

CHAPTER 4: AVIATION & FREIGHT

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4.1 Introduction

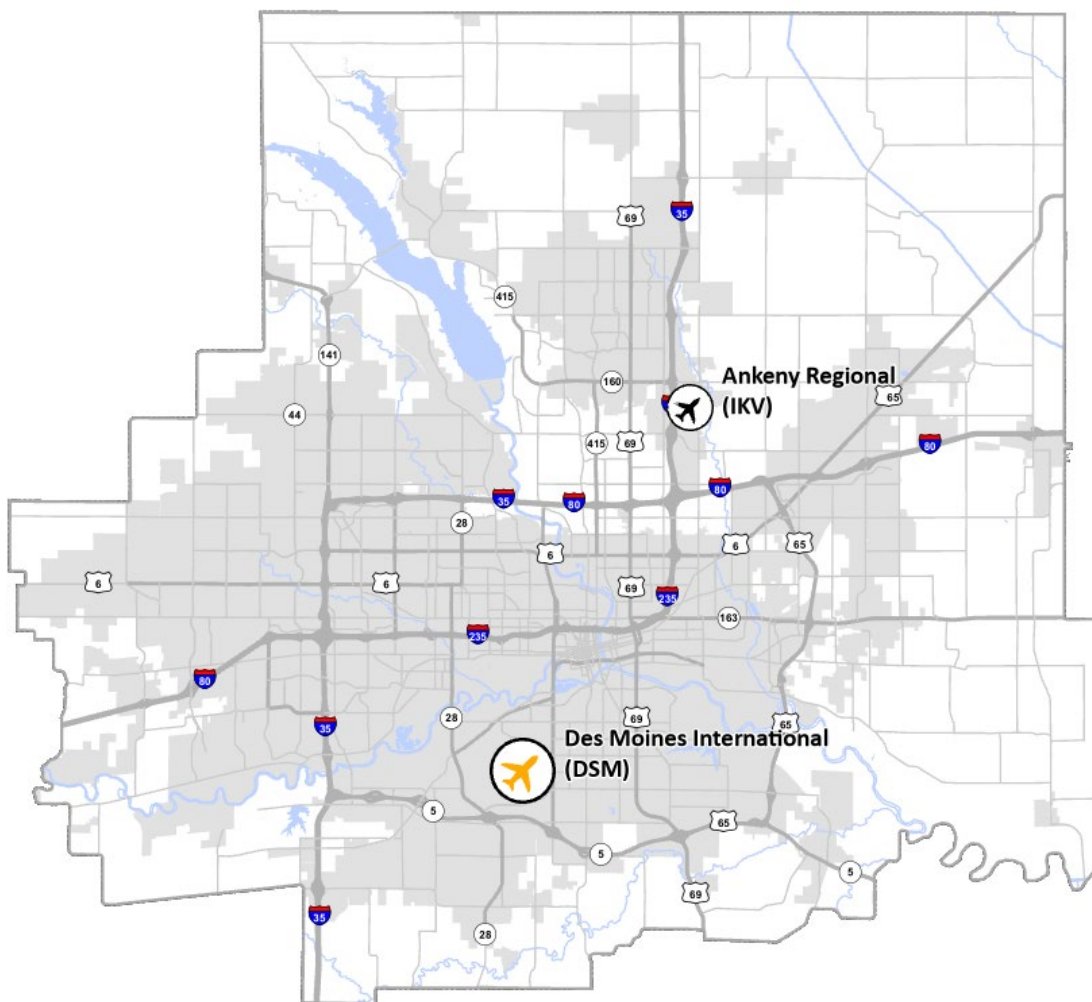
Goods movement is the transportation of for-sale products from where they are manufactured and/or harvested to where they will be sold. In Greater Des Moines, goods movement centers on rail and trucks.

4.2 State of the System

Aviation Network

The Des Moines region is served by two public airports. **Figure 4.1** identifies the location of airports in the region. The following section will focus on the two principal airports in the MPA – the Des Moines International Airport and the Ankeny Regional Airport. The Iowa DOT's Iowa Aviation System Plan includes individual airport summaries for Iowa airports.

Figure 4.1: Airport Locations



Ankeny Regional Airport

The Ankeny Regional Airport (IKV) is considered an Enhanced Service facility that provides general aviation needs for the Des Moines region as a business airport and as a reliever to the Des Moines International Airport. The IKV is owned and operated by the Polk County Aviation Authority and accounts for personal and business travel, as well as just-in-time shipping, law enforcement, agricultural, and medical transport.

Facilities: The Ankeny Regional Airport has two concrete runways – a 5,500 foot runway and a 3,855 foot runway. Both runways are accessible under less-than-visual meteorological conditions, using Instrument Flight Rules (IFR). The IKV’s facilities include a terminal building with a passenger lounge and meeting rooms. The fixed base operator (FBO) is located in the terminal building.

Services: The FBO provides charter service, flight department management, aircraft sales, aircraft rental, aircraft storage and maintenance, aircraft fueling, and pilot training.

Des Moines International Airport (DSM)

DSM serves as the major air passenger and airfreight service center for central Iowa. In addition, DSM serves as a base for the Iowa Air National Guard. The airport is governed by a five-member Airport Authority Board, composed of representatives appointed by the Des Moines Mayor and approved by the Des Moines City Council.

Facilities: DSM supports two concrete runways that are accessible under less-than-visual meteorological conditions, using Instrument Flight Rules (IFR). Terminal facilities include a passenger terminal complex, U.S. Customs and Immigration facility, air cargo facilities, general aviation facilities, military facilities, an aircraft rescue and firefighting facility, an air traffic control tower, and maintenance facilities.

Groundbreaking for DSM’s terminal expansion occurred in October 2023, and the new terminal is expected to be operational in late 2026.

