Our Metropolitan Area Today and Tomorrow

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"The word 'growth' once had a positive connotation for Americans: better jobs, better shops, better education, a better quality of life. But mention the word today and you are likely to hear discussions about congested traffic, higher taxes, crowded schools and the paving-over of the landscape."

~ Andres Duany
Smartcode: A Comprehensive Form-Based Planning Ordinance

So, What's at Stake?

There are distinct connections between the characteristics of a region's land use forms and its transportation characteristics. Factors such as population growth, development patterns, age, income, and land uses all have direct impacts on transportation characteristics like transit ridership, auto ownership, mobility choices, and the distance and time people and goods travel within a region.

Land use and transportation are two sides of the same coin. Transportation affects land use and land use affects transportation. Decisions that affect one also affect the other. As a result, it is important to understand the connections.

Under New Mexico laws, land use decisions are made by counties and municipalities through comprehensive plans, subarea plans, zoning and subdivision ordinances, and development review procedures. The transportation infrastructure commitments in this MTP are decided and approved by the Metropolitan Transportation Board, mostly elected officials from member governments within the Albuquerque Metropolitan Planning Area (AMPA). This makes it all the more important for elected officials, jurisdictions' staffs, and the public to understand the complex relationships between growth, mobility, access and our economic success. In a rapidly changing and competitive world, nothing less than our quality of life for current and future generations is at stake.

The Detailed, Technical Picture . . .

Several supporting datasets to the 2030 MTP have been compiled or developed by MRCOG since the 2025 MTP.

MRCOG has updated the base year demographics used for analysis from 2000 to 2004. While the 2000 dataset relied primarily on data provided by the 2000 Census Bureau, the 2004 dataset incorporates more current local data in order to estimate updated information regarding population, housing, and employment. MRCOG utilized building permit data, school enrollment trends, utility hook-ups, county assessor data, land use inventories, NM Department of Labor employment files, and other regionally available information to create a 2004 dataset that represents the base year socioeconomics used for this 2030 MTP. The data are created at the Data Analysis Subzone (DASZ) level, which are small areas or "zones" that are recognized by and fed to MRCOG's travel model in order to develop transportation forecasts.

As part of the effort to develop a 2004 DASZ socioeconomic dataset, MRCOG has updated its land

use inventory of the region to reflect existing uses in 2004. All construction that has occurred between 2000 and 2004 has been tracked by parcel in a spatial database maintained by MRCOG and coded into one of 19 land use categories. The land use categories tracked distinguish between single and multi family housing, minor and major commercial, office, industrial, institutional, schools and universities, airports, utilities, and other non-residential such as public safety facilities, cemeteries and community centers. Some local jurisdictions in the MRCOG region maintain their own land use inventories and these data were critical in updating MRCOG's land use database.

MRCOG has used the 2004 DASZ socioeconomics and 2004 land use inventory as the starting point towards developing a new 2030 DASZ socioeconomic forecast. From the base year data, MRCOG incorporated information that was compiled through meetings primarily held with planners, developers and public officials regarding recent construction, current plans for near term development, long range development plans. In addition, existing comprehensive plans, area plans, and other local land use policies including zoning codes were also used to guide the forecast. Observed trends were also taken into consideration in the forecast development. Ultimately, all of these data sources were input to MRCOG's Land Use Allocation Module (LAM) which allocates growth to the DASZ level. After post-processing and various reliability checks the 2030 forecast was finalized.

Lastly, the Census Bureau, in partnership with several affiliated agencies, has released the 2000 Census Transportation Planning Package (CTPP) in a series of products, many of which came out after the development of the 2025 MTP. Of particular interest is CTPP Part III, which connects trip origins to trip destinations thereby allowing transportation analysts to identify major commuting corridors as well as the demographics of those who use them.

A. Demographics

The demographics of an area provide important information about how the region is growing which in turn helps identify and anticipate potential transportation needs. Population density data allow planners to target areas that exhibit high

Table 2-1 ► Population Density by Municipality, 2000 and 2004

		persons per sq. mi.	
County	Municipality	2000	2004
Bernalillo County			
	City of Albuquerque	2,378	2,590
	Village of Los Ranchos de Albuquerque	1,174	1,215
	Village of Tijeras	469	511
	Remainder of County	105	111
Sandoval County			
	Town of Bernalillo	1,350	1,412
	Village of Corrales	666	763
	City of Rio Rancho	507	599
	Remainder of County	155	161
Valencia County			
	Village of Los Lunas	869	969
	AMPA	**485**	**529**

** 2000 AMPA Population is based on the 2004 AMPA boundary, which includes Santa Ana, Algodones, and Los Lunas.*
2004 Municipal estimates have been adjusted to the Bureau of Business and Economics Research's 2004 County estimates.

Table 2-2 ▶ Population by Municipality, 2000 and 2004

County	Municipality	2000 Population	2004 Population Estimate	2000 – 2004 Estimated Growth	2004 Distribution within AMPA
Bernalillo County					
	City of Albuquerque	448,607	488,570	8.9%	70.6%
	Village of Los Ranchos de Albuquerque	5,092	5,273	3.5%	0.8%
	Village of Tijeras	474	516	8.8%	0.1%
	Remainder of County	101,845	107,299	5.4%	15.5%
Sandoval County					
	Town of Bernalillo	6,611	6,915	4.6%	1.0%
	Village of Corrales	7,334	8,400	14.5%	1.2%
	City of Rio Rancho	51,765	61,144	18.1%	8.8%
	Remainder of County	2,356	2,450	4.0%	0.4%
Valencia County					
	Village of Los Lunas	10,034	11,192	11.5%	1.6%
	AMPA	**634,118**	**691,758**	**9.1%**	**100.0%**

** 2000 AMPA Population is based on the 2004 AMPA boundary, which includes Santa Ana, Algodones, and Los Lunas.*
2004 Municipal estimates have been adjusted to BBER's 2004 County estimates.

concentrations of activity for transit planning, to mitigate traffic congestion, improve walkability and so forth. Density information is used in combination with growth indicators so planners can anticipate future demand and plan for the resources new growth might require.

1. Population Density

Table 2-1 illustrates how densely settled the incorporated municipalities and villages are within the AMPA, and compares density changes between 2000 and 2004.

As an established urban center, City of Albuquerque exhibits the highest density among the greater metropolitan area, with 2,590 persons per square mile. Los Ranchos and Bernalillo follow with over 1,000 persons per square mile, and Los Lunas is nearing 1,000 as well.

Since 2000, the AMPA increased in density overall by 44 persons per square mile. The City of Albuquerque led the municipalities with the greatest increase in population density with an additional 212 persons per square mile, and Los Lunas ranks second with an increase of 100 new persons in each of its nearly 12 square miles. The most rapidly growing part of the AMPA, the City of Rio Rancho, had the most notable leap in density, increasing by 18% over the four years.

Map 2-1, 2004 population density by DASZ, shows density at a smaller geographic level allowing dense subareas to be visible.

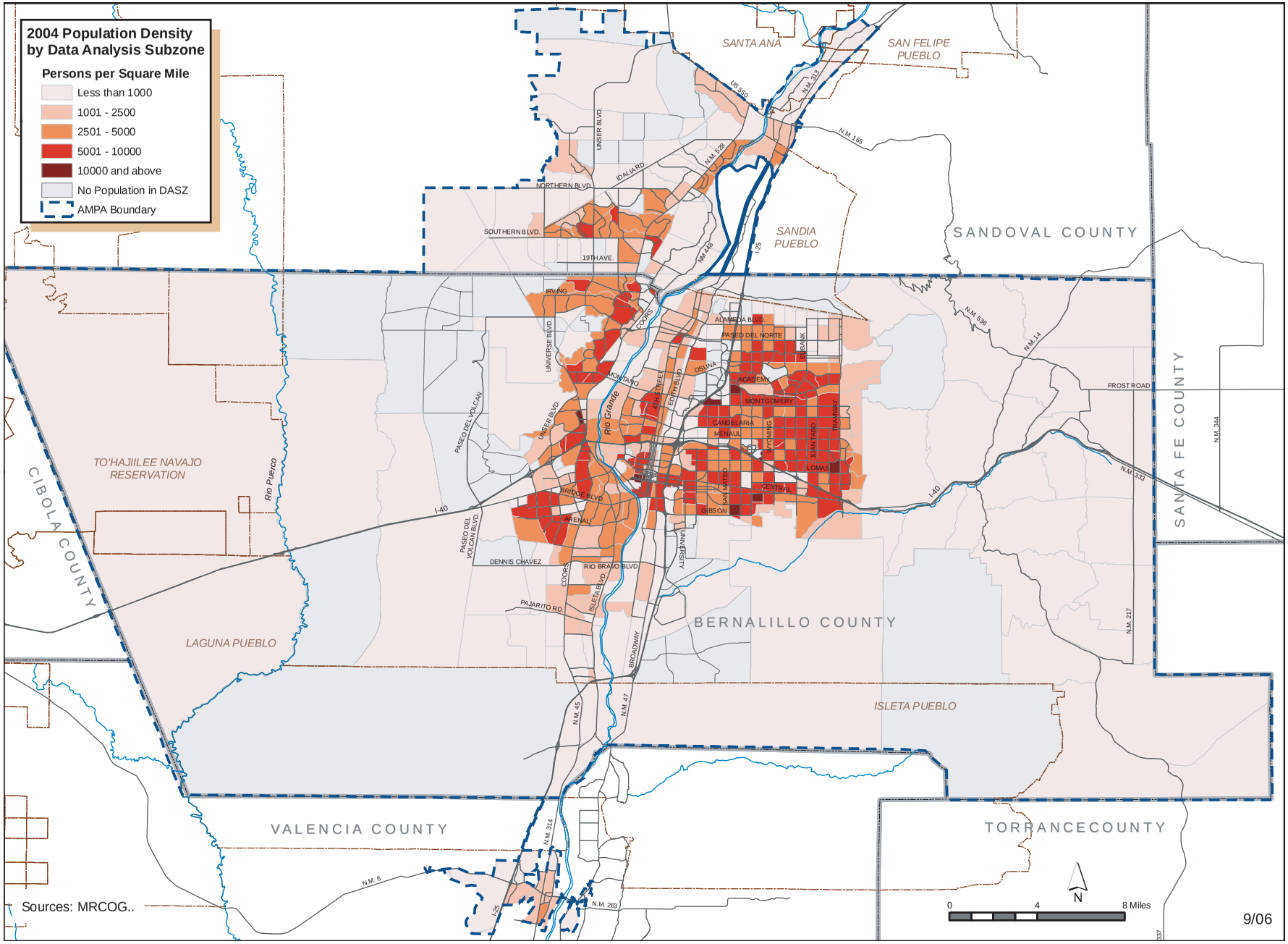
The map shows that the highest concentrations of people living in the AMPA are located in the Northeast and Southeast Heights of Albuquerque. However, the north and south valleys as well as west of the Rio Grande also exhibit moderate density along with southern Rio Rancho and eastern Los Lunas.

