## **FINAL REPORT**

Prepared for:





PINAL • COUNTY

July 2015



In Coordination with:





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This study has been prepared by Parsons Brinckerhoff, with market analysis support by RCLCO, for Pinal County as part of the Arizona Department of Transportation Planning Assistance for Rural Areas (PARA) Program.

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The suggestions and recommendations made in this document are for the purposes of discussion and debate in regard to regional transportation needs. Some of the ideas contained herein have regard to public and private lands. These ideas have been developed as a professional service without the full consultation of property owners.





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#### INTRODUCTION 1.0

Pinal County and the Arizona Department of Transportation (ADOT) jointly conducted the Southern Pinal County Regional Corridors Study, in coordination Eloy, Marana, and Coolidge, to address southern Pinal County's existing and future multimodal travel demand, identify market opportunities, evaluate priority investment areas, and identify improvements to the regional transportation system. This study was conducted through ADOT's Planning Assistance for Rural Areas (PARA program.

#### Background 1.1

Situated in the center of the Sun Corridor, Pinal County is positioned within one of the 11 megaregions of the United States. Over the last decade, the county's population more than doubled from approximately 179,700 in 2000 to 375,800 in 2010.

Encompassing a geographical area of roughly 1,300 square miles, the southern Pinal Region is rich with man-made and

natural resources. The region is home to numerous recreational destinations, such as Skydive Arizona at Eloy Municipal Airport, Picacho Peak State Park, and the Tortolita Mountains near Marana.

With three publicly owned airports, the Interstate 10 (I-10), and Union Pacific (UP) rail line centrally located, the southern Pinal County region is emerging as a key transportation hub. predict Economists<sup>1</sup> that transportation industries, such as UP's proposed classification yard in the Red Rock area, and general aviation are expected to drive future expansion of this region.

Megaregions are of Arizona

As stated in the *Pinal County Comprehensive Plan (2009)*, Pinal County's prime location between Phoenix and Tucson present numerous diverse opportunities that attract many people to the area. Changes to the area will have a statewide impact on many levels. As the county continues to grow, the county and its residents stress the importance of preserving the natural environments while emphasizing the value of:

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- Open Space
- Rural Atmosphere and environments
- Natural beauty
- History and heritage
- Night sky and clean air •
- Diversity

### 1.2 Purpose and Need

The primary purpose of the Southern Pinal County Regional Corridors Study was to review and evaluate the area's transportation system to enhance the transportation network, facilitate freight movement, and improve access to and from major employment centers, all of which will improve regional

> connectivity and increase economic development potential for the area. The region must adapt to evolving economic conditions, including shifting markets for commercial, and industrial housing, development, and address critical issues to implement a vision for the region. How the region plans for post-recession growth today will directly impact economic opportunities and open space systems paramount to the future health and livability of the region. This study is unique in that it describes the market opportunities to ultimately create a prioritization of transportation projects that responds to the area's growth patterns.

#### 1.3 Study Process

This study was conducted between January 2014 and June 2015. It was conducted with guidance and oversight from the Technical Working Group (TWG), which was composed of members representing the following agencies:

- Pinal County
- City of Eloy

- ADOT •
- •

Through the course of the study, the following working papers were developed in cooperation with the TWG and stakeholders:

This final report is comprised of the input provided into the entire project process and is a compilation of the findings and recommendations from these working papers.

strategic location between Phoenix and Tucson and its

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Town of Marana City of Coolidge Arizona State Land Union Pacific Railroad

Sun Corridor Metropolitan Planning Organization

- Working Paper #1: Summary of Plans and Opportunities
  - Working Paper #2: Market Understanding
- Working Paper #3: Scenario Development
- Working Paper #4: Strategic Transportation Investments
- Working Paper #5: Policy Opportunities &
  - **Recommendations to Implement Strategic**
  - Transportation Investments

#### **Executive Summary**

### 1.4 Study Area and Regional Context

The *Southern Pinal County Regional Corridors Study* area is situated in the southern portion of Pinal County. As shown in Figure 1, the study area includes the City of Eloy, The Town of Marana, a segment along State Route (SR) 87 annexed by the City of Coolidge, unincorporated areas of southern Pinal County and northern Pima County, and portions of the City of Casa Grande. The study area is bounded by Avra Valley Road on the south, Selma Highway on the north, SR 79 on the east, and Trekell Road on the west.

The study area spans approximately 1,300 square miles. As depicted in Figure 2 on the following page, the area is so vast that it exceeds the size of the urbanized area of the Phoenix-Mesa Metropolitan Statistical area. In a similar comparison, the study area is nearly three times larger than the urbanized area of the Tucson Metropolitan area. Established economic, social and cultural networks are strongest in Phoenix and Tucson urbanized areas and will continue for the foreseeable future. The study area must identify and fulfill a regional role and scale to complement the activity in these urbanized areas.

I-10 and SR 87 are the primary regional connections into and through the study area. The city of Eloy incorporated in 1949 utilizing a grid plan of streets forming right intersections at right angles. The scale of city blocks and infill opportunities compared to the areas near the Phoenix city center is also shown on the following page in Figure 3. The existing grid structure in Eloy is an asset, providing an opportunity for infill development and the creation of a robust multimodal transportation network. The Town of Marana, incorporated in 1977, was significantly influenced by prevailing post World War II practices that emphasized automobile access in the street arrangements.











Figure 2: Comparison of Study Area Size to Urban Areas



Figure 3: City Scale Comparison (Phoenix and Eloy)





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ery large study area – larger than the Phoenix an area and three times larger than the Tucson litan area. This means there will be a range of centers throughout the region and a range of nsportation infrastructure that is needed.

treet grid in Eloy is similar to downtown Phoenix the potential to infill as the community grows.

**Executive Summary** 

## 2.0 SUMMARY OF PLANS AND OPPORTUNITIES

### 2.1 Previous Studies and Reports

A review of previous studies and plans was conducted for this study. These previous studies provided background data for policy guidance, corridor plans with countywide and statewide implications, and smaller focused studies within the study area. A summary of the key relevant outcomes of these completed and active state, regional and local transportation and economic development plans is provided in the Appendix, including key findings, recommendations, considerations, timelines, and development objectives.

An overview of these studies is shown in Figure 4. Since these studies were completed during varying economic conditions, it is necessary to compile and evaluate them together under currently understood conditions.

This study is intended to focus on updating a few key previous studies that identified transportation improvements under a different economic climate. The *Pinal County Small Area Transportation Study (SATS) (2006)* evaluated the county's transportation needs to the year 2025. According to that study, the western and north central areas were expected to grow rapidly. Recommendations from this study provided the baseline for more detailed studies within the study area, including the *Southern Pinal/Northern Pima Corridors Definition Study (2008)*, the *Regionally Significant Routes for Safety and Mobility (RSRSM) Study (2008)*, the *City of Eloy Small Area Transportation Study (SATS) (2010)*, and the *MAG Freight Transportation Framework Plan (2012/2013)*. Given changing economic conditions in the area, which led to the development of this *Southern Pinal County Regional Corridors Study*.



#### Figure 4: Diagram of Related Studies



### 2.2 Existing and Future Conditions

#### 2.2.1 Socioeconomic Conditions

Socioeconomic conditions for the study area were first evaluated by analyzing population and employment data from the Central Arizona governments (CAG) and Pima Association of Governments (PAG) Focus Area Models, within the Pinal County and Pima County areas, respectively. Future estimates are based on projections for the year 2040. The following conditions assessment is based on the most reliable date currently available.

#### **Population**

#### **Current Population**

Figure 5 shows that the vast study area exhibits few existing population centers. Primarily, the centers exist within the incorporated limits of the cities. Existing densities for the predominant land area is undeveloped or agricultural and had less than 250 people per square mile. The more densely populated centers of Eloy and Marana have higher concentrations of residents adjacent to I-10. In 2010, there were 48,100 residents and 17,300 households within the study area.

#### Figure 5: 2010 Population Density

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Source: CAG and PAG Focus Area Model (2014)



**Executive Summary** 

#### Future Population

The CAG and PAG Focus Area Models predicts that the 2040 population will experience growth within the current population centers. As shown in Figure 6, agricultural and undeveloped lands continue to have less than 250 residents per square mile. Eloy and Marana continue to experience further growth in existing areas of development, with higher residential populations along I-10, especially north of Marana Road. A total of 160,600 residents and 58,200 housing units are predicted by 2040 within the study area.

Figure 6: 2040 Population Density

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Source: CAG and PAG Focus Area Model (2014)



#### **Employment**

#### **Current Employment**

Figure 7 exhibits a jobs-to-housing imbalance suggesting that employment opportunities for residents exist outside the study area. This means the number of residents in the study area exceeds employment opportunities and many residents are leaving the study area for jobs elsewhere, thus placing a burden on the transportation system. The employment centers within the study area exist in Eloy along I-10 and within the Main Street civic center. Employment density is greatest near Marana south of Park Link Drive. The largest concentration of employees (over 2,000 employees per square mile) is located in Marana north of Moore Road along I-10. Within the study area, in 2010, there was a ratio of 19 jobs per 100 residents, or 53 jobs per 100 households.

#### **Current Employment Travel Patterns**

The U.S. Census 2011 Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employment Statistics (LODES) dataset was used to map low-wage job and worker density in and throughout the study area. The LODES data includes the number of jobs by workplace location and the number of workers by household location at the census block level.

As shown in Table 1, the majority of residents in the study area travel outside the study area for work. In the northwest, 80.5 percent of residents travel farther than 50 miles one way. In the southeast, 47.2 percent travel between 10 to 24 miles one way. The travel patterns suggest that the majority of residents commute 60 minutes or longer to work on a daily basis. Without the growth of an employment base, future residents will continue to rely on jobs outside the study area. This will result in increasing demands on the transportation network, including higher infrastructure costs.

#### Table 1: Job Counts in Work Blocks to Home Blocks by Distance

	Northwe	st (2011)	Southeast (2011		
	Count	Share	Count	Share	
Total Primary Jobs	1,997	100.0%	2,045	100.0%	
Less than 10 miles	83	4.2%	153	7.5%	
10 to 24 miles	110	5.5%	966	47.2%	
25 to 50 miles	197	9.9%	741	36.2%	
Greater than 50 miles	1,607	80.5%	185	9.0%	

Source: U.S. Census 2011 LEHD Origin-Destination Employment Statistics



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Source: CAG and PAG Focus Area Model (2014)



#### **Executive Summary**

Currently, a significant number of residents within the study area travel long distances to work, which will lead to progressively more difficult commutes and decreased quality of life. The impact of residents traveling outside the study area is an increase in congestion and degraded environmental conditions. However, the travel patterns can change as the area infills with residential and employment opportunities.

#### **Current Job Market**

Table 2 shows the current job market sectors in the study area. Educational Services is the top job sector, providing 27.3 percent of total employment. While the sectors listed in Table 2 represent the current job types, the future land use plan seeks to diversify the employment base to emphasize both basic and non-basic economic activities. Both basic and non-basic activities sustain jobs, but basic activities (such as manufacturing) tend to sustain higher wage jobs than non-basic activities (such as services and retail). Basic activities bring new dollars into the community. Non-basic activities, in most cases, circulate existing dollars within the community.

#### Table 2: Top 5 Job Counts by NAICS Industry Sector

	2011		
	Count	Share	
Educational Services	1,950	27.3%	
Transportation and Warehousing	684	9.6%	
Retail Trade	616	8.6%	
Health Care and Social Assistance	523	7.3%	
Manufacturing	500	7.0%	
Other*	2,875	40.2%	

*Source:* North American Industry Classification System (NAICS) provided from the U.S. Census 2011 LEHD Origin-Destination Employment Statistics (LODES)

\*Other includes 15 other industries, such as food service, public administration, construction, utilities, mining, and real estate.