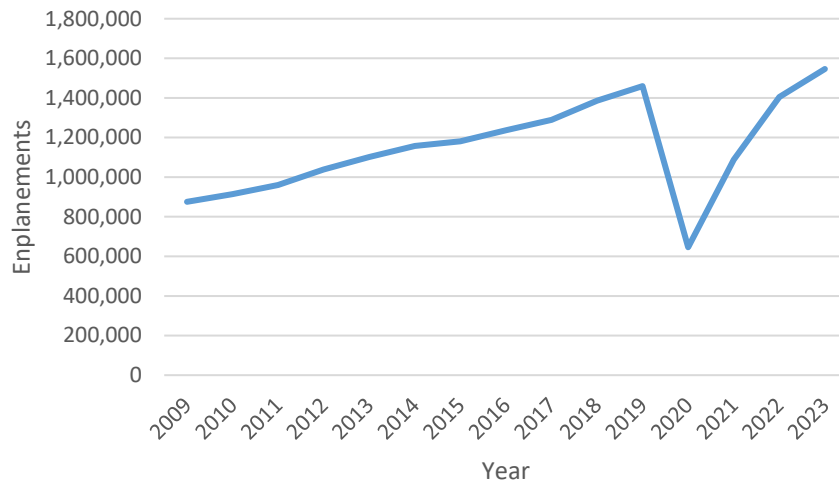
Services: DSM provides general aviation and commercial services. General aviation services include hanger rental, charter, aircraft rental, fuel, power and airframe repair, aircraft sales, avionics sales and repair, and pilot instruction. **Figure 4.2** shows direct passenger flights from the Des Moines International Airport.

Figure 4.2: Des Moines International Airport Direct Flights

Destination	Airport
Atlanta, GA	Hartsfield-Jackson International Airport (ATL)
Austin, TX	Austin-Bergstrom International Airport (AUS)
Charlotte, NC	Charlotte Douglas International Airport (CLT)
Chicago, IL	Chicago O'Hare International Airport (ORD)
Dallas, TX	Dallas Ft. Worth International Airport (DFW)
Denver, CO	Denver International Airport (DEN)
Destin, FL	Destin-Fort Walton Beach Airport (VPS)
Detroit, MI	Detroit Metro Airport (DTW)
Fort Lauderdale, FL	Fort Lauderdale-Hollywood International Airport (FLL)
Houston, TX	William P. Hobby Airport (HOU) George Bush Intercontinental Airport (IAH)
Las Vegas, NV	Las Vegas-McCarran International Airport (LAS)
Los Angeles, CA	Los Angeles International (LAX)
Miami, FL	Miami International Airport (MIA)
Minneapolis, MN	Minneapolis-St. Paul International Airport (MSP)
Nashville, TN	Nashville International Airport (BNA)
New York City, NY	LaGuardia Airport (LGA)
Newark, NJ	Newark Liberty International Airport (EWR)
Orange County, CA	John Wayne Airport (SNA)
Orlando, FL	Orlando International Airport (MCO) Orlando Sanford International Airport (SFB)
Phoenix, AZ	Phoenix-Mesa Gateway Airport (AZA)
Punta Gorda, FL	Punta Gorda Airport (PGD)
San Diego, CA	San Diego International Airport (SAN)
Sarasota, FL	Sarasota-Bradenton International (SRQ)
St. Louis, MO	Lambert-St. Louis International Airport (STL)
St. Petersburg, FL	St. Petersburg-Clearwater International Airport (PIE)
Washington, D.C.	Ronald Reagan Washington National Airport (DCA)

Passenger Data

DSM experienced 23.6 percent growth in passenger enplanements from 2015 to 2019. With the COVID-19 Pandemic, DSM saw a 55.7 percent decline in passenger enplanements from 2019 to 2020. Since 2020, DSM recovered from the pandemic decline and experienced a 117.4 percent growth in passenger enplanements from 2020 to 2022. **Figure 4.3** shows total passenger boardings since 2009.

Figure 4.3: Total Passenger Boardings

Source: Des Moines International Airport (DSM)

New Terminal Development

The Des Moines International Airport is in the process of developing a new terminal located to the northeast of the existing terminal. The new terminal will consist of 22 gates when completed, an increase from the 12 existing gates. Phase 1 of the project includes the construction of the passenger processing area that will include upgrades to the check-in area, baggage claim, and security. The project is estimated to cost \$445 million. Work began in the fall of 2023 and is on schedule to be completed by the end of 2026. **Figure 4.4** shows an artist's rendering of the new terminal and **Figure 4.5** provides a diagram of planned projects as part of the new terminal upgrade.

Figure 4.4: Artist Rendering of New Terminal

Figure 4.5: New Terminal Diagram



Railroad Network

Four railroad companies operate within the MPA. Three of these railroads are Class I railroads (BNSF, Norfolk Southern, Union Pacific), and the other is a Class II railroad (Iowa Interstate Railroad). The U.S. DOT's Surface Transportation Board classifies railway companies based on their operating revenue. As of 2022, Class I railroads are categorized by yearly operating revenues of more than \$1.03 billion, while Class II railroads are categorized by operating revenues between \$46.3 million and \$1.03 billion.¹ **Figure 4.6** provides a map of the regional railroad network. For a detailed profile of each railroad in Iowa, please refer to Iowa DOT's "Iowa State Rail Plan."

