

# 1. City Profile



# WHAT'S INSIDE

The city profile analyzes historic and existing conditions within Minot and projects conditions in 2040. The profile examines population, economic development, housing, transportation, and natural resource trends and sets a foundation for the full Comprehensive Plan.

## Read this section to learn more about:

- Planning Area
- Demographic Characteristics
- Economy
- Community Growth Trends and Forecasts
- Geography and Natural Features
- Cultural Resources and Community Institutions
- Growth Opportunities and Constraints
- Existing Land Use and Transportation System

## Fast Facts

Minot Population in 2020: **48,377**

Population growth from 2010: **+7,489 (18.3%)**

Median Household Income: **\$66,194**

Median Home Value: **\$208,700**

Average Household Size: **2.2**

Population with at least one disability: **10.8%**

Total value of building permits issued from 2011-2021: **\$1.68 billion**



# PLANNING AREA

## City of Minot and Context

Minot is the fourth-largest city in North Dakota and the economic center of the State's north-central region, with a trade area that extends to southwestern Manitoba and southeastern Saskatchewan. The micropolitan area includes the neighboring cities of Burlington, Des Lacs, Sawyer, and Surrey, as well as portions of McHenry County and Renville County. The State highway system provides direct connectivity to Bismarck, Williston, Devils Lake, and beyond. Minot Air Force Base, located approximately fifteen miles north of the City, is a pillar of the local economy, with a population of 5,312 in 2020 (see Figure 1-1).

The City's development pattern is shaped by the prominent hills and coulees of the Souris River Valley. This topography creates unique opportunities along with development challenges. The Souris River winds through the heart of downtown



*North Broadway looking toward South Hill.*

and the City's core neighborhoods. Newer neighborhoods are situated above the river basin, atop North Hill and South Hill. Broadway (Highway 83) is the primary roadway connection between North Hill and South Hill. The 2011 flood exposed

roadway connectivity issues, as the north and south sides of town were largely cut off from each other. Since then, the City has made a concerted effort to improve access to commercial goods and services on the north side of Minot.



## Extraterritorial Area

North Dakota Century Code (NDCC) empowers cities to extend their zoning and subdivision regulations to an extraterritorial area (ETA) beyond corporate limits. This statute is designed to promote organized city growth and intergovernmental cooperation. Cities with a population of 25,000 may extend the ETA boundary up to four miles beyond their corporate limits, through negotiation with the County and other impacted jurisdictions. **Figure 1-1** depicts Minot's current ETA boundary.

## Focus Areas

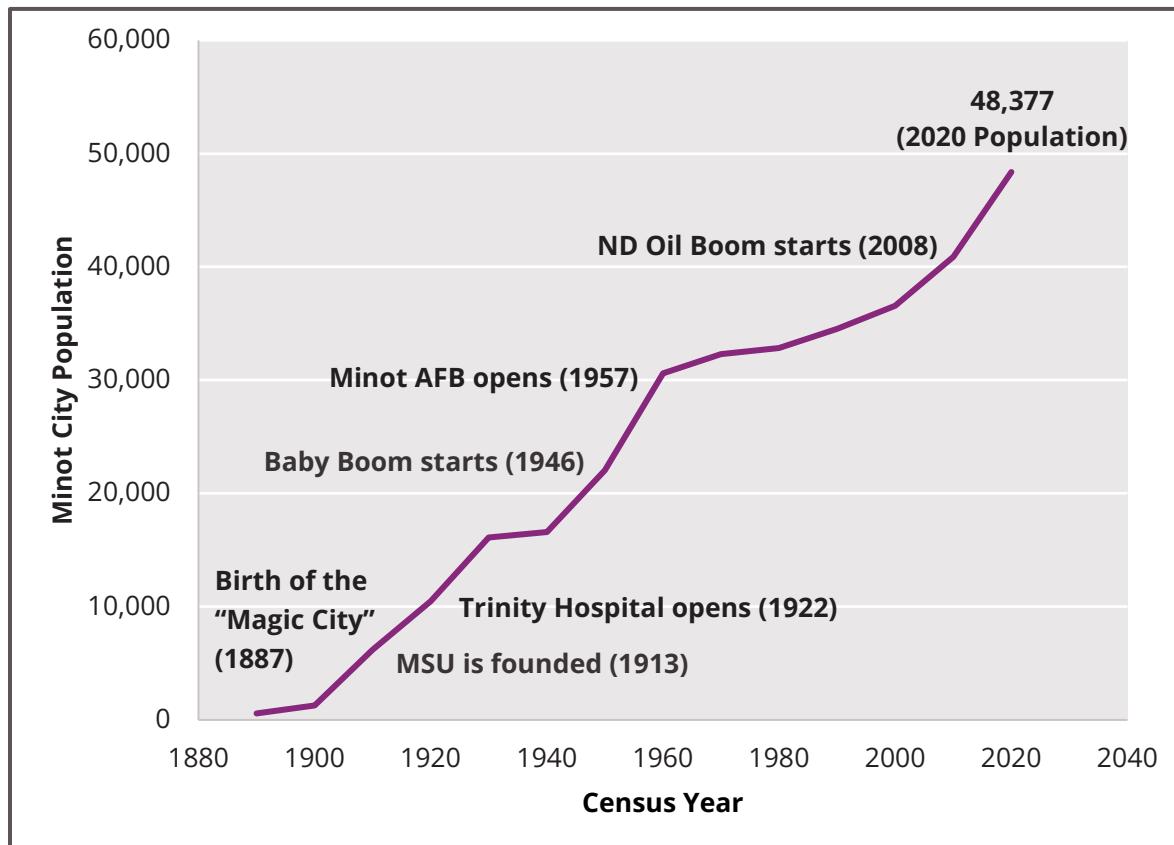
1	<b>Downtown &amp; Fringe Districts</b>	While Downtown Minot has made incremental strides in recent years, the relocation of some Trinity Health properties and the School District realignment present a significant opportunity to improve Downtown. The Comprehensive Plan provides a unified vision to support ongoing planning and placemaking efforts.
2	<b>Flood Impacts Neighborhoods</b>	Minot has acquired hundreds of properties in the Flood Impact Areas. Now, this area is positioned for transformative change. Area planning focuses on strengthening connections to the River and reinvigorating core neighborhoods through supportive development.
3	<b>Southwest Growth Area*</b>	As the new Trinity Health Regional Healthcare Campus and Medical District nears completion, the Southwest Growth Area has become a focus for development. The City has received several large development proposals for commercial, assisted living, and institutional uses. The Comprehensive Plan aims to organize development.
4	<b>Northwest Growth Area*</b>	After the flood, the relocation of Ramstad Middle School spurred development in Minot's Northwest Growth Area. Moving forward, the addition of Minot High School will drive continued demand for supportive development, infrastructure, and services.
5	<b>Extraterritorial Remainder*</b>	The Comprehensive Plan emphasizes growth management and provides a policy framework to organize development in the remainder of the Minot's Extraterritorial Area.

\*Minot's highway entry corridors (US Highways 2, 52, and 83) are a point of emphasis in Focus Areas 3-5. Certain corridor sections are developed with a disorganized mix of industrial, commercial, and residential properties. The Comprehensive Plan provides a holistic vision to improve the corridors' form and function.

# HISTORICAL DEVELOPMENT

In 1886, a railroad town sprung up in Ward County, North Dakota, seemingly by “magic” overnight. The City of Minot was incorporated the next year. The following century saw continual growth, punctuated by the establishment of Minot Normal School (now MSU) in 1913; Trinity Hospital in 1922; Minot Air Force Base in 1957; and an oil boom that lasted from roughly 2008 to 2014 (Figure 1-2). Since 2010, Minot’s population has grown by nearly 7,500 residents, reaching 48,377 at the 2020 Census. The last decade with similar growth was the 1950s, when the population grew by 8,572, due to the combined impacts of the Baby Boom and the launch of the Air Base.

**Figure 1-2. Historical Timeline**



Main Street looking south in the 1940s.

# POPULATION AND DEMOGRAPHICS

## Introduction

The Comprehensive Plan provides a blueprint for community growth and change. At a fundamental level, the Plan promotes opportunity and livability for existing and future residents and workers. Population and demographic characteristics such as median age, income, and household size are shifting and will continue to shift through the Plan horizon. This section reviews community trends that will drive city growth and shape future demand for housing, employment, services, amenities, and infrastructure.

## Impact of Migration

For any geography, the components of population change include natural change (births minus deaths) and net migration (inflow minus outflow). In Minot and across North Dakota, the rate of migration is the main driver of population change. From the railroad town to the oil boom, growth in Minot was historically fueled by a cycle of resource

development, industrialization, institutional growth, and in-migration of workers drawn to economic opportunity. Future growth cycles will also be driven predominantly by economic expansion and workforce migration.

## Age Structure

The age structure of Minot's population is indicative of recent growth. The largest age group consists of persons aged 25-29. This group comprises 11.8% of the city's population. It is followed by the 20-24 cohort (10.3%); the 30-34 cohort (8.2%); children under 5 years (6.9%); children aged 5-9 (6.7%); and the 35-39 cohort (6.5%) (**Figure 1-3**). Thus, Minot's population pyramid has a broad base, supported by Generation Y (Millennials) and their families. Minot is young compared to the rest of North Dakota and the United States as a whole. Minot Air Force Base and Minot State University contribute to the large share of college-aged persons and young adults. The influx of new workers skews male, which is reflected in the 20-24 and 25-29 cohorts.

## Key Terms

### Count

A count represents historic data developed from a verified study. The decennial Census is one example. The 2020 Census is intended to capture 100% data for the population of Minot and its sub-geographies. The City Profile uses Census data when available.

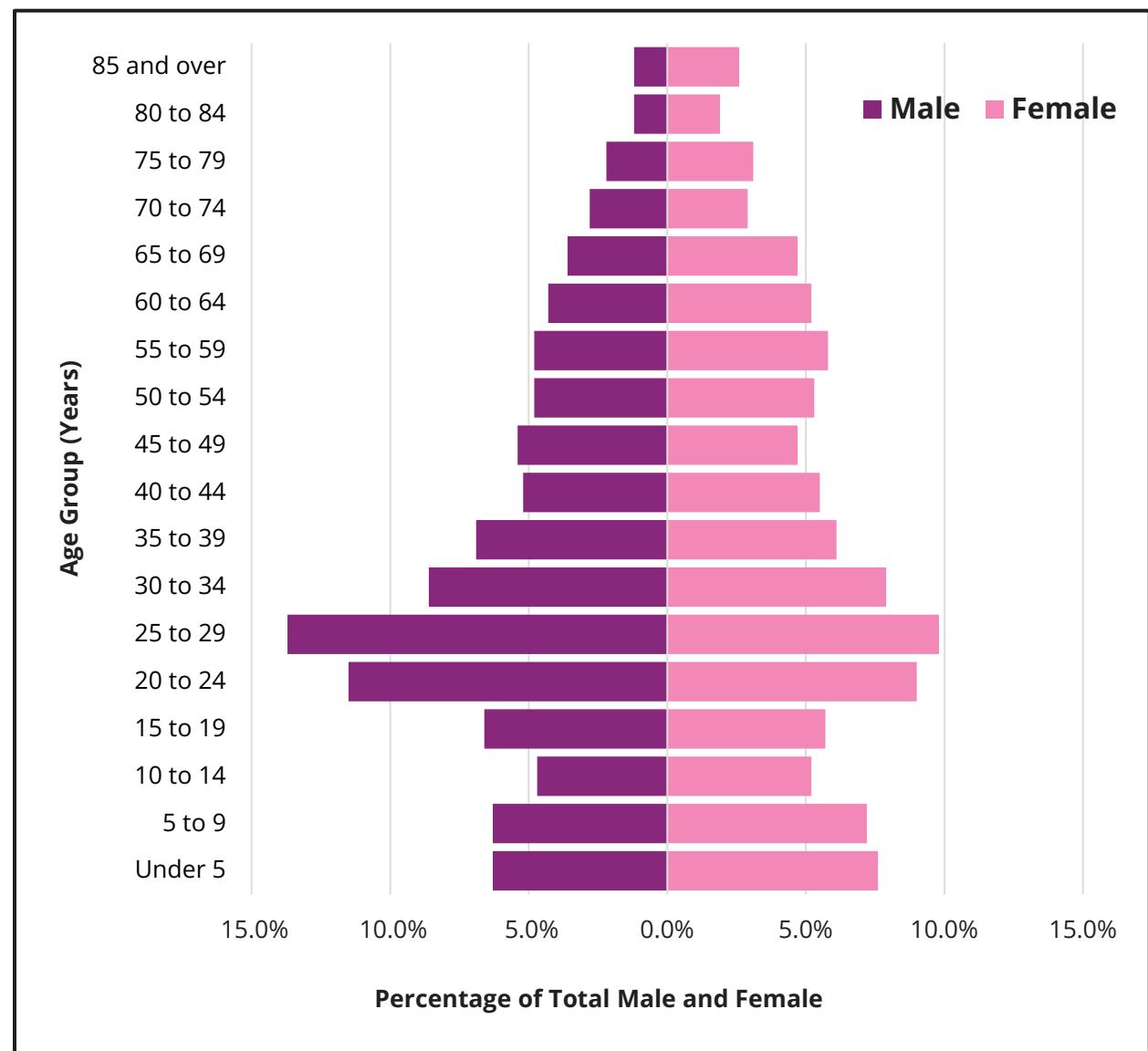
### Estimate

An estimate is derived from a representative sample of a population or study group. The American Community Survey (ACS) is one example. ACS estimates always include a margin of error, indicating the numeric range in which the true count is likely to fall. The ACS provides more data than the Census and is widely used. Data is collected and summarized on a rolling basis, with sample periods ranging from one to five years. The City Profile uses data from the 2015-2019 sample, which avoids issues from the COVID-19 pandemic.

