2040 NEBRASKA

Good Life. Great Journey.

STATEWIDE TRANSPORTATION PLAN

Existing Inventory and Conditions

March 25, 2020

This technical memorandum comprises the efforts under Task 3 of the Nebraska Department of Transportation's Statewide 2040 Transportation Plan. Contained within this memorandum are data and information relating to the existing transportation systems throughout the State of Nebraska.

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1 Introduction

1 Introduction

Nebraska's existing transportation system is the result of over 150 years of continuous effort to develop, improve, and maintain high quality, reliable infrastructure to support the movement of goods and people. The state's interdependent network of highways, streets, airports, rail lines, transit systems, and bicycle and pedestrian networks provide the means by which Nebraska's residents and visitors access the state's cities, towns, villages, recreational areas, and the markets beyond.

This transportation system is owned, operated, and maintained by a series of state and local governmental agencies as well as private enterprise. Generally, this technical memorandum is focused on the infrastructure under the control of the Nebraska Department of Transportation (NDOT). Where available, information relating to locally owned transportation systems or systems operated or maintained by private enterprise is included.

This technical memorandum identifies the modal systems included within Nebraska's transportation network, reviews their condition, performance, and distribution throughout Nebraska's 77,421 square mile territory. Where federal performance measures have been developed, this memorandum identifies and relates the current conditions or performance of the measures.

1.1 Structure

This technical memorandum will examine topics pertinent to the existing condition of Nebraska's existing transportation system. In Nebraska, the state, counties, and municipalities all share responsibilities for some portion of the transportation system. For example, NDOT owns, operates and maintains the state highway system as specified by state statute; counties and municipalities respectively control what is referred to colloquially as the 'local' system. In certain cases, NDOT may enter into maintenance agreements under which a local community maintains a state highway that functions as a local street within a community.

An assessment of the condition and extent of Nebraska's roadways, bridges, and intelligent transportation systems (ITS) is examined in sections 2 through 4. Nebraska's freight transportation infrastructure is discussed in section 5.

The existing public transportation network is discussed in section 6. NDOT is currently in the third phase of a statewide mobility management program. This overarching project has identified the state of public transportation in Nebraska, expanded to identify and assess public transportation needs, and is now in the implementation phase.

Section 7 reviews the existing public aviation facilities in Nebraska. In 2017, Nebraska Department of Roads merged with the Nebraska Department of

Aeronautics, forming the Nebraska Department of Transportation, bringing all transportation modes under one state agency.

Section 8 reviews available information relating to the extent of the bicycle and pedestrian transportation systems throughout Nebraska. This section highlights the importance of Nebraska's Natural Resource Districts (NRD) in providing recreational trail facilities as a part of their core mission of resource conservation and flood control.

Section 9 reviews publicly available information regarding access to broadband internet by county. It should be noted that the most recent data available at the time of writing is from December of 2018. It is understood numerous deployments of enhanced technology and an expansion of fiber optic telecommunications equipment has occurred since the data was collected and access to broadband internet may be more readily available than reported in this section.

The final section of this technical memorandum highlights key findings.

2 Roadways

2 Roadways

NDOT is responsible for the operations, maintenance, and improvements to the state's interstate and highway network. The highway network throughout the state can be classified into the following categories: interstate system, national highway system, U.S. routes, state highways, and local roads. These systems sometime overlap - for example, a route Identified on the national highway system may also be designated as a U.S. numbered route and a state highway. In other cases, a U.S. numbered route may also be maintained by a local jurisdiction (county or municipality) while also being on the NHS and state highway system.

This section will examine the extent of these networks, review existing traffic data, and outline their ownership, configuration, and existing condition.

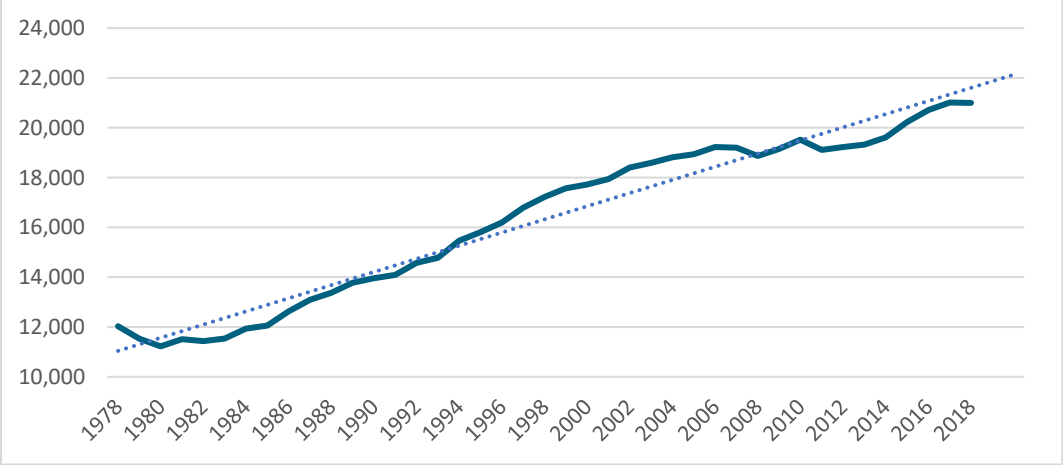
2.1 System Usage

This section reviews the existing system usage in terms of vehicle miles traveled and truck travel time reliability (TTTR). These measures provide a benchmark for the total system usage within Nebraska (for motorized vehicles) and an approximation of the performance of the entire system through TTTR. TTTR uses data collected from sensors in the existing freight fleet to provide performance information on the National Highway System (NHS).

2.1.1 Vehicle Miles Traveled

Vehicle Miles Traveled (VMT) is the aggregation of travel by all vehicles within a given geography during a specified time period. VMT data is used in transportation planning to identify trends in travel demand and behavior. Typically, VMT is calculated annually for all automobile and truck traffic within a state or region. VMT data for Nebraska is available beginning in 1978. VMT trends for the period of 1978 - 2018 are shown in **Figure 2-1.**

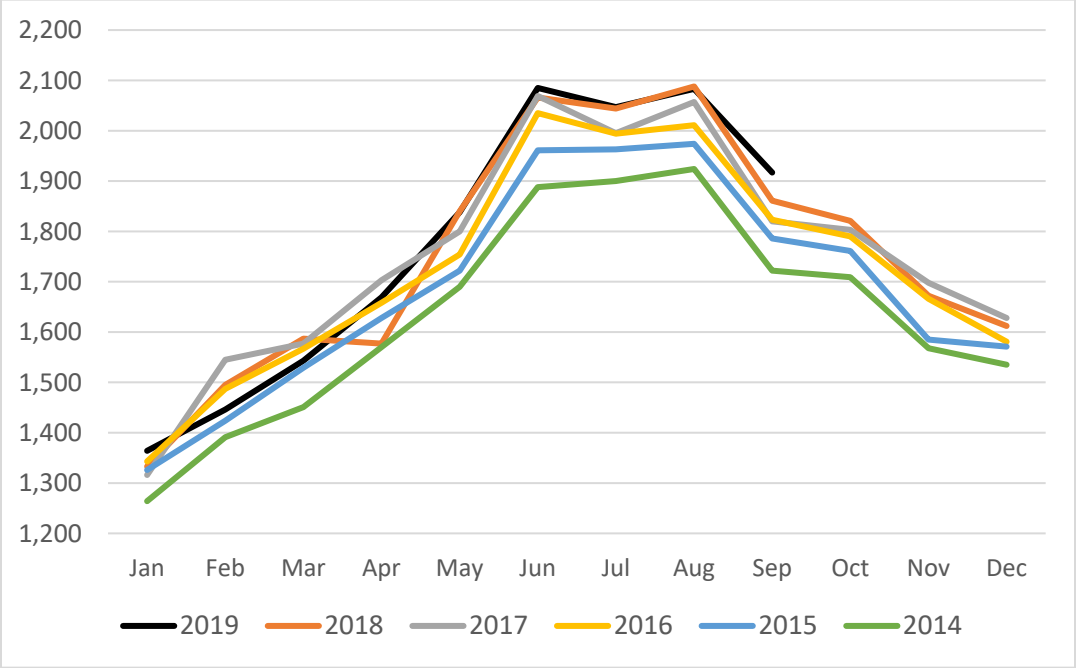
Figure 2-1: Nebraska Annual VMT (1978-2018)



Nebraska's VMT trends show an annual average increase of 1.42 percent for the period of 1978 - 2018 (the period for which complete data is available). Decline in annual VMT has only occurred seven times throughout the reporting period. Most recently in 2017 (-0.07%). Note that annual VMT declined from 2007 to 2008 during the recession and largely remained static during the recovery years until increasing again in 2014. [1]

VMT also varies considerably month to month due to seasonal changes in travel behavior, demands of the economy, and personal schedules. Monthly VMT data for Nebraska is available from January 1978 to October 2019. An excerpt of this data is shown in **Figure 2-2** for the period of January 2014 through September 2019.[2] VMT in Nebraska displays a clear peak during the late spring and summer (May - August).

Figure 2-2: Nebraska VMT by Month, 2014-2019



2.1.2 Truck Travel Time Reliability Index

The interstate Truck Travel Time Reliability (TTTR) Index is a federal performance measure used to assess the reliability of freight travel on the interstate system. TTTR is calculated as the ratio of 95th percentile travel time as compared to the 50th percentile travel time for freight vehicles based on data recorded by transponders within the freight vehicles. TTTR is reported annually through the National Performance Monitoring Research Data Set (NPMRDS).[3]

Travel times are reported for five segments throughout the day to determine the travel time percentiles used in the TTTR calculation. The periods include AM peak, Mid-day, PM Peak, Overnight and Weekend. AM peak, Mid-day, PM

peak and Overnight are based upon data gathered Monday through Friday. Weekend data is gathered on Saturday and Sunday. Reporting time periods are shown in **Table 2-1**.

Table 2-1: NPMRDS Reporting Periods

Reporting Period	Day(s)	Time
AM Peak	M-F	6am - 10am
Mid-Day	M-F	10am - 4pm
PM Peak	M-F	4pm - 8pm
Overnight	M-F	8pm - 6am
Weekend	Sa-Su	6am - 8pm

Source: FHWA

The federal performance measure for TTTR is the TTTR Index, this measurement is determined by evaluating the weighted average of maximum TTTR of the five periods noted in **Table 2-1.** The maximum TTTR is multiplied by the segment length on which it was observed, and the summation of the weighted values are divided by the total length of the interstate in Nebraska. The formula for this calculation is below.[4]

$$TTTR\ Index = \frac{\sum_{i=1}^{T}(SL_i \times maxTTTR_i)}{\sum_{i=1}^{T}(SL_i)}$$

Nebraska's baseline TTTR Index for the interstate system was reported as 1.10 for 2018. The 2-year TTTR Index target is 1.10 for interstate highways. Likewise, the 4-year target for interstate highway TTTR Index is 1.10. [5]

2.2 Transportation System Mileage

2.2.1 National Highway System (NHS)

The NHS is a network of roadways providing critical access and mobility to support the nation's economy and defense. This network is designated by the U.S. DOT in cooperation with state departments of transportation, local officials, and metropolitan planning organizations (MPO).

The most recent composition of the NHS within Nebraska (as updated 6/14/2019) is shown in **Figure 2-3.** Insets of the Lincoln and Omaha metropolitan areas are shown in **Figure 2-4.**

Figure 2-3: National Highway System Map

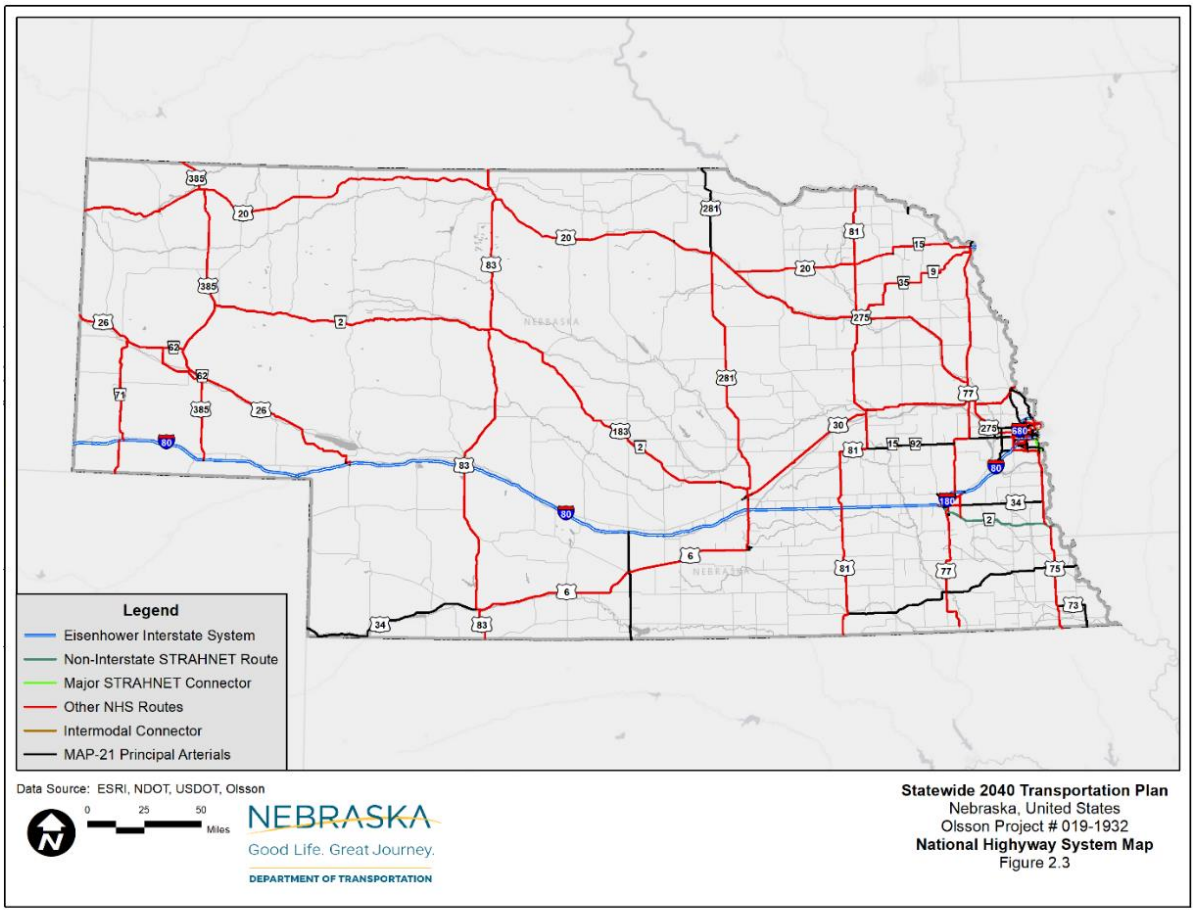
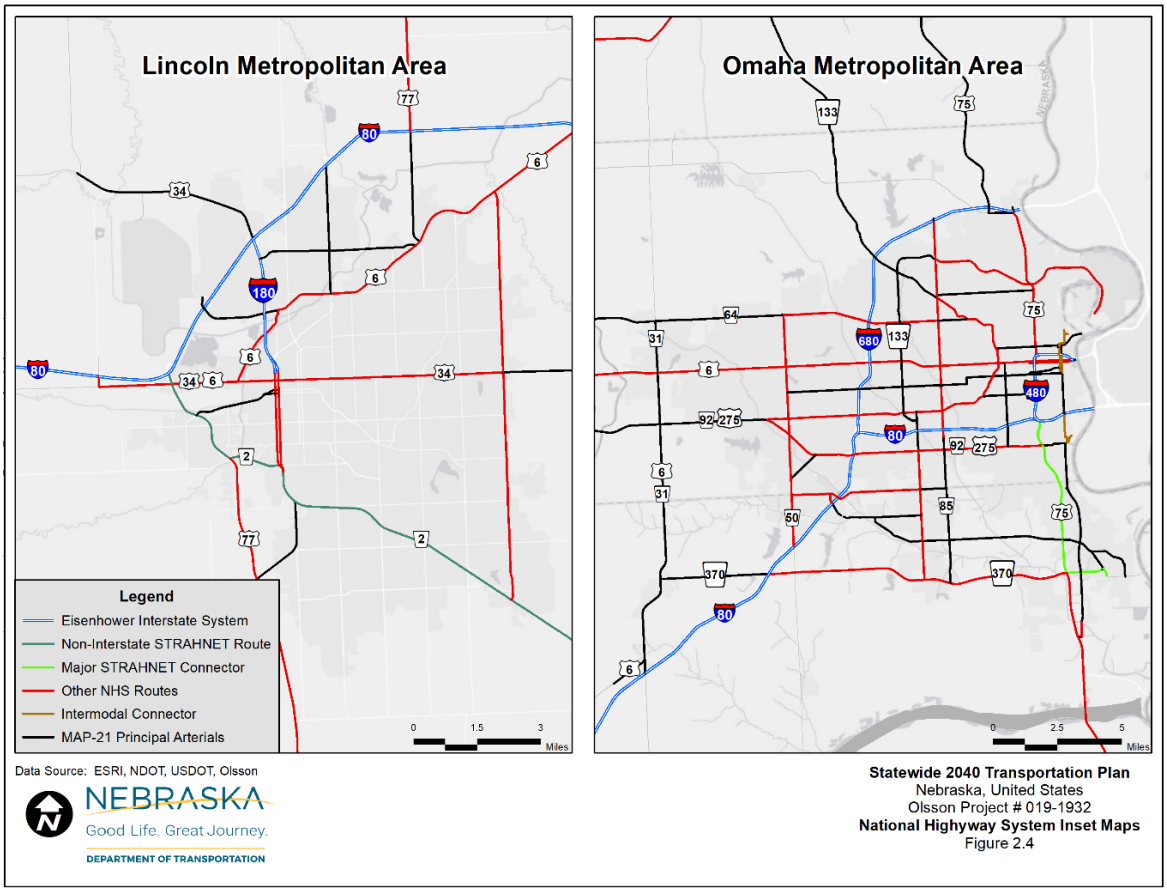


Figure 2-4: National Highway System Inset Maps



The NHS includes the following subsystems (specific routes may be designated to more than one subsystem):

- **Eisenhower Interstate System:** originally designated by the Federal Aid Highway Act of 1956 and completed in 1992, this network of high speed, high capacity roads serve long distance and freight uses throughout the US.
- **Other Principal Arterials:** roadways in urban and rural areas that provide access to other arterials, major ports, airports, public transportation facilities, or other intermodal transportation facilities.
- **Strategic Highway Network (STRAHNET):** highways important to the strategic defense policy in providing access, continuity and emergency capabilities for defense purposes.
- **Major Strategic Highway Network Connectors:** highways providing access between major military installations and highways which compose the STRAHNET.
- **Intermodal Connectors:** highways providing access between major intermodal facilities and the above four subsystems of the NHS.

During the adoption of the two year federal transportation reauthorization Moving Ahead for Progress in the 21st Century Act (MAP-21), on July 6, 2012, states had the ability to include existing principal arterials not previously designated as NHS routes as a part of the adopted NHS system. Following adoption, these existing principal arterials were added to the NHS system and noted as MAP-21 Principal Arterials, unless the state DOT (in cooperation with the MPOs) opted to not include the arterials in the update.

Nebraska's NHS system is predominantly composed of interstate and state highway routes, though several urban principal arterials, owned by local jurisdictions (cities, counties, etc.), are included in the system. The system mileage by subsystem is shown in **Table 2-2.**

Table 2-2: NHS System Mileage by Classification

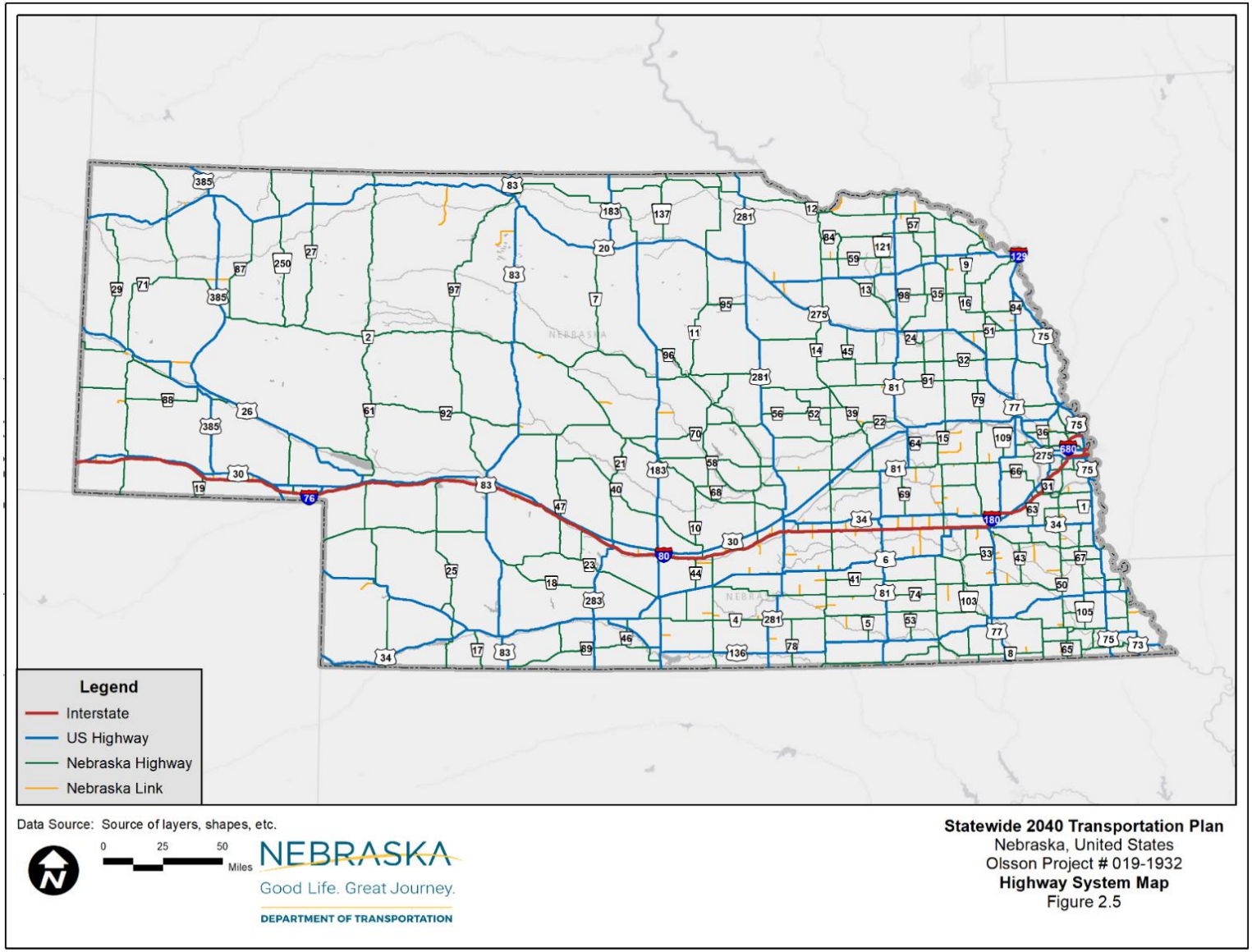
System	Centerline Miles
Eisenhower Interstate System	483
Non-Interstate STRAHNET	55
Major STRAHNET Connector	8
Other NHS Route	2540
Intermodal Connector (IC)	5
MAP-21 Principal Arterial	656
Total	3,747

Source: USDOT, FHWA, 2019

2.2.2 State Highway System

Nebraska's state highway system is composed of the Interstate System, US Routes, Nebraska state highways, and Nebraska state links. The NDOT system (including the Interstate System, US Route System, and state highway system) is shown in **Figure 2-5** on the following page.

