



2040 Metropolitan Transportation Plan

Albuquerque / Bernalillo County Air Quality Control Board
February 11, 2015

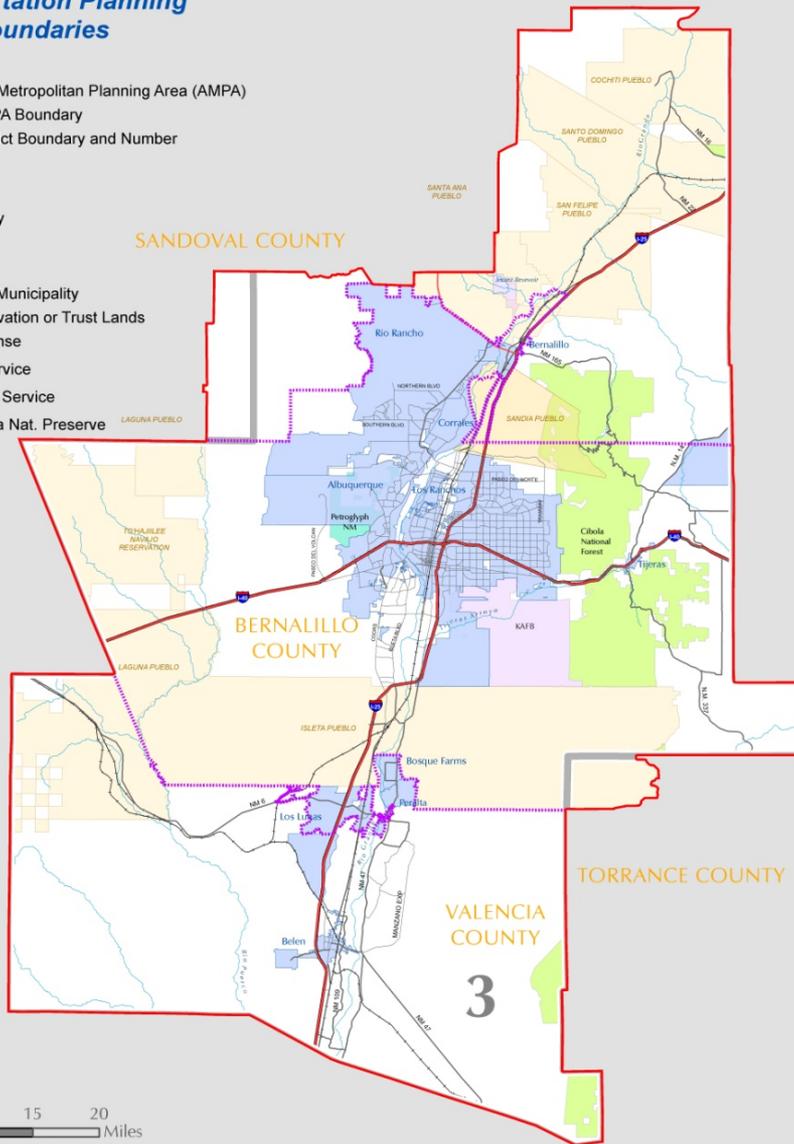


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Transportation Planning
Boundaries

-  Albuquerque Metropolitan Planning Area (AMPA)
-  Previous AMPA Boundary
-  NMDOT District Boundary and Number
-  Interstate
-  US Highway
-  State Highway
-  Other Roads
-  Railroads
-  Incorporated Municipality
-  Indian Reservation or Trust Lands
-  Dept. of Defense
-  US Forest Service
-  National Park Service
-  Valles Caldera Nat. Preserve

*Area outside of AMPA Boundary



Revised March 4, 2011
Approved by Governance Committee 01/20/2011

Albuquerque Metropolitan Planning Area:

Three counties

- Bernalillo County
- Valencia County
- Sandoval County

Two urbanized areas:

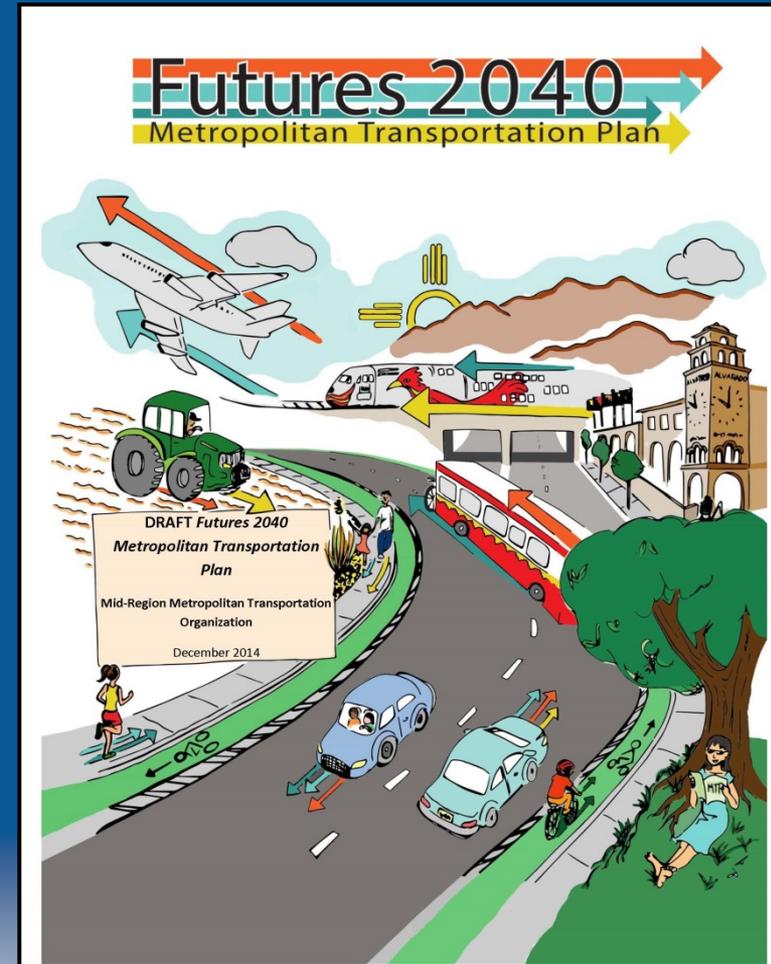
- Albuquerque
- Los Lunas

Population (2012) = 879,401

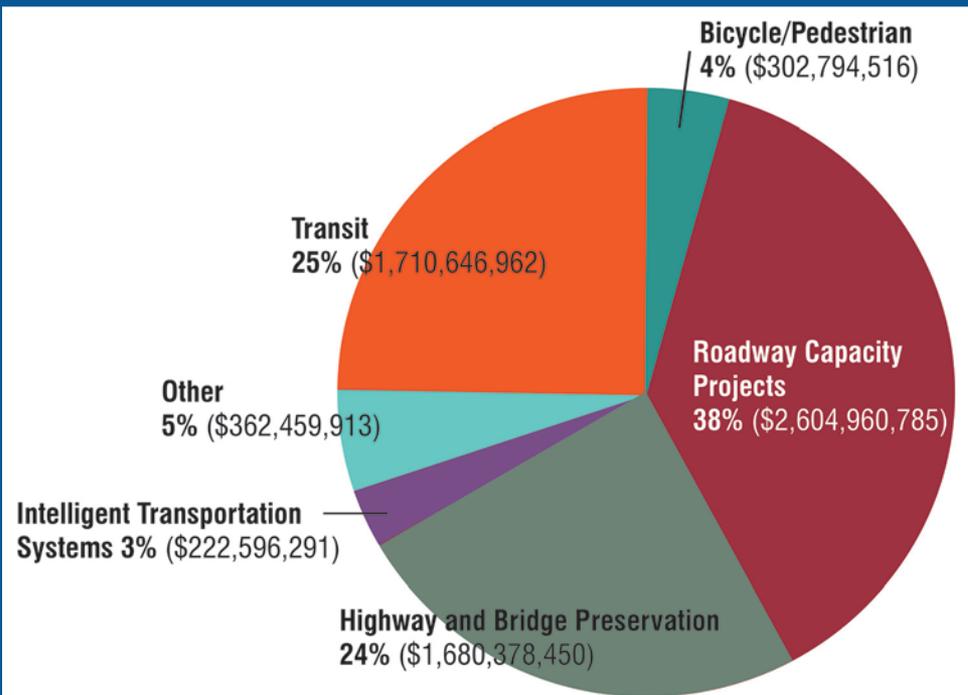
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Metropolitan Transportation Plan

- ◆ Long-range (20+ years) transportation plan for the Albuquerque metro area
- ◆ Updated every 4 years (current update → April 2015)
- ◆ Projections of growth/development
- ◆ List of all anticipated transportation projects in the region



2040 MTP Projected Funding Levels



◆ \$6.9 billion in projects from 2012-2040

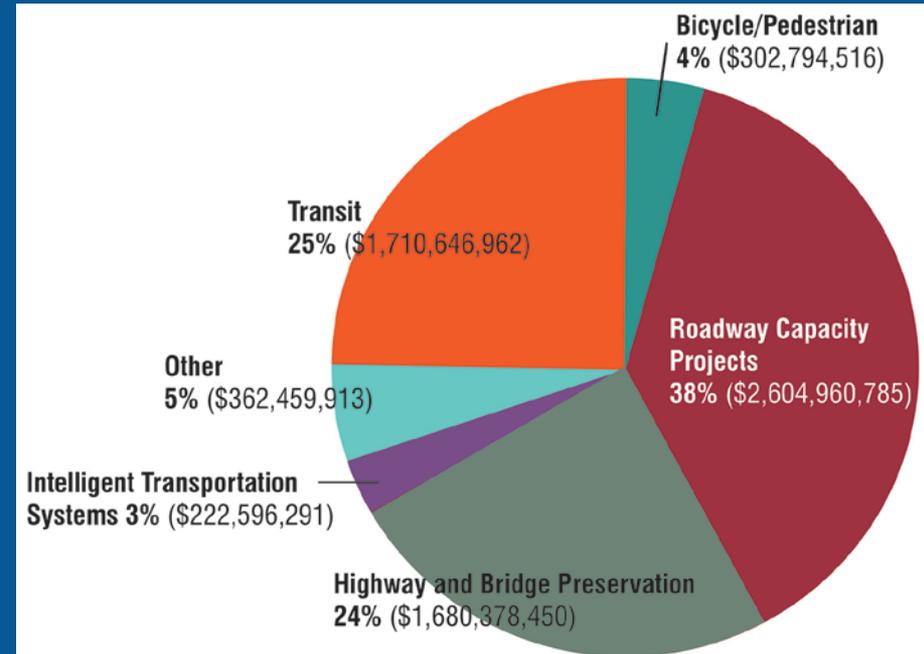
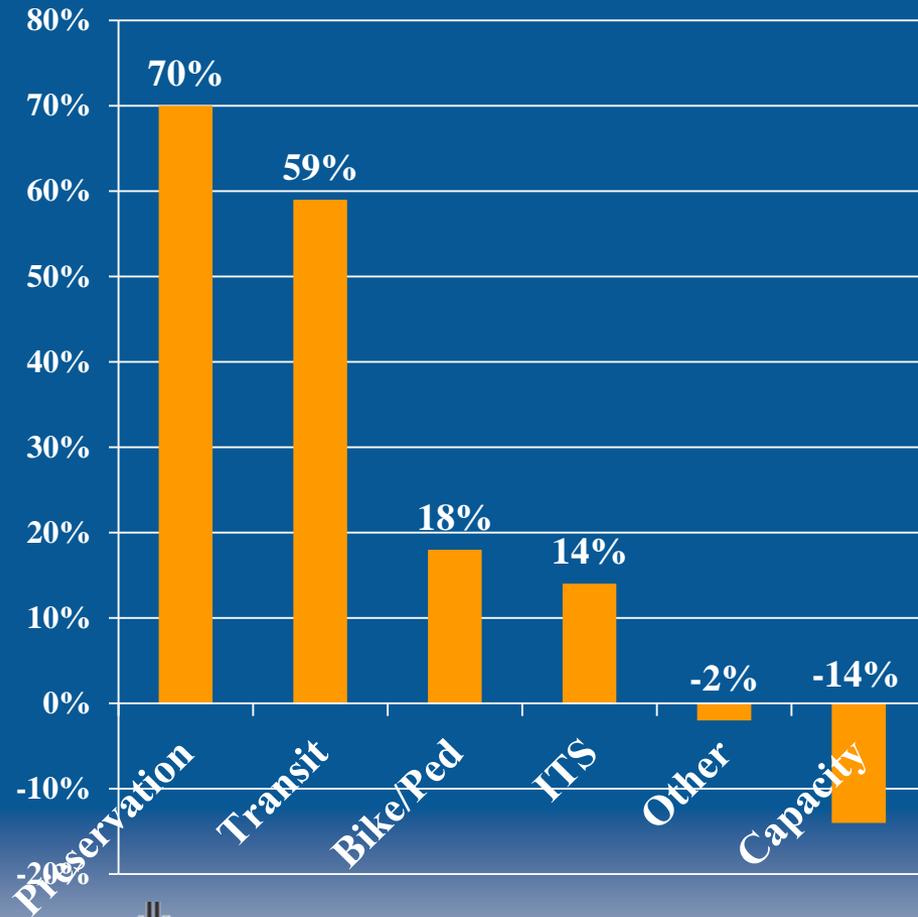
◆ Capacity expansion: *public versus private*

