METROPOLITAN TRANSPORTATION PLAN

2010 2035

Guiding the Future

MPO Farmington Metropolitan Planning Organization
Aztec • Bloomfield • Farmington • San Juan County • NEW MEXICO

www.farmingtonmpo.org

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FARMINGTON MPO
METROPOLITAN TRANSPORTATION PLAN

TABLE OF CONTENTS

SECTIONS	PAGE
Chapter 1 Introduction	**1-1**
1.1) Background	1-2
1.2) Vision and Mission Statements	1-2
1.3) FMPO Goals and Objectives	1-3
1.4) Recently Completed Regional Projects	1-5
1.5) SAFETEA-LU Planning Factors	1-6
1.6) Livability Principles	1-8
Chapter 2 Existing and Future Population & Employment Conditions	**2-1**
2.1) Background	2-1
2.2) Transportation and Land Use Characteristics	2-2
2.3) Historical Populations	2-2
2.4) Current and Future Populations	2-3
2.5) Historical Employment	2-5
2.6) Current and Future Employment	2-7
2.7) VISUM	2-7

SECTIONS	PAGE
Chapter 3 Public Participation	**3-1**
3.1) Overview	3-1
3.2) Kick-Off Meeting	3-1
3.3) MTP Surveys	3-2
3.4)Public Participation	3-2
3.5) Stakeholder Meetings	3-3
Chapter 4 Future Road Plan	**4-1**
4.1) Overview	4-1
4.2) Roadway Functional Classification	4-1
4.3) Congestion	4-4
4.4) Year 2035 Roadway System	4-4
4.5) Establishing Priorities in the FMPO	4-12
4.6) Major Thoroughfare Plan	4-12
4.7) Roadway Policies	4-12
4.8) Roadway Actions	4-13

FARMINGTON MPO
METROPOLITAN TRANSPORTATION PLAN

TABLE OF CONTENTS

SECTIONS	PAGE
Chapter 5 Transit Plan	**5-1**
5.1) Overview	5-1
5.2) Existing Transit Services	5-2
5.3) Current Red Apple Ridership	5-4
5.4) Greatest Transit Need	5-6
5.5) Transit Study Recommendations	5-10
5.6) Transit Expansion Beyond 2020	5-13
5.7) Transit Policies	5-13
Chapter 6 Bicycle/Pedestrian Plan	**6-1**
6.1) Overview	6-1
6.2) Purpose and Need	6-1
6.3) Goals and Objectives	6-2
6.4) Walking and Biking Improvements	6-3
6.5) Bicycle and Pedestrian Priorities	6-3
6.6) Bicycle and Pedestrian Policies	6-6
6.7) Bicycle and Pedestrian Recommended Standards	6-7
6.8) Bicycle and Pedestrian Funding Strategies	6-8
6.9) Bicycle and Pedestrian Implementation Strategies	6-9
6.10) Bicycle and Pedestrian Actions	6-11

SECTIONS	PAGE
Chapter 7 Other Modal Connections	**7-1**
7.1) Overview	7-1
7.2) Freight	7-1
7.3) NMDOT Freight Study	7-2
7.4) Future Freight Considerations	7-4
7.5) Air Cargo	7-4
7.6) Commuter Rail/Light Rail	7-5
7.7) Equestrian	7-5
Chapter 8 Safety	**8-1**
8.1) Overview	8-1
8.2) Roadway Safety	8-1
8.3) Intersection Safety	8-3
8.4) Bicycle and Pedestrian Safety	8-5
8.5) Safe Routes to School	8-8

FARMINGTON MPO
METROPOLITAN TRANSPORTATION PLAN

TABLE OF CONTENTS

SECTIONS	PAGE
Chapter 9 Security	**9-1**
9.1) Overview	9-1
9.2) San Juan County Emergency Operations Plan	9-1
9.3) Security Planning and the Role of the MPO	9-2
9.4) Security Goals and Strategies	9-3
9.5) Evacuation Planning	9-3
9.6) Transit Security	9-3
Chapter 10 Transportation Policies and Strategies	**10-1**
10.1) Overview	10-1
10.2) Transportation and Land Use	10-1
10.3) Environmental	10-3
10.4) System Preservation	10-5
10.5) Intelligent Transportation Systems	10-5

SECTIONS	PAGE
Chapter 11 Financial Plan	**11-1**
11.1) Overview	11-1
11.2) Funding Sources	11-2
11.3) Estimated Roadway Costs and Revenues	11-3
11.4) Approved Scenarios and Project Lists	11-3
11.5) Revenue Analysis	11-4
11.6) Operating Revenues	11-7
11.7) Transit Revenues	11-7
11.8) Potential Revenue Streams	11-8
Appendix A – Public Participation	A-1
Appendix B – Future Road Projects	B-1
Appendix C – Bicycle/Pedestrian Projects	C-1
Appendix D - Acronym List	D-1
Index	

FARMINGTON MPO
METROPOLITAN TRANSPORTATION PLAN

TABLE OF CONTENTS

MAPS	PAGE
Map -1-1 – Farmington MPO Map … … … … … … … … … …	1-3
Map 5-1 – Proposed Linear Route System in Farmington …	5-11
Map 5-2 – Proposed Regional Transit Route System … … …	5-12
Map 6-1 – Regional Bicycle/Pedestrian Improvements by Tier … … … … … … … … … … … … … … … … …	6-5
Map 7-1 – Truck Routes in the FMPO … … … … … … … … …	7-3
Map 9-1 – Identification of Evacuation Routes in the FMPO	9-4

FIGURES	PAGE
Figure 2-1 – Historical Population in San Juan County from 1970 to 2006 … … … … … … … … … … … … … … …	2-3
Figure 2-2 – Population Growth Components in San Juan County … … … … … … … … … … … … … … … … … …	2-4
Figure 2-3 – Historical Employment in San Juan County from 1970 to 2006 … … … … … … … … … … … … … … …	2-6
Figure 5-1 – Annual Ridership on Red Apple Transit … … …	5-4
Figure 8-1 – Number of Crashes by Entity … … … … … … …	8-2
Figure 8-2 – Pedestrian Crashes by Entity from 2004-2007…	8-7
Figure 8-3 – Pedestrian Crashes with Alcohol Involved by Entity from 2004-2007 … … … … … … … … … …	8-7

FARMINGTON MPO
METROPOLITAN TRANSPORTATION PLAN

TABLE OF CONTENTS

TABLES	PAGE
Table 1-1 – Goals and Objectives of the FMPO … … … … …	1-4
Table 2-1 – Future Population Growth … … … … … … … …	2-5
Table 2-2 – Future Employment Growth … … … … … … … …	2-6
Table 3-1 – Public Meeting held by the FMPO … … … … … …	3-2
Table 3-2 – FMPO Presentation to Local Organizations …	3-4
Table 4-1 – Functional Classification System … … … … … …	4-3
Table 4-2 – Priority Projects for the FMPO … … … … … … …	4-6
Table 5.1 – 2010 Greatest Transit Need … … … … … … … …	5-7
Table 5.2 – 2020 Greatest Transit Need … … … … … … … …	5-8
Table 5.1 – 2035 Greatest Transit Need … … … … … … … …	5-9
Table 6-1 – Tier 1 Regional Bicycle/Pedestrian Priorities in the FMPO … … … … … … … … … … … … … … … … …	6-4
Table 8-1 – Crash Rates by Entity (per thousand people) … … …	8-3
Table 8-2 – Road Intersections with the Most Crashes by Entity between 2005 and 2007 … … … … … … …	8-4
Table 8-3 – Number of Crashes Involving Bicyclists on the Local and Statewide Level in 2006 and 2007 …	8-5

TABLES	PAGE
Table 10-1 – Four Highest 8-Hour Average Ozone Readings 2007-2009 … … … … … … … … … … … … … … … …	10-4
Table 11-1 – Federal Funding and Local Contributions by Year … … … … … … … … … … … … … … … … … … …	11-5
Table 11-2 – Revenue Scenarios for Funding Future Transportation Projects … … … … … … … … … …	11-6
Table 11-3 – Future Transit Operating Revenues … … … …	11-7

ACKNOWLEDGEMENTS

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INTRODUCTION

The Metropolitan Transportation Plan (MTP), adopted by the Farmington Metropolitan Planning Organization (MPO), is the long-range transportation plan for the urbanized region that includes the Cities of Aztec, Bloomfield, and Farmington as well as parts of San Juan County. The Plan identifies future transportation investments, policies, goals, and strategies for all modes of transportation. Through the projections of where people will live and work, the plan strives to achieve a balance among all modes of travel, such as the automobile, public transit, pedestrian and bicycle, aviation, and freight.

The Metropolitan Transportation Plan identifies specific services and projects for each mode of travel in order to create a balanced transportation system and one that meets the transportation needs of the region through 2035. Similar to virtually every community across the nation, anticipated revenues are not sufficient to fund all of the transportation needs. Therefore, projects have been prioritized for implementation so that the Plan can respond to financial constraints required by law.

The Farmington MPO adopted its first Metropolitan Transportation Plan in April 2005. This update is a continuation of the guiding document that creates the region's transportation framework for the next 25 years. The Farmington MPO is the formal regional transportation planning forum and is responsible for carrying out federal transportation regulations in order to ensure a comprehensive, coordinated, and continuing transportation planning process.

1.1) BACKGROUND

The Farmington MPO is located in the northwest corner of New Mexico. The City of Farmington and the neighboring cities of Aztec and Bloomfield serve as the economic center for the Four Corners region. The MPO planning area is illustrated in Map 1-1. Several major highways connect this area to cities in New Mexico, Arizona, and Colorado. The total estimated population in 2008 within the MPO planning area is approximately 98,000 people.

The Federal transportation bill - Safe, Accountable, Flexible, and Efficient Transportation Equity Act - a Legacy for Users (SAFETEA-LU) - determines the planning activities of the MPO. SAFETEA-LU continues and enhances many of the planning guidelines set forth by the two previous transportation bills: ISTEA - Intermodal Surface Transportation Efficiency Act (1991) and TEA-21 - Transportation Equity Act for the 21st Century (1998). The MPO works in cooperation with the local entities, the New Mexico Department of Transportation, and the local transit operator to develop the federally mandated planning documents and activities.

1.2) VISION AND MISSION STATEMENTS

The Metropolitan Transportation Plan is shaped within the framework of the vision and mission statements for the MPO. These were developed in response to the planning factors outlined by SAFETEA-LU and in cooperation with the MPO Technical Committee, the MPO Policy Committee, and NMDOT.

Vision Statement
The Farmington Metropolitan Planning Organization vision is for a safe, efficient and reliable multi-modal transportation system that meets the needs of residents and visitors in the region.

Mission Statement
Provide a forum to develop an effective transportation system to move people and goods safely, economically and efficiently while maintaining a high quality of life.

1.3) FARMINGTON MPO GOALS and OBJECTIVES

Table 1-1 describes the goals and objectives identified by the MPO that help to support and achieve the Vision and Mission statements.

Map 1-1 – Farmington MPO Map

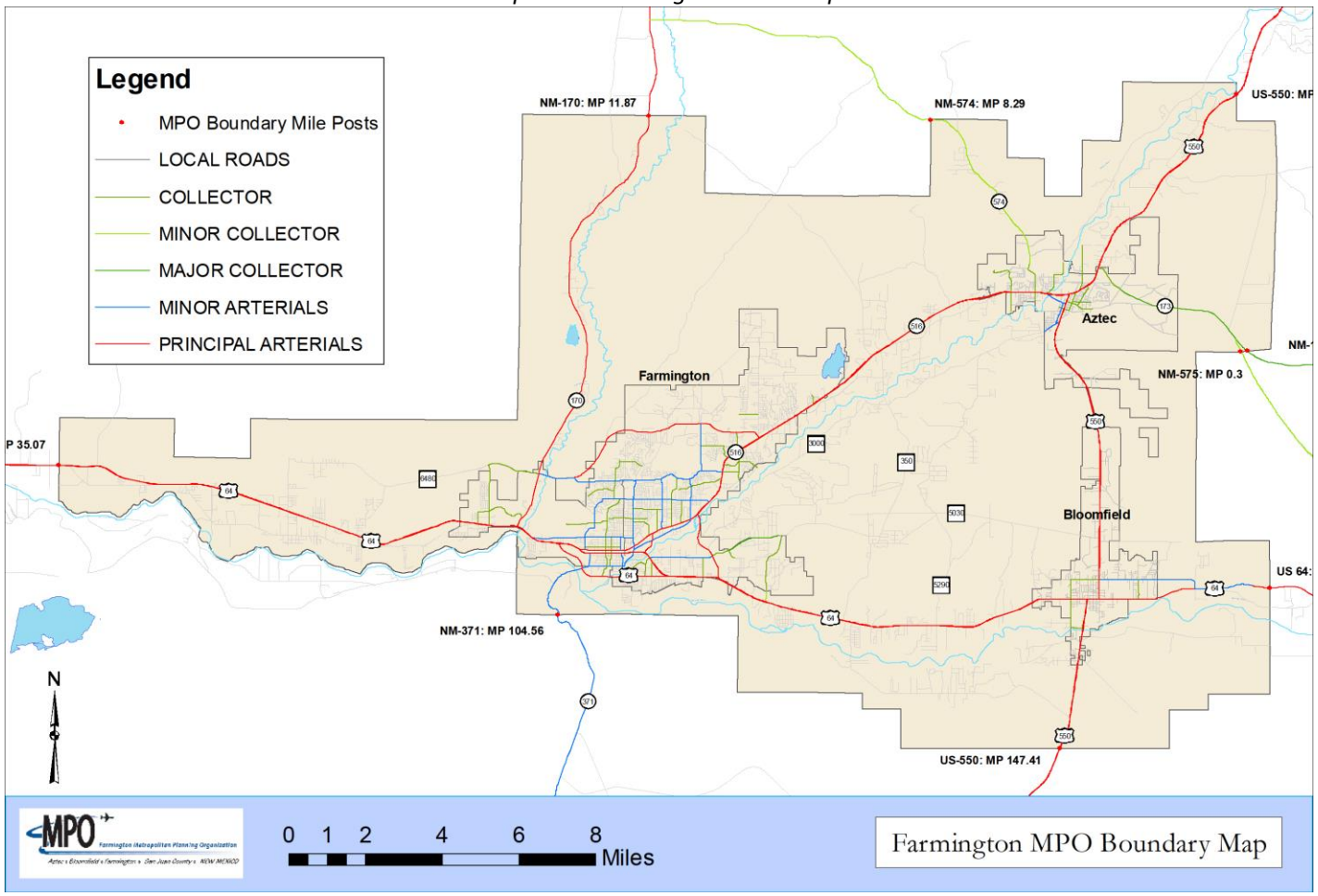


TABLE 1-1 – Goals and Objectives of the Farmington MPO

GOALS	OBJECTIVES
• Support the economic vitality of the MPO region by providing a balanced, multi-modal transportation system that moves people, goods and information safely, economically and efficiently.	1. Provide adequate land area and access for commercial opportunities to serve future population growth 2. Minimize congestion to improve delivery of goods and services
• Foster regional coordination and transportation system continuity	1. Maximize use of current transportation system 2. Involve local planners in the transportation planning process
• Develop and connect transportation systems and associated facilities into a cohesive intermodal system	1. Increase transit, bicycle and pedestrian connections
• Minimize congestion on the transportation system	1. Minimize congestion and minimize delay
• Provide reasonable access to services and jobs for all of the region's residents, regardless of age, income or disability	1. Increased multi-modal accessibility
• Minimize negative environmental impacts and enhance the environmental quality of the MPO region	1. Minimize air quality impacts 2. Minimize impacts to existing neighborhoods 3. Develop strategies to educate the public about how travel choices affect air quality
• Identify and develop funding sources adequate to build, operate and maintain the metropolitan transportation system	1. Minimize total transportation system costs 2. Maximize transportation system performance per project costs
• Identify and implement new technology for balanced multi-modal transportation	1. Improve multi-modal street design for high activity areas 2. Increase mode split
• Develop a transportation system that maintains and/or enhances the existing quality of life and works in concert with cultural and environmental resources and adopted local plans	1. Minimize access to adjacent developments along key arterials to maximize capacity
• Integrate transportation and land use planning to improve quality of life and to protect the natural environment	1. Encourage the local entities to integrate regional transportation policies into their adopted local plans
• Ensure public safety for all modes	1. Improve system safety through improved levels of service and reduced congestion 2. Promote safety design practices for all modes 3. Minimize emergency vehicle response time
• Coordinate with local agencies on security planning and strategies	1. Implement Intelligent Transportation Systems (ITS) technologies for improving the safety and security of transportation modes

1.4) RECENTLY COMPLETED REGIONAL PROJECTS

Some projects identified in the MTP adopted back in 2005 have been completed during the last five years. They include:

Roadway	Location	Description
Phase 1 of the US 64 Farmington to Bloomfield Project	Farmington	Intersection improvements at US 64/Browning Parkway and widening 0.5 miles east of the intersection.
US 550 (Main Ave)	Aztec	Travel lane reconfiguration, new parking lanes, sidewalk improvements
Piñon Hills Blvd	Farmington	Widening of road to 4 lanes from Butler to E. Main
Preliminary Engineering and Design	Farmington, San Juan County, Aztec	Piñon Hills Extension over Animas River from East Main to CR 3000 Upgrading CR 3900 from CR 3000 to CR 390 Phase 1A of the East Arterial Route in Aztec

Bicycle/Pedestrian	Location	Description
Sullivan Ave	Farmington	New bike lanes from Main Street to 20th Street
Piñon St.	Farmington	New bike lanes from Murray to Miller
Ruth Lane	Bloomfield	New bike lanes from US 64 to West Blanco Blvd
NM 516 & US 550	Aztec	Wide shoulders marked as bike routes within the City Limits
Ash St.	Aztec	New bike lanes from Llano to NM 516
Chaco St.	Aztec	New bike lanes from NM 516 to Ash St.
Rio Grande Ave	Aztec	New bike lanes from Blanco to US 550
US 64	Farmington	New sidewalks from Malta to Hillside (north side only)
San Juan Blvd	Farmington	New sidewalks from Butler to Main St.
West Blanco Blvd	Bloomfield	New sidewalks from US 550 to Ruth Lane
Pedestrian Bridge	Aztec	New bridge across the Animas River from Riverside Park to Hartman Park

In August 2006, Red Apple Transit created the Bloomfield Bobcat route from Orchard Plaza in Farmington to the Cultural Center in Bloomfield and headway times on the Farmington routes were reduced from one hour to 30 minutes. In December 2009, Road

Runner Transit, the transit authority for the Southern Ute Tribe, began service from Ignacio, Colorado to Aztec, New Mexico with a connection to the Red Apple Transit.

1.5) SAFETEA-LU PLANNING FACTORS

Federal guidance of MPO planning activities is achieved through the eight SAFETEA-LU planning factors. Examples of how the MPO can meet these factors are described as follows.

1) *Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency*.

Description Transportation decisions spur economic development by providing convenient access to jobs and making the system more reliable. Transportation projects also create local jobs.

MPO Actions

- Make accurate predictions regarding future employment growth and identify transportation projects to best serve these areas
- Seek transportation projects that reduce consumer cost and which in turn can stimulate the economy

2) *Increase the safety of the transportation system for motorized and nonmotorized users.*

Description Regardless of mode, residents and visitors must have proper facilities and amenities to reach destinations safely.

MPO Actions

- Retrofit existing corridors using access management techniques
- Provide key pedestrian amenities at critical intersections
- Adopt Complete Streets policies to facilitate proper street design

3) *Increase the security of the transportation system for motorized and non-motorized users.*

Description In the event of an emergency, the transportation system must be able to accommodate the needs of people. The MPO should seek to bring together transportation decision makers and emergency personnel to coordinate security plans.

MPO Actions

- Identify critical transportation facilities for evacuation planning
- Provide a forum for security and transportation agencies to coordinate prevention strategies

4) *Increase the accessibility and mobility of people and for freight.*

Description Destinations that are easily accessible help reduce travel time and transportation related costs. Transportation should make it convenient to reach neighborhoods and public locations. Mobility is typically measured by distance covered and travel speed.

MPO Actions

- Provide mode choice for improving travel options
- Maintain mobility on regional corridors through access management principles

5) *Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.*

Description Transportation plans must consider their impact to the environment and quality of life. Transportation and land use planning plays an integral role in reducing sprawl and reinforcing the importance of a centralized economic business district.

MPO Actions

- Expand transit, bicycle, and walking options for system users
- Integrate local land use planning strategies into the development of transportation plans

6) *Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.*

Description A well-balanced transportation system enables users to transfer between modes and does not require complete dependence on one mode, particularly the automobile.

MPO Actions
- Ensure walking and biking facilities are connected to transit stops
- Develop intermodal facilities between air and freight for the efficient movement of goods

7) *Promote efficient system management and operation.*

Description Existing infrastructure should be optimized through the implementation of systems and projects that preserve capacity and improve security, safety, and reliability.

MPO Actions
- Develop programs and strategies for arterial management, signal synchronization, and traffic incident management to reduce congestion and delay
- Implement Intelligent Transportation Systems (ITS) elements for optimal traffic operations

8) *Emphasize the preservation of the existing transportation system.*

Description System preservation can reduce costs and improve the life spans of existing infrastructure.

MPO Actions
- Preserve right-of-way (ROW) for future expansion of existing roadways
- Preserve future corridors for future facilities before land is developed
- Enact pavement preservation strategies for roads and bridges before serious repair is needed

1.6) LIVABILITY PRINCIPLES

In 2009, the US Department of Transportation (USDOT), Housing and Urban Development (HUD), and the Environmental Protection Agency (EPA) created an interagency partnership to help improve access to affordable housing, to provide more transportation options, and to lower transportation costs while protecting the environment in communities nationwide. This partnership has

developed six livability principles as a way to coordinate federal transportation, environmental protection, and housing investments. These principles are factored into many of the goals and policies identified in this document.

1) ***Providing more transportation choices***
   MPO Actions:
   - Make stronger investments in multi-modal transportation
   - Identify expansion routes for Red Apple Transit to serve more population and employment areas
   - Fund regional and local bicycle/pedestrian projects to develop a network that links neighborhoods, jobs, and recreational destinations

2) ***Expanding access to affordable housing, particularly housing located close to transit***
   MPO Actions:
   - Identify new transit service in the vicinity of existing affordable housing
   - Continue to construct sidewalks and bike facilities in neighborhoods with high concentrations of affordable housing

3) ***Enhancing economic competitiveness-–giving people access to jobs, education and services as well as giving businesses access to markets***
   MPO Actions:
   - Encourage local planning agencies to promote in-fill development which helps cluster businesses together and maximizes the efficiency of existing transportation infrastructure
   - Designate freight corridors and truck routes that efficiently distribute local goods

4) ***Targeting federal funds toward existing communities to spur revitalization and protect rural landscapes***
   MPO Actions:
   - Place emphasis on road projects that improve conditions within urban cores
   - Fund transit-oriented development and facilities that promote walking and biking

5) ***Increasing collaboration among federal, state, and local governments to better target investments and improve accountability***

MPO Actions:

- Encourage participation from representatives of all levels of government for the development of local and regional priorities
- Work with NMDOT to program and fund prioritized projects

6) ***Valuing the unique qualities of all communities--whether urban, suburban, or rural***

MPO Actions:

- Provide convenient transportation choices for accessing local national monuments and landmarks
- Protect the rural landscape of this area by reducing sprawl and encouraging system preservation strategies

EXISTING AND FUTURE POPULATION & EMPLOYMENT CONDITIONS

METROPOLITAN TRANSPORTATION PLAN

2

EXISTING & FUTURE CONDITIONS

2.1) BACKGROUND

To effectively plan for the next 25 years it is essential that a determination of the area's base year demographics (population, household size, employment, household income, and land use) is firm. It is necessary to look at how the local economy is affected by periods of national recession. Does the local economy slow or decline during a national recession, or does it appear unaffected? This will ensure that the future projections based on the base year's demographics are focused and accurate. The MPO used 2008 as the base year for the Metropolitan Transportation Plan (MTP) update. Various federal and state government data sources were used for the population and employment forecast totals for the Farmington MPO region. All long-term trends in population, employment, and real personal income have been analyzed and adjusted for inflation.

When developing future travel patterns one needs to achieve a comfort level with the demographic totals used in the development process. The tendency is to be more comfortable with the recent trends. When the economy is doing well, the tendency is to select an optimistic forecast. The tendency to select a conservative forecast usually occurs if the current or most recent trend is decreasing or flat. However, economies are circular in nature and upturns and downturns tend to counteract each other over a 20 or 30-year time span. For the MTP update staff annualized growth rates over a 25 year window for long term demographic projections.

2.2) TRANSPORTATION and LAND USE CHARACTERISTICS

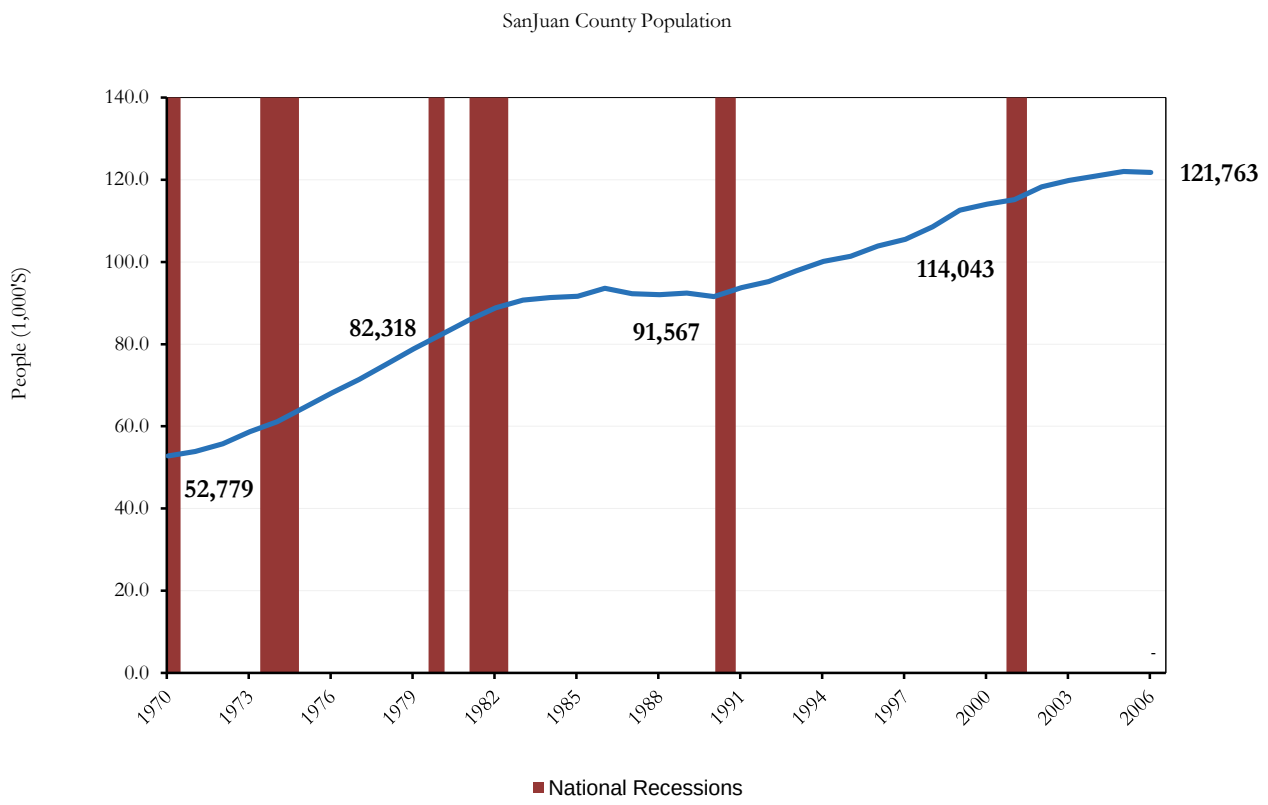
The interaction between transportation and land use go hand in hand. Whether the land use is residential, commercial, industrial, or other types, the activities that occur in each land use form the basis of trip making and travel demand. Typically, residential areas produce trips and employment areas will attract trips. To connect these areas, travel choice is influenced by several factors, such as distance, cost, and transportation modes that are available. Part of the update process requires estimates and assumptions about future land use developments and new transportation options that will best serve future travel demand.

2.3) HISTORICAL POPULATIONS

From 1970 to 2006 the San Juan County population grew by 68,984 people, a 131% increase in population over a 36 year span (Figure 2-1). This population increase translates into an annual rate of increase of 2.3%. When comparing San Juan County over the last 36 years to New Mexico and the United States, population growth in San Juan County outpaced that of the State and the nation, 131% vs. 90% and 47% respectively.

In 2008 the total population for the Farmington MPO was approximately 98,000. The population distribution by entity shows that Aztec and Bloomfield have approximately 8,100, and 7,500 respectively. The City of Farmington has approximately 45,000 and the urbanized areas (a group of census blocks which have a population density of at least 1,000 people per square mile) of San Juan County have 38,500 within the MPO Boundary. Population within the MPO boundary represents about 80% of the total population within the county.

Figure 2-1 – Historical Population in San Juan County from 1970 to 2006



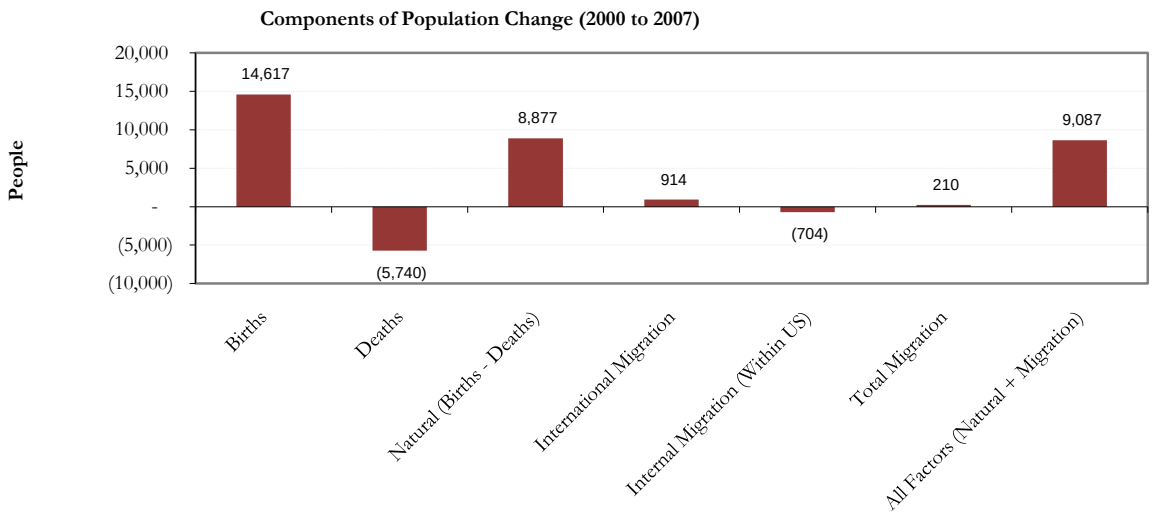
2.4) CURRENT and FUTURE POPULATION

The process for forecasting future growth in population and employment is not an exact science. To evaluate the population change within San Juan County and ultimately within the MPO region, various components of population change are taken into account. Total population growth is measured by the natural growth plus total migration. Natural growth is defined by the total number of births less total deaths, and total migration is defined as the change in international and domestic migration (Figure 2-2). By

understanding the components of population growth, insight can be gained into the cause of the growth (or decline). The total population within the Farmington MPO was derived from the total population of San Juan County.

