METROPOLITAN PROFILE 2014

ANNUAL TRANSPORTATION SURVEILLANCE AND MONITORING REPORT

community / demographics
roadway system
public transit
bicycle / pedestrian network
freight and air

PREPARED BY:
FARGO-MOORHEAD METROPOLITAN COUNCIL OF GOVERNMENTS
ADOPTION: AUGUST 21, 2014
INFORMATION APPLICABLE (2013)
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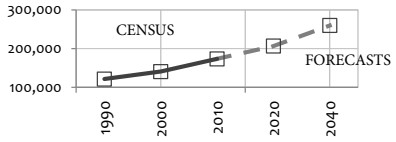
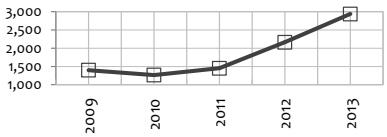
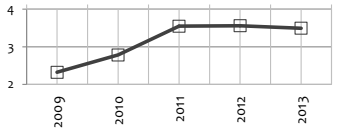
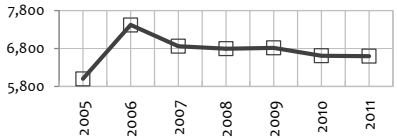
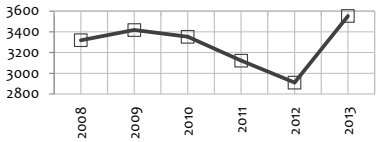
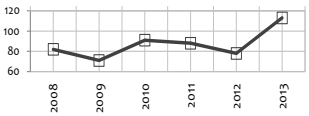
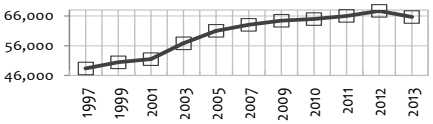
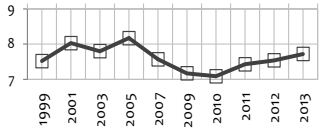
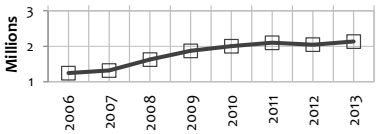
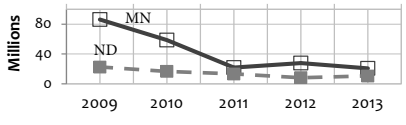
2014 METROPOLITAN SYSTEM DASHBOARD

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

	SUMMARY	TREND	ANALYSIS
POPULATION URBAN TOTAL Fargo, WF, MHD, Dilworth, Horace	*43% Population Growth from 1990-2010*		Cities in the Metropolitan Area have experienced strong population growth over the past three decades, with forecasts showing continual and substantial growth in 2020 and 2040.
RESIDENTIAL HOUSEHOLD PERMITS Fargo, WF, MHD, Dilworth	*Number of permits issued in the Metro from 2009 to 2013*		Residential building permits have steadily increased since 2010. The number of permits issued has doubled in that time.
FUEL PRICES Minnesota, All Grades All Formations Retail Prices	*From 2010 - 2012 gas prices have increased by nearly 30%*		Motor vehicle fuel prices have experienced significant fluctuations over the past seven years, ranging from $2.03 in 2005 to $3.47 in 2012 per gallon.
VEHICLE MILES TRAVELED PER CAPITA	*Nationally and locally, VMT has continued to drop since 2006*		At the national level, VMT per capita in 2011 was 9,588; significantly higher than what local statistics show. Interstate VMT within the metro area has risen sharply since 2009 (9%).
TRAVELER SAFETY VEHICLE CRASHES	*Metro vehicle crashes have decreased by 12% since 2008*		The total number of vehicle crashes in the Metropolitan Area have gradually decreased since 2009; with two fatal crashes recorded in 2012.
TRAVELER SAFETY BICYCLE/PEDESTRIAN CRASHES	*Compared to 2011, Bicycle, Pedestrian and vehicle conflicts decreased by 11%*		In 2013, the number of bicycle/pedestrian in the Metropolitan Area increased by over 25%
I-94 / RED RIVER BRIDGE TRAFFIC VOLUMES; TOTAL (AADT)	*Traffic volumes on I-94 continue to increase*		Due to growth patterns in the Fargo-MHD area, the interstate is a significant corridor for 'local' traffic and mobility. Volumes have increased by nearly 40% from 1997.
I-94 / RED RIVER BRIDGE TRUCK VOLUMES AS % OF TOTAL VOLUMES	*Heavy truck traffic at the I-94 Red River bridge is less than the previous decade*		Percentages from 2009 to 2013 are well below the figures from 1999 through 2005. Look for these percentages to increase with oil and industry growth in Western North Dakota.
PUBLIC TRANSIT, FIXED ROUTE RIDERSHIP	*Of the 2.04 million rides in 2012, just over 530,000 of those rides were generated by NDSU circulator routes*		In 2013, ridership was split as follows: College Student (51%), Adult (27%), Disabled/Elderly (18%) and Youth/Child (4%).
FEDERAL & STATE INVESTMENT TRENDS, BY STATE	*Average annual investment from 2010-2012 was approx. $48.6 Million*		This chart depicts surface transportation investment totals by State, applicable only to jurisdictions within the MPA.

Interested persons, stakeholders, jurisdictions, agencies and organizations;

The Fargo-Moorhead Metropolitan Council of Governments (Metro COG) is pleased to present the 2014 Metropolitan Profile, a document otherwise known as the Surveillance and Monitoring Report for the Fargo-Moorhead Metropolitan Area. The data presented within this profile pertains to the 2013 calendar year (January 2013 through December 31, 2013).

As background, Metro COG has produced a metropolitan transportation surveillance and monitoring report since 1981 which has taken various forms in order to ensure compliance and compatibility with relevant surface transportation authorization. Under MAP-21, the Metropolitan Profile will become a more important performance management tracking tool.

In its current form, the profile is structured to document and monitor the following:

(a) Changes to the transportation system;
(b) Demographic and socio-economic conditions;
(c) Changes in land use patterns and/or development patterns;
(d) Accuracy of projections/assumptions made within the Long Range Transportation Plan (LRTP); and
(e) Implementation of the Transportation Improvement Program (TIP).

This is data the Metro COG Policy Board believes is critical in order to accurately represent the state of the transportation network in the Metropolitan Planning Area (MPA) and data that is essential to maintain and implement elements of the Metropolitan Transportation Planning Program such as the TIP, LRTP and regional travel demand model (TDM).

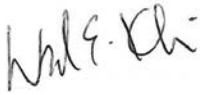
The 2014 Metropolitan Profile is separated into seven sections for the convenience of the reader, as follows:

Section 1 - Introduction
Section 2 - Community Profile (demographics and socio-economic data)
Section 3 - Roadway System
Section 4 - Public Transit
Section 5 - Bicycle & Pedestrian Network
Section 6 - Freight & Air
Section 7 - Planning for Change

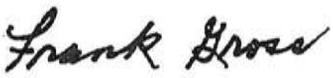
It is Metro COG's goal to continue to enhance the ease and accuracy of collecting and reporting metropolitan transportation data; as well as improving accessibility to this information for all interested persons and stakeholders.

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 MPA is available by contacting Metro COG (701.232.3242), by email at metrocog@fmmetrocog.org or visit Metro COG's website at www.fmmetrocog.org.

Sincerely,



Wade E. Kline
Executive Director



Frank Gross, Chair
Metro COG Policy Board

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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 (2005-2009), 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% 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 and a 200 foot buffer was applied. 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% of the total. Low income population concentrations were determined from block group level Census geography data. Block groups where 25% or more of the total population were low income were selected and mapped. Parcels designated as non-residential were removed and a 200 foot buffer was applied. 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% 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 (latitude/longitude) are assigned to informal locations, such as street addresses.

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 2006, 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 (FM MSA). The report established demographic projections through the year 2035 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 (ie. 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.

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.

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

BOUNDARIES

Metropolitan Planning Organization, Metropolitan Planning Area and Urbanized Area:

An MPO is defined under Federal Transportation legislation 23 USC 134(b) and 49 USC 5303(c) as the designated local decision-making body responsible for carrying out the metropolitan transportation planning process. An MPO is designated for each urban area with a population of more than 50,000 people as defined by the most recent decennial census. In addition to the urban area (UZA plus any urban clusters), the MPO boundary includes any contiguous area that may become urbanized within a twenty year forecast period, which is otherwise known pursuant to 23 CFR 450.104 as the Metropolitan Planning Area (MPA). For the Fargo-Moorhead MPO, the planning area encompasses a total of approximately 1,073.5 square miles or 687,022 acres. Figure 2 shows the following:

(a) Adjusted Urban Area (UZA) per the 2010 Census;
(b) Metropolitan Planning Area; and
(c) Jurisdictional boundaries as of December 31 of the identified year (2009 through 2013).

UZA Update: In March of 2012 the Census Bureau released updated (census defined) Urban Area boundaries. Per the official Census defined boundary, the Fargo-Moorhead Urban Area has a total population of 176,676. Pursuant to federal law, the Census defined Urban Area can be adjusted by the local officials in cooperation with the state, resulting in a transportation planning specific adjusted Urbanized Area (UZA) or Federal Aid Urbanized Area (FAUA). This boundary can impact the application of federal transportation programs and under current STP apportionment formulas this is most applicable on the North Dakota side (urban versus rural). In 2012 Metro COG worked closely with local jurisdictions and both State DOTs to closely review and establish an adjusted Urban Area. A draft version of the adjusted UZA was approved by the Metro COG Policy Board on October 18, 2012. The Adjusted UZA was approved by FHWA and both State DOTs in August 2013. The adjusted UZA is shown in Figure 2.

MPA Update: In preparation for the 2014 Long Range Transportation Plan (LRTP) for the Fargo-Moorhead Metropolitan Area, and in coordination with proposed Urban Area adjustments, Metro COG reviewed a number of scenarios regarding adjustment to the MPA boundary. The MPA boundary is effectively Metro COG's "study area" or area of influence respective to the metropolitan planning program. Under the existing boundary, portions of (incorporated) Fargo, Mapleton and Horace extend outside the extent of the MPA. Although these areas are not currently developed and likely will not experience development pressure in the near future, these communities are participants in the required metropolitan planning process. Further, these areas are adjacent to existing or future transportation assets of regional significance. To address this issue, while also giving consideration to adding addition mileage of high volume arterials into the MPA (ie. I-94 through Barnesville, TH 10 through Hawley, I-94 through Mapleton and I-29 through Pleasant Township) Metro COG proposed an adjusted MPA boundary which includes an additional fourteen townships compared with the previous MPA. The current MPA scenario was approved by the Metro COG Policy Board on November 15, 2012 and approved by FHWA and both State DOTs in August 2013. Figure 2 shows the current MPA boundary.

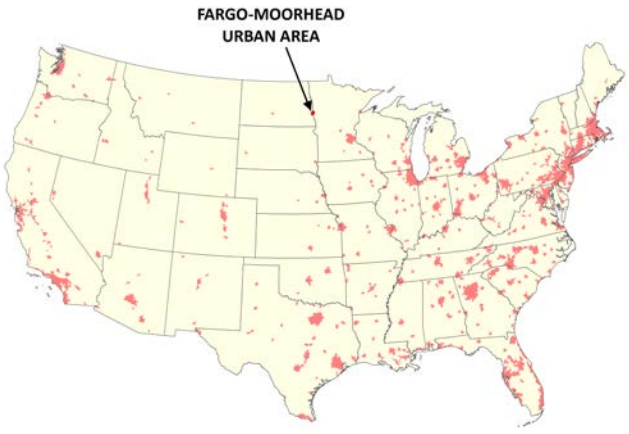


Figure 1: United States 2010 Census Defined Urban Areas
Source: Metro COG (2014)

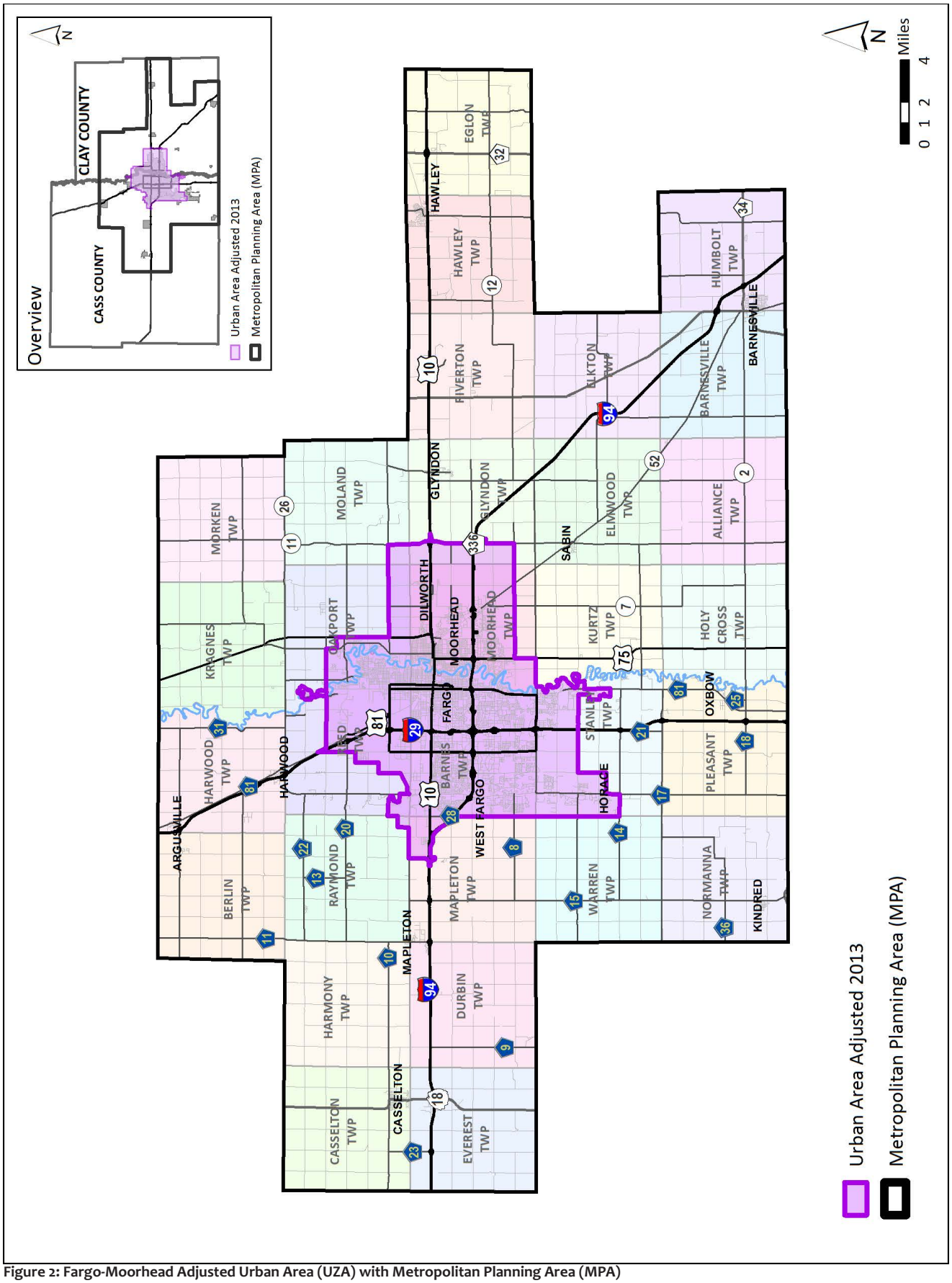


Figure 2: Fargo-Moorhead Adjusted Urban Area (UZA) with Metropolitan Planning Area (MPA)

Source: Metro COG (2014)

COMMUNITY PROFILE

Overview:

The Metropolitan Profile is a collection of metropolitan demographic, land use, socioeconomic, transportation, and infrastructure data. The intent of this document is to provide an annual update on important base datasets, which provide technical staff from member jurisdictions and interested individuals or entities the ability to easily access and identify significant transportation changes or trends in population and growth or housing data within the greater Metropolitan Area. The data is used by Metro COG on a regular basis to periodically assess the accuracy of population, job, household, and growth assumptions as utilized within the regional traffic volume projection model. This regional model is maintained and operated in cooperation with the Advanced Traffic Analysis Center (ATAC) at North Dakota State University (NDSU) under an agreement established in 2002 and is a critical component of the metropolitan transportation planning program.

Data - Accuracy, Applicability and Use Disclaimer:

2010 Census data supplemented with 2012 McKibben Demographic Forecast Study and 2007-2011 American Community Survey data (ACS) is used within this profile to provide an accurate depiction of population counts for metropolitan jurisdictions and other relevant statistical boundaries. Due to the existing McKibben Demographic Forecast Study and its applicability to the travel demand modeling process, 2010 Census data is the baseline from which all the projections in this section are established. All population, demographic, and socioeconomic projections in this chapter have been created solely for Metro COG's transportation planning program needs and for use within the regional traffic volume projection model. Metro COG does not place any warranty, explicit or implied, on the forecasted data's performance, merchantability, or suitability for any other purposes.

Jurisdictional approval of any projections or jurisdictional approval of this profile does not represent or imply that the associated data is thereby accepted or approved by a given jurisdiction as its 'official' population, housing, employment, or land use data. The data is hereby included within this report for documentation, informational, and transportation planning purposes.

Population.

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 (FM MSA). The report established demographic projections through the year 2040 for the MSA. These projections have been incorporated within the 2013 Metro Profile in conjunction with decennial Census data and ACS data, as applicable. As part of the demographic forecast for the FM 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 demographic projections for the MSA and based on input from Metro COG's Transportation Technical Committee (TTC) the 'High Growth' scenario or SCENARIO A was adopted by the Policy Board for use within the transportation planning program. Data and projections presented within this section represent the 'High Growth' scenario. A hard copy of the 2012 Demographic Forecast for the Fargo-Moorhead Metropolitan Statistical Area may be obtained by contacting Metro COG or by visiting Metro COG's website at www.fmmetrocog.org.

Table 1: Fargo-Moorhead Metropolitan Statistical Area Estimated and Projected Populations

Jurisdiction	Population			Population Change		Population Projections					
	1990	2000	2010	1990-00	2000-10	2015	2020	2025	2030	2035	2040
Fargo	74,111	90,599	105,549	22.20%	16.50%	112,870	122,050	130,370	139,030	147,265	154,170
Moorhead	32,295	32,177	38,065	-0.40%	18.20%	40,920	45,050	47,820	50,440	52,950	54,990
West Fargo	12,287	14,940	25,830	21.60%	72.80%	27,840	35,020	38,290	41,020	43,450	45,190
Dilworth	2,562	3,001	4,024	17.10%	34%	4,440	4,650	4,890	5,130	5,380	5,600
Horace	662	915	2,430	38.22%	165.56%	2,590	2,690	2,850	2,880	2,920	2,940
*Urban Total	121,917	141,632	175,898	16.17%	24.19%	190,160	209,460	221,370	238,500	249,040	262,890
Urban Cass	87,060	106,454	133,809	22.27%	25.69%	145,680	159,760	171,510	182,930	193,635	202,300
Rural Cass	15,817	16,684	15,969	5.48%	-4.28%	16,770	16,000	15,880	15,370	14,760	14,400
Cass Total	102,877	123,138	149,778	19.70%	21.60%	162,450	175,760	187,390	198,300	208,395	216,700
Urban Clay	34,877	35,178	42,089	0.80%	19.60%	45,360	49,700	52,100	55,570	58,330	60,590
Rural Clay	15,565	16,120	16,910	3.60%	4.90%	16,770	17,840	18,800	19,710	20,270	20,780
Clay Total	50,442	51,229	58,999	1.60%	15.10%	62,130	67,540	70,900	75,280	78,600	81,370
MSA Total	153,299	174,367	208,777	13.74%	19.70%	225,830	243,300	258,900	273,580	286,995	298,070

Population Source: 2010 Census

Projection Source: McKibben Demographic Research, 2012 Demographic Forecast for the Fargo-Moorhead Metropolitan Statistical Area

*Urban Total includes: Fargo, West Fargo, Moorhead, Dilworth, and Horace

Figure 3 depicts previous projections within Metropolitan Long Range Transportation Plans (LRTPs) compared to 2010 Census population counts. This data shows that Metro COG and long range plans have historically and continually under-project population and growth trends in the area dating back to the 1993 LRTP.

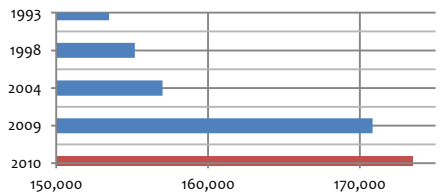


Figure 3: Previous LRTP 2010 Projections (by LRTP year) Compared to 2010 Census

Source: Metro COG (2014), 2010 Census

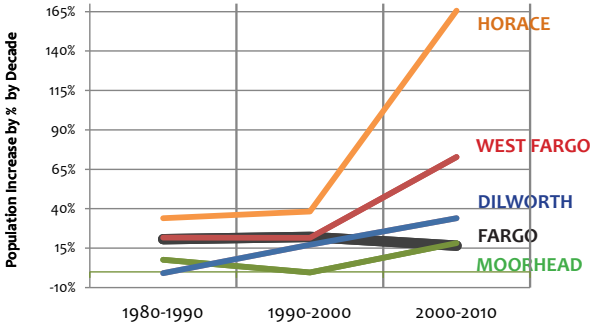


Figure 4: Population Change and Trends by Percentage and Decade

Source: Metro COG (2014) - per decennial Census data

Housing and Dwelling Units.

DEMOGRAPHIC RESEARCH DATA, DWELLING UNIT PROJECTIONS. In 2012, Metro COG's Policy Board approved the 'High Growth' projections for use within the transportation planning program. Table 2 summarizes dwelling unit growth and household projections within the Metropolitan Statistical Area based on the adopted 'High Growth' scenario. For the purposes of this profile, a dwelling unit is defined as any house, apartment, manufactured home, group of rooms, single occupied rooms, or any living quarter.

HOUSEHOLD PROJECTION ANALYSIS. Based on Table 2, the 2010 decennial Census data provides a comparative instrument for evaluating the accuracy of household projections by jurisdiction as the Metropolitan Area approaches the first model planning horizon year of 2015. Table 3 outlines the comparison which ultimately translates into 2010 Census data showing approximately 3,508, or five percent more households within metropolitan jurisdictions than 2010 projections represent. The largest differential exists within West Fargo whereby 2010 Census shows an additional 1,094 households, or 11.8 percent, compared to 2010 estimates. The lowest margin is representative in Fargo with 2010 Census data showing an additional 1,470 households, or 3.2 percent compared to 2010 estimates. In terms of traffic modeling, the net effect of a low projection is fewer households and fewer vehicular trips on the network. In

Table 2: Metropolitan Household Projections

Jurisdiction	2000	2010 Census	2015	2020	2025	2030	2035	2040	2007-2011 ACS
Fargo	39,268	46,791	49,590	52,920	55,330	58,600	61510	64,580	46,851
Moorhead	11,660	14,304	15,840	16,910	18,130	19,440	20,430	21,350	13,969
West Fargo	5,771	10,348	11,810	13,230	15,020	17,150	18,890	19,730	10,227
Dilworth	1,160	1,595	1,710	1,820	1,910	1,950	2,050	2,130	1,590
Horace	300	810	850	880	930	950	970	980	844
Urban Total	58,159	73,848	78,950	85,760	93,390	98,090	102,880	108,770	72,637
Metro Cass	45,339	57,949	62,250	67,030	71,280	76,700	81370	85,290	57,922
Other Cass	5,976	5,950	5,870	5,910	5930	5,990	5960	5,920	5,979
Cass Total	51,315	63,899	68120	72,940	77210	82,690	87330	91,210	63,901
Metro Clay	12,820	15,899	17,550	18,730	20040	21,390	22,480	23,480	15,559
Other Clay	5,850	6,380	6,290	6,390	6,650	6,930	7,180	7,370	6,369
Clay Total	18,670	22,279	23,840	25,120	26,690	28,320	29,660	30,850	21,928
MSA Total	69,985	86,178	91,960	98,060	103,900	111,010	111,010	122,060	85,829

Source: McKibben Demographic Research, 2012
Source: 2010 Census
Source: 2007-2011 American Community Survey

addition, analysis within the 2012 Demographic Forecast Study shows too much growth was attributed to unincorporated areas of Cass and Clay County and instead should have been accounted for within the incorporated limits of Fargo, West Fargo, Moorhead, and Dilworth.

Table 3: Household Projections and Estimate Comparison

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)

Source: 2010 Census, McKibben Demographic Research (2006) and Metro COG (2014)

PERCENTAGES BY UNIT TYPE AND JURISDICTION. 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. The City of Dilworth has the highest single-family ratio at approximately 74 percent. A summary of the ratios for the years 2008-2013 is set forth within Table 4. To note, as shown in the 2008-2013 numbers, the ratio of single -family to multi-family continues to decrease across the FM Metropolitan Area. These percentages are based on Metro COG dwelling unit and population projections and not projections established by the demographic research data. Additional information on this comparison is provided in subsequent sections. For additional information related to Metro COG population and household estimates, see Table 5.

HOUSING TENURE. Table 5 depicts owner occupied versus renter occupied statistics. For comparative purposes, Table 5 shows estimates and calculations for the five largest municipalities which make up the FM Metropolitan Area. Differences may be attributed to different land use, development patterns, infrastructure opportunities and constraints, or growth strategies and policies.

Table 4: Ratio of Single-Family to Multi-Family by Jurisdiction

Jurisdiction	2008	2009	2010	2011	2012	2013
Fargo	44.78%	44.47%	44.44%	43.87%	43.15%	43.87%
Moorhead	66.59%	66.44%	66.72%	66.74%	66.03%	66.14%
West Fargo	67.59%	67.66%	67.66%	68.35%	65.72%	64.89%
Dilworth	72.57%	73.71%	73.91%	73.87%	73.89%	73.92%
Metropolitan	52.96%	52.74%	52.80%	52.50%	51.59%	50.98%

Source: Metro COG (2014)

Table 5: Housing Tenure - Owner Occupied Compared Renter Occupied

Jurisdiction	Total Units	Occupied Housing Units	Owner Occupied Housing Units
Fargo	49,301	46,851 (95%)	21,252 (45.4%)
Moorhead	15,099	13,969 (92.5%)	8,790 (62.9%)
West Fargo	10,655	10,227 (95.98%)	7,049 (68.9%)
Dilworth	1,672	1,590 (95.10%)	1,162 (73%)
Horace	877	844 (96.24%)	815 (96.6%)
Metropolitan	77,604	73,481 (94.69%)	39,068 (52.5%)
MSA	90,887	85,829 (94.43%)	49,892 (58%)

Source: American Community Survey (2007-2011)

ENVIRONMENTAL JUSTICE DATABASE (LOW INCOME AND MINORITY POPULATIONS). Pursuant to Presidential Executive Order No. 12898 issued February 16, 1994 each federal agency is tasked with implementing environmental justice as part of its mission by identifying and addressing, as appropriate, disproportionately high, and adverse human health or environmental effects of its programs, policies, and activities upon minority populations and low-income populations. To identify significant concentrations of populations, and in an

effort to comply with Executive Order No. 12898, Metro COG utilized data from the ACS (2005-2009), 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 geographic data. Blocks where 25 percent or more of the total population was minority (any individual whom reports anything other than "white-alone" on their Census questionnaire) were selected and mapped. Parcels designated as non-residential were removed and a 200 foot buffer was applied. These remaining feature classes represent areas where a significant concentration 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 (1.25 times poverty, per 2011 HSS poverty guidelines or block groups with an annual median household income less than $19,915) were selected and mapped. Parcels designated as non-residential were removed and a 200 foot buffer was applied. These remaining feature classes represent areas where a significant concentration 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.