◆ \$1.5 billion in public funds

◆ \$1.1 billion in private funds



Projected Funding Levels Change Compared to Previous MTP



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Funding Takeaways

- ◆ Changing priorities
 - ◆ Major emphasis on preservation and maintenance
 - ◆ Increase in funding for alternative modes
- ◆ Greater reliance on private funding for capacity expansion
- ◆ Some previously planned roadways are not expected to be funded in 2040 timeframe (they remain on the Long-Range Roadway System)





2040 Socioeconomic Forecast



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What's New in the 2040 MTP?

- ◆ There are new regional projections
- ◆ There is a new land use model
- ◆ There is a new scenario planning process
- ◆ Introducing The Trend Forecast
- ◆ Introducing The Preferred Scenario

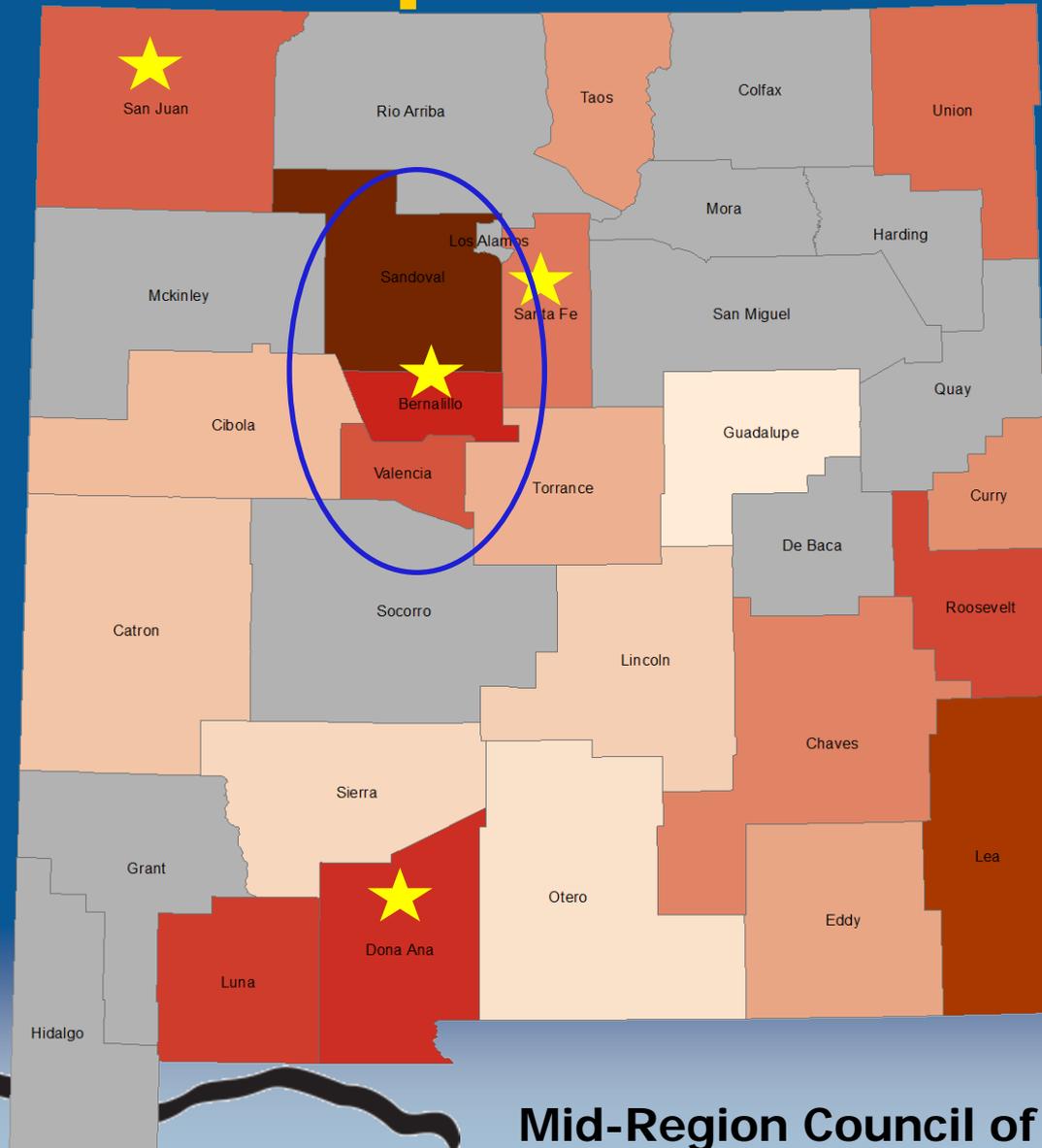


Regional Projections



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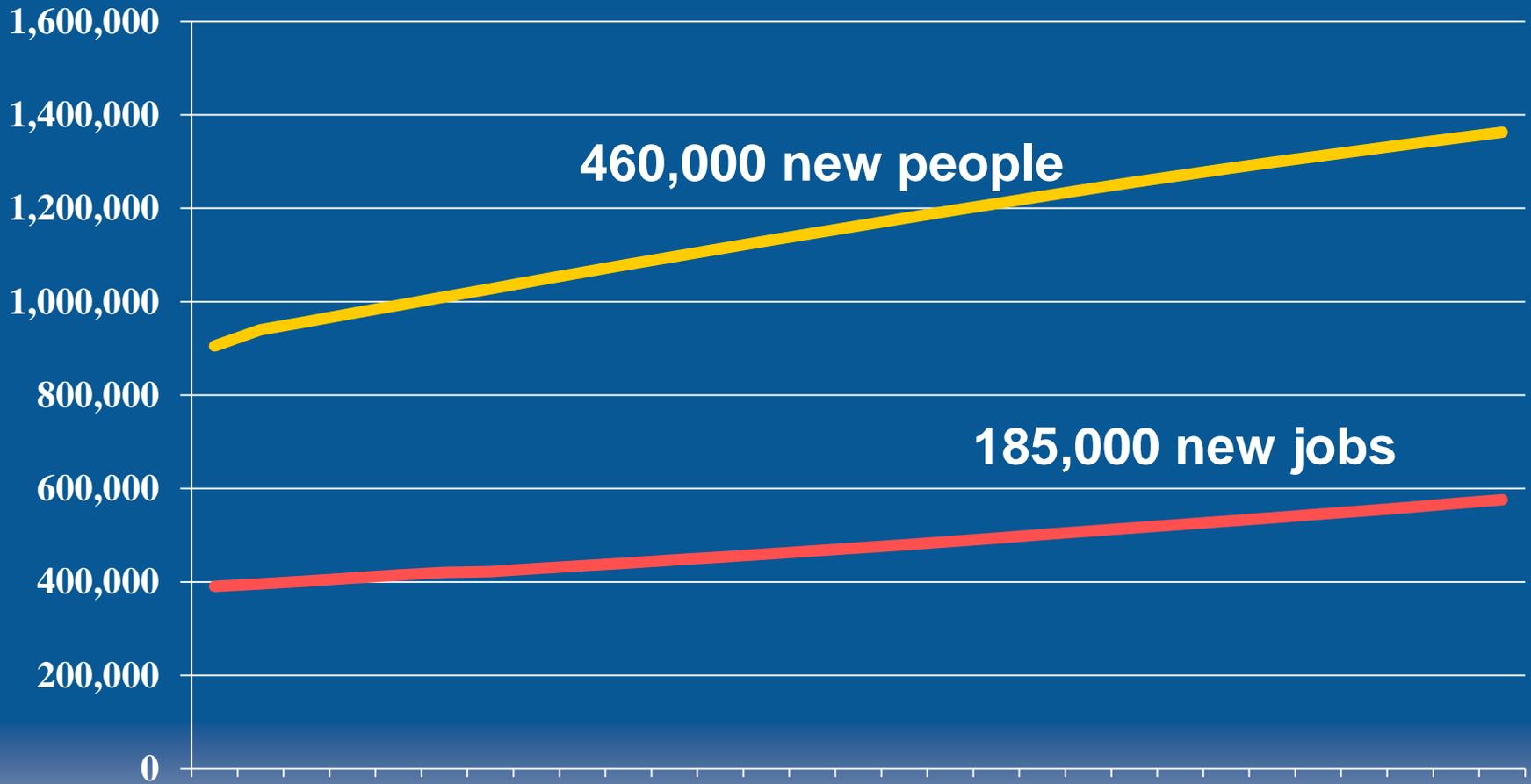
Statewide Population Projection



