

Chapter 6: Future Directions

This chapter discusses topics MRMPO is interested in studying or developing further between this MTP cycle and the next. In keeping with sound public participation practices, MRMPO will undertake studies and programs that are supported by member agencies and the general public.

A. Linking Land Use and Transportation

MRMPO is interested in developing a regional plan for the greater Albuquerque area that incorporates objectives related to the integration of land use and transportation, livability, rapid growth and other quality of life and sustainable funding issues. This plan would provide the opportunity to develop a new regional vision that would serve as the foundation for long-range planning activities in the larger region.

A general plan was developed for the MRCOG region (Bernalillo, Sandoval, Valencia and Tarrant counties) in the late 1990s. This plan, *Focus 2050*, provided a vision for transportation, economic development, housing, water and open space planning. Although the plan was adopted by MRCOG, it was never adopted by local governments and has not become a guiding force in local or regional planning efforts.

Since *Focus 2050*, regional decision makers and transportation planning partners have expressed renewed interest in working together to solve issues facing the metro area such as uncontrolled growth and the implications this type of growth has on the transportation network. A greater understanding of how transportation problems are often caused by land use decisions and development patterns, is leading to a stronger belief in the need for integrated transportation and land use planning (and vice versa; poor transportation decisions can lead to poor land use outcomes).

Transportation decisions have limited effect when they are reactive to land use development rather than considered concurrently. This type of disconnected planning hinders MRMPO's ability to provide comprehensive and cost effective transportation solutions. Furthermore, because these issues transcend local jurisdictions, they require the region to collectively work together to solve them. MRMPO can be an important facilitator for this process, as the Metropolitan Transportation Board—consisting of elected officials from many of the local jurisdictions—already provides a regional forum for considering new ideas and solutions.

In light of this, MRMPO supports development of a new, public-driven regional plan process with input from a diverse range of stakeholders. A new plan would provide the opportunity to create a region-wide growth and development vision and develop new regional sustainability goals related to land use and transportation integration, climate change, energy technology and livability. This effort would also analyze future growth scenarios and assess their impacts on the region as well as identify and support the

implementation of key projects linking transportation and land use in the region. The plan would build upon other similar efforts such as the City of Albuquerque's and Bernalillo County's Comprehensive Plan and Planned Growth Strategies, but would apply to the entire MRCOG region. It would serve as the region's current guide to transportation, growth and sustainability.

A new regional vision could also provide a framework for policy guidance for future MTPs. Other regions have followed this model where a regional plan provides the direction, vision and goals for lower-ranked plans and planning efforts. Transportation policies would be derived from the regional plan so future MTPs would be coordinated and consistent with other regional planning policies and focus areas. Better linkages between a regional plan and the MTP could help enhance the relevance of both plans, resulting in better planning outcomes for the greater Albuquerque area, particularly in regard to integrated land use and transportation planning.

Planning for an Aging Population

A stunning demographic fact that greatly impacts planning efforts in this region is that the over-65 population is projected to increase from the current 12 percent of the population to 20 percent by 2035. How this will affect the region—and how this population will be affected by the transportation system and the design of their communities—is profound. While this MTP does not specifically address this demographic trend, many of its goals, planned projects and strategies are targeted to help to improve mobility for all users. However, the potential implications of such a large segment of the population experiencing limited mobility due to age-related constraints, limited public transportation infrastructure and service, and the spread-out nature of the region mean greater attention will need to be paid to planning for this population. Connecting affordable housing to transportation, providing a more complete public transportation network and targeting transit to serve activity centers and essential services (such as retail districts, hospitals, etc.) are examples of how transportation planners can address this issue.

B. Alternative Land Use Scenarios

In the eight short years between 2000 and 2008 the AMPA developed 20,000 residential acres, increasing its residential land area by 25 percent. The impact of this enlarged geographic footprint can be seen in the increase in vehicle miles traveled (VMT) which grew by 29 percent over the same time period. Fortunately, recent trends do not predetermine the future. Rather, planners are responsible for reviewing the consequences of existing policies to see if they are achieving regional goals. Scenario analysis is a powerful tool for informing this process so that decision-makers are better equipped to affect change. Scenario analysis allows planners to test alternative scenarios and simulate their impact on quality of life issues such as congestion, travel times, personal transportation costs and air quality.

