Chapter 4 Roads & Bridges

4

Planning for the Metropolitan Planning Area

The Quad Cities is characterized by its excellent existing road network. The planning area boundary encompasses Eldridge, Iowa to the north; LeClaire, Iowa and Port Byron and Colona, Illinois to the east; Buffalo, Iowa and Andalusia, Illinois to the west; and Milan, Oak Grove, and Coal Valley, Illinois to the south. As a result of the 2020 U.S. Census and shifting definitions of urbanized areas, the Davenport, IA-IL UZA was altered slightly; however, the Metropolitan Planning Area was unchanged from the 2010 boundaries. Map 4.1 outlines the Quad Cities MPA boundary and existing road network.

The Quad Cities Region is served by four interstate highways (74, 80, 280, and 88); four U.S. highways (6, 61, 67, and 150); 6 signed state highways, four in Illinois (5, 84, 92, and 94) and two in Iowa (22 and 130); and a variety of local streets. Interstates I-80 and I-280 encircle the majority of the metropolitan area. Interstate 74 runs north/south through the center of the metropolitan area. The Mississippi River flows east to west in the Quad Cities along the Iowa/Illinois border. The existing road network represents every type of classified road from interstates to local streets within the planning area boundary.

Federal Functional Classification

The existing road network is categorized by the Federal Functional Classification (FFC). FFC defines the roadway by the services provided. For example, an interstate is the highest functionally-classified road. An interstate provides the highest level of service at the greatest speed for the longest uninterrupted distance. The lowest FFC level is defined as a local road, which provides the highest level of access at the lowest speeds. A collector road provides a lower level of service than interstates, but provides intraregional connections and indispensable mobility options. Roads shown as collectors or greater may be eligible for federal transportation funding. However, roads classified as minor collectors in the rural portions of the metropolitan area are not eligible for federal funds. A roadway providing the lowest service is considered a local road with the shortest distances and the least amount of traffic. A local road provides access to abutting land with little or no through movement. Table 4.1 illustrates the relationship between FFC and travel characteristics.

Table 4.1 – Federal Functional Classification and Travel Characteristics[1]

Functional Classification	Distance Served (and Length of Route)	Access Points	Speed Limit	Distance between Routes	Usage (AADT and DVMT)	Significance	Number of Travel Lanes
Arterial	Longest	Few	Highest	Longest	Highest	Statewide	More
Collector	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Local	Shortest	Many	Lowest	Shortest	Lowest	Local	Fewer

1 Adapted from *Highway Functional Classification Concepts, Criteria and Procedures*, 2023 Edition. Federal Highway Administration.

The Illinois and Iowa Departments of Transportation (DOT), in consultation with local governments, have classified all roadways in the Quad Cities MPA boundary. Table 4.2 summarizes the FFC in miles within the MPA, Figures 4.1 and 4.2 display the information in a pie chart by state, and Map 4.1 identifies existing roadways (2023) by this classification system. It should be noted that a large majority of road miles are classified as "Local Road or Street," nearly 60% in total. These roads are not eligible for federal funding; thus, maintenance must be funded entirely by local sources.

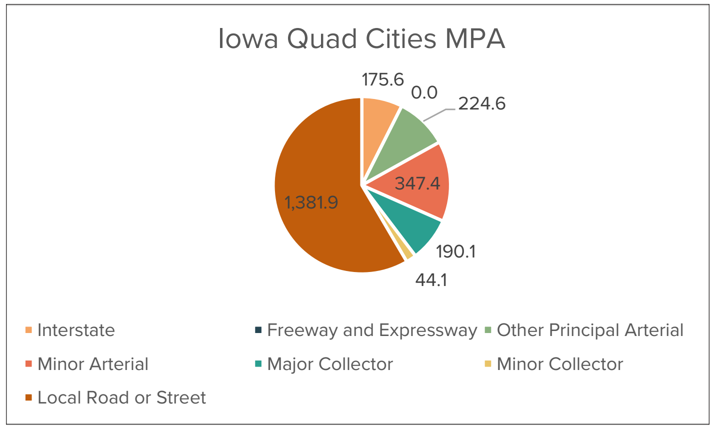
Table 4.2 – Quad Cities MPA Federal Functional Classification in Lane Miles

Federal Functional Classification (FFC)	Iowa Quad Cities MPA	Illinois Quad Cities MPA	Total
Interstate	175.6	201.1	376.7
Freeway and Expressway	0.0	18.6	18.6
Other Principal Arterial	224.6	232.0	456.7
Minor Arterial	347.4	234.4	581.7
Major Collector	190.1	226.0	416.2
Minor Collector	44.1	95.4	139.5
Local Road or Street	1,381.9	1,468.9	2,850.8
Total	2,363.8	2,476.4	4,840.2

Definition: *Lane mile is defined as one mile of roadway that is designed as a driving lane. For example, a four-lane road, two miles long has eight lane miles.*

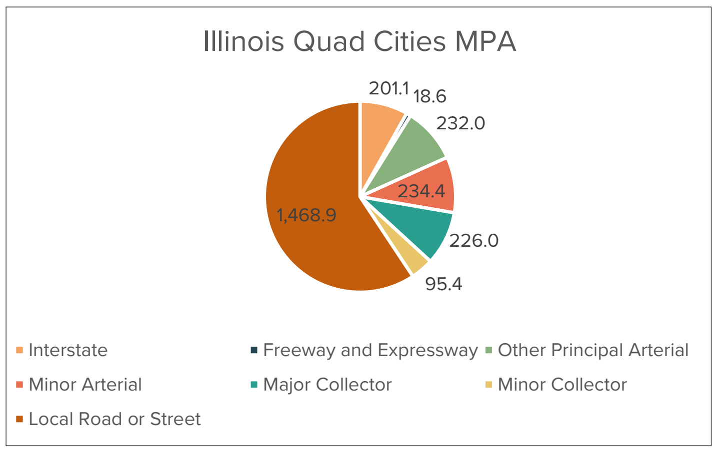
Source: Iowa and Illinois Departments of Transportation, 2025

Figure 4.1 – Lane Miles by Federal Functional Classification in the Iowa Quad Cities MPA

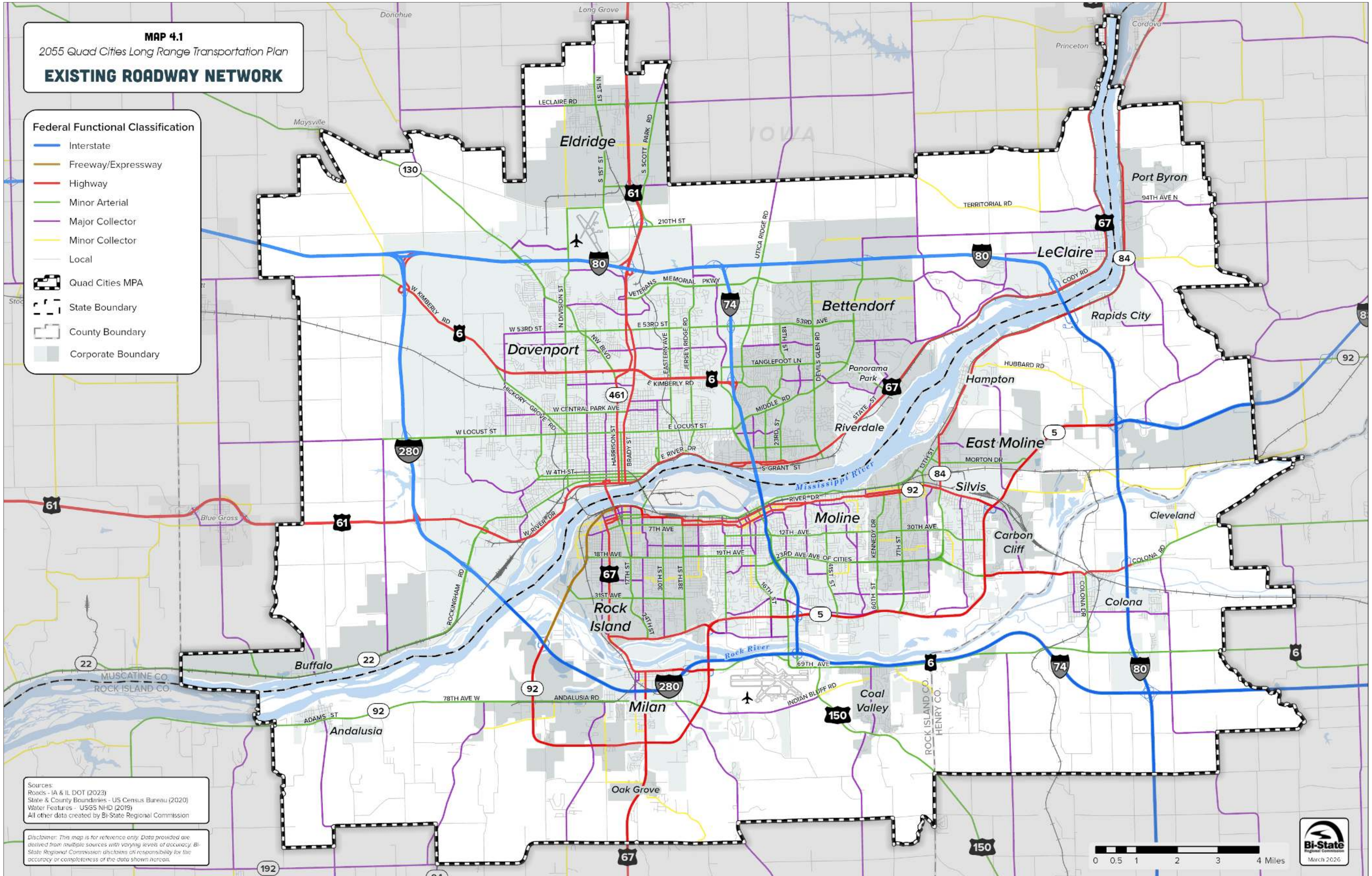


Source: Iowa Department of Transportation, 2025

Figure 4.2 – Lane Miles by Federal Functional Classification in the Illinois Quad Cities MPA



Source: Illinois Department of Transportation, 2025


MAP 4.1
2055 Quad Cities Long Range Transportation Plan
EXISTING ROADWAY NETWORK
Federal Functional Classification
Interstate
Freeway/Expressway
Highway
Minor Arterial
Major Collector
Minor Collector
Local
Quad Cities MPA
State Boundary
County Boundary
Corporate Boundary
Eldridge
Davenport
Bettendorf
LeClaire
Port Byron
Rapids City
Hampton
Riverdale
Panorama Park
East Moline
Silvis
Moline
Carbon Cliff
Cleveland
Colona
Rock Island
Milan
Coal Valley
Andalusia
Buffalo
Oak Grove
Blue Grass
IOWA
Mississippi River
Rock River
MUSCATINE CO.
ROCK ISLAND CO.
HENRY CO.
Sources:
Roads - IA & IL DOT (2023)
State & County Boundaries - US Census Bureau (2020)
Water Features - USGS NHD (2019)
All other data created by Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.
0 0.5 1 2 3 4 Miles
Bi-State Regional Commission
March 2026

Annual Average Daily Traffic

Traffic volume, vehicle classification, and truck traffic is foundational to monitoring roadway travel. Each state's department of transportation collects traffic volumes for various functionally classified roads then reports nationally into the federal highway data system. The FHWA Traffic Monitoring Guide (2022) outlines traffic monitoring guidance to provide best practices on the collection of traffic data to inform policies, standards, procedures, and facility/equipment needs. In Iowa, the DOT covers traffic counting needs in areas of the state on a four-year cycle for cities and counties. They also monitor 170 continuous count stations across the state located on the interstate system, and on certain U.S./ Iowa Highways, secondary roads, and city streets. Similarly, Illinois DOT collects data at the city and county level on a five-year cycle and manages thousands of 24-hour or 48-hour count locations throughout the state. Illinois maintains approximately 120 continuous count stations as well.

Traffic count information provides planners and engineers, as well as city/county officials with information on road usage. Higher traveled roads carry more people to their destinations. Knowing vehicle weights captured by counters provides information on the type of use. A road like Interstate 80 carries high volumes of traffic, and 29% of those vehicles are trucks. Using this information, it can be pared with other data like the capacity of the road to determine lane widths and number of lanes, and to decide if congestion may be a problem because the road cannot handle the high volume of traffic.

Maps 4.2 and 4.3 provide 2022 annual average daily traffic. The plan's travel demand model used the 2022 base-year data to calibrate the model, or ground check the model's predicted traffic in 2023 with the actual counts. This is discussed in more detail later in the chapter. Map 4.4 illustrates the truck network in the metro area and includes truck volumes where they are collected from 2022.

Bridges and Structures

The Quad Cities has two major rivers within its boundaries, the Mississippi River and the Rock River. While they are sources of scenic beauty, recreation, unique habitats, and commercial navigation, they also act as barriers to free movement of vehicular traffic throughout the area. The two-state Quad Cities MPA boundary includes five bridges over the Mississippi River – three interstate, one U.S. highway, and one local, owned by the Department of Defense and operated by the U.S. Army Corps of Engineers. The Quad Cities is the site of the first rail bridge in the United States crossing the Mississippi River between Rock Island, IL, and Davenport, IA, completed in 1856.The current Government Bridge completed in 1896 replaced the original and two subsequent crossings formerly upstream of the current bridge. The Government Bridge was designed by the same company, Modjeski, as designed the new I-74 Bridge. The Quad Cities' Mississippi River bridges range in age from 4 to 129 years (see Table 4.3). Figure 4.3 provides an aerial view of Lock and Dam 15 and the Government Bridge at the Rock Island Arsenal.

The highest average daily traffic (ADT) count in the entire region, and one of the highest in the State of Iowa, is 78,100 ADT (2023) on the I-74 Bridge over the Mississippi River. The three centrally-located bridge crossings at the Mississippi River tend to be the more congested road segments in the Quad Cities, particularly when they are under maintenance or rehabilitation, or as a result of an incident on or near the bridges.

Figure 4.3 – Aerial Photo of the Rock Island Arsenal and Government Bridge

Source: File photo

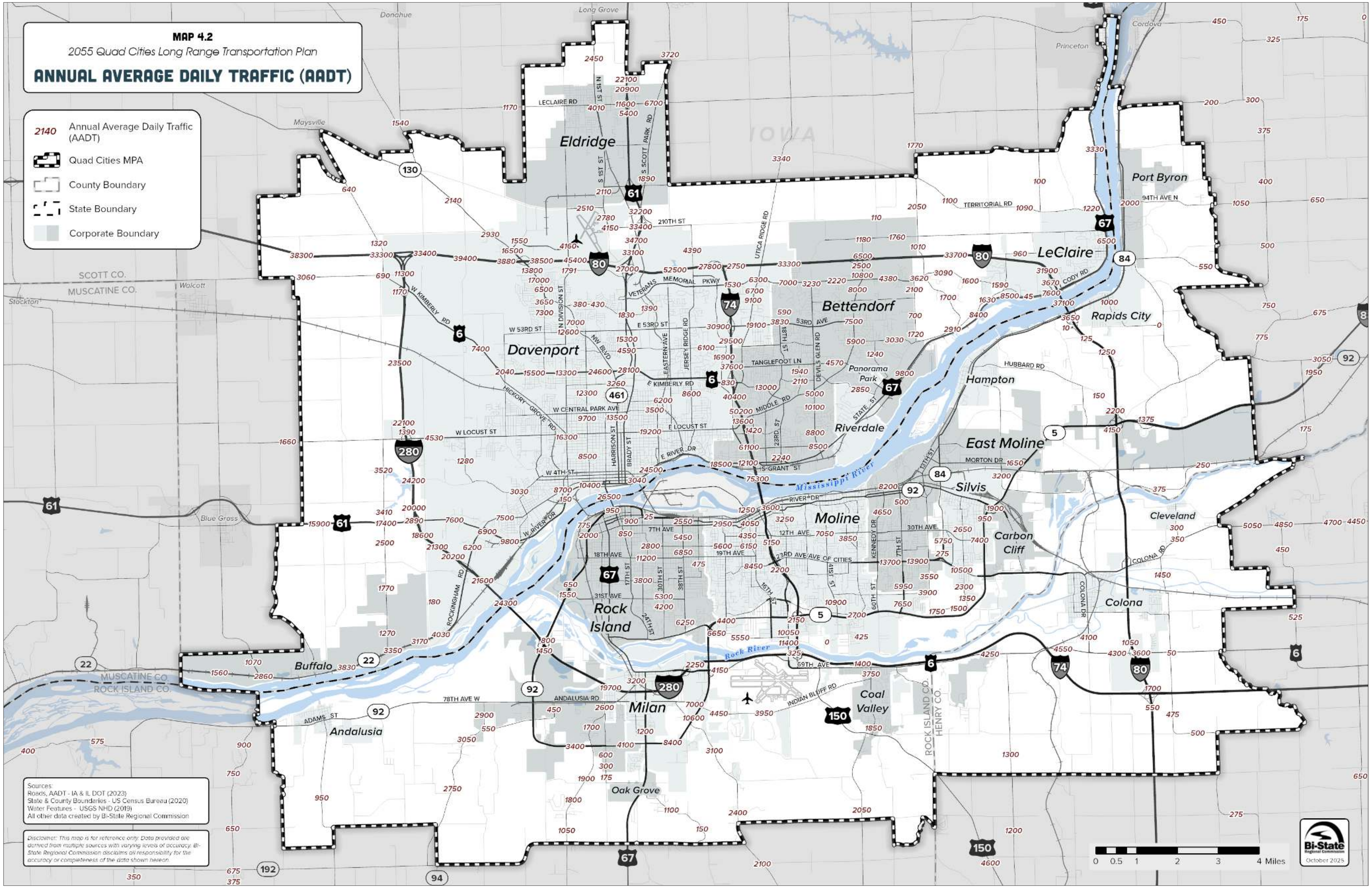
In addition to the Mississippi River crossings, there are seven Rock River crossings. These Rock River bridges include three federal, three state, and one local crossing. All of these bridges provide important connections throughout the Quad Cities for travel and commerce.

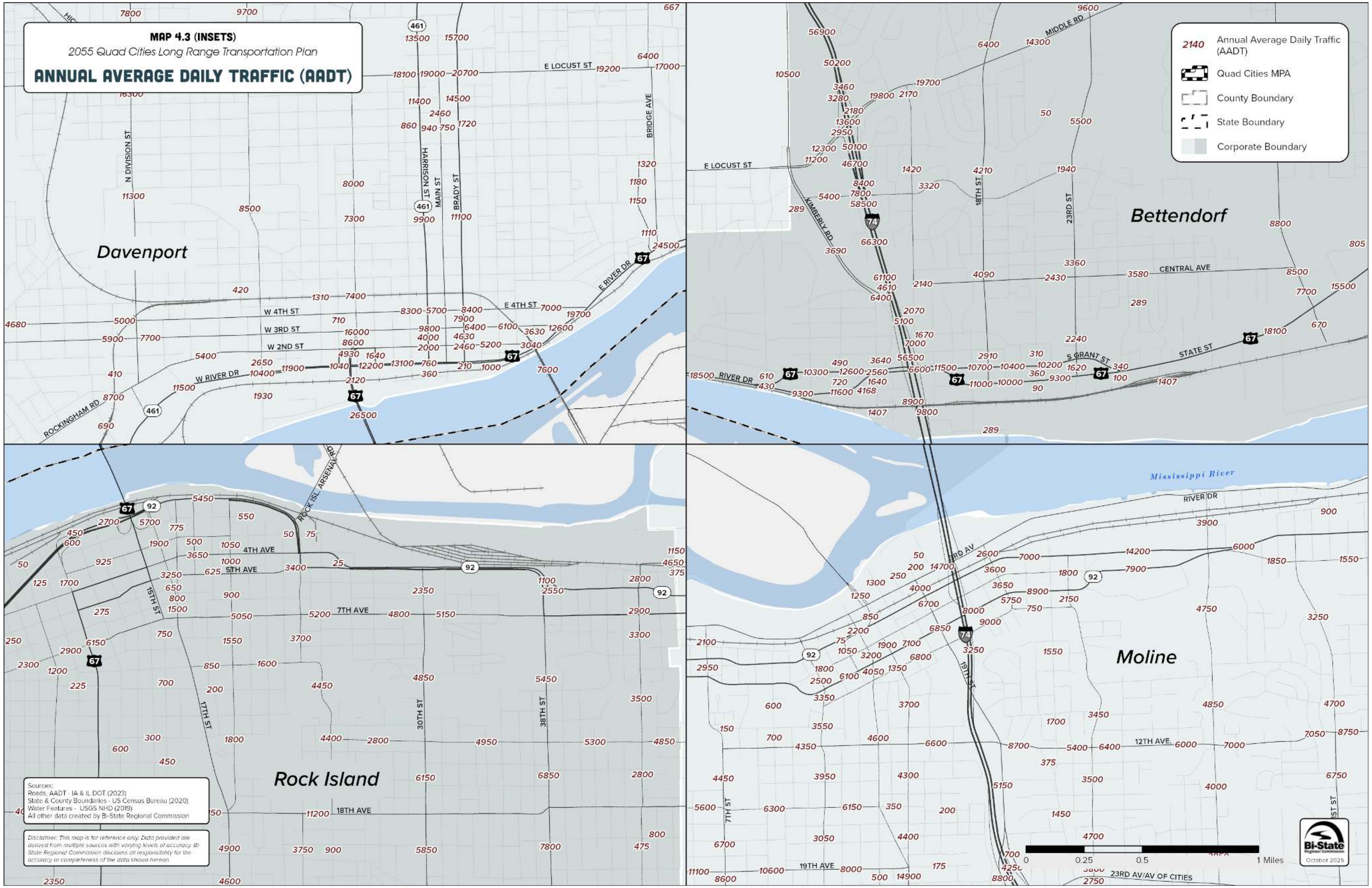
The newest Rock River crossing opened in 2007 as Veterans Memorial Bridge at Carr's Crossing between Moline/Rock Island and Milan. It connects John Deere Road to the Rock Island-Milan Parkway. There is public interest for an east Rock River bridge to connect Route IL 5 to U.S. 6 east of Coal Valley. A feasibility study will be required for this concept.

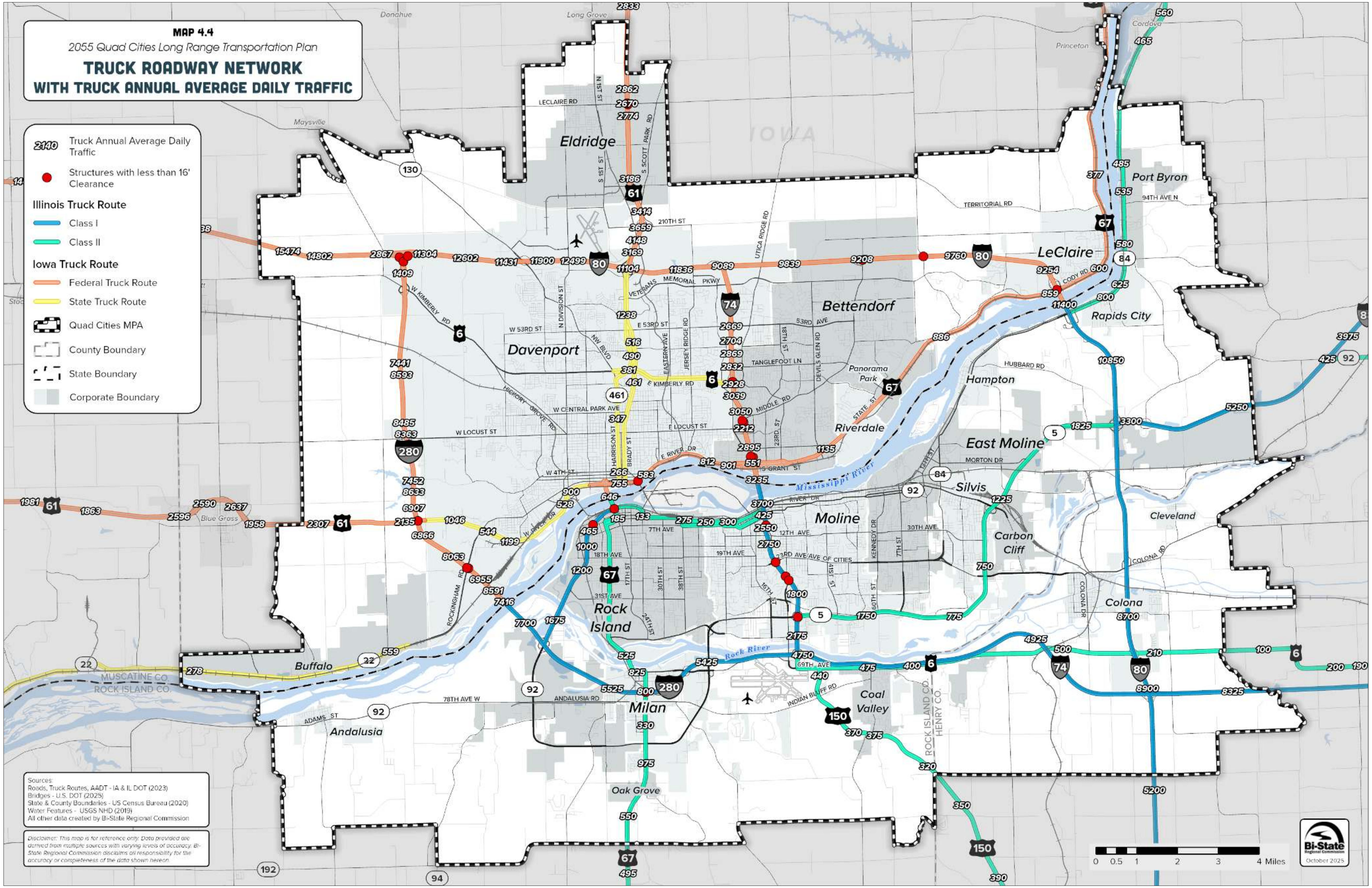
Table 4.3 – Quad Cities Mississippi River Bridges

Bridge	Bridge Opened	Design Type	ADT	Count Year
I-280	1973	Steel Thru-Arch, 4 lanes	28,100	2023
U.S. 67/ Centennial	1940	5 Tied Steel Arches, 4 Lanes	22,400	2023
Government	1896	Swing Span, 2 Lanes	5,750	2023
I-74	2021	Twin Spans, Tied Arch, 6 lanes + auxiliary lanes	78,100	2023
I-80	1966	Steel Girder, 4 Lanes	32,200	2023
		TOTAL	166,500	

