METROPOLITAN PROFILE 2015

ANNUAL REPORT OF THE FARGO-MOORHEAD METROPOLITAN AREA

community & demographics

roadway system

freight & interstate travel

bicycle & pedestrian network

transit network

PREPARED BY:
FARGO-MOORHEAD METROPOLITAN COUNCIL OF GOVERNMENTS
ADOPTED: June 18, 2015
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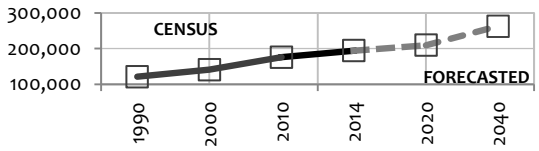
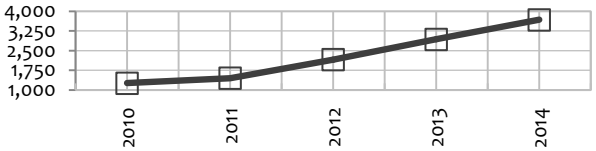
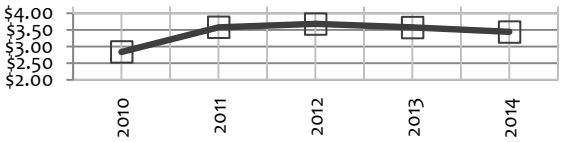
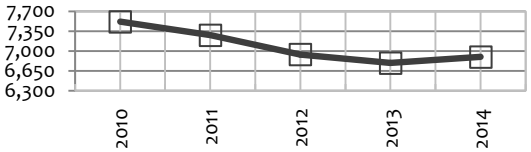
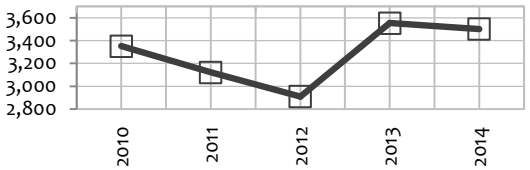
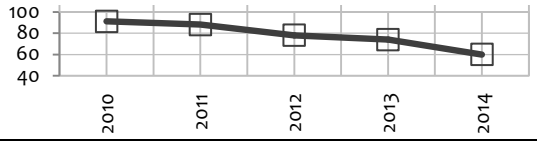
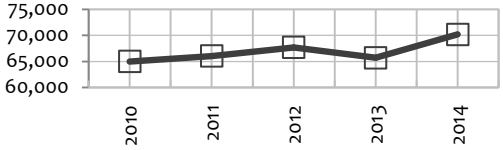
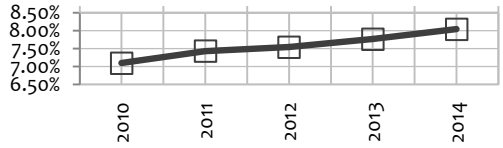
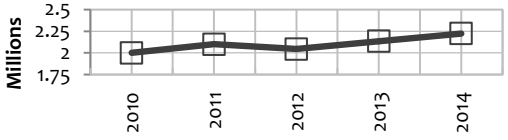
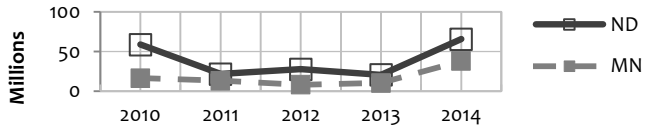
2015 METROPOLITAN SYSTEM DASHBOARD

AN ABSTRACT DEFINING THE '*STATE OF THE TRANSPORTATION NETWORK*'

	SUMMARY	TREND	ANALYSIS
POPULATION OF URBAN AREA (Fargo, Moorhead, West Fargo, Dilworth, Horace)	*The region is expected to continue to experience significant population growth in the coming decades*		Cities within the urbanized areas have experienced strong population growth over the past three decades, with forecasts showing a continuation of growth to 2040
RESIDENTIAL HOUSEHOLD PERMITS (Fargo, Moorhead, West Fargo, Dilworth, Horace)	*The number of permits issued in the metropolitan area have increased over 300% over the last five years*		Since 2010, residential building permits for cities within the urban area has tripled, from 1,266 in 2010 to 3,684 in 2014. The ratio of multi-family to single-family permits continues to increase.
Fuel Prices	*The price of gas has risen by 21% in the past five years*		After spiking in 2012, the price of gas had remained relatively steady until declining significantly at the end of 2014.
Vehicle Miles Traveled Per Capita	*Local VMT has declined nearly 20% since 2008*		Nationally, VMT per capita was 9,458 in 2014, significantly higher than at the local level. Local VMT per capita has declined significantly over the past decade.
Safety: Vehicle Crashes within the Urban Area	*Since 2012, vehicle crashes within the urban area have risen over 20%*		After a steady decrease from 2009 to 2012, the number of crashes in the urban area has risen sharply over the past two years.
Safety: Bicycle and Pedestrian Crashes in the Urban Area	*Crashes involving bicycles and/or pedestrians have decreased 34% since 2010*		Bicycle and pedestrian crashes have declined significantly in the past 5 years, from 91 in 2010 to only 60 in 2014.
Traffic Volume: AADT at I-94/Red River Bridge	*Traffic volume along I-94 on the Red River Bridge reached an all-time high in 2014*		Despite an overall decrease in VMT per capita in the metro area, traffic along I-94 continues to increase. 2014 witnessed an average annual daily traffic volume of 70,183 at the Red River Bridge, the highest recorded mark to date.
Truck Volume: Percent Truck at I-94/Red River Bridge	*In 2014, the proportion of truck travel along I-94 reached its highest mark since 2005*		Truck volume increased over 10% from 2013 to 2014 and 22.4% since 2010. This dramatic rise indicates that the I-94 corridor is an increasingly important component of interstate freight movement.
Public Transit: Fixed Route Ridership	*Transit ridership in the Fargo-Moorhead area continues to rise*		Fixed-route ridership continues to increase annually, reaching over 2.2 million rides in 2014. Overall, ridership has increased 37% since 2008.
Federal & State Investment Trends	*Federal and state investments into local transportation projects rose significantly in 2014*		In 2014, total investments in local projects were over $103 million. Of this total, approximately $65 million were in North Dakota and $38 million were in Minnesota.

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Interested Persons, Stakeholders, Jurisdictions, Agencies and Organizations --

The Fargo-Moorhead Metropolitan Council of Governments (Metro COG) is pleased to present the 2015 Metropolitan Profile (Profile), a document previously known as the Surveillance and Monitoring Report for the Fargo-Moorhead Metropolitan Area. The data presented within this Profile pertains to the 2014 calendar year (January 1, 2014 through December 31, 2014).

As background, Metro COG has produced the Metropolitan Transportation Surveillance and Monitoring Report since 1981. Over time, it has taken various forms in order to ensure compliance and compatibility with relevant surface transportation authorization. Under Moving Ahead for Progress in the 21st Century (MAP-21), the Profile has become an essential performance management tracking tool.

The Profile is structured to document and monitor the following:

(a) Changes, improvements, and projects affecting the transportation system;
(b) Demographic and socio-economic conditions affecting the region;
(c) Land use and development patterns;
(d) The accuracy of projections made within Metro 2040 – Mobility for the Future, Metro COG's Long Range Transportation Plan (LRTP); and
(e) Implementation of the Transportation Improvement Program (TIP).

The Metro COG Policy Board believes this data to be critical to both accurately represent the state of the transportation network and maintain and implement elements of the Metropolitan Transportation Planning Program such as the TIP, LRTP, and regional travel demand model (TDM).

For convenience, the Profile is separated into the following chapters:

Chapter 1: Community Profile – a summary of demographic, socio-economic, and land use patterns in the region
Chapter 2: Roadway System – an analysis of the region's roadways and summary of the annual roadway network changes
Chapter 3: Freight & Interstate Travel – airline passenger and cargo, passenger rail, and freight movement within the region
Chapter 4: Bicycle & Pedestrian Network – an analysis of the usage, operations, network changes, and safety of the bicycle and pedestrian system
Chapter 5: Transit System – an overview of the of the operations, performance trends, and inventories of the region's transit system providers

It is Metro COG's goal to continue to enhance the ease and accuracy of collecting and reporting metropolitan transportation data as well as improve accessibility to this information for all interested persons.

Any questions or comments on the content of this document should be directed to Metro COG. Supporting plans, studies, and other transportation data for the Fargo-Moorhead Metropolitan Area is available by contacting Metro COG by phone at 701.232.3242, by email at metrocog@fmmetrocog.org, by visiting Metro COG's website at www.fmmetrocog.org, or in person at Case Plaza, Suite 232, One 2nd Street North, Fargo, ND 58102.

Sincerely,

Julie Nash
Chair, Metro COG Policy Board

William Christian
Executive Director, Metro COG

LIST OF TABLES

LIST OF FIGURES

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SUMMARY OF ACRONYMS

AADT	Annual Average Daily Traffic
ACS	American Community Survey (Census Bureau)
ADA	Americans with Disabilities Act of 1990
ADT	Average Daily Traffic
ARRA	American Recovery and Reinvestment Act
ATAC	Advanced Traffic Analysis Center
ATR	Automatic Traffic Recorder
CDBG	Community Development Block Grant
CFR	Code of Federal Regulations
CSAH	County State Aid Highway
DNR	Department of Natural Resources
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HSS	U.S. Dept. of Health and Human Services
HUD	U.S. Dept. of Housing & Urban Development
ITS	Intelligent Transportation System
JARC	Job Access and Reverse Commute
JPA	Joint Powers Agreement
LRTP	Long Range Transportation Plan
MATBUS	Metro Area Transit of Fargo-Moorhead (or MATBUS)
Metro COG	Fargo-Moorhead Metropolitan Council of Governments
MnDOT	Minnesota Department of Transportation
MOU	Memorandum of Understanding
MPA	Metropolitan Planning Area
MPO	Metropolitan Planning Organization
MSA	Metropolitan Statistical Area (includes all Cass County and Clay County)
M|STATE	Minnesota State Community and Technical College
MSUM	Minnesota State University – Moorhead
MTG	Metro Transit Garage
NAICS	North American Industry Classification System
NDDOT	North Dakota Department of Transportation
NDSU	North Dakota State University
PPP	Metro COG's Public Participation Plan
RA	Regional Architecture (ITS)
SIC	Standard Industrial Classification
SRTS	Safe Routes to Schools
TAZ	Transportation Analysis Zone
TDM	Transportation Demand Management
TDM	Travel Demand Model (Regional Traffic Volume Forecast Model)
TDP	Transit Development Plan
TE	Transportation Enhancement Funds
TH	Trunk Highway
TIP	Transportation Improvement Program
TOC	Traffic Operations Center
TSI	Transportation Security Initiative
UPWP	Unified Planning Work Program (Metro COG's biannual work program)
USC	United States Code
UZA	Urbanized Area (or Federal Aid Urbanized Area FAUA)
VMT	Vehicle Miles Traveled
VSS	Valley Senior Services

COMMUNITY PROFILE

The Fargo-Moorhead Metropolitan Council of Governments (Metro COG) is both the designated Council of Governments (COG) and Metropolitan Planning Organization (MPO) for the greater Fargo-Moorhead Metropolitan Area. An MPO is a transportation policy-making organization comprised of representatives from local government and transportation authorities. The Federal Surface Transportation Assistance Act of 1973 requires the formation of a MPO for any urbanized area with a population greater than 50,000. MPOs ensure that existing and future expenditures for transportation projects and programs are based on a comprehensive, cooperative, and continuing planning process, known as the "3-C" process.

The core of an MPO is the urbanized area, which is initially identified and defined by the U.S. Census Bureau as part of the decennial Census update. This boundary is adjusted by local officials and approved by the North Dakota Department of Transportation (NDDOT), the result of which is the official Adjusted Urban Area (known as the UZA). The UZA boundary is used to determine the type of transportation funding programs potential projects may be eligible to receive. In 2012 Metro COG worked closely with local jurisdictions and the state DOTs to establish an Adjusted Urban Area Boundary for the Fargo-Moorhead area. This Adjusted UZA was subsequently approved by the Metro COG Policy Board, FHWA, and both the Minnesota and North Dakota Departments of Transportation in 2013.

In addition to the urban area (defined as the urbanized jurisdictions plus any additional urban areas immediately adjacent to the jurisdiction limits), the MPO boundary includes any contiguous areas which may become urbanized within a twenty-year forecast period.[1] Collectively, this area is known as the Metropolitan Planning Area, or MPA. The boundary of the Fargo-Moorhead MPA was most recently expanded in 2013 and is comprised of approximately 1,073 square miles (687,000 acres), 14 cities, and 30 townships. The MPA boundary is effectively Metro COG's "study area" or area of influence respective to the metropolitan planning program. These areas are significant not only as potential future population centers, but also due to their proximity to existing and future transportation assets of regional significance. Although many of these areas are not developed nor are they likely to experience development pressure in the near future, they are participants in the required metropolitan planning process.

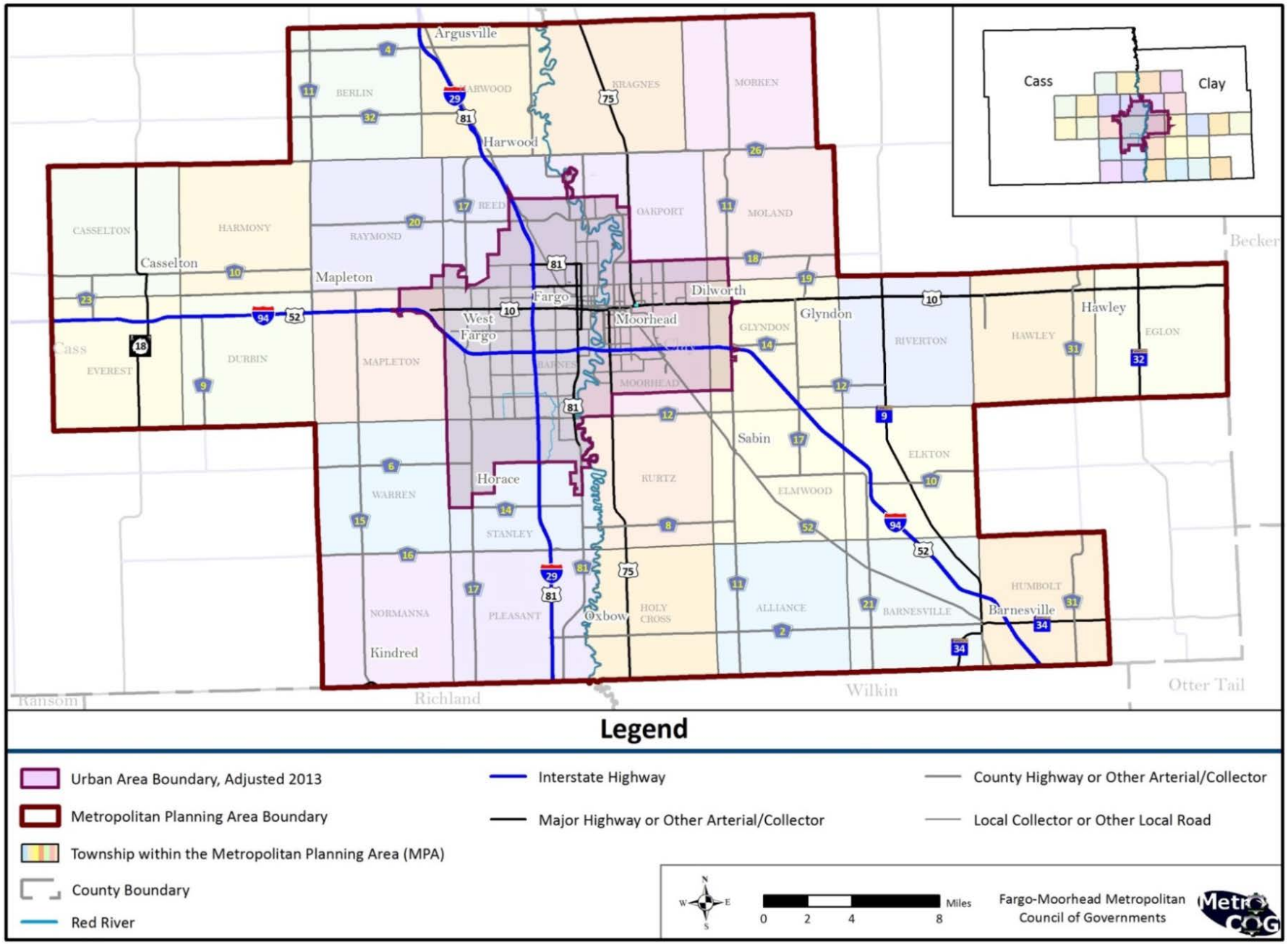
The map on Figure 1 provides an overview of these boundaries for the Fargo-Moorhead area, specifically depicting:

a) The Metropolitan Planning Area Boundary and townships within the MPA;
b) The Adjusted UZA boundary; and
c) Cities within the MPA.

This chapter of the Metropolitan Profile (Profile) provides information on key demographic, socioeconomic, housing, employment, and land use trends within the metropolitan area. There are many factors that affect the transportation needs of the area over the next few decades. As the region grows, diversifies, and the population becomes older, transportation needs change. Further, the types of businesses and industries that take root in the region and where people settle all fundamentally impact how the transportation system needs to adapt in order to serve the traveling public and the movement of freight. These factors are essential in assessing the current and future conditions affecting the transportation needs of the region, and play a critical role in establishing the transportation planning program.

[1] Pursuant to Title 23, Section 450.104 of the Code of Federal Requirements

Figure 1. Fargo-Moorhead Adjusted Urban Area and Metropolitan Planning Area Boundaries



Source: Metro COG, 2014

Population

In 2012 Metro COG worked with its stakeholders and McKibben Demographic Research to create the Demographic Forecast for the Fargo-Moorhead Metropolitan Statistical Area (MSA), which is defined as the entirety of both Cass and Clay counties. The report established demographic projections through the year 2040 for the MSA. These projections have been incorporated within the 2015 Metro Profile in conjunction with decennial Census data and American Community Survey (ACS) data, as applicable. Figures reported in the Community Profile are derived from the 2010 Census and, where possible, the 2009-2013 ACS five-year estimates.

As part of the demographic forecast for the MSA (prepared in 2012, and reapplied with 2013 data) two scenarios were developed. Scenario B was termed 'Most Likely' and takes into account a number of changing variables at the local, regional, and national level. Scenario A was identified as the 'High Growth' scenario and was formulated under a more aggressive set of assumptions. In December of 2012 the Metro COG Policy Board approved the use of the "High Growth" or Scenario A demographic projections for the MSA for use within the transportation planning program. The McKibben projections presented within this section represent the 'High Growth' scenario.

The Fargo-Moorhead metropolitan area is growing, with a 2010 MSA population of 208,777 and a 2014 MSA estimate of 228,291. The U.S. Census Bureau estimates the 2014 urban area (Fargo, Moorhead, West Fargo, Dilworth, Horace) population to be 194,227. Table 1 on the following page shows the area's change in population since 1990 and the future population of the urban and rural MSA as projected by Metro COG's 2012 Demographic Forecast Study.

The 2040 population projection for the MSA represents a 42.8 percent change from 2010, with West Fargo experiencing the highest growth rate at 75 percent. While the MSA as a whole is projected to experience significant urban growth, the rural portions of Cass County are expected to lose population, with an overall eight percent decrease.

As a consequence to this expected growth, the population density of the Fargo-Moorhead MSA is anticipated to increase over the next 25 years. In 2000 in the MSA there were 61.85 persons per square mile. By 2010 this number had grown to 74.1 persons per square miles. If the adopted projections hold true, the population density of the MSA will be over 105 persons/square mile by 2040. The transition to a more densely populated urban environment is an important consideration in the transportation program development process.

Age and Sex

Monitoring the age and sex composition of an area and considering how it changes over time is fundamental in understanding potential future social and economic challenges. Generally speaking, the population of the U.S. as a whole continues to grow older, with a median age of over 40 in many states. Concurrently, an increase in the number of older-aged males is also occurring in many parts of the country. Much like the rest of the nation, the Fargo-Moorhead metropolitan area is aging. Yet as a whole, the median age in our region is significantly younger than that of either Minnesota or North Dakota. A population pyramid representing the age and sex distribution for the MSA is presented in Figure 2.

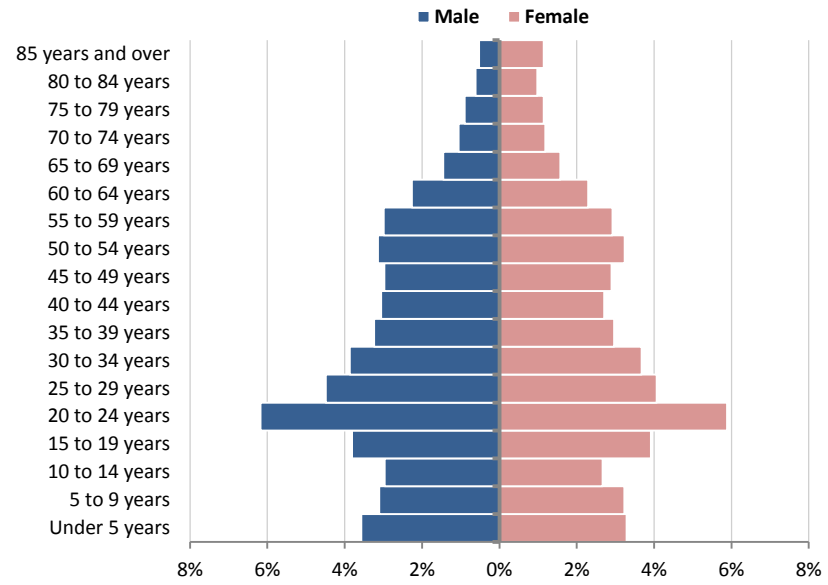
Overall, the median age for residents of the Fargo-Moorhead MSA is under 32 years of age, with a median age of 32.1 years in Clay County and 31.7 years in Cass County. This is significantly less than the median age in North Dakota (36.4), Minnesota (37.6), or the nation as a whole (37.3). McKibben projects that the median age of the MSA will increase to 36.1 years by 2040, with a significant rise in the proportion of elderly populations in the area. This is mainly due to a combination of a predicted reduced mortality rate and a higher in-migration rate of the elderly from the bordering service area over the next 25 years. The percentage of those who are 65 years of age and older is projected to increase 84 percent between 2010 and 2040, while those in the 0 to 24 age bracket is expected to increase by only 25 percent. Table 2 outlines the projected rate of change in each age group between 2010 and 2040.