As an initial exercise and a starting point for discussion, MRMPO developed a *compact development* scenario that represents a first brush effort to understand how changes in land use patterns might impact travel behavior and the transportation network (a methodology document that describes the steps and results is presented in Appendix A). The results of this exercise show that the impacts of compact development on regional travel are significant. Improvements to the efficiency of the transportation network are evident in the summary statistics shown in Table 6-1.

Table 6-1 Systemwide Travel Statistics for the PM Peak Hour in 2035

PM Peak Hour	MTP 2035	Compact Scenario	Percent Difference
Vehicle Hours of Delay	160,154	123,654	-23%
Vehicle Hours Traveled	228,812	189,354	-17%
Vehicle Miles Traveled	3,077,065	2,946,946	-4%
Average Speed	13.4	15.6	16%

Table 6-1 compares the *compact development* scenario with the 2035 MTP forecast, and illustrates that more compact growth results in fewer hours of delay and shorter distances of travel. This makes sense given that a greater number of people live closer to employment sites and services found on the Eastside. Most remarkably, perhaps, is that the average travel speed for the region increases. The reason for this is that by encouraging density and allowing for shorter trips overall congestion actually decreases and longer trips can be accomplished at faster speeds. In addition, portions of the AMPA that gain population under the *compact development* scenario are those best equipped to handle higher traffic volumes due to the presence of transit and a grid roadway system.

Daily impacts on travel as a result of the *compact development* scenario are show in Table 6-2. Reductions in total and per capita miles traveled are achieved, along with

50,000 fewer trips across the river. The latter statistic is particularly significant given the severity of current and projected congestion and travel delay on the river crossings.

Table 6-2: Daily Travel Statistics, 2035

Daily Statistics	MTP 2035	Compact Scenario	Percent Difference
Vehicle Miles Traveled	31,588,579	30,333,044	-4%
Vehicle Miles Per Capita	23.8	22.8	-4%
River Crossings	1,032,041	982,482	-5%

While the results of this scenario development demonstrates that changes in land use patterns can have a substantial impact towards congestion mitigation, a true scenario analysis would involve a much larger effort that includes the development of several potential growth scenarios and significant participation from MRMPO's committees and the public.

Future alternative scenarios should include elements which were not considered in the scenario proposed in Appendix A. For example, the *compact development* scenario looks at the effects (on the roadway infrastructure) of relocating housing to areas that could accommodate the growth, however it does not consider the reduction in volume that would result from increased transit use, nor does the scenario consider the impact of future transit services on travel patterns. Likewise the *compact development* scenario omits potential alternatives in employment location patterns and their impact on commuting. Finally, the scenario does not evaluate the economic impacts of alternative land use patterns. Incorporating these considerations, and engaging in a regional planning process to develop a more complete scenario analyses, are logical steps to pursue in the years to come.

C. Reducing Emissions and Addressing Climate Change

The federal transportation reauthorization bill is likely to include provisions for greenhouse gas emission reduction requirements and there have also been efforts to bring an energy and climate change bill before Congress. It is therefore reasonable to expect that greenhouse gas emissions reductions strategies will become a requirement for MPOs either through the passage of energy and climate change-related legislation or federal surface transportation legislation--or both. To date there is currently no federal, state or regional requirement for MPOs to develop greenhouse gas reduction strategies or even to monitor greenhouse gas levels. However, there have been recent steps taken at the federal, state and local levels that are in the meantime helping to address climate change.