Source: Latest Average Daily Traffic (ADT) for 24-hour period with counts taken by Illinois Department of Transportation and Iowa Department of Transportation


MAP 4.2
2055 Quad Cities Long Range Transportation Plan
ANNUAL AVERAGE DAILY TRAFFIC (AADT)
2140 Annual Average Daily Traffic (AADT)
Quad Cities MPA
County Boundary
State Boundary
Corporate Boundary
IOWA
Eldridge
Davenport
Bettendorf
LeClaire
Port Byron
Rapids City
Panorama Park
Riverdale
Hampton
East Moline
Silvis
Moline
Carbon Cliff
Cleveland
Colona
Rock Island
Milan
Coal Valley
Oak Grove
Buffalo
Andalusia
SCOTT CO.
MUSCATINE CO.
ROCK ISLAND CO.
HENRY CO.
Mississippi River
Rock River
Sources:
Roads, AADT - IA & IL DOT (2023)
State & County Boundaries - US Census Bureau (2020)
Water Features - USGS NHD (2019)
All other data created by Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.
0 0.5 1 2 3 4 Miles
Bi-State Regional Commission
October 2025


MAP 4.3 (INSETS)
2055 Quad Cities Long Range Transportation Plan
ANNUAL AVERAGE DAILY TRAFFIC (AADT)
2140 Annual Average Daily Traffic (AADT)
Quad Cities MPA
County Boundary
State Boundary
Corporate Boundary
Davenport
Bettendorf
Rock Island
Moline
Mississippi River
E LOCUST ST
W 4TH ST
W 3RD ST
W 2ND ST
W RIVER DR
E 4TH ST
E RIVER DR
N DIVISION ST
HARRISON ST
MAIN ST
BRADY ST
BRIDGE AVE
ROCKINGHAM RD
KIMBERLY RD
CENTRAL AVE
STATE ST
S GRANT ST
MIDDLE RD
18TH ST
23RD ST
RIVER DR
4TH AVE
5TH AVE
7TH AVE
18TH AVE
15TH ST
17TH ST
30TH ST
38TH ST
ROCK ISL ARSENAL RD
3RD AV
19TH ST
12TH AVE
19TH AVE
23RD AV/AV OF CITIES
7TH ST
Sources:
Roads, AADT - IA & IL DOT (2023)
State & County Boundaries - US Census Bureau (2020)
Water Features - USGS NHD (2019)
All other data created by Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.
0 0.25 0.5 1 Miles
Bi-State Regional Commission
October 2025


MAP 4.4
2055 Quad Cities Long Range Transportation Plan
TRUCK ROADWAY NETWORK
WITH TRUCK ANNUAL AVERAGE DAILY TRAFFIC
2140 Truck Annual Average Daily Traffic
Structures with less than 16' Clearance
Illinois Truck Route
Class I
Class II
Iowa Truck Route
Federal Truck Route
State Truck Route
Quad Cities MPA
County Boundary
State Boundary
Corporate Boundary
Sources:
Roads, Truck Routes, AADT - IA & IL DOT (2023)
Bridges - U.S. DOT (2025)
State & County Boundaries - US Census Bureau (2020)
Water Features - USGS NHD (2019)
All other data created by Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.
IOWA
Eldridge
Davenport
Bettendorf
LeClaire
Port Byron
Rapids City
Hampton
Panorama Park
Riverdale
East Moline
Silvis
Carbon Cliff
Moline
Rock Island
Milan
Coal Valley
Colona
Cleveland
Buffalo
Andalusia
Oak Grove
Mississippi River
Rock River
MUSCATINE CO.
ROCK ISLAND CO.
ROCK ISLAND CO.
HENRY CO.
0 0.5 1 2 3 4 Miles
Bi-State Regional Commission
October 2025

Bridge Conditions

There are 389 bridges and other crossing structures in the Quad Cities MPA. Map 4.5 shows the location of those bridges and their sufficiency rating ranked by good (81-100), fair (50-80), and poor (0-49). The sufficiency rating formula is a method of evaluating factors that indicate a bridge's sufficiency to remain in service. The result of the formula is a percentage in which 100% represents an entirely sufficient bridge and 0% an entirely insufficient or deficient bridge. Many factors are included in the ratings. The sufficiency rating doesn't necessarily indicate a bridge's ability to carry traffic loads. It helps determine which bridges may need repair or replacement. Any bridge found to be unsafe is removed from service until it can be returned to a safe state of operation or replaced.

Figure 4.4 – U.S. 67 Centennial Bridge at Mississippi River, Rock Island, Illinois

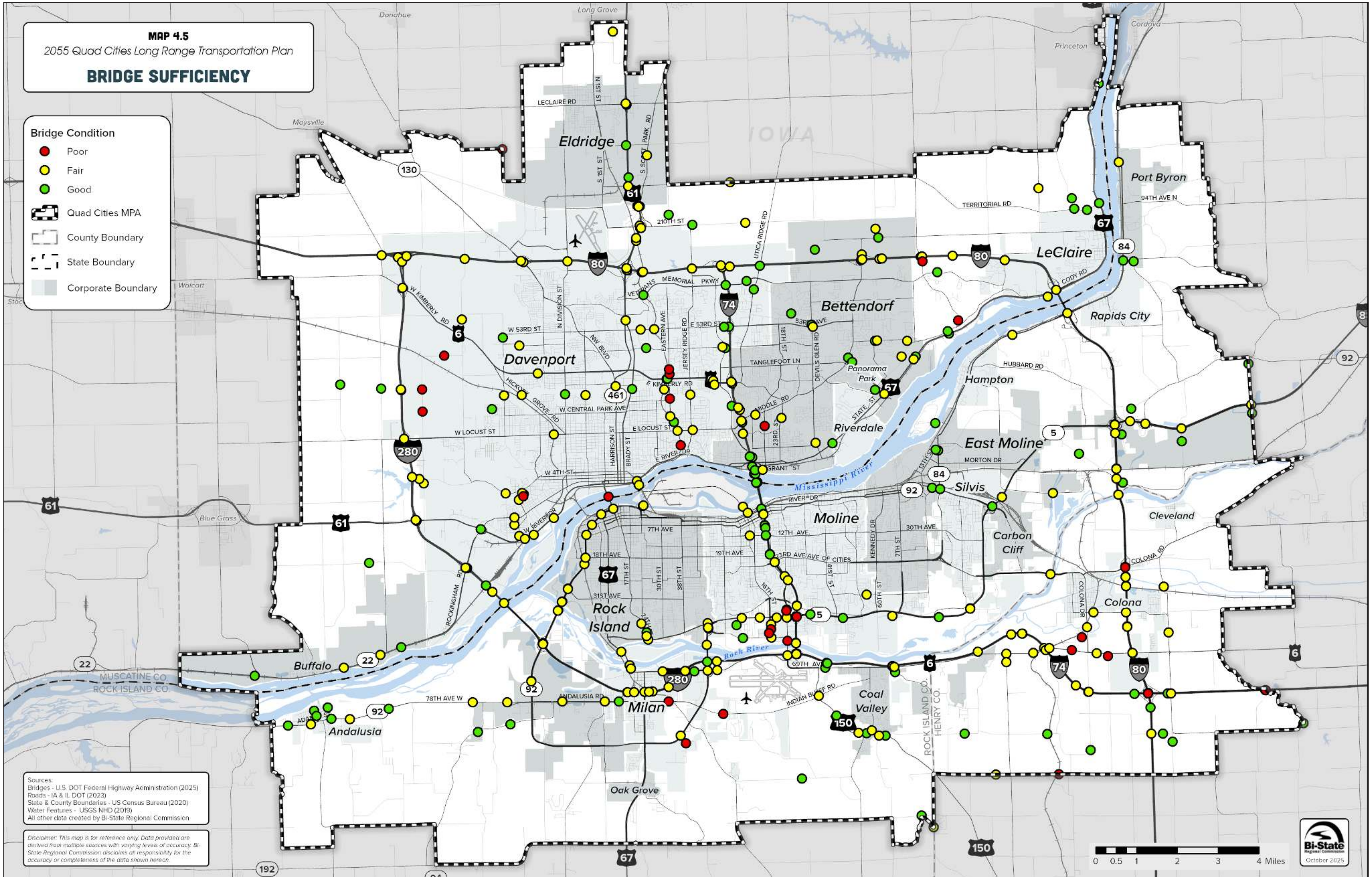
Source: Bi-State Regional Commission

Of all bridges and crossing structures in the Quad Cities MPA, 71% are considered to be in good condition, 20% are considered to be in fair condition, and 9% are considered to be poor. Table 4.4 compares this to the bridge sufficiency from the last long-range plan and shows considerable improvement in bridge sufficiency across the area. Figure 4.4 displays the U.S. 67 Centennial Bridge between Rock Island, Illinois and Davenport, Iowa. This bridge has been identified as the most structurally deficient bridge in Iowa. While it is inspected annually, it requires on-going maintenance and rehabilitation at increasing cost. As a result, the bridge and corridor are under study for rehabilitation or replacement.

Table 4.4 – Quad Cities Bridge Sufficiency

Rating	2015	2020	2023
Poor	106 (20%)	49 (9%)	31 (8.0%)
Fair	137 (26%)	116 (20%)	237 (60.9%)
Good	289 (54%)	409 (71%)	131 (31.1%)

Source: U.S. DOT Federal Highway Administration (2023)


MAP 4.5
2055 Quad Cities Long Range Transportation Plan
BRIDGE SUFFICIENCY
Bridge Condition
Poor
Fair
Good
Quad Cities MPA
County Boundary
State Boundary
Corporate Boundary
Eldridge
Davenport
Bettendorf
Riverdale
Panorama Park
LeClaire
Port Byron
Rapids City
Hampton
East Moline
Silvis
Moline
Carbon Cliff
Cleveland
Colona
Rock Island
Milan
Coal Valley
Oak Grove
Buffalo
Andalusia
Mississippi River
Rock River
IOWA
MUSCATINE CO.
ROCK ISLAND CO.
HENRY CO.
Sources:
Bridges - U.S. DOT Federal Highway Administration (2025)
Roads - IA & IL DOT (2023)
State & County Boundaries - US Census Bureau (2020)
Water Features - USGS NHD (2019)
All other data created by Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.
0 0.5 1 2 3 4 Miles
Bi-State Regional Commission
October 2025

Planning for River Crossings

Mississippi River Bridges

The legacy of the 1998 Mississippi River Crossings Plan resulted in a number of bridge improvements. This includes tolls being removed from the Centennial Bridge in 2003, jurisdictional transfer from Rock Island to Illinois DOT in 2005, and Phase I engineering for reconstruction expected to be completed in 2027. The I-74 Bridge was widened to six lanes and opened fully in 2021. A new bridge between East Moline and Bettendorf would need to be locally supported as federal investments have been focused on the other mentioned crossings with I-80 Mississippi River bridge in final design, and construction plans are expected to begin in 2028.

There continues to be public interest for another Mississippi River crossing to lessen the 9-mile gap between I-74 and I-80. During a project prioritization roundtable in 2015, there was consensus of the Transportation Policy Committee and Transportation Technical Committee to pursue another major investment study of the Mississippi River Crossings for both highway and rail crossing capacity. This was reaffirmed with this plan update as a project requiring further study. In 2020, a Mississippi River Rail Bridges study was conducted. A new rail bridge was deemed more suitable for the area between the Government Bridge and Crescent Bridge or slightly downstream, but would require private investment to initiate. Aligning a dual rail and road bridge on the upper pool from I-74 east was not deemed as the preferred alternative. A study of an east Mississippi River bridge remains to be investigated after other bridge improvement needs have been addressed.

Other Crossings

In addition to the major Mississippi River crossings, numerous streams and creeks traverse the planning area. On the Rock River, there continues to be public interest in an east Rock River Bridge, noted as needs additional study in Chapter 3.

Duck Creek nearly splits the Cities of Bettendorf and Davenport in half, flowing west to east. This results in several bridge crossings along many major north-south arterials. In the *Quad Cities Extreme Weather and Transportation Resilience Report* 2020, Duck Creek road crossings were noted as potential critical and vulnerable facilities to major creek flooding, and sited for consideration of mitigation and adaptation strategies to minimize traffic disruption during major flooding events. Many other minor tributaries of the Mississippi and Rock Rivers require the maintenance of bridge crossings or review of bridge sufficiency. Nineteenth Street over the Rock River is expected to be rehabilitated in CY 2026. In addition to water crossings, bridge overpasses also require consideration. IL5 over I-74 is expected to be replaced in FFY2027 in conjunction with improvements on the I-74 mainline, south of Avenue of the Cities and north of the Rock River.

Pavement Condition

One of the transportation objectives in the Bi-State Region is to preserve the existing transportation network. This includes repairing and/or replacing existing roads. Roads can be characterized by their surface type and the condition of the surface. Map 4.6 identifies the surface conditions of roadways in the MPO, and Map 4.7 identifies the surface material of the roadways in the MPO. Surface condition is used to evaluate maintenance needs and prioritize projects. Roads in the poorest condition and that carry heavy traffic are considered first for improvements. One challenge with this data set is the time between the measure and the current situation. With freeze-thaw cycles, and higher precipitation episodes, fair pavement can shift to poor quickly (see Figure 4.5). The engineering community is shifting the philosophy from a worst-first approach to one where roads in good-fair condition are evaluated for preservation and rehabilitation. Of course, maintenance needs are greater than the funding available, so addressing both philosophies will eventually bring roads closer to the good-fair asset condition.

Iowa Pavement Data Methodology and Conditions

The Iowa Pavement Management Program (IPMP) is Iowa DOT's approach for maintaining safe and reliable roads. The program's mission is to support the management, planning, and programming needs of transportation agencies; provide pavement management information, tools, and training for project and network-level activities; and develop and maintain a geographic information system (GIS) pavement management database to support local governmental agencies and the Iowa DOT pavement management efforts. The IPMP data collection is based on a four-year cycle and includes all paved roads. Iowa pavement data is collected statewide on a rotating schedule with the state split into quadrants. Local jurisdictions can opt-in every two-year cycle at their own expense. IPMP promotes optimal, cost-effective decisions on highway maintenance, rehabilitation, and reconstruction, using accurate past and projected pavement conditions. IPMP focuses on local transportation agencies and provides these agencies with:

- An objective and consistent planning tool to support development of regional and statewide transportation improvement plans
- Information on pavement condition for individual pavement sections
- Raw pavement distress data from the automated distress collection equipment
- Inventory and history information on roadways
- Training on pavement management software and principles
- Video logging of roadways

The pavement condition data is available to local governments for interstates to collectors. Local engineers utilize this data to determine road maintenance and reconstruction needs. The latest data collection for the Iowa Quad Cities was done in 2023. Table 4.5 shows the Pavement Condition Index (PCI) value and its respective category.

Table 4.5 – Pavement Condition Index (PCI) Value Categorization

PCI Value	Descriptive Category
1-27	Very Poor
28-45	Poor
46-62	Fair
63-78	Good
79-100	Excellent

Source: *Iowa Department of Transportation, 2023; and the Institute for Transportation at Iowa State University*

Illinois Pavement Data Methodology and Conditions

The Illinois Department of Transportation (ILDOT) has been using the Condition Rating Survey (CRS) to assess the condition of the state's pavement network since 1974. Initially, this was a very labor-intensive process and became automated in 1994. The results are used extensively at the network level to determine budget share for the pavement improvement program and at the project level to determine priorities of specific pavement improvement proposals. The CRS values range from 1.0 to 9.0 in 0.1 increments. The best CRS value is 9.0, reflecting a newly-constructed pavement surface. The worst CRS value is 1.0, representing total failure of a roadway. Table 4.6 shows the CRS value and its respective category.

Table 4.6 – Condition Rating Survey (CRS) Value Categorization

CRS Value	Descriptive Category
1.0-4.5	Poor
4.6-6.0	Fair
6.1-7.5	Good
7.6-9.0	Excellent

Source: *Illinois Department of Transportation, Condition Rating Survey Manual: State System Condition Rating Survey (CRS), 2023*

The CRS is an important tool that:

- Provides an opportunity to review the highway network
- Provides overall condition of the state highway system
- Gives input into the legislative/budgeting process
- Allows calculation of pavement needs

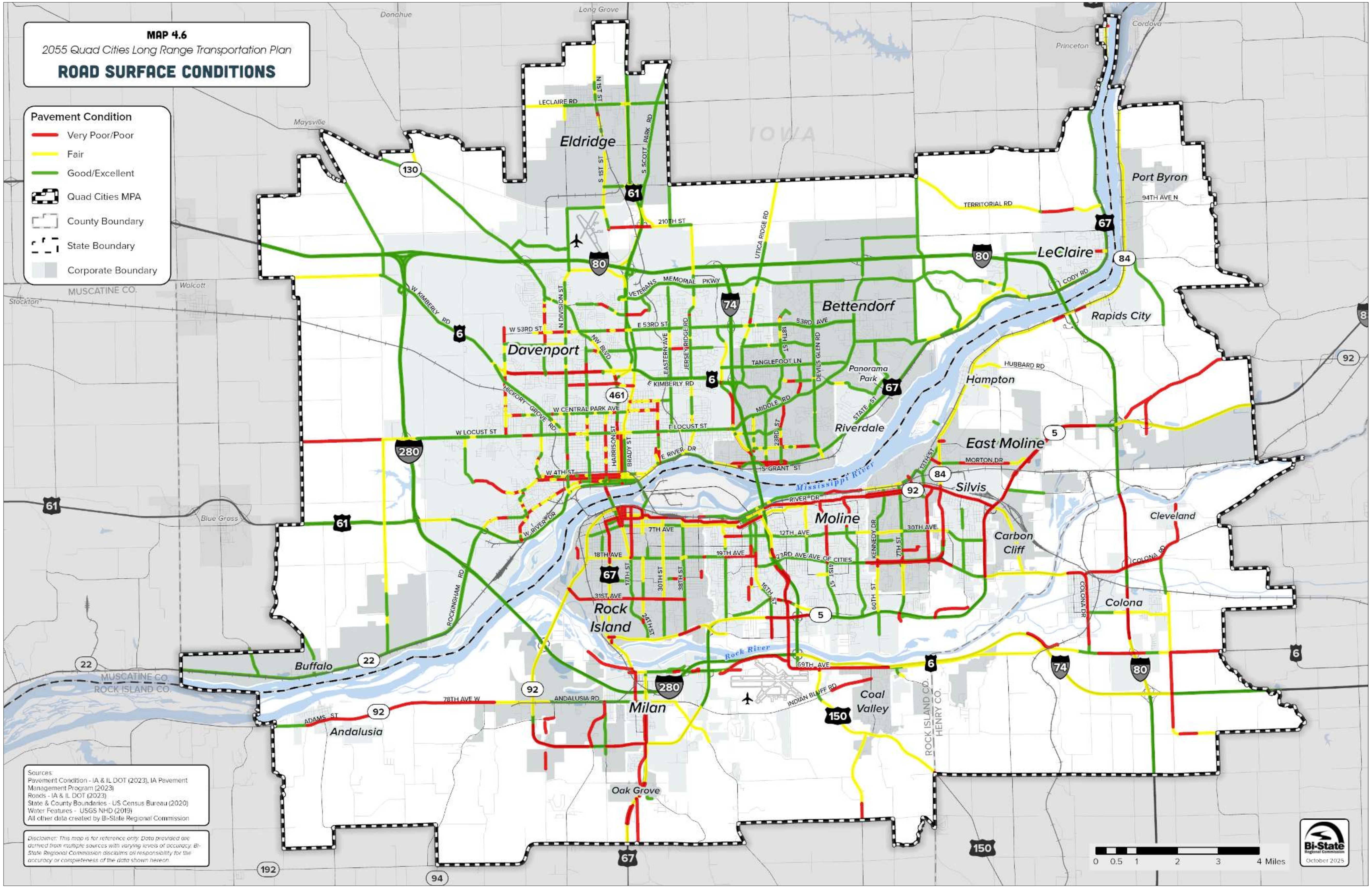
The CRS is conducted annually for alternating halves of the state on the roads under the State of Illinois' jurisdiction, including interstates, U.S. highways, and federally classified roads to the collector level. Rock Island and Henry Counties are located in ILDOT District 2, which results in the non-interstate system being rated in odd numbered years. Data on interstates is collected each year. CRS values are applied in even numbered years for interstates in all districts. In odd numbered years, the Pavement Review Team reviews the interstates and estimates the remaining life in the pavement surface.

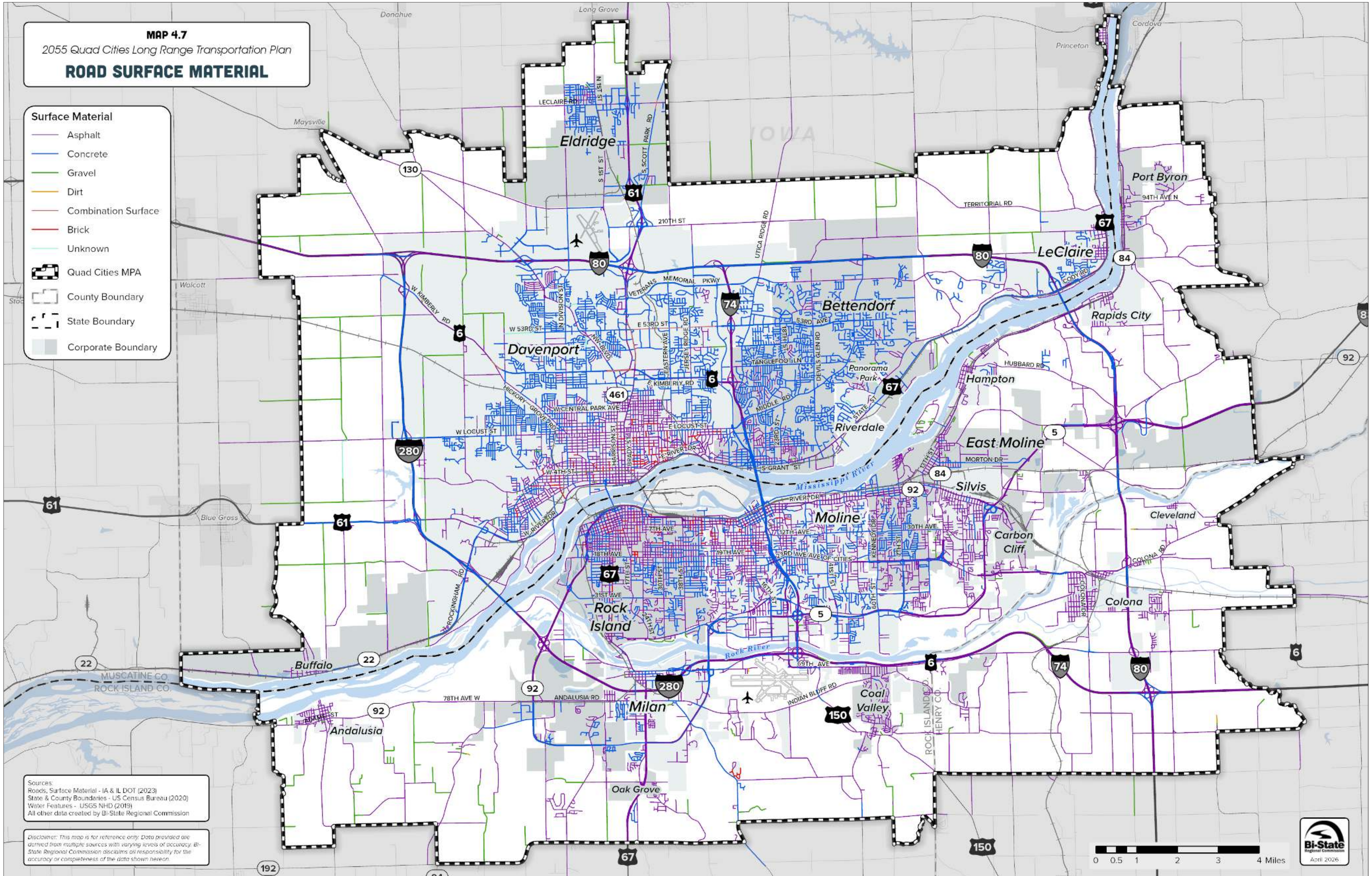
Mapping Pavement Conditions for the Quad Cities

Map 4.6 collapses the PCI and CRS values into three categories: poor/very poor, fair, and excellent/good. Thus, the scales represented on these two tables are different from those represented on the map. Local Illinois Quad Cities jurisdictions also collect road surface conditions, and their scales are relative to the jurisdiction that submitted the pavement management conditions data. Starting in 2025, ILDOT will be collecting pavement data for all National Highway System (NHS) statewide roads in each ILDOT district. The collection will include all functionally classified local jurisdiction routes. In the past, this has only been completed on roads classified as a collector and above. Adding functionally classified for local jurisdictions to the collection process will help further performance management of the greater road system. This will also provide more uniform data for these road classifications and allow for more comparable pavement conditions. Currently, federal performance measures only apply to the NHS-Interstate, and some non-Interstation NHS roads.

Figure 4.5 – Example of poor pavement conditions due to freeze/thaw cycle, Rock Island, Illinois

Source: Bi-State Regional Commission, 2025


MAP 4.6
2055 Quad Cities Long Range Transportation Plan
ROAD SURFACE CONDITIONS
Pavement Condition
Very Poor/Poor
Fair
Good/Excellent
Quad Cities MPA
County Boundary
State Boundary
Corporate Boundary
Eldridge
Davenport
Bettendorf
LeClaire
Port Byron
Rapids City
Panorama Park
Riverdale
Hampton
East Moline
Silvis
Moline
Carbon Cliff
Cleveland
Colona
Rock Island
Milan
Coal Valley
Buffalo
Andalusia
Oak Grove
IOWA
Mississippi River
Rock River
MUSCATINE CO.
MUSCATINE CO.
ROCK ISLAND CO.
ROCK ISLAND CO.
HENRY CO.
Sources:
Pavement Condition - IA & IL DOT (2023), IA Pavement Management Program (2023)
Roads - IA & IL DOT (2023)
State & County Boundaries - US Census Bureau (2020)
Water Features - USGS NHD (2019)
All other data created by Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.
0 0.5 1 2 3 4 Miles
Bi-State Regional Commission
October 2025


MAP 4.7
2055 Quad Cities Long Range Transportation Plan
ROAD SURFACE MATERIAL
Surface Material
Asphalt
Concrete
Gravel
Dirt
Combination Surface
Brick
Unknown
Quad Cities MPA
County Boundary
State Boundary
Corporate Boundary
IOWA
Eldridge
Davenport
Bettendorf
Panorama Park
Riverdale
LeClaire
Port Byron
Rapids City
Hampton
East Moline
Silvis
Moline
Carbon Cliff
Cleveland
Colona
Rock Island
Milan
Coal Valley
Oak Grove
Andalusia
Buffalo
Mississippi River
Rock River
MUSCATINE CO.
ROCK ISLAND CO.
HENRY CO.
Sources:
Roads, Surface Material - IA & IL DOT (2023)
State & County Boundaries - US Census Bureau (2020)
Water Features - USGS NHD (2019)
All other data created by Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.
0 0.5 1 2 3 4 Miles
Bi-State Regional Commission
April 2026

Maintenance

Maintenance of the existing road network is critical to its efficient, safe operation, and continuing usage. The reason for regular maintenance of roads and associated structures is to increase the useful life of a street or bridge. See Figure 4.6, which exhibits a sample of road construction. Roads are constructed with life cycles calculated into their design. Life cycles are developed by taking the average actual life of different surfaces and structures. These can be influenced by climate, construction materials, traffic volumes, and usage based on the weight of vehicles. In general, roads are constructed with a 15- to 20-year life span, while bridges are constructed with a 30- to 50-year life span. Restoration or rehabilitation of such facilities can add 10 to 20 years of life to an existing facility. Therefore, a regular maintenance schedule for all existing roads and bridges is important. State and local governments are responsible for the maintenance of the existing road network and the repair and rehabilitation of roads through planned maintenance programs. Local roads make up two-thirds of the MPO's roads, which local governments are responsible for funding. This also means that only one-third of the roads in the MPO are eligible for federal funds.

