CONNECTIONS 2040

Metropolitan Transportation Plan

Prepared by the Mid-Region Metropolitan Planning Organization
March 2020

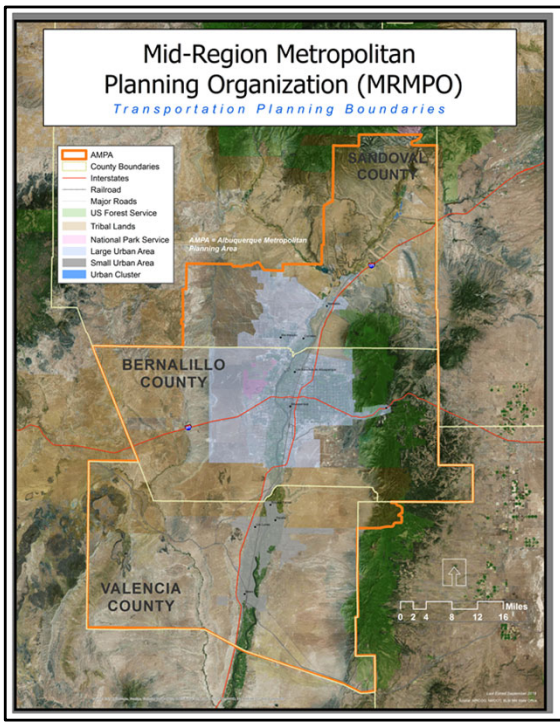
MRMPO
Mid-Region Metropolitan Planning Organization

Connections 2040 Metropolitan Transportation Plan (MTP) will soon be the new long range transportation plan for central New Mexico. It is an update to Futures 2040 MTP, which was approved by the Metropolitan Transportation Board (MTB) in April of 2015. The MTB is comprised of policy leaders from across the metropolitan planning area who come together with the common purpose of improving our regional transportation system. Connections 2040 MTP will go before the MTB for approval in April of 2020. This presentation includes some important details about the plan.

Topics for this Presentation

- Quick facts about the MTP
- Socioeconomic Forecast
- Travel Demand Forecast
- The Target Scenario
- Final Financial Estimates
- MTP Implementation Tools
- Economic Impact of the MTP
- MTP Schedule

This presentation is an update to the January 2020 presentation by MRMPO on the draft MTP. While the January presentation provides a general overview of the MTP, the focus of this presentation is to provide some additional detail on select parts of the MTP. This presentation highlights the final socioeconomic and travel demand forecasts (Chapter 2 & 4), the target scenario (Chapter 3), and the final financial information (Chapter 8). It also provides detail about MTP implementation tools (Chapter 9). Please see the January 2020 presentation if you are looking for a more comprehensive overview of the MTP.



What Area does The MTP Cover?

The projects and analysis provided in the MTP span the 3,100 square miles included in the Albuquerque Metropolitan Planning Area

The Albuquerque Metropolitan Planning Area (AMPA) is geographically situated in central New Mexico. It encompasses all of Bernalillo and Valencia Counties and the majority of the populated portion of Sandoval County.

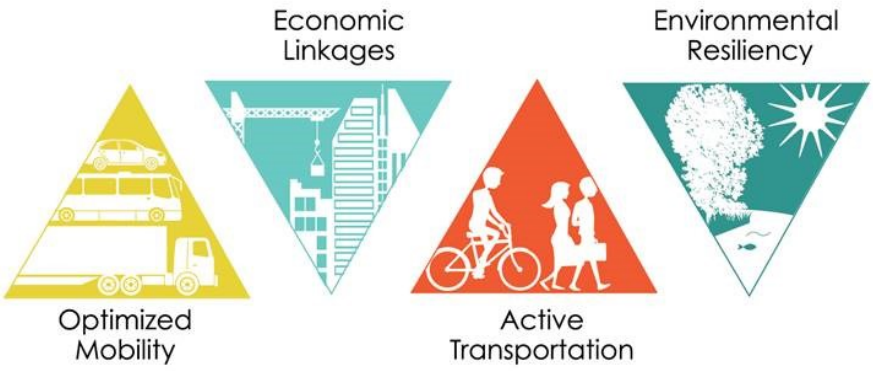
MTP Quick Facts!

- It's federally required for all urban areas over 50,000 people
- It explores existing socioeconomic and transportation trends and conditions
- It contains future growth forecasts for population, jobs and land use
- It anticipates future travel demand based on these forecasts
- It contains strategies and projects that respond to anticipated needs
- It addresses all modes of transportation with an emphasis on safety
- It's a collaborative process of stakeholders and government entities
- It's fiscally constrained so programmed funds do not exceed revenues
- It must be consistent with the latest federal transportation law (FAST Act)
- It looks forward 20+ years into the future and is updated every 5 years

The Metropolitan Transportation Plan (MTP) is a guiding document for investing in the region's long-range transportation system. Across the nation, Metropolitan Planning Organizations work together with their member agencies to produce similar plans to the Connections 2040 MTP. This slide contains a summary of elements that are common to the development of a Metropolitan Transportation Plan.

Connections 2040 MTP Goals

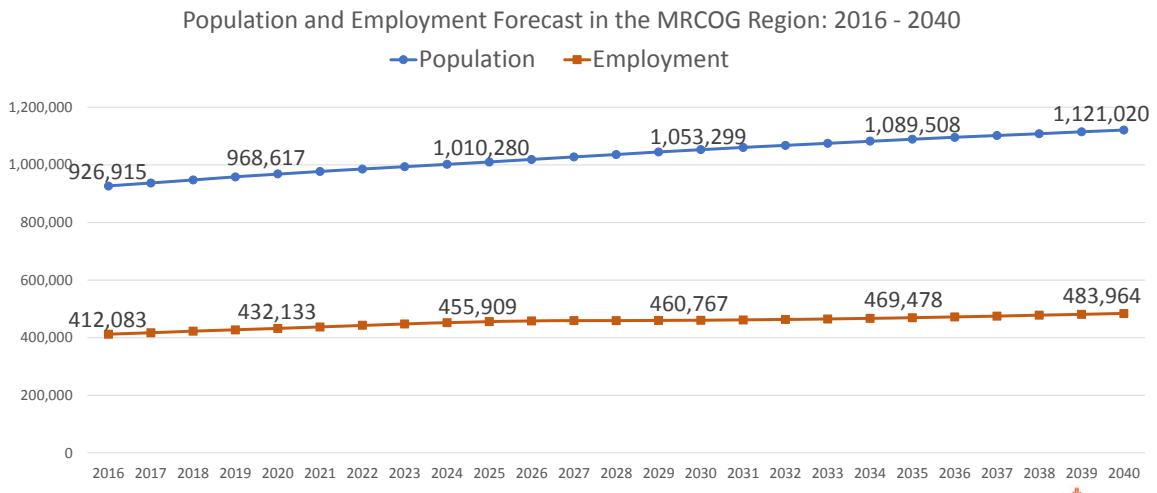
The MTP is guided by the following goals which incorporate the National Goals:



There are four overarching goals that guide *Connections 2040*. The goals are: Optimized Mobility, Economic Linkages, Active Transportation, and Environmental Resiliency. These four goals establish a direction and general priorities for the MTP and provide a framework to help assess the transportation system's performance in the region.