2. Population Growth

Population within the 2004 AMPA boundary is estimated to have increased by almost 60,000 (9%) between 2000 and 2004. Table 2-2 shows how growth was distributed throughout the AMPA.

Of the 60,000 new residents in the AMPA, Albuquerque captured approximately 40,000. However in terms of pace of growth, Rio Rancho saw

Map 2-1 ► Population Density by DASZ, 2004



the most rapid change, increasing in population by 18%. Map 2-2 illustrates where new growth has occurred throughout the AMPA by DASZ.

The Northwest and Southwest mesas in Albuquerque have experienced high population growth, along with pockets in the North Albuquerque Acres and the Southeast Heights. Pockets in Rio Rancho stand out as well, particularly along the 550 corridor to the north.

3. Housing Growth

One of the most reliable and accessible data sources for tracking new growth is building permits issued for new residential construction. MRCOG collects residential building permits from each permit issuing entity in the AMPA in order to estimate population growth and follow where new homes are being built.

Between 2000 and 2004, approximately 30,800 building permits were issued for new residential construction in the AMPA. Bernalillo County captured 80% of those permits, Sandoval County (the portion within the AMPA only) issued 19%, and Los Lunas issued 1%. By comparison, Bernalillo County spans approximately 89% of the AMPA's land area, Sandoval County makes up 10%, and Los Lunas encompasses 1%.

Map 2-3 shows the distribution of permits issued throughout the AMPA between 2000 and 2004.

New residential construction

Over the four year period from 2000 to 2004, residential construction has occurred in new subdivisions, in infill developments, and scattered among single plots throughout the AMPA. Some major subdivisions that filled in over this period were Enchanted Hills in Rio Rancho, and Ventana West and Vista Del Norte in Albuquerque. Major infill projects included the transition of the old Albuquerque High School into downtown lofts.

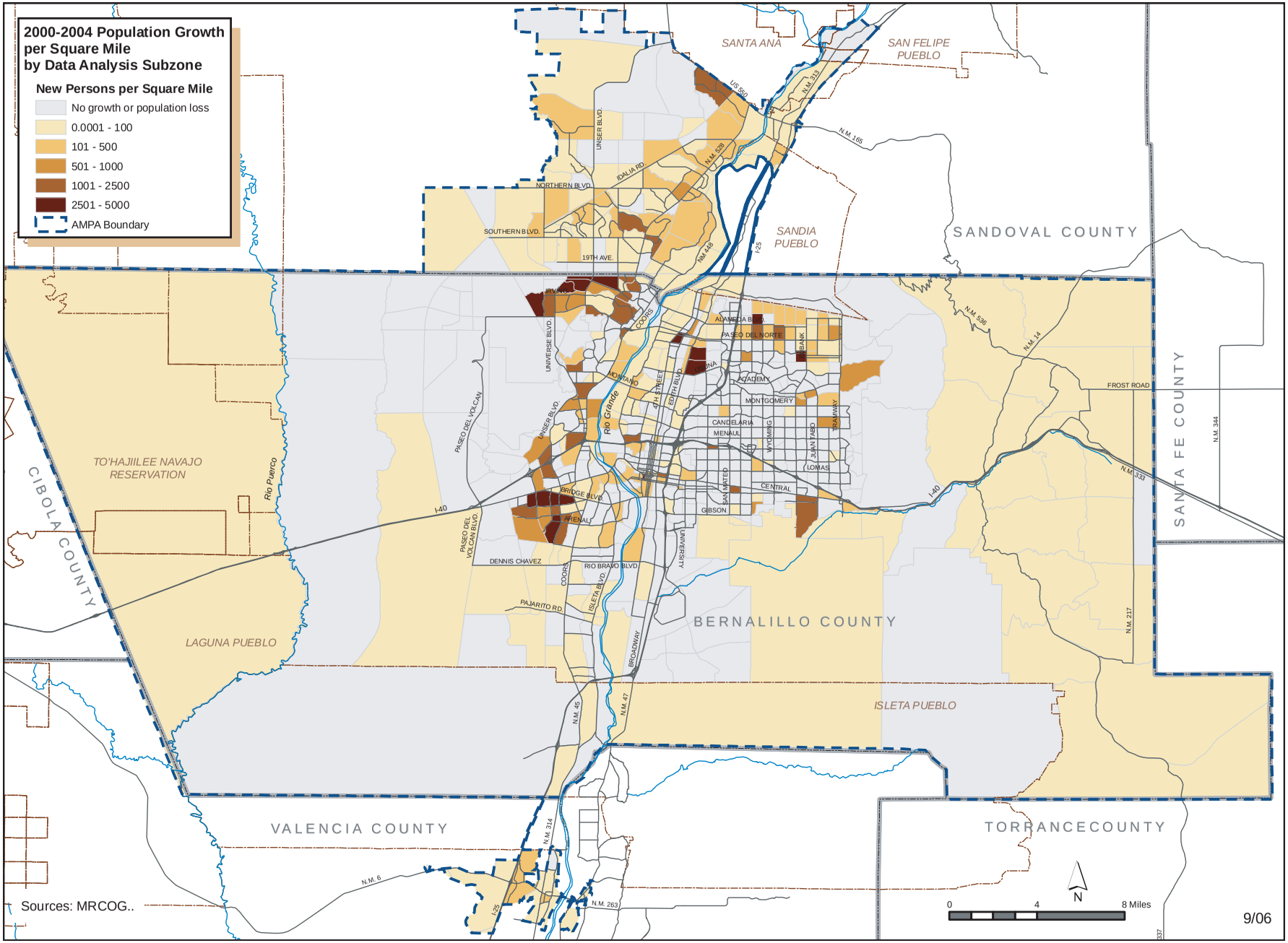
B. Land Use

Land development patterns have a direct relationship to transportation because residential and commercial development generally requires adequate transportation access in order for it to be viable. The type of development, the density, and the mix of land uses determine the kind of transportation investments that might best serve an area. But that is only half of

Table 2-3 ▶ Changes in Land Use, 2000 to 2004

Land Use	2000 Share	2004 Share	Difference in Acreage
Residential	9.9%	11.0%	9,031
Commercial	1.1%	1.1%	549
Office	0.1%	0.1%	160
Industrial/Warehouse	0.9%	0.9%	-532
Institutional	0.1%	0.1%	-28
Schools and Universities	0.4%	0.5%	309
Agriculture	1.0%	1.0%	-197
Open Space	12.6%	12.6%	328
Other	6.5%	6.7%	1,332
Vacant / Rangeland	67.4%	66.1%	-11,097
Total	**100.0%**	**100.0%**	

Map 2-2 ► Population Change by DASZ, 2000-2004



Map 2-3 ► 2000 Housing Density and 2000 – 2004 Residential Permits

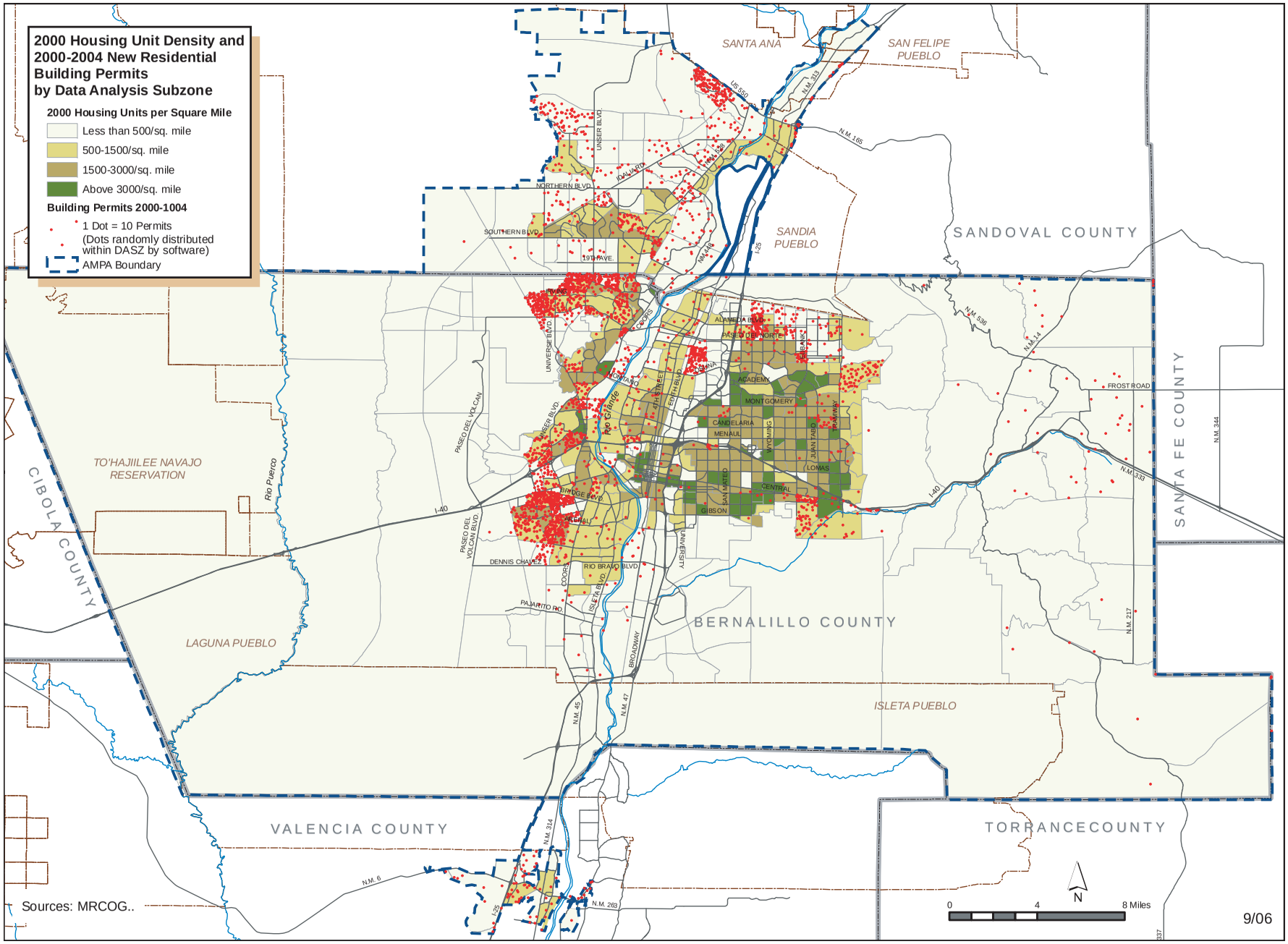


Table 2-4 ▶ Job to Housing Ratio , 2000 and 2004

Municipality	2000 Jobs to Housing Ratio	2004 Jobs to Housing Ratio
City of Albuquerque	1.40	1.31
Northeast	1.62	1.57
Southeast	1.29	1.25
Northwest	1.09	1.02
Southwest	0.82	0.61
West of Rio Grande	0.54	0.55
East of Rio Grande	1.69	1.56
Village of Los Ranchos de Albuquerque	0.83	0.73
Village of Tijeras	0.99	1.36
Town of Bernalillo	1.35	0.99
Village of Corrales	0.38	0.40
City of Rio Rancho	0.70	0.65
Village of Los Lunas	1.24	1.64
AMPA	**1.32**	**1.29**