Figure 2-5: Nebraska Highway System Map



Currently, 483 centerline miles of interstate highways traverse Nebraska. Most of this mileage is on I-80. I-80 connects New Jersey to California, traversing 11 states in all. Of these 11 states, Nebraska contains the largest portion of I-80's centerline miles. Nebraska was the first state in the nation to complete its mainline interstate in 1974.[6]

In all, two primary and three branch interstates exist in Nebraska:

2.2.2.1 *Primary Interstates*

- Interstate 76
  - Connects Denver, Colorado to I-80 near Brule, Nebraska.
- Interstate 80
  - Traverses the length of Nebraska from Pine Bluffs, Wyoming to Council Bluffs, Iowa.

2.2.2.2 *Branch Interstates*

- Interstate 180
  - Connects downtown Lincoln, Nebraska to I-80.
- Interstate 480
  - Connects downtown Omaha, Nebraska to Council Bluffs, Iowa; I-80 and I-29 (in Iowa).
- Interstate 680
  - Serves as a northern beltway connecting I-80 in Omaha, Nebraska to I-29 near Crescent, Iowa.

2.2.2.3 *US Routes*

Nebraska is served by 10 primary US Routes. These two-digit routes are numbered based upon the primary direction of travel. Odd-numbered routes predominantly move north-south while even-numbered routes travel east-west. Similar to the interstate system, several branch or spur routes also traverse the state. US Routes in Nebraska are shown in **Table 2-3** on the following page.

Table 2-3: US Routes in Nebraska

Route	From	To	Details
US 6	Holyoke, CO	Council Bluffs, IA	Generally paralleling I-80 (south of the interstate).
US 20	WY border near Harrison, NE	IA border near South Sioux City, NE	Principal east/west route north of I-80 or US 30.
US 26	Torrington, WY	Ogallala, NE	Parallels the North Platte, River
US 30	Pine Bluffs, WY	IA border near Blair, NE	Generally paralleling I-80 (north of the interstate).
US 34	Haigler, CO	I-29 east of La Platte, NE	Primary route
US 73	KS border near Falls City, NE	US 75 in Dawson, NE	Primary route
US 75	KS border near Dawson, NE	I-129 near South Sioux City, NE	Primary route
US 77	KS border near Wymore, NE	IA border near South Sioux City, NE	Primary route
US 81	KS border in Chester, NE	SD border north of Valentine, NE	Primary route
US 136	MO border near Brownville, NE	US 6/34 near Edison, NE	Spur route
US 138	CO border near Julesburg, CO	Big Springs, NE	Spur route
US 159	KS border south of Falls City, NE	MO border near Rulo, NE	Spur route
US 275	US 20/281 in O'Neil, NE	IA border in Omaha, NE	Branch route
US 281	KS border south of Red Cloud, NE	SD border near Spencer, NE	Branch route
US 283	KS border south of Bever City, NE	US 30 in Lexington, NE	Spur route
US 385	CO border near Julesburg, CO	SD border north of Chadron, NE	Branch route

2.2.2.4 State Highways, Links and Spurs

Numerous Nebraska state highways, links, and spurs fill the gaps between the Interstate and US Numbered Route Systems connecting Nebraska's incorporated communities to the national transportation system per Nebraska Revised Statute 39-1339 (1) and Nebraska Revised Statute 39-1339(2). These statutes require NDOT to provide a state-owned, operated, and maintained connection to Nebraska communities of the metropolitan class (Omaha), primary class (Lincoln), first class cities, second class cities, and incorporated villages.

2.2.3 Local Transportation System

Nebraska's local transportation network includes county and municipal roads. These facilities vary in composition and condition from minimum maintenance roads composed of soils to multilane arterial roadways paved in concrete. In

Nebraska, maintenance of and improvement to facilities that are not located upon the designated state highway system are the responsibility of the local jurisdiction.

MPOs are federally required in urbanized areas with a population of more than 50,000 people. Within Nebraska, there are four urbanized areas with populations over 50,000. Nebraska's MPOs include:

- Grand Island Area Metropolitan Planning Organization (GIAMPO)
  - Grand Island, Nebraska
- Lincoln Metropolitan Planning Organization (LMPO)
  - Lincoln, Nebraska
- Metropolitan Area Planning Agency (MAPA)
  - Omaha, Nebraska and Council Bluffs, Iowa area
- Siouxland Interstate Metropolitan Planning Council (SIMPCO)
  - South Sioux City, Nebraska; Sioux City, Iowa; and Dakota Dunes, South Dakota area

Once an MPO's population reaches 200,000, the MPO is designated as a Transportation Management Area (TMA). Of the four MPOs in Nebraska, LMPO and MAPA have been designated as TMAs. MPOs designated as TMAs receive apportioned funding through the Federal Highway Administration (FHWA) of the United States Department of Transportation to carry out transportation improvements within the MPO jurisdiction. TMAs are also subject to additional planning requirements, such as the development of a congestion management process and performance measure reporting. [7]

In Nebraska, MPO funded improvements typically occur on the non-state system, though examples exist when NDOT projects have been funded through MPO dollars. Information relating to the characteristics of the local transportation system is not readily available as municipalities and counties develop data at their discretion.

2.3 Pavement Condition

Pavement condition information availability varies throughout Nebraska. NDOT initially began recording pavement roughness using the present serviceability index (PSI) on all state-maintained highways in 1973. NDOT standardized a method for measuring surface condition on Nebraska roadways in 1985 based upon methods used by the Washington and Pennsylvania DOTs. The consolidated method was unveiled as the Nebraska Pavement Management System Manual (NPMS). Initially, the system was used only for NDOT facilities but was expanded to include locally owned NHS facilities in 1994.

Subsequent updates to the data collection methodology and refinements to data analysis provided the opportunity to develop NDOT's Pavement Optimization Program (POP). The POP was developed internally by NDOT in

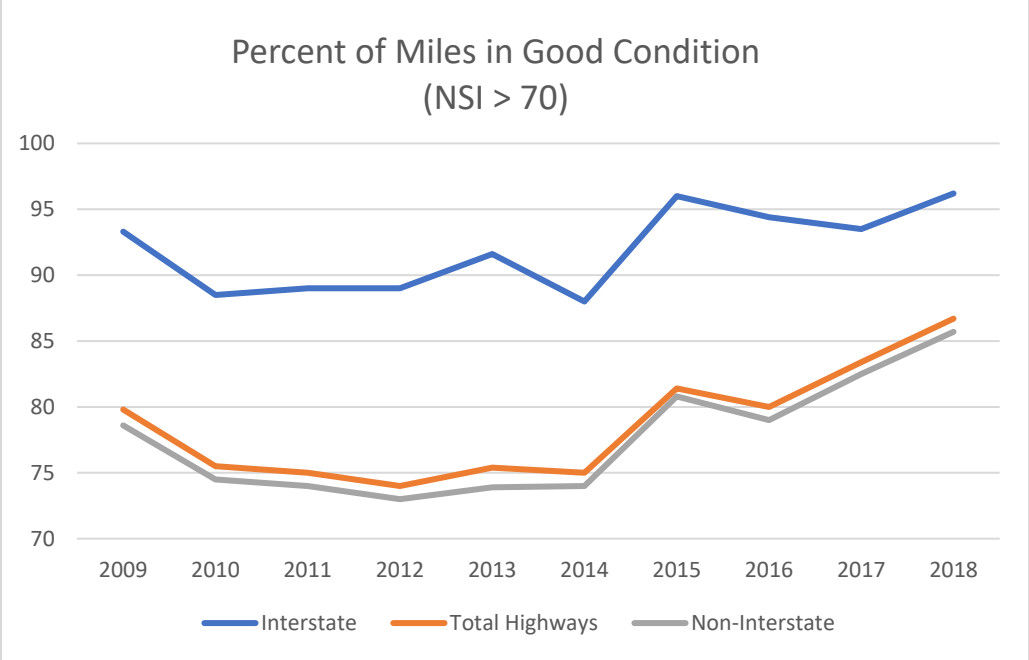
2004 to leverage existing and historic data trends in the analysis of pavement lifecycles on Nebraska roadways. The POP allows users to identify the best pavement management program of projects using lifecycle analysis and benefit-cost calculations. The POP has been updated numerous times by NDOT to reflect state of the practice methods in pavement management.

2.3.1 Nebraska Serviceability Index (NSI)

The Nebraska Serviceability Index (NSI) is a single value measure composed of surface condition information, surface type, severity of distress, extent of distress, rutting and faulting measurements. NSI is evaluated using a 100-point scale. Currently, NDOT considers pavement with NSI above 70 to be in "good" condition. The NSI allows NDOT to use a single value to monitor pavement condition over time and assess condition across pavement types and locations. Internally, NDOT relies upon NSI as a primary decision factor in pavement management.

NDOT reports the NSI to the Nebraska state legislature as a part of its annual needs assessment. Historic trends in the NSI are shown below in **Figure 2-6.** The target NSI range is between 80 and 85.

Figure 2-6: NDOT NSI 2009-2018



2.3.2 Federal Performance Measures

FHWA performance measures for pavement evaluate condition on the Interstate System and the Non-Interstate National Highway System (NHS). Pavement conditions and targets are reported based upon a "good", "fair", "poor" classification system determined by FHWA analysis. Data provided to FHWA in 2018 comprises the baseline condition for pavement performance

measures. Procedurally, NDOT provides raw data to FHWA as a part of a biennial performance report. FHWA then analyzes the data to provide NDOT with its "good", "fair", and "poor" ratings.[8]

During the first round of reporting, FHWA did not require state DOTs to submit performance baselines for interstate pavement. States will be required to provide performance measures and targets for the 2020 reporting period to update the initial 4-year baseline and targets as a part of mid-performance period reporting for the NHS.

As a part of the development of the final rule regarding pavement performance, FHWA set the minimum threshold for compliance at no more than 5 percent of interstate pavement reported in poor condition. No minimum threshold exists for non-interstate pavement. NDOT has complied with the final rule in developing the performance targets for interstate and non-interstate pavements.

2.3.2.1 Interstate System Pavement Condition

During the initial reporting period, baseline and two-year targets were not required for the interstate, as state DOTs were allowed time to build capacity and alter their data collection practices to meet the new standards. NDOT set the initial four-year target for interstate pavement in good condition at 50 percent of lane miles **(Figure 2-7)**.

Figure 2-7: Interstate Pavement in Good Condition

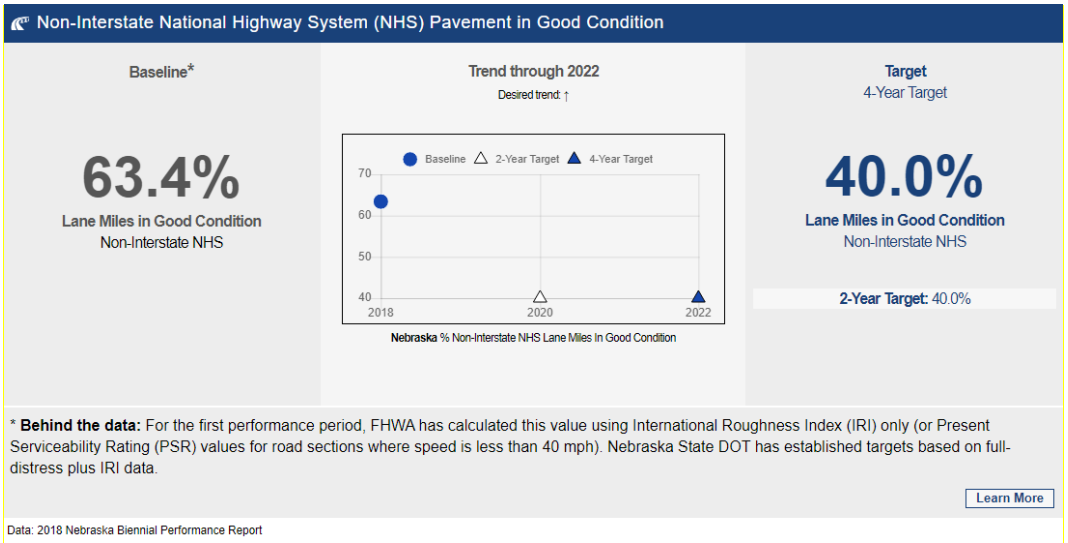
NDOT also set the four-year target for interstate pavement in poor condition at a maximum of 5 percent **(Figure 2-8)**.[9]

Figure 2-8: Interstate Pavement in Poor Condition

2.3.2.2 *Non-Interstate NHS Pavement in Good Condition*

Baseline data from the 2018 Nebraska Biennial Performance Report shows 63.4 percent of lane-miles of Non-Interstate NHS pavement in good condition. Nebraska's target for lane-miles in good condition for both the two-year and four-year performance periods is 40.0 percent of lane-miles in good condition **(Figure 2-9)**.[10]

Figure 2-9: Non-Interstate NHS Pavement in Good Condition

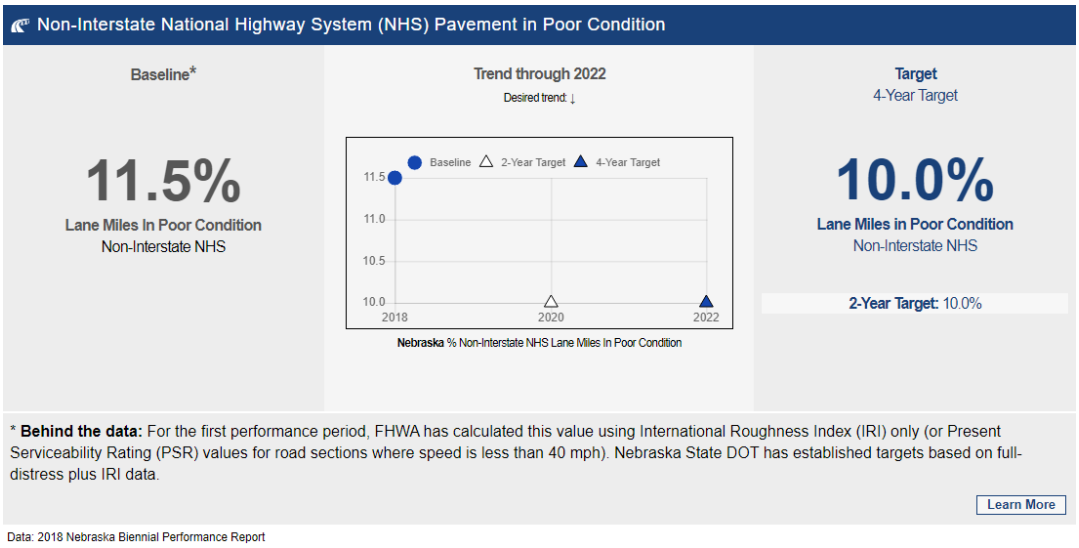


2.3.2.3 *Non-Interstate NHS Pavement in Poor Condition*

Baseline data for the Non-interstate NHS pavement in poor condition based upon the 2018 Nebraska Biennial Performance Report shows 11.5 percent of

lane-miles in poor condition. Nebraska's target for the two-year and four-year performance period is 10.0 percent of lane-miles in poor condition (**Figure 2-10**). Nebraska's desire is to decrease the level of lane-miles in poor condition.[11]

Figure 2-10: Non-Interstate NHS Pavement in Poor Condition




3 Bridges

3 Bridges

There are over 15,000 bridges in Nebraska. Most of Nebraska's bridges are owned by counties (over 11,000). NDOT owns and maintains 3,523 of the bridges in Nebraska (23.4%). This section contains summary information concerning bridge status and condition by system and ownership.[12]

3.1 National Highway System Bridges

Bridges on Nebraska's NHS routes fall under the jurisdiction of the entity maintaining the route. There are 1,500 bridges on the NHS network in Nebraska. Of these, 1,437 bridges (95.8%) are owned by NDOT. The remaining 63 bridges (4.2%) are located on local NHS routes and maintained by municipal or county governments.[13] A map showing Nebraska's NHS system bridges is shown on the following page in **Figure 3-2**. An inset of the Lincoln and Omaha metropolitan area NHS bridges are displayed in **Figure 3-1.**

Figure 3-1: NHS Bridges Inset Maps

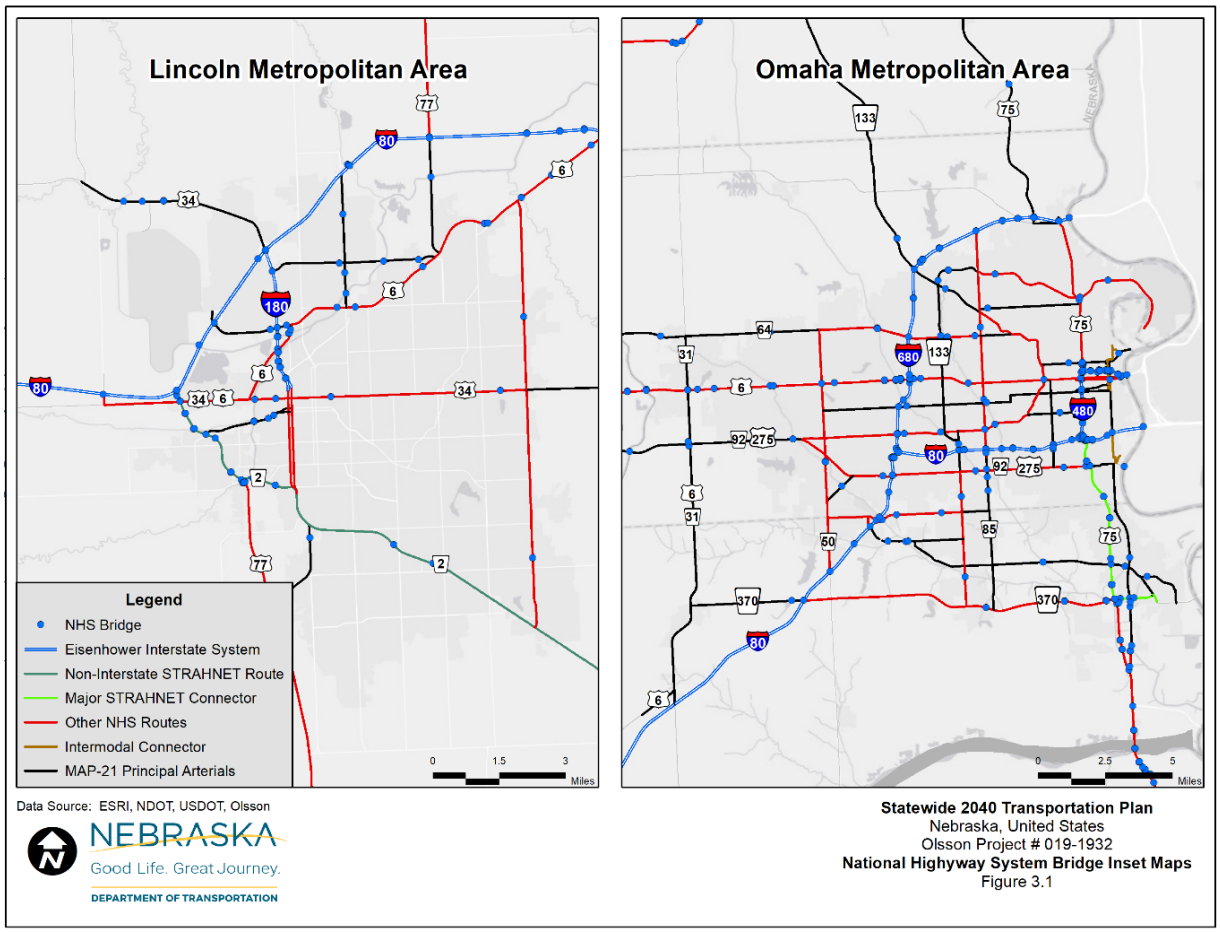
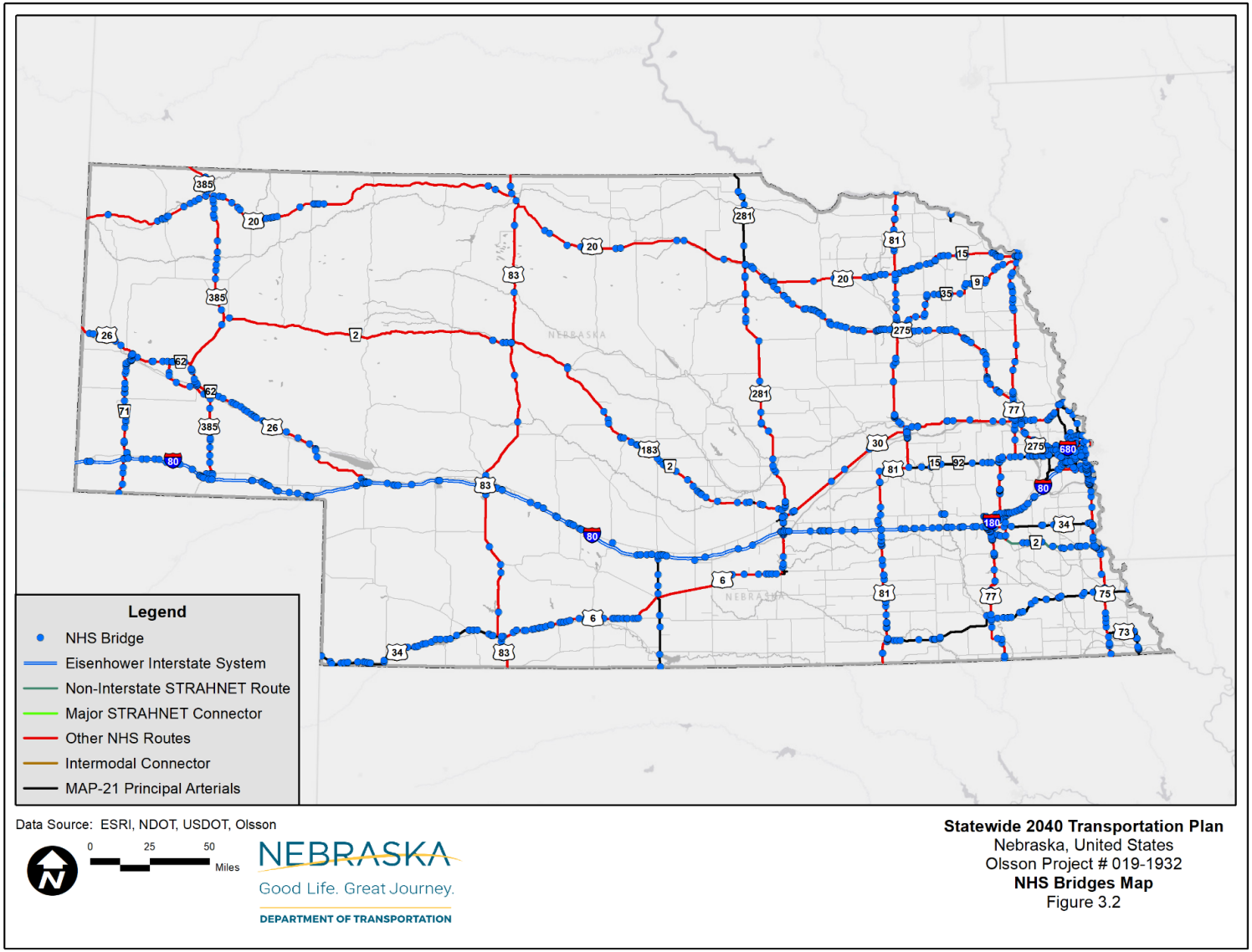


Figure 3-2: NHS Bridge Map



Structural deficiency is currently used as a critical reporting factor. A bridge is considered structurally deficient if one of two criteria are met:

1. Significant load carrying elements are in poor condition due to deterioration or damage.
2. The adequacy of the waterway opening provided by the bridge has been determined to be extremely insufficient, resulting in regular closures due to flooding.