Table 1. Fargo-Moorhead MSA Estimated and Projected Populations

Jurisdiction	Population				Population Change		Population Projections					
	1990	2000	2010	2014	1990-00	2000-10	2015	2020	2025	2030	2035	2040
Fargo	74,111	90,599	105,549	115,863	22.20%	16.50%	113,540	122,050	130,370	139,030	147,260	154,170
Moorhead	32,295	32,177	38,065	39,857	-0.40%	18.20%	43,715	46,551	49,444	52,187	54,819	56,982
West Fargo	12,287	14,940	25,830	31,771	21.60%	72.80%	30,010	35,020	38,290	41,020	43,450	45,190
Dilworth	2,562	3,001	4,024	4,188	17.10%	34%	4,360	4,650	4,890	5,130	5,380	5,600
Horace	662	915	2,430	2,548	38.22%	165.57%	2,590	2,690	2,850	2,880	2,920	2,940
Urban Total	**121,917**	**141,632**	**175,898**	**194,227**	**16.17%**	**24.19%**	**194,215**	**210,961**	**225,844**	**240,247**	**253,829**	**264,882**
Urban Cass	87,060	106,454	133,809	150,182	22.28%	25.70%	146,140	159,760	171,510	182,930	193,630	202,300
Rural Cass	15,814	16,684	15,969	16,823	5.50%	-4.29%	17,000	14,580	13,170	10,770	7,560	14,400
Cass Total	**102,874**	**123,138**	**149,778**	**167,005**	**19.70%**	**21.63%**	**163,140**	**174,340**	**184,680**	**193,700**	**201,190**	**216,700**
Urban Clay	34,857	35,178	42,089	44,045	0.92%	19.65%	48,075	51,201	54,334	57,317	60,199	62,582
Rural Clay	15,585	16,051	16,910	17,241	2.99%	5.35%	15,305	16,339	17,176	17,964	18,401	18,788
Clay Total	**50,442**	**51,229**	**58,999**	**61,286**	**1.56%**	**15.17%**	**63,380**	**67,540**	**71,510**	**75,280**	**78,600**	**81,370**
MSA Total	**153,269**	**174,367**	**208,777**	**228,291**	**13.77%**	**19.73%**	**226,520**	**241,880**	**256,190**	**268,980**	**279,790**	**298,070**

Sources: U.S. Census Bureau: 1990 - 2010 Decennial Censuses and 2014 Population Estimate; McKibben Demographic Research, 2012

Figure 2. Age and Sex Distribution for the Fargo-Moorhead MSA



Source: U.S. Census Bureau, 2009-2013 5-Year American Community Survey

Table 2. Projected Percent Change by Age Group, 2010 to 2040

Age Group	% Change	Age Group	% Change	Age Group	% Change
Under 5	13.41%	**30-34**	40.71%	**60-64**	70.10%
5-9	39.56%	**35-39**	63.84%	**65-69**	79.90%
10-14	47.23%	**40-44**	90.73%	**70-74**	100.10%
15-19	26.21%	**45-49**	53.34%	**75-79**	105.22%
20-24	9.35%	**50-54**	44.17%	**80-84**	96.79%
25-29	15.00%	**55-59**	45.99%	**85 & Over**	79.96%

Source: Demographic Forecast for the Fargo-Moorhead Metropolitan Area (2012)

Race and Ethnicity

While traditionally not a racially or ethnically diverse area, American Community Survey (ACS) data suggest that minority populations in the MSA have been increasing at a rate much higher than historical levels. Based upon five-year ACS annual estimates, the percentage of the total population who identified themselves as White fell 1.3 percent over the five-year period between 2009 and 2013, while Black, Asian, and multi-racial populations grew relatively significantly. The majority of growth in minority populations has occurred in the cities of Fargo and Moorhead, which experienced a 1.7 percent and 1.4 percent decline in the proportion of White population, respectively. By contrast, the cities of Dilworth and Horace actually became less diverse, with percentages of White populations increasing by 2.4 and 1.9 percent, respectively. Notably, the proportion of American Indian/Alaska Native declined in all cities and in the MSA over the last five years, while the proportion of individuals identifying as Hispanic or Latino remained relatively unchanged. Table 3 provides an overview of race and ethnicity and the percentage change of the total population over a five-year period of each census-defined ethnic group for individual cities of the urban core; the urban core as a whole; Cass and Clay counties; and the MSA. Figure 3 provides a graph of the overall racial composition of the MSA based on the ACS estimates.

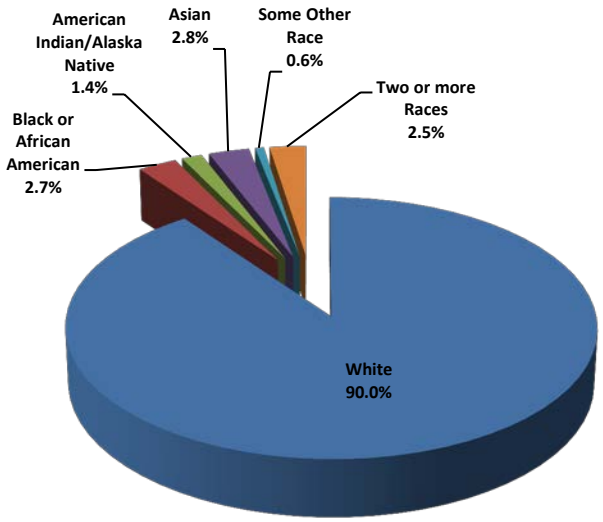
The map depicted in Figure 4 (page 17) shows the spatial distribution of minority populations in the urban area of the MSA. Census blocks where 25 percent of the total block population was "non-White" per the 2009-2013 ACS estimates were mapped as minority blocks. The map indicates a correlation between minority and low-income areas. These areas are identified, considered, and addressed in all aspects of the transportation planning and programming process.

Poverty

With a strong and diverse economy and one of the lowest unemployment rates in the nation, the Fargo-Moorhead Metropolitan Area has a poverty rate significantly lower than many similar sized cities. Nonetheless, poverty is undeniably a significant issue in the area and it's essential to understand the regions of the MSA that are most affected. The map in Figure 3 depicts census block groups where more than 25 percent of households had an income below the poverty level during the preceding 12 months. As is generally the case with minority populations, low-income areas are more concentrated in the urban core, and household income tends to rise on the fringe areas of the UZA.

It is important to note that the low-income areas, while all represented with the same color on the map, vary widely in the extent in which they are impoverished. For instance, the poverty rate ranged from barely making the cutoff at 25.6 percent to a block group which reported an 88 percent poverty rate. Additionally, the number of households in a block group can vary widely, from 99 to 1,400 in the case of highly impoverished areas. Thus, a highly populated block group has far more households and people affected by poverty than does a smaller one with a similar proportion. Finally, it's important to note that many of the block groups are largely comprised of students at the three major local universities. As students are often focusing on their studies full-time and not simultaneously working, they may technically be recorded as impoverished. These areas, while still important, should be considered distinct from areas where endemically poor populations typically reside.

Figure 3. Percent of Total Population by Race for the Fargo-Moorhead MSA (2009-2013 ACS Estimates)



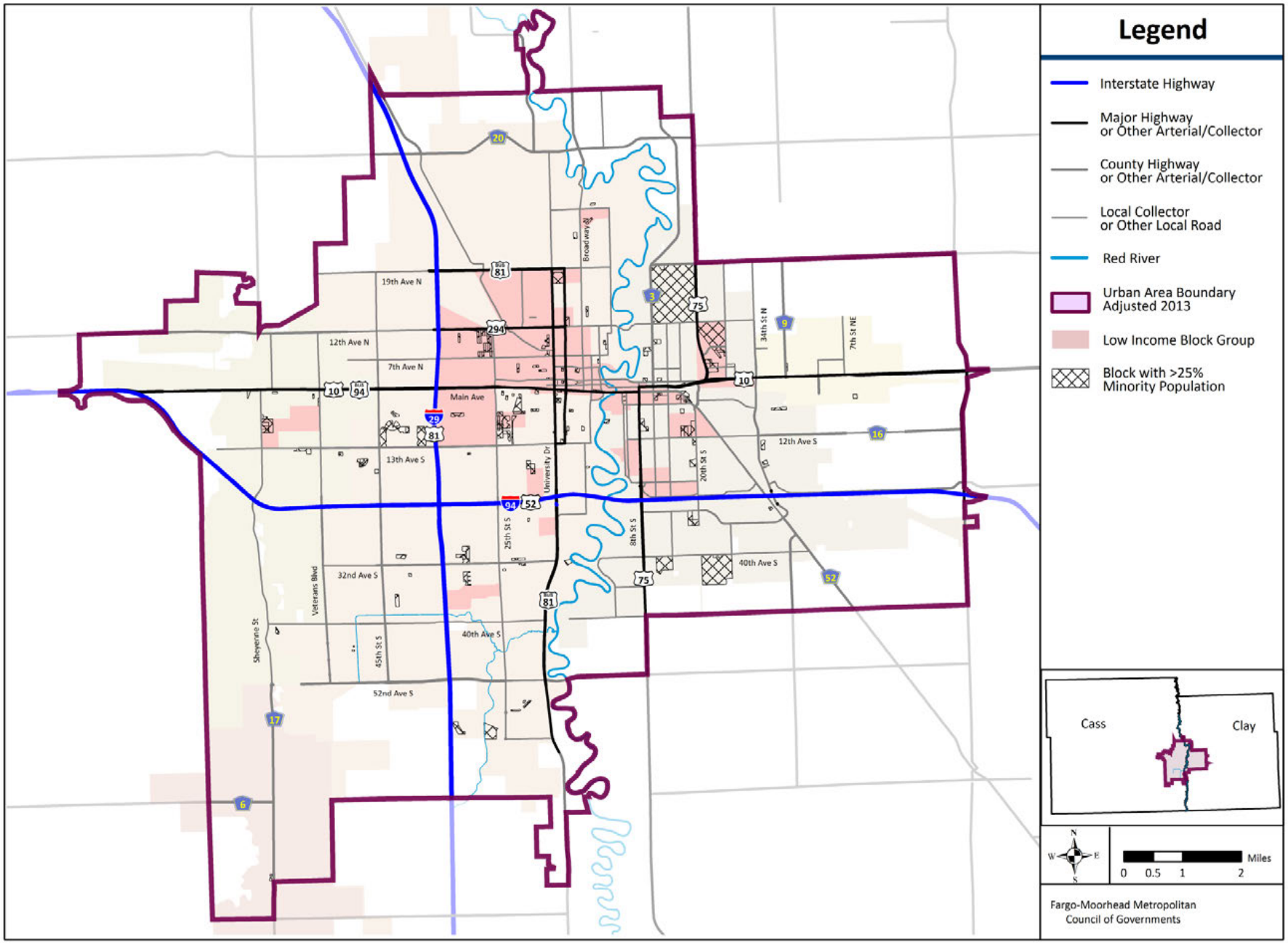
Source: U.S. Census Bureau, 2009-2013 5-Year American Community Survey

Table 3. Population Composition and Percent Change by Race and Ethnicity

Race and Ethnicity, 5-year ACS Estimate						% Change of Total Population, 2005-2009 to 2009-2013
Race/Ethnicity	2005-2009	2006-2010	2007-2011	2008-2012	2009-2013	
White						
Fargo	91.7%	91.6%	90.9%	90.3%	90.0%	**-1.7%**
Moorhead	91.9%	90.8%	90.6%	90.2%	90.5%	**-1.4%**
West Fargo	91.5%	91.1%	91.2%	91.4%	91.0%	**-0.5%**
Dilworth	94.0%	96.0%	95.1%	95.9%	96.4%	**2.4%**
Horace	96.6%	96.2%	98.3%	98.0%	98.5%	**1.9%**
Urban Total	**91.8%**	**91.5%**	**91.1%**	**90.7%**	**90.5%**	**-1.3%**
Cass County	92.6%	92.3%	92.0%	91.5%	91.2%	**-1.4%**
Clay County	93.8%	93.2%	92.9%	92.6%	92.8%	**-1.0%**
MSA Total	**93.0%**	**92.6%**	**92.2%**	**91.8%**	**91.7%**	**-1.3%**
Black						
Fargo	2.5%	2.2%	2.3%	2.6%	2.7%	**0.2%**
Moorhead	1.2%	2.0%	2.3%	2.3%	2.2%	**1.0%**
West Fargo	1.6%	2.7%	2.8%	3.0%	3.5%	**1.9%**
Dilworth	0.0%	0.0%	0.0%	0.0%	0.0%	**0.0%**
Horace	1.4%	1.4%	0.8%	0.4%	0.3%	**-1.1%**
Urban Total	**2.0%**	**2.2%**	**2.3%**	**2.5%**	**2.6%**	**0.6%**
Cass County	2.0%	2.1%	2.1%	2.4%	2.6%	**0.6%**
Clay County	0.8%	1.3%	1.5%	1.5%	1.5%	**0.7%**
MSA Total	**1.7%**	**1.8%**	**2.0%**	**2.1%**	**2.3%**	**0.6%**
American Indian/Alaska Native						
Fargo	1.5%	1.4%	1.4%	1.5%	1.4%	**-0.1%**
Moorhead	2.1%	2.1%	2.3%	1.9%	1.9%	**-0.2%**
West Fargo	2.0%	2.0%	1.4%	1.1%	0.7%	**-1.3%**
Dilworth	1.0%	0.5%	0.7%	0.6%	0.4%	**-0.6%**
Horace	0.8%	0.4%	0.0%	0.3%	0.2%	**-0.6%**
Urban Total	**1.7%**	**1.5%**	**1.6%**	**1.5%**	**1.4%**	**-0.3%**
Cass County	1.5%	1.3%	1.3%	1.3%	1.2%	**-0.3%**
Clay County	1.5%	1.5%	1.7%	1.5%	1.5%	**0.0%**
MSA Total	**1.5%**	**1.4%**	**1.4%**	**1.4%**	**1.3%**	**-0.2%**
Asian						
Fargo	2.3%	2.6%	2.9%	2.8%	2.8%	**0.5%**
Moorhead	1.5%	1.7%	1.8%	1.6%	1.8%	**0.3%**
West Fargo	0.9%	1.1%	1.0%	1.8%	2.3%	**1.4%**
Dilworth	2.5%	1.5%	1.8%	2.6%	0.9%	**-1.6%**
Horace	0.4%	0.5%	0.2%	0.3%	0.3%	**-0.1%**
Urban Total	**1.9%**	**2.1%**	**2.3%**	**2.4%**	**2.4%**	**0.5%**
Cass County	1.7%	2.0%	2.2%	2.3%	2.4%	**0.7%**
Clay County	1.3%	1.3%	1.4%	1.2%	1.2%	**-0.1%**
MSA Total	**1.6%**	**1.8%**	**2.0%**	**2.0%**	**2.0%**	**0.4%**
Some other race						
Fargo	0.6%	0.7%	0.7%	0.7%	0.6%	**0.0%**
Moorhead	1.5%	1.0%	0.8%	1.2%	0.9%	**-0.6%**
West Fargo	2.0%	1.4%	1.2%	1.2%	0.7%	**-1.3%**
Dilworth	0.8%	0.2%	0.3%	0.3%	0.3%	**-0.5%**
Horace	0.6%	0.9%	0.4%	0.6%	0.4%	**-0.2%**
Urban Total	**1.0%**	**0.8%**	**0.7%**	**0.9%**	**0.6%**	**-0.4%**
Cass County	0.7%	0.8%	0.8%	0.7%	0.6%	**-0.1%**
Clay County	1.2%	0.9%	0.8%	1.0%	0.8%	**-0.4%**
MSA Total	**0.9%**	**0.8%**	**0.7%**	**0.8%**	**0.6%**	**-0.3%**
Two or more races						
Fargo	1.4%	1.5%	1.8%	2.1%	2.5%	**1.1%**
Moorhead	1.7%	2.3%	2.2%	2.8%	2.8%	**1.1%**
West Fargo	2.0%	2.3%	2.4%	1.5%	1.9%	**-0.1%**
Dilworth	1.7%	1.6%	2.1%	0.7%	2.1%	**0.4%**
Horace	0.2%	0.5%	0.3%	0.4%	0.3%	**0.1%**
Urban Total	**1.5%**	**1.8%**	**1.9%**	**2.1%**	**2.4%**	**0.9%**
Cass County	1.3%	1.5%	1.7%	1.8%	2.1%	**0.8%**
Clay County	1.4%	1.8%	1.7%	2.1%	2.2%	**0.8%**
MSA Total	**1.3%**	**1.6%**	**1.7%**	**1.9%**	**2.2%**	**0.9%**
Hispanic/Latino (of any race)						
Fargo	2.3%	2.1%	2.4%	2.5%	2.7%	**0.4%**
Moorhead	4.0%	4.1%	4.0%	4.4%	4.5%	**0.5%**
West Fargo	3.2%	2.2%	1.6%	1.4%	1.0%	**-2.2%**
Dilworth	5.6%	7.3%	6.2%	5.1%	5.5%	**-0.1%**
Horace	1.2%	1.4%	1.1%	1.3%	1.2%	**0.0%**
Urban Total	**2.9%**	**2.7%**	**2.7%**	**2.8%**	**2.9%**	**0.0%**
Cass County	2.3%	2.0%	2.0%	2.1%	2.1%	**-0.2%**
Clay County	3.5%	3.7%	3.6%	3.6%	3.7%	**0.2%**
MSA Total	**2.7%**	**2.5%**	**2.5%**	**2.5%**	**2.6%**	**-0.1%**

Source: U.S. Census Bureau, 2005-2009 to 2009-2013 5-Year American Community Surveys

Figure 4. Low Income and Minority Areas in the Fargo-Moorhead UZA



Source: Sources: U.S. Census Bureau, 2009-2013 5-Year American Community Survey; Metro COG, 2014

Housing and Dwelling Units

Table 4 summarizes dwelling unit growth and household projections within the MSA based upon the adopted 'High Growth' scenario. A dwelling unit is defined as any house, apartment, manufactured home, group of rooms, single occupied rooms, or any living quarter. Included in the table are the most recent annual average household estimates from the ACS, covering a five-year time frame from 2009 to 2013. These numbers, which are updated more frequently than the decennial census and reflect more recent demographic patterns, indicate that the 'High Growth' scenario projection may significantly underestimate the household growth within the region. For the MSA as a whole, the ACS numbers for 2012 already had exceeded the McKibben estimate for 2015, a pattern which may have more pronounced effects as the demographic model approaches the 2040 horizon year.

The claim that the McKibben projection may underestimate household growth in the region is further reinforced when comparing the 2006 projections for the 2010 horizon year with the 2010 decennial census data. Table 5 outlines this comparison, showing that the 2010 Census data displayed approximately 3,508 or five percent more households within metropolitan jurisdictions than the McKibben projections for 2010 estimated. The greatest differential exists in West Fargo, where 2010 Census shows an additional 1,094 households, or 11.8 percent, compared to 2010 McKibben estimates. The net effect of this low projection is substantial for traffic modeling purposes, where fewer households equates to fewer vehicular trips on the network. Additionally, analysis performed in preparation for the 2012 Demographic Forecast reveals that too much growth was assigned to unincorporated areas of Cass and Clay counties, and instead should have been assigned to areas within the incorporated limits of Fargo, West Fargo, Horace, Moorhead, and Dilworth.

Table 4. Metropolitan Household Projections

Jurisdiction	U.S. Census Bureau		2012 McKibben Estimates						2009-2013 ACS
	2000 Census	2010 Census	2015	2020	2025	2030	2035	2040	
Fargo	39,268	46,791	49,590	52,920	55,330	58,600	61,510	64,580	50,831
Moorhead	11,660	14,304	15,840	16,910	18,130	19,440	20,430	21,350	15,426
West Fargo	5,771	10,348	11,810	13,230	15,020	17,150	18,890	19,730	11,277
Dilworth	1,160	1,595	1,710	1,820	1,910	1,950	2,050	2,130	1,655
Horace	300	810	850	880	930	950	970	980	835
Urban Total	58,159	73,848	78,950	85,760	93,390	98,090	102,880	108,770	80,024
Urban Cass	45,339	57,949	62,250	67,030	71,280	76,700	81,370	85,290	62,943
Rural Cass	5,976	5,950	5,870	5,910	5,930	5,990	5,960	5,920	6,558
Cass Total	51,315	63,899	68,120	72,940	77,210	82,690	87,330	91,210	69,501
Urban Clay	12,820	15,899	17,550	18,730	20,040	21,390	22,480	23,480	17,081
Rural Clay	5,850	6,380	6,290	6,390	6,650	6,930	7,180	7,370	7,071
Clay Total	18,670	22,279	23,840	25,120	26,690	28,320	29,660	30,850	24,152
MSA Total	**69,985**	**86,178**	**91,960**	**98,060**	**103,900**	**111,010**	**116,990**	**122,060**	**93,653**

Sources: U.S. Census Bureau: 2010 Decennial Census and 2009-2013 American Community Survey; McKibben Demographic Research, 2012

Table 5. Households: Historical Projections vs Actual

Jurisdiction	2010 McKibben	2010 Census	+/-
Fargo	45,321	46,791	+3.2% (1,470)
Moorhead	13,465	14,304	+6.2% (839)
West Fargo	9,254	10,348	+11.8% (1094)
Dilworth	1,490	1,595	+6.5% (105)
Metro Total	**69,530**	**73,038**	**+5.0% (3,508)**

Sources: U.S. Census Bureau: 2010 Decennial Census; McKibben Demographic Research, 2006

HOUSING OCCUPANCY AND OWNERSHIP RATES.

The ratio of single-family to multiple family dwelling units within a jurisdiction is an indication of population, density patterns, and home ownership. The City of Fargo has the lowest ratio of single-family to multi-family dwellings at approximately 44 percent while the City of Dilworth has the highest single-family ratio at approximately 74 percent. A summary of the ratios for the years 2009-2013 is presented in Table 6. Overall the ratio of single-family to multi-family continues to decrease across the Fargo-Moorhead Metropolitan Area, an indication that increasing density and a higher proportion of multi-unit dwellings.

Table 6. Ratio of Single-Family to Multi-Family Dwelling Units

Jurisdiction	2009	2010	2011	2012	2013
Fargo	44.47%	44.44%	43.87%	43.15%	43.87%
Moorhead	66.44%	66.72%	66.74%	66.03%	66.14%
West Fargo	67.66%	67.66%	68.35%	65.72%	64.89%
Dilworth	73.71%	73.91%	73.87%	73.89%	73.92%
Total	**52.74%**	**52.80%**	**52.50%**	**51.59%**	**50.98%**

Source: Metro COG, 2014

Table 7 summarizes housing occupancy and home ownership patterns within the metro area. These estimates, which are based on the American Community Survey 2009-2013 dataset, show an overall owner occupancy rate of approximately 57 percent for the MSA. The ratio of owner to renter occupancy rate has remained relatively static over the past decade for the MSA as a whole, with only moderate change in individual jurisdictions.

Table 7. Housing Occupancy and Home Ownership by Jurisdiction

Jurisdiction	Total Units	Occupied Housing Units	Owner Occupied Housing Units	Housing Units - Percent Occupied	Housing Units - Percent Owner Occupied
Fargo	50,831	48,044	21,738	94.5%	45.2%
Moorhead	15,426	14,426	8,816	93.5%	61.1%
West Fargo	11,277	10,861	7,424	96.3%	68.4%
Dilworth	1,655	1,600	1,060	96.7%	66.3%
Horace	835	820	791	98.2%	96.5%
UZA Total	80,024	75,751	39,829	94.7%	52.6%
MSA	**93,653**	**88,279**	**50,713**	**94.3%**	**57.4%**

Source: U.S. Census Bureau, 2009-2013 American Community Survey

The historical tracking of apartment vacancy rates is an important indicator of the health of the local economy and provides immediate insight into population flux within the region. According to Appraisal Services, Inc., the December 2014 apartment vacancy figures indicate that multi-family rental supply may be outpacing demand in the metro area, particularly in West Fargo.[2] Overall the multi-family rental market is strong, and, coupled with a low unemployment rate and strong economy, helps to fuel in-migration into the MSA. Table 8 summarizes the annual apartment vacancy rates in the metro area.

Table 8. Multi-Family (Apartment) Annual Average Vacancy Rates

Jurisdiction	2010	2011	2012	2013	2014
Fargo	5.80%	4.70%	2.90%	2.70%	3.4%
Moorhead	7.00%	7.20%	5.20%	5.00%	4.1%
West Fargo	6.60%	8.40%	2.60%	2.60%	5.8%
Dilworth	8.50%	6.00%	6.30%	4.50%	6.9%
Total	**6.00%**	**5.50%**	**3.20%**	**3.00%**	**3.8%**

Source: Appraisal Services, Inc., 2014

AVERAGE HOUSEHOLD SIZE

The average household size has decreased at a relatively steady rate over the first two decades of the 21st century. While this has certainly been a contributing factor for inaccuracy in the McKibben 2040 population estimates, it is not as significant of a challenge to the transportation system in the Fargo-Moorhead MSA as it is in other cities in the country. Table 9 compares the most current ACS estimates for the counties of the MSA and jurisdictions comprising the urban core to the previous two census counts, showing a marginal decline in household size in the area.

Table 9. Average Household Size

Jurisdiction	2000 Census	2010 Census	2009-2013 ACS
Fargo	2.21	2.15	2.16
Moorhead	2.43	2.41	2.39
West Fargo	2.61	2.49	2.48
Dilworth	2.61	2.52	2.53
Cass County	2.32	2.27	2.27
Clay County	2.53	2.48	2.47

Source: U.S. Census Bureau: 2000 and 2010 Decennial Census; 2009-2013 American Community Survey

[2] Appraisal Services, Inc. Quarterly Report on Multi-Family Vacancy, December 1, 2014.

ANNUAL PERMIT DATA SUMMARY AND METRO COG HOUSEHOLD PROJECTIONS.

Metro COG gathers permit data from each jurisdiction annually. This data, which includes permits issued for new single and multi-family housing construction as well as demolitions, is used to calculate the number of households within the UZA. Table 10 summarizes annual building permit data for 2010-2014 for municipalities within the two-county metro area and the urban core. The overall household projections and rate of change is depicted on Table 11. In total, the four-city area added approximately 3,300 new units in 2014, a 3.86 percent increase over the previous year. The rapid increase in building permits is evidence of strong growth in the urban core. Multi-family housing units in particular showed a dramatic spike in growth, and represent the main source of new housing units within the metro area in 2014. It should be noted, however, that overall apartment vacancy rates increased from 2013 to 2014, indicating that supply may potentially outweigh demand over the next few years. Figure 5 on the following page is a map depicting the spatial arrangement of residential permits for the urban area and the forecasted household growth by Traffic Analysis Zone (TAZ). This shows not only where the spatial arrangement of development is occurring, but also its relationship to the forecasted household growth used in development of Travel Demand Model (TDM). In short, the map can be used as a tool to help monitor the household growth assumptions and adjust to accommodate actual growth patterns.