**The quadrants listed within the City of Albuquerque are bound by the railroad tracks and Central Avenue. The areas east and west of the river are a different aggregation of the same area using the river as the delineator.*

the picture. It is also true that existing transportation facilities often determine how much development and the kinds of land use that is built around them. This is essentially the concept behind the importance of connecting land use and transportation planning decisions, as the two are inherently linked.

1. Land Area Consumed

Table 2-3 highlights the percentage of land in each land use category tracked by MRCOG in 2000 and 2004, and presents the differences in share and acreage over the 4 year period.

The two most significant changes are the gain in residential acreage and loss of vacant land, both which are indicators of a growing region. The table shows that the amount of land dedicated to residential uses represents 11% of the AMPA's land, increasing by over 9,000 new residential acres since 2000. In addition, two-thirds of the region's land is considered "vacant or rangeland," and 11,000 acres were developed in the past 4 years. It is important to note that although a large portion of the AMPA land is considered vacant or rangeland, much of that is not considered to be developable due to topographical constraints, ownership issues, and other barriers to development.

2. Jobs - Housing Balance

Trying to achieve a balance of housing and jobs in an area is considered as a means towards potentially relieving congestion on our roadways during peak commuting times. It also provides more opportunity for workers to ride their bikes or walk to work as long as the proper facilities are in place. Therefore, a jobs-housing unit ratio is considered as an indicator of how successful or unsuccessful a community is in achieving this balance. Although jobs-housing unit ratios may not directly correspond to commute lengths since it is not feasible for many to change their workplace just because there are new jobs near their homes, by improving the number of jobs to housing units in primarily residential areas, residents with flexible employment are presented with opportunities to reduce the length of their work trip.

Table 2-4 presents the jobs-housing unit ratios in 2000 and 2004 in the various areas of the AMPA. A

Table 2-5 ▶ Employment by Sector in the AMPA, 2004

Employment Sector	Jobs	Percentage
Agriculture	436	0.1%
Construction and Mining	27,973	7.4%
Manufacturing	22,718	6.0%
Transportation, Communications, Utilities	20,111	5.3%
Wholesale	13,596	3.6%
Retail	72,395	19.1%
Finance, Insurance, Real Estate	20,592	5.4%
Services	128,998	34.0%
Government	72,624	19.1%
Total	**379,443**	**100.0%**

Source: New Mexico Department of Labor, U.S. Bureau of the Census, MRCOG

Eating and drinking services are included in retail, military is included in government, and information is included in TCU.

This table is an estimate of total employment by work site, and includes wage and salary jobs as well as an estimate for contract, self-employment, agricultural, military, railroad, and unpaid family workers.

commonly recommended target standard is a ratio of 1.5, which implies that a healthy balance exists.[1]

In the AMPA it is estimated that there are 1.29 jobs for every housing unit, which decreased slightly from 2000 as housing growth occurred faster than job growth. Areas such as the Southwest Mesa, Los Ranchos de Albuquerque, Corrales and Rio Rancho have lower jobs to housing ratios than the AMPA average, and areas such as Northeast Albuquerque and Los Lunas have higher than average jobs-housing unit ratios. While commuters in the region already know that the Rio Grande serves as a natural barrier between residences and jobs, the magnitude of this problem is reflected in the jobs-housing ratio, which on the east side is triple that of the west side. Areas that saw a noticeable drop in their jobs-housing ratios over the four year period most likely experienced job loss, or job growth that did not keep pace with housing growth over the same time period.

C. The Economy

The economy of an area is linked to transportation decisions in many ways. For one, healthy job growth may be indicative of growing wealth in an area and could mean more resources for funding transportation projects, particularly privately-funded projects. Also, early identification of new or growing employment areas aids in the ability to plan ahead for areas that will likely require future transportation investments. Looking at the region on a system-wide level as it pertains to connections between employment, housing and transportation accessibility is the key towards achieving efficiency and equity in the distribution of transportation dollars.

1. Employment by Sector

While housing in the AMPA increased by about 9% over the past four years, job growth has increased by about 2.6% during the same time period. This

1 "Jobs – Housing Balance", Jerry Weitz. Planning Advisory Service Report Number 516, *American Planning Association*. Pg. 4.

translates to a net increase of about 10,000 jobs in the AMPA between 2000 and 2004. Although job creation has lagged behind housing growth, the AMPA has fared well on a national scale; while much of the country faced recession and job loss in the early part of the decade, job growth in the AMPA remained slow but steady.

There were an estimated 379,443 jobs in the AMPA in 2004. Table 2-5 shows the largest employment sector was Services, followed by Retail and Government. The Services sector includes the Sandia National Laboratories, along with other research and development companies, health care workers, educational jobs, and tourism related employment. Retail employment reflects the AMPA's role as a tourist destination as well as a shopping hub for the region. The Government sector includes the University of New Mexico, Kirtland Air Force Base, and Native American resorts and casinos.

Map 2-4 shows where job growth occurred throughout the region between 2000 and 2004. The map reflects both new jobs as well as existing jobs that moved within the region.

Note: Job growth is shown by dots that are randomly assigned throughout the DASZ in which they belong. Be aware that this may be misleading in large zones where jobs are concentrated in only a portion of the zone. This misrepresentation is particularly obvious in cases such as Kirtland Air Force Base to the southeast, Sandia Casino to the northeast, or the County Jail on the southwest mesa.

The majority of job growth has concentrated along the north 1-25 corridor, as office employment has remained strong and industrial sites have also filled in. Proximity to the interstate and its accessibility to the east and west side combine to make the I-25 corridor a desirable place to locate a business. The west side also attracted a large share of new jobs, particularly along the Coors corridor. Several call centers have moved to the west side, and population-serving retail employment such as shopping and restaurants have followed rooftops.

Between 2000 and 2004 there have been some noteworthy additions and losses among AMPA businesses. Losses include the closing of Honeywell, Gateway, Furrs grocery chain, Philips Semiconductors, and the MCI and Quest call centers. Important additions include expansions at Sandia National Laboratories and growth inside Sandia Science and Technology Park, a new Sandia Casino & Hotel, the Route 66 Casino, Sprint and TMobile call centers, and several new Home Depot, Lowes and Walmart stores.

2. Employment Centers

The development and expansion of "employment clusters," or employment that is spatially concentrated, is encouraged by transportation and land use planners for many reasons. One, it helps to cluster common destinations in order to plan for and maximize transportation investments, particularly public transit services. Two, it allows drivers the ability to park once and walk to multiple destinations. Three, locating complementary businesses near one another serves an economic development purpose by optimizing visibility and providing a level of convenience to the consumer.

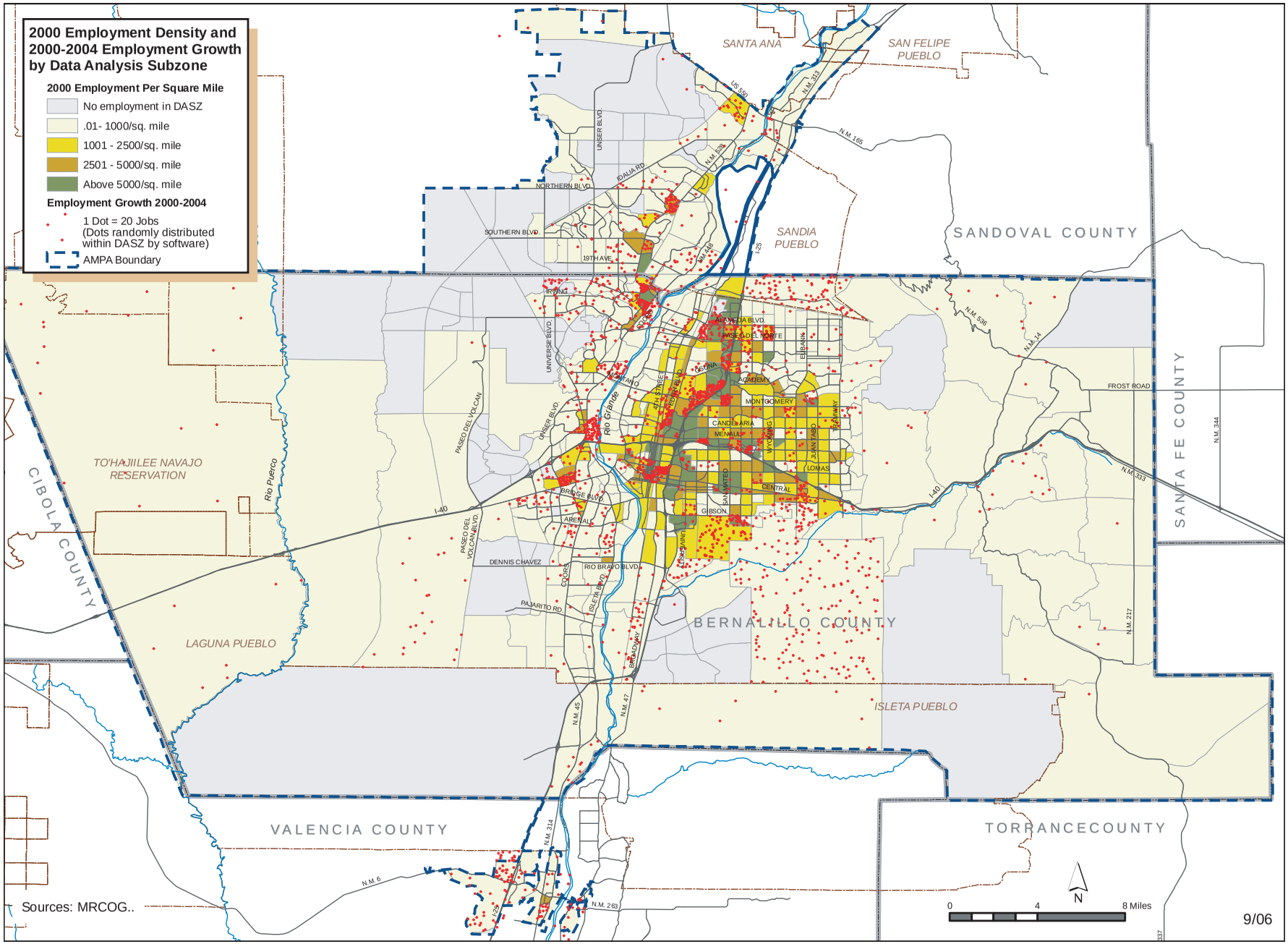
When job density in the AMPA is mapped, nine major employment centers emerge as areas with a high concentration of jobs. These nine centers, defined by contiguous DASZ geography, represent just 5% of the AMPA's area but 45% of the AMPA's employment. Map 2-5 shows these centers , along with a breakdown of number of jobs per center.