#### **Future Employment**

By year 2040, a relatively stable employment base is predicted for the study area. As shown in Figure 8, the majority of the region is expected to see employment growth within exiting employment centers. The trend suggests an infill pattern of land use surrounding the civic centers. Employment in Eloy is anticipated to be stable for the foreseeable future. In Marana, employment growth is evident along I-10. Small pockets of employment south of Pinal Airpark Road and around Moore Road are predicted to have over 2,000 employees per square mile. The top three employment sectors anticipated in

2040 are the service industry, leisure and healthcare. Within the study area, in 2040, there is anticipated to be a ratio of 28 jobs per 100 residents, or 77 jobs per 100 households.





Source: CAG and PAG Focus Area Model (2014)



#### **Executive Summary**

#### 2.2.2 Land Use

Land use data for Pinal County utilizes the CAG database, which compiles regional land use data from member agency land use and comprehensive plans. Land use data for Pima County is from the PAG database and the *Town of Marana General Plan (2010)*. Each agency has its respective land use designations. The following land use designations were utilized in this study:

- Residential Single- and multi-family residential.
- Mixed Use apartments and condominium projects with a mix of commercial and employment.
- Commercial retail, office, amusement and tourist facilities.
- **Industrial** all industrial facilities, sand and gravel, cemeteries, mining, storage facilities, distribution centers, and warehouses.
- Institutional public, military, institutional, religious, educational, and medical uses.
- Transportation railroads, freeways/highways, and streets.
- Agriculture all agricultural, field crop, and ranch uses.
- **Undeveloped** land without structures, improvements, and open space without designation.
- **Dedicated Open Space** wildlife/wilderness areas, parks, national forests, and national monuments.
- Indian Lands reserved for a Native American tribe.
- Military area managed by the Department of Defense.

#### Existing Land Use

Figure 9 shows existing land use in the study area. In Eloy, residential neighborhoods are located in the area surrounding the existing city center and public institutional buildings. The portions of Marana located within the study area are primarily agricultural. Residential planned-unit developments are located south of Moore Road and west of the Marana incorporated limits. Existing industrial areas are located on Avra Valley Road, west of I-10. Commercial areas reflect the proximity to residential developments within the study area. Areas outside the city centers are predominantly undeveloped and agricultural. Due to the dispersed nature of residential development, it is difficult and costly to provide an adequate transportation network that supports connectivity, mobility, and efficient movement.



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Source: CAG, PAG, Town of Marana General Plan (2010)



**Executive Summary** 

#### Future Land Use

As stated in the *Pinal County Comprehensive Plan*, Pinal County residents emphasize the value of open space and agriculture. Protection of existing agriculture and productive agricultural lands is limited in the current form of the Comprehensive Plan. The trend toward speculation and development will continue for the foreseeable future given current policies.

Three tiers of mixed-use activity centers are identified in the Comprehensive Plan, ranging from low intensity activity centers that cover approximately 100 acres to high intensity activity centers that are approximately 1,000 acres with a mix of professional office, business parks, and industrial uses.

Approximately 50 activity centers are identified in the plan. Eight centers are envisioned within the study area. Significant infrastructure needs will constrain development of these centers in a cohesive manner consistent with plan goals. The travel demand between existing centers and future centers will be a counter balance to the desired outcomes of reducing vehicle travel and encouraging the completion of trips via alternatives to personal vehicle travel.

Market demand for planned industrial space near the Pinal Airpark is not yet well-understood. Market momentum will continue to show preference for the industrial areas with existing transportation access. A diverse building stock of warehousing and distribution centers exists near competing air cargo facilities in Tucson, Phoenix, and Mesa. Transportation networks in Pinal County will need to promote land division, diverse routing options, and successional planning strategies to address long-term market preferences and development cycles.

As the region grows, it is important to encourage the location of job growth with residential growth, which will reduce long distance travel for job access and economic development.

### **ACTIVITY CENTERS**

The Urban Land Institute (largest international organization representing the development industry) and the National Home Builders Association have promoted the advantages of mixed-use development over the last 20 years, and this concept has more recently been embraced as a "smart growth" strategy. Mixed-use developments incorporate residential units, commercial properties, and employment uses. These such as performing arts centers, entertainment venues, museums, education and training centers, and community gather places. Mixed-use developments allow residents to minimize and shorten trips by clustering multiple services and activities and by supporting alternatives to automobile transportation. Focusing development on activity centers can reduce sprawl, conserve open space, and protect irreplaceable natural resources on the urban fringe.

#### **Buildout Land Use**

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Future land use projections made by the CAG and PAG models reflect existing planning documents, indicating a predominantly urbanized study area with selected locations preserved for future parks and dedicated open space. The plans maintain the publicly accessible open space and natural areas for mega regional parks exceeding 50,000 acres. Within the abundance of existing open space along the boundaries of Pinal County, seven regional parks are proposed, of which four are proposed to be centrally located.

Within the PARA study area, the Pinal County Open Space and Trails Master Plan also identifies Regional Park #1, proposing the regional park north of Picacho Peak State Park and consisting of conservation and development open space. The total developed open space acreage would be no larger than 100 acres of the total approximately 50,680 acres. Proposed amenities include trailheads with shade armadas, vehicle parking, and multi-use paths and trails.

Figure 10 shows the study area's land use at buildout when existing agriculture and undeveloped land is replaced by residential uses. The residential land use will expand to include a full range of residential options, such as higher-density neighborhoods consistent with demographers and researchers who describe the preference of younger people to choose locations closer to work, recreational activities, and other amenities. A large portion of the planning area is designated as moderate low-density residential (1.0 to 3.5 dwelling units per acres). To provide flexibility and promote mixed use concepts, alternative land uses may be allowed if certain guidelines are met. Within the land use, medium- and high-density residential, commercial, and employment (office and light industrial) developments are permitted to some extent without a Comprehensive Plan amendment.



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The *Pinal County Comprehensive Plan* permits the medium-density residential uses at the intersection of higher roadway classifications. As the development footprint grows, the plan calls for locations adjacent to higher roadway classifications.

Commercial uses are allowed anywhere up to 25 acres. For commercial uses greater than 25 acres, at least 1/4 mile separation from planned or existing single-family residential development is required.

Within this study area, the *Pinal County Comprehensive Plan* identifies highintensity activity centers that are approximately 1,000 acres and are located at the confluence of I-8 and I-10, I-10 and SR 87, and near the Pinal Airpark. A high-intensity activity center, as defined in the *Comprehensive Plan*, is approximately 1.4 miles in diameter and consists of three concentric zones. In the center core zone, the activity mix suggests 50 percent basic employment, 20 percent service employment, and 30 percent residential. The primary means of mobility are transit circulator, walking, and bicycling. Surrounding the core zone is the core periphery zone, consisting of 40 percent basic employment, 35 percent service employment, and 25 percent residential. The transition zone surrounds the core periphery zone and is suggested to consist of 50 percent basic employment, 15 percent service employment, and 35 percent residential. In the transition zone, primary means of mobility include transit circulator, bicycling, fixed route bus, and private automobile.

In Eloy, areas designated for commercial and industrial use are adjacent to I-10 and SR 87. In Marana, there are more commercial areas located on either side of I-10 between Tangerine Road and Moore Road. Industrial areas are concentrated along existing highways, I-8, I-10, SR 84, and SR 87.

#### Figure 10: Buildout Land Use

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Source: CAG, PAG, Town of Marana General Plan (2010)



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#### **Near-Term Land Use and Development Plans**

The Pinal County Comprehensive Plan is a broad policy document that guides decision-making about growth and development. While the Comprehensive Plan projects buildout conditions in the region, it is important to also understand near-term land use and development plans to determine infrastructure needs and prioritization of funding.

#### Entitlements

Near-term development, anticipated to start within the next 10 years, and recent development, within the past 10 years, can be seen in Figure 11 and summarized in Table 3. Entitlements and recently completed developments provide insight into the location and character of anticipated development, requisite regional approvals, and potential future for the study area.

Data collection methodologies vary by agency throughout the study area. Available data includes a number of planned area developments, acres for total area approved by PUD or similar requisite development entitlements, and the total number of units within the entitled development area.

Information, provided by CAG, for the Eloy and Pinal County area consists of a 2012 survey of developers intended to gauge timing and development intentions. The total number of units contained within the approve development does not distinguish between the constructed number of units and future development. In Marana, the town tracks entitlements with additional detail to estimate the constructed number of units within each anticipated development.

Entitled areas in Pinal County are predominantly residential and surround the Eloy area. In Marana, the most significant anticipated development is located between the Moore Road and Tangerine Road corridor.

#### Table 3: Residential Development Trends

	Started – Past 10 Years			Anticipate	ed To Start –	Next 10 Years*
	Number	Acres	Built Units	Number	Acres	Anticipated Units**
Casa Grande	27	3,930	5,620	54	14,870	45,050
Coolidge	14	2,810	1,340	13	7,250	25,360
Eloy	5	3,700	670	48	36,730	134,510
Marana	8	1,445	6,176	21	6,031	15,244
Unincorporated	8	2,490	690	15	8,780	28,330
Study Area	62	14,370	14,500	151	73,650	248,500

Based on CAG's 2012 Developer Survey on when a particular development would start and does not suggest all units will be completed within 10 year period and will be dependent as demand is needed which may take several years for completion \*\* Total number of units entitled within the development plans and does not suggest all units will be completed as construction will be

dependent as demand is needed which may take several years for completion



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Source: Pinal County: CAG Development Database, 2012; Town of Marana, 2014



#### **Executive Summary**

The overall trend remains a challenge for all areas of the study area. With a lack of job centers and employment opportunities to accompany residential development, residents are driving long distances to access jobs.

#### **Development Plans**

As the study area is very dynamic, in addition to the documented planned development and growth reflected in the existing plans and identified in the previous sections, Pinal County is currently working to attract additional opportunities. These are not reflected in the current adopted plans. However, they are documented in this section and will be included in future travel demand projections in subsequent phases of this study. Known planned residential and industrial projects are depicted in Figure 11. Potential industrial parks within and adjacent to the study area are listed below, with a summary of status provided in the Appendix.

- Toltec Industrial Park
- Sunshine Industrial Park
- Eloy Industrial Park
- Arizona Central Distribution Center
- Central Arizona Commerce Center
- Regional Gateway Commerce Center
- Red Rock Industrial Park
- Inland Port Arizona
- Pinal Industrial Park

#### Near-Term Committed Land Use

Near-term committed land use is based on existing land use estimates with entitled areas as shown in Figure 12. In the near-term, several existing agricultural areas in Eloy will be replaced with residential growth. However, as a whole, the study area is predicted to maintain the majority of existing agricultural areas. Dedicated open space in the form of parks will be located in the northeast segment of the study area between SR 79 and I-10. There is no current dataset for planned commercial development to accompany the anticipated residential growth.

Figure 12: Near-Term Committed Land Use (10 years)

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Source: CAG, PAG, Town of Marana General Plan (2010)



#### **Executive Summary**

A large amount of land within the corridor is entitled. However, the character of development has not been well-defined in the corridor, nor are there welldefined standards or guidelines to guide future development patterns. There are opportunities to create integrated, multijurisdictional, development standards and guidelines that describe the character of future development. Standards and guidelines can either be created by the county with input from the adjacent cities, or a combined policy can be created and attributed to a geographically defined overlay area. As an alternative to standards and guidelines, other development regulations or policies could be created to better define development patterns in Pinal County, especially along the I-10 Corridor.

#### 2.2.3 Land Management and Jurisdictions

Land Management within the study area can be understood in three relatively evenly distributed types. These areas are shown in Figure 13 and summarized in Table 4 on the following page.

One third of the study area is privately managed lands within incorporated and unincorporated areas that cover roughly 460 square miles. The incorporated areas and jurisdictions are shown in Figure 14, which represents approximations of the jurisdictional boundaries. Another third is State Trust Lands outside of federal and regional designations that constitute 435 square miles of the study area. Although the *Pinal County Open Space and Trails Master Plan* provides the base open space network, designations of private state trust or Bureau of Land Management lands as open space or regional parks has no regulatory impact. The remaining third of the study area is comprised of federal lands (including Bureau of Land Management and Bureau of Reclamation), federal open space (predominately the Ironwood Forest National Monument), tribal lands (Tohono O'odham Nation), and parks (Picacho Peak State Park). These lands cover 429 square miles.

