



Iowa State Rail Plan Final

Executive Summary



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Introduction

The Iowa Department of Transportation (Iowa DOT) has developed this Iowa State Rail Plan (SRP) for the purpose of guiding the state's short- and long-term rail freight and passenger transportation planning activities and project development plans through the year 2040. Iowa DOT serves as the State Rail Transportation Authority (SRTA) and the State Rail Plan Approval Authority (SRPAA), and has the responsibility to review and approve the State Rail Plan.

This SRP describes the state's existing rail network and rail-related economic and socioeconomic impacts. It also describes the State Rail Plan process, Iowa's rail vision and supporting goals, proposed short- and long-range capital improvements, studies, and recommended next steps to address the issues identified. This SRP is intended to meet the requirements established under Section 303 of the Passenger Rail Investment and Improvement Act of 2008 (PRIIA) which provides for enhanced State involvement in rail policy, planning, and development efforts, including requiring States to develop FRA-accepted SRPs in order to be eligible for the capital grants authorized in PRIIA and the subsequent FAST Act. This SRP has also been developed in compliance with the Final State Rail Plan Guidance as specified by the Federal Railroad Administration (FRA) in September 2013.

Iowa's Rail System

Iowa's rail system plays an essential role in linking Iowa shippers and receivers with markets throughout North America and the world. Chief among high volume rail shippers and receivers in the state is the agricultural, food and biofuel production industries. Historically, Iowa has been a major nexus for rail traffic traveling on Class I or large railroads between the West Coast, Midwest, and the East, and between the Midwest and the Gulf. Iowa's regional and short line railroads extend freight rail service into all areas of the state. Although Amtrak's long-distance passenger rail services in the state are limited, Amtrak provides essential transportation services for Iowans.

The sections below provide a brief description of Iowa's rail network.

Freight Rail System

The Iowa freight rail system is operated by five Class I, or large railroads (a sixth Class I railroad has access to Iowa via operating rights); one Class II, or regional railroad; 11 Class III, or short line railroads; and two non-operating railroad owners (these owners have agreements with other railroads to provide rail service).

The Iowa rail network consists of approximately 3,851 route miles, excluding leases, trackage rights, haulage rights, and other operating agreements.

The majority of rail mileage in Iowa is owned by the Class I carriers: BNSF Railway (BNSF), Canadian National Railway (CN), Canadian Pacific Railway (CP), Norfolk Southern Railway (NS), and Union Pacific Railroad (UP). These railroads own approximately 3,225 route miles. Regional and short line railroads and non-operating railroad owners own the remaining approximately 626 route miles in the state.

Iowa's freight railroads carried over 290 million tons of freight or nearly 4.5 million rail cars of various commodities which originated or terminated within Iowa, or traveled through the state in 2013. The leading commodities, comprising approximately 83 percent of rail borne tons, are: Coal (134.4 million tons); Food or Kindred Products (38.0 million tons); Chemicals and Allied Products (31.2 million tons); Farm Products (20.0 million tons); and Nonmetallic Minerals (17.4 million tons).

Forecasts indicate total rail freight flows in the state will increase from approximately 290 million tons of freight in 2013 to approximately 442 million tons of freight in 2040, for an increase of about 52 percent over the 26-year period. An anticipated downturn in future coal shipments may negatively impact the projected growth rate.

Passenger Rail Service

Iowa has access to two long-distance Amtrak passenger rail services. There currently is no intercity corridor service or commuter rail service provided in the state, either by Amtrak or by other operators. There are two tourist or heritage railroads offering excursion trips in the state.

Amtrak operates entirely over the trackage of Class I freight railroad BNSF in Iowa. Amtrak's frequency of train service through Iowa has been consistent for at least the last 20 years. The two long-distance services serving Iowa are: the California Zephyr operating between Chicago, Omaha, Denver, Salt Lake City, and the San Francisco Bay Area, and the Southwest Chief operating between Chicago, Kansas City, Albuquerque, Flagstaff, and Los Angeles. Just over 57,000 passengers boarded and alighted at the six Iowa Amtrak stations in 2014. Of these, approximately 14,000 boardings and alightings were at the Osceola Station (located south of Des Moines) and approximately 12,000 boardings and alightings were at the Mount Pleasant Station (located south of Iowa City).