The map in Figure 5 illustrates that both single- and multi-dwelling unit construction is concentrated in the following regions of the urbanized area:

- South of I-94 and west of I-29 in Fargo;
- South of 52nd Avenue and east of I-29 in Fargo;
- South of I-94 in West Fargo;
- Near US-75 and along 40th Avenue South in Moorhead;
- East of 34th Street and north of I-94 in Moorhead; and
- Near 7th Street NE in Dilworth.

The spatial distribution of the 2014 dwelling unit construction permits continues the trend of the last few years, which featured growth concentrated primarily in the same areas. While the 2040 TAZs generally correspond with the observed areas of growth, the TDM will need to be adjusted in the future to better reflect where dwelling units are constructed in the metro area. In particular, the TAZs south of 52nd Avenue in Fargo and along US-75 in south Moorhead will need to be calibrated to accommodate the growth seen in these areas.

Table 10. Reported Annual Building Permit Data*

Jurisdiction	2010		2011		2012		2013		2014	
	SF	MF	SF	MF	SF	MF	SF	MF	SF	MF
Fargo	334	344	283	516	403	732	490	1202	336	1897
Moorhead	160	0	80	81	98	60	133	274	162	269
West Fargo	165	78	163	142	411	430	433	372	469	463
Dilworth	13	0	16	0	17	8	34	21	26	59
Horace					7	0				
UZA Total	**672**	**422**	**542**	**739**	**936**	**1230**	**1090**	**1848**	**993**	**2668**
Clay County	26	0	27	0	35	0				
Harwood	0	0					14	0		
Glyndon	0	0	1	0			0	0		
Reiles Acres	6	0	8	0						
Mapleton	9	0	5	0	13	0	8	0		
Sabin										
Casselton	8	0	5	25			20	0		
Hawley			2	0			9	0	6	34
Kindred	2	0	3	0	5	0	5	0		
Barnesville	1	0	7	0						

Source: Metro COG; cities of Fargo, Moorhead, West Fargo, Dilworth, Hawley

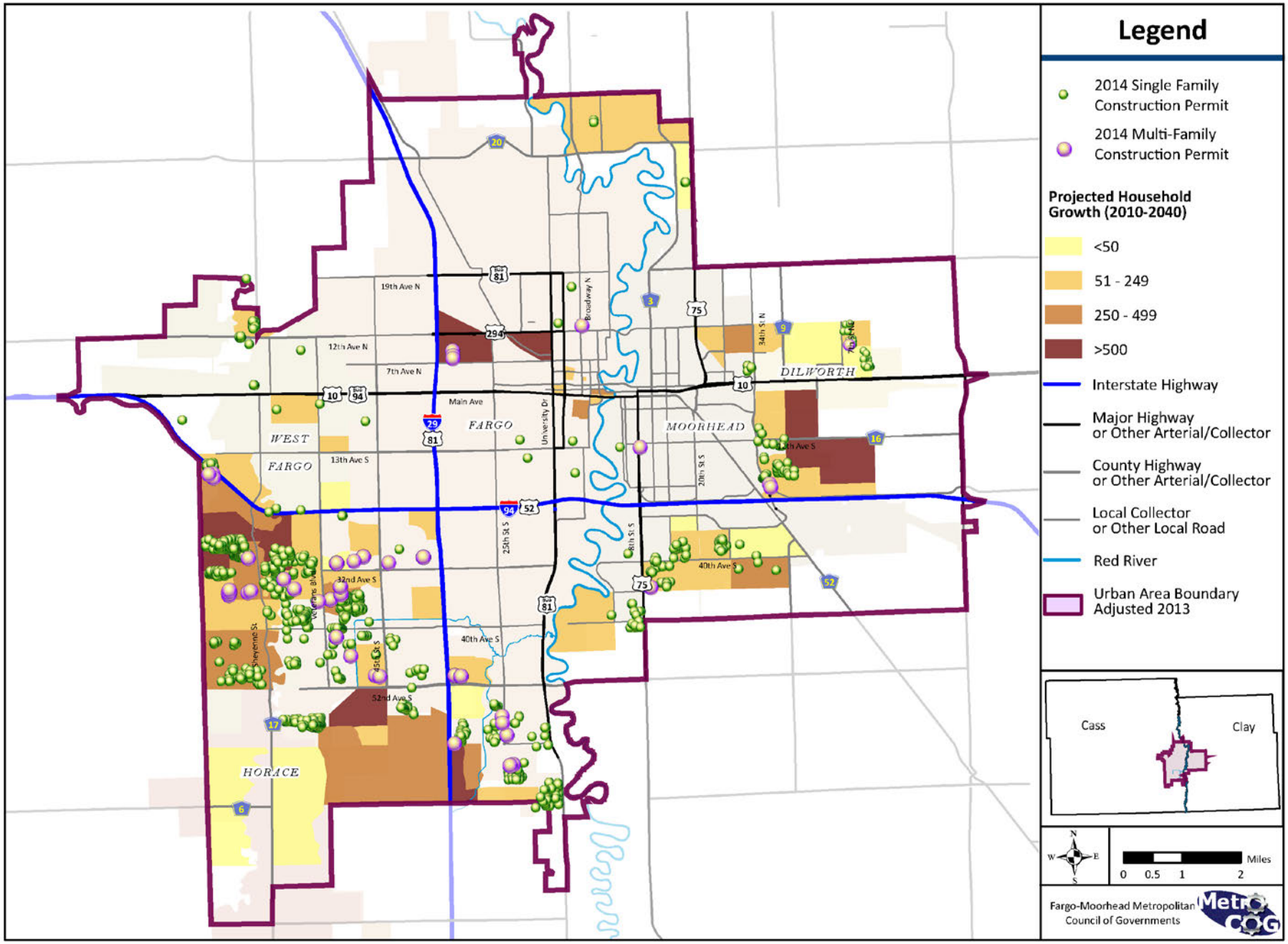
* Figures account for reported demolitions of single- and multi- family dwelling units.

Table 11. Metro COG Household Projections and Rate of Change

Jurisdiction	2010	09-'10	2011	10-11'	2012	11'-12'	2013	12'-13'	2014	13'-14'
Fargo	47,393	-0.69%	48,678	2.71%	50,220	3.17%	50,900	1.35%	53,036	4.20%
West Fargo	10,490	2.21%	10,737	2.35%	11,764	9.57%	12,540	6.60%	13,129	4.70%
Moorhead	15,050	-1.39%	15,244	1.29%	15,416	1.13%	15,427	0.07%	15,974	1.83%
Dilworth	1,537	-0.52%	1,555	1.17%	1,570	0.96%	1,616	2.93%	1,722	6.56%
Total	**74,470**	**-0.43%**	**76,214**	**2.34%**	**78,970**	**3.62%**	**80,483**	**1.92%**	**83,862**	**3.86%**

Source: Metro COG, 2014

Figure 5. 2014 Dwelling Unit Construction Permits and 2010 to 2040 Forecasted Household Growth by Traffic Analysis Zone



Source: Metro COG, 2014

Employment and Jobs Data

The economy of the Fargo-Moorhead Metropolitan Area is strong, with an unemployment rate among the lowest in the nation and employment opportunities across most sectors. Table 12 on the following page summarizes the 2010-2014 MSA employment by industrial sector, showing strong economic growth over the last five years across each employment category. Figure 6 (located on page 24) illustrates the spatial distribution of the most current employment data by TAZ within the urbanized area, with darker shades indicating those areas with the most jobs in 2010. Using projections based upon McKibben and other factors described below, Figure 6 shows the anticipated employment by TAZ by 2040. The variables which contributed to the employment distribution analysis for 2040 include:

- Designated growth areas per adopted city Future Land Use Plans and areas experiencing or anticipated to experience development pressure;
- The relationship to existing city boundaries and municipal services (e.g. water, sewer, etc.); and
- Existing infrastructure, including transportation, flood protection, and access.

EMPLOYMENT PROJECTIONS AND ACCURACY

In 2012 McKibben Demographic Research established employment projections based on 2010 Census data and other data sources for the MSA. As was the case with population projections, McKibben prepared two scenarios (Most Likely and High Growth) for consideration, and Metro COG's Policy Board formally adopted the 'High Growth' projection for use within Metro COG's transportation planning program. Table 13 on the following page displays these estimates and compares them to figures provided by a number of other established sources.

Due in part to methodological differences and the fact that the analyses were performed during a time of economic recession, the McKibben projections are significantly lower than estimates provided by the Bureau of Economic Analysis, Bureau of Labor Statistics, and Job Service North Dakota. For 2015, the first year in which projections are available, McKibben provides a total of 124,068 jobs in the MSA. In contrast, the three aforementioned sources estimate between 137,200 and 138,600 jobs in the MSA for 2013/2014. Clearly employment grew at a rate significantly higher than the McKibben projections, with the first horizon year projection deficit of approximately 15,000 jobs. Should the recent growth rate continue, the 2040 estimates are anticipated to show a deficit that is even more substantial. Employment projections will be re-calibrated in 2016 with more up to date information as part of the TDM update process, resulting in future projection s that better reflect current trends in the Fargo-Moorhead metro area.

The spatial distribution of jobs within the urbanized area is projected to change significantly by 2040. In 2010, most employment opportunities were concentrated in the downtown areas of Fargo and Moorhead, with additional high levels of employment clustered near NDSU, MSUM, and Concordia. Similar to the trend we see with population and housing forecasts, future jobs are projected to rise significantly in southern and western areas of Fargo, near I-94 and along US-10 in West Fargo, and in southern and eastern portions of Moorhead. The highest employment growth area is centered in the area south of I-94 and west of I-29.

Table 12. Total Annual Employment by Industry

Employment Category	2010	2011	2012	2013	2014
Total Nonfarm	**120,200**	**123,700**	**129,000**	**132,200**	**137,200**
Total Private	103,500	106,800	112,000	114,900	119,400
Goods-Producing	15,300	16,200	17,600	18,000	19,000
Service-Providing	104,900	107,500	111,500	114,200	118,200
Private Service-Providing	88,200	90,600	94,500	96,900	100,400
Mining, Logging, & Construction	6,700	6,800	7,400	8,000	8,700
Manufacturing	8,700	9,400	10,200	10,000	10,300
Trade, Transportation, & Utilities	26,700	27,300	28,300	29,100	30,200
Wholesale Trade	7,700	8,000	8,400	8,900	9,100
Retail Trade	14,800	14,900	15,200	15,400	15,900
Transportation, Warehousing and Utilities	4,200	4,500	4,800	4,800	5,100
Information	3,500	3,400	3,300	3,300	3,300
Financial Activities	8,700	9,000	9,100	9,600	10,400
Finance & Insurance	7,200	7,400	7,500	7,900	8,700
Professional & Business Services	13,100	13,700	15,000	15,500	16,100
Professional & Technical Services	5,100	5,200	5,700	5,900	6,100
Administrative & Support Services	5,100	5,500	6,100	6,200	6,500
Educational & Health Services	18,800	19,600	20,600	21,300	21,400
Health Care & Social Assistance	16,500	17,100	17,900	18,600	18,900
Leisure & Hospitality	12,600	12,500	13,100	13,100	13,800
Accommodation & Food Services	11,100	11,100	11,600	11,600	12,100
Food Services & Drinking Places	9,200	9,100	9,500	9,400	9,800
Other Services	4,900	5,000	5,100	5,100	5,200
Government	16,700	16,900	17,000	17,300	17,800
Federal Government	2,500	2,400	2,300	2,300	2,400
State Government	5,700	5,800	5,700	5,700	5,700
Local Government	8,600	8,800	9,000	9,300	9,700

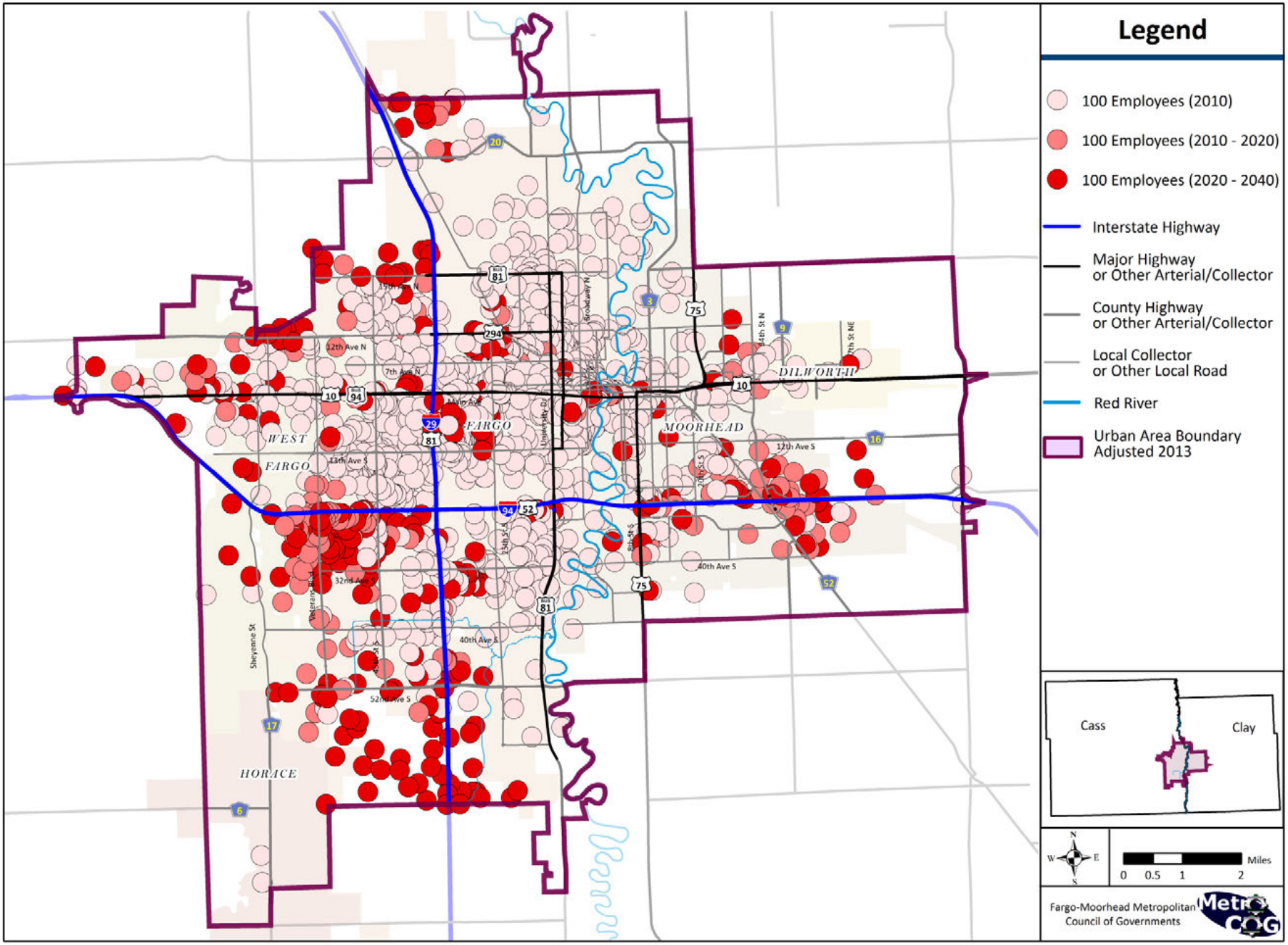
Source: Labor Market Information Center, Job Service North Dakota, CES Unit

Table 13. Selected Annual Employment Estimates and Projections

Source	2000	2010	2013	2014	2015	2020	2040
McKibben					124,068	131,935	162,429
U.S. Census Bureau	104,825	118,266					
Job Service ND		120,200	132,200	137,200			
U.S. Dept. of Commerce, Bureau of Economic Analysis		126,519	137,748				
U.S. Dept. of Labor, Bureau of Labor Statistics		121,300	133,600	138,600			

Source: : McKibben Demographic Research, 2012; U.S. Department of Labor, 2014; U.S. Department of Commerce, 20114; Job Service ND, 2014, U.S. Census Bureau, 2014

Figure 6. Forecasted Employment Growth by Traffic Analysis Zone, 2010-2040



Source: Metro COG, 2014

Land Use

In 2013, Metro COG collected parcel-level land use data from jurisdictions in the UZA. This, in conjunction with existing aerial photography, forms the foundation of the generalized existing land use database, which is represented in the map in Figure 7 on the following page. Using the aforementioned data sources, Metro COG classified each parcel into a discrete, general, land-use category. This process is essential not only for tracking land use changes within the Fargo-Moorhead Metropolitan Area, but also to ensure proper calibration of the TDM.

It is important to note that these classifications may not be consistent with land use or zoning terminology used within each jurisdiction. The intent of this land use data is to inform the metropolitan transportation planning program and therefore data should be considered in this context by interested individuals or entities.

METROPOLITAN LAND USE COMPARISON BY DECADE

Over the last four decades, the Fargo-Moorhead MSA has realized significant changes in regards to land use, land patterns, density, and growth. These changes impact the transportation system and are thus a critical consideration as the metro area completes project programming and develops long-range strategies to address system needs, issues, and limitations. Table 14 is a summary and comparison of land use data from 1977, 1986, 1991, and 2010.

Table 14. Metropolitan Area Land Use, 1977-2010

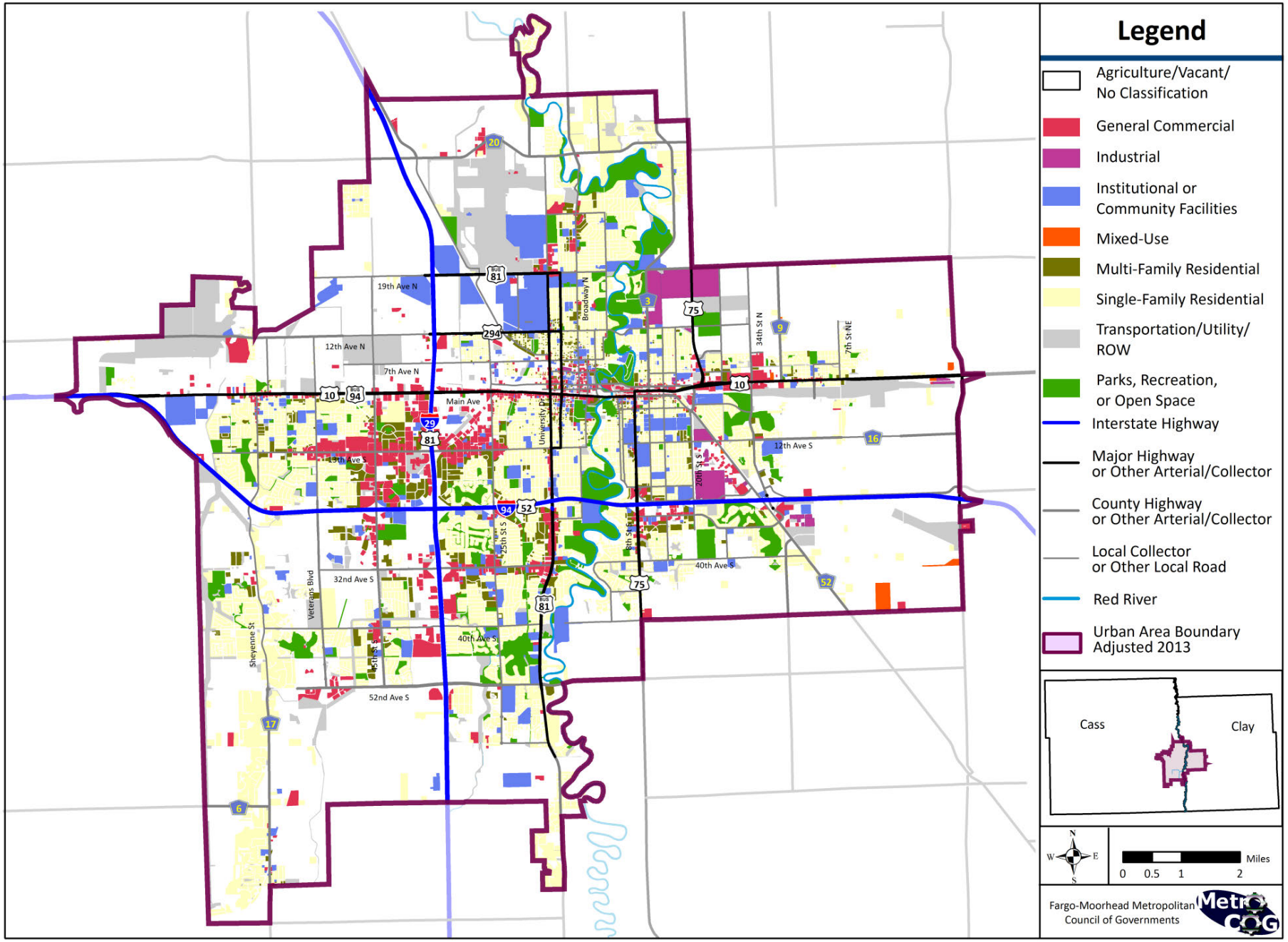
Land Use Category	1977 (Acres)	% of Metro Total	1986 (Acres)	% of Metro Total	1991 (Acres)	% of Metro Total	2010 (Acres)	% of Metro Total[3]
Single-Family Residential[4]	3,862	18%	4,814	17%	5,607	18%	9,713	18%
Multi-Family Residential	636	3%	1,031	4%	1,267	4%	1,693	3%
Industrial	535	3%	661	3%	750	3%	3,106	**6%**
Commercial	1,375	7%	2,211	8%	2,586	8%	2,521	5%
Transportation, Utilities, Etc.	6,929	32%	9,425	32%	9,480	30%	6,679	**12.5%**
Parks, Recreation & Open Space	1,349	6%	1,712	6%	2,409	8%	3,796	7%
Agricultural / Vacant / No code	5,728	27%	7,460	26%	7,183	23%	16,512	30%
Institutional / Community Facilities / Public	1,146	6%	1,778	6%	2,623	8%	3,009	6%
Total Acreage	21,560	100%	29,092	100%	31,905	100%	54,386	87%

Sources: Metro COG Metropolitan Land Use Element, 1978; Metro COG Metropolitan Land Use Report, 1986; Metro COG Metropolitan Land Use Report, 1991; Metro COG Metropolitan Profile, 2012

[3] Approximately 13 percent of the 2010 total acreage is unaccounted for in Table 14. It is most likely this acreage belongs in the "Transportation, Utilities, Etc." category.

[4] Includes "mobile" and "manufactured" housing

Figure 7. Generalized Metropolitan Land Use, 2013



Source: Metro COG, 2014

Based upon information contained within the land use comparison table and maps, the following observations and conclusions can be made in regards to the growth and change experienced in the metro area over the last four decades:

- From 1977 to 2010, significant commercial and industrial growth occurred adjacent to Main Avenue and the I-29 Corridor (north of I-94). The figures suggest industrial/commercial acreage represented approximately 9 percent of Metropolitan acreage in 1977 while in 2010 they constituted 11 percent.
- The proportion of single- and multi-family residential housing remained quite stable over time, even as residential housing expanded into fringe areas (e.g. south Fargo, West Fargo).
- Industrial development grew significantly in areas north of Main Avenue from 1991 to 2010.
- On average, the metro area increased by 994 acres per year for a total of 32,826 acres from 1997 to 2010.
- The city limits of Fargo, West Fargo, and Horace expanded significantly over the past four decades. Whereas in 1977 these areas were separated by swaths of vacant and agricultural land, by 2010 the undeveloped land was, by and large, filled in.

FARGO-MOORHEAD POPULATION DENSITY BY DECADE

Using previously documented population and land use data, Table 15 depicts both the current and historical population density (persons per acre and square mile) of the jurisdictions within the urbanized area. Note that while it would appear that the density of the area has decreased over time, this is more due to both an increase of jurisdictional land area and the incorporation of additional cities into the urbanized area.

Table 15. Fargo-Moorhead Historical Urbanized Area Population and Density

Year	Population	Acres	Persons Per Acre	Persons Per Square Mile
1977	90,734	21,560	4.20	2,694
1986	110,431	29,092	3.79	2,429
1991	121,255	31,905	3.80	2,432
2010	173,468	54,386	3.68	2,041

Source: Metro COG, 2014

As a means of comparison, Table 16 depicts the density of the Fargo-Moorhead MSA to that of selected MSAs outside of the region. The selected cities include not only those with similar characteristics to Fargo-Moorhead, but also those which provide examples of different land use, development patterns, infrastructure opportunities/constraints, and growth strategies.