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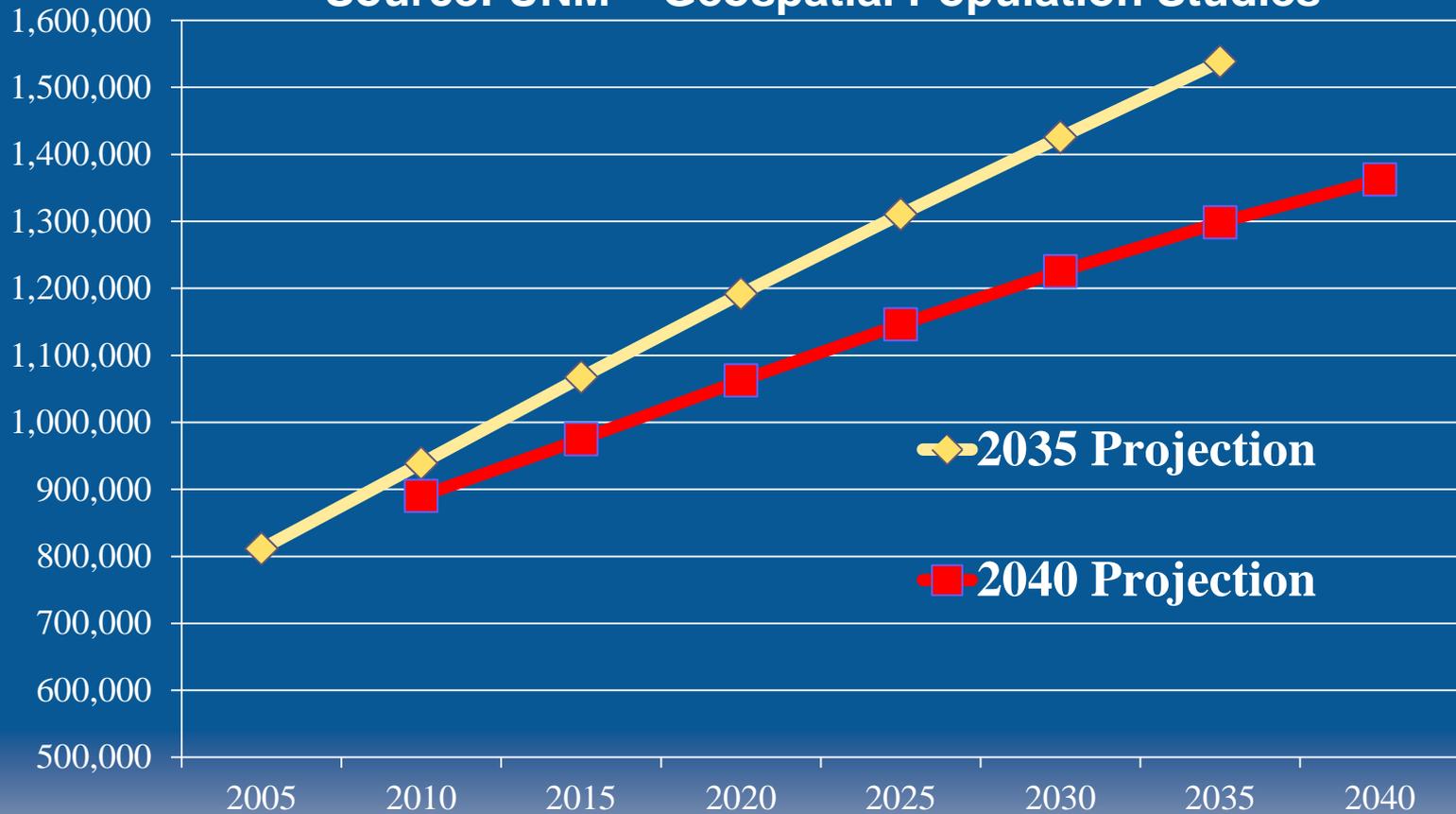
2040 Regional Forecast



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Difference from 2035 MTP

***Source: UNM – Geospatial Population Studies**



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Define the "ceiling" →



Collect information →



Allocate the growth →



Refine Forecast →



The Land Use Model



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UrbanSim Land Use Model

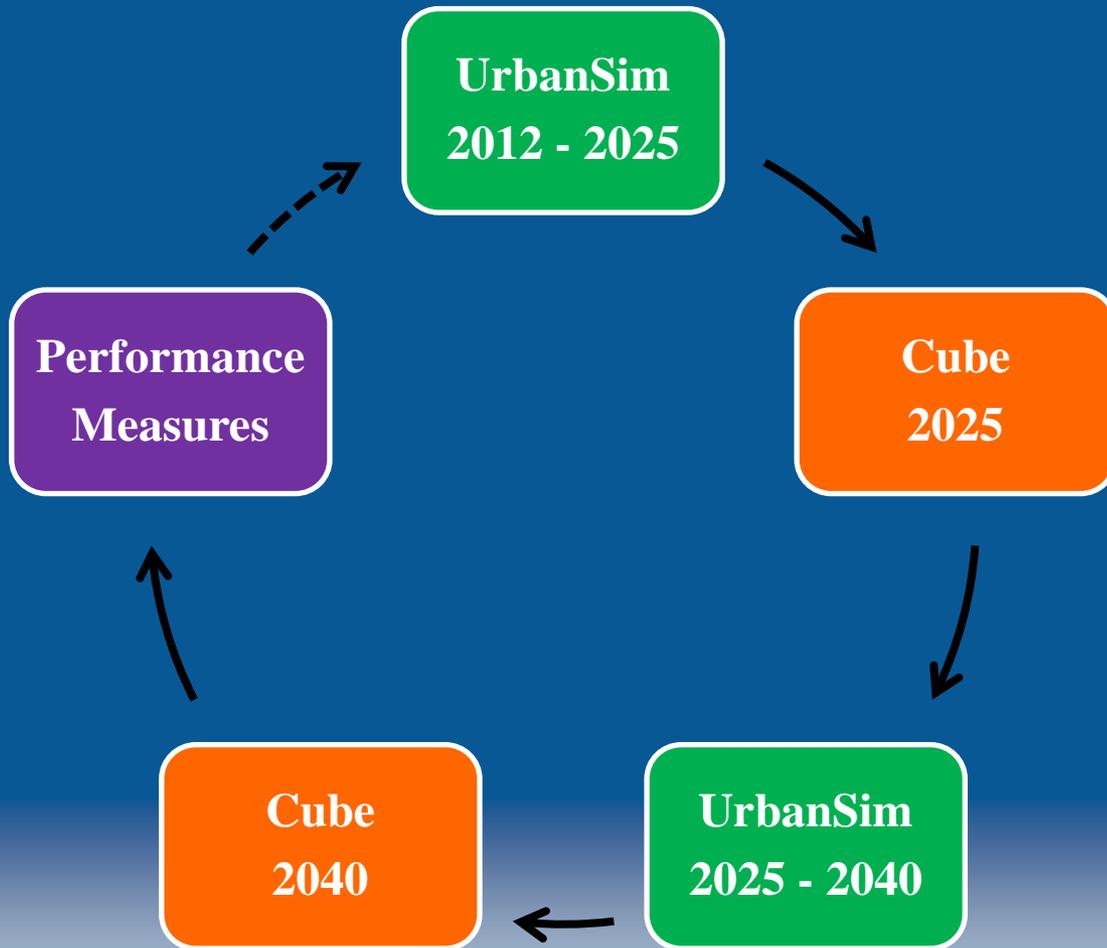


UrbanSim

Use the state-of-the-art urban simulation system to deliver integrated, long-range forecasting for land use and transportation. Assess regional impacts of population and employment growth, infrastructure investments, and land use and transportation policy.



Integrated Modeling



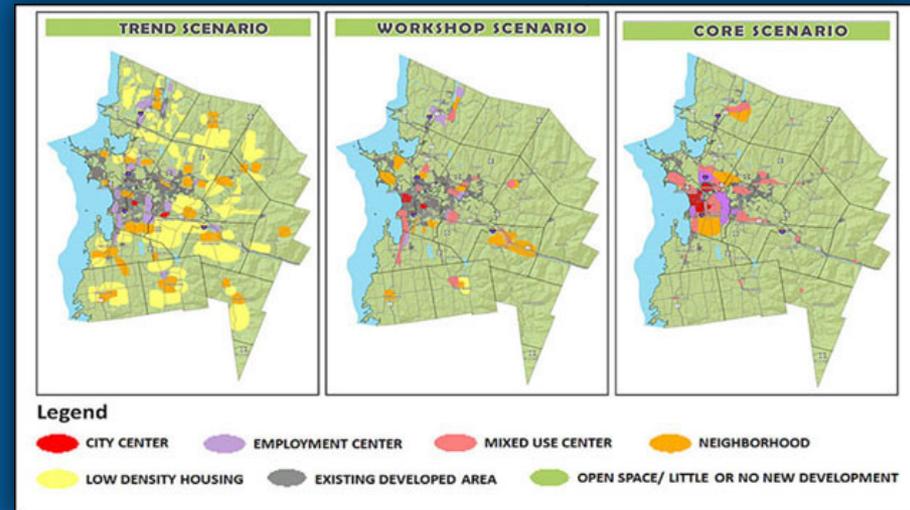
Scenario Planning



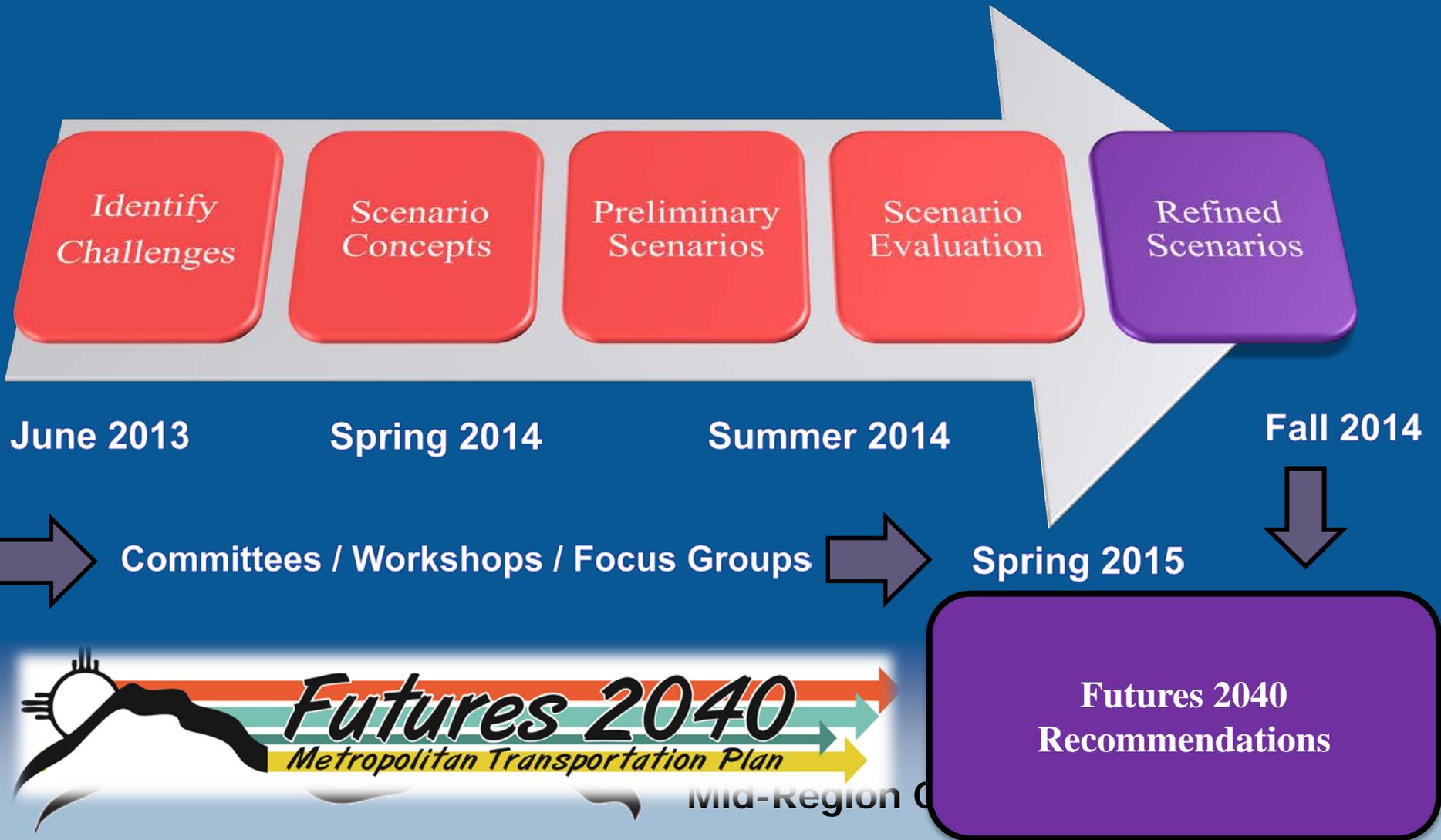
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Scenario Planning