Environmental justice overlays are critical to Metro COG's transportation planning program and the database is considered and utilized in project programming, various studies, and decision-making processes. As specific examples, the overlays are an important element within the Transportation Improvement Program (TIP), Long Range Transportation Plan (LRTP), Transit Development Plan (TDP), Unified Planning Work Program (UPWP) and virtually every subarea study completed under Metro COG's purview.

Metro COG intends to update this Environmental Justice database on a three year cycle. The database cited within this Metropolitan Profile was adopted by the Metro COG Policy Board in November 2011 and a complete methodology memorandum can be viewed on Metro COG's website at www.fmmetrocog.org. Figure 5 outlines Environmental Justice Areas for the Fargo-Moorhead Metropolitan Area.

ENTITLEMENT COMMUNITIES AND COMMUNITY DEVELOPMENT BLOCK GRANTS (CDBG). Within the Metropolitan Area, both Fargo and Moorhead are CDBG entitlement communities pursuant to 42 u.s.c. 5301. According to the Department of Housing and Urban Development (HUD) this program provides annual grants to entitlement cities and counties to assist in the development of strong urban neighborhoods through revitalization, economic development, affordable housing initiatives, and investments in community facilities and services. As noted in the authorization, entitlement communities must give maximum feasible priority to activities which benefit low to moderate income individuals. CDBG funds can be utilized for a broad range of activities, inclusive of: property acquisition, residential housing rehabilitation, construction of public infrastructure (ie. water, sewer, roadways, neighborhood centers, etc.), energy conservation efforts, job creation and retention initiatives, and other activities. To receive the annual entitlement grant, the grantee (City of Fargo or City of Moorhead) must develop a five year Consolidated Plan which articulates identified needs and community objectives for the defined planning horizon.

Pursuant to the grant requirements the grantee must certify that not less than 70 percent of the CDBG funds received are utilized for activities that benefit low and moderate income individuals. Figure 5 identifies the Census block groups within the greater Metropolitan Area which fall within the HUD defined income limit categories of extremely low (30 percent), very low (50 percent) and low (80 percent) of the area median income. According to HUD fiscal year 2010 Income Limits Documentation, the Fargo-Moorhead MSA has a family median income of $54,500, include both Cass County and Clay County. Based on this threshold, any block group with with a family median income below the HUD threshold was identified and mapped.

CDBG grants in both Fargo and Moorhead combined have reached nearly 1.2 million annually in recent years and Consolidated Plans suggest a five year need nearing six million dollars. Figure 5 overlays 2014 TIP projects with the CDBG eligible neighborhoods at a metropolitan scale. This is an area within the Profile that will need further improvement and refinement in subsequent years as data and applicability of analysis can be further defined. However, the ultimate objective should be to set forth a comprehensive outline of how local, state, and federal resources with linkages to surface transportation are utilized, and their geographic relationships within the Fargo-Moorhead Metropolitan Area.

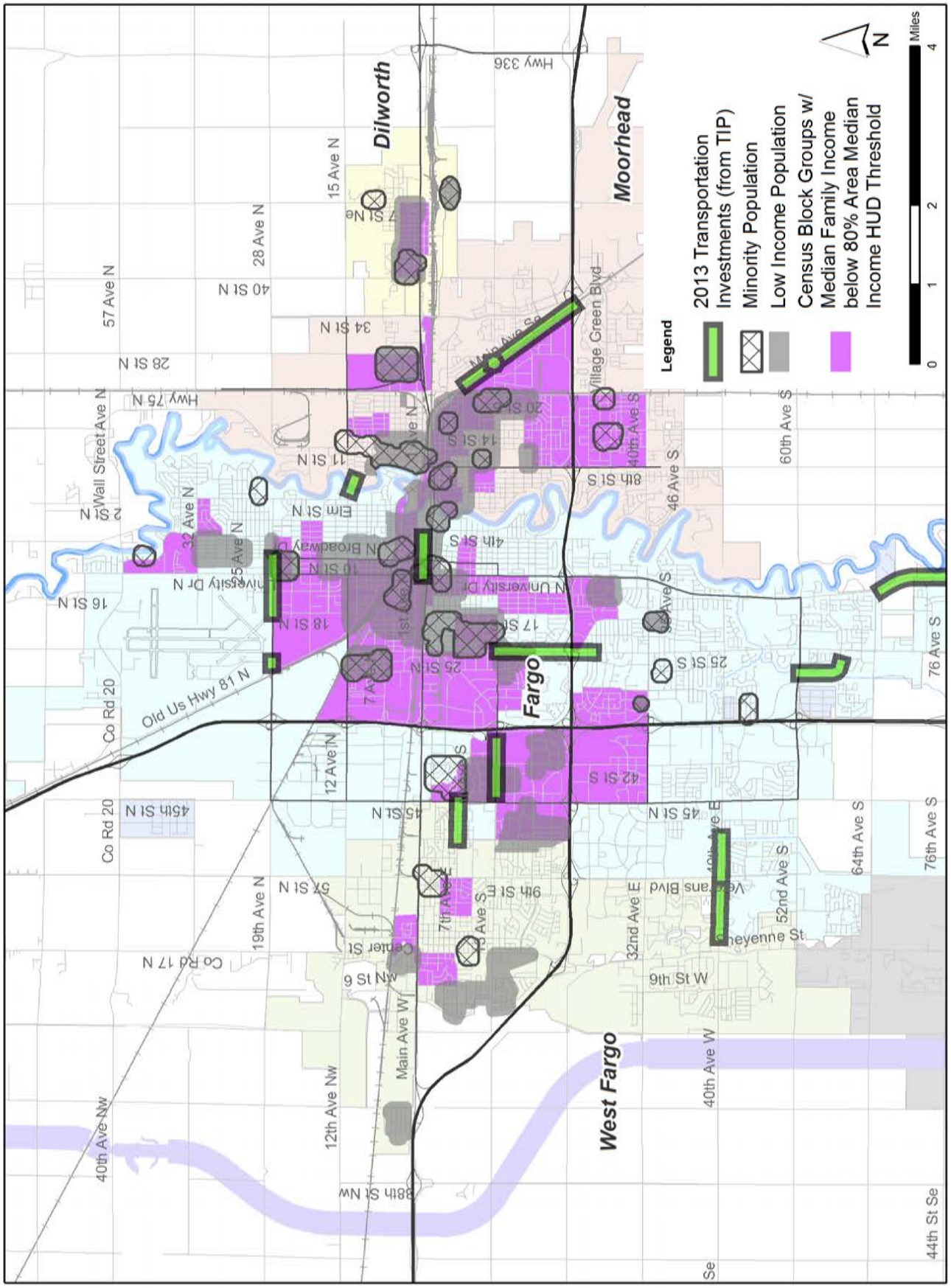


Figure 5: Environmental Justice Areas, CDBG Eligible Areas, and 2013 Surface Transportation Investments

Source: Metro COG (2014), November 2011 Environmental Justice Update

HOUSEHOLD / DWELLING UNIT PROJECTION ACCURACY . Although the long range household forecast numbers in Table 2 are representative of a constant growth trend set forth by McKibben Demographic Research, the accuracy of these projections are tracked on an annual basis by Metro COG. This is in addition to the validation the decennial Census data provides in Table 1. Metro COG utilizes dwelling unit permit data from each jurisdiction, including demolition permit data, and vacancy rates for single family and multi-family units to ensure the accuracy of household projections and to further validate applied growth assumptions by Transportation Analysis Zone (TAZ) through permit address geocoding in Figure 6. It is important to note that in order to establish some level of validation or analysis on growth assumptions, permit geocoding would need to be aggregated over a period of time. For example, as the 2010 base year is established, geocoded permit data would be collected through 2020 (model forecast year) and analyzed at various intervals (i.e. 2015) for consistency with growth assumptions and allocations.

The number of households is extrapolated by applying apartment vacancy rates to multiple family dwelling units and by assuming that the occupancy rate of single family units is consistent with Census data, as applicable given the year of the profile. In sum, any Metro COG estimates from the 2013 Metropolitan Profile and subsequent years will be based on 2010 Census data, while previous estimates remain based on 2000 Census data. This will impact Metro COG population and household estimates as well as other figures with applied 2010 Census data (i.e. average persons per household).

METROPOLITAN MULTI-FAMILY (APARTMENT) VACANCY RATES. Apartment vacancy rates are based on a quarterly survey of apartment owners and managers in the Metropolitan Area. This survey is completed by Appraisal Services Inc. and provides insight into market conditions within each jurisdiction. It is important to note that this survey measures only physical vacancy and does not take into account other factors such as rental incentives, delinquencies or other revenue issues. The metropolitan vacancy rate began declining in 2006 when the rate was approximately eight percent. Consistent with this downward curve over subsequent years, the annual average apartment vacancy rate for 2010 was six percent while 2011 was recorded at 5.5 percent, 2012 at 3.2 percent and 2013 at three percent. Metropolitan apartment vacancy rates are outlined within Table 6.

Table 6: Metropolitan Multi-Family (Apartment) Vacancy Rates

Jurisdiction	2009	2010	2011	2012	2013
Fargo	5.1%	5.8%	4.7%	2.9%	2.5%
Moorhead	5.0%	7.0%	7.2%	5.2%	5.0%
West Fargo	9.0%	6.6%	8.4%	2.6%	2.6%
Dilworth	4.4%	8.5%	6.0%	6.3%	4.5%
Metropolitan	5.4%	6.0%	5.5%	3.2%	3.0%

Source: Appraisal Services, Inc. 2013

SINGLE-FAMILY VACANCY RATES. Single-family vacancy rates are based on the total number of vacant housing units within a jurisdiction and total housing unit estimates as provided by the Census. Outlined within Table 7 are the single-family vacancy rates per 2000 and 2010 Census data and as utilized by Metro COG to estimate total population and occupied households for the Metropolitan Area.

Table 7: Metropolitan (Applied) Single-Family Vacancy Rates

Jurisdiction	2000 Census	2010 Census	+/-	Unit Differential
Fargo	4.7%	6.3%	+1.6%	1,233
Moorhead	4.3%	6.4%	+2.1%	450
West Fargo	3.3%	3.8%	+0.5%	215
Dilworth	6.3%	7.6%	+1.3%	60
Metropolitan	n/a	6.2%	n/a	1,958

Source: Census Bureau (2000, 2010)

METRO COG HOUSEHOLD PROJECTIONS. Metro COG's current estimate for households in the Metropolitan Area is identified within Table 8. In total, based on obtained permit data, the Metropolitan Area added 2,937 dwelling units in 2013. This represents a 1.2 percent increase over the 2009 Metro COG estimate of 78,655 total dwelling units (Metropolitan Area without applied vacancy rates). Percentages for each respective jurisdiction are depicted below. To note, Metro COG projections indicate a higher growth rate than projected within the 'High Growth' estimates as prepared by McKibben Demographic Research. Projections by McKibben Demographic Research and Metro COG both include a vacancy rate factor, which establishes a foundation for more accurate assumptions.

Table 8 shows that Moorhead, Fargo and Dilworth all show a decrease in units from 2009 to 2010. Permit data from both cities shows the construction of units during this timeframe changes in multi-family and single-family vacancy rates and average per household size Census estimates affect the total occupied 'household' estimates for these cities. This becomes an analysis tool as comparisons are made to McKibben, 2010 Census population estimates, or any other population figure as a number of factors play a role in determining population growth estimates within a municipality, such as vacancy rates and average household size data.

Table 8: Metro COG Household Projections & Percentages of Change (with Vacancy Rate)

Jurisdiction	2009	08'-09'	2010	09'-10'	2011	10'-11'	2012	11'-12'	2013	12'-13'
Fargo	47,723	2.32%	47,393	-0.70%	48,678	2.71%	50,220	3.17%	50,900	1.35%
Moorhead	15,262	1.86%	15,027	-1.3%	15,244	1.29%	15,416	1.11%	15,427	0.07%
West Fargo	10,263	1.88%	10,490	2.20%	10,737	2.35%	11,764	9.56%	12,540	6.6%
Dilworth	1,545	-0.50%	1,537	-0.50%	1,555	1.17%	1,570	0.9%	1,616	2.9%
Metropolitan	74,793	2.11%	74,447	-0.46%	76,214	2.34%	78,970	3.61%	80,483	1.9%

Source: Metro COG (2014), Cities of Fargo, Moorhead, West Fargo and Dilworth

RESIDENTIAL PERMIT DATA. Housing construction has remained strong in the Metropolitan Area over the past several years. Based on reported data in Table 9, it is evident that each jurisdiction has an ample supply of platted residential lots. Reported 2013 residential permit data appeared to show some indications of changing dynamics in the market as multi-family permits were up significantly from 2012 and more consistent with previous trends. As noted in previous discussion within this section, Metro COG utilizes dwelling unit permit data from each jurisdiction, including demolition permit data, to validate and analyze the accuracy of household and population projections for the Metropolitan Area. Table 9 represents dwelling unit permit activity within each jurisdiction from 2009 through 2013. Figure 6 represents geocoded permit data as reported by jurisdictions within the MPA. For reporting consistency between jurisdictions and based on the structure of Metro COG's regional travel demand model, residential permits fit under two overarching definitions. It is important to note that these definitions will not be consistent with adopted jurisdictional or building code definitions as Metro COG's definitions are formulated for trip generation purposes.

Table 9: Annual Building Permit Data as Reported (2009-2013)

Jurisdiction	2009		2010		2011		2012		2013	
	SF	MF	SF	MF	SF	MF	SF	MF	SF	MF
Fargo	332	752	334	344	283	516	403	732	490	1202
Moorhead	175	124	160	0	80	81	98	60	133	274
West Fargo	158	66	165	78	163	142	411	430	433	372
Dilworth	15	0	13	0	16	0	17	8	34	21
Metro	680	942	672	422	542	739	929	1230	1090	1848
Clay County	26	0	26	0	27	0	35	0		
Harwood	0	0	0	0					14	0
Horace	4	0					7	0		
Glyndon	6	0	0	0	1	0			0	0
Reiles Acres	11	0	6	0	8	0				
Mapleton	5	2	9	0	5	0	13	0	8	0
Sabin										
Casselton	12	0	8	0	5	25			20	0
Hawley					2	0			9	0
Kindred	1	0	2	0	3	0	5	0	5	0
Barnesville			1	0	7	0				

Source: Metro COG (2014)

Single-family: Any structure or combination of structures with three units or less;

Multi-Family: Any structure or combination of structures with four units or more.

METROPOLITAN HOUSEHOLD AND POPULATION CONSISTENCY REVIEW. One of the primary reasons building permit and household data is tracked on an annual basis is to provide a mechanism for Metro COG to verify the accuracy of five year demographic projections. Table 10 compares current year household and population numbers to numbers prepared by Metro COG through annual data tracking processes and decennial 2010 Census numbers. The projections are a side-by-side analysis for the years 2010 through 2013. Metro COG estimates for both households and population will typically be higher than McKibben projections partly based on the fact that Metro COG calculates population on permits issued through the end of the fiscal year. Some of these permits may not be closed or the household may not be in receipt of a certificate of occupancy. Further, McKibben projections are static and will not respond to changes in Census data, such as average household size or other similar variables. Regardless, the projections provided by Metro COG establish a full-build population and household number which provides insight into the statistical accuracy of adopted demographic projections.

Table 10: Metropolitan Household and Population Consistency Review

	Metro COG Estimate				McKibben Estimate				2010 Census
City	2010	2011	2012	2013	2010	2011	2012	2013	2010
Fargo	47,393	48,678	50,220	50,900	45,321	47,258	47,724	48,191	46,791
West Fargo	10,490	10,737	11,764	12,540	9,254	10,592	10,835	11,079	10,348
Moorhead	15,050	15,244	15,416	15,427	13,465	14,560	14,816	15,072	14,304
Dilworth	1,537	1,555	1,570	1,616	1,490	1,614	1,633	1,653	1,595
Total	74,446	76,214	79,656	80,483	70,722	74,024	75,008	75,995	73,038

City	2010	2011	2012	2013	2010	2011	2012	2013	2010
Fargo	101,895	104,657	107,974	109,434	105,600	106,524	107,499	108,475	105,549
West Fargo	26,119	26,736	29,293	31,225	24,430	26,433	27,037	27,640	25,830
Moorhead	36,214	36,737	37,152	37,179	36,890	38,683	39,300	39,918	38,065
Dilworth	3,873	3,919	3,956	4,073	3,920	4,063	4,103	4,142	4,024
Total	168,101	172,049	178,375	181,910	170,840	175,703	177,939	180,175	173,468

Source: Metro COG (2014), Cities of Fargo, Moorhead, West Fargo & Dilworth; McKibben Demographic Research (2006, 2012; 2010 estimates based on 2006 Demographic Study and 2011, 2012 & 2013 estimates per 2012 Demographic Study, U.S. Census Bureau (2010 counts)

AVERAGE HOUSEHOLD SIZE, 2010 CENSUS. Certainly a factor in 2010 and 2011 Metro COG population projections and likely a contributing factor to the margin of error within the McKibben estimate (2010 and 2011) is the decrease in the average household size for all Metropolitan jurisdictions. Both Metro COG and McKibben estimates in 2010 are within two percent of 2010 Census estimates. However, from a transportation planning and forecasting perspective, the real consideration is whether McKibben numbers are providing an adequate framework for decision-making relative to surface transportation needs in the Metropolitan Area.

REGIONAL TRAVEL DEMAND MODEL (TDM) CONSIDERATIONS AND APPLICABILITY. Metro COG's Regional Travel Demand Model (TDM) is based on demographic projections as set forth by McKibben Demographic Research (2012) for years 2020 and 2040. In 2010, Metro COG began the process of working and manipulating Census data which will be used to calibrate a 2010 base model. As the model calibration process is initiated, Metro COG and its jurisdictional partners will need to pay close attention to any disparities that become evident between forecasts and tabulated Census data.

Table 11: Average Household Size (2000, 2010 Census)

Jurisdiction	2000 Census	2010 Census
Fargo	2.21	2.15
Moorhead	2.43	2.41
West Fargo	2.61	2.49
Dilworth	2.61	2.52

Jurisdiction	2000 Census	2010 Census
Cass County	2.32	2.27
Clay County	2.53	2.48

Source: Census Bureau (2000, 2010)

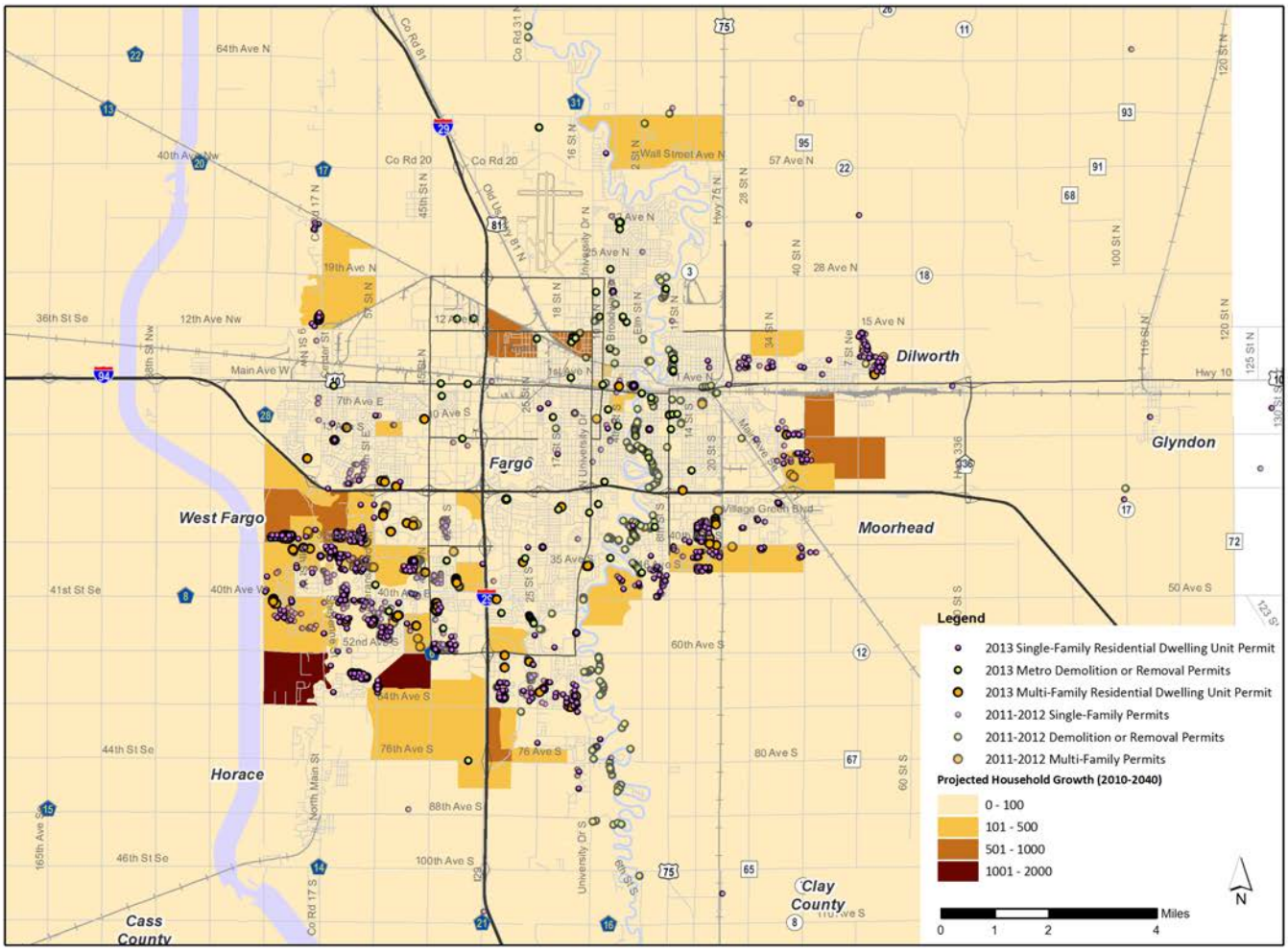


Figure 6: 2010 - 2013 Residential Permits and Forecasted 2010 to 2040 Household Growth by Transportation Analysis Zone (TAZ)
Source: Metro COG (2014)

Employment / Jobs Data.

JOBS PROJECTIONS. In 2012 McKibben Demographic Research established employment trends and projections based on 2010 Census data and other data sources for the Fargo-Moorhead Metropolitan Statistical Area (MSA). Consistent with population projections, McKibben Demographic Research 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 12 documents the 'High Growth' job/employment projections per jurisdiction. Figure 8 demonstrates the spatial distribution of projected employment growth between 2010 and 2040 as allocated by each jurisdiction based on anticipated growth and variables such as:

(a) Designated growth areas per adopted city Future Land Use Plans and areas experiencing and/or anticipated to experience development pressure;

(b) Relationship to existing city boundaries and municipal services (water, sewer, etc.); and

(c) Existing infrastructure (transportation, flood protection, access, etc.).

Table 12: Employment and Jobs by Jurisdiction

Jurisdiction	2000	2010	2020	2040
Cass County (non-urban)	3,310	1,423	1,501	1,591
Clay County (non-urban)	3,372	836	923	894
Fargo	77,502	91,071	97,975	121,700
West Fargo	6,061	9,010	12,294	15,811
Moorhead	13,375	14,724	17,848	20,863
Dilworth	1,205	1,202	1,395	1,571
Metro (Total)	104,825	118,266	131,935	162,429

Source: McKibben Demographic Research (2012)

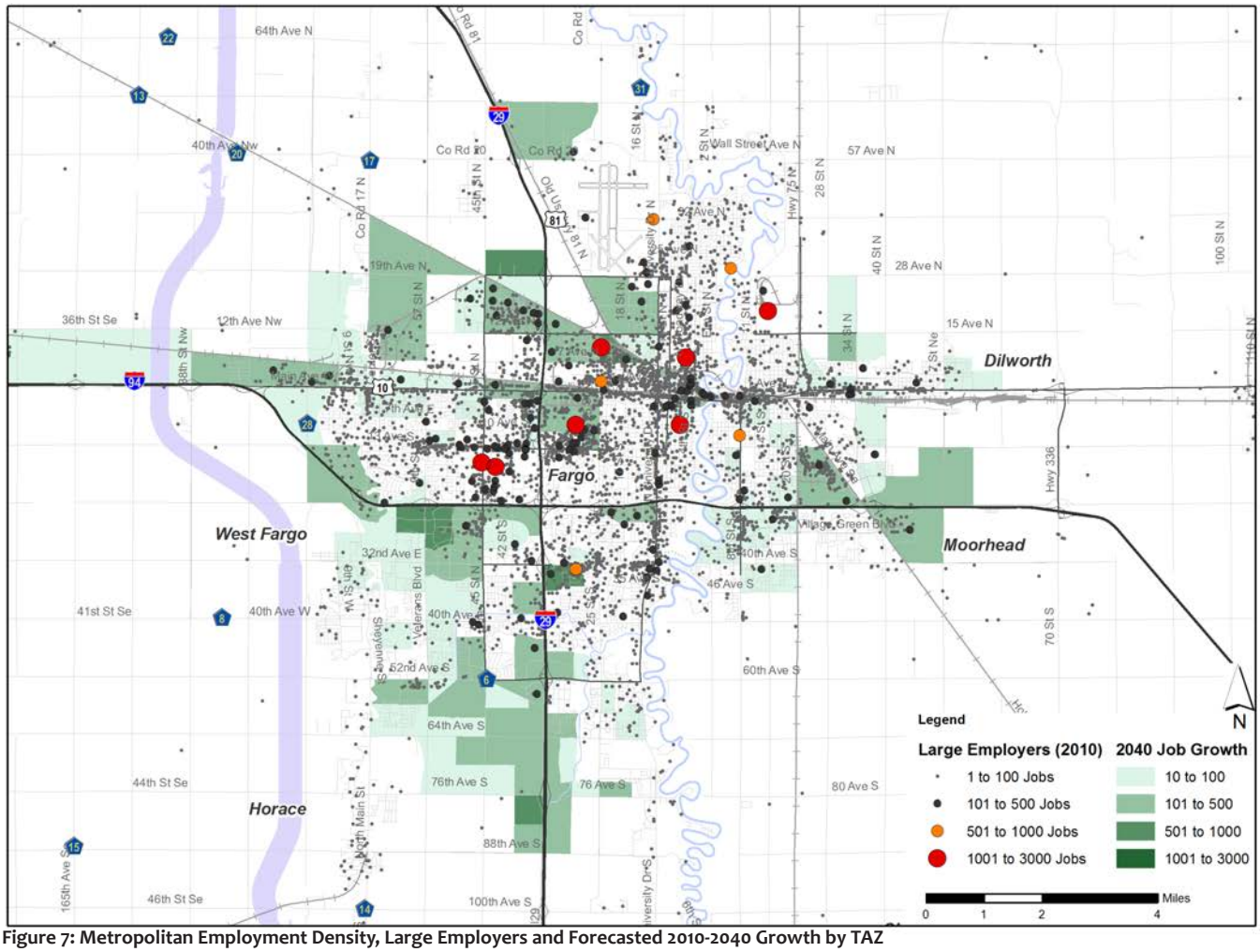


Figure 7: Metropolitan Employment Density, Large Employers and Forecasted 2010-2040 Growth by TAZ

Source: Metro COG (2014)

GEOCODED 2010 EMPLOYMENT DATA. Figure 7 displays all 2010 geocoded employment data by physical location, with any location over 100 employees specifically highlighted. This data is valid as of May 2010.

