

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	
All	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.

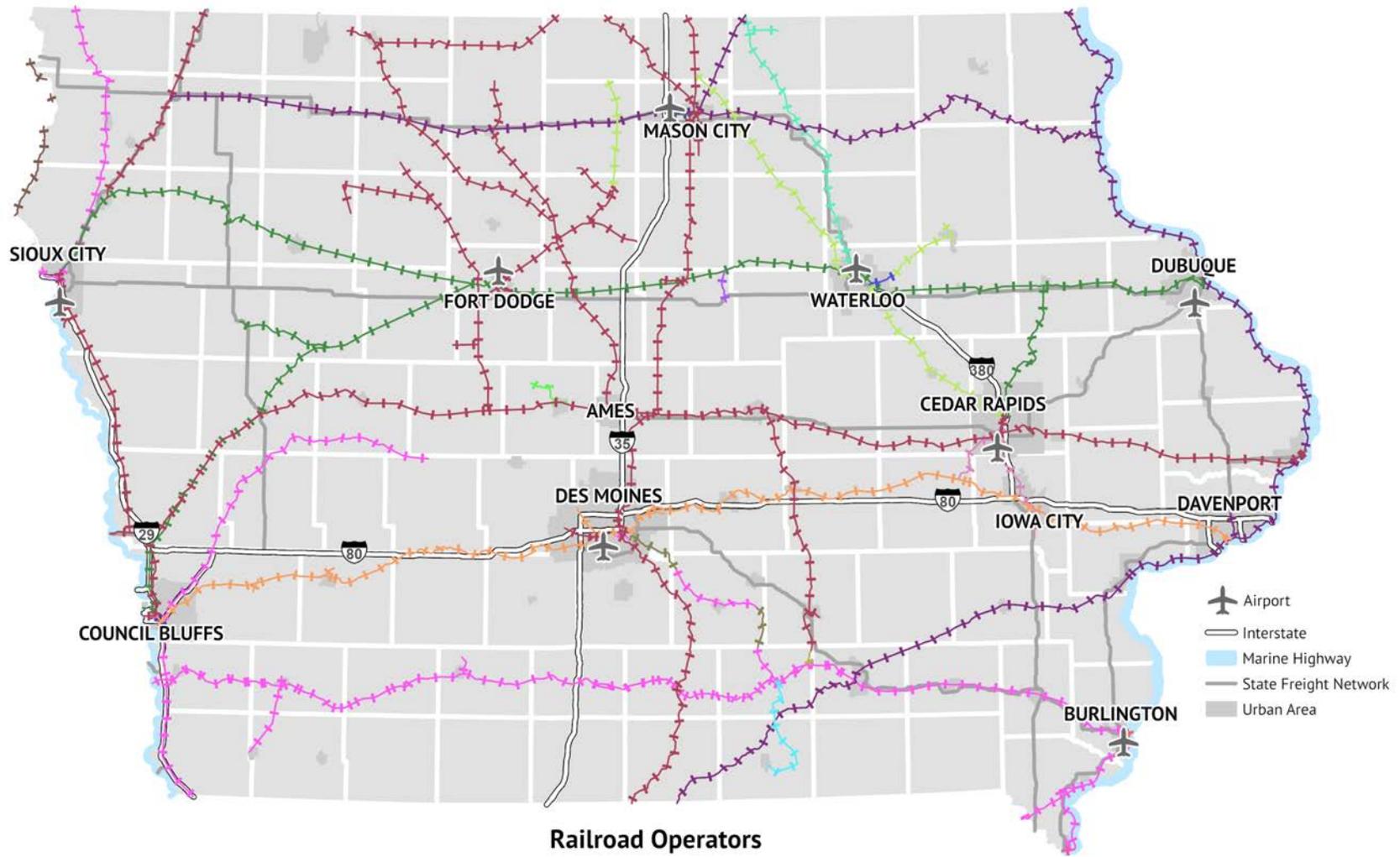
³ CBEC trackage is operated by IAIS.

