

CHAPTER 6: ECONOMIC LINKAGES

The economy is inextricably linked to transportation and land use. Investing in new transportation projects creates construction jobs and injects money into the economy. Transportation infrastructure plays a critical role in making a region competitive in terms of both supporting existing industry and labor and attracting new businesses and a talented workforce. Economic activities also include efficient goods movement, personal well-being and wealth, the creation of vibrant places, and ensuring efficient use of public funds. This chapter explores these different facets of the economy.

6.1 Economic Impact of Transportation Spending

The projects listed in *Connections 2040 MTP* have a combined total of \$5 billion in public dollars for capital transportation investments through 2040. These funds contribute to a stronger economy. Whether it is through creating and sustaining construction jobs, supplying contract work to engineer and design firms for project planning, or through right-of-way and land acquisition - the dollars we put towards investing in our infrastructure ripples throughout our entire economy in the following ways:

- 1) Direct jobs are created among the firms that design and build the project.
- 2) Indirect jobs are created when those businesses purchase supplies and equipment and services from other businesses to support their work.
- 3) Induced jobs are created when the workers involved in the projects take the money that they earn and put it back into the economy by making purchases that support themselves and their families.

Upgrading and maintaining transportation infrastructure is critical for mobility, safety, and access. Furthermore, there are broader economic benefits of transportation investments which can be substantial. The following table illustrates the economic impacts of infusing new federal transportation dollars into our economy over the life of the MTP.

a. Economic Impact of MTP Spending

Of the \$5 billion public capital transportation dollars in the MTP, \$4.1 billion is considered “new money” infused into the regional economy by the federal or state government. The impact of the \$4.1 billion is shown below:

Table 6-1: Economic Impacts of New Transportation Dollars (MTP 2016-2040), 2020 Dollars

Cumulative Benefits to Economy:	
<i>Average Annual Employment</i>	2,017
<i>Gross Regional Product (GRP)</i>	\$5.5 billion
<i>Real Personal Income</i>	\$4.1 billion
<i>Personal Consumption Expenditures</i>	\$3.7 billion

Source: MRMPO, REMI Model

MTP project spending is expected to have a considerable impact on the regional economy. Projects will result in an average of approximately 2,000 jobs per year that would not otherwise have been created. **Public transportation spending is also expected to have a cumulative impact on our GRP of \$5.5 billion between 2016 and 2040.** Personal incomes are projected to rise by \$4.1 billion, the majority of which will re-enter the economy in the form of increased expenditures on goods and services. These benefits capture just the transportation dollars and not the additional economic impact of an improved network (which is illustrated in section 6.2 of this chapter).

b. REMI Policy Insight Model

To analyze the impacts of transportation spending, MRMPO uses the Regional Economic Model, Inc. (REMI). REMI was designed to measure the impact of new jobs, policy shifts, and spending in an area and how these changes ripple throughout the economy. The REMI model is calibrated specifically to the MRMPO region and based on the most recent data available. The REMI model and its dynamic methodologies are well respected and used by organizations throughout the world to analyze regional economies. (See Appendix H for a description of the REMI methodology). Below are the definitions for the variables in Table 6-1.

Table 6-2: Economic Indicators

EMPLOYMENT	Employment is the estimate for number of jobs. This includes both part time and full time jobs as well as those who are self-employed. Employment figures presented here do not include unpaid family workers or volunteers. In the REMI model, employment is affected directly by output and labor productivity and indirectly by various transportation efficiency improvements and access.
GROSS DOMESTIC PRODUCT (GDP)	GDP is the total value of consumption, investment, and government spending in the region. Investments and government spending not only impact GDP directly, but also help create jobs and spur further consumption. GDP can also be seen as the total value of final goods and services produced within the regional economy.
REAL PERSONAL INCOME	Real Personal Income is the current dollar value of all personal earnings from wages, investment, and other earning streams.
PERSONAL CONSUMPTION EXPENDITURE	This is the dollar amount of disposable income put back into the economy through purchases of goods and services by individuals. Higher wages lead to higher disposable income and generally higher levels of consumption.

6.2 Economic Impact of Network Efficiency

Proper provision of transportation infrastructure can be a valuable tool for fostering economic development and can result in a number of benefits. As shown in the previous section, economic gains are incurred through the direct investment of federal dollars for the design and construction of transportation projects. In addition, economic gains are the result of improved network operations. For example, roadway efficiency can be realized from strategies including network expansion, safety improvements, and Intelligent Transportation Systems implementation, which help manage congestion and allow for a smoother flow of goods and people. Improvements in mobility and access reduce the effective distances between locations and reduce overall transportation costs.¹ This is referred to as the economic impact of network efficiency.

a. Economic Impacts of MTP Projects

Economic impacts to the MRMPO region associated with the improved mobility, or “network efficiency” gained by building the projects proposed in the *2040 MTP* are shown below. These benefits are above and beyond the impact of the construction and maintenance dollars associated with building the projects. The figures presented in the table indicate increases over a “no-build” scenario that models transportation conditions if the projects listed in the MTP are not built.

Table 6-3: Economic Impact of Network Efficiency Improvements

Economic Impacts of MTP Roadway Expansion Projects between 2016 and 2040 (2020 Dollars)	
User Benefits (2016 - 2040):	
<i>Travel Time Savings</i>	\$1,962,052,664
<i>Vehicle Operating Cost Savings</i>	\$78,863,205
<i>Safety Benefits</i>	\$47,779,559

Source: MRMPO, REMI Model

Mobility improvements over the next 24 years translates into a travel time savings of approximately \$1.9 billion over the life of the plan. In addition, vehicle operating expenses save an additional \$79 million, and safety benefits total approximately \$48 million. These results demonstrate the role of transportation projects as an important aspect of the regional economy and a huge driver of economic activity.

b. REMI TranSight Model

MRMPO used the REMI TranSight model to evaluate the economic impact of projects listed in the *2040 MTP*. TranSight is an extension of the REMI Policy Insight model that is compatible with MRMPO’s travel demand model and uses the number of trips, vehicle miles traveled, and vehicle hours traveled to calculate the economic benefits of transportation improvements. Rather than actual project costs, economic impacts are based on increased labor market access, decreased commuting costs, and lower transportation costs for delivering goods and services. More information concerning specific details and operation of the REMI TranSight model are included in Appendix H.

¹ Laube, M.M., L. Rainville, and W.M. Lyons. “A Multi-Modal Approach to Economic Development in the Metropolitan Area Transportation Planning Process,” Volpe Center, 2014

The TranSight analysis presented in this section only measures the impacts of roadway capacity and expansion projects associated with the *2040 MTP*. It does not include economic benefits associated with alternative modes of transportation or operational strategies such as Intelligent Transportation Systems and intersection improvements. While these transportation improvements are clearly of great value, they are not reflected in this analysis because they are not simulated within the travel demand model environment.

TranSight Economic Indicators

Several factors are commonly used to quantify economic benefits for roadway expansion or efficiency improvements. These are:

- 1) Travel Time Savings
- 2) Vehicle Savings
- 3) Safety Benefits

Travel Time Savings

Travel time savings provide individuals with more leisure time by effectively shortening necessary trips, like trips to work. Time savings create large economic benefits for businesses by providing cost savings for transporting goods and materials. Additionally, time savings makes communities more attractive for future business investments by reducing costs and allowing workforces to be drawn from larger areas. Time savings may induce new businesses to form, or existing businesses to expand, by reducing costs that had made operations prohibitively expensive.

Vehicle Savings

When roadway improvements reduce congestion and allow drivers to reach their destinations in less time there may be fuel and vehicle operation savings for individuals and businesses. These savings come in the form of fuel savings and general wear and tear on the vehicle that can be incurred by more trips, longer trips, and stop-and-go traffic.

Safety Benefits

Reduced congestion generally decreases the number of vehicle accidents but may increase accident severity.^{2, 3} Vehicle accidents cause undue repair costs, property damage, lost earnings, travel delays, medical and injury expenses, and may result in undue loss of life. Each of these factors hinders the local economy and places financial strain on individuals. Transportation projects promoting safety result in sizable increases in economic benefits.

Total Economic Impact of the MTP

When combined, the estimated impact of new transportation spending in the region and the transportation system's network efficiency improvements are substantial. The REMI TranSight model estimates that this MTP generates an additional:

1. **\$9 billion in GRP (2016 – 2040)**
2. **\$3.5 billion in wages and salaries (2016 – 2040)**
3. **5,500 additional jobs per year (on average)**

² Ibid.

³ Cambridge Systematics, "Crashes vs. Congestion - What's the Cost to Society?" AAA, 2011

6.3 Economic Well-Being

Our ability to easily and affordably access the things we need affects our daily quality of life. However, households are often forced to sacrifice housing options for affordable transportation, transportation options for affordable housing, or find that there are simply no options that meet their needs affordably. This section delves into the economic well-being of our region's households by exploring different housing options, transportation costs associated with housing location, and how those living in poverty are most likely to require access to daily destinations by transit or by foot.

a. Housing Affordability

In a report published in May 2002 by the Millennial Housing Commission it was asserted that, "Affordability is the single greatest housing challenge facing the nation" (Millennial Housing Commission 2002). According to the Department of Housing and Urban Development (HUD),

"...families who pay more than 30 percent of their income for housing are considered cost burdened and may have difficulty affording necessities such as food, clothing, transportation and medical care."⁴

Housing and transportation costs combined are an even better indicator of how cost burdened a family is and this concept is further explored in the next section. However, when evaluating just housing costs, this 30 percent standard has become the most widely accepted measure of housing affordability in the United States. In the AMPA, one of every three households (32.3 percent) spend over 30 percent of their income towards housing expenses. Included are households considered to be facing an extreme housing cost burden; **17.5 percent of AMPA households spend 50 percent or more of their income on housing.** The hardest hit are households that rent their homes. Approximately 35 percent of households in the AMPA are renters which is on par with the national average. However, almost **half of all renters in the AMPA exceed the 30 percent standard (48.6 percent).** This is due to the relatively low median incomes of renters when compared to owners (\$33,000 compared with \$66,000).

Offering a Range of Housing Options

One way of improving affordability is offering a range of housing options. In fact, this is an important theme of this MTP. One of the guiding principles for the Target Scenario is to encourage diverse housing options. And a pathway listed to implement the MTP as described in Chapter 9 is to promote a diverse mix of housing in cost, unit types, and neighborhood settings.

The Census Bureau's ACS describes current housing distribution by several broad categories as shown in the following table. When compared with the nation, the region's housing stock is overrepresented in single family housing and mobile homes, while underrepresented in attached housing and multi-family.