JOBS DATA SUMMARY. Overall, employment for the Metropolitan Area has been projected to grow significantly under the defined 2040 planning horizon, from 118,266 in 2010 to 162,429 in 2040. This is representative of a 37 percent increase over a 30 year timeframe or 1.24 percent annually.

Figure 7 identifies 'large employers' within the Metropolitan Area based on 2010 jobs data and shows all geocoded employment locations at the MPA geography. On a five-year timeframe, Metro COG works through numerous activities in anticipation of the next Long Range Transportation Plan. One activity that occurs early in the process is acquisition of metropolitan jobs data that informs various aspects of the base year model, in this case 2010. Access to this jobs data is critical to certain model calibration activities and is an interesting analysis tool from a transportation planning perspective as it can be used to identify concentrations of jobs and major employers within the Metropolitan Area while also providing the ability to overlay data with anticipated employment growth areas.

Land Use.

EXISTING LAND USE DATA. In 2011, Metro COG updated its existing land use map to coordinate with completed aerial photography for the metropolitan planning area. Parcel level land data was collected from local jurisdictions and categorized into the various land use categories that were defined by Metro COG. Table 13 shows the 2011 metropolitan land use inventory by jurisdiction. A map featuring existing land use data can be made available from Metro COG upon request.

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

ACCURACY. As noted within Table 13 unaccounted acreage within the 2011 existing land use map is identified as approximately 14 percent of the total incorporated acreage within the Metropolitan Area (47,029 acres of 54,386.33 acres). As Metro COG updates this information, this disparity will become much less significant as urban fringe land uses, municipal boundary, and other issues are rectified and clarified.

EXISTING LAND USE COMPARISON BY DECADE. Over the last four decades the Fargo-Moorhead Metropolitan Area has realized significant changes from a land use, land pattern, density, and growth perspective. These changes impact the transportation system and are therefore an important consideration as the Metropolitan Area completes project programming and develops long range strategies to capitalize on opportunities and strategies to address system needs, issues, and limitations. Outlined within Table 14 is a land use comparison table which includes data from 1977, 1986, 1991, and 2010.

Table 13: Metropolitan Area Land Use Acreage and Percentages

Jurisdiction	Fargo	West Fargo	MHD	Dwth	Total	% of Metro Total
Commercial	1,197	211	263	66	1,737	3.7%
Industrial	1,730	762	603	11	3,106	6.6%
Single-Family	4,679	1,874	2,261	273	9,087	19.3%
Multi-Family	1,161	226	278	28	1,693	3.6%
Other/Rural Residential	217	16	37	4	274	0.6%
Manufactured Housing	177	86	53	36	352	0.7%
Office/Bank	648	27	106	3	784	1.7%
Institutional/ Community/ Public Assembly	850	200	322	15	1,387	2.8%
Schools / Univ.	1,076	110	433	3	1,622	3.4%
Parks / Rec.	2,223	336	1,198	39	3,796	8.1%
Ag / Vacant	8,472	2,965	4,164	911	16,512	35.3%
Transportation / Utility	3,027	2,426	807	419	6,679	14.2%

Un-Identified Acreage	**54,386.33-47,029=7,357.33; see below for explanation**

Total (2008)	**25,457**	**9,239**	**10,525**	**1,808**	**47,029**	**86.47%**

Source: Metro COG (2014)

Table 14: Existing Land Use Comparison by Classification and by Decade

Land Use	1977 (Ac.)	% of Metro Total	1986 (Ac.)	% of Metro Total	1991 (Ac.)	% of Metro Total	2010 (Ac.)	% of Metro Total
Single-Family Residential	3,862	18%	4,814	16.5%	5,607	17.5%	9,713	18%
Multi-Family Residential	636	3%	1,031	3.5%	1,267	4%	1,693	3%
Industrial	535	2.5%	661	2.5%	750	2.5%	3,106	6%
Commercial	1,375	6.5%	2,211	7.5%	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	7.5%	3,796	7%
Agricultural / Vacant / No code	5,728	26.5%	7,460	26%	7,183	22.5%	16,512	30%
Institutional / Community Facilities / Public	1,146	5.5%	1,778	6%	2,623	8%	3,009	5.5%
Total Acreage	21,560	100%	29,092	100%	31,905	100%	54,386	87%

° Single-Family includes 'mobile' and 'manufactured' homes;
***** A majority of the unaccounted for acreage (approximately 14%) is believed to be a component of this category;
Source: Metropolitan Land Use Element (1978), Metro COG; 1986 Metropolitan Land Use Report, Metro COG; 1991 Metropolitan Land Use Report, Metro COG and 2012 Metropolitan Profile (2008 Existing Land Use data)

Table 15: Metropolitan Population and Persons Per Acre

Year	Jurisdiction	Population	Acres	Persons Per Acre	Persons Per Sq. Mi
1977	FM Metro	90,734 (approximately)	21,560	4.2	2,694
1986	FM Metro	110,431	29,092	3.79	2,429
1991	FM Metro	121,255	31,905	3.80	2,432
2010	FM Metro	173,468	54,386	3.68	2,041
2010	Bismarck, ND	61,272	20,102	3.04	1,950
2010	St. Paul, MN	285,068	35,826	7.95	5,092
2010	Minneapolis, MN	382,578	36,726	10.40	6,667
2010	Lincoln, NE	258,379	58,112	4.44	2,845
2010	Kansas City, MO	459,787	203,520	2.25	1,445
2010	Austin, TX	790,390	173,952	4.54	2,907
2012	United States	313,914,040	2.42B	0.13	82.82

Source: Metro COG (2014), U.S. Census Bureau
Acreage to Square Mile Conversion Factor: 1 ACRE = .0015625 SQUARE MILES

PERSONS PER ACRE BY DECADE. Based on documented population and land use data Table 15 depicts persons per acre by decade for the Metropolitan Area. Additionally, for comparison purposes only, Metro COG has included persons per acre calculations for other municipalities which have similar characteristics to Fargo-Moorhead and communities which may have different land use, development patterns, infrastructure opportunities or constraints, and growth strategies.

INCORPORATED ACREAGE BY JURISDICTION. According to 2013 data, the five-city incorporated limits encompassed a total of 62,254.42 acres. As noted in previous sections of the profile the Fargo-Moorhead Metropolitan Area has realized significant change over the last few decades with respect to population, transportation, land use, and municipal boundary adjustments. Growth and development pressure is typically the impetus for boundary adjustments and annexations and Table 16 sets forth reported acreage adjustments by means of annexation or other procedures from 2001 to 2013.

Table 16: Incorporated Acreage by Jurisdiction (Boundary Changes from 2001 to 2013 and Total Acreage)

City	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Jurisdictional Acreage
Fargo								452.1	0	0	0	0	132.8	30,885.33
West Fargo	13.8	912.2	684.6	0	3,026.4	62	0	0	296.4	0	0	0	25.82	9,727.44
Moorhead	1,062.4	134.4	224	1,587.2	0	544	128	1,267.2	0	0	0	0	0	12,621.54
Dilworth								145.57	0	0	0	0	0	2,055.38
Horace						0	0	5,536.16	0	0	0	0	0	6,964.73

Source: 2010 Census Urbanized Area; 2013 Jurisdictional Acreage reported by municipality

Geographic Information Systems.

GEOGRAPHIC INFORMATION SYSTEMS. The use of GIS in the Metropolitan Area began in the late 1980's when Metro COG initiated a process to establish a strategy to implement automated mapping. In 1992 Metro COG completed a Metropolitan GIS Feasibility Study, which set the framework for implementation with a focus on jurisdictional needs and a conceptual 'data' organizational structure. As a new surface transportation bill was effectuated in 1991 (ISTEA) additional transportation planning funds became available and a percentage was utilized to bolster the development of GIS systems in the Metropolitan Area, which was carried forward into the late 1990's. In 1993 and 2000 Metro COG contracted with private consulting companies to further analyze and improve system design, databases, data sharing approaches, and to bring the system under a more comprehensive and cohesive umbrella. Both the 1993 study and the 2000 study set forth a data model that identifies the files necessary to support Metro COG's transportation planning program. As data needs, definitions, program requirements, and priorities changed it has been increasingly more difficult to ensure consistent data sets across jurisdictional boundaries, especially given a majority of this data is created and maintained by the individual jurisdictions. Pursuant to the 2000 Advanced Metropolitan GIS Plan "one of the overriding goals for the region should be for the jurisdictions in the Metropolitan Area to adopt common formats and coordinate systems..." to facilitate improved accuracy, consistency, and confidence within core Metro COG applicable datasets. The following matrix sets forth critical data needs, responsibilities, updating parameters, timeframes, archive notations, and a brief definition of the data's intended use. The intent of this section is to report and track updates and the context of the matrix may change year-to-year as deemed appropriate by the Metropolitan GIS Committee and Metro COG program needs.

Table 17: GIS Data Model in support of Metro COG's Transportation Planning Program

Critical GIS Datasets by Category	Update Frequency (displayed)	Data Provider / [Maintenance]	Data Use / Definition	Timeframe (applicability through)	Attributed (base data)	Complete	Web
ROADWAY & TRANSPORTATION DATA							
Roadway Centerline	Annually (profile, LRTP)	Clay / Cass (merged by Metro COG) [Clay & Cass Counties]	Mapping	December 31	Road Name, Type, State, County, Length (Miles/Feet), Surface Type, Functional Class, Maintenance, Ownership, ROW	x (2013 archive)	County
Functional Classification	Annually (profile, LRTP)	Requests submitted w/ profile and documented by Metro COG annually. Formal DOT and FHWA approval as applicable, 3 to 5 years. [Metro COG]	Mapping, TIP	December 31	Centerline Name, Jurisdiction, State, Existing Functional Classification (per jurisdictions), Future Functional Classification (per LRTP), Length (Miles/Feet), NHS designation, Truck Route, Pavement Width, ROW	x (needs to be rectified w/ DOT networks) UPWP 2013/2014 project (2013 archive)	Metro COG
Regionally Significant Transportation Infrastructure (RSTI)	Annually or as study's permit (LRTP)	Data and possible changes tracked w/ profile submissions [Metro COG]	Mapping, LRTP	December 31 or as applicable	Centerline Name, Existing & Future Functional Classification, Jurisdiction, State, Length (Miles/Feet), NHS, Truck Route, Pavement Width, ROW, Beltline	x (per March 2011 Traffic Ops / Incident Mgmt. Study) (2011 archive)	Metro COG
Metro-wide Traffic Counts	5 years (profile, LRTP) - Updated version completed in Feb 2012 w/ missing 2011 counts	[Metro COG]	LRTP, Travel Demand Model Calibration / Forecasts, Mapping, Corridor Study's, Etc.	n/a	Vehicle AADT, Location ID, Centerline Name, Direction (if applicable), Truck Count or AADT	x (M: Traffic Counts, 2013)	Metro COG
Signal / Intersection Control	Annually (LRTP)	Network changes reported w/ profile [Metro COG]	LRTP, Travel Demand Model Calibration / Forecasts, Mapping	December 31	Location ID or Node ID, Intersection Control	x (see approved 2010 TDM network) (M: Modeling, 2012)	Metro COG

Table 17: CONTINUED

Critical GIS Datasets by Category	Update Frequency (displayed)	Data Provider / [Maintenance]	Data Use / Definition	Timeframe (applicability thru)	Attributed (base data)	Complete	Web
ROADWAY & TRANSPORTATION DATA							
Intelligent Transportation System (ITS) Infrastructure	Annually (profile, LRTP)	Network changes reported w/ profile [Metro COG]	LRTP, Mapping, Corridor Study's, Sub-Area Study's	December 31	Jurisdiction, System, Location ID, Operating Status	x (2013 archive)	Metro COG
Transportation Analysis Zones (TAZ)	5 years concurrent w/ LRTP update (LRTP)	[Metro COG & ATAC]	LRTP, Travel Demand Model Calibration / Forecasts, SE database, Mapping, Corridor Study's, Etc.	Concurrent w/ LRTP updates (next LRTP update scheduled in 2014)	TAZ ID, TAZ acreage, Socio-Economic Allocations (base and projection years)	x (completed in 2012) (2013 Archive)	Metro COG
Travel Demand Model (TDM)	5 years concurrent w/ LRTP update (LRTP)	[Metro COG & ATAC]	LRTP, Travel Demand Model Calibration / Forecasts, Corridor Study's	Concurrent w/ LRTP updates (next LRTP update scheduled in 2014)	Link ID, Speed, Intersection Control, Link Direction, Jurisdiction, Functional Class, VMT, Lanes, Turn Lanes, Link Capacity, Total Volume, Peak Volume, Delay, Total Volume/ Capacity, Modeled ADT	2005, 2015, 2035 (M: Modeling/2005 Model)	Metro COG (by request only)
TRANSIT DATA							
Fixed Route	Annually or concurrent w/ changes (profile, TDP)	MATBUS [City of Fargo]	TDP, Mapping	December 31 or as necessary	Route ID, Route Length (Miles/Feet), State, Service Description	x (2014 archive)	City of Fargo
Transit Shelter Locations	Annually (profile, TDP)	MATBUS [City of Fargo]	TDP, Mapping	December 31	Shelter ID, Jurisdiction, Location ID, Location Address, Shelter Size	x (2014 archive)	City of Fargo
Transit Transfer Point Locations	Annually (Profile, TDP)	MATBUS [City of Fargo]	TDP, Mapping	December 31	Transfer Point ID, Jurisdiction, Location ID, Location Address, Shelter Size (if applicable)	x (2014 archive)	City of Fargo
OTHER - LAND USE, SOCIO-ECONOMIC, PLANNING ETC.							
PARCEL	Annually	Clay / Cass (merged by Metro COG) [Clay & Cass Counties]	Mapping	December 31	Parcel ID or #, Acreage, City, Tax Name, Tax Address, School District, Watershed District, Legal Description	X (2014 archive)	County or City
Jurisdictional Boundaries	Annually (profile)	Clay / Cass (merged by Metro COG) [Clay & Cass Counties]	Mapping	December 31	City, State, Acreage/Sq. Miles	X (2013 archive)	County
Urban Area Boundary / Federal Aid Urban Area Boundary	Decennial Census or as necessary	Census Bureau [Metro COG]	Mapping, TIP	n/a	Acreage	X (2013 archive)	Metro COG
Metropolitan Planning Area Boundary	Decennial Census or as necessary	Census Bureau (UZA), CFR, LRTP [Metro COG]	Mapping	n/a	Acreage	X (2013 archive)	Metro COG

Table 17: CONTINUED

Critical GIS Datasets by Category	Update Frequency (displayed)	Data Provider / [Maintenance]	Data Use / Definition	Timeframe (applicability thru)	Attributed (base data)	Complete	Web
OTHER - LAND USE, SOCIO-ECONOMIC, PLANNING ETC.							
Sections	As Necessary	Clay / Cass (merged by Metro COG) [Clay & Cass Counties]	Mapping	As Necessary	Section ID, TWP, Range, Township Name, Acreage/Area Calculation	x (2013 archive)	County
Townships	As Necessary	Clay / Cass (merged by Metro COG) [Clay & Cass Counties]	Mapping	As Necessary	TWP ID, Acreage/Area Calculation	x (2013 archive)	County
Aerial Photography	3 years	Contracted Consultant	Mapping	May 2014	n/a	2011 (May) (Network)	County or City
Jobs Data / Large Employers	5 years concurrent w/ LRTP update (LRTP)	InfoSource USA [Metro COG]	Travel Demand Model Job Allocation (base year) to TAZ's, Large Employer Identification	2015	Employee Totals, Employment Location/Address, XY Coordinates, NAICS & SIC codes	2010 (2013 archive, see 2010 TAZ Boundaries & Allocations)	Metro COG (by request only)
Existing Land Use Data	3 years concurrent w/ Aerial Photo Projects (profile, LRTP)	Metro COG (use of county parcel files) [Metro COG]	Mapping, Travel Demand Model Base Year Calibration (verification of HH/job allocations by TAZ)	2008	Parcel ID or #, Existing Land Use Classification, Acreage	X (needs to be updated per 2011 Aerial Photography) (N:Land Land Use/2009)	Metro COG (profile)
Future Land Use Data	Annually (profile, LRTP)	Base data is formulated to represent jurisdictional future land use plans or growth plans, amendments reported w/ profile [Metro COG]	Travel Demand Model Forecast Year SE data allocations (allocation of HH/jobs by TAZ), Corridor Study's, Sub-Area Plans, Etc.	2011	Parcel ID or #, Future Land Use Classification, Acreage	X (minus 2006-2010 City of Fargo Growth Plan Amendments) (N:Land Land Use/2009)	Metro COG (profile)
Environmental Justice	3 years w/ ACS data or 10 years w/ decennial data	Census Bureau, American Community Survey (ACS), Metro COG [Metro COG]	TIP, LRTP, UPWP, modal plans, sub area study's	2010 (minority) and 2009 (low income) - next update 2013/2014	Significant Concentrations of Low Income and Minority Populations	X (2011 archive)	Metro COG
Metro Schools	Annually (as of first day of fall semester)	School District, Metro COG [Metro COG]	Mapping	January 2011	Shape ID, Jurisdiction, Acreage, School Name, Physical Address, Enrollment, Grade Range, Employment, Type (Public/Private),	x (2012 archive)	Metro COG
BICYCLE AND PEDESTRIAN DATA							
Existing Bikeway Network	Annually (Profile)	Network changes reported by jurisdictions w/ profile [Metro COG]	Mapping	December 31	Facility ID, Facility Description (shared use path, signed shared roadway, bike-lane, shoulder, Length (Miles/Feet), Jurisdiction	x (2013 archive)	Metro COG
Sidewalks / Pedestrian Facility Existing Network	Annually (Bike/Ped Plan)	Network changes reported by jurisdictions w/ profile [Metro COG]	Mapping	May 2011 (per Aerial Photography)	Facility ID, Facility Description (sidewalk, shared use path), Facility Location (one-side or two-side), Length (Miles/Feet), Jurisdiction	x (2011 archive)	Metro COG

Source: Metro COG (2014)

ROADWAY SYSTEM

Overview:

Every construction season, the roadway network in the Fargo-Moorhead Metropolitan Area undergoes change. This section of the profile is intended to document these network changes as well as certain data collection activities for the following purposes: (a) to monitor TIP implementation, (b) to provide a tracking mechanism for travel demand model development purposes, (c) to monitor the accuracy of projections and assumptions made within the LRTP, and (d) to provide a means to document certain data collection activities and dataset updates that are critical to Metro COG's program.

Functional Classification:

The functional classification of a roadway or corridor is an indication of its vehicle capacity and overall purpose. Functional classifications are described in detail as follows:

Collectors are a low volume road which 'collect' vehicle trips from residential or local streets and eventually feed into minor arterials or in certain circumstances principal arterials. Collectors provide service to important trip generators such as schools, recreational areas, and employment centers. A variety of traffic control devices are found at collector intersections throughout the Metropolitan Area to improve safety and access to other roadways. Examples of collectors within the Metropolitan Area include: 7th Avenue W (West Fargo), 17th Avenue S (Fargo), 4th Avenue S (Moorhead) and 8th Avenue NE (Dilworth).

Minor Arterials are higher volume roadways that interconnect with principle arterials and provide access to more developed areas. Minor arterials often accommodate higher speed limits than residential or local roadways and may feature additional travel lanes to facilitate vehicular volumes. Examples of minor arterial roadways within the Metropolitan Area include: 13th Avenue S (West Fargo, Fargo), 34th Street S (Moorhead) and 15th Avenue N (Dilworth).

Principal Arterials provide an integrated network of routes that serve major centers of activity. These roadways are high traffic volume corridors and are generally intended to handle increased trip length. Access to principal arterials is limited or restricted so as to facilitate higher traffic speeds and improved vehicular flows to destinations.

METROPOLITAN ROADWAY NETWORK. Roadways designated under the functional classification system (collectors, minor arterials, principal arterials) 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 18 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. In 2013, Metro COG worked closely with local jurisdictions and both NDDOT and MnDOT to review and establish an adjusted Urban Area (see Figure 2 on page 9 for additional information), and also coordinated to work on an updated functional classification network for the FM Metropoltian Area. Metro COG will continue to work with both DOT's to finalize a formal approval on this update functional class network. Subsequently, work needs to be done to coordinate and update DOT maps to ensure consistency between both Metro COG and DOT maps. The actual approved DOT/FHWA version, as shown in Figure 8, is only processed periodically, with the last update completed April 19, 2007.

Table 18: Functional Classification, Miles, and Jurisdiction

Jurisdiction	Functional Classification	Length (Miles)	% of Total Network Length	LRTP 2009 Length (Miles)
Fargo	Collector	50.63	9%	53.15
	Minor Arterial	78.24	14%	76.6
	Principal Arterial	36.50	7%	84.3
	Interstate	45.98	8%	
	Local	341.49	62%	337.64
	Total	552.84	100%	551.69
West Fargo	Collector	21.89	13%	20.77
	Minor Arterial	20.74	12%	19.13
	Principal Arterial	4.24	3%	9.69
	Interstate	7.21	4%	
	Local	113.77	68%	104.38
	Total	167.85	100%	153.97
Moorhead	Collector	24.43	11%	22.82
	Minor Arterial	37.05	16%	37.11
	Principal Arterial	12.26	5%	21.38
	Interstate	10.87	5%	
	Local	144.59	63%	145.68
	Total	229.20	100%	226.99
Dilworth	Collector	3.07	11%	4.27
	Minor Arterial	1.97	7%	1.51
	Principal Arterial	4.14	14%	4.15
	Interstate	0	0%	
	Local	19.50	68%	22.44
	Total	28.68	100%	32.37
Horace	Collector	5.11	12%	x
	Minor Arterial	3.99	10%	x
	Principal Arterial	0	0%	x
	Interstate	0	0%	
	Local	32.60	78%	x
	Total	41.70	100%	x
Total	Collector	105.13	10%	101.01
	Minor Arterial	141.99	14%	134.35
	Principal Arterial	57.14	6%	119.51
	Interstate	64.06	6%	
	Local	651.95	64%	610.54
	Total	1,020.27	100%	965.41

Jurisdiction	Functional Classification	Length (Miles)	% of Total Network Length
Cass County	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%
Clay County	Collector	90.57	16%
	Minor Arterial	34.49	6%
	Principal Arterial	18.20	3%
	Interstate	21.37	4%
	Local	404.51	71%
	Total	569.14	100%

Jurisdiction	Functional Classification	Length (Miles)	% of Total Network Length
Metropolitan Planning Area (MPA)	Collector	287.29	12%
	Minor Arterial	196.29	8%
	Principal Arterial	57.14	2%
	Interstate	142.39	6%
	Local	1,632.01	72%
	Total	2,315.12	100%

Source: Metro COG (2014)

- Classification totals are by geographic area and not specific to jurisdictional ownership, roadway maintenance responsibilities, or any other authority

- Mileage totals refer to CENTERLINE miles (2012) and not lane miles or segment miles. Roadways physically divided by a median or other barrier produce centerline length data in each direction traveled.

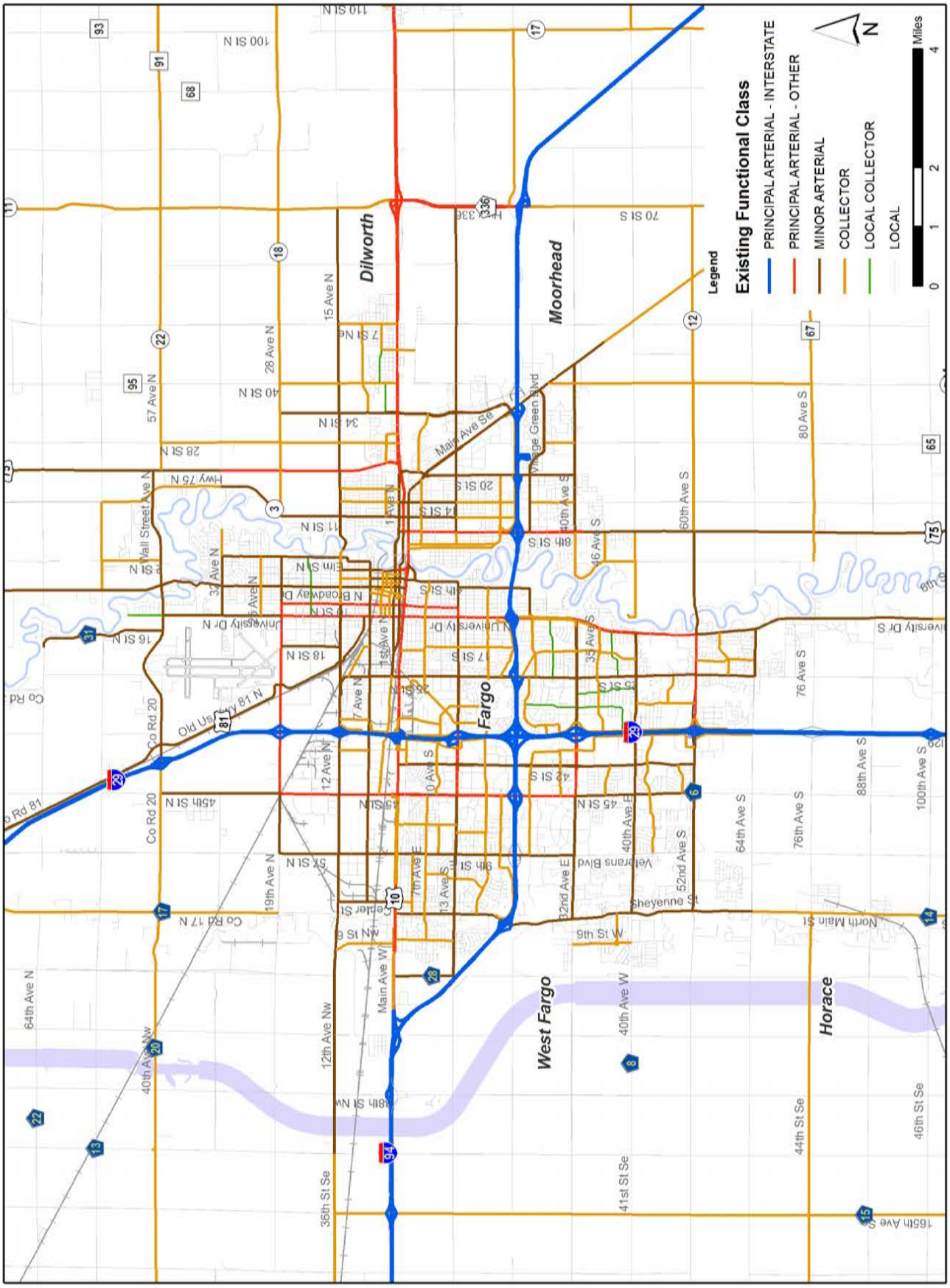


Figure 8: Existing Functional Classification Network

Source: Metro COG (2014)

Table 18 includes a column that depicts functional classification mileage pursuant to the 2009 adopted LRTP. During the profile updates from 2010 to 2012, Metro COG has closely reviewed the functional classification database and corresponding GIS shapefile while working closely with jurisdictions to ensure reporting accuracy. Inconsistencies between 2013 profile figures and adopted 2009 LRTP figures are present. Urban Area totals remain close as do jurisdictional totals. However, noticeable disparity exists in collector and minor arterial calculations in certain jurisdictions. This is largely due to shapefile errors, calculation errors, or clarity in calculations and recent changes by jurisdictions. Principal arterial, interstate and local roadway calculations remained relatively consistent in the comparisons.