Population numbers were originally obtained through data mining techniques that gathered San Juan County socio-economic information from 1970 to 2008. Once this information was gathered the information was graphically produced using the software program ArcGIS to visually display the growth patterns and then reviewed by each member entity. The information was also presented to other stakeholder groups and the numbers were then adjusted to reflect proposed annexation, future developments and other factors such as the lack of utilities and other inhibiting factors. The Farmington MPO population ranges from 80-85% of the total San Juan County Population (Table 2-1). This method ensures that the population is capped.

Figure 2-2 – Population Growth Components in San Juan County



Population numbers after the year 2015 were also furthered constrained by future assumed conditions which would limit the growth rate of the future population within the MPO boundary. Some of the assumed growth restrictions were the lack of developable land, the existing topography, archeological sites, current zoning and lack of transportation and utility infrastructure. An inhibiting growth factor was developed to reflect the constrained conditions, allowing the model to allocate the remaining population to the portions of San Juan County outside of the MPO boundary.

TABLE 2-1 – Future Population Growth

Jurisdiction	2008 Population	2015 Population	2020 Population	2030 Population	2035 Population
Aztec	7,600	8,127	8,473	9,083	9,367
Bloomfield	7,561	9,985	10,422	11,196	11,557
Farmington	45,038	51,929	54,147	58,072	59,900
San Juan County (within the MPO)	38,444	49,273	51,304	54,897	56,571
MPO Total	**98,643**	**119,314**	**124,346***	**133,248***	**137,395***
San Juan County (whole county)	110,973	131,245	141,754	154,568	160,752

*Population growth was constrained within the MPO boundary due to available land, zoning, archaeological sites and natural topography.

While area-wide demographic control totals were readily available, these figures needed to be disaggregated to census tracts and eventually to the TAZ - Traffic Analysis Zone (a geographical cluster of similar land uses) level for use in the travel demand model. It should be noted that the disaggregation process will produce an estimate of what may happen in the future; there is no way to predict the occurrence of unforeseeable changes that would affect the future distribution of population.

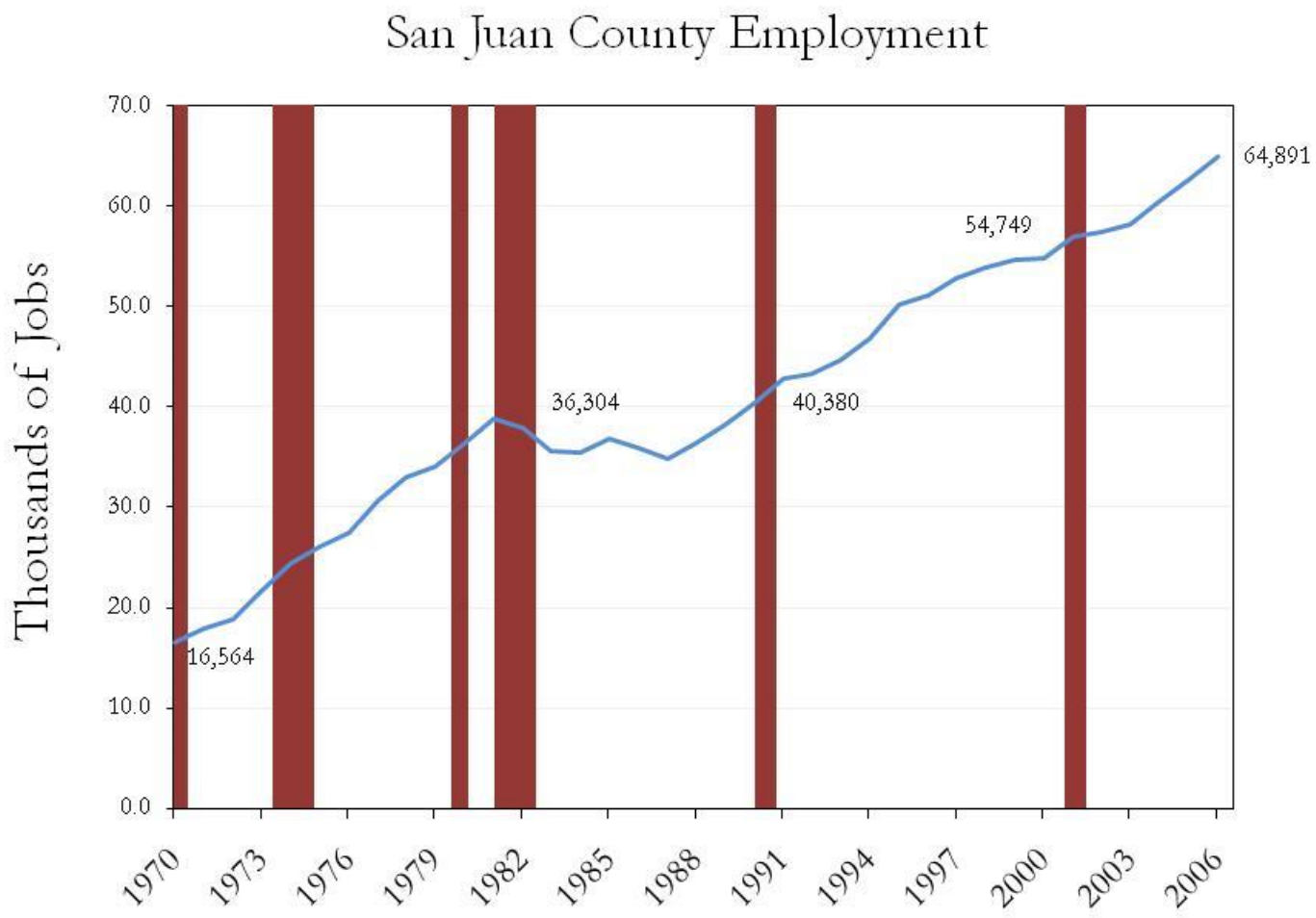
2.5) HISTORICAL EMPLOYMENT

To better understand the economic profile within the FMPO boundary, staff looked at two main economic components:

1. Industry employment and
2. Occupation employment within each industry (staffing patterns)

Staff then developed and evaluated historical employment trends, which were used in its employment projections. This was done by looking at the detailed Quarterly Census Employment and Wages Report (QCEW) for San Juan County and aggregating the data to each individual TAZ. The time series is the foundation for developing industry employment projections which reflect 25 years of historical data and a smaller 6 year window, from 2000-2006, of industrial trends (Figure 2-3). It illustrates what is likely to happen, excluding major changes from past trends.

Figure 2-3 – Historical Employment in San Juan County from 1970 to 2006



2.6) CURRENT and FUTURE EMPLOYMENT

The Farmington Metropolitan Planning Organization statistically accounts for approximately 85 percent of the County's economic production.

TABLE 2-2 – Future Employment Growth

Jurisdiction	2008 Employment	2015 Employment	2020 Employment	2030 Employment	2035 Employment
Aztec	4,254	4,517	4,963	5,909	6,522
Bloomfield	4,229	4,490	4,933	5,874	6,484
Farmington	36,324	38,566	42,374	50,452	55,691
San Juan County (within the MPO)	12,781	13,570	14,910	17,752	19,596
Total	**57,588**	**61,143**	**67,180**	**79,987**	**88,293**
San Juan County (whole county)	67,378	75,962	84,284	104,135	116,203

2.7) VISUM

VISUM is a travel demand modeling software that provides a reasonable and disaggregated forecast of travel patterns. VISUM combines employment, residence location, and transportation networks in a single comprehensive package embedded in a Geographic Information Systems (GIS) environment. The model allocates the total employment, households, and land use for an area into its sub-regional component zones. This allocation is made possible by using regional trends, transportation facility descriptions, and data on current locations of employment and households. This model incorporates a connection between land use and the transportation system.

The required data for the VISUM model runs include current population and employment by place of work, travel times between zones and current land use information. In order to develop this data as input into the model, staff acquired a computerized parcel and database file from the San Juan County Assessor Office. The files were merged and the information grouped to reflect land use types throughout the

FMPO boundary. Land use checks were performed by aerial photos and windshield surveys by staff.

Staff then analyzed potential land use changes by meeting with local stakeholders and using local area knowledge of on-going developments. Staff also collected data from the Cities of Aztec, Bloomfield and Farmington and the San Juan County to assess near term growth patterns in the area.

Since the travel demand model requires population and employment by traffic analysis zones (TAZs), the final forecasting output was at the TAZ level. The control totals for FMPO were approved by the MPO Policy Board in June 2009.

The model runs were performed for the 2008 base year and for the 2035 forecast year. Several scenarios were run to indicate potential change in traffic volumes and patterns if new, identified roadways were built. The demographic forecasting output at the traffic analysis zone level for each future year increment is the result of an evaluation process through the MPO Technical Committee. Concurrence by each member entity on future demographics was necessary prior to commencement of any subsequent model run. Concurrence ensures minimizing duplication of effort in data development and maximizes local confidence in demographic forecasts. Additionally as future population and economic trends progress attention to scenario planning activities will need to take place as each entity develops and grows to ensure support of the development of the Metropolitan Transportation Plan.

How do you forecast 2035 traffic volumes and evaluate improvements?

Forecasting traffic volumes typically involves three basic steps:

- *Trip Generation:* Based on existing and forecast socioeconomic data including the number of dwelling units and employment by category, the model estimates trips by trip type, such as work trips. The socioeconomic data is aggregated to the TAZ level. By comparing base year trip generation to forecast 2035 trip generation, one can see the estimated growth in trip activity within the area.
- Trip Distribution: The trip distribution process examines the relationship between where trips are produced or generated in relationship to where they are attracted or the destination end of the trip. As an example, a Home Based Work Trip begins at the residence and travels to the place of work..
- *Trip Assignment:* This is the process where the trip distribution patterns are assigned to various routes between where the trip originates and its destination. The model recognizes that as the roadways fill up, congestion might occur and that alternate routes might be more attractive for assignment.

In review of the various deficiencies and needs, several improvements were tested to determine which improvements best addressed future conditions. The model is designed to provide performance summaries of each improvement in terms of vehicle miles of travel, congestion, and delay. Using the model, various improvements were compared to one another to determine which improvements best addressed the region's future needs.

PUBLIC PARTICIPATION

METROPOLITAN TRANSPORTATION PLAN

3

PUBLIC PARTICIPATION

3.1) OVERVIEW

The public participation plan outlines a process for involving the public in the transportation planning process. The plan also allows for the Farmington MPO to meet the requirements of Safe, Accountable, Flexible, Efficient Transportation Equity Act - a Legacy for Users (SAFETEA-LU), which calls for a "proactive public involvement process that provides complete information, timely public notice, full public access to key decisions, and supports early and continuing involvement of the public in developing plans." Through the public involvement program and detailed technical analysis, transportation needs were identified and consensus was developed on system improvement strategies. A good public participation plan allows planners to identify and understand aspects of the transportation system directly from the users, the general public. This process was integrated into the overall development of the MTP update. A summary of public comments received during the MTP update process is found in Appendix A.

3.2) KICK-OFF MEETING

In November 2008 shortly after the MTP update process started, the MPO hosted a kick-off public meeting to introduce the public to the various elements that would be analyzed and developed. The presentation explained what the MTP is and how the public can play an integral part in its development. Further discussion explained the planning process with regards to roadways, transit, bicycle/pedestrian, and other issues.

3.3) MTP SURVEYS

MPO residents were invited to participate in the development of the MTP by completing two surveys. Through March and mid-April of 2009, the MPO issued two surveys to solicit public input on general travel characteristics, public transit services, and improvements needed for our regional transportation system. Overall, 639 surveys were received: 248 were transit surveys and 391 were surveys on general transportation characteristics and needed improvements. The surveys were available through a link on the MPO website and paper copies were provided at many public destinations including libraries, city halls and community centers. A summary of the survey results is provided in Appendix A.

Top transportation improvements identified by the public included:

- More sidewalks and bicycle facilities
- Engineering improvements
- Signal synchronization
- Expanding the transit system
- Making transit service more convenient for travel

3.4) PUBLIC PARTICIPATION

Public meetings were held at various locations at key points in the development of the plan (Table 3-1).

TABLE 3-1 - Public Meetings held by the Farmington MPO

WHEN	WHERE	WHAT
November 12, 2008	MPO Office, 100 W. Broadway	Open House presentation introducing the MTP Update
February 18, 2009	Farmington Public Library	Identification of needed improvements for all modes
February 19, 2009	Aztec Commission Chambers	Identification of needed improvements for all modes
February 23, 2009	Bloomfield Cultural Center	Identification of needed improvements for all modes
August 11, 2009	Farmers Market, Farmington	Identification of the public's preferred improvements
August 12, 2009	Connie Mack World Series, Ricketts Park	Identification of the public's preferred improvements
August 14, 2009	San Juan County Fairgrounds, McGee Park	Identification of the public's preferred improvements
August 26, 2009	San Juan College Graphics Art Court	Identification of the public's preferred improvements
August 26, 2009	San Juan College Health & Human Performance Center	Identification of the public's preferred improvements

WHEN	WHERE	WHAT
January 25, 2010	San Juan College Graphics Art Court Bloomfield Cultural Center	Present the draft MTP document
January 26, 2010	Aztec Public Library	Present the draft MTP document
January 27, 2010	Farmington Public Library	Present the draft MTP document

The MPO website was continually updated with new information, maps, and data as it was prepared by staff, reviewed by the entities, and approved by the Policy Committee. Quarterly newsletters summarized key accomplishments during the development of the update.

3.5) STAKEHOLDER MEETINGS

During the MTP update, staff met with several stakeholders to seek input and provide information on the development of the plan. Some of the stakeholder groups included:

- Northwest Regional Planning Organization (NWRPO)
- San Juan Center for Independence (SJCI)
- Local Councils and Commissions
- Navajo Nation DOT
- New Mexico Environmental Department (NMED)
- San Juan County Office of Emergency Management

MPO Staff was asked by several organizations to give presentations on the MTP Update (Table 3-2). These presentations were targeted to the audiences and allowed staff to hear specific concerns from members of these public groups.

TABLE 3-2 - Farmington MPO Presentations to Local Organizations

WHEN	WHERE	WHAT
April 8, 2009	Northwest New Mexico Seniors, Farmington	An MPO Overview was presented to the members at the Northwest New Mexico Seniors Meeting. Surveys were handled out to members to take back to their agencies and have patrons fill them out.
April 25, 2009	Earth Day Event - Aztec Ruins	The MPO had a booth to educate the public on the Bicycle Pedestrian Plan.
April 27, 2009	Elks Lodge, Farmington	The MPO was invited to present a description of projects and programs that the MPO administers in order to meet federal requirements.
May 5, 2009	San Juan Center for Independence-Farmington	An MPO Overview and a discussion on transit was presented to the San Juan Center for Independence, which is a community based nonprofit agency that was established by people with disabilities for people with disabilities.
May 27, 2009	Kiwanis Club - Farmington Meeting	The MPO Planner presented an overview of the public survey results for the MTP Update.
May 30, 2009	SRTS Bike Rodeo - San Juan College, Farmington	MPO Staff set up an information booth with pamphlets relating to the Bicycle/Pedestrian Plan, the Access Management Plan, and the MTP.
October 19, 2009	San Juan Center for Independence-Farmington	Presentation on an initial needs assessment and identification of transit expansion routes for Red Apple Transit.

FUTURE ROADWAY PLAN

METROPOLITAN TRANSPORTATION PLAN

4

FUTURE ROAD PLAN

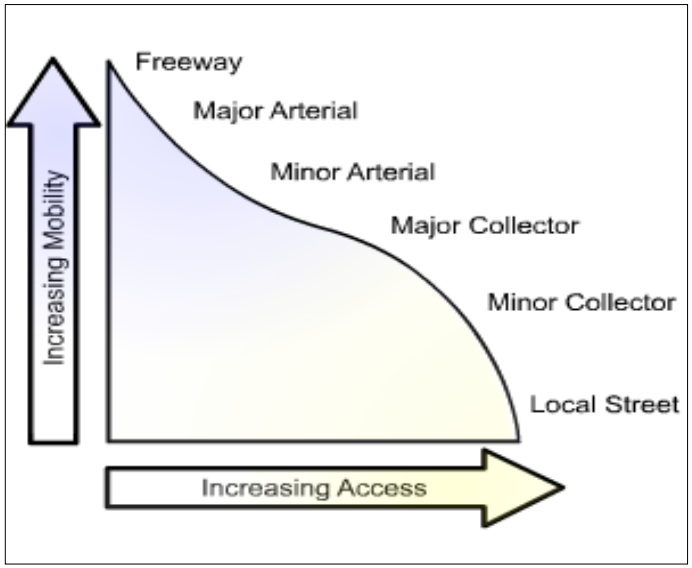
4.1) OVERVIEW

The future roadway plan is based on determining new improvements to meet the needs of projected population and employment growth. As more growth occurs, new infrastructure is needed to serve these areas or to provide relief to existing facilities that may be experiencing congestion and delay. Improvements to existing infrastructure are also needed for system preservation.

Through its coordination with the local entities, NMDOT, and the general public, the MPO identified several new road projects and road improvements. Through an alternatives analysis, future population and employment growth, these new road options were studied to determine their benefits. The road options were grouped into various scenarios, giving the MPO and its entities flexibility to adapt to changing factors that may influence the selection of regional priorities. The recommended projects and improvements described later in this chapter are expected to address the area's most critical roadway needs in the future. Policies and actions are identified in order to guide development of the future road system.

4.2) ROADWAY FUNCTIONAL CLASSIFICATION

The MTP is primarily concerned with regionally significant roadways that will be built or expanded using federal funding sources. These roadways are part of the "functionally classified roadway system." A functionally classified roadway system allows for urban streets to be grouped by their purpose or function. There are three main functions for urban streets:



1. Movement of traffic,
2. Distribution or collection of traffic, and
3. Provide access to terminal points.

Principal Arterial streets are intended to have the highest mobility for long distance travel and connecting cities. Minor Arterial streets support the principal arterial system by providing a moderate level of mobility with some access to surrounding land use. Collector and local streets primarily provide access to public facilities and neighborhoods. Each class of urban street serves as a collection device for the next lower class of street. The functional classification system is further defined in Table 4-1.

The purpose for using the functional classification system is to help determine which roadways should be included in a regional transportation system. Furthermore, functionally classified roadways describe the various levels of vehicular mobility. Using functional class in the transportation planning process ensures that adjacent land uses and local development are compatible with both existing and future transportation needs.

TABLE 4-1 – Functional Classification System

FUNCTIONAL CLASS	DESCRIPTION	FUNCTION	PURPOSE
Urban Principal Arterial (UPA)	The Urban Principal Arterial provides the greatest mobility for through movements and forms an integrated network without stub connections for long distance, intercity/cross town travel. It shall have designated access points.	Mobility with limited access points	Serves the major centers of activity in a metropolitan area and serves intra- and inter-regional trips. Provides access to major traffic generators.
Urban Minor Arterial (UMA)	The Urban Minor Arterial interconnects with and augments the urban principal arterial system. It is intended for trips of moderate lengths. It shall have designated access points with a reduced spacing requirement.	Maintain mobility while providing access points	Provide intra-community connectivity but ideally should not penetrate identifiable neighborhoods.
Urban Collector (UCol)	The Urban Collector distributes trips between the arterial system and the local road network.	Access & Mobility for connecting all types of roads	Provide land access & traffic circulation for residential and commercial neighborhoods
Rural Principal Arterial (RPA)	The Rural Principal Arterial provides minimal interference to through movements for long distance trips. It handles a high percentage of heavy commercial vehicles and forms an integrated network without stub endings except where unusual geographic conditions exist. It is part of the critical transportation infrastructure.	Mobility with limited access points	Provides access to important traffic generators and major cities not served by the Interstate; provides access to inter-modal facilities.
Rural Minor Arterial (RMA)	The Rural Minor Arterial provides a high level of mobility and minimizes interference to through movements. It forms an integrated network without stub endings except where unusual geographic conditions exist.	Maintain mobility	Provide inter-county access; used for long distance trips.
Rural Major Collector (RCol)	The Rural Major Collector connects urban areas with populations over 5,000 and tends to collect traffic from local roads to rural minor arterials.	Maintain mobility while providing access points	Serve traffic generators typically of intra-county importance and serves trips between low density residential & commercial areas.
Rural Local (RLoc)	The Rural Local collects traffic from local roads to rural major collectors and has the lowest traffic volumes. This classification has been defined by the Farmington MPO for access management purposes.	Dual function of maintaining mobility and providing access	Serves small population centers and provides access to residences and businesses

4.3) CONGESTION

Congestion occurs when roadways do not have sufficient carrying capacity to meet the demand for traffic loading onto the roadway. The term "capacity" refers to the ability of a street to carry traffic, which is a function of actual space on the roadway and is determined by the number of lanes, lane width, percent of slope, length of left or right turn bays, on-street parking, percent of truck and bus traffic, number of pedestrians or cyclists, and signal timing and phasing. For travel demand modeling purposes, capacity was defined in terms of the number of lanes, functional classification and area type. Congestion for the MPO region was defined as the volume over capacity ratio greater than 0.78 and based on the output from the travel demand model.

Level Of Service	*Description*
A	Free Flow
B	Reasonable Free Flow
C	Stable conditions, but noticeable congestion
D	Approaching capacity
E	At capacity, unstable conditions
F	Failing, above capacity, heavy congestion

Traffic conditions are described in terms of level of service (LOS) with the levels ranging from LOS A, the best, to LOS F, the worst. Level of service C is generally considered the design level of service, while LOS D is generally considered as the acceptable limit during peak hours. Level of service E is typically at or near the capacity of the roadway or intersection and generally involves unacceptable delays.

4.4) YEAR 2035 ROADWAY SYSTEM

The future year (2035) roadway system was developed using an extensive public involvement process and technical analysis. Working from the current functionally classified roadway system as an overall framework, a future year roadway network was developed. Arterials and collector streets in the MPO study area comprise the future year roadway networks.

The Federal Highway Administration (FHWA) is actively encouraging and supporting scenario planning. FHWA believes that scenario planning can help citizens, businesses, and government officials understand the impacts of growth, especially the relationship between transportation and the social, environmental and economic development of regions. FHWA sees scenario planning as an enhancement of, not a replacement for, the traditional transportation planning process. It enables communities to better prepare for the future. Scenario planning highlights the major forces that may shape the future and identifies how the various forces might interact, rather than attempting to predict one specific outlook. As a result, regional decision makers are prepared to recognize various forces to make more informed decisions in the present and be better able to adjust and strategize to meet tomorrow's needs.

Scenario planning is a new effort for the Farmington MPO region. Scenario planning enhances the traditional transportation planning process by raising the awareness of citizens and decision makers of the factors that affect growth and impact the regional transportation system. Scenario planning was initiated to engage residents and policy makers in a discussion of the region's future growth and development patterns.

After a technical analysis of all projects identified during the update process, the MPO has agreed that the focus for road improvements should continue to be between the three cities and through the Crouch Mesa area of San Juan County (the triangle of unincorporated land among the three cities). Five scenarios were approved by the MPO to meet the needs of these areas. Within the scenarios, six critical regional projects were identified. The five approved scenarios include combinations of these six projects. The scenarios provide flexibility to the entities to adapt to factors that influence transportation decisions, such as changes in land use and zoning, demographic shifts, cost estimates, and expected revenues.

Other road projects identified in the MTP update process are included in Appendix B. These projects will remain as secondary needs in the event that priorities change or additional funding opportunities become available.

Table 4-2 describes project details for the six regional priorities for the MPO region. The five approved roadway scenarios are illustrated on pages 4-7 to 4-11.

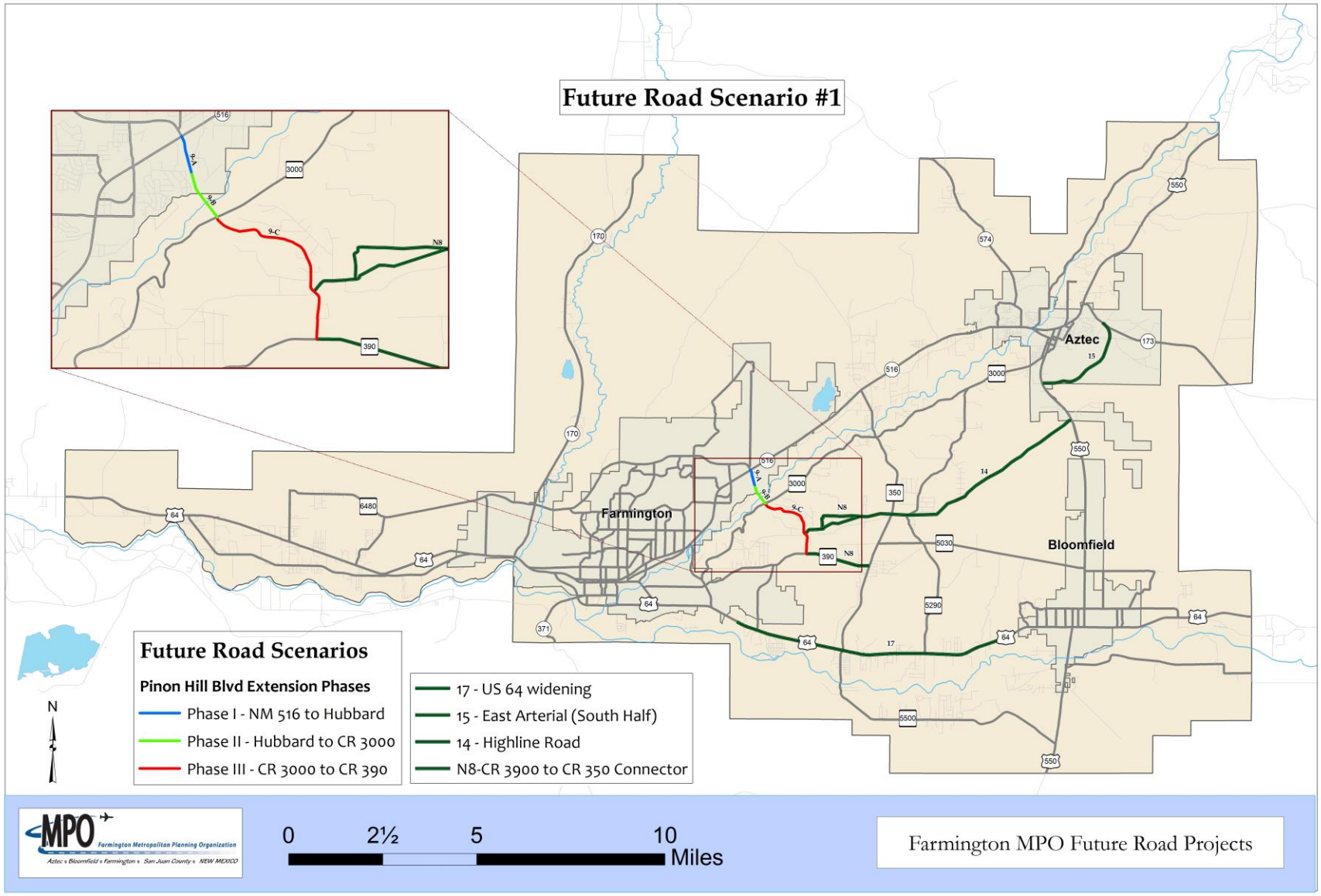
Note: Project #9, which was treated as one project at the time scenarios were run, was amended to projects 9A, B, & C in December 2014 to reflect project phasing that was required by NMDOT. As of December of 2014: ***Project #9A****- Construction of this project (Control No. F100100) is scheduled for early 2015.* ***Project#9B****- This project is at 90%*