Federal Actions

- The U.S. Environmental Protection Agency in May 2009 proposed regulations that would establish new volume standards for the amounts of renewable fuels that must be used in transportation fuels each year.
- In April 2010, the U.S. Department of Transportation and the U.S. Environmental Protection Agency announced a greenhouse gas and fuel economy program for cars and light-duty trucks that would result in a combined fleet average standard of 35.5 miles per gallon by model year 2016 (the current car and light-truck fleets in the U.S. have fuel economies of 22.4 and 18 miles per gallon, respectively, and the fleet that entered the market as of 2008 had an average fuel economy of 30 miles per gallon).
- In October 2010, the U.S. Environmental Protection Agency and U.S. Department of Transportation announced the first national standards aimed at increasing fuel efficiency and reducing greenhouse gas emissions for heavy duty trucks and buses (although heavy trucks make up only 7.5 percent of vehicle miles traveled, nationally they produce 35 percent of on-road transportation emissions).
- In May 2010, President Obama directed the Department of Energy to provide increased support for the deployment of advanced vehicles, including electric vehicles, and directed the Environmental Protection Agency to reduce non-greenhouse gas pollutants from vehicles.

State and Local Actions

- New Mexico instituted a goal of reducing emissions 75 percent below 2000 levels by the year 2050.
- The New Mexico Environmental Improvement Board and the Albuquerque-Bernalillo County Air Quality Control Board adopted emissions standards for new motor vehicles (the Clean Car Rule) in 2007. These regulations will into effect in model year 2016.
- Governor Richardson issued an Executive Order to reduce emissions associated with energy use and transportation in state government operations.

- The New Mexico Department of Transportation is “committed to the principle of an environmentally responsible transportation system” as stated in the Department’s Guiding Principles.
- The City of Albuquerque has developed a *Climate Action Plan*. One of the strategies listed in the plan is to engage jurisdictions in a coordinated planning effort to develop a regional land use and climate performance strategy. The plan also calls for MRMPO to be a stakeholder in Albuquerque’s efforts to become the most walkable and bicycle-friendly city and the city with the best transit service in the Southwest.

Future state-wide strategies may take several forms. *The New Mexico Climate Change Action Plan* recommended the following strategies in response to transportation-related greenhouse gas emissions: a State Clean Car program (being implemented); pay as you drive insurance, which would provide financial incentive for driving less by reducing insurance fees for those who drive less; alternative fuels use; transit-oriented development (TOD); intermodal freight initiatives; and lower speed limits.

MRMPO Actions

Actions that are currently being implemented or considered by MRMPO also play a role in reducing greenhouse gas emissions, even though that was not necessarily their primary or intended purpose. Examples of such actions include the CMP-based Project Prioritization Process, which rewards alternate modes of transportation projects by making them more likely to receive federal funding; and complete streets, currently being considered by MRMPO, which promote more multi-modal transportation networks.

However, to date, MRMPO has not begun active work on greenhouse gas emission reduction strategies. With or without federal or state legislation requiring MRMPO to reduce greenhouse gas emissions, the creation of regional strategies for mitigating and adapting to climate change will be needed and will be pursued.

Strategies MRMPO will investigate include:

- Developing a greenhouse gas (or vehicle miles traveled, as a proxy) reduction target. A reduction target could set a fixed target (e.g. 20 percent reductions below 2000 levels), a per capita target (more fair for growing areas), or a target in relation to a projected future baseline.
- Evaluating the effects potential strategies would have on greenhouse gas emissions reduction efforts. For example, evaluating the effect land use strategies would have on the vehicle miles traveled in the region.
- Developing policies and strategies related to the reduction of greenhouse gases through strategies such as land use development, user fees, transportation choices and technology.
- Making climate change more central to the MTP or incorporating climate change considerations into the Project Prioritization Process.

- Conducting a study of appropriate locations for siting alternative fuel infrastructure and working with member agencies to identify opportunities to use alternative fuel vehicles in their fleets.

Reductions in greenhouse gas emissions will be greatest if a multi-strategy approach is developed. As the Urban Land Institute's 2009 *Moving Cooler* study found, "an integrated, multi-strategy approach—combining travel activity, local and regional pricing, operational, and efficiency strategies—can contribute to significant GHG [greenhouse gas] reductions." A list of potential strategies is shown in Table 6-3.