Projections indicate boarding and alightings at existing Amtrak stations in Iowa will rise to approximately 62,000 in 2040, an increase of just above 8 percent over the 26-year period.

Rail Impacts

Rail service is essential to Iowa's economy. The basic provision of rail service, freight and passenger, generates 3,520 direct jobs. However, when the rail freight shipper and rail passenger visitor user impact activities and multiplier impacts are included, rail-related employment in Iowa totals 219,380 jobs, which represents nearly 11 percent of the 2 million jobs statewide. The jobs resulted in \$13.8 billion earned by these total impacted employees, representing nearly 14 percent of Iowa's total labor income. A combined value-added impact of \$24.2 billion associated with rail services and users represent nearly 15 percent of the state's Gross State Product (GSP).

In addition to the direct employment benefits, the availability of rail transport provides cost and logistical advantages to Iowa firms that enable the state to compete effectively in the global marketplace. Access to rail service is especially important in rural areas to cost effectively connect agriculture, manufacturing, and local industries to the national and global marketplace.

Railroads are also up to three times more fuel efficient than trucks on the basis of ton-miles transported, and as greenhouse gas emissions directly relate to fuel consumption, every ton-mile of freight moved by rail instead of truck reduces environmental damages and costs by 84 percent. The diversion of freight traffic to rail also increases the safety of state's highway system by reducing truck traffic.

Amtrak long-distance passenger rail service connects the state and connects the state to major urban areas in the Midwestern region and in the U.S. West, which is important to supplement air service in the state. Passenger train travelers generate income not only for the rail operations, but also for restaurants, hotels, and other visitor service establishments. Furthermore, passenger stations have the potential to increase economic development around the station areas.

Rail Plan Development Process

This State Rail Plan was developed under the authority and guidance of Iowa DOT's Planning, Programming, and Modal Division. With regards to this State Rail Plan, Iowa DOT is the primary rail regulator in the state; however, it has limited regulatory authority. The Office of Rail Transportation has the primary responsibility for rail planning in Iowa DOT, and led the development of the State Rail Plan. It is responsible for rail planning in the state, engages in rail policy and legislation development and advocacy and communications, and administers various programs that provide funding for rail safety and improvement projects, including highway/rail at-grade crossing improvements, and inspects track on the state's rail network. The Office of Rail Transportation coordinated with the Office of Systems Planning during development of the State Rail Plan and a companion State Freight Plan. The Office of Systems Planning is responsible for preparing comprehensive intermodal and modal transportation system plans for the state, and led the development of the State Freight Plan.

To provide a medium for public review, Iowa DOT posted the Draft Iowa State Rail Plan to the Iowa DOT website (<http://engagefreightrailplans.com> and <http://engagefreightrailplans.iowadot.gov>) prior to finalization of the Plan. The State Rail Plan integrates with and expands upon past Iowa transportation plans, including the state's Iowa in Motion — Planning Ahead 2040 State Transportation Plan from 2012. Iowa DOT developed the State Rail Plan concurrently with a companion State Freight Plan.

Iowa DOT contacted all railroads operating in the state to solicit information as to their operations, projects or other needs, and their opinions as to what the public sector could do to assist or improve the efficiency and expansion of rail in the state. Iowa DOT conducted similar interviews for rail shippers located on both the Class I and the regional and short line railroad network within the state. These results are included in the State Rail Plan.

In August 2015, Iowa DOT publicized in notices and at its public outreach meetings the availability of a State Rail Plan webpage. Within the webpage, Iowa DOT invited rail stakeholders and the public to respond to a survey which measured their interest in what the state's rail network and freight system should look like in the future. The survey was organized into five topics: economic and workforce development, multimodal networks, multimodal links, passenger rail, and rail safety and security. Visitors to the site were able to take an online survey until November 11, 2015.

