


TRANSIT DEVELOPMENT PLAN

2012 - 2016

Prepared By:

Fargo-Moorhead Metropolitan Council of Governments

Adopted January 19, 2012

Metro COG

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Resolution in Support of the 2012-2016 Transit Development Plan

Whereas, the Fargo-Moorhead Metropolitan Council of Governments (Metro COG) is responsible for the planning and development of safe and functional transportation systems, inclusive of public transit;

WHEREAS, the Fargo-Moorhead Metropolitan Council of Governments (Metro COG) has updated the current Metropolitan Transit Development Plan, which makes public transit projects eligible for future Federal funding; and

WHEREAS, the 2012-2016 Transit Development Plan was developed in consultation with a cross section of interests including: elected leaders, transit staff, transit users, the general commuting public, human service agencies, senior citizens, business and industry representatives, private transit providers, bus drivers, and technical staff, and

WHEREAS, the 2012-2016 Transit Development Plan outlines a five-year Program of Activities that will improve transit service in the Fargo-Moorhead Metropolitan Statistical Area.

WHEREAS, the 2012-2016 Transit Development Plan outlines service improvements that will help enhance and coordinate the areas transit systems to make them a more convenient and competitive mode of transportation;

WHEREAS, the 2012-2016 Transit Development Plan contains a Coordinated Public Transit Human Service Plan which meets and in many areas exceeds recent Federal mandates to provide a blueprint for the coordination of human service transportation programs funded with non-Department of Transportation funds; and

WHEREAS, the 2012-2016 Transit Development Plan supports the continued coordination of the metropolitan transit system, provided independently by the Cities of Fargo and Moorhead and known as MATBUS, to ensure a realistic evolution towards a more uniform transit entity.

NOW, THEREFORE, BE IT RESOLVED, that the Policy Board of the Fargo-Moorhead Metropolitan Council of Governments does hereby adopt the 2012-2016 Transit Development Plan, and agrees to use it as a tool to implement transit goals and objectives, which will complement the overall development of the metropolitan transportation system.

Approved and adopted this 19th day of January.

Vern Bennett, Chair

Wade E Kline, Executive Director

RESOLUTION
Adoption of the 2012-2016 Transit Development Plan

Whereas, the City Commission of Fargo is the duly elected governing body for the City of Fargo and is responsible for the allocation of resources that allow for a safe and functional public transportation system; and

WHEREAS, the Fargo-Moorhead Metropolitan Council of Governments (Metro COG) has updated the current Metropolitan Transit Development Plan, which makes public transit projects eligible for future Federal funding; and

WHEREAS, the 2012-2016 Transit Development Plan was developed in consultation with a cross section of interests including: elected leaders, transit staff, transit users, the general commuting public, human service agencies, senior citizens, business and industry representatives, private transit providers, bus drivers, and technical staff, and

WHEREAS, the 2012-2016 Transit Development Plan outlines a five-year Program of Activities that will improve transit service in the Fargo-Moorhead Metropolitan Statistical Area.

WHEREAS, the 2012-2016 Transit Development Plan outlines service improvements that will help enhance and coordinate the areas transit systems to make them a more convenient and competitive mode of transportation;

WHEREAS, the 2012-2016 Transit Development Plan contains a Coordinated Public Transit Human Service Plan which meets and in many areas exceeds recent Federal mandates to provide a blueprint for the coordination of human service transportation programs funded with non-Department of Transportation funds; and

WHEREAS, the 2012-2016 Transit Development Plan supports the continued coordination of the metropolitan transit system, provided independently by the Cities of Fargo and Moorhead and known as MATBUS, to ensure a realistic evolution towards a more uniform transit entity.

NOW, THEREFORE, BE IT RESOLVED, that the City Commission of the City of Fargo does hereby adopt the 2012-2016 Transit Development Plan, and agrees to use it as a tool to implement transit goals and objectives, which will compliment the overall development of the metropolitan transportation system.

Approved and adopted this 9 day of January 2012.

The City of Fargo, North Dakota

BY: _____

ATTEST: _____

RESOLUTION 2012-0109-14

Resolution to Approve the 2012-2016 Transit Development Plan (TDP) and Authorize Mayor to Sign Resolution of Adoption

WHEREAS, the City Council is the duly elected governing body for the City of Moorhead and is responsible for the allocation of resources that allow for a safe and functional public transportation system; and

WHEREAS, the Fargo-Moorhead Metropolitan Council of Governments (Metro COG) has updated the current Metropolitan Transit Development Plan, which makes public transit projects eligible for future Federal funding; and

WHEREAS, the 2012-2016 Transit Development Plan was developed in consultation with a cross section of interests including: elected leaders, transit staff, transit users, the general commuting public, human service agencies, senior citizens, business and industry representatives, private transit providers, bus drivers, and technical staff, and

WHEREAS, the 2012-2016 Transit Development Plan outlines a five-year Program of Activities that will improve transit service in the Fargo-Moorhead Metropolitan Statistical Area.

WHEREAS, the 2012-2016 Transit Development Plan outlines service improvements that will help enhance and coordinate the areas transit systems to make them a more convenient and competitive mode of transportation;

WHEREAS, the 2012-2016 Transit Development Plan contains a Coordinated Public Transit Human Service Plan which meets and in many areas exceeds recent Federal mandates to provide a blueprint for the coordination of human service transportation programs funded with non-Department of Transportation funds; and

WHEREAS, the 2012-2016 Transit Development Plan supports the continued coordination of the metropolitan transit system, provided independently by the Cities of Fargo and Moorhead and known as MATBUS, to ensure a realistic evolution towards a more uniform transit entity.

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of Moorhead does hereby adopt the 2012-2016 Transit Development Plan, and agrees to use it as a tool to implement transit goals and objectives, which will complement the overall development of the metropolitan transportation system.

PASSED: January 09, 2012 by the City Council of the City of Moorhead.

RESOLUTION
Adoption of the 2012-2016 Transit Development Plan

Whereas, the City Commission of West Fargo is the duly elected governing body for the City of West Fargo and is responsible for the allocation of resources that allow for a safe and functional public transportation system; and

WHEREAS, the Fargo-Moorhead Metropolitan Council of Governments (Metro COG) has updated the current Metropolitan Transit Development Plan, which makes public transit projects eligible for future Federal funding; and

WHEREAS, the 2012-2016 Transit Development Plan was developed in consultation with a cross section of interests including: elected leaders, transit staff, transit users, the general commuting public, human service agencies, senior citizens, business and industry representatives, private transit providers, bus drivers, and technical staff, and

WHEREAS, the 2012-2016 Transit Development Plan outlines a five-year Program of Activities that will improve transit service in the Fargo-Moorhead Metropolitan Statistical Area.

WHEREAS, the 2012-2016 Transit Development Plan outlines service improvements that will help enhance and coordinate the areas transit systems to make them a more convenient and competitive mode of transportation;

WHEREAS, the 2012-2016 Transit Development Plan contains a Coordinated Public Transit Human Service Plan which meets and in many areas exceeds recent Federal mandates to provide a blueprint for the coordination of human service transportation programs funded with non-Department of Transportation funds; and

WHEREAS, the 2012-2016 Transit Development Plan supports the continued coordination of the metropolitan transit system, provided independently by the Cities of Fargo and Moorhead and known as MATBUS, to ensure a realistic evolution towards a more uniform transit entity.

NOW, THEREFORE, BE IT RESOLVED, that the City Commission of the City of West Fargo does hereby adopt the 2012-2016 Transit Development Plan, and agrees to use it as a tool to implement transit goals and objectives, which will compliment the overall development of the metropolitan transportation system.

Approved and adopted this 19 day of ~~January 2012.~~ December, 2011.

The City of West Fargo, North Dakota

BY: Rich Mallen

ATTEST: Jane Brownly

RESOLUTION 12-01

Adoption of the 2012-2016 Transit Development Plan

Whereas, the City Council of Dilworth is the duly elected governing body for the City of Dilworth and is responsible for the allocation of resources that allow for a safe and functional public transportation system; and

WHEREAS, the Fargo-Moorhead Metropolitan Council of Governments (Metro COG) has updated the current Metropolitan Transit Development Plan, which makes public transit projects eligible for future Federal funding; and

WHEREAS, the 2012-2016 Transit Development Plan was developed in consultation with a cross section of interests including: elected leaders, transit staff, transit users, the general commuting public, human service agencies, senior citizens, business and industry representatives, private transit providers, bus drivers, and technical staff, and

WHEREAS, the 2012-2016 Transit Development Plan outlines a five-year Program of Activities that will improve transit service in the Fargo-Moorhead Metropolitan Statistical Area.

WHEREAS, the 2012-2016 Transit Development Plan outlines service improvements that will help enhance and coordinate the areas transit systems to make them a more convenient and competitive mode of transportation;

WHEREAS, the 2012-2016 Transit Development Plan contains a Coordinated Public Transit Human Service Plan which meets and in many areas exceeds recent Federal mandates to provide a blueprint for the coordination of human service transportation programs funded with non-Department of Transportation funds; and

WHEREAS, the 2012-2016 Transit Development Plan supports the continued coordination of the metropolitan transit system, provided independently by the Cities of Fargo and Moorhead and known as MATBUS, to ensure a realistic evolution towards a more uniform transit entity.

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of Dilworth does hereby adopt the 2012-2016 Transit Development Plan, and agrees to use it as a tool to implement transit goals and objectives, which will compliment the overall development of the metropolitan transportation system.

ADOPTED by the City Council of the City of Dilworth, Minnesota this 9th day of January, 2012.

Mayor: _____
Chad Olson

ATTEST: _____
Ken L. Parke, City Administrator

ACKNOWLEDGEMENTS. The Transit Development Plan was prepared by the Fargo-Moorhead Metropolitan Council of Governments (Metro COG) in cooperation with MATBUS, City of Fargo, City of Moorhead, other member local units of government and cognizant agencies inclusive of Mn/DOT, NDDOT and FTA; under the direct oversight of a Study Review Committee. Metro COG and contracted consultant Nelson/Nygaard worked cooperatively to complete all aspects of the scope of work for the 2012-2016 Transit Development Plan; as detailed in the table below.

Task Assignment

Existing Conditions Report (ECR)	Metro COG
Issue Identification and Needs Assessment	Consultant/Metro COG
Statewide Transit Planning, Programming & Policy Assessment	Metro COG
Operational Alternatives Development and Analysis	Consultant
Higher Education Institutions & U-Pass Program	Consultant
Coordinated Human Service Public Transportation Plan	Metro COG

Financial Plan and Implementation Matrix	Consultant / Metro COG
System Coordination	Metro COG
System Goals, Objectives and Performance Measurement	Consultant/ Metro COG
TDP Implementation Summary	Metro COG
Public Input Summary – Phase I, II and II	Metro COG
Appendices	Consultant/ Metro COG

The following individuals were instrumental in the development of this transit plan:

STUDY REVIEW COMMITTEE.

Kevin Hanson, MAT Coordinating Board Chair
Brenda Elmer, Moorhead City Council
Mike Williams, Fargo City Commission
Diane Wray-Williams, Moorhead City Council
Rob Lynch, North Dakota State University
Jim Aasness, City of Dilworth Council Member
Shawn Anderson, M-State
Dave Piepkorn, Fargo City Commission
Jessica Lee, FM/WF Chamber of Commerce
Mark Simmons, West Fargo City Commission
Jan Mahoney, MSUM
Paul Wraalstad, Concordia College
Lori Van Beek, MATBUS (Moorhead Transit Manager)
Julie Bommelman, MATBUS (Fargo Transit Manager)
Jim Gilmour, City of Fargo (Planning Director)
Chuck Marchand, First Transit Administration
Larry Weil, City of West Fargo (Planning Director)

METRO COG STAFF

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Mikel Kunza, Transportation Planner
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NELSON / NYGAARD CONSULTING ASSOCIATES

Thomas Wittmann, Principal
Paul Lutey
Linda Rhine / Paul Supawanich (Finance)

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SUMMARY OF ACRONYMS

MPO	Metropolitan Planning Organization
ECR	Existing Conditions Report (Transit Development Plan)
UZA	Urbanized Area (or Federal Aid Urbanized Area FAUA)
TDP	Transit Development Plan
LRTP	Long Range Transportation Plan
Metro COG	Fargo-Moorhead Metropolitan Council of Governments
ITS	Intelligent Transportation System
MAT	Metro Area Transit of Fargo-Moorhead (or MATBUS)
OADA	Operational Alternatives Development and Analysis
STIP	State Transportation Improvement Program
BNSF	Burlington Northern Santa Fe (Railroad)
SRC	Study Review Committee
GTC	Ground Transportation Center
VSS	Valley Senior Services
ARRA	American Recovery and Reinvestment Act
ADA	Americans with Disabilities Act of 1990
MTG	Metro Transit Garage
JPA	Joint Powers Agreement
ACS	American Community Survey
TAZ	Transportation Analysis Zone
NDSU	North Dakota State University
MSUM	Minnesota State University – Moorhead
M-STATE	Minnesota State Community and Technical College
JARC	Job Access and Reverse Commute (JARC)
TDM	Travel Demand Model (Regional Traffic Volume Forecast Model)
MSA	Metropolitan Statistical Area (includes all Cass County and Clay County)
UPWP	Unified Planning Work Program (Metro COG's biannual work program)
PPP	Metro COG's Public Participation Plan (last updated August 2009)
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (Surface Transportation Authorization Legislation)
FHWA	Federal Highway Administration
MN/DOT	Minnesota Department of Transportation
MPA	Metropolitan Planning Area
NDDOT	North Dakota Department of Transportation
FTA	Federal Transit Administration
MOU	Memorandum of Understanding
AADT	Annual Average Daily Traffic
TIP	Transportation Improvement Program
CFR	Code of Federal Regulations
MTG	Metro Transit Garage
ATAC	Advanced Traffic Analysis Center
RA	Regional Architecture (ITS)
TDM	Transportation Demand Management
AVL	Advanced Vehicle Location
NTD	National Transit Database
TSP	Transit Signal Priority
SOV	Single Occupant Vehicle
GRH	Guaranteed Ride Home
MTI	Metropolitan Transportation Initiative
TEA-21	Transportation Equity Act for 21st Century
MOA	Master Operating Agreement

DICTIONARY / GLOSSARY OF TERMINOLOGY

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.

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 UZA 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'.

HEADWAY. Measurement of the distance/time between vehicles or transfer points in a transit system. A 'shorter' headway signifies more frequent service.

METROPOLITAN PLANNING AREA (MPA). Defined by 23 CFR 450.104 as the geographic are 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.

PARATRANSIT. A form of passenger transportation which is primarily intended for mobility-impaired, mentally impaired and senior citizens (elderly). Vehicles are generally equipped with wheelchair lifts or ramps. Service is often complimentary to other public transit services and is mandated with a ¾ mile radius of fixed route bus service.

TRANSIT AUTHORITY. A transit authority is a special purpose district organized as either a corporation chartered by state statute, or a government agency, created for the purpose of providing public transportation within a specific region. Attributes of a transit authority include taxing authority and financial/political autonomy.

MOBILITY MANAGEMENT. Mobility Management is a concept that promotes the sustainable transport and management of demand for various modes of transportation, with an emphasis on information (access to) and communication. Mobility Management in terms of MAT focuses on coordination of specialized transportation within the Metropolitan Area and ensuring reasonable access to transportation for the elderly, disabled or individuals with medical needs.

STUDY REVIEW COMMITTEE (SRC). A committee that is designated to arrange the order of business or provide some form of project oversight for some larger (typically legislative) body. To oversee completion of the TDP the MAT Coordinating Board established a SRC to specifically analyze data, review draft documentation and most importantly act as a communication link to applicable segments of the community.

TRANSFER. Refers to the ability to switch or transfer from one fixed route to another fixed route, or in the case of larger metropolitan areas the ability to transfer between various modes of public transit such as bus-to-subway, subway-to-bus or between different routes.

FAREBOX (REVENUE). The cash collected in fares for transit revenue trips. For the purposes of this TDP; passes, farebox revenue includes gross receipts from all fare media purchased, cash riders, paratransit cash fares, paratransit coupons and U-pass program revenue.transfers and other non-currency forms of payment are not considered 'farebox' revenue.

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.

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. A 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.

PUBLIC PARTICIPATION PROGRAM. In accordance with SAFETEA-LU Metro COG's adopted Public Participation Program sets forth formalized procedures for effective community participation in the development, updating or amendment processes related to the LRTP (or any of its sub-elements) or the TIP. Metro COG's existing PPP was adopted in August of 2009.

TRANSPORTATION (TRAFFIC) 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.

ARTERIAL ROADWAYS (PRINCIPAL AND 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).

ENVIRONMENTAL JUSTICE (LOW INCOME/MINORITY DISTRIBUTION). As shown on Page 32, the ECR identifies concentrations of low income and minority populations (neighborhoods) in comparison to jurisdictional boundaries, existing public transit fixed routes, transfer sites and shelter locations. To identify these concentrations and in an effort to comply with Executive Order 12898 in 2003 Metro COG utilized 2000 U.S. Census Summary File 1, Summary File 2, Summary File 3, the Metropolitan Existing Land Use Map and input from numerous local social service agencies. 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 500 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 (1.24 or less of poverty) were selected and mapped. Parcels designated as non-residential were removed and a 500 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.

TRANSPORTATION DEMAND MANAGEMENT (TDM). The application of strategies, policies or concepts with the intent of reducing travel demand (specifically single-occupancy vehicles) or to re-distribute this demand in space or in time; with the overarching goal of increasing the efficiency of transportation systems. Examples include: rideshare programs, carpool, transit/employer partnerships, fringe parking, ITS deployments, etc.

30 SERIES (NDSU CIRCULATOR ROUTES). Any '30 Series' reference relates to fixed routes 31, 32, 33, 34 and 35. These routes were designed to provide NDSU with an additional level of service as operating costs are paid by the University.

1.0 Opening.

The OTHER benefits of Public Transit. A quick look at ridership trends on the mass transit system in Fargo-Moorhead Metropolitan Area and it is clearly evident that public transit is becoming an increasingly more important element of the surface transportation system. In 2010, the Metropolitan Area mass transit systems provided a total of 2,133,908 rides which includes all fixed route, paratransit services, rural commuter services senior ride and ADA demand response services. From a fixed route perspective, over the five (5) year timeframe between 2006 and 2010 MATBUS ridership has increased by 747,100 rides (or 53%). Similarly for other transit services, paratransit ridership over the same five (5) year timeframe has increased by 8,861 rides (or 18%) and NDSU circulator routes (30 Series) has increased by 188,100 rides (or 99%, non-inclusive of Rt. 33 ridership). Beyond ridership figures and the system's ability to provide mobility options for individuals, the quantifiable benefits of public transit are generally less acknowledged, discussed or visible to the greater community. Outlined below are a few highlighted benefits:

(a) Emergency Response. In several years the Metropolitan Area has been forced into flood fights due to rising river levels and overland flooding. The cities of Fargo and Moorhead have relied heavily on volunteers and their ability to fill and place sandbags to create the necessary temporary levees to protect core infrastructure. MATBUS personnel and their fleet are a critical factor in mobilization and implementation of the flood fight effort.

(b) Avoided Costs. Two examples are discussed below, of many that exist:

College Students/U Pass. As noted in Chapter 5, college students attending any of the four major colleges/universities in the Metropolitan Area have access to fixed route transit for free. U Pass ridership in 2010 approached 400,000 which equates to an enormous amount of vehicle trips eliminated from the roadways and a significant reduction in the amount of infrastructure needed to handle these students (i.e. parking, transportation facility expansion, etc.). In addition, a rather difficult element to quantify but nonetheless important, is the amount of land that is not consumed for auxiliary purposes (i.e. off-street parking) that can be developed or improved.

Infrastructure. Public transit reduces the impacts on existing surface transportation facilities which amounts to an avoided cost in roadway maintenance, preservation and in some cases expansion. Fewer vehicles on the road means less congestion, improved travel time, reduce vehicle delay and a reduction in vehicle emissions.

(c) Parking. A functional mass transit system can reduce and in some cases eliminate the demand for costly surface parking or parking structures. Generally speaking, surface lots cost around $4,000 per parking space and $15,000 to $20,000 per space for above or below grade garages/ramps, respectively.

(d) Access to Jobs. Public transit plays a vital role in providing choice riders and captive riders with access to employment and employment related activities. See Map 6 (Pg. 26) for additional information on spatial comparison of Environmental Justice Areas to existing fixed route transit service.

(e) Environmental. Public transit provides benefits from an environmental perspective, such as air quality and reductions in greenhouse gas and other emissions.

(f) **Economic Development and Redevelopment Support.** Readers do not have to look any further than recently completed NDSU campus expansion projects in Downtown Fargo. These projects were completed without a major emphasis on parking availability due to investments and improvements in the fixed route system. Renaissance Hall and Barry/Klai Hall are excellent examples of how mass transit can support and improve the marketability and profitability of developments. Further, consider the activity, energy and spending potential that has transitioned to these areas to support and enhance the value of properties and businesses.

(g) **Public Safety.** Safe and sober rides.

EXECUTIVE SUMMARY

INTRODUCTION. As the designated Metropolitan Planning Organization (MPO) for the Fargo-Moorhead Metropolitan Area, Metro COG is responsible under federal law for maintaining a continuous, comprehensive and coordinated transportation planning process. A component of the process is the maintenance of the Transit Development Plan (TDP) which is intended to identify strategies and recommendations to improve transit service delivery in the Metropolitan Area. The TDP is developed under a defined five (5) year planning horizon and functions as a sub-element of the Metropolitan Long Range Transportation Plan (LRTP). The previous TDP was adopted in January of 2007 and covered the five (5) year planning horizon from 2007 through 2011. This update will cover years 2012-2016. Metro COG has completed development of the TDP in cooperation with MATBUS, Minnesota Department of Transportation (Mn/DOT) and North Dakota Department of Transportation (NDDOT).

The TDP is a comprehensive summary of data, analysis and recommendations which focus on all aspects of the public transit system (i.e. fixed route, paratransit, senior ride and rural commuter). Outlined below is a brief synopsis of critical analysis and recommendations as set forth within the TDP. The *draft* TDP in its entirety can be viewed by visiting Metro COG's website at www.fmmetrocog.org.

PROJECT OVERSIGHT & PUBLIC INPUT. To oversee completion of the TDP a steering committee was appointed which included representation from all four major colleges/universities, elected and technical staff from each jurisdiction and MATBUS administration. The steering committee was established to analyze data, review draft documentation, act as a communication link to applicable segments of the community and most importantly guide study development to ensure system and/or city priorities and objectives were adequately addressed.

Pursuant to Metro COG's Public Participation Plan (PPP) development of the TDP was completed under a public participation program specifically designed for this project. To summarize, early in the process Metro COG held a series of focus group meetings with key stakeholders, riders, transit operators (bus drivers & managers), specialized transportation providers and other interested parties; meetings which were critical in identifying transit needs, issues and opportunities. Additionally, Metro COG held three (3) public input meetings at various stages during plan development which provided an opportunity to further evaluate analysis, alternatives and recommendations with riders, stakeholders and interested parties. An on-board rider survey was also completed which generated approximately 500 responses specific to fixed route needs, issues and opportunities. For additional information, see Chapter 11 of the TDP which provides the framework under which a majority of the recommendations and strategies established within this plan are built from.

EXISTING CONDITIONS. In 2010 the Metropolitan Area mass transit system provided a total of 2,133,908 rides which includes all fixed routes, paratransit services, rural commuter services, senior ride services and ADA demand response services. From a

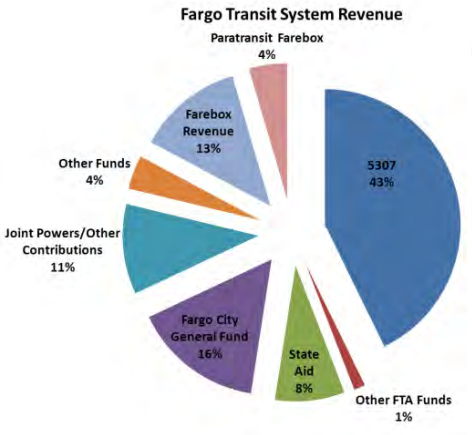
System	Service	2006	2007	2008	2009	2010
Metro Area Transit	Fargo Fixed	713,647	758,177	948,006	1,119,652	1,246,612
	Moorhead Fixed	345,228	356,606	398,445	392,984	376,697
	NDSU Circulator Rts	189,925	204,301	280,458	359,994	378,025
	Total MAT Fixed	1,058,875	1,114,783	1,346,451	1,512,636	2,001,334
	MAT Paratransit	48,989	55,133	60,255	57,428	57,850
Clay County Rural Transit	All Services	19,056	25,761	37,134	34,145	NA
Fargo Senior Services	Fargo/WF	43,231	43,604	41,721	42,104	38,491
	Moorhead/Dilworth	X	X	4,050	5,111	5,961
	Cass - Rural Transit	1,794	2,180	2,968	2,418	2,214
Handi/Wheels	All Services	24,938	26,000	17,689	15,414	28,280
TOTAL	All Systems	1,386,808	1,471,762	1,786,676	2,029,250	2,133,908

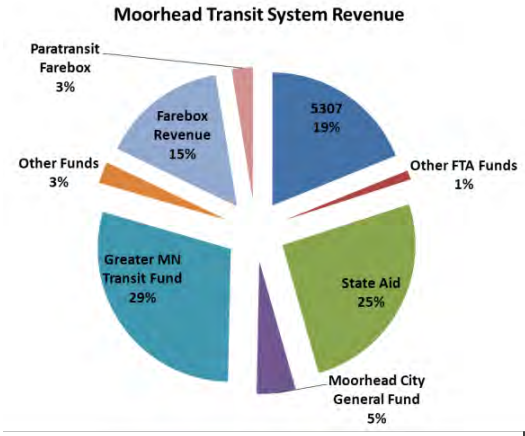
fixed route perspective, over the five (5) year timeframe between 2006 and 2010 MAT ridership has increased by 747,100 rides (or 53%). Similarly for other transit services, paratransit ridership over the same five (5) year timeframe (2006 to 2010) has increased by 8,861 rides (or 18%), NDSU circulator routes have increased by 188,100 rides (or 99%, non-inclusive of Route 33 ridership [Barry Hall/Klai Hall circulator route]) while rural commuter ridership (Cass and Clay County) and senior dial-a-ride service have also shown significant ridership increases. The figure above (see pg. i) summarizes total ridership data for the five (5) primary transit providers in the Metropolitan Statistical Area (MSA).

Academic Year	NDSU	Concordia	MSUM	MSCTC	Total
2001-2002	44,315	x	x	x	44,315
2002-2003	84,720	X	34,873	x	119,593
2003-2004	50,709	12,788	49,895	x	113,392
2004-2005	102,044	12,362	50,279	4,059	168,744
2005-2006	108,028	15,758	59,826	15,196	198,808
2006-2007	140,712	15,489	74,164	18,464	248,829
2007-2008	180,346	18,237	89,907	30,665	319,155
2008-2009	226,194	17,183	89,642	28,608	361,627
2009-2010	253,882	15,167	89,868	29,081	387,998

Student ridership has been a key component to the success of MATBUS and the fixed route system over the last decade; as shown in the adjacent table which depicts U-pass ridership for the past eight (8) academic years. The U-pass program was instituted in 2001 as a demonstration program and due to immediate success at NDSU it was expanded to include all four larger Metropolitan Area colleges/universities (Concordia, MSUM, M-State & NDSU). Under this program, each college contracts separately with the respective city and provides an annual contribution thereby allowing students to use any MAT fixed route for free by using their student ID as a transit pass.

The MATBUS operating budget is constructed and supported through a variety of federal, state and local funds. The table (to right) represents a rudimentary financial summary of the City of Moorhead and City of Fargo for fiscal year 2010, aggregated by funding category. Outlined below are more detailed pie charts depicting funding splits.





MAT Budget Summary - Operating Costs and Revenue Sources

Funding Category	Moorhead		Fargo	
	2010	%	2010	%
Total Operating Costs	$1,735,396		$4,634,499	
Federal	356,472		1,964,410	
State	974,904		370,000	
Farebox Revenue*	272,935		646,194	
Contributions (WF & NDSU)	x		781,000	
City General Funds	84,405		692,895	
Other Revenue	46,680		180,000	

ISSUE IDENTIFICATION. Based on the significant amount of early public input and an issue/needs assessment which analyzed important variables (i.e. on-time performance, route productivity, transfer rates, ridership patterns, capacity, unmet demand, railroad delay, etc.) a few key issues and needs were identified of critical importance, as outlined below:

a. *RELIABILITY OF SERVICE & ON-TIME PERFORMANCE.* Due to a number of factors including increased ridership, increased traffic volumes, railroad delays and tight route schedules; the ability of MATBUS to stay on-time has been compromised. Since the MATBUS fixed route system is a 'timed transfer' system, on-time performance is extremely important. This is a change from the TDP analysis conducted 5 years ago when on-time performance and system reliability was not seen as an issue. Addressing system reliability and on-time performance is the primary issue and number one priority in this TDP update.

b. *TRANSFERS.* According to analysis within the *draft* TDP, there is an overreliance on transferring which increases rider travel time and decreases trip convenience. Given the fact that industry standard suggests that incurring a transfer decreases a routes market potential by as much as 50% and that over 60% of riders transfer once and 30% twice; the TDP acknowledges that MATBUS is currently operating a system that is not convenient enough to attract choice riders.

c. *CAPACITY.* Capacity issues on certain routes were identified through TDP analysis and on some high ridership routes riders are being left behind on a regular basis.

d. *ROUTE FREQUENCY.* Ridership on several routes within the fixed route network have grown significantly over the past several years and their productivity shows clear warrants for more frequent service. These include: Routes 22, 25, 15, 13 and 2.

e. *SPAN OF SERVICE NEEDS.* The following span of service needs were identified: (a) fixed-route Sunday Service (repeatedly mentioned); and (b) later evening fixed-route service.

f. *GEOGRAPHIC AREAS W/ SERVICE NEEDS*. Fargo, Moorhead and West Fargo have grown substantially over the last decade. Locations that were consistency identified as service needs include: (a) Main Avenue from 25th St to Red River; (b) South 25th St; (c) Fargo Industrial Park; (d) Dilworth; and (e) South/Southwest Fargo to NDSU.

g. *PARATRANSIT.* Continued disbursement of paratransit users throughout the growing Metropolitan Area will place pressure on this system and the ability of MATBUS to stabilize rising operating costs while maintaining service and efficiency.

Throughout development of the TDP the steering committee continuously discussed and analyzed system priorities. Early in the process, prior to exploration of operational alternatives and based mainly on the unmet needs conclusions (see above a-g) the committee provided insight and direction on implementation priorities and funding distribution from a higher elevation perspective regarding the delivery of transit service, listed below in order of priority:

1. Maintain Existing System;
2. Invest in Core Areas;
3. Service Expansion.

These implementation priorities (1 – 3) in conjunction with the key unmet needs (see a-g above) established the framework under which alternatives and operational scenarios were developed.

FIXED ROUTE / ALTERNATIVE DEVELOPMENT. Three (3) fixed route alternatives and operational scenarios are outlined within the *draft* TDP and are comprised of various route modifications, adjustments and improvements. Significant aspects of each scenario are outlined below.

5% REDUCTION SCENARIO. This scenario assumed a five (5) percent reduction in hours of service by Fargo and Moorhead (non-inclusive of hours funded by NDSU as these are standalone). Based on ridership and productivity, in Moorhead frequency on Route 3 and 5 would be reduced during weekday (midday) and in Fargo Route 23 would only operate in the a.m. and p.m. peak hours. Overall, impacts from this 5% reduction scenario would be negligible.

SERVICE RE-STRUCTURE SCENARIO. This baseline scenario assumes that 2010 funding levels is the depth of resources that are available to address community and MATBUS service needs; with the principal issue/need being system reliability and on-time performance. In Moorhead, the most significant change revolves around the removal of the Marriott transfer facility on 11th Street S as timed route transfers are increasing difficult to make due to a number of factors (some outlined above under issue identification, see pg. iii). Since the predominant transfer patterns are between Rt 5 and Rt 1/Rt 2 the service re-structure scenario recommends that Rt 1 be interlined with Rt 3 and Rt 2 with Rt 5; thereby providing a one-seat ride without the need for transfers. Service would remain at 30 minute frequencies (i.e. two buses per route). In Fargo, the *draft* TDP recommends elimination of Rt 12 due to duplicative coverage with Rt 11. Rt 11 would be shortened to improve on-time performance and would be re-aligned to provide service to the Veteran's Hospital at a 30 minute frequency instead of hourly under Rt 12's current configuration. Rt 13 would be extended to 32nd Ave N to improve connections in North Fargo with the NDSU campus and existing Rt 13 A, B and X would be combined into one route with a 15 minute frequency. Further, recommendations include improving frequency on Rt 15 to 15 minute service, interlining Rt 14 with Rt 25 (one seat ride between 32nd Ave S and Downtown without Kmart transfer) and interlining Rt 16 with Rt 22 (one seat ride between West Fargo, West Acres and Downtown) which would also help alleviate capacity issues on Rt 15.

SERVICE EXPANSION SCENARIO. The *draft* TDP states that based on the issue identification/needs assessment, public outreach findings and an examination of the local market there are several opportunities for service expansion. This scenario is cost un-constrained and each strategy or concept contained within includes a description of the market to be served as well as associated costs. Non-route specific system-wide recommendations included Sunday service, later evening service and earlier a.m. service. In Moorhead, expansion priorities include increasing frequency on Rt 2 to 15 minute service during weekdays, new service to Horizon Middle School and SE Main Ave/Center Avenue, new service to Dilworth and frequency improvements on night routes. In Fargo, recommendations include implementation of a downtown circulator route, re-branding Rt 13 and Rt 15 as a combined "super route" with 15 minute frequency, targeted frequency improvements on Rt 14, Rt 16/Rt 22, new service to Davies High School and 52nd Ave S WalMart via 25th St S, a new express route from West Acres to NDSU and new service to the Fargo Industrial Park.

FIXED ROUTE IMPLEMENTATION. These three scenarios are comprised of various route modifications, adjustments and improvements with each including a recommendation summary which outlines projected annual revenue hours, annual cost and fleet impact. A majority of these recommendations can be implemented as stand-alone improvements/projects; however, it is critically important for city leaders, elected officials, staff and interested individuals to understand that the 'status quo' alternative was developed to specifically address system reliability, on-time performance and the number of required transfers. Therefore, the 'status quo'

alternative should be reviewed from a more all-inclusive perspective; which is especially critical and applicable on the Moorhead side as the entire concept revolves around elimination of transfers at the Marriot facility. In sum, the Moorhead 'status quo' concept was designed and programmed to be implemented in its entirety and should be considered in this manner to achieve maximum benefit relative to the issues and unmet needs identified in the *draft* TDP.

SYSTEM FACILITY NEEDS / CAPITAL ENHANCEMENTS. Based on the scenarios outlined above and detailed system analysis, a number of facility needs were identified and are highlighted within the *draft* TDP. Key recommendations include transitioning from a 'flag stop' system to 'designated stops' on high ridership routes (i.e. Rt 2, 11, 13, 14 and 15) and placement of shelters at any stop with twenty (20) or more boarding's per day. Further, given increased ridership levels and the additional dwell time associated with one-door operations of 30 foot buses, minimum replacement for Fargo buses should be 35 foot (with Rt 13, 15, 32 and 34 a minimum of 40 foot buses, possibly 45 or 60 foot long term).

COORDINATED HUMAN SERVICE & PUBLIC TRANSPORTATION. Chapter 6 is an important element within the *draft* TDP as it identifies the transportation needs of elderly, low income and individuals with disabilities. In addition, the coordinated plan provides an assessment of transportation barriers and prioritized concepts to address these issues/needs. The three (3) major barriers identified in the *draft* TDP focus on coordination (i.e. between agencies, organizations and service providers), travel time/convenience and service coverage (i.e. ensuring land development is done in consultation with available and projected surface transportation assets, including public transit). These barriers are intended to form the foundation for the development of programs and services which seek use of Federal Transit Administration (FTA) Section 5310, 5316 and 5317 funds.

FINANCIAL PLAN. Revenue forecasts, financial assumptions and the five (5) year financial plan is based upon 2010 operating costs/revenues as set forth within Chapter 1 (Existing Conditions Report). It is important to note that revenue projections within the *draft* TDP vary by city. The City of Fargo assumptions indicate revenues will increase by 2% between the base condition (2010) and the TDP planning horizon of 2016. The City of Moorhead assumptions utilize a 2% growth rate for city general funds and farebox revenue; however, federal revenues are shown to increase at 2% only through 2012 and no increase in state funding from the 2010 base condition to 2016. The 5 year financial plan includes forecasted operating costs and revenues for each system scenario as follows: 5% reduction, status-quo and cost un-constrained. In sum, under the baseline scenario the City of Moorhead shows an annual surplus in the range of $60,000 to $130,000 through 2016 while the City of Fargo shows an annual deficit ranging from $50,000 to $110,000. It is important to note that applied assumptions and performance indicators (i.e. impacts on ridership due to fare increases, operating costs per hour, funding and growth %'s, etc.) play a significant role in this financial plan and should be reviewed accordingly. The financial plan and matrices should be considered as a long range planning tool and are to be strictly interpreted as 'planning level' financial analysis. For additional details, see Chapter 7 of the *draft* TDP.

OTHER RECOMMENDATIONS, CONSIDERATIONS AND OPPORUNITIES MOVING FORWARD.

> *UPASS PROGRAM*. As noted on page ii within this Executive Summary, the UPass program has been an important component to the success of MATBUS, the fixed route system and has played a key role in supporting revitalization efforts specifically in Downtown Fargo. Currently, agreements are structured under an annual contribution by the four major colleges based on reported FTE students, faculty and staff; a methodology which is not necessarily correlated to actual ridership or costs for services. Chapter 5 of the *draft* TDP sets forth two alternative contribution methodologies that could be considered in future negotiations; although it is important to note that the existing method works and

the suggested alternatives may have varying levels of political palatability. The recommended concept would accommodate a contribution per FTE enrollee (students, facility & staff) plus a volume discount.

TRANSIT AUTHORITY. It is a generally held goal of the City of Moorhead and City of Fargo to continue to identify opportunities to eventually complete a transition to a joint transit authority. This concept has been previously studied (1999 LJR, Inc Study) and many of the pro/cons of various alternative forms of a transit authority remain unchanged. However, several years have passed since completion of the 1999 study and many of the operational and physical characteristics of MATBUS have changes. The *draft* TDP recommends that a process be initiated through the auspices of the MAT Coordinating Board to take a fresh look at the options, alternatives, implementation strategies and the various dynamics/issues that need further consideration.

INTELLIGENT TRANSPORTATION SYSTEMS (ITS). In recent years MATBUS has been effective in implementing ITS projects to further improve system operations and passenger convenience. A few of these improvements include implementation of transit signal priority on certain corridors (i.e. Broadway) and automatic vehicle location (AVL) kiosks at high boarding locations. Recommendations within the *draft* TDP focus on increasing the ability for MATBUS to provide real-time bus location data, enhancing system operations data reporting (i.e. ability to analyze route level schedule adherence on a regular basis) and expanded use of transit signal priority on high traffic/high ridership corridors (i.e. 13th Ave S, signalized exit at GTC, etc.). To note, the upcoming update of the Metropolitan ITS Plan, scheduled for 2012, will include a detailed ITS deployment strategy related specific to transit operations and MATBUS.

MASTER OPERATING AGREEMENT. As a continuation of a recommendation within the 2007-2011 TDP, this *draft* TDP additionally recommends the City of Fargo and City of Moorhead pursue a Master Operating Agreement. This master agreement would consolidate a series of smaller joint powers agreements between the two cities regarding issues such as the Ground Transportation Center, MAT Paratransit, Metro Transit Garage, vehicle maintenance, dispatch, etc.

PRELIMINARY FINDINGS AND DRAFT TDP PRESENTATION. On November 30th, 2011 Metro COG held a brown bag presentation on preliminary findings and recommendations within the *draft* TDP. The presentation was intended to provide a platform for informal discussion and comments specifically for elected leadership from Metro COG's local units of government. The presentation was well attended by all four metropolitan cities and a webcast of the presentation/discussion is available on Metro COG's website (see front page, click 'Transit Development Plan Update' and then click on the November 30th webcast link).

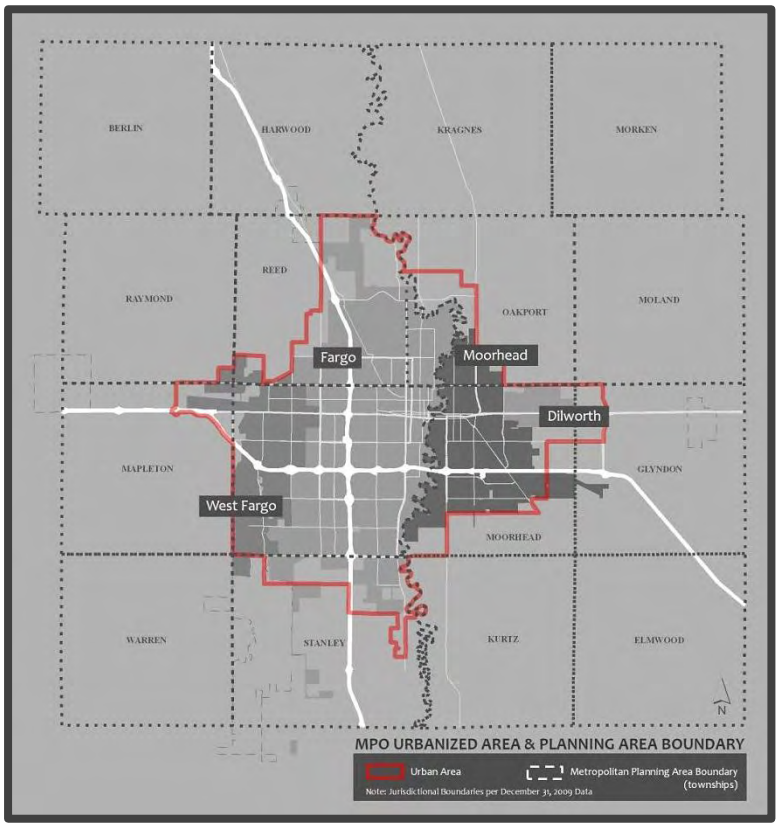
PLAN ADOPTION / SUPPORT. A signed 'resolution of support' has been included from each jurisdiction which was drafted to secure overarching support for the *draft* TDP and the analysis, findings and conclusions contained within. It is important to acknowledge that in no manner or circumstance do the recommendations, conclusions or strategies set forth within the *draft* TDP require or bind the cities to any such action, implementation schedule or timeframe. The TDP is developed as a 'guidance' document and the content should be interpreted, vetted and utilized accordingly. Metro COG's local units of government are encouraged to further debate, consider and revise strategies/concepts as deemed appropriate.

Existing Conditions Report (ECR)

1.0 Metropolitan Planning Organizations (MPO).

MPO's, Urbanized Area and Metropolitan Planning Area. A 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 each urban area with a population of more than 50,000 people as defined by the most recent decennial census. In addition to the urbanized area (UZA) the MPO boundary includes any contiguous geographic 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 sixteen townships directly adjacent to the UZA and includes approximately 573 square miles (or 367,454 acres). Map 1.0 (right) shows both the urbanized area per the 2000 Census and the Metropolitan Planning Area. As a major element of the transportation planning process, the MPO in coordination with the state (North Dakota and Minnesota) are required to develop a Transportation Improvement Program (TIP) for the Metropolitan Planning Area under a four (4) year planning horizon. The TIP is intended to implement LRTP surface transportation projects within the MPA; subsequent to vetting and prioritization of the projects by the MPO (23 CFR 450.324). Based on project location and description different funding sources apply respective to boundaries of the UZA and MPA.

MAP 1 – Urbanized Area / Planning Area



Source: Metro COG (2011)

TDP Study Area. The TDP study area comprises the entirety of the Metropolitan Planning Area, as shown in Map 1 (above).

2.0 Project Development.

TDP Background. As the designated Metropolitan Planning Organization (MPO) for the Fargo-Moorhead Metropolitan Area, Metro COG is responsible under federal law for maintaining a continuous, comprehensive and coordinated transportation planning process. A component of the process is the maintenance of the Transit Development Plan (TDP) which is intended to identify strategies and recommendations to improve transit service delivery. The previous TDP was adopted in January 2007 and covered the five year planning horizon from 2007 through 2011.

Authorization or Enabling Provisions. Pursuant to 23 CFR 450.322 (April 1, 2010) and as an sub-element of the Metropolitan Transportation Plan the Fargo-Moorhead Metropolitan Council of Governments (Metro COG)

prepares an update to the metropolitan TDP on a five (5) year cycle as codified in 23 CFR 450.322 (April 1, 2010). The plan shall consider both long-range and short-range strategies and actions that lead to the development of an integrated multimodal transportation system that efficiently moves people and addresses current/future transportation demand. Development and adoption of a TDP is recommended by the Federal Transit Administration (FTA) for the purposes of establishing a transit agency's vision for public transportation, assessing needs and identifying a framework for program implementation. Program implementation, especially respective to the Fargo-Moorhead Metropolitan Area, depends largely on funding, grants and participation from FTA and/or other applicable state agencies (see Financial Overview and Funding for additional information); thereby strengthening the need for a comprehensive TDP to guide considerations and policy decisions related to operations, maintenance, infrastructure and capital under a defined planning horizon.

Vision and Mission. The adopted 2009 Fargo-Moorhead Metropolitan Area Long Range Transportation Plan (LRTP) includes a 'Regional Development Framework' which is essentially a comprehensive vision for the regional transportation system, including transit related components. In addition to an overarching locally defined vision for the transit system both states (Minnesota and North Dakota) and FTA have established visions and mission statements. Outlined below are the applicable visions and/or policy statements respective to the intent of this TDP update:

From a local perspective (per adopted 2009 LRTP and Regional Development Framework):

> *"Provide an improved, safe and efficient public transit service that is focused on accessibility, mobility and enhancement of quality of life."*

From a state perspective [Minnesota] (per Greater MN Transit Plan 2010-2030)

> "A high quality coordinated transit network that is integrated into the overall transportation system and that meets the mobility needs of the people of Minnesota."

From a state perspective [North Dakota] (per 2007 TransAction II Plan)

> *"North Dakota will provide a safe and secure transportation system that considers personal choices, enhances business opportunities, and supports economic competiveness; and promotes the wise use of all resources."*

From a federal perspective (per FTA Strategic Plan – Mission Statement and Vision Strategies)

> *"To ensure personal mobility and America's economic and community vitality by supporting high quality public transportation through leadership, technical assistance and financial resources."*

Planning Process and Project Oversight. The planning process to guide completion of the Transit Development Plan is structured under five (5) predominant steps, as follows:

(a) vision;
(b) existing conditions;
(c) issue identification;
(d) alternative development; and
(e) preferred alternative and five (5) year implementation plan.

To oversee completion of the TDP the Metro Area Transit Coordinating Board established a study review committee (SRC) which was formally approved at their January 18, 2011 meeting. The SRC was established to play a significant role from a project oversight/input perspective; specifically, analyzing data, reviewing draft documentation and most importantly acting as a communication link to applicable segments of the community. The TDP Study Review Committee included the following members as appointed by the MAT Coordination Board:

FIGURE 1 – Study Review Committee

STUDY REVIEW COMMITTEE (SRC)	
Kevin Hanson, Chairperson, MAT Coordinating Board	FM/WF Chamber of Commerce
Brenda Elmer, City of Moorhead Council Member	Mike Hahn, Downtown Community Partnership
Mike Williams, City of Fargo Commissioner	Chuck Marchand, First Transit Administration
Diane Wray Williams, City of Moorhead Councilor	Jim Gilmour, City of Fargo Planning Director
Rob Lynch, North Dakota State University	Julie Bommelman, City of Fargo, Transit Manager
Jim Aasness, City of Dilworth Council Member	Lori Van Beek, City of Moorhead, Transit Manager
Shawn Anderson, M-State	Wade Kline, Metro COG Executive Director
Dave Piepkorn, City of Fargo Commissioner	Mikel Kunza, Metro COG Regional Transportation Coordinator
Mark Simmons, City of West Fargo (proxy Larry Weil)	Joe Nigg, Metro COG Principal Planner
Paul Wraalstad, Concordia College	Jan Mahoney, MSUM

Source: Metro COG (2011)

Scope of Work Overview. With the effective date of the TDP in mind, Metro COG allocated resources within the 2011-2012 Unified Planning Work Program (UPWP) to complete an update to this plan. In December (2010) Metro COG's Policy Board approved the *2007-2011 TDP Consistency Review* which reviewed aspects of the existing plan and effectively set the stage for moving forward with the plan update (see additional information on the Consistency Review below). Subsequently, in cooperation with Metro Area Transit (MAT), applicable metropolitan jurisdictions and cognizant agencies inclusive of Mn/DOT, NDDOT and FTA a scope of work was developed to guide development of the 2012-2016 Transit Development Plan. The scope set forth a plan whereby actual physical development of the TDP would be completed through collective efforts of Metro COG and MAT staff with the addition of a contracted consultant to assist with technical, operation analysis and other specific tasks. The scope of work is comprised of ten (10) major tasks and/or elements, as summarized below:

1.0 Background, Purpose and Need. A significant portion of this discussion and data will be provided within the context of this Existing Conditions Report (ECR) with the intent of establishing a framework of base information for plan development.
2.0 Existing Conditions Report (ECR). This component of the TDP will provide a summary of existing conditions and the operating environment (transit history, operations, agreements, ridership trends, finances, etc.) of public transit in the Metropolitan Area. This report includes data, analysis and discussion as set forth within Chapter 1 of the 2012-2016 Transit Development Plan.

3.0 Statewide Transit Planning, Programming and Policy Assessment. This element of the TDP will focus on documentation of adopted statewide plans, programs and policies regarding public transit, in addition to federal guidance on public transit, metropolitan planning and SAFETEA-LU planning factors. Further, this section (see Chapter 3) will analyze the existing Memorandum of Understanding (MOU) regarding Metropolitan Transportation Planning in the Metropolitan Area to verify compliance and consistency with federal, state and local plans, programs and policies.

4.0 Public Participation Plan. Pursuant to Metro COG's adopted Public Participation Plan (PPP) development of the TDP will be completed under a robust public participation program, specifically designed for this project. The public participation program is defined in detail within Chapter 11 of the TDP and is intended to engage the public, transit users, stakeholders, businesses and all interested individuals. The program includes a Study Review Committee (SRC) to oversee plan development, focus group meetings, operator workshops, public input meetings and a custom transit rider survey.

5.0 Issue Identification and Needs Assessment. Based on data within Chapter 1 (ECR), analysis within Chapter 3 (Statewide Transit Planning, Programming and Policy Assessment) and comments, ideas and issues obtained through initial phases of the public participation program; the consultant in cooperation with MAT and Metro COG will prepare an overarching ASSESSMENT which clearly summarizes and prioritizes (as appropriate) all applicable issues and needs. This assessment is outlined as Chapter 2 of the TDP.

6.0 Operational Alternatives Development and Analysis (OADA). This component of the TDP (Chapter 4) will utilize the Existing Conditions Report, Statewide Transit Planning/Programming/Policy Assessment and most importantly the Issues Identification and Needs Assessment as base information in the development of system alternatives. The OADA will place emphasis on the completion of technical analysis relative to the effectiveness, efficiency and appropriateness of MAT service delivery methods (fixed route, paratransit, senior ride, rural transit, fare structure/media, etc.) with consideration to the following: (a) system growth scenarios; (b) service to higher education facilities; (c) route operations / alignment; (d) system facility needs; and (e) modal integration.

7.0 Coordinated Human Service Public Transportation Plan. Chapter 6 will set forth the Coordinated Human Service Public Transportation Plan for the Metropolitan Area. This section of the TDP will cover specialized transportation and specifically document needs and barriers for low income, elderly and disabled individuals. Chapter 6 will serve as an official update of the Coordinated Human Service Public Transportation Plan as set forth in the 2007-2011 TDP and will follow guidance and research adopted within the 2010 Metro Mobility Study.

8.0 Financial Plan and TDP Implementation. An important component of the TDP, specific to consultant project tasks, is the development of a coordinated financial plan for each city which identifies how the preferred alternative(s) will be implemented over the five (5) year life of the plan. This detailed financial strategy will be developed to ensure effective implementation and will include recommendations on programming of additional local, state and federal resources.

9.0 System Coordination. Previous TDP's have provided significant discussion on opportunities for improved system coordination and a number of these directives have been pursued and/or implemented. Chapter 8 will document existing levels of coordination between the City of Fargo and the City of Moorhead (and other applicable Metropolitan jurisdictions) and will additionally identify any remaining gaps while establishing a new framework for coordination principles or concepts (as applicable) that should be considered based on changing dynamics and needs of public transportation in the Metropolitan Area.

10.0 System Goals, Objectives and Performance Measures. Metro COG, MAT and the contracted consultant will cooperatively develop (throughout applicable portions of the TDP) specific, measurable, achievable, realistic and timely goals/objectives regarding public transit in the Metropolitan Area. The overarching intent of these goals, objectives and performance measures will be establishing a system in which the functionality of the transit system can be assessed from various perspectives throughout the five (5) year planning horizon of the TDP.

2007 – 2011 TDP Consistency Review. Since adoption of the 2007-2011 TDP a number of recommendations and strategies outlined within the plan have been implemented or further analyzed to determine implementation feasibility. The consistency review is drafted to assess the degree to which major elements of the current TDP were implemented and is therefore divided into the following four (4) categories:

(a) General Plan Recommendations (fare structure, administrative, human service transportation, metro college and metro senior services);
(b) Routes and Operations;
(c) Recommended Studies, Technical Reports; and
(d) Facility Recommendations.

The assessment concludes that substantial progress has been made by MAT and other responsible entities respective to four (4) categories mentioned above. The document notes that 85% of high priority route recommendations have been implemented and 100% of recommended plans, studies and technical memorandums will be completed by the end of the 2007-2011 planning horizon. In sum, the consistency review acknowledges that an update to the existing plan is necessary based on remaining functionality of the existing TDP (2007-2011) and a need to continue efforts in addressing long range transit planning issues in the Metropolitan Area.

Contractor Procurement. On January 21, 2011 Metro COG issued a Request for Proposals (RFP) for technical components of the TDP scope of work that were envisioned to be completed by a contracted consultant. The RFP set forth the collective vision/framework for the project and clearly identified the following elements as major tasks that would be completed by the consultant:

(a) Chapter 3, Issue Identification and Needs Assessment;
(b) Chapter 4, Operational Alternatives Development and Analysis (OADA);
(c) Chapter 6, Financial Plan and TDP Implementation; and
(d) Public Participation Plan Involvement (contracted consultants will be expected to be intimately involved in this process to ensure a seamless flow and transition of data throughout the TDP update process.

3.0 History of Public Transit in the Metropolitan Area.

Summary. Public transit in the Fargo-Moorhead area has an interesting, historical and eventful past which dates back over a century, specifically to Thanksgiving Day in 1904. The Fargo-Moorhead Street Railway Company operated public transit with electric streetcars. In 1916 Northern States Power Company was formed and shortly thereafter absorbed the streetcar system. In 1937 the streetcar system converted to buses and Northern States Power Company sold the Fargo-Moorhead Transit Operations to Northern Transit Company. In 1945 the Northern Transit Company was operating 44 buses on 41 miles of routes and ridership figures are representative of the functionality and reliance placed on this system (see Figure 2, pg. 6).

After WWII transit use declined nationwide, including the Fargo-Moorhead Metropolitan Area. In 1954 the fleet of buses had been incrementally reduced to 27, then 20 by 1959 until 1966 when only seven buses remained. From 1949 to 1966 daily ridership fell from approximately 13,000 to 2,500. Near the end of 1968 Northern Transit Company abandoned all transit operations leaving the Fargo-Moorhead Metropolitan Area without any public transportation for the first time in 64 years.

One (1) year after Northern Transit Company abandoned transit service a new company, Holiday Transportation Company was formed. Holiday Transportation began operating three buses on three routes. Ridership during the first six months averaged 900 per day. The ridership was not enough to cover operating expenses; however, the City of Fargo and City of Moorhead intervened and began providing an operating subsidy to preserve the service. Public transit operated under this context until 1972 when the City of Fargo contracted with Stewart-Doyle, Inc. to operate the Fargo buses. Holiday continued to operate the bus service for the City of Moorhead. This marked the beginning of several years of separately operated bus service by the City of Fargo and the City of Moorhead.

The Arab Oil Embargo of 1973 increased the desire for public transit and by 1975 Fargo had expanded to five principle routes and four back-up routes while Moorhead was operating two routes. In addition, there was a privately operated route which serviced West Fargo and West Acres. 1975 ridership was up 33% from 1973.

Ridership continued to increase throughout the remainder of the 1970's and by 1982 total transit ridership reached 990,000. In 1979 the City of Dilworth contracted with the City of Moorhead for transit services; however, the service was removed in 1984 due to limited ridership. The Ground Transportation Center (GTC) was constructed in 1985 (present location downtown Fargo) and continues to operate as the central transfer point between both systems.

FIG 2 - Ridership Trends - Historical

1949 – 2000 Metro	
YEAR	APPROX. RIDERSHIP
1949	3,300,000
1966	650,500
1975	299,400
1979	595,000
1985	760,000
1990	904,200
1995	848,750
2000	753,000

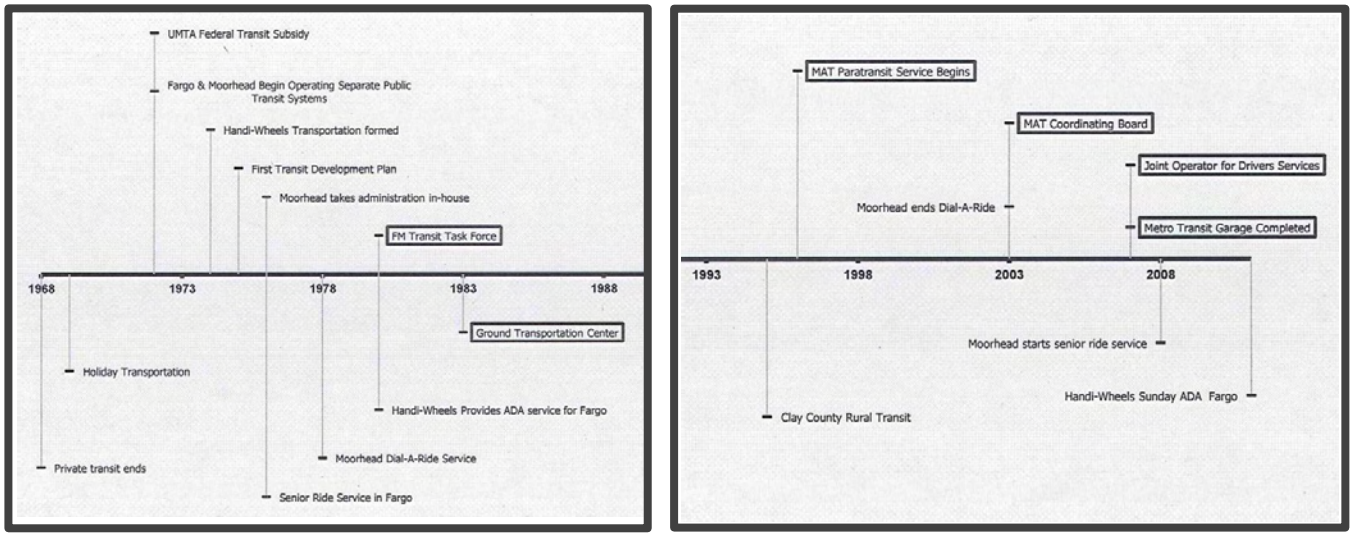
Source: Metro COG (2011) – combined fixed routes

During the 1990's numerous changes were realized to the metropolitan transit system and ridership reached its peak at 900,000 riders in 1991, with a subsequent gradual decline in ridership for the following decade. An important element to this substantial increase (see 1990 ridership estimate) was the elimination of transfer fees between cities. In 1991 the City of West Fargo finalized a contract with the City of Fargo for transit services and in 1994 the City of Dilworth re-established its contractual relationship with the City of Moorhead for transit services. Another significant change in public transit was implementation of metropolitan wide paratransit service in 1996 for disabled residents of the Metropolitan Area.

Similarly to the 1990's, transit service during the 21st Century continued to evolve and ridership totals began to show significant increases. Pursuant to Metro COG's 2010 Surveillance and Monitoring Report numbers indicate a metropolitan fixed route figure of 1,512,636. Other important changes included the construction of the Metro Transit Garage in 2006 which has allowed the placement of administrative staff from both cities in one building, resulting in numerous coordination, service and operational efficiencies.

Historical Overview Evolution of Public Transit Service Delivery. The flow chart below was created to show the relationships and transitions of service delivery in the Metropolitan Area since the 1960's. For the most part, service has traditionally included fixed route, paratransit, senior ride and rural transit; however, the form, manner and ownership/subsidy structure has been in constant evolution for a variety of reasons.

FIGURE 3 – Evolution of Public Transit in Fargo-Moorhead Metropolitan Area



Source: Metro COG (2011)

4.0 Existing Service Overview.

Summary. The Fargo-Moorhead Metropolitan Area provides numerous public transportation opportunities for residents, visitors or other interested parties. There are five (5) 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 (MAT) Fixed Route; (b) Metro Area Transit (MAT) para-transit; (c) Valley Senior Services (VSS); (d) Handi-Wheels and (e) Clay County Rural Transit (operated by Productive Alternatives in 2010). Metro Area Transit operates twenty-five (25) fixed routes of which four (4) are seasonal routes in coordination with North Dakota State University (NDSU). In addition, MAT operates para-transit 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.

Fixed Route. Fixed routes account for the majority of public transit ridership in the Metropolitan Area (as detailed in section 8 of Chapter 1) and the general structure of each existing fixed route system, by city, is described below. Broadly applied, fixed route service is provided throughout the Metropolitan Area from 6:15 a.m. to 10:15 p.m. Monday through Friday and 7:15 a.m. to 10:15 p.m. on Saturday. Fixed route service is not provided on Sundays. Free transfer service is offered between the City of Fargo, City of Moorhead, City of West Fargo and Clay County Rural Transit. Fixed route cash fares were increased on January 1, 2009 to $1.25 for adults and $.60 for discount riders. MAT additionally offers a number of different 'pass' types (also increased in price in 2009) which includes the popular College U-Pass.

Service Area. Fixed routes operated by Metro Area Transit are contained entirely within the jurisdictional limits of Fargo, West Fargo, Moorhead and Dilworth; and thereby, entirely within the Urban Area. A contributing factor to this service area delineation is the applicability and use of 49 U.S.C. 5307 Urbanized Area Formula Program which provides substantial financial support for capital investments related to the operation of fixed route transit in Fargo-Moorhead (see section 5, for additional info). These federal funds are apportioned to a UZA and flow directly to the recipient.

City of Fargo. The fixed route system within the City of Fargo includes seventeen (17) routes of which four (4) routes are seasonal and only operate during the North Dakota State University academic year (Routes 31, 32, 33 and 35). As of March 2009, Route 34 has been extended to operate Monday-Friday throughout the entire year. It is important to note that Route 13 (A & B) and Route 33 (A, B & C) require multiple vehicles in order to adequately accommodate headways and demand. Headways in the City of Fargo range from an hour to twelve (12)/fifteen (15) minutes on certain NDSU circulator routes (Routes 31, 33, 34). All fixed routes in the City of Fargo pulse at the GTC excluding Route 21, 22 23, and 25 which operate in south Fargo and transfer riders at the West Acres Transit Hub and affiliated NDSU routes (31, 32, 33, 34 & 35). Transfer points are located at the following facilities:

(a) North Dakota State University Memorial Union Transit Hub (Administration Avenue);
(b) West Acres Transit Hub (Roger Maris Wing, West Acres Mall);
(c) K-Mart Transfer Hub (14th Street South and 25th Avenue South);
(d) Ground Transportation Center (NP Avenue and 5th Street North).

City of West Fargo. The City of West Fargo receives fixed route transit service via Route 22 through a contractual arrangement with the City of Fargo. Important destinations along this alignment include the 13th Avenue South business corridor, Sanford Health, High Rise, City Hall, High School and Share House. This route operates from 6:15 a.m. to 7:45 p.m. Monday through Friday and 7:15 a.m. to 7:45 p.m. on Saturdays. Transfers from Route 22 to Route 15, 21, 22, or 25 is available at the West Acres Transit Hub. Transfer points are located at the following facilities:

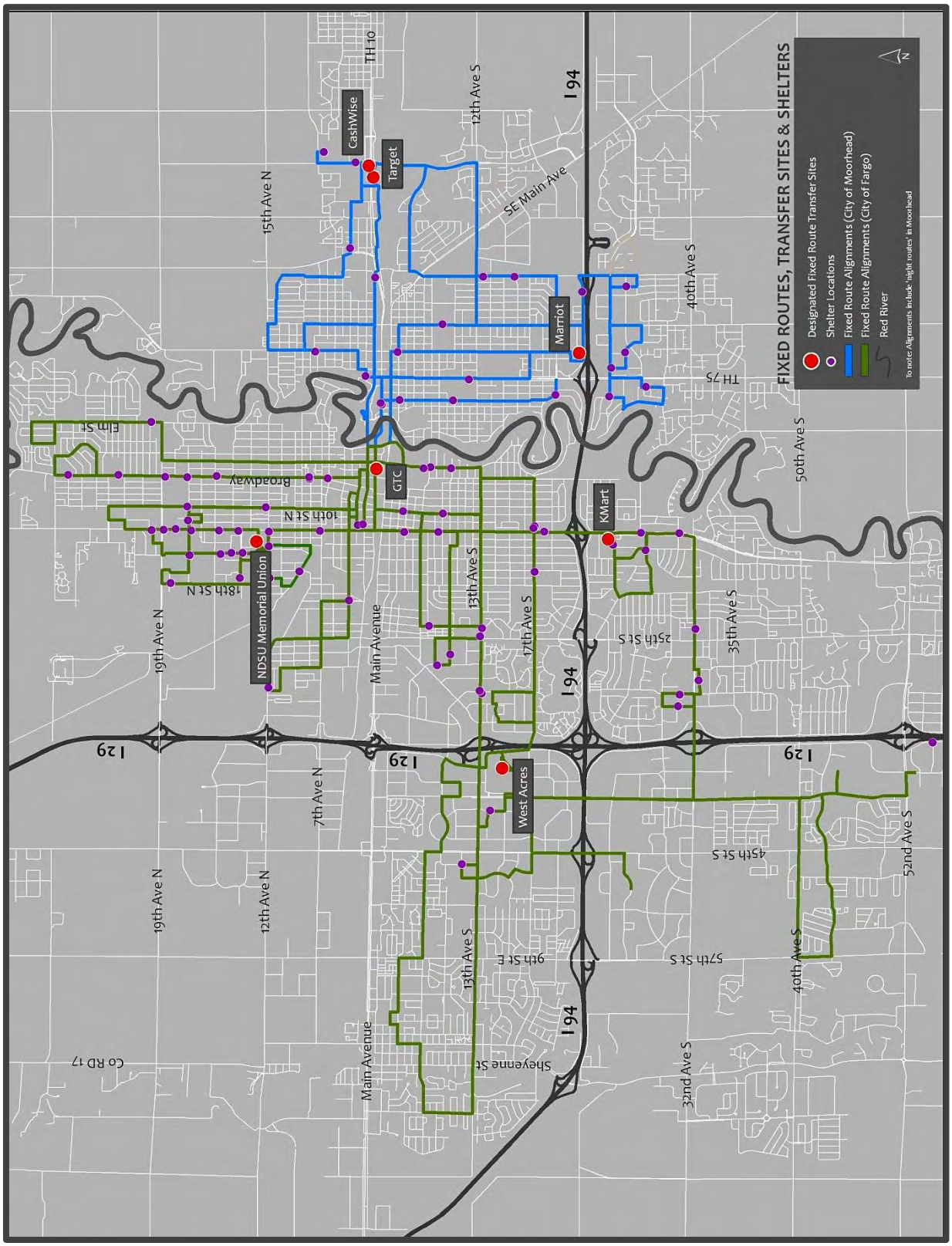
(a) West Acres Transit Hub (Roger Maris Wing, West Acres Mall).

City of Moorhead. The fixed route system within the City of Moorhead includes five (5) routes and two (2) evening routes. All fixed routes in the City of Moorhead pulse at the GTC excluding Route 3 and Route 5 which transfer riders at the Marriot Transfer Hub. Headways in the City of Moorhead are thirty (30) minutes with the exception of Route 4 which accommodates a sixty (60) minute headway although utilizing two (2) buses for a thirty (30) minute frequency. Transfer points are located at the following facilities:

(a) Marriot Transfer Hub (11th Street South and 28th Avenue South);
(b) Ground Transportation Center (NP Avenue and 5th Street North);
(c) Target (Hwy 10 Frontage Road and 34th Street South);
(d) Cashwise Grocery Store (Hwy 10 and 34th Street North).

City of Dilworth. Currently, residents in the City of Dilworth do not have direct access to fixed route service within their jurisdictional limits. Riders can access the system at Cashwise, Target or Wal-Mart (actually within City of Dilworth incorporate limits) however route alignments do not extend past 34th Street North.

Fixed Routes, Transfer Points and Shelter Locations. Map 2 (pg. 9) shows fixed routes and transfer points by jurisdiction (data as of December 31, 2010). MAT currently maintains eighty-six (86) of the eighty-eight (88) shelters/facilities as detailed within Map 2 (data as of December 31, 2010). A majority of these structures are located in high usage/demand areas, such as: commercial areas, colleges, public housing, health facilities and human service facilities. NDSU owns and maintains the Memorial Union Transit Hub and the FargoDome Shelter (Albrecht & 17th Ave N). Heated shelters and/or facilities are provided at the West Acres Transit Hub, North Dakota State University Memorial Union Transit Hub and the FargoDome shelter per the location mentioned above.

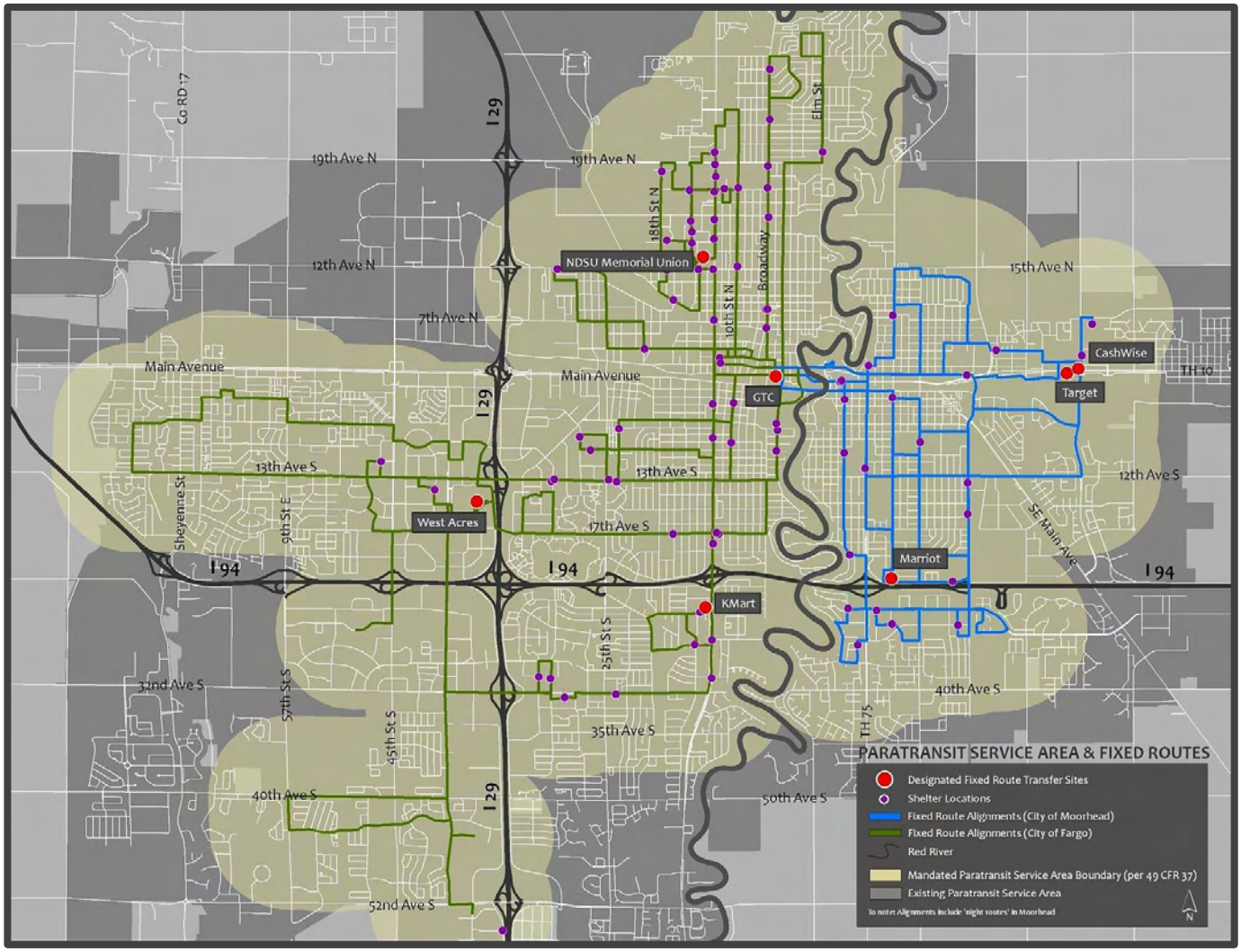


MAP 2 – Fixed Routes, Transfer Sites and Shelters

Source: Metro COG (2011)

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. Paratransit operates under the same hours as the fixed route system, 6:15 a.m. to 10:15 p.m. Monday through Friday and 7:15 a.m. to 10:15 p.m. on Saturday. The City of Fargo and the City of West Fargo provide service with one (1) paratransit vehicle on Sunday between 7:00 a.m. and 5:00 p.m.

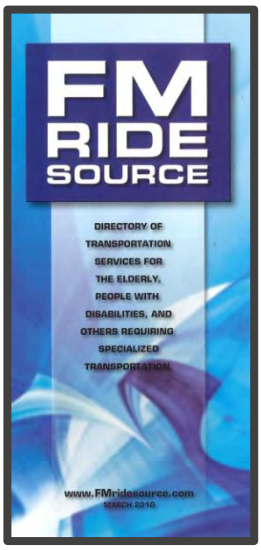
Map 3 – Paratransit Service Area and Fixed Routes



Source: Metro COG (2011)

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 Americans with Disabilities Act of 1990 which mandated complimentary paratransit 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-fourth (3/4) of a mile on each side of each fixed route, including three-fourths (3/4) of a mile radius at the ends of each fixed route." Map 3 (pg. 10) outlines the 'mandatory' paratransit service area based on the existing structure of fixed routes in the Metropolitan Area.



Senior Ride and Rural Transit. Metro Senior Ride is operated by Valley Senior Services (VSS) in Fargo and West Fargo without a contract for services. Service in Moorhead is provided by VSS under contract. Metro Senior Ride provides door-to-door transportation services for senior citizens age sixty (60) and over. To be eligible for this service, individuals must be able to walk and enter/exit the vehicle under their own power. The Senior Ride service area includes the entire Metropolitan Area. Within rural areas of the MSA, Clay County Rural Transit (Productive Alternatives, Inc.) and Cass County Rural Transit (operated by VSS) provide a blend of fixed route and demand response services to individuals. Up until 2010, Clay County Rural Transit was operated by Clay County under auspices of Mn/DOT and federal transit grants; however, the program has since been transitioned to a private entity (Productive Alternatives, Inc.) whom operates the service. Services offered by Clay County Rural Transit include a commuter route from Detroit Lakes to Fargo-Moorhead which pulses at the GTC and a 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, etc.) to accommodate senior residents.

FIGURE 4 - '*Public*' Specialized Transportation Providers

Transportation Provider	Phone number	Office Hours for for Arranging Ride	Hours of service	Vehicle Lift/ramp	ND Medicaid	MN Medicaid	Cost one way within Metro Area	Eligibility Requirements
Anytime Transportation	701-232-3322	8:00am to 5:00pm M-F	8:00am to 9:00pm, M-F 8:00am to 7:00pm, Sat	yes	no	yes	$18 + $1.40 per mile $30 hospital discharge	no
CareAVan Mobility 4U	877-832-0168	9:00am to 5:00pm M-F	Varies (call for more info)	yes	no	yes	$20 + $2.50 per mile	no
Doyle's Yellow Checker Cab	701-235-5535	24 hours/day	24 hours/day	no	yes	yes	$4.50 + $1.60 per mile	no
Handi-Wheels Transportation	701-232-3231	9:00am to 5:00pm M-F	6:00am to 6:00pm, M-F Varies on weekend	yes	yes	no	$11 medical	ND Medicaid
Lucky 7 Taxi Service	701-235-1717	24 hours/day	24 hours/day	no	no	no	$4.50 + $1.60 per mile	no
MAT Fixed Route Bus	701-232-7500	Not Applicable	6:00am to 10:15pm, M-F 7:00am to 10:15pm, Sat	yes	no	no	Adult: $1.25 Discount: 60 cents	no
MAT Paratransit	701-235-4464	8:00am to 4:30pm M-F	6:00am to 10:15pm, M-F 7:00am to 10:15 pm, Sat 7:00am to 5:00pm, Sun (One vehicle only on Sun)	yes	no	no	$2.50	yes
Metro Senior Ride	701-293-1440	8:00am to 4:30pm M-F	7:40am to 4:30pm M-F	no	no	no	$2.50 Seniors $23 General Public	yes
Medi-Van Specialized Transportation	800-422-0976	24 hours/day	24 hours/day	yes	stretcher only	yes	$23 plus $2.90 per mile	no
Ready Wheels	701-364-1700	24 hours/day	6:00am to 10:00pm M-Sun	yes	no	no	$27	no

Source: FM Ride Source, MATBUS, City of Fargo, City of Moorhead, Metro COG

Specialized Transportation Services. In recent years, MAT 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 thirty (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 MAT survey these providers to gather data and establish an understanding of operational features and services. Based on this information, Metro COG and MAT 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*'.

5.0 Financial Overview.

Summary. Metro Area Transit's operating budget is constructed and supported through a variety of federal, state and local funds. Figure 5 represents a financial summary of the City of Fargo and City of Moorhead transit systems for fiscal years 2007, 2008, 2009 and 2010 aggregated by funding category. Both operating budgets are highly subsidized by state and federal resources with the City of Moorhead at 77% (2010) and the City of Fargo at 50% (2010). Total operating costs for the City of Moorhead in 2010 were $1,735,396 and the City of Fargo $4,634,499. Detailed information is provided within Figure 5 and explanations of each funding category are also provided below for reference.

FIGURE 5 – Metro Area Transit Budget Summary – Operating Costs and Revenue Sources

MAT Budget Summary - Operating Costs and Revenue Sources

Funding Category	City of Moorhead								City of Fargo							
	2007	%	2008	%	2009	%	2010	%	2007	%	2008	%	2009	%	2010	%
Total Operating Costs	$1,549,267		$1,752,766		$1,654,149		$1,735,396		$3,139,359		$3,791,553		$4,158,922		$4,634,499	
Section 5307	396,821	25%	391,008	22%	289,613	18%	336,407	27%	1,530,736	49%	1,855,394	49%	1,826,060	44%	1,904,410	41%
Other FTA Funds	27,431	2%	87,112	5%	41,555	3%	20,065	1%	40,825	1%	88,451	2%	151,423	4%	60,000	1%
State Aid	599,256	38%	650,455	37%	504,509	30%	455,522	26%	268,102	9%	308,059	8%	423,510	10%	370,000	8%
Farebox Revenue*	227,136	15%	253,420	14%	286,399	17%	272,935	16%	388,678	12%	476,869	13%	607,912	15%	646,194	14%
WF Joint Powers	x	x	x	x	x	0%	x	0%	170,146	5%	196,058	5%	201,602	5%	205,000	4%
NDSU Joint Powers°	x	x	x	x	x	0%	x	0%	142,500	5%	180,000	5%	540,000	13%	576,000	12%
City General Funds	25,735	2%	67,357	4%	19,675	1%	84,405	4%	416,211	13%	570,839	15%	239,335	6%	692,895	15%
Greater MN Transit Fund	228,815	15%	255,916	15%	469,906	28%	519,382	23%	x	X	x	X	x	0%	x	X
Other Revenue	44,072	3%	47,498	3%	42,492	3%	46,680	2%	182,161	6%	113,883	3%	169,080	4%	180,000	4%

Source: Metro Area Transit and Metro COG (2011)
* Farebox Revenue – gross receipts from all fare media purchased, cash riders, paratransit cash fares, paratransit coupons and U-pass per student fees
° Does not include NDSU capital contribution of $321,000 to the City of Fargo in 2009

Funding and Revenue Sources.

Section 5307, Urbanized Area Formula Program. The Urbanized Formula Funding Program per 49 U.S.C. 5307 makes federal resources available to urbanized areas and to Governors for transit capital, operating assistance (urbanized areas with less than 200,000 population) and transportation related planning activities. In urbanized areas where Section 5307 funds are utilized for operating assistance, at least one (1) % of these funds must be used for transportation security projects or the recipient

must certify such expenditures for security purposes are unnecessary. The City of Fargo and the City of Moorhead are both direct recipients of these funds based on the populations of Fargo, West Fargo, Moorhead and Dilworth. As shown in Figure 5, these federal formula funds are critical to the overall system budget.

Other Federal Transit Administration Funds. This category represents FTA grants that are more specific in purpose, inclusive of Section 5316 and 5317 funds. Section 5316 refers to the Job Access and Reverse Commute (JARC) program (49 U.S.C. 5316) which was established to address the unique transportation challenges faced by welfare recipients and low-income persons seeking to obtain and maintain employment. These funds are apportioned by FTA to designated recipients in large urbanized areas (60%), small urbanized areas (20%) and rural/small urban areas under the 50,000 population threshold (20%) and the formula is based on a ratio of eligible low-income/welfare recipients in such areas. These funds can be used to finance capital, planning or operating expenses; however, a local match is required dependent upon the activity. Section 5317 refers to the New Freedom Formula Grant Program (49 U.S.C. 5317) which is intended to provide resources to overcome existing barriers and expand mobility options available to individuals with disabilities beyond the requirements of the Americans with Disabilities Act of 1990. Funds are apportioned similar to Section 5316 funds and may be used to finance capital and operating expenses. Section 5317 funds also require a local match with the percentage dependent upon the activity.

FIGURE 6 – Revenue Recovery - Moorhead Transit System

Category	*2007*	Revenue Recovery Rate	*2008*	Revenue Recovery Rate	*2009*	Revenue Recovery Rate
Fixed Route	*128,644*	*8%*	*138,101*	*8%*	*164,765*	*10%*
U-Pass / MSUM	*42,711*	*3%*	*44000*	*2%*	*46,000*	*3%*
U-Pass M-State	*9,744*	*1%*	*11,106*	*1%*	*12,500*	*1%*
U-Pass / Concordia	*17,601*	*1%*	*18,563*	*1%*	*19,800*	*1%*
Total Fixed Route	*198,700*	*13%*	*211,770*	*12%*	*243,065*	*15%*
Paratransit	*28,436*	*2%*	*30,050*	*2%*	*32,518*	*2%*
Senior Ride	*NA*	*NA*	*11,600*	*1%*	*10,816*	*1%*
Total Farebox	***227,136***	***15%***	***253,420***	***15%***	***286,399***	***18%***
Total System Operating Costs	**$1,549,267**	**x**	**$1,752,766**	**x**	**$1,654,149**	**x**

Source: Metro Area Transit and Metro COG (2011)

FIGURE 7 – Revenue Recovery – Moorhead Paratransit

Category	*2007*	Revenue Recovery Rate	*2008*	Revenue Recovery Rate	*2009*	Revenue Recovery Rate
Paratransit Fares	28,436	11%	30,050	10%	32,518	12%
Operating Costs	$258,202	x	$292,448	x	$278,250	x

Source: Metro Area Transit and Metro COG (2011); includes MTG Operating Cost Estimate

FIGURE 8 – Revenue Recovery – Moorhead Senior Ride

Category	*2008*	Revenue Recovery Rate	*2009*	Revenue Recovery Rate
Fares – City of Moorhead	8,600	27%	10,216	31%
Fares – City of Dilworth	3,000	10%	600	2%
Total	11,600	37%	10,816	33%
Senior Ride Operating Costs	31,552	x	33,363	x

Source: Metro Area Transit and Metro COG (2011)

Minnesota State Aid and Greater Minnesota Transit Fund. The City of Moorhead receives state aid through the Public Transit Participation Program (facilitated by Mn/DOT) which provides financial assistance for public transit services. This program is intended to support transit systems in urban

areas and rural areas (outside Twin Cities Metropolitan Area) from a capital, planning and operations perspective. Funding sources for this program include the State of Minnesota General Fund and the Greater Minnesota Transit Fund combined with applicable Federal Transit Administration grants. The Greater Minnesota Transit Fund is supported by state motor vehicle sales tax revenues.

North Dakota State Aid. The City of Fargo receives state aid from the North Dakota Public Transportation Fund. Fund distribution is based on a formula established by the North Dakota Legislature and is administered by the North Dakota Department of Transportation.

Farebox Revenue. Traditionally (and per TDP definition, see pg. 5) farebox revenue includes only cash revenue from riders. Passes, transfers and other non-currency forms of payment are not considered 'farebox' revenue. For the purposes of Figure 5 (above) and for the purposes of providing meaningful output for system performance evaluation, Metro COG has expanded the definition as follows. Farebox revenue as depicted in Figure 5 includes gross receipts from all fare media purchased, cash riders, paratransit cash fares, paratransit coupons and U-Pass program revenue. Farebox revenue recovery analysis for fiscal years 2007,2008 and 2009 are shown within Figures 6, 7, 8, 9 and 10.

FIGURE 9 – Revenue Recovery Fargo Transit System

Category	*2007*	% Non-Federal Revenue	*2008*	% Non-Federal Revenue	*2009*	% Non-Federal Revenue
Fixed Route (cash)	184,298	26%	235,981	28%	239,142	21%
Fixed Route (pass)	60,075	9%	73,874	9%	138,215	12%
U-Pass / NDSU	58,448	8%	70,782	8%	115,384	10%
Paratransit (Fargo/West Fargo)	85,857	12%	96,232	11%	115,171	10%
Total Farebox	**388,678**	**55%**	**476,869**	**56%**	**607,912**	**53%**
NDSU Contribution	142,500	20%	182,000	21%	350,500	30%
Fixed Route (WF)	75,999	11%	89,160	10%	90,720	8%
Paratransit (WF)	94,147	14%	106,898	13%	110,882	9%
Total Joint Powers & Contribution Revenue	**312,646**	**45%**	**378,058**	**44%**	**552,102**	**47%**
Total Non-Federal Revenue	701,324	x	854,927	x	1,160,014	x
Total System Operating Costs	**$3,139,359**	**x**	**$3,791,553**	**x**	**$4,158,922**	**x**

Source: Metro Area Transit and Metro COG (2011)

Joint Powers / Other Contributions. This category includes local share (funds) derived from joint powers agreements with other cities and contributions to the system (i.e. NDSU contribution).

FIGURE 10 – Revenue Recovery – Fargo Paratransit

Category	*2007*	Revenue Recovery Rate	*2008*	Revenue Recovery Rate	*2009*	Revenue Recovery Rate
Paratransit Fare, City of Fargo	65,178	16%	74,340	16%	90,150	18%
Paratransit Fares, City of WF	16,088	4%	15,858	4%	20,701	4%
Total	81,266	14%	90,198	14%	110,851	14%
Operating Costs	-649,769	x	-746,343	x	-791,509	X

Source: Metro Area Transit and Metro COG (2011); includes MTG Operating Cost Estimate

City General Funds. The city general fund category references the amount of local dollars used to cover any remaining operational deficit after all other revenue sources have been applied. As noted in Figure 5, general fund revenues from 2007 to 2010 represented approximately 1 – 4% of the operating budget for the City of Moorhead and 9 – 15 % for the City of Fargo.

Other Revenue. This category includes revenue obtained from system contributions, vending, service contracts and bus advertising.

Farebox Recovery Ratio. As depicted in Figure 6 (City of Moorhead) and Figure 9 (City of Fargo) the farebox recovery ratio is the amount of revenue generated by paying customers compared total system operating expenses. The 2007-2011 TDP stated that the farebox recovery ratio for Fargo and Moorhead was below the un-official fifteen (15) % benchmark; however, data only included cash fares and bus pass sales. For the purpose of computing the farebox recovery ratio and accurately representing system finances within the TDP, Figure 6 and Figure 9 show all applicable revenue. According to 2009 figures, system wide, the City of Moorhead has a farebox recovery ratio of approximately seventeen (17) % and the City of Fargo at approximately fifteen (15) %. Paratransit farebox recovery ratios are at twelve (12) % and sixteen (14) % for the City of Moorhead and City of Fargo, respectively. For the City of Moorhead, the Senior Ride farebox recovery ratio is at thirty-two (32) % and figures are not included for the City of Fargo as this is an independently operated service by Valley Senior Services (see Figure 8, above and Section 4 of this Chapter, Existing Service Overview for additional information on Senior Ride in the Metropolitan Area).

Project Programming, Long Range Transportation Plan. In December of 2009 Metro COG's Policy Board adopted the 2009 Metropolitan Long Range Transportation Plan. Per 23 CFR 450.322 MPO's are required to prepare and update a twenty (20) year long-range transportation plan at least every five (5) years for metropolitan communities identified as attainment areas (i.e. Fargo-Moorhead Metropolitan Planning Area). The LRTP documents Metro COG's ongoing, multi-modal transportation planning process and more importantly identifies a matrix of necessary metropolitan transportation system improvements to accommodate demands forecasted over the applied planning horizon. Projects included in the LRTP and various sub-plans (2008 ITS Plan, 2007 TDP, 2006 Metro Bicycle/Pedestrian Plan) are analyzed, programmed and scheduled for construction/implementation according to Transportation Improvement Program (TIP) processes. In short, the TIP is a compilation of surface transportation improvements scheduled for implementation by the Metropolitan Area under a four (4) year planning horizon as required by 23 CFR 450.324. The TIP is developed in direct cooperation with (Mn/DOT, NDDOT, MAT, MPO) and includes an 'annual element' (first year of the TIP) which constitutes an agreed to listing of federal aid surface transportation projects for the fiscal year. It is important to note that FHWA and FTA require that projects included in the approved TIP are consistent with the adopted LRTP for the Metropolitan Area. Upon approval of the TIP by Metro COG's Policy Board and the Governors of North Dakota and Minnesota, the TIP is incorporated without change into each State Transportation Improvement Program (STIP). Figure 11 (below) sets forth a listing of transit related projects included within the LRTP, classified under short-term, mid-term and long-term planning horizons.

FIGURE 11 – LRTP Projects (Minnesota)

Moorhead Fixed Route			
Planning Year	**Total Project**	**Local**	**Federal**
Short-Term 2010-2015	x	x	x
Mid-Term 2021-2030	$2,725,000	$545,000	$2,180,000
Long-Term 2021-2035	$5,684,000	$1,136,800	$4,547,200
Total LRTP	**$8,409,000**	**$1,681,800**	**$6,727,200**
Valley Senior Services LRTP			
Planning Year	**Total Project**	**Local**	**Federal**
Short-Term 2010-2015	$125,000	$25,000	$100,000
Mid-Term 2021-2030	$300,000	$60,000	$240,000
Long-Term 2021-2035	$1,100,000	$220,000	$880,000
Total LRTP	**$1,525,000**	**$305,000**	**$1,220,000**

FIGURE 12 – LRTP Projects (North Dakota)

Fargo Fixed Route			
	Total Project	**Local**	**Federal**
Short-Term 2010-2015	$1,368,000	$241,200	$1,126,800
Mid-Term 2021-2030	$2,186,472	$437,292	$1,749,180
Long-Term 2021-2035	$13,729,381	$2,745,873	$10,983,508
Total LRTP	**$17,283,853**	**$3,424,365**	**$13,859,488**
Valley Senior Services LRTP			
	Total Project	**Local**	**Federal**
Short-Term 2010-2015	$458,291	$77,940	$380,533
Mid-Term 2021-2030	$548,463	$93,240	$455,221
Long-Term 2021-2035	$2,578,165	$438,287	$2,139,878
Total LRTP	**$3,584,919**	**$609,467**	**$2,975,632**

Moorhead MAT Paratransit LRTP			
Planning Year	**Total Project**	**Local**	**Federal**
Short-Term 2010-2015	x	x	x
Mid-Term 2021-2030	$282,000	$56,400	$225,600
Long-Term 2021-2035	$2,597,000	$519,400	$2,077,600
Total LRTP	**$2,879,000**	**$575,800**	**$ 2,303,200**
Miscellaneous Capital Improvements LRTP			
Planning Year	**Total Project**	**Local**	**Federal**
Short-Term 2010-2015	$548,400	$109,680	$438,720
Mid-Term 2021-2030	$800,000	$160,000	$640,000
Long-Term 2021-2035	$3,700,000	$740,000	$2,960,000
Total LRTP	**$5,048,400**	**$1,009,680**	**$4,038,720**
Total Moorhead Capital Needs			
Planning Year	**Total Project**	**Local**	**Federal**
Short-Term 2010-2015	$673,400	$134,680	$538,720
Mid-Term 2021-2030	$4,107,000	$821,400	$3,060,000
Long-Term 2021-2035	$13,081,000	$2,616,200	$10,464,800
Total LRTP	**$17,861,400**	**$3,572,280**	**$ 14,063,520**

Source: Metro COG (2011)

Fargo MAT Paratransit LRTP			
	Total Project	**Local**	**Federal**
Short-Term 2010-2015	$981,218	$220,853	$760,365
Mid-Term 2021-2030	$1,476,520	$251,008	$1,225,512
Long-Term 2021-2035	$6,493,938	$1,126,941	$5,370,997
Total LRTP	**$8,951,676**	**$1,598,802**	**$7,356,874**
Miscellaneous Capital Improvements LRTP			
	Total Project	**Local**	**Federal**
Short-Term 2010-2015	$688,779	$265,723	$422,056
Mid-Term 2021-2030	$392,914	$73,245	$319,669
Long-Term 2021-2035	$7,508,000	$2,692,360	$4,815,640
Total LRTP	**$8,589,693**	**$3,031,328**	**$5,557,365**
Total Fargo Capital Needs in LRTP			
	Total Project	**Local**	**Federal**
Short-Term 2010-2015	$3,496,288	$805,716	$2,689,754
Mid-Term 2021-2030	$4,604,369	$854,785	$3,749,582
Long-Term 2021-2035	$30,309,484	$7,003,461	$23,310,023
Total LRTP	**$38,410,141**	**$8,663,962**	**$29,749,359**

Source: Metro COG (2011)

6.0 Administration.

Overview. Metro Area Transit is currently the function of two separate municipal departments within the Cities of Fargo and Moorhead; however, efforts over the past decade have significantly increased administrative and management coordination of Metro Area Transit. Pursuant to the 1980 Transit Development Plan a number of governance and management concepts were recommended with the idea that Metro Area Transit would eventually evolve into a Transit Authority. These initial 1980 TDP recommendations set the vision for Metro Area Transit and were instrumental in establishing the necessary framework for the eventual construction of a joint maintenance and storage facility (Metro Area Transit Garage, 2006) and initiation of a central coordinating board (MAT Coordinating Board, 2005).

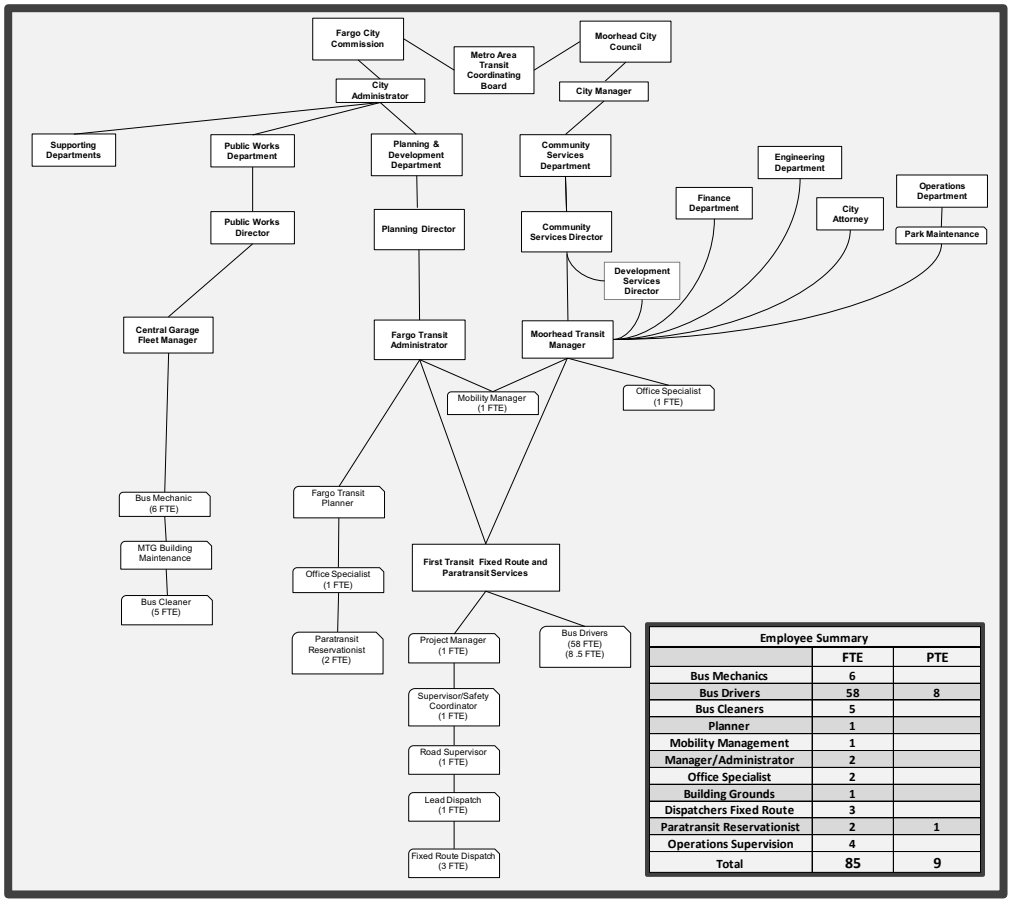
City of Fargo. The City of Fargo's transit division operates under the Planning and Development Department, with oversight provided by the Planning Director. The City employs one (1) full time administrator, office specialist, transit planner and a percentage of the mobility manager position; in addition to two (2) full time and one (1) part-time paratransit reservationist positions (full-time positions are reimbursed by the City of Moorhead based on % of ridership and the part-time position is funded through a JARC grant [50%] with a portion of the 50% local share paid by the City of Moorhead based on % of total ridership). The mobility manager position was envisioned in the 2007-2011 TDP (followed by a more detailed analysis within the 2007 MAT Paratransit Options Analysis) as an opportunity to improve/coordinate the delivery of specialized transportation services. This position and the associated costs are shared between the City of Fargo and the City of Moorhead with a 2/3 1/3 split, respectively. From a fleet management and mechanic perspective, the City of Fargo Public Works Department provides all necessary resources to operate the Metro Transit Garage. Other City of Fargo departments that assist with various transit related activities include: Information Technology, Engineering, Planning/Development, Human Resources and the City Attorney.

City of Moorhead. The City of Moorhead operates public transit under the umbrella of the Department of Community Services, with oversight provided by the Community Services Department Director. The City employs one (1) full time transit manager, office specialist and 1/3 of the mobility manager position. Other City of Moorhead departments that assist with various transit related activities include: Operations (Park Maintenance), Finance, City Attorney and Engineering.

First Transit. The City of Fargo and the City of Moorhead contract with First Transit Inc. for fixed route and paratransit drivers. This contract includes management, driver and dispatch services for fixed route, and management and driver services for paratransit between January 1, 2011 and December 31, 2013 with two (2) additional one (1) year extension options. First Transit Inc. employs a total of sixty-six (66) bus drivers; in addition to one (1) full time project manager, safety coordinator, road supervisor and four (4) dispatch staff.

Organizational Chart. Outlined below (Figure 13) is a 2011 organizational chart for Metro Area Transit.

FIGURE 13 – MAT Organization Chart



Employee Summary		
	FTE	PTE
Bus Mechanics	6	
Bus Drivers	58	8
Bus Cleaners	5	
Planner	1	
Mobility Management	1	
Manager/Administrator	2	
Office Specialist	2	
Building Grounds	1	
Dispatchers Fixed Route	3	
Paratransit Reservationist	2	1
Operations Supervision	4	
Total	85	9

Source: Metro COG (2011)

MAT Coordinating Board. Pursuant to Chapter 54-40.3 North Dakota Century Code and Minnesota Statutes §471.59 (as noted in Figure 3, pg. 13) the Metro Area Transit Coordinating Board was formally established in 2004 under a Joint Powers Agreement (JPA), a direct derivative of recommendations within the 1980 TDP. The document was last updated in 2007 and is set to expire December 31, 2011. The board was created to coordinate operations and administration of a joint transit system within the Metropolitan Area. Under this JPA, the board is tasked with making recommendations to the governing bodies (City of Fargo, City of Moorhead) and other cities/entities related to capital purchases, service areas, transit routes, transit rates/fares, budgets, marketing, long-term planning needs and other applicable matters. Further, the JPA states that the board will "assist in developing a framework for the transition to, and ultimately the operation of, a joint transit system, as outlined in the 2007-2011 TDP" with consideration to the following:

(a) driver service contract;
(b) employment status of fixed route dispatch and contractor support staff;
(c) administration streamline and re-organization;
(d) coordinated procurement and operation of transit vehicles; and
(e) joint/shared staff.

FIGURE 14 – Board Membership Structure

JURISDICTION / ENTITY	APPOINTMENT
City of Fargo	Two (2) City Commissioners
City of Moorhead	Two (2) City Councilors
City of West Fargo	One (1) City Commissioner
City of Dilworth	One (1) City Councilor
North Dakota State University	One (1) Administrator
Moorhead Area Colleges*	One (1) Administrator
Board Chair	Jointly Appointed

Source: December 2007 Joint Powers Agreement

The MAT Coordinating Board consists of nine (9) members whom are appointed by the respective governing bodies and institutional entities recognized as having a financial stake in the operation of public transit. Membership is outlined in Figure 14, above. *As defined in the JPA, voting membership designated for Moorhead Area Colleges rotates annually between Minnesota State University Moorhead (MSUM), Concordia College and M-State.

Existing Cost Sharing and Operating Agreements. The City of Fargo and the City of Moorhead have entered into several agreements over the last few decades, both formal and informal, to assist in the operation of various elements of MAT. Some of these agreements have been specifically drafted to set forth a cost sharing/allocation plan for the distribution of costs related to major transit system expenditures. Significant MAT operating agreements are discussed in detail below.

Metro Transit Garage. The transit garage (located at 650 23rd Street North, Fargo ND) is a jointly owned facility which houses the public transit fleet and serves as the administrative/maintenance hub for MAT. Cost splits and allocation formulas for the Metro Transit Garage are shown in Figure 15.

FIGURE 15 –Cost Allocation Formulas

ELEMENT	ALLOCATION METHOD
GTC Operating Costs	2/3 City of Fargo, 1/3 City of Moorhead (per 1984 agreement)
MTG Facility Ownership	2/3 City of Fargo, 1/3 City of Moorhead (per 2005 cost sharing agreement)
MTG Operating Costs	Proportionate to the number of buses and vehicle units stored and maintained in the facility
MTG Structural Costs	Split based on ownership (2/3 City of Fargo, 1/3 City of Moorhead)
MTG Indirect Operation Costs	Proportionate to the number of buses and vehicle units stored and maintained in the facility and pro-rata ridership formula for paratransit operations
Vehicle Maintenance (Fixed Route)	Maintenance costs on fixed route vehicles are billed directly to the owner
Vehicle Maintenance (Paratransit)	Maintenance costs on paratransit fleet is split per pro-rata ridership formula
Fixed Route Dispatch	2/3 City of Fargo, 1/3 City of Moorhead
MAT Paratransit	Pro-rata ridership formula

Source: Metro COG (2011)

Ground Transportation Center. In 1984 the City of Fargo and the City of Moorhead finalized an agreement which outlined the rent/lease parameters which allows buses from Moorhead the ability to

transfer riders at the GTC. In sum, and as noted in Figure 15 above, the agreement splits net operating costs at 2/3 City of Fargo and 1/3 City of Moorhead. In recent years, addendums to this agreement have been approved to address ownership and maintenance of a variety of costs related to system software, hardware and upgrades.