Several freight and passenger rail projects have been proposed within the MPA, including

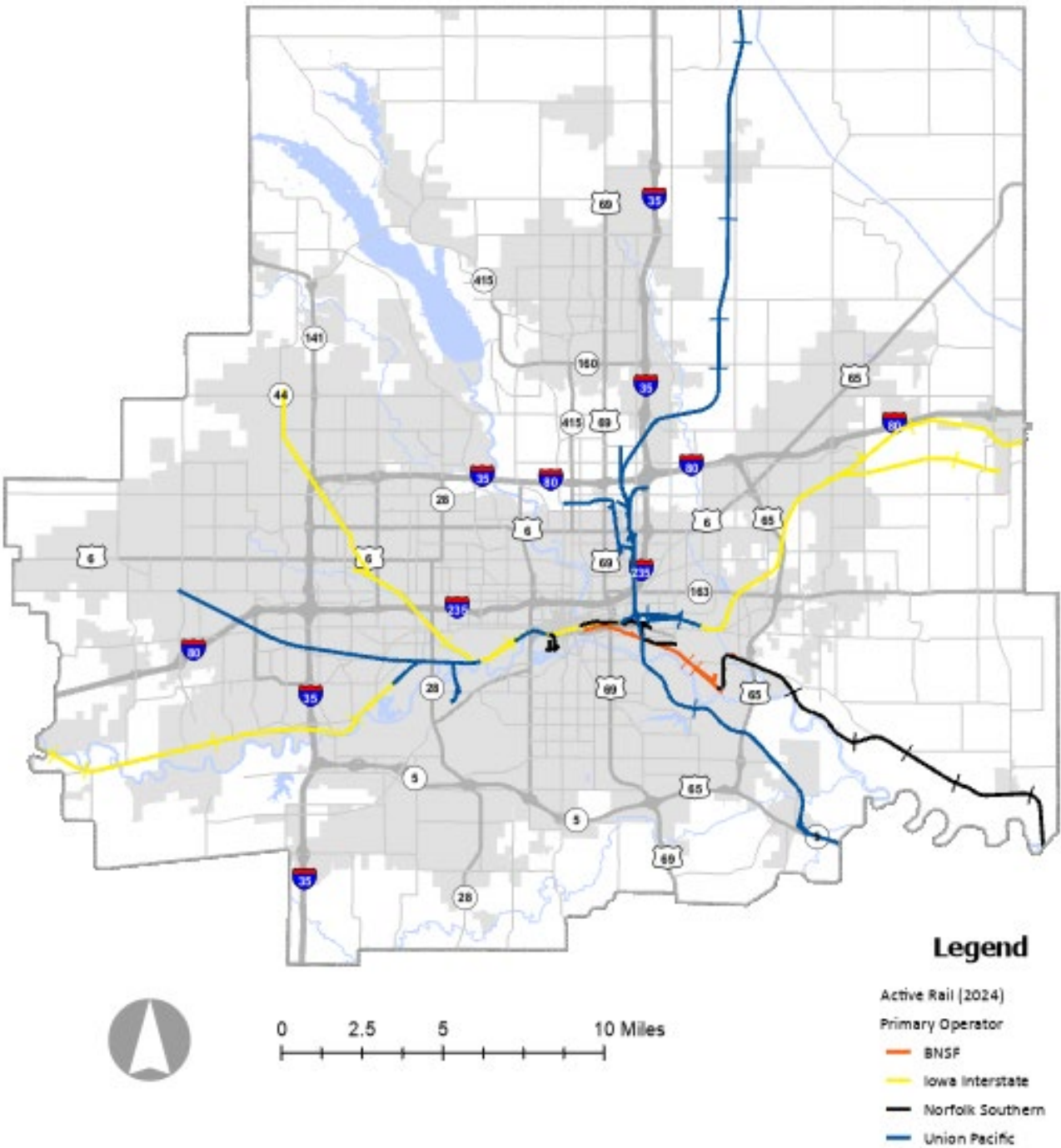
- Proposed Freight Rail Projects and Studies
 - SE Corporate Woods Drive overpass at Union Pacific Railroad in Ankeny
 - Construct Iowa Interstate Railroad bypass track around the Union Pacific Short Line Yard in Des Moines
 - Iowa Interstate expansion of rail to serve industrial parks in the Des Moines metro
- Proposed Passenger Rail Projects and Studies
 - Intercity service from Chicago to Council Bluffs/Omaha through Des Moines

¹ Surface Transportation Board. Economic Data. <https://www.stb.gov/reports-data/economic-data/>

- Intercity service from the Twin Cities to Kansas City through Des Moines
- Des Moines Area Commuter Rail

Additional information regarding these freight and passenger rail, including short- and long-range studies and capital programs, are detailed in the Iowa DOT's "Iowa State Rail Plan."

