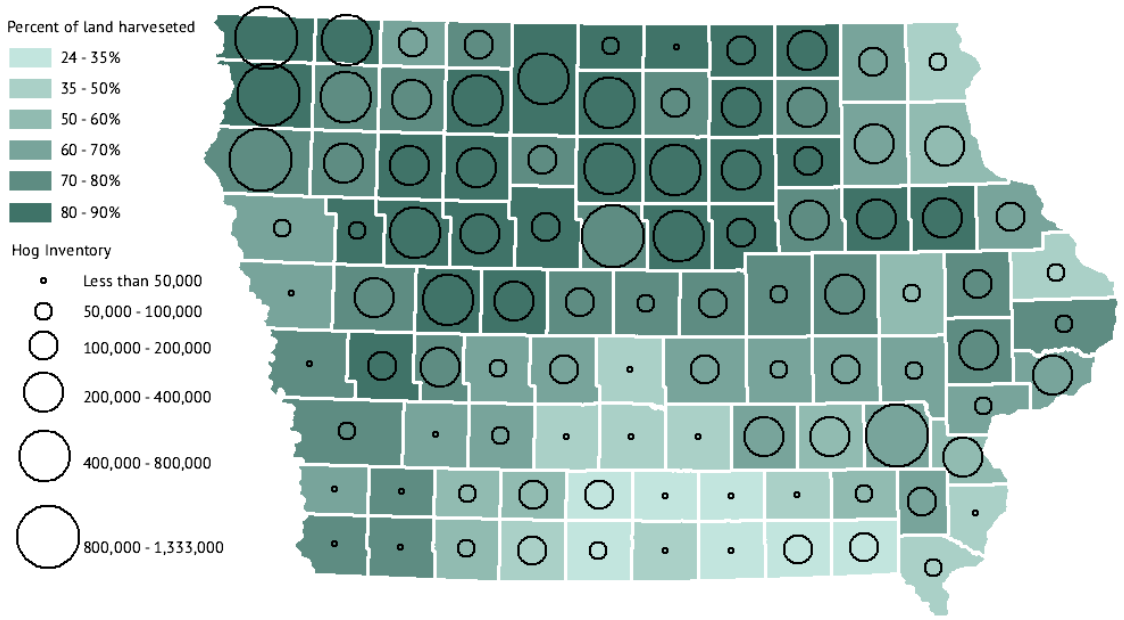
While the farm sector continues to decrease in terms of employment and the number of farms, the value of Iowa's agricultural output continues to increase. In 2017, 86% of Iowa's land area was part of farms, and 68% of the state's land area was harvested cropland. Figure 4.12 shows that during the past couple decades, overall farm output and products such as corn, soybeans, and hogs have increased, while the number of farms has decreased. As shown in Figure 4.13, the patterns of crop and animal production in Iowa reflect the natural geography of the state, with flatter northern Iowa having larger percentages of land used for crops. This also correlates to larger numbers of hog inventories, likely being fed via the area's corn crops, which are also helping to fuel ethanol production. Growth in agricultural output has a corresponding impact on Iowa's transportation systems as products are moved to in-state, interstate, and overseas markets via multiple modes. This highlights the need for sustained investment in the roadway system, rail network, intermodal facilities, and lock and dam infrastructure.

Figure 4.12: Percent change for selected agricultural items, 1997-2017



Source: U.S. Department of Agriculture Census of Agriculture

Figure 4.13: Percent of land harvested and hog inventory by county, 2017



Source: U.S. Department of Agriculture Census of Agriculture

Iowa's gross domestic product continues to increase

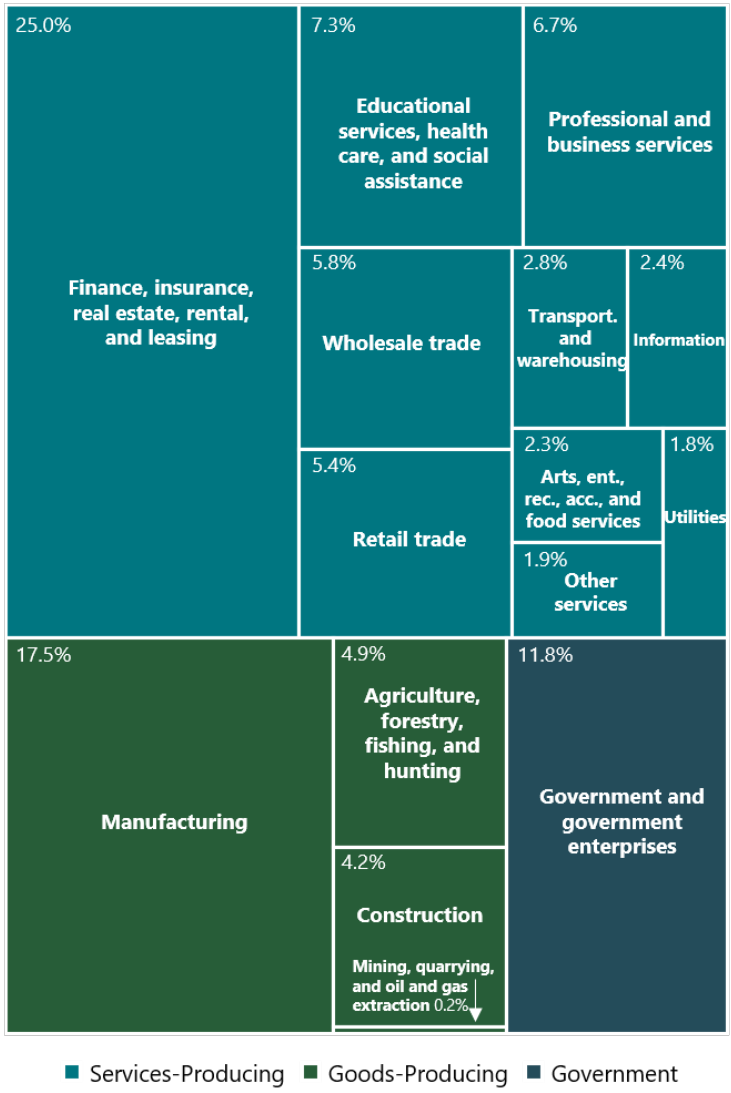
Gross domestic product (GDP) is the total market value of all goods and services produced in the economy. In 2000, Iowa's GDP was $93 billion; by 2020, Iowa's current-dollar GDP had grown by 107% to $193 billion and ranked 30th among states. The real-dollar GDP growth during this time, which accounts for inflation by using constant 2012 dollars, was 38.5%, or less than 2% per year. However, as shown in Figure 4.14, some industries have seen significant growth in real GDP since 2000, including agriculture, information, professional and business services, and finance and real estate. The current breakdown of Iowa's GDP is 61% private service-producing, 27% private goods-producing, and 12% government; the proportions by industry are detailed in Figure 4.15. While the goods-producing sectors are forecast to continue to make up a smaller percentage of Iowa jobs over time, they will continue to have significant transportation infrastructure needs related to moving raw materials and finished products.

Figure 4.14: Change in real GDP by industry from 2000-2020

181%	Agriculture, forestry, fishing and hunting
100%	Information
86%	Professional and business services
77%	Finance, insurance, real estate, rental, and leasing
35%	Wholesale trade
29%	Educational services, health care, and social assistance
27%	Manufacturing
21%	Retail trade
11%	Government and government enterprises
9%	Transportation and warehousing
5%	Utilities
-7%	Construction
-17%	Arts, entertainment, recreation, accommodation, and food services
-28%	Other services (except government and government enterprises)
-29%	Mining, quarrying, and oil and gas extraction

Source: U.S. Bureau of Economic Analysis

Figure 4.15: Iowa's 2020 GDP by industry



Source: U.S. Bureau of Economic Analysis

Freight Transportation Trends

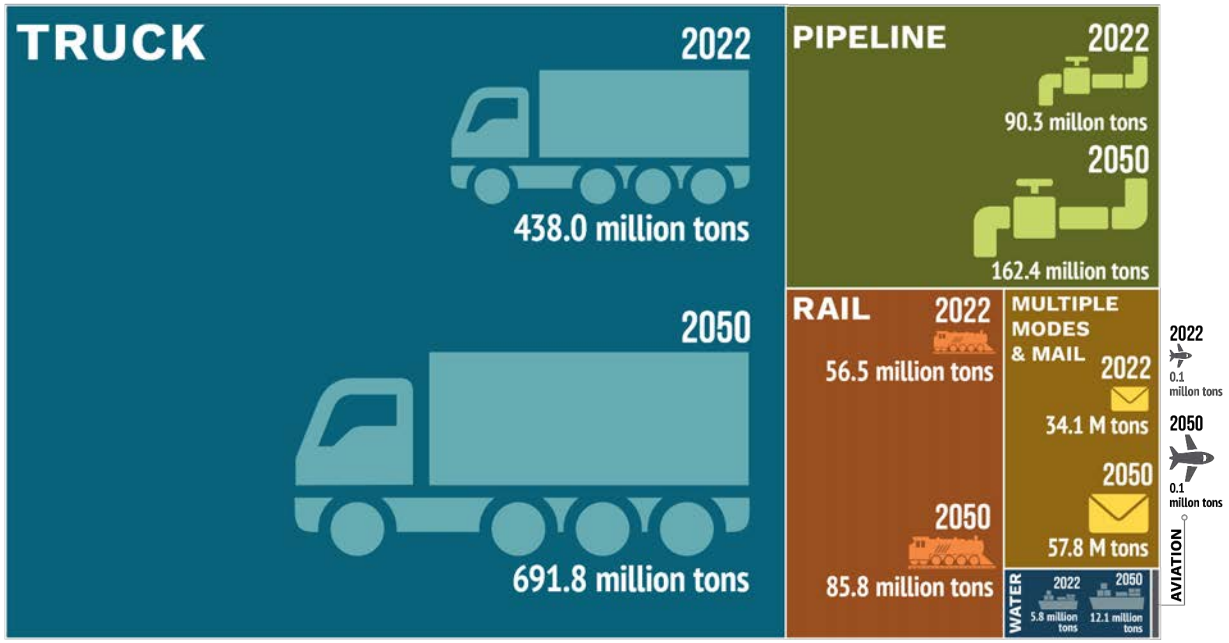
According to the Federal Highway Administration (FHWA) Freight Analysis Framework (FAF), freight tonnage moving in the U.S. will increase by nearly 27% between 2022 and 2050. This will prove to be a sizable challenge for the overall freight transportation system. This growth will be reflected in Iowa and will not uniform across modes.

Iowa's transportation system facilitated the movement of over 624 million tons of freight with an estimated value of $377 billion in 2022. These figures are expected to grow to over 1 billion tons with a value of over $745 billion in 2050. Additionally, Iowa is a net exporting state, meaning the state produces and exports more goods than it imports. This is true both in terms of tonnage and value. The gap between Iowa's imports and exports is projected to grow wider from 42 million tons in 2022 to 120 million tons in 2050.

Trucks will remain the dominant mode for freight traffic

Figure 4.16 shows Iowa's freight tonnage by mode in 2022, and the projections for 2050 according to the FHWA FAF. Truck, rail, and pipeline are the top three modes and collectively transport 97% of the tonnage to, from, and within Iowa. These three modes are expected to maintain their prominence through 2050. Over this same period, FHWA FAF projects rail tonnage to increase by 29 million tons or 52%. This increased freight movement will require additional infrastructure and yard capacity to be moved effectively.

Figure 4.16: Projected growth in tonnage of Iowa freight by mode, 2022-2050

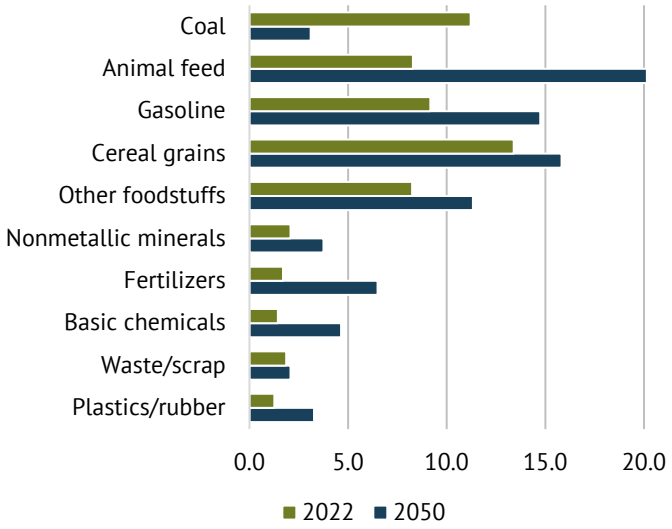


Source: FHWA Freight Analysis Framework

Iowa freight movement will continue to serve agriculture

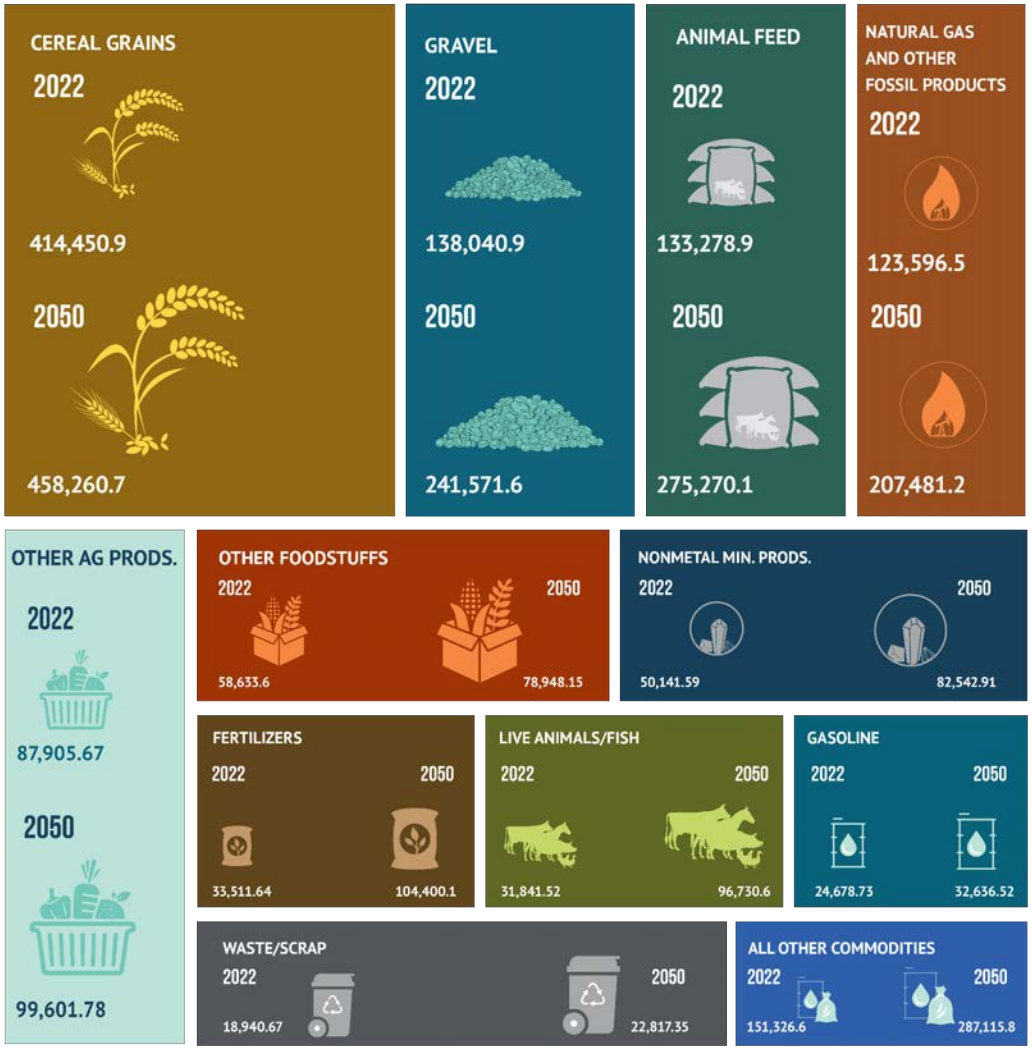
According to the FHWA FAF, the total weight of Iowa freight (freight moved within, exported from, and imported to the state) is expected to grow from 624 million tons in 2022 to over 1 billion tons in 2050. In 2050, agricultural products will continue to be the top freight commodities, as shown in Figure 4.17. Cereal grains (such as corn) and animal products and feed (including eggs) will be the top commodities, along with gravel. According to the same projections, rail freight will move away from commodities such as coal and focus on commodities such as animal feed and cereal grains instead (Figure 4.18).

Figure 4.18: Iowa commodity movements by rail in millions of tons, 2022 and 2050 (projected)



Source: FHWA Freight Analysis Framework

Figure 4.17: Iowa commodity movements across all modes, 2022 and 2050 (projected)



Source: FHWA Freight Analysis Framework

Freight Rail Trends

Various types of freight travels across Iowa's rail infrastructure every year, including finished goods, materials, and supplies. Primary freight rail issues are the identification of movements most important to Iowa and the options to facilitate and support these movements. Identifying the importance of, and solutions for, freight rail comprises several perspectives, including volumes (especially compared to capacity), units (carloads), and directional movements.

In this section and Appendix F, current freight rail volumes for year 2022, as reported in the STB Railroad Waybill Sample database, are tabulated by major commodity types to understand freight movements. Additionally, directional rail tonnage forecasts are provided as derived from the FHWA FAF data.

- **Commodity Classification** – The Standard Transportation Commodity Code (STCC) is a seven-digit numeric code, categorized by 40 commodity groupings, based on physical product information used on shipping documents and published/maintained by the AAR. A hierarchical STCC structure allows for data collapsibility, enabling summarization of commodity information.[i] Although freight movements are tallied at the seven-digit STCC detail, the information summarized herein is at the aggregated two-digit level.
- **Waybill Sample** – Based on STCC codes[ii], the Waybill provides detailed most-recently available year 2022 movement data by commodity. It uses a 2% stratified sample by the STB Carload Waybill Sample of carload waybills for all rail traffic submitted by rail carriers that terminate 4,500 or more revenue carloads annually.
- **Freight Analysis Framework (FAF)** – Integrates year 2022 U.S. Census Bureau Commodity Flow Survey (CFS) and additional sources to provide freight movement metrics in terms of tonnage, value, and domestic ton-miles by region of origin and destination, commodity type, and mode for most current year (e.g., 2022 via FAF v5.6.1) and forecasts through 2050 (via FAF v5.6.1). While FAF is not as exhaustive (excludes railcar unit metrics or through state movements) as the Waybill Sample, FAF does provide a means by which to assess future tonnage growth. Note that FAF presents rail ton movement data by two-digit Standard Classification of Transportable Goods (SCTG) code classification, which differs notably from the STCC classification used in the Waybill Sample.[iii]

Year 2022 Iowa rail movements by direction (outbound, inbound, intrastate, and through) and term (defined as tons and carload units) are derived from the STB Waybill database. Each subsection summarizes rail movements by direction and term, and each identifies the top two-digit STCC commodity movements. Summary data is provided here; supporting comprehensive data is in Appendix F.

Overview

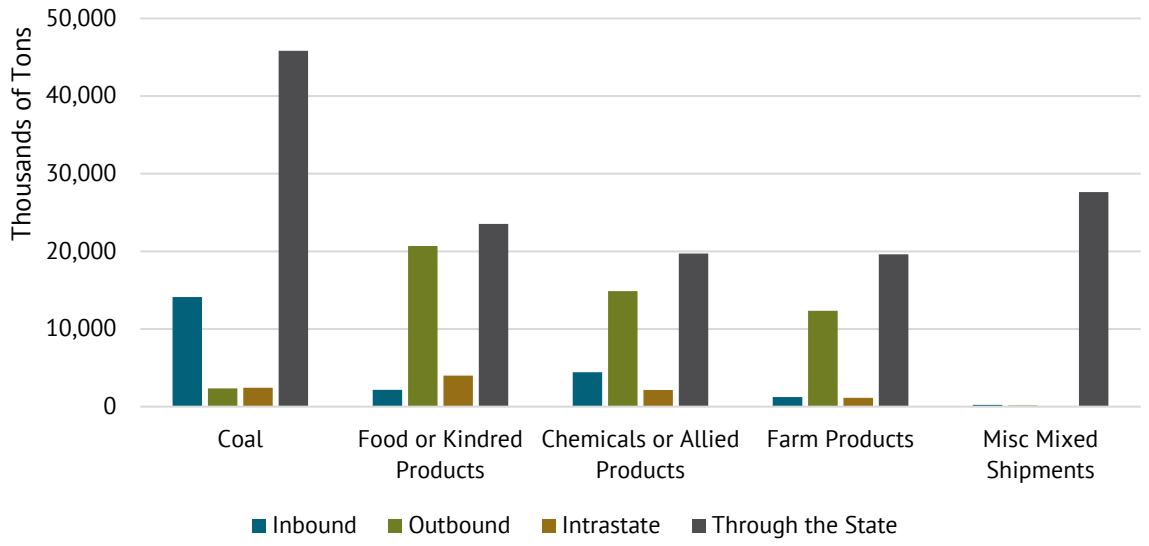
Iowa rail movements in 2022 totaled 273.6 million tons, carried by over 6.0 million carload units, as seen in Table 4.1 and Figure 4.19. Rail movements through Iowa account for 66% of the weight and 84% of the carloads of all rail movements in the state. The five commodity categories included on Figure 4.19 – coal, food or kindred products, chemicals or allied products, farm products, and misc. mixed shipments account for 80% of the total commodity movements by weight and 69% by carloads.

Table 4.1: Rail Movements by Direction, 2022

Direction	Tons		Units (Carloads)		Tons/Unit Utilization
	Amount	Percent	Amount	Percent	
Outbound	56,027,913	20.5%	589,196	9.8%	95.1
Inbound	26,276,380	9.6%	286,425	4.8%	91.7
Intrastate	10,971,407	4.0%	112,763	1.9%	97.3
Through	180,357,192	65.9%	5,035,151	83.6%	35.8
Total	**273,632,892**	**100.0%**	**6,023,535**	**100.0%**	**45.4**

Source: Calculated based on STB Waybill Sample Data for 2022

Figure 4.19: Freight rail movements by top commodity and direction, 2022



Source: FHWA's Freight Analysis Framework

Rail Origins and Destinations

Appendix F presents major outbound and inbound rail tonnages in 2022. The top three origins or destinations and each of their respective top five commodities are included. Tables 4.2 and 4.3 provide a summary of the top origins and destinations for outbound and inbound rail movements.

Table 4.2: Top origins and destinations for outbound rail movements from Iowa, 2022

	Location	Tons	Percent
Iowa Origin County	1. Pottawattamie County	8.1m	14.5%
	2. Clinton County	4.9m	8.8%
	3. Woodbury County	4.3m	7.6%
Destination State	1. Illinois	16.8m	25.0%
	2. Texas	11.9m	17.7%
	3. California	4.8m	7.1%

Source: STB Waybill Sample Data

Table 4.3: Top origins and destinations for inbound rail movements to Iowa, 2022

	Location	Tons	Percent
Origin State	1. Wyoming	14.2m	53.9%
	2. Illinois	1.7m	6.7%
	3. Canada	1.7m	6.4%
Iowa Destination County	1. Wapello County	5.4m	20.7%
	2. Pottawattamie County	4.7m	18.1%
	3. Clinton County	4.0m	15.2%

Source: STB Waybill Sample Data

Freight Forecasts

Rail freight tonnage forecasts for the year 2050 were derived using data from the FHWA FAF: 2022 provisional data (FAFv5.6.1) and 2050 forecasts. While rail freight data is not as exhaustive as the STB Waybill data, the FAF does provide a means by which to assess future tonnage growth. Specifically, total annual growth forecasts by direction (outbound, inbound, intrastate, and through) are derived by comparing FAF tonnage volumes for the year 2022 to 2050.[iv] Additionally, FHWA FAF data are presented in SCTG commodity terms, and is thus not directly comparable to the Waybill data by commodity.[v] However, the directional totals are relatively comparable.

FHWA FAF presents directional rail tonnage for 2022 through the FAF v5.6.1 provisional data; however, the directional coverage excludes through movements because routing of freight movements is not specified. As such, only outbound, inbound, and intrastate movements are comparable with the Waybill data for 2022. Subtotaling the available three directions, the FHWA indicates that 72.4 million tons moved via the Iowa rail system, about 22.3% below that subtotal reported by Waybill. Because of the reporting differences shown in Table 4.4, the forecast growth rates, by direction, from the FAF were applied to the Waybill directional totals to estimate 2050 rail freight, shown in Table 4.5 and Figure 4.20.

Table 4.4: Rail tonnage comparison by source, 2022

Direction	STB Waybill		FHWA FAFv5.0		FAF/STB
	Amount	Percent	Amount	Percent	
Outbound	56,027,913	60.1%	36,097,027	49.8%	64.4%
Inbound	26,276,380	28.2%	28,339,832	39.1%	107.9%
Intrastate	10,971,407	11.8%	7,992,295	11.0%	72.8%
Total	**93,275,700**	**100.0%**	**72,429,154**	**100.0%**	**77.7%**

Source: Calculated based on STB Waybill Sample Data for 2022 and FHWA FAF v5.6.1

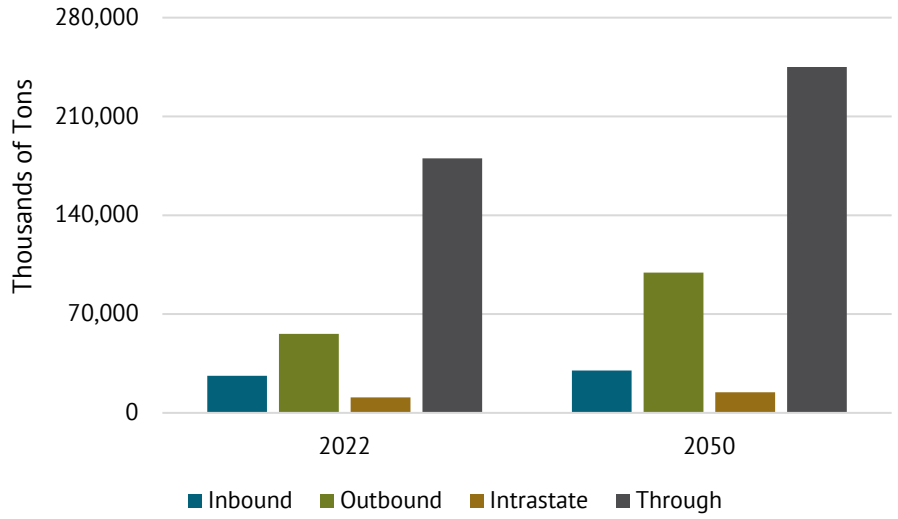
Table 4.5: Rail tonnage forecast summary, 2022-2050

Direction	2022		2050		Change	
	Amount	Percent	Amount	Percent	Percent	CAGR
Outbound	56,027,913	20.5%	99,436,241	25.6%	77.5%	2.1%
Inbound	26,276,380	9.6%	29,977,370	7.7%	14.1%	0.5%
Intrastate	10,971,407	4.0%	14,556,026	3.7%	32.7%	1.0%
Through	180,357,192	65.9%	244,999,852	63.0%	35.8%	1.1%
Total	**273,632,892**	**100.0%**	**388,969,489**	**100.0%**	**42.2%**	**1.3%**

Note: CAGR = Compound Annual Growth Rate

Source: Calculated based on STB Waybill Sample Data for 2022 and FHWA FAF v5.6.1

Figure 4.20: Rail tonnage growth by movement, 2022-2050



Source: Calculated based on STB Waybill Sample Data for 2022 and FHWA FAF v5.6.1

Commodity Growth

As noted, the SCTG commodity types reported in the FAF differ from the STCC reported in the Waybill sample, which makes direct comparison difficult. Nonetheless, the change in two-digit level SCTG commodity movements for the available outbound, inbound, and intrastate directions are presented in a table in Appendix F.

Industrial Outlook by Sector

FHWA FAF-derived commodity movements by direction are presented by SCTG code in Appendix F. SCTG codes are also summarized within four overarching industrial categories: Agricultural, Mining and Extraction, Manufacturing, and Other. Note that Alcoholic Beverages, a category that includes ethanol, is included in the Agricultural SCTG code. An overview of the industrial categories is provided in Table 4.6 and Figure 4.21.

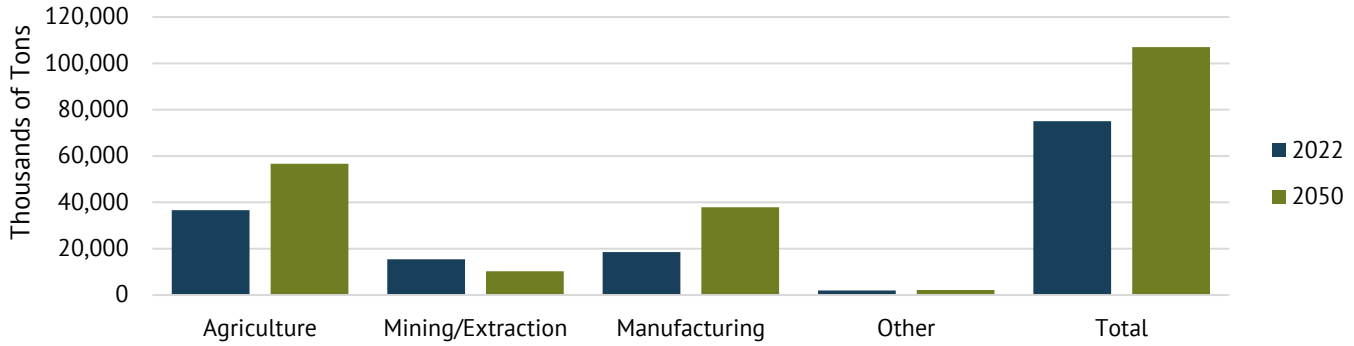
Table 4.6 Rail tons by industrial sector, 2022 and 2050

Industrial Sector	Outbound			Inbound			Intrastate		
	2022	2050	CAGR	2022	2050	CAGR	2022	2050	CAGR
Agricultural	21,708,902 (60.1%)	37,740,072 (58.9%)	2.0%	8,642,982 (30.5%)	11,024,617 (34.1%)	0.9%	6,231,137 (78.0%)	7,913,675 (74.6%)	0.9%
Mining / Extraction	2,213,230 (6.1%)	3,408,822 (5.3%)	1.6%	13,239,566 (46.7%)	6,841,699 (21.2%)	-2.3%	1,835 (0.0%)	2,910 (0.0%)	1.7%
Manufacturing	11,444,093 (31.7%)	21,829,469 (34.1%)	2.3%	5,656,668 (20.0%)	13,785,561 (42.6%)	3.2%	1,417,279 (17.7%)	2,274,620 (21.5%)	1.7%
Other	730,802 (2.0%)	1,085,288 (1.7%)	1.4%	800,616 (2.8%)	679,579 (2.1%)	-0.6%	342,043 (4.3%)	412,362 (3.9%)	0.7%
Total	**36,097,027**	**64,063,652**	**2.1%**	**28,339,832**	**32,331,457**	**0.5%**	**7,992,295**	**10,603,567**	**1.0%**

Note: CAGR = Compound Annual Growth Rate

Source: FHWA Freight Analysis Framework

Figure 4.21: Tonnage projections by industrial sector, 2022-2050



Source: FHWA Freight Analysis Framework

Conclusions

Freight rail movements in Iowa include a wide range of commodities moving in different directions (outbound, inbound, intrastate, and through), measured in different terms (tons and carload units), and with varying geographic origins and destinations. The following summary provides highlights of Iowa freight rail movements and forecasts.

Directional Overview

- **Through** – Through freight movements comprise most directional movements, both in terms of tonnage carload units. With respect to tonnage, the 180.4 million tons constitutes 65.9% of all directional freight rail movement via Iowa. In terms of carload units, the directional proportion attributable to through traffic is even higher, with the 5.0 million carload units representing 83.6% of total directional units.
- **Inbound** – At 26.3 million tons, inbound movements represent 9.6% of directional tonnage, and at 286,400 carload units, 4.8% of all directional carloads.
- **Outbound** – Outbound movements represent the second largest share of directional tonnage at 56.0 million tons (20.5%) and 589,200 carload units (9.8%).
- **Intrastate** – Comparatively insignificant tonnages are moved between counties in Iowa, with 11.0 million tons comprising 4.0% of directional movement and 112,800 carload units comprising 1.9% of directional carload movements.

Notable Commodity Movements

- **Coal** - The major single-commodity movement via Iowa in 2022, accounting for 23.7% of all freight rail tonnage (64.7 million tons); and 9.1% of carload units (546 thousand carload units). Much of this coal freight pertains to through movements, predominantly from Wyoming.
- **Food or Kindred Products** - 50.4 million tons (704 thousand carload units) of food or kindred products traversed the rail network in Iowa in 2022, representing 18.4% of all directional movements in Iowa. Nearly half (20.7 million tons) of all directional movements pertained to outbound movements, given that Iowa is an agriculture-producing state.
- **Chemicals or Allied Products** - 41.2 million tons (489 thousand carload units) of all directional movements pertained to Chemicals or Allied products. The directional breakdown includes 14.9 million tons (149 thousand carload units) attributable to outbound movements, 4.4 million tons (46 thousand carload units) for inbound movements, an allocation of 2.2 million tons (23,000 carload units) to intrastate movements, and finally 19.7 million tons (261,300 carload units) for through movements.
- **Farm Products** - 34.3 million tons of farm products traversed the rail network in Iowa in 403,200 carload units in 2022. Similar to food or kindred products, due to Iowa being an agriculture-producing state, a large share of all directional movements pertained to outbound movements at 12.3 million tons (120 thousand carload units). Through movements comprised an additional 19.6 million tons (259,200 carload units).

Forecasted Movements

Total rail traffic outbound, inbound, within the state, and through will grow 77.5% (2.1% CAGR), 14.1% (0.5% CAGR), 32.7% (1.0% CAGR), and 35.8% (1.1% CAGR), respectively between 2022 and 2050. Including all directional movements, total rail freight in Iowa is forecast to grow 42.2% (1.3% CAGR) from 273.6 million tons in 2022 to 389.0 million tons in 2050. Outbound tonnages are expected to grow at the highest rate. Inbound is expected to experience a slight decline in share of total rail tonnage, primarily due to declining imports of coal. Intrastate traffic is projected to maintain a relatively constant share of total rail tonnage. Through traffic is expected to continue to constitute the majority of all freight on the Iowa rail network.

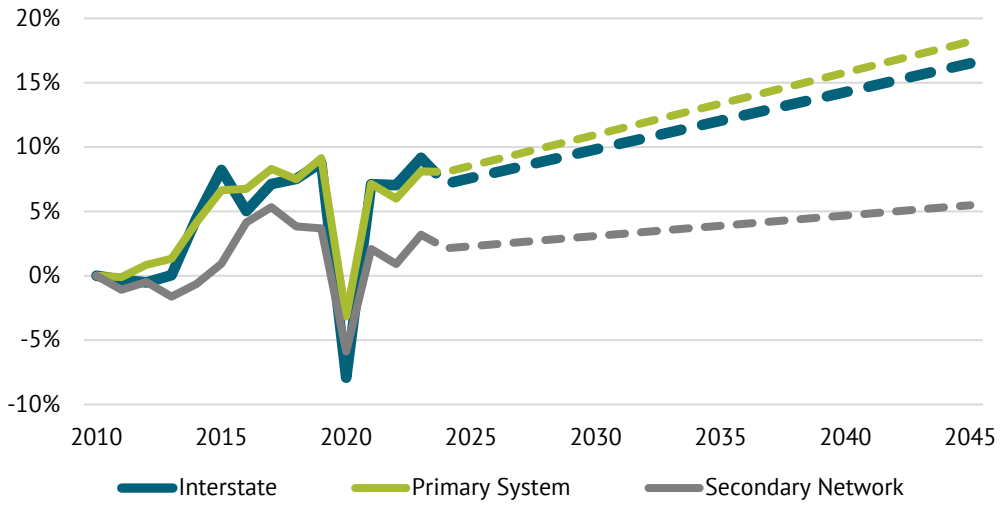
Passenger Transportation Trends

Highway

While Iowa's primary and secondary roadway network mileage has not grown significantly in recent years, travel along it has. As shown in Figure 4.22, vehicle miles traveled (VMT) have grown steadily since 2010, except for a sharp decline in 2020 due to decreased commute traffic during the COVID-19 pandemic. Traffic is expected to continue to increase in the future, particularly on Iowa's Interstate and Primary Highway Systems.

Automobile traffic along Iowa's existing passenger rail routes is projected to increase overall by 2050. Table 4.7 shows the projected daily automobile VMT between zones with stations along the California Zephyr and Southwest Chief Amtrak routes in 2050, as well as the change from 2018 to 2050. While the daily vehicle travel between the Chicago area and several of Iowa's rural Amtrak stations is projected to decrease, automobile traffic between Chicago and major destinations such as Omaha-Council Bluffs and Kansas City-Overland Park is projected to increase and involve millions of daily VMT, which would likely be utilizing Iowa highways between these destinations. If improvements to the existing passenger routes and/or stations are made, some of that highway traffic could potentially be diverted to passenger rail instead of the roadway network. Additional information about intercity vehicle traffic along proposed passenger routes can be found in Appendix E.

Figure 4.22: Percent change in Vehicle Miles Traveled (VMT) from 2010 to 2045 (projected)



Source: Iowa DOT

Table 4.7: Projected daily vehicle miles traveled (VMT) between Chicago-Naperville, IL and Amtrak station areas in 2050 and percent change from 2018-2050

Route	Station Area	2050 VMT	Change from 2018
California Zephyr	Burlington-Fort Madison	139,627	-14%
	Henry County	29,545	-6%
	Ottumwa	50,693	-11%
	Clarke County	20,836	-3%
	Union County	27,546	-7%
	Omaha-Council Bluffs	**3,091,382**	**+13%**
	Lincoln-Beatrice, NE	**997,712**	**+10%**
Southwest Chief	Burlington-Fort Madison	139,627	-14%
	Kansas City-Overland Park	**13,535,943**	**+21%**

Source: Iowa DOT

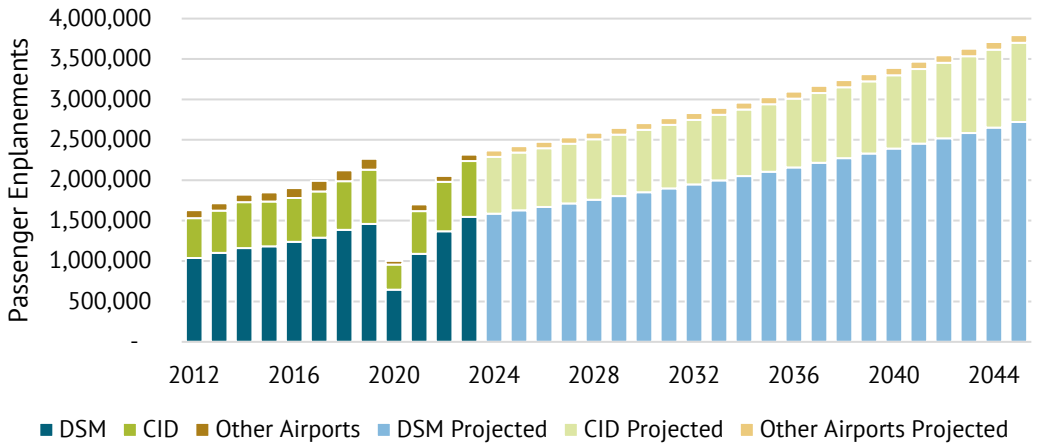
Air Transportation

Airports in Iowa serve varying types of users and levels of demand. Iowa's airport system has extensive geographic coverage, with over 97% of Iowa's population located within 30 minutes of an airport. Commercial service options for Iowa residents are enhanced by several nearby commercial airports in bordering states.

Passenger enplanements at Iowa's eight commercial service airports grew regularly to record levels prior to 2020, as shown in Figure 4.23. Despite a severe dip during the pandemic, passenger operations have recovered and are projected to continue to increase. Over 90% of Iowa's commercial passengers utilize the Des Moines International Airport (DSM) and the Eastern Iowa Airport (CID) in Cedar Rapids. Passenger enplanements are anticipated to continue to increase at an average annual rate of growth of 2.2%.

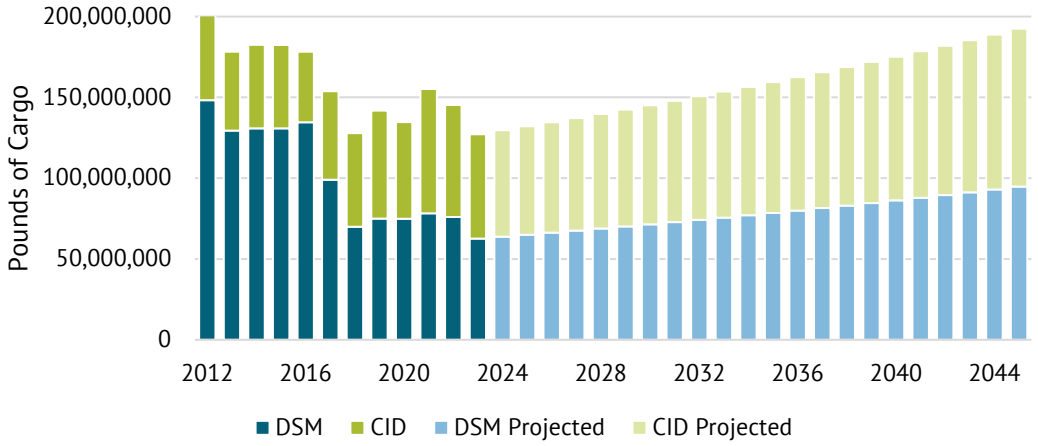
Most reported air freight in Iowa is moved by scheduled commercial air passenger carriers and dedicated air cargo carriers (e.g., UPS and FedEx) at the eight commercial airports. Although most of the airports in the state handle cargo to some extent, over 99% of reported tonnage moves through DSM and CID. To a large degree, the movement of air cargo is contingent upon the business decisions of these private carriers. In recent years, increased fuel expenses and changes in business models have resulted in reduced air freight activity in Iowa, shown in Figure 4.24. However, statewide air cargo is projected to increase at 1.9% per year over time.

Figure 4.23: Passenger enplanements at Iowa's commercial service airports



Source: Federal Aviation Administration (FAA); 2020 Iowa Aviation System Plan

Figure 4.24: Pounds of air cargo transported at Iowa's airports



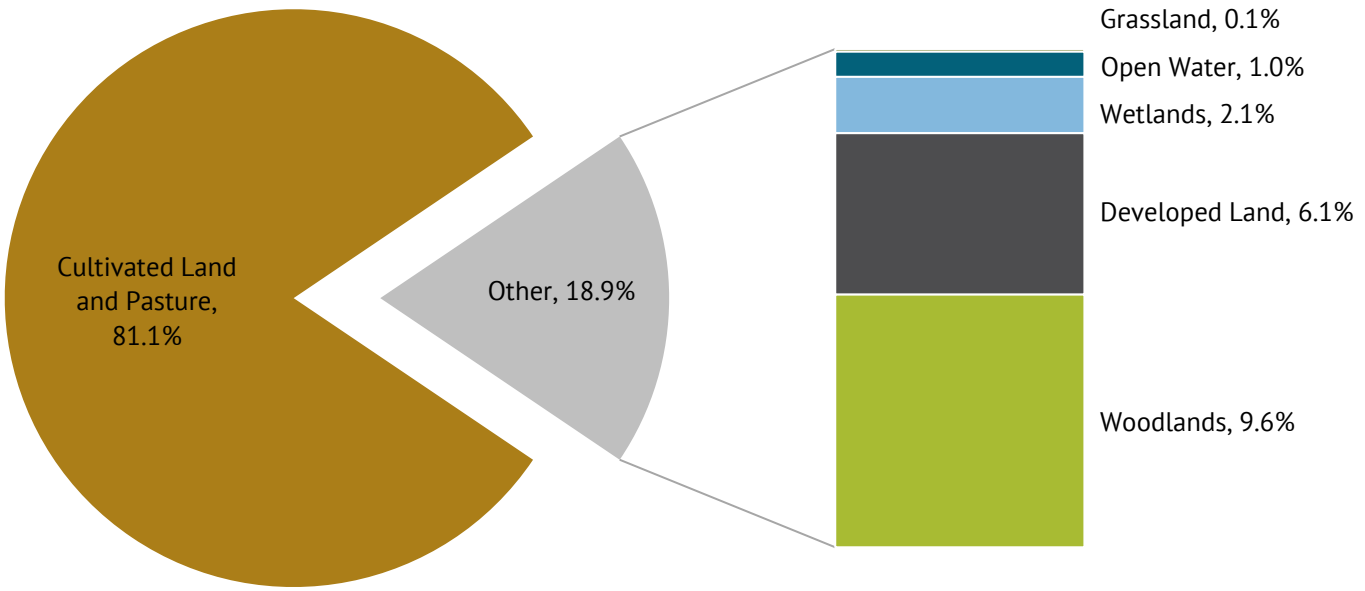
Source: FAA; 2020 Iowa Aviation System Plan

Land Use Trends

Agriculture remains the major land use in the state (National Land Cover Database (NLCD) classifications 81 and 82)). This land use is very dependent on the transportation system to access the fields, transport products for field application, and for deliver commodities to market.

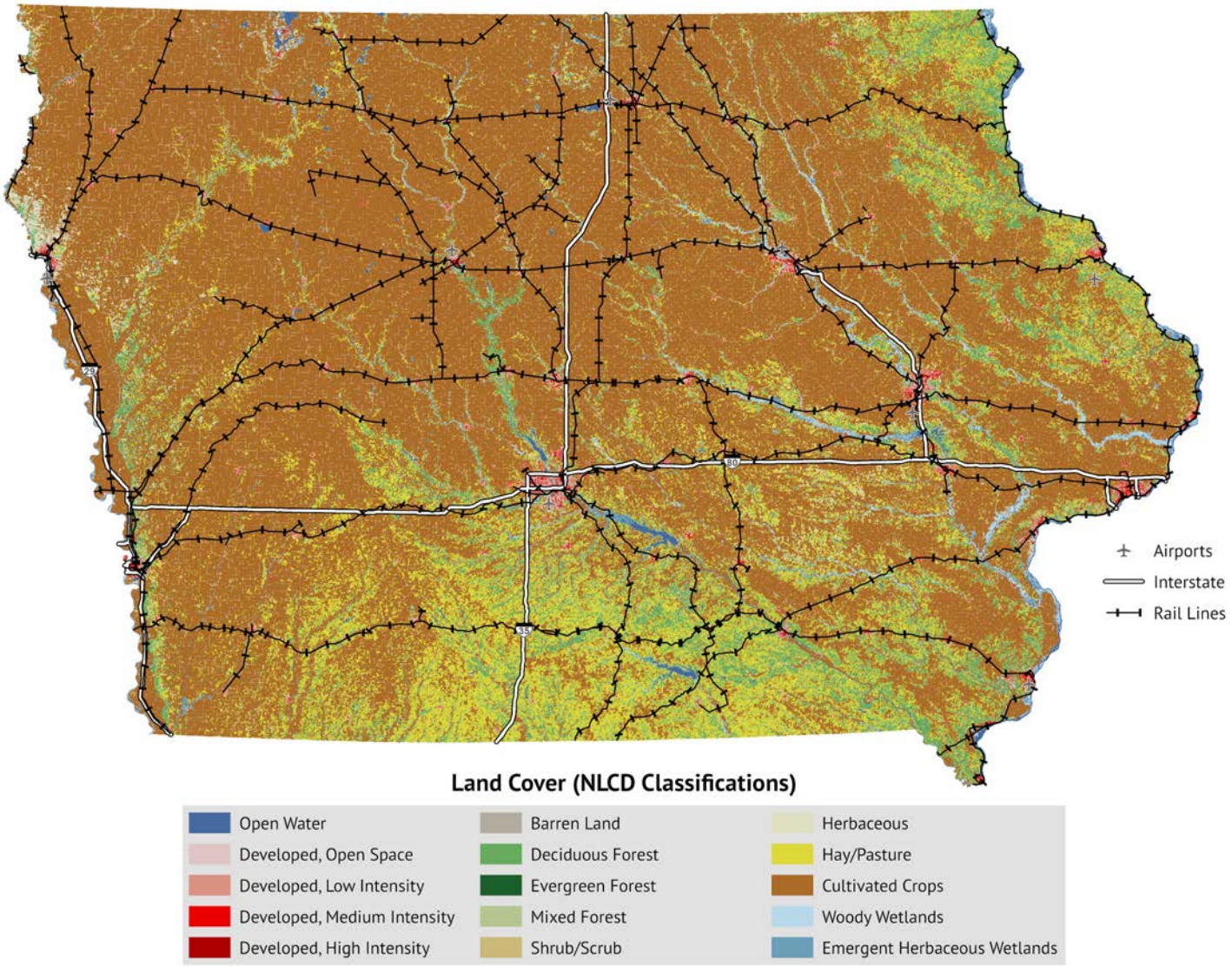
Developed land has grown slightly in the past 20 years, but by less than half a percent of the state's area. Developed urban areas can conflict with rail operations by creating more crossings, trespassing issues, and noise complaints. Figures 4.25 and 4.26 show Iowa's land uses and land cover.

Figure 4.25: Iowa land uses by percentage, 2021



Source: National Land Cover Database

Figure 4.26: Iowa land cover, 2021



Source: National Land Cover Database

4.2 Economic and Environmental Benefits of Rail Transportation

Rail has a significant impact on Iowa stemming from the transportation of freight and passengers in and out of the state. As such, this translates to notable economic activity within Iowa that is supported by rail operations and rail transportation services. Moreover, rail is also a more environmentally friendly and safer transportation mode than automobiles and trucks. This section presents the economic impact of rail transportation in Iowa and discusses the various environmental and safety benefits of rail transportation relative to roadway alternatives.

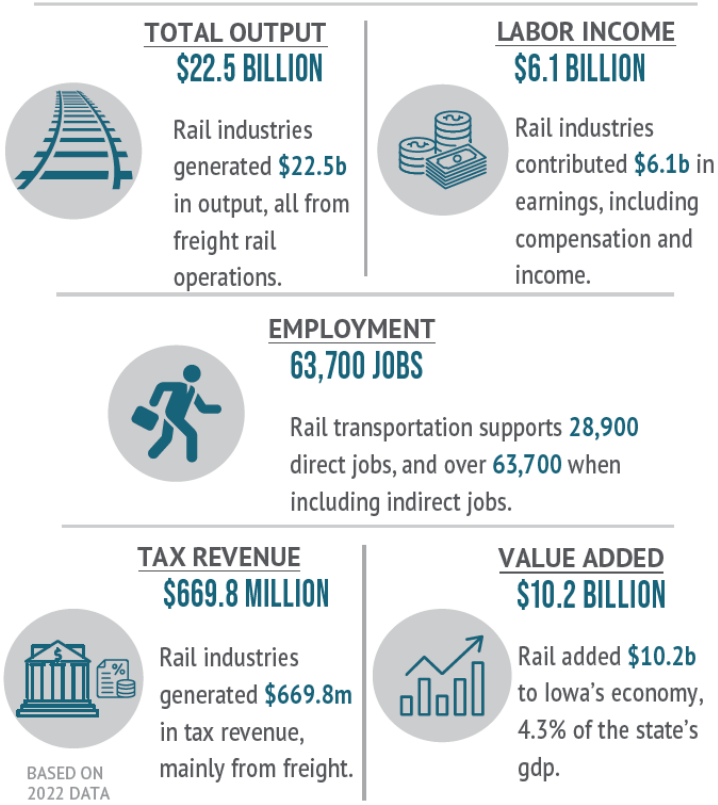
Economic Impact of Rail Transportation

The economic impacts of rail transportation in Iowa in 2022 were estimated using multipliers from IMPLAN economic impact analysis software with input data and assumptions from freight data, value of commodity shipments, and passenger rail operations. Freight data was extracted through the U.S. Surface Transportation Board (STB) Waybill Sample data for shipments focusing on traffic originating in Iowa. This was done to avoid overstating the impact of rail transportation services and rail served industries in Iowa. Meanwhile, the value of commodity shipments, presented in 2022 dollars per ton, were estimated based on freight data for the rail shipments originating in Iowa from the Federal Highway Administration's (FHWA) Freight Analysis Framework (FAF).

Impacts of the rail industry in Iowa considered within this analysis stems from organizations providing freight and passenger transportation services, industries who use freight rail services to trade goods (i.e., shippers of goods or commodities), and visitor expenditures from out-of-state tourists that use passenger rail services.

Impacts were estimated and presented by activity (service provision and rail users), type (direct, indirect, induced, and total), and measure (employment, income, output, value added, and taxes) for 2022 to provide an extensive review of how rail operations in Iowa impacted the State's economy. Overall results are highlighted in Figure 4.27 and Table 4.9.

Figure 4.27: Benefits of rail transportation in Iowa, 2022



Source: Calculated based on STB Waybill Sample Data for 2022, FHWA FAF v5.6.1, and IMPLAN Data

Table 4.9: Economic impacts of rail transportation in Iowa

Impact Metric		Transportation Services		Transportation Users		Total Service		Total
		Freight	Passenger	Freight	Passenger	Freight	Passenger	
Output ($M)	Direct	$2,745.4	$10.3	$12,142.8	$10.9	$14,888.2	$21.1	$14,909.4
	Total	**$3,841.0**	**$14.4**	**$18,667.6**	**$20.2**	**$22,508.6**	**$34.6**	**$22,543.2**
Employment (Jobs)	Direct	2,938	11	25,875	107	28,813	118	28,931
	Total	**8,566**	**32**	**54,938**	**164**	**63,504**	**196**	**63,700**
Employment Income ($M)	Direct	$435.3	$1.2	$1,993.3	$7.5	$2,428.6	$8.7	$2,437.4
	Total	**$766.0**	**$2.5**	**$5,343.6**	**$10.6**	**$6,109.7**	**$13.0**	**$6,122.7**
Value Added ($M)	Direct	$1,828.4	$6.8	$4,432.9	$6.6	$6,261.3	$13.5	$6,274.8
	Total	**$2,431.7**	**$9.1**	**$7,706.4**	**$11.8**	**$10,138.1**	**$20.9**	**$10,159.0**
Taxes ($M)	Direct	$40.2	$0.15	$334.4	$0.4	$374.6	$0.55	$375.2
	Total	**$97.5**	**$0.37**	**$571.1**	**$0.8**	**$668.6**	**$1.2**	**$669.8**

Note: All monetary values are in millions of 2022 dollars.

Source: Calculated based on STB Waybill Sample Data for 2022, FHWA FAF v5.6.1, and IMPLAN Data

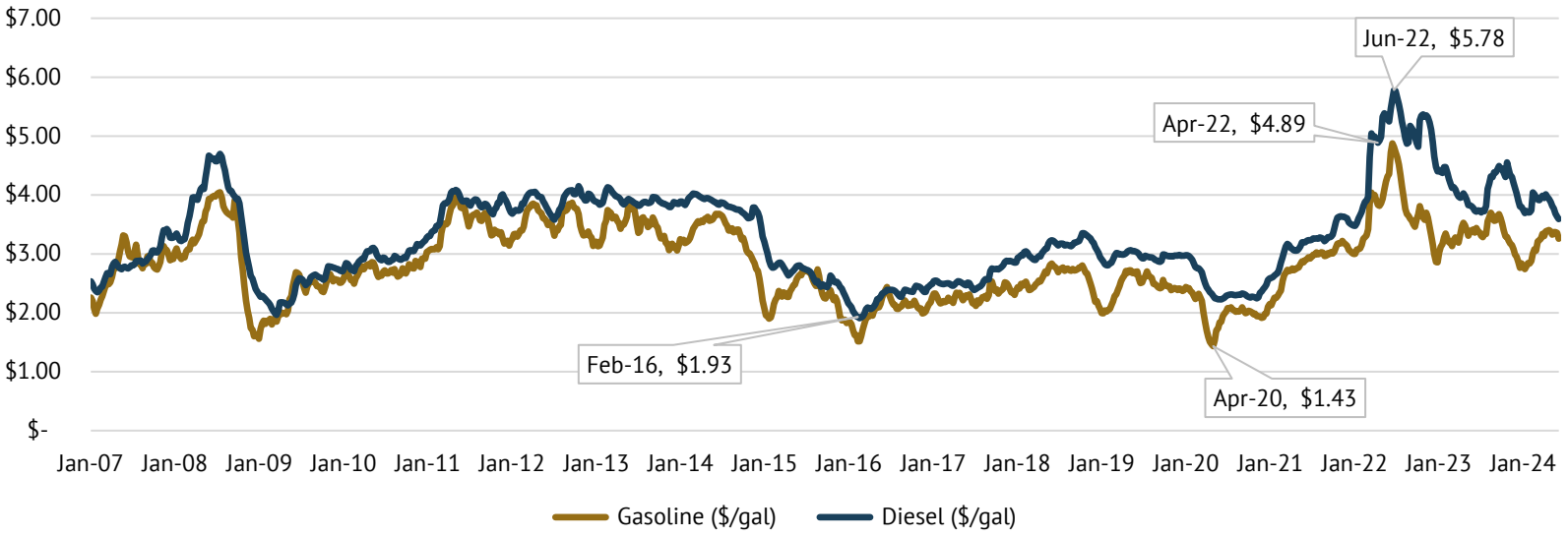
A full description of the methodology, data sources, and detailed economic impact analysis results can be found in Appendix G.