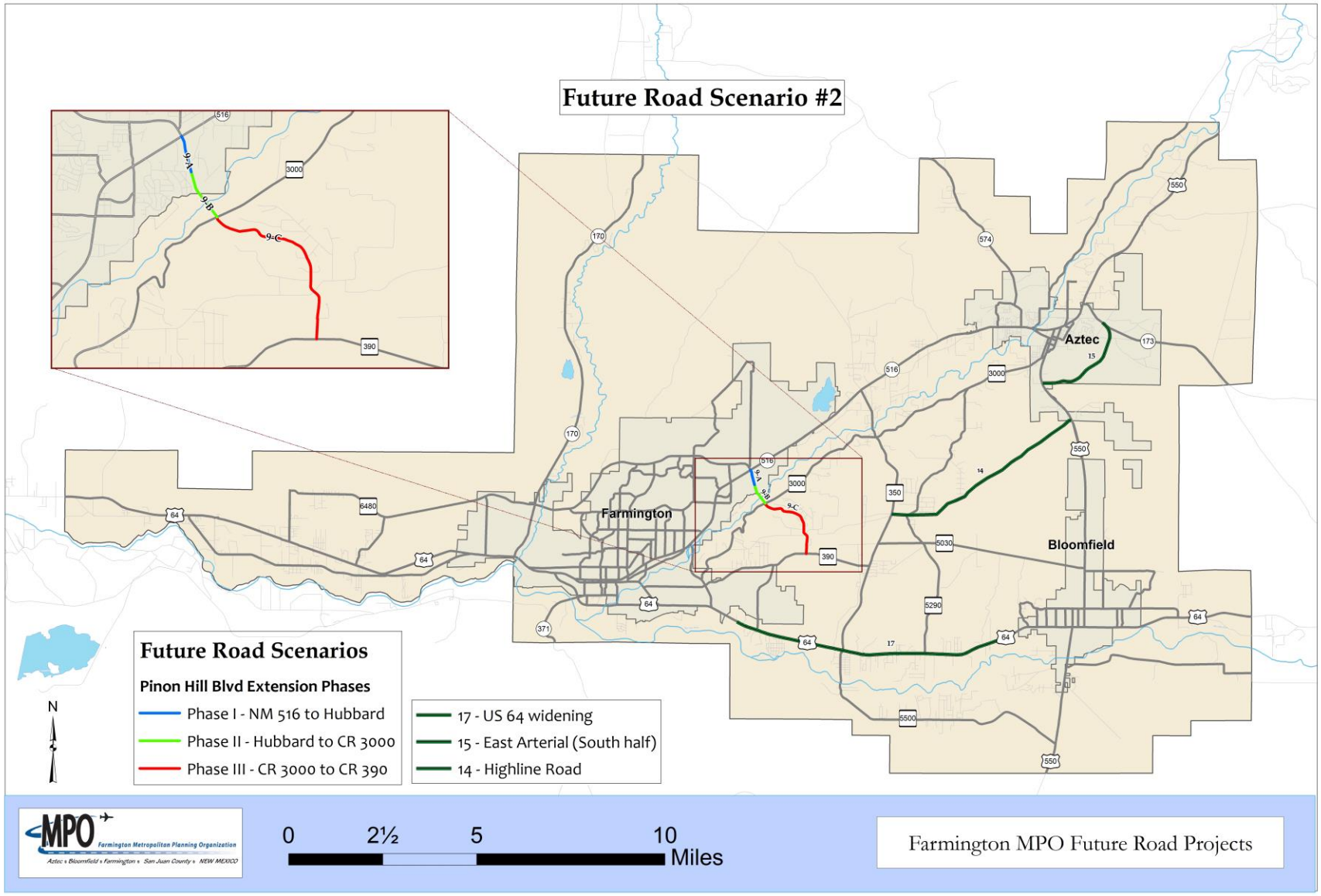
Facility & Location	Scenario #1	Scenario #2	Scenario #3	Scenario #4	Scenario #5
#9A, B, & C - Piñon Hills Extension/CR 3900 – East Main to CR 390	X	X	X	X	X
# 17 - US 64 widening – Browning Pkwy to US 550	X	X		X	
# 15 - East Arterial (south) – US 550 to NM 173	X	X	X	X	X
# 16 - East Arterial (north) – NM 173 to US 550				X	X
# 14 - Highline Road – CR 350 to US 550	X	X	X	X	X
# N8 - Piñon Hills Ext to CR 350 Connector	X			X	X

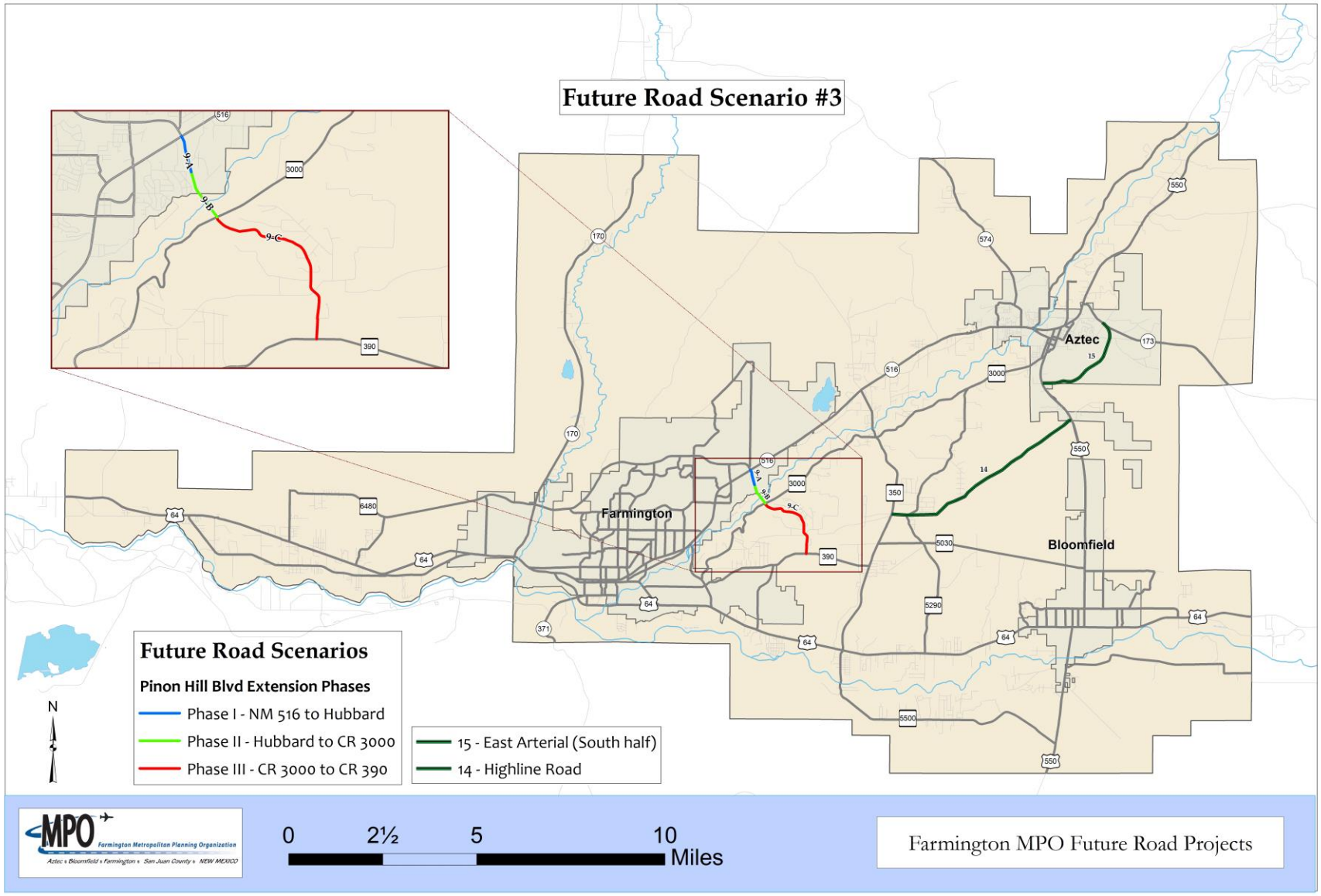
Design (approved by NMDOT), has 100% of ROW acquired, and has a draft environmental report, all funded by State of New Mexico and City of Farmington funds. Final Design is planned for FFY 2017. ***Project #9C****- San Juan County secured FHWA funding ($1.3 million) for a portion of this project in FFY2008 (CN F100020) for environmental and engineering services, final design, and right-of-way/easement acquisition. The total amount of FHWA funds expended is $917,849.*

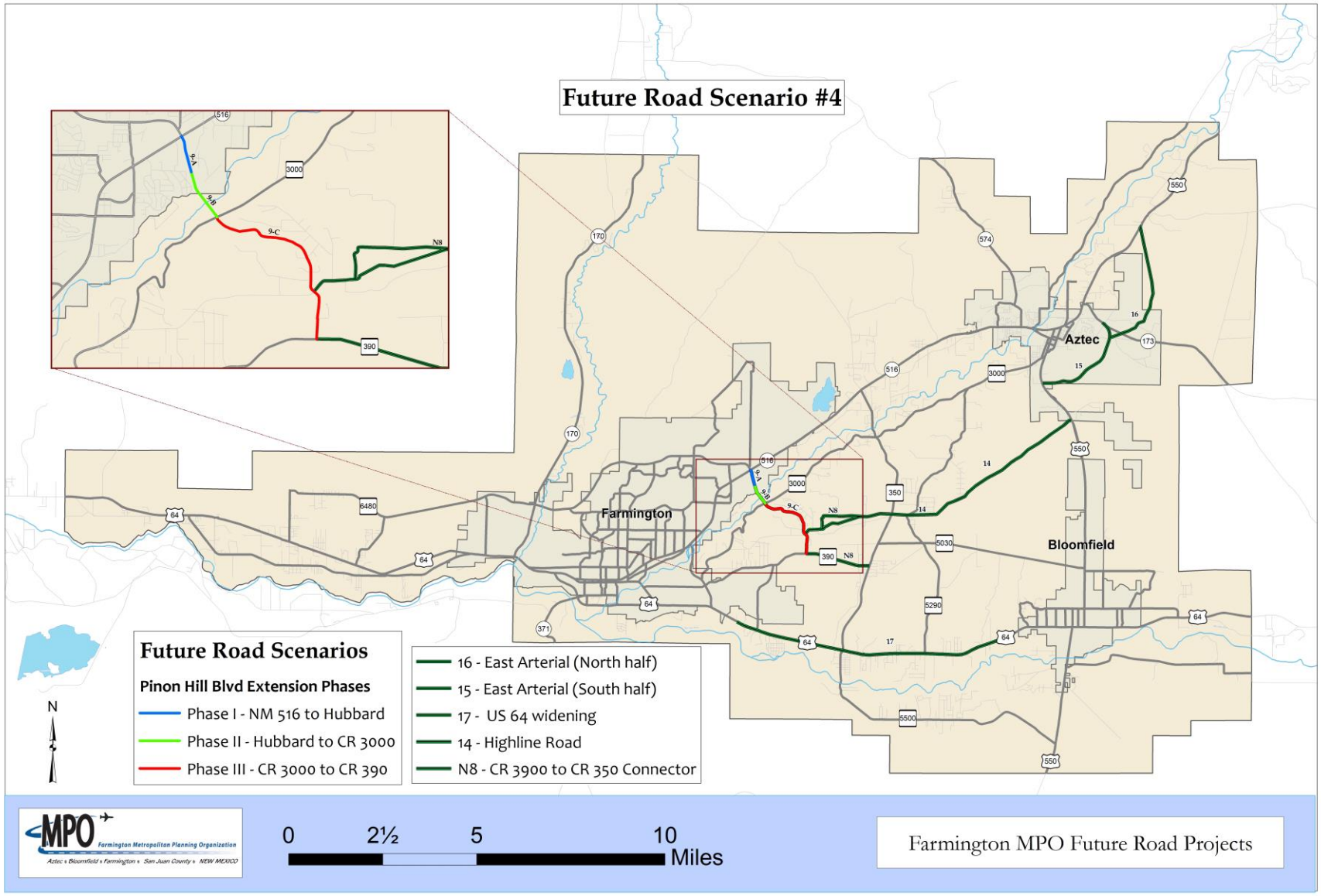
TABLE 4-2 – Priority Projects for the Farmington MPO

	Map Num	Facility Name	Termini	Project Description	Functional Class	Jurisdictions	Regional Significance	Other Comments	Length (feet)	Est. Project Cost
TIER 1 PROJECTS	17	US 64 Farmington to Bloomfield	1.5 mi. east of Browning Pkwy to Bloomfield City Limit	Widen to 6 lanes; implement access management; install traffic signals	Principal Arterial	Farmington, Bloomfield, County	Major east-west arterial; developing economic corridor	Phase 1 complete; Phase 2 has committed funding; Phase 3 partial funding programmed for 2012 & 2013	36960	$65,000,000
	9A	East Pinon Hills Blvd Extension (Phase I)	NM 516 to Hubbard	Full rebuild of the Intersection of Piñon Hills and NM 516; Extension of Piñon Hills Blvd to include earthwork, asphalt, street lighting, drainage improvements and signalization upgrades.	Principal Arterial (other)	Farmington	Improves access for Crouch Mesa area to East Main; relieves congestion on connecting principal arterials.	Improves network effeciency by reducing travel distance between river crossings at Browning Parkway and CR 350.	4440	$4,155,000
	9B	East Pinon Hills Blvd Extension (Phase II)	Hubbard to South Side River Road (CR 3000)	Includes earthwork, asphalt, intersection lighting, bridges over the Animas River and oxbow, drainage improvements, environmental mitigation.	Minor Arterial	Farmington, County	Improves access for Crouch Mesa area to East Main; relieves congestion on connecting principal arterials.	Improves network effeciency by reducing travel distance between river crossings at Browning Parkway and CR 350.	7340	$14,250,000
	9C	East Pinon Hills Blvd Extension (Phase III)	South Side River Road (CR 3000) to CR 390	Includes earthwork, asphalt, intersection lighting, drainage improvements, environmental mitigation.	Minor Arterial	County	Improves access for Crouch Mesa area to East Main; relieves congestion on connecting principal arterials.	Improves network effeciency by reducing travel distance between river crossings at Browning Parkway and CR 350.	11620	$8,250,000
	15	East Arterial (South)	US 550 to NM 173	Construct new 2 lane road (preserve ROW for 2 additional lanes)	Proposed Principal Arterial	Aztec	Direct heavy truck traffic away from downtown; create bike/ped friendly environment	Funding has been secured for Phase 1A & 1B	14784	$18,700,000
	14	Highline Road	CR 350 to US 550	Construct new 2 lane road	Proposed Principal Arterial	All	New east-west arterial to support regional network	Will distribute traffic to/from Crouch Mesa; connects PHB Ext. to East Arterial	27880	$14,987,142
	N8	Pinon Hills Blvd Extension to CR 350 Connector	Corridor to be determined	Construct a facility to connect Pinon Hills Blvd Extension to Highline Rd	Proposed Minor Arterial	County	Complete an east-west segment for improved traffic distribution		8980	$4,164,027
	16	East Arterial (North)	NM 173 to US 550	Construct new 2 lane road (preserve ROW for 2 additional lanes)	Proposed Principal Arterial	Aztec	Direct heavy truck traffic away from downtown	Continues relief route for heavy truck traffic and pass-through travel	19025	$11,031,837
									Estimated Total:	**$140,538,006**


Future Road Scenario #1
Farmington
Aztec
Bloomfield
Future Road Scenarios
Pinon Hill Blvd Extension Phases
Phase I - NM 516 to Hubbard
Phase II - Hubbard to CR 3000
Phase III - CR 3000 to CR 390
17 - US 64 widening
15 - East Arterial (South Half)
14 - Highline Road
N8-CR 3900 to CR 350 Connector
N
0
2½
5
10
Miles
Farmington MPO Future Road Projects


Future Road Scenario #2
Farmington
Aztec
Bloomfield
Future Road Scenarios
Pinon Hill Blvd Extension Phases
Phase I - NM 516 to Hubbard
Phase II - Hubbard to CR 3000
Phase III - CR 3000 to CR 390
17 - US 64 widening
15 - East Arterial (South half)
14 - Highline Road
N
0
2½
5
10
Miles
Farmington MPO Future Road Projects


Future Road Scenario #3
Aztec
Farmington
Bloomfield
Future Road Scenarios
Pinon Hill Blvd Extension Phases
Phase I - NM 516 to Hubbard
Phase II - Hubbard to CR 3000
Phase III - CR 3000 to CR 390
15 - East Arterial (South half)
14 - Highline Road
N
0
2½
5
10
Miles
Farmington MPO Future Road Projects


Future Road Scenario #4
Aztec
Farmington
Bloomfield
Future Road Scenarios
Pinon Hill Blvd Extension Phases
Phase I - NM 516 to Hubbard
Phase II - Hubbard to CR 3000
Phase III - CR 3000 to CR 390
16 - East Arterial (North half)
15 - East Arterial (South half)
17 - US 64 widening
14 - Highline Road
N8 - CR 3900 to CR 350 Connector
N
0
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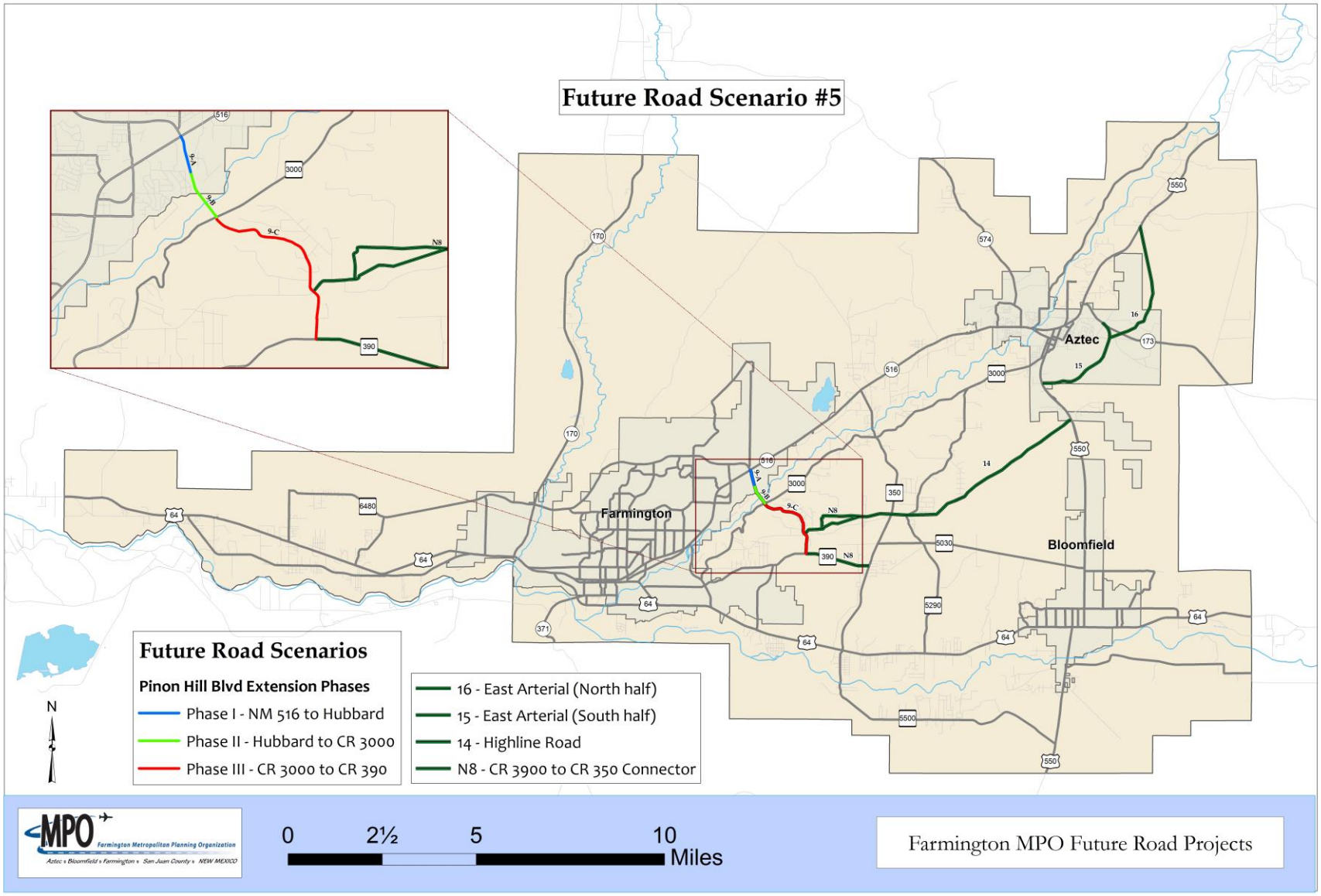
Miles
MPO
Farmington Metropolitan Planning Organization
Aztec • Bloomfield • Farmington • San Juan County • NEW MEXICO
Farmington MPO Future Road Projects


Future Road Scenario #5
Farmington
Aztec
Bloomfield
Future Road Scenarios
Pinon Hill Blvd Extension Phases
Phase I - NM 516 to Hubbard
Phase II - Hubbard to CR 3000
Phase III - CR 3000 to CR 390
16 - East Arterial (North half)
15 - East Arterial (South half)
14 - Highline Road
N8 - CR 3900 to CR 350 Connector
N
0
2½
5
10
Miles
Farmington MPO Future Road Projects

4.5) ESTABLISHING PRIORITIES IN THE FARMINGTON MPO

Upon adoption of the MTP, the six regional roadway projects described above are established as priorities by the Farmington MPO. Initial analysis has shown that these new roadway projects can provide relief to existing state-owned highways by redistributing traffic volumes and patterns. New road facilities also provide the opportunity for implementing walking and biking facilities which can be difficult due to ROW constraints on existing infrastructure. Performing cost/benefit analyses will become essential to show the importance of investing federal funding into these new regional priorities.

The MPO will work in cooperation with NMDOT to secure federal funding for these projects for further planning and engineering analysis and eventually for construction. These projects will be incorporated into the Transportation Improvement Program (TIP) and Statewide Transportation Improvement Program (STIP) so that the project development process can be started.

4.6) MAJOR THOROUGHFARE PLAN

The area's current regional road network is composed primarily of Principal and Minor Arterial streets and provides the necessary transportation support and access to and from local land uses. Since many corridors are constrained from acquiring additional right-of-way, much of the future demand will likely have to be accommodated through a better connected and more efficient arterial street system.

During development of the MTP, many current and future roadways were identified that could become part of a Major Thoroughfare Plan for the Farmington MPO. As a by-product of the MTP development process, a Farmington MPO Major Thoroughfare Plan will need to go through a collaborative process in which all member entities review and agree to the existing and future expansion of the classified roadway network. Once a Major Thoroughfare Plan is adopted by the MPO Policy Committee it will then need to be adopted by each member entity's governing body. A Major Thoroughfare Plan that is adopted by all member entities will allow for corridor preservation and will lead towards a coordinated and cooperative implementation of future roadway projects. With an adopted thoroughfare plan, local planning staffs and developers can make better decisions about the expansion of commercial and residential development that integrates transportation and land use planning.

4.7) ROADWAY POLICIES

Developing and maintaining a comprehensive network of streets and highways that supports the needs of automobile, transit, bicycle, and pedestrian traffic is critical to reducing congestion, improving safety, and increasing mobility within the MPO region. As population and employment continue to grow in the Farmington Metropolitan Area, a higher burden will be placed on the transportation system. The proposed policies below will assist in developing the best transportation system for the area:

- All new arterial roads shall be controlled using access management standards
- Develop a roadway system that is compatible with the needs of other modes such as bicycles, pedestrians, public transportation and truck freight
- Consider safety in the project selection process
- Require land developers to preserve the necessary right-of-way in future travel corridors
- Require private developer contributions in roadway construction in undeveloped areas through the development process
- When approving new land development, ensure that internal, connecting and adjacent streets are able to handle the expected type and intensity of development that is proposed
- Implement access management strategies found within the FMPO Access Management Plan to improve safety and traffic flow
- The MPO should establish a regional major thoroughfare plan, approved by the entities, that indicates future roads and the preservation of ROW for these corridors
- Develop a Complete Streets policy

4.8) ROADWAY ACTIONS

In order for the regional system to support the needs of the community and provide acceptable level of service, a number of broad actions are needed. These actions create proactive opportunities to address future transportation concerns.

- Develop access management corridor plans for system preservation and major retrofit projects, such as for 20th Street and Main Street in Farmington and NM 516 and US 64
- Develop access management corridor plans for new roads, such as the East Arterial and Highline Rd
- Intersection data collection, such as turn movement counts
- Develop intersection design standards and signal timing plans
- Signal progression analysis for new developments
- Level of Service (LOS) standards for functionally classified roads

TRANSIT PLAN

5.1) OVERVIEW

Transit service, whether fixed-route or demand-responsive, is intricately linked to many other governmental and planning actions. Providing fixed-route transit service relies upon and reacts to the density of development within the city, locations of transportation corridors and activity centers, and the design of developments along the corridors and centers it serves. Travel corridors and activity centers with a mix of uses and a large number of travelers provide the demand that can effectively support higher levels of transit service.

A balanced, multi-modal transportation system sometimes requires shifts in public investment given the historical emphasis on roadways and automobiles. To facilitate a higher level of transit service in the region, new developments and land use patterns should be planned in such a way as to support the non-automobile modes.

Ridership on Red Apple Transit continues to increase each year as the system becomes an integrated part of daily commuting. Due to this growth in the MPO region, the MPO and Red Apple Transit worked with a consultant to conduct a transit needs assessment and evaluation of the current system. The Red Apple Transit Study was completed in January 2011 and provided short and long term recommendations for how transit can expand its services to meet future demand.

5.2) EXISTING TRANSIT SERVICES

Red Apple Transit, owned and operated by the City of Farmington, is the primary transit service in the MPO region. Within the city limits of Farmington, two loop routes (Red and Green Routes) operate counter-clockwise and serve several apartment complexes, neighborhoods, and public destinations. A third route (Express Route) operates along the East Main corridor to serve the mall and many of the big box retailers. For all three routes, bus stops are found at specific locations. Buses run from 7am to 6pm Monday through Saturday. All routes are on 30 minute headways.

Red Apple Transit also runs three regional routes that connect Farmington to Aztec, Bloomfield, and the community of Kirtland. These routes too have specific stops and connect to the Farmington routes at Orchard Plaza as a transfer point. The regional routes only operate three times a day: early morning, mid-day, and late afternoon.

Navajo Transit serves the Farmington area with two routes and provides connections to Shiprock and other places on the Navajo Nation. Navajo Transit has two transfer points with Red Apple Transit at American Plaza in Farmington and in Kirtland.

Red Route Bus Stops	Green Route Bus Stops	Express Route Bus Stops
Orchard Plaza	Orchard Plaza	Orchard Plaza
Conquistador	Library	Museum At Gateway
San Juan Apt.	Apple Ridge	Mall
San Juan Career	Smith's	Grocery Warehouse
San Juan College	Airport	Wal-Mart – Sam's Club
Social Security	Police Department	Plaza Farmington
28th/Crescent	Northgate Apt.	K-Mart
Smith's	Wal-Mart-West	
Mesa Shopping	Safeway-West	
Senior Center	Civic Center	
Civic Center	PMS Clinic	
Mesa Village Apt.	Totah (Ojo Court)	
San Juan Energy	San Juan Regional	
MOC	State Building	
Ricketts Park/Aquatic Center	Butler/Murray	
	Scott Ave.	

Aztec Tiger Route Bus Stops
Animas Village Apartments
Aztec Safeway
Westside Plaza
Flora Vista Circle K
Orchard Plaza Transfer Location

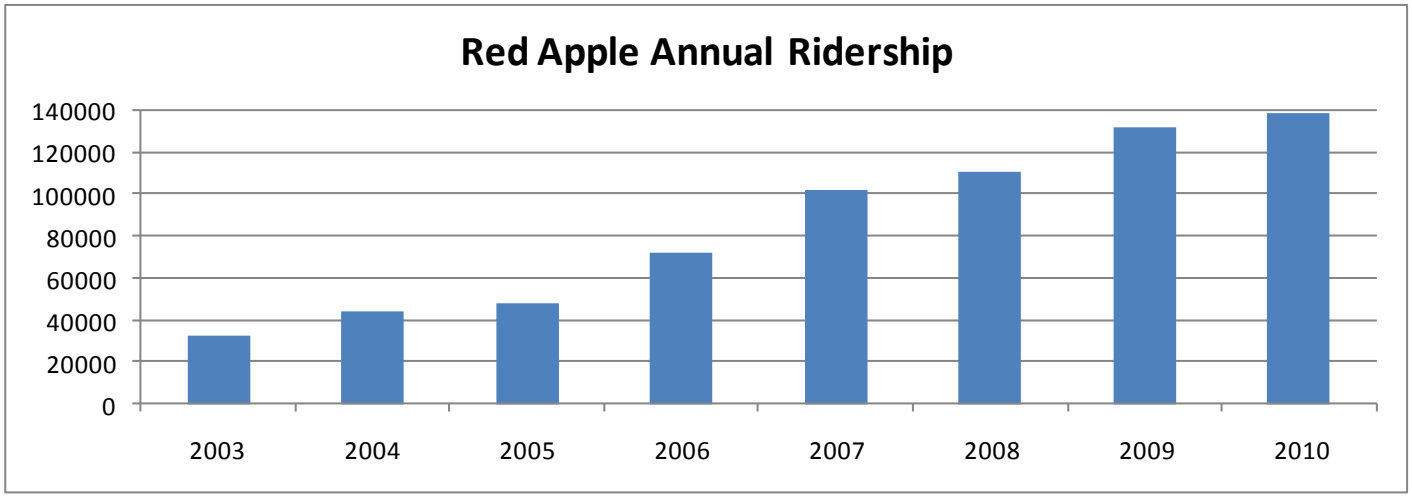
Bloomfield Bobcat Route Bus Stops
SJRMC Ambulance Station
Bloomfield Cultural Center
Pinos Blancos Apartments
McGee Park
SJC Detention Center
Wildflower Drive
Orchard Plaza Transfer Location

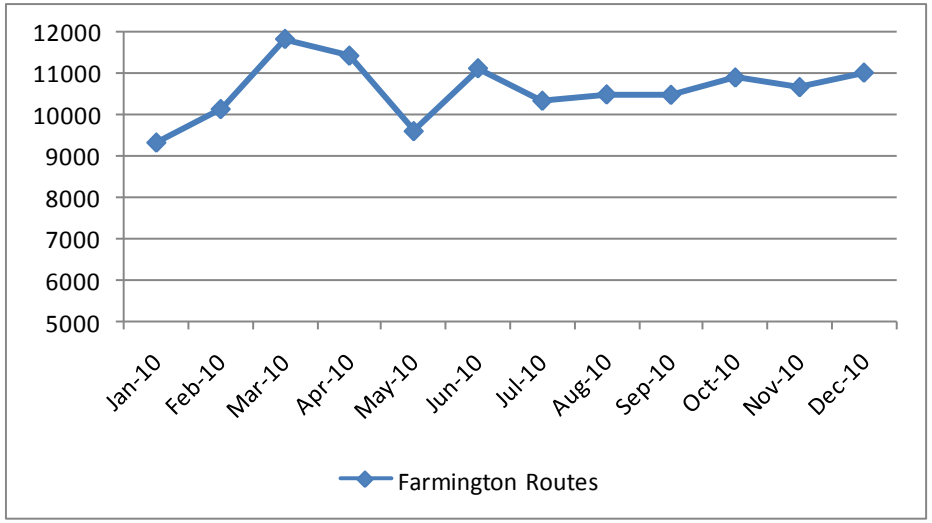
Kirtland Bronco Route Bus Stops
Central Center Kirtland
Mesa Mobile Home Park
Orchard Plaza Transfer Location

5.3) CURRENT RED APPLE RIDERSHIP

Annual ridership for Red Apple has steadily increased since 2003 (Figure 5-1). Monthly ridership reports provided by Red Apple show the change in ridership as the year progresses. There tends to be seasonal trends that affect ridership month to month. In 2010, ridership on the Farmington routes totaled 121,840. Ridership on the Kirtland route was 3,244, the Aztec route was 2,464, and the Bloomfield route was 4,986. The Aztec and Bloomfield routes witnessed a decline from 2008 to 2009, whether because it has reached its service threshold or economic factors have reduced those who need to take the bus.