Optimized Mobility focuses on the overall management of our roadways, with an emphasis on prioritizing cost effective maintenance and operations to preserve existing infrastructure. The Active Transportation goal highlights the unacceptable amount of pedestrian fatalities in our region and focuses on non-motorized modes of travel such as walking and biking and includes other types of travel in the region like bike share or scooters. Economic Linkages is expanded in this update to explore the economic impacts of place-making and capture a better sense of fiscal implications of different growth scenarios. Finally, Environmental Resiliency recognizes the transportation sector's impact on climate change, the urban heat island effect, and air quality.

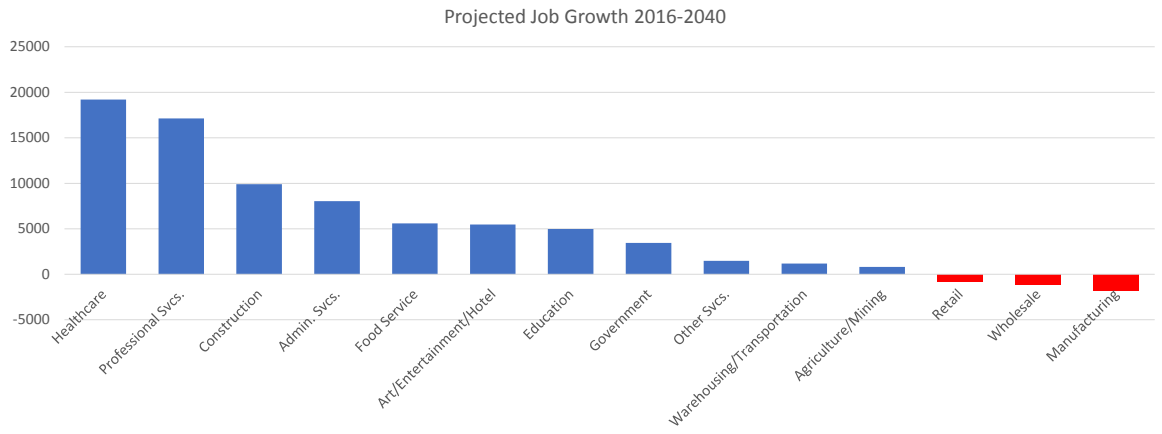
The Socioeconomic Forecast



* Source: UNM-GPS, UNM-BBER, MRMPO

According to projections by the University of New Mexico's Geospatial Population Studies (UNM-GPS), the MRCOG region is projected to grow by 194,105 people over the next 24 years resulting in a 2040 population of 1.1 million. This represents an average annual growth rate of 0.8 percent. By contrast, the average annual historical growth rate in the 1990s was approximately 1.6 percent. The reduction in the pace of growth is fueled by slowed migration and a declining birth rate. In addition, the region is projected to gain 71,553 jobs for a total of 483,964 jobs by 2040.

Employment Forecast by Industry



* Source: UNM-BBER, REMI, MRMPO

Most employment industries will see positive gains, led by the Healthcare industry. Projected growth in healthcare jobs includes major hospital expansions at UNMH and Presbyterian main hospital, and a new hospital on the Westside in the Petroglyphs master plan area. Growth in the Professional Services sector will occur primarily in existing job centers (Sandia Labs, Journal Center, and downtown Albuquerque). Growth in the Construction and Warehousing industries is creating demand for new business parks and warehousing clusters along Interstate 25 and Interstate 40.

Forecast Household & Job Growth by County

Forecast Pace of Growth by County, 2016 - 2040

	2016 Base		2040 Trend		% Growth	
County	*Households*	*Jobs*	*Households*	*Jobs*	*Households*	*Jobs*
Bernalillo	272,540	352,003	319,180	412,176	17.1%	17.1%
Sandoval	50,564	35,852	66,319	42,955	31.2%	19.8%
Southern Santa Fe	3,959	1,784	4,517	2,109	14.1%	18.2%
Torrance	6,092	4,321	7,053	5,118	15.8%	18.4%
Valencia	27,461	18,123	30,288	21,606	10.3%	19.2%
Total	360,616	412,083	427,357	483,964	18.5%	17.4%

Forecast Distribution of Growth by County, 2016 - 2040

	Existing Distribution		2016 - 2040 Growth		Growth Distribution	
County	*Households*	*Jobs*	*Households*	*Jobs*	*Households*	*Jobs*
Bernalillo	75.6%	85.4%	46,640	60,173	69.9%	83.7%
Sandoval	14.0%	8.7%	15,755	7,103	23.6%	9.9%
Southern Santa Fe	1.1%	0.4%	558	325	0.8%	0.5%
Torrance	1.7%	1.0%	961	797	1.4%	1.1%
Valencia	7.6%	4.4%	2,827	3,483	4.2%	4.8%
Total	100.0%	100.0%	66,741	71,881	100.0%	100.0%

* Source: MRMPO

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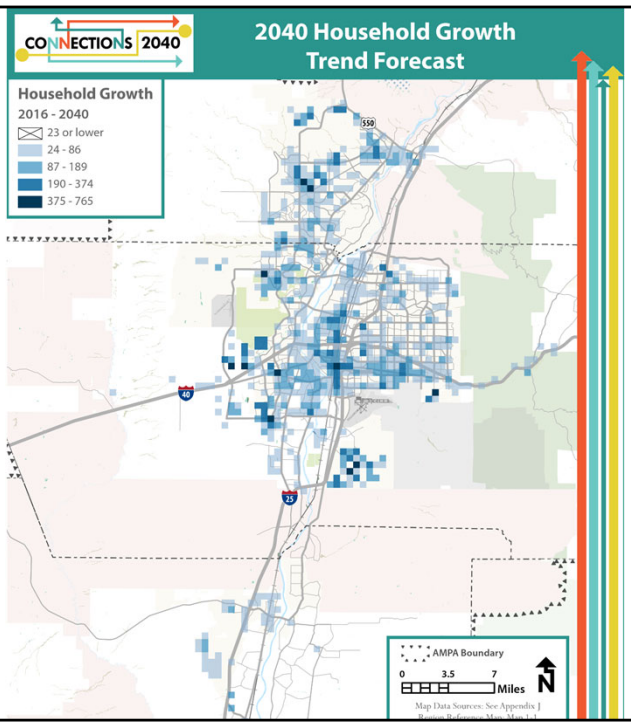
Led by the City of Rio Rancho, Sandoval County is expected to hold onto its position as the fastest growing county in the region (and the state) by 31.2 percent. Bernalillo County will see the second fastest household growth at 17.1 percent. Sandoval will also see the fastest employment growth at 19.8 percent, followed closely behind by Valencia County.