Table 16. Population and Densities of Selected Metropolitan Statistical Areas

Area	2013 Population	Acres	Persons Per Acre	Persons Per Square Mile
Bismarck, ND MSA	117,878	3,502,831	0.03	21.5
Minneapolis-St. Paul, MN MSA	3,391,191	5,196,600	0.65	417.7
Anchorage, AK MSA	386,756	17,081,397	0.02	14.5
Palm Bay-Melbourne, FL MSA	545,667	674,339	0.81	517.9
Rochester, MN MSA	208,641	1,603,897	0.13	83.3
Fargo-Moorhead MSA	**213,718**	**1,805,150**	**0.12**	**75.8**

Sources: Metro COG, 2014; U.S. Census Bureau 2008-2013 American Community Survey

INCORPORATED ACREAGE BY JURISDICTION

According to 2014 data, the five city incorporated limits encompassed a total of 62,744 acres. As noted in previous sections of the Metro Profile, the Fargo-Moorhead Metropolitan Area has realized significant change since 2000 with respect to population, transportation, land use, and municipal boundary adjustments. Growth and development pressure is typically the impetus for boundary adjustments and annexations. Table 17 reports the acreage of the five cities within the urbanized area for 2000, 2004, 2008, 2013, and 2014. Since 2000, the five city UZA has grown from 38,531 to 62,744 acres, an increase of nearly 63 percent in the last 14 years.

Table 17. Incorporated Acreage of the 5-City Urbanized Area, 2000-2014[5]

City	2000	2004	2008	2013	2014
Fargo	23,563	28,458	30,200	30,885	31,209
West Fargo	4,654	6,255	9,406	9,727	9,735
Moorhead	8,801	9,865	12,628	12,622	12,622
Dilworth	1,276	1,569	2,054	2,055	2,055
Horace	237	1,432	6,968	6,965	7,123
UZA Total	**38,531**	**47,578**	**61,256**	**62,254**	**62,744**

Source: Metro COG, 2014

[5] Acreage totals were derived from archived GIS data. Slight variations may exist in the calculated acreage from year to year, which may not indicate actual boundary modification.

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Roadway System

Every construction season, the roadway network in the Fargo-Moorhead Metropolitan Area undergoes change. The intent of this chapter is to document these annual network changes as well as certain data collection activities in order to:

- Monitor TIP implementation;
- Provide a tracking mechanism for development purposes;
- Assess the accuracy of projections and assumptions made within the LRTP; and
- Provide a means to document data collection activities and dataset updates that are critical to Metro COG's program.

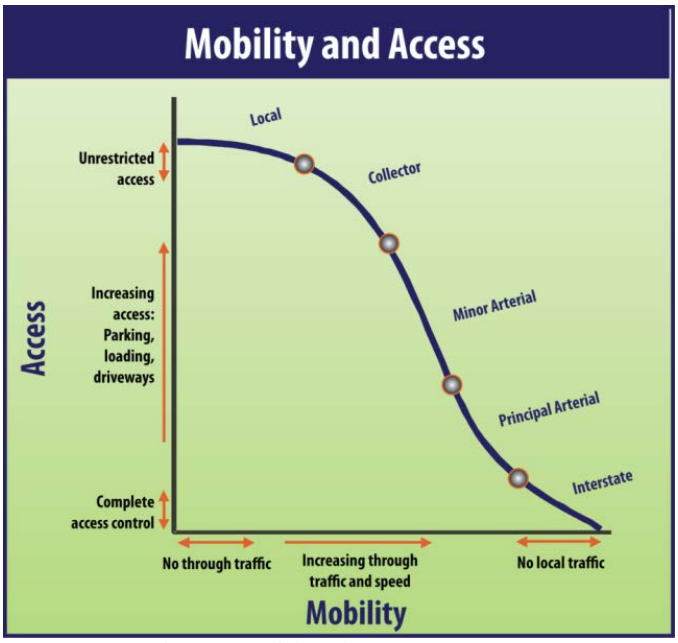
Federal Functional Classification

The FHWA groups roadways into classes according to the character of service they are intended to provide. In order to be eligible for Federal transportation funding, a roadway must be identified as part of the Federal Functionally Classified (FFC) road network. There are three basic highway classifications: Arterial, Collector and Local. All streets and highways are grouped into one of these classes depending on the character of the traffic and the degree of land access that they provide. Higher level facilities, such as interstate highways, have lower access, allowing for higher speeds and capabilities. Conversely, lower level facilities allow for greater access, but have reduced mobility due to lower speeds and capabilities. The relationship between roadway accessibility and mobility is illustrated in Figure 8. The general Federal Functional Classifications are described in more detail in Table 18.

METROPOLITAN ROADWAY NETWORK

Roadways designated under the functional classification system have access to federal transportation funds, which can be utilized for studies, network improvements, and construction. Local facilities, residential streets, local collectors, and rural minor collectors (pursuant to CFR 470.103) are not considered to be functionally classified and therefore federal transportation funding assistance is not available for planning or improvements related to these roadways. Table 19 delineates functional classification mileage by jurisdiction and overall percentages for the urban area and planning area. It is important to note that FHWA has established guidelines for the appropriate percentage of system mileage within each functional class category. Any functional classification changes are submitted by the jurisdiction annually, concurrent with the profile update process. A map depicting the functional classification network for the area is shown in Figure 9.

Figure 8. Relationship between Mobility and Access on Roadways



Source: Federal Highway Administration

Table 18. General Federal Functional Classifications

Functional System	Services Provided
Arterial	Provides the highest level of service at the greatest speed for the longest uninterrupted distance, with some degree of access control. Categories under the Arterial system include Principal Arterial-Interstate, Principal Arterial-Freeway/Expressway, Principal Arterial-Other, and Minor Arterial.
Collector	Provides a less highly developed level of service at a lower speed for shorter distances by collecting traffic from local roads and connecting them with arterials. Categories under the Collector system include Major Collector and Minor Collector.
Local	Consists of all roads not defined as arterials or collectors; primarily provides access to areas with little or no through movement.

Table 19. Functional Classification Mileage by Jurisdiction

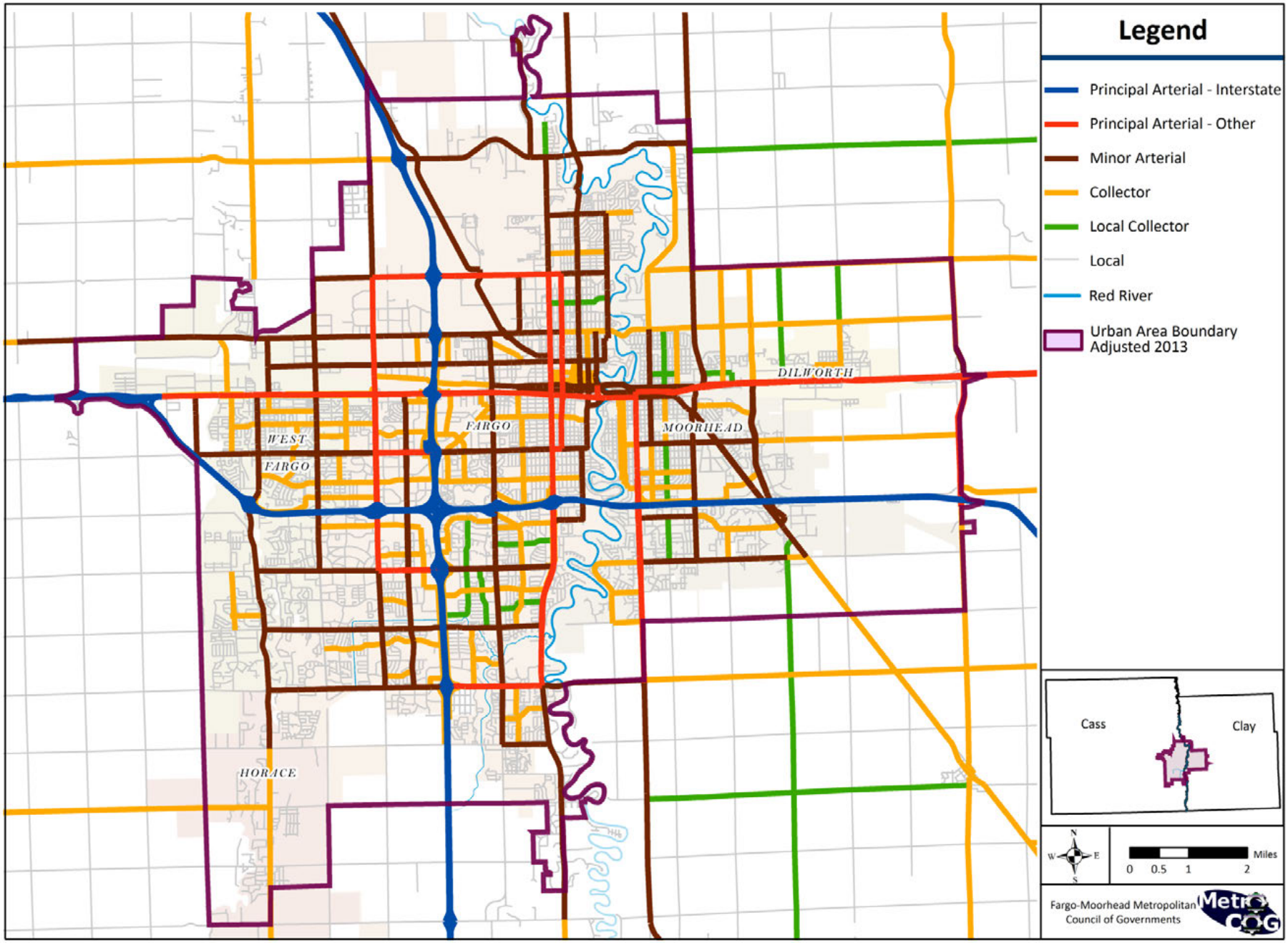
Jurisdiction	Functional Classification	Length	Percent of Network Length
Fargo	Collector	50.63	9%
	Minor Arterial	78.24	14%
	Principal Arterial	36.5	7%
	Interstate	45.98	8%
	Local	341.49	62%
	Total	552.84	100%
West Fargo	Collector	21.89	13%
	Minor Arterial	20.74	12%
	Principal Arterial	4.24	3%
	Interstate	7.21	4%
	Local	113.77	68%
	Total	167.85	100%
Moorhead	Collector	33.86	16.2%
	Minor Arterial	27.97	13.4%
	Principal Arterial	9.12	4.4%
	Interstate	7.39	3.5%
	Local	130.91	62.6%
	Total	209.25	100%
Dilworth	Collector	3.37	12.3%
	Minor Arterial	0.07	0.3%
	Principal Arterial	4.07	14.9%
	Interstate	0	0%
	Local	19.82	72.5%
	Total	27.33	100%
Horace	Collector	5.11	12%
	Minor Arterial	3.99	10%
	Principal Arterial	0	0%
	Interstate	0	0%
	Local	32.6	78%
	Total	41.7	100%
UZA Total	Collector	114.86	11%
	Minor Arterial	131.01	13%
	Principal Arterial	53.93	5%
	Interstate	60.58	6%
	Local	638.59	64%
	Total	998.97	100%
Rural Cass County (within MPA)[6]	Collector	91.59	12%
	Minor Arterial	19.81	3%
	Principal Arterial	0	0%
	Interstate	56.96	8%
	Local	575.55	77%
	Total	743.91	100%
Rural Clay County (within MPA)[7]	Collector	124.5	22%
	Minor Arterial	29.83	5%
	Principal Arterial	22.86	4%
	Interstate	21.08	4%
	Local	374	65%
	Total	572.27	100%
MPA	Collector	330.95	14%
	Minor Arterial	180.65	8%
	Principal Arterial	76.79	3%
	Interstate	138.62	6%
	Local	1588.14	69%
	Total	2315.15	100%

Source: Metro COG, 2014

[6] Includes all mileage within MPA in Cass County that is not within the city limits of Fargo, West Fargo, or Horace

[7] Includes all mileage within MPA in Clay County that is not within the city limits of Moorhead or Dilworth

Figure 9. Existing Functional Classification System



Source: Metro COG, 2014

Traffic Counts

METRO COG COUNTS

Metro COG collects 12 hour counts, peak turning movement counts, and 24/48 hour volume counts at the request of local jurisdictions to assist in various planning efforts. In 2014 Metro COG and local jurisdictions completed traffic counts at the locations identified in Table 20. For additional details on these counts contact either Metro COG or the specific jurisdiction.

Metro COG also coordinates annualized average daily traffic (AADT) which are conducted on a five-year cycle to provide base traffic data for use within the regional traffic model calibration process. These counts can be found on Metro COG's website (www.fmmetrocog.org -> Resources -> Maps and Data) or a paper map can be purchased from Metro COG.

NDDOT COUNTS

NDDOT routinely collects AADT and vehicle class count data across the state. Currently traffic data in the eastern region of the state (including Fargo/West Fargo) has been collected every two years. For information on these counts you can visit NDDOT's traffic count webpage at: http://www.dot.nd.gov/road-map/traffic/

MNDOT COUNTS

MnDOT also routinely collects traffic data across the state of Minnesota. Trunk highways are counted every two years while the local system roads are counted every four years. For the results of these counts you can visit MnDOT's traffic forecasting & analysis webpage at: http://www.dot.state.mn.us/traffic/data/

LOCAL JURISDICTION COUNTS

Local jurisdictions often coordinate counts with Metro COG. However, jurisdictions may collect vehicle data on their own. Additionally, some jurisdictions, such as the City of Fargo, have the capability of counting vehicles using their vehicle detection systems for signalized intersections. For information on local jurisdiction counts you may contact the jurisdiction or Metro COG.

AUTOMATIC TRAFFIC RECORDER (ATR) COUNTS

ATR stations are traffic volume detection systems that are permanently installed on selected interstate, state, county highways and urban roadways and provide continuous access to data. These ATR stations are equipped with loop detectors that allow the station to collect traffic volume data and, in certain circumstances, vehicle classification data. The City of Fargo, NDDOT, and MnDOT currently operate ATR stations.

Table 20. 2014 Traffic Count Locations

Jurisdiction	Location	Type	Completed By:	Count Date
Cass County	Intersection of Cass 10 & Cass 23 (West, South, East legs)	Volume and Vehicle Class Counts	Metro COG	6/1/2014
Cass County	Intersection of Cass 10 & Cass 11 (West, South, East, North legs)	Volume, Vehicle Class, Speed Counts	Metro COG	August/ September 2014
Cass County	Cass 15 between Cass 10 & I-94	Volume and Vehicle Class Counts	Metro COG	9/1/2014
Cass County	Cass 4 west of I-94	Volume and Vehicle Class Counts	Metro COG	6/1/2014
Cass County	Intersection of Cass 4 & Cass 11 (West, South, East, North legs)	Volume, Vehicle Class, Speed Counts	Metro COG	6/1/2014
West Fargo	12th St W at 3700 block	Volume, Vehicle Class, Speed Counts	Metro COG	5/1/2014
West Fargo	47th Ave W just west of Persimmon Place	Volume, Vehicle Class, Speed Counts	Metro COG	5/1/2014
West Fargo	12th St E at 600 block	Volume, Vehicle Class, Speed Counts	Metro COG	5/1/2014
West Fargo	2nd St E at 3400 block	Volume, Vehicle Class, Speed Counts	Metro COG	6/1/2014
West Fargo	31st Ave E at 400 block	Volume, Vehicle Class, Speed Counts	Metro COG	7/1/2014
Clay County	CSAH 12 just east of Red River Bridge	Volume, Vehicle Class, Speed Counts	Metro COG	6/1/2014
Clay County	CSAH 12 just east of US 75	Volume, Vehicle Class, Speed Counts	Metro COG	6/1/2014
Clay County	CSAH 9 just north of US 10	Volume and Vehicle Class Counts	Metro COG	7/1/2014
Clay County	CSAH 9 just north of 15th Ave N	Volume and Vehicle Class Counts	Metro COG	7/1/2014
Clay County	CSAH 117 & Parke Ave (north leg)	Volume and Vehicle Class Counts	Metro COG	7/1/2014
Clay County	CSAH 117 & 10th St (north leg)	Volume and Vehicle Class Counts	Metro COG	7/1/2014
Clay County	7th St NE & 4th Ave NE – Dilworth (West, South, East, North legs)	Volume Counts	Metro COG	9/1/2014
Fargo	17th Ave S & 38th St	Turning movement counts	Metro COG	10/1/2014
Fargo	36th Ave S & 45th St	Turning movement counts	Metro COG	10/1/2014
Fargo	NP Ave & 10th St	Turning movement counts	Metro COG	10/1/2014
Fargo	NP Ave & 8th St	Turning movement counts	Metro COG	10/1/2014
Fargo	NP Ave & Broadway	Turning movement counts	Metro COG	10/1/2014
Moorhead	1st Ave N & 7th St	Turning movement counts	Metro COG	10/1/2014
Moorhead	1st Ave N & 8th St	Turning movement counts	Metro COG	10/1/2014
Moorhead	1st Ave N & 11th St	Turning movement counts	Metro COG	10/1/2014
Moorhead	20th St & 28th Ave S	Turning movement counts	Metro COG	10/1/2014
Moorhead	20th St & I-94 South Ramp	Turning movement counts	Metro COG	10/1/2014

Source: Metro COG, 2014

2014 Roadway System Changes

Pursuant to initiatives set forth within MAP-21, Metro COG annually tracks the efforts of local jurisdictions to improve and change the roadway network. Roadway system changes include: capacity changes/improvements; roadway reconstruction rehabilitation and maintenance projects; capacity changes; and other activities (e.g. corridor preservation, ROW acquisition). The information in Table 21 – 03 reports and summarizes these annual system changes.

Table 21. 2014 Roadway Capacity and System Changes

Jurisdiction	Type / Network Characteristic	Description	Location
Fargo	Lane Reduction	Left-hand turn lanes reduced from 2 lanes to 1	10th St at 19th Ave N
Fargo	Roadway Widening	Expanded roadway from a 4 to 6 lanes	25th St from 17th Ave S to 23rd Ave S
Fargo	Road Reconstruction and additional turn lanes	Widened roadway from a 2-lane to a 4-lane divided.	40th Avenue S from County Drain 27 to Veterans Blvd
Fargo	Signal	Added a new traffic signal at 54th Street	40th Avenue S at 54th St
Fargo	Signal	New permanent signal	40th Avenue S at Veterans Blvd
Fargo	Intersection Improvements	Completed Intersection Improvements at University Dr and 70th Ave S	University Dr and 70th Ave S
Fargo	New/extended roadway	New 3-lane collector roadway between 47th St and Veterans Blvd	36th Ave S
Fargo	New/extended roadway	New 3-lane collector roadway between 36th Ave S & 40th Ave S.	36th Ave S to 40th Ave S
Fargo	Road Reconstruction	2 lane roadway with parking on north side	7th Ave S from 45th St to 52nd St
Moorhead	Turn lane	Single left turn lane installation	27th Ave. South - SE Main Ave. to 26th St. South
Moorhead	Turn lane	Free right turn	11th St N at 1st Ave N - NB to EB movement
Moorhead	Turn lane/intersection improvements	Restriped to add dedicated left turn lanes	11th St N at 1st Ave N - NB and SB movements
Moorhead	Intersection Improvements	Removed center turn lane	11th St N from 2nd Ave N to 200 feet north of 3rd Ave N
Moorhead	New/extended roadway	New bituminous roadway	18th St. South - Johnson Farms 3rd
Moorhead	New/extended roadway	New bituminous roadway	36th Ave. South - Johnson Farms 3rd
Moorhead	New/extended roadway	New bituminous roadway	44th Ave. South - Stonemill Estates
Moorhead	New/extended roadway	New concrete roadway	42nd St. South - MCCARA 4th

Source: Cities of Fargo and Moorhead, 2014; Metro COG, 2014

Table 22. 2014 Obligated Projects

Jurisdiction	Location	Project Description	TIP Project No. / Local
Moorhead	SE Main Ave	Resurfacing SE Main Ave from Oak Way to I-94.	514040
Clay County	CSAH 18	Grading 4.5 miles of CSAH 18 from TH 75 to 0.9 mile east of CSAH 11	214011
Clay County	CSAH 3	Asphalt Mill and Overlay of CSAH 3 from Center Avenue to CSAH 18	214012
MnDOT	TH 75	Grading, Bituminous Milling & Surfacing of JCT of TH 10 to North Clay County Line	814030
MnDOT	TH 10	TH 10 EB from E. OF TH 9 to 150th ST N. - Grading, Bituminous Surfacing and Replace old bridge 14003 with new bridge 14800 over the Buffalo River (Eastbound)	814040
Fargo	25th St S	25th St S reconstruction and widening including bridge widening over I-94	414010
Fargo	13th Ave S	Reconstruct 13th Ave S between 38th and 44th St	413035
Fargo	40th Ave S	Reconstruct 40th Ave S from County Drain 27 to Veterans Blvd	414012
Fargo	40th Ave S	Reconstruct 40th Ave S from Veterans Blvd to the Sheyenne River	414013

Jurisdiction	Location	Project Description	TIP Project No. / Local
Fargo	19th Ave N	Rehab between 10th and 18th St including access management, pedestrian safety improvements, and intersection improvements	414021
West Fargo	7th Ave E	Rebuild as urban 3-lane roadway from 17th St E to 45th St SW	313010
West Fargo	40th Ave S	Reconstruct 40th Ave S from Veterans Blvd to the Sheyenne River	414013A
Cass County	Cass County 14	Maintenance Overlay of Cass County Highway 14 from I-29 to CR 81 South	115020
Cass County	Cass County 81	Maintenance Overlay on Cass County Highway 81 from 64th Ave South to CR 16	115010
Cass County	Cass County 20	CR 20 from CR 17 to University Dr. Includes 2.5" M&O and turn lanes.	114020
Cass County	Cass County 22	CR 22 from CR 17 to east of Harwood will have existing paved shoulders M & O. CR 22 from east of Harwood to the Red River will have a 2.5 inch maintenance overlay	114021
Cass County	Cass County 31	CR 31 - 2.5" Maintenance Overlay from CR 20 to CR 22	114022
Cass County	Cass County 15	CR 15 Grading and Drainage Improvements from I-94 to CR 10	114015
NDDOT	I-29	PCC Pavement on Northbound I-29 from Argusville to Hunter	914040
NDDOT	19th Ave N	Beacon detection on 19th Ave N at the NDSU Barns	914050
NDDOT	I-94	Westbound I-94 from east of Casselton to near West Fargo - HBP on Ramps, Microsurfacing and Milling	914034
NDDOT	NDDOT Fargo District	Districtwide Retroreflectivity Signing	914035
NDDOT	Metro COG Planning Area	Sign replacements throughout eastern North Dakota, including replacements within the cities of Fargo and West Fargo and other areas within Metro COG's Planning Area	20303

Source: Cities of Fargo, Moorhead, and West Fargo, 2014; Cass and Clay Counties, 2014; NDDot, 2014; Metro COG 2014

Table 23. 2014 Roadway Preservation/Transportation Systems Management Activities

Jurisdiction	Project Description	TIP Project No. / Local
Fargo	Mill & overlay 25th St from 23rd Ave S to 32nd Ave S	Local
Fargo	Mill & Overlay Cass Co 20 from 500' west of University Dr to I-29. Added bypass lanes at 37th St and at 32nd St in both directions.	114020
Moorhead	City-wide striping of existing roadways	Local
Moorhead	North Bridge joint repairs on 1st Ave N over Red River	Local
Moorhead	Overlay Tessa Terrace third addition subdivision	Local
Moorhead	Bituminous mill with concrete overlay of SE Main Ave from Oak Way to I-94	514040
Clay County	Bituminous mill & overlay of 11th St. N from 1st Ave N to Co Hwy 18	Local
Moorhead	Concrete pavement repairs of 34th Ave S from Co Hwy 52 to 43rd St S	Local

Source: Clay County, 2014; Cities of Fargo and Moorhead, 2014

Vehicle Miles Traveled

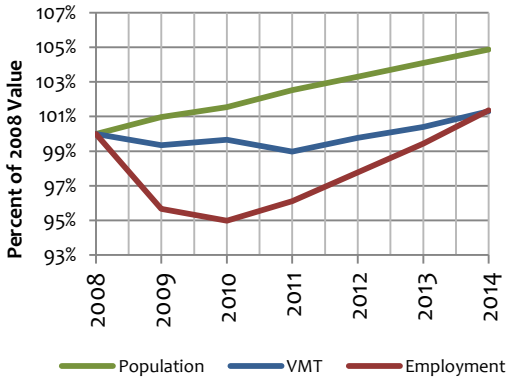
This section presents an overview of vehicle miles traveled (VMT) from both a national and metropolitan perspective, analyzing its relationship to population, employment, and fuel costs. VMT is often used (amongst a host of other mechanisms) not only to measure the relative demand on the transportation network, but also for model calibration purposes. For the purposes of the Metro Profile, VMT is annualized and refers to the total number of miles traveled by all vehicles during the defined time period.