MAT Paratransit. As noted in section 4.0 of this Chapter (Existing Service Overview) MAT initiated metropolitan Paratransit service in 1996 following passage of the Americans with Disabilities Act of 1990 which mandated complimentary paratransit for any system that offered fixed routes It is important to note that prior to 1996 paratransit service was available; however, it was contracted by both cities to local vendors and did not accommodate the entirety of the metropolitan area. The 1996 agreement between both cities set forth the framework for allocation of costs associated with this service. Per the agreement (and as noted in Figure 15, above) paratransit costs are primarily split pro-rata based on actual ridership. However, both cities are responsible for replacing their respective paratransit fleet; irregardless of the fact that the fleet operates as a 'metro fleet'. The City of Fargo provides three (3) paratransit dispatcher [2 full-time, 1 part-time] which are reimbursed by the City of Moorhead based on ridership percentages (see pg. 16 for additional details on reimbursement).

Master Agreement. The 2007-2011 TDP includes discussion on developing a 'master operating agreement' which would effectively consolidate all existing cost sharing/allocation agreements into one (1) overarching document. This master agreement was envisioned to govern all cost sharing and cost allocations related to the MAT fixed route and paratransit systems. Since adoption of the 2007-2011 TDP Metro COG and partner agencies have prepared a draft version of this agreement; however, formal action has not been pursued and/or achieved. A significant advantage to the master agreement as documented in previous TDP's is the ability to update and execute one agreement instead of monitoring numerous agreements for relevancy, applicability and functionality.

Transit Coordination. Since adoption of the 2002-2006 TDP Metro Area Transit has made significant progress in the delivery of transit services, specifically relating to coordination efforts between the operating jurisdictions. Coordination efforts, milestones and accomplishments have been summarized within Figure 16 (below) and are separated by category (Marketing, Joint Procurement of Products/Services, Administration/Facilities and Completed Studies, Technical Memorandums or Plans related to Coordination of Services).

FIGURE 16 – Transit Coordination Efforts, Milestones and Accomplishments Since 2002

CATEGORY	STATUS
Marketing Plans and Related Activities	• Created U-Pass Program in 2001, and expanded participation in 2002, 2003 and 2005 to include all four colleges (NDSU, Concordia College, MSUM, M-State). • Expanded joint bus schedule to include Moorhead evening and NDSU circulator routes in 2003. • Implemented "X Marks the Stop" campaign in 2005. • Coordinate annual events/activities, such as MAT Times Newsletter, Try Transit Week, Earth Week, Quarter Days, etc. • Adopted a new Marketing Plan in 2010 and implemented a new MATBUS logo and MATBUS stop signage. • Expansion of U-Pass Program – M-State joined the program in January 2005 and Moorhead's Horizon Middle School joined in 2006. The City of Fargo and the City of Moorhead continue to honor U-pass riders and transfers from the other city's colleges.

Joint Procurement of Products and Services	• With the relocation to the new Metro Transit Garage in January 2007, the cities began jointly contracting for driver services with one contractor (First Transit Inc.). The existing contract is effective January 1, 2011 through December 31, 2014. • In 2006 and 2007, Moorhead purchased and installed security cameras for their transit fleet in coordination with the existing Fargo security cameras for system-wide coverage. • Fargo and Moorhead jointly procured vehicles in 2010, including 35' New Flyer coaches, Paratransit vehicles, and senior ride vans. A shop truck was purchased jointly for the MTG. • A replacement farebox system was purchased and began operation in January 2010.
Administration and Facilities	• Coordinated recertification of Paratransit passengers in 2004. • The City of Fargo and City of Moorhead cooperatively establish paratransit revenue hours and budgets on an annual basis. • All transit staff re-located to the Metro Transit Garage (2007). • MAT submitted a request and received federal funding to construct a joint maintenance facility (occupied in 2007). • The MAT Coordinating Board was created and implemented in 2004 per recommendations initially set forth in the 1980 TDP. • MAT opened a stall at the GTC to accommodate Clay County Rural Transit (operated by Productive Alternatives, Inc.) passengers transferring into the fixed route system (2005). • In 2005 Moorhead's evening routes became part of the fixed route system (previously contracted through Moorhead colleges/universities). • Effective June 1, 2006 GTC operating hours were extended into the evening with the City of Fargo and City of Moorhead jointly sharing the cost for additional dispatch staff. • In 2007, concurrent with the re-location to the Metro Transit Garage, the City of Fargo began providing maintenance services on Moorhead vehicles (previously maintenance was completed by the contracted operator Red River Trails). • In January 2008, Fargo Senior Services began operating metro senior ride service in Moorhead and Dilworth for senior citizens age 60 and older. FSS was previously operating in Fargo and West Fargo, so this coordination expanded service metro-wide. • In 2008, Fargo's part-time mobility manager became a full-time transit employee, jointly funded by the City of Fargo and the City of Moorhead through New Freedom federal grants. • In January 2009, MAT Fixed Route fares and MAT Paratransit fares were increased in coordination between the City of Fargo and the City of Moorhead. • AVL System Expansion. With the influx of economic stimulus funding from the federal government in 2009, the AVL system for MAT was expanded into Moorhead and throughout the Fargo fixed routes (previously only NDSU routes were on the AVL system). Kiosks and TV monitors were purchased for the GTC and Marriott transfer points in 2010; MSUM, M-State and Microsoft kiosks will be installed in 2011.
Completed Studies, Technical Memorandums or Plans related to Coordination of Services	• Metropolitan Area Transit Authority Feasibility Study (2000) • Metropolitan College Student Transit Use (September, 2003) • Metro Area Paratransit Service Boundary Study (August, 2005) • Metro Area Transit Growth Area Study (December, 2005) • MAT Paratransit Options Analysis (July, 2007) • Transit Signal Priority Demonstration Project (June, 2008) • Transit Signal Priority Project Phase II (June, 2009) • Metro Mobility Study (March, 2010) • Transit Development Plans (2002-2006, 2007-2011)

Source: Metro Area Transit (2011)

7.0 Demographic Profile and Trends.

Summary. In 2006Metro COG worked with its member local units of government and McKibben Demographic Research to create the *2006 Demographic Forecast for the Fargo-Moorhead Metropolitan Statistical Area* (FM MSA). The report established demographic projections (population, household and employment) through planning year 2035 for the MSA. As part of the demographic forecast for the FM MSA two scenarios were developed. Scenario 1 was labeled 'Most Likely' and takes into account a number of changing variables within the local, regional and national population. Scenario 2 was identified as the 'High Growth' scenario which assumed local jurisdictions would take proactive measures to counteract a projected reduction in population capture rates. In January of 2007 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 was adopted by the Policy Board for use within the transportation planning program. Data presented within this section represents the 'High Growth' scenario; however, a hard copy of the 2006 Demographic Forecast for the Fargo-Moorhead Metropolitan Statistical Area may be obtained by contacting Metro COG or by visiting Metro COG's website (www.fmmetrocog.org).

Data (Accuracy, Applicability and Use). The 2000 Census provides accurate statistics regarding the metropolitan area's population and is the baseline from which all of the projections in this section are formulated. At the time of preparation of this ECR, 2005-2009 American Community Survey (ACS) block level data was not available for the Fargo-Moorhead Metropolitan Area which resulted in a reliance on 2000 Census data in certain sections of analysis within this TDP (refer to source data for each table and map). It should be noted that all population, demographic and socio-economic projections in this chapter have been created solely for Metro COG's transportation planning program needs. 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 does not represent or imply that the associated data is thereby accepted or approved by the given jurisdiction as its 'official' population, housing, employment or land use data. The data is hereby included in the TDP for documentation, informational and transportation planning purposes.

Population. Although growth rates within specific metropolitan jurisdictions have varied significantly over the past two decades (see Figure 17), overall, population figures within the FM MSA have sustained a relatively consistent annual growth rate at approximately 1.7% (since 1980).

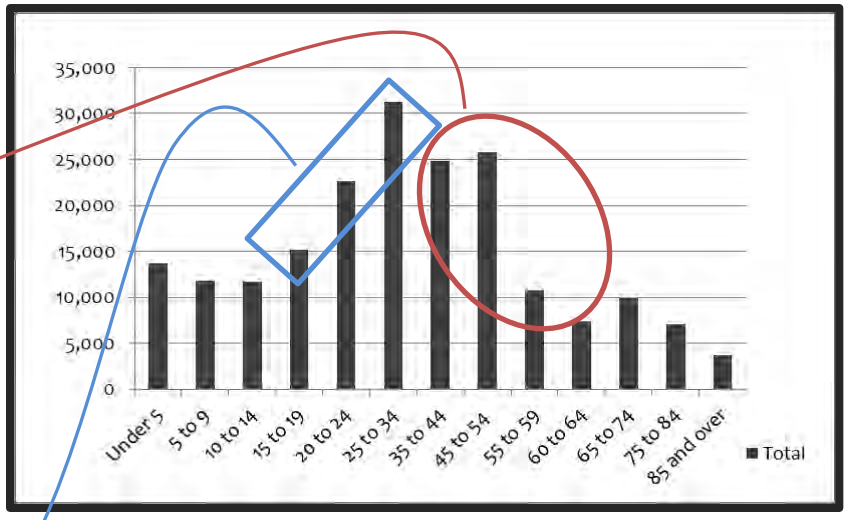
FIGURE 17 – Population and Growth Percentages (1950 – 2009)

JURISDICTION	YEAR							GROWTH	
	1950	1960	1970	1980	1990	2000	2009	Avg. Growth (year/decade)	Total Change (%)
Cass County (North Dakota)	58,877	66,947	73,653	88,247	102,874	123,138	147,714	1,505 / 14,806	151%
Clay County (Minnesota)	30,363	39,080	46,585	49,327	50,442	51,229	58,688	480 / 4,721	93%
City of Moorhead (MN)	14,870	22,934	29,687	30,641	32,295	32,177	36,358	364 / 3,581	144%
City of West Fargo (ND)	1,632	3,328	5,161	10,099	12,287	14,940	23,520	370 / 3,648	1,341%
City of Dilworth (MN)	1,429	2,102	2,321	2,575	2,562	3,001	3,808	40 / 396	166%
City of Fargo (ND)	38,256	46,662	53,365	61,383	74,111	90,599	104,002	1,114 / 10,958	172%

Source: McKibben (2006), Metropolitan Profile (2010, Metro COG)

Population is affected by the following three (3) factors: (a) deaths; (b) births; and (c) migration rates. Further, according to the 2006 Demographic Forecast Study, the two most important population change factors for the Fargo-Moorhead Metropolitan Area is the increasing mortality rate of the baby boomer generation and the net migration rate. Figure 18 is a graph outlining population by age cohort per data within the 2008 American Community Survey. It is important to note the bulge within the period for age cohorts 41 to 55 (red circle) which is representative of this baby boomer population. This age cohort will be transitioning into retirement years where access to public transportation will become increasingly more important for medical trips, daily activity and general mobility. The corresponding bulge in the pyramid (blue square) is representative of the large numbers of college students in the metro area.

FIGURE 18 – Fargo-Moorhead MSA Population Pyramid (2008 ACS)



Source: US Census Bureau (2008, American Community Survey)

Figure 19, below, sets forth population estimates and projections for the Fargo-Moorhead MSA. Population estimates (1990 and 2000) are based on documented decennial census numbers and population projections (2015 to 2035) are consistent with the 'High Growth' scenario as adopted by Metro COG's Policy Board for transportation planning purposes. For comparison purposes, Figure 11 includes July 1, 2009 population estimates as prepared by the US Census Bureau and 2009 estimates based on forecasting completed within the *2006 Demographic Forecast for the Fargo-Moorhead Metropolitan Statistical Area*. The 2009 population figures produced by the US Census Bureau are the last estimates to use 2000 Census results as base data.

FIGURE 19 – Metropolitan Statistical Area (MSA) Population Estimates and Projections

Jurisdictions	Population				Population Change			Population Projections					
	1990	2000	2009 (McKibben)	2009 (Census Bureau, ACS, 2008)	1980-90	1990-00	2000-09	2010	2015	2020	2025	2030	2035
Fargo	74,111	90,599	104,002	95,556	20.7%	22.2%	14.8%	105,600	112,870	120,010	127,340	135,050	142,740
Moorhead	32,295	32,177	36,358	36,804	7.7%	-0.4%	13.0%	36,890	40,920	43,640	46,360	49,110	51,670
West Fargo	12,287	14,940	23,520	24,313	21.7%	21.6%	57.4%	24,430	27,840	29,680	30,440	30,040	28,870
Dilworth	2,562	3,001	3,808	3,711	-0.9%	17.1%	26.9%	3,920	4,440	4,840	5,160	5,210	5,190
Urban Total	121,255	140,717	167,688	160,384	16.5%	16.1%	19.2%	170,840	186,070	198,170	209,300	219,410	228,470
Cass County	102,874	123,138	147,714	143,339	16.6%	19.7%	20.0%	150,550	163,140	174,340	184,680	193,700	201,190
Clay County	50,442	51,229	58,688	56,763	2.2%	1.6%	14.6%	59,630	64,010	68,280	72,480	76,510	80,270
MSA Total	153,269	174,367	206,402	200,102	11.4%	13.7%	18.4%	210,180	227,150	242,620	257,160	270,210	281,460

Source: US Census Bureau, American Community Survey (ACS), 2006 Demographic Forecast for the Fargo-Moorhead MSA (McKibben / Ulteig Engineering, Inc.)

Households. As previously noted, in 2007 Metro COG's Policy Board approved the 'High Growth' projections for use within the transportation planning program. Pursuant to the *2006 Demographic Forecast for the Fargo-Moorhead Metropolitan Statistical Area* household forecasts are essentially a derivative of population and average household size. Figure 20 (below) summarizes dwelling unit growth and household projections under the 2035 planning horizon for the MSA. For the purposes of Figure 20, a dwelling unit is defined as any house, apartment, manufactured home, group of rooms, single occupied rooms and any living quarter.

FIGURE 20 – Metropolitan Statistical Area (MSA) Household Projections

Jurisdiction	2000	2009	2010	2015	2020	2025	2030	2035
Fargo	39,268	44,723	45,321	48,119	51,031	54,465	58,071	61,347
Moorhead	11,660	13,270	13,465	15,037	16,110	17,097	18,236	19,381
West Fargo	5,771	8,927	9,254	10,667	11,549	12,032	12,261	12,079
Dilworth	1,160	1,449	1,490	1,675	1,833	1,977	2,043	2,084
Urban Total	57,859	68,369	69,530	75,498	80,523	85,571	90,611	94,891
Metro Cass	45,039	53,650	54,575	58,786	62,580	66,496	70,332	73,426
Other Cass	6,276	7,317	7,446	8,273	9,488	10,572	11,224	11,578
Cass Total	51,315	60,967	62,021	67,059	72,068	77,068	81,556	85,004
Metro Clay	12,820	14,719	14,956	16,712	17,943	19,074	20,279	21,466
Other Clay	5,850	6,716	6,805	6,659	6,971	7,420	7,842	8,294
Clay Total	18,670	21,435	21,761	23,371	24,914	26,494	28,121	29,760
MSA	69,985	82,403	83,782	90,430	96,982	103,563	109,677	114,764

Source: 2006 Demographic Forecast for the Fargo-Moorhead MSA (McKibben / Ulteig Engineering, Inc.), Metropolitan Profile (2010, Metro COG)

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%. The city of Dilworth has the highest single-family ratio at approximately 73%. A summary of the ratios for the years 2000-2009 is set forth within Figure 21. To note, these percentages are based on Metro COG dwelling unit and population projections and not projections established within the *2006 Demographic Forecast for the Fargo-Moorhead Metropolitan Statistical Area*.

FIGURE 21 – Ratio of Single-Family to Multi-Family Units

Jurisdiction	2006	2007	2008	2009
Fargo	44.65%	44.67%	44.78%	44.47%
West Fargo	67.78%	67.49%	67.59%	67.66%
Moorhead	67.44%	67.45%	66.59%	66.44%
Dilworth	71.96%	72.32%	72.57%	73.71%
Metro	**52.90%**	**53.00%**	**52.96%**	**52.74%**

Source: Metropolitan Profile (Metro COG, 2010)

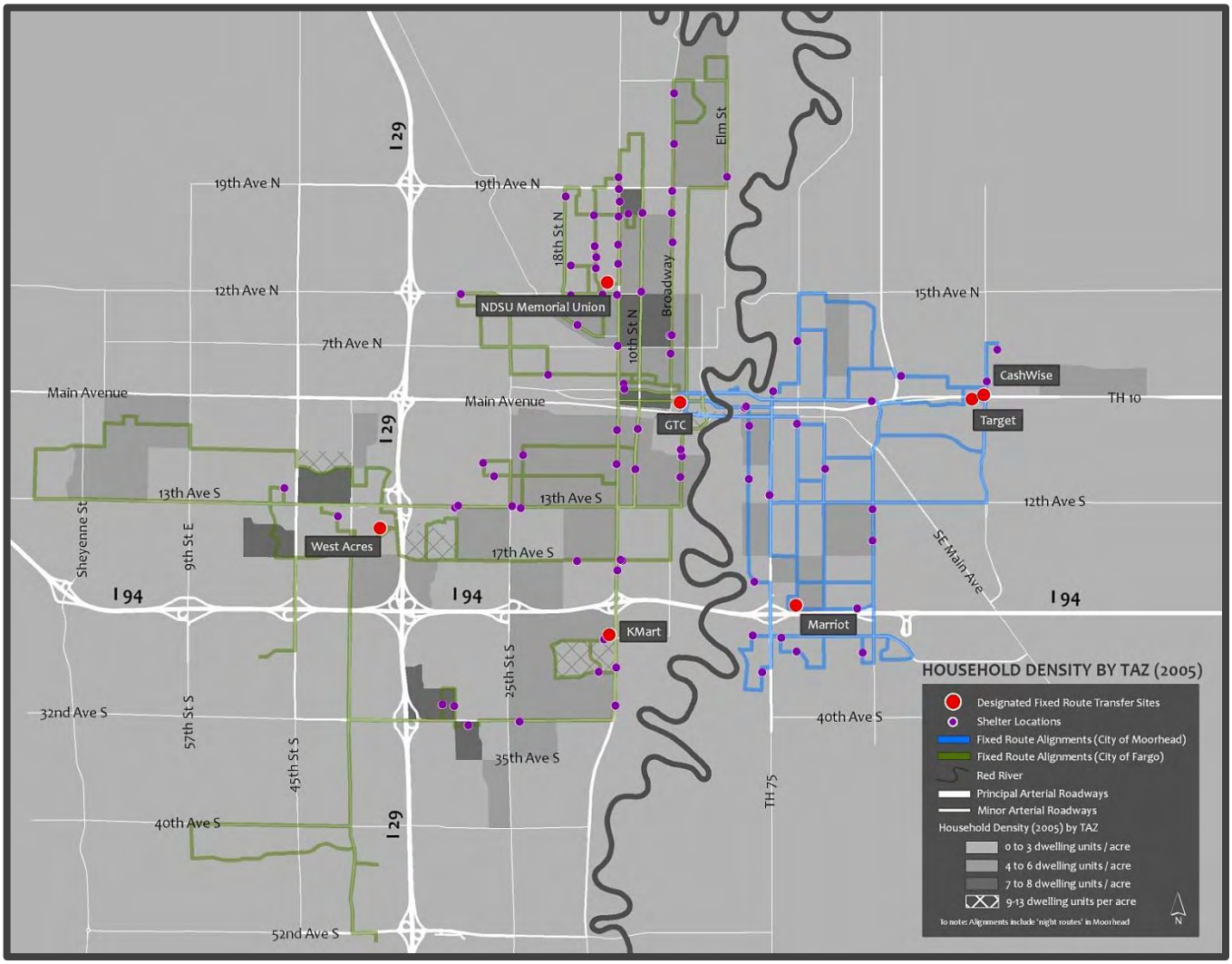
Fundamentally, Metro COG's Regional Travel Demand Model (TDM) is based on demographic (household/employment) projections set forth within the *2006 Demographic Forecast for the Fargo-Moorhead*

Metropolitan Statistical Area for planning years 2015 and 2035. Based on these projections, metropolitan jurisdictions are able to allocate households (and jobs, see similar discussion below) to certain Transportation Analysis Zones (TAZ) consistent with known 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.).

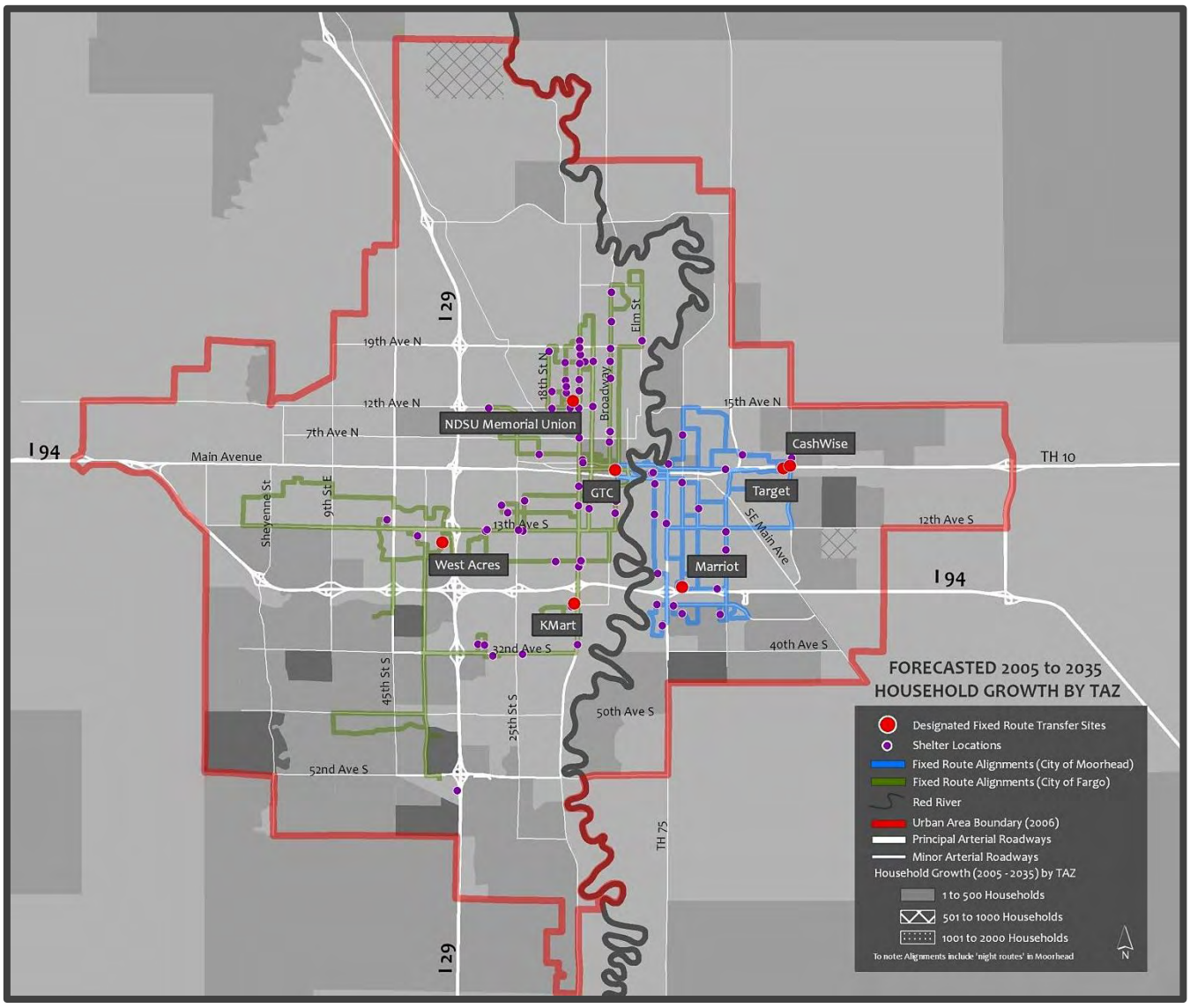
These allocations, by jurisdiction and TAZ, provide the necessary framework to map existing conditions and forecasted growth within specific areas of the Metropolitan Area from base model year 2005 to planning year 2035. In sum, Map 4 (below) shows household density by TAZ (base 2005 model) and Map 5 (below) identifies areas where jurisdictions anticipate household growth.

MAP 4 – Household Density by Transportation Analysis Zone (2005 base year model estimates)



Source: Metro COG Regional Travel Demand Model (TDM, Base Year 2005)

MAP 5 – Forecasted 2005 to 2035 Household Growth by TAZ

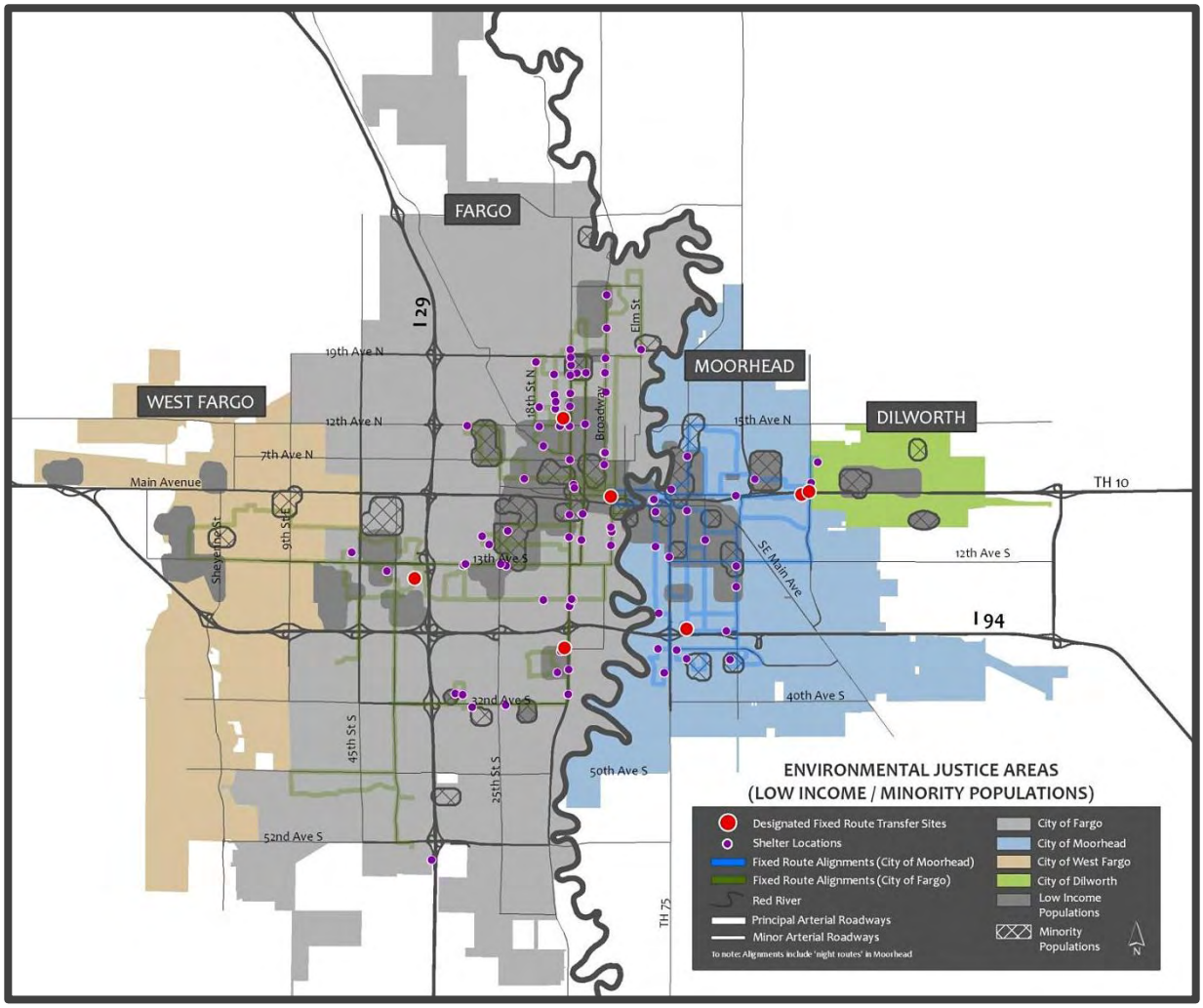


Source: Metro COG Regional Travel Demand Model (TDM, Base Year 2005)

Pursuant to Presidential Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations) issued February 16, 1994 "....each Federal agency shall make achieving environmental justice 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 on minority populations and low income populations....". This Executive Order follows up 42 U.S.C. 2000d (Civil Rights Act of 1964) which requires nondiscrimination in federally assisted programs. Based on 2000 Census data, concentrations of low income and minority populations (neighborhoods) are shown within Map 6 in comparison to jurisdictional boundaries, existing public transit fixed routes, transfer sites and shelter locations. For additional information on Metro COG's environmental justice methodology, see TDP definitions.

Employment. The *2006 Demographic Forecast for the Fargo-Moorhead Metropolitan Statistical Area* established employment trends and projections based on 2000 Census data. Consistent with population and household

MAP 6 – Environmental Justice, Low Income / Minority Populations Distribution



Source: 2000 U.S Census Bureau, Metro COG 2011

FIGURE 22 – Employment Trends by Jurisdiction (2005-2035)

Jurisdiction	2010-2015	2015-2020	2020-2025	2025-2030	2030-2035	2005-2035
Cass County	6%	4.8%	4.7%	5%	**5.8%**	**39.8%**
Clay County	4.2%	5.6%	2.9%	5.1%	**3.5%**	**31.3%**
Fargo	6.2%	5%	4.8%	5.5%	**6.2%**	**42%**
West Fargo	5.1%	2.4%	4.8%	0.9%	**3.1%**	**29%**
Moorhead	5.3%	6%	2.7%	6.9%	**4.8%**	**38%**
Dilworth	4.1%	2.2%	4.3%	2.2%	**3.4%**	**26%**
Metro	**5.18%**	**3.9%**	**4.15%**	**3.88%**	**4.38%**	**33.75%**

Source: Metro COG, 2011

projections within this section, the 2006 demographic forecast included two scenarios ('Most Likely' and 'High Growth'). As previously noted in the ECR, Metro COG's Policy Board approved the 'High Growth' projections in 2007 for use within the transportation planning program. Figure 22 (above) outlines job/employment projections per jurisdiction. Overall, employment for the FM MSA has been projected to grow significantly under the defined 2035 planning horizon (from 104,825 in 2000 to 154,502 in 2035) which is representative of a 47% increase over a thirty (30) year timeframe or 1.56% annually. Employment forecasts are derived by the number of employed persons by job location in contrast to where the

employed person lives. According to the 2006 demographic study, employment projections were calculated by determining 'internal' MSA jobs based on ratio to population and then added to 'external' MSA workers (based on analysis of commuter data from the 2000 Census) to establish overall estimates.

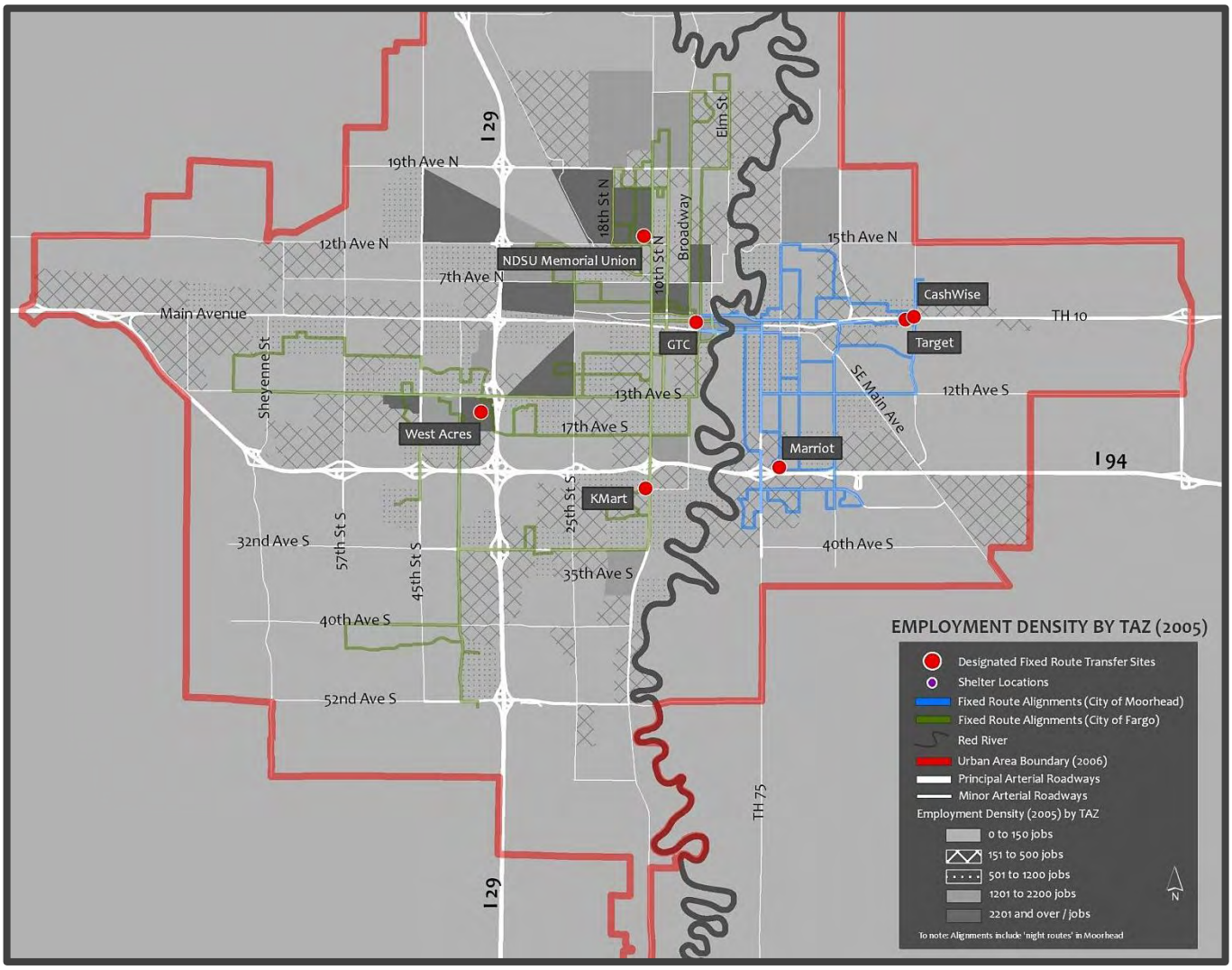
Metro COG's Regional Travel Demand Model (TDM) is based on demographic (household/employment) projections set forth within the *2006 Demographic Forecast for the Fargo-Moorhead*

FIGURE 23 – Employment / Jobs by Jurisdiction

Jurisdiction	2000	2009	2010	2015	2035
Cass County (non-urban areas)	3,310	3,295	3,295	3,415	3,614
Clay County (non-urban areas)	3,372	3,299	3,308	3,289	3,377
Fargo	77,502	88,617	90,010	95,578	117,860
Moorhead	13,375	14,633	14,846	15,631	19,071
Dilworth	1,205	1,365	1,385	1,442	1,625
West Fargo	6,061	7,484	7,623	8,015	8,955
Total Metro	**104,825**	**118,693**	**120,467**	**127,370**	**154,502**

Source:: See Figure 12

MAP 7 – Employment Density by TAZ (2005 base year model estimates)



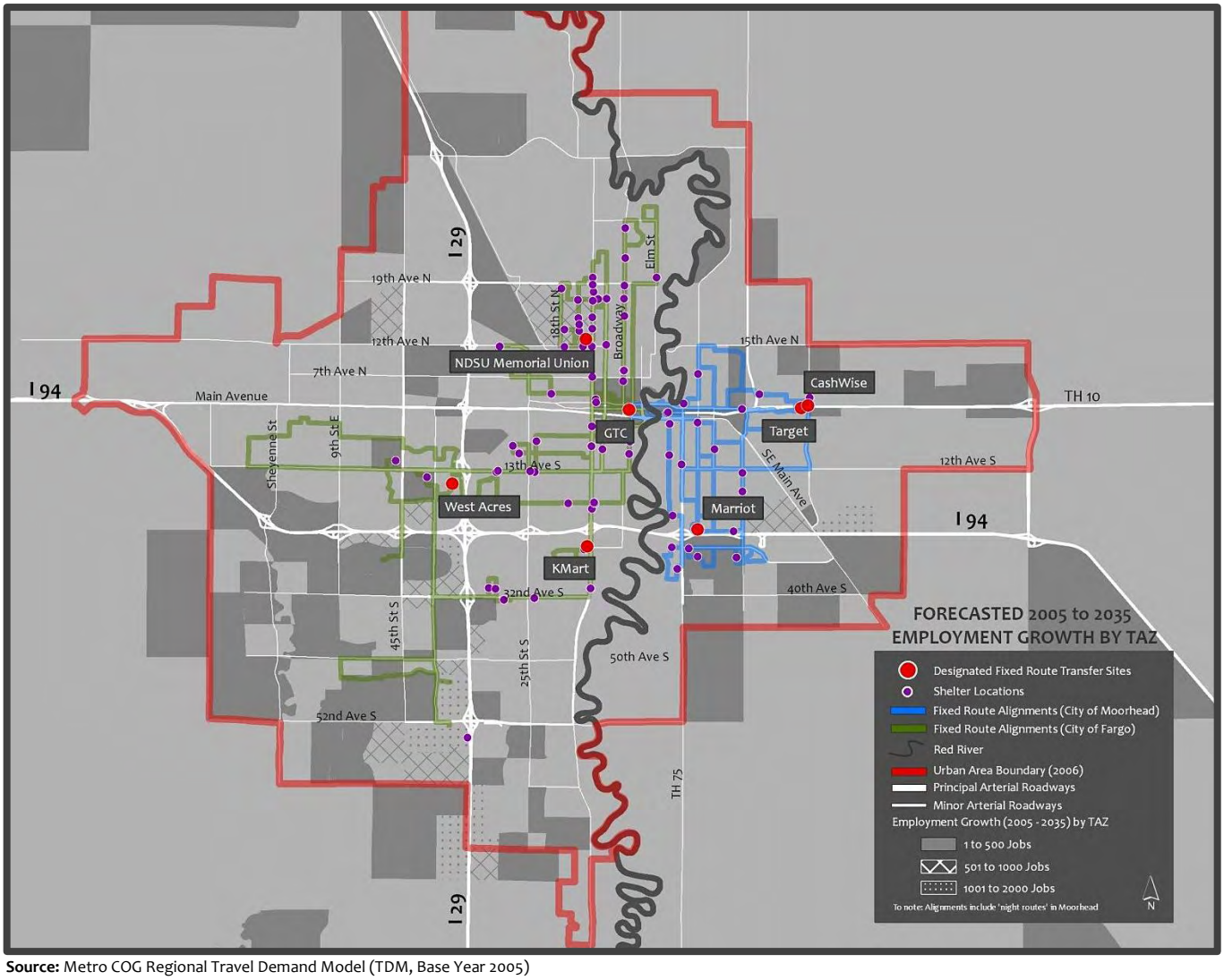
Source: Metro COG Regional Travel Demand Model (TDM, Base Year 2005)

Fargo-Moorhead Metropolitan Statistical Area for planning years 2015 and 2035. Based on these projections, metropolitan jurisdictions are able to allocate jobs (and households, see similar discussion above) to certain Transportation Analysis Zones (TAZ) consistent with known 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.).

These allocations, by jurisdiction and TAZ, provide the necessary framework to map existing conditions and forecasted growth within specific areas of the Metropolitan Area from base model year 2005 to planning year 2035. In sum, Map 7 (above) shows employment density by TAZ (base 2005 model) and Map 8 (below) shows areas where jurisdictions anticipate employment growth.

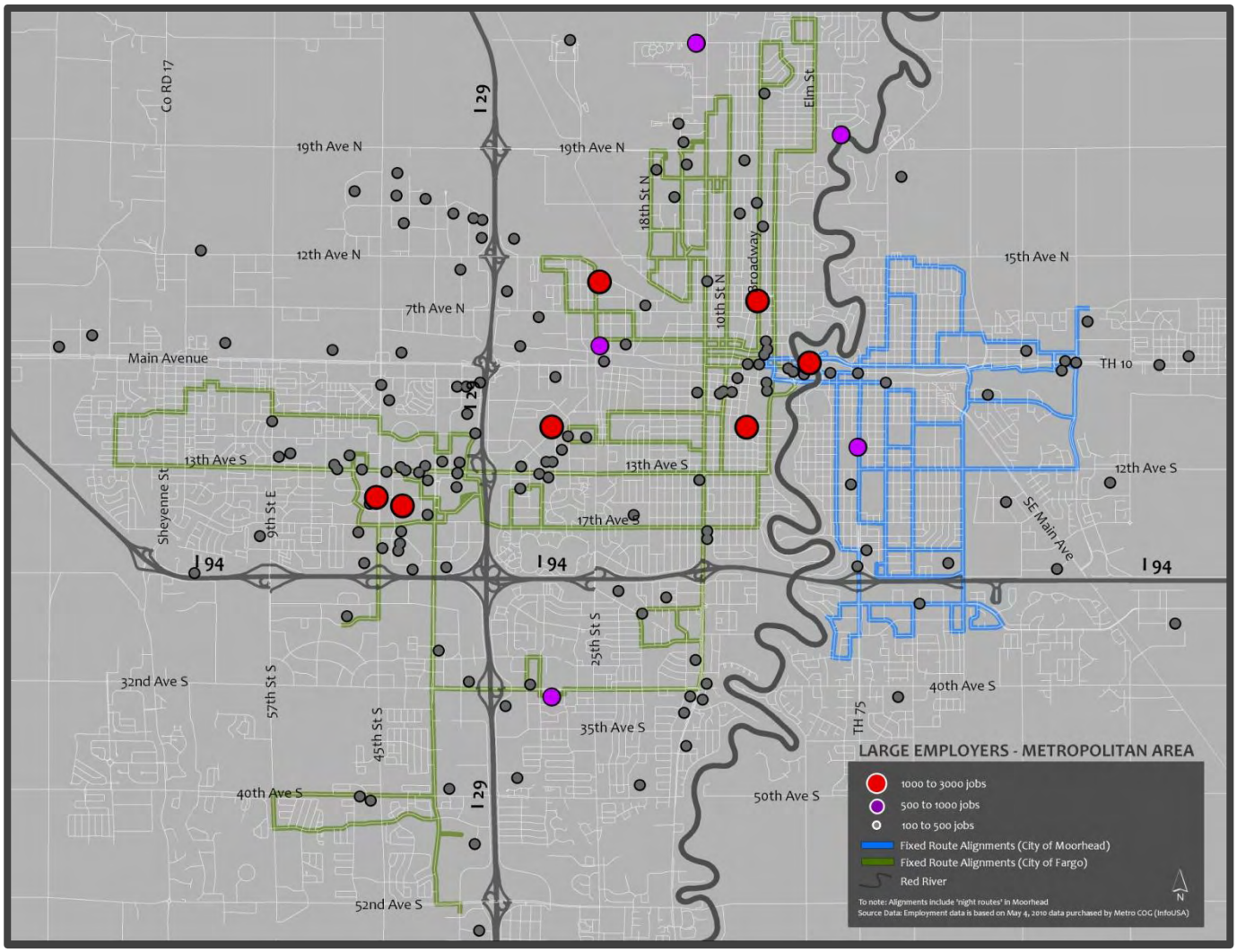
MAP 8 – Forecasted 2005-2035 Employment (job) Growth by Transportation Analysis Zone (TAZ)



Source: Metro COG Regional Travel Demand Model (TDM, Base Year 2005)

On a five (5) 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 also extremely beneficial for Transit Development Plan analysis. Map 9 (below) identifies concentrations of jobs and major employers within the Metropolitan Area relative to the existing fixed route network and major transportation facilities (principal arterials and minor arterial roadways). Data shown within Map 9 is valid as of May 4, 2010 and shows job locations with 100 or more employees.

MAP 9 – Large Employers – Metropolitan Area



Source: InfoUSA (May 4, 2010)

Transit Generators – Fixed Route. Understanding the location and impact of transit generators is an important component to any public transit system, as in many cases, such as Fargo-Moorhead, they are instrumental in defining [supporting] the structure of the network. To develop the transit generator map (Map 10, below) Metro COG utilized 2009 boarding data (supplemented with 2008 boarding data) to identify all locations with a

daily average of more than five (5) boarding's. From this data, generators were divided into five (5) overarching categories which either produce or attract transit trips. Residential areas with high transit usage are considered transit trip producers and the following four (4) categories are considered transit trip attractors; commercial areas, educational facilities, medical facilities and social/government services. Each category is further defined below. It is important to note that boarding's represented in Figure 16 comprise 40% of overall transit system boarding's; which is even more significant considering Fargo and West Fargo do not accommodate designated stops, thus, high boarding locations are extremely difficult to isolate.

Transit Trip Producers:

(a) Residential. Areas of high-density residential development will generally create an increased demand for public transit, as population density limits parking and access to automobiles. These transit producers include large apartment complexes, condominiums and elderly housing. Examples include the Fargo High Rise (Fargo), Riverview High Rise (Moorhead) and Sheyenne Crossings (West Fargo).

Transit Trip Attractors:

(a) Commercial. Commercial areas include major shopping centers and grocery stores which traditionally attract a large number of customers. Examples include the Northport Shopping Center (Fargo), Wal*Mart (Dilworth) and Market Square (Fargo).

(b) Education. Educational facilities attract transit trips from students, employees and faculty. Examples include M-State (Moorhead) and the Skills/Technology Training Center (Fargo).

(c) Medical. Medical facilities are major attractors of transit trips as individuals with limited mobility utilize public transit to access medical needs/appointments. In addition, these facilities are generally major employment centers which increases the likelihood that employees will use public transit to access their jobs. Examples include Sanford Hospital (Fargo) and the VA Hospital (Fargo).

(d) Social and Government Services. Social services and government facilities are major transit trip attractions for employees, clients/customers and the general public. Examples include Southeast Human Service Center (Fargo), Lakeland Mental Health (Moorhead), city halls and county courthouses.

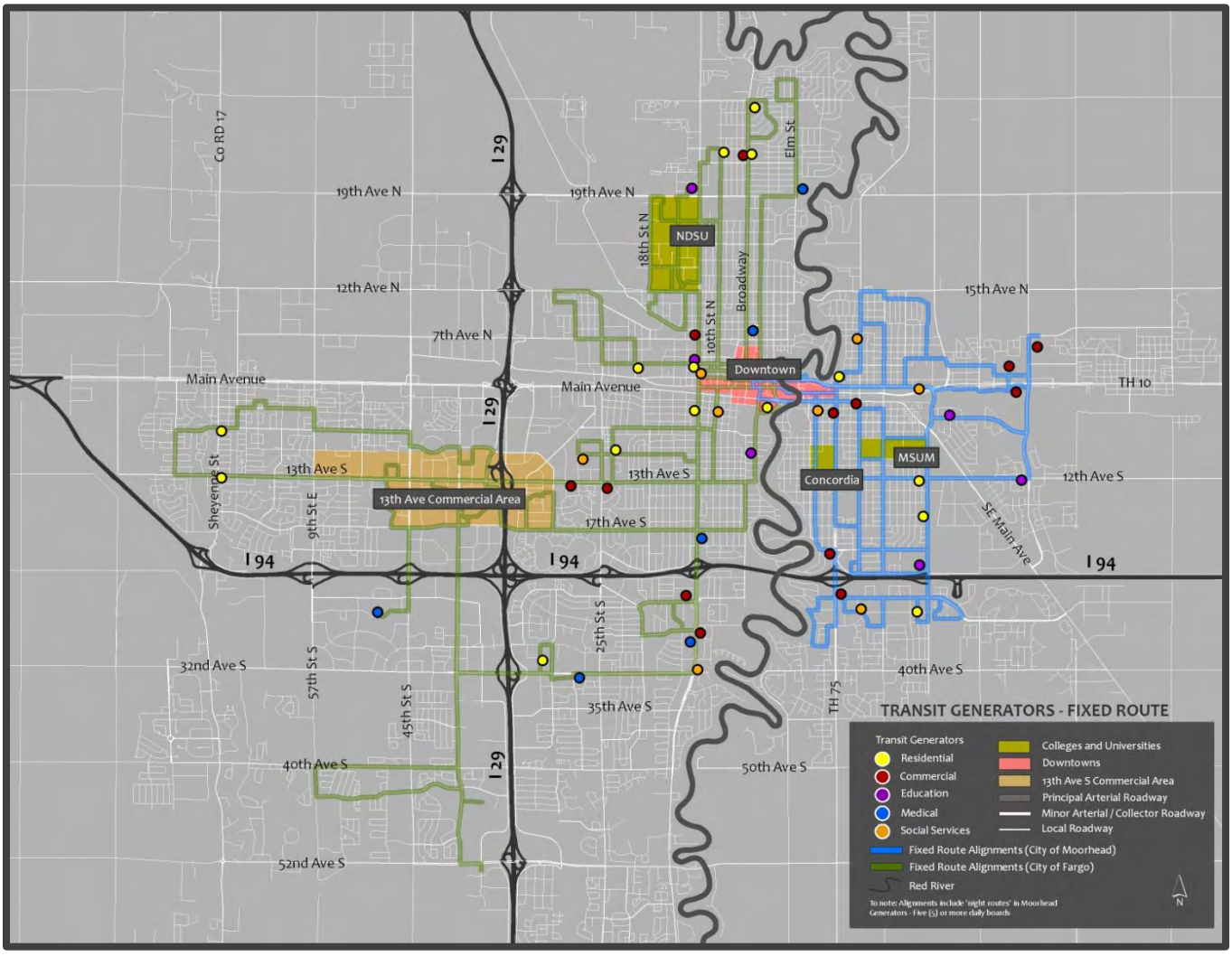
Due to high concentrations of transit boarding's and deboarding's, the following areas have been designated by geographic area. These areas contain numerous transit generators within close proximity. All stops within these five (5) areas with more than one (1) board per day are documented within Figure 16 (below).

(e) Downtown. This area contains the Ground Transportation Center, employment centers, government facilities, shopping, restaurants, entertainment and an increasing amount of residential capacity within both Fargo and Moorhead.

(f) 13th Avenue South Commercial Area. Located adjacent to the 13th Avenue South corridor and near I-29 interchanges, this area includes a high concentration of transit trip attractors including the West Acres Shopping Center, Hornbachers and Wal*Mart.

(g) NDSU, MSUM and Concordia. These Metropolitan Area colleges/universities produce and attract a significant amount of transit trips relative to the overall fixed route system. The residential nature of these campuses (and adjacent residential areas) are a contributing factor to the production/attraction of trips as well as the fact that these institutions are major employment centers. In addition, the U-Pass Program allows students, facility and staff at these colleges/universities (and M-State) access to MAT fixed route services for free which provides individuals with an incentive to use public transit.

MAP 10 – Transit Generators – Fixed Route.



Source: MAT 2008 and 2009 Boarding Data and Metro COG (2011)

Figure 24 (below) identifies each transit generator and attractor as included within Map 10 (above) by stop location, category and average daily board rate.

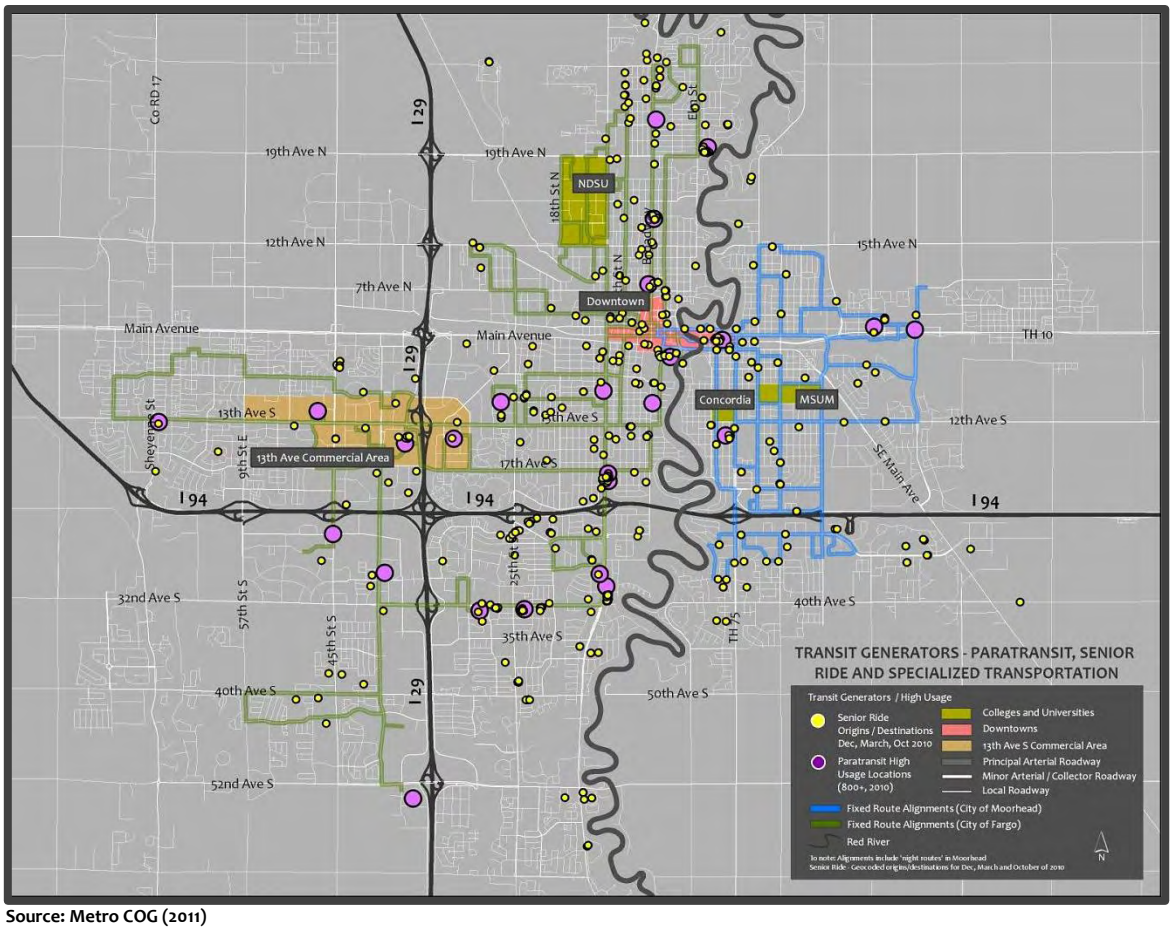
Transit Generators – Paratransit, Senior Ride and Specialized Transportation. As previously noted, understanding the location and impact of transit generators is an important consideration. To identify paratransit generators Metro COG queried locations from 2010 ridership data that accounted for more than 800 rides. Figure 25 identifies these ten (10) locations and the associated 2010 ridership data. It is important to note that these ten locations account for approximately 31% of all paratransit rides. Map 11 (below) includes an additional sixteen (16) locations that traditionally produce high paratransit service usage. To define generators and attractors for 'senior rides' is a little more difficult; however, many are linked to various paratransit generator locations. To document senior ride trends Metro COG acquired ridership data for three (3) separate months within 2010 (December, March and October). This origin and destination data was then geocoded (assigned to an address) and is displayed within Map 11 (yellow circles). Displaying this origin/destination data spatially provides a mechanism in which certain trends/tendencies can be identified. For example, it is interesting to note the amount of Senior Ride trip produced and/or attracted to areas between University Drive (Fargo) and US Hwy 75 (Mhd).

FIGURE25 – Paratransit Generators & Ridership

Location	2010 Ridership
Davita Dialysis	972
DWAC	3,608
Evaluation & Training Center	2,040
New Horizons Center	3,892
Parkview Terrace	1,444
Rosewood	1,156
Sanford Dialysis	2,132
Sanford Southpointe	840
Veterans Administration	1,096
West Acres Shopping Center	876
Total	18,056 (31% of 57,870)

Source: Metro Area Transit and Metro COG (2011)

MAP 11 – Transit Generators (Paratransit, Senior Ride and Specialized Transportation)



Source: Metro COG (2011)

8.0 Operations Assessment (Ridership Trends, Fleet, Peer Comparison).

Overview. In 2010 the Metropolitan Area mass transit system provided a total of 2,133,908 rides which includes all fixed routes, paratransit services, rural commuter services, senior ride services and ADA demand response services. From a fixed route perspective, over the five (5) year timeframe between 2006 and 2010 MAT ridership has increased by 747,100 rides (or 53%). Similarly for other transit services, paratransit ridership over the same five (5) year timeframe (2006 to 2010) has increased by 8,861 rides (or 18%), NDSU circulator routes have increased by 188,100 rides (or 99%, non-inclusive of Route 33 ridership [Barry Hall/Klai Hall circulator route]) while rural commuter ridership (Cass and Clay County) and senior dial-a-ride service have also shown significant ridership increases. Figure 26 (right) summarizes total ridership data for the five (5) primary transit providers in the MSA.

FIGURE 26 – RIDERSHIP SUMMARY (2006 to 2010)

Transit System	Service	2006	2007	2008	2009	2010
Metro Area Transit	Fargo Fixed	713,647	758,177	948,006	1,119,652	1,246,612
	Mhd Fixed	345,228	356,606	398,445	392,984	376,697
	NDSU Circulator Rts	189,925	204,301	280,458	359,994	378,025
	Total MAT Fixed	1,058,875	1,114,783	1,346,451	1,512,636	2,001,334
	MAT Paratransit	48,989	55,133	60,255	57,428	57,850
Clay County Rural Transit	All Services	19,056	25,761	37,134	34,145	NA
Fargo Senior Services	Fargo/WF	43,231	43,604	41,721	42,104	38,491
	Mhd/Dilworth	X	X	4,050	5,111	5,961
	Cass County Rural Transit	1,794	2,180	2,968	2,418	2,214
Handi/Wheels	All Services	24,938	26,000	17,689	15,414	28,280
TOTAL	All Systems	1,386,808	1,471,762	1,786,676	2,029,250	2,133,908

Source: Metropolitan Profile (2010, Metro COG)

Fixed Route. Figure 27 (below) provides an outline of fixed route transit ridership since 1982, with splits between the City of Fargo and City of Moorhead.

FIGURE 27 – Metropolitan Fixed Route Ridership Totals (1982 to 2010)

Year	Fargo	Moorhead	Metro Fixed Total
1982	786,512	204,905	991,417
1983	565,541	184,135	749,676
1984	527,482	190,137	717,619
1985	531,892	229,217	761,109
1986	495,403	246,021	741,424
1987	474,979	231,801	706,780
1988	532,137	258,624	790,761
1989	563,762	275,901	839,663
1990	597,582	306,660	904,242
1991	594,555	321,968	916,523
1992	555,741	312,249	867,990
1993	551,656	331,583	883,239
1994	541,813	329,078	870,891
1995	519,266	329,471	848,737
1996	498,030	334,454	832,484
1997	446,344	333,239	779,583
1998	473,729	319,499	793,228
1999	429,442	314,554	743,996
2000	446,037	315,290	761,327
2001	460,045	313,512	773,557
2002	474,233	297,004	771,237
2003	499,106	288,741	787,847
2004	559,106	285,887	844,993
2005	661,752	319,746	981,498
2006	900,178	344,824	1,245,002
2007	962,478	356,606	1,319,084
2008	1,228,464	398,445	1,626,909
2009	1,479,646	392,984	1,872,630
2010	1,624,637	376,697	2,001,334

Source: Metro Area Transit and Metro COG (2011)

Figures set forth below depict general operating characteristics of the fixed route system within each municipality and also ridership trends on each route from 2007 through 2010.

City of Fargo.

FIGURE 28 – General Operating Characteristics (Fixed Rt)

Category	Total (2009)
Annual Revenue Miles	688,507
Total Operating Days	307
Daily Revenue Miles	2,242
Revenue Hours	51,767
Rides per Day	4,820
Rides per Hour	29
Farebox Revenue (- contributions)	$497,061
Farebox Recovery Ratio	15%
Total Ridership	1,479,646
Annual Cost per Route	$198,083
Cost per Passenger	$2.27
Fleet Size	25
Number of Routes	17 (as of Dec. 31, 2009)
Total Operational Costs	$3,367,413

Source: Metro Area Transit and Metro COG (2011)

FIGURE 29 – City of Fargo Fixed Route Ridership Trends

Route	2007	2008	2009	2010
Route 11 (6.548 miles)	78,008	98,509	101,091	97,248
Route 12 (7.669 miles)	15,796	19,573	16,620	19,978
Route 13 (6.327 miles)	161,818	197,391	209,333	213,353
Route 14 (7.335 miles)	87,668	108,282	110,302	102,712
Route 15 (11.289 miles)	132,285	222,433	255,590	266,332
Route 16 (12.127 miles)	92,523	81,084	80,141	77,192
Route 17 (5.983 miles)	36,556	41,410	38,962	43,223
Route 18 (5.207 miles)	66,331	71,545	67,947	68,098
Route 21 (4.581miles)	3,369	11,117	10,564	10,913
Route 22 (9.4 miles)	28,656	44,303	49,807	51,184
Route 23 (started in 2011) (16.567 miles)	x	x	X	801
Route 25 (14.208 miles)	42,249	52,359	56,817	59,776
Route 31 (2.547 miles)	47,846	71,199	98,876	105,241
Route 32 (3.788 miles)	156,456	198,655	208,823	171,694
Route 33 (4.193 miles)	x	x	122,478	235,802
Route 34 (2.427 miles)	x	x	39,940	88,657
Route 35 (3.069 miles)	x	10,604	12,355	12,433
Total (123.265 miles)	962,478	1,228,464	1,479,646	1,624,637

Source: Metro Area Transit and Metro COG (2011)

From an operations perspective, the following is meant to document significant changes to the City of Fargo fixed route system from fiscal year 2007 through 2010.

2007. As envisioned by the 2007 MAT Paratransit Options Analysis the City of Fargo created a *Mobility Management* position to assist with paratransit operations and other tasks related to specialized transportation service coordination. Due to demands generated from the NDSU downtown campus (Renaissance Hall) MAT added a second bus to Route 13B during peak hours in the afternoon and early evening. Significant route changes were made on Routes 11 (increased frequency on Saturday), 13, 14, 15 (extended to Wal*Mart and increased frequency), 17, 18, 19 (eliminated) and 22.

2008. MAT added Route 35 (NDSU evening on-campus circulator) in 2008 which continues to operate only on school days. U-Pass fares were raised from $5.25 to $6.00 per student for the 2008-2009 academic year.

2009. Effective January 1, 2009 MAT increased cash fares from $1.00 to $1.25 (adult) and $0.50 to $0.60 for discount. Thirty (30) day pass fares increased from $35 to $40 (adult) and from $23 to $26 for discount. U-pass costs remained at $6.00 per student; however, it is important to note that NDSU faculty and staff were included in the U-pass program for the 2009-2010 school year. The City of Fargo added additional service between NDSU (main campus) and newly constructed Barry Hall/Klai Hall in August of 2009. Routes 33A and 33B were initially implemented; however, ridership volume warranted a third route (33C). Further, effective March 2009 Route 34 (near campus circulator) was extended to operate Monday through Friday (all year) instead of only during the academic year.

2010. In November of 2010 MAT received approval to implement Route 23 which provides services to West Acres, Osgood, Woodhaven and Microsoft neighborhoods in Southwest Fargo.

City of Moorhead.

FIGURE 30 – General Operating Characteristics (Fixed Rt)

Category	Total (2009)
Annual Revenue Miles	316,361
Total Operating Days	305
Daily Revenue Miles	1,037
Revenue Hours	21,845
Rides per Day	1,288
Rides per Hour	18
Farebox Revenue	$253,881
Farebox Recovery Ratio	18%
Total Ridership	392,968
Annual Cost per Route	$171,987
Cost per Passenger	$3.50
Fleet Size	10
Number of Routes	8 (as of Dec. 31, 2009)
Total Operational Costs	$1,375,899

Source: Metro Area Transit and Metro COG (2011)

FIGURE 31 – City of Moorhead Fixed Route Ridership Trends

Route	2007	2008	2009	2010
Route 1 (6.262 miles)	56,444	76,790	80,418	72,380
Route 2(7.128 miles)	101,204	112,202	108,913	109,755
Route 3 (7.876 miles)	34,041	42,893	45,374	43,000
Route 4 (11.485 miles)	65,508	57,420	51,263	68,214
Route 5 (8.10 miles)	39,531	47,814	51,790	49,532
Route 6 (eliminated in 2010)	43,827	40,848	38,843	16,191
Route 7 (7.8 miles)	6,997	9,492	7,466	8,012
Route 8 (9.0 miles)	9,054	10,986	8,917	9,613
Total (57.651 miles)	356,606	398,445	392,984	376,697

Source: Metro Area Transit and Metro COG (2011)

From an operations perspective, the following is meant to document significant changes to the City of Moorhead fixed route system from fiscal year 2007 through 2010.

2007. M-State (Community College & Technical School) was phased into the U-pass Program and rates were raised from $4.25 to the $5.25 rate. In January Moorhead fixed route buses began utilizing the Metro Transit Garage and on January 21st administrative staff moved to the MTG. Routes 7 and 8 (evening routes) alignments were modified which shifted the route off Center Avenue and onto Main Avenue to address rail pre-emption issues that were causing significant route delays.

2008. U-Pass fares were raised from $5.25 to $6.00 per student for the 2008-2009 academic year. Metro Senior Ride was expanded into Moorhead and Dilworth in January of 2008. Significant route changes were made on Routes 4, 6 (service to Wal*Mart in Dilworth and frequency adjustments) and minor changes were made to Route 1 and 5.

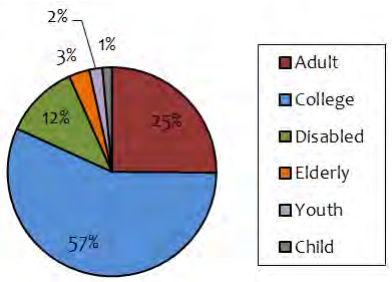
2009. Effective January 1, 2009 MAT increased cash fares from $1.00 to $1.25 (adult) and $0.50 to $0.60 for discount. Thirty (30) day pass fares increased from $35 to $40 (adult) and from $23 to $26 for discount.

2010. Effective June 15, 2010 the City of Moorhead made significant changes to Route 4 and 6. Route 6 was eliminated and two buses have been placed on Route 4, with an additional transfer point at CashWise Foods. Other changes were made to Routes 1, 2 (interlined with Route 4), 3 and 5 (removed from 8th Street).

Metropolitan Ridership Data (customer type, U-pass ridership by college/university). Establishing an understanding of the public transit system customer base in addition to demographic variables and other data presented within this ECR will create a framework for system growth projections and alternatives.

Based on 2009 ridership data, the following table and chart (Figure 32) represents rider type for the combined Metropolitan Area. It is especially important to note the large percentage of college students.

FIGURE 32 – 2009 MAT Ridership by Customer Type

Customer Type	2009 (total)	% of Total	Chart / Customer Type
Adult	471,160	25%	
College/Student	1,060,300	57%	
Disabled	215,639	12%	
Elderly	60,330	3%	
Youth	37,564	2%	
Child	27,637	1%	
Total	1,872,630	100%	

Source: Metro Area Transit (2009)

Figure 33 (below) identifies student ridership for the past eight (8) 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 (4) larger Metropolitan Area colleges/universities; inclusive of Concordia College, MSUM, M-State and NDSU. In sum, each college contracts separately with MAT and provides an annual subsidy allowing students to use any MAT fixed route for free, with discounts useable throughout the entire academic year. Data provided within Figure 33 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 Figure 26. The large increase in ridership at NDSU in 2004-2005 relates to the opening of Renaissance Hall (downtown campus building served by Route 13) and substantial increases starting in 2007 through 2010 relate to NDSU's expanding presence in the downtown area from both an educational (Barry Hall and Klai Hall constructed in 2009) and residential housing perspective.

FIGURE 33 – U-pass Ridership (2001 to 2010)

Academic Year	NDSU	Concordia	MSUM	MSCTC	Total
2001-2002	44,315	x	x	x	44,315
2002-2003	84,720	X	34,873	x	119,593
2003-2004	50,709	12,788	49,895	x	113,392
2004-2005	102,044	12,362	50,279	4,059	168,744
2005-2006	108,028	15,758	59,826	15,196	198,808
2006-2007	140,712	15,489	74,164	18,464	248,829
2007-2008	180,346	18,237	89,907	30,665	319,155
2008-2009	226,194	17,183	89,642	28,608	361,627
2009-2010	253,882	15,167	89,868	29,081	387,998

Source: Metro Area Transit and Metropolitan Profile (2010, Metro COG)

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 thirty-five (35) buses with twenty-seven (27) in operation during peak requirements. It is important to note that FTA does not set specific spare bus requirements for transit systems with less than 100 vehicles. For MAT, the need for spare buses is driven by multiple variables include peak demand, planned service expansion and maintenance programs. Figure 34 provides a general summary of the fixed route fleet and outlines peak requirements for both municipalities. Peak vehicle requirement includes all routes and a break/lunch bus that is used on a rotation basis to provide drivers with necessary breaks during peak hours of service.

FIGURE 34 – Fixed Route Fleet Summary

Jurisdiction	Fleet Size	Peak Requirement	Spare Ratio	Spare Buses
City of Fargo	25	20	25%	5
City of Moorhead	10	7	42%	3
Combined Fleet	35	27	29%	8

Source: Metro Area Transit and Metro COG (2011)

FIGURE 35 – Fixed Route Fleet Inventory (Mhd)

Year	Make / ID	Mileage (5/21/2010)	Replacement Year per LRTP
2003	Orion / 381	206,743	2015
2003	Orion / 370	173,011	2015
2003	Orion / 371	202,895	2015
2003	Orion / 380	245,449	2015
2003	Orion / 382	262,530	2015
2005	Orion / 590	185,093	2017
2005	Orion / 591	188,003	2017
2005	Orion / 592	188,875	2017
2005	Orion / 593	206,397	2017
2010	New Flyer/ 1020	258	2022

Source: Metro Area Transit and Metro COG (2011)

In 2010, the City of Fargo and the City of Moorhead received unexpected 100% federal capital funding as a direct result of the American Recovery and Reinvestment Act (ARRA) of 2009. With these capital funds, the City of Fargo purchased five (5) fixed route buses (2010 vehicles as shown within Figure 36) and the City of Moorhead purchased one (1) fixed route bus to replace a 1997 New Flyer (ID No. 9741).

FIGURE 36 – Fixed Route Fleet Inventory (Fargo)

Year	Make /ID	Mileage (5/21/2010)	Replacement Year per LRTP
1997	New Flyer / 1125	437,733	Not in LRTP
1997	New Flyer / 1124	481,100	Not in LRTP
1997	New Flyer / 1123	485,326	Not in LRTP
2002	Gillig / 1126	303,884	2015 / 2025
2002	Gillig / 1127	320,566	2015 / 2025
2002	Gillig / 1128	306,730	2015 / 2025
2004	Gillig / 1139	227,217	2015 / 2027
2004	Gillig / 1140	275,260	2015 / 2027
2004	Gillig / 1141	244,147	2015 / 2027
2004	Gillig / 1142	236,225	2019
2007	New Flyer / 1173	115,714	2019
2007	New Flyer / 1174	90,893	2019
2007	New Flyer / 1175	84,047	2019
2007	New Flyer / 1176	93,135	2019
2009	New Flyer / 1184	22,434	2021
2009	New Flyer / 1185	16,669	2021
2009	New Flyer / 1186	20,659	2021
2009	New Flyer / 1187	14,170	2021
2009	New Flyer / 1188	22,848	2021
2010	New Flyer / 1195	353	2022
2010	New Flyer / 1196	345	2022
2010	New Flyer / 1197	342	2022
2010	New Flyer / 1198	292	2022
2010	New Flyer / 1199	259	2022

Source: Metro Area Transit and Metro COG (2011)

Paratransit. Figure 37 (below) provides an outline of paratransit ridership since 2002, with splits between Fargo, Moorhead, West Fargo and Dilworth. Figure 38 (below) depicts the general operating characteristics of the paratransit system.

FIGURE 37 – Metropolitan Paratransit Ridership Totals (2002 to 2010)

Year	Fargo	West Fargo	Moorhead	Dilworth	Total
2002	20,787	2,635	4,411	145	27,978
2003	24,331	2,573	7,941	318	35,163
2004	25,953	3,802	9,950	446	40,151
2005	25,446	4,464	10,958	751	41,619
2006	29,550	6,424	12,290	725	48,989
2007	32,589	8,044	13,438	1,062	55,133
2008	37,170	7,929	13,825	1,331	60,255
2009	36,060	8,285	12,650	443	57,428
2010	37,471	7,159	12,711	509	57,850
% of System Total	65%	12%	22%	1.0%	100%

Source: Metro Area Transit and Metro COG (2011)

FIGURE 38 – Operating Characteristics

Category	Total (2009)
Annual Revenue Miles	362,049
Total Operating Days	359
Daily Revenue Miles	1,008
Revenue Hours	25,502
Rides per Day	160
Rides per Hour	2.25
Farebox Revenue	$143,369
Farebox Recovery Ratio	13%
Total Ridership	57,428
Cost per Passenger	~ $ 20.00 – $23.00
Fleet Size	14
Total Operational Costs	$1,069,759

Source: Metro Area Transit and Metro COG (2011)

Pursuant to current agreements, the City of Fargo and City of Moorhead share paratransit service costs based on a ridership pro-rata (see additional information with Section 6, Administration...Figure 15, Cost Allocation Formulas) with the only 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.

From an operations perspective, the following is meant to document significant changes to the Metropolitan Area paratransit system from fiscal year 2007 through 2010.

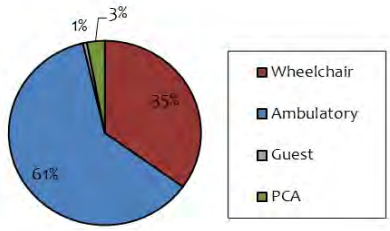
2007. As envisioned by the 2007 MAT Paratransit Options Analysis the City of Fargo created a *Mobility Management* position to assist with paratransit operations and other tasks related to specialized transportation service coordination.

2008. Effective January 1, 2009 paratransit fares were increased from $2.00 to $2.50.

Metropolitan Ridership Data (customer type). Establishing an understanding of the public transit system customer base in addition to demographic variables and other data presented within this ECR will create a framework for system growth projections and alternatives. Based on

FIGURE 39 –2009 MAT Paratransit Ridership by Customer Type

Customer Type	2009 (total)	% of Total	Chart / Customer Type
Wheelchair	20,060	35%	
Ambulatory	35,255	61%	
Guest	390	1%	
PCA (personal care attendant)	1,723	3%	
Total	57,428	100%	



Source: Metro Area Transit and Metro COG (2011)

2009 paratransit ridership data, the following table and chart (Figure 38) represents rider type for the combined Metropolitan Area.

Fleet Inventory (Paratransit). Metro Area Transit 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 establishes a baseline of Fargo contributing eight (8) vehicles to the fleet and Moorhead contributing three (3) vehicles to the fleet for a combined fleet of eleven (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 (2) vehicles and Moorhead has added one (1) vehicle. As of December 2010 and as described in Figure40, MAT paratransit operates fourteen (14) vehicles with ten (10) under City of Fargo ownership and four (4) under City of Moorhead Ownership.

FIGURE 40 –Fleet Summary

Jurisdiction	Fleet Size
City of Fargo	10 (72% of total)
City of Moorhead	4 (28% of total)
Combined Fleet	14

Source: Metro Area Transit and Metro COG (2011)

FIGURE 41 – Paratransit Fleet Inventory (Metropolitan)

Year	Make / ID	Mileage (5/21/2010)
2006	Ford / 1150	125,426
2003	Ford / 1152	218,257
2003	Ford / 1153	223,199
2006	Ford / 1170	108,884
2006	Ford / 1171	110,600
2006	Ford / 1172	100,055

Year	Make / ID	Mileage (5/21/2010)
2008	Ford / 1177	53,150
2008	Ford / 1178	67,051
2008	Ford / 1179	70,880
2008	Ford / 1180	70,700
2008	Ford / 1181	51,905
2008	Ford / 1182	52,646

Year	Make / ID	Mileage (5/21/2010)
2009	Ford / 1202	21,836
2009	Ford / 1203	17,470

	City of Fargo Vehicles
	City of Moorhead Vehicles

Source: Metro Area Transit and Metro COG (2011)

Senior Ride and Rural Transit. Figure 42 (below) provides an outline of 'senior ride' ridership since 2002, with splits between the City of Fargo/City of West Fargo, City of Moorhead/City of Dilworth and rural transit services. As described in detail within Section 4, Existing Service Overview) Metro Senior Ride is operated by Valley Senior Services (VSS) under contract with MAT and provides door-to-door transportation services for senior citizens age sixty (60) and over. Within rural areas of the MSA, Clay County

FIGURE 42 –Metro Senior Ride & Rural Transit Ridership Totals (2007 to 2010)

Transit System	Route	2007	2008	2009	2010
Clay County Rural Transit (Productive Alternatives, Inc.)	All Services	25,761	37,134	34,145	NA
Fargo Senior Services	Fargo/WF	43,604	41,721	42,104	38,491
	Mhd/Dilworth	x	4,050	5,111	5,961
	Cass County Rural Transit	2,180	2,968	2,418	2,214
TOTAL	All Systems	71,545	85,873	83,778	46,666

Source: Metro Area Transit and Metropolitan Profile (2010, Metro COG)

Rural Transit (Productive Alternatives, Inc.) and Cass County Rural Transit (operated by VSS) provide a blend of fixed route and demand response services to individuals. Moorhead's Dial-a-Ride was eliminated in 2003 (which primarily served senior citizens) and some of this ridership burden was likely shifted onto the paratransit system until the 'Senior Ride' program was instituted in 2008.

From an operations perspective, the following is meant to document significant changes to the Metropolitan Area senior ride system from fiscal year 2007 through 2010.

> **2007.** As envisioned by the 2007 MAT Paratransit Options Analysis the City of Fargo created a *Mobility Management* position to assist with paratransit operations and other tasks related to specialized transportation service coordination.
>
> **2008.** Senior rides were established at $2.50 per ride with one (1) guest permitted.

Fleet Inventory (Senior Ride). Figure 43 (below) outlines the vehicle inventory for Valley Senior Services and Cass County Rural Transit. The City of Fargo uses its designated allocation of urbanized area formula funds (Section 5307 and 5309) to purchase vehicles which are then leased to VSS. The following table does not include a vehicle inventory for Productive Alternatives, Inc. due to the service being no longer facilitated by Clay County.

FIGURE 43 – Senior Ride Fleet Inventory (Metropolitan)

Vehicle ID	Year/Make	Model Year	Mileage (11/27/07)	Type of Service	Owner
1155	Ford E-450	2001	54,255	Senior Ride	Fargo
1156	International	2000	169,532	Cass Co. Rural	FSC/FPD
1158	Dodge Caravan	2000	152,058	Senior Ride	FSC/FPD
1159	Ford E-450	2003	112,094	Senior Ride	Fargo
1160	GMC - Uplander	2007	19,475	Senior Ride	Fargo
1161	GMC - Uplander	2007	15,567	Senior Ride	Fargo
1163	Dodge Caravan	2005	90,996	Senior Ride	Fargo
1165	Dodge Caravan	2005	86,851	Senior Ride	Fargo
1166	GMC - Uplander	2007	22,325	Senior Ride	Fargo
1167	Ford Windstar	1999	19,365	Senior Ride	Dilworth
2008 Expansion	na	2008	na	Senior Ride	Fargo
1204	Dodge Caravan	2009	805	Demand Response	Moorhead
1205	Dodge Caravan	2009	15,966	Demand Response	Moorhead

Source: Metropolitan Profile (2010, Metro COG)

Peer Transit System Comparison. Metro COG has identified six (6) peer mass transit systems within the region in an attempt to compare various aspects of each operating system. Figure 44 (below) sets forth a comparison between Fargo-Moorhead, Grand Forks, Sioux Falls, Rapid City, Duluth, Rochester and St. Cloud public transit providers; with consideration given to population, fleet, revenue miles/cost and funding.

FIGURE 44 – Peer Transit System Comparison

Public Transit Agency/Provider	Population (2000 census)	Vehicles		Urbanized Area Population	Ridership (annual un-linked trips)
		Fixed	Demand Response		
MAT Fargo °	105,539	18	11	142,477	1,537,074
MAT Moorhead *	35,178	6	1 ②	142,447	398,095
CAT (Grand Forks)	56,573	8	10	56,573	333,334
Sioux Falls	124,269	30	21	124,269	1,054,357
Rapid City	66,780	7	12	66,780	302,980
Duluth	118,265	47	5	118,265	3,198,683
Rochester	91,271	27	4	91,271	1,624,370
St Cloud	91,305	27	17	91,305	2,381,444

Public Transit Agency/Provider	Funding				Revenue Miles		Hourly Cost per Revenue Mile	
	Federal	State	Local	Total	Fixed	Demand Response	Fixed	Demand Response
MAT Fargo	$1,975,824	$514,777	$610,452	$3,101,053	625,507	337,982	$76	$48
MAT Moorhead	$362,150	$973,809	$33,025	$1,368,984	283,388	29,439	$62	$72
CAT (Grand Forks)	$861,153	$200,851	$565,777	$1,627,781	381,873	260,233	$63	$13
Sioux Falls	$1,997,537	$75,529	$3,505,400	$5,578,466	719,108	604,836	$63	$60
Rapid City	$670,543	$28,425	$568,467	$1,267,435	240,400	233,319	$39	$36
Duluth	$1,489,465	$7,305,339	$1,239,245	$10,034,049	1,756,924	192,651	$82	$38
Rochester	$972,020	$2,318,440	$ -	$3,290,460	978,883	183,074	$73	$52
St Cloud	$1,967,074	$4,022,867	$1,025,376	$7,015,317	1,130,602	486,111	$72	$69

Source: 2000 Census, National Transit Database (NTD), Metro COG (2011), Ridership Data (2008), ° includes City of West Fargo population, * includes City of Dilworth population
② Note: City of Fargo NTD data from 2009 includes three (3) of Moorhead's demand response vehicles

9.0 Transit System Operations and Multi-Modal Relationships.

Overview. Public transit is a critical part of the Metropolitan Area transportation network and a variety of existing conditions and modal elements factor into the overall efficiency, effectiveness and functionality of the system. Described below is a summary of certain existing conditions and/or modal elements that specifically impact or disrupt transit operations and the delivery of reliable/effective service.

Railroad Crossings, Pre-Emption and Downtown Areas. Several railroad tracks bisect the Metropolitan Area; however, the most prominent and impactful activity occurs in the downtown areas of Fargo and Moorhead. Rail lines parallel Main Avenue, Center Avenue, 1st Avenue and SE Main Avenue in Moorhead and Main Avenue, NP Avenue and 6th Ave North in Fargo. Rail impacts on vehicular movements and transit are not as significant

in Fargo due to a number of grade separated crossings at 2nd Street, University Drive, 10th Street and 25th Street. In regards to Moorhead, the only grade separated crossing is located at 3rd Street and this roadway is not constructed or capable of handling significant traffic volumes or transit routes due to flooding and other issues. Three (3) sets of tracks parallel downtown Moorhead roadways and include the 'KO Line' (east/west between Center Avenue and Main Avenue), the 'Prosper Line' (east/west between Center Avenue and First Avenue) and the 'OTV Line' (north/south adjacent to 20th Street and another set adjacent to SE Main Avenue). Together, average train movements in Moorhead total 90-95 trains per day with forty-five (45) % of all train movements taking place between 10 p.m. and 7 a.m. The average time needed for a train to clear a crossing is approximately seven (7) minutes, according to BNSF (see Chapter 2, Pg. 61 for additional information on railroad crossing delay).

In 2007 the City of Moorhead, in conjunction with Mn/DOT and BNSF completed a 'quiet zone' project on both the mainline (KO) and the north line (Prosper). The quite zone on the KO stretches from 8th Street (Fargo) to 14th Street (Moorhead) and the quiet zone on the Prosper encompasses an area between 7th Street (Fargo) to 14th Street (Moorhead). To complete the project certain safety measures were required at crossing and intersections, including installation of railroad pre-emption equipment on traffic signals along each applicable corridor. The rail pre-emption is structured to temporarily suspend north/south traffic movements while providing certain movements with priority to ensure vehicles are not trapped on a crossing by a signal. The overarching intent of the system is to provide advanced warning and adequate clearance time to reduce/minimize collisions between vehicles and trains. It is also important to note that four (4) street closures were also necessary in order to accommodate the quite zone; three (3) in Moorhead and one (1) in Fargo.

The only significant improvement identified for any of these corridors within the adopted 2009 LRTP is a multi-phase project at the 20th/21st/SE Main Avenue intersection. As currently programmed, the project will include a grade separation between the SE Main Avenue and 20th/21st street and the OTV railroad tracks. In addition, the project will accommodate a wye ('Y') between BNSF mainline tracks and the BNSF Moorhead Subdivision tracks.

In January 2011 the City of Moorhead Council approved an Engineering Services Agreement with *Campbell Technology Corporation* to evaluate the downtown railroad crossings and determine if operational and/or infrastructure improvements can be made to improve the efficiency of the traffic signals while maintaining safety. As scoped, the study is intended to specifically analyze pre-emption timing, signal timing, turn lane modifications, median installation, access closures and one-way traffic concepts. This study and the eventual recommendations will be critical with respect to the development of the TDP and specifically the Operations Alternatives Development and Analysis (see Chapter 4).

Intelligent Transportation Systems (ITS). Metro COG maintains an Intelligent Transportation System (ITS) Plan for the Metropolitan Area and works in cooperation with the Advance Traffic Analysis Center (ATAC) on the maintenance of the Regional ITS Architecture (RA). The major recommendations of the ITS plan and Regional Architecture focus on interoperability and regionalization of existing/future ITS deployments while also placing a high priority on the centralization/integration of signal systems within the Metropolitan Area.

The Regional ITS Architecture provides guidance for developing /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) enhance tools for system monitoring and management;
(c) enhance traveler information/customer service;
(d) enhance transit operations, improve safety and increase transit demand; and
(e) coordinate emergency and security management.

With inputs from the Regional ITS Architecture the 2008 ITS Plan 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 and data collection.

Other than the typical traffic oriented ITS deployments (i.e. dynamic vehicle detectors, static camera, anti-ice systems, pan tilt zoom cameras, permanent dynamic message, etc.) the Metropolitan Area has limited ITS deployments specific to functionality of the mass transit system. Limited transit green light pre-emption is used for fixed route transit vehicles in Fargo. Opticom detectors are currently installed along most major streets; however, routes that travel on Broadway and University in North Fargo are the only fixed route alignments that utilize the limited green light priority. This project was completed in 2008 and has not been expanded to other fixed routes within the system network. Signal priority in the City of Moorhead is not currently an option due to the sound actuation required to operate the pre-emption.

Bridge Crossings. There are six (6) bridges that cross the Red River in the Metropolitan Area, as outlined below:

12th Avenue/15th Avenue North Toll Bridge. Although this bridge has been utilized in the past it currently does not accommodate any (fixed) route alignments. The bridge is a privately owned toll bridge that is often closed in the spring of each year due to high river levels. Pursuant to 2010 traffic count data this bridge currently handles an annual average daily traffic (AADT) volume of 1,165.

1st Avenue, NP/Center Avenue and Main Avenue Bridges. These bridges are located within the downtown core of Fargo and Moorhead and are approximately one (1) block apart (north to south). These bridges have all been used for transit routes; however, more recently the Center Avenue/NP Avenue and 1st Avenue bridges have become less desirable due to train delays and railroad pre-emption issues. The Main Avenue bridge is the preferred alignment for Moorhead fixed routes as it utilizes the 2nd Street underpass (Fargo) to avoid railroad crossings. Pursuant to 2010 traffic count data and Red River screen line analysis, these three (3) bridges accommodate 36% of all river crossings (1st Avenue (12,290 AADT), NP/Center Avenue (4,100 AADT) and Main Avenue (22,355 AADT). Together with the I-94 bridge (see below) these crossings accommodate 95% of all trips traversing the river.

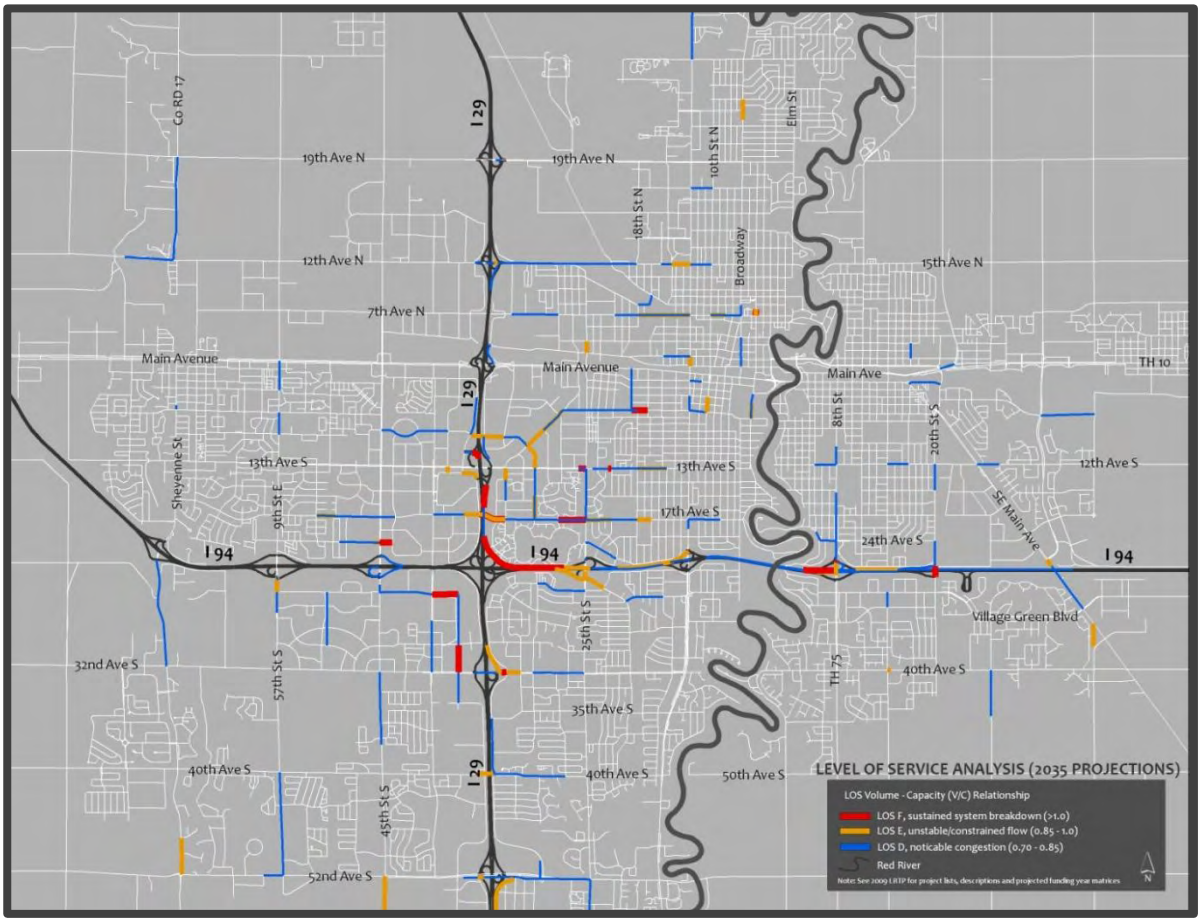
I-94 Bridge. The Red River Bridge on I-94 was previously used to transport riders between the Holiday Mall and West Acres Shopping Center. This route alignment was specifically designed to accommodate Moorhead College Students and was discontinued when the U-pass program was implemented. Pursuant to 2010 traffic count data this bridge currently handles an AADT volume of 64,000, which is representative of approximately 59% of all river crossings in the Metropolitan Area.

52nd Avenue South Bridge. This bridge has never accommodated a fixed route alignment and existing routes are a significant distance from this area (Moorhead Route 5 reaches 37th Avenue South and Fargo Route 25 reaches 32nd Avenue South). This is largely due to a pattern of very low density residential, commercial and industrial growth in these areas. Pursuant to 2010 traffic count data this bridge currently handles an AADT volume of 3,985.

Traffic Count Data (2010). In 2010 Metro COG worked closely with NDDOT, Mn/DOT, ATAC and SRF Consulting Group Inc. to collect average daily traffic (ADT) volumes throughout the Metropolitan Area. Traffic counts can be an important element of consideration during development of system concepts and route alignment alternatives; however, level of service (LOS) analysis is probably more beneficial in determining which corridors are more fluid from a mobility perspective (see below). These counts were adopted by Metro COG's Policy Board in February of 2011 and are available on Metro COG's website at www.fmmetrocog.org or by contacting Metro COG staff.

Level of Service (LOS) Analysis (2035 Projections). Map 12 identifies functionally classified corridors (collector, minor arterial and principal arterial) and projected 2035 level of service based on a volume to capacity formula. These projections are based on Metro COG's 2005 base year travel demand model as adopted within the 2009 LRTP.

MAP 12 – Level of Service (LOS) Analysis (2035 Projections)



Source: Metro COG (2011)

Issue Identification and Needs Assessment

1.0 ECR Overview and Previous Reports.

Existing Conditions Report. As Chapter 1 of the TDP, Metro COG has developed an Existing Conditions Report (ECR) that summarizes key financial, performance and organizational elements of transit services in the Fargo-Moorhead area. While much of this information stands on its own as important background information, several pieces are worth reiterating in this needs assessment:

Expected Demographic Changes.

(a) The Fargo/Moorhead area is home to a significant number of baby boomers (expected to retire in coming years) and college students;

(b) Population is expected to continue to grow by about 40,000 residents by 2020 – much of which is expected in the City of Fargo;

(c) Employment is expected to increase by 28 percent between 2010 and 2035 in the Metro area (34,000 additional jobs). Much of this growth (about 80 percent) is expected in Fargo. Large employers and clusters of employment are largely concentrated in downtown Fargo, around West Acres and at the four universities. Some large employers are also located in Southwest Fargo and within the Industrial Park.

Significant Ridership Increases.

(a) Total transit ridership was relatively stable between the early 1980's and 2004. Since that time, ridership has nearly tripled. Much of this ridership increase is attributed to improvements in fixed route service in Fargo and serving the NDSU campus;

(b) Most of the ridership gains in the system can be attributed to the routes that serve the NDSU campus (13A/B, 31, 32, 33, 34 and 35), and 57 percent of ridership on the fixed route system are identified as college students. Additional increases in ridership also came from increased Moorhead college/university ridership. Frequency and route improvements on Routes 11, 13, 14, 15, 17 and 22 have also resulted in significant ridership increases on these routes.

Railroad Delay.

(a) Delay resulting from railroad traffic is especially having an impact on service reliability in Moorhead. It was noted that a new 20th/21st/SE Main Avenue grade separation was included in the adopted 2009 Long Range Transportation Plan;

(b) The City of Moorhead is currently conducting a study of downtown rail crossings to determine if operational and/or infrastructure improvements can be made while also improving safety.

Several other previously developed reports have also been reviewed as part of the TDP, including the MAT Paratransit Options Analysis (July 2007), North Dakota State University Campus Access Study (July 2007), Southwest Metro Transit Study (October 2008), North Fargo Transit Analysis (May 2009), Moorhead Expansion and Alignment Study (2007), Moorhead Transit Operations Analysis (April 2010) and the 2007-2011 Transit

Development Plan Consistency Review (November 2010). While key findings are summarized below, each of these studies will be extensively referenced in making recommendations for this TDP.

Southwest Metro Transit Study. This study evaluated the various transit needs and issues for the rapidly growing part of Southwest Fargo and West Fargo. The study includes significant analysis and detail, but the primary outcome was a tiered set of improvements for this area starting in 2009/2010 through 2016 and beyond. About 40 percent of the improvements are related to expansion of existing services, while 60 percent were related to new services. Highlights of the recommendations are as follows:

- Interline Routes 14 and 25 (2009/2010)
- Extend evening hours on Routes 21/22 (2009/2010)
- New Osgood/Microsoft route (2009/2010), which is now Route 23
- New 25th Street cross-town route (2011/2012)
- New Kmart/Bennet/52nd Avenue route (2011/2012)
- Improved headways on Route 16 and extend to Wal-Mart (before 2016)
- 30 minute headways on Route 25 (before 2016)

North Fargo Transit Analysis. This study evaluated transit services in north Fargo, specifically Routes 11 and 12. As with the findings discussed below, this study identified on-time performance issues on Route 11 and low ridership issues on Route 12. Recommendations from this study include:

- Change the northern alignment of Route 11 and implement full Transit Signal Priority (TSP) to improve on-time performance.
- Change the alignment of Route 12 by shortening to just serve the VA

MAT Paratransit Options Analysis (2007). This study evaluated the MAT Paratransit service to identify ways to curb unsustainable increases in service demand and operating costs. The primary concern is the changing geographic disbursement of paratransit users. Primary recommendations included the addition of a mobility management position (which has since been implemented), negotiation of rates for medical and non-emergency medical trips, initiation of a new voucher program, an alternate Sunday service provider, fixed route pass incentive program and feeder service to fixed route service.

2007-2011 Transit Development Plan Consistency Review (2010). This brief review found that about 80 percent of the Metro Transit Plan had been completed over the past four years. About 85 percent of the high priority route recommendations has also been implemented, and facility improvements have been continuous throughout the life of the plan. The review then recommended the update of the TDP in 2011.

NDSU Campus Access Study (2007). This study developed several recommendations for improved accessibility in advance of opening the College of Business (which has since opened). Transit recommendations were to meet capacity needs by operating 15-30 minute service.

Moorhead Expansion and Alignment Study (2007). This study examined how to provide service to growing areas in Moorhead, including a proposed new library, Horizon Shores, and Dilworth. Scheduling changes to maintain on-time performance were also outlined.

Moorhead Transit Operations Analysis (April 2010). This analysis was conducted to address on-time performance issues on Routes 1 and 2, as well as examine potential new alignments for North Moorhead and a College Circulator. The existing Route 4 – which combined two former routes – was developed as a result of this study.

2.0 On-Time Performance.

Overview. Because MATBUS largely operates as a hub and spoke system that relies on timed transfers, maintaining good on-time performance is critical to the success of the system. Even one route that is having trouble staying on schedule can have serious repercussions throughout the system.

This section evaluates one full week of data (Monday through Friday) in March 2011 for all MATBUS routes (except Routes 31, 32, 33 and 34). Figure 45 (below) presents the percent of arrivals, by route, that are five (5) or more minutes past their scheduled arrival time. The arrival times are recorded largely at the GTC with the exception of Routes 3, 5, 21, 22 and 25 that are recorded at other transfer locations. Figure 46 presents arrivals by route that are more than one minute early. Finally, Figure 47 shows, by route, the percent of trips either early (more than 1 minute), on-time (0-4 minutes of scheduled arrival time) or late (5 or more minutes late). It is clear from this data that on-time performance is a significant issue on MATBUS. While many routes are running behind schedule, which breaks down the timed transfer system, many of the routes that are not running late are consistently running early. In both cases, these issues point to a need to evaluate scheduled running times and/or identify ways to make trips operate more reliably. Some of the routes with most severe on-time performance issues include:

Routes 1 and 2. These routes are both having regular problems staying on time, especially in the PM peak and Evening periods. In the PM peak period, Route 2 was late over half of the time. Both routes are exposed to railroad delay in Moorhead, and both have instituted signed bus stops to improve speed and reliability.

Route 4. This route serves north Moorhead and Dilworth and is running early on nearly all runs – indicating that the current running time is more than adequate. Route 2 is interlined with Route 4 so that operators can have a chance to catch back up on schedule if they run late on Route 2.

Route 13A. This route which connects the GTC to the NDSU campus (serving downtown campus buildings along the way) is late at least 20 percent of the time throughout the day, and as much as 45 percent of the time in the AM and midday periods. On-time performance issues on this route are related to the number of boardings, as well as the length of the route. Additional service is provided in this corridor to help alleviate some of these issues (Routes 13B, 13X and 33X).

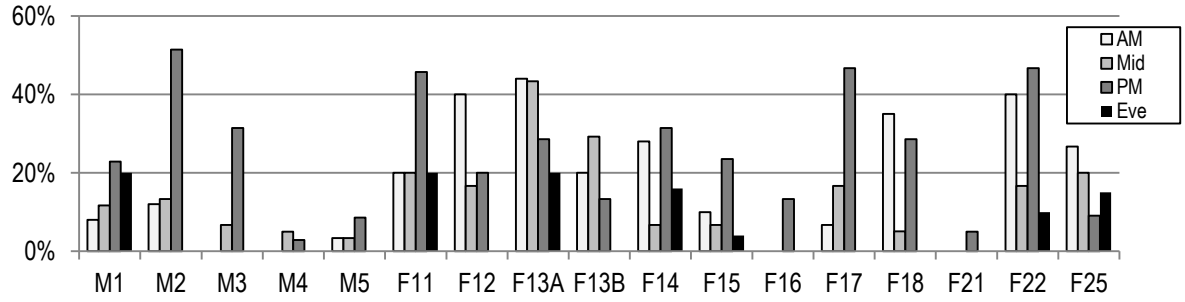
Route 13B. This route is shorter than Route 13A but has the same round trip running time. While a significant number of trips are running late in the AM peak and midday periods presumably when students are traveling to class), many trips are early in the PM peak and evening periods.

Routes 11 and 12. Similar to Route 13A, Routes 11 and 12 are regularly late (around 20 percent of the time for much of the day and 40 percent or more at some times of the day. While boardings on route 11 are likely contributing to the on-time performance issues, the length of route 12 is likely the primary contributor of its on-time performance issues.

Route 17 and 18. These routes both have the same scheduled cycle time, and both experience delays in the PM peak period between 30-50 percent of the time). Route 18 is also having trouble staying on schedule in the AM peak period.

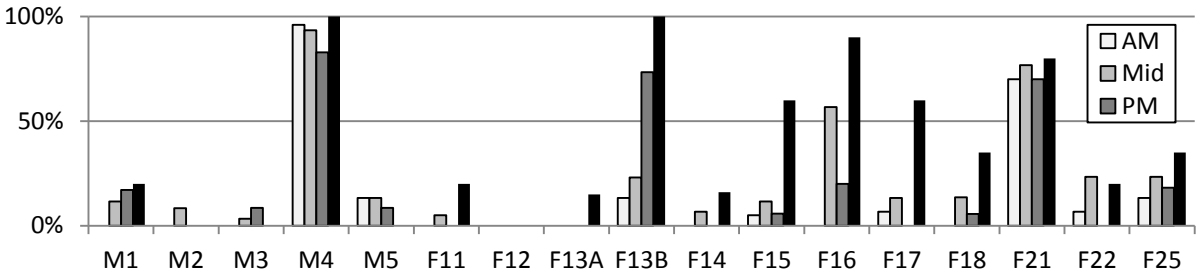
Route 22. This route is experiencing delays in the AM and PM peak periods at least 40 percent of the time. While ridership has improved on this route, boardings are relatively light on this route, these delays are likely due to the length of the route and/or traffic congestion in the West Acres area.

FIGURE 45 – Late Arrivals by Route



AM= 6:00-9:00 AM, Midday=9:00 AM-3:00 PM, PM=3:00 PM-6:30 PM, Eve=6:00 PM and later
Source: Data from one full week (Monday through Friday) in March 2011. Dates were 3/25, 3/28, 3/29, 3/30 and 3/31.

FIGURE 46 – Early Arrivals by Route



AM= 6:00-9:00 AM, Midday=9:00 AM-3:00 PM, PM=3:00 PM-6:30 PM, Eve=6:00 PM and later
Source: Data from one full week (Monday through Friday) in March 2011. Dates were 3/25, 3/28, 3/29, 3/30 and 3/31.