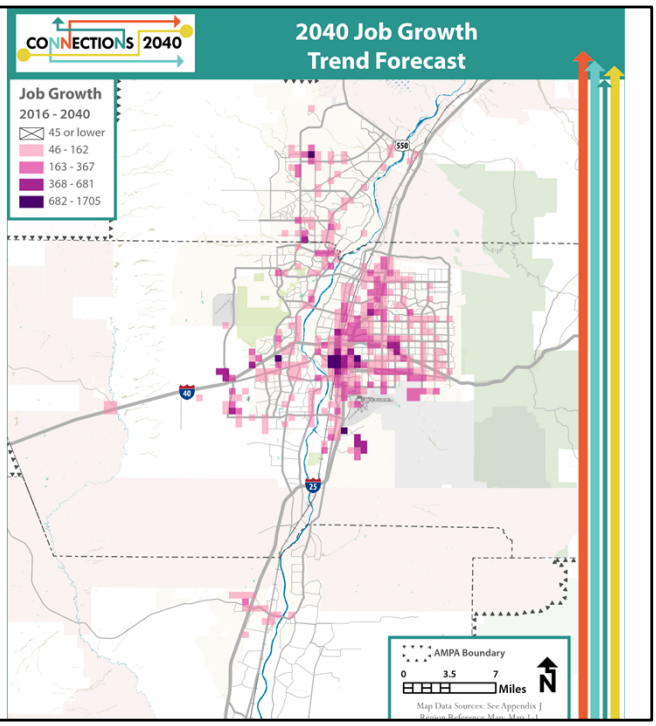
In terms of numbers, Bernalillo County will capture the largest amount of growth, adding 46,600 households and 60,000 jobs. While Bernalillo County holds 75.6 percent of the region's households, it will capture a smaller share of growth (69.9 percent). Conversely, Sandoval County holds 14 percent of the region's households and will capture 23.6 percent of the growth.

Future Household Growth



This map shows the forecasted distribution of household growth throughout the region. New housing developments and master planned communities are expected to capture a large portion of housing growth. There will also be a considerable amount of redevelopment in older parts of the region as buildings near the end of their lifecycle. There will be some increased density in urban areas and conversions from underutilized commercial to a mix of uses including multi-family housing. In addition, it is expected that vacant homes in established neighborhoods will begin to fill up, and that there will be increased household turnover with the aging of the population, contributing to population growth in areas that may be considered to be “built out”.

Future Job Growth

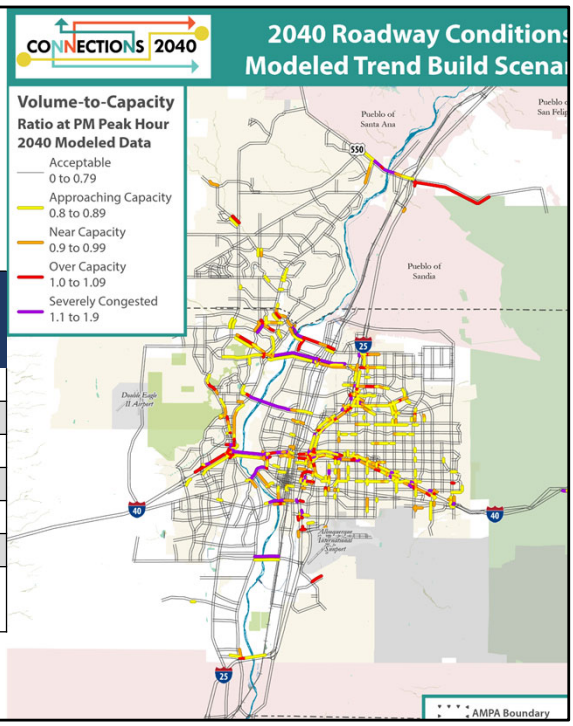


This map shows the forecasted distribution of job growth. Existing job centers will attract a great deal of job growth, either by filling existing vacancies or constructing expansions on the same property (as is the case with several major hospitals). New master planned communities will also come on line, attracting jobs to new or growing job centers. Redevelopment will occur as buildings near the end of their lifecycle, and underutilized commercial activity in key locations are expected to generate more intense uses.

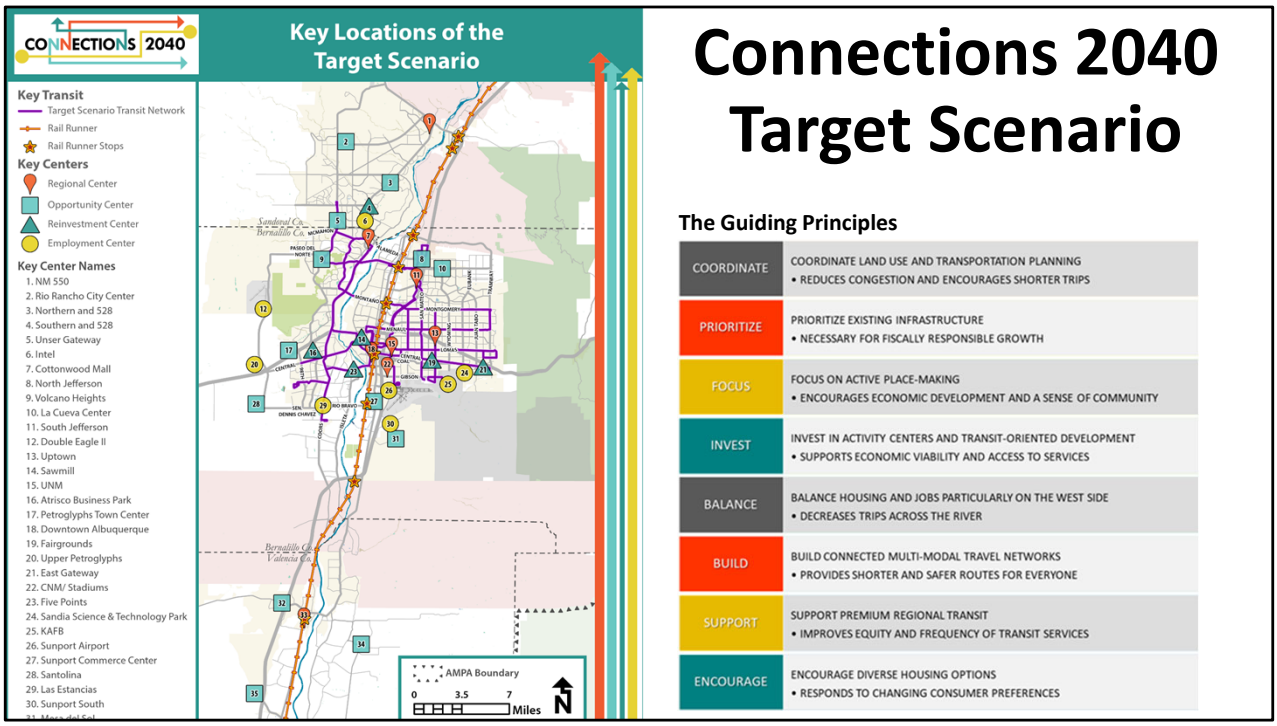
Future Travel Demand

Roadway Performance Summary: 2040 Trend

PM Peak Hour	2016 Base Year	2040 Trend	Percent Difference
Vehicle Miles Traveled	1,673,908	1,937,337	16%
Vehicle Hours Traveled	58,700	75,503	29%
Vehicle Hours Delay	23,131	33,999	47%
VMT Over Capacity	81,245	125,376	54%
Congested Lane-Miles	56.8	91.8	62%
Average Speed	29.8	25.9	-13%
River Crossings Vehicle Hours of Delay	924	2,767	199%



The patterns of congestion that we see today, unsurprisingly, become more severe in the future under the Trend Scenario. By 2040, nearly every river crossing will be over capacity or severely congested. Other areas that will experience over-capacity roadway conditions include many of the arterials adjacent to major river crossings, the downtown/UNM areas, and areas with non-grid type roadway infrastructure design particularly on the westside of the Rio Grande. Vehicle hours of delay during peak commuting times are expected to increase by 200 percent on river crossings as the westside is projected to gain 43,000 new homes in the Trend Scenario, while the majority of jobs remain east of the river.