Figure 4.6 – Sample Road Construction, Davenport, Iowa

Source: Bi-State Regional Commission, 2025

Federal Highway Administration (FHWA) offers guidance on pavement maintenance that can extend the longevity of roads, and can be classified into three categories:

- **Preventative Maintenance –** typically used for pavements in good condition to extend a roads service life
- **Minor Rehabilitation (non-structural) –** restore existing structural capacity through elimination of age-related, environmental cracking of a road surface or by increasing the pavement thickness to strengthen a section of road.
- **Routine Maintenance –** addresses specific conditions and events that restore the road to an adequate level of service.[2]

Technology and Operations

Chapter 2 noted the need for planning considerations of safety, operations, and security.

Transportation System Management and Operations

Transportation system management and operations (TSMO) is an integrated approach to managing the performance of the road network to meet travel needs. It is the application of programs, technology, and system processes that support the flow of vehicles, travelers, and goods on the existing roads. These activities support improvements to the day-to-day operations through asset management, application of traffic control devices and real time traveler information, and use of traffic analysis tools to better understand problems and possible solutions. Examples of these include traffic detection and surveillance, arterial management, electronic toll collection, automated enforcement, traffic incident management, road weather management, traveler information services, commercial vehicle operations, traffic control, and freight management.

In the MPA, traffic operations are managed at the jurisdictional level. Currently, the majority of the traffic

2 Source: *Federal Highway Administration Pavement Preservation Definitions Memorandum 9-12-05*

signals operate independently from each other. The City of Bettendorf has interconnected signals throughout the city, and Davenport has certain corridors where traffic signals are synchronized.

Intelligent Transportation System (ITS)

Intelligent Transportation System (ITS) is a term that applies to any transportation-related project that uses computers, communication, and other advanced technologies to support transportation services. ITS may include telephone systems, such as 511, to disseminate traveler information; weigh-in-motion systems that measure truck weight without stopping; or dynamic message signs (DMS) warning of a crash ahead along a road segment or alerting travelers of construction ahead. ITS has added cost when compared to traditional construction and maintenance projects. However, ITS draws on system engineering methodologies that provide advantages for the integration and deployment of technology and systems. These components in ITS improve transportation operations. ITS has been shown to:

- Reduce design costs and development time
- Allow for orderly and efficient expansion
- Improve communications between systems
- Lower project risk
- Promote interoperability
- Allow interchangeability of equipment and devices

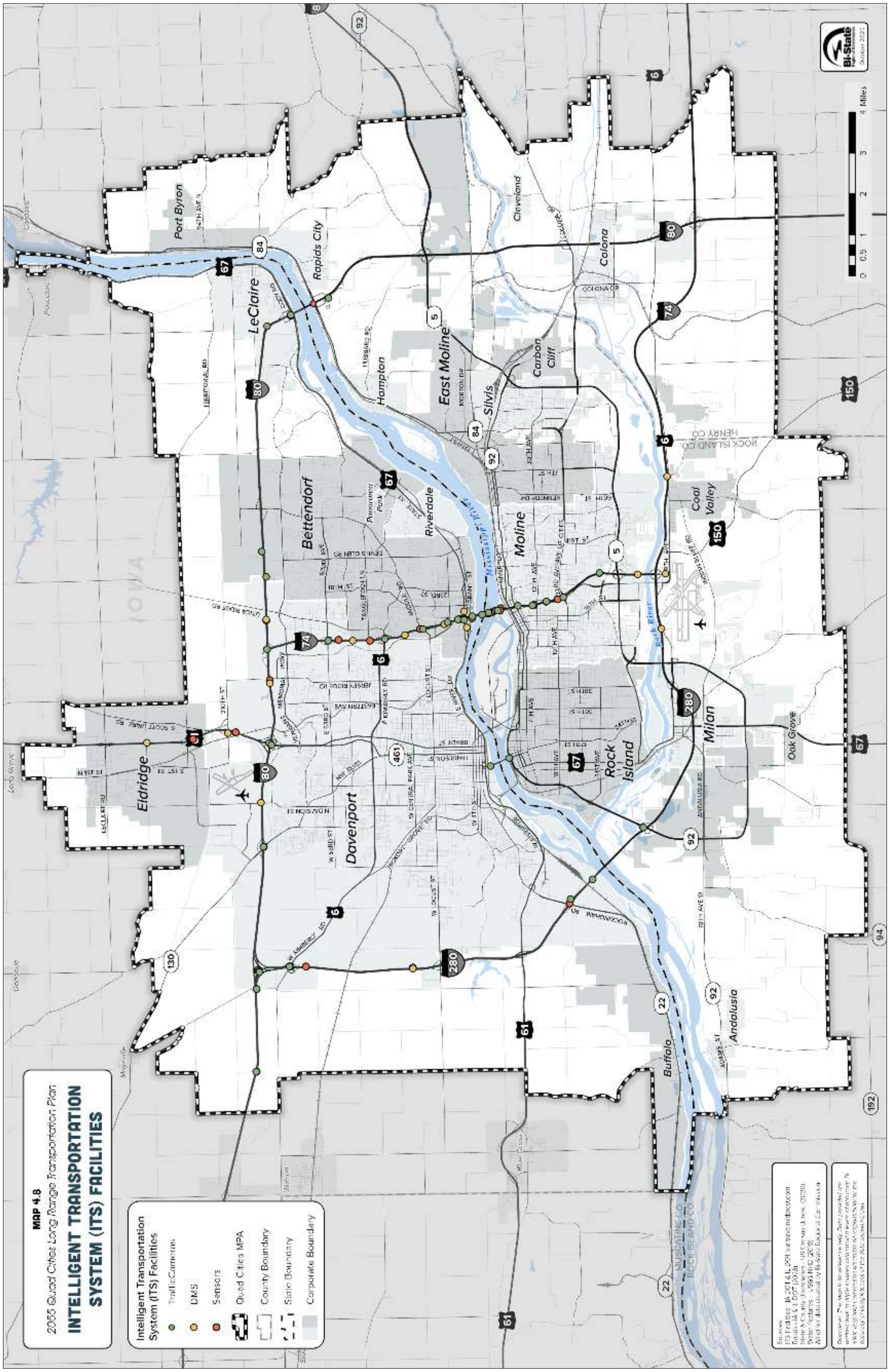
The *Bi-State Regional ITS Architecture Plan*, last updated in June 2022, provides the regional framework for planning, deploying, and operating transportation technology projects in the Quad Cities Metropolitan Planning Area. The plan documents existing ITS infrastructure, defines inter-agency data sharing and system interactions, and identifies regional transportation systems management and operations needs. Within the LRTP, the architecture ensures that ITS projects are coordinated, interoperable, and developed in accordance with federal requirements and a systems engineering approach. Map 4.8 identifies ITS technologies currently used in the Quad Cities MPA. Figures 2.6 and 2.7 in Chapter 2 illustrate the interconnective framework of ITS. The ITS needs identified in the regional architecture plan for transportation systems and operations include:

- Connected and Automated Vehicle (CAV) Readiness: Fiber-optic infrastructure, roadside units (RSUs), and upgraded signals.
- Smart Work Zones: Real-time traveler info, speed compliance, and dynamic detour guidance.
- Integrated Corridor Management (ICM): Coordinated response and traffic control along high-volume corridors like I-74 and I-80.
- Bicycle and Pedestrian ITS: Smart crosswalks, flashing beacons, and detection systems for safety enhancements.
- Freight Signal Priority (FSP): Evaluating corridors where freight volumes would benefit from reduced signal delays.

Key ITS elements include the implementation of the following: traveler information, road closure management, incident management, maintenance and construction activity coordination, emergency routing, regional traffic management, ITS data source, arterial management, and automatic transit vehicle tracking. Deployment of these technologies will improve safety, reduce traffic congestion, and provide greater incentives for auto alternatives via the transit network.

Bi-State Regional Commission, along with member governments and the Illinois and Iowa Departments of Transportation, has partnered with Waze for Cities to share road closures and other traffic alerts with the public. Waze for Cities was introduced in 2021. There is an interactive map on the Bi-State website and a Waze app for iOS and Android to view live traffic information.

Iowa Department of Transportation facilitates a 511 traveler information system (https://www.511ia.org) that includes the Quad Cities. Travelers can find information related to road conditions, incidents and county road closures, construction and planned closures, and views from roadside cameras. Many larger metropolitan areas have traffic operations centers that are often tied to a district DOT office. In the Quad Cities, there is no state district office, and Iowa's statewide ITS system offers a greater system approach to traffic management.


MAP 4.8
2055 Quad Cities Long Range Transportation Plan
INTELLIGENT TRANSPORTATION SYSTEM (ITS) FACILITIES
Intelligent Transportation System (ITS) Facilities
Traffic Cameras
DMS
Sensors
Quad Cities MPA
County Boundary
State Boundary
Corporate Boundary
Port Byron
Rapids City
LeClaire
Eldridge
Davenport
Bettendorf
Riverdale
Panorama Park
Hampton
East Moline
Silvis
Carbon Cliff
Cleveland
Colona
Moline
Rock Island
Milan
Coal Valley
Oak Grove
Buffalo
Andalusia
IOWA
Mississippi River
Rock River
HENRY CO.
ROCK ISLAND CO.
MUSCATINE CO.
0 0.5 1 2 3 4 Miles
October 2022

Moving People, Goods, and Services

Traffic Movement, Congestion, and Traffic Safety

Traffic data provides an opportunity to quantify and evaluate the number of vehicles, speed, vehicle type, and other parameters. Map 4.2 shows the annual average daily traffic (AADT) in the Quad Cities MPA for 2023 (Travel Demand Model base year). The most heavily traveled road within the metropolitan area is located on the I-74 Mississippi Bridge with 78,100 vehicles per day, as of 2023. With increased travel lanes from the bridge reconstruction, this corridor has seen improved travel time and reduced congestion.

Congestion is an excess of vehicles on a road at a particular time resulting in lower speeds than normal. While this is a simple concept, it is not constant. Traffic demands vary significantly by time of day, day of the week, season of the year, special events, and emergencies. Capacity of the roadway also varies due to weather, work zones, traffic incidents, or other non-recurring events.

Six major sources of congestion:

- Limited physical capacity (i.e. Bottlenecks)
- Poorly functioning traffic signals
- Traffic incidents
- Work zones
- Bad weather
- Special events

Congestion Management Process (CMP)

Recurring congestion generally occurs in short time periods, such as rush hour, and is fairly predictable based on previous days' traffic levels and roadway capacity. Non-recurring congestion is caused from unforeseen incidents, such as accidents, stalled cars, and bad weather. These incidents result in unanticipated delays and driver impatience. It is estimated that almost 60% of traffic delay is caused by non-recurring incidents. In order to reduce recurring congestion and minimize the effects of non-recurring congestion, the FHWA established a Congestion Management Process (CMP).

The FHWA defines a CMP as "a systematic approach collaboratively developed and implemented throughout a metropolitan region that provides for the safe and effective management and operation of new and existing transportation facilities through the use of demand reduction and operational management strategies." Bi-State Regional Commission is required to create a CMP Plan as a designated Transportation Management Area (TMA) – an urbanized area with a population over 200,000.

The FHWA requires that consideration be given first to strategies that reduce single-occupancy vehicle (SOV) travel and improve the efficiency of the existing system. All other reasonable strategies must be analyzed before a capacity increase is proposed as a congestion management technique. Strategies may include geometric improvements, primarily at intersections including exclusive or multiple turning lanes or roundabouts; traffic signal coordination; reversible or bi-directional lanes; incident detection and management systems; High Occupancy Vehicle (HOV) strategies; transit turnouts; and Intelligent Transportation Systems (ITS) for travel planning/information, travel management, open road tolling payment, commercial vehicle operations, and advanced vehicle technology. These measures address traffic congestion and tend to be lower cost solutions. They require minimal right-of-way and shorter implementation schedules compared to new construction for additional lanes.

Congested Corridors or Hot Spots

Historically, some corridors that experienced higher Average Daily Traffic (ADT) counts resulted in more congestion than others. Floating car travel time analysis was used to survey these segments at that time. These historically congestion-prone segments included:

Historical North-South Corridors

- I-74 from 53rd Street (Davenport) to Airport Road (Moline)
- U.S. 61/Brady Street-Welcome Way/Harrison Street couple from 2nd Street to I-80 (Davenport)

- Division Street from Northwest Boulevard (Davenport) to 3rd Street (Davenport)
- 18th Street from 53rd Avenue (Bettendorf) to State Street (Bettendorf)
- 7th Street from 17th Avenue (Moline) to John Deere Road (Moline)

Historical East-West Corridors

- 53rd Street/Avenue from Pine Street (Davenport) to Devil's Glen Road (Bettendorf)
- Kimberly Road from Pine Street (Davenport) to I-74, and Spruce Hills Drive from I-74 to Utica Ridge Road (Bettendorf)
- Locust Street from Fairmount Road (Davenport) to Kimberly Road, and Middle Road at Kimberly Road to Tanglewood Road (Bettendorf)
- Avenue of the Cities from 16th Street (Moline) to Archer Drive (East Moline)
- John Deere Road from 7th Street (Moline) to 70th Street (Moline)
- U.S. 67 from Centennial Bridge (Davenport) to Devil's Glen Road (Bettendorf)
- Northwest Boulevard from I-80 to Kimberly Road (Davenport)
- 41st Street from 12th Ave (Moline) to John Deere Road (Moline)
- 18th/19th Avenue from 11th Street (Rock Island) to 16th Street (Moline)
- Route 6 from Airport Entrance/I-74 (Moline) to Niabi Zoo Road (Coal Valley)
- IL 92 from IL 5 (Carbon Cliff) to 19th Street (Rock Island)

Downtowns and Hot Spots

With new methods to collect travel data, the floating car technique has been transitioned to real-time traffic data available through a proprietary platform coordinated with the Iowa DOT. Using a variety of mobility and contextual sources from GPS Commercial and connect vehicle data to Census and traffic counters, this data set allows for analysis of vehicle and other modal travel. A 2024 congestion management analysis looked at free flow travel speeds against posted speed limits to illustrate congestion. Free flow traffic five mph below the posted speeds indicate slowed traffic at interchanges, downtowns, and scattered corridors. These are often locations where traffic slows down either due to transition from a higher speed facility like a ramp, or in areas where there is a mix of vehicles, parking, and often more intersections. The snapshot of 2024 traffic in the side bar illustrates a more dispersed representation of congestion in the metro area where traffic is moving five mph lower than the posted speed limit. The data coincides with transportation officials' experience with traffic being linked to nonrecurring congestion, so delays are not typically long periods of the day and are more intermittent.

Work Zones and Bridge Lane Restriction Coordination

The wider availability of traveler information systems and mapping tools to help road users navigate road closures, incidents, and weather conditions has already been noted. The metro area has particularly focused attention on its aging and limited river crossings. Ongoing maintenance responsibilities continue to restrict the number of available lanes at the river crossings for the older structures. Bi-State Regional Commission annually convenes meetings to discuss river crossing restrictions and coordinate with the jurisdictions responsible for maintenance and construction. Local road coordination meetings have been held during the reconstruction of the I-74 Mississippi River bridge that helped lessen congestion, and now the new bridge offers free flow and reliable travel between the Iowa and Illinois Quad Cities. Additionally, both the Illinois and Iowa DOTs meet regularly to coordinate their bridge and road construction and maintenance projects. Where possible, both DOTs utilize traffic controls set by the other DOT on coordinated river crossing projects. These efforts appear seamless to the public, but are examples of significant local inter-jurisdictional coordination. It is recognized that these efforts help improve traffic flow through construction zones and reduce emissions from idling vehicles.

Low Clearance Structure Impediments

Trucks colliding with low-clearance structures in the Quad Cities, namely at Brady Street and E. 5th Street, and Harrison Street and W. 5th Street, has been a recurring problem. In November 2000, electronic warning signs alerting truck drivers to the low-clearance railroad bridge were installed on Harrison Street. Low-clearance warning signs can also be found north-bound on Highway 61 just west of I-280 (West River Drive) and southbound on Highway 61 in Eldridge. These signs route through-trucks onto I-80 and I-280 and have been in place since the early 1980s.

The Iowa Quad Cities has seen a significant number of crashes involving low-clearance structures. These incidents not only damage the trucks, but recurring collisions could potentially damage the structural integrity of the bridge. A strategy to reduce future collisions at the U.S. 61 sites involved re-designating the corridor as a business route. This redirects primary traffic to I-80 and I-280, particularly the truck traffic. In 2010, the re-designation was approved federally and has since been completed. With all of these efforts in place, crashes have continued, and discussions with Iowa Interstate Railroad on bridge raising has ensued as another alternative.

Map 4.4 shows the truck routes and low-clearance structures (structures with less than a 16-foot clearance) in the Quad Cities MPA. The data set used was from 2023. With improvements along the I-74 corridor, certain low-clearance structural limitations have been resolved. Crashes at low-clearance structures can have a negative impact on mobility in the metro area.

Traffic Safety

Vehicle incidents are one of the top reasons for non-recurring congestion. While crashes reduce traffic flow, they also pose a threat to health and safety. A transportation objective of this plan is to reduce fatal crashes and serious injuries. In 2025, the Quad Cities participated in the development of the *Quad Cities-Kewanee-Muscatine Traffic Safety Action Plan*. The Quad Cities MPO Transportation Policy Committee approved a resolution to support a Vision Zero goal to reduce fatal and serious traffic crashes to zero. Tables 4.7 and 4.8 show the total crashes, fatalities, and severe crashes sustained each year from 2018 to 2022 by state.

Illinois separates injuries into four categories: fatalities, A injuries (incapacitating injury), B injuries (non-incapacitating injury), and C injuries (not evident injury). Iowa also separates injuries into four categories: fatalities, major injuries, minor injuries, and possible/unknown injuries. The average number of fatalities in the Quad Cities MPA between 2018 and 2022 was 12 fatalities per year. The average number of A injuries/major injuries within the Quad Cities MPA from during that same time span was 76.9 per year.

Truck-Bridge Collision at 5th

Source: Brad Burton, KWQC September 3, 2025

The *2025 Traffic Safety Action Plan* identified not only reducing the total number of injuries as being important, but also reducing their severity. Map 4.9 identifies intersections with high severity crashes between 2018 and 2022. The locations in darker shades indicate higher concentrations of crashes, many noted on U.S.6/Kimberly Road, Locust Street, Avenue of the Cities, Blackhawk Road/John Deere Road corridors, and in the downtown areas. Map 4.10 highlights the concentration of crashes from most to least dense and notes fatalities and serious injuries by location. Many cluster around the same routes just noted.

Table 4.7 – Number of Crashes by Severity for Iowa Quad Cities

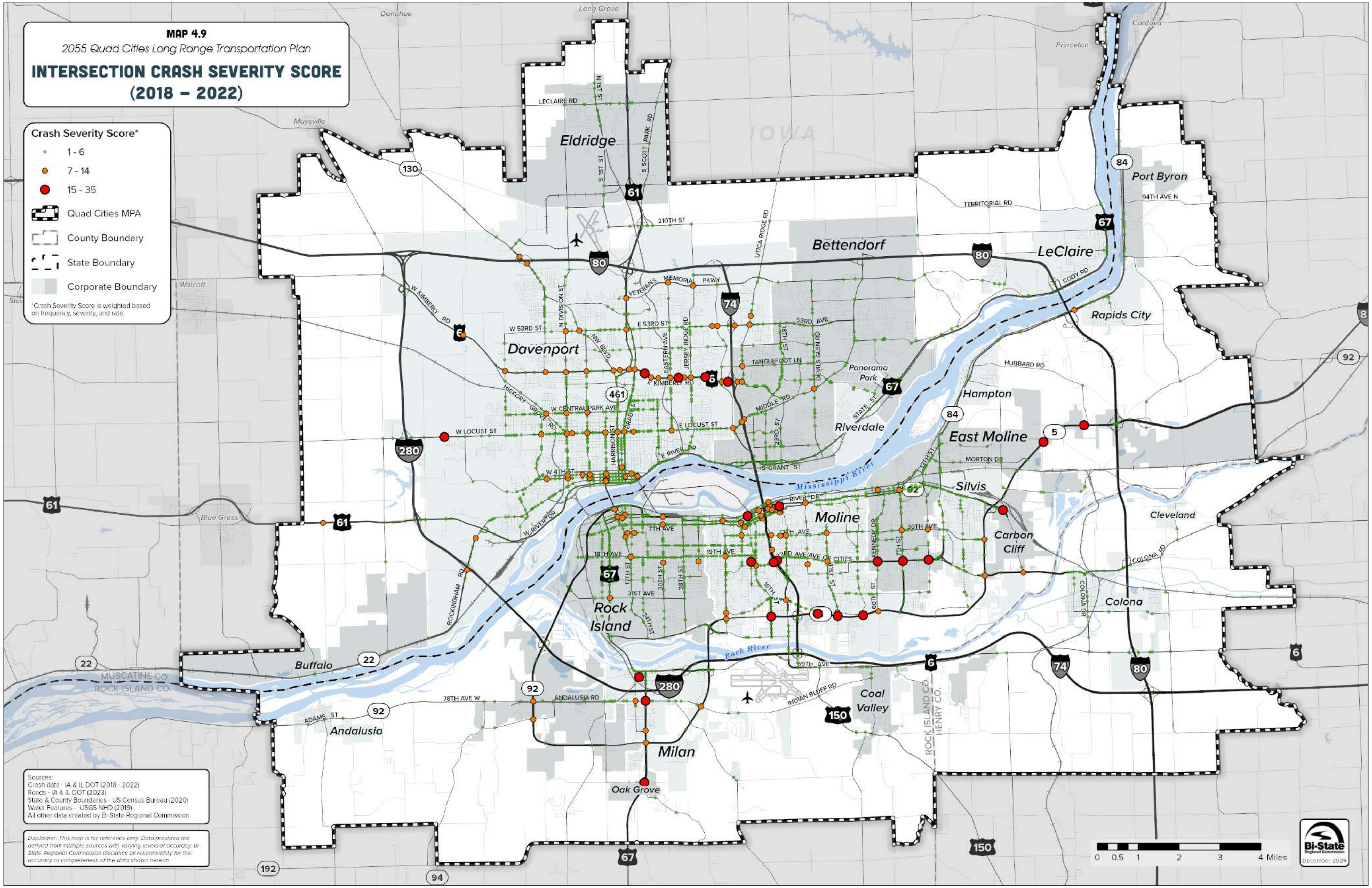
	Year					
Record Type (Severity)	2018	2019	2020	2021	2022	5-Year Avg.
Fatal	9	8	18	13	16	12.8
Major Injury	52	68	56	67	65	61.6
Minor Injury	364	369	306	362	441	368.4
Total Crashes	3,687	3,855	3,208	3,674	2,989	3,482.6

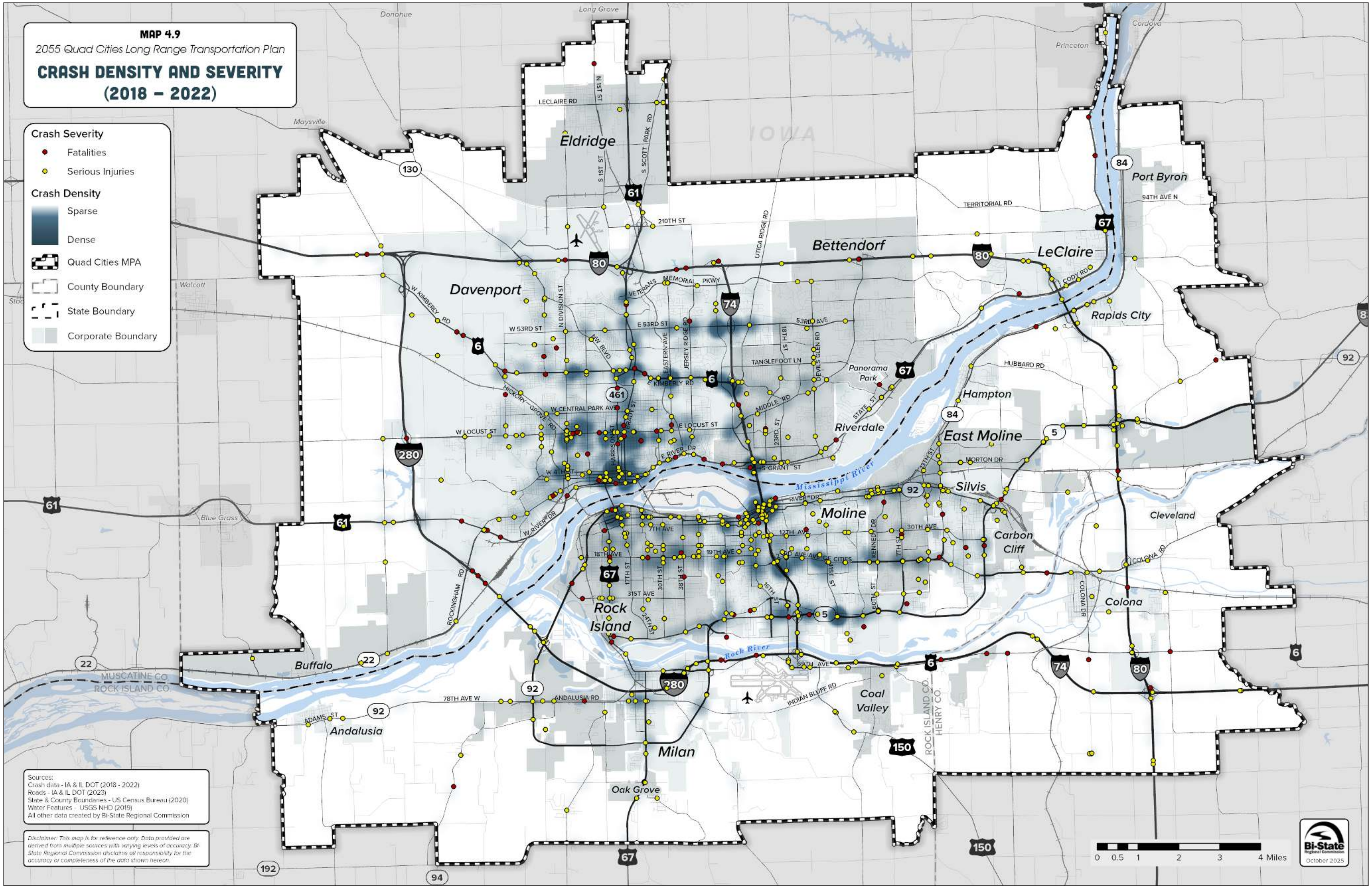
Source: Iowa DOT Crash Data 2018-2022

Table 4.8 – Number of Crashes by Severity for Illinois Quad Cities

	Year					
Record Type (Severity)	2018	2019	2020	2021	2022	5-Year Avg.
Fatal	13	12	10	6	17	11.6
Major Injury	104	119	70	103	66	92.4
Minor Injury	404	374	358	407	385	385.6
Total Crashes	3,547	3,610	2,805	3,174	3,082	3,243.6