FIGURE 47 – Summary of On-Time Performance (Weekdays, March 2011)

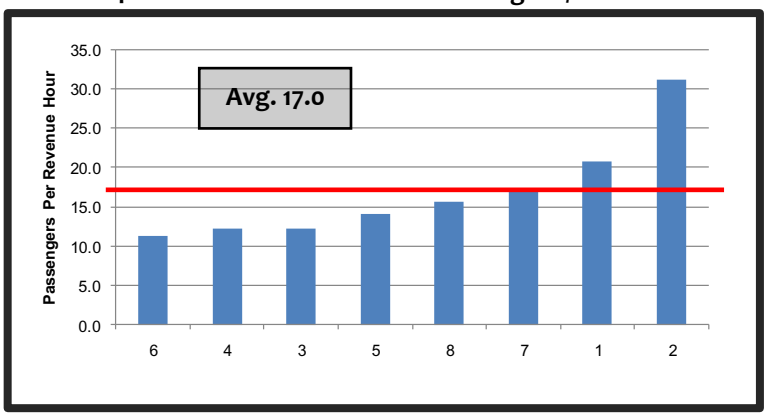
Rt	Early				On Time				Late				Total Weekly
Rt	AM	Mid	PM	Eve	AM	Mid	PM	Eve	AM	Mid	PM	Eve	Trips
M1	0%	12%	17%	20%	92%	77%	60%	60%	8%	12%	23%	20%	125
M2	0%	8%	0%	0%	88%	78%	49%	100%	12%	13%	51%	0%	125
M3	0%	3%	9%	-	100%	90%	60%	-	0%	7%	31%	-	125
M4	96%	93%	83%	100%	4%	2%	14%	0%	0%	5%	3%	0%	125
M5	13%	13%	9%	-	83%	83%	83%	-	3%	3%	9%	-	95
F11	0%	5%	0%	20%	80%	75%	54%	60%	20%	20%	46%	20%	140
F12	0%	0%	0%	-	60%	83%	80%	-	40%	17%	20%	-	60
F13A	0%	0%	0%	15%	56%	57%	71%	65%	44%	43%	29%	20%	140
F13B	13%	23%	73%	100%	67%	48%	13%	0%	20%	29%	13%	0%	115
F14	0%	7%	0%	16%	72%	87%	69%	68%	28%	7%	31%	16%	145
F15	5%	12%	6%	60%	85%	82%	71%	36%	10%	7%	24%	4%	139
F16	0%	57%	20%	90%	100%	43%	67%	10%	0%	0%	13%	0%	75
F17	7%	13%	0%	60%	87%	70%	53%	40%	7%	17%	47%	0%	65
F18	0%	14%	6%	35%	65%	81%	66%	65%	35%	5%	29%	0%	134
F21	70%	77%	70%	80%	30%	23%	25%	20%	0%	0%	5%	0%	65
F22	7%	23%	0%	20%	53%	60%	53%	70%	40%	17%	47%	10%	70
F25	13%	23%	18%	35%	60%	57%	73%	50%	27%	20%	9%	15%	120

3.0 Productivity Assessment.

The Existing Conditions Report included ridership trends for all routes (see Pg. 35 & Pg. 36). One of the elements that was not examined was the productivity of existing service, which is an excellent indicator of how routes perform relative to each other. Moorhead and Fargo service are summarized separately.

Moorhead Route Productivity. In 2010, Moorhead routes averaged 17.0 passengers per revenue hour. As shown in Figure 48, Route 2 is unequivocally the highest performing route, with close to double the average productivity. Routes 4 and 6 are two of the lower performing routes. Both these routes were merged into one route in 2010. Routes 3 and 5 also show lower than average productivity – and this is likely due to the need to transfer to/from another route for virtually all trip needs.

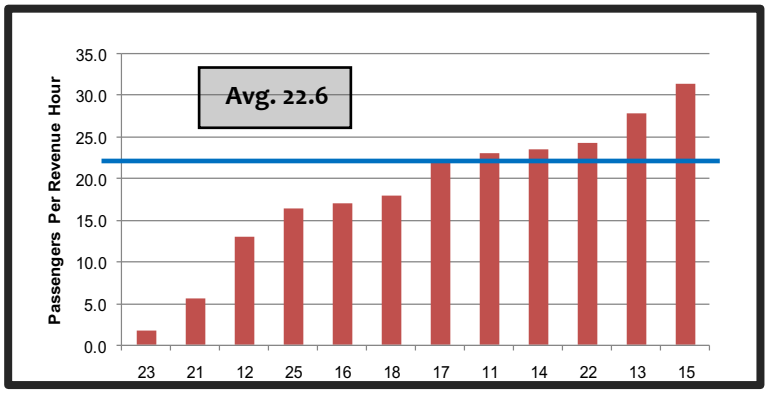
FIGURE 48 – Moorhead Routes 2010 Passengers / Revenue Hr



Source: Metro Area Transit, Nelson/Nygaard (2011)

Fargo Route Productivity. In 2010, Fargo routes averaged 22.6 passengers per revenue hour (Figure 5). Route 15 is the highest performing route, with over 30 passengers per hour. Route 23 is the lowest performing route, carrying less than 2 passengers per hour. It should be noted that Route 23 is a new route, so its performance is still preliminary. Route 21's productivity was also less than 6 passengers per hour, which is on the very low end of needing fixed-route service. In addition, Route 22 showed excellent productivity considering it is hourly service.

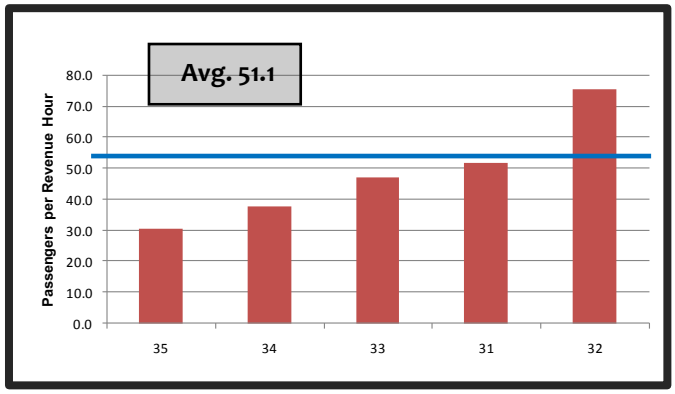
FIGURE 49 – Fargo Routes 2010 Passengers / Revenue Hr



Source: Metro Area Transit, Nelson/Nygaard (2011)

NDSU Route Productivity. Routes 31-35 are funded by NDSU and serve the University market. Due to their unique operating environment, they are analyzed separately from the Fargo routes. The average productivity for NDSU routes is 51.1 passengers per hour. Route 32 has the highest productivity, carrying more than 70 passengers per hour. Route 35, which is an evening route, has the lowest productivity, at just over 30 passengers per hour.

FIGURE 50 – NDSU Routes 2010 Passengers / Revenue Hr



Source: Metro Area Transit, Nelson/Nygaard (2011)

4.0 Capacity Assessment.

Capacity issues (passengers left behind) were evaluated over a three month period on all MATBUS routes

(including Routes 31, 32, 33 and 34). Regular capacity issues indicate where service levels are not matching demand and where additional frequency, improved on-time performance and/or larger vehicles may be justified.

The large majority of capacity issues are occurring on the routes that serve the NDSU campus: Routes 13A/B, 32, 33 and 34. Of these, most passengers are being left behind at Richard H. Barry Hall, the Bison Sports Arena (BSA), 14th& Albrecht or Albrecht & Centennial (all major stop locations along these routes). While some of these trips only left behind one or two passengers, the average number of passengers left behind is between 10 and 15 and there are incidences where significantly more passengers are left behind.

The other routes that experience capacity issues include Routes 15 and 17, though these issues are far less severe and occur less regularly as the routes that serve NDSU. Figure 51 (below) provides a summary of capacity incidents from January 2010 through March 2011.

FIGURE 51 – Summary of Capacity Incidents (January 2010 through March 2011)

Route	Capacity Incidents (Jan 2010 - Mar 2011)	Total Passengers Left Behind	Passengers Left Behind per Trip	Primary Leave Behind Locations (1)
3	1	1	1	
13A	13	141	11	Richard H. Barry Hall, 14th & 7th
13B	9	81	9	BSA
13N	1	0	0	
15	5	8	2	
15A	4	8	2	
15B	2	2	1	
15N	1	0	0	
17	8	27	3	GTC
18	1	0	0	
31	4	18	5	Fargodome
32	12	74	6	14th & Albrecht, University Village
32A	72	747	10	14th & Albrecht, Albrecht & Centennial
32B	1	6	6	
33	1	3	3	
33A	42	407	10	BSA, Richard H. Barry Hall
33B	45	531	12	Richard H. Barry Hall
33X	32	481	15	Richard H. Barry Hall
34	14	78	6	Niskanen Hall, BSA, 14th & Albrecht
Total	**268**	**2,613**	**10**	

1) Only for routes that had more than 25 passengers left behind
Source: Metro Area Transit (MATBUS), Nelson/Nygaard

5.0 Transfer Rates.

Figure 52 presents average daily transfers between routes (excluding the NDSU shuttle routes). This data is based on an entire month worth of data from February 2011. The top 20 transfer pairs are highlighted in the table. Understanding transfer patterns is critical from a service evaluation standpoint, especially where those transfer patterns may warrant new or modified service.

Key findings from this analysis are:

(a) **Route 15** by far has the greatest amount of transfer activity, accounting for twenty (20) percent of all transfers to a route and seventeen (17) percent of all transfers from a route. Many routes are transferring to and from Route 15 at both the GTC and at West Acres.

(b) **Route 5** has a significant number of transfers to **Routes 1 and 2** at the Marriott transfer point.

(c) **Route 14** has a significant number of transfers to **Route 25** at the Kmart transfer point.

FIGURE 52 – Average Daily Transfers between Routes (February 2011)

To → From↓	1	2	3	4	5	7	8	11	12	13	14	15	16	17	18	21	22	23	25	Total
1	-	2	3	5	7	-	-	2	1	3	3	10	2	1	2	-	-	-	-	**42**
2	1	1	7	3	9	-	-	2	1	2	3	8	1	1	3	-	-	-	-	**40**
3	8	4	-	4	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**22**
4	3	2	4	5	1	-	-	4	1	3	5	8	3	1	1	-	-	-	-	**41**
5	12	9	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**25**
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0**
8	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	**1**
11	2	3	-	4	-	-	-	-	-	1	5	12	3	1	4	-	-	-	-	**33**
12	1	1	-	1	-	-	-	-	-	-	1	3	1	1	1	-	-	-	-	**8**
13	1	1	-	2	-	-	-	1	-	-	5	10	1	1	3	-	-	-	-	**25**
14	2	3	-	4	-	-	-	4	1	5	2	9	3	1	1	-	-	-	14	**48**
15	4	9	-	7	-	1	1	8	1	9	5	2	4	9	5	3	11	7	5	**90**
16	3	3	-	3	-	-	1	5	1	4	3	5	-	1	4	-	6	2	-	**42**
17	1	2	-	2	-	-	-	-	1	1	2	8	1	-	1	-	-	-	-	**18**
18	1	3	-	2	-	-	-	4	-	3	1	5	1	3	1	-	-	-	1	**26**
21	-	-	-	-	-	-	-	-	-	-	-	6	1	-	-	-	-	-	-	**7**
22	-	-	-	-	-	-	-	-	-	-	-	17	2	-	-	-	-	-	2	**21**
23	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	1	**5**
25	-	-	-	-	-	-	-	-	-	-	13	6	2	-	-	-	3	1	-	**24**
Total	**38**	**44**	**18**	**41**	**22**	**1**	**2**	**30**	**7**	**30**	**47**	**111**	**25**	**20**	**26**	**3**	**19**	**10**	**22**	**517**

Source: Metro Area Transit (MATBUS) & Nelson/Nygaard

6.0 Existing Ridership Patterns.

Figure 53 below presents annual ridership by route between 2007 and 2010, as well as how each route ranks in terms of 2010 ridership. Route 15 has the highest ridership of any single route, followed by the routes that connect downtown Fargo with NDSU: 33, 13 and 32. Route 2 in Moorhead is the route with the 5th highest ridership in the system, followed closely by

FIGURE 53 – Annual Ridership by Route

Route	2007	2008	2009	2010	2010 Rank
1	56,444	76,790	80,418	72,380	11
2	101,204	112,202	108,913	109,755	5
3	34,041	42,893	45,374	43,000	18
4	65,508	57,420	51,263	68,214	12
5	39,531	47,814	51,790	49,532	16
6	43,827	40,848	38,843	16,191	20

Routes 31 and 14.

Ridership data at the stop level was also summarized by route and is included in the Appendix (composite weekday service from Jan 1 to Feb 28, 2011). While these maps largely speak for themselves, key destinations by route are identified below:

Route	2007	2008	2009	2010	2010 Rank
7	6,997	9,492	7,466	8,012	24
8	9,054	10,986	8,917	9,613	23
11	78,008	98,509	101,091	97,248	8
12	15,796	19,573	16,620	19,978	19
13	161,818	197,391	209,333	213,353	3
14	87,668	108,282	110,302	102,712	7
15	132,285	222,433	255,590	266,332	1
16	92,523	81,084	80,141	77,192	10
17	36,556	41,410	38,962	43,223	17
18	66,331	71,545	67,947	68,098	13
21	3,369	11,117	10,564	10,913	22
22	28,656	44,303	49,807	51,184	15
23	n/a	n/a	n/a	801	25
25	42,249	52,359	56,817	59,776	14
31	47,846	71,199	98,876	105,241	6
32	156,456	198,655	208,823	171,694	4
33	n/a	n/a	122,478	235,802	2
34	n/a	n/a	39,940	88,657	9
35	n/a	10,604	12,355	12,433	21
Total	**1,306,167**	**1,626,909**	**1,872,630**	**2,001,334**	

Source: Metro Area Transit (MATBUS) & Nelson/Nygaard

Route 1. Major boarding locations besides the two transfer locations (GTC and Marriott) include 8th Street S/24th Avenue S (due to the apartments nearby), the Moorhead Center Mall and the Moorhead Public Library. A significant number of transfers are occurring between Route 5 and this route.

Route 2. Boardings are strong on this route, especially at the two transfer locations as well as the MSUM stops on both 11th Street N and 14th Street S. The other major stops include 11th Street S/24th Avenue S (near the large apartment complex west (between 8th and 10th Street S) and 2nd Avenue S/11th Street S.

Route 3. Boardings are relatively light on this route, with the two major stops at the Marriott transfer point and at Cash Wise Foods (34th Street N/Center Avenue).

Route 4. Boardings on this route are relatively light with the exception of the Wal-Mart, Cash Wise Foods, the Clay County Court House(on 11th Street N), and at 1st Avenue N/21st Street N. Despite moderate annual boardings, there were a significant number of transfers between this route to other routes in both Moorhead and Fargo.

Route 5. Boardings on this route are relatively light with the exception of M-State and the along 32nd Avenue S (apartments). The on-request service via Village Green and 33rd Avenue S is the weakest segment of the route. Transfers to Routes 1 and 2 at the Marriott transfer point are very prevalent among riders on this route.

Routes 7 and 8. These evening routes operate hourly until about 10:00 pm but attract very little ridership. Primary boarding locations are the same as those discussed on routes 2 and 4 above.

Route 11. As the eighth highest ridership route in the system, this route serves north Fargo largely via Broadway. Major stops along the route include the Sanford, New Horizons/North Port shopping center (at 25th Avenue N/Broadway), the apartments at 29th/Broadway and Trollwood Village. The greatest number of transfers to or from this route is with Route 15.

Route 12. Ridership on this route is very low overall, with the only significant boarding location at Elm Street and 19th Avenue N (the VA hospital).

Route 13. This is one of the highest ridership routes in the system, with heavy boardings at the GTC, the NDSU buildings in downtown, as well as at the Memorial Union and Fargodome/University Village. Boardings are also relatively strong on University and 10th Street N south of 12th Avenue N. The only weak segment of the route is on Route 13A north of 19th Avenue N.

Route 14. This route has the seventh highest ridership in the system and serves the University Drive retail cluster south of I-94. Primary stops on this route include the K-Mart, as well as the apartments near 15th Street S and 27th Avenue S. The segment between the GTC and 7th Avenue S is relatively weak with no stop generating more than 10 boardings per day on average. The major transfer to or from this route is with Route 25. While many transfers occur to other Fargo and Moorhead routes, no strong pattern is evident.

Route 15. This is the highest ridership route in the system with the highest number of boardings at the GTC (largely due to transfers) and West Acres Mall. Other major boarding locations include several other stops in the downtown core, along 13th Avenue S (between I-29 and 21st Street S), and in the 13th Avenue commercial area (especially the Wal-Mart). The weakest segments of this route include the more established neighborhoods in central Fargo, as well as 13th Avenue S between the West Acres Mall and Wal-Mart. The lack of boarding directly on 13th Avenue S is a good indicator of the poor pedestrian conditions along this stretch of the route. As noted earlier, this route attracts the greatest number of transfers of any route in the system and is important to nearly all routes that connect to it.

Route 16. This route has the 10th highest ridership in the system and connects the GTC to West Acres via 4th Street S and 17th Avenue S. Primary boarding locations along the route include the Fargo Senior High Rise, the Evaluation and Training Center (ETC) at 4th Street S/9th Ave S, Sanford Hospital at University, the Cash Wise near 34th Street S and West Acres. There are a significant number of transfers to and from this route, but no strong transfer patterns to/from a particular route or routes.

Route 17. This route serves the neighborhoods directly west of downtown Fargo between the rail lines and total annual ridership is in the middle tier of routes. Outside of the downtown area (east of University), the major boarding locations include 3rd Avenue N/15th Street N, the New Life Center (3rd Avenue S/20th Street N) and at Madison Avenue N/32nd Street N. The majority of transfers to or from this route occur with Route 15.

Route 18. This route connects the GTC to west central Fargo via 5th Avenue S and 9th Avenue S. Major boarding locations along the route include the Developmental Work Activity (28th Street S/9th Avenue S), the mobile homes/apartments at 7th Avenue S/23rd Street S) and 10th Street S/4th Avenue S. The segments along 5th Avenue S and 9th Avenue S (between University and 21st Street S) is relatively weak. Transfers are moderately important to this route, but no strong transfer pairs are evident.

Route 21. This is one of the lower ridership routes that connects West Acres to Cetero Research on Amber Valley Parkway. The two terminal locations are the only major boarding locations along the route. Route 15 is the only major transfer pair with this route.

Route 22. This route connects West Fargo with the West Acres Mall and 13th Avenue commercial area. Boarding activity is fairly well distributed along the route, especially in the older neighborhoods of West Fargo and through the commercial areas surrounding West Acres. The weakest segment on this route is 13th Avenue between 48th Street S and 8th Street W (in West Fargo), with the exception of activity at 13th Avenue S/2nd Street

E where there are several large apartment complexes. The primary transfer pair with this route is Route 15, and to a lesser degree Route 16.

Route 23. This new route connects West Acres to southwest Fargo via 42nd Street S, also serving several large employment destinations and activity centers such as Microsoft and Wal-Mart. These destinations are by far the largest generators of ridership on the route, with the exception of the Hornbacher's on 40th Avenue S and at the apartments on 42nd Street S near 35th Avenue S. The major transfer pattern to/from this route is with Route 15.

Route 25. This is MATBUS' only cross-town route that connects the K-Mart on University Drive S with West Acres via 32nd Avenue S and 42nd Street S. While annual ridership is in the middle tier of routes, ridership is relatively high given the hourly headways. While the section of 32nd Avenue S is consistently strong between University and 33rd Street S, the segment between this point and West Acres (via 42nd Street S) is comparatively very weak. The primary transfer pair with this route is to Route 14 (at K-Mart).

Route 31. This is a one of several NDSU on-campus circulator routes and is one of the highest ridership routes in the system. Boardings are fairly strong along the entire route, with the exception of the 18th Street N section. The highest boarding location by far is at the Fargodome at 17th Avenue N/Albrecht. No transfer activity was available for this route.

Route 32. This is also a NDSU circulator route that connects University Village with the main core of the campus (via Albrecht) as well as the student neighborhoods southwest of the campus.

Route 33. This is another NDSU circulator route that connects the main campus to Richard H. Barry Hall in downtown Fargo. The primary boarding locations are Richard H. Barry Hall, the Memorial Union and University Village (on 17th Avenue N).

Route 34. This is another NDSU on-campus circulator route connecting the Fargodome with the main part of campus. This route operates year round, whereas Route 31 only operates when NDSU is in session. Major boarding locations are the Memorial Union, Centennial/Albrecht and the Fargodome/University Village.

Route 35. This relatively low-ridership route provides on-campus circulation during evenings only. Boarding patterns are similar to the other on-campus circulators, but much lower volumes.

7.0 North Dakota State University Survey.

Overview. In May 2011, the Small Urban & Rural Transit Center at NDSU conducted a survey of students focused on transit and transportation issues. While the survey will be fully summarized and analyzed by NDSU, a high level assessment of transit needs from the survey are as follows:

(a) NDSU students are satisfied overall with MATBUS service, with over 80 percent saying the quality of the service is "good" or "very good." About 86 percent of students also believe that MATBUS marketing materials are easily available, although 88 percent said that a website with real-time location of buses would be helpful. And, just over half (53 percent) of students also said that bus arrival times texted to their mobile device would be useful.

(b) For a large university, there is a relatively low transit mode share to the campus (13.4 percent) and a high automobile mode share (56.6 percent). This can partially be attributed to the fact that 86 percent of students said they had regular access to a motor vehicle (which increases the further away students live from campus), and 52 percent have a NDSU parking permit (though this is lower

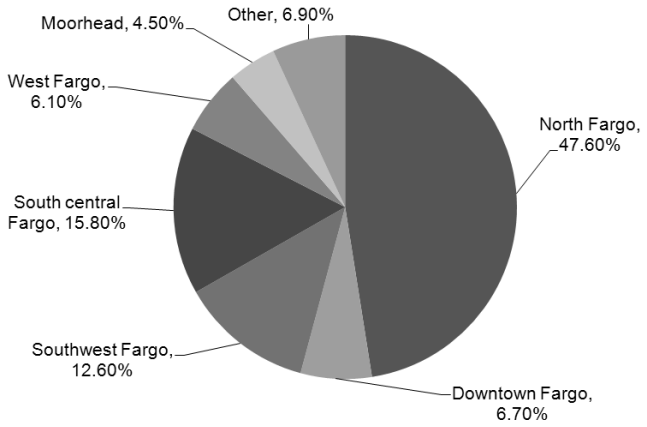
among students living in north Fargo). Only about ¼ of students said that parking was inconvenient or very inconvenient, and similarly, the cost of parking is considered unaffordable or very unaffordable by less than ¼ of students.

(c) Significant number of students live off campus (60 percent), and 57 percent of these students live further than a mile from campus. About 30 percent of off-campus students live more than 5 miles from campus. Map 16 below shows where off-campus students live.

(d) Geographically, about half of off-campus students live in north Fargo, with just under 1/3 living in southwest or south central Fargo. Only about 25 percent of students living in southwest Fargo have used MATBUS, while 50 percent or more of students living in other areas in the region have used MATBUS. Students who live in downtown Fargo or north Fargo were far more likely to consider transportation as a factor when deciding where to live.

(e) In terms of on-time performance, about 62 percent of students said that buses were occasionally more than 5 minutes late, while 25 percent said buses were never late. On the other hand, about 46 percent of students said they were unable to board a bus because it was full, further reinforcing the capacity issues noted earlier.

Figure 54 – Residence Location of NDSU Student Survey Respondents



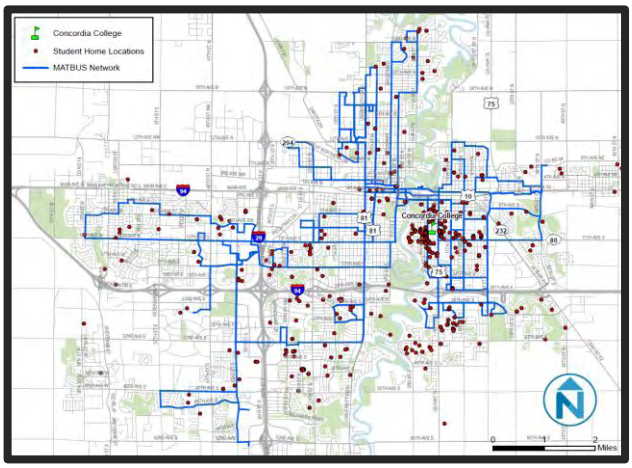
Source: SURTC, Nelson/Nygaard (2011)

(f) About 85 percent of students that have a need to travel to the downtown campus use MATBUS, while only 15 percent do not use MATBUS.

(g) The further away students live, the less likely they are to use MATBUS, while students living even less than ½ mile use MATBUS more regularly. Students living over 1 mile from campus are far less likely to consider transit and are more likely to consider driving.

(h) Because of relatively short travel times between destinations (on average 12-13 minutes), the large majority of riders (88.4 percent) are not willing to wait more than about 10 minutes for bus service.

Map 13 – Concordia Student Housing Locations



(i) About ¼ of students (24.8 percent) said that hours of service on MATBUS are not adequate.

8.0 Unmet Demand for Transportation to Colleges.

Overview. The Fargo-Moorhead area has four large higher-education institutions, including Concordia College,

Minnesota State Community and Technical College (M-State), Minnesota State University Moorhead (MSUM), and North Dakota State University (NDSU). Each of these locations has a pass agreement with MATBUS, and students represent more than fifty (50) percent of MATBUS' overall ridership.

Map 13-16 show the location of student addresses from each of these institutions. It should be noted that not all addresses could be geocoded (approximately 80% of off-campus housing addresses were geocoded), but these scattergrams provide a good representation of the potential locations from where students desire transportation.

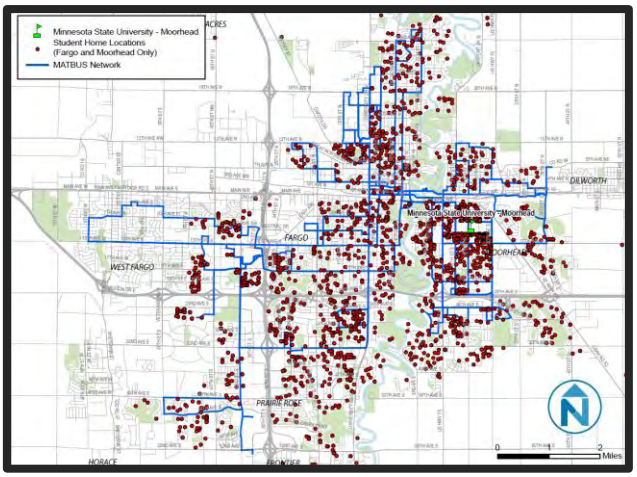
Concordia College. Concordia College is located in Moorhead, and has an enrollment of over 2,800 students. The scattergram (Map 13) shows that most students live clustered around the College. There are no readily identifiable concentrations of students anywhere else in the study area. Route 1 serves Concordia College.

MSUM. MSUM is located in Moorhead, and has an enrollment of nearly 7,500 students. The scattergram (Map 14) shows that large numbers of students live clustered around MSUM in South Moorhead. There are several areas in Fargo that have concentrations of MSUM students, including in North Fargo by NDSU, and apartment complexes in South and West Fargo. Route 2 serves MSUM.

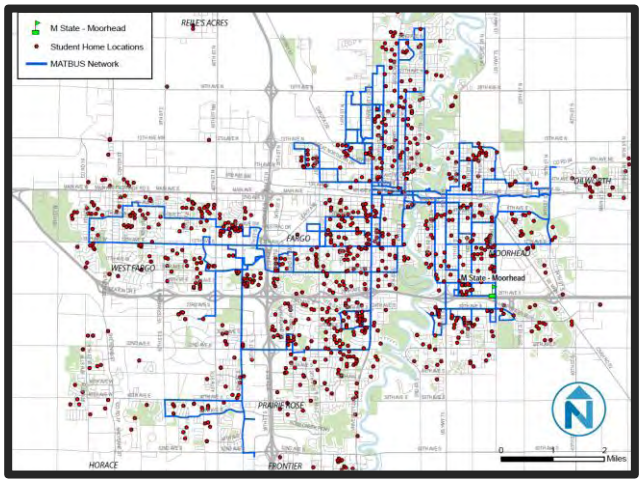
M-State. M-State is located in South Moorhead and has an enrollment of more than 2,500 students. The scattergram (Map 15) of student addresses shows very little clustering of students, but instead shows a widely distributed student base. This is typical of community colleges nationwide, as the institution caters to a wider and older student body. Routes 3 and 5 serve M-State's main campus.

North Dakota State University. NDSU has over 14,000 students enrolled. The campus is located in North Fargo. The scattergram (Map 16) confirms some of the findings of the NDSU survey, which reported that large numbers of students lived clustered in the vicinity of the campus. While there are student locations distributed throughout Fargo and Moorhead, distinct clusters of student residences can be made out at large apartment complexes in West Fargo

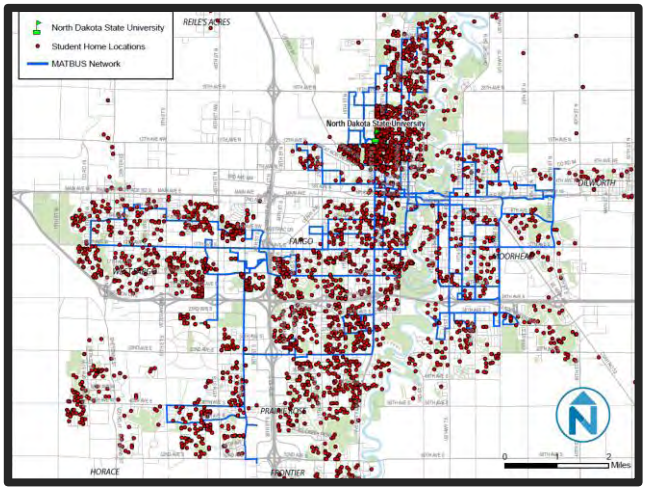
Map 14 – MSUM Student Housing Locations



Map 15 – M-State Student Housing Locations



Map 16 – NDSU Student Housing Locations



Source: Concordia (2008), MSUM, M-State & NDSU (Spring 2011); Metro COG & Nelson/Nygaard (2011)

and in south Fargo.

9.0 Travel Demand Model Data.

Travel demand model data was evaluated between zones throughout the Fargo-Moorhead Metro Area, as shown in Map 17. This information is valuable in that it identifies where people are traveling for certain trip purposes and modes (Metro COG model does not include a mode split). It should be noted that only major pairs are identified on the map (over 4,000 daily trips) and the map does not indicate the number of trips within zones. It is also important to note that the lines on the map connect the centroid of each zone, which may not necessarily be an indicator of where the demand is specifically located. Key travel demand pairs from this analysis are as follows:

(a) **West Acres/Westgate.** Travel demand between this zone and nearly all zones in the region is very high. The trip data suggests that the West Acres area is one of the biggest daily trip generators in the study area.

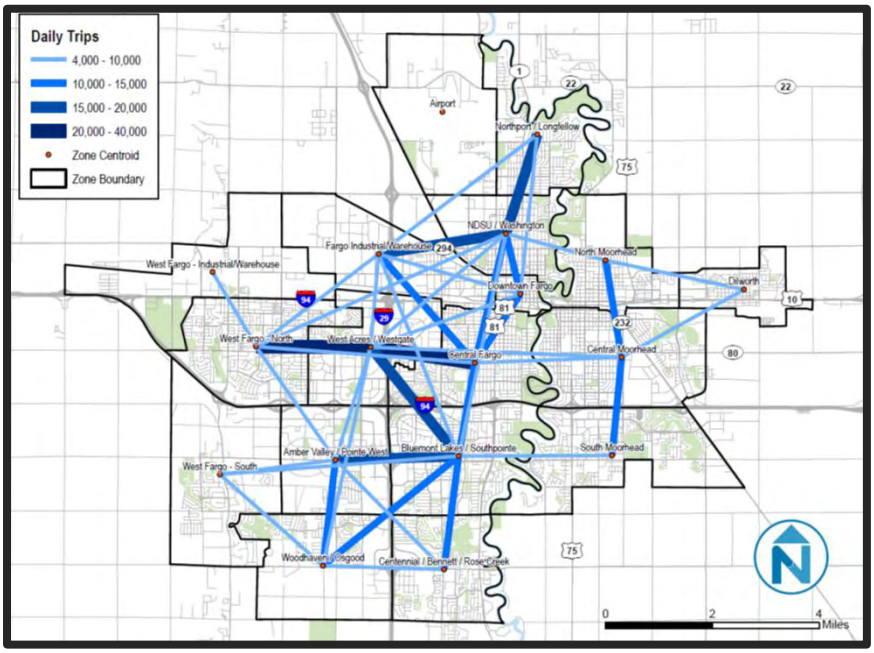
(b) **I-94 Corridor.** Related to the demand at West Acres and other employment hubs, demand between zones along the I-94 corridor is relatively strong. Demand from South Moorhead and West Acres and Southeast Fargo is especially strong.

(c) **Downtown Fargo.** Although downtown Fargo is the historic center of the region, travel demand to this zone, especially from Moorhead, is not nearly as strong as to or from the newer areas in Fargo, especially West Acres.

(d) **South, Central and North Moorhead.** The strongest travel demand patterns in Moorhead are within the city itself. Outside of the city, the strongest patterns are to West Acres, South and Southwest Fargo and NDSU.

(e) **Fargo Industrial/Warehouse area to NDSU.** Travel demand in this area is strong likely due to student housing that is located on the eastern fringe of this zone, as well as the many jobs in this zone.

Map 17 - Origin-Destination Pairs (2015 model)



Source: Nelson/Nygaard and Metro COG (2011)

9.0 On-Board / On-line Rider Survey.

Summary. As described in the Early Input Public Input Section of the TDP (see Chapter 11 for additional details) a passenger and on-line survey were conducted during the last week of April 2011 and the first week of May 2011. There were several findings that pointed to areas where service could be enhanced.

Areas where service was desired. An open ended question regarding areas that are difficult to reach by bus resulted in several locations. The five items that received more than ten (10) unique responses include:

(a) Main Avenue;

(b) Dilworth;

(c) Any location after 10 p.m.;

(d) Fargo Industrial Park;

(e) West Fargo.

High Transfer Rates. More than two-thirds of MAT riders transfer once to reach their destination. Almost one-third of riders transfer twice. Moorhead riders were more likely to need multiple transfers than Fargo riders. The MAT system is designed for multiple-timed transfers, yet the transfer numbers are much higher than typical similar sized systems.

Highest Priorities for Improvement. Passengers were asked to rank improvements in terms of importance to them. Three improvements were ranked significantly higher than any others. To note, Appendix 5.0 of the TDP discusses issue identification/need prioritization and implementation in additional detail.

(a) Later Evening Service;

(b) Sunday Service;

(c) More Frequent Service.

10.0 Public Outreach – Rider Interviews and Focus Groups.

In late April 2011, outreach efforts were held as part of the TDP process. These are fully described in the Public Input Summary (see Chapter 11) and included operator interviews, public meetings in both Fargo and Moorhead, stakeholder focus groups and rider focus groups. Between these diverse groups, several common themes emerged regarding service levels, technology and capital needs.

Operations Themes.

(a) **Reliability and On-Time performance.** There was consensus that the routes were not operating on-time as regularly as they should. Traffic levels, train conflicts, and increased ridership were the primary identified causes. Specific routes identified included Routes 1, 2, 7 and 8 in Moorhead and Routes 11,13, 14 and 15 in Fargo;

(b) **Overloads.** Both Routes 15 and 25 were identified as being at or over capacity during peak hours. Frequency improvements are warranted on these routes.

(c) **Route Directness.** The alignment of MATBUS routes was perceived as being indirect. Speed and reliability could be improved by staying on main arterials.

Unserved Areas. Several areas were consistently identified by multiple sources. Areas where service should be considered include the following:

(a) Main Avenue corridor (specifically between 25th Street and the Red River);

(b) 25th Street Corridor between 13th Avenue and 32nd Avenue;

(c) Fargo Industrial Park;

(d) Cass County Jail and Probation Offices.

Span of Service and Service Frequency. One of the other themes involved the times when existing MATBUS services were operating.

(a) Sunday service is necessary. At a minimum, limited Sunday service should be provided.

(b) Later evening service should be provided.

(c) West Fargo has neither the frequency nor the span of service necessary to support its patrons.

Infrastructure Needs. A variety of infrastructure and technology enhancements were suggested, including:

(a) Day Passes. Lower income riders could benefit from a pass that costs less than the 30-day pass, which would increase ridership.

(b) **Bus Pass Sales Locations**. Currently only the GTC has a bus pass vending machine. Other locations should be considered for pass sales.

(c) **Transit Signal Priority.** Several high-traffic corridors should be considered for TSP. Identified corridors included 13th Avenue, signals in Moorhead, and the signalized exit at the GTC.

(d) **Technology Improvements.** Several specific improvements include:

- Clocks need to be synchronized at the GTC with cell phones;
- Technology or protocol adjustments to eliminate 1099 code;
- Advanced Vehicle Location (AVL) at high boarding locations;
- Signal timing improvements;
- Signal count down timers (extremely helpful to drivers);
- GPS automated announcements;
- **Bus Stops**. Bus stops improve a route's speed and reliability. Moreover, they give non users an idea that bus service is available and are an invaluable marketing tool.

  Shelters. More shelters at high ridership areas are desired, including more heated shelters.

11.0 Railroad Delay Analysis.

Overview. Both Fargo and Moorhead have multiple routes that cross railroad tracks. As evidenced by the comments by the operators and on-time performance analysis in previous sections, the train operations – particularly in Moorhead – are perceived to be a major cause of delay.

Two different concurrent efforts were conducted to provide insights into the frequency and duration of railroad induced delays to transit. The first was to ask operators to record all delays associated with trains. The second was to conduct a railroad crossing delay study for all vehicles.

Figure 55 – Train Delay by Route

Rt.	Avg. Delay (min)	Max Delay (min)	Min Delay (min)	% Round Trips Affected by Trains
1	1.9	7.0	1.0	21.6%
2	2.0	7.0	1.0	6.7%
3	9.2	14.0	4.0	4.0%
4	3.6	10.0	1.0	5.6%
7/8	1.4	3.0	1.0	20.0%
11	2.0	5.0	1.0	5.7%
12	3.9	17.0	1.0	16.7%
14	2.4	4.0	1.0	4.8%

Source: Nelson/Nygaard (2011) and Metro COG (2011)

Train Delays to Transit. For five (5) days between May 9 and May 13, 2011 MATBUS operators recorded every time they were delayed by trains. The time of delay and the length of the delay were then summarized by route. It should be noted that operators recorded delays created by the signal preemption system on Main Avenue even when they were not directly crossing a railroad track.

Based on a week's worth of data, Routes 1, 7/8, and 12 all had more than fifteen (15) percent of their scheduled trips affected in some way by a train delay. Routes 1 and 7/8 both had more than twenty (20) percent of their trips affected. The average wait for these delays was less than two (2) minutes, but both these routes are considered "tight" on running time and these delays are negatively affecting their ability to consistently make timed transfers.

Route 2 was consistently mentioned by operators as being affected by train delays, by the signal preemption in particular. The data shows that train delays were a daily occurrence but their impact affects less than ten (10) percent of trips. The consistent comments on Route 2 are likely due to the overall tightness of the route that is compounded when a delay does take place.

Overall, the data shows that train delays are borne by all routes crossing track, and given some of the long delays – sometimes over ten (10) minutes – passengers occasionally miss their transfers due to these delays.

Figure 56 – Train Delay by Location

Location	Number of Trains	Avg. Delay (min)	Max Delay (min)	Min Delay (min)	% Time Closed by Trains	Routes Affected
Main Ave / 8th St - Moorhead	26	3.9	15.0	0.0	14.2%	1
Center Ave / 8th St - Moorhead	5	3.6	5.0	2.0	2.5%	4
Broadway / 4th St N - Fargo	9	6.2	25.0	1.0	7.8%	11
12th Ave. S./Hwy 52 (SE Main Ave) - Moorhead	0	0	0	0	0	3

Source: Kadrmas, Lee & Jackson

Train Delays at Select Moorhead and Fargo Locations. On the week of May 9, 2011, Kadrmas, Lee, and Jackson (KLJ) staff collected data that showed the frequency and duration of train delays at four different intersections. KLJ staff were instructed to record when the warning lights started flashing and the gates started coming down and when the gates then lifted. KLJ staff spent 12 hours at each railroad crossing location between 6 a.m. and 6 p.m., times that correspond with the heaviest bus traffic. Outlined within Figure 56 (above) are the results from this data collection effort.

The BNSF mainline in downtown Moorhead between Center Avenue and Main Avenue had the highest train volumes, with more than two trains every hour. Delays ranged from less than a minute to 15 minutes. Overall, between 6 a.m. and 6 p.m., 8th Street was blocked by train related activity over fourteen (14) percent of the time. Route 1 crosses the tracks at 8th Street in the southbound direction and 4th Street in the northbound direction. The delays incurred to Route 1 can be substantial.

The BNSF line in north downtown Fargo also had several significant delays at its intersection with Broadway. There were nine (9) trains in a 12 hour period that created delays between 1 and 25 minutes. One of these trains was AMTRAK's Empire Builder, which was operating very late. Overall, 7.8 percent of the time, the Broadway crossing of the tracks was closed due to train activity. This has a negative effect on Route 11, a route that has on-time issues without train activity.

The railroad crossing of Center Avenue and 8th Street in Moorhead had less significant train activity. Only five (5) trains were recorded and they blocked the intersection less than three (3) percent of the time. Route 4 is affected by this crossing, and while the impacts on Route 4 were somewhat muted, in at least one instance, the queue waiting at the BNSF crossing gates between Center Avenue and Main Avenue spilled back in this railroad crossing.

On May 11, 2011, zero trains were observed between 6 a.m. and 6 p.m. at the 12th Avenue S/ Highway 52 crossing in Moorhead. Route 3 over the course of the week of May 9-13 only recorded one instance of train delay at this crossing.

Train Delay Conclusions. Trains are negatively affecting all routes that cross at-grade railroad tracks. The BNSF tracks between Main Avenue and Center Avenue appears to have the highest number of trains and resultant highest amount of delays. The individual route impact of train delays confirms that the BNSF tracks are the prime contributor to the on-time performance issues experienced on Route 1.

The difference in train exposure between Route 1 and Route 2 is striking – with Route 1 being significantly more impacted despite almost identical destinations through downtown Moorhead. It is clear that adjusting Route 1 to not cross the BNSF tracks between Center Avenue and Main Avenue will result in a dramatic improvement in on-time performance.

Trains are a fact of life in Fargo and Moorhead and there are not sufficient grade separated crossings to fully protect MATBUS operations from the impacts of trains. MATBUS schedules should take into account the probability that at least one train delay will occur and ensure that if an average train delay occurs, that timed transfers at the GTC or outlying transit centers can still occur.

12.0 Unmet Needs Conclusions.

Based on: (a) public input and outreach; (b) an assessment of existing ridership patterns and operating characteristics; (c) information within the Existing Conditions Report (see Chapter 1); and (d) a review of previous planning documents, it is clear that MATBUS is doing many things well as ridership has increased significantly in recent years. However, a variety of issues and needs were identified through the early input phase of this process (see Chapter 11 for additional information) that are of critical importance. Primary issues include service reliability, capacity issues, transfer issues, service frequency, geographic coverage and span of service. Each is summarized and discussed separately below.

Reliability of Service. The increased ridership and traffic levels in Fargo and Moorhead have to some extent compromised the ability for MATBUS to stay on-time. This is a change from the TDP analysis conducted five years ago when on-time performance was not seen as a huge issue by operators or existing riders. Addressing on-time performance and thereby improving reliability appears to be the primary issue to address in this TDP update.

Reliability and Number of Transfers. There is an overreliance on transferring which increases passenger travel time and decreases trip convenience. One industry rule of thumb is that incurring a transfer drops a route's market potential by as much as 50 percent. Given the fact that over 60 percent of riders transfer once and 30 percent transfer twice, MATBUS is currently operating a system that does not appear convenient enough for new riders. West Fargo and Moorhead riders in particular must undergo multiple transfers. Travel times associated with transferring are especially discouraging for new riders when most trips by car can be made in significantly less time. If on-time performance was not currently a concern then the multi-transfer patterns would be more acceptable. However, as reliability of service has decreased the number of missed transfers has increased. Reducing the need to transfer and ensuring that existing transfer connections can be met must be addressed.

Address Capacity Issues. Route 15 and the routes serving the NDSU campus have been extremely productive in terms of generating ridership. Unfortunately, both are now experiencing capacity issues with riders being left behind on a regular basis. The TDP should address how to improve capacity in these key markets.

Increase Frequency of Service on Key Corridors. Ridership on several routes in south and west Fargo have grown significantly over the past several years due to new commercial and residential areas being constructed. Routes 25 and 22 both operate hourly and their productivity shows clear warrants for more frequent service. The ridership loads on Route 15 and some of the NDSU routes also show clear warrants for more frequent service. Doubling the frequency of Route 15 which has the highest number of transfers in the system could eliminate the need to meet the timed transfer at GTC and West Acres every 30 minutes.

MAT Paratransit Needs. Based on the evaluation of paratransit services from the 2007 MAT Paratransit Options Analysis as well as NTD data from 2005-2009; operating costs and ridership are increasing but the efficiency of the service (passengers per hour) is steadily decreasing. While transitioning some existing and future paratransit users to fixed route should remain a goal, eligibility requirements on MAT paratransit ensure that many users of the system are unlikely to use fixed route. Sunday service is still provided in Fargo which goes beyond the requirements of the ADA. While the disbursement of paratransit users throughout the growing region will continue to place pressure on this system (and Sunday services are clearly valued) the TDP should evaluate options to stabilize rising operating costs while maintain (and where possible) improving efficiency of the service.

Span of Service Needs. An examination of ridership patterns, land uses and associated employment patterns show that the existing span of service may not be meeting all transportation needs.

(a) Fixed-Route Sunday Service – The past thirty years have seen a gradual shift in the types of businesses that are open on Sundays. For service workers in particular, work is being scheduled seven days a week. Sunday service was mentioned repeatedly as a priority by existing riders and stakeholders.

(b) Later Fixed Route Evening Service – Several members of the public and numerous stakeholders mentioned later evening service for routes. Two routes in particular – Routes 22 and 25 – show

propensity for later evening service due to their existing ridership pattern and the land uses adjacent to these routes.

Geographic Areas with Service Needs. Both Fargo and Moorhead have grown substantially over the past five years as data within the ECR clearly represents. This growth has helped establish additional areas and destinations that are currently unserved by MATBUS. Some of the locations consistently identified through the early input process include:

(a) Main Avenue – between 25th Street and downtown Fargo in particular. There are a number of established businesses, restaurants and employment opportunities that both users and non-users identified as needing service.

(b) Cass County Jail – The jail and probation offices are located in an area that does not have direct or easy access to MATBUS. Route 15 is more than a ¾ mile walk from either location. Both locations represent a potential ridership market.

(c) South 25th Street – Several stakeholders and existing riders commented that most service was east-west in orientation in South Fargo and that South 25th Street could represent an ideal corridor for bus service. It should be noted that existing land uses and development patterns along significant portions of South 25th Street are not ideal for regular fixed-route bus service.

(d) Fargo Industrial Park – This is a desired location for entry-level job seekers in particular and requested repeatedly in a variety of forums. The travel demand data also showed a large trip demand to the Industrial Park area. The dispersed job sites and the lack of pedestrian amenities in the Industrial Park will make this need difficult to meet, at least with fixed route service.

(e) Dilworth – The Super Wal-Mart served by Route 4 is technically in Dilworth. However, most of the residents of Dilworth are currently unserved by MATBUS. Residential density along with some lower income housing and group homes comprises the primary transit market in Dilworth.

(f) South Fargo to South Moorhead – The travel demand analysis showed a relatively strong propensity for travel between South Moorhead and South Fargo presumably via the I-94 corridor. From a transit perspective, the demand could be large enough to potentially support a cross-town route and remove the need to travel downtown. It should be noted, however, that a suburban to suburban market such as the South Fargo to South Moorhead is exceptionally difficult to serve effectively with transit due to the wide variety of trip origins and destinations.

(g) South and Southwest Fargo to NDSU – The travel demand model showed a significant travel demand between South Fargo and NDSU. Moreover, the NDSU student survey confirmed this travel pattern as a desired way to get to and from campus. Due to the concentrated destination and the lack of free parking at NDSU this market has a high potential to be successfully served by transit.

Statewide Transit
Planning, Programming
& Policy Assessment

1.0 Statewide Transit Planning, Programming and Policy Assessment.

Background. Pursuant to 23 CFR 450.314 Metro COG, the City of Fargo, the City of Moorhead, Mn/DOT and NDDOT implement the metropolitan planning process within the FM Metropolitan Area under a memorandum of understanding (MOU) approved in August of 2010. The current MOU is effective until terminated, however the document will be reviewed with the passage of each successive surface transportation authorization act. The MOU clearly outlines the roles and responsibilities of each party regarding the implementation of critical plans and programs related to surface transportation within the FM Metropolitan Area, as required by 23 CFR 450.

Pursuant to the approved MOU Metro COG has conducted a detailed review of applicable statewide plans, programs and policy documents developed by NDDOT and Mn/DOT. The intent of the review is to provide a general overview of adopted plans and policies of each DOT regarding public transit.

The outcome of this assessment will be used to provide a reference point to statewide policy and program guidance to assist in the development of the Transit Development Plan (TDP) update for the FM Metropolitan Area. The following statewide plans were reviewed as part of Chapter 1 (see Pg. 2):

(a) Greater Minnesota Transit Plan (2010-2030)

(b) Minnesota Statewide Transportation Policy Plan (2009-2028)

(c) Greater Minnesota Transit Investment Plan

(d) TransAction II – North Dakota's Strategic Transportation Plan

Outlined below is a brief summary with a specific focus towards recommended policies and strategies. As per the current MOU, Metro COG and Metro Area Transit (MATBUS) shall coordinate the development of the TDP with these statewide plans.

Minnesota Statewide Transportation Policy Plan. Adopted in 2009 (slightly before the completion of the Greater Minnesota Transit Plan) the Statewide Plan speaks narrowly to public transit in Minnesota. In general, Policy 7 (Greater Minnesota Metropolitan and Regional Mobility) provides the setting for the development of Policy 1 and Policy 2 (see below) from the Greater Minnesota Transit Plan. Policy 7 provides the context for addressing the changing mobility needs in Greater (and metropolitan) Minnesota to ensure critical needs are being met through the coordinated development of multi-modal plans and programs, as follows:

Policy 7: Provide for the changing transportation needs of people and freight traveling within Greater Minnesota Regions and metropolitan areas by planning regionally for critical investment and improving coordination across modes and jurisdictions.

The Minnesota Statewide Transportation Plan identifies a sub policy c of Policy 7, related specifically to public transit:

Policy 7c: Mn/DOT, MPOs, RDC's, tribal and local governments, regional rail authorities and transit providers will work together to plan for and provide a coordinated transit system.

Policy 7c identifies the first priority for transit providers in Greater Minnesota as meeting the needs of the elderly, individuals with disabilities and low-income individuals; and to coordinate with other related agencies to the degree possible. Policy 7c also identifies needs beyond core services as follows:

(a) Branch out into emerging markets such as commuters;
(b) Strengthen and expand core transit services by expanding service frequency and area of coverage.

It is important to note that the Statewide Transportation Policy Plan defers to the Greater Minnesota Transit Plan regarding specific recommendations and policies regarding public transit in Minnesota.

Greater Minnesota Transit Plan. Adopted in 2010 the Greater Minnesota Transit Plan sets a twenty (20) year strategic plan for public transit around the state of Minnesota. The Greater Minnesota Transit Plan identifies five primary challenges facing transit systems over the planning horizon:

(a) Maintain and Expanding Public Transit;
(b) Changing Mobility Needs of Individuals;
(c) Changing Mobility Needs of the Workforce;
(d) Changing Transit Options in Greater Minnesota;
(e) Coordination of Services.

The Greater Minnesota Transit Plan identifies strategic directions to address current and projected need for public transit in Greater Minnesota. What follows is a summary of relevant Policy points from the Greater Minnesota Transit Plan.

Policy 1: Maintain and expand the statewide public transit network.

Intent: Maintain and nurture existing core services before expanding services to new areas/markets. Ensure current services are meeting annual system performance measures.

Policy 2: Increase mobility for individuals and the workforce.

Intent: Evaluate travel needs and markets (user groups) to ensure that local services are reflective of the needs of the community. Establish priority service needs within the various segments of the market, and or user groups.

Policy 3: Provide a safe and reliable transit environment.

Intent: Ensure the safety and security of the public transit system.

Policy 4: Invest in infrastructure to increase access to services.

Intent: Ensure appropriate fleet/facility maintenance standards; ensure vehicles are appropriate to the services provided and replaced in accordance with industry standards. Carefully evaluate technology applications (E.g. ITS, etc.) to ensure appropriate return on investment, with focus in the areas of scheduling, dispatching, customer information systems, and fare collection/payment systems, etc.

Policy 5: Enhance coordination and communication to reach the broadest possible audience in a cost effective manner.

Intent: Coordinate with local human service agencies and providers; deploy meaningful mobility management programs to increase options and choices and maximize demand on current services. Implement a meaningful public involvement/decision making process regarding system operations.

Coordinate public transit system with non-motorized network. Incorporate public transit into land use decisions.

Greater Minnesota Transit Investment Plan. Development of the Greater Minnesota Transit Investment Plan was a legislative directive to Mn/DOT to establish an investment plan to meet eighty percent (80%) of the transit needs in Greater MN by 2015; ninety percent (90%) by 2025. The Greater Minnesota Transit Investment Plan establishes transit investment priorities to meet existing service levels and guide investment decisions regarding the preservation, expansion or contraction of service based on future funding scenarios.

The estimates developed by the Greater Minnesota Transit Investment Plan are based upon a Service Hour Model developed by Mn/DOT. The intent of the Service Hour Model is to estimate current and projected demand for transit services around Greater Minnesota. Transit systems were lumped into peer groups and target rates were set for each peer group within the State of Minnesota. For the purposes of the Service Hour Model Moorhead was classified as a medium urban per group, similar in nature to Mankato, La Crescent, East Grand Forks; a step below the large urban peer group (i.e. Duluth, St. Cloud, Rochester). Overall, Mn/DOT classifies Moorhead as a large urban system. The differentiation in the case of the Service Hour Model was based upon the variation of service levels between each peer group.

Based on service hour need estimations developed as part of the Greater Minnesota Transit Investment Plan the City of Moorhead should be providing one (1.0) service hour per capita. What follows would be an estimate of current and future per capita demand in Moorhead based on the one service hour (1.0) per capita target for the medium urban peer group.

Figure 57 - Moorhead Per Capita Transit Need*

Year	Population	Per Capita Service Target	Total Estimated Service Hours	Existing Service Hours (2009)
2010	42,089	1.0	42,089	Fixed Rt. = 21,845 Paratransit = 7,650 **TOTAL =29,495**
2025	51,500	1.0	51,500	

*Includes population of Moorhead and Dilworth

Source: 2010 Census; Metro COG Demographic Projections

Figure 57 would suggest that by 2015 and assuming 80% of the need was met, Moorhead would need to be near 36,288 service hours. Based on 2009 service hours pursuant to Chapter 1, Moorhead is currently 6,793 service hours short. By 2035 and assuming 90% of the need was met, Moorhead would need to be around 46,314 service hours (which equates to a difference of 16,819 service hours when compared to 2009 figures). Readers should take a close look at strategies/recommendations within Chapter 4 to gauge priorities and feasibility of meeting these thresholds as set forth in the Greater Minnesota Transit Investment Plan.

The Greater Minnesota Transit Investment Plan identifies investment guidance for three funding scenarios: 1) Preservation; 2) Expansion; and 3) Contraction.

Preservation. Mn/DOT's first priority for greater Minnesota transit systems is preservation. Mn/DOT strives to maintain funding levels to ensure system preservation, if system performance is maintained and if state and federal reporting requirements are met.

Expansion. Service expansion priorities identify how additional funds would be spent after all current systems are maintained at their current levels. Mn/DOT's first priority in an expansion setting would be to expand service to the areas of Greater Minnesota where there is currently no service provided. Once service is provided to the un-served areas of the state, Mn/DOT's second priority is to enhance service to existing systems as follows: Expand hours of operation (i.e. earlier and later in the day); expand multi-county service; provide service on more days of the week; expanded frequencies and coverage.

Contraction. When funding levels are contracted, Mn/DOT would not consider funding for enhanced or expanded service. Mn/DOT will use performance to determine how funding cuts are applied to specific systems in Greater Minnesota. Mn/DOT will work with transit systems to improve underperforming segments. Mn/DOT will reduce state and Federal (where applicable) funds to those systems that are not meeting performance measures.

The Greater Minnesota Transit Investment Plan identifies recommended program management tools that can be considered by public transit systems to assist in improving operations. Mn/DOT will work with public transit systems to deploy/maximize management tools as follows:

(a) Utilize technology to increase efficiency;
(b) Adjust services by using service-level performance measures;
(c) Coordinate with other providers and agencies.

TransAction II – North Dakota's Strategic Transportation Plan. TransAction II is North Dakota's statewide strategic transportation plan. TransAction II was adopted in 2007 and provides a broad policy level overview of how NDDOT will approach its statewide transportation systems and resources. Metro COG's review of statewide plans and programs in North Dakota is limited to only TransAction II. It is important to note that NDDOT has no specific plans or studies addressing the delivery of public transit in metropolitan areas in North Dakota. TransAction II establishes 6 transportation goals, of which three are relevant to the update of the TDP:

Goal 2: A transportation system that allows optimum mobility.

Goal 4: A transportation system that supports economic diversity, growth, and competitiveness with consideration of environmental and social impacts.

Goal 5: Funding sufficient to protect and enhance North Dakota's transportation infrastructure and address future transportation needs.

TransAction II contains 12 specific Initiatives with each initiative including a handful of strategies. What follows are excerpts from TransAction II Initiatives and Strategies relevant to the delivery of public transportation in the FM Metropolitan Area.

Initiative: Strategically prioritize the use of transportation resources, and define levels of service to be provided and maintained.

Strategy 4: Promote an integrated transportation system.

Initiative: Enhance communication and facilitate cooperation and collaboration between and within governmental units, tribal authorities, modes of transportation, and the public and private sectors.

Strategy 1: Facilitate and promote interaction between members of North Dakota's transportation community.

Strategy 2: Continuously review transportation planning and programming process for opportunities to improve communication, cooperation, and collaboration.

Strategy 3: Promote transportation plans, programs and projects that are compatible with economic growth and diversification, land use management, natural resources, environmental protection, conservation, and historic preservation.

Initiative: Improve the performance of priority transportation corridors and facilities.

Strategy 3: Periodically review and evaluate the performance of existing corridors and facilities, and identify emerging transportation priorities.

Initiative: Consider economic viability when developing projects, program, and statewide plans.

Strategy 3: Support the development and implementation of projects and plans that have positive impact on the state's economy.

Initiative: Appropriately use technologies to enhance North Dakota's transportation system by improving service, performance, mobility, safety, and security.

Strategy 1: Review current, seek out new, and deploy appropriate Intelligent Transportation System (ITS) applications that enhance passenger and freight mobility and improve safety and security.

Strategy 2: Continue and broaden technology partnerships between governmental entities, universities, and the private sector.

Initiative: Promote public/private sector partnerships that bring about selected transportation initiatives.

Strategy 1: Define conditions, criteria and types of transportation initiatives that warrant promotion of public/private partnerships.

Initiative: Emphasize safety and security in planning, developing, and maintaining the transportation system.

Strategy 1: Review and evaluate transportation plan, program, and project development and maintenance processes to ensure that safety and security considerations are incorporated at all major decisions points.

Initiative: Assess and plan for personal mobility options, both motorized and non-motorized.

Strategy 4: Consider non-motorized transportation and the needs of mobility challenged individuals in plans, programs, projects, and operations.

Initiative: Monitor key issues affecting personal and freight mobility.

Strategy 1: Periodically identify and assess key issues and trends affecting personal and freight mobility.

Initiative: Consider environmental and social impacts when developing transportation plans, programs and projects.

Strategy 1: Consider state, local, and tribal agency planned growth and economic development patterns to promote consistency with transportation improvements.

Summary. In conclusion, the following serves to consolidate the broad direction set collectively by Mn/DOT and NDDOT regarding the provision of public transit within the FM Metropolitan Area:

- Develop services/programs in consultation with a decision making/public engagement process;
- Identify system user needs (by service type);
- Prioritize Needs (by service type);
- Establish system performance measures;
- Respond to changing conditions through system/community evaluation and monitoring
- Coordination of services;
- Enhance underperforming segments through appropriate management tools;
- Provide a safe and secure public transit system;
- Seek out partnerships with other public or private entities;
- Consider the public transit system as part of the economic condition of the community/region;
- Integrate public transit with other modes and transportation system resources;
- Expand service once core needs are met and current services are meeting established performing measures.

The transit development plan has been developed to directly coordinate and align with these statewide goals, policies, initiatives and strategies embodied by both Mn/DOT and NDDOT through adopted plans and programs.

Operational Alternatives Development and Analysis

1.0 Higher Education Transit Needs Assessment.

Existing Usage. In both Fargo and Moorhead, MATBUS provides service to several higher education institutions. Students, faculty and staff at these colleges and universities have been using public transit in steadily increasing numbers over the past several years (see U-Pass ridership, Figure 33, Pg. 41 for additional information or Figure 69, Pg. 111).

Presently, students from four colleges in the metropolitan area are offered access to the U-Pass program through a bi-annual financial contribution to MATBUS that is funded by each respective higher education institution. These institutions include:

(a) Concordia College;
(b) Minnesota State Community and Technical College (M-State);
(c) Minnesota State University – Moorhead (MSUM);
(d) North Dakota State University (NDSU).

Of these four institutions, NDSU in Fargo is the largest and has the highest level of annual transit ridership. It also has the highest level of transit service measured by annual service hours for routes directly serving campus. The other three institutions are in Moorhead and have substantially less ridership. Figure 58 (below) provides a summary of each higher education institution and a basic summary of ridership and service.

Figure 58 – Summary of Current U-Pass Participants

UPass	Concordia College	M | State	MSUM	NDSU
Annual ridership (2009-2010)	15,167	29,081	89,868	253,882

*Routes 31-35 are operated to serve the NDSU campus population and are funded through a separate annual contribution from NDSU to MATBUS. Service statistics for Routes 31-35 are omitted from the above calculations.

Existing Higher Education Travel Pattern Needs. Chapter 2 (Issue Identification & Needs Assessment) outlined the results of a survey completed on NDSU's campus and displayed scattergrams of student residences in relation to the campus. Based on input received at early public input forums, analysis within Chapter 1 and factors mentioned above, the unmet needs for each higher education facility are outlined below.

Concordia College. Concordia College has an enrollment of over 3,000 students. Most students live clustered around the College. There are no readily identifiable concentrations of students anywhere else in the study area. It does not appear there are significant unmet needs for Concordia College.

MSUM. MSUM has an enrollment of nearly 7,500 students. Large numbers of students live clustered around the MSUM campus as well as in south Moorhead. In addition, there are several areas in Fargo that have concentrations of MSUM students including in North Fargo by NDSU and apartment complexes throughout Fargo. Connecting south Moorhead more directly with campus would more effectively provide access to MSUM. In addition, maintaining good transfer connection to Fargo routes provides access for MSUM students residing in Fargo.

M-State. M-State has an enrollment of about 2,500 students. As a community and technical college it is not surprising that the student resident base is widely distributed throughout the Metropolitan Area. There does not appear to be specific concentrations of students that need to be connected to M-State. One element that is apparent is that most persons wishing to access M-State must make at least one transfer. This limits the ridership growth potential. A reduction in the dependence on transfers would enhance ridership potential and ultimately the number of students using MATBUS to access the M-State campus.

North Dakota State University. NDSU has over 14,000 students enrolled. As expected, large numbers of students live in the immediate vicinity of campus in north Fargo. There are several distinct clusters of student residences at larger apartment complexes in west and south Fargo, as well as in the city of West Fargo. One of the biggest clusters without direct service to the NDSU is in North Fargo (east of 10th Street). Also, it is important to note that student residences on campus do not have a direct connection to grocery stores and services. In addition to geographic coverage, it appears that a large percentage of NDSU's student body indicates that service times are inadequate – later evening service is a desire – particularly connecting the downtown campus with main campus.

2.0 Fixed-Route Alternatives.

Three different fixed-route alternatives were created as a part of this effort, pursuant to the scope of work for the TDP update. Due to fiscal uncertainties, one of the alternatives will reflect a five (5) percent reduction in operating costs. A second alternative will focus on restructuring service using the 2010 levels of service / operating costs as a baseline. A third alternative will be a cost-unconstrained expansion scenario. This third cost-unconstrained expansion scenario will include the restructuring elements from the second alternative as a baseline condition.

Service Reduction Scenario. The parameters assumed for the reduction scenario include a five (5) percent cut in hours for service operated by Fargo and Moorhead, respectively. These figures do not include hours funded by NDSU for circulator routes, as they are standalone. It is important to note that his reduction scenario and the applied assumptions were discussed and ultimately accepted by the TDP study review committee.

Based on the ridership and productivity numbers the area that would cause the least amount of impact in Moorhead would be to reduce the frequency of existing Route 3 and 5 from every 30-minutes to hourly service during weekday midday. Peak hour service would remain as currently configured. Between 10 a.m. and 2 p.m. service on Route 3 and 5 would be hourly. This service reduction would reduce Moorhead's operating hours by approximately five (5) percent.

In Fargo, the lowest performing route is Route 23, a relatively new route that has not necessarily had a chance to fully mature from a ridership perspective. The fact that it is a new route without an established ridership base and the fact that it has one fifth (1/5) of the productivity of most other routes operated by MATBUS in Fargo makes it a clear candidate for service reductions if the need arises. With the exception of Route 21, all other routes are more integral to the overall success of MATBUS. Therefore, if a five (5) percent reduction were required, Route 23 should operate 4 hours during the morning peak and 4 hours in the afternoon peak only. This will reduce the number of hours operated in Fargo by approximately five (5) percent.

Service Re-Structure Scenario. The baseline assumption for the service restructure scenario is that the existing 2010 funding levels is the depth of resources that are available to address community and MATBUS service needs. The principal reason for looking at route modifications is to give routes the opportunity to improve system speed and reliability. This issue was identified by both users and non-users as well as MATBUS staff to be of critical importance. In addressing on-time performance every effort was made to maintain existing coverage to minimize confusion for existing customers. Each route in Moorhead and Fargo is discussed separately. The overall number of hours and buses under this scenario is equivalent to 2010 funding levels.

Summary, Moorhead Routes. Map 18 and 19 show the proposed restructured service in Moorhead (see Pg. 75). The biggest change from today's service is the removal of the Marriott Transfer Center on 11th Street South. Timed connections at this location are increasingly difficult to make due to increased passenger loads, train delays, signal timing issues and increased traffic volumes on major corridors. In addition, the transit schedules in Moorhead have already been maximized with very little flexibility, if any, within the route. There is no easy way to replace the functions of the Marriott Transfer Center as the location and timing of four different routes must work, and sufficient curb space for four buses must be found.

Prior to these recommendations being made the transfer pattern between routes in Moorhead was examined at the Marriott Transfer Center (see Chapter 2, Pg. 49). The transfer pattern is based on the farebox registering transfers and does not account for pass usage. The percentage of transfers of pass users and transfer users is likely to be equivalent however, and thus the pattern should be applicable to the total ridership numbers at the Marriott Transfer Center. The transfer patterns between Route 5 and Routes 1 and 2 was the predominant movement. The other strong movement was the transfer rate between Routes 1 and 5.

A detailed description of route modifications and the rational for the modification follows:

Route 1. Route 1 provides direct service between the Ground Transportation Center (GTC) in downtown Fargo and Concordia College, serving the downtown Moorhead Center Mall along the way and ending at the Marriott Transfer Center in south Moorhead. Route 1 has good ridership, yet it experiences on-time performance issues due to both passenger volumes and railroad track crossings in downtown Moorhead. An analysis of the recovery time in the schedule shows that Route 1 has a slim chance of getting back on time if delayed by a train.

The recommendations for Route 1 are two-fold. First, to reduce the exposure to trains the TDP recommends using the 2nd Street N underpass in Fargo to cross the BNSF tracks and then use Main Avenue to the existing route alignment. Patrons using Route 1 existing stops on Center Avenue would have to walk one block north to Route 4 or one block south to access Routes 1 and 2. In order to give Route 1 additional recovery time it should bypass the Marriott Transfer Center and instead be interlined with Route 3. This recommendation will create a one-seat ride between central Moorhead, south Moorhead and the shopping opportunities at Wal-Mart and EastTen. There are no additional costs associated with this recommendation.

Route 2. Route 2 serves Minnesota State University Moorhead directly from the GTC and continues to the Marriott Transfer Center in south Moorhead. Route 2 is the most productive route in Moorhead.

Due to heavy ridership, route length and some indirect train delays caused by signalization, Route 2 has consistent on-time performance issues. MATBUS has recently experimented with an interlined Route 2 with Route 4 to help mitigate this issue, but transfers are remain in jeopardy due to the inability of Route 2 to stay on schedule.

Route 2 should bypass the Marriott Transfer Center and be directly interlined with Route 5. This recommendation will add a substantial amount of recovery time to Route 2's schedule and address it's chronic on-time performance issue. It will also open up new markets as M-State and Moorhead neighborhoods south of I-94 will be more directly connected with downtown Fargo and the rest of the MATBUS network. Existing Route 5 patrons also gain a one-seat ride to a grocery store as well as direct service to MSUM. There are no additional costs associated with this recommendation.

Route 3. Route 3 provides circulator service throughout south and east Moorhead via a figure-8 alignment. It operates half-hourly on weekdays and hourly on Saturdays. Timed transfers to Routes 1, 2 and 5 are provided at the Marriott Transfer Center. Route 3 ridership is significantly lower than other Moorhead routes. One of the probable causes for this is that most Route 3 riders must transfer to get to Fargo and the remaining regional network. A large number of Route 3 riders transfer twice which is a severe ridership disincentive. Another probable cause of lower ridership is the indirect routing that patrons must take to get to their destination, as service is not bi-directional.

Route 3 should be interlined with Route 1 to provide a one-seat ride for all existing patrons to downtown Fargo. Timed transfers to Routes 2 and 5 would no longer be made. In addition, Route 3 alignment should be adjusted to provide bi-directional service along most of its alignment. Both the high school and middle school should have bi-directional service, albeit at 60-minute headways as compared to 30 minute on the remainder of the route. There are no additional costs associated with this recommendation.

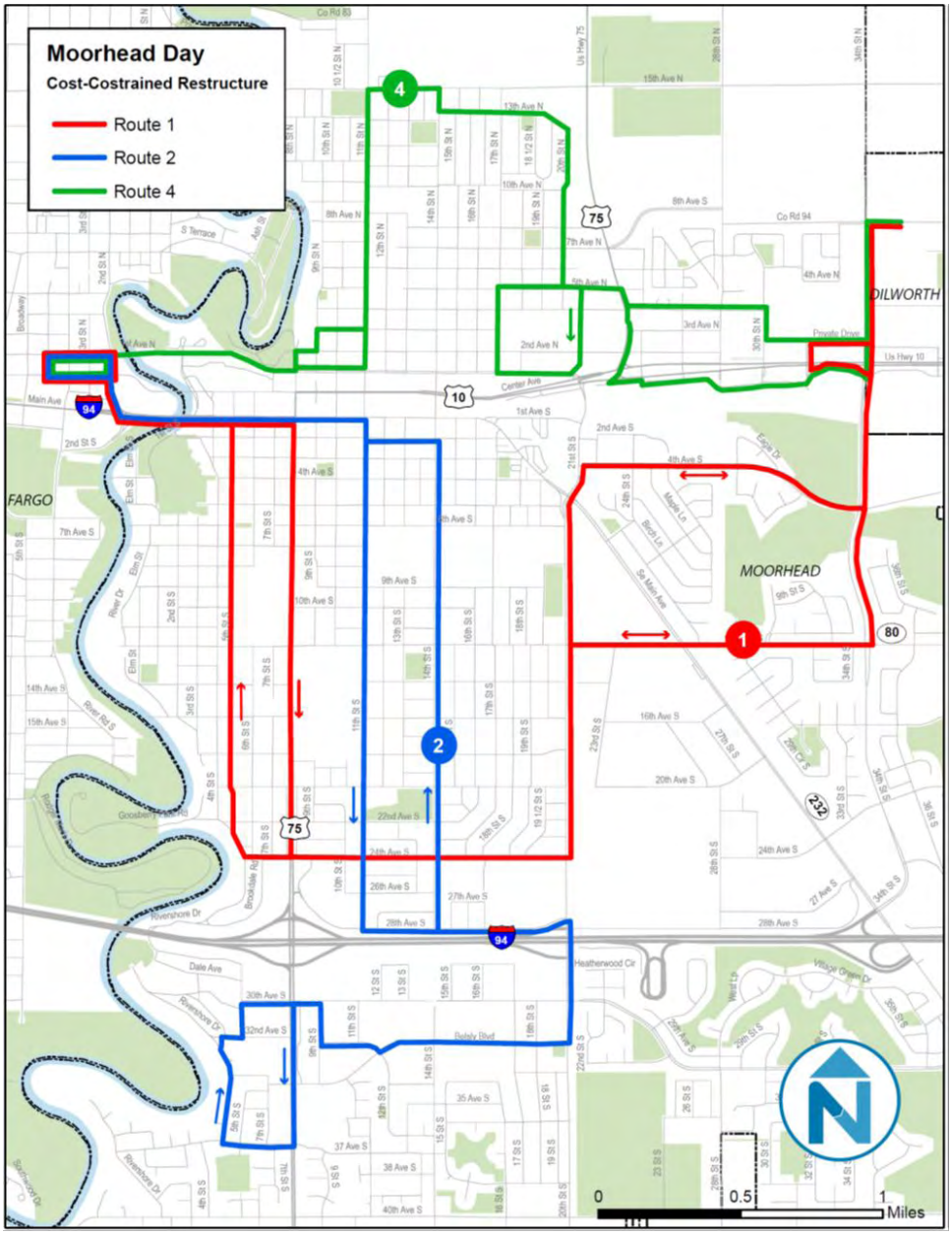
Route 4. Route 4 provides service between the GTC in downtown Fargo and the EastTen Shopping Center in east Moorhead. It also serves north Moorhead and makes a loop to serve the Clay County Courthouse. Route 4 is a recent conglomeration of a previous Route 4 and Route 6. Running time issues with Route 6 in particular was the impetus for making this change. Route 4 has generous recovery times and is currently interlined with Route 2 to ensure that Route 2 is more consistent (especially on outbound). Productivity on Route 4 is slightly below Moorhead route average. Route 4 alignment is circuitous and difficult for a casual user to understand.

The alignment for Route 4 should be adjusted to remove some of the out-of-direction travel and improve route understanding. In particular, Route 4 should travel bi-directionally past the Courthouse and through north Moorhead to reduce the travel time for these patrons. A loop route structure is still required on the frontage roads to effectively serve Target and EastTen. here are no additional costs associated with this recommendation.

Route 5. Route 5 provides circulator service in south Moorhead (including areas to the south of Interstate-94) and connects with other routes at the Marriott Transfer Center. It is the only route serving M-State's campus directly. On-time performance is good, but productivity is below average compared to other Moorhead routes. Like Route 3, one of the probable causes for the low

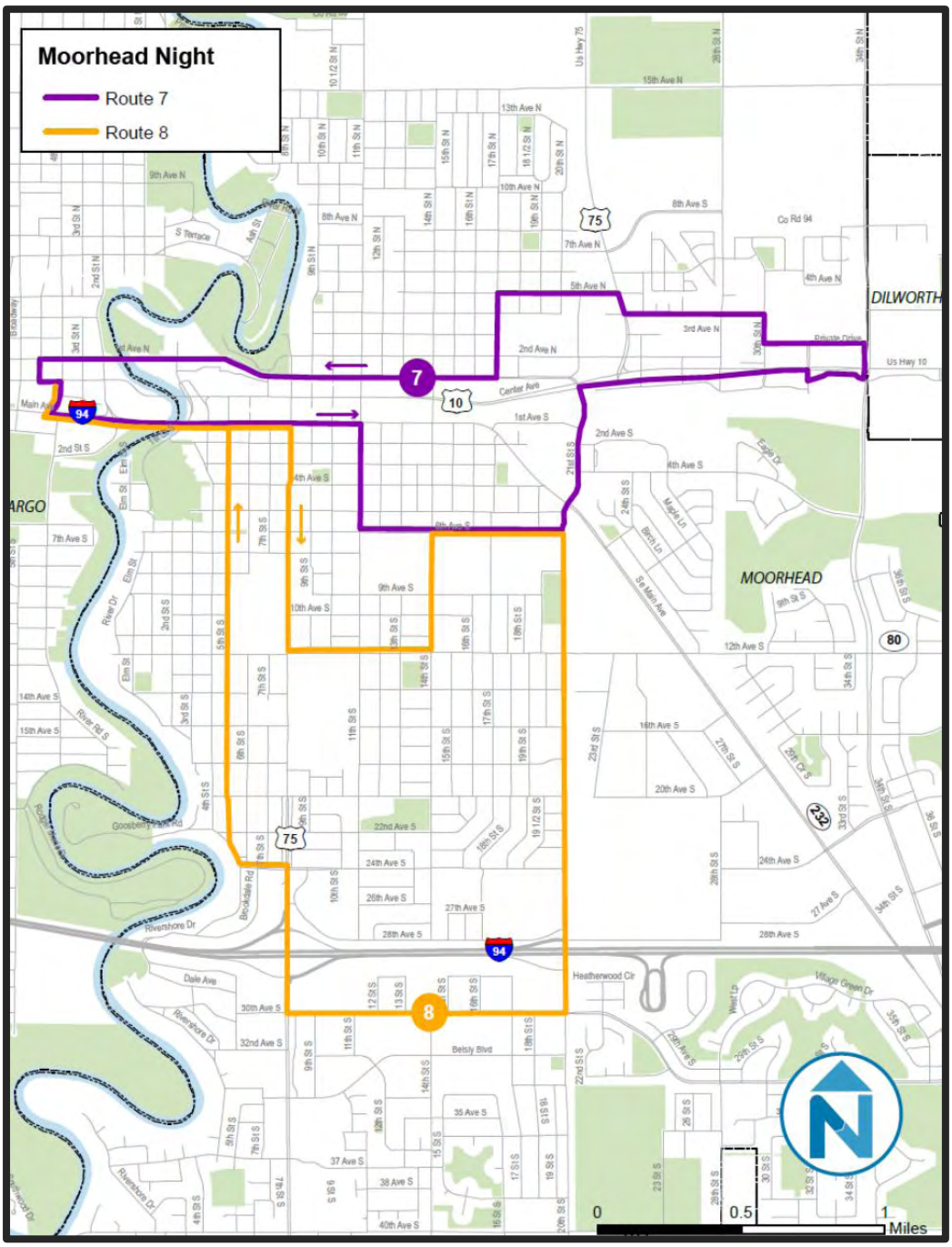
productivity is that most Route 5 riders must transfer to get to any destination in Fargo or Moorhead. A number of Route 5 riders transfer twice which again is a severe ridership disincentive.
Route 5 should be interlined with Route 2. This would address Route 2's on-time performance issues but also expand ridership potential by providing a one-seat ride connecting south Moorhead and M-State with MSUM and downtown Fargo. Individuals living south of I-94 would have a one-seat ride to a grocery store and drugstore. The timed transfer at the Marriott with Route 1 and 3 would be removed; however, transfers to the restructured Route 1 would still be available on 24th Avenue. Route 5's alignment should also be modified to reduce running time slightly and provide more direct service. There are no additional costs associated with this recommendation.

Map 18 – Moorhead Cost-Constrained Re-Structure Recommendations – Day Routes



Source: Nelson/Nygaard

Map 19 – Moorhead Cost-Constrained Re-Structure Recommendations – Night Routes



Source: Nelson/Nygaard

Route 7. Route 7 provides evening service in central and east Moorhead connecting the GTC with MSUM and EastTen. Ridership is low but acceptable for an evening route. Route 7 has on-time performance issues as the running time is at or slightly over what is possible in 30-minutes. Routes 7 and 8 are among the least on-time routes MATBUS operates. Route 7 is interlined with Route 8 which provides alternating trips at night in Moorhead.

Route 7 should be shortened so that it has more recovery time. The only area that can be shortened without entirely compromising coverage is a small segment serving MSUM and the south frontage road adjacent to US-10. MSUM would be served on south 6th Avenue between 11th and 20th Streets. The stops on the south frontage road should be made on-demand. The McDonalds and Target stops would continue to be made on a regular basis. These changes should reduce running times by up to two (2) minutes which would improve overall operations of both Routes 7 and 8. If on-time performance continues to be an on-going issue Routes 7 and 8 should be switched to a 45-minute frequency (from 30-minutes) which will cause longer waits for transfers, but allow the buses to operate on-time. The 45-minute routes will have lower ridership but they will maintain coverage. This recommendation should only happen if Route 15 in Fargo operates every 30-minutes during the evening.

Route 8. Route 8 provides evening service in central and south Moorhead connecting the GTC with Concordia College, MSUM, M-State and the areas south of I-94. Ridership is low but acceptable for an evening route. Route 8 has on-time performance issues as the running time is at or slightly over what is possible in 30-minutes. Routes 7 and 8 are among the least on-time routes MATBUS operates. Route 8 is interlined with Route 7 which provides alternating trips at night in Moorhead.

As noted above, the shortening of Route 7 should provide some measure of additional time that should assist Route 8, and thus no route modifications are recommended for Route 8. If on-time performance continues to be an on-going issue Routes 7 and 8 should be switched to a 45-minute frequency (from 30-minutes) which will cause longer waits for transfers, but allow the buses to operate on-time. The 45-minute routes will have lower ridership but they will maintain coverage. This recommendation should only happen if Route 15 in Fargo operates every 30-minutes during the

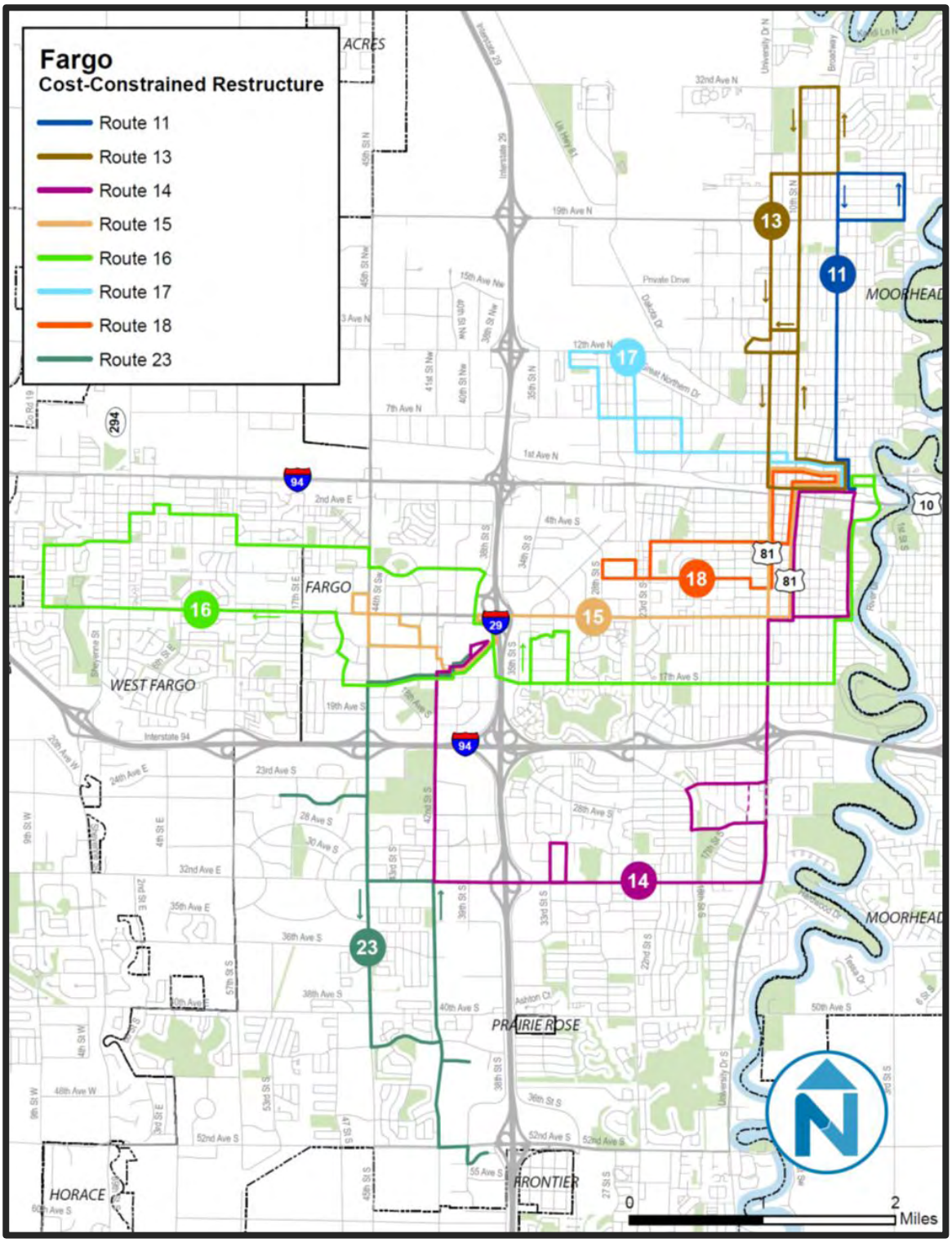
Summary, Fargo Routes. Map 20 (Pg. 78) shows the proposed 'status quo' restructured service in Fargo. A description of the route modification details and rational for the changes is outlined below.

Route 11. Route 11 provides service from the GTC to the North Broadway corridor. While ridership is good, Route 11 has on-time performance issues caused by high ridership and other issues. Transit signal priority has been installed along Broadway in an attempt to help mitigate on-time performance issues, but the problem remains. Route 11 is one of the clear examples where closely spaced flag stops are slowing the bus down (see recommendation about fixed bus stops in the Facility Needs section of this Chapter 4, Pg. 89). Route 11 should be shortened so that it can consistently stay on time. In conjunction with the restructuring of Route 12 and 13, Route 11's alignment should terminate with a loop serving 19th Avenue, Elm Street, 25th Avenue and Broadway. Route 11 would serve the VA Hospital instead of Route 12 and the area north of 25th Avenue will be served by a revised Route 13. There are no additional costs associated with this recommendation.

Route 12. Route 12 operates between the GTC and North Elm Street serving the VA Hospital enroute. Between the GTC and 19th Avenue it operates via 4th Street North, just 2 blocks east of the route 11 alignment. Ridership on Route 12 is weak as it appears that patrons are walking to the more frequent service provided by Route 11 on Broadway. The VA hospital is the only major ridership generator along the route. Route 12 should be eliminated due to low ridership and because Route 11 provides duplicative service in the immediate area. A restructured Route 11 would serve the VA hospital with more frequent service (every 30-minutes instead of hourly) than the existing Route 12 and the VA

would be served on Saturdays. This recommendation frees up half of a bus for approximately 6 weekday service hours.

Map 20 – Fargo Cost-Constrained Re-Structure Recommendations



Source: Nelson/Nygaard

Route 13. Route 13 consists of two separate routes, each operating half-hourly with schedules offset to provide 15-minute service along the common alignment. Service is provided from the GTC to the downtown NDSU Campus, Skills and Technology Center and the NDSU main campus. Route 13 has excellent ridership which is driven by the intra-campus market as well as the University Village to campus market. Route 13 is performing a key role in transporting NDSU students and supplements Routes 32 and 33.

Route 13 has on-time performance issues as a result of the heavy ridership. In particular, Route 13A which is 1.5 miles longer than Route 13B has trouble maintaining schedule. In response to this, MATBUS has begun operating Route 13X whose sole purpose in the afternoon is to provide a trip from NDSU's main campus to the GTC that is on-time so that patrons can make their transfers. Route 13X is not in any published schedule and operates only during times NDSU is in session. Route 13 should be restructured to address both on-time performance issues and one of the biggest unmet transit needs in Fargo – connecting north Fargo neighborhoods (east of 10th Street) directly with NDSU's Campus. Routes 13A, 13B and 13X should be combined into one route that serves NDSU's Memorial Union stop in both the north and southbound direction, and also extends north in a loop that serves University Village, 25th Avenue, Broadway, 32nd Avenue N and 10th Street. Trollwood Village and New Horizons would have 15-minute service during NDSU service times and 30-minute service at other times. This recommendation would require one additional bus for approximately 16 weekday service hours.

Route 14. Route 14 operates via South University Drive to 25th Avenue South where it loops into the Fargo Youth Commission, returning via 27th Avenue South to University Drive and ultimately to the GTC. Service operates half-hourly during weekday (daytime) time periods and hourly on evenings and Saturdays. Transfer connections are provided with Route 25 at the 25th Avenue South/University Drive Kmart for continuing trips to the West Acres Mall. Transferring passengers to Ro**u**te 25 are one of the biggest ridership generators of Route 14. With increased passenger loads and traffic on University Drive, Route 14 is no longer consistently running on-time.

Every second trip of Route 14 should be interlined with Route 25 to provide a one-seat connection from 32nd Avenue to downtown Fargo (see Figure 60, Pg. 82). This recommendation will increase ridership potential for Route 14 as well as Route 25 by removing transfers. In addition, the benefit for Route 14 is that Route 25 will provide some much needed recovery time for Route 14. The revised Route 14 will require one additional revenue hour on weekdays to expand the evening span on the portion of the new Route 14 currently covered by Route 25.

Route 15. Route 15 connects the GTC with South University Drive, 13th Avenue, West Acres Mall and the Wal-Mart on 13th Avenue. It is the primary link between the West Acres Mall and downtown Fargo. Ridership is spectacular with more than 30 passengers per hour for a route not serving a University. Route 15 has two on-going operational issues: on-time performance and overloads. On-time performance has been a growing issue due to increased traffic on 13th Avenue and heavier route passenger loads. The lack of signed bus stops on Route 15 also contributes to on-time performance issues. During the morning peak it was observed that patrons waiting for Route 15 at most street corners which causes the bus to stop at almost every block. MATBUS has recently adjusted the alignment between Wal-Mart and West Acres to reduce the exposure to traffic on 13th Avenue and improve reliability. During certain times of the day, Route 15 experiences overloads. Route 15 is a strong route and no short-term alignment recommendations are made. Route 15 is one of MATBUS's

biggest candidates for bus stop implementation as it will further enhance on-time reliability (see recommendation about fixed bus stops in the Facility Needs section of this Chapter 4, Pg. 89). Recommendations for Route 16 should address some of the ridership overload issues currently experienced on Route 15.

Route 16. Route 16 operates between the GTC and the West Acres Transfer Center via 4th/5th Street South and 17th Avenue South serving the Fargo High Rise, Prairie Psychiatric, Dakota Clinic and South High School. Service operates hourly. On-time performance is not regularly an issue. Route 16 should be interlined with Route 22 to provide a seamless one-seat ride between West Fargo and downtown Fargo. Route 22 passengers transferring to Route 15 appeared to be a contributing factor to Route 15's overload issues. Combining Route 16 and Route 22 into one route will likely cause most downtown (Fargo) bound patrons to not transfer to Route 15, freeing up seat capacity. Route 16 would continue to operate hourly (see Figure 59 for scheduling example). There are no additional costs associated with this recommendation.

Figure 59 – Rt 16, Rt 22 Interlined (& Rt 17) Schedule Example

Bus No.	Stops				
	Rt	GTC	West Acres	West Acres	GTC
1	17	6:15			6:45
1	16	6:45	7:15		
1	22		7:15	7:45	
1	16			7:45	8:15
2	22		6:15	6:45	
2	16			6:45	7:15
2	17	7:15			7:45
2	16	7:45	8:15		
1	17	8:15			8:45
1	16			8:45	9:15
1	22	9:15			9:45
1	16	9:45			10:15

Source: Nelson/Nygaard

Route 17. Route 17 operates between the GTC and the mixed industrial/commercial/residential area west of NDSU between 3rd and 12th Avenues. The current alignment is a long loop operating in a clockwise direction. On-time performance is not regularly an issue on this route. Ridership is slightly below average. Route 17 currently has at least one trip a day that is operating at or over capacity. The destination (Woodrow Wilson) where this full load of passengers is currently travelling to will be shifted to an area served by both Routes 15 and 18, thereby eliminating Route 17's capacity problem. No routing recommendations are made for Route 17 in this cost neutral scenario. (See Figure 59 for scheduling example as this route will coordinate with Rt 16 and Rt 25 revisions)

Route 18. Route 18 operates between the GTC and Southeast Human Services on 28th Street South via a circuitous loop alignment that duplicates services on several other routes (i.e. 10th St S, University Dr). Ridership is slightly below average. Route 18 has recently been shortened to address on-time performance issues. No routing recommendations are made for Route 18 in the short-term.

Route 21. Route 21 operates between West Acres Mall and Cetero Research on Amber Valley Parkway. Ridership is significantly lower than average and is one of the least productive bus routes in the system. There are consistent trips when very few (if any) passengers are carried. Route 21 has

significant recovery time in its schedule and is currently interlined with Route 22, which has on-time performance issues.

In conjunction with changes to Route 23 (see below) the cost neutral scenario includes the recommendation that Route 21 be eliminated. All existing stops on Route 21 would retain service, as Routes 21 and 23 services would be combined. This recommendation frees up half of a bus for approximately 6.5 weekday and Saturday service hours.

Route 22. Route 22 connects West Fargo destinations with the West Acres Mall via a large loop. Ridership is above average compared to the overall system, which is excellent considering the large loop and hourly service. Route 22 is a long route to operate in 30 minutes and the on-time performance issues reflect this. As noted above, Route 22 is currently interlined with Route 21 to provide some recovery time. The biggest ridership generators are the apartment complexes north of the West Acres Mall. The majority of Route 22 passengers are transferring to access their destination. Route 22 has clear warrants for more frequent and later service.

Route 22 should be combined and renamed as Route 16 (see Figure 59 for scheduling example). Existing Route 22 riders will benefit with a one-seat ride to downtown and no longer have to worry about missing transfers at West Acres. The seat utilization on Route 16 should improve as well. There are no additional costs associated with this recommendation.

Route 23. Route 23 is a new route that connects West Acres with southwest Fargo. Specific route destinations include the Wal-Mart on 52nd, Microsoft campus and Hornbachers. Route 23 ridership is poor – it is MATUS's lowest performing route. Productivity is what is typically found for demand response service rather than fixed-route service. It should be noted that this is a new route and a new market, which requires time to develop. Land use along the route is still developing – there are long stretches of undeveloped land being served. From a route design perspective, the doubling back to serve Wal-Mart twice is unusual.

In conjunction with changes to Route 21 this TDP recommends restructuring Route 23. The alignment would serve Cetero, Hornbachers, Microsoft and Wal-Mart. All existing stops on Route 21 would retain service, as Routes 21 and 23 services are combined. Service would no longer be available between Veterans Boulevard and 45th Street. Evening service would be eliminated due to poor utilization. Costs would be reduced by approximately 3 weekday revenue hours and 4 Saturday revenue hours.

Route 25. Route 25 operates between the K-Mart on University Drive and the West Acres Mall. It connects the 32nd Avenue corridor to the greater Fargo area and is the only true "cross-town" route in the system. Ridership is below average which can partially be attributed to the low-density and sparse land use on 42nd Street. One of the contributing factors that limit Route 25's ridership potential is the need to transfer to access most regional destinations. The K-Mart transfer point in particular is unheated, making the risk of poor transfer connections more acute. Route 25 also has warrants for later service. During the afternoon, on-time performance of Route 25 is worse than the rest of the day. Route 25 has several deviations that slow the service down.

The route serves the front door of Innovis which is less than 300 feet from 32nd Avenue. Additionally, the route makes a loop on 33nd Street, 30th Avenue and 32nd Street to serve several apartment complexes.

Route 25 should be combined with Route 14 to create one route that connects downtown Fargo, K-Mart, 32nd Avenue and West Acres. Service on 32nd Avenue would continue to be hourly, so every second Route 14 trip would continue from K-Mart to West Acres (see Figure 60 for scheduling example). This will remove the transfer penalty that existing Route 25 patrons have and improve their travel time. On-time performance for Route 25 should be enhanced by moving the Innovis stop from in front of the Hospital to 32nd Avenue. Route 25 would henceforth be branded as Route 14. In addition, Route 25 would operate one hour later than it currently does, which will require one additional revenue hour on weekdays.

Figure 60 – Rt 14, Rt 25 Interlined Schedule Example

Bus No.	Stops				
	GTC	K-Mart	West Acres	K-Mart	GTC
1	6:15	6:30	7:00	7:30	7:45
2	6:45	7:00		7:00	7:15
2	7:15	7:30	8:00	8:30	8:45
1	8:45	9:00		9:00	9:15
1	9:15	9:30	10:00	10:30	10:45
2	10:45	..... (CONTINUED)			

Source: Nelson/Nygaard

NDSU Services. No changes are suggested for Routes 31, 32, 33, 34, and 35. Route 13's restructure will have a potential impact on Route 33 in particular, as the travel pattern between NDSU's main campus and downtown campus will vary more between the routes. If there is a capacity issue between these two destinations, Route 33 service is the appropriate route to expand service on.

Service Expansion Scenario. The Issue Identification/Needs Assessment, public outreach findings as well as an examination of the local travel market suggests MATBUS has several opportunities for service expansion. On July 19, 2011 the Study Review Committee prioritized a list of system needs that was developed from these sources (see Appendix 5.0). Naturally, service expansion requires additional revenues. Each of the suggested service expansion concepts listed in this section are cost unconstrained – and will include a description of the market to be served as well as the costs associated with them. The Service Expansion Scenario assumes the implementation of 'status quo' restructure concepts as outlined within the chapter.

Non-Route Specific Recommendations.

Span of Service Improvements *[EARLY]*. MATBUS service is currently not configured to bring patrons to their jobs prior to 7 a.m. In order to expand the employment market for MATBUS, service should begin one hour earlier on weekdays. This will require approximately eleven (11) daily revenue hours in Fargo (2,900 annual revenue hours) and six (6) in Moorhead (1,600 annual revenue hours) and no additional buses.

Span of Service Improvements *[LATE]*. MATBUS service currently ends before service workers have an opportunity to get back home. For instance, someone working at West Acres Mall could not make it back to their apartment in North Fargo if they had to wait until after close time at 9 p.m. MATBUS should operate service one hour later than they do right now for all routes in Fargo and for Routes 7/8

in Moorhead. This will require approximately eleven (11) daily revenue hours in Fargo (2,900 annual revenue hours) and one (1) in Moorhead (300 annual revenue hours) and no additional buses.

Sunday Service. The continued growth of the service industry over the past decades has increased the need for Sunday service. Retail establishments that were once closed are now open. In order to serve the shopping, entertainment and employment needs of Fargo and Moorhead citizens, fixed-route Sunday service should be implemented. This will require approximately 1,400 annual revenue hours in Moorhead and 4,700 annual revenue hours in Fargo.

Figure 61 –Non-Route Specific Expansion Recommendations

Route Recommendation	Annual Rev. Hours	Annual Cost*	New Buses
Begin weekday service one hour earlier	4,500	$342,000	0
Operate weekday service one hour later	3,200	$243,400	0
Implement Sunday Service	6,100	$460,000	0

Source: Nelson/Nygaard;

* Assumes $76/hour per NTD

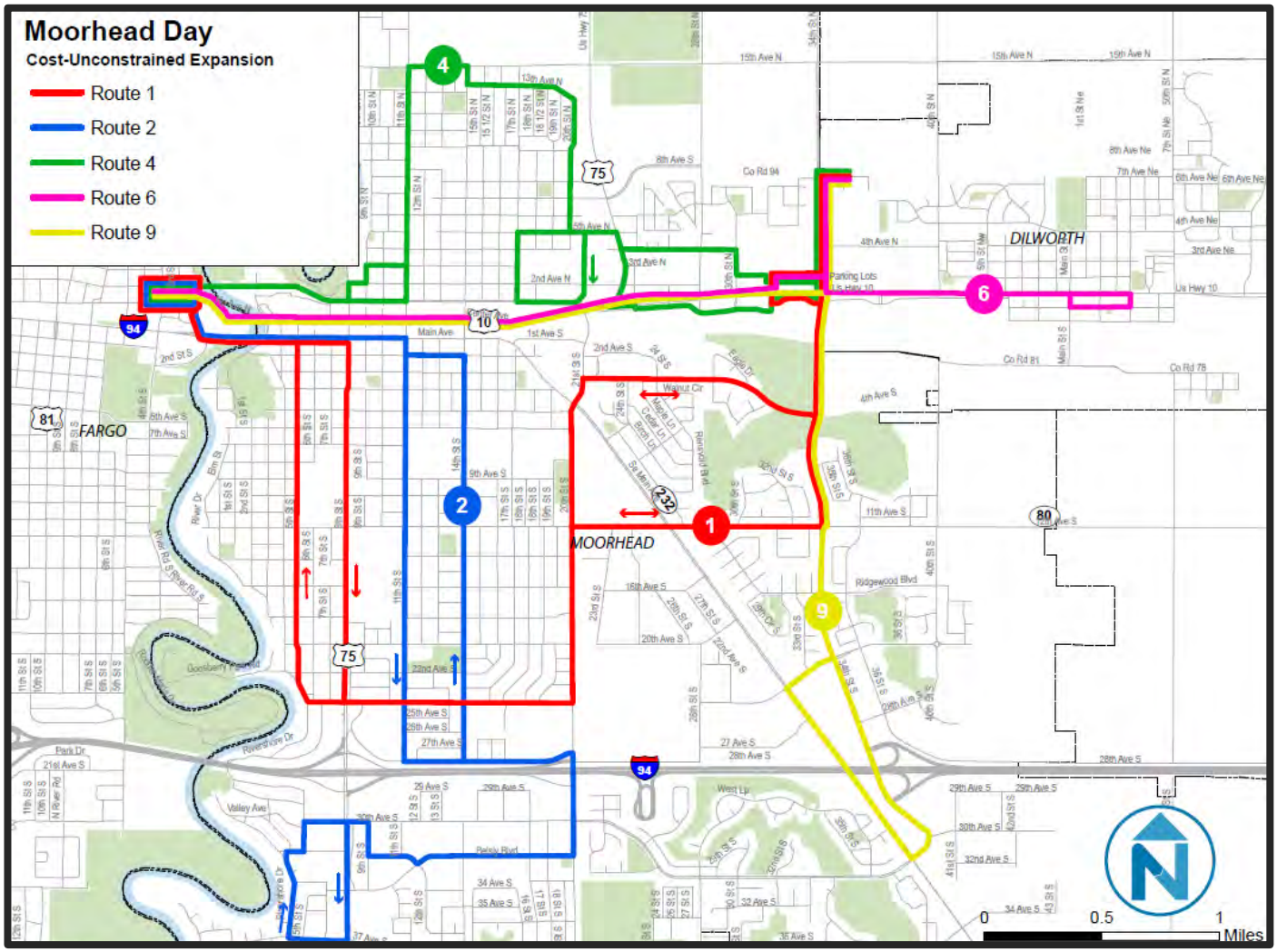
Route Specific Recommendations.

Summary, Moorhead Routes. Map 21 (Pg. 84) shows the proposed cost un-constrained alternative in Moorhead. A description of the route modification details and rational for the changes is outlined below.

Route 2. One of the service expansion priorities was targeted frequency improvements to high-ridership routes. In Moorhead, Route 2 is the most productive route particularly in the segment between MSUM and downtown Fargo. Current service is every 30-minutes on Route 2. The cost-unconstrained scenario recommends improving the frequency between the GTC and MSUM's campus to every 15-minutes on weekdays between 6 30 a.m. and 6:30 p.m. and the remaining portions of Route 2 would continue to be 30 minute service. This will facilitate transfers and connect MSUM with NDSU and the commercial areas along 13th Avenue with frequent all-day service. This recommendation will require approximately 3,100 annual revenue hours and will require one (1) additional bus.

Route 9 and Route 6. *New Service to Horizon Middle School and SE Main Avenue/Center Avenue* – This new route would connect Horizon Middle School and the new development along Main Avenue by I-94 (including the Sanford Health Clinic, Business College, Menards) with EastTen, Wal-Mart, central areas of Moorhead and downtown Fargo. Similar to proposed Route 6 (see Map 21) this route would provide a more direct and efficient path from Fargo and central Moorhead to EastTen and Dilworth; while additionally serving Center Avenue redevelopment/infill efforts. It would also serve to further address the mobility needs of Churches United residents and the mobility needs of the adjacent commercial area. The proposed route should operate hourly between 6:45 a.m. and 6:45 p.m. on weekdays. This recommendation will require approximately 3,100 annual revenue hours and will require one (1) additional bus. Between Wal-Mart and downtown Fargo, Routes 6 and 9, if both implemented, should be scheduled 30-minutes apart to provide 30-minute frequencies on Center Avenue.