Environmental Benefits of Rail Transportation

In 2023, passenger rail ridership totaled 40,132 passengers[vi] and in 2022, freight rail moved 273.6 million tons of goods in Iowa. If not for rail, these passengers and goods would likely be transported over the roadways resulting in additional highway congestion. Not only does access to rail transportation reduce highway congestion, but rail is known to be more efficient when transporting both freight and passengers. Both the reduction in highway congestion and the added efficiency from rail transportation is expected to generate environmental benefits.

Gasoline and diesel are both used for transporting people and commodities, and higher prices may indicate a higher demand for rail transportation. The prices of gasoline and diesel have experienced wide fluctuations since 2008, as shown in Figure 4.28. Prices in the Midwest for both commodities peaked in 2022 at $4.89 per gallon of gas and $5.78 per gallon of diesel. Prices have decreased since then but have not returned to pre-pandemic levels.

Figure 4.28: Gasoline and diesel prices in the Midwest



Source: U.S. Energy Information Administration

Freight Rail Efficiency

Based on existing technologies and transportation modes, rail is considered the most fuel-efficient approach to transport goods over land. According to the American Association of Railroads (AAR), not only can one train move nearly 500 tons on a gallon of fuel, one train can carry the freight of hundreds of trucks.[vii] Additionally, AAR indicates freight railroads are, on average, three to four times more fuel efficient than trucks and moving freight by rail instead of trucks is expected to translate to a reduction in greenhouse gas (GHG) emissions by up to 75%.[viii] The efficiency is reflected in the 2020 national data, where freight rail only represented 6.0% of the GHG emissions related to freight transportation, while transporting almost 29.0% of the total freight.[ix]

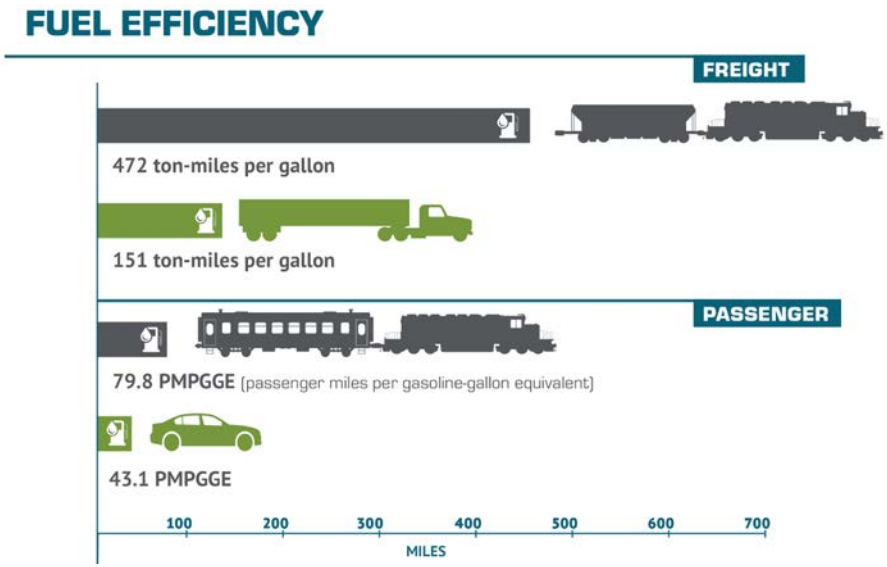
The efficiency of rail relative to truck is not new. A 2022 study from Texas A&M Transportation Institute comparing domestic freight transportation modes highlighted that while freight trucks have been improving in terms of metric tons of GHG emissions produced per ton-mile transported from 2005 (171.9 metric tons GHG per ton-mile) to 2019 (140.7 metric tons GHG per ton-mile), it is still significantly more environmentally damaging than rail, which only produced 21.6 metric tons of GHG per ton-mile transported in 2019.[x] Additionally, the study also indicated that, in 2019, freight trucks had a fuel efficiency of 151 ton-miles per gallon, which was more than three times less efficient than freight rail (472 ton-miles per gallon).[xi] This is illustrated in Figure 4.29.

Passenger Rail Efficiency

As of 2023, Amtrak operates four trains per day in Iowa, as part of their two long-distance passenger rail services, the California Zephyr (between Chicago, Illinois, and San Francisco Bay Area, California, via Burlington, Ottumwa, Osceola, and Creston, Iowa) and Southwest Chief (between Chicago, Illinois, and Los Angeles, California, via Fort Madison, Iowa). There is currently no intercity corridor service or commuter rail service provided in the state.

Similar to freight rail, passenger rail in Iowa alleviates roadway congestion by providing users with a transportation alternative to passenger vehicles. In addition to reducing roadway congestion, which has a direct correlation with transportation emissions, passenger rail is also a more efficient mode for transporting passengers. In particular, the U.S Department of Energy and the Oak Ridge National Laboratory indicated that intercity rail moves 79.8 passenger-miles per gasoline gallon equivalent (GGE), while passenger vehicles only move 43.1 passenger miles per GGE.[xii] This is illustrated in Figure 4.29.

Figure 4.29: Comparative fuel efficiency between rail and highway vehicles for carrying passengers and freight



Source: National Waterways Foundation and U.S. Department of Energy

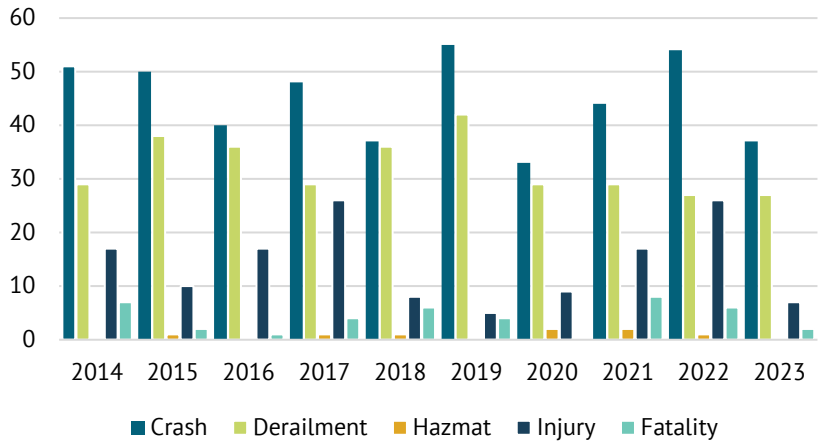
4.3 Rail Service Needs and Opportunities

Key Issue: Safety

Figure 4.30 provides an inventory of railroad safety in Iowa from 2014-2023, detailing patterns of rail accidents and incidents, including types of accidents, individuals affected, and causes.

During these ten years, there were 449 crashes between highway and railroad traffic, 322 train derailments, and 8 hazardous materials (HAZMAT) incidents, with a relatively consistent number occurring each year. A total of 142 injuries and 81 fatalities resulted from those crashes and derailments, with varying trends by year.

Figure 4.30: Iowa railroad safety statistics 2014-2023



Source: FRA Office of Safety Analysis

Iowa DOT's Rail Section within the Modal Transportation Bureau manages rail safety, overseeing railroad coordination operations, track safety inspections, and the grade crossing safety program.

Infrastructure Inspections

Railroad safety hinges on infrastructure and equipment condition. Regular maintenance is key in preventing major incidents like derailments. Ensuring employees are well-trained and adhere to safety protocols is crucial for safe train operations and track upkeep.

The Federal Railroad Administration (FRA) uses inspectors across five key areas to enforce federal safety standards – track, operating practices, motive power and equipment, signal and train control, and hazardous materials. In Iowa, inspectors from each area scrutinize railroad operations and infrastructure for compliance with these standards. Deviations prompt issuance of violations and civil penalties, with standards differing based on track classification.

Iowa DOT has employed two full-time track inspectors certified and licensed by FRA. They work alongside federal inspectors to visually inspect railroad tracks across the state, ensuring safety and compliance with regulations. Railroads comply with FRA guidelines through regular track inspections by dedicated inspectors to ensure safety. Collaboration among railroads, employees, suppliers, customers, and policymakers drives innovation in safety technologies and practices. National programs for highway-rail crossings, hazardous materials transport, positive train control, and remote locomotives highlight these efforts.

Operation Lifesaver

Iowa Operation Lifesaver, launched in 1972, promotes safety at highway-rail crossings and prevents rail trespassing through educational programs. It educates drivers and pedestrians on safe track practices, enforces traffic laws for crossing signals and trespassing, and supports engineering research to improve railroad crossing safety. Iowa DOT works closely with Operation Lifesaver through a designated liaison.

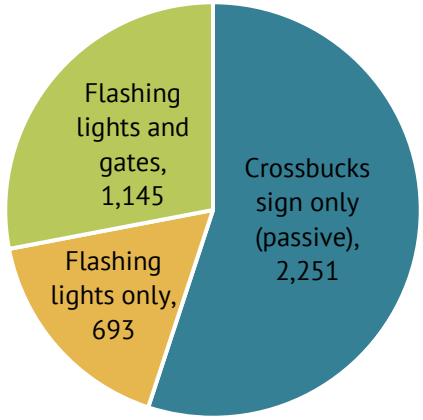
Grade-Crossing Safety

According to FRA, there are a total of 4,089 public at-grade highway-rail crossings in Iowa. In addition, 773 crossings are grade-separated. The state's public at-grade crossings feature a variety of grade-crossing warning devices. Figure 4.31 shows the various types of warning devices and the number of crossings equipped with them. Slightly less than half of all public at-grade crossings in the state have active warning devices such as gates and flashing lights, while more than half of crossings have passive warning devices (e.g., cross bucks signs) or no warning systems. Many of the crossings with passive warning systems have low volumes of roadway traffic and are rural in nature.

In addition to public at-grade crossings, there are around 2,300 private crossings throughout the state. Iowa DOT does not have jurisdiction over private crossings. Table 4.10 shows the number of highway-rail grade crossing incidents, fatalities, and injuries reported at all public at-grade crossings from 2014-2023.

The trend in total rail incidents in Iowa increased during this time, while the number of associated deaths and injuries has decreased. The first half of the decade saw an average of 39 total incidents, 3.6 fatalities, and 11 injuries, while the most recent five-year period saw averages of 39.6 total incidents, 2.6 fatalities, and 9.8 injuries.

Figure 4.31: Types of warning devices at Iowa public at-grade crossings



Source: FRA Office of Safety Analysis

Table 4.10: Highway-rail incidents in Iowa, 2014-2023

Rail Injury Type	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total Incidents	45	43	35	41	31	48	25	40	50	35
Included Deaths	6	1	2	3	6	2	0	4	5	2
Included Injuries	12	8	10	17	8	5	8	12	17	7
Property Damage Only	27	34	23	21	17	41	17	24	28	26

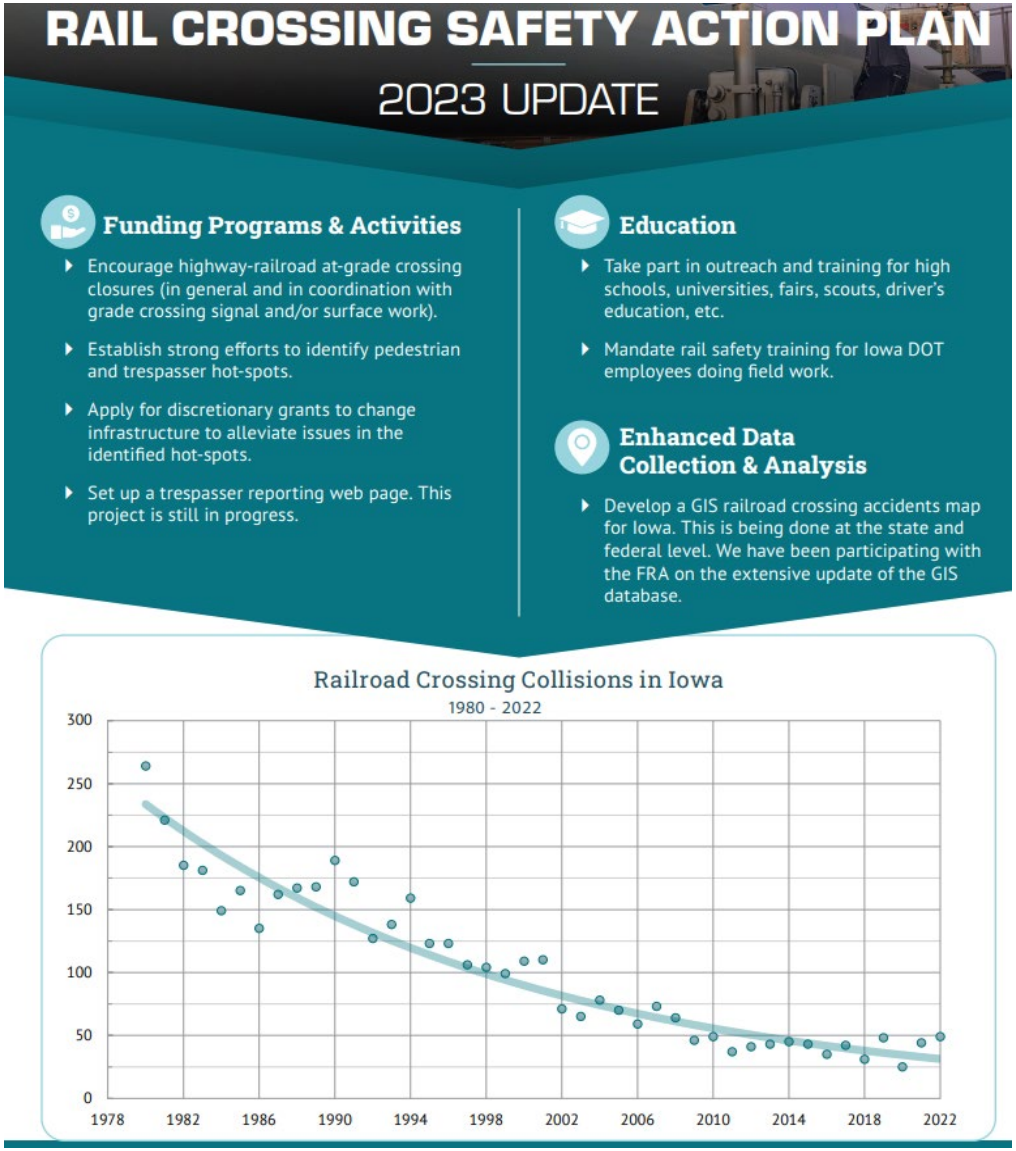
Source: FRA Office of Safety Analysis

Rail Crossing Safety Action Plan

On December 14, 2020, FRA mandated 40 states and the District of Columbia to develop and implement highway-rail grade crossing action plans, as outlined in Federal Register Volume 5, Issue 240. Additionally, ten states, including those compliant with the Rail Safety Improvement Act of 2008, were required to update their plans and report progress to the FRA. Iowa DOT revised its Safety Action Plan, which was approved by the FRA on February 11, 2022. Currently, Iowa DOT is actively executing the initiatives outlined in the approved plan. The plan will be reviewed at least annually and modified as necessary; the latest update is shown in Figure 4.32.

Short-term goals and objectives include the funding and encouragement of grade crossing closures in coordination with specific characteristics of each locations signal or surface condition. Iowa DOT is also involved in efforts related to state and federal financing. This can involve loans and grants for construction and maintenance of track, maintenance and safety improvements at highway-rail crossings, and developing new spur tracks to support economic development.

Figure 4.32: Rail Crossing Safety Action Plan 2023 Update



Source: Iowa DOT

Hazardous Materials

An example of the potential danger of hazardous materials (hazmat) occurred on February 3, 2023, when a Norfolk Southern train carrying hazardous materials derailed in East Palestine, Ohio. Railroad personnel responding to the site decided to conduct a controlled release and burn of one of the cars containing vinyl chloride, a chemical used to create PVC, in order to prevent an explosion. This incident sparked a national discussion on the transport of hazmat by rail and the risk they pose to communities.

The transport of hazardous materials is regulated by the FRA and the Pipeline and Hazardous Materials Safety Administration (PHMSA). Class I railroads have additional resources and personnel that can be dispatched quickly to supplement local response to hazardous materials rail incidents outside of public emergency response. Figure 4.33 illustrates the routes designated for hazmat transportation throughout the state of Iowa. Table 4.11 displays the number of accidents involving rail cars carrying hazardous materials in Iowa from 2014-2023. These incidents included one near Graettinger, Iowa, in 2017, which resulted in the derailment of several cars carrying ethanol.

Material/ethanol derailment near Graettinger, IA

Table 4.11: Rail incidents involving hazardous materials (hazmat) in Iowa (2014-2023)

Rail Incidents	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Cars Carrying Hazmat	7,674	7,903	5,704	6,535	6,482	7,520	7,062	7,341	6,137	6,270
Hazmat Cars Damaged or Derailed	799	650	565	674	591	749	673	601	646	667
Cars Releasing Hazmat	26	60	20	37	34	27	27	24	45	34

Note: The table only shows incidents related to cars carrying hazmat; this is out of roughly six million rail cars moving to, from, within, or through the state in a given year.

Source: FRA Office of Safety Analysis

Figure 4.33: Iowa hazmat routes

Source: Iowa DOT

Crude Oil and Biofuels Rail Transportation Study

In April 2016, Iowa DOT published the Iowa Crude Oil and Biofuels Rail Transportation Study to aid state, local, and tribal governments in assessing risks, vulnerabilities, and readiness concerning incidents with crude oil and biofuels transported by rail. The study analyzed geographic, administrative, and operational aspects to identify programs, capabilities, and potential risks. It used desktop research, interviews, surveys, a Stakeholder Steering Committee (SSC), and workshops to assess existing procedures, legislation, risks, and vulnerabilities. The SSC, including representatives from Iowa railroads, ethanol producers, government bodies, and emergency responders, collaborated to formulate recommendations and an action plan to enhance readiness and response capabilities.

The study also included a Risk and Vulnerability Assessment (RVA) that analyzed current routes and volumes of bulk crude oil and ethanol transportation. The RVA was systematically developed on a county-by-county basis by considering past incidents such as derailments, spills, and fires, evaluating the likelihood of future incidents, identifying critical public safety and environmental risks, and assessing potential consequences. These findings were utilized to determine an overall aggregate risk value.

The study findings were used to pinpoint specific issues and develop recommendations for policy adjustments, improved planning, training programs, communication strategies, and other measures to mitigate risks and vulnerabilities. Recommendations were informed by input from stakeholders, Iowa DOT, and Iowa Homeland Security and Emergency Management (HSEMD). Improvement actions were guided by several key principles.

- Prioritizing stakeholder cooperation and voluntary initiatives over new legislative regulations.
- Ensuring proposed improvements are practical, achievable, and pertinent.
- Aligning changes with existing commercial, economic, regulatory, and technological frameworks.
- Implementing measurable improvements to gauge effectiveness.
- Exploring potential applicability to other hazardous commodities transported via rail in Iowa, where feasible.

Positive Train Control (PTC)

PTC is a set of technologies that prevent the most serious human error incidents. It is designed to prevent train-to-train collisions or derailments caused by excessive speed, unauthorized train movement onto sections of track where maintenance activities are taking place, and movement of a train through a track switch left in the wrong position. These technologies are designed to automatically stop a train before certain accidents. PTC systems determine the precise location, direction, and speed of trains, warn train operators of potential problems, and safely bring the train to a stop if the operator does not act.

Mandated by Congress as part of the Rail Safety Improvement Act of 2008 (RSIA), PTC has been an unprecedented technological undertaking requiring each railroad to develop a system comprised of hundreds of thousands of components that must work across an interconnected network of freight, passenger, and commuter railroads.

PTC is fully implemented and operates network-wide on 100% of Class I PTC route miles. This technology also provides the foundation for future rail safety innovations.

Remote Control Locomotives (RCL)

For more than 20 years, freight railroads have successfully used RCL technology — also known as Remote Control Operations (RCO) — to enhance the safety and efficiency of locomotive operations within railyards. Widely accepted throughout the industry, RCL has proven to be as safe or safer than conventional methods in facilitating yard operations. All RCO employees are FRA-certified and receive specialized training in remote operations. Operators must comply with safety standards and operating rules equivalent to conventional locomotive engineers. FRA regulations require that ground employees maintain a line of sight where they can observe the track ahead or create specified zones where only one RCL can operate at a time. Additionally, RCOs continually undergo testing and training, including tri-annual recertification and an annual “check ride” by a supervisor.

Railroads primarily use RCL technology in yards for essential tasks like building trains. For example, when the RCO, who can be positioned anywhere along the length of cars, wants a train backed up 40 feet, they can reverse the locomotive and stop it at a given point, instead of having to communicate directions multiple times with another employee over a radio. By controlling the locomotive from a safe distance, RCL significantly reduces the risk of accidents and injuries while improving efficiency through optimized train movements. One or two RCOs stationed near the train or on the locomotive itself use transmitters called Operator Control Units (OCUs) to communicate with and operate the RCL. The operator can remotely control locomotive movements within the rail yard or industrial facility, including acceleration, deceleration, direction, and other functions necessary for shunting, coupling, and uncoupling cars.

Remote control systems often incorporate several safety features to prevent mistakes and accidents. These include the following.

- Man Down: OCUs include a “man down” feature that will stop the locomotive and broadcast an emergency radio message if the operator trips or falls down.
- Vigilance Test: OCUs also have a vigilance feature that detects a lack of activity on the part of the operator and will bring the locomotive to a stop (after an audible warning) if the operator does not operate a button to indicate they are actively engaged in the operation.
- Registration: Before being used, the OCUs are digitally registered to the assigned locomotive to ensure the operators are only controlling their intended locomotive.

Key Issue: Community Continuity and Safety

As urban areas expand and average train lengths become longer, railroads can be viewed as a nuisance to local communities that are divided by busy rail corridors. These divisions also result in increased railroad crossing incidents between trains and cars, or trains and pedestrians.

Concerns of blocked crossings and trespassing incidents is a focus of Iowa DOT and operating railroads. Iowa DOT is pursuing funding from the newly created discretionary Rail Crossing Elimination (RCE) program for a highway/railroad grade crossing on U.S. 75 in Merrill, Iowa. This is a major freight corridor recognized for both highway and rail movements in the state.

Iowa DOT supports efforts to reduce incidents at railroad crossings and to increase community continuity. Recently, the City of Waterloo was awarded $750,000 from U.S. DOT through the Reconnecting Communities and Neighborhoods grant program for the Downtown Waterloo Railyard Relocation and Railroad Crossing Improvement Study. The study will focus on the Canadian National (CN) railyard, the rail lines leading into the yard, associated at-grade railroad crossings, and their effects on the surrounding neighborhoods. The planning study would address noise and air pollution, safety concerns, and the aesthetics of industrial facilities. The current railyard creates numerous environmental burdens on a disadvantaged community and is a major source of air pollution. The area is in the top percentile in the state for asthma, persons with disabilities, people of color, low income, unemployment rate, and low life expectancy. Blocked rail crossings in the corridor prevent students from getting to school if they reside on the opposite side of the tracks.

Aerial photo showing proximity of railyard to East High School in Waterloo

Source: City of Waterloo and INRCOG Grant Application

Key Issue: Hazardous Materials (hazmat)

For rail security in Iowa, the Iowa Homeland Security and Emergency Management Department (HSEMD) focuses primarily on hazardous materials events stemming from rail accidents. Activities include:

- Local Emergency Planning Commissions (LEPCs)
- Hazardous Materials Planning, ESF-10 Hazmat, Local and State
- Hazardous Materials Emergency Preparedness (HMEP) Grant
- High-Hazard Flammable Train (HHFT) Reports

Local Emergency Planning Commissions (LEPCs)

LEPCs are groups from various disciplines that are organized to inform the public, enhance preparedness, and increase readiness to respond to a hazardous materials event in Iowa. Typical members of an LEPC include the local emergency management administrator (EMA), fire, police, paramedics, elected officials, hospitals and public health officials, media, handlers and producers of hazardous materials, and anyone else interested in improved awareness and preparedness for hazardous materials events. LEPCs can cover a single county or multiple counties. They are required to update their membership and their hazardous materials plans annually.

Iowa HSEMD maintains records of LEPC membership, helps to update the LEPC handbook, and provides plan review, training opportunities, and exercise support to LEPCs. HSEMD also holds an annual meeting with state-level stakeholders to ensure awareness of hazardous materials response activities statewide.

Hazardous Materials Planning, ESF-10 Hazmat, Local and State

Iowa HSEMD maintains the State Response Plan and ensures local response planning is accomplished by local EMAs. Response planning is in the Emergency Support Function (ESF) format, and ESF-10 covers hazardous materials or hazmat.

Local EMAs are required to update ESF-10 Hazmat annually. ESF-10 focuses on fixed facilities within their county that store hazardous materials above a certain threshold and on transportation of hazardous materials, primarily by rail and road.

ESF-10 must identify facilities and transportation routes, response entity capabilities, current contact information for fixed facilities, and contact information for any entity in the vicinity of a fixed facility or transportation route that may contribute to a hazardous materials response, such as a school, daycare, or assisted living facility. HSEMD provides minimum planning standards for all ESFs, including ESF-10. HSEMD reviews local ESF-10s annually to ensure compliance. LEPCs are required to assist in updating ESF-10s annually. HSEMD also maintains the state ESF-10 and updates it annually.

Hazardous Materials Emergency Preparedness (HMEP) Grant

HMEP is a grant from the U.S. DOT that HSEMD administers. HMEP funds focus on hazardous materials transportation events. These funds can be used to train personnel, conduct exercises, update plans, conduct commodity flow studies, or support the grant recipient in preparedness to respond to a transportation hazmat event. To access HMEP funds, an entity must be an active member of an LEPC, and the funding must be used to address a hazardous materials event in the transportation sector.

High-Hazard Flammable Train (HHFT) Reports

Rail carriers generate HHFT reports. These reports are required when a rail carrier has a train that includes hazardous materials with a higher risk of causing a fire if an incident occurs. HHFT reports are sent to HSEMD and shared with state and local partners such as Iowa DOT, the Iowa Department of Natural Resources, local EMAs, and LEPC chairs along the HHFT route. HSEMD also maintains a database of these reports.

Key Issue: Chokepoints

Chokepoints exist throughout Iowa's railroad network, constraining railroad operating capacity, efficiency, velocity, and safety, as well as freight mobility. Typical chokepoints in the state include the following and are highlighted on Figure 4.34.

Operational and Infrastructure

Limitations in infrastructure and trackage rights reduce the efficiency of railroad operations in some areas. Trains may spend more time idling while waiting for an interchange to be clear or there might be insufficient capacity to accommodate current or future train volumes.

Timber Trestle Bridges (Wagon Bridges)

These bridges are typically older structures built in the late 19th or early 20th century in rural locations that restrict the types of rail cars that can pass under them because of vertical and horizontal limitations. These bridges are typically the responsibility of local jurisdictions (typically counties) that lack the resources to replace them. Most Iowa timber trestle bridges are found in the southern portion of the state.

Flood Prone Areas

Many areas in the state are prone to semi-frequent flooding that limits the operations of railroads. In addition to preventing the movement of trains, floodwaters can also damage rail infrastructure.

Swing Span Bridges

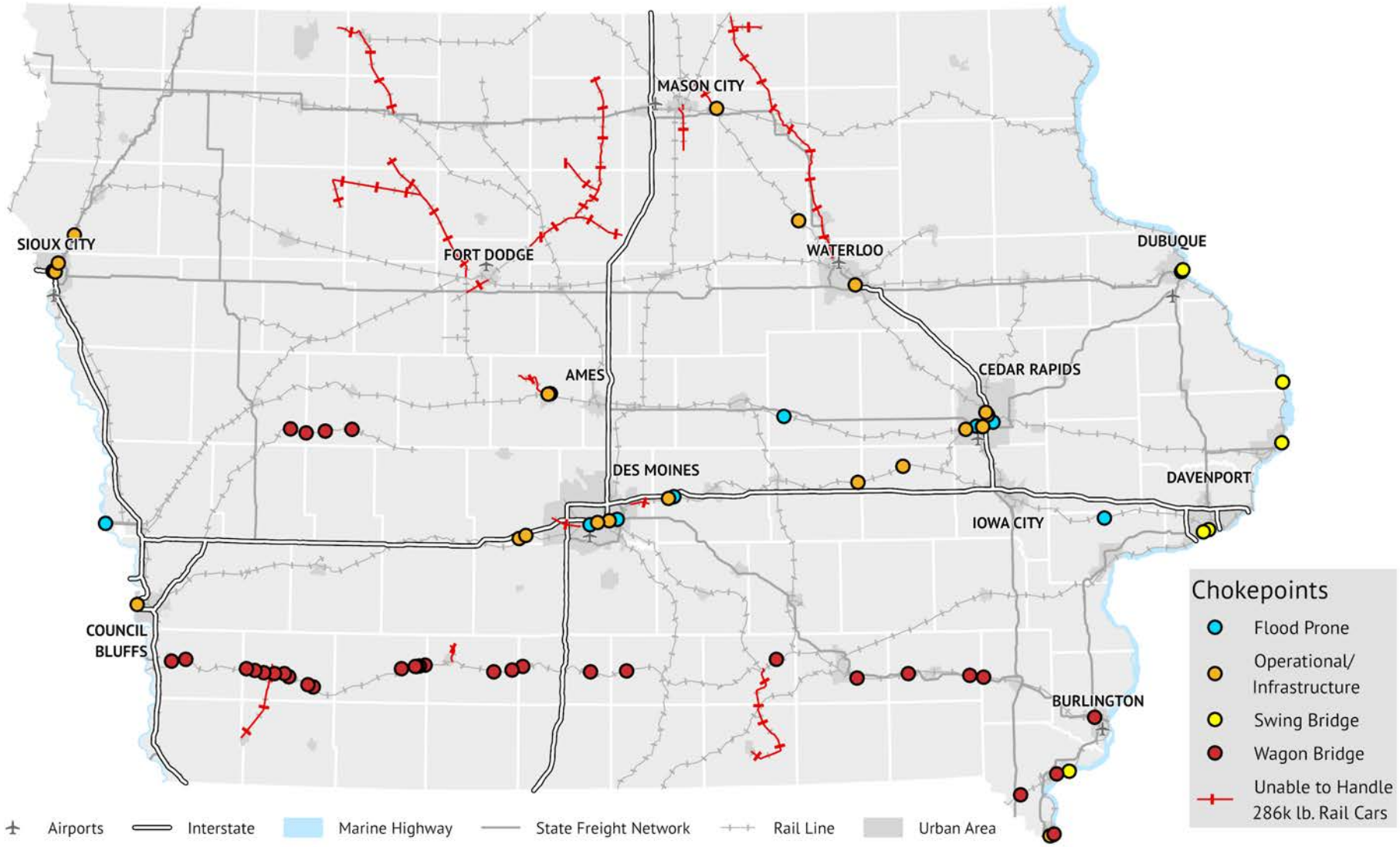
Several bridges along the Mississippi River owned by the railroads must swing open to allow barge traffic to move beneath them. This can create delays for trains crossing them during peak seasons.

286,000-Pound Railcar and Track Weight

Railcars with a maximum gross weight of 286,000 lbs. is the industry standard for railroad transportation. The ability to handle maximum carloads of 286,000 lbs. is of importance to manufacturers of large commodities, such as wind turbines, that may consider locating along rail lines in Iowa.

Montgomery County Wagon Bridge on L Ave near Red Oak, Iowa

Figure 4.34: Iowa rail chokepoints, including rail lines incapable of handling 286,000 lb. railcar weights



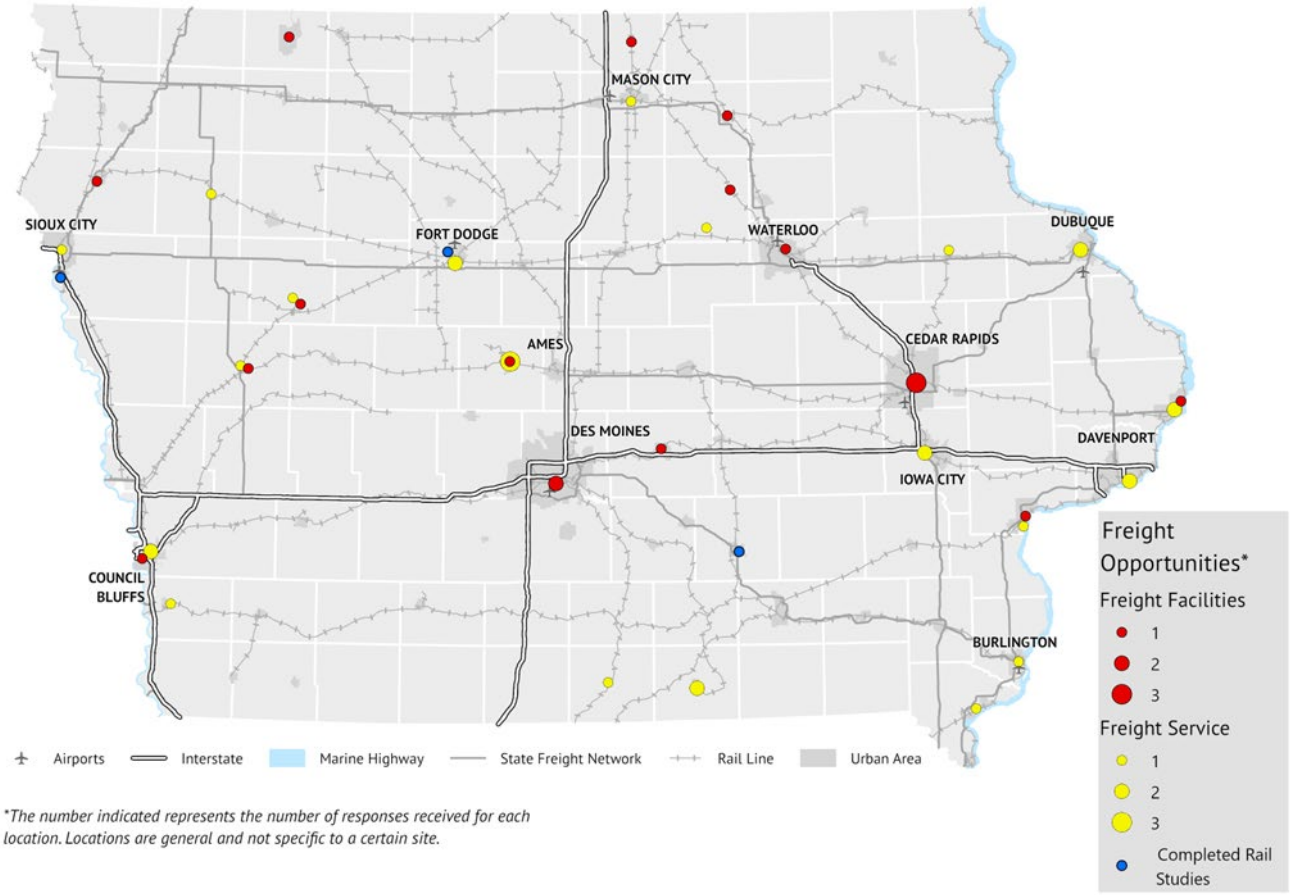
Source: Iowa DOT, Class I, Class II, and Class III Railroads

Key Issue: Freight Opportunities and Growth Limitations

Discussions with operating railroads in Iowa show a fluid planning of capital improvements and investments into their respective networks. The greatest area of investment can be seen in through new transload facilities and logistical park development. There is a growing need to increase railroad access to provide new shipper connections and transload facilities with access to the freight network. Iowa Economic Development has identified eleven development ready areas as part of Iowa's Certified Sites program.

Figure 4.35 represents locations identified by railroad representatives as growth opportunities in both freight service and freight facilities. More information about engagement with rail stakeholders can be found in Chapter 6.

Figure 4.35: Railroad opportunities identified by stakeholders



*The number indicated represents the number of responses received for each location. Locations are general and not specific to a certain site.

Source: Iowa DOT Stakeholder Rail Opportunity Mapping Exercise

Key Issue: Passenger Rail Service

As metropolitan areas throughout Iowa continue to grow, the need to consider a diverse network of passenger transportation options that will accommodate this growth will continue to be a factor. Given freight railroads' existing and projected traffic volumes, rail line capacity likely will loom large as an issue for new passenger rail service implementation. Passenger rail sponsors will need to engage the freight railroads in analysis of the infrastructure improvements required to assure fluid and reliable freight and passenger operations in shared-use corridors. Potential for commuter, intercity, and multimodal lines to provide connectivity and passenger rail services may exist in several areas of the state, as discussed in Chapter 2. These include the following.

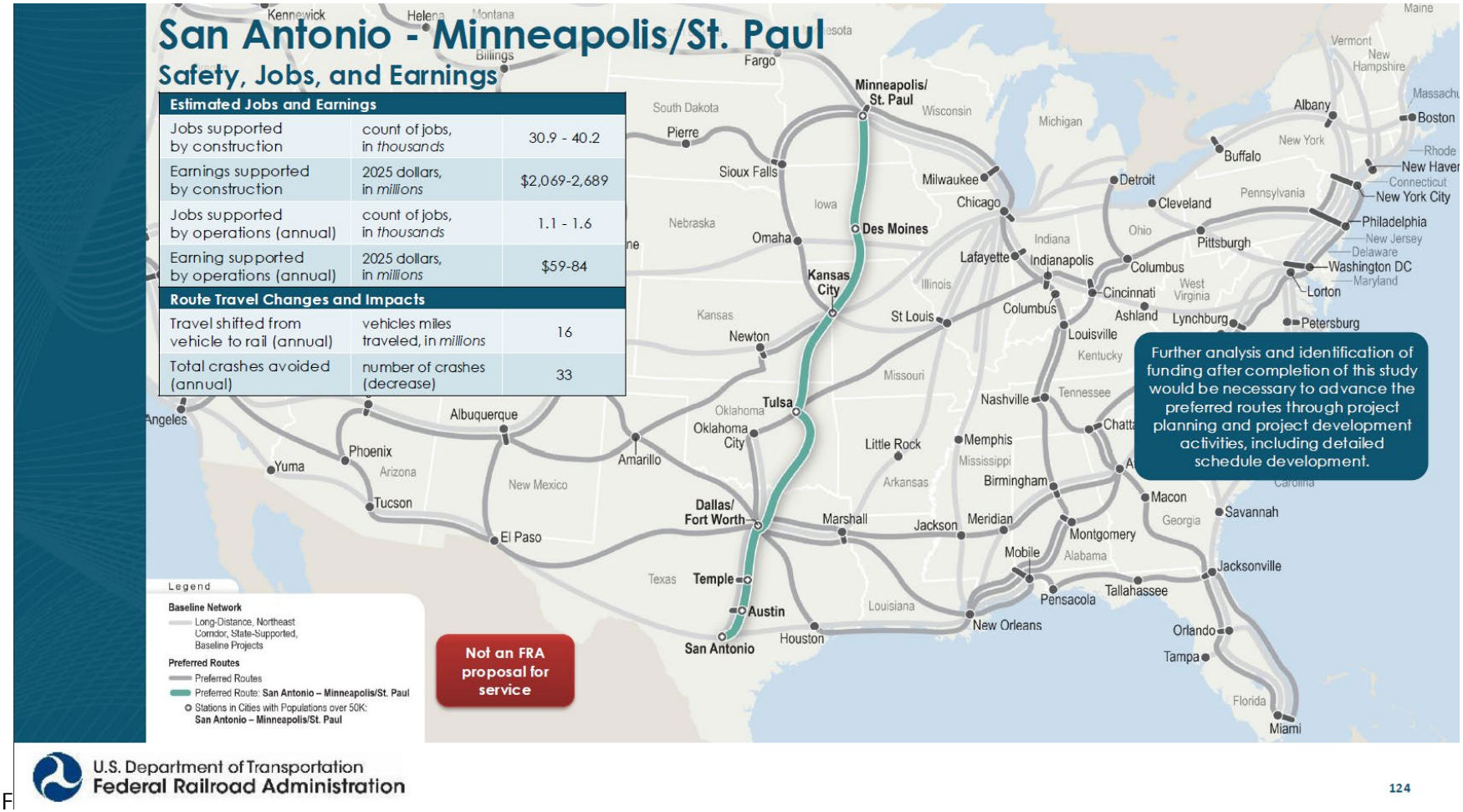
- New intercity service
    - Studied routes
        - Chicago to Council Bluffs-Omaha
        - Chicago to Dubuque
    - Conceptual routes
        - Dubuque to Sioux City
        - Twin Cities to Des Moines
        - Twin Cities to Kansas City
        - Twin Cities to Sioux City
- New commuter rail service
    - Cedar Rapids to Iowa City
    - Des Moines area
    - Council Bluffs to Omaha

An Amtrak interline rail concept (coordinating with intercity bus providers) could also be a type of rail service to explore in Iowa. This could help couple new or existing Amtrak service with intercity bus companies such as Burlington Trailways and Jefferson Lines, which serve several of these interstate and intrastate markets today.

The FRA is conducting an Amtrak Daily Long-Distance Service Study to evaluate the restoration of daily long-distance intercity rail passenger service and the potential for new Amtrak long-distance routes. This study will ultimately create a long-term vision for long-distance passenger rail service and identify capital projects and funding needed to implement that vision. The two long distance route alternatives that would benefit Iowa are shown in Figures 4.36 and 4.37.

Each potential opportunity for enhancing existing service or adding new service comes with considerable investment needs for planning, development, and operation. Rail funding sources often have unpredictable grant cycles, making it challenging to align rail development with state programmed resources. Recent discussion of allocating federal formula funding to each state is of growing interest and supported by Iowa. Designated funds could allow improvement projects to be programed on a routine cycle, increasing the likelihood of expanding passenger rail service in Iowa.

Figure 4.36: FRA Long Distance Route Alternative San Antonio -Minneapolis/St. Paul



Source: FRA Long Distance Service Study Alternative Route Options

Figure 4.37: FRA Long Distance Route Alternative Phoenix-Minneapolis/St. Paul

Source: FRA Long Distance Service Study Alternative Route Options

Chapter Endnotes

[i] For example, '01' represents 'Farm Products', '011' identifies 'Field Crops', '0112' indicates 'Raw Cotton', etc., narrowing in specificity to a seven-digit level.

[ii] STB WAYBILL designates freight rail movements via two STCC conventions: one includes the 49xxxxx (HAZMAT-related) and 50xxxxx (bulk movements) STCC designations; the alternative translates those HAZMAT- and bulk-related movements into actual product STCC. Summary data herein pertains to the non-HAZMAT/non-bulk STCC convention.

[iii] STCC is a detailed 7-digit numeric code with about 750 product classifications, published/maintained by the Association of American Railroads (AAR), that are generally collapsed for analysis purposes into 4-digit or 2-digit summaries. Conversely, STCG is based on the Harmonized Commodity Description and Coding System product classifications tailored for transportation modes. The 5-digit SCTG comprises over 1,100 product classifications; however, FAF only provides information at the 2-digit summary level. Unfortunately, collapsibility between the two conventions differs due to the overarching needs of the organizations that developed them. While STCC is railroad-based commodity classification system, STCG is a broader-based multimodal classification system for all modes. So, developed for different purposes and modal use, STCC and STCG are different tools used for different purposes, which happened to overlap on quantification of rail movements. Most notably for Iowa products is the difference in classification of ethanol between STCC (Chemical and Allied Products) and STCG (Alcoholic Beverages).

[iv] Since FAF does not provide specific through-state movement data, total tonnage growth for the United States was used based on an FHWA study that results in a 1.1% annual growth rate through 2050. Freight Analysis Framework Commodity Flow Forecast Study (FAF Version 5): Final Forecasting Results (dot.gov)

[v] While useful for aggregate directional comparisons, commodity code variance between the two sources (STCC-Transearch versus STCG-FAF) can present complications when/if broken down by commodity groups due to variances between sub-group composite commodities.

[vi] Amtrak Fact Sheet. Fiscal Year 2023. State of Iowa.

[vii] Association of American Railroads. MSTRS Spring Meeting: The North American Rail Industry. May 11, 2023. Accessed: October 2024.

[viii] Ibid.

[ix] Freight rail greenhouse gas emissions data obtained from U.S. Department of Transportation's Freight Transportation Energy Use & Environmental Impacts (accessed October 2024), while freight rail volume data obtained from the U.S. Department of Transportation Bureau of Transportation Statistics' Freight Activity in the United State: 1993, 1997, 2022, 2012, and 2017 (accessed: October 2024).

[x] Texas A&M Transportation Institute. A Modal Comparison of Domestic Freight Transportation Effects on the General Public: 2001 – 2019. January 2022. Accessed: October 2024.

[xi] Ibid.

[xii] Oak Ridge National Laboratory, Transportation Energy Data Book 40. 2022. Table 2.13 Average Per-Passenger Fuel Economy by Travel Mode. October 2022.

5. IOWA'S RAIL SERVICE AND INVESTMENT PROGRAM

This chapter describes Iowa's Rail Service and Investment Program (RSIP). The RSIP consists of three major parts.

- Iowa's long-term State Rail Vision for rail service, supported by goals, objectives, and ultimately by the state's program of rail projects.
- How the State Rail Vision is integrated with other state, regional, and national rail planning initiatives as well as related financial and physical impacts of the proposed program of projects.
- The state's potential future rail projects, including studies. The projects are organized as short-range (2025 to 2029) and long-range (2030 to 2046).

5.1 Goals, Objectives, and Strategies

The development of Iowa's Rail Vision incorporates appropriate and extensive stakeholder input and by a review of vision statements from Iowa DOT planning documents. These efforts align plans and identify priorities for rail planning in Iowa. The rail vision statement is as follows.

Iowa Rail Vision Statement

A safe and efficient rail system that provides Iowa with economic growth opportunities and competitiveness by maintaining the rail infrastructure, ensuring connectivity for people and goods in an environmentally

Goals and Objectives

The goals and objectives help prioritize the components of the RSIP that achieve the desired outcomes of the vision, as identified by Iowa's railroad stakeholders. The goals of the State Rail Plan are drawn from the vision statement, as shown in Figure 5.1.

The development of Iowa's rail goals and objectives connect individual strategic steps to support and foster the desired outcomes of the vision statement. A consistent component is the education, advocacy, and collaboration with transportation partners and stakeholders.

This vision captures the long-term intent of what Iowa DOT is aiming to provide its customers, including support during project development and prioritization of resources that may contribute to the improvement of freight and passenger movements. This includes not only those within the state but also across the Midwest, with a focus on enhancing connectivity of transportation services across the economy. Iowa DOT will work with the Federal Railroad Administration (FRA) and other states in the region to ensure that the region's rail perspectives and issues are adequately addressed within the national rail planning process.

Figure 5.1: State Rail Plan goals and objectives (1 of 2)

Goals	Objectives
Safety and Security	• Solicit applications from local roadway jurisdictions (cities/counties) for Section 130 and Highway-Railroad Crossing Surface Repair projects. • Continue to inspect rail infrastructure. • Communicate with the public regarding rail crossing safety to reduce train collisions. • Continue to convene the Rail Advisory Committee to improve rail safety outcomes in the state. • Identify potential grade separation project locations. • Pursue opportunities to improve community connectivity across rail lines. • Monitor, review, and respond to proposed legislation regarding rail safety. • Monitor crude oil, ethanol, and other hazardous materials routes for safety.
Infrastructure	• Continue to monitor the condition of rail infrastructure in the state via track inspections. • Support programs that improve the condition of highway-rail crossings. • Continue to convene the Rail Advisory Committee to discuss the maintenance of Iowa's rail network. • Upgrade rail line segments and bridges to accommodate heavier railcars and address aging infrastructure to meet current/future needs of modern rail transport. • Upgrade passenger stations to comply with ADA requirements and ensure a state of good repair. • Continue to utilize and enhance the RRLG Program for improving railroad infrastructure.
Economic Development	• Work with economic development agencies and local governments to promote the Railroad Revolving Loan & Grant (RRLG) Program. • Communicate the RRLG program to decisionmakers, economic development agencies, and potential grant applicants. • Award RRLG projects to create/retain jobs and expand the use of rail in the state. • Monitor, review, and respond to proposed legislation regarding rail economic development. • Encourage new and enhanced industrial spurs or industrial parks when suitable. • Continue to support efforts that attract and sustain business in Iowa.

Source: Iowa DOT

Figure 5.1: State Rail Plan goals and objectives (2 of 2)

Goals	Objectives
Connecting Industries	• Use RRLG to encourage industries to use rail transportation. • Continue to convene the Rail Advisory Committee to discuss expansion of freight rail service. • Help educate decisionmakers and the public on the benefits of transporting freight by rail.
Efficiency	• Work with rail partners and the Rail Advisory Committee to eliminate chokepoints that limit the movement of goods and people. • Encourage investments in capacity improvements, especially on short lines. • Promote yard and interchange improvements.
Connecting People	• Continue to support Amtrak long distance routes and expanding services to better serve Iowans. • Explore the expansion of passenger rail service in the state. • Encourage the improvement of accessibility to passenger rail stations. • Continue to meet with the Passenger Rail Advisory Committee to discuss passenger rail issues with stakeholders.
Environmental Impact and Resiliency	• Implement the Crude Oil and Biofuels Rail Transportation Study • Work with other Local/State/Federal agencies regarding the transport of hazardous materials by rail. • Continuously monitor the transition of the rail industry to low-energy/low-emission locomotives. • Continue to convene the Rail Advisory Committee to discuss the transport of hazardous materials. • Pursue opportunities to improve community connectivity across rail lines. • Identify and educate stakeholders on the impacts between land use decisions and rail operations. • Monitor, review, and respond to proposed legislation regarding railroad environmental impacts and resiliency.

Source: Iowa DOT

Strategies

The Iowa DOT Modal Transportation Bureau Rail Team will prioritize resources to focus efforts on the following railroad safety and security and infrastructure strategies. These have been categorized as either (1) policy, implementation, and research or (2) partnership and collaboration.

Safety and Security

Grade Crossing Safety

Policy, implementation, and research

- Maintain focus on reducing grade crossing safety incidents.
- Pursue funding efforts for grade separation studies and construction projects.
- Consider methods to reduce railroad trespassing incidents.
- Seek transportation funding innovations.

Partnership and collaboration

- Advocate to minimize grade crossing accidents/incidents through increased enforcement.
- Promote Operation Lifesaver education material and campaigns.
- Increase public awareness of grade crossing safety.

Blocked Crossings

Policy, implementation, and research

- Support local and railroad coordination to reduce blocked crossing conflicts.
- Expand awareness of Iowa Code 327G.32 to local jurisdictions.
- Increase awareness of FRA's Blocked Crossing Reporting Tool.
- Review and monitor recommendations of 2006 FRA Report- Impact of Blocked Crossings on Emergency and First Responders.

Partnership and collaboration

- Consider and research new technology software to identify and communicate when a crossing is blocked to emergency management.
- Discuss priorities for multimodal transportation system.
- Facilitate discussions with local communities and railroad staff.
- Increase public and law enforcement awareness of RR Emergency Notification Signs (ENS) and procedures.

Train Length

Policy, implementation, and research

- Increase awareness of emergency response and highway operations related to longer trains
- Provide information and research correlation of rail safety and train length
- Monitor Transportation Research Board's Long Train Study for policy recommendations

Partnership and collaboration

- Consider methods to discuss railroad train lengths and operations in Iowa
- Partner with emergency services to understand impacts to emergency response related to increased train lengths
- Increased focused inspections on Hazmat rail lines

Infrastructure

Railroad Agreement Process

Policy, implementation, and research

- Enhance agreement process to improve schedule and cost predictability.
- Modify DOT Design manual to better meet railroad grade separation guidelines and provide easy access to design information.
- Maintain the internally developed annual Railroad Safety Awareness Training for employees to encourage cross discipline learning and information sharing.

Partnership and collaboration

- Participate in FHWA's Community of Interest (COI) which provides opportunities for members and railroads to network and share knowledge.
- Conduct monthly conference calls and annual in-person meeting to foster communication and coordination with rail partners.
- Consider methods to improve agreement review and process timelines.
- Post letting DOT engineering support.

5.2 Program Coordination

Integration with other State Planning Efforts

Iowa coordinates its state transportation planning with various programs and activities at both the state and local levels, following federal laws on coordinated planning. This collaborative approach ensures that different transportation modes work together effectively.
The SRP is specifically designed to integrate with and expand upon several existing transportation plans in the state, as discussed further in earlier chapters and noted here. The SRP is both informed by these plans and helps inform the next iteration of them.

- **Iowa In Motion 2050 State Long Range Transportation Plan**: A comprehensive strategy that outlines Iowa's transportation vision for the next several decades, addressing all modes of transport and prioritizing system stewardship.
- **Iowa's 2022 State Freight Plan**: This plan focuses on enhancing freight movement across the state, identifying key corridors and infrastructure needs to support economic growth.
- **2025-2029 Iowa Transportation Improvement Program**: This Five-Year Program (5YP) of projects is developed and approved annually by the Iowa Transportation Commission and includes specific highway and bridge projects anticipated to be constructed over the next five years on the state highway system.
- **Statewide Transportation Improvement Program (2025-2028)**: This program combines projects from the 5YP as well as Metropolitan Planning Organization (MPO) and Regional Planning Affiliation (RPA) 4-year Transportation Improvement Programs, which include federal aid road and transit projects.
- **Iowa Rail Toolkit (2019)**: A resource aimed at supporting rail development and investment in Iowa, providing guidance on best practices and strategies for enhancing rail services.
- **Iowa Highway-Rail Grade Crossing Safety Action Plan (2022-2026)**: This plan focuses on improving safety at highway-rail crossings, aiming to reduce accidents and enhance public safety through targeted interventions.

By aligning the Iowa State Rail Plan with these existing initiatives, the state aims to create a cohesive transportation strategy that meets the needs of all users while promoting economic growth and improving safety and sustainability in Iowa's transportation system.

National and Regional Rail Planning Integration

Since Iowa shares rail corridors and services with other states, it is essential to coordinate with those states through both direct interaction and through comprehensive review and analysis of state or regional rail plans prepared by or in cooperation with other states in the region. Iowa will submit its Draft State Rail Plan to neighboring states for their review and comment. In addition, Iowa DOT will work with FRA and other states in the region to ensure that the region's rail perspectives and issues are adequately addressed within the national rail planning process.

5.3 Rail Agencies

As noted in Chapter 1, Iowa DOT's Rail Transportation Team within the Modal Transportation Bureau is primarily responsible for rail planning for the state. This State Rail Plan does not recommend any departmental changes, nor does it recommend the creation or abolition of any other agencies or authorities.

Rail Transportation Team

The Rail Transportation Team is part of the Modal Transportation Bureau, which also includes the Aviation Team and Public Transit Team. The Team is primarily responsible for all matters involving rail in the state, including rail planning and policy, rail related funding programs, rail safety and inspections, and coordination between railroads and Iowa DOT during highway project development. The Team is comprised of ten full time positions and is overseen by the Rail Director.

Freight/Passenger Policy and Planning

The Rail Transportation Team engages in rail policy and legislation development, advocacy, and communications regarding freight and passenger rail operations. Special emphasis is placed on opportunities to provide network connectivity and economic growth. Additionally, the Rail Transportation Team is primarily responsible for creating and maintaining the State Rail Plan, which is coordinated with other statewide intermodal and modal system plans. This State Rail Plan was created with coordination with Iowa DOT's Systems Planning Bureau.

Grade Crossing Surface/Safety Programs

Grade Crossing Surface Repair Program

The grade crossing surface repair program participates in the cost to rebuild highway-railroad grade crossings. This program assists in maintaining safe and smooth crossing surfaces at highway-railroad crossings. An annual appropriation of $900,000 from Iowa's Road Use Tax Fund assists cities, counties, and railroads with surface repairs. Projects selected for funding receive 60% of the cost of repairs from the Grade Crossing Surface Repair Fund. The highway authority and railroad must each agree to pay 20% of the total project cost. The criteria used to identify priorities for this portion of the funding include, but are not limited to, the following.