Source: Illinois DOT Crash Data 2018-2022


MAP 4.9
2055 Quad Cities Long Range Transportation Plan
INTERSECTION CRASH SEVERITY SCORE
(2018 – 2022)
Crash Severity Score*
1 - 6
7 - 14
15 - 35
Quad Cities MPA
County Boundary
State Boundary
Corporate Boundary
*Crash Severity Score is weighted based on frequency, severity, and rate.
Sources:
Crash data - IA & IL DOT (2018 - 2022)
Roads - IA & IL DOT (2023)
State & County Boundaries - US Census Bureau (2020)
Water Features - USGS NHD (2019)
All other data created by Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.
IOWA
Eldridge
Davenport
Bettendorf
LeClaire
Port Byron
Rapids City
Panorama Park
Riverdale
Hampton
East Moline
Silvis
Moline
Carbon Cliff
Cleveland
Colona
Rock Island
Milan
Oak Grove
Coal Valley
Buffalo
Andalusia
Blue Grass
Walcott
Maysville
Donahue
Long Grove
Princeton
Cordova
Mississippi River
Rock River
MUSCATINE CO.
ROCK ISLAND CO.
ROCK ISLAND CO.
HENRY CO.
0 0.5 1 2 3 4 Miles
Bi-State Regional Commission
December 2025


MAP 4.9
2055 Quad Cities Long Range Transportation Plan
CRASH DENSITY AND SEVERITY
(2018 – 2022)
Crash Severity
Fatalities
Serious Injuries
Crash Density
Sparse
Dense
Quad Cities MPA
County Boundary
State Boundary
Corporate Boundary
Sources:
Crash data - IA & IL DOT (2018 - 2022)
Roads - IA & IL DOT (2023)
State & County Boundaries - US Census Bureau (2020)
Water Features - USGS NHD (2019)
All other data created by Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.
0 0.5 1 2 3 4 Miles
Bi-State Regional Commission
October 2025
IOWA
Eldridge
Davenport
Bettendorf
LeClaire
Port Byron
Princeton
Cordova
Rapids City
Panorama Park
Riverdale
Hampton
East Moline
Silvis
Moline
Carbon Cliff
Cleveland
Colona
Rock Island
Milan
Coal Valley
Oak Grove
Andalusia
Buffalo
Blue Grass
Walcott
Maysville
Donahue
Long Grove
Mississippi River
Rock River
MUSCATINE CO.
ROCK ISLAND CO.
ROCK ISLAND CO.
HENRY CO.
LECLAIRE RD
210TH ST
TERRITORIAL RD
HUBBARD RD
MORTON DR
W 53RD ST
E 53RD ST
53RD AVE
TANGLEFOOT LN
W KIMBERLY RD
E KIMBERLY RD
W CENTRAL PARK AVE
W LOCUST ST
E LOCUST ST
E RIVER DR
W RIVER DR
GRANT ST
7TH AVE
12TH AVE
18TH AVE
19TH AVE
30TH AVE
31ST AVE
69TH AVE
78TH AVE W
ANDALUSIA RD
INDIAN BLUFF RD
ROCKINGHAM RD
COLONA RD
COLONA DR
UTICA RIDGE RD
MIDDLE RD
DEVILS GLEN RD
VETERANS MEMORIAL PKWY
94TH AVE N
CODY RD
61
80
74
280
6
67
84
5
92
22
130
150
192
94
461

Tables 4.7 and 4.8 also show a calculated 5-year average. Since the Moving Ahead for Progress in the 21st Century Act (MAP-21) rulemaking, safety performance measures will consider a 5-year rolling average for Fatal and Class A or Incapacitating Injuries. As targets have been established at the state level, MPOs determine whether to support the states' crash reduction efforts or development MPO-level targets.

In the case of the Quad Cities, supporting the states' respective targets has been the position. Supporting the targets locally means looking at the state emphasis areas and aligning efforts locally to reduce fatal and serious injury crashes in those areas, as well as those specific to the MPO. The Quad Cities Traffic Safety Plan, 2020 was prepared for location officials to utilize for decision-making on improving these areas of concern. However, the 2020 plan did not fully meet the criteria for the Safe Streets and Roads for All traffic safety action plan requirements to pursue federal implementation funds to implement countermeasures to reduce crashes.

In order to continue improving traffic safety in the Quad Cities, it is important to consider the causes of severe accidents. The 2025 Quad Cities-Kewanee-Muscatine Traffic Safety Action Plan explored the causes of crashes in the study area. Detailed reports can be found in that document related to conditions, such as speeding, lighting and weather conditions, vulnerable road users, and numerous other crash variables. The plan also recommended specific locations where improvement could be made and potential countermeasures to reduce severe crashes.

Map 4.8 shows the high-density crash and severity locations in the MPA from 2018-2022. It is important to note that Iowa and Illinois gather and report their data differently. Instead of comparing Iowa to Illinois, it is more accurate to compare different locations within each state.

Tables 4.9 and 4.10 show the top crash locations by average annual crashes, crash frequency, and crash severity in Illinois and Iowa respectively.

Table 4.9 – Top Crash Locations in Illinois Quad Cities 2018-2022

Rank	Intersection	Annual Average Crashes	Crash Rate	Average Annual Crash Severity Rating	Weighted Crash Severity Score
1	HWY 5/John Deere Rd & 41st St.	40.6	10.2	18	35
2	Ave of the Cities & Kennedy Dr.	17.4	5.89	22	30
3	Ave of the Cities & 7th St.	16.4	6.81	20	28
4	Ave of the Cities & 19th St. SB	3.2	4.11	11	25
5	Ave of the Cities & 19th St. NB	11.8	7.03	9	24
6	HWY 5/John Deere Rd & 53rd St.	8.8	4.82	8	22
6	Ave of the Cities & Archer Dr.	7	4.12	9	22
7	HWY 5/John Deere Rd & 38th St	8.2	6.71	1	20
7	HWY 92 & 15th St.	6.2	5.57	6	20
8	HWY 5/John Deere Rd & 4th Ave	1.8	65.75	7	18
8	HWY 5/John Deere Rd & 16th St	13.6	1.77	11	18

Source: Illinois DOT Crash Data 2018-2022

In Table 4.9, two corridors, HWY 5/John Deere Road and Avenue of the Cities, are notable for being responsible for 10 out of the 11 top intersections for weighted crash severity score. The score is a composite index of the three criteria shown in the other columns (annual average crashes, crash rate, and annual crash severity rating). The corridors are heavily traveled thoroughfares that cross multiple jurisdictions and provide vital east-west mobility.

Table 4.10 – Top Crash Locations in Iowa Quad Cities 2018-2022

Rank	Intersection	Annual Average Crashes	Crash Rate	Average Annual Crash Severity Rating	Weighted Crash Severity Score
1	E. Kimberly Rd. & Davenport Ave.	3.8	13.01	4	18
1	E. Kimberly Rd. & I74 S bound off ramp	3	9.9	3	18
1	E. Kimberly Rd. & Spring St.	5.6	3.37	4	18
2	E. Kimberly Rd. & Forest Rd.	2.2	5.74	1	17
3	W. Locust St. & Jenna Dr.	0.2	3.63	0	15
4	E. Kimberly Rd. & Eastern Ave.	10.6	1.12	9	14
5	E. Kimberly Rd. & Belle Ave.	1	2.74	1	13
6	E. Kimberly Rd. & W 37th St/Main St (North Park Mall)	4.8	1.97	5	13
6	Veterans Memorial Pkwy & Jersey Ridge Rd	2.6	2.11	1	12
6	E Locust St. & Iowa St.	9.6	1.05	7	12
6	E. Kimberly Rd. & Elmore Ave.	11.2	0.84	6	12
6	53rd St. & Elmore Ave.	15.8	0.41	7	12
6	Brady St. & W 65th St/Veterans Memorial Pkwy	14.4	0.36	10	12

Source: Iowa DOT Crash Data 2018-2022

Table 4.10 indicates that 8 out of the top 13 locations in the Iowa Quad Cities with the highest weighted crash severity scores are located along E. Kimberly Road/U.S. 6. Other locations with high scores include two each along E. Locust Street and Veterans Memorial Parkway.

Crash rates are an important measure of roadway safety and are typically expressed as crashes per million entering vehicles. While some roads may have a high number of crashes, their crash rate can be low when traffic volumes are also high. In contrast, a roadway with lower traffic volumes may have a high crash rate, indicating more crashes than expected for the amount of traffic it carries. Roads with high crash rates may warrant further review to identify safety improvements. Crash rate analysis is one of the factors evaluated in the crash reports prepared by the Bi-State Regional Commission on a periodic basis.

MAP-21 required states to create a State Highway Safety Plan. These requirements were carried forward in the FAST Act and the Infrastructure Investment and Jobs Act (IIJA). It is important for MPO activities to be consistent with State Highway Safety Plans in order to facilitate safer roads. In the State of Iowa, the *Comprehensive Highway Safety Plan* outlines five safety policy areas and eight safety program areas. The overall vision is "One Death is Too Many," and the policy areas focus attention on young drivers, occupant protection, motorcycle safety, traffic safety enforcement, and traffic safety improvements. These statewide policies will be supported by the eight program areas targeting lane departure, safety corridors, intersections, local roads, crash data records, senior mobility, safety training and education, and unpaved rural roads.

In the State of Illinois, the *Comprehensive Highway Safety Plan* outlines ten data-driven emphasis areas that were identified for immediate action. The overall vision is "Highway users arrive safely at their destination" with a "Zero Fatalities" goal. The emphasis areas seek to focus attention on alcohol and other impaired driving, driver behavior and awareness, highway-railroad grade crossing, information systems, intersections, large trucks, road departure, safety belts/occupant protection, vulnerable users (pedestrian, motorcyclists, pedalcyclists), and work zones.

Under the Safe System Approach, traffic safety is addressed through a coordinated and proactive framework that recognizes human mistakes and seeks to prevent those mistakes from resulting in serious injury or death. This approach builds on the traditional four E's of safety—Engineering, Education, Enforcement, and Emergency Medical Services while emphasizing shared responsibility across all levels of government, agencies, and road users. Safety considerations are integrated at every stage of planning, design, operation, and maintenance. A fifth E, "Everyone," highlights the role of all partners and the traveling public in creating a safer transportation system. When all elements work together, the transportation system is better equipped to protect people and ensure everyone arrives alive.

The *2025 Traffic Safety Action Plan* provides regional goals that can be applied to the MPA, including involvement in traffic safety forums, programming projects with safety in mind, furthering safety education and enforcement, and coordinating emergency response to improve individuals' recovery outcome in severe crash situations with timely response and medical treatment.

Safe System Elements and Entities Involved in Traffic Safety

Engineering (Safe Roads & Safe Speeds)

- Iowa DOT/Illinois DOT
- Iowa DOT/Illinois DOT Districts
- Municipal and County Engineers

Education (Safe Road Users)

- State Departments of Education
- Universities and Educational Institutions
- Iowa DOT/Illinois DOT Districts

Enforcement (Safe Road Users & Safe Speeds)

- Highway Patrol
- Local Police Departments
- Judiciary
- Department of Public Safety
- Attorney General's Office

Emergency Medical Services (Post-Crash Care)

- State Departments of Health
- First Responders

Everyone (Shared Responsibility)

- Public agencies, community partners, advocacy groups, and all road users

Wayfinding

The effective use of signs to direct traffic is a strategy for managing congestion. Signage is also essential for guiding travelers to local attractions throughout the MPA. Consistent wayfinding signage along major corridors facilitates the smooth flow of traffic.

The 17 contiguous communities in the region offer a variety of opportunities, but navigating the area can be challenging due to inconsistent street names along shared corridors. Often, a single roadway may have as many as five different names, depending on the community and the jurisdiction responsible for its maintenance. This situation can be particularly confusing for visitors to the Quad Cities, especially along the east-west corridors.

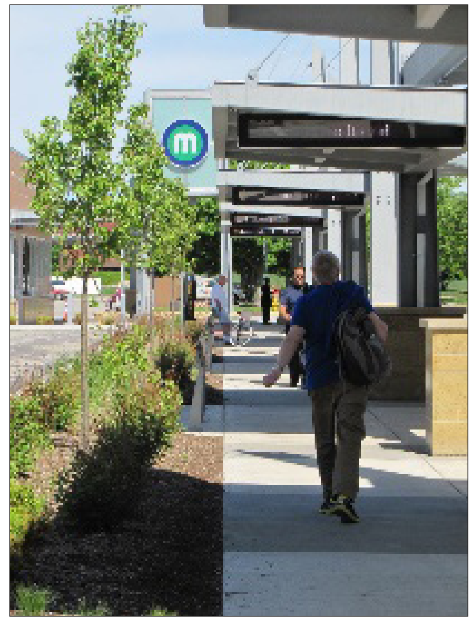
Fortunately, many of these routes are designated as state or federal highways, which provides some degree of consistency. However, there are also local roads in the area that could benefit from improved signage and uniform naming conventions. Notable improvements in street naming include the renaming of 23rd Avenue in Moline, 42nd Avenue in East Moline, and 23rd Avenue in Silvis to “Avenue of the Cities” in 2002. In 2009, the corridor of 65th/67th Street east of Brady Street in Davenport was renamed Veterans Memorial Parkway.

Over the past 25 years, various efforts have been made to improve signage for attractions while enhancing guidance along the interstate system. These initiatives have led to the addition of more riverfront and attraction signs, as well as interstate trailblazers. Organizations like Visit Quad Cities and the Quad Cities Chamber of Commerce continue to build on these efforts.

In 2008, a uniform area-wide wayfinding signage system was introduced. This system utilizes color-coded quadrants to help travelers easily identify when they are entering or leaving a community. The color designations are as follows: Davenport is represented by the green quadrant, Bettendorf by the yellow quadrant, Rock Island by the red quadrant, and Moline/East Moline by the blue quadrant.

These signs not only inform drivers of the city they are in, but also indicate the locations of attractions, venues, public parking, and adjacent cities. Currently, there are 217 wayfinding signs that direct visitors to 85 different destinations throughout the Quad Cities.

Figure 4.7 – MetroLINK District Station, Rock Island



Connectivity

The current road network effectively integrates various transportation modes into the overall system. It is essential to continue enhancing these connections. The road network facilitates access for both motor vehicles and bicycles to multi-purpose trails, transit facilities, airports, railroad stations, terminals, and intermodal freight facilities. In many locations, accompanying sidewalks provide access for pedestrians, enhancing connectivity. Figure 4.6 illustrates pedestrian access to MetroLINK’s District Station. Roads intersect these different transportation modes, linking land, air, and water transport options.

From a regional perspective, the interstates (I-74, I-80, I-88, and I-280) provide important corridors for thru-traffic and external-internal traffic either for the purpose of travel or freight movement. For example, arterial roads from the rural areas carry agricultural products. These roads allow freight to be transported to barge terminals located at the Mississippi River. This freight can then be carried to other ports not only regionally, but nationally and internationally. Other examples include roads that provide the corridors with transit routes, as well as crossings of the Mississippi River bridges. There are a host of connections that can be illustrated using existing roads as the linkage. An integrated road network is important to supporting economic vitality; increasing accessibility and mobility; enhancing connectivity, safety, and security; promoting system efficiency; and enhancing the environment.

Moving Toward Tomorrow

Future road and bridge needs were determined through input from the various jurisdictions and public in the MPA, as well as examining existing road network conditions and evaluating projects by level of service with a travel demand model. Planners and engineers from the jurisdictions used existing comprehensive land use plans and/or city street plans, where available; and the crash, pavement condition, traffic volume to capacity, and resilience criticality data on the existing road network when developing suggested road improvements.

While road preservation projects may take less time for planning and engineering, an expansion project for a road or highway typically includes the following major phases over several years' time:

- Feasibility Study (Pre-Engineering Process)
- Engineering Phase I (with Environmental Impact Statement–EIS)
- Engineering Phase II (with Plan Preparation)
- Land Acquisitions
- Utility Relocations
- Environmental Mitigation
- Bridge Work (if applicable)
- Construction (Grading, Paving, and Other)
- Lighting and Signing

Each of these phases also includes bidding and contract negotiations between the jurisdiction developing a new road and the people completing that particular phase of the project. An important purpose of the long-range transportation plan is to develop a list of expansion projects on the FFC system and systematically determine projects for the short- and long-term horizon years when construction is expected.

Technology, Automation, and Intelligent Traffic Systems

Technology continues to play a growing role in people's lives and the transportation system. Discussions of artificial intelligence (AI), autonomous vehicles, and drones have already started. AI has been developing since the 1950s, but has increased in involvement with the transportation sector with items like autonomous vehicles and improved route and signal optimization. AI can also be used to obtain traffic analysis by detecting crashes and hazards. Autonomous vehicle readiness discussions are occurring at the state and federal levels. In Iowa, an Iowa Advisory Council on Automated Transportation (ATC) has been formed. Many of the elements of autonomous vehicles will coincide with ITS, requiring some system integration and coordination between jurisdictions responsible for traffic management. Illinois addresses the issue within their 2019 *Intelligent Transportation System (ITS) Architecture Strategic Plan*. The MPO will monitor state and federal activities in this area for impacts on the local metropolitan system as part of the *Bi-State Regional ITS Architecture Plan*.

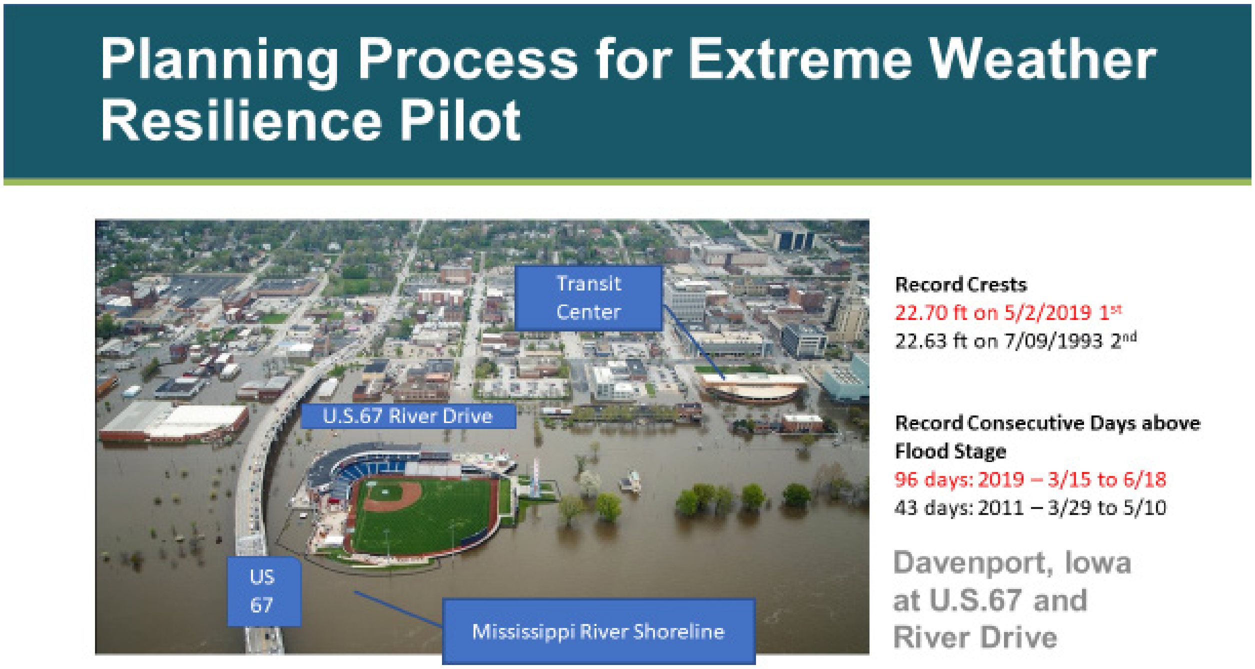
There are opportunities for ITS in traffic operations, such as signal synchronization and traveler information, that is widely available through apps and traveler information websites. The MPO will work with state and federal partners to monitor advances in technology, automation, and ITS to allow discussions on infrastructure and/or systems changes that would affect the transportation network within the Quad Cities.

Drone activity is also a topic that transportation professionals are exploring. In the year 2055, there may be more drones over roadways delivering goods and other services.

Unexpected Travel Disruptors

Chapter 2 notes a variety of planning considerations from hazard mitigation to resilience. Natural hazards and man-made events can be disruptors to the transportation system via a hazardous materials spill, an extreme weather event, or a global pandemic. Counties and cities within the MPA participate in hazard mitigation planning. These events can be short in duration or much longer. In the case of extreme weather, the Mississippi River experienced the greatest flood height on record and the longest duration flood of over 40 days in 2019 from March to June. Flooding required a long-term detour on U.S. 67/River Drive in Davenport and detours in downtown Davenport for many days. The City of Davenport in cooperation with Iowa DOT is working on improvements to this corridor to decrease impacts to travel during flood events.

Figure 4.8 – Extreme Weather Resilience Pilot – Flooding Example



Source: Bi-State Regional Commission 2020

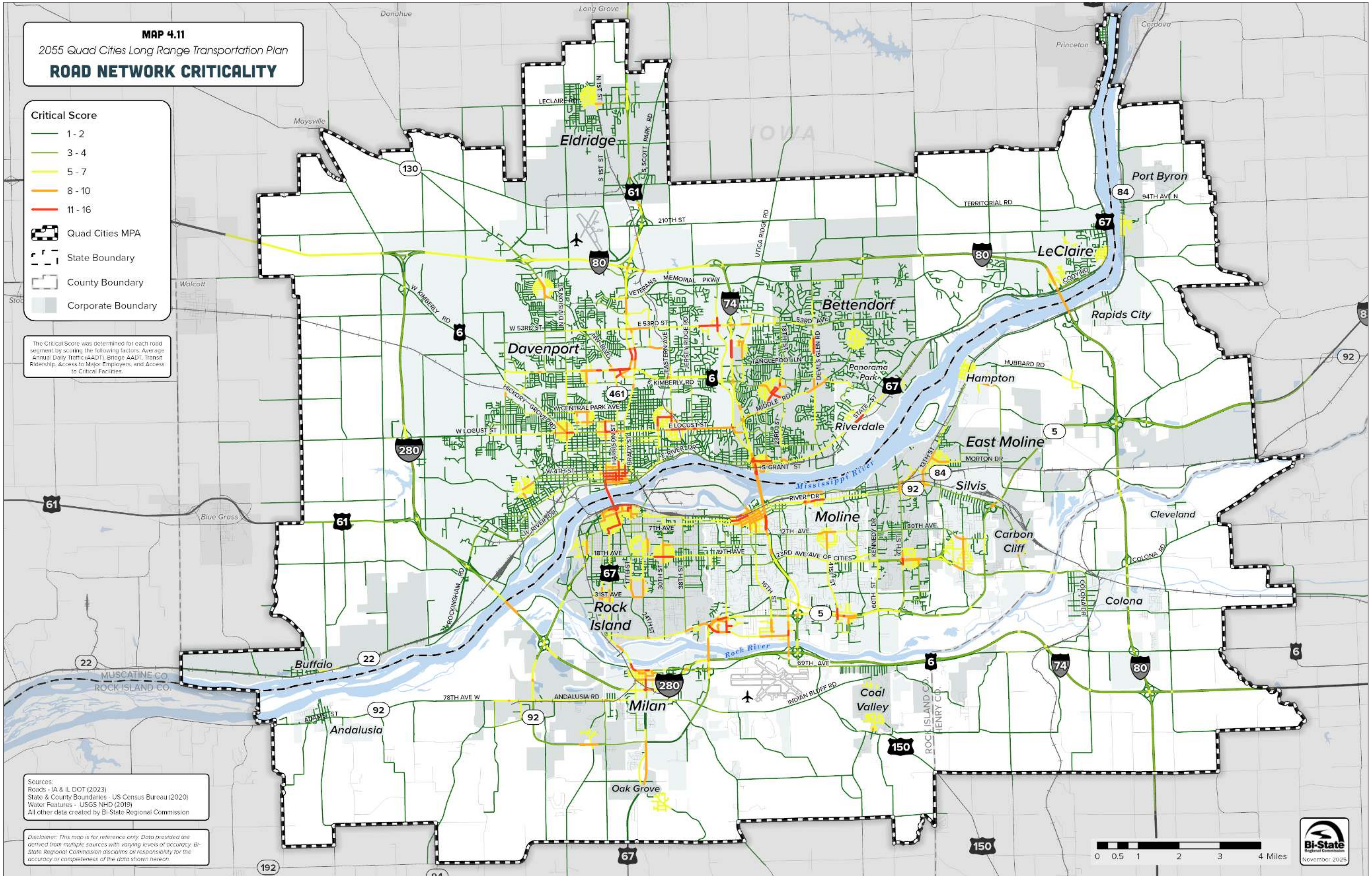
Global Pandemics

In March 2020, states across the nation took varying steps to limit the spread of COVID-19. In Iowa and Illinois, stay-at-home guidance or directives halted significant travel except for essential activities. The global impact of the pandemic has since changed operational procedures, increased work-from-home opportunities and virtual business practices, economic activities, and general lifestyles. As noted in Chapter 5, transit and air travel saw significant impacts from 40-60% reductions in ridership and enplanements. Passengers counts are slowly rebounding, but the impacts are still being realized as single-occupancy vehicle usage continues to be a preference.