⁴ Department of Housing and Urban Development,
http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/affordablehousing

Table 6-4: Housing by Units in Structure in 2017, Albuquerque MSA & United States

	Albuquerque, MSA		United States	
	Number	Percent	Number	Percent
Single family	277,718	71.4%	92,789,782	67.5%
Attached housing 2 - 4 units	24,345	6.3%	10,905,172	7.9%
Multi-family 5 units or more	51,502	13.2%	25,084,209	18.3%
Mobile homes	35,333	9.1%	8,500,432	6.2%
Other	258	0.1%	127,713	0.1%
Total Housing Units	389,156	100.0%	137,407,308	100.0%

Source: US Census Bureau ACS 1-year 2017

Multi-Family Housing

Multi-family housing is often seen as an affordable housing option. However, in the AMPA a tight demand for quality apartments has made renting an apartment out of reach for many. According to CBRE Albuquerque, rents across the AMPA increased 7.5 percent between September of 2018 and September 2019 with apartments at a 96 percent occupancy rate. Much of the multi-family housing currently under construction is located along major transit routes which is beneficial to renters who may rely on public transportation. However, a large portion of newer multi-family developments are marketed towards above average income earners and less accessible to households with limited financial means. There are some notable exceptions however, one example is the conversion of several historic motels along the Central Avenue corridor into low income housing units.

Manufactured Homes

While Albuquerque is underrepresented by multi-family housing (its share of the housing market is lower than the national average and other cities of similar size) it has a high share of mobile and manufactured housing. In the region there are 35,000 households living in mobile homes (9.1 percent of households compared with 6.2 percent nationwide). It is likely that the sizable share of mobile homes among our overall housing stock indicates that this may be a viable alternative to households seeking affordable housing. While typically considered a more rural housing option, this is certainly not always the case. There are 16,000 households living in mobile homes within urban neighborhoods in the region.⁵

Households living in mobile and manufactured homes have considerably lower incomes than the general population. The median income for a household living in a mobile home in the Albuquerque metropolitan area is approximately \$33,000 annually, while the median income for all households is \$50,906. In an article published in the journal titled, *Housing Policy Debate* (Sullivan, 2019), the authors found that while households that reside in manufactured homes are typically more economically disadvantaged than conventional renters and homeowners, they pay a smaller percentage of their income on housing costs.

⁵ Urban neighborhoods is defined here as housing located within the Albuquerque Urbanized Area, which is established by the US Census Bureau based on housing unit density criteria.

The Missing Middle

Termed by architect Daniel Parolek, missing middle housing is defined as, “a range of multi-unit or clustered housing types compatible in scale with single-family homes that help meet the growing demand for walkable urban living”.⁶ The missing middle housing types include, townhomes, duplexes, bungalows, and live/work spaces. These housing types are a medium density alternative to the traditional single family or large-scale multifamily options. The Integrated Development Ordinance (IDO), recently adopted by the City of Albuquerque, provides more opportunities for housing of this type in order to promote transit-oriented development in targeted areas. Missing middle housing can help to provide a level of density that is transit supportive and walkable while maintaining a neighborhood scale. The region is underrepresented in this type of housing (6.3 percent compared with 7.9 percent nationally).

Co-Housing, Co-op Housing, and Multi-Generational Housing

In the 2040 MTP Questionnaire there was a question which read, “What type of housing would you like to live in in the future (in the next 20 years or so)?” There were a large number of respondents who wrote in alternative options to those provided, including co-housing and similar shared housing types. There are a variety of co-housing options that offer a range of initial investment including; ownership, shareholding, and renting. The co-housing model allows residents to live in individual units while sharing common facilities that usually include a communal dining and recreation area. Co-housing may be an affordable option for people in varying stages of life by providing a support system and an overall sense of community. Some examples of cohousing communities in the region include; Vecinos del Bosque and Acequia Jardin. These communities are well positioned for access to retail and transit. The City of Albuquerque’s Integrated Development Ordinance (IDO) promotes co-housing by adding the “cottage development” use. Cottage developments allow for the maximum Floor Area Ratio (FAR) of multiple dwelling units on lots that, typically, only allow for single family residential development.

Figure 6-1: Multi-Unit Housing in Albuquerque



⁶ Opticos Design, 2020.

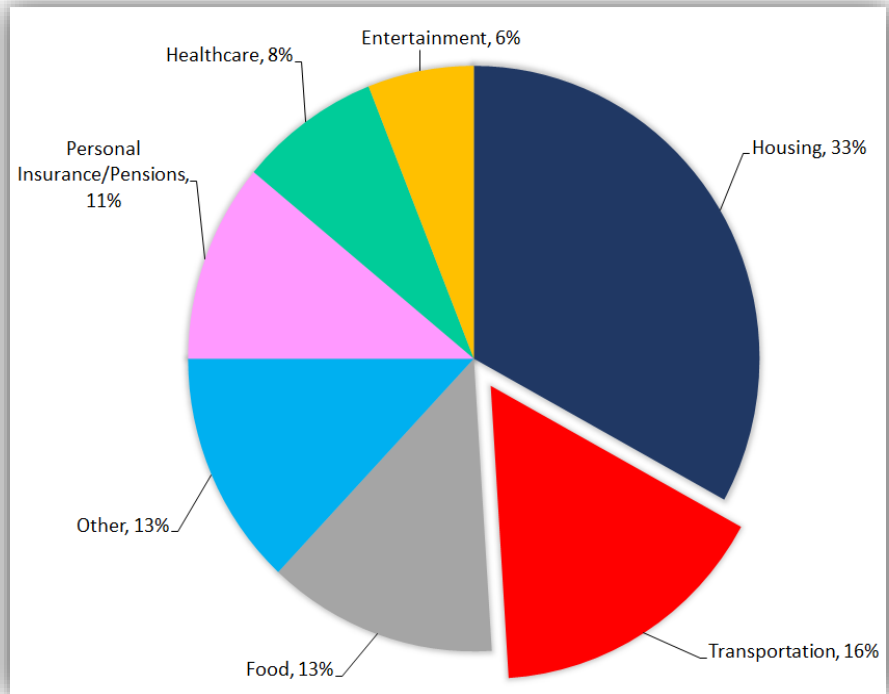
b. Housing and Transportation Costs

Housing affordability is an important component to the issue of economic well-being and is vital to ensuring that the region is livable for current and future residents. However, it is an incomplete picture without consideration of transportation expenses. Transportation is typically a household's second largest cost, and a family that lives far away from their daily destinations in order to find affordable housing may be losing those savings due to higher spending on transportation. When evaluating economic well-being of the region's households it is important to view housing and transportation costs together for a complete picture of some of the less visible barriers to economic health.

Center for Neighborhood Technology (CNT) Housing + Transportation Affordability Index

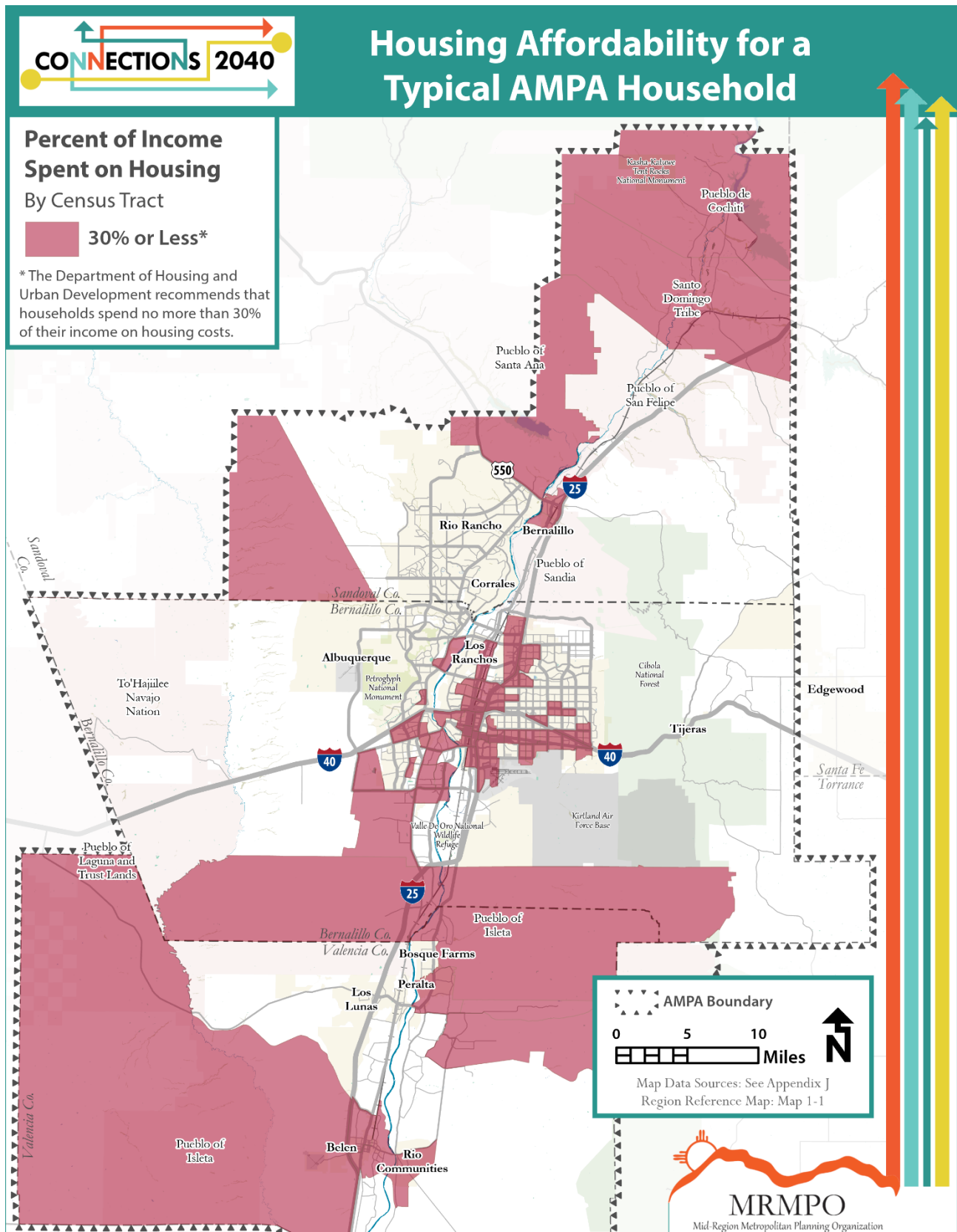
The Center for Neighborhood Technology (CNT) has developed a tool called the Housing + Transportation Affordability Index that integrates both housing and transportation costs to provide a more realistic measure of an area's affordability. CNT has found 15 percent of income to be an attainable goal for transportation spending as a share of total income. Therefore, by summing the guidelines that a family should spend no more than 30 percent of their income on housing and 15 percent on transportation, CNT has established that no family should spend more than 45 percent of their income on combined housing and transportation costs.