- ◆ Analyze possible growth ‘futures’ for the region
- ◆ Integrate land use and transportation policy-making
- ◆ Understand costs and benefits of development patterns
 - ◆ Land consumption
 - ◆ Transportation conditions
 - ◆ Environmental impacts
 - ◆ Economic competitiveness



Scenario Planning Process



Challenges



MTP Scenarios

Trend

Existing plans and policies



Historical development patterns



Separation of land uses



Fiscally constrained roadway and transit networks



Preferred

Flexible zoning with increased focus on centers and corridors

Greater balance of jobs and housing

Promote mixed uses within key centers and transit nodes (options)

Fiscally constrained roadway and expanded transit in key locations



Preferred

- ◆ Increase attractiveness:
 - ◆ Activity Centers
 - ◆ Transit Nodes

- ◆ Infrastructure differences:
 - ◆ Same roadway network
 - ◆ Built-out transit network

- ◆ Self-identified by land use policy making jurisdictions



Preferred Scenario Activity Centers, Transit Stops and Commercial Corridors

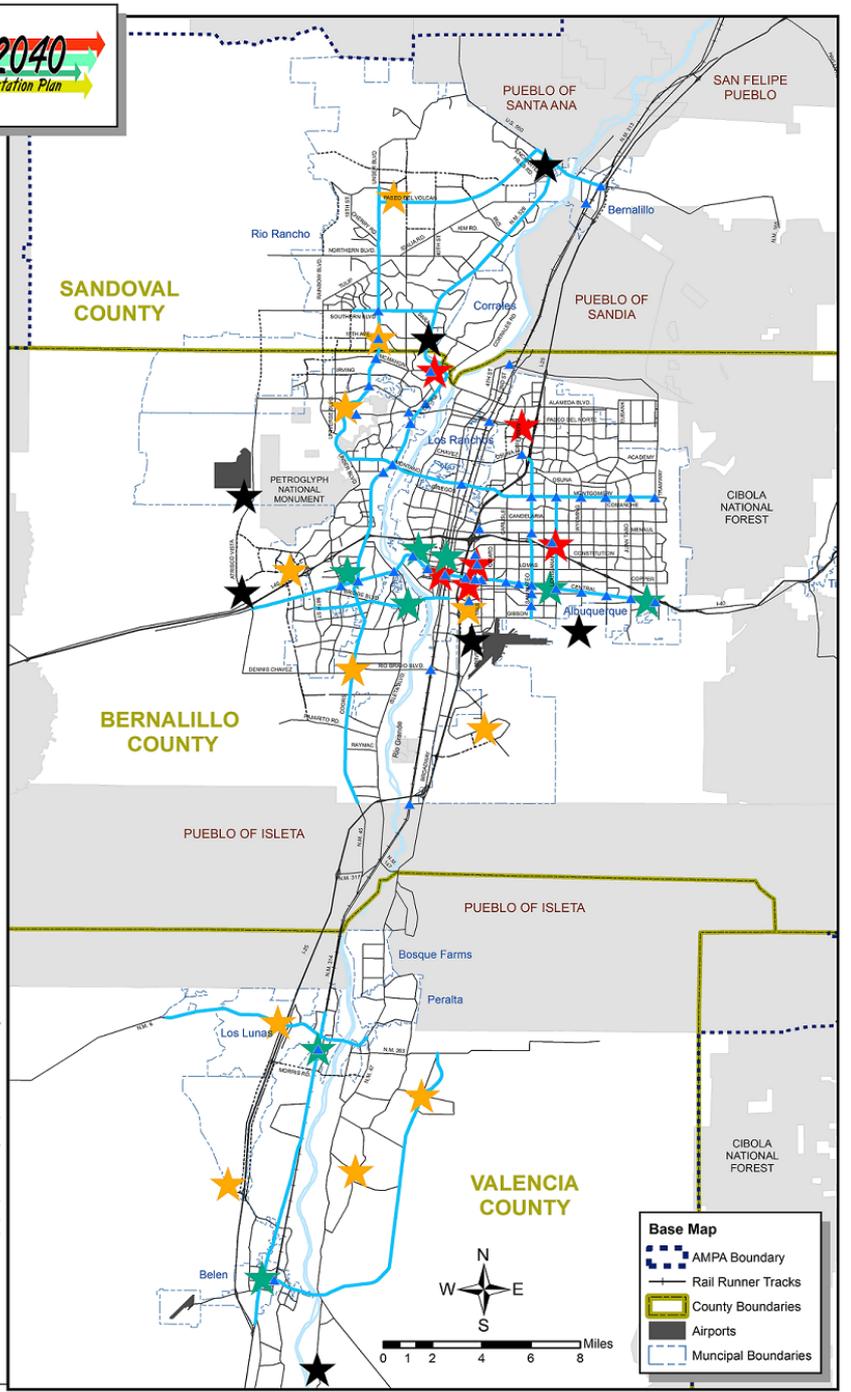
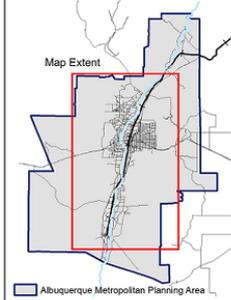
- Activity Centers**
- ★ Regional Center
 - ★ Opportunity Center
 - ★ Reinvestment Center
 - ★ Employment Center
- Transit Stops**
- ▲ Key Transit Stops
- Commercial Corridors**
- Key Commercial Corridors
 - ⋯ Future Roadways

Regional Center
 a. Large regional market with existing employers and mix of uses
 b. Existing transit connections

Opportunity Center
 a. Currently vacant or growing center
 b. Opportunity to become a mixed use destination

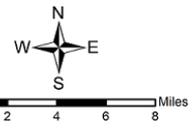
Reinvestment Center
 a. Existing node of activity
 b. Targeted for redevelopment
 c. Central location for sub-regional market

Employment Center
 a. Large existing single employer or business center
 b. No plans for housing
 b. Not targeted for change



Base Map

- ▭ AMPA Boundary
- Rail Runner Tracks
- ▭ County Boundaries
- ▭ Airports
- ▭ Municipal Boundaries



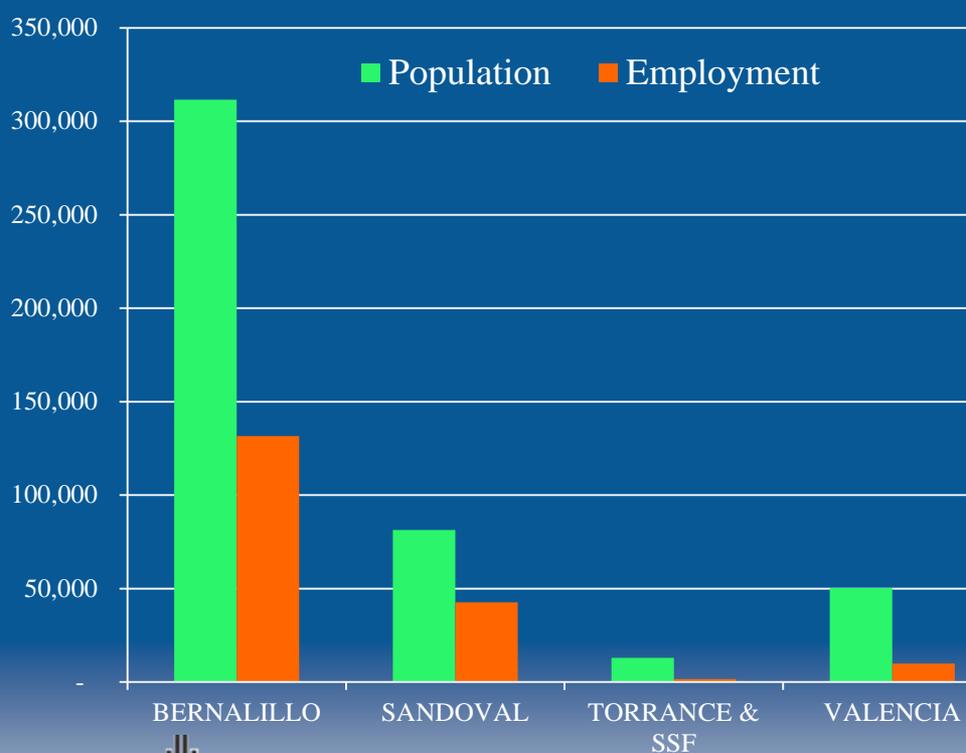
The Trend Forecast



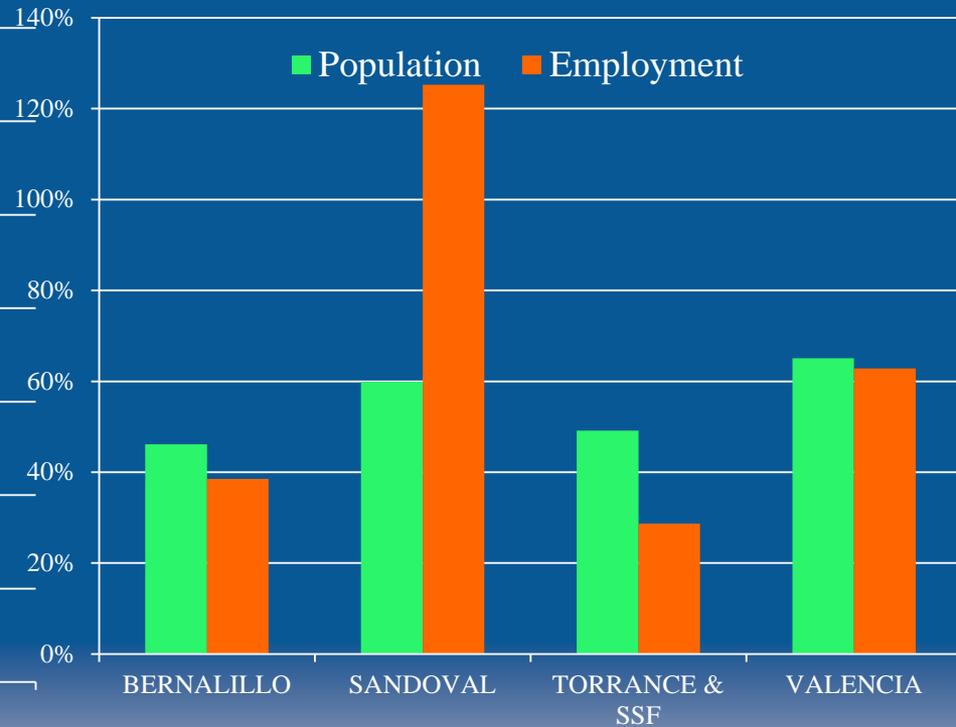
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County Growth, 2012 - 2040