Extreme Weather

IIJA/BIL continued to support transportation resilience. The nation has experienced numerous annual billion-dollar weather-related disasters since 2008, as reported by the National Weather Service (NWS). NWS promotes a weather-ready nation, and hazard mitigation planning within the MPO will compliment efforts to be prepared for transportation disruptors. Bi-State Regional Commission was one of eleven FHWA-sponsored pilot projects to examine extreme weather vulnerability as it relates to transportation.

The 2020 Quad Cities Iowa/Illinois MPO Extreme Weather and Transportation Resilience Report identified critical facilities and road assets that were vulnerable to specific weather occurrences, derived from state and local stakeholders' input, including precipitation resulting in flooding, extreme temperature, ice and snow, wind, and other weather, such as fog. Map 4.11 updates and illustrates the areas of the transportation network that represent critical locations where extreme weather events could pose traffic disruptions. Roads with the highest criticality score are roads and bridges that would impact travel if disrupted for an extended period of time. Map 4.11 is based on weighted multi-variate criterion that includes high traffic corridors, transit routes, proximity to critical facilities (such as public works and emergency/medical facilities), and major employers. The 2020 report detailed how extreme weather events at vulnerable transportation locations intersect with the critical facilities in Map 4.11. The resilience report has been posted to the Bi-State Regional Commission website.


MAP 4.11
2055 Quad Cities Long Range Transportation Plan
ROAD NETWORK CRITICALITY
Critical Score
1 - 2
3 - 4
5 - 7
8 - 10
11 - 16
Quad Cities MPA
State Boundary
County Boundary
Corporate Boundary
The Critical Score was determined for each road segment by scoring the following factors: Average Annual Daily Traffic (AADT), Bridge AADT, Transit Ridership, Access to Major Employers, and Access to Critical Facilities.
Sources:
Roads - IA & IL DOT (2023)
State & County Boundaries - US Census Bureau (2020)
Water Features - USGS NHD (2019)
All other data created by Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.
IOWA
Eldridge
Davenport
Bettendorf
Panorama Park
Riverdale
LeClaire
Port Byron
Rapids City
Hampton
East Moline
Silvis
Moline
Carbon Cliff
Cleveland
Colona
Rock Island
Milan
Coal Valley
Buffalo
Andalusia
Oak Grove
Long Grove
Donahue
Maysville
Walcott
Blue Grass
Princeton
Cordova
Mississippi River
Rock River
MUSCATINE CO.
ROCK ISLAND CO.
HENRY CO.
0 0.5 1 2 3 4 Miles
Bi-State Regional Commission
November 2025

Maintenance and Operations Tomorrow

As noted in this chapter, maintenance and operations are important considerations in the future road network. Investing in roads that are classified in fair pavement condition, before they reach poor condition, will help reduce maintenance costs and sustain a better level of service on the road network. Pavement preservation techniques have been shown to help prolong the life of roadways. According to the For Pavement Preservation (FP^2) trade association, for every $1 spent on pavement preservation, $6-10 in costs are eliminated or delayed on future rehabilitation and reconstruction. Fixing the worst first can often cause preventative maintenance work to be neglected and can lead to deterioration of the road network. According to FHWA, pavement preservation is the culmination of all activities implemented to provide and maintain serviceable roads.

Pavement Data Collection

While specific maintenance projects are not spelled out in this plan, it will be up to the state and local jurisdictions to develop their respective priorities in the short- and long-terms. Map 4.6 highlights road surface conditions at a point in time. The on-going need to collect pavement condition information will help support better decision-making. In the Iowa Quad Cities, pavement data is collected with assistance at the state level for local roads. Similarly, pavement data in the Illinois Quad Cities is collected by the Illinois DOT for roads with an FFC of collector or greater. Local jurisdictions also collect their own data to supplement the cyclical collections by the states. More uniform pavement data for the entire metro area aids the ability to compare connecting roadways between jurisdictions to enhance corridor travel. As noted, giving priority to pavement in fair condition through a preventative maintenance program will allow more dollars to be used to serve a greater number of roads. Of course, failing roads or those in poor condition will require attention, but over time will be fewer in number if ongoing preventative maintenance is applied. Proactive preservation initiatives will lead to improved pavement performance, safer roads, higher user satisfaction, and reduced overall life-cycle costs.[3]

Best Practices in Operations and Maintenance

Best practices to enhance the area's existing road system through improved traffic operations noted by FHWA include access management, traveler information technologies, work zone management, signal and speed management, and incident management. Traffic demands management improves system reliability and safety, and allows for choices. The Congestion Management Process report is an addendum to this plan. Crashes and work zones are the greatest cause of congestion in the Quad Cities. Working to reduce incidents and manage work zones and traffic operations will result in better, more reliable travel in the metro area. FHWA has extensive resources on planning for operations, and the effort is consistent with the transportation objectives of this plan.

Additionally, the Quad Cities MPO maintains the *Bi-State Regional ITS Architecture Plan* that emphasizes providing information technologies and data collection within key corridors, such as the interstate systems and specifically the I-74 corridor, to aid traffic operations. The area is served by a fiber optic loop that provides an opportunity for enhanced communications for both safety and security. As on-board vehicle technologies see greater deployment, the ITS network will need to adapt to manage information, relay information, and provide traveler information to enhance system reliability and mobility in the metro area.

Complete Streets

The Quad Cities Urbanized Area Transportation Policy Committee adopted the Quad Cities MPO Complete Streets Policy on October 28, 2008 as follows:

"Complete Streets" refers to public right-of-way that is designed for the safety and accessibility of multiple users, regardless of ability. As a standard practice in the Quad Cities MPO, a balanced approach in design and operation of the transportation system within public right-of-way will be taken as feasible, giving consideration to:

- Types of users of the transportation system, including pedestrians, bicyclists, transit users,

3 *FHWA Resource Center, Pavement Preservation Concepts and Techniques*

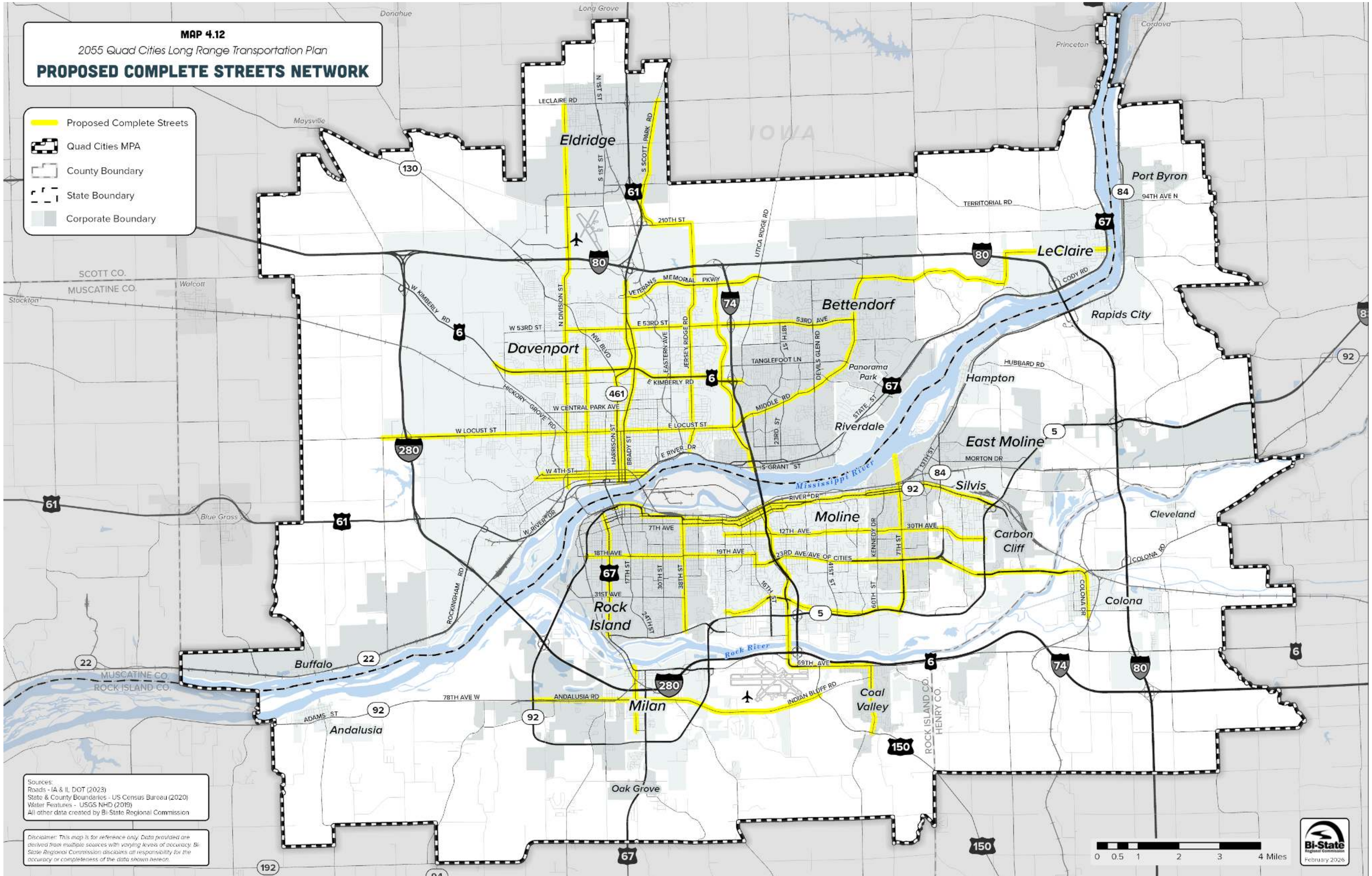
motor vehicles, and freight interests in design and operation

- Project surroundings in context with how and who will use the facility to determine what accommodations users will be provided
- Service levels for all users anticipated by adopted comprehensive or system-wide plans

In 2007, the State of Illinois passed Complete Streets legislation; and on June 1, 2010, the Illinois Department of Transportation published its revised bicycles and pedestrian policies to incorporate Complete Streets. In 2021, the Illinois General Assembly passed HB0270 that eliminated the local match requirement for walking and biking infrastructure on state roads within one mile of an urbanized area. The policies are contained in the Illinois Department of Transportation Bureau of Design and Environment's Manual. Iowa DOT also developed a Complete Streets Policy in 2018, and it was last revised in 2025. Its intent is to improve conditions for bicycling and walking in every project including new construction, reconstruction, resurfacing, restoration, and rehabilitation of a roadway project. Refer to Map 4.12 and Table 6.3 for the Quad Cities Complete Streets Network, and to the MPO's Transportation Improvement Program (TIP) where the Complete Streets Priority Network is shown in relation to programmed projects These corridors have been identified to focus Complete Streets features, such as sidewalks, bike lanes, transit access, etc. Figure 4.8 shows an example from the East Village of Davenport with a bike lane, parking, and sidewalk adjacent to the road along Jersey Ridge Road.

Figure 4.9 – Complete Streets Example, Jersey Ridge Road, Davenport

Source: Bi-State Regional Commission, 2016


MAP 4.12
2055 Quad Cities Long Range Transportation Plan
PROPOSED COMPLETE STREETS NETWORK
Proposed Complete Streets
Quad Cities MPA
County Boundary
State Boundary
Corporate Boundary
IOWA
SCOTT CO.
MUSCATINE CO.
ROCK ISLAND CO.
HENRY CO.
Eldridge
Davenport
Bettendorf
LeClaire
Port Byron
Rapids City
Hampton
Panorama Park
Riverdale
East Moline
Silvis
Moline
Carbon Cliff
Cleveland
Colona
Rock Island
Milan
Coal Valley
Buffalo
Andalusia
Oak Grove
Blue Grass
Walcott
Stockton
Maysville
Donahue
Long Grove
Princeton
Cordova
Mississippi River
Rock River
LECLAIRE RD
210TH ST
VETERANS MEMORIAL PKWY
W 53RD ST
E 53RD ST
53RD AVE
TANGLEFOOT LN
E KIMBERLY RD
W CENTRAL PARK AVE
W LOCUST ST
E LOCUST ST
E RIVER DR
W 4TH ST
S GRANT ST
MIDDLE RD
TERRITORIAL RD
CODY RD
HUBBARD RD
MORTON DR
RIVER DR
7TH AVE
12TH AVE
18TH AVE
19TH AVE
23RD AVE/AVE OF CITIES
30TH AVE
31ST AVE
69TH AVE
78TH AVE W
ADAMS ST
ANDALUSIA RD
INDIAN BLUFF RD
COLONA RD
COLONA DR
W KIMBERLY RD
HICKORY GROVE RD
W RIVER DR
ROCKINGHAM RD
N DIVISION ST
NW BLVD
HARRISON ST
BRADY ST
EASTERN AVE
JERSEY RIDGE RD
UTICA RIDGE RD
S SCOTT PARK RD
N 1ST ST
S 1ST ST
18TH ST
DEVILS GLEN RD
23RD ST
STATE ST
13TH ST
KENNEDY DR
7TH ST
16TH ST
41ST ST
60TH ST
17TH ST
30TH ST
38TH ST
24TH ST
94TH AVE N
Sources:
Roads - IA & IL DOT (2023)
State & County Boundaries - US Census Bureau (2020)
Water Features - USGS NHD (2019)
All other data created by Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.
0 0.5 1 2 3 4 Miles
Bi-State Regional Commission
February 2026

Travel Demand Modeling for Transportation Planning

The regional Travel Demand Model (TDM) is a key analytical tool used to estimate existing and future travel demand in support of the Long Range Transportation Plan (LRTP). The model forecasts travel patterns based on land use and transportation system characteristics over the planning horizon. The TDM includes a roadway network of freeways, interchanges, arterials, collectors, and selected local roads necessary for system connectivity. This network was developed using Geographic Information System (GIS) data from the Iowa and Illinois Departments of Transportation and supplemented with local roadway data. The planning area is divided into Traffic Analysis Zones (TAZs) that represent land-use and socioeconomic conditions. Zone connector links conceptually connect each TAZ to the roadway network to load and assign trips. The TDM is used to estimate future traffic volumes, evaluate system performance, and assess transportation investment scenarios considered in the LRTP.

Traffic Analysis Zones (TAZ) for Urban Activity

Urban activities are located in Traffic Analysis Zones (TAZs). A TAZ, in an ideal setting, is a portion of the planning area delineating similar or homogeneous land use and travel purposes. The original TAZs for the planning area were developed in cooperation with the Iowa DOT who utilized a mainframe computer software package, PLANPAC, to conduct the planning area's travel demand forecasting prior to 1992. The Census 2000 Traffic Analysis Zones program was initiated in 1998, completed in 2000, and provided the basic geography for the travel demand model. TAZs have been refined since then to reflect a change in urban activity and land use and align with the 2020 Census geographies. As part of that process, the number of TAZs was increased to 881 for refinement of the model output.

With the adoption of Iowa Standardized Model Structure (ISMS) version 1.0 in 2020, Bi-State Regional Commission has switched to a parcel-based TAZ system and land use data categories. In this process, refined TAZ boundaries following parcel land areas resulted in additional TAZs. There are 1,983 internal and 88 externals, for a total of 2071. TAZs for the 2055 travel demand model (TDM). For this update, the model has been developed using ISMS version 2.0, incorporating the latest methodological refinements and data standards. A map of the MPA boundary and TAZ geography for the Quad Cities is provided in a travel model technical addendum associated with the LRTP. Figure 4.9 provides a conceptual representation of a TAZ and trip movements between them within, between, and outside the MPA boundary.

Travel demand on the Quad Cities roadway network is driven by urban activities, such as where people live, work, and conduct business. The transportation system supplies this demand through the roads and highways that carry traffic. To estimate future travel, the Travel Demand Model uses a standard four-step forecasting process: trip generation, trip distribution, mode choice, and trip assignment. Rather than using a full-mode choice model, the Quad Cities model applies fixed-mode shares by trip type. This method accounts for trips made by transit, bicycling, or walking by removing those trips before assigning motorized travel to the roadway network. This approach provides a practical way to represent non-motorized and transit travel given the type of model used. Additional details on each step of the modeling process are provided in the "Development and Calibration of the Travel Demand Model" section of this chapter. Transit ridership forecasting was conducted using a separate methodology and is documented in Chapter 5, Figure 5.4.

Travel Demand Modeling Process

TransCAD is the travel demand modeling software used to perform the regional travel forecasting for the Quad Cities. Bi-State Regional Commission adopted TransCAD under the Iowa Standardized Model Structure (ISMS) framework with technical assistance from Iowa DOT, allowing for consistent and quantitative evaluation of land use and roadway network scenarios. For this long range transportation plan update, the model was developed using ISMS Version 2.0, which includes updated methods and an enhanced modeling interface.

ISMS is a standardized modeling platform built on TransCAD and developed by Iowa DOT in coordination with Iowa MPOs. It follows the traditional four-step travel demand modeling process–trip generation, trip distribution, mode choice, and traffic assignment–using existing and forecasted socioeconomic data to estimate travel activity across the region. The model generates and distributes trips between Traffic Analysis Zones (TAZs), applies mode shares, and assigns vehicle trips to the roadway network.

Traffic assignment is performed using an equilibrium process that considers roadway capacity and travel times. Trips are loaded onto the network iteratively until travel times are balanced and no simulated traveler can reduce their travel time by choosing a different route. This modeling framework supports evaluation of future traffic conditions and roadway improvement needs. Additional technical details are documented in the Travel Demand Model Documentation Report as an addendum to this plan.

Model Input Data

A major change with the latest ISMS model upgrade is the use of parcel-based land use data. Unlike earlier models that relied on Census-based TAZ boundaries, ISMS requires land use inputs at the parcel level. This approach provides more detailed and accurate land use information from local jurisdictions for both current and future conditions. As part of this transition, Bi-State staff previously increased the number of Traffic Analysis Zones from 881 to 2,071 to better reflect land use patterns across the Metropolitan Planning Area (MPA). For this plan update, no TAZ boundaries were modified. The long-range planning horizon year is 2055, with 2035 used as an intermediate analysis year.

The model is a useful tool to predict traffic and help determine the effects of future project choices. Travel demand forecasting predicts the amount of future travel on the road network based on existing and anticipated social economic features of the planning area. Data on the existing and projected planning area was collected at the parcel level and aggregated to TAZs to predict travel in the planning area. A map that illustrates the 2,071 TAZs in the MPA can be found in the Travel Demand Model Documentation Report.

A key part of travel demand forecasting is understanding where people live and work, both today and in the future. The model was calibrated using 2022 as the base year to reflect current travel conditions. Forecast years 2035 and 2055 were then used to estimate future traffic patterns. Calibration involves adjusting model settings, so that the model results closely match observed traffic conditions in the base year.

Table 4.11 summarizes the MPA Travel Demand Model Data used to predict trips. The reference to high and low projections for population and employment are generally described in Figures 1.19 and 1.20 in Chapter 1. The mathematical and model generated projections in Table 4.11 frame the TAZ or zonal level projections derived from land use and local officials input to verify a “reasonable” forecast for population and employment of the model generated data compared to mathematical trends.

Table 4.11 – Parcel-Derived Population and Employment Projections and Limits

Planning Area Demographic Data	Projection	Base Year 2022 Total	Horizon Year 2035 Total	Horizon Year 2055 Total
Population	High	301,060	319,790	353,632
	Model	307,257	314,176	321,906
	Low	301,060	299,866	297,888
Employment	High	155,771	165,462	182,972
	Model	155,771	159,887	179,898
	Low	155,771	155,153	154,130

Source: U.S. Census Bureau Decennial Censuses (2000-2020) and Annual Estimates of the Resident Population (2023), Esri ArcGIS Business Analyst (2023), Woods & Poole Economics, Inc. (v2024), and Bi-State Regional Commission (2025) for population, and U.S. Census Bureau LEHD Origin-Destination Employment Statistics (2010-2019), Data Axle (April 2025), Woods & Poole Economics, Inc. (v2024), and Bi-State Regional Commission (2025) for employment

Using the parcel-based data from 2022 for the Quad Cities MPA, allocations were made to individual Traffic Analysis Zones (TAZs) for land use then converted to population and employment based on residential housing units and land use development codes. TAZs vary in size by the density or nature of the urban land use that they encompass. As noted above, the TAZs in this report were created to analyze traffic flow on the major streets in the MPA. A model documentation report will follow the adoption of the plan to document the detail and assumptions used in the modeling process to check reasonableness of the input data and the model's output.

Land Use Data

ISMS model input is similar to the prior model input. Prior to the 2050 plan, Census and employment information was determined for each TAZ. ISMS land use data starts from the land use parcel data that local governments use for zoning and tax purposes. Because of the nature of parcel data, it is more representative of the land activity to be used as input to the travel demand model. Number of existing and future housing units for residential parcels, and square footage of non-residential existing and future structures within the parcels are identified.

Then, parcel data is coded into more than 73 land use codes (following) and grouped into 10 categories for the purpose of the TDM trip generation step. The nine categories that represent the characteristics of land use are shown in the sidebar.

Land Use Code Categories

- 10-20, Single family residential
- 21 -28, Multi-family and special residential
- 30-39, Industrial
- 40-45, Transportation
- 50-59, Commercial
- 60-69, Office, service
- 70-79, Institutional/Health care
- 80-89, Educational
- 90-99, Low intensity
- 100-109, Future Mixed uses

Other Model Data Input

In addition to housing units and non-residential structure utilization, additional socio-economic data and other transportation data is needed to run the model. Other zonal level socio-economic data include the following: number of households by household size, number of auto availability, school enrollment, time-of-day/weekday-weekend trip split, and activity by special generators. The households by household size and auto availability are derived from the Census Transportation Planning Package (CTPP), which was applied to the prior 2050 Quad Cities travel demand model. School enrollment is determined from each school district. A special generator is defined by the FHWA Model Validation and Reasonableness Checking Manual as a major land use where standard trip generation and distribution models are not expected to provide reliable estimate of travel patterns. The employment for special generators is derived from Data Axle and applied to such locations as the Quad Cities International Airport and area casinos, as examples. Street light data is used to verify average trip lengths, district-to-district trips, intra-zonal trips, time-of-day factors, directional factors, and vehicle trip percentages. External travel was derived from the Iowa/Illinois DOT statewide travel models and 88 external stations where roads cross the metropolitan planning area boundary, and average daily traffic was available through the Illinois and Iowa DOTs.

The prior Bi-State model road network is updated with latest completed projects, as well as future planned projects marked for planned year of completion. The road network is represented as "links" in the model and coded with attributes, such as number of lanes; direction; area type, such as Central Business District (CBD); base year traffic counts; capacity; posted speeds; turn penalty codes; and functional classification. Traffic counts were obtained from the Iowa and Illinois DOTs.

Future Years Data

Future year land use data was collected by working with local governments for potential parcel level land use changes and growth. Specifically, horizon year 2035 or 2055 was indicated for each parcel land use.

For new housing units within the parcels, a downward adjustment of 25%, 50%, 75% of full build-out was applied during the process of projecting future year 2035 and 2055 population growth in the planning area. as shown in Table 4.11. The socio-economic data variables described in Table 4.11 were used in forecasting the travel demand for 2035 and 2055. These years were selected as the mid-term and long-term horizon periods for review and evaluation. The parcel land use data was once again aggregated to TAZs that provided the building blocks or variables necessary to forecast future traffic. Model forecasts were developed based on past, observed trends, and demographic projections as a framework, and with input for future growth/decline from community planners, engineers, and public officials in the planning area.

To frame community travel model data input for reasonableness, the 2035 and 2055 forecasts were prepared for population and employment (by place of work) within the MPA boundary. Scenarios for slow growth and fast growth were used to limit community-derived zonal forecasts. The model-derived forecasts using land use fell between the low and high forecasts and represent what is foreseen today to be a reasonable expectation of future population and employment. Housing was used to predict future population as persons per housing unit. Housing units were not forecasted on its own as a framing variable. Conversations were held with city and county officials to discuss comprehensive land use plans, near-term, and future developments for both residential and commercial/industrial land uses. Map 1.7 in Chapter 1 illustrates future land use discussed with planners, engineers, and other officials and added or deleted development by TAZ. The summation of the TAZs by population and employment derived from future land is shown in Table 4.11. For a full summary on population and employment projections, refer to the travel model documentation report as an addendum to this plan.

Implementation and Calibration of Travel Demand Model

For the Quad Cities' ISMS model, the travel demand forecasting process includes three primary steps, one of which is trip generation. Trip generation quantifies the number of trips to be made at each TAZ in the planning area based on land use types and its intensity. Trip generation is composed of two parts – trip productions and trip attractions that refer to residential and non-residential trip ends, respectively. The production points and the attraction points are called trip ends. One trip is made up of two trip ends, a production, and an attraction.

To use a mathematical model for future regional travel demand forecasting, trip generation, trip distribution, and trip assignment procedures must closely represent the planning area trip characteristics in the base year. As noted, Year 2022 was the base year for model calibration purposes. Base year traffic counts from 2022, or those available closest to 2022, were used as the basis for calibration.