- Condition of the crossing
- Safety concerns
- Utilization of the rail line
- Train and motor vehicle traffic density at the site – special consideration may be given to heavy truck traffic
- Recent or planned development or construction in the vicinity of the crossing

Highway-Railroad Crossing Safety Program (Section 130)

The crossing safety program participates in the cost of safety improvements at public highway-railroad grade crossings. These funds are used to install new crossing signal devices, to upgrade existing signals, and to provide low-cost improvements, such as increased sight distance, widened crossings, increased signal lens size, or crossing closures.

Priorities for this funding are determined through a benefit cost analysis. Generally, those crossings with a high probability for a serious crash with a proposed improvement anticipated to be effective and cost efficient will receive the highest priority. The analysis takes into consideration many factors including the following.

- The extent of vehicle and train traffic at the crossing
- The speed of trains at the crossing
- Crossing characteristics
- Anticipated effectiveness of the proposed improvement
- Estimated cost of the improvement
- Safety history at the crossing location

Railroad Revolving Loan & Grant Program

The Railroad Revolving Loan and Grant (RRLG) Program is administered by the Rail Transportation Team. Industries, railroads, local governments, or economic development agencies are eligible to apply. The program provides financial assistance to improve rail facilities that will create jobs, spur economic activity, and improve the rail transportation system in Iowa in three separate categories.

1. Targeted job creation. These rail projects are those that provide immediate, direct job opportunities. Loans and grants are available. Grant funding is contingent on job creation and retention commitments by the applicant and loans can supplement grants if the project cost exceeds the amount available in grant funding. A local match is required for both grants and loans.
2. Rail network improvement. These rail projects are those that support existing rail lines and service or improve industrial access when no direct job creation is involved. Only loans are available in this category. Loans will be offered at zero percent for a 10-year term. Loan requests require a 20% matching contribution.
3. Rail Port Planning and Development. Grants of up to $100,000 are available for planning studies that enable a community, county, or region to make fact-based decisions concerning the location, design, or funding requirements for a rail port facility. The result of a planning study should help decision makers evaluate rail development options that support industrial and business progress and economic growth in the community and region. Grant requests require a 20% matching contribution.

Rail Safety/Track Inspections

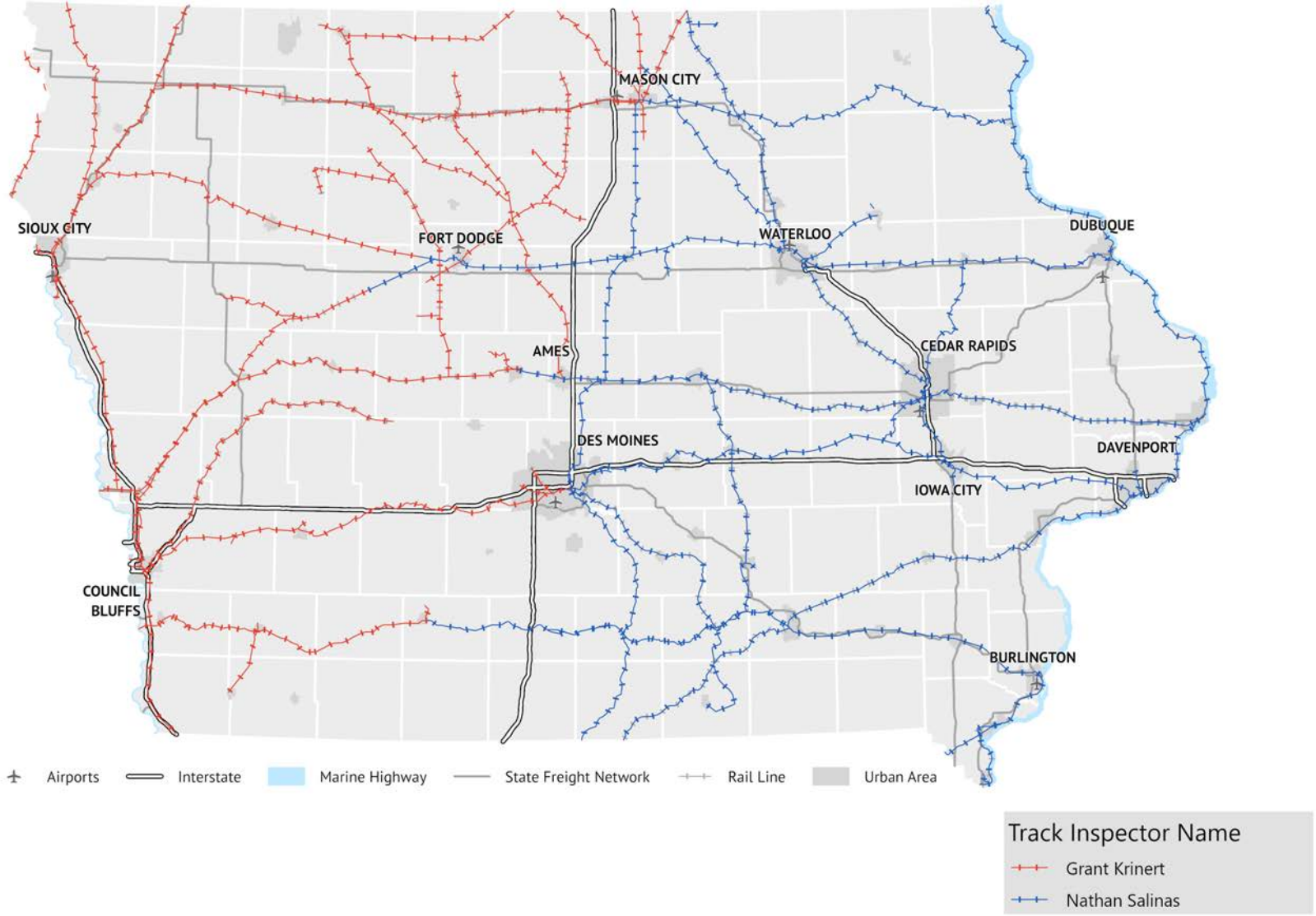
The first federal track safety standards were implemented in 1971, following the enactment of the Federal Railroad Safety Act of 1970 in which Congress granted the FRA comprehensive authority over "all areas of railroad safety." A qualified railroad employee, in accordance with a schedule prescribed in these standards (49 CFR 213), must visually inspect all tracks in Iowa. Iowa DOT's track inspectors, working with the FRA, provide regulatory oversight of railroad track safety effort to enhance railroad compliance with federal law.

Iowa Code Chapter 327C.4 requires the following: "The department shall inspect the condition of each railroad's rail track and may inspect the condition of each railroad's rail facilities, equipment, rolling stock, operations and pertinent records at reasonable times and in a reasonable manner to ensure proper operations." The Rail Transportation Team employs two Track Inspectors. Their contact information and areas of responsibility are shown in Figure 4.2.

Highway/Railroad Crossing Agreements

The Rail Transportation Team is responsible for coordination of highway construction and maintenance agreements and access to railroad right-of-way during highway development projects. This entails negotiation with the railroads during highway project development to ensure successful and safe project completion and to limit disruptions on both the highway and rail networks.

Figure 4.2: Iowa DOT Track Inspectors



Source: Iowa DOT

5.4 Intended Program Effects

This chapter includes Iowa DOT's proposed program of future capital projects and studies, i.e. its Rail Service and Investment Program (RSIP), for short-range (2025 to 2029) and long-range (2030 to 2046) timeframes. The RSIP was developed from a list of potential future passenger and freight rail projects and studies identified during stakeholder outreach, railroad coordination, and Iowa DOT internal coordination undertaken during the development of the State Rail Plan. The list of potential projects and studies is included in Section 5.7. The system objective framework provided in Section 5.1 outlines areas decision-makers should focus on to help them prioritize among needs and risks for short and long-term development. As Class I railroads are generally considered sufficiently capable of funding their own improvements, Class I railroad projects are identified to the extent known during the development of the State Rail Plan.

The projects proposed are based largely on those activities that best protect the Class II and Class III railroads operating in the state; the reduction or elimination of major freight bottlenecks; rail capacity, efficiency, and safety; and rail passenger improvements that are based on preservation and improvement of existing service, the safety of passengers, and potential rail passenger service expansion. These projects offer substantial potential benefits.

As most intercity rail passengers are diverted from automobiles, service improvements and expansion will result in a more extensive and diverse intercity transportation network, enhanced mobility, increased tourism and access to job opportunities, and increased energy efficiency.

For rail freight improvements, the benefits involve increased transportation competition resulting in lower cost to shippers, less highway congestion and damage, and reduced environmental and energy impacts. By their nature, grade crossing improvement projects and other rail-related improvements also increase transportation safety.

5.5 Rail Project Impact and Financing Analysis

FRA's 2013 State Rail Plan Guidance requires states to describe how capital projects were analyzed, with regard to their impacts on passenger rail ridership, potential diversion from highway and air to rail, passenger rail revenues and costs, freight rail project benefits, etc. States are also required to describe their 4- and 20-year (or more) financing plans for passenger rail capital and operating costs.

Passenger Rail

Passenger Rail Project Impact Analysis

Most significant rail intercity or commuter rail projects have a positive impact on overall rail passenger ridership, rail passenger miles traveled, modal diversion from highway and air, and increased rail passenger revenues and/or reduced costs.

Iowa DOT currently has a limited amount of control over the rail passenger operations within the state as the state provides no operational funding for the service. Amtrak operates passenger trains, and as these services in Iowa are multi-state long-distance routes, operations within the state represent only a portion of the total service area. These limitations also reduce the state's ability to significantly affect positive impacts on other modes or influence major modal diversion. The state does have conversations with Amtrak about opportunities to partner on various efforts, when possible.

As noted in Chapter 3, Iowa DOT and other agencies in the state have conducted studies of potential new intercity and commuter passenger rail services which evaluate the estimated ridership, revenues, and costs for new services or service extensions. These studies provide the benchmark information necessary to determine whether further analysis and potential investment in the proposed services are merited.

The Infrastructure Investment and Jobs Act (IIJA), signed on November 15, 2021, established new federal programs and funding mechanisms to develop and implement intercity passenger rail service in the U.S. The law also significantly increased the levels of funding for all types of rail transportation, including freight, intercity passenger, commuter, and transit services. Intercity passenger rail projects will be funded primarily through programs administered by the FRA, such as the Federal-State Partnership for Intercity Passenger Rail (FSP) and Consolidated Rail Infrastructure and Safety Improvements (CRISI) programs.

Non-federal matching funds for passenger rail capital projects will need to be provided by corridor sponsors. State sponsorship for intercity passenger rail service investments may require legislative action to approve the use of existing state funds or to create new state or local revenue streams dedicated to supporting intercity passenger rail.

Passenger Rail Operations Financing Plans

Iowa's intercity passenger rail service is currently limited to Amtrak long-distance routes. Amtrak has sole fiscal responsibility for these long-distance routes. Amtrak service differs from state-supported intercity passenger corridor services where states have the financial responsibility for operating losses but also have a voice in the expected performance and operation of the service. Amtrak operates most state-sponsored intercity service as a contractor to states.

The establishment of new corridor services without federal financial assistance would require Iowa to provide the financing for capital improvements necessary to upgrade routes to passenger service standards and also bear the responsibility for service operating losses in accordance with the 2008 Passenger Rail Investment and Improvement Act (PRIIA) legislation. Therefore, considering the current uncertainties with regard to prospective federal rail funding, decisions to move ahead with a robust passenger rail program must be supported by the necessary planning efforts for the state to be prepared to provide transparency to decision makers. More detailed studies of expanded commuter and intercity rail will need to include a comprehensive examination of all potential financing sources and alternatives to ensure that the public is kept aware of the financial benefits and costs of each alternative.

Passenger Rail Economic Benefits

Studies of new passenger services comprise the largest share of investment dollars in the short term, but there are improvements to existing Amtrak stations and services that will enhance the attractiveness, safety, and accessibility of intercity rail travel and thus enhance mobility. Long-range investments will go farther, building intercity and possibly even commuter rail networks with the potential to facilitate economic growth and enhance the quality of life for Iowans.

Freight Rail

Freight Rail Project Impact Analysis

The freight rail projects identified for the short- and long-range RSIP involve improvements to Iowa's railroads and grade crossing safety. Class I railroads are generally considered capable of funding their own capital projects. However, potential future investments to the state's rail network that were identified through coordination with the state's Class I railroads are shown in the RSIP.

Such self-funding is more challenging for Class II and Class III railroads, which have smaller physical plants and fewer shippers, severely limiting opportunities to generate revenue. Class II and Class III railroads typically earn a fee for picking up and delivering rail carloads from/to the Class I railroads. Some Class III railroads in Iowa have only one connecting Class I railroad. Accordingly, the internal cash flow for a Class II or Class III is often insufficient for yard and line capacity improvements, increasing access to industries, or upgrading legacy track and bridges to handle heavier loads.

Many states, including Iowa, have opted to provide support to their Class II and Class III railroads to upgrade their lines via state and federal funding mechanisms. Iowa DOT can help sponsor applications for federal funding through programs such as Rebuilding American Infrastructure with Sustainability and Equity (RAISE) and the CRISI program, among others. Such investments ensure that these railroads can continue to serve their shippers, thus helping to retain businesses and employment and prevent the diversion of freight from rail to truck and the consequent maintenance impacts to the state highway system. Projects seeking competitive federal discretionary grant funding under many of the available programs are typically subjected to a rigorous benefit-cost analysis (BCA) to quantify specific public benefits needed to justify the investment, in addition to narrative description of project merits.

Another key area for state and federal investment is highway-rail grade crossing safety. Improvements include upgrades to warning devices and crossing surfaces, as well as crossing closures and grade separations where appropriate. These projects may be funded through the long-running FHWA Railway-Highway Crossing Safety Program (Section 130) or the FRA's Railroad Crossing Elimination Program (RCE), which was launched in 2022. The impacts of such investments are the prevention and reduction of deaths and injuries at highway-rail grade crossings. The main financing mechanisms for state investments in rail lines and in highway-rail grade crossing safety improvements were identified in Chapter 3.

State funding mechanisms, as well as federal grant programs and local matching contributions, can together potentially support the planned and proposed investments in the state rail network described in the Passenger and Freight Rail Capital Program section of this chapter.

Freight Rail Project Financing Plan

The main financing mechanisms for state investments in rail lines and in crossing safety were identified Chapter 3 of the State Rail Plan. These include the following.

- Railroad Revolving Loan and Grant Program (RRLG)
- Railway-Highway Crossing Safety Program (Section 130)
- Highway-Railroad Grade Crossing Surface Repair Program (60/20/20 Program)
- Primary Road Highway-Railroad Grade Crossing Repair Program
- Iowa Highway Grade Crossing Safety Fund

All these mechanisms, as well as various federal programs, can potentially support the planned investments in the state rail network noted in the Passenger and Freight Rail Capital Program section of this chapter.

Freight Rail Economic Benefits

The public benefits of state investment in Iowa's rail network include the transportation-related economic and socio-environmental benefits involved in providing competitive rail service itself, as well as the preservation and protection of irreplaceable rail assets. These rail lines have also steadily produced increased traffic levels which have resulted in former and new shippers receiving cost efficient service.

Through the State Rail Plan development process, Iowa DOT has also gained a better understanding of the rail industry's plans for growth within the state and the projects deemed necessary to facilitate this growth. Therefore, private sector rail projects may receive increased public financial assistance in the future should additional funding become available.

As most proposed long-range projects have yet to be analyzed with regard to economic feasibility, it is premature to identify any correlation between the level of public investment and benefits.

Rail Program Impacts Summary

As noted in earlier chapters, the impacts of freight and passenger rail services in Iowa are sizable in terms of cost savings and employment. Palpable benefits of rail improvements include lower transportation costs and enhanced mobility. Iowa's proposed short- and long-range rail investment plans are intended to have a high correlation between the public funding provided and their intended benefits.

The state's proposed short- and long-range projects are based largely on increasing the efficiency of rail operations of Iowa's railroads, enhancing rail access, expanding or constructing multimodal facilities for handling freight more economically and efficiently (transloads and intermodal facilities), enhancing safety at crossings, upgrading existing passenger rail stations, and the potential for expanding intercity passenger rail services. Typical benefits related to the increased operating efficiency of railroads include improved financial health of both the railroads and the shippers being served. New or improved passenger rail operations provide more cost-effective travel alternatives to travelers.

In general, any improvements in operating efficiency and access to rail service for either rail passengers or freight users achieved through continued investment in the rail network would enhance the existing economic and socio-environmental benefits of the state's freight and passenger services.

5.6 Rail Studies and Reports

Analysis of Iowa's rail network, comments, and recommendations provided through the State Rail Plan's outreach meetings and ongoing railroad coordination and internal Iowa DOT coordination resulted in recommendations for studies to determine the feasibility of future projects to improve rail operations and services in Iowa. The following is a list of proposed or ongoing rail studies being or to be conducted by Iowa DOT, local governments or development organizations, or other entities. It is worth noting that some of these studies do not currently have funding or other support necessary to move forward so timelines, scopes, etc. are still uncertain.

Table 5.1: Short-range (1-4 years) passenger rail studies

Applicant	Title	Description	Estimated Completion Date	Estimated Cost	Funding Source(s)
Illinois DOT	Passenger Rail Corridor ID Planning Study – Long Distance Service Chicago to Quad Cities Service Extension Program*	The proposed Corridor would connect Chicago to Moline, IL, through Naperville and Wyanet, IL. The proposed corridor would provide new service on an existing alignment. The corridor sponsor would enter Step 1 of the program to develop a scope, schedule, and cost estimate for preparing, completing, or documenting its service development plan.	TBD	$500,000	Federal
Greater Iowa City, Inc.	Iowa City to North Liberty Commuter Service	Pop Up Metro project is a potential project along the Iowa City–North Liberty Commuter Rail line in Johnson County, Iowa, that aimed to reintroduce a pilot passenger rail service along an 8.2-mile segment of the Cedar Rapids and Iowa City Railway (CRANDIC) corridor. The service would have connected North Liberty, Coralville, and the University of Iowa campus in Iowa City. A three-year pilot program was in planning and anticipated seeking funding requests in 2026. In January 2025, the Iowa City-North Liberty Commuter Rail project was placed on hold indefinitely after CRANDIC declined to lease trackage for any use or other passenger service on their corridor.	TBD	$5,700,000 capital; $3,700,000 annual operating	No funding has been allocated.
FRA	Amtrak Daily Long-Distance Service Study	The FRA's Amtrak Daily Long-Distance Service Study is intended to create a foundation for further planning of potential future long-distance services. The FRA may also assess potential new Amtrak long-distance routes in its evaluation.	Ongoing	TBD	Federal

Total Costs Identified: $9,900,000

** This project is focused on passenger rail in Illinois but includes service between Chicago and the Quad Cities in the scope of work.*

Table 5.2: Short-range (1-4 years) freight rail studies (section 1 of 2)

Applicant	Title	Description	Estimated Completion Date	Estimated Cost	Funding Source(s)
Mahaska County Development	Oskaloosa Industrial Park Transload Facility	This planning study is looking at developing 29 acres of land near Oskaloosa into a railport /transload facility. The concept includes almost three miles of track and the potential of a diverse array of storage and transloading capabilities.	August 2024	$94,500	$18,900 local; $75,600 state (RRLG*)
Legacy Materials LLC	Booneville North Transload Facility	The purpose of the study is to determine the feasibility of a transload facility to serve Dallas County. The study will determine the current and future needs of the area and prepare a plan for an efficient rail transportation to meet those needs.	July 2025	$125,000	$25,000 local; $100,000 state (RRLG)
Mills County Economic Development Foundation	Pacific Junction South Industrial Park Transload Planning Study	The Mills County Economic Development Foundation seeks to develop approximately 217 acres of land located south of Pacific Junction, Iowa into a railport/transload facility. The development study will assess the feasibility of the facility and determine the economic impacts to the city, county, and region.	September 2025	$103,050	$20,610 local; $82,440 state (RRLG)
Iowa Crossroads of Global Innovation	Iowa Crossroads of Global Innovation Dual Rail and Transload Study	The purpose of the study is to determine the feasibility of a transload facility to serve Webster County. The study will determine the current and future needs of the area and prepare a plan for an efficient rail transportation to meet those needs.	January 2025	$200,000	$100,000 local; $100,000 state (RRLG)
City of Webster City	City of Webster City	The purpose of the study is to identify both local and nonlocal businesses in and around Webster City, Iowa whose operations could be improved with the addition of a rail service. Once identified, the study will investigate four site locations to determine which is the most operational cost feasible for construction of a rail port facility. The area rail service provider is Canadian National (CN).	April 2026	$125,000	$25,000 local; $100,000 state (RRLG)
Iowa DOT	BNSF – Merrill Grade Crossing Study	This is a feasibility study of highway-rail grade crossing safety upgrades and a potential highway-rail grade separation at the intersection of U.S. Highway 75 in Merrill, Iowa, along with two other adjacent highway-rail grade crossings.	January 2027	$675,000	$135,000 state; $540,000 federal (RCE**)

Table 5.2 (continued): Short-range (1-4 years) freight rail studies (section 2 of 2)

Applicant	Title	Description	Estimated Completion Date	Estimated Cost	Funding Source(s)
City of Waterloo	Downtown Waterloo Railyard Relocation and Railroad Crossing Improvement Study	This study will investigate safety improvements to the railroad bisecting Waterloo, Iowa, and the possible relocation of an active railroad yard from the city's downtown to the outskirts of town, which will ease traffic issues through downtown and increase pedestrian access, while safety improvements will make the entire corridor safer.	February 2027	$750,000	$750,000 federal (NAE***)
City of Carroll	City of Carroll Railroad Quiet Zone Study	Establish a quiet zone in the City of Carroll	TBD	$1,500,000	No funding has been allocated.
	Iowa Rail Economic Impact Report	Analysis of the economic impact and transportation system benefits of freight railroad transportation in Iowa, analysis of the capacity and adequacy of shortline rail service, rail transload and intermodal facilities, and development of a guidebook for rail users and local developers.	TBD	$200,000	No funding has been allocated.
	Iowa Grade Crossing Study	Identify and prioritize grade crossings for potential closure, grade separation, or improvement. Could include grade crossing evaluation with LIDAR, an analysis of full-crossing pavement markings where there are quad gates and / or limited queue space, evaluation of the B/C prioritization formula used by DOT, modification of the current methodology or development of a crossing evaluation methodology to improve selection of project candidates, and development of an easily understood means to communicate to railroads and highway authorities the relative risks of crossings under their jurisdiction.	TBD	$1,000,000	No funding has been allocated.
	Railroad / Highway Grade Crossing Signal Preemption	Develop Railroad / Highway Grade Crossing Signal Preemption document.	TBD	TBD	No funding has been allocated.

Total Costs Identified: $4,772,550

**RRLG: Railroad Revolving Loan and Grant Program; **RCE: Rail Crossing Elimination Program; ***NAE: Neighborhood Access and Equity Funds*

Table 5.3: Long-range (5-20 years) passenger rail studies

Note: No Federal, state, or local sources have been allocated nor have timelines been established.

Title	Description	Estimated Cost
Iowa Five-Year Passenger Rail Strategic Planning Study	Develop a five-year passenger rail strategic plan to identify potential strategies for the enhancement to existing passenger rail services and corridors in the state and the development of new passenger rail services and corridors in the state.	$75,000
Iowa Thruway Bus Study	Explore implementation of additional thruway bus services connecting to existing and potential future Amtrak services in Iowa and to promote multimodal connectivity (e.g., Osceola-Des Moines-Ames, and Mt. Pleasant-Iowa City-Cedar Rapids).	$25,000
Iowa Passenger Rail Economic Impact Study	Identify the economic impacts of expanding passenger rail corridors and services in Iowa.	$50,000
Chicago-Iowa City- Des Moines Tier II Environmental Impact Study/Service Development Plan/Preliminary Engineering (to increase roundtrip train frequencies from two to four daily roundtrips)	Conduct a Tier II level Environmental Impact Study/Preliminary Engineering/Service Development Plan to increase intercity passenger rail service between Chicago and Des Moines from two daily roundtrips to four daily roundtrips.	$500,000
Iowa City-Des Moines Tier II Environmental Impact Study / Service Development Plan / Preliminary Engineering (two daily roundtrips service)	Conduct a Tier II level Environmental Impact Study / Preliminary Engineering / Service Development Plan to extend intercity passenger rail service from Iowa City to Des Moines.	$5,000,000
Des Moines- Council Bluffs Tier II Environmental Impact Study/Service Development Plan/ Preliminary Engineering	Conduct a Tier II level Environmental Impact Study/Preliminary Engineering/Service Development Plan to extend intercity passenger rail service from Des Moines to Council Bluffs.	$5,000,000
Council Bluffs-Omaha Tier II Environmental Impact Study/Service Development Plan/ Preliminary Engineering	Conduct a Tier II level Environmental Impact Study/Preliminary Engineering/Service Development Plan to extend intercity passenger rail service from Council Bluffs to Omaha.	TBD
Chicago-Omaha Amtrak Intercity Passenger Rail Expansion Study	Identify the potential for implementation of a second intercity passenger rail service frequency between Chicago and Omaha via southern Iowa on the BNSF route presently used by Amtrak's California Zephyr.	$75,000
St. Paul-Mason City-Des Moines-Kansas City Passenger Rail Study	Study the potential for implementation of intercity passenger rail between St. Paul, Des Moines, and Kansas City.	TBD
Chicago-Dubuque- Waterloo-Sioux City Passenger Rail Study	Study the potential for implementation of intercity passenger rail between Chicago, Dubuque, Waterloo, Fort Dodge, and Sioux City.	TBD
St. Paul-Sioux City- Council Bluffs/Omaha- Kansas City Passenger Rail Study	Study the potential for implementation of intercity passenger rail between St. Paul, Sioux City, Council Bluffs / Omaha, and Kansas City.	TBD

Total Costs Identified: $10,725,000

Table 5.4: Long-range (5-20 years) freight rail studies

Note: No Federal, state, or local sources have been allocated nor have timelines been established.

Title	Description	Estimated Cost
Iowa Hazardous Materials Rail Transportation Study	Identify commodities, routing on the state rail network, future commodity and rail transportation trends, and key novel risks for each commodity.	TBD
Iowa Freight Rail Clearance Study	Identify vertical and horizontal clearance issues on the state rail network and any constraints on highway transportation resulting from insufficient clearances on railroad bridges.	TBD
Iowa Rail Database Update Technical Memorandum	Update the Iowa rail system inventory, rail database, and associated GIS mapping maintained by the state.	TBD

Total Costs Identified: TBD

Table 5.5: Summary of short- and long-range studies

Category	Number of studies	Total Costs Identified
Short-range (1-4 years) passenger rail studies	3	$9,900,000
Short-range (1-4 years) freight rail studies	11	$4,772,550
Long-range (5-20 years) passenger rail studies	11	$10,725,000
Long-range (5-20 years) freight rail studies	3	TBD
		$25,397,550

Note: Not all studies have costs identified at this time.

5.7 Passenger and Freight Rail Capital Program

This section identifies the short- and long-range program of projects and studies, consistent with PRIIA requirements, with specific project detail provided in the RSIP.

Short-Range Rail Investment Program

Proposed short-range projects and studies for which estimated capital costs are known at this time, totaling approximately $59.6 million, have been evaluated largely based on their respective potential sources of funding eligibility and benefits to be realized from the completion of the projects. This includes preserving the state's past investments and improving the levels of service and financial performance of the state's railroads as well as the estimated benefits expected for projects in terms of freight and passenger system capacity, efficiency, and safety; rail network access; economic development and competitiveness; job creation and retention; transportation savings; energy and environmental benefits; and other program-specific benefits. The state's short-range grade crossing improvement program projects' primary intent is to provide or upgrade active warning devices and to make surface and safety improvements at grade crossing locations throughout Iowa.

Proposed Short-Range Freight Rail Projects and Studies

During the four-year short-range program period, the proposed freight rail projects primarily entail making improvements to the capacity and rail access on the state's railroads.

Proposed short-range freight rail projects can be categorized as follows, with the number of identified projects noted.

- Enhancements to the Capacity of the State's Rail Network (11)
- Enhancement of Existing Transload Facilities or Construction of New Transload facilities (9)
- Enhancement of Existing Rail Access or Development of New Rail Access for Shippers / Receivers (6)
- Improvements to Bridge Infrastructure (7)
- Enhancements to Safety (4)
- Development of a New Intermodal Facility (1)
- Improvements to Track Infrastructure (4)
- Grade Separation of Highway/Rail Grade Crossings (2)
- Development of an Education and Training Program (1)
- Improvements to Flood Mitigation Measures (1)

Table 5.6: Short-range (1-4 years) passenger rail projects

Name	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
Illinois DOT: Phase 1 of Chicago-Omaha Intercity Passenger Rail Service Implementation: Chicago-Quad Cities (two daily roundtrips) (Note: this project is in Illinois)	Establish passenger rail service between Chicago and the Quad Cities. Project in Illinois with benefits to the Quad Cities of Illinois and Iowa.	Implementation of new intercity passenger rail service will provide additional alternatives for passenger travel, will reduce highway and related impacts, and will provide economic development opportunities.	TBD	Federal, state, and local sources
West Main Multimodal Corridor Revitalization Project	Multimodal Station Capital Improvements – Ottumwa Amtrak Station included	Perform necessary capital improvements including road, streetscape, municipal, utility and electrical infrastructure upgrades.	$18,800,000	Federal, state, and local sources

Total Costs Identified: $18,800,000

Table 5.7: Short-range (1-4 years) freight rail projects (section 1 of 12)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
IANR	City of Cedar Falls Railroad Crossing Elimination/Rail Asset Relocation	Remove IANR's Cedar Falls Spur, Railroad Crossing Elimination of 22 rail crossings & relocation of rail assets	Increase Public Safety in downtown Cedar Falls area while also benefitting Public Safety in Butler County and protecting rail infrastructure	$14,455,876	Federal, Railroad, and local sources
IANR	City of Waterloo – Railroad Crossing Elimination Study	Conduct Safety Study for crossing improvements between IANR's Linden and Bryant Yards.	Provide plan for corridor improvement	TBD	Federal, state, and local sources
IANR	Butler County/Shell Rock Railroad Crossing Elimination and Road Realignment	Railroad Crossing Elimination and County Road realignment	Increases Public Safety while modernizing county road configuration due to industrial growth	TBD	Federal, state, and local sources
CPKC	Clay County Railroad Crossing Elimination at County Road B24 in Clay County	The project will realign approximately 1/2 mile of County Road B24 (B24) to County Road M50 (M50) at a location North of the Railroad crossing on M50. The B24 RR crossing will be eliminated along with the reduced speed s-curves on B24.	The project goal is to reduce traffic accidents and eliminate traffic fatalities. By eliminating the crossing entirely, the two modes of transportation (Highway and Rail) will not have to cross each other's route on B24.	$4,800,000	Federal, Railroad, and local sources
UP	SE Corporate Woods Drive Over pass in Ankeny, Iowa	Project will comprise replacing the existing at grade rail-roadway crossing with an overpass bridge over the Union Pacific Railroad. The SE Corporate Woods Drive roadway replacement required for constructing the overpass will extend from SE Convenience Boulevard to SE 72nd Street. The overpass bridge will accommodate four travel lanes, a recreational trail, and a sidewalk.	Improve safety, capacity, and efficiency	$23,500,000	Federal, local, and private sources

Table 5.7 (continued): Short-range (1-4 years) freight rail projects (section 2 of 12)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
CPKC	Eliminate two crossings and construct a new bridge and access road over the railroad	Improve safety by eliminating crossings and building a bridge and access road over the railroad east of Nahant Rail Yard. The bridge and access road will allow safe access to the Davenport Regional Water Pollution Control Plant, Compost Facility, and Nahant Rail Yard. The bridge will be above 500-yr flood levels and allow freight to be moved along the rails with no interruptions from vehicular traffic.	The project will improve rail safety through grade separation and crossing eliminations. The project will also allow emergency access during frequent Mississippi River flood events and will also provide economic benefits, protect the environment by reducing emissions, and benefit the surrounding community.	$9,696,077	Federal, local, and private sources
IANR and CPKC	Add Interchange Track Capacity at Nora Springs Junction	Increase track capacity at the IANR/CP Nora Springs Interchange to enhance increasing traffic growth from Northeast Iowa Customers to CPKC origins and destinations.	Improve track capacity and operating efficiencies which delivers better customer service to Northeast Iowa Rail Customers.	TBD	Federal and state sources
BNSF	Grade separation Conceptual Design at Merrill	Conduct a feasibility study of highway-rail grade crossing safety upgrades and a potential high-way-rail grade separation at the intersection of U.S. Highway 75 in Merrill, along with two other adjacent highway-rail grade crossings.	Improve safety and efficiency and reduce highway congestion.	$675,000	Federal, state, and private sources
UP	Big Soo Terminal Rail Expansion at Sioux City	Construct a new industrial spur to supplement the existing rail capacity at the Big Soo Terminal Facility in Sioux City.	Enhance capacity and rail system access.	TBD	State and local sources
	Kemin Industries Rail Delivery Addition in Des Moines	Construct a rail spur, bulk storage, and pumping station Des Moines to supply local manufacturers via rail.	Enhance rail system access and capacity	TBD	State and local sources
UP	Add Yard/Working Tracks support at Boone	Support switching operations at location to handle increased local business.	Improve safety, capacity, and efficiency.	TBD	Federal, state, and local sources
UP	Add Yard/Working Tracks Support at Marshalltown	Support switching operations at location to handle increased local business.	Improve safety, capacity, and efficiency.	TBD	Federal, state, and local sources

Table 5.7 (continued): Short-range (1-4 years) freight rail projects (section 3 of 12)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
IANR	Expanded Facility Capacity at Manly Logistics Park	Expand track capacity, develop land, and build access road entrance and exit to the Manly Logistics Park.	Enhance multimodal capacity, transloading services, and rail system access.	TBD	Federal, state, and local sources
IANR	Intermodal Facility Construction at Manly	Develop a new intermodal facility on the IANR Manly Subdivision at Manly.	Enhance multimodal capacity, transloading services, and rail system access.	$16,400,000	Federal, state, and local sources
IANR	Bridge Infrastructure Improvements on Manly Subdivision	Improve bridge infrastructure to allow for the handling of 286K Railcars at 40 MPH track speeds at IANR Bridge 177.3, Bridge 178.2, Bridge 202.6, and Bridge 208.7.	Improve safety, capacity, and efficiency.	TBD	Federal and state sources
IANR	Bridge Infrastructure Improvements on Garner Subdivision	Improve bridge infrastructure to allow for the handling of 286K Railcars between Garner and Forest City by replacing IANR Bridge 73.89 and Bridge 74.11.	Improve safety, capacity, and efficiency.	$800,000	Federal and state sources
BNSF	Siding Track for Transload Facilities at Pottawattamie and Mills Counties in Council Bluffs Area	Develop and construct a siding track for use in serving a transload facility under development near Council Bluffs on the BNSF Council Bluffs Subdivision.	Enhance capacity, availability of transloading services, and rail system access.	TBD	State and local sources
CN and UP	Iowa Falls / Hardin County Dual Rail Connection and Transload Facility at Iowa Falls	Construct a dual-rail connection track to the CN Waterloo Subdivision and the UP Mason City Subdivision, four yard tracks, and a siding each near CN and UP interchanges, and a transload/terminal facility.	Enhance multimodal capacity, transloading services, and rail system access.	TBD	State and local sources
IANR	Wayside Detector Equipment for Cedar Rapids and Manly Subdivisions	Install Hot Box and Dragging Equipment detectors every 20 miles on the IANR. Install a site with a Wheel Impact Load Detector, Acoustic Bearing Monitor, Truck Hunting, and Weigh-in-Motion Scale in the vicinity of Shell Rock.	Wayside Detectors provide a high level of protection from mechanical failures of rail cars and enhance safe operations at speeds of 40 MPH per recommendation of Association of American Railroads Recommended Operating Procedures	$800,000	TBD

Table 5.7 (continued): Short-range (1-4 years) freight rail projects (section 4 of 12)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
IANR	Advanced Switch Point Protection on Cedar Rapids and Manly Subdivisions	Install advanced switch point protection on the IANR Cedar Rapids and Manly Subdivisions to provide increased safety utilizing locomotive PTC equipment.	Provide for protection of train operations encountering reversed main track switches using PTC technology.	TBD	TBD
IANR	Bridge Infrastructure Improvements on Cedar Rapids Subdivision	Improve bridge infrastructure to allow for the handling of 286K Railcars at 40 MPH track speeds at IANR Bridge 103.1, Bridge 124.9, Bridge 142.7, and Bridge 143.9.	Improve safety, capacity, and efficiency.	TBD	Federal and state sources
IANR	Flood Mitigation Measures at Cedar Rapids	Address flood prone area along the Cedar River by performing bank stabilization measures on the Cedar Rapids Subdivision from MP 101.2 to MP 200.9 at Linn Junction near Cedar Rapids.	Improve safety, capacity, efficiency, and resiliency.	$500,000	Federal, state, and local sources
IAIS	Bridge Modifications at Colfax	Complete modifications to bridges that restrict the movement of high-wide loads due to the truss construction at Colfax (Newton Subdivision MP 329.1).	Improve safety, capacity, and efficiency.	TBD	IAIS awarded $29,883,200 in FY 2023-2024 CRISI funding– 80/20 matching)
IAIS	Bridge Modifications at De Soto	Complete modifications to bridges that restrict the movement of high-wide loads due to the truss construction at De Soto (Council Bluffs Subdivision MP 380.4).	Improve safety, capacity, and efficiency.	$1,820,000	IAIS awarded $29,883,200 in FY 2023-2024 CRISI funding – 80/20 matching)
CIC	Rail Corridor Rehabilitation	Replacement of railroad ties along 56 miles of main line track from Cedar Rapids to Hills, Iowa	Improve safety, capacity, and efficiency.	$23,800,000	CIC awarded $19,040,000 in FY 2023-2024 CRISI funding – 80/20 matching)
CPKC	Fauser Rail Terminal Rail Access at New Albin	Construct a rail spur to serve Kermin Industries located on the CPKC Marquette Subdivision at New Albin.	Enhance rail system access and capacity.	TBD	State and local sources

Table 5.7 (continued): Short-range (1-4 years) freight rail projects (section 5 of 12)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
CPKC	Pattison Sand Unit train Capacity Expansion at Garnavillo	A six-phase project to expand the unit train capacity for Pattison Sand on the CPKC Marquette Subdivision near Garnavillo.	Enhance rail system access and capacity.	TBD	State and local sources
KJRY	Yard and Main Track Enhancements at Keokuk	The project would expand the Twin Rivers Yard by adding new yard tracks and undertaking other major yard rehabilitation, including replacing damaged infrastructure from derailments and flooding. Improvements will also be made to the main track between US 136 Overpass to the Mississippi River Bridge.	The project will enhance operating capacity, efficiency, and safety for the line. The project will also improve environmental impacts and increased capacity in Keokuk will reduce the repetitive movements across the Mississippi Rive Bridge currently required to address the space limitations and reduce unnecessary burdens on the increasingly deteriorating bridge.	TBD	State, local, and private sources
IANR	Iowa Northern Education and Training Program	Development and delivery of virtual, and in-person education and training courses, development of a customized learning platform to deliver those courses, as well as remote and in-person locomotive simulator education and training.	Improve railroad safety, compliance with FRA regulations, enhance and expand work force development, and improve the efficiency of rail operations	$6,781,830	IANR awarded $5,425,464 in FY 2020 CRISI funding – 80/20 matching)
CIC	Construct Bypass Track at Cedar Rapids	Rail traffic currently moves through ADM Plant in Cedar Rapids, affecting the efficiency of operations. Project would construct a track that bypasses ADM that would allow CIC trains to travel around the plant, thus promoting efficiency and minimizing potential operating conflicts for CIC trains.	Increase operating capacity, efficiency, and safety.	TBD	State and local sources

Table 5.7 (continued): Short-range (1-4 years) freight rail projects (section 6 of 12)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
KJRY	Rail Upgrade Project	Replace ties, resurface, and upgrade rail over 100 miles on the KJRY improving the track excepted and Class 1 FRA track safety standard to Class 2	Improve safety, capacity, and efficiency.	$20,000,000	Federal and private sources
CIC	Iowa River Bridge Project	Replacement of a 118-year -old Iowa River Bridge at MP 18.15 on the CIC's Amana Subdivision, spanning the Iowa River near Middle Amana, Iowa. The project will raise the new bridge 30 inches to clear the 100-year flood height, lengthen and widen the through truss span of the bridge, and increase the load capacity to accommodate 286K rail cars.	Improve safety, capacity, and efficiency.	$10,929,585	Federal sources (Funding through a FY20 CRISI Grant, 50/50 matching)
IANR	Industrial Park Development at Forest City	Construct a rail served industrial park on North Central Iowa Rail Corridor in Forest City.	Enhance IANR rail system access, provide for industrial rail access for Forest City, Iowa.	TBD	Federal, state, and local sources
IANR	Industrial Park Development at Garner	Construct a rail served industrial park on North Central Iowa Rail Corridor in Garner.	Enhance IANR rail system access, provide for industrial rail access for Garner, Iowa.	TBD	Federal, state, and local sources
IANR	Industrial Park Development at Oelwein	Construct a rail served industrial park on the IANR Oelwein Subdivision in Oelwein.	Enhance IANR rail system access, provide for industrial rail access for Oelwein, Iowa.	TBD	Federal, state, and local sources
IANR	Industrial Park Development at Palo	Construct a rail served industrial park on the IANR Cedar Rapids Subdivision in Palo.	Enhance IANR rail system access, provide for industrial rail access for Palo, Iowa.	TBD	Federal, state, and local sources
IANR	Advanced Switch Point Protection	Install advanced switch point protection on IANR Manly and Cedar Rapids Subdivisions to provide increased safety utilizing Locomotive PTC equipment.	Provide for protection of train operations encountering reversed Main Track Switches using PTC technology.	TBD	TBD

Table 5.7 (continued): Short-range (1-4 years) freight rail projects (section 7 of 12)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
IANR	Remote Control Switches	Install Remote Control Switch Machines in Waterloo, Nora Springs Jct. and Plymouth Jct. on IANR	Expedite train movements between IANR and CN in Waterloo and between IANR and CPKC in Nora Springs	$200,000	TBD
BJRY	Le Mars Transload Expansion	Construct improvements that expand the capacity of a transload operated by the BJRY in the Le Mars Industrial Park and allow it to handle additional commodities.	Enhance capacity, availability of transloading services, and rail system access.	TBD	State and local sources
BJRY	Transload/Intermodal Investments	Investments in new transloading and intermodal capabilities, terminals, and operations across network.	Enhance multimodal capacity, transloading services, and rail system access.	TBD	TBD
CPKC	CTC on Kansas City Subdivision	Add CTC to 102 miles of the Kansas City Subdivision. Anticipated to be complete in 2025.	Improve safety, capacity, efficiency, and resiliency.	TBD	TBD
CPKC	Davenport Riverfront Rail Crossing Safety Improvements Project	Project includes various safety improvements (e.g., signals, gates, crossing signage, etc.) at multiple highway-rail grade crossings, as well as trespassing prevention measures (e.g., barriers and/or fencing in Davenport. With the proximity of the CPKC rail line to the city's commercial riverfront district and multi-purpose trails, there are many conflict points along the rail line, creating safety challenges that require the trains to frequently sound the horn for an estimated nine-mile distance	Improve safety, capacity, efficiency, and resiliency.	$3,437,150	Federal sources (Funding through a FY22 CRISI Grant, 80/20 matching)

Table 5.7 (continued): Short-range (1-4 years) freight rail projects (section 8 of 12)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
CPKC	South Concord Street Grade Separation	Project would eliminate two highway-rail grade crossings (elimination of one crossing and creation of a grade separation at another) to provide better access to critical infrastructure, including the regional wastewater treatment plant	Improve safety, capacity, efficiency, and resiliency.	$9,696,078	Federal sources (Funding through a FY22 RCE Grant, 80/20 matching)
BSV	New Interchange and Access at Boone	One of BSV's customers has an expansion planned in 3-4 years, which would significantly increase the railcar traffic. BSV is working on designs for a new interchange with UP, along with additional areas for rail served customers, are being developed to accommodate customer expansion planned in 3-4 years.	Enhance multimodal capacity, transloading services, and rail system access.	TBD	TBD
UP	Network Renewal Projects	Rail, tie, and signal renewals throughout the state.	Improve safety, capacity, efficiency, and resiliency.	TBD	Federal, state, local, and private sources
CIC	Bridge Replacement at Iowa River	Construction of new Iowa River Bridge (Bridge I-142) that will replace the 2 existing steel truss spans and 2 existing through girder spans.	Improve safety, capacity, efficiency, and resiliency.	TBD	TBD
CIC	Bridge Replacement at Cedar Rapids	UP Overhead Bridge replacement will replace the 106' 5 span bridge and timber trestles with 182'5" span and steel trusses with concrete piers.	Improve safety, capacity, efficiency, and resiliency.	TBD	TBD

Table 5.7 (continued): Short-range (1-4 years) freight rail projects (section 9 of 12)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
CIC	Streamline Rail Operations and Improve Yard Safety in Cedar Rapids	Includes various improvements (e.g., new tracks, station building, and equipment) to expand the CIC Smith-Dows Rail Yard. The Project will remove capacity and facility constraints, make interchanging and switching operations safer, ensure fewer locomotive and Screw truck traffic emissions, and create a dependable reporting location and storm shelter for CIC operation staff.	Improve safety, capacity, efficiency, and resiliency.	$11,700,000	Federal sources (Funding through a FY22 CRISI Grant, 50/50 matching)
BNSF	Transload Facility and Rail Industrial Park in Mills County	Develop transload facility and rail industrial park in Mills County. This is in preliminary design.	Enhance multimodal capacity, transloading services, and rail system access.	TBD	Local sources
CN and CPKC	Charles City Transload	The proposed project will re-purpose the former Oliver/White Tractor Manufacturing plant site as a railcar-truck transload center for transshipment of propane, bio-renewables, and specialized fuels through connections with both CP and CN railroads. Project is expected to create 20-25 new jobs.	Enhance multimodal capacity, transloading services, and rail system access.	$9,595,000	State, local, and private sources (Awarded $1,140,000 RRLG in 2022)
UP	Cold Links Logistics	Project is adding a switch and 2,500-foot rail spur to the planned industrial facility connecting it to the railroad network. The project is expected to create 60 new jobs (plus additional contractor jobs to support daily operations of the finished manufacturing facility).	Enhance multimodal capacity, transloading services, and rail system access.	$60,000,000	State, local, and private sources (Awarded $687,933 RRLG in 2022)

Table 5.7 (continued): Short-range (1-4 years) freight rail projects (section 10 of 12)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
UP	Ten D/Merchants Distribution Service	Project will add 1 mile of new rail and replace/upgrade/make accessible 1.5 mile of existing rail. Also will add additional transloading service capacities and capabilities.	Enhance multimodal capacity, transloading services, and rail system access.	$8,665,822	State, local, and private sources (Awarded $1,500,000 RRLG in 2022)
UP	New Horizons Switching Track and Additions	Atlas Roofing Corporation, Clinton, Co is building a new roofing materials plant that will produce asphalt shingles. The $218M plan includes rail infrastructure that will also benefit future rail access in the industrial park.	Improve safety, capacity, and efficiency.	$218,000,000	State, local, and private sources (Awarded $2,119,000 RRLG in 2024)
CN	A-line EDS	A-line E.D.S. recycles electrical transformers from utilities companies. This new rail spur would allow mineral oil and scrap metal to be shipped out by rail using Canadian National (CN) and the potential for larger transformers to be processed at this facility.	Enhance multimodal capacity, transloading services, and rail system access.	$4,000,000	State, local, and private sources (Awarded $1,309,000 RRLG in 2025)
BJRY	BJRY Rail Yard and Transload Expansion	This project will demolish a 19,000 SF building and construct a spur into a 16,000 SF building to the North for use as a transload facility.	Enhance multimodal capacity, transloading services, and rail system access.	$343,132	State, local, and private sources (Awarded $257,349 RRLG in 2025)
BNSF and CPKC	Appanoose County Rail Extension	This project would add a new rail spur and up to 6-miles of new track connecting Iowa Southern Railway (IASR) to proposed industrial sites East of Centerville, with connection to Canadian Pacific Kansas City (CPKC) . Two large agricultural produces are nearing the commitment stage in the development of these sites.	Improve safety, capacity, and efficiency.	$6,000,000	State, local, and private sources (Awarded $4.8 million in CRISI funds in 2024 and $600,000 RRLG in 2025)

Table 5.7 (continued): Short-range (1-4 years) freight rail projects (section 11 of 12)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
UP	Heartland Co-op Greenfield Rail Loading Elevator	This project will construct a loading facility and unit train capable loop track with a connection to Union Pacific (UPRR), Northeast of Millerton.	Enhance multimodal capacity, transloading services, and rail system access.	$50,000,000	State, local, and private sources (Awarded $1,840,000 RRLG in 2025)
IAIS	Reid Line LLC Dexter Rail Yard Improvements	This project will make improvements to an existing spur and add additional rail car storage, an under track unloading pit and support a potential rail accessible warehouse. The area rail service provider is Iowa Interstate RR Ltd (IAIS).	Improve safety, capacity, and efficiency.	$6,507,386	State, local, and private sources (Awarded $957,000 RRLG in 2025)
MULTIPLE	Railroad Revolving Loan and Grant Program	This program administered by Iowa DOT provides financial assistance to improve rail facilities that will create jobs, spur economic activity and improve the rail transportation system in Iowa.	Improve safety, capacity, efficiency, resiliency, and economic development.	TBD	State sources (Note: this program receives annual appropriations)
MULTIPLE	Statewide Grade Crossing Improvement and Upgrade Projects (Federal Highway-Railroad Crossing Safety Program)	Includes anticipated annual funding from the Federal Highway- Railroad Crossing Safety Program (approximately $5.31 Million per year) to upgrade crossings with passive warning devices including crossbucks to active warning devices including flashing light signals and gate arms; upgrading existing signals; improve crossing surfaces; and to provide low-cost improvements such as increased sight distance, medians, widened crossings, or to close crossings.	Improve grade crossing signals and surfaces, safety, and efficiency and reduce highway congestion through routine infrastructure investment.	$21,240,000	Federal and state sources (Note: Approximately $5.31 Million per year on average, based upon current program funding. For years 1-4 inclusive funding would be approximately $21.24 Million.)
MULTIPLE	Statewide Track and Bridge Infrastructure Upgrades to Accommodate 286K Rail Cars	Upgrade segments, including track and bridges, of the rail network that were identified as being incapable of handling 286K rail cars.	Improve safety, capacity, and efficiency.	TBD	Federal, state, and local sources

Table 5.7 (continued): Short-range (1-4 years) freight rail projects (section 12 of 12)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
MULTIPLE	Statewide Grade Crossing Improvement and Upgrade Projects (State Highway-Railroad Surface Repair Program)	Includes anticipated annual funding from the State Highway-Railroad Crossing Surface Repair Program (approximately $900,000 per year) to promote safety through surface replacement programs at public highway-railroad grade crossings.	Improve grade crossing surfaces, safety, and efficiency and reduce highway congestion through routine infrastructure investment.	$3,600,000	Federal and state sources (Note: Approximately $900,000 per year on average, based upon current program funding. For years 1-4 inclusive funding would be approximately $3.6 Million)
MULTIPLE	Statewide Grade Crossing Safety Fund	Includes funding for a portion of the maintenance costs for traffic control devices activated by the approach or presence of a train installed under the Highway-Railroad Crossing Safety Program.	Improve grade crossing safety and efficiency.	$2,800,000	Federal and state sources (Note: Approximately $700,000 per year on average, based upon current program funding. For years 1-4 inclusive funding would be approximately $2.8 Million)

Total Costs Identified: $550,742,936

Long-Range Rail Investment Program

Iowa's long-range RSIP is comprised of projects identified by Iowa DOT and other rail stakeholders to address rail passenger and freight needs, rail system access, infrastructure enhancement or replacement, and grade crossing safety. These projects, however, are not expected to be implemented within the next four years.

The long-range program includes prospective freight and passenger rail projects receiving support during the public outreach process, regardless of funding availability or technical analysis at this time. These projects are subject to additional feasibility analysis and evaluation of potential public and private benefits. Upon completion of these analyses, long-range program updates will reflect more current and accurate information, including capital cost estimates for implementation. Upon the availability of state or federal funding resources, projects selected for implementation may move to the short-range RSIP in the future.
Proposed Long-Range Freight Rail Projects and Studies
Projects proposed for public funding beyond the four-year short-range program period will be subject to funding availability as well as further analysis as to their viability and relative benefits to costs.

Similar to the short-range program, the objective of most long-range projects will be to improve the capacity, efficiency, and safety of the state's railroads, particularly in yards and congested terminal areas; enhance rail access by expanding or constructing transload and intermodal facilities for handling freight more economically and efficiently; upgrade or replace legacy rail bridges over the Mississippi River; and improve flood mitigation measures.

Proposed long-range freight rail projects can be categorized as follows, with the number of identified projects noted.

- Enhancements to the Capacity of the State's Rail Network (19)
- Enhancement of Existing Transload Facilities or Construction of New Transload Facilities (8)
- Improvements to Bridge Infrastructure (9)
- Improvements to Flood Mitigation Measures (9)
- Improvements to Track Infrastructure (1)
- Enhancement of Existing Rail Access or Development of New Rail Access for Shippers/Receivers (5)
- Grade Separation of Highway/Rail Grade Crossing (1)
- Improve Traffic Congestion and Enhance Safety in an Urban Rail Corridor (1)
- Development of a New Intermodal Facility (1)

Freight Rail Safety Projects

In conjunction with and in addition to the short- and long-range proposed freight projects, Iowa DOT has set long-range goals for the state's rail network and its public highway rail crossings. Iowa DOT annually programs at-grade improvement projects based on both project needs and priority projects identified from its crossing accident prediction formula results and corridor analyses.

From FY 2022 – FY 2026, the Iowa DOT expects to receive approximately $5.7M in funding from the federal Highway-Railroad Crossing Safety Program (Section 130). This is an addition to the $900,000 in annual appropriation from Iowa's Road Use Tax Fund. Projects selected for funding receive 60 percent of the cost of repairs from the Grade Crossing Surface Repair Fund, while the highway authority and railroad must each agree to pay 20 percent of the total project cost. Similar funding levels are anticipated for long-range crossing projects that are yet to be identified (and not included in the following tables).