Absolute Growth

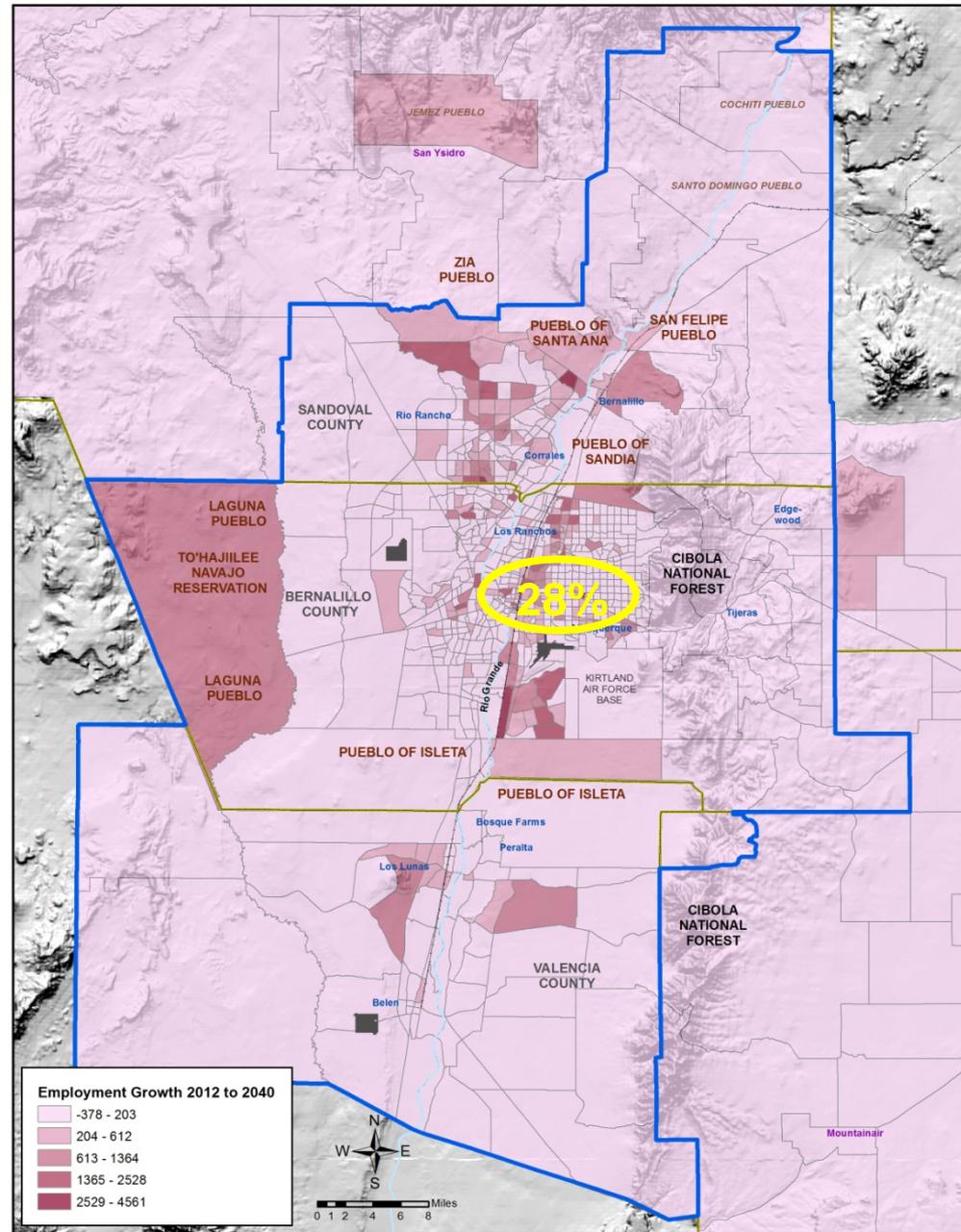
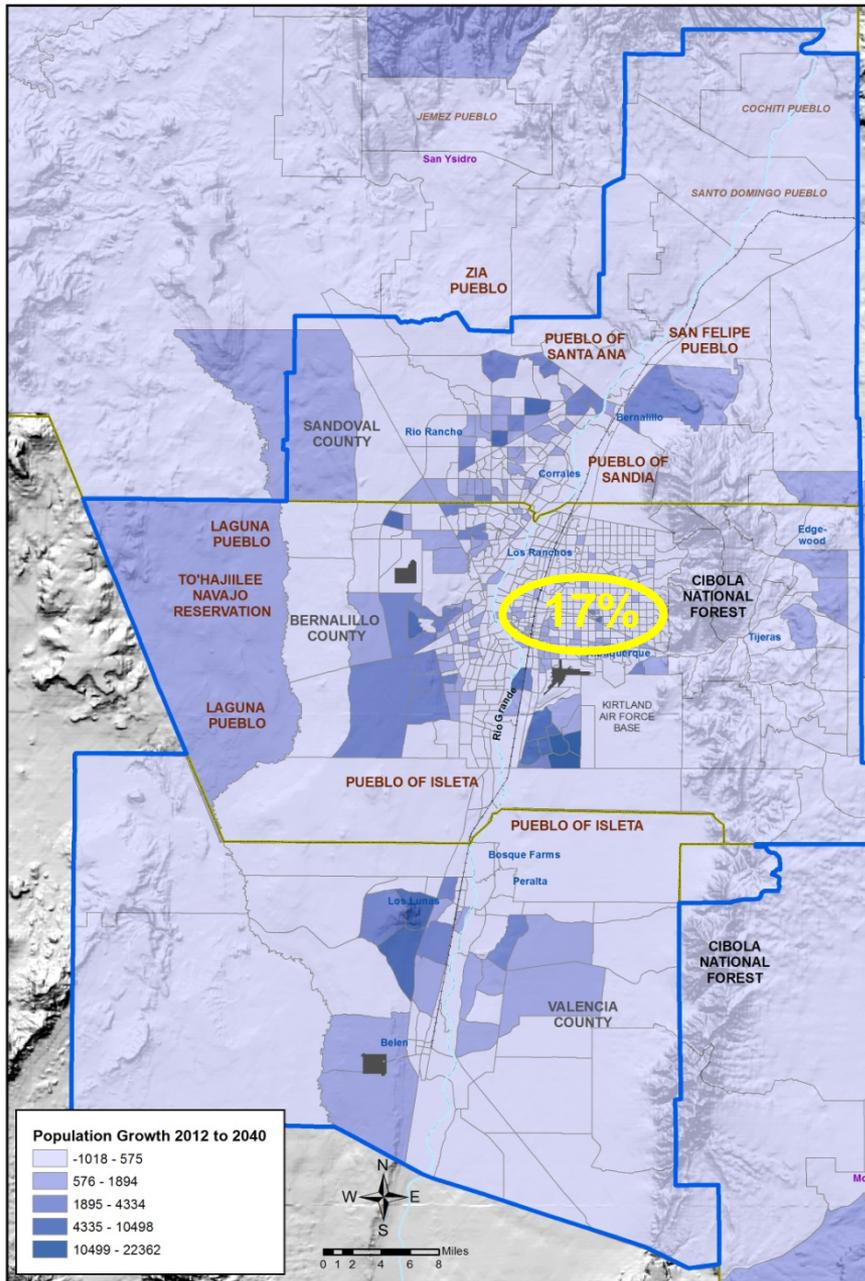


Percentage Growth



Population Growth, 2012 - 2040

Employment Growth, 2012 - 2040



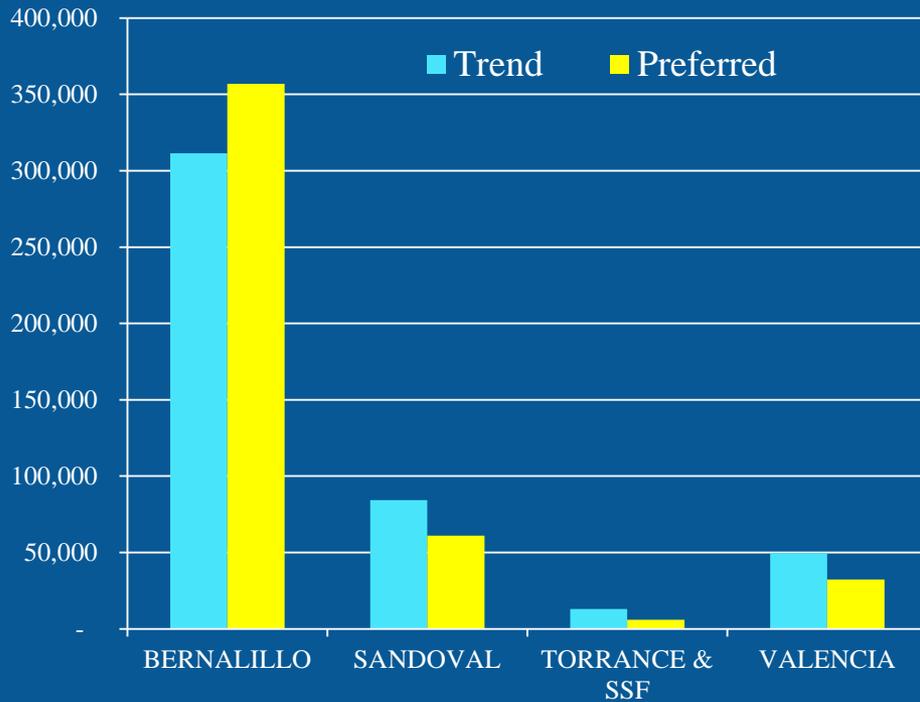
The Preferred Forecast



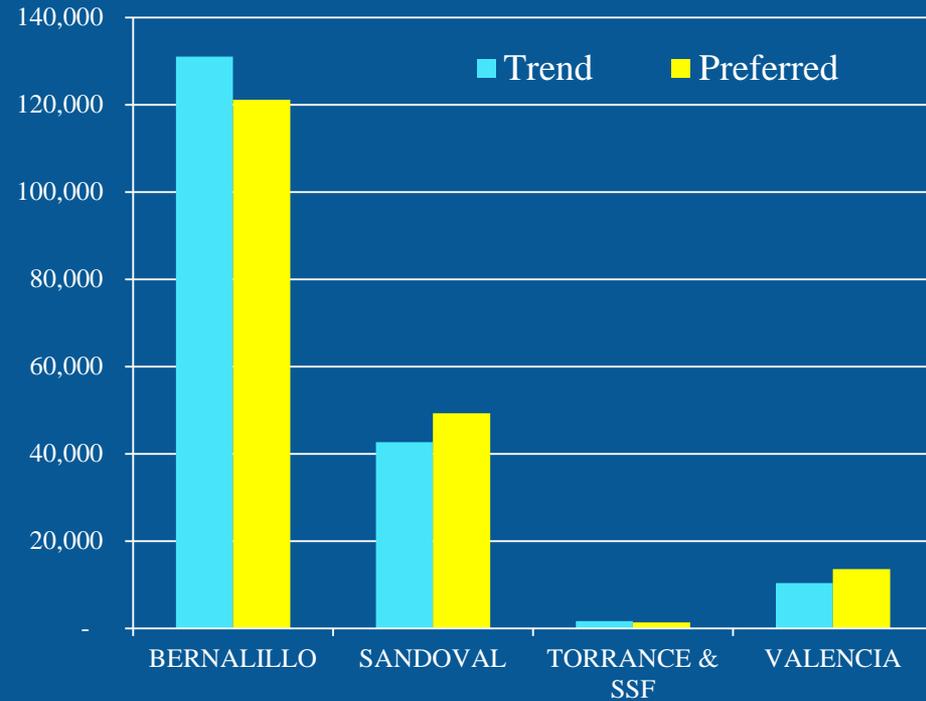
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County Differences