3.1.1 NHS Bridges Summary

Federal performance targets for bridges are based upon a good, fair, poor rating system. All bridges are inspected according to a two-year inspection cycle; results are reported to the National Bridge Inventory (NBI). FHWA uses NBI condition ratings for deck, superstructure, substructure, and culvert to determine bridge performance. Using the lowest rated of these factors, FHWA grades bridge condition as 'good' if the lowest rating is above 7. A bridge is graded as 'poor' if the lowest rating is below a 4. Bridges with conditions rated between 4 and 7 are rated as fair.[14]

The NHS network in Nebraska is supported by 1,500 bridges. Structural deficiency in Nebraska is reported as both a count of total bridges and as a percentage of total bridge deck area. Summary information concerning condition and structural deficiency of bridges on Nebraska's NHS system is shown in **Table 3-1** and **Table 3-2**.[15]

Table 3-1: NHS Bridge Condition Summary by Area

	Bridges	Bridge Area (ft^2)	Bridges Closed	Closed % by Area per system	Structurally deficient % by Area per system	Good % by Area per system	Fair % by Area per system	Poor % by Area per system
State System	1,437	15,658,570	2	0.2	1.7	58.4	39.9	1.6
Local System	63	1,141,398	0	0.0	4.7	59.6	35.8	4.7
NHS System	**1,500**	**16,799,968**	**2**	**0.2**	**10.9**	**58.5**	**39.6**	**1.9**

Source: NDOT, 2018

Table 3-2: NHS Bridge Condition Summary by Count

	Bridges	Bridge Area (ft^2)	Bridges Closed	Closed % by Count per system	Structurally deficient Count	Structurally Deficient % by Count Per System	Good % by Count per system	Fair % by Count per System	Poor % by Count per system
State System	1,437	15,658,570	2	**0.1**	47	3.3	66.6	30.2	3.2
Local System	63	1,141,398	0	**0.0**	3	4.8	50.8	44.4	4.8
NHS System	**1,500**	**16,799,968**	**2**	**0.1**	**50**	**3.3**	**65.9**	**30.8**	**3.3**

Source: NDOT, 2018

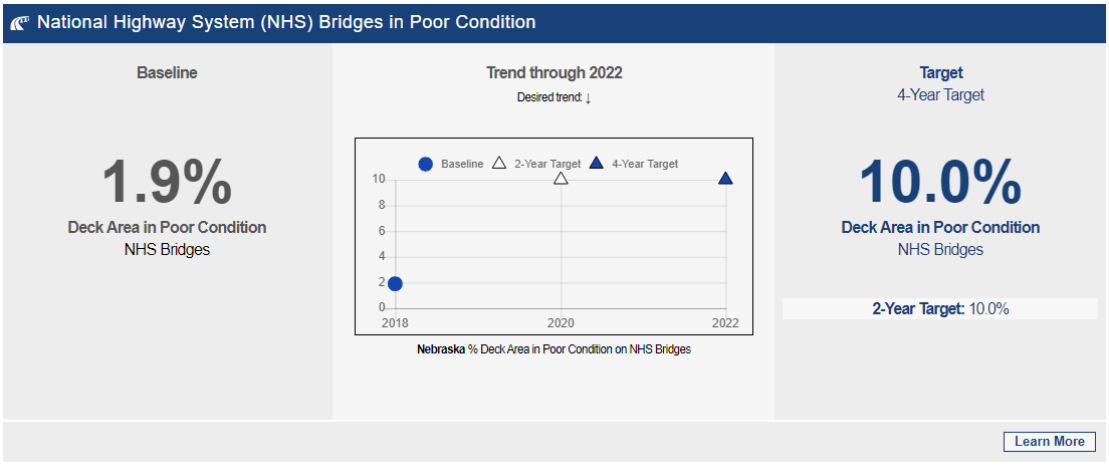
3.1.2 Federal Performance Measures

FHWA performance measures for bridge condition evaluate bridges on the NHS System in terms of the percentage of deck area in good or poor condition. The 2-year and 4-year performance target for Nebraska's NHS bridges is to achieve over 55 percent of NHS bridge deck area in good condition by 2022. Baseline 2018 data shows that 61 percent of the deck area of Nebraska's NHS bridges was in good condition (**Figure 3-3**).

Figure 3-3: NHS Bridges in Good Condition

The second NHS bridge performance measure relates to the percent of bridge deck area in poor condition. Baseline data shows that 1.9 percent of Nebraska's NHS bridge deck area was in poor condition in 2018 (**Figure 3-4**). In the final rule concerning bridge condition performance, FHWA set the minimum threshold for compliance with the performance measure at no more than 10 percent of bridges in poor condition. NDOT complies with the initial performance threshold target and has set the 2-year and 4-year performance target is to limit the percentage of deck area in poor condition to less than 10 percent.

Figure 3-4: NHS Bridges in Poor Condition



Data: 2018 Nebraska Biennial Performance Report

3.2 NDOT System Bridge Summary

The NDOT state highway system includes 3,523 total bridges. Removing the 1,437 NDOT bridges that are also on the NHS system results in a Non-NHS state highway system of 2,086 bridges. The Non-NHS state highway system's bridge condition summary is shown in **Table 3-3** and **Table 3-4.**

Table 3-3: Non-NHS NDOT Bridge Condition Summary by Area

	Bridges	Bridge Area (ft^2)	Bridges Closed	Closed % by Area per system	Structurally deficient % by Area per system	Good % by area per system	Fair % by Area per System	Poor % by Area per system
Non-NHS NDOT System	2,086	9,441,428	10	1.3	6.8	62.1	31.1	6.9

Source: NDOT, 2018

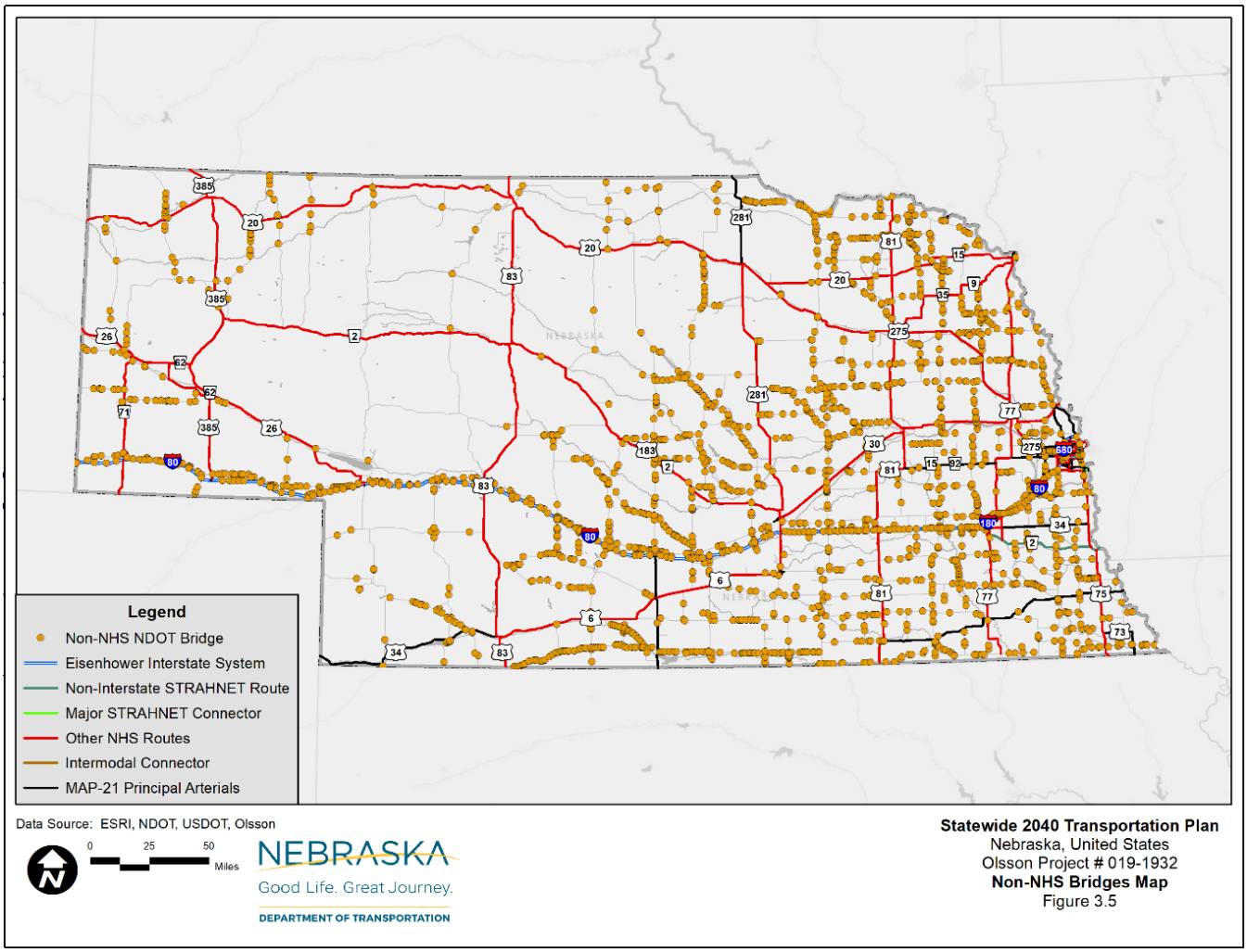
Table 3-4: Non-NHS NDOT Bridge Condition Summary by Count

	Bridges	Bridge Area (ft^2)	Bridges Closed	Closed % by Count per system	Structurally deficient Count	Structurally Deficient % by Count Per System	Good % by Count per system	Fair % by Count per System	Poor % by Count per system
Non-NHS NDOT System	2,086	9,441,428	10	0.5	5.3	5.3	69.6	25.1	5.2

Source: NDOT, 2018

The location of Non-NHS NDOT bridges is shown in **Figure 3-5.**

Figure 3-5: Non-NHS NDOT Bridges



3.3 Local System Bridge Summary

Over 75 percent of the bridges in Nebraska (11,521 bridges) are owned and maintained by local jurisdictions (city or county governments). County governments are responsible for 11,067 bridges. Generally, county bridges in Nebraska exhibit a higher percentage of deck area and number of bridges in poor condition as compared to municipal and NDOT owned bridge systems. Summary information concerning the condition of the locally owned bridge system is shown in **Table 3-5** and **Table 3-6**.

Table 3-5: Local Bridge Condition Summary by Area

	Bridges	Bridge Area (ft^2)	Bridges Closed	Closed % by area per system	Structurally deficient % by area per system	Good % by area per system	Fair % by Area per System	Poor % by area per system
County Bridge System	11,067	17,314,130	163	1.1	11.8	55.3	37.2	7.4
Municipal Bridge System	454	3,558,257	1	0.8	5.4	68.5	25.9	5.6
Total Local System	11,521	20,872,387	164	1.0	10.7	57.6	35.3	7.1

Source: NDOT, 2018

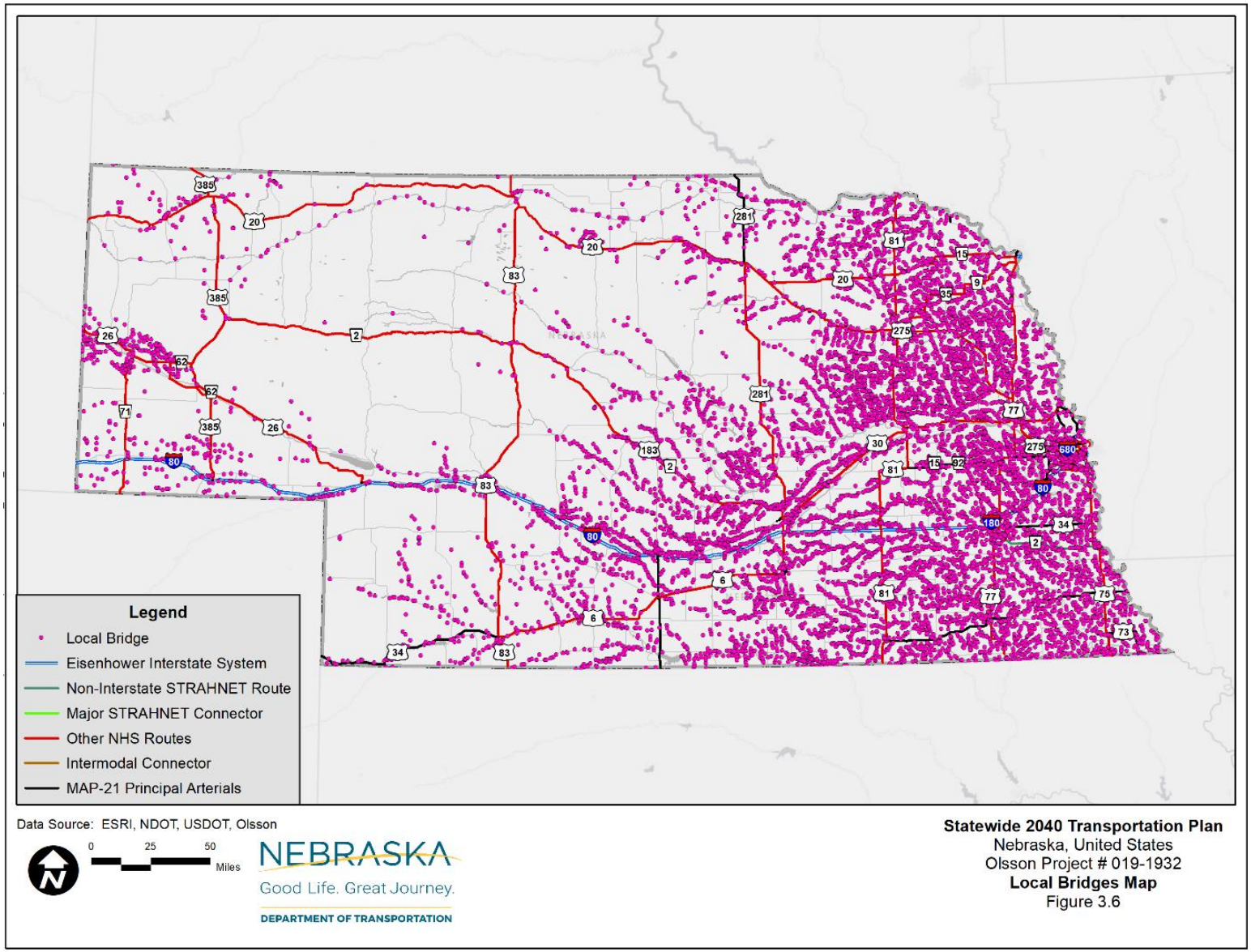
Table 3-6: Local Bridge Condition Summary by Count

	Bridges	Bridge Area (ft^2)	Bridges Closed	Closed % by count per system	Structurally deficient count	Structurally Deficient % by Count Per System	Good % by Count per system	Fair % by Count per System	Poor % by Count per system
County Bridge System	11,067	17,314,130	163	1.5	1836	16.6	46.9	43.0	10.1
Municipal Bridge System	454	3,558,257	1	0.2	15	3.3	64.1	32.4	3.5
Total Local System	11,521	20,872,387	164	1.4	1851	16.1	47.6	42.6	9.8

Source: NDOT, 2018

Nebraska's locally owned bridge system is shown in **Figure 3-6.**

Figure 3-6: Local Bridges Map



4 Intelligent Transportation Systems

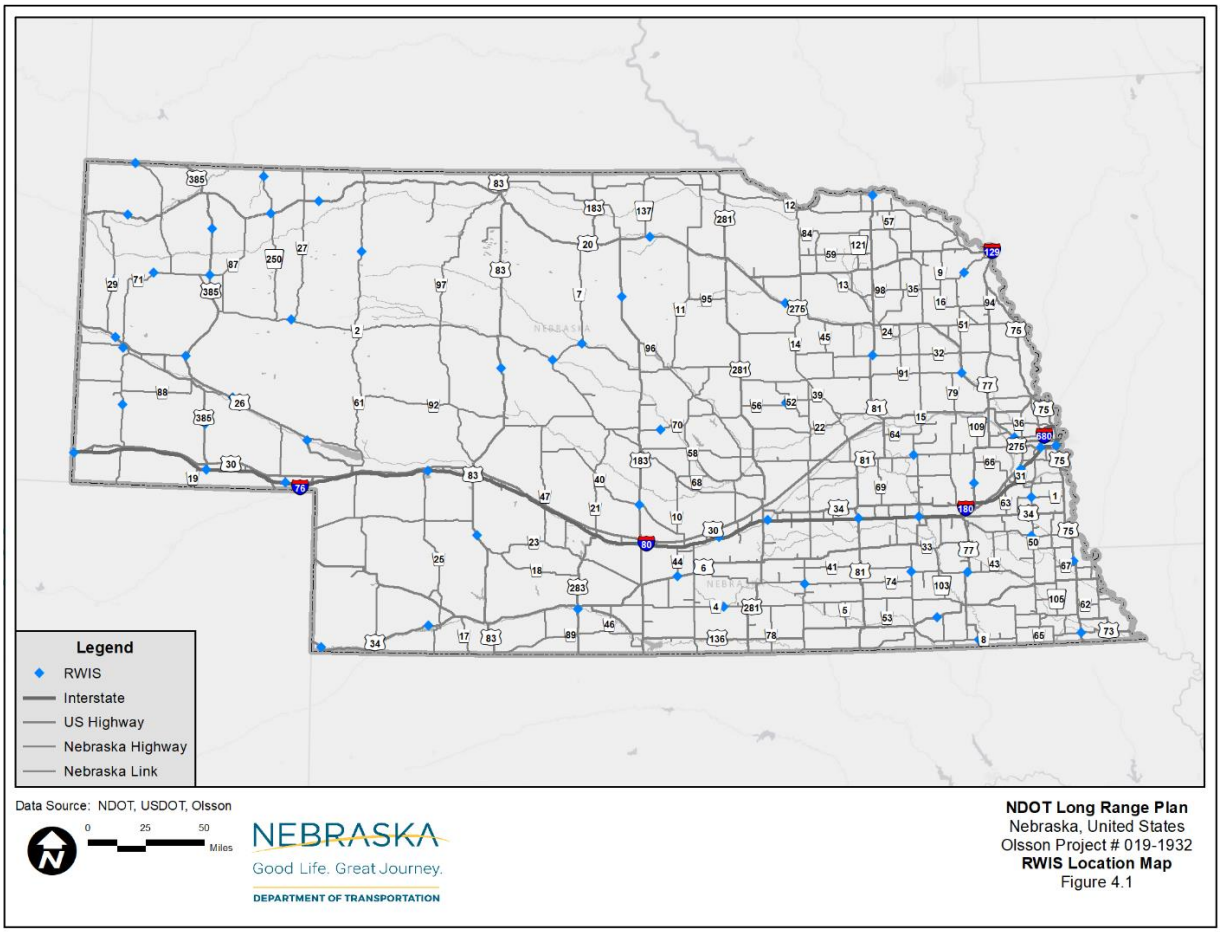
4 Intelligent Transportation Systems

To assist in gathering and disseminating useful travel information to the public, NDOT has deployed numerous intelligent transportation system (ITS) devices throughout the state. The electronic devices, communications infrastructure, and various software, firmware and hardware components used to improve traffic safety, relieve congestion, and improve efficiency comprise the system. In Nebraska, ITS devices owned and operated by NDOT include components of several systems: Road Weather Information System (RWIS), Dynamic Message Signs (DMS), traveler information kiosks, management centers, and a network of video and still capture cameras.

4.1 Road Weather Information System (RWIS)

NDOT's RWIS assists the traveling public by providing detailed weather information and its impact upon the state's roads and bridges. Sixty-two RWIS stations are located throughout the state. Over half of the stations (33) have been installed since 2010. The oldest of the existing stations were installed in January 2000. The location and distribution of RWIS stations across Nebraska is shown in **Figure 4-1.**

Figure 4-1: RWIS Location Map

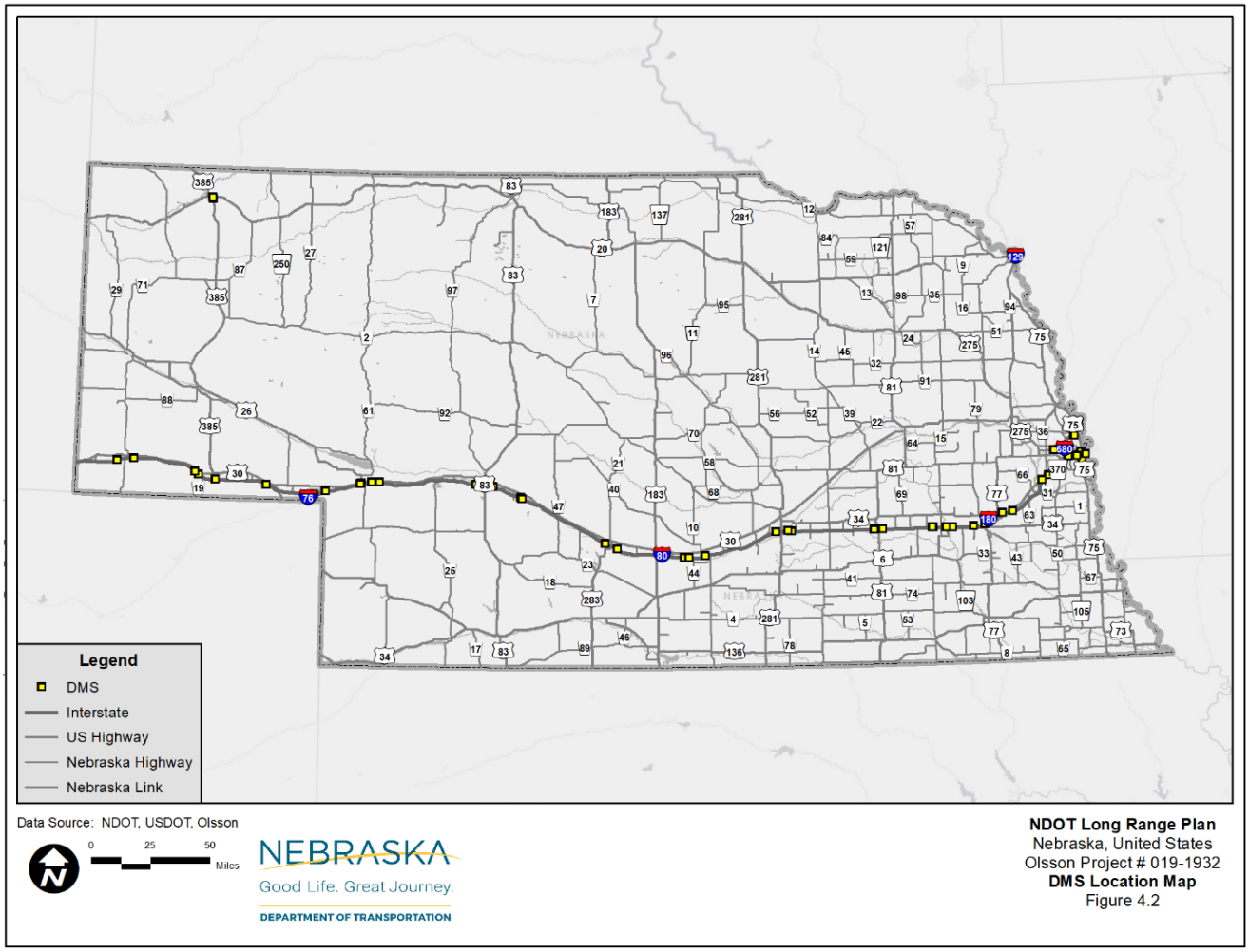


4.2 Dynamic Message Signs (DMS) and Variable Message Signs (VMS)

Dynamic message signs present NDOT with the opportunity to communicate to travelers on the network at various points. NDOT's DMS system includes portable and permanent infrastructure. NDOT's portfolio of permanent DMS includes 66 existing units located throughout the state. Of these units, the oldest was installed in 2002. Most of the existing DMS are located on the interstate system due to the higher traffic volumes and nature of interstate travel. The advanced warning provided by DMS can be critical to informing users of oncoming hazards due to incidents, weather, or congestion.

The locations of permanent DMS in Nebraska is shown in **Figure 4-2.**

Figure 4-2: Permanent DMS Location Map



NDOT also owns 211 portable DMS that can be deployed at locations in which a permanent DMS does not exist. The flexibility of portable DMS allows NDOT to effectively communicate construction information, detour information, and other useful messages to the traveling public.