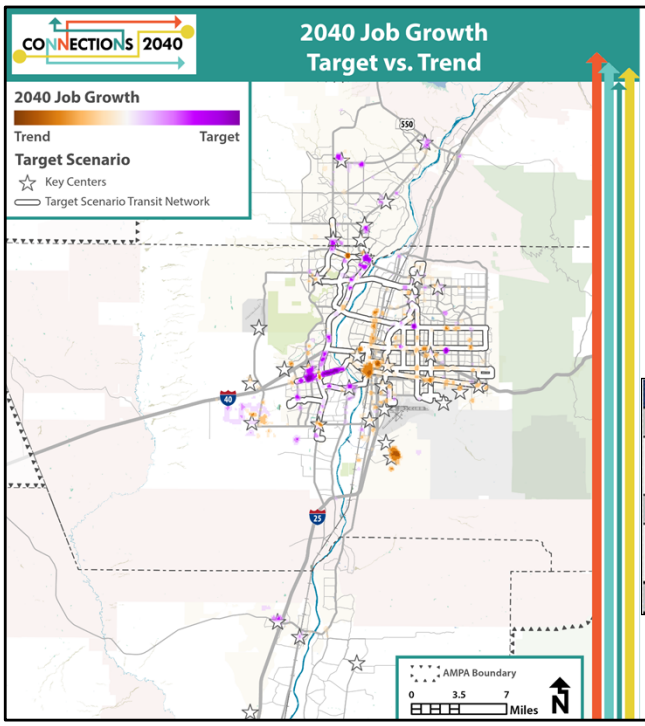


In response to expectations for future congestion, local agencies and stakeholders joined together to envision an alternative future with better transportation outcomes. From an intensive two-year process with thousands of participants that occurred between 2012 and 2014, stakeholders developed a “Preferred Scenario” for growth. This scenario is featured in Futures 2040.

This MTP, Connections 2040, builds on that work with an update called the Target Scenario. While the Target Scenario embodies a variety of components, there are three that capture its essence:

1) Target investments to strengthen regional activity centers, support a core transit network, and enable safe bicycle and pedestrian connections.
2) Target a healthy balance of jobs and housing east and west of the Rio Grande.
3) Target the preservation of open space, agricultural land, and rural communities.

At the heart of the Target Scenario lies eight **Guiding Principles** and several **Key Locations** for additional investment that were developed and refined by regional stakeholders through a collaborative process. This slide presents the products of that work.



Housing & Jobs: Target v. Trend Scenario

Jobs to Housing Ratio

Jobs-to-Housing Ratio	2016	Trend	Target
East of the Rio Grande	1.42	1.42	1.34
Housing	223,422	255,804	262,286
Jobs	317,489	364,483	351,067
West of the Rio Grande	0.56	0.55	0.65
Housing	153,926	196,898	190,163
Jobs	85,644	109,227	122,656
AMPA Average	**1.07**	**1.05**	**1.05**

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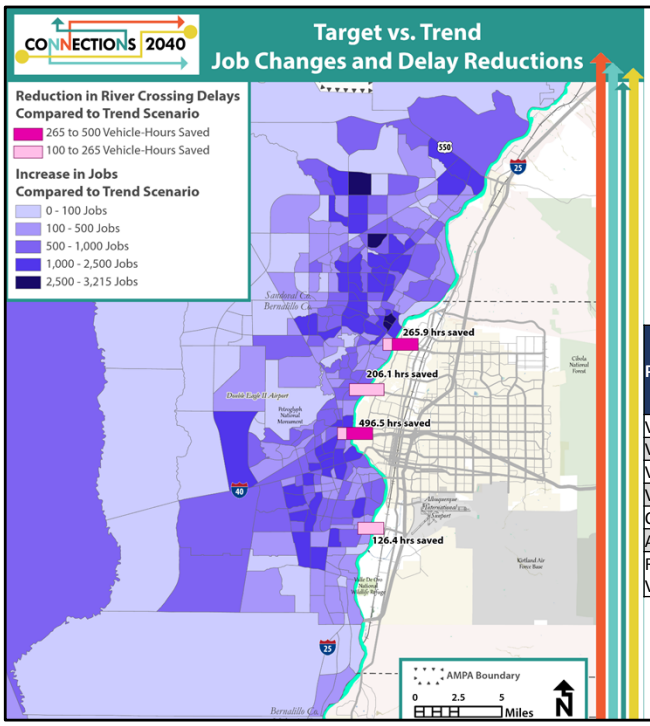
The following table illustrates the extent to which the Target Scenario improves the jobs to housing balance west of the Rio Grande. By incentivizing job growth on the westside of the Rio Grande and housing in areas with remaining capacity east of the river, the Target Scenario achieves approximately 13,000 more jobs west of the river and 6,700 fewer homes over the Trend. This improves the westside jobs-to-housing ratio from 0.55 to 0.65. While the jobs-to-housing ratio decreases slightly east of the river, it remains higher than the AMPA average and higher than the general target of 1.2 (which is the average number of workers per household in the AMPA). Note that the ratio on both sides of the river remains the same in the Trend over the baseline conditions in 2016, exhibiting that existing plans and policies do not indicate an improvement over time without additional investment or intervention.



Travel Demand: Target v. Trend Scenario

Roadway Performance Summary; Target v. Trend

PM Peak Hour	2016 Base Year	2040 Trend	2040 Target	Percent Difference Target vs. Trend
Vehicle Miles Traveled	1,673,908	1,937,337	1,913,356	-1%
Vehicle Hours Traveled	58,700	75,503	71,224	-6%
Vehicle Hours Delay	23,131	33,999	30,244	-11%
VMT Over Capacity	81,245	125,376	110,058	-12%
Congested Lane-Miles	56.8	91.8	81.9	-11%
Average Speed	29.8	25.9	26.1	1%
River Crossings Vehicle Hours of Delay	924	2,767	1,571	-43%