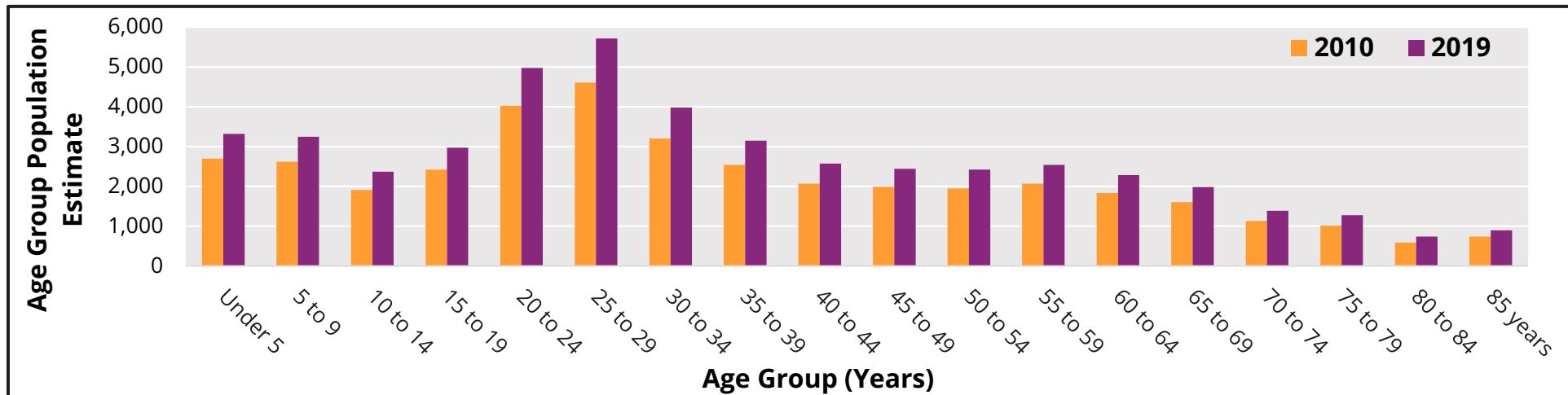
The population pyramid helps us forecast future growth. With a broad base of young adults and children, Minot is positioned for continued growth over the next 20 years. By 2040, Minot should expect a large share of individuals in their 40s and 50s (aging Millennials) and a sizeable share of young adults (Generation Z). In addition, the Baby Boom generation will continue to age, with increasing demand for supportive housing and medical care.

**Minot is a young community, owing primarily to the presence of the Air Base and Minot State University, and the recent influx of young workers, which skews toward male. This broad population base primes the City for continued growth.**

**Figure 1-3. Population Pyramid**



**Figure 1-4. Population by Age Group (2010-2019)**



Young cohorts grew disproportionately during the last decade, due to migration. (Figure 1-4) To visualize the impact of migration, consider the size of the 15-19 age group in 2010 (orange bar). With no deaths and net-zero migration, this cohort, now aged 25-29 in 2019, would have contained approximately 2,900 people. Instead, it grew to 5,700 (purple bar).

## Peer City Comparison

To understand Minot's growth in context, our historic growth can be compared to several other "peer cities". These cities are similar in size, geographic location, connectivity, and economic profiles. For the sake of this profile, the peer cities included Rapid City (South Dakota), Grand Forks (North Dakota), Great Falls (Montana), La Crosse (Wisconsin), and Manhattan (Kansas). Minot's growth has been substantially higher than similar cities, with a ten-year growth rate of approximately 18 percent. Grand Forks and Rapid City have high growth rates, but almost half the rate of Minot at 12 and 10 percent, respectively.

	Minot, ND	Rapid City, SD	Grand Forks, ND	Great Falls, MT	La Crosse, WI	Manhattan, KS
2010 Population	40,888	67,956	52,838	59,121	51,320	52,281
2020 Population	48,377	74,703	59,166	60,442	52,680	54,100
Change	+7,489 (18%)	+6,747 (10%)	+6,328 (12%)	+1,321 (2%)	+1,360 (3%)	+1,819 (3%)

# POPULATION PROJECTIONS

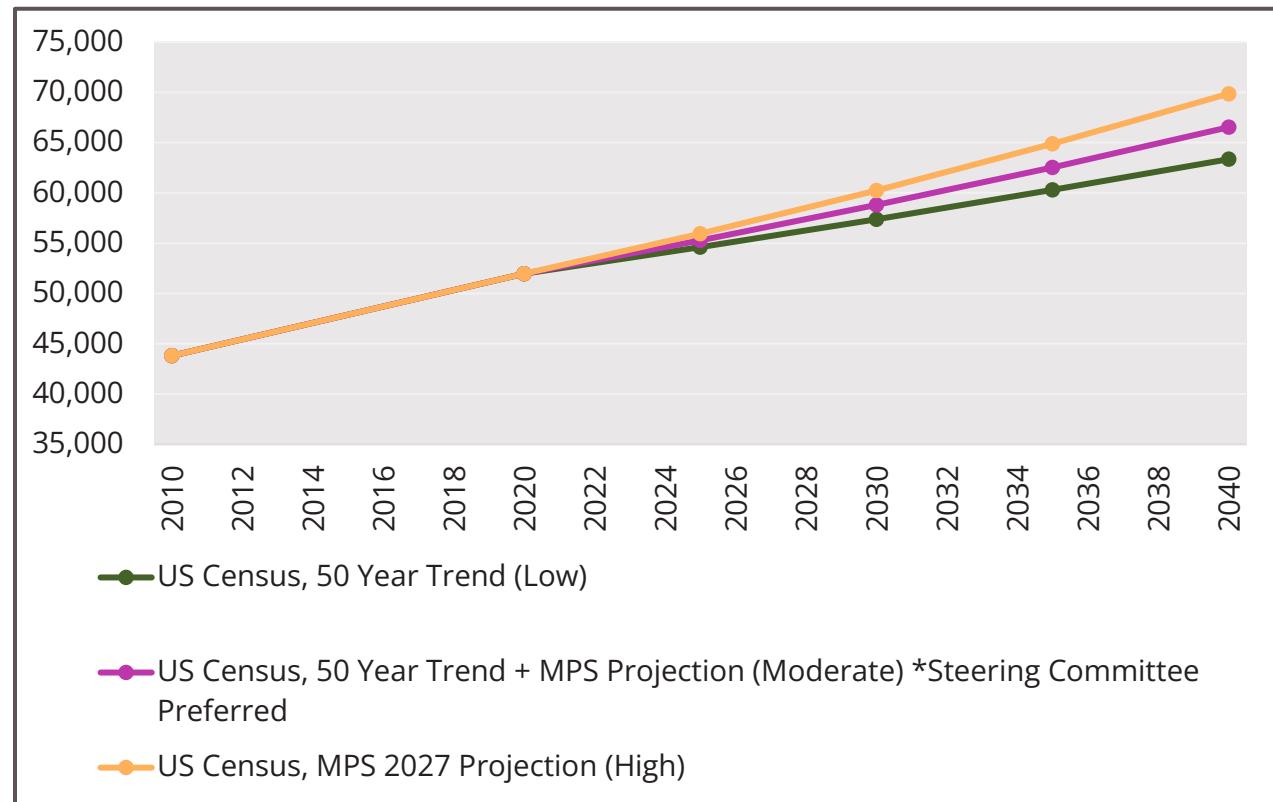
Understanding how the city has grown historically is key to assessing the future population of Minot. The Comprehensive Plan is intended to guide the city towards 2040, and estimating the population is a key component of a successful Plan. A series of projections were created for 2040 based on historical trends:

**Low:** This projection uses the average growth rate from the last 50 years of Census data, which discounts the effect of the oil boom. The year 2040 population is 63,351 (+11,395 from 2020).

**High:** This projection utilizes Minot Public School (MPS) enrollment projections for the year 2027 and is consistent with the rate of growth that occurred from 2010 to 2020. The year 2040 population is 69,863 (+17,907).

**Moderate:** This projection combines the MPS projection with the 50-year growth trend. The year 2040 population is 66,532 (+14,576). This projection is similar as North Dakota Census Office projections from 2016.

**Figure 1-5. Population Projections**



**The moderate growth projection was preferred by the Steering Committee.**

## Growth Impacts

If Minot reaches even the lowest projected population (around 63,000) by 2040, this will require significant planning in housing, transportation, economic development, and other areas.

The Comprehensive Plan sets forth guidelines and best practices to accommodate this population change. Each plan element (housing, transportation, etc.) discusses related growth impacts and planning strategies.

# RACE AND ETHNICITY

Minot's population is increasingly diverse. In 2010, minority races (non-White) composed 9.8% of the population and the Hispanic/Latino population was 2.7%. In 2020, the minority population was 20.3% and the Hispanic/Latino population was 6.8%.

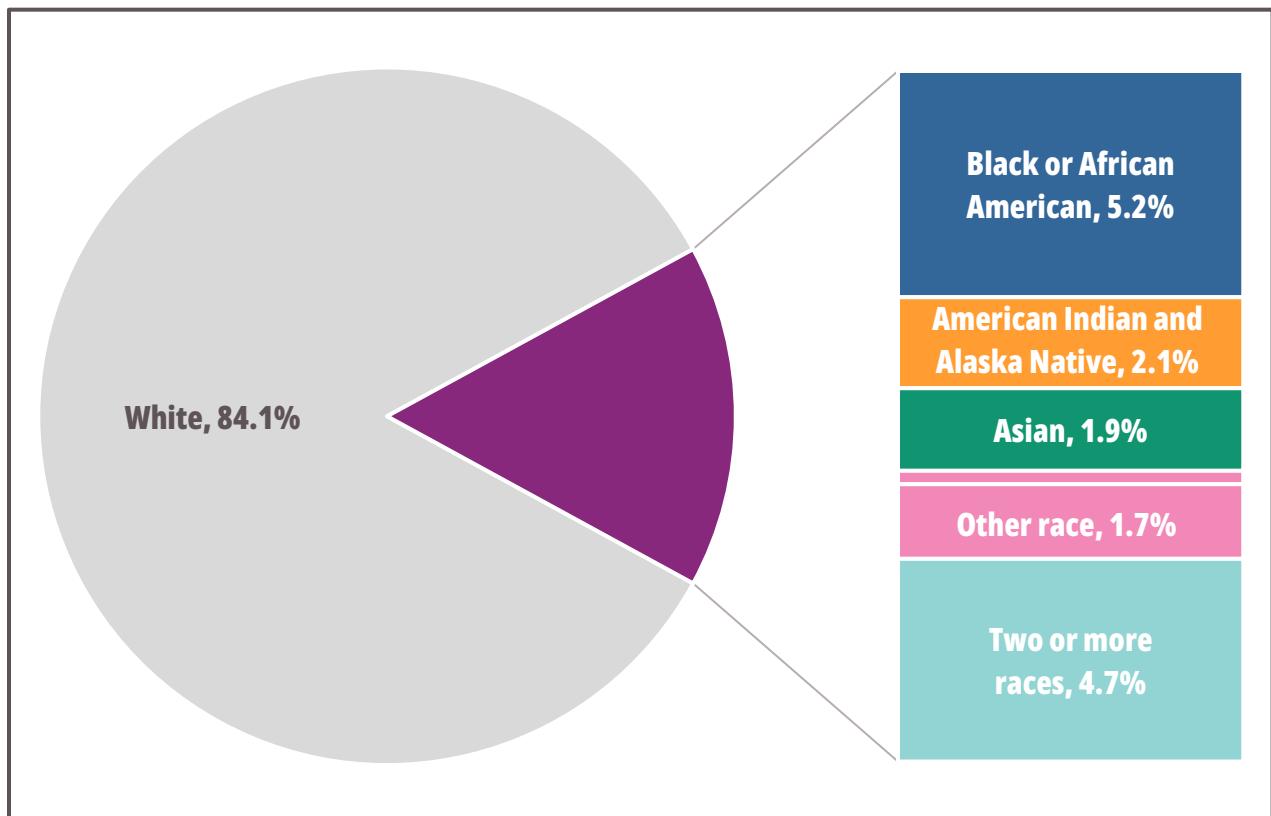
## Language

Over 3,000 Minot residents primarily speak a language other than English at home. Of these residents, approximately one-third speak Spanish and one-third speak a different Indo-European language.

## Income

The 2019 per capita income for all Minot residents is \$35,367. Incomes vary by racial groups, as shown in the table below.

**Figure 1-6. Race and Ethnicity**



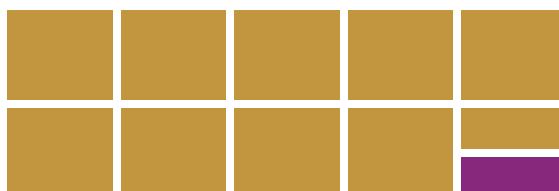
Race	White	Black/African American	American Indian and Alaska Native	Asian	Native Hawaiian/Other Pacific Islander	Some other race	Two or more races	Hispanic or Latino Origin	White alone (not Hispanic or Latino)
Mean Income	\$36,461	\$31,829	\$21,574	\$33,821	\$41,533	\$23,246	\$29,641	\$28,500	\$37,234
% of Total Income	85.1%	4.2%	2.3%	2.3%	0.1%	1.6%	4.3%	6.3%	80.9%

## Poverty

Based on the ACS definition of poverty, only 9.5% of residents who identify as "White alone" experienced poverty over the last year. Comparatively, 32% of American Indian and Alaska Native, 20% of Native Hawaiian and Other Pacific Islander, 20% of Hispanic or Latino, and 44% of "Some other race" experienced poverty in the last year.