Since land use is such a critical piece in reducing greenhouse gas emissions, and is something that MRMPO could potentially help play a role in, MRMPO is interested in the possibility of developing a regional vision and growth strategy with partner agencies. This plan could help guide development in a more sustainable manner in order to better address climate change as well as other regional issues such as public health and livability. In addition, this plan would help address the link between land use and transportation—a fundamental issue behind transportation-related climate change impacts—and help rectify the lack of regional coordination between land use and transportation. Short of such a plan, MRMPO could also play a valuable role toward this end by analyzing and modeling the impacts of potential land use changes for local jurisdictions to consider.

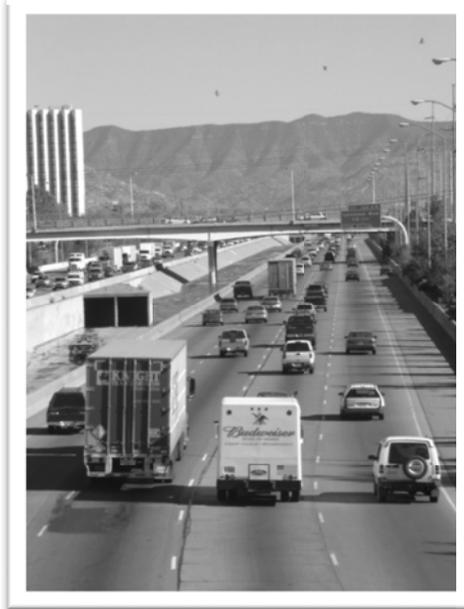


Table 6-3: Greenhouse Gas Emissions Reduction Strategies

Pricing Strategies	Land Use and Smart Growth Strategies	Non-motorized Transportation Strategies	Public Transportation Improvement Strategies	Regional Ride & Car Sharing and Commuting Strategies	Regulatory Strategies	Operational & ITS Strategies	Bottleneck Relief
Parking pricing	Adoption of urban growth boundaries	Adoption of complete streets policies	Lower fares and discounted passes	High Occupancy Vehicle (HOV) lanes	Non-motorized zones in CBDs and activity centers	"Eco-driving" training programs	Investments in existing highway bottlenecks
Congestion pricing	Density targets	Creation of continuous network of bike routes and "bike stations"	Increased level of service on existing routes and improved travel times	Public, private or non-profit car sharing organizations	Parking restrictions imposed in urban areas	Freeway management (real-time information and operational adjustments based on that information; ramp metering; ITS)	Highway investments to improve traffic flow & reduce congestion
Intercity tolls	Pedestrian and bicycle friendly neighborhoods	Inclusion of buffered sidewalks with pedestrian amenities	Provision of new service	Employer-based telework and compressed work week programs	National speed limit lowered with increased enforcement	Incident management	
Pay-as-you drive insurance	Transit-oriented development	Traffic calming measures	Expansion of existing intercity bus and rail services	On-line ride matching, vanpool services, and guaranteed ride home programs		Road weather management	
Vehicle-miles traveled fee	Incentives for agencies (e.g., funding) to help achieve objectives			Employer-offered discounts for monthly transit passes		Traffic management center	
Motor fuel tax or carbon price				Mandatory SOV-reduction programs		Arterial management	
				Employer-outreach		Traveler information	

Source: Moving Cooler, Urban Land Institute, 2009

D. Improving Quality of Life

In addition to the development of a regional plan that focuses on land use and transportation integration and addressing climate change, MRMPO is looking into several other important areas to include as part of its transportation planning activities. These areas include livability, public health, complete streets, user fees, planning for an aging population, and housing and transportation affordability.

Livable Communities

The U.S. Department of Transportation (DOT) launched a Livable Communities Initiative in 2009. The initiative aims to improve quality of life for Americans and create efficient and more accessible transportation that serves the needs of individual communities. The DOT's "goal is to build livable communities, where safe, convenient and affordable transportation is available to all people, regardless of what mode they use." The DOT aims to accomplish this goal in several ways, one of which is integrating transportation planning with community development. On the heels of the Livable Communities Initiative was the creation of an unprecedented partnership between the DOT, the U.S. Department of Housing and Urban Development and the U.S. Environmental Protection Agency for the launch of the Sustainable Communities initiative to ensure that these goals would be properly implemented. The partnership is guided by the following six livability principles:

1. Provide more transportation choices
2. Promote equitable, affordable housing
3. Enhance economic competitiveness
4. Support existing communities
5. Coordinate policies and leverage investment
6. Value communities and neighborhoods



MRMPO will investigate the ways in which it can best support and pursue livability principles in the AMPA. These efforts will focus policies and programs over which the organization has some control, such as providing more transportation choices and supporting existing communities. MRMPO will also continue to pursue federal funding and grant opportunities offered as part of the Sustainable Communities Initiative and other related sources.