Figure 6-2: Household Costs by Category

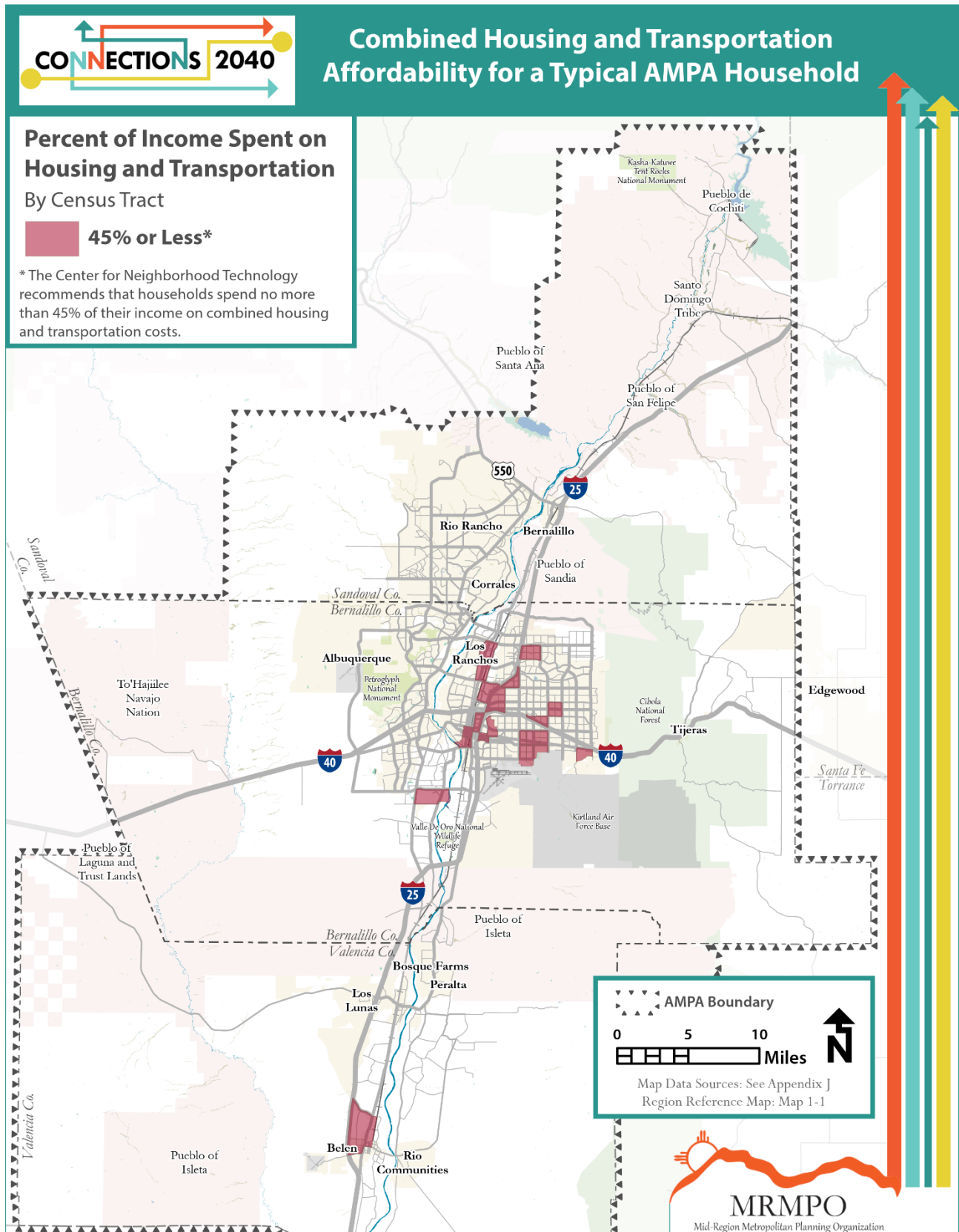


The following maps were produced using CNT's Housing and Transportation Affordability Index data and demonstrate that geographic areas which appear affordable when looking only at housing costs, are revealed as unaffordable when combined with estimated transportation costs. The rose-colored shaded areas in the first map show the areas that are considered "affordable" when just considering housing costs. The following map adds transportation costs into the mix, and the rose shading shows areas where a household earning median income would be expected to spend under 45 percent of their income on housing and transportation combined. When the costs of housing and transportation are considered together the metropolitan area becomes much less affordable.

Map 6-1: Housing Affordability in the AMPA, 2017



Map 6-2: Combined Housing and Transportation Affordability in the AMPA, 2017



Looking only at housing affordability, 89 percent of block groups in the AMPA are considered affordable for a family of four (using 30 percent or less of a household's income spent on housing as the threshold for what is considered affordable). **When household and transportation costs are combined, however, only five percent of block groups are considered affordable** (are within the 45 percent combined cost guideline). This is primarily because block groups with lower housing costs are located farther from jobs and other trip purposes, thus increasing transportation costs to the average household. If a household is transit dependent this further exacerbates the household burden given the limited transit service outside of the urban core.

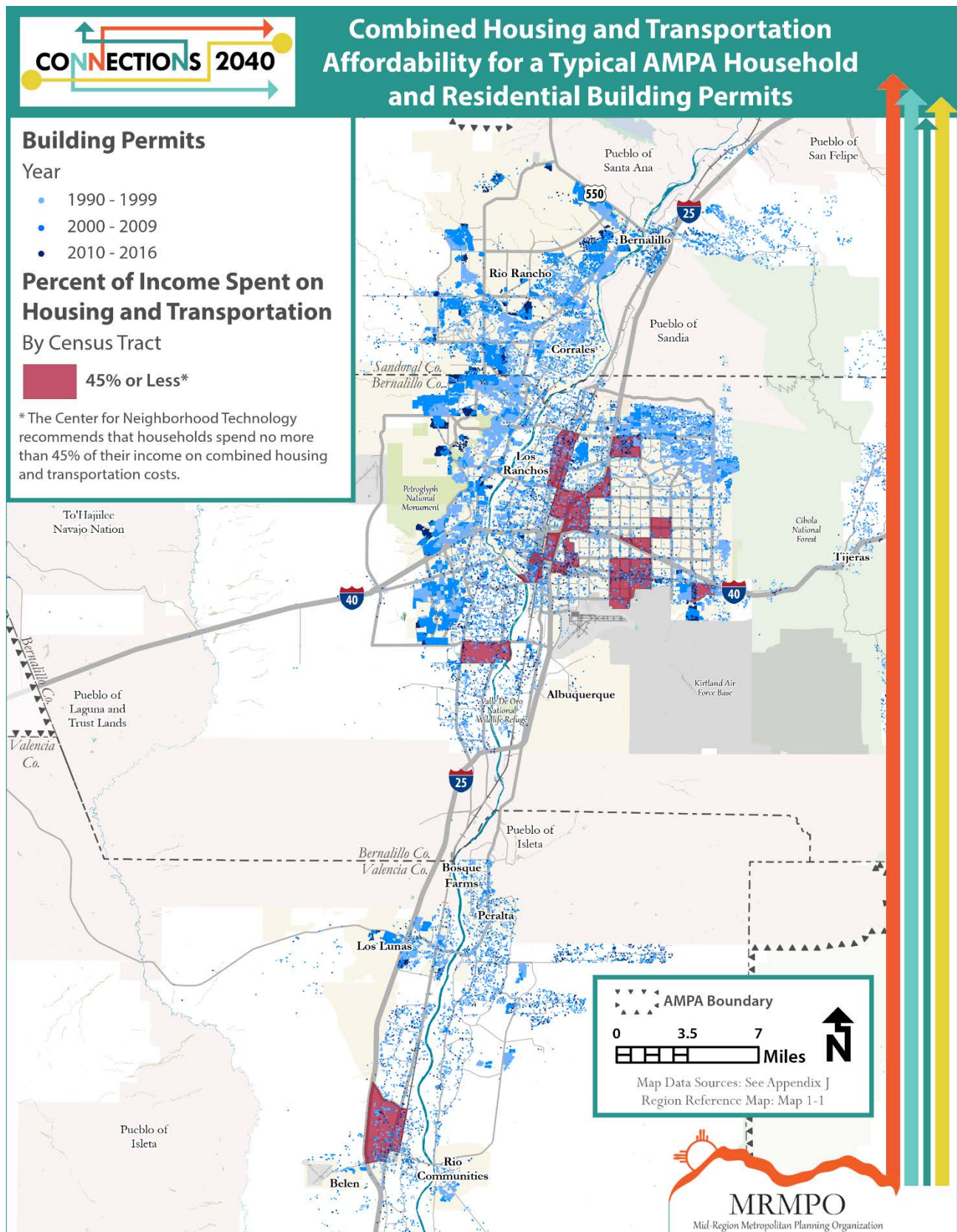
Location of Historical Growth

Building permit data show that over the last 20 years, growth has increasingly occurred farther from areas that are served by transit and considered "affordable" when housing is considered with the cost of transportation. Outward development patterns make it challenging for transit providers with limited resources to offer viable transit services to all residents. Housing that is increasingly located farther from job centers and other destinations leads to longer trip lengths as well as the necessity for personal vehicles to carry out everyday activities. The relationship between dispersed development patterns and affordability is clear:

- Transportation costs are a function of vehicle ownership and operating expenses.
- Vehicle operating costs are higher if more travel is required.
- Vehicle ownership is a necessity if distances are too great for trips to be achieved by other modes.

Even if individuals choose to drive for all trips regardless of length, vehicle operating expenses can be reduced if those trips are shorter. Hence, reducing trip lengths can improve affordability by either reducing vehicle ownership rates or by reducing vehicle operating costs. The following map highlights the disconnect between housing and transportation affordability and the location of new growth.

Map 6-3: Combined Housing and Transportation Affordability and Residential Building Permits



c. Transportation Equity

Transportation equity means ensuring that there are affordable, reliable, and safe means of travel available for those who need it to reach their jobs, healthcare services, and perform routine errands. When compared with the nation, the AMPA has higher poverty, lower incomes, and a greater share of disabilities. The disproportionate need in our region underscores the importance of addressing equity issues as it applies to transportation access throughout the metropolitan area.