## Homeownership

The vast majority (94.2%) of owner-occupied homes are owned by White residents. Generally, there is a higher proportion of renter-occupied units being occupied by minority populations, disproportionate to their percentage of the population. For example, Black or African Americans make up 5.2% of Minot's population, but only account for 1.2% of owner-occupied units.



 Owned by White Residents

 Owned by Non-White Residents

Race	% of Minot Population	% of Owner-occupied Units	% of Renter-Occupied Units
White	84.1%	94.2%	80.5%
Black or African American	5.2%	1.2%	7.1%
American Indian and Alaska Native	2.1%	0.7%	3.0%
Asian	1.9%	1.4%	3.3%
Native Hawaiian and Other Pacific Islander	0.3%	0.1%	0.1%
Some other race	1.7%	0.1%	2.6%
Two or more races	1.7%	2.3%	3.5%
Hispanic or Latino Origin	6.8%	2.6%	7.2%
White alone, not Hispanic or Latino	77.7%	92.3%	76.1%

# HOUSEHOLD CHARACTERISTICS

Understanding existing household characteristics can help us estimate how Minot's population will be organized in 2040. Changes in household size, tenure (owned or rented), home size, and vehicle ownership all directly impact land use and transportation systems. The 2019 ACS recorded 20,979 households in Minot.

## Average Household Size

### Household Size

Since 2010, Minot's average household size has remained consistent around **2.2**

**persons per household.** Household size is a key metric for estimating future housing demand (number of units) and quantifying acreage needs for future residential development.

## Tenure

Housing tenure refers to the proportion of residents that own or rent their homes. This is analyzed in detail by race in the section above, but generally Minot is evenly split between owned and rented units. As of 2019, **56.7% of units were**

**owner-occupied, with 43.3% renter-occupied.**

## Vehicle Availability

Vehicle availability has remained proportionally consistent over the past decade, with most households having access to two vehicles (data includes all vehicles that are owned or leased). Planning for roadway systems, parking, transit, and bicycle and pedestrian networks should account for vehicle availability and provide opportunities for residents to navigate Minot without a car.

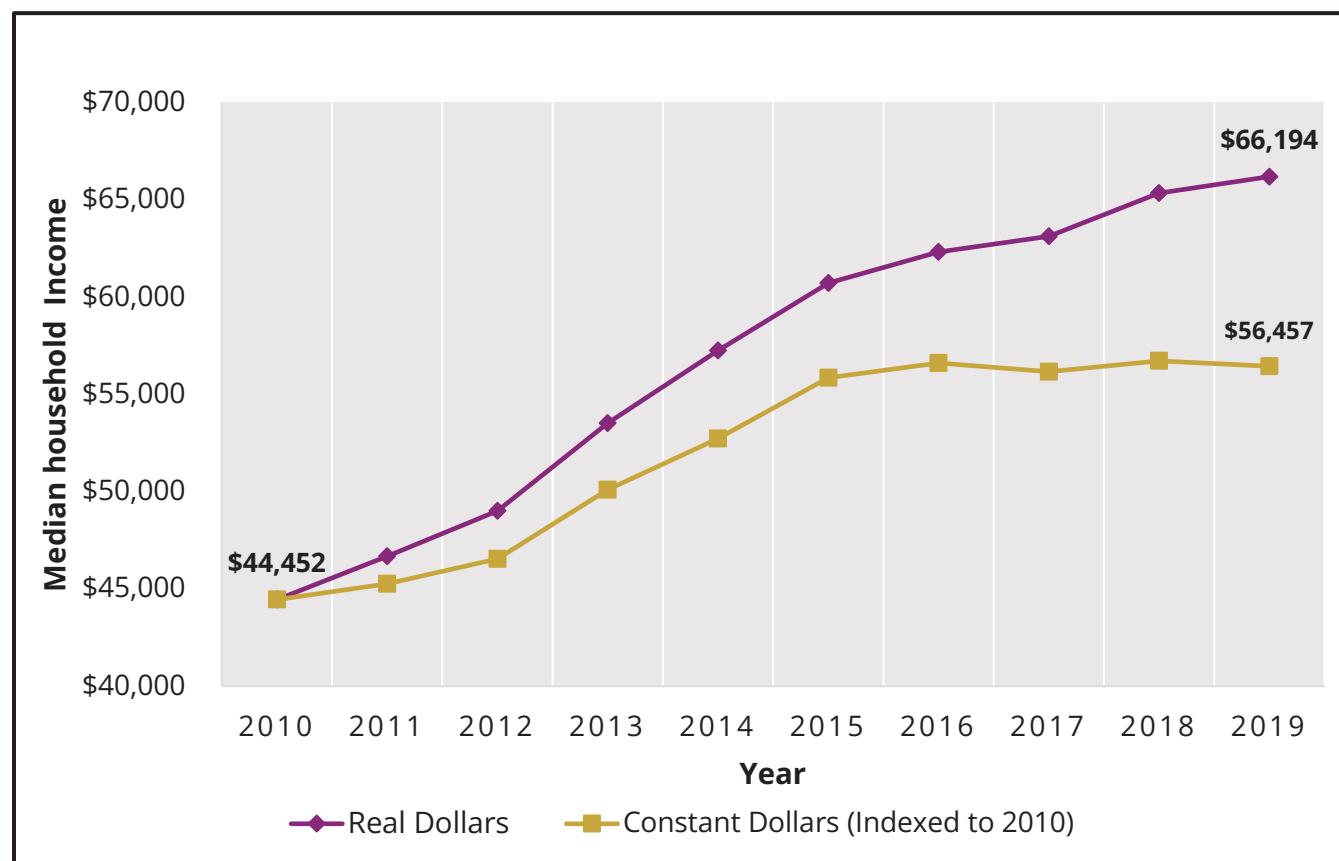
Vehicle Availability	Households
No vehicle	1,041 (5.0%)
1 vehicle	7,078 (33.7%)
2 vehicles	8,185 (39.0%)
3 vehicles	3,354 (16.0%)
4 or more vehicles	1,321 (6.3%)

## Income

The median household income for Minot is \$66,194, which is about \$1,600 more than the state median income and 15,000-\$20,000 more than the median household incomes in Minot's peer communities.

The City's median income has risen steadily over the past decade, increasing by nearly \$22,000 in real dollars. Indexing values to adjust for inflation reveals relative gains in purchasing power. In constant-dollar terms, incomes increased by about \$10,000 from 2010 through 2015. Since 2015, real incomes have continued to rise, but relative purchasing power has leveled off.

**Figure 1-7. Median Household Income (2010-2019)**



Location	Minot	North Dakota	United States	Grand Forks, ND	Great Falls, MT	La Crosse, WI	Manhattan, KS	Rapid City, SD
Median Income	\$66,194	\$64,577	\$69,560	\$50,076	\$46,965	\$45,223	\$50,537	\$52,351
Difference	--	+1,617	-3,366	+16,118	+19,229	+\$20,971	+15,657	+13,843

## Disability Characteristics

### Physical Disabilities

**Over 10% of Minot residents experience a physical disability**, which has significant impacts on planning for our future. Understanding disability types, personal needs, and where residents with disabilities live can help Minot create a future where efficient services are provided in the correct locations. Of those who identify as having a disability, nearly 2,000 residents have cognitive difficulties, 2,000 have ambulatory difficulties, and 1,700 have hearing or independent living challenges. Nearly 50 percent of those who identify

75. As our population ages, the number of individuals experiencing a disability will likely increase. The Comprehensive Plan identifies goals and strategies to provide adequate services for this demographic.

### Mental and Behavioral Disabilities

As of 2018, approximately 17 percent of adults in North Dakota met the criteria for a mental health disability – nearly 100,000 state residents, according to the North Dakota Behavioral Health System Study. About 4 percent of these residents experience Serious Mental Illness (SMI), which interferes with their ability to work and perform other major life activities.

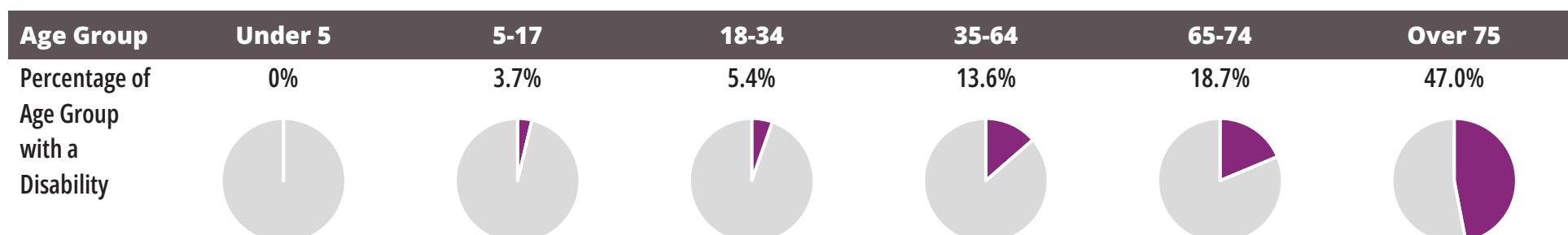
Mental health resources can support

as those who are suffering from undiagnosed mental and behavioral disabilities.

There are many opportunities to support mental and behavioral health through planning, such as:

- Supporting access to mental and behavioral health services
- Providing access to functional open space
- Designing neighborhoods to promote social interaction and pedestrian activity

Type of Disability	Hearing	Vision	Cognitive	Ambulatory	Self-Care	Independent Living
# of Residents	1,706	931	2,008	2,058	802	1,702
% of Total Population	3.7%	2.0%	4.7%	4.9%	1.9%	4.8%



as having a disability are over the age of

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those diagnosed with disabilities as well



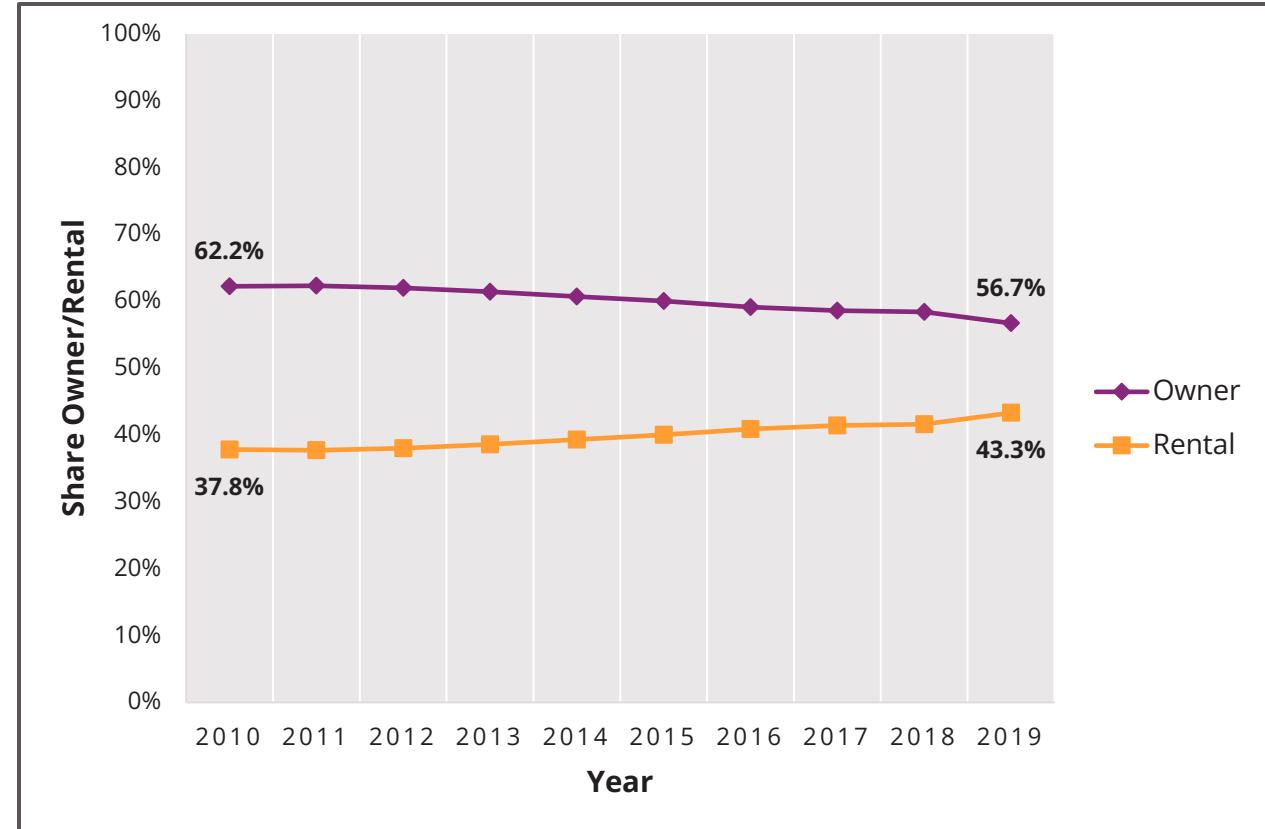
# HOUSING

The housing market within Minot is dependent on almost all other plan topics, including population, workforce, economy, transportation, and natural resources. Inversely, housing can also directly impact these plan topics themselves. As the City prepares for growth through 2040, an understanding of the historic trends and current condition of the housing market will help prepare us for future residents.