Iowa DOT held one public outreach meeting in Des Moines to educate stakeholders and the public regarding the State Rail Plan process; obtain input for development of a rail vision; solicit comments on proposed policies, programs, and projects recommended for inclusion in the State Rail Plan; and to provide a forum for discussion of specific rail issues. Thirty-three people attended the June 8, 2016, public meeting. Participants included staff representatives of the Iowa General Assembly, U.S. House of Representatives, and U.S. Senate; local government officials; Metropolitan Planning Organization staff; local economic development organizations; Class I railroads; rail contractors; rail passenger advocacy organizations; rail-served industries; local media; and private citizens.

Throughout the Plan's development, High Leverage Stakeholder Committee (HLSC) meetings hosted by Iowa DOT provided input and guidance. The Committee met three times during the development of the State Rail Plan and the companion State Freight Plan — in November 2015, to review and provide comments on the State Rail Plan draft vision and goals, provide updates on what was discussed at an earlier Issues Based Workshop (held in September 2015), and review the vision and goals for the State Freight Plan; in February 2016, to focus on reviewing the performance metrics of the State Rail Plan and State Freight Plan and to identify potential future rail projects and studies for consideration; and in June 2016, to provide comments on the Draft State Rail Plan and Draft State Freight Plan. The participating Committee members included representatives from the state's Class I, II, and III railroads; Amtrak; Metropolitan Planning Organizations (MPOs) and Regional Planning Affiliations (RFAs); cities; economic development organizations; rail shipper and receiver community; logistics providers; Iowa Motor Truck Association; Office of Motor Vehicle Enforcement; Environmental Law and Policy Center; and Iowa DOT staff.

Lastly, the Draft Iowa State Rail Plan was provided to the state rail planning contacts of neighboring state departments of transportation to ensure coordination with neighboring states with respect to rail facilities, services, and future rail planning which cross state boundaries.

Key Stakeholder Input on Rail Issues, Challenges, and Opportunities

Various themes arose during the outreach process regarding existing rail issues at the local, regional, or state levels and the direction or actions that should be taken in the future. The themes described include:

- **General Rail Benefits, Opportunities, and Threats** — Iowa's citizens and businesses understand the importance of rail transportation, both for its impact on economic development and personal mobility. The issues that most critically impacted rail operations in Iowa, included passenger rail, safety and security of freight operations, economic workforce development, multimodal freight networks, and multimodal freight connectors.

- **Rail Freight** — Issues identified for freight in the state include enhanced rail system access, enhanced or new transload and intermodal facilities, and enhanced rail network capacity and efficiency.
- **Intercity Passenger Rail Service** — Stakeholders expressed a significant level of interest in new intercity passenger rail service for Iowa. They also indicated that existing passenger rail services in the state could be enhanced. Issues identified for passenger rail in the state include the potential for improvements to existing Amtrak passenger rail services and facilities and the potential future expansion of passenger rail services on existing and new corridors.
- **Commuter Rail Service** — Iowa does not presently have commuter rail service. The potential for future implementation of commuter rail lines in the Des Moines Metropolitan Area and between Iowa City and Cedar Rapids on the CRANDIC Corridor were mentioned during outreach.
- **Rail Safety and Security** — Overall, stakeholders considered rail a safe and secure mode of transportation. Rail safety and security issues discussed during the stakeholder outreach process centered on at-grade crossing safety, trespassing on railroads, the movement of hazardous materials, and the general condition of rail lines and yards. Priorities identified during outreach included grade crossing closures, separations, and improvements and public education programs.
- **Rail-related Economic Development** — Issues identified for economic and workforce development include how necessary transportation is, Iowa's aging infrastructure, the need for connections to rural communities, efficient transportation, additional funding, and worker availability. Stakeholders indicated transload/intermodal facilities as one of the top capital investment projects that would support economic development.
- **Environmental Issues** — Participants from outreach meetings discussed environmental protection. While discussing modes of transportation and their respective connections to environmental protection participants indicated that rail transportation could be a way to protect the environment, when it is promoted as an efficient mode of transportation with low emissions. Some initiatives to promote sustainability of the rail mode could include the operations of additional low-emissions locomotives on the state's railroads. Participants discussed that through education and potentially through incentives, the state's current and future rail shippers and receivers could re-evaluate their transportation choices, and potentially select a mode that may have less impact on the environment.
- **Rail Financing** — Priorities identified during outreach included additional funding sources for Iowa rail projects in the state. Participants voted on the top potential capital investments and projects within the following categories: capacity and mitigation of operational chokepoints, safety, economic development, and modal connectivity.
- **The Role of Public Agencies Regarding Rail** — The general sentiment from the public outreach effort was that Iowa DOT should implement policies to make passenger rail service a priority, preserve existing rail lines at a statewide level, support and facilitate the movement toward containerization of rail-borne freight, and to educate the public about the value of addressing passenger and freight rail needs and opportunities.