Population

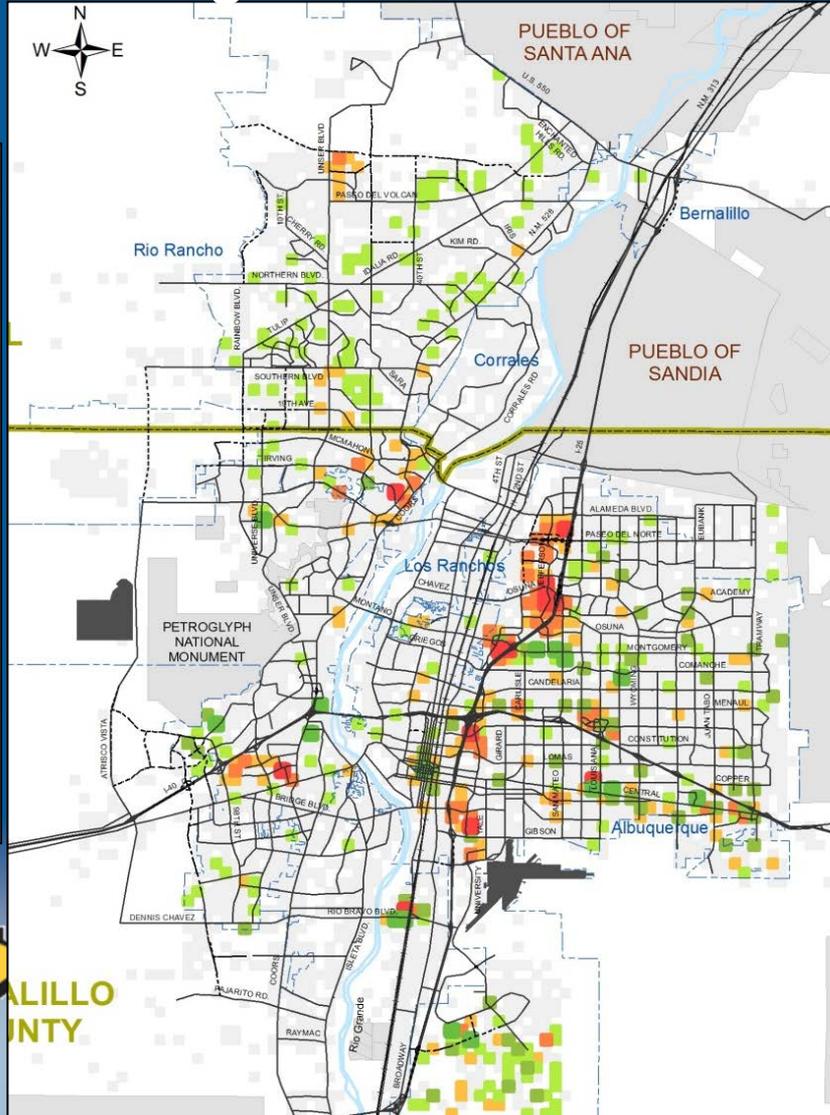


Employment

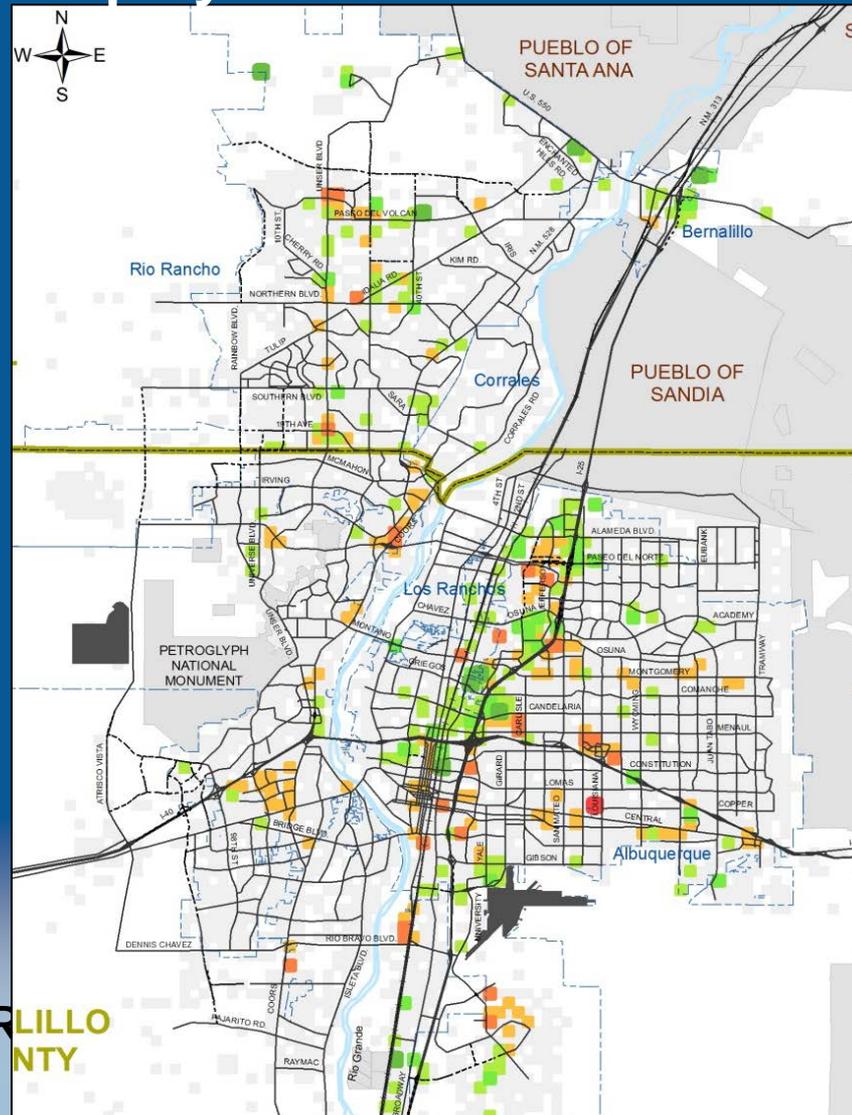


Small Area Differences

Housing



Employment



Accessibility Differences

Measures	Preferred - Trend
Developed Acres	-20,374
Households in Activity Centers	31,786
Households near Key Transit Nodes	10,663
Jobs in Activity Centers	19,031
Jobs near Key Transit Nodes	9,850



Futures 2040 MTP

- ◆ Trend Scenario will be adopted as the official 2040 MTP socioeconomic forecast
- ◆ Preferred Scenario will be also adopted and serve as a regional target
- ◆ Implementation is up to the local jurisdictions





2040 Travel Demand, Air Quality, and Roadway Projects



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Roadway Capacity Projects



Roadway Network Projects 2012-2040

2012-2025 Projects

- 1 to 2 Lane Reduction
- 1 Lane Reduction Road Diet
- Lane Reduction due to ART
- Additional CTL
- Additional 1 to 2 Lanes
- Additional 3 to 4 Lanes

2040 Projects

- Additional 1 to 2 Lanes
- Up to 4 Additional Lanes

Interchanges

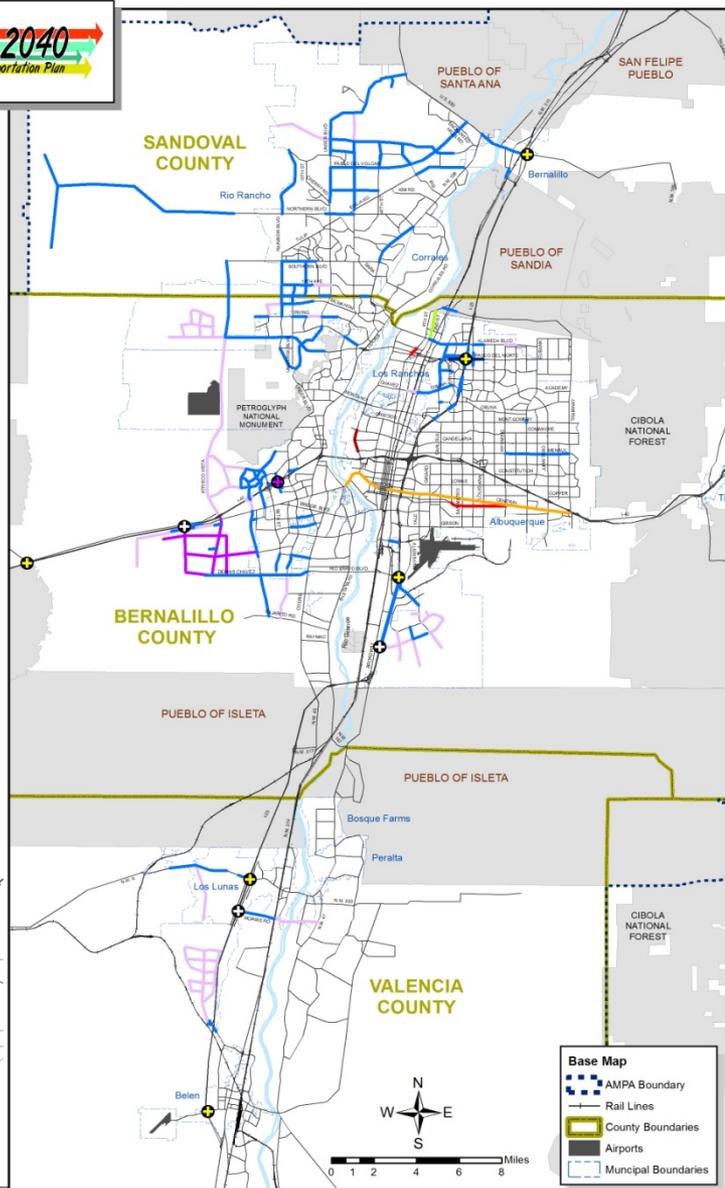
- + Proposed
- + Reconstruction
- + Underpass

This map depicts the major roadways expected to be added or reduced in the 2040 MTP timeframe.

The lane removal along Central is necessary to add Bus Rapid Transit. ART stands for Albuquerque Rapid Transit.

The Road Diet is from 4 to 3 lanes of traffic.

CTL stands for Center Left Turn Lane.



Base Map

- AMPA Boundary
- Rail Lines
- County Boundaries
- Airports
- Municipal Boundaries

Network expansion

- Rio Rancho and NW Albuquerque
- SW metro area and Mesa del Sol
- Journal Center