## 2017 Minot Housing study

An initial housing study was conducted in 2012, assessing conditions following the 2011 flood and the influx of workers during the oil boom. The study was updated in 2017, finding that although the shortage of rental units has subsided, the number of affordable units has decreased considerably. The study concluded that the incidence of cost-burden (both owner and renter occupied) will likely increase as the population grows and that low-income households will likely continue to struggle finding an affordable rental or ownership opportunity.

**Figure 1-8. Homeownership and Rental Rates**



## Housing Tenure

Homeownership rates have been gradually falling since 2010, with a corresponding rise in rental rates. Since 2010, ownership has declined from 62.2% to 56.7%. Correspondingly, the share of renting households increased from 37.8% to 43.3%.

**Chapter 5 provides a guide for housing.**

Location	Minot	North Dakota	United States	Grand Forks, ND	Great Falls, MT	La Crosse, WI	Manhattan, KS	Rapid City, SD
Ownership Rate (2019)	56.7%	62.4%	64.1%	43.6%	62.6%	46.1%	39.0%	61.8%
Rental Rate (2019)	43.3%	37.6%	35.9%	56.4%	37.8%	53.9%	61.0%	38.2%

As Minot continues to see a decrease in ownership rates, it also sees a greater distancing from county, state, and national trends. Ward County generally reflects Minot's temporary workforce housing market but has a homeownership rate that is almost 3% higher. State and national ownership rates are approximately 6% higher. Housing markets vary widely among peer communities.

## Housing Stock

### Housing Type

**The most common housing type is single-family detached homes (48.9%).** The next most common housing type is apartment buildings with more 10 or more units, accounting for 23.2% of Minot's housing stock.

Units	Percentage
1 (detached)	48.9%
1 (attached)	7.9%
2	2.5%
3-4	7.2%
5-9	3.1%
10+	23.2%
Mobile/Other	7.2%

### Housing Age

Minot's homes are typically less than 60 years old. About 25% of homes were built from 2010-2020, though the pace of development slowed by the end of the decade.

Year Built	Percentage
1939 or earlier	8.7%
1940-1959	14.1%
1960-1979	21.8%
1980-1999	21.4%
2000-2020	34.0%

## Housing Value

In 2019, the American Community Survey estimated 11,889 homes in Minot, about half of which are valued between \$200,000 and \$400,000. The median home value was \$208,700, nearly a \$90,000 increase from the 2010 median home value of \$118,600. In constant dollar terms, the median home value rose \$59,405 from 2010 to 2019 (33.4%). For comparison, inflation-adjusted incomes rose 27.0%.

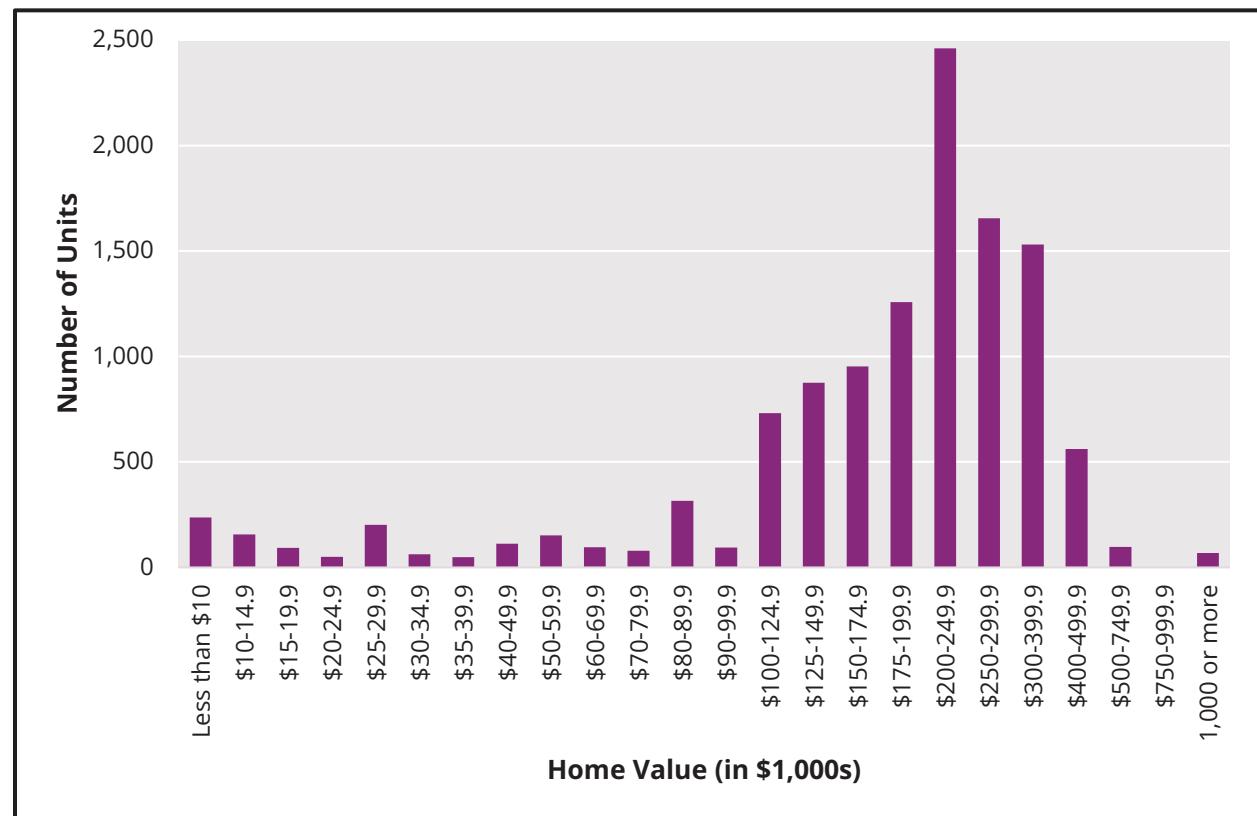
## Housing Affordability

Affordability of housing is a nebulous term, as it differs greatly depending on location, family size, and income. There are generally three ways of assessing affordability: Fair Market Rent Income, Income Limits based on Area Median Income, and the 30 percent threshold.

## Fair Market Rent Income

Fair Market Rent Income (FMR) is used to facilitate housing voucher programs and is based on calculations relating to the area median income. The FMR determines the value of housing vouchers, depending on location and unit size.

**Figure 1-9. Home Value (2019)**



## Income Limits

The Department of Housing and Urban Development (HUD) sets income limits that determine eligibility for assisted housing programs. These limits are based on Median Family Income estimates and Fair Market Rent area definitions for each area. The limits differ depending on family size and location. The 2019 income limits for a 4-person family in Ward County are shown below:

Income Threshold	Amount
Extremely Low-Income Limit (app. 30% of AMFI)	\$25,750
Very Low-Income Limit (app. 50% of AMFI)	\$41,400
Low-Income Limit (app. 80% of AMFI)	\$66,250
Area Median Income	\$82,400

### 30 Percent Threshold

Rather than relying on detailed geographic, family size, and income information some planners have taken to utilizing a more general rule of affordability: the 30 percent threshold.

This metric shows that a family who spends less than 30 percent of their income on housing and transportation costs are in an “affordable” housing situation. Situations where housing and transportation costs account for more than 30 percent are deemed unaffordable. The combination of housing plus transportation cost addresses issues where typical affordable housing is located far from employment centers, and the cost savings end up negating increased transportation costs.

Next to housing, the cost of transportation consumes a significant portion of household budgets. The Housing and Transportation Index estimates that the average Minot household spends 22% of its income on housing and 21% on transportation (<https://htaindex.cnt.org/>). It calculates the average annual transportation cost at \$13,051 per household. This number includes the cost of vehicle ownership (most households own more than one vehicle), maintenance, fuel, and fees. While driving is generally a convenient way to travel, it is important to remember that the cost of owning a reliable vehicle is unaffordable to some residents.

## ECONOMY

### Impacts of Covid-19

The Covid-19 pandemic brought business to a halt in 2020. Economies rebounded in 2021, but things look different now. Production is down, as industries continue to suffer from labor shortages and supply chain issues. Meanwhile, digital trade is booming, with the rise in remote work and continued growth of online shopping. These changes and others will have profound impacts across land use planning, transportation planning, economic development, and other areas.

### Note on the Data

This section utilizes economic data from 2019 and 2021 to help convey the scope and structure of Minot’s regional economy before and after COVID-19. Data sources include the Quarterly Census of Employment and Wages (QCEW) and the American Community Survey (ACS).

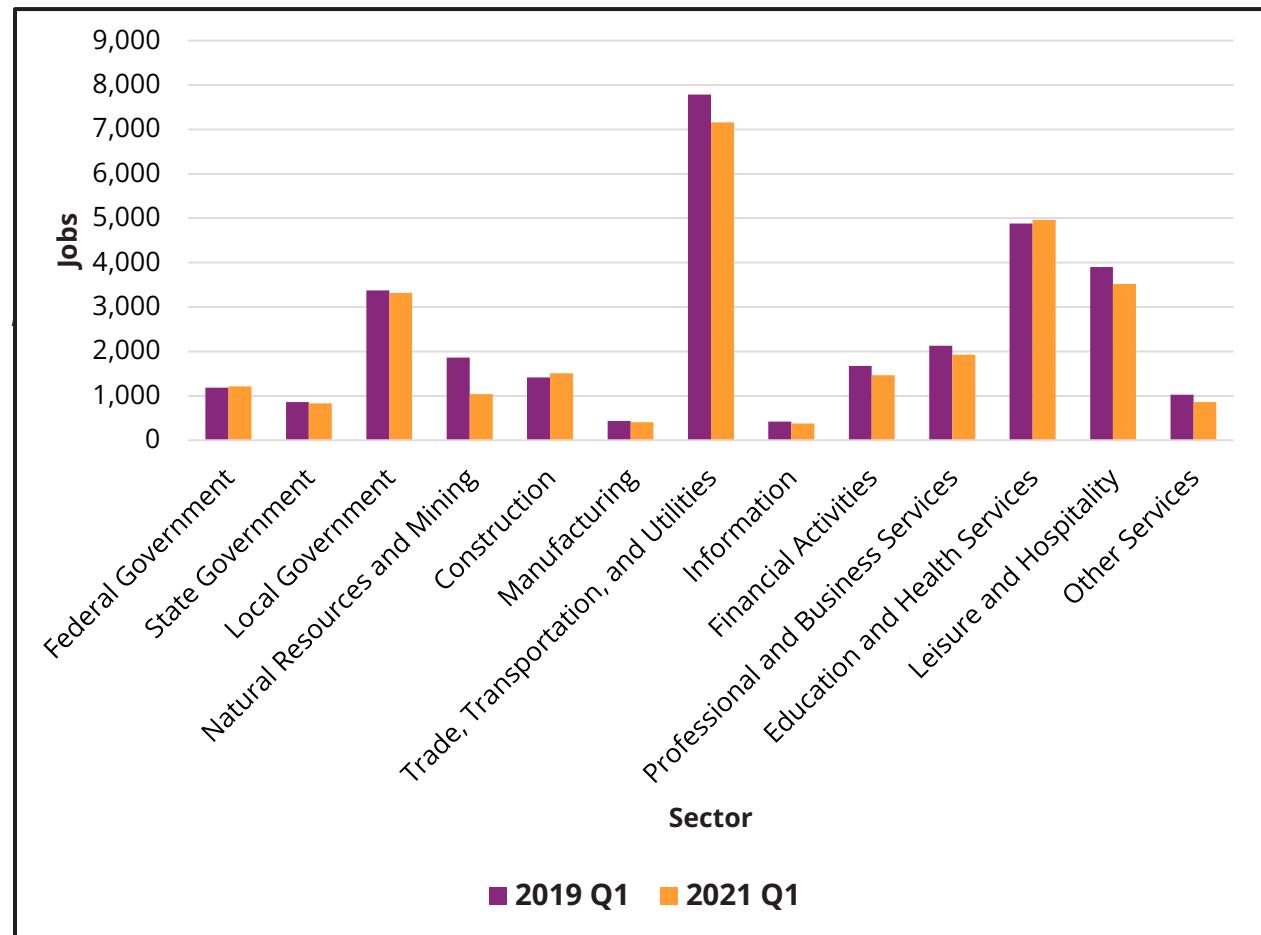
## Industry Employment

Minot's strongest employment sectors include Trade, Transportation, and Utilities, Education and Health Services, and Leisure and Hospitality. Although all of these sectors saw a decline between 2019 and 2021, they held onto relative consistency. Most sectors have been slow to recover from the pandemic. Ward County employment was down about 2,400 jobs in the first quarter of 2021 compared to 2019. Two of the County's strongest sectors, Natural Resources and Mining and Trade, Transportation, and Utilities, experienced the greatest impacts, with employment down 821 jobs (-44.1%) and 625 jobs in these sectors, respectively.

### Unemployment Trends

Minot unemployment has generally reflected County and State trends, which have hovered around 2.5 to 3.0 percent since 2010. As of 2019 ACS estimates, Minot's unemployment rate was 2.7%.