Table 6-5: Select Equity Data, 2017

	Albuquerque MSA	United States
Median Income	\$50,906	\$60,336
Persons living Below Poverty	15.5%	13.4%
Children under 18 living Below Poverty	20.2%	18.4%
Persons Living with a Disability	15.0%	12.7%

Source: US Census Bureau Public Use Microdata Sample, 2017

Regional data reveal that workers who are living in poverty travel differently than those living above the poverty level. Specifically, our most economically vulnerable are more likely to carpool, use public transit, and walk to get to where they need to go. While the table below applies to work commutes, it is likely that a heavier reliance on modes other than a private vehicle translates to all trip purposes. This is because low-income households are far less likely to have access to a vehicle than an average-income household. **While five percent of all households do not own a vehicle, 12 percent of lower-income households are without a vehicle.**

Table 6-6: Means of Transportation to Work by Poverty Level, 2017

Albuquerque Metropolitan Planning Area (AMPA)	Below Poverty	At or Above Poverty Level
Drove Alone	71.5%	80.0%
Carpool	12.7%	10.4%
Public Transit	3.3%	1.5%
Walk	4.4%	1.6%
Taxicab, Motorcycle, Bicycle, or other Means	2.5%	2.2%
Worked at Home	5.5%	4.4%

Source: US Census Bureau Public Use Microdata Sample, 2017

Although transportation costs are substantial for all households, they are particularly challenging for low-income households. It is just not economically feasible to service the entire region with quality transit service. Therefore, households that live farther from their daily destinations are more likely to require personal vehicles for transportation. However, because housing affordability increases the farther a household is willing to live from their jobs and centers of activity, the burden of vehicle ownership costs fall disproportionately on low-income households. Chapter 9 continues this discussion with an analysis of low-income households and communities of color and access to healthcare and transit services.

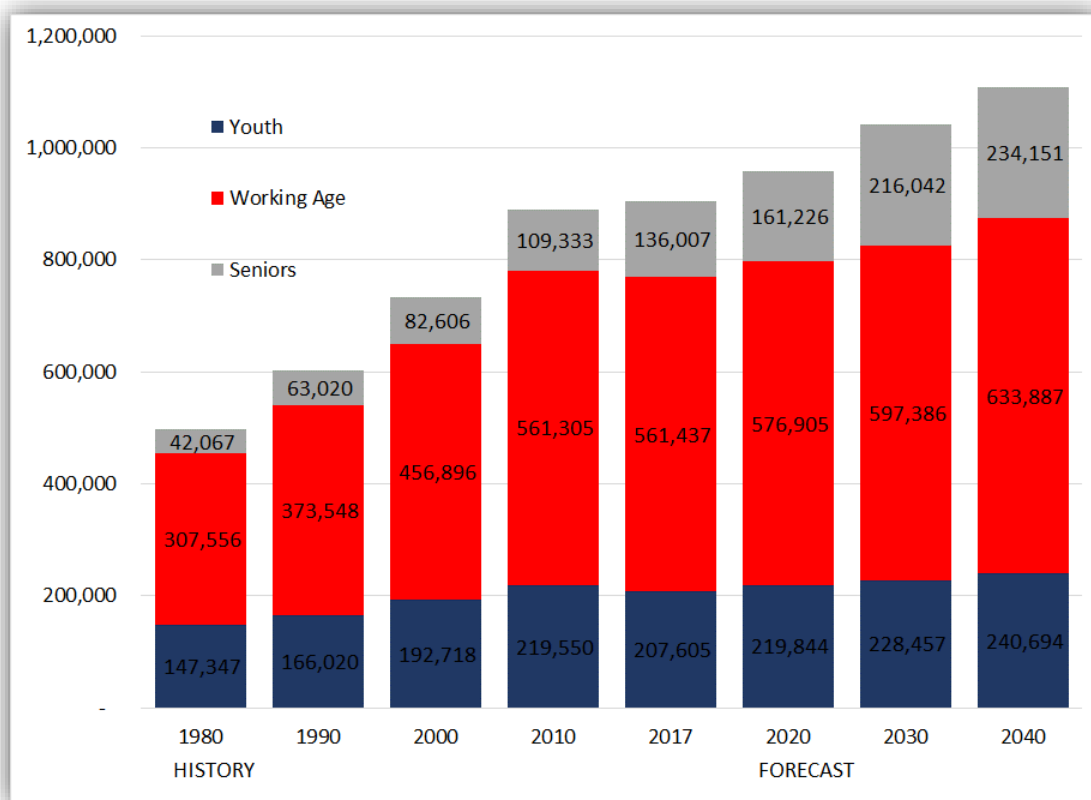
6.4 Place-Making as an Economic Driver

A considerable source of economic uncertainty facing central New Mexico is changing population dynamics. Recent trends demonstrate declining birth rates and high levels of out-migration. These trends suggest the potential for a decreasing labor force and a future imbalance between an aging and increasingly dependent population and fewer workers to support them. This creates uncertainty about the future of business and industry in central New Mexico. One way to attract and maintain a talented workforce is to create vibrant and unique places throughout the region.

a. Declining Workforce and Aging Population

New Mexico has historically had one of the youngest populations of all states. This provided the regional economy with young professionals, a solid base for the workforce, and attracted business and industry. However, a look at the changing age composition reveals an emerging regional challenge; a declining workforce as a share of the total population.

Figure 6-3: Shifting Age Composition in the Region



Source: US Census Bureau Decennial Census, American Community Survey, UNM-GPS

In 1980, 62 percent of the population was what we might consider “working age”, falling between the ages of 18 and 64. Due to the increasing number of millennials entering the workforce that share has risen to 65 percent today. However, as our population ages and baby boomers continue to enter retirement the share of working age population will decline, and is projected to fall to 57 percent of the population by 2040. Meanwhile, the share of the 65 plus population will rise from 15 percent today to 21 percent by 2040.

b. Place-Making and Transportation Benefits

Retaining young professionals and providing support for the senior population can be aided by transportation and transit investments that make New Mexico a more desirable place to be. Rather than thinking of the transportation network as simply a means of conveyance, it can also build communities and make critical connections. In a regional context, the experience of a place is from the time that you leave home until you arrive at your destination, and the fabric in between. In 2018, Brookings established the “Bass Center for Transformative Placemaking,”⁷ in order to create place-led policies and practices that will bridge the nation’s increasing spatial divides shaped by market disruptions and changing demographic and household compositions. This approach has a strong regional focus by connecting residents and businesses to regional markets, and is described, in part, as aiming to, “Nurture an economic ecosystem that is regionally connected, innovative, and rooted in the assets of its local residents and businesses.”

Transformative Place-Making

The rich cultural history of the AMPA provides a unique opportunity for transformative place-making. By incorporating history, tradition, and quality of place, strategies can emerge to invigorate social, economic, and civic life. Planning for a diverse mix of land uses in areas identified in the Target Scenario as being “regionally significant,” can promote communities with dense walkable areas while preserving open space, ecosystems, agricultural areas, and places with cultural and or historical significance.

The Target Scenario represents a 30,000-foot view of the region by establishing high level guiding principles that have been developed collaboratively with the intent of making the AMPA a more desirable place to be and traverse. By honoring unique places and emphasizing the importance of viewing the region as a whole system, the Target Scenario sets a tone for the region. And by emphasizing transportation and housing choices, diversity, and balance, it also sets a direction. MRMPO believes that by addressing transportation needs with a keen focus on other aspects that impact quality of life, this transportation plan is an important element of the region’s overall economic health.

Future Workforce

Transportation systems can be designed to strategically make areas attractive for businesses and housing while connecting communities. **Walkable and transit-friendly communities may be more attractive to a younger workforce.** This dynamic is important given the findings of the MTP Questionnaire, which show that young residents are least satisfied with the available transportation options and demand investments in alternative modes more than other age groups. Cities around the world have recognized the benefits of transportation in creating communities that are attractive to younger residents, which strengthens the future workforce. Such investments that promote a sense of place also have the benefit of improving quality of life for all members of the community.

A study conducted by George Washington University and Smart Growth America⁸ found a significant correlation between the educational attainment of its workforce and the gross domestic product per capita (GDP). **Metro areas with higher levels of walkability tend to have a population with higher educational attainment.** While it is uncertain whether there is a causal connection between walkability and the attractiveness of a place to a more educated workforce, there does appear to be a relationship between the two. Transportation systems can be utilized to create connected communities that are more attractive to businesses, and a younger, more educated, workforce.

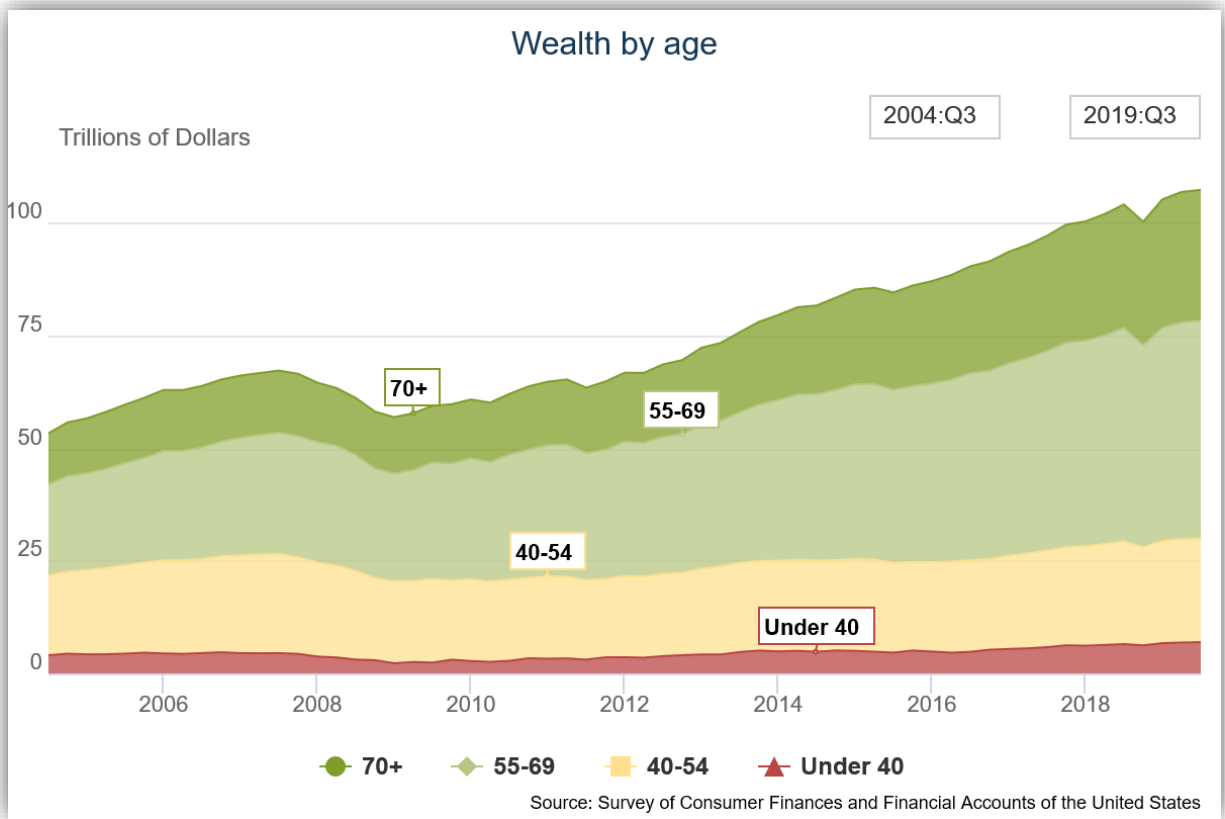
⁷ Vey, J. S., H. Love, “Transformative Placemaking: A framework to create connected, vibrant, and inclusive communities,” 2019