2013 ROADWAY MILES PER CAPITA. Table 19 shows both 'total' and 'local' roadway miles per capita. To a certain extent, these numbers provide some insight into development patterns and trends within each MPA city.

Table 19: Roadway Miles per Capita (2011)

Jurisdiction	Population	'Total' Mileage per 1,000 People	'Local' Mileage per 1,000 People
Fargo	105,549	5.2	3.2
West Fargo	25,830	6.5	4.4
Moorhead	38,065	6.0	3.8
Dilworth	4,024	6.6	4.8
Horace	2,430	17.2	13.4
Urban Area Total	175,898	5.8	3.7

Source: Metro COG (2014)

Traffic Counts:

Forty-eight hour traffic volume counts are conducted on a five year cycle to provide base annualized average daily traffic data for use within the regional traffic model calibration process. Further, Metro COG periodically completes twelve hour counts, peak turning movement counts and twenty-four/forty-eight hour volume counts at the request of local jurisdictions to assist in various planning efforts. In 2013 Metro COG and local jurisdictions completed analysis at the locations as identified in Table 20. Table 20 identifies the specific location and the type of count completed. For additional details on these counts contact Metro COG or the corresponding jurisdiction.

In June of 2014, Metro COG's Policy Board adopted Metro COG's 2013 Average Annual Daily Traffic (AADT) Volume Map. This is an update to the 2010 count map which was completed through a coordinated effort with the following agencies and organizations: Metro COG,

Table 20: 2013 Traffic Count Data by Location

City	Location	Type	Completed By:	Count Date
Moorhead	Village Green	Pedestrian Count	Metro Cog	June 2013
Moorhead	Village Green 8th St Train	72 Hour Count	Metro COG	October 2013
Moorhead	13th St between 11th and 12th Ave South	72 Hour Speed Study	Metro COG	September 2013
Fargo	Main Ave at 2nd St at 4th, 7th, 8th, Broadway and University	Peak Hour Turning Movenment Count	Metro COG	October 2013
Fargo	Fargo Courts Plus	Pedestrian Count	Metro COG	July 2013
Fargo	45th St and 44th Ave S	12 Hour Turning Movement Count	Metro COG	October 2013
Fargo	42nd St and 44th Ave S	12 Hour Turning Movement Count	Metro COG	March 2013
Fargo,	42nd St and 18th Ave S	12 Hour Turning Movement Count	Metro COG	October 2013
Fargo	25th Street S between 17th and 20th Ave S	12 Hour Turning Movement Counts	Metro COG	May 2013
Fargo	!st Ave N at 2nd, 4th, 5th, 10th, Roberts, Univ	Peak Hour Turning Movement Countss	Metro COG	October 2013
Fargo	13th Ave S at 36th, 38th, 42nd, and 43 1/2 St		Metro COG	October 2013
Dilworth	Main Street near Railroad Crossing	48 Hour Count	Metro COG	x

Source: Metro COG (2014)

* AADT volumes included within 2010 Traffic Count Map

SRF Consulting Group, Inc., ATAC, NDDOT, and MnDOT. The 2013 count map and associated shapefile (.shp) are available on Metro COG's website. The appendix within this profile includes a copy of the 2013 subarea volume maps.

AUTOMATIC TRAFFIC RECORDER (ATR) COUNTS AND LOCATIONS. 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. MnDOT does not currently have any stations within the boundaries of the MPA.

Where can I find the data?

MnDOT – ATR data and location maps can be found on the Minnesota Department of Transportation website at www.dot.state.mn.us.

Table 21: Principal Arterial (ND) Automatic Traffic Recorder Counts

STATE OF NORTH DAKOTA
AUTOMATIC TRAFFIC RECORDER DATA BY MONTH
AVERAGE DAILY TRAFFIC AND PERCENT CHANGE BY STATION

URBAN INTERSTATE 94

DIRECTION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STATION: 217 - FARGO (U)														
LOCATION: HIGHWAY 94 - RED RIVER BRIDGE														
EAST	2013	28695	30635	31018	33153	34503	34196	32183	32279 *	32602 *	35790	34191	31156	32533
	2012	28819	30647	31512	33627	34808	35292	35495	35569	34658	34561	31938	32603	33294
	% CHG MO.	-0.4%	-0.0%	-1.6%	-1.4%	-0.9%	-3.1%	-9.3%	-9.2%	-5.9%	3.6%	7.1%	-4.4%	
	% CHG YR.	-0.4%	-0.2%	-0.7%	-0.9%	-0.9%	-1.3%	-2.5%	-3.4%	-3.7%	-3.0%	-2.1%	-2.3%	
WEST	2013	29787	31477	31906	34484	35554	36549	33753	32279 *	32602 *	35568	33606	31166	33144
	2012	30203	31780	32796	35047	36066	36381	36253	36543	36033	35728	32965	33157	34414
	% CHG MO.	-1.4%	-1.0%	-2.7%	-1.6%	-1.4%	-2.3%	-6.9%	-11.7%	-9.5%	-0.4%	1.9%	-6.0%	
	% CHG YR.	-1.4%	-1.2%	-1.7%	-1.7%	-1.6%	-1.7%	-2.5%	-3.7%	-4.4%	-4.0%	-3.5%	-3.7%	
EAST & WEST	2013	58482	62112	62924	67637	70057	69745	65936	64558	65204	71358	67797	62321	65678
	2012	59022	62437	64308	68674	70874	71673	71748	72112	70691	70289	64903	65760	67708
	% CHG MO.	-0.9%	-0.5%	-2.2%	-1.5%	-1.2%	-2.7%	-8.1%	-10.5%	-7.8%	1.5%	4.5%	-5.2%	
	% CHG YR.	-0.9%	-0.7%	-1.2%	-1.3%	-1.3%	-1.5%	-2.5%	-3.6%	-4.1%	-3.5%	-2.8%	-3.0%	

URBAN INTERSTATE 29

DIRECTION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STATION: 235 - FARGO (U)														
LOCATION: HIGHWAY 29 - NORTH OF 12TH AVE.														
NORTH	2013	13961	15185	15534	15975	16823	17263	16802	16846	16999	16891	16455	15160	16157
	2012	13890	14598	15192	15660	16638	16727	16565	16894	16456	16657	15404	15440	15843
	% CHG MO.	0.5%	4.0%	2.3%	2.0%	1.1%	3.2%	1.4%	-0.3%	3.3%	1.3%	6.8%	-1.8%	
	% CHG YR.	0.5%	2.3%	2.3%	2.2%	2.0%	2.2%	2.1%	1.8%	1.9%	1.9%	2.3%	2.0%	
SOUTH	2013	13119	14228	14734	15032	15840	16397	16209	16235	16166	16112	15708	14595	15365
	2012	13167	13767	14342	14625	15747	15809	15854	15837	15548	15818	14521	14614	14971
	% CHG MO.	-0.4%	3.3%	2.7%	2.8%	0.6%	3.7%	2.2%	2.5%	4.0%	1.9%	8.2%	-0.1%	
	% CHG YR.	-0.4%	1.5%	2.0%	2.2%	1.8%	2.2%	2.2%	2.2%	2.4%	2.4%	2.9%	2.6%	
NORTH & SOUTH	2013	27080	29413	30268	31007	32663	33660	33011	33081	33165	32993	32163	29755	31522
	2012	27057	28365	29534	30285	32385	32536	32419	32731	32004	32475	29925	30054	30814
	% CHG MO.	0.1%	3.7%	2.5%	2.4%	0.9%	3.5%	1.8%	1.1%	3.6%	1.6%	7.5%	-1.0%	
	% CHG YR.	0.1%	1.9%	2.1%	2.2%	1.9%	2.2%	2.1%	2.0%	2.2%	2.1%	2.6%	2.3%	

DIRECTION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
STATION: 501 - FARGO (U)														
LOCATION: HIGHWAY 81B - UNIVERSITY AVE. BET 15 AND 15 1/2 AVE.														
NORTH	2013	10813	11150	11240	11989	12074	11724	11687	11681	11927	11929	11357	11086	11555
	2012	11141	11542	11771	12032	12285	12101	11828	11408	11564	11778	11107	11591	11679
	% CHG MO.	-2.9%	-3.4%	-4.5%	-0.4%	-1.7%	-3.1%	-1.2%	2.4%	3.1%	1.3%	2.3%	-4.4%	
	% CHG YR.	-2.9%	-3.2%	-3.6%	-2.8%	-2.6%	-2.7%	-2.4%	-1.9%	-1.3%	-1.1%	-0.8%	-1.1%	
SOUTH	2013	11661	12098	11996	12802	12980	13002	12862	12544	12961	12909	12441	11961	12518
	2012	11878	12336	12591	12915	13200	12983	12959	12841	12725	12834	11986	12609	12653
	% CHG MO.	-1.8%	-1.9%	-4.7%	-0.9%	-1.7%	0.3%	-0.7%	-2.3%	1.9%	0.6%	3.8%	-5.1%	
	% CHG YR.	-1.8%	-1.9%	-2.8%	-2.3%	-2.2%	-1.8%	-1.6%	-1.7%	-1.3%	-1.1%	-0.7%	-1.1%	
NORTH & SOUTH	2013	22474	23248	23236	24791	25054	24726	24549	24225	24888	24838	23798	23047	24073
	2012	23017	23878	24362	24847	25485	25064	24787	24249	24289	24612	23093	24200	24332
	% CHG MO.	-2.4%	-2.6%	-4.6%	-0.6%	-1.7%	-1.3%	-1.0%	-0.1%	2.5%	0.9%	3.1%	-4.9%	
	% CHG YR.	-2.4%	-2.5%	-3.2%	-2.6%	-2.4%	-2.2%	-2.0%	-1.9%	-1.3%	-1.1%	-0.7%	-1.1%	

Source: North Dakota 2013 Automatic Traffic Data, North Dakota Department of Transportation, Planning and Asset Management Division, Traffic Data Section

Figure 9: Archived AADT by ATR Station (Total Vehicle AADT and Truck AADT)

Source: North Dakota 2013 Automatic Traffic Data, North Dakota Department of Transportation, Planning and Asset Management Division, Traffic Data Section

City of Fargo – The City of Fargo has numerous ATR stations within the urban area and this data (until recently) was processed and stored by ATAC. ATR locations include the following corridors: 45th Street S, Main Avenue, 25th St S, 12th Avenue N, University Dr, 32nd Ave S and 13th Ave S. Archived ATR data can be accessed upon request.

NDDOT – ATR locations are installed throughout the state of North Dakota on various classes of highways. Locations in Fargo include I-94 at the Red River bridge (urban interstate), I-29 just north of 12th Avenue North (urban interstate) and University Drive between 15th Avenue and 15 ½ Avenue (urban principal arterial). NDDOT prepares a monthly report analyzing ATR data from these stations which is available through the NDDOT website at www.dot.nd.gov. Table 21 outlines ATR counts as documented within the December 2013 NDDOT monthly Automatic Traffic Data report and Figure 9 provides a historical analysis of AADT by ATR station. The monthly reports also include truck average daily traffic by station.

Speed Studies:

Periodically, metropolitan jurisdictions, Metro COG, or DOTs will complete speed studies at the request of residents, as part of a corridor study, as part of a construction project, or as a component to a specific planning effort. In 2013, speed data was collected at the locations as shown within Table 22. For additional information on corridor speed studies or to access archived speed study data, please contact Metro COG.

Table 22: Speed Studies by Location (2013)

City	Location	Completed By:	Count Date
Moorhead	6th Street S/Lexington Ln	Metro COG	June 2013
Moorhead	13th St S between 11th and 12th Ave S	Metro COG	September 2013

Source: Metro COG (2014)

Network Link Modifications:

Every five years, Metro COG develops an update to the regional travel demand model for the purposes of supporting components within the Long Range Transportation Plan and other long range planning efforts. In order to establish volumes for forecast years, Metro COG needs to initially establish a base year model which utilizes metropolitan traffic counts as the basis for calibration. Thus, it is critical that a process exists to track network link modifications that occur each year within the MPA to ensure an efficient process and accuracy as the previous base year network is updated at the end of the five year horizon. Link modifications include changes to the following: intersection control, speed limit, lanage, turn lanes, geometric, centroids, new facilities, and/or changes to the functional class system. These network characteristics are all elements that play a role in the construction and functionality of the base year model as well as forecast year models. Table 23 outlines 2013 link modifications as submitted by member jurisdictions. Tracked over a five year time period this section of the profile will provide the framework for future model network updates, an extremely important component of Metro COG's transportation planning program.

Table 23: Network Link Modifications (2013)

Jurisdiction	Type / Network Characteristic	Description	Location
Moorhead	Modified turn lane	N.B. Right Turn Lane to Convenience Store	N.B. 34th St. South just north of 12th Ave. S
Clay County	Intersection Control & Turn Lanes	Intersection Control & Turn Lanes at Intersection of CSAH 31/33 and TH 10	Intersection of CSAH 31/33 and TH 10
Clay County	Speed Limit	Change to 40 MPH Speed Limit	On CSAH 7 from 300'S of 41st St S to CSAH 52
Clay County	Speed Limit	Change to 50 MPH Speed Limit	On CSAH 52 from 41st St S to CSAH 52
MnDOT	no reported network changes in 2013		
Dilworth	no reported network changes in 2013		
Cass County	no reported network changes in 2013		
Fargo	Traffic Control	New traffic signal	45th St & 30th Ave S
Fargo	Lane Reduction	Lane reduction from 3 to 2 lanes, but added bike lane	Univ Dr - 8th Ave N to 4th Ave N
Fargo	Link	1-way to 2-way conversion	1st Ave N - 2nd St to Univ Dr
Fargo	Link	1-way to 2-way conversion	NP Ave - 4th St to Univ Dr
NDDOT	Lighting	Lighting System restoration	West Fargo 13th Ave E from Sheyenne St to 17th St E
NDDOT	Signals	Revise traffic signals	Intersection of 52nd Ave and Bishops Boulevard

Source: Metro COG (2014)

2013 Transportation System:

OVERVIEW . Pursuant to initiatives set forth within MAP-21, Metro COG annually tracks efforts by local jurisdictions respective to improvements and changes to the transportation network. Roadway system changes include: reconstruction, rehabilitation and maintenance projects, capacity changes and other activities (i.e. corridor preservation, ROW acquisition) as reported by area jurisdictions. The information in the following tables is intended to summarize and document TIP implementation, as well as regionally significant and locally funded projects that are not necessarily discernible by reviewing the federally mandated Transportation Improvement Program or Metropolitan Transportation Plan.

Table 24: Preservation of Existing Transportation Facilities - Transportation System Management Reported by Jurisdictions in 2013.

Jurisdiction	Project Description	TIP Project No. / Local
Fargo	Seal Coat on 40th St - Main to 13th Ave S	Local
Fargo	Seal Coat on 17th Ave S - 42nd St to 45th St	Local
Fargo	Mill & Overlay 32nd St - 26th Ave S to 32nd Ave S	Local
Fargo	Mill & Overlay 35th Ave S - University Dr to 28th St	Local
Fargo	Mill & Overlay 18th St - 32nd Ave S to 35th Ave S	Local
Fargo	Seal Coat 40th Ave S - 45th St to Veterans Blvd.	Local
Fargo	Seal Coat 47th St - 40th to 1/2 Mile	Local
Fargo	28th St - 32nd Ave S to 37th Ave S	Local
Fargo	Convert NP and 1st Avenue North from one-way to two-way operations between University Drive and 2nd Street	416025/Local
NDDOT	CPR, Replace Approach Panels, Structural, Structure Paint, Abutment Repair, Guardrail & Incidentals on I-29 & I-94 Interchange; I-94 Pedestrian overhead bridge 2 miles east of I-29; 1 mile west of 45th St to the Red River, both bounds	913020/913040/913041
NDDOT	Drainage improvements on 52nd Ave Interchange w/I-29	Local
Moorhead	City-wide Striping	Local
Moorhead	Bit. M/O, ADA Imps., Signal Imps. (STP#1401-166) - 8th St S/Main Ave/TH 10 (Center Ave)	812050
Moorhead	IMS (Infrastructure Management Systems) - Pavement widths and Pavement Rating index for northeast Moorhead	Local
Clay County	Mill & Overlay CSAH 17 from CSAH 12 to TH 10	Local
Clay County	Mill & Overlay CSAH 2 from CSAH 21 to 1 mile East of CSAH 11	Local
Clay County	Overlay CSAH 31 from CSAH 10 to CSAH 12	Local
Clay County	Mill & Overlay CSAH 31 from CSAH 10 to CSAH 12	Local
Cass County	Maintenance Overlay on CR 4 from CR 11 to CR 81	113020
MnDOT	Mill and Overlay from US 10 bridge to the west jct. of US 75/US 10. ADA and signal improvements from the US 10 bridge to the jct. of US 10/34th Street. ADA and signal improvements from jct. of US 75/US 10 to 40th Avenue South.	812050
Cass County	Maintenance Overlay on CR 4 from CR 11 to CR 81	113020

Source: Metro COG (2014)

Table 25: Construction / Major Rehabilitation Projections reported by jurisdictions as completed during 2013.

Jurisdiction	Project Description	TIP Project No. / Local
Fargo	Reconstruction to Concrete on 32nd Ave N from University to Broadway	413060
Fargo	Reconstruction of Veterans Blvd. to 4 lane from 32nd Ave S to 40th Ave S	413033A/Local
Fargo	23rd Ave S - 55th St to 51st St	Local
Fargo	51st St - 23rd Ave S to Amber Valley Parkway	Local
Fargo	Veterans Blvd - 2 Lane to 4 Lane Divided Arterial	Local
Fargo	Reconstructed 32nd Ave N from Univ Dr to Broadway	Local
Moorhead	Intersection Improvements at 50th Avenue S and 3rd Street	512085/Local
Moorhead	Rivershore Drive Imps / I-94 Clearence R'qments on Brookdale Road to Brookdale Ave. (I-94 Bridge crossing)	Local
Moorhead	Horizon Shore 6th Addition - Sanford Hospital - 40th St at 28th Ave S	Local
Moorhead	Southfield 2nd Addition - 44th Ave S/14th St	Local
Clay County	Reconstruction of CSAH 19 from N Limit of Glyndon to CSAH 18	Local
Clay County	Reconstruction of CSAH 31 from S Limit of Hawley to TH 10	Local
Clay County	Reconstruction of CSAH 33 from TH 10 to Main St in Hawley	Local

Source: Metro COG (2014)

Table 26 Preservation or ROW Acquisition Activities. Table 26 identifies right-of-way preservation or right-of-way acquisition activities as reported by jurisdictions during 2012.

Jurisdiction	Project Description	TIP Project No. / Local
Moorhead	Platting Trails at Stonemill Estates - TH 75 / 46th Ave. S	Local
Moorhead	Platting MCCARA 4th Addition - 42nd St./34th Ave. S	Local
Moorhead	Platting Honey Badger Addition - 1st Ave N/15th St	Local
Clay County	ROW Acquisition on CSAH 19 from N Limits of Glyndon to CSAH 18	Local
Clay County	ROW Acquisition on CSAH 31 from S Limits of Hawley to TH 10	Local
Clay County	ROW Acquisition on CSAH 33 from TH 10 to Main St in Hawley	Local
West Fargo/Fargo	ROW Aquisition between 32nd and 40th Ave S on Veterans Blvd (Funds 50/50 Split)	413033A/413033/Local
NDDOT	Purchase ROW for the reconstruction of Main Ave from I-94 to Morrison Street in West Fargo. Project includes pedestrian sidewalk and multi use path.	913010

Source: Metro COG (2014)

Table 27: Other Reported Changes, Improvements or System Changes. Table 27 identifies other changes as reported by jurisdictions. These may include transportation security projects (i.e. ITS deployments, anti-ice systems, etc.), transportation safety improvements (i.e. ADA improvements, countdown timers, etc.) or transportation demand management (TDM) improvements (i.e. signal operations, ramp metering, employer programs, congestion management, etc.).

Jurisdiction	Project Type	Project Description	Location	TIP Project No. / Local
West Fargo	Landscaping	Landscaping from Sheyenne St to 45th St	Sheyenne St	313020
West Fargo	Safety	Reconstruct existing lighting system from Sheyenne St to 17th St E	13th Ave E	314010
NDDOT	Safety	New Dynamic Message Sign	I-94 EB at RP 342.783	914020
NDDOT	Safety	New Dynamic Message Sign	I-29 NB at RP 59.275	914030
NDDOT	Safety	52nd Avenue South and Bishops Boulevard Signal Revision	52nd Ave S	913015
Fargo	Safety	Upgrade Traffic Signal Control Software to Centralized Software	City Wide	412041
Fargo	Safety	New Signal	45th & 30th Ave S	Local
Moorhead	Safety	Bit. M/O, ADA Imps., Signal Imps. (STP#1401-166) on 8th St. South / Main Ave. / TH 10 (Center Ave.)	8th St. South / Main Ave. / TH 10 (Center Ave.)	812050
MnDOT	Safety	Addition of cable median guardrail along I-94 from RP 0.312 to RP 7.667 (from approximately the TH 75 interchange to east of TH 336).	I-94	813020

Source: Metro COG (2014)

Vehicle Miles Traveled (VMT):

OVERVIEW. The following sets forth an analysis of VMT from both a national and metropolitan perspective, with associations to population, employment, and fuel costs. VMT is often used (amongst a host of other mechanisms) to measure the relative demand on the transportation network and also for model calibration purposes. For the purposes of this monitoring report, VMT is annualized and refers to the total number of miles traveled by all vehicles during the defined time period.

VMT, POPULATION, AND EMPLOYMENT TRENDS. Data shows that VMT growth began to flat-line nationally in 2005 and 2006, and experienced a decline in 2008 for the first time since 1980. VMT has rebounded with only moderate growth from 2008 to the present day. Further, data shows that 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 illustrate changes in VMT, population, and employment data from 2005 to 2013 as a percentage of 2005 figures for both Fargo-Moorhead Metropolitan Area and the United States.

In respect to national trends, the continual rise in population is juxtaposed with flat-lined or decreasing VMT and instability within employment figures over the same time period.

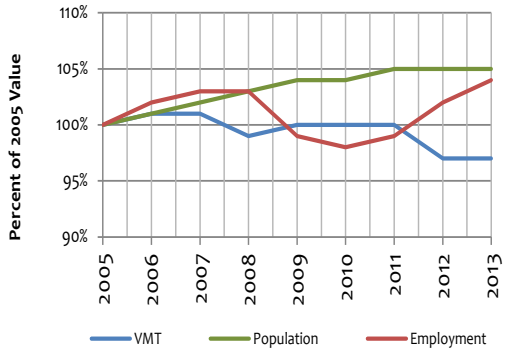


Figure 10: National VMT, Population, and Employment Trends (2005 to 2013)

Source: VMT from FHWA - Highway Statistics Series; Population from Census Bureau, Employment from U.S. Bureau of Labor Statistics (Employment status of the civilian non-institutional population, 1940 to date)

On the local level, data shows a sharp increase in VMT's in 2006 and continues to remain at a much higher percentage relative to 2005 figures in comparison to national trends, although the national flat-lining characteristic from 2007 to 2012 is certainly evident. Of additional importance is the steady and gradual increases in population and employment over the same period of time, specifically 2007 to 2012, whereby population and employment continue to increase and VMT's remain relatively constant.

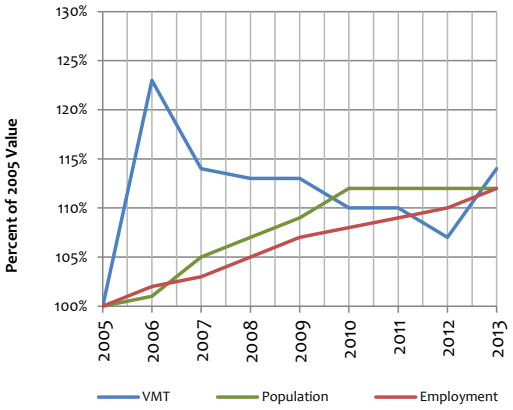


Figure 11: Local VMT, Population and Employment Trends (2005 to 2013)

Source: VMT from FHWA - Highway Statistics Series; Population from Census Bureau, Employment from U.S. Bureau of Labor Statistics (Employment status of the civilian non-institutional population, 1940 to date)

VMT PER CAPITA. A second method is to calculate VMT per capita, or in other terms, the amount of vehicle miles traveled per each individual.

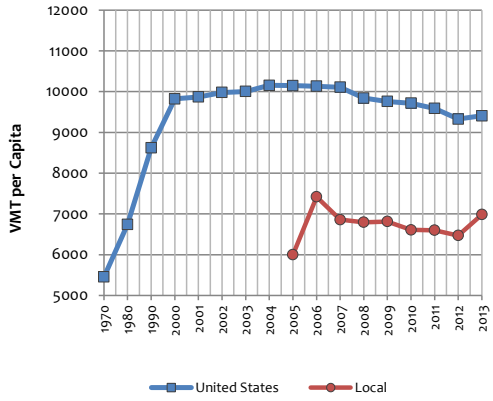


Figure 12: National and Local VMT per Capita

Source: VMT from FHWA - Highway Statistics Series; Population from Census Bureau, Employment from U.S. Bureau of Labor Statistics (Employment status of the civilian non-institutional population, 1940 to date)

National data suggests that since 2005 VMT per capita has experienced a steady decrease, nearly to 2000 numbers, even though population has continued to increase at a fairly steady rate. Local data follows a somewhat similar trend line with VMT per capita decreasing rather significantly since 2006. However, according to the data in 2013, the VMT per capita in Fargo-Moorhead is 6,986 or approximately 35 percent less than national VMT per capita.

VMT 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 these variables influencing VMT at the national and local level likely include: population profile, age distributions, average household size, household composition, vehicle availability, household income, proximity to services, travel time/trip length, mode shifts, land use patterns, and decision making. With this in mind, one factor typically associated with VMT trends is the cost of fuel. Figure 13 and Figure 14 illustrate associations between VMT per capita and fuel prices.