FIGURE 5-1 – Annual Ridership on Red Apple Transit




12000
11000
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Aug-10
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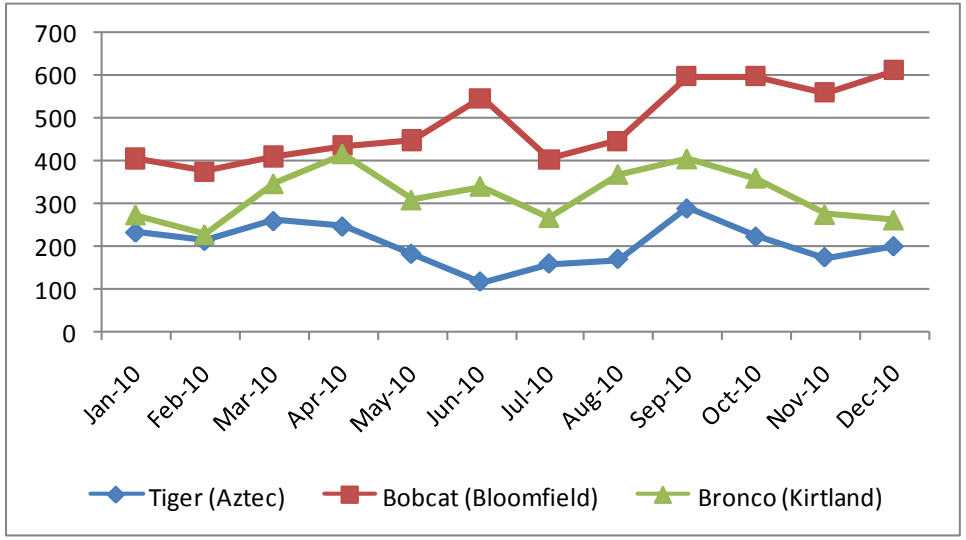
Oct-10
Nov-10
Dec-10
Farmington Routes


700
600
500
400
300
200
100
0
Jan-10
Feb-10
Mar-10
Apr-10
May-10
Jun-10
Jul-10
Aug-10
Sep-10
Oct-10
Nov-10
Dec-10
Tiger (Aztec)
Bobcat (Bloomfield)
Bronco (Kirtland)

5.4) GREATEST TRANSIT NEED

Certain population types tend to use transit more often than the choice rider; in other words, those who are transit dependent are more likely to use the system than those who own a personal automobile. Those population types that are typically transit dependent include those younger than 18, the elderly, those with a disability, households that do not own a vehicle, and low-income households. Census 2000 data provides these populations by census tract.

During development of the transit study, this information was collected for analysis to better understand where the focus of transit service should be. The data for these population types was compared to total population of these census tracts to determine a percentage of the total population. These percentages were then ranked within each type. The ranks from all of the population types were scored to establish an overall rank. The highest score indicates the greatest transit need. Greatest transit need was developed for 2010, 2020 and 2035 (Table 5-1 through 5-3). When comparing the three years of data, certain census tracts began to rise to the top because they had large numbers of these population types:

- Areas in central and south Farmington
- The north and west areas of Crouch Mesa
- The northwest and southwest areas of Bloomfield

Using data by Traffic Analysis Zone (TAZ), staff grouped population and employment data to project where the largest areas of growth are expected to occur in 2020 and 2035. The data were developed as a way to gauge locations of high concentrations of population and employment. Besides further growth within the three cities, Crouch Mesa and Kirtland will become the fastest growing areas within the MPO.

Table 5-1 – 2010 Greatest Transit Need

Census Tract	Census Block Group	Land Area (sq.ml.)	Zero-Vehicle Hhlds #	Zero-Vehicle Hhlds Density	Zero-Vehicle Hhlds rank	Total # of Hhlds #	Total Number of Elderly 60 & over #	Total Number of Elderly 60 & over Density	Total Number of Elderly 60 & over rank	Mobility-Limited Population #	Mobility-Limited Population Density	Mobility-Limited Population rank	Below-Poverty Population #	Below-Poverty Population Density	Below-Poverty Population rank	Overall Score (4-20)	Final (1-5)	Total Population (Persons) #
1	1	0.73	0	0	1	89	35	49	2	28	38	3	34	47	2	8	3	248
1	2	0.94	71	75	5	621	220	234	4	143	152	4	546	581	5	18	5	1,823
1	3	1.65	32	19	3	455	243	147	3	88	53	3	239	145	3	12	4	1,332
1	4	2.36	9	4	2	650	140	59	2	171	72	3	631	267	3	10	3	1,833
1	5	0.36	56	156	5	278	138	383	4	66	183	5	189	526	5	19	5	735
2.01	1	2.42	17	7	3	454	188	78	3	34	14	2	0	0	1	9	3	1,237
2.01	2	2.59	6	2	2	869	297	115	3	127	49	3	118	46	2	10	3	2,415
2.02	1	5.48	0	0	1	800	414	76	3	23	4	1	28	5	1	6	2	2,488
2.02	2	3.05	9	3	2	495	178	58	2	16	5	1	39	13	2	7	2	1,389
2.02	3	0.40	0	0	1	272	127	317	4	73	183	5	21	52	2	12	4	705
2.04	1	0.88	0	0	1	215	139	158	3	0.00	0.00	1	0.00	0.00	1	6	2	653
2.04	2	1.03	38	37	4	676	239	232	4	123	120	4	397	385	4	16	4	2,000
2.05	1	0.44	18	42	4	635	220	500	5	89	203	5	278	633	5	19	5	1,585
2.05	2	0.22	22	100	5	400	53	239	4	109	494	5	74	339	4	18	5	1,158
2.05	3	0.57	137	240	5	728	155	272	4	38	66	3	643	1,129	5	17	5	1,879
2.05	4	1.32	83	63	4	1,109	386	292	4	112	85	4	508	385	4	16	4	3,057
3.01	1	0.31	12	39	4	780	238	768	5	87	280	5	359	1,158	5	19	5	1,767
3.01	2	0.22	9	39	4	424	259	1,177	5	20	89	4	55	250	3	16	4	1,067
3.01	3	0.26	7	28	3	347	112	432	4	9	33	3	98	376	4	14	4	1,035
3.01	4	0.37	137	370	5	867	435	1,175	5	117	317	5	156	422	4	19	5	1,897
3.02	1	0.23	15	64	4	497	270	1,173	5	60	260	5	160	695	5	19	5	1,291
3.02	2	0.12	0	0	1	303	187	1,557	5	29	244	5	56	468	4	15	4	737
3.02	3	0.15	35	236	5	359	99	659	5	6	41	3	154	1,026	5	18	5	780
3.02	4	0.27	17	63	4	458	179	665	5	87	321	5	271	1,004	5	19	5	1,159
4.01	1	0.45	0	0	1	508	260	578	5	37	81	4	20	43	2	12	4	1,375
4.01	2	0.58	15	25	3	614	398	686	5	83	143	4	62	107	3	15	4	1,630
4.01	3	2.64	103	39	4	811	192	73	3	128	49	3	585	222	3	13	4	2,134
4.01	4	0.12	13	112	5	324	212	1,770	5	73	611	5	96	804	5	20	5	807
4.02	4	0.89	79	89	5	725	128	144	3	100	112	4	519	583	5	17	5	1,868
4.02	5	0.85	74	88	5	703	465	547	5	145	171	4	404	475	4	18	5	1,775
5.01	1	5.74	40	7	3	839	214	37	2	126	22	2	580	101	3	10	3	2,800
5.01	2	145.62	28	0	1	814	176	1	1	61	0	1	253	2	1	4	1	2,459
5.02	1	3.44	10	3	2	633	242	70	2	109	32	3	174	51	2	9	3	1,966
5.02	2	8.66	13	2	2	1,167	279	32	2	178	21	2	672	78	3	9	3	4,168
5.02	3	56.49	15	0	1	181	36	1	1	26	0	1	95	2	1	4	1	542
5.02	4	6.79	31	5	2	584	187	27	2	113	17	2	391	58	2	8	3	1,939
6.01	1	0.59	44	75	5	614	191	324	4	59	99	4	280	474	4	17	5	1,576
6.01	2	15.98	15	1	2	589	275	17	1	104	7	1	94	6	1	5	2	1,717
6.01	3	8.86	67	8	3	896	310	35	2	71	8	1	396	45	2	8	3	2,201
6.01	5	94.60	8	0	1	494	213	2	1	39	0	1	128	1	1	4	1	1,439
6.05	1	25.36	7	0	1	1,032	499	20	1	240	9	1	345	14	2	5	2	2,876
6.05	2	13.86	17	1	2	451	230	17	1	74	5	1	62	4	1	5	2	1,149
6.05	3	2.00	8	4	2	454	194	97	3	37	19	2	280	140	3	10	3	1,895
6.05	4	1.91	11	6	3	408	203	106	3	74	39	3	162	85	3	12	4	1,172
6.06	1	18.27	97	5	2	1,612	477	26	2	285	16	2	532	29	2	8	3	4,634
6.06	2	17.83	12	1	2	965	267	15	1	98	5	1	388	22	2	6	2	3,332
6.06	3	1.82	0	0	1	471	236	129	3	70	38	3	495	272	3	10	3	1,274
7.02	2	107.75	0	0	1	284	124	1	1	64	1	1	14	0	1	4	1	856
7.03	1	320.63	39	0	1	835	345	1	1	228	1	1	303	1	1	4	1	2,575
7.03	2	1.99	35	18	3	603	210	106	3	154	77	4	128	64	2	12	4	1,521
7.03	3	6.15	28	4	2	1,048	371	60	2	105	17	2	479	78	3	9	3	2,873
7.04	1	20.36	24	1	2	1,213	490	24	2	216	11	2	649	32	2	8	3	3,800
7.04	2	5.30	31	6	3	1,120	390	74	3	199	38	3	630	119	3	12	4	3,385
7.04	3	0.84	31	37	4	735	319	379	4	164	195	5	260	310	4	17	5	2,141
9430	1	186.10	76	0	1	767	200	1	1	257	1	1	1,084	6	1	4	1	3,221
9432	1	46.90	45	1	2	1,243	313	7	1	185	4	1	460	10	1	5	2	3,749
		1,156	1,747	2,124		36,515	13,596			5,555			16,073					105,120

Table 5-2 – 2020 Greatest Transit Need

Census Tract	Census Block Group	Land Area (sq.ml.)	Zero-Vehicle Hhlds #	Zero-Vehicle Hhlds Density	Zero-Vehicle Hhlds rank	Total # of Hhlds #	Total Number of Elderly 60 & over #	Total Number of Elderly 60 & over Density	Total Number of Elderly 60 & over rank	Mobility-Limited Population #	Mobility-Limited Population Density	Mobility-Limited Population rank	Below-Poverty Population #	Below-Poverty Population Density	Below-Poverty Population rank	Overall Score (4-20)	Final (1-5)	Total Population (Persons) #
1	1	0.73	0	0	1	105	42	57	2	33	45	3	40	55	2	8	2	292
1	2	0.94	83	89	5	733	259	276	4	168	179	4	643	684	5	18	4	2,149
1	3	1.65	37	23	3	537	286	174	4	104	63	3	282	171	3	13	3	1,570
1	4	2.36	10	4	2	766	166	70	2	201	85	3	744	315	4	11	3	2,160
1	5	0.36	66	184	5	328	163	452	4	78	216	5	223	620	5	19	5	866
2.01	1	2.42	20	8	3	535	222	92	3	40	17	2	0	0	1	9	2	1,458
2.01	2	2.59	7	3	2	1,025	350	135	3	150	58	3	140	54	2	10	2	2,847
2.02	1	5.48	0	0	1	943	488	89	3	27	5	1	33	6	1	6	1	2,933
2.02	2	3.05	10	3	2	583	210	69	2	19	6	1	46	15	2	7	1	1,638
2.02	3	0.40	0	0	1	321	150	374	4	86	216	5	24	61	2	12	3	830
2.04	1	0.88	0	0	1	253	164	186	4	0	0	1	0	0	1	7	1	770
2.04	2	1.03	45	43	4	797	282	274	4	145	141	4	468	454	4	16	4	2,357
2.05	1	0.44	22	49	4	748	259	589	5	105	239	5	328	746	5	19	5	1,868
2.05	2	0.22	26	118	5	472	62	281	4	128	582	5	88	399	4	18	4	1,364
2.05	3	0.57	161	283	5	858	183	321	4	45	78	3	758	1,331	5	17	4	2,215
2.05	4	1.32	98	74	4	1,307	455	345	4	132	100	4	599	454	4	16	4	3,604
3.01	1	0.31	14	46	4	920	281	905	5	102	330	5	423	1,365	5	19	5	2,083
3.01	2	0.22	10	46	4	499	305	1,387	5	23	105	4	65	294	4	17	4	1,258
3.01	3	0.26	9	33	4	409	132	509	5	10	39	3	115	443	4	16	4	1,220
3.01	4	0.37	161	436	5	1,022	512	1,385	5	138	373	5	184	498	4	19	5	2,237
3.02	1	0.23	17	75	5	586	318	1,383	5	71	307	5	189	820	5	20	5	1,521
3.02	2	0.12	0	0	1	357	220	1,835	5	35	288	5	66	552	4	15	3	869
3.02	3	0.15	42	278	5	423	117	777	5	7	48	3	181	1,209	5	18	4	920
3.02	4	0.27	20	75	5	540	212	784	5	102	378	5	320	1,183	5	20	5	1,366
4.01	1	0.45	0	0	1	599	307	681	5	43	96	3	23	51	2	11	3	1,621
4.01	2	0.58	17	30	4	724	469	809	5	98	169	4	73	127	3	16	4	1,921
4.01	3	2.64	121	46	4	956	226	86	3	151	57	3	689	261	3	13	3	2,516
4.01	4	0.12	16	132	5	381	250	2,087	5	86	720	5	114	947	5	20	5	951
4.02	4	0.89	94	105	5	855	151	170	4	118	133	4	612	687	5	18	4	2,202
4.02	5	0.85	88	103	5	829	548	645	5	171	201	5	476	560	4	19	5	2,093
5.01	1	5.74	47	8	3	989	252	44	2	148	26	2	684	119	3	10	2	3,300
5.01	2	145.62	33	0	1	960	207	1	1	72	0	1	298	2	1	4	1	2,899
5.02	1	3.44	12	3	2	746	285	83	3	129	37	3	206	60	2	10	2	2,546
5.02	2	8.66	16	2	2	1,375	329	38	2	210	24	2	792	92	3	9	2	5,397
5.02	3	56.49	18	0	1	213	43	1	1	31	1	1	112	2	1	4	1	702
5.02	4	6.79	36	5	2	688	220	32	2	133	20	2	461	68	3	9	2	2,511
6.01	1	0.59	49	82	5	671	209	354	4	64	108	4	306	518	4	17	4	1,723
6.01	2	15.98	17	1	2	644	301	19	1	114	7	1	102	6	1	5	1	1,876
6.01	3	8.86	73	8	3	979	339	38	2	78	9	1	433	49	2	8	2	2,406
6.01	5	94.60	9	0	1	540	233	2	1	42	0	1	140	1	1	4	1	1,573
6.05	1	25.36	8	0	1	1,128	545	21	2	262	10	2	378	15	2	7	1	3,143
6.05	2	13.86	20	1	2	531	271	20	1	88	6	1	73	5	1	5	1	1,354
6.05	3	2.00	9	4	2	497	212	106	3	41	20	2	306	153	3	10	2	2,071
6.05	4	1.91	12	6	3	445	221	116	3	81	42	3	177	92	3	12	3	1,281
6.06	1	18.27	106	6	3	1,762	521	29	2	311	17	2	581	32	2	9	2	5,065
6.06	2	17.83	13	1	2	1,054	315	18	1	115	6	1	458	26	2	6	1	3,928
6.06	3	1.82	0	0	1	515	278	153	3	82	45	3	583	320	4	11	3	1,501
7.02	2	107.75	0	0	1	310	166	2	1	85	1	1	18	0	1	4	1	1,146
7.03	1	320.63	42	0	1	913	462	1	1	304	1	1	405	1	1	4	1	3,445
7.03	2	1.99	47	24	3	659	281	141	3	206	103	4	171	86	3	13	3	2,035
7.03	3	6.15	37	6	3	1,402	497	81	3	140	23	2	641	104	3	11	3	3,843
7.04	1	20.36	32	2	2	1,622	656	32	2	289	14	2	868	43	2	8	2	5,084
7.04	2	5.30	42	8	3	1,499	522	98	3	266	50	3	843	159	3	12	3	4,529
7.04	3	0.84	42	50	4	983	426	508	5	219	261	5	348	414	4	18	4	2,865
9430	1	186.10	102	1	2	1,026	268	1	1	344	2	1	1,450	8	1	5	1	4,171
9432	1	46.90	60	1	2	1,662	418	9	1	248	5	1	615	13	2	6	1	5,016
		1,156	2,075	2,507		43,223	16,263			6,720			19,394					127,110

Table 5-3 – 2035 Greatest Transit Need

Census Tract	Census Block Group	Land Area (sq.ml.)	Zero-Vehicle Hhlds #	Zero-Vehicle Hhlds Density	Zero-Vehicle Hhlds rank	Total # of Hhlds #	Total Number of Elderly 60 & over #	Total Number of Elderly 60 & over Density	Total Number of Elderly 60 & over rank	Mobility-Limited Population #	Mobility-Limited Population Density	Mobility-Limited Population rank	Below-Poverty Population #	Below-Poverty Population Density	Below-Poverty Population rank	Overall Score (4-20)	Final (1-5)	Total Population (Persons) #
1	1	0.73	0	0	1	116	46	63	2	37	50	3	45	61	2	8	2	323
1	2	0.94	92	98	5	810	287	305	4	186	198	4	712	757	5	18	5	2,377
1	3	1.65	41	25	4	594	317	192	4	115	69	3	312	189	3	14	3	1,737
1	4	2.36	11	5	2	847	183	78	3	223	94	3	823	349	4	12	3	2,390
1	5	0.36	73	203	5	363	180	500	4	86	239	5	247	686	5	19	5	958
2.01	1	2.42	22	9	3	592	245	101	3	45	18	2	0	0	1	9	2	1,613
2.01	2	2.59	8	3	2	1,134	387	149	3	166	64	3	154	60	2	10	3	3,149
2.02	1	5.48	0	0	1	1,043	540	98	3	30	6	1	37	7	1	6	1	3,245
2.02	2	3.05	11	4	2	645	232	76	3	21	7	1	51	17	2	8	2	1,812
2.02	3	0.40	0	0	1	355	166	414	4	96	239	5	27	68	3	13	3	919
2.04	1	0.88	0	0	1	280	182	206	4	0	0	1	0	0	1	7	2	852
2.04	2	1.03	49	48	4	882	312	303	4	161	156	4	517	502	4	16	4	2,608
2.05	1	0.44	24	54	4	828	287	651	5	116	264	5	363	825	5	19	5	2,067
2.05	2	0.22	29	130	5	522	68	311	4	142	644	5	97	441	4	18	5	1,509
2.05	3	0.57	178	313	5	949	202	355	4	49	87	3	839	1,472	5	17	4	2,450
2.05	4	1.32	108	82	5	1,446	503	381	4	146	111	4	662	502	4	17	4	3,987
3.01	1	0.31	16	51	4	1,017	310	1,002	5	113	365	5	468	1,510	5	19	5	2,304
3.01	2	0.22	11	51	4	552	338	1,534	5	25	116	4	72	326	4	17	4	1,392
3.01	3	0.26	10	37	4	452	146	563	5	11	43	2	127	490	4	15	3	1,350
3.01	4	0.37	178	482	5	1,130	567	1,532	5	153	413	5	204	551	4	19	5	2,474
3.02	1	0.23	19	83	5	648	352	1,530	5	78	339	5	209	907	5	20	5	1,683
3.02	2	0.12	0	0	1	395	244	2,030	5	38	318	5	73	610	5	16	4	962
3.02	3	0.15	46	308	5	468	129	860	5	8	53	3	201	1,337	5	18	5	1,017
3.02	4	0.27	22	83	5	597	234	867	5	113	419	5	353	1,309	5	20	5	1,511
4.01	1	0.45	0	0	1	662	339	754	5	48	106	4	25	57	2	12	3	1,793
4.01	2	0.58	19	33	4	801	519	895	5	108	187	4	81	140	3	16	4	2,126
4.01	3	2.64	134	51	4	1,057	250	95	3	167	63	3	763	289	4	14	3	2,783
4.01	4	0.12	18	146	5	422	277	2,309	5	96	796	5	126	1,048	5	20	5	1,052
4.02	4	0.89	103	116	5	946	167	188	4	131	147	4	677	760	5	18	5	2,436
4.02	5	0.85	97	114	5	917	607	714	5	189	223	5	527	620	5	20	5	2,315
5.01	1	5.74	53	9	3	1,094	279	49	2	164	29	2	756	132	3	10	3	3,651
5.01	2	145.62	37	0	1	1,062	229	2	1	80	1	1	330	2	1	4	1	3,207
5.02	1	3.44	13	4	2	825	315	92	3	143	41	2	227	66	3	10	3	2,810
5.02	2	8.66	17	2	2	1,522	364	42	2	232	27	2	877	101	3	9	2	5,956
5.02	3	56.49	20	0	1	236	48	1	1	35	1	1	124	2	1	4	1	775
5.02	4	6.79	40	6	3	762	243	36	2	147	22	2	510	75	3	10	3	2,770
6.01	1	0.59	54	91	5	741	231	391	4	71	120	4	338	573	5	18	5	1,904
6.01	2	15.98	18	1	2	712	332	21	2	126	8	1	113	7	1	6	1	2,074
6.01	3	8.86	81	9	3	1,082	375	42	2	86	10	2	478	54	2	9	2	2,659
6.01	5	94.60	10	0	1	597	257	3	1	47	0	1	154	2	1	4	1	1,739
6.05	1	25.36	8	0	1	1,246	603	24	2	290	11	2	417	16	2	7	2	3,474
6.05	2	13.86	22	2	2	588	299	22	2	97	7	1	81	6	1	6	1	1,498
6.05	3	2.00	10	5	2	549	235	117	3	45	23	2	338	169	3	10	3	2,289
6.05	4	1.91	13	7	3	492	245	128	3	89	47	2	195	102	3	11	3	1,416
6.06	1	18.27	117	6	3	1,948	576	32	2	344	19	2	642	35	2	9	2	5,597
6.06	2	17.83	16	1	2	1,258	349	20	1	127	7	1	506	28	2	6	1	4,345
6.06	3	1.82	0	0	1	615	307	169	3	91	50	3	645	354	4	11	3	1,661
7.02	2	107.75	0	0	1	421	184	2	1	95	1	1	20	0	1	4	1	1,271
7.03	1	320.63	58	0	1	1,239	512	2	1	338	1	1	449	1	1	4	1	3,821
7.03	2	1.99	52	26	4	894	312	157	3	228	115	4	189	95	3	14	3	2,258
7.03	3	6.15	41	7	3	1,554	551	90	3	156	25	2	710	116	3	11	3	4,263
7.04	1	20.36	35	2	2	1,799	727	36	2	321	16	2	963	47	2	8	2	5,639
7.04	2	5.30	46	9	3	1,662	579	109	3	295	56	3	935	176	3	12	3	5,023
7.04	3	0.84	46	55	4	1,091	473	563	5	243	289	5	386	459	4	18	5	3,178
9430	1	186.10	108	1	2	1,089	284	2	1	365	2	1	1,539	8	1	5	1	4,603
9432	1	46.90	67	1	2	1,844	464	10	1	275	6	1	683	15	2	6	1	5,563
		1,156	2,303	2,773		48,393	17,987			7,423			21,399					140,637

5.5) TRANSIT STUDY RECOMMENDATIONS

The Red Apple Transit Study identified several recommendations for modifying the existing system to meet future need. The recommendations needing minimal to no funding increases would occur within the next five years. Others that require additional funding could be completed within ten years. Please see the Red Apple Transit Final Report for full details on these recommendations.

A simple, but effective change includes adding in new bus stops to the current routes to reduce the service gaps. These new stop locations would create reasonable walking distances for residents in nearby neighborhoods. Additionally, these stops could have shelters built when funding allows.

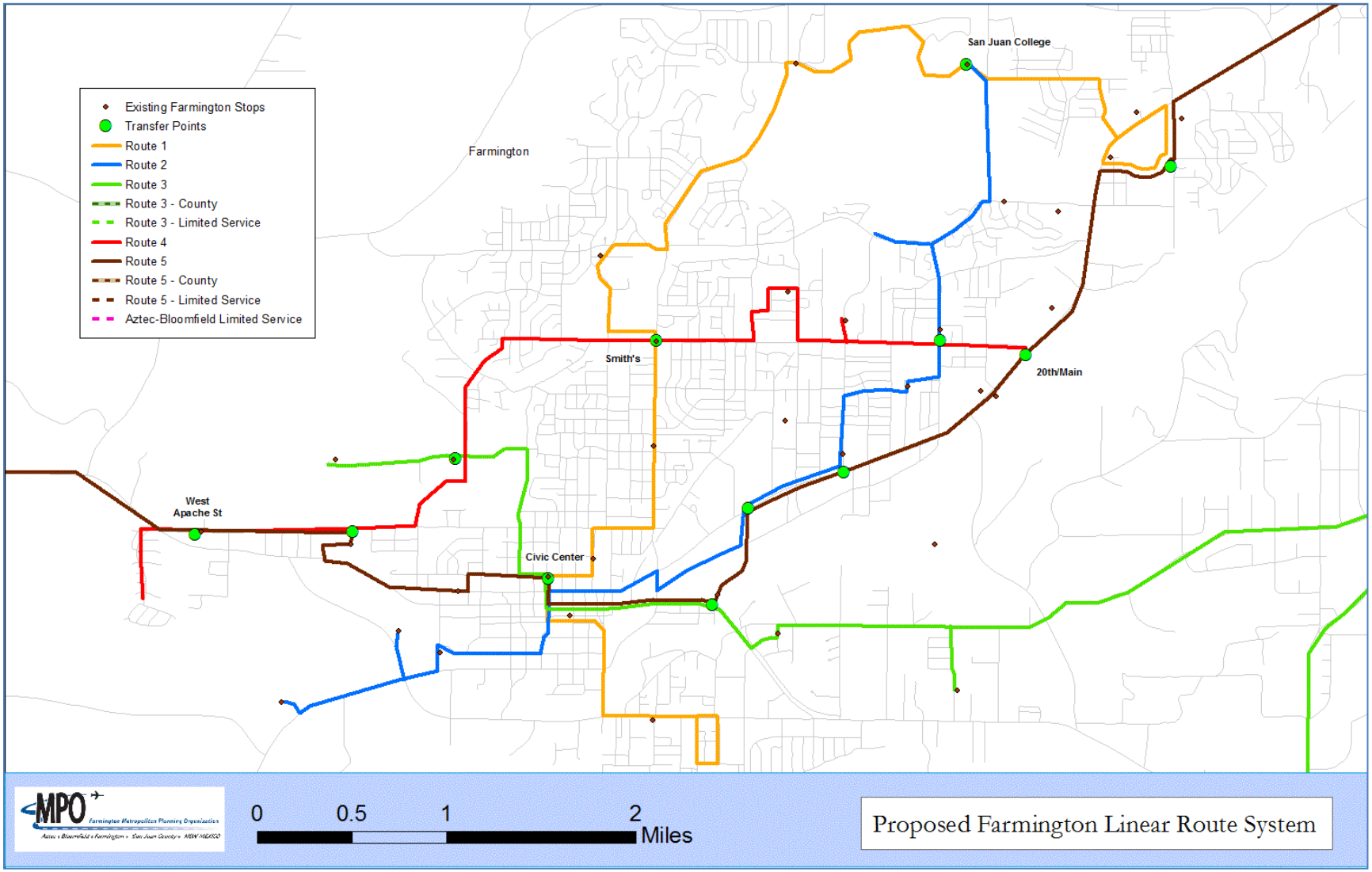
In Farmington, any future transit expansion will require the conversion of the one directional loop system into a two-directional line route system. In the Transit Study, a linear system has been proposed that would run along many of the city's arterial streets and link popular public destinations from all parts of the city. The line routes would also create several more transfer points. All-day service would run from McGee Park to the Four Corners Regional Airport and from Flora Vista to west side of Farmington (Map 5-1).

On the regional side, the existing routes should seek funding to provide additional runs each day to close the operational gaps. An additional run during the mid-morning and the mid-afternoon has been recommended. Aztec and Bloomfield should also consider creating a new route between the cities (Map 5-2).