⁸ Hadden Loh, T., C. B. Leinberger, & J. Chafetz, “Foot Traffic Ahead: Ranking Walkable Urbanism in America’s Largest Metros,” 2019

c. Investing in the “Longevity Economy”

Creating communities that are attractive to retirees by providing places to age comfortably and safely with appropriate housing and access to community and social services is economically advantageous for the region. The figure below is based upon data from the *Survey of Consumer Finances and Financial Accounts of the United States* and illustrates that people between the ages of 55-69 have the largest percentage of wealth in the country.⁹ Due to their relatively high incomes and low demands for services, retirees can boost demand for goods and services, and increase government revenue by paying taxes. Transportation, including a robust transit network that is accessible to people of all ages and abilities, and walkable communities, is an important factor in promoting active aging and creating an appealing place for retirees.

Figure 6-4: Wealth by Age



⁹ Board of Governors of the Federal Reserve System. (2019, December 23). *Distribution of Household Wealth in the U.S. since 1989*. Retrieved from [www.federalreserve.gov](https://www.federalreserve.gov/releases/z1/dataviz/dfa/distribute/chart/): <https://www.federalreserve.gov/releases/z1/dataviz/dfa/distribute/chart/>

d. Supporting Innovation

It is also important that transportation projects help build an environment that is friendly to innovation and business. Projects that emphasize access and mobility are of particular value to private enterprise by reducing the costs of doing business and make the region more attractive to new industry. MRCOG, in coordination with other government entities, has undertaken an economic branding campaign to guide future policy and investment in such a way that Albuquerque becomes a destination for innovation.

Ingenuity Central Campaign

The “Ingenuity Central” campaign is focused on economic development, planning, and policy making which encourage entrepreneurship and foster collaboration between business, government, and individuals. MRMPO and the region can support these economic development efforts through improving transportation connections to destinations where innovation takes place, and supporting active modes of travel (bike, walk, scooters...) within key centers to foster interaction and even perhaps “collisions” of creative thought.

Figure 6-5: Deep Dive Coding Workshop



<https://www.bizjournals.com/albuquerque/news/2017/07/21/how-abq-tech-courses-are-faring-amid-a-downward.html>

6.5 Fiscal Stewardship

Growth within a metropolitan area is often considered a measure of economic health. Growth fuels a broader tax base, a larger workforce, and generates spending within a community. However, while growth generates additional revenue, it also comes with the need for additional spending. New population must be supported by services such as schools and public safety and infrastructure such as roads and utilities. Financing projects that support new growth while maintaining the quality of existing services and infrastructure can be a difficult balance for local governments.

Cost of Growth

To help alleviate some of the financial burden of growth, local governments across the nation are increasingly pursuing development projects that both maximize existing infrastructure and minimize infrastructure expansion. This is done with two goals in mind: one, to reduce upfront capital costs for new roads and other infrastructure, and two, to limit the future inventory of roads and infrastructure that need to be maintained and operated over time.

The idea that municipal financial benefits are achievable through land use and development strategies has existed in planning since the 1970s. Infrastructure development (e.g., new roadways, utilities, water, and sewer) and maintenance represent significant costs to municipalities. Compact development in targeted locations has been widely used as a strategy to serve larger populations with transit, alleviate the demand on already stretched emergency services, and reduce upfront capital costs for infrastructure as well as ongoing maintenance.¹⁰

A national survey of literature supports this and demonstrates through multiple case studies that compact development has saved municipalities an average of 38 percent in infrastructure spending and an average of ten percent for providing public services compared to more traditional development patterns.¹¹

Cost of Density

An increase in density incurs costs as well. By intensifying activity within already developed areas roads may receive greater wear, schools may require more supplies and staffing, and emergency services will be in higher demand. Infill costs also include land acquisition, utility upgrades, power and electrical upgrades, code compliance and fiber optics installation. While the cost of densification is not insignificant, measuring it can be a challenge. A literature search of the public infrastructure costs associated with increased density finds a general consensus that while there are increased demands with densification they are minimal in comparison to the magnitude of public costs associated with expansive development patterns.

“The increase in per capita expenditures associated with an increase in density is quite small in relation to the reductions associated with developed land.”¹²

MRMPO made an effort to take density costs into consideration in its fiscal impact assumptions in the following section. By using a per capita approach to school cost estimates, the FIT model accounts for the increased demands of density as it relates to school infrastructure. The FIT model also accounts for the increased transit investment that will be required to support transit-oriented development under the Target Scenario and incorporates those costs in its operations assumptions.

¹⁰ Burchell, R.W., G. Lowenstein, W.R. Dolphin, C.C. Galley, A. Downs, S. Seskin, K.G. Still, and T. Moore, “Costs of Sprawl - 2000”

¹¹ Fulton, W., I. Preuss, A. Dodds, S. Absetz, and P. Hirsch. 2013. “Building Better Budgets: a national examination of the fiscal benefits of smart growth development,” 2013

¹² Goodman, C.B. 2019. “The Fiscal Impacts of Urban Sprawl: Evidence from U.S. County Areas.”

a. Fiscal Impacts of Growth

In our efforts to better understand the impacts of growth patterns on infrastructure costs and services within the region, MRMPO developed a new model called the **Fiscal Indicator Tool (FIT)**. FIT is a model that is designed to compare the upfront and recurring costs between different growth scenarios in order to inform the discussion regarding the efficient use of public dollars. Rather than relying on national studies and cost assumptions, the FIT model provides regional decision-makers with figures that are based on local land use data and cost factors compiled through local documentation and personal interviews with experts in the field.

How FIT Works

The FIT model estimates the capital and the maintenance and operations (M&O) costs that will be expected for select infrastructure types (roads, transit, schools, and fire stations) between the 2016 base year and the 2040 horizon year under both the Trend and the Target Scenario. Calculations are driven by an estimate of additional infrastructure triggered by growth in newly developed areas, such as the demand for new roads or schools, as well as an estimate of M&O for those new facilities. FIT also estimates costs of service improvements necessitated by growth in existing built areas for schools and transit. The value of FIT is in identifying the cost savings potential under alternative growth scenarios.

Limitations of FIT

The focus of the FIT model is on specific types of infrastructure that are wholly or partially funded by local taxes and impact municipal budgets. FIT is not intended to measure all costs of growth to society, nor is it an exhaustive look at all infrastructure needed to support growth. For example, municipal services such as parks, libraries, and community centers are also influenced by the location of growth but were excluded from the model. In addition, FIT does not estimate the cost of infrastructure funded mostly by user-charges such as water and wastewater infrastructure. In these cases, costs are consumed by individual households who eventually absorb the cost of infrastructure expansion regardless of the growth scenario. Nonetheless, discussions related to water use and utility infrastructure are integral to the broader societal implications of growth in the region.

The FIT model also does not estimate the revenue side of the growth equation. The revenue side would include both Gross Receipts Taxes (GRT) and property taxes. These are not considered in this analysis because MRMPO assumes land use scenarios incur the same total amount of growth (population and jobs) added to the region by 2040. That is, the level of growth is “net neutral” to the scenario, and only the distribution changes. Holding this constant has the advantage of being able to attribute the measures of the scenario performance (cost, miles traveled, commute times) to the one factor that did change; the actual distribution of growth. In terms of GRT, the same population between scenarios is assumed to generate the same GRT. And while property tax revenues are indeed affected by location (development in key locations garner higher taxes), the FIT model does not attempt to forecast variability in property tax revenues based on location or density of growth.

Capital Cost Estimate

In total, the Trend Scenario is estimated to require approximately \$223 million more in new infrastructure than the Target Scenario to support projected growth through 2040 in the MRCOG region. This figure represents the cost of constructing new public facilities and infrastructure triggered by new growth only. It does not address existing public infrastructure needs. Recognizing existing unmet needs is not a trivial point, for example, Albuquerque Public Schools estimates that its current schools have pre-existing capital needs of over \$5 billion.

Table 6-7: Estimate of Capital Costs Incurred by New Growth, 2016 – 2040

New Population = 194,000 New Households = 67,000 New Jobs = 72,000

Indicators	Scenarios		Comparison	
	Trend Cost	Target Cost	Difference	% Difference
Local Roads	\$324,000,000	\$298,000,000	-\$26,000,000	-8%
Schools	\$530,455,981	\$475,861,872	-\$54,594,109	-10%
Fire Stations	\$266,000,000	\$266,000,000	\$0	0%
Transit Extension	\$2,176,435	\$2,021,776	-\$154,659	-7%
Transit Expansion	\$65,000,000	\$65,000,000	\$0	0%
Major Road Projects	<u>\$141,971,431</u>	<u>\$0</u>	<u>-\$141,971,431</u>	<u>-100%</u>
Total	\$1,329,603,847	\$1,106,883,648	-\$222,720,199	-17%

Source: MRMPO, BHI, Economic & Planning Systems, FIT model

**Major road estimates represent only the cost differences between the Trend and Target Scenario, and not the total cost of new roadway infrastructure.*

***Transit extension is a basic level of service in newly developed areas, where transit expansion assumes enhanced transit service to support transit-oriented growth.*

Major road projects represent the largest difference between scenarios at \$141 million, followed by schools at approximately \$55 million, local roads at approximately \$26 million, and, finally, transit extension at \$155,000 of additional cost. It is assumed that the Trend and Target will require the same level of new transit investment, which represents rapid bus service along University corridor.