Figure 4.6: Regional Railroad Network

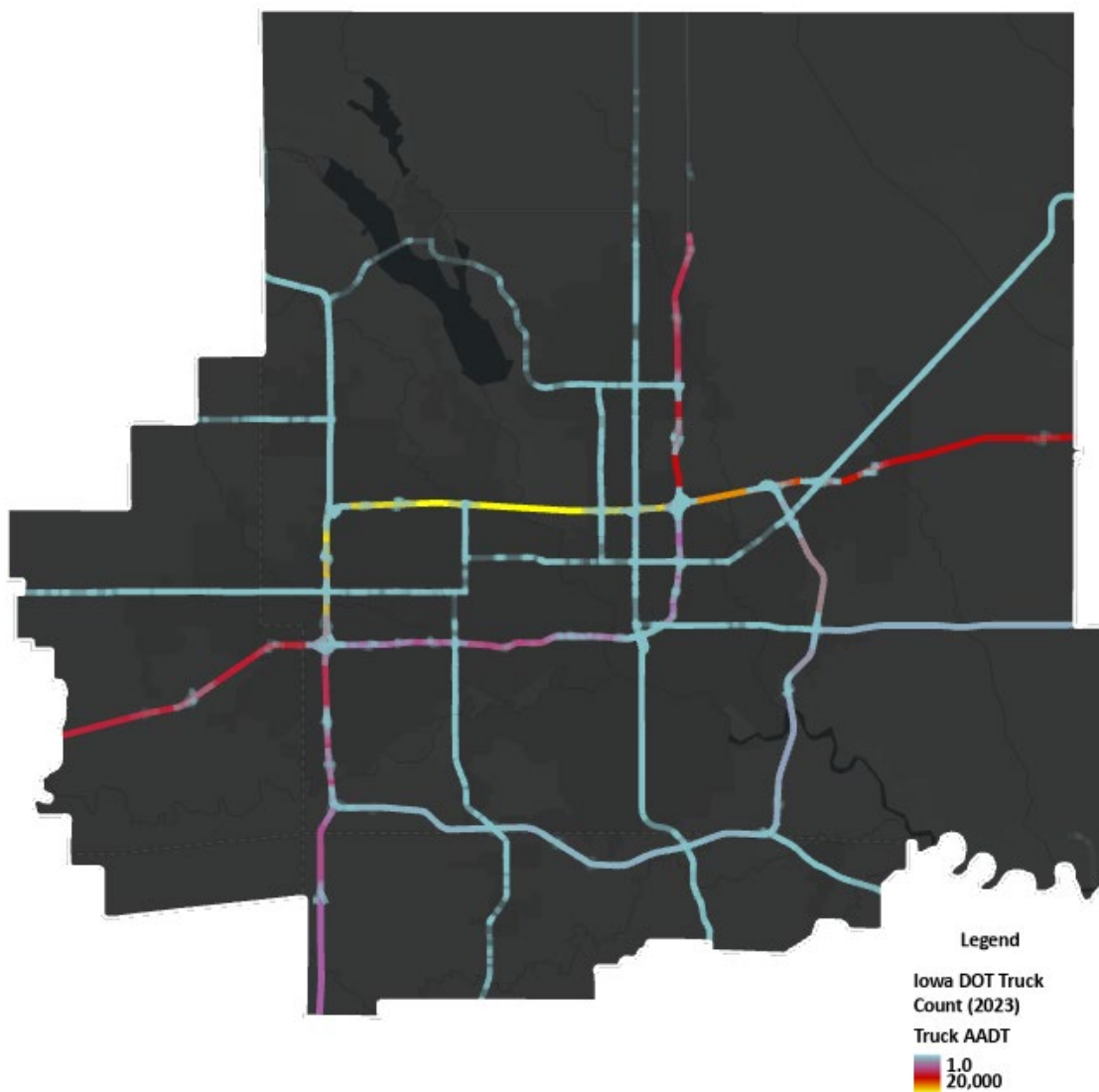


Freight Network

The following provides an overview of freight movement and freight impediments in the Des Moines metropolitan area.

In 2023, the Iowa DOT conducted truck counts along the National Highway System (NHS) in the Des Moines metropolitan area. Truck traffic was largely going north and south on Interstate 35, east and west on Interstate 80, and through Interstate 80/35 and Interstate 235. **Figure 4.7** shows a heat map of truck counts along the highway network in the Des Moines metropolitan area in 2023.