Map 21 – Moorhead Cost-Unconstrained Expansion Recommendations



Source: Nelson/Nygaard

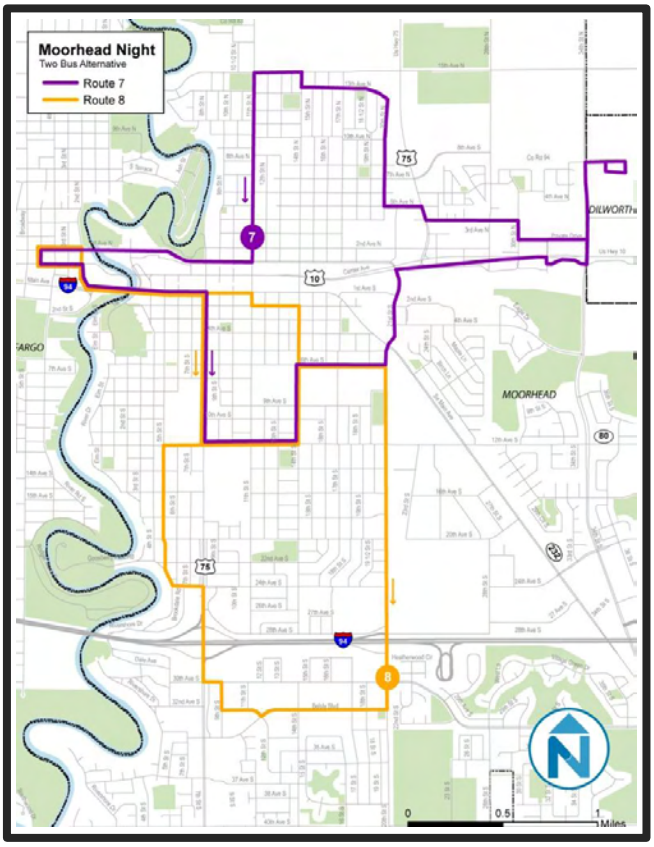
New Service to Dilworth. Dilworth is part of the urbanized area that is virtually unserved by fixed-route transit. The Issue Identification/Needs Assessment (Chapter 2) identified that there was an unmet demand for transportation mobility in Dilworth. Both residents as well as social service agencies such as the Red River Recovery Center (old Howard Johnson Motel) could benefit from the mobility options provided by public transit. Recognizing that budgeting for transit service in a small community like Dilworth can be difficult, three different options are presented – in order of cost.

(a) *Option 1. Subsidized Taxi Trips* – This option would provide for subsidized trips on taxis between Dilworth and a transfer location at either EastTen or Wal-Mart only. This service would only be for trips to and from these destinations and for making connections to the fixed route service on weekdays only. While demand for this type of service is difficult to estimate, if it is assumed that the subsidized cost of each one way trip is $8.00 with 20 daily one-way trips daily, this would be approximately $40,800 annually. The cost of this program would directly reflect the demand for service.

(b) Option 2. *General Public Dial-A-Ride* – This concept would provide a general public dial-a-ride service to EastTen or Wal-Mart where connections to other routes could be made. The target market for this service would be for those residents who do not have other mobility options. As such, this option assumes a limited service span between 10:00 a.m. and 5:00 p.m., Monday through Friday(at least initially to test the demand for this service). As with other demand responsive services this would require an advanced reservation, though anybody could use the service. Based on these assumptions, this service would require an estimated 1,020 annual revenue hours and one (1) additional bus. One way to help offset these costs would be to charge a premium fare for general public users.

(c) Option 3. *New Fixed Route to Dilworth (Route 6)* – This new route could connect Dilworth to both Moorhead and Fargo via Center Avenue and Highway 10. It would make deviations to EastTen and Wal-Mart. The Dilworth target market for this route is commuters, shopping, and social service trips; thereby this option would address the identified need. Route 6 is a direct and efficient path from Fargo and central Moorhead to EastTen and Dilworth. As previously noted, this alignment will also serve redevelopment/infill efforts on Center Avenue in Moorhead. The proposed route should operate hourly between 6:15 a.m. and 7:15 p.m. on weekdays. This recommendation will require approximately 3,400 annual revenue hours and will require one (1) additional fixed route bus.

Map 22 – Moorhead Night Route 2-Bus Scenario



Source: Nelson/Nygaard

Moorhead Night Service. Currently Routes 7 and 8 are operating on extremely tight schedules and experience frequent on-time performance issues, particularly during inclement weather. Short-term recommendations outlined within the cost-neutral scenario will partially address this situation. However, it should be noted that the TDP is recommending additional service to address this operational issue, as the routes can no longer be shortened without sacrificing coverage. Ideally, two (2) buses could be added into the schedule and all of Moorhead would enjoy the same coverage they currently have during the daytime – with Routes 1, 2, and 4 operating every 60-minutes during the evenings. However, if only two buses were available, per Map 22 (above) Route 7 and 8 should be adjusted to operate every 60-minutes, but serve Concordia College and MSUM every 30-minutes.

Figure 62 –Summary of Moorhead Expansion Recommendations

Route	Recommendation	Annual Rev. Hours	Annual Cost*	New Buses
2	15-minute service between GTC and MSUM	3,100	$236,000	1
9	Implement new service to New Horizons	3,100	$236,000	1
7/8	Operate Routes 1, 2, and 4 during evening hours	2,150	$163,400	0
7/8	Restructure Routes 7 and 8 and operate with 2 buses	1,075	$81,700	0
6	New Dilworth fixed route (Route 6)	3,400	$258,400	1
DAR	Limited Dilworth Dial-A-Ride service	1,785	$62,500	1
Taxi	Dilworth subsidized Taxi service	n/a	$40,800	n/a
Maximum Total Cost *(Assumes operating 1,2, and 4 evenings and new Route 6)*		**11,750**	**$893,800**	**3**

*Fixed routes assumes $76/hour; Dilworth general public Dial-A-Ride assumes $35/hour.

<u>Summary, Fargo Routes</u>. Map 24 (Pg. 88) shows the proposed cost un-constrained alternative in Moorhead. A description of the route modification details and rational for the changes is outlined below.

<u>Downtown Circulator</u>. One of the elements that came up several times during the TDP process was a downtown circulator. Several different market components were identified, including Sanford, parking ramps, and NDSU's downtown campus. A successful circulator will operate frequently enough that potential patrons will not need a schedule. It will also connect together sufficient origins and destinations to be viable throughout the day and be easy to understand for patrons. While we believe that it will be best to work together with downtown interests to finalize the alignment, the proposed alignment serves Sanford, the Broadway corridor, downtown NDSU's campus, and a proposed parking ramp at 2nd Avenue/ Roberts Street. The circulator should operate a minimum of every 15-minutes on weekdays, and more frequently at 7-8 minute frequencies during peak demand times. This will require approximately 18 daily revenue hours in Fargo (4,600 annual revenue hours) and two additional buses. It should be noted that downtown circulator buses should be branded separately from regular fixed-route bus service.

Map 23 – Downtown Circulator Route

Source: Nelson/Nygaard

<u>*Route 13/15 Super Route*</u>. Travel demand between NDSU, downtown Fargo and the 13th Avenue Corridor to West Acres is the highest of any transit corridor in the region. The two routes have the

highest ridership of existing MATBUS routes. In addition, there is a high transfer rate between Routes 13 and 15. Route 13 already operates at 15-minute frequencies during times when NDSU is in session and is often running at capacity. Likewise, Route 15 is often running at capacity and has clear warrants for additional service. In order to directly connect the major destinations of NDSU, downtown Fargo and West Acres; Routes 13 and 15 should be combined and rebranded as the "Super Route" or with another moniker that implies high frequency service. The route should use Albrecht to travel through NDSU's campus to provide year-round circulation (and potentially reduce the need for other NDSU services). The Super Route should operate on a 15-minute frequency during weekdays and Saturdays all-year round between 6:30 a.m. and 6:30 p.m. On weekday evenings, the Super Route should have 30-minute frequency. This route is designed to continue to attract choice riders to MATBUS and continue the ridership growth that MATBUS has experienced. This recommendation will require 10,600 additional revenue hours and two (2) new buses.

Route 14. One recommendation within the cost neutral scenario was to combine Routes 14 and 25 into one route with the southwestern portion of the route operating at 60-minute headways and the portion closer to downtown operating at 30-minute frequency. To reduce potential customer confusion and to serve the growing 32nd Avenue market, Route 14 should operate every 30-minutes along the entire alignment. In addition, the segment to West Acres should operate later to 10:15 p.m. This will require one (1) additional vehicle as well as 4,600 annual revenue hours.

Route 16. Pursuant to the cost neutral restructure scenario presented within this chapter, one of the recommendations accommodated a consolidated Route 16 and 22. The route operates at 60-minute frequency. As ridership grows, frequency of Route 16 should be improved to every 30-minutes during weekdays. In addition, the West Fargo alignment of Route 16 should be modified by splitting the current loop into two separate routes. Route 16 would continue to serve 13th Avenue E in West Fargo, as well 8th Street W, 7th Avenue E and Sheyenne Street. A new Route 22 would serve the remainder of the existing West Fargo loop. Additionally, evening service on the entire route should be extended to 10:30 p.m. This recommendation will require 5,600 additional revenue hours and two (2) new buses.

Route 18. Ridership on Route 18 is derived from locations on the western extent of this route. Due to the structure of this route, most patrons are forced to use the GTC to connect to other routes, even while the West Acres Transit Center is just over a mile away. In addition, the high density apartment complexes north of the West Acres Mall are served by a terminal loop on Route 16 (currently Route 22). In order to connect more residents to West Acres and to provide a more convenient trip for anyone on the northeast portion of existing Route 22, the TDP recommends streamlining and extending Route 18 to serve the West Acres Mall. Service on 9th Avenue S would be deleted between 23rd Street and University Drive. Frequency of this extension would be every 30-minutes during weekdays and hourly on weekday evenings and Saturdays. This recommendation will require one (1) additional new bus and 3,500 annual revenue hours. It should be noted that this recommendation could be done in conjunction with a new Route 29, and if implemented, Route 18 should run hourly with Route 29 also providing hourly service. The core route segment between the GTC and 25th Street would continue to be served by 30-minute service between the two routes.

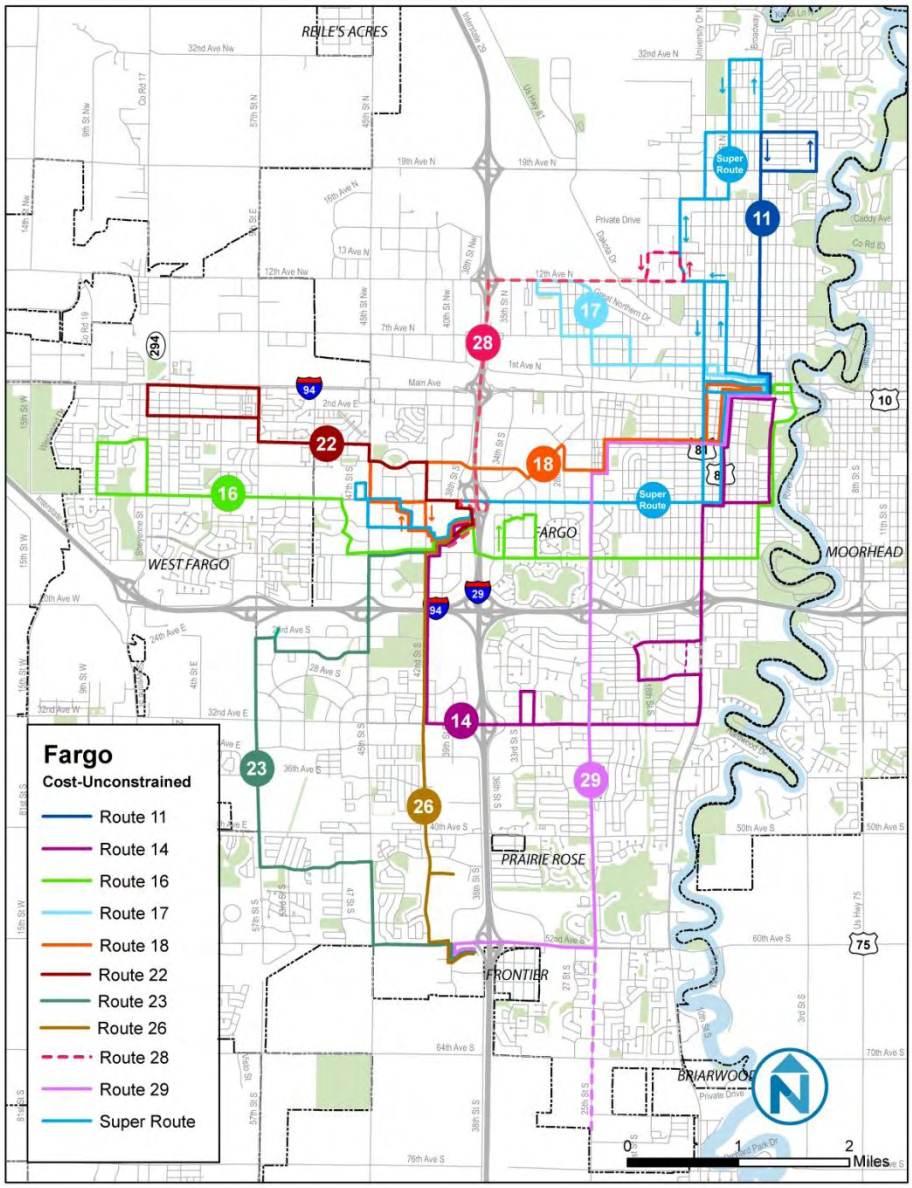
Route 22. A new Route 22 should be created to split apart the existing West Fargo loop. West Fargo residents will benefit by this by having a more direct route and less in-vehicle travel time. In addition, bi-directional routes are easier for potential patrons to understand. The new Route 22 will serve the

northern portion of the existing West Fargo service, in addition to serving a segment of Main Street. Service should operate every 30-minutes between 6:00 a.m. and 7:30 p.m. and would require 4,100 additional revenue hours and one (1) new bus.

Routes 23/26. As Sanford Hospital becomes operational, and Veterans Boulevard develops into more of an urban landscape, Route 23 should be split into two different routes. The proposed Route 23 would continue to connect Cetero and the Sanford Hospital site with West Acres Mall. The route would also use Veterans Boulevard, 44th Avenue S, and 45th Street SW to access the Wal-Mart on 52nd Avenue S. Route 23 would be connected to a new Route 26, the 42nd Street SW Route. The new Route 26 would provide a direct path from West Acres Mall to the Wal-Mart on 52nd Avenue S. via 42nd Street SW. A deviation into the Microsoft Campus would be made as well. The new route 26 would operate hourly between 6:00 a.m. and 7:30 p.m., and would require 4,100 additional revenue hours and one (1) additional bus.

Route 29. New Route to South Fargo – One of the comments repeatedly heard from the general public as well as stakeholders was the need for transit service on Main Avenue and 25th Street in Fargo. The new Route 29 addresses this unmet need. The new route would connect the downtown Fargo, 5th Avenue (which is the closest pedestrian friendly street to Main Avenue), and 25th Street with the new Davies High School (during school times) and the Wal-Mart on 52nd Avenue. Service would be hourly and operate weekdays only. This recommendation would require approximately 3,200 annual revenue hours and 1 bus.

Map 24 – Fargo Cost-Unconstrained Expansion Recommendations



Source: Nelson/Nygaard;

Route 28. West Acres to NDSU Express – The travel demand data, existing student body residence distribution, and the transfer patterns between Routes 13 and 15 suggest that a park-and-ride model to/from NDSU's campus from West Acres may be viable. Each increase in parking fees at NDSU further increases the market potential for this route. Route 28 would supplement existing services and provide a direct connection via I-29 between West Acres Mall, 12th Avenue, and NDSU's campus. Frequency would be approximately every 30-minutes – depending on time of day, on days when NDSU is in session only. This recommendation requires that an agreement between the Mall and MATBUS is in place to use Mall parking stalls for park-and-ride purposes (see the System Facility Needs section). This recommendation would require approximately 1,800 annual hours and an additional bus.

Industrial Park Service. Stakeholders and the general public repeatedly identified the Industrial Park as a destination that MATBUS should serve. An examination of the potential travel patterns from the regional travel demand model, as well as an assessment of the land use types, and pedestrian connectivity, and shift times at the Industrial Park, revealed that fixed-route transit has virtually no chance of being successful there. In order to meet the demand for service in the Industrial Park, we recommend a user side subsidy, where MATBUS subsidizes cab fare from the GTC to the Industrial Park. It should be noted that no other origins or destinations should be allowed using this subsidy (i.e. the subsidy can only be used for trips to and from the industrial park). In addition, the passenger fare should reflect that this is a premium program. For the purposes of costing, we assumed a cab fare $4.50 initial fare plus $1.60/mile thereafter – giving an approximate cost of $12.50 per trip to or from the Industrial Park. Funding for tokens or vouchers for 10 round trips per weekday should be set aside, which equates to approximately $51,000 annually.

Figure 63 - Summary of Fargo Expansion Recommendations

Route	Recommendation	Annual Rev. Hours	Annual Cost*	New Buses
Circulator	Create downtown Circulator	4,600	$350,000	2
13/15 Super Route	Combine 13 and 15 into one route that operates 15-minute all-day frequency	10,600	$805,600	2
14	Expand 30-minute service to entire expanded route and operate later on 32nd Avenue	4,600	$350,000	1
16	Expand 30-minute service to entire route and operate later	5,600	$425,600	2
18	Streamline route and extend to West Acres	3,500	$266,000	1
29	Create new route to South Fargo	3,200	$243,200	1
28	West Acres – NDSU Express	1,800	$136,800	1
Industrial Park	User side taxi subsidy for up to 10 round trips per day.		$51,000	
Total Cost		33,900	$2,628,200	10

Source: Nelson/Nygaard;
* Assumes $76/hour per NTD

3.0 System Facility Needs.

Based on the Route Restructure Scenario (status quo) and Service Expansion Scenario a number of system facility needs arise, as further described below.

Transfer Center Needs. The primary facility change resulting from the two scenarios is the elimination of the Marriott Transfer Center in Moorhead as a meeting point for buses. This facility currently has four sets of benches and trash receptacles, a double shelter (measuring about 20 feet), two sets of bike racks and pedestrian-level lighting. With the exception of the pedestrian scaled lighting most of these facilities can easily be relocated. In addition, the Fargo Kmart transfer center is no longer necessary in both the Route Restructure and Service Expansion scenarios because the transfer between Routes 14 and 25 will be eliminated as the routes are combined into one route. Because this will continue to be a Park and Ride location the shelter at this location should remain.

Additionally, the TDP recommends that any major transfer location include advanced vehicle location (AVL) kiosks similar to those used at the GTC and at several popular NDSU stops. At minimum, an AVL kiosk should be installed at West Acres but could also be considered in Moorhead at either the Kmart/Cashwise stop or the Wal-Mart stop.

Park and Ride Facilities. There are six (6) existing park and ride locations in the metropolitan area (four in Fargo and two in Moorhead). While these facilities offer convenient and free parking for MATBUS passengers, without a significant express bus operation, park and rides are unlikely to play a major role in the existing transit system. Nonetheless, the TDP includes recommendations to maintain the six park and ride locations as a way to provide passengers with additional travel flexibility.

In the Service Expansion Scenario a new park and ride location at West Acres Mall is recommended. This new park and ride would primarily be for passengers using proposed Route 28 that would provide express service between West Acres and the NDSU campus. This new park and ride would ideally utilize the existing lot between the existing Transfer Center and the Best Buy parking lot; however, if additional space is required the larger lot south and southwest of the existing Transfer Center could also be used. An agreement would be required with the West Acres Mall to allow a park and ride. This agreement should stipulate not only the number of spaces allowed but locations where people are required to park.

Shelters. Shelters should be placed where passenger boarding activity is high and especially where transfers occur or on routes with less frequency. It is assumed that any stop with twenty (20) boardings a day or more justifies a shelter. Based on the Route Restructure Scenario presented above, as well as recent boarding data, placement of the following shelters is recommended (Map 25 shows proposed shelter locations, see Pg. 91):

(a) Route 1, 8th Street and 24th Avenue (north side);
(b) Route 1 (old Route 3), 20th Street and 18th Avenue (east side);
(c) Route 2, 11th Street and 6th Avenue (west side);
(d) Route 2, 14th Street and 24th Avenue (south and north side);
(e) Route 5, 5th Street and 30th Avenue (move shelter to south side);
(f) Route 13, University and 3rd Avenue (west side);
(g) Route 13, Renaissance Hall (south side);
(h) Route 14, 15th Street and 27th Avenue (west side);
(i) Route 14, University and 25th Avenue (west side);
(j) Route 16, 2nd Street at Fargo High Rise (north and south side);
(k) Route 17, 20th Street and 3rd Avenue, New Life Center (south side);
(l) Route 22, 9th Avenue and 9th Avenue Circle (south side);
(m) Route 22, 42nd Street and 9th Avenue (west side);

As ridership builds, the following location shows promise for future shelter locations:

(a) Route 3, 32nd Street and 12th Avenue (north and south side).

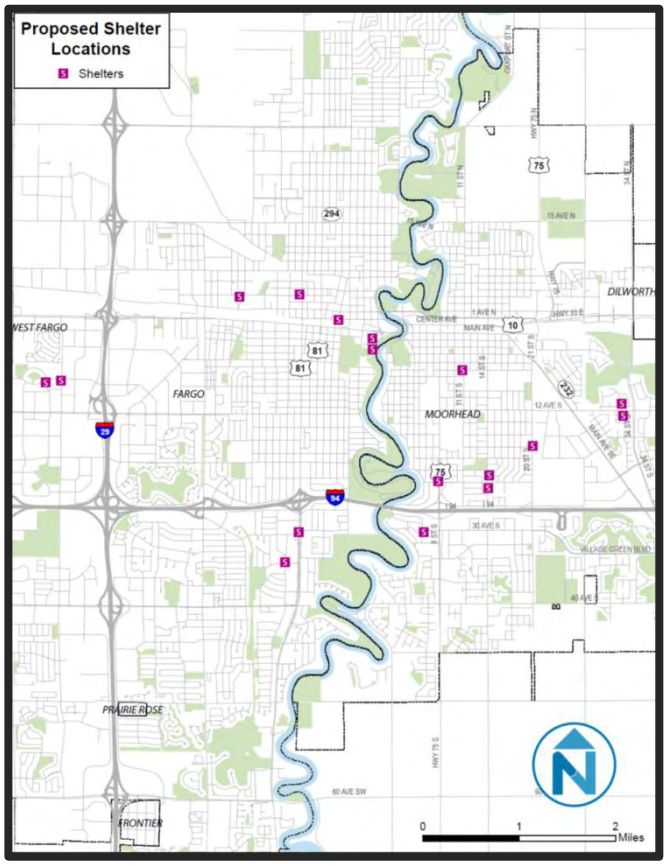
Fixed Bus Stops. With the exception of Routes 1 and 2 in Moorhead and major stops and transfer locations in both cities (Fargo/Moorhead), MATBUS currently operates as a flag-stop system. While there are advantages of a flag-stop system (such as passenger convenience, stop flexibility in inclement weather, ability to easily change route alignments, etc.) fixed bus stops have a number of advantages that outweigh the benefits of flag stops:

(a) **Speed and reliability.** Fixed bus stops spaced evenly along the route removes the uncertainty that the bus could be stopping every block. As a general rule of thumb, stops should be placed on average every 800 to 1,000 feet.

(b) **Branding.** A fixed bus stop is perhaps the best advertising for the system. Bus stop signs should be colorful and include the MATBUS logo, phone number, website and route specific information (as appropriate).

(c) **Understanding of the system.** A fixed bus stop also helps current and potential passengers understand the system. Key stops can also include route information – either in hard copy or via an AVL kiosk.

Map 25 – Proposed Shelter Locations



Source: Nelson/Nygaard;

The TDP recommends that in the long-term MATBUS implement fixed bus stops system-wide. In the short term, fixed stops should be implemented *at minimum* on the highest ridership routes and/or those that are having the most difficulty staying on schedule. Currently, fixed bus stops should be considered for routes 2, 11, 13, 14, 15.

Vehicles. The Route Restructure Scenario does not incur additional costs and thus no additional vehicles are required under that scenario. The Service Expansion Scenario, however, does require ten (10) additional vehicles as outlined in Figure 63. Given the increased ridership levels and the additional dwell time associated with one-door operations of 30-foot buses, the minimum replacement size for Fargo buses should be 35-foot buses. In Moorhead, some of the turning radii on the existing and proposed routes preclude the use of larger vehicles.

Due to recommended frequency improvements on Routes 13 and 15 ("super route") twice as much capacity will be provided in this corridor and thus 40-foot vehicles should be sufficient for the near term. However, as ridership continues to grow on these corridors, larger vehicles could be considered by MATBUS. While MATBUS

does not currently have any 45- or 60-foot vehicles in their fleet, this up-grade may help provide the necessary capacity and service desired on this route alignment.

All of the NDSU routes experience some level of capacity constraints. While the frequency on these routes is good and passengers are not waiting long for the next bus, additional buses are deployed at peak times to deal with heavy boarding activity. Consistent with recommendations regarding Routes 13 and 15, larger 45- or 60-foot buses could be considered on these routes, particularly Routes 32 and 33.

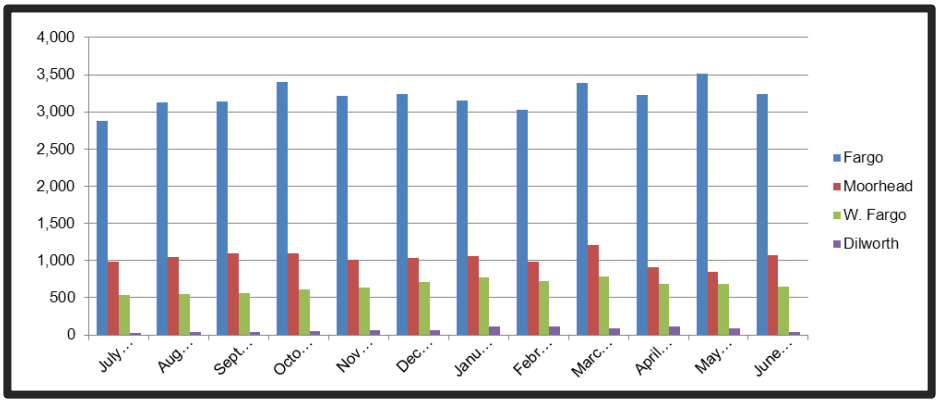
4.0 Paratransit Needs.

This section provides a review of the MAT Paratransit program and identifies potential service needs related to paratransit service. This is not intended to be a detailed evaluation of the MAT Paratransit system. Rather, this section is intended to serve as a high-level overview of existing policies, procedures and performance data to identify any areas that might be considered for improvement. Additional information about MAT Paratransit, including recent performance information, is provided in the Existing Conditions Report (see Chapter 1).

Program Overview. MAT Paratransit is the ADA mandated complementary public transit service for people with disabilities in the Fargo-Moorhead Metropolitan Area. The MAT Paratransit service area includes the city limits of Fargo, West Fargo, Moorhead and Dilworth. The service is intended for people with disabilities who are unable to independently use the MATBUS fixed route system. MAT Paratransit operates during the same hours as the MATBUS fixed route system, though service hours may differ for each participating jurisdiction. In addition, MAT Paratransit operates on Sunday from 7:00 AM – 5:00 PM in Fargo and West Fargo. Because the fixed route service does not operate on Sunday, this additional service is above and beyond what is required by the ADA.

Recent Performance. Based on data from July 2010 to June 2011 MAT Paratransit provides an average of 5,000 trips per month, as shown below in Figure 64. About 65% of the trips are provided for residents of Fargo while 20% are provided for residents of Moorhead, 13% for residents of West Fargo and 2% for residents of Dilworth. Utilization of MAT Paratransit very closely corresponds to the population distribution among the four cities.

Figure 64 – MAT Paratransit Ridership by City, July 2010 – June 2010



Source: Nelson/Nygaard;

As a key measure of productivity, riders per hour of service on MAT Paratransit has remained very stable over the past two fiscal years (July 2009 to June 2011) as shown in Figure65. In fact, productivity has remained around this level since at least 1998 according to data from the National Transit Database (NTD). Given population growth and land use trends in the metropolitan area, maintaining a stable productivity is an excellent trend. Average miles per passenger is an indicator of how trip patterns are changing over time, as shown in Figure 66. Again, average miles per passenger has remained around six (6) miles over the past two years. This has increased somewhat compared to 1998 when the average was about 5.3, which can be expected given growth in the metropolitan area.

Figure 65 – MAT Paratransit Rider Per Hour, July 2009 to July 2011

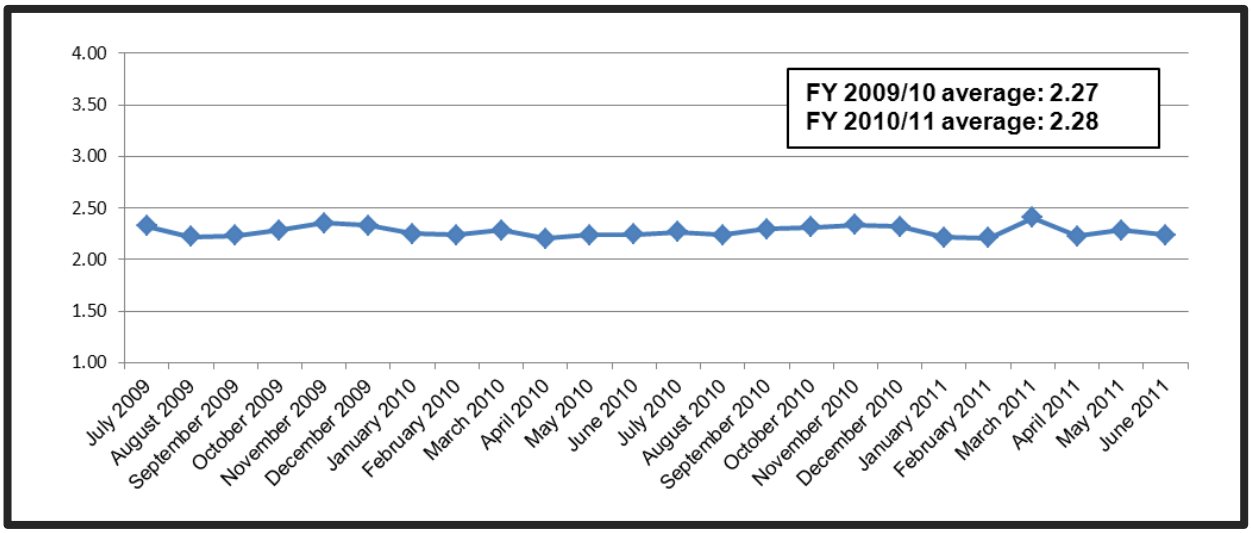
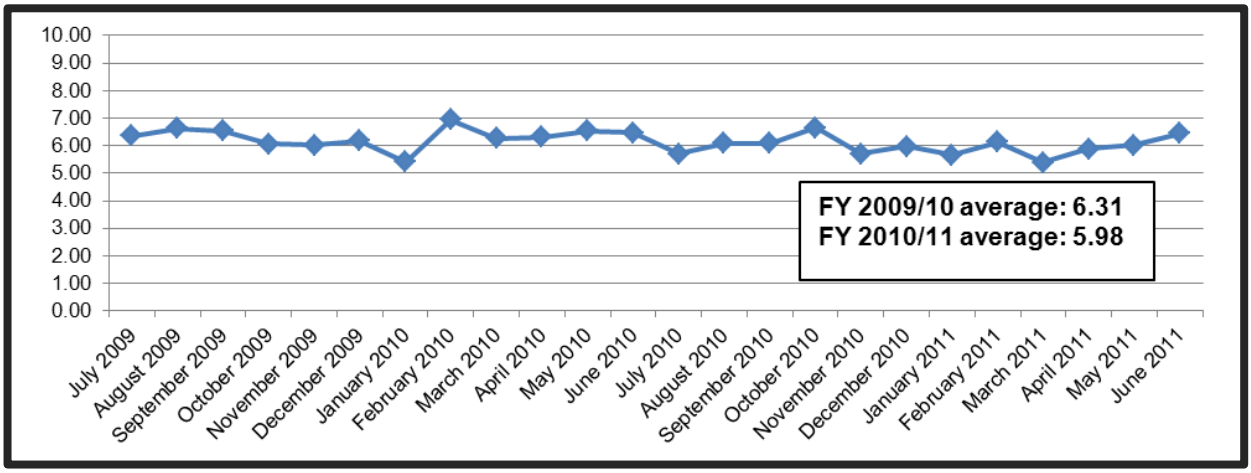


Figure 66 – MAT Paratransit Miles Per Rider, July 2009 to July 2011



Source: Metro Area Transit (MATBUS); Nelson/Nygaard

Administration and Service Agreements. MAT Paratransit is supported by two full-time transit administrators (Fargo and Moorhead), one Mobility Manager, two office specialists (Fargo and Moorhead) and two planners from the City of Fargo. The Mobility Management position is jointly funded by the City of Fargo (2/3) and Moorhead (1/3).

To ensure the mobility needs of the disabled community in the Metropolitan Area are met, several agreements have been established between the cities in the region to provide MAT Paratransit:

(a) **Contract to Operate Services.** All MATBUS fixed route and paratransit services are provided under contract by First Transit. There are 13 lift-equipped paratransit vehicles in the fleet, compared to 32 fixed route vehicles. During peak hours, 10 paratransit vehicles are operating, compared to 24 fixed route vehicles. The existing contract with First Transit commenced on January 1st, 2011 and is in effect until December 31st, 2013. The contract can be extended for up to two one-year periods.

(b) **Fargo and Moorhead Joint Powers Agreement (JPA).** This joint powers agreement stipulates that Fargo and Moorhead will administer and operate MAT Paratransit services as outlined in the agreement. Certification of eligibility (discussed below) is the responsibility of each city, while operating costs for MAT Paratransit will be incurred by Fargo and billed to Moorhead based on ridership. Moorhead and Fargo also share vehicles, maintenance responsibilities, annual grant applications, marketing, oversight of the contract with First Transit, and other administrative duties.

(c) **Fargo and West Fargo Agreement.** This agreement stipulates that all transit service in the City of West Fargo will be provided under contract to the City of Fargo. Paratransit services are reimbursed on a per passenger basis. The agreement also says that West Fargo reserves the right to limit the amount of MAT Paratransit service provided in the city as long as it does not interfere with State or Federal laws.

Eligibility Procedures. MAT Paratransit closely follows the ADA in determining eligibility for paratransit services and every effort is made to ensure that functionally able passengers use the fixed route system instead of paratransit. The eligibility process on MAT Paratransit begins with potential riders completing an application and authorization form. The forms gather important information about the individual's disability and functional ability to use the fixed route system. Each applicant must also have a medical professional complete a Professional Verification of Disability Form. Based on this process, the Mobility Manager and Moorhead Transit Manager reviews applications and determines eligibility, which takes approximately three (3) weeks. Once determined eligible, the user is then issued a Special User Card (valid for 3 years) which states the level of eligibility to use MAT Paratransit. There are four (4) levels of eligibility:

(a) **Fully Eligible.** This category is for users that are permanently disabled and unable to use the fixed route system;

(b) **Conditionally Eligible.** This category allows use of MAT Paratransit for certain trips only, such as at certain times of the day only;

(c) **Seasonally Eligible.** This category allows users in a wheelchair to use MAT Paratransit when ice or snow are present;

(d) **Temporarily Eligible.** This category is reserved for individuals who have a temporary disability, such as for surgery or an accident.

Reservation Procedures. When a passenger calls for a ride on MAT Paratransit the reservationist asks for the desired drop-off time and negotiates a pick-up time with the passenger. Per the ADA, the trip pick-up time can be within one hour (before or after) the desired time and reservations can be made one (1) day to one (1) week in advance. Passengers wishing to ride MAT Paratransit on a regular basis (a minimum of two months) to the same destination can make a subscription reservation. MAT Paratransit enforces their no-show and late cancellations policy (see below).

Cancellation and No Show Policies. No shows and cancellations on paratransit are not only inconvenient for other passengers, but can be costly. MAT Paratransit makes this very clear to existing and potential riders in an effort to maximize the efficiency of the service. As such, passengers must cancel their trip a minimum of two (2) hours before their pick-up time without penalty. If a trip is cancelled less than two hours before the pick-up time, or not cancelled, it is considered a "no show" and the passenger must pay for the ride. Return trips are treated

the same as the initial trip and thus a passenger that makes a round trip reservation and does not cancel both trips incurs two no-shows. If a passenger has four no-shows in a month, they will be suspended from using MAT Paratransit. The first offence results in a suspension of service for one 91) week. For the second offence the suspension is two (2) weeks. Each additional offense adds one (1) more week to the suspension period for a maximum of ten (10) weeks. There are exceptions to the "no show " policy: (a) if the vehicle arrived more than fifteen (15) minutes late and the passenger made other arrangements; and (b) if the reason for the no show is related to the person's disability.

Potential Service Considerations. Based on this high-level overview of MAT Paratransit policies and procedures, as well as an overview of recent performance trends from the past 3-5 years, it is clear that the efficiency of the service is remaining steady despite rising operating costs and increasing ridership. This is an excellent trend and indicative of the fact that MAT Paratransit has been able to adjust to changing conditions. Most notably, MAT Paratransit has made significant strides in recent years in terms of maximizing the use of the fixed route system through their eligibility process. This has largely been a function of the new Mobility Manager and recent travel training efforts that are ensuring that policies and procedures on MAT Paratransit are clear to both agency staff, current passengers and potential passengers.

Based on this overview and a review of public comment received during the initial public involvement phase, no significant changes to MAT Paratransit are recommended at this time. It is important to note that operating costs on MAT Paratransit continue to increase (which is common among all transit providers). As such, the recommendations in the 2007 Paratransit Options Analysis which focused on the rising cost of paratransit services, are still relevant and should continue to be explored. In addition to the recommendations in the 2007 Paratransit Options Analysis several additional considerations are provided to further enhance and support MAT Paratransit services:

(a) **Optimization of Computer Software.** MAT Paratransit uses RouteMatch to schedule trips. While scheduling staff currently utilize the optimization feature of this software to improve efficiency, the software has only been in use for about 1 ½ years and some manual scheduling still occurs. While the use of manual scheduling commonly occurs to account for local operating conditions, reservationists and MATBUS staff should continue to explore ways to improve the optimization feature. One suggestion is to produce a monthly report that presents on-time performance, missed trips, etc. over the past 6-12 months and regularly assess how these measures are trending over time. MAT Paratransit staff should also continue to work with RouteMatch to further optimize the use of the software to meet local needs. Further, MAT Paratransit staff should continue attending training and national conferences to further enhance their knowledge of the software.

(b) **Further Encourage Fixed Route Transit Use.** While MAT Paratransit's current eligibility process closely follows the ADA, there is a growing need to train potential passengers on how to use the fixed route system. MATBUS's Bus Familiarization Workshop which provides travel trainers detailed information on how to use the bus, is an excellent step in the right direction and has been very well received in the community. Over time, however, it is anticipated that the need to train agency staff (and passengers) how to use the bus will grow beyond the capability of existing MATBUS staff. As such, additional MATBUS staff might be considered to assist (or lead) this process.

(c) **Evaluate Service Area Boundary Policies.** Currently, MAT Paratransit's service area includes the city limits of Fargo, Moorhead, West Fargo and Dilworth. As pressures increase to reduce paratransit costs

nationwide, more and more systems are going by the strict definition of the ADA (3/4 mile buffer of a fixed route) rather than using city limits. There is no precedence for which service boundary is "right" – as it remains a policy decision. Many systems extend paratransit service to the city limits rather than adhere to the ¾ mile buffer for several reasons: (a) it's easier to explain; (b) ridership demand may not be much higher outside of the ¾ mile buffer; and (c) there is often political pressure to serve the entire city. To properly inform this decision, it is recommended to conduct a more detailed analysis of boarding activity by location relative to the 3/4 mile buffer around all fixed routes. If there are significant boardings outside of the 3/4 mile buffer this analysis would better inform future policy decisions. In any case, a second recommendation would be to add language to the existing service area criteria to include areas that are outside of the city limits but within ¾ mile of a fixed route, which is mandated by the ADA).

5.0 Modal Integration.

Interagency cooperation and modal integration are the major objectives of the National ITS Architecture. The National ITS Architecture is a tool that is used in transportation planning, programming, and project implementation for Intelligent Transportation Systems (ITS). It is a framework for institutional agreement and technical integration for ITS projects and defines:

(a) The functions (e.g. gather traffic information or request a route) that are required;

(b) The physical entities or subsystems where these functions reside (e.g. an operations center or a vehicle); and

(c) The information flows and data flows that connect these functions and physical subsystems together into an integrated system (e.g. the conveying of vehicle location information to a transit traveler information system).

Because it is highly unlikely that the entire National ITS Architecture would be fully implemented by any single metropolitan area or State, federal policy requires that the National ITS Architecture be used to develop a local implementation of the National ITS Architecture, which is referred to as a Regional ITS Architecture. A FTA grantee needs to be an active participant in the Regional ITS Architecture development and maintenance if the grantee is implementing ITS projects. Correspondingly the grantee's ITS projects must be included in the locally approved Regional ITS Architecture. Metro COG works in cooperation with the Advance Traffic Analysis Center (ATAC) on the maintenance of the Regional ITS Architecture (RA) meeting these requirements.

ITS projects include comprehensive management strategies that apply technologies in an integrated manner. The purpose of ITS integration is to facilitate institutional integration through sharing information and reducing redundant spending between jurisdictions. ITS integration includes both technical and interagency aspects of system development. One example of institutional integration is sharing information between transit and other agencies to improve the speed and schedule reliability of buses on the transportation network. Another type of integration is when agencies use technologies that are compatible with each other, such as traffic signals and vehicle preemption to enable vehicles to travel more efficiently through a specified corridor.

An ITS project is defined in the ITS Architecture Policy Guidance as "any project that in whole or in part funds the acquisition of technologies or systems of technologies that provide or significantly contribute to the provision of

one or more ITS User Services as defined in the National ITS Architecture." There are currently 33 "User Services" organized in eight (8) User Service Bundles, represented within the National ITS Architecture. For example, pre-trip travel information and en-route driver information are two user services under the Travel and Traffic Management user services bundle. Appendix X details the User Services most likely to be implemented by a transit agency.

The National ITS Architecture also defines market packages that collect together several different subsystems, equipment packages, etc. in order to provide a desired service. These market packages provide a good framework for evaluating Metro COG's deployment of transit related ITS projects. The following list identifies the ten (10) public transportation market packages and Appendix X details the scope of each market package and highlights the services provided, ITS Goals met and problems addressed by each market package.

(a) Transit Vehicle Tracking;
(b) Transit Fixed-Route Operations;
(c) Demand Response Transit Operations;
(d) Transit Fare Collection Management;
(e) Transit Security;
(f) Transit Fleet Management;
(g) Multi-modal Coordination;
(h) Transit Traveler Information;
(i) Transit Signal Priority;
(j) Transit Passenger Counting.

Status of MATBUS Transit ITS Deployment. This section highlights the status of public transit ITS deployment in the Fargo/Moorhead Metropolitan Area. The various technologies are discussed in terms of the identified market packages. For each package, a table summarizes:

(a) ITS User Services addressed;
(b) Inclusion in the Regional ITS Architecture[1];
(c) Inclusion in the Metro ITS Plan;
(d) Applicable projects undertaken by Metro COG or MATBUS;
(e) Existing needs and/or issues.

Transit Vehicle Tracking (a).

Applicable User Services:	
Pre-Trip Travel Information	Public Transportation Management
En-Route Transit Information	Public Travel Security
Regional ITS Architecture Transit Elements	
Functional Requirement	**2007 Regional ITS Architecture Status**
The center shall monitor the locations of all transit vehicles within its network.	Planned
The center shall determine adherence of transit vehicles to their	Planned

[1] Sources: Fargo-Moorhead Regional ITS Architecture Version 2.0, December 2007

assigned schedule.	
The center shall provide transit operational data to traveler information service providers.	Planned
Metro ITS Plan	
Vehicle location is a fundamental element of the transit arrival notification system discussed the ITS Plan.	
Applicable Projects	
(a) MATBUS has installed AVL technology on all of its fixed route and paratransit vehicles. (b) Paratransit vehicle schedule adherence is tracked using AVL data. (c) Vehicle location information is presented on real-time displays in the dispatch center. (d) Vehicle location information is presented to passengers at some high-boarding locations. See the Transit Traveler Information market package for additional information.	
Current Needs/Issues	
AVL data is not integrated into the analysis of fixed-route schedule adherence. GTC staff log vehicle departure and arrival times at the GTC, resulting in a check on a route's full cycle time. AVL data is available in the system to provide a more detailed segment-level analysis, but need to pulled out and reported on.	

Transit Fixed Route Operations (b).

Applicable User Services:	
Public Transportation Management	
Regional ITS Architecture Transit Elements	
Functional Requirement	**2007 Regional ITS Architecture Status**
The center shall be able to generate special routes and schedules to support an incident, disaster, evacuation, or other emergency.	Planned
The center shall collect transit operational data for use in the generation of routes and schedules.	Planned
The center shall collect transit management data such as transit fares and passenger use, transit services, paratransit operations, transit vehicle maintenance data, etc. (Part of Transit Data Collection functional area: Collection and storage of transit management data. For use by operations personnel or data archives in the region)	Existing
Metro ITS Plan	
The ITS Plan highlights the large amount of system data that may be collected (specifically AVL, TSP interaction and Boarding) and quickly discusses the potential for enhanced data management integration.	
Applicable Projects	
MATBUS is currently procuring new dispatch equipment to aid its fixed route dispatchers when releasing vehicles (including an improved internal announcement system, customizable automatic public announcements, a new audio system, improved release lights for bus operator usage, etc). It is also procuring digital clocks to be placed in its downtown transfer location, which will be synchronized to digital clocks on board all fixed route vehicles. These features should be installed by the end of 2011.	
Current Needs/Issues	
MATBUS Planning collects operational data from the AVL and farebox systems and uses the boarding and transfer data in its planning process, but manual processing of the data is often required. In addition to the refined schedule adherence analysis discussed in the Transit Vehicle Location market package, measures such as vehicle speeds can be calculated from the AVL data, but MATBUS lacks tools for regularly reporting on these measures.	

Demand Response Transit Operations (c).

Applicable User Services:	
Public Transportation Management	Ride Matching and Reservation
Personalized Public Transit	
Regional ITS Architecture Transit Elements	
Functional Requirement	**2007 Regional ITS Architecture Status**
None Identified	
Metro ITS Plan	
Not addressed	
Applicable Projects	
MATBUS recently completed a complete conversion to a new its paratransit scheduling, accounting and trip management system. The new RouteMatch system facilitates more accurate ridership reports and improved scheduling efficiency.	
Current Needs/Issues	
MATBUS continues to optimize its use of the RouteMatch system as the auto scheduling feature can result in tight schedules.	

Transit Fare Collection Management (d).

Applicable User Services:	
Public Transportation Management	
Electronic Payment Services	
Regional ITS Architecture Transit Elements	
Functional Requirement	**2007 Regional ITS Architecture Status**
The transit vehicle shall read data from the traveler card / payment instrument presented by boarding passengers.	Existing
The transit vehicle shall provide fare statistics data to the center.	Existing
Metro ITS Plan	
Not Addressed	
Applicable Projects	
MATBUS completed an upgrade to its farebox system and all fixed-route vehicles now accept smart cards and TRiM magnetic card transfers. Fareboxes are also integrated with the AVL equipment allowing tracking of boarding activity by stop location. The farebox system is configured such that transfer media are good for one hour and cannot be used on the same route that they were generated on. This configuration is appropriate for MATBUS system in terms of controlling fare evasion and reducing passenger/operator conflicts.	
Current Needs/Issues	
Non beyond maximizing use of data collected by fare system.	

Transit Security (e).

Applicable User Services:	
Public Transportation Management	Emergency Notification and Personal Security
Public Travel Security	
Regional ITS Architecture Transit Elements	
Functional Requirement	**2007 Regional ITS Architecture Status**
The center shall monitor transit vehicle operational data to	Planned

determine if the transit vehicle is off-route and assess whether a security incident is occurring.	
The center shall receive reports of emergencies on-board transit vehicles entered directly be the transit vehicle operator or from a traveler through interfaces such as panic buttons or alarm switches.	Planned
The center shall receive information pertaining to a wide-area alert such as weather alerts, disaster situations, or child abductions. This information may come from Emergency Management or from other Alerting and Advisory Systems.	Planned
The center shall coordinate the response to security incidents involving transit with other agencies including Emergency Management, other transit agencies, media, traffic management, and traveler information service providers.	Planned
The transit vehicle shall perform video and audio surveillance inside of transit vehicles and output raw video or audio data for either local monitoring (for processing or direct output to the transit vehicle operator), remote monitoring or for local storage (e.g., in an event recorder).	Existing
Metro ITS Plan	
The ITS Plan discusses the potential for integrating security devices and making information available to emergency responders.	
Applicable Projects	
(a) All MATBUS fixed route and Paratransit vehicles have security cameras on board to ensure passenger security and to respond to any accidents. MATBUS has also installed digital video viewers in its administrative offices to allow for timely review of video footage whenever necessary. (b) Additionally, MATBUS fixed route and Paratransit vehicles contain DriveCam units, which monitor sights and sounds inside and outside of a vehicle. The system records an event and sends MATBUS administration a message when loud noises are detected, hard acceleration occurs, rapid turns are detected or fast stops occur, etc. (c) Vehicle location information is presented on real-time displays in the dispatch center allowing for manual recognition of vehicles traveling off of intended routes. (d) MATBUS has coordinated with local police departments on radio interoperability for emergencies (e) MATBUS continues to upgrade its video surveillance of transit facilities addressing the security needs of its passengers, employees and assets.	

Transit Fleet Management (f).

Applicable User Services:	
Public Transportation Management	
Regional ITS Architecture Transit Elements	
Functional Requirement	**2007 Regional ITS Architecture Status**
The transit vehicle shall compute the location of the transit vehicle based on inputs from a vehicle location determination function. (Part of On-board Transit Trip Monitoring functional area: Support fleet management with automatic vehicle location (AVL) and automated mileage and fuel reporting and auditing.)	Planned
Metro ITS Plan	
Not Addressed	
Applicable Projects	
(a) See Transit Vehicle Location market package for AVL related projects. (b) MATBUS staff if investigating options for remote monitoring of vehicle status including pre-trip and post-trip inspection data.	
Current Needs/Issues	
None beyond those being addressed by the solicitation for remote monitoring capabilities (e.g. bus pre-trip and post-trip inspection, driver maximum speed, idle time etc).	

Multi-Modal Coordination (g).

Applicable User Services:	
Traffic Control	
Public Transportation Management	
Regional ITS Architecture Transit Elements	
Functional Requirement	**2007 Regional ITS Architecture Status**
None Identified	
Metro ITS Plan	
The ITS Plan highlights the large amount of system data that may be collected (specifically AVL, TSP interaction and Boarding) and quickly discusses the potential for enhanced data management integration.	
Applicable Projects	
None Identified	
Current Needs/Issues	
Multi-modal Coordination includes the coordination of traveler information. State-level 511 systems are intended to provide a "one-stop" entry point for such information via the internet or just dialing 511 on the phone. Historically these have focused on roadway conditions but some integrate transit in better than others, but few achieve the one-stop objective. The Minnesota system has links to public transportation provider contact information on both the web and phone interfaces. The North Dakota web interface has access to the DOT page which then can be navigated to a list of public transit providers.	

Transit Traveler Information (h).

Applicable User Services:	
Pre-Trip Travel Information	Personalized Public Transit
Public Transportation Management	Electronic Payment Services
En-Route Transit Information	Ride Matching and Reservation
Regional ITS Architecture Transit Elements	
Functional Requirement	**2007 Regional ITS Architecture Status**
The transit vehicle shall broadcast advisories about the imminent arrival of the transit vehicle at the next stop via an on-board automated annunciation system.	Planned
Metro ITS Plan	
The ITS Plan calls for the expansion of the transit arrival notification system, adding locations where bus arrival information is presented to riders.	
Applicable Projects	
(a) Kiosks presenting bus location and arrival information have been placed at 4 high-passenger boarding locations in Fargo. Three additional Kiosks are being installed at the NDSU campus, the Microsoft Great Plains Campus, and the Moorhead Marriott transfer location. Displays at the GTC also provide bus location information. (b) MATBUS provides trip planning via a web-based form and email reply. Responses can take up to 48 hours On the average, 18 people use the system per day (c) MATBUS is currently in the process of procuring an automatic announcement system to provide automatic announcements of upcoming bus stop on its fixed routes. The system will comply with Americans with Disabilities Act (ADA) and produce both audio and visual information for passengers. The system is going out for bid in August 2011. (d) MATBUS has installed a public announcement system that enables staff to place important messages regarding service modifications, public information meetings, promotions, etc. on large-screen displays at the GTC. MATBUS staff has access to the system remotely through an internet connection, enabling rapid updates in the event of emergencies or service interruptions. (e) MATBUS has a rider alert system to notify riders about detours, public notices, potential route modifications, the introduction of new routes, promotions, holiday hours through email notifications. Riders sign up for this feature on the MATBUS webpage.	

Current Needs/Issues
(a) The current kiosks are custom units and are configured for operation as specific stops. MATBUS staff is required to visit kiosk locations to reconfigure the units whenever schedules are revised. As a result, staff is looking for alternate rider information platforms and not looking to deploy additional kiosks. (b) The email-based trip planning system may not be attractive to many passengers and potential riders. MATBUS staff is looking to implement Google Transit by the end of the year to provide a more interactive and responsive system. (c) See the Transportation Demand Management (TDM) section of a discussion of ridematching needs for shared rides.

Transit Signal Priority (i).

Applicable User Services:	
Traffic Control Public Transportation Management	
Regional ITS Architecture Transit Elements	
Functional Requirement	**2007 Regional ITS Architecture Status**
The transit vehicle shall send priority requests to traffic signal controllers at intersections, pedestrian crossings, and multimodal crossings on the roads (surface streets) and freeway (ramp controls) network that enable a transit vehicle schedule deviation to be corrected.	Planned
Metro ITS Plan	
The ITS Plan notes that Metro COG was studying TSP at the time the ITS Plan was being released. It suggested an update to the Plan to detail a roll-out plan if the TSP System was found to be beneficial	
Applicable Projects	
The two-phase evaluation study highlighted that active TSP, along with improved signal timing, will improve schedule adherence for transit vehicles. Subsequently, MATBUS has placed Opticom TSP emitters on all vehicles in the Fargo fixed route fleet. TSP detectors are currently installed along most major streets in Fargo; however only routes 11 and 12, along those serving NDSU via Albrecht Blvd. & 12th Ave. N. utilize the limited green light priority. TSP is improving runtimes between 1.5 and 2 minutes per run on these select routes.	
Current Needs/Issues	
Full deployment of TSP is not currently feasible as a few intersections approaches used by buses in Fargo do not have Opticom detectors. And the signals in Moorhead use a sound actuation system making them incompatible with Opticom infrared system used in Fargo.	

Transit Passenger Counting (j).

Applicable User Services:	
Public Transportation Management	
Regional ITS Architecture Transit Elements	
Functional Requirement	**2007 Regional ITS Architecture Status**
Non Identified	
Metro ITS Plan	
Not Addressed	
Applicable Projects	
Recent upgrade to farebox system and its integration with the AVL system provide stop-level boarding data.	
Current Needs/Issues	
None beyond improved reporting of boarding data from AVL and farebox systems.	

Recommendations. Metro COG and MATBUS have been effective in implementing ITS projects to improve operations and passenger convenience. The scale of these technological solutions has been appropriate for the size of MATBUS operations and needs. Recent and planned investments have addressed or will address many of the needs and issues raised in this section, the Issue Identification and Needs Assessment (Chapter 2) and Public Input Summary (Chapter 11, Phase I). This section summarizes a set of suggested strategies that should be considered going forward.

1. **Enhance Transit Traveler Information.** MATBUS should carry out the changes it's considering for both the pre-trip planning services and for the real-time bus arrival system. The decision to use Google Transit is a sound one. Google Transit is becoming a de facto industry norm from many transit agencies. This application allows users to view schedules and do automated trip planning from the internet and mobile devices. MATBUS is currently conducting the labor and time intensive task of putting route and schedule information into the required formats. Upon completion of this task, future maintenance will be limited to updates in response to schedule or route changes.

   MATBUS has investigated third-party services to report real-time bus location information and next arrival times. The current system has limited benefits to passengers (e.g. a rider cannot check for an arrival time before leaving for any bus stop – a real disadvantage in the winter) and MATBUS staff spends a significant amount of time configuring the current Kiosks. There is a trend in the industry to move away from "push" systems where information is delivered to passenger locations to "pull" systems where customer and potential customers request information from the internet, mobile devices, or telephones. The later approach saves on stop-level displays (typically only installed at major transit facilities) and can greatly reduce reoccurring communication costs if delivering data to numerous stops.

   Service providers such as NextBus and TransLoc actively manage the reporting of an agency's AVL data and present it to passengers via the Web or mobile phone applications. These services focus on the transit industry and the presentation of location data to the general public, including the maintenance of smartphone apps. Fleet management service providers can process similar data but they have traditionally focused on systems for operations staff, not the public. Any of these services can be costly running more than $50,000 per year. But these costs need to be compared to those for maintaining the current deployment of Kiosks and Displays. The services can also provide reports showing route- and stop-level schedule adherence performance (see below).

   Alternatively, Google Transit is just conducting Beta testing on "Live Transit Updates" which is their approach to reporting real time information and service alerts on the same platform as they have for trip planning. Assuming application proceeds, they will develop a set of standards for transit agencies to follow when feeding their AVL data. MATBUS will probably require some one-time assistance to provide the AVL data in the proper format, but the costs for ongoing maintenance of this approach should be much lower than those associated with a managed service provider.

2. **Enhance Operations Data Reporting.** MATBUS staff should pursue systems that provide route segment-level schedule adherence reports on a regular basis. Staff is investigating two services related to vehicle arrival prediction (e.g. Nextbus and TransLoc) as well as those associated with remote fleet monitoring (e.g. Zonar). Each has some reporting capability and their ability to provide performance monitoring and planning-level data on fixed-route schedule adherence should be considered in the final procurement of

each system. Similarly, MATBUS should consider the development of standard reports that analyze AVL and farebox data for planning proposes. This should reduce the effort to generate stop-level and transfer data in support of ongoing system reviews and special projects.

3. **Expand use of TSP.** As identified in the needs analysis for this TDP several high-traffic corridors should be considered for TSP. Identified corridors in Fargo included 13th Avenue and the signalized exit at the GTC. This will require continued coordination with the City of Fargo to address the availability of detectors on all applicable approaches and verification that intersection operation and cross traffic will not be unduly impacted. Currently the use of TSP is allowed at the operator's discretion when driving a vehicle with the feature enabled. As more routes are enabled, MATBUS may want to consider policies to provide additional guidance such as only using when behind schedule. Metro COG and MATBUS will need to monitor the potential for TSP in Moorhead in efforts to address the incompatibility in traffic control systems.

4. **Further Coordination on 511 Systems**. Metro COG and MATBUS should work to promote MATBUS to new riders though the states' 511 system. This would be part of a long-term endeavor to keep public transportation included in all traveler information systems. Advocating for these improvements may be best done through the broader Dakota Transit Association and Minnesota Public Transit Association networks.

6.0 Transportation Demand Management (TDM) Strategies.

Overview. Historically, transportation solutions have tended to focus on the "supply side" of transportation questions. That is, "how many more roadway lanes should we add to accommodate 20,000 more residents or 10,000 additional commuters?" Or, "how much additional parking will be needed to accommodate all potential drivers?" Supply side solutions are capital intensive and require significant investments in infrastructure. Transportation Demand Management (TDM) on the other hand, considers the "demand side," posing a very different set of questions, such as: "What effect would a parking price increase have on the use of alternate modes of travel?" or "Does the current highway have enough capacity if ten percent of the commuters are encouraged to carpool or work at home one day a week?" Managing demand makes the best use of supply by maximizing unused capacity through pricing and incentive strategies. TDM strategies typically require behavioral changes, such as modifying how or when someone commutes to work.

TDM strategies manage or influence how residents and employees use the transportation system in order to increase overall system efficiency. TDM strategies aim to shift single-occupant vehicle (SOV) trips to other modes of travel such as transit, carpooling or bicycling or out of peak travel periods when roads are most congested. By reducing auto trips TDM solutions reduce total vehicle miles residents travel to accomplish their daily needs and help address regional congestion, air quality and energy consumption goals. This is generally accomplished by increasing travel options, providing incentives and information to encourage and help individuals modify their travel behavior, or by reducing the physical need to travel through use of technology or neighborhood design. TDM programs are usually implemented by public agencies, employers or via public-private partnerships. This section presents an overview of TDM issues and considerations. Subsequent sub-sections explore TDM guiding principles, effective strategies and considerations for Metro COG and MATBUS.

TDM Planning Principles. *TDM is About Providing Options*. One of the clearest lessons of modern urban transportation systems planning is that no single solution works for everyone in every instance. Different

solutions may work better for the same individual on different days. TDM is about providing people with more transportation options to choose from and leveling the economic playing field between those choices. It is not about "forcing" people to do one thing or another. The modern American transportation system, however, often provides travelers with only one viable "choice": driving alone. TDM approaches seek to broaden the available choices.

Information is Critical to Change. People must be informed about their transportation choices in order to make them. Many people are not aware of existing bus lines which could serve their needs. People may also have heard negative comments about bus service, carpooling, bicycling, etc. While there are negative aspects of all travel modes, hearing negative comments about a mode that a person has not used, can effectively dissuade behavior change. Inertia plays a large role in people's travel patterns. People become used to, and comfortable with, the mode they use most often. They become comfortable with the advantages and disadvantages of that mode, whether it is traffic congestion or the occasional late bus. Since the most common mode for the majority of travelers is the Single Occupant Vehicle, accurate, easy-to-obtain, and easy-to-understand information about alternatives is vital to overcoming this inertia.

It is Often More Cost-Effective to Better Manage Existing Resources than to Add More Capacity. The first strategies that should be examined are those that seek to make better use of existing resources be they roadway lanes, transit vehicles or parking supply. The provision and promotion of alternative transportation modes are not free and may involve substantial investment but can often increase overall mobility for less than adding supply, especially when considering all the direct and indirect/external costs.

Common TDM Strategies.

Financial Incentives. This category either reveals the true cost of driving to the workplace or makes non-SOV options relatively cheaper for the employee to use. Examples include:

(a) Transit Subsidies. Provision of free or subsidized transit passes, vanpool vehicles or fares and/or shuttle services to reduce the cost of these high-capacity modes and create cost-competitive alternatives that make SOV commutes seem more expensive by comparison;

(b) Pre-tax Benefits. Allowing employees to withdraw money from their paychecks before taxes are deducted for use toward the purchase of transit passes, vanpool fares or cycling gear;

(c) Realizing the True Cost of Parking. While employers may provide free parking, parking is never free. Programs that charge for parking or allow employees to realize employer paid parking as a benefit are very effective strategies for reducing SOV trips;

(d) Overall Incentives to Reduce Parking. Allowing employees to purchase individual days of parking on a pro-rated basis comparable to monthly rates; providing a few free days of parking each month for employees who usually commute using a non-SOV mode; offering lower parking rates to carpools and vanpools; offering cash in lieu of free parking (parking cash outs) and allowing employees to make the choice.

Facilities and Services. This category of strategies provides the necessary facilities, services or infrastructure to make non-SOV commute options more appealing and viable. Examples include:

(a) Vanpools, Shuttles, and Car-sharing. Provision of free vanpool vehicles, shuttle services or car-sharing programs for employees so they do not need to bring a private vehicle to work;

(b) Guaranteed-Ride-Home. This benefit allows for a set amount of free taxi rides or use of car-share vehicles for unplanned trips home that cannot be accommodated by the employee's normal commute mode (e.g. working late past last scheduled bus, carpool driver with sick child at school, etc). The presence of a Guaranteed Ride Home (GRH) benefit is often enough to alleviate fears of being stuck, resulting in increased use of shared rides and most programs see limited use of the actual benefit;

(c) Bike and Walk Facilities. Secure workplace parking for bikes, as well as shower and locker facilities that can also be made available for those who walk to work;

(d) Preferred Parking for Carpoolers. Provision of preferred spaces for carpool and vanpool vehicles.

Flexible Scheduling. This strategy allows employees to reduce their number of weekly commute trips and shift work trips to non-peak hour times of day. Examples include:

(a) Telecommuting. Allowing employees to work from home or a non-office location one or more days a week;

(b) Compressed Workweek. Enabling employees to compress regularly scheduled hours into fewer work days per week;

(c) Flexible Schedule. Allowing employees to offset work hours from the typical 9-5 standard and shift commute travel to off-peak hours.

User Information. Employers and academic institutions can provide information on available alternatives to driving alone, through: (a) designated Employee Transportation Coordinator; (b) use of print marketing; (c) information kiosks; (d) ridematching services; (e) websites; and/or (f) participating in employee-oriented informational/ educational sessions on available transportation options. Employers can benefit if they are able to reduce the number of employee parking stalls they are required to provide.

Organizational Infrastructure. Transportation Management Associations (TMAs) offer customized commute planning, commute benefits consultations and information on ridesharing, transit, and non-motorized transportation free of charge to all businesses. These TMAs partner with governments and transit agencies to develop programming, marketing and incentive programs for employers and employees alike. These organizations represent opportunities to broaden the reach of TDM programs and bolster

Effects of TDM Programs. Figure 68(Pg. 107) provides a brief overview of the effectiveness of various transportation demand management strategies which are often quantified in terms of the reduction in vehicle trips. Reducing the number of vehicle trips has benefits such as reduced congestion and can translate into increased use of alternative forms of transportation, including transit. The table highlights that the strategies that offer financial incentives or increase the cost of driving tend to provide the greater impacts. Appendix 1.0 provides additional information on the effectiveness of TDM strategies.

Figure 67 – MAT Impact of Selected Employer-Based TDM Strategies

Strategy	Details	Employee Vehicle Trip Reduction Impact
Parking Charges[1]	Previously Free Parking	20-30%
Information Alone[2]	Information on Avalable SOV- Alternatives	1.4%
Services Alone[3]	Ridematching, Shuttles, Guaranteed Ride Home	8.50%
Monetary Incentives Alone[4]	Subsidies for carpool, vanpool, transit	8-18%
Services + Monetary Incentives[5]	Example: Transit vouchers and Guaranteed Ride Home	24.5%
Cash Out[6]	Cash benefit offered in lieu of accepting free parking	17%

1 Based on research conducted by Washington State Department of Transportation.
2,3, 5 Schreffler, Eric. "TDM Without the Tedium," Presentation to the Northern California Chapter of the Association for Commuter Transportation, March 20, 1996.

4 Washington State Department of Transportation

6 Donald Shoup (1997), "Evaluating the Effects of California's Parking Cash-out Law: Eight Case Studies," Transport Policy, Vol. 4, No. 4, 1997, pp. 201-216. http://www.commuterchallenge.org (accessed November 2, 2007)

Metro COG and MATBUS TDM Opportunities. The table in Figure 68 indicates the potential responsibilities and roles for MATBUS, Metro COG and individual employers/institutions for each of the major TDM strategies. The table also highlights the level to which the strategies are currently being acted upon in the Metropolitan Area. Many of the actions are typically the responsibility of large employers, business associations, or large institutions. Without regional or state incentives to reduce automobile use, support for TDM solutions often correlates to the presence of parking constraints. Transit agencies and local governments can promote and facilitate TDM programs and are often looked to as providers of high-quality transit as an option to driving alone.

Figure 68 – TDM Strategy Roles and Status

TDM Strategy	Potential Roles and Responsibilities			Current Status
	MATBUS	Metro COG	Employer/Institution	
Financial Incentives				
Transit subsidies	Bulk sale agreements with academic institutions and employers		Contracts with MATBUS for bulk purchases of passes and further subsidies for employees and students	Concordia, MSUM , NDSU (students, faculty and staff) and M-State (students) participate in U-Pass program. Sanford Health also participates in bulk pass purchase program (M3TRO) for employees.
Pre-tax benefits	MATBUS passes are available via Commuterchecks		Employers can make transit passes available to employees on a pre-tax basis (via payroll deduction). Employees can do directly or pay Commuterchecks, Wageworks or similar services a fee for administering pre-tax	Little to no passes are sold through Commuterchecks

TDM Strategy	Potential Roles and Responsibilities			Current Status
	MATBUS	Metro COG	Employer/Institution	
			pass sales.	
Realize true cost of parking	MATBUS can work with employers looking to manage parking and assure a quality level of transit service is provided to the worksite where possible		Employers can set up parking cash out programs to allow employees the option to pay for parking and/or pass on any costs attributable to individual parking spaces	Non Identified
Incentives to reduce parking demand				
Facilities and Services				
Vanpools	MATBUS could administer regional vanpool program	Metro COG could administer regional vanpool program	Individual employers could administer a vanpool program (or contract with a service provider (e.g. VPSI, Enterprise)	The region has tried to promote vanpools in the past, but interest was minimal and there are no current vanpools.
Shuttles	MATBUS could operate site specific shuttles		Individual employers could identify and fund worker shuttles based on employee home locations and shift times.	
Carsharing			Individual employers could subsidize employee costs if a carsharing program is deemed feasible.	
Carpooling		Metro COG could administer a regional carpooling program	Individual academic institutions could administer a carpooling program for their students, staff and faculty.	No formal carpooling programs exist in the Metropolitan Area.
Guaranteed Ride Home	MATBUS offers a GRH benefit to pass holders.		Individual employees could subsidize taxi trips for employees using other shared ride options.	GRH is available to all transit pass holders and carpool participants, but the benefit in not being used by eligible participants
Bike and pedestrian facilities			Individual employers could invest in bike and ped amenities to promote these alternate modes of travel	
Flexible Scheduling				
Telecommuting			Individual employees could facilitate non-traditional work schedule to reduce peak SOV travel	
Compressed workweek				
Flexible schedules				
User Information				
Transportation options campaigns	MATBUS and Metro COG have worked with businesses and academic institutions to build support for transit and explore other options.		Individual employers could establish transportation coordinators to administer internal TDM	U-Pass program has generated custom outreach material promoted at higher education intuitions

TDM Strategy	Potential Roles and Responsibilities			Current Status
	MATBUS	Metro COG	Employer/Institution	
Outreach events			programs and promote transportation options.	MATBUS recently promoted the U-Pass and transit in general as part of a large advertising campaign aimed at NDSU students, staff and faculty. MATBUS is ramping us a business outreach project this summer
Organizational Infrastructure				
TMAs	MATBUS could work with a potential TMA to address the TMA's needs in future route planning, set up and operate special shuttles and set up bulk pass purchase programs for the association		Individual business could help form a TMA and financially support it in order to provide transit/vanpool subsidies and shuttle services	

Source: Metro Area Transit (MATBUS); Nelson/Nygaard

TDM Recommendations. TDM programs are typically pursued in areas associated with traffic congestion and/or parking constraints. TDM strategies perform the best where high levels of transit and other modes are available as options. In the urbanized area, these conditions can be associated with the downtown cores and areas around the academic institutions. The U-Pass and Stanford Health M3TRO pass programs help shift travelers to transit in what is otherwise a car friendly environment. MATBUS has also implemented a system-wide Guaranteed Ride Home program – somewhat unique in terms of its breadth of coverage. This section summarizes a set of suggested strategies that should be considered going forward to expand on these successes and move additional travelers to alternate modes of travel.

1. **Expand employer programs:** MATBUS and Metro COG should continue working with additional employers, focusing on those along transit routes and with parking constraints where appropriate. This outreach should:

    (a) Identify additional partners for bulk pass purchase agreements;
    (b) Encourage the establishment of financial incentives for using alternative modes including transit tax benefits and realization of parking costs/savings;
    (c) Identify potential needs for vanpools and/or employee shuttles (i.e. where shift times or dispersed employee home locations are not conducive to using MATBUS); and
    (d) Provide general information of MATBUS services.

    MATBUS staff have reviewed pricing options for employer bulk pass programs and have suggested an approach common in the industry where MATBUS should remain revenue neutral (i.e. collecting an amount equal to what employees would generate in fares without the bulk purchase program). They recognized that the current ridership to a site may not be obvious and that employers would want to fund the program commensurate with the benefits they and their employees would receive. Appendix C presents a summary of approaches used to price passes based on potential use (via employee surveys or level of service available to worksite).

2. **Investigate carpooling programs:** Without severe traffic congestion or high parking costs, carpooling has not been in high use in the Metropolitan Area. But as seen with the U-Pass program, the academic institutions create demands for non-SOV travel. Zimride is a relatively new service provider that has focused on carpooling at Universities. They and other ridematching applications are incorporating social networking tools into the process, attracting younger participants. The use of social networking sites also adds component of real-time ridematching as high numbers of students and staff can offer, and check for, rides on an impromptu basis. This can help promote the use of transit as some students may take transit to class knowing they may have an easier time to carpool back if they don't want to wait for a later bus. These services do charge for their applications and support. The Zimride package normally costs around $1,000 per University client. They are just starting to offer the service to municipalities and a Metropolitan Area, or four-campus package may be available. An independent service provider could also help determine the demand for carpooling in the Metropolitan Area.

3. **Investigate carsharing programs**: Similar to carpooling, universities are looked at as good markets for carsharing, especially if driving alone is either costly or inconvenient. Zipcar is an example of a nationwide service provider with a number of University clients. The costs for carsharing are borne by the program participants with some subsidies by employers. Similar to carpool service providers, a carsharing firm/organization may be interested in determining the local demand and feasibility for carsharing in the region or at campus locations. This is likely a longer-term need based on the growth of the campuses and the downtown cores.

4. Monitor demand for vanpools: While the past demand for vanpools has not been evident, this may change over time. A number of stakeholders expressed interest in serving the Industrial Park, but traditional bus service has not proven to be viable for this destination. The Industrial Park may benefit from the establishment of a Transportation Management Association (TMA) in order to represent multiple employers and allow for the aggregation of public transportation demand. Metro COG and MATBUS should work with large employers in the industrial park and other worksite concentrations to determine the feasibility of TMA formation and vanpool services. Private vanpool providers (e.g. VSPI and Enterprise Rideshare), may be willing to provide ridematching analysis at worksites as part of their feasibility evaluation.

5. **Parking demand:** Strive to integrate transit investments into all comprehensive land use planning efforts (Comprehensive Plans, downtown plans , etc.) to reduce parking demand along major transit corridors. Examples could include parking maximums instead of minimums, shared parking, parking cash out, and parking pricing. Primary targets should include the two downtown areas and colleges/universities where parking is likely to be constrained sooner than in other areas.

Higher Education
Institutions and U-Pass
Program

1.0 Context.

30 Series. Prior to discussing the UPass program it is important to understand the context of transit service in regards to North Dakota State University. NDSU has the highest level of transit service in comparison to other Metropolitan colleges/universities; however, a critical factor to acknowledge is that the operating costs for the 30 Series (which includes Routes 31, 32, 33, 34 and 35) is covered by NDSU through a JPA with the City of Fargo. Readers should reference Figure 5 (Pg. 12) or Figure 89 (Pg. 140) for specifics on NDSU annual system contributions. In addition, NDSU has provided funds for required 'local match' to purchase buses for these routes, a contribution as recent as 2009. Additional details regarding NDSU contributions per student are highlighted within other sections of this chapter.

UPass Overview. The following details characteristics of the current Metro Area Transit (MATBUS) U-Pass program, provides case studies of other educational institution's U-Pass programs and provides analysis and recommendations for future policy changes to address increasing demand and growth in the program.

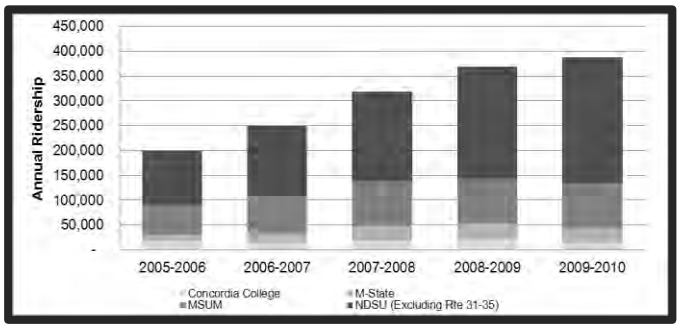
MATBUS provides service to several higher education institutions within Fargo and Moorhead. Students, faculty and staff at these colleges and universities have been using public transit in steadily increasing numbers over the past several years, warranting the need for MATBUS to reassess how to handle this increased demand of students and to ensure they are being adequately compensated for the services provided to the educational institutions.

Presently, students from four colleges in the metropolitan area are offered the U-Pass through a bi-annual financial contribution to MATBUS that is assessed to each of the respective higher education institutions. These institutions include:

(a) Concordia College (Moorhead, MN)
(b) Minnesota State Community and Technical College (M-State, Moorhead, MN)
(c) Minnesota State University – Moorhead (MSUM, Moorhead, MN)
(d) North Dakota State University (NDSU, Fargo, ND)

Figure 69 provides a basic summary of general ridership growth over the past five years from these four higher educational institutions. Of these four institutions, NDSU in Fargo is the largest and has the highest level of annual transit ridership. It also has the highest level of transit service measured by annual service hours for routes directly serving campus. The other three institutions are in Moorhead, and have substantially less ridership. Figure 70 (below) provides a summary of each higher education institution and a basic summary of ridership and service.

Figure 69 – Ridership for UPass Institutions (2005-2010)



Source: Metro Area Transit & Nelson/Nygaard

Ridership for Routes 31-35 are not reflected in this figure as these services primarily serve NDSU's campus

Figure 70 – Summary of Current UPass Participants

Annual ridership (2009-2010)	Concordia College	M-State	MSUM	NDSU
	15,167	29,081	89,868	253,882

Source: Metro Area Transit (MATBUS) & Nelson/Nygaard
Time periods reflect academic years

The current methodology to determine the financial contribution is consistent across the four institutions and enables all currently enrolled students, faculty and staff to ride MATBUS free of charge. The methodology used to calculate the financial contribution from each institution is described below:

1. Each institution determines the number of full time equivalent (FTE) students plus full time faculty/staff near the beginning of the fall semester;
2. The total from step one (1) is then multiplied by $6.00 per person to determine the actual amount.

This basic methodology produces a final annual amount that each institution contributes to MATBUS, typically on a bi-annual basis in November and March (agreements negotiated prior to fall semester). While this amount has been sufficient in past years, it is not necessarily in alignment with MATBUS' internal cost recovery and payment per ride goals and targets. In discussion with MATBUS staff, it was noted that the system has a cost recovery goal of 15% and also hopes to achieve a fare payment of approximately $0.75 per ride. These specific goals are important to consider when investigating potential restructuring of financial contribution agreements from each educational institution. New financial agreements should be structured to consider MATBUS financial goals as a basis for setting fees for transportation services.

2.0 Current UPass Policies.

Based on the present methodology, each of the four institutions contributes different net amounts to receive the benefits of the U-Pass program. However, the per person contribution (FTE student, faculty and staff) is held constant at $6.00 per individual. Given these inputs, the reported 2010-2011 financial contribution for each of the higher education institutions is presented in Figure 71.

With respect to service, the annual financial contributions are based on reported FTE students, faculty and staff which are not necessarily correlated to actual ridership or the costs to provide service. Thus, differences may exist between the amount of the financial contribution and the actual level of service provided by MATBUS. This difference between the contract amount and the equivalent paid service is also noted in Figure 71.

To determine the difference between the financial contribution from each institution and the value of equivalent paid-fare services received, MATBUS developed an estimated "value of rides" amount for each institution. This amount is developed by taking the projected year-end ridership and multiplying this by an average cash fare. The difference is then calculated by taking this "value of rides" figure and subtracting it from the actual financial contribution amount. Average cash fare for Concordia College, MSUM, M-State are $1.25, $0.62 and $0.76 respectively. MATBUS's information did not present an average fare for NDSU. Given this information, Concordia College paid approximately $850 more than an equivalent amount of paid fare service whereas MSUM and M-State received approximately $9,500 extra in value of services on top of their financial contribution.

Why $6 per individual?

Originally, the contribution per student amount was set at $3 per student. This number was selected based on the amount needed to fill a funding gap based on other local funding sources in order to provide transportation services. While the funding generated by this fee (and its subsequent increases to $6/FTE student, faculty and staff) have worked well for some time, it is important to know that the fee was "backed into" and not determined by a specific methodology or by agency goals.

It is important to note that NDSU provides an annual contribution to MATBUS through a joint powers agreement to operate the 30 series campus circulator routes. In addition, NDSU provided a capital contribution of $321,000 in 2009 (local match). Based on these contributions NDSU's per student contribution (inclusive of UPass contribution) in 2010 is approximately $45 whereas other colleges/universities whom contribute (only) through the UPass program equates to $6 per FTE student. Readers should keep this in mind as they review alternatives and discussion detailed within this section.

Figure 71 – 2009 to 2010 Reported FTE (Students/Faculty/Staff) and Financial Contributions

2009 to 2010	Concordia College	MSUM	M-State	NDSU
Reported (FTE students/faculty/staff) for each institution (2009-2010)	3,300	7,667	2,083	15,407
Cost per Individual	$6.00	$6.00	$6.00	$6.00
2010-2011 Annual Financial Contribution	$19,650	$46,000	$13,620	$92,442
Difference between financial contribution amount and equivalent value of service*	+$841.25	-$9,446.56	-$9,601.56	N/A

*Equivalent paid service is based on 2009-2010 actual ridership and an estimate of average cash fare value per ride as provided by MATBUS. A negative amount equates to a better value to the educational institution on a per ride basis. Time periods reflect academic years.

Data source: Metro Area Transit (MATBUS)

2.0 Financial Agreements.

Formal financial agreements between universities and transit operators are common and vary in length and content. (This may be observed among the partnership agreements found in Appendix X). Because these documents involve the exchange of monies they are considered legally-binding contracts, and as such contain several key components. Most formal educational institution agreements feature the following elements:

(a) **Recitals**. This section typically contains several clauses outlining the mutual goals shared by the university and the transit provider in implementing a U-Pass program.

(b) **Scope of Agreement**. Outlines a brief summary of the agreement and identifies primary responsibilities of each party.

(c) **Financial Arrangement / Compensation.** Includes an identification of reimbursement values to be paid on a yearly or bi-yearly basis and additional information such as a yearly recalculation based on CPI adjustments (as found in the UCSC agreement).

(d) **Term and Termination**. Identifies the length of the contract, effective date and instances when termination of the agreement may be allowed.

(e) **Insurance / Liability**. This section identifies the legal responsibilities of each party in event of an accident or incident. MATBUS should consult with its legal counsel to determine relevant agreement language.

(f) **Other / Optional Sections**: This section may include details about how the pass is to be produced and issued, how the contract may be modified depending on ridership recalculations, and any service

modifications requested by the university. Specific methodology alternatives and recommendations for future MATBUS U-Pass agreements are outlined within Section 6 of this Chapter 5 (see pg. 123).

In Fargo and Moorhead each educational institution has an established (and separate) annual agreement with their respective City for contracted financial contributions. Important to note is that the level of detail and specificity in the agreements between the cities and the four institutions are not consistent. As an example, the agreement for transit services between Fargo and NDSU and between Moorhead and MSUM provide a high level of detail/specificity; whereas the other agreements do not.

All agreements state that free transit rides will be provided to the respective institution's students, faculty and staff provided that an up-to-date identification card (with the current year) is presented on the bus.

Figure 72 provides a summary of key components of each of these U-Pass agreements.

Figure 72 – Summary of Key Components of U-Pass Agreements

Elements	Concordia College	MSUM	M | State	NDSU
Recitals	X	X		X
Scope of Agreement	X	X	X	X
Financial Arrangement	X	X	X	
Term and Termination	X	X	X	X
Other (Methodology for Contract Amount)				X
Other (Clause for contract modification)		X		X

Data source: Metro Area Transit (MATBUS); Nelson/Nygaard

3.0 <u>Case Studies</u>.

The following case studies were conducted to provide insight into the structure of U-Pass programs at other educational institutions. Schools examined include: (a) University of California, Berkeley; (b) University of California, Santa Cruz; (c) Chico State University; and (d) University of Michigan. While the exact characteristics of these universities may not match those in Fargo and Moorhead per se, agreement context and disparities within do provide additional perspective on development and implementation of U-Pass policies.

A more comprehensive list of cities is included as Appendix 3.0. The appendix includes additional information on U-Pass agreements, methods of payment and administrative history for seventeen (17) colleges and universities in nine (9) cities nationwide (Fargo and Moorhead institutions are included for comparative purposes). Appendix X contains sample U-Pass partnership agreements including the contract between Santa Cruz METRO and the University of California, Santa Cruz and a template used by AC Transit in Oakland, California for potential university U-Pass agreements.

UC Berkeley: Class Pass Program. At the University of California, Berkeley all registered students are eligible to receive a Class Pass. The Class Pass enables students to ride AC Transit local, Transbay buses and Bear Transit shuttle routes free of charge. The Class Pass is a sticker that is affixed to a student's UC Berkeley student ID card. When boarding the bus students show the bus driver their ID card with the sticker to ride free of charge. The Class Pass is funded by a $69.50 portion of each student's registration fees each semester.

The Class Pass program which began as a pilot program in 1998 appears to have had a profound effect on the campus' mode split: the overall student transit mode share has grown from 14% in 1997 to 27% in 2008 while the student drive-alone share fell from 16% to 7% during the same period. The vast majority of the growth in student transit mode share occurred due to increasing (student) use of AC Transit: 20% of UC Berkeley students now commute by AC Transit according to the most recent survey of student commute patterns.[2] The Class Pass program now serves more than 6,900 student commuters daily. In the 2009-2010 academic year the University paid AC Transit $2,278,650 for the Class Pass program while students paid $4,695,400 in Class Pass fees which includes other services such as the night safety shuttle. This computes to a cost per commuter served of $330 per year.

The class pass program also provides substantial benefit to many students who do not commute by AC Transit but who use it for many other types of trips. While 6,900 students commute by AC Transit a total of approximately 33,000 students claim the Class Pass which allows students an opportunity to meet their transportation needs without having to bring a car to campus.

Compared to the cost of accommodating a single commuter by providing a new structured parking space ($3,244 per year[3]), the Class Pass program at $330 per year per commuter is highly cost-effective. Moreover, since the cost of the Class Pass is paid by a fee approved by and imposed upon all students, the Class Pass program has succeeded in greatly reducing student parking demand and freeing up more spaces for other motorists at no cost to parking permit holders.

Figure 73 – Class Pass Per Year Information

	Cost
A. Class Pass Annual Cost—paid to AC Transit	$2,278,650
B. Number of students*	34,525
C. Fees paid annually by students @ $68 x 2 (semesters)	$4,695,400**
D. Percent of students commuting by AC Transit	20.0%
E. Number of Class Pass commuters (D = BxD)	6,905
F. Cost per Class Pass commuter per year (E = A/E)	$330
G. Cost per Class Pass commuter per month (G = F/12)	$28

***** Estimated average enrollment spring and fall semesters 2009; baseline numbers consistent with 2008 GHG Emissions Inventory projections by the Office of Sustainability

****** Of the total Class Pass fee, approximately half goes to AC Transit, 33% goes toward financial aid, and the remainder goes to additional transit services for students such as the campus shuttle, night safety shuttle, and technology enhancements such as NextBus (Parking and Transportation, 2010)

[2] UC Berkeley 2008 Student Housing and Transportation Survey.

[3] To facilitate cost comparisons across modes, the cost of a parking structure can be expressed in terms of the annual cost per space per year. To estimate this cost the following assumptions were used:

1. The parking structure can be expected to have a useful life span of 35 years (industry standard, Nelson\Nygaard)
2. If a parking structure is expected to last 35 years, the capital costs can be translated into an annual cost by spreading the cost of building it over its expected 35-year lifespan, using a long-term interest rate to account for the cost of the up-front expenditure. For this plan, an interest rate of 6% was used per UCOP, February 2010
3. Operating and maintenance costs, at $536 per space per year (2009 study referenced above) are then added to the total.
4. This translates into an annual cost per space of $3,244 per year, every year for the expected life cycle of the parking structure, a per month cost of $270, and a per work day cost of $12.44.

University of California, Santa Cruz (Santa Cruz, CA). The University of California, Santa Cruz (UCSC) is located in an expansive campus in the hills northwest of downtown Santa Cruz. The campus is home to 16,070 students and 508 faculty and staff. UCSC has a formal agreement with the Santa Cruz METRO transit agency that allows students to ride any Santa Cruz METRO bus free of charge. Students must display an UCSC ID card with valid sticker to the driver to board the bus. Drivers manually count student and faculty boardings and the university is then invoiced monthly for $1.21 a ride (normal fare is $1.50). Students are assessed a quarterly transit fee of $111.66 as part of their tuition which was approved by student referendum. Faculty and staff must purchase a transit pass for $110 from the university.[4]

There are seven METRO routes that directly serve campus. However, UCSC students are able to ride for free on any METRO bus throughout the system. Over 29% of all students commute to campus by METRO bus and student riders as a whole represent close to 60% of total METRO ridership.

Chico State University (Chico, CA). Chico State University, in Chico California, is comprised of 16,934 students and 1,668 faculty and staff. Student parking is limited on campus and permits are difficult to obtain. Due to parking constraints and the environmental goals of the university, alternative transportation is strongly encouraged by Chico State. A free shuttle service is available for students who commute from residential facilities separated from the main campus. The university offers carpool programs to faculty, students, and staff, providing priority parking spaces and discounts to those that carpool. Bicycle use is also encouraged by the university by providing resources such as free bike maps and guides as well as free bike licensing (which registers all bikes in a university database to help prevent theft[5]).

Chico State University currently has a formal contract with Butte Regional Transit or "B-Line" to provide free bus transit to students, faculty, and staff, which represent close to 25% of overall system ridership. Under this agreement, those with valid Chico State ID Cards are allowed to board B-Line buses for free after swiping cards through a fare box scanner. The fare boxes record and total the number of free boardings, allowing B-Line to send the university an annual invoice. The University's student association is responsible for a portion of the cost, while the University itself covers the remainder through student fees.

The regular fare for local transit service is $1.40, while the student (K-12) fare is $1.00. However, Chico State is invoiced only $0.82 per boarding, creating a significant discount for the university and increasing overall ridership for B-Line. Over 6,600 different university unique IDs were recorded during the 2008/09 fiscal year, indicating that close to 40% of Chico State students utilized the free service.[6]

Although current policies allow for students, faculty, and staff to ride B-Line system wide, there are two routes (8 & 9) that are designed to specifically serve the University and operate only during the school year. B-Line staff is responsible for all route planning and operations, but university feedback is continually sought when changes to routes 8 & 9 are being considered.

University of Michigan (Ann Arbor, MI). The University of Michigan (U of M) is a major academic and research institution located in Ann Arbor, MI. The several campuses and medical centers are intermixed throughout the City and are home to over 40,000 students and 38,000 faculty and staff. Student parking is extremely limited and available only to commuting graduate students and junior/senior undergraduates.

[4] Larry Pageler, Transportation and Parking Services, UCSC. *Phone Interview*

[5] http://www.csuchico.edu/taps/sustainable_transportation.php

[6] Jim Peplow, Senior Planner, Butte Regional Transit (B-Line), Phone Interview

The university operates an expansive 11 route intra-campus bus service that transports students, faculty and staff in between the several campuses, medical centers and research parks. U of M also offers other alternative transportation resources such as 8,500 bike parking spaces, indoor storage lockers at major campus buildings, a subsidized van pool for faculty and staff and several on campus carsharing sites.

Along with university programs, U of M has a 5-year contract with the Ann Arbor Transportation Authority (AATA) to allow all U of M students, faculty and staff to ride city buses free of charge. U of M ID cards must be presented to drivers in order to board buses. University students, faculty and staff represent the majority of AATA bus ridership.[7]

The contract agreement is valued at close to $1.8 million per year. The bulk of the contract ($1.1 million) is provided by federal funds allocated to U of M Transit Operations. The remaining $700,000 is paid out of U-M general funds. Students are not charged a transit fee as part of tuition. Out of the 27 bus routes operated by the AATA, 12 of them directly serve U of M campus sites.

4.0 Analysis of U-Pass Financial Contributions.

While the current policies for establishing the level of financial contributions have been adequate to date, increasing demand for transit services due to high U-Pass usage and other system dynamics has created a need to investigate alternative methodologies. The goal of this section is to set forth alternative methodologies which may provide a more consistent and equitable means to determine each institution's financial contribution; with consideration to MATBUS financial goals. This section will discuss various considerations when developing a method to establish financial contribution amounts.

Sources of Funding. Based on the case studies above funding sources for contributions from higher educational institutions vary. In the case studies from California, the majority of contributions are paid for through student fees, some of which are approved by the student body themselves. These fees are typically per student and are assessed at the beginning of the academic term (semester or quarter). The fees are intended to pay for various transportation services for the duration of that time period. The remaining balance is funded through other sources such as a university general fund or campus parking fees/fines. Alternatively, as identified in the University of Michigan case study, the university utilizes federal subsidies in addition to their own general fund to fund their system contribution.

Among the four institutions that MATBUS serves each U-Pass financial contribution is generated through different sources. NDSU utilizes parking fees; MSUM utilizes student fees; M-State assesses a fee per student credit which is separate from their parking fund and Concordia utilizes a 50/50 split between general funds and student activity fees.

Financial Contribution Methods. Numerous methods can be used to determine an appropriate financial contribution amount. The current method based on enrollment of faculty and staff has its advantages since the inputs (FTE students, faculty/staff rosters) are readily available and simple to calculate. A disadvantage is that the number is not directly correlated to actual U-Pass usage (boardings). A modified version of the existing condition is presented in the Alternatives section of this Chapter. Two financial contribution methods are described in greater detail below:

[7] http://pts.umich.edu/taking_the_bus/mride.php

1. **Contribution based on Ridership: (Pay per usage).** In order to better match an institution's financial contribution for transit service with actual U-Pass usage, contributions could be matched to ridership. Setting a financial contribution based on ridership ensures that paid service is proportional to the actual usage over a given period of time. Ridership numbers can be determined using two methods:

   (a) Actual ridership (per previous year);
   (b) Projected ridership.

   Actual. Both methods have been used in practice and have different advantages and disadvantages. The advantage of using ridership numbers from the previous year is that the number will be precise. This method would ensure that long term MATBUS can financially be "made whole" and the institutions can be assured they are not being overcharged based on inaccurate projections. However, it is possible some jurisdictions prohibit retroactive payment for services provided. In this case, the financial contribution could be based on projected ridership.

   Projected. Projected ridership can be determined based on past data and trends. For MATBUS, accurate records of year to year ridership are known for each of the four institutions. Thus, projected ridership for an agreement year could be established by taking the previous year's ridership and applying a percentage increase or decrease based on an average. A three to four year moving average may be an appropriate method to accommodate recent trends and establish an accurate measurement for ridership growth or decline.

2. **Contribution based on Enrollees (FTE students, Faculty, Staff).** MATBUS's present financial contribution structure is based on this method that considers an institution's number of students, faculty and staff. An advantage to this method includes its simplicity and the ease of calculating the contribution amount (number of enrollees multiplied by per person cost). The current practice could be modified in two ways:

   (a) Modify the current per individual fee amount ($6.00) paid from each educational institution;
   (b) Modify the source of funding (institute a student transportation fee or similar fee resulting in a per person contribution).

Based on the case studies presented above, it is clearly evident that universities and public transit systems implement and fund programs in a variety of ways. One common theme among many of these universities is that a fee (to some degree) is assessed to their students to help fund transportation services; which for the most part is consistent with methods used by local universities to accommodate the U-Pass financial contribution payment.

Comparison of Methods Based on Existing Contributions. Figure 74 (below) outlines per unit costs for each of the four institutions given the financial contributions from 2009-2010. Using these various methods, contributions on a per ride basis and per individual basis come out very different. If contributions per ride were standardized (made equal), financial contributions for each of the four institutions may change significantly. Using the ridership method (2009-2010 academic year ridership) and given the financial contributions from 2009-2010, contributions per ride range from $0.36 for NDSU to $1.31 per ride for Concordia College.

Figure 74 – Comparison of Alternative Methods Using 2009-2010 Financial Contributions

	Concordia College	MSUM	M | State	NDSU
2009-2010 Financial Contribution	**$19,800**	**$46,000**	**$12,500**	**$92,442**
Contribution per FTE + faculty/staff (Existing)	$6.00	$6.00	$6.00	$6.00
Contribution per Ride (from 09/10)*	$1.31	$0.51	$0.43	$0.36

*Contribution amounts use 2009-2010 financial contribution and divides by 2009-2010 actual ridership. Time periods reflect academic years.

The results shown in Figure 74 highlight large differences in the per ride financial contribution for the four institutions based on the 2009-2010 contributions. However, this is not intended to suggest that one method is necessarily better or optimal as compared to another. It is intended to highlight how different methods produce different results and that there is no one "right" method. Factors to consider include local priorities, political environmental and what higher education institutions are willing to pay for transit service for their students. In addition, these two methods should not be viewed in a vacuum. These methods can also be combined with other programs (such as volume discounts or other incentives that will be discussed below) to modify the financial contribution for each educational institution to realize the appropriate balance.

5.0 Future U-Pass Agreement Alternatives.

Alternatives. If MATBUS decides to modify its methodology for determining the financial contribution for the U-Pass program, efforts should be focused towards ensuring consistency with overarching financial goals/objectives (i.e. average fare per boarding or average cost recovery) and system sustainability. Agreements with institutions should be clear, concise and provide fair terms for any modifications that may be necessary.

The previous section analyzed two potential methods to determine future financial contributions which included a contribution by ridership (pay per usage) or by enrollees

Figure 75 – Potential Advantages & Disadvantages for Alternative Methods

Contribution	Advantages	Disadvantages
Contribution determined by FTE + faculty/staff	-Number of persons is easy to determine and process is already well established. - Amount for contribution per person ($6 per person is politically acceptable and currently agreed upon by all parties.	-Contribution may not be commensurate with the level of service provided. - Actual percentage of student/faculty/staff usage is not included in calculation.
Contribution determined by projected ridership (+/- percentage)*	-Contribution amount is proportional to actual boardings from each institution. -Contribution would also be proportional to a normal fare per boarding if a student/higher institution fare were ever implemented or evaluated. -Ridership data is available making this method somewhat simple to calculate.	- Even through the use of moving averages, percentage increases/decreases may be volatile from year to year and may require post-processing to reach an accurate ridership projection (could be alleviated by using prior year ridership data. - Would require an annual per rider contribution amount to be determined and approved upon by all stakeholders.

*It is likely that ridership from NDSU Routes (Routes 31-35) would not be included as part of these calculations since NDSU provides a separate contribution to operate these services.

(students, faculty and staff). Figure 75 (above) outlines the two methods and identifies the major advantages and disadvantages for each. As noted above, there is no clear method that is optimal, but selecting one method versus another does include tradeoffs that should be weighed carefully by MATBUS, higher educational institutions and other key stakeholders.

In addition to the methods discussed above, there are also other components that could be considered to further develop an appropriate U-Pass contribution methodology.

(a) **Volume Discounts.** Contribution levels could be further stratified based on a volume discount. A volume discount would provide additional savings for institutions that reported above a certain threshold of ridership or individuals (FTE students, faculty and staff). Volume discounts are seen in many types of major institution programs for both educational institutions and employers. This type of incentive may also encourage institutions to increase marketing and promotion efforts.

(b) **Transportation Demand Management Incentives.** Depending on institution or city goals, further incentives could be provided to help reduce vehicle congestion and parking issues in and around the campus areas. For institutions that manage internal campus parking and transportation policies, price breaks, increased transit discounts/incentives or additional contributions and/or coordination with MATBUS to improve service delivery could be pursued to help reduce vehicle trips. Similarly, programs like bicycle sharing and carsharing could further reduce vehicle trips and may warrant further transit discounts. The City of Moorhead is currently (2011/2012) developing a neighborhood parking study to analyze parking related issues in cooperation with area colleges (specifically MSUM and Concordia). This effort is contemplating various 'carrot' and 'stick' strategies to address identified parking concerns. Transportation demand management strategies and specifically transit related strategies could play an integral role in a (likely) multi-tiered approach to achieve parking management goals of the city and universities; while also supporting: (a) development/density/infill goals outlined within Comprehensive Plans; (b) efforts to increase competiveness with other institutions that realize higher levels of transit service; (c) efforts to secure the long term presence of the U-Pass program and increasing its functionality/efficiency; (d) deferment (construction) and/or reduction of surface parking lots [additional surface parking may garner attention may reside as an easy solution but unequivocally resonates as a short-term and short-sighted initiative]; and (e) the possibility of increased viability of certain redevelopment parcels through the reduction of certain regulatory design standards. As this discussion moves forward; creativity, idea generation and inter-agency coordination should be the focal point to ensure that solution identification and implementation is vetted from every angle to maximize benefits from an overarching community perspective. For additional information on TDM incentives and strategies, see Chapter 4 (strategies/programs) and Appendix 1.0 (effects of TDM strategies/incentives).

(c) **Modify the source of funding (institute a student transportation fee or similar charge).** As previously noted, transportation at many universities around the country is funded through student fees that come bundled with tuition. These funds are a guaranteed source of revenue for a university and can ensure funding for students (and potentially faculty and staff) for various transportation services. Transportation costs could then be balanced between numerous sources, providing greater financial stability and consistency. While it is understood that this decision would need to occur at the college/university level, it is an important factor in setting an appropriate financial contribution level.

The amount of a student fee would dependent on what would be funded through the fee (transit, parking, etc) and if it could additionally be supplemented by university funds, as applicable.

6.0 Potential Alternatives.

Given the discussion and potential methods to determine financial contributions described in prior sections of this Chapter, this section will present three potential future alternatives. These include the following:

1. **Status Quo** (Payment per person)
2. **Alternative #1** Payment by Past Year's Ridership with Volume Discount
3. **Alternative #2** Payment per Person with Volume Discount

Alternative #1 – Status Quo. Under the status quo option the per individual fee (FTE student, faculty, staff) would continue at $6.00 per person. Future financial contributions would continue to be based on number of FTE students plus faculty and staff enrolled thirty days after the first day of classes for the fall semester (current policy).

Alternative #2 – Payment Using Past Year's Ridership (with Volume Discount). Alternative #2 presents a scenario that utilizes the previous year's ridership to establish a final financial contribution amount on a per ride basis. This alternative also sets guidelines for a ridership volume discount (e.g. higher ridership equates to a higher discount). Given MATBUS's internal goal of $0.75 per rider (approximately); this amount was used as the approximate goal for establishing the per rider fee. A basic fare model was developed using 2009-2010 ridership and also takes into consideration a volume discount. The model for Alternative #2 makes the following assumptions:

(a) When ridership increases at an institution, the assessments per rider decline. Institutions with ridership less than 50,000 annually are assessed at fee of $1/ride; between 50,000 and 100,000 a fee of $0.80 per ride and institutions with ridership over 100,000 are assessed $0.70 per ride. (These costs per ride are on par with others presented within the case study section and reflect discounts of 24%, 36%, and 44% respectively of the regular cash fare);

(b) Ridership is based on 2009-2010 reported U-Pass ridership from each institution;

(c) Average overall calculated fare per rider is determined by taking the total estimated

Figure 76 – Alternative No. 2 Estimated Annual Financial Contributions

Institution	Reported 2009-2010 Ridership	Assessed Cost per Rider (Using Volume Discount)	Estimated Financial Contribution	Existing 2009-2010 Financial Contribution	Difference (Estimated-Existing)	% Change
Concordia College	15,167	$ 0.95	$ 14,409	$ 19,800	$ (5,391)	-27%
M-State	29,081	$ 0.95	$ 27,627	$ 12,500	$ 15,127	121%
MSUM	89,868	$ 0.80	$ 71,894	$ 46,000	$ 25,894	56%
NDSU	253,882	$ 0.70	$ 177,717	$ 92,442	$ 85,275	92%
Net Difference					**$120,905**	

Source: Metro Area Transit (MATBUS); Nelson/Nygaard

financial contribution and dividing it by total reported ridership.

Given the assumptions for Alternative #2 the net difference in overall financial contributions is approximately $121,000. This amount divided by the reported 2009-2010 ridership equates to a fare per rider of approximately $0.75. Under this alternative, Concordia College and M-State would be assessed a cost per rider of $0.95 which is a discount of 24% from the adult cash fare. Concordia College would experience a decrease in its annual contribution while M-State would have a significant increase in its financial contribution. MSUM would be assessed a cost per rider of $0.80 which is equivalent to a 36% discount and would experience an increase in its financial contribution of approximately 56%. Finally, NDSU would be offered the highest cost per rider discount at 44% and would realize an approximate 90% increase in its financial contribution.

Alternative #3 Payment per Person (with Volume Discount). Alternative #3 presents a scenario that utilizes reported student enrollment and numbers of faculty/staff to determine a financial contribution amount for each institution. Enrollment reflects 2009-2010 students, faculty and staff from the four educational institutions. The goal of Alternative #3 is to achieve an average fare per boarding of $0.75. This model makes the following assumptions:

(a) Institutions with reported enrollment less than 5,000 annually are assessed at fee of $10.50/person and those above 10,000 are charged $10.00 per person. (On a per person basis, these amounts remain less than most reviewed case studies);

(b) Ridership is based on 2009-2010 reported U-Pass ridership from each institution;

(c) Average overall fare per rider is calculated through the total estimated financial contribution divided by total reported ridership.