Public Health

At the core of planning is protecting public health and safety and there are increasingly new challenges to address. Public health concerns are coming to the forefront, in part, because of the growing awareness of how the built environment (which includes our transportation network) greatly affects overall levels of health and well-being. National Ambient Air Quality Standards are, in fact, a result of health based concerns and standards are established with the main purpose to protect public health. For example, emissions from motorized transportation have been shown to impact respiratory health, particularly for residential areas near major interchanges and large arterials.

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Overall, a poorly connected transportation system combined with widely dispersed and segregated land uses can result in a sedentary lifestyle that contributes to heart disease, diabetes, certain cancers and arthritis, and increasing health care costs. Over the last two decades the country has experienced an obesity epidemic. According to National Center for Chronic Disease Prevention and Health Promotion data, in 1985 no U.S. state had an obesity rate of 15 percent or more. However by 2008 only one state, Colorado, had an obesity rate of less than 20 percent. New Mexico has gone from an obesity rate of less than 10 percent in 1990 to a rate of 25 to 29 percent in 2008. According to the NM Healthier Weight Council, an estimated \$324 million is spent annually on adult medical expenditures that are attributable to obesity and in 2007 17 percent of high school students did not engage in any physical activity. Although many factors are causing rising obesity rates, transportation planners have the ability to influence some contributing factors. A particularly important challenge to address is providing a multi-modal transportation network (studies have shown that communities with viable transportation options other than driving alone have lower obesity rates). By enhancing the bicycle and pedestrian networks and transit service, people are encouraged to bicycle and walk more which will help the population be more active and healthy.

Safety is also a vital consideration because improving conditions for bicyclists and pedestrian will improve the comfort-level associated with these modes and encourage their greater use. Programs such as Safe Routes to School and complete streets can make strides toward providing the region with more multimodal options and safe routes for all users of the transportation system.

MRMPO will direct attention toward improving public health in the region through various means including improved safety, prioritizing alternative modes of travel more so than has been done in the past and investigating development of a complete streets policy.

Complete Streets

Complete streets are streets and sidewalks that are designed to provide safe and convenient travel for pedestrians, bicyclists, motorists and transit users of all ages and abilities. Because complete street strategies support safer and more convenient and appealing travel options for all users, they are an effective way of managing and improving the transportation system. Following is a list of complete streets elements:

- sidewalks
- bus pull-outs
- street furniture
- bus shelters and crossings
- traffic calming measures
- pedestrian refuge medians
- sidewalk bulb-outs
- bike lanes
- ample crossing opportunities
- treatments for disabled travelers
- bus lanes



Example of a corridor before and after complete streets implementation (Source: Completestreets.org)

Complete streets policies are gaining popularity and have been adopted by a number of states, MPOs and local jurisdictions around the country. The U.S. Department of Transportation recently began encouraging the adoption of complete streets policies and programs at the state and local levels as a way of improving pedestrian, bicyclist and motorist safety.

In the State of New Mexico, the City of Las Cruces, Dona Ana County, and the Town of Mesilla have adopted complete streets resolutions. However, the true effectiveness of these policies is in the implementation measures and therefore often requires re-visiting design standards. Similarly, the NMDOT has adopted a Context Sensitive Design Solutions (CSS) policy, but applying CSS occurs only along specific corridors.

Although no complete streets policies have been adopted in the AMPA, the City of Rio Rancho is looking into complete streets implementation, and the City of Albuquerque

hopes to adopt by spring 2011 a plan with similar intent, the *Great Streets Facility Plan*. Complete streets and “great streets” are similar in that they both aim to develop multi-modal streets; however, there are important differences. First, the City of Albuquerque’s Great Streets initiative addresses building and site design factors while complete streets policies usually only include the public right-of-way. Second, whereas all streets in the region classified as collector and above would be considered under a complete streets initiative, Great Streets is focused on a series of specific corridors and does not constitute a regional street design policy.