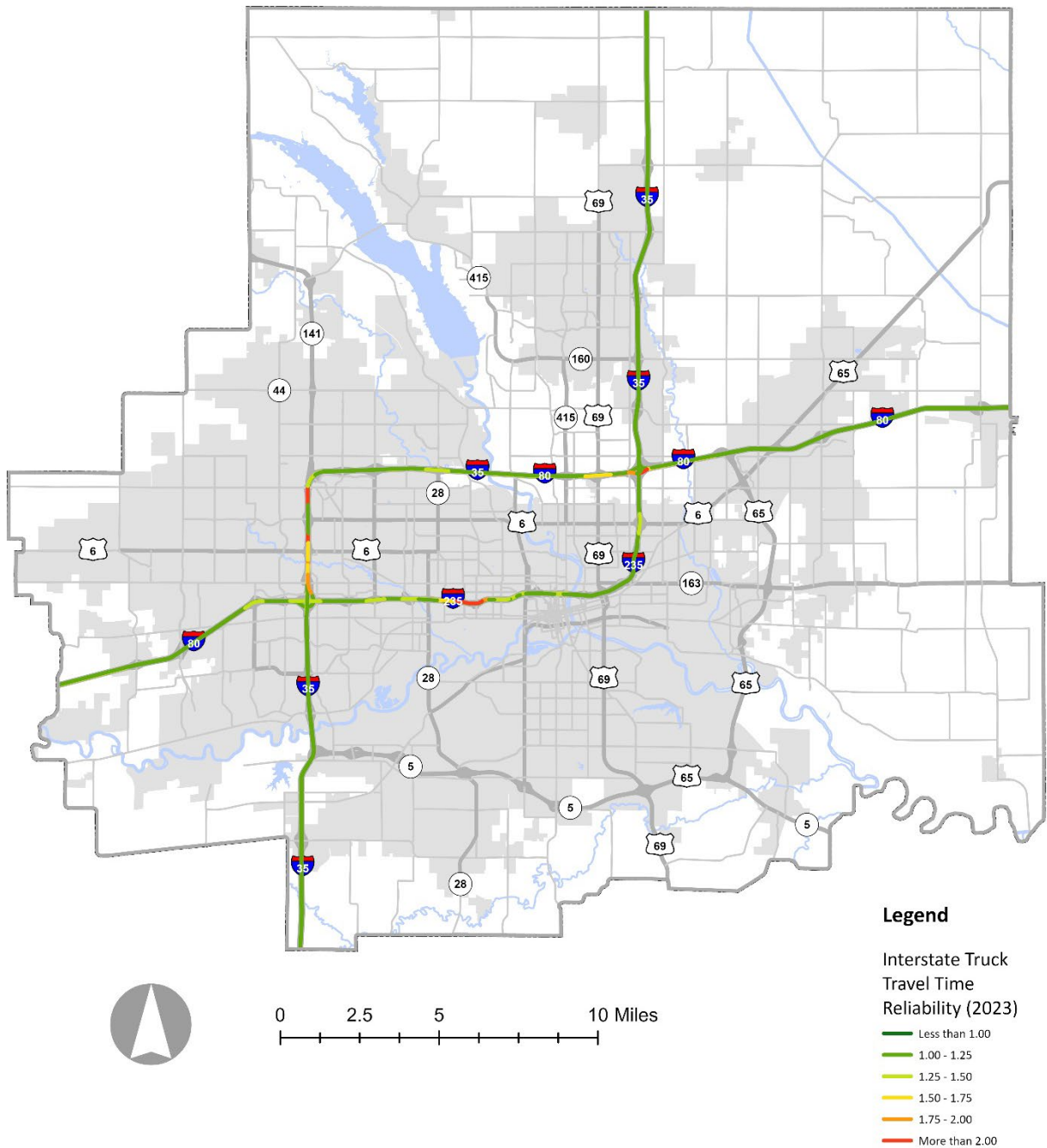
Figure 4.7: Truck Counts



Source: Iowa DOT

Freight movement can be assessed by the Truck Travel Time Reliability Index (TTTR Index), which measures the travel time reliability of truck travel on the Interstates. The TTTR Index is calculated by comparing the 95th percentile truck travel time with the 50th percentile (normal) truck travel time for five time periods on

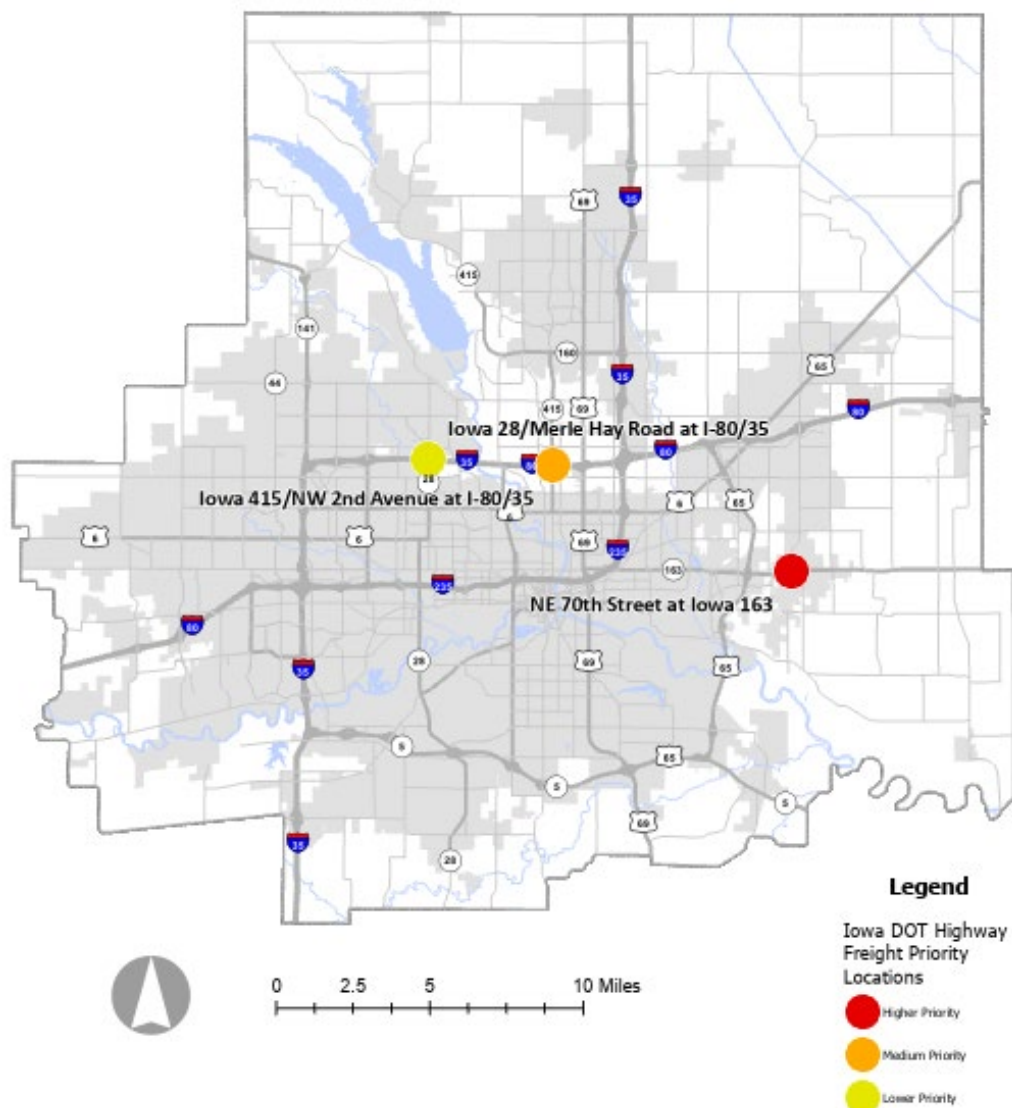
Figure 4.8: Truck Travel Time Reliability



Interstate roadway segments. A lower TTTR Index indicates better truck travel time reliability. **Figure 4.8** shows truck travel time reliability for the MPO in 2023.