Figure 77 – Alternative No. 3 Estimated Annual Financial Contributions

Institution	Reported 2009-2010 Enrollment (Students/Faculty/Staff)	Assessed Cost per Participant (Using Volume Discount)	Estimated Financial Contribution	Existing 2009-2010 Financial Contribution	Difference (Estimated-Existing)	% Change
Concordia College	3,300	$ 10.50	$ 34,650	$ 19,800	$ 14,850	75%
M-State	2,083	$ 10.50	$ 21,872	$ 12,500	$ 9,372	75%
MSUM	7,667	$ 10.50	$ 80,504	$ 46,000	$ 34,504	75%
NDSU	15,407	$ 10.00	$ 154,070	$ 92,442	$ 61,628	67%
Net Difference					**$120,353**	

Source: Metro Area Transit (MATBUS); Nelson/Nygaard

Given the assumptions for Alternative #3 the net difference in overall financial contributions is approximately $120,000. This amount divided by the reported 2009-2010 ridership equates to a fare per rider of approximately $0.75. Under this alternative, Concordia College, M-State and MSUM would be assessed a cost per participant of

$10.50 and would also experience an increase in their financial contributions by approximately 75%. NDSU would be assessed a slightly reduced cost per rider ($10.00) and would realize an approximate 67% increase in its financial contribution.

Other. Given the above three alternatives it is further recommended that the financial agreements between MATBUS and the four respective institutions also be updated to include specific language to address the following:

(a) **Reporting deadlines.** This would include time for MATBUS to review enrollment estimates and timeframes for the institutions to review ridership data estimates. This information should be provided at minimum thirty (30) days prior to agreement renewal.

(b) **Changes in fares or service**. Changes in fares or service should be reported to the educational institutions in advance of agreement renewal. Changes would include fare increases, route modifications or service reductions.

(c) **Marketing efforts**. Since the financial agreement also serves as a general agreement between MATBUS and higher education institutions it could be used as an opportunity to ensure that marketing and other communication expectations are set. An example includes defining responsibility for updating service materials and stocking rider guides / system maps at various campus locations.

(d) **Methodology for determination of financial contribution.** The method for determining the financial contribution should be included in the agreement in addition to the final contribution amount. It should include detailed language to describe the methodology and the resulting amounts.

Figure 78 (below) provides a summary of the three financial contribution methodologies. Alternative #2 and #3 were both devised to achieve an average fare per rider (among U-Pass participants) of $0.75.

Figure 78 – Summary of Financial Contribution Methodologies

Alternative	Description	Net Difference in Overall Contribution	Average Fare per Rider*
Alternative #1, Status Quo	Contribution paid per FTE student enrollee plus faculty and staff	0	$0.44
Alternative #2	Contribution paid per previous year's ridership with volume discount. Goal of $0.75 fare per ride.	$120,905	$0.75
Alternative #3	Contribution paid per FTE student enrollee plus faculty and staff with volume discount. Goal of $0.75 fare per ride.	$120,353	$0.75

*Average fare per rider determined by dividing estimated financial contribution per educational institution by number of 2009-2010 U-Pass boardings per institution

7.0 <u>Conclusions</u>.

Based on the information presented, both Alternative #2 and Alternative #3 would increase revenues and help MATBUS achieve a higher average fare per rider as compared to the status quo. Yet, both alternatives may have different levels of political palatability. Alternative #2 presents a method that charges based on level of consumed service (e.g. boardings). Bringing this measure into the mix for the four education institutions would result in a varying degree of financial contribution change (range between -27% and +121%). From a fare equity standpoint this alternative has its merits although it may not be reasonable given the price change differences between institutions. Alternative #3 would basically take the status quo and add a volume discount. Under this

method all four institutions would see financial contribution amount increases; however, they would be roughly similar in scale at 67%-75%.

The two alternatives (in addition to status quo) result in large increases in financial contributions. Given recent financial hardships at many educational institutions, particularly those that are publicly supported, major increases in financial commitments may be very challenging at this time and for planning horizon associated with the Transit Development Plan.

Based on the analysis provided within this Chapter and consideration to all factors as they currently exist, it is the recommendation of Nelson/Nygaard that the most appropriate alternative for MATBUS appears to be Alternative #3 (or similar variant) for the following reasons: (a) ability to achieve a higher average fare per rider (as compared to the Status Quo); and (b) Alternative #3 is more balanced and the contribution increases across all four educational institutions is more consistent.

Coordinated Human Service Public Transportation Plan

1.0 Purpose and Background.

Overview. The 2005 passage of SAFETEA-LU amended the federal transit law to include a coordinated planning requirement for Section 5310 Elderly and Disabled, Section 5316, Job Access Reverse Commute, and Section 5317 New Freedom. Per SAFETEA-LU it was now a requirement to prepare a Locally Developed Coordinated Public Transit Human Services Transportation Plan (Coordinated Plan).

The definition of a Locally Developed Coordinated Public Transit-Human Services Transportation Plan (Coordinated Plan) by law, a plan that identifies the transportation needs of individuals with disabilities, older adults, and people with low income, provides strategies for meeting those local needs, and prioritizes transportation services for funding and implementation. At minimum a Coordinated Plan requires an assessment of services, assessment of needs, strategies to meet needs, and a prioritization of these strategies.

Metro COG completed the first Coordinated Plan for the FM Area in 2007 as a component of the Transit Development Plan (TDP) Update. The development of the 2012-2016 TDP update provides an opportunity for Metro COG to also update and reaffirm a Coordinated Plan for the FM Metropolitan Area.

The development of the Coordinated Plan allowed Metro COG to assess the status of transportation services for elderly, low income, and disabled in the FM Metropolitan area. The Coordinated Plan provides an assessment of transportation barriers identified for elderly, low income and individuals with disabilities. The gaps identified in the Coordinated Plan were the result of public input, focus groups, and stakeholder outreach from both 2012-2016 TDP update and the development of the 2010 Metro Mobility Study. The Coordinated Plan culminates in the development of prioritized project concepts to address identified transportation barriers.

2.0 Development of the Coordinated Plan.

Metro COG has a long history of planning for the specialized transportation needs of low income individuals/families, the elderly, and individuals with disabilities. Since 1978 Metro COG has developed several plans which have served to inventory specialized transportation providers within the FM Metropolitan area and also move forward strategies at improving mobility options for individuals requiring specialized transportation.

1977 Special Transportation Needs Study

- Follow up on the inaugural FM Metropolitan Transit Development Plan (1976)
- Asses & Document Need for Elderly/Handicapped individuals
- Inventory Providers
- Develop Options outside of public fixed route
- Coordinated Service Development Plan
- Recommended Directory Development

1985 Special Transportation Services Report

- Survey existing providers and users to determine unmet need and services satisfaction
- Fargo Senior Services, Handi-Wheels, Moorhead DAR, and Fargo DAR (Taxi)
- ID Need for more specialized services
- Individuals with disabilities emerging a growing user group

1990 Elderly & Handicapped Transit Needs Study

- Follows developments in the late 1980s that indicated more attention needed regarding Paratransit service (Coordination and Streamline)
- Identify growing needs regarding specialized user groups (no service in West Fargo/ Dilworth)
- Disabled needs double existing service levels
- Specialized providers increased since late 1970s; but not keeping pace or innovating to meet needs of FM Area.
- Stressed looming changes needed pending ADA Act
- Duplication occurring; resource sharing a priority

1991/1993 Metro Mobility Study (Phase I and II)

- Follows recommendation from 1991 TDPto create uniform ADA Paratransit system
- Studies and recommends transition to single Paratransit provider; efficiency opportunities and to uniformly address 1991 ADA
- Joint Powers Agreement developed between Fargo & Moorhead to cover provision of ADA Paratransit under single operator

In 2003 Metro COG developed the Metropolitan Access to Jobs Plan at the request of several local human service stakeholders. The Access to Jobs Plan was written in compliance with TEA-21 regulations governing Job Access Reverse Commute (JARC) funds. The 2003 Jobs Plan ushered in the award of approximately $300,000 in JARC funds for the FM Metropolitan area.

The 2003 JARC allocation to the FM Metropolitan Area was administrated by the Metro COG Policy Board and was advised by the Metropolitan Transportation Initiative (MTI). In the years since the award of the JARC funds 14 separate projects aimed at addressing transportation barriers were initiated by Metro COG in cooperation with local transportation providers.

Figure 79 – Metro COG Funded JARC Projects

JARC Funded Program	Target Barrier	Program Budget
Smart Commute	Land use/Perception	$11,000
Giving + Learning	Cost of Transportation/Dependable Transportation	$12,100
Handi-Wheels(1)	All	$138,000
Clay County Commuter Route	Cost of Transportation	$6,000
Heartland Industries	Cross-Agency	$48,000
Industrial Park Shuttle	Industrial Park	$840
Marketing Promotion	Information/Perception	$5,000
MAT Card Printer	Information/Perception	$3,500
Moorhead Summer Evening	3rd Shift	$22,000
MAT Dispatch	Perception	$35,000
Moorhead Adult Education	Childcare Transportation	$13,700
TANF Pilot Program	Childcare Transportation	$2,250
Total for Fiscal Years 2004/2005 JARC Earmark		$297,320

Source: Metro COG (2011)

Since the passage of SAFETEA-LU in 2005, program changes to the JARC program allowed for the formulization of these program dollars to the states (and Metropolitan areas with populations over 200,000). SAFETEA-LU also created the New Freedom program to provide capital and operating assistance for persons with disabilities for services provided above the ADA requirements. New Freedom funds are allocated similar to JARC funds. The City of Fargo and the City of Moorhead (MAT) now competitively apply for JARC and New Freedom funds directly from either the State of Minnesota (Mn/DOT) or the State of North Dakota (NDDOT). Applications submitted from the FM Metropolitan area for JARC or New Freedom funds are evaluated and prioritized prior to submission to each DOT for project selection. MATBUS has been the recipient of JARC and New Freedom funds since the passage of SAFETEA-LU. Programs funded with JARC and New Freedom Awards made to MATBUS are summarized in Figure 80.

Figure 80 – MATBUS Funded JARC and New Freedom Projects

Program	Target Barrier	Funding Source	Estimated Federal investment
Mobility Management 2008-Present	Multiple	New Freedom	$211,800
MAT Paratransit Dispatch 2008-Present	Information	New Freedom	$81,374
Handi-Wheels 2008-2009	Multiple	JARC	$104,469
Moorhead Summer Mid-day 2008	Travel time	JARC	$54,000
MAT Fixed Route Dispatch/GTC Hours 2008-Present	Perception	JARC	$141,500
TANF Pilot Program 2008-Present	Childcare Transportation	JARC	$17,000
Route 23 2010-Present	Multiple	JARC	$241,000
Total			$709,643

Source: Metro COG (2011)

The states of North Dakota & Minnesota have both directly funded New Freedom projects in the FM Metropolitan area. Figure 81 shows the state funded projects.

Figure 81 – State DOT Funded Section 5317 Projects

JARC Funded Program	Target Barrier	Project Budget
Mn/DOT Traffic Signal Hwy 75 7th Avenue South Moorhead	Land use/Perception	$180,000
NDDOT Lift equipped van for Community Living Services Fargo	Travel Time	$32,000
Total State Funded Projects		$212,000

Source: Metro COG (2011)

Since the development of the first Coordinated Plan in 2007 Metro COG has developed two important plans which focus on the coordination of specialized transportation services within the FM Metropolitan area. Based on recommendations from the 2007-2011 TDP, Metro COG and MATBUS conducted the Paratransit Operations Analysis to address the rapid growth in Paratransit use. In 2009-2010 Metro COG and MATBUS developed the Metro Mobility Study to further define programmatic needs regarding mobility management initiatives within the FM Metropolitan area.

The 2007 Paratransit Options Analysis outlined an aggressive set of recommendations for MATBUS to reign in Paratransit operating costs. The recommendations were aimed at giving MATBUS a better handle on growth areas of Paratransit. The Paratransit Options Analysis recommendations provided MATBUS a roadmap to begin administrative and political changes that would keep the MATBUS Paratransit operation more efficient. Since adoption of the Paratransit Options Analysis in 2007, MATBUS has made substantial progress towards implementation of the primary recommendations. Implementation of critical recommendations from the Paratransit Operations Analysis has been aided greatly by the addition of Mobility Management staff by

MATBUS. Started initially by the City of Fargo, the Mobility Management position is now cooperatively shared between both cities.

The other important planning effort completed by Metro COG since the 2007 Coordinated Plan was development of the 2010 Metro Mobility Study. The completion of the Metro Mobility Study served to reinforce many of the recommendations made with the 2007 Paratransit Options Analysis. Metro Mobility provided strategies and initiatives which consider the larger spectrum of specialized transportation needs. Metro Mobility put a focus on programmatic initiatives aimed at managing the mobility options for specialized transportation users in the FM Metropolitan area.

The strategies developed to meet the needs and barriers outlined in the update of Coordinated Plan have evolved over time based on the successes experienced regarding improving mobility of residents in the FM Metropolitan area. The development of the updated Coordinated Plan builds upon the legacy of the 2003 Access to Jobs Plan and reaffirms initiatives outlined in the 2007 Paratransit Operations Analysis and 2010 Metro Mobility Study. The analysis and the recommendations of these former studies are still considered relevant and are valid by reference to them within in the updated Coordinated Plan.

3.0 Development of the Coordinated Plan.

Section 7.0 of the TDP Existing Conditions Report contains a comprehensive demographic profile for the FM Metropolitan area. The following data sets are clearly displayed in the Existing Conditions Report of the TDP and are used as key metric to determine the potential demand for transit services within the FM Metropolitan Area.

(a) Environmental Justice (Low Income/Minority);

(b) Large Employers;

(c) Transit Generators and Attractors (Commercial, Education, Social Services, Medical);

(d) Specialized Transportation Generators (Paratransit, Senior Ride, Etc.).

Existing Providers (specialized). The FM Ridesource Directory provides the metropolitan area of Fargo and West Fargo, North Dakota and Moorhead and Dilworth, Minnesota with a list of transportation services primarily for people with disabilities and people over age 60. All of the transportation services, including private transportation providers and government supported transit, are available to the public. This information is also available at www.fmridesource.com.

The FM metropolitan area is a regional medical center and a hub of human and social services. The population needing access to these services is growing and transportation is an important part of living independently. A partnership with FirstLink seeks to add specialized transportation information to the 211 phone service.

FM Ridesource was first printed in 2010 in place of the *Directory of Transportation Services* published annually by Fargo -Moorhead Metropolitan Council of Governments (Metro COG) since 1978. This is a joint mobility management project of Fargo–Moorhead Metro Area Transit (MATBUS) and Metro COG.

4.0 Stakeholder Involvement and Public Input.

Development of the updated Coordinated Plan was completed in consultation with Metro COG's Public Participation Plan. Accordingly, input received during the public participation process for the overall

development of 2012-2016 TDP was used to form the basis of the needs identification process. Further, given the limited amount of time which has passed since the completion of the Metro Mobility Study, information gathered as part of that process was also considered relevant to the needs identification process for the update of the Coordinated Plan.

Metro Mobility Study Public Involvement. In 2009 Metro COG and MATBUS completed an extensive stakeholder consultation process as part of the development of the Metro Mobility Study. Consultation efforts included numerous meetings with the Transportation Coordination Network (TCN) to gather specific input and feedback on existing operational issues related to specialized transportation providers. A series of four focus group meetings were held to gather feedback directly from a number of significant stakeholders representing the interests of specialized transportation user groups. The focus groups allowed for feedback on the relevance of existing transportation barriers currently outlined in the 2007 Coordinated Plan. The focus groups provided stakeholders the opportunity to assist in the identification of emerging issues and also gather direction in regards to the overall mobility management initiatives being pursued through the MATBUS Mobility Manager. Information gleaned through the development of Metro Mobility Study is still considered valid and is used as a basis for the formation of recommendations regarding implementation of the Coordinated Plan.

A Metro Mobility survey was distributed online and in paper copy. Notification and outreach regarding the survey was conducted at the Metro Mayor's Committee for People with Disabilities Meeting, the Metropolitan Transportation Initiative, and distributed to a comprehensive email list of interested agencies and stakeholders. The survey was available from May 14 until June 15, 2009. A total of 298 survey responses were received.

There were two target groups the survey attempted to reach. The first group was people who rely on public or specialized transportation, the second group was people that worked for agencies that assist people who rely on public or specialized transportation. The majority of respondents were employees of agencies that represented clients who rely on public or specialized transportation (see Figure 82).

Figure 82 – Respondent Type

Respondent Type	Response Percent	Response Count
Transportation User	16.1%	48
Agency Liaison	83.9%	250

Source: Metro COG (2011)

Figure 83 represents the type of clientele agency respondents serve. The results represent a broad spectrum of clientele. Nearly fifty percent (46.9%) of respondents indicated they served all categories. Only 1% (.89%) exclusively served elderly clients, thirty percent (29.20%) served the disabled, and 19% (18.58%) served low income. These responses show connections between multiple client populations and agency representatives.

Figure 83 – Agency Liaison Service Population

Population Served	Elderly	Low Income	Disabled	All	Other
%	0.88%	18.58%	29.20%	46.90%	4.42%

Source: Metro COG (2011)

Figure 84 represents transportation barriers that agencies report their clients face based on their level of importance. Hours of operation was ranked the highest, closely followed by cost of transportation, medical transportation, and travel time. Childcare transportation ranked the lowest, followed by access to the industrial park.

Figure 85 displays agency knowledge of transportation services. Medical and Private providers rank the highest followed by Metro Senior Ride and Clay County Rural Transit. Knowledge of the MATBUS Fixed Route system ranked the highest. In general the responses indicate that the degree of knowledge agencies have about all transportation services could be increased.

Figure 84 – Agency Ranking of Identified Barriers

Barrier	Low	Medium	High
Land Use	23.9%	19.3%	56.9%
Hours of operation	5.4%	10.8%	83.8%
Travel Time	9.2%	18.3%	72.5%
Information	24.3%	35.5%	40.2%
Childcare Transportation	38.8%	23.3%	37.9%
Access to the Industrial Park	35.8%	13.8%	50.5%
Cross Agency Coordination	13.5%	24.0%	62.5%
Attitude and Perceptions of Transit	25.7%	29.5%	44.8%
Cost of Transportation and Transit	7.4%	13.9%	78.7%
Medical Transportation (Medicaid)	11.4%	13.3%	75.2%

Source: Metro COG (2011)

Figure 86 displays the follow-up to the responses in Figure 84 and attempts to identify what information agencies need regarding transportation services. The largest individual need is how to ride. The answers reflect that agencies generally are seeking information that provides an overview of the service by the overwhelming response in the all category.

Figure 85 – Agency Understanding of Service / Providers

Transportation Service	Low	Medium	High
MAT Fixed Route	27.6%	23.8%	48.6%
MAT Paratransit	34.9%	26.4%	38.7%
Discounted Fixed Route (Elderly/Disabled)	34.0%	23.3%	42.7%
Metro Senior Ride Service	65.0%	20.4%	14.6%
Clay County Rural Transit (Transit Alternatives)	64.1%	20.4%	15.5%
Handi-Wheels	50.0%	28.8%	21.2%
Other Medical and Private Providers	69.6%	15.7%	14.7%

Source: Metro COG (2011)

Figure 87 (see Pg. 131) displays transportation services that agency representatives feel do not meet agency needs. The answers received are similar and may represent a lack of information identified in earlier survey questions. The high responses in the not applicable section may represent agencies thinking a service will not benefit their client therefore dismissing it without proper information. Respondents were asked to comment on why certain services were not meeting the needs of their clients.

Figure 86 – Agency Understanding of Service / Providers

Transportation Service	How to Ride	Cost	Service Levels	Rule/Regs	All
MAT Fixed Route	9.4%	0.0%	9.4%	4.7%	76.6%
MAT Paratransit	13.8%	3.4%	1.7%	5.2%	75.9%
Discounted Fixed Route (Elderly/Disabled)	6.8%	6.8%	1.7%	5.1%	79.7%
Metro Senior Ride Service	18.0%	0.0%	0.0%	2.0%	80.0%
Clay County Rural Transit	17.0%	2.1%	2.1%	4.3%	74.5%
Handi-Wheels	14.3%	4.1%	2.0%	4.1%	75.5%
Other Medical and Private Providers	12.2%	2.0%	0.0%	2.0%	83.7%

Source: Metro COG (2011)

Figure 87 – Agency Liaison Rating of Service Meeting Client Needs

Transportation Service	Low	Medium	High	Not Applicable
Metro Senior Ride	9.3%	15.1%	24.4%	51.2%
MAT Paratransit	7.4%	33.0%	36.2%	14.9%
MAT Fixed Route	8.5%	30.9%	30.9%	7.4%
Clay County Rural Transit	10.3%	24.1%	11.5%	42.5%
Handi-Wheels	10.2%	22.7%	21.6%	31.8%
Other medical/private providers	13.3%	16.9%	15.7%	43.4%

Source: Metro COG (2011)

TDP Public Involvement. Development of the 2012-2016 TDP involved a robust public involvement process. The overall summary of the public involvement process for the TDP update is outlined in Chapter X. Metro COG consulted directly with interested persons and stakeholder's who depend upon specialized transportation services within the FM Metropolitan area. Metro COG also involved agencies and individuals' representative of specialized transportation users in focus groups aimed at identifiying mobility needs within the FM Metropolitan area. The TDP update process also included the deployment of a survey completed by transit users (specifically MATBUS fixed route) within the FM Metropolitan area.

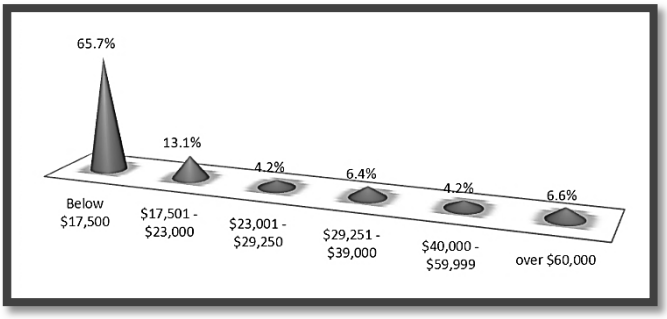
The following TDP Survey questions are related to the coordinated plan. The following questions address specific transportation barriers. These questions are part of the overall TDP Survey. The complete survey summary can be found in Chapter 11 (Phase I).

(a) Of 509 responses 334 (or 65.7%) were classified within the household income range below $17,500. Fifty-five (55) responses were from respondents with a household income over the estimated median household income for Fargo (at approximately $38,500 in 2009).

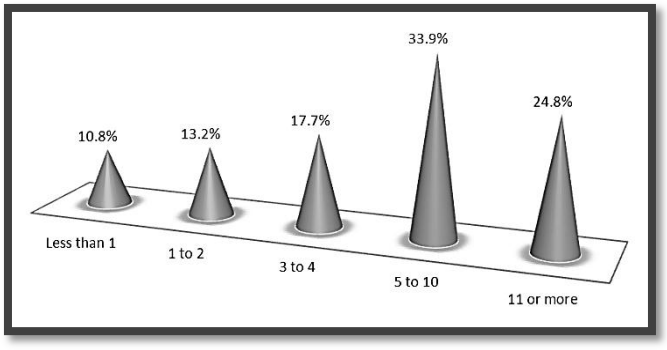
(b) Survey results indicate that very few respondents use MATBUS less than one (1) time per week and approximately 41% of respondents utilize MATBUS less than four (4) times per week. In contrast, of 509 responses 295 (or 58%) individuals represented that they utilize MATBUS for more than five (5) one-way trips per week.

(c) Survey results indicate the largest percentage of respondents (at 36% or 186 responses) complete at least one (1) transfer per one-way trip. Approximately 32% of respondents (or 162 survey responses) transfer two (2) or more times per one-way trip and approximately 31% (or 157 survey responses) do not complete a transfer between trip origin and destination.

(a) What was your total HH income last year?

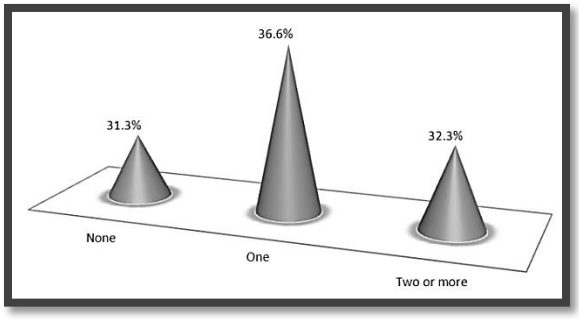


(b) How many on-way trips do you make on MATBUS each week?

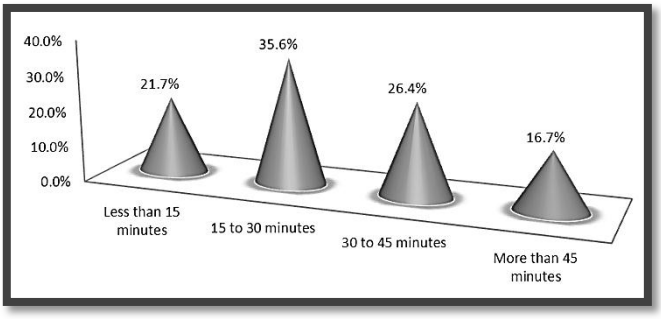


(d) Of 509 survey responses 400 (or 79%) participants indicated a one-way trip length of more than fifteen (15) minutes. Sixty-two (63) percent of responses were classified within the *'15 to 30 minute or 30 to 45 minute'* timeframe. Only 16.7% (or 85 responses) identified a one-way trip length greater than 45 minutes.

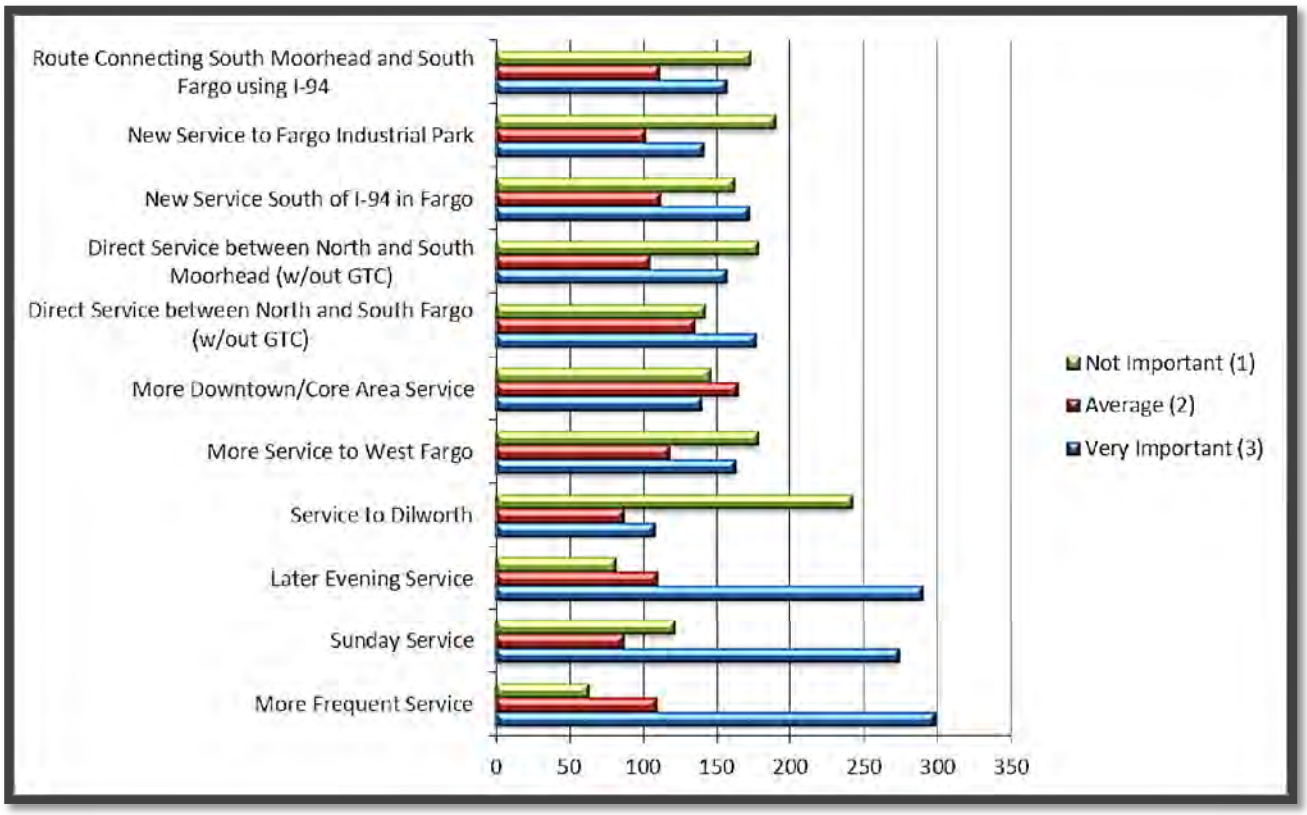
(c) How many transfers do you usually make on a one-way trip when you ride MATBUS?



(d) How long does your total MATBUS trip usually last?



Service Priorities. On a scale of 1 (Not Important) to 3 (Very Important), please rank the following improvements, in terms of importance to you.



Results from this service priority question suggest a large percentage (and definitely a majority) of respondents believe the following services are important, in order of relevance: (a) more frequent service; (b) later evening service; and (c) Sunday service.

Other results for suggested service improvements, many of which have been discussed in previous TDP's or sub-area transit plans, indicate a much more balanced response between levels of importance. A few worth noting:

(a) Service to Dilworth;
(b) New Service to Fargo Industrial Park;
(c) More Service to West Fargo;
(d) More Downtown / Core Area Service.

Information gathered as part of the TDP public input process is summarized in detail in Chapter 11. However, an analysis of the input received points to the following issues having an impact on specialized transportation users:

(a) On time performance
(b) Capacity
(c) Transfers
(d) Need for Service Expansion
(e) Third Shift Transportation
(f) Extended Hours Fixed Route

5.0 Day training and Habilitation Programs – Ensuring Service Coordination.

The largest subset of social services that generates demand for specialized transportation is Day Training and Habilitation Programs (DT&H). The purpose of DT&H programs is to provide people with mental and/or physical disabilities training and skills to allow them to be productive in the community. DT&H programs have expanded considerably in the past twenty years coinciding with efforts to de-institutionalize people with mental and physical disabilities. The majority of those who attend DT&H programs live in public, tax credit, or agency owned housing. The DT&H program takes place at a sheltered work shop or at businesses throughout the community with the assistance of a job coach. DT&H programs require significant transportation to achieve community integration goals. The Minnesota portion of the FM Metropolitan Area has two major DT&H providers: Connections Inc. and Heartland Industries. The North Dakota portion of the FM Metropolitan Area has three main providers of in-home services: Friendship Inc. Community Living Services and Fraser LTD, and three main DT & H providers DWAC, ETC, & VTC. All providers are 501 C (3) non-profit corporations.

There is a fundamental difference in the way the North Dakota DHS and Minnesota DHS operate and fund DT&H programs. Minnesota DT&H providers receive a per diem transportation allocation to support the transportation of clients and are required to transport the client from their home setting to and from the program location. Mn/DOT uses FTA section 5310 grant funds to subsidize DT&H transportation by purchasing buses. There are approximately 285 Section 5310 vehicles statewide in Minnesota. Approximately 70% of those vehicles support DT&H transportation.

ND DT&H providers do not receive a direct allocation of transportation funding. They are also not responsible for transporting the client to and from the program location. Some transportation funding is included in the overall monthly fee the client's in-home service provider is paid; however, no cost allocation exists to identify this amount. Unlike Mn/DOT, NDDOT does not use any of their yearly 5310 allocation in urban areas, however NDDOT did fund a lift equipped van for Community Living Services in 2010.

Policy differences between ND and MN DHS and DOT's have noticeable impacts in the FM Metropolitan area. MAT Paratransit does not transport DT&H clients in Moorhead and Dilworth. The service is there to assist if

needed, but the providers rarely use it because of their high internal capacity. DT&H ridership on MAT Paratransit in Fargo and West Fargo is nearly 30% of total system rides.

In 2007 an analysis was conducted by Metro COG to quantify the amount of DT&H transportation in Fargo and West Fargo. The analysis concluded that DT&H programs demand 98,000 riders per year. To put that number in perspective the DT&H demand is nearly twice the MAT Paratransit demand. Strategies are needed to ensure coordination among DT& H providers to ensure they are able to maintain a commitment to their clients.

6.0 Transportation Barriers.

The Transportation Barriers identified in the Coordinated Plan are based on three (3) primary inputs:

1. The review and analysis or progress made towards the implementation of recent specialized transportation plans and programs. MATBUS and Metro COG have developed a number of recent plans that deal specifically with specialized transportation. Tracking the implementation of these plans identifies areas where continued program emphasis is needed in the areas of mobility management and human service coordination.

2. The second input into the development of the Transportation Barriers is the public input elements of Metro Mobility. Through the public input element of Metro Mobility, MATBUS and Metro COG were able to gather direct feedback from a number of local stakeholders on issues and opportunities for increasing the efficiency and capacity of the specialized transportation network in the FM Metropolitan Area.

3. The final input into the development of the Transportation Barriers of the Coordinated Plan was the overall development of the 2012-2016 TDP update.

Based on the Issues and Needs identification process outlined above, the following three (3) transportation barriers have been identified for purposes of developing the Coordinated Plan. Under each broad barrier, smaller barriers have been developed which highlight more specific needs facing the specialized transportation system within the FM Metropolitan area.

Coordination. Additional coordination is needed in several aspects of the specialized transportation community within the FM Metropolitan area. Improved coordination would serve to address transportation barriers and improve efficiency and effectiveness of existing transportation providers, with the overall goal of improving individual mobility options. Implementation of the strategies to address the Coordination barriers relates to the following aspects of the specialized transportation community:

(a) In general, foster coordination among social and human services agencies and organizations with in the FM Metropolitan area to deliver transportation with fewer resources.

(b) Improve cross agency coordination for agencies who are involved in Day Training and Habilitation (DT&H) programs.

(c) Continue to Implement and Follow up on primary recommendations from the MAT Paratransit Options Analysis.

(d) Continue to monitor implementation of Metro Senior Program for consistency metro-wide.

Travel Time/Convenience. Enhancements to existing programs/services offered within the FM Metropolitan area will improve the mobility of specialized transportation users. Improving travel time and convenience of services/program offered increases the access of specialized transportation users to work, educational, medical, and quality of life activities. Implementation of the strategies to address the Travel Time/Convenience barrier relates to the following aspects of the specialized transportation community:

(a) Improve travel time of existing transportation service providers.

(b) Improve Information available about existing transportation services/programs and providers.

(c) Reduce the stigma associated with using public transit and specialized transportation services/program within the FM Metropolitan area.

(d) Continue to seek solutions to address barriers related to child care transportation and the cost of transport in general.

Service Coverage. Expansion of public transit service in general will improve the mobility of specialized transportation users within the FM Metropolitan area. Expanded service needs involve additional services/programs offered earlier in the morning and later in the evening. Expanded service needs involve increasing the geographic reach of services and programs. Expanded services needs involve offering additional days of week (E.g. Sunday fixed route service). Implementation of the strategies to address the Service Coverage barrier relates to the following aspects of the specialized transportation community:

(a) Finding solutions to ensure land development is done in consultation with available and projected surface transportation program assets, including public transportation.

(b) Finding solutions to providing services/programs for individuals working evenings and 3rd shifts, primarily in the industrial areas of the FM Metropolitan area.

(c) Strategically analyzing new services/programs to expand the geographic coverage of public transit services.

These barriers are intended to form the foundation for the development of programs and services which seek the use of FTA Section 5310, 5316, and 5317 funds. These barriers assist for the purposes of the Coordinated Plan with developing project/program priorities.

7.0 Recommendations for Coordinated Metropolitan Mobility.

This section of the Coordinated Plan serves as the implementation plan and provides guidance regarding the development of projects, programs, or services which may seek funding through FTA Section 5310, 5316, and 5317. The Recommendations are broken down into seven areas, with each serving to more specifically address Barriers identified within the Coordinated Plan.

Mobility Management Programs and Initiatives. The Development of the Mobility Manager position by MATBUS is one of the most significant elements of MATBUS operations available for addressing Barriers identified in the Coordinated Plan. Based on recent applications for Federal aid to extend the program, the generally accepted goals of the mobility management program of MATBUS are as follows:

(a) Develop and maintain the Transportation Coordinating Network (TCN) to address transportation issues of individuals with disabilities. Network outcomes include increased communication among transportation providers, creative solutions to gaps in service, and cooperation in service delivery.

(b) Develop and maintain a clearinghouse of information.

(c) Communicate with program providers who work with individuals with disabilities to identify needs and determine ways to creatively address those needs.

(d) Promote transportation options to individuals with disabilities and program providers.

(e) Manage MAT Paratransit growth to ensure service continuation outside of the ¾ mile corridor.

MATBUS will need to make a concerted effort to regularly update the foundations driving its mobility management program. Work done as part of the Metro Mobility Study and the Coordinated Plan justify the need for a long range program of mobility management initiatives on the part of MATBUS. What follows are several smaller initiatives which fall under an overall Mobility Management program and which should be considered candidate projects for future mobility management program activities:

- Travel Training - programs when properly implemented demonstrates a return investment that is many times greater than the cost of the training. Establishing a travel training program and policy that clearly defines what will be done and puts measurable goals in place is needed.
- Information & Marketing - Advertising and outreach aimed at users and possible users of the public transit system.
- Website Information – Using the web to provide information to existing and potential users of the public and specialized transportation system.
- Information by Phone (one call center) - Establishing phone systems that enable a user to schedule a ride on multiple services from one phone number.
- Pass Programs- Could assist MAT at guiding users of the specialized systems in the FM Metropolitan Area to the most appropriate type of service and in the process trying to maximize cost effectiveness for the provider.
- Fare Incentives – Programs that create savings for users to use one form of transportation versus another. An example is allowing Paratransit riders free access to fixed route service if they choose.
- Trip planning - initiatives on the part of MATBUS would also assist in boosting the understanding of available transportation resources in the community so that users are able to make choices appropriate for themselves, and that also is in line with service of the chosen provider.
- Travel Navigation - programs assist those who need help choosing a method of transportation. There are a variety of strategies to be explored for travel navigation. Including a hotline, software, or instructional resources.
- Voucher Programs - MATBUS has an opportunity to offload some demand on MAT Paratransit through the development of a voucher program that provide resources to other agencies who may be able to meet excess demand on the MAT Paratransit system. A voucher program should be considered a relevant part of future program initiatives aimed as dampening demand on MAT Paratransit.

Metropolitan Planning Program. Metro COG has a long history of assisting MATBUS in the areas of transit planning and programming as part of its Unified Planning Work Program (UPWP). While Metro COG has recently included *human service coordinatio*n within its UPWP, Metro COG has struggled to give these efforts program

definition and relevance. There is tremendous opportunity to coordinate the transit planning and programming elements of Metro COG's UPWP and the Mobility Management efforts of MATBUS. Metro COG and MATBUS need to work closely to develop a system that coordinates the efforts of Metro COG's Unified Planning Work Program (UPWP) and its mobility management program that would specifically direct the actions of Metro COG staff in support of the MATBUS Mobility Manager.

MAT Paratransit. Mobility management efforts on the part of MATBUS have been successful in reducing demand on MAT Paratransit since completion of the 2007 Paratransit Options Analysis. After several years of rapid growth MAT Paratransit ridership has flattened since 2009. Many of the primary recommendations of the 2007 Paratransit Options Analysis are reaffirmed with the updated Coordinated Plan, as follows:

(a) Affirm and Implement the Core Mission of MAT Paratransit – Although an official mission statement has not been developed, efforts of the Mobility Manager have created a new level of community understanding for MAT Paratransit service.

(b) Negotiate medical (Medicaid) transportation rate – This effort has been stalled based on the position that Medicaid transportation is entitled to the usual and customary public transit fare. However this is still an important issue facing MAT Paratransit.

(c) Negotiate Facility Rate – Facility rates have successfully been implemented with Fargo and West Fargo nursing homes. There needs to be a commitment to maintain these rates.

(d) Negotiate non-emergency medical facility/agency rate – These rates have been difficult to accomplish due to state Medicaid agencies insisting that they only have to pay the rate charged to the general public. This effort is important and should remain a part of the program to ensure efficiency of the Paratransit system.

(e) Paratransit Certification – The Paratransit certification process has improved in recent years. The certification process is an essential tool for MATBUS to screen the eligibility of applicants. Future certification efforts should consider involvement of an external or 3rd party screener.

(f) Alternate Provider for Sunday Paratransit – The city of Fargo has tried to procure a provider for Sunday Paratransit service on two occasions. However it has been difficult to find a provider with the capacity to successfully deliver the service. While some of initial benefits of an alternate provider of Sunday Paratransit likely remain, such a transition may impact a possible expansion of Paratransit on Sundays within the City of Moorhead or Dilworth. Implementation of an alternate provider of Sunday Paratransit should be done so in consultation with the MAT Board.

System Coordination. There are opportunities to increase coordination with and among the providers of and users of specialized transportation in the FM Metropolitan area. Efforts are needed to bring about information and resource sharing among a host of local service agencies who work with individual users of specialized transportation. There are two primary ways to increase system coordination within the FM Metropolitan area. One is through development of a Community Capital Assistance Program, and the second is through a Coordinated Service Development Initiative. The need for these programs, as more clearly substantiated in the Metro Mobility Study is to ensure area agencies and services providers are able to meet the demand of their clients.

(a) Community Capital Assistance Program (CCAP) - A critical need is the development of ongoing program to assist local agencies fund capital, or a Community Capital Assistance Program (CCAP). The CCAP

could be used to meet the capital needs of agencies whose operations can currently (or with additional capital input) assist in reducing demand on MAT Paratransit. The CCAP could be used to bring somewhat congruent agencies together into service partnerships that would increase coordination within the specialized transportation network and also possibility expand service options for users groups by providing capital facilities to leverage coordination among agencies.

CACP would be limited to non-profit 501 C (3) and government transportation providers that serve elderly and disabled populations. The program could solicit applications through the Metro COG project prioritization process used for the purposes of developing the transportation Improvement Program (TIP) within the FM Metropolitan area.

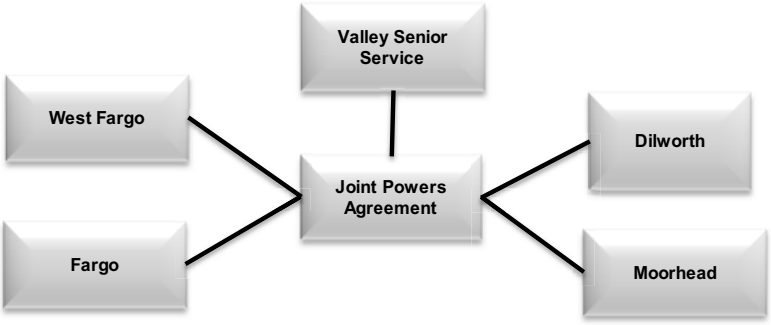
The logic behind a CACP is to allow agencies to access funding for capital so they can better serve their clients, thus reducing client shedding onto MAT Paratransit. The size of the program is based on the agencies in the community. There are FTA grant programs designated for this purpose, must significant is the Section 5310 program. Monitoring MAT Paratransit ridership and communicating with the major agencies requiring transportation for their clients will demonstrate if the program is effective.

(b) Coordinated Service Development Initiative (CSDI) - Closely related to the CCAP would be the development of the Coordinated Service Development Initiative (CSDI) that would (through the allocation of Federal, state, or local operational resources) facilitate system coordination. The CSDI would work to bring greater coordination and program delivery between agencies who deal with somewhat similar users of specialized transportation.

Senior Transportation. A review of the current operations of the Metro Senior Ride program exposes opportunities to transition the service to a more uniform operation, akin to MAT Paratransit. Metro Senior Ride will operate more efficiently if agreements can be reached to merge fleets between Fargo/West Fargo and Moorhead/Dilworth operations. Broader cost sharing agreements may be needed to reflect the service area of Metro Senior Ride, and ensure that the system operations remain solvent in the face of political and financial evolution of its benefit partners. The system planning and programming for Metro Senior Ride needs to be considered under the large Mobility Management efforts of MATBUS and Metro COG.

Transitioning to a joint powers system as shown above will allow each participant an avenue to allocate and assign cost based on usage. A jointly funded system based on ridership may allow communities to alter eligibility of senior ride specifically the age requirement. This transition will allow for the sharing of vehicles, and in the future begin to look at joint dispatch and other efficiencies. The current agreement does not allow the Moorhead/Dilworth vehicles to mingle with the rest of the VSS fleet.

Figure 88 – Metro Senior Ride Joint Powers Agreement



Source: Metro COG (2011)

Beyond the recommendations for a more coordinated Metro Senior Ride program, two additional recommendations are suggested regarding Metro Senior Ride. Each aim at maximizing coordination among available transportation programs and services within the FM Metropolitan area:

(a) A fare incentive program should be evaluated that keeps Metro Senior Ride fares lower than MAT Paratransit. This would be a cost saving measure that seeks to increase capacity on lift equipped MAT Paratransit.

(b) Consideration should be given to removing the age requirement for eligible individuals on Metro Senior Ride. Such an initiative would expand public transportation options to individuals (i.e. low income) and to geographic locations where no fixed route exists (i.e. Dilworth).

Handi-Wheels. Handi-Wheels is a unique provider of transportation services in the FM Metropolitan Area. Handi-Wheels is the only third party non-public provider of specialized lift equipped transportation. Handi-Wheels is given in-kind donations of office space and monetary support from the Fargo Housing Authority. For the past several years the city of Fargo has supported Handi-Wheels by leasing vehicles purchased with FTA Section 5309 funds. The city of Fargo also provides Handi-Wheels assistance with fleet maintenance and fuel, and via the City of Fargo social services grant program. The City of Fargo and the Fargo House Authority maintain financially committed to Hand-Wheels in an effort to support mobility needs of individuals with disabilities within the city of Fargo, and more specifically those living at New Horizons Manor.

Handi-Wheels should be considered a meaningful partner in developing and implementing niche services aimed at addressing barriers identified within the Coordinated Plan. Handi-Wheels has historically shown success in meeting certain transportation needs, however is limited by the overall scale and nature of its operation. It is recommended that Handi-Wheels continue to implement its 2008 Strategic Operations Plan.

Service Coverage Expansion. It is recognized that addressing the barriers related to expanded service coverage are likely the most costly and in some cases the most complicated to implement. None the less the following initiatives should be considered priorities regarding the development of programs/services to address the service coverage barrier:

(a) Fixed Transit Expansion – Expand hours of operations of MATBUS fixed route to ensure earlier morning and later evening service. Expand the geographic coverage of MATBUS fixed route to areas not currently served as indicated in the Existing Conditions Report. Expand MATBUS fixed route service to Sunday.

(b) General Public Demand Response – Develop a general public demand response service. The intent of the service would be to meet needs in areas and at times of day where there is currently no fixed route transit. Implementation of a general public demand response system would be most appropriate through coordinating the services of existing services (i.e. Metro Senior Ride, Paratransit, Handi-Wheels, etc.).

(c) Voucher Programs – Develop voucher based programs with smaller providers or taxi companies to provide transportation options for difficult to reach locations (E.g. Fargo Industrial park) or for service during times of day when there is limited demand (3rd shift/late evening/early AM).

Financial Plan & Implementation Matrix

Revenue Projections and Financial Assumptions

1.0 Context.

Background. The development of the financial plan is consistent with requirements regarding the development of a metropolitan transportation plan, pursuant to 23 CFR 450.322(d). Revenue forecasts and assumptions are based upon data and information reported as part of the ECR (see Chapter 1) which summarized actual operating costs and revenues for transit services operated by MATBUS (City of Fargo and City of Moorhead) within the FM Metropolitan Area.

Revenue. To establish the base condition for revenue projections; operating costs and revenues from 2010 (year-end) financial data provided by MATBUS were utilized. Figure 88 (below) sets forth corresponding financial data as previously displayed within the ECR (see Pg. 13).

Revenue projections within this financial plan vary by city. The City of Fargo assumptions indicate revenues will grow by 2% annually between the base condition (2010) and 2016 (which is the out year of the TDP planning horizon). This 2% growth rate is additionally supported through the approved financial element within the 2009 LRTP for the Metropolitan Area.

City of Moorhead assumptions use the 2% growth rate for city General Funds and Farebox Revenue. Moorhead assumes a 2% growth rate in Federal Revenue until 2012 and no growth in state revenue through 2016.

Figure 89 – MATBUS Budget Summary from ECR (see Pg. 13)

MAT Budget Summary - Operating Costs and Revenue Sources

Funding Category	City of Moorhead								City of Fargo							
	2007	%	2008	%	2009	%	2010	%	2007	%	2008	%	2009	%	2010	%
Total Operating Costs	$1,549,267		$1,752,766		$1,654,149		$1,735,396		$3,139,359		$3,791,553		$4,158,922		$4,634,499	
Section 5307	396,821	25%	391,008	22%	289,613	18%	336,407	19%	1,530,736	49%	1,855,394	49%	1,826,060	44%	1,904,410	41%
Other FTA Funds	27,431	2%	87,112	5%	41,555	3%	20,065	1%	40,825	1%	88,451	2%	151,423	4%	60,000	1%
State Aid	599,256	38%	650,455	37%	504,509	30%	455,522	26%	268,102	9%	308,059	8%	423,510	10%	370,000	8%
Farebox Revenue*	227,136	15%	253,420	14%	286,399	17%	272,935	16%	388,678	12%	476,869	13%	607,912	15%	646,194	14%
WF Joint Powers	x	x	x	x	x	0%	x	0%	170,146	5%	196,058	5%	201,602	5%	205,000	4%
NDSU Joint Powers º	x	x	x	x	x	0%	x	0%	142,500	5%	182,000	5%	540,000	13%	576,000	12%
City General Funds	25,735	2%	67,357	4%	19,675	1%	84,405	5%	416,211	13%	570,839	15%	239,335	6%	692,895	15%
Greater MN Transit Fund	228,815	15%	255,916	15%	469,906	28%	519,382	30%	x	X	x	X	x	0%	x	X
Other Revenue	44,072	3%	47,498	3%	42,492	3%	46,680	3%	182,161	6%	113,883	3%	169,080	4%	180,000	4%

Source: Metro Area Transit and Metro COG (2011)
* Farebox Revenue – gross receipts from all fare media purchased, cash riders, paratransit cash fares, paratransit coupons and U-pass per student fees
° Does not include NDSU capital contribution of $321,000 to the City of Fargo in 2009

Figure 90(below) outlines the revenue forecasts for the City of Moorhead. Revenue streams for the City of Moorhead are separated into five (5) primary sub categories: Federal, Minnesota State Aid, Greater Minnesota Transit Fund, City General Fund and Farebox/Miscellaneous.

Figure 90 – City of Moorhead Revenue Projections

Revenue Source	Base*	2012**	2013	2014	2015	2016
Federal	$356,472	$363,601	$363,601	$363,601	$363,601	$363,601
Minnesota State Aid	$455,522	$519,383	$519,383	$519,383	$519,383	$519,383
Greater MN Transit Fund	$519,382	$455,523	$455,523	$455,523	$455,523	$455,523
City General Fund	$84,405	$86,093	$87,815	$89,571	$91,363	$93,190
Farebox/Misc.	$319,615	$326,007	$332,527	$339,178	$345,962	$352,881
Total	**$1,735,396**	**$1,750,608**	**$1,758,850**	**$1,767,257**	**$1,775,832**	**$1,784,578**

Source: Metro COG (2011)
Federal Revenue Includes FTA 5316 and FTA 5317 Funds

Figure 91 outlines the revenue forecasts for the City of Fargo. Revenues streams for the City of Fargo are separated into five (5) primary sub categories: Federal, State, Contract, City General Fund and Farebox/Miscellaneous. The City of Fargo uses a 2% growth rate applied to the base condition to project out to the year 2016. The 2% growth rate is consistent with the growth rate in the adopted 30 year Long Range Transportation Plan.

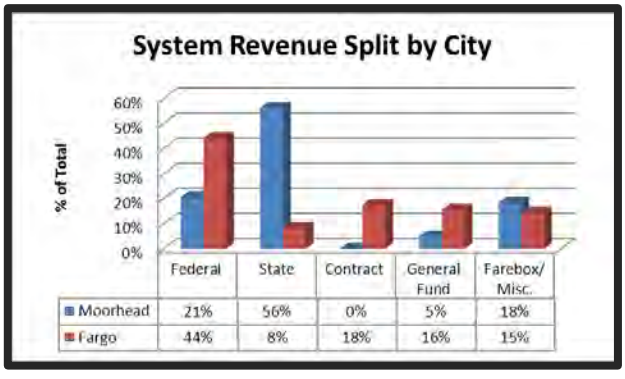
Figure 91 – City of Fargo Revenue Projections

Revenue Source	Base*	2012**	2013	2014	2015	2016
Federal	$1,964,410	$2,003,698	$2,043,772	$2,084,648	$2,126,341	$2,168,867
State	$370,000	$377,400	$384,948	$392,647	$400,500	$408,510
System Contributions*	$781,000	$796,620	$812,552	$828,803	$845,380	$862,287
City General Fund	$692,895	$706,753	$720,888	$735,306	$750,012	$765,012
Farebox/ Misc.	$646,194	$659,118	$672,300	$685,746	$699,461	$713,450
Total	**$4,454,499**	**$4,543,589**	**$4,634,460**	**$4,727,150**	**$4,821,694**	**$4,918,126**

Source: Metro COG (2011)
Federal Revenue Includes FTA 5316 and FTA 5317 Funds
*System contributions include West Fargo and NDSU Joint Powers Agreements

As is clear from the estimates shown in Figures 90 and 91, funds by revenue source for each city are noticeably different as a percentage of the overall system revenue. Figure 92 (right) summarizes figures 90 and 91 by comparing the revenue split by source for each city. The data used in Figure 91 is based on the base condition.

Figure 92 – Revenue Split by Source and by City



Source: Metro COG (2011)

Considerations Regarding Surface Transportation Funding. These are somewhat uncertain times regarding surface transportation planning and programming. Federal funding for surface transportation is typically provided in six (6) year authorizations. The current authorization expired on 9/30/09 and has been extended through a series of continuing resolutions. Completion of a new six year transportation bill is currently stalled and not likely until 2012 or perhaps even as late as 2013. This degree of uncertainty challenges the basis of financial planning and programming which has formed the foundation of

statewide and metropolitan surface transportation planning since at least 1991. A number of issues mire the completion of new surface transportation authorization, primarily revenue. The gas tax trust fund can no longer sustain historic funding levels for surface transportation and there appears no clear consensus on how to increase revenue to fund surface transportation.

Both the City of Fargo and the City of Moorhead utilize Federal funds to operate transit service. As shown in Figure 91, Fargo utilizes a larger share of Federal funds by percentage of total revenue than does the City of Moorhead. Changes in Federal funding levels for public transportation will impact both cities. Federal funding for mass transportation has been a hallmark of Federal surface transportation policy since the mid-1970s and the Federal commitment/involvement in mass transportation has grown steadily since.

The City of Moorhead is heavily dependent upon funding from the State of Minnesota via both state aid and funding from the Greater Minnesota Transit Fund (see Chapter 1 for additional details). State funding makes up 51% of Moorhead's revenue stream in the base condition. Uncertainty regarding future state funding should be a consideration when planning for future transit system needs within the City of Moorhead. As noted below, state funding received by the City of Moorhead keeps its local general fund contributions to public transit relatively low. State aid for the City of Fargo has increased in recent years and has allowed the city more stability relative to local general fund contributions.

Minnesota and North Dakota have different styles of State and Local Government. Minnesota collects revenues at a statewide level and distributes them to municipalities while North Dakota allows for more revenue to be raised at the local level thus providing less state-level aid. Both the City of Fargo and the City of Moorhead provide revenue from their local general fund to pay for public transportation. By percentage, about 16% of system revenue for Fargo is from its general fund. By contrast, only 4% of Moorhead's system revenue is from its general fund. The Greater Minnesota Transit Fund allows Moorhead to keep city general fund contributions to transit minimal.

5 Year Financial Plan

This chapter describes the ability to fund the continuation and expansion of MATBUS services in both Fargo and Moorhead over the next five years. Operating costs and key assumptions are presented first followed by a review of projected revenues and the resultant performance indicators. Capital needs are then discussed including vehicle replacement, expansion, and other related system capital improvements. Costs and revenues are projected across three different operating and expansion scenarios, which are defined below.

1.0 Operating and Expansion Scenarios.

Overview. Operating and capital costs have been projected for the next five years under three different scenarios. A summary of the three scenarios for fixed route service are described below followed by a review of the detailed assumptions and corresponding costs. Year-by-year service levels and the corresponding capital needs are described to provide an understanding of enhanced service levels for the unconstrained expansion scenario.

(a) *Reduced Service.* This scenario is based on a 5% reduction in service hours given the 2009 service levels. The outcome of this scenario results in an overall cost savings for MATBUS. Capital improvements primarily consist of vehicle replacements and minimal system improvements such as ITS enhancements, a new park and ride facility and bus stop enhancements.

(b) *Baseline Service*. This scenario maintains baseline 2009 service hours in the next five years. The capital improvements for this scenario are nearly identical to the reduced service scenario.

(c) *Unconstrained Expansion*. This scenario assumes unconstrained funding to allow for significant transit enhancements and expansion. Increased service levels are proposed for Fargo and Moorhead. Fargo service expansion includes a gradual ramp-up of services (starting in FY 2011/12) including a taxi subsidy, creation of a "Super Route", expansion/modification of the Circulator and Routes 16, 14, 18, 28 and 29. Moorhead service expansion includes improvements to Routes 2, 6, and 9 in FY 2013/14, 2014/15, and 2015/16, respectively. Please see Chapter 4 (Operational Alternatives Development & Analysis) for further details on this expansion scenario. This scenario includes all of the same capital improvement projects as the reduced and baseline scenarios plus additional vehicle purchases to accommodate new MATBUS service.

2.0 Operating Costs.

Operating costs have been projected for fixed route and paratransit service separately for Fargo and Moorhead. Costs are based on 2010baseline figures from the TDP Existing Conditions Report (ECR) dated April 2011. Major assumptions in estimating service costs are listed below:

(a) Hourly fixed route costs for Fargo and Moorhead are $66.89 and $63.00 respectively in 2010;
(b) The unconstrained scenario assumes service level increases each year of the five year plan;
(c) Paratransit hourly costs are the same for Fargo and Moorhead at $53 per hour;
(d) Annual service hours for paratransit remain the same for the next five years at 25,517; hours are split between Fargo (77%) and Moorhead (23%); and
(e) Annual inflation rate is projected at 2%.

See Five Year Financial Summaries - Pg. 149

Under the baseline alternative, total operating costs including fixed route and paratransit services for Fargo are estimated at $4.9 million in the first year (FY 2012) and increase to nearly $5.4 million after five years. Under the 5% reduction alternative, the costs are slightly lower at $4.7 million (increasing to approximately $5.1 million after five years). Moorhead costs are projected at $1.75 million in FY 2012 under the baseline alternative compared to $1.65 million under a 5% reduction. Costs for the unconstrained scenarios are significantly higher. For Fargo the costs are estimated at $5.3 million FY 2012 and for Moorhead unconstrained operating costs are estimated at $1.8 million for the same year.

3.0 Operating Revenue.

Operating revenues have been projected for both Fargo and Moorhead assuming existing funding sources with modest increases. MATBUS operating revenues come from a range of federal, state and local resources. A brief description follows:

Federal Funds. The Federal Transportation Bill which passed in 2005 is known as the "Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users "SAFETEA-LU" and was originally set to expire in 2009; however it has been extended until a new federal transportation bill is approved.

(a) *Section 5307 Urban Area Funds* - Urbanized areas with populations over 50,000 or more are eligible to receive formula funding through the Section 5307 urbanized area grant program. For urbanized areas with a population over 200,000, funds are apportioned and flow directly to a designated recipient selected locally to apply for and receive Federal funds. Section 5307 funding apportionments, can be used for both capital and preventive maintenance of the fleet. Transit related capital projects are eligible and typically fund 80% of projects.

(b) FTA Section 5316 Job Access and Reverse Commute (JARC) Program - The purpose of the JARC program is to fund local programs that offer job access services for low-income individuals. JARC funds are distributed to states on a formula basis, depending on that state's rate of low-income population, and then are awarded within individual states following a competitive process. JARC funds will pay for up to 50% of operating costs and 80% for capital costs. The plan assumes some JARC funds for capital purchases.

(c) FTA Section 5317 New Freedom Program -The New Freedom formula grant program aims to provide additional tools to overcome existing barriers facing Americans with disabilities seeking integration into the workforce and full participation in society. New Freedom funds are awarded following a competitive process, and are available for capital and operating expenses that support new public transportation services and alternatives, beyond those required by the ADA, that are designed to assist individuals with disabilities with accessing transportation services, including transportation to and from jobs and employment support services. The plan assumes 5317 funds could help pay for some capital purchases. The same match requirements for JARC apply for the New Freedom Program.

(d) State Aid: Both Minnesota and North Dakota make contributions to MATBUS in varying amounts. In 2009, state funding was comprised of approximately $400-500,000 to support MATBUS operations. In addition, the state of Minnesota provides operating funds through the Greater Minnesota Transit Fund.

(e) Joint Powers/Other Local Contributions: Since MATBUS serves the Cities of West Fargo and Dilworth, these communities support operations through joint powers agreements. In addition, MATBUS serves a large population of college students in both Moorhead and Fargo and as a result, receives financial contributions directly to fund transit services. MATBUS also offers a U-Pass program with four local higher educational institutions which provides an additional revenue stream for operations.

(f) Local general funds: Both cities of Fargo and Moorhead also provide local general funds to supplement the provision of transit services.

The operating revenue tables present projected ridership and farebox revenue for the three scenarios. Farebox revenues are based on ridership projections for each scenario and an average fare per passenger. In all three scenarios, farebox revenues increase over the five-year period for both Fargo and Moorhead based on the following assumptions:

(a) Modest 1% annual growth in passenger demand when service levels remain constant;
(b) When service levels vary (up or down), ridership is determined based on changes due to fare increases in addition to using the average passengers per hour from the previous year to project new ridership estimates;
(a) Fixed route fare increases from $1.25 to $1.50 in 2012, and a second increase occurs in 2015 to $1.75;
(b) Paratransit fare increases from $2.50 to $3.00 in 2013 and again in 2015 to $3.50;
(c) Assumed elasticity associated with fare increases of -0.3.

Between FY 2012 and FY 2016, Fargo's farebox revenue across all three scenarios increases, with the most significant increase under the unconstrained scenario which more than doubles its fixed route farebox revenue

between FY 2012 and FY 2016 (increase from approximately $560,000 to over $1.1 million). This increase is due to ridership growth as a result of significant service improvements and expansion in the unconstrained scenario.

The same pattern occurs for Moorhead. Between FY 2012 and FY 2016, farebox revenues increase across all three scenarios with the most significant increase under the unconstrained scenario. Farebox revenues increase from approximately $300,000 in FY 2012 to approximately $513,000 in FY 2016.

See System Operating Costs and Revenues - Pg. 150 and Pg. 151

A comparison of operating costs and operating revenues reveals annual deficits for Fargo under the 5% reduction, baseline and unconstrained scenarios. When service hours are reduced by 5%, deficits are approximately $35,000 to $115,000 depending on the year. Under the baseline alternative, deficits range from nearly $270,000 to $336,000 per year. To cover operating costs under the expansion (unconstrained) scenario, Fargo would need to annually increase its revenue between $650,000 and $3 million as shown in the table on Pg. 150.

Moorhead is able to cover its operating costs under the 5% reduction and baseline scenarios. As shown in the table on Pg. 151, surpluses are projected for both scenarios which is likely due in part to lower estimates of hourly costs. However, under the expansion scenario, Moorhead would require additional funding support beginning in FY 2014 and for the following fiscal year.

See Pg. 150 and Pg. 151

Performance Indicators. Financial tables on Pg. 150 and Pg. 151 show performance indicators for both Fargo and Moorhead in each of the three fixed route service scenarios and for paratransit service. It shows average fare per passenger and farebox recovery ratio as well as productivity expressed as passengers per hour. On the Fargo side, about 27 passengers per hour are carried, indicating a very productive service. Moorhead service carries an average of 17 hourly passengers. Fargo and Moorhead paratransit service carries about two hourly passengers, which is on par with industry standards.

See System Performance Indicators - Pg. 150 and Pg. 151

4.0 Capital Requirements.

In the next five years, the majority of the MATBUS capital needs are vehicle replacements or expansion vehicles. Other capital projects include physical improvements such as rider information kiosks, bus stop signage improvements, park and ride expansion and bus stop shelters. For the two constrained scenarios, all capital requirements will be needed with the exception of expansion vehicles. The unconstrained scenario includes all capital requirements plus expansion vehicles. A detailed description of these capital requirements can be found in Chapter 4 of this Plan.

Capital Costs. The capital costs for this plan were estimated based on the assumption that existing fleets will be maintained and replaced as they reach their useful life. The service expansion scenario requires additional equipment and facilities as described above. Costs were projected on a year-by-year basis in three categories:

(a) Vehicle needs based on existing services (Replacement);
(b) Vehicle needs based on new/enhanced services (Expansion, unconstrained alternative only);

(c) Other recommended capital projects.

Vehicle Replacement

Fargo. In all scenarios, it is assumed that Fargo will replace seven of its fixed route vehicles (which are slated to reach scheduled replacement in 2015). These vehicles include seven Gillig vehicles and are estimated to have a replacement cost of approximately $2.5 million.[1]

Moorhead. In all scenarios, the City of Moorhead is assumed to replace four of its fixed route vehicles (replacement schedule for 2015) at a cost of $915,000. These vehicles include four Orion vehicles purchased in 2003.[2]

Vehicle Expansion

Fargo. To support the service enhancements in the unconstrained alternative, additional vehicles are needed each year between FY 2012/13 through FY 2015/16. The total cost for ten new vehicles is estimated at approximately $4.25 million over the five- year period. The cost is assumed to be $425,000 per vehicle.

Moorhead. Moorhead will require four additional vehicles to support the service enhancements in the unconstrained alternative. Assuming $425,000 per vehicle the vehicle costs are estimated at approximately $1.27 million over a three year period.

Bus Stops and Shelters. Under all scenarios, it is recommended that MATBUS transition from a flag stop operation to a system with fixed bus stops. At high volume stops, shelters are proposed at key locations. In Fargo, fixed stops are proposed for Routes 11,13,14 and 15 at an approximate distance of every 800 feet. This would require a total of 338 new bus stops. At $140 per stop, the total cost is estimated at $47,320. In addition, 11 new bus shelters are recommended in Fargo at key locations. In Moorhead, 74 new bus stops are recommended along Route 2 in addition to six shelters at key stop locations. Capital costs for the stops and shelters are $10,360.

Intelligent Transportation Systems. To supplement existing rider information and signage, two additional AVL kiosks should be purchased and installed (one in Fargo and one in Moorhead). These kiosks provide additional on-site passenger information about the location and arrival time of MATBUS vehicles. In Fargo, the kiosk should be installed at the West Acres Shopping Center. In Moorhead, a location has not been defined, but it should be at a key transfer location.

5.0 5 Year Capital Summary.

The tables below list capital projects by year and the estimated costs including five year totals. For Fargo, the five-year capital costs for the 5% reduction and baseline are approximately $2.6 million compared to $6.8 million under the enhanced scenario. Moorhead capital costs are $935,000 over the five year planning period with the

[1] Capital Coordination and Funding Plan (2010)

[2] Ibid.

lion's share of the cost in FY 2015because of vehicle replacements in that year. Under the unconstrained scenario, capital expenses over the five year period are estimated at $2.2 million.
The capital plan assumes that Federal Funds, primarily FTA Section 5307, would cover 80% of capital costs. The 20% match would be a combination of state and local funds.

See Five Year Capital Matrices - Pg. 152

6.0 Potential Funding Sources.

Discretionary Federal Funds

(a) **FTA Section 5309 -**Capital projects such as transit centers and large bus purchases are often partially funded with federal discretionary funds in Section 5309 Bus and Bus Facility Grants. These funds totaled over $800 million annually nationwide through the course of the current transportation funding act (SAFETEA-LU). These funds are often "earmarked", either in the federal transportation funding legislation or in annual appropriations of any unobligated balances. Because these funds are discretionary, they were not included in the funding plan. However, by working with the local congressional delegation to prioritize FMCOG transit projects in future appropriations, specific capital needs could be funded with this federal program**.**

(b) **FTA Section 5311** - Federal Section 5311 funds are distributed on a formula basis to rural counties throughout the country. The goals of the non-urbanized formula program are as follows:
   (a) To enhance the access of people in non-urbanized areas to health care, shopping, education, employment, public services, and recreation;
   (b) To assist in the maintenance, development, improvement, and use of public transportation systems in rural and small urban areas;
   (c) To encourage and facilitate the most efficient use of all Federal funds used to provide passenger transportation in non-urbanized areas through the coordination of programs and services;
   (d) To assist in the development and support of intercity bus transportation; and
   (e) To provide for the participation of private transportation providers in non-urbanized transportation to the maximum extent feasible.

Fifteen percent of the Section 5311 apportionment is for the Intercity Bus Program, Section 5311(f). The Intercity Bus Program funds public transit projects that serve intercity travel needs in non-urbanized areas. Projects are awarded on a statewide, competitive basis. This program funds operating and capital costs, as well as planning for service. As with most federal capital funds, the Section 5311 grant funding program provides 80% of capital costs with a 20% matching requirement. Section 5311 funds provide up to 50% of operating costs to support transit operations.

- Public/Private Partnerships -Direct or in-kind contributions can provide important marginal support for transit services. It is common, for instance, for retailers and merchants to financially contribute to a local downtown shuttle service, and major employers often contribute significantly to transit linking job sites to major rail or bus connections. These contributions can include direct annual contributions for operating costs, or contribution of capital facilities such as passenger benches and shelters.

7.0 Summary and Conclusions.

This chapter has presented an estimate of the operational and capital costs to implement the recommendations of the three service scenarios. It has also identified existing and potential revenue sources to provide the funds needed for capital and operations. To summarize:

(a) Operating expenses for Fargo will exceed operating revenues by no less than $200,000 under all scenarios, highlighting a need for additional funds in the next five years.
(b) Moorhead is able to fully fund all scenarios in years one and two of the plan (FY 2011/12 -2012/13) with small surpluses. However, in FY 2013/14 onward, an operating deficit begins in the unconstrained scenario, which would require additional funding.
(c) Capital outlays needed to support existing services for both Fargo and Moorhead primarily consist of replacing existing vehicles that have reached the end of their useful life plus passenger and service enhancements. The plan assumes that 80% of capital needs will be paid for with FTA 5307 funds and 20% local and state matching funds. If these funds are not available, then FMCOG and the cities can pursue discretionary federal funds and explore other nontraditional funding sources.
(d) Assuming that all capital needs will be met through a combination of federal funding and other sources, Fargo will need to identify a total of $1.2 million to operate services in the 5% reduction scenario and $2.9 million in the baseline scenario between FY 2011/12 and FY 2015/16.
(e) The unconstrained scenario will require an additional $10.6 million in funding for Fargo and $845,000 in Moorhead to fund across the next five years.
(f) Without new funding to support operations (regardless of funds for capital investments) Fargo and Moorhead will be unable to introduce new or enhanced services.

Five Year Financial Plan Overview

FARGO Summary Five -Year Financial Plan

Alternative 1

	2012	2013	2014	2015	2016
SYSTEM EXPENSES					
Operating Expenses	$4,534,589	$4,625,281	$4,717,786	$4,812,142	$4,908,385
Capital Expenses	$24,564	$10,564	$10,564	$2,530,564	$10,564
Total Expenses	**$4,559,153**	**$4,635,845**	**$4,728,350**	**$7,342,706**	**$4,918,949**
REVENUES					
Capital Revenues					
FTA 5307 Federal	$19,651	$8,451	$8,451	$2,024,451	$8,451
State	$4,913	$2,113	$2,113	$506,113	$2,113
FTA 5307 Local Match	$0	$0	$0	$0	$0
Federal Capital	$0	$0	$0	$0	$0
Capital Revenue Subtotal	*$24,564*	*$10,564*	*$10,564*	*$2,530,564*	*$10,564*
Operating Revenues					
Section 5307	$ 1,981,348	$ 2,020,975	$ 2,061,395	$ 2,102,623	$ 2,144,675
Other FTA Funds	$ 62,424	$ 63,672	$ 64,946	$ 66,245	$ 67,570
State Aid	$ 384,948	$ 392,647	$ 400,500	$ 408,510	$ 416,680
Joint Powers / Other Contributions	$ 498,365	$ 508,332	$ 518,499	$ 528,869	$ 539,446
City General Funds	$ 720,888	$ 735,306	$ 750,012	$ 765,012	$ 780,312
Greater MN Transit Fund	$ -	$ -	$ -	$ -	$ -
Other Revenue	$ 187,272	$ 191,017	$ 194,838	$ 198,735	$ 202,709
Fargo Farebox Revenue	$ 585,729	$ 597,443	$ 609,392	$ 689,629	$ 703,421
Paratransit Revenue	$ 210,502	$ 226,762	$ 228,780	$ 244,473	$ 231,769
Operating Revenue Subtotal	$ 4,631,476	$ 4,736,155	$ 4,828,361	$ 5,004,094	$ 5,086,583
Total Revenues	**$ 4,656,040**	**$ 4,746,719**	**$ 4,838,925**	**$ 7,534,658**	**$ 5,097,147**
Capital Revenue/Expense Balance	$ -	$ -	$ -	$ -	$ -
Operations Revenue/Expense Balance	**$ 96,887**	**$ 110,874**	**$ 110,575**	**$ 191,952**	**$ 178,198**
Total Balance	**$ 96,887**	**$ 110,874**	**$ 110,575**	**$ 191,952**	**$ 178,198**

Moorhead Summary Five -Year Financial Plan

Alternative 1

	2012	2013	2014	2015	2016
SYSTEM EXPENSES					
Operating Expenses	$1,677,286	$1,710,831	$1,745,048	$1,779,949	$1,815,548
Capital Expenses	$9,672	$2,672	$2,672	$917,672	$2,672
Total Expenses	**$1,686,958**	**$1,713,503**	**$1,747,720**	**$2,697,621**	**$1,818,220**
REVENUES					
Capital Revenues					
FTA 5307 Federal	$7,738	$2,138	$2,138	$734,138	$2,138
State	$1,934	$534	$534	$183,534	$534
FTA 5307 Local Match	$0	$0	$0	$0	$0
Federal Capital	$0	$0	$0	$0	$0
Capital Revenue Subtotal	$9,672	$2,672	$2,672	$917,672	$2,672
Operating Revenues					
Section 5307	$ 349,998	$ 349,998	$ 349,998	$ 349,998	$ 349,998
Other FTA Funds	$ 20,876	$ 20,876	$ 20,876	$ 20,876	$ 20,876
State Aid	$ 473,925	$ 473,925	$ 473,925	$ 473,925	$ 473,925
Joint Powers / Other Contributions	$ -	$ -	$ -	$ -	$ -
City General Funds	$ 87,815	$ 89,571	$ 91,363	$ 93,190	$ 95,054
Greater MN Transit Fund	$ 540,365	$ 540,365	$ 540,365	$ 540,365	$ 540,365
Other Revenue	$ 48,566	$ 49,537	$ 50,528	$ 51,538	$ 52,569
Moorhead Farebox Revenues	$283,507	$286,342	$289,205	$340,780	$344,188
Paratransit Farebox Revenue	$47,952	$54,090	$54,090	$59,950	$59,950
Operating Revenue Subtotal	$ 1,853,003	$ 1,864,704	$ 1,870,350	$ 1,930,622	$ 1,936,924
Total Revenues	**$ 1,862,675**	**$ 1,867,376**	**$ 1,873,022**	**$ 2,848,294**	**$ 1,939,596**
Capital Revenue/Expense Balance	$ -	$ -	$ -	$ -	$ -
Operations Revenue/Expense Balance	**$ 175,717**	**$ 153,873**	**$ 125,302**	**$ 150,673**	**$ 121,376**
Total Balance	**$ 175,717**	**$ 153,873**	**$ 125,302**	**$ 150,673**	**$ 121,376**

Baseline Alternative

	2012	2013	2014	2015	2016
SYSTEM EXPENSES					
Operating Expenses	$4,717,399	$4,811,747	$4,907,982	$5,006,142	$5,106,264
Capital Expenses (1)	$24,564	$17,564	$10,564	$2,530,564	$10,564
Total Expenses	**$4,741,963**	**$4,829,311**	**$4,918,546**	**$7,536,706**	**$5,116,828**
REVENUES					
Capital Revenues					
FTA 5307 Federal	$19,651	$14,051	$8,451	$2,024,451	$8,451
State	$4,913	$3,513	$2,113	$506,113	$2,113
FTA 5307 Local Match	$0	$0	$0	$0	$0
Federal Capital	$0	$0	$0	$0	$0
Capital Revenue Subtotal	*$24,564*	*$17,564*	*$10,564*	*$2,530,564*	*$10,564*
Operating Revenues					
Section 5307	$ 1,981,348.16	$ 2,020,975.13	$ 2,061,394.63	$ 2,102,622.52	$ 2,144,674.97
Other FTA Funds	$ 62,424.00	$ 63,672.48	$ 64,945.93	$ 66,244.85	$ 67,569.75
State Aid	$ 384,948.00	$ 392,646.96	$ 400,499.90	$ 408,509.90	$ 416,680.10
Joint Powers / Other Contributions	$ 498,365.13	$ 508,332.43	$ 518,499.08	$ 528,869.06	$ 539,446.44
City General Funds	$ 720,887.96	$ 735,305.72	$ 750,011.83	$ 765,012.07	$ 780,312.31
Greater MN Transit Fund	$ -	$ -	$ -	$ -	$ -
Other Revenue	$ 187,272.00	$ 191,017.44	$ 194,837.79	$ 198,734.54	$ 202,709.24
Fargo Farebox Revenue	$560,917	$572,135	$583,578	$660,415	$673,624
Paratransit Revenue	$ 210,501.74	$ 226,761.87	$ 228,779.98	$ 244,472.91	$ 231,769.42
Operating Revenue Subtotal	$ 4,606,663.66	$ 4,710,847.04	$ 4,802,546.85	$ 4,974,881.29	$ 5,056,785.97
Total Revenues	**$ 4,631,228**	**$ 4,728,411**	**$ 4,813,111**	**$ 7,505,445**	**$ 5,067,350**
Capital Revenue/Expense Balance	$ -	$ -	$ -	$ -	$ -
Operations Revenue/Expense Balance	**$ (110,735)**	**$ (100,900)**	**$ (105,435)**	**$ (31,260)**	**$ (49,478)**
Total Balance	**$ (110,735)**	**$ (100,900)**	**$ (105,435)**	**$ (31,260)**	**$ (49,478)**

Baseline Alternative

	2012	2013	2014	2015	2016
SYSTEM EXPENSES					
Operating Expenses	$1,747,055	$1,781,996	$1,817,636	$1,853,989	$1,891,069
Capital Expenses (1)	$9,672	$2,672	$2,672	$917,672	$2,672
Total Expenses	**$1,756,727**	**$1,784,668**	**$1,820,308**	**$2,771,661**	**$1,893,741**
REVENUES					
Capital Revenues					
FTA 5307 Federal	$7,738	$2,138	$2,138	$734,138	$2,138
State	$1,934	$534	$534	$183,534	$534
FTA 5307 Local Match	$0	$0	$0	$0	$0
Federal Capital	$0	$0	$0	$0	$0
Capital Revenue Subtotal	*$9,672*	*$2,672*	*$2,672*	*$917,672*	*$2,672*
Operating Revenues					
Section 5307	$ 349,998	$ 349,998	$ 349,998	$ 349,998	$ 349,998
Other FTA Funds	$ 20,876	$ 20,876	$ 20,876	$ 20,876	$ 20,876
State Aid	$ 473,925	$ 473,925	$ 473,925	$ 473,925	$ 473,925
Joint Powers / Other Contributions	$ -	$ -	$ -	$ -	$ -
City General Funds	$ 87,815	$ 89,571	$ 91,363	$ 93,190	$ 95,054
Greater MN Transit Fund	$ 540,365	$ 540,365	$ 540,365	$ 540,365	$ 540,365
Other Revenue	$ 48,566	$ 49,537	$ 50,528	$ 51,538	$ 52,569
Moorhead Farebox Revenues	$311,146	$314,257	$317,400	$355,488	$359,043
Paratransit Farebox Revenue	$47,952	$54,090	$54,090	$59,950	$59,950
Operating Revenue Subtotal	$ 1,880,642.32	$ 1,892,619.67	$ 1,898,544.41	$ 1,945,329.95	$ 1,951,779.39
Total Revenues	**$ 1,890,314**	**$ 1,895,292**	**$ 1,901,216**	**$ 2,863,002**	**$ 1,954,451**
Capital Revenue/Expense Balance	$ -	$ -	$ -	$ -	$ -
Operations Revenue/Expense Balance	**$ 133,587**	**$ 110,623**	**$ 80,908**	**$ 91,341**	**$ 60,711**
Total Balance	**$ 133,587**	**$ 110,623**	**$ 80,908**	**$ 91,341**	**$ 60,711**

Unconstrained Alternative

	2012	2013	2014	2015	2016
SYSTEM EXPENSES					
Operating Expenses	$5,050,849	$6,158,291	$6,963,389	$7,416,346	$8,155,908
Capital Expenses	$29,324	$872,324	$1,715,324	$2,960,324	$1,290,324
Total Expenses	**$5,080,173**	**$7,030,615**	**$8,678,713**	**$10,376,670**	**$9,446,232**
REVENUES					
Capital Revenues					
FTA 5307 Federal	$23,459	$697,859	$1,372,259	$2,368,259	$1,032,259
State	$5,865	$174,465	$343,065	$592,065	$258,065
FTA 5307 Local Match	$0	$0	$0	$0	$0
Federal Capital	$0	$0	$0	$0	$0
Capital Revenue Subtotal	$29,324	$872,324	$1,715,324	$2,960,324	$1,290,324
Operating Revenues					
Section 5307	$ 1,981,348.16	$ 2,020,975.13	$ 2,061,394.63	$ 2,102,622.52	$ 2,144,674.97
Other FTA Funds	$ 62,424.00	$ 63,672.48	$ 64,945.93	$ 66,244.85	$ 67,569.75
State Aid	$ 384,948.00	$ 392,646.96	$ 400,499.90	$ 408,509.90	$ 416,680.10
Joint Powers / Other Contributions	$ 498,365.13	$ 508,332.43	$ 518,499.08	$ 528,869.06	$ 539,446.44
City General Funds	$ 720,887.96	$ 735,305.72	$ 750,011.83	$ 765,012.07	$ 780,312.31
Greater MN Transit Fund	$ -	$ -	$ -	$ -	$ -
Other Revenue	$ 187,272.00	$ 191,017.44	$ 194,837.79	$ 198,734.54	$ 202,709.24
Fargo Farebox Revenue	$560,917	$676,635	$792,419	$948,751	$1,065,717
Paratransit Revenue	$ 210,501.74	$ 226,761.87	$ 228,779.98	$ 244,472.91	$ 231,769.42
Operating Revenue Subtotal	$ 4,606,663.66	$ 4,815,346.69	$ 5,011,388.05	$ 5,263,216.99	$ 5,448,879.61
Total Revenues	**$ 4,635,988**	**$ 5,687,671**	**$ 6,726,712**	**$ 8,223,541**	**$ 6,739,204**
Capital Revenue/Expense Balance	$ -	$ -	$ -	$ -	$ -
Operations Revenue/Expense Balance	**$ (444,185)**	**$ (1,342,945)**	**$ (1,952,001)**	**$ (2,153,129)**	**$ (2,707,029)**
Total Balance	**$ (444,185)**	**$ (1,342,945)**	**$ (1,952,001)**	**$ (2,153,129)**	**$ (2,707,029)**

Unconstrained Alternative

	2012	2013	2014	2015	2016
SYSTEM EXPENSES					
Operating Expenses	$1,747,055	$1,781,996	$2,021,600	$2,290,209	$2,548,218
Capital Expenses	$9,672	$2,672	$427,672	$1,342,672	$427,672
Total Expenses	**$1,756,727**	**$1,784,668**	**$2,449,272**	**$3,632,881**	**$2,975,890**
REVENUES					
Capital Revenues					
FTA 5307 Federal	$ 7,738	$ 2,138	$ 342,138	$ 1,074,138	$ 342,138
State	$ 1,934	$ 534	$ 85,534	$ 268,534	$ 85,534
FTA 5307 Local Match	$ -	$ -	$ -	$ -	$ -
Federal Capital	$ -	$ -	$ -	$ -	$ -
Capital Revenue Subtotal	$9,672	$2,672	$427,672	$1,342,672	$427,672
Operating Revenues					
Section 5307	$ 349,998	$ 349,998	$ 349,998	$ 349,998	$ 349,998
Other FTA Funds	$ 20,876	$ 20,876	$ 20,876	$ 20,876	$ 20,876
State Aid	$ 473,925	$ 473,925	$ 473,925	$ 473,925	$ 473,925
Joint Powers / Other Contributions	$ -	$ -	$ -	$ -	$ -
City General Funds	$ 87,815	$ 89,571	$ 91,363	$ 93,190	$ 95,054
Greater MN Transit Fund	$ 540,365	$ 540,365	$ 540,365	$ 540,365	$ 540,365
Other Revenue	$ 48,566	$ 49,537	$ 50,528	$ 51,538	$ 52,569
Moorhead Farebox Revenues	$311,146	$314,257	$361,551	$459,078	$513,490
Paratransit Farebox Revenue	$47,952	$54,090	$54,090	$59,950	$59,950
Operating Revenue Subtotal	$ 1,880,642.32	$ 1,892,619.67	$ 1,942,695.68	$ 2,048,919.86	$ 2,106,226.36
Total Revenues	**$ 1,890,314**	**$ 1,895,292**	**$ 2,370,368**	**$ 3,391,592**	**$ 2,533,898**
Capital Revenue/Expense Balance	$ -	$ -	$ -	$ -	$ -
Operations Revenue/Expense Balance	**$ 133,587**	**$ 110,623**	**$ (78,905)**	**$ (241,289)**	**$ (441,991)**
Total Balance	**$ 133,587**	**$ 110,623**	**$ (78,905)**	**$ (241,289)**	**$ (441,991)**

System
Coordination

1.0 System Coordination.

Transit Coordination and Gaps. As noted in Chapter 1 (see Pg. 19 – 20), since adoption of the 2002-2006 TDP MATBUS has made significant progress and improvements in the delivery of transit services, specific to coordination efforts between operating jurisdictions. Per Figure 16 (see Pg. 19) a number of recent coordination efforts, milestones and accomplishments are outlined by corresponding category, which is further verification of cooperative efforts to improve system performance and functionality.

Pursuant to the scope of work, the intent of this chapter was to document existing levels of coordination between both cities and, as applicable, identify any coordination gaps that should be addressed over the planning horizon of the 2012 to 2016 TDP.

Through the issue/need identification process (Chapter 2) and throughout the public input phases (Chapter 11) there was limited discussion/input relative to this topic. Although improvement is always possible, it is evident that a majority of the more 'achievable' coordination efforts have been implemented or addressed by MATBUS. It is important to note that the 2007-2011 TDP did include analysis on certain coordination efforts that would be consistent and support transition initiatives to a transit authority.

2007-2011 TDP. The 2007-2011 Transit Development Plan included a chapter titled '*Framework for Coordination*'. The chapter discussed and established in detail an overall framework by which the two systems could continue progress towards a unified structure. The chapter detailed opportunities for a more unified transit system in the following categories:

(a) Administration;

(b) Finance;

(c) Drivers;

(d) New Employees;

(e) Capital Finances.

The intent of the *Framework for Coordination* element of the 2007-2011 TDP was to set forth a process and strategy to achieve a unified transit system by analyzing the administrative structure of MAT. Further, the chapter discussed the feasibility of hiring certain functions of transit in-house versus contracts for services and establishing a mechanism whereby joint staff could be hired as a short term implementation strategy. In addition, the chapter analyzes the feasibility of consolidating federal operating and capital grants for both cities, such that the flow of FTA funds would be administered by one city (both city grants are processed through FTA Region VIII).

Implementation / Progress. A majority of the analysis and framework outlined within the *Framework for Coordination* section of the 2007-2011 TDP has yet to receive attention and/or implementation. Based on previous TDP's and completed analysis, there appears to be two approaches to accommodate transition to a transit authority:

1. Per the 2007-2011 TDP, MATBUS would utilize incremental steps to transition the administrative, financial and capital structure, and operators to an arrangement that would be consistent and compatible with an eventual transition to a transit authority;

2. Complete the transition as one overarching phase.

In either approach, decisions and guidance from the policy level needs to be communicated to the community, stakeholders and MATBUS to ensure effective implementation, if indeed the end goal or objective is a truly coordinated system under the auspices of a transit authority.

MAT Coordinating Board. As described in Chapter 1 (Pg. 17 and 18) the MAT Coordinating Board was formally established in 2004 under a JPA to coordinate operations and administration. The 2007 JPA (expires December 2011) was written with specific reference that the board will "assist in developing a framework for the transition to, and ultimately the operation of, a joint transit system.....". As the MAT Coordinating Board and both cities revise and update this JPA; specific consideration should be given to the inclusion of this statement and (if included) the context under which the MAT Coordinating Board should be engaging from an implementation perspective.

2010 Capital Cost Sharing Memorandum. In 2010 Metro COG completed the *Capital Analysis, Capital Coordination and Funding Memorandum* which outlined cost sharing agreement and funding barriers to system coordination/unification. A majority of this document remains current and applicable, and should be referenced accordingly as decisions are made in the future regarding the unification of transit.

System Goals, Objectives and Performance Measures

1.0 The Value of Performance and Design Standards.

Monitoring system performance and designing the "right" mix of transit service is an important task for MATBUS. Performance standards and measures provide a consistent framework for the effective management, evaluation and planning of public transit services. Performance and design standards should:

(a) Reflect and support goals and objectives of MATBUS, which should support the overall metropolitan planning program as well as the cities of Fargo, Moorhead, West Fargo and Dilworth. Goals and objectives provide a "foundation" for public transit, whereas standards provide a formal, quantifiable structure for how the service should perform and be implemented;

(b) Ensure compliance with all applicable federal, state and local regulatory requirements (described in more detail below);

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

(d) Provide a clear rationale for service increases (increased frequency or service span), service expansion (route extensions or new routes to areas not currently served) and service reductions (what services should be reduced when budgets are cut or if resources have to be reallocated to increase or expand service elsewhere). Service standards will help MATBUS justify critical decisions affecting service delivery within the Metropolitan Area;

(e) Provide benchmark measures that can be written into approved service and operating policies.

It is also important to note that the pending transportation reauthorization bill will likely rely on a more performance based approach to surface transportation planning and programming. As such, it is in the best interest of the Fargo-Moorhead Metropolitan Area to start working towards a comprehensive performance management framework. The development of a performance based system will also position the area to respond to possible changes in how Federal aid is disseminated to state and local governments. In addition, it is in Metro COG's interest to ensure better linkages with MATBUS in how performance measurement data is collected and analyzed. This will also ensure linkages between Metro COG's program and the performance of the surface transportation system in the Fargo-Moorhead Metropolitan Area (i.e. how this data is tracked and reported within the annual Metropolitan Profile / Surveillance & Monitoring Report). While specific standards can vary, industry practice generally uses the following categories for service performance and design:

(a) Efficiency standards;

(b) Service quality/reliability and quality/performance standards;

(c) Service design standards.

While the recommended performance and design standards will help guide the transit services provided in the Fargo-Moorhead Metropolitan Area, it is recognized that MATBUS staff may not have resources to collect extensive operations data. For this reason, this chapter recommends a very basic set of performance and design standards that should be relatively easy for MATBUS and MetroCOG to evaluate existing services and assess future demands. Finally, establishing a process for ongoing collection of operating data will make it easier for MATBUS when applying for state and federal grants.

2.0 Recommended Efficiency Standards.

Efficiency standards use operational data to measure the performance of a transit system. Monitoring operational efficiency and productivity requires that the following data be collected:

(f) Operating cost by service;
(g) Farebox revenue by fare type;
(h) Vehicle revenue miles by service;
(i) Vehicle revenue hours by service;
(j) Boardings (passenger trips) by service and fare type.

Although data is generally calculated on a system-wide basis, data should be collected separately for MATBUS fixed route and paratransit services so that planning decisions can be made regarding these services separately. Additionally, the services provided in Moorhead should be presented separately from those provided in Fargo and West Fargo. Data should be collected and entered into a basic spreadsheet or database on a daily basis and reported on a monthly basis. Performance data should then be reviewed annually (or more frequently as needed) to determine the need for system planning or analysis or to evaluate recent changes to improve performance. Four service efficiency standards and recommended benchmarks are as follows (see Figure 93, below):

Figure 93 – MATBUS Transit Service Efficiency Standards

Performance Standard	Fixed Route Benchmark			Paratransit Benchmark	Comment
	Fargo/W. Fargo	Moorhead	NDSU Routes		
Operating Cost per Passenger	Maintain under $2.75 (2010) $3.25 (2020)	Maintain under $4.00 (2010) $5.00 (2020)	Maintain under $1.00 (2010) $1.25 (2020)	Maintain under $26.00 (2010) $30.00 (2020)	Based on recent service trends and assuming equal (or faster) growth in ridership compared to operating costs
Existing (2009)	*$2.78*	*$3.50*	*$0.85*	*~ $20.00 – $23.00*	x
Operating Cost per Revenue Hour	$60.00-$65.00 (2010) $85.00-$95.00 (2020)			$50.00-$54.00 (2010) $54.00-$66.00 (2020)	Based on a 3% increase in operating costs per year.
Existing (2009)	**$62.00 (Moorhead), $65.00 (Fargo)*			*~ $53.00 (2010)*	x
Passengers per Revenue Hour	Minimum: 10.0 Consider for service improvements: Over 30.0		Minimum: 30.0 Consider service improvements: Over 50.0	Maintain between 2.0-3.0	Based on recent service trends and industry standards
Existing (2010)	*22.6*	*18.0*	*51.1*	*2.25 (2009)*	x
Farebox Recovery Ratio	Minimum of 20%			Minimum of 20%	Based on recent service trends and industry standards
Existing (2009)	*18%*	*20%*	*n/a*	*13%*	x

Source: Metro COG (2011), Metro Area Transit (MATBUS) and Nelson/Nygaard

***** Estimates include administrative costs per ECR, see Figure 5, 28 and 30 for additional details

It should be noted that these efficiency standards comply with the basic performance indicators required by the National Transit Database (NTD) and are largely consistent with operating and cost data already collected by MATBUS.

3.0 Recommended Service Quality / Reliability Standards.

Service quality and reliability standards are developed to ensure that the transit services provided by MATBUS meet certain standards for attracting and maintaining ridership and customer satisfaction. Figure 94 (below) presents recommended service quality and reliability standards, which are based on the goals and objectives presented earlier in the chapter.

Figure 94 - MATBUS Transit Service Quality / Reliability Standards

Performance Standard	Fixed Route Benchmark	Paratransit Benchmark	Comment
On-time Performance	90% of all arrival times should be within 5 minutes of scheduled time. No trip should depart prior to scheduled departure time.	All Paratransit trips shall arrive at pick-up points no earlier than 15 minutes before and no later than 15 minutes after the scheduled pick up time, 95% of the time.	This performance standard can be monitored on the fixed route service by quarterly review of farebox data. Paratransit performance can be measured from regular data collected on all trips.
Existing Arrival Times	*Fargo (62%)*, Moorhead (63%)*	*N/A*	
Passenger Complaints per Passengers Carried	Objective is to minimize passenger complaints, but no more than 1 per 10,000 passenger trips.		Requires the systematic recording of passenger complaints via telephone, email or other venues (i.e. drivers).
Road Calls/ Revenue Mile Operated	No more than 1 road call per 10,000 revenue miles		Road calls are the number of times a vehicle must be taken out of service while in operation. A high number of road calls indicates the need for a more aggressive vehicle replacement program or changes to maintenance procedures.
Bus Trips Cancelled	No scheduled trips on MATBUS fixed route should be cancelled.	N/A	Service cancellation can be eliminated or minimized through increased bus reliability and the maintenance of sufficient spare vehicles.
Preventable Accidents/ Revenue Mile Operated	While the objective should be no preventable accident, a benchmark has been established to allow for some flexibility due to driver training and turnover. The number of preventable accidents should not exceed 1 for every 100,000 revenue miles, or one approximately every two years.		Operator training efforts should be adjusted to address specific types of preventable accidents.
Cancellations and No-Shows	N/A	No more than 5% of scheduled trips should be cancelled by passengers within one hour of scheduled trip, and no more than 2% of trips due to last-minute cancellations.	Because cancellations and no-shows are an unproductive use of resources, occurrences should be tracked to identify customers and reasons. Actions should be taken to minimize the occurrences in the future.
Trip Coverage / Trip Denials	N/A	100% of all ADA-eligible trips should be accommodated.	According to the ADA, a trip is denied if the trip cannot be accommodated one hour before or one hour after the desired pick-up time.

Source: Nelson/Nygaard, Metro Area Transit (MATBUS)

* Does not include NDSU Routes

4.0 Recommended Service Design Standards.

Service design standards are important planning tools for transit providers to justify service expansion and to guide how existing and future services should be designed. Recommended service design standards for MATBUS are summarized below in Figure 95.

Figure 95 - MATBUS Transit Service Design Standards

Performance Standard	Fixed Route Benchmark / Paratransit Benchmark
Introduction of New Service	New service should be introduced if anticipated hourly productivity (passengers per revenue hour) is expected to meet or exceed the established performance standards by service type.[3] If new service is introduced, it should be evaluated at six months and again at one year. If the service is not meeting performance standards after a year, measures should be taken to modify the service or consider for elimination.
Contraction of Service	If existing services are not meeting established performance standards, the following procedures should be followed: (a) Evaluate route for potential productivity improvements; (b) Reevaluate after six months of operation and again at one year. If performance is still not meeting established standards, consider route for elimination or consolidation with other services.
Access to the Bus	Sidewalks should be available in the immediate area of a fixed route bus stop and in good condition.
Minimum Household Density	Average household density (households/acre) for fixed route service is a minimum of 3.5 households per acre within ¼ mile of a new route.
Minimum Bus Stop Design	All signed bus stops should include appropriate information about the fixed route service. Bus stops with more than twenty (20) daily boardings or alightings should be considered for a shelter if one does not already exist. Priority should be given to stops located in areas that have high concentrations of seniors or people with disabilities.
Passenger Loads	Maximum passenger loads should not exceed 1.5 passengers per seat or exceed vehicle specifications for maximum load.
Recovery Time	The fixed route service should include a minimum of 10% recovery time to ensure on-time performance.
Timed Transfers	Fixed route services should be designed to include timed transfers in at least one location (GTC or other location, such as West Acres or K-Mart). For routes serving more than one transfer location, timed connections should be made at both ends of the route to as many routes as possible.

Source: Nelson/Nygaard, Metro Area Transit (MATBUS)

5.0 Implementation.

Metro COG, MATBUS, NDDOT, and Mn/DOT per the development and adoption of the TDP will develop a performance management program for the delivery of public transit in the Fargo-Moorhead Metropolitan Area. The program would be implemented and effective by January 1, 2012.

Upon implementation of the program, data should be collected by MATBUS and transmitted to Metro COG and documented annually within the Metropolitan Profile, as determined appropriate by Metro COG and MATBUS. MATBUS and Metro COG will use this data to assist in determining short range system or subarea transit

[3] To calculate the estimated productivity for an area where new service is proposed, total population within ¼ mile of the bus stops should be determined and then multiplied by a standard mode split figure. In a region like the Fargo-Moorhead Metropolitan Area, the mode split is estimated at 2%. This estimate can then be doubled to assume a round trip, and annualized by multiplying by 255 (assuming weekday operation only). This figure can then be divided by the estimated number of annual revenue hours to arrive at an estimated productivity.

planning needs. These needs are then programmed into the UPWP. Data should also be analyzed to determine effectiveness of past planning and analysis to enhance and refine this process. Data should also guide minor internal changes by MATBUS regarding route changes and operations, customer service, etc.

Implementation Summary

1.0 Overview.

How to Interpret the Plan? The TDP is drafted / formatted to guide a reader sequentially through the data, analysis, input and recommendations. The early chapters are critical as they set the framework for recommendations and conclusions within the later chapters of the document. Of specific attention, Chapter 2 (Pg. 62) establishes the '*Unmet Needs Conclusions*' and these themes are thereby carried forward throughout the entirety of the TDP, explicitly within Chapter 4 (Operational Alternatives Development & Analysis).

How do Identify Recommendations? Although Chapter 4 (Operational Alternatives Development & Analysis) sets forth three (3) operational scenarios designed to address key 'service delivery' unmet needs, other chapters do include recommendations and conclusions that should receive proportional attention. Typically, these recommendations or conclusions can be found at the end of the respective chapter (i.e. Chapter 5, Higher Education Institutions & Upass Program; Chapter 6, Coordinated Plan; Chapter 7, Financial Plan and Chapter 8, System Coordination).

Plan Adoption / Acceptance / Support. All elements of the TDP and the draft TDP in its entirety were reviewed and considered in detail by the appointed study review committee. Subsequent to final public input meetings the document was forwarded to each applicable jurisdiction and formalized through approval of a 'resolution of acceptance'. It is important to document that the aforementioned resolution is merely intended to convey overarching support for the Transit Development Plan and the analysis, findings and conclusions contained within. However, in no manner or circumstance, do the recommendations, conclusions or strategies set forth in this document require or bind the cities to any such action or implementation schedule or timeframe. The TDP is developed as a 'guiding' document and recommendations/conclusions/strategies should be interpreted, vetted and utilized accordingly. Metro COG's local units of government are encouraged to further debate, consider and revise strategies and concepts as deemed necessary.

Implementation Priorities. Throughout development of the TDP the study review committee continuously discussed and analyzed system priorities. Early in the process, prior to exploration of operational alternatives and based mainly on public input/Issue ID/Needs Assessment (Chapter 2), the SRC undertook an exercise to prioritize system needs (specifically fixed route span of service, frequency and new destinations) based on the following factors: (a) estimated operating costs; (b) ridership potential; (c) initial capital investment; (d) implementation ease; (e) survey score [public input]; and (f) consistency with statewide plans. These priorities are classified into three overarching categories from a 5-year implementation perspective based on the ability for the improvement/system revision to: (a) address a major system unmet need [See Chapter 2]; (b) substantially increase ridership potential; and (c) implementation costs exceed ridership potential. Appendix 5.0 includes a copy of this priority matrix. In addition, the SRC provided insight and direction on implementation priorities and funding distribution from a higher elevation perspective regarding the delivery of transit service, listed below in order of priority:

1. Maintain existing system;
2. Invest in core areas;
3. Service expansion.

Fixed Route Scenarios / Implementation. The three fixed route alternatives and operational scenarios presented within Chapter 4 are comprised of various route modifications, adjustments and improvements. Each scenario includes a *recommendation summary* which includes projected annual revenue hours, annual cost and fleet

impact. A majority of these recommendations can be implemented as stand-alone improvements/projects; however, it is critically important for city leaders, elected officials, staff and interested individuals to understand that the cost-constrained (or status quo) alternative was developed to specifically address major issues and unmet needs (Chapter 2). These issues and unmet needs are targeted at: (a) reliability of service and on-time performance; (b) number of transfers; (c) route capacity and (d) frequency on high ridership routes. Therefore, this scenario should be reviewed from a more all-inclusive perspective; which is especially critical and applicable on the Moorhead side as the entire concept revolves around the elimination of transfers at the Marriott facility. The Moorhead 'status quo' concept was designed and programmed to be implemented in its entirety and should be considered in this manner to achieve maximum benefit relative to the issues and unmet needs identified above (and within Chapter 2).

Sub-Area or Additional Analysis Needs. As part of the process to develop the Long Range Transportation Plan and its specified sub plans (TDP, Bike/Ped, ITS), typically the issue identification process will produce certain questions or topics that could benefit from further analysis; however, these generally remain outside the context of the scope of work. The following sub-area studies have been identified as possible areas of interest for future consideration:

(a) **Transit and Bike/Pedestrian Infrastructure Gap Analysis and Capital Funding Options.** This study would analyze and identify physical infrastructure gaps between transit facilities and bike/ped facilities. Additionally, research and discussion would be provided on available funding sources (including FTA sources) which could further efforts to link bike/ped facilities with transit and core areas of the Metropolitan Area.