4.3 Traveler Information Kiosks

In addition to the online 511 system, NDOT maintains 12 rest areas throughout the state containing digital traveler information kiosks. Information available at these kiosks includes weather and roadway pavement condition (wet, ice, snow packed, etc.), closures or detours, and construction information. Traveler information kiosks are located at the rest areas near North Platte and Lincoln on Interstate 80.

4.4 Transportation Management Centers (TMC)

NDOT operates two Transportation Management Centers (TMC) to assist with traffic operations in Omaha and statewide. The statewide operations center is located within the NDOT Operations Division offices in Lincoln. From this facility, NDOT staff have the ability to control the array of DMS and cameras throughout the state to assist in responding to emergency situations as they arise.

The District 2 Operations Center in Omaha is co-located with the Nebraska State Patrol's (NSP) Troop A offices. The facility features a video wall and computer terminals from which operations staff can control the region's camera and DMS systems to assist traffic enforcement, emergency responders, and tow operators in responding to incidents in real time. The District 2 Operations Center also serves as a backup for the Statewide Operations Center should that facility be impacted, or the need arise.

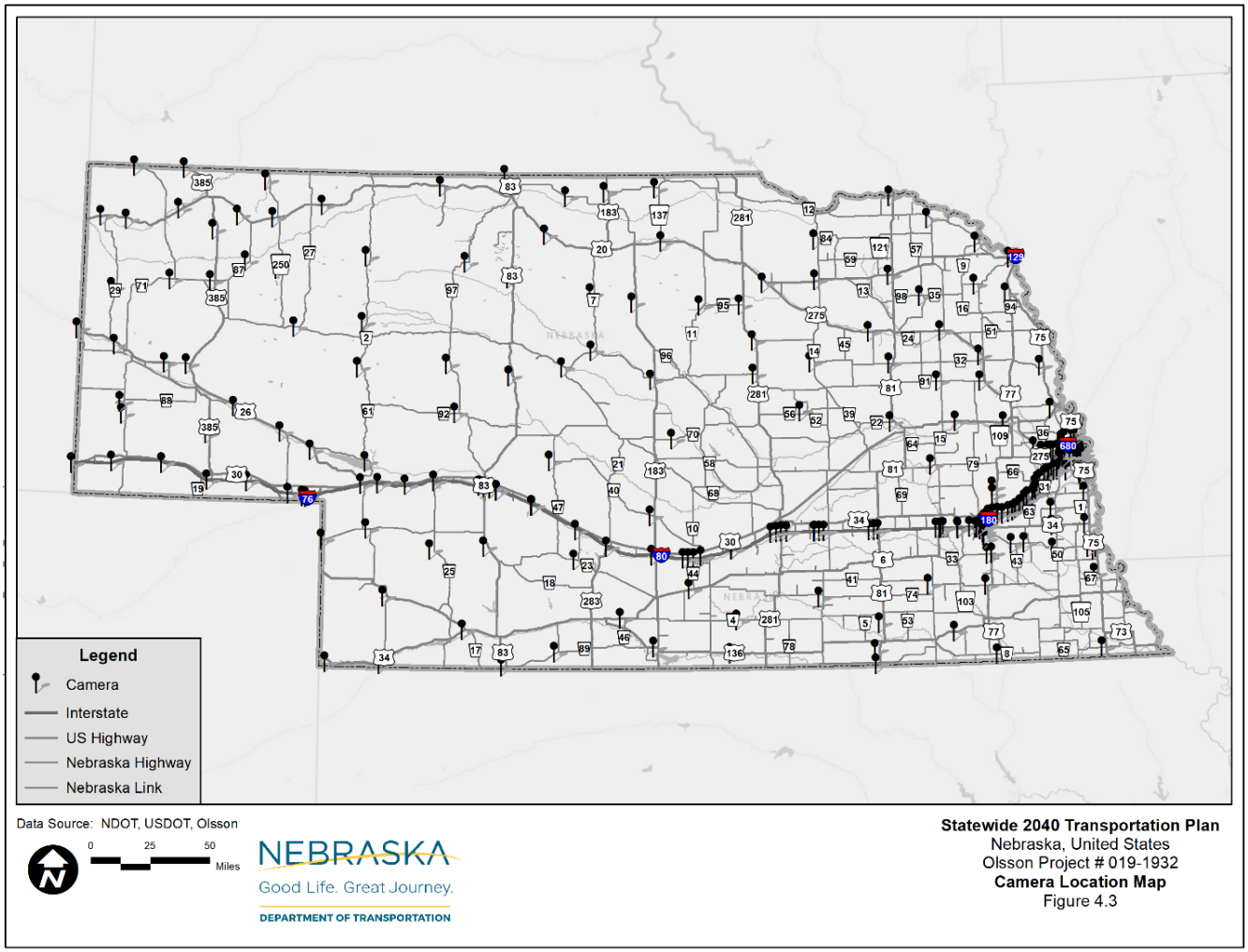
4.5 Cameras

NDOT operates a vast array of cameras that collect still imagery or video. Still capture and video cameras allow NDOT to view roadway condition in real time to assist in reporting critical traveler information to operations staff, first responders, and the traveling public.

NDOT's portfolio includes 60 still capture cameras and 185 streaming video cameras. Through the online 511 portals, the public may view images or video from these cameras to review traveling conditions. Cameras may be viewed or controlled by NDOT through the internal management system at either TMC.

The location of NDOT's cameras is shown in **Figure 4-3.**

Figure 4-3: Camera Location Map



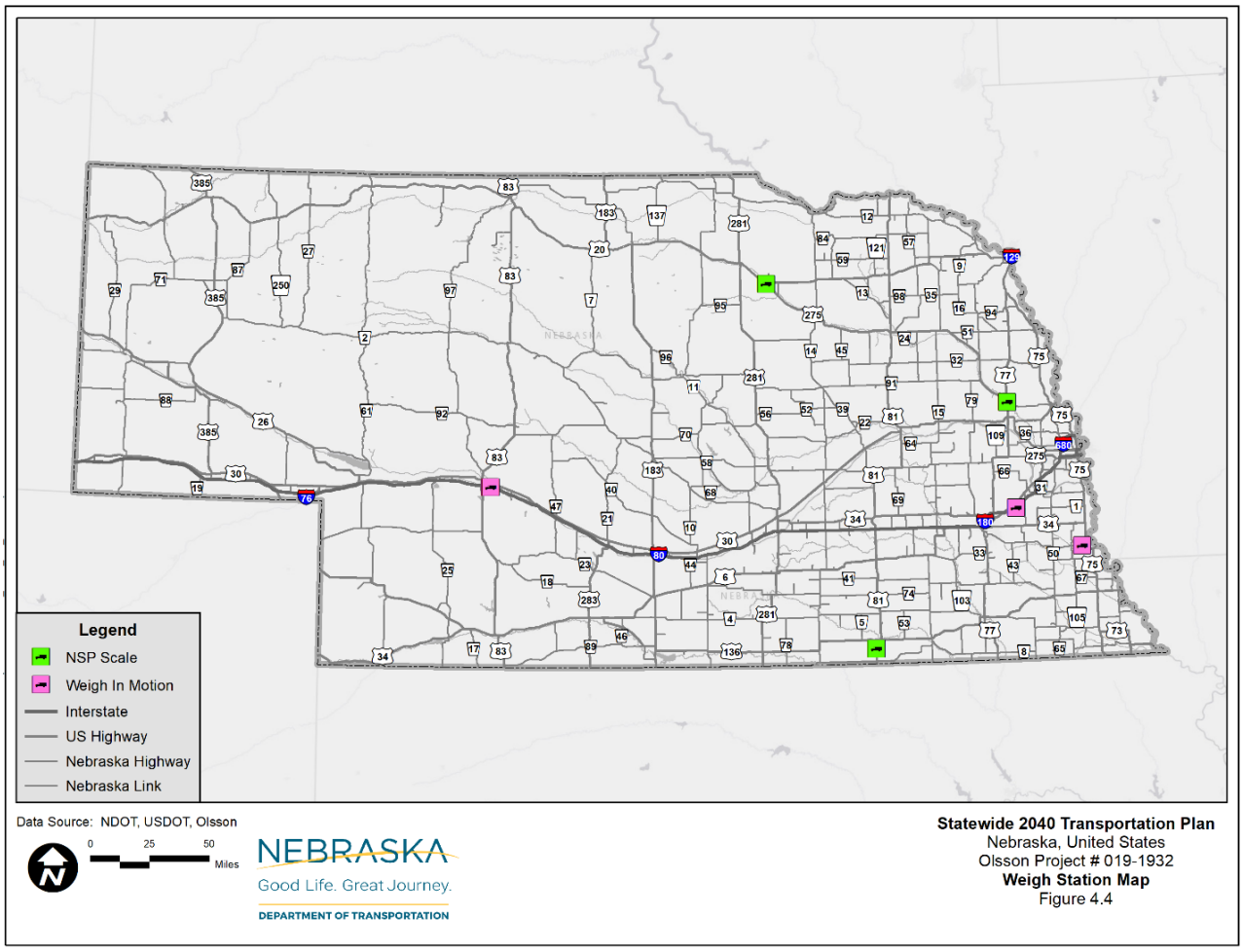
4.6 Weigh Stations

NDOT's permanent weigh stations assist NSP's motor carrier enforcement division in assessing compliance of weight limits for freight vehicles as they traverse the state. NDOT owns three permanent weigh stations: two located on Interstate 80, and a third on Nebraska Highway 2.

NSP's carrier enforcement division also operates permanent scales near Fremont, Hebron, North Platte, O'Neill, and Waverly; NSP also has the ability to operate mobile scales throughout the state.

The location of NDOT and NSP weigh stations is shown in **Figure 4-4.**

Figure 4-4: Weigh Station Map



5 Freight

5 Freight

Nebraska's freight transportation system consists of the freight rail network, river ports along the Missouri River, intermodal transload facilities, air freight facilities at the state's commercial airports, and the roadway system described in Section 2.

NDOT completed the initial draft of a State Freight Plan in 2017. The plan was revised and updated in 2019. The most current version of the State Freight Plan is available on the NDOT website. This section will identify the existing freight transportation network and location of facilities.[16]

5.1 Freight Rail System

5.1.1 Freight Rail Network

Nebraska's freight rail network is owned by a series of private companies. Of the seven Class I railroads, three have holdings in Nebraska; Burlington Northern Santa Fe (BNSF) and Union Pacific (UP) own the majority of the existing rail network and Kansas City Southern (KCS) holds trackage rights in the state – allowing its operation on track owned by other organizations. Additionally, UP is headquartered in Omaha, Nebraska.

Railroads are grouped into three (3) operating classes based upon annual revenue. Class I railroads each report annual revenue of over $447.6 million. Class I railroads operate in 44 of the 50 states, employ 90 percent of U.S. railroad workers, and account for over two-thirds of the total mileage.[17]

Class II railroads are also referred to as short line and regional railroads. These operators report revenue between $35.8 and $447.6 million. Class II railroads account for most of the remaining third of total mileage and 10 percent of workers.[18]

Class III railroads are also known as switching and terminal railroads. These operators are typically located near ports or industrial areas and move traffic between other, larger railroads or shippers. Class III railroads report annual revenue below $35.8 million.[19]

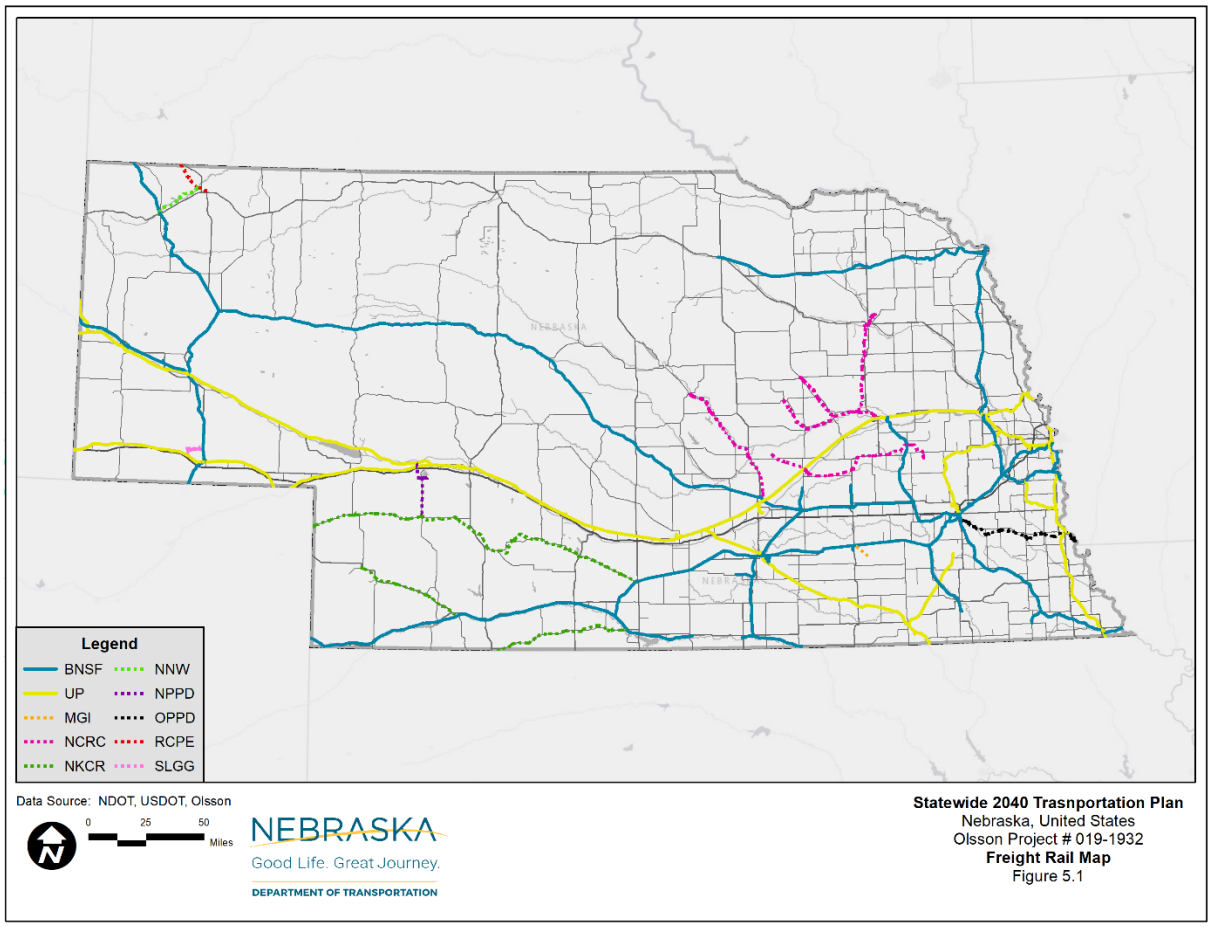
On the following pages, a summary table of freight rail system ownership is shown in **Table 5-1** and a map of existing track ownership is shown in **Figure 5-1**.

Table 5-1: Freight Rail System Summary

Company	Railroad ID	NE Track Owned (Miles)	Additional NE Trackage Rights (Miles)	Railroad Type
Burlington Northern Santa Fe Railway	BNSF	1,631	79	Class I
Union Pacific Railroad	UPRR	1,104	39	Class I
Nebraska Kansas Colorado Railnet	NKCR	327	32	Class III
Nebraska Central Railroad Company	NCRC	273	63	Class III
Omaha Public Power District	OPPD	61	4	n/a
Nebraska Public Power District	NPPD	28		n/a
Nebraska Northwestern Railroad	NNR	26		Class III
Rapid City, Pierre & Eastern Railroad	RCP&E	13	5	Class III
Freight Car Rail Services Inc.	FCRS	10		n/a
Sidney & Lowe	SLGG	9	1	Switching & Terminal Railroads
Manning Grain Inc	MGI	6		Class III
Total		3,488	223	

Source: USDOT, NTAD, 2019

Figure 5-1: Freight Rail Map



5.2 Ports and Waterways

5.2.1 Water Freight

Riverine freight is typically transported in bulk through a system of barges and tugs. Suitable freight for river travel is not time sensitive, bulky, and heavy. Examples of freight cargo suitable for riverine transport include bulk grain, aggregate, fertilizer, or other bulky, heavy materials.

5.2.2 Missouri River Freight

Nebraska's only navigable waterway for freight traffic is the Missouri River, which serves as the eastern border of the state. The Missouri river was channelized during the middle of the 20th century, providing a 300-foot wide channel at a depth of nine-feet from Kansas City, Missouri to the Sioux City, Iowa. The Missouri is not channelized and is not navigable to barge traffic upstream of Sioux City, Iowa.

In contrast to other navigable waterways in the United States, the Missouri River lacks weirs and locks to aid in navigation. The Missouri's flow is also regulated by the U.S. Army Corps of Engineers (USACE) using the dam at Gavin's Point and other facilities upstream.

Freight volumes on the Missouri River are much lower than those seen on the Mississippi River. Typical annual freight transported on the Missouri River in recent years is comparable with daily freight volumes on the Mississippi. Challenges to the channel, a shortage of tugs, persistent flooding, and environmental concerns contribute to the low level of freight transported on the Missouri.[20]

5.2.3 Port Facilities

Thirteen active ports exist in Nebraska on the Missouri River. Active port facilities in Nebraska are shown in **Table 5-2.** The location of these facilities is shown in

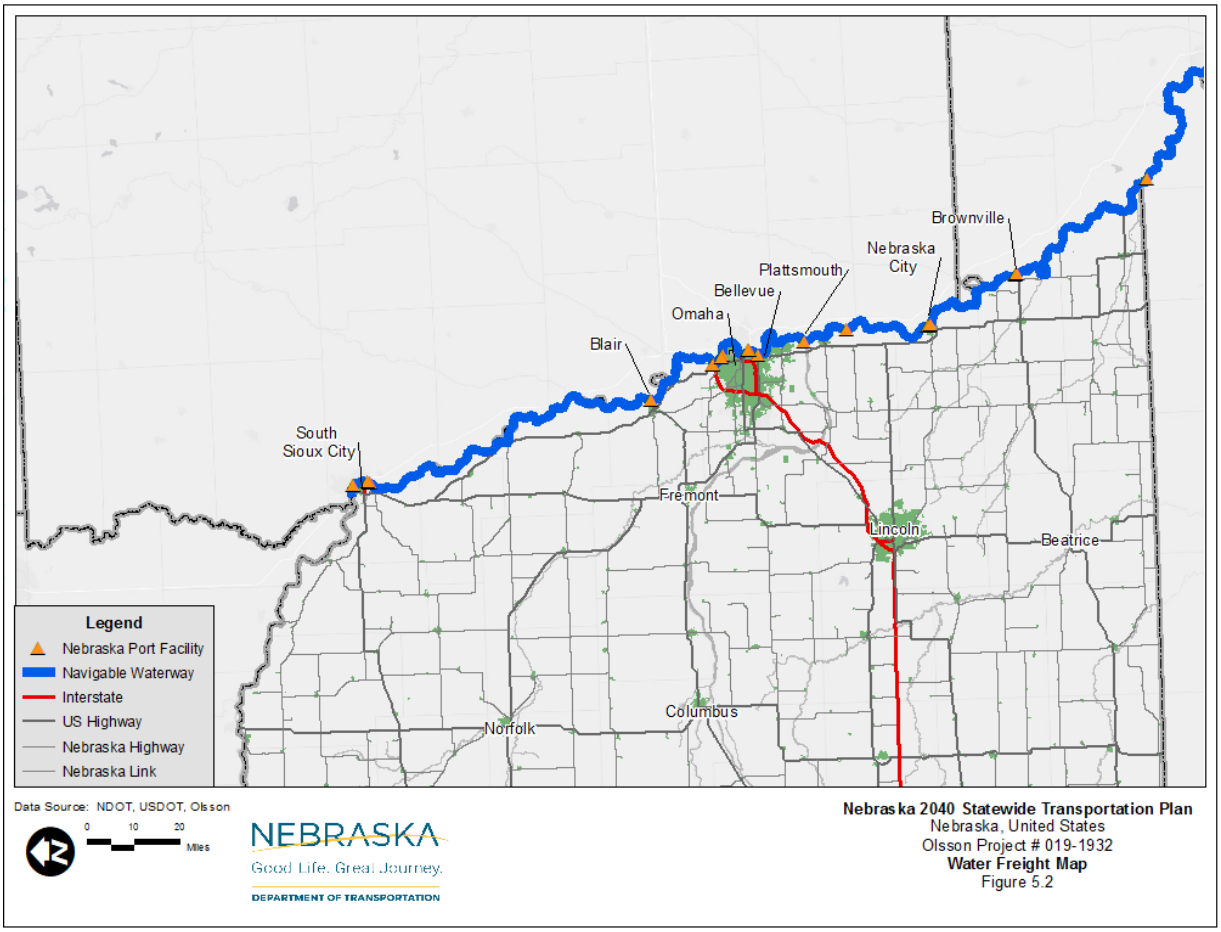
Figure 5-2.

Table 5-2: Active Port Facilities

Port Name	Commodity Information
Agri Grain Marketing Council Bluffs Terminal Dock	Food and Farm Products
Agriliance Co. Council Bluffs Terminal Dock	Fertilizers
JEBRO Dock	Petroleum Pitches, Coke, Asphalt, Naptha and Solvents
Big Soo Terminal Dock	Fertilizers | Iron Ore and Iron & Steel Waste & Scrap | Sulphur (Dry), Clay & Salt | Paper & Allied Products | Primary Iron and Steel Products (Ingots, Bars, Rods, etc.) | Food and Farm Products | Animal Feed, Grain Mill Products, Flour, Processed Grains |
Argosy's Belle of Sioux City Casino Boat Dock	N/A
White Cloud Grain Co. Dock	Fertilizers | Food and Farm Products | Unknown or Not Elsewhere Classified
Heartland Cooperative	Coal, Lignite & Coal Coke | Fertilizers | Primary Iron and Steel Products (Ingots, Bars, Rods, etc.) | Unknown or Not Elsewhere Classified
Bartkett and Company Nebraska City Dock	Food and Farm Products
Debruce Grain Nebraska City Elevator Dock	Fertilizers | Food and Farm Products | Oilseeds (Soybean, Flaxseed and Others)
Bunge Corp Brownsville Elevator Dock	Food and Farm Products
Brownsville Development Corp Riverboat Dock	
U S Coast Guard Moorings Omaha	
U S Army Corps of Engineers Missouri River Project Office Dock	
Consolidated Blenders Blair Terminal Dock	Food and Farm Products | Animal Feed, Grain Mill Products, Flour, Processed Grains
Haveman Grain Co. Rock Bluff Grain Elevator Dock	Food and Farm Products
PCS Nitrogen Bellevue Plant Dock	Fertilizers | Other Chemicals and Related Products
Westway Feed Products Co. South Omaha Plant Wharf	Vegetable Products
American Commercial Terminals Heartland Terminal Dock	Fertilizers | Other Chemicals and Related Products | Sulphur (Dry), Clay & Salt
Pentzien Omaha Dock	Unknown

Source: USDOT, NTAD, 2019

Figure 5-2: Water Freight Map



5.3 Air Cargo

5.3.1 Air Cargo

Air cargo is suitable for freight that is low weight, high value, time sensitive, or any combination of the three. A typical application for air cargo may be to transport surgical equipment, medical supplies, or technological equipment (laptop computers, etc.) to and from distribution or repair centers. Time sensitive documents (such as contracts) may also use the air mail/air cargo systems.

5.3.2 Air Cargo Network

Nebraska's public airport network serves as a distribution point for air freight throughout the state. Detailed air cargo statistics are generally not publicly available for non-primary class airports. In Nebraska, the Federal Aviation Administration (FAA) reports annual air cargo statistics for Omaha's Eppley Field (the only qualifying airport).