#### Figure 13: Land Management

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### **Executive Summary**

Geographically, the boundaries of Pinal County and periphery of the study area are controlled by State Trust Land and managed by the Arizona State Land Department (ASLD). These lands, held in trust, are intended to benefit 14 beneficiaries of the trust and may eventually transfer to alternative interests through sale or lease. Due to recent interpretation of state law, ASLD is limited in its ability to comprehensively plan future uses of the trust lands. The history and role of ASLD is described in the following section.

Tracts of federal and military land are scatted throughout the study area. The largest contiguous blocks of federal open space include the Ironwood Forest National Monument in the southwest, Tribal land consists of the Tohono O'odham Nation in the west.

#### Table 4: Land Management within Study Area

	Square Miles	%	
Incorporated and Unincorporated Areas	460	34.7%	
Eloy incorporated area	113	8.5%	
Marana incorporated area	96	7.3%	
Casa Grande incorporated area	12	0.9%	
Coolidge incorporated area	7	0.5%	
Arizona City (unincorporated)	11	0.8%	
Private lands (unincorporated)	221	16.7%	
State Trust Lands	435	32.9%	
State trust lands	435	32.9%	
Federal Lands and Open Space	429	32.4%	
Federal open space	170	12.8%	
Tribal land	13	1.0%	
Park and wilderness area	9	0.7%	
Federal land and military	30	2.3%	
Future park and protected open space	207	15.6%	
Total	1,324	100%	

Figure 14: Jurisdictions and Census Designated Places

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![](_page_18_Picture_9.jpeg)

**Executive Summary** 

#### Arizona State Land Department

State trust lands are not public lands but are, instead, the subject of a public trust created to support the education of Arizona's children. On February 24, 1863, by an Act of Congress, the Territory of Arizona was established, reserving Sections 16 and 36 of each township for the benefit of the common schools. The State enabling Act, passed June 20, 1910, allowed the Territory of Arizona to prepare for statehood, adding that Sections 2 and 32 of each township to be held in trust for the common schools, as well as other selected beneficiaries. Currently, Arizona has approximately 9.28 million surface acres and 9 million subsurface acres of land held in trust. The trust lands constitute approximately 13 percent of land in Arizona.

State trust land is distinguished from public land, such as parks or national forests, because all uses of the land must benefit the trust beneficiaries. Congress, in granting the state trust land, recognized the value of the land and the importance of providing support to public schools and public institutions. The Common Schools (K-12) are the largest beneficiary owning approximately 87 percent of the land and receiving close to 90 percent of the revenue.

The trust law requires that trust lands be sold or leased for their highest and best appraised use to the highest bidder at public auction. Trust lands can generate income for schools through the sale as well as lease of trust lands for grazing, agriculture, municipal, school site, residential, commercial, and open space purposes.

In the case of this study, there are many ASLD lands potentially affected by a proposed transportation system in the area. In general, improved access will benefit state lands and improve the ability to general funds for its mission from the sale of property at auction. At the same time, if the market does not support the sale of property in a particular area, improved access may have limited effect on property value. During this study process, ASLD expressed concerns that the introduction of a UP Red Rock Classification Yard along I-10 near Picacho Peak will limit access to the I-10 freeway for land that is not yet believed to be beneficially marketable but that it could become so in the future. In light of that, ASLD requested assurance that access not be unnecessarily restricted to its lands east of a potential future UP Red Rock Classification Yard. This may require alternative access from I-10 interchange locations north and south of the proposed yard and will have an influence over how the remainder of the transportation system is configured within the area.

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In areas closer to near term commercial or residential activity, how the transportation system is configured could affect when and how much land is made available to the market in the next few years. Typically, ASLD meters the release of land to prevent leapfrog growth patterns and encourages efficient use of resources for the state as well as local communities. For the PARA analysis, this focused attention on the areas adjacent to or near the I-10 corridor.

Identifying corridors for future transportation options, with ASLD participation, helped to provide understanding around a trunk transportation system when remote areas of ASLD property become more attractive in the market place. Consequently, ASLD's responsibility for and control of land within the study area has a potentially significant influence on the decisions at both the regional and the local levels regarding the transportation plan for the area.

#### Land Ownership Next Steps

The benefit of having large assemble state lands is that organized and integrated land development is possible and easier to achieve than many areas in the region that have fragmented ownership. Fragmented ownership occurs when multiple entities, with inconsistent development intentions, own small areas or parcels. This makes the creation of organized development, or the ability to create a consistent character, difficult to achieve.

Additionally, it is difficult to plan for transportation improvements since development may occur along different timelines, thereby triggering different infrastructure improvements in an uncoordinated manner that could be more costly and less efficient. A goal should be to encourage multiple contiguous owners to work together and create a master development plan for their lands. This would allow more efficient provision of infrastructure improvements, create more efficient and valuable development, increase municipal revenues and distribute developer responsibility more fairly.

Given the large areas of land currently undeveloped, phased development of these areas adjacent to existing developed areas can leverage infrastructure funding, promote desired development activity, and preserve future opportunities. Maintaining open space will also help to preserve the character of the area, which is highly valued by the area residents as a unique asset. By leveraging this as an asset and strategically focusing development and infrastructure, the region can maximize its economic development potential and market value and its attractiveness to new investment. As the areas grow over time, it is important to focus the timeline of development to be contiguous with previous development to ensure infrastructure funding is available to provide adequate facilities to newly developed areas.

#### 2.2.4 Open Space

There is approximately 386 acres of open space (29.1%) and represents a large portion of the study area. How that open pace develops will be critical to planning the region and local road network, effective access management, drainage, and overall character of the area. The benefits of opens space can be leveraged to create community value through preservation, access and character of the opens space in the community. Open space can then lead to increasing economic value by increasing development premiums through visual and physical access to improve open space.

![](_page_19_Picture_18.jpeg)

**Executive Summary** 

#### **Drainage and Floodplains**

Figure 15 shows the existing drainage pattern in the study area and the presence of the 100-year floodplain identified by the Federal Emergency Management Agency (FEMA) along the east side of I-10 and south of the county line. The proximity of flood zones to major transportation facilities, such as I-10 and I-8, pose potential issues and limitations to development. Integrating these zones as an amenity within development or as public open space may form part of a mitigation strategy, promoting development adjacent to the existing urbanized and incorporated areas.

Development in the study area is partially guided by the drainage features that traverse the study areas. With the exception of Eloy and Marana, west of I-10, rivers and washes follow natural water courses and traverse the study area. The CAP canal runs north to southeast of the study area and is managed by the Bureau of Reclamation (BOR). The BOR constructs and operates dams, reservoirs, canals, and other water management facilities. Its overall mission is to meet the increasing water demands while protecting the natural environment and the public's investment in these structures. The BOR preserves open space by managing public lands for multiple uses, including agriculture and recreation, and by conserving natural, historic, and cultural resources through resource management plans. The BOR's consideration of applications to use project lands and water surface is completely discretionary and it reserves the right to refuse to authorize any use that may be incompatible with the federally authorized purposes of reclamation projects or interfaces with rights or operations. Developable areas are somewhat limited by rivers, washes, and flood zones that traverse large portions of the study area. It is important to preserve these areas as assets and encourage sensitively designed adjacent development. Drainage features can be incorporated into development as an amenity as the area grows.

![](_page_20_Figure_5.jpeg)

the Printing of the of the real of the real

![](_page_20_Figure_6.jpeg)

Source: Pinal County, FEMA

![](_page_20_Picture_9.jpeg)

#### **Executive Summary**

#### **Conservation Potential**

#### Special Status Species and Critical Habitats

The conservation potential assessment was conducted based upon the Species and Habitat Conservation Guide (SHCG) tool published in 2011 by the Arizona Game and Fish Department. This SHCG tool provided a broad regional assessment of conservation potential in the study area. In the SHCG, conservation potential is measured in six levels, as shown in Figure 16, where the lowest conservation potential is shown in the lightest blue color and the highest conservation potential is shown in darkest blue.

The department's work supports efforts to identify wildlife resources that are an important component of Arizona's natural environment. As new roads, communities, and energy corridors are built, the wildlife that traditionally moved through the area is forced to find ways around or through the new features, increasing the likelihood of interactions with humans. Some of these interactions are simply nuisance encounters, but some may be more serious where harm can come to a human or animal. Increasing connectivity for wildlife in a planned manner will reduce the frequency of negative interactions and will allow animals to access the resources they need.

Areas of high conservation potential should be closely examined prior to potential development. It is important to preserve sensitive wildlife and conservation areas as well as maintain wildlife corridors. According to the Gallup Arizona Poll and recorded in the report *The Arizona We Want*, Arizonans highly value aesthetics and the natural environment. The report states, "It's important that growth and development in the future respect the passion that citizens feel for their environments." The poll indicates that the policy ideas most favored by citizens to protect the environment include adopting water management plans statewide and implementing policies that balance population growth with preserving open space.

#### Figure 16: Habi-Map

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![](_page_21_Figure_8.jpeg)

Source: Species and Habitat Conservation Guide (SHCH) tool (2011). Arizona Game and Fish Department

![](_page_21_Picture_11.jpeg)

#### **Executive Summary**

#### Recreation, Parks, and Trails

The Pinal County Open Space and Trails Master Plan (2007) and the Town of Marana Parks, Recreation, Trails, and Open Space Master Plan (2010) provide the base open space and trail network shown in Figure 17.

#### **Open Space**

Existing open space areas within the study area consist of the Ironwood Forest to the southwest and the centrally located Picacho Peak State Park. Proposed open spaces are located to the southwest and east. Two regional parks are proposed to the north and east of Picacho State Park, which are easily accessible from the existing transportation network.

#### **Trail Network**

The Town of Marana designates trails as either river, park, greenway, paved/unpaved path, unpaved trail, or single track trail, all of which allow for multiple non-motorized uses. There are currently no designated or proposed motorized trails in Marana. For the purpose of this study, trails are defined according to the Pinal County Open Space and Trails Master Plan (2007) as follows:

- Multi-Use Trails non-motorized trails that provide for a range of uses, including hiking, equestrian, and biking
- Off-Highway Vehicle (OHV) Trails motorized trails that are separate from multi-use trails and allow OHV usage
- County Trails trails which provide regional connections

The existing trail network consists of two county trails, the CAP Canal Trail and the Juan Bautista de Anza Trail, which provides national and regional trail connections to Maricopa County and Pima County. Existing multi-use trails are both paved and unpaved and are located in the northwest and southwest of the study area. Proposed connections follow drainages and the existing transportation network to link existing and planned trails to open space. A proposed OHV trail is located adjacent to SR 79.

Proposed multi-use trail corridors include open space buffers and connect to Santa Cruz River, Picacho Peak, Tortolita Mountains, Black Mountains, and Coronado National Forest.

Utilizing the areas of high conservation potential in concert with the need for recreation areas and parklands, the region can take advantage of

designated open space/parks and treat them as assets. Development adjacent to open space and preservation areas would be premium and increase the attractiveness of area development. Transportation access to these areas, while maintaining the character of the area, would be essential.

![](_page_22_Figure_15.jpeg)

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![](_page_22_Figure_16.jpeg)

Source: Pinal County Open Space and Trails Master Plan

![](_page_22_Picture_19.jpeg)

#### **Executive Summary**

#### 2.2.5 **Transportation Network**

Currently, the transportation network within the study area, is centered in and around Casa Grande, Eloy, and Marana. It is important to build upon the existing transportation network to maximize value capture from existing fund that is available. As the region grows, resolving facility gaps or inconsistencies within the current transportation network will ultimately enhance circulation options, while increase opportunities for more desirable development. Also, it is important to have complementary facilities to support long-distance trips. An improved, more robust transportation network will improve market potential by improving access, mobility, and circulation for people and goods.