VMT, POPULATION, AND EMPLOYMENT

The total number of VMT began to flat-line nationally in 2005 and 2006, and declined in 2008, concurrent with the national recession. VMT has since rebounded to a degree, but with only moderate growth from 2009 to the present. Further, VMT per capita realized steady increases over the past several decades and has only recently seen a rather significant decline. Research and reports at the national level suggest and hypothesize that even though VMT growth has steadied, with moderate growth forecasted for the near future, there may continue to be a decline in transportation system performance due to the fact that the system is near capacity and thus susceptible to level of service issues with only minimal increases in demand. Figure 10 and Figure 11 (at right) illustrate changes in VMT, population, and employment from 2008 to 2014 as a percentage of 2008 figures for both the Fargo-Moorhead Metropolitan Area and the United States.

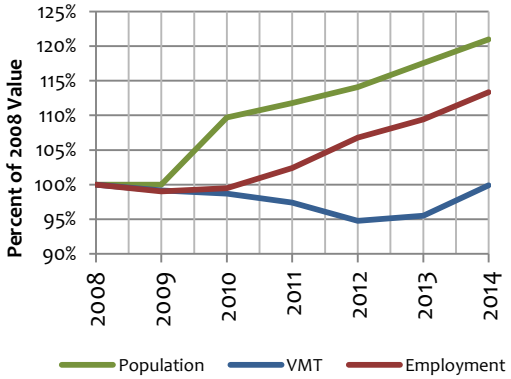
In regards to national trends, while population has increased at a steady pace, VMT has not increased proportionally. Indeed, VMT dipped slightly from 2010 to 2011 before increasing at a steady pace (though at a rate lower that the increase in population). Employment on the other hand decreased sharply between 2008 and 2011, a result of the significant recession seen in the country during that time. The number of jobs has increased since 2011, and now eclipses pre-2008 national levels. While employment and population continue to increase, the amount of miles people travel have no risen to the same degree.

Figure 10. National Vehicle Miles Traveled, Population, and Employment Trends, Percent Change from 2008



Sources: FHWA Highway Statistics Series, 2008 – 2014; U.S. Census Bureau, 2008 – 2014; U.S. Bureau of Labor Statistics, 2008-2014

Figure 11. Local Vehicle Miles Traveled, Population, and Employment Trends, Percent Change from 2008



Sources: FHWA Highway Statistics Series, 2008 – 2014; U.S. Census Bureau, 2008 – 2014; U.S. Bureau of Labor Statistics, 2008-2014

Local trends in population, employment, and VMT differ significantly from the national trends. While the nation experienced one of the largest recessions in modern times from 2008 to 2011, the Fargo-Moorhead MSA was comparatively unaffected. Employment remained flat (but did not notably decline) from 2008 to 2010 before rapidly increasing from 2010 to present. Population spiked after 2009 at a rate closely mirroring employment trends. VMT on the other hand decreased from 2008 to 2014, at which point it once again approached 2008/2009 levels. The graphs clearly depict that residents of the metro area were driving significantly less than in the past beginning in 2008/2009.

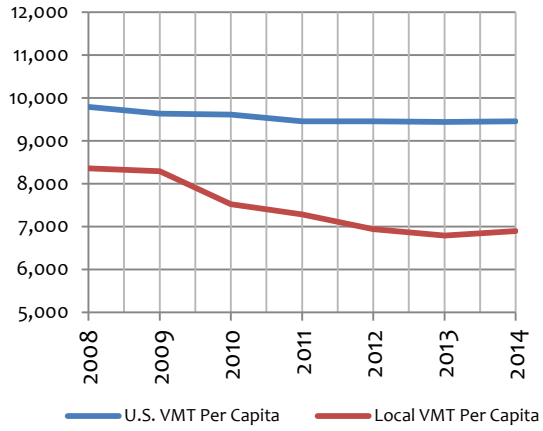
VMT PER CAPITA

VMT per capita – that is, the number vehicle miles traveled per person – is a statistical tool that can shed light on travel patterns, the amount and length of trips people are undertaking, and the use of personal automobiles versus public and alternative modes of transportation.

National data suggests that since 2008 VMT per capita has declined slightly, with the largest drop during the midst of the recession. Since the end of the recession in 2011, VMT per capita has remained at nearly the same level in spite of economic growth and greater employment opportunities.

Locally, VMT per capita has declined at a much greater rate than nationally, dropping nearly 2,000 per year since 2008 (see Figure 12). All of this is in spite of strong economic and job growth within the metro area. These numbers indicate that there has been a significant shift since 2008 in how people travel and the amount and length of trips undertaken, all of which are seemingly un-tied to economic and job growth. In fact, in this example, an area with a strong economy (Fargo-Moorhead MSA) experienced a much more pronounced decline in VMT per capita than what occurred nationally.

Figure 12. National and Local VMT Per Capita, 2008-2014



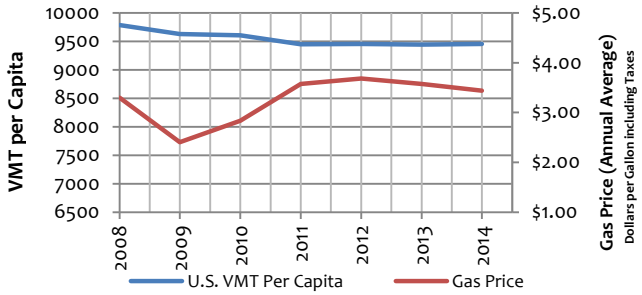
Sources: FHWA Highway Statistics Series, 2008 – 2014; U.S. Census Bureau, 2008 – 2014

VMT PER CAPITA AND FUEL PRICES

VMT is a product of a number of socio-economic, demographic, economic, market, and community variables, which are continually changing and evolving. Some of the factors influencing VMT at both national and local scales include: population and age distribution; household size and composition; vehicle availability; household income; travel time/trip length; land use patterns; and personal decision making. In addition to these factors, one variable which typically trends with VMT is the cost of fuel. Figure 13 and Figure 14 illustrate associations between VMT per capita and fuel prices at both the national and local levels.

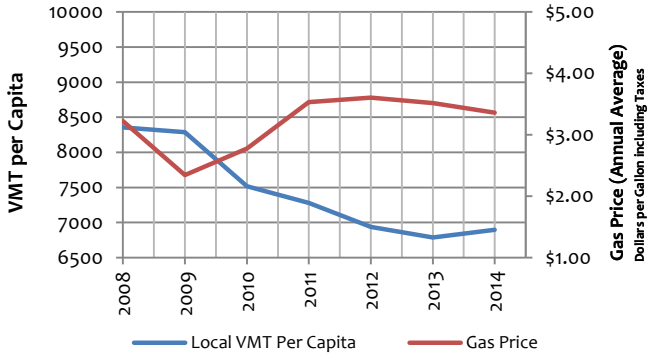
Generally speaking, as gas prices increase, the total VMT in any given area begins to decrease. This relationship is illustrated to some extent on both national and local scales, with the latter in particular showing a direct correlation. In spite of this relationship, one should be wary to suggest that correlation equates to causation, as there are many other factors which may have led to the decline in VMT per capita (e.g. unemployment rates, a greater emphasis on alternative modes of transportation, etc.).

Figure 13. National VMT Per Capita and Annual Fuel Prices, 2008-2014



Sources: FHWA Highway Statistics Series, 2008–2014; U.S. Census Bureau, 2008–2014; U.S. Energy Information Administration, 2008-2014

Figure 14. Local VMT Per Capita and Annual Fuel Prices, 2008-2014



Sources: FHWA Highway Statistics Series, 2008–2014; U.S. Census Bureau, 2008–2014; U.S. Energy Information Administration, 2008-2014

VMT BY FEDERAL FUNCTIONAL CLASSIFICATION

Table 24 details VMT by Federal Functional Classification (FFC) over the last five years for Fargo, West Fargo, and the Clay County urban area. Note that these were the only jurisdictions in which VMT by FFC were reported upon. Of interest is the increase of total VMT in reporting jurisdictions over the past 2 years, which has risen more sharply than in preceding years. Overall, the proportion of VMT in each FFC has remained relatively static since 2010.

Table 24. 2010-2014 Vehicle Miles Traveled and Rate of Change, by Functional Classification

Year	Jurisdiction	Principal Arterial, Interstate	Principal Arterial, Other	Minor Arterial	Collector	Local Roadway	Total	% Principal Arterial (Interstate)	% Principal Arterial (other) and Minor Arterial	% Collector	% Local
2010	Fargo	224,811,000	152,858,000	192,557,000	68,249,000	149,069,000	787,544,000	28.54%	43.86%	8.67%	18.93%
	West Fargo	41,031,000	17,474,000	43,147,000	14,757,000	22,614,000	139,023,000	29.51%	43.61%	10.61%	16.27%
	Clay County Urban Area	49,057,460	60,422,465	70,604,870	19,717,665	42,798,805	242,601,265	20.22%	54.01%	8.13%	17.64%
	Total Reported 2010 VMT	314,899,460	230,754,465	306,308,870	102,723,665	214,481,805	1,169,168,265				
2011	Fargo	223,590,000	152,692,000	189,994,000	67,735,000	150,415,000	784,426,000	28.50%	43.69%	8.63%	19.18%
	West Fargo	42,466,000	17,474,000	43,297,000	14,669,000	22,730,000	140,636,000	30.20%	43.21%	10.43%	16.16%
	Clay County Urban Area	54,367,845	59,797,585	69,688,355	19,891,405	43,128,400	246,873,590	22.02%	52.45%	8.05%	17.48%
	Total Reported 2011 VMT	320,423,845	229,963,585	302,979,355	102,295,405	216,273,400	1,171,935,590				
2012	Fargo	225,562,000	152,257,000	187,357,000	66,950,000	151,321,000	783,447,000	28.79%	43.35%	8.55%	19.31%
	West Fargo	43,659,000	17,474,000	43,472,000	14,555,000	22,847,000	142,007,000	30.74%	42.93%	10.25%	16.08%
	Clay County Urban Area	55,007,238	60,476,376	72,251,328	19,945,902	43,246,560	250,927,404	21.92%	52.89%	7.95%	17.23%
	Total Reported 2012 VMT	324,228,238	230,207,376	303,080,328	101,450,902	217,414,560	1,176,381,404				
2013	Fargo	233,463,000	160,587,000	195,778,000	66,338,000	155,848,000	812,013,000	28.75%	43.89%	8.17%	19.19%
	West Fargo	45,633,000	19,151,000	51,440,000	15,541,000	23,531,000	155,296,000	29.38%	45.46%	10.01%	15.15%
	Clay County Urban Area	54,856,945	60,093,600	77,584,035	20,447,300	43,383,900	256,365,780	21.40%	53.70%	7.98%	16.92%
	Total Reported 2013 VMT	333,952,945	239,831,600	324,802,035	102,326,300	222,762,900	1,223,674,780				
2014	Fargo	239,319,000	160,919,000	197,525,000	66,467,000	160,544,000	824,775,000	29.02%	43.46%	8.06%	19.47%
	West Fargo	47,248,000	19,170,000	51,946,000	15,800,000	24,237,000	158,398,000	29.83%	44.90%	9.97%	15.30%
	Clay County Urban Area										
	Total Reported 2014 VMT										

Sources: 2010-2014 NDDOT Annual Traffic Reports, MnDOT Traffic Information System Database

Intelligent Transportation System (ITS):

Metro COG maintains an Intelligent Transportation System (ITS) plan for the MSA and works in cooperation with the Advance Traffic Analysis Center (ATAC) on the maintenance of the Regional ITS Architecture. The ITS Deployment Strategy and Regional ITS Architecture were both updated and adopted by Metro COG in December 2014. The primary recommendations of the ITS Deployment Strategy and Regional Architecture focus on interoperability and regionalization of existing and future ITS deployments and place a high priority on the centralization and integration of signal systems within the MSA.

The Regional ITS Architecture provides guidance for developing and implementing ITS systems through Systems Engineering Analysis and information flows between entities. With inputs from the Regional ITS Architecture, the 2014 ITS Deployment Strategy was developed to further plan for ITS implementation through identification of deployment strategies and initiatives. These strategies and initiatives focus on the following priority areas:

(a) closed circuit television cameras (CCTV);
(b) traffic signal systems integration; and
(c) development of a Traffic Operations Center (TOC) to coordinate traffic management, traveler information, maintenance, management, and data collection.

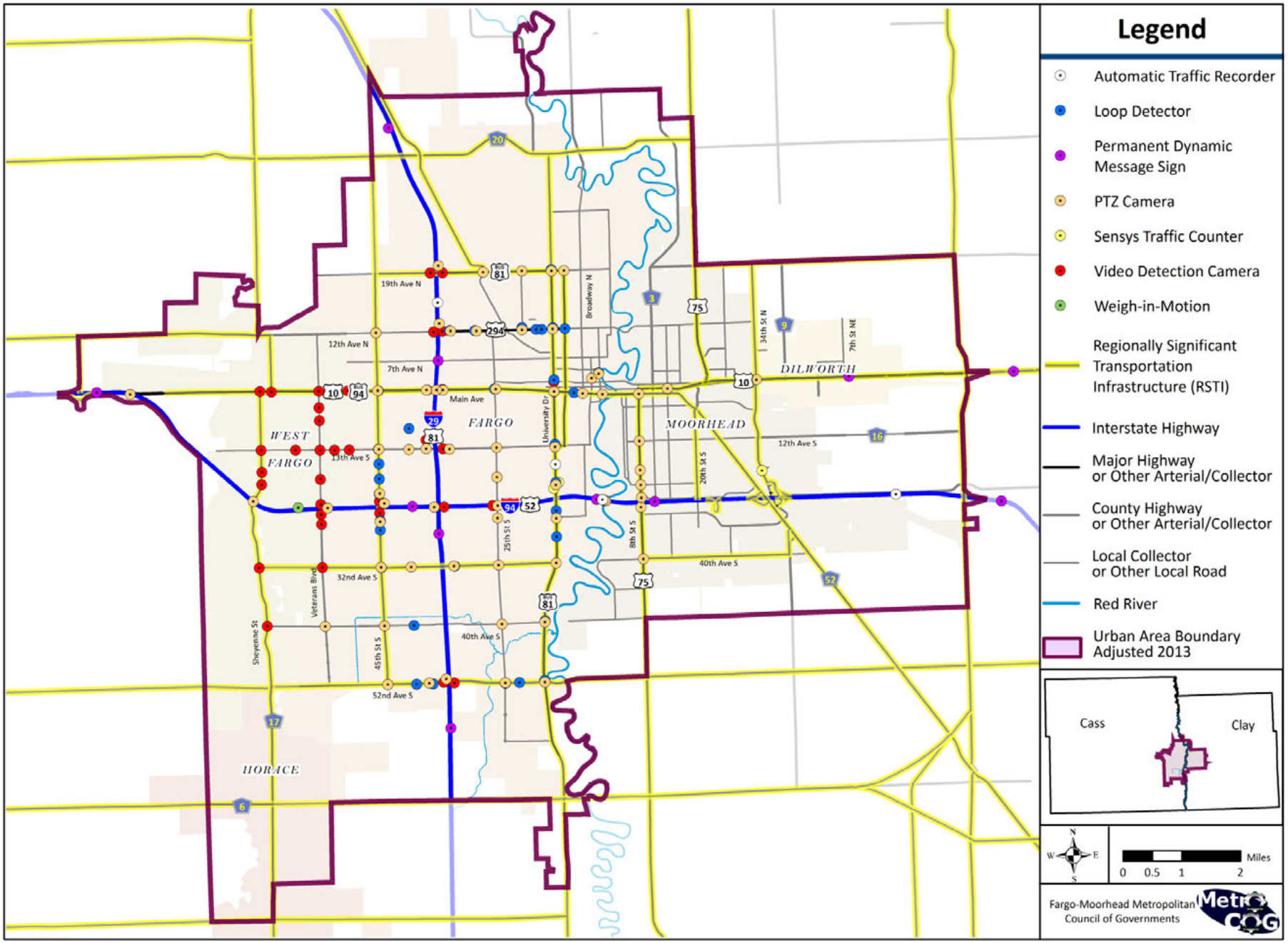
Also adopted in December 2014 was the Concept of Operations Report for a Fargo-Moorhead TOC. This report details steps necessary to implement a traffic operations center for the Fargo-Moorhead area.

In March 2011, Metro COG finalized and adopted the Traffic Operations Incident Management Strategy (TOIMS) to establish a list of improvements to enhance the movement of people and goods in the event of an incident or emergency. Major components of the study include discussion and analysis on identification of a Regionally Significant Transportation Infrastructure (RSTI) network, beltway concepts, and ITS deployment.

These plans are overseen by the Traffic Operations Working Group (TOWG). The TOWG is comprised of traffic experts from Metro COG, local jurisdictions, NDDOT, MnDOT, and ATAC. The TOWG meets regularly to discuss traffic operations issues, oversee the ITS Deployment Strategy and Regional Architecture, and for other ITS issues concerning the metro area.

Figure 15 identifies current ITS deployments within the metropolitan transportation network, including: dynamic vehicle detectors, vehicle detector systems, cameras, dynamic message signs, traffic cameras, and weigh-in-motion stations. Also in Figure 15 is the Regionally Significant Transportation Infrastructure (RSTI), which are corridors that are significant to the safety and security of the region by serving as evacuation corridors during emergency events. It is essential to carefully identify and preserve these critical corridors.

Figure 15. Intelligent Transportation System (ITS) Deployments as of December 2014



Source: Metro COG, 2014

Freight & Interstate Travel

This chapter of the Profile outlines information related to airline passenger and cargo activities, passenger rail (Amtrak) travel, and freight movement within the Fargo-Moorhead Metropolitan Area. Airline and passenger rail systems are essential components of a multi-modal transportation system, and are increasingly utilized as travel options by members of the Fargo-Moorhead community. The region is also increasing in prominence as a regional freight hub, and serves as a center for freight activity for both western Minnesota and eastern North Dakota.

Aviation

While there are five airports within the Fargo-Moorhead MSA, only Hector International Airport provides scheduled commercial service. In addition to passenger service, Hector is also the primary hub for air-based freight and mail activity within the region. Five commercial passenger lines and five cargo carriers provide the majority of service to Hector International Airport. There are approximately 25 to 30 aircraft landings each day or 9,000 to 11,000 per year. Hector International Airport is also a site for international customs inspections.

COMMERCIAL PASSENGER ACTIVITY

There were 894,426 combined boardings and deboardings in 2014, once again making it the busiest year on record for Hector International Airport. Table 25 documents commercial passenger activity by carrier for 2014. Table 26 summarizes annual passenger activity and annual change over the past five years. Activity in 2014 was up by approximately 12.2 percent from the previous year, and has increased by approximately 19 percent over the past two years. The figures clearly show that commercial service activity at Hector International has seen remarkable growth over the past few years.

Table 25. 2014 Commercial Passenger Activity at Hector International Airport, by Airline

Airline	Enplanements	Deplanements	Total
Delta Airlines	195,778	192,994	388,772
United Express	95,996	96,448	192,444
Allegiant Air	75,898	75,472	151,370
American Eagle	55,254	54,490	109,744
Frontier Airlines	25,922	26,174	52,096
Total	**448,848**	**445,578**	**894,426**

Source: Fargo Municipal Airport Authority, 2014

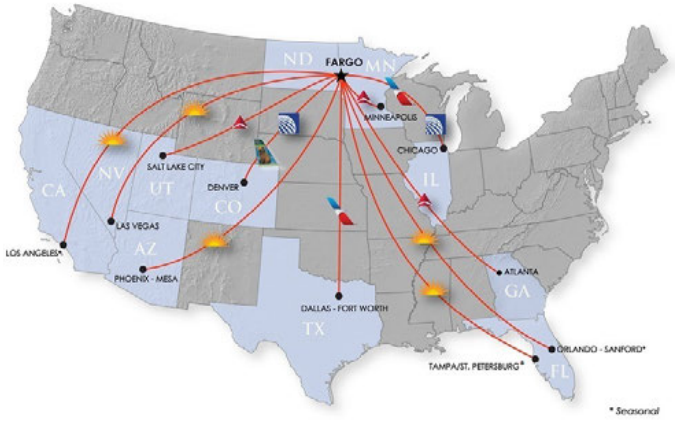
Table 26. Total Passenger Activity and Annual Rate of Change at Hector International Airport, 2010-2014

Year	Enplanements	Deplanements	Total	Percent Change
2010	363,138	361,803	724,941	-
2011	350,458	349,091	699,549	**-3.5%**
2012	364,727	364,702	728,799	**4.2%**
2013	398,677	398,448	797,125	**9.4%**
2014	448,844	445,578	894,426	**12.2%**

Source: Fargo Municipal Airport Authority, 2010-2014

Figure 16 (below) depicts the 11 scheduled non-stop routes to and from Fargo.

Figure 16. Hector International Airport Non-Stop Routes



Source: Fargo Municipal Airport Authority, 2015

AVIATION PERFORMANCE

Table 27 depicts on-time performance and causes of delay for 2010-2014 at Hector International Airport. Over the past two years, on-time performance has declined approximately 12 percent. This decrease in aviation performance can be attributed to air carrier delays, system delays, cancelled and late arriving aircrafts. National system delays and air carrier delays for carriers serving Hector International Airport have increased significantly over the past two years, providing some insight into trends affecting aviation performance at the airport.

INTERNATIONAL CUSTOMS ACTIVITY

Hector International Airport is designated as a 'Port of Entry,' meaning a customs officer is present and authorized to accept entries of merchandise and duties, and to enforce various provisions, customs, and navigation laws (19 CFR 101.1). For additional information relating to transactions, inspections, and other customs activities conducted at the Hector International Airport, visit the U.S. Customs and Border Protection website at www.cbp.gov.

Table 27. On-Time Performance at Hector International Airport, 2010-2014

Year	Air Carrier Delay	Weather Delay	National Aviation System Delay	Security Delay	Late Arriving Aircraft	Cancelled	Diverted	On-time Performance
2010	6.66%	0.64%	4.35%	0.02%	7.02%	2.22%	0.25%	**78.84%**
2011	6.43%	0.85%	4.22%	0.05%	7.27%	2.65%	0.20%	**78.34%**
2012	5.84%	0.76%	4.23%	0.00%	6.55%	1.64%	0.25%	**80.73%**
2013	7.46%	1.24%	6.69%	0.00%	8.30%	2.99%	0.19%	**73.13%**
2014	9.01%	1.07%	7.91%	0.03%	9.54%	4.15%	0.17%	**68.11%**

Source: U.S. Department of Transportation, Bureau of Transportation Statistics, 2014

Passenger Rail (Amtrak)

Amtrak provides daily passenger rail service to the Fargo-Moorhead Metropolitan Area with one long distance train as part of the 'Empire Builder' line, which continues to be one of the most productive of all existing Amtrak lines. The Empire Builder line runs from Chicago to the Pacific Northwest with one eastbound and one westbound train passing through the Fargo station daily. Additionally, Amtrak provides express services for packages and carries mail to certain locations. Table 28 provides ridership data for the Fargo Amtrak station since 2010. After the Empire Builder line, the next closest to the region is the 'California Zephyr' line, which runs from Chicago to Omaha to Denver and then on to Utah and California.

Flooding in the Red River Valley affected ridership in 2010 and played a major role in the significant ridership decrease in 2011, as service west of St. Paul was significantly impacted due to flooding in Minot. Since the flooding, however, ridership has rebounded and has since eclipsed the pre-flood totals of 2010. Overall, since 2000, boardings have increased by approximately 45 percent in the metro area.

Table 28. Amtrak Ridership and Annual Change, Fargo Station

Year	Ridership	Percent Change
2010	21,286	-
2011	16,968	-20.29%
2012	20,304	19.66%
2013	22,497	10.80%
2014	23,314	3.63%

Source: National Association of Railroad Passengers, 2015

Table 29 shows the annual ridership and percent change of all North Dakota Amtrak stations. After a significant decline in 2011 (again in large part due to flooding), total ridership exploded in 2012, increasing by over 41 percent. In 2014, total ridership in North Dakota fell approximately 14.79 percent. This decline in ridership can be attributed somewhat to the decline in ridership for the Empire Builder service as a whole, which saw a drop of approximately 52,000 riders from 2013 to 2014.