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



Railroad Operators

- | | | | | |
|---|---|--|---|---|
| <ul style="list-style-type: none"> ✦ BNSF ✦ Boone and Scenic Valley R.R. ✦ Burlington Junction Railway ✦ CBEC Railway Co. | <ul style="list-style-type: none"> ✦ Cargill ✦ Cedar Rapids and Iowa City Railway Co. ✦ Cedar River Railroad ✦ Chicago, Central & Pacific | <ul style="list-style-type: none"> ✦ D & I Railroad ✦ Dakota, Minnesota and Eastern ✦ Davenport Industrial ✦ Iowa Interstate RR Ltd. | <ul style="list-style-type: none"> ✦ Iowa Northern Railway ✦ Iowa River Railroad ✦ Iowa Southern Railway Company ✦ Iowa Traction RR | <ul style="list-style-type: none"> ✦ Jaguar Transport ✦ Keokuk Junction Railway ✦ Norfolk Southern Railway Co ✦ Union Pacific |
|---|---|--|---|---|

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.

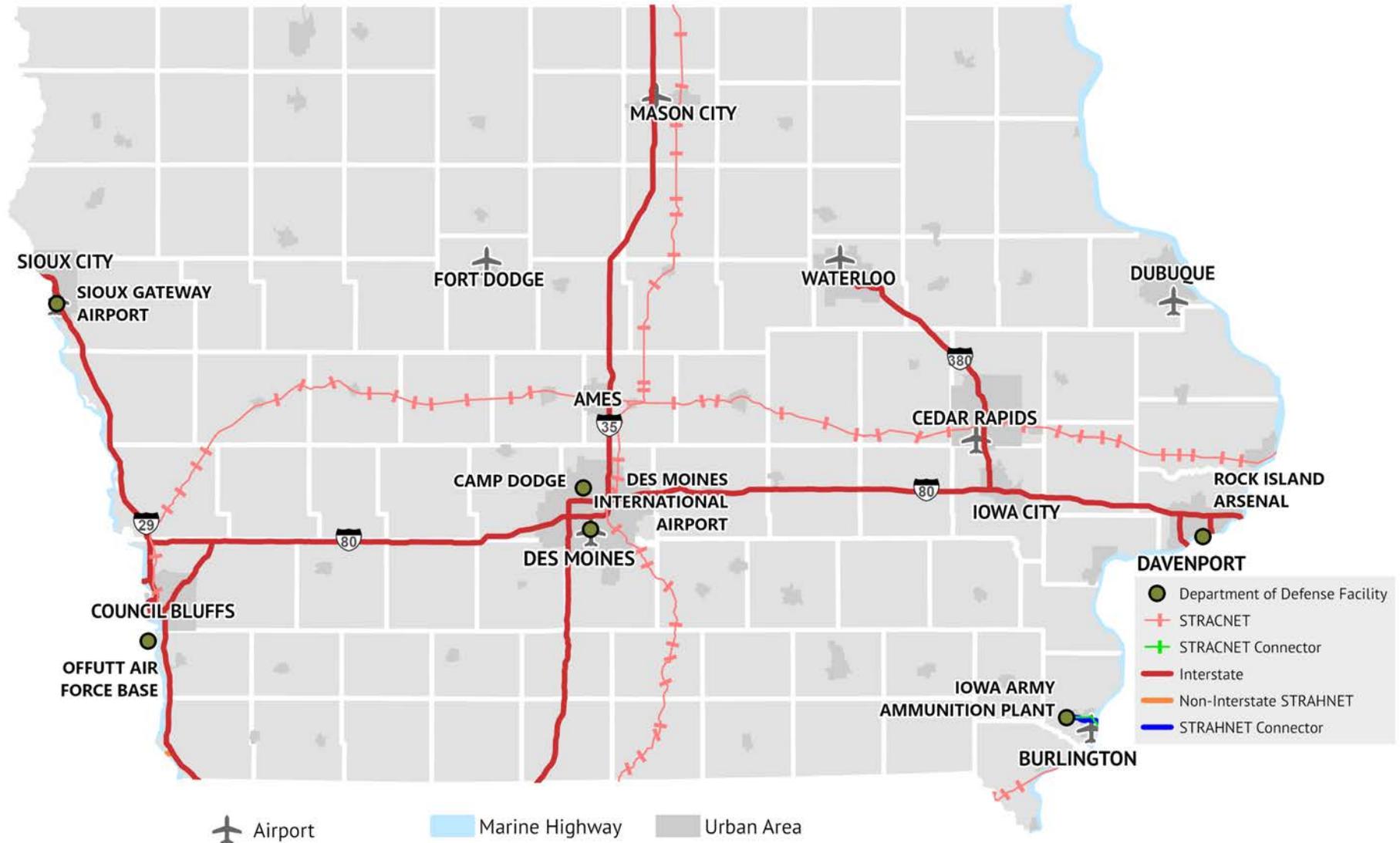
Table 3.2: Railroad portions of designated networks