#### **Existing Roadway Network**

State and the state of the second

The existing roadway network, depicted in Figure 18 and Figure 19, is comprised of two interstates, four state highways, major roads, and local roads. There are a total of 13 interchanges located along I-10 and two along I-8. Within the study area, I-10 is used for long distance travel, with state routes serving as major arterials. Minor arterials and collectors provide local circulation.

Figure 20 details traffic data volumes on the system, based on the CAG and PAG Focus Area Model, which utilizes 2010 average daily traffic (ADT). I-10 carries the highest volume of traffic within the study area, with Jimmy Kerr Boulevard, Selma Highway, SR 287 (just outside the study area), Sunland Gin Road, and Marana Road carrying significant volumes.

#### Figure 18: Existing Facility Type

## Ironwood lationa Monumen Facility Type (2010) Maior Arteria Minor Arterial PINAL COUNTY MA COUNTY Other Road Land Use Existing Open Space Proposed Open Space Indian Lands Military and Federa

Source: CAG and PAG Focus Area Model (2014)

![](_page_23_Figure_10.jpeg)

![](_page_23_Figure_12.jpeg)

Source: CAG and PAG Focus Area Model (2014)

![](_page_23_Figure_14.jpeg)

![](_page_23_Picture_16.jpeg)

![](_page_23_Figure_17.jpeg)

Figure 20: Existing Average Daily Traffic and Posted Speed

Source: CAG and PAG Focus Area Model (2014)

#### **Executive Summary**

#### Future Roadway Network

The future transportation network shown in Figure 21 is based on data gleaned from previous studies including, but not limited to, the *Pinal County RSRSM Study (2008), PAG 2040 RTP (2010), Pinal County Transit Feasibility Study (2011),* and the *PAG RSC Study (2014).* Ongoing transportation facility studies, such as the *Passenger Rail Corridor Study, I-11 Intermountain West Study, and North-South Corridor Study* were also considered.

If constructed, the I-11 and North-South corridors will provide a north-south connection and alternative to I-10 by connecting Pinal County to Pima County in the south and to Maricopa County to the north. Local traffic will also provide north-south and east-west connections throughout the study area via six-lane arterials and parkways as proposed by the *Pinal County RSRSM Study (2008)*. As shown in Figure 21, anticipated transit service within the study area is concentrated along major highways. Future transit includes:

- Transit centers in Casa Grande and Eloy
- 3 park-and-ride lots along I-10
- Passenger rail along I-10 south of Eloy and near UPRR north of Eloy
- Bus rapid transit service along I-10 south of Marana Road
- Express bus service along Tangerine Road
- Regional bus service along I-10, SR 87, and SR 84 connecting Eloy, Red Rock, and Casa Grande to northern Pinal County
- Local circulator service within Marana provided by Marana Sun Shuttle

As stated in the *Pinal County Transit Feasibility Study (2011)*, transit service and regional connections between Casa Grande and Eloy are important due to anticipated future growth. Eloy is expected to be Pinal County's fastest growing community with increased employment opportunities.

![](_page_24_Figure_13.jpeg)

Figure 21: Planned Roadway / Transportation Network

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Source: Pinal County RSRSM Study (2008), PAG 2040 RTP (2010), Pinal County Transit Study (2011), PAG RSC Study (2014), Passenger Rail Corridor Study, I-11 Intermountain West Study, North-South Corridor Study

![](_page_24_Picture_17.jpeg)

**Executive Summary** 

The facility type projected for the 2040 network is depicted in Figure 22 and Figure 23, as reflected in the CAG and PAG Focus Area Model. In the future, within the study area, I-10, SR 87, and SR 287 (just outside the study area) continue to be the primary major facilities.

Figure 24 depicts the future projected traffic volumes within the study area. Traffic volumes are anticipated to increase significantly on I-10, as well as on Eleven Mile Corner Road, Toltec Road, Battaglia Road, Houser Road, and Marana Road. These future projections indicate there may be a need for additional facilities carrying both local and longer distance trips.

#### Figure 22: Future Facility Type

![](_page_25_Figure_5.jpeg)

Figure 23: Future Number of Lanes

![](_page_25_Figure_8.jpeg)

A Martin and a Martin

Source: CAG and PAG Focus Area Model (2014)

Source: CAG and PAG Focus Area Model (2014)

![](_page_25_Figure_11.jpeg)

![](_page_25_Picture_13.jpeg)

![](_page_25_Figure_14.jpeg)

#### Figure 24: Future Average Daily Traffic and Posted Speed

Source: CAG and PAG Focus Area Model (2014)

#### **Executive Summary**

#### Freight

#### Existing Freeway Truck Volume

The annualized average 24-hour volume of vehicles at a given point or section of highway is called a traffic count. It is normally calculated by determining the volume of vehicles during a given period and dividing that number by the number of days in that period. Four ADOT facilities within the study area (Appendix 2) describe the vehicle and truck volumes on the roadway for the year 2012.

A strong freight network is crucial to attracting and retaining businesses and jobs because how the network performs will ultimately shape the logistics performance that Arizona businesses will use to compete with other regions, states and countries. There are two pillars to competitive performance. The first is fast, reliable, productive freight service for which the risks of disruption are managed and the pressures of growth on the network are addressed. The second pillar is freight service end-to-end – from pick-up at shippers' doors to delivery to receivers' doors – because the premise of freight shipment is that buyer's receive the goods. This means that the regional roadway network that connects towns and businesses and the urban network that serve industrial parks and commercial zones are as much a part of competitive freight performance as the interstates.

#### Major Freight Generators

Major freight generators within the study area reflect the agricultural, resource mining, and construction trades and form a significant composition of the economic activity.

The prominent freight generators within Eloy are:

- Ballard Truss
- HASA Chemicals
- Monsanto Company
- San Juan Pools
- Townley Manufacturing Co.
- Schuff Steel
- Republic Plastics

- Otto Environmental Systems, Inc.
- Elrus Aggregate Systems
- Arizona Pacific Wood Preserving, Inc.

The prominent freight generator within Marana is:

• Marana Stockyards and Livestock

Within the study area and the surrounding context, the following freight generators rely upon the transportation network:

- Red Rock Feeding Co., Red Rock
- Cal Portland Rillito Plant, Rillito
- Hayden Concrete Products, Rillito
- M C Davis Co., Arizona City
- Cardinal IG Co., Casa Grande
- Fertizona, Casa Grande
- Fresh Start Bakeries, Casa Grande
- Graham Packaging Co., Casas Grande
- Norm Bingham Equipment Co., Casa Grande
- Pinal Ways Magazine, Casa Grande

While existing major freight generators are another important consideration when making long-term transportation planning decisions, regional clusters of freight generators will provide planning an economic development opportunities to support an efficient and reliable surface transportation network. Such strategies to optimize supply chains and concentrate complementary industries in a common location could enhance the ability of the region to attract additional major shippers and carriers.

#### Freight Rail Operating Facilities

The railroad network in the U.S. is mostly privately owned and includes not only the track over which the rail carrier operates and its trains, but also terminals and facilities. There are two principal categories of facilities. One category comprises facilities that support the railroad's operations, effectively a component of a railroad's "factory." An example of this type of facility is the rail classification or marshalling yard. A "yard" is a series of tracks used for sorting and consolidating cars into trains. Railroads had operated as a hub and spike system built around their yards long before airlines adopted a similar operating model.

Rail yards where trains from all parts of a railroad's network converge to exchange freight cars can be large, covering several thousand acres. The proposed Red Rock Classification Yard, to be located adjacent to I-10 near Picacho Peak, is an example of a yard where trains from Tucson and Phoenix will be combined into larger trains destined for the east or west. Yards can also be smaller facilities distributing and collecting cars on trains serving local industries. The Buckeye Yard on the western edge of the Phoenix metropolitan area is an example of this type of terminal.

UP's "Sunset Route" connects Southern California to El Paso, Texas, and through the State of Texas and the Midwest to Chicago. The Sunset Corridor is UP's principal corridor connecting the Los Angeles Basin, including the Ports of Los Angeles and Long Beach, with markets in the Midwest and East. Although the line is currently a mix of double and single track, UP is completing improvements that will eventually double track the Sunset Corridor in its entirety. The line serves communities and economic centers in the southern part of the State of Arizona, including Yuma, Wellton, Gila Bend, Maricopa, Casa Grande, Eloy, Marana, Tucson, Benson, and Willcox. Primary commodities carried on the route are intermodal, coal, metallic ores mined in Arizona, automobiles, and general merchandise.

While UP serves Tucson and Pinal County directly through the Sunset Corridor, UP accesses the Phoenix area by a lesser used line, the Phoenix Subdivision. This 125 mile route connects to the Sunset Corridor near Eloy and terminates at a point west of Phoenix. Maximum operating speed on the line is 60 mph with train activity currently at fewer than 10 trains per day.

![](_page_26_Picture_40.jpeg)

#### **Executive Summary**

UP also has direct access to markets in Mexico through its Nogales Subdivision that connects Tucson to Nogales, Mexico. At the U.S./Mexico border near Nogales, UP connects with Ferrocarril Mexicano (Ferromex) giving the railroad (and the region) access to the maquiladora industry and Mexico's industrial centers. Ferromex also serves the Port of Guaymas. The line as a maximum speed of 40 mph. The line to Nogales as well as the connecting Ferromex line is also restricted to lower capacity freight cars, a disadvantage to shippers because of the higher operating cost per ton transported.

Despite the crossing location at Nogales, currently, the majority of UP's Mexico traffic flows through the U.S. ports of entry at Laredo, Texas (37 percent) and Eagle Pass, Texas (32 percent). Nogales is UP's third largest border crossing with 12 percent of the traffic.

#### Air Freight Inventory

Most airports with scheduled commercial passenger service have some level of freight activity in the form of belly cargo. Freight forwarders are general active in every market, and integrated express services like UPS and FedEx serve all major airports within the Sun Corridor. The major difference in the services between airports is the frequency of service and the size of aircraft utilized. The air-cargo business has shifted in three significant ways:

- 1. More shipments have shifted to trucks because of cost,
- 2. More air cargo is carried via passenger aircraft, and
- 3. FedEx and UPS have emerged as a near duopoly in expedited parcel shipments.

Within the Sun Corridor, four airports of varying sizes have cargo handling ability, including belly cargo or all-cargo. Table 5 provides a list of these airport facilities and their runway dimensions. As shown, these airports each have a runway with sufficient length to accommodate take off and landings for a smaller integrated express carrier or all-cargo carrier jet, such as a Boeing 727 aircraft (minimum runway length of 5,800 feet). Three airports have the ability to accommodate larger freight aircraft that would likely be flown by an integrated express carrier or all-cargo carrier utilizing an airport facility for a hub operation, such as a McDonnell Douglas MD-10 or Boeing 747 aircraft (runway length greater than 9,800 feet). Such a hub operation would include package sorting facilities rather than straight transfer of packages to trucks.

#### Table 5: Sun Corridor Air Cargo Facilities

Airport Facility	County	Longest Runway Length x Width (feet)
Phoenix Sky Harbor International Airport (PHX)	Maricopa	11,490 x 150
Tucson International Airport (TUS)	Pima	10,996 x 150
Phoenix-Mesa Gateway Airport (IGA)	Maricopa	10,401 x 150
Pinal Airpark (MZJ)	Pinal	6,849 x 150
	1 0010	

Source: Sun Corridor Freight Framework, 2012

In addition to the runway length, factors that would influence the selection of one of these airports as a hub for air cargo could include air traffic control during night time hours, available land on or surrounding the airport for sorting facilities, roadway access to the interstate system, and environmental concerns such as noise control.

In lieu of attracting new air-cargo hubs, which requires significant investment, public private partnership, and longterm commitments, leveraging existing assets for air-cargo operations and new uses will be the most advantageous strategy in the short-term. Although air-hub operations may not be likely for these airports, there is still potential for substantial logistics operations, and with that potential, a need to improve connecting road networks.