Table 5.8: Long-range (5-20 years) passenger rail projects (section 1 of 3)

Name	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
Implementation of a Quad Cities to Iowa City Thruway Bus Service (two daily roundtrips)	Establish a temporary Thruway bus service connecting the Phase 1 Chicago-Quad Cities passenger rail service with Iowa City.	Implementation of a Quad Cities-Iowa City Thruway bus service will provide a temporary, dedicated connection to Iowa City, until passenger rail service can be extended from the Quad Cities to Iowa City in Phase 2 of the Chicago- Omaha passenger rail implementation.	$50,000	Amtrak
Phase 2 of Chicago- Omaha Intercity Passenger Rail Service Implementation: Chicago-Quad Cities- Iowa City (two daily roundtrips)	Extend the Chicago-Quad Cities passenger rail service to Iowa City.	Implementation of new intercity passenger rail service will provide additional alternatives for passenger travel, will reduce highway and related impacts, and will provide economic development opportunities.	$295,000,000 (Approximate based on 2020 Corridor Study)	Federal, state, and local sources
Phase 3 of Chicago- Omaha Intercity Passenger Rail Service Implementation: Chicago-Quad Cities- Iowa City-Des Moines (two daily roundtrips)	Extend the Chicago-Iowa City passenger rail service to Des Moines.	Implementation of new intercity passenger rail service will provide additional alternatives for passenger travel, will reduce highway and related impacts, and will provide economic development opportunities.	$342,900,000	Federal, state, and local sources (Note: Approximately $342.9 Million – based upon the estimated capital cost in the 2013 Chicago to Council Bluffs-Omaha Regional Passenger Rail System Planning Study, escalated to 2016 dollars)

Table 5.8 (continued): Long-range (5-20 years) passenger rail projects (section 2 of 3)

Name	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
Phase 4 of Chicago- Omaha Intercity Passenger Rail Service Implementation: Increase Number of Frequencies Chicago- Quad Cities-Iowa City- Des Moines (four daily roundtrips)	Increase the number of daily passenger train frequencies between Chicago and Des Moines from two to four.	Enhancement of new intercity passenger rail service will provide additional alternatives for passenger travel, will reduce highway and related impacts, and will provide economic development opportunities.	$123,300,000	Federal, state, and local sources (Note: Approximately $123.3 Million – based upon the estimated capital cost in the 2013 Chicago to Council Bluffs-Omaha Regional Passenger Rail System Planning Study, escalated to 2016 dollars)
Phase 5 of Chicago- Omaha Intercity Passenger Rail Service Implementation: Chicago-Quad Cities- Iowa City-Des Moines-Council Bluffs (four daily roundtrips)	Extend the Chicago-Des Moines passenger rail service to Council Bluffs.	Implementation of new intercity passenger rail service will provide additional alternatives for passenger travel, will reduce highway and related impacts, and will provide economic development opportunities.	$320,500,000	Federal, state, and local sources (Note: Approximately $320.5 Million – based upon the estimated capital cost in the 2013 Chicago to Council Bluffs-Omaha Regional Passenger Rail System Planning Study, escalated to 2016 dollars)
Phase 6 of Chicago- Omaha Intercity Passenger Rail Service Implementation: Chicago-Quad Cities- Iowa City-Des Moines-Council Bluffs-Omaha (four daily roundtrips)	Extend the Chicago-Council Bluffs passenger service to Omaha.	Implementation of new intercity passenger rail service will provide additional alternatives for passenger travel, will reduce highway and related impacts and will provide economic development opportunities.	TBD	Federal, state, and local sources
Implementation of Intercity Passenger Rail Service Chicago-Dubuque	Establish intercity passenger rail service between Chicago and Dubuque. Most of corridor located in Illinois.	Implementation of new intercity passenger rail service will provide additional alternatives for passenger travel, will reduce highway and related impacts, and will provide economic development opportunities.	TBD	Federal, state, and local sources

Table 5.8 (continued): Long-range (5-20 years) passenger rail projects (section 3 of 3)

Name	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
Implementation of Intercity Passenger Rail Service St. Paul-Mason City-Des Moines-Kansas City	Establish intercity passenger rail service between St. Paul, Des Moines, and Kansas City.	Implementation of new intercity passenger rail service will provide additional alternatives for passenger travel, will reduce highway and related impacts, and will provide economic development opportunities.	TBD	Federal, state, and local sources
Implementation of Commuter Rail Service Iowa City-Cedar Rapids	Establish commuter rail service on the CRANDIC Corridor between Iowa City and Cedar Rapids.	Implementation of new commuter rail service will provide additional alternatives for passenger travel, will reduce highway and related impacts, and will provide economic development opportunities.	TBD	Federal, state, and local sources
Implementation of Commuter Rail Service in the Des Moines Metropolitan Area	Establish commuter rail service on existing rail corridors in the Des Moines Metropolitan Area, including a service from Des Moines to Ames.	Implementation of new commuter rail service will provide additional alternatives for passenger travel, will reduce highway and related impacts, and will provide economic development opportunities.	TBD	Federal, state, and local sources

Total Costs Identified: $1,081,750,000

Table 5.9: Long-range (5-20 years) freight rail projects (section 1 of 13)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
BRJY	Mt. Pleasant Transload Building	Construct a 6,000 SF transload building in Mount Pleasant, Iowa to be used for rail-to-truck and truck- to-rail cross-dock transloading.	Enhance capacity, availability of transloading services, and rail system access.	$670,000	Federal, State, Local and Private Sources
IANR	Expand Capacity at Nora Springs on the Manly Subdivision	Expand capacity to better accommodate interchange between IANR and CPKC at Nora Springs	Increase operating capacity, efficiency, and safety.	TBD	State and local sources
KJRY	Rehabilitation of the Railroad Bridge over Mississippi River	The project will rehabilitate the freight rail bridge spanning the Mississippi River in Keokuk, IA. The bridge, owned by the City of Keokuk, is in very poor condition, which has been worsened by major flooding in 2008 and minor flooding in subsequent years. Rehabilitation work to the bridge will include removing deteriorated masonry/ concrete, installing new dowels/ rebar, and place new encasement concrete on piers and abutments. Work will also include cleaning and spot painting of critical areas of the bridge structure with a rust penetrating sealer and topcoat.	This project will preserve the existing transportation network of an economically challenged rural region that spans portions of three states. The Keokuk Rail Bridge serves as a link in the supply chain between agricultural communities and processing facilities on both sides of the river and offers the ability to attract new industries to the area in the future. The bridge has recently offered a secondary benefit to the region by supporting a new broadband fiber line that connects Illinois and Iowa. This connection has enabled greater network reliability and provided the first-class data connections to regional network hubs in Chicago, St. Louis, Des Moines, and Omaha that the Keokuk region previously lacked.	$10,000,000	Federal, State, Local and Private Sources

Table 5.9 (continued): Long-range (5-20 years) freight rail projects (section 2 of 13)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
CN and UP	Expand Capacity on Joint-Use Line between Le Mars and Sioux City	Enhance capacity on the CN Cherokee Subdivision (owned by CN; maintained by UP) trackage shared by CN and UP to address existing bottleneck.	Increase operating capacity, efficiency, and safety.	TBD	State and local sources
DAIR	Siding construction near Beloit	Install one 8000-foot meet and pass siding at MP 46 to address increasing traffic on the subdivision and improve the efficiency of the line and train operations.	Improve safety, capacity, and efficiency.	TBD	State, local, and private sources
DAIR	Bridge enhancements in Iowa between Canton, SD and Elk Point, SD	Maintenance enhancements to 19 steel truss bridges, through steel girder bridges, and open steel girder bridges that are at least 60 years of age, including six Big Sioux River crossings, as well as numerous timber structures approaching 70 years of age.	Improve safety, capacity, and efficiency.	TBD	State, local, and private sources
DAIR	Rail line upgrades near Hawarden	Replace approximately 9 miles (MP 22-29 and 35-37) of legacy 100 pound rail in current use to 115 pound heavy rail.	Improve safety, capacity, and efficiency.	TBD	State, local, and private sources
BNSF, CN, DAIR, and UP	Terminal Capacity Improvements at Sioux City	Improve the safety and efficiency of train operations at an at-grade crossing of several rail lines in the congested terminal area and improve capacity for carload interchange between railroads.	Increase operating capacity, efficiency, and safety.	TBD	Federal, state, and local sources
UP	Grade Crossing Closures and/or Grade Separations at Sioux City	Consider closing and/or grade separating the following crossings with UP in Sioux City: 11th Street, 18th Street, and 28th Street; coordination between UP and the City of Sioux City for potential projects is ongoing.	Increase operating capacity, efficiency, and safety.	TBD	Federal, state, and local sources

Table 5.9 (continued): Long-range (5-20 years) freight rail projects (section 3 of 13)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
BNSF	BNSF Gordon Drive Viaduct Vertical Clearance Improvements at Sioux City	Make clearance improvements at the Gordon Drive viaduct in Sioux City, which presently has a vertical clearance of 17'6" Above Top of Rail and does not allow for the passage of BNSF double-stack container trains.	Increase operating capacity, efficiency, and safety.	$172,023,000	Federal, state, and local sources
UP	Capacity Improvements in Western Iowa	Enhance line capacity on the UP Sioux City Subdivision between California Junction and Sioux City, potentially through the enhancement of existing sidings and/or construction of additional sidings.	Improve safety, capacity, and efficiency.	TBD	Federal, state, and local sources
CN and UP	Address bottleneck between Council Bluffs and Omaha	CN uses trackage rights over UP Missouri River Bridge between Council Bluffs and Omaha, and experiences operating delays. CN traffic between Council Bluffs and Omaha is limited. Capacity improvements could be made to lessen CN operating delays.	Increase operating capacity, efficiency, and safety.	TBD	Federal, state, and local sources
CIC	Enhancements to the DuPont Rail Spur in Cedar Rapids	Construction / enhancements to the DuPont Rail Spur on CIC in Cedar Rapids to provide improved rail access for shipper.	Enhance access to the state rail network.	$1,700,000	State and local sources
IAIS	Transload Expansion at Council Bluffs	Expansion of existing tracks and laydown areas including paving, stormwater management, and improved roadway access.	Enhance multimodal capacity, transloading services, and rail system access.	TBD	Federal, state, and local sources
IAIS	Western Iowa sidings	Extend sidings on the IAIS Council Bluffs Subdivision to accommodate longer train lengths and increased traffic at Hillis, Atlantic and Booneville.	Improve safety, capacity, and efficiency.	$6,500,000	State and local sources (Booneville cost is $2.0 Million, Atlantic cost is $2.5 million, and Hillis cost is $2.0 million)

Table 5.9 (continued): Long-range (5-20 years) freight rail projects (section 4 of 13)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
CN and UP	Rail Access Improvement at Fort Dodge	Provide enhanced rail access to CN and UP in the Fort Dodge area at a certified industrial site located in Tara, west of Fort Dodge. Options could potentially include an industrial spur and transload facility.	Enhance capacity, availability of transloading services, and rail system access.	TBD	State and local sources
BSV and UP	Boone Industrial Park Upgrade Phase III	Replace UP interchange to provide increased capacity and install new 1300-foot siding to improve rail car sorting.	Increase operating capacity, efficiency, and safety.	TBD	State, local, and private sources
IAIS	Bridge Modifications at Victor	Complete modifications to bridges that restrict the movement of high-wide loads due to the truss construction at Victor (Newton Subdivision MP 278.1).	Increase operating capacity, efficiency, and safety.	$5,100,000	State and local sources
IAIS	Industrial Park Construction at West Des Moines	Construct rail served industrial parks to expand rail access to customers in growing industrial areas in central Iowa.	Enhance multimodal capacity, transloading services, and rail system access.	TBD	Federal, state, and local sources
IAIS and UP	Bypass Track at Des Moines	IAIS has trackage rights over UP between East Des Moines and Short Line Junction in Des Moines. Project would construct a bypass track for IAIS around UP Short Line Yard to add capacity and allow IAIS to operate through the terminal without restrictions.	Increase operating capacity, efficiency, and safety.	TBD	Federal, state, and local sources
IAIS	Flood Mitigation at Des Moines	Address flood prone areas at Des Moines (Council Bluffs Subdivision MP 359.04-MP 362.25).	Increase operating capacity, efficiency, and safety, and mitigate against the potential for storm-related damage to the rail network and delays to freight transportation.	TBD	Federal, state, and local sources

Table 5.9 (continued): Long-range (5-20 years) freight rail projects (section 5 of 13)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
CN and UP	Rail Access Improvement at Fort Dodge	Provide enhanced rail access to CN and UP in the Fort Dodge area at a certified industrial site located in Tara, west of Fort Dodge. Options could potentially include an industrial spur and transload facility.	Enhance capacity, availability of transloading services, and rail system access.	TBD	State and local sources
BSV and UP	Boone Industrial Park Upgrade Phase III	Replace UP interchange to provide increased capacity and install new 1300-foot siding to improve rail car sorting.	Increase operating capacity, efficiency, and safety.	TBD	State, local, and private sources
IAIS	Bridge Modifications at Victor	Complete modifications to bridges that restrict the movement of high-wide loads due to the truss construction at Victor (Newton Subdivision MP 278.1).	Increase operating capacity, efficiency, and safety.	$5,100,000	State and local sources
IAIS	Industrial Park Construction at West Des Moines	Construct rail served industrial parks to expand rail access to customers in growing industrial areas in central Iowa.	Enhance multimodal capacity, transloading services, and rail system access.	TBD	Federal, state, and local sources
IAIS and UP	Bypass Track at Des Moines	IAIS has trackage rights over UP between East Des Moines and Short Line Junction in Des Moines. Project would construct a bypass track for IAIS around UP Short Line Yard to add capacity and allow IAIS to operate through the terminal without restrictions.	Increase operating capacity, efficiency, and safety.	TBD	Federal, state, and local sources
IAIS	Flood Mitigation at Des Moines	Address flood prone areas at Des Moines (Council Bluffs Subdivision MP 359.04-MP 362.25).	Increase operating capacity, efficiency, and safety, and mitigate against the potential for storm-related damage to the rail network and delays to freight transportation.	TBD	Federal, state, and local sources

Table 5.9 (continued): Long-range (5-20 years) freight rail projects (section 6 of 13)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
IAIS	Flood Mitigation at Pleasant Hill	Address flood prone areas at Pleasant Hill (Newton Subdivision MP 352.25-MP 353.0).	Increase operating capacity, efficiency, and safety, and mitigate against the potential for storm-related damage to the rail network and delays to freight transportation.	TBD	Federal, state, and local sources
IAIS	Industrial park construction at Altoona	Construct rail served industrial parks to expand rail access to customers in growing industrial areas in central Iowa.	Enhance multimodal capacity, transloading services, and rail system access.	TBD	Federal, state, and local sources
IAIS	Construct rail served industrial parks in the Des Moines metro area	Expansion of rail access to customers in growing industrial areas such as West Des Moines, Altoona, and Mitchellville.	Enhance multimodal capacity, transloading services, and rail system access.	TBD	Federal, state, and local sources
IAIS	Council Bluffs Transload	Expansion of existing tracks and laydown areas including paving and storm water management and improved roadway access.	Enhance multimodal capacity, transloading services, and rail system access.	TBD	Federal, state, and local sources
IAIS	Industrial Park Construction at Mitchellville	Construct rail served industrial parks to expand rail access to customers in growing industrial areas in central Iowa.	Enhance multimodal capacity, transloading services, and rail system access.	TBD	Federal, state, and local sources
IAIS	Flood Mitigation at Colfax	Address flood prone areas at Colfax (Newton Subdivision MP 334.25-MP 336.0).	Increase operating capacity, efficiency, and safety, and mitigate against the potential for storm-related damage to the rail network and delays to freight transportation.	$6,300,000	Federal, state, and local sources
IAIS	Yard Expansion at Newton	Reconfigure and expand IAIS Newton Yard to support increase in multimodal and transload opportunities including wind blades, truck to rail transloading, and additional grain capacity. Expand yard to support increased traffic. Longer tracks needed to improve interchange efficiency with Class I carriers.	Enhance multimodal capacity, transloading services, and rail system access.	$18,000,000	State and local sources

Table 5.9 (continued): Long-range (5-20 years) freight rail projects (section 7 of 13)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
UP	Capacity Improvements between Des Moines and Lineville	Enhance line capacity by constructing additional sidings on the UP Trenton Subdivision between Des Moines and the Iowa/Missouri state line at Lineville.	Increase operating capacity, efficiency, and safety.	TBD	Federal, state, and local sources
IANR	Transload, Cross-Dock, and Industrial Siding Construction at Forest City	Construct a transload facility, cross-dock facility, and an industrial siding in an industrial park area on the North Central Iowa Rail Corridor.	Enhance multimodal capacity, transloading services, and rail system access.	TBD	State and local sources (Total capital cost TBD; a feasibility study for the improvements could be conducted for approximately $45,000)
CN and CPKC	Construct an Intermodal Facility in the Dubuque Area	Develop an intermodal facility in the Dubuque Area with potential access to CN and CPKC.	Enhance multimodal capacity, availability of intermodal services, and rail system access.	TBD	Federal, state, and local sources
IAIS	Construct a Transload Facility at Wilton	Develop a transload facility on the IAIS Iowa City Subdivision at Wilton to serve Eastern Iowa.	Enhance capacity, availability of transloading services, and rail system access.	TBD	State and local sources
UP	Capacity Improvements near Mason City	Enhance operating capacity on the UP Mason City Subdivision in the Mason City Area, potentially through the closure and/or separation of grade crossings and enhancement of siding capacity.	Increase operating capacity, efficiency, and safety.	TBD	Federal, state, and local sources

Table 5.9 (continued): Long-range (5-20 years) freight rail projects (section 8 of 13)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
UP	Capacity Improvements to UP Sioux City and Worthington Subdivisions in Western Iowa	Enhance line capacity by constructing additional sidings on the UP Sioux City Subdivision between California Junction and Sioux City and on the UP Worthington Subdivision between Le Mars and the Iowa/Minnesota state line near Sibley, potentially through the enhancement of existing sidings and/or construction of additional siding capacity.	Increase operating capacity, efficiency, and safety.	TBD	Federal, state, and local sources
CPKC	Yard Capacity in Dubuque	Enhance rail yard capacity near Garfield Avenue in Dubuque. The Project could also potentially include the extension of additional yard tracks or the extension of existing yard tracks.	Increase operating capacity, efficiency, and safety.	TBD	State and local sources
CIC	Track Geometry improvements on Eight Avenue Curve in Cedar Rapids	The current 18-degree curve on the CIC at Eighth Street in Cedar Rapids limits train size and motive power options for train operations, which increases the number of trains and the volume of congestion. Project could potentially improve the track geometry so that the curve is not as restrictive.	Increase operating capacity, efficiency, and safety.	TBD	Federal, state, and local sources
CIC, CN, IANR, and UP	Fourth Street Rail Corridor at Cedar Rapids	Address the traffic congestion and safety issues in the Fourth Street rail corridor that is a shared-use, mostly single-track urban corridor hosting operations for CIC, CN, IANR, and UP, and has several grade crossings.	Improve safety, capacity, and efficiency, and reduce highway congestion and emissions.	TBD	Federal, state, and local sources

Table 5.9 (continued): Long-range (5-20 years) freight rail projects (section 9 of 13)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
UP	Flood Mitigation at Cedar Rapids, Beverly, Montour, and Missouri Valley-Council Bluffs/ Omaha at Cedar Rapids	Address flood prone areas on the UP Clinton Subdivision in Cedar Rapids, Beverly Yard, and Montour, and on the UP Omaha Subdivision between Missouri Valley and Council Bluffs/ Omaha.	Increase operating capacity, efficiency, and safety, and mitigate against the potential for storm-related damage to the rail network and delays to freight transportation.	TBD	Federal, state, and local sources
IAIS	Bridge Modifications at Marengo	Complete modifications to bridges that restrict the movement of high-wide loads due to the truss construction at Marengo (Newton Subdivision MP 268.6).	Improve safety, capacity, and efficiency.	$4,800,000	State and local sources
IAIS	Extend Siding at Hills	Extend sidings on the IAIS Council Bluffs Subdivision to accommodate longer train lengths and increased traffic.	Improve safety, capacity, and efficiency.	$2,500,000	State and local sources (Booneville cost is $2.5 Million, Atlantic cost TBD, and Hills cost TBD)
UP	Third Main Track at Cedar Rapids and Clinton	Enhance line capacity by constructing a third main track on the UP Clinton Subdivision at terminal areas only in Clinton and Cedar Rapids.	Increase operating capacity, efficiency, and safety.	TBD	Federal, state, and local sources
CN	South Port Yard Capacity at Dubuque	Enhance rail yard capacity near South Port. This could potentially include the extension of additional yard tracks or the extension of existing yard tracks.	Increase operating capacity, efficiency, and safety	TBD	State and local sources
CN	Rehabilitate or Replace the Existing Mississippi River Bridge at Dubuque	Rehabilitate or replace the existing CN Mississippi River swing-swan bridge between Dubuque and East Dubuque, IL.	Increase operating capacity, efficiency, and safety.	TBD	Federal, state, and local sources

Table 5.9 (continued): Long-range (5-20 years) freight rail projects (section 10 of 13)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
UP	Replace the UP Mississippi River Bridge at Clinton	Replace the existing UP Mississippi River swing bridge at Clinton. This location has also been recognized as an operations bottleneck, owing to delays incurred by trains that are delayed as a result of the need to open and close the bridge for barge traffic on the Mississippi River.	Increase operating capacity, efficiency, and safety.	TBD	Federal, state, and local sources
IAIS	Transload and Intermodal Facility Construction between Iowa City and Davenport	Develop a transload and intermodal facility on the IAIS Iowa City Subdivision to serve eastern Iowa.	Enhance multimodal capacity, transloading services, and rail system access.	TBD	State and local sources
IAIS and CPKC	Replace Government Bridge over the Mississippi River at Davenport	Replace the existing Government Bridge over the Mississippi River between Davenport and Rock Island, IL.	Increase operating capacity, efficiency, and safety.	$380,000,000	Federal, state, and local sources (Total capital cost identified in study completed by Bi-State Regional Commission)
BNSF and CPKC	Replace Crescent Bridge over the Mississippi River at Davenport	Replace railroad bridge that is functionally obsolete and cannot handle 286K rail car weights.	Increase operating capacity, efficiency, and safety.	TBD	Federal, state, and local sources
IAIS	Davenport Elevated Trainway	Height of railroad bridges restricts vehicle traffic in downtown Davenport. Existing railroad clearance of around 11 ft. could be improved to 13.5 ft. on three main bridges. Delays railroad traffic following vehicle strikes while waiting for inspection.	Improve safety, capacity, and efficiency.	$16,000,000	State and local sources
IAIS	Flood Mitigation at Moscow	Address flood prone areas along the Cedar River at Moscow (Iowa City Subdivision MP 211.75-MP 212.75).	Increase operating capacity, efficiency, and safety, and mitigate against the potential for storm-related damage to the rail network and delays to freight transportation.	TBD	Federal, state, and local sources

Table 5.9 (continued): Long-range (5-20 years) freight rail projects (section 11 of 13)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
BJRY	Yard Expansion at Burlington	Construct an additional 3000 feet of yard track that would provide storage for up to 60 rail cars.	Improve safety, capacity, and efficiency.	TBD	State, local, and private sources
IANR	Expand Capacity at Bryant Yard in Waterloo	Expand yard capacity to accommodate the convergence of traffic from three IANR subdivisions (Cedar Rapids, Manly, and Oelwein) and provide sufficient trackage to classify trains at Waterloo.	Increase operating capacity, efficiency, and safety.	TBD (Note: Total capital cost TBD; $75,000 for a project feasibility study)	Federal, state, and local sources
BNSF	Replace the Mississippi River Bridge at Fort Madison	Replace the existing BNSF Mississippi River swing-span bridge to address the operational bottleneck and delays incurred by trains as a result of the need to open and close the bridge for barge traffic. The time typically required to stop trains, open the bridge for river traffic, return the bridge to its original position, and restore normal railroad operations cause delays to BNSF, Amtrak, and vehicular traffic that shares the bridge.	Increase operating capacity, efficiency, and safety.	TBD	Federal, state, and local sources
KJRY	Address Operating Bottleneck on the Existing Mississippi River Bridge at Keokuk	The bridge closes for rail traffic to accommodate barge passage on the river during navigation season. The time required to stop trains, open the bridge for river traffic, return the bridge to its original position, and restore normal railroad operations cause delays to KJRY. Note also that the bridge cannot handle 286K railcars.	Increase operating capacity, efficiency, and safety.	TBD	Federal, state, and local sources

Table 5.9 (continued): Long-range (5-20 years) freight rail projects (section 12 of 13)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
KJRY	Transload Facility Expansion at Keokuk	Expand and enhance a KJRY transload facility to serve southeastern Iowa.	Enhance multimodal capacity, transloading services, and rail system access.	TBD	State and local sources
KJRY	Flood Mitigation at Keokuk	Address the flood prone area along the Mississippi River between Keokuk and Hamilton, IL.	Increase operating capacity, efficiency, and safety, and mitigate against the potential for storm-related damage to the rail network and delays to freight transportation.	TBD	Federal, state, and local sources
MULTIPLE	Railroad Revolving Loan and Grant Program	This program administered by Iowa DOT provides financial assistance to improve rail facilities that will create jobs, spur economic activity and improve the rail transportation system in Iowa.	Improve safety, capacity, efficiency, resiliency, and economic development.	TBD	State sources (Note: this program receives annual appropriations)
MULTIPLE	Track and Bridge Infrastructure Upgrades to Accommodate 286K Railcars	Note that there are several segments of the Iowa rail network that were identified during the railroad outreach as being incapable of handling 286K railcars; however, no specific rail line segments were specifically identified for the upgrades by stakeholders during outreach undertaken for the State Rail Plan.	Improve the operating capacity, efficiency, and safety of the state rail network.	TBD	Federal, state, and local sources

Table 5.9 (continued): Long-range (5-20 years) freight rail projects (section 13 of 13)

Railroad(s)	Project	Description	Benefits	Estimated Capital Cost	Potential Funding Source (s)
MULTIPLE	Statewide Grade Crossing Improvement and Upgrade Projects (Federal Highway-Railroad Crossing Safety Program)	Includes anticipated annual funding from the Federal Highway- Railroad Crossing Safety Program (approximately $5.178 Million per year) to upgrade crossings with passive warning devices including crossbucks to active warning devices including flashing light signals and gate arms; upgrading existing signals; improve crossing surfaces; and to provide low-cost improvements such as increased sight distance, medians, widened crossings, or to close crossings.	Improve grade crossing signals and surfaces, safety, and efficiency and reduce highway congestion through routine infrastructure investment.	$88,026,000	Federal and state sources (Approximately $5.178 Million per year on average, based upon current program funding. For years 5-21 inclusive funding would be approximately $96.9 M)
MULTIPLE	Statewide Grade Crossing Improvement and Upgrade Projects (State Highway-Railroad Surface Repair Program)	Includes anticipated annual funding from the State Highway-Railroad Crossing Surface Repair Program (approximately $900,000 per year) to promote safety through surface replacement programs at public highway-railroad grade crossings	Improve grade crossing surfaces, safety, and efficiency and reduce highway congestion through routine infrastructure investment.	$15,300,000	Federal and state sources (Approximately $900,000 per year on average, based upon current program funding. For years 5-21 inclusive funding would be approximately $15.3 M)
MULTIPLE	Statewide Grade Crossing Safety Fund	Includes funding for a portion of the maintenance costs for traffic control devices activated by the approach or presence of a train installed under the Highway-Railroad Crossing Safety Program.	Improve grade crossing safety and efficiency through routine infrastructure investment.	$11,900,000	Federal and state sources (Approximately $700,000 per year on average, based upon current program funding. For years 5-21 inclusive funding would be $11.9 M)

Total Costs Identified: $738,819,000

Table 5.10: Summary of short- and long-range projects

Category	Number of studies	Total Costs Identified
Short-range (1-4 years) passenger rail projects	2	$18,800,000
Short-range (1-4 years) freight rail projects	63	$550,742,936
Long-range (5-20 years) passenger rail projects	10	$1,081,750,000
Long-range (5-20 years) freight rail projects	60	$738,819,000
		$2,390,111,936

Note: Not all projects have costs identified at this time.

Rail Funding Shortfall

Through the planning process conducted for the State Rail Plan, Iowa DOT has facilitated comprehensive stakeholder and public outreach to determine needs in the state, which are identified in the RSIP. Benefits of these projects and studies to Iowa and the region include:

- Improved rail access and service
- Improved reliability of the state's rail network
- Improved rail safety
- Improved mobility
- Enhanced rail network capacity
- Savings in transportation costs to shippers and receivers
- Enhanced multimodal connectivity
- Diversion of freight from truck to rail
- Improved environmental benefits such as decreased fuel consumption, traffic congestion, and air emissions
- Reduced road maintenance and "build sooner" costs
- Enhanced economic development
- Enhancement of Iowa's position in the global marketplace

Present and anticipated short-term federal and state funding availability is presently insufficient to support implementation of the studies and projects identified and described for Iowa in the RSIP. Additional federal and state funding will be essential for Iowa to realize these benefits through the implementation of these projects and studies.

6. COORDINATION AND REVIEW

This chapter describes how Iowa DOT involved stakeholders in the coordination necessary to develop the Iowa State Rail Plan (SRP). Stakeholders included shippers; modal operators; transportation academics; logistics organizations and service providers; current and potential passenger rail users' industrial and manufacturing sectors; state, regional, county, and city government agencies; economic development and business interests; and the general public.

6.1 Public and Agency Participation

State

The Rail Team in the Iowa DOT Modal Transportation Bureau is primarily responsible for rail planning and policy at Iowa DOT and manages various federal and state rail programs. The Systems Planning Bureau creates comprehensive system and modal transportation plans for the state and maintains rail data and map products. These two Bureaus were the primary developers of the Plan.

However, rail planning also involves other bureaus within the Iowa DOT as well as other state agencies. The following partners provided support for the development of the Plan and were given the opportunity to provide input on the Draft Plan before it was finalized: the Iowa Transportation Commission; the Iowa DOT (District Offices, Modal Transportation Bureau, and Systems Planning Bureau); and the Iowa Economic Development Authority.

Local

Iowa DOT regularly collaborates with Iowa's nine metropolitan planning organizations (MPO) and 18 regional planning affiliations (RPA) on different transportation planning efforts. In spring 2024, Iowa DOT conducted an online survey that targeted public sector stakeholders, including MPOs, RPAs, city officials, and county representatives. Distributed through the Local Systems Bureau in coordination with MPOs and RPAs, the survey remained open from April 1 to June 19, 2024. Respondents were asked to identify their professional role, then identify locations on a map and highlight specific rail-related concerns. Multiple submissions were permitted.

These partners were also given the opportunity to provide input on the Draft Plan, ensuring their perspectives were considered.

Public

A public input period was open during February and March 2025. An online portal on the Iowa DOT webpage was provided for stakeholders and the general public to review the Draft Plan and provide any comments to be considered.

6.2 Coordination with Neighboring States

Iowa DOT understands how crucial it is to coordinate with neighboring states on rail services and corridor management. This means not only building direct partnerships, but also reviewing state and regional rail plans developed together with these states. To encourage this collaboration, Iowa DOT shared the Draft Plan with neighboring states for their feedback and has already started discussions about rail corridor proposals for the Corridor Identification and Development (Corridor ID) program.

6.3 Stakeholder Involvement

Stakeholder engagement activities are crucial for Iowa DOT to understand current rail and freight movements across the state and identify key issues. Outreach efforts included delivering presentations to targeted stakeholder groups, holding committee meetings, conducting focused interviews with specific stakeholders, and managing online surveys. This section outlines each of these elements, and section 6.4 lists the input that was identified. Findings from these engagement exercises were incorporated into each chapter of this Plan.

Rail Advisory Committee (RAC)

The RAC helps guide Iowa DOT in creating a safe and efficient rail transportation system by providing advice on policies, programs, and investments. The committee consists of representatives from all operating railroads in Iowa and meets at least twice per year to discuss challenges, emerging trends, and legislative issues affecting rail transportation.

Presentations were delivered at the December 14, 2023, March 7, 2024, and October 28, 2024 RAC meetings, to outline the work to be undertaken in developing the Plan and to solicit feedback from stakeholders regarding the vision, goals, and rail service needs within the state. Interactive polling and mapping exercises were also utilized to gather input from railroad representatives.

Input from the RAC was utilized in Chapter 3, Freight Inventory and Performance; Chapter 4, Planning Considerations; and Chapter 5, Rail Service and Investment Program.

Passenger Rail Advisory Committee (PRAC)

The PRAC has been meeting regularly since 2008 to discuss passenger rail planning in the state. Members include Iowa DOT, cities, MPOs/RPAs, Amtrak, freight railroads, and passenger rail advocacy organizations. During the PRAC meeting on April 22, 2024, in Des Moines, Iowa, the rail team shared information about the development of the Plan and feedback was gathered from stakeholders on passenger rail service needs. An interactive polling exercise was utilized to facilitate this engagement.

Input from the PRAC was utilized in Chapter 2, Passenger Inventory and Performance; Chapter 4 Planning Considerations; and Chapter 5, Rail Service and Investment Program.

Freight Advisory Council (FAC)

The FAC is a group of Iowa-based public and private stakeholders serving as an advisory body to Iowa DOT on freight mobility policies, programs, and investments. This group was created in 2012 as a forum to assist with understanding the complexities associated with freight movements through education, discussion, and review. Members include representatives of the agriculture, energy, distribution, logistics, and multimodal transportation industries, as well as state and local government agencies.

Presentations outlined the development process for the Plan at FAC meetings on December 15, 2023 and March 8, 2024. The objective was to engage freight stakeholders in providing feedback on the Plan and addressing rail service needs within the state. To facilitate this engagement, planners utilized interactive polling and mapping exercises to gather insights. At the June 14, 2024 FAC meeting, a draft statement about the vision, goals, and objectives of the Plan was provided to gather their input and thoughts.

Input from the FAC was utilized in Chapter 3, Freight Inventory and Performance; Chapter 4, Planning Considerations; and Chapter 5, Rail Service and Investment Program.

Railroads

Online Survey

An online survey was conducted from January 31 – February 29, 2024 to gather direct feedback from railroad companies operating in Iowa on railroad investments, infrastructure, and operations in Iowa. Stakeholders were notified about the survey via email to encourage widespread participation.

Winter Meetings

Every winter, Iowa DOT's Rail Team hosts meetings with each railroad operating in the state. Iowa DOT began having these regular Winter Meetings with railroads following the initiation of the Primary Surface Repair Program. These annual meetings are held after the construction season and have led to significant progress through collaboration with railroads, resulting in longer-lasting rebuilt crossings. Participants typically include roadmasters, their supervisors, signal maintenance staff, and the Public Works representative managing agreements.
Input from railroads on capital improvements, weight restrictions, vertical clearances, and other relevant issues was collected during the 2024 meetings, which were held on the following dates.

- January 31, 2024 – CPKC /DME
- February 7, 2024 – BNSF
- February 14, 2024 – UP
- February 21, 2024 – Shortlines
- February 29, 2024 – CN

Railroad Interviews

The last engagement initiative with railroads involved one-on-one calls with select railroads operating in Iowa, providing an additional platform for stakeholders to share their feedback on current issues and infrastructure conditions within the state's rail network and freight system. These conversations aimed to fill in any remaining gaps by gathering valuable insights and fostering continued collaboration, ensuring that stakeholder perspectives are utilized for addressing existing challenges and enhancing rail infrastructure. Calls were held on the following dates.

- June 18, 2024 - UP
- June 19, 2024 – BNSF
- June 19, 2024 – CN
- July 15, 2024 - CIC

6.4 Stakeholder Feedback

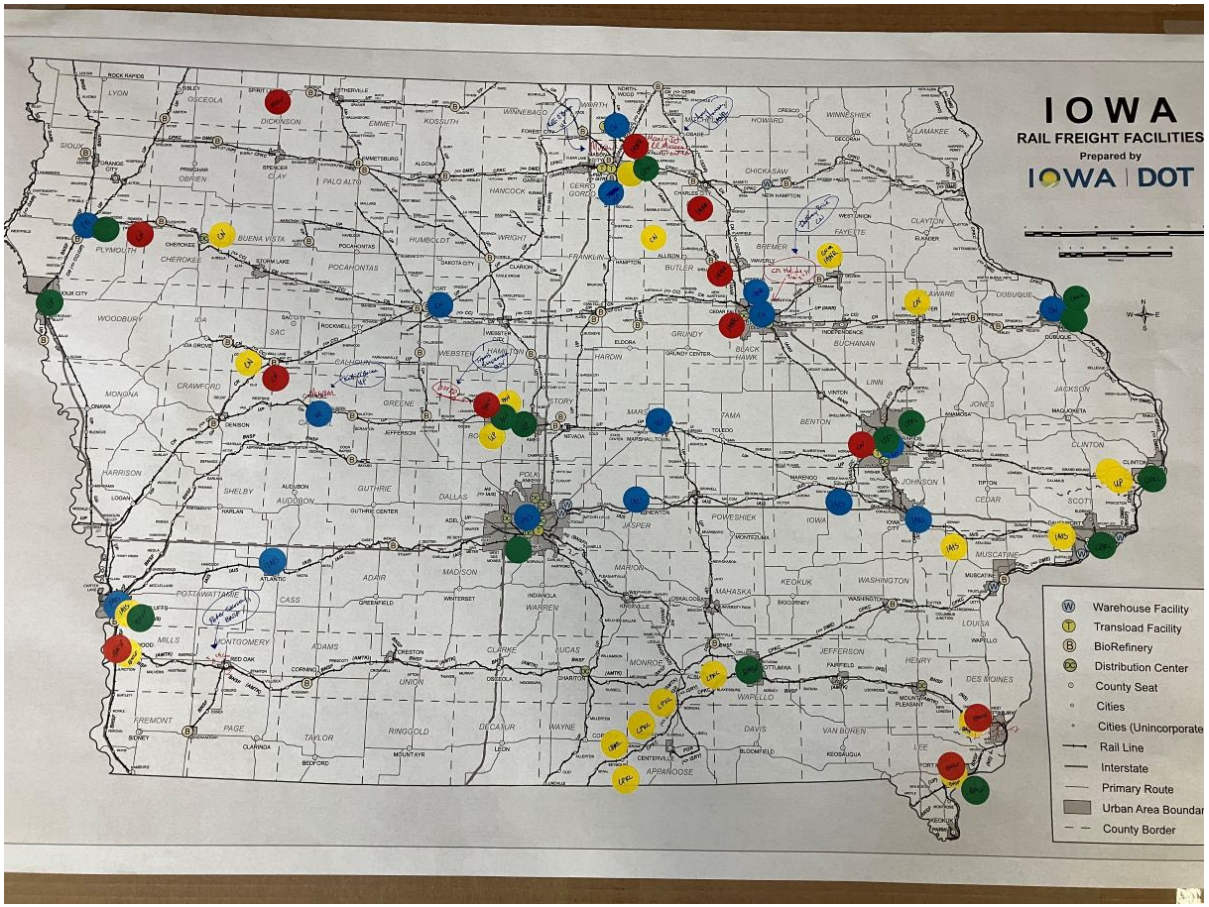
Summaries of public, agency, and stakeholder engagement efforts are outlined in sections 6.1, 6.2, and 6.3. Stakeholders provided input through mapping exercises, interactive polling exercises, surveys, and interviews. Summaries of resulting input are included in this section.

RAC and FAC Mapping Exercise

This exercise was conducted at the RAC and FAC meetings held in March 2024 to identify areas of the state with railroad issues and/or opportunities. Members were asked to place dots on a poster-sized state map to indicate their responses to the following questions. Output is shown in Figure 6.1.

1. What does good rail service look like to you? Where in the state do you see good rail service?
2. Where in the state do you see new opportunities for rail service?
3. Where in the state are there hurdles to rail service?
4. Where in the state are there opportunities for new rail/freight facilities?
5. Put a dot where your railroad has existing tourism trains or activities.
6. Put a dot where you think there are opportunities for rail tourism (including use of the rails or museum investments).

Figure 6.1: Results from RAC and FAC mapping exercise



Source: Iowa DOT

RAC, FAC, and MPO/RPA Interactive Exercise

This exercise was conducted at the RAC, FAC, and MPO/RPA Quarterly meetings in fall 2023 and spring 2024.

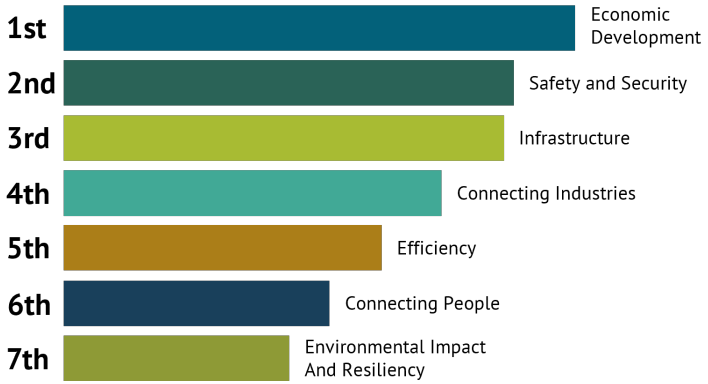
The questions in Figure 6.2 were asked of the RAC and FAC. RAC feedback is shown in the word clouds. MPO/RPA Quarterly attendees were also asked the following two questions to gather input for the Plan.

1. What do you think should be the "vision, goals, and objectives" of Iowa's Rail System?
2. Broadly speaking, what issues do you see in your region with rail service/operations?

RAC Vision and Goals Ranking

On October 28, 2024, RAC members were asked to rank the elements of the Iowa rail vision, with results shown in Figure 6.3.

Figure 6.3: RAC ranking of SRP goals



Source: Iowa DOT

Figure 6.2: RAC feedback from interactive exercise

1. What do you think should be the "vision, goals, and objectives" of Iowa's Rail System?

2. What current or forecasted trends/improvements should be considered when developing the State Rail Plan?

3. Are there any issues, service gaps, and/or needs that you're aware of impacting Iowa's Rail Network?

Source: Iowa DOT

Survey of Local Officials

The following issues and concerns were noted by local officials via their survey responses.

Safety Concerns

- Unsafe, rough, and deteriorating crossings create hazards.
- Blocked crossings from idle trains have increased safety issues and limited access.
- Long train blockages hinder access to emergency services and community connectivity.
- The railroad intersects a school crossing, highlighting safety risks for students.
- Gated crossings are needed for safety, as are improved pedestrian and ADA crossings.
- Concerns about hazardous materials being transported by longer trains without clear communication.

Traffic and Accessibility Issues

- Frequent extended crossing blockages disrupt traffic flow and emergency response.
- Multiple at-grade crossings impact traffic, with potential for grade separation or alternate alignment.
- A city seeking to reopen an abandoned crossing.
- Long trains delay traffic, especially during peak hours, affecting school and work commutes.
- A road was recently closed for an extended time due to rail operations, causing significant backups.

Infrastructure and Maintenance Needs

- A transload station is needed.
- Rail crossing maintenance is lacking.
- The railroad right-of-way is poorly maintained.

Communication and Collaboration Challenges

- Difficulty in obtaining responses from the railroad about deteriorating crossings and needed improvements.
- The railroad requires agreements for “engineering services,” complicating upgrade discussions.
- Communication with railroad personnel has been challenging, impacting project timelines.

Proposed Improvements

- Seeking funding to upgrade crossings with safety measures, including lights and signals.
- Advocating for expanded rail connections and improved passenger service between key cities.
- An unpaved trail crossing requires urgent construction for accessibility.

Community Impact and Environmental Concerns

- Noise pollution from idling trains affects nearby areas, complicating the passenger experience.
- Long trains blocking access to certain facilities or outdoor spaces.
- Snow buildup at crossings increases maintenance and safety concerns during winter.
- Railyard is in a disadvantaged community.

Survey of Railroads

When surveying railroads, the following issues, gaps in services, and needs arose.

Rail Safety and Education

- Rail safety education needs to be reintegrated into Iowa drivers' education.
- Promote unified outreach on rail safety and its environmental benefits over truck transport.
- Distracted driving has caused collisions with trains and motorists.
- The lack of perceived enforcement for traffic violations impacts rail and roadway safety.
- Trespassing on rail right-of-way.

Environmental Considerations

- Transition to cleaner locomotives using renewable diesel, hydrogen, and other clean fuel sources.

Infrastructure and Funding

- Additional assistance for local road authorities is needed to support grant applications for FRA funding.
- Need to increase Section 130 funding.
- Create a rail crossing elimination program in Iowa.
- Grade separations and consolidation of crossings.
- Longer trains require more funding for infrastructure improvements.
- Increased focus and funding for intermodal facilities.
- Proposed train stations on town outskirts raise accessibility concerns for riders.

Political Factors

- Lack of political support for passenger rail.

Planning and Development

- Context sensitive roadway planning should be prioritized near railroad corridors.
- Encourage planning agencies to consider rail impacts in residential and industrial land use plans and decisions.
- Plan with the perspective of rail as an economic development driver.
- Incentivize design considerations for new developments, emphasizing diagnostics before land use changes.
- Iowa DOT could consider utilizing some Interstate rights-of-way for passenger rail, as there is often enough space for both two lanes and railroad tracks.
- Develop technology, such as a smartphone app, to help motorists avoid occupied crossings by showing train locations.

APPENDIX A
Passenger Rail Stations

Table A.1 provides key characteristics of the six Iowa passenger rail stations served by Amtrak. These stations vary in size, location, and level of services offered, and are important in connecting Iowa residents to the regional and national rail networks.

Table A.1: Characteristics of Iowa Amtrak stations

Characteristics	Fort Madison	Burlington	Mount Pleasant	Ottumwa	Osceola	Creston
Address	1601 20th St	300 S Main St	418 N Adams St	210 W Main St	143 E Webster St	100 W Adams St
Ownership	BNSF	BNSF owns platform and track; City of Burlington owns facility and parking lot	BNSF	BNSF owns platform and track; Wapello County owns facility and parking lot	BNSF owns platform and track; City of Osceola owns facility and parking lot	BNSF
Served by	*Southwest Chief*	*California Zephyr*	*California Zephyr*	*California Zephyr*	*California Zephyr*	*California Zephyr*
Service Frequency	Twice Daily (EB AM; WB PM)	Twice Daily (EB AM; WB PM)	Twice Daily (EB AM; WB PM)	Twice Daily (EB AM; WB PM)	Twice Daily (EB AM; WB PM)	Twice Daily (EB AM; WB PM)
Depot Hours	10:00 AM – 1:00 PM and 5:00 PM – 6:30 PM M-F; closed weekends and holidays; lobby open daily	8:00 AM – 6:00 PM Daily	9:30 AM - 1:30 PM and 2:30 PM - 6:15 PM MTuWF; 9:30 AM – 3:45 PM and 4:45 PM – 6:15 PM Th; closed weekends and holidays	8:30 AM – 11:30 AM and 5:30 PM – 8:00 PM	7:00 AM – 10:00 AM and 7:00 PM – 9:00 PM daily	No Station Hours
Station Location Type	Urban	Urban	Urban	Urban	Urban	Urban
Parking	49 spaces (2 ADA)	40 spaces (2 ADA)	100 spaces (2 ADA)	30 spaces (3 ADA)	63 spaces (3 ADA)	19 spaces (2 ADA)
Shared Use	BNSF Facility	No	No	Wapello County Historical Museum	No	BNSF Facility
Intermodal and Non-Motorized Transportation Access	SEIRPC dial-a-ride service	SEIBUS local fixed route bus service and SEIRPC dial-a-ride service and bike racks	SEIRPC dial-a-ride service	Ottumwa transit fixed route local service	Southern Iowa Trolley dial-a-ride service	Southern Iowa Trolley dial-a-ride service
ADA Parking	2 spaces	2 spaces	2 spaces	3 spaces	3 spaces	2 spaces
Platform Type	Double	Double	Double	Double	Double	Double

Table A.1 (continued): Characteristics of Iowa Amtrak stations

Characteristics	Fort Madison	Burlington	Mount Pleasant	Ottumwa	Osceola	Creston
Lighting	Fully lit	Fully lit	Fully lit	Fully lit	Fully lit	Lighting along covering
Platform Construction	Concrete	Asphalt	Concrete/Brick/ Asphalt	Asphalt	Concrete	Concrete
Wi-Fi Availability	No	No	No	No	No	No
Shelter	Enclosed waiting area; covered platform	Enclosed waiting area	Enclosed waiting area	Enclosed waiting area	Enclosed waiting area	Enclosed waiting area; covered platform
Platform Amenities	Benches under covering	Canopy and benches	Benches	Topless Canopy	Benches	Benches under covering
Passenger Safety	Yellow safety stripe	Unmarked	Yellow safety stripe; yellow safety bumpy pads on concrete ADA boarding area	Yellow safety strip	Yellow safety stripe; red safety bumpy pads	Yellow safety stripe
ADA	Station wheelchair accessible, not all facilities are accessible	Station wheelchair accessible, not all facilities are accessible	Station wheelchair accessible, not all facilities are accessible	Station wheelchair accessible, not all facilities are accessible	Station wheelchair accessible, not all facilities are accessible	Station wheelchair accessible, not all facilities are accessible
Inside Seating Capacity	23 seats	14 seats	34 seats	40 seats	25 seats	19 seats
Water Fountain	Yes	No	Yes	Yes	No	No
Restrooms	Yes	Yes	Yes	Yes	Yes	Yes
ATM	No	No	No	No	No	No
Ticketing	Staffed counter with checked baggage; help with baggage	Unstaffed station; a caretaker opens and closes the station	Staffed counter with checked baggage; help with baggage; checked baggage service available on weekends	Staffed counter; help with baggage	Unstaffed station; Quik-Trak self-service ticketing kiosk	Unstaffed station
Payphone	No	No	Yes	No	No	No

Source: Amtrak

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APPENDIX B
Freight Railroad Profiles

The railroad profiles included in this appendix have been developed using annual reports and direct input from Iowa railroads.

Please contact the respective companies directly for detailed information on specific services and available resources.

BNSF Railway (BNSF)

www.bnsf.com
Emergency number: 800-832-5452
Corporate HQ: 2650 Lou Menk Dr., Fort Worth, TX 76131
General offices: Sioux City Iowa

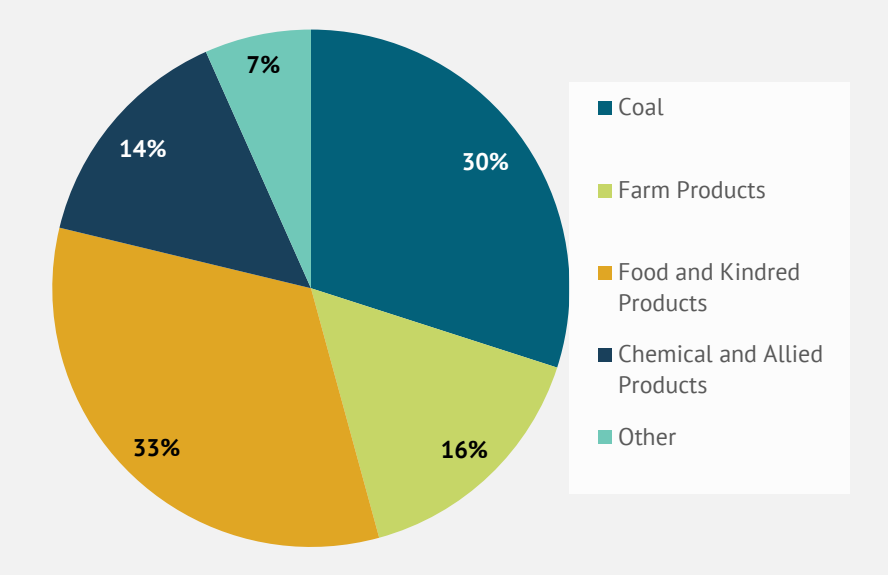
Overview

BNSF is a major U.S. railroad with over 32,000 miles across 28 states and three Canadian provinces. It covers the western two-thirds of the United States connecting Pacific ports to the Midwest, Southeast, and Southwest, and from Canada to Mexico. In Iowa, BNSF operates 659 miles, primarily from Burlington to Glenwood. Operations are on mainline tracks in the east, south, and west parts of the state as well as several branch lines.

BNSF in Iowa

Miles of track owned/leased/serviced in Iowa	624
Miles operated under trackage rights in Iowa	35
Employees in Iowa	701

Commodities



Transloading

Altoona, IA
Burlington, IA
Camanche, IA
Clinton, IA
Council Bluffs, IA
Des Moines, IA
Hawarden, IA
Mount Pleasant, IA
Ottumwa, IA
Sioux City, IA
Savanna, IL

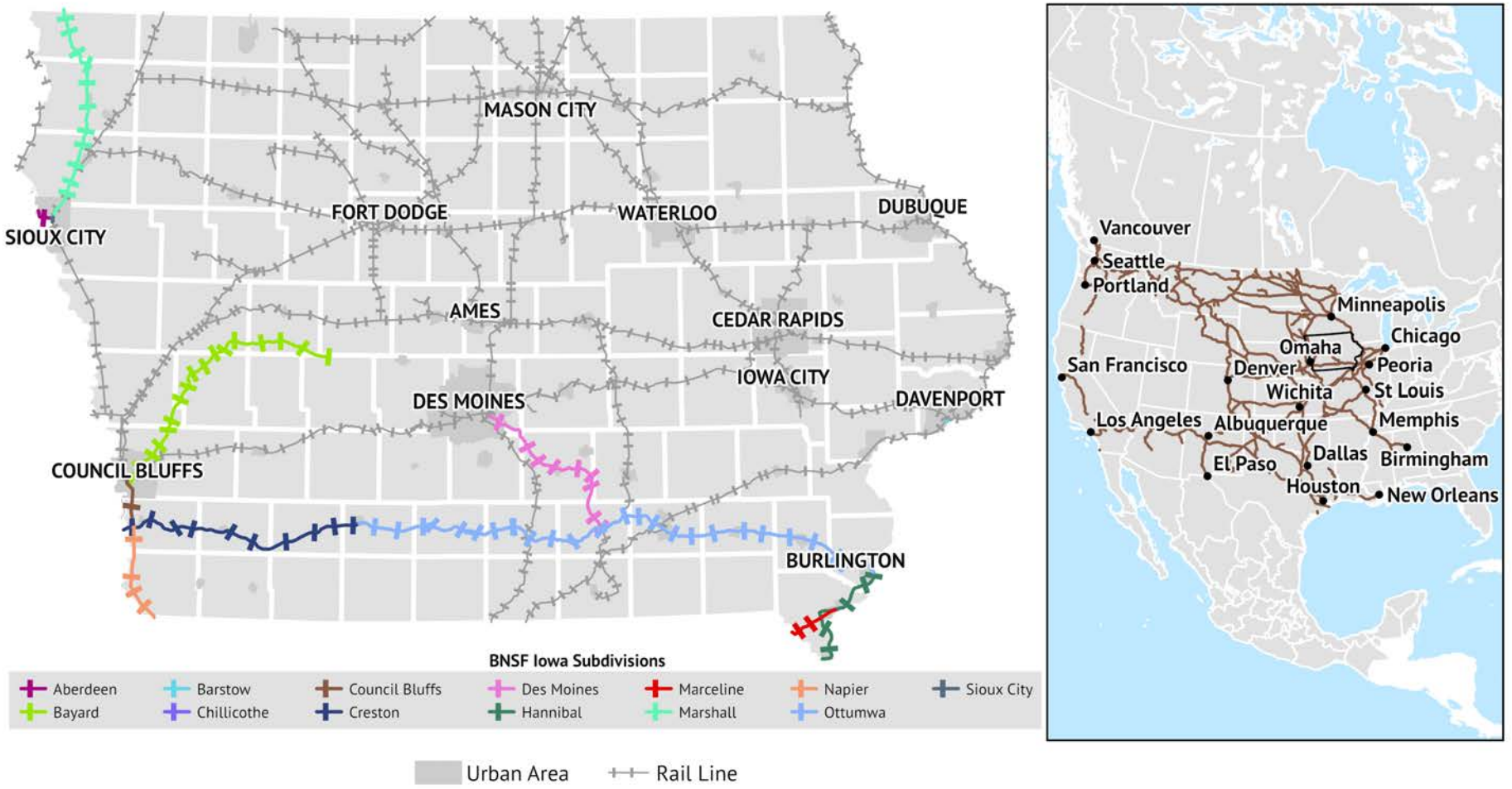
Intermodal

Omaha, NE: Omaha Intermodal Facility

Railroad Interchanges

Albia	APNC
Burlington	BJRY
Clinton	CPKC
Council Bluffs	CN
Davenport	IAIS
Des Moines	IAIS
Keokuk	KJRY
Mount Pleasant	BJRY
Ottumwa	BJRY, IAIS, CPKC
Quad Cities	CPKC
Sioux City	CN, DAIR

BNSF Service



BNSF Subdivisions in Iowa (section 1 of 2)

Subdivision	Division	Railroad Owner	Railroad operator	FRA Track Class	Track Configuration	Signal Type	Method of Operation	Maximum Allowable Weight	Clearances
Ottumwa	Chicago	BNSF	BNSF	Class 4	Two main tracks	A mixture of Centralized Traffic Control (CTC) and Automatic Block Signals (ABS)	A mixture of Centralized Traffic Control (CTC), Track Warrant Control (TWC), and Yard Limits (YL)	286,000 lbs.	Cleared for trailers (TOFC), double-stacks (COFC), hi-trilevel, and auto-max equipment
Creston	Nebraska	BNSF	BNSF	Class 4	A combination of two main tracks and one main track	Centralized Traffic Control (CTC)	Centralized Traffic Control (CTC)	286,000 lbs.	Cleared for trailers (TOFC), double-stacks (COFC), hi-trilevel, and auto-max equipment
Napier	Nebraska	BNSF	BNSF	Class 4	One main track with passing sidings	None	• Restricted Limits (RL) at Pacific Junction, IA • Track Warrant Control (TWC) Pacific Junction, IA-IA/ MO state line near Hamburg, IA	286,000 lbs.	Cleared for trailers (TOFC), double-stacks (COFC), hi-trilevel, and auto-max equipment
Sioux City	Nebraska	BNSF	BNSF	Class 3	One main track with passing sidings	None	Track Warrant Control (TWC)	286,000 lbs.	Not cleared for double-stacks, hi-trilevel, and auto-max equipment
Council Bluffs	Nebraska	BNSF	BNSF	Class 2	One main track with passing sidings	None	• Restricted Limits (RL) at Pacific Junction, IA • Track Warrant Control (TWC) Pacific Junction, IA-Council Bluffs, IA • Yard Limits (YL) at Council Bluffs, IA	286,000 lbs.	Cleared for trailers (TOFC), double-stacks (COFC), hi-trilevel, and auto-max equipment
Barstow	Chicago	BNSF	BNSF	Class1	One main track	None	GCOR Rule 6.28	263,000 lbs.	18’ 6” Above Top of Rail; can accommodate TOFC equipment and COFC equipment only one container high

BNSF Subdivisions in Iowa (section 2 of 2)

Subdivision	Division	Railroad Owner	Railroad operator	FRA Track Class	Track Configuration	Signal Type	Method of Operation	Maximum Allowable Weight	Clearances
Aberdeen	Twin Cities	BNSF	BNSF	Class 2/ Class 3	One main track with passing sidings	None	Restricted Limits (RL)	286,000 lbs.	Unknown
Des Moines	Chicago	BNSF	BNSF	Class 3	One main track with passing sidings	None	• Restricted Limits (RL) at Albia, IA • Track Warrant Control (TWC) Albia, IA-Des Moines, IA • Restricted Limits (RL) at Des Moines, IA • Yard Limits (YL) at Des Moines, IA	286,000 lbs.	Unknown
Bayard	Nebraska	BNSF	BNSF	Class 2	One main track with passing sidings	None	• Yard Limits (YL) at Council Bluffs, IA • Track Warrant Control (TWC) Council Bluffs, IA-Bayard, IA	286,000 lbs.	Unknown
Chillicothe	Chicago	BNSF	BNSF	Class 4	Two main tracks	Centralized Traffic Control (CTC)	Centralized Traffic Control (CTC)	286,000 lbs.	Cleared for trailers (TOFC), double-stacks (COFC), hi-trilevel, and auto-max equipment
Marceline	Chicago	BNSF	BNSF	Class 5	Two main tracks	Centralized Traffic Control (CTC) and Automatic Train Stop (ATS)	Centralized Traffic Control (CTC)	286,000 lbs.	Cleared for trailers (TOFC), double-stacks (COFC), hi-trilevel, and auto-max equipment
Marshall	Twin Cities	BNSF	BNSF	Class 4	One main track with passing sidings	None	Track Warrant Control (TWC)	286,000 Lbs.	Cleared For Trailer (TOFC) And Double-Stack (COFC) Equipment
Hannibal	Heartland	BNSF	BNSF	Class 3	One main track with passing sidings	None	Track Warrant Control (TWC)	286,000 lbs.	Clearance Above Top of Rail unknown; not cleared for double-stacks, hi-trilevel, and auto max equipment

Boone & Scenic Valley Railroad (BSV)

www.bsvrr.com
Emergency number: 515-433-0524
Corporate HQ: 225 10th St, P.O. Box 603, Boone, IA 50036

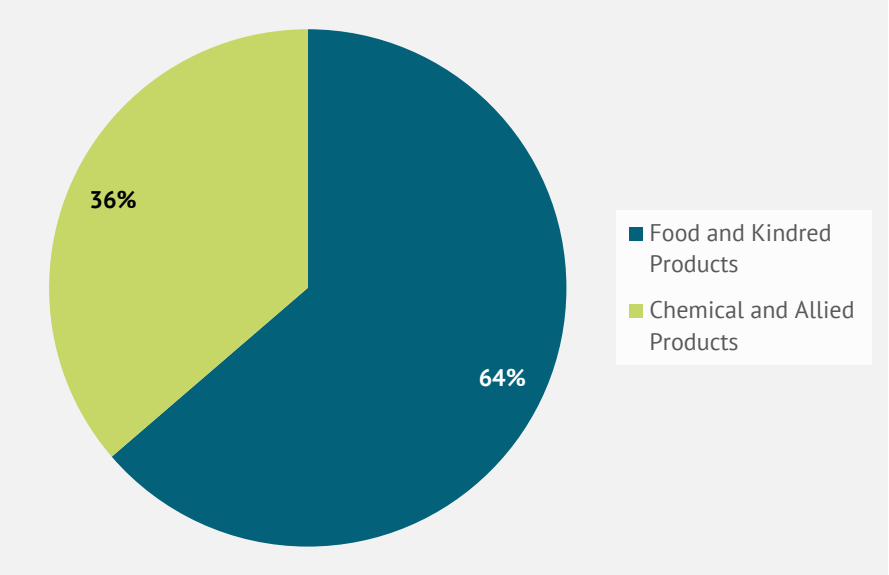
Overview

BSV, a nonprofit museum based in Boone, Iowa, was established in 1983 after acquiring 12 miles of track slated for abandonment by the Chicago and North Western Railway. That same year, a historical society was formed, and BSV began operating passenger excursion trains between Boone and Wolf. In February 2001, BSV expanded its operations by acquiring an additional 1.7 miles of right-of-way from Union Pacific Railroad, connecting downtown Boone to the Boone Industrial Park to support local industries. Currently, freight service is provided exclusively on this 1.7-mile section. BSV employs four individuals, all based in Iowa.