Local road costs are often funded by the developer of the housing project and directly through public revenue. Excluding local roads from the capital cost comparison, the Trend Scenario costs approximately \$197 million more than the Target scenario.

Maintenance and Operations Estimate

The Target Scenario is projected to cost approximately \$23 million per year more to operate and maintain than the Trend Scenario. This figure represents the cost of maintaining the new facilities triggered by new growth only, not the full M&O costs for all existing infrastructure today.

Higher operating and maintenance costs in the Target Scenario are exclusively a result of higher costs of transit operation. These higher costs stem from an assumption of better and more frequent transit service in the Target Scenario, which helps support denser land use patterns. The Trend Scenario has higher operating and maintenance cost for each of the other infrastructure types included in the analysis. If transit is excluded, then the Target Scenario costs approximately \$7 million per year more than the Target Scenario. In short, the cost of more frequent transit service is almost offset by the reduced operating costs for other infrastructure types.

While more frequent and better transit service costs more, it also represents and creates other regional benefits, including a reduction in congestion through fewer cars on the road as well as a reduction in the number of car accidents.

Table 6-8: Annual Maintenance and Operations Cost Estimates of New Growth

New Population = 194,000 New Households = 67,000 New Jobs = 72,000

Indicators	Scenarios		Comparison	
	Trend Cost	Target Cost	Difference	% Difference
Local Roads	\$19,000,000	\$17,000,000	-\$2,000,000	-11%
Schools	\$37,865,042	\$34,036,909	-\$3,828,133	-10%
Fire Stations	\$110,833,333	\$110,833,333	\$0	0%
Transit Extension	\$7,589,448	\$7,062,076	-\$527,372	-7%
Transit Expansion	\$42,772,613	\$73,227,099	\$30,454,487	71%
Major Road Projects	\$620,071	\$0	-\$620,071	-100%
Total	\$218,680,507	\$242,159,418	\$23,478,911	11%

Source: MRMPO, BHI, Economic & Planning Systems, FIT model

**Major road estimates represent only the cost differences between the Trend and Target Scenario, and not the total cost of new roadway infrastructure.*

***Transit extension is a basic level of service in newly developed areas, where transit expansion assumes enhanced transit service to support transit-oriented growth.*

b. Understanding the Results

The Target Scenario focuses new growth in regional activity centers and along key transit corridors, promotes more job opportunities west of the Rio Grande, and encourages the preservation of rural areas and open space. As a result, the Target Scenario has a slightly more compact land use footprint than the Trend, attracts more jobs to the westside, and generates a higher intensity of development in regional activity centers and along key transit routes. The Target Scenario, by definition, is designed to optimize areas that are currently served by existing infrastructure.

Putting New Growth in Perspective

It is important to emphasize that the Trend and the Target Scenarios both start with the same land use conditions in 2016, and that the FIT model only measures the impacts of new growth. To put this in perspective, of the 1.1 million people expected to live in the region by 2040, the new growth represents just under 200,000 people, or less than 20 percent of the total expected population. Therefore, the majority of our land use has already been determined by where people live and work in the region today. As such, the Trend and Target Scenarios do not dramatically differ in terms of their overall land use patterns, and the full extent of M&O costs are going to be significant under both scenarios. The FIT model measures only the additional capital investments triggered by new growth in one scenario over another, plus the additional M&O costs associated with the new facilities that serve that growth.

Key Takeaway

In an era of fiscal uncertainty and reliance on federal and state discretionary funds, it is more important than ever that transportation projects be planned and undertaken to minimize future financial risk while providing needed transportation services. Given that growth will occur, planning for and promoting a more efficient development pattern for service delivery may provide local jurisdictions cost savings while providing comparable services.

c. FIT Methods

In all cases, local resources were used in order to provide an approximation of costs for select infrastructure types. In addition to using land use information and roadway costs from MRMPO collected for this MTP, FIT relies on infrastructure and cost data from local planning and budget documents, and interviewed stakeholders from key organizations and agencies in the region to better understand a more complete picture of how the region builds and funds infrastructure. Cost assumptions are standard costs commonly used in developing estimates by practitioners in the field. Where decisions were required, MRMPO made an effort to remain conservative in its assumptions so as not to overstate differences between the scenarios.

Population and Job Growth

Population and employment forecasts are consistent with the regional control totals that were used to create the Trend and Target forecasts for the MTP. That is, 2040 population projections are from University of New Mexico's Geospatial Population Studies, and the employment projections come from the University of New Mexico's Bureau of Business and Economic Research extended to 2040 by MRMPO using the REMI Model. The total amount of growth is exactly the same in both the Trend and Target Scenario, with the difference being the location of growth within the region.

Land Use

The land use data source is the same database used by the MRMPO land use model which was developed based on local land use and zoning information. The Trend and Target land use forecasts are the same as those used for the development of this MTP and represent a "most likely" scenario (Trend) based on current plans and policies, and an "alternative" scenario (Target) based on stakeholder feedback on desirable future land use patterns. The base, Trend and Target land use layers exist as spatial databases which were converted into half mile grid cells in order to produce a consistent equal area unit of geography to evaluate and compare household and job densities. These densities were used to understand roadway, transit, and fire service areas under existing conditions as well to formulate an estimate of additional infrastructure required by each scenario.

Existing Service Areas

In order to estimate the level of new infrastructure required under different growth scenarios, MRMPO needed to distinguish which areas are currently serviced by existing infrastructure. In order to make this determination, MRMPO developed a geographic boundary that depicts land that can reasonably be considered an existing service area, or an "infill" area.¹³

¹³ The American Planning Association (APA) describes infill as new development or "redevelopment that optimizes prior infrastructure investments and consumes less land than is otherwise available." The National League of Cities describes it as "new development that is sited on vacant or undeveloped land within an existing community and that is enclosed by other types of development."

The general agreement found in the literature and among planning experts defines land as infill it is:

- 1) Located within an established community or urban area;
- 2) In close proximity to or surrounded by existing development;
- 3) Served by road, water, and sewer infrastructure.

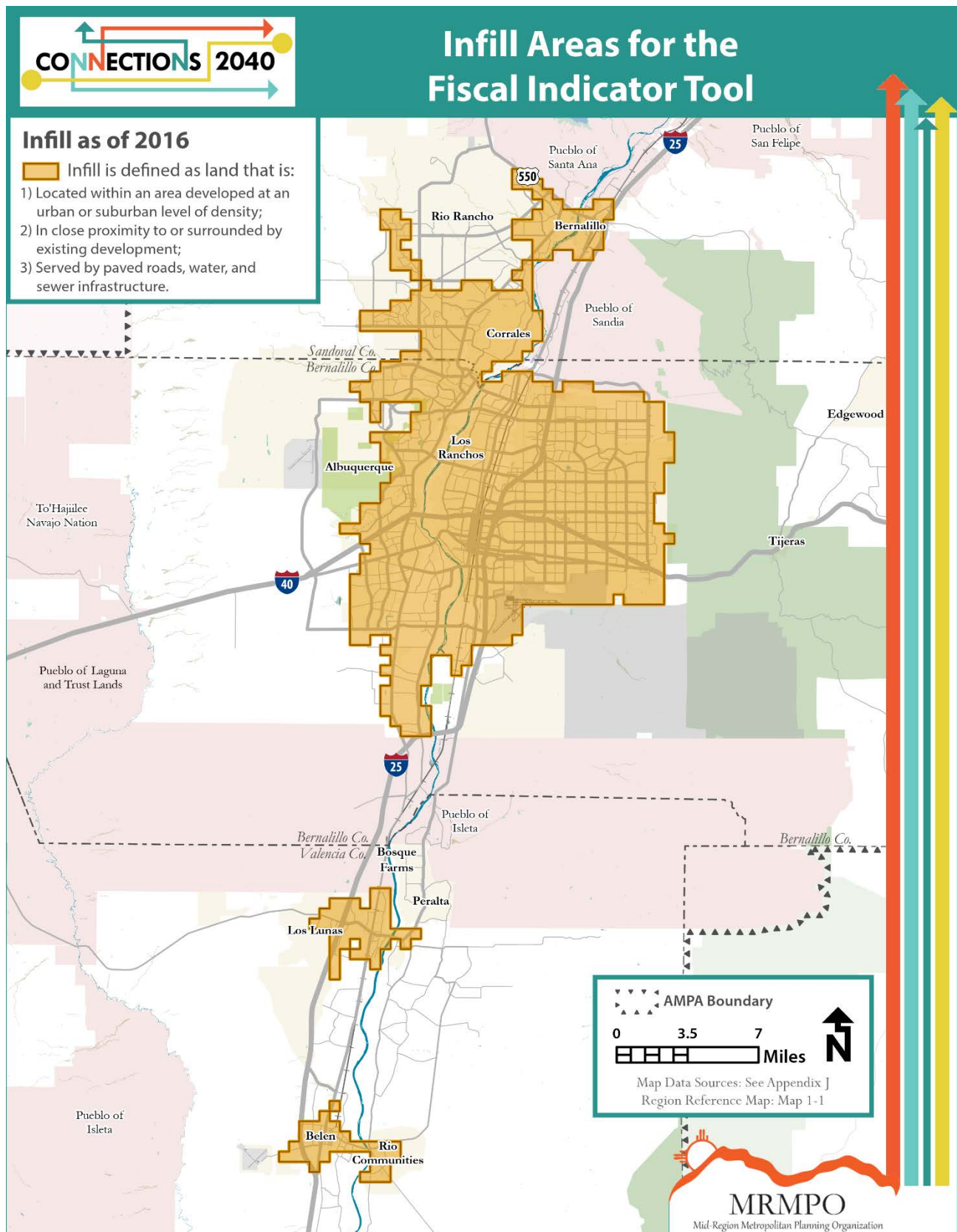
As such, land was determined to represent infill if it was located in an area that has public water service, sewer service, is on a paved road, and is in a contiguous and established development of housing units or jobs. There were a handful of modifications applied to these criteria based on local knowledge. These are described below.

- Paved roads data was unable to be obtained in Los Lunas and Belen so water and sewer service data were used to create the infill boundary and paved roads were spot checked with aerial imagery.
- The Town of Bernalillo, Belen and Rio Communities do not yet have spatial files for water and sewer service. As a result, municipal boundaries and the paved roads file were used to estimate infill. These municipalities have their own water and wastewater systems so the municipal boundary should be a reasonable proxy for the service area.
- A household density threshold, combined with a paved road density threshold, was used instead of water and sewer service in order capture areas such as Corrales and North Albuquerque Acres. These areas have a road density similar to neighboring infill areas and are surrounded by existing development, however they do not have municipal water and sewer service.