Intermodal Facilities and Transload Terminals with Transfer Capacity

Traditionally, railroads would serve all their customers at their loading docks. The introduction of intermodal trailer and

container services require shippers to truck their freight to specially designed terminals that have the equipment for transferring trailers and containers to or from flat cars. These facilities are located strategically on the Class I railroad network to take advantage of large markets and concentrated movements of containerized freight, most often near major metropolitan areas or adjacent to major marine port facilities.

While intermodal growth over the past 20 years was primarily driven by international trade, development of new intermodal facilities and railroad operating and marketing practices has increased the viability of all-domestic intermodal moves. Nationally, rail carriers, with the assistance of some public subsidies, have invested heavily in creating terminals bridging the modal capabilities of roadway, rail, and marine cargo.

Railroads also recognized that by providing central facilities for loading or unloading other types of freight cars, they could both penetrate a competitor's market without direct access to a shipper and provide rail service to customers lacking spur track access. By also serving multiple shippers through these "transload" or transfer terminals, railroads enjoy the added benefit of avoiding the high cost to shippers. Table 6 details the nearest transload facilities to the study area. Railroad customers, in turn, benefit from the value-added services that can be provided at these transfer terminals. These facilities are often equipped with specialized equipment to facilitate expedited loading/unloading. These may include specialized pumps and piping, conveyors, and cranes.

#### Table 6: Near Operator

Freeport Logistic

Port of Tucson

![](_page_27_Picture_25.jpeg)

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	Location	Facility Type
CS	4625 N 45 <sup>th</sup> Street, Phoenix	Break bulk products; warehouse storage
	6964 E Century Park Drive, Tucson	Break bulk products, produce, frozen foods

Table 6: Nearest Transload Facilities to Study Area

#### **Executive Summary**

#### 2.2.6 **Estimated Cost of Plan**

In response to land use plans, traffic engineers have described preliminary concept of regional routes and corridors. A series of six-lane parkways and arterials describes a means to address the travel demand generated from the land use plans. The 130- to 150-foot roadway cross sections feature 12- to 14foot travel lanes. Design standards describe posted speeds of 50-65 miles per hour (mph) for Parkways and 35-50 mph on arterials.

Vehicles speeds play a critical role in the cause and severity of crashes. Lowering the frequency of injuries and fatalities is a crucial public health goal for the study area. The risk of pedestrian fatalities where vehicle speeds top 50 mph increases substantially, while 30 mph speeds reduce the risk to 40 percent and 20 mph speeds lower the risk further to less than 10 percent.

Total cost to implement the Regionally Significant Routes is estimated at nearly \$10 billion for all of Pinal County. Within the study area, rough magnitude cost estimates anticipate planned buildout to exceed \$5 billion (Table 7). The unit estimates of probable costs in the plan assume that new roadways include a minimum level of landscaping limited to gravel or decomposed granite and a minimum number of plants. The unit estimate of probable cost does not include costs for right-of-way acquisition. Inclusion of right-of-way unit costs will require detailed right-of-way investigation in future studies.

While the vision for the multimodal transportation improvements is to provide a "high level of safety ... for automobile, transit, and pedestrian trips," the high vehicle speeds, wide travel lanes, and limited amenities for pedestrians are gaps between vision and outcomes which can be overcome. The financial constraints of initial infrastructure capital cost, as well as long-term operations and maintenance, will burden development over the long term.

Real estate development describes these pre-development costs and preoccupancy costs as the amount of investment, or "lift", required prior to development for an area.

		Exi	sting	Future		Rough Magnitude of Cost	
Classification	Length (miles)	Number of Lanes	Pavement Condition	Number of Lanes	Pavement Condition	Per Mile	Total Capital and 20-year O & M
Parkway	30	2	Paved	6	Paved	\$8 - 9.5 Million	\$260 - 310 Million
Parkway	5	2	Unpaved	6	Paved	\$8 - 9.5 Million	\$40 - 50 Million
Parkway	30	-	-	6	Paved	\$25 - 28 Million	\$830 - 920 Million
Arterial	10	4	Paved	6	Paved	\$4 - 6 Million	\$40 - 70 Million
Arterial	135	2	Paved	6	Paved	\$8 - 9.5 Million	\$1190 - 1410 Million
Arterial	80	2	Unpaved	6	Paved	\$8 - 9.5 Million	\$700 - 840 Million
Arterial	85	-	_	6	Paved	\$20 - 23 Million	\$1870 - 2150 Million

Source: Rough magnitude of cost estimates utilized methodology from a November 2010 bqAZ Memorandum and were updated to present dollars.

![](_page_28_Picture_12.jpeg)

#### TOTAL: \$4.9 - 5.7 Billion

#### Annual Capital Per Year

25 Year Plan	\$200 - 230 Million
50 Year Plan	\$100 - 120 Million
75 Year Plan	\$70 - 80 Million
100 Year plan	\$50 - 60 Million

**Executive Summary** 

#### Workshop 1 Summary 2.3

Project Workshop #1 was conducted on May 8, 2014. While other focused outreach and agency meetings had previously occurred as part of the project scope, this meeting was the first meeting where all the stakeholders were invited to provide feedback on the findings to date and provide input to shape the scenarios and alternatives for the tasks to follow. The meeting included representation from Pinal County, City of Eloy, Town of Marana, Maricopa Association of Governments (MAG), ADOT, UP, ASLD, and private sector businesses and landowners.

Members of the project team discussed the scope, schedule, and analysis to date in a general presentation to kick off the meeting, which included discussion of existing trip travel pattern data, combined land uses from the cities and counties, environmental data, and findings from the Regionally Significant Routes for Safety and Mobility (RSRSM) Study. A breakout session followed with the intention being to collect input and discuss opportunities and issues in the study area. Attendees formed three breakout groups that focused on addressing a series of questions related to how the area could logically develop, understanding infill potential, and what attributes should be considered in planning such a large area. Figure 25 depicts the workshop breakout groups.

Based on input collected from the three groups, the following themes were identified, in no particular order:

- Infrastructure
  - o A reliever or parallel facility to I-10 should be considered to relieve future congestion and improve emergency and traffic management.
  - o Union Pacific Rail line transverses the corridor, which provides an infrastructure barrier and also potential opportunities for development.
  - o Future Passenger Rail Corridor is proposed within study area.
  - o Central Arizona Project (CAP) canal provides some infrastructure barriers within the study area.

#### • Environment

o Extensive floodways throughout the study area which support species diversity and create a robust habitat for flora and fauna, but also somewhat limits development or creates increased development costs.

o Significant topographical considerations within study area, which also can become assets for habitat conservation, recreation, and open space.

#### • Open Space

o A significant regional open space/environmental corridor stretching from Ironwood Forest north to SR 79 and beyond could be a valued environmental, cultural, and economic asset if planned appropriately.

![](_page_29_Picture_17.jpeg)

#### Development

- o If the Red Rock Classification Yard is approved, access from I-10 to lands north will need to be reevaluated.
- o Landscaped screening/buffering treatments should be considered to mitigate visual impacts of the Red Rock Classification Yard from I-10 and other surrounding uses.
- o Red Rock Classification Yard as a catalyst to other growth and development.
- o Portions of the corridor along I-10, between Eloy and Marana, may be constrained for development due to the CAP, UP, and floodway/drainage, which may lead to increases in infrastructure costs that will need to be mitigated.
- o Pinal Airpark is a focus area for Marana to expand as jobs center.
- o Large tracts of single-owner land that have potential to develop at the nexus of SR 87 and I-10.
- o State land has major land holdings in study area which can impact timeline of development.

Figure 26 is a compilation of the specific issues, concerns, and potential opportunities identified during the breakout session.

![](_page_29_Picture_30.jpeg)

#### Figure 25: Workshop 1 Photos

![](_page_29_Picture_32.jpeg)

![](_page_29_Picture_33.jpeg)

**Executive Summary** 

#### Figure 26: Workshop 1 Summary

![](_page_30_Figure_3.jpeg)

### 2.4 Define Planning Focus Areas

Great imagining has occurred within the study area to describe how the region can create value and fulfill a role within the Sun Corridor. In response, plans have described how transportation, land use, development, and environmental resources will be created, preserved, maintained, and leveraged within the study area. Today, indicators point to several trends that pose barriers and opportunities to achieving outcomes desired by the citizens of Eloy, Marana, and Pinal and Pima Counties.

Central to understanding the opportunities in the study area will be understanding, at a high planning level, the utilization of built infrastructure along the corridor. To accomplish this, the team has defined six geographical study areas. These study areas can also be used to understand the potential market demand along the corridor. Through the integration of existing public infrastructure assets, with the market-based anticipation of development patterns, the project team will be able to identify key priority areas that would best leverage public resources to promote community goals and maximize economic development.

The following pages describes additional opportunities that could be explored in the six focus areas listed below:

- Focus Area One (I-10)
- Focus Area Two (Eloy)
- Focus Area Three (Red Rock) Focus Area Six (SR 87)

#### Focus Area One - I-10

Focus area one, depicted in Figure 27, represents the lands along the I-10 corridor that connect Eloy to Marana. Additionally, this corridor is presently the most traveled connection between Phoenix and Tucson. This corridor accommodates a high percentage of vehicle trips and is located through natural desert open spaces (which is very rare). Most of I-10 is becoming highly urbanized with a lack of natural character. The high concentration of trips along this corridor creates an opportunity for expanded economic development, which accounts for the existing urbanized areas along the corridor. However this stretch of I-10 is either undeveloped or is highly underutilized from an economic development perspective. The project team understands that large amounts of industrial-related development is anticipated to occur along the corridor over the next 5 to 15 years.

![](_page_30_Picture_14.jpeg)

- Focus Area Four (Pinal Airpark)
- Focus Area Five (Marana)

**Executive Summary** 

The challenge will be to design development patterns and character types that create economic development centers that can be more sustainable than typical highway strip development and can also preserve and leverage natural open space to increase development premium. Focusing on centers would greatly benefit the future transportation system needed within this area of Pinal County.

#### Focus Area Two - Eloy

Focus area two, Eloy, is depicted in Figure 28. Bounded on three sides by major regional transportation facilities, the existing built area of the City of Eloy is well connected to trading partners at all levels. It has the components to grow into a highly desirable urban center. However, the city core and downtown area has not seen significant investment for decades. While there is much opportunity, a lot of work is needed to improve the character of the area in a manner that can attract private investment.

In addition, the *ADOT Passenger Rail Corridor Study* describes rail corridor alternatives with connections to Eloy. Given the desire for long-term economic development and livability, the city is well-positioned to leverage the transportation assets and enhance the last mile connection to mixed-use districts in the city. For these connections, the historic street grid is a valuable asset that was established by the city founders and can be expanded to the east to promote land division and high intersection densities. It is possible that infill land-use strategies could sustain a large portion of forecasted growth in the area.

To Leverage the existing assets, the city can identify small focus areas for promotion of a "Main Street" district, Entrepreneurial ventures, and small businesses. Larger industrial uses proposed by developers can expand the economic base and job market adjacent to SR 87. A range of partnerships could be created that can be combined with main street business consulting and retention programs to enhance the civic core and establish a foundation to catalyze future growth opportunities.

#### Focus Area Three - Red Rock

Focus area three, depicted in Figure 29, centers on the area of Red Rock. Today the area is undeveloped with transportationoriented uses (fueling stating and rest and recovery) adjacent to the I-10 Interchange, with the recreation uses of Picacho Peak. The double-tracked railway alignment carries significant east-west traffic for UP. Development in the area will be supported by labor forces present in Marana and Eloy and farther yet from Phoenix and Tucson. In the current condition, development in this area will promote an increase in both cumulative vehicle miles traveled and vehicle hours traveled.