BSV in Iowa

Miles of track owned/leased/serviced in Iowa	1.7
Miles operated under trackage rights in Iowa	0
Employees in Iowa	4

Commodities



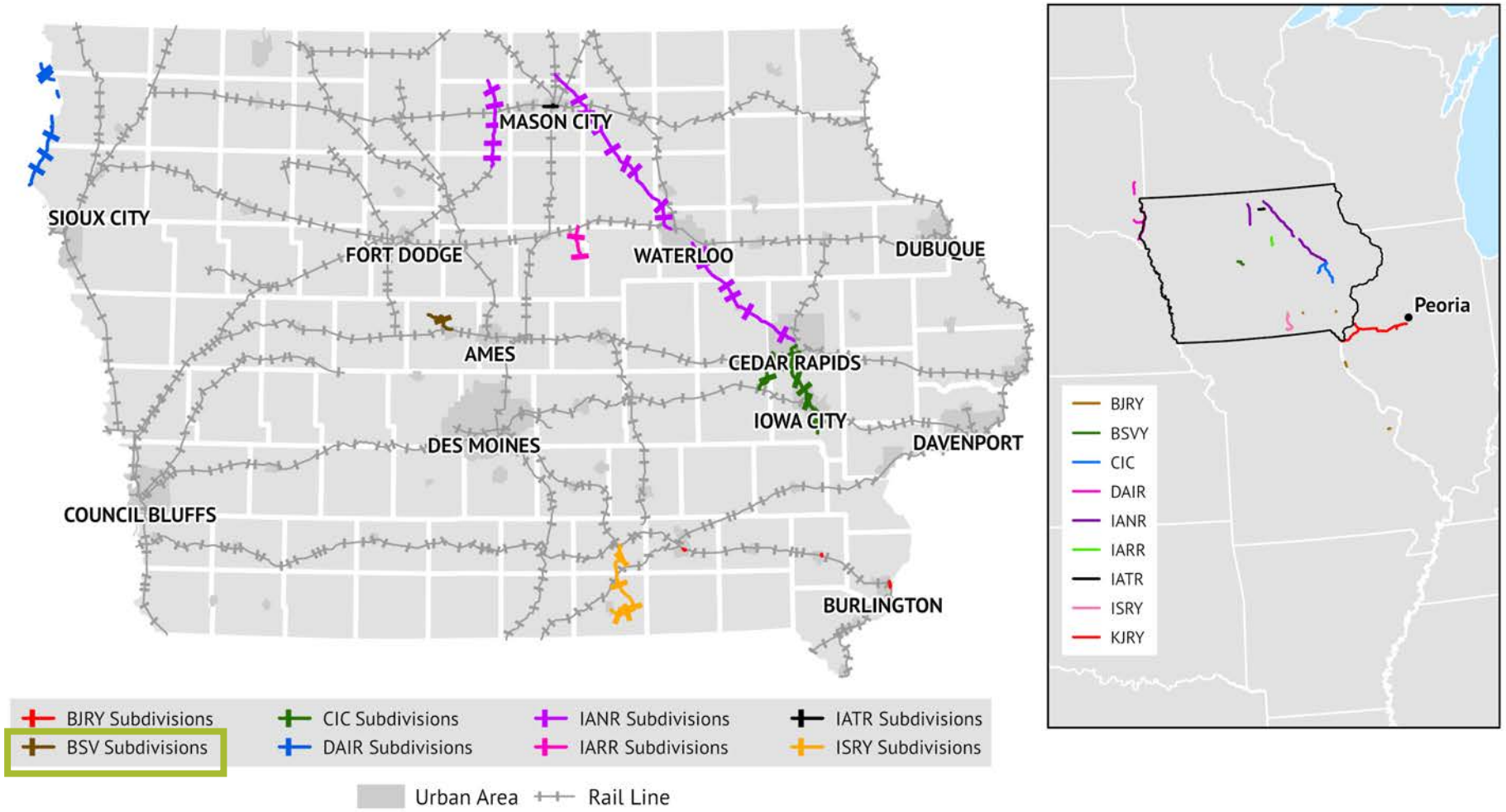
Transloading

Boone, IA

Railroad Interchanges

Boone	UP

Class III Service in Iowa and BSV Subdivisions



Subdivision	Railroad Owner	Railroad operator	FRA Track Class	Signal Type	Maximum Allowable Weight	Clearances
Boone	BSV	BSV	Class 1	None	268,000 lbs.	Unknown

Burlington Junction Railway (BJRY)

www.bjryrail.com
Emergency number: 888-753-6157
Corporate HQ: 200 Jefferson St., Burlington, IA 52601
Phone: 319-754-5000
General offices: 1510 Bluff Rd., P.O. Box 37, Burlington, IA 52601
Phone: 319-753-6157

Overview

BJRY is a shortline railroad that was established in 1985 and is headquartered in Burlington, Iowa. BJRY provides rail switching and commodity transloading services in Burlington, Mount Pleasant, Le Mars, and Ottumwa, Iowa, and locations across Illinois and Missouri.

BJRY in Iowa

Miles of track owned/leased/serviced in Iowa	5.8
Miles operated under trackage rights in Iowa	2.3
Employees in Iowa	26

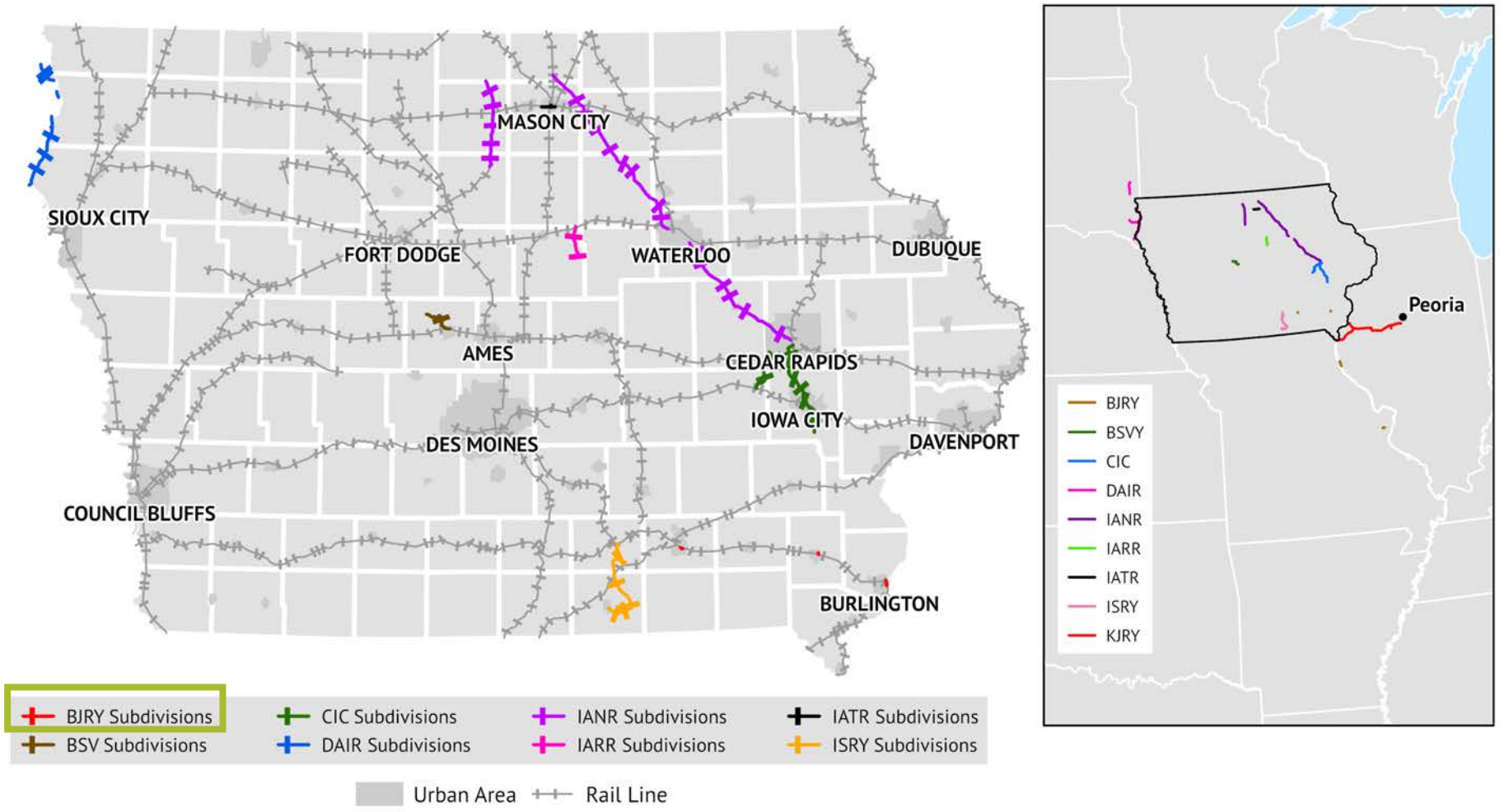
Transloading

Burlington, IA
Le Mars, IA
Mount Pleasant, IA
Ottumwa, IA

Railroad Interchanges

Burlington	BNSF
Le Mars	CN
Mount Pleasant	BNSF
Ottumwa	BNSF

Class III Service in Iowa and BJRY Subdivisions



Subdivision	Railroad Owner	Railroad operator	FRA Track Class	Signal Type	Maximum Allowable Weight	Clearances
Burlington; Le Mars; Mount Pleasant; Ottumwa	BJRY	BJRY	Class 1	None	286,000 lbs.	Unknown

CPKC Railway (CPKC)

Operates in Iowa as the Dakota, Minnesota, and Eastern Railroad (DME)
www.cpkcr.com/en
Emergency number: 800-716-9132
Corporate HQ: 7550 Ogden Dale Rd. SE, Calgary, AB T2C 4X9
General offices: 120 S Sixth St., Minneapolis, MN 55402

CPKC in Iowa

Miles of track owned/leased/serviced in Iowa	649.8
Miles operated under trackage rights in Iowa	38.9
Employees in Iowa	582

Transloading

Camanche, IA
Clayton, IA
Clinton, IA
Davenport, IA
Mason City, IA
Muscatine, IA
New Hampton, IA
Ottumwa, IA

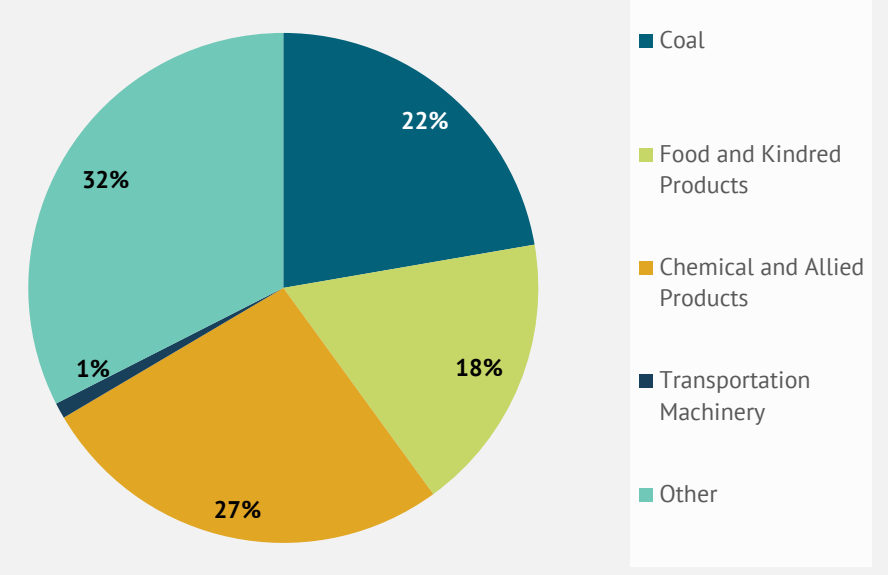
Railroad Interchanges

Clinton	UP, BNSF
Dubuque	CN
Mason City	UP
Moravia	ISRY
Nora Spring	IANR
Ottumwa	BNSF, NS
Quad Cities	IAIS, BNSF
Sheldon	UP

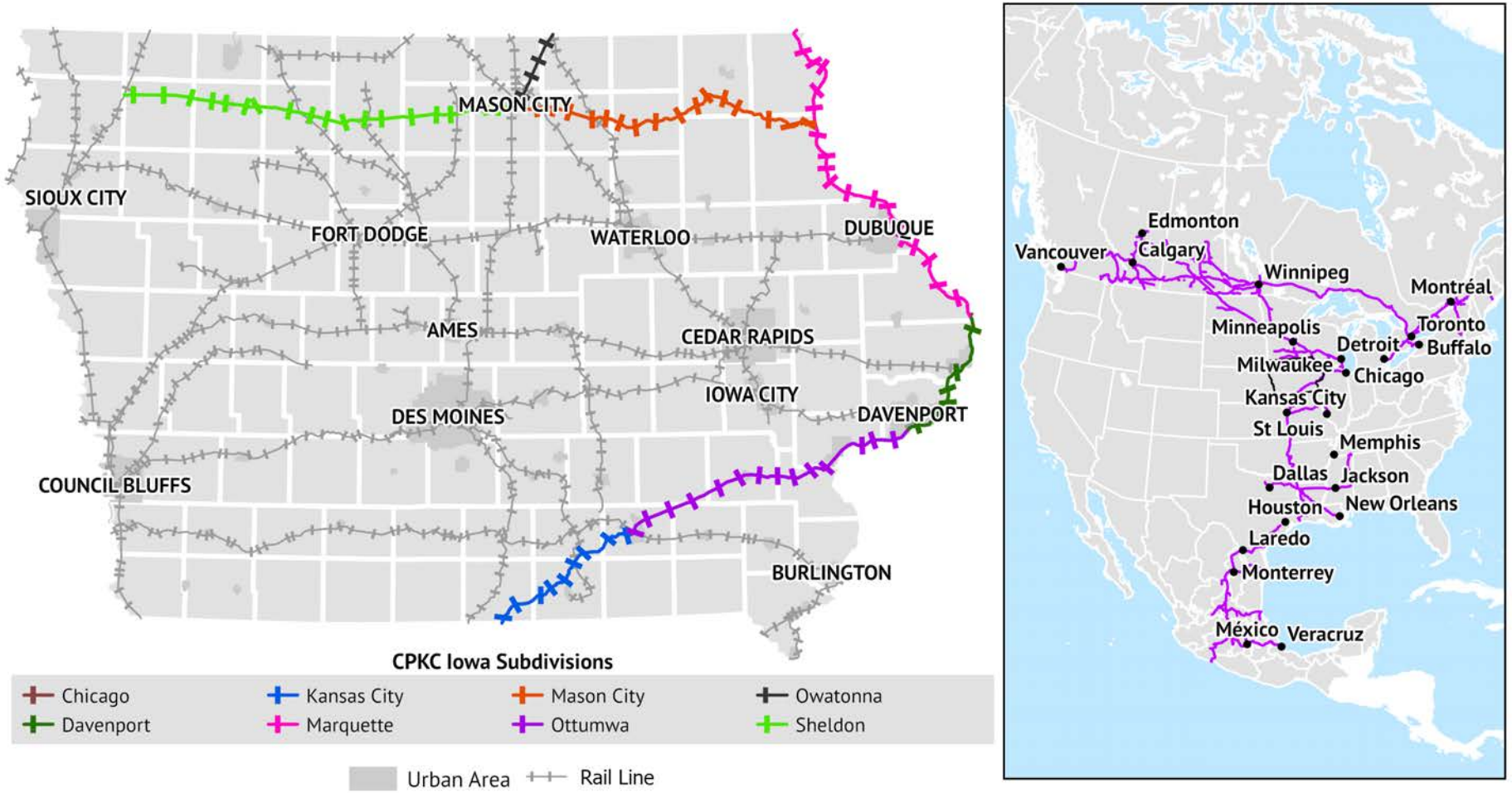
Overview

CPKC was born following the 2023 merger of two railroads – Canadian Pacific and Kansas City Southern. CPKC operates in Iowa through the DME. CPKC's 20,000-mile transcontinental network spans the U.S., Canada, and Mexico connecting ports like Montreal and Vancouver to key U.S. cities such as Chicago and Kansas City. Headquartered in Calgary, Alberta, with U.S. operations in Minneapolis, CPKC's Iowa routes run along the Mississippi River from the Minnesota border to Muscatine, crossing at Sabula toward Chicago, and extending to Ottumwa and on to the Missouri border, plus routes operating from Mason City west to Sheldon, east to Marquette, and north into Minnesota.

Commodities



CPKC Service



CPKC Subdivisions in Iowa (section 1 of 2)

Subdivision	Division	Railroad Owner	Railroad operator	FRA Track Class	Track Configuration	Signal Type	Method of Operation	Maximum Allowable Weight	Clearances
Davenport	U.S. Southern Region	CPKC (DME)	CPKC	Class 3	One main track with passing sidings	• Centralized Traffic Control (CTC) Sabula Junction, IA-Deer Creek, IA • Automatic Block Signals (ABS) North Wye Switch (Davenport), IA-Nahant, IA	• Centralized Traffic Control (CTC) Sabula Junction, IA-Deer Creek, IA • Track Warrant Control (TWC) Deer Creek, IA-North Wye Switch (Davenport), IA • Yard Limits (YL) North Wye Switch (Davenport), IA-Nahant, IA	The Davenport Industrial Railroad is limited by a bridge that can't support 286k, hindering major rail traffic interchanging with CPKC's transcontinental network.	Supports multi-level intermodal and automotive rail equipment up to 19' 1" above the rail.
Ottumwa	U.S. Southern Region	CPKC (DME)	CPKC	Class 3	One main track with passing sidings	• Centralized Traffic Control (CTC) Montpelier, Iowa-Heinz, IA; Fruitland, IA-Cotter, IA; Rutledge, IA-Ottumwa, IA • Automatic Block System (ABS) Nahant, IA-Montpelier, IA; Heinz, IA-Fruitland, IA	• Yard Limits (YL) at Nahant, IA • Centralized Traffic Control (CTC) Montpelier, IA-Heinz, IA; Fruitland, IA-Cotter, IA; Rutledge, Iowa-Ottumwa, IA • Track Warrant Control (TWC) Nahant, IA-Montpelier, IA; Heinz, IA-Fruitland, IA; Cotter, IA-Rutledge, IA • Yard Limits (YL) at Ottumwa, IA	286,000 lbs.	Supports multi-level intermodal and automotive rail equipment up to 19' 1" above the rail.
Sheldon	U.S. Southern Region	CPKC (DME)	CPKC	Class 2	One main track	None	• Yard Limits (YL) at Mason City, IA • Track Warrant Control (TWC) Mason City, IA-Sheldon, IA • Yard Limits (YL) at Sheldon, IA	286,000 lbs.	Accommodates trailer (TOFC) equipment not exceeding 17' 6" Above Top of the Rail

CPKC Subdivisions in Iowa (section 2 of 2)

Subdivision	Division	Railroad Owner	Railroad operator	FRA Track Class	Track Configuration	Signal Type	Method of Operation	Maximum Allowable Weight	Clearances
Chicago	U.S. Southern Region	CPKC (DME)	CPKC	Class 3	One main track	Centralized Traffic Control (CTC) IL/IA state line at Sabula, IA- Sabula Junction, IA	Centralized Traffic Control (CTC)	286,000 lbs.	Supports multi-level intermodal and automotive rail equipment up to 19' 1" above the rail.
Mason City	U.S. Southern Region	CPKC (DME)	CPKC	Class 3	One main track with passing sidings	None	• Yard Limits (YL) at Marquette, IA • Track Warrant Control (TWC) Marquette, IA-Mason City, IA • Yard Limits (YL) at Mason City, IA	286,000 lbs.	Accommodates trailer (TOFC) equipment not exceeding 17’ 6” Above Top of the Rail
Marquette	U.S. Southern Region	CPKC (DME)	CPKC	Class 3	One main track with passing sidings	Centralized Traffic Control (CTC) Sabula Junction, IA-Lake, IA	• Centralized Traffic Control (CTC) Sabula Junction, IA-Lake, IA • Track Warrant Control (TWC) Lake, IA-Wood (Dubuque), IA; Dubuque Junction, IA-IA/MN state line at New Albin, IA	286,000 lbs.	Supports multi-level intermodal and automotive rail equipment up to 19' 1" above the rail.
Kansas City-Ottumwa	U.S. Southern Region	CPKC (DME)	CPKC	Class 3	One main track with passing sidings	None	• Yard Limits (YL) at Ottumwa, IA • Track Warrant Control (TWC) Ottumwa, IA-IA/MN state line near Sewal, IA	286,000 lbs.	Supports multi-level intermodal and automotive rail equipment up to 19' 1" above the rail.
Owatonna	U.S. Southern Region	CPKC (DME)	CPKC	Class 3	One main track with passing sidings	None	• Yard Limits (YL) at Mason City, IA • Track Warrant Control (TWC) Mason City, IA-IA/MN state line at Lyle, MN	286,000 lbs.	Accommodates trailer (TOFC) equipment not exceeding 17’ 6” Above Top of the Rail

Cedar Rapids and Iowa City Railway Company (CRANDIC; CIC)

www.travero.com
Emergency number: 319-786-3645
Corporate HQ: 2330 12th St. SW, Cedar Rapids, IA 52404
Phone 319-786-3686

CRANDIC in Iowa

Miles of track owned/leased/serviced in Iowa	59.5
Miles operated under trackage rights in Iowa	22.7
Employees in Iowa	90

Transloading

Cedar Rapids, IA

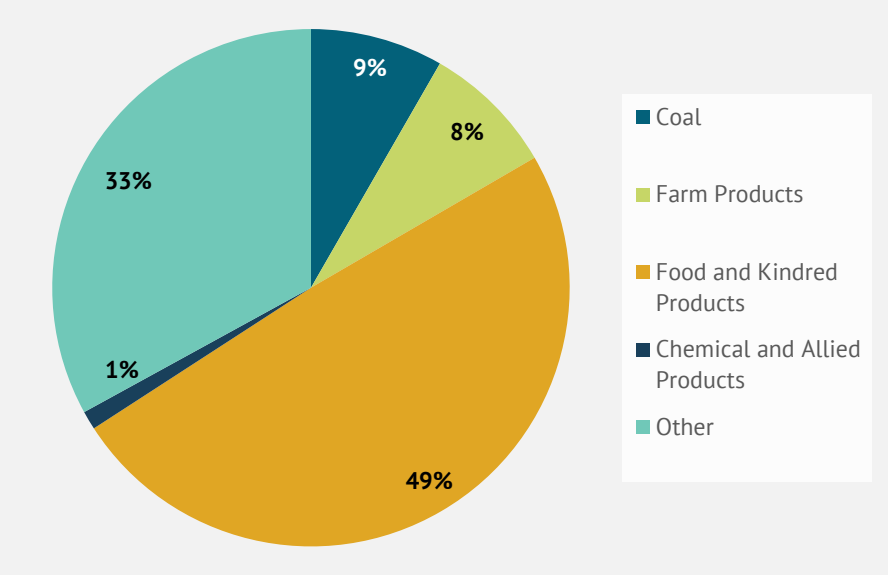
Major Existing Customers

Alliant Energy
Archer Daniels Midland Co.
Cargill
Ingredion
International Paper

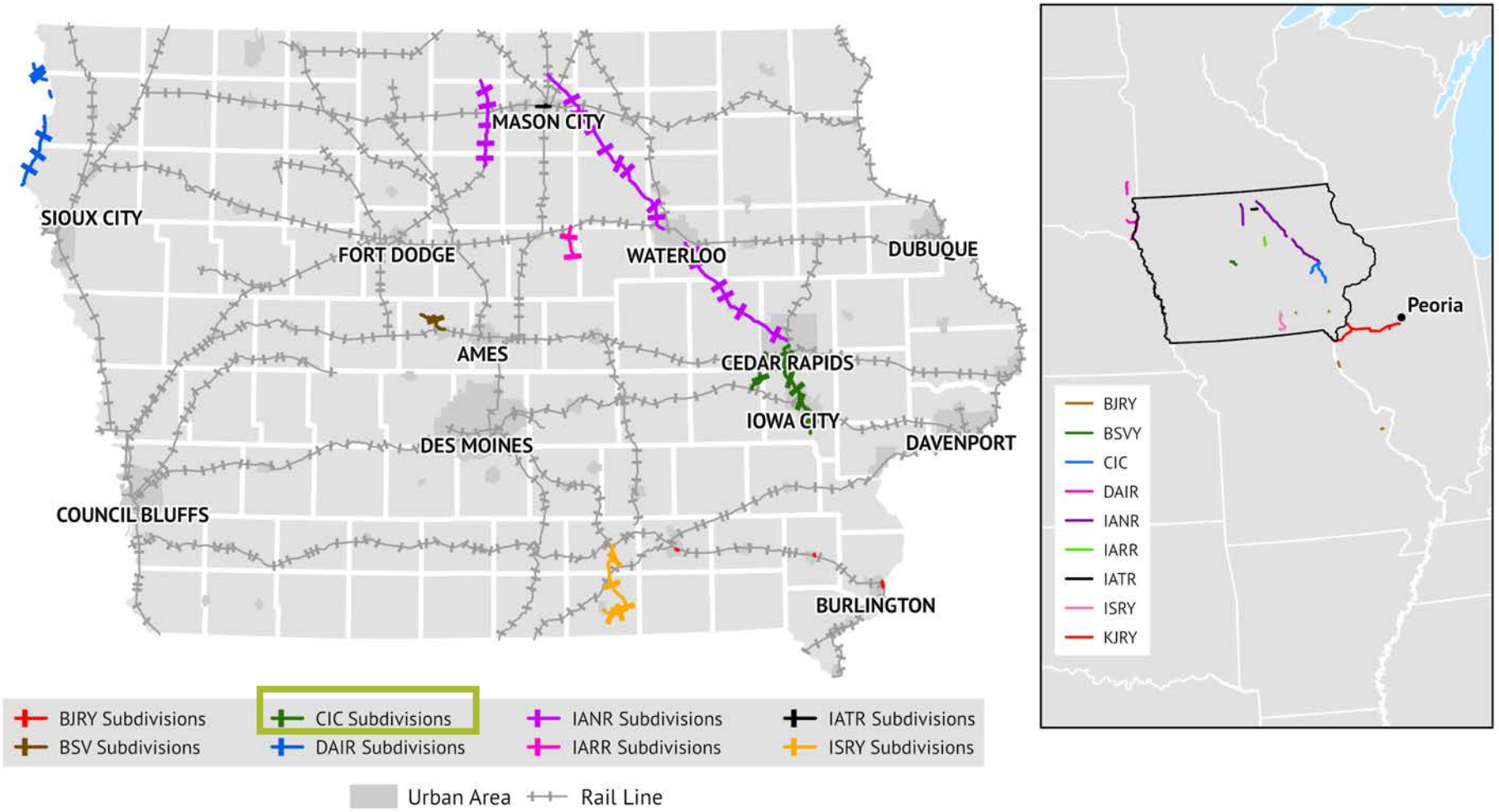
Overview

CRANDIC, owned by Travero, is a shortline railroad providing freight service between Cedar Rapids and Iowa City. It connects with Class I railroads UP and CN, as well as shortlines IANR and IAIS. Known for customer service and flexibility, CRANDIC plays a vital role in economic growth and industrial development in eastern Iowa.

Commodities



Class III Service in Iowa and CRANDIC/CIC Subdivisions



CRANDIC/CIC Subdivisions in Iowa

Subdivision	Railroad Owner	Railroad operator	FRA Track Class	Signal Type	Maximum Allowable Weight
Cedar Falls-Iowa Hills	CIC	IAIA	Class 1 / Class 2 (varies by segment)	None	286,000 lbs.
Cedar Rapids-Yocum	CIC	IAIS		None	286,000 lbs.
Other main tracks in Cedar Rapids	CIC	CIC		None	286,000 lbs.

Canadian National Railway (CN)

Operates in Iowa as Chicago Central & Pacific (CCP) and Cedar River Railroad (CEDR). CN is in the process of acquiring IANR.
www.cn.ca/en
Emergency number: 800-465-9239
Corporate HQ: 935 de La Gauchetiere St. W, Montreal PQ H3B 2M9
General offices: 17641 S. Ashland Ave., Homewood, IL 60430

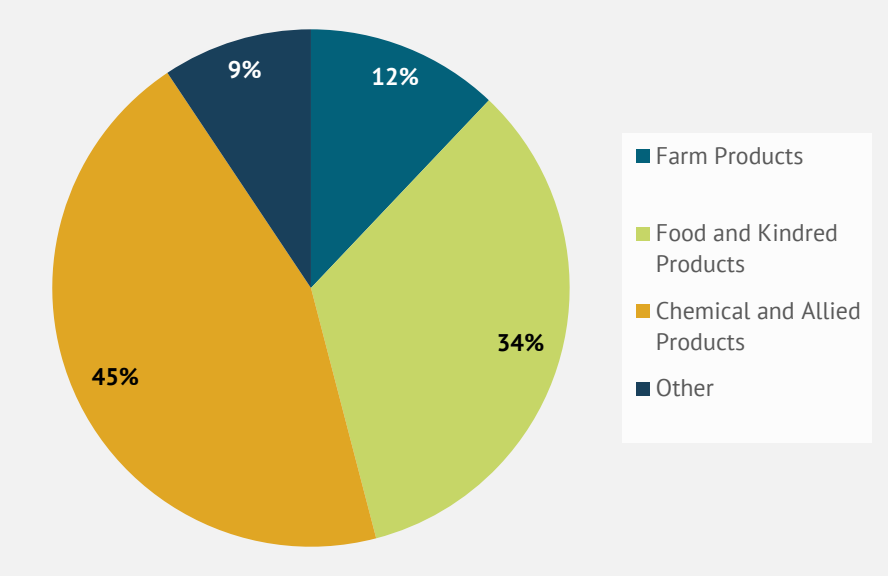
Overview

Through its subsidiaries CCP and CEDR, CN operates a vital rail network across Iowa from the Missouri River to the Mississippi River. CN transports a wide range of products, including food, machinery, chemicals, and primary metals, while also supporting a strong ethanol franchise with plants along the routes between Dubuque and Sioux City and Council Bluffs corridor. The largest rail yard in CN's Iowa network is in Waterloo.

BNSF in Iowa

Miles of track owned/leased/serviced in Iowa	596.3
Miles operated under trackage rights in Iowa	19.3
Employees in Iowa	182

Commodities



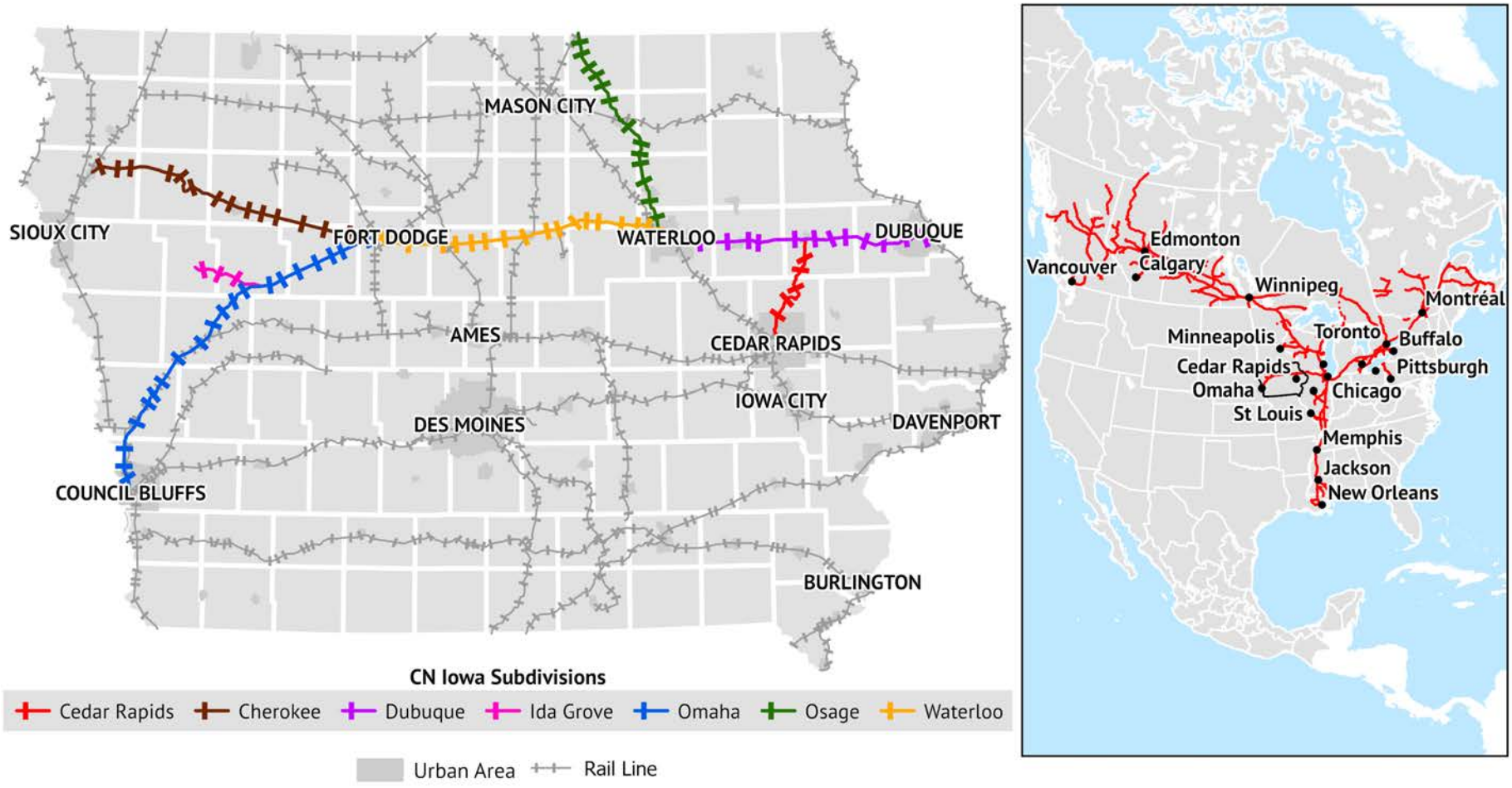
Transloading

Cedar Falls, IA
Cedar Rapids, IA
Cherokee, IA
Dubuque, IA
Le Mars, IA
Sioux City, IA
Williams, IA

Railroad Interchanges

Cedar Rapids	UP, CIC, IAIS, IANR	Iowa Falls	UP
Council Bluffs	IAIS, UP, BNSF	Sioux City	DAIR, UP, BNSF
Dubuque	CPKC	Waterloo	IANR, UP

CN Service


MASON CITY
SIOUX CITY
FORT DODGE
WATERLOO
DUBUQUE
AMES
CEDAR RAPIDS
IOWA CITY
DES MOINES
DAVENPORT
COUNCIL BLUFFS
BURLINGTON
CN Iowa Subdivisions
Cedar Rapids
Cherokee
Dubuque
Ida Grove
Omaha
Osage
Waterloo
Urban Area
Rail Line
Edmonton
Vancouver
Calgary
Winnipeg
Montréal
Minneapolis
Toronto
Buffalo
Cedar Rapids
Pittsburgh
Omaha
Chicago
St Louis
Memphis
Jackson
New Orleans

CN Subdivisions in Iowa (section 1 of 2)

Subdivision	Division	Railroad Owner	Railroad operator	FRA Track Class	Track Configuration	Signal Type	Method of Operation	Maximum Allowable Weight	Clearances
Dubuque	North Division - Iowa Zone	CN (CCP)	CN	Class 4	One main track with passing sidings	Centralized Traffic Control (CTC)	Centralized Traffic Control (CTC)	286,000 lbs.	Height above top of rail unknown; subdivision can accommodate Trailer on Flat Car (TOFC) equipment.
Waterloo	North Division - Iowa Zone	CN (CCP)	CN	Class 4	One main track with passing sidings and sections of two main tracks	• Centralized Traffic Control (CTC) Hilltop, Iowa-Waterloo, Iowa • Automatic Block Signals (ABS) at Waterloo, Iowa • Centralized Traffic Control (CTC) Waterloo, Iowa-Tara, Iowa	• Centralized Traffic Control (CTC) Hilltop, IA-Waterloo, IA • Yard Limits (YL) at Waterloo, IA • Centralized Traffic Control (CTC) Waterloo, IA-Tara, IA	286,000 lbs.	Height above top of rail unknown; subdivision can accommodate Trailer on Flat Car (TOFC) equipment.
Cherokee	North Division - Iowa Zone	CN (CCP)	CN	• Class 3 (Tara-Le Mars) • Class 4 (Le Mars-Sioux City)	One main track with passing sidings	Automatic Block Signals (ABS) Le Mars, Iowa-Sioux City, Iowa	• Yard Limits (YL) at Tara, IA • Track Authority (TA) Tara, Iowa-Le Mars, IA • Track Warrant Control (TWC) Le Mars, IA-Sioux City, IA • Rule 520 (Non-Main Track) at Sioux City, IA	286,000 lbs.	Height above top of rail unknown; subdivision can accommodate Trailer on Flat Car (TOFC) equipment.

CN Subdivisions in Iowa (section 2 of 2)

Subdivision	Division	Railroad Owner	Railroad operator	FRA Track Class	Track Configuration	Signal Type	Method of Operation	Maximum Allowable Weight	Clearances
Ida Grove	North Division - Iowa Zone	CN (CCP)	CN	Class 2	One main track with passing sidings	Centralized Traffic Control (CTC) at Ida, Iowa	Track Authority (TA)	286,000 lbs.	Unknown
Omaha	North Division - Iowa Zone	CN (CCP)	CN	Class 2	One main track with passing sidings	• Centralized Traffic Control (CTC) at Tara, IA • Centralized Traffic Control (CTC) at Ida, IA	• Track Authority (TA) Tara, IA-Council Bluffs, IA • Rule 520 (Non-Main Track) at Council Bluffs, IA	286,000 lbs.	Height above top of rail unknown; subdivision can accommodate Trailer on Flat Car (TOFC) equipment.
Cedar Rapids	North Division - Iowa Zone	CN (CCP)	CN	Class 3 / Class 2 (varies by segment)	One main track	None	• Rule 520 (Non-Main Track) at Manchester, IA • Track Authority (TA) Manchester, IA-Cedar Rapids, IA • Rule 520 (Non-Main Track) at Cedar Rapids, IA	286,000 lbs.	Height above top of rail unknown; subdivision can accommodate Trailer on Flat Car (TOFC) equipment.
Osage	North Division - Iowa Zone	CN (CEDR)	CN	Class 3	One main track	None	Track Authority (TA)	286,000 lbs.	Unknown

D & I Railroad (DAIR)

www.lgeverist.com/dirailroad.php
Emergency number: 800-843-7992
Corporate HQ: 350 S. Main Ave. Suite 400, Sioux Falls, SD 57104
Phone: 605-334-5000

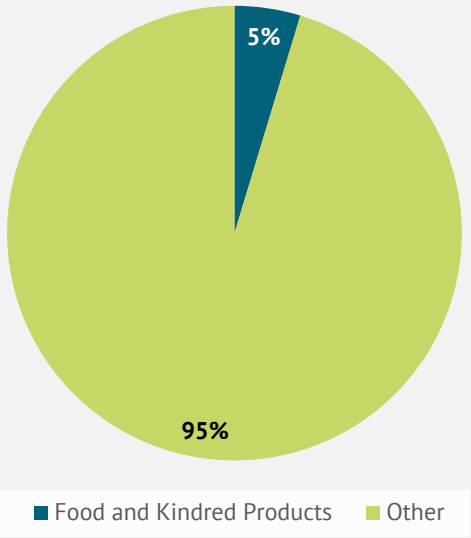
Overview

DAIR was established in 1981 following the bankruptcy of the Milwaukee Road. The State of South Dakota acquired most of the rail lines within the state, as well as a portion of the track miles extending into Iowa. Owned by L.G. Everist, Inc., DAIR plays a vital role in regional transportation, providing freight services and interchanging with major railroads—BNSF, CN, and UP—in Sioux City, Iowa. This strategic positioning enhances DAIR's ability to support local industries and facilitate broader national connectivity.

DAIR in Iowa

Miles of track owned/leased/serviced in Iowa	0
Miles operated under trackage rights in Iowa	42
Employees in Iowa	0

Commodities



Transloading

Hawarden, IA
Sioux City, IA
Various locations, CO

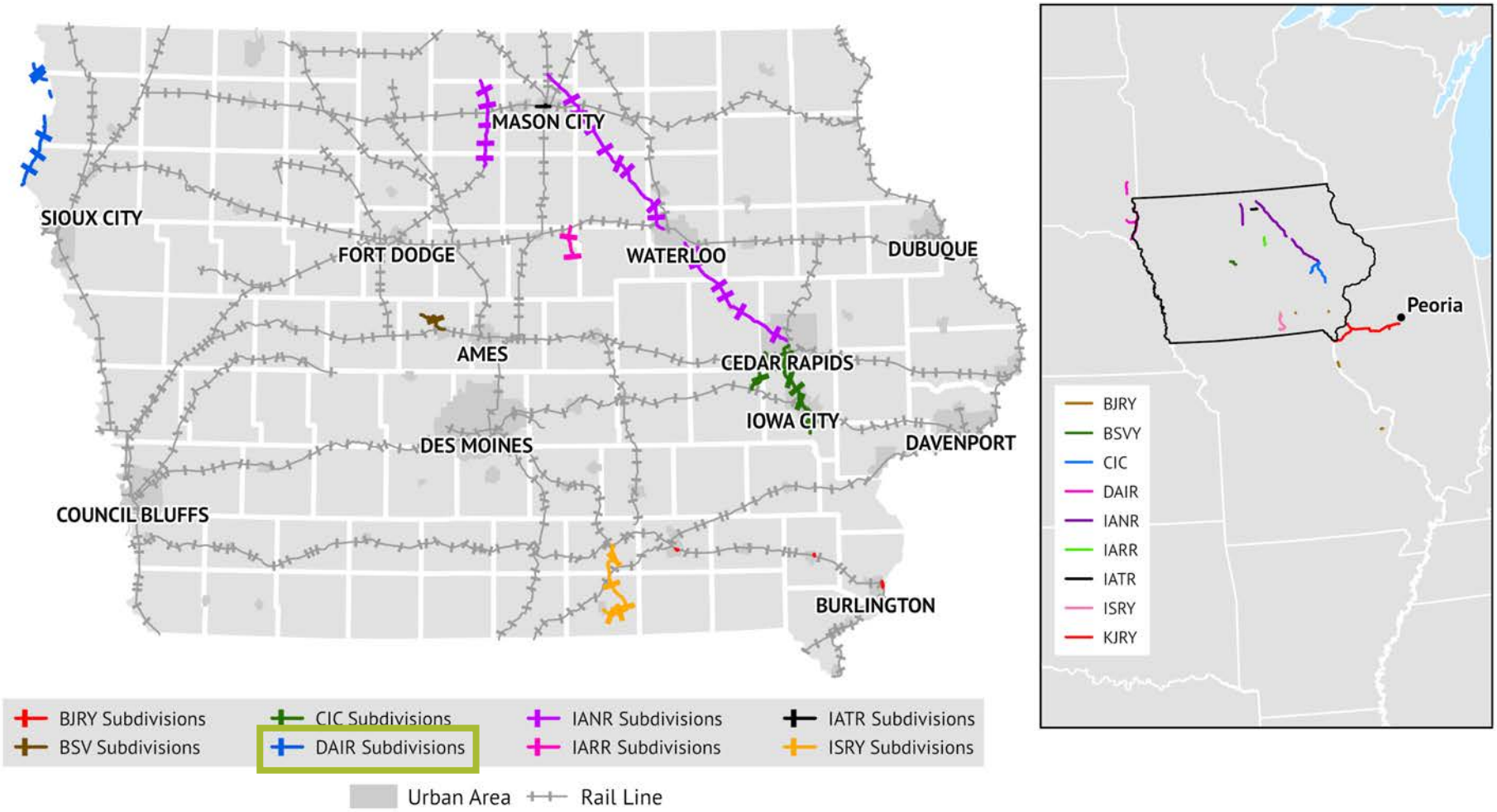
Railroad Interchanges

Sioux City, IA	BNSF, CN, UP
Sioux Falls, SD	BNSF

Major Existing Customers

L.G. Everist Inc.
Poet Biorefining - Hudson
Siouxland Energy Transload
GCC Dacotah Cement
Poet Nutrition
Prinsco Inc.
BX Civil & Construction Inc.

Class III Service in Iowa and DAIR Subdivisions



DAIR Subdivisions in Iowa

Subdivision	Railroad Owner	Railroad operator	FRA Track Class	Signal Type	Maximum Allowable Weight	Clearances
Sioux City-Iowa/South Dakota state line	BNSF	DAIR	Class 1	None	• 286,000 lbs. (DAIR Hawarden Subdivision in Iowa) • 286,000 lbs. (DAIR Beresford Subdivision in Iowa)	Unknown
DAIR Hawarden Subdivision State of South Dakota Sioux Valley Line	State of South Dakota	DAIR	Class 2	None		Unknown
DAIR Beresford Subdivision – State of South Dakota Sioux Valley Line	State of South Dakota	DAIR	Class 2	None		Unknown

Iowa Interstate Railroad (IAIS)

Also operates CBED Railway (CBRX) trackage (5 miles total) in Iowa.
www.iaisrr.com
Emergency number: 800-321-3891
Corporate HQ: 203 2nd St. SE, Suite 500, Cedar Rapids, IA 52404
Phone: 319-298-5400

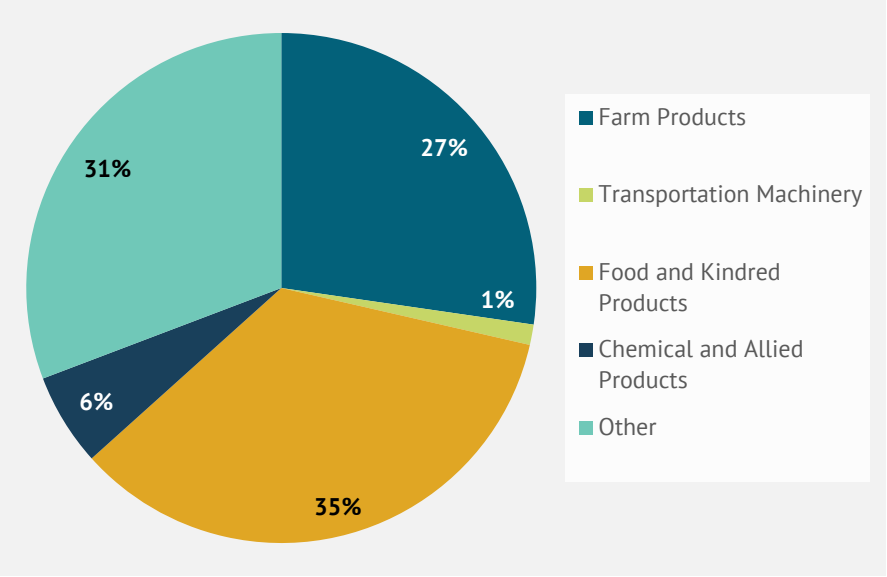
Overview

IAIS is one of the few regional railroads that connect with the entire Class I railroad network, including BNSF, UP, CN, CPKC, CSXT, and NS, at multiple interchange locations. The IAIS main line runs from Council Bluffs through Des Moines, Iowa City, and Davenport, Iowa, extending to Chicago and Peoria, Illinois. This extensive connectivity enhances IAIS's ability to serve regional industries.

IAIS in Iowa

Miles of track owned/leased/serviced in Iowa	305.3
Miles operated under trackage rights in Iowa	27.3
Employees in Iowa	210

Commodities



Transloading

Altoona, IA	Dexter, IA	West Liberty, IA
Atlantic, IA	De Soto, IA	Wilton, IA
Council Bluffs, IA	Newton, IA	Wiota, IA
Des Moines, IA		

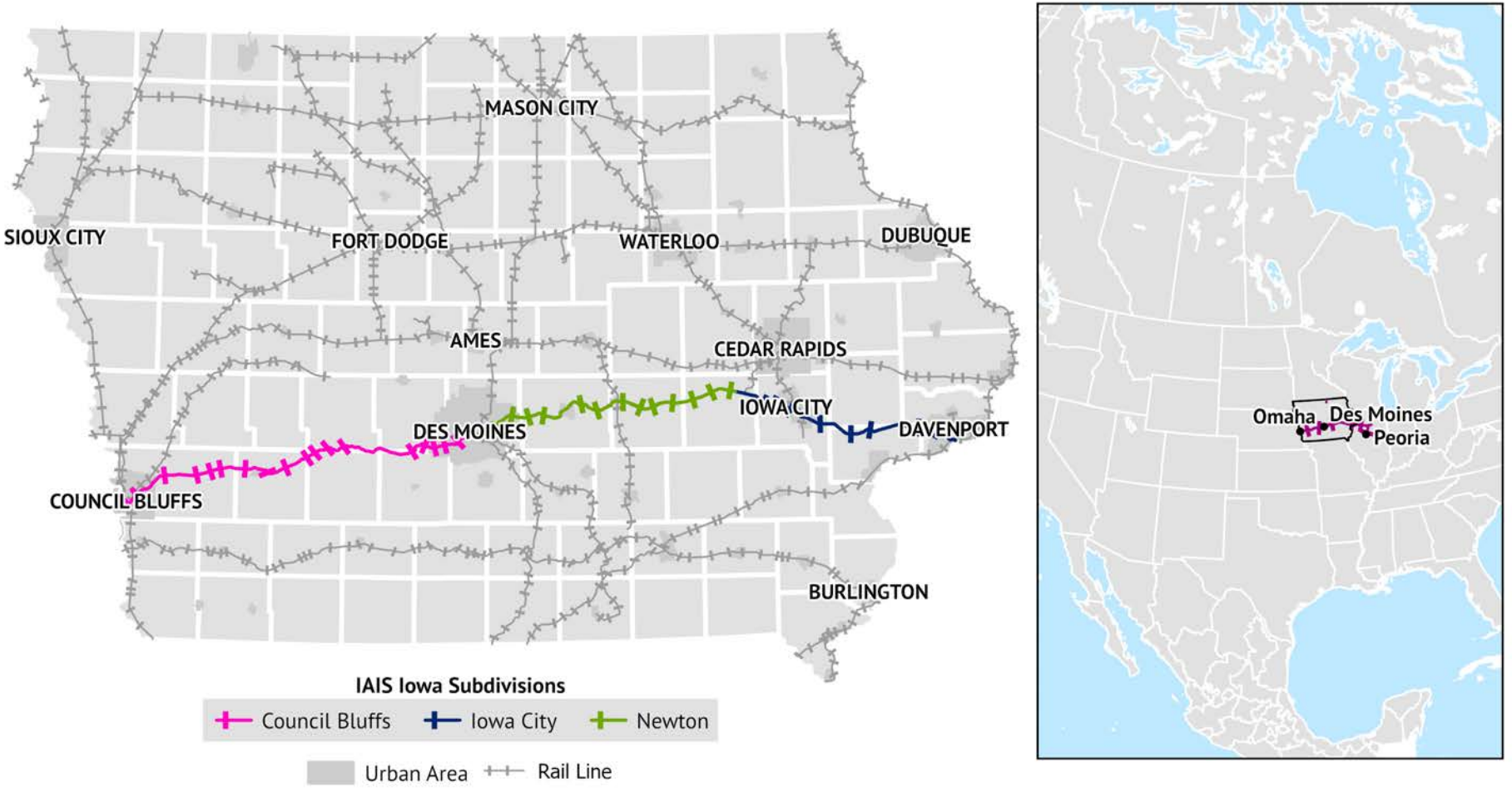
Intermodal

Council Bluffs, IA	Blue Island, IL

Railroad Interchanges

Blue Island, IL	IHB, CSXT, NS, CPRS, CN, UP, CFE, BNSF
Cedar Rapids, IA	CIC
Council Bluffs, IA	BNSF, UP, CN, CPKC
Davenport, IA/ Rock Island, IL	BNSF, CPRS
Des Moines, IA	BNSF, NS, UP
Iowa City, IA	CIC
Peoria, IL	TZPR, TPW, IMRR, NS, UP, BNSF, CN, KJRY
Utica, IL	CSXT

IAIS Service



IAIS Subdivisions in Iowa

Subdivision	Division	Railroad Owner	Railroad operator	FRA Track Class	Track Configuration	Signal Type	Method of Operation	Maximum Allowable Weight	Clearances
Iowa City	IAIS	IAIS	IAIS	Class 3	One main track with passing sidings	None	Track Warrant Control (TWC)	286,000 lbs.	Double stack capable (20' 2" above the top of the rail)
Newton	IAIS	IAIS	IAIS	Class 3	One main track with passing sidings	None	Track Warrant Control (TWC)	286,000 lbs.	Double stack capable (20' 2" above the top of the rail)
Council Bluffs	IAIS	IAIS	IAIS	Class 3	One main track with passing sidings	None	Track Warrant Control (TWC)	286,000 lbs.	Double stack capable (20' 2" above the top of the rail)
Cedar Rapids	IAIS Cedar Rapids subdivision (CIC subdivision 3)	CIC	IAIS	Class 2	One main track	None	Track Warrant Control (TWC)	286,000 lbs.	Double stack capable (21' 3" above the top of the rail)

Iowa Northern Railway (IANR)

IANR is in the process of being acquired by CN.
www.iowanorthern.com
Emergency number: 800-383-5810
Corporate HQ: 201 Tower Park Dr., Suite 300, Waterloo, IA 50701
Phone: 319-297-6000

Overview

IANR operates 217.3 miles of track in northeast Iowa running diagonally from Manly to Cedar Rapids, passing through key cities such as Mason City, Waterloo, and Cedar Rapids. IANR also maintains two branch lines: one connecting Waterloo to Oelwein and another running from Forest City south to Belmond. This network provides essential freight service to industries across the region, contributing to the economic vitality of northeast Iowa.