Based on Figures 13 and 14, the data suggests that as gas prices increased, motorists traveled fewer miles and VMT's began to flat-line. There is a distinct similarity with national trend lines versus local trend lines, even though VMT per capita is on a much different scale from the national level to the local level.

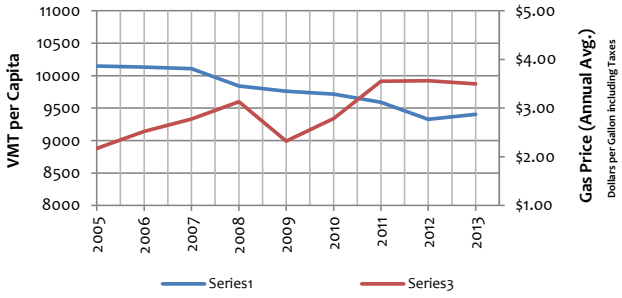


Figure 13: National VMT per Capita and Fuel Prices

Source: VMT from FHWA - Highway Statistics Series; Population from Census Bureau, Gas Prices from U.S. Energy Information Administration / Monthly Energy Review

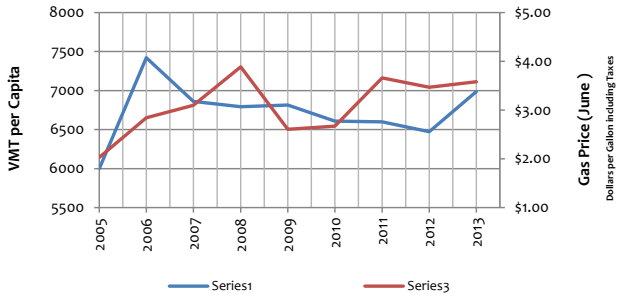


Figure 14: Local VMT per Capita and Fuel Prices

Source: VMT from FHWA - Highway Statistics Series; Population from Census Bureau, Gas Prices from U.S. Energy Information Administration / Monthly Energy Review

Travel Time and Commuting Data:

OVERVIEW. Travel time to employment in the Metropolitan Area shows slight increases for Moorhead and West Fargo and a small decrease for Dilworth (Fargo remains constant at 14.7 minutes) over the past three decades. Compared to U.S. 'mean' travel times, the Fargo-Moorhead Metropolitan Area commute time remains considerably less than MN, ND, and U.S. estimates.

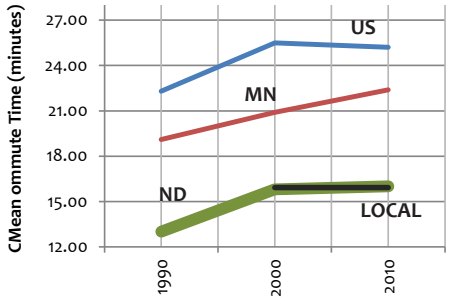


Figure 15: Metropolitan Mean Travel Time to Work (in Minutes)

Source: American Community Survey (2006-2010)

Table 28: Vehicle Miles Traveled (VMT) by Functional Classification

Year	City	Principal Arterial, Interstate	Principal Arterial, Other	Minor Arterial	Collector	Local Roadways	Total	% Principal Arterial (Interstate)	% Principal Arterial (other) plus Minor Arterial	% Collector	% Local
2009	Fargo	207,632,000	163,677,000	180,022,000	66,865,000	147,724,000	765,920,000	27.10%	44.88%	8.73%	19.29%
	West Fargo	36,466,000	17,402,000	44,552,000	13,644,000	23,324,000	135,388,000	26.93%	72.69%	10.08%	17.23%
	Clay County Urban Area	48,620,190	59,886,280	70,513,985	19,708,540	42,795,885	241,524,880	20.13%	53.99%	8.16%	17.72%
	Total Reported 2009 VMT	292,718,190	240,965,280	295,087,985	100,217,540	213,843,885	1,142,832,880				
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	155,848,00	812,013,000	28.75%	19.77%	24.11%	19.19%
	West Fargo	45,633,000	19,151,000	51,440,000	15,541,000	23,859,000	140,772,000	32.14%	13.6%	36.45%	16.94%
	Clay County Urban Area	-	-	-	-	-	-	-	-	-	-
	Total Reported 2013 VMT	-	-	-	-	-	-				

Source: NDDOT Annual Traffic Report, MnDOT Transportation Information System (TIS) Database

Intelligent Transportation Systems (ITS):

OVERVIEW. Metro COG maintains an Intelligent Transportation System (ITS) plan for the FM Metropolitan Area and works in cooperation with the Advance Traffic Analysis Center (ATAC) on the maintenance of the Regional ITS Architecture (RA). The ITS Plan was updated and adopted by Metro COG in July of 2008 and the Regional ITS Architecture was last updated in 2007. The major recommendations of the ITS plan 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 FM Metropolitan Area.

The Regional ITS Architecture provides guidance for developing and implementing ITS systems through Systems Engineering Analysis and information flows between entities. Identified needs from the regional ITS architecture study include: (a) improved traffic operations and safety, (b) enhanced tools for system monitoring and management, (c) enhanced traveler information and customer service, (d) enhanced transit operations to improve service and increase transit demand, and (e) coordinated emergency and security management.

With inputs from the Regional ITS Architecture, the 2008 ITS Plan for the FM Metropolitan Area 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. The 2008 ITS Plan envisions an interoperable transportation system for the FM Metropolitan Area, in which all transportation operators are interconnected through a hybridized traffic operations center, eventually evolving to a stand alone TOC for the FM Metropolitan Area.

In April of 2008, Metro COG adopted the Transportation Security Initiative (TSI) to address the new security emphasis as outlined by SAFETEA-LU. The 2008 TSI puts an emphasis on the utilization of ITS as a strategy to address transportation security within the FM Metropolitan Area. As supported by the 2008 TSI, Metro COG's UPWP continues to support planning and programming efforts aimed at the coordinated deployment of ITS and traffic operations-related strategies as critical to maintaining the security and the safety of transportation systems.

In August of 2009, Metro COG adopted the FM Metropolitan Traffic Operations Action Plan. With the development of the 2009 FM Metropolitan Traffic Operations Action Plan, Metro COG put further emphasis on the need for the development of protocols and procedures to address incident management related to traffic operations within the FM Metropolitan Area, particularly related to currently deployed or planned ITS infrastructure deployments.

In March of 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.

ITS DEPLOYMENTS. Figure 16 identifies ITS deployments within the metropolitan transportation network which include: dynamic vehicle detectors, static camera and anti-ice systems, pan tilt zoom camera, permanent DMS and vehicle detection system.

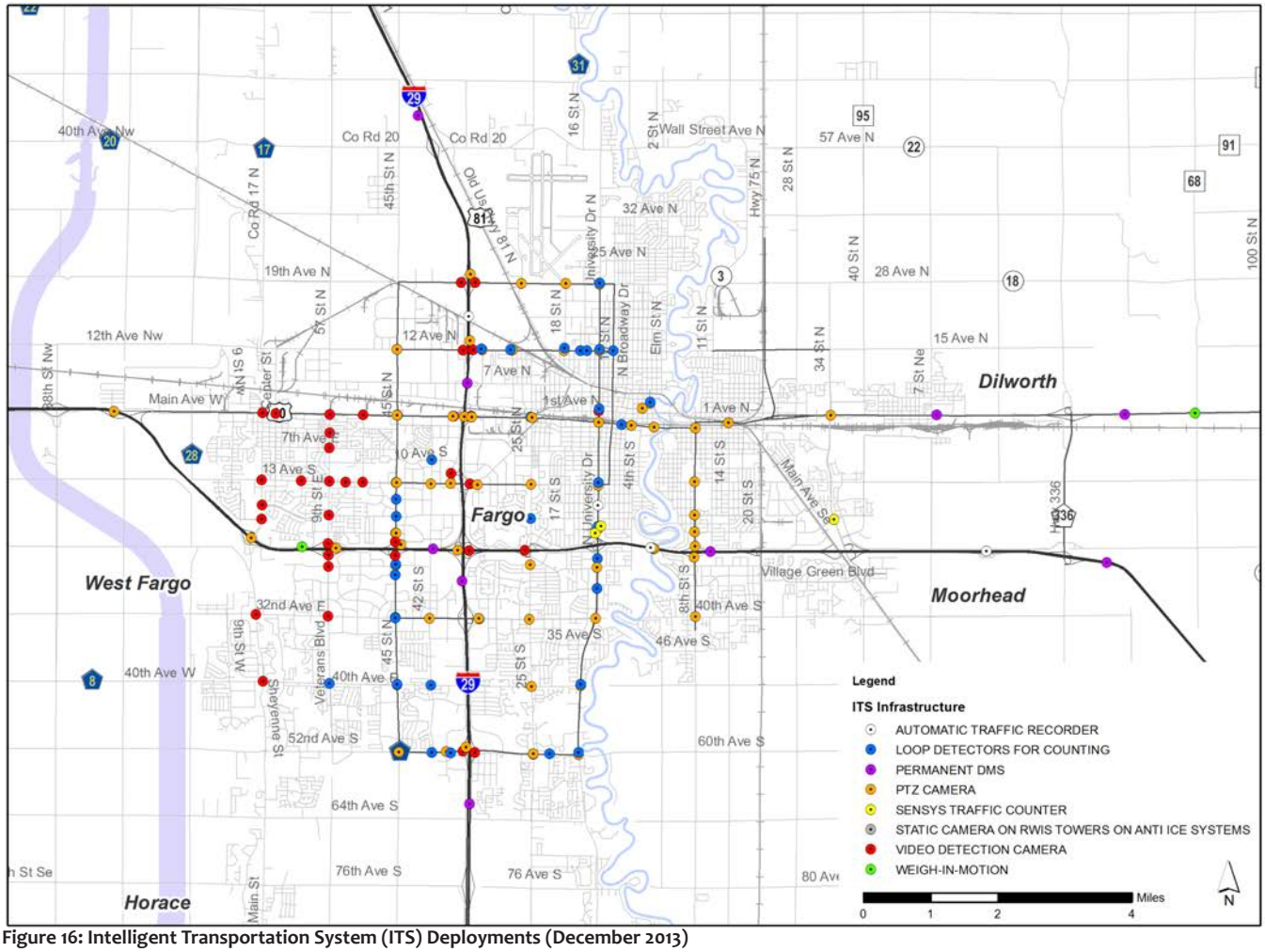


Figure 16: Intelligent Transportation System (ITS) Deployments (December 2013)

Source: Metro COG (2014)

TRANSIT SYSTEM

Overview:

The Fargo-Moorhead Metropolitan Area provides numerous public transportation opportunities for residents, visitors, or other interested parties. There are five primary transit providers in the Metropolitan Statistical Area (MSA) that receive public funding; together these providers offer fixed route transit services, rural commuter services, senior dial-a-ride services, and ADA demand response services. These primary transit providers include: (a) Metro Area Transit (MATBUS) Fixed Route; (b) MAT Paratransit; (c) Valley Senior Services (VSS); (d) Handi-Wheels; and (e) Transit Alternatives (formally Clay County Rural Transit). Metro Area Transit operates 21 fixed routes of which five are seasonal routes in coordination with North Dakota State University (NDSU). In addition, MAT operates complimentary paratransit services for ADA eligible residents whom are unable to access fixed route services. Outlined below is a detailed overview of each transit service and the applicable service area.

Services:

FIXED ROUTE. Fixed routes account for the majority of public transit ridership in the Metropolitan Area (see Table 29). 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 (or 5339 under MAP-21) which provides substantial financial support for capital investments related to the operation of fixed route transit in Fargo-Moorhead. Figure 20 shows fixed routes, transfer points, and shelter locations as of December 31, 2013. MATBUS maintains 94 of the 96 shelters and facilities as detailed within Figure 18, a majority of the structures being located in high demand areas such as commercial areas, colleges, public housing, health facilities and human service facilities. To note, NDSU owns and maintains the Memorial Union Transit Hub and the FargoDome shelter (Albrecht & 17th Ave N). Heated shelters and facilities are provided at the West Acres Transit Hub, NDSU Memorial Union Transit Hub, and the FargoDome.

PARATRANSIT. 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 non-profit human service agencies and public transit agencies per requirements set forth in Section 504 of the Rehabilitation Act of 1973. In sum, Section 504 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 (49 CFR 37) sets forth requirements for making buses accessible and other regulations relating to paratransit services within public transit service areas. From a service boundary perspective, at minimum and per 49 CFR 37.131 (a), the entity (public transit provider) "shall 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." Figure 18 outlines paratransit service boundaries which are contiguous with incorporated city limits of Fargo, West Fargo, Moorhead, and Dilworth, thus, providing service well beyond the extent of ADA requirements.

SENIOR RIDE AND RURAL TRANSIT. Metro Senior Ride is operated by Valley Senior Services (VSS) in Fargo and West Fargo and under contract with the City of Moorhead. 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 entire Metropolitan Area. Within rural areas of the MSA, Cass County Rural Transit operated by VSS and Transit Alternatives operated by Productive Alternatives, Inc. in Clay County provide a blend of fixed route and demand response services to individuals. Up until 2010, Clay County Rural Transit was the rural transit provider and operated by Clay County under auspices of MnDOT and federal transit grants. However, the program has since been transitioned to a private entity, Productive Alternatives, Inc. Services offered by Transit Alternatives include a commuter route from Detroit Lakes to Fargo-Moorhead via the GTC and some weekly routes within the City of Moorhead. Cass County Rural Transit mainly provides door to door transportation services within rural Cass County and a few weekly routes to various peripheral communities (ie. 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, 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 Metro COG or MATBUS directly for information on obtaining a hard copy.

System Operating Data and Changes:

In 2013 the Metropolitan Area mass transit system provided a total of 2,196,336 rides which includes all fixed routes, paratransit services, rural commuter services, senior ride services, and ADA demand response services. For MATBUS fixed route services over the five-year timeframe between 2009 and 2013, ridership has increased by 110,943 rides (or seven percent). For other transit services, paratransit ridership over the same five-year timeframe has decreased by 4,025 rides (or seven percent), NDSU circulator routes have increased by 151,322 rides (or 42 percent, non-inclusive of Route 33 ridership [Barry Hall/Klai Hall circulator route]) while rural commuter ridership and senior dial-a-ride service have also generally shown ridership increases. Table 29 summarizes total ridership data for the primary transit providers in the MSA.

Table 29: Ridership Summary (2009 to 2013)

Transit System	Service	2009	2010	2011	2012	2013
Metro Area Transit (MAT-BUS)	Fargo Fixed	1,119,652	1,246,612	1,292,541	1,069,034	1,170,951
	MHD Fixed	392,984	376,697	433,676	436,304	452,624
	NDSU Circulator Rts	359,994	378,025	374,488	539,594	511,316
	Total MAT Fixed	1,872,630	2,001,334	2,100,705	2,044,932	2,134,891
	MAT Paratransit	57,428	57,850	58,992	54,217	53,403
Transit Alternatives	All Services	34,145	n/a	7,232	6,797	8,016
Valley Senior Services	Fargo/WF	42,104	38,491	36,328	35,098	35,614
	MHD / Dilworth	5,111	5,961	6,323	7,492	8,042
	Cass County Rural Transit	2,418	2,214	2,013	1,872	1,963
Handi-Wheels	All Services	15,414	28,280	13,844	15,398	10,845
TOTAL	All Services	2,029,250	2,134,130	2,225,437	2,165,806	2,252,774

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

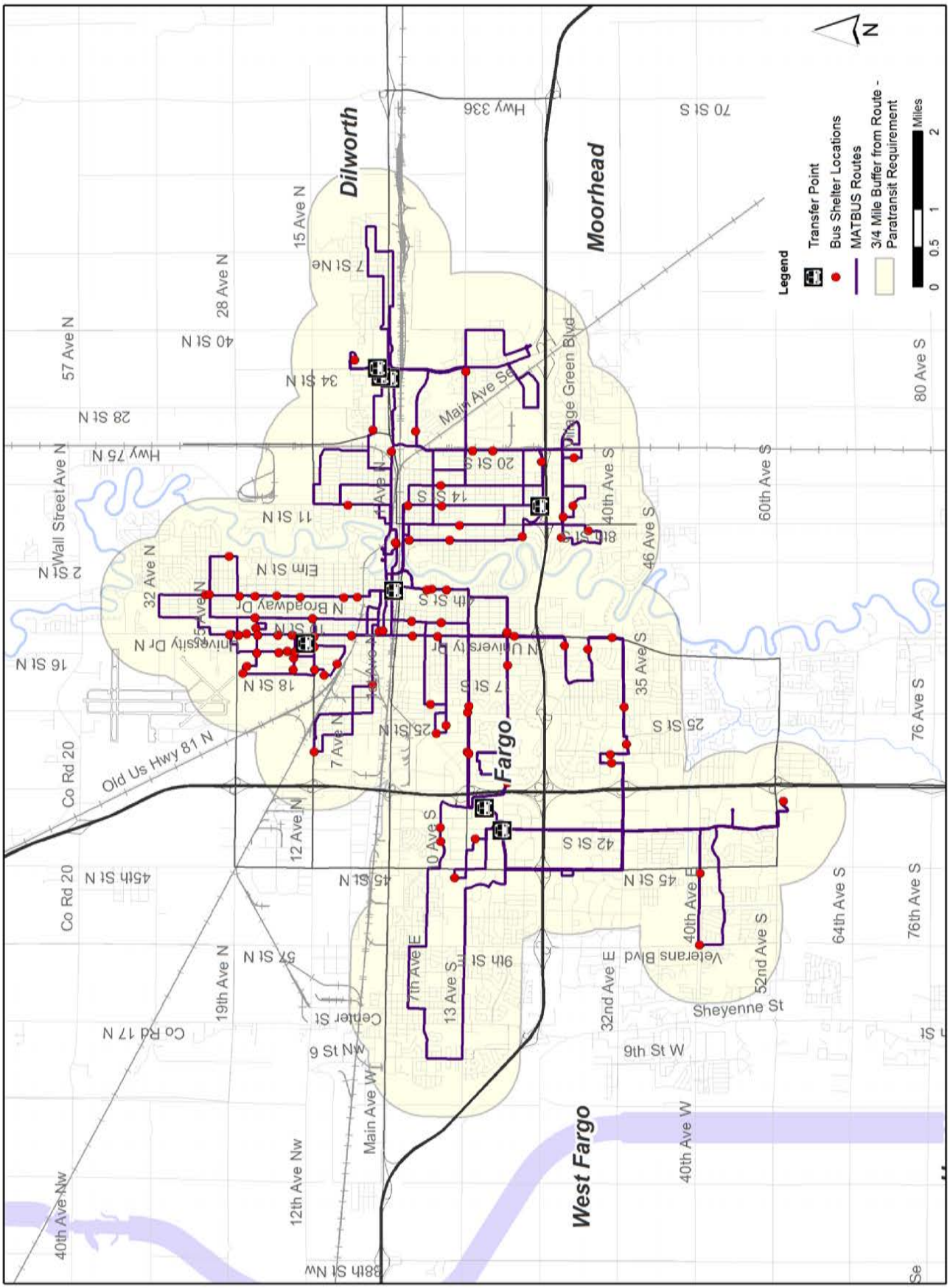


Figure 17: MATBUS Fixed Route and Paratransit Service Area

Source: Metro COG (2014)

Table 30: Fargo Fixed Route Operating Characteristics

Category	TOTAL (2013)
Annual Revenue Miles	950,598
Total Operating Days	365
Daily Revenue Miles	3096.41
Annual Revenue Hours	74,462
Rides Per Day	5,480
Rides Per Hour	23
Farebox Revenue *	$658,311
Farebox Recovery Ratio	13.1%
Total Ridership	1,682,267
Annual Cost Per Route	$238,553
Cost per Passenger (approx.)	$3.97
Fleet Size	28
Number of Routes	14 (as of December 31, 2013)
Total Operational Costs	$1,731,065

* Farebox Revenue (for purposes of this summary) includes gross receipts from all fare media purchased, cash riders, U-Pass; but no contributions
- National Transit Database (NTD) [2012]
- Metro Area Transit (MATBUS) and Metro COG (2014) for all other data

Table 31: Moorhead Fixed Route Operating Characteristics

Category	TOTAL (2013)
Annual Revenue Miles	345,721
Total Operating Days	307
Daily Revenue Miles	1056
Annual Revenue Hours	24,257
Rides Per Day	1,474
Rides Per Hour	19
Farebox Revenue *	$294,500
Farebox Recovery Ratio	18%
Total Ridership	452,624
Annual Cost Per Route	$233,936
Cost per Passenger (approx.)	$3.62
Fleet Size	10
Number of Routes	7
Total Operational Costs	$471,624

* Farebox Revenue (for purposes of this summary) includes gross receipts from all fare media purchased, cash riders, U-Pass; but no contributions
- National Transit Database (NTD) [2012]
- Metro Area Transit (MATBUS) and Metro COG (2014) for all other data

FIXED ROUTE HISTORICAL RIDERSHIP TRENDS. Figure 18 provides an outline of fixed route transit ridership since 2005 with splits between Fargo/West Fargo and Moorhead.

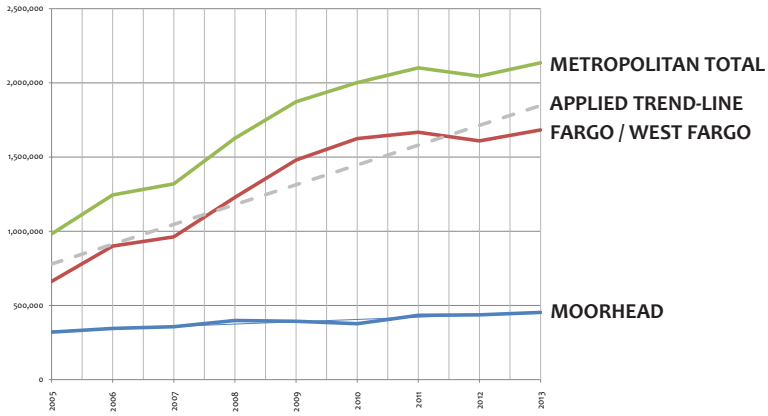


Figure 18: Metropolitan Fixed Route Ridership Totals and Historical Trends (2005 to 2013)

Source: Metro Area Transit (MATBUS), Metro COG (2014)

GENERAL FIXED ROUTE OPERATING CHARACTERISTICS AND FIXED ROUTE RIDERSHIP TRENDS BY ROUTE. The tables and figures in this section depict general operating characteristics of the fixed route system within each municipality and ridership trends on each route.

METROPOLITAN FIXED ROUTE RIDERSHIP DATA - CUSTOMER TYPE. Based on 2013 ridership, Table 32 depicts rider type for the combined Metropolitan Area. A large percentage of college students utilize fixed route service. For additional information, see Table 43 which further details the U-Pass program and ridership data.

Table 32: Metropolitan Fixed Route Customer Type

Customer Type	2011 (total)	% (of total)	2012 (total)	% (of total)	2013 (total)	% (of total)
Adult	567,190	27%	552,156	27%	534,106	27%
College / Student	1,113,374	53%	1,042,962	51%	1,000,423	51%
Disabled	272,541	13%	306,753	15%	275,995	14%
Elderly	58,887	3%	61,351	3%	69,774	4%
Youth	38,528	2%	40,900	2%	37,332	2%
Child	45,155	2%	40,900	2%	43,941	2%
TOTAL	2,095,675	100%	2,045,023	100%	2,134,891	100%

Source: Metro Area Transit (MATBUS) and Metro COG (2014)

Table 33: Fixed Route Revenue Hours per Capita

Year	Metro Ridership	Metro Population	Revenue Hours per Capita	Revenue Hours
2009	1,872,630	167,688	0.43	72,184
2010	2,001,334	173,886	0.42	73,439
2011	2,100,705	173,886*	0.47	82,651
2012	2,044,932	173,886*	0.53	91,506
2013	2,134,891	173,866*	0.57	98,719

Source: Metro Area Transit (MATBUS) and Metro COG (2014)
* per 2010 Census population count

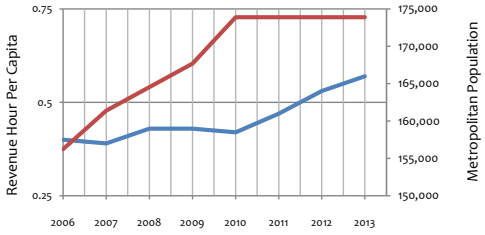


Figure 19: Fixed Route Revenue Hour per Capita Compared to Metropolitan Population
Source: Metro Area Transit (MATBUS) and Metro COG (2014)

Table 34: Fixed Route Operating Cost Per Passenger

Year	Fargo *	Moorhead	Metropolitan
2009	$2.61	$3.45	$2.78
2010	$2.67	$3.73	$2.79
2011	$2.65	$4.30	$2.99
2012	$3.12	$4.08	$3.38
2013	$3.97	$4.08	$3.15
BenchMARK	$2.75 (2010); $3.25 (2020)	$4.00 (2010); $5.00 (2020)	n/a

Source: National Transit Database (NTD)
* Fargo numbers include NDSU circulator Routes; this number should be factored out as data is made available. NDSU benchmark is set at $1.00 ($1.25 / 2020)

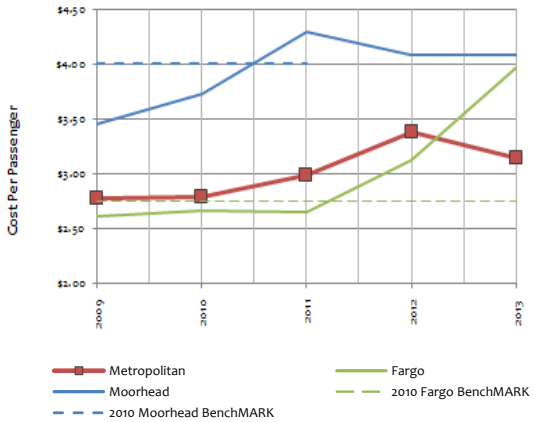


Figure 20: Fixed Route Operating Cost per Passenger by Year and City
Source: Metro Area Transit (MATBUS) and Metro COG (2014)

FIXED ROUTE SYSTEM PERFORMANCE AND TRENDS. As part of the 2012-2016 Transit Development Plan (TDP) a series of performance standards and measures were identified to provide a starting point towards developing a comprehensive performance management framework. The intent of these performance standards and measures is to provide a consistent framework for the effective management, evaluation, and planning of public transit services. These standards are formulated to:

(a) Reflect and support goals and objectives of MATBUS;

(b) Ensure compliance with applicable federal, state, and local regulatory requirements;

(c) Facilitate a simple and straightforward evaluation of service;

(d) Provide supporting data and documentation for service increases, service expansion or service reductions; and

(e) Establish a benchmarks that can be referenced and written into service or operating policies.

Figure 19 depicts revenue hours per capita contrasted against metropolitan population trends.

Figure 20 shows operating costs per passenger which are separated by year and city. Also charted are the 2010 benchmarks and noted within Table 34 are the applicable 2020 benchmarks per the 2012-2016 TDP.

The performance standards outlined within this section include both efficiency standards based on operational data and service quality and reliability standards. This section will continue to expand and improve as certain data is more accessible and is collected and tracked in a certain manner.