Existing Employment Centers

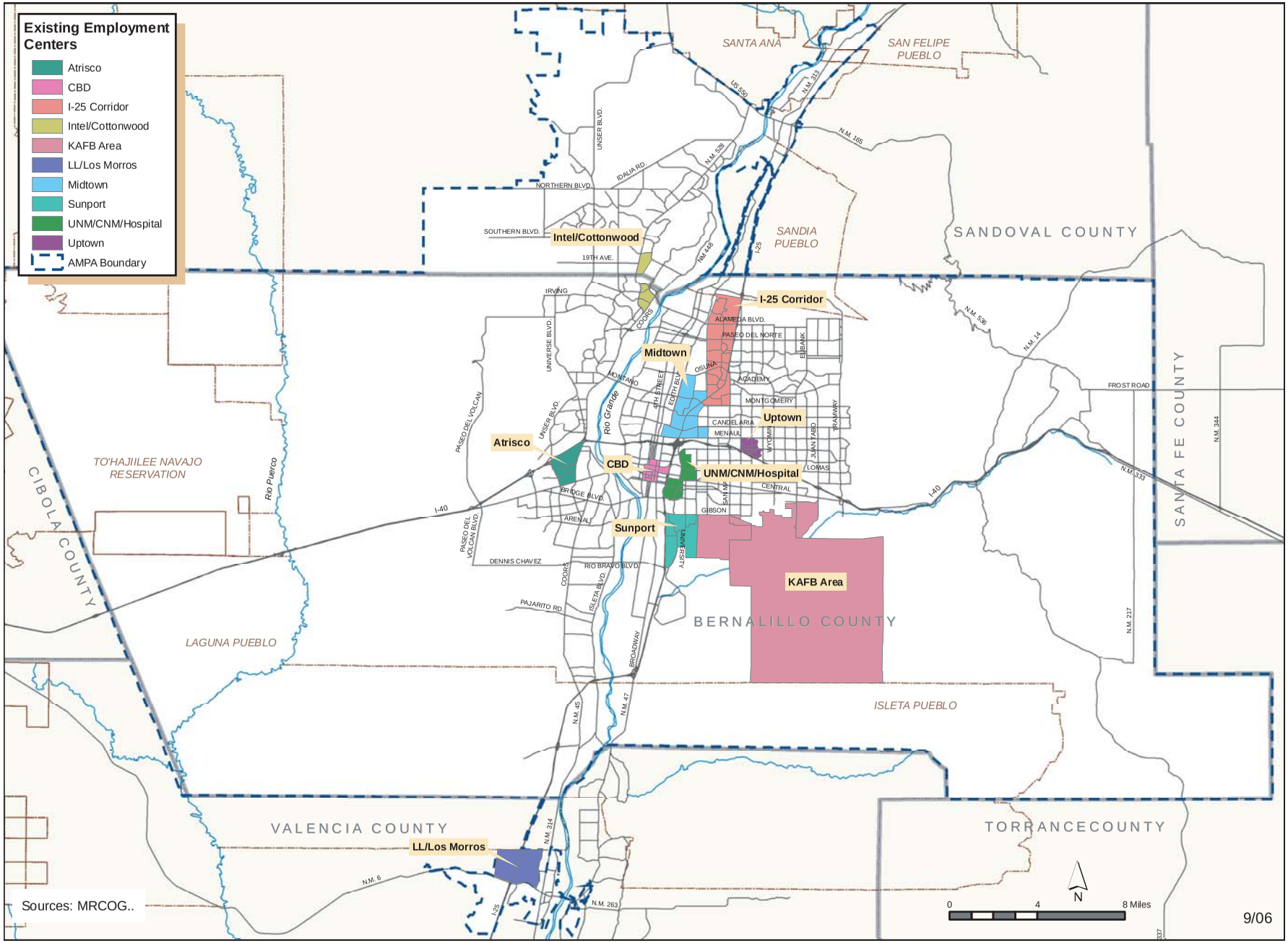
Because the Employment Centers are defined by DASZ geography, caution must be used when looking at the densities. For example, KAFB shows a low employment density, but that is misleading because the DASZ is so large. In actuality, the jobs are mostly concentrated in just a small part of that zone.

With over 28,000 jobs per square mile, Albuquerque's Downtown has the highest concentration of jobs in the AMPA. Uptown and the university/hospital area rank next for highest job densities. In terms of sheer

Map 2-4 ► 2000 Employment Density and 2000 – 2004 Job Growth



Map 2-5 ▶ Employment Centers



numbers, the I-25 Corridor tops the list with the most jobs and at 10% it holds the largest share of the AMPA's overall employment.

Future employment centers that are anticipated to develop as the AMPA grows include the Double Eagle II Airport, the Volcano Heights business area, Los Morros Park in Los Lunas and the new Rio Rancho Town Center.

3. Housing Construction and Sales

Although housing is discussed in the demographics section of this document, the recent housing "boom" experienced across the nation and in the Albuquerque area warrants a revisiting of this subject since it has obvious impacts on the economy. Aided in part by interest rates that dropped to their lowest levels in several decades, the early part of this decade has brought record highs to the metropolitan area in terms housing construction and sales as more people have entered the market by purchasing starter homes, others have upgraded into larger or newer homes, and it is suspected that more still are purchasing second homes or retirement properties. Figure 2-1 illustrates the trends in housing unit permits in the AMPA's three largest municipalities over the past 14 years.

The Albuquerque MSA (Bernalillo, Sandoval, Torrance and Valencia Counties) had an average annual rate of increase in residential permits of 15.7% between 2000 and 2004, six percentage points higher than the national rate of increase. Albuquerque has averaged about 4,600 permits annually for the past four years, and has reported closing on the sale of over 15,000 new and existing homes over the same time, each year more than the previous one. Rio Rancho has seen robust growth in new single family homes, with 1,700 new permits in 2004 which doubled 2002's number of permits and is almost half of permits in 2005. And as of this writing in 2006, Los Lunas has enjoyed a recent rise new home construction, much of it attributable to the construction at Huning Ranch which will eventually hold 6,200 homes,. However several smaller subdivisions have also recently begun construction.

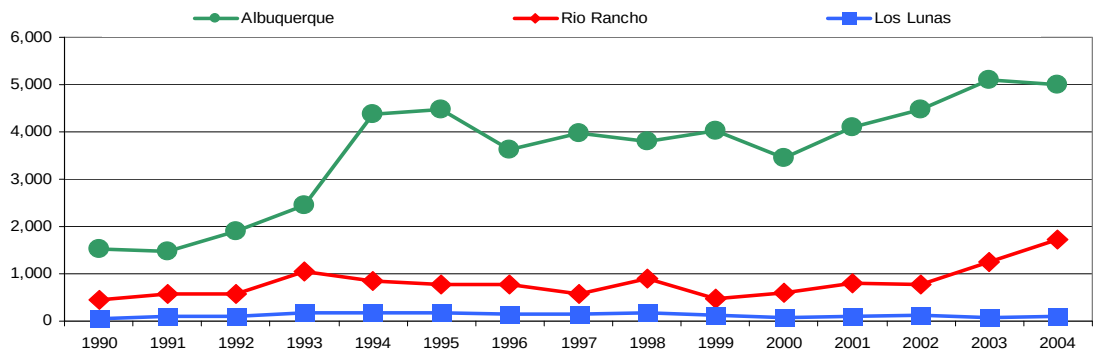
The growth in new housing and rise in existing housing sales has had quite an impact on the economy. Housing prices in the Albuquerque metropolitan area have increased an average of 29% since 2001, according to the National Association of REALTORS, and real estate professionals suspect that is due at least in part to out of state investors who have recently tapped into the comparatively affordable Albuquerque

Table 2-6 ▶ Existing Employment Center Statistics, 2004

Employment Center	DASZ Square Miles	2004 Employment	2004 Jobs per Square Mile	2004 Share of Jobs
KAFB Area	49.2	31,450	639	8.3%
Downtown Abq	0.8	22,308	28,238	5.9%
I-25 Corridor	5.8	38,728	6,724	10.2%
Midtown	3.5	21,770	6,150	5.7%
Uptown	0.6	10,270	17,407	2.7%
UNM/CNM/Hospital	1.5	21,963	14,545	5.8%
Sunport	2.8	7,646	2,770	2.0%
Intel/Cottonwood	1.0	11,938	11,938	3.1%
Atrisco	1.6	4,390	2,832	1.2%
Inside Center	66.7	170,463	2,556	44.9%
Outside Center	1,241.9	208,980	168	55.1%
AMPA	**1,308.6**	**379,443**	**290**	**100.0%**

**MRCOG Employment Centers are defined by DASZ geography and therefore total employment numbers or areas may not match those found in other agencies publications for the same center.*

Figure 2-1 ▶ Residential Building Permits, 1990 - 2004



market. Several larger Master Planned areas, including Mesa Del Sol in southeast Albuquerque, have begun to move forward and are breaking ground as builders and investors have greater confidence in the viability of the metropolitan area's market. All of this activity has had a positive impact on construction jobs, which have enjoyed a steady gain over the past several years.