Iowa's Rail Vision, Goals, and Initiatives

Based on suggestions obtained through the outreach effort, Iowa DOT developed the following vision statement for rail transportation.

Iowa's Rail Vision

"A safe, secure, and efficient Iowa rail system that ensures Iowa's economic competitiveness and development by maintaining the rail infrastructure and providing rail access and connectivity for people and goods in an environmentally sustainable manner."

Rail service goals aligned with the vision were developed based on the rail-related benefits, issues, and challenges that had been identified. These goals are as follows:

- **Enhance Safety and Security of the Rail System** — Typical initiatives could include minimizing grade crossing accidents, monitoring hazmat rail routes for safety, reducing track-caused accidents, and providing public education programs.

- **Maintain the Rail Infrastructure** — Typical initiatives could include projects to accommodate the higher maximum loaded car weights on Iowa railroads (i.e., 286,000 pounds) and upgrading track and bridges to improve operating efficiency and capacity, upgrading existing passenger rail stations, and leveraging public-private partnerships for funding rail improvements.
- **Provide Access and Connectivity** — Typical initiatives for passenger rail could include developing projects that would improve access to and multimodal integration with existing stations and continuing study of implementation of enhanced service on existing corridors and new intercity service on intercity corridors. Typical initiatives for freight rail could include developing projects promoting enhanced rail access for shippers and receivers through the study and development of enhanced or new industrial spurs, transloads, and intermodal facilities.
- **Improve Efficiency** — Typical initiatives could include investing in capacity improvements especially for regional and short line railroads and promoting improvements to rail yards and interchanges.
- **Ensure Economic Competitiveness and Development** — Typical initiatives could include encouraging development of enhanced or new industrial spurs and industrial parks, encouraging investment in the rail system, and supporting efforts that attract and sustain business in Iowa.
- **Sustain the Environment** — Typical initiatives could include reducing transportation-related congestion and air pollution through investments in rail infrastructure and promotion of emission-reduction technologies.

Proposed Capital Investment Programs and Future Studies

Based on identified needs and available funding sources, Iowa DOT developed short- and long-range proposed rail investment programs. The short-range projects are limited to those for which funding is available or could potentially be available during the four-year short-range period (2016 to 2019, inclusive). Long-range projects, implemented between 5 and 21 years from today, (2020 to 2040, inclusive) were proposed during the outreach process or from other sources and will be further evaluated as to their feasibility, their merit on the basis of public benefits versus costs, and the potential for available funding.

The program of potential projects and studies represents investments that would improve both passenger and freight rail in the state. Passenger rail investments emphasize enhanced and new intercity passenger rail services to enhance mobility and multimodal connectivity for Iowans in all regions of the state. Freight rail investments emphasize improvements in rail line capacity and infrastructure to ensure system fluidity and competitive access for rail shippers. The investments support the rail vision and goals articulated above.

The short- and long-range projects and studies recommended appear by category (passenger rail and freight rail) in the table below.