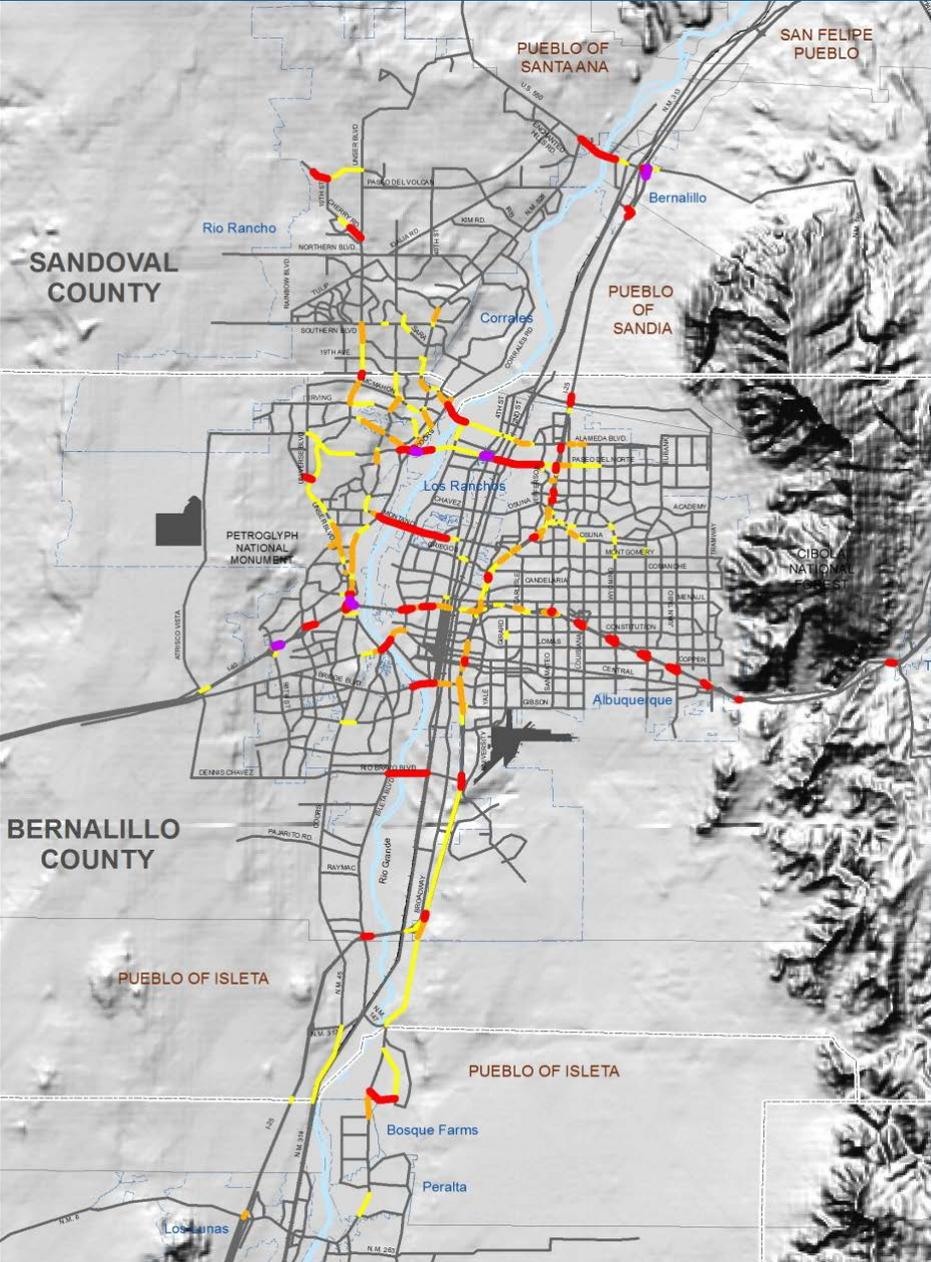
Widening projects

- Atrisco Vista (with extension from Paseo del Norte to Southern Blvd)
- Unser Blvd → 4 lanes
- I-25 widening and enhancements

Interstates and major facilities

- 9 new/reconstructed interchanges
- Paseo del Volcan interchange ROW
- Morris Rd river crossing – Valencia County

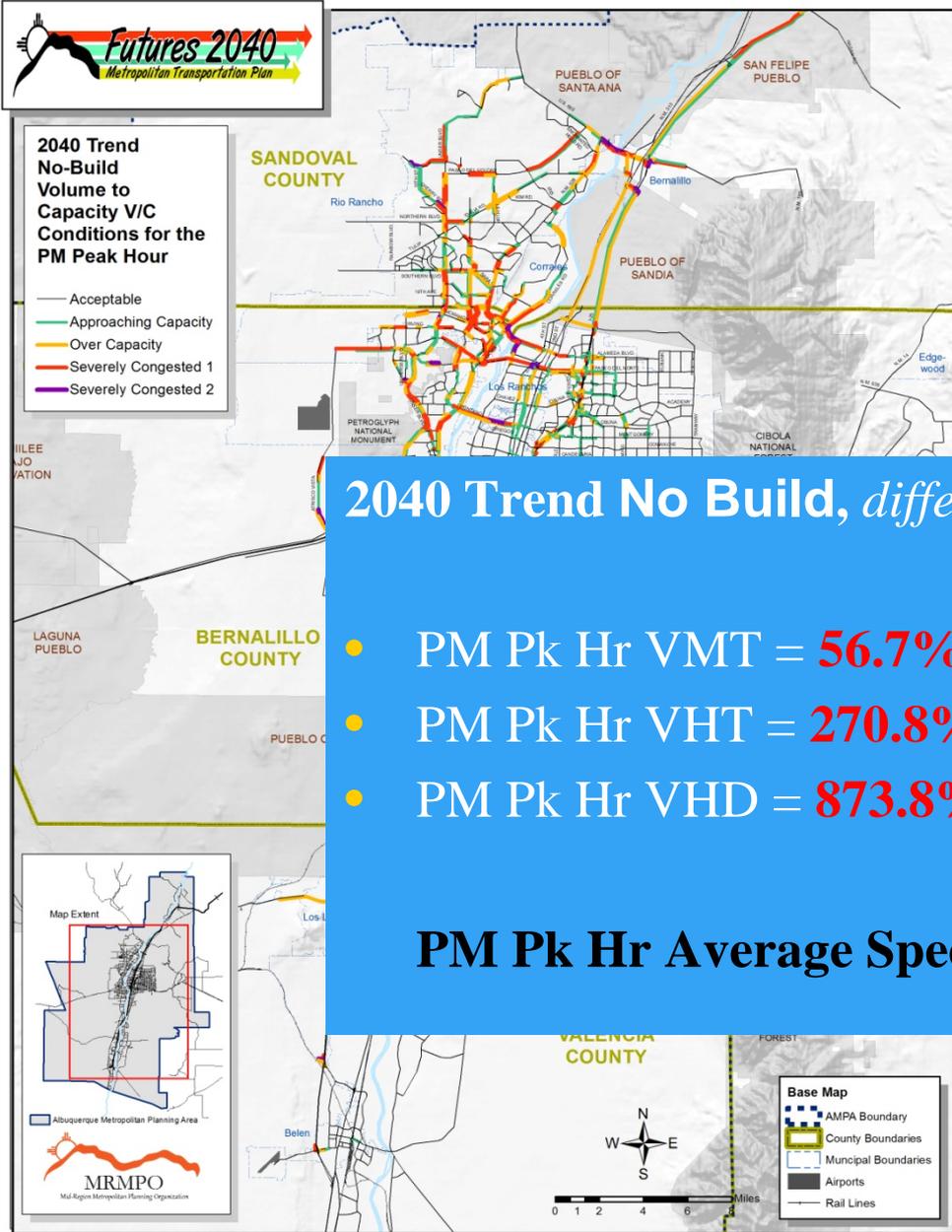
2012 Base Year Conditions



Planning - first step:

- Consider inputs in “modeling environment”
- Consider impacts of growth on existing infrastructure
- Comparison for future scenarios

2040 Trend No-Build, Congestion Levels



First step:

- Consider impacts of growth on existing infrastructure
- See what happens if we don't build anything!

2040 Trend No Build, *difference from 2012 Base Year:*

- PM Pk Hr VMT = **56.7%**
- PM Pk Hr VHT = **270.8%**
- PM Pk Hr VHD = **873.8%**

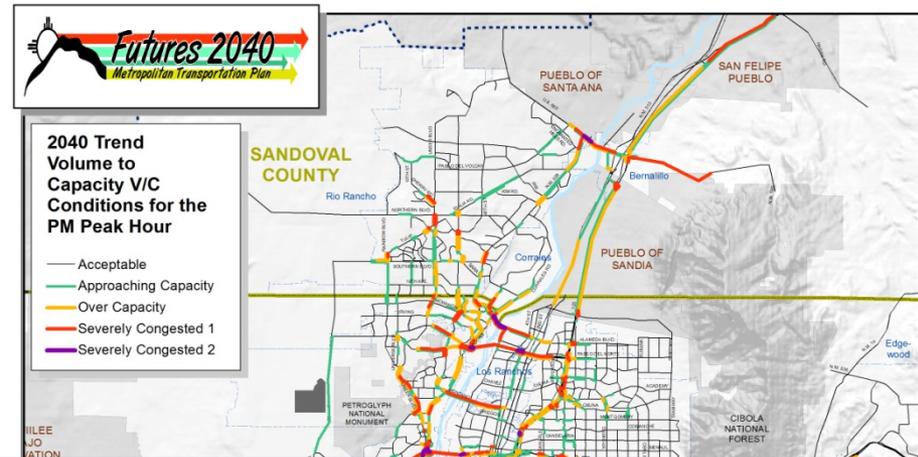
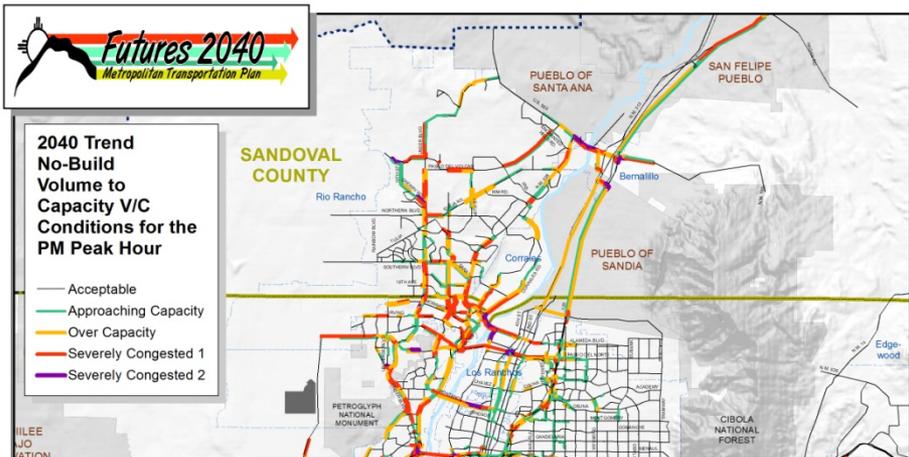
PM Pk Hr Average Speed = 15.4 vs 36.4 (-58%)

growth
investments
what
on in

2040 Trend No-Build

Congestion and Preliminary AQ Analysis

2040 Trend Build

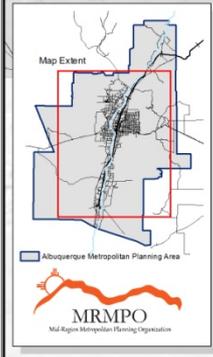


2040 Trend, difference from 2040 Trend No Build:

PM Pk Hr VMT = **0.8%**
 PM Pk Hr VHT = **-26%**
 PM Pk Hr VHD = **-39%**

PM Pk Hr Average Speed = 21.1 vs 15.4 (37%)