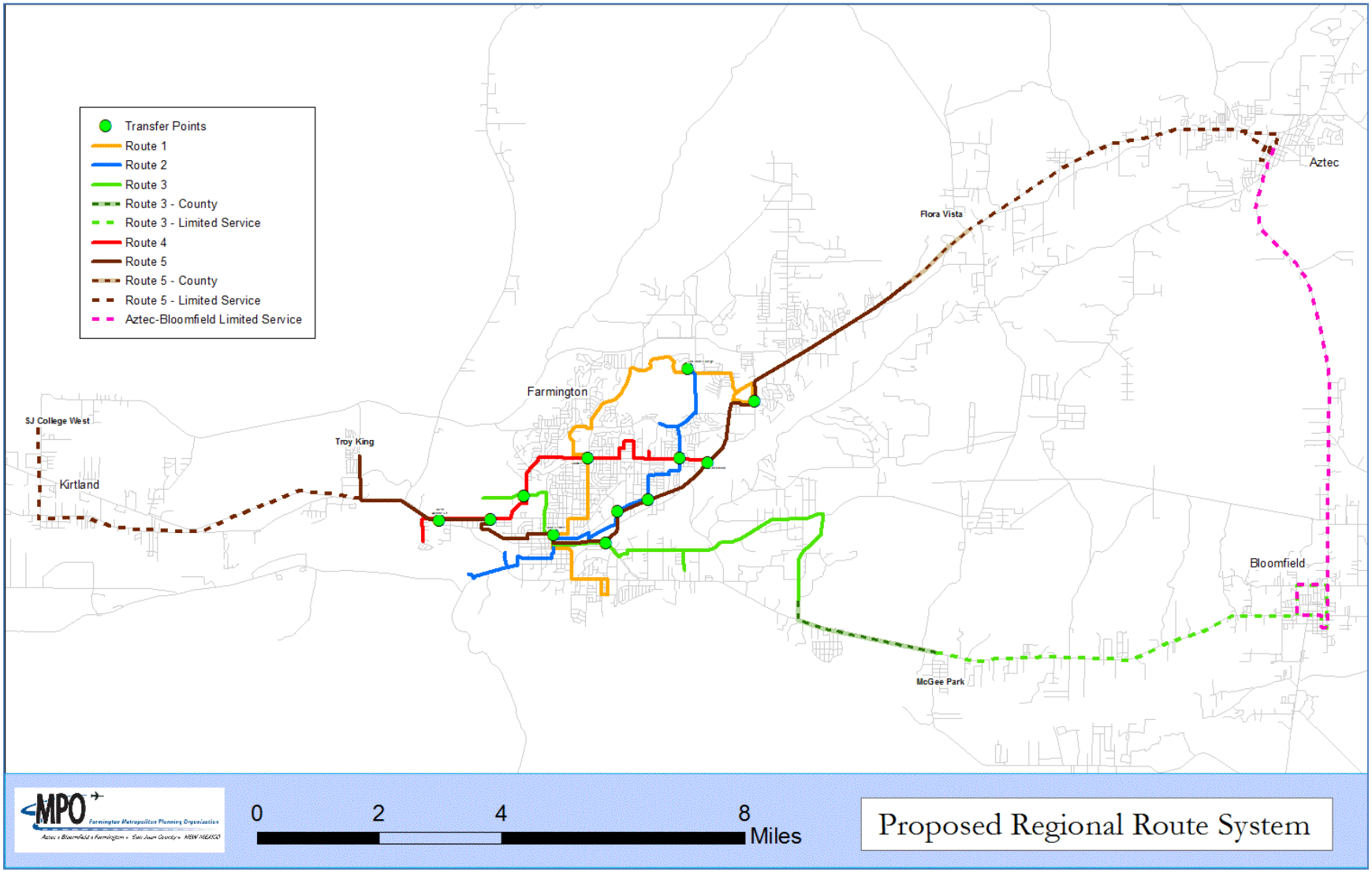
Other recommendations include starting evening service for the Farmington routes and developing a marketing program to inform the public about identified changes to the system.

One improvement that will be necessary before any type of expansion will be the location of a transit hub within the City of Farmington. The hub should be located in the vicinity of residential and commercial development and should be accessible to pedestrians and bicyclists. Once a location is established, modifications to the Farmington routes can occur.

MAP 5-1 – Proposed Linear Route System in Farmington



MAP 5-2 – Proposed Regional Transit Route System



5.6) TRANSIT EXPANSION BEYOND 2020

While the Transit Study offers recommendations to 2020, this section identifies further areas of study to be consistent with the 2035 planning horizon of this document.

With the understanding that Crouch Mesa is one of the fastest growth areas of the MPO, a transit system for the land area within the three cities should be planned for to accommodate future growth. CR 350, Wildflower Pkwy/CR 390, CR 3000, CR 3150, and the proposed Piñon Hills Blvd extension provide key arterials for developing a route structure.

Within Aztec and Bloomfield, feeder routes that circulate through these cities would carry passengers to the existing regional routes and would serve many popular destinations.

5.7) TRANSIT POLICIES

To support implementation of an expanded transit system and to promote efficiency, Red Apple Transit should use the following policies as guidance:

- Ensure all bus stops are ADA accessible and that sidewalks are constructed to provide direct access to the stops
- Provide bus shelters at main public destinations
- Encourage mixed use development and higher density areas that support transit
- Identify activity and retail centers and business parks that serve as transfer hubs for transit routes
- Monitor and modify transit service in response to future growth and changes in development patterns
- Develop a long term funding strategy for sustaining the expansion of the system

BICYCLE/PEDESTRIAN PLAN

6.1) OVERVIEW

The Farmington MPO and the four local municipalities adopted a Bicycle and Pedestrian Plan for the cities of Farmington, Aztec, and Bloomfield and the surrounding communities of San Juan County in June 2008. The Bicycle and Pedestrian Plan is intended to provide residents and visitors with more options to get to and from their destinations. The plan is a guiding document that was the result of strong input from the MPO member agencies and the participants of the Bicycle/Pedestrian Advisory Group (BPAG). Overall, the walking and biking system should provide more mode choices that help to preserve and enhance the quality of life in urbanized areas.

Regional projects identified in the Bicycle/Pedestrian Plan were ranked and prioritized by the MPO as part of the MTP development process. These projects will create a regional bicycle and pedestrian network that links the three cities and surrounding communities. The Bicycle/Pedestrian Plan outlines policies and recommended standards for implementation as new developments occur, as new roads are built, and as existing infrastructure is reconstructed. Various funding and implementation strategies are described in order to assist the agencies involved with planning and developing the preferred walking and biking network.

6.2) PURPOSE and NEED

The purpose of the Bicycle/Pedestrian Plan guides future development and needs statements strive to provide a balance that meets the needs of all users of the system:

- The purpose of the Bicycle/Pedestrian Plan is to link communities, provide access to parks, schools, residences and businesses, encourage walking and biking for commuting, and improve the health of the citizens and the communities within the Farmington MPO boundaries.

- There is a need to serve those who do and those who do not currently bike and walk on a regular basis. These persons include: children; the elderly, commuters, students (elementary through college), and persons with disabilities.
- There is a need to improve pedestrian and bicyclist access from residences to destinations such as parks, schools, medical facilities, shopping centers, libraries, and places of employment.
- There is a need to educate motorists and the general public about the rights and responsibilities of bicyclists and pedestrians who use the roads and sidewalks, respectively.

6.3) GOALS and OBJECTIVES

With assistance from the BPAG and the member entities, a list of goals and objectives were developed, all of which fall within the framework of the goals described in the MPO Metropolitan Transportation Plan.

GOALS
Goal 1 - Encourage kids to ride bikes as a life-long, healthy habit.
Goal 2 - Increase the quality and quantity of bicycle and pedestrian facilities in a strategic manner.
Goal 3 - Promote the idea of walking and biking for commuting as well as for recreation.
Goal 4 - Educate motorists, bicyclists, and pedestrians about bicyclist and pedestrian rights and responsibilities for the proper use of roads, sidewalks, and paths.

OBJECTIVES
Link resources and programs, such as Safe Routes to School, to improve unsafe walking and biking locations.
Encourage and support groups (e.g. bike clubs and stores, police departments) to provide bicycle safety equipment.
Develop education programs that clearly define rules for safe walking and biking to motorists, children, and adults.
Collect data on bicycle and pedestrian trips as a way to evaluate the effectiveness of walking and biking facilities.
Identify the current deficiencies in the bicycle/pedestrian network and develop a method to eliminate gaps in the existing bicycle and pedestrian system.
Monitor TIP project descriptions to ensure that bicycle and pedestrian facilities are included where appropriate.

OBJECTIVES
Identify locations for bicycle and pedestrian facilities and amenities, such as bicycle racks at civic buildings and safe, convenient connections to transit stops.
Develop the MPO to be the clearinghouse for collecting and updating data on bicycle and pedestrian activity (pedestrian counts, surveys) and making the data accessible for entity staff, elected officials, and the public.
Increase public awareness of pedestrians and bicyclists.
Support the efforts of local municipalities in including bicycle and pedestrian facilities as components of their capital programs and site review approval processes.
Develop walking/biking and trails maps for use by local residents, visitors, and others.
Publish information that outlines safety tips and rules of the road responsibilities for motorists, bicyclists, and pedestrians regarding the appropriate use of bicycle and pedestrian facilities.
Encourage and promote multi-modal strategies to all those involved with the planning and design of transportation facilities.

6.4) WALKING and BIKING IMPROVEMENTS

Walking and biking facility improvements were identified during development of the Bicycle/Pedestrian Plan by collecting information from city plans, proposed river trail plans, and the Metropolitan Transportation Plan (MTP). With input from the BPAG, additional improvements were incorporated into the plan's development.

Identified projects were then divided into two groups: regionally significant and local. Regional projects are defined as those that connect two or more cities, get a person across town, or follow the rivers. These projects were the focus of prioritization efforts by the MPO. Local projects are smaller in scale and primarily serve neighborhoods or other specific areas of the cities. The local governments will decide how to fund and prioritize their own local projects.

The plan serves as a mechanism for the identification of corridors to preserve for future walking and biking improvements. For many of the regional projects identified, this plan indicates where corridors should be preserved for future bicycle and pedestrian projects.

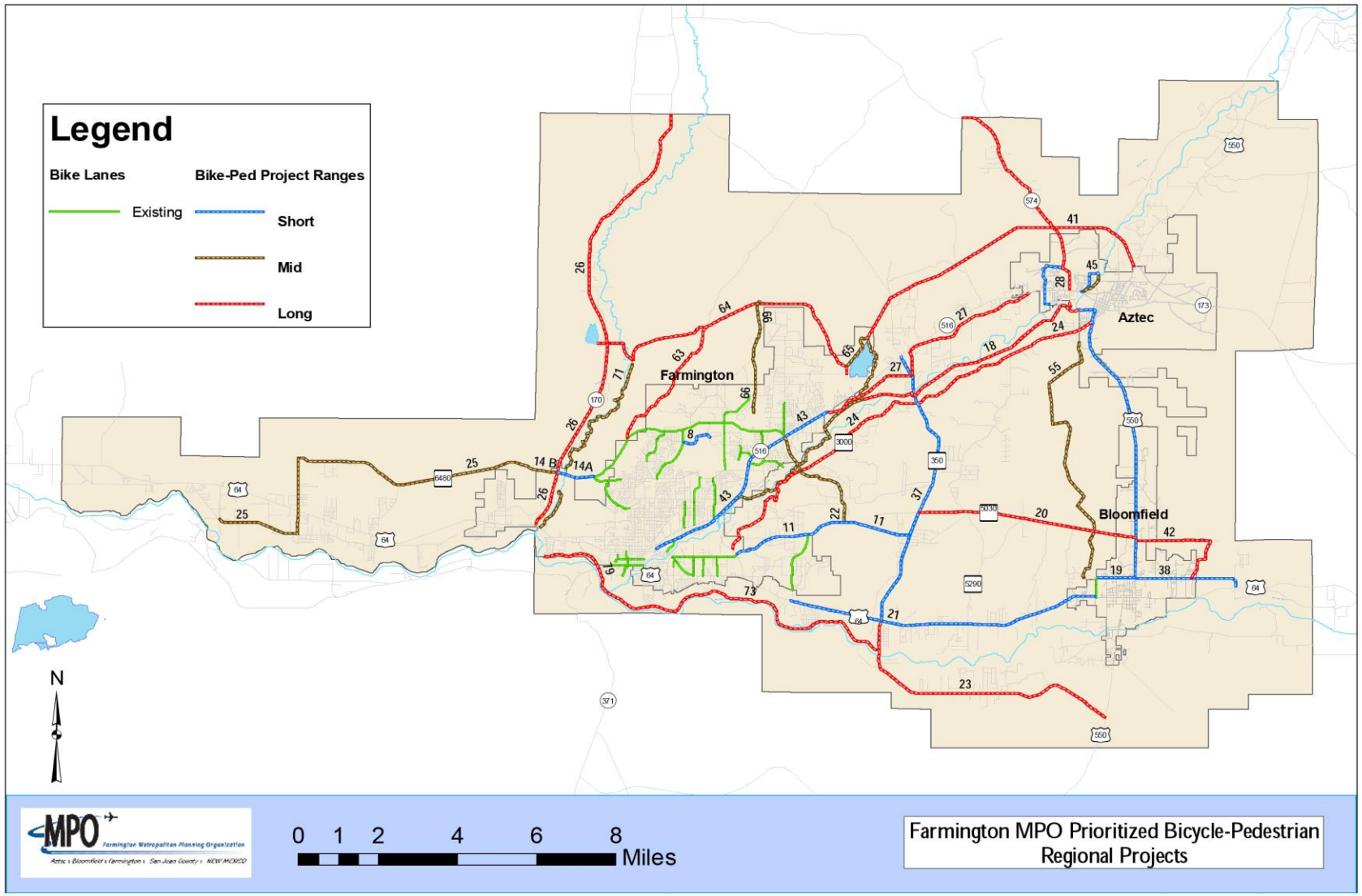
6.5) BICYCLE and PEDESTRIAN PRIORITIES

The MPO performed ranking exercises to develop prioritized lists of regional bicycle/pedestrian improvements. Approved criteria were used to rank and evaluate the regional projects. The ranked projects are shown in Map 6-1. The first 10 projects (Table 6-1) will serve as the critical projects for the MPO. The Farmington MPO and the participating entities will work together to secure funding for these projects. The remaining ranked projects are found in Appendix C and are provided in the event additional funding becomes available.

TABLE 6-1 – Tier 1 Regional Bicycle/Pedestrian Priorities in the MPO

	Map Num	City or Area	Road/Facility Name	From Road/ Place	To Road/ Place	Type of Facility	Location Type	Surface	Connects to	Length	EST. COST	Avg Ranked Score
TIER ONE PRIORITIES	8	Fmtn	Butler to San Juan College along Sunrise	Butler	San Juan College	Multimodal	Multi-Use Path	Concrete	residential, college, transit	4700	$137,000	**20.6**
	38	Blmfld	East Blanco Blvd	US 550 N (1st St)	US 64	Bike lanes and sidewalks	On road	Concrete	residential, school	14200	$831,000	**20.1**
	43	Fmtn	San Juan and East Main	San Juan/ Butler	E Main/ Piñon Hills	Wide sidewalk/ path	Multi-Use Path	Hard	Residential, retail	24500	$712,000	**18.6**
	14A	Fmtn	Pinon Hills Blvd	30th	Sports Complex	Bike lane (westbound)	On road	Hard	Park	3500	$143,000	**18.6**
	11	County	Wildflower Parkway	Approx. at Yarrow	CR 350	Multimodal	Multi-Use Path	Hard	Residential	19500	$566,000	**18.5**
	37	County	CR 350	US 64	NM 516	Bike lanes	On road	Existing	Residential, retail	39700	$1,622,000	**18.4**
	21	B,F,C	Path parallel to US 64	Andrea/US 64	Ruth Ln/US 64	Multimodal	Multi-Use Path	Hard	Retail	42000	$1,220,000	**18.2**
	19	Aztec, Blmfld	Connect from Animas River trail to Bloomfield	Hartman Park (Aztec)	Blanco/Ruth Ln (Bloomfield)	Multimodal	Multi-Use Path	Hard	Residential, school, park	37300	$1,084,000	**17.8**
	49	Aztec	Oliver-McWilliams Trail	50 acre open space	Ruins Road trail junction	Multimodal	On- and off-road	Hard	Residential, school, park	8600' on-road & 4600' off-road	$986,000	**17.3**
	45	Aztec	Ruins Road Trail	Chaco/NM 516	Trail Junction	Multimodal	Off-road	Crusher fines	Aztec Ruins, residential	4600	$42,000	**17.3**
						Estimated Cost (based on cost of material times length of project:					**$7,343,000**	

MAP 6-1 – Regional Bicycle/Pedestrian Improvements by Tier



6.6) BICYCLE and PEDESTRIAN POLICIES

Policies provide guidelines for future development of the walking and biking network. The policies offer an overall framework as to how and why bicycle and pedestrian facilities need to be implemented as cities grow and new roads are built.

- For all new residential and commercial development, encourage the provision of complete pedestrian and bicycle facilities to create consistent networks rather than installing these facilities on a piece-meal basis at the time when the property is built.
- For rural areas (or low density areas) reasonable efforts should be made to obtain right-of-way (ROW) for future construction of pedestrian and bicycle facilities.
- Construct appropriate pedestrian and biking facilities simultaneously with the construction of new road projects and major road reconstruction projects for roads classified as collector and above.
- Locate applicable bicycle and pedestrian facilities in a safe and efficient manner on all arterial and collector streets. For example, for arterial roads with a speed limit greater than 30mph, consider building a separated multi-use trail in the vicinity of the road. Safety and convenience should be analyzed when determining whether to construct on-road or off-road facilities.
- Transit stops shall be ADA accessible and be connected to residential neighborhoods, commercial buildings, and retail shops by pedestrian and bicycle facilities.
- Each road classification should have a typical road section that incorporates applicable bicycle and pedestrian facilities.
- Maintain/preserve cross-development access in new developments so that new construction does not block off planned biking/walking paths.
- Provide a hearing process and public notification if a new development will block, disrupt, or interfere with an existing walk and/or bike route.
- Provide posted signs and on-road pavement markings to let motorists and bicyclists know when bike lanes end so that motorists and bicyclists know where/when to yield or merge.
- Publish the “rules of the road” for bicyclists, pedestrians, and motorists and make these publications available at public facilities such as libraries, city halls, motor vehicle division offices, and similar places.
- Sweep highway shoulders and bike lanes on a regular basis to minimize debris that has the potential to cause accidents.
- Preserve ROW for future facilities, use existing corridors, and ensure consistency with adopted plans. Bicycle and pedestrian projects can reduce or eliminate ROW acquisition costs when implemented in existing corridors.

6.7) BICYCLE and PEDESTRIAN RECOMMENDED STANDARDS

Standards provide specific criteria for the construction of bicycle and pedestrian facilities. This enables users of the system to have certain expectations about where facilities are located, how they should look, and how they will function. The standards described here are recommended practices by the entities as they implement bicycle and pedestrian projects. Where applicable, it is strongly recommended that facilities are constructed based on guidelines set forth in the AASHTO *Guide for the Development of Bicycle Facilities* and the *AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities.* For signage and markings, guidelines in the Manual on Uniform Traffic Control Devices (MUTCD) should be followed.

Facility Description	Bicycle & Pedestrian Recommended Standards
Sidewalks ▪ Width ▪ Buffer Zone	 ▪ 4' minimum (to meet ADA requirements) ▪ 5'-6' recommended on minor/principal arterials and collectors ▪ Between curb and sidewalk: 3' minimum; 4'-5' recommended
Curb Cuts	▪ 2 curb cuts per corner ▪ Install special texture at corners to identify crosswalk ▪ See applicable ADA requirements (http://www.access-board.gov/adaag/html/adaag.htm)
Median Refuge Island	▪ Recommend installing at intersections with roads of 5 lanes or more, where feasible
Bicycle Lanes ▪ Width ▪ Lane Markings ▪ Signage	 ▪ 5' minimum for all road classifications ▪ Use appropriate markings as described in MUTCD ▪ Use appropriate signage as described in MUTCD ▪ Install signs alerting users to limited visibility areas
Multi-modal Paths ▪ Location	 ▪ Corridors with minimal intersections and with available ROW ▪ On rural roads in the vicinity of urban areas

Facility Description	Bicycle & Pedestrian Recommended Standards
▪ Width ▪ Markings	▪ 10' minimum; 12' recommended if used by both bicyclists and pedestrians ▪ Use appropriate marking to delineate use by pedestrians and bicyclists
Bicycle Routes	▪ Install 'share the road' and 'bicycle route' signage as described in MUTCD ▪ Provide additional lane width to outside travel lane where possible to accommodate bicyclists ▪ Evaluate speed and volume of identified bike route corridors from a safety perspective.
Bicycle Traffic-Actuated Signals	▪ Ensure that loop detectors that detect bicycles are present at signalized intersections
Special Bicycle Signal Timing	▪ Provide additional time for bicycle movements through the intersection, where appropriate
Additional Recommendations ▪ Shoulders ▪ Traffic Signals ▪ Drainage Grates	▪ Typically 8' minimum for vehicle emergency ▪ In lieu of sidewalks and/or bike lanes, provide 4' minimum of asphalt for use by pedestrian/bicyclist, where feasible ▪ Provide adequate green times for bicyclists ▪ Provide adequate crossing time for pedestrians as outlined in MUTCD ▪ Use countdown pedestrian signals ▪ Install bars perpendicular to direction of travel

6.8) BICYCLE and PEDESTRIAN FUNDING STRATEGIES

There are several ways to secure funding for the proposed improvements that have been identified. Beyond common funding options from the federal, state, and local levels, the Farmington MPO and the entities should proactively seek out other funding sources, whether through grants, private contributions, or creating a budget dedicated to funding the projects. Funding for the regional improvements will be a primary responsibility of the Farmington MPO. Federal funding that is awarded to entities of the Farmington MPO must be included in the TIP, and subsequently added into the Statewide TIP (STIP).

Federal Funding

Walking and biking improvements that focus on serving a transportation commuting purpose stand the greatest chance of receiving federal funding. While not all-inclusive, many regional walking and biking improvements could be funded from the following programs:

- National Highway System (NHS)
- Surface Transportation Program (STP)
- Transportation Enhancements (TPE)
- Hazard Elimination
- Recreational Trails
- Safe Routes to School (SRTS)

Local Funding

The local governments should dedicate or continue to dedicate a portion of road funding in the Capital Improvement Program (CIP) to the construction or maintenance of new and existing facilities. Opportunities to apply for grants should be actively pursued. To complement the development of the regional walking and biking system, local governments should consider:

- Funding pedestrian and bicycle improvements at the same time new roads are built or existing roads are retrofitted.
- Setting aside local funds that are dedicated to walking and biking improvements.
- Road impact fees that may be used for motorized and non-motorized improvements.

6.9) BICYCLE and PEDESTRIAN IMPLEMENTATION STRATEGIES

The Bicycle/Pedestrian Plan outlines several strategies for funding projects and implementing policies.

Strategy 1 – Responsibilities and Support

The Farmington MPO will coordinate the Bicycle/Pedestrian Plan. Activities will include:

- Develop a prioritization process for regional projects
- Seek federal funding and work with the local entities and NMDOT to obtain it
- Monitor and update the Bicycle/Pedestrian Plan as necessary
- Ensure the plan is consistent with the MTP and other comprehensive transportation plans
- Assist with development review to ensure new subdivisions and businesses follow approved policies
- Consult with local organizations and the general public who are involved with walking and biking improvements

The local governments will develop the elements of the Bicycle/Pedestrian Plan. Activities will include:

- Construct applicable walking and biking facilities in conjunction with maintenance projects
- Incorporate applicable elements of this plan into local planning documents and processes
- Dedicate local funding to the construction of new pedestrian and bicycle facilities
- Modify the CIP to fund walking and biking improvements
- Ensure that all traffic control plans comply with MUTCD
- Review the Bicycle/Pedestrian Plan as part of the subdivision and development review process
- Coordinate local projects among the cities in preparation for the regional projects
- Map out projects using assessor and township maps and aerial photography to better define locations for the projects

Strategy 2 – Multi-modal Improvements

The importance of incorporating multi-modal aspects into all road projects is becoming increasing more critical. From the national level to the local level, legislation is being passed to implement "complete streets", meaning roads must accommodate all types of users. The Farmington MPO and its members should actively pursue ways to incorporate multi-modal elements into new improvements.

Strategy 3 – Educate and Encourage Walking and Biking

Public awareness and acceptance of walking and biking as a viable means of transportation will require the use of effective education and encouragement methods. While the Bicycle/Pedestrian Plan describes tools for providing more mode choice, the MPO should investigate ways to get people involved and interested in walking and biking:

Strategy 4 – Maintain the Facilities

Sufficient maintenance of current walking and biking facilities requires staff time and funding. Regular inspection, cleaning, and striping are critical to user safety.

Strategy 5 – Pedestrian and Bicycle Amenities

Pedestrians and bicyclists routinely need amenities to complement their walking or biking trip. Possible ideas for cities and local business to implement include installing benches and bike racks at public destinations, and posting signs and informational kiosks.

6.10) BICYCLE and PEDESTRIAN ACTIONS

The Farmington MPO will investigate implementing these actions to further promote the plan:

- Create a permanent bicycle and pedestrian committee to ensure that bicycle/pedestrian planning activities and projects constructed by the entities within the Farmington MPO are consistent with the strategies and policies outlined in the Bicycle/Pedestrian Plan.
- Create a Pedestrian Safety Action Plan, which would be integrated into the Bicycle/Pedestrian Plan and would serve as a self-contained document.
- Collect data on bicycle and pedestrian trips in an effort to prioritize investments.
- Establish bicycle/pedestrian targets for the creation of a mode split component in the MPO traffic model.
- Assist local governments and the school districts with applying for federal Safe Routes to School funding.
- Create a Bicycle Suitability Map.
- Create a budget that dedicates specific funding to bicycle and pedestrian projects annually.

OTHER MODAL CONNECTIONS

METROPOLITAN TRANSPORTATION PLAN

7

OTHER MODAL CONNECTIONS

7.1) OVERVIEW

Transportation systems must be multimodal. Beyond the typical modes of travel, the region's transportation system must consider the movement of people and freight as well as airports and potential rail facilities. Existing and future intermodal connecting points are a vital part of the system MTP's goals, objectives and policies. Enhancing freight mobility improves regional economic development while simultaneously minimizing impacts to the neighborhoods and the environment. The growth of air cargo and its linkage to freight corridors will require new and existing road facilities to ensure appropriate transport of goods. Now that passenger rail is recognized as a viable option between Santa Fe and Albuquerque, this area could stand to benefit from a commuter rail connection from Farmington to Albuquerque. Establishing an equestrian trail network will maintain the rural nature of many parts of the county.

7.2) FREIGHT

With an expansive mineral extraction industry and the need to bring in finished products to support the expanding retail sector, freight movement is an important need throughout the Farmington MPO region. Now, as the movement of goods continues to grow, the result will be more trucks, and possibly an increase in air cargo transport traffic using the transportation system. More trucks on the region's state highways will require capacity improvements and route upgrades. Finally, intermodal exchanges, locally and regionally, will need to be enhanced to improve the efficiency of goods delivery.

The role of the Farmington MPO in freight planning is to develop a framework for facilitating and enhancing freight mobility and goods movement in the region, improving the region's economic competitiveness, and minimizing negative environmental and community impacts within the MPO region.

7.3) NMDOT FREIGHT STUDY

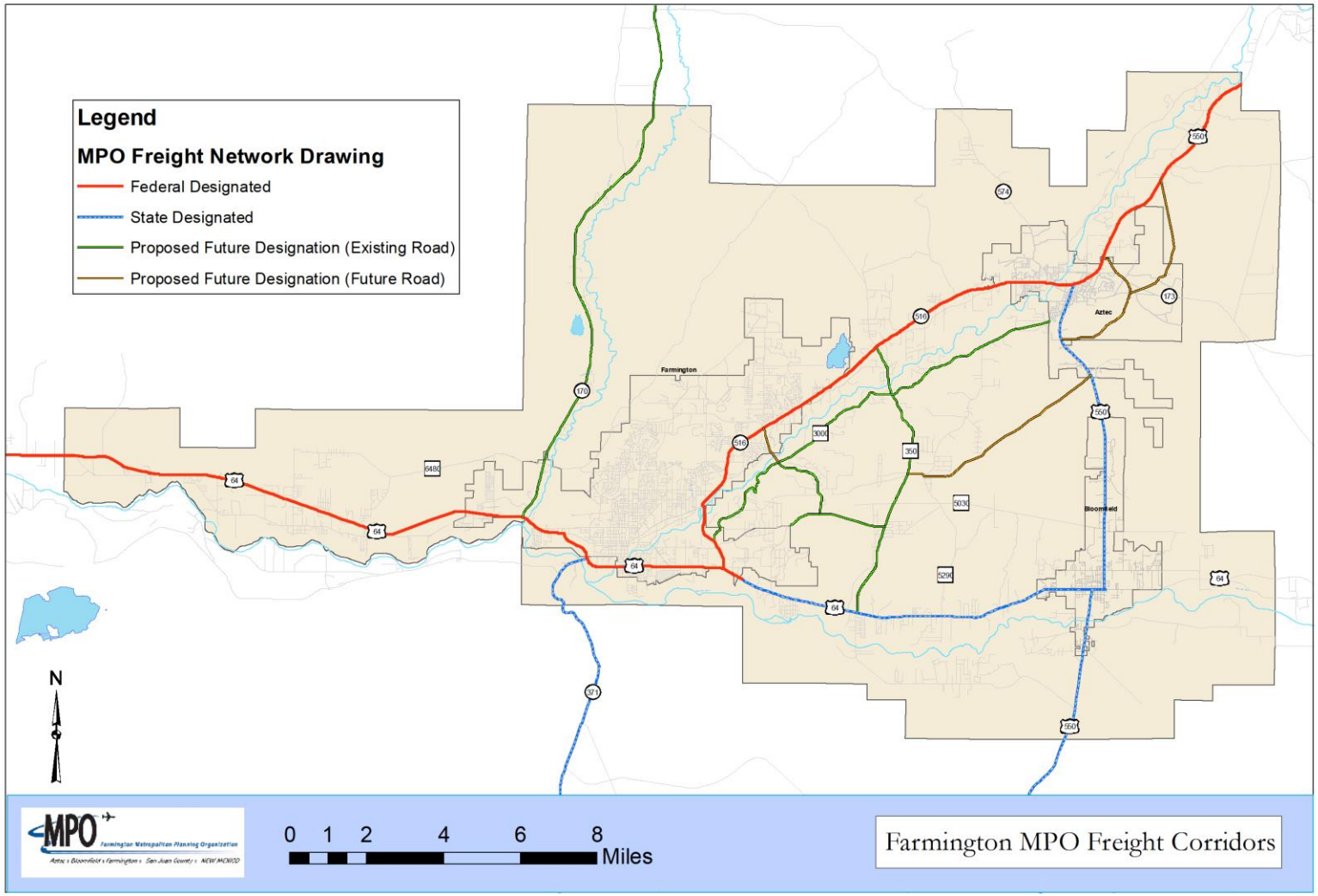
In 2008, NMDOT published a statewide Multimodal Freight Study. Although the focus was on the interstate corridors and the Albuquerque region, some highlights about the MPO region include:

- US 550 is an identified freight corridor that links the Farmington area to regional, state, and national markets; US 550 is critical to the oil and gas industry.
- US 550 has a projected truck Average Annual Daily Traffic (AADT) of 3,000 to 7,000 in 2035.
- There is a strain on US 550 infrastructure conditions and there is concern that maintenance for these roads is deferred to other areas of the state.
- US 64 between Farmington and Bloomfield has a projected truck AADT of 7,000 to 15,000 in 2035.