Table 29. Total Amtrak Ridership and Annual Change, All North Dakota Stations

Year	Ridership	Percent Change
2010	122,200	-
2011	108,900	-10.88%
2012	153,700	41.14%
2013	153,500	-0.13%
2014	130,800	-14.79%

Source: National Association of Railroad Passengers, 2015

Freight

In 2007, Metro COG completed the Fargo-Moorhead Freight Assessment, which provided a framework to facilitate and establish a regional freight-planning program as a subset to the metropolitan transportation planning program. The movement and distribution of freight has significant links to the metropolitan transportation network's efficiency and functionality. The Fargo-Moorhead Metropolitan Area functions as a regional economic center for eastern North Dakota and western Minnesota, accommodating numerous big-box retail businesses, a regional shopping center, and a large quantity of restaurants and supporting businesses. The regional transportation network is a vital component in the support of economic development and freight movement. The following analyses use figures and estimates from the states of Minnesota and North Dakota. These figures provide insight into not only the quantity of goods arriving, departing, and moving within the region, but also the modes on which they arrive, both presently and in the future.

REGIONAL FREIGHT MOVEMENT AND DISTRIBUTION

Freight in the Fargo-Moorhead Area arrives, departs and is distributed locally via truck, rail, air, or other modes. According to data from the most recent version of the FHWA freight analysis framework, in 2011 over $450 billion in domestic freight was moved within, from and to Minnesota and over $108 million in North Dakota. The value of this freight is expected to more than double by 2040 ($977 billion in MN, $278 million in ND). The 2011 total domestic tonnage of shipments travelling within, from, or to was over 561,000 tons in Minnesota and 258,000 tons in North Dakota. It is projected that this will increase to over 886,000 tons in Minnesota and over 780,000 tons in North Dakota by 2040.

While rail and air contribute significantly to the movement of freight, most domestic freight movement is transported via truck. In Minnesota over 86 percent of domestic freight within the state is transported by truck, a figure which is expected to increase to over 90 percent by 2040. The proportion of domestic freight transported via truck is lower in North Dakota, where trucks account for over 70 percent of all freight moved. By 2040, this figure is expected to increase to 82 percent for North Dakota.

For 2011, the FHWA estimates that 33 percent of domestic freight shipped from Minnesota was done via truck while 32 percent was shipped by rail. This is expected to change by 2040, with over 43 percent of domestic freight shipments within the state made by truck and 32 percent by rail. A majority of domestic freight shipments leaving North Dakota are done by rail (41 percent) and by pipeline (44 percent). These modes will continue to serve as the largest modes transporting domestic freight from the state. By 2040 it is anticipated that the proportion of domestic export shipments will increase to 56 percent for rail while the proportion of pipeline movements will decrease to 21 percent of all freight movement.

Shipments of domestic freight into both states are dominated by truck, with over 49 percent of movements in Minnesota and 64 percent in North Dakota. Domestic freight shipped into each state via rail account for 29 percent in Minnesota and 26 percent in North Dakota. The mode split by 2040 for domestic freight shipped into Minnesota and North Dakota remain similar to those in 2011. In 2040, domestic freight shipments arriving into Minnesota by truck are expected to drop to 42 percent, while the proportion of shipments arriving via rail is expected to increase 9 percent, to 38 percent. Domestic freight shipped by truck and rail into North Dakota are anticipated to remain about the same in 2040, with the percentage of truck shipments increasing to 67 percent, while rail shipments decrease very slightly to 25 percent. Table 30 on the following page summarizes current and projected shipments of freight within, from, and to Minnesota and North Dakota.

Table 30. Freight Movement Within, From, and To Minnesota and North Dakota -- Percent of Tonnage by Mode for 2011 and 2040

State	Trade	Mode	Within		From		To	
			2011	2040	2011	2040	2011	2040
MN	Domestic	Truck	86.25%	90.60%	32.79%	43.79%	49.26%	41.47%
		Rail	5.86%	4.70%	32.16%	32.28%	29.04%	37.51%
		Water	0.00%	0.00%	7.48%	4.78%	2.43%	4.22%
		Air (include truck-air)	0.00%	0.00%	0.02%	0.04%	0.02%	0.03%
		Multiple Modes & Mail	2.23%	1.22%	19.09%	13.54%	7.67%	10.56%
		Pipeline	4.83%	2.55%	7.96%	5.06%	11.18%	5.78%
		Other and Unknown	0.83%	0.94%	0.50%	0.50%	0.40%	0.43%
		Total Domestic	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
	Imports	Truck	0.86%	0.99%	2.77%	3.47%	47.15%	56.01%
		Rail	3.72%	3.18%	97.12%	96.29%	36.75%	31.09%
		Air (include truck-air)	0.00%	0.00%	0.00%	0.00%	0.02%	0.03%
		Multiple Modes & Mail	0.00%	0.00%	0.03%	0.06%	4.20%	5.65%
		Pipeline	95.22%	95.63%	0.00%	0.00%	11.65%	6.92%
		Other and Unknown	0.21%	0.20%	0.08%	0.17%	0.23%	0.29%
		Total Imported	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
	Exports	Truck	38.78%	28.59%	25.08%	34.63%	6.97%	10.87%
		Rail	23.43%	20.38%	27.18%	17.96%	89.90%	88.33%
		Water	0.27%	0.43%	33.48%	36.83%	0.00%	0.00%
		Air (include truck-air)	0.00%	0.00%	0.02%	0.03%	0.09%	0.11%
		Multiple Modes & Mail	2.91%	2.54%	13.28%	9.73%	2.79%	0.45%
		Pipeline	1.01%	1.45%	0.00%	0.00%	0.00%	0.00%
		Other and Unknown	33.61%	46.61%	0.96%	0.82%	0.25%	0.24%
		Total Exported	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

State	Trade	Mode	Within		From		To	
			2011	2040	2011	2040	2011	2040
ND	Domestic	Truck	70.38%	82.13%	13.79%	21.12%	63.87%	67.26%
		Rail	2.03%	1.92%	41.06%	56.36%	26.25%	25.02%
		Air (include truck-air)	0.00%	0.00%	0.00%	0.00%	0.04%	0.07%
		Multiple Modes & Mail	0.01%	0.02%	1.56%	1.21%	1.90%	3.44%
		Pipeline	2.35%	2.23%	43.51%	21.25%	7.49%	3.72%
		Other and Unknown	25.23%	13.71%	0.08%	0.06%	0.46%	0.49%
		Total Domestic	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
	Imports	Truck	8.17%	6.65%	36.50%	41.96%	52.05%	69.43%
		Rail	8.03%	7.05%	47.02%	46.77%	4.17%	6.20%
		Air (include truck-air)	0.00%	0.00%	0.00%	0.00%	0.02%	0.04%
		Multiple Modes & Mail	0.00%	0.00%	0.01%	0.01%	0.96%	1.23%
		Pipeline	83.80%	86.30%	16.47%	11.27%	42.27%	22.30%
		Other and Unknown	0.00%	0.00%	0.00%	0.00%	0.53%	0.81%
		Total Imported	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
	Exports	Truck	66.89%	70.86%	4.35%	3.47%	41.31%	41.39%
		Rail	30.20%	26.84%	95.27%	96.26%	52.30%	53.05%
		Air (include truck-air)	0.00%	0.00%	0.01%	0.01%	0.03%	0.03%
		Multiple Modes & Mail	0.00%	0.00%	0.32%	0.23%	0.00%	0.00%
		Pipeline	0.00%	0.00%	0.00%	0.00%	0.09%	0.06%
		Other and Unknown	2.91%	2.30%	0.06%	0.02%	6.28%	5.47%
		Total Exported	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: FHWA Freight Analysis Framework, 2014

LOCAL FREIGHT MOVEMENT BY TRUCK

According to data published in the Freight Analysis Framework (FAF), in 2007 over 1.6 million kilotons of freight were moved by truck on the FAF network. It is projected that over 5.8 million kilotons of freight will be moved by truck through the region by 2040. Figure 17 on the following page identifies the tonnage shipped by truck in 2007 on the FAF network through the Fargo-Moorhead metropolitan area. Figure 18 (located on page 47) depicts the area projections for 2040. Note that the symbols representing tonnage in 2040, though identical to those in the 2007 map, depict dramatically higher values. In the case of the highest value, depicted as red on the map, the quantity symbolized increases from 25,000 in 2007 to 75,000 in 2040.

LOCAL FREIGHT GENERATORS

On a five year timeframe Metro COG purchases employment data for use in the calibration of the TDM. This data, in combination with freight industry consultation and input from Metro COG's Transportation Technical Committee, provides the framework for development of the freight generator database. Figure 19 on page 48 depicts the 2010 freight generators in the UZA, both as a specific point-based location and a wider area. A freight generator 'area' is identified as aggregated parcels with significant industrial development pursuant to Metro COG's existing land use database. Site specific freight generators are based on available employment data and are current as of 2010.

FREIGHT AND MAIL

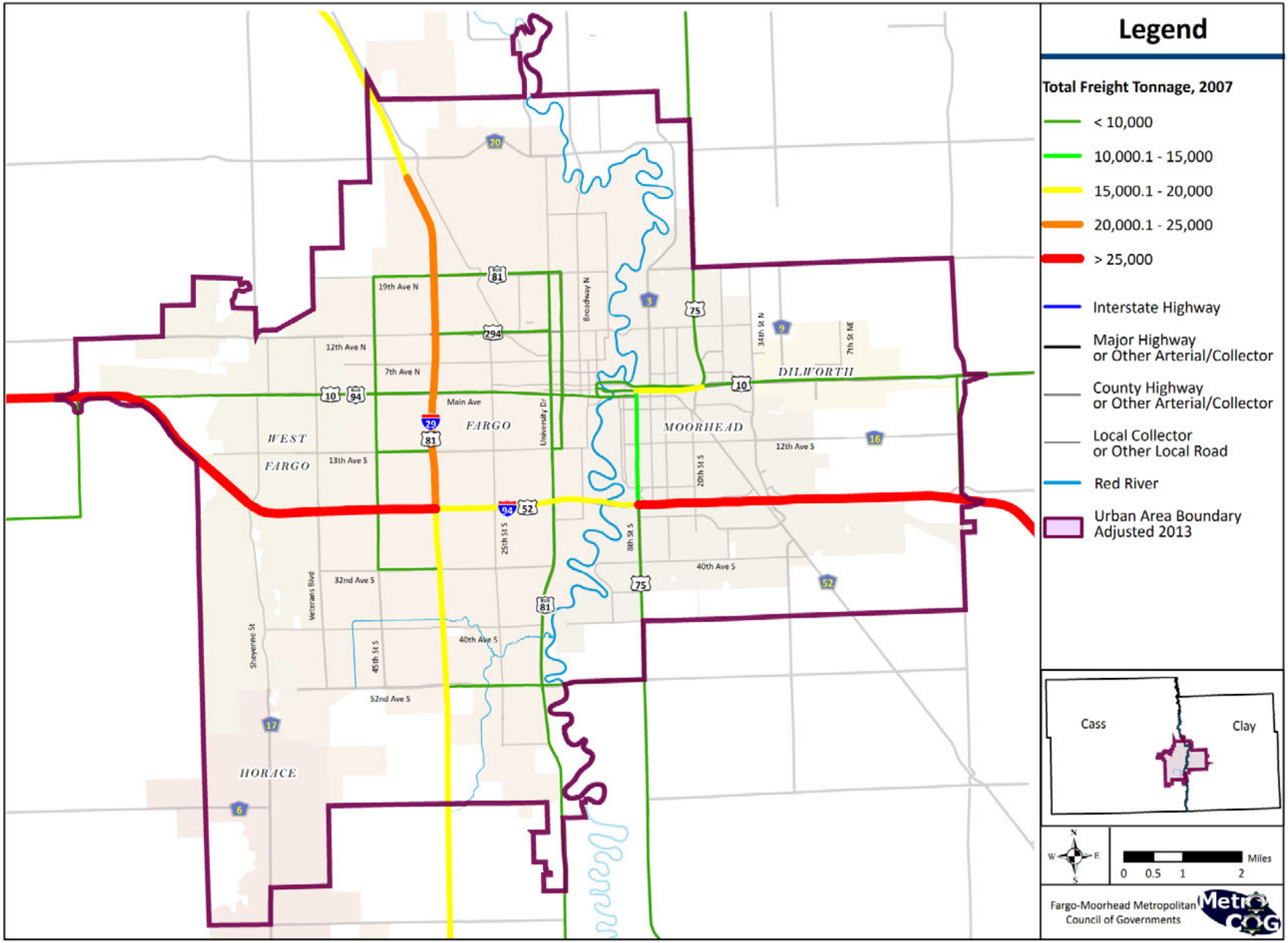
The movement of freight and mail by aviation is critical to local commerce and market dynamics within a region. Table 31 displays the 2014 total landed weight for the freight and mail air carriers that serve the Fargo-Moorhead MSA.

Table 31. Total 2014 Cargo Landed Weight at Hector International Airport, by Airline

Airline	Total Landed Weight (in lbs)
Alpine Air	782,500
Atlas Aviation	3,996,000
Corporate Air	1,368,500
Encore Air Cargo	2,281,300
Martinaire Aviation LLC	7,422,100
Paccair	1,409,400
Total	**17,259,800**

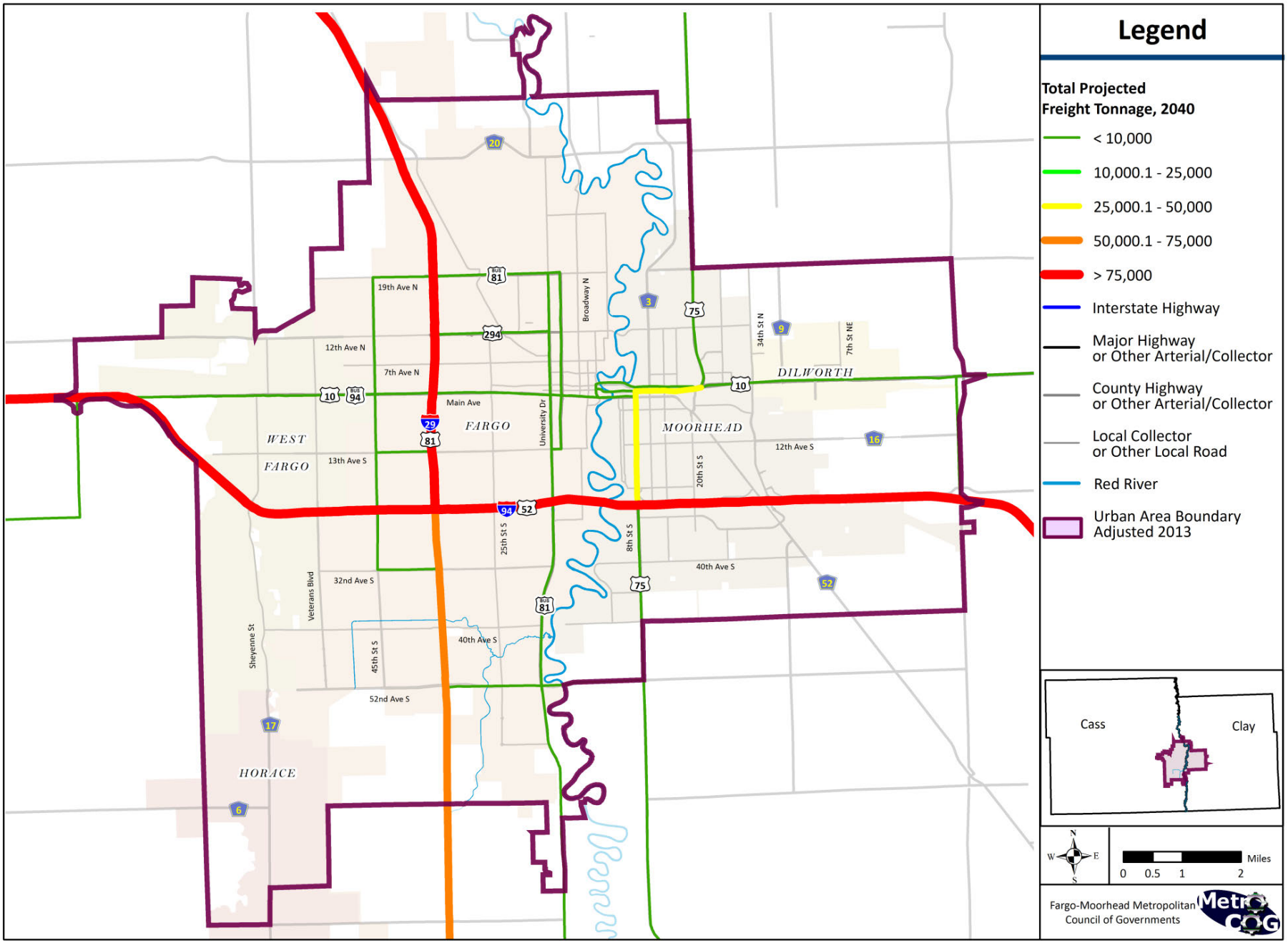
Source: Fargo Municipal Airport Authority, 2014

Figure 17. 2007 Freight Tonnage in the Fargo-Moorhead UZA



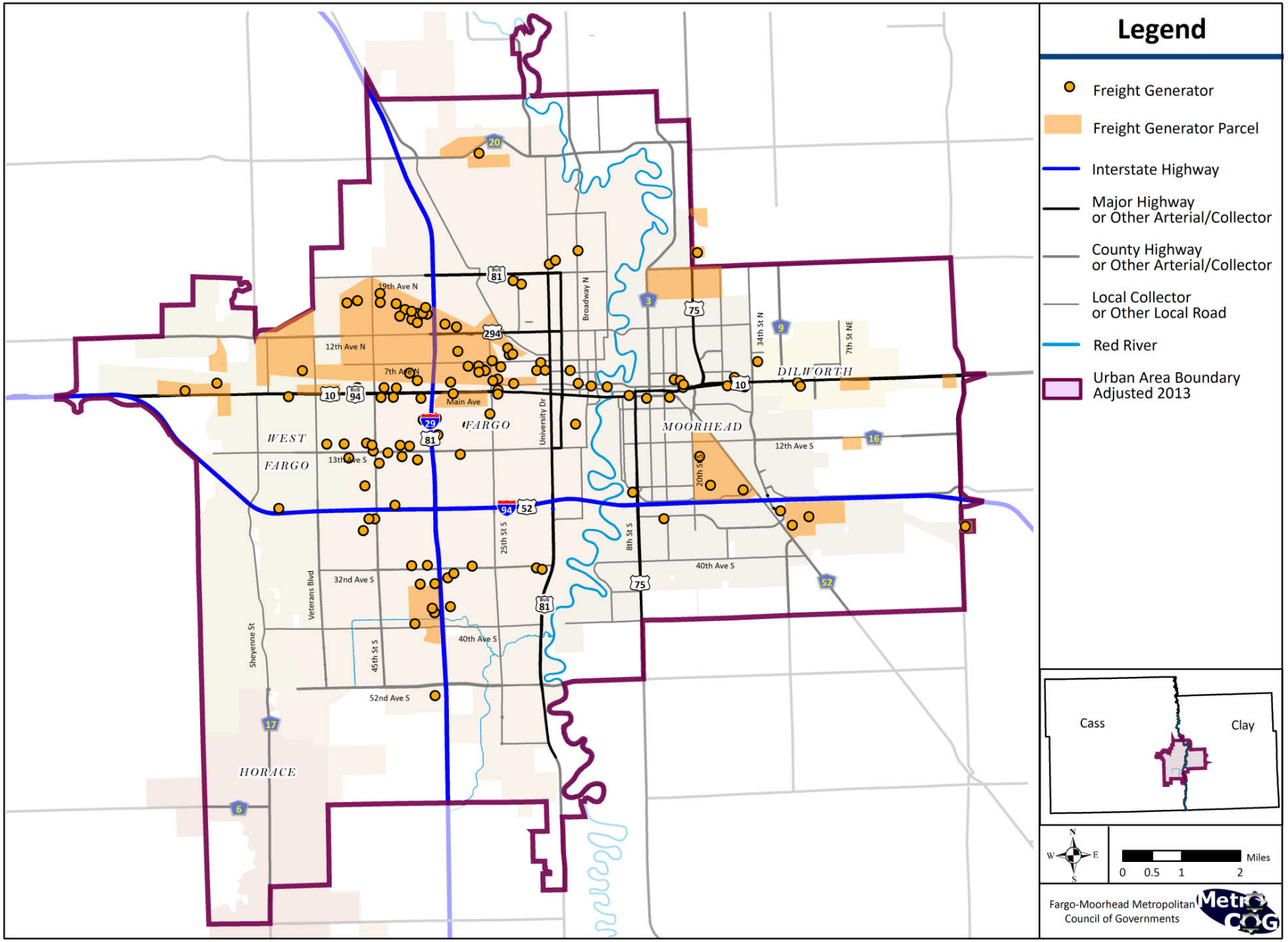
Source: FHWA Freight Analysis Framework, Version 3.4

Figure 18. 2040 Projected Freight Tonnage in the Fargo-Moorhead UZA



Source: FHWA Freight Analysis Framework, Version 3.4

Figure 19. Local Freight Generators, 2010



Source: Metro COG, 2014

Bicycle & Pedestrian Network

The Fargo-Moorhead regional bicycle and pedestrian network continues to grow steadily as the community further realizes the importance of providing transportation options for all modes. Many steps have been taken in recent years to improve conditions for both cyclists and pedestrians. Jurisdictions continue to make improvements to existing bicycle and pedestrian infrastructure and continue to expand miles of facilities. Safety and education is also a focus for Metro COG and area jurisdictions.

Metro COG has also been aggressive in counting bicycle and pedestrian traffic with numerous locations counted every fall and six automated bicycle/pedestrian counters collecting data 24 hours a day, seven days a week.

BICYCLE AND PEDESTRIAN NETWORK CHANGES

Jurisdictions continue to make improvements to existing bicycle and pedestrian infrastructure and continue to expand miles of facilities. Jurisdictions also continue to make sidewalks, paths and crosswalks ADA compliant and every year more signalized crosswalks are fitted with pedestrian countdown pedestrian signal heads. A map of the current bicycle and pedestrian network is located on Figure 20 (page 52).

Per initiatives set forth within MAP-21, Metro COG tracks improvements or changes to the bicycle and pedestrian transportation network and reports such changes annually. Table 32 summarizes the bicycle and pedestrian network changes completed in 2014 within the Fargo-Moorhead Metro Area. It is critical for Metro COG to track and report these changes as some projects are locally funded and are not identifiable by review of the federally mandated TIP or LRTP.

BICYCLE AND PEDESTRIAN SAFETY

Using data received from MnDOT and NDDOT, Metro COG annually tracks crashes involving bicycles and pedestrians. In 2014 there were a total of 60 bike/ped crashes in the metro area, 46 of which occurred in Fargo, five in West Fargo, and nine in Moorhead. No fatal events occurred in 2014, and overall crash counts were down slightly from 2013. Figure 21 (located on page 53) contains a map depicting all 2014 crash locations in the urban area.

BICYCLE SAFETY EDUCATION

Bicycle education continues to be a high priority in the area. Metro COG's 2011 Bicycle and Pedestrian Plan identified bicycle safety education as one of ten goals. Educating the public about appropriate operation of bicycles and motor vehicles in relation to each other is a key component in reducing the number of bicycle-related crashes.

In response to the need of providing bicycle education to the public, the Valley Bicycle Summit was created in 2012 with one event held in 2012 and two events in 2013. In 2014 Metro COG facilitated the Valley Bicycle Summit events which occurred on July 13th and August 24th, both as part of the Streets Alive event in Fargo-Moorhead. The Summit provided the public with free Fargo-Moorhead bikeways maps (education materials were shown on maps), surveys, educational poster boards, and more.

In 2013 Metro COG created a website which provides the public with a host of educational information. The educational information includes rules of the road, youth education information, frequently asked questions, and more. In addition to educational information, the website also provides maps, closure information, events, news, and more. The Bike FM website can be visited at www.bikefm.org. Metro COG continues to make updates and provides current information to the website as needed.