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 3.3: Iowa freight and strategic rail network designations



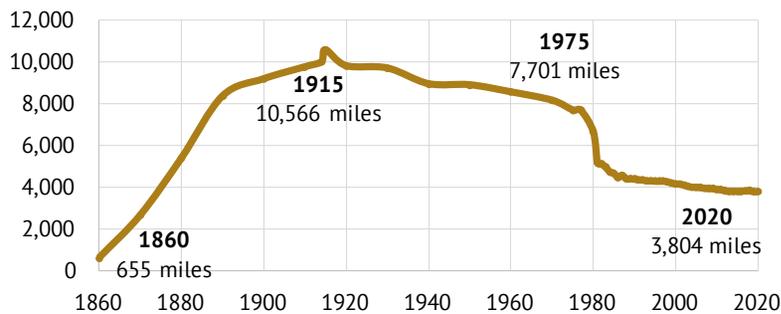
Source: Iowa DOT, U.S. DOT, and U.S. Military Surface Deployment and Distribution Command Transportation Engineering Agency

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

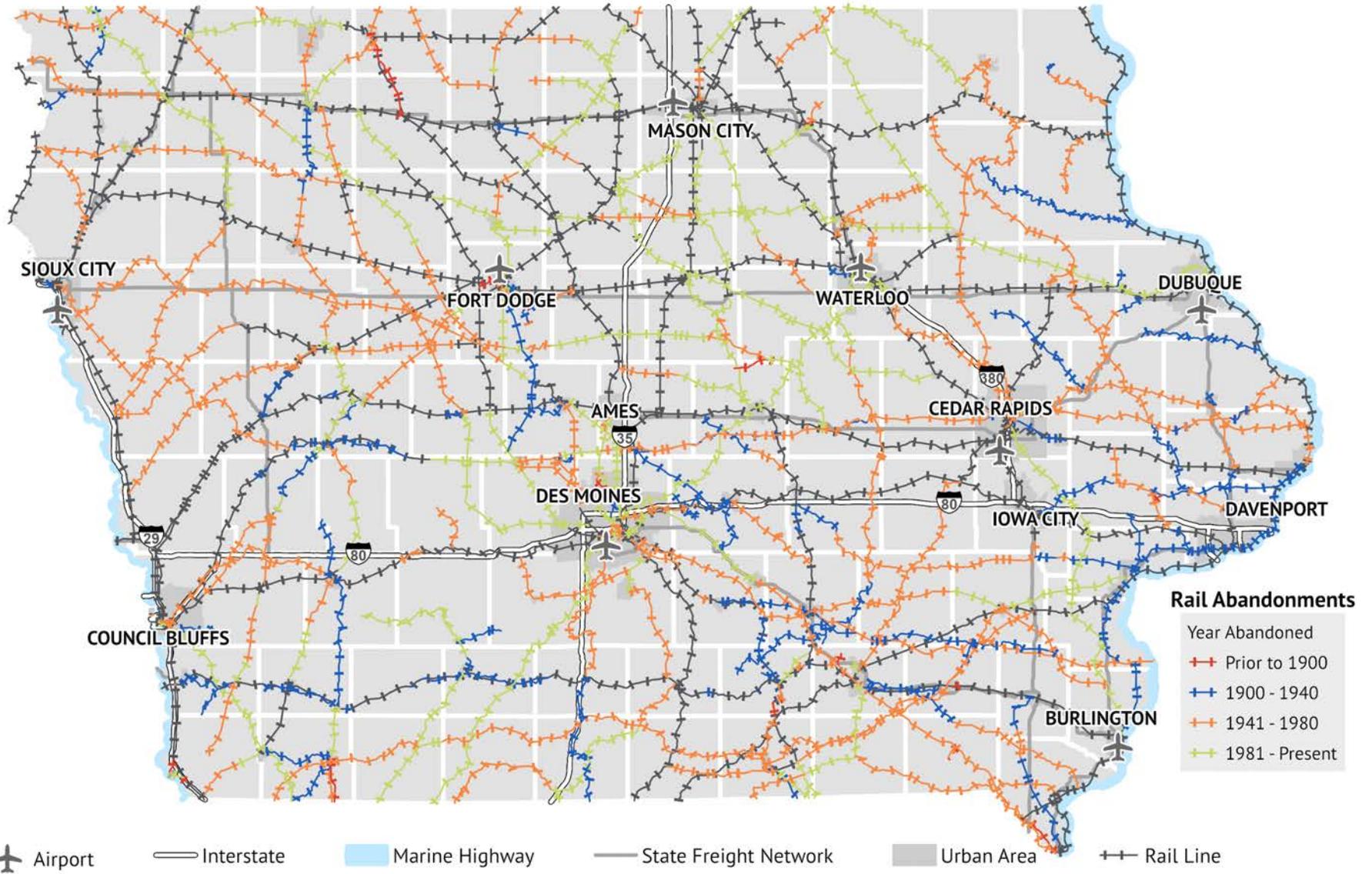
Table 3.3: Major Iowa rail trails

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.