IANR in Iowa

Miles of track owned/leased/serviced in Iowa	174.3
Miles operated under trackage rights in Iowa	43
Employees in Iowa	113

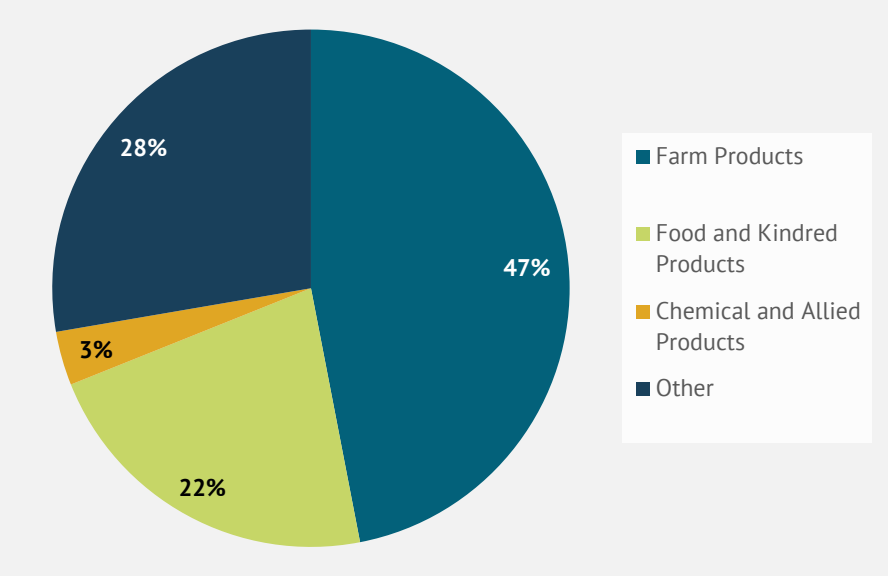
Transloading

Manly, IA
Shell Rock, IA
Waterloo, IA

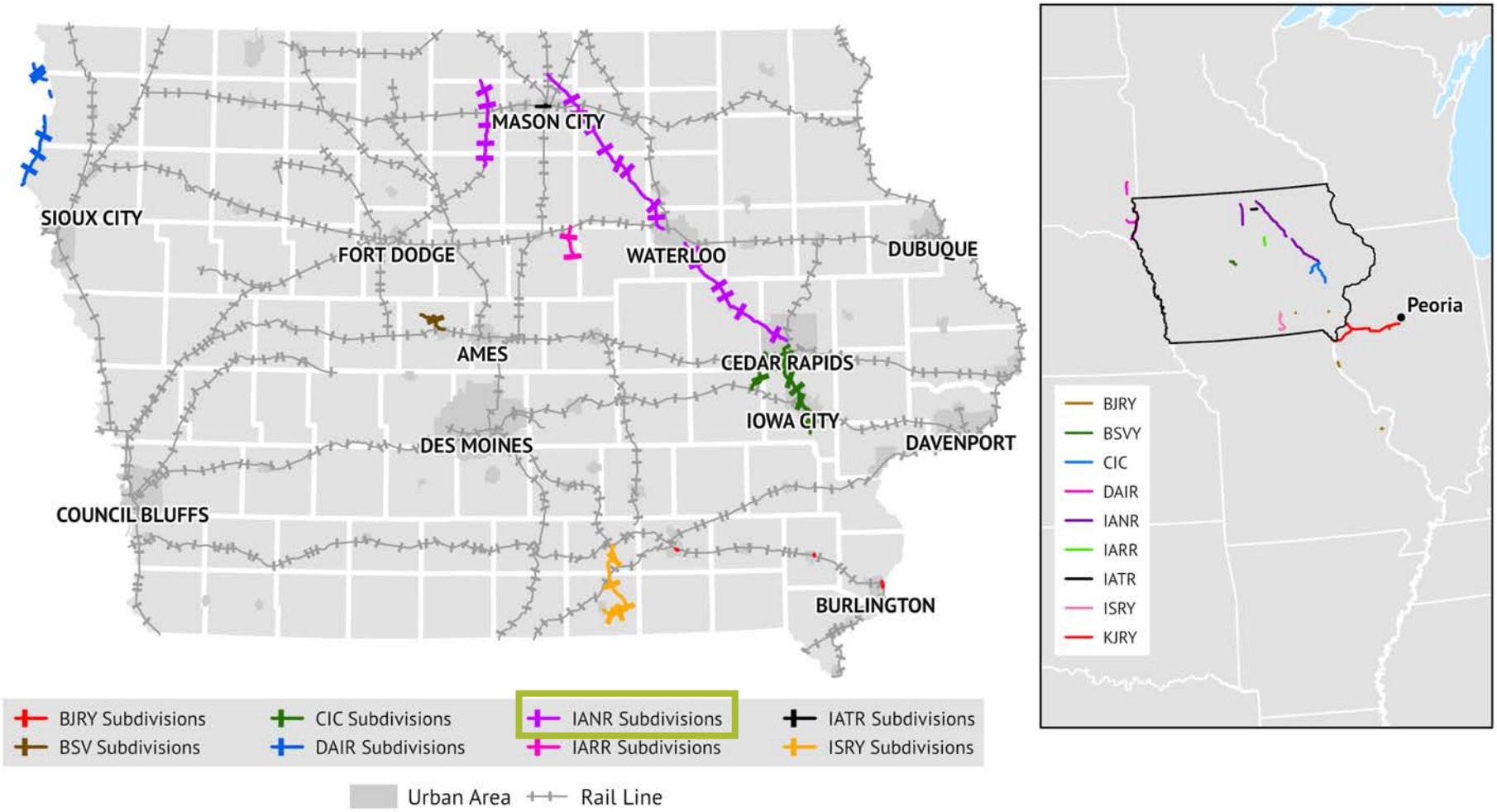
Railroad Interchanges

Cedar Rapids	UP, CN, CIC to IAIS
Manly	UP
Nora Spring	CPKC to CSXT, and NS
Waterloo	CN to BNSF, CSXT, and NS

Commodities



Class III Service in Iowa and IANR Subdivisions



IANR Subdivisions in Iowa

Subdivision	Railroad Owner	Railroad operator	FRA Track Class	Track Configuration	Signal Type	Method of Operation	Maximum Allowable Weight	Clearances
Manly	IANR	IANR	Class 2	One main track with passing sidings	None	• Yard Limits (YL) Manly, IA-Reindl, IA • Track Warrant Control (TWC) Reindl, IA-Cedar Falls Junction, IA	286,000 lbs.	Double-stack capable; Clears Plate H 20'-9" (Manly, IA-Cedar Falls Junction, IA)
Cedar Rapids	IANR	IANR	Class 2	One main track with passing sidings	None	Track Warrant Control (TWC)	286,000 lbs.	Double-stack capable; Clears Plate H 20'-9" (Waterloo, IA-Cedar Rapids, IA)
Oelwein	D&W	IANR	Class 1	One main track with passing sidings	None	• Track Warrant Control (TWC) Dewar, IA-Oelwein, IA • Yard Limits (YL) at Oelwein, IA • Yard Limit (YL) Waterloo, IA-Dewar, IA	286,000 lbs.	Clears Plate H 20' 9" Above Top of Rail (Dewar, IA-Oelwein, IA)
Garner	NCIRC	IANR	Class 1	One main track with passing sidings	None	• Track Warrant Control (TWC) Belmond, IA-Garner, IA • Yard Limits (YL) Garner, IA • Track Warrant Control (TWC) Garner, IA-Forest City, IA	263,000 lbs.	21' 0" Above Top of Rail (Belmond, IA-Forest City, IA)

Iowa River Railroad (IARR)

Emergency number: 641-858-0656; 641-751-5105 after hours
Corporate HQ: 33371 170th St., Steamboat Rock, IA 50627
Phone: 641-868-2676

Overview

IARR, headquartered in Steamboat Rock, Iowa, operates a rail line between Steamboat Rock and Ackley, Iowa. The railroad primarily transports corn byproducts and ethanol produced by Pine Lake Corn Processors, facilitating the transfer of goods to the CN at their interchange point.

IARR in Iowa

Miles of track owned/leased/serviced in Iowa	11
Miles operated under trackage rights in Iowa	0
Employees in Iowa	5

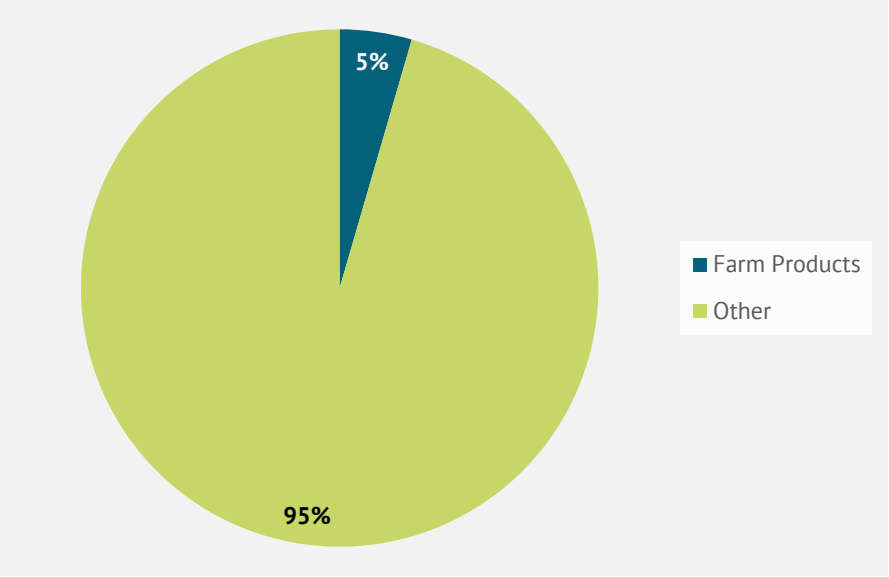
Railroad Interchanges

Ackley	CN

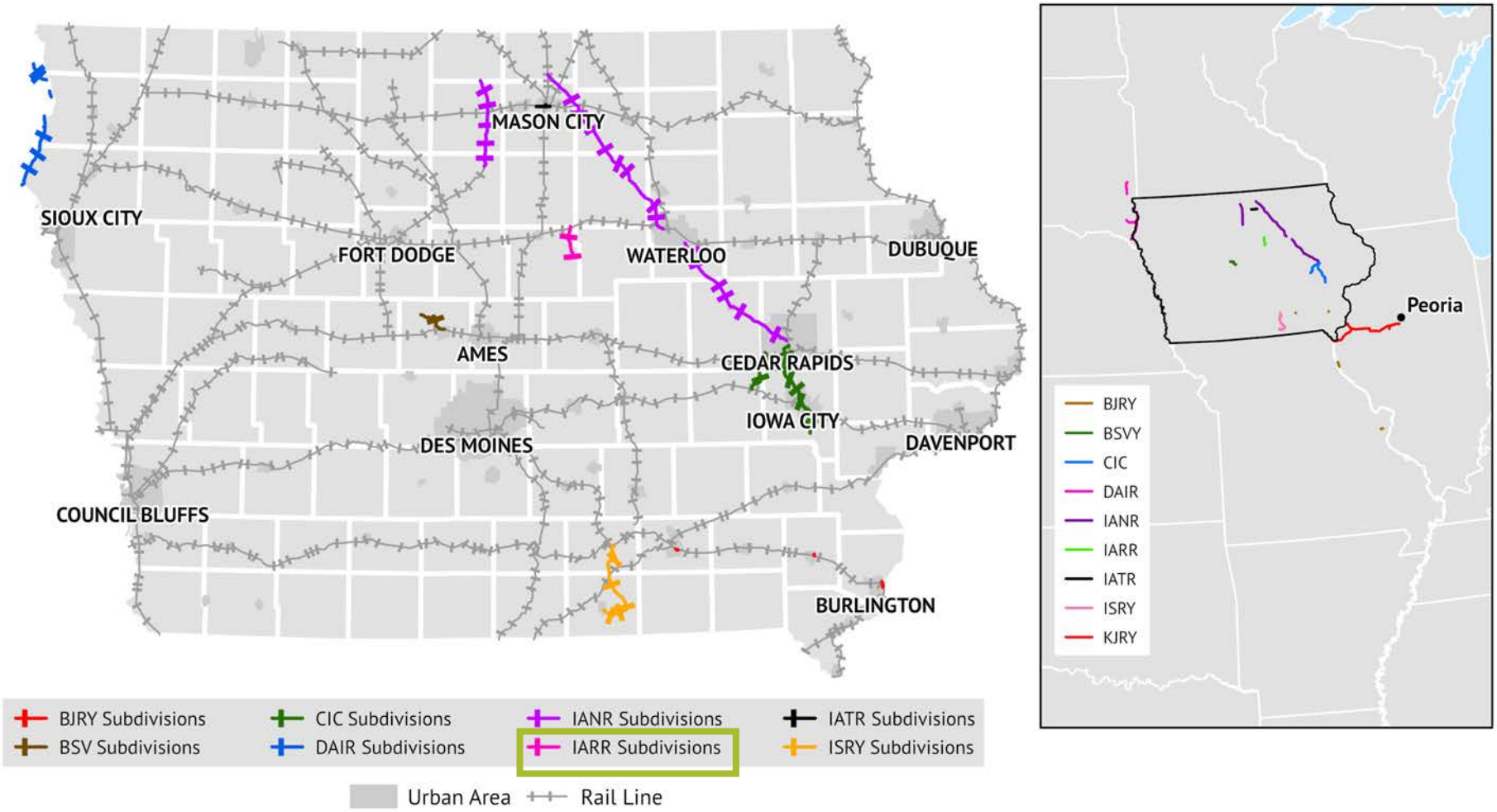
Major Existing Customers

Pine Lake Corn Processors LLC Steamboat Rock, IA

Commodities



Class III Service in Iowa and IARR Subdivisions



Subdivision	Railroad Owner	Railroad operator	FRA Track Class	Signal Type	Maximum Allowable Weight	Clearances
Ackley-Steamboat Rock	IARR	IARR	Class 1	None	265,000 lbs.	Unknown

Iowa Southern Railway (ISRY)

www.progressiverail.com/rrisry/isry.html
Emergency number: 641-437-7029; 641-529-0061 after hours
Corporate HQ: 1303 S. 21st St., P.O. Box 321, Centerville, IA 52544

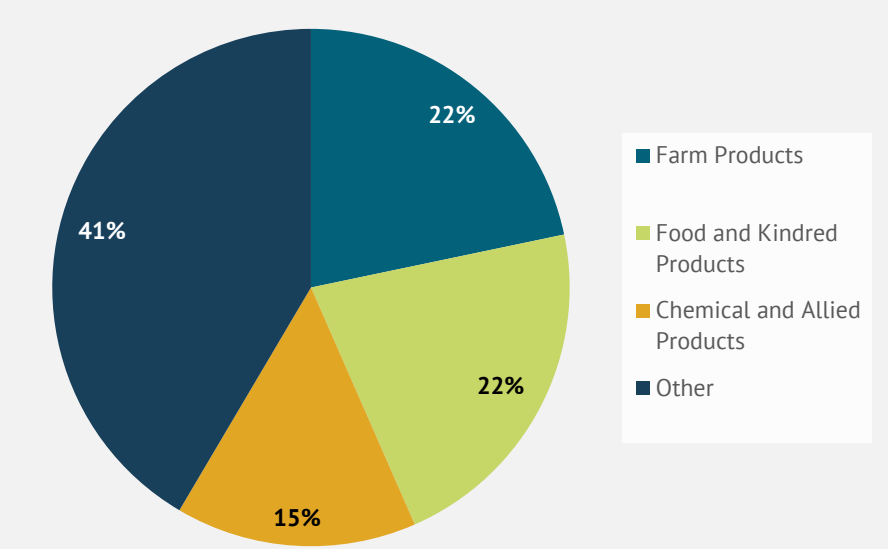
Overview

ISRY became part of the Progressive Rail family of shortline railroads in 2016. The ISRY operates 35 miles of track in Monroe and Appanoose counties, Iowa. This track was previously operated by major railroads such as BNSF, the Wabash Railroad, and the Rock Island Line.

ISRY in Iowa

Miles of track owned/leased/serviced in Iowa	35
Employees in Iowa	7

Commodities



Transloading

Centerville, IA

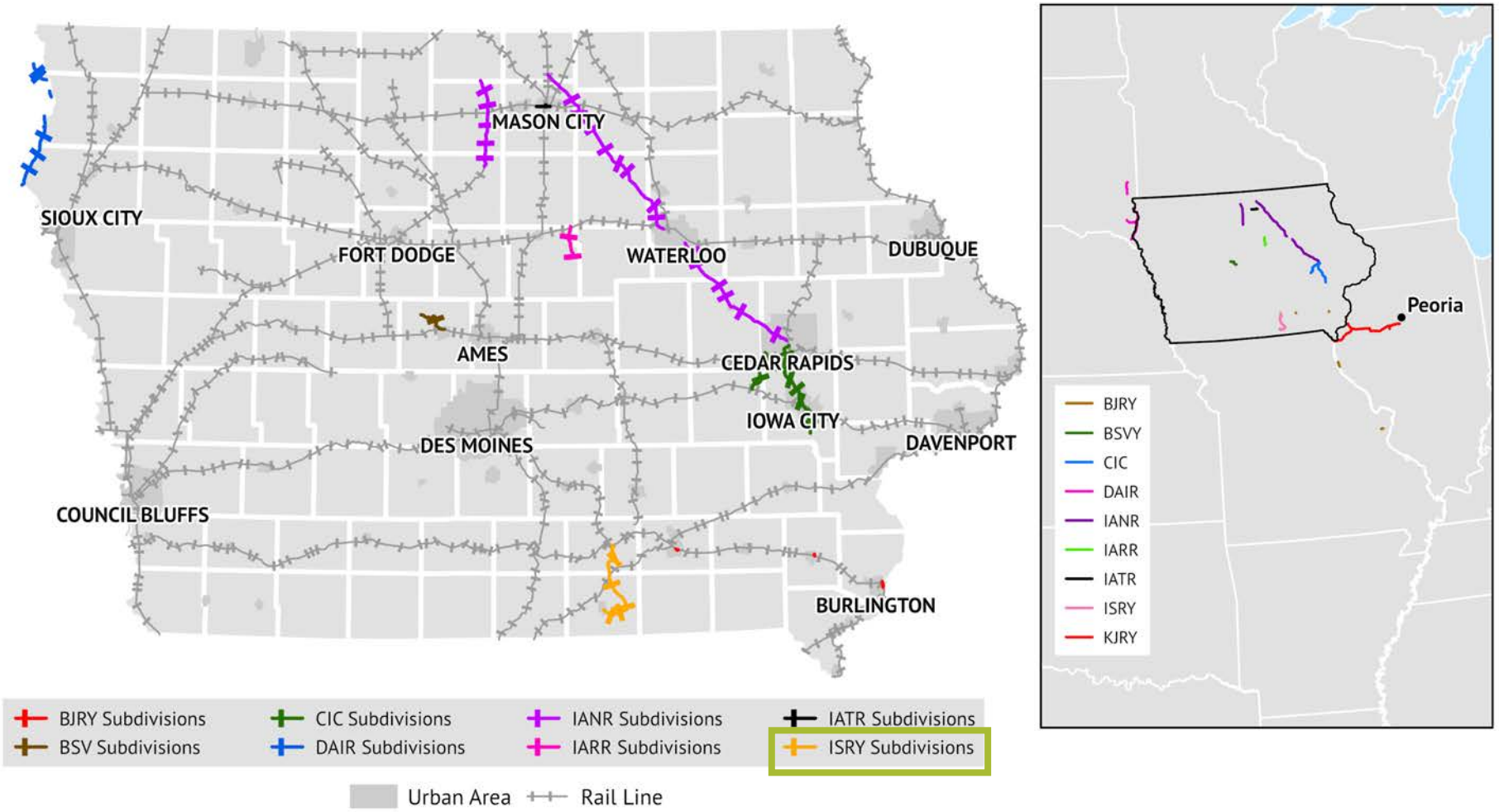
Railroad Interchanges

Albia	BNSF, NS
Moravia	CPKC

Major Existing Customers

RELCO, Inc.	Albia
Lee Container, Inc.	Centerville
Bemis Corporation	Centerville
Centerville Iron & Metals	Centerville
Rio Tinto Aluminum	Centerville
Iowa Steel & Wire	Centerville
World Foods Processing, Inc.	Centerville
Growmark, Inc.	Moravia
Performance Pipe, Inc.	Centerville

Class III Service in Iowa and ISRY Subdivisions



Subdivision	Railroad Owner	Railroad operator	FRA Track Class	Signal Type	Maximum Allowable Weight	Clearances
Centerville-Albia	ISRY	PGR	Class 1	None	268,000 lbs.	Unknown

Iowa Traction Railway (IATR)

www.progressiverail.com/rriatr/iatr.html
Emergency number: 641-424-4600
Corporate HQ: 21778 Highview Ave., Lakeville, MN 55044
Phone: 612-791-1190
General offices: 12045 W. State St., P.O. Box 309, Mason City, IA 50401
Phone: 641-424-2600

Overview

IATR is one of seven railroads owned and operated by Progressive Rail Inc., headquartered in Lakeville, Minnesota. As an electric railway, IATR operates on 10.4 miles of track between Mason City and Clear Lake, Iowa, supporting agribusiness and industrial operations in northern Iowa and southern Minnesota. Its facility in Emery, Iowa, offers direct switching of railcars and provides transloading services, facilitating efficient transfer between trucks and trains.

IATR in Iowa

Miles of track owned/leased/serviced in Iowa	10.4
Miles operated under trackage rights in Iowa	0
Employees in Iowa	9

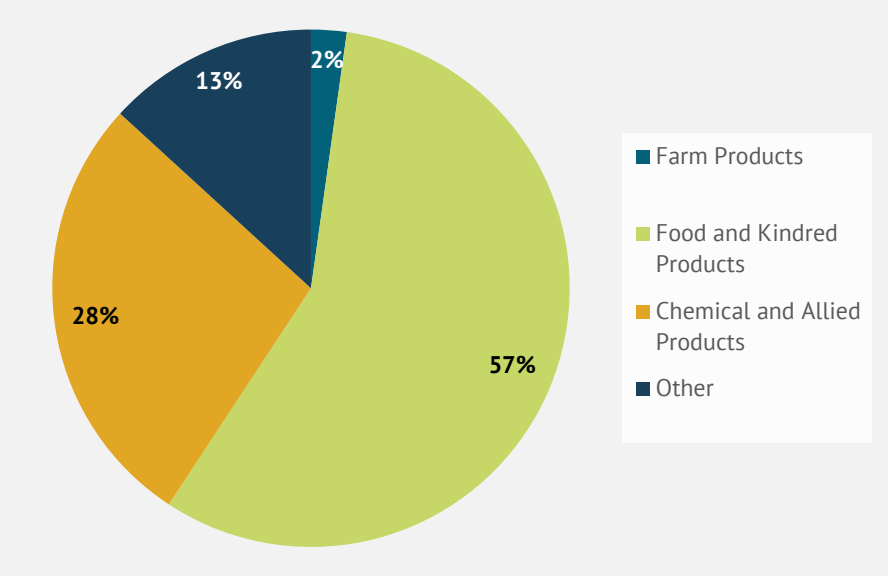
Transloading

Mason City, IA

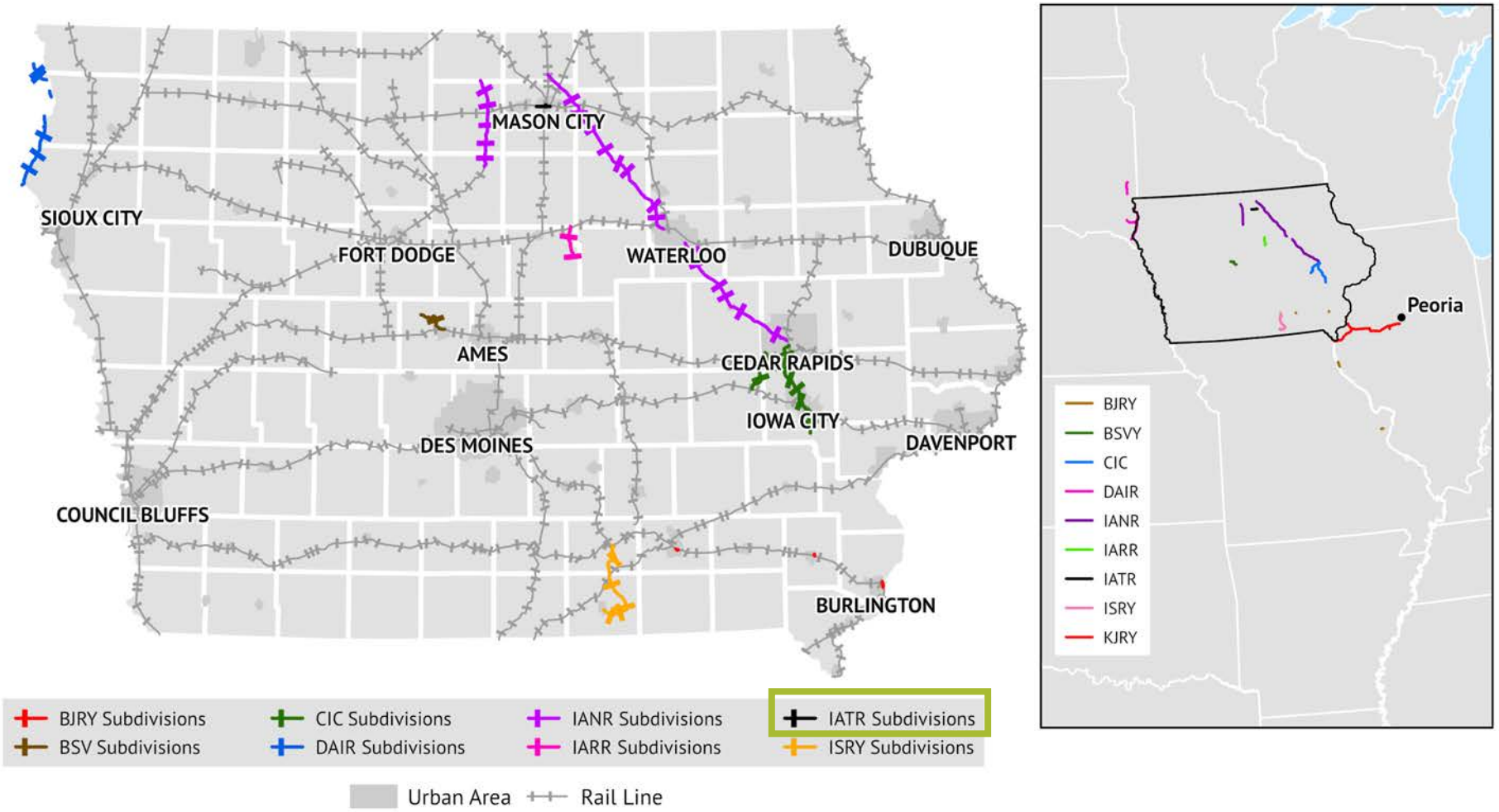
Railroad Interchanges

Mason City	UP, CPKC

Commodities



Class III Service in Iowa and IATR Subdivisions



Subdivision	Railroad Owner	Railroad operator	FRA Track Class	Signal Type	Maximum Allowable Weight	Clearances
Mason City-Clear Lake	IATR	IATR	Class 1	None	286,000 lbs.	19’ 6” Above Top of Rail

Keokuk Junction Railway (KJRY)

www.patriotrail.com/rail/keokuk-junction-railway-co-kjry
Emergency number: 855-258-4514
Corporate HQ: 10752 Deerwood Park Blvd. #300, Jacksonville, FL 32256
Phone: 904-423-2540
Site Contact: KJRY, 300 Main St. Suite 490, Keokuk, IA 52632

KJRY in Iowa

Miles of track owned/leased/serviced in Iowa	1
Miles operated under trackage rights in Iowa	0
Employees in Iowa	12

Transloading

Keokuk, IA

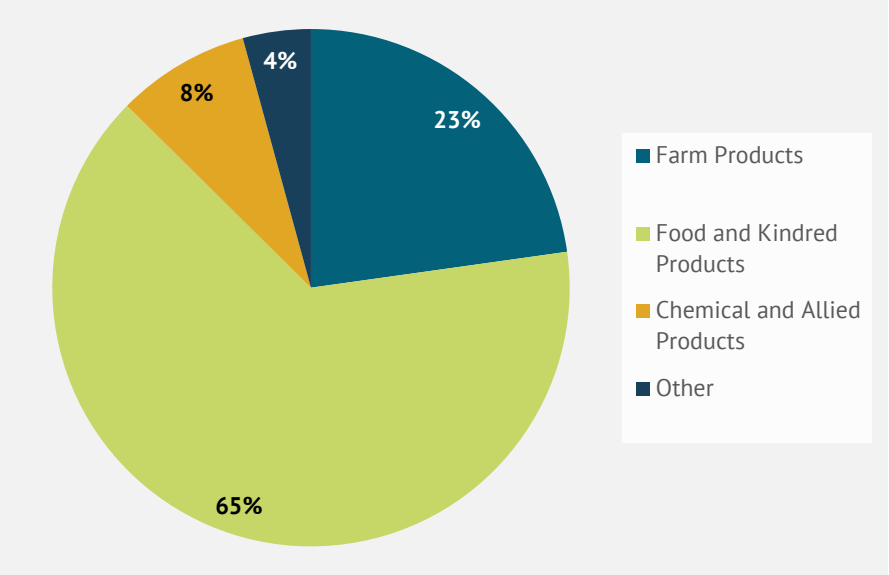
Railroad Interchanges

Fort Madison, IA	UP
Keokuk, IA	BNSF
Peoria, IL	BNSF, CN, NS, UP
Sommer, IL	UP

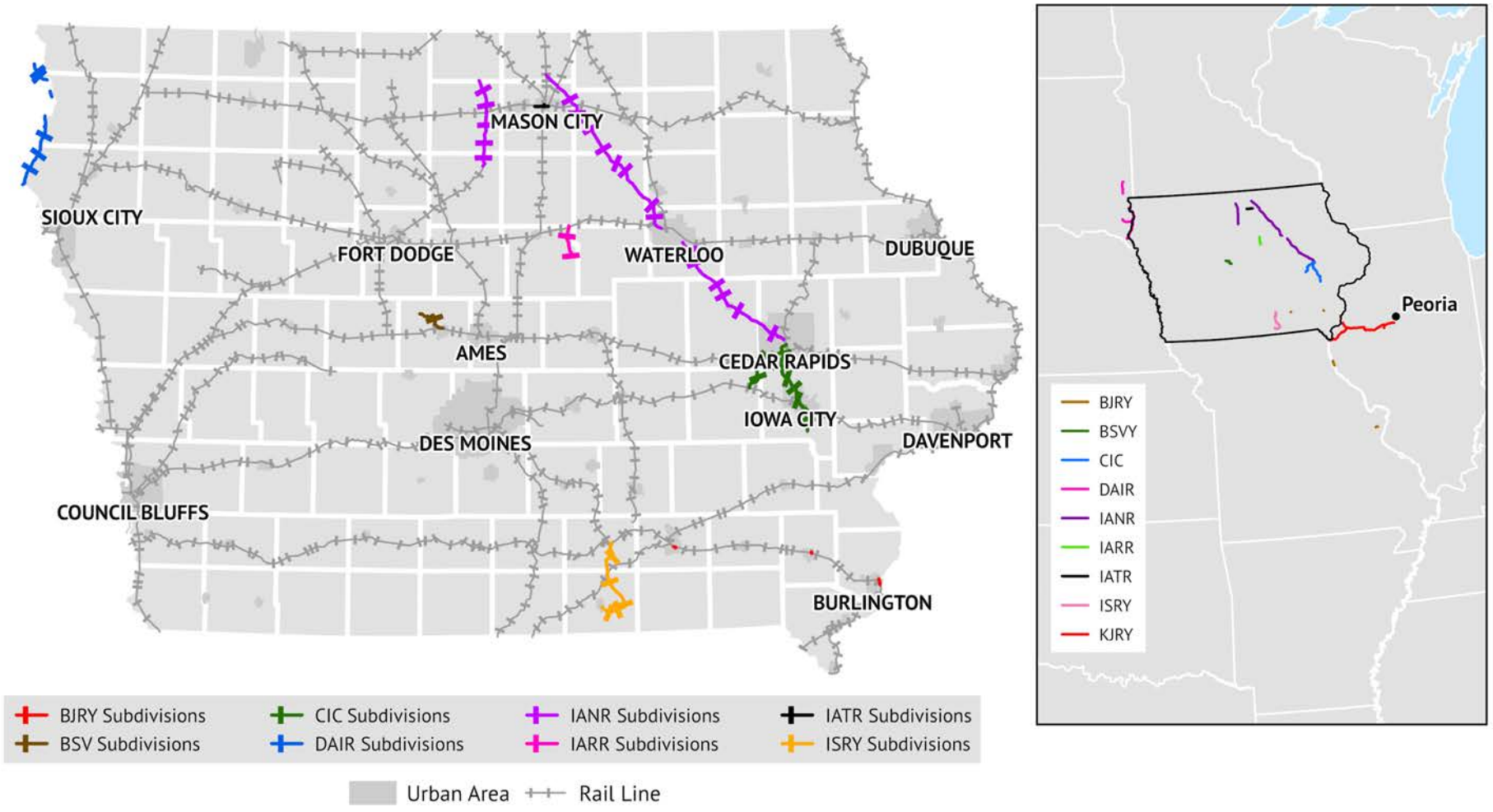
Overview

KJRY, a wholly owned subsidiary of Patriot Rail, operates a 114-mile rail line from Peoria, Illinois, to Keokuk, Iowa, along with an additional 12-mile section between La Harpe and Lomax, Illinois. KJRY also holds trackage rights over a 15.5-mile segment of BNSF Railway from Lomax, Illinois, to Fort Madison, Iowa, enabling seamless interchange with UP. In addition to these routes, KJRY provides local shippers in Keokuk with services like reciprocal switching and transloading. The railway primarily transports agricultural and industrial products, including corn syrup, fertilizer, grain, minerals, scrap iron, and steel.

Commodities



Class III Service in Iowa and KJRY Subdivisions (see inset)



Subdivision	Railroad Owner	Railroad operator	FRA Track Class	Signal Type	Maximum Allowable Weight	Clearances
KJRY Iowa Subdivision	KJRY	KJRY	Class 1	None	263,000 lbs	Unknown
IA/IL state line at Fort Madison	BNSF	KJRY	Class 1	None	260,000 lbs	Unknown

Norfolk Southern (NS)

www.norfolksouthern.com
Emergency number: 800-453-2530
Corporate HQ: 650 W. Peachtree St. NW, Atlanta, GA 30308

NS in Iowa

Miles of track owned/leased/serviced in Iowa	5.1
Miles operated under trackage rights in Iowa	36.9
Employees in Iowa	

Transloading

Altoona, IA
Des Moines, IA

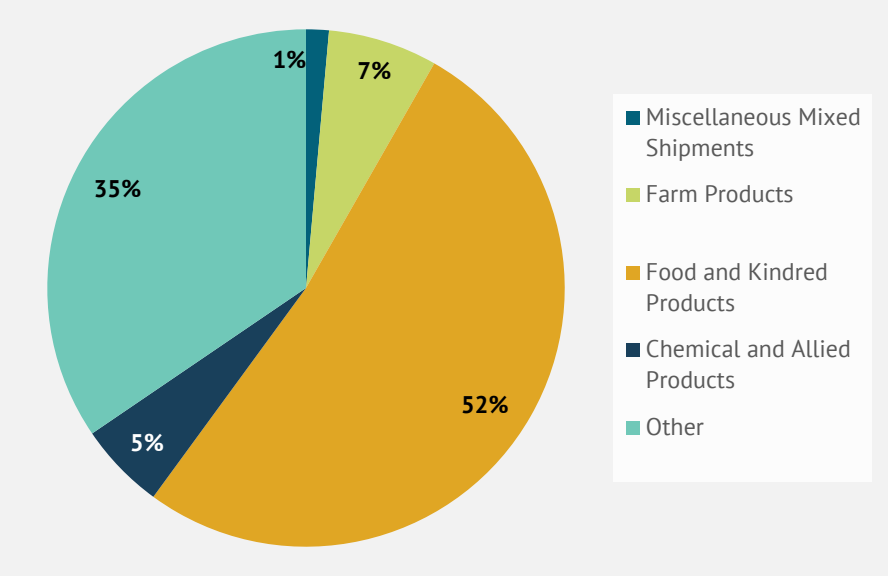
Railroad Interchanges

Des Moines	UP, IAIS
Ottumwa	CPKC

Overview

NS operates a vast rail network spanning 20,000 miles across 22 states and Washington, D.C. The company plays a critical role in international trade, providing rail service to all major eastern seaports, along with 10 river ports and nine lake ports. In Iowa, NS has operating agreements with BNSF, allowing it to run on tracks from Keokuk through Burlington and into Des Moines, expanding its reach in the Midwest.

Commodities



NS Subdivisions in Iowa

Subdivision	Division	Railroad Owner	Railroad operator	FRA Track Class	Track Config-uration	Signal Type	Method of Operation	Maximum Allowable Weight	Clearances
Des Moines Terminal	Illinois	NS	Total miles of NS-owned trackage in Iowa: Approximately 44.0 miles, as follows: • Tracy, IA-Hamilton, IA; operated by BNSF as part of the BNSF Des Moines Subdivision (approximately 11.0 miles) • Swan, IA-Des Moines, IA; operated by BNSF as part of the BNSF Des BNSF as part of the BNSF Des Moines Subdivision (approximately 16.0 miles) • Des Moines, IA; operated by NS as the NS Des Moines Terminal (approximately 5.0 miles)	• Class 2 (Tracy-Hamilton) • Class 2 (Swan-Des Moines)	One main track	None	• Track Warrant Control (TWC) Tracy, IA-Hamilton, IA; dispatched by BNSF • Track Warrant Control (TWC) Tracy, IA-Des Moines, IA; dispatched by BNSF • Restricted Speed (RS) at Des Moines, IA • Yard Limits (YL) at Des Moines, IA	286,000 lbs.	• Unknown for NS-operated trackage in Des Moines. •Clearances on routes in Iowa over which NS has haulage rights are established by host railroads, BNSF, and IAIS.

Union Pacific Railroad (UP)

www.up.com/index.htm
Emergency number: 888-877-7267
Corporate HQ: 1400 Douglas St., Omaha, NE 68179
Phone: 402-544-5000

UP in Iowa

Miles of track owned/leased/serviced in Iowa	1,278
Miles operated under trackage rights in Iowa	275
Employees in Iowa	1,528

Transloading

Altoona, IA
Camanche, IA
Cedar Rapids, IA
Clinton, IA
Council Bluffs, IA
Des Moines, IA
Emery, IA
Fairfax, IA
Hawarden, IA
Manly, IA
Mason City, IA
Shell Rock, IA
Sioux City, IA
Waterloo, IA
Omaha, NE

Intermodal

Council Bluffs, IA

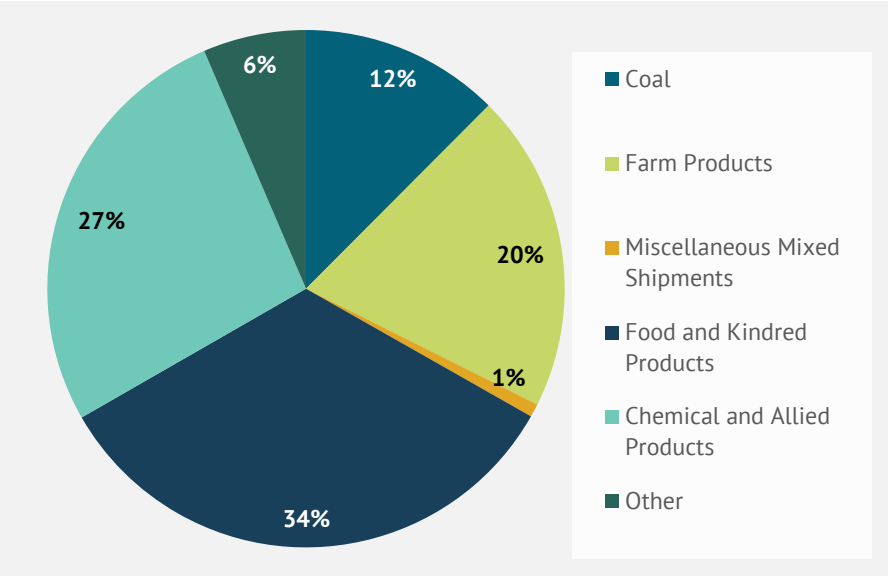
Railroad Interchanges

Boone	BSV
Cedar Rapids	CIC, CN, IANR
Clinton	CPKC
Council Bluffs	CN, IAIS
Des Moines	IAIS, NS
Emmetsburg	KJRY
Fort Madison	KJRY
Iowa Falls	CN
Manly	IANR
Mason City	CPKC, IATR
Sheldon	CPKC
Sioux City	CN
Waterloo	CN, DAIR

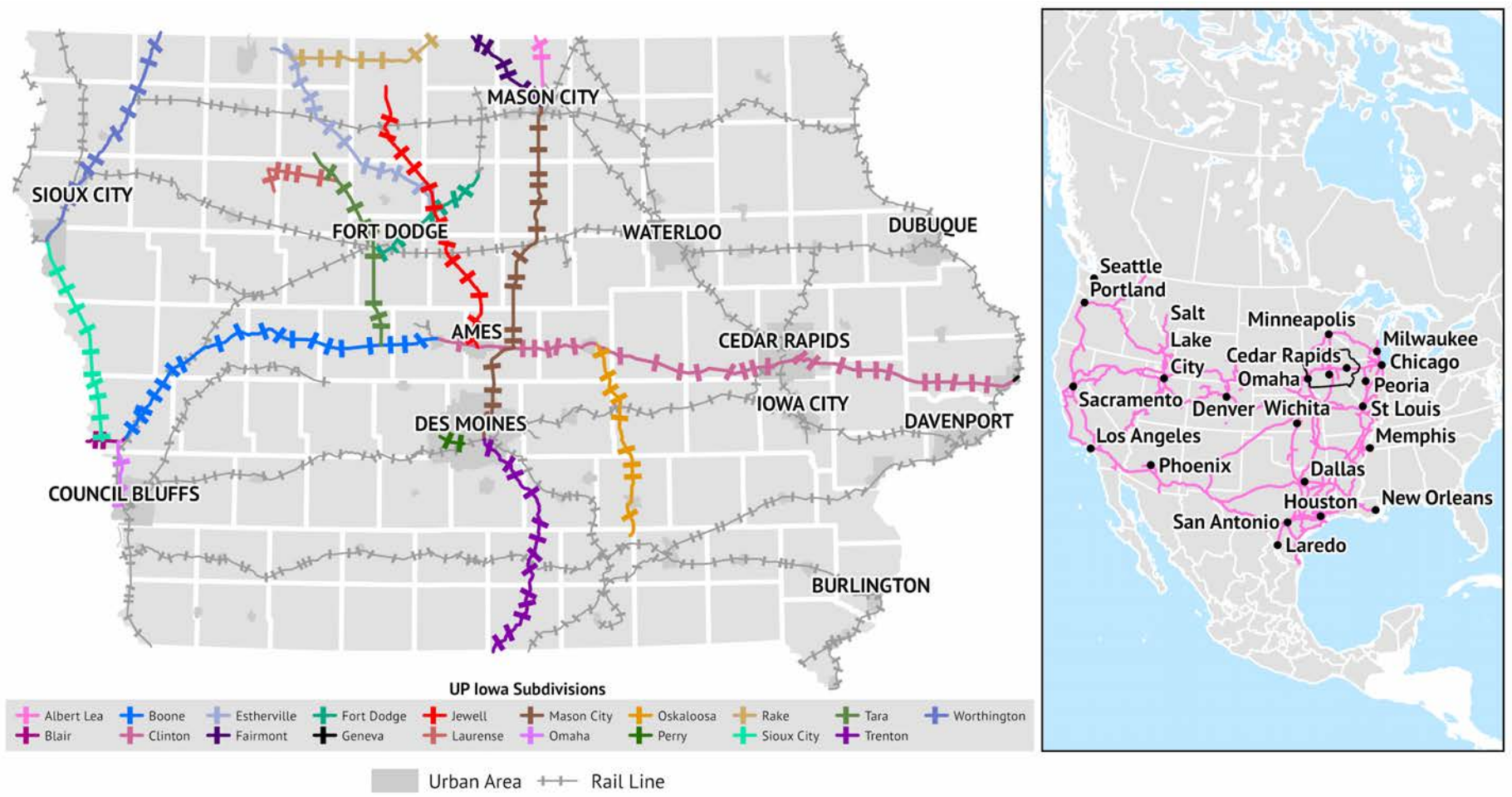
Overview

Union Pacific Railroad and the Chicago & North Western Transportation Co., which merged in 1995, have been part of the Iowa landscape since the 1850s. Today, UP's rail network stretches across the state, with its primary east-west main line serving as a vital corridor connecting Chicago to the West Coast. The north-south "Spine Line," which runs through Des Moines and Mason City, links Minneapolis-St. Paul with Kansas City, further enhancing the railroad's regional connectivity. UP operates an extensive branch line network in northwest Iowa supporting local industries and communities.

Commodities



UP Service


MASON CITY
SIOUX CITY
FORT DODGE
WATERLOO
DUBUQUE
AMES
CEDAR RAPIDS
IOWA CITY
DAVENPORT
DES MOINES
COUNCIL BLUFFS
BURLINGTON
Seattle
Portland
Salt Lake City
Minneapolis
Milwaukee
Chicago
Cedar Rapids
Omaha
Peoria
Sacramento
Denver
Wichita
St Louis
Los Angeles
Memphis
Phoenix
Dallas
Houston
New Orleans
San Antonio
Laredo
UP Iowa Subdivisions
Albert Lea
Blair
Boone
Clinton
Estherville
Fairmont
Fort Dodge
Geneva
Jewell
Laurense
Mason City
Omaha
Oskaloosa
Perry
Rake
Sioux City
Tara
Trenton
Worthington
Urban Area
Rail Line

UP Subdivisions in Iowa (section 1 of 5)

Subdivision	Division	Railroad Owner	Railroad operator	FRA Track Class	Track Configuration	Signal Type	Method of Operation	Maximum Allowable Weight	Clearances
Geneva	Chicago Area	UP	UP	Class 5	Two main tracks	Centralized Traffic Control (CTC) and Automatic Train Control (ATC) IL/IA state line at Clinton, IA-Clinton, IA	Centralized Traffic Control (CTC)	286,000 lbs.	Approximately 20' 2" Above Top of Rail
Clinton	Iowa Area	UP	UP	Class 5	Two main tracks	Centralized Traffic Control (CTC) and Automatic Train Control (ATC) Clinton, IA-Boone, IA	Centralized Traffic Control (CTC)	286,000 lbs.	Approximately 20' 2" Above Top of Rail (nine bridges on the subdivision will not clear 21' 6" Above Top of Rail)
Boone	Iowa Area	UP	UP	Class 5	Two main tracks	Centralized Traffic Control (CTC) and Automatic Train Control (ATC) Boone, IA-East Missouri Valley, IA	Centralized Traffic Control (CTC)	286,000 lbs.	Approximately 20' 2" Above Top of Rail (four bridges on the subdivision in Iowa will not clear 21' 6" Above Top of Rail)
Oskaloosa	Iowa Area	UP	UP	Class 2	One main track with passing sidings	None	• Yard Limits (YL) at Marshalltown, IA • Track Warrant Control (TWC) Marshalltown, IA-Oskaloosa, IA • Yard Limits (YL) at Oskaloosa, IA • Track Warrant Control (TWC) Oskaloosa, IA-Bridgeport, IA • Yard Limits (YL) at Bridgeport, IA	286,000 lbs.	Height Above Top of Rail unknown (six bridges on the subdivision in Iowa will not clear 21' 6" Above Top of Rail)

UP Subdivisions in Iowa (section 2 of 5)

Subdivision	Division	Railroad Owner	Railroad operator	FRA Track Class	Track Configuration	Signal Type	Method of Operation	Maximum Allowable Weight	Clearances
Estherville	Iowa Area	UP	UP	Class 4	One main track with passing sidings	None	Track Warrant Control (TWC)	•286,000 lbs. (Goldfield-Emmetsburg) • 268,000 lbs. (Emmetsburg-Superior)	Unknown
Tara	Iowa Area	UP	UP	Class 3	One main track	None	Track Warrant Control (TWC)	•286,000 lbs. East Grand Junction-Tara) • 268,000 lbs. (Tara-Mallard)	Unknown
Mason City	Iowa Area	UP	UP	Class 4	One main track with passing sidings	• Centralized Traffic Control (CTC) Des Moines, IA-Nevada, IA • Automatic Block Signals (ABS) Nevada, IA-Mason City, IA	• Centralized Traffic Control (CTC) Des Moines, IA-Nevada, IA • Track Warrant Control (TWC) Nevada, IA-Flint, IA • Yard Limits (YL) Flint, IA-Mason City, IA	286,000 lbs.	Approximately 20' 2" Above Top of Rail (one bridge on the subdivision in Iowa will not clear 21' 6" Above Top of Rail)
Jewell	Iowa Area	UP	UP	Class 3	One main track with passing sidings	None	• Track Warrant Control (TWC) West Ames, IA-Eagle Grove, IA • Yard Limits (YL) at Eagle Grove, IA • Track Warrant Control (TWC) Eagle Grove, IA-North Burt, IA	286,000 lbs.	Approximate height Above the Top of the Rail is 20' 9"
Rake	Iowa Area	UP	UP	Class 3	One main track	None	Track Warrant Control (TWC)	•286,000 lbs. (Rake-IA/MN state line near Rake, IA) • 268,000 lbs. Estherville-Rake)	Unknown

UP Subdivisions in Iowa (section 3 of 5)

Subdivision	Division	Railroad Owner	Railroad operator	FRA Track Class	Track Configuration	Signal Type	Method of Operation	Maximum Allowable Weight	Clearances
Laurens	Iowa Area	UP	UP	Class 2	One main track	None	Track Warrant Control (TWC)	268,000 lbs.	Unknown
Fort Dodge	Iowa Area	UP	UP	• Class 4 (Moorland-Eagle Grove) • Class 3 (Eagle Grove-Belmond)	One main track with passing sidings	None	• Track Warrant Control (TWC) Moorland, IA-Eagle Grove, IA • Yard Limits (YL) at Eagle Grove, IA • Track Warrant Control (TWC) Eagle Grove, IA-Belmond, IA	• 286,000 lbs. (Moorland-South Fort Dodge) • 268,000 lbs. (South Fort Dodge-Vincent) • 286,000 lbs. (Vincent-Eagle Grove) • 268,000 lbs. (Eagle Grove-Belmond)	• Approximate height Above the Top of the Rail is 20' 9" (Belmond-Eagle Grove) • Height above the Top of Rail unknown (Eagle Grove-Moorland)
Blair	Council Bluffs Area	UP	UP	Class 4	• Two main tracks (East Missouri Valley-Allen Creek) • One main track with passing sidings (Allen Creek-IA/NE state line near Blair, NE)	• Centralized Traffic Control (CTC) and Automatic Train Control (ATC) East Missouri Valley, IA- Missouri Valley Junction, IA • Centralized Traffic Control (CTC) Missouri Valley Junction, IA-IA/NE state line near Blair, NE	Centralized Traffic Control (CTC)	286,000 lbs.	Approximately 20' 2" Above the Top of the Rail (one bridge on the subdivision in Iowa will not clear 21' 6" Above the Top of the Rail)
Worthington	Twin Cities Area	UP	UP	Class 4	One main track with passing sidings	None	Track Warrant Control (TWC) Le Mars, IA - IA/MN state line near Bigelow, MN	286,000 lbs.	Approximately 20' 2" Above the Top of the Rail

UP Subdivisions in Iowa (section 4 of 5)

Subdivision	Division	Railroad Owner	Railroad operator	FRA Track Class	Track Configuration	Signal Type	Method of Operation	Maximum Allowable Weight	Clearances
Sioux City	Council Bluffs Area	UP	UP	Class 3	One main track with passing sidings	• Centralized Traffic Control (CTC) California Junction, Iowa-Modale, IA • Automatic Block Signals (ABS) Modale, IA -Sioux City, IA	• Centralized Traffic Control (CTC) California Junction, IA -Modale, IA • Track Warrant Control (TWC) Modale, IA -Sioux City, IA • Yard Limits (YL) at Sioux City, IA	286,000 lbs.	Approximately 20' 2" Above the Top of the Rail (two bridges on the subdivision in Iowa will not clear 21' 6" Above the Top of the Rail)
Perry	Iowa Area	UP	UP	Class 1	One main track	None	Restricted Limits (RL) / Yard Limits (YL) East Des Moines, IA-West Des Moines, IA	286,000 lbs.	• Double-stack compliant (approximately 20' 2" Above Top of Rail) – East Des Moines-West Des Moines • Unknown – West Des Moines-Waukee
Trenton	Kansas City Area	UP	UP	Class 4	One main track with passing sidings	• Centralized Traffic Control (CTC) Des Moines, IA-Beech, IA • Automatic Block Signals (ABS) Beech, IA-Williamson, IA • Centralized Traffic Control (CTC) Beech, IA-IA/MO state line near Lineville, IA	• Centralized Traffic Control (CTC) Des Moines, IA-Beech, IA • Track Warrant Control (TWC) Beech, IA-Williamson, IA • Centralized Traffic Control (CTC) Williamson, IA-IA/MO state line near Lineville, IA	286,000 lbs.	Approximately 20' 2" Above the Top of the Rail (two bridges on the subdivision in Iowa will not clear 21' 6" Above the Top of the Rail)

UP Subdivisions in Iowa (section 5 of 5)

Subdivision	Division	Railroad Owner	Railroad operator	FRA Track Class	Track Configuration	Signal Type	Method of Operation	Maximum Allowable Weight	Clearances
Fairmont	Twin Cities Area	UP	UP	Class 2	One main track with passing sidings	None	• Yard Limits (YL) Mason City, IA-River City, IA • Track Warrant Control (TWC) River City, IA-IA/MN state line near Scarville, IA	286,000 lbs.	Unknown
Albert Lea	Twin Cities Area	UP	UP	Class 4	One main track with passing sidings	Centralized Traffic Control (CTC)	• Yard Limits (YL) at Mason City, IA • Centralized Traffic Control (CTC) Mason City, IA - IA/MN state line near Northwood, IA	286,000 lbs.	Approximately 20' 2" Above the Top of the Rail
Omaha	Council Bluffs Area	UP	UP	Class 4	• Two main tracks (Missouri Valley-South Missouri Valley) • One main track (South Missouri Valley-North Council Bluffs) • Two main tracks (North Council Bluffs-Council Bluffs) • Three main tracks / two main tracks (Council Bluffs-IA/NE state line at Council Bluffs)	• Centralized Traffic Control (CTC) and Automatic Train Control (ATC)Missouri Valley, IA - North Council Bluffs, IA • Automatic Block Signals (ABS) North Council Bluffs, IA-Council Bluffs, IA • Centralized Traffic Control (CTC) Council Bluffs, IA-IA/NE state line at Council Bluffs, IA	• Centralized Traffic Control (CTC) Missouri Valley, IA-North Council Bluffs, IA • Yard Limits (YL) North Council Bluffs, IA -Council Bluffs, IA • Centralized Traffic Control (CTC) Council Bluffs, IA - IA/NE state line at Council Bluffs, IA	• 286,000 lbs. (Missouri Valley-Council Bluffs) • 315,000 lbs. (Council Bluffs-IA/NE state line at Council Bluffs, IA)	21' 6" Above Top of Rail

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APPENDIX C
Rail-Served Freight Facilities

Tables C.1 – C.6 provide an inventory of Iowa freight facilities that are served by rail. These lists are not exhaustive. Some facilities listed may no longer be operational and new facilities may not be represented. Descriptions of freight facility types are included in Chapter 3, Freight Inventory and Performance. Intermodal facilities, transload facilities, barge terminals, public/contract warehouses, coal burning facilities, ethanol plants, and biodiesel plants are listed. Due to the large number of facilities and locations throughout the state, grain elevators are not listed.