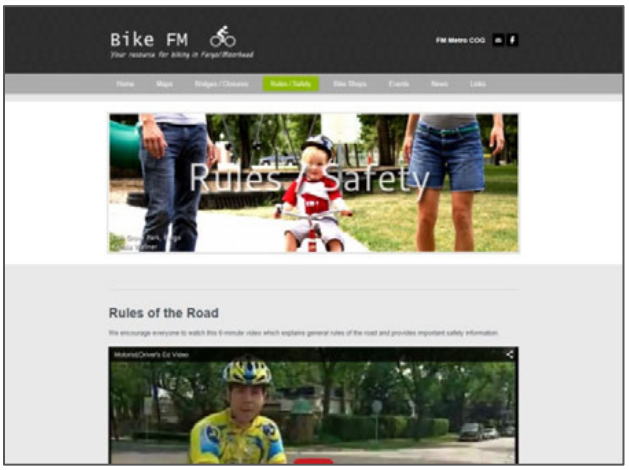


Table 32. 2014 Bicycle and Pedestrian Projects and Improvements

Jurisdiction	Location	Project Description	TIP Project No. / Local
Dilworth	7th St NE	New Shared use path along the east side of 7th St from 3rd to 8th Ave NE	616010
Clay County	Barnesville	New shared use path along 5th Avenue and additional improvements around the school	214010
Fargo	City-wide	Installation of 150 Pedestrian Countdown Signal Heads at 19 Signalized Intersections	413022
Fargo	19th Ave N	Rehab between 10th and 18th St including access management, pedestrian safety improvements, and intersection improvements	414021
Fargo	Legal Drain 53	New Shared use path along Legal Drain 53 between 52nd Ave and 58th Ave S	417040
Fargo	Mickelson Park	Reconstruction of shared use path through Mickelson Park from 9th Ave to 12th Ave N	414050
Fargo	19th Ave N	Widened sidewalk to 10' shared use path between 10th St and University Dr	Local
Fargo	25th St between 18th and 23 Ave S	Widened sidewalk to 10' Shared Use Path	Local
Fargo	40th Ave S	Added new 10' shared use path on north side from 1/2 mile west of 45th St to Sheyenne St	Local
Fargo	36th Ave S	Added 5' on-street bike lanes between 47th St S and Veterans Blvd	Local
Fargo	36th Ave S	Added new sidewalk on north side and 10' shared use path on south side between 47th St S and Veterans Blvd	Local
Fargo	North-South Power Lines in Valley View	New 10' shared use path connecting from just north of 36th Ave S to Drain #27	Local
Fargo	Between 36th Ave S and 40th Ave S	New 3-lane roadway with sidewalk on west side and 10' shared use path to school property on east side	Local
Moorhead	40th Ave S at 14th St	Extension of existing bike/ped path and ADA improvements	Local
Moorhead	Gooseberry Park	Bituminous overlay of bike path	Local
Moorhead	TH 10 - 34th St to 30th St	Bituminous overlay of bike path	Local
Clay County	11th St N	Bike lane striping from 15th Ave N to Co. Hwy 18	Local
Clay County	11th St N	Sidewalk and ADA ramp improvements from 1st Ave N to 15th Ave N	Local
Clay County	11th St N from 15th Ave N to 17th Ave N	Sidewalk extension	Local
Moorhead	44th Ave S	Installed new sidewalk in Stonemill Estates	Local
Moorhead	Stonemill Estates (Park Area)	Installed new sidewalk/bike path	Local
Moorhead	18th St S to Johnson Farms 3rd Subdivision	Installed new sidewalk	Local
Moorhead	36th Ave S to Johnson Farms 3rd Subdivision	Installed new sidewalk	Local
Moorhead	24th Ave S from SE Main Ave to 370' west	Installed new sidewalk	Local
Moorhead	SE Main Ave	Bituminous overlay of bike path	Local
Moorhead	City-wide	City-wide sidewalk repairs and ADA Improvements	Local

Source: Cities of Fargo, Moorhead, and Dilworth, 2014; Clay County, 2014

BICYCLE & PEDESTRIAN COUNTS

In 2013 Metro COG began a new and extensive bicycle and pedestrian count program. At least 14 locations around the UZA are manually counted every year for four hours (3:00 pm – 7:00 pm) on a weekday in September. Table 33 compares the counts collected in 2013 and 2014. It is important to note that many of these counts were collected over one day only so factors such as weather could create a significant variance between the count days.

Table 33. 2013- 2014 Manual Bicycle and Pedestrian Counts for 3:00 p.m. to 7:00 p.m.

Location	2013 Bikes	2014 Bikes	2013 Peds	2014 Peds
7th St NE at 4th Ave NE, Dilworth	0	11	4	15
9th Ave S under I-29, Fargo	30	32	10	11
12th Ave N bridge near 29th St, Fargo	18	17	14	19
13th Ave S under I-29, Fargo	30	38	32	27
45th St at 40th Ave S, Fargo*	-	25	-	35
40th Ave S at 45th St, Fargo*	-	13	-	25
Broadway at 2nd Ave N, Fargo*	-	80	-	1414
Broadway at Main Ave RR trx, Fargo	69	72	210	327
12th Ave N at University Dr., Fargo*,**	-	53	-	201
University Dr. at 12th Ave N, Fargo*,**	-	78	-	141
NDSU gate at 12th & Univ, Fargo*,**	-	67	-	230
12th Ave N / 15th Ave N Bridge, F/M	37	46	12	25
9th St at 17th Ave S, West Fargo*	-	14	-	92
17th Ave S at 9th St, West Fargo*	-	48	-	102

* A different method of counting was used at this location in 2013. Therefore 2013 and 2014 counts are not comparable.

** Counts were taken between 1:00 pm – 6:00 pm.

In addition to the manual counts, bicycle and pedestrian traffic is also collected using infrared trail counters. These counters, permanently installed at six locations around the UZA, collect bicycle/pedestrian traffic 24 hours a day, 7 days a week. The counters have been operating since summer 2014. Table 34 is an overview of the counts recorded in 2014. Please note that the infrared trail counters do not distinguish between bicyclists and pedestrians.

Table 34. Automated Bicycle/Pedestrian Counts, Monthly Total

Location	June 2014	Sept 2014	Dec 2014
West sidewalk of Broadway at 2nd Ave N, Fargo	22,596	34,595	21,767
Trail near Rendezvous Park, West Fargo	3,198	2,008	257
Gooseberry/Lindenwood Park Bridge, Fargo/Moorhead	-	12,740	1,043
Milwaukee Trail at 35th Ave S, Fargo	-	9,526	1,855
Oak Grove/Memorial Park Bridge, Fargo/Moorhead	-	3,699	713
Red River Trail at 9th Ave S, Fargo	-	8,774	1,195

BRONZE BICYCLE FRIENDLY COMMUNITY

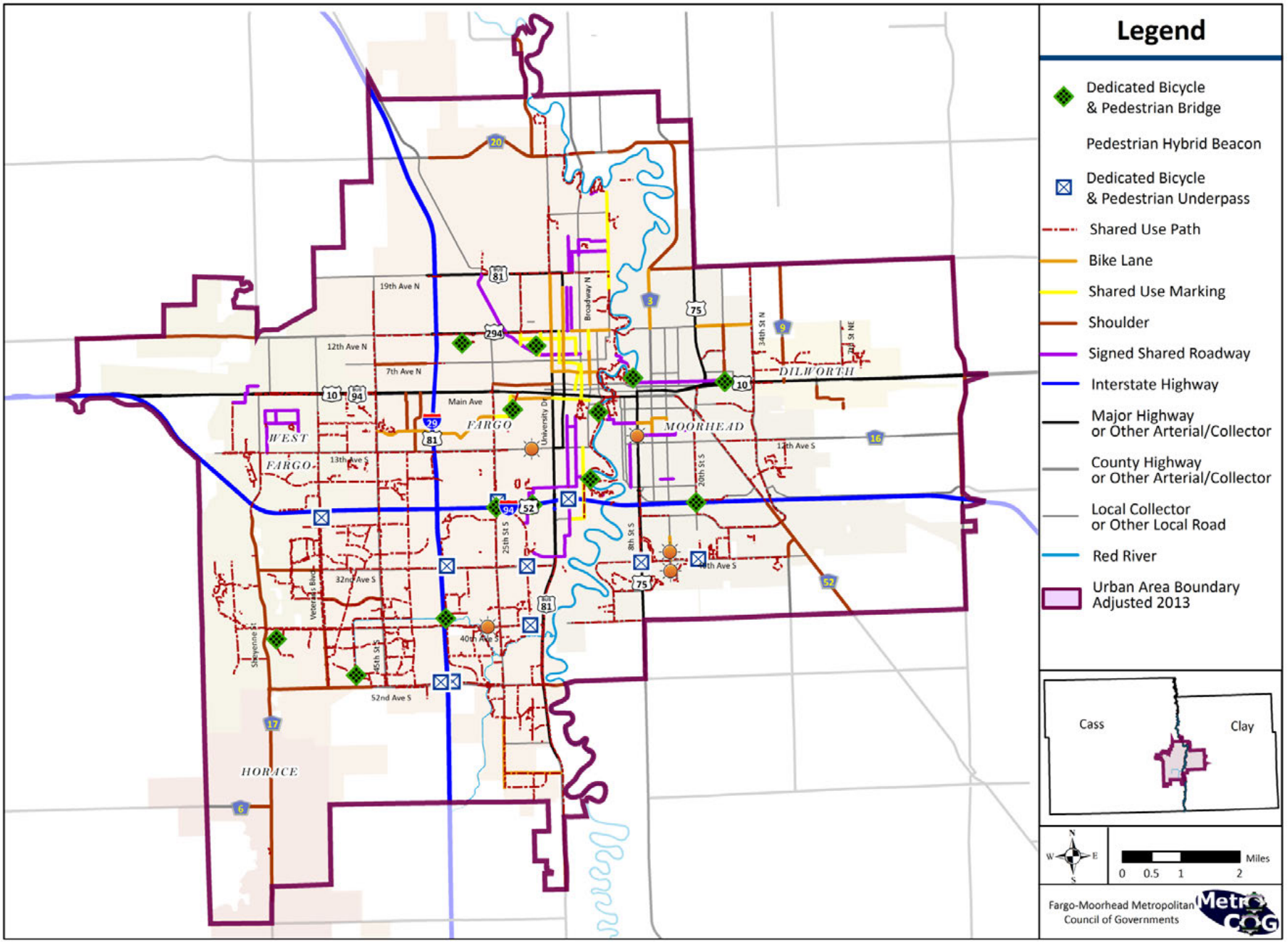
In 2013 Metro COG began the application for Bicycle Friendly Communities for the Fargo-Moorhead area. This included the cities of West Fargo, Fargo, Moorhead, and Dilworth. The application was reviewed by the League of American Bicyclists and in November 2014 the MSA was designated as a Bronze Bicycle Friendly Community. The designation is valid until 2018. Communities are encouraged to re-apply to renew the designation or possibly receive a high designation (silver, gold, platinum, or diamond). In 2015 Metro COG plans to work with local jurisdictions in displaying road signs showing the community's designation.

BICYCLE / PEDESTRIAN-RELATED STUDIES AND PLANS

In 2014 the Clay County Heartland Trail Task Force was formed to help study and plan the Heartland Trail through Clay County. The Heartland Trail is currently a 49-mile paved shared use path running from Park Rapids, MN to Cass Lake, MN. In 2006 the Minnesota legislature approved the extension of the Heartland Trail from Park Rapids to Moorhead. Metro COG continues to facilitate the meetings of the Clay County Heartland Trail Task Force which has met monthly since its inception.

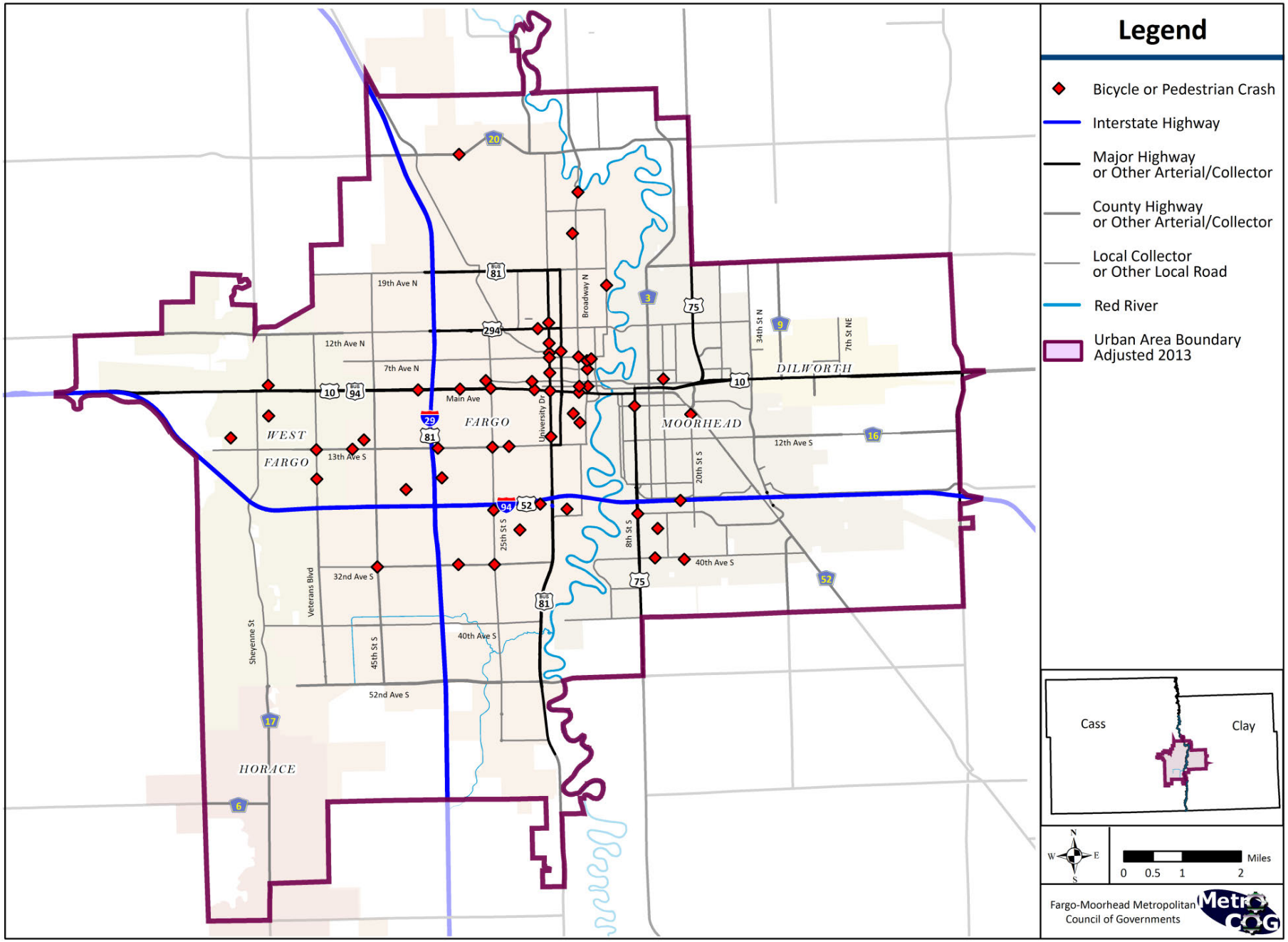
In 2014 Metro COG, in cooperation with the City of Moorhead, completed the Moorhead River Corridor Master Plan. This plan studies and provides recommendations for the recently-acquired land along the Red River in Moorhead. Many opportunities were found desirable along the corridor such as shared use paths, cross country ski/hiking trails, landscaping, and more. Public input played a key role in determining the needs and desires of the public.

Figure 20. Fargo-Moorhead Bicycle and Pedestrian Network, 2014



Source: Metro COG, 2014

Figure 21. 2014 Bicycle and Pedestrian Accidents



Sources: MnDOT Crash Data, 2014; NDDOT Crash Data, 2014; Metro COG, 2014

Transit System

The Fargo-Moorhead Metropolitan Area offers numerous public transportation opportunities for its residents and visitors. There are five primary transit providers receiving public funding; together these providers offer fixed route transit services, rural commuter services, senior dial-a-ride services, and ADA demand response services. The transit providers servicing the Metro Area include:

- Metro Area Transit (MATBUS) Fixed Route;
- MAT Paratransit;
- Valley Senior Services (VSS);
- Handi-Wheels; and
- Transit Alternatives

This chapter provides a detailed overview of each transit service and the applicable service area.

Services

FIXED ROUTE SERVICE

Fixed routes account for the bulk of public transit ridership in the Metropolitan Area. Routes operated by MATBUS are contained entirely within the jurisdictional limits of Fargo, West Fargo, Moorhead, and Dilworth, thereby entirely within the UZA. A contributing factor to this service area delineation is the applicability and use of 49 U.S.C. 5307 Urbanized Area Formula Program, which provides substantial financial support for the operation of fixed route transit in Fargo-Moorhead. Figure 22 shows fixed routes, transfer points, and shelter locations as of December 31, 2014. MATBUS maintains 94 of the 96 shelters and facilities, and the majority of the structures are located in high demand areas such as commercial areas, colleges, public housing, health facilities and human service facilities. Of the two shelters not maintained by MATBUS, NDSU owns and maintains the Memorial Union Transit Hub and the Fargodome shelter on Albrecht & 17th Ave N. Heated shelters and facilities are provided at the West Acres Transit Hub, NDSU Memorial Union Transit Hub, the FargoDome, MSUM on 14th Street, and at Concordia College on 5th Street.

PARATRANSIT SERVICE

MAT paratransit provides non-emergency, lift-equipped transportation services for individuals whom are functionally unable to ride the MAT fixed route system. The service is door to door for eligible riders; however, it is a 'shared ride service' which means other passenger stops are accommodated as necessary in route to a destination. Prior to existence of the Americans with Disabilities Act of 1990 (ADA), paratransit was typically provided by either non-profit human service agencies or public transit agencies per requirements set forth in Section 504 of the Rehabilitation Act of 1973. This Act prohibited the exclusion of the disabled from any program or activity receiving federal financial assistance. After passage of the ADA, which mandated complimentary service for any system that offered fixed route service, most transit agencies did not see fixed route accessibility as a desirable option and instead opted for a flexible system comprised of small paratransit vehicles operating parallel to the traditional fixed route system. The Code of Federal Regulations (Title 49, 37.131(a)) sets forth requirements for making buses accessible and other regulations relating to paratransit services within public transit service areas. In regards to the service boundary, a transit provider must provide "complementary paratransit service to origins and destinations within corridors with a width of three-fourths of a mile on each side of each fixed route, including three-fourths of a mile radius at the ends of each fixed route."[8]

SENIOR RIDE AND RURAL TRANSIT SERVICES

Metro Senior Ride is operated by Valley Senior Services (VSS) in Fargo and West Fargo and under contract with the City of Moorhead for service to Moorhead and Dilworth. Metro Senior Ride provides door-to-door transportation services for senior citizens age 60 and over. To be eligible for this service, individuals must be ambulatory and able to enter and exit the vehicle under their own power. The Senior Ride service area includes the cities of Fargo, Moorhead, West Fargo, and Dilworth.

Within rural areas of the MSA, Cass County Rural Transit and Transit Alternatives in Clay County provide a blend of fixed route and demand response services to individuals. Services offered by Transit Alternatives include a commuter routes from Detroit Lakes and Fergus Falls to Fargo-Moorhead via the GTC, weekly shopping routes to public housing facilities in Moorhead, and Sunday flexible route service to Moorhead. Cass County Rural Transit primarily provides door-to-door transportation services within rural Cass County as well as a few weekly routes to selected

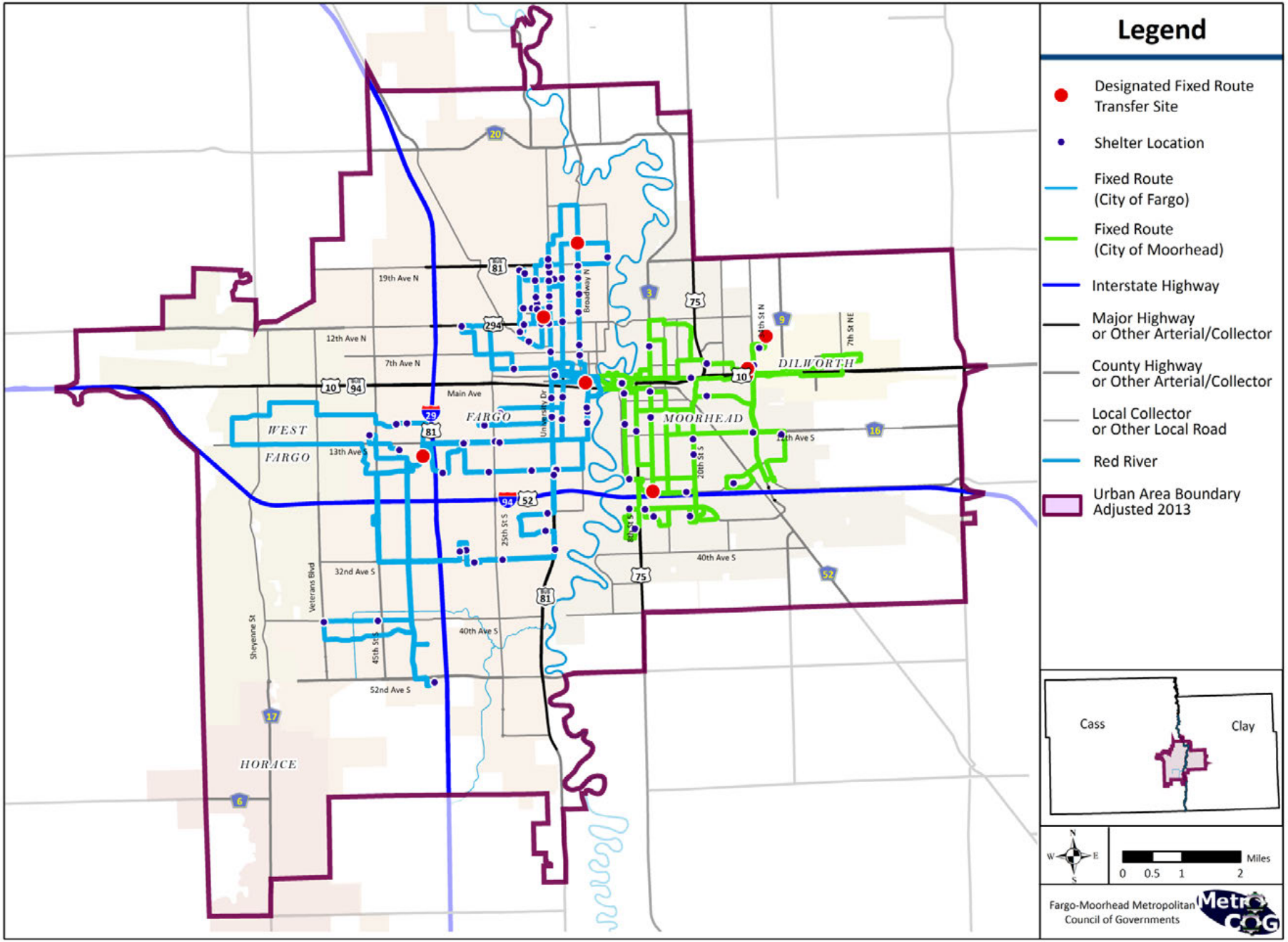
[8] Per the Code of Federal Regulation, Title 49, 37.131 (a).

peripheral communities (e.g. Casselton, Mapleton) to accommodate senior residents.

SPECIALIZED TRANSPORTATION SERVICES

In recent years, MATBUS and Metro COG have cooperatively undertaken extensive transportation planning and mobility management efforts to ensure the transportation needs of metropolitan citizens are reasonably met. In addition to fixed route, paratransit, senior ride, and rural transit, the Metropolitan Area has approximately 30 private/public transportation providers whom serve a diverse set of specialized transportation and mobility needs, mainly for elderly, individuals with disabilities and medical trips. The Fargo-Moorhead Metropolitan Area is a regional medical center and is also a significant population center for human and social services. Thus, there is a growing population that needs access to these services. On a bi-annual cycle, Metro COG and MATBUS survey these providers to gather data and establish an understanding of operational features and services. Based on this information, Metro COG and MATBUS publish the 'FM Ride Source' which catalogues available transportation services in the Metropolitan Area. This document has been published since 1978, and is formerly known as the 'Directory of Special Transportation Services'. To acquire a copy of this directory, please visit the City of Fargo's website at www.fmridesource.com or contact either Metro COG or MATBUS directly for information on obtaining a copy.

Figure 22. MATBUS Fixed Routes, Transfer Sites, and Shelter Locations



Sources: MATBUS, 2014; Metro COG, 2014

2014 System Operations, Performance and Trends

In 2014, the transit system provided a total of 2,285,895 rides, including all fixed routes, paratransit services, rural commuter services, senior ride services, and ADA demand response services within the region.[9] For MATBUS fixed route services over the five-year timeframe between 2010 and 2014, ridership has increased by 222,367 rides, representing a 11 percent increase. For other transit services, paratransit ridership over the same five-year timeframe has decreased by 3,957 rides (approximately seven percent); NDSU circulator routes have increased by 197,654 rides; and rural commuter ridership and senior dial-a-ride service have also generally shown ridership increases. Table 35 summarizes total ridership data for the primary transit providers in the MSA.