MRMPO visually inspected the resulting map to ensure results were consistent with local knowledge. The map was vetted by member governments through individual interviews and before its technical committees. The following map shows the resulting infill boundary, outside of which would be considered greenfield for the purposes of the FIT model.

It is important to note that the FIT model does not estimate a future infill boundary. Rather, the infill boundary will be evaluated and revised periodically to account for new growth and the subsequent expansion of infrastructure as additional analyses are performed.

Map 6-4: Infill Areas for the FIT Model



Roadways

Local roads: The demand for new local roads is based on the density of new households and job growth in greenfield areas in each scenario. While infill areas have the infrastructure in place to sustain additional growth, development occurring in greenfield areas, by definition, do not have the infrastructure and will therefore need for new roadways and incur additional M&O costs to maintain the new roadways. Maintenance of existing roads is assumed to be necessary in the Trend and Target Scenario and not included as part of the calculation of the M&O.

It is important to note that capital cost for local roads are typically financed by the developer, and then ultimately paid for by the homebuyers. As a result, these are not typically costs paid for by local governments and may be omitted from the capital cost assumptions. However, new local roads expand the inventory of roadways that need to be maintained. M&O costs are typically borne by local governments.

Major roads: Major roadway (collector and above) differences between the Trend and Target is not calculated within the FIT model, but rather based on differences between growth scenarios using the MTP project list. While this initial effort was completed by MRMPPO staff during FIT model development, future iterations will incorporate input from local agencies through MRMPPO's various committees.

Road costs and assumptions were provided by municipal development departments, the City of Albuquerque's Development Process Manual, and the City of Albuquerque's Unit Price Guide. The cost assumptions were adjusted based on geographic area.

Transit

Transit extension: Transit extension refers to new demand triggered by growth in areas that are currently unserved by transit. The service assumptions required by growth incurred in both the Trend and Target Scenarios are determined by the levels of existing transit service in comparable areas, based on household and job density. The Trend Scenario incurs higher M&O costs, however, because it entails more outward growth patterns and assumes that existing routes will need to be extended in some areas to accommodate increased demands for service.

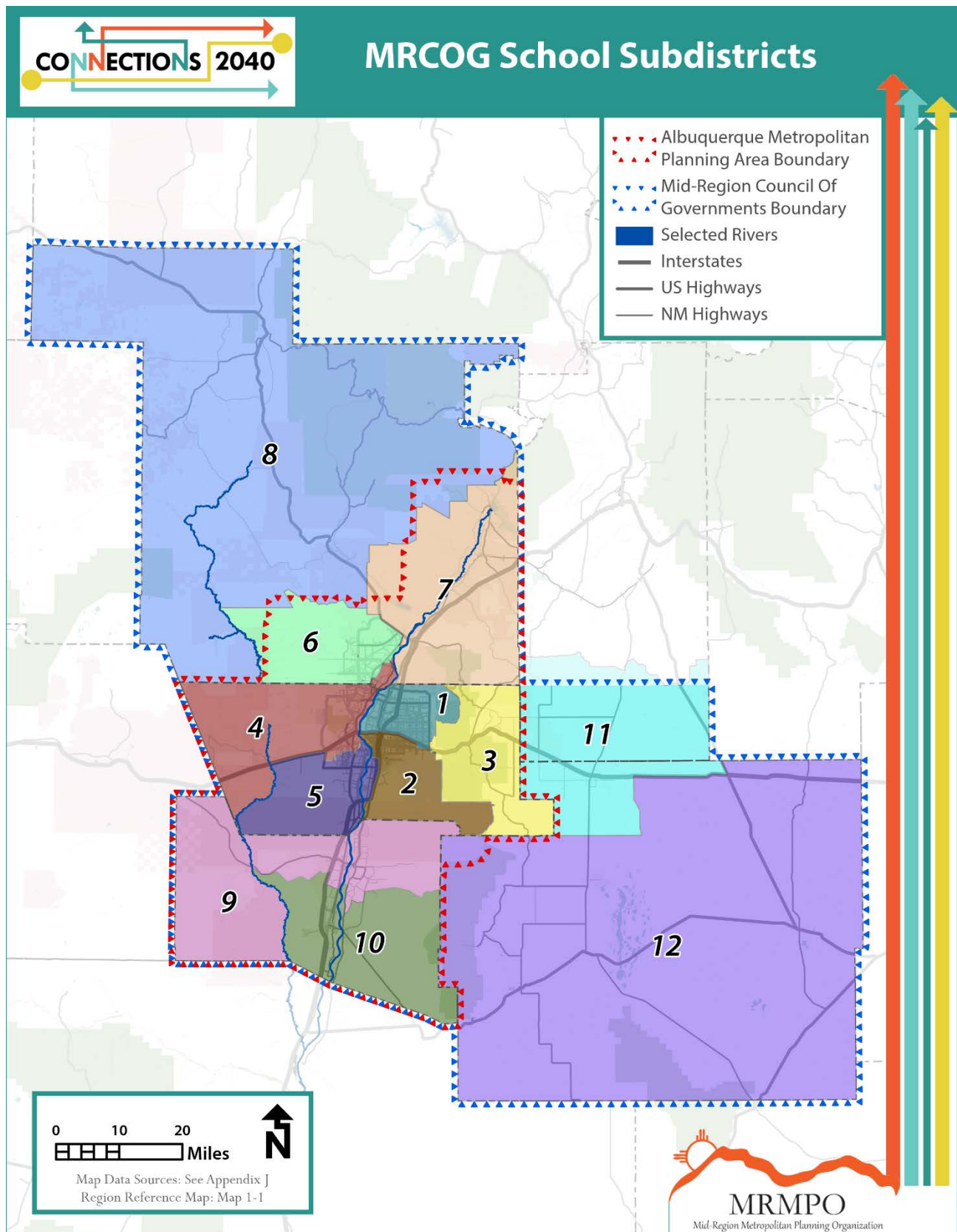
Transit expansion: Transit expansion refers to enhancements to existing service areas through additional routes and higher frequency. Transit expansion is a policy choice meant to support increased density or transit-oriented development. Given that the Target Scenario's goal is to increase transit investment and transit-oriented development, this scenario assumes a larger investment in transit operations. Aside from the purchase of new buses to service the University Corridor valued at \$65,000,000, neither scenario assumes any additional capital costs for new rolling stock. The actual route differences between the Trend and Target are determined by MRMPPO staff in collaboration with regional transit providers outside of the FIT model. The Trend Scenario assumes higher frequency of buses along several core routes along with new rapid ride type service along major corridors of Paseo del Norte, Lomas, Montgomery and San Mateo. These costs are reflected as M&O costs of the Trend Scenario using cost factors provided by ABQ RIDE.

Transit service and route data is provided by the local transit agencies, who also verified all cost and service assumptions.

Schools

While road and transit infrastructure demand is calculated based on household and job densities, school demand is based on "school subdistrict" boundaries, which is an aggregation of school attendance areas. These boundaries were developed using actual school administrative boundaries and practical boundaries (ie. the Sandia Mountains, county lines) that may approximate actual population sheds for individual schools.

Map 6-5: School Subdistrict Boundaries for the FIT Model



The FIT model is based on the assumption that a household will send their child to a neighborhood public school with capacity. While student transfers, homeschooling, charter schools, and private school alternatives are certainly a reality, this behavior is not predicted within the FIT model. When capacities of existing schools within a school subdistrict are met, it is assumed that new facilities will be needed, through portables, adding classrooms, or building a new school. The cost triggered by this additional demand is calculated on a per student basis and the same incremental cost factor for demand that exceeds capacity is used regardless of location. Maintenance of existing schools is assumed to be necessary in the Trend and Target Scenario and not included as part of the calculation of the M&O.

The Trend Scenario requires (in per capita costs) what amounts to one new elementary school over the Target, as the Target Scenario development patterns better maximize existing capacity. M&O costs represent the cost associated with maintaining only the additional facilities needed in the Trend over the Target.

School enrollments and capacities of existing facilities, average student generation rate per dwelling unit, average school capacity and size, and new school construction costs and operating budgets were provided by two major school districts in the region, Albuquerque Public Schools and Rio Rancho Public Schools.

Fire Stations

Fire stations are situated across geographic areas to ensure adequate response times to residents and businesses. Many jurisdictions identify a target response time for fire emergencies of four-minutes, however actual response times vary based on geographic density and connectivity of existing roadways. The basic assumption made by the FIT model is that response times in new growth areas should approximate existing service in similar locations. Based on development patterns and densities, it is estimated that the Target Scenario will require 6 fewer fire stations by 2040. M&O cost savings of the Target Scenario are the equivalent of not having to maintain those stations.

Fire service area assumptions and costs associated with building, supplying, and maintaining new stations were developed through interviews with local fire officials and by using the 2019 Albuquerque Approved Budget.

6.6 Goods Movement ¹⁴

An efficient and reliable transportation system creates a competitive edge by providing efficient freight movement and the ability to deliver products at a lower cost. For consumers in the area, improved access to these goods raises their standards of living. The synchronization of multimodal freight movement and the enabling the transfer of goods between different freight modes to occur more seamlessly will result in a more efficient and economical freight transportation system. Altogether, these efforts support the region's freight system and play a critical role in meeting the MTP's goals of supporting the region's economic vitality and mobility.

a. Freight Assessment

The geographic area of MRMPO is positioned at the junction of two significant interstates, I-40 and I-25, with direct access to the BNSF Railway Trans-continental line. Additionally, air cargo and passenger service is offered by the Albuquerque International Sunport. While the region faces challenges, such as an overall industrial base smaller than the national average, the region's research and technology sector – centered on multiple national laboratories and the University of New Mexico – is robust. To capitalize on these strengths, **MRMPO facilitated a Transportation and Logistics Hub Study to more precisely assess the region's competitiveness and ability to attract freight-related industries** and identify ways to improve the region's overall economic competitiveness and position it as an international transportation and logistics hub.