In the 2022 Iowa DOT State Freight Plan, 27 locations across Iowa were identified as highway freight bottlenecks using a Value, Condition, and Performance (VCAP) matrix. Of the 27 highway freight bottlenecks, 3 were within the Des Moines metropolitan area: a higher priority location at NE 70th St and Iowa 163, a medium priority location at Iowa 415/NW 2nd Avenue and I-80/I-35, and a lower priority location at Iowa 28/Merle Hay Road and I-80/I-35. With these locations identified, additional analysis at the corridor level is needed to develop the context appropriate treatments and solutions. **Figure 4.9** shows Iowa DOT highway freight priority locations within the Des Moines metropolitan area.

Figure 4.9: Iowa DOT Freight Priority Locations



Source: Iowa DOT State Freight Plan (2022)

Des Moines Transload Facilities

The Des Moines and central Iowa markets are largely dependent on moving goods via truck. Access to rail intermodal options exist through intermodal facilities located in Kansas City, Chicago, Omaha, and Minneapolis. However, the distance to these facilities adds time and cost to shippers. Transload facilities provide direct movement of goods via railcar into and out of the area, allowing for more efficient and ecologically friendly freight movement. The existing goods movement system provides established lines of distribution for products to move into and out of the market, but it lacks efficiencies that could be achieved by moving more goods by rail. Transload facilities address the challenges of providing railcar movement of freight into the market, removing long haul truck traffic from congested roadways, reducing overall carbon emissions for each ton of freight moved into the market, providing efficient and cost-effective goods movement to businesses, and reducing significant existing drayage costs required to move goods 2-5 hours from Des Moines to access rail intermodal service.

Currently, there are three transload opportunities in the Des Moines region to move non-intermodal railcars to industries in the market. These three freight-transload facilities demonstrate the success of public-private partnership as well as private initiative with available public funding assistance.

- **Central Iowa Rail Port (CIRP) / Transload Facility & Logistics Park (Des Moines)**

First established in 1988, the CIRP Transload Facility & Logistics Park was further developed with both private funds (warehouse expansion in 2002 then added a second rail spur in 2002) and public funds (upgraded in 2024 with a Rail Revolving Loan Grant from the Iowa DOT). Future upgrades and expansions potential include expanded Logistics Park and Inland Port and intermodal capabilities.

- **Midwest Transload & Industrial Park (MTIP) (Altoona)**

The MTIP has been developing since 2008 with Merchants Distribution as a founding co-developer and managing partner. Three development phases of MTIP have been completed so far with the use of private funding, the Iowa DOT's RRLG program, Intermodal Pilot Project Program funds, and direct federal appropriation with core partners, including Merchants' Warehouse, Reppert Rigging & Hauling, Iowa Cold Storage & Central Plains Company's Cement Plant. Phase 1 constructed the core service tracks to Iowa Interstate Railroad's mainline and built Merchants' 135,000 sq. ft. warehouse; Phase 2 extended Track 2 of 5 to serve Iowa Cold Storage; Phase 3 extended and adjusted Tracks 4 & 5 to serve the new Central Plains Cement Plant. Additional phases are possible, including to extend rail service to additional parcels of the Industrial Park and expanding Freight/Yard services.

- **Des Moines Industrial Transload Facility (Des Moines)**

The MPO was awarded a \$1.7 million RRLG (Rail Revolving Loan Grant) from the Iowa DOT in 2015 and a \$11.2 million-dollar BUILD (Better Utilizing Investments to Leverage Development) grant in the fall of 2018 for the development of a Transload facility. Construction began in 2021, and the facility was opened for operations in 2022.

Figure 4.10 shows the completed Des Moines Industrial Transload facility. **Figure 4.11** shows the location of Transload facilities in relation to existing railroad lines. **Figure 4.12** shows the site plan of the Des Moines Industrial Transload facility. **Figure 4.13** shows an aerial image of the Midwest Transload Facility and Industrial Park. **Figure 4.14** shows an aerial image of the Central Iowa Rail Port and Logistics Park.