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Additionally, impacts from development due to traffic loading onto I-10 may reduce national and regional mobility unless secondary and tertiary transportation networks are created, which will be identified as part of this study. Considerations for new development must address both site constraints due to topography, canals, State and Indian lands, and state parks and regionally significant transportation corridors. Given the significant contiguous undeveloped land areas in Pinal County, the area adjacent to UP railroad provides a unique opportunity for industrial development that would need to utilize rail, potentially fir distribution and delivery.

The project team understands that there is a desire by UP to create a classification yard within this focus area directly adjacent to I-10. The classification yard could be developed to include a future privately developed industrial component that could include direct rail-served spurs to development parcels. While this use could be accommodated within this focus area, there are many possible conditions that would require mitigation, mainly access to lands beyond the yard and character treatments along the I-10 corridor. Additionally, the proposed location is opposite Picacho Peak and could limit future regional open space connections.

Within this focus area it will be important to understand the location and timeframe for development of market-based uses since there is an opportunity for this area to create long-term economic value through strategic development that can

![](_page_31_Picture_14.jpeg)

![](_page_31_Picture_16.jpeg)

![](_page_31_Figure_17.jpeg)

![](_page_31_Figure_18.jpeg)

Figure 29: Focus Area Three - Red Rock

![](_page_31_Figure_20.jpeg)

#### **Executive Summary**

benefit from preservation of natural assets. This opportunity could address economic development goals, preserve cultural heritage, and expand positive health benefits. Understanding this opportunity will influence how the transportation network should be planned through this centrally located focus area.

#### Focus Area Four – Pinal Airpark

Focus area four, depicted in Figure 30, centers on Pinal Airpark and its immediate surroundings. It's strategically located adjacent to I-10 and contains substantial aviation-related transportation infrastructure with available undeveloped and underutilized lands surrounding the facility. Majority of the current infrastructure is outdated but programs to being updating them have begun. Additionally, its nearness to UP rail line could create an opportunity to expand this facility into an intermodal facility located north of Tucson.

A facility in this location could support the region and provide cargo services directly connected to rail and the interstate highway system to distribute goods east of I-8 and the future possible alignment of the Intermountain West Corridor. This link of resources could also create new opportunities in education, research and development, and other sectors and businesses that do no currently exist. Furthermore, this area is near a distributed transportation network as well as close to the growing skilled labor force in Marana and Tucson and could be developed into a viable regional employment center.

#### Focus Area Five - Marana

Focus area five consists of the Marana area, depicted in Figure 31. With proximity to the Tucson market, Marana established itself as a residential alternative for labor employed in Tucson. The town's economic roadmap provides specificity to target markets and specific districts north of Avra Valley Road located within the study area.

While the economic activities desired by the town are well articulated, the town could emphasize more integrated development patterns in a way to promote fewer private vehicle trips and improve community character by strengthening the relationships between the various types and uses of building and their adjacent street spaces.

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The proximity to the Pinal Airpark and anticipated future growth will provide new opportunities for economic diversification. The south side of the Airpark provides access to the labor force in Marana and requires a transportation network of routes that promote land subdivision and route redundancy. Coordination with the airport and surrounding industrial uses can preserve this long-term opportunity while creating alternative development patterns that promote a more sustainable mix of uses and possibly form a business cluster of related sectors.

Major hubs of employment, office parks, and other commercial areas can be significant generators of activity that could support future transit ridership. Buildings set back from the street and dispersed between large surface parking lots create long walking distances for pedestrians, which discourage walking. Circuitous road patterns lengthen travel times and result in an inefficient transportation system.

#### Focus Area Six – 87

Focus area six, depicted in Figure 32, is located at a strategic center comprised of the interstate highway system, a newly planned regional north-south roadway, a possible passenger rail corridor, and the nearby communities of Eloy, Coolidge, and Casa Grande.

SR 87 is a regional connector from I-10 north to the Phoenix East Valley cities. This facility is also a major connector to SR 79, which parallels I-10 south to Tucson. Adjacent to SR87 is the planned north-south corridor that will provide increased trip capacity and provide enhanced connectivity to the region. Additionally, a large land owner in this focus area is currently interested to developing land into a multi-phased commercial and industrial employment and distribution center. Significant development in this area will likely absorb a high percentage of planned growth.

![](_page_32_Figure_16.jpeg)

![](_page_32_Picture_19.jpeg)

![](_page_32_Figure_20.jpeg)

Figure 31: Focus Area Five - Marana

![](_page_32_Figure_22.jpeg)

Figure 32: Focus Area Six – SR 87

![](_page_32_Figure_24.jpeg)

**Executive Summary** 

#### MARKET UNDERSTANDING 3.0

Among the inputs to this strategic transportation effort for this study is a forecast that looks at potential development opportunities that build on recent development patterns and institutional forecasts of population and employment. The magnitude and character of these opportunities will be an important driver of future transportation investments.

This section serves to characterize the population, household and employment growth, bringing to light trends and growth patterns within the study area and focus areas. The analysis relies on the socioeconomic forecasts provided by ADOT and utilizes the resulting trends, projected demand for commercial land uses (industrial, office and retail) for the study area.

#### Market Analysis Methodology 3.1

In order to characterize economic and demographic growth trends and project demand for commercial land uses, statistical and qualitative methods were used, as described below:

#### **Economic and Demographic Growth Trends**

- The study team utilized data provided by ADOT for the study area as well as for the defined focus areas defined in Transportation Analysis Zones (TAZs). The data includes historical 2010 numbers as well as 2035 projections for population, households, and employment. In addition to this data, outside sources were utilized, such as the U.S. Bureau of the Census and ESRI Business Analyst, to provide additional insight where applicable.
- The data were then aggregated from the TAZ level to express the changes in population, households, and employment from 2010 to 2035 for Maricopa, Pima, and Pinal Counties, as well as the Study area and focus areas.

• These changes were then used to identify projected shifts in household size, as well as employment per household, in order to characterize how each area is growing.

#### **Commercial Real Estate Land Use Projections**

- Once economic and demographic projections were established and characterized, historical commercial real estate land uses for industrial, office/flex, and retail land uses by total inventory, occupancy, net absorption, and rent using data from Costar Group, Inc., were summarized.
- Employment data was categorized at the MSA level by sector, and estimated the percent of employed persons that would utilize industrial and office/flex land uses, to arrive at a total industrial and office/flex use figure.
- These employment figures were then compared historically to establish employment density (square footage per employee).
- The industrial and office/flex employment density factors were then applied to the projected new industrial and office/flex-using employment to arrive at a projected 2035 floor area space requirement.
- Projected new retail square feet was obtained by examining the current retail square feet per household (per Costar) at the county level and multiplying this by the projected new households in each of the relevant areas.
- New commercial square feet for each land use were then translated into acres use a Floor to Area Ratio (FAR) obtained from anecdotal evidence in Costar.

#### **General Demographic Trends** 3.2

From 2000 to 2010, Pinal County was by far the fastest growing of the three counties examined on a percent basis in terms of population, households, and employment.

- 14,700 (1.4%).

- Pima County.

![](_page_33_Picture_27.jpeg)

• Pinal County annual population growth averaged 17,600 (7.3%) per year over this period, compared to Maricopa County at 81,200 (2.4%), and Pima County at

 Households shows a similar trend with Pinal, Maricopa, and Pima Counties growing by 6,400 (7.4%), 27,900 (2.2%), and 5,600 (1.6%) per year respectively.

• Employment projections were no different, with Pinal County growing by 1,400 (3.2%), Maricopa County by 10,000 (0.7%), and Pima County by 540 (0.2%).

• Yet projections for 2035 shift dramatically away from the 2000 -2010 growth trend, with Pinal County growing by 6,600 (1.6%) people per year, compared to figures of 78,400 (1.7%) in Maricopa County and 7,400 (1.7%) in

Households projections are unsurprisingly similar with Pinal County growing by 2,600 (1.7%) per year, and Maricopa and Pima Counties growing by 34,900 (1.9%) and 6,800 (1.5%) respectively.

• Pinal County is projected to grow by 1,200 (1.9%) jobs per year, while Maricopa and Pima Counties are projected to grow by 52,000 (2.4%) and 7,400 (1.7%) respectively. See Figure 33, Figure 34, Figure 35, and Table 8 on the next page for more detail.

#### Table 8: State Growth by County

		ł	POPULATION					HOUSEHOLDS	5		EMPLOYMENT										
TOTAL			AVERAC GR	ge annual Cowth		TOTAL		AVERAC	ge annual Owth		TOTAL		AVERA G	GE ANNUAL ROWTH							
	TOTAL	CAGR	SHARE OF STATE	TOTAL	SHARE OF STATE	TOTAL	CAGR	SHARE OF STATE	TOTAL	SHARE OF STATE	TOTAL	CAGR	SHARE OF STATE	TOTAL	SHARE OF STATE						
MARICO	PA COUNTY																				
2000	3,004,985		59.8%			1,132,886		59.6%			1,497,231		66.8%								
2010	3,817,117	2.4%	60.2%	81,213	61.6%	1,411,583	2.2%	59.3%	27,870	58.1%	1,597,898	0.7%	69.3%	10,067	157.7%						
2035	5,776,300	1.7%	59.5%	78,367	58.2%	2,283,494	1.9%	61.8%	34,876	66.3%	2,901,686	2.4%	72.0%	52,152	75.6%						
PINAL CO	DUNTY																				
2000	173,364		3.5%			61,364		3.2%			37,697		1.7%								
2010	349,688	7.3%	5.5%	17,632	13.4%	125,625	7.4%	5.3%	6,426	13.4%	51,788	3.2%	2.2%	1,409	22.1%						
2035	514,304	1.6%	5.3%	6,585	4.9%	190,409	1.7%	5.2%	2,591	4.9%	82,262	1.9%	2.0%	1,219	1.8%						
PIMA CO	UNTY																				
2000	828,905		16.5%			332,350		17.5%			346,900		15.5%								
2010	975,580	1.6%	15.4%	14,668	11.1%	388,660	1.6%	16.3%	5,631	11.7%	352,300	0.2%	15.3%	540	8.5%						
2035	1,385,982	1.4%	14.3%	16,416	12.2%	557,462	1.5%	15.1%	6,752	12.8%	538,112	1.7%	13.4%	7,432	10.8%						
ARIZONA																					
2000	5,025,823		100.0%			1,901,327		100.0%			2,242,900		100.0%								
2010	6,343,154	2.4%	100.0%	131,933	100.0%	2,380,990	2.3%	100.0%	47,966	100.0%	2,306,749	0.3%	100.0%	6,385	100.0%						
2035	9,706,653	1.7%	100.0%	134,540	100.0%	3,696,464	1.8%	100.0%	52,619	100.0%	4,030,253	2.3%	100.0%	68,940	100.0%						

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Source: U.S. Census Bureau; CAG; MAG; PAG; RCLCO

![](_page_34_Figure_5.jpeg)

## Figure 33: Share of State Growth by Population, 2010-2035

![](_page_34_Figure_7.jpeg)

![](_page_34_Figure_8.jpeg)

![](_page_34_Picture_10.jpeg)

### Figure 35: Share of State Growth by Employment, 2010-2035

![](_page_34_Figure_12.jpeg)

**Executive Summary** 

#### Study Area and Focus Area Trends 3.3

The study area saw significant growth from 2000 to 2010, with population and household growth of 2,200 (5.8%) and 959 (7.3%) respectively.

- Of the Focus Areas, Focus Area One, Three, and Five saw significant average annual population growth on a percentage basis of 7.7%, 9.2%, and 11.1% respectively, while Focus Areas Two, Four, and Six saw very little or negative growth.
- On an absolute scale, Focus Area Five is the only area with significant growth, accounting for 39% of the population growth and 27.5% of the household growth in the study area from 2000-2010.
- Projected growth through 2035 is even more focused on Focus Area Five, with 78.5% of the annual population growth and 79.5% of the household growth occurring in this area. Growth in the other five Focus Areas is moderate ranging from 1.4% in Area Three to 1.7% in Focus Area Six.