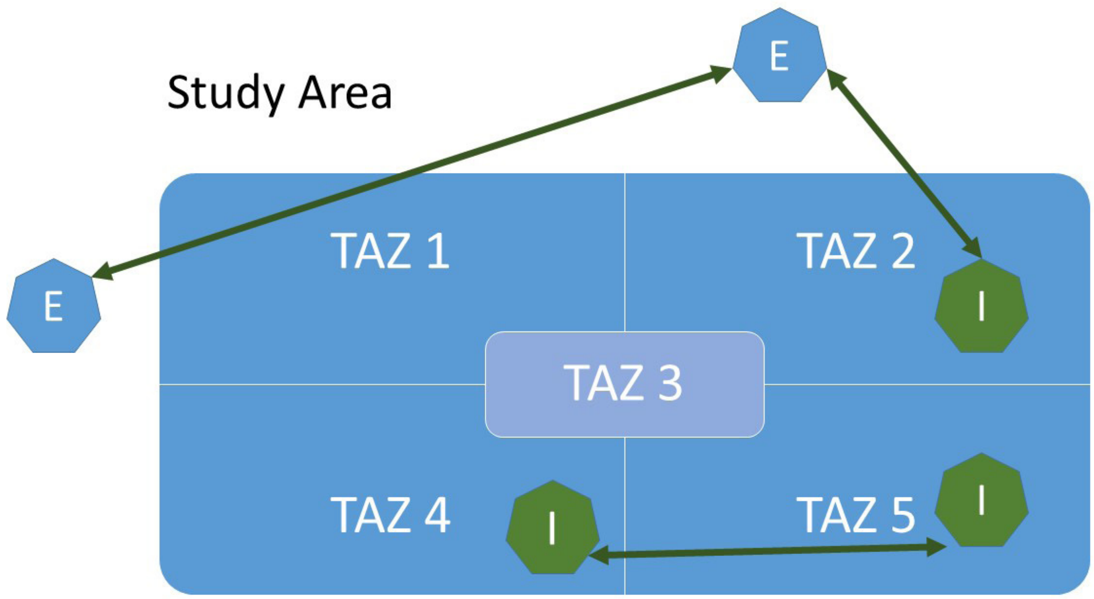
Trip Generation

Trip generation rates were reviewed and crosschecked using Streetlight data to ensure they reflect observed travel behavior.

The trip generation rates served as the baseline inputs as the model was implemented within the ISMS platform. These rates were further refined using ISMS default parameters and available regional data to account for differences in income levels and key trip attractors, such as hospitals, hotels, and airports. Weekday and weekend trip characteristics were applied using standardized assumptions within ISMS and nationally accepted practices. This approach ensures consistency with prior modeling efforts while reflecting current data availability and modeling standards.

Trips having at least one end outside the planning area boundary are either called external-internal (E-I) trips (one end is outside the area) or external-external (E-E) trips (both ends are outside the area) (see Figure 4.9). The traffic counts at the 88 external zones (TAZs that cross the planning area boundary) were used as the control totals. The Iowa/Illinois DOT's statewide model was used to split E-I trips by trip purpose and determine E-E trip flows between external zones.

Figure 4.10 – Trip Types in Relation to the Study Area



Legend:

E – I:	External Internal Traffic
I – I:	Internal Traffic
E – E:	External - External (through) Traffic

Trip Distribution

Following the trip generation process, which estimated the total trips beginning and ending at each TAZ, a distribution model was developed to link the productions with the attractions. The distribution of trips can be reflected in a mathematical equation that compares the relative intensities of each land use to the distance separating them. Figure 4.10 illustrates this relationship, which is called the gravity model.

The friction factor (F_{ij}) is an empirically-derived travel time factor that measures the average area-wide effect of spatial separation on trip interchange between zones "i" and "j." It expresses the probability of trip making at each one-minute increment of travel time. The trip distribution calculation was carried out in an iterative manner to bring the model-estimated trip tables into agreement with the observed data. The output is a zone-to-zone origin-destination (O-D) matrix, which was then used for traffic assignment. The average trip length from the model is 3.8 miles. Intra-zonal trips represent 4.3% of the trips in the model.

Figure 4.11 – The Gravity Model

$$T_{ij} = P_i \times \left(\frac{A_j \times F_{ij} \times K_{ij}}{\sum_{j=1}^{n} A_j \times F_{ij} \times K_{ij}} \right)$$

Where, i – Origin zone (production)

j – Destination zone (attraction)

Tij – Trip produced in zone i and attracted to zone j

Pi – Trip productions at i

Aj – Trip attractions at j

Fij – Friction Factor, reflecting travel time separation between zones i and j

(Kij) – An optional trip distribution adjustment factor for interchanges between Zone i and Zone j

n – The highest numbered zone in the planning area

Traffic Assignment and Model Validation

The ISMS model used a two-class assignment algorithm to carry out the traffic assignment step of the modeling process. Auto and truck trips were loaded onto the road network using the minimum (time/distance) path available through an iterative process. An "equilibrium" assignment uses the capacity constraints on links and calculates the updated minimum (time/distance) path for each iteration until an optimized result was attained. That means for each and every O/D trip, no better route could be found within the set criteria.

A highway network for base year 2022 was loaded with trips. When compared to the base year traffic count data, the model's ability to replicate the actual travel characteristics on the streets can be determined. This step is called model validation. The total model estimated volume is within 2.2% of traffic counts for all classifications of roads, other than the small number of freeway-to-freeway connectors. Table 4.12 illustrates the level of accuracy by road classification.

Table 4.12 – Quad Cities MPA Travel Model Results by Road Classification

	Number of Counts	VMT		Error		Distribution		FHWA Goal
Facility Type		Estimated	Observed	Difference	Percent	Estimated	Observed	
Freeways	191	1,904,776	1,880,678	24,098	1.3%	55%	56%	+/-7%
Principal Arterial	282	784,669	743,976	40,693	5.5%	23%	22%	+/-10%
Minor Arterial	383	534,453	521,237	13,215	2.5%	15%	15%	+/-15%
Collector	308	231,450	236,218	-4,768	-2.0%	7%	7%	+/-20%
Local	225	173,100	164,263	8,838	5.4%	5%	5%	N/A
Ramps	97	177,186	156,419	20,767	13.3%	6%	5%	N/A
All Classes	1,486	3,455,348	3,382,109	73,239	-2.2%	100%	100%	

Source: Bi-State Regional Commission, December 2025

Table 4.3 crossings. It shows model estimates and counts across the planning area well within the range expected.

Table 4.13 – Quad Cities Travel Model Results by Area Type

	Number of Counts	VMT		Error		Distribution	
Area Type		Estimated	Observed	Difference	Percent	Estimated	Observed
Iowa	593	1,948,923	1,869,398	-79,525	-4.2%	54%	51%
Illinois	886	1,511,034	1,685,797	174,763	-10.3%	42%	45%
Bridge	7	153,391	150,338	-3053	-2%	4%	4%
Total	1,486	3,613,348	3,705,533	92,185	-2.4%	100%	100%

Source: Bi-State Regional Commission, December 2025

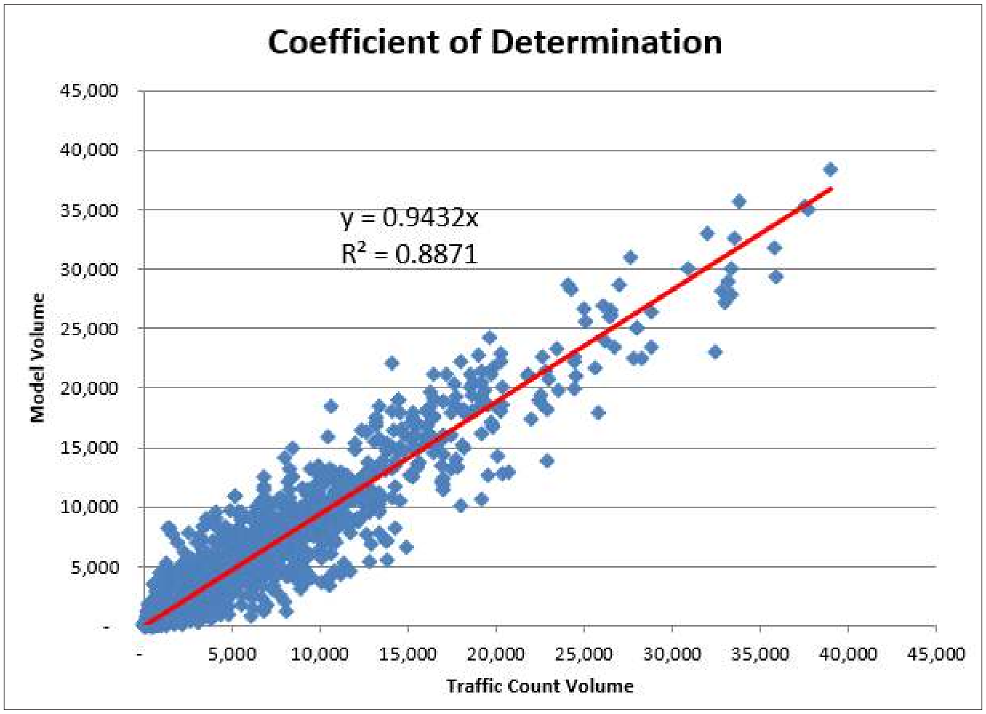
No travel demand model can replicate actual traffic counts with 100% accuracy. The volume difference errors reported in Table 4.13 are well within Federal Highway Administration guidelines (1990), which suggests the following acceptable range of error for each functional classification:

- Interstate Freeway ± 7%
- Major arterial ± 10%
- Minor arterial ± 15%
- Collector ± 20%

It should be noted that during the calibration process, special attention was devoted to Mississippi River screen line. It divides the region approximately in half, with five bridges as the sole linkage of the two parts.

One overall check of the model is via a scatterplot in Figure 4.11. It looks at model estimated traffic at all points where base year 2022 traffic counts are present.

Figure 4.12 – Model vs. Traffic Counts (Scatterplot)



Source: Bi-State Regional Commission, December 2025

In conclusion, the comparison of model estimated trips and traffic with the field traffic counts for the planning area confirms that the Quad Cities MPO Travel Demand Model closely replicated the 2022 Base Year condition. Therefore, the travel demand model structure along with its parameters can be applied to estimate future traffic in the planning area.

Network Improvements Model Analysis

In addition to maintaining the existing network, this plan considers what is needed to expand roadway capacity through 2055. The future road system is presented in general terms related to corridor improvements. Chapter 3 of this plan outlines future road improvements based on the area's ability to afford projects, specifically those that increase capacity of the road network. Costs and projected revenues are also described in that chapter.

The travel demand model was used to look at projects that affect the network capacity. Local jurisdictions provided a list of all capacity enhancing or expansion projects that they wished to see completed by 2055. These projects either require future right-of-way, identified additional lanes, or traffic directional change. The travel demand model analysis looked at the scenarios in Table 4.14.

Road Network Scenarios

Alternatives analyses for the road network were conducted. This analysis is one tool used by local and state jurisdictions to determine a future road network. In addition, road capacity, pavement condition, crash history, and extreme weather criticality are other elements, as well as funding availability. Alternatives analysis identifies existing and future congested road segments. Projects are proposed and refined, based on these findings, to address the congested and critical corridors within the road network. The calibrated model can demonstrate 24-hour traffic volumes, traffic volume over capacity (V/C) ratios, and/or vehicle miles over hours traveled (VMT/VHT) ratios for this analysis. The regional model uses time-of-day and directional factors to represent peak hour and off-peak congestion; V/C ratio summaries illustrate the highest congestion levels during the day.

The analysis is outlined in Table 4.14 for the 2022 base year, no build scenario, full build scenario if all desired projects were constructed, and fiscally constrained scenario of projects that can reasonably be expected to be funded in the future. Similarly, Maps 4.14 to 4.23 illustrate volume to capacity of the road network. The red symbols in these maps demonstrate areas where the volume to capacity (V/C) ratio is equal to or greater than 1.01 or considered poor Level of Service (LOS). This means that the roadway segment has virtually reached the level of traffic that it can safely handle (capacity) and is failing to handle traffic in the manner it was designed. The orange symbols indicate areas where the V/C ratio is equal to or greater than 0.81 or greater or less than 1.01. This means the traffic on the segment is at its capacity, and congestion is becoming a problem. The yellow symbols indicate areas where the V/C ratio is between 0.71-0.90 and nearing capacity. The green symbols illustrate segments with V/C ratios less that 0.71; thus, these segments did not demonstrate a capacity problem on average over a 24-hour period.

Table 4.14 – Travel Demand Model Scenarios Analysis

Projects Network	TAZ SE Data			Notes
	2022	2035	2055	
2022 Network	X		X	No Build with 2055 Socio-Economic Data
2022/TIP Committed		X	X	Only Projects in TIP
2035 Constrained		X	X	Projects in Fiscal Constraint Table 3.3 (2025-2035)
2055 Constrained			X	Projects in Fiscal Constraint Table 3.3 (2036-2055)
2035 Unconstrained		X		Projects in Fiscal Constraint (2025-2035) - All projects
2055 Unconstrained			X	Projects in Fiscal Constraint (2036-2055)- All projects
State Only 2035 & 2055			X	Projects in Table 3.4 - All years - All State Projects

No Build Scenarios

Map 4.13 illustrates the base year 2022 network as an existing, no-build condition with morning peak hour traffic. Maps 4.14 and 4.15 show the area no-build scenario for 2035 and 2055 during morning peak hour traffic. This means if nothing is done to increase the capacity or expand any roads, the roads shown in red would experience congestion. Without any new projects, the travel demand model identifies capacity problems beginning to occur in some areas of the MPA at the bridges and along I-80.

Full Build Scenarios

Maps 4.16 and 4.17 demonstrate 2035 and 2055 morning peak hour traffic, respectively, by V/C on both the 2035 and 2055 unconstrained road network or full build scenario. The unconstrained scenarios represent all capacity enhancing or expansion projects desired by the local jurisdictions, as well as the state capacity enhancing or expansion projects. Capacity enhancing or expansion projects were defined as those projects that would require right-of-way, add travel lanes, or change the direction of the traffic flow in some way for the purpose of travel demand modeling. From these maps, the model indicates very few locations with V/C 0.91 or greater. Map 4.18 show projects in the unconstrained (full-build) by horizon year 2035 and 2055 by local and state projects.

Fiscally Constrained Scenarios

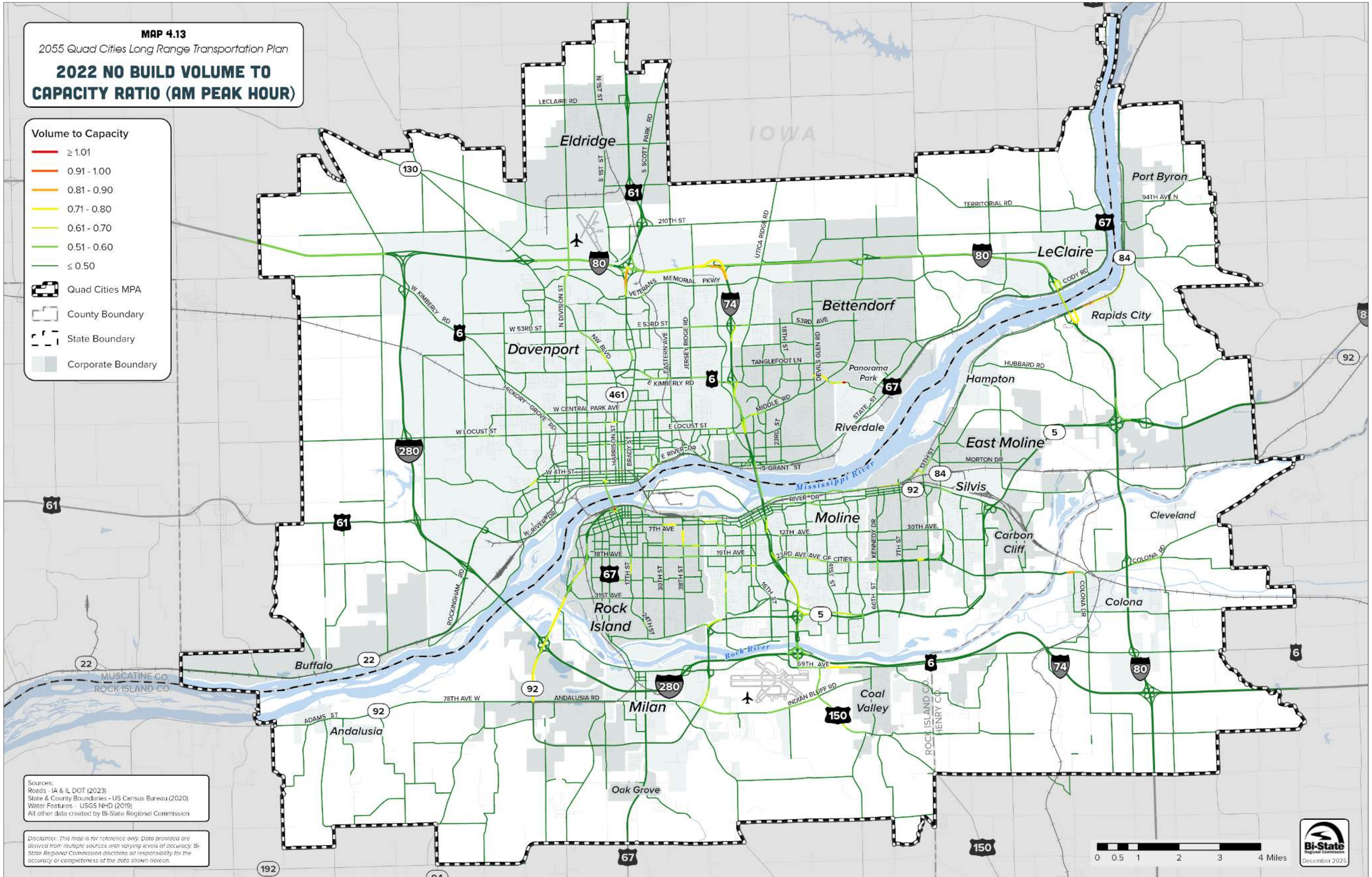
Projects from the unconstrained scenario analysis were evaluated, refined, and/or proposed to address the congested areas, as well as other existing conditions, such as capacity, pavement condition, and High Injury Network (HIN). A map of these priority-weighted roads has been included in the travel model documentation report. The final results of evaluating short-term (2029-2035) and long-term (2036-2055) projects on the network and their impact on the capacity of the road system are shown in Maps 4.19 and 4.20, respectively. These maps represent the fiscally-constrained network of projects with a reasonable expectation of funding being available to accomplish them. In some locations, such as I-80 at I-74 interchange, there may be a need to examine the travel demand further. Map 4.21 shows the fiscally constrained projects resulting from this process noted above for 2035 and 2055, differentiating between state and local projects.

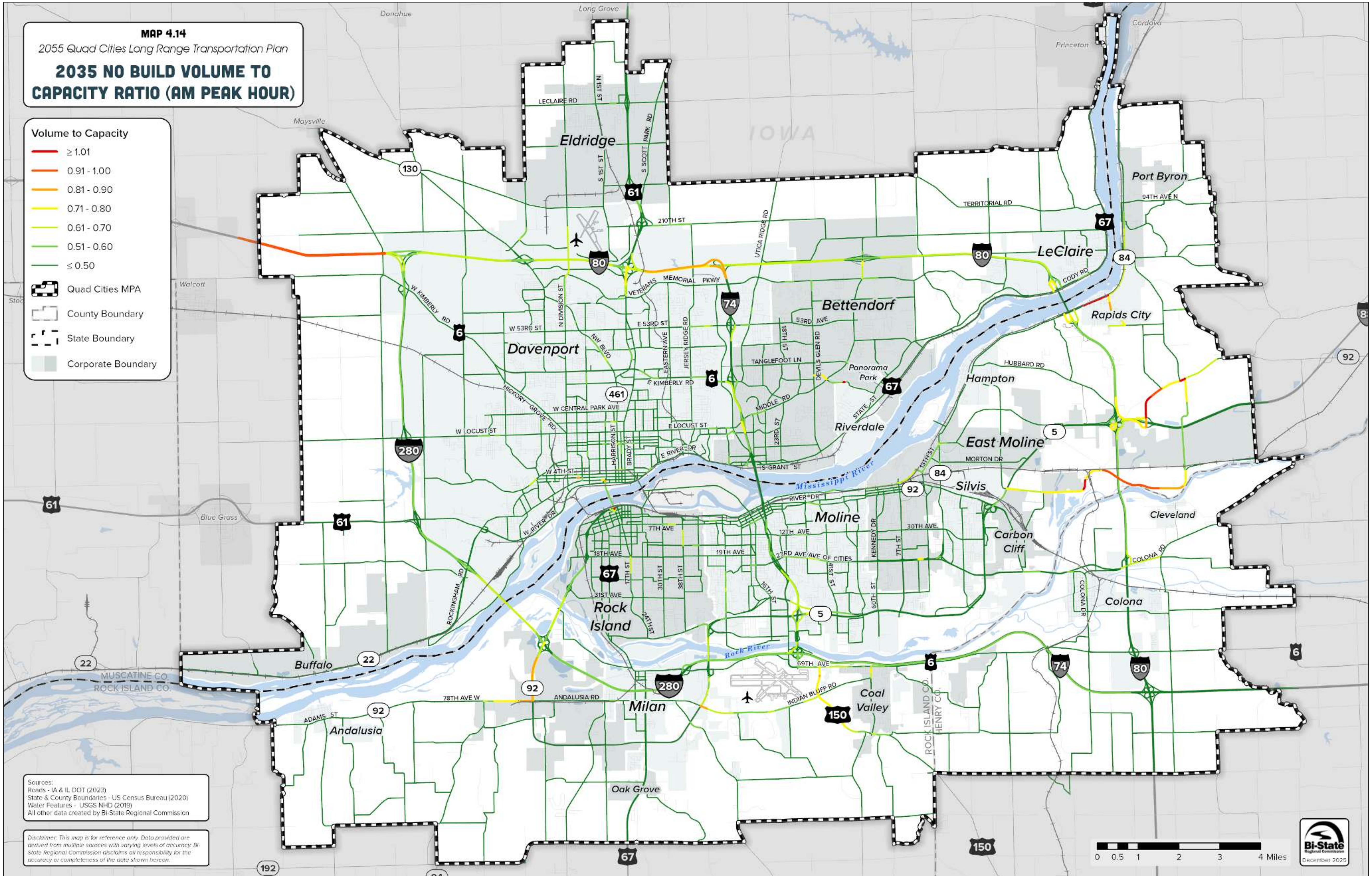
In reviewing the respective maps, some of the improvements appear to reduce congested areas, while others provide alternative routing via new roads. In addition, not all congestion concerns could be addressed for various reasons through road capacity expansion, but may be addressed using alternatives as part of the metro area's Congestion Management Process (CMP) report.

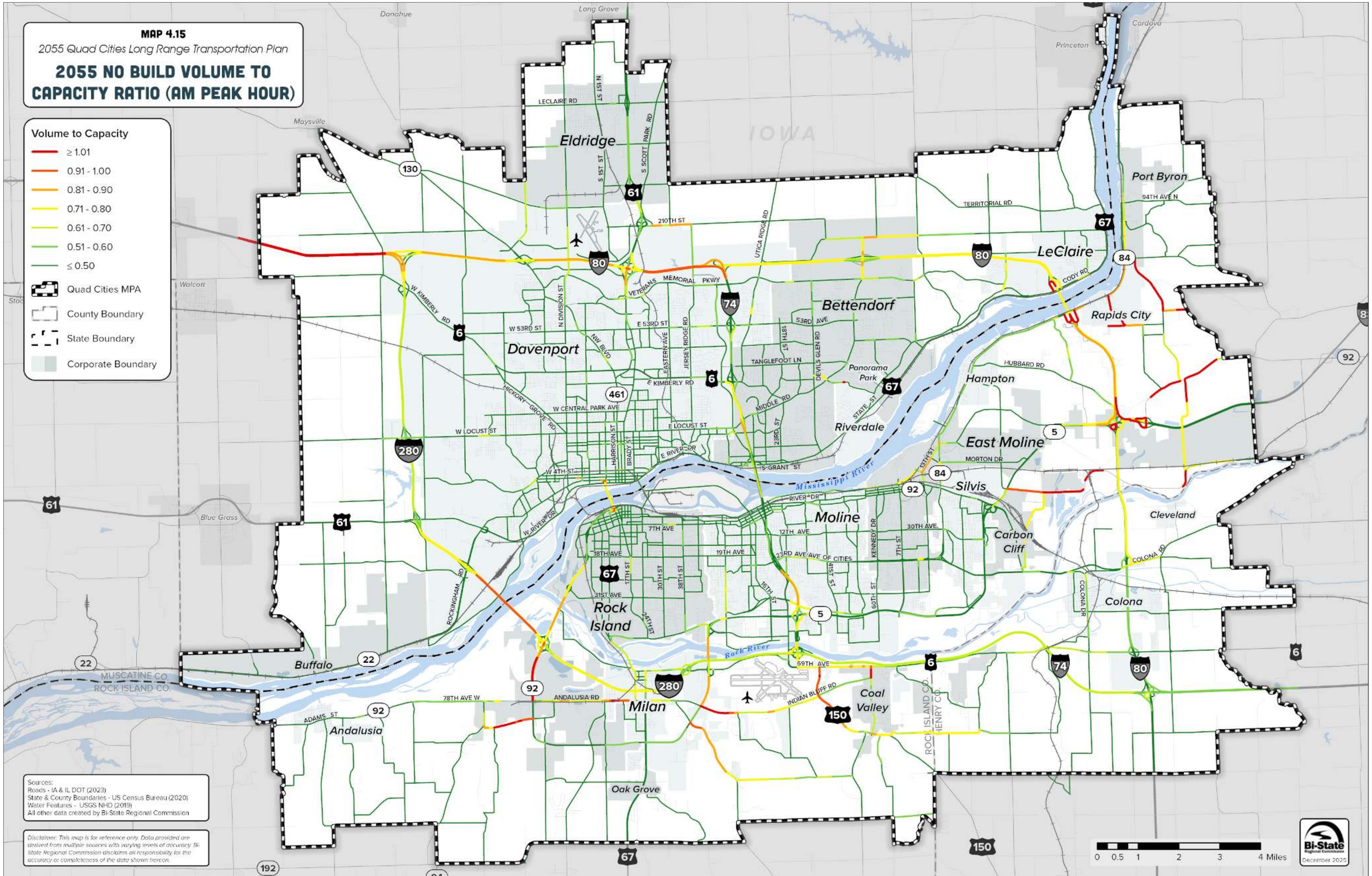
As a result of changing demographics, a few new congested locations were created that may need further study in the future. In addition, there may be a few locations where the Federal Functional Classification (FFC) should be reconsidered to reflect improvements in the connectivity of the road network. This type of change would affect the results of the V/C analysis.