Air cargo statistics for calendar year 2017 and 2018 are shown in **Table 5-3.** Air cargo traffic at Eppley Airfield has increased by over 7 percent (in terms of landed weight) from 2017 to 2018.[21]

Table 5-3: Eppley Airfield Air Cargo Statistics

Airport ID	Airport Name	City	2018 Landed Weight (lbs.)	2017 Landed Weight (lbs.)	% Change
OMA	Eppley Airfield	Omaha	437,709,788	406,576,402	7.66%

Source: FAA, 2019

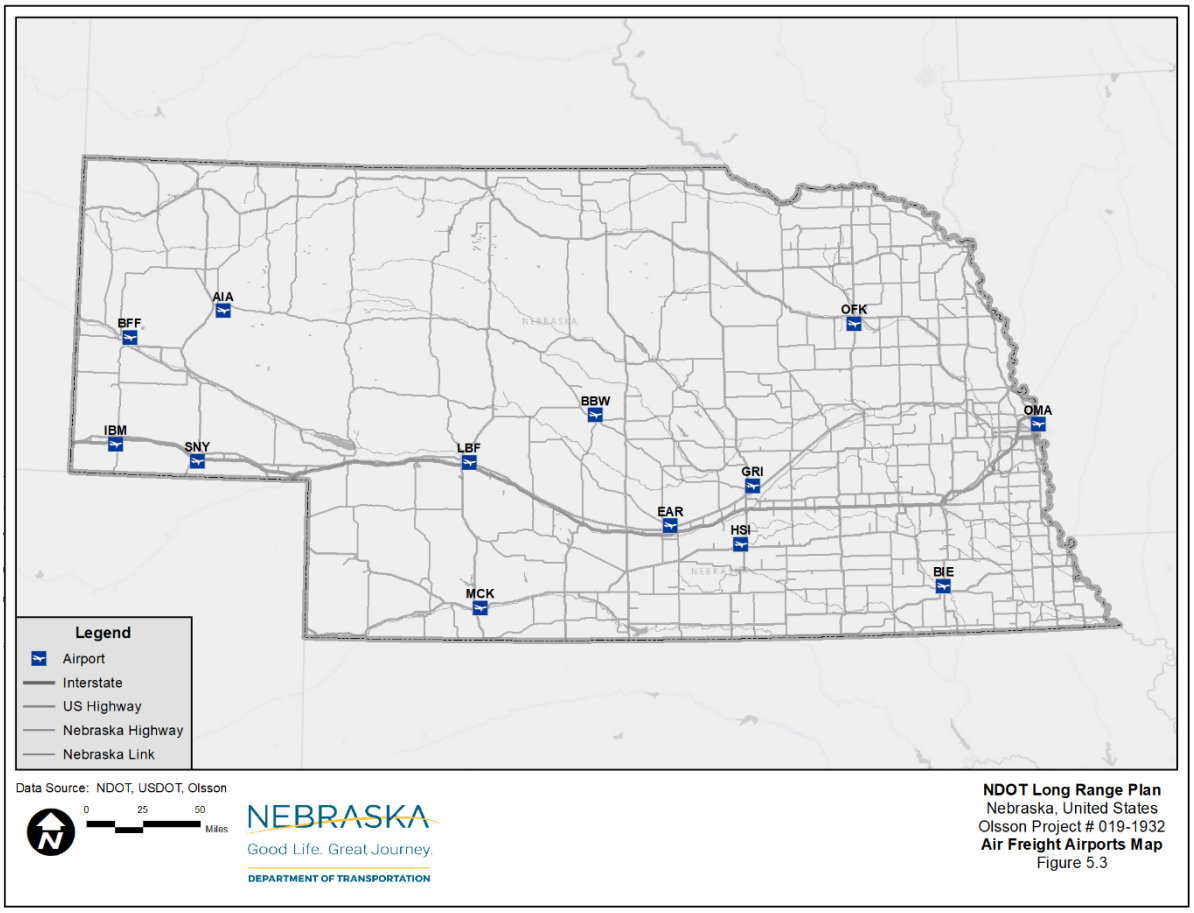
The 2019 Nebraska State Freight Plan lists statistics from Nebraska's other public, freight-handling airports as shown in **Table 5-4**. It should be noted that these statistics are estimates. Nebraska's air freight transporting airports are shown in **Figure 5-3**.[22]

Table 5-4: Air Cargo Operation in Nebraska, 2016

Airport	Cargo Operators	Total Operations	Airport Classification
Omaha	FedEx	8,564 total annual operations (2015)	Primary (Medium Hub)
	UPS		
	Suburban Air		
	Baron Aviation		
	Ameriflight		
	AirNet II		
	Central Air Southwest		
	Encore Air Cargo		
	Kalitta Charters		
Grand Island	Ameriflight	1,144/annually est.	Primary (Non-hub)
	Baron Aviation		
Kearney	Ameriflight	1,040/annually est.	Commercial Service
	Baron Aviation		
Scottsbluff	Key Lime	1,040/annually est.	Commercial Service
	FedEx		
North Platte	Key Lime	1,040/annually est.	Commercial Service
	Baron Aviation		
Hastings	Ameriflight	1,000/annually est.	General Aviation
Beatrice	Ameriflight	1,000/annually est.	General Aviation
Alliance	Key Lime	520/annually est.	General Aviation
McCook	Bemidji Aviation	530/annually est.	General Aviation
	Key Lime		
Kimball	Key Lime	Limited/Varies	General Aviation
Broken Bow	Ameriflight	520/annually est.	General Aviation
Norfolk	Ameriflight	1,300/annually est.	General Aviation
Sidney	Key Lime	1,040/annually est.	General Aviation
	Bemidji Aviation		

Source: Nebraska State Freight Plan, NDOT, 2019; Air Cargo Operation in Nebraska, University of Nebraska at Omaha, 2016

Figure 5-3: Air Cargo Airports Map



5.4 Pipelines

5.4.1 Pipeline Freight

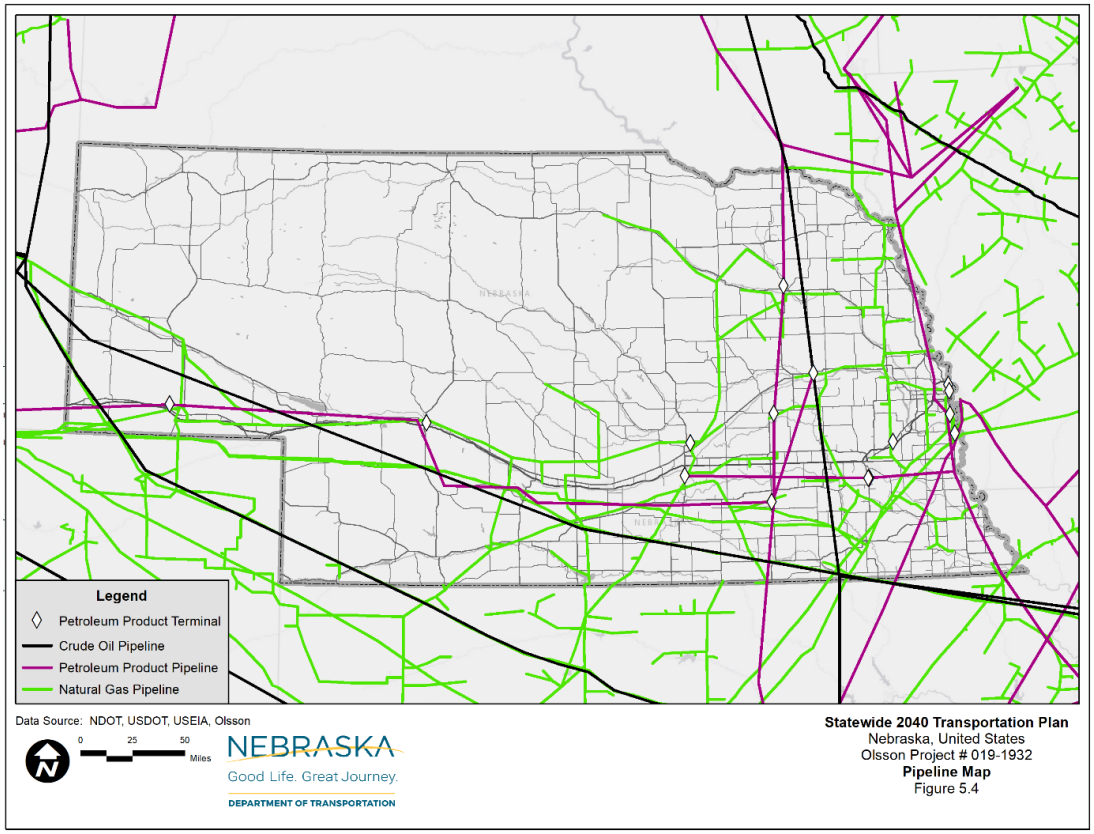
Pipelines transport bulk liquids or gasses over long distances to terminals for refinement or final distribution. As pipelines are typically privately owned, information relating to their location, usage, and condition is limited. The U.S. Energy Information Administration (USEIA) maintains a database of natural gas, petroleum product, crude oil pipelines and terminal locations throughout the United States.

5.4.2 Pipeline and Terminal Network

Pipelines play a critical part in Nebraska's intermodal freight network, specifically in the distribution of motor vehicle fuels. For example, the Magellan Pipeline Company's terminal in north downtown Omaha provides nearly 75 percent of the Omaha area's motor vehicle fuels. The transloading of gasoline and diesel fuel from pipeline to storage tank to tanker truck for distribution to gas stations is critical to the Nebraska economy. The connection to the Magellan terminal to Interstate 480 is listed as a critical Intermodal Connector on Nebraska's National Highway System map.

The approximate location of crude oil, natural gas, petroleum product pipelines, and terminals is shown in **Figure 5-4**.

Figure 5-4: Pipeline Map, 2018



5.5 Intermodal Facilities

5.5.1 Intermodal Freight

Intermodal freight involves the transfer of cargo from one mode to another at a single facility. Depending upon location and access, intermodal facilities may shift freight from rail, truck, pipeline, water or aviation modes. Nebraska's intermodal facilities are predominantly focused on transloading agricultural truck-based freight onto rail lines.

5.5.2 Intermodal Network

Of the 38 intermodal facilities located in Nebraska, 19 are divisions of agricultural elevator cooperatives, used to store grain until market conditions are appropriate for the grain to be sold. Air-to-truck intermodal freight transfers occur at Omaha's Eppley Airfield.

As noted previously, Nebraska's use of water-based freight is very limited. Nebraska's only pipeline terminal is in north downtown Omaha, Nebraska. Intermodal freight facilities are listed in Table 5-5 and shown in

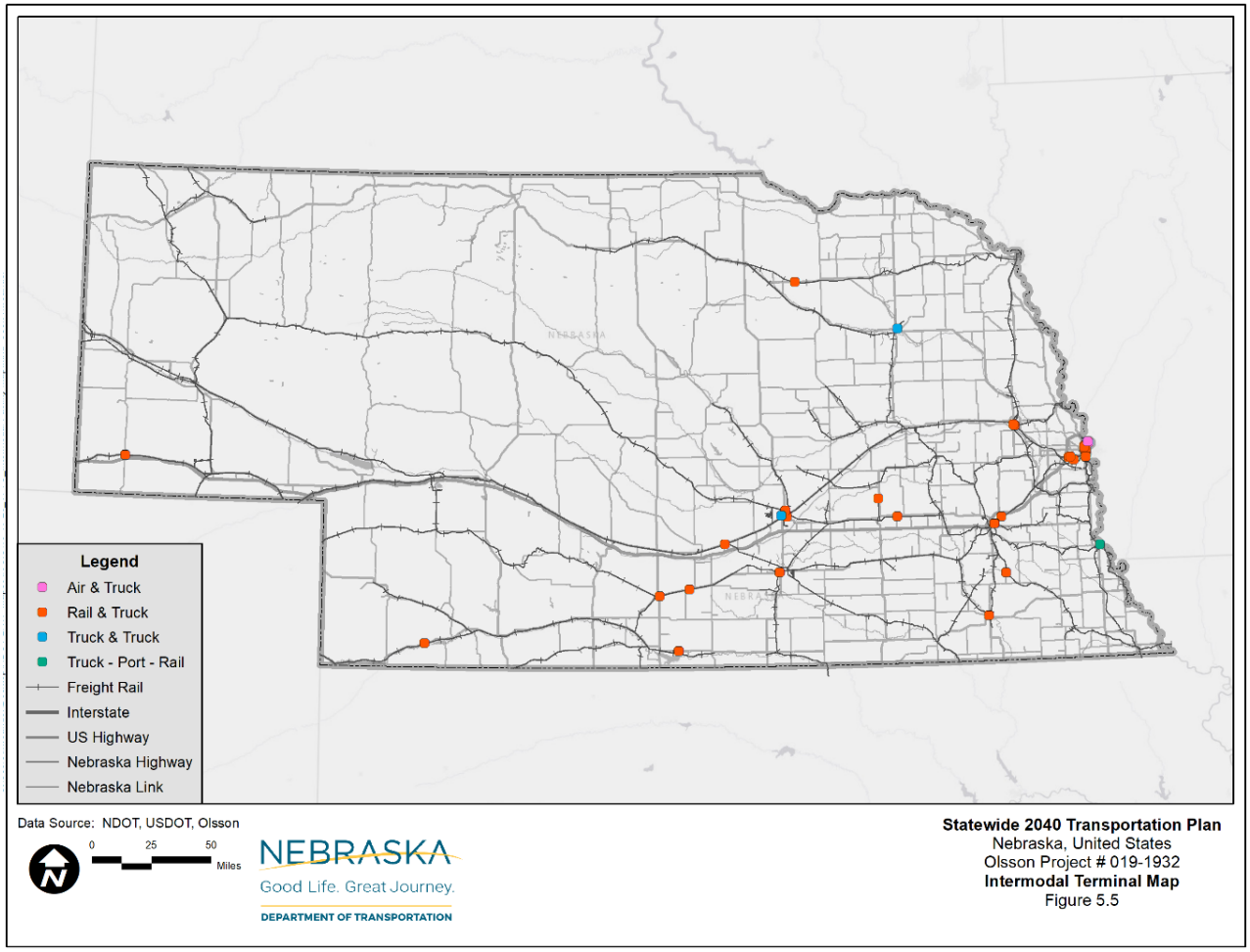
Figure 5-5.[23]

Table 5-5: Nebraska Intermodal Terminals

Facility Name	Modes Supported
Omaha Eppley Airfield	Air & Truck
USPS, AMC, AMF-Omaha, NE	Air & Truck
UP Omaha, NE 8TH and Mason	Rail & Truck
BNSF, Omaha, NE	Rail & Truck
Koch Agri Services, Orchard, NE	Rail & Truck
Farmland Industries, Inc. Grain Division, Omaha, NE	Rail & Truck
Peavey Co., Omaha, NE	Rail & Truck
Peavey Grain Co. Grand Island, NE	Rail & Truck
Aurora Cooperative Elevator Co., Grand Island, NE	Rail & Truck
UP, Omaha, NE 1416, Dodge	Rail & Truck
Fox Grain of Gibbon, Inc., Gibbon, NE	Rail & Truck
Souler Grain Co., Fremont, NE	Rail & Truck
Act Omaha Terminal, Omaha, NE	Rail & Truck
Distribution, Inc., Omaha, NE	Rail & Truck
Central Logistics Services, Inc., Hastings, NE	Rail & Truck
Millard Refrigerated Services, Grand Island, NE	Rail & Truck
Americold Logistics, Inc., Fremont, NE	Rail & Truck
AGP Grain Cooperative, Ayr, NE	Rail & Truck
Midland Cooperative, Axtell, NE	Rail & Truck
Port of Omaha	Rail & Truck
United Cooperative	Rail & Truck
Agri Co-Op	Rail & Truck
High Plains Cooperative	Rail & Truck
Scoular Grain Co.-Lincoln	Rail & Truck
Farmland Grain	Rail & Truck
United Seeds, Inc.	Rail & Truck
Midland Cooperative	Rail & Truck
Farmers' Cooperative Grain and Supply Co.	Rail & Truck
United Farmers' Cooperative	Rail & Truck
Gratton Warehouse Company	Rail & Truck
Elevator A	Rail & Truck
Nebraska Warehouse Co., Omaha, NE	Rail & Truck
L and D Reload, Omaha, NE	Rail & Truck
ConAgra, Inc., Fremont, NE	Rail & Truck
Firth Cooperative, Firth, NE	Rail & Truck
Nebraska City	Truck – Port – Rail
USPS-P and DC-P and DF, Grand Island, NE	Truck & Truck
USPS-PDC-PDF, Norfolk, NE	Truck & Truck

Source: USDOT

Figure 5-5: Intermodal Terminal Map



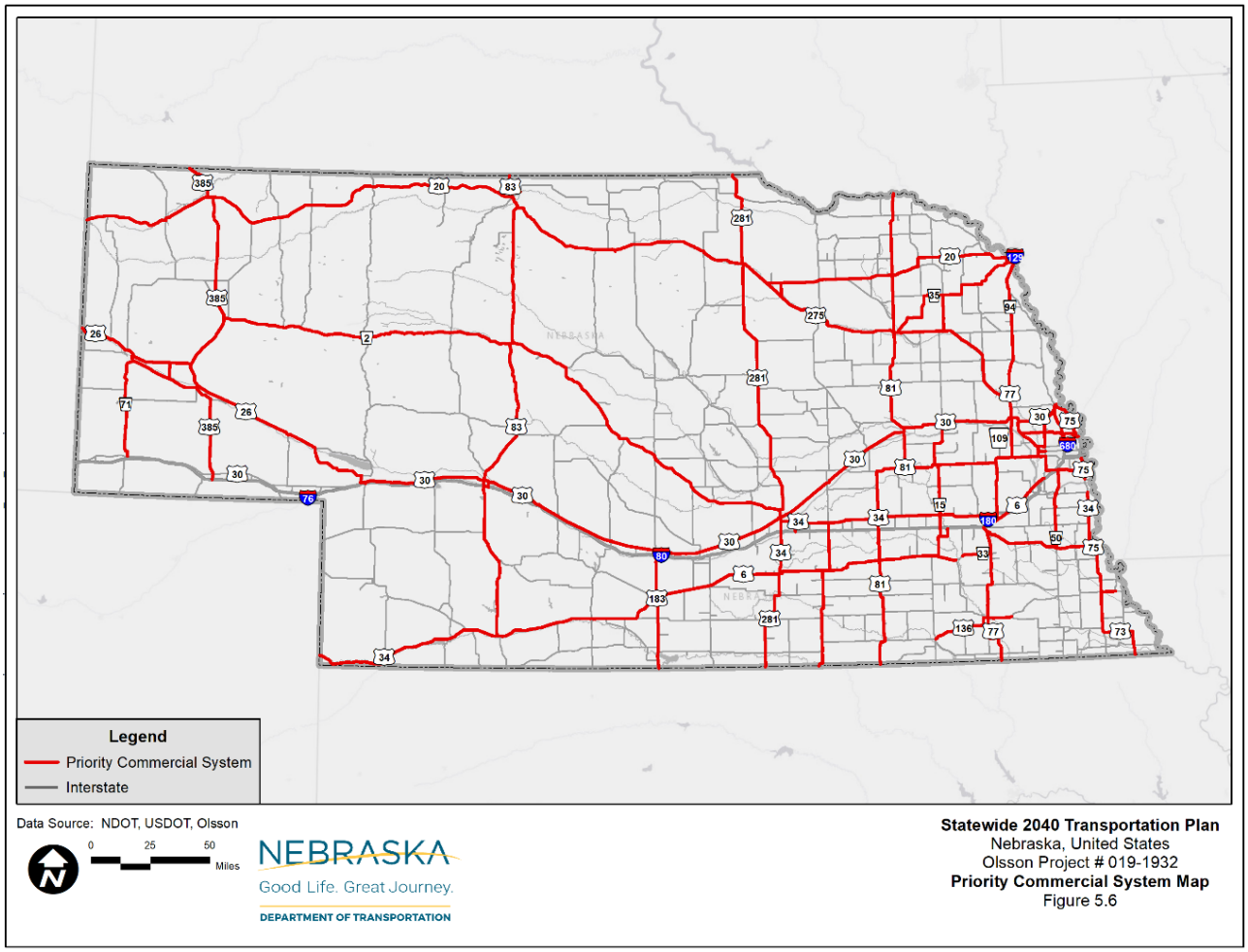
5.6 Nebraska Designated Priority Commercial System

Nebraska's state legislature designated the Priority Commercial System in 1988 to provide a continuous network of high capacity transportation routes to support commercial vehicle movement throughout the state. This system is composed entirely of US numbered routes and comprises the rural expressway system.

The priority commercial system also connects all cities of the metropolitan class (Omaha), primary class (Lincoln), and first class (communities with populations from 5,001 to 100,000 persons). The priority commercial system serves 80 of the 115 cities of the second class (800 to 5,000 persons) and comes within 10 miles of 18 of the remaining 35 cities of the second class.

The designated Priority Commercial System is shown in **Figure 5-6**.

Figure 5-6: Nebraska Designated Priority Commercial System



Related to the priority commercial system is the National Highway Freight Network (NHFN) composed of four federally designated networks:

- **Primary highway freight system (PHFS) -** the most critical highway portions of the U.S. freight system according to national data.
- **Other non-PHFS interstate highways** – the remainder of the interstate not designated as a part of the PHFS.
- **Critical rural freight corridors (CRFC)** – roadways outside of census designated urbanized areas which provide access to the PHFS, interstate highway system, or other freight or public transportation facilities. This system is defined by the states and is then included within the NHFN.
- **Critical urban freight corridors (CUFC)** – roadways in urbanized areas that provide connectivity and access to the PHFS, interstate highway system, and other important freight or public transit facilities. Each state defines its CUFC routes in partnership with its MPOs.

Nebraska's interstates are designated as a part of the NHFN. Interstate 80 (for its entire length in Nebraska) is designated as a part of the PHFS. Nebraska's remaining interstates (I-76, I-180, I-480 and I-680) are designated as other non-PHFS interstate highways.

6 Public Transportation

6 Public Transportation

Public transportation in Nebraska varies from urban fixed route transit services to small, rural accessible vans to national passenger rail service. In Greater Nebraska, much of the state-sponsored public transit is rural demand response service meeting needs across the state. The urbanized areas have fixed route transit services, along with complimentary paratransit services for those persons unable to use the fixed route network. Public transportation in the form of ridesharing and taxis has expanded into Transportation Network Companies (TNCs). The state recently established a new Statewide Mobility Manager staff position to aid in coordination of services and increased mobility across the state for visitors and residents. Additionally, long distance transportation is provided through existing intercity bus providers and the national passenger rail system operated by Amtrak.

6.1 Passenger Rail

Nebraska has one passenger rail line operating in the state: the Amtrak California Zephyr. This line, originating in Chicago and terminating in San Francisco, has five stops in Nebraska: Omaha, Lincoln, Hastings, Holdrege and McCook. It operates twice daily, once per direction. According to Amtrak's 2018 State Fact Sheet, total boardings and alightings were 53,527, approximately half of which (27,524) were at the Omaha station. This is down from 2017 with a total usage of 55,693.

One (Omaha) of the five stations in Nebraska is owned and operated by Amtrak. The remaining four are privately owned or held by a freight operator (McCook - BNSF). Amtrak does not own any track in Nebraska but uses rail from UP and BNSF. On these rail lines, passenger rail has priority over the freight trains according to federal law. However, only the U.S. Department of Justice (US DOJ) can enforce these statutes and has brought only once case against freight railroads in the last 40 years. Freight railroads control the operation of their systems through internal scheduling and dispatching systems and therefore may determine what trains have priority on the rail lines in lieu of U.S. DOJ intervention. In 2018, the on-time performance was 48.8 percent.