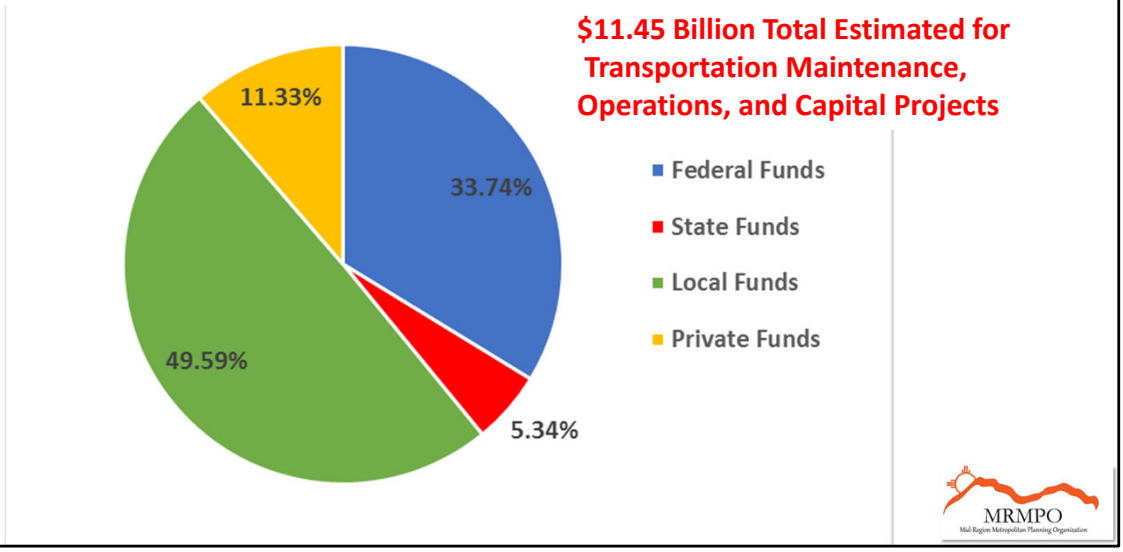
There is a tremendous difference in travel delay on the river crossings in the Target vs. the Trend Scenario. During the pm peak commute the Target Scenario provides a remarkable improvement, with 43 percent less delay in vehicle travel on the river crossings over the Trend Scenario. To further explore this finding, additional analysis was performed on river crossings that directly support those commuter flows from the residences west of the river to jobs east of the river. The map illustrates the impact of the increased job concentrations on the westside of the river in the Target Scenario shows over the Trend. Also shown are those river crossings that are directly affected by this shift and the consequential reductions in associated river-crossing delay.

Connections 2040 MTP
Fiscal Constraint Analysis

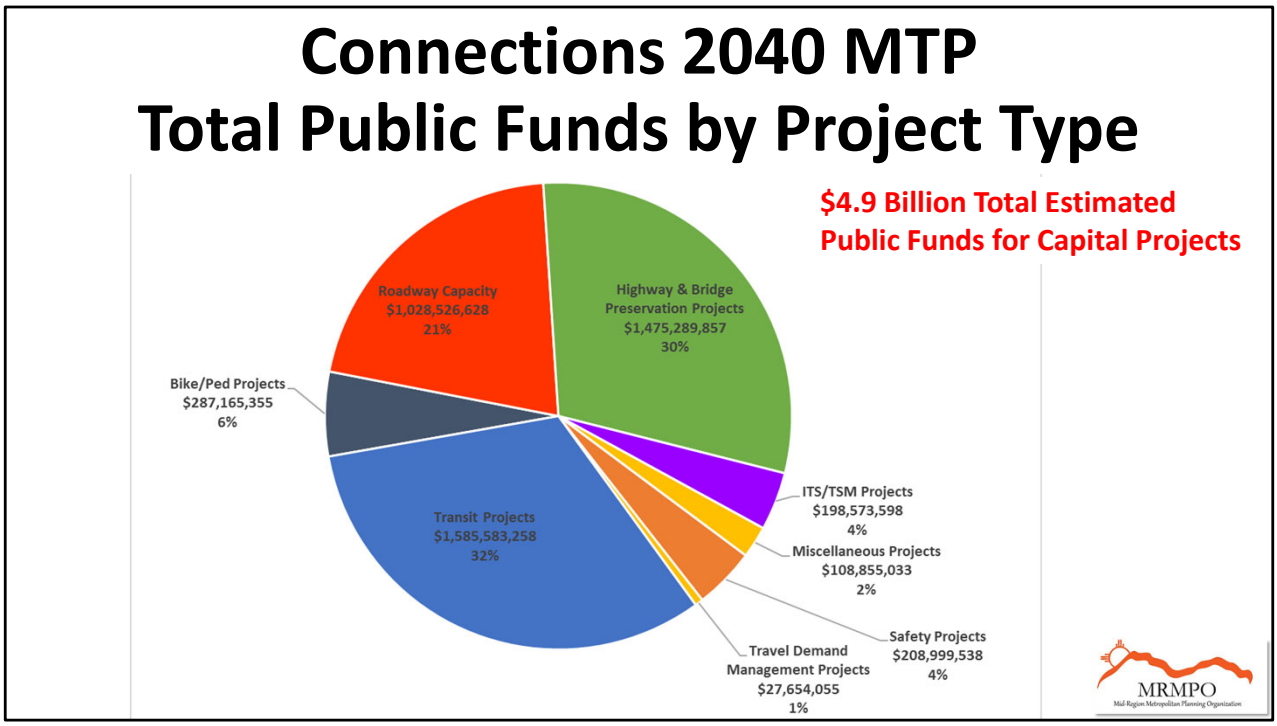
Funding Source	Amount
Federal Funds	$3,863,579,607
State Funds	$611,309,092
Local Funds	$5,677,361,395
Private Funds	$1,297,162,212
TOTAL PUBLIC & PRIVATE FUNDS AVAILABLE	**$11,449,412,306**
Maintenance & Operations Expenditures	-$5,231,159,913
TOTAL PUBLIC & PRIVATE FUNDS AVAILABLE for CAPITAL PROJECTS	**$6,218,252,393**
Cumulative Cost of All Privately Funded MTP Projects	-$1,297,162,212
PUBLIC FUNDS AVAILABLE FOR CAPITAL PROJECTS	**$4,921,090,181**
Cumulative Cost of All Publicly Funded MTP Projects	-$4,920,647,322
Difference (Available Capital Funds - Total Projects' Cost) for Verification of Fiscal Constraint	**$442,859**
Total Private Funds Available	$1,297,162,212
Cumulative Cost of All Privately Funded Projects	$1,297,162,212

Connections 2040 MTP contains a grand total of $11.45 billion of **public and private** funds available for **maintenance, operations, and capital projects**. When we factor out maintenance and operations expenditures ($5.2 billion) there are $6.2 billion in public and private funds available for capital projects. If we remove privately funded MTP projects ($1.2 billion) we have $4.9 billion of public funds available for capital projects. The difference between the public funds available for capital projects ($4,921,090,181) and the cumulative cost of all publicly funded MTP projects from Appendix A ($4,920,647,322) is $442,859 of available public funds. This remaining amount is verification that the fiscal constraint requirement for this MTP has been met.

Connections 2040 MTP
Percentage of Funds by Funding Source



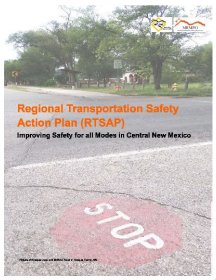
This slide shows the breakdown of the total MTP funds by funding source. Of the $11.45 billion of public and private funds available for maintenance, operations, and capital projects, approximately half is represented by local funds, a third is represented by new federal dollars coming into the region, 11.3 percent is the share of private investment, and 5.3 percent is allocated from the state.



This chart shows a breakdown of all public funds available for capital projects by project type ($4.9 billion). Funds for roadway maintenance, operations and privately funded capital projects are not included in this chart. This breakdown of the allocation of public funds in the Connections 2040 MTP demonstrates a continued emphasis on preserving existing transportation infrastructure to maintain what is already built. Note that the transit category includes funds used for operations (unlike the other categories) which explains the larger proportion. The transit category also includes a large Federal Railroad Administration CRISI grant for the Positive Train Control project, and the Federal Transit Administration grant for the ART project.