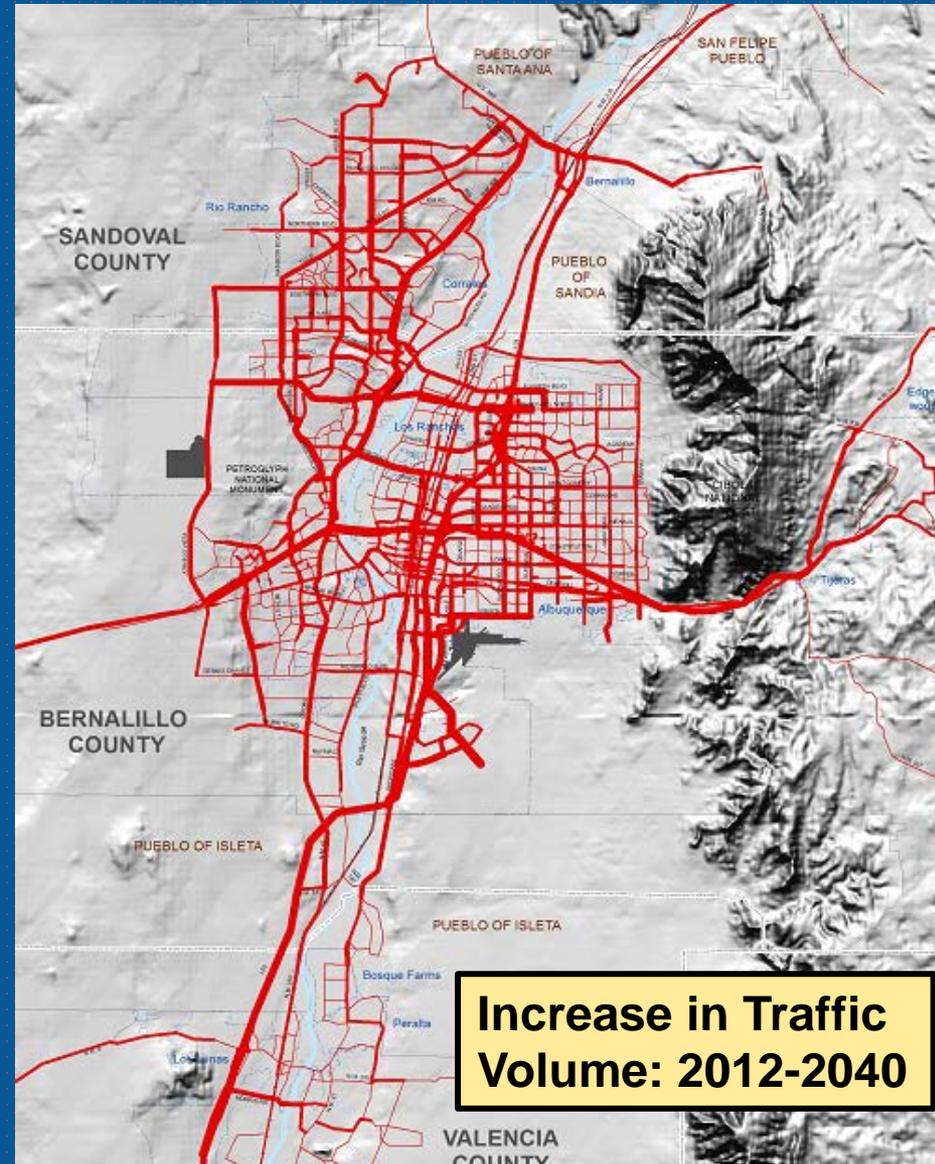
CO = **-1.7%**
 NOx = **-5.1%**
 VOC = **-9.1%**



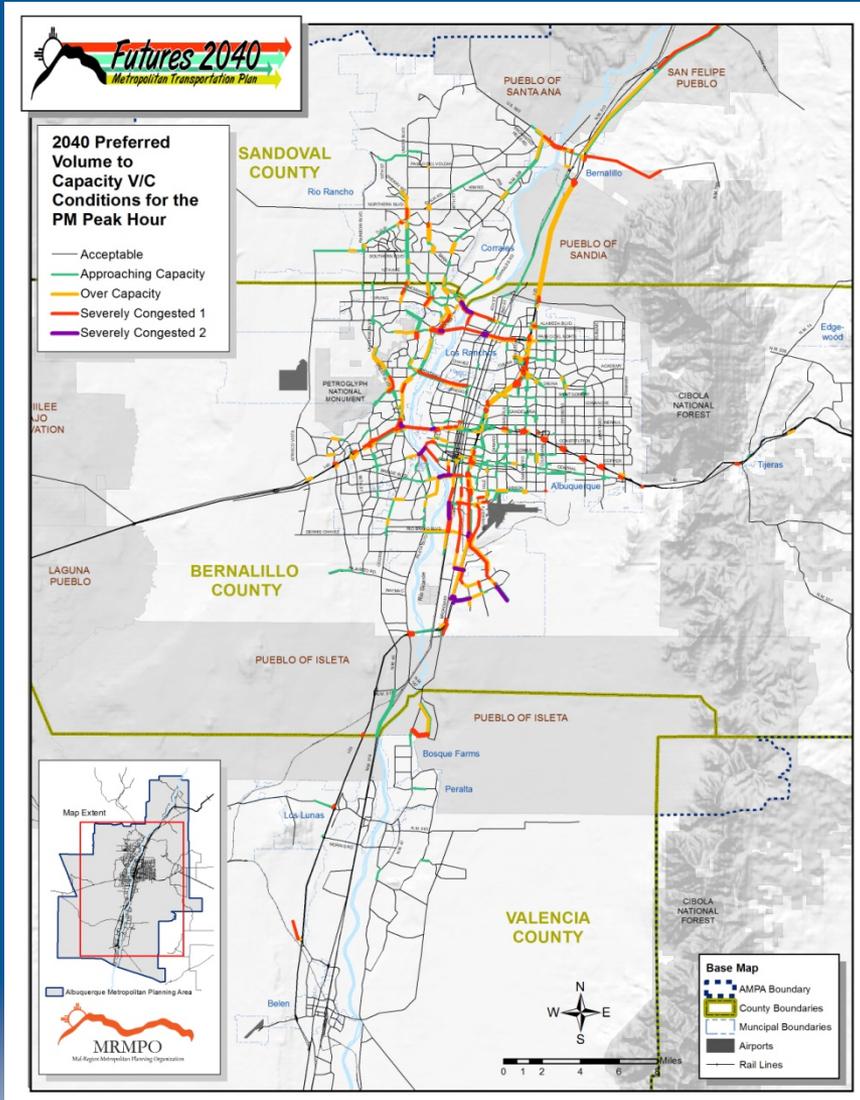
Summary Roadway Statistics

Trend Scenario v. 2012

- Hours Traveled **↑173%**
- Miles Traveled **↑58%**
- River Crossing Trips **↑44%**
- Average Speeds **↓42%**



2040 Preferred, Congestion and Preliminary AQ Analysis



2040 Preferred, *difference from 2040 Trend No Build:*

PM Pk Hr VMT = **-6.4%**

PM Pk Hr VHT = **-45%**

PM Pk Hr VHD = **-64%**

Average Speed = 26.3 vs 15.4 (70.8%)

CO = **-13.1%**

NO_x = **-17.2%**

VOC = **-22.9%**

2040 Preferred, *difference from 2040 Trend:*

PM Pk Hr VMT = **-7%**

PM Pk Hr VHT = **-25%**

PM Pk Hr VHD = **-41%**

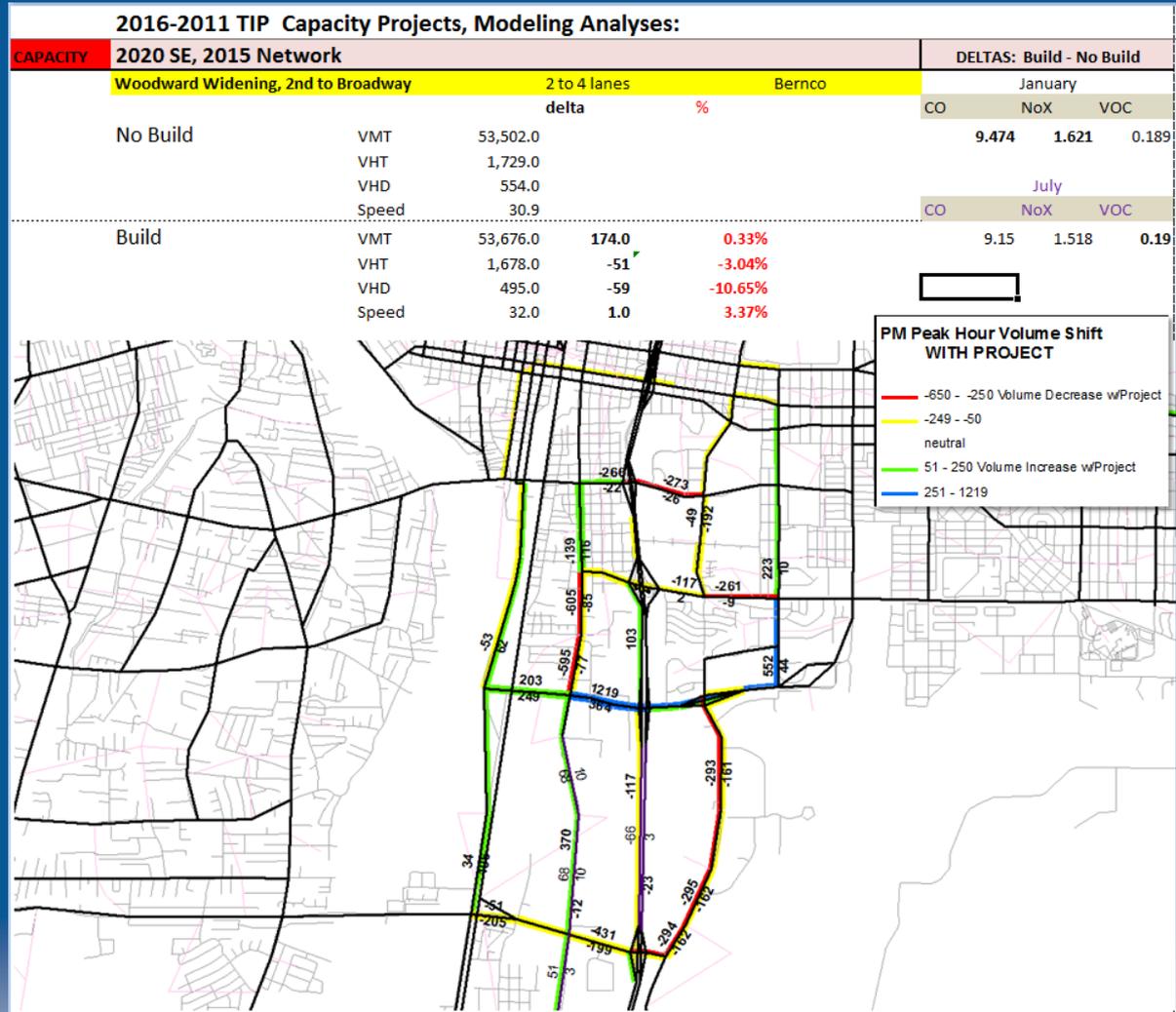
Average Speed = 26.3 vs 21.1 (24.6%)

CO = **-11.7%**

NO_x = **-12.8%**

VOC = **-15.1%**

Project Evaluation Examples:



Project Evaluation Examples:

2016-2011 TIP Capacity Projects, Modeling Analyses:						DELTA: Build - No Build		
ROW	2030 SE, 2025 Network				January			
Los Lunas Corridor (ROW)		Inch/Crossing delta		%	VoLL	CO	NoX	VOC
No Build	VMT	134,557.0				64.606	20.874	-0.04
	VHT	4,833.0						
	VHD	2,367.0						
	Speed	27.8						
Build	VMT	135,421.0	864	0.64%		57.458	20.682	-0.039
	VHT	4,520.0	-313	-6.92%				
	VHD	2,099.0	-268	-11.32%				
	Speed	30.0	2.1	7.61%				

July		
CO	NoX	VOC
57.458	20.682	-0.039

Project Evaluation Examples:

2016-2011 TIP Capacity Projects, Modeling Analyses:

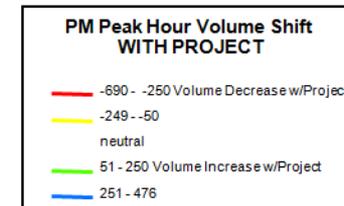
ART - Central Ave Capacity Reduction

2040 SE, 2040 Network

Lane Reduction on Central Ave, Sunset Dr to Tramway Blvd

CoA

			delta	%
No ART	VMT	472,956.0		
	VHT	24,407.0		
	VHD	13,715.0		
	Speed	19.4		
Build ART	VMT	473,090.0	134.0	0.03%
	VHT	23,384.00	-1023	-4.37%
	VHD	12,803.00	-912	-6.65%
	Speed	20.2	0.9	4.40%



Thank you

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