(b) **Paratransit Service Area Boundary Analysis.** If pursued from a policy level or as a result of funding gaps in future years this analysis would provide discussion and a data based recommendation on the mandated paratransit service area compared to the current service area. To properly address this issue, the study would include a detailed analysis of boarding activity by location relative to the mandatory (3/4 mile) buffer around all fixed routes. This analysis would also draw associations to other cities/MPO's and case studies. To note, SURTC produced the *Metropolitan Paratransit Service Boundary Study (August 2005)* which would provide some context into this discussion.

(c) **Designated Stop Implementation Analysis.** With the exception of Rt 1 and Rt 2 in Moorhead, MATBUS operates as a flag-stop system. Pursuant to Chapter 4 (Operational Alternatives Development & Analysis) MATBUS should be considering a fixed-stop system to increase the efficiency of certain routes, improve rider understanding of the system and to provide further branding opportunities. The TDP recommends in the short-term (at minimum) high ridership routes be considered for designated stops and long-term all routes. This analysis would provide the framework for implementation under short-term and long-term timeframes; with specific attention given to identifying the short-term routes, stop locations and other considerations (i.e. shelters re-locations, etc.) based on existing boarding data and other available resources (land use, transportation, bike/ped infrastructure, etc.).

(k) **Development of a Master Operating Agreement.** As a continuation of a prior recommendation from the 2007 Transit Development Plan; it is recommended the City of Fargo and City of Moorhead develop a Master Operating Agreement (MOA). The MOA would serve to consolidate multiple smaller joint powers agreements between the two cities covering issues such MAT Paratransit, Ground Transportation Center (including pass sales), Metro Transit Garage, etc.

(l) **Fargo-Moorhead Transit Authority Implementation Strategy**. It is a generally held goal of the City of Moorhead and City of Fargo to continue to identify opportunities to eventually complete a transition to a joint transit authority. The concept of a transit authority has been previously studied (1999 LJR, Inc. Study) and many of the pro/cons of various alternative forms of a transit authority remain unchanged. However several years have passed since the 1999 Study and many of the operational and physical characteristics of MATBUS have changed. A fresh analysis should be initiated regarding the options for the development of a joint transit authority for the FM Metropolitan Area. The analysis should identify alternatives, outline the pros and cons of each alternative, and develop an agreed to implementation strategy to guide the continued, albeit measured, transition to a joint transit authority.

(m) **Moorhead College Transportation Demand Management Plan**. As an update to a study completed by Metro COG in the 1990s, it is proposed that a Plan be developed in cooperation with the City of Moorhead, M-State, Concordia, and MSUM to identify strategies and solutions to manage travel demand in and adjacent to Moorhead Area Colleges. The Plan would be structured to compliment recent studies and analysis, and focus on developing an agreed to demand management program.

(n) **Capital Cost Sharing Study**. Given changes in Federal funding for bus and bus related facilities the timing seems appropriate to develop an updated strategy for sharing bus and bus related capital between the City of Fargo and the City of Moorhead. Changes in Federal funding through the Section 5309 program could dramatically impact the proactive replacement schedule implemented by the City of Fargo for its rolling stock over the past 10 years. This analysis is also timely given the need for the City of Moorhead to replace the entirety of its fixed route rolling stock between the years 2015 / 2018.

(o) **MATBUS Marketing Study**. An update of the 2010 Marketing Study should be conducted around 2013/2014. The update of the Marketing Study would assess the effectiveness of current marketing strategies of MATBUS and establish a new MATBUS marketing program. The Study should also explore the options to restructure the existing bus wrap marketing contract to allow for more revenue to be retained by MATBUS to dedicate to marketing related needs.

(p) **Transit Related Intelligent Transportation Systems (ITS) Deployment Plan.** The update of the Metropolitan ITS Plan (scheduled for 2012) should include a detailed ITS deployment strategy specifically related to MATBUS. MATBUS has made significant investments in ITS in recent years. As these investments continue they need to be developed consistent with the overall Regional ITS Architecture and should be uniform with the overall approved Concept of Operations for the FM Metropolitan Area. The development of the transit related ITS Deployment Plan should be developed in unison with the overall ITS Plan, however should be provided unique oversight by MATBUS staff and personnel.

(q) **Transportation Management Organization/Association.** The FM Metropolitan Area has not had a meaningful Transportation Management Organization/Association (TMO/A) since late 1990s. As a growing metropolitan area the development of a TMO/A appears a worthy and feasible endeavor. The development of a TMO/A is supported by other recently completed metropolitan plans/studies (E.g. Interstate Operations Study). To further the development of a TMO/A a study should be developed to outline the options, alternatives and feasibility of developing a TMO/A within the FM Metropolitan Area.

Public Input
Summary

1.0 Public Input Overview.

Overview. Pursuant to Metro COG's adopted PPP development of the TDP was completed under a public participation program, specifically designed for this study. This chapter sets forth a summary of the public input process and documents meeting summaries, comments and discussion during each input phase. The participation program includes a Study Review Committee (SRC) to oversee plan development, focus group meetings, operator/driver workshops, public input meetings, transit rider survey and other presentations.

Study Review Committee (SRC). As defined in Chapter 1 (ECR) the MAT Coordinating Board established an SRC to oversee completion of the TDP (formally appointed at the January 18, 2011 MAT Coordinating Board meeting). The SRC was established to play a significant role in crafting the TDP from a project oversight perspective; specifically, analyzing data, reviewing draft documentation and acting as a communication link to applicable segments of the community. The SRC met approximately every other month between January 2011 and December 2011 (total of 6 meetings) to provide oversight and input into the development of the TDP.

Focus Group Meetings. Metro COG conducted focus group meetings with key stakeholders (specialized transportation providers, human service agencies, large employers, environmental justice, city/county representatives, etc.), interested persons and transit riders during early stages of plan development. Discussion at these meetings focused on identification of transit system needs, opportunities and issues within the Metropolitan Area.

Operator/Driver Focus Groups. Metro COG and contractor Nelson/Nygaard facilitated operator workshops at critical intervals of plan development. The intent of these meetings was to consult with operators and provide a forum in which drivers/dispatchers/management could provide input and an important layer of stakeholder vetting relative to any proposed recommendations, strategies, route alignments or concepts.

Public Input Meetings. Metro COG facilitated open house style public input meetings at critical times in the plan development process. All comments, suggestions and responses are outlined in the applicable meeting summaries as presented within this chapter.

Transit Rider Survey. Metro COG in cooperation with MAT and contractor Nelson/Nygaard with input from the Upper Great Plains Transportation Institute - Small Urban & Rural Transit Center (SURTC) developed a transit rider survey for distribution in hardy copy and electronic format to support the TDP update. The survey was drafted in a manner to collect base demographic, usage, system preference and most importantly data which would be used to further inform elements within the TDP Issues Identification and Needs Assessment (see Chapter 3). Survey specifics, results and analysis are provided within this Chapter (see Pg. 181).

Other. Throughout various stages of the TDP update Metro COG has solicited input from various stakeholders, partners and interested parties. In most cases, this solicitation has been framed around a specific issue, need or discussion point.

Phase I, Early Input Opportunities. Upon completion of the existing conditions report, Metro COG presented the document to the TDP study review committee on March 15, 2011. Subsequently, a number of early input meetings/opportunities (as outlined below) were provided to discuss the ECR and to specifically solicit input, comments, issues, needs on respective to transit service delivery within the Metropolitan Area.

SRC Meeting No. 1, March 15th 2011. The first SRC meeting was held to address the following objectives: (1) review draft Existing Conditions Report and (2) discuss public input strategy/methodology.

Record of Meeting / March 15, 2011
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Fargo-Moorhead Metropolitan Council of Governments

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****Record of Meeting****

Transit Development Plan Update
Study Review Committee Meeting No. 1

Date of Meeting:
03/15/2011 – Metro COG Conference Room

SRC Members Present

Kevin Hanson, Chairman
Brenda Elmer, City of Moorhead, Council Member
Rob Lynch, North Dakota State University
Jim Gilmour, City of Fargo - Planning Director
Julie Bommelman, City of Fargo - Transit Administrator
Diane Wray Williams, City of Moorhead, Council Member
Joe Nigg, Metro COG – Community Planner
Mike Williams, City of Fargo Commissioner
Lori Van Beek, City of Moorhead – Transit Manager
Jim Aasness, City of Dilworth, Council Member
Dave Piepkorn, City of Fargo Commissioner
Wade Kline, Metro COG – Executive Director
Mikel Kunza, Metro COG – Transportation Coordinator
Chuck Marchand, First Transit Administration

SRC Members Absent

Shawn Anderson, M-State
Mark Simmons, City of West Fargo Commissioner
Kelli Poehls, FM/WF Chamber of Commerce
Mike Hahn, Downtown Community Partnership

Welcome and Introductions:
Mr. Kline welcomed SRC members and noted there would be as many as six (6) SRC meetings. Mr. Kline provided a brief overview on the intent of the Transit Development Plan update and how the process would unfold over the next eight months. Mr. Kline stated the TDP is a five (5) year planning document and is intended to identify strategies and recommendations to improve transit service delivery.

Study Review Committee Overview/Procedures:
Mr. Kline stated the SRC is comprised of the MAT Coordinating Board and other stakeholders identified by the board as important partners in the development of the TDP. Mr. Kline stated this group would be responsible for overseeing development of the TDP and will play a significant role in reviewing documentation and vetting recommendations. Mr. Kline additionally noted that staff (MAT, Metro COG, City of Fargo) are considered a voting member on the SRC; thereby clarifying the inherent differences between the MAT Coordinating Board and the TDP study review committee.

Update on Consultant Selection:
Mr. Nigg provided the SRC with an update on consultant selection for the TDP. Mr. Nigg noted that Metro COG contracts with a consultant to complete specific technical tasks within the TDP scope; inclusive of operations analysis, financial planning and implementation matrices. Mr. Nigg stated the scope of work for this project was reviewed by a number of transit stakeholders (including MAT Coordinating Board) and the RFP was issued in January following Metro COG Policy Board approval. Mr. Nigg stated four (4) proposals were received in February and a selection committee appointed by the MAT Coordinating Board completed a detailed review of each. Mr. Nigg stated the selection committee interviewed three consultant teams in late February and ultimately (unanimously) identified the proposal submitted my Nelson/Nygaard as the most appropriate given the scope of work and needs of the Fargo-Moorhead Metropolitan Area. Mr. Nigg stated the selection committee's recommendation would be forwarded to the Metro COG Policy Board in March for final approval.

Review draft Existing Conditions Report:
Mr. Kline, Mr. Nigg and Mr. Kunza discussed elements of the Existing Conditions Report with the SRC; inclusive of the following, with SRC discussion and comments detailed where applicable:

(a) Role of the MPO;

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(b) Intent of the TDP;
(c) Scope of Work Overview;
(d) Demographics / Trends;
(e) Fixed Route, Paratransit and Senior Ride Service Area;
(f) Ridership;

In response to *cost per passenger* numbers shown within Figure 28 (Fargo) and Figure 30 (Moorhead) of the ECR, Mr. Gilmour stated the ECR should make a distinction between the cost of rides between fixed route, NDSU and paratransit. Mr. Gilmour suggested that costs per ride in Moorhead are higher because certain rides (such as NDSU rides which are paid for in full) are not factored into the equation. Mr. Gilmour stated blending these costs together does not necessarily give an accurate picture of cost per ride.

Following discussion on paratransit ridership numbers from 2002 to 2010, Mr. Kline suggested that the introduction of the Mobility Manager position at MAT has played a role in stabilizing ridership especially considering the significant increases realized from 2002 to 2008. Mr. Kline stated paratransit rides are extremely expensive to provide and a component of this TDP is to provide public transportation in the most cost effective and efficient manner.

(g) Peer Analysis;

Mr. Piepkorn questioned whether MAT was doing an adequate job of placing riders with the appropriate service. Ms. Bommelman stated that from an eligibility standpoint definite improvements have been made to ensure riders are using the most appropriate service.

In reference to Figure 44 within the ECR (Peer Transit System Comparison) Mr. Gilmour noted that Sioux Falls has a comparable system to Fargo-Moorhead and their paratransit costs are nearly triple MAT costs. Mr. Kunza stated that Sioux Falls fixed route revenue miles were almost equal to demand response revenue hours which is a major concern for their system. Ms. Wray Williams questioned why the Sioux Falls system was out of balance. Mr. Kunza stated Sioux Falls did not have a comprehensive eligibility policy and human service agencies started to direct riders to this service. Mr. Kunza stated that paratransit was competing against fixed route service since most individuals would prefer door-to-door service if eligibility screening was not required.

(h) Financial Overview;

In reviewing the financial overview with the SRC, Mr. Kunza noted Metro COG needed to remove NDSU contributions from the farebox revenue line within Figure 5 of the ECR. Mr. Gilmour stated West Fargo contributions should also be removed from the farebox revenue column.

(i) Organizational Information; and
(j) Other Discussion.

Ms. Wray Williams questioned when 2010 Census numbers would be available and whether any of this new information would be used within the demographic section of the ECR. Mr. Gilmour stated 2010 Census data should be released within the next week. Mr. Nigg stated some of this data would be useful and consolidated into various areas of the ECR. Mr. Nigg noted the American Community Survey (ACS) took the place of the Census long form and therefore 2010 Census data will only be useful in certain areas, such as updating population estimates. Ms. Wray Williams asked whether the Environmental Justice map (Map 6, ECR) would be updated since it is currently based on 2000 census data. Mr. Nigg stated this map would be updated based on 2007-2009 ACS data and should be completed in time to include in the ECR prior to TDP adoption.

Ms. Wray Williams questioned why ridership in 1949 was so high. Mr. Gilmour stated access to vehicles became more prevalent after WWII. Lori Van Beek stated the rail cars provided access to specific areas within a small geographic area; unlike today where the Metropolitan Area is spread out.

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Mr. Williams stated the TDP needs to show why transit is important and that it is a good 'avoided' cost. Mr. Williams suggested it was critical that the TDP identify strategies and recommendations to make the best use of available resources while growing the system in the most efficient/effective manner.

Discussion on Public Input Strategy/Methodology:
Mr. Kline discussed the proposed public input strategy associated with the initial round of early input meetings tentatively planned for the week of April 18th. Mr. Kline explained Metro COG and Nelson/Nygaard would facilitate two (2) rider focus groups, two (2) general public input opportunities, three (3) focus group meetings with specific stakeholder groups and three (3) operator/driver focus groups. Mr. Kline also noted Metro COG would be completing a rider survey to collect important demographic, usage, system preference and other fixed route specific data. Mr. Gilmour asked whether any large employers were included in the focus groups. Mr. Nigg stated Metro COG was in the process of trying to identify a number of large employers to include in these meetings with the intent of facilitating discussion on issues/needs/barriers to the public transit system. Mr. Nigg suggested this was especially important given the clustering of large employers within proximity to the existing fixed route system. Mr. Piepkorn stated NDSU and Sanford should be included in these focus groups to identify any issues and needs from their perspectives. Ms. Elmer asked whether the survey would be available to non-riders, specifically south Moorhead residents. Mr. Kline stated the survey would be available on Metro COG's website and in hard copy on all MAT routes. Mr. Kline stated the survey would be intended for fixed route riders; however, comments, issues or needs from any community member would be accepted and documented as part of this early input process. Ms. Wray Williams and Ms. Elmer stated they often hear requests for extended hours and Sunday Service.

Follow up from January MAT Coordinating Board Meeting:
Mr. Kunza stated the board will be busy with the TDP for the next several months. Mr. Kunza stated he would like to focus on the joint powers agreement update at a board meeting in the spring or early summer.

Next Meeting:
Chairman Hanson stated the next SRC meeting is tentatively scheduled for May 2011. Mr. Nigg stated the Issues Identification and Needs Assessment will be completed for the next meeting which will be a coordinated effort between Metro COG, MAT and Nelson/Nygaard.

Rider Focus Group Meetings, April 26th 2011. Metro COG facilitated two (2) rider focus group meetings on April 26th, 2011. Focus group participants were solicited by Metro COG through MAT's rider alert which reaches 589 contacts via email. Both rider focus group meetings were held at the Ground Transportation Center (GTC) located at 502 NP Avenue in Fargo. Discussion lasted approximately 1 ½ hours and summaries of each are provided below.

Record of Meeting / April 26, 2011
Rider Focus Group, 8:30 a.m.
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Fargo-Moorhead Metropolitan Council of Governments
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Record of Meeting

Transit Development Plan Update
Rider Focus Group No. 1

Date of Meeting:
04/26/2011, 8:30 a.m. – Ground Transportation Center (502 NP Avenue, Fargo)

Participants:

Rachel Frankel, Rider	Ben Schwandt, Cass County Sheriff's Office	Diane Widholm, Rider
Anthony Dillard, Rider	Jay Schnitzer, Rider	Jackie Schluchter, NDSU
Ann Campbell, Rider	Ruth Carnal, Fargo Public Schools	Katie White, Metro COG
Mikel Kunza, Metro COG	Thomas Wittmann, Nelson/Nygaard	Lori Van Beek, MAT
Julie Bommelman, MAT	Joe Nigg, Metro COG	

Comments and Discussion:

- Routes that cross train tracks (Rt 1, 2, Moorhead) are always an issue and reliability of these routes is poor
- No need to serve the Moorhead Center Mall since there are few boarding's at this location
- Transfers at the Marriott are frequently missed (Rt 1, 2, 3)
- Transit service is needed at the Cass County jail and probation office (450 34th Street South)
  - Approximately twenty (20) inmates released per day around 8am
  - Several check-ins weekly at the probation office
  - Work release participants leave between 6-8am
- K-Mart transfer site is unattractive and needs to be cleaned up
- A number of highschool students are using public transit to access school and work and reaching out to these individuals would be a good way to grow the system
- Heated shelters are important and MAT should consider upgrading certain existing shelters. This is especially important on routes where transfers are frequently missed
- Service is needed south of the interstate on 25th Street
- Winter conditions seriously affect reliability of buses and on-time performance
- Rt 15 and 25 inbound in the mornings are very full. Standing room is not safe for seniors with balance problems
- The transfer between Rt 17 and Rt 18 is frequently missed
- Route 25 should run more than once per hour
- Several people leave half an hour early to build in an expectation of missing their transfer
- Service to Dilworth including access to Hogue Estates, Red River Recovery Center and restaurants
- Not all riders have access to the website or email and route changes or notices should be posted so all riders (whether regular or not) can view them
- Rt 15 is very tight and occasionally the drivers will not respond to riders requesting a stop
- The fixed route schedule is so tight that it is difficult to accommodate the loading of one wheelchair. Further, it is inappropriate that drivers need to call in the 1099 code immediately after loading an individual in a wheelchair
- New suggested route: GTC to Main Ave to 25th St S to 52nd Ave S to University Drive
- GTC clocks and route clocks do not match cell phone clocks
- Rt 25 (32nd Avenue South) should be every 30 minutes instead of every hour
- Transferring to Rt 22 is difficult and overall service to West Fargo is poor
- Crossing from the YWCA to Frasier is very difficult especially with curb cut and median issues
- Sunday service is important, especially for low income students who work on Sundays
- Sunday service is more important than expanded weekday service or increased route frequencies
- Why was Rt 23 implemented? Does anybody even ride this route?
- Clay County Rural Transit will start a flexible route in July on Sundays (price unknown) - MAT

Record of Meeting / April 26, 2011
Rider Focus Group, 6:30 p.m.
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Record of Meeting

Transit Development Plan Update
Rider Focus Group No. 2

Date of Meeting:
04/26/2011, 6:30 p.m. – Ground Transportation Center (502 NP Avenue, Fargo)

Participants:

Steve Eldred, Rider	Linda Onstad, Rider	Susan Ostby, Rider
Jon Moore, Rider	Katie White, Metro COG	Lori Van Beek, MAT
Mikel Kunza, Metro COG	Thomas Wittmann, Nelson/Nygaard	Joe Nigg, Metro COG

Comments and Discussion:

- Access to groceries and other service needs is a positive of the fixed route system
- Route timing has become extremely tight and MAT has done very little to address the issues. Reliability and on-time performance is a major concern on Rt 25, Rt 15 and Rt 14
- A large number of Sanford Health employees use the fixed route system and on-time performance is an issue especially in poor weather conditions. Riders should be able to make it to work (and expect to make it to work) on-time
- Drivers need better training for winter conditions
- Buses not showing up in the a.m. because a driver didn't report to work is completely unacceptable, but continues to happen on a frequent basis
- Route schedules are not appropriate given the posted speed limits, drivers need to exceed the speed limit to attempt schedule compliance
- In the winter it is very rare for the evening routes to arrive on time
- Buses are full of clutter and hard to sort the important information from the unimportant
- Why does NDSU have so many routes while other areas of the Metro Area are un-served?
- Advanced Vehicle Location (AVL) technology or GPS should be used to show riders where buses are at on the route. Transfer sites or high boarding locations (such as West Acres) should be priorities
- Increasing the cost of a monthly pass would not be worth it; but increasing the cost of the individual fares would be a better idea
- Service to the industrial park should be considered
- MAT should work more closely with Sanford Health to get information to employees, specifically that they can sign up for a pass at any time.
- The fixed route system should be more flexible and responsive to areas requiring service
- Route 23 was a poor decision and investment. Why was this implemented?
- A route on Main Avenue would service numerous important locations and businesses: NODAK, ethnic groceries stores, restaurants, employment, etc
- Service to fleet farm should be considered
- A Frequently Asked Question (FAQ) page on the website, schedules and promotional materials would reduce confusion and anxiety for new riders
- Preference to travel from north to south without having to transfer downtown
- Cab rides frequently serve as Sunday alternatives to fixed route service which is extremely expensive given the hourly rates for a majority of these Sunday shifts
- Extended night service and Sunday service are needed (Sunday service from 11 a.m. to 7 p.m.)
- Old route 20 (NDSU to West Acres) should be considered again, this was an effective route
- Can MAT work with large employers and other key destinations to help fund operations/transit as it would provide improved access to their businesses which would likely mean increased profits?
- Language barriers for riders does not currently seem to be an issue but should be kept in mind in the future and relative to website/promotional materials

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Stakeholder Focus Group Meetings, April 28th 2011. Metro COG facilitated three (3) stakeholder focus group meetings on April 28th, 2011. Participants were directly solicited from Metro COG's *interested person* list which includes specialized transportation providers, human service agencies, large employers, environmental justice, city/county representatives and other interested parties. All three (3) focus groups were held at the Fargo Public Library, located at 102 3rd Street North, Fargo. Discussion at each focus group lasted approximately 1 hour and summaries of each meeting are provided below.

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Stakeholder Focus Group, 10:30 a.m.
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Record of Meeting

Transit Development Plan Update
Stakeholder Focus Group No. 1

Date of Meeting:
04/28/2011, 10:30 a.m. – Fercho Room, Fargo Public Library

Participants:

Laurie Baker, FM Coalition for Homeless Persons
Gina Nolte, Clay County Public Health
Karla Johnson, Catholic Charities, ND
Mary Fandrich, Connections of Moorhead
Karol Provost, Rural MN CEP
Dan Bacon, Moorhead Public Schools
Shannon Scott, Heartland Industries
Wade Kline, Metro COG
Katie White, Metro COG
Rocky Schneider, Home Builders Association/FM
Erin Hall, Cardinal IG
Dale Rollie, Lakes & Prairies CAP Inc.
Blake Strehlow, Cass County Housing
Tim Solberg, Cass County Hwy Department
Nate Bailly, City of Fargo Planning Department
Barb Hildenbrand, Heartland Industries
Mikel Kunza, Metro COG
Thomas Wittmann, Nelson/Nygaard

Comments and Discussion:

- The current "pulse" system is less efficient than a "grid" system; a grid system be more reliable and support ridership increases
- Need more north/south routes; current system is heavy on east/west (specifically 45th Street)
- Decreasing the number of transfers would increase ridership
- Increase the number of bus shelters, especially in West Fargo
- Schedules are not always available at bus stops
- It would be nice to facilitate some employer leniency, both for low-income and choice riders, to accommodate people who get to work late due to bus problems
- Service to the Industrial Park
    - From the apartment complex near Fleet Farm to the industrial park
    - Perhaps a van service/shuttle to the industrial park
    - Service would be needed 24 hours/day, but only 5 days/week
- 30 minute headways make it difficult for working parents to drop their kids off at daycare and proceed to work
- Bus stops are not always on sidewalks; can get muddy and force people to wait in the street
- A more flexible system as certain areas will need more service in subsequent years (i.e. Village Green)
    - The FM system hasn't changed much since the 1970's
- Having the bus system exist as a social service is a priority over expanding service to choice riders
- NDSU's route alignments, frequency and student/employee bus passes should be used as models for developing the rest of the system
- Apartment buildings are not concentrated in one area; they are being included in most developments and therefore are very spread out from one another. These buildings need to be served
- Should smaller buses be used to serve the southwestern part of the region? At least until ridership is developed further in the area
- Can a shuttle service be used for areas like downtown, 13th Avenue South and the Industrial Park?
- Service to Main Avenue
- Cass County's 2005 Comprehensive Plan provides the following language relative to transit service delivery:
    - Objective E: Encourage the use of the existing public transit in rural Cass County by all residents of rural Cass County
        - Policy 1. Ensure adequate local, state, and federal funding for transit service in rural Cass County by reviewing the existing needs and demands of rural residents on a regular basis
        - Policy 2. Work with the Cass County Rural Transit, Metro Area Transit, FM Metro COG, and NDDOT to promote the development of formal and information "park n ride" facilities at key intersections in rural Cass County for use by metro bound commuters
        - Policy 3. Work with Cass County Rural Transit, Metro Area Transit, FM Metro COG to promote the development and use of Rideshare and Carpooling Programs in Cass County for the use by metro bound commuters

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Stakeholder Focus Group, 2:30 p.m.
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Record of Meeting

Transit Development Plan Update
Stakeholder Focus Group No. 3

Date of Meeting:
04/28/2011, 2:30 p.m. – Fercho Room, Fargo Public Library

Participants:
Kyle Hedin, Friendship Inc.
Tim Vangerud, Sanford Health
Sabina Abaza, New American Services LSS of ND
Carey Fry, JSND
Dave Anderson, Sanford Health
Wade Kline, Metro COG
Katie White, Metro COG
Tammy Schatz, Skills Development Project –STTC Fargo
Nola Storm, Fargo Adult Learning Center
Wanda Carlson, SEHSC
Brian Arett, Valley Senior Services
Thomas Wittmann, Nelson/Nygaard
Mikel Kunza, Metro COG

Comments and Discussion:

- Bus service should be characterized as timely, predictable and available for a reasonable cost
- The Woodrow Wilson facility will be relocating and it will need a safer (and perhaps larger) bus stop for the students. 20-40 students typical for each bus
- Woodrow Wilson sponsors a CNA (Certified Nursing Assistant) class that goes until 10pm; bus service would be important
- $40 for a monthly pass can be difficult for New Americans and low income earners to pay, so they end up paying more over the long run by paying $1.25 for each trip. Could there be a weekly pass?
- High demand for Sunday service
- Need for later evening service (retail and industrial job shifts)
- Service to Fargo industrial park is important
- There are few communication/language barrier problems between MATBUS and its users; however, there is an initial fear for new users who are unfamiliar
- Sanford Heath has found the boxed lunch bus tours to be a good way of getting people familiar with the bus system to make it feel more user-friendly
- If reliability increases, ridership will increase. (Specifically: missed transfers)
- Suggestion to add another GTC-style transfer terminal in western Fargo along Main Avenue to reduce the likelihood that transfers will be missed
- Several employees currently use an informal Park-n-Ride by parking at the south Fargo Kmart and take the bus into the downtown area
- Self-service bus pass vending machines would be useful to have
- There is currently a program where some social service agencies are allotted emergency bus passes two times per year. The Adult Learning Center would like to be added to the list of agencies that can dispense those passes
- Some bus stops (especially in winter) are difficult for seniors from an access perspective

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Stakeholder Focus Group, 12:30 p.m.
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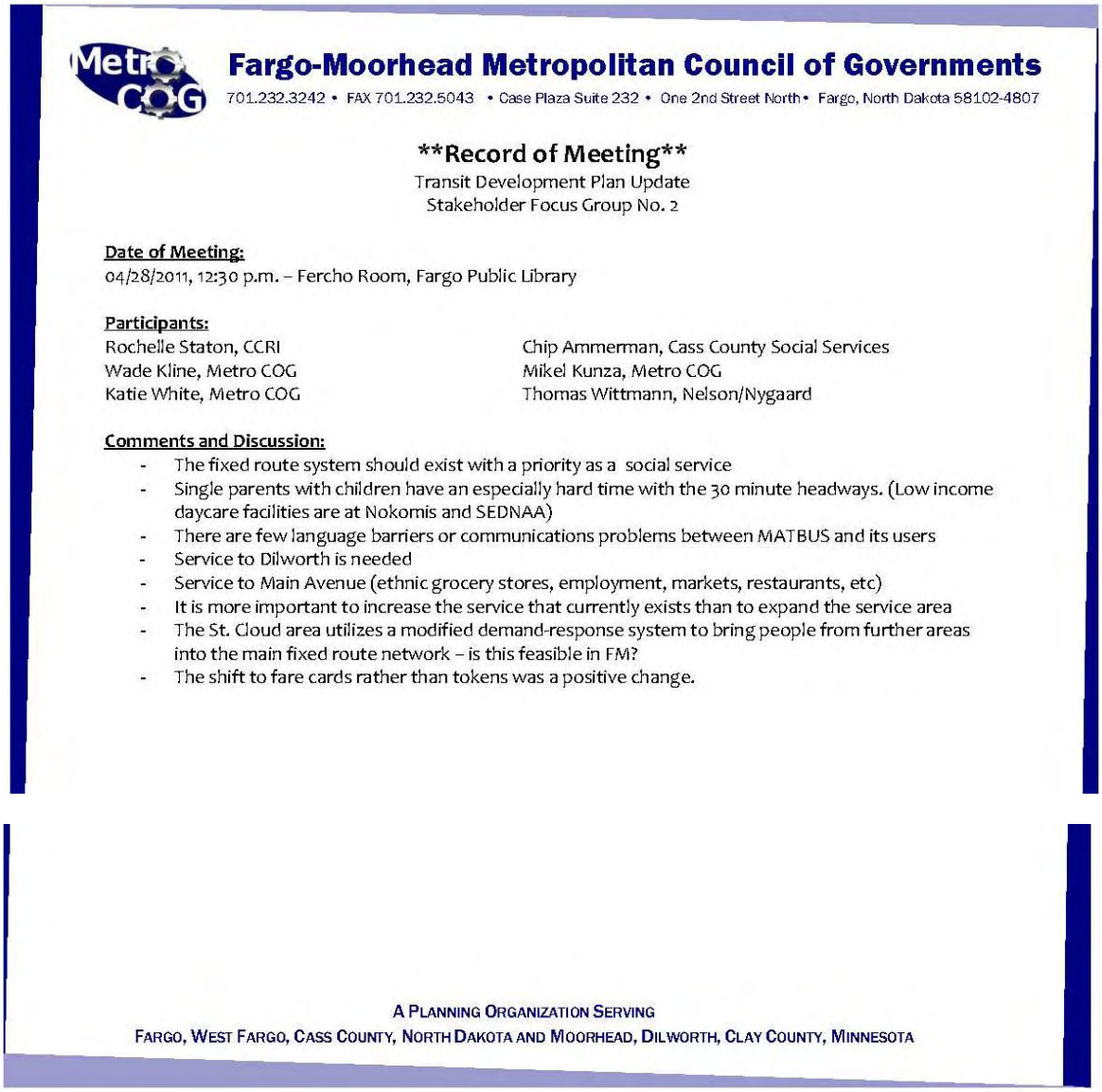

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****Record of Meeting****

Transit Development Plan Update
Stakeholder Focus Group No. 2

Date of Meeting:
04/28/2011, 12:30 p.m. – Fercho Room, Fargo Public Library

Participants:

Rochelle Staton, CCRI	Chip Ammerman, Cass County Social Services
Wade Kline, Metro COG	Mikel Kunza, Metro COG
Katie White, Metro COG	Thomas Wittmann, Nelson/Nygaard

Comments and Discussion:

- The fixed route system should exist with a priority as a social service
- Single parents with children have an especially hard time with the 30 minute headways. (Low income daycare facilities are at Nokomis and SEDNAA)
- There are few language barriers or communications problems between MATBUS and its users
- Service to Dilworth is needed
- Service to Main Avenue (ethnic grocery stores, employment, markets, restaurants, etc)
- It is more important to increase the service that currently exists than to expand the service area
- The St. Cloud area utilizes a modified demand-response system to bring people from further areas into the main fixed route network – is this feasible in FM?
- The shift to fare cards rather than tokens was a positive change.

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Operator/Driver Focus Group Meetings, April 28th 2011. Metro COG facilitated three (3) operator/ dispatch/management focus group meetings on April 28th, 2011. The focus groups were held at regularly scheduled driver safety meetings and discussion lasted approximately 1 hour for all three. Timing these focus groups with safety meetings (requires all drivers and dispatchers to attend) was an important element of the public input strategy as comments, suggestions and feedback from the operators/dispatchers was considered critical/essential to properly identifying all issues, needs, barriers and opportunities across the entire system. These meetings were held at the Metro Area Transit Garage located at 650 23rd Street North, Fargo.

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Operator/Driver Focus Group, 9:00 a.m.
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Record of Meeting

Transit Development Plan Update
Operator/Driver Focus Group No. 1

Date of Meeting:
04/28/2011, 9:00 a.m. – MAT Transit Garage, 650 23rd Street North, Fargo

Attendance:
MAT Operators – 14
First Transit Administration – 2 (Chuck Marchand, Michael Farley)
Kadrmas Lee & Jackson – 1 (Nick Anderson)
Metro COG – 2 (Joe Nigg, Mikel Kunza)
Nelson/Nygaard – 1 (Thomas Wittmann)
MAT Staff – 2 (Lori Van Beek, Gregg Schildberger)

General Comments:

- Later evening service
- Number of vehicles on the roads is increasing and routes have not been adjusted accordingly
- Industrial Park needs service
- Sunday service (possibly limited to certain routes or alignments)
- Route timing is too tight, even in good conditions (Fargo: Rt. 13, 11, 14 and Mhd: 1, 2, 7 and 8)
- Other destinations often requested include: Fairgrounds (West Fargo), Airport (Fargo), 12th Avenue North or Industrial Park (Fargo), Main Avenue (Fargo & West Fargo), Eagle Run (West Fargo) and Churches United on Rt. 7 (evening route) in Moorhead
- The signal timing in Moorhead on Main Avenue needs to be improved and study whether the signal at 6th Street/Main Ave can be removed
- Improve the process or strategy for how buses exit the GTC
    - A majority of the time the signal at 5th Street is red when buses are trying to exit, how about a green light pre-emption at this signal?
    - Is there a more efficient way to enter/exit the GTC for all routes?
    - If NP Avenue is converted to a 2 and 1 (currently one-way / eastbound) configuration, how will this impact the GTC and transit routes?
    - 4th Street grade separation (Fargo) would be a great improvement
    - Eliminate loop into GTC from Moorhead routes (Rt. 1, Rt. 2, Rt. 4) would improve route efficiency
- Intersections that continually cause lengthy delays
    - Rt. 15, 43rd ½ St/13th Avenue South (Fargo)
    - 19th Avenue North/10th Street North (Fargo)
- Expand Area where buses can park at West Acres
- Transfers between 4a, 4b and 4c in Moorhead and specifically at Wal-Mart on 34th Street
- 2 minute release rule needs to be eliminated at the GTC
- Can 'How to" videos be created to show riders how to properly use/access the MAT system?
- Create a 1 and 3 day pass
- Dispatch staff at the GTC is needed, there is too much work and activity
- Designated stops are needed in Fargo

Priorities.
As determined by the Operator's, the following two (2) issues/needs were identified as priorities:

No. 1 Route Reliability / On-Time Performance
No. 2 Implementation of Designated Bus Routes

Discussion Summary.
A majority of the discussion focused on ideas and alternatives that could be implemented and/or studied to improve the functionality of the fixed route system. Operator comments were closely aligned with comments received from riders; specifically related to reliability and performance issues. Other topics that received considerable attention were issues with signal timing (mainly downtown Moorhead), perceived unnecessary delay caused by certain intersections and discussion regarding 'minor' adjustments that would significantly improve system performance (see notes above).

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Operator/Driver Focus Group, 9:00 a.m.
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Record of Meeting

Transit Development Plan Update
Operator/Driver Focus Group No. 2

Date of Meeting:
04/28/2011, 1:00 p.m. – MAT Transit Garage, 650 23rd Street North, Fargo

Attendance:
MAT Operators – 15
First Transit Administration – 2 (Chuck Marchand, Michael Farley)
Kadmas Lee & Jackson – 1 (Nick Anderson)
Metro COG – 1 (Joe Nigg)
MAT Staff – 2 (Lori Van Beek, Gregg Schildberger)

General Comments:

- Rt. 3, corner of 12th Avenue South and 34th Street Circle is difficult to accommodate given proximity of left turn lane onto 34th Street North
- Industrial Park needs service, most importantly the area directly north of 12th Avenue and immediately west of the I-29 interchange
- Designated bus stops needed on certain Fargo routes
- Limited Sunday Service
- Rt. 12, service to the Veterans Affairs Hospital should be more frequent than once per hour
- Increased frequency on Rt. 11 (Broadway)
- Rt. 15 is overcrowded, especially during peak a.m. and p.m. timeframes; could Rt. 15 be an express route?
- Rt. 4 left turns onto 34th Street North (northbound) are near impossible, consider the following:
    - 30 mph speed limit enforcement between the bridge and TH 10
    - Can the shelter be moved to a location directly adjacent to McDonalds? This would allow Rt. 4 to use 32nd Street South to access TH 10
    - If the shelter was relocated to the east side of 32nd Street South closer to McDonald's sidewalks and ADA improvements would be necessary
- Consider a route from South Moorhead to South Fargo that does not require a transfer at the GTC
- Signal countdowns are extremely helpful for bus operators and should be implemented on more signals
- Intersections that continually cause lengthy delays
    - Rt. 25, 32nd Avenue South/32nd Street South (near Essentia Health Hospital, Fargo)
    - Rt. 2, 11th Street South/Main Avenue; northbound left turn onto Main Avenue (Hornbachers, Moorhead)
    - 8th Street South/Main Avenue (Moorhead)
    - Rt. 14, University Drive/27th Avenue South; eastbound left turn onto University Drive (near the Bowler, Fargo)
- Green light priority should be implemented on more routes and in Moorhead
- Concordia College students and pedestrians crossing 8th Street South (just south of 10th Avenue South intersection) is a major concern. There is no crosswalk at this location and something should be done to ensure these pedestrians use the correct crossing locations
- The jog in Center Avenue near Scheels/Center Mall is difficult with a large bus, especially when vehicles are not respecting the striped lanes

Priorities.
As determined by the Operator's, the following one (1) issue/need was identified as a priority:

No. 1 Route Reliability / On-Time Performance

Discussion Summary.
This operator group discussed a number of different issues/needs in detail (see above) with a few specific comments/observations consistent with feedback provided at the 9 a.m. operator meeting. These repetitive comments related to the importance of system reliability, implementation of designated stops on certain Fargo routes and increased frequency on high ridership routes. In addition, limited Sunday Service and other operational improvements were discussed, which included: ITS improvements (signal countdown timers, green light priority, signal timing) and service expansion to the Industrial Park.

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Operator/Driver Focus Group, 9:00 a.m.
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Fargo-Moorhead Metropolitan Council of Governments
701.232.3242 • FAX 701.232.5043 • Case Plaza Suite 232 • One 2nd Street North • Fargo, North Dakota 58102-4807

Record of Meeting

Transit Development Plan Update
Operator/Driver Focus Group No. 3

Date of Meeting:
04/28/2011, 5:00 p.m. – MAT Transit Garage, 650 23rd Street North, Fargo

Attendance:
MAT Operators – 17
First Transit Administration – 2 (Chuck Marchand, Michael Farley)
Kadmas Lee & Jackson – 1 (Nick Anderson)
Metro COG – 1 (Joe Nigg)
MAT Staff – 2 (Lori Van Beek, Gregg Schildberger)

General Comments:
- Designated stops should be implemented on Fargo routes, especially Route 11
- Rt. 1 should follow the same alignment as Rt. 2 to access the GTC, this would eliminate or reduce rail crossing exposures
- Train pre-emption and signal timing in Moorhead (dwnt) is a major issue that needs to be addressed by the City and MAT
- 2 minute release rule needs to be eliminated at the GTC
- Limited Sunday Service
- Rt. 13 runs on a 26 minute headway and has approximately 16 minutes to spare every two hours. Should this route be more efficient and does it need to operate on a 30 minute schedule?
- Consistency between routes is extremely important. As an example, Moorhead routes change to 'night routes' at 6:45 p.m. on weekdays which are different alignments. This causes significant confusion for riders
- Moorhead night Rt. 7 and Rt. 8 have too much coverage and are therefore difficult to keep on time
- "How to" ride videos, informational packets or a summary of 'frequently asked questions' would be helpful for new riders
- Rt. 1 has designated stops and bus benches in locations other than these designated stop locations confuse riders, even though they are signed accordingly
- NDSU campus needs designated stops and MAT staff should work with NDSU campus police to establish enforcement procedures. St. Cloud has implemented a similar strategy on campus and it has worked well
- Rt. 13 should be removed from Administrative Avenue as NDSU routes already provide service to this location. From May through August Rt. 13 could accommodate this alignment when NDSU seasonal routes are not in operation
- Use of student ID's on routes other than NDSU is an issue, specifically Rt. 13
- Remove Rt. 13 from 28th Avenue North and instead use 25th Avenue North
- GPS automated announcements should be considered, other transit agencies use this technology and it would reduce driver distraction
- Paratransit computer scheduling software is not used to its full potential, therefore numerous hours are spent manually scheduling trips
- Analyze feasibility of a fare system that accommodated transfers more efficiently/effectively
- Sell passes at other locations (not just the GTC)
- Metro Area should pursue implementation of a Transit Authority
- Operators should be city employees, this would improve turnover rates as drivers would have an increased sense of job security

Priorities.
As determined by the Operator's, the following two (2) issues/needs were identified as a priority:

No. 1 Route Reliability / On-Time Performance
No. 2 Limited Sunday Service and Route Consistency (night routes)

Discussion Summary.
A variety of topics, issues and needs were identified and discussed at this operator meeting, many consistent with themes common to all operator discussions; inclusive of: (1) limited Sunday service, (2) train pre-emption/signal timing issues, (3) designated stops, (4) increased frequency on certain routes and (5) ITS opportunities. However, this group discussed and detailed a number of other issues/needs that were specific to other areas of fixed route service, which included: NDSU campus concerns relating to how students access the system (mainly relating to safety) and the need for enforced designated stop locations, consistency between routes during the day/night and the organization/management structure of the system (i.e. transit authority, employment status/terms).

Public Input Meetings, April 27th 2011. Metro COG facilitated two (2) open house style input meetings on April 27th, 2011. Meetings were held at the Ground Transportation Center (GTC) located at 502 NP Avenue, Fargo and at the Moorhead Public Library located at 118 5th Street South, Moorhead. Metro COG staff and Nelson/Nygaard staff were set up at the GTC from 7:00 a.m. to 3:00 p.m. and at the Moorhead Public Library from 4:00 p.m. to 8:00 p.m. For additional details and the record of meeting associated with these input opportunities, see following page (pg. 177).

Other. Other solicited input during the early input phase of the TDP resulted from the following presentations and discussion.

(a) May 6th, 2011 City of Fargo Parking Commission. Metro COG provided a memorandum to the Parking Commission and solicited feedback on a number of applicable/relevant TDP items, including:

Downtown Circulator: *The Parking Commission discussed this topic at length (during other agenda items as well) and consensus continues to reflect a need to pursue this concept. The City of Fargo represented there was a possibility a concept of this nature could be funded by the city in 2012 and therefore it was critical that the TDP continues to facilitate/further this discussion.*

Downtown Parking Ramps/Structures. *As a part of another agenda item, the Parking Commission discussed parking deficits in the downtown area. Discussion focused on potential locations of a future parking ramp and the soon to expire debt service related to the Island Park ramp. Metro COG questioned (see memorandum dated April 28, 2011) how transit and downtown parking can work together to effectuate a common goal. An example of a parking ramp constructed in Sioux Falls was mentioned which was designed to provide direct access to transit service within the ramp. The Parking Commission commented that these type of relationships should be considered, especially if transit funds could be used to help fund the project. City of Fargo staff suggested that parking is an important element of transportation; however, it is rarely given any attention and/or funding consideration. The Parking Commission and Metro COG staff agreed it would be worthwhile to research some case studies and include the information within the TDP to determine flexibility in use of transit or other surface transportation funds for these types of projects (i.e. Sioux Falls).*

Fargo Comprehensive Plan / Transit Development Plan Coordination. *The Parking Commission discussed the need for coordination between these two important documents; specific to future land use and the evolution of transit under the five (5) year TDP horizon.*

Record of Meeting / April 27, 2011
Public Input Meeting, 7:00 a.m. to 3:00 p.m. and 4:00 p.m. to 8:00 p.m.
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Fargo-Moorhead Metropolitan Council of Governments
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Record of Meeting

Transit Development Plan Update
Public Input Meeting

Date of Meeting:
04/27/2011
7:00 a.m. to 3:00 p.m. – Ground Transportation Center, 502 NP Avenue, Fargo
4:00 p.m. to 8:00 p.m. – Moorhead Public Library, 118 5th Street South, Moorhead

Attendance:
Metro COG was unable to document or tally the total number of individuals that were providing feedback, comments and suggestions at the Ground Transportation Center. Metro COG staff estimates that discussions were facilitated with at least sixty-five (65) riders. Participation at the Moorhead Public Library was significantly less with six (6) individuals on the sign-in sheet, as follows:

Alison Wolbeck, rider
Laurie Baker, FM Coalition for Homeless Persons
Miranda Persellin, rider
Kyle Anderson, rider
Jon Evert, Clay County Commission
Joel Quanbeck, Ulteig Engineers Inc.

Mikel Kunza, Metro COG
Joe Nigg, Metro COG
Katie White, Metro COG

General Comments:

- Access is needed to Cass County Jail and Probation offices (450 34th Street South)
- Consider old Rt 20 alignment (NDSU to West Acres)
- Why does Rt 17 return via 25th Street and 7th Avenue? This alignment essentially duplicates service
- Service to Dilworth
- There is a driver that constantly pumps the gas/brakes. Riders will wait another 30 minutes so they do not have to ride with this driver
- Sunday service, specifically Rt 15 and Rt 17
- Service to Main Avenue
- Could Sunday service be implemented on routes that access homeless shelters?
- Homeless shelters need increased access to day pass or weekly pass
- Access to paratransit for individuals with mental health issues needs to improve
- The biggest obstacle to housing and employment is transportation
- Access to the industrial park is important for employment opportunities
- South Moorhead bus service in the evenings is inaccessible to several individuals
- Increase service to hospitals and medical facilities
- Extend Rt 3 (Moorhead) to serve Horizon Middle School
- Repeatedly, service requested to Industrial Park, Main Avenue, Dilworth
- More shelters and better lighting at these locations in West Fargo (Rt. 22)
- More service to Osgood and adjacent commercial areas
- Service to events at the FargoDOME
- Consider a Downtown shuttle
- Service to Hector International Airport
- Service to Centennial Park (North Moorhead)

Interactive Activity Results:
Routes and commonly requested service changes, improvements, etc. (weighted in order of popularity):

1 – Evening service (3), Sunday service (2)
2 – Sunday service (4), Evening service (3)
3 – Sunday service (2), Evening service (1), More frequent service (1), Early morning service (1)
4 – Sunday service (3), Evening service (3), More frequent service (2)
5 – Sunday service (2), Evening service (2)
7 – Walmart at night (1), Schedule is too tight (1), Extended/Expanded service area (1), Service to 12th Avenue South (1)
8 – Sunday service (1), Schedule is too tight (1), Extended/Expanded service area (1), Service to 12th Avenue South (1)

Record of Meeting / April 27, 2011
Public Input Meeting, 7:00 a.m. to 3:00 p.m. and 4:00 p.m. to 8:00 p.m.
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11 – Evening service (3), Sunday service (2)
12 – Sunday service (1), Evening service (1), More frequent service (1)
13A – Sunday service (3), Evening service (3)
13B – Sunday service (1), Evening service (1)
14 – Schedule is too tight (1), Sunday service (1), Evening service (1)
15 – Sunday service (13), Evening service (5), More frequent service (2), Schedule is too tight (1), Expand service to Paradiso (1)
16 – Sunday service (2), More frequent service (2), Evening service (1)
17 – Sunday service (3), Evening service (1), More frequent service (1)
18 – Evening service (1)
21 – Evening service (1)
22 – Sunday service (1), Evening service (1)
25 – Evening service (2), More frequent service (1)
31 – Evening service (1)

Phase I, Early Input Opportunities_Summary. A significant amount of comment and feedback from riders, interested parties, the SRC and stakeholders was received during this initial input phase of the TDP. Outlined below (by category) is a synopsis of the comments, suggestions, issues and needs most commonly referenced during the early input process. It is important to note that this outline does not represent priorities and is not organized by preference or any other hierarchy. The outline is merely meant as a summation to inform subsequent drafting of the Issues Identification and Needs Assessment (see Chapter 3).

Having concluded the early public input phase of the TDP update, Metro COG has attempted to summarize the comments received from the public into generalized issue areas. The identification of these issue areas is meant to serve as a "bridge" to the development of the needs analysis element of the TDP. For the purposes of this section, Metro COG defines a "stakeholder" as a typical non-user who is considered a potential user of public transit or who represents individuals who use public transit. A "transit user" is an individual who is a typical user of public transit. "Transit operator" would be an individual involved in the operation of the public transit system (dispatcher, driver, trainer, etc.).

<u>Operations / Fixed Route Alignments</u>.

Reliability and on time performance were a common theme of the early input meetings. Issues of reliability were most prominent among those individuals who frequently use or operate the transit system.

Increased traffic volumes on major arterial roadways coupled with increased ridership on several routes make it difficult for MATBUS to keep some routes on time. These conditions result in missed transfers and general tardiness of certain routes. This situation appears to be creating an increased feeling of frustration from riders and operators. *This was not a trend that was noted during the last update of the TDP in 2006.*

It was pointed out by riders and operators that railroad operations make it difficult for MATBUS to operate in downtown Moorhead. Comments indicate that the situation has further degraded with quiet zone deployment and the associated train preemption system present on several signals in both Moorhead and Fargo. The early

input meetings highlight several very common and acute situations of congestion which directly impacts transit operations.

The past several winters have been particularly difficult, with a number of significant snow storms which have impacted MATBUS operations. These conditions have brought to the forefront concern from transit users and operators regarding MATBUS dependability and operational strategies during the winter months.

It was pointed by users, stakeholders and operators that the transit system still seems to function as it did twenty (20) or more years ago; however, in direct contrast, other elements of the surface transportation system in the FM Metropolitan Area have changed and/or evolved. Several stakeholders commented on the need for MATBUS to ensure that it is flexible and able to evolve/transform to meet changing demands and needs. There was a general feeling, especially among stakeholders that MATBUS should provide more direct service between major generators and along major arterials. There was a general sense among stakeholders and some riders that the system was a bit too circuitous. In addition, stakeholders submitted that a priority for MATBUS should be to ensure the needs of those who have limited mobility are met.

Opportunities to improve transit operations (commonly referenced) were identified by riders, operators and stakeholders as outlined below.

(a) Reliability and on-time performance (specifically Rt. 1, 2, 7 and 8 in Moorhead and Rt. 11, 13, 14 and 15 in Fargo);
(b) Rt. 15 and Rt. 25 are over loaded during peak hours;
(c) Buses not showing up on routes in the a.m. is unacceptable (regardless of reason);
(d) Rt. 23? There are other more important needs than this route alignment;
(e) Re-establish old Rt. 20 alignment / NDSU to West Acres without transfer at GTC;
(f) Increase frequency on certain routes;
(g) Implement designated stops in Fargo (not necessarily all routes);
(h) Consider express routes;
(i) Route consistency between day and evening alignments;
(j) Consider demand response zones that pulse into fixed route system;
(k) Eliminate two-minute release rule at the GTC.

<u>Needs / Issues / Expanded Service Requests</u>.

The Main Avenue corridor (specifically between 25th Street and the Red River) was mentioned on several occasions by riders, operators and stakeholders as a corridor in need of transit service. It was indicated that Main Avenue is slowly developing a niche for ethnic food marts and other types of niche business which may justify/generate transit service/demand. It was also noted that Main Avenue is an employment corridor and access to jobs is not easy in this area of Fargo and West Fargo.

The 25th Street Corridor was identified as a major north-south corridor which currently lacks transit service, especially between 13th Avenue and 32nd Avenue.

It was clear through the early public involvement process that service to the Fargo Industrial Park is desired and continues to be a need in the Metropolitan Area. It was noted that service to the Industrial Park is a unique situation given shift changes, location, etc. However, it was clearly conveyed that some form of service should be considered for the Fargo Industrial Park. It was pointed out by users and stakeholders that the current hub and spoke system which is centralized on downtown limits the ability to provide meaningful service to the Industrial Park, regardless of time of day. It was noted by stakeholders that several individuals who work in the Industrial Park actually live south of I-94 and the current hub and spoke system would not serve them in an efficient/effective manner. It was noted that service to the Fargo Industrial park would be more logical if provided north-south from the Southside of Fargo (E.g. 45th Street, 25th Street, etc.).

Sunday service was consistently mentioned by transit users as a need and priority. It was noted that transit users in the FM Metropolitan Area are often employed in the service industry and are required to work on Sundays. It was also noted by those requesting Sunday service that it would not need to be system wide, rather more targeted to ensure access to high boarding locations and important destinations/areas (E.g. 2, 4, 11, 13, 14, 15, etc.).

Expanded service was identified for West Fargo north of I-94. It was noted that the current service levels of Route 22 are not adequate given the existing demand and growth realized in West Fargo. Stakeholders and transit users acknowledged that transit dependent groups are becoming more decentralized and the transit plan needs to be reflective of changing and emerging demographic patterns.

Other (commonly referenced) needs, issues and expanded service requests:

(a) Cass County Jail and Probation Offices (450 34th Street South, Fargo);
(b) Later evening service;
(c) Day and week passes;
(d) Bus pass vending at additional locations (not just GTC).

Intelligent Transportation Systems (ITS) / Technology.

MATBUS is largely dependent upon the arterial roadway system within the FM Metropolitan Area. The early public input phase of the TDP identified a number of opportunities to implement traffic operation strategies to benefit MATBUS. In general, several comments suggested a need to better use ITS related deployments currently operated by MATBUS (dispatch software, green light-priority, etc.) and for an enhanced ITS deployment architecture. Several comments were received requesting the deployment of AVL kiosks at major MATBUS boarding points.

Expanded use of low priority green light preemption was mentioned often, specifically at the release point of the GTC (NP Avenue/5th Street). Transit uses and operators noted that continued improvement in signal coordination on major arterials will also serve to benefit transit operations; especially through (downtown) Moorhead. While green light preemption was suggested for Moorhead routes, it should be noted that the current opticon system used in Fargo is not present in Moorhead (or West Fargo), which uses siren active preemption.

Other (commonly referenced) ITS needs, issues, comments and suggestions:

(a) Clocks need to be synchronized at the GTC with cell phones;
(b) Technology or protocol adjustments to eliminate 1099 code;
(c) Advanced Vehicle Location (AVL) at high boarding locations;
(d) Signal timing improvements;
(e) Signal count down timers (extremely helpful to drivers);
(f) Green light pre-emption at GTC/5th Street North exit;
(g) GPS automated announcements;
(h) Green light priority on signals in Moorhead (at least for certain routes).

Infrastructure Improvements / Other Improvements.

In general it was noted by transit users and stakeholders that MATBUS should make greater investment in bus route demarcation and passenger facilities. The NDSU area was pointed out as a good example of how to define a transit system with signage and shelters, etc.

Transit users highlighted the importance of ensuring connectivity of the pedestrian and bicycle network to the transit network. It was noted that most transit trips start on foot and that safety to and from the bus stop is an important issues for transit users, especially seniors and disabled individuals.

Other (commonly referenced) infrastructure needs, issues and comments:

(a) Heated shelters (especially at high boarding locations);
(b) Increase shelters in West Fargo;
(c) Pedestrians crossing 8th Street (near Concordia in Moorhead) just south of 10th Avenue South is a safety issue that needs to be addressed.

Outreach.

A number of transit riders and stakeholders suggested MATBUS should more actively pursue partnerships with large employers, specifically those in close proximity to existing service. Transit users and stakeholders noted that many 'new' riders are unfamiliar with the proper protocol of riding a bus and this creates anxiety and often causes route delay; an issue that could be easily reduced with a Frequently Asked Questions (FAQ) section on the MATBUS website and other relevant publications or "How to Ride" videos and improved materials to help new riders understand the system.

Transit Rider Survey / Methodology. The transit rider survey was prepared by Metro COG and Nelson/Nygaard (with assistance from SURTC) and distributed in hard copy (on-board) and electronic format with an intended sample targeted at current MATBUS riders. Self-administered surveys were distributed on all MATBUS routes during the week of April 25, 2011 with additional copies accessible for riders at the GTC. A total of 1,500 surveys were divided and distributed onto the system, as shown in Figure 92. An online version of the survey was available on Metro COG's website at www.fmmetrocog.org from April 25th to May 6th, 2011. Public notices, early input informational packets, press releases, social media notices (MAT Facebook) and websites included references to the survey and its importance relative to the TDP update. In addition, SURTC collected a small sample of surveys on certain routes throughout the week with smartphone technology. Survey and specific cross tabulation results are defined below.

Figure 92 - On-Board Distribution

Survey Distribution on MATBUS Routes	
Route	No.
1	50
2	100
3	50
4	75
5	50
6	50
7	50
8	50
11	50
12	50
13	150
14	60
15	150
16	45
17	50
18	30
21	45
22	30
23	30
25	30
31	50
32	75
33	75
34	75
35	30
TOTAL	1,500

Figure 93 – Survey Sample Response / Rates

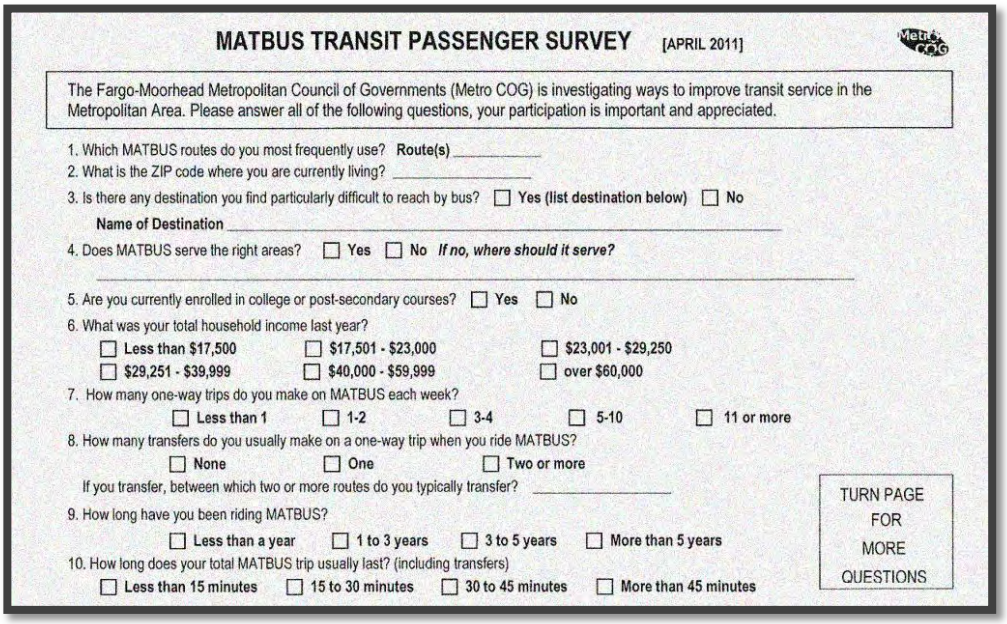
Type	Collected	Useable	[%]
Paper	577	442	77%
On-line	28	28	100%
In-Person (SURTC)	39	39	100%
Total	644	509	79%

Source: Metro COG (2011)

Rider surveys generated the following response and are classified by type. Hard copy surveys were not always entirely complete and any survey with unanswered questions or illegible writing were thereby deemed invalid. Overall, 79% of surveys returned were deemed useable, as set forth in Figure 93 (above).

The survey included fourteen (14) questions, a copy is provided below. The intent and objectives supporting a rider survey were as follows.

(a) Establish a baseline demographic profile of existing MATBUS riders;
(b) Determine the general transportation profile of MATBUS riders;
(c) Determine and establish a more detailed understanding of transfer patterns by riders;
(d) Understand system functionality and level of efficiency from a rider perspective;
(e) Collect data on rider priorities, issues and needs;
(f) Solicit feedback on transit service delivery.



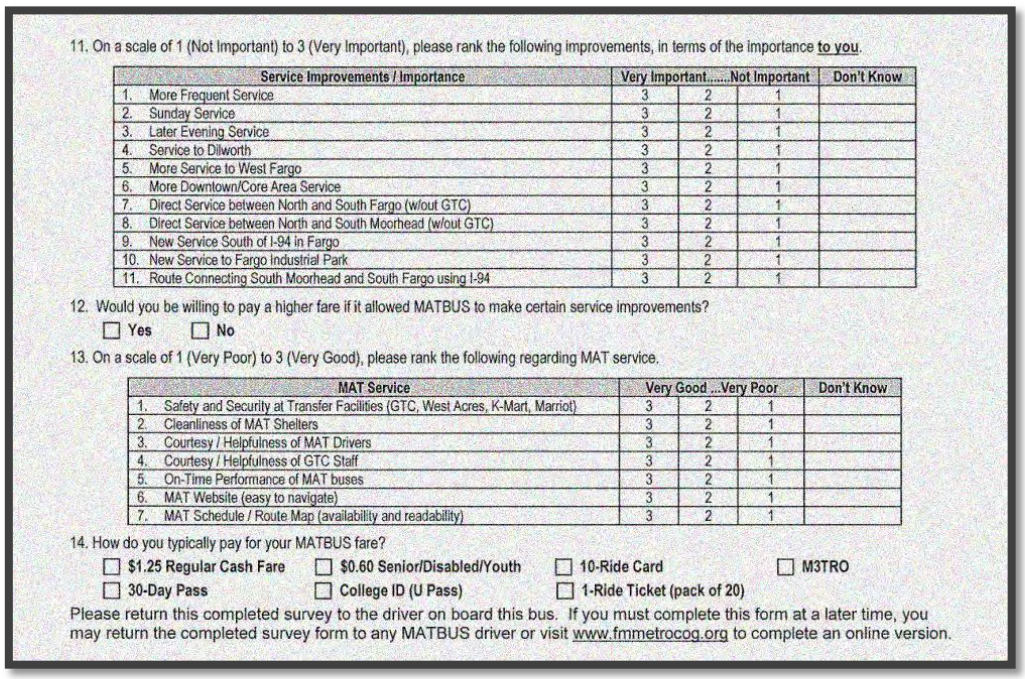
MATBUS TRANSIT PASSENGER SURVEY [APRIL 2011]

The Fargo-Moorhead Metropolitan Council of Governments (Metro COG) is investigating ways to improve transit service in the Metropolitan Area. Please answer all of the following questions, your participation is important and appreciated.

1. Which MATBUS routes do you most frequently use? **Route(s)** _____
2. What is the ZIP code where you are currently living? _____
3. Is there any destination you find particularly difficult to reach by bus? ☐ **Yes (list destination below)** ☐ **No**
   Name of Destination _____
4. Does MATBUS serve the right areas? ☐ **Yes** ☐ **No** ***If no, where should it serve?***
   _____
5. Are you currently enrolled in college or post-secondary courses? ☐ **Yes** ☐ **No**
6. What was your total household income last year?
   ☐ **Less than $17,500** ☐ **$17,501 - $23,000** ☐ **$23,001 - $29,250**
   ☐ **$29,251 - $39,999** ☐ **$40,000 - $59,999** ☐ **over $60,000**
7. How many one-way trips do you make on MATBUS each week?
   ☐ **Less than 1** ☐ **1-2** ☐ **3-4** ☐ **5-10** ☐ **11 or more**
8. How many transfers do you usually make on a one-way trip when you ride MATBUS?
   ☐ **None** ☐ **One** ☐ **Two or more**
   If you transfer, between which two or more routes do you typically transfer? _____
9. How long have you been riding MATBUS?
   ☐ **Less than a year** ☐ **1 to 3 years** ☐ **3 to 5 years** ☐ **More than 5 years**
10. How long does your total MATBUS trip usually last? (including transfers)
    ☐ **Less than 15 minutes** ☐ **15 to 30 minutes** ☐ **30 to 45 minutes** ☐ **More than 45 minutes**

TURN PAGE FOR MORE QUESTIONS

TDP Rider Survey Page No. 1



11. On a scale of 1 (Not Important) to 3 (Very Important), please rank the following improvements, in terms of the importance to you.

Service Improvements / Importance	Very Important.....Not Important			Don't Know
1. More Frequent Service	3	2	1	
2. Sunday Service	3	2	1	
3. Later Evening Service	3	2	1	
4. Service to Dilworth	3	2	1	
5. More Service to West Fargo	3	2	1	
6. More Downtown/Core Area Service	3	2	1	
7. Direct Service between North and South Fargo (w/out GTC)	3	2	1	
8. Direct Service between North and South Moorhead (w/out GTC)	3	2	1	
9. New Service South of I-94 in Fargo	3	2	1	
10. New Service to Fargo Industrial Park	3	2	1	
11. Route Connecting South Moorhead and South Fargo using I-94	3	2	1	

12. Would you be willing to pay a higher fare if it allowed MATBUS to make certain service improvements?
    ☐ **Yes** ☐ **No**
13. On a scale of 1 (Very Poor) to 3 (Very Good), please rank the following regarding MAT service.

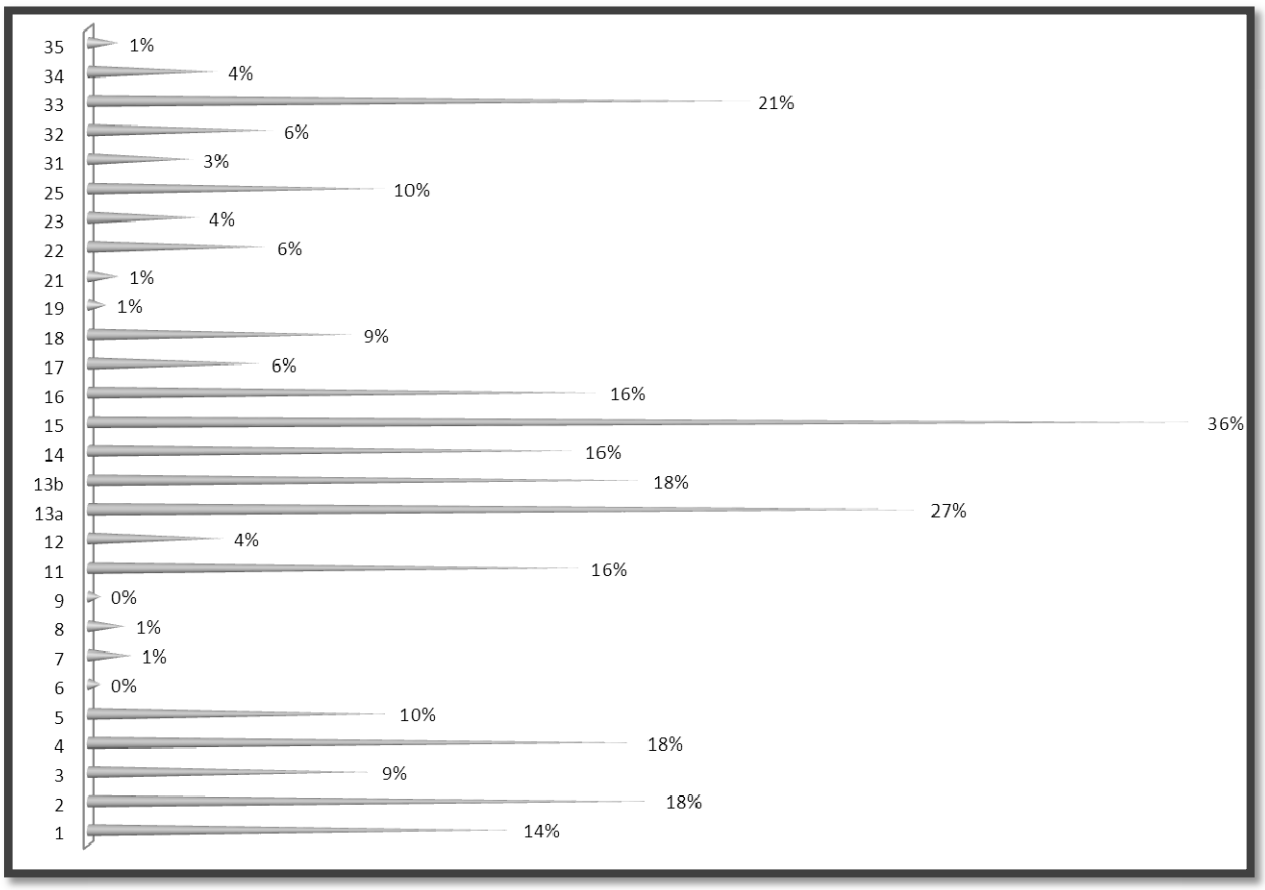
MAT Service	Very Good ...Very Poor			Don't Know
1. Safety and Security at Transfer Facilities (GTC, West Acres, K-Mart, Marriot)	3	2	1	
2. Cleanliness of MAT Shelters	3	2	1	
3. Courtesy / Helpfulness of MAT Drivers	3	2	1	
4. Courtesy / Helpfulness of GTC Staff	3	2	1	
5. On-Time Performance of MAT buses	3	2	1	
6. MAT Website (easy to navigate)	3	2	1	
7. MAT Schedule / Route Map (availability and readability)	3	2	1	

14. How do you typically pay for your MATBUS fare?
    ☐ **$1.25 Regular Cash Fare** ☐ **$0.60 Senior/Disabled/Youth** ☐ **10-Ride Card** ☐ **M3TRO**
    ☐ **30-Day Pass** ☐ **College ID (U Pass)** ☐ **1-Ride Ticket (pack of 20)**

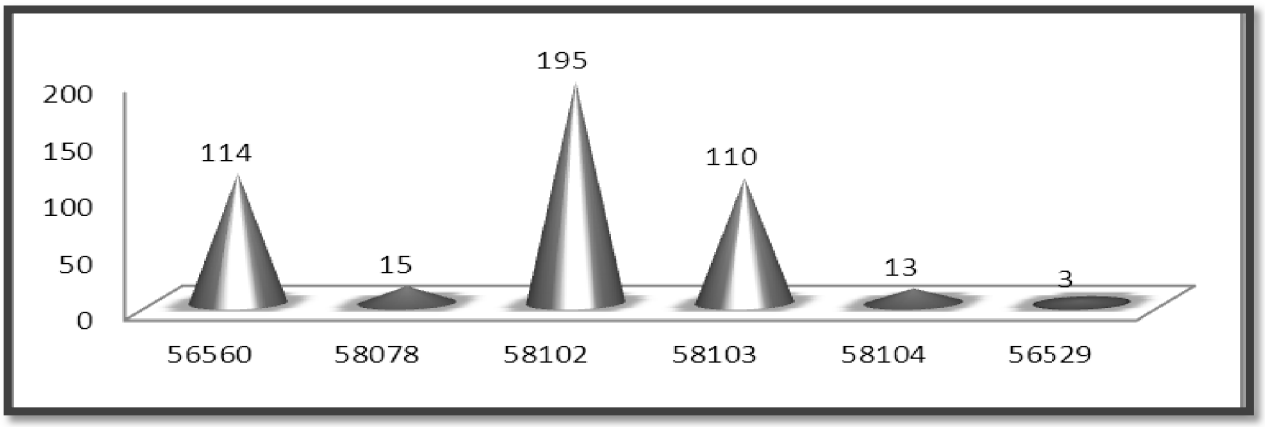
Please return this completed survey to the driver on board this bus. If you must complete this form at a later time, you may return the completed survey form to any MATBUS driver or visit www.fmmetrocog.org to complete an online version.

TDP Rider Survey Page No. 2

Question 1. Which MATBUS routes do you most frequently use?



Question 2. What is the ZIP code where you are currently living?



Zip Code References

Fargo: 58102, 58103, 58104 West Fargo: 58078 Moorhead: 56560 Dilworth: 56529

Question 3. Is there any destination you find particularly difficult to reach by bus?

Of the 35% (178 responses) that said a destination was difficult to reach by bus, the following list includes these destinations and each answers frequency. It is also important to note that Question 4 (below) attracted a similar response pattern or destination/area list and therefore results from Question 4 have been combined in Figure 94.

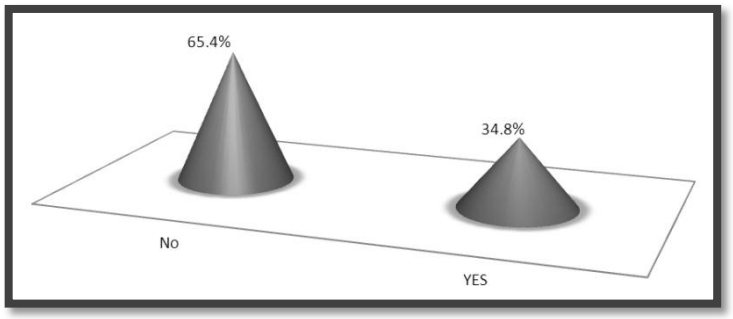


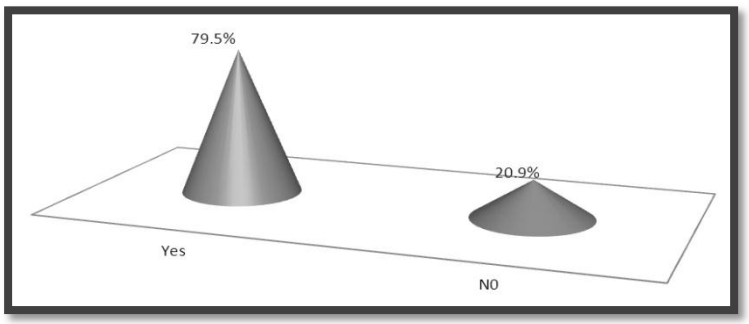
Figure 94 – Destinations / Areas Difficult to Reach by Bus

Destination / Area	Corridor	Freq.	Destination / Area	Corridor	Freq.
45th Street South / Businesses	45th St S	2	Village Green / Moorhead	Village Green Blvd.	4
Gordman's Department Store	13th Ave S	1	Dilworth	TH 10	16
Clay County Offices / Court	11th St N	1	Any location after 10 p.m.	x	10
Cass County Offices / Court	9th St S	1	West Fargo / North of Main Ave	x	2
Hector International Airport	19th Ave N	4	Fargo Industrial Park	12th Ave N	11
Eagle Run / West Fargo	CR 17	3	South Moorhead	x	4
Cass County Probation Offices	34th St. S	1	Fraser LTD	S. University Dr.	1
Fleet Farm	36th St. S	7	American Crystal Sugar / Mhd	11th St N	2
Civic Center/ FargoDOME Events	x	1	West Fargo	x	11
North Moorhead	x	1	Fairgrounds / WF	Main Avenue	8
South Fargo	x	6	Rasmussen College	29th Ave S	1
Main Avenue	x	11	MSUM	11th St S	1
Casselton	x	2	Horace	CR 17	2
Menards / Moorhead	28th Ave S	1	NDSU / Memorial Union	Admin. Ave	1
Moorhead Center Mall / City Hall	Center Ave	1	MN School of Business / Mhd	SE Main Ave	1
13th Ave S / Businesses	13th Ave S	3	25th Street / Fargo	25th St. S	1
Horizon Shores / Mhd	12th Ave S	3	Mapleton	x	1
South Moorhead to South Fargo	I-94	1	Red River Recovery Center	TH 10 / Dilworth	1

Source: Metro COG (2011), TDP Rider Survey

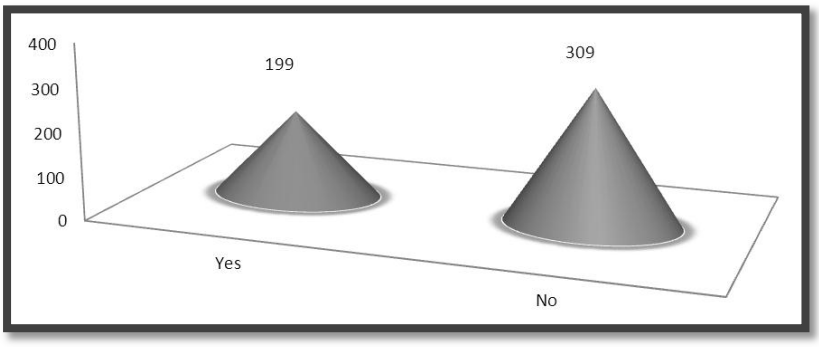
Question 4. Does MATBUS serve the right areas?

Pursuant to the survey, approximately 79% (or 402 responses) stated MATBUS serves the right areas. Of the 21% (or 107 responses) that said MATBUS does not serve the right areas; responses are



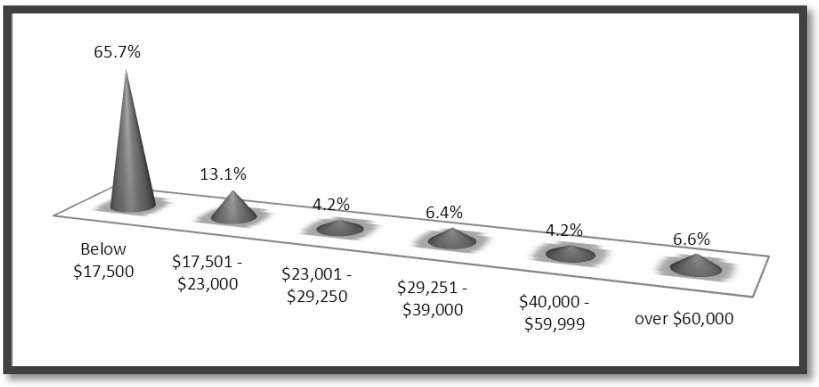
incorporated into findings within Figure 94, above. Although Question 3 and 4 indicate a large number of individuals responding and therefore an answer should be delineated on the survey, a large percentage of the surveys did not include a destination or area. These write-in sections of the survey were either left blank or in many circumstances were non legible. In sum, tallies are extremely low for the destinations/areas tabulate above.

Question 5. Are you currently enrolled in college or post-secondary courses?



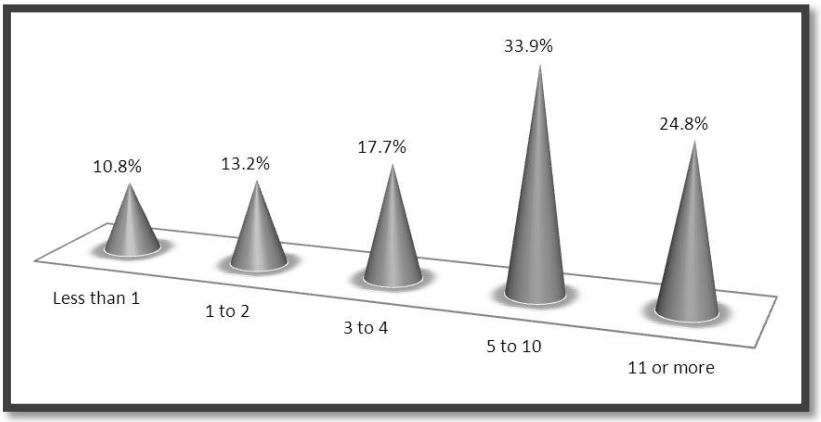
Of the 508 recorded responses on this question, 61% of the survey participants were not enrolled in college or post-secondary courses. Since a NDSU transit survey was recently completed by SURTC (2011), Metro COG wanted to ensure riders on non-NDSU routes received adequate access to the survey. In this regard, Metro COG structured the on-board survey distribution (see Figure x – above) with a reduced focus on survey deployment on NDSU specific routes.

Question 6. What was your total household income last year?



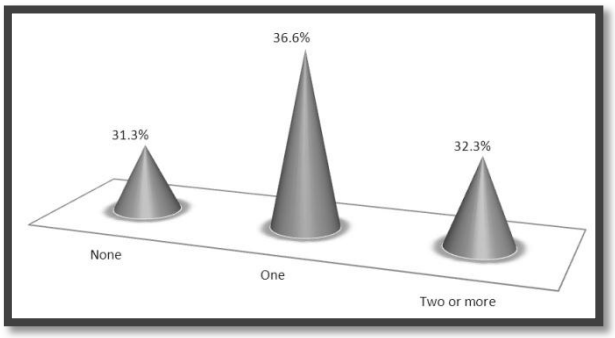
Of 509 responses 334 (or 65.7%) were classified within the household income range below $17,500. Fifty-five (55) responses were from respondents with a household income over the estimated median household income for Fargo (at approximately $38,500 in 2009).

Question 7. How many one-way trips do you make on MATBUS each week?



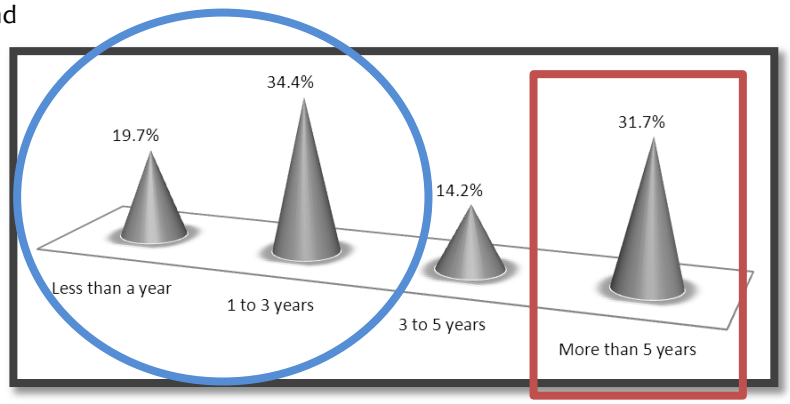
Survey results indicate that very few respondents use MATBUS less than one (1) time per week and approximately 41% of respondents utilize MATBUS less than four (4) times per week. In contrast, of 509 responses 295 (or 58%) individuals represented that they utilize MATBUS for more than five (5) one-way trips per week.

Question 8. How many transfers do you usually make on a one-way trip when you ride MATBUS?



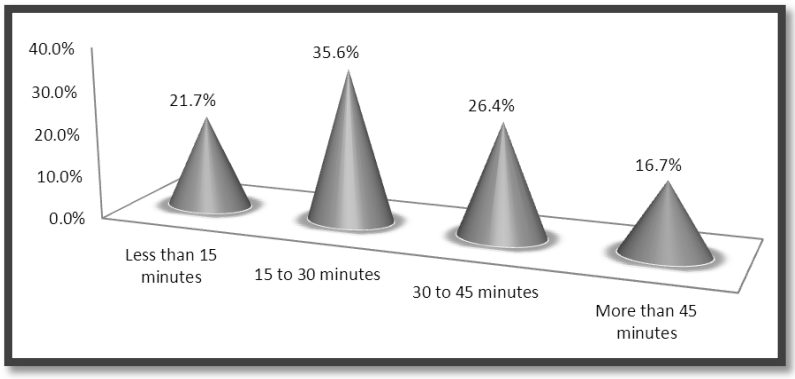
Survey results indicate the largest percentage of respondents (at 36% or 186 responses) complete at least one (1) transfer per one-way trip. Approximately 32% of respondents (or 162 survey responses) transfer two (2) or more times per one-way trip and approximately 31% (or 157 survey responses) do not complete a transfer between trip origin and destination.

Question 9. How long have you been riding MATBUS?



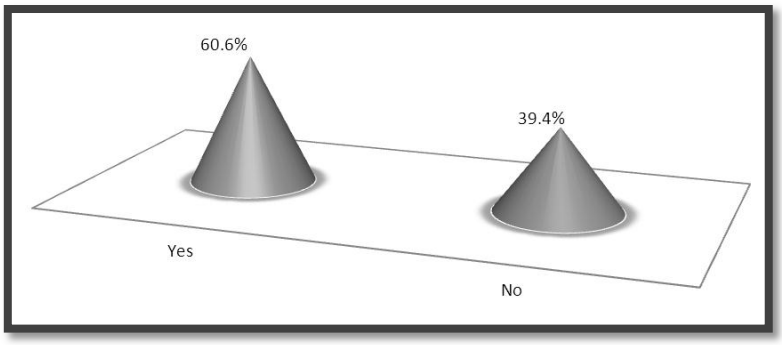
Responses to this question show the highest longevity of riders in the '*1 to 3 year*' and '*more than 5 years*' ranges, at 34.4% and 31.7% respectively. It is particularly interesting that the '*3 to 5 year*' range is the lowest classification as the '*less than 1 year and 1 to 3 years*' cumulatively represent 76% of the respondents identified as college or post-secondary students. In sum, these survey results suggest a majority of the regular riders (non-college) have utilized the system for more than five (5) years and this demographic group represents a minimal percentage of riders between one (1) year and five (5) years.

Question 10. How long does your total MATBUS trip usually last?



Of 509 survey responses 400 (or 79%) participants indicated a one-way trip length of more than fifteen (15) minutes. Sixty-two (63) percent of responses were classified within the '*15 to 30 minute or 30 to 45 minute*' timeframe. Only 16.7% (or 85 responses) identified a one-way trip length greater than 45 minutes.

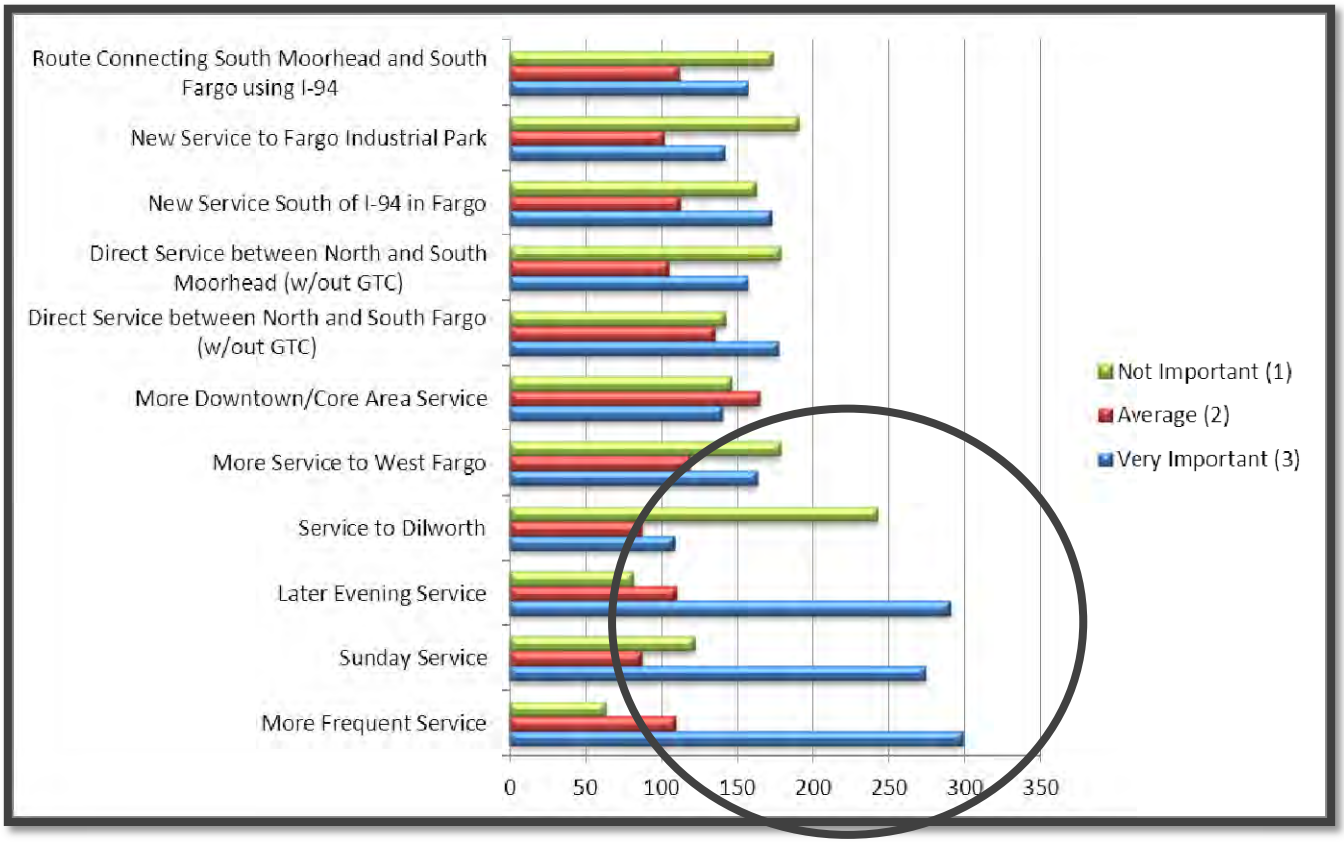
Question 12. Would you be willing to pay a higher fare if it allowed MATBUS to make certain service improvements?



Approximately 61% (or 308 respondents) stated they would be willing to pay a higher fare if certain system improvements were

implemented. Of the 161 riders whom have utilized the fixed route system for more than five years (see Question 9, above) 99 (or 62%) represented they would be willing to pay a higher fare. This is particularly interesting because the income stratification for a majority of this demographic group that have utilized transit for more than five (5) years is on the lower two-thirds of the scale within Question 6. Survey results indicate a majority (55%) of the college/post-secondary participants would be willing to pay the higher price in exchange for certain service improvements.

Question 11. On a scale of 1 (Not Important) to 3 (Very Important), please rank the following improvements, in terms of importance to you.



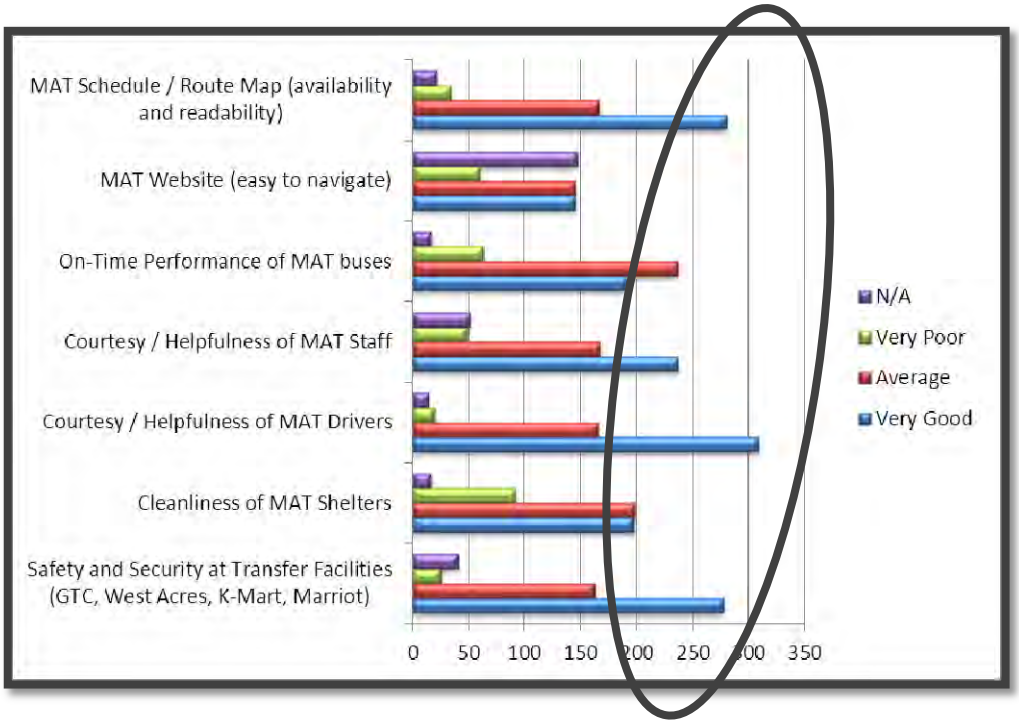
Results from Question 11 suggest a large percentage (and definitely a majority) of respondents believe the following services are important, in order of relevance:

(a) More Frequent Service;
(b) Later Evening Service;
(c) Sunday Service.

Other results for suggested service improvements, many of which have been discussed in previous TDP's or sub-area transit plans, indicate a much more balanced response between levels of importance. A few worth noting:

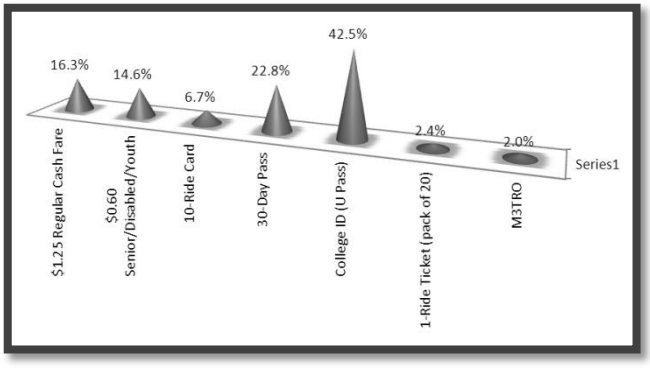
(e) Service to Dilworth;
(f) New Service to Fargo Industrial Park;
(g) More Service to West Fargo;
(h) More Downtown / Core Area Service.

Question 13. On a scale of 1 (Very Poor) to 3 (Very Good), please rank the following regarding MAT service.



Survey respondents indicated through this question that from an overarching perspective MAT customer service is '*average*' and leaning more towards '*very good*'. The only quantified survey response that shows more balance is the MAT website and navigation question. The N/A (not applicable) answers likely relate to respondents whom are not familiar with the MATBUS website and/or do not use it regularly. This is potentially a very important assumption as MATBUS provides a lot of information to riders via their website and related technologies (i.e. social media, rider alerts, etc.); whereby, this question reiterates the significance of processes to distribute pertinent information to all riders.

Question 14. How do you typically pay for your MATBUS fare?



Of 509 respondents 216 (or 43%) use College ID (U-Pass) to access the fixed route system. 30-day passes and regular $1.25 fare accounts for another 39% of MATBUS fare.

Transit Rider Survey / Summary and CrossTabulation.

All Respondents. Most riders who completed the survey indicated they made less than $17,000 per year, reside in zip code 58102 and generally think MATBUS serves the right destinations/areas. The survey revealed the most popular alignments were Rt. 15 and Rt. 33.

Most riders (60%) feel that increased frequency, Sunday service and later evening service are the most important improvements needed from a transit service delivery standpoint. Service to Dilworth was rated the least important improvement; however as quantified it represented less than 50% of responses due to the '*average*'

category. Riders across all income levels indicated a strong desire to travel north and south without stopping at the GTC. The survey identified that 60% of respondents are willing to pay a higher fare for increased service.

Overall, riders are happy with the drivers, schedule accessibility and safety at transfer sites. Riders are least satisfied with the cleanliness of shelters and the ease of navigation on the MATBUS website.

Cross-tabulation.

Those not willing to pay a higher fare for more service (see Question 12) indicated that they can get where they need to go under the structure of the existing system (73%) because MATBUS services the right destinations/areas (85%).

60% of respondents willing to pay a higher fare for more service (see Question 12) indicated they can get where they need to go under the existing system and 75% believe MATBUS serves the right destinations/areas.

College students ride Rt. 33 most frequently and overwhelmingly (93%) believe MATBUS serves the right destinations/areas. College/post-secondary students do not think service to Dilworth or West Fargo is a priority. In general, service priorities of college/post-secondary respondents are the opposite for non college/post-secondary riders.

Those making less than $17,000 per year take five (5) or more trips per week on the fixed route system. Route 15 is the most popular pursuant to survey results for this demographic group. These respondents have also indicated a very high preference for service expansion to the industrial park.

Those riding for longer than five (5) years overwhelmingly pay for their ride with a 30-day pass and typically make two (2) or more transfers to reach their destination. This demographic group had the highest response related to MATBUS not serving the right areas (see Figure x, for additional information). Overall, this demographic group has the highest satisfaction with current services and the highest demands for increased services.

Transfers by Zip Code. Moorhead residents transfer at the highest rates to reach a destination; closely followed by zip code 58104 and 58103 (south Fargo residents). Residents within zip code 58102 make the least amount of transfers on a one-way trip which is likely due to their relative proximity to the GTC or NDSU campus. Survey results show a definitive linear connection between the number of transfers and trip length.

On-time Performance/Reliability. All zip codes are similarly impacted by on-time performance.

West Fargo residents that ride the fixed route system typically transfer twice to reach a destination and often utilize Rt. 15. Forty percent (40%) of West Fargo riders believe industrial park service is '*very important*' and a majority would prefer a route alignment that went north/south without having to transfer at the GTC. West Fargo riders (66%) indicated a willingness to pay a higher fare for increased service.

Joe Nigg

From: Paula Aalgaard <PAalgaard@matbus.com>
Sent: Thursday, May 05, 2011 10:07 AM
To: Mike Kunza; Joe Nigg; Wade Kline
Cc: Julie Bommelman; Lori Van Beek; Gregg Schildberger
Subject: transit input from Homeless Connect

Mike, Joe, and Wade –
People at the Homeless Connect event stopped by the Metro Area Transit booth to provide input for the transportation consultant putting together the five year transit plan. We received valuable input from a group of people who are users of the system and rely on it heavily for self sufficiency. This event is a good place to get input from hundreds of people who experience homelessness. I encourage MetroCOG to have a booth at future Homeless Connect events because this is the best place to reach transit users who move around a lot.

Between Gregg and I we talked to 12 people and they suggested the following:

1. Start fixed route service to the industrial park. (12 people)
2. At the very least, have an existing run go by the industrial park in the morning and the evening. (2 people)
3. Start service earlier in the morning so people can get to the start of a 6am shift. (1 person)
4. Have Sunday service - even if it is on a limited basis to start. (10 people)
5. Have later service on Moorhead routes (people working in N. Fargo get on the bus at 9:45pm and then get to the GTC without having a transfer option to get home to Moorhead).
6. Need 13A to stay on time from 11:15 onward into late afternoon. Transfers are missed constantly. (1 person)

Gary Gronberg, former director of Churches United, sat at the next booth. He talked about the need for funds to pay for bus passes. He said asking someone to pay $20 for half the cost of a bus pass is like asking for $1,000 when they are homeless. He pointed out that it is difficult to get grants to pay for bus passes. We also talked about the difficulty of transit subsidizing "free" passes because the service would not be equal for all passengers.

Are you still collecting surveys for the study? Have they been distributed to the homeless shelters?

Paula

Paula Aalgaard | Metro Area Transit Mobility Manager | **City of Fargo, North Dakota** | 650 23rd Street N
o: 701-476- 5967 | f: 701-241-8558 | c: 701-730-8776 | e: paalgaard@matbus.com

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Joe Nigg

From: Matthew Peterson <MGPeterson@matbus.com>
Sent: Wednesday, May 04, 2011 9:54 AM
To: Joe Nigg
Subject: RE: your comments from operator meeting
Attachments: image003.jpg

Joe,

Sorry I did not get this to you yesterday.

Route 25 quits running at 7:00pm. This is hard because we start holding routes at 5:45 so that people are able to make their transfers and this does not allow us to get caught back up on the time table from rush hour traffic. Around 5:00pm traffic lightens up and we should be making up more time however because route 25 and 21/22 quit running earlier than the rest of the system we need to hold back these routes so that transfers can be made this is also true on the Moorhead side.

I also don't think route 15 should be going into west acres twice on its runs. It should follow 13th Ave. straight down to Walmart and then return on 15th Ave. back into West Acres. This would allow us to service the Holiday Inn on 13th Ave and other businesses, without having to make someone take route 22 and add 30 minutes to their trip. You could also have route 22 service Walmart outbound and inbound so that 15 only has to go to West Acres this would also save time on 15 but would require making route 22 an hour long route. We are still currently having problems on route 22 with on time performance because of the amount of area it coves in West Fargo.

Hope this helps.

Thanks,

Matthew G. Peterson
Lead Dispatcher | MATBUS
Office: 701.476.5963
mgpeterson@matbus.com
701.232.7509 | matbus.com

From: Larry M. Weil <Larry.Weil@westfargond.gov>
Sent: Thursday, March 24, 2011 12:05 PM
To: 'Joe Nigg '
Subject: RE: Transit Development Plan SRC Mtg No. 1 Materials

Joe,

Thanks for the email and information. I have reviewed the plan and have a couple of general comments. I don't know if it would be appropriate to include West Fargo under Scope of Work Overview 9.0 in terms of system coordination, but I see transit as a metro-wide function that should be as seamless as possible and not just follow jurisdictional boundaries. Transit/Paratransit should be routed wherever the need is, whether more need in West Fargo, less, or as is (With the ridership, it seems as though West Fargo residents use and support transit fairly well). I guess this may look to more of a metro transit authority with each community providing their fair share of the costs. Also, if we can be proactive in the Plan in determining where additional generators may be, including demographic population nodes (senior, new American, low-income, entry-level housing areas), then we may be more proactive in planning for future routes and associated needs for street system transit design considerations.

Larry

COMMENT FORM

Transit Development Plan
Public Input Opportunities (Forums, Focus Groups, Workshops)

Use this form to register any comments, specific issues, concerns and/or ideas regarding the Transit Development Plan. Just fill it out, fold it, and mail it using the address provided on back. You may also e-mail your comments to metrocog@fmmetrocog.org.

Comments:

1) Extended hours (2nd & 3rd shift) & Sundays
2) Access to Fargo Industrial park
3) Access to Transportation subsidy for poor/homeless in Fargo

For homeless individuals, re. Employment (Wilder 2009) 32% are working 26% of those who aren't cite TRANSPORTATION as the #1 reason.

For homeless individuals in Moorhead re Employment (Wilder 2009) 29% are working + 23% of those who aren't cite Transportation as the #1 reason they are not working

4) Improved Access @ metro wide - inconsistency of ½ hr + hour routes > more frequent
5) Possible Addn. transfer points
6) More short bus/contract carriers
7) Avoid the either-or thinking of promoting to more affluent ridership and the poor. It's not either-or. It would be good for the whole community - building community cohesion instead of us-them thinking.

Joe Nigg

From: Adam Fuller <AFuller@matbus.com>
Sent: Tuesday, May 17, 2011 9:30 AM
To: nigg@fmmetrocog.org; kunza@fmmetrocog.org
Cc: Julie Bommelman
Subject: TDP -NDSU Routes

In regards to the routes on the NDSU campus:

I have been riding the MATBUS to the downtown campuses, Barry Hall and Renaissance Hall for 3 years now and I have to admit it can be frustrating due to a couple reasons. The bus system is not as fast as driving down to the campus. If I want to be on time to class at Barry Hall I have to leave my apartment on the North end of campus an 45 minutes before class starts. To break down this hour the first thing I do is wait for the 31 to pick me up at my building and drive me to the Union, I usually walk if it is warm or if I see the bus drive by because it takes about 15 minutes for that route to circulate. Once I am to the Memorial Union shelter 10 minutes later, I wait about 5-10 minutes for the 33 to circulate back to the Union. In the morning it takes about 10 minutes for the 33 to get to Barry Hall because of all the pick-ups along the way. This is only 30 minutes but this is if everything goes right. Which if one thing gets off then everything gets pushed back and if a student were to miss the 33 to Barry Hall then they will be late to class therefore I plan to leave my room one 45 minutes to an hour before class starts.

In the afternoon on the way back to main campus the bus turns into a sardine can which is ok with me but it makes it slow to leave and it makes so many stops on the way back to campus. Sometimes I will take the 13 A or 13 B even though it is a longer route, I can usually find a place to sit for the ride.

If I could make a suggestion to find a way to have the buses come around more often and if budgets allow having multiple routes during busy times of the day.

I think it would also help if the students were more informed on how NDSU funds the MATBUS system on our campus. I think there are a lot of students, including myself, that don't know what all goes into have all the routes on campus. I feel that the more people are informed about things they won't have as much to complain about. For an example I didn't know why the two 32 routes ran one right after the other but found out that President Chapman did that so no one would be denied a ride and have to wait by themselves. If I would have known that years ago I wouldn't have complained about it as much.

Another suggestion is make a route that goes more East and West on campus. Our campus is more long than wide but there is not a route that goes down Centennial Blvd. except from Steven's Auditorium and West. We wouldn't need to add a route just change one a little. I was thinking that it would be easy to have the 31 take a left on Administration Ave. then follow that back around along the West side of the Union and then Left on Centennial Blvd. Whenever I ride the 31 it doesn't pick up anyone between the Minard pull-out to Steven Auditorium so re routing it may allow more students to use it.