MTP Implementation Tools

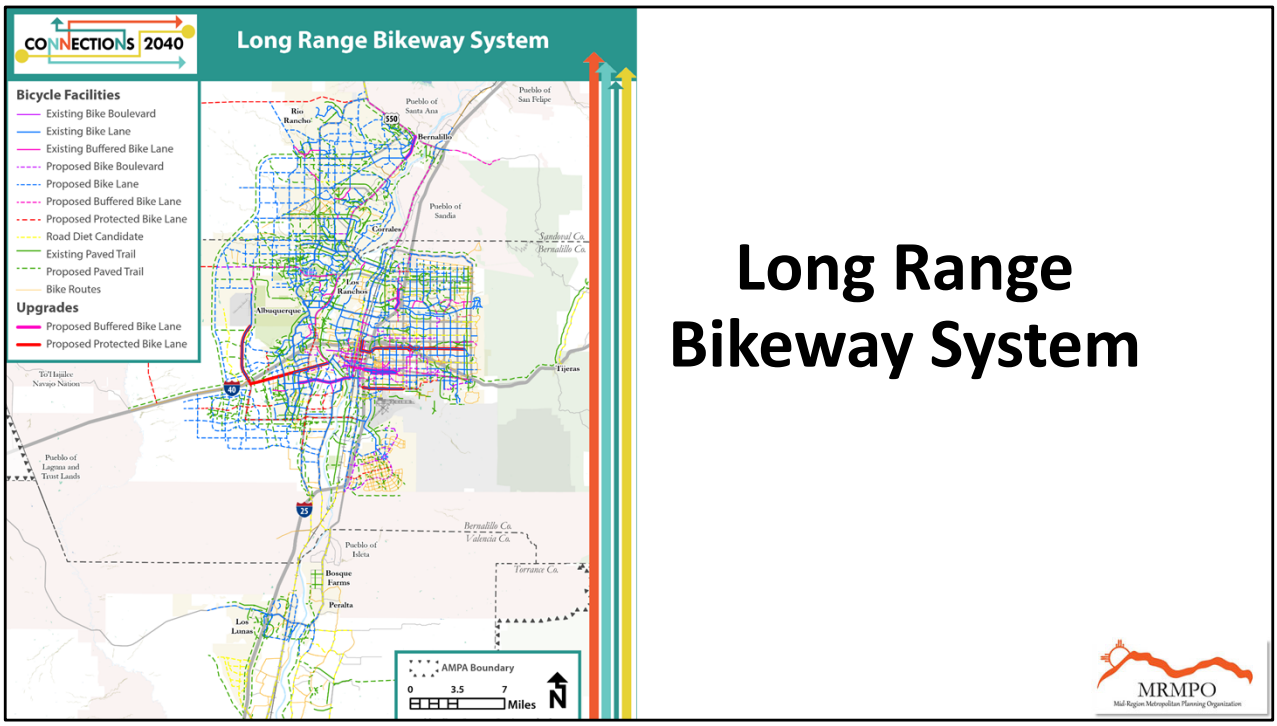
- Selecting projects for funding through the Transportation Improvement Plan using the **Project Prioritization Process**
- Supporting complete street design that work for users of all modes of transportation through guidance from **the Long Range Transportation Systems (LRTS) Guide**
- Ensuring the consistency of new development with the MTP through **development review**
- Prioritizing safety improvements with the **Regional Transportation Safety Action Plan (RTSAP)**
- Addressing congestion through an **Incident Management Plan**
- Understanding the costs of public infrastructure under difference future growth scenarios with the **Fiscal Indicator Tool**



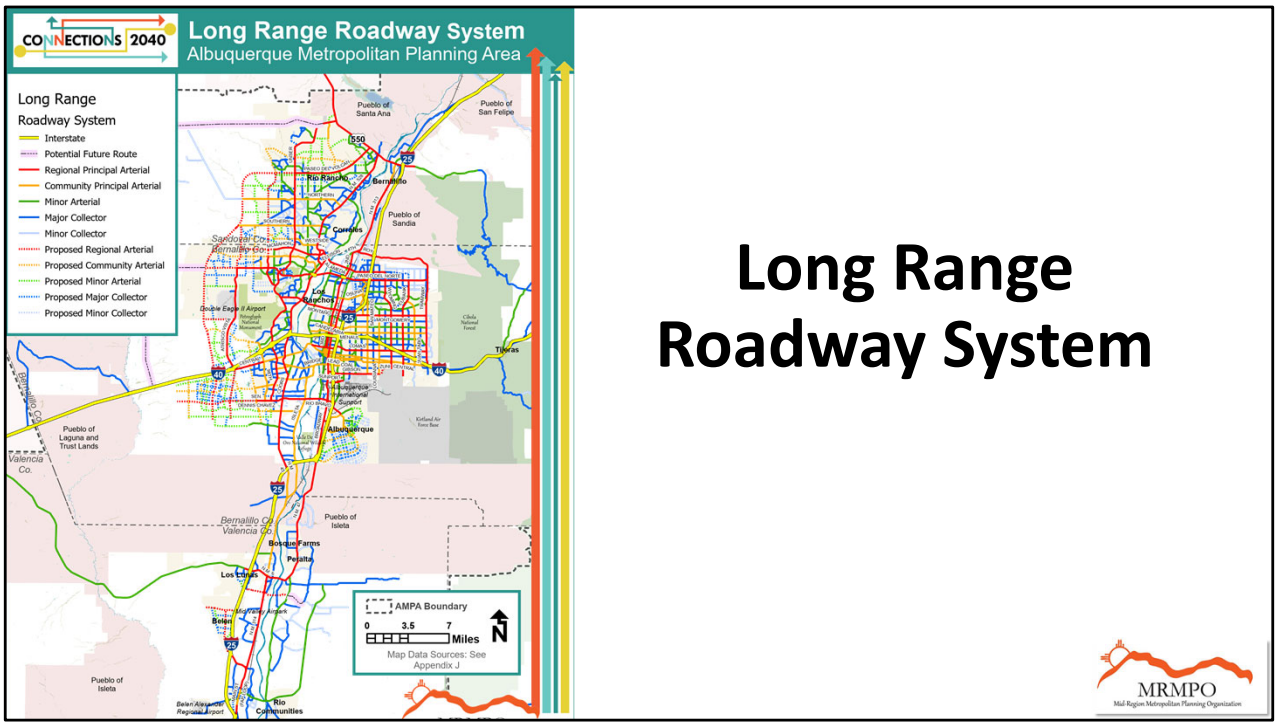
This slide presents a partial list of tools to implement the MTP. The full summary is in Chapter 9 of Connections 2040 MTP.

- The **Project Prioritization Process** informs project selection by scoring and ranking project proposals on how well they support the national performance goals and the goals of the Metropolitan Transportation Plan. This process serves as an objective and data-driven tool for helping to determine which projects should receive funding through the Transportation Improvement Plan (TIP).
- The **LRTS Guide** provides design guidance for new and reconstructed roadways to work toward a more complete, connected, and safe transportation system that meets the needs for users of all transportation modes and for people of all abilities. The LRTS Guide responds to the growing need for transportation networks to become more efficient at addressing congestion, providing multimodal options for all users, supporting economic development, and improving public health. The LRTS Guide incorporates multimodal accommodations guidance based on national best practices. The LRTS Guide is found in Appendix E of the Connections 2040 MTP. The LRTS Guide includes the long range system maps for roadways, bicycles, and transit (shown in the following slides).
- The **development review** process is used by MRMPO for reviewing proposed land use development projects in the City of Albuquerque, Bernalillo County, Rio Rancho, and Los Lunas to provide consistency between land use practices and the transportation goals set forth in the MTP, particularly the guiding principles identified in the Target Scenario.