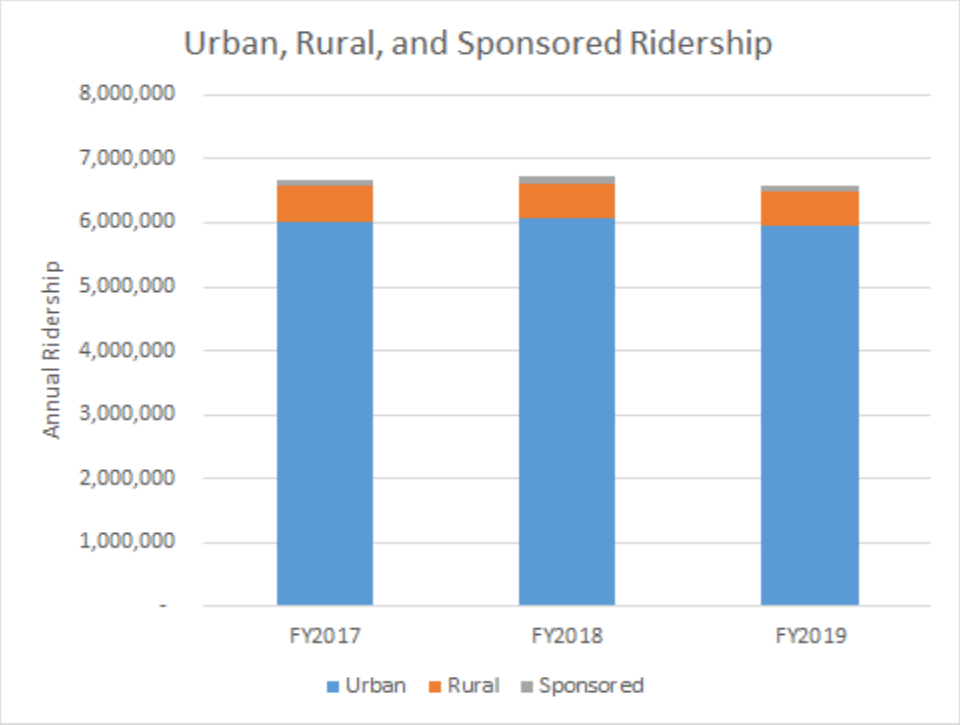
The Omaha Amtrak station is currently undergoing renovations for the intercity bus carriers to move to the Amtrak station in 2020. Bus slips and a bus ticketing office will be available at the Amtrak station, along with a sanitary dumping station for Burlington Trailways vehicle servicing.

6.2 Public Transit

Nebraska public transportation agencies provided approximately 6.6 million trips to residents and visitors in the 2019 fiscal year according to NDOT, which has remained steady over the past three years. According to the 2018 American Community Survey by the U.S. Census Bureau, less than one percent of all trips to work in Nebraska are made by public transportation. The primary mode of travel in the state is the single occupant vehicle. However, for those residents who use public transportation by choice or do not have access to a vehicle, many transit systems across the state, both urban and rural, offer alternative transportation means for residents.

Urban area transit agencies in Nebraska provide 90 percent of the total ridership for the state, with 8 percent of the ridership in rural areas. The remaining one percent of ridership are sponsored trips, where transit agencies coordinate with local organizations for specific trip requests under contract and financially supported by a designated program. **Figure 6-1** illustrates the statewide ridership trends.

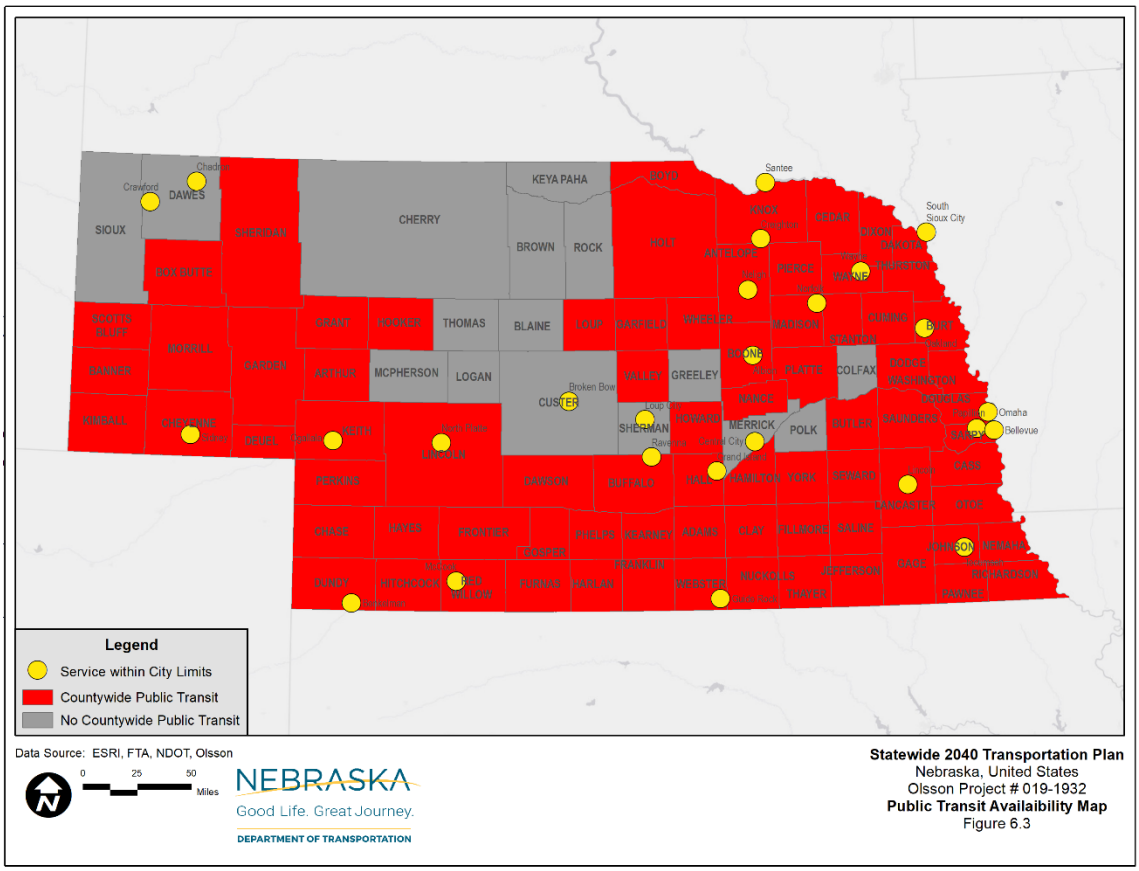
Figure 6-1: Statewide Transit Ridership



Currently, public transit is available to residents in 82 of the 93 counties in Nebraska. Agencies provide a range of service options to residents, including four intercity providers, 56 demand response providers, a flexroute provider, four urban providers, and paratransit service.

The following 11 counties were identified as not having any public transit service supported by any of the funding programs administered by NDOT: Blaine, Brown, Cherry, Greeley, Keya Paha, Logan, Sioux, McPherson, Polk, Rock, and Thomas. **Figure 6-2** shows specific transit coverage across the state.

Figure 6-2: Public Transit Availability in Nebraska Counties



6.2.1 Rural

Transit agencies in rural areas of Nebraska primarily operate demand response service, with one flexible route system in Scottsbluff and a transit line in Sidney. Funding for the agencies include federal, state, passenger fares, and local dollars, which may be from the local municipality or county general fund or other designated funding sources. In addition, many of the rural transit agencies receive local matching funds by partnering with local organizations recognizing the need for public transportation services.

In 2019, Nebraska rural transit agencies operated 253 vehicles during peak service hours. Rural agencies with 10 or more vehicles include:

- Blue Rivers Area Agency on Aging
- City of North Platte
- Ryde Transit (Community Action Partnership of Mid-NE)

- Kimball County
- Midland Area Agency on Aging
- Tri-City Roadrunner (Scotts Bluff County)

6.2.1.1 *Access to Transit*

Nebraska is relatively unique in the distribution of its population, with much of the population concentrated in a few cities, and many small towns with low population distributed across the state. Typically, intercity or regional bus services operating on a scheduled route will only be feasible if stops have a sufficient population. All of Nebraska's Census Designated Places and Urbanized Areas with a population above 5,000 have intercity bus service, except the eight listed below that have a population over 5,000 and are not located within an Urbanized Area:

- Blair (Population 7,990)
- Crete (Population 7,055)
- Gretna (Population 5,416)
- Hastings (Population 25,030)
- Holdrege (Population 5,506)
- McCook (Population 7.580)
- Seward (Population 7,050)
- Wayne (Population 5,578)

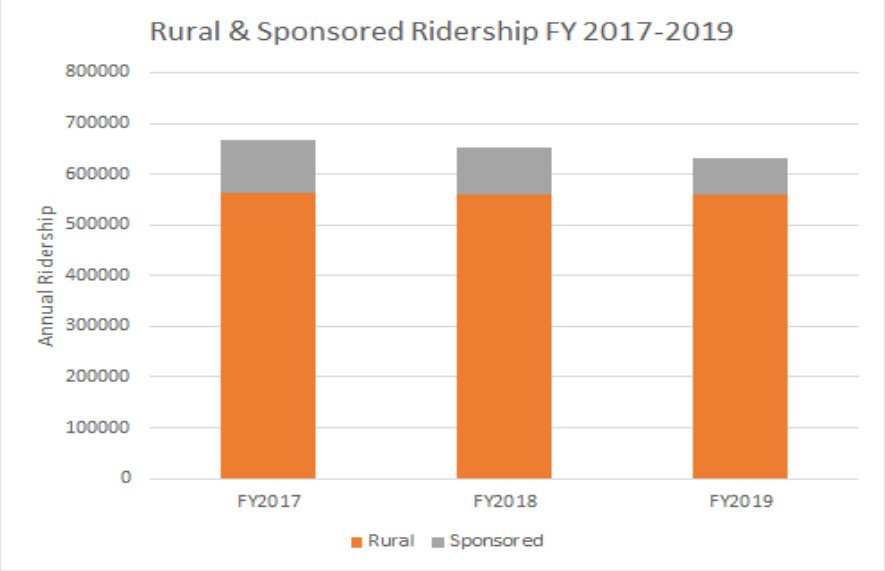
Hastings, Holdrege and McCook are served twice a day by Amtrak's California Zephyr intercity rail passenger service, but not by intercity bus. In that sense they could be seen as having intercity access by Amtrak. However, the current schedule to those communities is in the middle of the night.

6.2.1.2 *Demand Response Services*

Due to the rural nature of greater Nebraska, the majority of the rural transportation agencies operate demand response service due to the low densities within the communities and distances between towns. Demand response agencies typically operate by taking reservations (typically 24 hours) in advance from passengers. Anyone is eligible for general public transit services and many trips are for medical, shopping, employment, meals, or education. North Platte Transit provides a unique higher level of service with real-time demand response service within the City limits, in addition to advance reservation service.

In 2019, rural transit agencies provided approximately 560,000 annual trips, which has remained steady over the past three years. Sponsored transit trips – riders whose transit costs are supported financially by a specific program or organization – exhibited a decrease in ridership over the past three years, from 103,000 trips in 2017 to 72,402 trips in 2019. The decrease may be due to program funding cuts of community organizations. **Figure 6-3** shows the rural and sponsored annual ridership trends.

Figure 6-3: Rural and Sponsored Ridership FY 2017 - 2019



Rural transit agencies with the 2019 ridership over 25,000 in Nebraska are listed below.

- Blue Rivers Area Agency on Aging (47,042 annual trips)
- Box Butte County Public Transit (27,436 annual trips)
- Chase County Transit (29,663 annual trips)
- City of North Platte (70,982 annual trips)
- City of Ogallala (25,358 annual trips)
- Ryde Transit (105,161 annual trips)
- Norfolk Public Transit (31,356 annual trips)
- Tri-City Roadrunner (25,260 annual trips)

6.2.1.3 Flexible Route Services / Stage Line

Flexroute transit routes are scheduled routes through the community but are able to make deviations off the routes. The deviations are scheduled with the transit office dispatch and are made in advance.

Scotts Bluff County, NE – The Tri-City Roadrunner operates two flexroutes through the three communities of Scottsbluff, Gering, and Terrytown. In addition, the agency provides demand response service for those persons who are unable to use the flexroute service. The agency operates 10 peak vehicles for the services. The Tri-City Roadrunner's route map is available on their website. [i].

[i] https://tricityroadrunner.com/schedules

Sidney, NE – The Sidney Stage Line is a city-owned scheduled transit service operating six days a week with 12 designated stops. The agency also operates Dial-A-Ride service Monday through Friday. Five peak vehicles are used for Sidney services. In 2019, annual ridership for Stage Line services was 15,353 trips. Information related to the Sidney Stage Line is available on their website.[ii]

6.2.2 Urban Transit

Four urban transit systems operate in Nebraska. Three of the cities, Lincoln, Omaha, and South Sioux City have fixed route service and paratransit service for persons not able to access the fixed route network. The City of Grand Island operates CRANE Transit, which is a demand response service within the urbanized area. **Table 6-1** illustrates key statistics for each agency from the fiscal year 2018.

6.2.2.1 Grand Island, NE

The City of Grand Island currently contracts with Senior Citizens Industries, Inc. to provide transit service for the general public in the City of Grand Island and Hall County under the name "CRANE Public Transit." CRANE stands for Central Ride Agency of Nebraska. The agency requires 24-hour advance reservations and operates Monday through Friday. More information about CRANE is listed on their website.[iii]

6.2.2.2 Lincoln, NE

StarTran is managed by the City of Lincoln under the auspices of Lincoln Transportation and Utilities Department (LTU). The agency operates 19 fixed routes and paratransit service. StarTran provides service six days a week, with evening service on busiest routes. StarTran's system map is available on their website.[iv]

6.2.2.3 Omaha, NE

Omaha has the largest transit agency in Nebraska with 17 fixed routes and 10 express routes within the Omaha metro area. Metro also operates MOBY, the paratransit service. Additionally, Metro is in the construction phase for the first bus rapid transit line in the state, ORBT, which is scheduled to open in spring 2020. The ORBT service will run primarily on Dodge Street from downtown Omaha near 10th Street to Westroads Mall. Metro's system map is available on their website.[v]

[ii] https://www.cityofsidney.org/85/Public-Transportation
[iii] https://www.grand-island.com/departments/public-works/transit
[iv] https://www.lincoln.ne.gov/city/ltu/startran/routemap/
[v] http://www.ometro.com/index.php/bus-system/system-map/

6.2.2.4 *South Sioux City, NE*

Sioux City Transit System serves three communities: Sioux City, South Sioux City, and North Sioux City. The agency operates 10 regular fixed routes and tripper routes, weekdays and Saturdays. Sioux City Transit's system map is available on their website.[vi]

Summary statistics for all four urban transit agencies' are listed in **Table 6-1**.

Table 6-1: Nebraska Urban Transit Agencies FY 2018

Agency Statistics	CRANE (Grand Island)	StarTran (Lincoln)	Metro (Omaha)	Sioux City Transit (Sioux City)
Total Peak Vehicles	10	65	113	20
Routes	Demand Response	19	27	10
Demand Response - % of Total Trips -	100%	3%	3%	3.2%
% of Funding - Fares/ Directly Generated	n/a	47.4%	16.9%	16.8%
Annual Ridership	26,425	2,463,799	3,516,078	868,182

Source: NTD Transit Agency Profiles - (2018), NDOT

6.2.3 Intercity Bus Service

The NDOT is the designated recipient for Federal Transit Administration (FTA) Section 5311 Formula Grants for Rural Areas funding, including Section 5311(f) which is a subsection devoted to rural intercity bus service. Each state is required to spend 15 percent of its overall Section 5311 allocation on rural intercity bus services, unless it conducts a consultation process that finds no unmet rural intercity needs. Five intercity bus private carriers operate in Nebraska:

- Express Arrow (formerly known as Black Hills Stage Lines)
- Burlington Trailways
- Jefferson Lines
- Panhandle Trails
- Navigator Airport Express

6.2.3.1 *Omaha / Norfolk and Omaha / Denver Intercity Routes*

Express Arrow operates two lines in Nebraska, a route from Omaha to/from Norfolk and Omaha to/from Denver, CO. The Omaha/Norfolk route has one trip during the day, seven days week. The Omaha/Denver route has

[vi] https://www.sioux-city.org/government/departments-q-to-z/transit/all-route-schedules

one trip per day, leaving both destinations in the morning and arriving in the evening.

6.2.3.2 *Des Moines, IA / Sterling, CO Route*

Burlington Trailways provides intercity service east/west from Sterling, CO to Des Moines, IA, traveling on to Chicago.[vii] Bus stops in Nebraska are available in Aurora, Grand Island, Kearney, Lexington, Lincoln, North Platte, Ogallala, and Omaha. Services are available seven days per week. The Omaha/Denver service is an overnight trip, with one round trip per day. The bus travels on to Chicago with four round trips per day. [viii]

6.2.3.3 *Omaha / Sioux City, IA*

Jefferson Lines operates one line on the eastern portion of the state traveling from Sioux City, IA, Omaha, St. Joseph, MO, and extends south through Kansas. Two round trips are operated daily.

6.2.3.4 *Panhandle Intercity Bus Service*

Panhandle Trails is a newer intercity bus operator focusing on the western portion of Nebraska. The agency operates three regularly scheduled routes connecting to other intercity carriers.[ix] The service connects larger communities in the Panhandle such as Chadron, Scottsbluff, Alliance, Sidney, and Ogallala. The Alliance – Scottsbluff – Gering route operates Monday, Wednesday, and Friday. The other two routes operate Tuesday and Thursday and provide same day roundtrip transportation connections to Express Arrow, Burlington Trailways, Amtrak, Alliance, Scottsbluff, Chadron and Denver International Airports via the connection to the national network at Ogallala. This connection is displayed in Figure 6.3.

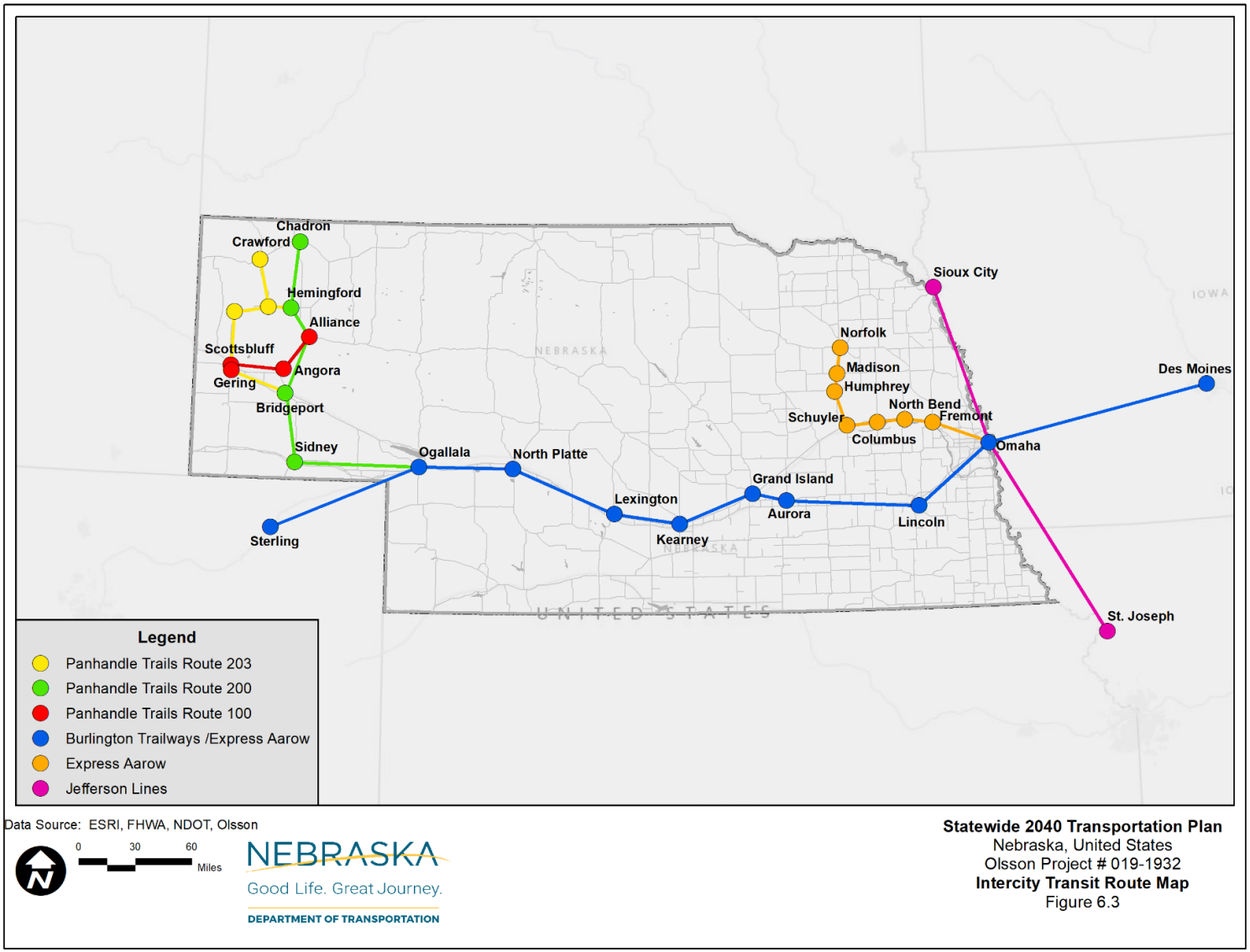
6.2.3.5 *Navigator Airport Express*

The Navigator Airport Express service specifically focuses on travel to/from Eppley Airport in Omaha and Kearney. A stop is also available in Lincoln. One round trip per day is available six days per week.

The extent of the existing intercity transit network in Nebraska is shown in **Figure 6-3.**

[vii] https://burlingtontrailways.com/locations/nebraska/
[viii] https://burlingtontrailways.com/locations/iowa/
[ix] https://panhandletrails.com/

Figure 6.3: Intercity Transit Route Map



6.3 Mobility Management

NDOT, along with a broad range of partnering agencies, initiated the Statewide Mobility Management Project in December 2015, with the goal of improving travel options for residents and visitors of the state. Through this statewide approach to address mobility needs, alternatives to fill in service gaps were identified, and an implementation plan was initiated. Mobility management represents a transportation strategy focusing more on the customer and their needs and addressing these needs through the coordinated use of a variety of providers. The concept looks beyond a single transportation service or solution by following a "family of services" philosophy offering a wide range of services and options to meet the needs of a population with diverse socio-demographics.