Many speculate that this trend will continue to hold strong in the greater Albuquerque area as baby boomers begin to retire and "follow the sun" towards second-homes and retirement homes, and as markets such as Las Vegas and Phoenix become more expensive and land more scarce. However others caution against projections that it will continue, as the housing market has traditionally been cyclical, rising and then leveling off to a pace that is more sustainable given available resources and consumer demand. The Bureau of Business and Economic Research (BBER) predicts the future slowing of housing construction in their March-April 2006 New Mexico Business Current Economic Report, and their long term population projections show a leveling off in terms of pace of growth in the 4-County region. Since MRCOG uses BBER population projections as County controls for the DASZ socioeconomic forecasts, the MRCOG forecast also reflects a steadying growth rate.

D. Commuting

Commuting trips are of specific interest to transportation planners because they generally dominate peak hour times, occur regularly, and are longer than other kinds of trips. Therefore, an understanding of the characteristics of work trips, including origins and destinations and the locations of recurring congestion allows planners the ability to implement strategies that aim to mitigate some of this congestion.

1. Origins and Destinations

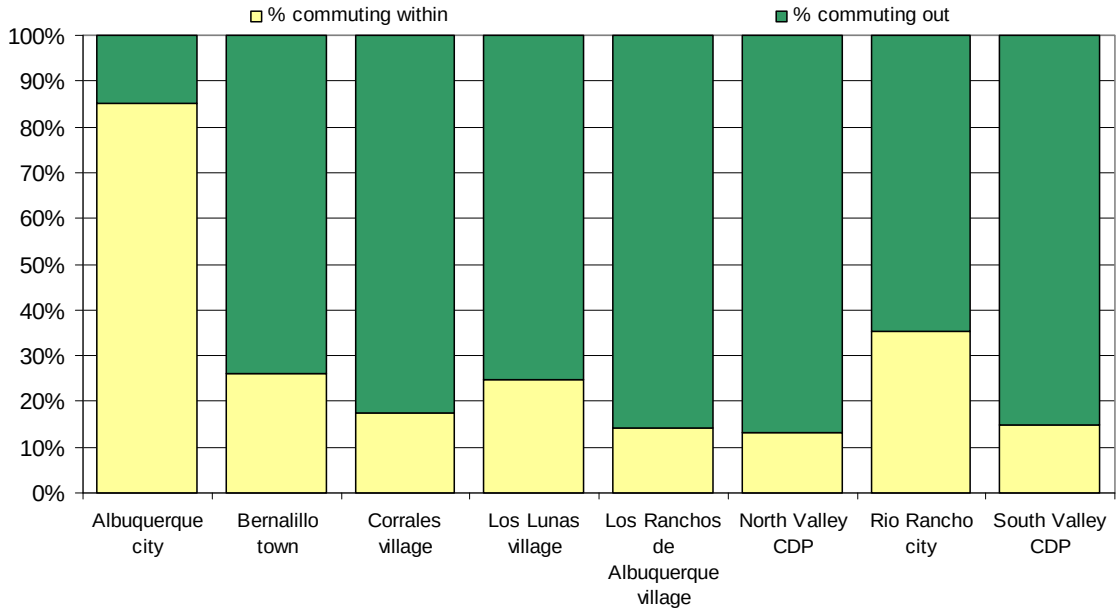
Table 2.7 shows Census Transportation Planning Package (CTPP) data from 2000 regarding work trips that occurred between municipalities and other Census designated places in the AMPA.[2]
The furthest column on the right sums the employed residents by place of residence by row, and the bottom row of the matrix sums the total workers by place of work. So for example, the Census estimates that the City of Albuquerque has 253,262 people working there on an average day, and a total of 215,172 employed residents who live there. This tells us that Albuquerque has more employment than employed residents, which is to be expected as we know that Albuquerque serves as an employment hub for the region into which many working residents commute.

2 The CTPP presents place of work origin and destination data for all places with a resident population of 2,500 or more.

Table 2-7 ▶ Commuter Flows for Work Trips by Place, 2000

Place of Work / Place of Residence	Albuquerque	Los Ranchos de Albuquerque	North Valley	South Valley	Rio Rancho	Bernalillo	Corrales	Los Lunas	Other NM	Employed Residents
Albuquerque	183,455	930	3,250	2,660	6,475	430	380	520	17,072	215,172
Los Ranchos de Albuquerque	1,670	360	130	15	75	40	10	-	212	2,512
North Valley	3,815	90	715	75	135	10	10	-	508	5,358
South Valley	10,420	95	380	2,175	200	30	15	90	1,234	14,639
Rio Rancho	12,265	50	410	195	8,645	415	135	45	2,231	24,391
Bernalillo	1,174	10	85	10	320	705	25	4	355	2,688
Corrales	1,965	30	105	30	595	50	640	-	267	3,682
Los Lunas	1,785	-	110	90	70	-	-	1,090	1,256	4,401
Other NM	36,713	169	1,145	1,299	1,731	607	104	2,773	17,068	61,609
Total Workers	**253,262**	**1,734**	**6,330**	**6,549**	**18,246**	**2,287**	**1,319**	**4,522**	**103,262**	**397,511**

Figure 2-2 ▶ Place of Work, 2000



By looking down the column we see that over 12,000 employed residents from Rio Rancho and 10,000 from the South Valley work in Albuquerque.

Figure 2-2 shows the percentage of working residents in each place in the AMPA who work within their place of residence, and the percentage who commute outside of it. It emphasizes the large percentage of commuting trips that flow outside of places in the AMPA with the exception of Albuquerque, which exports about 15%, or 31,000 members of its workforce.

2. Mode Choice and Travel Times

Mode choice has to do with personal preference as well as the mobility choices that are available to commuters. For example, public transportation use is higher in Albuquerque than other areas because it is

more widely available. Preliminary Commuter Rail ridership figures, which began service several months before the writing of this MTP, appear to strongly support the idea of the existence of untapped markets and the public's willingness to change their mode of travel given more choices.

Table 2-8 shows 2000 CTPP figures regarding average travel time and mode split for AMPA work commutes by municipality and Census designated place.[3]

In the previous section it was established that Albuquerque is the destination for the majority of AMPA work commutes. Therefore it stands to reason that the average travel time for Albuquerque commuters is shorter than its surrounding areas, and the further out one goes, the longer the commute time.

In terms of mode split, we see that Tijeras residents are least likely to drive alone and most likely to carpool, Rio Rancho commuters are most likely to drive alone, Albuquerque has the highest transit ridership (again, reflecting its lack of availability in surrounding areas) and also the highest bicycle mode share, and the Town of Bernalillo has the highest percentage of walk to work commuters. In addition, Los Ranchos de Albuquerque and Corrales have the highest percentage of employed residents who work at home, which represent nearly 10% of their working population.

The New Mexico Rail Runner Express commuter train at the Alvarado Transportation Center in Downtown Albuquerque

E. Projected Regional Growth

A long range regional transportation plan identifies where and when transportation projects will be implemented in the next 20 years, how much they will cost, and where the funds will come from. Before the "where" and "when" portions of the Plan can be identified, it is critical to understand where the need will be. This is determined through the development of population, employment, and land use projections.

Table 2-8 ▶ Means of Transportation and Travel Time by Place, 2000

	Mean Travel Time	Drove alone	Carpooled	Public Transportation	Bicycle	Walked	Other means/ Worked at Home	Total
Albuquerque	19.7	77.7%	12.5%	1.7%	1.1%	2.7%	4.3%	100.0%
Bernalillo	21.2	78.7%	12.9%	0.0%	0.1%	3.2%	5.0%	100.0%
Corrales	23.6	80.3%	7.0%	0.4%	0.2%	2.6%	9.5%	100.0%
Los Lunas	25.3	78.6%	15.4%	0.0%	0.0%	2.8%	3.2%	100.0%
Los Ranchos de Albuquerque	18.9	81.4%	6.5%	0.8%	0.0%	1.6%	9.8%	100.0%
North Valley	20.5	76.1%	15.7%	0.1%	0.1%	2.8%	5.2%	100.0%
Rio Rancho	26.8	84.4%	10.5%	0.5%	0.2%	0.4%	3.9%	100.0%
South Valley	23.3	74.6%	18.8%	1.0%	0.0%	1.2%	4.3%	100.0%

3 CTPP data is available by County and Place. Places must have a population of over 2,500, and therefore includes all AMPA municipalities and several smaller "Census Designated Places" (CDP). CDPs are delineated to provide Census data for concentrations of people that are identifiable by name but are not within an incorporated place.

Socioeconomic projections are developed specifically for each MTP by using the most current demographic, land use, and employment data available. County population forecasts for 2030 are developed by the University of New Mexico's Bureau of Business and Economic Research (BBER) and serve as the basis for the population forecasts in this Plan. Employment forecasts for the region are also developed by BBER, but they are shorter term forecasts and are supplemented by long range forecasting performed by MRCOG using a Regional Economic Model (REMI). These large area population and employment forecasts are then disaggregated to smaller areas of geography using the Land Use Allocation Model (LAM), a model developed specifically for the Middle Rio Grande Region and based on local and regional policies and trends.

The forecast data presented in this section is from a draft 2030 forecast. This draft served as the basis for the development of the 2030 MTP network, which in turn served as the basis for a final socio-economic dataset. This iterative process is critical in order to maintain a feedback loop between land use and transportation. Since the socioeconomic dataset could not be finalized until the network was finalized, the completion of the socioeconomic dataset occurred following the approval of this document. It can be accessed in MRCOG document #S-07-01 in "2030 Socioeconomic Forecasts by Data Analysis Subzones".