Figure 4.10: Constructed Des Moines Transload Facility



Figure 4.11: Transload Facility Locations with Active Railroad Lines

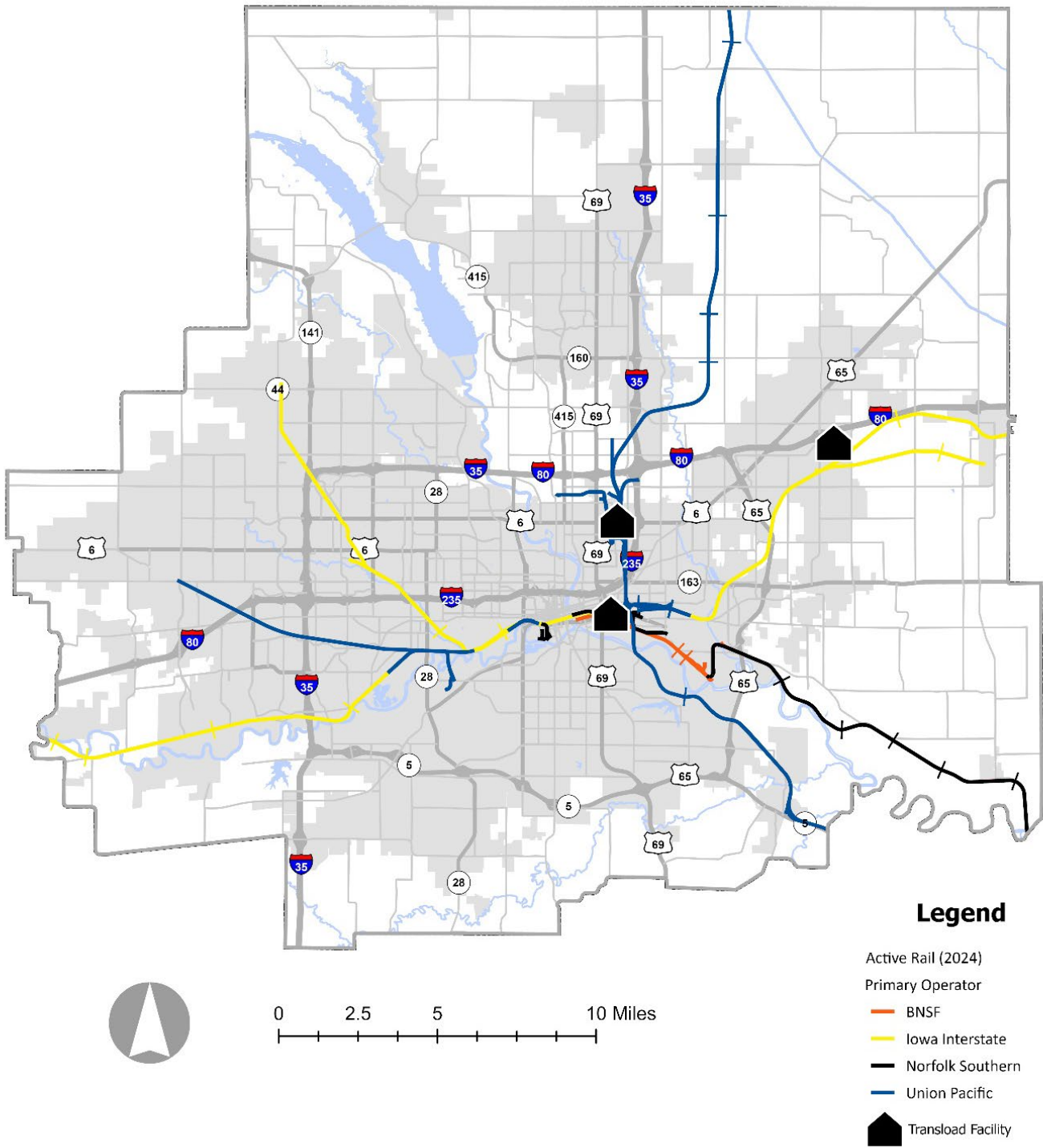


Figure 4.12: Site Plan of Des Moines Industrial Transload Facility in Des Moines

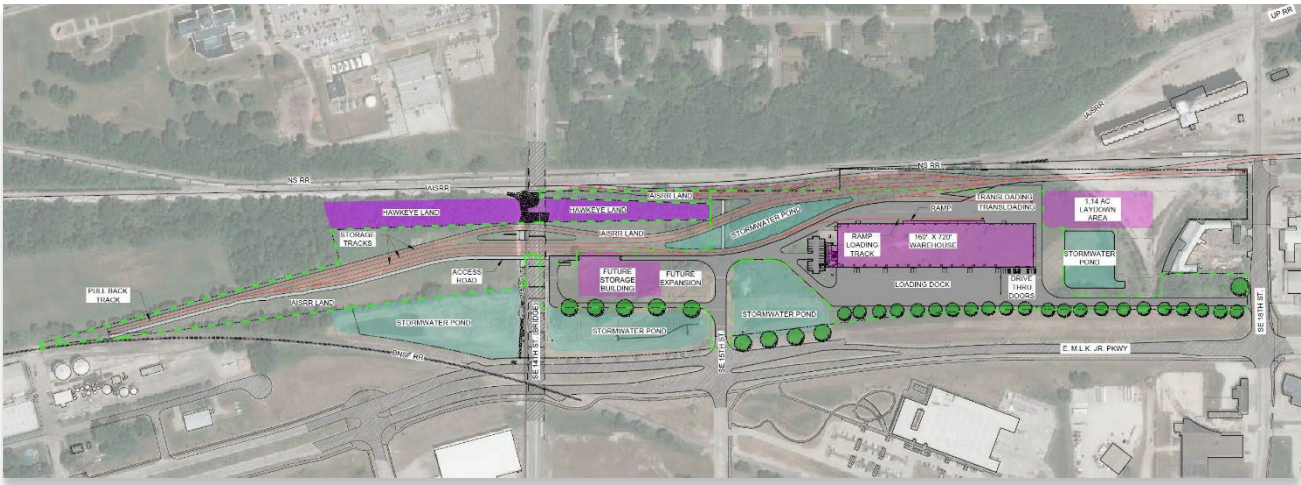
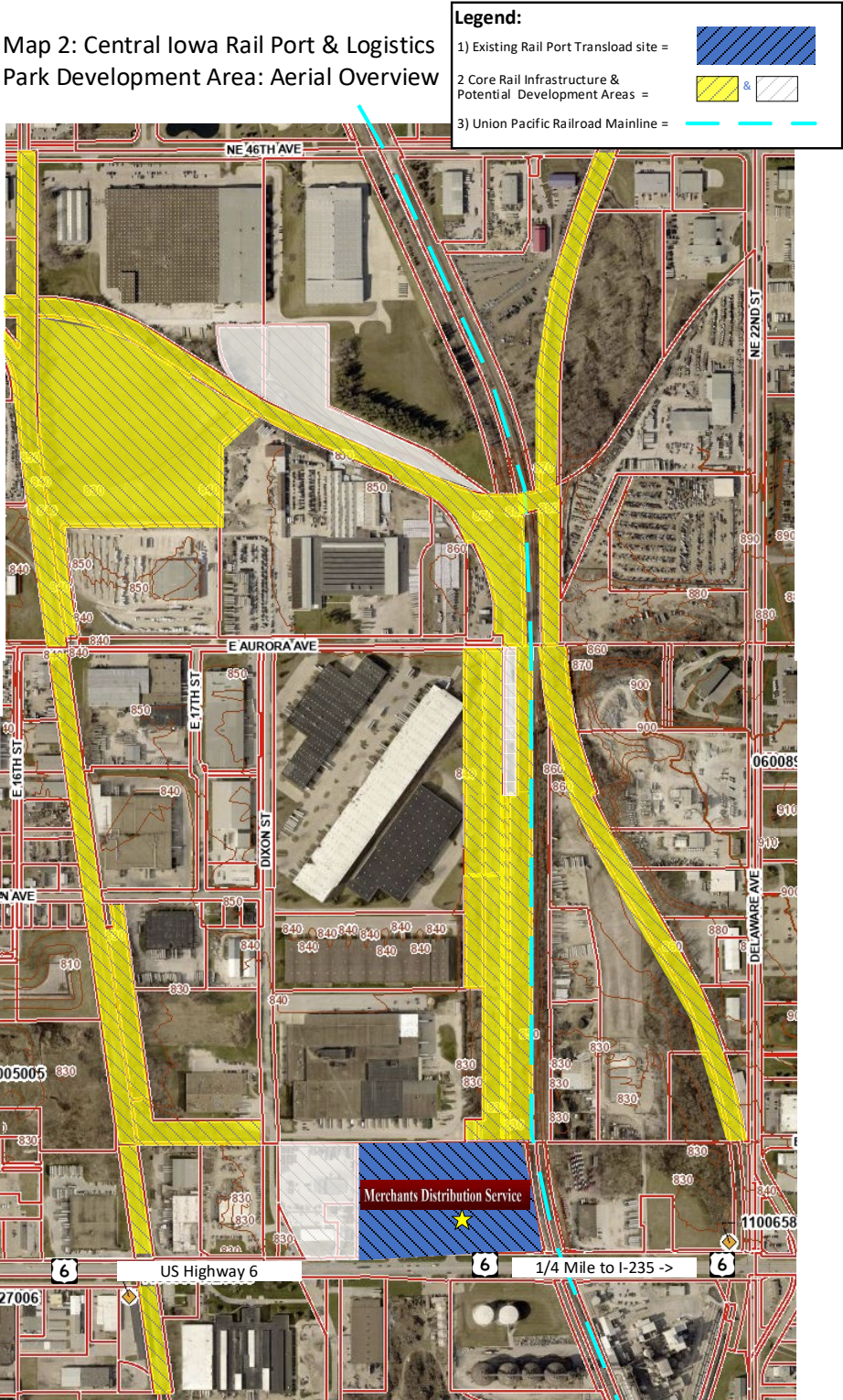