6.2.4 Development of Regions

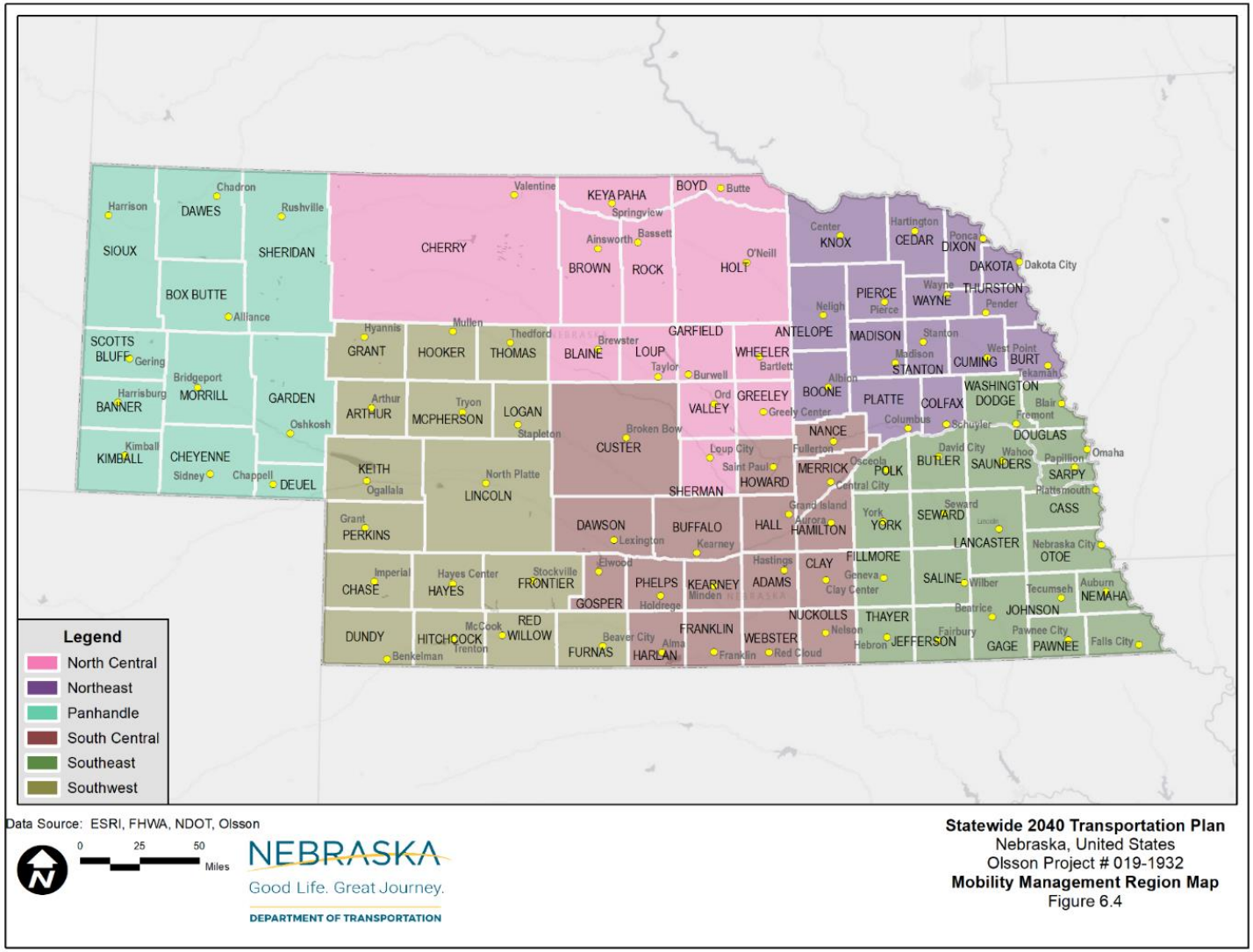
Six coordination regions were organized along county boundaries to better address the diversity of the state. The regions include the Panhandle, Southwest, North Central, South Central, Northeast and Southeast. A Regional Coordinating Committee (RCC) was established for each region to help understand transit needs and strategies. **Figure 6-4** shows the six regions. The regions consider the boundaries of the current multicounty transportation agencies, and the general service areas of county and community-based transit agencies.

6.2.5 Role of the Mobility Manager

The DOT initiated the first Nebraska Statewide Mobility Manager in 2019 to aid in coordination of services and increased mobility across the state for visitors and residents. The Statewide Mobility Manager is instrumental for continued advancement of transit service coordination throughout Nebraska along with the transit providers and human service agencies. Working together with each of these partners, the NDOT provides the opportunity for the Statewide Mobility Manager to be an accessible person who is tasked with organizing coordination across the state and serving as a liaison between local agencies and the DOT.

The Statewide Mobility Manager position is the beginning step to implementation of regional mobility management. The goal will be to increase community partnerships and support for increased coordination in the region.

Figure 6-4: Nebraska Mobility Management Regions



6.3 Ride Sharing and Taxi

6.3.1 Transportation Network Companies

Although they weren't legalized in Nebraska until May 2015, residents were using mobile ride-hailing apps for ride services from transportation network companies (TNCs) for over a year according to the Omaha World Herald. In July 2015, Uber received approval to operate from the Nebraska Public Service Commission. Lyft followed in September.

While the providers are reluctant to share exact coverage information, Lyft's website lists 5 areas of service: Bellevue, Omaha Metro, Lincoln, North Platte, and Grand Island. Uber only lists Omaha and Lincoln. There is unofficially recorded coverage in some other urban and rural areas.

Additionally, zTrip began an expansion into Nebraska in early 2018. The company is a combination of a traditional cab company and a TNC with mobile ride hailing abilities but with the regulations of a cab company.

6.3.2 Vanpool

The Nebraska statewide vanpool began in 2017. The purpose of the vanpool program is to share rides with six or more people to/from common destinations for work in the same vehicle. Currently, NDOT has a contract with Enterprise Rideshare which allows commuters to use Enterprise vehicles. The vans are equipped with Wi-Fi, satellite radio, 24-hour roadside assistance, auto liability insurance, and scheduled maintenance. Vanpoolers will also have access to a guaranteed ride-home program, which ensures they can leave work at unscheduled times worry-free. The driver for each vanpool is a volunteer within the commuter group.

Vanpools with Enterprise are offered up to a $400 monthly subsidy, reducing the cost for riders monthly. Currently, NDOT has over 40 active vanpools, with the majority of vanpools in rural areas of Nebraska. The vanpools provide a valuable transportation option in rural and urban areas, where public transportation may be limited. With this mobility alternative, employers and employees have a reliable and cost-effective method of transportation to and from jobs across the state.

6.4 Emerging Technology

Recent trends in urban mobility include the use of electric scooters that are owned by third party vendors. A user downloads an app via smartphone to access a tool to pay for the use of the scooter. The scooters are used by the rider, parked at another location, until they are picked up for charging by an independent contractor or used by another user. Considered to be a micro-transit tool and trip extender, electric scooters may assist in filling gaps within the transportation network.

At the date of this writing, electric scooters are not currently deployed within Nebraska. Recently, the City of Omaha held a six-month pilot project (from May 2019 – November 2019) under the Omaha SmartCities Coalition. The pilot program attracted scooters from Lime and Spin, two competing scooter companies. In total, the scooter pilot logged over 200,000 rides during the initial test period.

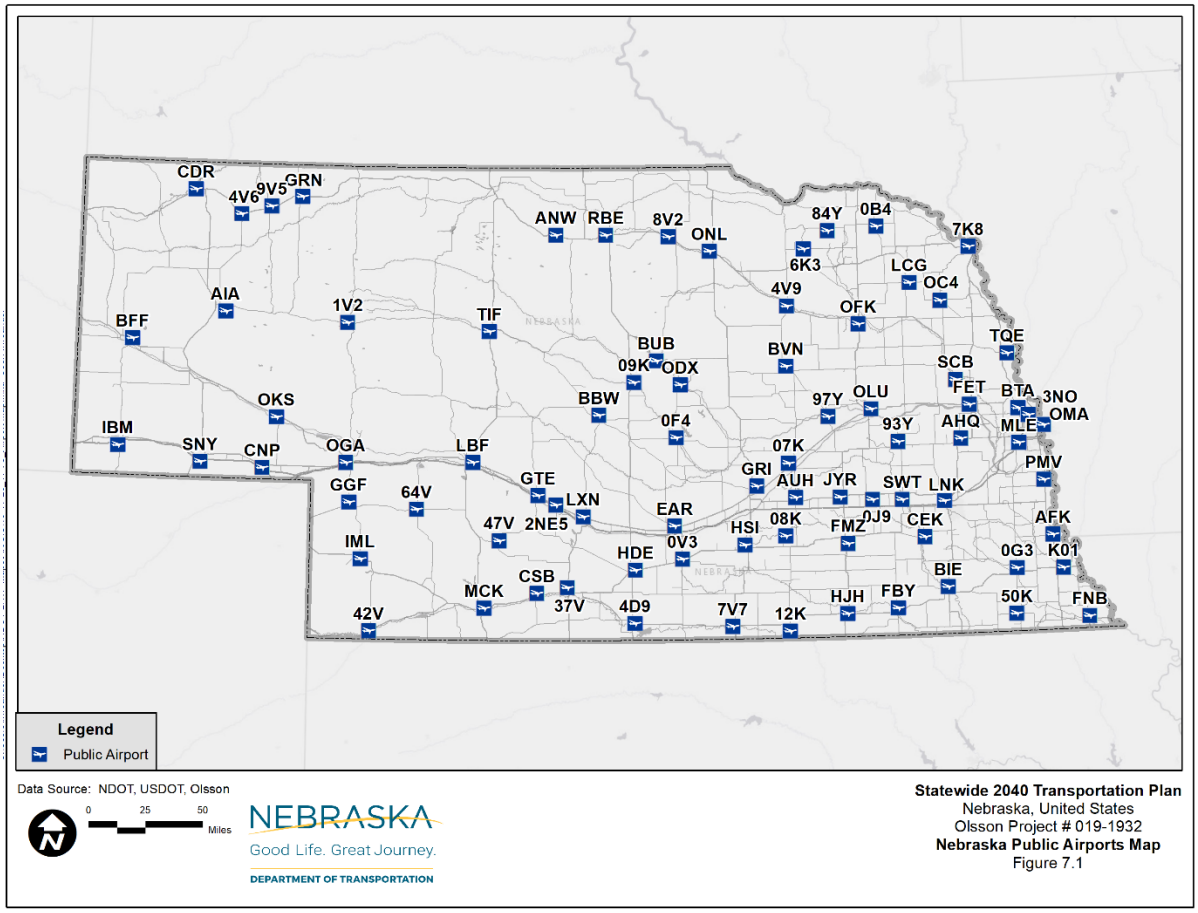
The City of Omaha is currently evaluating the program and may extend the pilot during 2020. Lincoln is also moving toward a scooter pilot, anticipated for the spring/summer of 2020.

7 Aviation

7 Aviation

Nebraska's public aviation network includes 82 public airports. Most of these facilities are smaller, general aviation airports in rural areas, providing services to private pilots, air taxi services, and small businesses such as agricultural crop pesticide and fertilizer application. Supplementing the public airport network are 164 private airstrips, owned by corporations or residents. Offutt Air Force Base, in Bellevue, Nebraska is the only military installation that is not collocated with a public use airport. The locations of Nebraska's public airports are shown in **Figure 7-1.** [24]

Figure 7-1: Nebraska Public Airports Map



7.1 Commercial Aviation

Regularly scheduled commercial flights take place at eight of Nebraska's 82 public airports. The majority of commercial air service in terms of both total passengers and destinations served originate at Omaha's Eppley Airfield. The Lincoln Airport is the next greatest generator of commercial air traffic, followed by Central Nebraska Regional Airport (Grand Island), Western Nebraska Regional Airport (Scottsbluff), and Kearney Regional Airport. Fewer

than 1,500 annual commercial operations occur at McCook's Ben Nelson Regional Airport, Lee Bird Field (North Platte) and Chadron Municipal Airport.

On demand air taxi service is available throughout the state at various locations. The location of commercial airports in Nebraska is shown in **Figure 7-2**. Detailed statistics and locations served by each commercial airport and summary information of air taxi activity is shown in **Figure 7-2.** [25]

Figure 7-2: Commercial Airports Map

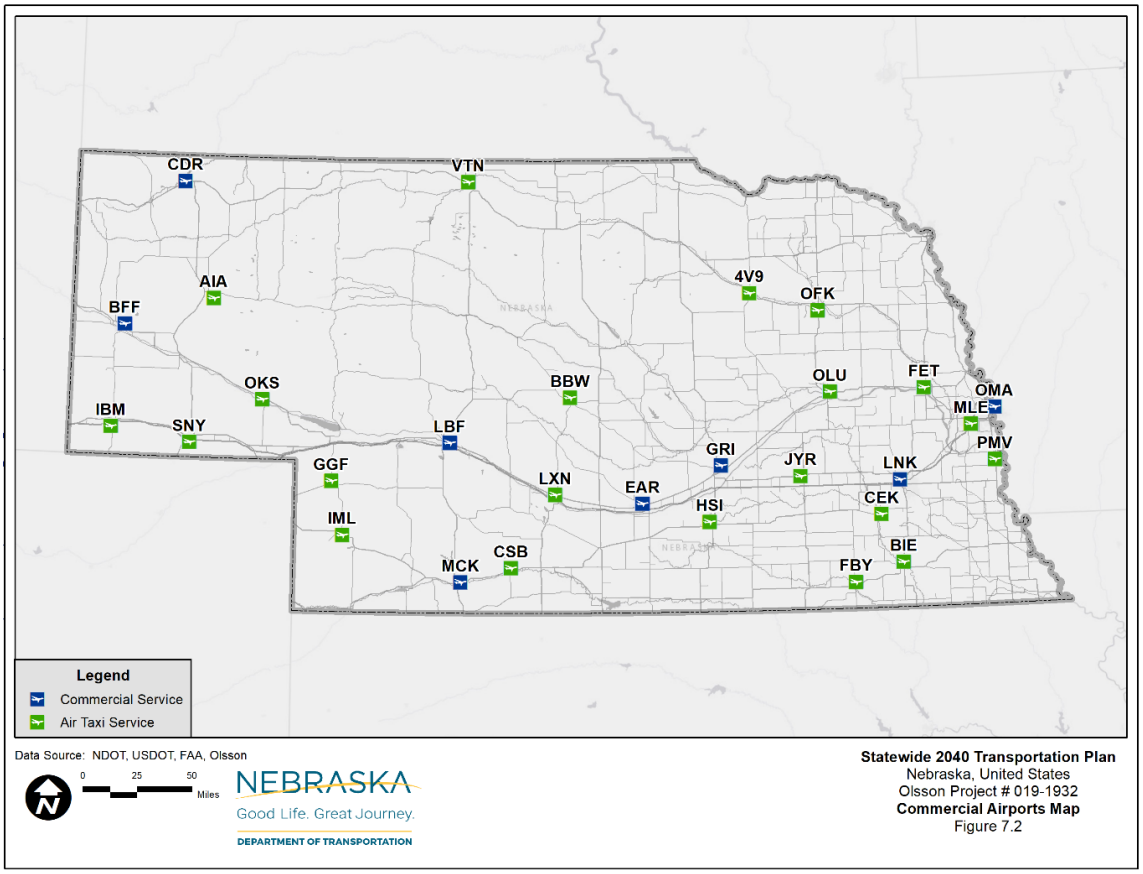


Table 7-1: Commercial and Air Taxi Statistics

Airport Code	City	Name	Commercial Operations	Commercial Destinations	Air Taxi Operations
OMA	Omaha	Eppley Airfield	55,843	Atlanta, Charlotte, Chicago, Dallas, Denver, Destin, Detroit, Fort Myers, Houston, Las Vegas, Miami, Minneapolis, Nashville, New York City, Orlando, Philadelphia, Phoenix, Portland, Punta Gorda, Salt Lake City, San Diego, San Francisco, Seattle, St. Louis, St. Petersburg, Washington D.C.	18,296
LNK	Lincoln	Lincoln Airport	7,250	Chicago, Denver, Minneapolis, Atlanta	6,643
GRI	Grand Island	Central Nebraska Regional Airport	4,440	Chicago, Dallas, Las Vegas, Phoenix	2,294
BFF	Scottsbluff	Western Nebraska Regional Airport	3,589	Denver	627
EAR	Kearney	Kearney Regional Airport	2,190	Chicago, Denver	550
MCK	McCook	McCook Ben Nelson Regional Airport	1,500	Denver	-
LBF	North Platte	North Platte Regional Airport	1,300	Denver	3,500
CDR	Chadron	Chadron Municipal Airport	1,249	Denver	667
FET	Fremont	Fremont Municipal			3,600
OFK	Norfolk	Norfolk Regional Airport			2,894
4V9	Neligh	Antelope County Airport			2,658
GGF	Grant	Grant Municipal Airport			2,100
MLE	Omaha	Millard Airport			1,375
BIE	Beatrice	Beatrice Municipal Airport			1,200
IMP	Imperial	Imperial Municipal Airport			1,000
VTN	Valentine	Miller Field			935
HSI	Hastings	Hastings Municipal Airport			600
LXN	Lexington	Jim Kelly Field			400
SNY	Sidney	Lloyd W Carr Field			300
JYR	York	York Municipal Airport			300
BBW	Broken Bow	Keith Glaze Field			250
OLU	Columbus	Columbus Municipal Airport			200
PMV	Plattsmouth	Plattsmouth Municipal Airport			200
CSB	Cambridge	Cambridge Municipal Airport			150
AIA	Alliance	Alliance Municipal Airport			102
CEK	Crete	Crete Municipal Airport			100
FBY	Fairbury	Fairbury Municipal Airport			100
IMB	Kimball	Robert E Arraj Field			100
OKS	Oshkosh	King Rhiley Field			70

Source: FAA, 2019

Recently, air service from Central Nebraska has expanded to Chicago with both Central Nebraska Regional Airport and Kearney Regional Airport adding direct flights during the winter of 2019.

7.2 Medical Aviation

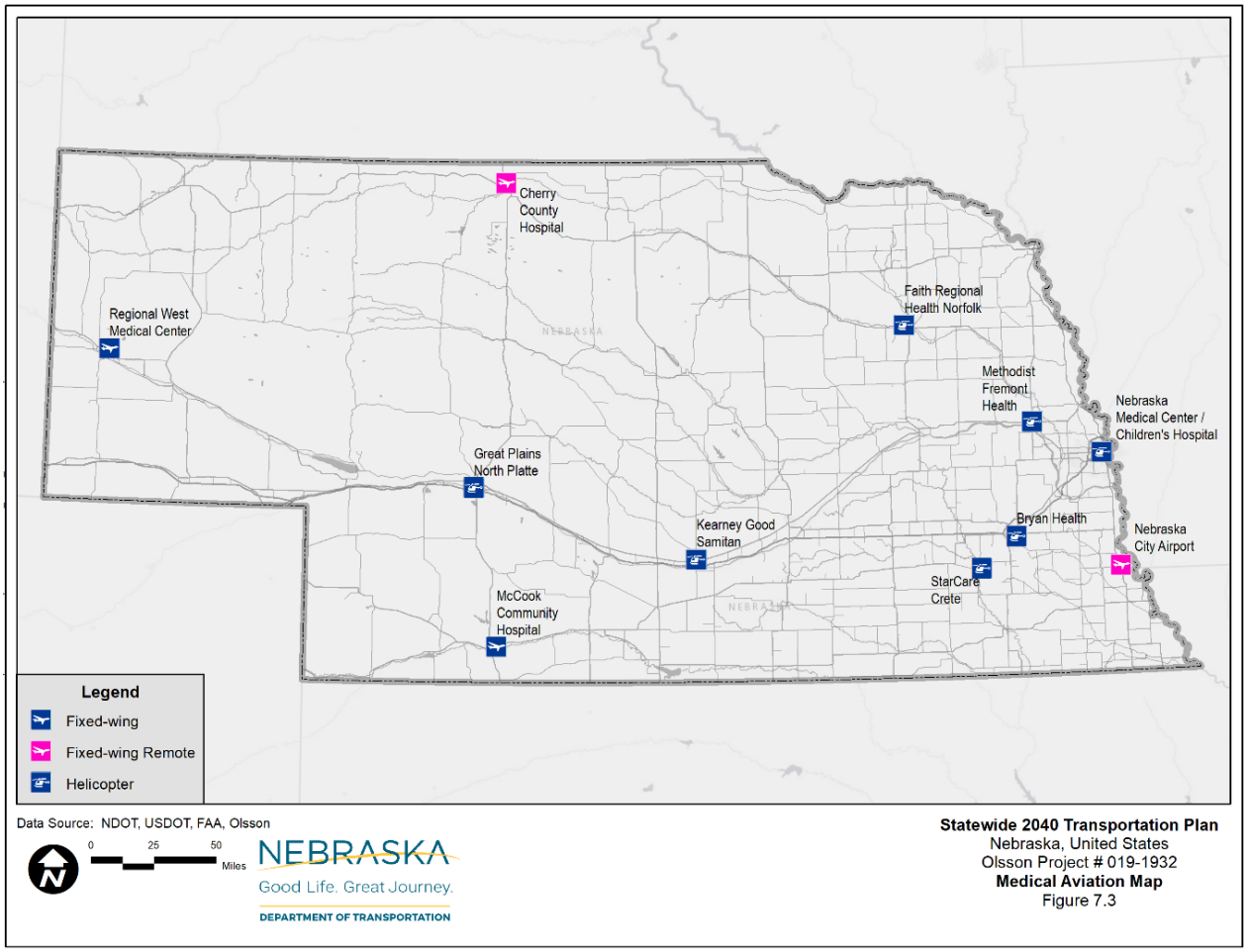
Access to emergency medical care in rural Nebraska can be challenging due to the large distances that must be travelled to access trauma centers. Medical aviation through life flight helicopter service is a critical asset to the Nebraska healthcare system. The location of medical aviation providers is shown in

Five life flight helicopter providers operate within Nebraska: Air Methods Corp., LifeNet, AirCare Ambulance Service, StarCare, and Trinity Air Ambulance. Wings Air Rescue is based in Sioux City, Iowa but provides regional service in northeast Nebraska. Three fixed wing operators provides air ambulance service from the Scottsbluff, McCook, and Nebraska City. Access to medical aviation is available at regional hospitals throughout Nebraska but would be supplied by other health systems which follow:

- Medical Air Rescue Company
  - Rapid City, South Dakota
- AirMed (Sanford Health)
  - Fargo, North Dakota

The location of these medical aviation providers is shown on the following page in **Figure 7-3**.

Figure 7-3: Medical Aviation Map



Air Methods Corp. serves the Critical Care Transport Team from Omaha's Children's Hospital and Medical Center. Air Methods Corp provides access to either fixed wing or helicopter transportation as needed by the patient.

LifeNet's medical aviation program serves northeast Nebraska, western Iowa, northwest Missouri, and northern Kansas. LifeNet operates helicopters throughout the state. Helicopter ambulances are located in Omaha at the Nebraska Medical Center, Methodist Fremont Health center in Fremont, Great Plains Health center in North Platte, and Faith Regional Health Services in Norfolk.

AirCare ambulance service operates from Kearney's CHI Good Samaritan Hospital. AirCare ambulance operates a single Bell 429 helicopter to transport patients to and from Good Samaritan hospital and the CHI network of hospitals

throughout the Midwest. A flight time, response map for the AirCare ambulance is available on their website.[x]

StarCare operates a single helicopter from Crete, Nebraska. StarCare provides medical transport and accident response service to locations within 160 miles of Crete. Additional information relating to StarCare is available on their website.[xi]

Trinity Air Ambulance is a national provider that provides services in Bellevue, Grand Island, Kearney, Lincoln and Omaha.

AirLink air ambulance service provides fixed wing medical transportation services to patients transferring to and from the Regional West Medical Center in Scottsbluff, Nebraska. The AirMedCare Network (of which AirLink is a subsidiary) covers the entire country. Additional information regarding AirLink and the AirMedCare Network is available on their website.[xii]

LifeSave Transport provides fixed wing medical transport services throughout southwest Nebraska and Kansas. LifeSave operates a single aircraft from McCook's Ben Nelson Regional Airport. Additional information regarding LifeSave's network is available on their website.[xiii]

Horizon Air Ambulance is another worldwide provider of air medical transport that can provide medical service from the Nebraska City airport. Horizon's fleet of fixed wing aircraft includes turbo props, light jets, medium sized jets and heavy jets to meet the medical needs of patients. Additional information concerning Horizon Air Ambulance is available on their website.[xiv]

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[x] https://www.chihealth.com/content/dam/chi-health/website/documents/goodsamaritan/aircare-eta-map.pdf
[xi] https://www.neaams.org/programs/starcare-lincoln/
[xii] https://www.airmedcarenetwork.com/membership
[xiii] https://lifesave.com/coverage-area
[xiv] https://horizon-air-ambulance.com/about-us.php

8 Bicycle and Pedestrian Systems

8 Bicycle and Pedestrian Systems

Bicycle and pedestrian systems within Nebraska are largely the outfall of local government investments (cities, counties, natural resource districts, etc.). In Nebraska, bicycles are largely treated as motor-vehicles and are expected to operate within the street while abiding by the same traffic laws as automobiles. Pedestrian sidewalk construction and maintenance are generally the responsibility of adjacent property owners (with some exceptions such as the City of Lincoln) and become a code enforcement challenge for local communities. Enhanced planning and construction of more robust bicycle and pedestrian systems is ongoing in many Nebraska communities.