**Figure 1-10. Industry Employment**



## Industry Concentration

A location quotient compares the impact of industries within a local geography to the impact of industries nationwide. If an LQ is equal to 1, then the local share of industry employment is equal to the national share. An LQ greater than 1 indicates that the local share of employment is above the national average. The same comparison can be done for wages, where an LQ above 1 indicates that the local share of wages derived from an industry is greater than the national average. Comparing Ward County employment in Natural Resources and Mining to the national average, the employment LQ is 4.77. **This means that the proportion of workers employed in the Natural Resources and Mining industry within Ward County was 4.77 times the national average in 2019.**

Industry	Annual Average Employment	Employment Location Quotient (ND)	Employment Location Quotient (US)	Annual Average Wages	Wages Location Quotient (ND)	Wages Location Quotient (US)
All Industries	31,754	1.00	1.00	\$51,377	1.00	1.00
Federal Government	1,214	1.74	2.00	\$60,373	1.63	1.65
State Government	850	0.63	0.85	\$47,871	0.56	0.75
Local Government	3,239	0.98	1.06	\$44,799	1.09	1.03
Natural Resources and Mining	1,984	1.02	4.77	\$109,598	1.21	9.75
Construction	1,784	0.85	1.12	\$64,868	0.85	1.29
Manufacturing	457	0.23	0.17	\$46,549	0.20	0.13
Trade, Transportation, and Utilities	7,821	1.14	1.33	\$45,106	1.04	1.40
Information	420	0.92	0.69	\$58,925	0.80	0.39
Financial Activities	1,697	0.97	0.95	\$60,749	0.94	0.68
Professional and Business Services	2,228	0.90	0.49	\$52,839	0.79	0.38
Education and Health Services	4,933	1.00	1.00	\$62,228	1.24	1.38
Leisure and Hospitality	4,084	1.35	1.16	\$18,252	1.39	0.97
Other Services	1,042	1.22	1.07	\$36,423	1.21	1.12

*Location Quotients for Ward County industries compared to state and national averages. LQs above 1 are highlighted.*

## Major Employers in Minot Area

Based on a 2019 study by the Minot Area Development Corporation (MADC), Minot's top employers include Minot Air Force Base, Trinity Health, and Minot Public Schools. The full list of top 10 employers in the City is provided below. Note that Cognizant closed its campus in 2020 with a shift to remote work; the company counted approximately 150 associates in Minot in June 2020.

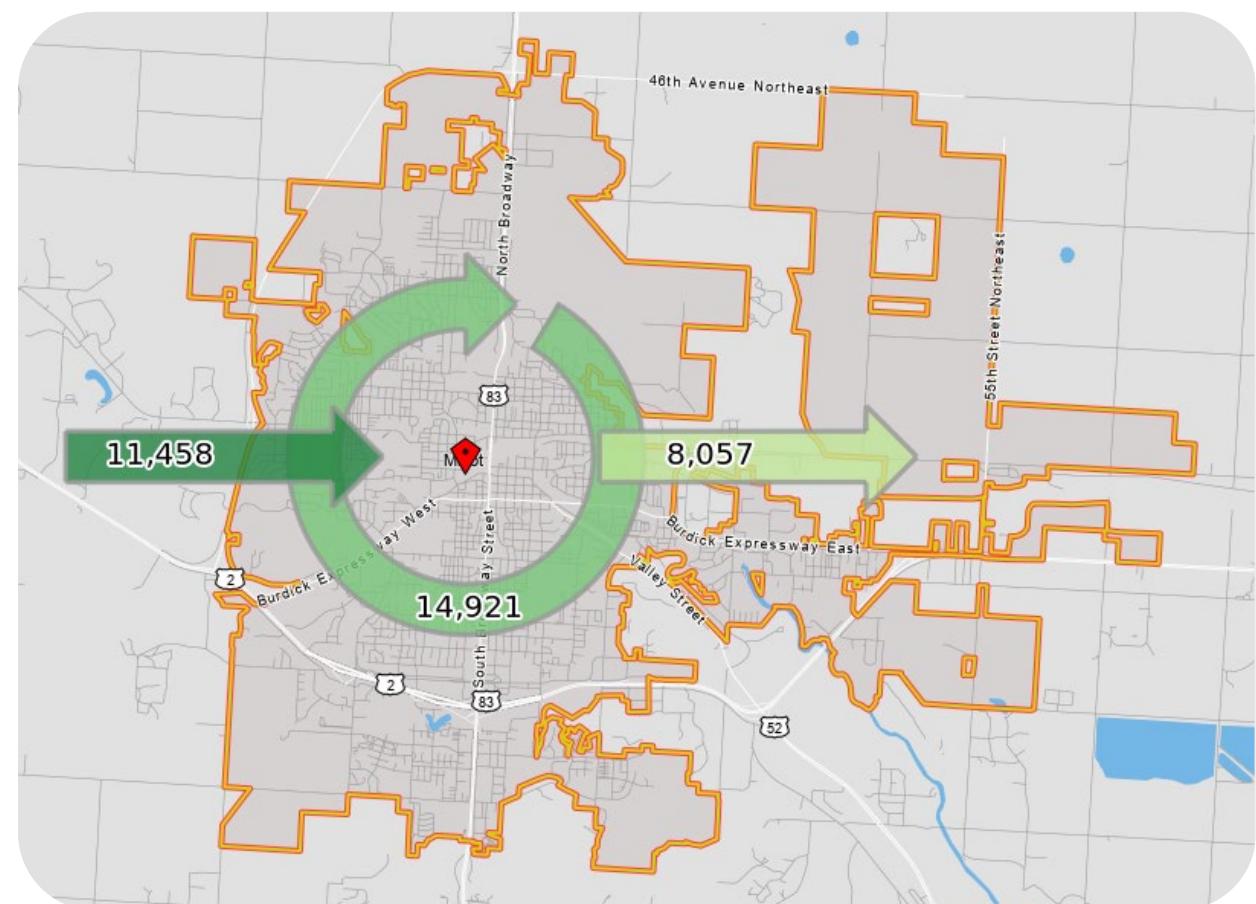
Employer	Workforce
Minot Air Force Base	6,368
Trinity Health	2,053
Minot Public Schools	1,052
City of Minot	424
Minot State University	404
BNSF Railway	360
MLT Inc.	358
Kalix	308
Ward County	297

*Chapter 8 provides a guide for economic development.*

## Employment Flow

The Census application On the Map provides data on worker inflow/inflow. This resource provides some insight into commuting patterns and jobs/housing balance, which impact Minot's tax base and influence city and regional planning. Most Minot residents both live and work

within City limits (14,921). Approximately 8,000 residents travel outside City limits for employment. Conversely, nearly 12,000 people who live outside Minot travel here to work.



# GEOGRAPHY AND NATURAL FEATURES

Minot is shaped by a variety of natural and geographic features which contribute to the economic vitality and quality of life for residents. These include the Souris River Valley, Coulees, North and South Hill, and the numerous watersheds and floodplains that interact with the City.

## Souris River

The Souris River originates in Canada and travels 357 miles through North Dakota and eventually back north into Manitoba.



*Source: International River Souris Board (2018)*

The Souris River Basin drains nearly 23,600 square miles and has a frequent history of flooding.

### Key Terms

**Watershed.** A geographical area in which all streams and rainfall drain to a common outlet. Watersheds are delineated by Hydrologic Unit Codes (HUC)

### Watersheds

Minot is situated within the Moose Mountain Creek-Souris River Sub-basin (HUC 8, #09010008). This watershed contains several sub-watersheds (HUC 12), which drain to the Souris River via

lesser channels. Watershed boundaries follow the contours of hills and coulees within and around the city (see **Figure 1-11**).

Water resources are susceptible to pollution, depletion, and flood events. In urban areas, natural drainage patterns and groundwater recharge are altered by the spread of impervious surfaces (buildings, roads, and parking lots). In this way, development can increase surface runoff and elevate flood risk. Developers must account for these impacts and may be asked to design their project so that it does not result in a net increase to stormwater discharge rates.



## Slopes and Watersheds

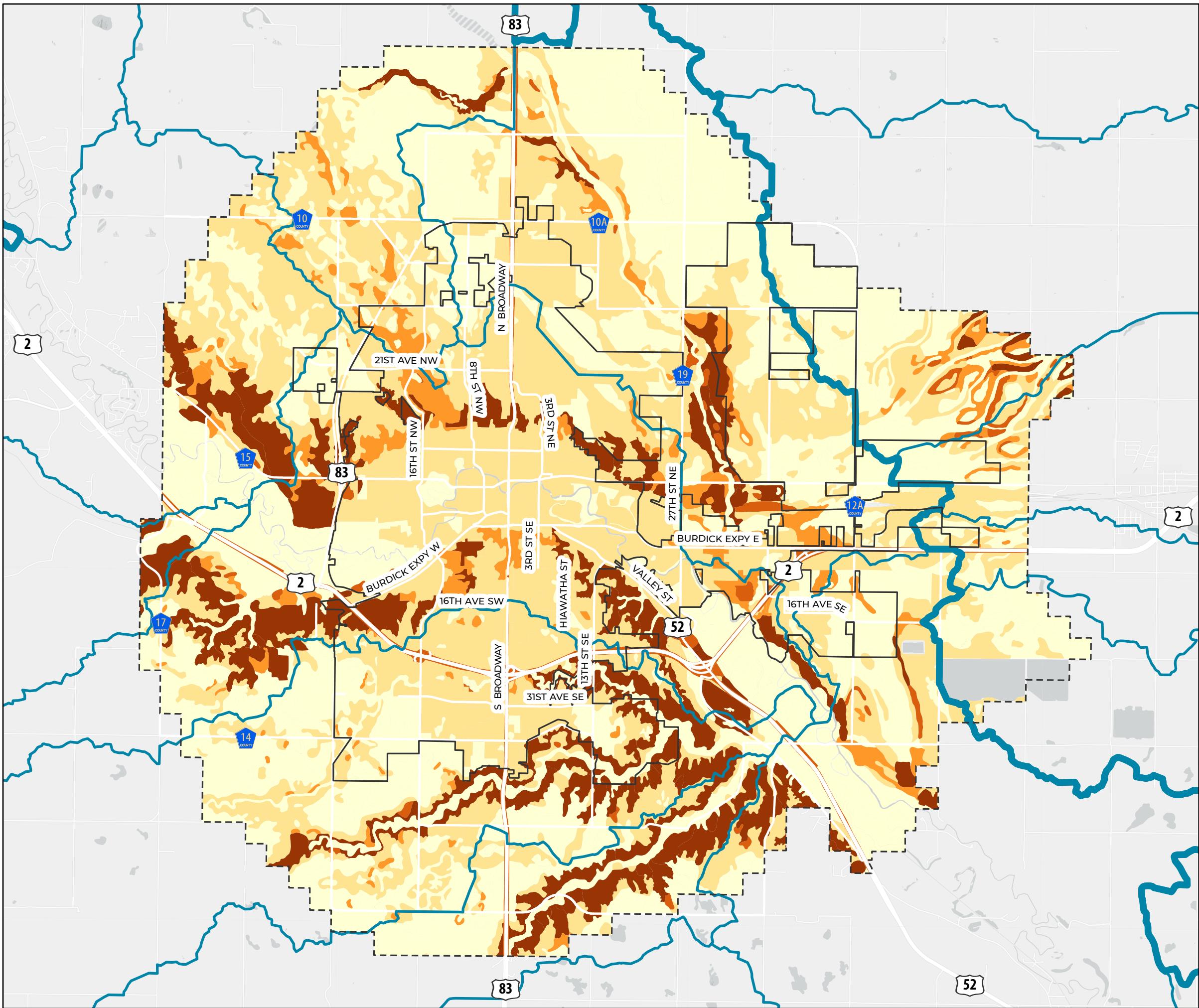
Figure 1-11

## Legend

- HUC 8 Watersheds
- HUC 12 Subwatersheds
- City Limits
- 2-Mile Boundary

## Average Slope

- 2.0% or Less
- 2.1-5.0%
- 5.1-10.0%
- 10.1-15.0%
- Over 15.0%



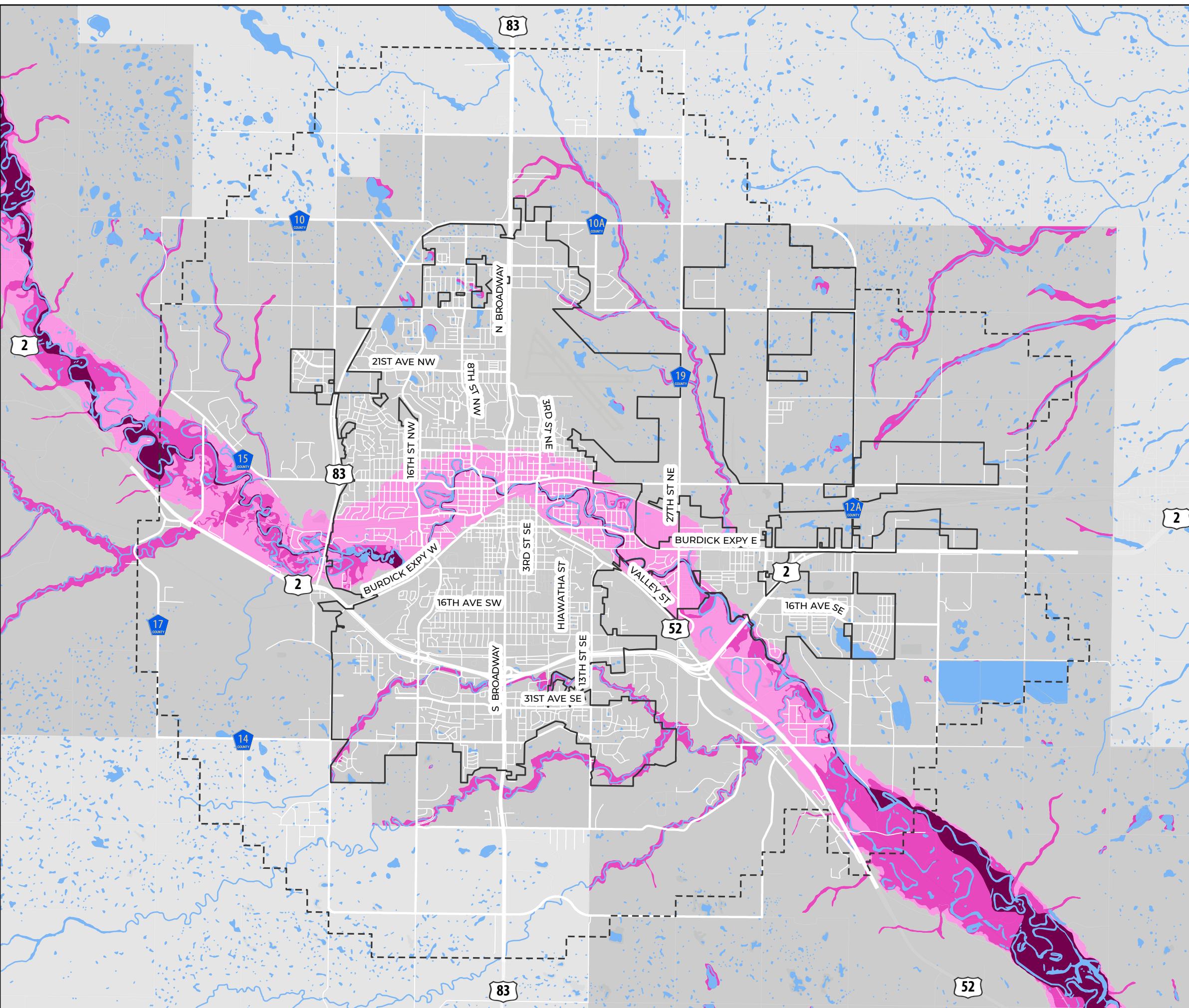
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## Water Resources and Flood Zones