Figure 4.13: Aerial Imagery of Midwest Transload Facility and Industrial Park in Altoona



Figure 4.14: Aerial Imagery of Central Iowa Rail Port and Logistics Park in Des Moines



4.3 Measures & Targets

The MPO will use the following measures and targets to evaluate how well the MPO is advancing its goals related to aviation and freight facilities. *For additional detail on how the performance measures and targets were selected see Appendix D.*

Figure 4.15: Aviation & Freight Measures and Targets

Measure	Current (2023)	2029 5-YR Target	2050 Target	Goal
Freight				
Interstate Truck Travel Time Reliability Index*	1.20	Less than 1.28	Less than 1.28	Goal 1
Aviation				
Passenger Enplanements (DSM)	1,546,165	1,700,000	2,000,000	Goal 2
Air Cargo Handled (lbs.) (DSM)	62,630,081	Increase	Increase	Goal 2

4.4 Fiscal Capacity

The MPO does not currently have any dedicated funding sources directed to freight and aviation projects. These types of projects are funded by project sponsors and typically require special tax levy's or large federal or state grants to complete. Therefore, these types of special projects were not considered in the fiscal analysis for this plan.

Aviation and Freight Projects

This section documents the aviation and freight projects identified in Mobilizing Tomorrow.

Figure 4.16: 2025-2034 Freight and Aviation Projects

Sponsor	Project	Project Location	YOE Cost (Millions)
Des Moines International Airport	New Terminal	East of existing terminal off Fleur Drive in Des Moines	\$445
The Midwest Transload and Industrial Park	Phase 4 and 5, including site development parcels	Existing site in Altoona	Unknown
Central Iowa Rail Port / Transload Facility and Logistics Park	Phases 2 and 3	North and west of existing site in Des Moines	Unknown
Des Moines Industrial	Transload Facility – Phase II	Existing site in Des Moines	Unknown
*BNSF Railroad	Positive Train Control (PTC) Implementation (safety Improvements)	Statewide	\$200
*Union Pacific Railroad	Hull Avenue Yard Expansion	Des Moines	\$12.4
*Union Pacific Railroad	Remote Control Switches – Short Line Yard	Des Moines	\$1.9

*Source: Iowa State Rail Plan

4.5 Policies and Best Practices

The City College of New York and New York City Department of Transportation Office of Freight Mobility's publication, "Complete Streets Considerations for Freight and Emergency Vehicle Operations", provides recommendations to enhance freight and emergency vehicle operations in urban environments:

- Street Design and Management
 - Provide adequate spacing for large freight vehicle operations, parking, loading, and deliveries
 - Separate large freight vehicles and vulnerable road users
 - Reduce speeds
 - Provide network connectivity and redundancy
- Demand Management Strategies
 - Off-hour deliveries
 - Lockers and pick-up points
 - Urban Consolidation Centers

Additional strategies to improve freight operations for urban environments are available in the publication:

The City College of New York and New York City Department of Transportation Office of Freight Mobility. *Complete Streets Considerations for Freight and Emergency Vehicle Operations*. May 2018.
https://www.metrotrans.org/assets/upload/complete%20streets%20freight%20booklet_v6_hires-0.pdf