Population

The AMPA population is expected to grow by about 260,000 persons by 2030, an increase of 38%. This is slower than the anticipated regional growth, with surrounding counties projected to continue growing slightly faster than the immediate metropolitan Albuquerque area. The difference is minimal however, as the AMPA will continue to house the vast majority of the regional population (84.5%) in 2030.
Other demographic trends that are anticipated to occur are:

Table 2-9 ▶ Regional and AMPA Population, 2004 and 2030

	MRCOG Region	AMPA	AMPA Share
2004	802,110	691,758	86.2%
2030	1,129,472	954,905	84.5%
% Growth	40.8%	38.0%	

- Declining household sizes from 2.53 to 2.41
- A more racially and ethnically diverse population
- An aging population with significant growth in retirees and seniors

Maps 2-6 and 2-7 illustrate population density in 2030 and change in population between 2004 and 2030. When considered together, it is apparent that although Albuquerque's north and southeast heights continue to hold the highest population densities, they are expected to experience some population loss, primarily due to declining household sizes coupled with limited opportunities for new development. Albuquerque's far northwest, far northeast, and southwest areas are expected to capture a significant portion of new growth. And although Albuquerque continues to act as a residential core, northern Rio Rancho and Los Lunas will attract a share of new growth as well.

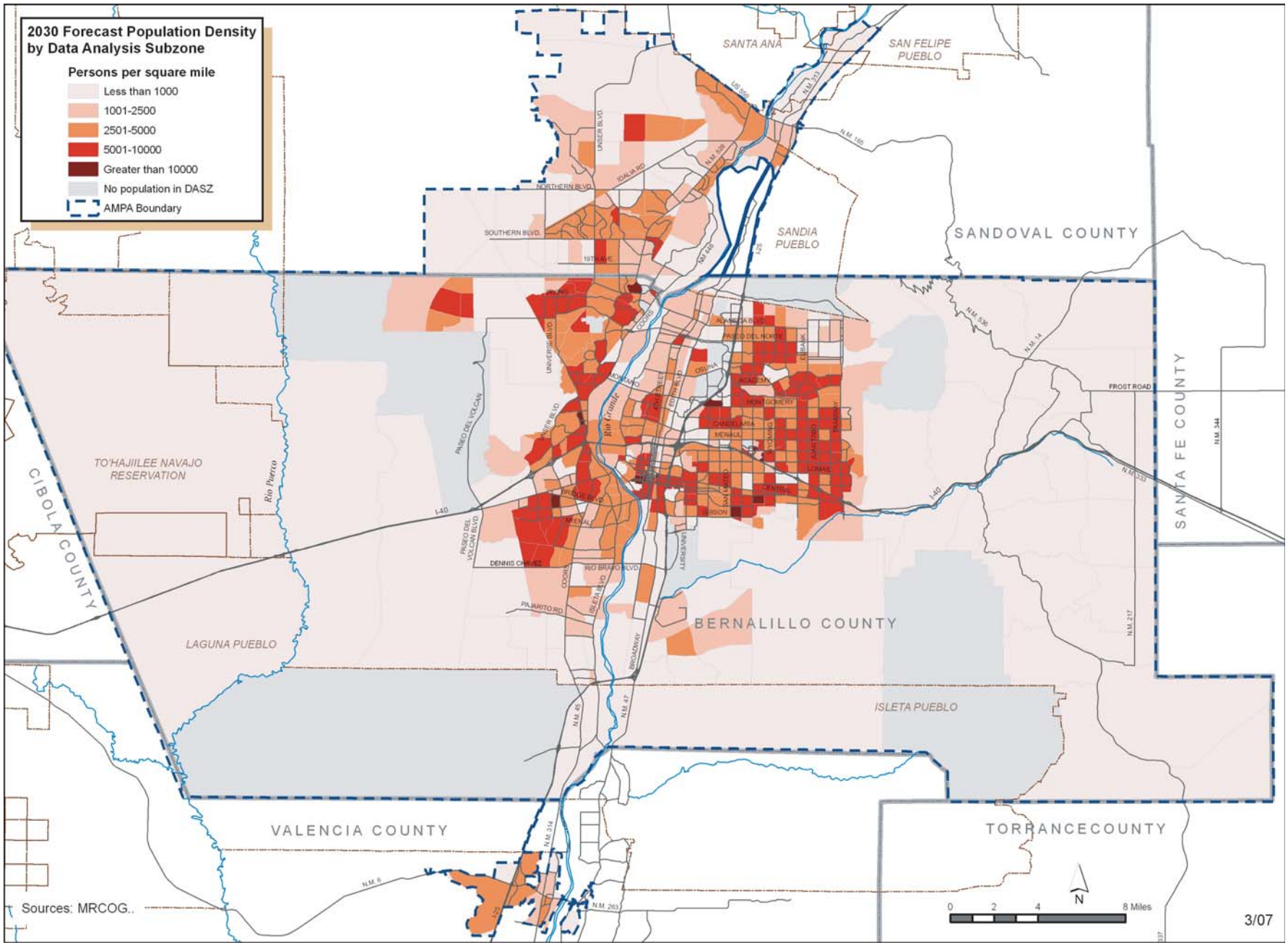
Employment

Employment in the region and the metropolitan area is projected to increase at a healthy rate over the next 26 years, by 39% in the region and 37% in the AMPA. The AMPA will continue to attract the majority of employment with a growth of over 130,000 jobs -- 90% of all new jobs in the region.

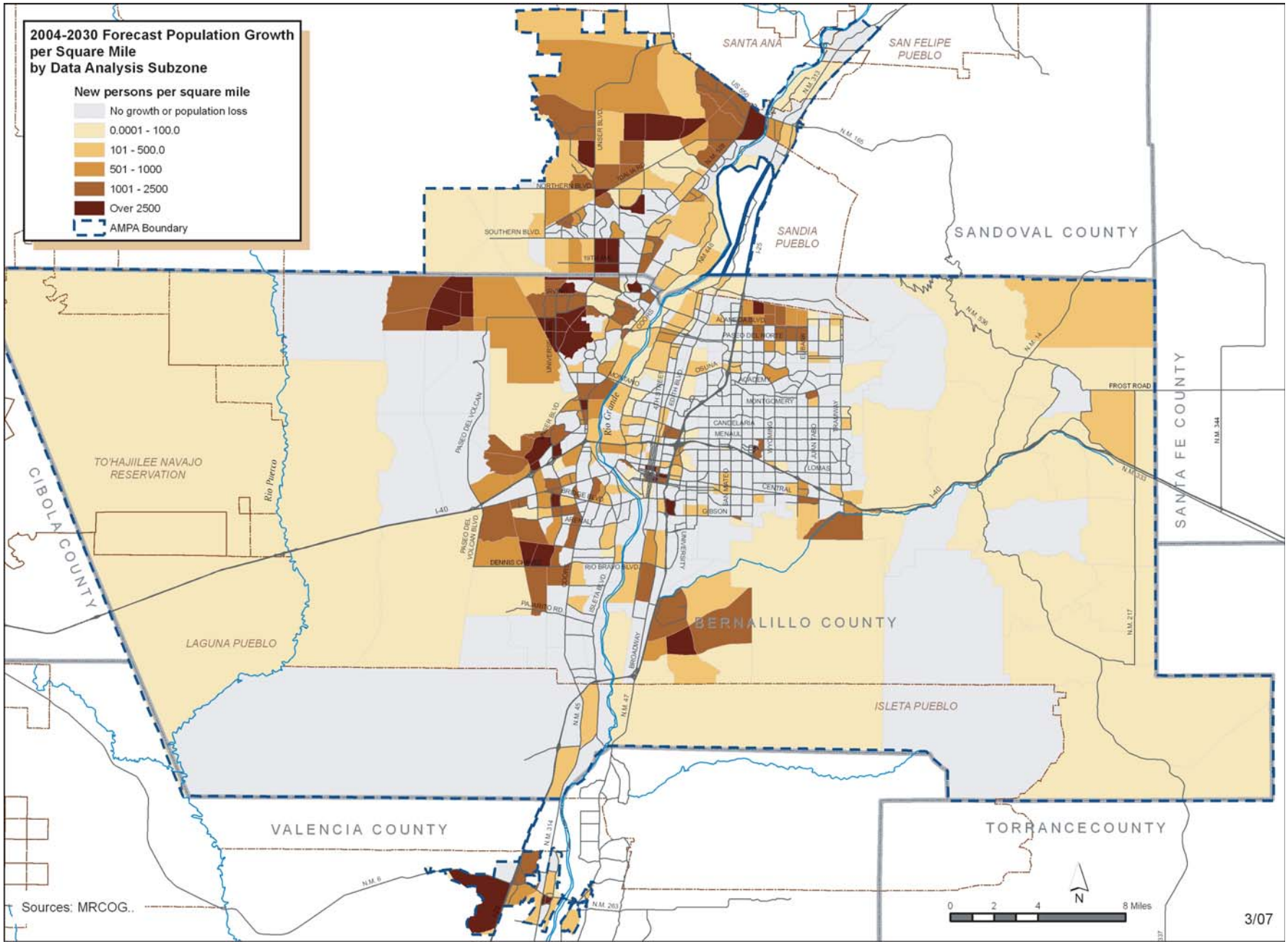
Table 2-10 ▶ Regional and AMPA Employment, 2004 and 2030

	MRCOG Region	AMPA	AMPA Share
2004	401,639	379,443	94.5%
2030	559,860	521,526	93.2%
% Growth	39.4%	37.4%	

Map 2-6 ► Draft Population Density 2030



Map 2-7 ▶ Draft Population Growth 2004-2030



Maps 2-8 and 2-9 show the forecast employment density in 2030 and where new jobs are anticipated to occur between 2004 and 2030. The highest concentration of employment will continue to surround the northern I-25 corridor, with other clusters in Downtown Albuquerque, Uptown Albuquerque, Sunport, and scattered pockets on the west side and in Rio Rancho. Areas that will attract many of the new jobs will be the existing job centers such as the northern I-25 corridor, the Sandia Science and Technology Park, the Atrisco business park and the Los Morros business park in Los Lunas. Future employment centers include the Westland Town Center, Eclipse and Volcano Heights areas, Rio Rancho's City Center, and Mesa del Sol's employment center.

Land Use

As the AMPA continues to attract people and jobs over the next 26 years it will see an increase of nearly 52,000 acres dedicated to residential, employment, and public uses. Over 80% of newly developed land will be new residential. At the same time, vacant and rangeland will decrease by approximately 11%. While the majority of new development will occur on vacant or rangeland, some will occur on unpreserved agricultural lands, which are anticipated to decline in area. In addition, some new growth will occur on blighted or underdeveloped parcels as redevelopment projects will continue to emerge throughout older parts of the AMPA.