Area truck routes, as stated in the Freight Study, are as follows:

Federally-Designated
US 64 from Farmington west to Arizona
NM 516 from US 64 to US 550
US 550 from Aztec to Colorado
State Designated
US 64 Farmington to Bloomfield
US 550 from I-25 to Aztec
NM 371 from Farmington south

MAP 7-1 – Truck Routes in the Farmington MPO



7.4) FUTURE FREIGHT CONSIDERATIONS

Future freight considerations for this area:

- What does Bloomfield plan for freight movement, given freight traffic to/from Colorado and Albuquerque as well as the proposed industrial park north of town? Will all truck traffic rely on US 550?
- How will the potential industrial corridor of CR 350 impact the area road network?
- How will future industrial expansion affect Farmington and Aztec?

In order to facilitate the development of a freight framework, the following considerations should be taken into account to support the vision of an accessible, safe, and efficient surface transportation system that integrates convenience, affordability and improved air quality:

- Increase the efficiency of the existing transportation system and decrease traffic congestion through coordination of traffic operations and development of strategies to reduce travel demand at both the regional and corridor levels.
- Develop and implement operational improvements for the management of traffic along major travel corridors, including incident management, intersection improvements, construction coordination, access management, signal re-timing programs, and freight management.
- Monitor freight travel patterns and identify preferred truck routes and the implementation of truck lanes.

7.5) AIR CARGO

The potential for growth of air cargo at either the Farmington or Aztec airports is tied to the growth and movement of products within the Four Corners region. Most of the air cargo transported via the airport involves goods moving to or from regional sorting centers and warehouses in Albuquerque or within New Mexico. Mail and other products are shipped via air cargo to facilitate "just-in-time" arrivals. Improvements in area arterials, such as Piñon Hills Extension Bridge and the Aztec East Arterial, are needed to facilitate possible increases in air cargo.

Another improvement to serve the airports which merits implementation is preserving the corridor and future construction of the Northern Route to allow establishment of a connection between both airports and facilities located in Southwest Colorado. The Northern Route would be a proposed relief route to NM 516 and would connect from the northeast part of Farmington to north and west parts of Aztec. Being in the vicinity of the Aztec Airport, this new route would provide convenient mobility for shipping freight and air cargo.

It is worthwhile to note that Aztec has considered an industrial park to be located near the Aztec Airport and currently has expanded industrial parks in the south part of the city along US 550. A market analysis and runway justification study may be needed if gradual increase in aircraft operations occurs over the next 20 years.

7.6) COMMUTER RAIL/LIGHT RAIL

The RailRunner is the first commuter line in New Mexico, running from Santa Fe to Belen and serving Albuquerque. The rail line has been a great success in the past four years and has witnessed increasing ridership as new stops opened along the route. Possible expansion could see the RailRunner reaching as far south as Las Cruces. With a main rail corridor already in place, New Mexico has the potential for creating branch lines that serve various cities to the east and west of Albuquerque. As an idea for a long term, potential project the MPO and its entities should consider the costs and benefits of a spur route from the RailRunner to connect this area to the Albuquerque region.

On a more local scale, the MPO could stand to benefit from a light rail system that serves the three cities and other unincorporated communities such as Kirtland and Flora Vista. A light rail system would provide a fast and convenient mode choice. The system could parallel the existing roadways or be integrated into those corridors. Light rail would be an excellent opportunity for transit-oriented developments to occur and would strengthen the connection between transportation and land use planning.

At one time there was a freight rail line that transported goods between Farmington and Durango, CO. Although the line has been abandoned and many segments of the corridor have been sold to private ownership, reconnecting the Four Corners region with rail may be a viable option for transporting people and helping to generate economic development. Moving goods by rail could alleviate future truck traffic which in turn helps reduce deterioration of current infrastructure.

7.7) EQUESTRIAN

Horseback riding is a popular activity which speaks to the agricultural history of this area. There are times when riders need to use public highways to reach remote trail destinations. Horseback riders must ride defensively, and always anticipate the unexpected. In identifying potential locations for equestrian trails, safety concerns are crucial. Different situations to be aware of include minimizing the potential for conflicts between equestrians and other modes of transportation (bridges, bike/pedestrian trail crossings, motorized and nonmotorized traffic). There are currently no specifically-designated equestrian trail systems within the MPO region; however, equestrians are permitted to use the riverwalk trail in Farmington and wide shoulders on state owned highways. The MPO should consider working with local equestrian stakeholders to identify key locations for equestrian trails. The trails could be mechanism for attracting future residents who enjoy this activity.

SAFETY

METROPOLITAN TRANSPORTATION PLAN

8

SAFETY

8.1) OVERVIEW

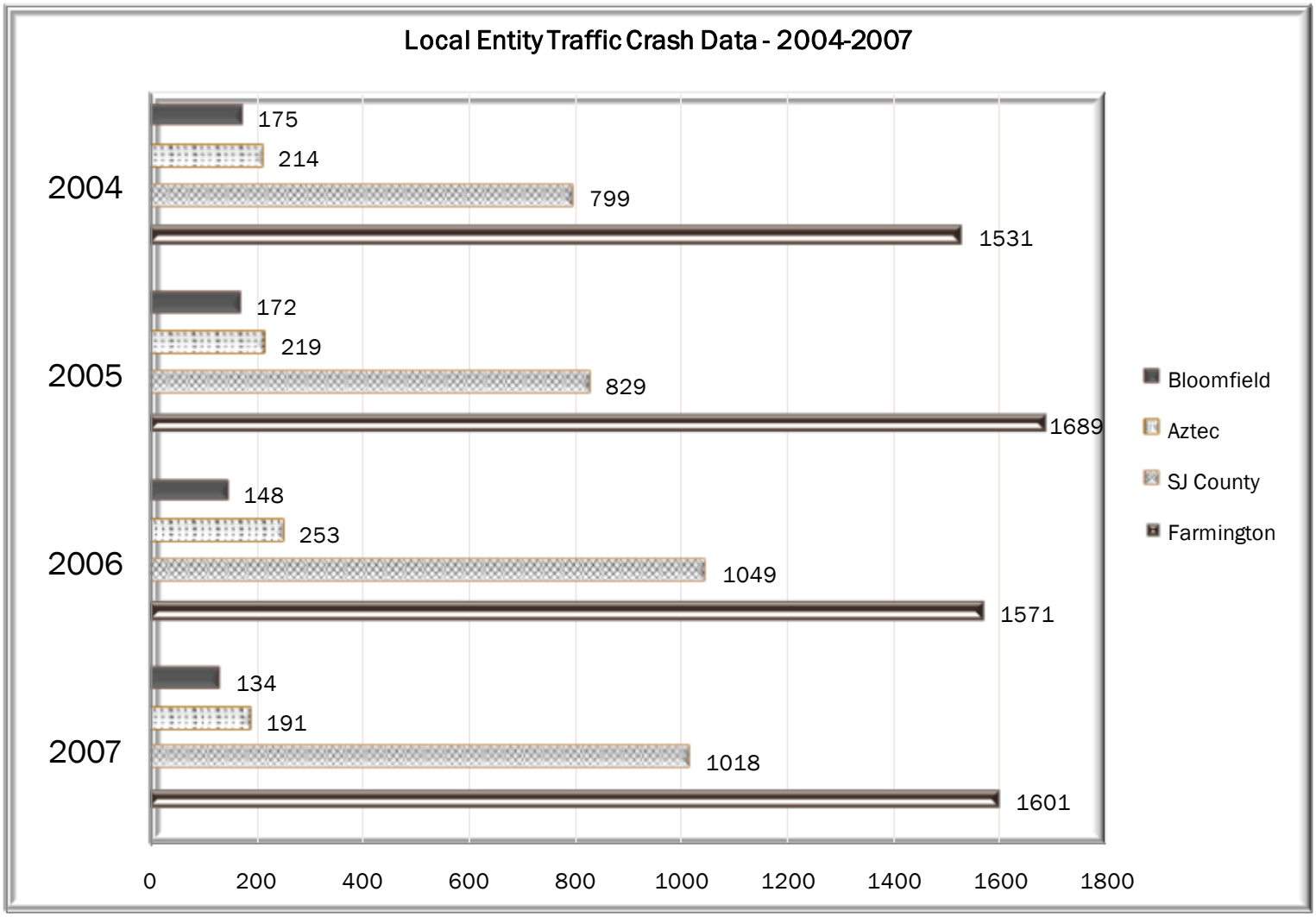
As one of the eight planning factors outlined in SAFETEA-LU, safety needs to be addressed for all modes of transportation. Safety is addressed during design of new roadways, intersections, and bicycle/pedestrian facilities. Safety is measured by the reduction in crash rates and can be achieved through the implementation of a variety of existing and innovative techniques.

8.2) ROADWAY SAFETY

The State of New Mexico ranks fairly high above the national scale for vehicle crash and fatality rates *(NMDOT Traffic Safety Bureau 2006 Annual Crash Report)*. NMDOT completed its Comprehensive Transportation Safety Plan (CTSP) in 2006 which presented 12 safety emphasis areas and 94 strategies. As of early 2009, nearly 70 percent of the strategies are being implemented to some degree. Data has shown that since 2006, total highway fatalities dropped by 15 percent, a good indication that the strategies in the CTSP are having an effect.

The NMDOT Traffic Safety Bureau has data on the number of crashes for each entity from 1998 to 2007. Figure 8-1 illustrates crash data from 2004 to 2007. Aztec witnessed a gradual increase from 2004 to 2006 but had a significant reduction in 2007. Crashes in Bloomfield have dropped since 2005. During this timeframe, Farmington has had almost a consistent number of crashes. San Juan County has seen a slight increase from 2004 to 2006.

FIGURE 8-1 – Number of Crashes by Entity



***Note: The totals for San Juan County exclude the totals shown for the three cities*

Table 8-1 provides a three year comparison of crash rates by entity to the State's crash rate. Bloomfield and San Juan County fall below the state's rate. The crash rate is the number of crashes divided by entity population, times 1000.

Roadway Safety Goals

The focus of vehicle safety should be on reducing the chances of a crash occurring through either infrastructure improvements or policy enforcement:

- Fund safety studies for area corridors with high levels of crashes to determine what measures can be taken to reduce the number of crashes
- Fund corridor access management studies that reduce conflict points and control turning movements

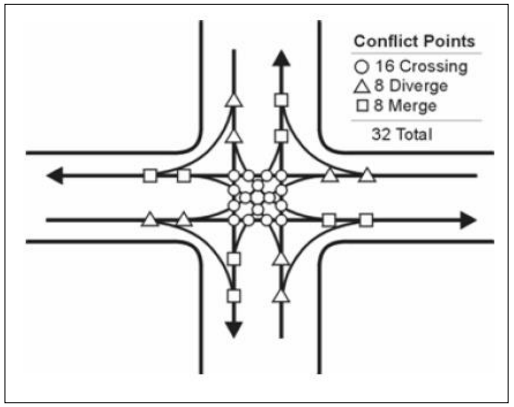
Table 8-1 - Crash Rates by Entity (per thousand people)

	2005	2006	2007	3 Year Change
Aztec	31	36	28	-3
Bloomfield	23	20	19	-4
Farmington	39	36	38	-1
San Juan County	24	23	22	-2
State of New Mexico	25	25	25	0

(Source: NMDOT Traffic Safety Bureau – 2005-2007 Annual Reports for each entity; Crash rate is number of crashes divided by entity population, times 1000)

8.3) INTERSECTION SAFETY

Most often crashes occur at an intersection. A typical intersection includes 32 conflict points based on through and turning movements. Driver inattentiveness and red light running violations are common causes for intersection crashes. Pedestrians and bicyclists often need to negotiate an intersection, which can increase the potential for conflict even more.



Several approaches are already in place for making intersections safer:

- Improving corner sight distances by keeping corners free of signs, landscaping, and other obstacles
- Replace a signalized intersection with a roundabout
- Installing pedestrian countdown signals
- Installing pavement flashers that are activated by pedestrians
- Painting crosswalks or using highly visible material for crosswalks

Top Crash Locations

Crash data obtained from the NMDOT Traffic Safety Bureau describes certain corridors and specific intersections that have the highest number of crashes (Table 8-2). The MPO can use this information to inventory and prioritize safety improvements to achieve a reduction in the number of crashes at these locations. For each entity, these roads tend to have the highest volumes of daily traffic.

Table 8-2 – Road Intersections with the Most Crashes by Entity between 2005 and 2007

Aztec	Total	Farmington	Total	Bloomfield	Total
▪ NM 516 (Aztec Blvd) at Oliver	30	▪ 20th Street at Butler	80	▪ US 550 (1st Street) at Blanco Blvd	16
▪ NM 516 at Lt. Plant Rd	42	▪ 20th Street at E. Main St	131	▪ US 550 (1st Street) at US 64	52
▪ NM 516 at Ruins Rd	24	▪ NM 516 at E. Main St	110	▪ US 550 (Bloomfield Blvd) at US 64	47
▪ NM 516 at Chaco	29	▪ NM 516 at Cliffside	89		
▪ US 550 (Main Ave) at NM 516	21	▪ NM 516 at 30th Street	130		

(Source: NMDOT Traffic Safety Bureau – 2005-2007 Annual Reports for each entity)

Intersection Safety Techniques

The FHWA, based on the National Cooperative Highway Research Program (NCHRP) Report 500 - Volumes 5 & 12, is considering new technologies to address intersection safety. Pilot projects using some of the techniques are in place; however, the FHWA acknowledges that substantial data has not yet been collected regarding the full benefit of these technologies:

- Investigate the potential benefit of innovative technologies for pedestrians crossing at intersections
- Raised pavement markers for illuminating crosswalks or turning movements at intersections
- Install red signal enforcement lights to reduce red light running violations
- Embedding LEDs into traffic control signs for better visibility

Intersection Safety Goals

- Maintain clear sight lines at all intersections by developing and enforcing standards that prevent
- Construct applicable pedestrian amenities that increase safety at intersections with multiple lanes

8.4) BICYCLE and PEDESTRIAN SAFETY

In the State of New Mexico, bicyclists have all the rights and responsibilities as a vehicle when traveling on a roadway. Through education and better awareness, motorists and bicyclists can share the road and reduce the chances of potential conflict. Table 8-3 shows the number of crashes involving bicyclists by entity in 2006 and 2007.

Table 8-3 – Number of Crashes Involving Bicyclists on the Local and Statewide Level in 2006 and 2007

	New Mexico		San Juan Co.		Farmington		Aztec		Bloomfield	
	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007
Crashes Involving Bicyclists	389	N/A	13	21	7	11	3	5	1	1
Fatalities	5	N/A	0	0	0	0	0	0	0	0

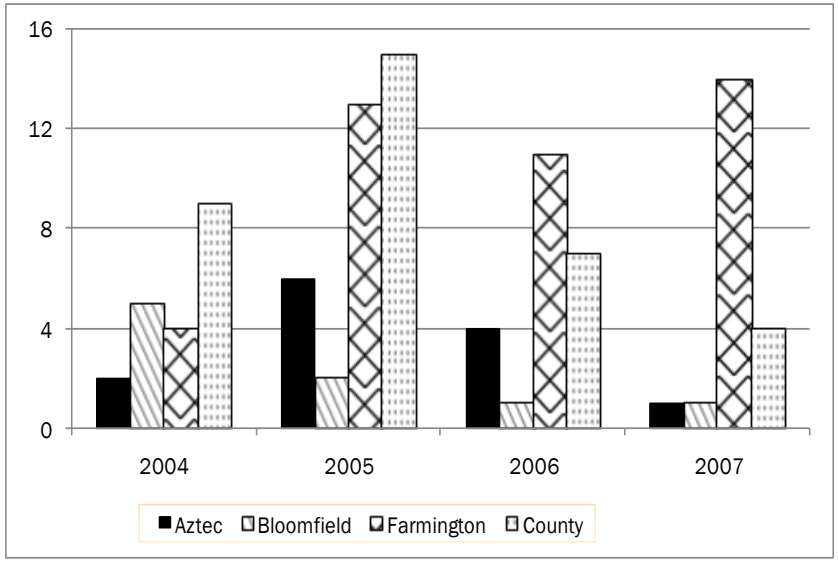
(Source: NMDOT Traffic Safety Bureau – 2006-2007 Annual Reports for each entity)

The 2007 Annual Report from the Traffic Safety Bureau indicates improper driving and driver inattention are the leading causes of crashes. From 2004 to 2007, there were a total of 87 pedestrian crashes combined within the three cities. In San Juan County – and excluding the three cities, there were 57 pedestrian crashes during this timeframe. Figure 8-2 and 8-3 provide details on pedestrian crashes in the four entities from 2004-2007.

Bicycle/Pedestrian Safety Goals

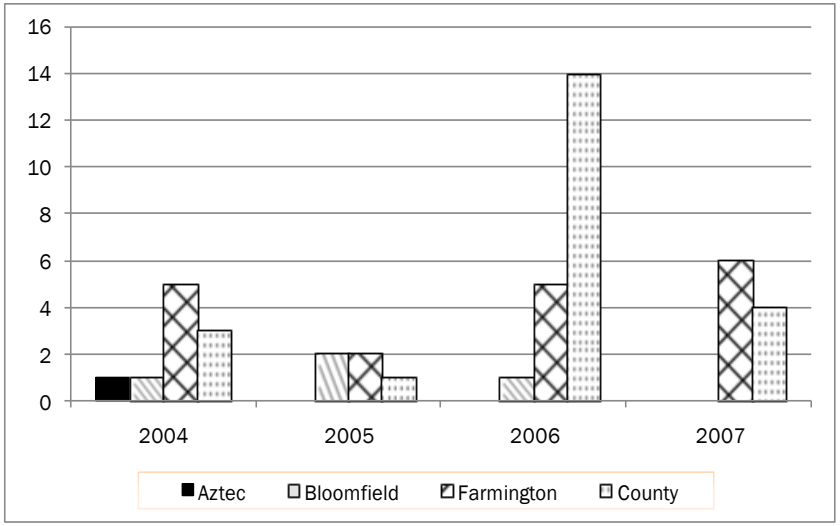
- Publish information that outlines safety tips to educate motorists about the rights of bicyclists
- The entities should inventory and prioritize sidewalks that need to be reconstructed or retrofitted
- Build bike lanes or bicycle facilities and sidewalks at the same time new roads are built or major reconstruction of existing roads occurs
- Develop a Complete Streets policy that promotes equal consideration of needs for motorists, transit users, bicyclists, and pedestrians
- Implement innovative crosswalk technologies that reduce vehicle speeds and make pedestrians more visible to motorists

Figure 8-2 –Pedestrian Crashes by Entity from 2004-2007



	Aztec	Bloomfield	Farmington	County
2004	2	5	4	9
2005	6	2	13	15
2006	4	1	11	7
2007	1	1	14	4

Figure 8-3 – Pedestrian Crashes with Alcohol-Involved by Entity from 2004-2007



	Aztec	Bloomfield	Farmington	County
2004	1	1	5	3
2005	0	2	2	1
2006	0	1	5	14
2007	0	0	6	4

8.5) SAFE ROUTES TO SCHOOL

The Safe Routes to School (SRTS) program is an initiative to make walking and biking to school a safer endeavor for students through engineering improvements, educational trainings, encouragement activities, and enforcement practices. The program has been implemented by many schools and cities over the years. Marin County in California has been the most noteworthy SRTS program in the United States.

In 2008, stakeholders in the City of Farmington, led by a Safe Routes to School Coordinator, created a SRTS Committee to encourage participation in the SRTS program. The Coordinator started with holding events and identifying safety concerns at Mesa Verde Elementary. As the program grew, interest spread to two other schools in Farmington – McKinley Elementary and Apache Elementary – through the efforts of parents at those schools.

In 2009 the City of Farmington successfully received Phase 1 funding through the federal SRTS program. The funding has been used for various school activities to promote the program as well as for developing Action Plans for the participating schools. The Action Plans outline improvements and strategies and those involved with achieving safer walking and biking routes for our students.

Various improvements have been identified by each of the three participating schools:

Apache Elementary	McKinley Elementary	Mesa Verde Elementary
▪ Improve sidewalks near the school grounds	▪ Mark a school zone	▪ Delineate walking and biking areas from vehicle drop-off areas
▪ Construct a new pedestrian walkway along the east side of the parking lot to connect the school building to the sidewalk along Apache St	▪ Evaluate traffic conditions along Monterey St. to determine if signage or engineering improvements are needed	▪ Increase the size of waiting areas at intersections that have crosswalks

The SRTS Coordinator and other parent volunteers have prepared several safety trainings and presentations at the schools. As parents and students are educated, they become more inclined to participate and assist with promoting the program. The schools are in the early stages of developing walking and biking goals. Through the efforts of those involved, each school will soon develop a successful and sustainable SRTS program.

Safe Routes to School Goals

- Achieve a 20% walking ratio for each participating school
- Have other schools join the Safe Routes to School program each year
- Perform at least one SRTS activity at each participating school each year

SECURITY

9.1) OVERVIEW

As one of eight planning factors, each MPO must plan for security as a way to safeguard travelers and the transportation system. Security planning involves effective communication and coordination among various emergency and enforcement agencies. Furthermore, plans for how the transportation system can effectively serve the needs of the public in the event of an emergency must be readily understood and utilized by these agencies.

9.2) SAN JUAN COUNTY EMERGENCY OPERATIONS PLAN

San Juan County has an established Emergency Operations Plan (EOP) that outlines policies and procedures for the four governments to save lives, minimize injuries, protect property, preserve functioning civil government, and perform other essential activities as a result of any natural, technological or terrorist incident. A comprehensive evacuation plan is included in the EOP that describes the procedures to be conducted and the responsibilities of various agencies in the event of incident or emergency.

9.3) SECURITY PLANNING and THE ROLE OF THE MPO

While the role of the Farmington MPO may be small in terms of security planning, the MPO can be instrumental in identifying evacuation routes and can partner with various agencies to create a regional emergency response plan. The MPO is encouraged to take the following steps related to security planning:

- Review local and statewide plans for emergency planning/security elements
- Incorporate transit security planning into the MTP
- Define the role of public transportation operators, the MPO, and the state in promoting security
- Identify critical facilities and transportation system elements for evacuation planning
- Develop security goals and appropriate strategies
- Work with emergency response agencies for disseminating information to the public as quickly as possible

There are a few roles an MPO can perform with regards to security planning:

- **Traditional** – The MPO incorporates system operations and management (O&M) into its ongoing transportation planning activities. The focus would be on specific O&M projects that arise as part of the transportation planning process, but the primary responsibility for operations-type projects would rest elsewhere, most likely with the region's operations agencies.
- **Convener** – The MPO would act as a forum where operations plans could be discussed and coordinated with other plans in the region. Regular meetings on operations issues would be held, but the MPO would still not be responsible for developing a regional operations plan.
- **Champion** – The MPO works aggressively to develop a regional consensus on operations planning. MPO planners work with operating agencies to create programs and projects that improve system performance. The MPO takes the lead in developing regional agreements on coordinated operations.

Currently, the MPO does not have the staff or resources to develop or implement security measures. It is very likely that the MPO, as a regional transportation planning forum, could program funding for O&M strategies for improving the abilities of the transportation system to handle emergency situations. Additional roles and responsibilities could be further studied and/or analyzed at a later time.

9.4) SECURITY GOALS and STRATEGIES

In order to perform any type of role related to security, the MPO should consider the following strategies for achieving security goals:

- Provide a forum for security/safety agencies to coordinate prevention strategies
- Coordinate with security officials in development of prevention strategies
- Fund new strategies/technologies/projects that can help prevent events
- Conduct vulnerability analyses on regional transportation facilities and services
- Secure management of data and information on transportation system vulnerabilities
- Develop techniques for disseminating information to the public in the event of an emergency
- Fund communications systems, such as ITS, and other technologies to speed response to incident

9.5) EVACUATION PLANNING

In coordination with San Juan County Office of Emergency Management, the MPO has identified primary and secondary evacuation routes in the event that a security incident occurs (Map 9-1):

- **Primary Routes –** US 64, US 550, NM 516, Piñon Hills Blvd, CR 350, and NM 170
- **Secondary Routes** – NM 371, Twin Peaks/CR 6480, Wildflower/CR 390, East Blanco Blvd, NM 574, 20th St, 30th St, and Butler.

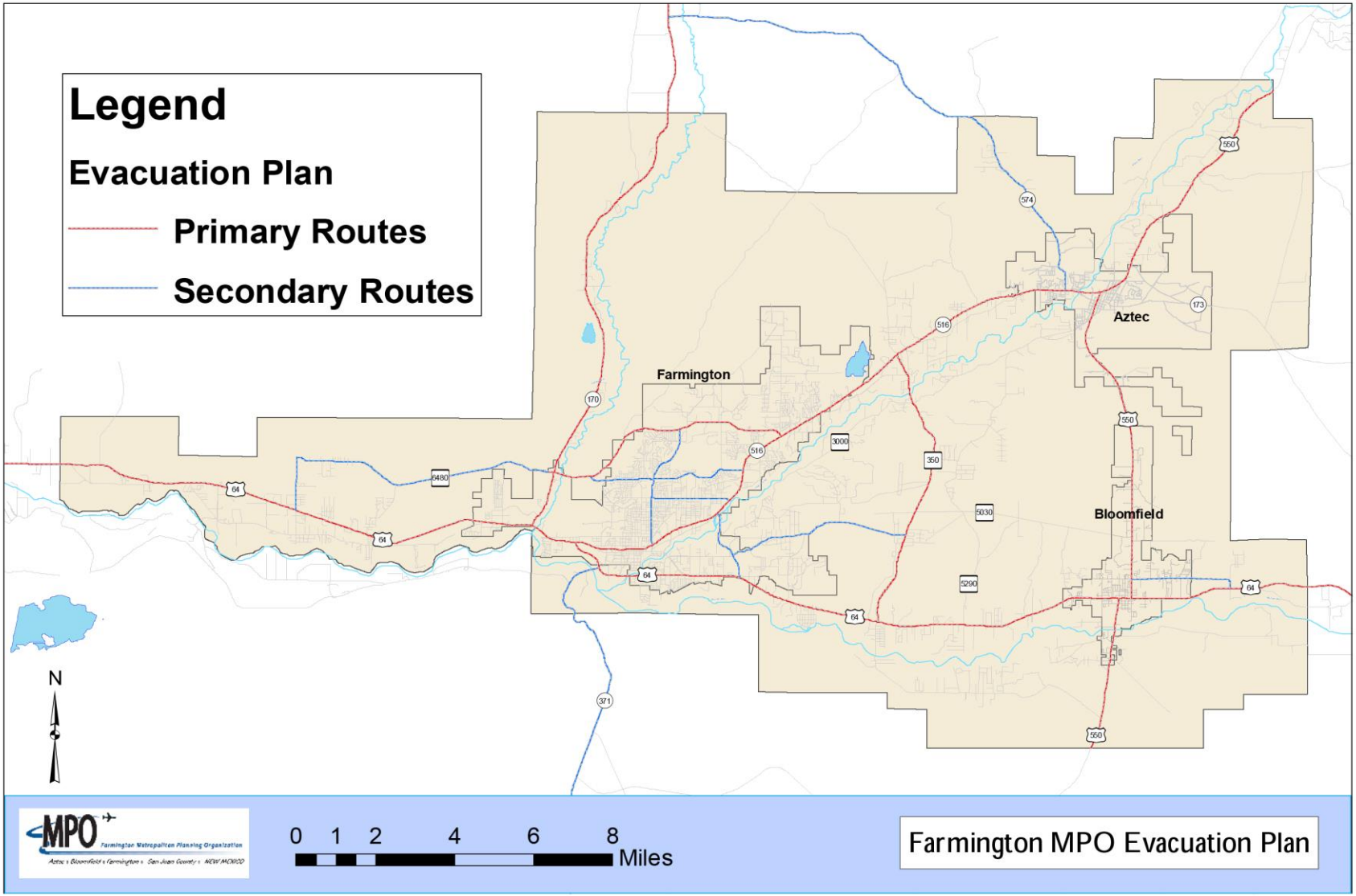
It should be noted that the San Juan County already has an emergency alert system in place which sends out radio messages to inform the public about severe weather or other incidents. It is conceivable that the identified evacuation routes could be incorporated into this alert system so as to direct the public to which routes to use.

9.6) TRANSIT SECURITY

All efforts should be made to ensure the safety and security of public transit users. The perceptions of an unsafe system may discourage or prevent people from using the system. While crime on Red Apple Transit is minimal, preventive measures should be taken, such as:

- Bus stops and shelters should be well-lit and located in places that are highly visible
- Install on-board cameras to discourage crime and monitor activities

MAP 9-1 – Identification of Evacuation Routes in the Farmington MPO



TRANSPORTATION POLICIES AND STRATEGIES

10.1) OVERVIEW

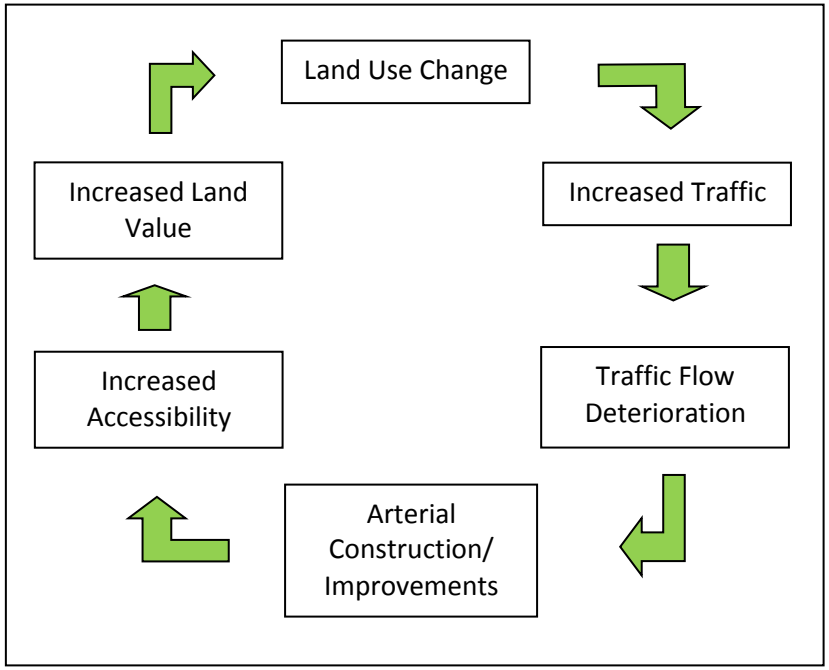
The following sections focus on specific areas that relate to or are affected by transportation decisions. By concentrating on these areas, the MPO can make better decisions for achieving its vision, mission, and goals.