MRMPO supports adoption of complete streets policies at the local level and believes a complete streets policy at the regional level would be beneficial as well. The advantage of a regionally-implemented program is that complete streets could be built across the metropolitan area in a comprehensive manner rather than in individual jurisdictions, thus providing greater opportunity for a more fully-interconnected multi-modal street network that benefits all users. Complete streets also have great potential for encouraging mode shift and responding to identified regional challenges such as safety, air quality, climate change, bicycle connectivity, pedestrian access and public health.

E. Economic Activity

Economic Impact Model

Recently MRCOG expanded the ability of its economic impact model to interact with the travel demand model and analyze the impact of changes to the transportation network. MRMPO expects that this tool will allow for a more comprehensive integration of land use, transportation, and economic analysis so that planners may anticipate how an investment in one of these elements will impact the others. Furthermore, adding an element of economic analysis will allow for a more informed decision-making process when selecting near and long term projects for funding.

There are several ways that this new capability will enhance MRMPO's ability to plan for the future of the region. For instance, this new feature has the ability to project the economic impacts of transportation investment proposals. In the past, projects could only be considered based on how much they cost and the perceived benefit to the region. Now, the model will be able to quantify benefits as transportation cost savings, increase in network efficiency, and lower business costs due to improved accessibility to goods and services.

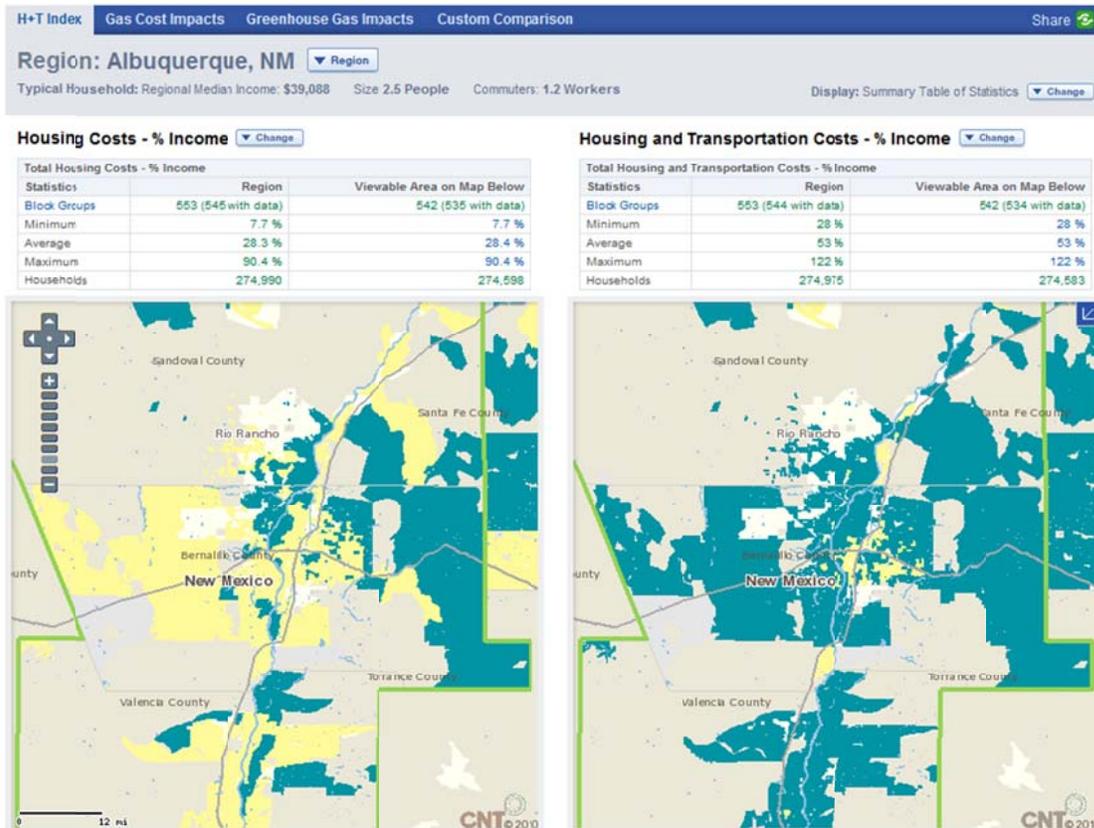
Another feature of the model is the ability to measure the economic benefit of a single investment across jurisdictional lines. Planners can analyze seven regions which include each county, both major cities, and City of Albuquerque east and west of the river. This capability will substantially enhance understanding of intra-regional economic impacts and provide a mechanism that allows members to consider how a project that may not be located in their municipality may still be of economic benefit to their constituents. Other improvements include analyzing the impacts of construction phases of transportation facilities and simulating impacts for alternative modes including transit, freight, air travel and rail. Even details such as changes to electricity and water infrastructure, safety policy, entry and exit of businesses and fuel usage can be incorporated.