Table C.1: Intermodal and transload facilities (section 1 of 2)

City	Facility	Railroad	Intermodal	Transload	Cross-dock	Team track	Warehouse	Truck/ Rail	Truck/ Barge	Rail/ Barge
Altoona	Merchants Distribution Service	IAIS, BNSF, NS, UP		Yes	Yes		Yes	Yes		
Altoona	Lineage Logistics LLC	IAIS			Yes			Yes		
Atlantic	Iowa Interstate Railroad LLC	IAIS				Yes		Yes		
Atlantic	Pattison Sand Company	IAIS		Yes				Yes		
Boone	PDM Transload	BSV					Yes	Yes		
Burlington	BJRY	BJRY, BNSF		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Camanche	ADM Terminal Services	CPKC, BNSF, UP		Yes	Yes		Yes	Yes	Yes	Yes
Cedar Falls	Standard Distribution	CN		Yes	Yes		Yes	Yes		
Cedar Rapids	CRANDIC Wilson Ave Team Track	CIC		Yes	Yes	Yes		Yes		
Cedar Rapids	Logistics Park Cedar Rapids	CIC, CN, UP		Yes	Yes	Yes	Yes	Yes	Yes	
Cherokee	Cloverleaf Cold Storage	CN, UP					Yes	Yes		
Clayton	Consolidated Grain and Barge	CPKC		Yes				Yes		Yes
Clinton	ADM Terminal Services	CPKC, BNSF, UP		Yes			Yes	Yes	Yes	Yes
Clinton	Clausen Companies Warehousing	UP		Yes	Yes		Yes	Yes		
Council Bluffs	IAIS Intermodal Facility	IAIS, BNSF, UP	Yes					Yes		
Council Bluffs	Cox Contracting Company Inc.	IAIS		Yes				Yes		
Council Bluffs	Council Bluffs Railport	IAIS	Yes					Yes		
Council Bluffs	Watco Transloading LLC	IAIS, BNSF, UP		Yes				Yes		
Council Bluffs	Heritage-Crystal Clean LLC	IAIS		Yes				Yes		
Council Bluffs	Pattison Sand Company	IAIS		Yes				Yes		
Council Bluffs	Viterra USA Ingredients LLC	IAIS		Yes				Yes		
Council Bluffs	Martin Marietta Materials	IAIS		Yes				Yes		
Davenport	Catch-Up Logistics	CPKC		Yes	Yes		Yes	Yes		
De Soto	Sioux City Brick and Tile Co.	IAIS			Yes			Yes		
Des Moines	Merchants Distribution Service	UP		Yes	Yes		Yes	Yes		
Des Moines	Luckey Logistics	UP		Yes				Yes		
Des Moines	Des Moines Industrial LLC	BNSF, IAIS, NS, UP		Yes		Yes	Yes	Yes		

Table C.1 (continued): Intermodal and transload facilities (section 2 of 2)

City	Facility	Railroad	Intermodal	Transload	Cross-dock	Team track	Warehouse	Truck/ Rail	Truck/ Barge	Rail/ Barge
Dexter	Reid line LLC	IAIS		Yes				Yes		
Dubuque	Gavilon	CN		Yes			Yes	Yes	Yes	Yes
Dubuque	IEI Barge Services	CN		Yes		Yes	Yes	Yes	Yes	Yes
Emery	Emery Transload Facility	IATR, UP, CPKC		Yes				Yes		
Hawarden	GCC Dakotah Cement/L.G. Everist	DAIR, BNSF, UP		Yes				Yes		
Iowa City	Iowa Interstate Railroad LLC	IAIS				Yes		Yes		
Le Mars	BJRY Transload	BJRY, CN		Yes	Yes	Yes		Yes		
Le Mars	Le Mars Public Storage, Inc.	CN			Yes		Yes	Yes		
Manly	Manly Terminal	IANR, UP		Yes				Yes		
Manly	Manly Yard	IANR, UP		Yes			Yes	Yes		
Mason City	Iowa Dry Warehouse	IATR, UP, CPKC		Yes	Yes	Yes	Yes	Yes		
Mason City	IATR/Progressive Rail	IATR, CPKC, UP		Yes	Yes	Yes		Yes		
Mason City	Cartersville Elevator Inc.	CPKC		Yes				Yes		
Mt. Pleasant	BJRY	BJRY, BNSF		Yes				Yes		
Muscatine	Kinder Morgan	CPKC		Yes			Yes	Yes		
Muscatine	CAM II Warehouse	CPKC					Yes	Yes		
New Hampton	New Hampton Transfer & Storage	CPKC		Yes	Yes		Yes	Yes		
Newton	Luckey Logistics	IAIS		Yes				Yes		
Newton	Iowa Interstate Railroad LLC	IAIS				Yes		Yes		
Ottumwa	BJRY	BJRY, BNSF		Yes	Yes	Yes		Yes		
Ottumwa	Quest Liner/Foodliner	CPKC		Yes				Yes		
Shell Rock	Butler Intermodal Terminal	IANR, UP	Yes	Yes			Yes	Yes		
Sioux City	Big Soo Terminal	UP		Yes				Yes	Yes	Yes
Sioux City	L.G. Everist	DAIR, BNSF, CN, UP		Yes				Yes		
Victor	Iowa Interstate Railroad LLC	IAIS				Yes		Yes		
Waterloo	Kinder Morgan/Black Hawk Terminal	UP		Yes			Yes	Yes		
Waterloo	Bryant Yard	IANR		Yes	Yes		Yes	Yes		
West Liberty	ABC-Cascade Holdings LLC	IAIS		Yes				Yes		
Williams	Williams Bulk Transfer	CN		Yes	Yes	Yes	Yes	Yes		
Wilton	Olson Road Solutions LLC	IAIS		Yes				Yes		
Wiota	Pattison Sand Company	IAIS		Yes				Yes		

Source: Survey of Iowa companies

Table C.2: Public/contract warehouses

City	Facility	Railroad
Akron	Heyl Truck Lines	DAIR
Altoona	Iowa Cold Storage, LLC	BNSF, UP
Altoona	Merchants Distribution Service	NS, IAIS, UP
Bettendorf	AmeriCold Logistics	BNSF, UP
Burlington	Diversified Distribution Service Center	BNSF
Camanche	Economy Coating Systems, Inc.	UP
Cedar Rapids	Worley Warehousing, Inc	UP
Cedar Rapids	Midwestern Third-Party Logistics	UP, CN
Clinton	Clausen Warehousing & Trucking	UP
Davenport	Catch-Up Logistics Warehousing and Distribution	CPKC
Davenport	Murray's Warehouse, Inc.	CPKC
Des Moines	Action Warehouse Co., Ltd.	UP
Des Moines	Jacobson Companies	UP
Des Moines	Kitt's Transfer & Storage	UP
Des Moines	Diverse Solutions MBE	BNSF
Des Moines	Centennial Warehouse Corp.	IAIS
Le Mars	Jacobson Companies	CN
Le Mars	Nor-Am Cold Storage	CN
Muscatine	C A M II Warehouse	CPKC
New Hampton	New Hampton Transfer & Storage, Inc.	CPKC
Ottumwa	Hardsocg Pneumatic Tool Co./HPT Stores-All	BNSF
Peosta	Peosta Warehousing	CN
Sioux City	Big Soo Warehouse	UP
Walford	GSTC Logistics, Inc.	CN
Waterloo	Crystal Distribution Services, Inc.	CN
Waterloo	Waterloo Warehousing and Service Co., Inc	IANR, UP, CN

Source: Leonard's Guide National Warehouse and Distribution Directory

Table C.3: Coal burning facilities

City	Facility	Railroad
Cedar Falls	Cedar Fall Utilities	IANR
Cedar Rapids	Archer Daniels Midland Co.	CN
Clinton	Archer Daniels Midland Co.	UP
Des Moines	Archer Daniels Midland Co.	UP
Eagle Grove	Ag Processing Inc.	UP
Iowa City	University of Iowa	CN
Keokuk	Roquette America	KJRY
Middletown	Iowa Army Ammunition Plant	BNSF
Muscatine	Muscatine Power & Water	CPKC
Ottumwa	MidAmerican Energy Co.	BNSF
Salix	MidAmerican Energy Co.	UP
Sergeant Bluff	MidAmerican Energy Co.	UP

Source: Sierra Club

Table C.4: Biodiesel plants

City	Facility	Railroad
Algona	Ag Processing Inc (AGP)	CPKC
Farley	Western Dubuque Biodiesel	CN
Iowa Falls	Cargill, Inc	UP
Mason City	Renewable Energy Group (REG)	IATR
Newton	Renewable Energy Group (REG)	IAIS
Ralston	Renewable Energy Group (REG)	UP
Sergeant Bluff	Ag Processing Inc (AGP)	UP
Wall Lake	Western Iowa Energy	CN
Washington	Iowa Renewable Energy	CPKC

Source: Iowa Renewable Fuels Association

Table C.5: Barge terminals

City	Facility	River	Railroad
Bettendorf	U.S. Oil, Bettendorf Terminal	Mississippi	CPKC
Bettendorf	Continental Cement Co.	Mississippi	CPKC
Buffalo	AGRI Grain Marketing, Buffalo Grain Elevator	Mississippi	CPKC
Buffalo	Blackhawk Fleet, Inc	Mississippi	CPKC
Buffalo	BP Products North America, Davenport Asphalt Terminal	Mississippi	CPKC
Buffalo	Cargill AgHorizons	Mississippi	CPKC
Buffalo	Lafarge North America, Davenport Plan	Mississippi	CPKC
Buffalo	Texpar Energy, Davenport Terminal	Mississippi	CPKC
Burlington	ADM/Growmark	Mississippi	BJRY
Burlington	Alliant Energy-Burlington Generating Station	Mississippi	BNSF
Burlington	Burlington River Terminal, Inc. North	Mississippi	BJRY
Burlington	Matteson River Terminal	Mississippi	BJRY
Camanche	American River Transportation Company	Mississippi	BNSF, UP, CPKC
Camanche	Vertex Chemical Corporation	Mississippi	BNSF, UP, CPKC
Clayton	Pattison Brothers - North	Mississippi	CPKC
Clinton	ADM Corn Processing	Mississippi	BNSF, UP, CPKC
Clinton	ADM/Growmark	Mississippi	CPKC
Clinton	Interstate Power & Light Co., M.L. Kapp Plant	Mississippi	CPKC
Clinton	Clinton Municipal Dock	Mississippi	CPKC
Council Bluffs	AGRI Grain Marketing Council Bluffs Terminal	Missouri	UP
Council Bluffs	AGRILIANCE Co. Council Bluffs Terminal	Missouri	UP
Davenport	Linwood Mining & Minerals	Mississippi	CPKC
Davenport	River/Gulf Grain Company	Mississippi	CPKC
Davenport	W.G. Block	Mississippi	CPKC
Davenport	Harvest States Cooperatives, Davenport West Grain Elevator	Mississippi	CPKC
Davenport	Blackhawk Fleet	Mississippi	CPKC
Davenport	Builders Sand And Cement Co.	Mississippi	CPKC
Davenport	Koch Materials Co.	Mississippi	CPKC
Dubuque	Peavey Company	Mississippi	CN
Dubuque	Interstate Power & Light Co., Dubuque Plant Coal Dock	Mississippi	CN
Dubuque	Koch Materials Co., Dubuque Terminal	Mississippi	CN
Dubuque	Cargill AgHorizons	Mississippi	CN
Dubuque	Dubuque River Terminal	Mississippi	CN
Fort Madison	Hall Towing, Inc.	Mississippi	BNSF
Keokuk	Iowa Gateway Terminal	Mississippi	KJRY, BNSF
Keokuk	Orba-Johnson Transshipment Co.	Mississippi	BNSF
Keokuk	Roquette America, Inc.	Mississippi	KJRY
Lansing	Interstate Power & Light Co., Lansing Plant Coal Dock	Mississippi	CPKC
McGregor	AGRI Grain Marketing, McGregor River Terminal	Mississippi	CPKC
Montpelier	Central Iowa Power Co.	Mississippi	CPKC
Muscatine	Grain Processing Corporation	Mississippi	CPKC
Muscatine	K.A. Steel	Mississippi	CPKC
Muscatine	Muscatine Power & Water Generation	Mississippi	CPKC
Muscatine	River Terminal Corp.	Mississippi	CPKC
Muscatine	AGRI Grain Marketing, Muscatine Grain Elevator	Mississippi	CPKC
Muscatine	ACME Fuel And Material Co.	Mississippi	CPKC
Muscatine	AGRILIANCE, Muscatine Terminal	Mississippi	CPKC
Muscatine	River Trading Co.	Mississippi	CPKC
Sioux City	Jebro, Inc.	Missouri	UP
Sioux City	Big Soo Terminal	Missouri	UP

Source: U.S. Army Corps of Engineers

Table C.6: Ethanol plants

City	Facility	Railroad
Albert City	Valero Renewables	UP
Arthur	POET - Arthur	CN
Ashton	POET - Ashton	UP
Atlantic	Elite Octane	IAIS
Cedar Rapids	Archer Daniels Midland	CN
Cedar Rapids	Archer Daniels Midland	CN
Charles City	Valero Renewables	UP
Clinton	Archer Daniels Midland	CPKC
Coon Rapids	POET - Coon Rapids	BNSF
Corning	POET - Corning	BNSF
Council Bluffs	Southwest Iowa Renewable Energy	BNSF
Denison	The Andersons Denison Ethanol, LLC	UP
Dyersville	Big River United Energy, LLC	CN
Eddyville	Cargill, Inc	BNSF, UP
Emmetsburg	POET - Emmetsburg	UP
Emmetsburg	POET - DSM Advanced Biofuel, LLC	UP
Fairbank	POET - Fairbank	IANR
Fort Dodge	Cargill, Inc	CN
Fort Dodge	Valero Renewables	CPKC
Goldfield	Corn, LP	UP
Gowrie	POET - Gowrie	UP
Grand Junction	Louis Dreyfus Commodities, LLC	UP
Hanlon town	POET - Hanlon town	UP
Hartley	Valero Renewables	CPKC
Iowa Falls	POET – Iowa Falls	UP
Jewell	POET - Jewell	UP
Lakota	Valero Renewables	UP
Lawler	Homeland Energy Solutions	CPKC
Marcus	Little Sioux Corn Processors	CN
Mason City	Golden Grain Energy	UP
Menlo	POET - Menlo	IAIS
Merrill	Lakeview Plymouth Energy	BNSF
Muscatine	Grain Processing Corporation	CPKC
Nevada	Lincoln way Energy	UP
Nevada	Verbio Nevada	UP
St. Ansgar	Absolute Energy (MN)	CPKC
Shell Rock	POET – Shell Rock	IANR
Shenandoah	Green Plains, Inc.	BNSF
Steamboat Rock	Pine Lake Corn Processors, LLC	IARR
Superior	Green Plains, Inc	UP
West Burlington	Big River Resources	BNSF

Source: Iowa Renewable Fuels Association

APPENDIX D
Freight Railroad Improvements and Investments

Tables D.1 – D.12 include federal and state Highway-Railroad Crossing Safety Program and Grade Crossing Improvement projects in Iowa from 2019 to 2024. These projects are essential initiatives aimed at improving safety and reducing the risk of accidents at highway-railroad crossings by upgrading infrastructure, implementing advanced safety measures, and minimizing the potential for collisions where roadways and railways intersect.

Federal Highway-Railroad Crossing Safety Program and Grade Crossing Improvement projects in Iowa, 2019-2024

Table D.1: Federal-Aid Highway-Railroad Safety Fund 2019 accomplishment program candidates (section 1 of 2)

B/C Ratio	Federal ID No.	Railroad	County	Highway Jurisdiction	Road Location	Present Warning Device	Type of Improvement	Federal Funds
3.4	876035W	UP	Polk	Polk Co	NE 150th Ave	Signals	Signals w/gate arms	$225,000
2.2	385271U	DME	Chickasaw	Lawler	Benz St	Crossbucks	Signals w/gate arms	$247.500
2.2	385270M	DME	Chickasaw	Lawler	Depot St	Crossbucks	Signals w/gate arms	$247,500
2.1	605729D	UP	Warren	Warren Co	190th Ave	Crossbucks	Signals w/gate arms	$225,000
2.0	191357P	UP	Woodbury	Sioux City	Dace Ave	Signals	Signals w/gate arms	$202,500
1.7	385273H	DME	Chickasaw	Lawler	Lincoln St	Crossbucks	Signals w/gate arms	$202,500
0.9	380010C	DME	Cerro Gordo	Mason City	N Kentucky St	Signals	Signals w/gate arms	$202,500
0.8	385516H	DME	Cerro Gordo	Clear Lake	Buddy Holly Pl	Signals	Signals w/gate arms	$247,500
0.8	385563R	DME	Hancock	Britt	Main Ave N	Signals	Signals w/gate arms	$270,000
0.7	385179U	DME	Allamakee	Postville	Lybrand St	Signals	Signals w/gate arms	$202,500
0.7	382078X	BNSF	Woodbury	Sioux City	Military Rd	Signals	Signals w/gate arms	$315,000
0.7	307688E	UP	Woodbury	Sioux City	41st St	Signals	Signals w/gate arms	$270,000
0.7	379989X	DME	Cerro Gordo	Mason City	E State St	Signals	Signals w/gate arms	$202,500
0.6	385628G	DME	Kossuth	Iowa DOT	IA 15	Signals	Signals w/gate arms	$202,500
0.6	385775U	DME	O'Brien	Sheldon	Washington Ave	Signals	Signals w/gate arms	$202,500
0.6	385487A	DME	Cerro Gordo	Mason City	S Carolina Ave	Signals w/ gate arms	Constant warning time	$202,500
0.6	385193P	DME	Winneshiek	Iowa DOT	US 52	Signals w/ gate arms	Constant warning time	$202,500
0.6	196994L	UP	Story	Story City	Broad St	Signals	Signals w/gate arms	$247,000
0.6	385749E	DME	O'Brien	O'Brien Co	Vine Ave	Signals	Signals w/gate arms	$202,500
0.6	385247T	DME	Winneshiek	Fort Atkinson	4th St NW	Signals	Signals w/gate arms	$202,500
0.5	385485L	DME	Cerro Gordo	Mason City	S Virginia Ave	Signals	Signals w/gate arms	$202,500
0.5	382076J	BNSF	Woodbury	Sioux City	W 19th St	Signals	Signals w/gate arms	$270,000

Table D.1 (continued): Federal-Aid Highway-Railroad Safety Fund 2019 accomplishment program candidates (section 2 of 2)

B/C Ratio	Federal ID No.	Railroad	County	Highway Jurisdiction	Road Location	Present Warning Device	Type of Improvement	Federal Funds
0.5	196614C	UP	Pocahontas	Pocahontas Co	140th Ave	Crossbucks	Signals w/gate arms	$205,500
0.5	191314W	UP	Woodbury	Sioux City	Harbor Dr	Crossbucks	Signals w/gate arms	$225,000
0.4	385223E	DME	Winneshiek	Winneshiek Co	155th St	Crossbucks	Signals w/gate arms	$162,000
0.4	385203T	DME	Winneshiek	Winneshiek Co	123rd St	Crossbucks	Signals w/gate arms	$162,000
0.4	195940C	UP	Wright	Woolstock	Neville St	Crossbucks	Signals w/gate arms	$180,000
0.4	192750N	UP	Polk	Iowa DOT	US 6	Signals	Signals w/gate arms	$202,500
0.4	064048E	BNSF	Woodbury	Sioux City	Dace Ave	Signals	Signals w/gate arms	$216,000
0.4	376192J	DME	Allamakee	Harpers Ferry	Chestnut St	Signals	Signals w/gate arms	$202,500
0.4	196421D	UP	Wright	Iowa DOT	US 69	Signals	Signals w/gate arms	$189,000
0.4	195946T	UP	Kossuth	Kossuth Co	190th Ave	Crossbucks	Signals w/gate arms	$198,000
0.4	097457N	BNSF	Sioux	Sioux Center	20th St SW	Signals	Signals w/gate arms	$180,000
0.3	196916E	UP	Pocahontas	Laurens	East St	Crossbucks	Signals w/gate arms	$180,000
0.3	876110F	UP	Hardin	Hardin Co	CR D-47	Signals	Signals w/gate arms	$189,000
0.3	604460X	UP	Wayne	Corydon	Dekalb St	Signals	Signals w/gate arms	$220,500
0.3	196581S	UP	Wright	Iowa DOT	IA 3	Signals	Signals w/gate arms	$247,500
0.3	911768L	UP	Plymouth	Plymouth Co	CR C-70	Signals	Signals w/gate arms	$180,000
0.3	067326D	BNSF	Plymouth	Plymouth Co	CR C-70	Signals	Signals w/gate arms	$225,000
0.3	876195K	UP	Cerro Gordo	Cerro Gordo Co	210th St	Signals	Signals w/gate arms	$189,000
				Statewide			Crossing closures	$15,000
							Total	**$8,315,748**

Source: Iowa DOT

Table D.2: Federal-Aid Highway-Railroad Safety Fund 2020 accomplishment program candidates

B/C Ratio	Federal ID No.	Railroad	County	Highway Jurisdiction	Road Location	Present Warning Device	Type of Improvement	Federal Funds
2.8	190587M	UP	Tama	Tama Co	V Ave	Crossbucks	Signals w/gate arms	$350,000
2.8	840206T	CIC	Linn	Cedar Rapids	Bowling St	Signals	Signals w/gate arms	$150,000
2.4	191136M	UP	Pottawattamie	Council Bluffs	2nd Ave	Signals	Signals w/gate arms	$50,000
2.3	608576M	UP	Kossuth	Iowa DOT	IA 9	Signals	Signals w/gate arms	$230,000
2.3	603326H	IAIS	Dallas	West Des Moines	S 88th St	Crossbucks	Signals w/gate arms	$325,000
1.9	191082J	UP	Harrison	Harrison Co	Kermit Pl	Crossbucks	Signals w/gate arms	$350,000
1.5	608101V	UP	Emmet	Estherville	N 2nd St	Crossbucks	Signals w/gate arms	$250,000
1.5	201768B	UP	Webster	Webster Co	260th St	Crossbucks	Signals w/gate arms	$250,000
1.4	190435R	UP	Cedar	Clarence	4th Ave	Crossbucks	Signals w/gate arms	$350,000
1.1	385243R	DME	Winneshiek	Winneshiek Co	266th Ave	Crossbucks	Signals w/gate arms	$250,000
1.0	307845V	CCP	Linn	Cedar Rapids	H Ave	Signals	Signals w/gate arms	$450,000
0.9	307013D	CCP	Delaware	Earlville	S Wine St	Signals	Signals w/gate arms	$230,000
0.7	376125P	DME	Dubuque	Dubuque	E 14th St	Signals	Signals w/gate arms	$225,000
0.7	190676E	UP	Marshall	Marshall Co	Canfield Ave	Crossbucks	Signals w/gate arms	$350,000
0.7	190682H	UP	Story	Story Co	720th Ave	Crossbucks	Signals w/gate arms	$350,000
0.6	190616V	UP	Marshall	Marshall Co	Three Bridges Rd	Crossbucks	Signals w/gate arms	$375,000
0.6	307541E	CCP	Cherokee	Aurelia	W 3rd St	Crossbucks	Signals w/gate arms	$200,000
0.3	196993E	UP	Story	Story City	Washington St	Crossbucks	Signals w/gate arms	$400,000
				Statewide			Crossing closure	$15,000
							Total	**$5,150,000**

Source: Iowa DOT

Table D.3: Federal-Aid Highway-Railroad Safety Fund 2021 accomplishment program candidates

B/C Ratio	Federal ID No.	Railroad	County	Highway Jurisdiction	Road Location	Present Warning Device	Type of Improvement	Federal Funds
2.2	603280W	IAIS	Guthrie	Guthrie Co	Talon Ave	Crossbucks	Signals w/gate arms	$202,500
1.9	064031B	BNSF	Woodbury	Sioux City	6th St	Cantilever/ Signals w/gate arms	Constant Warning Time	$45,000
1.8	606842A	IAIS	Muscatine	Atalissa	Oak St	Signals	Signals w/gate arms	$180,000
1.1	063403M	BNSF	Marion	Iowa DOT	Lincoln St	Cantilever/ Signals w/gate arms	Constant Warning Time	$450,000
1.0	067364M	BNSF	Sioux	Sioux Co	360th Ave	Cantilever/ Signals	Signals w/gate arms	$247,500
0.9	078051D	BNSF	Lee	Lee Co	48th St	Cantilever/ Signals	Signals w/gate arms	$225,000
0.9	082342A	BNSF	Lyon	Lyon Co	210th St	Signals	Signals w/gate arms	$225,000
0.8	063246W	BNSF	Lee	Fort Madison	2nd St	Cantilever/ Signals	Signals w/gate arms	$360,000
0.8	376717A	CIC	Linn	Cedar Rapids	1st St SW	Cantilever/ Signals	Signals w/gate arms	$166,500
0.7	082337D	BNSF	Lyon	Lyon Co	CR A-26	Signals	Signals w/gate arms	$225,000
0.7	063232N	BNSF	Lee	Fort Madison	27th St	Signals	Signals w/gate arms	$225,000
0.7	190508Y	UP	Linn	Cedar Rapids	1st Ave SE	Cantilever/ Signals	Signals w/gate arms	$360,000
0.7	074396K	BNSF	Pottawattamie	Pottawattamie Co	192nd St	Signals	Signals w/gate arms	$225,000
0.7	382037T	BNSF	Woodbury	Sioux City	Court St	Crossbucks	Signals w/gate arms	$450,000
0.6	385463L	DME	Floyd	Floyd Co	Zinnia Ave	Signals	Signals w/gate arms	$247,500
0.6	190563Y	UP	Benton	Benton Co	25th Ave	Crossbucks	Signals w/gate arms	$315,000
0.1	926050N	IAIS	Guthrie	Guthrie Co	Talon Ave	Crossbucks	Signals w/gate arms	$202,500
				Statewide			Crossing closure	$15,000
							Total	**$4,366,500**

Source: Iowa DOT

Table D.4: Federal-Aid Highway-Railroad Safety Fund 2022 accomplishment program candidates

B/C Ratio	Federal ID No.	Railroad	County	Highway Jurisdiction	Road Location	Present Warning Device	Type of Improvement	Federal Funds
7.0	385716S	DME	Clay	Iowa DOT	US 18	Cantilever/ Signals w/gate arms	Signals w/gate arms	$292,500
4.3	064031B	DME	Dubuque	Dubuque	Jones St	Cantilever/ Signals w/gate arms	Constant Warning Time	$157,500
1.5	376043H	DME	Clinton	Clinton	30th Ave N	Crossbucks	Signals w/gate arms	$360,000
1.3	380021P	DME	Cerro Gordo	Cerro Gordo Co	Spruce Ave	Crossbucks	Signals w/gate arms	$292,500
0.8	190945U	CCP	Sac	Iowa DOT	IA 39	Signals	Signals w/gate arms	$252,000
0.7	078050W	BNSF	Lee	Lee Co	Ortho Way	Signals	Signals w/gate arms	$270,000
0.7	074970K	BNSF	Fremont	Fremont Co	155th Ave	Signals w/gate arms	Constant Warning Time	$369,000
0.7	376039T	DME	Clinton	Clinton	23rd Ave N	Crossbucks	Signals w/gate arms	$369,000
0.6	307518K	CCP	Buena Vista	Iowa DOT	IA 110	Signals	Signals w/gate arms	$270,000
0.6	097445U	BNSF	Sioux	Maurice	4th St	Signals	Signals w/gate arms	$283,500
0.6	376045W	DME	Clinton	Clinton	32nd Ave N	Crossbucks	Signals w/gate arms	$427,500
0.5	097429K	BNSF	Plymouth	Plymouth Co	CR C-16	Signals	Signals w/gate arms	$315,000
0.5	376027Y	DME	Clinton	Clinton	9th Ave N	Cantilever/ Signals	Signals w/gate arms	$315,000
0.5	074503X	BNSF	Fremont	Fremont Co	Washington St	Signals w/gate arms	Constant Warning Time	$369,000
0.4	074962T	BNSF	Fremont	Fremont Co	220th St	Signals	Signals w/gate arms	$369,000
0.4	074504E	BNSF	Fremont	Fremont Co	Main St	Signals w/gate arms	Constant Warning Time	$369,000
0.0	074046T	BNSF	Clarke	Osceola	US 69	Cantilever/ Signals w/gate arms	Fencing	$49,500
				Statewide			Crossing closure	$15,000
							Total	**$5,145,000**

Source: Iowa DOT

Table D.5: Federal-Aid Highway-Railroad Safety Fund 2023 accomplishment program candidates

B/C Ratio	Federal ID No.	Railroad	County	Highway Jurisdiction	Road Location	Present Warning Device	Type of Improvement	Federal Funds
4.46	067357C	BNSF	Plymouth	Iowa DOT	IA 3	Cantilever/ Signals w/gate arms	Interconnected advanced warning sign	$31,500
3.35	190461F	UP	Cedar	Cedar Co	115th St	Crossbucks	Signals w/gate arms	$337,500
1.65	608572K	UP	Kossuth	Kossuth Co	185th Ave	Crossbucks	Signals w/gate arms	$292,500
1.47	385427R	DME	Floyd	Charles City	E St	Signals w/gate arms	Constant Warning Time	$427,500
1.35	608579H	UP	Kossuth	Kosuth Co	440th St	Crossbucks	Signals w/gate arms	$292,500
1.24	190501B	UP	Linn	Cedar Rapids	8th St SE	Cantilever, Signals w/gate arms	Constant Warning Time	$337,500
1.22	607858A	IANR	Linn	Cedar Rapids	42nd St	Crossbucks	Signals w/gate arms	$202,500
1.19	190734X	UP	Greene	Greene Co	Linwood Ave	Crossbucks	Signals w/gate arms	$337,500
1.0	376730N	CIC	Linn	Cedar Rapids	Wilson Ave SW	Cantilever, Signals w/gate arms	Constant Warning Time	$292,500
0.97	190547P	UP	Benton	Benton Co	32nd Ave	Crossbucks	Signals w/gate arms	$337,500
0.75	607175J	DME	Muscatine	Muscatine Co	Tombstone Tr	Signals w/gate arms	Constant Warning Time	$427,500
0.67	922467W	UP	Benton	Benton Co	22nd Ave	Crossbucks	Signals w/gate arms	$337,500
0.66	380054C	DME	Mitchell	Carpenter	William St	Cantilever, Signals w/gate arms	Constant Warning Time	$427,500
0.61	606843G	IAIS	Muscatine	Iowa DOT	US 6	Cantilever, Signals w/gate arms	Constant Warning Time	$337,500
0.14	607399G	IANR	Butler	Butler Co	220th St	Signals	Signals w/gate arms	$198,000
0.0	876012P	UP	Polk	Polk Co	NE Broadway	Signals w/gate arms	Grade separation project contribution	$500,000
				Statewide			Crossing closure	$15,000
							Total	**$5,132,000**

Source: Iowa DOT

Table D.6: Federal-Aid Highway-Railroad Safety Fund 2024 accomplishment program candidates

B/C Ratio	Federal ID No.	Railroad	County	Highway Jurisdiction	Road Location	Present Warning Device	Type of Improvement	Federal Funds
49.34	307816K	CCP	Linn	Linn Co	Arabian Rd	Crossbucks	Signals w/gate arms	$405,000
22.36	197056P	UP	Kossuth	Kossuth Co	150th St	Crossbucks	Signals w/gate arms	$470,000
16.00	607425U	IANR	Butler	Butler Co	T-47 / Packard Ave	Crossbucks	Signals w/gate arms	$300,000
7.52	375972F	DME	Scott	Scott Co	210th St	Signals	Signals w/gate arms	$460,000
2.93	307097B	CCP	Black Hawk	Black Hawk Co	S Canfield Rd	Signals	Signals w/gate arms	$400,000
2.84	082335P	BNSF	Lyon	Lyon Co	170th St	Crossbucks	Signals w/gate arms	$395,000
2.4	377213D	IAIS	Polk	Windsor Heights	73rd St	Cantilever, signals	Signals w/gate arms	$400,000
2.13	606887G	IAIS	Johnson	Coralville	Camp Cardinal Blvd	Signals	Cantilever, Flashing lights & Gates	$400,000
2.09	840173H	CIC	Johnson	Coralville	12th Ave	Cantilever, signals	Signals w/gate arms	$275,000
1.9	385747R	DME	O'Brien	Hartley	S Central Ave	Signals	Signals w/gate arms	$495,000
1.78	385428X	DME	Floyd	Charles City	Grand Ave	Cantilever, signals	Cantilever, Signals w/gate arms	$500,000
1.71	607880M	IAIS	Polk	Altoona	9th St NW	Signals	Signals w/gate arms	$350,000
1.61	606850S	IAIS	Muscatine	Iowa DOT	IA 70	Flashing lights with motion circuitry	Signals w/gate arms	$325,000
1.5	078040R	BNSF	Lee	Lee Co	245th Ave	Crossbucks	Flashing lights & Gates with CWT	$425,000
1.43	385645X	DME	Palo Alto	Palo Alto Co	490th Ave	Signals	Signals w/gate arms	$350,000
1.08	607146Y	DME	Scott	Davenport	Wapello Ave	Signals	Signals w/gate arms	$475,000
0.27	599322V	IANR	Hancock	Iowa DOT	US 18	Cantilever, signals	Signals w/gate arms	$450,000
				Statewide			Crossing closure	$300,000
							Total	**$7,175,000**

Source: Iowa DOT

State Highway-Railroad Crossing Surface Repair Program and Grade Crossing Improvement projects in Iowa, 2019-2024

Table D.7: 2019 State Highway-Railroad Crossing Surface Repair Program projects

County	Federal ID No.	Railroad	Highway Jurisdiction	Road Location	State Repair Fund (60%)
Black Hawk	307189N	CCP	Cedar Falls	Center St	$83,812
Linn	307802C	CCP	Linn Co	Central City Rd E-16	$65,400
Linn	307805X	CCP	Linn Co	Central City Rd E-16	$74,400
Linn	307840L	CCP	Cedar Rapids	McCloud Pl NE	$58,200
Buena Vista	307503V	CCP	Storm Lake	Oneida St	$80,400
Buena Vista	307505J	CCP	Storm Lake	Cayuga St	$60,600
Buena Vista	307512U	CCP	Storm Lake	W 5th St	$128,400
Lyon	082328E	BNSF	Lyon Co	Clinton St	$55,328
Clarke	074070U	BNSF	Osceola	S Ridge Rd	$57,600
Clarke	074050H	BNSF	Osceola	240th Ave	$57,600
O'Brien	385769R	DME	O'Brien Co	L-40 / Oriole Av	$40,590
Wright	197025R	UP	Goldfield	E Cedar St	$75,000
Blackhawk	200782T	UP	Waterloo	Franklin St	$71,794
				Total	**$909,124**

Source: Iowa DOT

Table D.8: 2020 State Highway-Railroad Crossing Surface Repair Program projects

County	Federal ID No.	Railroad	Highway Jurisdiction	Road Location	State Repair Fund (60%)
Black Hawk	307177U	CCP	Waterloo	Wagner Rd	$71,400
Buchanan	307064N	CCP	Buchanan Co	Nathan Bethel Ave	$51,600
Black Hawk	307112B	CCP	Waterloo	Osage Ave	$123,000
Buchanan	307075B	CCP	Buchanan Co	Golf Course Blvd	$51,600
Black Hawk	307181J	CCP	Waterloo	Airport Blvd	$82,200
Plymouth	307671B	UP	Hinton	Main St	$54,184
Plymouth	067334V	BNSF	Hinton	Main St	$79,517
Plymouth	307671B	Central Valley AG	Hinton	Main St	$54,184
Plymouth	067334V	Central Valley AG	Hinton	Main St	$50,792
Lyon	082328E	Lester Feed & Grain	Lyon Co	Clinton St	$55,328
Linn	376717A	CIC	Cedar Rapids	1st St SW	$147,900
Clay	385696H	MaxYield Coop	Dickens	Main St	$39,720
Clay	385696H	CP	Dickens	Main St	$39,720
				Total	**$901,145**

Source: Iowa DOT

Table D.9: 2021 State Highway-Railroad Crossing Surface Repair Program projects

County	Federal ID No.	Railroad	Highway Jurisdiction	Road Location	State Repair Fund (60%)
Black Hawk	307861E	CCP	Waterloo	Newton St	$80,400
Black Hawk	307869J	CCP	Waterloo	Conger St	$85,800
Black Hawk	307173S	CCP	Waterloo	Burton Ave	$100,200
Black Hawk	307897M	CCP	Waterloo	Rainbow Dr	$71,400
Plymouth	307615U	CCP	Remsen	Washington St	$84,600
Polk	603720K	IAIS	Des Moines	SW 5th Ave	$61,200
Linn	840206T	CIC	Cedar Rapids	S Bowling St	$79,200
Winnebago	608601T	UP	Winnebago Co	20th Ave/CR R-20	$31,800
Cerro Gordo	201859G	UP	Mason City	S Monroe St	$102,900
Cerro Gordo	385463L	DME	Cerro Gordo Co	Zinnia Ave	$42,600
Kossuth	385619H	DME	Kossuth Co	B-40 / 210th St	$133,000
Black Hawk	307861E	CCP	Waterloo	Newton St	$80,400
Black Hawk	307869J	CCP	Waterloo	Conger St	$85,800
				Total	**$1,039,300**

Source: Iowa DOT

Table D.10: 2022 State Highway-Railroad Crossing Surface Repair Program projects

County	Federal ID No.	Railroad	Highway Jurisdiction	Road Location	State Repair Fund (60%)
Calhoun	307447R	CCP	Pomeroy	Ontario St	$136,200
Cerro Gordo	385516H	DME	Clear Lake	Buddy Holly Pl	$73,200
Floyd	385422G	DME	Floyd Co	Underwood Ave(T-66)	$42,000
O'Brien	385762T	DME	O'Brien Co	B-20 (Roosevelt Ave)	$56,760
Chickasaw	385301J	DME	Chickasaw Co	B-57 (220th St)	$73,800
Cerro Gordo	874095Y	IATR	Mason City	19th St SW	$79,400
Cerro Gordo	874104V	IATR	Mason City	19th St SW	$101,289
Plymouth	307616B	Farmer's Co-op	Remsen	Washington St	$141,999
Lee	072519M	KJRY	Keokuk	Twin Rivers Dr	$49,320
Adams	095331A	BNSF	Adams Co	2nd St	116,922
Palo Alto	385645X	DME	Palo Alto Co	490th Ave	$39,600
Johnson	607299C	CIC	Iowa City	South Gilbert St (S crossing)	$42,240
Henry	079161S	BNSF	Henry Co	Oasis Ave	$86,400
Guthrie	603291J	IAIS	Guthrie Co	McPherson St	$64,826
				Total	**$1,103,956**

Source: Iowa DOT

Table D.11: 2023 State Highway-Railroad Crossing Surface Repair Program projects

County	Federal ID No.	Railroad	Highway Jurisdiction	Road Location	State Repair Fund (60%)
Polk	607878L	IAIS	Altoona	5th Ave	$76,621
Polk	607880M	IAIS	Altoona	9th St / 5th Ave	$81,934
Benton	607937L	IANR	Shellsburg	Smith St	$34,560
Linn	840212W	CIC	Cedar Rapids	9th St SW	$38,310
Cerro Gordo	380019N	DME	Cerro Gordo Co	305th St	$47,700
Cherokee	307576F	CCP	Cherokee	W Cedar St	$85,200
Linn	376726Y	CIC	Cedar Rapids	9th St SW	$206,400
Polk	377207A	IAIS	Clive	86th St	$171,674
Sioux	067362Y	BNSF	Sioux Center	20th St NW	$82,800
Sioux	067359R	BNSF	Sioux Center	4th St NW	$67,800
Sioux	067358J	BNSF	Sioux Center	3rd St NW	$70,200
Sioux	067358J	Farmer's Co-op	Sioux Center	3rd St NW	$44,400
Sioux	067359R	Farmer's Co-op	Sioux Center	4th St NW	$44,400
				Total	**$1,051,999**

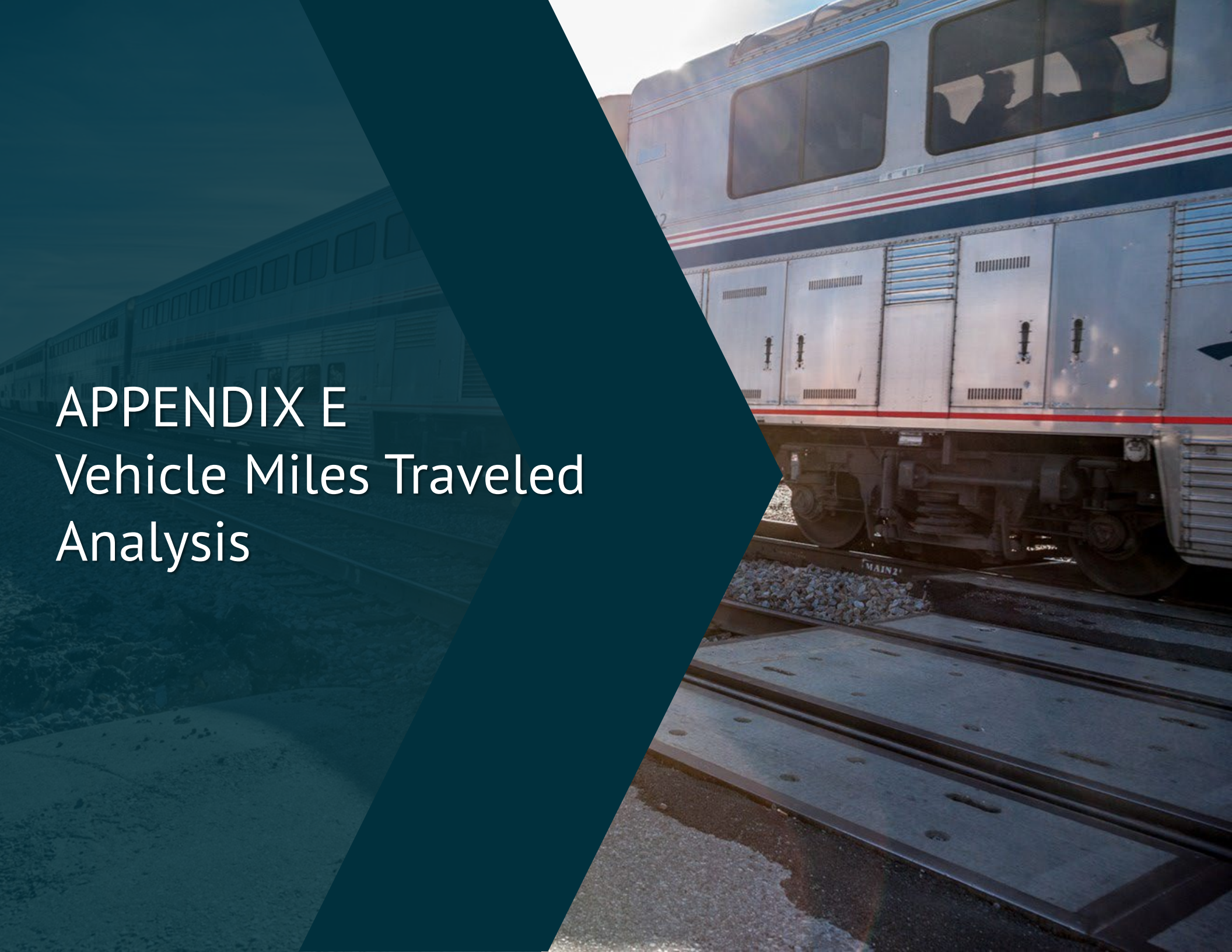
Source: Iowa DOT

Table D.12: 2024 State Highway-Railroad Crossing Surface Repair Program projects

County	Federal ID No.	Railroad	Highway Jurisdiction	Road Location	State Repair Fund (60%)
Linn	307841T	CCP	Cedar Rapids	29th St NE	$135,000
Linn	840224R	CIC	Cedar Rapids	Wright Brothers E	$96,000
Linn	840198D	CIC	Cedar Rapids	60th Ave SW	$66,000
Linn	840199K	CIC	Cedar Rapids	Waconia Ave SW	$69,000
Johnson	607307S	CIC	Iowa City	Kirkwood Ave	$57,000
Polk	377221V	IAIS	Des Moines	Grand Ave	$148,200
Washington	607335V	DME	Washington Co	Old Military Rd	$58,200
Johnson	606887G	IAIS	Coralville	Camp Cardinal Blvd	$102,000
Black Hawk	607625D	IANR	Black Hawk Co	Cedar Wapsi Road (C-57)	$46,800
Kossuth	390124S	DME	Algona	East St / Finn Dr	$115,136
Johnson	608027T	IAIS	Oxford	Augusta Ave	$185,050
				Total	**$1,078,386**

Source: Iowa DOT

APPENDIX E
Vehicle Miles Traveled Analysis

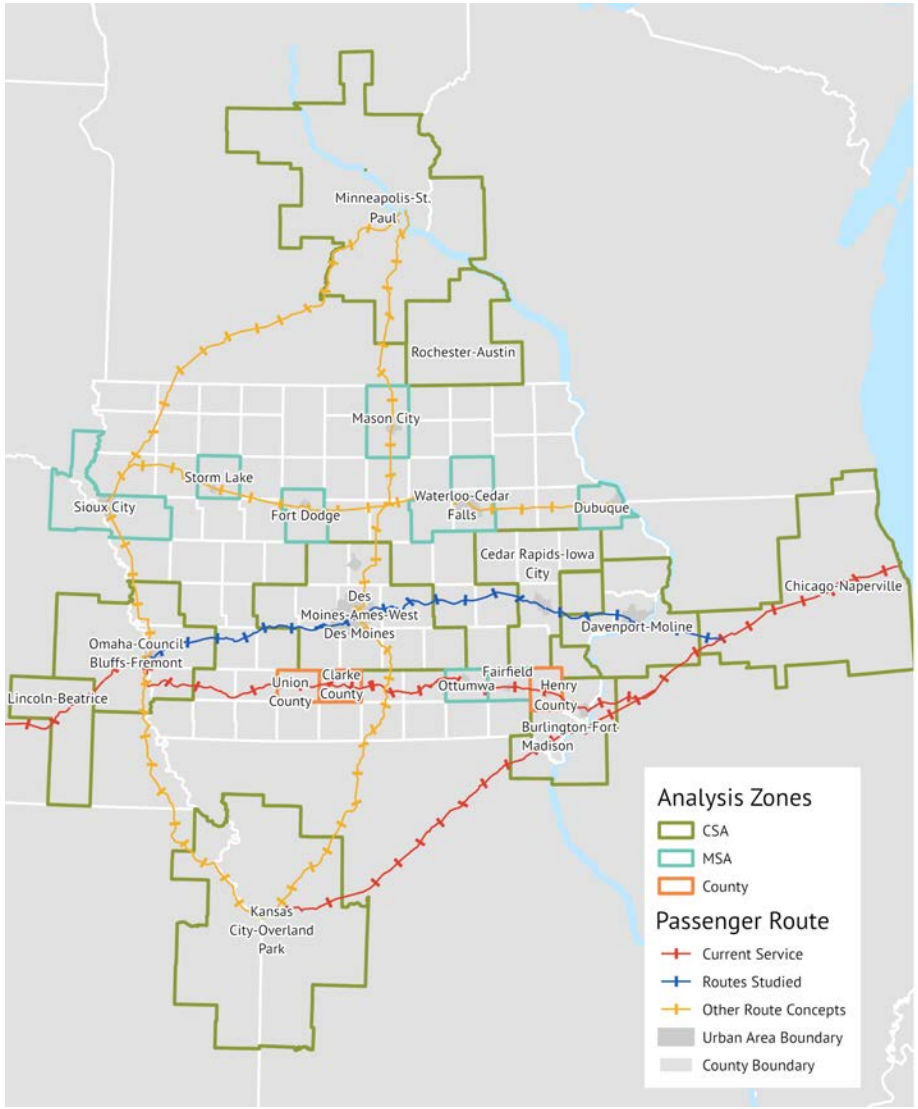


As referenced in Chapter 4, Iowa DOT conducted a Vehicle Miles Traveled (VMT) analysis for proposed passenger rail routes. The analysis used the Iowa Travel Analysis Model (iTRAM) to calculate the number of trips between selected geographies and to estimate the typical travel distance between those geographies.

The geographies used are Metropolitan Statistical Areas (MSAs), Combined Statistical Areas (CSAs) and selected Iowa counties. MSAs are Census Bureau-defined areas consisting of one or more counties that contain a city of 50,000 or more inhabitants. Additional counties qualify to be included by meeting a specified level of commuting to the counties containing the population concentration and by meeting certain other requirements of metropolitan character, such as a specified minimum population density or percentage of the population that is urban. CSAs are United States Office of Management and Budget delineated groupings of adjacent metropolitan and/or micropolitan statistical areas that have social and economic ties as measured by commuting to work, but at lower levels than are found among counties within individual metropolitan and micropolitan statistical areas. CSAs can be characterized as representing larger regions that reflect wider-ranging social and economic interactions, such as wholesaling, commodity distribution, and weekend recreation activities, as well as lower levels of daily commuting interaction. The individual counties selected represent locations with existing Amtrak stations that are not within an MSA or CSA.

A map of the proposed routes and the geographies used in the analysis is shown in Figure E.1. Matrices showing projected daily passenger VMT between destinations along existing and potential routes in 2018 and 2050 are provided in Tables E.1 – E.12. These daily VMT would be traveling along Iowa and neighboring states' highways and could potentially be diverted to passenger rail if existing service was improved, or if new service was added.

Figure E.1: Geographies analyzed in VMT analysis and current and proposed passenger rail routes



Source: Iowa DOT

California Zephyr Route

Table E.1: Projected daily vehicle miles traveled (VMT) between Chicago, IL and Amtrak station areas along California Zephyr route in 2018

	Chicago, IL	Burlington-Fort Madison	Henry County	Ottumwa	Clarke County	Union County	Omaha, NE	Lincoln, NE
Chicago, IL		81,401	15,734	28,430	10,816	14,814	1,364,037	455,199
Burlington-Fort Madison	81,332		129,890	7,467	24	23	10,714	3,868
Henry County	15,582	130,311		10,457	13	3	2,003	758
Ottumwa	28,327	7,446	10,428		1,791	300	2,734	1,032
Clarke County	10,757	24	13	1,798		18,093	1,135	201
Union County	14,772	23	3	300	18,073		2,609	219
Omaha, NE	1,367,658	10,691	1,990	2,738	1,143	2,622		667,280
Lincoln, NE	455,233	3,576	712	1,013	200	218	667,015	

Origin is shown in the left column; destination is shown in the top row.

Source: Iowa DOT

Table E.2: Projected daily VMT between Chicago, IL and Amtrak station areas along California Zephyr route in 2050

	Chicago, IL	Burlington-Fort Madison	Henry County	Ottumwa	Clarke County	Union County	Omaha, NE	Lincoln, NE
Chicago, IL		69,840	14,808	25,789	10,446	13,792	1,545,508	498,850
Burlington-Fort Madison	69,788		121,047	7,226	23	19	10,845	3,700
Henry County	14,737	121,431		12,678	21	4	2,215	795
Ottumwa	24,904	7,202	12,631		1,951	323	2,828	1,026
Clarke County	10,391	23	21	1,958		19,898	1,450	215
Union County	13,754	19	4	323	19,875		2,868	227
Omaha, NE	1,545,874	10,770	2,189	2,815	1,451	2,871		830,041
Lincoln, NE	498,863	3,417	745	992	214	225	829,884	

Origin is shown in the left column; destination is shown in the top row.

Source: Iowa DOT

Southwest Chief Route

Table E.3: Projected daily VMT between Chicago, IL and Amtrak station areas along Southwest Chief route in 2018

	Chicago, IL	Burlington-Fort Madison	Kansas City, MO
Chicago, IL		81,401	5,609,617
Burlington-Fort Madison	81,332		24,347
Kansas City, MO	5,609,381	24,297	

Origin is shown in the left column; destination is shown in the top row.

Source: Iowa DOT

Table E.4: Projected daily VMT between Chicago, IL and Amtrak station areas along Southwest Chief route in 2050

	Chicago, IL	Burlington-Fort Madison	Kansas City, MO
Chicago, IL		69,840	6,767,971
Burlington-Fort Madison	69,788		25,960
Kansas City, MO	6,767,972	25,895	

Origin is shown in the left column; destination is shown in the top row.

Source: Iowa DOT

Chicago – Des Moines – Omaha-Council Bluffs

Table E.5: Projected daily VMT between Chicago, IL and Omaha, NE via Des Moines in 2018

	Chicago, IL	Davenport	Cedar Rapids-Iowa City	Des Moines	Omaha, NE
Chicago, IL		476,937	398,991	1,101,274	1,364,037
Davenport	474,603		361,888	18,175	48,239
Cedar Rapids-Iowa City	397,460	360,819		69,373	53,233
Des Moines	1,100,723	18,298	69,915		143,647
Omaha, NE	1,367,658	48,384	53,383	143,228	

Origin is shown in the left column; destination is shown in the top row.

Source: Iowa DOT

Table E.6: Projected daily VMT between Chicago, IL and Omaha, NE via Des Moines in 2050

	Chicago, IL	Davenport	Cedar Rapids-Iowa City	Des Moines	Omaha, NE
Chicago, IL		538,493	449,551	1,313,389	1,545,508
Davenport	534,398		374,260	29,570	54,629
Cedar Rapids-Iowa City	447,225	372,708		150,536	70,868
Des Moines	1,314,021	27,494	152,165		243,528
Omaha, NE	1,545,874	54,605	70,737	242,520	

Origin is shown in the left column; destination is shown in the top row.

Source: Iowa DOT

Minneapolis – Sioux City - Omaha

Table E.7: Projected daily VMT between Minneapolis, MN and Omaha, NE via Sioux City in 2018

	Minneapolis, MN	Sioux City	Omaha, NE
Minneapolis, MN		67,545	596,914
Sioux City	68,252		29,562
Omaha, NE	595,988	29,771	

Origin is shown in the left column; destination is shown in the top row.

Source: Iowa DOT

Table E.8: Projected daily VMT between Minneapolis, MN and Omaha, NE via Sioux City in 2050

	Minneapolis, MN	Sioux City	Omaha, NE
Minneapolis, MN		89,600	904,154
Sioux City	90,053		45,857
Omaha, NE	902,518	46,044	

Origin is shown in the left column; destination is shown in the top row.

Source: Iowa DOT

Chicago – Dubuque – Sioux City

Table E.9: Projected daily VMT between Chicago, IL and Sioux City via Dubuque in 2018

	Chicago, IL	Dubuque	Waterloo-Cedar Falls	Fort Dodge	Storm Lake	Sioux City
Chicago, IL		61,199	152,850	39,667	26,926	211,979
Dubuque	61,482		5,317	16	6	468
Waterloo-Cedar Falls	153,380	5,277		2,854	56	683
Fort Dodge	39,678	16	2,865		6,038	820
Storm Lake	26,984	6	56	6,012		13,473
Sioux City	209,078	468	683	826	13,441	

Origin is shown in the left column; destination is shown in the top row.

Source: Iowa DOT

Table E.10: Projected daily VMT between Chicago, IL and Sioux City via Dubuque in 2050

	Chicago, IL	Dubuque	Waterloo-Cedar Falls	Fort Dodge	Storm Lake	Sioux City
Chicago, IL		62,992	151,464	32,995	24,938	214,700
Dubuque	63,321		16,921	25	5	496
Waterloo-Cedar Falls	152,000	16,738		4,463	56	691
Fort Dodge	33,011	25	4,480		5,384	731
Storm Lake	24,995	5	56	5,359		14,257
Sioux City	211,648	495	692	736	14,218	

Origin is shown in the left column; destination is shown in the top row.