I hope this help in any way with your upcoming planning. Please contact me with any questions or for more details.

Best Regards,

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mail in by May 4th to arrive by May is deadline

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Comments:

Some ideas:
Decorate a bus for local parades
Have a bus carnival - decorate the busses with promotional things - a fun to show it's air conditioned etc.
Offer a Bus Riding 101 Tutorial...
Now that gas is so high make a commercials (similar to the NetFlix one) of questions + answers. The only correct answer is ride the bus, or Metro Area Transit Bus. perhaps each answer could be slightly different yet still be ride the bus. Ex: Fargo Moorhead has an excellent city bus system, or F-M Metro Area Transit will get you there every time or (you know I use the questions + answers to highlight features of MAT buses.
Collaborate with radio or TV stations for promotions or contests involving the MAT bus. Maybe even involving WE Fest or something at the Dome
Feature MAT bus drivers as heroes like firemen + policemen (oops - fire + police persons!)
Do a big push for GOING GREEN at the same time as SAVING GREEN ($)
Please forgive any repeats of things you're already doing or have already discussed.
Thanks for providing wonderful service in all kinds of weather.
Love ya! Bus Rider

COMMENT FORM

MAY 12 2011

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Public Input Opportunities (Forums, Focus Groups, Workshops)

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Comments:

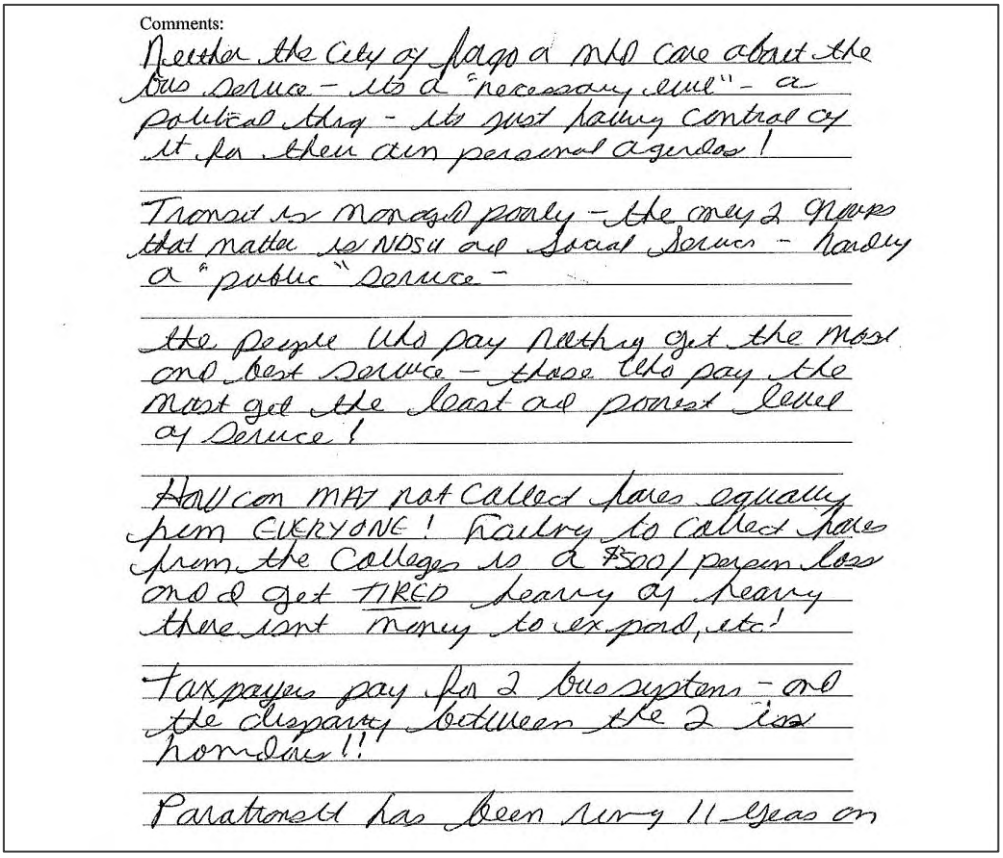
Dress Code - Man's Trousers worn Below belt line - showing underwear -
I've heard that women now are attempting this dress?
On both these issues, there are older passengers who feel there is to much information being given
smoking is not allowed on or near the vehicle - on the issue of snuff or chewing tobacco?

From: Justin Kristan [jkristan@fmmetrocog.org]
Sent: Friday, May 13, 2011 8:11 AM
To: 'Joe Nigg '
Cc: Mike Kunza
Subject: Comments on Transit Development Plan

A few quick notes as public input or internal input:

1. It does not appear that there is any specific driver training that deals with bicyclists' rights to the road and how to operate appropriately around on-road bicyclists. I have attempted to contact Michael Farley twice and have not received any response. If there is no dedicated driver training material relating to the operation of buses around on-road bicyclists then there should be. More bicycle lanes will be installed in the next few years and in 2012 (fall) there may be a left side bicycle lane on 10th street north which will create new operational behavior by on-road bicyclists.
2. As a rider of Route 14 and 15; I have had to make guesses as to whether I should wait for Route 14 when 15 was ready to leave the GTC or hold out for Route 14 who's on-time arrival between the 4:15 and 5:45 runs suffers significantly. Live feedback as to where the buses are would tell me whether to wait for the 14 which runs closer to my house or take the 15 and walk the extra blocks home.
3. Route 14 and 15 have had significant numbers of late arrivals between4:15 and 5:45. Are they getting hammered by peak hour commutes in the afternoon? Time to change their routes?
4. Why does Route 15 leave West Acres Mall going east bound via the frontage road to 13th Avenue when it theoretically could hook a right on the frontage road, left on 17th Ave. South- left on 35th street -right on 13th Avenue. Maybe left on to 35th is too narrow? Remove some parking and make the turn possible. What a waste of time to drive to main exit of Mall (especially during holidays) then drive 13th eastbound between mall and 35th where no stops are available anyway.
5. How do we get choice riders on the bus? I believe that the buses will need to run more often and their on-time record must be better. Incentives from employers may help.
6. Is the Commuter Challenge going to be revived and held in the summer or tie it into when the students return to school? It should be revived for all users and marketed more strongly.

Justin Kristan
Regional Bicycle and Pedestrian Coordinator
Fargo-Moorhead Metropolitan Council of Governments
Case Plaza Suite 232
One North 2nd Street
Fargo, ND 58102
701-232-3242 x.36



Comments:
Neither the City of Fargo or NDSU care about the bus service - its a "necessary evil" - a political thing - its just having control of it for their own personal agendas!

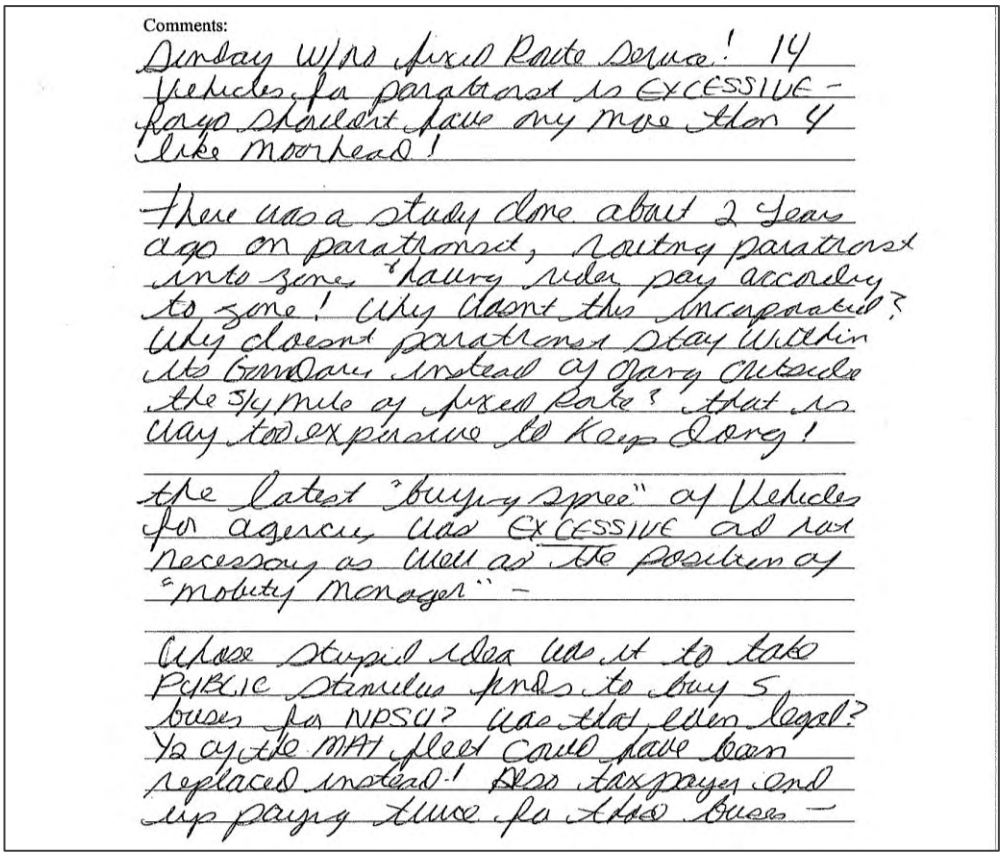
Transit is managed poorly - the only 2 things that matter is NDSU and Social Service - hardly a "public" service -

the people who pay nothing get the most and best service - those who pay the most get the least and poorest level of service!

Hall can MAT not collect fares equally from EVERYONE! Failure to collect fares from the colleges is a $500/ person loss and I get TIRED hearing of heavy there isnt money to expand, etc!

Taxpayers pay for 2 bus systems - and the disparity between the 2 is horrendous!!

Paratransit has been running 11 years on



Comments:
Sunday W/NO fixed Route Service! 14 vehicles for paratransit is EXCESSIVE - Fargo shouldn't have any more than 4 like Moorhead!

There was a study done about 2 years ago on paratransit, routing paratransit into zones "Failure rider pay according to zone! Why doesn't this incorporated? Why doesn't paratransit stay within its boundaries instead of going outside the 3/4 mile of fixed Route? That is way too expensive to keep doing!

the latest "buying spree" of Vehicles for agency was EXCESSIVE and not necessary as well as the position of "Mobility Manager" -

Whose stupid idea was it to take PUBLIC Stimulus funds to buy 5 buses for NDSU? Was that even legal? To say the MAT fleet could have been replaced instead! Also taxpayers end up paying twice for these buses -

Comments:

the Stomach # and NDSU - Who gets the funding from public tax dollars! Some goes for Shelter -

Why are the NDSU shelter heated but not the public shelter -

Fargo Walmart needs a LARGE shelter - more shelter along 13th and on 32nd -

the 2 $600,000 buses were a waste of money - 15 needs seats! It would have been more practical to get a Capacity articulated buses

Route 16 needs a 35 ft bus - the small 30' is insufficient - the riders tend to be heavyset and bring or two handfuls of groceries carts, etc!!

Route 23 is a Joke - another "route to nowhere" - it should serve Bethany, Walmart & Hornbachers - but

Comments:

Who else? Who at Microsoft is going to ride a transit bus with the incomes they make? the night hours should be taken from 23 and given to 25 instead!

Having 25 go around those Apts is a waste of time! Why cant those people go to the corner & wait?

How about service to fleet farm?

Bus service needs to start earlier - 5:15 or 5:45 Am -

the bus needs to show - totally unacceptable this keeps happening - First transit is sloppy & lazy & needs to be present to ensure every route is covered - Some at Dispatch - where is Chuck & Company - they should be at Dispatch helping!!

First Transit is sloppy and in-

Comments:

Competition as a contractor! Neither City should put up any more with First Transit's "no show" and constant turnover in drivers.

Transit mgmt w/ both cities is poor, inefficient and ineffective! Having Gilmour appoint himself "transit czar" is a joke! Neither he or Julie Lale NO credibility and need to go - NOW!!!

I'd like to see a PROFESSIONAL mgmt system - a transit authority - to take over transit - run it professionally, effectively, efficiently & be more careful with fiscal matters! Again - neither city cares about MAT - its a "control thing" and nothing more!

Sunday service and some limited Holiday service is need to address shopping/employment issues! Maybe run 11am to

Comments:

7pm -- and cut back paratransit to those hours also-

West Fargo needs its own bus to cover more area there.

Why does NDSU have 3 taxpayer bus on every route - and MAT only has one? Its obvious help is needed to meet headways - be proactive - this past winter 15 need at least 1 extra bus - 25 needed an extra bus - 14 needed an extra bus - it gets so far behind there is NO schedule anymore. This running 2-3 hours late is unacceptable!!!

The night routes need to run on time - they need to START on time!! Maybe develop a route that can be a "night route" and a "Sunday/Holiday" route? Also run later-

Comments:

There are the people who pay to ride the bus - and those who don't!! Raising fares in 2009 was unjustified as there has been NO new service - and what service there is is poor and unreliable -- MAT claims there is no money to do anything - then why don't they collect fares from everyone equally? "Higher Ed" is not a protected class - you've got these 5-6 figure professor faculty & staff who also get health care, pensions etc subsidized by taxpayer money - and they pay nothing to ride the bus! Students spend more on electronics, clothes and lingerie from Victoria Secret than on riding the bus! No bus service can afford to not collect fares from everyone - why should I a regular rider have to pay full fare and these Higher Ed people pay nothing - and get more service!!

Also observe riders who can go a week w/o refilling their bus card - alot of freeloaders - Shouldn't they get one

Comments:

warning & after that pay cash - revoke their pass or refused service! MAT is NOT a charity - its a public service and those who use it pay to use it!! The only future - fare increase needs to happen to those who currently aren't paying anything!!!

I'd like to see a "day pass" added - Down the cities a "day pass costs $6 and is good for 24 hours unlimited rides after activation.

MAT doesn't address night employment or activities - ends too early - can't go to a movie, the Fargodome, civic, HUB/venue - etc

Would like to see some kind of demand/responsive service to cover after hour employment esp. to Industrial Park - Fixed Route was tried twice & doesn't work - need something w/ flexibility -

Comments:

Always hear about "partnership" w/ NDSU, etc -- Why isn't there a "partnership" w/ fixed Route? Does anybody even represent or stand up for fixed route ridership?

Why aren't public bus shelters heated? taxpayers pay for heated shelters at NDSU - so why aren't ALL shelters heated?

Why put in kiosks, Wifi, etc at the colleges - at taxpayer expense! Learn how to read a bus schedule!!

Having gone through another horrific winter w/ MAT failing time and again to make timely transfers - help is needed to make things run on time!! Being so late that there is NO Schedule is unacceptable! Get extra buses to keep with headway time! Just get sick & tired of having

Comments:

"Excuses"! "Excuses"! "Excuses"!!

SOLUTIONS = = NOT EXCUSES!!

MAT is supposed to be an "essential service" - its run like some after thought -- the "don't care" attitude of the transit office (esp. Fargo) comes through loud and clear to fixed route riders - which is unacceptable for people in charge of a public service!! Time for a major change!!

Fargo/MHD has grown - transit is 10 plus years behind and has ALOT of catching up to do!

Lexstar™ REALTY

June 2, 2011

Gregg Schildberger
MATBUS
650 23rd ST North
Fargo, ND 58102

Dear Gregg,

This letter is to request that the Multiband Tower, located at 2000 44th Street South, be added to a bus route, in order to provide easy access to both visitors and tenants. The Tower currently employs approximately 450 people and also includes a restaurant/bar, Grazies, that is open seven days a week.

The Tower is also surrounded by several hotels, office buildings and restaurants and would make a great central drop/pick-up location.

Please feel free to contact me if you should have any additional questions.

Thank you in advance for reviewing our request.

Sincerely,

Lisa Rudnick

Lisa Rudnick
Director of Communications

1555 43rd Street South Suite 105 Fargo, ND 58103 Phone: 701-492-6123 Fax: 701-281-7155 www.lexstardevelopment.com

From: Terri Frappier [mailto:Terri.Frappier@noridian.com]
Sent: Tuesday, September 06, 2011 10:02 AM
To: Gregg Schildberger
Subject: RE: schedule

Thanks; I see that the route 23 brochure is now out there, which is the one I'm looking for. Awesome! Now if I could just get you to loop it around to 45th and the BCBSND building....thanks for the prompt response, and have a great day!

Terri

From: Josh Sayler [mailto:josh.sayler@connectionsofmoorhead.org]
Sent: Monday, June 20, 2011 3:21 PM
To: Transit E-mail
Subject: Bus Route Question

Hi,

I was wondering if there were any plans to add some stops or a route on Main Ave. in Fargo? I work with adults with disabilities, most of rely on the bus and the addition of such a route would be of great assistance to these adults.

Josh Sayler
Community Services Supervisor
Connections of Moorhead, Inc.
810 4th Ave South, Ste 156
Moorhead, MN 56560
(218) 233-8657 ext. 21

SRC Meeting No. 2, June 21 2011. The second SRC meeting was held to address the following objectives: (1) review early public input (phase I) summary; (2) review Statewide Transit Planning, Programming and Policy Assessment; and (3) review Issue Identification / Needs Assessment Memorandum.

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****Record of Meeting****

Transit Development Plan Update
Study Review Committee Meeting No. 2

Date of Meeting:
06/21/2011 – Metro COG Conference Room

SRC Members Present

Kevin Hanson, Chairman
Brenda Elmer, City of Moorhead, Council Member
Rob Lynch, North Dakota State University
Jim Gilmour, City of Fargo - Planning Director
Julie Bommelman, City of Fargo - Transit Administrator
Diane Wray Williams, City of Moorhead, Council Member
Joe Nigg, Metro COG – Community Planner
Shawn Anderson - M-State
Jan Mahoney – MSUM
Paul Lutey – Nelson/Nygaard
Mike Williams, City of Fargo Commissioner
Lori Van Beek, City of Moorhead – Transit Manager
Jim Aasness, City of Dilworth, Council Member
Dave Piepkorn, City of Fargo Commissioner
Wade Kline, Metro COG – Executive Director
Mikel Kunza, Metro COG – Transportation Coordinator
Chuck Marchand, First Transit Administration
Larry Weil – City of West Fargo, Planning Director
Thomas Wittmann – Nelson/Nygaard

SRC Members Absent

Jessica Lee, FM/WF Chamber of Commerce
Mark Simmons, City of West Fargo Commissioner
Mike Hahn, Downtown Community Partnership
Paul Wraalstad, Concordia College

Appointment of MSUM and Concordia College Representatives to the TDP Study Review Committee:
Mr. Nigg stated at the January 2011 MAT Coordinating Board meeting the composition of the TDP study review committee was discussed and approved. Mr. Nigg stated the MAT Coordinating Board concluded that the TDP SRC should include all members of the MAT Coordinating Board and representation from various stakeholders which included the Chamber of Commerce, Downtown Community Partnership and First Transit. Mr. Nigg explained that the 2007 Joint Powers Agreement that governs the MAT Coordinating Board accommodated a rotating member seat between Moorhead area colleges; and at the time the composition of the TDP study review committee was determined M-State was fulfilling this responsibility. Mr. Nigg stated after the first SRC meeting in March it was realized that MSUM and Concordia representatives were mistakenly left out of the SRC. Mr. Nigg noted that Metro COG contacted MSUM and Concordia and met with each college representative to discuss March SRC meeting materials and request their participation. Mr. Nigg stated Mr. Paul Wraalstad (Concordia) and Ms. Jan Mahoney (MSUM) have agreed to participate and thereby Metro COG is requesting that the SRC formally appoint them as representatives to the SRC. A motion to approve the appointments was made by Mr. Piepkorn and seconded by Mr. Aasness. The motion was unanimously approved.

Mr. Nigg stated the record of meeting (March) shows the Chamber of Commerce representative (Kelli Poehls) as absent. Mr. Nigg stated the Chamber of Commerce has a new governmental affairs manager (Jessica Lee) whom will be fulfilling the Chamber's role on this study review committee.

Review and approval of March 15, 2011 SRC Record of Meeting:
Chairman Hanson stated a record of meeting (March) was included in the SRC packets and asked if any SRC members had any revisions or edits. A motion to approve the minutes was submitted by Mr. Lynch and seconded by Ms. Wray-Williams. The motion was unanimously approved.

Review Early Public Input Summary:
Mr. Nigg stated upon completion of the Existing Conditions Report (ECR) and the first SRC meeting in March, a number of early input meetings were held in late April to solicit input, comments, issues and needs from a diverse set of stakeholders respective to transit service delivery in the Metropolitan Area. Mr. Nigg explained that early input opportunities included two (2) rider focus groups [both at the GTC], three (3) stakeholder focus groups, three (3) driver/operator focus groups [which included all drivers and dispatchers] and two (2)

open house style public input meetings which were held at the GTC and Moorhead Public Library. Mr. Nigg stated the public input opportunities were well attended and a significant amount of input and feedback was received. Mr. Nigg stated a rider survey was also conducted which provided approximately 640 responses to a number of different questions. Mr. Nigg stated the public input summary documents these survey results and details specific findings.

Mr. Nigg stated Metro COG met with the City of Fargo Parking Commission on May 6, 2011 to solicit input into the development of the TDP. Mr. Nigg stated two discussion items were brought to the forefront at this meeting which included the downtown circulator and a future downtown parking ramp. Mr. Nigg stated the consensus of the Parking Commission was that a downtown circulator was a concept that should be pursued. Mr. Nigg stated this concept should be considered in the context of the TDP and specifically relative to how this type of additional service would function. Mr. Nigg noted the Parking Commission is currently looking at possible sites for a future parking ramp in downtown Fargo. Mr. Nigg stated that consideration should be given to how transit and downtown parking can work together to effectuate a common goal, specifically to increase the economic success of the downtown, enhance opportunities to maximize infill/redevelopment by reducing parking demand, providing improved access to destinations, etc. Mr. Nigg noted a project in Sioux Falls where direct access to transit service was provided within a newly constructed parking ramp. Mr. Nigg stated the Parking Commission commented that these types of relationships should be considered, especially if transit funds could be used to help fund the project.

Mr. Nigg provided an overview of the comments, issues and needs most commonly referenced during the early input process, by category. See Phase I, Early Input Opportunities_Summary for specific details. Mr. Nigg noted that a number of written comments were received with this early input phase and directed the SRC to the location of these comments within the summary.

Mr. Kunza reviewed the transit rider survey and explained that of 644 returned surveys a total of 509 were determined to be valid. Mr. Kunza noted that a large percentage of returned surveys represented individuals with incomes below $17,500, which is influenced to some degree by the number of students using the system. Mr. Kunza noted that stakeholder focus groups discussed the importance of serving low income individuals before expanding service to meet the needs of choice riders. Mr. Kunza noted that survey results indicate a fairly even distribution of rider longevity. Mr. Kline questioned why this trend seemed to be changing as past TDP's have shown a higher percentage of riders that have used the system for five (5) years or more. Mr. Kunza stated later evening service, Sunday service and more frequent service were indicated as the most important improvements to riders. Mr. Kunza stated the survey appeared to do a good job of measuring the general attitude of bus riders and reinforced what was heard in the public input opportunities. Mr. Williams questioned whether the survey collected any data on what it would take to get more choice riders on the system. Mr. Kunza stated the focus groups discussed this at length and it really relates to frequency and convenience. Mr. Nigg stated that the Unmet Needs Assessment outlines a number of barriers that likely affect the attractiveness of the system to choice riders, such as the number of transfers required between certain destinations and reliability/on-time performance of the system. Mr. Piepkorn stated that later service in the evening would be a beneficial improvement as access to transportation after 10 p.m. is difficult. Mr. Nigg noted that NDSU survey results show there is a large percentage of students that live near campus (in close proximity to transit service) and use their vehicle instead to access campus/destinations. Mr. Nigg noted that a large percentage of these students also indicated that the cost of parking on-campus is not prohibitive and there seems to be a correlation that can be made where, if the perceived cost of parking on-campus is higher, transit would become more attractive. Mr. Kunza concluded that survey results clearly show difference between demographic groups and their opinions on how transit service should function and how it should be improved.

Review Statewide Transit Planning, Programming and Policy Assessment:
Mr. Kline stated Metro COG, City of Fargo, City of Moorhead, Mn/DOT and NDDOT implement the metropolitan planning process within the FM Metropolitan Area under a memorandum of understanding (MOU). Mr. Kline noted that pursuant to the MOU, and as part of the TDP update, Metro COG has conducted a review of applicable statewide plans, programs and policy documents to ensure compliance and consistency as the TDP is developed. Mr. Kline noted this included a review of the Greater Minnesota Transit Plan (2010-2030), Minnesota Statewide Transportation Policy Plan (2009-2028), Greater Minnesota Transit Investment Plan and North Dakota's Strategic Transportation Plan (TransAction II). Mr. Kline briefly reviewed each of the documents and highlighted areas of importance. Mr. Kline noted that Mn/DOT transit plans set forth a

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consistent vision which is focused on ensuring the efficiency of core services and that resources are made available to provide these services. Mr. Kline noted the five (5) primary challenges facing transit over the 2030 planning horizon as identified in the Greater Minnesota Transit Plan, which included: (a) maintain/expand public transit; (b) changing mobility needs of individuals; (c) changing mobility needs of the workforce; (d) changing transit options in Greater Minnesota; and (e) coordination of services. Mr. Kline discussed the Greater Minnesota Transit Investment Plan and the legislative directive that Mn/DOT establish an investment plan to meet 80% of the transit needs in Greater MN by 2015 and 90% by 2025. Mr. Kline explained that the plan sets forth transit investment priorities to meet existing service levels and serves as a guide to investment decisions regarding the preservation, expansion and contraction of service based on different funding scenarios. Mr. Kline stated TransAction II is a high elevation strategic plan which focuses on level of service and improving performance. Mr. Kline reviewed a summary of the collective objectives from both states and concluded that as the TDP is finalized we will be able to review our plan against the goals, policies and objectives set forth by the state. Mr. Williams stated the bullet "integrate public transit with other modes and transportation system resources" suggests roadway funds should be used to meet a diverse set of mode/transportation needs, which includes transit. Mr. Kline noted the state DOT's are looking for jurisdictions to use innovative ways to use surface transportation funds to meet the highest transportation need within the Metropolitan Area.

Issue Identification / Needs Assessment:
Mr. Wittmann stated in addition to public input, survey data and existing condition data the consultant team has completed analysis to determine unmet needs within the community. Mr. Wittmann stated this analysis included a close review of on-time performance, route productivity, vehicle capacity, transfer analysis, existing ridership patterns, university/college transportation and travel demand. Mr. Wittmann discussed on-time performance and noted Route 2, 11, 13A, 17 and 22 are chronically late and the data shows there is an overarching reliability issue on this system. Mr. Wittmann noted the MATBUS system is based on a timed transfer system and when transfers are missed the mobility of riders is impacted which results in a service that is perceived to not meet the needs of the user. Mr. Wittmann explained from a productivity perspective Route 1 and 2 have the highest passengers/revenue hour in Moorhead; with an average passenger per revenue hour of approximately 17. Mr. Wittmann stated the route productivity analysis in Fargo shows a much higher passenger/revenue hour than Moorhead (approximately 28 passengers/revenue hour), which is partly due to ridership levels on NDSU routes. Mr. Wittmann stated that route capacity issues are regular occurrences on NDSU routes (32, 33, 13A, 13B, 31 and 34) and regular route 15 and 17 (Rt. 17 at the GTC). Mr. Wittmann noted some of these occurrences are not a major issues as a second bus is arriving a few minutes later; however, in other cases the bus is not arriving for 30 minutes or more. Mr. Wittmann discussed transfer rates as documented in the rider survey and noted 33% of passengers are transferring twice to reach a destination, which is very high and a major disincentive to ride a public transit system. Mr. Wittmann reviewed existing ridership by route with the SRC, noting major boarding locations on each route. Mr. Nigg commented on Route 4 and that the alignment follows 1st Avenue and Center Avenue which are corridors that are primed for redevelopment/infill and future development projects. Mr. Nigg stated that Route 4 is somewhat efficient from a passenger/revenue hour perspective but has the potential to significantly increase in productivity as some of these projects are realized. Mr. Nigg stated that maybe there is some incentive (parking reductions, density bonuses, etc.) that can be considered as the projects are scoped that have immediate/direct access to transit which would serve a number of purposes, including incentivizing infill development and increasing ridership on the fixed route system. Mr. Wittmann discussed the transit mode share (13%) at NDSU based on a recent student survey. Mr. Wittmann stated the downtown campus transit mode share is 85%, which is a major success. Mr. Lynch noted that this percentage is a result of policy as student parking is not available in the downtown area near campus buildings. Mr. Nigg questioned why this strategy couldn't be applied elsewhere, such as adjacent to metropolitan area campuses which would support concepts of higher density in core areas, infill/redevelopment, increased transit ridership, reduction in need for surface parking lots and associated maintenance costs, etc. Mr. Wittmann concluded that the following unmet needs exist and are supported by analysis: (a) improve service reliability, (b) decrease transferring, (c) address capacity issues, (d) increase capacity on key corridors[i.e. Rt 15, 22, 25 and NDSU], (e) span of service [Sunday/evening service]. Mr. Wittmann stated the following unserved areas may warrant service and should be considered/prioritized by the SRC: (a) Main Avenue [25th St. /Red River], (b) S. 25th St, (c) Fargo Industrial Park, (d) Dilworth, (e) South/Southwest Fargo to NDSU, (f) South Fargo to South Moorhead [lower priority]. Mr. Wittmann requested feedback from the SRC. Ms. Bommelman questioned what would be served or what need would be met by providing fixed route service on Main Avenue between 25th Street and the Red River. Mr. Wittmann stated this comment was heard repeatedly and after driving the corridor he is unsure whether this would be a

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productive segment. Mr. Kunza noted a diverse mixture of businesses exist on Main Avenue including a number of ethnic markets. Mr. Nigg stated written comments were also submitted by a human service agency which identified this area as an employment hub. Mr. Wittmann stated that just because an area is identified as an unmet need it does not necessarily mean it will be implemented in the exact manner; more so, the unmet need should be considered given funding resources and how it fits into an overall priority matrix. Ms. Bommelman stated a prioritization exercise would be a good idea as some of these needs have been previously addressed, such as the Fargo Industrial Park which could not support a fixed route for a number of reasons. Ms. Wray Williams stated the analysis shows there are distinct populations that have needs and the commitment to serve low income populations is very important. Ms. Wray Williams stated these populations (students, New Americans, etc.) have different needs and trying to address them should be a priority. Mr. Wittmann stated he does not want to be making the decision on whose needs are more important and ultimately the SRC needs to prioritize and set the framework. Mr. Williams stated that instead of reacting solely to these needs that the SRC should be looking for ways to leverage these needs and add value elsewhere. Ms. Elmer stated this data and analysis is very interesting and will link nicely with a housing study that is currently underway by the City of Moorhead. Ms. Elmer stated the Unmet Needs Assessment should also be made available to other groups such as the Greater Fargo-Moorhead Economic Development Corporation and higher education institutions as other needs could potentially be met through transit service. Mr. Gilmour stated the City of Fargo Parking Commission has been looking at a downtown circulator concept and its merits. Mr. Gilmour stated as part of the TDP it may be advantageous to consider route alignment changes to make transit more attractive to individuals with destinations in the downtown core. Mr. Gilmour stated the transit mode share for individuals traveling to the downtown area is rather low (especially in comparison to other communities) and if this percentage can improve it would help reduce the demand for parking. Mr. Wittmann stated the consultant team has yet to develop any conceptual ideas; however, increasing frequency on certain routes, reducing transfers and simplifying route alignments are key drivers to improve the transit mode share to the downtown core. Mr. Lynch stated the Existing Conditions Report and Early Input Summary made it clear that NDSU does not do a very good job of explaining its role in funding transit service and specifically routes that serve NDSU. Mr. Lynch stated NDSU pays for the operation of the 30 series routes and it is important to recognize that if capacity issues or other needs are identified NDSU pays for that improved service. Mr. Lynch noted when concerns or issues are present they need to balance them with funding availability and resources. Mr. Lynch suggested that if the other area colleges would want to meet and discuss how NDSU has worked to develop a private/public partnership with MATBUS to provide improved service to students he would be willing. Mr. Williams stated that NDSU's involvement is an investment but it also serves as a recruitment tool; and further suggested that this may be a strategy that could benefit other area colleges. Ms. Mahoney stated that parking availability and the cost of parking determines whether students will drive to campus. Mr. Lutey noted that the NDSU survey shows that only 25% of students feel parking costs are an issue, which becomes even less of an issue as you move further from campus.

TDP Timeline Update:
Mr. Nigg stated the project is on schedule and in good shape relative to the budget. Mr. Nigg stated Metro COG would like to schedule a SRC meeting for July 12th to work through a needs/issue prioritization exercise. Mr. Nigg stated the next step for Nelson/Nygaard was development of the system alternatives, operations analysis and financial plan which would be brought forward to the SRC for review in late August or September. Mr. Nigg stated Metro COG will also be working to complete the Coordinated Human Service Transportation Plan which will also be presented at the August/September SRC meeting. Mr. Nigg noted the second round of public input is anticipated for October of 2011; whereby a majority of this information (including system alternatives) will be made available for public review/comment.

Next Meeting:
Mr. Nigg stated the next SRC meeting will be scheduled for July 12th, 2011 and materials will be sent out as soon as possible to give everyone adequate time to review and consider prior to the prioritization exercise.

SRC Meeting No. 3, July 19 2011. The third SRC meeting was held to address the following objectives: (1) review revenue projection scenarios; (2) discuss system needs prioritization; and (3) review system goals / performance measures memorandum.

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****Record of Meeting****

Transit Development Plan Update
Study Review Committee Meeting No. 3

Date of Meeting:
July 19/2011 – Metro COG Conference Room

SRC Members Present

Kevin Hanson, Chairman
Brenda Elmer, City of Moorhead, Council Member
Jim Aasness, City of Dilworth, Council Member
Jim Gilmour, City of Fargo - Planning Director
Julie Bommelman, City of Fargo - Transit Administrator
Diane Wray Williams, City of Moorhead, Council Member
Joe Nigg, Metro COG – Community Planner
Shawn Anderson - M-State
Larry Weil – City of West Fargo, Planning Director
Lori Van Beek, City of Moorhead – Transit Manager
Paul Wraalstad, Concordia College
Dave Piepkorn, City of Fargo Commissioner
Chuck Marchand, First Transit Administration
Mikel Kunza, Metro COG – Transportation Coordinator
Jessica Lee, FM/WF Chamber of Commerce

SRC Members Absent

Mike Hahn, Downtown Community Partnership
Mark Simmons, City of West Fargo Commissioner
Jan Mahoney, MSUM
Mike Williams, Fargo City Commission
Rob Lynch - NDSU

Review and approval of June 21, 2011 SRC Record of Meeting:
Upon a motion by Mr. Piepkorn, seconded by Ms. Wray Williams, it was voted on and unanimously carried to accept the minutes of the June 21, 2011 Transit Development Plan Study Review Committee.

Review Financial Scenarios (Revenue Projections):
Mr. Nigg explained the memo included in the meeting packet regarding the revenue projections and assumptions as the framework for development of the TDP financial plan. Mr. Nigg stated the intent of the memorandum is to establish a base revenue assumption that can be used by Nelson/Nygaard to develop operational alternatives and ultimately the financial plan. Mr. Nigg explained the methodology Metro COG used to develop revenue assumptions and the relationship to the Long Range Transportation Plan financial assumptions. Mr. Nigg stated the memo was a starting point and noted that the committee should work towards consensus on a framework for these base assumptions. Ms. Van Beek asked why 2010 numbers were not used to develop the revenue forecasts. Mr. Nigg stated 2010 numbers were not incorporated into the existing conditions report (ECR) as they were not available at the time this document was drafted. Mr. Nigg continued to explain that for consistency reasons Metro COG stuck with data set forth with the ECR (2007 to 2009); however, noting that Metro COG can make the adjustments if 2010 data is the consensus. Mr. Gilmour stated that an accurate base for Fargo would be the 2010 year-end figures. Ms. Van Beek agreed 2010 would be an accurate base for Moorhead and an average of previous years should not be used. Ms. Van Beek stated 2% revenue growth may not be accurate for the Moorhead system due to the State of Minnesota financial situation. It was agreed that the Moorhead financial growth will not be 2% across all revenue streams, but Fargo will continue to use the 2% growth factor. Mr. Nigg stated that the assumptions will be adjusted to represent the direction received from the committee.

System Needs Prioritization Discussion:
Mr. Kunza provided an overview of the system needs priority matrix as included in the committee packet. Mr. Kunza stated that projects were rated in categories including public input, ridership potential, operating and capital cost, and consistency with statewide plans. Mr. Kunza stated the score is based on technical analysis completed by Nelson/Nygaard and ranking completed by Metro COG. Mr. Kunza stated the point of the matrix and exercise is to get the committee to provide guidance on project priorities prior to Nelson/Nygaard

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SRC Meeting No. 3
Page 2 of 2

finalizing alternatives and the operations analysis. Mr. Kunza reviewed the matrix and listed projects. The committee discussed how different categories should be weighted. Mr. Nigg stated that we may not need to go into project specific details at this point, but the intent was to provide the consultant with an overview of priority areas. Mr. Nigg stated it was probably important from a high elevation perspective for the committee to recognize certain priorities (i.e. preserve system, improve core service, expand service). Mr. Gilmour stated more weight should be given to different categories. Mr. Gilmour stated ridership potential is perhaps the most important criteria and the matrix should be structured accordingly. Mr. Piepkorn stated he liked the idea of measuring public input. Ms. Van Beek stated there appeared to be some errors in the scoring. Mr. Kunza stated they will be double checked and corrected if needed. Mr. Nigg stated Metro COG will re-work the matrix and send it back out for the committee to review. Ms. Wray Williams stated people at the public input meetings depend on the transit system and public input needs to a part of system priorities. Mr. Wraalstad reminded the committee that for college student's later service and improved frequency is usually more important than earlier service.

Review Performance Measures:

Mr. Kunza explained the intent of the performance measure memo and noted that preliminary feedback was being requested from the SRC. Mr. Kunza stated that performance measures will assist in competitive grant applications and the development of transit items in Metro COG's work program. Mr. Hanson asked if this was intended to be a dashboard style program. Mr. Kunza stated that it should be simple with available data that is useful and continually tracked to provide insight into system dynamics and performance. Mr. Nigg stated there are some areas of concern within the memo and Nelson/Nygaard will be working closely with MATBUS staff to ensure the performance measures are appropriate and structured to respond to existing system conditions. Ms. Bommelman and Ms. Van Beek discussed some detailed measures in the memo and noted that they would provide specific feedback to Nelson/Nygaard relative to their concerns. Ms. Van Beek stated that the final performance measure document should indicate where MATBUS is currently. Mr. Hanson asked if the idea of the performance measures is agreeable. Ms. Van Beek and Ms. Bommelman agreed. Mr. Gilmour stated with minor tweaks this is the kind of information that needs to be tracked.

Next Meeting:

Mr. Nigg stated the next SRC meeting will be scheduled for August 23rd 2011 and materials will be sent out as soon as possible to give everyone adequate time to review. Mr. Nigg stated that all documents are now on Metro COG's website and additionally noted that the second phase of the public input process will take place in the third week of September. Mr. Nigg stated during this second phase the public will have a chance to review all the information completed to date and specifically the draft alternatives and route concepts as developed by Nelson/Nygaard.

SRC Meeting No. 4, August 23 2011. The fourth SRC meeting was held to address the following objective: (1) review draft Operational Alternatives Development & Analysis Memorandum.

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****Record of Meeting****

Transit Development Plan Update
Study Review Committee Meeting No. 4

Date of Meeting:
August 23, 2011

SRC Members Present

Kevin Hanson, Chairman
Brenda Elmer, City of Moorhead, Council Member
Jim Aasness, City of Dilworth, Council Member
Jim Gilmour, City of Fargo - Planning Director
Mike Williams City of Fargo Commissioner
Julie Bommelman, City of Fargo - Transit Administrator
Diane Wray Williams, City of Moorhead, Council Member
Joe Nigg, Metro COG – Community Planner
Rob Lynch – North Dakota State University
Larry Weil – City of West Fargo, Planning Director
Lori Van Beek, City of Moorhead – Transit Manager
Paul Wraalstad, Concordia College
Jan Mahoney, MSUM
Dave Piepkorn, City of Fargo Commissioner
Chuck Marchand, First Transit Administration
Mikel Kunza, Metro COG – Transportation Coordinator
Shawn Anderson - M-State

SRC Members Absent

Mike Hahn, Downtown Community Partnership
Mark Simmons, City of West Fargo Commissioner

Review and approval of July 19, 2011 SRC Record of Meeting:
Upon a motion by Mr. Piepkorn, seconded by Ms. Wray Williams, it was voted on and unanimously carried to accept the minutes of the July 19, 2011 Transit Development Plan Study Review Committee.

Review draft Operational Alternatives Development and Analysis Memorandum:
Mr. Wittmann presented the draft alternatives and operations analysis memorandum to the SRC. Mr. Wittmann discussed three different system alternative scenarios which included the following: (a) a 5% reduction scenario, a cost neutral scenario, and an unconstrained scenario. Mr. Wittmann indicated that the needs assessment (reviewed by the SRC at the June 21, 2011 meeting) indicated system reliability as the number one priority. Mr. Wittmann informed the committee how transfers reduce ridership potential and add time to route headways. Mr. Wittmann continued by explaining that eliminating and reducing transfers was an important element of proposed recommendations in both Moorhead and Fargo. Ms. Van Beek question the transfer pattern data used to decide combining routes 1 & 3 and 2& 5. Mr. Wittmann explained that cash users and pass users have generally the same transfer patterns nationwide. Mr. Wittmann stated the route combination is a trade-off and it does prioritize the patterns of the majority of the riders. Mr. Wittmann stated that without the changes the system would continue to have on-time performance issues. Mr. Wraalstad stated the changes to route one would likely offer more shopping choices for students. Ms. Van Beek stated the need for crosswalks may become an issue in the future so riders can get to the right side of the street. Mr. Wittmann stated that routes 7 & 8 are the lowest performing routes from an on-time performance perspective due to the in-ability of these routes to make up time. Ms. Van Beek stated that the proposed solution for the night routes would need to be reconsidered. Ms. Van Beek suggested that route 7 & 8 could go down 8th street to 6th avenue. Ms. Van Beek stressed the need to serve MSUM at night. Mr. Wittmann stated that without two buses something would have to be sacrificed. It was agreed that more work would be done on the Moorhead evening routes. Mr. Wittmann discussed the Fargo recommendations with the SRC. Mr. Gilmour stated that route 15 is important to the overall system and agreed that the recommended improvements were appropriate. Mr. Wittmann stated that Sunday service is becoming more of an issue and needs a very close look in the future. The SRC discussed bus capacity and articulating busses and the added costs and challenges associated with them.

Other Business: Mr. Nigg updated the SRC on the overall process and the upcoming steps to completing the Transit Development Plan.

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SRC Meeting No. 5, October 4th 2011. The fifth SRC meeting was held to address the following objectives: (1) review September 21st Public Input comments/feedback; (2) review Higher Education Institution UPass Memorandum; and (3) discuss update to MAT Coordinating Board Joint Powers Agreement.

Record of Meeting / October 4, 2011
Page 1 of 1

Fargo-Moorhead Metropolitan Council of Governments

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****Record of Meeting****

Transit Development Plan Update
Study Review Committee Meeting No. 5

Date of Meeting:
October 4, 2011

SRC Members Present
Kevin Hanson, Chairman
Brenda Elmer, City of Moorhead, Council Member
Jim Aasness, City of Dilworth, Council Member
Jim Gilmour, City of Fargo - Planning Director
Wade Kline, Metro COG – Executive Director
Julie Bommelman, City of Fargo - Transit Administrator
Diane Wray Williams, City of Moorhead, Council Member
Joe Nigg, Metro COG – Community Planner
Rob Lynch – North Dakota State University
Larry Weil – City of West Fargo, Planning Director
Lori Van Beek, City of Moorhead – Transit Manager
Chelle Lyons-Hanson, Concordia College
Paul Supawanich, Nelson/Nygaard (via phone)
Dave Piepkorn, City of Fargo Commissioner
Chuck Marchand, First Transit Administration
Mikel Kunza, Metro COG – Transportation Coordinator
Shawn Anderson - M-State

SRC Members Absent
Mike Hahn, Downtown Community Partnership
Mike Williams, City of Fargo Commissioner
Mark Simmons, City of West Fargo Commissioner
Jan Mahoney, MSUM

Other Participants
Matt Peterson, First Transit Administration

Review and approval of July 19, 2011 SRC Record of Meeting:
Upon a motion by Mr. Aasness, seconded by Mr. Piepkorn, it was voted on and unanimously carried to accept the minutes of the August 23, 2011 Transit Development Plan Study Review Committee.

Update on September 21 Public Input Opportunity and Comments Received:
Mr. Nigg provided a summary of the public input opportunity from September 21st to the SRC. Mr. Nigg stated the meeting was held at the GTC and the project team (Metro COG, Nelson/Nygaard and MATBUS) spoke with approximately 100 riders/stakeholders/interested parties regarding various aspects of proposed operational and route alignment scenarios. Mr. Nigg stated comments and feedback were overall positive on both sides of the river; inclusive of feedback on the concept of removing the Marriott Transfer Facility.

Review and discussion on Higher Education / UPass Memorandum:
Mr. Nigg walked the committee through the U-Pass memo as prepared by Nelson/Nygaard. Ms. Lyons Hanson provided feedback on Concordia College and their budget process and noted the issue that agreements are negotiated after the student body has left; however, funds are programmed mid-year. Mr. Lynch stated NDSU's system contributions need to be factored into this memorandum. Mr. Lynch stated per student contributions at NDSU should be noted to ensure all information is presented in the memorandum and not just UPass contributions. Mr. Nigg acknowledged that the memorandum could be revised to accommodate this request. Mr. Gilmour noted 2008-2009 ridership numbers for NDSU within this memo were incorrect. Mr. Nigg stated Metro COG would provide Nelson/Nygaard with updated numbers. The SRC discussed alternative UPass methodologies and the recommended ridership (w/ volume discount) approach. Ultimately, the SRC concluded that there was merit to the alternate methods; however, due to various complexities of this program any changes in contribution calculation methods would have to be carefully considered and presented to area colleges. Mr. Nigg stated any recommendation within the TDP (including whichever Upass recommendation is carried forward), if pursued, will require

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Record of Meeting / October 4, 2011
SRC Meeting No. 5
Page 2 of 2

city consideration and action; and they will have the ability to refine, revise or change course as they deem appropriate. Mr. Nigg stated the TDP merely sets forth the data, alternatives and a recommendation while implementation falls within the oversight of each respective city.

Update on MATBUS Coordinating Board Joint Powers Agreement:
Mr. Kunza updated the committee on the status of the MAT Board Joint Powers agreement that expires at the end of 2011. A consensus was reached to continue work towards an updated agreement for the board to consider in November.

Next Steps / Process Update Memorandum: Mr. Nigg stated the project remains on-budget and the study is approximately ¾ complete. Mr. Nigg discussed the 'next steps' memorandum and noted the draft TDP would be distributed to the SRC on November 1st with an anticipated final SRC meeting during the week of November 14th. Mr. Nigg continued to explain that Metro COG and Nelson/Nygaard would like to hold a joint jurisdiction presentation on November 30th with a specific focus towards city council members and commissioners from its local units of government. Mr. Nigg explained that due to the importance of an efficient/functional transit system within the metropolitan area and the importance of recommendations within the TDP, this presentation would provide an opportunity for Metro COG and Nelson/Nygaard to review key elements of the TDP with city leaders. Mr. Nigg noted that this presentation would ensure that each elected body has an opportunity to provide comments prior to a request for a formal resolution of support in December. The Study Review Committee agreed that this was a good approach and that it should be pursued by Metro COG.

Phase II, Public Input Opportunity, Operational Alternatives/Analysis. Upon completion of the draft Operational Alternatives Development and Analysis Memorandum and the document being preliminarily vetted by the SRC, Metro COG scheduled the intermediate public input meeting (phase II). The intent of this public input meeting was solicit input, comments and feedback relative to operational alternatives (i.e. route alignment) and other draft elements of the TDP (i.e. ECR, Issues/Needs Assessment, Statewide Assessment, Phase I Public Input Summary).

Public Input Meetings, September 21, 2011. Metro COG facilitated one (1) open house style public input meeting on September 21, 2011. The meeting was held at the Ground Transportation Center (GTC) located at 502 NP Avenue, Fargo. Metro COG staff and Nelson/Nygaard staff were set up at the GTC from 8:00 a.m. to 8:00 p.m. For additional details and the record of meeting associated with this input opportunity, see below.

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Record of Meeting / September 21, 2011
Public Input Meeting, 8:00 a.m. to 8:00 p.m.
Page 1 of 1

Fargo-Moorhead Metropolitan Council of Governments
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Record of Meeting

Transit Development Plan Update
Public Input Meeting

Date of Meeting:
09/21/2011, 8:00 a.m. to 8:00 p.m. – Ground Transportation Center (502 NP Avenue, Fargo)

Attendance:
Metro COG was unable to document or tally the total number of individuals that were providing feedback, comments and suggestions at the Ground Transportation Center. Metro COG staff estimates that discussions were facilitated with at least one hundred (100) riders and interested persons. A listing of individuals per sign-in sheets are outlined below:

Terry Horn
Craig Johnson
Robert Stitz
Lori Van Beek, MATBUS
Chad Vagel
Kathryn Lackmann
Walt O'Brien
Doris Sorensen
Jeri Leyland
Randy Johnson
Larry Weil, WF Planning
Nicole Crutchfield, Fargo Planning
Linda Onstad
Vidisha Bhatt
Samson Savoy
Thomas Wittmann, Nelson/Nygaard
Maria Hinds
Terry Whitmer, MATBUS
Matt Pederson, MATBUS
Annette Brokke
Dan Seyma, ND Probation
Jon Zeutschel
Andy Yahahn
William Aelai
Joanne Borgen
Robert Bensecker
Peggy Seiler
Mike Camacho
Persellin Miranda
Sharlene Ann Meyer
Mikel Kunza, Metro COG
Enrique Lopez
Kyle Anderson
Bruce Maylath, NDSU
Michael Laemmerman, MATBUS
Erin Williams
Julie Bommelman, MATBUS
Anthony Dillard
Shari Neisius
Joe Nigg, Metro COG
Chris Graham
Jim Hinderaker, Fargo Planning
Marlene Knutsen
James Cleveland
Darcy Villebrun

Total: 45

Comments and Discussion:

- Generally, system wide, riders were supportive of the concept to eliminate the Marriott transfer facility in Moorhead, including support for the route restructuring concepts set forth under the cost neutral scenario;
- Comments relative to the cost neutral alternative in Fargo, system wide, were extremely positive and well received;
- Sunday Service;
- Extended service in evenings, especially on core routes;
- Service to Cass County Jail and Probation Offices (see cost unconstrained scenario);
- Concerns for North Fargo residents and access to Route 11 if Route 12 is eliminated;
- Heated shelters.

See additional comments submitted in writing. Some of these comments were received at the public input meeting and others were mailed or delivered shortly thereafter.

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----- Original Message -----
From: "M & C García" <lafamiliagarcia24@gmail.com>
To: <metrocog@fmmetrocog.org>
Sent: Friday, September 23, 2011 8:30 PM
Subject: Transit Development Plan

Hopefully this is the right means to make a comment. I appreciate elements of the plan, particularly for the practicality ie early and later weekday service, Sunday service, having fixed rather than flag stops. At the same time, I'm disappointed by some of the route restructuring. We moved from Mpls where we were frequent mass transit riders. We chose housing in Fargo right on a route that would provide direct service within a walking distance of <1 block, to my place of employment, Sanford Medical Center- via route 1. I am disappointed to see that proximity eliminated with the new plan. I'm certain I'm not the only person who has chosen housing based on mass transit and would like, with the restructuring, that you consider the addition of more bus shelters. If people are walking longer distances to catch and wait for the bus, protection from the weather elements is more than warranted.

Fargo, ND 58102

We would support Route 18 cost unstructured so that ~~they~~ there would be a closer stop to the probation office & jail. Several people that come to our probation office rely on public transportation.

Erin Williams
Parole & Probation Officer II
239-7149

We would support the update for Route 18 on the proposed Cost Unconstrained plan. This would benefit many of the clients who come to our office at 461 34th St. S, probation office. It would also help with transportation issues at the Cass County Jail. We appreciate your thoughts and consideration with the updated plan.

Dan Seymour - ND Probation/Parole
239.7248

I have a suggestion. If the GTC and/or administrative offices are becoming crowded would you consider space in the Northport Shopping Center?

Barb McKeever
barbmckeever@cableone.net

I think that the proposed change to Route 11 would be a bad idea. I live on Broadway + 29th Ave. It would be a real hardship for me especially in the winter if I had to walk up to 25th Ave to catch Route 11. I also work at the Radisson Hotel. So Route 11 works out great just the way it is now. There are a lot of people who get on between 25th + 32 Ave to.

Thanks
Peggy Seiler
Phone 701-293-6129

Route 9 - Moorhead -

New Moorhead Sanford Clinic will be at the NE Corner of the 34th St. Interchange with I-94. -

Dave Anderson
234-6637

Yesterday 9-20-2011
The Bus Driver who was driving Bus #1171 Route 15 from West Acres Eastbound to 6th ave 20 min late. Was rude to 2 passengers, who wanted to sit down at elderly Disabled seats. Was told they couldn't sit there. These seats were available.

Fargo, ND 58102

The bus should run on Sundays

Fargo, ND 58102

I think you should have heater's in the Bus shelters. I like the route 4 + 15 Idea. I don't like the idea of getting Rid of the Marriot transfer point. I really think you should do routes on Sunday.

I think combining Routes 1 + 3 buses in Moorhead is a really good idea. It would be a lot quicker.

Thank-you

Keep transfer point at Marriot - keep route 1 and 2 which I use, the same.

Have 15 minute runs to the Mall route 15.

The system runs good now.

I LIKE WHAT YOU HAVE DONE BUT WOULD STILL LIKE TO SEE HORIZON SOMETIME IN THE FUTURE,

THANX

Fargo, ND 58102

Jim Duncan Good Job thats what we need keep it up.

TDP Comments:

Moorhead Routes :

- Rt. 1 –
  Remove travel from along Holiday Dr. to 14th St via 28th Ave
  Frequent difficulty merging on to 24th Ave
  Offers no stops or service on Holiday Dr. road
  Has the necessary time given recent modification of route
- Rt. 2 –
  NR
- Rt. 3 –
  NR
- Rt. 4 –
  Remove courthouse loop, implement as meandering and retracing
  Will provide service inbound and outbound to currently unidirectional areas (see attached)
  Provide more direct route to most destinations
- Rt. 5 –
  NSF NR
- Night Routes –
  Implement as designated stops only
  Address traffic signal sequences and railroad crossing influences
  Decrease grace window to three (3) minutes while maintaining five (5) minute grace window for Fargo buses (driver discretion/ weather dependent)
  - Rt. 7 –
    Designate frontage road as "on request only" until 28th St

Rt. 4 suggestion detailed :

~ Departing GTC:
- NP Ave. to 2nd St to 1st Ave N into Moorhead
  - Serve: Hjemkomst (on request), Park View
- 1st Ave N to 11th St, north on 11th St to 15th Ave N
  - Serve: Courthouse, Family Services & Robert Asp
- 15th Ave N east to 17th St
  - Serve: Mobile Manor, DMV
- 17th St south to 1st Ave N
  - Serve: Moorhead Manor, Park Christian neighborhood
- 1st Ave N east to Highway 75, along H-75 to 4th Ave N
  - Serve: Churches United, Gateway Gardens
- 4th Ave N to EasTen Shopping Center and Wal-mart

~ Returning GTC
- EXACTLY reverse roadways

Comments Related to Needs Assessment Technical Memo Page 14

Route 15. This is the highest ridership route in the system with the highest number of boardings at the GTC (largely due to transfers) and West Acres Mall. Other major boarding locations include several other stops in the downtown core, along 13th Avenue S (between I-29 and 21st Street S), and in the 13th Avenue commercial area (especially the Wal-Mart). The weakest segments of this route include the more established neighborhoods in central Fargo, as well as 13th Avenue S between the West Acres Mall and Wal-Mart. The lack of boarding directly on 13th Avenue S is a good indicator of the poor pedestrian conditions along this stretch of the route. As noted earlier, this route attracts the greatest number of transfers of any route in the system and is important to nearly all routes that connect to it.

Comment. I suspect that the lack of boarding directly on 13th Avenue has a lot more to do with the layout of stores and services along 13th Avenue not pedestrian conditions. Intersections are signalized along 13th Avenue South especially between 23rd street and 34th Street. Sidewalks and shared use paths are found along most of Route 15's run along 13th Avenue. Shelters are also available. Winter does find many sidewalks and shared use paths not cleared of snow and ice on Rte 15's run along 13th Avenue. Why is the mall so popular? It is the concentration and diversity of businesses under one roof. Transit and land use development are intimately connected. Strip malls are not going to support transit like the West Acres Mall or downtown with its concentration of mixed-use development.

Route 15
The table on page 5 show Route 15 running late just over 20% of the time. I have noticed that Route 15 runs late consistently in the 4pm-6pm time slot.

- I suspect much of this has to do with 13th Avenue Congestion. Time to discuss TDM solutions (enhanced promotion, education etc. with major employees)?
- What if Route 15 route was changed? Here is my thought. Instead of leaving the mall on its eastbound run to downtown via 38th Street South to 13th Avenue; use the Route 16 route and go south on 38th Street South then east on 17th Avenue and north on 34th Street South then either go directly to 13th Avenue South and head east or stop at Cash Wise and then proceed north on 33rd Street South to 13th Avenue South then head east. Route 15 avoids major congestion at 38th Street South and the entrance to the Mall during the holiday season and avoids a lot of dead zone (38th Street South, entrance to the Mall, 13th Avenue South from mall entrance to 34th Street) which burns time. 17th Ave South and 34th Street South hold potential for riders. I have experienced Route 15 bog down during the holiday season on 38th and the mall entrance on its eastbound run. The eastbound stretch from the mall exit to 34th Street South

1

can bind up a bit as well. If Route 15 made a door front stop at Cash Wise every ½ hour it seems like Route 15 would be even more convenient for those that shop at Wal-Mart and Cash Wise. Presently, a person has to haul their groceries from Cash Wise to 13th Avenue at 33rd Street to catch Route 15.

General Comments:

- Having dedicated bus stops seems like it would clean up excessive stopping. If this is going to happen then spend the money to make the dedicated stops sheltered and heated on Route 13, 14 and 15 where most useful.
- Removing transfers or minimizing them seems like it would increase the attractiveness of using transit.
- Bus passes and maps should be much more available to the public. Make them available at Wal-Mart, Cash Wise, West Acres Mall, Kmart.....
- Extend service on Routes 13, 14 and 15 Monday- Saturday to 11 or midnight.
- Sunday service for Routes 13, 14 and 15 from 11am to 7pm or at least special Sunday holiday service on 15 (Sunday before Thanksgiving to Sunday after Christmas).
- Info kiosk for buses at West Acres Mall (in multiple areas) so folks know how close the bus is so that they can shop in "real bus arrival time" and not miss the bus nor stand around wasting time waiting for a late bus to arrive.

I look forward to seeing the transit system become stronger and more efficient in the coming years.

Sincerely,
Justin Kristan

Fargo, ND 58102

BUS SHELTERS:

A LARGE shelter is needed at Fargo Walmart – 13th Avenue – I thought that was supposed to happen this last purchase of shelters –

Don't need a shelter on every corner at NDSU – remove them and put them other places around town.

The shelter need to be cleaned out more thoroughly and more often.

Put heat in shelters – why did we taxpayers pay for heated shelters at NDSU but there are NONE for the public?

BUS STOPS!

Agree designated bus stops are needed on 15 – 3rd also incorporate on ALL routes! There are too many times people are standing along the street instead of at the corner. Bus

Fargo, ND 58102

stops also need to be cleaned out so riders don't have to stand in the street and get hit by traffic.

PRIORITIES!

Downtown circulator, a NDSU / West Acres route are NOT priority – No is expanding to Bennett area.

If Downtown circulator are wanted, they just should be funded WHOLLY by the Parking Commission, the Downtown business – NOT a single penny of public transit money should go to this –

Both for the NDSU / West Acres route – not important – if it is implemented, not a single cent of public money should be completely be paid for by NDSU

Fargo, ND 58102

Student fees - If times on 13 and 15 are increased, Don't see a need for this.

Make a priority: Limited Sunday Service 11AM - 7pm - Stanley earlier and Surry later.

Not a priority - South Fargo to Moorhead - can only pick up at each end and Nothy in between

OTHER STUFF:
Residential streets the buses travel on are hard to maneuver and stranger parking enforcement needs to happen.

Any expanded service on/by MSUM should be paid for by/by Student fees - NOT public money!

Fargo, ND 58102

I support combining Routes 11 and 12!

I support combining Routes 25 and 21 - Will this arrangement be able to serve the new Costco that is coming in?

there are too many people who are stopping the bus and not paying - Not fair, if one uses it, pay for it!

I found it amusing to read in the College survey the students indicated they might pay more for more service - & they pay nothing as it is - why don't we all just pay the regular adult fare as support MAT??

Fargo, ND 58102

Any frequency increase on 13 should be paid by student fees – NO public money on this either!

Have concern about combining 14 and 25 – 14 need the ½ turn around at Kmart – there is too much traffic congestion on 32nd that will mess this scenario up –

Same can be said about 16/22 – Ideally, West Fargo needs its own bus to cover mall area in WF and pulse at West Acres. WF needs to step up and start taking responsibility for its own service and not depend on Fargo.

Buying 2 $600,000 buses was a stupid idea – especially when there was no additional seat space.

Fargo, ND 58102

Buying a couple articulated buses – some 40 footer would have made more sense

Paratransit is a disaster – it is excessive and very expensive to run – 14 buses – huh? Paratransit needs to go to a fare schedule based on distance. Paratransit also needs to stay within its boundaries. Paratransit has been running 11 years w/o accompanying fixed route – either run both or neither! In fact, paratransit should be suspended until there is Sunday fixed route service and the 2 run similar hours.

There has been an excessive waste of money lately buying vans, etc for organizations – duplication and more duplication of service.

INDUSTRIAL PARK --

fixed route service never worked and never will - need a flexible demand-responsive arrangement similar to paratransit for late hours, etc!

All the crap w/ regard to NDSU was unnecessary to put in the TDP - We taxpayers pay for MAT and NDSU and the disparity in service is out of sight - if students want bus service it should be paid WHOLLY by student fees - and student and staff be required to pay the regular adult fare - why do lower income fixed route riders have to pay full fare and 6-figure staff/faculty pay NOTHING? - Higher education is better referred to as "special ed" the way they act! Students spend more on their phones than on MAT - taxpayers should NOT

have to subsidize bus rides for student and faculty!! there are No unmet needs for colleges -

would like to have 15 run at night - every 1/2 hour - can eliminate 16 to accomplish!

MAT is supposed to be an "essential" service - its run sloppy, poorly and inconsistently!

MAT needs a contractor who can produce drivers, run the routes and take responsibility??

Why isn't there more push to develop a transit authority? Send out RFP's, etc?? the process is dragging! Long overdue to bring on a professional management team to run MAT, seek funding etc - the attitude ay

have to subsidize bus rides for student and faculty!! there are No unmet needs for colleges -

would like to have 15 run at night - every 1/2 hour - can eliminate 16 to accomplish!

MAT is supposed to be an "essential" service - its run sloppy, poorly and inconsistently!

MAT needs a contractor who can produce drivers, run the routes and take responsibility??

Why isn't there more push to develop a transit authority? Send out RFP's, etc?? the process is dragging! Long overdue to bring on a professional management team to run MAT, seek funding etc - the attitude ay

TDP Comments:

Fargo Rt. 15 :

- Rather than two additional Route 15 buses,
  - add another Rt.16
  - shift service
    - have Rt. 15 serve wal-mart
    - have Rt. 16 serve west acres
    - modify Rt 22 to shuttle between west acres and wal-mat *OR* extend Rt 16 into the Kohl's area

--- OR ---

  - add another Rt.16
  - provide a WA/Wal-mart service loop on both routes
    - have Rt. 16 travel from GTC
      - to WA and then to Wal-mart
    - have Rt. 15 travel from GTC
      - to wal-mart and then to WA

SRC Meeting No. 6, November 16th, 2011. The sixth and final SRC meeting was held to address the following objectives: (1) review the draft Transit Development Plan and secure a recommendation from the SRC.

Record of Meeting / November 16, 2011
Page 1 of 1

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Record of Meeting

Transit Development Plan Update
Study Review Committee Meeting No. 6

Date of Meeting:
November 16, 2011

SRC Members Present

Kevin Hanson, Chairman
Brenda Elmer, City of Moorhead, Council Member
Jim Aasness, City of Dilworth, Council Member
Jim Gilmour, City of Fargo - Planning Director
Rob Lynch – North Dakota State University
Julie Bommelman, City of Fargo - Transit Administrator
Diane Wray Williams, City of Moorhead, Council Member
Larry Weil – City of West Fargo, Planning Director
Lori Van Beek, City of Moorhead – Transit Manager
Paul Wraalstad, Concordia College
Dave Piepkorn, City of Fargo Commissioner
Mike Williams, City of Fargo Commissioner
Joe Nigg, Metro COG – Community Planner
Mikel Kunza, Metro COG – Transportation Coordinator

SRC Members Absent

Mike Hahn, Downtown Community Partnership
Jan Mahoney, MSUM
Shawn Anderson - M-State
Mark Simmons, City of West Fargo Commissioner
Chuck Marchand, First Transit Administration
FM/WF Chamber of Commerce

Review and approval of October 4, 2011 SRC Record of Meeting:
A motion to approve the minutes of SRC 5 was made by Ms. Wray Williams and seconded by Mr. Piepkorn. The motion was unanimously approved.

Review Draft 2012-2016 Transit Development Plan:
Mr. Kunza explained that the presentation would be an overview of the entire document. Mr. Kunza reviewed the sections of the TDP and highlighted key aspects within each. Mr. Nigg explained the financial portion of the TDP to the committee in detail. Ms. Van Beek pointed out a few discrepancies in the financial numbers and noted they should be updated with 2010 actuals.

After the presentation a broad discussion on the 2012-2016 Transit Development Plan ensued.

Mr. Williams commented that strategies are needed to tie transit closer to planning and zoning. Mr. Nigg concurred and cited some examples. Mr. Piepkorn stated that he liked the plan and the suggestions offered by Nelson Nygaard. Ms. Van Beek agreed with Mr. Piepkorn and stated that Moorhead will likely analyze some of the recommendations further prior to implementation.

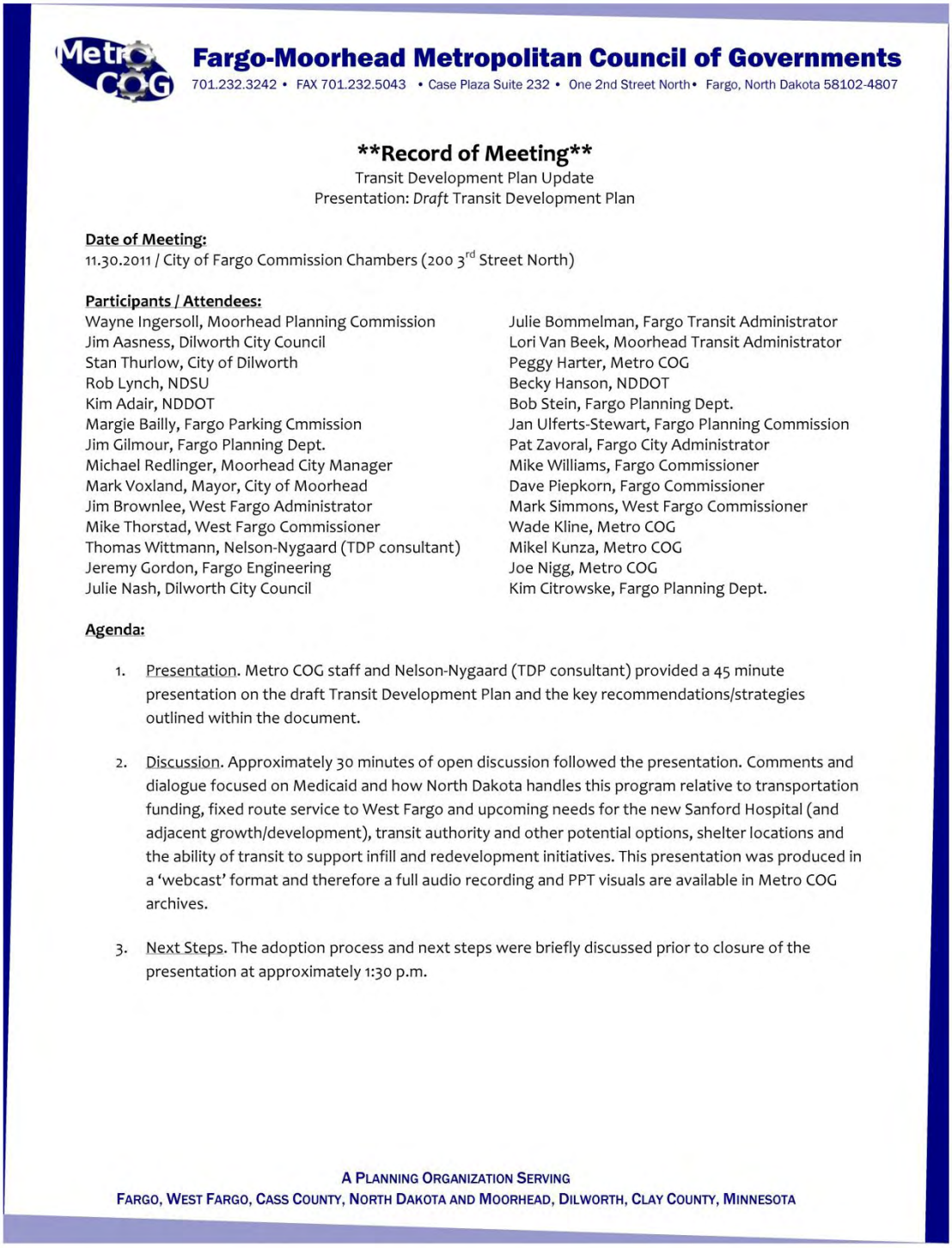
Mr. Lynch stated that the language in Chapter five should be expanded to include a detailed overview of the 30 series and how NDSU contributions fit into the system. The committee discussed and agreed that a future effort to further identify the local economic impact of transit would be beneficial exercise.

The SRC concurred with the draft TDP and directed Metro COG to proceed with public input meetings and final adoption hearings unless significant issues or concerns were brought forward which required consideration and deliberation by the SRC.

Next Steps / Process Update Memorandum:
Mr. Nigg explained the remaining public input process and how the plan would be finalized. Mr. Nigg noted a presentation to elected leaders/officials and other interested parties would be given at Fargo City Hall on November 30th from 11:45 a.m. to 1:30 p.m. Mr. Nigg noted any interested SRC members are welcome to attend.

A PLANNING ORGANIZATION SERVING
FARGO, WEST FARGO, CASS COUNTY, NORTH DAKOTA AND MOORHEAD, DILWORTH, CLAY COUNTY, MINNESOTA

November 30th, 2011 Draft TDP Presentation. On November 30th, 2011 Metro COG held a meeting at the Fargo City Commission Chambers (200 3rd Street North) to present findings, recommendations and strategies as set forth within the draft Transit Development Plan. The intent of the presentation was to provide an informal discussion and comment session for local elected leaders and critical stakeholders from the Metropolitan Area. The meeting was determined critical in order to secure input and feedback from these stakeholders prior to final adoption by local units of government and the Metro COG Policy Board. This presentation was held during the overall comment period for the draft TDP which was open from November 21st to December 16th.



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****Record of Meeting****

Transit Development Plan Update
Presentation: *Draft* Transit Development Plan

Date of Meeting:
11.30.2011 / City of Fargo Commission Chambers (200 3rd Street North)

Participants / Attendees:

Wayne Ingersoll, Moorhead Planning Commission
Jim Aasness, Dilworth City Council
Stan Thurlow, City of Dilworth
Rob Lynch, NDSU
Kim Adair, NDDOT
Margie Bailly, Fargo Parking Cmmission
Jim Gilmour, Fargo Planning Dept.
Michael Redlinger, Moorhead City Manager
Mark Voxland, Mayor, City of Moorhead
Jim Brownlee, West Fargo Administrator
Mike Thorstad, West Fargo Commissioner
Thomas Wittmann, Nelson-Nygaard (TDP consultant)
Jeremy Gordon, Fargo Engineering
Julie Nash, Dilworth City Council
Julie Bommelman, Fargo Transit Administrator
Lori Van Beek, Moorhead Transit Administrator
Peggy Harter, Metro COG
Becky Hanson, NDDOT
Bob Stein, Fargo Planning Dept.
Jan Ulferts-Stewart, Fargo Planning Commission
Pat Zavoral, Fargo City Administrator
Mike Williams, Fargo Commissioner
Dave Piepkorn, Fargo Commissioner
Mark Simmons, West Fargo Commissioner
Wade Kline, Metro COG
Mikel Kunza, Metro COG
Joe Nigg, Metro COG
Kim Citrowske, Fargo Planning Dept.

Agenda:

1. Presentation. Metro COG staff and Nelson-Nygaard (TDP consultant) provided a 45 minute presentation on the draft Transit Development Plan and the key recommendations/strategies outlined within the document.

2. Discussion. Approximately 30 minutes of open discussion followed the presentation. Comments and dialogue focused on Medicaid and how North Dakota handles this program relative to transportation funding, fixed route service to West Fargo and upcoming needs for the new Sanford Hospital (and adjacent growth/development), transit authority and other potential options, shelter locations and the ability of transit to support infill and redevelopment initiatives. This presentation was produced in a 'webcast' format and therefore a full audio recording and PPT visuals are available in Metro COG archives.

3. Next Steps. The adoption process and next steps were briefly discussed prior to closure of the presentation at approximately 1:30 p.m.

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FARGO, WEST FARGO, CASS COUNTY, NORTH DAKOTA AND MOORHEAD, DILWORTH, CLAY COUNTY, MINNESOTA

Phase III, Public Input Opportunity, Draft Transit Development Plan (TDP). The draft TDP was reviewed by the SRC on November 16, 2011 and a recommendation to proceed was rendered. Based on this recommendation, Metro COG scheduled the final public input meeting for December 1st (Phase III). The intent of this public input meeting was to solicit final input, comments and feedback relative to the draft TDP, in its entirety.

Public Input Meetings, December 1, 2011. Metro COG facilitated one (1) open house style public input meeting on December 1, 2011. The meeting was held at the Ground Transportation Center (GTC) located at 502 NP Avenue, Fargo. Metro COG staff was set up at the GTC from 8:00 a.m. to 7:00 p.m. For additional details and the record of meeting associated with this input opportunity, see below.

Fargo-Moorhead Metropolitan Council of Governments

701.232.3242 • FAX 701.232.5043 • Case Plaza Suite 232 • One 2nd Street North • Fargo, North Dakota 58102-4807

****Record of Meeting****

Transit Development Plan Update
Public Input Meeting

Date of Meeting:
12/01/11, 8:00 a.m. to 7:00 p.m. – Ground Transportation Center (502 NP Avenue, Fargo)

Attendance:
Metro COG was unable to document or tally the total number of individuals that were providing feedback, comments and suggestions at the Ground Transportation Center. Metro COG staff estimates that discussions were facilitated with at least fifty (50) riders and interested persons. A listing of individuals per sign-in sheets are outlined below:

Lori Van Beek, MATBUS	Nate Aalgaard, Freedom Resource Center	Rick Baker
Shaun Tabery	Barbara Dawn	James Fien
Peg Worner, SEHSC	Amous Norqua	Cynthia Kile
John D. Andrews	Jennifer, WYCA	L.D. Foll
Rick Barkle	Jim Gilmour, City of Fargo	Mikel Kunza, Metro COG
Jeremy Matson, SURTC	Julie Bommelman, MATBU	Joe Nigg, Metro COG

Total: 18

Comments and Discussion:

- Generally, system wide, riders were supportive of the concept to eliminate the Marriott transfer facility in Moorhead, including support for the route restructuring concepts set forth under the cost neutral scenario;
- Comments relative to the cost neutral alternative in Fargo, system wide, were extremely positive and well received;
- Sunday Service;
- Extended service in evenings, especially on core routes;
- Concerns for North Fargo residents and access to Route 11 if Route 12 is eliminated;
- Service to Dilworth
- Desire to establish a bulk purchase plan for shelters

See additional comments submitted in writing. Some of these comments were received at the public input meeting and others were mailed or delivered shortly thereafter.

A PLANNING ORGANIZATION SERVING
FARGO, WEST FARGO, CASS COUNTY, NORTH DAKOTA AND MOORHEAD, DILWORTH, CLAY COUNTY, MINNESOTA

From: Nate Aalgaard [mailto:NateA@freedomrc.org]
Sent: Monday, December 12, 2011 5:14 PM
To: kunza@fmmetrocog.org
Subject: Transit Development Plan

Mike,

I spent some time looking through the Transit Development Plan draft. I agree with many of the other commenters regarding their wishes for the transit service in the Fargo Moorhead area. Transportation comes up time and time again as one of the most important issues to the people with disabilities we survey. While Metro area has more comprehensive services than any of the other colonies in our catchment area, there are still things that could be improved. Here's some the issues that we see as an organization:

1. Desire for increased services in the evening, Sunday, and holidays.
2. More direct routes on the fixed route system to places like West Acres.
3. Service to Dilworth.
4. More service on the peripheral edges of the city.
5. Travel training for riders who use the paratransit system, but who could use the regular fixed route system (weather permitting.)

Nate Aalgaard
Freedom Resource Center
701-478-0459

Name John D. Andrews
Address 2917 3rd St. N Fargo, ND 58102
Email Johnddandrews@hotmail.org
Phone # (701) 237-0181

Comments
Please leave Route 11 as it is. If it is changed I would have to walk, from 29th Ave 3rd St, to the new bus stop at 25th Ave. Broadway.

Please use this form to register any final comments relative to the *draft 2012-2016 Transit Development Plan*. Comments can be mailed to Metro COG at One 2nd Street North, Suite 232, Fargo ND 58102 or by email to metrocog@fmmetrocog.org. All comments should be submitted prior to **December 16th, 2011.**

Name Jen YWCA
Address
Email
Phone #

Comments
Shelter would like A Pass Purchase Program.

Comments
West Fargo Route to WAL-MART on 13th
WORS the 10pm shift And gets to WORK AT 7:30pm

Name L.D. Fo11
Address
Email
Phone #
Comments
Bus will not stop And let me off
At university + NP (Bus 18)

Name Cynthia Kile
Address 113-32nd Ave. NO Fargo
Email CRKitten2000@yahoo.com
Phone # 701-540-3435
Comments
Daily Rider would need to move if 12 is eliminated.
Is There A way to Run 11 or 13 closer to my Address.

M-State - How could I BOARD proposed Route 2 to get home From M-State?

Comments
Please Add bus service on Sundays ~~Thanks~~ People miss alot of work opportunities because there is no service on Sundays.

Comments
6:09 PM last Bus WAL MART
Too cold to WALK to CASH WISE in WINTER

LAST West FARGO Route is 7:15PM

From: Mattson, Jeremy <Jeremy.W.Mattson@ndsu.edu>
Sent: Friday, December 16, 2011 3:53 PM
To: Joe Nigg
Subject: TDP comments

Joe,

I didn't get a chance to read through everything in the latest TDP draft, but I did read the earlier draft. Here's just a few comments.

I think the recommendation to interline some of the routes to improve on-time performance and reduce the number of transfers is a good idea.

I'm not sure, though, about removing the timed transfers at the Marriott. We've just done some surveys for Lori on routes 1, 2, 3, and 5 regarding transfer patterns between these routes (I just sent her the results). We found the most transfers to be between 2 and 5 (which I think confirms the TDP finding), so it seems appropriate to interline those routes. On the other hand, we found route 1 riders were more likely to transfer with route 5, and route 3 riders were more likely to transfer with route 2, and there were some transfers between 3 and 5. So, if the Marriott transfer is removed, it will become more difficult for some riders to make their transfers. It's a difficult tradeoff between on-time performance and providing convenient connections, and I'm not sure which problem is worse. It could also be the case, though, that a number of those riders on routes 3 and 5 are heading to the GTC, so it doesn't matter whether they transfer to 1 or 2. I think their plan is to interline the routes first, and then see how that works before making any decisions regarding the Marriott transfer point. That's probably a good approach.

I like the idea of eliminating route 12 and using those service hours to improve service on 13 or other high demand routes, while serving the VA with 11.

I also think it's a good idea to have designated stops on high ridership routes or routes with poor on-time performance.

Given limited resources, I generally think it's a better idea to focus on providing high quality service on the high demand corridors (e.g., 13, 15, 2) rather than trying to expand geographic coverage to new developments. Increased service frequency on 15, for example, will serve more people than a new route some place like Veteran's Blvd. I think the TDP reflects that.

Also, I rode 33 quite a bit this past semester, and the recommendation for larger buses may be appropriate. Those were some packed buses. The service frequency for 33, though, is great.

Jeremy Mattson
Associate Research Fellow
Small Urban & Rural Transit Center
Upper Great Plains Transportation Institute
North Dakota State University, Fargo, ND
701.231.5496

COMMENT FORM
Transit Development Plan - Draft

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Name Driver

Address

Email

Phone #

Comments

22 16 inbound Overcrowded

13 overkill not needed unless NDSU service Reduced

23 A+B style
21 – To PIACS – Microsoft
23 – To [redacted] – WAL/MART

Keep 14 all by itself
18 Plain 18 by itself

Rout 1 [redacted] inbound main

consider 1-5 [redacted] combo

1-

Appendices

Parking Management. TDM programs have been shown to reduce employee vehicle trips by up to 38%, with the largest reductions achieved through parking pricing.[4] Observed reductions range from 15% to 38% (Shoup & Willson, 1990; Comsis, 1993; Pratt, 2000). Parking cash-out programs tend to have significantly lower impacts (Pratt, 2000). Donald Shoup finds that single occupancy vehicle trips declined by 17% and other modes increased significantly (carpooling by 64%, transit by 50%, and walking/biking by 33%) after a parking cash-out program was introduced at various urban and suburban worksites with varying levels of transit service.[5] Another study of City of Pleasanton (CA) employees saw a doubling of participation between 1993 and 2004 and an annualized reduction of 20,625 commuter vehicle trips.[6]

Parking supply is another key indicator of trip generation. Research shows that there is an indirect link between reduced minimum parking requirements and a decline in vehicle trips. Setting minimum parking requirements often results in lower parking prices, as the supply of parking exceeds demand, which in turn increases vehicle ownership and the propensity to use a vehicle for work trips. Studies reveal that the elasticity of vehicle ownership with respect to price is typically -0.4 to -1.0, hence a 10% increase in total vehicle costs reduces vehicle ownership 4-10%.[7]

Average income households spend an average of $3,800 annually per vehicle.[8] Assuming that residential parking spaces have an annualized cost of $800 per year, parking costs add 21% to vehicle costs for an average income household. Assuming a vehicle price elasticity of –0.7 (**Error! Reference source not found.** A), minimum parking requirements that exceed the actual demand for parking increase vehicle ownership about 15%. The resulting increase in vehicle ownership produces more vehicle trips. Conversely, decreasing or eliminating requirements would result in a proportionate reduction in residential vehicle trips.[9]

Figure A - Vehicle Ownership Reductions from Residential Parking Pricing

Annual (Monthly) Fee	-0.4 Elasticity	-0.7 Elasticity	-1.0 Elasticity
$300 ($25)	4%	6%	8%
$600 ($50)	8%	11%	15%
$900 ($75)	11%	17%	23%
$1,200 ($100)	15%	23%	30%
$1,500 ($125)	19%	28%	38%

Source: Nelson\Nygaard (2010), Santa Monica LUCE Trip Reduction Impacts Analysis

[4] Shoup & Willson (1980); Comsis (1993); Valk & Wasch (1998); Pratt (2000).

[5] Donald C. Shoup, *Evaluating the Effects of Cashing Out Employer-Paid Parking: Eight Case Studies*, http://www.arb.ca.gov/research/apr/past/93-308a.pdf.

[6] U.S. Environmental Protection Agency (2005), *Parking Cash Out: Implementing Commuter Benefits as One of the Nation's Best Workplaces for Commuters,* http://www.bestworkplaces.org/pdf/ParkingCashout_07.pdf

[7] Victoria Transport Policy Institute (2009), Transportation Elasticities, http://www.vtpi.org/tdm/tdm11.htm

[8] Bureau of Labor Statistics (2003), Consumer Expenditure Survey, 2002, www.bls.gov.

[9] From Nelson\Nygaard (2010) Santa Monica LUCE Trip Reduction Impacts Analysis.

Subsidized Transit Passes. Free transit pass programs have been shown to increase transit ridership by 50-79% (City of Boulder, undated; Caltrans, 2002), and reduce vehicle trips by 19% (Shoup, 1999). Todd Litman of the Victoria Transport Policy Institute confirms the trip reduction benefits of transit subsidies by workplace setting. **Error! Reference source not found.** below depicts the potential impacts of a transit pass program for different land use environments.

Figure B – Vehicle Trip Reduction by Workforce Setting and Daily Transit Subsidy

	Daily Transit Subsidy			
Worksite Setting	**$0.75**	**$1.49**	**$2.98**	**$5.96**
Low density suburb, rideshare oriented	0.1%	0.2%	0.6%	1.9%
Low density suburb, mode neutral	1.5%	3.3%	7.9%	21.7%
Low density suburb, transit oriented	2.0%	4.2%	9.9%	23.2%
Activity center, rideshare oriented	1.1%	2.4%	5.8%	16.5%
Activity center, mode neutral	3.4%	7.3%	16.4%	38.7%
Activity center, transit oriented	5.2%	10.9%	23.5%	49.7%
Regional CBD/Corridor, rideshare oriented	2.2%	4.7%	10.9%	28.3%
Regional CBD/Corridor, mode neutral	6.2%	12.9%	26.9%	54.3%
Regional CBD/Corridor, transit oriented	9.1%	18.1%	35.5%	64.0%

Source: Victoria Transport Policy Institute (2008), *Transportation Elasticities*, http://www.vtpi.org/elasticities.pdf

Carpooling and Rideshare. Research indicates that ridesharing programs typically attract 5-15% of commute trips if they offer only information and encouragement, and 10-30% if they also offer financial incentives such as parking cash out or vanpool subsidies.[10] Rideshare programs that include incentives such as HOV priority and parking cash-out often reduce affected commute trips by 10-30%.[11] If implemented without such incentives travel impacts are usually smaller. A study conducted by Reid Ewing concluded that ridesharing programs can reduce daily vehicle commute trips to specific worksites by 5-15%, and up to 20% or more if implemented with parking pricing.[12]

Carsharing. The trip reduction benefits of carsharing are increasingly backed by research findings. According to TCRP Report 108, each car-sharing vehicle takes nearly 15 private cars off the road – a net reduction of almost 14 vehicles.[13] A UC Berkeley study of San Francisco's City CarShare found that members drive nearly 50% less after

[10] Bryon York and David Fabricatore (2001), *Puget Sound Vanpool Market Assessment*, www.wsdot.wa.gov.

[11] Philip Winters and Daniel Rudge (1995), *Commute Alternatives Educational Outreach*, www.cutr.eng.usf.edu.

[12] Reid Ewing (1993), *TDM, Growth Management, and the Other Four Out of Five Trips.*

[13] Transportation Research Board (2005), *Car-Sharing: Where and How it Succeeds*, Transit Cooperative Research Program Report 108. http://onlinepubs.trb.org/Onlinepubs/tcrp/tcrp_rpt_108.pdf

joining. The research also indicates that nearly three-quarters of the vehicle trips made by members were for running errands, visiting friends and other social activities, meaning that only roughly one-quarter of trips were for commuting to work.

Alternative Work Schedules. Compressed work weeks and telecommuting are TDM strategies that eliminate vehicle trips by decreasing the number of work days while maintaining the level of work hours (i.e. working four 10-hour days per week) and shifting the worksite to an employee's home, respectively. :Research by Apogee (1994) demonstrated that compressed work weeks can reduce VMT by up to 0.6% and vehicle trips by up to 0.5% in a region. However, two other studies showed that compressed work weeks may provide more modest reductions in total vehicle travel, in part because participants make additional trips during their non-work days.[14] Compressed work weeks may also encourage some employees to move further from worksites or to drive rather than rideshare, effects not accounted for in any of the tools.

Telecommuting generates even smaller trip reductions. Recent research concludes that only one in ten employees that are in a telecommuting suitable environment either have employers that would host such a program, or would in fact telecommute if given the chance.[15]

Potential Results from Packages of TDM Strategies. Figure C presents nine different packages of TDM programs and the employee vehicle trip reduction impact that can be expected from each. The impact of these programs is measured as the percentage of employee vehicle trips reduced from the existing baseline and is based on documented program results from a number of studies and reports. The impacts are measured at the site level. The TDM program impacts are presented as ranges, since no two situations are the same and different sites offering the very same programs will have different results based on:

(a) Level of ongoing support for the TDM program including the presence of dedicated staff to administer and coordinate TDM efforts;
(b) Level of public transportation serving the site;
(c) Typical length of commutes;
(d) Price of gasoline;
(e) The urban / suburban / rural nature of the site including proximity to nearby attractions (other work sites, personal errand and restaurant locations etc);
(f) External transportation factors (e.g. HOV lanes, bus service, traffic conditions);
(g) Nature of workforce (work schedule reliability, skill levels, salary levels).

The synergy of the elements in the TDM package and how they work for that particular site (e.g. use of Guaranteed Ride Home to alleviate concerns about carpooling and possibly needing to go home early to take care of family members).

The nine packages are organized from least to most aggressive. The first six show potential program impacts of TDM programs when parking is free. The last three show potential program impacts when parking is not free. The program packages vary in their combinations and intensity of each of the following five elements:

[14] See Ho and Stewart (1992) and Giuliano (1995)

[15] See Joanne H. Pratt and Associates (1999); LDA Consulting (2004); Mokhtarian, P. et al. (1996)

(a) Information (e.g. educating employees about options, potential cost savings, tax impacts);
(b) Services (e.g. preferential parking; Guaranteed Ride Home programs, shuttles);
(c) Financial Incentives (e.g. reward for participation, partial to full subsidy of alternate mode travel costs);
(d) Financial Disincentives (e.g. charging for employee parking);
(e) Site Design (e.g. land use development that encourages use of alternate modes).

Figure C – TDM Strategies and Potential Impacts

A	**Information Only Programs**
Trip Reduction[16]	1% to 3%
Elements	New employee orientation, Brochures, Information kiosk, Newsletter articles; Preferential carpool parking with no staff support or enforcement; Advertise carpool information phone number; Annual promotional events.

B	**Information + Modest Services/Incentives**
Trip Reduction	3% to 9%
Elements	Information: see above Preferential carpool parking with enforcement and promotion Carpool and vanpool database / formation Promotional financial incentive (e.g. one-time vanpool subsidy or chances to win prizes) Commuter Club that offers discounts at stores/restaurants, mugs, monthly giveaways of small items, etc. On-site amenities – cafeteria, bank machine
C	**Information + Moderate Services & Moderate Financial Incentives**
Trip Reduction	7% to 15%
Elements	Information services described above Bicycle lockers, showers Guaranteed Ride Home program Full-time TDM program coordinator/manager Lower frequency shuttles, as applicable and/or a mid-day shopper shuttle On-site circulator shuttle or golf-carts and/or campus bicycles On-site amenities - dry cleaning, café/restaurant, convenience retail Vanpool support – e.g. empty seat subsidies, formation meetings Moderate financial incentives – e.g. 30% coverage of vanpool costs, monthly gift certificates or drawings for substantial prizes ($100+ value) Fleet vehicles for mid-day trips (useful if employees drive in order to make midday errands) On-site transit ticket sales, if applicable Allow employees to work alternative work schedules or telecommute

[16] Trip reduction refers to estimated range of employee vehicle trip reduction based on review of TDM program results.

D	**Information and Aggressive Services**
Trip Reduction	12% to 25%
Elements	Information services described above, plus Subscription buses Employer-owned/sponsored vanpools Aggressive carpool formation and HOV parking program Frequent shuttle service up to all-day service Extensive shuttle program – e.g. on-site, mid-day downtown connector, local residential shuttles Aggressive alternative work hours program (e.g. require some departments to work 9/80 or 3/36 unless an exception is made) Aggressive telecommuting program (e.g. employer pays for home office set-up) On-site amenities – child care, fitness center (useful if employees drive in order to make midday errands or trip chain to/from work) Bicycle Commuter Club/Promotion, Bike parking (variety of options), showers
E	**Information and Aggressive Financial Incentives**
Trip Reduction	12% to 25%
Elements	On-going transit subsidies covering at least 50% of transit costs Vanpool subsidies Eco-Pass (free transit for everyone) Transportation allowance received by all users of alternatives
F	**Information + Aggressive Services and Financial Incentives**
Trip Reduction	17% to 33%
Elements	Services listed in D Financial incentives listed in E
G	**Institute Parking Charges where Previously Free**
Trip Reduction	18% to 35%
Elements	Maintain existing conditions, but begin charging up to market rates for parking

H Information + Aggressive Services and Financial Incentives + Parking Charges	
Trip Reduction	22% to 40%
Elements	Package F + Parking Charges or Parking Cash-Out (instead of charging for parking, Cash-Out programs rebate the cost of parking to employees who do not drive – creating the financial incentive not to drive alone and park)
I Information + Aggressive Services and Financial Incentives + Parking Charges + Site Designed to Limit Trips	
Trip Reduction	25% to 65%
Elements	Package H +, On-site housing Wide sidewalks Street-level, pedestrian facing retail Building design to embrace pedestrian Extensive bicycle network and parking Shared parking or 3rd party-provided parking Satellite/peripheral/remote Proximity to transit node Green spaces that promote picnicking Mixed-use facility or located within urban core

Alternate Bulk Pass Pricing Models. Trimet in Portland, OR uses an approach where annual contract prices are uniquely set for individual employers. In this model, the transit agency determines a pass rate that guarantees that they will maintain the fare revenues currently provided by those employees previously riding transit. To achieve this, the employer has to survey their employees and determine who is currently using transit. The agency supports the employer with survey implementation and determines a contract price for the next year based on estimated fare revenue generated by these current transit users.

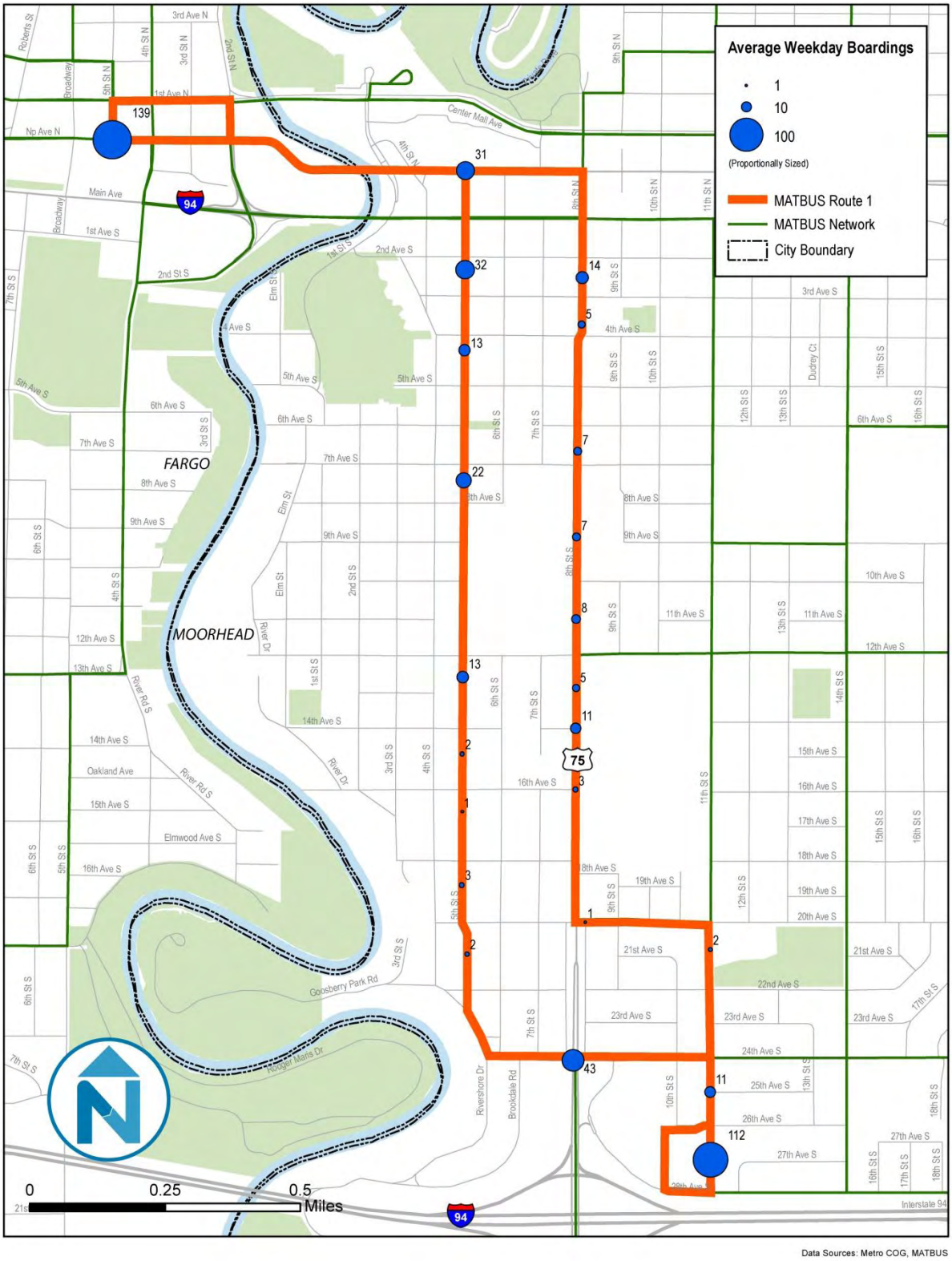
Participating employers are required to re-survey employees (every two years in Trimet's case) to determine current usage and determine contract rate for the following year. This accounts for any changes in ridership and allows for the recovery of additional fare revenue to cover additional costs associated in increased ridership demands. Employers typically see biggest jump in contract costs after first year in the program as ridership gains can be expected from: available of free or discounted passes from their employer; and increased promotion from employer typically associated with being in the program. Trimet's experience shows that some employers have concerns about these rate increases but typically stay with the program. Educating prospective employers about possible increase is important and Trimet highlights that the employer is realizing a discount in the early years as rate is based on an unfulfilled ridership potential.

Other agencies determine annual contract prices based on employee's probable use of transit. This is typically based on the level of transit service available to the employer location. For instance, employers located in downtown or along major bus or rail corridors will have a higher assumed mode split and will be charged a higher rate than those located in suburban locations. Some agencies offer further discounts to larger employers. VTA in San Jose and RTD in Denver use this model and have multiple pricing categories for both employer location and employer size. UTA in Salt Lake provides the multiple location categories but does not offer discounts based on the number of employees. UTA has two contract pricing levels, one if the employees will be offered passes for basic bus service only and a higher rate if the employer will provide premium service passes (express bus and rail).