Iowa Rail Service and Investment Plan Summary

RAIL CATEGORY	ESTIMATED CAPITAL COST IN 2016 DOLLARS
PASSENGER RAIL	
Short-Range Passenger Rail Studies (Years 1-4; 2016-2019)	\$5.45 Million
Short-Range Passenger Rail Projects (Years 1-4; 2016-2019)	\$192.85 Million
Long-Range Passenger Rail Studies (Years 5-21; 2020-2040)	\$5.50 Million
Long-Range Passenger Rail Projects (Years 5-21; 2020-2040)	\$675.70 Million
TOTAL (PASSENGER RAIL)	\$879.50 Million
FREIGHT RAIL	
Short-Range Freight Rail Studies (Years 1-4; 2016-2019)	\$1.59 Million
Short-Range Freight Rail Projects (Years 1-4; 2016-2019)	\$103.17 Million
Long-Range Freight Rail Studies (Years 5-21; 2020-2040)	\$0.00 Million
Long-Range Freight Rail Projects (Years 5-21; 2020-2040)	\$125.80 Million
TOTAL (FREIGHT RAIL)	\$230.56 Million
RAIL SERVICE AND INVESTMENT PLAN TOTAL	\$1,110.06 Million

Note: The summary table above represents by category known capital costs for 15 studies and 25 projects identified during development of the SRP. An additional 9 studies and 55 projects identified during the development of the SRP, and for which capital costs are not presently known, are not included in the table above.

State Rail Plan Recommendations

Based on suggestions received from stakeholders and the public during the preparation of the Iowa State Rail Plan, Iowa DOT could consider the following actions:

- Increase the movement of goods by rail and emphasize rail-related intermodal, transloading, and other rail improvements to ensure a diverse and robust rail network and multimodal connectivity, while maintaining economic competitiveness and community and environmental stewardship.
- Continue efforts to preserve strategic rail rights-of-way and support the development of rail spurs, intermodal and transload facilities, and other infrastructure projects required to maintain a state of good repair, enhance efficiency, and bolster economic development through support for the establishment of additional federal and state public rail assistance programs.
- Continue to promote and enhance rail safety through continued safety education programs, additional coordination with the state's railroads, and enhancements to the public grade crossing improvement programs and state track inspection program.
- Expand rail-related data collection efforts including data on hazardous material movements, grade crossing hazards, rail volume and commodity flows, and rail freight originating/terminating data.
- Preserve, protect, improve, and expand, as necessary, intercity passenger rail service through station facility and access improvements; and continue to study implementation of additional intercity passenger services and commuter rail services where transportation and other public benefits merit.
- Enable strategic and prioritized investments in passenger / freight rail to optimize positive economic impacts.
- Further collaborate with neighboring states on regional issues and solutions to freight and passenger rail needs through regional multi-state coordination.

Summary

Iowa has undertaken a comprehensive study of its passenger and freight rail network and has identified key issues and opportunities through a wide-ranging rail stakeholder and public outreach process in conjunction with various technical analyses. This Iowa State Rail Plan serves to document this information and set a direction for rail planning and project development into the future while meeting the federal requirements to qualify the state for any future federal rail funding.

The chapters that follow describe Iowa's rail planning processes, the existing conditions of Iowa's railroads, proposed concepts for freight and passenger improvements, and a state program of rail investments.

- **Chapter 1** discusses the role of rail in Iowa's multimodal transportation system and the state's organization to provide political, legal, and financial support to rail development.
- **Chapter 2** discusses the existing state rail system, trends and forecasts of freight and passenger rail traffic, and needs and opportunities facing Iowa's railroads and rail stakeholders.
- **Chapter 3** identifies various passenger rail projects and improvements previously investigated and those that are under study.
- **Chapter 4** notes the specific rail improvements planned by the state's Class I railroads, the needs of the state's regional and short line railroads, and the state's grade crossing improvement program.
- **Chapter 5** outlines a proposed program of short-range and long-range rail improvement projects and studies.
- **Chapter 6** describes the stakeholder and public outreach process conducted in support of the Iowa State Rail Plan.

The development of the Iowa State Rail Plan was possible because of the participation of many rail stakeholders, interested agencies, and others. The Iowa Department of Transportation expresses its appreciation to those individuals and parties who participated in this effort.



 **IOWA DOT**