Figure 1-12



### Legend

Rivers and Streams

Wetlands

Floodway

Floodplains

### FEMA Flood Zone

A/AE - 1% Annual Flood Hazard

0.2% Annual Flood Hazard

D - Possible but Indefinite Flood Hazard

X - Minimal Hazard

City Limits

2-Mile Boundary

0 0.5 1 1.5 2 Miles



Water resources are most effectively managed at the watershed scale. Many communities and regions have created watershed management organizations to manage water quality, water supply, water rights, flood control, and other issues. Environmental specialists, stormwater engineers, landowners, the City of Minot, and surrounding communities can all play a role in watershed management.

## Hills and Coulees

The Minot region features unique geography, shaped by hills and coulees (see **Figure 1-11**). Sloped areas are susceptible to erosion and should be protected from disturbance. In some cases, development is infeasible, as it may be too difficult to install roads and infrastructure or achieve a level grade.

Many communities have adopted zoning standards to limit impacts to steep slopes. Typically, hills with an average slope of 15% or more classified as “steep slopes”. In these areas, development should be restricted or limited to very low densities.

On Figure 1-11, areas with an average slope of 15% or more are indicated in

brown. As this figure shows, topographical constraints will limit development opportunities in Minot’s southeast growth area. For this reason, future growth will be guided toward other portions of the city’s extraterritorial area.

## Wetlands

Natural wetlands provide a variety of valuable ecosystem services, such as groundwater recharge, flood mitigation, and habitat for a variety of plant and animal species. Minot is located within the Prairie Pothole region. This region is characterized by millions of depressional freshwater wetlands and surrounding grasslands, which provide critical habitat for birds and waterfowl. Within the Souris River floodplain, riparian wetlands mitigate flooding and help filter nutrients before they enter the waterway.

Wetlands are impacted by human activities, including agriculture and urban development. Federal law protects jurisdictional waters of the U.S., including wetlands connected to navigable waters and tributaries.

## Floodplain

The Souris River channel is prone to flooding. Significant flooding occurred in 1969, 1976, and 2011. The 2011 flood event was the largest on record, forcing 11,000 Minot residents to evacuate. Resiliency efforts are ongoing, aided by a \$74 million federal grant awarded to the City in 2016.

## Key Terms

### **Special Flood Hazard Areas.**

Floodplain management regulates development within Special Flood Hazard Areas (SFHA). Building standards and insurance requirements follow the framework of the National Flood Insurance Program (NFIP), which is administered by FEMA. Special Flood Hazard Areas include flood zones A and AE (the 100-year floodplain). The 100-year floodplain is assumed to have a 1% flood risk every year. During a flood event, floodwaters could impact the extent of the 100 floodplain (see **Figure 1-12**). Similarly, the probability of a 500-year flood event is 0.2% from year to year.

During flood recovery, the City of Minot bought out hundreds of impacted properties and shored up flood protection. Presently, the City is simply holding these buyout parcels and performing minimal lawn maintenance. A key objective for the Comprehensive Plan is to develop and implement a long-term vision for flood-impact areas that supports core neighborhoods and reduces burdens on the City.

### *Future Flood and Drought Risk*

A flood event on the scale of the 2011 flood would be estimated to occur once every 200 to 500 years. However, in recent decades, floods have occurred more frequently across the Plains, casting uncertainty on our traditional methods of risk assessment. With warming temperatures, the atmosphere holds more moisture, which increases the frequency and intensity of heavy storm events, even as average annual precipitation has declined in some areas. 2011 was one of the wettest years on record for North Dakota, while 2021 was one of the driest. In the next 20 years, flooding and drought are expected to be the primary climate-related threats facing western North Dakota.

## CULTURAL RESOURCES AND INSTITUTIONS

Cultural resources, institutions, and events give definition to the community, enhance the quality of life for Minot residents, and help attract new workers and families to the region. The Minot community supports a variety of events and organizations that nurture local arts and culture. Public and semi-public institutions, including Minot State University, the K-12 school system, and the future hospital, are other differentiators that can support economic development. This section explores some of the city's cultural resources and institutions.

### North Dakota State Fair

The North Dakota State Fair is the largest annual event in the state. In 2021, the fair attracted more than 300,000 people over nine days. The fair showcases North Dakota culture, attracts top musical talent, and provides a unique summer diversion for people of all ages. In 2018, KX News reported that the fair generates \$80 million for the City of Minot. This impact includes direct visitor spending

and additional spending by the businesses and residents they support. Increased sales directly benefit City revenue.



*Photos courtesy Odney Advertising Inc.*

## Arts and Culture

### *Høstfest*

The largest Scandinavian festival in North America occurs each year in Minot, North Dakota. Now in its 43<sup>rd</sup> year, Norsk Høstfest attracts thousands of visitors from around the world. The festival celebrates the culture and heritage of Denmark, Finland, Iceland, Norway, and Sweden, to which many North Dakotans proudly trace their ancestry. Høstfest showcases authentic entertainment, cuisine, and artisan wares. Led by Høstfest, a community nonprofit, the festival has spurred the formation of other organizations in the community with a shared interest in preserving Nordic heritage.

### *Minot Symphony Orchestra*

Minot is one of the smallest communities in the nation to support a full symphony orchestra. The orchestra performs classical repertoire and other music throughout the year, providing an enriching experience for the audience and the ensemble. The symphony provides a unique performance opportunity for Minot State University students, faculty, and other musicians.



*Photo courtesy Odney Advertising Inc.*

## Anchor Institutions

### *Minot School System*

Minot's public school system currently oversees 13 elementary schools, three middle schools, and one high school on three campuses, including three schools located on Minot Air Force Base. In December 2021, voters approved a bond referendum to finance a new high school located on the vacated Cognizant campus. Realignment also affects Magic City Campus, which will become a comprehensive high school for grades 9-12, and Central Campus, which will become a fourth middle school, located downtown.

Current enrollment numbers show over 600 students in every grade K-5, 500-600 students in each grade 6-8, and 475-600 students in grades 9-12. Kindergartens have the largest enrollment at 649 students, indicating that the school system is poised for continued growth.

### *Minot State University*

As the third-largest university in North Dakota, Minot State University has served the Minot community and western North Dakota for over 100 years. Situated in northwest Minot, the school offers a variety of academic programs and is recognized for its affordability. Formerly Minot State Teacher's College, the

university is well-regarded for its College of Education and Health Sciences, but it provides a full complement of programs and individualized majors, including eight graduate programs. With enrollment around 3,000 and about 300 faculty, MSU provides excellent access to faculty and a supportive environment for its diverse student body. MSU is the region's fifth largest employer.

### *Trinity Health*

Trinity Health is the region's second largest employer and primary healthcare provider, serving western North Dakota, Eastern Montana, and parts of Saskatchewan. Trinity provides a full range of healthcare services, including a tertiary care hospital, more than 40 specialties, a long-term care facility, and several rural health clinics. The healthcare system has been headquartered in downtown Minot since 1922, but an expansive new facility is slated to open in 2023 in southwest Minot. The hospital relocation will vacate several properties in downtown, creating a significant opportunity to catalyze downtown revitalization efforts.



*Photos courtesy Odney Advertising Inc.*

### *Roosevelt Park Zoo*

Opened in 1921, Roosevelt Park Zoo is the oldest zoo in North Dakota. The zoo features 135 animals from 68 species and recently. Under its ongoing capital campaign, New Habitat for a New Century, the zoo recently constructed a state-of-the-art tiger complex, and development plans for a new lion site are underway. With these investments, Roosevelt Park Zoo is a valuable amenity that provides a unique visitor experience. Located in the Roosevelt Park complex, the zoo hosts family activities throughout the year.

### *Minot Air Force Base*

Minot Air Force Base (AFB) is the region's largest employer, counting 6,368 service members and additional staff in 2019. Located just over 10 miles north of the city, Minot AFB houses the 5<sup>th</sup> Bomb Wing and 91<sup>st</sup> Missile Wing, both of Air Force Global Strike Command unit. Established in 1957, the airbase is long-time institution that underpins the regional economy.

Jurisdictions within the Air Force Base's sphere of influence must be sensitive to military operations and facilities, including its underground complex of intercontinental ballistic missiles (ICBMs). The Minot AFB Joint Land Use Study (JLUS), adopted in 2015, provides a guide to mitigate military-civilian land use conflicts and foster a working relationship between Minot AFB and surrounding communities. Looking forward, Minot AFB anticipates changes with construction of a new Ground Based Strategic Deterrence (GBSD) system, which will replace the Minutemen III ICBMs. The Air Force Base expects activity to ramp up 7-12 years.

# HISTORICAL GROWTH AND DEVELOPMENT PATTERNS

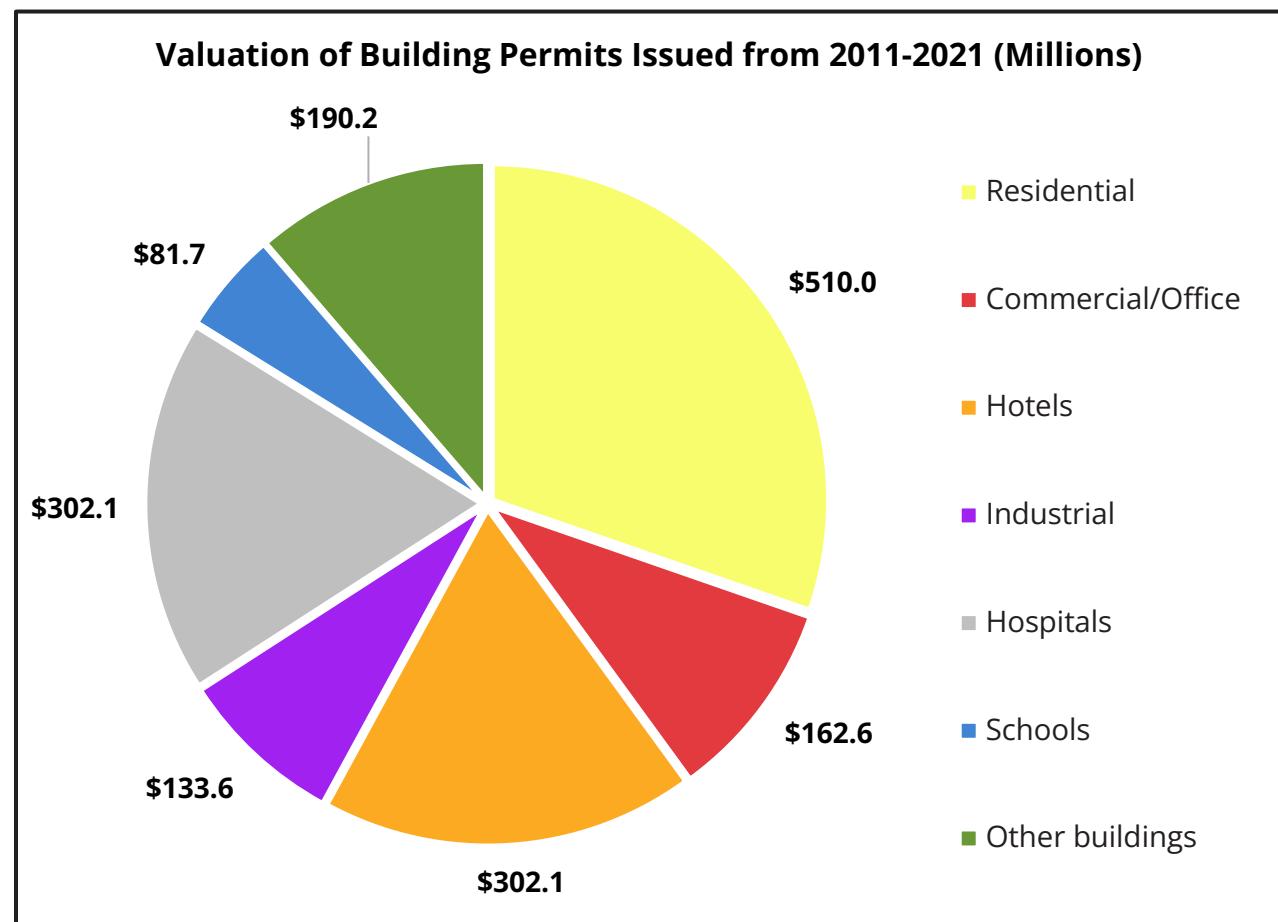
Minot has experienced continual growth for over 120 years. The pace of development that occurred from 2010 to 2014 was unprecedented. Driven by expanding employment opportunities, this growth substantially impacted Minot's housing market, transportation system, and economy. Development has stabilized, but continued growth is likely through 2040. As we prepare for the larger population of 2040, understanding historic growth and development patterns and impacts will help us plan a system that can appropriately support it.