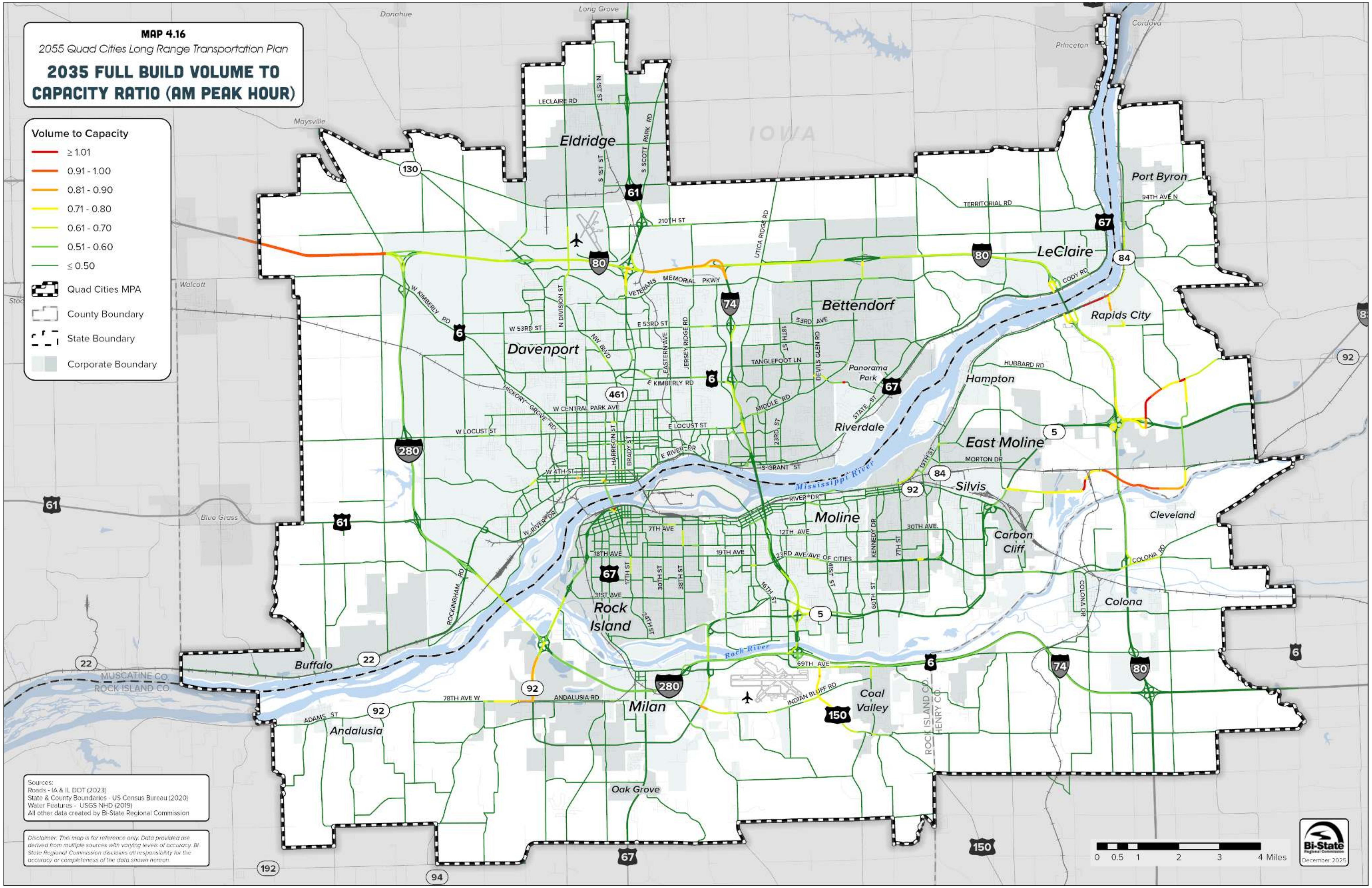
Projected Future Traffic for Fiscally Constrained Scenarios

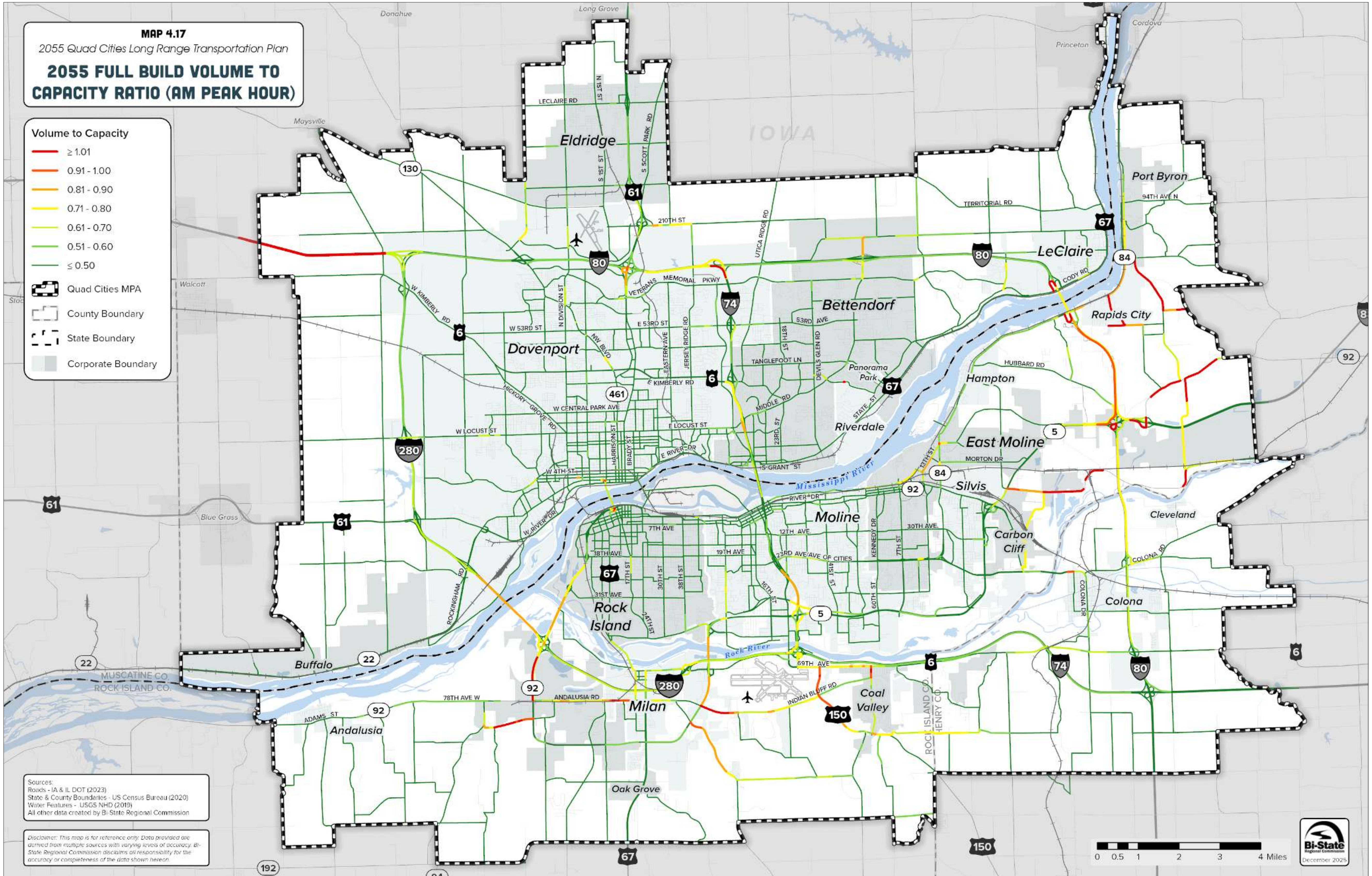
Maps 4.22 and 4.24 and their respective insets (Map 4.23 and 4.25) illustrate the projected daily traffic volumes for the 2035 and 2055 fiscally constrained network, showing where the higher volume traffic will be on the future road network. They are also viewable on an interactive mapping portal using a QR code on each map. As the plan is reevaluated, amended, and/or updated in the future, these issues of capacity and traffic can be further studied as part of the project development process, moving from long-range planning to implementation.

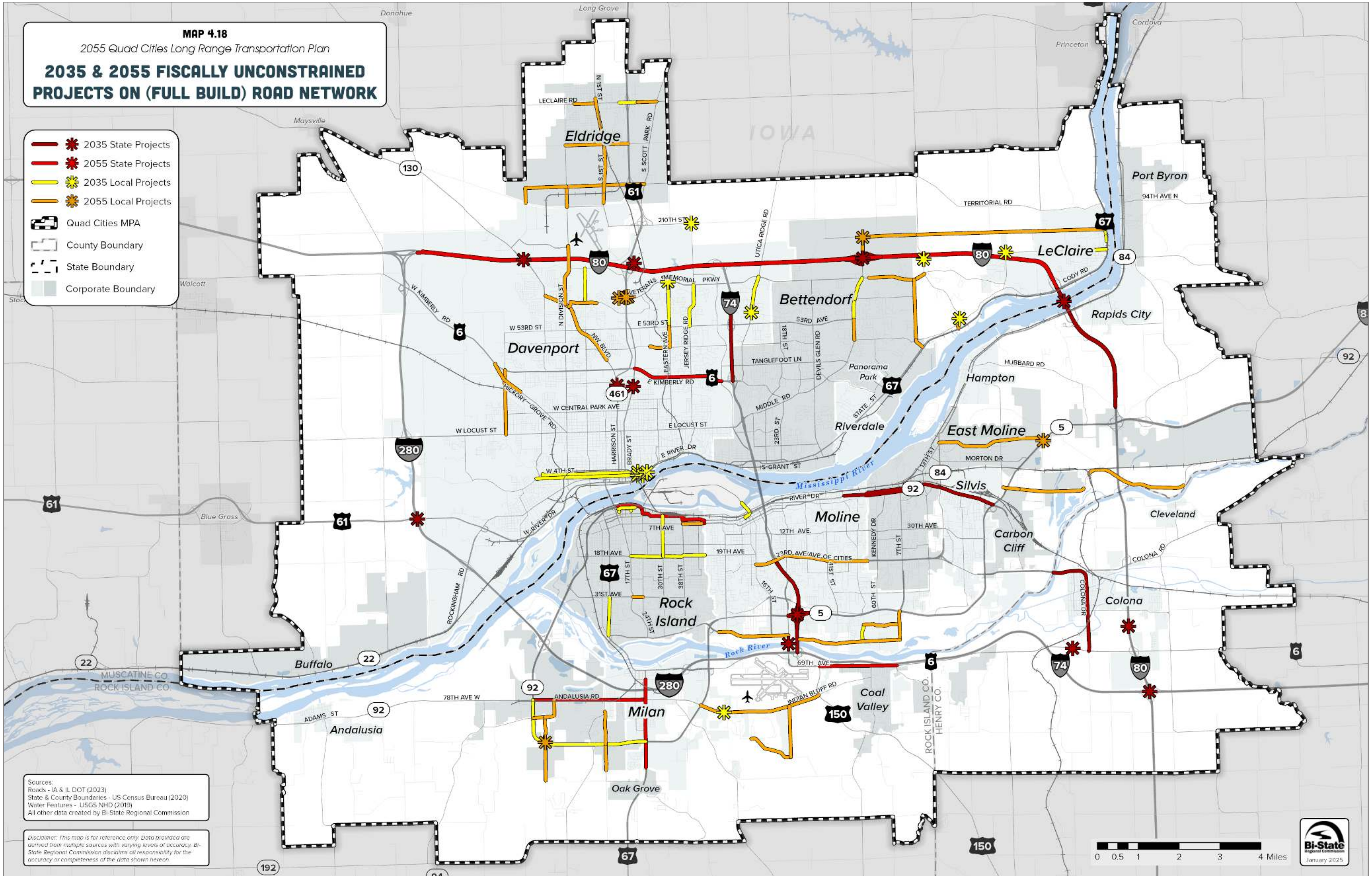

MAP 4.13
2055 Quad Cities Long Range Transportation Plan
2022 NO BUILD VOLUME TO CAPACITY RATIO (AM PEAK HOUR)
Volume to Capacity
≥ 1.01
0.91 - 1.00
0.81 - 0.90
0.71 - 0.80
0.61 - 0.70
0.51 - 0.60
≤ 0.50
Quad Cities MPA
County Boundary
State Boundary
Corporate Boundary
IOWA
Eldridge
Davenport
Bettendorf
LeClaire
Port Byron
Rapids City
Panorama Park
Riverdale
Hampton
East Moline
Silvis
Moline
Carbon Cliff
Cleveland
Colona
Rock Island
Milan
Coal Valley
Buffalo
Andalusia
Oak Grove
Mississippi River
Rock River
MUSCATINE CO.
ROCK ISLAND CO.
ROCK ISLAND CO.
HENRY CO.
Sources:
Roads - IA & IL DOT (2023)
State & County Boundaries - US Census Bureau (2020)
Water Features - USGS NHD (2019)
All other data created by Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.
0 0.5 1 2 3 4 Miles
Bi-State Regional Commission
December 2025

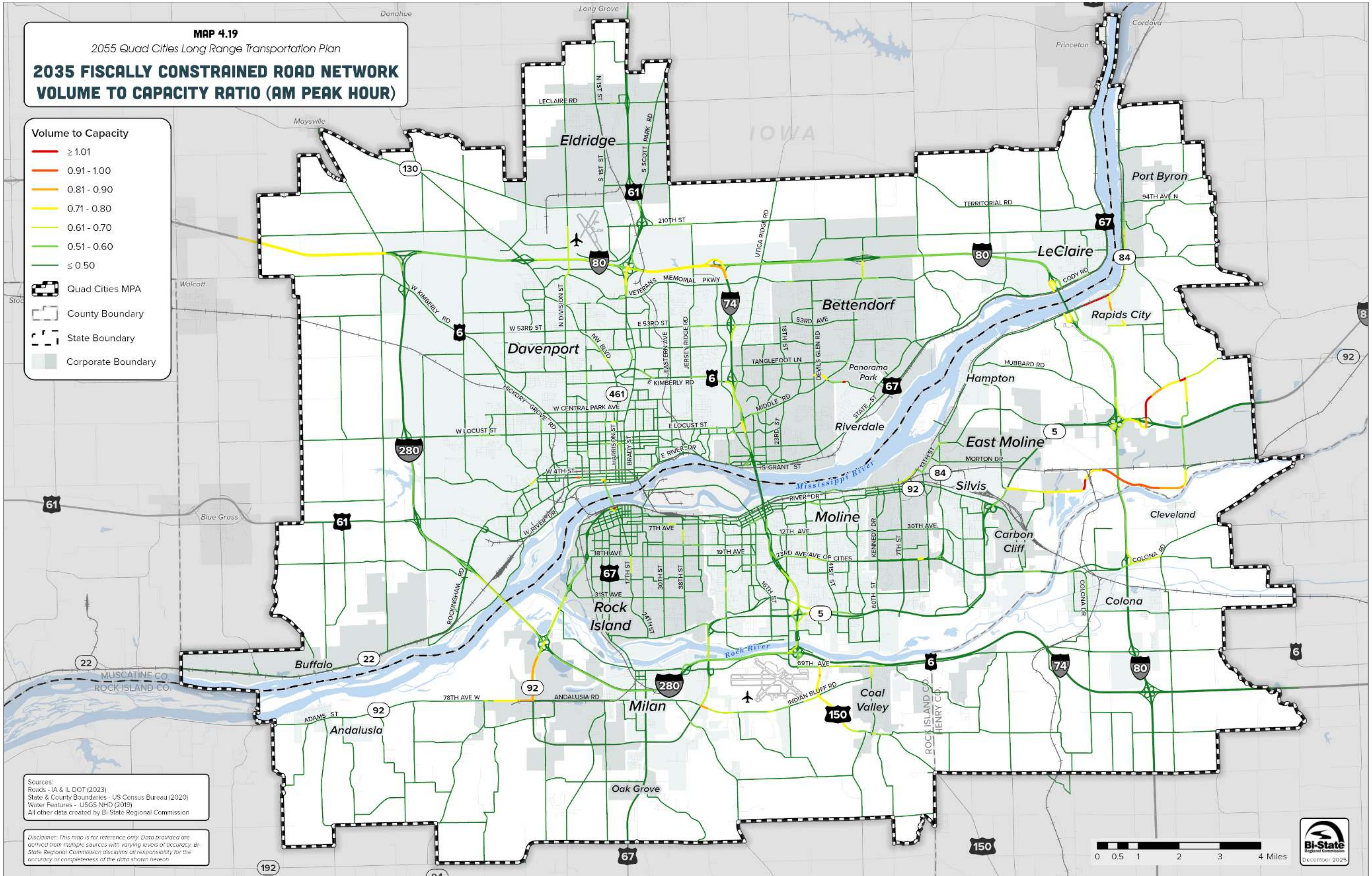

MAP 4.14
2055 Quad Cities Long Range Transportation Plan
2035 NO BUILD VOLUME TO CAPACITY RATIO (AM PEAK HOUR)
Volume to Capacity
≥ 1.01
0.91 - 1.00
0.81 - 0.90
0.71 - 0.80
0.61 - 0.70
0.51 - 0.60
≤ 0.50
Quad Cities MPA
County Boundary
State Boundary
Corporate Boundary
IOWA
Eldridge
Davenport
Bettendorf
Panorama Park
Riverdale
LeClaire
Port Byron
Rapids City
Hampton
East Moline
Silvis
Moline
Carbon Cliff
Cleveland
Colona
Rock Island
Milan
Coal Valley
Buffalo
Andalusia
Oak Grove
Mississippi River
Rock River
MUSCATINE CO.
ROCK ISLAND CO.
ROCK ISLAND CO.
HENRY CO.
Sources:
Roads - IA & IL DOT (2023)
State & County Boundaries - US Census Bureau (2020)
Water Features - USGS NHD (2019)
All other data created by Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.
0 0.5 1 2 3 4 Miles
Bi-State Regional Commission
December 2025

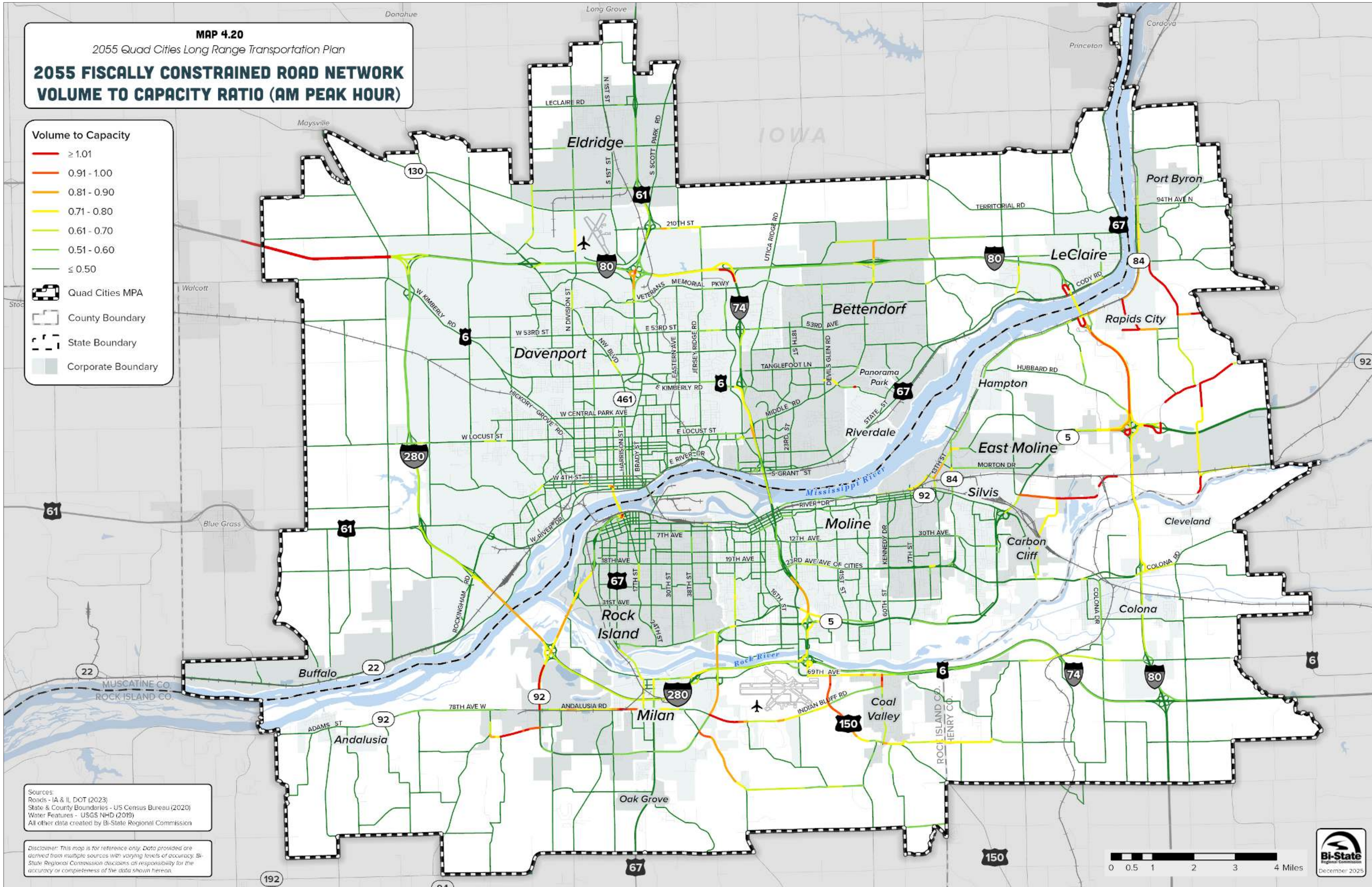

MAP 4.15
2055 Quad Cities Long Range Transportation Plan
2055 NO BUILD VOLUME TO CAPACITY RATIO (AM PEAK HOUR)
Volume to Capacity
≥ 1.01
0.91 - 1.00
0.81 - 0.90
0.71 - 0.80
0.61 - 0.70
0.51 - 0.60
≤ 0.50
Quad Cities MPA
County Boundary
State Boundary
Corporate Boundary
IOWA
Eldridge
Davenport
Bettendorf
LeClaire
Port Byron
Rapids City
Panorama Park
Riverdale
Hampton
East Moline
Silvis
Moline
Carbon Cliff
Cleveland
Colona
Rock Island
Milan
Coal Valley
Buffalo
Andalusia
Oak Grove
Mississippi River
Rock River
MUSCATINE CO.
ROCK ISLAND CO.
ROCK ISLAND CO.
HENRY CO.
Sources:
Roads - IA & IL DOT (2023)
State & County Boundaries - US Census Bureau (2020)
Water Features - USGS NHD (2019)
All other data created by Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.
0 0.5 1 2 3 4 Miles
Bi-State Regional Commission
December 2025

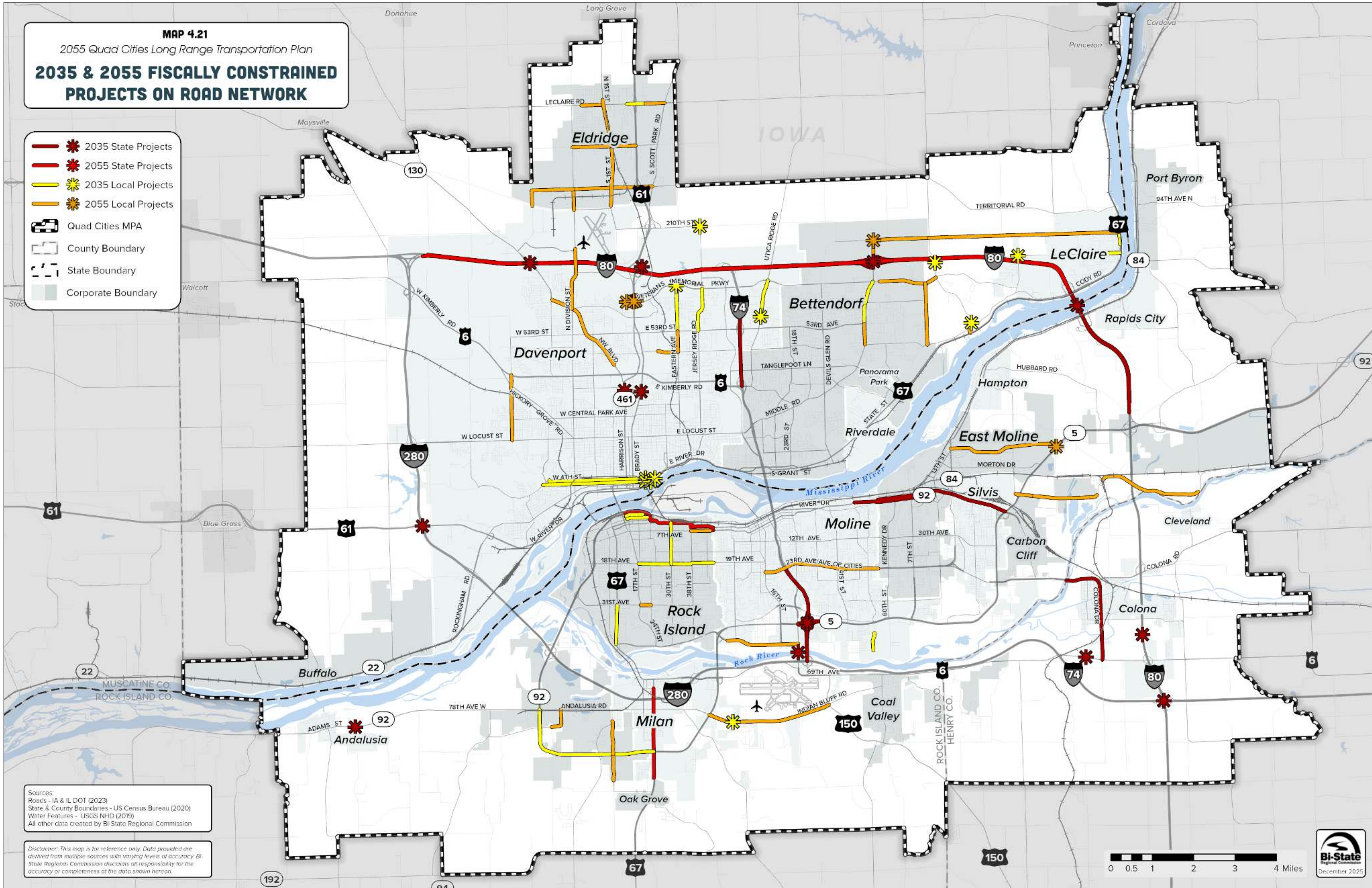

MAP 4.16
2055 Quad Cities Long Range Transportation Plan
2035 FULL BUILD VOLUME TO CAPACITY RATIO (AM PEAK HOUR)
Volume to Capacity
≥ 1.01
0.91 - 1.00
0.81 - 0.90
0.71 - 0.80
0.61 - 0.70
0.51 - 0.60
≤ 0.50
Quad Cities MPA
County Boundary
State Boundary
Corporate Boundary
IOWA
Eldridge
Davenport
Bettendorf
LeClaire
Port Byron
Rapids City
Hampton
Riverdale
Panorama Park
East Moline
Silvis
Moline
Carbon Cliff
Cleveland
Colona
Rock Island
Milan
Coal Valley
Buffalo
Andalusia
Oak Grove
Mississippi River
Rock River
MUSCATINE CO.
ROCK ISLAND CO.
HENRY CO.
Sources:
Roads - IA & IL DOT (2023)
State & County Boundaries - US Census Bureau (2020)
Water Features - USGS NHD (2019)
All other data created by Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.
0 0.5 1 2 3 4 Miles
Bi-State Regional Commission
December 2025