Table 35: Fixed Route Operating Cost per Revenue Hour

Year	Metro Ridership	Metro Revenue Hours	Reported Operating Expense (NTD)	Cost Per Revenue Hour
2009	1,872,630	73,612	$5,215,331	$70.85
2010	2,001,334	82,391	$5,600,535	$67.98
2011	2,100,705	82,765	$6,288,184	$75.98
2012	2,044,932	91,506	$6,387,676	$69.81
2013	2,134,891	98,719	$7,264,070	$73.58
Bench-MARK	n/a	n/a	n/a	$62.00 (MHD) $65.00 (Fargo)

Source: National Transit Database (NTD), Metro COG (2014)

Table 36: Fixed Route Passengers per Revenue Hour

Year	Fargo Rides	Fargo Revenue Hours	Fargo Passen-gers Per Revenue Hour	Moor-head Rides	Moor-head Revenue Hours	Moor-head Passen-gers Per Revenue Hour
2009	1,119,652	50,464	22.19	392,984	21,720	18.09
2010	1,246,612	51,416	24.25	376,697	22,023	17.10
2011	1,667,029	60,643	27.49	433,676	22,008	19.71
2012	1,608,628	68,513	23.48	436,304	22,993	18.98
2013	1,682,267	74,462	22.59	452,624	24,257	18.66
Bench-MARK	n/a	n/a	30 ^	n/a	n/a	30 ^

Source: National Transit Database (NTD), Metro COG (2014)
^ Per 2012-2016 TDP, the minimum passenger per revenue hour standard is set at 10 (consider reduction or elimination of route) and 30 establishes the threshold whereby MATBUS should be considering expanded service on the route. For a route specific analysis see Figure 61 (below). NDSU ridership and revenue hours are included in Fargo totals per Figure 60. NDSU minimum set at 30 and improvement threshold at 50.

Figure 21 depicts operating cost per revenue hour based in Table 35. Reported operating expenses are defined pursuant to NTD data and may vary compared to official MATBUS figures.

Figure 22 depicts passengers per revenue hour for both the Fargo and Moorhead transit systems based in Table 36. This figure establishes a system-wide perspective, however, NDSU ridership and revenue hours are included in this total which skews passenger per revenue hour total for Fargo. See route specific analysis within Figure 23 for further details.

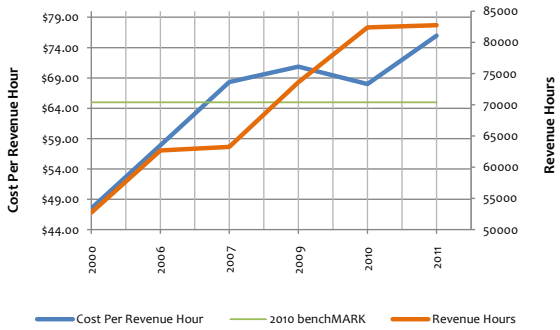


Figure 21: Fixed Route Operating Cost per Revenue Hour
Source: National Transit Database (NTD), Metro COG (2014)

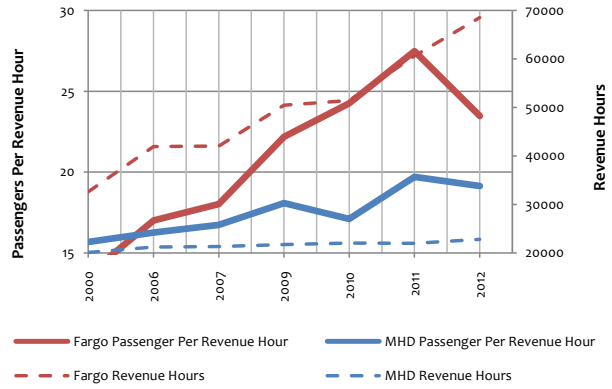


Figure 22: Fixed Route Passengers per Revenue Hour
Source: National Transit Database (NTD), Metro COG (2014)

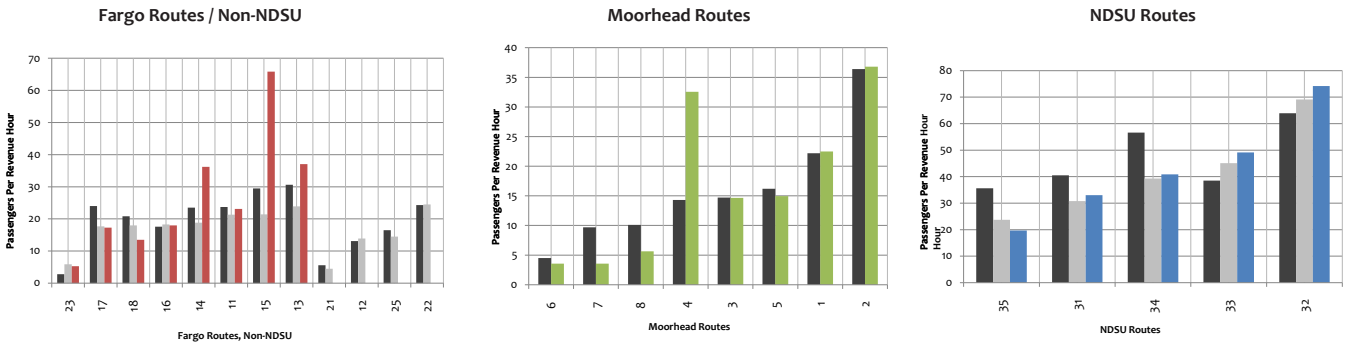


Figure 23: Route Productivity Assessment and Passengers per Revenue Hour by Route
Source: Metro Area Transit (MATBUS) and Metro COG (2014)

PARATRANSIT RIDERSHIP TRENDS. Table 37 illustrates paratransit ridership since 2009 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. The City of Dilworth is not charged for use of the paratransit system and the City of West Fargo is charged a 'per ride' cost which is collected by the City of Fargo.

Table 37: Metropolitan Paratransit Ridership Totals (2009 - 2013)

Year	Fargo	West Fargo	Moorhead	Dilworth	Total
2009	36,060	8,285	12,650	443	57,428
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
% of System Total (2013)	70%	10%	17%	3%	100%

Source: Metro Area Transit (MATBUS) and Metro COG (2014)

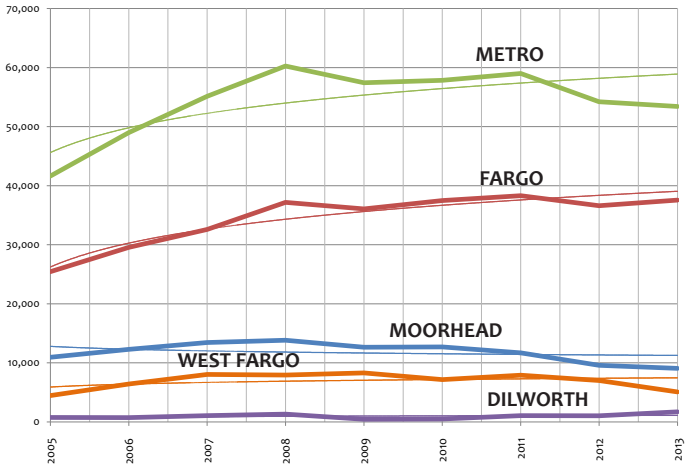


Figure 24: Metropolitan Paratransit Ridership Totals and Historical Trends (2005 to 2013)

Source: Metro Area Transit (MATBUS) and Metro COG (2014)

Note: Logarithmic trendlines

GENERAL PARATRANSIT OPERATING CHARACTERISTICS. Table 38 sets forth paratransit general operating characteristics from a metropolitan perspective.

Table 38: Metropolitan Paratransit Ridership Totals

Category	TOTAL (2013)
Annual Revenue Miles	366,830
Total Operating Days*	357
Daily Revenue Miles	1,028
Annual Revenue Hours	25,922
Rides Per Day	149.59
Rides Per Hour	2.06
Total Ridership	53,403
Cost per Passenger (approx.)	$21.42
Fleet Size	15
Total Operational Costs	$1,144,045

Source: National Transit Database (NTD) [2012]

* only Sunday in Fargo and West Fargo (1 vehicle)

PARATRANSIT SYSTEM PERFORMANCE AND TRENDS. Similar to fixed route service, as part of the 2012-2016 Transit Development Plan (TDP) a series of performance standards and measures were identified to provide a starting point towards developing a comprehensive performance management framework. The intent of these performance standards and measures is to provide a consistent framework for the effective management, evaluation, and planning of public transit services. The performance standards outlined within this section include both efficiency standards based on operational data and service quality and reliability standards 2013 Metropolitan Profile. This section will continue to expand and improve as certain data is more accessible and tracked.

Table 39: Operating Cost Per Passenger

Year	Reported Operating Expenses	Ridership	Metropolitan Cost Per Passenger
2009	$1,335,113 (approx.)	57,428	$23.25
2010	$1,413,715 (approx.)	57,850	$24.44
2011	$1,503,902 (approx.)	58,992	$25.49
2012	$1,609,237	54,217	$29,68
2013	$1,144,045	53,403	$21.42
BenchMARK	$26.00 (2010) $30.00 (2020)		

Source: National Transit Database (NTD), Metro COG (2014)

Table 40: Paratransit Operating Cost per Revenue Hour

Year	Metro Ridership	Metro Revenue Hours	Reported Operating Expense (NTD)	Cost Per Revenue Hour
2009	57,428	26,626	$1,335,113	$50.14
2010	57,850	28,935	$1,413,715	$48.86
2011	58,992	29,775	$1,503,902	$50.51
2012	54,217	25,442	$1,604,237	$63.25
2013	53,403	25,922	$1,126,918.72	$43.68
Bench-MARK	n/a	n/a	n/a	$50-54.00 (2010) 54-66.00 (2020)

Source: National Transit Database (NTD), Metro COG (2014)

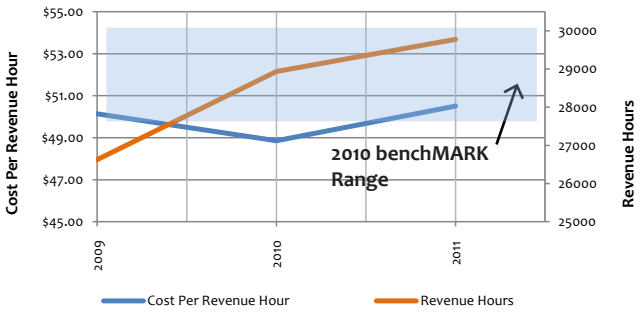


Figure 25: Paratransit Operating Cost per Revenue Hour
Source: National Transit Database (NTD), Metro COG (2014)

Table 41: Paratransit Passengers per Revenue Hour

Year	Metro Ridership	Revenue Hours	Metropolitan Passengers per Revenue Hour
2009	57,428	26,626	2.16
2010	57,850	28,935	2.0
2011	58,992	29,775	1.98
2012	54,217	25,442	2.13
2013	53,403	25,922	2.06
BenchMARK	n/a	n/a	Maintain between 2.0 and 3.0

Source: National Transit Database (NTD), Metro COG (2014)

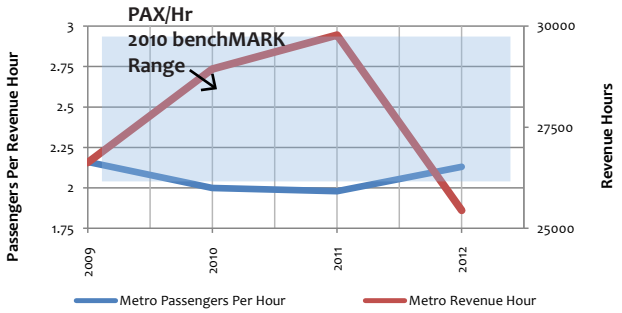


Figure 26: Paratransit Passengers per Revenue Hour
Source: National Transit Database (NTD), Metro COG (2014)

SENIOR RIDE AND RURAL TRANSIT RIDERSHIP TRENDS. Table 42 provides an outline of senior ride and rural transit ridership since 2009, with splits between the City of Fargo and the City of West Fargo, City of Moorhead and the City of Dilworth, and rural transit services for Cass County and Clay County.

Table 42: Senior Ride and Rural Transit Ridership Totals

Transit System	Route	2009	2010	2011	2012	2013
Transit Alterna-tives (formerly Clay County Rural Transit)	All Services	34,145	n/a	7,232	6,797	8,016
Valley Senior Services	Fargo / West Fargo	42,104	38,491	36,328	35,098	37,465
	Moorhead / Dilworth	5,111	5,961	6,323	7,492	8,042
	Cass County Rural Transit	2,418	2,214	2,013	1,872	1,963
Total	All Systems	83,778	46,666	51,896	51,259	55,486

Source: Metro Area Transit (MATBUS) and Metro COG (2014)

U-PASS RIDERSHIP. According to MATBUS data for 2013, student ridership accounts for 1,000,423 of the 2,134,891 rides on the fixed route system, or 51 percent of the total ridership. Table 43 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 larger Metropolitan Area 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 'free', with discounts usable throughout the entire academic year. Data provided within Table 43 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 within Table 29.

Table 43: U-Pass Ridership

Academic Year	NDSU	Concordia	MSUM	M|State	TOTAL
2008 - 2009	226,194	20,518	90,136	32,366	369,214
2009 - 2010	253,882	15,167	89,868	29,081	387,998
2010 - 2011	230,746	13,602	97,768	36,452	378,568
2011 - 2012	220,283	13,932	101,590	46,746	382,551
2012 - 2013	261,202	12,517	100,250	46,646	420,615

Source: Metro Area Transit (MATBUS) and Metro COG (2014)
Academic Year: August 1 to July 30

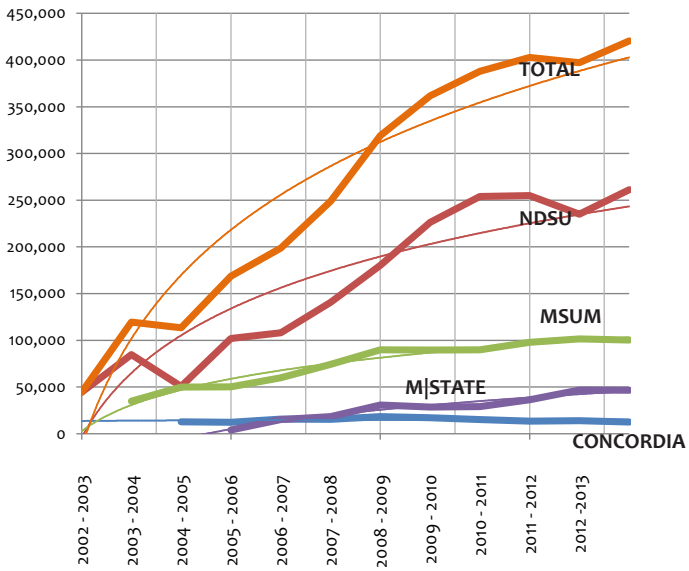


Figure 27: U-Pass Ridership Totals and Historical Trends
Source: Metro Area Transit (MATBUS) and Metro COG (2014)
Note: Logarithmic trendlines

2013 Projects, Purchases, and Improvements:

OVERVIEW. Pursuant to initiatives set forth within MAP-21, Metro COG annually tracks efforts by the local transit operators respective to projects, capital purchases, and system improvements and investments. Table 44 is intended to summarize and document 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 44: Transit Projects, Purchases and Improvements

Jurisdiction	Project Description	LRTP / Applicability TIP Project No. / Local
Fargo	Replace MAT Paratransit vehicles (#1170, #1171 and #1172) with hybrid buses	410032
Fargo	Automatic Vehicle Announcement & Automatic Vehicle Locator Systems	412065
Fargo	Replace one 2010 Valley Senior Services van #1206	413014
Fargo	Fargo Paratransit Operating Assistance Considered Capital Improvements	413040
Moorhead	Replacement of 2008 Paratransit vehicle Unit #1177 (Class 400)	513034

Source: Metro Area Transit (MATBUS) and Metro COG (2014)

Other Available Information:

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 2013 fixed route fleet inventory is provided in Table 45.

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 (1996) establishes 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. Further, the agreement specifies that the city experiencing growth in ridership is thereby responsible for any additional vehicles. Since the agreement was initially established, the City of Fargo has added two vehicles and Moorhead has added one vehicle. As of December 2013 MATBUS paratransit operates 14 vehicles with ten under City of Fargo ownership and four under City of Moorhead ownership. A complete 2013 paratransit fleet inventory is provided in Table 45.

FLEET INVENTORY - SENIOR RIDE. Consistent with fixed route and paratransit summaries above, a complete 2010 senior ride fleet inventory is provided within the 2012-2016 Transit Development Plan. This inventory only includes vehicles for Valley Senior Services and Cass County Rural Transit.

CUSTOMER TYPE ANALYSIS. In addition to other transit related demographic and socio-economic details, the 2012-2016 Transit Development Plan sets forth a basic customer type profile for each transit system (fixed route, paratransit and senior ride); based on 2009 ridership data. Table 32 sets forth an updated customer type profile for fixed route service pursuant to 2013 ridership data.

This data and other analysis within the TDP provides an in-depth look at the public transit system, its functionality and the scope of its service.

Table 45: Fixed Route and Paratransit Fleet Inventory (as of December 2013)

Vehicle ID	Year	Make / Model	Type of Service	Owner
1121	1997	New Flyer - 35'	Fixed Route	Fargo
1122	1997	New Flyer - 35'	Fixed Route	Fargo
1123	1997	New Flyer - 35'	Fixed Route	Fargo
1124	1997	New Flyer - 35'	Fixed Route	Fargo
1125	1997	New Flyer - 35'	Fixed Route	Fargo
1126	2002	Gillig -29.5'	Fixed Route	Fargo
1127	2002	Gillig -29.5'	Fixed Route	Fargo
1128	2002	Gillig -29.5'	Fixed Route	Fargo
1139	2004	Gillig -29.5'	Fixed Route	Fargo
1140	2004	Gillig -29.5'	Fixed Route	Fargo
1141	2004	Gillig -29.5'	Fixed Route	Fargo
1142	2004	Gillig -29.5'	Fixed Route	Fargo
1173	2007	New Flyer - 35'	Fixed Route	Fargo
1174	2007	New Flyer - 35'	Fixed Route	Fargo
1175	2007	New Flyer - 35'	Fixed Route	Fargo
1176	2007	New Flyer - 35'	Fixed Route	Fargo
1184	2009	New Flyer - 35'	Fixed Route	Fargo
1185	2009	New Flyer - 35'	Fixed Route	Fargo
1186	2009	New Flyer - 35'	Fixed Route	Fargo
1187	2009	New Flyer - 35'	Fixed Route	Fargo
1188	2009	New Flyer - 35'	Fixed Route	Fargo
1195	2010	New Flyer - 35'	Fixed Route	Fargo
1196	2010	New Flyer - 35'	Fixed Route	Fargo
1197	2010	New Flyer - 35'	Fixed Route	Fargo
1198	2010	New Flyer - 35'	Fixed Route	Fargo
1199	2010	New Flyer - 35'	Fixed Route	Fargo
1200	2011	New Flyer - 35'	Fixed Route	Fargo
1201	2011	New Flyer - 35'	Fixed Route	Fargo

Table 45: CONTINUED

Vehicle ID	Year	Make / Model	Type of Service	Owner
370	2003	Orion VII -35'	Fixed Route	Moorhead
371	2003	Orion VII -35'	Fixed Route	Moorhead
380	2003	Orion VII -30'	Fixed Route	Moorhead
381	2003	Orion VII -30'	Fixed Route	Moorhead
382	2003	Orion VII -30'	Fixed Route	Moorhead
590	2005	Orion VII -30'	Fixed Route	Moorhead
591	2005	Orion VII -30'	Fixed Route	Moorhead
592	2005	Orion VII -30'	Fixed Route	Moorhead
593	2005	Orion VII -30'	Fixed Route	Moorhead
1020	2010	New Flyer - 35'	Fixed Route	Moorhead
1170	2006	Ford E450	Paratransit	Fargo
1171	2006	Ford E450	Paratransit	Fargo
1172	2006	Ford E450	Paratransit	Fargo
1178	2008	Ford Supreme	Paratransit	Fargo
1179	2008	Ford Supreme	Paratransit	Fargo
1180	2008	Ford Supreme	Paratransit	Fargo
1181	2008	Ford Supreme	Paratransit	Fargo
1182	2008	Ford Supreme	Paratransit	Fargo
1207	2011	Ford E450	Paratransit	Fargo
1208	2011	Ford E450	Paratransit	Fargo
1177	2008	Ford Supreme	Paratransit	Moorhead
1202	2009	Ford Supreme	Paratransit	Moorhead
1203	2009	Ford Supreme	Paratransit	Moorhead
1218	2011	Ford Goeshen	Paratransit	Moorhead

Source: Metro Area Transit (MATBUS) and Metro COG (2014)

BICYCLE & PEDESTRIAN NETWORK

Overview:

The Fargo-Moorhead regional bicycle and pedestrian network continues to grow steadily as the community further realizes the importance of providing transportation facilities for all users. This vision is additionally supported by Complete Street legislation signed by former Minnesota Governor Tim Pawlenty (May 15, 2010), a policy statement issued by Transportation Secretary Ray LaHood (March 11, 2010), and a policy adopted by Metro COG's Policy Board (November 2010) all which set framework principals that encourage communities to provide facilities and to exceed minimum standards for all modes of transportation. There are numerous external factors that are likely to bring about conversations respective to the balance of on-road and off-road bicycle facilities within the Metropolitan Area, including: (a) development of the FM Community Bicycle Workshop, (b) population growth and core density changes, (c) active living policy directives, (d) increased university student populations, and (e) growth of the Commuter Challenge program. Safe Routes to School (SRTS) is also a program that will continue discussions on facility connectivity between residential neighborhoods and school sites. Growth that has occurred within the bicycle and pedestrian network over the last few years is important as future day to day transportation costs rise and individuals contemplate transportation decisions accordingly.

System Operating Data and Changes:

BICYCLE AND PEDESTRIAN COUNTS. In prior years, counts were conducted as part of an annual rotating schedule of identified locations; with the overarching intent of having each location counted every five years to ensure accurate data is available for each cycle of the Metropolitan Bicycle and Pedestrian Plan.

As part of Metro COG's 2012 UPWP, a new bicycle and pedestrian count program was developed, consisting of the following two components: (a) regular counts along identified corridors; and (b) pre-construction/improvement and post-construction/improvement counts on roadways and facilities to help gauge facility performance. This was done as an effort by Metro COG to establish a more consistent and reliable data collection method.

Network Changes:

OVERVIEW. Pursuant to initiatives set forth within MAP-21, Metro COG annually tracks efforts by local jurisdictions respective to improvements or changes to the bicycle and pedestrian transportation network. Table 46 illustrates bicycle and pedestrian network changes completed in 2013. Bicycle and pedestrian changes include: ADA improvements, sidewalk construction or repair, shared use path construction, SRTS projects, and pavement marking upgrades. These reported changes are extremely important as some projects are locally funded and are not discernible by review of the federally mandated TIP or LRTP.

Over the past couple of years, investments and commitments (specifically local) to bicycle and pedestrian infrastructure improvements have continued to increase.

Crash Data:

CRASH DATA. Metro COG annually documents motor vehicle accidents involving pedestrians or bicyclists within the Metropolitan Area. Crash data for 2013 as shown within Figure 28 is provided by NDDOT and MnDOT and reported by local agencies and jurisdictions. Data shows seven reported crash locations in Moorhead, zero crashes in Dilworth, nine in West Fargo, and 62 crash locations in Fargo.