- The **RTSAP** is a regional comprehensive safety plan that serves as a mechanism for implementing safety policy and street improvements in the AMPA. The RTSAP emphasizes the need to prioritize safety over speed and recommends the adoption of Vision Zero policy.
- **Incident Management Plans** help implement congestion management (narrowly) and the Optimized Mobility goal of the MTP (broadly) in the AMPA. IMPs help reduce travel delay due to incidents and improve safety before and after an incident. The ITS Subcommittee will soon be facilitating the development of an AMPA-specific IMP to foster inter-agency coordination on recurring and non-recurring congestion and incidents, which is key in our region's "congestion toolbox."
- The **Fiscal Indicator Tool** (FIT) calculates capital and ongoing maintenance and operations costs of public infrastructure under difference future growth scenarios. The FIT is intended to inform policymakers as they strive to make the most efficient use of limited municipal resources.

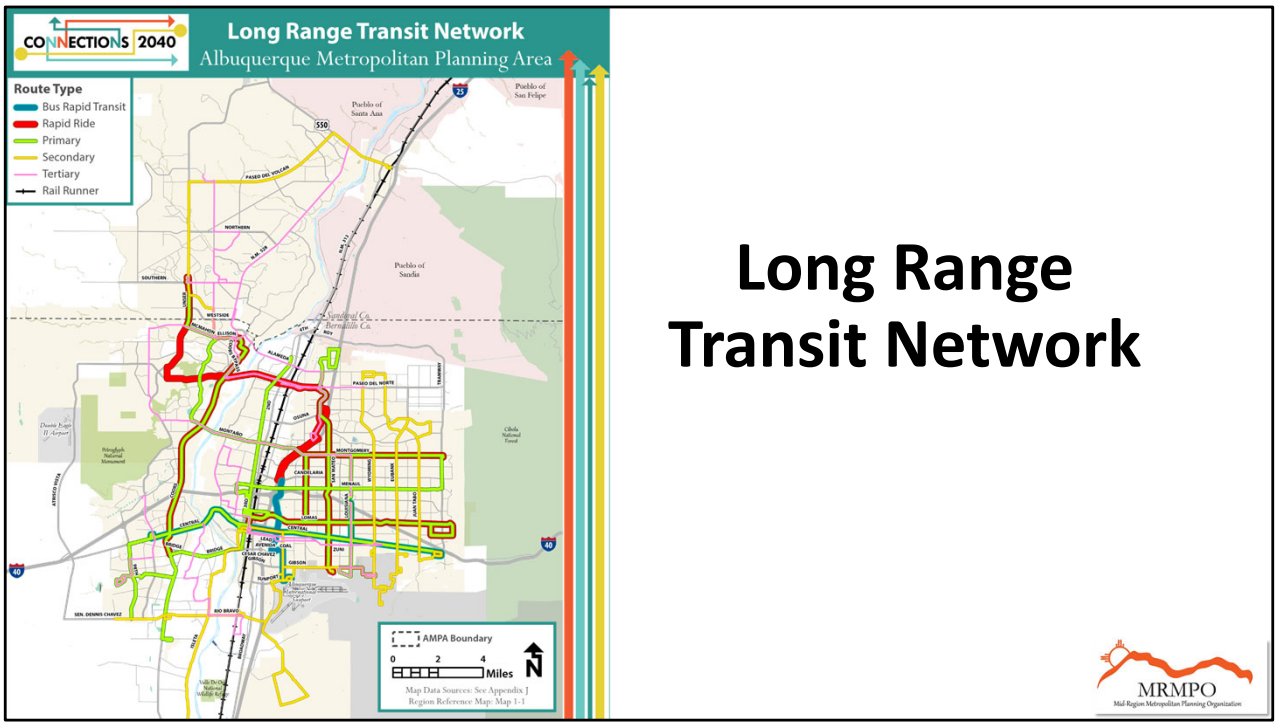


The Long Range Bikeway System (LRBS) provides an aspirational view of how regional stakeholders would like the bikeway network to develop over time. It is not limited to the 20-year horizon or funding limitations of the MTP project list. MRMPO's Active Transportation Committee updated the LRBS. The LRBS provides high-level guidance about providing future facilities based on the National Association for City Transportation Officials (NACTO) guide for "Designing for All Ages and Abilities." As a result, there is now a greater focus on creating more protected bikeway facilities that serve cyclists who are interested in riding their bikes but may be hesitant due to concerns about safety.



Long Range Roadway System

As with the LRBS, the Long Range Roadway System (LRRS) is an aspirational network of how we would like roadways to develop beyond the 2040 horizon. Agencies provide input on the LRRS either directly or through the MPO committee process. The LRRS does it fall within the MTP's fiscal constraint requirement, therefore many of the projects on the map will still need to identify a funding source.



Rio Metro and ABQ RIDE staff, as well as the Land Use and Transportation Integration Committee, were consulted on updating the regional Long Range Transit Network (previously identified as the Conceptual Network). Minor changes were made to reflect the impact of growth on our region and to capture updates to the Target Scenario. The Long Range Transit Network is an aspirational transit network for beyond 2040 that is not fiscally constrained and captures how the AMPA's overall transit network could feasibly grow in the region. Funding would need to be identified to realize this aspirational network.

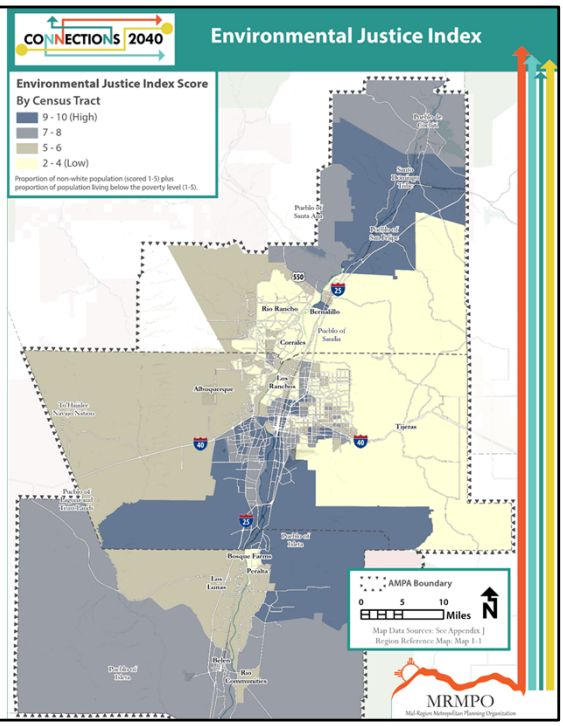
This transit network includes routes that serve areas that are not dense and currently have less frequent service. It includes a wide range of different types of transit service, ranging from Bus Rapid Transit (BRT) and Rapid Ride, to Primary, Secondary, and Tertiary bus routes.

Environmental Justice

The *Connections 2040 MTP* analyzes existing conditions and considers how transportation investments can improve access for low-income and historically marginalized communities.