Off-Model Forecasts

Kirtland Air Force Base (KAFB) and the region's Pueblo lands were forecast as a separate process from the population and employment allocated by the LAM model. This was done for several reasons. First, the land use data was not available for these areas and therefore a 2004 baseline could not be developed and used to forecast forward. In addition, specific growth plans were not available to MRCOG for these areas. KAFB and tribal leaders were contacted, and KAFB, the Pueblo of Sandia, the Pueblo of Isleta, the Pueblo of Santa Ana and the Pueblo of Laguna participated to varying degrees in this process.

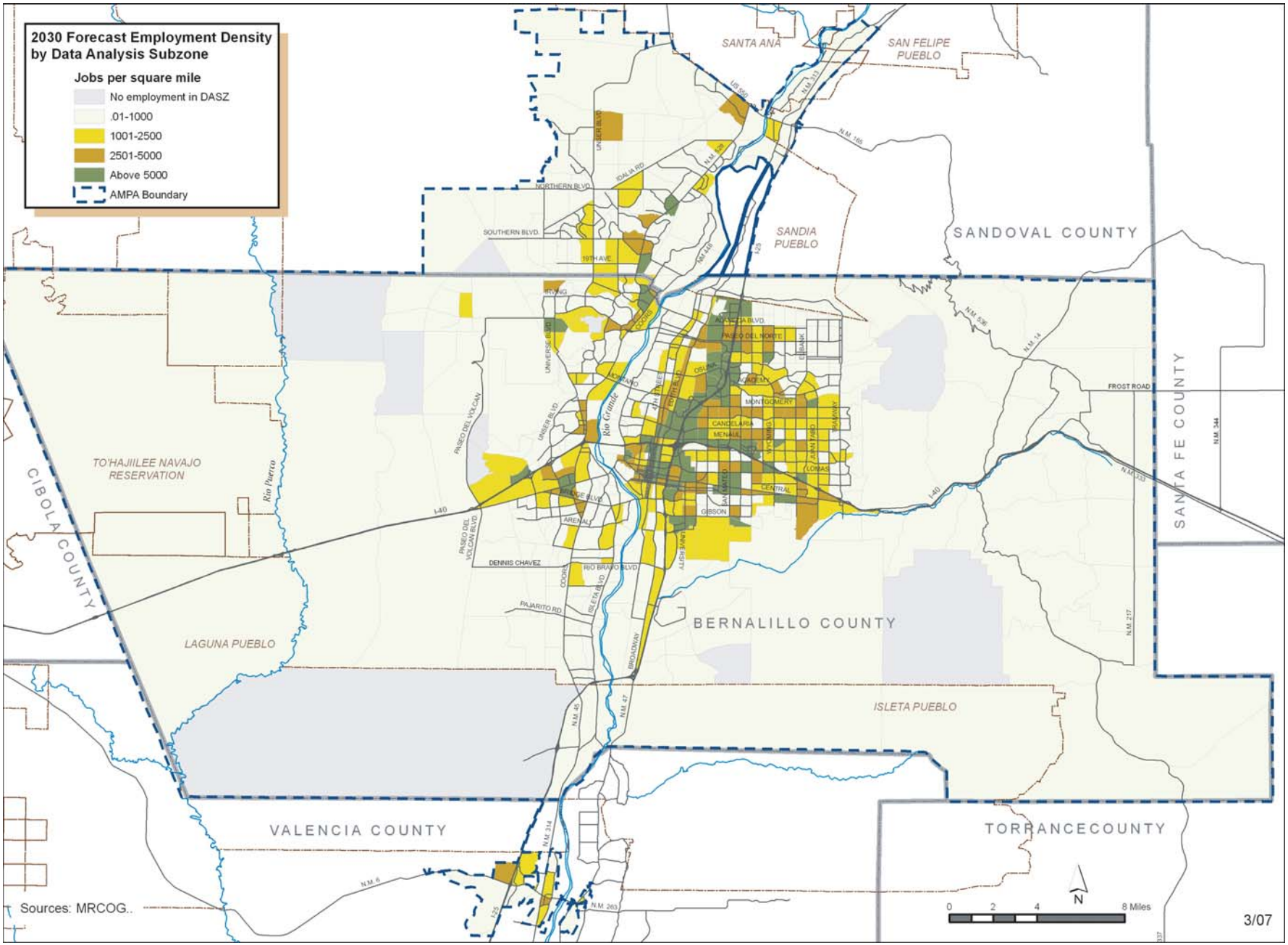
DASZ forecast datasets include projections for KAFB and Pueblo lands that were performed "off-model", or manually. However the forecast land use maps will show these areas as shaded due to lack of specific information regarding the location of new development. The exception is the Pueblo of Sandia. Based on communication with Pueblo of Sandia staff and tribal leadership, anticipated population and employment growth for the Pueblo of Sandia's trust land is reflected in all MRCOG 2030 forecast land use maps.

Table 2-11 ▶ Land Use Changes, 2004 and 2030

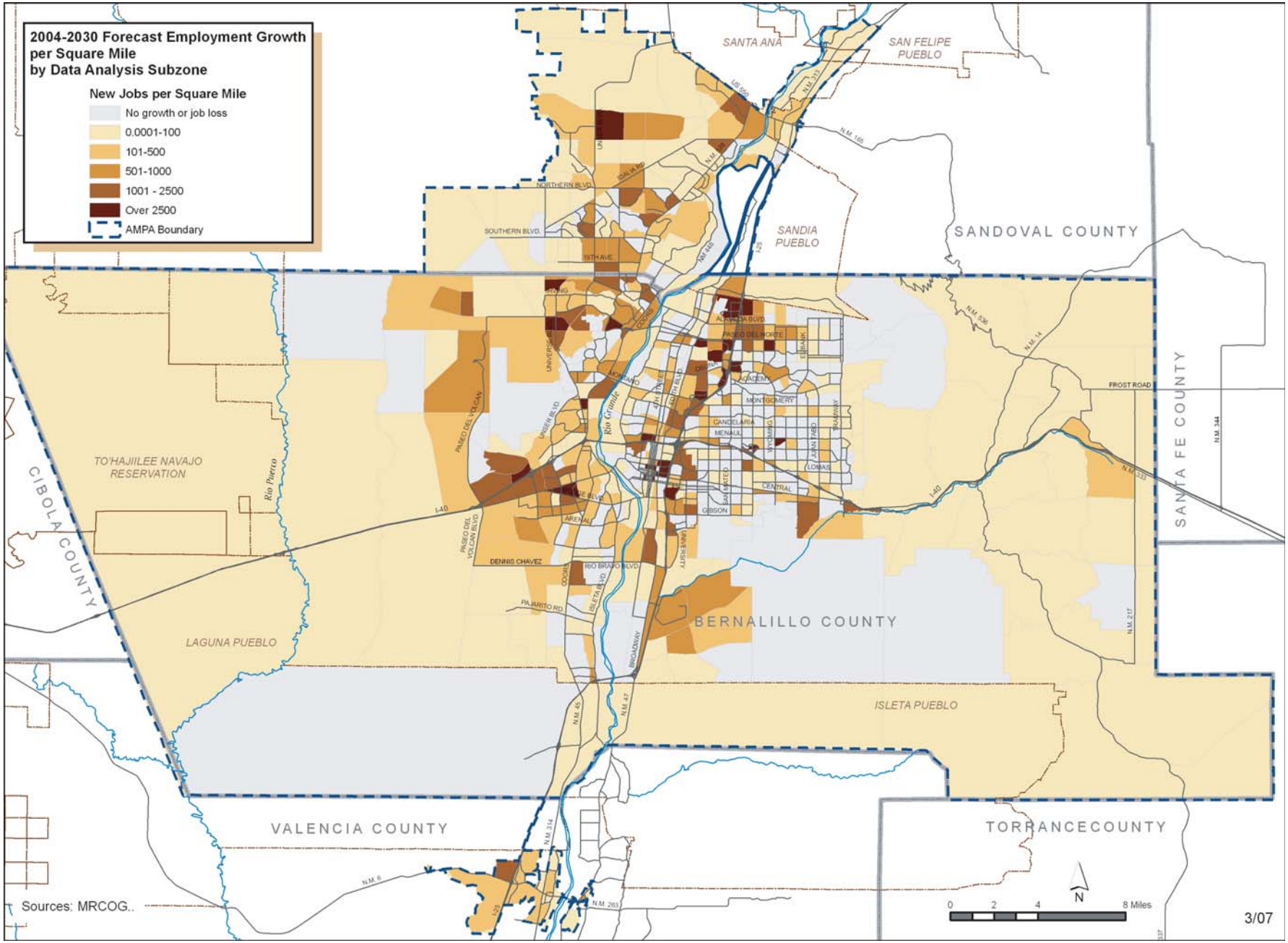
	Acres in 2004	Acres in 2030	Percent Change
Residential	90,372	132,429	46.5%
Commercial/Office/Industrial	17,646	25,137	42.5%
Institutional/Schools/Public Use	6,823	8,902	30.5%
Vacant/Rangeland	536,829	477,161	-11.1%

**Public Uses include cemeteries, fire and police stations, community centers, libraries, churches, museums, and other public assembly facilities.*