Table 46: Bicycle and Pedestrian Projects, Purchases and Improvements

Jurisdiction	Project Description	TIP Project No. / Local
NDDOT	Pedestrian Structure over I-94 2 miles east of I-29 Structure Painting, Structural/Incidentals	913041
Dilworth	Shared Use Path along the east side of 7th Street from 3rd to 8th Avenue NE (Project will be advanced construction with 100% Local Funds in 2013 and will receive $300,000 AC Payback Federal SRTS in 2014).	613010
MnDOT	No Reported Changes	-
Fargo	Shared Use Path along 12th Ave N from 45th St to I-29 and along 45th St from 7th to 12th Ave N	413039
Fargo	New shared use path on south side of 12th Ave N from 38th St to 45th St	Local
Fargo	New shared use path on west side of 45th St from 7th Ave N to 16th Ave N	Local
Fargo	Bike lanes added to 10th St - 4th Ave N to 12th Ave N	Local
Fargo	Bike lanes added to Univ Dr - 12th Ave N to 4th Ave N	Local
Moorhead	HAWK Ped Beacon at 8th St. South at 10th Ave. - Concordia	Local
Moorhead	Ped Beacon at 14th St. South at 38th Ave. - Reinertson	Local
Moorhead	Ped Beacon at 14th St. South at 43rd Ave. - Reinertson	Local
Moorhead	Sidewalk construction at Belsley Blvd - TH 75 to 9th St. So.	Local
West Fargo	No Reported Changes	-

Source: Metro COG (2014)

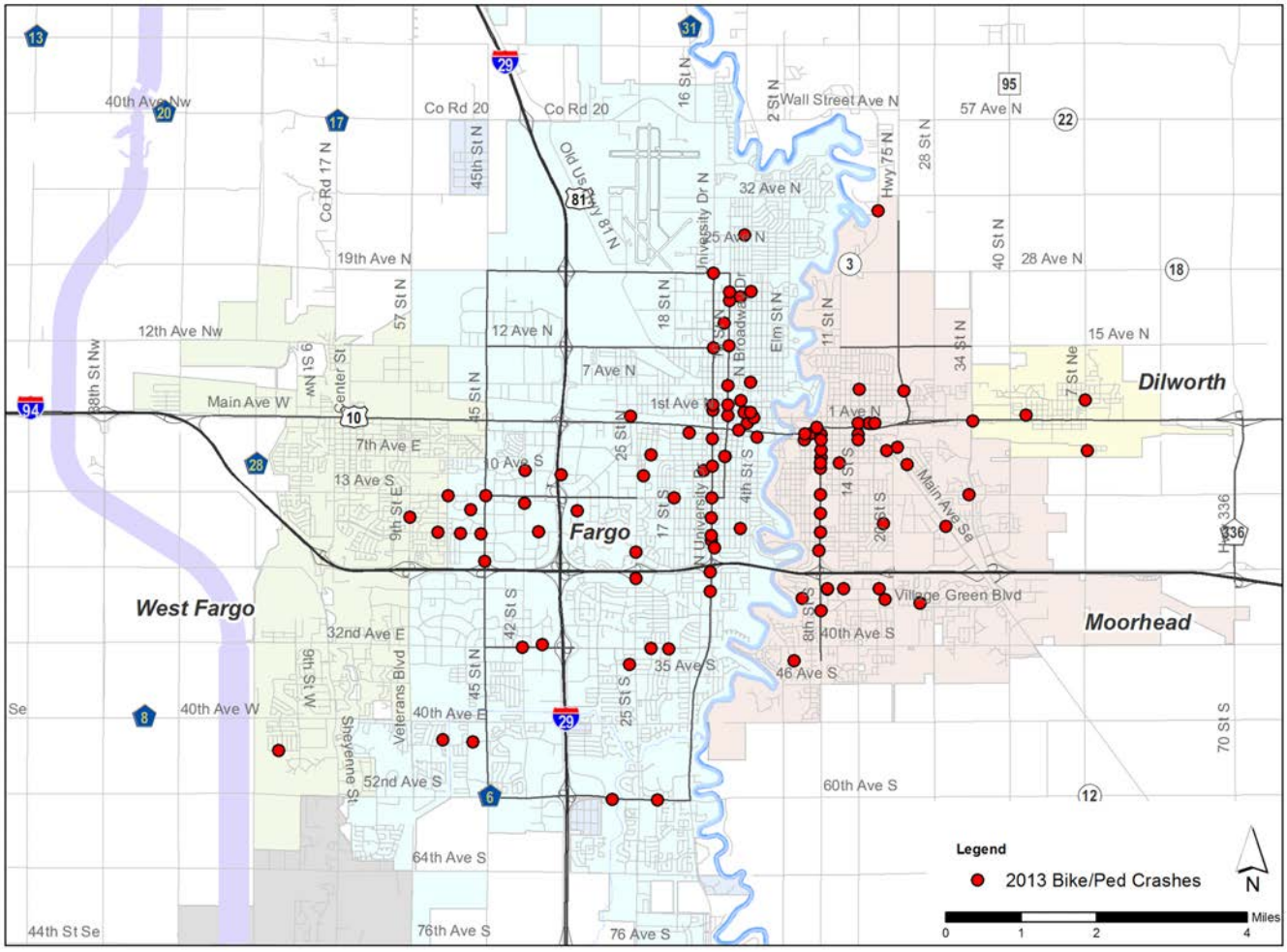


Figure 28: Geocoded Bicycle and Pedestrian Crash Data

Source: Metro COG (2014)

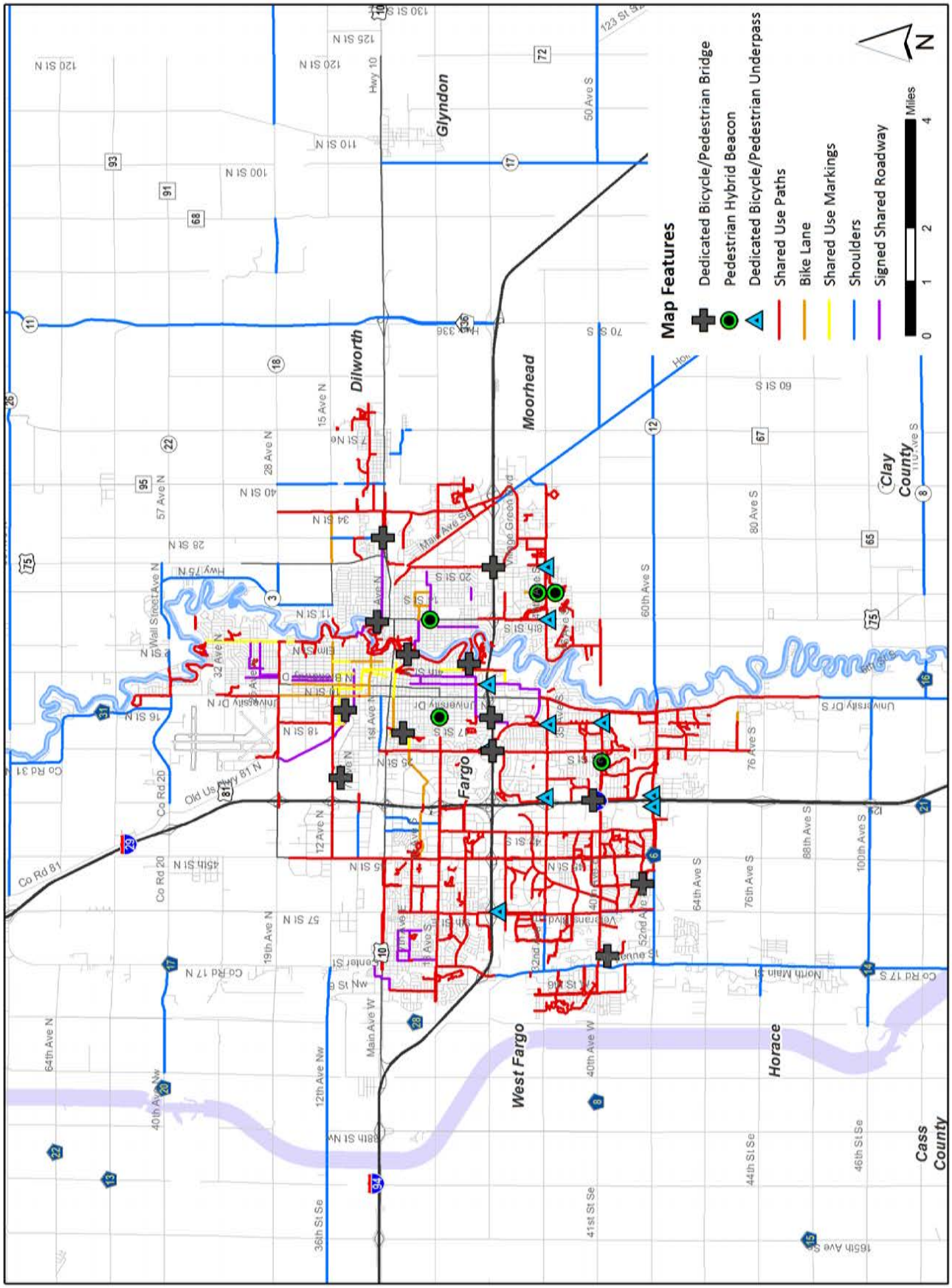


Figure 29: Existing Bikeway Network

Source: Metro COG (2014)

FREIGHT & AIR

Overview:

This section of the metropolitan profile outlines information on airline passenger data, freight, and intermodal facilities. Freight and passenger data within this chapter is collected by the Fargo Airport Authority and the US Customs Office. In recent years, Hector International Airport has become a port of entry which has increased the amount of international freight handled and transitioned through Fargo. Port of entry status gives the Metropolitan Area a strategic advantage in freight movement, respective to industry attraction and retention.

Airport Data and Operating Characteristics:

GENERAL INFORMATION. Hector International Airport provides for the commercial movement of passengers, freight, and mail. 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 797,125 combined boardings and deboardings in 2013, making it the busiest year on record for Hector International Airport. Table 47 documents commercial passenger activity by carrier in 2013. Activity in 2013 was up by approximately 14.2 percent from 2009 when there were 697,810 combined passenger boardings and deboardings. To note, passenger activity in 2013 was up 45 percent from 2005 and 71 percent since 2000.

Table 47: Commercial Passenger Activity at Hector International Airport in 2013

Airline	Enplanements	Deplanements	Total
Delta Airlines	165,049	163,913	328,962
United Express	96,648	97,564	194,212
Allegiant Air	68,514	69,032	137,546
American Eagle	45,749	45,609	91,358
Frontier Airlines	22,717	22,330	45,047
Total	398,677	398,448	797,125

Source: Fargo Municipal Airport Authority (2014)

Table 48: Commercial Passenger Activity at Hector International Airport (2009 to 2013)

Year	Enplanements	Deplanements	Total	Percent Change
2009	348,951	348,859	697,810	-
2010	363,138	361,803	724,941	3.9%
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%

Source: Fargo Municipal Airport Authority (2014)

Figure 30 outlines the 10 scheduled non-stop routes to and from Fargo. Data shows that the top domestic passenger market was Phoenix/Mesa followed by Las Vegas. These two destinations continue to be the largest airline revenue markets for Fargo.

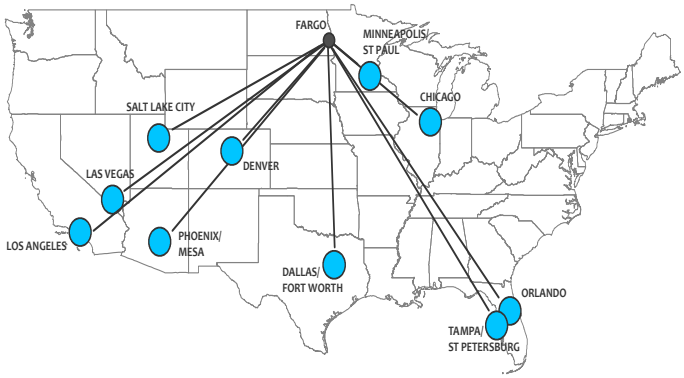


Figure 30: Hector International Airport Non-Stop Routes
Source: Fargo Municipal Airport Authority (2014), Airport Traffic Year End Report (January 2014)

INTERNATIONAL CUSTOMS ACTIVITY. Hector International Airport is designated as a 'Port of Entry' which means 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 contact the regional Field Operation Office, located in Seattle, WA (or visit the U.S. Customs and Border Protection website at www.cbp.gov).

FREIGHT AND MAIL . Movement of freight and mail is very important to local commerce, communication and market dynamics within the Metropolitan Area. As noted in Table 49 there are a number of air cargo carriers that transfer freight in and out of the Fargo-Moorhead Metropolitan Area and the greater Red River Valley.

Table 49: Air Cargo Report for Hector International Airport in 2013

Airline	Total Landed Weight (in lbs)
Atlas Aviation	1,332,000
Corporate Air	1,479,000
Encore Air Cargo	1,895,800
Martinaire Aviation LLC	8,500,800
Paccair	3,076,800
Total	16,284,400

Source: Fargo Municipal Airport Authority (2014)

Amtrak Data:

OVERVIEW. 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 every day. Additionally, Amtrak provides express services for packages and carries mail to certain locations. Table 50 provides ridership data for the Fargo Amtrak station since 2009. The next closest line to the Metropolitan Area is the California Zephyr line which runs from Chicago to Omaha to Denver and then on to Utah and California. This solidifys the importance of this line from a transportation and mobility perspective for the Fargo-Moorhead Metropolitan Area and the greater RedRiver Valley. Flooding in the Red River Valley affected ridership in 2010 and played a major role in ridership decreases in 2011 as service west of St. Paul was significantly impacted due to flooding in Minot. However, since 2000, boardings have increased by approximately 45 percent in the Metropolitan Area. Amtrak usage in 2013 held steady for all North Dakota stations, with 154,800 total riders compated to 154,864 total riders in 2012.

Table 50: Amtrak Ridership in Fargo (2009 to 2013)

Year	Ridership	Percent Change
2009	21,514	-
2010	21,286	- 1.05%
2011	16,968	- 25.44%
2012	20,304	+ 19.66%
2013	22,497	+ 10.80%

Source: Amtrak Governmental Affairs

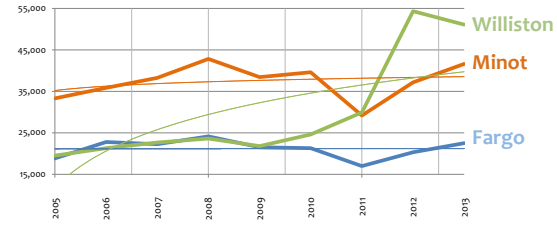


Figure 31: Amtrak Ridership at Top Three ND Stations (2005 to 2013)
Source: Amtrak Governmental Affairs

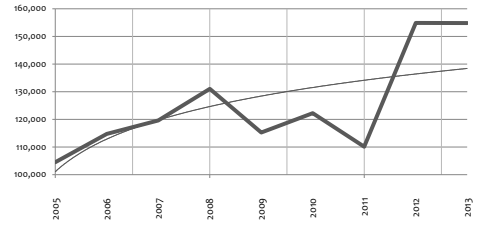


Figure 32: North Dakota Amtrak Ridership (2005 to 2013)
Source: Amtrak Governmental Affairs, All ND Stations

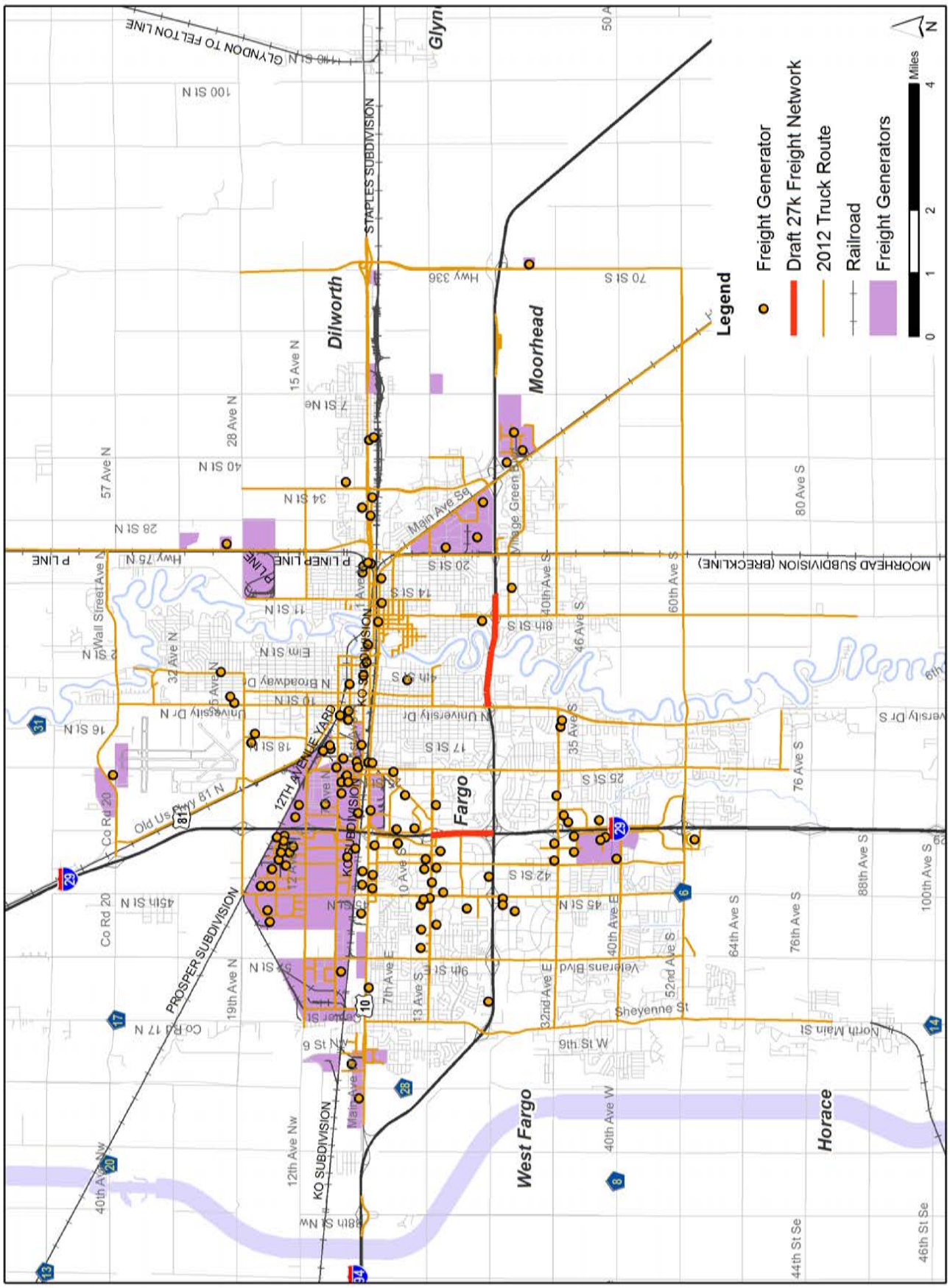


Figure 33: 2010 Freigh Generators and Designated Truck Routes

Source: Metro COG (2014); MnDOT; NDDOT

Freight:

OVERVIEW. In 2007 Metro COG completed the Fargo-Moorhead Freight Assessment. This assessment provided a framework that was utilized by Metro COG 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 and its efficiency and functionality. The Fargo-Moorhead Metropolitan Area functions as a regional economic center for eastern North Dakota and western Minnesota. As such, the greater Metropolitan Area accommodates numerous big-box retail businesses, a regional shopping center, and a large quantity of restaurants and supporting businesses. Additionally, the area accommodates a number of large freight producing industries, inclusive of the following: Integrity Windows, Case-New Holland (agricultural implement/equipment), Bobcat Company, Swanson Health Products, and Tecton (fiberglass/composite). The regional roadway network becomes an important component in the support of economic development and freight movement. The interstate system through Fargo-Moorhead also handles freight 'flow-through' or 'external to external trips' which do not have an origin or destination point in the Fargo-Moorhead Metropolitan Area; however, network capacity for these movements is still in the best economic interests of jurisdictions in the Metropolitan Area. See Figure 38 and details below for additional information on identified truck routes and truck counts.

METROPOLITAN FREIGHT GENERATORS. As discussed in other sections of this profile, on a five year timeframe Metro COG purchases employment data for use in the calibration of the travel demand model. 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 33 outlines 2010 freight generators by area and specific location. A freight generator 'area' is identified as aggregated parcels with significant industrial development pursuant to Metro COG's existing land use map. Site specific freight generators are based loosely on 2005 employment data and identified updates through December of 2010.

INTERMODEL FACILITY. An intermodal rail yard is located within the incorporated limits of the City of Dilworth. The facility is located on a seven acre parcel and up until 2008 container lifts were performed on-site. Recent information suggests this facility continues to be marketed as an 'intermodal' facility; however, containers are trucked to the St. Paul terminal where they are loaded on trains. In effect, the Dilworth facility is not being utilized as a transfer facility or true intermodal yard. In order for the facility to be successful, according to Burlington Northern Santa Fe (BNSF), it must provide the following: (a) traffic volume large enough to generate efficient shipment sizes to final destinations without being consolidated with other intermodal freight, (b) must have ancillary services available to the railroad that would give it a reason to stop and receive extra cars, (c) service to a market area that does not overlap with an existing intermodal facility, (d) weekly minimum volumes that allow trainload volumes and economic efficiencies, (e) in-bound/out-bound balance, and (f) sustainable growth forecasts over a long term planning horizon. Metro COG's Metropolitan Long Range Transportation Plan (LRTP) continues to support the development and identification of an intermodal facility for the Metropolitan Area.

REGIONAL FREIGHT PLANNING PROGRAM. Metro COG continues to program staff hours on an annual basis to work collaboratively with the freight industry to identify issues, define solutions, and prioritize strategies for implementation. For additional information on freight movement see the adopted 2009 Metropolitan Long Range Transportation Plan (LRTP), available in full version on Metro COG's website at www.fmmetrocog.org.

Truck Routes and ADT:

DESIGNATED TRUCK ROUTES AND TRUCK ADT. Figure 33 displays designated truck route corridors within the Metropolitan Area and additionally includes heavy commercial or truck ADT at certain locations. For North Dakota count locations, truck ADT's were extracted from the 2013 metropolitan traffic count database. For Minnesota count locations, Metro COG utilized data from MnDOT's traffic volume program which documents heavy commercial volumes on certain corridors on a three year cycle. For both North Dakota and Minnesota counts, heavy commercial/truck classification is based on FHWA Scheme F which sets a base threshold of two axles, six tires.

The City of Fargo completed an update to their truck route designation database in April 2012. For additional information contact the City of Fargo or visit www.fargotruckroutes.com for a complete version of their adopted network inclusive of restrictions. These updates have been incorporated into the 2014 Metropolitan Profile.

PLANNING FOR CHANGE

Ongoing or Upcoming Efforts:

Alternate Routes/Traffic Incident Management Guide Book. The Traffic Operations Incident Management Strategy (TOIMS) was completed by Metro COG in 2011. One of the recommendations from the TOIMS document heavily supported by emergency and incident managers was the completion of an Emergency Alternate Routes Guidebook. The Emergency Alternate Routes Guidebook would identify an alternate route and all of the needed traffic control, emergency personnel, and signage for closures on the interstates and major arterials within the FM Metropolitan area. The project would include procurement and oversight of a consultant to assist with completion of the guidebook. Metro COG staff would work with emergency/incident managers and traffic operations staff during the development of the project.

Barnesville Comprehensive & Transportation Plan Update. Metro COG will assist the City of Barnesville develop an update to its current Comprehensive Plan. The Plan update will focus on transportation and related infrastructure needs within the City of Barnesville, and serve as an update to its current 2004 Comprehensive Plan. Close attention will be paid to coordination with major MnDOT Trunk Highway and County Roads in and adjacent to the City of Barnesville. Given the recent addition of Barnesville to the MPA, attention will be paid to developing existing and projected data sets which integrate Barnesville within in the overall Metro COG Transportation Planning process.

Bicycle & Pedestrian Counts & Analysis. Metro COG has reinstituted its bicycle and pedestrian counts as part of an annual rotating schedule of identified locations. The overarching intent is to have each site counted at least every five years to ensure accurate data is available for each cyclical update of the Metropolitan Bicycle & Pedestrian Plan. Within this UPWP, hours have been assigned to ensure the accuracy of collected data and to manipulate and/or format the data for release to interested parties. Metro COG will work to make this information available to the local units of government (including MnDOT and NDDOT), private sector entities, and other interested persons.

Bicycle & Pedestrian Plan Update. In 2016 Metro COG will update the Metropolitan Bicycle and Pedestrian Plan. The updated plan will provide a summary of existing conditions, address current bicycle and pedestrian issues, and identify potential projects by jurisdiction in the FM Metropolitan area for the years 2016 to 2020. The Plan update will take note of the recently approved Moorhead River Corridor Study, review new opportunities in the City of Fargo/Cass County along the Red River, and integrate findings from the Red River Diversion Recreational Plan. This project would include procurement of a consultant and Metro COG staff to work in coordination on various aspects of the Bicycle and Pedestrian Plan update.

Clay County Comprehensive & Transportation Plan Update. As a follow up to the completion of Metro 2040, and the new MPO Boundary, Metro COG will work with Clay County in 2016 to provide technical analysis assistance on transportation elements affecting the update to its Comprehensive and Transportation Plan. The focus of the plan will be transportation; however will also entail an update of the County's current 2000 Comprehensive Plan. Metro COG will secure consultant service to assist with the plan update and development.

Demographic Forecasts (2015 to 2045). In 2016 Metro COG will work in coordination with a consultant on the development of demographic forecasts for the FM Metropolitan area. The demographic forecasts will cover the years 2020 to 2045 and will assist in establishing thresholds for household, employment, and other socioeconomic factors which are subsequently allocated

to Transportation Analysis Zones (TAZ) within the 2025 to 2045 travel demand model forecast years. The development of future year travel forecast models is an important element in the development of the next long range plan update, scheduled for adoption in the third quarter of 2019. Metro COG will contract for the development of the Demographic Forecasts.

DIlworth North & East Transportation Plan. The City of Dilworth has requested that Metro COG assist in the completion of a subarea plan to address anticipated growth and development in the north and east portion of the city. The transportation plan would include a review of existing conditions in the subarea, a public participation component, identification of issues and needs, growth management, project phasing, right-of-way preservation, and complete streets with bicycle and pedestrian facilities.

Fuctional Class Update. Metro COG will carry over work from the functional class update started in 2014. This update involves working with every jurisdiction within the Metropolitan Planning Area (MPA) to update Metro COG's inventory of roads. Metro COG will review and make recommendations in coordination with NDDOT and MnDOT concerning the functional classification system to ensure consistency with statewide functional classification listings.

Glyndon Parke Avenue Reconstruction. Metro COG will work with the City of Glyndon and Clay County in 2015 in developing a strategy for the reconstruction of Parke Avenue from TH 10 to 12th Street/County Road 117. Metro COG will assist Clay County in developing a project purpose and need statement, project alternatives, and coordinate public involvement, and provide technical. Clay County will be responsible for efforts requiring "beyond planning" detail, and will develop all project layouts and costs estimates.

Hawley Comprehensive & Transportation Plan Update. Metro COG will assist the City of Hawley develop an update to its current Comprehensive Plan. The Plan update will focus on transportation and related infrastructure needs within the City of Hawley, and serve as an update to its current 2009 Comprehensive Plan. Close attention will be paid to coordination with major MnDOT Trunk Highway and County Roads in and adjacent to the City of Hawley. Given the recent addition of Hawley to the MPA, attention will be paid to developing existing and projected data sets which integrate Hawley within in the overall Metro COG Transportation Planning process.

Heartland Trail Extension (Countywide Coordination & Corrdior Study). The Heartland Trail is currently a 49-mile paved shared-use path that runs from Cass Lake, MN to Park Rapids, MN. In 2006 an extension of the Heartland Trail was legislatively authorized to extend west to the City of Moorhead — a distance of 85 to 100 miles. Metro COG will work with representatives from Clay County, including the cities of Hawley, Glyndon, Dilworth, Moorhead, and other local agencies on a detailed study that would determine trail alignment, right-of-way needs, land ownership, and cost estimates. In addition, Metro COG will work with representatives from area jurisdictions to create a formalized committee to oversee Heartland Trail efforts through Clay County.

2014 Metropolitan Long Range Transportation Plan (LRTP) Development. Pursuant to federal law, Metro COG will complete an update to the Metropolitan Long Range Transportation Plan in 2014. The process of updating this plan was initiated in 2013 with the completion of an existing conditions report. A number of public input opportunities were available throughout the update process, inclusive of specific focus group meetings to engage various stakeholders. The LRTP includes a comprehensive outline of surface transportation issues, needs, opportunities, and funding priorities for the Fargo-Moorhead Metropolitan Area.

Metropolitan Bikeway Map Update. An on-going effort since mid year 2011, Metro COG will update its metropolitan bike map as necessary. Updates will be done in cooperation with the Metropolitan Bicycle and Pedestrian Committee.

Metropolitan Bikeway Signage Study. Metro COG will work with the Metropolitan Bicycle and Pedestrian Committee along with jurisdictions and other entities to develop a comprehensive signing system for the FM Metropolitan area's bikeways. This study will include both destination signs and route confirmation signs and markings. The study will identify important destinations and landmarks to which pedestrians and cyclists may be directed to, along with potential signs locations at strategic intersections and other decision points.

Metropolitan Traffic Counts & Analysis. Metro COG has begun the implementation of a more robust data monitoring and collection program to support initiatives regarding the development of performances measures and to support initiatives regarding the development of a more integrated traffic operations program in the FM Metropolitan area. In 2015 and 2016 Metro COG will assist local member units of government (including MnDOT and NDDOT) with transportation data collection efforts, as requested. In 2015 Metro COG will implement its metropolitan wide traffic count collection to support calibration of the next base year (2015 travel demand model).

Moorhead Downtown Grade Separation: Alternatives Development & Evaluation. Metro COG will assist the City of Moorhead and MnDOT on the coordination of a study for the development and evaluation of grade separation alternatives in downtown Moorhead. This study will build off of two completed studies: the Downtown Moorhead Railroad Grade Separation Feasibility Study (2008) and the TH 10/TH 75/ Center Avenue Corridor Studies (2013). The study will focus on the development of alternatives with functional (25 percent) design plans and a preliminary environmental review. Following these tasks, the City of Moorhead may amend its contract with the consultant to cover additional NEPA analyses required for further project development and design.

Moorhead Safe Routes to School Update. This update will identify obstacles near and adjacent to selected school sites and include a list of recommendations to improve safety, as well as increase education and encouragement activities. The analysis would likely focus on new (or pending) facilities recently developed or repurposed buildings by the Moorhead School District.