• Employment growth follows the same trend, with Focus Area Five taking the largest share of the growth (87.7%) in the study area.

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• The other Focus Areas show moderate growth on a percentage basis, but relatively insignificant on an absolute basis with the next largest growth, Focus Area Two, accounting for 29 new jobs per year. Figure 36, Figure 37, Figure 38, and Table 10 (all on the following page) provide a detailed breakdown of these demographic trends.

#### Land Use Projections 3.4

#### 3.4.1 Study Area

Projected land requirements within the study area based upon the previously presented methodology result in little demand for land for the study area.

• The study area is projected to require a total of 3.8 million square feet, or 328 acres, of industrial, office/flex, and retail space through 2035. On an annual basis this results

#### 3.4.2 **Focus Area**

Similarly, the focus areas provide little function indication of large-scale commercial development based on the population, household, and employment projections.

	Study Area	Focus Area 1 (I-10)	Focus Area 2 (Eloy)	Focus Area 3 (Red Rock)	Focus Area 4 (Pinal Airpark)	Focus Area 5 (Marana)	Focus Area 6 (SR 87)
Projected Land Use (SF)							
Industrial	411,000	3,833	33,474	0	210	326,813	3,161
Office/Flex	838,110	3,035	32,624	0	42	696,812	13,671
Retail	2,529,270	18,162	78,761	0	36,498	1,666,449	55,176
Total	3,778,380	25,029	144,859	0	36,750	2,690,073	72,008
Projected Land Use (Acres)							
Industrial	31	0	3	0	0	25	0
Office/Flex	64	2	2	0	0	53	1
Retail	232	2	7	0	3	153	5
Total	328	4	12	0	3	231	6

#### Table 9: Projected Demand for Industrial, Office/Flex, and Retail Land Uses In Square Feet and Acres, 2010-2035

Source: CAG; MAG; PAG; Costar Group, Inc.; RCLCO

![](_page_35_Picture_23.jpeg)

in the additional capacity requirement of 151,000 square feet, or 15 acres, per year.

• Given that the size of the study area is approximately 1,100 square miles (704,000 acres), this volume of land use would be insignificant.

 Excluding Focus Areas Two and Five, none of the other focus areas are projected to require more than 10 additional acres through 2035.

• Focus Area Five (the section of Marana within the study area) is projected to require 231 acres, or 9.25 acres per year through 2035. This represents 70% of the total demand in the study area. Table 9 shows the breakdown by focus area.

#### Table 10: Growth by Study Area

	, , ,			HOUSEHO	LDS		EMPLOYMENT											
	TOTAL			AVERAGE A	NNUAL GROWTH		TOTAL		AVERAGE AN	INUAL GROWTH		TOTAL		AVERAGE AN	INUAL GROWTH			
	TOTAL	CAGR	STUDY AREA SHARE	TOTAL	STUDY AREA SHARE	TOTAL	CAGR	STUDY AREA SHARE	TOTAL	STUDY AREA SHARE	TOTAL	CAGR	STUDY AREA SHARE	TOTAL	STUDY AREA SHARE			
STUDY AREA	A, TOTAL																	
2000	29,292					9,315												
2010	51,582	5.8%		2,229		18,901	7.3%		959		9,070							
2035	126,336	3.6%		2,990		49,302	3.9%		1,216		32,066	5.2%		920				
FOCUS ARE	A 1 – (I-10)																	
2000	597		2.0%			203												
2010	1,255	7.7%	2.0%	66	3.0%	418	7.5%	2.2%	22	2.2%	160		2.0%					
2035	1,844	1.6%	1.0%	24	0.8%	635	1.7%	1.3%	8	0.7%	256	1.9%	1.0%	4	0.4%			
FOCUS ARE	A 2 – (ELOY)																	
2000	9,901		34.0%			2,404												
2010	9,275	-0.7%	18.0%	-63	-2.8%	3,020	2.3%	16.0%	62	6.4%	1,236		14.0%					
2035	13,639	1.6%	11.0%	1/5	5.8%	4,583	1.7%	9.3%	63	5.1%	1,965	1.9%	6.0%	29	3.2%			
FOCUS ARE	A 3 – (RED RUCK)		0.00/			47												
2000	31		0.0%			17												
2010	/5	9.2%	0.0%	4	0.2%	36	7.8%	0.2%	2	0.2%	0		0.0%					
		1.4%	0.0%	I	0.0%	51	1.4%	0.1%	l	0.0%	0	0.0%	0.0%	0	0.0%			
	A 4 - (PINAL AIRPARK)		0.4%			6.4												
2000	183	 10 5%	0.0%	01	 1 1%	04 365	 10.0%	 1 0%		 2 1%	7							
2010	1,690	1 5%	2.170	20	4.1%	553	1 7%	1.9%	8	0.7%	, 11	1.8%	0.0%		0.0%			
FOCUS ARE	A 5 - (MARANA)	1.070	1.070	20	0.770	000	1.770	1.170	0	0.770		1.070	0.070	0	0.070			
2000	4.646		15.9%			1.622												
2010	13.261	11.1%	25.7%	862	38.6%	5,200	12.4%	27.5%	358	37.3%	5,452		60.0%					
2035	71,941	7.0%	56.9%	2,347	78.5%	29,373	7.2%	59.6%	967	79.5%	25,623	6.4%	80.0%	807	87.7%			
FOCUS ARE	A 6 – (SR 87)																	
2000	3,136		10.7%			493												
2010	1,749	-5.7%	3.4%	-139	-6.2%	550	1.1%	2.9%	6	0.6%	303		3.0%					
2035	2,571	1.6%	2.0%	33	1.1%	836	1.7%	1.7%	13	1.1%	482	1.9%	2.0%	7	0.8%			
Sourco: 115	CONSUS BURGALIS CACS MACS DACS DCI	CO																

SOURCE: U.S. CENSUS BUREAU; CAG; MAG; PAG; RCLCO

- Focus Area 1 (I-10) Focus Area 2 – (Eloy)
- Focus Area 3 (Red Rock)
- Focus Area 4 (Pinal Airpark)
- Focus Area 5 (Marana)

Focus Area 6 – (SR 87)

Rest of Study Area

![](_page_36_Figure_12.jpeg)

### Figure 37: Share of Study Area Growth By Households, 2010-2035

States & Fridge and Address

![](_page_36_Figure_14.jpeg)

![](_page_36_Picture_16.jpeg)

#### Figure 38: Share of Study Area Growth By Employment, 2010-2035

![](_page_36_Figure_18.jpeg)

**Executive Summary** 

### 3.5 Market Assumptions

The conclusions of the market analysis are based on the analysis of the most currently understood information available. Certain assumptions wer3e made about the future performance of the global, national, and local economy and real estate market. Given the fluid and dynamic nature of the economy and real estate markets, as well as the uncertainty surrounding particularly near-term future, it is critical to monitor the economy and markets continuously and to revisit the market analysis periodically.

It is assumed that the economy and real estate markets will grow at a stable and moderate rate starting in 2010, more or less in a straight line average to 2020 and beyond. However, history tells us that stable and moderate growth patterns are not sustainable over extended periods of time, and that the economy is cyclical and that the real estate markets are typically highly sensitive to business cycles. It is difficult to predict when the current economic and real estate downturns will end, and what will be the shape and pace of growth once they are recovered. It is assumed that the long term average absorption rates and price changes will be as projected. Realizing that most of the time performance will be either above or below said average rates.

This analysis does not take into account the potential impact of future economic shocks on the local economy, and does not necessarily account for the potential benefits from major "booms." Similarly, the analysis does not necessarily reflect the residual impact on the real estate market and the competitive environment of such a shock or boom.

Close monitoring of the economy and the marketplace is recommended. It is assumed that once the current cycle is over, the following will occur in accordance with current expectations:

• Economic, employment, and household growth.

• Forecasts of trends and demographic and economic patterns, including consumer confidence levels.

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- The cost of development and construction.
- Tax laws (i.e., property and income tax rates, deductibility of mortgage interest, and so forth).
- The availability and cost of capital and mortgage financing for real estate developers, owners and buyers, at levels present in the market before the most recent run up (i.e., early 2000s levels).
- Competitive projects will be developed as planned (active and future) and that a reasonable steam of supply offerings will satisfy real estate demand.
- Major public works projects occur and are completed as planned.

Should any of the above change, this analysis should be updated, with the conclusions reviewed accordingly.

### 4.0 SCENARIO DEVELOPMENT

#### 4.1 Baseline Scenario and Proposed Scenario

Travel forecasts are estimated for future conditions based on population and employment growth projections that build upon existing population and employment conditions. This section describes the scenario development process, the baseline scenario and the proposed scenario utilized for this study. Detail about revision to the travel demand model as part of this process can be found in the Appendix.

#### 4.1.1 Baseline Scenario

In summer 2014, CAG completed the development of a regional travel demand model as part of their Regional

Transportation Plan (RTP). Because the CAG RTP was concurrent with this study, and overlapped this study area, it was determined that the RTP should be utilize as the baseline future scenario, referred to as Scenario A.

Following protocol as outlined in State Statutes, the CAG RTP utilized total population and employment estimates within the study area consistent with projections established by the Arizona State Demographer's Office, working with official population estimates and projections for the State of Arizona. The CAG Population Technical Advisory Committee (POPTAC) working group, which includes the coordinating parties of this study, determined the sub-regional distribution of population and employment forecasts at the Traffic Analysis Zone (TAZ) level for the transportation planning process. ADOT's travel demand model (AZTDM) was utilized as the platform for the CAG travel demand model. The existing (2010) and future (2040) population and employment distribution based on AZTDM was presented in Section 2.2. The CAG 2040 condition, together with the PAG future condition, was considered Scenario A, based on the distribution within the CAG RTP.

#### 4.1.2 Planned Development

The Technical Working Group (TWG) for this PARA study acknowledged that the CAG RTP model and the conducted market analysis did not account for all the currently known planned development with the study area. Therefore, the TWG requested that this study develop a future socioeconomic scenario that would address several entitled residential developments and eleven zoned or planned industrial developments within the study area. These residential and industrial developments were documented in Figure 11. Residential development is fully entitled and industrial is proposed or zoned.

Working with the TWG and the Pinal County Economic Development Department, this study created a future scenario that quantifies job, population, and household figures for the future condition when all currently identified development is complete.

![](_page_37_Picture_26.jpeg)

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#### 4.1.3 **Proposed Scenario**

A proposed socioeconomic scenario, referred to as Scenario B, was developed as part of this study in order to capture the planned development anticipated beyond that identified as part of the CAG RTP (Scenario A). Scenario B accounts for known opportunities, including population and employment that may occur beyond the 2040 horizon year. Due to Scenario B accounting for known opportunities in which developments may occur beyond the 2040 horizon year, population and employment thresholds were utilized, with direction by the TWG, for future needs and not linked to a specific design year. The population and the employment for Scenario B is identified in Figure 39 and Figure 40 respectively on the next page.

#### **Demographic Trends** 4.2

The development trends depicted in Scenario B will redistribute population centers in significant ways. This section describes the demographic characteristics of Scenario B within the study area and by Focus Area, as previously established in Section 2.4.

#### 4.2.1 **Study Area**

As summarized in Table 11, the population and employment in Scenario B is a substantial increase over Scenario A. This expansion of population and employment will have significant effects on infrastructure. The population projected in Scenario B is based on buildout of the residential development identified to have start years by 2040. The population assumes buildout of these housing developments, which may occur after 2040.

While close to 100,000 jobs will be the result of new economic opportunities for residents, it is anticipated that employment growth will lag residential growth, which follows typical development trends. When a large mismatch exists between housing and employment, called the jobs-to-housing ratio, significant pressure on the transportation system may occur due to the need to travel long distances for work. In this case, within the study area, due to the jobs-to-housing ratio, there will

be continued demand on the transportation network for longer distance works trips, although hit should be noted that a major employment center of Casa Grande is located slightly outside the study area.