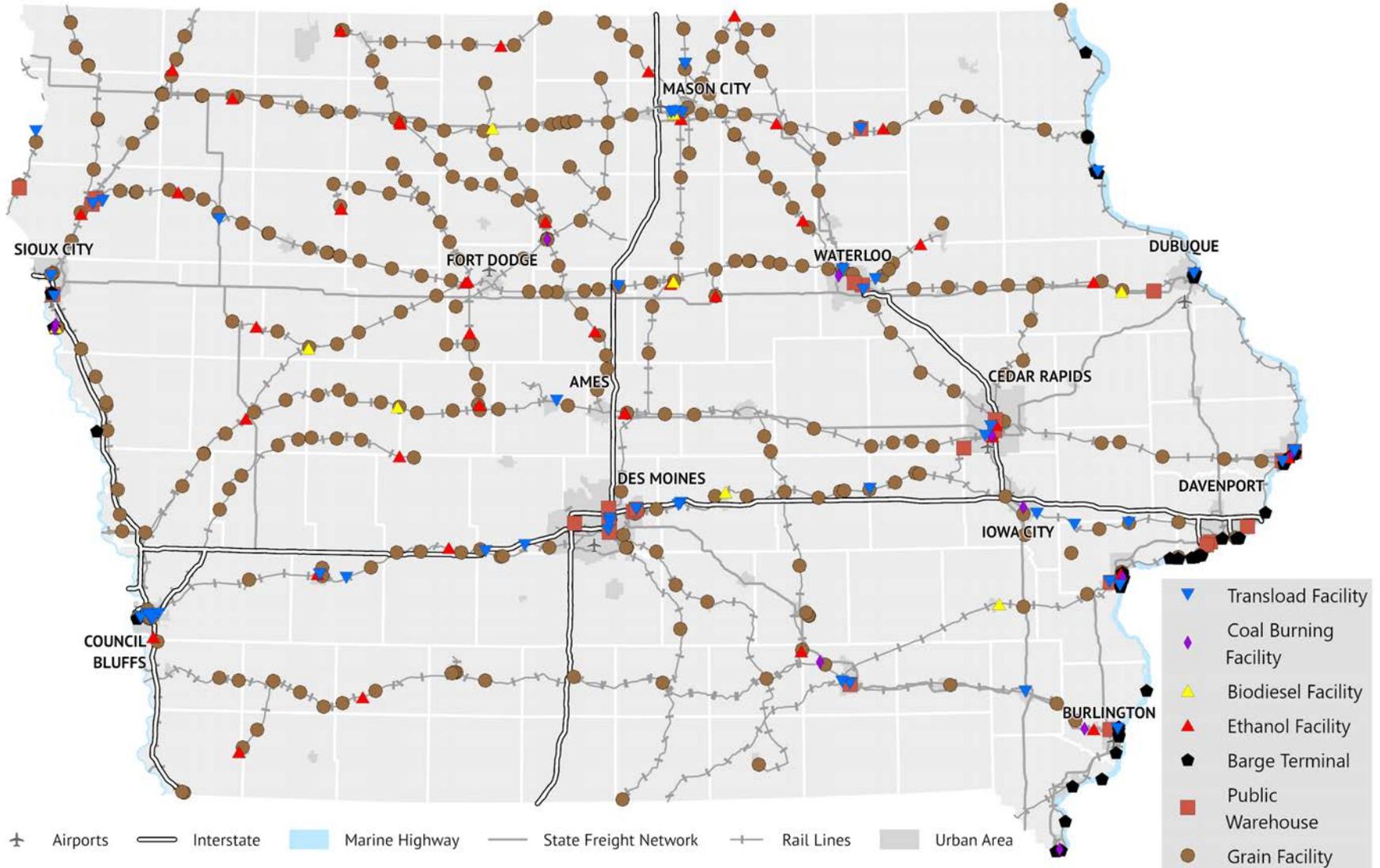
Transload Facilities

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 derailments¹, 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

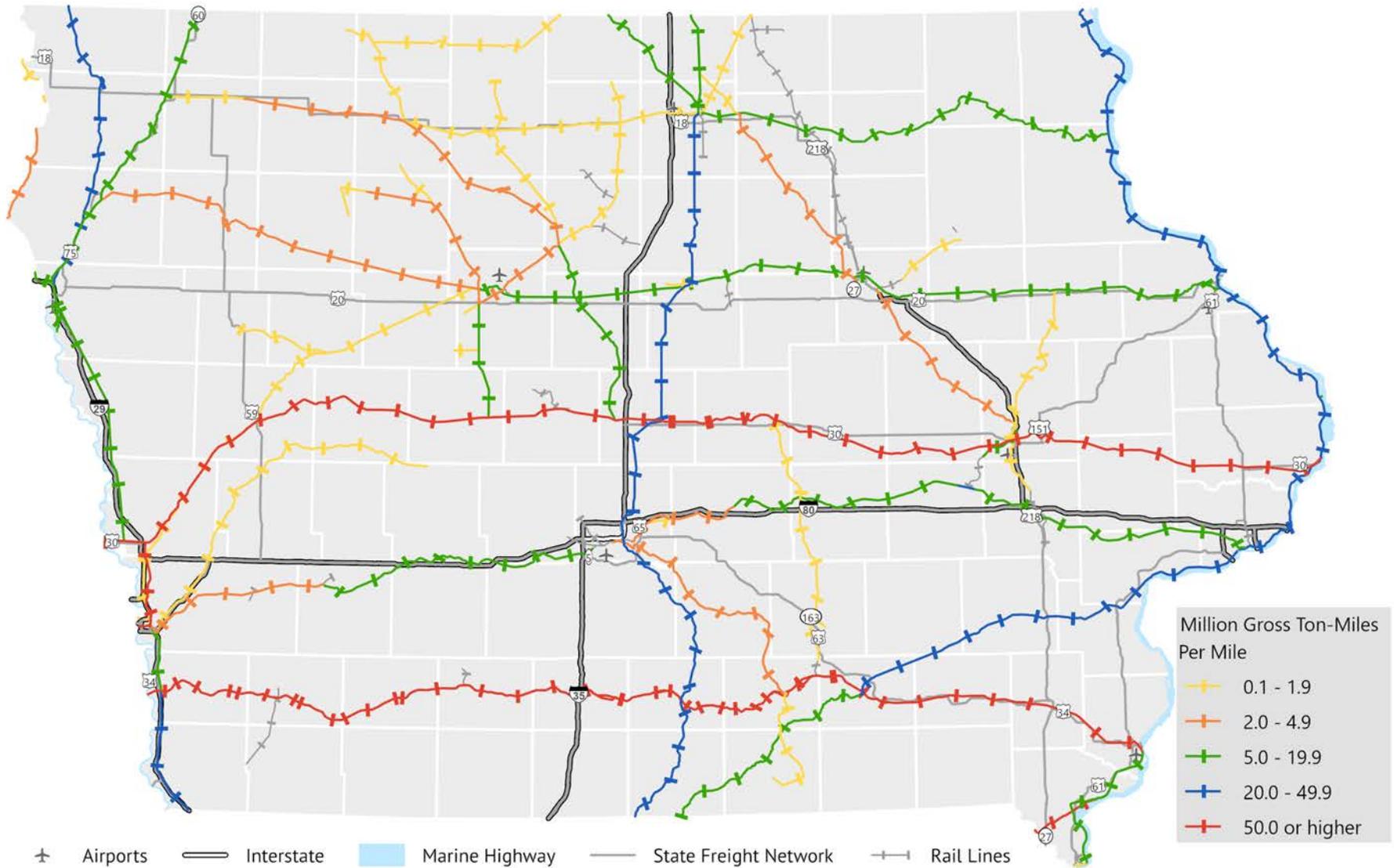
Railroad bottleneck locations are usually referred to as "choke points" to avoid confusion with the more conventional railroad sector use of "bottleneck" to describe locations served by only one rail carrier (i.e., the "bottleneck carrier"). The choke points shown in Figure 3.8 and Table 3.4 were identified 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.