Figure D – Sample Employer Transit Pass Pricing

VTA (San Jose) Eco Pass Annual Price per Employee				
Employer Location	**1 - 99 Employees**	**100 - 2,999 Employees**	**3,000-14,999 Employees**	**15,000 + Employees**
Downtown San Jose	$144	$108	$72	$36
Areas served by bus & light rail	$108	$72	$36	$18
Areas served by bus only	$72	$36	$18	$9

UTA 2010 Eco Pass Renewal Pricing			
Service Level at Employer Site		**Basic Level Price Per Pass**	**Premium Upgrade Level Price Per Pass**
A	65+ transit vehicle trips/peak hour within ¼ of site, or rail station within ½ mile of site	$229	$301
B	40-65 transit vehicle trips/peak hour within ¼ of site	$179	$233
C	25-39 transit vehicle trips/peak hour within ¼ of site	$108	$144
D	Less than 25 transit vehicle trips/peak hour within ¼ of site	$51	$69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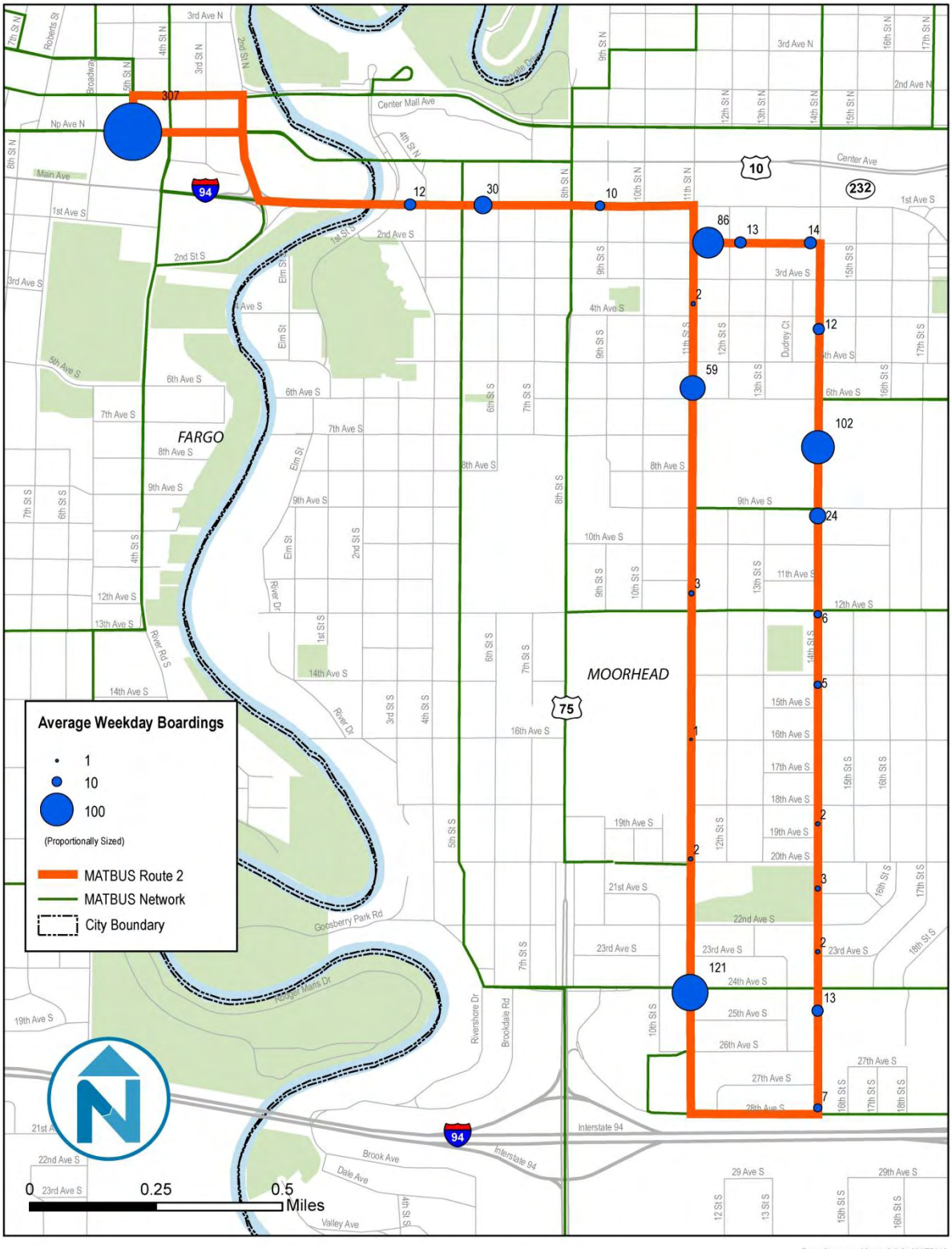
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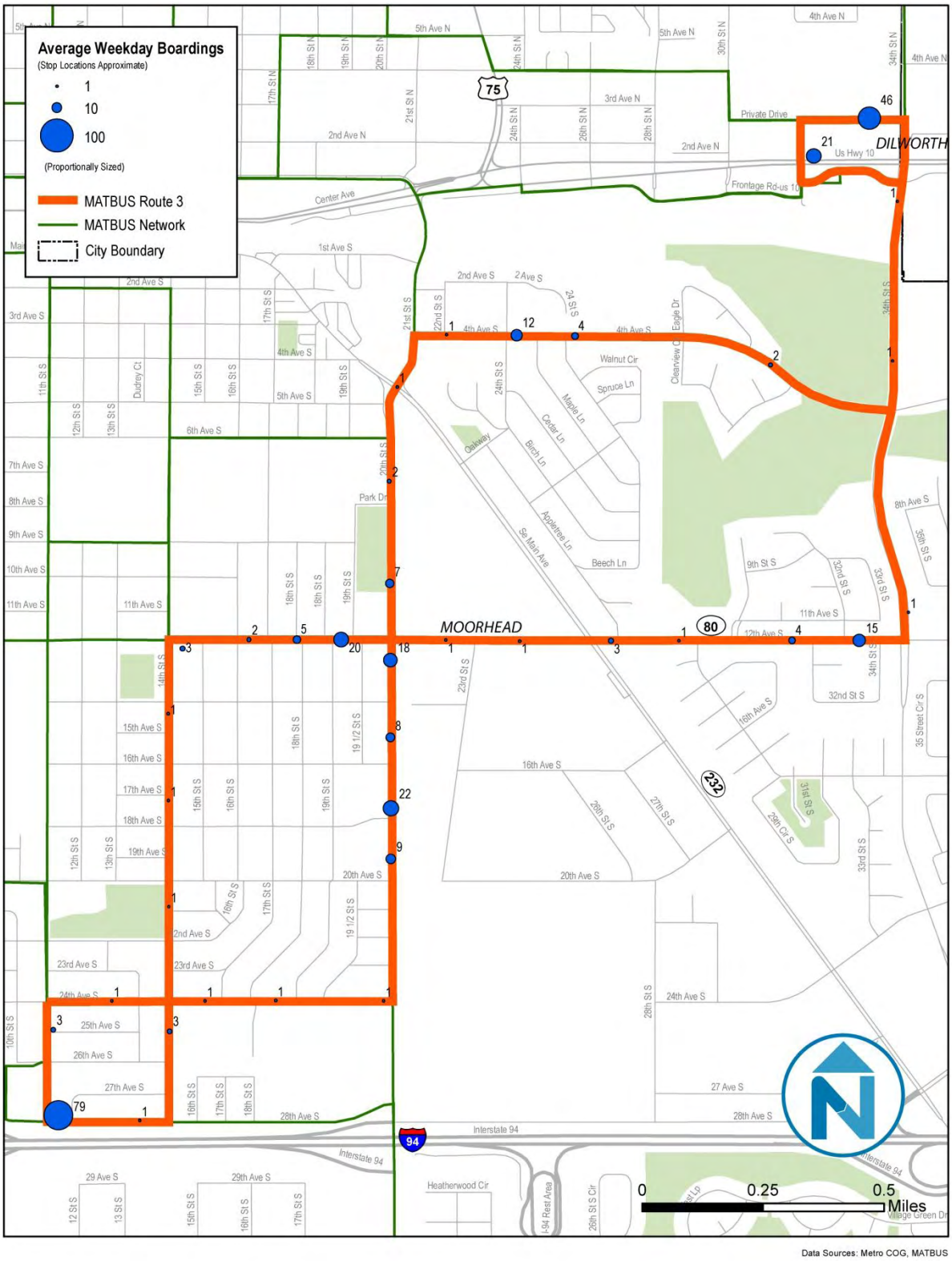
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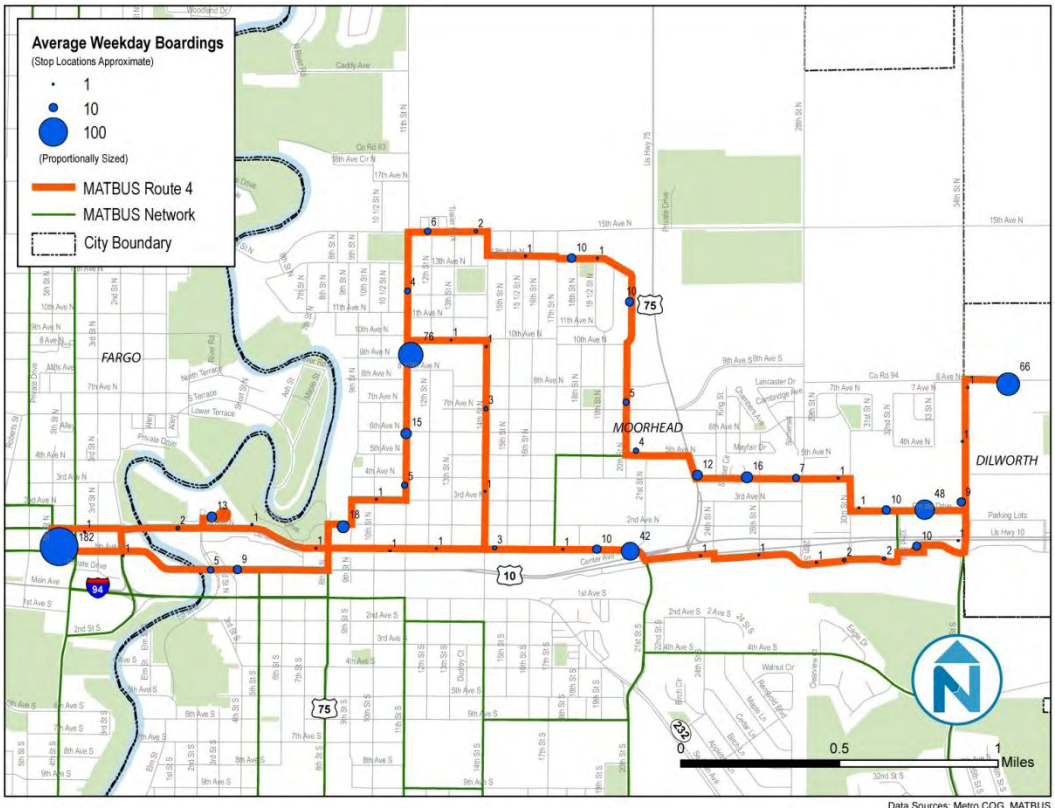
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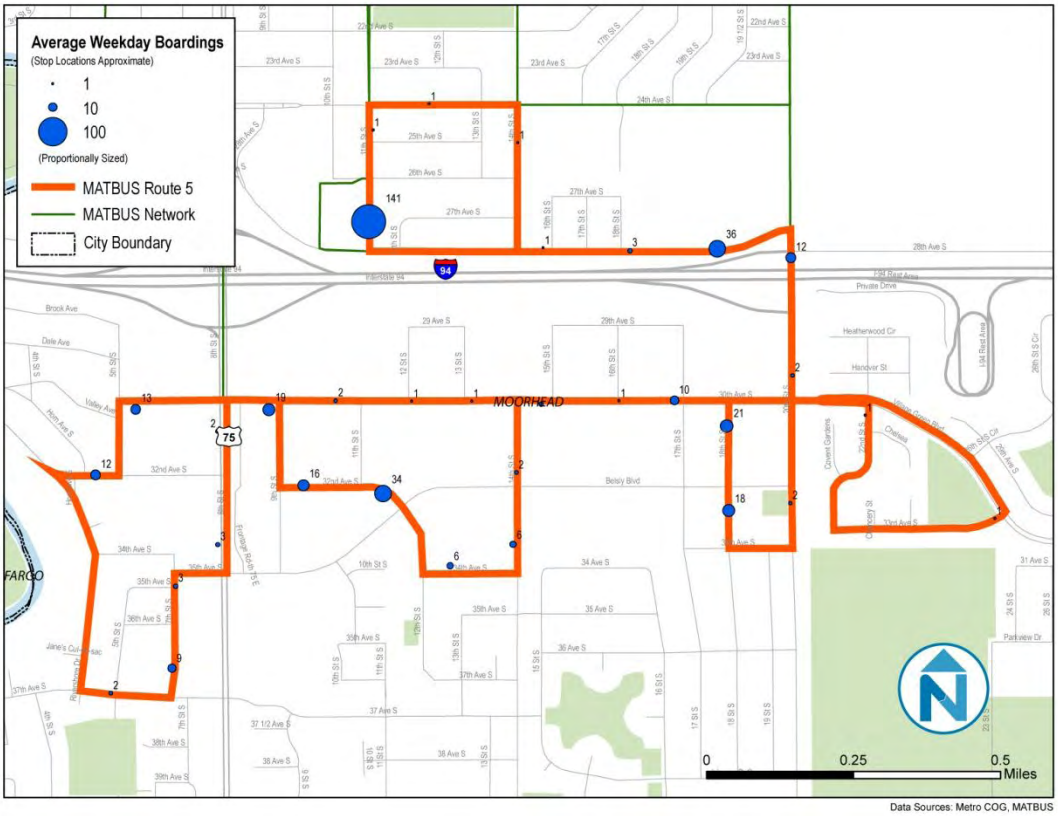
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MATBUS Network
City Boundary
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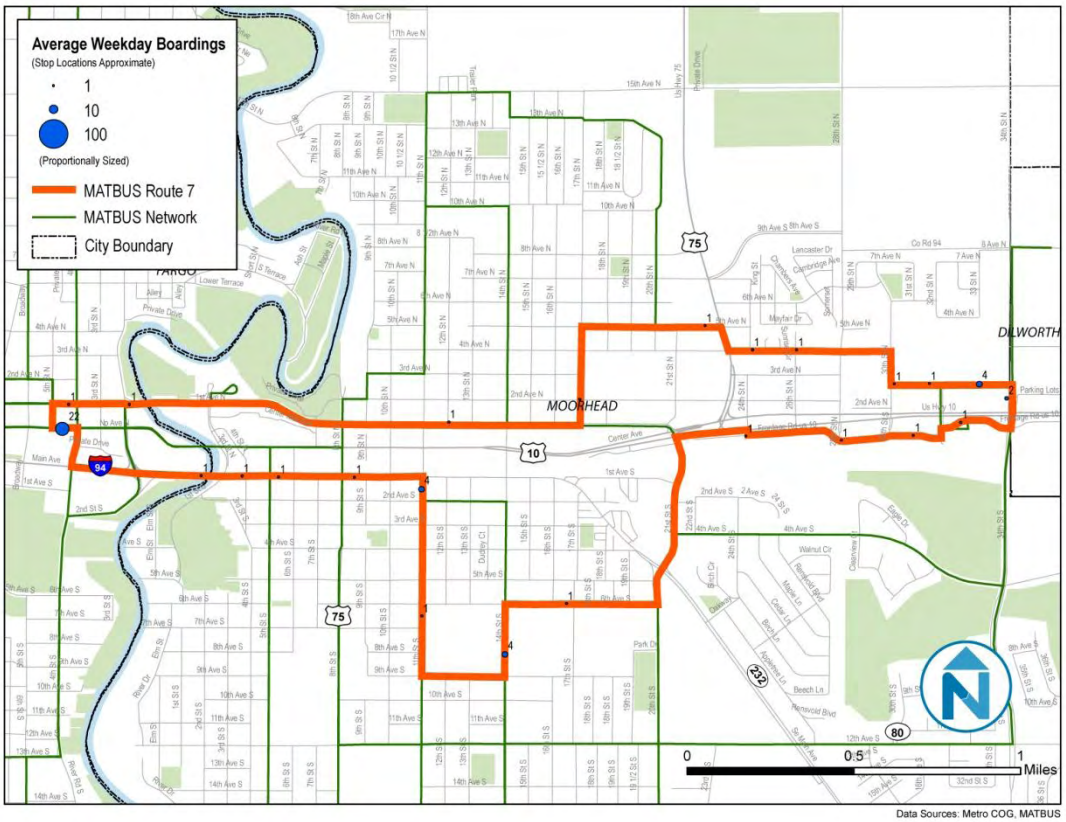
Miles
Data Sources: Metro COG, MATBUS


Average Weekday Boardings
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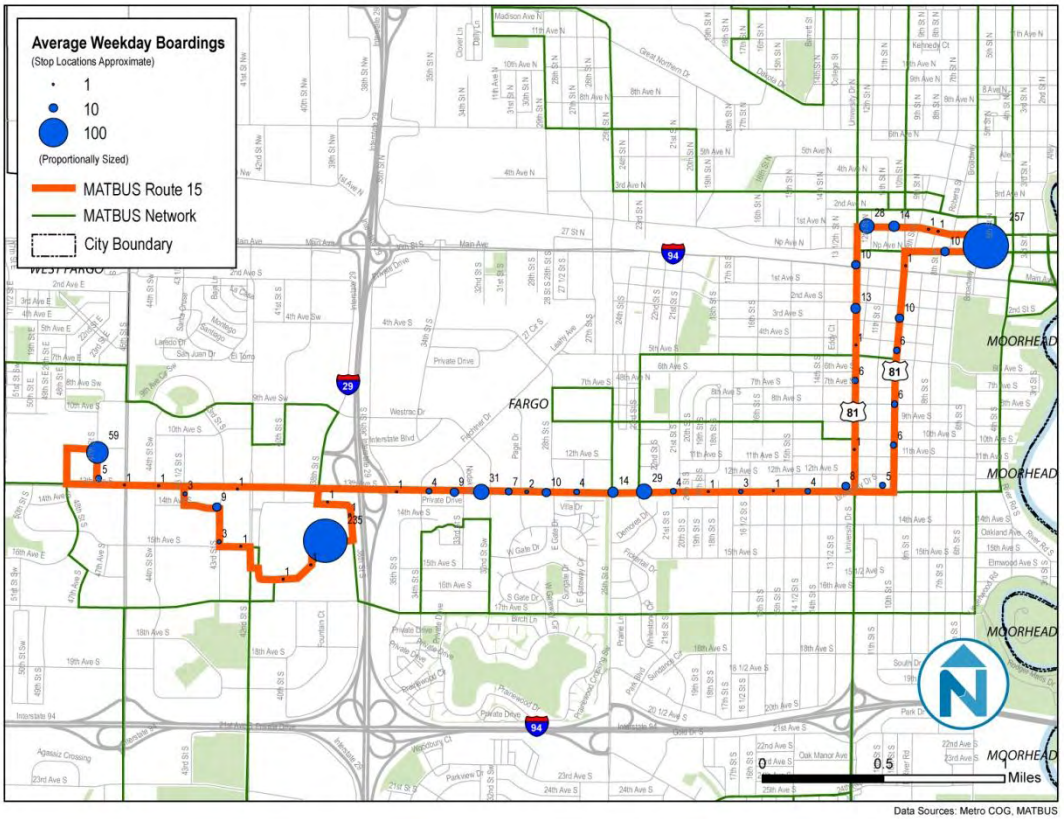
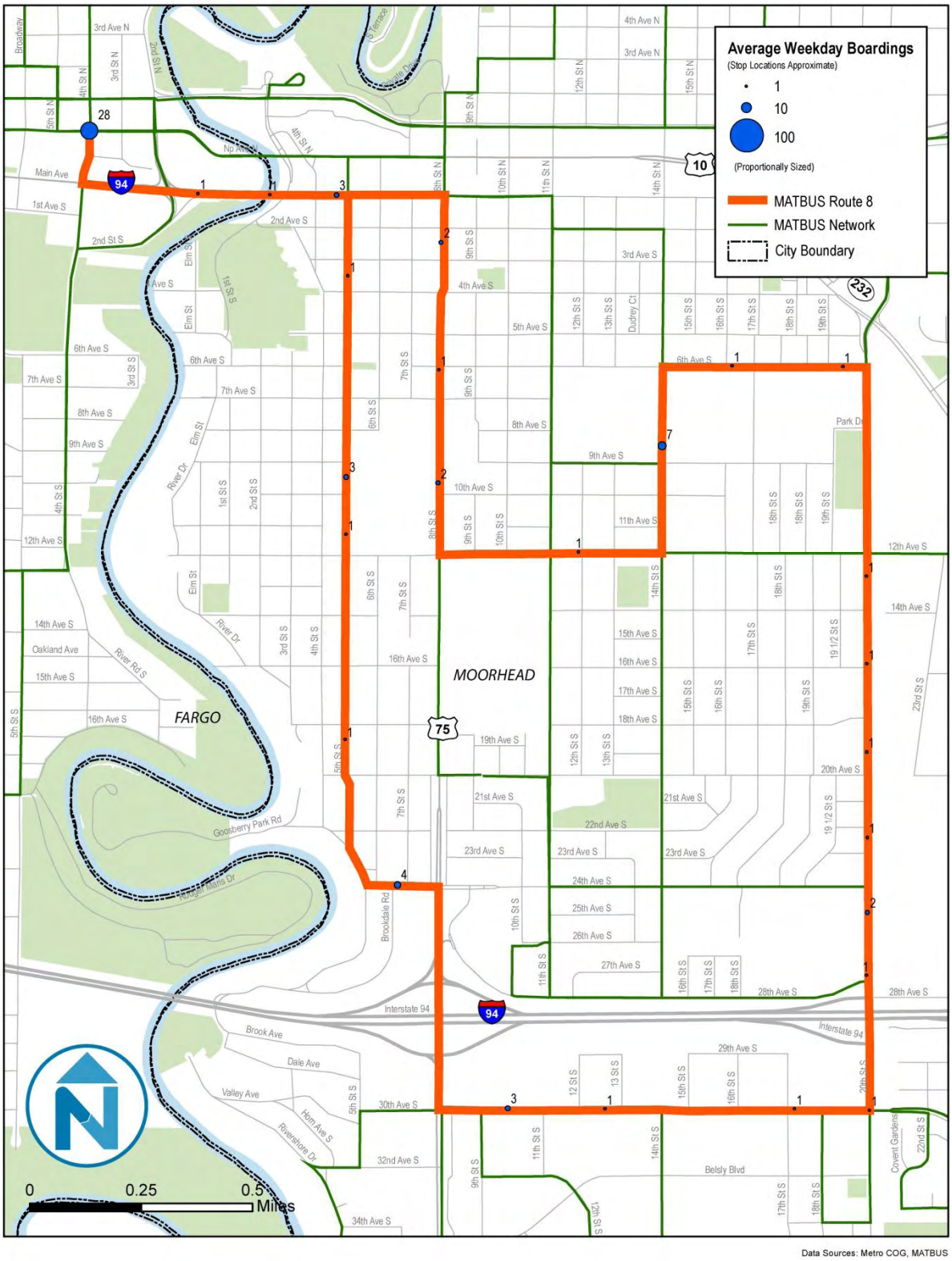
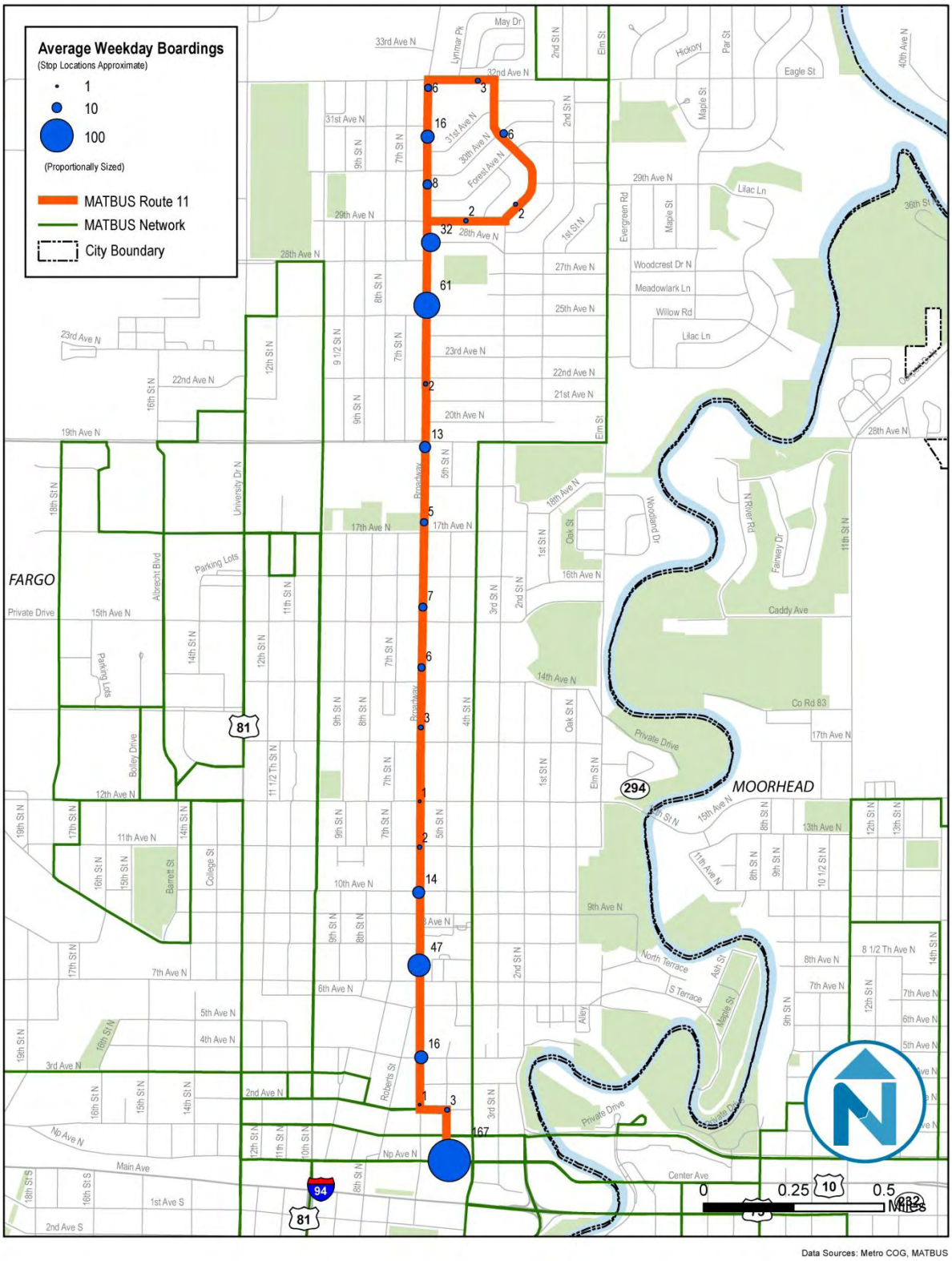
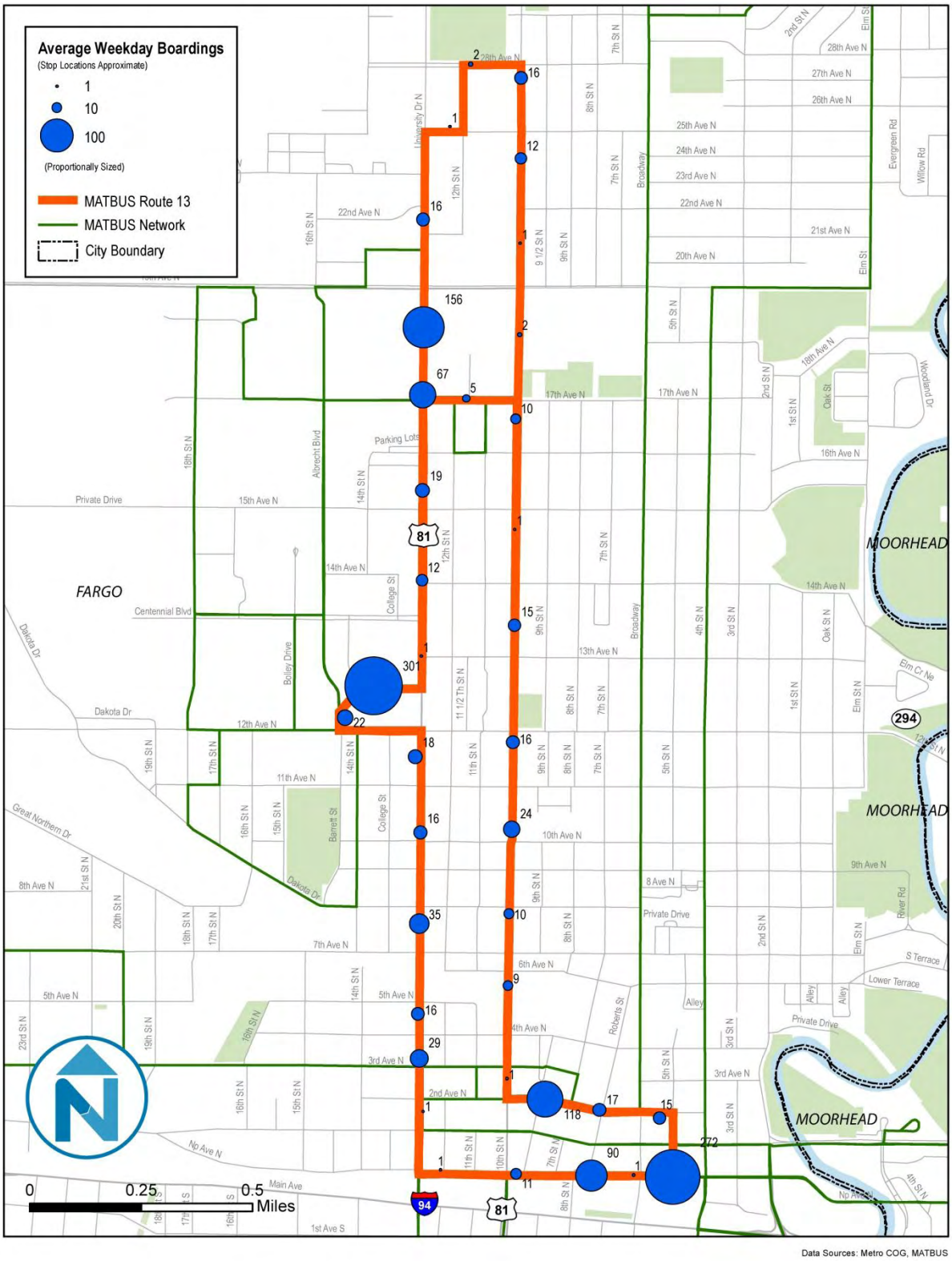
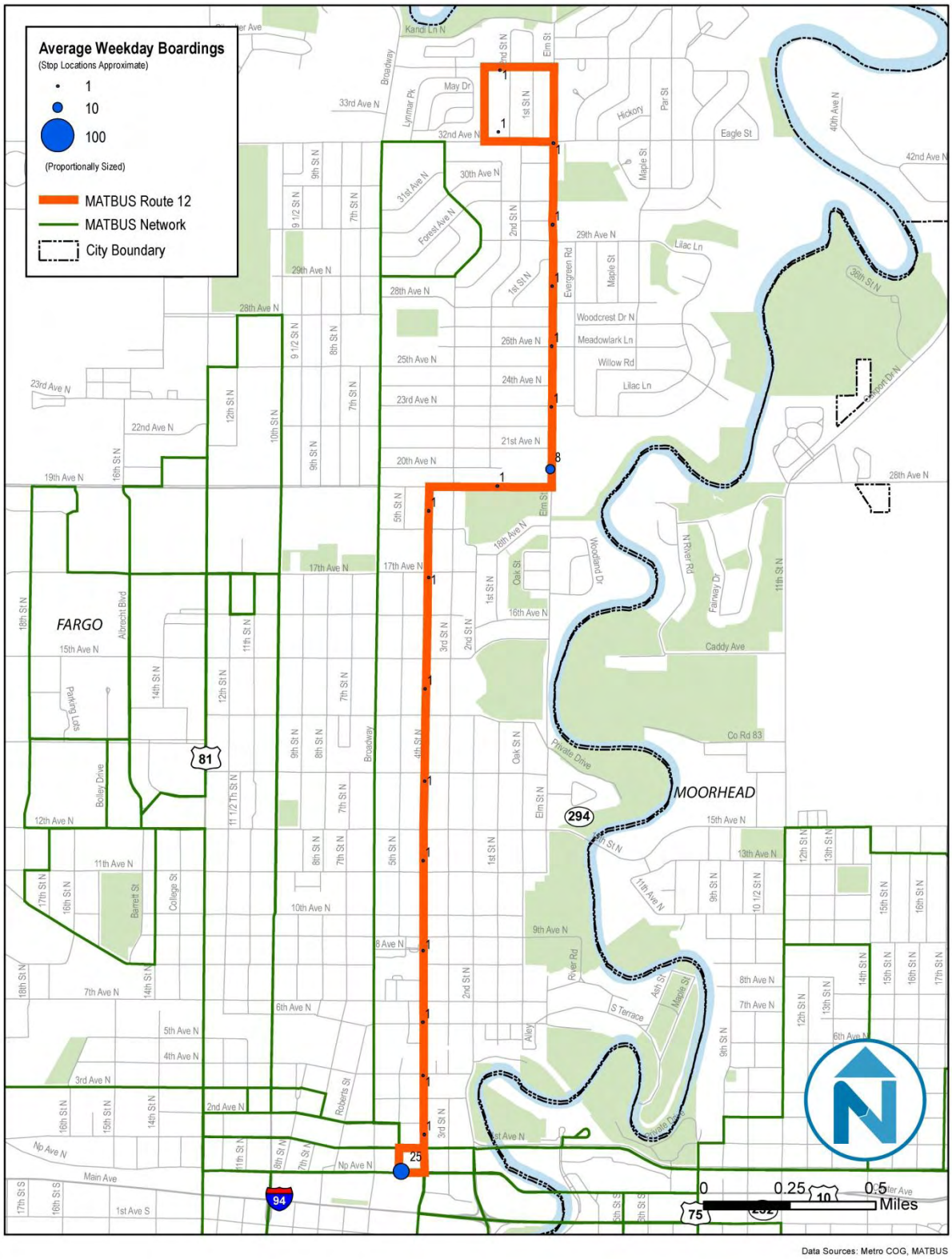
10
100
(Proportionally Sized)
MATBUS Route 7
MATBUS Network
City Boundary
MOORHEAD
DILWORTH
FARGO
0
0.5
1
Miles
Data Sources: Metro COG, MATBUS

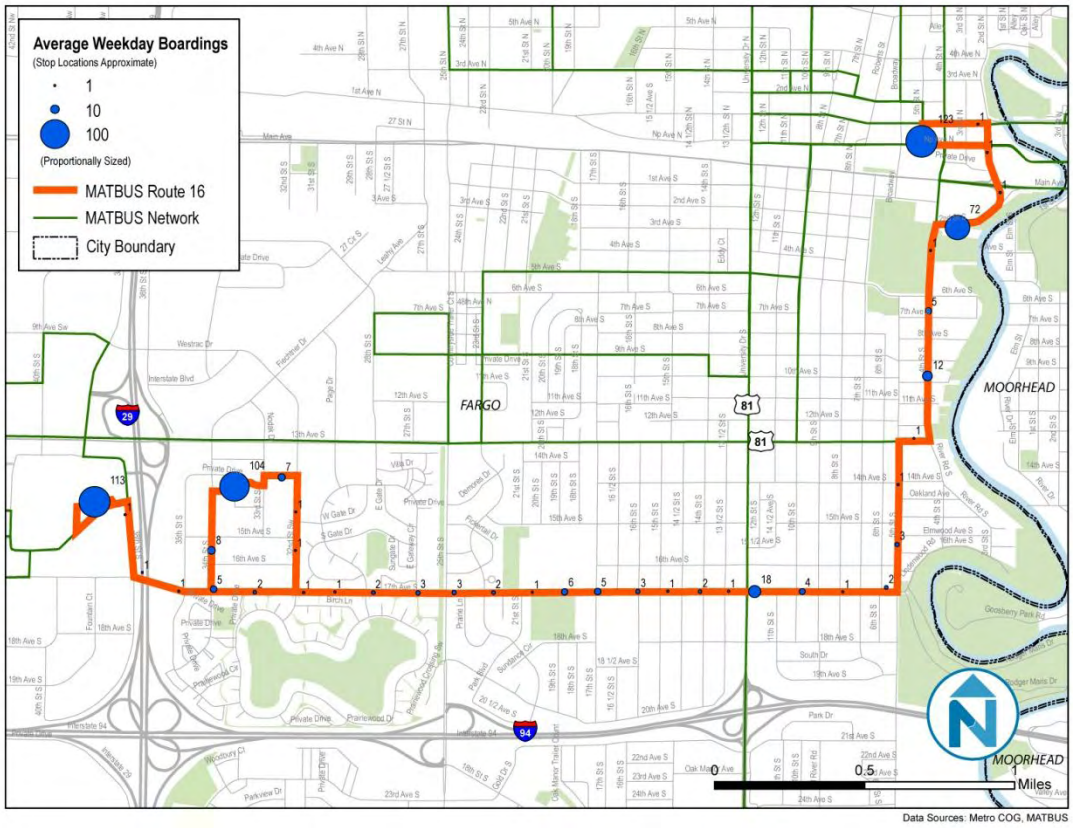

Average Weekday Boardings
(Stop Locations Approximate)
1
10
100
(Proportionally Sized)
MATBUS Route 15
MATBUS Network
City Boundary
FARGO
MOORHEAD
0
0.5
Miles
Data Sources: Metro COG, MATBUS

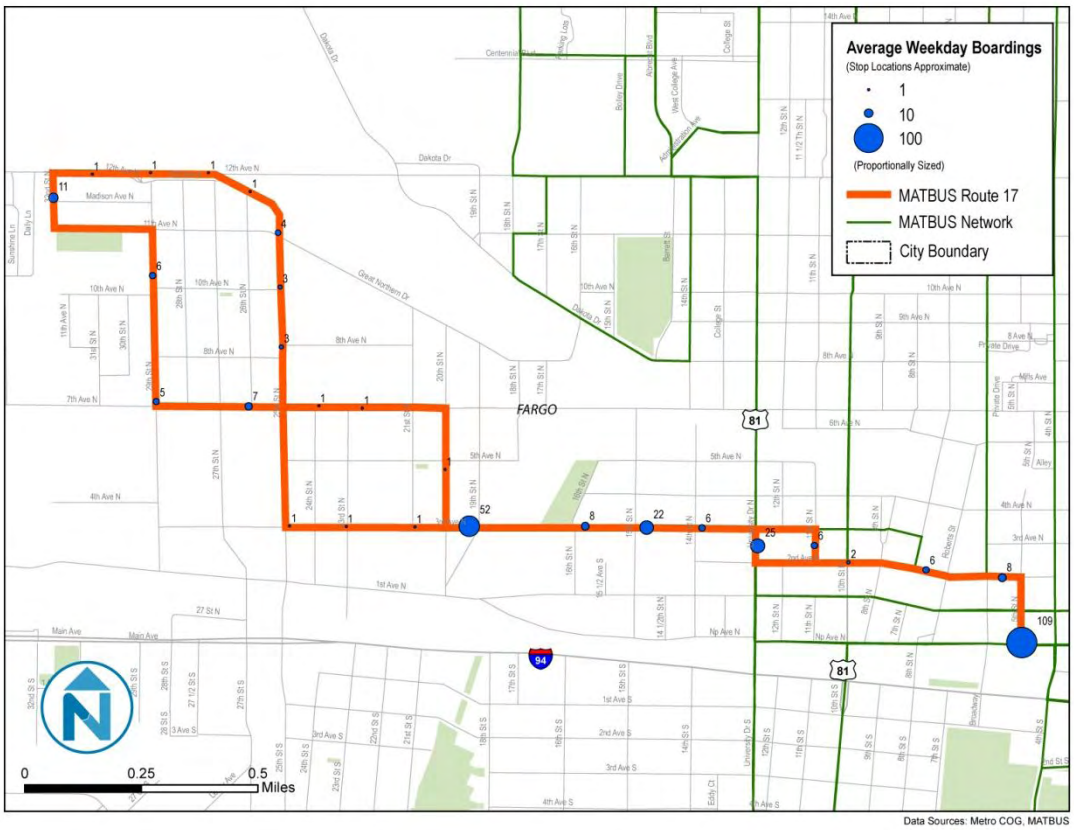

Average Weekday Boardings
(Stop Locations Approximate)
1
10
100
(Proportionally Sized)
MATBUS Route 8
MATBUS Network
City Boundary
FARGO
MOORHEAD
Interstate 94
0
0.25
0.5
Miles
Data Sources: Metro COG, MATBUS

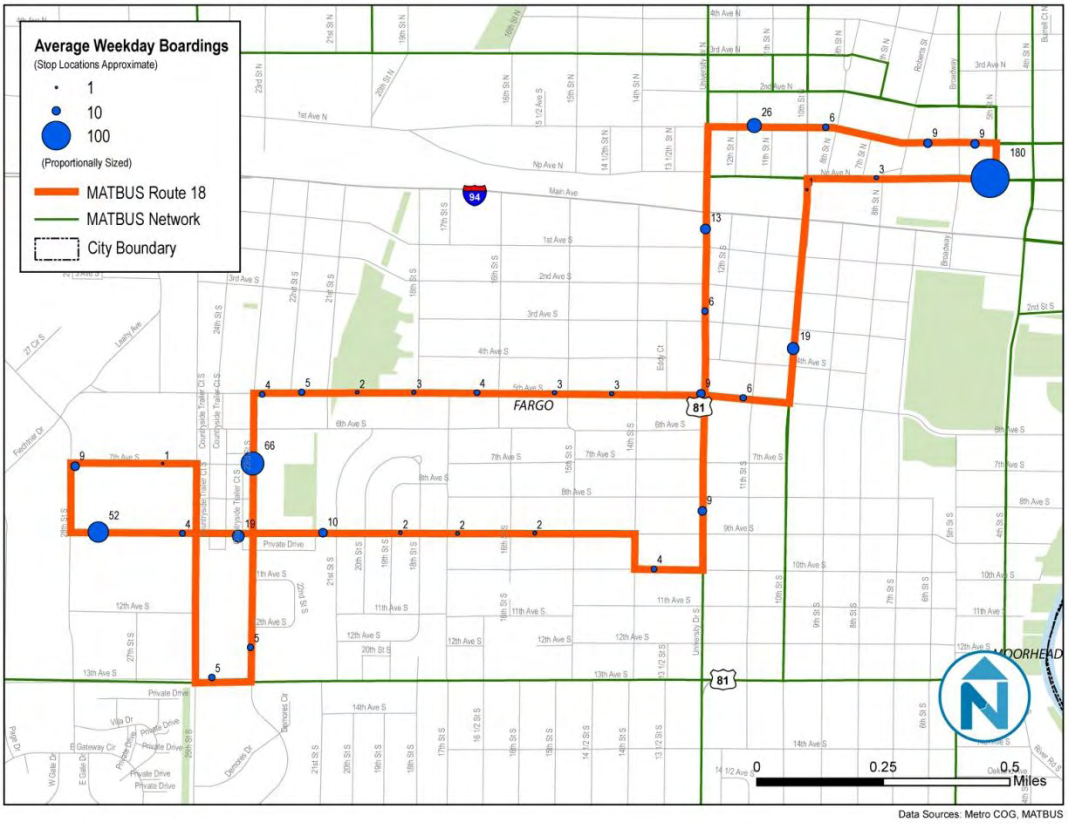

Average Weekday Boardings
(Stop Locations Approximate)
1
10
100
(Proportionally Sized)
MATBUS Route 11
MATBUS Network
City Boundary
FARGO
MOORHEAD
Data Sources: Metro COG, MATBUS


Average Weekday Boardings
(Stop Locations Approximate)
1
10
100
(Proportionally Sized)
MATBUS Route 13
MATBUS Network
City Boundary
FARGO
MOORHEAD
0
0.25
0.5
Miles
Data Sources: Metro COG, MATBUS


Average Weekday Boardings
(Stop Locations Approximate)
1
10
100
(Proportionally Sized)
MATBUS Route 12
MATBUS Network
City Boundary
FARGO
MOORHEAD
0
0.25
0.5
Miles
Data Sources: Metro COG, MATBUS

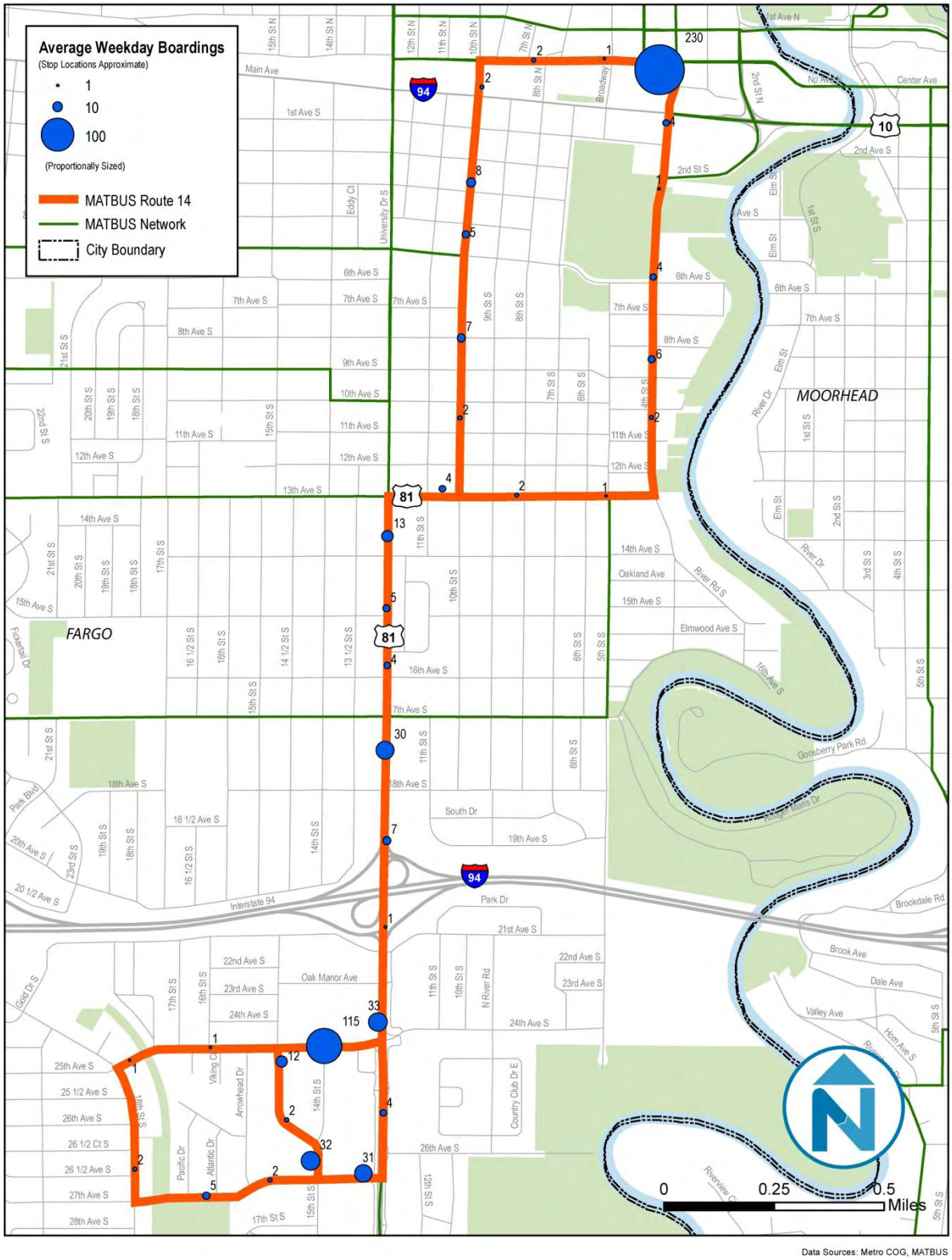

Average Weekday Boardings
(Stop Locations Approximate)
1
10
100
(Proportionally Sized)
MATBUS Route 16
MATBUS Network
City Boundary
FARGO
MOORHEAD
0
0.5
1
Miles
Data Sources: Metro COG, MATBUS


Average Weekday Boardings
(Stop Locations Approximate)
1
10
100
(Proportionally Sized)
MATBUS Route 17
MATBUS Network
City Boundary
FARGO
0
0.25
0.5
Miles
Data Sources: Metro COG, MATBUS

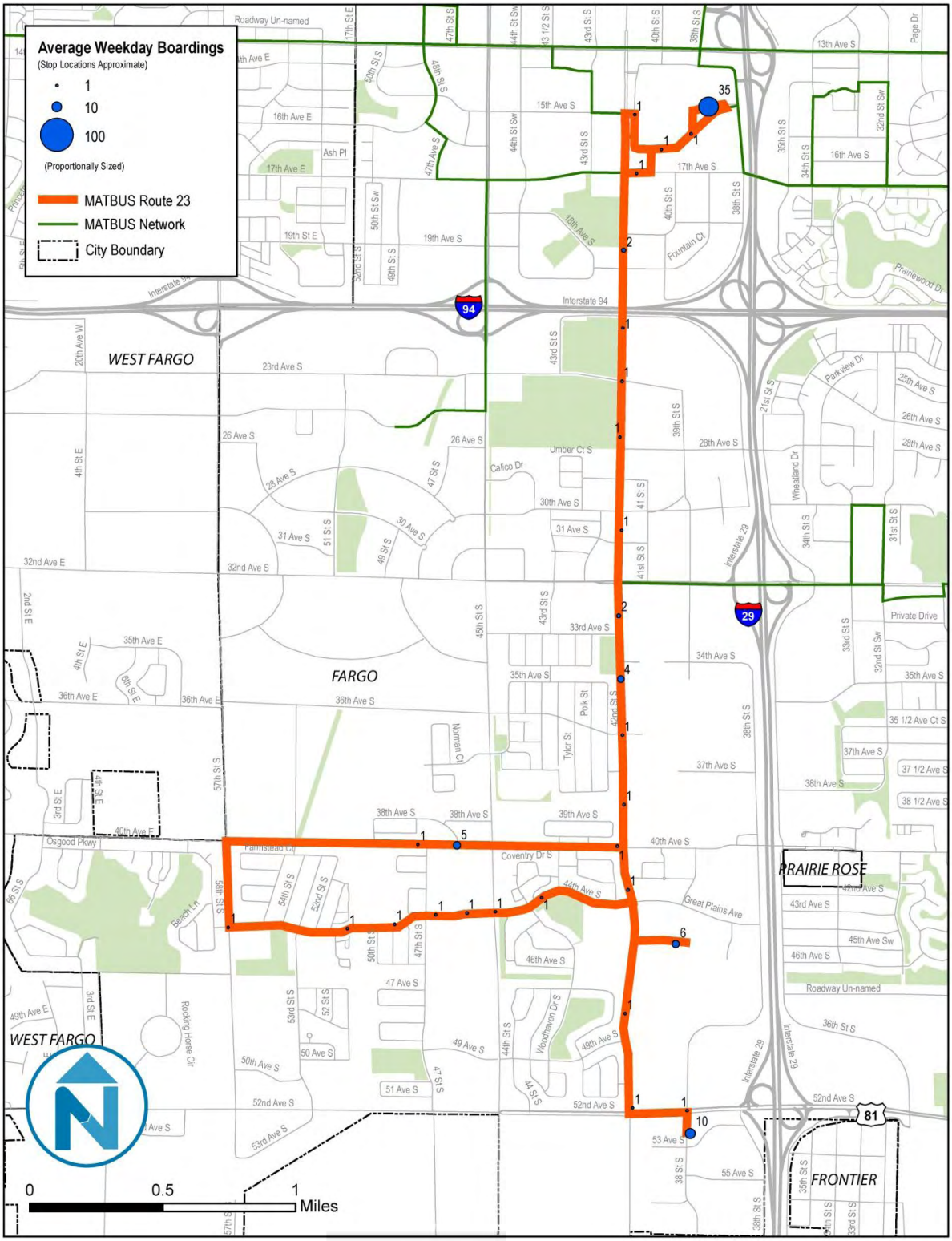


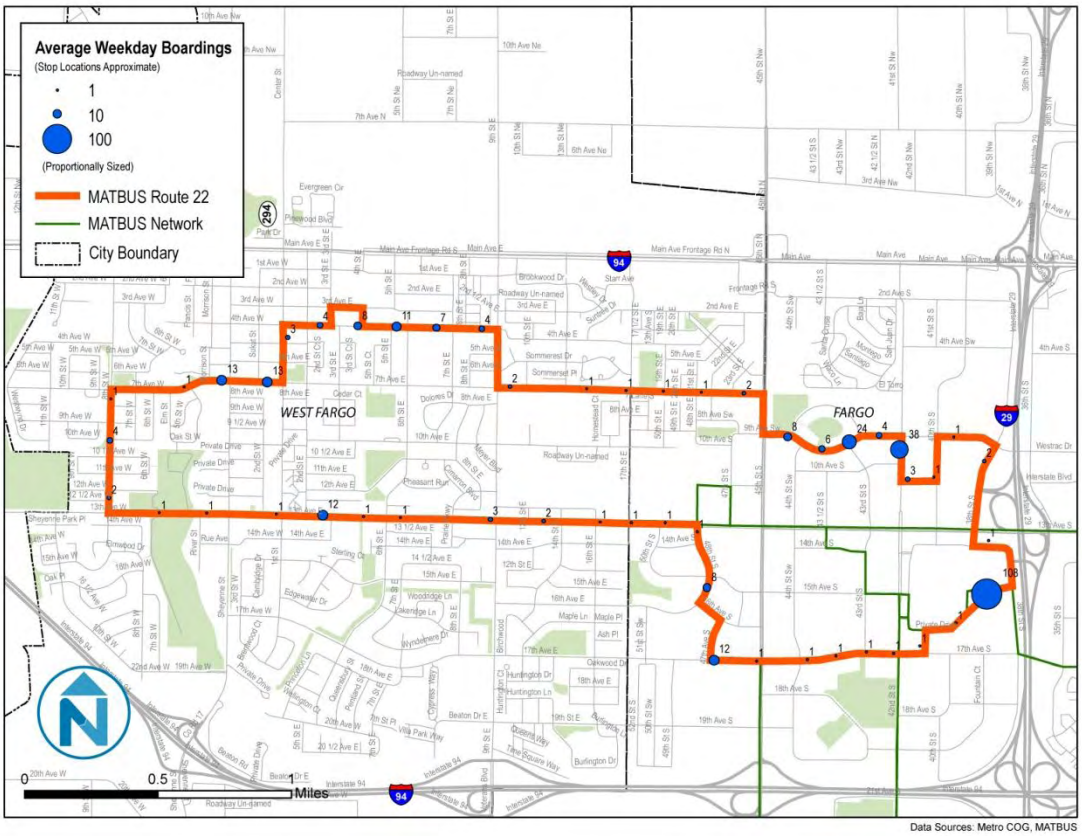
Data Sources: Metro COG, MATBUS

Data Sources: Metro COG, MATBUS

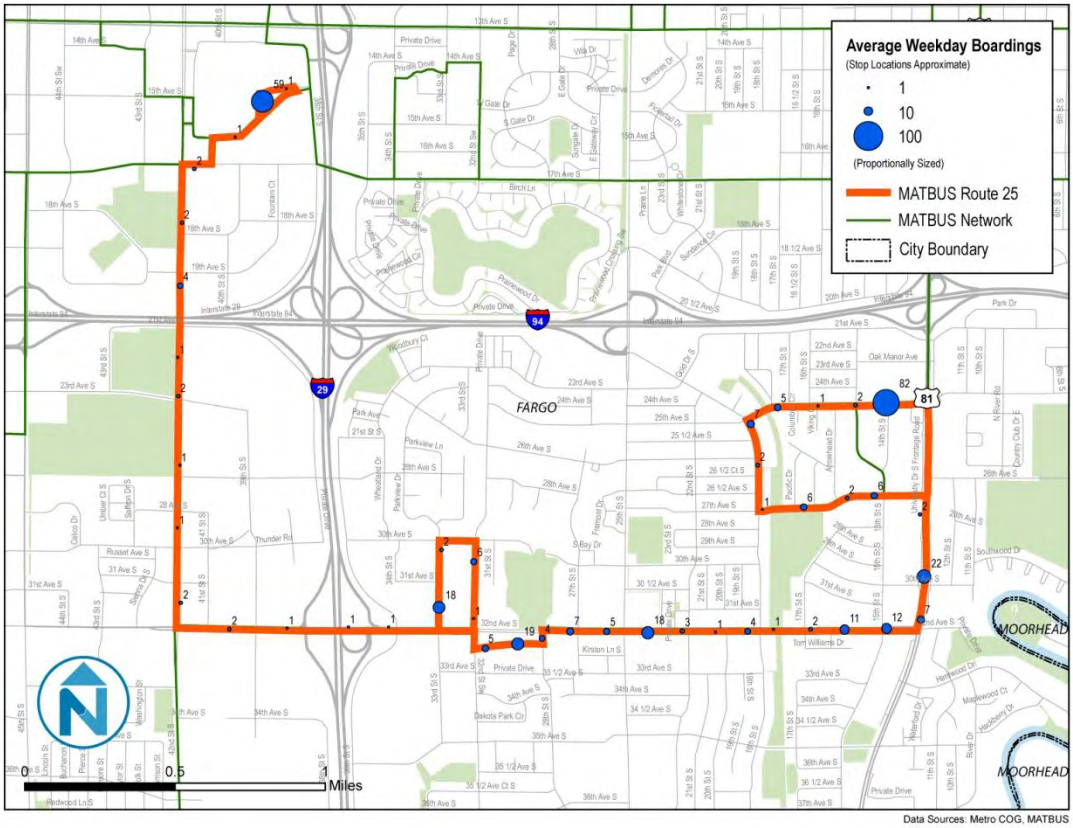


Data Sources: Metro COG, MATBUS

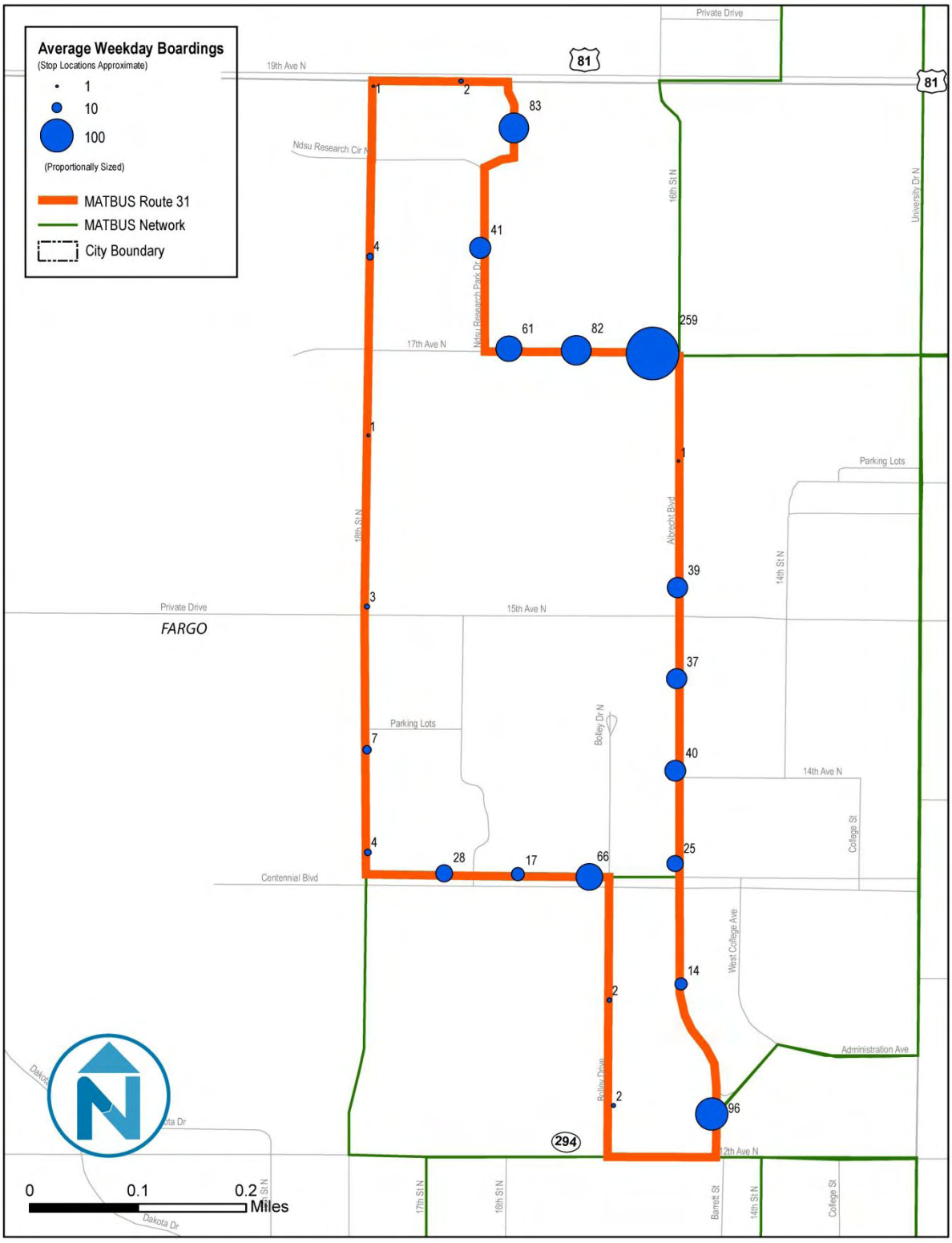

Average Weekday Boardings
(Stop Locations Approximate)
1
10
100
(Proportionally Sized)
MATBUS Route 23
MATBUS Network
City Boundary
WEST FARGO
FARGO
PRAIRIE ROSE
FRONTIER
WEST FARGO
Interstate 94
Interstate 29
0
0.5
1
Miles
Data Sources: Metro COG, MATBUS



Data Sources: Metro COG, MATBUS

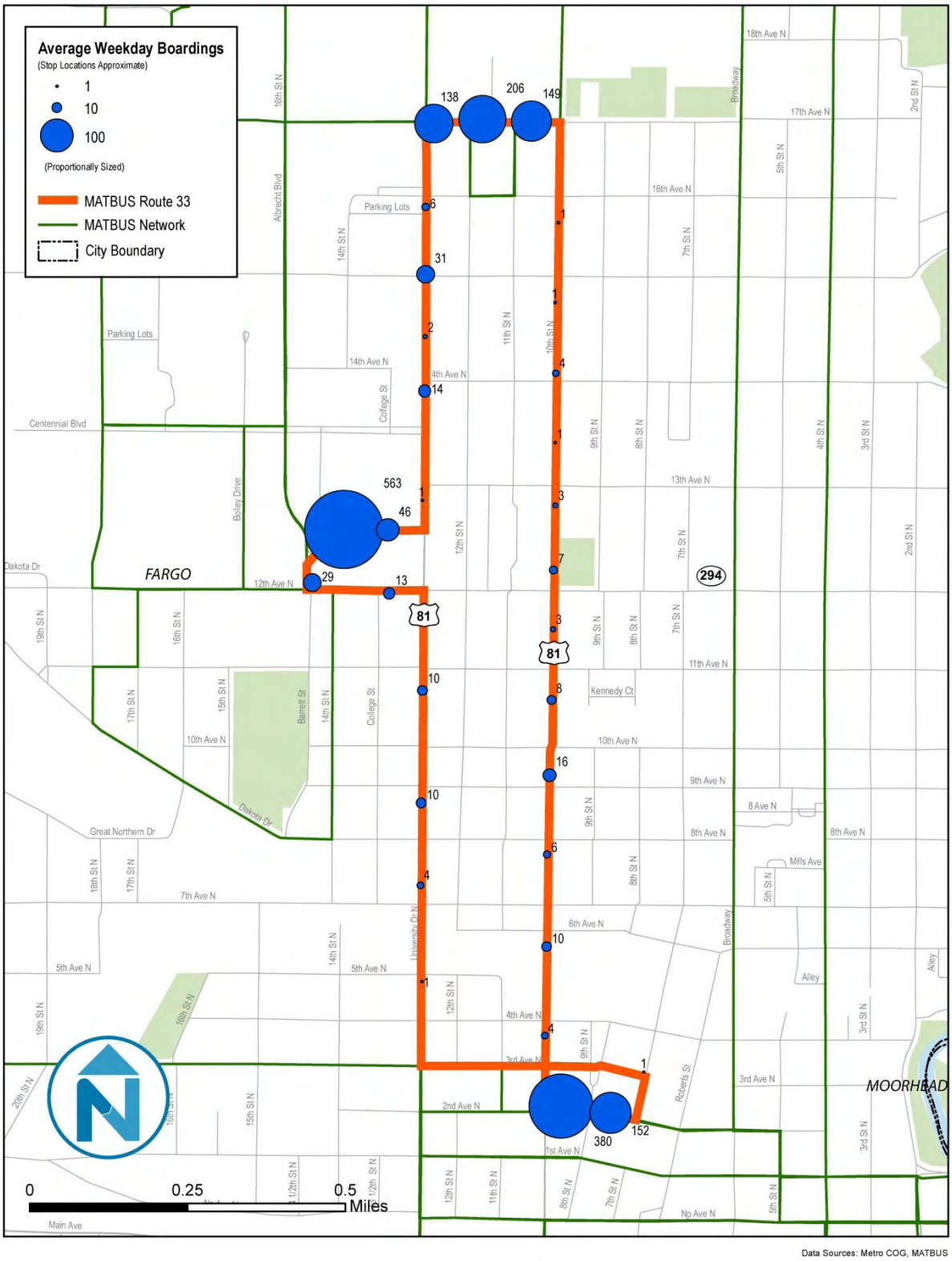


Data Sources: Metro COG, MATBUS

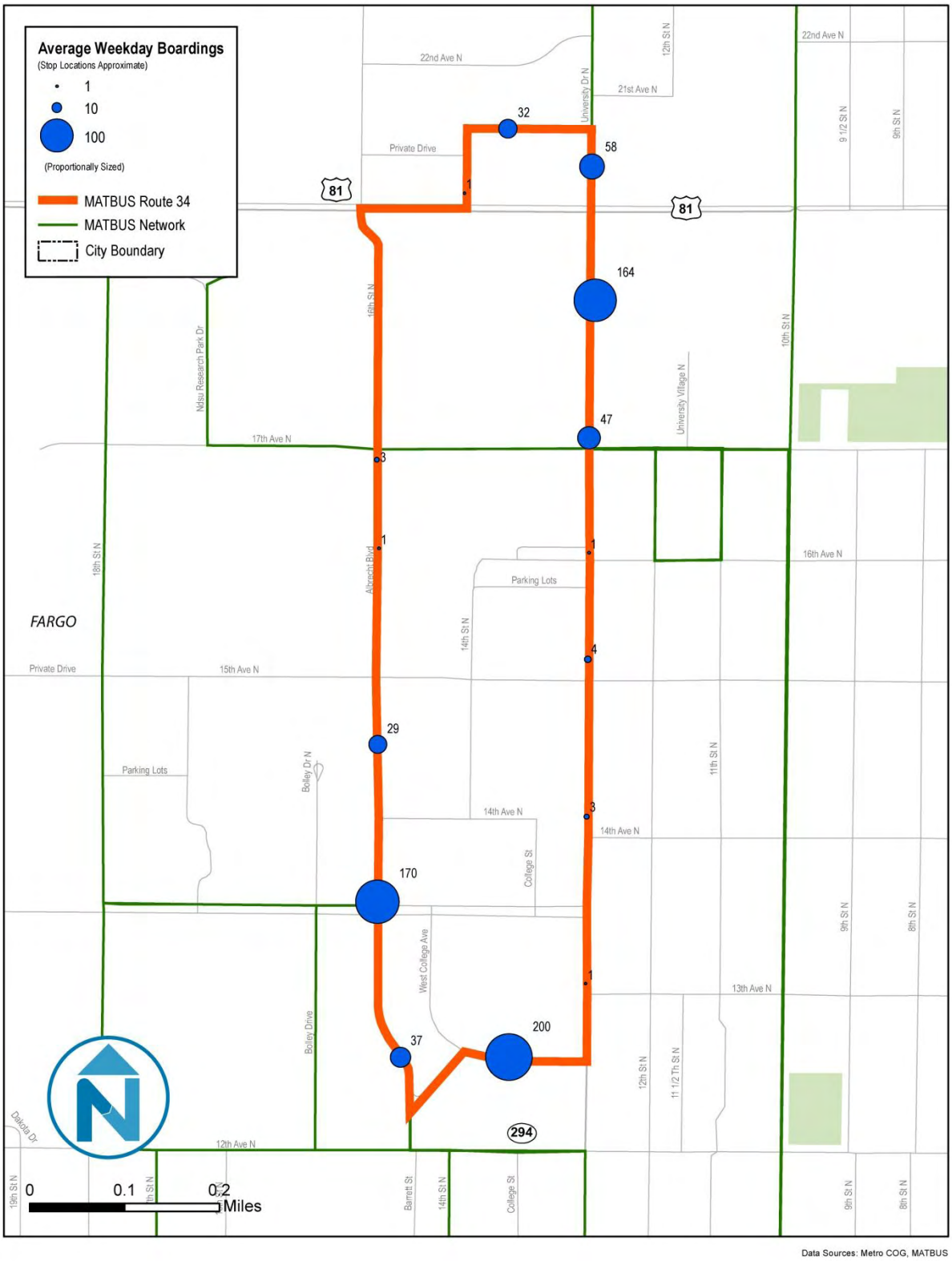


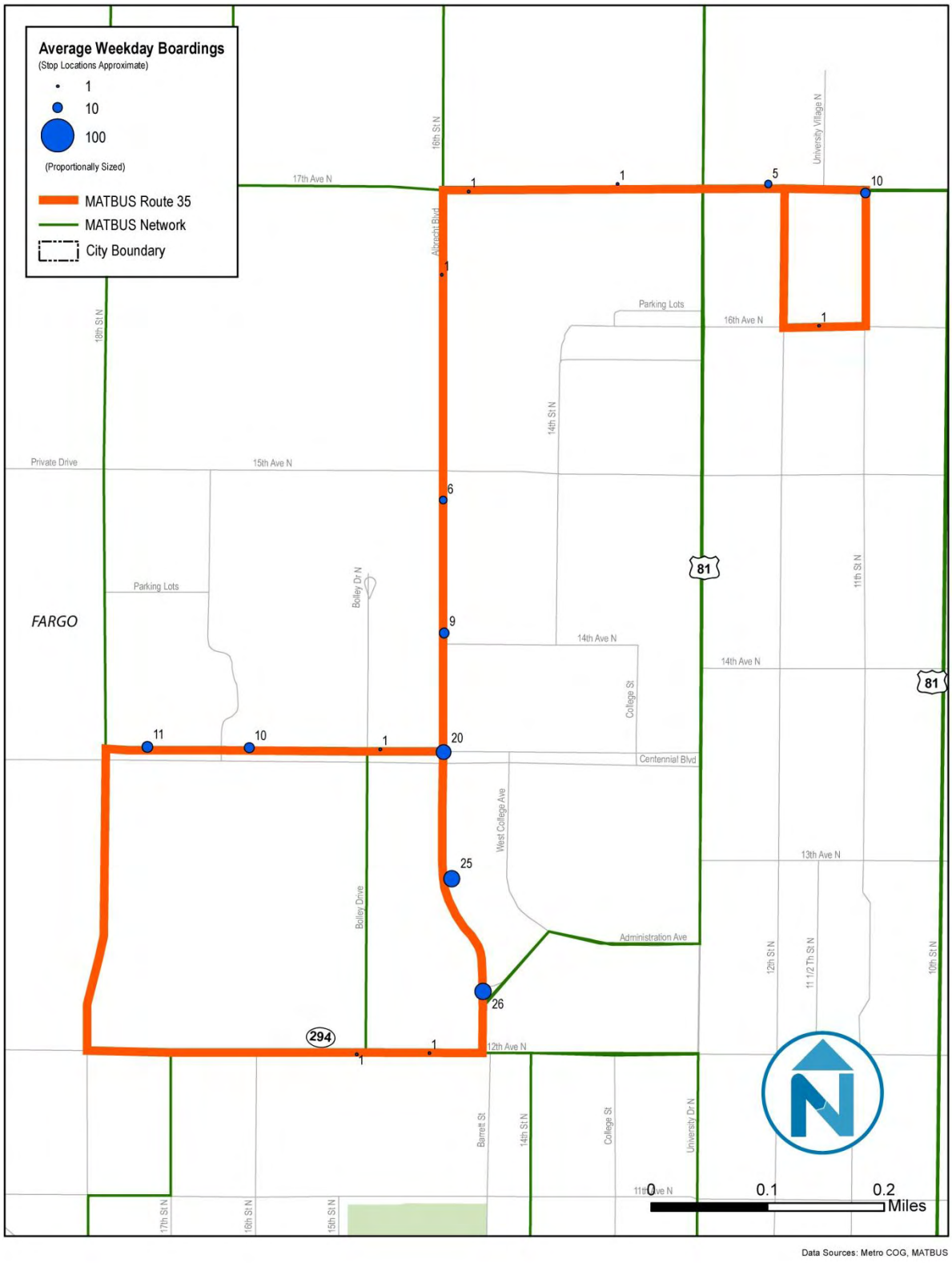
Data Sources: Metro COG, MATBUS


Average Weekday Boardings
(Stop Locations Approximate)
1
10
100
(Proportionally Sized)
MATBUS Route 32
MATBUS Network
City Boundary
FARGO
17th Ave N
16th Ave N
15th Ave N
14th Ave N
13th Ave N
12th Ave N
11th Ave N
10th Ave N
9th Ave N
8th Ave N
7th Ave N
6th Ave N
Private Drive
Parking Lots
Centennial Blvd
Dakota Dr
Great Northern Dr
Kennedy Ct
Administration Ave
Albrecht Blvd
16th St N
14th St N
College St
West College Ave
Bolley Drive
Barrett St
University Dr N
19th St N
17th St N
15th St N
11th St N
10th St N
9th St N
8th St N
20th St N
18th St N
12th St N
Ndsu Research Park Dr
11 1/2 7th St N
81
294
196
79
12
2
13
1
37
69
186
198
165
25
123
52
47
34
22
16
10
3
0
0.25
0.5
Miles
Data Sources: Metro COG, MATBUS



Data Sources: Metro COG, MATBUS


Average Weekday Boardings
(Stop Locations Approximate)
1
10
100
(Proportionally Sized)
MATBUS Route 34
MATBUS Network
City Boundary
22nd Ave N
21st Ave N
Private Drive
University Dr N
12th St N
9 1/2 St N
9th St N
32
58
1
81
164
10th St N
University Village N
Ndsu Research Park Dr
16th St N
47
17th Ave N
3
1
18th St N
Albrecht Blvd
16th Ave N
Parking Lots
14th St N
FARGO
4
Private Drive
15th Ave N
29
Parking Lots
Bolley Dr N
11th St N
14th Ave N
3
14th Ave N
College St
170
West College Ave
9th St N
8th St N
13th Ave N
Bolley Drive
37
200
12th St N
11 1/2 Th St N
294
Dakota Dr
12th Ave N
19th St N
0
0.1
0.2
Miles
Barrett St
14th St N
College St
Data Sources: Metro COG, MATBUS


Average Weekday Boardings
(Stop Locations Approximate)
1
10
100
(Proportionally Sized)
MATBUS Route 35
MATBUS Network
City Boundary
FARGO
17th Ave N
16th St N
University Village N
Albrecht Blvd
18th St N
Parking Lots
16th Ave N
14th St N
Private Drive
15th Ave N
Bolley Dr N
11th St N
14th Ave N
College St
Centennial Blvd
West College Ave
13th Ave N
Bolley Drive
Administration Ave
12th St N
11 1/2 Th St N
10th St N
12th Ave N
Barrett St
University Dr N
17th St N
16th St N
15th St N
81
294
0
0.1
0.2
Miles
Data Sources: Metro COG, MATBUS

	Existing Span		No-Cost Restructure Span	
Route	Weekday	Saturday	Weekday	Saturday
Moorhead				
1	6:15 AM to 6:45 PM	7:45 AM to 6:15 PM	6:15 AM to 6:45 PM	7:15 AM to 6:15 PM
2	6:15 AM to 6:45 PM	7:15 AM to 6:45 PM	6:15 AM to 6:45 PM	7:15 AM to 6:15 PM
3	6:18 AM to 6:48 PM	7:28 AM to 6:41 PM	Now Part of Route 1	
4	6:15 AM to 6:59 PM	7:45 AM to 6:29 PM	6:30 AM to 7:00 PM	7:30 AM to 6:45 PM
5	6:13 AM to 6:43 PM	7:13 AM to 6:22 PM	Now Part of Route 2	
7/8	6:45 PM to 10:11 PM	6:45 PM to 10:11 PM	6:45 PM to 10:11 PM	6:45 PM to 10:11 PM
Fargo				
11	6:15 AM to 9:40 PM	7:15 AM to 9:40 PM	6:15 AM to 9:40 PM	7:15 AM to 9:40 PM
12	6:45 AM to 6:11 PM	No Service	Route Deleted	
13	6:15 AM to 10:11 PM	7:15 AM to 10:11 PM	6:15 AM to 10:00 PM	6:50 AM to 10:00 PM
14	6:15 AM to 10:11 PM	7:15 AM to 10:11 PM	6:30 AM to 10:11 PM	7:30 AM to 10:11 PM
15	6:15 AM to 10:11 PM	7:15 AM to 10:11 PM	6:15 AM to 10:11 PM	7:15 AM to 10:11 PM
16	6:45 AM to 9:39 PM	7:45 AM to 9:39 PM	6:45 AM to 9:39 PM	7:45 AM to 9:39 PM
17	6:15 AM to 6:39 PM	7:15 AM to 6:39 PM	6:25 AM to 6:39 PM	7:25 AM to 6:39 PM
18	6:45 AM to 9:39 PM	7:45 AM to 9:39 PM	6:45 AM to 9:39 PM	7:45 AM to 9:39 PM
21	6:50 AM to 7:10 PM	7:50 AM to 7:10 PM	Now Part of Route 23	
22	6:15 AM to 7:45 PM	7:15 AM to 7:45 PM	6:15 AM to 7:45 PM	7:15 AM to 7:45 PM
23	6:35 AM to 10:08 PM	7:35 AM to 10:08 PM	**7:15 AM to 7:15 PM**	**8:15 AM to 6:45 PM**
25	7:00 AM to 6:53 PM	8:00 AM to 6:53 PM	**6:30 AM to 7:30 PM**	**7:30 AM to 7:30 PM**
NDSU				
31	7:25 AM to 7:51 PM	No Service	7:25 AM to 7:51 PM	No Service
32	7:25 AM to 6:21 PM	No Service	7:25 AM to 6:21 PM	No Service
33	6:55 AM to 6:31 PM	No Service	6:55 AM to 6:31 PM	No Service
34	7:44 AM to 4:55 PM	No Service	7:44 AM to 4:55 PM	No Service
35	8:00 PM to 10:07 PM	No Service	8:00 PM to 10:07 PM	No Service

	Existing Frequency (AM/Midday/PM/Ev)		No-Cost Restructure Frequency (AM/Midday/PM/Ev)	
Route	Weekday	Saturday	Weekday	Saturday
Moorhead				
1	30/30/30/-	60/60/60/-	30/30/30/-	60/60/60/-
2	30/30/30/-	60/60/60/-	30/30/30/-	60/60/60/-
3	30/30/30/-	60/60/60/-		
4	30/30/30/-	60/60/60/-	30/30/30/-	60/60/60/-
5	30/30/30/-	60/60/60/-		
7/8	-/-/-/60	-/-/-/60	-/-/-/60	-/-/-/60
Fargo				
11	30/30/30/60	30/30/30/60	30/30/30/60	30/30/30/60
12	60/60/60/-	No Service	Route Deleted	
13	15/15/15/60	30/30/30/60	15/15/15/60	30/30/30/60
14	30/30/30/60	30/30/30/60	30/30/30/60	30/30/30/60
15	30/30/30/60	30/30/30/60	30/30/30/60	30/30/30/60
16	60/60/60/60	60/60/60/60	60/60/60/60	60/60/60/60
17	60/60/60/60	60/60/60/60	60/60/60/60	60/60/60/60
18	30/30/30/60	60/60/60/60	30/30/30/60	**30/30/30**/60
21	60/60/60/-	60/60/60/-	Now Part of Route 23	
22	60/60/60/-	60/60/60/-	60/60/60/-	60/60/60/-
23	60/60/60/60	60/60/60/60	60/60/60/**-**	60/60/60/**-**
25	60/60/60/-	60/60/60/-	60/60/60/-	60/60/60/-
NDSU				
31	15/15/15/-	No Service	15/15/15/-	No Service
32	30/30/30/-	No Service	30/30/30/-	No Service
33	12/12/12/-	No Service	12/12/12/-	No Service
34	15/15/15/-	No Service	15/15/15/-	No Service
35	-/-/-/20	No Service	-/-/-/20	No Service

Proposed Hours

Route	Wkday Rev Hrs	Sat Rev Hrs	NonNDSU Wkdy Rev	Annual Hours
1	24:57	11:00		6,934
2	24:57	11:00		6,934
4	25:00	11:15		6,960
7/8	3:30	3:30		1,075
11	14:00	13:00		4,246
13	39:10	25:55	29:25	10,458
14	27:45	25:45		8,415
15	28:00	26:00		8,492
16/17/22	28:50	27:00		8,757
18	14:00	13:00		4,246
23	12:00	10:30		3,606
Total				70,122

	Proposed	Existing
Moorhead	21,903	21,979
Fargo (non NDSU)	48,219	48,082

Note: Existing hours includes 13B and 13X hours

Route 1

Weekday

Block	GTC	24th/11th	Wal-Mart	24th/11th	GTC
1			6:18	6:30	6:45
2	6:15	6:30	6:45	7:00	7:15
1	6:45	7:00	7:15	7:30	7:45
2	7:15	7:30	7:45	8:00	8:15
1	7:45	8:00	8:15	8:30	8:45
2	8:15	8:30	8:45	9:00	9:15
1	8:45	9:00	9:15	9:30	9:45
2	9:15	9:30	9:45	10:00	10:15
1	9:45	10:00	10:15	10:30	10:45
2	10:15	10:30	10:45	11:00	11:15
1	10:45	11:00	11:15	11:30	11:45
2	11:15	11:30	11:45	12:00	12:15
1	11:45	12:00	12:15	12:30	12:45
2	12:15	12:30	12:45	13:00	13:15
1	12:45	13:00	13:15	13:30	13:45
2	13:15	13:30	13:45	14:00	14:15
1	13:45	14:00	14:15	14:30	14:45
2	14:15	14:30	14:45	15:00	15:15
1	14:45	15:00	15:15	15:30	15:45
2	15:15	15:30	15:45	16:00	16:15
1	15:45	16:00	16:15	16:30	16:45
2	16:15	16:30	16:45	17:00	17:15
1	16:45	17:00	17:15	17:30	17:45
2	17:15	17:30	17:45	18:00	18:15
1	17:45	18:00	18:15	18:30	18:45
2	18:15	18:30	18:45		

Revenue Time:	Block	Time
Weekday	1	12:27
	2	12:30
	Total	24:57

Saturday

Block	GTC	24th/11th	Wal-Mart	24th/11th	GTC
1			7:15	7:30	7:45
1	7:45	8:00	8:15	8:30	8:45
1	8:45	9:00	9:15	9:30	9:45
1	9:45	10:00	10:15	10:30	10:45
1	10:45	11:00	11:15	11:30	11:45
1	11:45	12:00	12:15	12:30	12:45
1	12:45	13:00	13:15	13:30	13:45
1	13:45	14:00	14:15	14:30	14:45
1	14:45	15:00	15:15	15:30	15:45
1	15:45	16:00	16:15	16:30	16:45
1	16:45	17:00	17:15	17:30	17:45
1	17:45	18:00	18:15		

Revenue Time:	Block	Time
Saturday	1	11:00
	Total	11:00

Route 2

Weekday

Block	GTC	24th/11th	Americinn	24th/14th	GTC
1			6:18	6:30	6:45
2	6:15	6:30	6:45	7:00	7:15
1	6:45	7:00	7:15	7:30	7:45
2	7:15	7:30	7:45	8:00	8:15
1	7:45	8:00	8:15	8:30	8:45
2	8:15	8:30	8:45	9:00	9:15
1	8:45	9:00	9:15	9:30	9:45
2	9:15	9:30	9:45	10:00	10:15
1	9:45	10:00	10:15	10:30	10:45
2	10:15	10:30	10:45	11:00	11:15
1	10:45	11:00	11:15	11:30	11:45
2	11:15	11:30	11:45	12:00	12:15
1	11:45	12:00	12:15	12:30	12:45
2	12:15	12:30	12:45	13:00	13:15
1	12:45	13:00	13:15	13:30	13:45
2	13:15	13:30	13:45	14:00	14:15
1	13:45	14:00	14:15	14:30	14:45
2	14:15	14:30	14:45	15:00	15:15
1	14:45	15:00	15:15	15:30	15:45
2	15:15	15:30	15:45	16:00	16:15
1	15:45	16:00	16:15	16:30	16:45
2	16:15	16:30	16:45	17:00	17:15
1	16:45	17:00	17:15	17:30	17:45
2	17:15	17:30	17:45	18:00	18:15
1	17:45	18:00	18:15	18:30	18:45
2	18:15	18:30	18:45		

Revenue Time:	Block	Time
Weekday	1	12:27
	2	12:30
	Total	24:57

Saturday

Block	GTC	24th/11th	Americinn	24th/14th	GTC
1			7:15	7:30	7:45
1	7:45	8:00	8:15	8:30	8:45
1	8:45	9:00	9:15	9:30	9:45
1	9:45	10:00	10:15	10:30	10:45
1	10:45	11:00	11:15	11:30	11:45
1	11:45	12:00	12:15	12:30	12:45
1	12:45	13:00	13:15	13:30	13:45
1	13:45	14:00	14:15	14:30	14:45
1	14:45	15:00	15:15	15:30	15:45
1	15:45	16:00	16:15	16:30	16:45
1	16:45	17:00	17:15	17:30	17:45
1	17:45	18:00	18:15		

Revenue Time:	Block	Time
Saturday	1	11:00
	Total	11:00

Route 4

Weekday

Block	GTC	Wal-Mart	GTC
1		6:30	6:45
2	6:15	6:45	7:15
1	6:45	7:15	7:45
2	7:15	7:45	8:15
1	7:45	8:15	8:45
2	8:15	8:45	9:15
1	8:45	9:15	9:45
2	9:15	9:45	10:15
1	9:45	10:15	10:45
2	10:15	10:45	11:15
1	10:45	11:15	11:45
2	11:15	11:45	12:15
1	11:45	12:15	12:45
2	12:15	12:45	13:15
1	12:45	13:15	13:45
2	13:15	13:45	14:15
1	13:45	14:15	14:45
2	14:15	14:45	15:15
1	14:45	15:15	15:45
2	15:15	15:45	16:15
1	15:45	16:15	16:45
2	16:15	16:45	17:15
1	16:45	17:15	17:45
2	17:15	17:45	18:15
1	17:45	18:15	18:45
2	18:15	18:45	19:00

Revenue Time:	Block	Time
Weekday	1	12:15
	2	12:45
Total		25:00

Saturday

Block	GTC	Wal-Mart	GTC
1		7:30	7:45
1	7:45	8:15	8:45
1	8:45	9:15	9:45
1	9:45	10:15	10:45
1	10:45	11:15	11:45
1	11:45	12:15	12:45
1	12:45	13:15	13:45
1	13:45	14:15	14:45
1	14:45	15:15	15:45
1	15:45	16:15	16:45
1	16:45	17:15	17:45
1	17:45	18:15	18:45

Revenue Time:	Block	Time
Saturday	1	11:15
Total		11:15

Route 7 & 8

Weekday

Block	GTC	Cashwise	GTC	Safari	GTC
1			18:45	19:00	19:15
1	19:15	19:30	19:45	20:00	20:15
1	20:15	20:30	20:45	21:00	21:15
1	21:15	21:30	21:45	22:00	22:15

Revenue Time:	Block	Time
Weekday	1	3:30
Total		3:30

Saturday

Block	GTC	Cashwise	GTC	Safari	GTC
1			18:45	19:00	19:15
1	19:15	19:30	19:45	20:00	20:15
1	20:15	20:30	20:45	21:00	21:15
1	21:15	21:30	21:45	22:00	22:15

Revenue Time:	Block	Time
Saturday	1	3:30
Total		3:30

Route 11

Weekday

Block	GTC	VA	GTC	
1	6:15	6:30	6:45	
1	6:45	7:00	7:15	
1	7:15	7:30	7:45	
1	7:45	8:00	8:15	
1	8:15	8:30	8:45	
1	8:45	9:00	9:15	
1	9:15	9:30	9:45	
1	9:45	10:00	10:15	
1	10:15	10:30	10:45	
1	10:45	11:00	11:15	
1	11:15	11:30	11:45	
1	11:45	12:00	12:15	
1	12:15	12:30	12:45	
1	12:45	13:00	13:15	
1	13:15	13:30	13:45	
1	13:45	14:00	14:15	
1	14:15	14:30	14:45	
1	14:45	15:00	15:15	
1	15:15	15:30	15:45	
1	15:45	16:00	16:15	
1	16:15	16:30	16:45	
1	16:45	17:00	17:15	
1	17:15	17:30	17:45	
1	17:45	18:00	18:15	
1	18:15	18:30	18:45	to 14
2	19:15	19:30	19:45	to 14
3	20:15	20:30	20:45	to 14
4	21:15	21:30	21:45	to 14

Revenue Time:	Block	Time
Weekday	1	12:30
	2	0:30
	3	0:30
	4	0:30
Total		14:00

Saturday

Block	GTC	VA	GTC
1	7:15	7:30	7:45
1	7:45	8:00	8:15
1	8:15	8:30	8:45
1	8:45	9:00	9:15
1	9:15	9:30	9:45
1	9:45	10:00	10:15
1	10:15	10:30	10:45
1	10:45	11:00	11:15
1	11:15	11:30	11:45
1	11:45	12:00	12:15
1	12:15	12:30	12:45
1	12:45	13:00	13:15
1	13:15	13:30	13:45
1	13:45	14:00	14:15
1	14:15	14:30	14:45
1	14:45	15:00	15:15
1	15:15	15:30	15:45
1	15:45	16:00	16:15
1	16:15	16:30	16:45
1	16:45	17:00	17:15
1	17:15	17:30	17:45
1	17:45	18:00	18:15
1	18:15	18:30	18:45
2	19:15	19:30	19:45
3	20:15	20:30	20:45
4	21:15	21:30	21:45

Revenue Time:	Block	Time
Weekday	1	11:30
	2	0:30
	3	0:30
	4	0:30
Total		13:00

Route 13

Weekday NDSU is in Session (165 days)

Block	GTC	Union	Trollwood	Union	GTC
1			6:20	6:30	6:45
2	6:15	6:25	6:35	6:45	7:00
1	6:45	6:55	7:05	7:15	7:30
2	7:00	7:10	7:20	7:30	7:45
3	7:15	7:25	7:35	7:45	8:00
1	7:30	7:40	7:50	8:00	8:15
2	7:45	7:55	8:05	8:15	8:30
3	8:00	8:10	8:20	8:30	8:45
1	8:15	8:25	8:35	8:45	9:00
2	8:30	8:40	8:50	9:00	9:15
3	8:45	8:55	9:05	9:15	9:30
1	9:00	9:10	9:20	9:30	9:45
2	9:15	9:25	9:35	9:45	10:00
3	9:30	9:40	9:50	10:00	10:15
1	9:45	9:55	10:05	10:15	10:30
2	10:00	10:10	10:20	10:30	10:45
3	10:15	10:25	10:35	10:45	11:00
1	10:30	10:40	10:50	11:00	11:15
2	10:45	10:55	11:05	11:15	11:30
3	11:00	11:10	11:20	11:30	11:45
1	11:15	11:25	11:35	11:45	12:00
2	11:30	11:40	11:50	12:00	12:15
3	11:45	11:55	12:05	12:15	12:30
1	12:00	12:10	12:20	12:30	12:45
2	12:15	12:25	12:35	12:45	13:00
3	12:30	12:40	12:50	13:00	13:15
1	12:45	12:55	13:05	13:15	13:30
2	13:00	13:10	13:20	13:30	13:45
3	13:15	13:25	13:35	13:45	14:00
1	13:30	13:40	13:50	14:00	14:15
2	13:45	13:55	14:05	14:15	14:30
3	14:00	14:10	14:20	14:30	14:45
1	14:15	14:25	14:35	14:45	15:00
2	14:30	14:40	14:50	15:00	15:15
3	14:45	14:55	15:05	15:15	15:30
1	15:00	15:10	15:20	15:30	15:45
2	15:15	15:25	15:35	15:45	16:00
3	15:30	15:40	15:50	16:00	16:15
1	15:45	15:55	16:05	16:15	16:30
2	16:00	16:10	16:20	16:30	16:45
3	16:15	16:25	16:35	16:45	17:00
1	16:30	16:40	16:50	17:00	17:15
2	16:45	16:55	17:05	17:15	17:30
3	17:00	17:10	17:20	17:30	17:45
1	17:15	17:25	17:35	17:45	18:00
3	17:45	17:55	18:05	18:15	18:30
1	18:15	18:25	18:35	18:45	19:00
3	18:45	18:55	19:05	19:15	19:30
1	19:15	19:25	19:35	19:45	20:00
1	20:15	20:25	20:35	20:45	21:00
1	21:15	21:25	21:35	21:45	22:00

Revenue Time:	Block	Time
Weekday	1	15:40
	2	11:15
	3	12:15
Total		39:10

Saturday

Block	GTC	Union	Trollwood	Union	GTC
1			6:50	7:00	7:15
1	7:15	7:25	7:35	7:45	8:00
2	7:45	7:55	8:05	8:15	8:30
1	8:15	8:25	8:35	8:45	9:00
2	8:45	8:55	9:05	9:15	9:30
1	9:15	9:25	9:35	9:45	10:00
2	9:45	9:55	10:05	10:15	10:30
1	10:15	10:25	10:35	10:45	11:00
2	10:45	10:55	11:05	11:15	11:30
1	11:15	11:25	11:35	11:45	12:00
2	11:45	11:55	12:05	12:15	12:30
1	12:15	12:25	12:35	12:45	13:00
2	12:45	12:55	13:05	13:15	13:30
1	13:15	13:25	13:35	13:45	14:00
2	13:45	13:55	14:05	14:15	14:30
1	14:15	14:25	14:35	14:45	15:00
2	14:45	14:55	15:05	15:15	15:30
1	15:15	15:25	15:35	15:45	16:00
2	15:45	15:55	16:05	16:15	16:30
1	16:15	16:25	16:35	16:45	17:00
2	16:45	16:55	17:05	17:15	17:30
1	17:15	17:25	17:35	17:45	18:00
2	17:45	17:55	18:05	18:15	18:30
1	18:15	18:25	18:35	18:45	19:00
1	19:15	19:25	19:35	19:45	20:00
1	20:15	20:25	20:35	20:45	21:00
1	21:15	21:25	21:35	21:45	22:00

Revenue Time:	Block	Time
Weekday	1	15:10
	2	10:45
Total		25:55

Weekday NDSU is NOT in Session (90 days)

Block	GTC	Union	Trollwood	Union	GTC
1			6:20	6:30	6:45
2	6:15	6:25	6:35	6:45	7:00
1	6:45	6:55	7:05	7:15	7:30
2	7:15	7:25	7:35	7:45	8:00
1	7:45	7:55	8:05	8:15	8:30
2	8:15	8:25	8:35	8:45	9:00
1	8:45	8:55	9:05	9:15	9:30
2	9:15	9:25	9:35	9:45	10:00
1	9:45	9:55	10:05	10:15	10:30
2	10:15	10:25	10:35	10:45	11:00
1	10:45	10:55	11:05	11:15	11:30
2	11:15	11:25	11:35	11:45	12:00
1	11:45	11:55	12:05	12:15	12:30
2	12:15	12:25	12:35	12:45	13:00
1	12:45	12:55	13:05	13:15	13:30
2	13:15	13:25	13:35	13:45	14:00
1	13:45	13:55	14:05	14:15	14:30
2	14:15	14:25	14:35	14:45	15:00
1	14:45	14:55	15:05	15:15	15:30
2	15:15	15:25	15:35	15:45	16:00
1	15:45	15:55	16:05	16:15	16:30
2	16:15	16:25	16:35	16:45	17:00
1	16:45	16:55	17:05	17:15	17:30
2	17:15	17:25	17:35	17:45	18:00
1	17:45	17:55	18:05	18:15	18:30
2	18:15	18:25	18:35	18:45	19:00
1	18:45	18:55	19:05	19:15	19:30
2	19:15	19:25	19:35	19:45	20:00
2	20:15	20:25	20:35	20:45	21:00
2	21:15	21:25	21:35	21:45	22:00

Revenue Time:	Block	Time
Weekday	1	13:40
	2	15:45
Total		29:25

Route 14

Weekday							Saturday						
Block	GTC	K-Mart	West Acres	K-Mart	GTC		Block	GTC	K-Mart	West Acres	K-Mart	GTC	
2				6:30	6:45								
1	6:15	6:30	7:00	7:30	7:45		1					7:30	7:45
2	6:45	7:00		7:00	7:15								
2	7:15	7:30	8:00	8:30	8:45		2	7:15	7:30	8:00	8:30	8:30	8:45
1	7:45	8:00		8:00	8:15		1	7:45	8:00		8:00	8:00	8:15
1	8:15	8:30	9:00	9:30	9:45		1	8:15	8:30	9:00	9:30	9:30	9:45
2	8:45	9:00		9:00	9:15		2	8:45	9:00		9:00	9:00	9:15
2	9:15	9:30	10:00	10:30	10:45		2	9:15	9:30	10:00	10:30	10:30	10:45
1	9:45	10:00		10:00	10:15		1	9:45	10:00		10:00	10:00	10:15
1	10:15	10:30	11:00	11:30	11:45		1	10:15	10:30	11:00	11:30	11:30	11:45
2	10:45	11:00		11:00	11:15		2	10:45	11:00		11:00	11:00	11:15
2	11:15	11:30	12:00	12:30	12:45		2	11:15	11:30	12:00	12:30	12:30	12:45
1	11:45	12:00		12:00	12:15		1	11:45	12:00		12:00	12:00	12:15
1	12:15	12:30	13:00	13:30	13:45		1	12:15	12:30	13:00	13:30	13:30	13:45
2	12:45	13:00		13:00	13:15		2	12:45	13:00		13:00	13:00	13:15
2	13:15	13:30	14:00	14:30	14:45		2	13:15	13:30	14:00	14:30	14:30	14:45
1	13:45	14:00		14:00	14:15		1	13:45	14:00		14:00	14:00	14:15
1	14:15	14:30	15:00	15:30	15:45		1	14:15	14:30	15:00	15:30	15:30	15:45
2	14:45	15:00		15:00	15:15		2	14:45	15:00		15:00	15:00	15:15
2	15:15	15:30	16:00	16:30	16:45		2	15:15	15:30	16:00	16:30	16:30	16:45
1	15:45	16:00		16:00	16:15		1	15:45	16:00		16:00	16:00	16:15
1	16:15	16:30	17:00	17:30	17:45		1	16:15	16:30	17:00	17:30	17:30	17:45
2	16:45	17:00		17:00	17:15		2	16:45	17:00		17:00	17:00	17:15
2	17:15	17:30	18:00	18:30	18:45		2	17:15	17:30	18:00	18:30	18:30	18:45
1	17:45	18:00		18:00	18:15		1	17:45	18:00		18:00	18:00	18:15
1	18:15	18:30	19:00	19:30	19:45	to 16N	1	18:15	18:30	19:00	19:30	19:30	19:45
2	18:45	19:00		19:00	19:15	to 11	2	18:45	19:00		19:00	19:00	19:15
1	19:45	20:00		20:00	20:15	to 11	1	19:45	20:00		20:00	20:00	20:15
3	20:45	21:00		21:00	21:15	to 11	3	20:45	21:00		21:00	21:00	21:15
4	21:45	22:00		22:00	22:15	G	4	21:45	22:00		22:00	22:00	22:15

Revenue Time:	Block	Time
Weekday	1	14:00
	2	12:45
	3	0:30
	4	0:30
Total		27:45

Revenue Time:	Block	Time
Weekday	1	12:45
	2	12:00
	3	0:30
	4	0:30
Total		25:45

Route 15

Weekday							Saturday						
Block	GTC	West Acres	Wal-Mart	West Acres	GTC		Block	GTC	West Acres	Wal-Mart	West Acres	GTC	
1	6:15	6:38	6:45	6:53	7:15								
2	6:45	7:08	7:15	7:23	7:45								
1	7:15	7:38	7:45	7:53	8:15		1	7:15	7:38	7:45	7:53	8:15	
2	7:45	8:08	8:15	8:23	8:45		2	7:45	8:08	8:15	8:23	8:45	
1	8:15	8:38	8:45	8:53	9:15		1	8:15	8:38	8:45	8:53	9:15	
2	8:45	9:08	9:15	9:23	9:45		2	8:45	9:08	9:15	9:23	9:45	
1	9:15	9:38	9:45	9:53	10:15		1	9:15	9:38	9:45	9:53	10:15	
2	9:45	10:08	10:15	10:23	10:45		2	9:45	10:08	10:15	10:23	10:45	
1	10:15	10:38	10:45	10:53	11:15		1	10:15	10:38	10:45	10:53	11:15	
2	10:45	11:08	11:15	11:23	11:45		2	10:45	11:08	11:15	11:23	11:45	
1	11:15	11:38	11:45	11:53	12:15		1	11:15	11:38	11:45	11:53	12:15	
2	11:45	12:08	12:15	12:23	12:45		2	11:45	12:08	12:15	12:23	12:45	
1	12:15	12:38	12:45	12:53	13:15		1	12:15	12:38	12:45	12:53	13:15	
2	12:45	13:08	13:15	13:23	13:45		2	12:45	13:08	13:15	13:23	13:45	
1	13:15	13:38	13:45	13:53	14:15		1	13:15	13:38	13:45	13:53	14:15	
2	13:45	14:08	14:15	14:23	14:45		2	13:45	14:08	14:15	14:23	14:45	
1	14:15	14:38	14:45	14:53	15:15		1	14:15	14:38	14:45	14:53	15:15	
2	14:45	15:08	15:15	15:23	15:45		2	14:45	15:08	15:15	15:23	15:45	
1	15:15	15:38	15:45	15:53	16:15		1	15:15	15:38	15:45	15:53	16:15	
2	15:45	16:08	16:15	16:23	16:45		2	15:45	16:08	16:15	16:23	16:45	
1	16:15	16:38	16:45	16:53	17:15		1	16:15	16:38	16:45	16:53	17:15	
2	16:45	17:08	17:15	17:23	17:45		2	16:45	17:08	17:15	17:23	17:45	
1	17:15	17:38	17:45	17:53	18:15		1	17:15	17:38	17:45	17:53	18:15	
2	17:45	18:08	18:15	18:23	18:45		2	17:45	18:08	18:15	18:23	18:45	
1	18:15	18:38	18:45	18:53	19:15		1	18:15	18:38	18:45	18:53	19:15	
1	19:15	19:38	19:45	19:53	20:15		1	19:15	19:38	19:45	19:53	20:15	
1	20:15	20:38	20:45	20:53	21:15		1	20:15	20:38	20:45	20:53	21:15	
1	21:15	21:38	21:45	21:53	22:15		1	21:15	21:38	21:45	21:53	22:15	

Revenue Time:	Block	Time
Weekday	1	16:00
	2	12:00
Total		28:00

Revenue Time:	Block	Time
Weekday	1	15:00
	2	11:00
Total		26:00

Route 16, 17, and 22

Weekday

Block	GTC	Route 16 West Acres	Route 22 High Rise	Route 16 West Acres	GTC	Route 17 New Life	GTC
1					6:25	6:30	6:45
2		6:15	6:30	6:45	7:15	7:30	7:45
1	6:45	7:15	7:30	7:45	8:15	8:30	8:45
2	7:45	8:15	8:30	8:45	9:15	9:30	9:45
1	8:45	9:15	9:30	9:45	10:15	10:30	10:45
2	9:45	10:15	10:30	10:45	11:15	11:30	11:45
1	10:45	11:15	11:30	11:45	12:15	12:30	12:45
2	11:45	12:15	12:30	12:45	13:15	13:30	13:45
1	12:45	13:15	13:30	13:45	14:15	14:30	14:45
2	13:45	14:15	14:30	14:45	15:15	15:30	15:45
1	14:45	15:15	15:30	15:45	16:15	16:30	16:45
2	15:45	16:15	16:30	16:45	17:15	17:30	17:45
1	16:45	17:15	17:30	17:45	18:15	18:30	18:45
2	17:45	18:15	18:30	18:45	19:15 to 18		
1	18:45	19:15	19:30	19:45	20:15 to 18		
3	19:45	20:15		20:15	20:45		
3	20:45	21:15		21:15	21:45		

Revenue Time:	Block	Time
Weekday	1	13:50
	2	13:00
	3	2:00
Total		28:50

Saturday

Block	GTC	Route 16 West Acres	Route 22 High Rise	Route 16 West Acres	GTC	Route 17 New Life	GTC
1							
2					7:15	7:30	7:45
1		7:15	7:30	7:45	8:15	8:30	8:45
2	7:45	8:15	8:30	8:45	9:15	9:30	9:45
1	8:45	9:15	9:30	9:45	10:15	10:30	10:45
2	9:45	10:15	10:30	10:45	11:15	11:30	11:45
1	10:45	11:15	11:30	11:45	12:15	12:30	12:45
2	11:45	12:15	12:30	12:45	13:15	13:30	13:45
1	12:45	13:15	13:30	13:45	14:15	14:30	14:45
2	13:45	14:15	14:30	14:45	15:15	15:30	15:45
1	14:45	15:15	15:30	15:45	16:15	16:30	16:45
2	15:45	16:15	16:30	16:45	17:15	17:30	17:45
1	16:45	17:15	17:30	17:45	18:15	18:30	18:45
2	17:45	18:15	18:30	18:45	19:15 to 18		
1	18:45	19:15	19:30	19:45	20:15 to 18		
3	19:45	20:15		20:15	20:45		
3	20:45	21:15		21:15	21:45		

Revenue Time:	Block	Time
Weekday	1	13:00
	2	12:00
	3	2:00
Total		27:00

Route 18

Weekday

Block	GTC	SEHS/The I	GTC	
1	6:45	7:00	7:15	
1	7:15	7:30	7:45	
1	7:45	8:00	8:15	
1	8:15	8:30	8:45	
1	8:45	9:00	9:15	
1	9:15	9:30	9:45	
1	9:45	10:00	10:15	
1	10:15	10:30	10:45	
1	10:45	11:00	11:15	
1	11:15	11:30	11:45	
1	11:45	12:00	12:15	
1	12:15	12:30	12:45	
1	12:45	13:00	13:15	
1	13:15	13:30	13:45	
1	13:45	14:00	14:15	
1	14:15	14:30	14:45	
1	14:45	15:00	15:15	
1	15:15	15:30	15:45	
1	15:45	16:00	16:15	
1	16:15	16:30	16:45	
1	16:45	17:00	17:15	
1	17:15	17:30	17:45	
1	17:45	18:00	18:15	
1	18:15	18:30	18:45	Garage
2	19:15	19:30	19:45	
3	20:15	20:30	20:45	
3	20:45	21:00	21:15	
3	21:15	21:30	21:45	

Revenue Time:	Block	Time
Weekday	1	12:00
	2	0:30
	3	1:30
Total		14:00

Saturday

Block	GTC	SEHS/The I	GTC	
1	7:45	8:00	8:15	
1	8:15	8:30	8:45	
1	8:45	9:00	9:15	
1	9:15	9:30	9:45	
1	9:45	10:00	10:15	
1	10:15	10:30	10:45	
1	10:45	11:00	11:15	
1	11:15	11:30	11:45	
1	11:45	12:00	12:15	
1	12:15	12:30	12:45	
1	12:45	13:00	13:15	
1	13:15	13:30	13:45	
1	13:45	14:00	14:15	
1	14:15	14:30	14:45	
1	14:45	15:00	15:15	
1	15:15	15:30	15:45	
1	15:45	16:00	16:15	
1	16:15	16:30	16:45	
1	16:45	17:00	17:15	
1	17:15	17:30	17:45	
1	17:45	18:00	18:15	
1	18:15	18:30	18:45	Garage
2	19:15	19:30	19:45	
3	20:15	20:30	20:45	
3	20:45	21:00	21:15	
3	21:15	21:30	21:45	

Revenue Time:	Block	Time
Weekday	1	11:00
	2	0:30
	3	1:30
Total		13:00

Route 23

Weekday

Block	West Acres	Wal-Mart	West Acres
1			
1	7:15	7:45	8:15
1	8:15	8:45	9:15
1	9:15	9:45	10:15
1	10:15	10:45	11:15
1	11:15	11:45	12:15
1	12:15	12:45	13:15
1	13:15	13:45	14:15
1	14:15	14:45	15:15
1	15:15	15:45	16:15
1	16:15	16:45	17:15
1	17:15	17:45	18:15
1	18:15	18:45	19:15

Revenue Time:	Block	Time
Weekday	1	12:00
Total		12:00

Saturday

Block	West Acres	Wal-Mart	West Acres
1			
1	8:15	8:45	9:15
1	9:15	9:45	10:15
1	10:15	10:45	11:15
1	11:15	11:45	12:15
1	12:15	12:45	13:15
1	13:15	13:45	14:15
1	14:15	14:45	15:15
1	15:15	15:45	16:15
1	16:15	16:45	17:15
1	17:15	17:45	18:15
1	18:15	18:45	

Revenue Time:	Block	Time
Weekday	1	10:30
Total		10:30