Source: Iowa DOT

Minneapolis – Des Moines – Kansas City

Table E.11: Projected daily VMT between Minneapolis, MN and Kansas City, MO via Des Moines in 2018

	Minneapolis, MN	Rochester, MN	Mason City	Des Moines	Clarke County	Kansas City, MO
Minneapolis, MN		1,149,310	29,284	447,876	4,690	1,304,961
Rochester, MN	1,148,790		43,774	16,927	178	51,594
Mason City	29,305	43,745		15,580	18	14,057
Des Moines	447,474	16,872	15,686		172,440	176,013
Clarke County	4,641	176	18	170,387		1,140
Kansas City, MO	1,300,247	51,417	14,044	175,848	1,133	

Origin is shown in the left column; destination is shown in the top row.

Source: Iowa DOT

Table E.12: Projected daily VMT between Minneapolis, MN and Kansas City, MO via Des Moines in 2050

	Minneapolis, MN	Rochester, MN	Mason City	Des Moines	Clarke County	Kansas City, MO
Minneapolis, MN		1,471,388	37,355	710,996	6,050	2,120,071
Rochester, MN	1,470,591		26,765	24,386	205	74,281
Mason City	37,391	26,737		17,471	17	14,729
Des Moines	710,281	24,305	17,622		191,395	261,284
Clarke County	5,985	202	17	189,174		1,342
Kansas City, MO		1,471,388	37,355	710,996	6,050	2,120,071

Origin is shown in the left column; destination is shown in the top row.

Source: Iowa DOT

APPENDIX F
Commodity Movements

This appendix provides tables to support the freight rail trends discussed in Chapter 4, Rail Planning Considerations. The data in these tables reflects freight movements only and should not necessarily be construed as a direct reflection of production and/or consumption in the state. Tables F.1 – F. 7 use the Standard Transportation Commodity Code (STCC), a seven-digit numeric code, categorized by 40 commodity groupings, based on physical product information used on shipping documents and published/maintained by the Association of American Railroads. Additional detail on the data and sources can be found in the endnotes of Chapter 4, Rail Planning Considerations. Tables are provided for the following information.

- Table F.1: Rail movement by commodity (all directions), 2022
- Table F.2: Rail outbound movement by commodity, 2022
- Table F.3: Rail inbound movement by commodity, 2022
- Table F.4: Rail intrastate movement by commodity, 2022
- Table F.5: Rail through movement by commodity, 2022
- Table F.6: Rail outbound tons by geography, 2022
- Table F.7: Rail inbound tons by geography, 2022
- Tables F.8—F.12: Federal Highway Administration Freight Analysis Framework (FHWA FAF) rail tons by Standard Classification of Transportable Goods (SCTG), 2022 and 2050

Table F.1: Rail movements by commodity (all directions), 2022

STCC2	Commodity	Tons	Percent of Tons	Units (Carloads)	Percent of Carloads
1	Farm Products	34,343,384	12.6%	403,206	6.7%
8	Forest Products	20,435	0.0%	310	0.0%
9	Fresh Fish or Marine Products	7,370	0.0%	280	0.0%
10	Metallic Ores	193,169	0.1%	1,963	0.0%
11	Coal	64,731,272	23.7%	545,981	9.1%
13	Petroleum Prod, Natural Gas	416,181	0.2%	4,532	0.1%
14	Nonmetallic Minerals	11,963,961	4.4%	108,146	1.8%
19	Ordnance or Accessories	19,560	0.0%	625	0.0%
20	Food or Kindred Products	50,393,045	18.4%	704,104	11.7%
21	Tobacco Products	0	0.0%	0	0.0%
22	Textile Mill Products	36,390	0.0%	2,645	0.0%
23	Apparel or Related Products	1,230,440	0.4%	91,320	1.5%
24	Logs, Lumber, Wood Prod.	4,131,235	1.5%	62,150	1.0%
25	Furniture or Fixtures	719,600	0.3%	62,760	1.0%
26	Pulp, Paper or Allied Products	3,066,560	1.1%	89,040	1.5%
27	Printed Matter	136,040	0.0%	7,640	0.1%
28	Chemicals or Allied Products	41,186,691	15.1%	489,372	8.1%
29	Petroleum or Coal Products	7,687,067	2.8%	94,873	1.6%
30	Rubber or Misc Plastics	1,160,630	0.4%	90,780	1.5%
31	Leather or Leather Products	6,880	0.0%	920	0.0%
32	Clay, Concrete, Glass, or Stone	5,072,837	1.9%	59,187	1.0%
33	Primary Metal Products	5,249,134	1.9%	64,835	1.1%
34	Fabricated Metal Products	259,100	0.1%	15,255	0.3%
35	Machinery	500,911	0.2%	31,937	0.5%
36	Electrical Equipment	529,885	0.2%	47,550	0.8%
37	Transportation Equipment	5,121,432	1.9%	314,206	5.2%
38	Instrum, Photo Equip, Optical Eq	68,440	0.0%	4,520	0.1%
39	Misc Manufacturing Products	147,960	0.1%	13,640	0.2%
40	Waste or Scrap Materials Not Identified by Producing Industry	2,530,535	0.9%	33,847	0.6%
41	Misc Freight Shipments	187,425	0.1%	18,545	0.3%
42	Shipping Containers	41,565	0.0%	431,265	7.2%
43	Mail or Contract Traffic	1,200	0.0%	240	0.0%
44	Unknown	2,796,373	1.0%	132,226	2.2%
46	Misc Mixed Shipments	28,030,450	10.2%	1,982,145	32.9%
47	Small Pig Freight Shipments	1,549,240	0.6%	112,160	1.9%
48	Waste Hazardous Materials or Waste Hazardous Substances	96,495	0.0%	1,330	0.0%
	Total	**273,632,892**	**100.0%**	**6,023,535**	**100.0%**

Source: Calculated based on Surface Transportation Board (STB) Waybill Sample Data for 2022.

Table F.2: Rail outbound movements by commodity, 2022

STCC2	Commodity	Tons	Percent of Tons	Units (Carloads)	Percent of Carloads
1	Farm Products	12,341,770	22.0%	119,644	20.3%
8	Forest Products	0	0.0%	0	0.0%
9	Fresh Fish or Marine Products	0	0.0%	0	0.0%
10	Metallic Ores	0	0.0%	0	0.0%
11	Coal	2,347,498	4.2%	19,436	3.3%
13	Petroleum Prod, Natural Gas	0	0.0%	0	0.0%
14	Nonmetallic Minerals	2,246,092	4.0%	19,788	3.4%
19	Ordnance or Accessories	3,635	0.0%	50	0.0%
20	Food or Kindred Products	20,693,376	36.9%	212,003	36.0%
21	Tobacco Products	0	0.0%	0	0.0%
22	Textile Mill Products	0	0.0%	0	0.0%
23	Apparel or Related Products	0	0.0%	0	0.0%
24	Logs, Lumber, Wood Prod.	6,485	0.0%	70	0.0%
25	Furniture or Fixtures	2,160	0.0%	160	0.0%
26	Pulp, Paper or Allied Products	187,125	0.3%	2,810	0.5%
27	Printed Matter	0	0.0%	0	0.0%
28	Chemicals or Allied Products	14,887,312	26.6%	159,347	27.0%
29	Petroleum or Coal Products	187,675	0.3%	2,190	0.4%
30	Rubber or Misc Plastics	0	0.0%	0	0.0%
31	Leather or Leather Products	0	0.0%	0	0.0%
32	Clay, Concrete, Glass, or Stone	809,044	1.4%	7,824	1.3%
33	Primary Metal Products	644,710	1.2%	6,985	1.2%
34	Fabricated Metal Products	360	0.0%	40	0.0%
35	Machinery	71,070	0.1%	1,940	0.3%
36	Electrical Equipment	2,025	0.0%	85	0.0%
37	Transportation Equipment	127,473	0.2%	11,614	2.0%
38	Instrum, Photo Equip, Optical Eq	840	0.0%	40	0.0%
39	Misc Manufacturing Products	0	0.0%	0	0.0%
40	Waste or Scrap Materials Not Identified by Producing Industry	392,375	0.7%	4,719	0.8%
41	Misc Freight Shipments	0	0.0%	0	0.0%
42	Shipping Containers	0	0.0%	3,125	0.5%
43	Mail or Contract Traffic	0	0.0%	0	0.0%
44	Unknown	922,773	1.6%	9,346	1.6%
46	Misc Mixed Shipments	153,695	0.3%	7,965	1.4%
47	Small Pig Freight Shipments	0	0.0%	0	0.0%
48	Waste Hazardous Materials or Waste Hazardous Substances	420	0.0%	15	0.0%
	Total	**56,027,913**	**100.0%**	**589,196**	**100.0%**

Source: Calculated based on Surface Transportation Board (STB) Waybill Sample Data for 2022.

Table F.3: Rail inbound movements by commodity, 2022

STCC2	Commodity	Tons	Percent of Tons	Units (Carloads)	Percent of Carloads
1	Farm Products	1,238,974	4.7%	13,013	4.5%
8	Forest Products	19,635	0.1%	270	0.1%
9	Fresh Fish or Marine Products	0	0.0%	0	0.0%
10	Metallic Ores	775	0.0%	10	0.0%
11	Coal	14,128,164	53.8%	118,150	41.2%
13	Petroleum Prod, Natural Gas	5,365	0.0%	70	0.0%
14	Nonmetallic Minerals	610,938	2.3%	5,733	2.0%
19	Ordnance or Accessories	0	0.0%	0	0.0%
20	Food or Kindred Products	2,172,278	8.3%	21,657	7.6%
21	Tobacco Products	0	0.0%	0	0.0%
22	Textile Mill Products	1,800	0.0%	160	0.1%
23	Apparel or Related Products	0	0.0%	0	0.0%
24	Logs, Lumber, Wood Prod.	368,870	1.4%	3,990	1.4%
25	Furniture or Fixtures	240	0.0%	80	0.0%
26	Pulp, Paper or Allied Products	323,795	1.2%	4,315	1.5%
27	Printed Matter	0	0.0%	0	0.0%
28	Chemicals or Allied Products	4,436,212	16.9%	46,178	16.1%
29	Petroleum or Coal Products	447,035	1.7%	5,085	1.8%
30	Rubber or Misc Plastics	505	0.0%	5	0.0%
31	Leather or Leather Products	0	0.0%	0	0.0%
32	Clay, Concrete, Glass, or Stone	1,053,850	4.0%	10,312	3.6%
33	Primary Metal Products	457,505	1.7%	4,970	1.7%
34	Fabricated Metal Products	1,360	0.0%	80	0.0%
35	Machinery	31,505	0.1%	2,389	0.8%
36	Electrical Equipment	980	0.0%	5	0.0%
37	Transportation Equipment	187,494	0.7%	13,323	4.7%
38	Instrum, Photo Equip, Optical Eq	0	0.0%	0	0.0%
39	Misc Manufacturing Products	0	0.0%	0	0.0%
40	Waste or Scrap Materials Not Identified by Producing Industry	555,195	2.1%	6,245	2.2%
41	Misc Freight Shipments	0	0.0%	0	0.0%
42	Shipping Containers	0	0.0%	12,520	4.4%
43	Mail or Contract Traffic	0	0.0%	0	0.0%
44	Unknown	0	0.0%	0	0.0%
46	Misc Mixed Shipments	233,120	0.9%	17,840	6.2%
47	Small Pig Freight Shipments	0	0.0%	0	0.0%
48	Waste Hazardous Materials or Waste Hazardous Substances	785	0.0%	25	0.0%
	Total	**26,276,380**	**100.0%**	**286,425**	**100.0%**

Source: Calculated based on Surface Transportation Board (STB) Waybill Sample Data for 2022.

Table F.4: Rail intrastate movements by commodity, 2022

STCC2	Commodity	Tons	Percent of Tons	Units (Carloads)	Percent of Carloads
1	Farm Products	1,133,868	10.3%	11,366	10.1%
8	Forest Products	0	0.0%	0	0.0%
9	Fresh Fish or Marine Products	0	0.0%	0	0.0%
10	Metallic Ores	0	0.0%	0	0.0%
11	Coal	2,428,727	22.1%	20,344	18.0%
13	Petroleum Prod, Natural Gas	0	0.0%	0	0.0%
14	Nonmetallic Minerals	602,347	5.5%	5,557	4.9%
19	Ordnance or Accessories	0	0.0%	0	0.0%
20	Food or Kindred Products	3,996,058	36.4%	40,317	35.8%
21	Tobacco Products	0	0.0%	0	0.0%
22	Textile Mill Products	0	0.0%	0	0.0%
23	Apparel or Related Products	0	0.0%	0	0.0%
24	Logs, Lumber, Wood Prod.	10,715	0.1%	120	0.1%
25	Furniture or Fixtures	0	0.0%	0	0.0%
26	Pulp, Paper or Allied Products	2,655	0.0%	50	0.0%
27	Printed Matter	0	0.0%	0	0.0%
28	Chemicals or Allied Products	2,145,331	19.6%	22,528	20.0%
29	Petroleum or Coal Products	15,325	0.1%	180	0.2%
30	Rubber or Misc Plastics	0	0.0%	0	0.0%
31	Leather or Leather Products	0	0.0%	0	0.0%
32	Clay, Concrete, Glass, or Stone	94,690	0.9%	905	0.8%
33	Primary Metal Products	38,500	0.4%	430	0.4%
34	Fabricated Metal Products	0	0.0%	0	0.0%
35	Machinery	0	0.0%	0	0.0%
36	Electrical Equipment	0	0.0%	0	0.0%
37	Transportation Equipment	65,236	0.6%	5,691	5.0%
38	Instrum, Photo Equip, Optical Eq	0	0.0%	0	0.0%
39	Misc Manufacturing Products	0	0.0%	0	0.0%
40	Waste or Scrap Materials Not Identified by Producing Industry	435,815	4.0%	5,180	4.6%
41	Misc Freight Shipments	0	0.0%	0	0.0%
42	Shipping Containers	0	0.0%	0	0.0%
43	Mail or Contract Traffic	0	0.0%	0	0.0%
44	Unknown	0	0.0%	0	0.0%
46	Misc Mixed Shipments	820	0.0%	15	0.0%
47	Small Pig Freight Shipments	0	0.0%	0	0.0%
48	Waste Hazardous Materials or Waste Hazardous Substances	1,320	0.0%	80	0.1%
	Total	**10,971,407**	**100.0%**	**112,763**	**100.0%**

Source: Calculated based on Surface Transportation Board (STB) Waybill Sample Data for 2022.

Table F.5: Rail through movements by commodity, 2022

STCC2	Commodity	Tons	Percent of Tons	Units (Carloads)	Percent of Carloads
1	Farm Products	19,628,772	10.9%	259,183	5.1%
8	Forest Products	800	0.0%	40	0.0%
9	Fresh Fish or Marine Products	7,370	0.0%	280	0.0%
10	Metallic Ores	192,394	0.1%	1,953	0.0%
11	Coal	45,826,883	25.4%	388,051	7.7%
13	Petroleum Prod, Natural Gas	410,816	0.2%	4,462	0.1%
14	Nonmetallic Minerals	8,504,584	4.7%	77,068	1.5%
19	Ordnance or Accessories	15,925	0.0%	575	0.0%
20	Food or Kindred Products	23,531,333	13.0%	430,127	8.5%
21	Tobacco Products	0	0.0%	0	0.0%
22	Textile Mill Products	34,590	0.0%	2,485	0.0%
23	Apparel or Related Products	1,230,440	0.7%	91,320	1.8%
24	Logs, Lumber, Wood Prod.	3,745,165	2.1%	57,970	1.2%
25	Furniture or Fixtures	717,200	0.4%	62,520	1.2%
26	Pulp, Paper or Allied Products	2,552,985	1.4%	81,865	1.6%
27	Printed Matter	136,040	0.1%	7,640	0.2%
28	Chemicals or Allied Products	19,717,836	10.9%	261,319	5.2%
29	Petroleum or Coal Products	7,037,032	3.9%	87,418	1.7%
30	Rubber or Misc Plastics	1,160,125	0.6%	90,775	1.8%
31	Leather or Leather Products	6,880	0.0%	920	0.0%
32	Clay, Concrete, Glass, or Stone	3,115,253	1.7%	40,146	0.8%
33	Primary Metal Products	4,108,419	2.3%	52,450	1.0%
34	Fabricated Metal Products	257,380	0.1%	15,135	0.3%
35	Machinery	398,336	0.2%	27,608	0.5%
36	Electrical Equipment	526,880	0.3%	47,460	0.9%
37	Transportation Equipment	4,741,229	2.6%	283,578	5.6%
38	Instrum, Photo Equip, Optical Eq	67,600	0.0%	4,480	0.1%
39	Misc Manufacturing Products	147,960	0.1%	13,640	0.3%
40	Waste or Scrap Materials Not Identified by Producing Industry	1,147,150	0.6%	17,703	0.4%
41	Misc Freight Shipments	187,425	0.1%	18,545	0.4%
42	Shipping Containers	41,565	0.0%	415,620	8.3%
43	Mail or Contract Traffic	1,200	0.0%	240	0.0%
44	Unknown	1,873,600	1.0%	122,880	2.4%
46	Misc Mixed Shipments	27,642,815	15.3%	1,956,325	38.9%
47	Small Pig Freight Shipments	1,549,240	0.9%	112,160	2.2%
48	Waste Hazardous Materials or Waste Hazardous Substances	93,970	0.1%	1,210	0.0%
	Total	**180,357,192**	**100.0%**	**5,035,151**	**100.0%**

Source: Calculated based on Surface Transportation Board (STB) Waybill Sample Data for 2022.

Table F.6: Rail outbound tons by geography, 2022

	Originating Iowa Counties							
STCC2	**Pottawattamie**	**Clinton**	**Woodbury**	**Wapello**	**Johnson**	**Remaining**	**Total**	**Percent**
20 Food or Kindred Products	3,790,665	1,374,462	2,450,827	2,410,140	1,853,788	8,813,494	**20,693,376**	**36.9%**
28 Chemicals or Allied Products	860,255	878,947	900,194	46,895	1,119,570	11,081,451	**14,887,312**	**26.6%**
01 Farm Products	3,226,885	0	785,060	0	0	8,329,825	**12,341,770**	**22.0%**
11 Coal	0	2,347,498	0	0	0	0	**2,347,498**	**4.2%**
14 Nonmetallic Minerals	2,145	0	28,586	518,515	0	1,696,846	**2,246,092**	**4.0%**
Remaining Commodities	269,520	315,680	111,750	12,590	1,855	2,800,470	**3,511,865**	**6.3%**
Total	**8,149,470**	**4,916,587**	**4,276,417**	**2,988,140**	**2,975,213**	**32,722,086**	**56,027,913**	**100.0%**
Percent	**14.5%**	**8.8%**	**7.6%**	**5.3%**	**5.3%**	**58.4%**	**100.0%**	

	Terminating Location							
STCC2	**Illinois**	**Texas**	**California**	**Wisconsin**	**Mexico**	**Remaining**	**Total**	**Percent**
20 Food or Kindred Products	6,072,778	5,425,374	2,388,515	48,435	128,876	6,629,398	**20,693,376**	**36.9%**
28 Chemicals or Allied Products	8,763,689	2,406,847	742,722	65,315	50,795	2,857,944	**14,887,312**	**26.6%**
01 Farm Products	748,572	3,659,626	1,524,015	0	2,069,924	4,339,633	**12,341,770**	**22.0%**
11 Coal	0	0	0	2,347,498	0	0	**2,347,498**	**4.2%**
14 Nonmetallic Minerals	758,204	181,076	0	0	0	1,306,812	**2,246,092**	**4.0%**
Remaining Commodities	409,860	189,014	125,345	105,876	4,310	2,677,460	**3,511,865**	**6.3%**
Total	**16,753,103**	**11,861,937**	**4,780,597**	**2,567,124**	**2,253,905**	**17,811,247**	**56,027,913**	**100.0%**
Percent	**29.9%**	**21.2%**	**8.5%**	**4.6%**	**4.0%**	**31.8%**	**100.0%**	

Source: Calculated based on STB Waybill Sample Data for 2022.

Table F.7: Rail inbound tons by geography, 2022

	Originating Location							
STCC2	**Wyoming**	**Illinois**	**Canada**	**Wisconsin**	**Nebraska**	**Remaining**	**Total**	**Percent**
11 Coal	13,943,314	184,850	0	0	0	0	**14,128,164**	**53.8%**
28 Chemicals or Allied Products	206,400	679,460	614,184	451,854	35,655	2,448,659	**4,436,212**	**16.9%**
20 Food or Kindred Products	0	268,425	162,118	7,120	923,725	810,890	**2,172,278**	**8.3%**
1 Farm Products	495	96,981	441,734	27,729	37,090	634,945	**1,238,974**	**4.7%**
32 Clay, Concrete, Glass, or Stone	21,030	85,670	0	0	42,634	904,516	**1,053,850**	**4.0%**
Remaining Commodities	675	433,165	453,145	663,179	26,980	1,669,758	**3,246,902**	**12.4%**
Total	**14,171,914**	**1,748,551**	**1,671,181**	**1,149,882**	**1,066,084**	**6,468,768**	**26,276,380**	**100.0%**
Percent	**53.9%**	**6.7%**	**6.4%**	**4.4%**	**4.1%**	**24.6%**	**100.0%**	

	Terminating Iowa County							
STCC2	**Wapello**	**Pottawattamie**	**Clinton**	**Linn**	**Woodbury**	**Remaining**	**Total**	**Percent**
11 Coal	4,717,844	2,985,966	3,313,864	1,607,228	1,253,210	250,052	**14,128,164**	**53.8%**
28 Chemicals or Allied Products	172,480	220,845	220,060	90,980	577,742	3,154,105	**4,436,212**	**16.9%**
20 Food or Kindred Products	64,040	971,940	218,480	206,750	77,460	633,608	**2,172,278**	**8.3%**
1 Farm Products	22,938	28,035	109,662	281,823	24,125	772,391	**1,238,974**	**4.7%**
32 Clay, Concrete, Glass, or Stone	13,800	13,370	39,575	0	4,295	982,810	**1,053,850**	**4.0%**
Remaining Commodities	446,424	525,205	102,485	100,965	282,589	1,789,234	**3,246,902**	**12.4%**
Total	**5,437,526**	**4,745,361**	**4,004,126**	**2,287,746**	**2,219,421**	**7,582,200**	**26,276,380**	**100.0%**
Percent	**20.7%**	**18.1%**	**15.2%**	**8.7%**	**8.4%**	**28.9%**	**100.0%**	

Source: Calculated based on STB Waybill Sample Data for 2022.

Table F.8: FHWA FAF Rail Tons by SCTG, 2022 and 2050—Agriculture

SCTG	Description	Outbound			Inbound			Intrastate		
		2022	2050	CAGR	2022	2050	CAGR	2022	2050	CAGR
1	Live animals/fish	0	0	0.0%	0	0	0.0%	0	0	0.0%
2	Cereal grains	5,755,842	7,831,245	1.1%	4,431,479	4,788,158	0.3%	3,204,960	3,487,679	0.3%
3	Other ag prods.	1,317,438	740,696	-2.0%	639,662	664,722	0.1%	558,884	620,605	0.4%
4	Animal feed	7,221,589	18,328,753	3.4%	787,573	1,572,829	2.5%	278,157	563,479	2.6%
5	Meat/seafood	4,873	2,474	-2.4%	903	1,351	1.4%	0	0	0.0%
6	Milled grain prods.	1,380,326	2,132,927	1.6%	1,195,457	1,848,057	1.6%	1,112,172	1,766,379	1.7%
7	Other foodstuffs	5,760,806	8,337,787	1.3%	1,498,301	2,003,035	1.0%	987,445	1,329,477	1.1%
8	Alcoholic beverages	268,028	366,189	1.1%	89,606	146,466	1.8%	89,520	146,056	1.8%
9	Tobacco prods.	0	0	0.0%	0	0	0.0%	0	0	0.0%
	Subtotal	**21,708,902**	**37,740,072**	**2.0%**	**8,642,982**	**11,024,617**	**0.9%**	**6,231,137**	**7,913,675**	**0.9%**

Source: Calculated based on FHWA FAF v5.6.1

Table F.9: FHWA FAF Rail Tons by SCTG, 2022 and 2050—Mining/Extraction

SCTG	Description	Outbound			Inbound			Intrastate		
		2022	2050	CAGR	2022	2050	CAGR	2022	2050	CAGR
10	Building stone	0	0	0.0%	0	0	0.0%	0	0	0.0%
11	Natural sands	1,724,581	3,108,157	2.1%	0	0	0.0%	0	0	0.0%
12	Gravel	247,713	266,134	0.3%	205	16,831	17.0%	4	6	2.1%
13	Nonmetallic minerals	42,724	33,805	-0.8%	2,039,840	3,720,007	2.2%	1,832	2,904	1.7%
14	Metallic ores	188,553	726	-18.0%	0	0	0.0%	0	0	0.0%
15	Coal	9,659	0	-100.0%	11,199,520	3,104,861	-4.5%	0	0	0.0%
16	Crude petroleum	0	0	0.0%	0	0	0.0%	0	0	0.0%
	Subtotal	**2,213,230**	**3,408,822**	**1.6%**	**13,239,566**	**6,841,699**	**-2.3%**	**1,835**	**2,910**	**1.7%**

Source: Calculated based on FHWA FAF v5.6.1

Table F.10: FHWA FAF Rail Tons by SCTG, 2022 and 2050—Manufacturing

SCTG	Description	Outbound			Inbound			Intrastate		
		2022	2050	CAGR	2022	2050	CAGR	2022	2050	CAGR
17	Gasoline	7,589,347	12,971,299	1.9%	790,387	978,513	0.8%	790,160	978,513	0.8%
18	Fuel oils	491,539	893,813	2.2%	78,896	83,497	0.2%	77,243	83,048	0.3%
19	Natural gas and other fossil products	255,720	415,950	1.8%	566,659	645,118	0.5%	68,658	88,577	0.9%
20	Basic chemicals	333,713	1,188,095	4.6%	1,104,195	3,450,288	4.2%	1,902	6,897	4.7%
21	Pharmaceuticals	2,310	1,157	-2.4%	8,123	2,312	-4.4%	0	0	0.0%
22	Fertilizers	487,813	1,037,118	2.7%	1,181,926	5,431,736	5.6%	26,518	81,100	4.1%
23	Chemical prods.	184,875	715,163	5.0%	162,529	461,898	3.8%	93,658	280,932	4.0%
24	Plastics/rubber	943,100	2,544,968	3.6%	252,581	660,372	3.5%	70,372	182,485	3.5%
25	Logs	12,782	837	-9.3%	58,162	78,165	1.1%	0	0	0.0%
26	Wood prods.	5,110	9,464	2.2%	296,718	381,983	0.9%	0	0	0.0%
27	Newsprint/paper	2,613	599	-5.1%	87,651	129,844	1.4%	0	0	0.0%
28	Paper articles	2,225	2,158	-0.1%	297	59	-5.6%	0	0	0.0%
29	Printed prods.	807	17	-12.9%	207	175	-0.6%	0	0	0.0%
30	Textiles/leather	493	1,011	2.6%	6,654	6,685	0.0%	0	0	0.0%
31	Nonmetal min. prods.	577,870	1,074,425	2.2%	59,048	78,310	1.0%	45,594	75,534	1.8%
32	Base metals	353,073	702,716	2.5%	662,242	943,213	1.3%	194,034	406,391	2.7%
33	Articles-base metal	49,481	116,037	3.1%	144,348	242,955	1.9%	47,494	85,721	2.1%
34	Machinery	74,980	63,424	-0.6%	138,427	86,118	-1.7%	0	0	0.0%
35	Electronics	1,021	828	-0.7%	7,287	11,264	1.6%	78	205	3.5%
36	Motorized vehicles	55,769	75,278	1.1%	22,279	30,809	1.2%	0	0	0.0%
37	Transport equip.	11,985	7,552	-1.6%	19,328	30,569	1.7%	0	0	0.0%
38	Precision instruments	580	17	-11.8%	327	493	1.5%	0	0	0.0%
39	Furniture	3,691	1,777	-2.6%	3,296	30,285	8.2%	0	0	0.0%
40	Misc. mfg. prods.	3,198	5,769	2.1%	5,100	20,901	5.2%	1,568	5,218	4.4%
	Subtotal	**11,444,093**	**21,829,469**	**2.3%**	**5,656,668**	**13,785,561**	**3.2%**	**1,417,279**	**2,274,620**	**1.7%**

Source: Calculated based on FHWA FAF v5.6.1

Table F.11: FHWA FAF Rail Tons by SCTG, 2022 and 2050—Other

SCTG	Description	Outbound			Inbound			Intrastate		
		2022	2050	CAGR	2022	2050	CAGR	2022	2050	CAGR
41	Waste/scrap	718,197	1,063,386	1.4%	799,490	672,364	-0.6%	342,043	412,362	0.7%
43	Mixed freight	12,605	21,902	2.0%	1,126	7,215	6.9%	0	0	0.0%
	Subtotal	**730,802**	**1,085,288**	**1.4%**	**800,616**	**679,579**	**-0.6%**	**342,043**	**412,362**	**0.7%**
	Total	**36,097,027**	**64,063,652**	**2.1%**	**28,339,832**	**32,331,457**	**0.5%**	**7,992,295**	**10,603,567**	**1.0%**

Source: Calculated based on FHWA FAF v5.6.1

Table F.12: FHWA FAF Rail Tons by SCTG, 2022 and 2050—Summary

Description	Outbound			Inbound			Intrastate		
	2022	2050	CAGR	2022	2050	CAGR	2022	2050	CAGR
Agriculture	21,708,902	37,740,072	2.0%	8,642,982	11,024,617	0.9%	6,231,137	7,913,675	0.9%
Mining/Extraction	2,213,230	3,408,822	1.6%	13,239,566	6,841,699	-2.3%	1,835	2,910	1.7%
Manufacturing	11,444,093	21,829,469	2.3%	5,656,668	13,785,561	3.2%	1,417,279	2,274,620	1.7%
Other	730,802	1,085,288	1.4%	800,616	679,579	-0.6%	342,043	412,362	0.7%
Total	**36,097,027**	**64,063,652**	**2.1%**	**28,339,832**	**32,331,457**	**0.5%**	**7,992,295**	**10,603,567**	**1.0%**

Source: Calculated based on FHWA FAF v5.6.1

APPENDIX G
Economic Impact Analysis

Executive Summary

The economic impacts of rail transportation in Iowa in 2022 were estimated using economic impact multipliers from the IMPLAN modeling tool with input data and assumptions on the following.

- Freight movements, based on data derived from the U.S. Surface Transportation Board (STB) 2022 Waybill Sample data of shipments originating in Iowa as described in Chapter 4 of the Iowa State Rail Plan.
- Values of commodity shipments extracted from the Federal Highway Administration's (FHWA's) Freight Analysis Framework (FAF) data base for rail shipments originating in Iowa in 2022, converted to a value (2022 dollars) per ton.
- Rail transportation operations.

Impacts of the rail industry in Iowa considered in this analysis stem from organizations providing freight and passenger transport and tourism services, as well as industries using rail freight services to trade goods (i.e., shippers of goods or commodities).

Impacts were estimated and presented by activity (service provision and rail users), type (direct, indirect, induced, and total), and measure (employment, income, value added, and taxes) for 2022 to provide an extensive review of how rail operations in Iowa impact the State's economy. Table G.1 provides a summary of the economic impacts which include the following.

- **Output**: In terms of total revenue, the rail-related industries generated an estimated $22.5 billion in output, nearly all of which was contributed by freight rail operations and services.
- **Employment**: Rail transportation supported over 28,900 jobs directly through the provision of rail transportation services (both freight and passenger) and facilitation of operation of rail transportation users. If multiplier effects (indirect and induced) are included as well, rail transportation industry supported 63,700 jobs.
- **Labor Income**: In total, the rail transportation industries supported $6.1 billion in earnings for employees. These earnings include employee compensation and proprietary incomes.
- **Value Added**: The combined value-added impact of rail-related activity amounted to nearly $10.2 billion, accounting for approximately 4.3% of Iowa's Gross Domestic Product (GDP) in 2022.[i]
- **Tax**: Rail-related industries generated over $669.8 million in government tax revenues, with the majority of these revenues attributable to freight rail operations and freight rail users.

Table G.1: Economic impacts of rail transportation in Iowa

Impact Metric		Transportation Services		Transportation Users		Total Service		Total
		Freight	Passenger	Freight	Passenger	Freight	Passenger	
Output ($M)	Direct	$2,745.4	$10.3	$12,142.8	$10.9	$14,888.2	$21.1	$14,909.4
	Total	**$3,841.0**	**$14.4**	**$18,667.6**	**$20.2**	**$22,508.6**	**$34.6**	**$22,543.2**
Employment (Jobs)	Direct	2,938	11	25,875	107	28,813	118	28,931
	Total	**8,566**	**32**	**54,938**	**164**	**63,504**	**196**	**63,700**
Employment Income ($M)	Direct	$435.3	$1.2	$1,993.3	$7.5	$2,428.6	$8.7	$2,437.4
	Total	**$766.0**	**$2.5**	**$5,343.6**	**$10.6**	**$6,109.7**	**$13.0**	**$6,122.7**
Value Added ($M)	Direct	$1,828.4	$6.8	$4,432.9	$6.6	$6,261.3	$13.5	$6,274.8
	Total	**$2,431.7**	**$9.1**	**$7,706.4**	**$11.8**	**$10,138.1**	**$20.9**	**$10,159.0**
Taxes ($M)	Direct	$40.2	$0.15	$334.4	$0.4	$374.6	$0.55	$375.2
	Total	**$97.5**	**$0.37**	**$571.1**	**$0.8**	**$668.6**	**$1.2**	**$669.8**

Note: All monetary values are in millions of 2022 dollars

Source: Calculated based on STB Waybill Sample Data for 2022, FHWA FAF v5.6.1, and IMPLAN Data

Introduction

Economic impacts of the rail transportation industry in Iowa assessed in this analysis stem from 1) railroads providing freight and passenger rail services, and 2) industries using such services to trade or transport goods (i.e., the shippers of goods or commodities) and tourism-related visitors to Iowa via rail. Of these activities, freight users generate the most significant impacts.

This section outlines the methodology of quantification of these impacts together with input data and results. The methodology represents an input-output approach that captures and quantifies the flow of goods and services (or expenditures) between various industries in the economy arising from technical requirements of one industry for inputs provided by another industry. These inter-industry requirements for input supplies and labor create rounds of expenditures and impacts that, when added throughout the economy, exceed the initial expenditure.

The analysis is implemented on the basis of Surface Transportation Board (STB) 2022 Waybill Sample data of shipments originating in Iowa and using the economic impact multipliers from the IMpact analysis for PLANing (IMPLAN) economic impact modeling tool.[ii] Shipments with destinations in Iowa are excluded from the analysis, as this would result in double counting of economic impacts, as the economic impact of any inputs received from other states would be captured through the output of final goods transported out of Iowa.

The remainder of this section is organized as follows.

- **Methodology, Data Sources, and Assumptions**: Highlights the methodology used for the economic impact analysis (EIA), as well as the assumptions and the various data sources used in the analysis.
- **Results**: Presents the results of the EIA.
- **Summary of Impacts**: Summarizes the findings from the EIA.

Methodology, Data Sources, and Assumptions

Key Concepts

Economic impact analysis (or assessment) is a type of conceptual analysis that identifies and quantifies the economic activity that is generated or can be attributed and linked to an investment project, government policies, events, etc. being evaluated. These projects, policies, or events have some underlying change in the stream of expenditures in an economy and lead to a change in the demand for goods and services. This has implications on the number of jobs and other measures of economic activity in the local, regional, and national economy.

Traditionally, economic impact analysis involves the estimation of three distinct types of economic activity, commonly referred to as direct impacts, indirect impacts, and induced impacts. These impacts are attributable to an initial stream of incremental capital or operating expenditures and are defined as follows.

- **Direct impacts** refer to the initial economic effects occurring as the result of capital or operating expenditures directly related to the project, policy, or event being evaluated. Direct spending results in the employment of workers, business output, and sales of locally produced goods or services.
- **Indirect impacts** refer to the "spin-off" economic activities that result from purchases of production inputs, goods, and services by businesses that are impacted by the initial expenditures. The spending by the supplier firms on their labor, production inputs, and goods and services that they require creates output of other firms further down the production chain, bringing about additional business output, employment, and earnings. The sum of these effects across the supply chain is the indirect impact.
- **Induced impacts** represent the increase in business output, employment, and earnings over and above the direct and indirect impacts, generated by re-spending of employment income derived from the direct and indirect employment. Induced impacts are thus changes in economic activity that are the result of personal (household) spending for goods and services by employees comprising the direct and indirect impacts.
- **Total economic impact** is the sum of the direct, indirect, and induced impacts for the activity being evaluated.

Each of the direct, indirect, and induced impacts is estimated in terms of the following various measures of economic activity.

- **Output**: Is the total gross value of all business revenue. Output represents the total sum of all economic activity that has taken place in connection with it. This is the broadest measure of economic activity.
- **Employment**: The number of incremental jobs created as a result of all expenditures related to the activities evaluated.[iii]
- **Labor Income**: The additional earnings that would be paid to jobs/employees. These earnings include employee compensation and proprietary incomes. Specifically, employee compensation includes wages or salary payments, employee benefits, and employer paid payroll taxes. Meanwhile, proprietary incomes consist of payments received by self-employed individuals and unincorporated business owners.
- **Value Added**: The value added represents the unduplicated measure of the total value of economic activity. This is also sometimes referred to as the gross domestic product (GDP), the "value added" to the economy, or the value of output minus the value of purchased goods and services used in the production process.
- **Taxes**: The government tax revenue generated from the taxes on products associated with direct, indirect, and induced economic activities.

Indirect and induced impacts are often referred to as "multiplier effects," since they increase the overall economic impacts of the original expenditure that initiated the rounds of spending and effects described above.

The analysis is made operational via an input-output methodology and multipliers that capture and quantify the flow of goods and services between various industries in an economy arising from technical requirements of one industry for inputs produced by another industry (supply-purchase relationships).

Aggregate measures of the requirements of one industry from all other industries (per $1 of output) represent indirect multipliers. Own industry requirements for labor and operational profile (wages and salaries paid, use of production inputs) represent direct multipliers. Indirect multipliers can be used to estimate indirect impacts, and direct multipliers can be used to estimate direct effects (or its missing components, e.g., employment from given expenditure amount). Induced impacts are estimated based on profile of consumer expenditures on goods and services, and the aggregate results of re-spending of labor income represent the induced multipliers which can be used in a similar way as indirect multipliers and direct multipliers.

Economic impacts of transportation include both impacts of transportation services and the choice of rail transportation made by users of these services themselves. That is, Iowa economic impacts stemming from rail transportation are categorized into services provision and user impacts. Rail transportation services would be curtailed in the absence of rail activity (elimination of goods or passenger movements). Transportation user aspect focuses on the impacts pertaining to industries using freight rail to transport goods. The nature of these impacts include the following.

- **Transportation Service Providers**: Impacts associated with the provision of rail transportation include a wide range of primarily modal transport activity, but also may include other support and administrative operations. In particular, these impacts reflect freight and passenger railroad operations.
- **Transportation Users (Freight Users)**: Impacts associated with shippers of freight and the industries that supply goods and services to them. Specifically, this reflects the impacts associated with shippers using freight rail for goods movement, except for the rail industry itself. Rail users have several options available to transport freight and could substitute this service with other modes, such as truck or barge, if rail services were unavailable. However, the choice to use rail service to ship freight indicates cost and/or logistical advantages in a competitive marketplace. Loss of rail service could negatively affect its current users. In this sense, rail contributes to the vitality of the state economy and supports jobs and economic activity of its users involved in the production of goods shipped.

  This analysis focuses on the impacts to shippers as captured by outbound freight that originated within Iowa. Although freight receivers may also benefit by being able to obtain their orders by rail at a lower cost, including many production inputs and supplies, this impact is difficult to quantify without a risk of over-stating the impact. For example, the receivers of production supplies may then themselves ship final goods they produce by rail as well. The economic activity and contribution to the state economy corresponding to the production of those final goods will be accounted for under outbound freight. Including impact due to being able to obtain production supplies by rail as well carries a high risk of double counting as those supplies may be used to produce the goods already captured under the outbound freight.

- **Transportation Users (Visitors)**: Economic impacts arise in industry sectors that service visitors to Iowa who arrive by rail (Amtrak) or come for scenic tours. Rail visitors have several transport options and could possibly substitute other modal transport (such as highway and/or air) if rail services became unavailable. However, the choice to travel using Amtrak services indicates cost, convenience and/or amenity advantages, and as such, removal of such advantages would negatively affect rail users and the industries serving them.

The above analysis is implemented and estimated using economic impact multipliers from IMPLAN. These multipliers are widely used in economic impact modeling to forecast the effect of a given change in the economy's activity on the local, regional, and national economy.

The activity is specified in terms of incremental expenditures related to the activity, such as revenue of the industry that receives orders of its goods and services, or the number of workers that will be required to complete the order. The multipliers are then applied to incremental revenues (or jobs) for each of the metrics discussed previously to calculate direct, indirect, and induced impacts, all in terms of business output, jobs, employment income, value-added, and taxes. The approach is based on classic input-output modeling principles. This analysis used the statewide multipliers for Iowa.

Estimation of economic impacts with IMPLAN multipliers involved the following key steps.

- **Step 1**: Identify the streams of revenues directly related to the activity being analyzed (i.e., freight shippers' sales by commodity) and classify them into industrial sectors.
- **Step 2**: Identify IMPLAN industries that most closely correspond to the industrial sectors of revenues listed in Step 1, based on the type and nature of commodities involved.
- **Step 3**: Compile multipliers by identified industries, match with streams of revenues, and code all direct, indirect, and induced impacts.
- **Step 4**: Run model simulations and analyze results.

The specific data and methodological assumptions used develop the streams of expenditures generating economic impacts are discussed in the next section.

Data and Assumptions

Rail Service Provision

Estimation of economic impacts of passenger rail services in Iowa are based on information on direct industry employment. Per Amtrak's fiscal year 2023 fact sheet outlining its contribution to Iowa's economy, Amtrak employed 11 Iowa residents in 2023.[iv]

With respect to passenger visitor expenditures, out-of-state visitor expenditures reflect Amtrak and tourist rail passengers arriving in Iowa (similarly, from Amtrak's fact sheets and tourist rail websites). This information is combined with the Iowa Economic Development Authority's Tourism Office's visitor profile to estimate the share of rail visitors and average visitor spending.[v] Assumptions used in the estimation of passenger rail visitor expenditures for Amtrak and the Boone & Scenic Valley Railroad are presented in Table G.2. According to Amtrak's fact sheet, in 2016, 16,000 tourists visited Iowa via Amtrak services. Per Iowa's Tourism Office, the average visit duration is 3.6 days, with visitors spending an average of $131 (2022$) per day, resulting in an estimated total Amtrak visitor expenditure of $7.6 million.

Table G.2: Passenger rail visitor expenditures

Metric		Amtrak	Boone & Scenic Valley	Total
Annual Passengers	Total Movements	33,725	50,000	**83,725**
Visitors (Out of State)	Percent	47%	50%	
	Visitors	16,000	25,000	**41,000**
	Expenditures/ Day	$131.40	$131.40	**N/A**
	Days/Visit	3.6	1.0	**N/A**
	Visitor Expenditures	$7,570,132	$3,285,648	**$10,855,780**

Note: All monetary values are in 2022 dollars

Source: Amtrak, BSV, IEDA

Meanwhile, the economic impacts of freight rail services were estimated based on railroad revenues provided in the STB 2022 Waybill Sample data for each record together with other shipment details, such as weight, number of carloads, and commodity classification.

To align this analysis with the scope of impacts to transportation users, the focus is on impacts due to outbound and intrastate shipping and corresponding railroad revenues. It is recognized that some of this revenue would likely accrue to destination states, rather, than Iowa. However, railroad revenues in Iowa, and thus economic impacts, may also accrue via services provided to inbound and through shipments. Overall, given the tonnage of inbound and through shipments, economic impacts based on railroad revenues from outbound and intrastate shipping are likely to represent a conservative estimate of impacts.

Freight Movements

The STB 2022 Waybill Sample data of rail shipments originating in Iowa described in Chapter 4 provided the volume of shipments of goods originating in Iowa. Meanwhile, FAF data was leveraged to extract values of shipments by rail that originate in Iowa in millions of 2022 dollars. The total shipment values were converted to average commodity value, by commodity, in terms of value per ton in 2022 dollars. These were then matched to commodity categories in the STB 2022 Waybill Sample data.

Multiplying the tonnage of shipments from the Waybill data by the average value of goods provided the total value of commodities shipped from an Iowa origin. As mentioned in the previous section, this is interpreted as shippers' revenue, or the value of production supported (facilitated or made more competitive) by the presence of rail transportation. The employment and income related to these shipments are interpreted as the economic impacts related to rail.

It is noted that in practice many shipments may represent movements of goods from warehousing and distribution centers, rather than manufacturing establishments directly. In particular, the analysis of 2017 Commodity Flow Survey data reveals that, by value, 39.2% of shipments are shipped by manufacturing industries, and about 54.9% are shipped by wholesale trade and warehousing and storage industries.[vi] Based on this analysis, 54.9% of all commodity shipments by value were assigned to wholesale trade and the remaining share were assigned to the various industries that produce a given commodity. Revenue of the warehousing industry was estimated using an assumption for the wholesale margin which was applied to the value of the goods handled. The wholesale margin was sourced from the 2017 U.S. Census, which indicated that the margins for wholesalers are approximately 27.5%[vii], and the total value was allocated to wholesale trade.

As shown in Table G.3, the top 12 volume of goods shipped from Iowa origins amount to just over 66.1 million tons, which reflects approximately 99.9% of the total volume of goods shipped from Iowa and have a total value of $24.6 billion. The table also indicates that the top three shipments, in terms of tonnage, were Food or Kindred Products (37.3% of total tonnage), followed by Chemicals or Allied Products (25.7% of total tonnage), and Farm Products (20.4% of total tonnage). Meanwhile, in terms of value, the top three shipments were Chemicals or Allied Products ($6.1 billion), Misc. Mixed Shipments ($3.9 billion), and Food or Kindred Products ($2.1 billion).

Table G.3: Freight shipments assessed in the economic impact analysis

Commodity Group	Outbound and Intrastate Volumes (tons)	Commodity Value ($/ton)	Shipment Value ($M)	Value Allocated to Whole Trade ($M)	Value Allocated to IMPLAN Industries ($M)
Food or Kindred Products	24,689,434	$158.5	$3,912.3	$2,149.3	$1,762.9
Chemicals or Allied Products	17,032,643	$648.1	$11,038.7	$6,064.5	$4,974.2
Farm Products	13,475,638	$143.0	$1,927.5	$1,058.9	$868.6
Coal	4,776,225	$239.4	$1,143.2	$1,143.2	$0.0
Nonmetallic Minerals	2,848,439	$143.6	$409.0	$224.7	$184.3
Clay, Concrete, Glass, or Stone	903,734	$37.8	$34.1	$18.8	$15.4
Primary Metal Products	683,210	$355.9	$243.1	$133.6	$109.6
Petroleum or Coal Products	203,000	$409.6	$83.2	$45.7	$37.5
Transportation Equipment	192,709	$6,190.9	$1,193.0	$655.4	$537.6
Pulp, Paper or Allied Products	189,780	$1,794.9	$340.6	$187.1	$153.5
Misc Mixed Shipments	1,077,288	$520.9	$3,927.3	$2,157.6	$1,769.7
Machinery	71,070	$3,822.1	$271.6	$149.2	$122.4
Remaining Commodities	10,760	$3,066.7	$33.0	$18.1	$14.9
Total	**66,153,930**	**$17,531**	**$24,557**	**$14,006**	**$10,550**

Note: All monetary values are in 2022 dollars

Source: U.S. Census Bureau; Calculated based on STB Waybill Sample Data for 2022, FHWA FAF v5.6.1, and IMPLAN Data

Results

Rail Transportation Service Impacts

Table G.4 presents the economic impact of rail transportation services in Iowa in 2022. The rail transportation services industry in Iowa supported just under 8,600 jobs, which were comprised of 32 passenger rail related jobs and 8,566 freight transportation related jobs. The indirect and induced effects in other related industries, due to spending on rail operations, supported 5,649 of these jobs (3,086 indirect jobs and 2,563 induced jobs) throughout the state. Combined, in 2022 the provision of freight and passenger rail services supported an estimated 8,598 jobs. Other industry impacts included the following.

- $3.9 billion in total output
- $0.8 billion in total labor income
- $2.4 billion in total value added
- $97.9 million in total tax revenues

Table G.4: Economic impact of rail transportation service, 2022

Impact Metric		Freight	Passenger	Total
Output	Direct	$2,745.4	$10.3	$2,755.7
	Indirect	$663.5	$2.5	$666.0
	Induced	$432.1	$1.6	$433.7
	Total	**$3,841.0**	**$14.4**	**$3,855.4**
Employment (Jobs)	Direct	2,938	11	2,949
	Indirect	3,075	12	3,086
	Induced	2,553	10	2,563
	Total	**8,566**	**32**	**8,598**
Employment Income ($M)	Direct	$435.3	$1.2	$436.6
	Indirect	$203.2	$0.8	$203.9
	Induced	$127.5	$0.5	$128.0
	Total	**$766.0**	**$2.5**	**$768.5**
Value Added ($M)	Direct	$1,828.4	$6.8	$1,835.2
	Indirect	$356.4	$1.3	$357.7
	Induced	$246.9	$0.9	$247.8
	Total	**$2,431.7**	**$9.1**	**$2,440.8**
Taxes ($M)	Direct	$40.2	$0.2	$40.3
	Indirect	$36.5	$0.1	$36.6
	Induced	$20.9	$0.1	$20.9
	Total	**$97.5**	**$0.4**	**$97.9**

Note: All monetary values are in millions of 2022 dollars.

Source: Calculated based on STB Waybill Sample Data for 2022, FHWA FAF v5.6.1, and IMPLAN Data

Rail Transportation Users Impacts

Table G.5 presents the impacts of rail transportation users in Iowa in 2022. Through their economic activities, rail users directly supported 25,982 jobs, and a total of over 55,102 jobs when indirect and induced employment is considered. Other industry impacts included the following.

- $18.7 billion in total output
- $5.4 billion in total employment income
- $7.7 billion in total value added
- $0.6 billion in total tax revenues based on the services and products

Table G.5: Economic impact of rail transportation users, 2022

Impact Metric		Freight	Passenger	Total
Output	Direct	$12,142.8	$10.9	$12,153.7
	Indirect	$4,391.3	$3.4	$4,394.7
	Induced	$2,133.5	$6.0	$2,139.5
	Total	**$18,667.6**	**$20.2**	**$18,687.8**
Employment (Jobs)	Direct	25,875	107	25,982
	Indirect	16,394	22	16,416
	Induced	12,669	35	12,704
	Total	**54,938**	**164**	**55,102**
Employment Income ($M)	Direct	$1,993.3	$7.5	$2,000.8
	Indirect	$2,153.0	$1.3	$2,154.3
	Induced	$1,197.4	$1.8	$1,199.1
	Total	**$5,343.6**	**$10.6**	**$5,354.2**
Value Added ($M)	Direct	$4,432.9	$6.6	$4,439.5
	Indirect	$2,051.9	$1.8	$2,053.7
	Induced	$1,221.5	$3.4	$1,224.9
	Total	**$7,706.4**	**$11.8**	**$7,718.2**
Taxes ($M)	Direct	$334.4	$0.4	$334.8
	Indirect	$134.8	$0.1	$134.9
	Induced	$101.8	$0.3	$102.1
	Total	**$571.1**	**$0.8**	**$571.9**

Note: All monetary values are in millions of 2022 dollars.

Source: Calculated based on STB Waybill Sample Data for 2022, FHWA FAF v5.6.1, and IMPLAN Data

Summary of Impacts

Total Rail Activity Impacts

Table G.6 provides a summary of the total rail-related impacts in Iowa in 2022. Accounting for both rail transportation users and rail transportation services, the rail industry supported over 63,700 jobs and $6.1 billion in employment income in Iowa. Moreover, the rail-related impacts generated $22.5 billion in output, $10.2 billion in value-added to the state, and $0.7 billion in tax revenue.

Table G.6: Total rail transportation impacts, 2022

Impact Metric		Freight	Passenger	Total
Output	Direct	$12,153.7	$2,755.7	$14,909.4
	Indirect	$4,394.7	$666.0	$5,060.7
	Induced	$2,139.5	$433.7	$2,573.2
	Total	**$18,687.8**	**$3,855.4**	**$22,543.2**
Employment (Jobs)	Direct	25,982	2,949	28,931
	Indirect	16,416	3,086	19,502
	Induced	12,704	2,563	15,267
	Total	**55,102**	**8,598**	**63,700**
Employment Income ($M)	Direct	$2,000.8	$436.6	$2,437.4
	Indirect	$2,154.3	$203.9	$2,358.2
	Induced	$1,199.1	$128.0	$1,327.1
	Total	**$5,354.2**	**$768.5**	**$6,122.7**
Value Added ($M)	Direct	$4,439.5	$1,835.2	$6,274.8
	Indirect	$2,053.7	$357.7	$2,411.5
	Induced	$1,224.9	$247.8	$1,472.8
	Total	**$7,718.2**	**$2,440.8**	**$10,159.0**
Taxes ($M)	Direct	$334.8	$40.3	$375.2
	Indirect	$134.9	$36.6	$171.6
	Induced	$102.1	$20.9	$123.1
	Total	**$571.9**	**$97.9**	**$669.8**

Note: All monetary values are in millions of 2022 dollars.

Source: Calculated based on STB Waybill Sample Data for 2022, FHWA FAF v5.6.1, and IMPLAN Data

Impacts as a Percentage of the Total Economy

To present the economic contribution of the rail industry in Iowa, the estimated impacts were compared with the corresponding economic statistics for the entire state. The comparison of the data points is presented in Table G.7. The results indicate that the rail industry in Iowa accounted for about 3.8% to 6.7% of the state's economy[viii], depending on the reference measure.

Table G.7: Iowa and rail-related economic measures, 2022

Measure of Economic Activity	Overall State Level	Rail Industry Related Activity	Share of Rail Related Activity
Employment	1,658,607	63,700	3.8%
Employment Income	$91,335.3	$6,122.7	6.7%
Value Added (GDP)	$238,342.3	$10,159.0	4.3%

Note: All monetary values are in millions of 2022 dollars.

Source: U.S. Census Bureau; Calculated based on STB Waybill Sample Data for 2022, FHWA FAF v5.6.1, and IMPLAN Data

Appendix Endnotes

[i] Based on a GDP of $238,342.3 million for Iowa in 2022. U.S. Bureau of Economic Analysis, Gross Domestic Product: All Industry Total in Iowa [IANGSP], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/IANGSP, September 19, 2024.

[ii] IMPLAN (IMpact analysis for PLANning) is an economic impact modeling tool used for forecasting the effect of a given economic activity on the local, regional, and national economy. The activity is specified in terms of incremental expenditures related to the activity (e.g., revenue of the industry that receives the orders for tis goods and services, or number of workers that will be required to complete the order). The model is based on classic input-output modeling approaches combined with social accounting matrices and multiplier. IMPLAN has datasets for the geography analyzed, which may include the entire United States, a state, a county, a zip code area, or a combination of these areas, depending on the specific project and desired geographic area of impact assessment.

[iii] In economic impact analysis, employment impacts are typically estimated terms of job-years which expresses the number of jobs created multiplied by the length of time, in years, for which they would last. Example: 1 job-year is 1 job created for 1 year. For simplicity, we refer here to these impacts as employment, or jobs. They include both full time jobs and part-time jobs.

[iv] Amtrak, Iowa. Amtrak's Contributions to Iowa, 2023.

[v] Iowa Economic Development Authority, Tourism Office. Iowa Welcome Center Survey Report. 2015. 2015_WC_Survey_Report_2_26_16_FINAL.pdf (traveliowa.com)

[vi] Calculated based on United States 2017 Economic Census: Transportation, Table A7a.

[vii] Based on data from: U.S. Census Bureau. "Wholesale Trade: Gross Margin and its Components for Merchant Wholesalers for the U.S.: 2017." Economic Census, ECN Sector Statistics Wholesale Trade: Gross Margin and its Components for Merchant Wholesalers for the U.S., Table EC1742MARGIN, 2017, https://data.census.gov/table/ECNMARGIN2017.EC1742MARGIN?q=EC1742MARGIN. Accessed on September 15, 2024.

[viii] Employment for Iowa in 2022 were obtained from the U.S. Census Bureau's 2022.
Total employment income in Iowa in 2022 was obtained from the U.S. Bureau of Economic Analysis Total Wages and Salaries in Iowa [IAWTOT], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/IAWTOT, September 23, 2024.
The value added / GDP from Iowa in 2022 were obtained from the U.S. Bureau of Economic Analysis, Gross Domestic Product: All Industry Total in Iowa [IANGSP], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/IANGSP, September 23, 2024

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