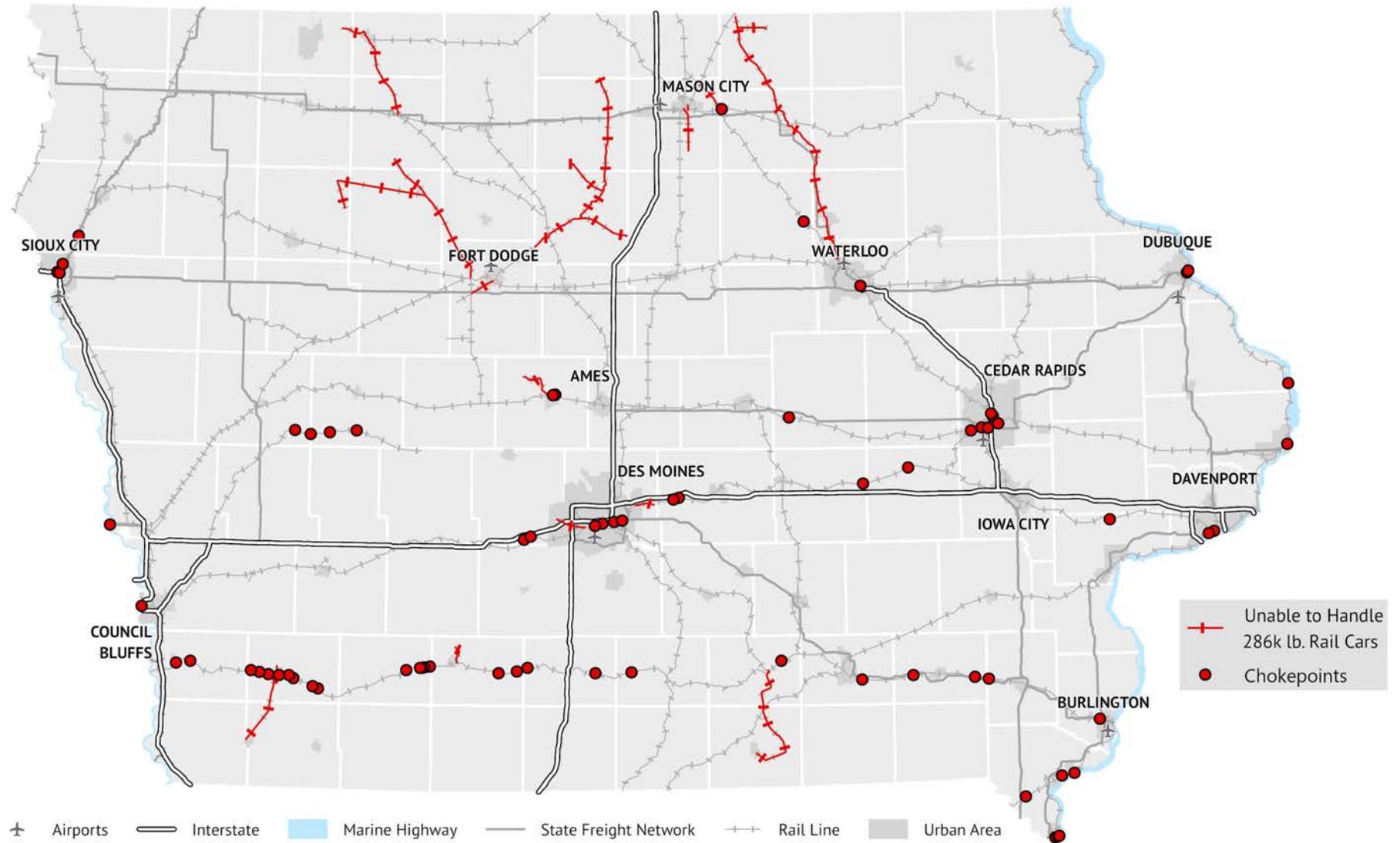


Figure 3.7: Freight railroad traffic density, 2023 (gross tons per mile)