## Development Trends

Over the past ten years, the total valuation of building permits exceeded 1.6 billion dollars. Most investment occurred in the form of residential development (see **Figure 1.13**). Significant development has also occurred in functions supporting residential growth, such as hospitals, commercial, and

schools. Many hotels were also developed, which helped house temporary workers, but the City may be faced with surplus inventory under typical economic conditions.

*Figure 1-13. Development Value*



Permits & Valuation	2021 (Jan.-Oct.)	2020	2019	2018
Total Units	90	130	71	70
Single Family Homes	82	82	67	68
Multi-Family Units (Apts., etc.)	8	48	4	2
Residential Valuation	\$29,742,201	\$26,058,296	\$12,468,700	\$12,003,184
Commercial Valuation	\$215,793,138	\$22,371,150	\$22,884,900	\$202,210,300
<b>Total Valuation</b>	<b>\$245,535,339</b>	<b>\$48,429,446</b>	<b>\$35,353,600</b>	<b>\$214,213,484</b>

Residential development trends have started to differentiate between single-family and multi-family development. During the initial boom, development of both types occurred relatively consistently. Over the past three years, single-family home development has continued to increase, while multifamily has slowed significantly. In 2020, a total of 48 multifamily permits were issued, compared to only 8 in January through October of 2021. Commercial development valuation reached a peak of \$214 million in 2018, declined to around \$40 million for two years, and then grew to its highest value of \$245 million prior to 2021 year-end. Development statistics

from 2020-2021 must be considered in the context of the pandemic.

### Impacts on Local Systems

The strong growth in Minot is likely to continue over the next twenty years, along with significant impacts to our local systems. Although this growth is mostly beneficial, it does present some challenges for the City to overcome. As we prepare this Comprehensive Plan, we should keep the following issues and opportunities in mind:

- Permanent housing availability and affordability
- Temporary housing availability and affordability

- Increased wear and congestion of local transportation networks
- Increased demand for education opportunities
- Attraction and retention of skilled workforce
- Amenities to retain temporary workforce
- Ability of local utilities and services to serve growing population

## Annexation History

**Figure 1-14** shows how Minot's boundary has expanded over the last 30 years. Data are summarized in the table below. Prior to 1991, the city spanned approximately 13.3 square miles. By 2021, the city boundary had roughly doubled in size. Most of this expansion is attributable to annexation that occurred from 2011-2015. Note that these statistics describe the size of annexed territory, not the extent of urban development. Many large tracts annexed over the past decade are undeveloped or partially developed. Growth planning should prioritize infill/buildout of undeveloped areas within city limits.

## Minot Annexation History

Development Period	City Area (Square Miles)	Growth Increment (Square Miles)	% of Current Total
Pre 1991	13.3	-	48.2%
1991-2000	14.6	1.3	4.7%
2001-2010	18.2	3.6	12.9%
2011-2015	26.9	8.7	31.5%
2016-2021	27.6	0.7	2.6%

## Infrastructure Systems

Development is supported by infrastructure and services, including water, sanitary sewer, and storm systems that are constructed and maintained by the City of Minot. Public infrastructure costs are a large component of total development costs. Effective growth management ensures that infrastructure is available when and where it is needed for development to occur, while avoiding overextension of municipal services. Areas of the City with excess infrastructure capacity may be able to support additional development (i.e.,

infill). Efficient development increases revenue to the City of Minot, helping the City finance the costs of infrastructure maintenance and improvements.

Infrastructure can be financed in several ways, including through the City's general fund (property taxes), special assessments, public-private partnerships, and tax-increment financing (TIF).

**Chapter 6 provides guidance for public infrastructure, facilities, and utilities.**

**CITY OF MINOT**

2040 Comprehensive Plan

**Existing Annexation History**

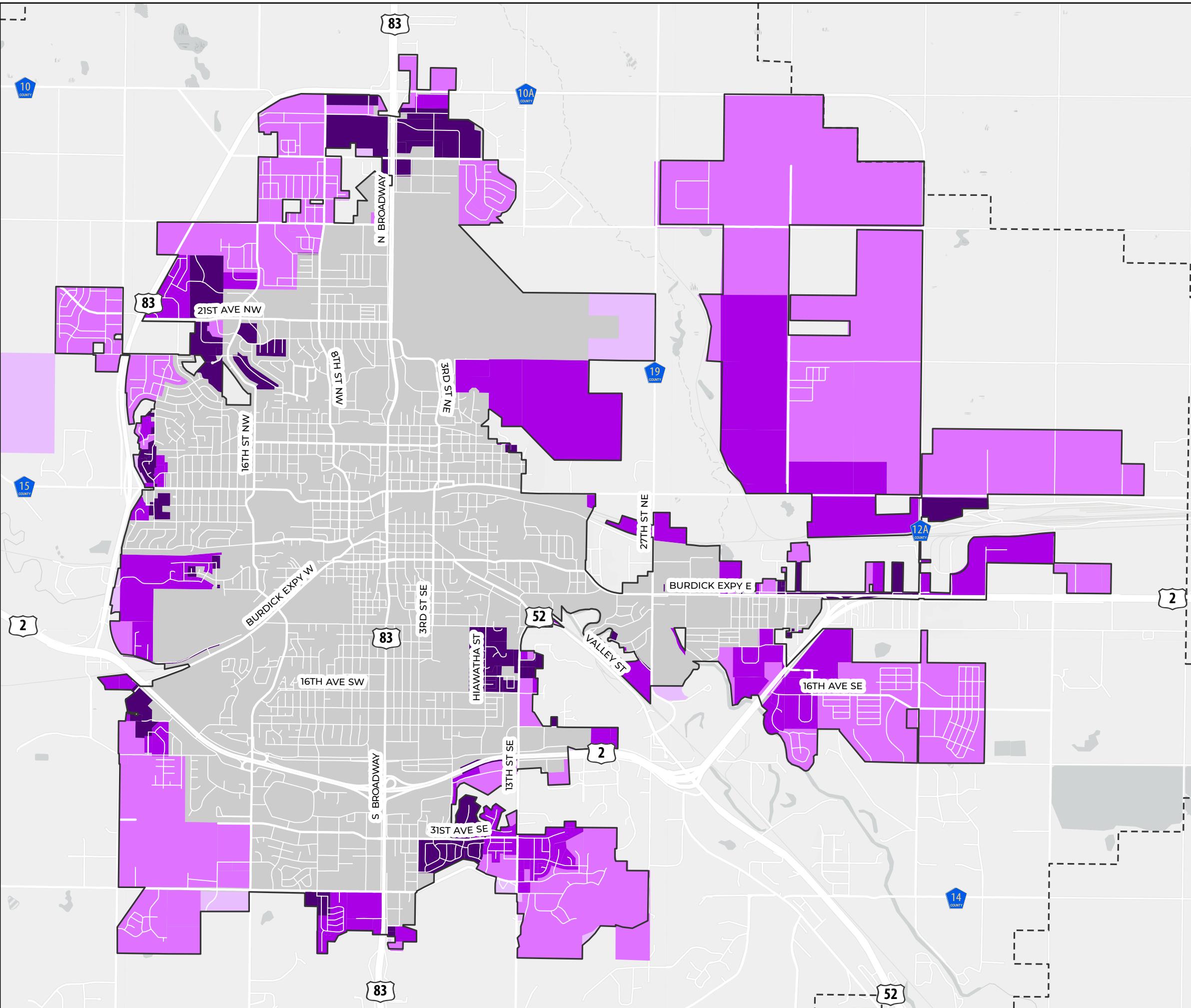
Figure 1-14

**Legend**

- 1991-2000
- 2001-2010
- 2011-2015
- 2016-2021
- Pre-1991

City Limits

2-Mile Boundary



# LAND USE AND TRANSPORTATION

As two interconnected systems, land use and transportation shape urban development and define community character. Land use planning organizes various development types in a supportive way, while transportation systems enable access and connectivity between different uses and neighborhoods.

## Existing Land Use

The first step in effective planning is to inventory existing land use. **Figure 1-15** shows a generalized map of existing land that covers all of Minot and its 2-mile ETA. Land uses are broadly defined as follows:

- Residential (places to live)
- Commercial (places to shop and work)

- Industrial (places that support economic growth)
- Public/Semi-public (institutions, public/shared spaces, and “third places”)
- Parks/Open Space (outdoor spaces reserved for recreational activity)
- Agricultural (undeveloped fields and rural areas)

***Chapter 3 includes the Future Land Use Map and development guidance.***

***Chapter 4 provides guidance for transportation.***

## Existing Zoning

The City Zoning Ordinance translates the community's vision for development into policy. Zoning is a tool that regulates the location and character of various development types. Minot uses a

standard (Euclidean) zoning code, which organizes uses by district (see **Figure 1-16**). Each district permits a series of complementary use types and prohibits incompatible uses. For example, the code generally prohibits intense industrial development from occurring within a residential zone and vice versa. Some communities have transitioned to form-based codes, which place a heightened focus on regulating the form or aesthetics of development and de-emphasize standards pertaining to use.

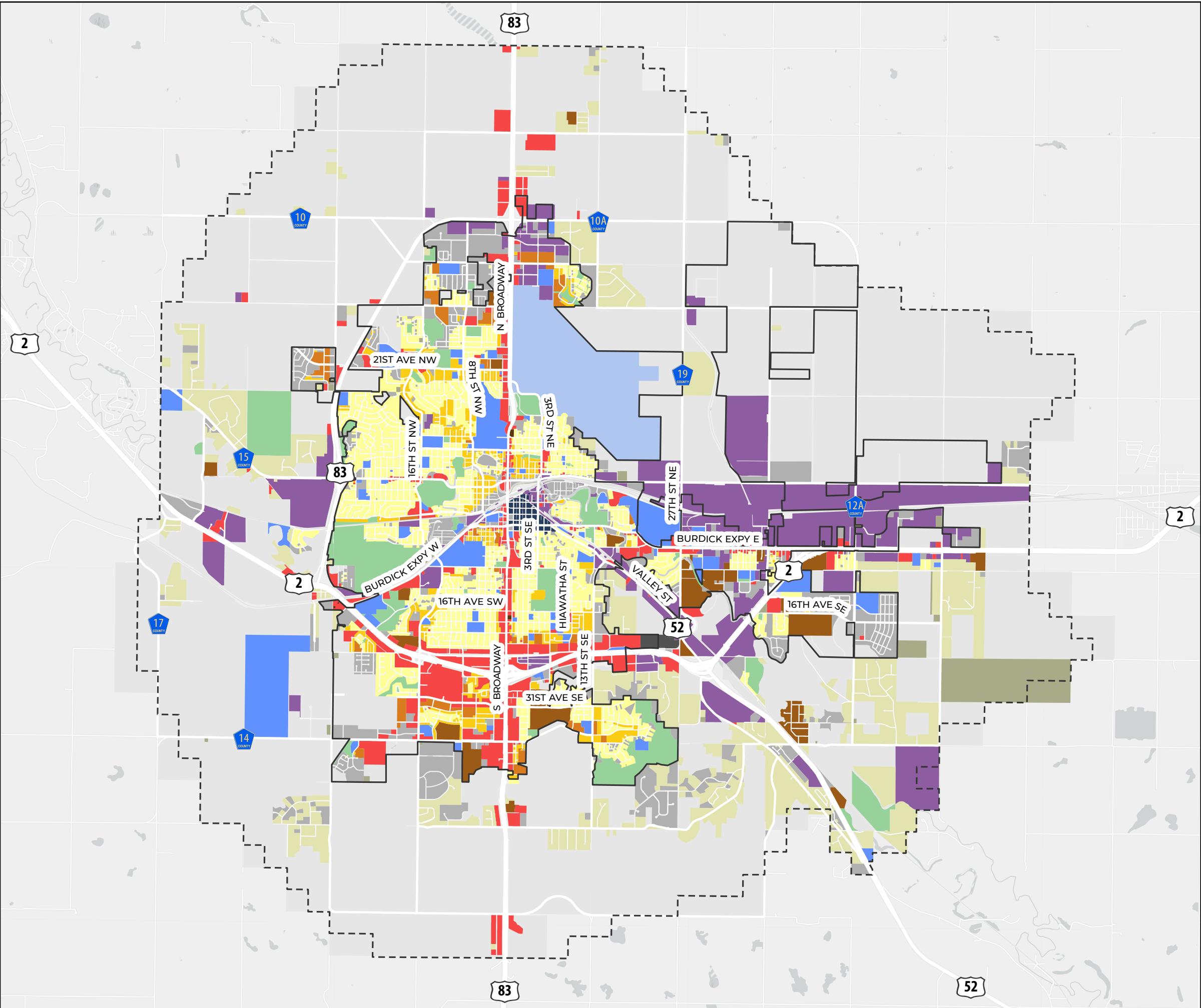
## Key Terms

**Land Use Plan.** A land use plan is a guide for community development. The plan is implemented through the official zoning ordinance adopted by the City of Minot.