Freight Assets

The MRCOG region has a number of important freight transportation assets that could facilitate international trade if the region's industrial capacity was sufficient to fully utilize them:

- Interstate I-40 is one of America's highest volume truck routes connecting the west coast ports of Los Angeles and Long Beach to the east coasts. Interstate I-40 intersects with I-25 in the center of the City of Albuquerque.
- The BNSF Railway's Southern Transcontinental (Transcon) Line is the busiest intermodal freight rail corridor in North America, connecting Los Angeles with Chicago, and it passes through the MRCOG region. All the trains on this high-density rail corridor make a mid-route stop at the Town of Belen.
- BNSF's Southern Transcon connects Belen to its El Paso Subdivision line, the only line it owns that crosses the Mexican border. The rail line parallels I-25, which connects Albuquerque through a five-hour truck drive with Interstate I-10, the El Paso metropolitan area, and Santa Teresa, New Mexico's rapidly growing industrial center and Mexican border crossing.
- The first transload facility in the region opened in spring 2016. The New Mexico Transload facility, in the City of Albuquerque, handles a wide range of products, including palletized goods, bulk liquids, bulk solids, construction materials and equipment. Additional transload facilities in the region are being considered in Albuquerque, Belen, and Los Lunas.
- The Albuquerque International Sunport, the region's international airport, is less than six miles from ramps to I-40, I-25, and the BNSF rail facilities in Albuquerque. In addition, the Sunport is home to a Foreign Trade Zone, which effectively amounts to a duty-free port. Currently, the main freight activity at Sunport is through the expedited carriers FedEx and United Parcel Service (UPS) and their partners.

¹⁴ Information presented in this section contains modified text from the *Transportation and Logistics Hub Study*, prepared for the Mid-Region Council of Governments by Cambridge Systematics, Inc. with GLD Partners in conjunction with Center for Neighborhood Technology, March 23, 2017.

The MRMPO region has an opportunity to grow and diversify its economy by leveraging its transportation infrastructure, strengths in technology and workforce developments, and regional partnerships to support existing employers and attract new businesses. By making targeted, regionally-focused investments that leverage the trade gateways – air, rail, and highway – to build its manufacturing and technology economy, MRMPO and its partners can cultivate an economy of robust growth. Moreover, increasing the freight- and logistics-based economy will support growth in the region as a whole – not just for a particular city or county.

Project Development Opportunities

The Hub Study found that the Albuquerque region is competitive in a number of land economics factors, including land availability, labor costs, and regulatory environment. It identifies several development opportunities that capitalize on existing strengths in order to position the region as a competitor when businesses are selecting sites for new locations.

Develop an Albuquerque International Sunport Investment District (AISID): Airport investment districts are opportunities to collaboratively leverage investments and attract businesses that can capitalize on the logistics advantages of the airport. AISID could be coupled with the region’s strong research and technology sector to forward its commitment to be an important player in technology advancements over the next 25 years. This would have the added benefit of bringing additional cargo services to the Sunport.

Assess Potential for a Rail-Related Investment District: There have been a number of proposals and projects intended to capitalize on opportunities related to connection to the BNSF Transcon Line in Belen. Developers broke ground on one such project in Los Lunas in December 2016, a rail spur to a planned 1,400 acre Central New Mexico Rail Park. This industrial park has been certified by BNSF as ready for immediate development, and as such is a candidate to be the centerpiece of a rail-related investment district that could lead to additional industry in the region. It would be advantageous to develop a rail-related collaborative investment program that would focus on identifying and cultivating opportunities for businesses that can take advantage of proximity to the rail lines.

b. Industrial Opportunities

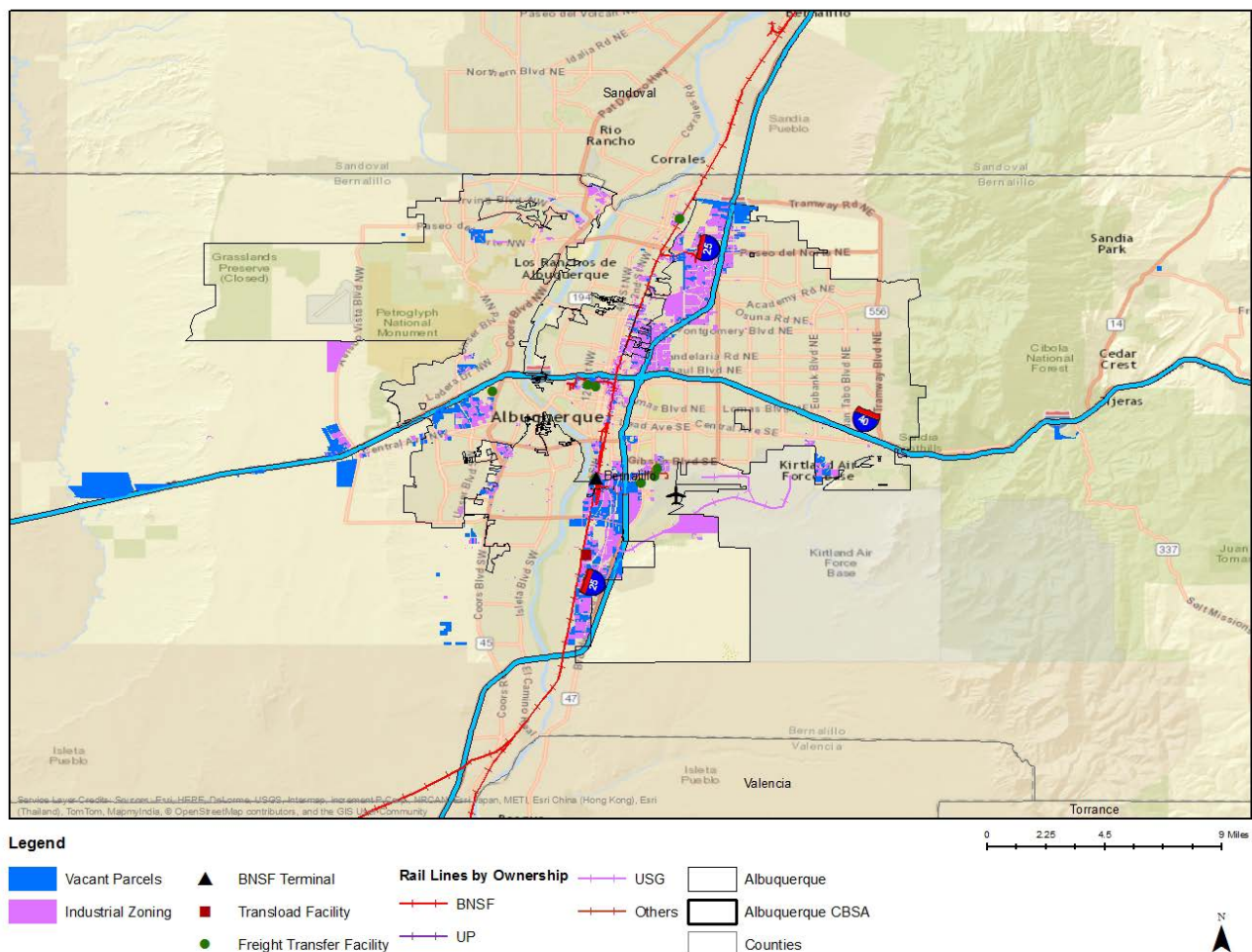
The region must grow and diversify its industrial economy to reach a scale of economic activity and supply chain efficiency that fully utilizes the region’s freight assets. The manufacturing sector is relatively weak, with less than half of the national average in terms of employment. However, the Research and Technology base is robust in the region, and the HUB Study found opportunities to capitalize on specialty industries such as automotive technology, food manufacturing, plastics and composite materials, and others. At the same time that economic development efforts are focused on supporting, retaining, and attracting industries, complementary efforts should ensure the availability of high-quality industrial infrastructure sites, workforce, and connections.

Industrial Site-Certification Programs

The MRCOG region, and in particular Bernalillo County, has dozens of vacant or severely under-utilized, industrially zoned sites proximate to rail, highway, and air transportation that can be leveraged to attract new business to the region.

Over 1,500 acres of industrially zoned land in 27 sites as well as five proposed industrial park projects (totaling more than 4,200 acres) have been identified as suitable for Cargo-Oriented Development, which is a type of compact, transportation-focused, minimally invasive industrial growth. Other sites in the region could also be made more attractive to future industrial investors. A “certified ready” industrial site program or “precertification program” can help expedite development and raise the profile of the region’s industrial properties. Certified site programs also give local governments a tool to direct development to places where they would like economic growth to occur in order to achieve public goals such as the creation of jobs in low-income neighborhoods, the reduction of truck mileage to achieve environmental objectives, the restoration of brownfields into productive land, or the realization of local land use plans.

Figure 6-6: Industrial Zones and Vacant Land in the Region



Source: Transportation and Logistics Hub Study

Site-certification programs help mitigate the flaws that many sites currently have, especially in older industrial districts, which make it difficult for private firms to redevelop them. Many of these sites, with proactive action, could return to the market as strong candidates. These include properties without clear ownership title, properties that are suspected of having or actually contain environment contamination, or properties fragmented into numerous small parcels. By establishing an inventory of certified ready sites, the region’s economic development officers will be able to respond immediately to many corporate searches and other industrial attraction opportunities as they arise. Certification programs are becoming more popular as a tool for public agencies to cultivate and direct economic development.

Industrial Land and the Target Scenario

A number of substantial benefits follow from current patterns in the geographic distribution of industrial business locations in the MRCOG region, which is fairly compact, focused around major transportation assets and largely central to the population. The necessary distance of truck trips within the region is shorter than would be required by a more diffuse industrial pattern. Containing demand for truck mileage in this way limits intraregional costs of shipping, traffic congestion, air pollution including greenhouse gasses, highway maintenance costs, and the risk of accidents. Additionally, the overall costs of providing infrastructure including water, power, and sewage are constrained when development areas are limited.

Continuing to develop in a generally compact development pattern also makes jobs more accessible to the majority of workers than a more diffuse distribution of businesses would be. The potential for worker access that relatively compact development provides could be realized by further improvements in the region's public transportation system. An example of a meaningful upgrade in the region's transit system is the Albuquerque Rapid Transit (ART) line. The ART will increase the speed and frequency of transit service along Albuquerque's Central Avenue –the primary east-west artery that links downtown Albuquerque with neighborhoods at the city's edges. The ART will speed workers' connections to numerous north-south bus lines that give them access to jobs in industrial districts.

Challenges of Compact Growth

Relatively compact development also entails a number of challenges. In many cases industrial districts will continue to be close to residential areas, and as industrial areas fill up, they may come to annoy neighbors or even pose public health risks. Compact development also frequently involves difficulties for industrial developers, such as assembling adequate land, dealing with obsolete buildings or environmental contamination, as well as time delays in securing development permissions. These problems often drive developers to build on virgin land, reducing their development costs but at the cost of the public and regional economic benefits noted above.

If the Target Scenario is to be achieved, that is, policy makers choose to realize the benefits of compact development without incurring negative consequences, they will need to insist on design and technology standards that will make industrial businesses good neighbors while smoothing the path for development in desired locations.