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	<p>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.</p> <ul style="list-style-type: none"> • 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 billionⁱⁱ 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 was completed in 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 replaced two existing steel truss spans and two existing through girder spans in 2025. 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

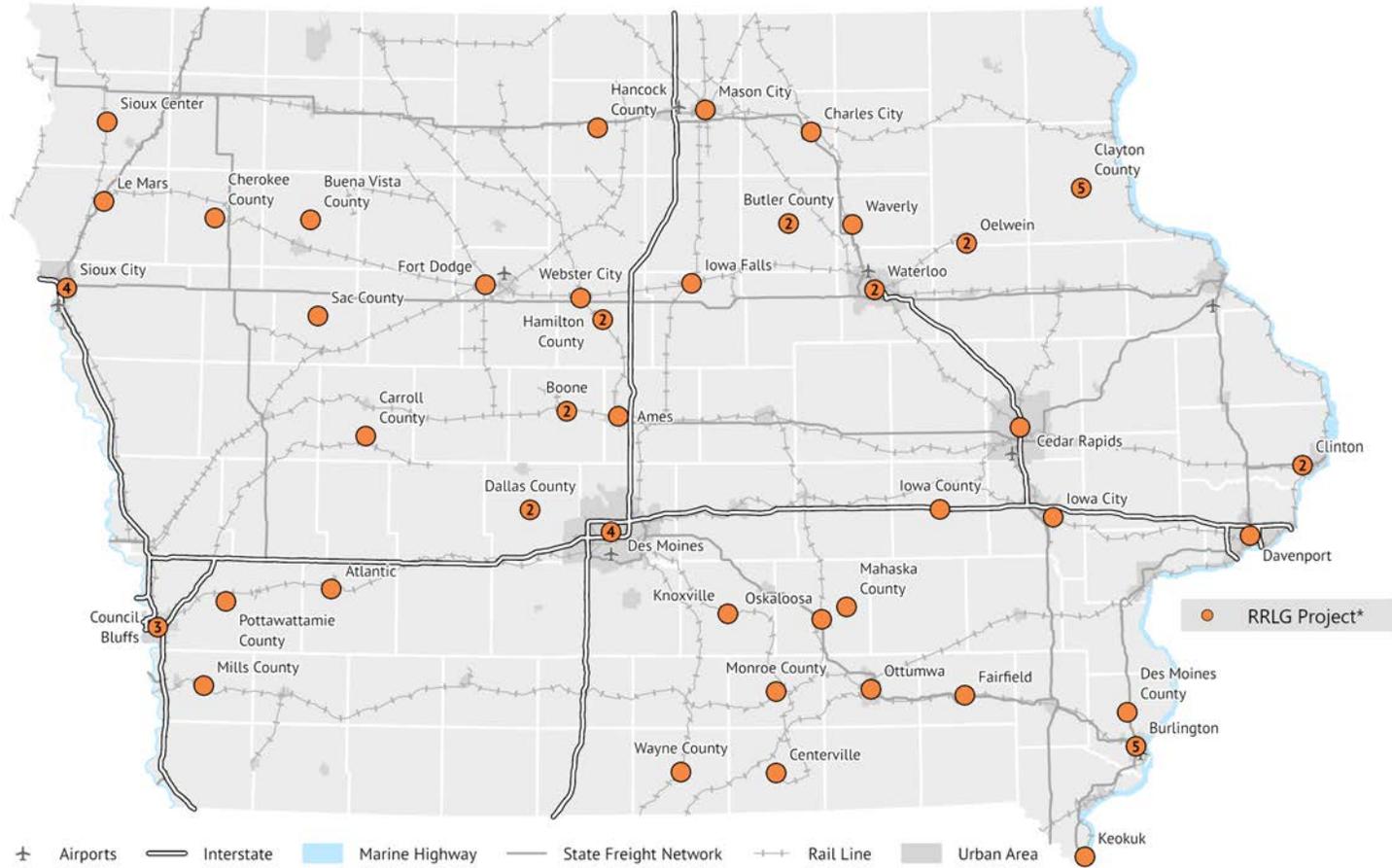
Table 3.7: RRLG projects, 2019-2025

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](#)