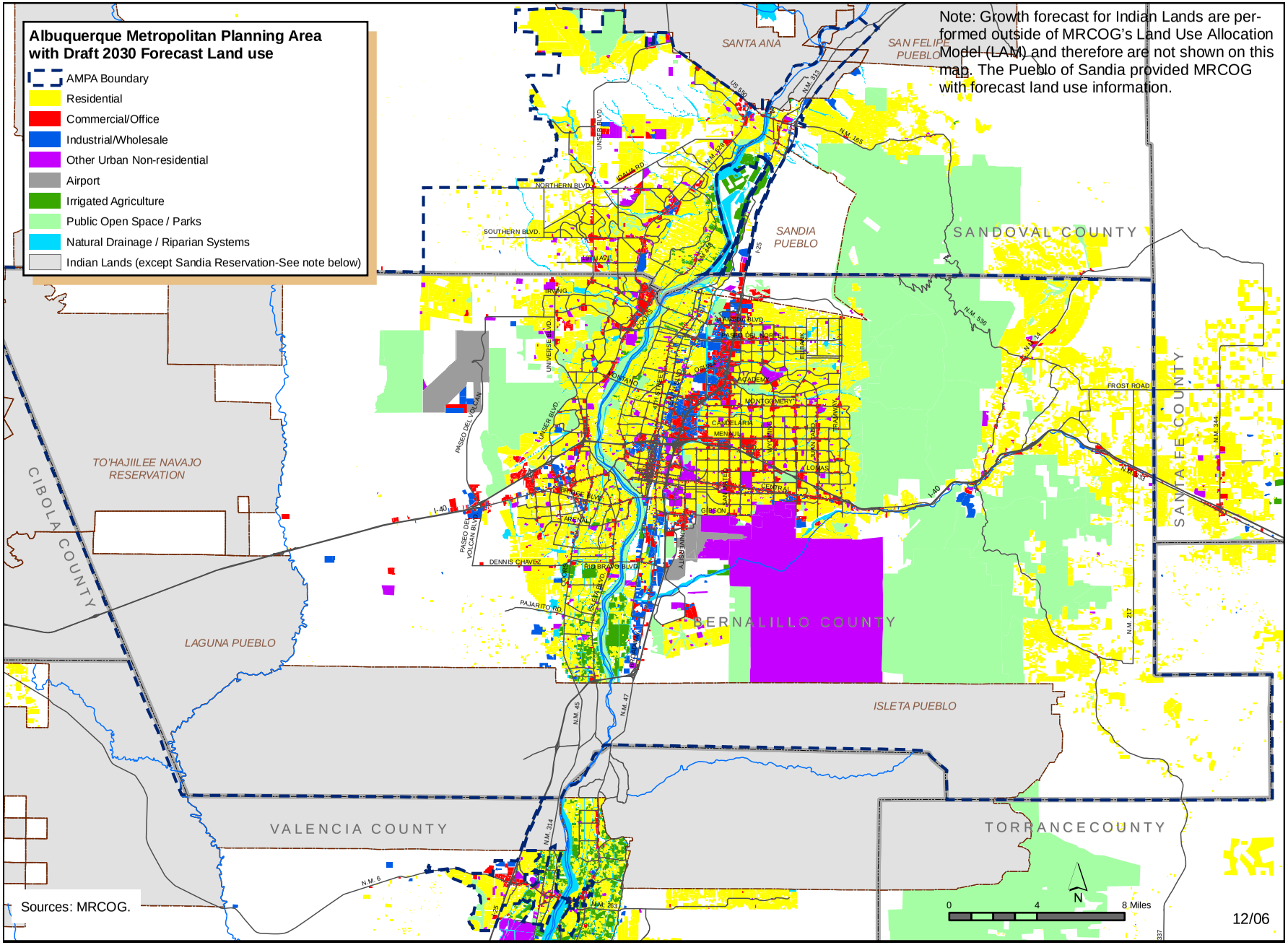
Map 2-8 ► Draft Employment Density 2030



Map 2-9 ► Draft Employment Growth 2004-2030



Map 2-10 ▶ Draft Land Use Forecast 2030



F. Existing Plans

It is important to be aware of a region's existing plans when developing a new one, like this MTP. Consistency between plans is good planning practice and imperative if plans are to be implemented. The AMPA's main planning documents are summarized below.

Long Range System Maps

A legacy document and set of systems maps known as the Future Albuquerque Area Bikeways and Streets (FAABS) provided a "full build out" perspective that was to guide development of the MTP. In theory, the FAABS and its systems maps were to reflect regional consensus regarding how the area will look in the long-term time frame. In practice, this "look" was based on little or no socioeconomic, land use, market, environmental or any other planning factors and analyses. In light of this, the FAABS is not a reasonable foundation or framework for developing an MTP, does not comply with federal planning regulations, and does not conform with air quality plans. Unconstrained or ultimate build out for roadway, transit and bikeway facilities instead has been conducted as part of the MTP development and based on all the rigorous planning factors inherent in the planning process, including some capability to understand future land uses.

Long range system maps will now be developed with and included in the MTP itself. The FAABS will no longer be maintained as a separate document or set of maps. Functional classification and Limited Access Policies are maintained as separate policy documents by the MPO. Given professional planning and engineering practice over the past fifteen years or so, it also seems appropriate to leave design and right-of-way details to Context Sensitive Solutions and other specific land use considerations appropriate to a facility. Therefore, right-of-way requirements based on functional classification are no longer mandated by the FAABS and the MPO.

State of New Mexico Plans

In the development of this MTP, major State of New Mexico plans were considered and, as appropriate, incorporated into the goals, policies, plans and programs for the AMPA. The plans are

- The New Mexico Department of Transportation's (NMDOT) Long Range Multi-Modal Transportation Plan
- The NMDOT's Comprehensive Transportation Safety Plan
- The State Implementation Plan (SIP) Revision: Limited Maintenance Plan for Carbon Monoxide; Albuquerque/Bernalillo County, New Mexico, Years 2006-2016
- New Mexico Administrative Code (NMAC), Title 20, Chapter 11, Part 3 (20.11.3), Transportation Conformity

Additionally, the New Mexico Office of Homeland Security goals and objectives were considered in this MTP's development, as reflected in the Transportation Security element of this plan.

Regional Economic Development Plan

The 2005 Comprehensive Economic Development Strategy (CEDS) for New Mexico State Planning and Development District 3 was considered in the development of this MTP. The purpose of a District CEDS document is to encourage coordinated economic growth throughout the region. The CEDS document was developed with wide-spread input and support from residents, economic development specialists and elected officials throughout State Planning and Development District 3. As a designated Economic Development District, the MRCOG is responsible for preparing and adopting a CEDS document at least every five years. The MRCOG provides the organizational structure for the formulation of the CEDS and serves as a regional coordinating body to bring players together to assure implementation of the recommendations.

Major regional goals and strategies for economic development identified in the 2005 CEDS are as diverse as the region's topography. They serve to outline and synthesize certain economic development

efforts that have energy and momentum. The community identified seven focus areas:

1. Agriculture and Environment (Alternative Energy)
2. Aviation and Space Exploration
3. Entrepreneurship and Access to Capital
4. Film and Artisan Manufacturing
5. Infrastructure and Multimodal Transportation Improvements
6. Technology and Biosciences
7. Workforce and Education Investments

Infrastructure and multimodal transportation improvements are critical for economic development and, as a focus area, figure prominently in the 2030 MTP. One of the premier projects in the focus area is the New Mexico Rail Runner Express, the state's first commuter rail service. Other infrastructure issues include planning for other capital improvements, multimodal transportation, and community development.

Middle Rio Grande Regional Water Plan

The Middle Rio Grande Regional Water Plan is the repository for regional water planning data and decisions to date, as gathered, discussed, analyzed, and proposed through numerous open planning sessions and public meetings. Given that New Mexico is a land of limited water and growing population, water planning is critical to the future of the region and will likely affect transportation infrastructure decisions, such as those in this MTP.

County and Municipal General Comprehensive Plans

All of the county and municipal governments that are partly or wholly contained within the AMPA have comprehensive plans as provided for under New Mexico state statute. Comprehensive plans are not mandatory under New Mexico law, but they are of critical importance since New Mexico law requires that zoning and subdivision ordinances must be consistent with any existing municipal or county general, comprehensive or master plan. The state statute specifies that the content of the general or comprehensive plan must include at least the following: "the general location, character, and extent of streets, bridges, viaducts and parkways … : and "the general location, character, and extent of community centers and neighborhood units and the re-planning of blighted districts and slum areas … " Local planning commissions have the responsibility to enforce comprehensive plans.

Area and Sector Development Plans

Secondary to County and Municipal Comprehensive plans are Area Plans and community specific Sector Development Plans. These plans comply with the general plan and then go a step further to address specific areas and their unique circumstances and vision. They outline existing conditions in terms of Land Use, Infrastructure, and the Environment and provide guidelines for future development. Often times these documents are designed with the goal of planning for growth while preserving a community's character. Once adopted by local planning commissions these plans become policy documents.

Capital Improvement Plans

A Capital Improvement Plan (CIP) is the financial mechanism that promotes the goals and objectives of a jurisdiction, just like the MTP is the funding mechanism that supports the transportation goals of a region. The CIP serves as a commitment from local governments for specific capital improvements to be funded in the upcoming years. Capital spending, in general, includes facilities design and construction and equipment purchases as they relate to physical and cultural development. The primary source of funds comes from General Obligation Bonds.

Major Transportation Studies

The Metropolitan Planning Organization (MPO) staff reviews local development proposals for consistency with current transportation plans and policies. The staff also participates in and provides technical support to various transportation study teams regarding transportation projects, corridor studies, or other transportation studies. The current list of studies anticipated to occur within the AMPA is located in the Transportation Studies list (see Appendix D).

County and Municipal Housing Plans and Goals

In the development of this MTP, consultation was made with the Region III Housing Authority of New Mexico, Inc, plans and programs. The Housing Authority is a New Mexico non-profit corporation and 501(c)(3) organization formed pursuant to the New Mexico Housing Law. The purpose of the Region III Housing Authority is to provide decent, safe and sanitary dwellings, apartments, single-family housing or other living accommodations for persons and families of low and moderate income in the counties of Bernalillo, Sandoval, Torrance and Valencia. In 2003, the Region III Housing Authority efforts resulted in 1,729 affordable housing units in the four-county area. The 2030 MTP land use and socio-economic information reflects the affordable housing units and considers program research development and planning efforts of the Authority in the AMPA.

Natural Resource Plans and Issues

MPOs and States must consult "as appropriate" with "State and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation" in developing long-range transportation plans. Agencies contacted and participating in the development of this plan included the U. S. Forest Service, the U. S. Bureau of Land Management, the U. S. National Park Service, the New Mexico Department of Game and Fish, the New Mexico State Historic Preservation Office, New Mexico State Parks, as well as local county and municipal parks, recreation and open space departments.

New Mexico Department of Game and Fish – Comprehensive Wildlife Conservation Strategy

Most of the AMPA falls within the Arizona-New Mexico Mountains Ecoregion. A small area in the vicinity of the Sandia Mountains is classified as “Rocky Mountain Montane Mixed Conifer Forest and Woodland,” a key terrestrial habitat. Numerous species, especially birds, mammals and mollusks, are classified by the New Mexico Game and Fish Department as “species of greatest conservation need” or SGCN.

Most of the AMPA also falls within the Rio Grande Watershed. The Rio Grande itself is classified as a 5th order stream that contains many SGCN, primarily fish and birds. The bridge crossing project proposed by the Village of Los Lunas at Morris Road will have to address the impacts of the project on this critical aquatic habitat.