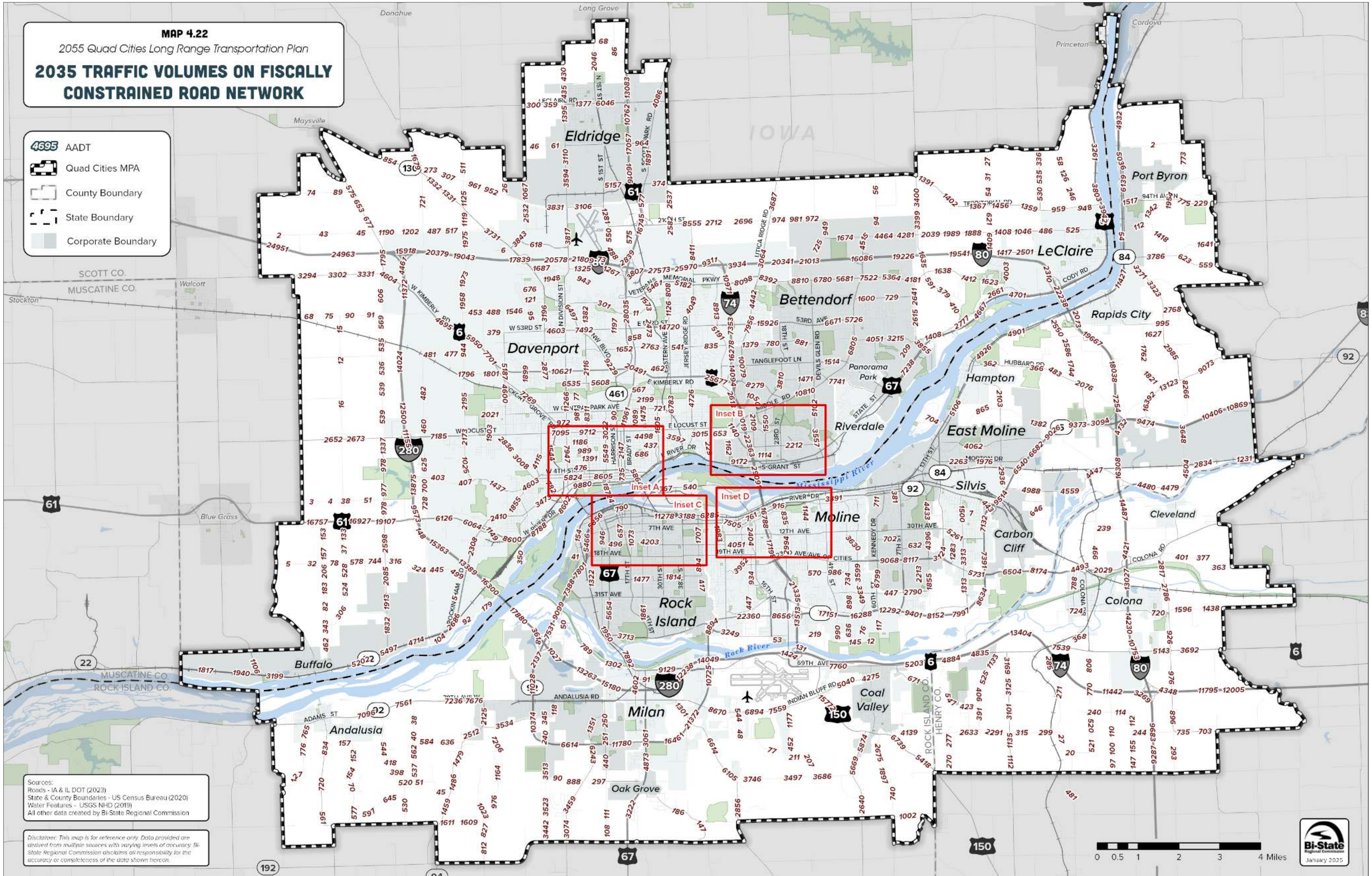

MAP 4.17
2055 Quad Cities Long Range Transportation Plan
2055 FULL BUILD VOLUME TO CAPACITY RATIO (AM PEAK HOUR)
Volume to Capacity
≥ 1.01
0.91 - 1.00
0.81 - 0.90
0.71 - 0.80
0.61 - 0.70
0.51 - 0.60
≤ 0.50
Quad Cities MPA
County Boundary
State Boundary
Corporate Boundary
IOWA
Eldridge
Davenport
Bettendorf
Panorama Park
Riverdale
LeClaire
Port Byron
Rapids City
Hampton
East Moline
Silvis
Moline
Carbon Cliff
Cleveland
Colona
Rock Island
Milan
Coal Valley
Buffalo
Andalusia
Oak Grove
Mississippi River
Rock River
MUSCATINE CO.
ROCK ISLAND CO.
ROCK ISLAND CO.
HENRY CO.
0 0.5 1 2 3 4 Miles
Bi-State Regional Commission
December 2025
Sources:
Roads - IA & IL DOT (2023)
State & County Boundaries - US Census Bureau (2020)
Water Features - USGS NHD (2019)
All other data created by Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.

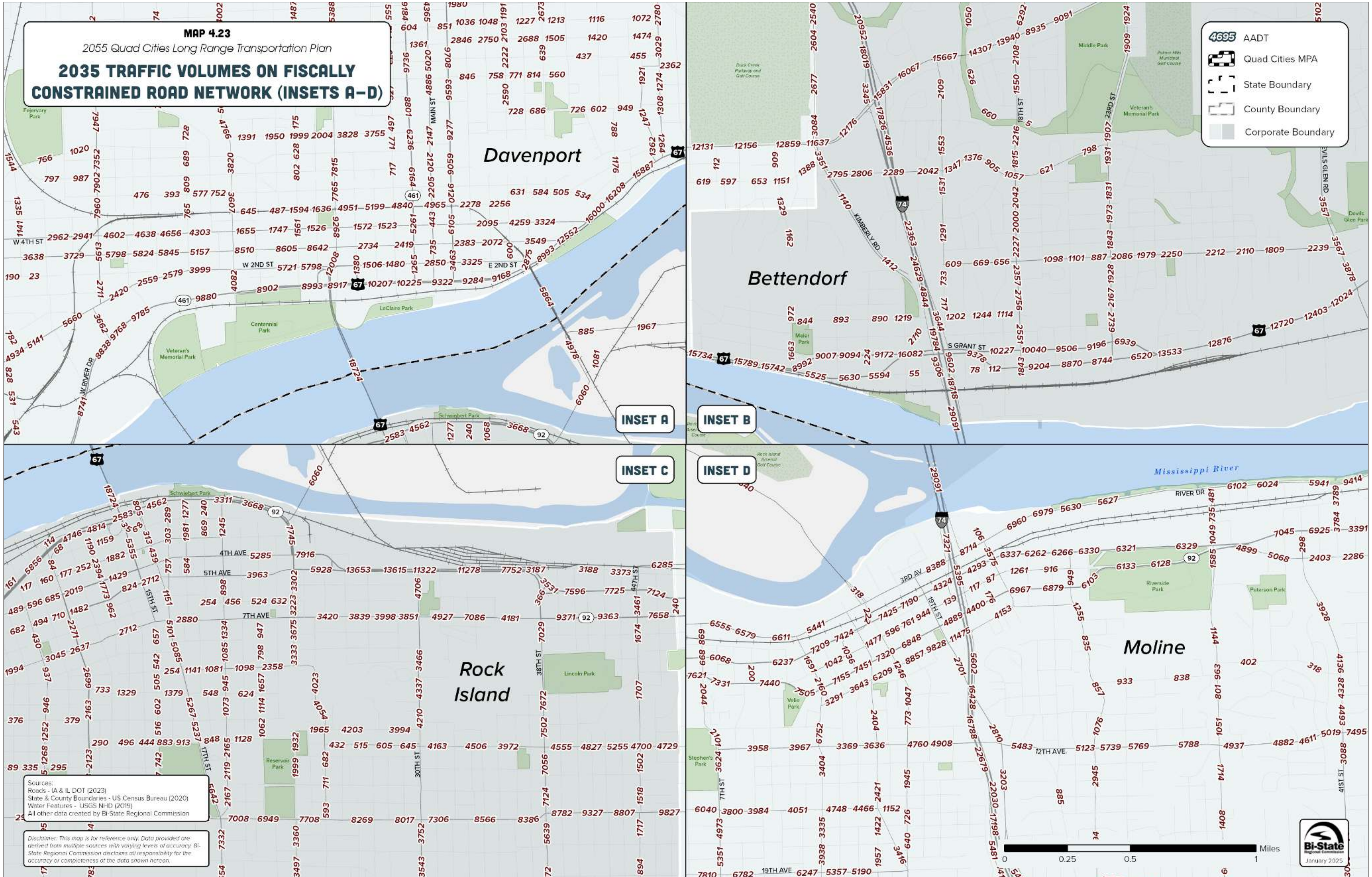

MAP 4.18
2055 Quad Cities Long Range Transportation Plan
2035 & 2055 FISCALLY UNCONSTRAINED PROJECTS ON (FULL BUILD) ROAD NETWORK
2035 State Projects
2055 State Projects
2035 Local Projects
2055 Local Projects
Quad Cities MPA
County Boundary
State Boundary
Corporate Boundary
IOWA
Eldridge
Davenport
Bettendorf
LeClaire
Port Byron
Rapids City
Panorama Park
Riverdale
Hampton
East Moline
Silvis
Moline
Carbon Cliff
Cleveland
Colona
Rock Island
Milan
Coal Valley
Andalusia
Buffalo
Oak Grove
Mississippi River
Rock River
MUSCATINE CO.
ROCK ISLAND CO.
ROCK ISLAND CO.
HENRY CO.
Sources:
Roads - IA & IL DOT (2023)
State & County Boundaries - US Census Bureau (2020)
Water Features - USGS NHD (2019)
All other data created by Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.
0 0.5 1 2 3 4 Miles
Bi-State Regional Commission
January 2025

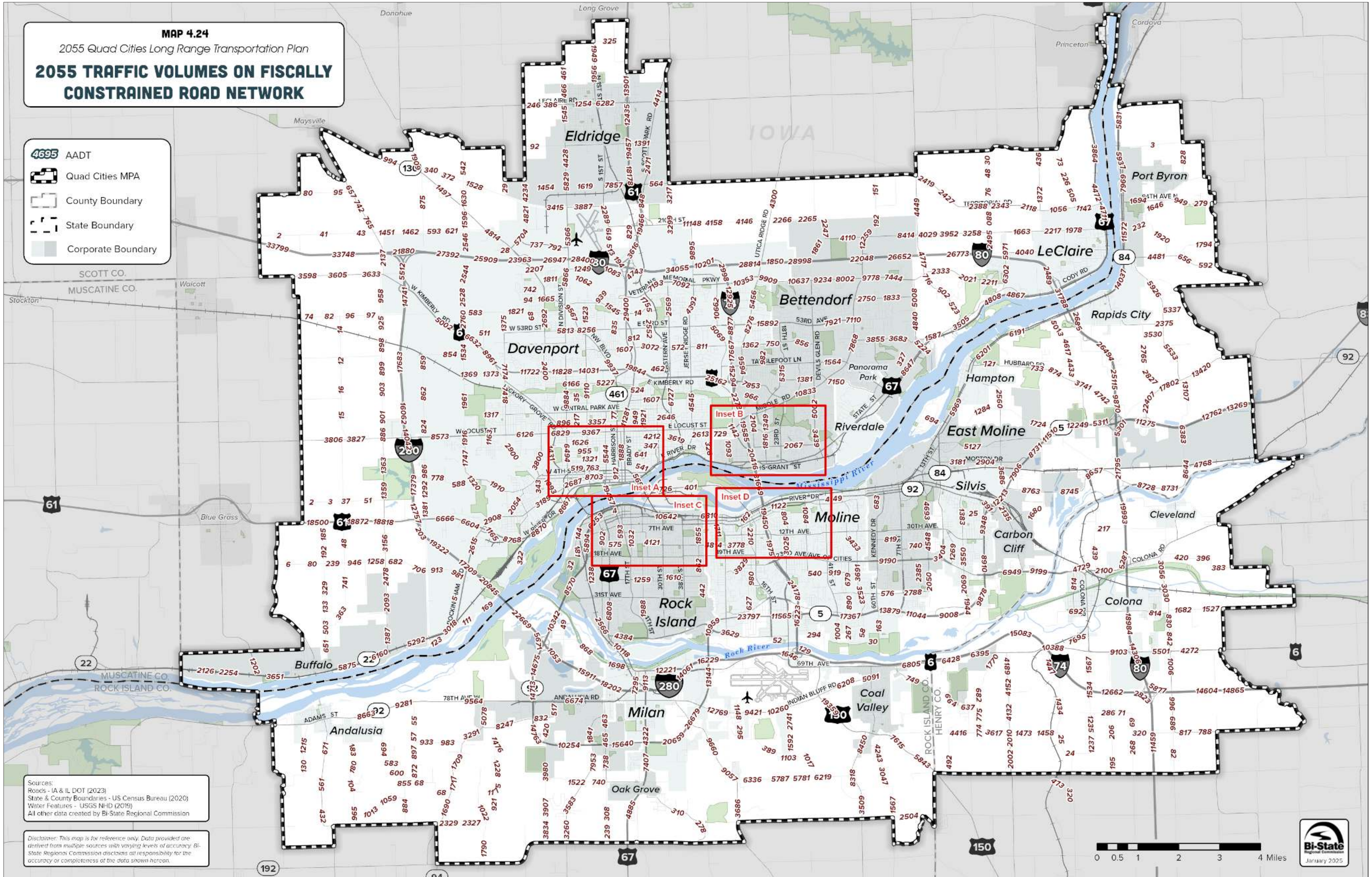

MAP 4.19
2055 Quad Cities Long Range Transportation Plan
2035 FISCALLY CONSTRAINED ROAD NETWORK
VOLUME TO CAPACITY RATIO (AM PEAK HOUR)
Volume to Capacity
≥ 1.01
0.91 - 1.00
0.81 - 0.90
0.71 - 0.80
0.61 - 0.70
0.51 - 0.60
≤ 0.50
Quad Cities MPA
County Boundary
State Boundary
Corporate Boundary
Sources:
Roads - IA & IL DOT (2023)
State & County Boundaries - US Census Bureau (2020)
Water Features - USGS NHD (2019)
All other data created by Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.
IOWA
Eldridge
Davenport
Bettendorf
Panorama Park
Riverdale
LeClaire
Port Byron
Rapids City
Hampton
East Moline
Silvis
Carbon Cliff
Moline
Cleveland
Colona
Rock Island
Milan
Coal Valley
Buffalo
Andalusia
Oak Grove
Mississippi River
Rock River
MUSCATINE CO.
ROCK ISLAND CO.
HENRY CO.
0 0.5 1 2 3 4 Miles
Bi-State Regional Commission
December 2025

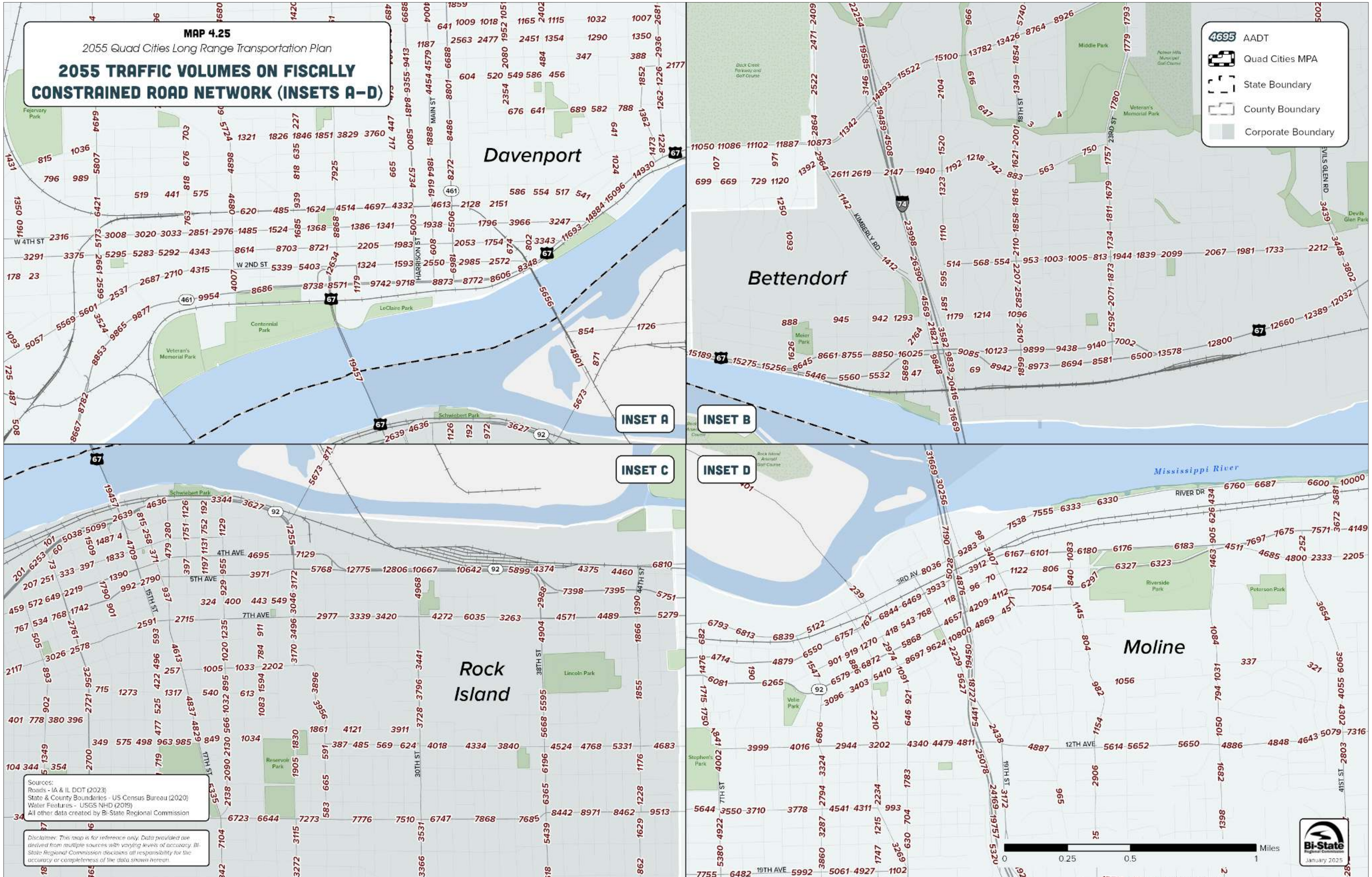

MAP 4.20
2055 Quad Cities Long Range Transportation Plan
2055 FISCALLY CONSTRAINED ROAD NETWORK
VOLUME TO CAPACITY RATIO (AM PEAK HOUR)
Volume to Capacity
≥ 1.01
0.91 - 1.00
0.81 - 0.90
0.71 - 0.80
0.61 - 0.70
0.51 - 0.60
≤ 0.50
Quad Cities MPA
County Boundary
State Boundary
Corporate Boundary
IOWA
Eldridge
Davenport
Bettendorf
Panorama Park
Riverdale
LeClaire
Port Byron
Rapids City
Hampton
East Moline
Silvis
Moline
Carbon Cliff
Cleveland
Colona
Rock Island
Milan
Coal Valley
Buffalo
Andalusia
Oak Grove
Mississippi River
Rock River
MUSCATINE CO.
ROCK ISLAND CO.
HENRY CO.
Sources:
Roads - IA & IL DOT (2023)
State & County Boundaries - US Census Bureau (2020)
Water Features - USGS NHD (2019)
All other data created by Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.
0 0.5 1 2 3 4 Miles
Bi-State Regional Commission
December 2025


MAP 4.21
2055 Quad Cities Long Range Transportation Plan
2035 & 2055 FISCALLY CONSTRAINED PROJECTS ON ROAD NETWORK
2035 State Projects
2055 State Projects
2035 Local Projects
2055 Local Projects
Quad Cities MPA
County Boundary
State Boundary
Corporate Boundary
IOWA
Eldridge
Davenport
Bettendorf
LeClaire
Port Byron
Rapids City
Hampton
Panorama Park
Riverdale
East Moline
Silvis
Moline
Carbon Cliff
Cleveland
Colona
Rock Island
Milan
Oak Grove
Coal Valley
Buffalo
Andalusia
Donahue
Long Grove
Princeton
Cordova
Maysville
Walcott
Blue Grass
Mississippi River
Rock River
MUSCATINE CO.
ROCK ISLAND CO.
HENRY CO.
LECLAIRE RD
TERRITORIAL RD
210TH ST
MEMORIAL PKWY
W 53RD ST
E 53RD ST
53RD AVE
TANGLEFOOT LN
E KIMBERLY RD
W CENTRAL PARK AVE
W LOCUST ST
E LOCUST ST
E RIVER DR
W 4TH ST
HUBBARD RD
MORTON DR
RIVER DR
7TH AVE
12TH AVE
18TH AVE
19TH AVE
23RD AVE/AVE OF CITIES
30TH AVE
31ST AVE
69TH AVE
78TH AVE W
ANDALUSIA RD
INDIAN BLUFF RD
ADAMS ST
COLONA RD
COLONA DR
CODY RD
94TH AVE N
Sources:
Roads - IA & IL DOT (2023)
State & County Boundaries - US Census Bureau (2020)
Water Features - USGS NHD (2019)
All other data created by Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.
0 0.5 1 2 3 4 Miles
Bi-State Regional Commission
December 2025


MAP 4.22
2055 Quad Cities Long Range Transportation Plan
2035 TRAFFIC VOLUMES ON FISCALLY CONSTRAINED ROAD NETWORK
AADT
Quad Cities MPA
County Boundary
State Boundary
Corporate Boundary
IOWA
Eldridge
Davenport
Bettendorf
Panorama Park
Riverdale
LeClaire
Port Byron
Rapids City
Hampton
East Moline
Silvis
Carbon Cliff
Moline
Rock Island
Milan
Coal Valley
Oak Grove
Andalusia
Buffalo
Cleveland
Colona
Long Grove
Donahue
Maysville
Princeton
Cordova
Walcott
Stockton
Blue Grass
SCOTT CO.
MUSCATINE CO.
ROCK ISLAND CO.
HENRY CO.
Mississippi River
Rock River
Inset A
Inset B
Inset C
Inset D
Sources:
Roads - IA & IL DOT (2023)
State & County Boundaries - US Census Bureau (2020)
Water Features - USGS NHD (2019)
All other data created by Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.
0 0.5 1 2 3 4 Miles
Bi-State Regional Commission
January 2025


MAP 4.23
2055 Quad Cities Long Range Transportation Plan
2035 TRAFFIC VOLUMES ON FISCALLY CONSTRAINED ROAD NETWORK (INSETS A-D)
4695 AADT
Quad Cities MPA
State Boundary
County Boundary
Corporate Boundary
Davenport
Bettendorf
Rock Island
Moline
Mississippi River
INSET A
INSET B
INSET C
INSET D
Sources:
Roads - IA & IL DOT (2023)
State & County Boundaries - US Census Bureau (2020)
Water Features - USGS NHD (2019)
All other data created by Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.
0 0.25 0.5 1 Miles
Bi-State Regional Commission
January 2025


MAP 4.24
2055 Quad Cities Long Range Transportation Plan
2055 TRAFFIC VOLUMES ON FISCALLY CONSTRAINED ROAD NETWORK
4695 AADT
Quad Cities MPA
County Boundary
State Boundary
Corporate Boundary
Sources:
Roads - IA & IL DOT (2023)
State & County Boundaries - US Census Bureau (2020)
Water Features - USGS NHD (2019)
All other data created by Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.
Eldridge
Davenport
Bettendorf
LeClaire
Port Byron
Rapids City
Hampton
Riverdale
East Moline
Silvis
Moline
Carbon Cliff
Cleveland
Colona
Rock Island
Milan
Coal Valley
Oak Grove
Andalusia
Buffalo
Panorama Park
IOWA
Mississippi River
Rock River
Inset A
Inset B
Inset C
Inset D
SCOTT CO.
MUSCATINE CO.
ROCK ISLAND CO.
HENRY CO.
0 0.5 1 2 3 4 Miles
Bi-State Regional Commission
January 2025


MAP 4.25
2055 Quad Cities Long Range Transportation Plan
2055 TRAFFIC VOLUMES ON FISCALLY CONSTRAINED ROAD NETWORK (INSETS A–D)
4695 AADT
Quad Cities MPA
State Boundary
County Boundary
Corporate Boundary
Davenport
Bettendorf
Rock Island
Moline
INSET A
INSET B
INSET C
INSET D
Mississippi River
W 4TH ST
W 2ND ST
HARRISON ST
MAIN ST
18TH ST
23RD ST
KIMBERLY RD
4TH AVE
5TH AVE
7TH AVE
15TH ST
17TH ST
30TH ST
38TH ST
44TH ST
3RD AV
RIVER DR
12TH AVE
19TH ST
7TH ST
19TH AVE
41ST ST
23RD AV/AV OF CITIES
Centennial Park
LeClaire Park
Veteran's Memorial Park
Schwiebert Park
Middle Park
Lincoln Park
Reservoir Park
Riverside Park
Peterson Park
Velie Park
Stephen's Park
Sources:
Roads - IA & IL DOT (2023)
State & County Boundaries - US Census Bureau (2020)
Water Features - USGS NHD (2019)
All other data created by Bi-State Regional Commission
Disclaimer: This map is for reference only. Data provided are derived from multiple sources with varying levels of accuracy. Bi-State Regional Commission disclaims all responsibility for the accuracy or completeness of the data shown hereon.
0 0.25 0.5 1 Miles
Bi-State Regional Commission
January 2025