8.1 NDOT Bicycle Friendly System

Nebraska DOT maintains a map of bicycle friendly routes that were identified in 2012 as a part of a statewide planning effort. These state highways are classified according to the 2012 traffic volumes and existence and width of the shoulder provided. Bicycle friendly state highways are deemed to be those highways on which bicycle traffic is permitted with traffic volumes below 5,000 ADT. NDOT maintains the current bicycle friendly system map on their website.[xv]

8.2 Local and Regional Bicycle and Pedestrian System

Local Nebraska communities have taken a proactive approach to planning and constructing bicycle and pedestrian systems for both recreational and commuter needs. These systems often occur as a partnership between municipal governments, county governments, and regional partnerships – such as natural resource districts, councils of governments, metropolitan planning organizations, et cetera.

8.2.1 Omaha Area System

Omaha and its surrounding communities are a part of the Metropolitan Area Planning Agency (MAPA) MPO. MAPA, through boards and committees, has developed a regional bicycle and pedestrian system plan that outlines existing and a future vision for bicycle and pedestrian infrastructure. It should be noted that this plan is illustrative in nature and not fiscally constrained. The current MAPA plan includes and builds upon all past local community plans (including the City of Omaha's Bike Omaha Network). The proposed network is available on their website.[xvi] [26]

[xv] https://dot.nebraska.gov/transportation-links/bike-hike-walk/
[xvi] http://mapacog.org/wp-content/uploads/2015/11/MAPA_Regional_Bike_Ped_Plan_WEB.pdf

The Omaha area's existing bicycle and pedestrian system builds upon a backbone of routes developed, owned, and maintained by the Papillion Creek-Missouri River Natural Resources District (Papio NRD). During flood control efforts, the Papio NRD has developed a series of 8-foot shared-use trails adjacent to drainageways. These shared-use trails have predominantly been developed for recreational usage, but also function as the backbone of the bicycle commuter network in Omaha. The Papio NRD's trail network generally runs from the northwest to southeast.

The Bike Omaha network composes an approximate 20-mile loop in central and eastern Omaha surrounding the downtown area. This network is composed largely of on-street bicycle lanes. Connections are made throughout the network to former railroad right of way (Field Club Trail) and the existing Papio NRD network. Omaha is currently a Bronze Level Bicycle Friendly community according to the League of American Bicyclists.

In the Omaha area, bicycle and pedestrian travel is limited by the availability of suitable east-west routes. As mentioned above, the Papio NRD network runs on a diagonal toward the southeast. Omaha's development patterns have pushed communities on more of an east-west commute pattern. Throughout the development of Omaha, right of way for bicycle and pedestrian modes adjacent to major east-west connector routes has not been maintained, creating challenges for bicycle users and pedestrians.

Supplementing the bicycle and pedestrian system in the Omaha area is the Metro system. Metro's fleet can carry up to two bicycles on racks in front of the buses, serving as trip extenders for users whose trip pattern overlaps a metro route.

Additional planning for expanded bicycle infrastructure in Omaha has led to the development of Omaha's Complete Street's Design Guide, the North Omaha Trail Plan and several proposed pilot projects for protected bicycle lanes in central Omaha.

8.2.2 Lincoln Area System

The City of Lincoln has developed a robust bicycle network and system plan during recent years. The expansion of abandoned railway lines through the Rails to Trails program in the latter part of the 20th century provided Lincoln with the opportunity to develop a robust, off street backbone for bicycle and pedestrian transportation. Lincoln and Lancaster County maintain a portfolio of named, off-street trails provide connections throughout the community

and County (Lincoln/Lancaster County Planning Dept, 2008). The current Lincoln bicycle trail map is available on their website. [xvii]

In recent years, Lincoln has focused efforts to develop premium on-street bicycle infrastructure, building Nebraska's first on-street protected bikeway (cycle track). The N Street Cycle Track runs from 23rd Street to Arena Drive in Downtown Lincoln (17 blocks). Building upon this effort, Lincoln recently developed an updated on-street bicycle plan.

As of 2019, Lincoln was Nebraska's only Silver Level Bicycle Friendly Community according to the League of American Bicyclists. To assist the Lincoln in achieving Gold Level, the City updated its on-street bicycle plan to guide the development of future bicycle and pedestrian networks. The Lincoln Bike Plan, completed in 2019 identifies on-street improvements and strategies to develop a more robust, higher quality bicycle system.

Lincoln is also working to address challenges to bicycle and pedestrian movements in the downtown area. The ongoing Downtown Lincoln Traffic Study is reviewing the potential to transition existing one-way street pairs into two-way streets, which may provide additional right-of-way for on-street bicycle facilities.

8.2.3 Grand Island Area System

The City of Grand Island, in partnership with the Grand Island Metropolitan Planning Organization (GIAMPO) completed the development of a Bicycle and Pedestrian Master Plan in August 2018. The plan identifies seven goals for active transportation within the GIAMPO region and sets measures of success for the implementation of the developing bicycle and pedestrian network.

Ultimately, the plan recommends the development of 17 individual trails, bikeways or bicycle boulevards throughout urban Grand Island, connecting outlying neighborhoods and parks to Grand Island's downtown area.[27] Additional detail regarding the planned network and process to achieve it may be found on their website.[xviii]

8.2.4 South Sioux City Area System

South Sioux City's bicycle and pedestrian system connects to the lager regional system in Sioux City, Iowa and Dakota Dunes, South Dakota. South Sioux City currently maintains three recreational trails that provide access to Scenic Park, Freedom Park, the South Sioux City Arboretum, and Crystal Cove Park. These trails form an outer ring around the community.

[xvii] https://lincoln.ne.gov/city/parks/parksfacilities/trails/links/2008_GPTN_Trails_Map.pdf
[xviii] https://www.grand-island.com/departments/public-works/metropolitan-planning-organization/bike-ped-master-plan

The Al Bengtson trail network was initially developed during the 1970s as a 1-mile running trail near downtown South Sioux City. During the late 20th and early 21st century, the Al Bengtson trail network has been expanded to include over 20 miles of on-street trail throughout South Sioux City. Additional detail may be found on their website[xix].

8.2.5 Hastings Area System

The City of Hastings recently adopted a complete streets policy and is in the process of updating and enhancing its community plans to provide better access and mobility for pedestrians and cyclists. Two recent planning efforts have been completed to present Hastings with a route forward to improving the bicycle and pedestrian network within the community.

The Hastings Walkability and Connectivity Study was completed in 2019 and identified potential on-street bicycle facilities that could be completed to enhance the existing Pioneer Spirit Trail network within Hastings. Also completed in 2019, the Hastings Universal Mobility Study identifies challenges to pedestrian mobility throughout the community and presents the City with a 25-year program to improve the condition and accessibility of Hastings sidewalk network.[28] These documents are available on their website[xx].

8.2.6 Regional Trail Systems

Several rural regional trails connect Nebraska communities throughout the state. The largest of these trails is the Cowboy Trail. The Cowboy Trail is the largest Rails-to-Trails project in the United States; the entire corridor covering 321 miles from Norfolk, Nebraska to Chadron, Nebraska. Currently, 192 miles of the trail have been improved to a crushed limestone surface. The trail is open to bicycle, pedestrian and equestrian traffic. [xxi]

The Homestead Trail is the second longest rail-trail in Nebraska, following approximately 40 miles of former UPRR right-of-way connecting Lincoln to Beatrice, Nebraska. The trail is composed of crushed stone and connects to the Lincoln trail network. This regional trail is open to bicycle, pedestrian and equestrian traffic. [xxii]

The MoPac Trail is a limestone Rails-to-Trails facility that follows the Missouri Pacific Railroad line from the eastern edge of Lincoln, Nebraska to a terminus near Wabash, Nebraska. The trail runs approximately 22 miles and connects Lincoln to Walton, Eagle, Elmwood and Wabash. Future potential connections

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[xix] https://www.southsiouxcity.org/department/division.php?structureid=58
[xx] https://www.cityofhastings.org/engineering/
[xxi] http://outdoornebraska.gov/cowboytrail/
[xxii] https://www.traillink.com/trail/homestead-trail/

to other trails along MoPac right-of-way include Springfield, Nebraska's MoPac Trail and the greater Omaha area trail system. [xxiii]

The Oak Creek Trail is a limestone trail using 13 miles of vacated UPRR right-of-way connecting Brainard to Valparaiso in north central Nebraska. Similar to the trails mentioned previously this rural trail is open to bicycle, pedestrian and equestrian traffic.[xxiv]

The Steamboat Trace Trail connects Nebraska City to Brownville, running approximately 22 miles on former BNSF right-of-way. This crushed stone trail parallels the Missouri River, providing scenic views of farmland and forest in southeast Nebraska.[xxv]

[xxiii] https://www.traillink.com/trail/mopac-trail-east/
[xxiv] https://www.traillink.com/trail/oak-creek-trail/
[xxv] https://www.traillink.com/trail/steamboat-trace-trail/

9 Access to Broadband Internet Introduction

9 Access to Broadband Internet

Broadband internet is a general term that describes a communications network supporting multiple signals and traffic types at speeds greater than those available through traditional dial-up, analog internet services. In the US, the Federal Communications Commission (FCC) defines broadband internet as internet with speeds over 25mbps download and 3mbps upload capabilities.

Broadband internet providers are typically privately corporations that invest in the deployment of communications infrastructure. In Nebraska, there is no single source as to the extent of private fiber network exists. However, the availability of broadband internet is a performance measure that is tracked by the FCC and updated every six months.[29]

9.1 FCC Access to Broadband

The FCC collects information identifying the coverage of broadband network in terms of the percent of population with access to internet providers that meet download and upload speed parameters. Additionally, the FCC data identifies whether the network is fixed (using ADSL, cable, or a fiber optic network) or mobile (using an over the air network via fixed cellular towers).

Using the 2018 U.S. Census population estimates in conjunction with the FCC broadband access data, over 87 percent of Nebraska's residents have access to at least one provider of fixed, wired broadband internet service (25mpbs); over 44 percent of Nebraska's residents have access to fixed, wired broadband internet providers with speeds over 100mbps. To a lesser extent, Nebraska's residents also have access to a wireless broadband network (25mbps). According to the December 2018 FCC data, 12.75 percent of Nebraska residents have access to a mobile broadband network.[30]

These data are the most recent, publicly available data concerning broadband access for Nebraskans. That said, it is understood that additional deployments of fiber optic cables, cellular and microcellular transmitters have occurred since December 2018. It is anticipated that additional expansion of the broadband network will continue to into the future.

9.2 FCC Broadband Access by Geography

Access to broadband in rural areas is an important factor in the development and retention of businesses. Rural broadband access also assists in enhancing the quality of life of rural Nebraska residents. The FCC reports access to broadband service as a percentage of population with access by county. This information is displayed for access to wired broadband service (25mbps), wired service of 100mbps, and wireless broadband access (25mbps) in **Figure 9-1**, **Figure 9-2** and **Figure 9-3** on the following pages.

Figure 9-1: Access to Wired Broadband by County, December 2018

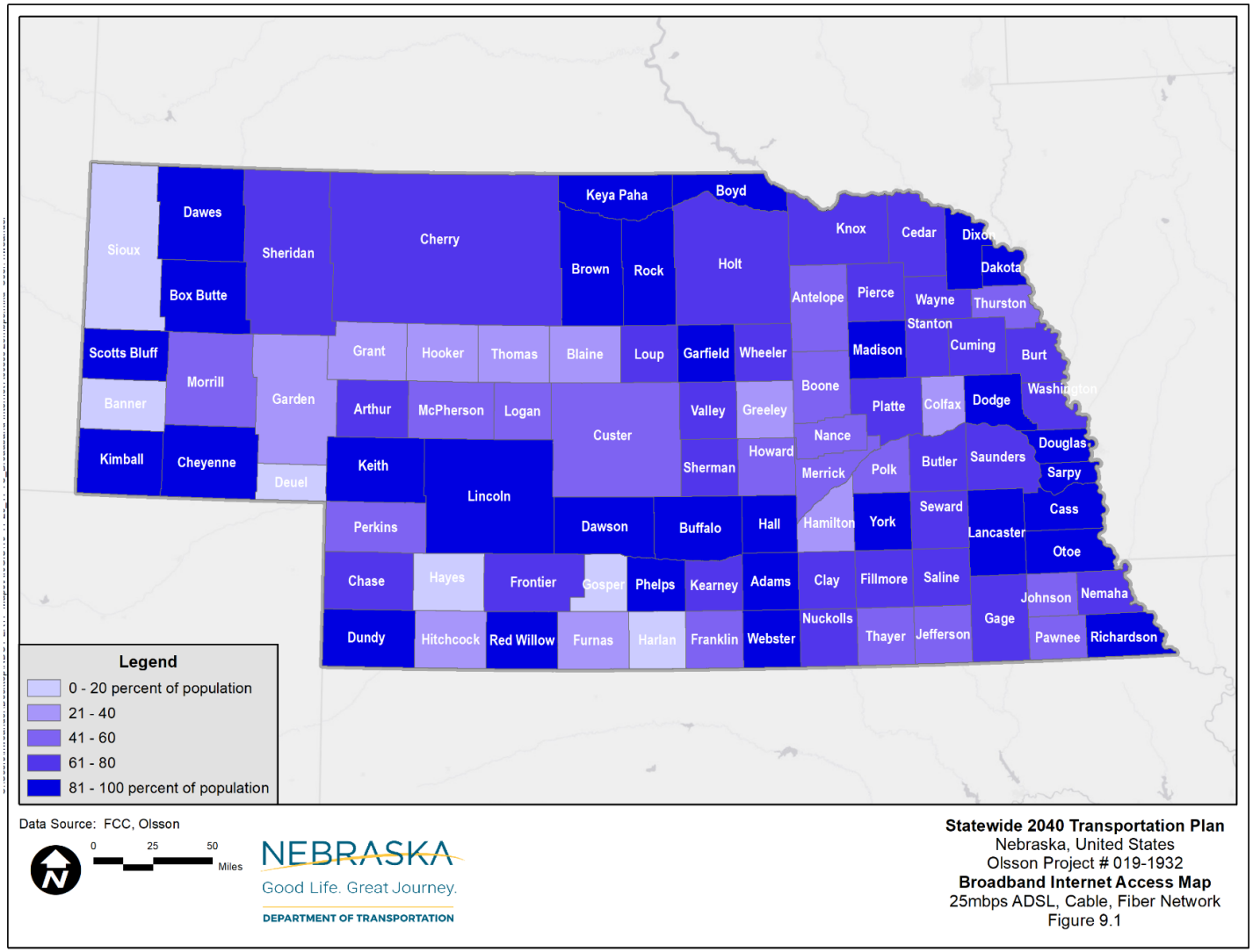


Figure 9-2: Access to 100mpbs Wired Broadband by County, December 2018

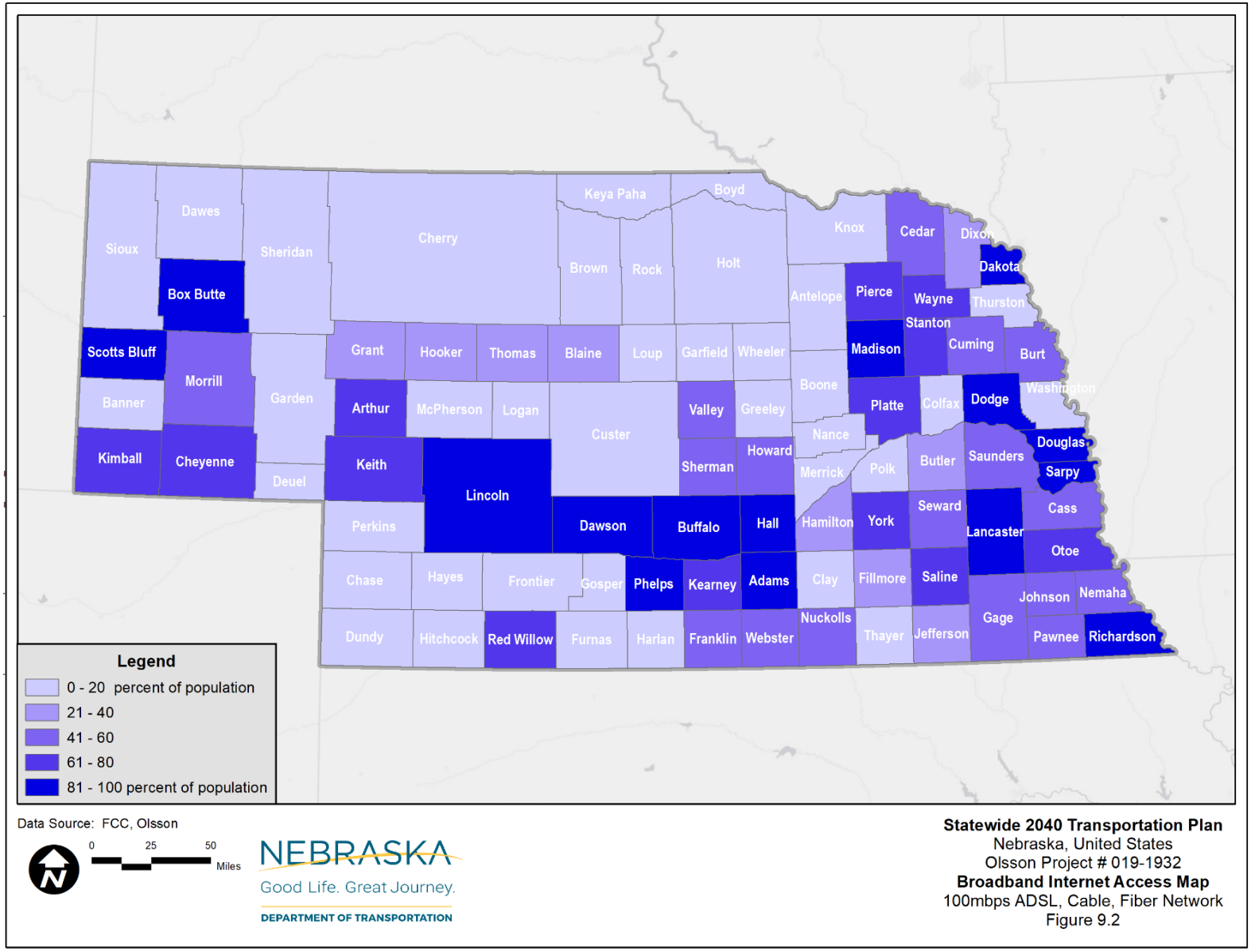
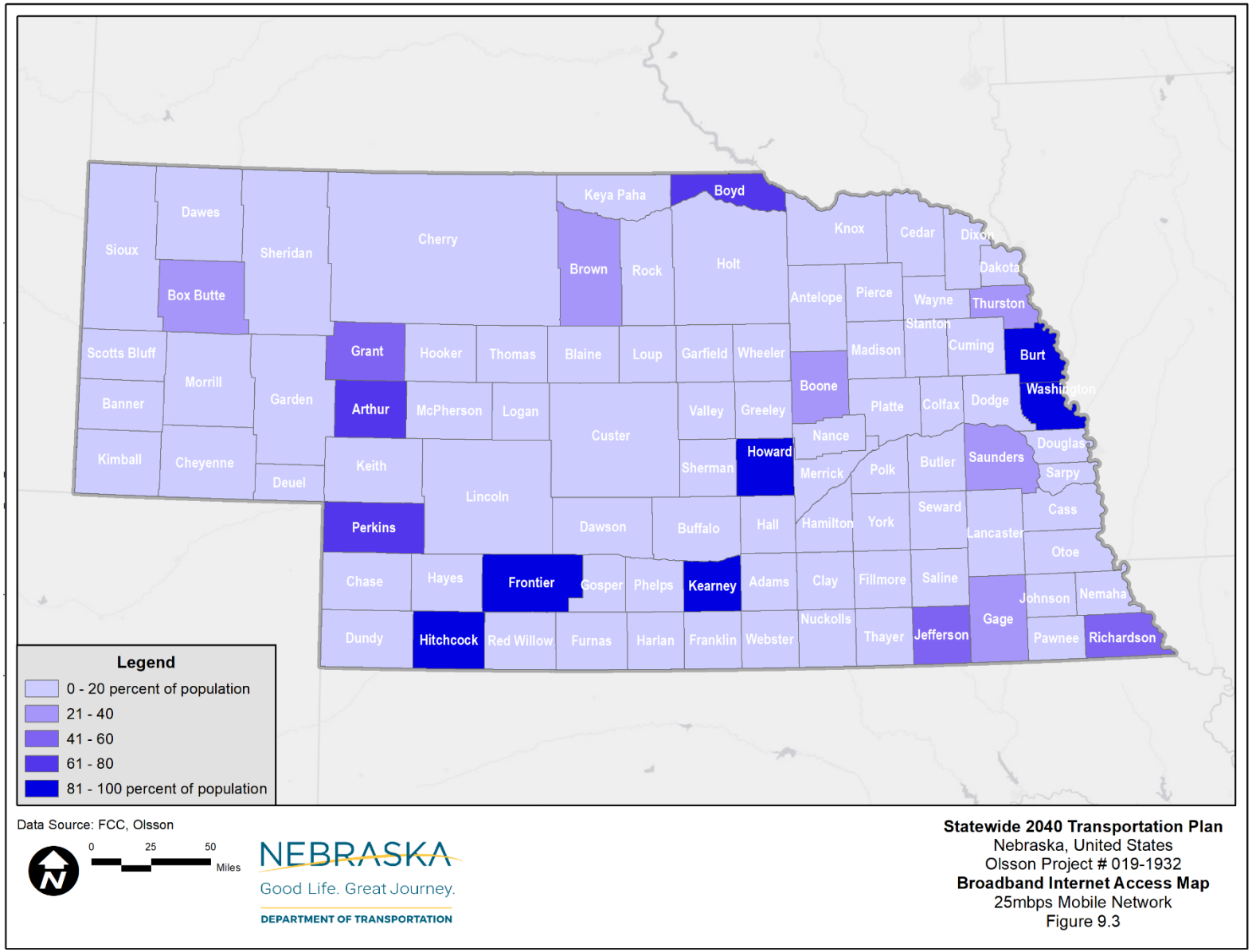


Figure 9-3: Access to Mobile Broadband by County, December 2018



10 Summary of Findings

10 Summary of Findings

Generally, Nebraska's transportation system is in good condition, meeting or exceeding the performance measures established for the state with respect to pavement condition, bridge condition, and travel time reliability. Nebraska's bridges and highways – especially those on the NDOT system, are in good condition and exceed the existing performance targets. Nebraska's intelligent transportation systems span the state and provide valuable information to the traveling public and government agencies.

Freight transportation in Nebraska is largely dependent upon the existing roadway and rail systems. Nebraska's water freight capacity and traffic are extremely limited due to the challenges faced on the Missouri River. Air freight traffic from Nebraska is generally concentrated to Eppley Airfield in Omaha.

Transit ridership in Nebraska has been steady in recent years, though the transit network is less mature, with limited fixed or flexible route transit available. The state (outside of Omaha, Lincoln, and Scotts Bluff County) relies heavily upon demand response transit to facilitate the movement of persons who either cannot drive or choose not to drive. Similarly, intercity transit has been limited to a few providers with limited schedules.

Statewide, Nebraska's bicycle and pedestrian systems are less mature. The rural bicycle network is generally limited to low volume state highways on which travelers must use the paved shoulder (where available). Within Nebraska's urban areas, the bicycle and pedestrian network is similarly less mature, recreational trails making up the largest portion of the network. High quality, on-street infrastructure for bicycling is limited to the City of Lincoln's N-Street Cycle Track or bicycle lanes with painted buffers in both Omaha and Lincoln though communities like Grand Island, Hastings, and South Sioux City are working to improve their network.

Commercial air transportation is generally concentrated in the eastern half of the state. Omaha's Eppley Airfield and the Lincoln Airport serve the most destinations and generate the most traffic. However, commercial air service to the larger hubs of Denver and Chicago is available throughout the state. Access to emergency medical care via air transportation also is seemingly well distributed based upon the limited data available.

The most recent available statistics regarding Nebraska's access to broadband internet (25mpbs), shows that over 85 percent of the state's population has access to at least one provider of wired broadband service. Additionally, nearly 45 percent of the state's population has access to at least one provider with wired speeds over of 100mbps.

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