10.2) TRANSPORTATION AND LAND USE

Transportation and land use are intrinsically linked – one affects the other and each must be considered as cities continue to grow. The location of various land uses and development patterns will dictate the infrastructure that is needed to serve these uses. Land uses tend to put a strain on transportation infrastructure, especially if developments are spread out across a city. As a result, the vehicle becomes the only practical choice for travel. Transit, walking, and biking become ineffective due to long distances and safety concerns. Likewise, this type of transportation facilities will encourage and attract particular land uses. Principal arterials draw businesses and big box stores while smaller roadways, such as collectors and minor arterials, tend to attract residential and small local shops and professional businesses.

Smart transportation and land use decisions increase the viable options people have for accessing opportunities, goods, services, and other resources to improve the quality of their lives. A balance between transportation and land use must be achieved. The MPO, along with NMDOT, local transit systems, and the entity planning staffs must develop partnerships and incorporate land use considerations into their transportation planning activities. The following policies and strategies should be implemented to achieve the transportation/land use balance:

- Develop a Complete Streets policy that integrates all transportation modes into the design and construction of roadways
- Adopt a major thoroughfare plan for the MPO area that preserves corridors and prevents future developments from interfering with future corridors
- Encourage the development of complimentary land uses
- Identify activity centers that become the focal point for a variety of surrounding land uses
- Promote reuse and in-fill development to strengthen existing parts of the city
- Create transportation and land use master plans for developing areas in San Juan county that are outside the city limits of the three local jurisdictions
- Develop a specific budget to construct more walking and biking facilities



Source: Iowa Access Management Handbook

10.3) ENVIRONMENTAL

Transportation decisions have a direct impact on air quality and environmental issues. More vehicles on the road and longer commute increase pollutants emitted into the air. Ozone and particular matter are two of more common pollutants that can be caused by transportation. Standards for these pollutants, which measure how much is allowed to be emitted, is monitored and enforced by the Environmental Protection Agency (EPA).

Currently, the Farmington MPO is in attainment for all air quality standards. However, recent data collected at regional monitoring stations and a reduction in the ozone standard to 0.075 parts per million (ppm) have indicated that San Juan County is on the threshold of being in non-compliance for ozone standards (Table 10-1). In January 2010, EPA once again proposed new ozone standards which would reduce the standard to a range of 0.060ppm to 0.070ppm. If this standard goes into effect in August 2010, there is a strong possibility that San Juan County could be designated non-attainment for ozone. As a result, more stringent requirements for the MPO and its transportation planning efforts would go into effect. Violations of air quality standards can lead to federal funds being withheld from the MPO.

As of early 2010, the New Mexico Environmental Department (NMED) has focused its efforts on point sources of pollution; that is, what impacts are coal power plants and oil wells having on ozone levels. No research has been conducted as to how vehicles and trucks affect ozone. To avoid falling into non-attainment and the subsequent additional requirements, the MPO should pro-actively implement policies that reduce the sources that contribute to ozone from a transportation standpoint:

- Implement ITS elements that reduce congestion
- Synchronize signals on major corridors to improve arterial travel flow movements
- New housing, business, and retail developments should be built around transit stops
- Encourage the use of walking and biking by creating higher density and mixed-use developments
- Research and invest in cleaner fuels that have a smaller impact on air quality

Table 10-1 – Four Highest 8-Hour Average Ozone Readings 2007-2009

	Substation (Farmington)	Bloomfield	Navajo Lake
2007	0.074 0.074 0.074 0.073	0.071 0.071 0.071 0.069	0.08 0.08 0.079 0.079
2008	0.071 0.070 0.070 0.069	0.065 0.064 0.064 0.063	0.077 0.075 0.069 0.069
2009	0.062 0.061 0.061 0.059	0.056 0.054 0.053 0.052	0.070 0.064 0.062 0.061
3 Year Average	**0.067 ppm**	**0.061 ppm**	**0.069 ppm**
Data Readings are shown in Parts per Million (ppm)			

Source: New Mexico Environmental Department (February 2010)

Nationwide, innovative strategies are being discussed or implemented as the newest ways to reduce transportation-related emissions. While typically seen in non-attainment, large metropolitan areas, the MPO may consider investigating the costs and benefits of the following strategies:

- Tax drivers based on distance traveled
- Charge vehicles to park at public facilities
- Implement road pricing, where motorists pay directly for using a particular road or for traveling in certain areas during peak time periods
- Create car-sharing programs to minimize personal automobile use
- Build rail systems that reduce vehicle trips and promote denser developments
- Telecommuting
- Incentives from businesses to employees to use other alternatives modes of travel

10.4) SYSTEM PRESERVATION

Every effort should be made to preserve the existing transportation system. System preservation can reduce costs over the life of infrastructure. While it is understood that new facilities will need to be built in the future to meet demand, maintaining the existing system reduces costly future improvements, reduces the tendency for urban sprawl to occur, and maintains access to neighborhoods, jobs, and employment centers.

The following policies and strategies should be implemented:

- Preserve right-of-way (ROW) that allows future expansion of existing roadways without impacting or disrupting adjacent land uses
- Select and enact pavement preservation strategies before roadways and bridges require serious repair.
- Implement access management strategies to maintain the functionality of road classifications
- Implement signal coordination plans for major corridors to reduce congestion and the need for adding more capacity to roadways
- Research and implement the use of road diets, which typically replace two travel lanes with bike lanes and/or parking lanes to improve safety. Road diets can reduce the need to construct new facilities.

10.5) INTELLIGENT TRANSPORTATION SYSTEMS

Intelligent Transportation Systems (ITS) are integrated technologies that improve safety and mobility on roadways, coordinate emergency management procedures, and distribute regional traveler information. ITS Program Areas include Traffic Management, Traveler Information, Public Transportation Management, and Emergency Management.

The MPO adopted an ITS architecture for the area in November 2006 and renewed it in November 2008. An ITS architecture is a computer software program that an MPO uses to inventory the various ITS elements and stakeholders involved. The Farmington MPO architecture describes the stakeholders who are involved with ITS, the types of ITS technologies to implement, and the roles and responsibilities of the stakeholders. Initial ITS projects that could be implemented include:

- Dynamic Message Signs (DMS) along critical regional corridors such as US 64, NM 516, and US 550 that would provide traveler alerts, travel times, and roadway conditions
- Arterial Management through a Traffic Management Center that monitors traffic flows and adjusts traffic control devices to reduce congestion
- Signal Synchronization that improves traffic flow on principal arterials
- Information kiosks for communicating regional traveler information

FINANCIAL PLAN

11.1) OVERVIEW

According to SAFETEA-LU, the financial plan of the Metropolitan Transportation Plan must be 'fiscally constrained', meaning transportation projects must be funded through reasonable estimates of revenues. The proposed roadway system improvements in the MTP are confined to the amount of funding available, or those revenues that can be reasonably expected over the 25-year life of the MTP. While more infrastructure improvements were identified than what funding would be reasonably expected, the roadway projects address the most pressing areas within the MPO boundary.

To complete the regional bicycle/pedestrian network, the entities will need to secure federal and local funding for many of the priorities discussed in Chapter 6. On-road bike facilities and sidewalks should be constructed in conjunction with new roads or with retrofit projects whenever feasibly possible. Funding these regional bicycle/pedestrian projects needs to be factored into the financial analysis.

Transit is funded primarily through FTA 5307 Operating and FTA 5309 Capital as well as through required local matches. These funding sources will be maintained as the reasonable funding estimates out to the year 2035. Although the Red Apple Transit does charge a fare for a fare box recovery ratio, the system is primarily subsidized by federal funds through FTA.

11.2) FUNDING SOURCES

The MPO typically receives funding from the following federal sources:

- **National Highway System (NHS) –** Used to construct improvements on urban and rural roads that are part of the NHS system.
- **Surface Transportation Program (STP) –** provides flexible funding that may be used by States and localities for projects on any Federal-aid highway, including the NHS and bridge projects on any public road.
- **Transportation Enhancements (TPE) –** Part of the STP program, this source funds specific walking and biking improvements that create facilities, provide safety, or preserve rail corridors for conversion into walk/bike trails.
- **Highway Safety Improvement Program –** Also part of STP, used for projects that provide safety or improve dangerous conditions on roadways, at intersections, or for walkers and bicyclists.
- **Highway Bridge Program –** enables States to improve the condition of their highway bridges through replacement, rehabilitation, and systematic preventive maintenance.

Other secondary federal sources occasionally received by the MPO include:

- **Recreational Trails Program –** provides funds for the creation or maintenance of new or existing trails, typically for non-motorized modes of travel.
- **Safe Routes to School Program (SRTS) –** A program that funds infrastructure improvements or educational activities that make it safer for students to walk or bike to school.
- **High Priority Projects Program –** commonly known as 'earmarks', this program provides designated funding for specific projects identified in SAFETEA-LU.
- **Transportation, Community, and System Preservation (TCSP) –** intended to improve efficiency of the existing transportation system by reducing environmental impacts and the need for new infrastructure.

Typical state funding sources include the General Fund, Severance Tax, and the Municipal Arterial Program (MAP). Local entities may use their general funds as well as dedicated road-building funds to complete regional transportation improvements. These funds rely on revenues from various sources including local sales and property taxes, fees, bond levies, and private sector contributions including right-of-way dedication. Additional revenues sources may come from impact fees if established by the individual entities under NM State Statute.

11.3) ESTIMATED ROADWAY COSTS and REVENUES

Conventional practice for estimating future revenues for financing future transportation projects begins with an examination of historical state and federal funding levels. An estimation of future federal and state funding for the Farmington MPO region would be made based on a forecast of previous authorizations; however, the insolvency of the Highway Trust Fund, federal funding rescissions, reduced District targets for federal funds, and the current economic recession make estimating the future funding levels based on historical data a challenge. Simply projecting current revenues over the past several years for the future is no longer a viable methodology for revenue forecasting.

An alternative to a straight historical forecast is the development of future revenue scenarios. Due to varying revenue-impacting assumptions, three scenarios have been created by the MPO: a low-revenue, mid-range revenue, and high-revenue. The revenue scenarios allow the Farmington MPO to be flexible in its planning process and adaptable to the changing dynamics of the economy within the region and the state. The Farmington MPO and its entities should always seek out or research new innovative funding strategies as they are identified. In a tight economy, the challenge is finding creative ways to optimize and augment existing financing strategies to provide the best service and infrastructure to the area's residents.

11.4) APPROVED SCENARIOS and PROJECT LISTS

The final roadway scenarios and project lists that are expected to meet future travel demand and needs reflect consultation with the public, local entities and other stakeholders. The MPO has undertaken an extensive amount of technical analysis to arrive at the approved scenarios contained in this plan. The overall roadway project lists were reduced and grouped into categories in order to meet the SAFETEA-LU planning requirements of a fiscally constrained plan for the next 25 years. The approved scenarios include combinations of up to six projects that could potentially fall within projected revenues. Several additional projects are shown in Appendix B. This list shows an additional $201,000,000 in unfunded transportation needs. The MPO will maintain these projects as unfunded requests in the event that additional revenues or increased funding levels are achieved. A few identified projects have been removed as being not recommended due to high costs or not having much benefit to the regional system.

For each revenue scenario, a dedicated amount should be reserved for regional bicycle/pedestrian projects. Projects should be selected from the short term priority list. Project selection would be determined in future years based on specific conditions and need.

Project costs were developed in cooperation with the entities and NMDOT. The MPO used existing worksheets and formulas for cost estimation of road projects. Then, to achieve a year of expenditure amount, an inflation rate of 2.5% was applied

to the projects. Cost of materials and project length were the primary factors for bicycle/pedestrian costs, but they do not calculate right-of-way or property acquisition costs at this time. After review by the entities, the project costs received approval through the MPO process.

11.5) REVENUE ANALYSIS

Table 11-1 describes federal funding provided to NMDOT District 5 and the amounts programmed to the Farmington MPO during the past five years as well as through the current STIP cycle out to the year 2013. Each of the three scenarios is described as follows to indicate how the base funding level was developed and how projected funding levels are estimated. Assumptions are also explained as part of the financial analysis:

Low Revenue Scenario

- The Low Revenue scenario took the average federal funding per year (from FY2006 to FY2013) and reduced that amount ($6,076,000) by 25%. Due to a lack of having a federal transportation bill in place, a 25% reduction is applied to reflect the uncertainty of District targets. An average local contribution amount was also calculated using the same formula; however the average amount ($2,200,000) was reduced by 35% since most of the entities have indicated to MPO staff that they are cutting their capital budgets in the near term. After projecting the federal and local contributions out to the year 2035, the total estimated revenue for the Low Revenue scenario is $149,625,000. Table 11-2 shows what can be reasonably funded with this scenario.

Mid-Range Revenue Scenario

- The Mid-Range Revenue scenario takes historical and near-term amounts of federal funding programmed to the FMPO for a period of ten years (from FY2005 to FY2014) and assumes the funding will stay consistent for the next 25 years. In a ten year timeframe, the Farmington MPO can expect to receive about $49,897,000 in federal funding and about $17,575,000 in local contributions. For the 25 year timeframe, total estimated funding for this scenario is expected to be around $168,680,000 (Table 11-2).

High Revenue Scenario

- The High Revenue scenario calculates the average yearly amount of federal funding ($6,076,000) and the average yearly local contribution ($2,200,000) and continues these funding trends out to the year 2035. This scenario estimates a total revenue amount of $206,900,000 (Table 11-2).

Each revenue scenario would allow flexibility for the Farmington MPO to fund some safety, bicycle and pedestrian projects over the next 25 years. The Metropolitan Transportation Plan and this scenario list can be revised, as necessary, to meet the changing needs of the community.

TABLE 11-1 – Federal Funding and Local Contributions by Year

	Total District 5 Federal Funding by Year*	District 5 % Change Year to Year	Portion of District 5 Funding Programmed to FMPO*	FMPO % Share of Federal Funding Year to Year
2005	$ 17,562,333		$ 1,288,333	
2006	$ 43,420,700	147.24%	$ 750,667	
2007	$ 23,153,000	-46.68%	$ 1,199,000	5.18%
2008	$ 26,431,800	14.16%	$ 6,381,000	24.14%
2009	$ 16,283,000	-38.40%	$ 5,527,476	33.95%
2010	$ 29,948,000	83.92%	$ 13,640,000	45.55%
2011	$ 28,996,500	-3.18%	$ 11,210,779	38.66%
2012	$ 24,359,000	-15.99%	$ 5,500,000	22.58%
2013	$ 15,650,000	-35.75%	$ 4,400,000	28.12%

* Funding shown for NHS, STP, TPE, Safety, and Bridge programs only

District 5 Total Federal Funds from FY05-FY13 to FMPO	$	49,897,255
FMPO Annual Average Share of District 5 Federal Funds from FY06-FY13	$	6,076,115

	Total Local Capital Funding for Regionally Significant Projects
2007	$ 708,000
2008	$ 3,845,000
2009	$ 3,097,000
2010	$ 2,225,000
2011	$ 3,200,000
2012	$ 1,125,000
2013	$ 2,100,000
2014	$ 1,275,000

Local Total Capital Funding from FY07-14 for Regionally Significant Projects	$	17,575,000
Average Annual Share of Local Capital Funding from FY07-14	$	2,196,875

TABLE 11-2 – Revenue Scenarios for Funding Future Transportation Projects

OPTION #1			**What can be funded with Option #1**	
FMPO Annual Avg Share of D5 Federal Funds (reduced by 25%)	$ 4,557,000		US 64 widening	$ 65,000,000
Assume funding trend continues for next 25 years			Pinon Hills Extension/CR 3900	$ 26,500,000
FMPO reasonable revenue estimate from D5		$ 113,925,000	East Arterial (South)	$ 18,700,000
			Highline Rd	$ 15,000,000
Estimated Local Avg Entity Contribution to Regionally Significant Roads (reduced by 35%)	$ 1,428,000		Various Regional Bicycle/Pedestrian Projects	$ 12,000,000
Assume funding trend continues for next 25 years			Various Bridge Improvements	$ 10,000,000
MPO reasonable revenue estimate from Local Entities		$ 35,700,000	**Project Funding Estimation**	**$ 147,200,000**
Total Estimated Revenues		**$ 149,625,000**		
OPTION #2			**What can be funded with Option #2**	
Approximate Federal Funding for FMPO every 10 years	$ 49,897,000		US 64 widening	$ 65,000,000
Assume funding trend continues for next 25 years			Pinon Hills Extension/CR 3900	$ 26,500,000
FMPO reasonable revenue estimate from D5		$ 124,742,500	East Arterial (South)	$ 18,700,000
			Highline Rd	$15,000,000
Estimated Local Entity Contribution every 10 years	$ 17,575,000		CR 390 Widening or New CR350 to CR3900 Connector	$ 4,164,027
Assume funding trend continues for next 25 years			Various Regional Bicycle/Pedestrian Projects	$ 25,000,000
MPO reasonable revenue estimate from Local Entities		$ 43,937,500	Various Bridge Improvements	$ 10,000,000
Total Estimated Revenues		**$ 168,680,000**	**Project Funding Estimation**	**$ 164,364,027**
OPTION #3			**What can be funded with Option #3**	
FMPO Annual Avg Share of D5 Federal Funds	$ 6,076,000		US 64 widening	$ 65,000,000
Assume funding trend continues for next 25 years			Pinon Hills Extension/CR 3900	$ 26,500,000
FMPO reasonable revenue estimate from D5		$ 151,900,000	East Arterial (South)	$ 18,700,000
			Highline Rd	$ 14,987,142
Estimated Local Avg Entity Contribution to Regionally Significant Roads	$ 2,200,000		CR 390 Widening or New CR350 to CR3900 Connector	$ 4,164,027
Assume funding trend continues for next 25 years			East Arterial (North)	$ 11,100,000
MPO reasonable revenue estimate from Local Entities		$ 55,000,000	Various Tier 2 Road Projects	$ 25,000,000
Total Estimated Revenues		**$ 206,900,000**	Various Bridge Improvements	$ 10,000,000
			Various Regional Bicycle/Pedestrian Projects	$ 30,000,000
			Project Funding Estimation	**$ 205,451,169**

11.6) OPERATING REVENUES

District 5 and all four entities oversee operating budgets which maintain roadways typically through resurfacing, chip sealing, and other minor road repairs. District 5 oversees maintenance schedules for the state and US highways in this area. The entities maintain all other roads. For purposes of this financial plan, operating budgets are assumed to increase by approximately two percent each year. It should be noted that some entities expect operating budgets to remain constant for the near term.

11.7) TRANSIT REVENUES

Revenue for Red Apple Transit is expected to continue to come from FTA 5309 Capital and FTA 5307 Operating. It will continue to be assumed that the fare box recovery ratio will be insufficient and that transit subsidies will still be needed to fully cover all transit expenditures. Future capital funds will be contingent on the ten year lifespan of the current fleet. With a fleet of nine trolley-style buses and each costing approximately $200,000, Red Apple would need $1,800,000 in 5309 funding every ten years to replace its fleet. Total capital funds needed by 2035 are projected to be $4,500,000.

The MPO and Red Apple Transit will make the assumption that FTA 5307 Operating funding will remain constant for each ten year period. For one ten year timeframe to the next, Operating is assumed to increase by nearly fourteen percent, which reflects the most recent Operating increase back between FY2007 and FY2008. Table 11-4 reflects Operating per year and ten year estimates projected out to the year 2035.

TABLE 11-3 – Future Transit Operating Revenues

Timeframe (years)	Operating per Year	Total Operating
2011 to 2020	$1,118,000	$11,118,000
2021 to 2030	$1,273,478	$12,734,783
2031 to 2035	$1,450,579	$7,252,893
Total Estimated Operating Funding from 2011 to 2035		**$31,167,675**

11.8) POTENTIAL REVENUE STREAMS

It will be advantageous for the Farmington MPO and its members to investigate other revenue streams beyond the traditional federal, state, and local funding programs. Committees established by the New Mexico Legislature are researching new funding source options to aid transportation improvements throughout the state. When recommendations from these committees are issued, the MPO may consider implementing these funding options that are applicable to this area.

Toll Collection/User Fees

Facilities could be constructed through the selling of bonds and be operated and maintained by toll collections. There are currently no existing toll facilities in the region. Toll revenue estimates would depend on:

- Traffic volumes of the roadway
- Trip length
- Established user fee

Public/Private Partnerships

Public/private partnerships could be used in financing transportation facilities. These ventures include roadways, bridges, right-of-way, pedestrian facilities, auxiliary lanes, and signalization. Public/private partnerships may also be used for parking facilities, bicycle facilities, transit improvements (including shelters), operational improvements, providing matching funds for transportation improvement projects (including enhancement projects), toll facilities, and other situations which may help leverage available financing for transportation improvements.

Borrowing

Borrowing allows the region the opportunity to build a project sooner, with the understanding that the borrowed money will need to be repaid out of future revenue streams. This could be accomplished through the issuance of bonds.

New Mexico Transportation Commission

Work with the New Mexico Transportation Commission to receive a larger portion of federal and state transportation funding allocated within District Five.

APPENDIX A
PUBLIC PARTICIPATION

Public participation is a key component of any community based plan. For development of the Metropolitan Transportation Plan, the Farmington MPO engaged the public throughout the process to identify and understand aspects of the system directly from the users. Many types of public participation techniques were used, including formal public meetings, surveys, having an information table at public events, and giving presentations to various local agencies.

November 12, 2008 - Farmington Downtown Center

Staff held a kick-off public meeting to introduce the MTP process. It outlined the various components of the MTP and how the public could be involved in the decision making process.

February 18, 2009 - Farmington Library
February 19, 2009 - Aztec City Hall
February 23, 2009 - Bloomfield Cultural Center

Early in the process, three public meetings were held and the public was asked to identify needed improvements for all types of modes. Staff took into consideration many of these suggestions and studied them for further analysis. The following list highlights many of the comments received:

Roadway Improvements

- The Pinon Hills Extension should use CR 3900 and also head east to connect to CR 3720.
- Morningstar Dr. from Browning into the County is a heavily traveled road. There is a blind intersection at Morningstar and CR 3950.
- Improvements need to be made to the bottleneck at Butler/Broadway intersection.
- Look to see if Browning can be extended north and west to Hutton.
- Two roads need to be extended – Beckland Hills north to Pinon Hills Blvd and Sandalwood east to Foothills.
- There is heavy traffic during the morning and evening on the two-lane stretch of 30th between Municipal and Sunset.
- Piñon Hills Blvd and 30th Street is a bad intersection.
- Can a new facility be developed soon that is parallel to CR 390 and CR 3720?
- Can there be a connection from US 64 to CR 5500 west of Bloomfield that crosses the river and provides a new route for trucks?
- Members of the public would like to see the PHB extension and the Highline Road built as soon as possible to give Crouch Mesa residents new outlets.
- The Aztec East Arterial is a great proposal.
- The Post Office in Bloomfield needs a back access point from Oak St. to keep people from having to go onto US 64 to reach the Post Office.
- Traffic is extremely dangerous for those trying to enter and leave the Post Office. Traffic needs to be slowed down as no one pays attention to the 40 mph speed limit.
- Conditions will only get worse as construction on US 64 begins.

Transit Improvements

- Need better transit service for seniors trying to get to doctor offices.
- Pick-up and drop off times are inconvenient for travel to/from Farmington.
- Need more regional bus runs during the morning and afternoon – there should be at least 5-6 per day.
- Members of public stated a need for transit service between Aztec and Bloomfield.
- Need more bus stops closer together to support seniors at Farmington and Aztec.
- Loop routes are too long and waste too much time.
- Routes to/from Farmington tend to take up half a day for a round trip.
- Have bus stops at Dino's at CR 350/CR 390 and at the Bloomfield Pool.
- The Bronco Route should have a stop at the westside Wal-Mart and someplace in downtown Farmington.
- Need a route to serve the south end of Bloomfield along US 550.
- Light rail should be a transit option for the future.
- Consider bus connections from the Farmington area to Durango.
- Consider passenger rail service from the Farmington area to Albuquerque, possibly a spur route from the RailRunner.

March-April 2009 - MTP Public Participation Survey

Two on-line surveys were available for the public as a way to understand their transportation concerns. One survey focused on general transportation and the other looked at transit. The following observations summarize the survey:

- 87% of respondents drive alone.
- Typical school or work trips are less than 10 miles, which presents opportunities for walking/biking options.
- 7am-8am is the most common depart from home time; after 4pm is the typical return to home time.
- To reduce congestion, respondents suggested improving signal timing, implementing access management, having better road connectivity, and expanding transit.
- Very few people who took survey ride the bus (approximately 10%).
- To increase bike riding, the need for more on-road and more off-road facilities was virtually tied (35-36%).
- 65% of respondents not in favor of toll roads.
- Most comments received pertained to engineering improvements, bike safety, rail service, signal timing, and transit improvements.

March 11, 2009 - Farmington Senior Center

Staff provided information on the MTP to members of the Farmington Senior Center. They were also asked to complete the MTP Public Participation survey.

Transit Improvements

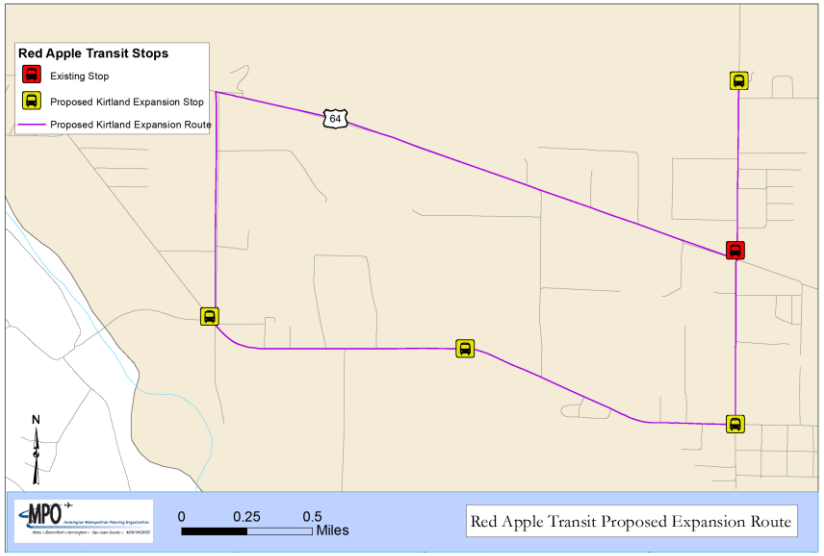
- The bus kiosks should have the bus map and schedule posted.
- Have a bus stop on Arrington near Airport to serve the local residences and the Safeway on Main St.
- The circular routes in Farmington result in really long commutes.
- The following residential neighborhoods were noted as not having transit in close proximity:
    - Municipal Dr between 20th and 30th
    - Butler/Carlton/30th
- The Red and Green routes need to serve the big box and shopping destinations on East Main St.
- There were requests for bus stops on East Main at Villa View and at Mickey.

March 27, 2009 - Navajo DOT

Staff met with Navajo DOT to discuss possible transportation connections between tribal lands and the MPO region.

- New bus stops along the Bronco route could be located at the Four Seasons residential neighborhood, at CR 6200/US 64, and at San Juan College West.
- Continue the Bronco route to loop through Kirtland (see map); have stops at CR 6675/CR 6100, at Kirtland High School, and at CR 6400/CR 6100.

Potential New Bus Stop Locations in Kirtland



- Consider a new bus route that serves the Ojo Amarillo area, including the neighborhoods, the elementary school, and the planned high school.
- Have a new bus route that serves housing from NM 371 east on top of the mesa down to the paved road to CR 5500, and then further onto the Fairgrounds and points beyond.
- There are dirt road connections that extend from CR 6480 in Kirtland that could be paved to create a new route to Shiprock.

May 5, 2009 - San Juan Center for Independence

A presentation on the MTP was given to staff at the San Juan Center for Independence. Input was provided mostly on how to improve and expand the transit system.

Transit Improvements

- Consider a bus stop at the dialysis center at Broadway/Lake in Farmington.
- Add a bus stop at the 30th/Farmington medical area.
- Service should be added to northeast Aztec along US 550 to serve retail and business destinations such as Construction Supply.
- Overcrowding on buses prevents passengers from taking the bus. Example was given at Apple Ridge where a passenger was told they had to wait for the next bus because this one was too full.
- Bus stops along CR 5500 are important for serving the residential neighborhoods and connecting them to Farmington and Bloomfield.
- Have a stop at the Bloomfield courthouse.
- The loop routes can add hours to travel time.
- Many bus stops are too far away to access from residential neighborhoods.
- Can headways be reduced to 15 minutes?

August 11, 2009 - Farmer's Market at Animas Park in Farmington
August 12, 2009 - Connie Mack World Series in Farmington
August 14, 2009 - San Juan County Fair
August 26, 2009 - San Juan College

During the summer, staff set up information tables at public events. Based on the list of identified improvements, the public was asked which projects they would fund over the course of 25 years given fiscal constraints. The majority of participants focused on funding roads but some indicated their preferred bicycle/pedestrian trail improvements.

Based on responses, the most preferred road projects were:

- The extension of Piñon Hills/CR 3900
- The East Arterial in Aztec
- The Northern Route from Farmington to Aztec
- The Highline Road from CR 350 to US 550 in Crouch Mesa

October 19, 2009 San Juan Center for Independence

Staff met again with the San Juan Center for Independence to see where they would like to see future transit service.

Transit Improvements

- A new housing development is being built at Piñon /Lake and will need a bus stop.
- Serve the PATH organization on Piñon with a stop.
- Add a bus stop at the 30th/Farmington medical area.
- Service should be added to northeast Aztec along US 550 to serve business destinations and low income housing.
- SJCI will be building a new office on San Juan Blvd across from Sonic. A bus stop should be located there once the office is operational.
- Can the stop at Apple Ridge be located at the north end for easier accessibility (current driveway at the south is too sloped).
- Have a stop at the Bloomfield courthouse.
- Have bus service to all of the apartment complexes along Blanco Blvd (east and west).
- A bus shelter should be built at the Kirtland stop.
- A mid-block crosswalk should be painted from the Civic Center to the south parking lot.

January 25, 2010 - San Juan College
January 25, 2010 - Bloomfield Cultural Center
January 26, 2010 - Aztec Library
January 27, 2010 - Farmington Library

With a draft document in place, staff held a series of public meetings to give the public an opportunity to review project analysis, identified improvements, policies, and strategies. The following comments were received:

Roadway Improvements

- Improve Hood Mesa Trail for better circulation.
- Make sure that drainage is considered when putting in new infrastructure.
- There needs to be better connectivity throughout Aztec.
- The Piñon Hills Blvd connection to Crouch Mesa needs to be built.
- There needs to be zoning in the County
- We need to good plans for guiding the development of the future road network.
- Build the East Arterial to get trucks out of downtown.