## Existing Land Use

Figure 1-15



## Legend

City Limits

2-Mile Boundary

## Land Use Classification

- Agriculture/Rural Open Space
- Airport
- Commercial
- Downtown Mixed Use
- High Density Residential
- Industrial
- Low Density Residential
- Manufactured Home Park
- Medium Density Residential
- General Mixed Use
- Park/Open Space
- Public/Semi-Public
- RV Park
- Rural Residential
- Undeveloped/Vacant
- Utility/Infrastructure

0 0.5 1 1.5 2 Miles



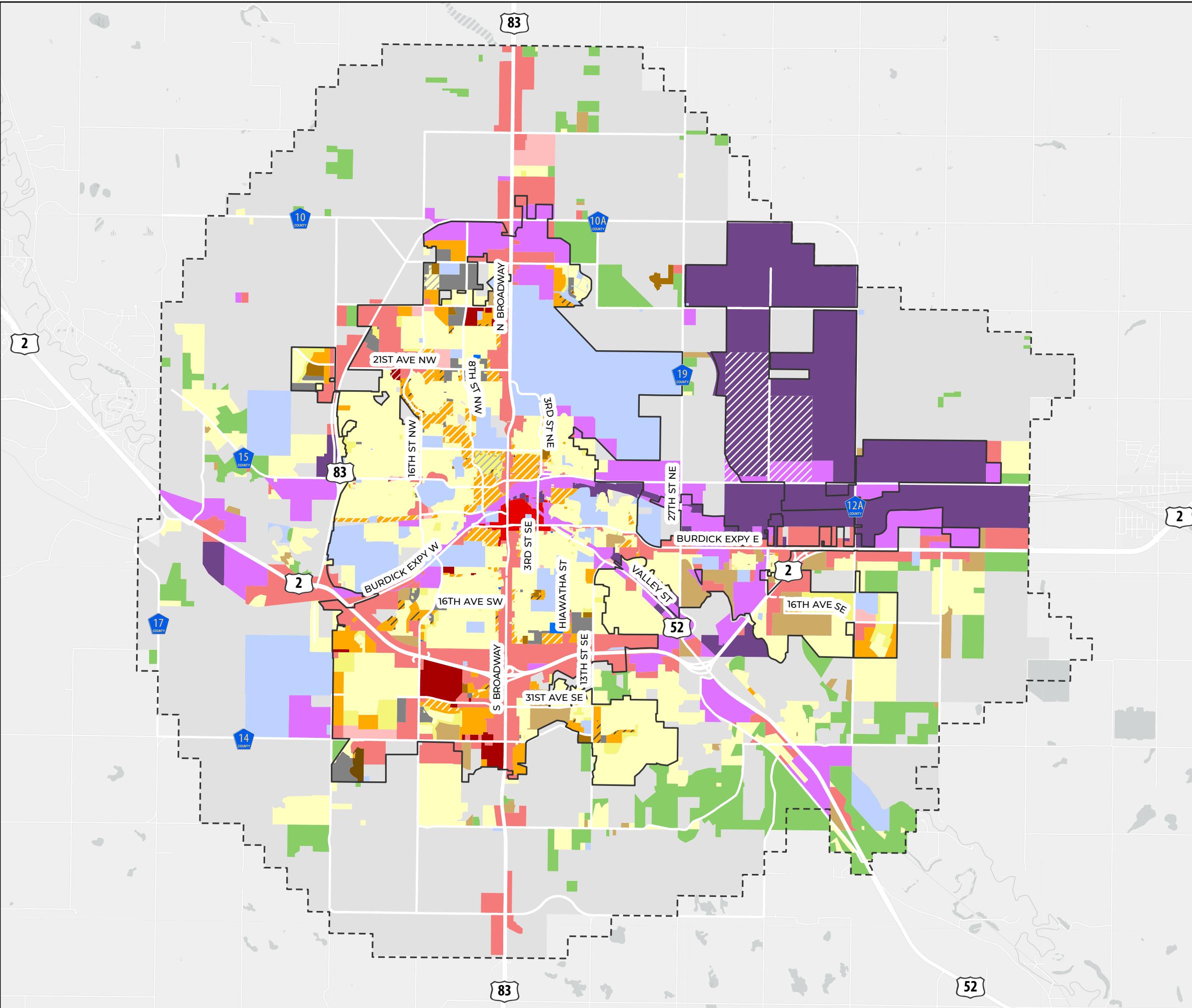
## Existing Land Use Classification

Map Color	Land Use Classification	City Acres	% City	ETA Acres	% ETA	Total Area	% Total
	Agricultural/Rural Open Space	3,385	19.5%	23,728	66.4%	27,113	51.1%
	Rural Residential	26	0.1%	3,695	10.3%	3,721	7.0%
	Low Density Residential	2,488	14.3%	83	0.2%	2,571	4.8%
	Medium Density Residential	699	4.0%	0	0.0%	699	1.3%
	High Density Residential	297	1.7%	0	0.0%	297	0.6%
	Manufactured Homes/RV Park	472	2.7%	187	0.5%	658	1.2%
	General Mixed Use	11	0.1%	0	0.0%	11	0.0%
	Downtown Mixed Use	60	0.3%	0	0.0%	60	0.1%
	Commercial	1,237	7.1%	358	1.0%	1,595	3.0%
	Industrial	1,235	7.1%	2,075	5.8%	3,310	6.2%
	Public/Semi-Public	755	4.3%	607	1.7%	1,361	2.6%
	Airport	1,209	7.0%	1	0.0%	1,210	2.3%
	Park/Open Space	1,080	6.2%	422	1.2%	1,502	2.8%
	Utility/Infrastructure	42	0.2%	472	1.3%	514	1.0%
	Undeveloped/Vacant	1,653	9.5%	988	2.8%	2,642	5.0%
	Remaining (e.g., Right-of-Way)	2,716	15.6%	3,100	8.7%	5,816	11.0%
	<b>Total</b>	<b>17,364</b>	<b>100.0%</b>	<b>35,711</b>	<b>100.0%</b>	<b>53,075</b>	<b>100.0%</b>



## Existing Zoning

Figure 1-16



## Legend

AG - Agricultural
C1 - Limited Commercial
C2 - General Commercial
C3 - Central Business
C4 - Planned Commercial
GMU - General Mixed Use
I1 - Light Industrial Park
I2 - Heavy Industrial Park
M1 - Light Industrial
M2 - Heavy Industrial
O - Office
P - Public
R1 - Single-Family Residential
R1S - Single-Family Residential
R2 - Two-Family Residential
R2B - Two-Family Residential
R3 - Multiple Residential
R3B - Multiple Residential
R3C - Townhouse Residential
R4 - Planned Residential
RM - Medium Density Residential
RH - High Density Residential
MH - Manufactured Home
RA - Agricultural Residential
City Limits
2-Mile Boundary

0 0.5 1 1.5 2 Miles

### Existing Zoning Classification

Abbreviation	City Acres	% City	City + ETA Acres	% Total
AG - Agricultural	268	1.5%	23,888	45.7%
RA – Agricultural Residential	1	0.0%	2,837	5.4%
C1 – Limited Commercial	147	0.8%	251	0.5%
C2 – General Commercial	2,306	13.3%	3,922	7.5%
C3 – Central Business	119	0.7%	119	0.2%
C4 – Planned Commercial	237	1.4%	237	0.5%
GMU – General Mixed Use	9	0.1%	9	0.0%
I1/M1 – Light Industrial	1,430	8.3%	2,982	5.7%
I2/M2 – Heavy Industrial	3,261	18.8%	4,485	8.6%
O – Office	16	0.1%	16	0.0%
P – Public	2,392	13.8%	3,436	6.6%
R1/R1S – Single Family Residential	4,527	26.0%	7,132	13.6%
R2/R2B – Two-Family Residential	461	2.7%	465	0.9%
R3/R3B/R3C – Multiple Residential/Townhouse	1,248	7.2%	1,258	2.4%
R4 – Planned Residential	374	2.2%	378	0.7%
RM – Medium Density Residential	66	0.4%	90	0.2%
RH – High Density Residential	30	0.2%	30	0.1%
MH – Manufactured Home	472	2.7%	758	1.4%

## Existing Transportation System

### Main Roads

Minot is served by a variety of roadways, including U.S. Highways 2, 52, and 83. These highways create opportunities for the efficient movement of goods and people across long distances, ensuring the community can grow in population and economy.



### System Organization

U.S. Highways 2, 52, and 83 are principal arterials. These roads are designed to carry high travel volumes and support long trips. Access to adjacent properties is limited. Collector roads convey intermediate volumes and connect arterials to the local system. They provide a moderate degree of access to adjacent properties. Local roads convey the lowest travel volumes and provide direct access to property. **Figure 1-17** shows the hierarchy of roads in Minot's existing roadway system.

### Land Use and Transportation Connection

Roadway characteristics impact land use and vice versa. High-intensity residential and employment uses are generally located adjacent to arterials and collectors that can serve higher traffic volumes. Low-intensity uses, including single-family homes, are generally located on local streets. Aligning roads that are generally proportional to the uses they serve also facilitates infrastructure financing. Looking forward to 2040, land use and transportation are integrated components of the Comprehensive Plan.

### Commuting

Traveling to and from places of employment is some of the most frequent travel for residents. Most workers in Minot commute to work alone (84 percent), with nearly 10 percent opting to carpool. Alternative transportation methods such as walking, transit, or bicycling are not commonly used as of 2019. Although only 2.2 percent of workers identified as working from home in 2019, this value should be evaluated routinely due to the remote work shifts caused by COVID-19.

Method of Commute	Share of Workers
Drove Alone	84.0%
Carpooled	9.9%
Public Transportation	0.5%
Walking	2.2%
Bicycling	0.1%
Taxicab, Motorcycle, Other	0.7%
Worked from Home	2.7%

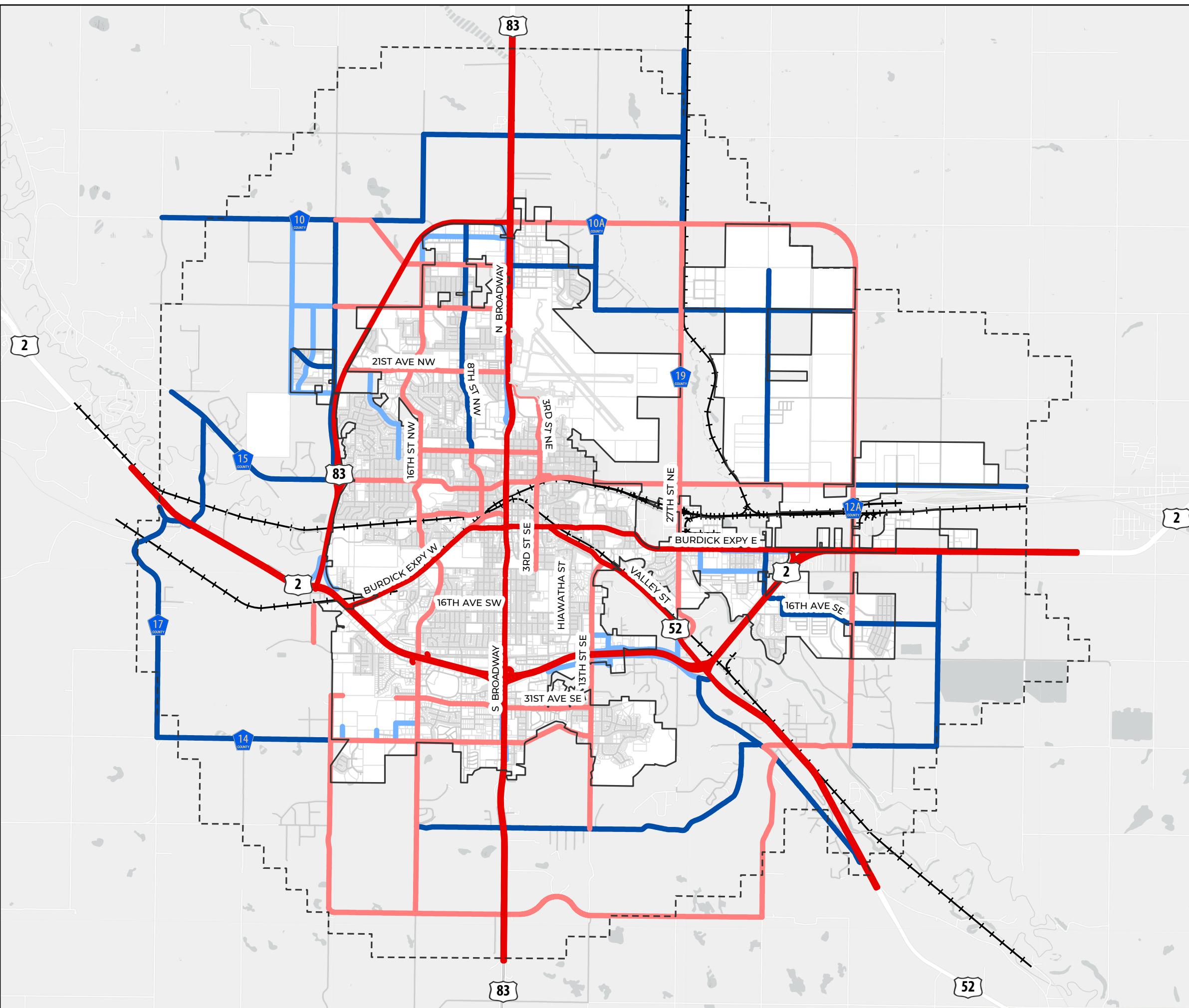


## Existing Roadway System

Figure 1-17

## Legend

- City Limits
- 2-Mile Boundary
- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Local Roads



0 0.5 1 1.5 2 Miles