Table 35. Transit Ridership Summary, 2010 - 2014

Transit System	Service	2010	2011	2012	2013	2014
Metro Area Transit (MAT-BUS)	Fargo Fixed	1,246,612	1,292,541	1,069,034	1,170,951	1,165,845
	MHD Fixed	376,697	433,676	436,304	452,624	482,177
	NDSU Circular Routes	378,025	374,488	539,594	511,316	575,679
	Total MAT Fixed	2,001,334	2,100,705	2,044,932	2,134,891	2,223,701
	MAT Paratransit	57,850	58,992	54,217	53,403	53,893
Transit Alternatives	All Services	n/a	7,232	6,797	8,016	
Valley Senior Service	Fargo/ WF	38,491	36,328	35,098	35,614	43,478
	MHD / Dilworth	5,961	6,323	7,492	8,042	8,301
	Cass County Rural Transit	2,214	2,013	1,872	1,963	1,792
Handi-Wheels	All Services	28,280	13,844	15,398	10,845	
Total	**All Services**	**2,134,130**	**2,225,437**	**2,165,806**	**2,252,774**	**2,285,895**

Sources: MATBUS, Valley Senior Services, Handi-Wheels, Productive Alternatives, Inc.

[9] At the time of publication, 2014 figures were not available from Handi-Wheels, Clay County Rural Transit, or Valley Senior Services.

FIXED ROUTE OPERATING CHARACTERISTICS

Table 36 and Table 37 depict the general operating characteristics of the fixed route system within Fargo and Moorhead for 2014.

Table 36. Fargo Fixed Route Operating Characteristics

Category	2014 Total - Fargo
Annual Revenue Miles	936,562
Total Operating Days	307
Daily Revenue Miles	3,100
Annual Revenue Hours	74,814
Rides per Day	5,673
Rides per Hour	23.28
Farebox Revenue[10]	-
Farebox Recovery Ratio	-
Total Ridership	1,741,524
Annual Cost per Route	-
Cost per Passenger (approx.)	-
Fleet Size	32
Number of Routes	14
Total Operational Costs	-

Source: MATBUS, 2014

Table 37. Moorhead Fixed Route Operating Characteristics

Category	2014 Total - Moorhead
Annual Revenue Miles	373,356
Total Operating Days	307
Daily Revenue Miles	1,216
Annual Revenue Hours	27,643
Rides per Day	1,571
Rides per Hour	17.44
Farebox Revenue	$309,586.51
Farebox Recovery Ratio	24.18%
Total Ridership	482,177
Annual Cost per Route	$221,562.08
Cost per Passenger (approx.)	$4.14
Fleet Size	10
Number of Routes	9
Total Operational Costs	$1,994,058.72

Source: MATBUS, 2014

[10] Farebox revenue includes gross receipts from all fare media purchased, cash riders, U-Pass, but not contributions

PARATRANSIT RIDERSHIP CHARACTERISTICS

Table 38 displays paratransit ridership since 2010, with splits between each applicable jurisdiction. Pursuant to current agreements, the City of Fargo and City of Moorhead share paratransit service costs based on a ridership pro-rata, with the exception that both cities are responsible for replacing their respective portion of the metropolitan paratransit fleet. As of 2014, the City of Dilworth is charged for use of the paratransit system and pays a pro rate share of the local share match based on ridership for both Paratransit and Senior Ride service to Dilworth Residents. The City of West Fargo is charged a 'per ride' cost, which is collected by the City of Fargo.

Table 38. Paratransit Ridership, 2010-2014

Year	Fargo	West Fargo	Moorhead	Dilworth	Total
2010	37,471	7,159	12,711	509	57,850
2011	38,307	7,914	11,707	1,064	58,992
2012	36,612	7,001	9,576	1,028	54,217
2013	37,562	5,070	9,059	1,712	53,403
2014	39,160	4,695	8,647	1,391	53,893
% of System Total (2014)	73%	9%	16%	3%	100%

Sources: MATBUS, 2014; Metro COG, 2014

PARATRANSIT OPERATING CHARACTERISTICS

Table 39 outlines the annual operating characteristics for paratransit services for 2014.

Table 39. Paratransit Operational Characteristics, 2014

Category	2014 Total[11]
Annual Revenue Miles	360,793
Total Operating Days	355
Daily Revenue Miles	1,016
Revenue Hours	26,047
Rides per Day	153
Rides per Hour	2.08
Total Ridership	54,217
Cost per Passenger (approx.)	
Fleet Size	16
Total Operational Costs	

Source: MATBUS, 2014

[11] Operating costs were not available at the time of publication.

SENIOR RIDE AND RURAL TRANSIT RIDERSHIP CHARACTERISTICS

Table 40 outlines the annual senior ride and rural transit ridership totals in the Fargo-Moorhead Metropolitan Area for 2010-2014.

Table 40. Senior Ride & Rural Transit Ridership, 2010-2014

System	Route	2010	2011	2012	2013	2014[12]
Transit Alternatives/ Clay County Rural Transit	All Services	n/a	7,232	6,797	8,016	
Valley Senior Services	Fargo/ WF	38,491	36,328	35,098	37,465	
	Moorhead Dilworth	5,961	6,323	7,492	8,042	8,301
	Cass County Rural Transit	2,214	2,013	1,872	1,963	
Total	**All Systems**	**46,666**	**51,896**	**51,259**	**55,486**	

Sources: MATBUS, 2014; Metro COG, 2014

U-PASS RIDERSHIP

According to MATBUS data for 2014, student ridership accounts for 1,111,525 of the 2,223,701, 50 percent, of rides on the fixed route system. Table 41 identifies student ridership for the past five academic years. The U-Pass program was instituted in 2001 as a demonstration program and due to immediate success at NDSU the program was expanded to include all four of the larger Metropolitan Area's colleges and universities including Concordia College, MSUM, M|State and NDSU. Each college contracts separately with MATBUS and provides an annual subsidy allowing students to use any MAT fixed route for no additional fees, with discounts usable throughout the entire academic year. Data provided within Table 41 does not include ridership on NDSU circulators (Routes 31, 32, 33, 34 and 35). Ridership on these routes is also detached from fixed route ridership totals and displayed on Table 35.

[12] 2014 ridership figures were not available for all transit providers at the time of publication.

Table 41. U-Pass Ridership, Academic Years Spanning 2009-2014

Academic Year[13]	NDSU	Concordia	MSUM	M|State	Total
2009-2010	253,882	15,167	89,868	29,081	387,998
2010-2011	254,881	13,602	97,768	36,452	402,703
2011-2012	234,925	13,932	101,590	46,746	397,193
2012-2013	261,202	12,517	100,250	46,646	420,615
2013-2014	281,759	11,060	112,444	43,719	448,982

Source: MATBUS, 2014

2014 Projects, Purchases, and Improvements

Pursuant to initiatives set forth within MAP-21, Metro COG annually tracks the efforts of the local transit operators respective to projects, capital purchases, and system improvements/investments. Table 42 summarizes and documents TIP implementation, as well as any locally funded projects of significance that are not necessarily discernible by reviewing the federally mandated Transportation Improvement Program or Long Range Transportation Plan.

Table 42. 2014 Transit Projects, Purchases, and Improvements

Jurisdiction/ Agency	Type	Project Description	LRTP/TIP Project No./Local
Moorhead	Staff	Added new position of Asst. Planner & Marketing Specialist to the City of Moorhead Transit staff	Local
Moorhead	Shelters	Installed two new shelters in Moorhead along Route 9 at Horizon Middle School and Sam's Club.	Local
Fargo	Route Change	Added second bus to Sunday Paratransit in Fargo and West Fargo	411041
Moorhead	Route Change	Added new Route 6 to Dilworth	515030
Moorhead	Route Change	Added new Route 9 to SE Moorhead	515030
Moorhead	Route Change	Started evening Route 7 one-half hour earlier on Hwy. 10	514090
Metro COG	Study	Metro COG completed SE Moorhead Analysis, Oakport Analysis, Southwest Fargo Transit Study	Local
NDSU	Study	Completed studies on Performance Measures, Vehicle Life Cycle Analysis	Local
Moorhead	Equipment	Replaced radios on all Moorhead Fixed Route, Paratransit and Senior Ride vehicles	513038
Moorhead	Equipment	Updated vehicle security camera system to wireless on 10 Fixed Route vehicles	513038
Fargo	Equipment	Updated vehicle security camera system to wireless on 4 Fixed Route vehicles	412090
Moorhead	Equipment	2 new Paratransit vehicles	514020/ 514021
Fargo	Equipment	3 new Paratransit vehicles	410032
Moorhead	Equipment	1 new 35-foot diesel Fixed Route vehicle	515051
Fargo	Equipment	2 new 40-foot Hybrid Fixed Route vehicle	413013
Fargo	Equipment	Completed implementation of AVA/AVL system and MATBUSMobile.com with Fargo fixed route vehicles	412065
MATBUS	Policy	Added driver of the month award	Local
MATBUS	Marketing	Participated in transportation for Fargo Marathon	Local
MATBUS	Marketing	Participated in NDSU Game Day downtown, including billboard location for MATBUS	Local
MATBUS	Marketing	Received APTA Ad Wheel award for social media	Local
MATBUS	Marketing	Completed advertising trade between MSUM Athletics and City of Moorhead	Local
MATBUS	Marketing	Initiated new web site design	Local

Sources: MATBUS, 2014; Metro COG, 2014

[13] The academic year spans August 1st to July 30th

Transit Fleet Inventory

FLEET INVENTORY – FIXED ROUTE

The City of Fargo and City of Moorhead each procure, operate, and maintain fixed route transit vehicles independently. The entire fixed route fleet is comprised of 42 buses with 27 in operation during peak requirements. A complete 2014 fixed route fleet inventory is provided in Table 43.

FLEET INVENTORY – PARATRANSIT

MATBUS paratransit operates a joint fleet of vehicles with capital contributions to the fleet under the responsibilities of each city (Fargo & Moorhead). The City of Fargo contributes the West Fargo portion of capital to the fleet and the City of Moorhead contributes the Dilworth portion of capital to the fleet. The existing MAT Paratransit agreement, established in 1996, created a baseline of Fargo contributing eight vehicles to the fleet and Moorhead contributing three vehicles to the fleet for a combined fleet of 11 vehicles. The agreement also specifies that the city experiencing growth in ridership is responsible for any additional vehicles. Since the agreement was initially established, the City of Fargo has added two vehicles and the City of Moorhead one. As of December 2014, MATBUS paratransit operates 16 vehicles, with eleven under City of Fargo ownership and five under City of Moorhead ownership. A complete 2014 paratransit fleet inventory is provided in Table 43.

FLEET INVENTORY – SENIOR RIDE

Table 44. contains a fleet inventory of senior ride services operating within the MSA. This inventory only includes vehicles operated by Valley Senior Services and Cass County Rural Transit.

Table 43. Fixed Route and Paratransit Fleet Inventory, December 2014

Vehicle ID	Year	Make/Model	Mileage	Type of Service	Owner
1121	1997	New Flyer - 35'	654,765	Fixed Route	Fargo
1122	1997	New Flyer - 35'	595,415	Fixed Route	Fargo
1123	1997	New Flyer - 35'	517,962	Fixed Route	Fargo
1124	1997	New Flyer - 35'	586,037	Fixed Route	Fargo
1125	1997	New Flyer - 35'	549,948	Fixed Route	Fargo
1126	2002	Gillig - 29.5'	442,361	Fixed Route	Fargo
1127	2002	Gillig - 29.5'	469,189	Fixed Route	Fargo
1128	2002	Gillig - 29.5'	453,440	Fixed Route	Fargo
1139	2004	Gillig - 29.5'	394,972	Fixed Route	Fargo
1140	2004	Gillig - 29.5'	439,193	Fixed Route	Fargo
1141	2004	Gillig - 29.5'	397,818	Fixed Route	Fargo
1142	2004	Gillig - 29.5'	406,764	Fixed Route	Fargo
1173	2007	New Flyer - 35'	267,889	Fixed Route	Fargo
1174	2007	New Flyer - 35'	217,078	Fixed Route	Fargo
1175	2007	New Flyer - 35'	227,244	Fixed Route	Fargo
1176	2007	New Flyer - 35'	238,684	Fixed Route	Fargo
1184	2009	New Flyer - 35'	156,871	Fixed Route	Fargo
1185	2009	New Flyer - 35'	138,799	Fixed Route	Fargo
1186	2009	New Flyer - 35'	152,578	Fixed Route	Fargo
1187	2009	New Flyer - 35'	133,529	Fixed Route	Fargo
1188	2009	New Flyer - 35'	141,486	Fixed Route	Fargo
1195	2010	New Flyer - 35'	173,192	Fixed Route	Fargo
1196	2010	New Flyer - 35'	156,531	Fixed Route	Fargo
1197	2010	New Flyer - 35'	147,196	Fixed Route	Fargo
1198	2010	New Flyer - 35'	154,898	Fixed Route	Fargo
1199	2010	New Flyer - 35'	155,148	Fixed Route	Fargo
1200	2011	New Flyer - 35'	142,871	Fixed Route	Fargo
1201	2011	New Flyer - 35'	126,267	Fixed Route	Fargo
1220	2013	New Flyer	42,510	Fixed Route	Fargo

Vehicle ID	Year	Make/Model	Mileage	Type of Service	Owner
1221	2013	New Flyer	48,006	Fixed Route	Fargo
1222	2013	New Flyer	32,768	Fixed Route	Fargo
1223	2013	New Flyer	33,354	Fixed Route	Fargo
370	2003	Orion VII - 35'	314,575	Fixed Route	Moorhead
371	2003	Orion VII - 35'	352,524	Fixed Route	Moorhead
380	2003	Orion VII - 30'	398,194	Fixed Route	Moorhead
381	2003	Orion VII - 30'	366,713	Fixed Route	Moorhead
382	2003	Orion VII - 30'	418,806	Fixed Route	Moorhead
590	2005	Orion VII - 30'	342,802	Fixed Route	Moorhead
591	2005	Orion VII - 30'	347,934	Fixed Route	Moorhead
592	2005	Orion VII - 30'	347,899	Fixed Route	Moorhead
593	2005	Orion VII - 30'	377,828	Fixed Route	Moorhead
1020	2010	New Flyer - 35'	177,324	Fixed Route	Moorhead
1170	2006	Ford E450	217,758	Paratransit	Fargo
1171	2006	Ford E450	223,147	Paratransit	Fargo
1178	2008	Ford Supreme	179,902	Paratransit	Fargo
1179	2008	Ford Supreme	183,840	Paratransit	Fargo
1180	2008	Ford Supreme	192,362	Paratransit	Fargo
1181	2008	Ford Supreme	166,940	Paratransit	Fargo
1182	2008	Ford Supreme	164,596	Paratransit	Fargo
1207	2011	Ford E450	53,268	Paratransit	Fargo
1208	2011	Ford E450	32,060	Paratransit	Fargo
1224	2012	Ford Goshen GCII	54,455	Paratransit	Fargo
1919	2008	Ford Supreme	25,650	Paratransit	Fargo Housing Authority
1177	2008	Ford Supreme	169,574	Paratransit	Moorhead
1202	2009	Ford Supreme	148,979	Paratransit	Moorhead
1203	2009	Ford Supreme	138,154	Paratransit	Moorhead
1218	2012	Ford Goshen GCII	90,148	Paratransit	Moorhead
1225	2014	Ford Goshen GCII	17,315	Paratransit	Moorhead

Source: MATBUS, 2014

Table 44. Valley Senior Services Vehicle Inventory

Vehicle ID	Year	Make/Model	Owner
1192	2009	Dodge/Gr. Caravan	City of Fargo
1193	2009	Dodge/Gr. Caravan	City of Fargo
1212	2011	Dodge/Gr. Caravan	City of Fargo
1213	2011	Dodge/Gr. Caravan	City of Fargo
1206	2010	Dodge/Gr. Caravan	City of Fargo
1209	2013	Dodge/Gr. Caravan	City of Moorhead
1214	2011	Dodge/Gr. Caravan	City of Fargo
1204	2009	Dodge/Gr. Caravan	City of Moorhead
1215	2011	Dodge/Gr. Caravan	City of Fargo
1216	2011	Dodge/Gr. Caravan	City of Fargo
1226	2014	Dodge/Gr. Caravan	City of Moorhead
1167	1999	Ford Windstar	City of Moorhead
1210	2011	Ford E450	City of Fargo
1211	2011	Ford E450	City of Fargo
1194	2009	Ford E450/Goshen	FPD/VSS
1227	2014	Dodge Braun	FPD/VSS

Source: Valley Senior Services, 2014

Glossary

The glossary of terminology is outlined in alphabetical order and reflects definitions as adopted, utilized and/or commonly applied in Metro COG's transportation planning program.

Advanced Traffic Analysis Center (ATAC):
ATAC is one of the main programs under the umbrella of the Upper Great Plains Transportation Institute (UGPTI) at North Dakota State University. ATAC focuses on enhancing transportation systems in small-to-medium size urban areas and rural areas through state-of-the-art analysis tools and technologies. ATAC worked closely with Metro COG to develop the 2005 base travel demand model (forecast years 2015 and 2035) and has assisted Metro COG with various projects.

American Community Survey (ACS):
The American Community Survey (ACS) is a project established by the US Census Bureau that replaces the "long form" in the decennial census. This process is an on-going statistical survey which is sent to 250,000 addresses per month and will provide access to more current data throughout each decade.

Arterial Roadways (Principal & Minor): Principal and minor arterials carry longer distance traffic between important activity and population centers. These roadways are typically high traffic volume corridors and have more restrictive access standards to allow higher design speeds. Examples in the Fargo-Moorhead Metropolitan Area include: Interstate 94 (principal), Interstate 29 (principal), 45th Street South (principal), 32nd Avenue South (minor) and 12th Avenue South in Moorhead (minor).

Average Annual Daily Traffic:
In accordance with AASHTO (2001) average daily traffic (ADT) volume is the most basic measure of the traffic demand for a roadway. ADT is defined as the total volume during a given time period (in whole days) divided by the number of days in that period (i.e. annual).

Environmental Justice Database (Low Income / Minority Populations):
To identify significant concentrations of populations and in an effort to comply with Executive Order 12898 Metro COG utilized data from the ACS (2009-2013), decennial 2010 Census, and data from the U.S. Department of Health and Human Services (HHS). Minority population concentrations were determined from block level Census geography data. Blocks where 25 percent or more of the total population was minority (race other than "single-race white") were selected and mapped. Parcels designated as non-residential were removed. These areas represent areas were a significant group of minorities reside; however, it is important to note that if a parcel is selected it simply means it falls within a Census block whose minority population is at least 25 percent of the total. Low income population concentrations were determined from block group level Census geography data. Block groups where 25 percent or more of the total population were low income were selected and mapped. Parcels designated as non-residential were removed. These areas represent areas were a significant group of low income individuals reside; however, it is important to note that if a parcel is selected it simply means it falls within a Census block group whose low income population is at least 25 percent of the total.

Fixed Route:
Transit vehicles travel an established route and passengers are picked up and dropped off at designated locations along the route alignment. Typically, fixed routes include printed timetables, designated bus stops, and utilize larger vehicles to transport passengers.

Functional Classification:
Functional classification is the process by which roadways are grouped into classes according to the character of service they are intended to provide. For urbanized areas four (4) functional classifications exist: principal arterial, minor arterial, collector and local. Federal transportation funding is only available for functionally classified roads with a collector designation or above.

Geocode(ing):
A process facilitated through Geographic Information Systems (GIS) whereby geographic coordinates tabular data featuring street addresses are matched to attributes in an appropriate shapefile. The result of this match is an accurate spatial representation of the address noted in the original tabular data.

Jurisdictions:
The member units of government which are located within the boundary of Metro COG's planning area (see MPA). Member jurisdictions include: North Dakota Department of Transportation (NDDOT), Minnesota Department of Transportation (MnDOT), Cass County, Clay County, City of West Fargo, City of Moorhead, City of Fargo, and the City of Dilworth.

MAP-21:
MAP-21 stands for Moving Ahead for Progress in the 21st Century. This act was signed into law by President Obama on July 6, 2012. Map-21 funds surface transportation projects and with funding intended to be distributed using a performance-based method.

McKibben Demographic Forecast:
In 2012, Metro COG worked with its member local units of government and McKibben Demographic Research to create the Demographic Forecast for the Fargo-Moorhead Metropolitan Statistical Area (MSA). The report established demographic projections through the year 2040 for the MSA and is a critical element of the socio-economic data that is necessary in order to construct the regional travel demand model.

Metropolitan Planning Area (MPA):
Defined by 23 CFR 450.104 as the geographic area determined by agreement between the Metropolitan Planning Organization (MPO) for the Metropolitan Area and the Governor of the State, within which the metropolitan transportation planning process must be carried out. The MPA boundary, at minimum, shall include the UZA and all contiguous geographic areas likely to become urbanized within a twenty (20) year forecast period outlined within the adopted Metropolitan Area Transportation Plan.

Metropolitan Planning Organization (MPO):
An MPO is defined under Federal Transportation Legislation 23 USC 134(b) and 49 USC 5303(c) as the designated local decision making body that is responsible for carrying out the metropolitan transportation planning process. An MPO is designated for an urban area with a population of more than 50,000 as established by the most recent decennial census.

Metropolitan Statistical Area (MSA):
According to the US Census Bureau, metropolitan and micropolitan statistical areas are geographic entities defined by the US Office of Management and Budget (OMB) for use by Federal agencies in collecting, tabulating, and publishing federal statistics. An MSA contains a core urban area of 50,000 or more population (i.e. Fargo-Moorhead) and includes one or more counties (Cass ND and Clay MN) containing the core urban area, as well as any adjacent counties that have a high degree of social and economic integration (as measured by commuting to work) with the urban core. The Census-defined MSA for the region is the counties of Cass and Clay.

Paratransit:
A form of passenger transportation which is primarily intended for mobility-impaired, mentally impaired, or senior citizens (elderly). Vehicles are generally equipped with wheelchair lifts or ramps. Service is often complimentary to other public transit services and is mandated within a 3/4 mile radius of fixed route bus service.

Public Participation Program (PPP):
In accordance with SAFETEA-LU and Map 21, Metro COG's adopted PPP sets forth formalized procedures for effective community participation in the development, updating or amendment processes related to the LRTP (or any of it sub-elements) or the TIP. Metro COG's existing PPP was adopted in January of 2013.

Transit Development Plan (TDP):
The TDP functions as a sub-element of the Long Range Transportation Plan and is intended to identify strategies and recommendations to improve transit service delivery within the Metropolitan Area. The TDP is developed under a five (5) year planning horizon and pursuant to federal law (23 CFR 450.322) the plan shall consider both short-range and long-range strategies/actions that lead to the development of an integrated multimodal transportation system that efficiently moves people and addresses current/future transportation demand.

Transportation Improvement Program (TIP):
Pursuant to 23 CFR 450.104, the TIP is a prioritized listing/program of transportation projects covering a period of four (4) years that is developed and formally adopted by an MPO as part of the metropolitan transportation planning process, consistent with the adopted LRTP, and required for projects to be eligible for funding under title 23 USC and title 49 USC Chapter 53.

Transportation Analysis Zone (TAZ):
A traffic analysis zone is a unit of geography that is most commonly used in conventional transportation planning (forecast) models. The geography is delineated by state and/or local transportation officials for tabulating traffic related data, especially trip related data. Traffic Analysis Zones typically consist of one or more census blocks, block groups or tracts although geographies are generally not exactly parallel with Census derived boundaries.

Unified Planning Work Program (UPWP):
Pursuant to 23 CFR 450.308, the UPWP formally identifies the planning priorities for the Fargo-Moorhead Metropolitan Area for a two year timeframe. The UPWP is developed by the MPO in cooperation with NDDOT, MnDOT, MATBUS, and Fargo-Moorhead member jurisdictions. The document is constructed to implement certain activities from previously adopted plans, programs and policies relative to the Metropolitan Planning Program; which includes activities related to the maintenance and implementation of the 2009 Long Range Transportation Plan (LRTP).

Urbanized Area (UZA):
Urbanized Area is a term used by both the U.S. Census Bureau and Federal Transportation Legislation. From a transportation perspective, the UZA is a statistical geographic area with a population of 50,000 or more and an overall population density of at least 1,000 people per square mile. The urban area can be adjusted by state and local officials under federal law, resulting in the Federal Aid Urban Area (FAUA). The UZA together with Urban Clusters (2,500 to 49,999 people) produces the 'Urban Area'.

Vehicle Miles Traveled (VMT):
A transportation demand measurement which refers to the total number of miles traveled by all vehicles during a defined time period, typically calculated in daily VMT or annual VMT. VMT is calculated by multiplying the roadway segment length (miles) by the AADT.