Housing and Transportation Affordability

The effects of transportation on our daily lives can be explored in various ways through environmental, social and economic impacts such as reduced air quality, how our streets encourage or discourage social connections and personal transportation costs as part of our household expenses. This last concept—transportation expenses understood as a part of household expenses—has gained attention through the Center for Neighborhood Technology's (CNT) work on calculating how much households across the country are spending on transportation in an effort to measure true housing affordability. The organization has shown what many have ignored for decades: that cheaper housing is actually less affordable when associated transportation costs are factored in because of longer travel distances from jobs and services and less available public transportation.

CNT has brought awareness to this issue through its mapping of the cost of housing plus transportation costs using their Housing and Transportation Affordability Index tool (<http://www.cnt.org>). This online tool shows areas that are affordable and unaffordable when transportation costs are considered as part of total housing costs in the Albuquerque region. This tool also brings to light the importance of developing neighborhoods that are location efficient, meaning that people can efficiently get to the places they need because of good proximity to services and access to transit.

Figure 6-1: Housing and Transportation Affordability Index for Albuquerque



MRMPO has discussed with CNT the possibility of developing a similar tool specifically for the MRMPO region (the MRMPO region is different than the CNT Albuquerque region, which is based on census boundaries). A map showing housing and transportation affordability for the MRMPO region would allow decision-makers to better plan transportation and land use and to better locate affordable housing needs. This tool would also help bring more public awareness to the implications of housing location on true housing cost and the importance of the location of services and adequate transportation infrastructure. Residents can use the tool for very practical reasons, such as making decisions on where to live based on their mortgage payment and associated transportation expenses.

User Fees

As is the case with most metropolitan areas around the country, there are more transportation infrastructure needs in our region than revenue and funding sources to meet them. One way to solve this perpetual dilemma is to begin moving toward a more user fees-oriented approach in order to finance needed transportation infrastructure. Examples of user fees are regular tolls, high occupancy toll (HOT) lanes,¹ congestion pricing and vehicle miles travelled charges. User fees not only help finance infrastructure, but they can also reduce congestion in networks with limited capacity. Thus they can provide additional benefits such as reduced vehicle miles traveled in the region and fewer pollutants emitted, including greenhouse gases.

Our region will have to become more innovative with financing transportation improvements as the area grows and is forced to provide more facilities and service despite constrained funds from traditional sources. Funds will be increasingly constrained because of reduced fuel tax revenues from the higher use of alternative fuels and more fuel efficient vehicles.

MRMPO plans to investigate the feasibility of phasing in user-based fees for needed investments in future years within the 2035 horizon. High occupancy toll lanes are more likely to be implemented along certain corridors. Investigation into user-based-fees issues such as equity, legislative requirements, technological issues and the viability of high occupancy toll lanes as well as other user-based-fees methods are likely next steps.

¹ High occupancy toll (HOT) lanes are managed facilities that charge fees (tolls) for use of designated HOT roadway lanes. Tolls may vary according to congestion levels on the facility and fees may or may not be waived for public transportation vehicles and carpools (vehicles with at least one or more passengers).

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