- US 64 needs improvement.
- Build the Northern Route as another connection from Farmington to Aztec.

Transit Improvements

- Build a passenger train connection to Albuquerque and to Santa Fe.
- More transit options are needed to serve the growing population.
- Red Apple Transit needs more lines and frequency of services.
- There is a need for the external bus routes to run more often.

Bicycle/Pedestrian Improvements

- Aztec should look into the 'rails to trails' program. Any opportunity to save the remaining railroad ROW should be acted on for trail development.
- Build an off-road bike/pedestrian trail along the river north of NM 516 in Aztec.
- Need more recreational paths in Bloomfield and a trail connection from Bloomfield to Aztec.

Other Comments Received

During the MTP update process, citizens provided several comments to the MPO for consideration:

- I would like to see riverside bicycle path east to west bypassing all traffic lights. Maybe something in the same sense around 20th and 30th street. Denver's got a great commute to get around by bicycle paths without being directly in traffic. High traffic areas would probably lead to the hospital, Walmart, schools, the mall, and to work. Nonstop traffic by bicycle to work would be ideal for me.

- Butler Ave. drastically needs to be expanded. You can hardly make a left turn onto it in the morning or afternoon any more. Traffic backs up from Apache St. to nearly Navajo street due to the bottleneck and timing of lights at Apache and Butler, and likewise Butler and 20th St. and 30th and Butler. This road should have been widened to 5 lanes 15 years ago, but the city took no action when they could have been purchasing property for rights of way when property was cheap. Now it is all way overpriced and will take eminent domain declarations to acquire the needed property for right of ways, which the city will have no choice but to do because it is getting worse by the day. You can hardly make a left hand turn on to Butler now between the hours of 6:30am and 9:00pm. Also find a route for a new major North/South arterial and make it wide enough.

- There are too many roads that merge from 4 or 5 lanes to 2 lanes such as Butler and also 30th St. The section of 30th St. between Hutton Ave. and College Blvd is ridiculous and was a big waste of money when redone a couple of years ago. That section will also have to employ eminent domain declarations in order to improve and is only getting worse by the day also. This is another road that should have been widened 15 year ago also when property was relatively cheap. Get rid of the bike lanes on roads for motor vehicles. It is a lot of wasted space and bicyclists pay no user fees to use that space like motor vehicle users do through fuel taxes.

- When the city resurfaces roads, realign the manholes before you repave. The system used now of paving and then realigning the manholes only destroys the new pavement and they are never level with the new road, and the asphalt used is of poor quality which results in those sections creating potholes the first time it snows or rains. For that matter get rid of some of the hundreds of manholes that now exist if possible. Also please spend our tax money on roads and sewers and infrastructure needed for the common good which is government's purpose, and not on providing entertainment for citizens such as parks, ball fields, performance centers and the like. Priorities need to be set straight.

- How about a pedestrian walkway/bridge at the mall to walk from Walmart/Sams Club to the mall without having to drive back and forth several times a day. I notice this a lot on the weekends (I live in the area) that the same people drive back and forth to drop off family members for the movies while some of them go shopping at Walmart at the same time.

- I have noticed that bicycle travel is very dangerous here compared to where I came from. After being forced into the curb by a family on their way to or from church, I got rid of my road bike. I always thought that if the city could work with the ditch companies to cover the ditches and put a bike path on top of them it would have many benefits. The ditches would be covered so they would pose less of a drowning potential for the kids. It would move the bike paths away from the roads and highways which would make it safer and more peaceful for the riders. The ditch companies would benefit with less maintenance and controlling unauthorized use of the ditch water.

- Consider a Monorail in the median of the highways in the tri-city area and even extending it out to Shiprock. I notice that most of the airports and any highly complex facilities use them. I don't know if the easement problems of using space above the medians and the mixture of road traffic and monorail traffic would be an overwhelming problem. It is my personal opinion that in this highly rural area just making roads more accessible to bicycles is going to make more people convert from vehicle traffic to some other form of transportation. But high tech, fast moving, comfortable transportation could be the answer. I think there are a growing number of people who would drive a short distance, park and ride mass transportation if available, even in an area like ours.

- I have long thought it would be great to work towards a bicycle/pedestrian trail that follows the wash that runs from Piedra Vista HS, under pinion hills blvd, through Beckland Hills park, through Kiwanis Park, and eventually reaching the proposed river trail system. Such a system could be used to access PVHS, San Juan College, as well as the Glade

Run mountain biking trails with the proposed river system. Even linking Kiwanis Park to the Glade Run (Road Apple) trail system would be pretty cool in my opinion.

- I do agree that Farmington should extend Pinon Hills Blvd. across the Animas to County Rd 3900. The two-lane road called Highline Rd should be built from CR 350 to US 550. However, I do not think that the Bloomfield Highway 64 should be widened to 6 lanes. If the other roads are built it will take much of the traffic off of 64 from Crouch Mesa and direct it to Main. The current situation takes traffic from Crouch Mesa and routes it the long way to Main. Instead, add bus routes to that section from Farmington to Bloomfield to ease the amount of traffic on the highway

APPENDIX B
FUTURE ROAD PROJECTS

Federal law requires the MTP to satisfy financial constraints such that all proposed projects can be reasonably funded, and undergo extensive public review.

The 2035 MTP included a priority process to identify a list of transportation improvement projects that best meet the needs of our region as a whole.

Tier One

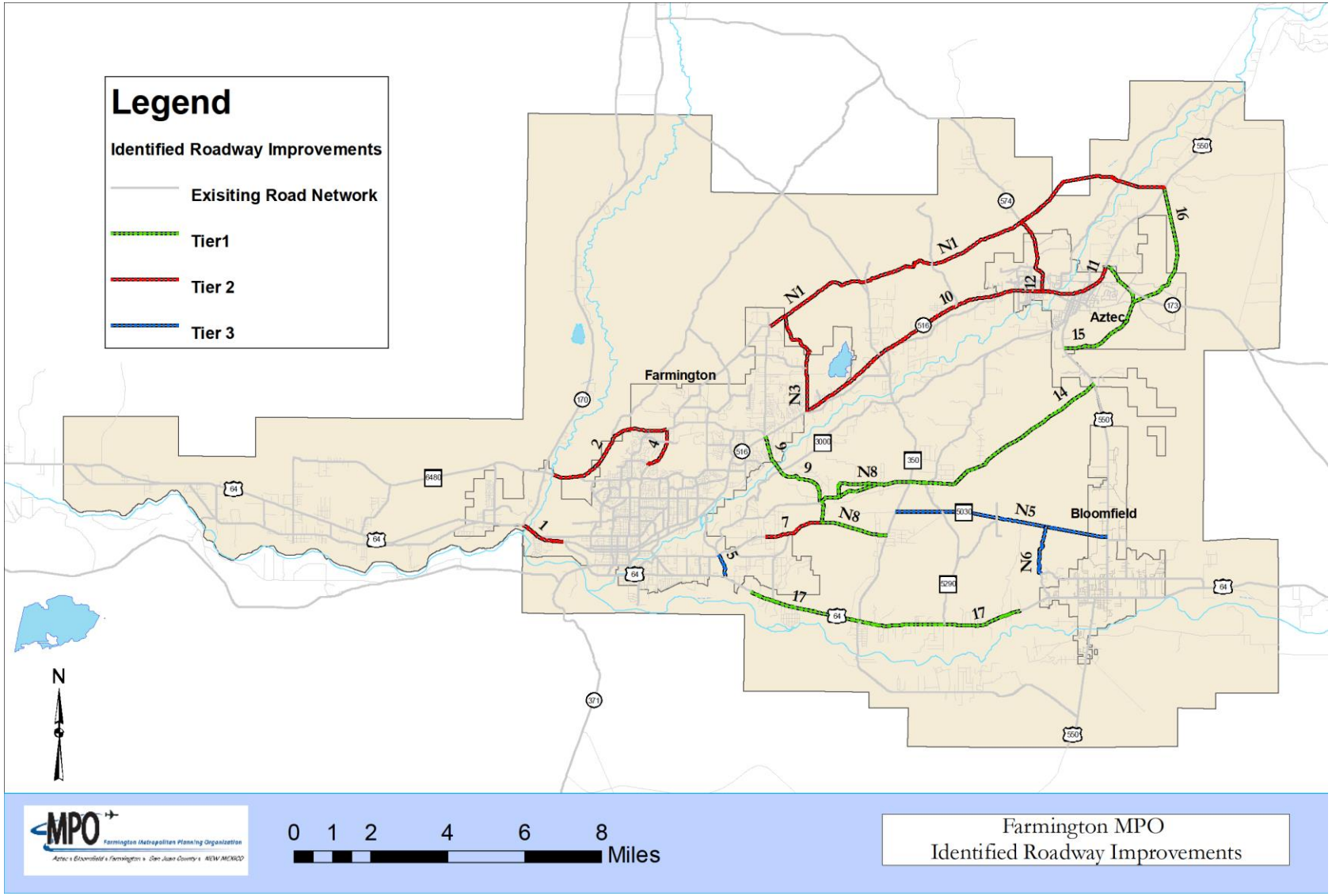
- Total Cost: $140,400,000
- Tier 1 is the plan that is constrained by reasonably expected revenues. These are the roadway priority projects for the MPO.

Tier Two

- Total Cost: $181,700,000
- Tier 2 is a vision plan for new revenues that include an additional 2.5% inflation rate.

Tier Three

- Total Cost: $19,500,000
- Tier 3 includes road projects that have been identified as needs for the regional transportation network, but that do not have any identified funding sources. Although these roadways remain unfunded it is pertinent that future corridors are identified and right-of-ways are preserved.


Legend
Identified Roadway Improvements
Exisiting Road Network
Tier1
Tier 2
Tier 3
Farmington
Aztec
Bloomfield
N1
N3
N5
N6
N8
1
2
4
5
6
7
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0 1 2 4 6 8
Miles
MPO
Farmington Metropolitan Planning Organization
Aztec • Bloomfield • Farmington • San Juan County • NEW MEXICO
Farmington MPO
Identified Roadway Improvements

TIER 1 PRIORITIES

Map #	Facility Name	Termini	Project Description	Functional Class	Entities	Regional Significance	Other Comments	Length (feet)	Est. Project Cost
17	US 64 Farmington to Bloomfield	1.5 mi. east of Browning Pkwy to Bloomfield City Limit	Widen to 6 lanes; implement access management; install traffic signals	Principal Arterial	Farmington Bloomfield County	Major east-west arterial; developing economic corridor	Phase 1 complete; Phase 2 has committed funding; Phase 3 partial funding programmed for 2012 & 2013	36960	$65,000,000
9	Piñon Hills East/ CR 3900	NM 516 to CR 390	Construct new bridge and 4 lane road	Proposed Principal & Minor Arterials	Farmington County	Direct connection for Crouch Mesa area to East Main; improves out-of-direction travel	Projected to reduce traffic on Browning & CR 350 river crossings	13650	$26,500,000
15	East Arterial (South)	US 550 to NM 173	Construct new 2 lane road (preserve ROW for 2 additional lanes)	Proposed Principal Arterial	Aztec	Direct heavy truck traffic away from downtown; create bike/ped friendly environment	Funding has been secured for Phase 1A & 1B	14784	$18,700,000
14	Highline Road	CR 3950 to US 550	Construct new 2 lane road	Proposed Principal Arterial	All	New east-west arterial to support regional network	Will distribute traffic to/from Crouch Mesa; connects PHB Ext. to East Arterial	27880	$15,000,000
N8	Piñon Hills Blvd Extension to CR 350 Connector	Corridor to be determined	Construct a facility to connect Piñon Hills Blvd Extension to Highline Rd	Proposed Minor Arterial	County	Complete an east-west segment for improved traffic distribution		8980	$4,200,000
16	East Arterial (North)	NM 173 to US 550	Construct new 2 lane road (preserve ROW for 2 additional lanes)	Proposed Principal Arterial	Aztec	Direct heavy truck traffic away from downtown	Continues relief route for heavy truck traffic and pass-through travel	19025	$11,000,000
								Estimated Tier 1 Total:	**$140,400,000**

TIER 2 PROJECTS

Map #	Facility Name	Termini	Project Description	Functional Class	Entities	Regional Significance	Other Comments	Length (feet)	Est. Project Cost
7	Wildflower Pkwy	Approx. Yarrow to CR 3900	Upgrade road - add TWLTL, curb/gutter, sidewalk, bike lanes	Minor Arterial	Farmington County	Distributes Crouch Mesa traffic to US 64, CR 350, and Browning Pkwy	Will become an essential link to the PHB extension	4760	$2,500,000
12	Lt Plant Rd	NM 516 to approximately Aztec City Limits	Upgrade road to Minor Arterial; curb/gutter, sidewalks	Collector	Aztec	Major north-south connection serving a fast developing part of Aztec	Projected to have future congestion issues	5000	$3,000,000
2	Piñon Hills Blvd	Sports Complex to Butler	Widen to 4 lanes	Principal Arterial	Farmington	Limited access arterial through Farmington	Projected to have future congestion issues	18510	$8,600,000
4	Butler	38th St to Piñon Hills Blvd	Widen to 4 lanes	Minor Arterial	Farmington	Major north-south arterial through Farmington	Projected to have future congestion issues	6105	$3,200,000
10	NM 516	Piñon Hills to Lt Plant Rd	Widen to 6 lanes; implement access management; install traffic signals	Principal Arterial	Farmington Aztec County	Major east-west arterial; developing economic corridor	Initial Studies by NMDOT have been conducted	43930	$55,000,000
N3	New Road east of Foothills	NM 516 to Northern Route	Construct 2 lane road	Proposed Collector	Farmington	Alternate terminus for proposed Northern Route	Becomes an option for a western terminus to the Northern Route	15950	$6,300,000
1	US 64	NM 170 to Murray	Widen to 6 lanes	Principal Arterial	Farmington	Major east-west arterial serving a fast developing part of Farmington	Projected to have future congestion issues	10450	$3,000,000
N1	Northern Route	East Farmington to US 550	Construct new 2 lane road from Farmington to Aztec	Proposed Minor Arterial	Farmington, Aztec, County	New limited access, high mobility corridor	An alternative corridor to NM 516 may be needed	61600	$70,000,000
11	NM 516/US 550	Lt Plant Rd to NM 173	Widen to 6 lanes and add accel/decel lanes	Principal Arterial	Aztec	Critical regional corridor	Initial Studies by NMDOT have been conducted	10454	$30,000,000
								Estimated Tier 2 Total:	**$181,700,000**

TIER 3 PROJECTS

Map #	Facility Name	Termini	Project Description	Functional Class	Entities	Regional Significance	Other Comments	Length (feet)	Est. Project Cost
N5	CR 5030	CR 350 to US 550	Construct new 2 lane road	Proposed Collector	County	Distribute Crouch Mesa traffic to US 550 and CR 350		29460	$12,000,000
N6	Newby Ln/ CR 5075	US 64 to CR 5030	Upgrade road to Collector	Proposed Collector	Bloomfield	Distribute traffic in west Bloomfield		10500	$4,200,000
5	Browning	US 64 to Southside River Road	Widen to 6 lanes	Principal Arterial	Farmington	Connects to retail districts along East Main; river crossing	Might not be needed if PHB bridge is built	9504	$3,300,000
								Estimated Tier 3 Total:	**$19,500,000**
								Estimated Total of All Projects:	**$341,600,000**

APPENDIX C
BICYCLE/PEDESTRIAN PROJECTS

Over 30 regional bicycle/pedestrian projects have been identified to create a regional network. During the MTP process, the regional projects were ranked to determine priorities. Projects were grouped into ranges to meet financial constraints. Many of the short range projects are expected to be funded through federal funds, such as the Safety program and the Surface Transportation Program, and local contributions. Grants and other sources will provide other funding opportunities.

Projects in the mid and long ranges are unfunded requests and will assist in further achievement of the regional bicycle/pedestrian network. These projects are included for informational purposes in the event that future revenues exceed projected estimates.

The Farmington MPO is committed to identifying funding for projects in all parts of the MPO region. Estimated cost for all regional projects is approximately $10,802,000. Please note that costs for property acquisition or for right-of-way are not factored into the cost.

The tables below correspond to Map 6-1 – Regional Bicycle/Pedestrian Improvements by Range.

Tier 1 Regional Bicycle/Pedestrian Priority List

Map Num	City or Area	Road/Facility Name	From Road/ Place	To Road/ Place	Type of Facility	Location Type	Surface	Connects to	Length	Est. Cost	Ranked Score
8	F	Butler to San Juan College along Sunrise	Butler	San Juan College	Multimodal	Multi-Use Path	Concrete	Residential, college, transit	4700	$137,000	**20.6**
38	B	East Blanco Blvd	US 550 N (1st St)	US 64	Bike lanes and sidewalks	On road	Concrete	Residential, school	14200	$831,000	**20.1**
43	F	San Juan and East Main	San Juan/ Butler	E Main/ Piñon Hills	Wide sidewalk/ path	Multi-Use Path	Hard	Residential, retail	24500	$712,000	**18.6**
14A	F	Pinon Hills Blvd	30th	Sports Complex	Bike lane (westbound)	On road	Hard	Park	3500	$143,000	**18.6**
11	C	Wildflower Parkway	Approx. at Yarrow	CR 350	Multimodal	Multi-Use Path	Hard	Residential	19500	$566,000	**18.5**
37	C	CR 350	US 64	NM 516	Bike lanes	On road	Existing	Residential, retail	39700	$1,622,000	**18.4**
21	B,F,C	Path parallel to US 64	Andrea/US 64	Ruth Ln/US 64	Multimodal	Multi-Use Path	Hard	Retail	42000	$1,220,000	**18.2**
19	A,B	Connect from Animas River trail to Bloomfield	Hartman Park (Aztec)	Blanco/Ruth Ln (Bloomfield)	Multimodal	Multi-Use Path	Hard	Residential, school, park	37300	$1,084,000	**17.8**
49	A	Oliver-McWilliams Trail	50 acre open space	Ruins Road trail junction	Multimodal	On- and off-road	Hard	Residential, school, park	8600' on-road & 4600' off-road	$986,000	**17.3**
45	A	Ruins Road Trail	Chaco/NM 516	Trail Junction	Multimodal	Off-road	Crusher fines	Aztec Ruins, residential	4600	$42,000	**17.3**
	F = Farmington, A = Aztec B = Bloomfield, C = San Juan County					Estimated Cost for Short Range Projects: (based on cost of materials times length)				$7,343,000	

Mid-Range Bicycle/Pedestrian Project List

Map Num	City or Area	Road/Facility Name	From Road/ Place	To Road/ Place	Type of Facility	Location Type	Surface	Connects to	Length	Est. Cost	Ranked Score
25	C	Kirtland path	Troy King/ Twin Peaks	CR 6675/ CR 6100	Bike rt on Twin Pks & CR 6500; Multi-use path on CR 6400 & CR 6100	On road, multi-use path	Hard	Residential, school	14100	$410,000	**17.2**
14B	F, C	Twin Peaks Rd from NM 170 to Troy King Road	NM 170	Troy King Rd	Bike lanes	On road	Hard	Residential, park	6575	$269,000	**17.1**
55	A, B	Blmfld-Aztec Hike/Mtn Bike trail	Wilderness Park (west of Ruth)	S. Rio Grande (Aztec)	Multimodal (mtn bike/ hike)	Off-road	Crusher fines		40800	$98,000	**16.9**
65	F, C	Animas River/E. Main	Gateway Park	Farmington Lake	Multimodal	Off-road	Crusher fines	Parks	42300	$102,000	**16.6**
22	F, C	PHB Extension/ CR 3900	CR 390/ CR3900	PHB/ E Main	Multimodal	Multi-use Path	Hard	Residential, retail	26000	$755,000	**16.5**
46	A	Riverside Trail	North end of River trail	Aztec Ruins via River Trl	Multimodal	Off-road	Crusher fines	River	1200	$300,000	**16.3**
66	F	Lions Wilderness Trail	Lions Wild Pk	Fmtn Lake Trail	Multimodal	Off-road	Crusher fines		15800	$38,000	**16.2**
71	F, C	La Plata River	Sports Complex	Jackson Lake Junction	Multimodal	Off-road	Crusher fines	Park	22400	$54,000	**16.1**
72	F	La Plata River	Westland Park	Sports Complex	Multimodal	Off-road	Crusher fines	Parks	6700	$16,000	**15.8**
	F = Farmington, A = Aztec B = Bloomfield, C = San Juan County					Estimated Cost for Short Range Projects: (based on cost of materials times length)				$2,042,000	

Long Range Bicycle/Pedestrian Project List

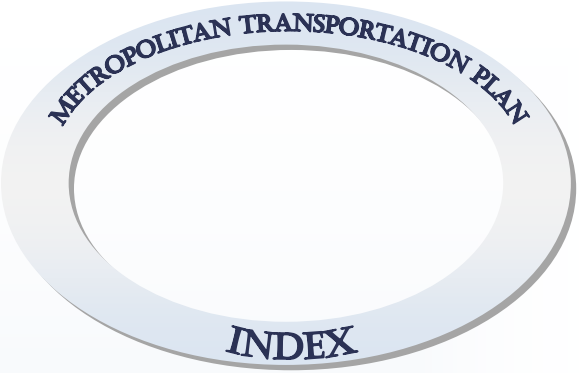
Map Num	City or Area	Road/Facility Name	From Road/ Place	To Road/ Place	Type of Facility	Location Type	Surface	Connects to	Length	Est. Cost	Ranked Score
51	A	Riverside Trl B	Existing river trail	Existing Riverside Pk loop trail	Multimodal	Off-road	Crusher fines	Downtown, park	800	$52,000	**15.8**
18	A, F	Animas River Trail	South of Farmington Lk	Hartman Park (Aztec)	Multimodal	Off-road	Crusher fines	Residential, park	34000	$82,000	**15.7**
27	C	Old Aztec Hwy & CR 3050	NM 516/ CR 3520	NM 516/ CR 3050	Bike route	On road	Existing	Residential	35000	$0	**15.2**
24	C	CR 3000	Browning Pkwy	US 550	Bike route	On road	Existing	Residential	63200	$0	**15.2**
79	F, C	San Juan River	San Juan/ Animas River	River Bend Park	Multimodal	Off-road	Crusher fines	Parks	11300	$27,000	**15.0**
28	A. C	Light Plant Rd	NM 516	MPO boundary	Bike route	On road	Existing	Residential, school	30600	$0	**14.6**
20	B, C	CR 5030	CR 350	US 550	Multimodal	Multi-use Path	Hard		30600	$889,000	**14.5**
63	F, C	Glade Road	PHB/Glade Rd	Farm Lake Trail	Multimodal	Off-road	Crusher fines		20400	$49,000	**14.3**
73	F, C	San Juan River	San Juan/ Animas River	CR 5500	Multimodal	Off-road	Crusher fines		44000	$106,000	**14.3**
41	A,F,C	Farmington-Aztec route	Farmington Lake	US 550/ NM 173	Multimodal	Off-road	Crusher fines		44500	$107,000	**13.9**
64	F, C	Farmington Lake Trail	Jackson Lake Junction	Farmington Lake	Multimodal	Off-road	Crusher fines		43700	$105,000	**13.6**
26	C	La Plata Rd (NM 170)	US 64	North end MPO boundary	Bike route	On road	Existing	Residential, parks	63400	$0	**13.5**
23	B, C	CR 5500 (West Hammond)	US 64	US 550	Bike Route (Bike lanes)	On road	Existing	Residential	39700	$0	**13.3**
42	B	CR 4935 (Arroyo)	Arroyo/ E. Blanco	CR 4900 (Arizona)/ US 550	Bike route	On road	Existing	Residential	16200	$0	**12.5**
	F = Farmington, A = Aztec B = Bloomfield, C = San Juan County					Estimated Cost for Short Range Projects: (based on cost of materials times length)				$1,417,000	

APPENDIX D
ACRONYM LIST

AADT	Annual average daily traffic
ADA	Americans with Disabilities Act of 1990
ARRA	American Recovery and Reinvestment Act
BLM	United States Department of the Interior, Bureau of Land Management
BPE	Bicycle, Pedestrian and Equestrian
BPAG	Bicycle Pedestrian Group
CIP	Capital Improvement Plan
CFR	Code of Federal Regulations
CTSP	Comprehensive Transportation Safety Plan
CMAQ	Congestion Mitigation & Air Quality
DOT	United States Department of Transportation
EJ	Environmental justice
EPA	United States Environmental Protection Agency
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FMPO	Farmington Metropolitan Planning Organization
FTA	Federal Transit Administration
FY	Fiscal year
ISTEA	Intermodal Surface Transportation Efficiency Act (preceded TEA-21)
ITS	Intelligent transportation systems
LOS	Level of service
MPO	Metropolitan planning organization

MTP	Metropolitan Transportation Plan
NEPA	National Environmental Policy Act of 1969
NHS	National Highway System
NMDOT	New Mexico Department of Transportation
NWNMCOG	Northwest New Mexico Council of Governments
PC	Policy Committee of the Farmington MPO
PPP	Public Participation Plan
RTD	Regional Transit District
SAFETEA-LU	Safe, Accountable, Flexible and Efficient Transportation Equity Act – A Legacy for Users
SRTS	Safe Routes to School
STIP	Statewide Transportation Improvement Program
STP	Surface Transportation Program
TAZ	Transportation analysis zone
TC	Technical Committee of the Farmington MPO
TE	Transportation Enhancements
TEA-21	Transportation Efficiency Act for the 21st Century
TIA	Traffic impact analysis
TIP	Transportation Improvement Program
TOD	Transit – Oriented Development
Title VI	Title VI of the Civil Rights Act
UPWP	Unified Planning Work Program
USDOT	United States Department of Transportation
UZA	Urbanized area
V/C	Volume to capacity ratio
VHT	Vehicle hours traveled
VMT	Vehicle miles traveled

INDEX



A

Access Management 1-6, 1-7, 3- 4, 4-3, 4-13, 7-4, 8-3, 10-2, 10-5, A-3, B-4
Airport 7-4
American Association of State Highway & Transportation Officials 6-7
Americans with Disabilities Act 5-12, 6-6, 6-7

B

Bike
- Lane 1-5, 6-6, 6-8, 8-6, 10-5, A-8, B-4, C-2, C-3, C-4
- Path A-8
- Route 1-5, 6-6, 6-8, C-4

C

Capital Improvement Program 6-9
Civic Center 5-2, 1-6
Congestion See Street 1-4, 1-8, 4-1, 4-4, 4-12, 7-4, 10-3, 10-5, A-3, B-4
Court 3-2, 3-3

D

Department of Transportation 1-8, 3-3, 3-4
Development
- Apartment 5-2, A-6
- New Construction 6-6
- Residential Development 4-12
- Shopping Center 6-2

Drainage 6-8, A-6
Driveway(s) A-6

E

Easement(s) A-8
Environmental Protection Agency 1-8, 10-3

F

Federal Highway Administration 4-4
Federal Transit Administration 11-1, 11-7

G

Geographic Information System 2-7

I

Intelligent Transportation System 1-4, 1-8, 9-3, 10-3, 10-5
Intermodal 1-2, 1-4, 1-8, 7-1
Intermodal Surface Transportation Efficiency Act 1-2

L

Land Use 1-4, 1-7, 2-1, 2-2, 2-5, 2-7, 2-8, 4-2, 4-5, 4-12, 5-1, 7-5, 10-1, 10-2
Level of Service 4-4, 4-13
Loading 4-4

M

Manual on Uniform Traffic Control Devices 6-7, 6-8, 6-10
Monuments 1-10
Multimodal
- Equestrian 7-1, 7-5
- Multimodal 7-1, 7-2, C-2, C-3, C-4
- Pedestrian and Biking Facilities 6-6
- Sidewalks 1-5, 1-9, 3-2, 5-12, 6-2, 6-7, 6-8, 8-6, 8-8, 11-1, B-4

N

National Highway System 6-9, 11-2
New Mexico Department of Transportation 1-2, 1-10, 4-1, 4-12, 6-9, 7-2, 8-1, 8-3, 8-4, 8-5, 10-2, 10-3, 11-4, A-4

O

Ozone 10-3, 10-4

P

Police Department 6-2
Policy 1-2, 2-8, 8-3
Policy Committee 1-2, 3-3, 4-12
Public Meeting 3-2
Public Participation Plan 3-1R

R

Rail
- Commuter Rail 7-1, 7-5
- Freight Rail 7-5
- Light Rail 7-5, A-2

Reach 1-6, 1-7, 7-5, A-2
Right of Way See Street 1-8, 4-12, 4-13, 6-6, 6-7, 10-5, A-7, B-3
Road Classification
- Collector 4-2, 4-3, 4-4, 4-6, B-4, B-5
- Minor Arterial 4-2, 4-3, 4-12, 10-1, B-3, B-4
- Principal Arterial 4-2, 4-3, 6-7, 10-5, B-3, B-4, B-5
- State Highway 7-1

S

Safe Accountable Flexible Efficient Transportation Equity Act- a Legacy for Users 1-2, 1-6, 8-1, 11-1, 11-2, 11-3
State Transportation Improvement Program 4-12, 6-8, 11-4
Street
- Congestion 1-4, 1-8, 4-1, 4-4, 4-12, 7-4, 10-3, 10-5, A-3, B-4
- Intersections 1-6, 6-7, 6-8, 8-1, 8-4, 8-5, 8-8, 11-2
- Lane 1-5, 4-4, 6-7, 6-8, A-2, A-9, B-3, B-4, B-5
- Right of Way 1-8, 4-12, 4-13, 6-6, 6-7, 10-5, A-7, B-3
- Sight Distance 8-4

Subdivision 6-9, 6-10
Surface Transportation Program 6-9, 11-2, C-1

T

Thoroughfare 4-12, 4-13, 10-2
Traffic Analysis Zone 2-5, 2-8, 5-8
Transit 1-1, 1-2, 1-4, 1-5, 1-7, 1-8, 1-9, 3-1, 3-2, 3-4, 4-12, 5-1, 5-2, 5-3, 5-4, 5-5, 5-6, 5-7, 5-8, 5-9, 5-10, 5-11, 5-12, 6-3, 6-6, 7-5, 8-6, 9-2, 9-3, 10-1, 10-2, 10-3, 11-1, 11-7, 11-8, A-2, A-3, A-5, A-6, A-7, C-2
Transportation Improvement Program 4-12, 6-2, 6-8