Oak Grove/Memorial Bike Bridge Programming Assistance. Following the provision of TAP funding for the City of Moorhead, Metro COG staff will continue assisting the City of Fargo and the Fargo Park District with grant applications and other strategic funding initiatives to secure funding for the Oak Grove/Memorial Bicycle and Pedestrian Lift Bridge over the Red River. The City of Fargo and City of Moorhead have previously completed environmental documentation and plan sets for the bridge and are continuously looking for opportunities to fund the new bridge. Similarly to the Lindenwood/ Gooseberry Bicycle and Pedestrian Bridge over the Red River, Metro COG would assist Fargo, Moorhead, and the Fargo Park District with the development of a Memorandum of Understanding (MOU} regarding cost splits and maintenance of the facility.

76th Avenue South Corridor Study. As a follow up to the Southwest Metro Transportation Plan, the City of Fargo has requested Metro COG assist in the completion of a corridor study along 76th Avenue South from Sheyenne Street/County Road 17 to University Drive. The corridor study would include a review of existing and future conditions including proposed future development and impacts of a grade separation at I-29. The study would also include a public participation component, identification of issues and project need, a review of both existing and forecast year 2040 project conditions, environmental impact review of alternatives, and an evaluation of alternatives.

Southwest Metro Transportation Plan. The City of Fargo and Cass County have requested Metro COG assist in the completion of a subarea plan from (north to south) 52nd Avenue South to 100th Avenue South and (east to west) the Red River to the Sheyenne Diversion. The plan would identify the opportunities, constraints, and needs for transportation infrastructure within the study area and provide a framework for short and long term transportation system improvements. The plan would also include a public participation component, existing conditions and issue identification, land use planning assistance for the City of Fargo and City of Horace, and recommendations based on travel demand model scenarios.

Transit Development Plan Update. In 2015 Metro COG will update the 2012-2016 Transit Development Plan for the FM Metropolitan area. Metro COG will work in cooperation with Metro Area Transit (MATBUS) on the TDP update. A portion of the scope of work will require procurement of a consultant and Metro COG staff will work in coordination on various aspects of the TDP update (see Program Area 1000). The TDP update will cover transit operations within the FM Metropolitan area for the years 2016 to 2020. It is anticipated that the following activities will be handled by Metro COG staff and will not be part of any procured contract:

i. Public participation (including needed survey work);
ii. Identification and analysis of administrative and political coordination opportunities;
iii. Coordinated human service transportation plan and metropolitan mobility management strategy; and
iv. Plan approvals and adoption.

West Fargo Safe Routes to School Plan Update. This update will identify obstacles near and adjacent to selected school sites and include a list of recommendations to improve safety, as well as increase education and encouragement activities. The analysis would likely focus on new facilities recently developed or repurposed buildings by the West Fargo School District.

West Fargo Sheyenne Street Corridor Study. The City of West Fargo has requested Metro COG assist in the completion of a corridor study along Sheyenne Street from 13th Avenue West to 52nd Avenue West, with further analysis of 52nd Avenue from 4th Street East to the Sheyenne Diversion. The corridor study would analyze existing and future conditions along the corridor. The study would also include a public participation component, identification of issues and project need, a review of both existing and forecast year 2040 project conditions, environmental impact review of alternatives, and an evaluation of alternatives.

Completed Projects:

Moorhead River Corridor Study. As part of Metro COG's 2012 and 2013 work program, a study was completed to identify and analyze opportunities and strategies relative to flood buyout lots in Moorhead. In an effort to remove flood prone homes and further develop flood protection in certain areas of the city, a number of lots have been acquired, many directly adjacent to the river corridor. This study looked specifically at a number of important questions while establishing a comprehensive strategy (or related policies) for use, maintenance, bike/ped/trail connectivity, safety, etc.

Metropolitan Food Systems Report. In collaboration with Fargo Cass Public Health and Clay County Public Health, Metro COG explored opportunities to expand local food production and options to increase access to food. The report identified opportunities where existing urban areas could be re-used for agricultural purposes and will also identify opportunities to expand the marketability of locally developed food products. The intent of this effort was to strengthen programmatic commitments among partnering agencies and to analyze the use of federal aid within the local transportation network in relation to identified production, distribution, and access gaps.

TH 10/TH 75/Center Avenue and Fargo Main Avenue Corridor Study. Initiated in 2011 and carried into 2012 and 2013, Metro COG worked in cooperation with the City of Moorhead, City of Fargo, NDDOT, and MnDOT to complete a corridor study which included segments of Main Avenue (25th Street to River), TH 75 (Center Ave to 20th Ave S), TH 10 (Red River to TH 336) and Center Avenue (Red River to TH 10/8th St S). Early public input opportunities were completed in 2011 and alternative development was completed in early 2012 with public input opportunities in May/August (2012).

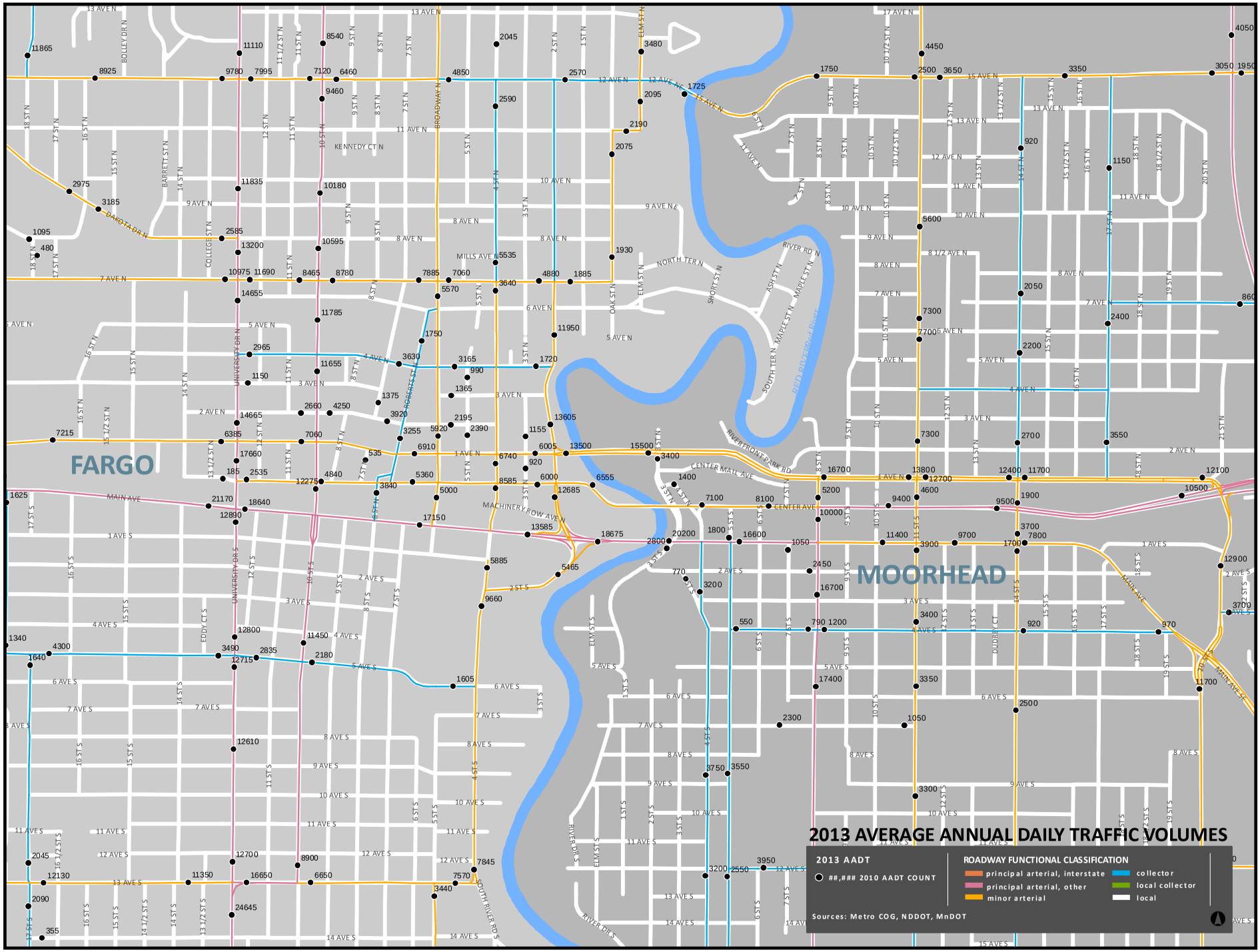
25th Street Project Concept Report (PCR). Started in 2010 and based on the findings from the 2009 corridor study, the PCR serves as the environmental documentation and engineering decisions document for the reconstruction project on 25th Street between 17th Avenue South and 23rd Avenue South. The City of Fargo was the lead in overseeing the completion of the document. Metro COG staff participatied in the PCR meetings and reviewed the draft document to ensure linkages with past plans.

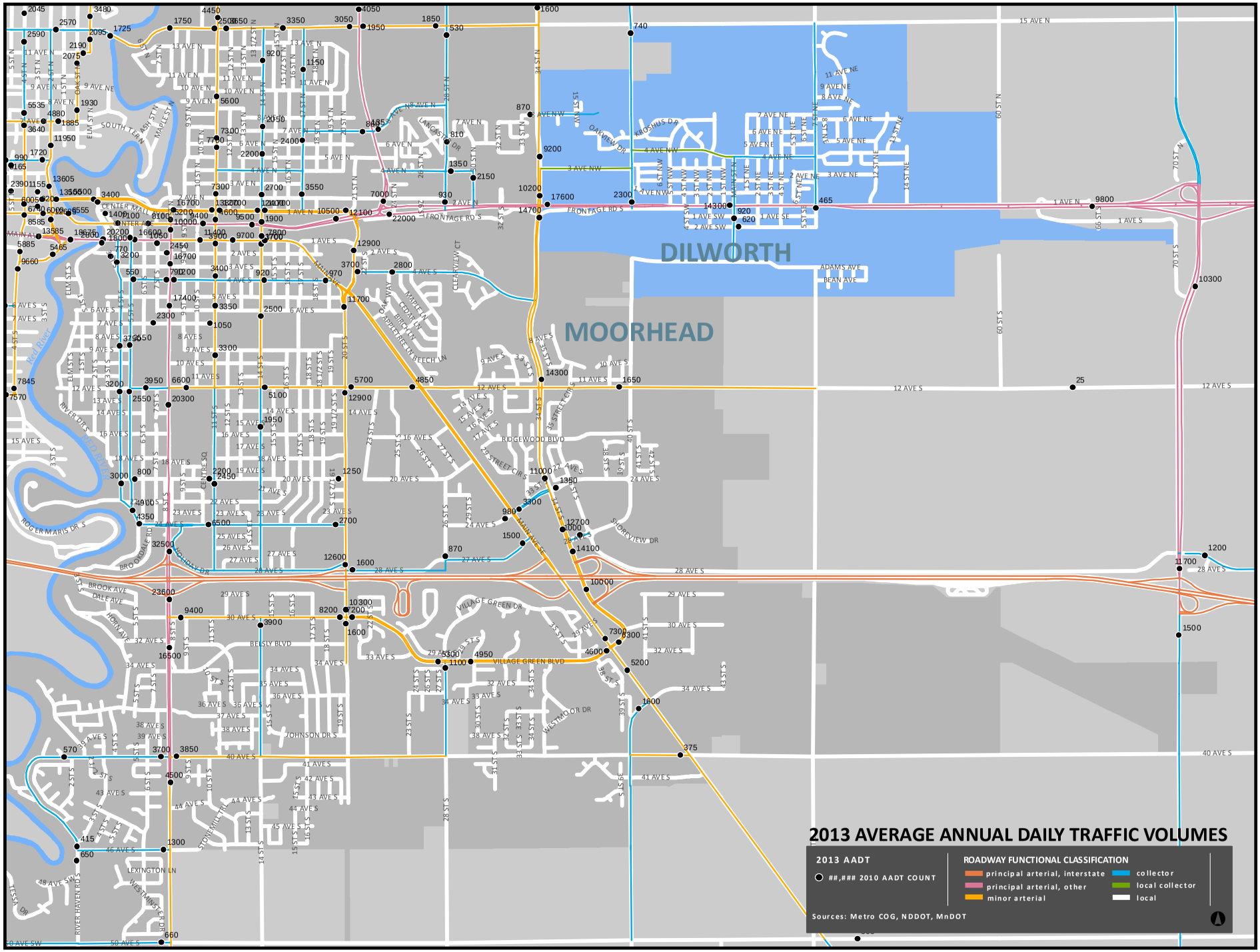
West Fargo / Fargo / Cass County Cooperative 12th Avenue North Project Concept Report (PCR). Throughout 2012 and into 2013, Metro COG assisted the City of Fargo, City of West Fargo, and Cass County with the completion of planning level components of the PCR. The project included 12th Ave N from CR 19 (west limit) to 45th St (east limit). This stretch of corridor has received urban roads funding for reconstruction in 2015. In July (2012) Metro COG finalized the scope of work for this project which outlined which portions are considered 'planning' (Metro COG) and which portions are 'project development' (consultant).

2010 Base Model Calibration and TAZ Socio-Economic Allocations (2010, 2020/2040). In the 1st Quarter of 2013, Metro COG worked closely with ATAC to develop and finalize the base 2010 network which were utilized within the 2014 LRTP to establish 2020 and 2040 traffic projections. Additionally, Metro COG worked internally to develop and allocate the necessary demographic and socio-economic variables for each Transportation Analysis Zone (TAZ); inclusive of households, jobs, student enrollment, etc. Additionally, during the 2nd Quarter of 2013 Metro COG worked closely with each city to allocate growth (Population, Households and Jobs) to applicable TAZ's respective to each forecast planning horizon.

Flashing Yellow Arrow Technical Memorandum. As part of Metro COG's 2013 work program a technical memorandum was prepared to analyze the potential use of flashing yellow arrows (FYA) at signalized intersections within the Metropolitan Area. The memorandum documents existing research and case studies while also providing detailed recommendations regarding placement and implementation. The use of FYA's are becoming more popular around the country and the technology has shown an ability to reduce delay at intersections through permissive left turn movements, as well as a number of other safety related benefits.

APPENDIX


FARGO
MOORHEAD
RED RIVER
2013 AVERAGE ANNUAL DAILY TRAFFIC VOLUMES
2013 AADT
##,### 2010 AADT COUNT
ROADWAY FUNCTIONAL CLASSIFICATION
principal arterial, interstate
principal arterial, other
minor arterial
collector
local collector
local
Sources: Metro COG, NDDOT, MnDOT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MOORHEAD
2013 AVERAGE ANNUAL DAILY TRAFFIC VOLUMES
2013 AADT
##,### 2010 AADT COUNT
ROADWAY FUNCTIONAL CLASSIFICATION
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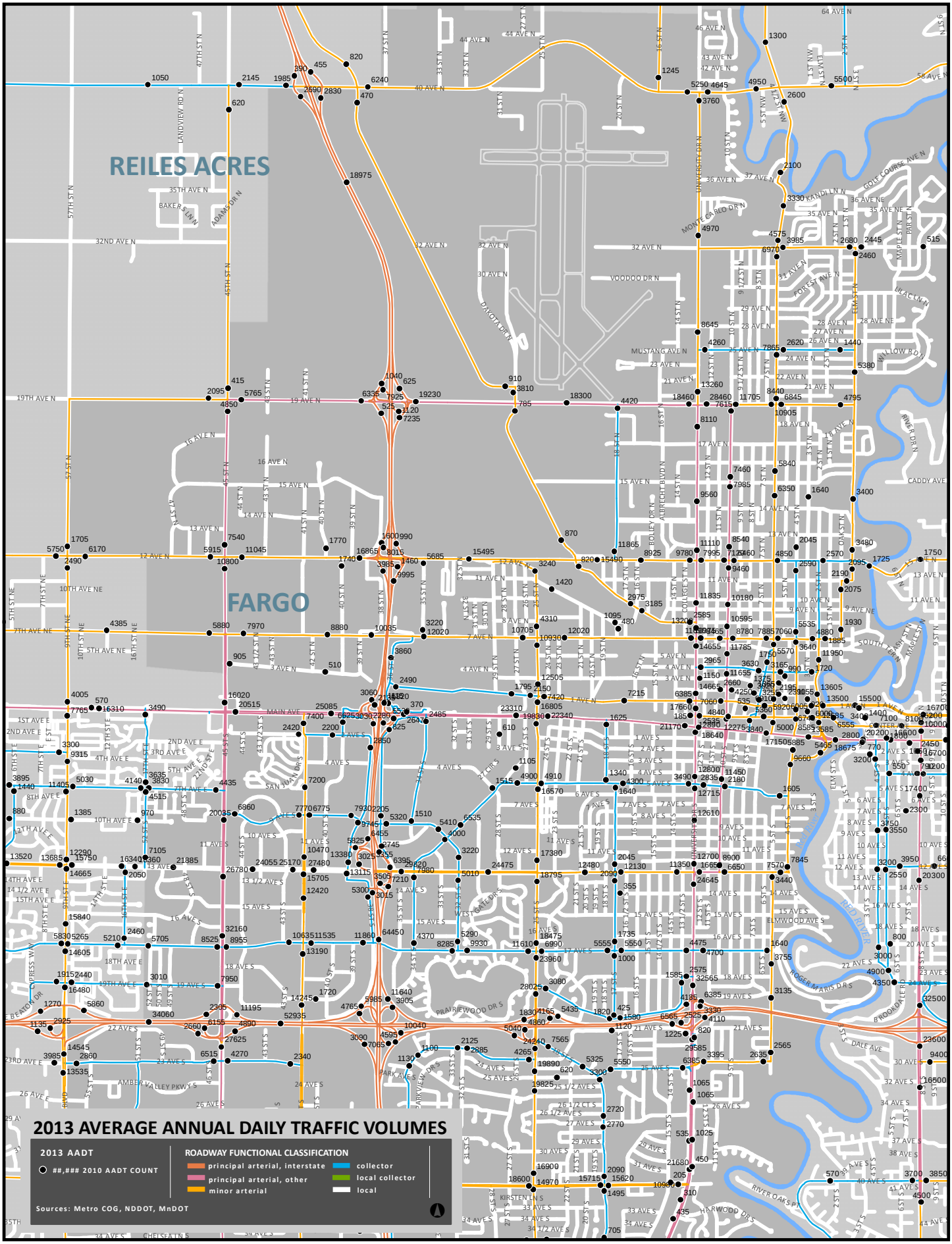
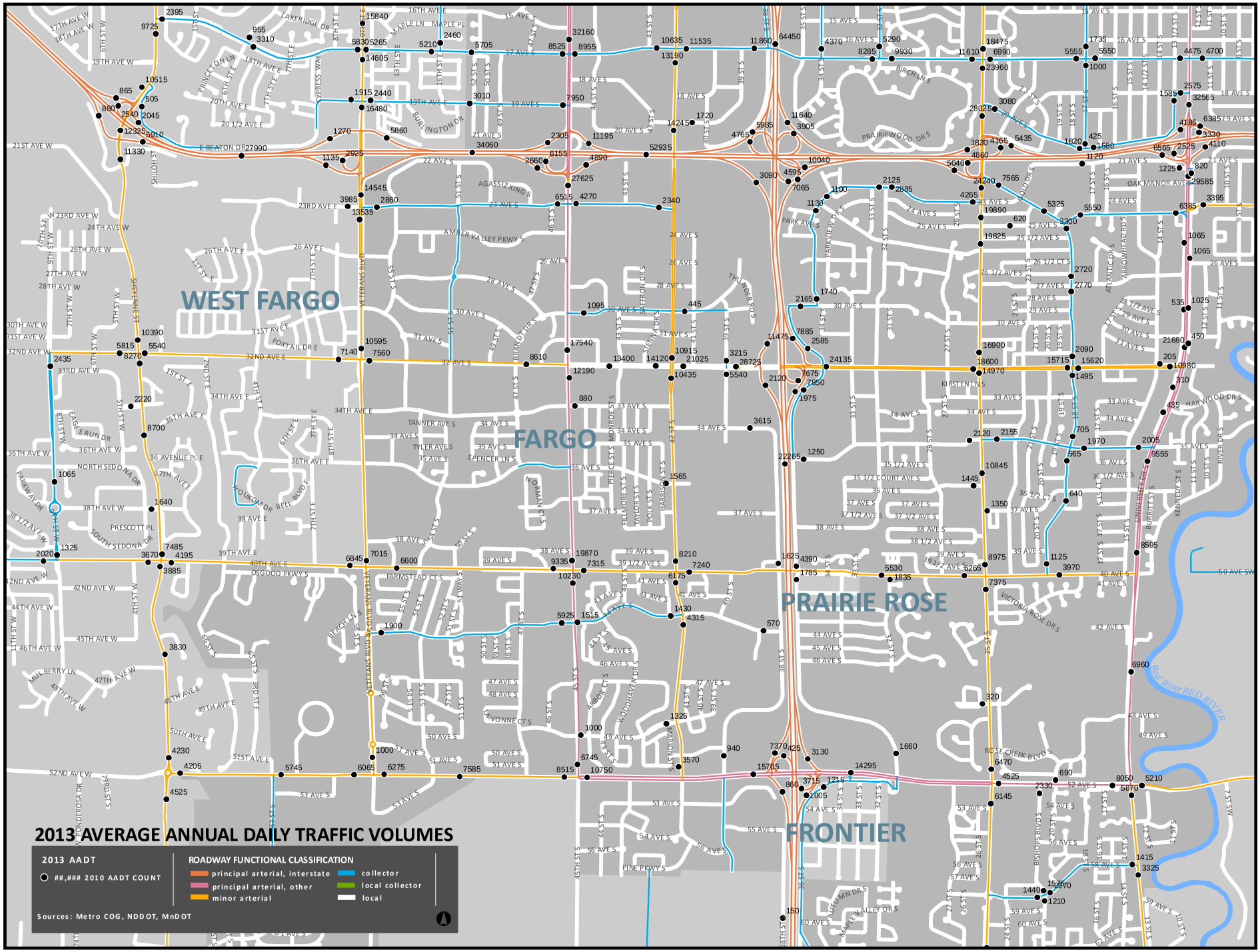
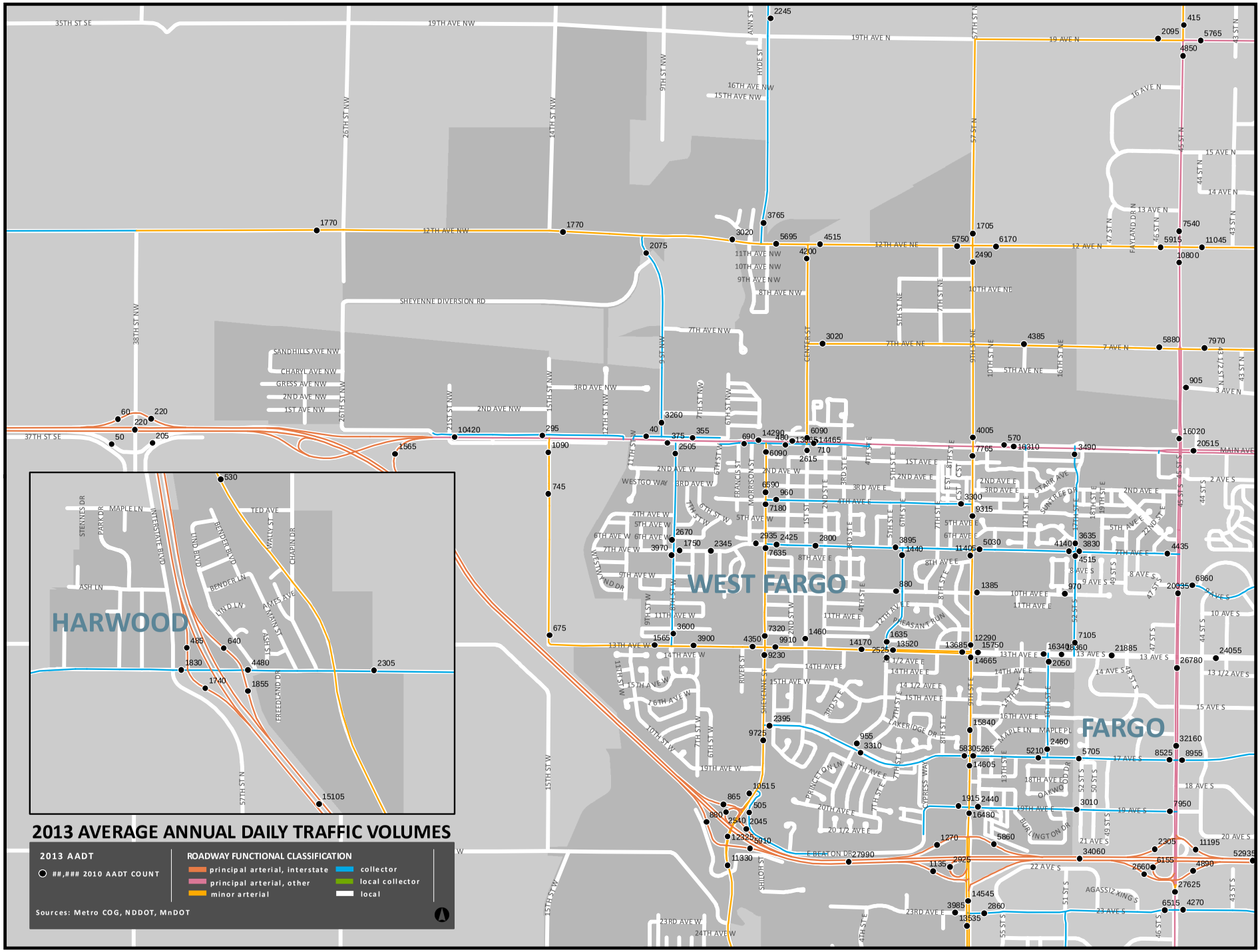
principal arterial, other
minor arterial
collector
local collector
local
Sources: Metro COG, NDDOT, MnDOT


REILES ACRES
FARGO
2013 AVERAGE ANNUAL DAILY TRAFFIC VOLUMES
2013 AADT
##,### 2010 AADT COUNT
ROADWAY FUNCTIONAL CLASSIFICATION
principal arterial, interstate
principal arterial, other
minor arterial
collector
local collector
local
Sources: Metro COG, NDDOT, MnDOT


WEST FARGO
FARGO
PRAIRIE ROSE
FRONTIER
2013 AVERAGE ANNUAL DAILY TRAFFIC VOLUMES
2013 AADT
##,### 2010 AADT COUNT
ROADWAY FUNCTIONAL CLASSIFICATION
principal arterial, interstate
principal arterial, other
minor arterial
collector
local collector
local
Sources: Metro COG, NDDOT, MnDOT
Red River RED RIVER


WEST FARGO
FARGO
HARWOOD
2013 AVERAGE ANNUAL DAILY TRAFFIC VOLUMES
2013 AADT
##,### 2010 AADT COUNT
ROADWAY FUNCTIONAL CLASSIFICATION
principal arterial, interstate
principal arterial, other
minor arterial
collector
local collector
local
Sources: Metro COG, NDDOT, MnDOT