Accessibility of Major Healthcare Facilities by Transit

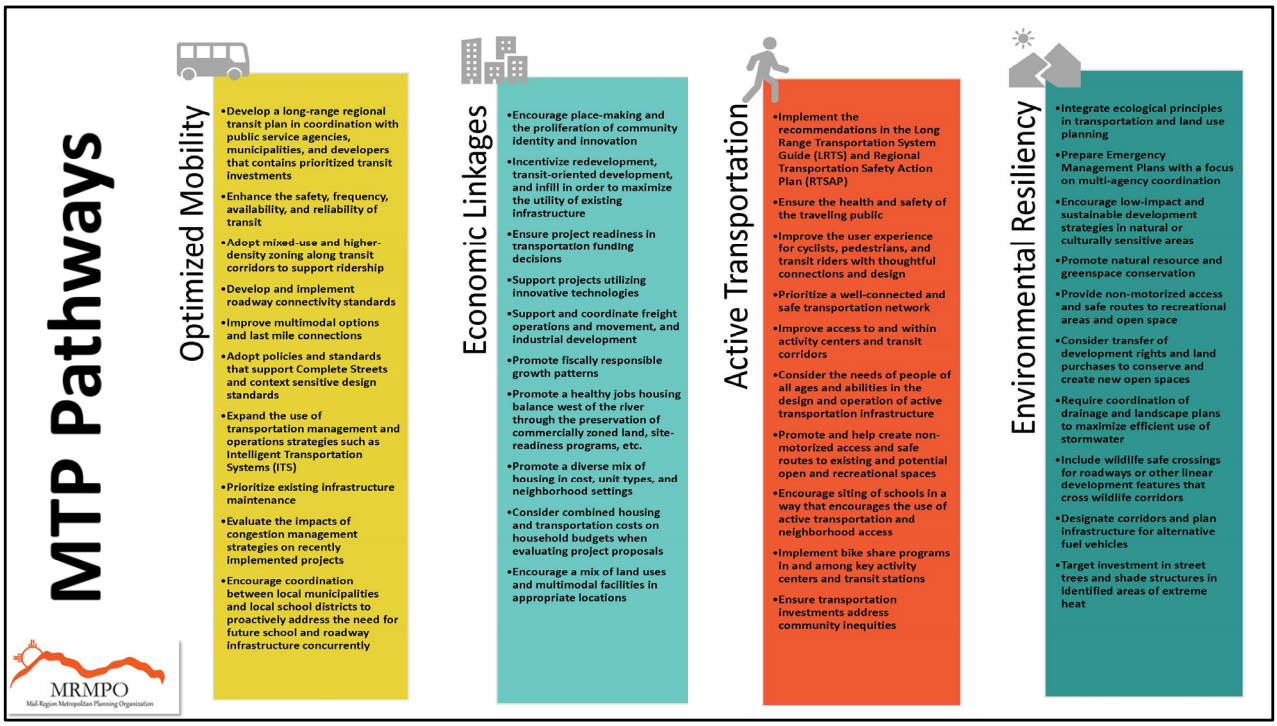
	% of Total Pop	EJ Population	Non-EJ Population
Within 15 Minutes Transit Time	32.8%	45.5%	30.4%
Within 30 Min Transit Time	57.9%	64.4%	56.6%
Within 45 Min Transit Time	74.5%	77.6%	73.9%



The metropolitan transportation planning process must comply with federal Environmental Justice (EJ) requirements. EJ addresses how low-income and minority populations are affected by government actions, including transportation decisions made as part of the metropolitan transportation planning process.

MRMPO analyzed locations with relatively high concentrations of environmental justice populations based on minority status and household poverty level using 2014-2018 American Community Survey data. This map highlights census tracts that scored high on the EJ Index showing where concentration of both household poverty and minority status are highest. Using "natural breaks", the percentage of census tract population considered "minorities" (anyone who self-identifies as not white, non-Hispanic) and individuals "living below the poverty level in the last 12 months" were used to assign a corresponding score between 1 and 10, with the resulting scores combined to produce an overall "environmental justice score" for each tract.

This MTP primarily addresses environmental justice by assessing where low-income and minority populations reside and how those populations are served by the transportation network – (particularly the transit network) within the AMPA. In addition, tree canopy coverage, access to open space and parks, and access to healthcare are explored among EJ communities.



MRMPO has developed a list of broad pathways, or strategies, to address transportation problems in the region. The pathways are the culmination and synthesis of strategies in Futures 2040, strategies identified by MRMPO committees, and input from other experts in the transportation arena. The following tables provide a summary of the key pathways, categorized by MTP goal to address gaps in the transportation system. While this slide provides some highlights, a complete list of pathways is available in Appendix G.

Economic Impact of the MTP

Economic Impact of Connections 2040 MTP (2016 - 2040) Impact of Federal Dollars + Improved Network Efficiency	
Average Annual Jobs Added	5,491
Cumulative Gross Regional Product (GRP)	$8.9 billon
Cumulative Personal Income	$9.7 billion
Cumulative Total Wages and Salaries	$3.5 billion

All dollar amounts adjusted to 2020 dollars.
Source: REMI Model, MRMPO

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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. Using the REMI model, MRMPO estimates the impact of the MTP on the region. The figures on this slide represent the combined impact of new federal transportation dollars circulating throughout the economy, as well as the economic benefits of a more efficient transportation network that results from constructing the projects in the MTP. Clearly, the estimated impact of Connections 2040 on the region's economy is substantial.

MTP Final Steps

- Comments from the 2nd draft of the MTP are due on April 8th, 2020.
- Comments are reviewed by staff and incorporated into the Final MTP where appropriate.
- All public comments will received a written response and will be included in the Final MTP packet to the Metropolitan Transportation Board.
- The Final MTP will be presented to the Metropolitan Transportation Board for proposed adoption on **Friday, April 17, 2020.**
- Pending the Plan's adoption, the Plan must be approved by the Federal Highway Administration and Federal Transit Administration by June 2020.

CONNECTIONS 2040

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The Connections 2040 MTP process has been ongoing for the past 2 years and draft 2 is currently out for final public review. On April 17th, 2020 the plan will go before the MTB for approval. The plan will also go before the FHWA and the FTA in June of 2020 for approval. At that point, Connections 2040 will become the official long range transportation plan for this region and guide metropolitan transportation planning and programming for the next 5 years.

Thank you to the many collaborators on the MTP process!

- ABQ RIDE
- Albuquerque Public Schools
- AMAFCA
- Belen Consolidated Schools
- Bernalillo County
- Bernalillo Public Schools
- City of Albuquerque
- City of Belen
- City of Rio Communities
- City of Rio Rancho
- Cochiti Pueblo
- Isleta Pueblo
- Laguna Pueblo
- Los Lunas Public Schools
- Middle Rio Grande Conservancy District
- Navajo Nation-To'hajiilee
- New Mexico Department of Transportation
- Rio Metro Regional Transit District
- Rio Rancho Public Schools
- Sandia Pueblo
- Sandoval County
- San Felipe Pueblo
- Santa Ana Pueblo
- Santo Domingo Pueblo
- SSCAFCA
- Town of Bernalillo
- Town of Peralta
- Valencia County
- Village of Bosque Farms
- Village of Corrales
- Village of Los Lunas
- Village of Los Ranchos
- Village of Tijeras
- Business & Development Community
- The General Public

MRMPO staff extend our gratitude to all of the agencies, entities, committees, and individuals who have participated in developing this plan. Thank you!