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#### Table 11: Study Area Population & Employment, by Scenario

	Existing	Scenario A	Scenario B
	(2010)	(CAG RTP 2040)	(CAG RTP 2040 + Additional Development)*
Population	45,000	161,000	674,000
Employment	8,000	45,000	110,000

\*Additional development may occur beyond the 2040 horizon year. Population and employment projections should be utilized as thresholds for needed infrastructure improvements, instead of being linked to a specific year.

#### 4.2.2 **Comparisons by Focus Area**

The six Focus Areas previously identified help to understand how the growth trends vary throughout the study area, thus providing insights into potential real estate submarkets and associated infrastructure needs. The anticipated housing growth is strongest within the incorporated area of Eloy, with more than one-third of all future development. Future employment is highest in Marana, followed by the Eloy and the SR 87 Corridor focus areas.

The anticipated growth in the area contiguous with existing development is consistent with the market demand assessment, noting that the market demand would naturally extend from the areas with existing infrastructure. As such, the areas of Eloy and Marana, as well as the corridor along SR 87, are most likely to experience near-term development.

#### Freight Opportunities 4.3

The study area includes many areas where freight-related business are established as well as opportunity areas for increased fright-based economic development. This section describes the potential for these freight opportunities.

#### Context: Freight Transportation Framework Study 4.3.1

In 2012, the Maricopa Association of Governments (MAG) completed a regional study for the Sun Corridor in concert with two other Planning Agencies: Pima Association of Governments (PAG) and CAG. The study, known as the Freight Transportation Framework Study, included five focus areas in Pinal County that were identified by County staff as opportunity sites. The five areas include:

- Focus Area)

- of study area)

The 2012 MAG study focus areas were evaluated against qualitative and quantitative screening criteria, including distance, economic value, demographic and land use performance measures. The focus areas were ranked, with higher screening results for Pinal Airpark and the lands surrounding the I-8 and I-10 interchange.

Freight related land use opportunities were defined through the creation of supply chain facility typologies and associated location principles. Four typologies were defined in the 2012 MAG study, relevant descriptions of these typologies are excerpted in the upcoming section.

![](_page_38_Picture_29.jpeg)

• Pinal Airpark (included within this study's Pinal Airpark

• La Palma (SR 87 & SR 287) (north of study area)

I-8/I-10 Interchange (just west of study area)

• Casa Grande (SR 84 & SR 387) (just west of study area)

Magma Rail Road (north of SR 287 & west of SR 79) (north

• Import Center: As products enter the country, an import center states them for inland distribution. Possible functions of an import center include redirection of goods to the precise markets currently demanding them; combining goods from multiple sources into load sets for individual stores and customers (referred to as

**Executive Summary** 

### Figure 39: Scenario B Future Population

![](_page_39_Figure_3.jpeg)

#### Figure 40: Scenario B Future Employment

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![](_page_39_Figure_5.jpeg)

![](_page_39_Picture_7.jpeg)

**Executive Summary** 

deconsolidation and consolidation); changing modes (e.g., to transfer goods from rail to truck, or to expedite a shipment through forwarding it by air); and processing goods via packaging, labeling, or more complex preparation. Distinguishing principles for an Import Center are:

- o Sites should be close to the international gateway so that goods may be accessed as soon as possible;
- o Sites benefit from being within an anchor market providing opportunities for immediate local distribution:
- o Location should have strong connections to highway system for regional and national distribution, and be in reach of air service and other modal options;
- o The labor pool should find warehouse wages (roughly \$14/hour) attractive, and have a reasonable commute to work:
- Manufacturing and Local Distribution Center: Facility functions are production, storage, and direct distribution (with little intermediate staging in the local area). Distinguishing principles for a Manufacturing and Location Distribution Center are:
  - o Sites focus closely on the population: for proximity to labor in the case of manufacturing, and for proximity to consumers for distribution;
  - o A comprehensive and efficient highway network is necessary in all directions;
  - o Air service is essential for manufacturing supplies and distribution;
  - o Labor requirements are divers; manufacturing process and management skills necessitate

tertiary educated personnel with advance technical and/or managerial skills demanding higher pay, while distribution can range from relatively demanding logistical work in a production environment, to relatively simple warehousing and trucking for local consumption.

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- Mixing Center: Products traveling from sources all over the country and world may be staged for destination markets in a mixing center, which combines the characteristics of an import center with forward distribution. The essential functions of a mixing center are redirection, deconsolidation and consolidation, and modal change, along with processing and storage. Distinguishing principles for a Mixing Center are:
  - o Access to international gateways, either by proximity or by location enroute to market;
  - o Sites should be situated on the threshold of destination markets, and be enroute from domestic origins;
  - o Access to an extensive highway network and broad availability of air service are critical, and rail options are desirable;
  - o Locations should be anchored by substantial local demand:
  - o Labor should find warehouse wages attractive and be able to commute to work, but the greater complexity of work also necessitates more sophisticated and diversity in the labor pool;
  - o Distance to the boarder should be sufficient to support round trips by Mexican truck fleets.
- Forward Distribution Center: As products travel across the country, a forward distribution center assembles goods from many long distance origins and local

o Locations should be near the threshold of destination markets so as to serve as jumping off points, ideally within overnight truck service range (approximately 550 miles);

o Immediate proximity to a large local anchor market improves location economics;

o The labor pool should find warehouse wages attractive and be able to commute to work.

The location principles are summarized here, but should be referenced from the 2012 MAG Freight Transportation Framework Study for greater detail. Import Centers are generally located at international gateways so that goods can be accessed as soon as possible. For the 2012 MAG study, the only focus area that satisfied this principle was the Tucson International Airport. The Manufacturing and Local Distribution Center typology is heavily influenced by the proximity to consumers for distribution services. Based on these principles, the La Palma and Pinal Airpark focus areas were most appropriate. Among many functions, *Mixing Center* facilities redirect, deconsolidate and consolidate goods, and are most appropriately located at the thresholds to destination markets, which in many cases are the interchanges of state highways and interstate freeways. In Pinal County, the focus areas located at the I-8/I-10 Interchange and in Casa Grande were

![](_page_40_Picture_31.jpeg)

manufacturing and warehousing facilities, and stages them for delivery to major destination markets within reach of the center. Deconsolidation and consolidation are the key facility functions, but others include mode change (such as rail to truck), redirection, processing, and storage. Distinguishing principles for a Forward Distribution Center are:

o Sites should be enroute between origins and destinations, thus requiring few additional travel miles to reach the facility;

o Excellent general highway access and good modal alternatives are important;

identified as mixing center typologies. No Forward Distribution Centers were identified in Pinal County.

Each of the typologies can be expanded to include transportation requirements based on the assumed operations for each facility. The 2012 MAG study acknowledged that transportation improvements were needed for these locations and typologies to be realized as economic development centers. However, that study did not identify specific transportation improvements for each focus area.

#### 4.3.2 **Freight Market**

As part of this study, an assessment of development trends was prepared to inform the study team about specific land uses and potential absorption. In general, the assessment identified that demand for industrial-based uses is higher than that assumed in the currently adopted AZTDM and the CAG 2040 RTP. In order to capture these opportunities and realized higher absorption rates, Pinal County will depend on the quality of needed transportation infrastructure and the readiness of sites for development and business needs.

#### 4.3.3 Freight-related Development Opportunities

Building on the Freight Transportation Framework Study and information collected previously in this study, freight-related development opportunities were identified based on information provided by County staff and data analysis. Additionally, and consistent with the methodology for the Freight Transportation Framework Study, significant freightrelated opportunities are most likely near the interstate and state highway network. Within the study area, I-10, I-8, and SR 87 are the appropriate corridors to expand existing freightrelated services and create new services. Along these corridors there are four distinct opportunity focus area, as described below.

Interstate 10 Corridor: the portion of the corridor located • between Sunshine Boulevard and Sunland Gin Road in Eloy is unique in that it has access to skilled labor

available from Casa Grande and Eloy, is roughly threequarters of a mile long, offers highway and rail servicing for large scale destinations, and is located at a significant interstate highway interchange. This particular area is unique based on the existence of parallel roadway and rail facilities that can be accessed and loaded separately. This allows for additional roadway network expansion and railway spur extensions without modal conflict. Based on the proximity to the interchange, this focus area could complement a broad-based mixing center facility type presented in the Freight Transportation Framework Study. The risk to this focus area is development in a piecemeal pattern that does not take significant advantage of the interstate network proximity or parallel modes and transportation facilities. This area should be considered for high value regional freight-related industries.

- Red Rock Classification Yard: Situated on the north side of I-10, just south of Picacho Peak, lies the proposed Red Rock Classification Yard that is planned to contain approximately a seven (7) mile long rail classification yard for rail operations. In addition to the rail operations, it is possible that other freight-related industries could locate in the area if they can benefit from the proximity of the new facility. However, there are a number of challenges to this area for land development. This would include the proximity to the CAP, transportation access and circulation, and environmental impacts related to the proximity to natural features, topography and view sheds.
- SR 87: A large area of land in the City of Coolidge, located east of SR 87 and north of Houser Road is envisioned for significant freight related development. This area is well positioned to contribute to the mixing center facility type due to its nexus to I-10 and SR 87. Based on the proximity of skilled labor and transportation infrastructure, this focus area could also contribute to a manufacturing and local distribution center. The particular area is owned by a single entity and is actively

planning freight-based development and business creation.

A strong freight network is crucial to attracting and retaining businesses and jobs. How the network performs will ultimately shape the logistics performance that Arizona businesses will use to compete with other regions, states, and countries. The two pillars of competitive performance are having fast, reliable, productive freight service and freight service end-to-end. Therefore the regional roadway network connecting businesses and the network serving industrial parks and commercial zones are equally important, when compared with the interstates, when looking at competitive freight performance.

![](_page_41_Picture_16.jpeg)

Pinal Airpark: This existing facility is planned for expansion of development and employment opportunities; Pinal County has prepared a master plan for the facility. Pinal Airpark is located along the southern boundary of Pinal County, west of I-10. More broadly, it is between Tucson International Airport (TIA) and the interchange of I-10 and I-8, with the Union Pacific rail line operating adjacent to the east side of I-10. This location, coupled with the extensive planning for the Airpark, and the assets of the existing facility, provides extensive development opportunities that can expand job growth through aviation, logistics and manufacturing.

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### 5.0 STRATEGIC TRANSPORTATION INVESTMENTS

This section outlines a plan for strategic transportation investments to support the development scenario detailed in Section 4. The development of the strategic transportation network results in a planning level estimate of required transportation investment. Strategic transportation investments consider transportation options to realize the specific public, private, community, and stakeholder goals.

#### 5.1 Transportation Network

#### 5.1.1 Baseline Transportation Network

In 2014, CAG, which serves Gila and Pinal Counties, developed their first Regional Transportation Plan (RTP) which included the study area for this study. The future transportation network that was recommended as part of the CAG RTP was utilized as the baseline transportation condition. For the portion of the study area outside the CAG RTP boundary the adopted Pima Association of Governments (PAG) plans were utilized. The socioeconomic condition utilized in the CAG and PAG future condition reflects a constrained population and employment scenario. This study builds upon the transportation needs identified in CAG and PAG plans to identify any additional transportation infrastructure to address additional population and employment beyond those currently identified. The proposed socioeconomic scenario, referred to as Scenario B, identified planned development anticipated beyond that identified in the CAG and PAG RTSs.

This study utilized the ADOT Travel Demand Model (AZTDM) for analysis of transportation infrastructure needs. The first step in the transportation analysis process involved running AZTDM using the adopted CAG and PAG transportation network and the Scenario B population and employment. This provide an understanding of where infrastructure needs exist beyond those identified in the current CAG and PAG plans in order to accommodate future growth. Because some of this growth is planned to occur in areas not currently developed, adjustments were made to the model including a refined TAZ network and new centroid connectors. Capacity analysis assumptions are included in the Appendix.

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The results of the initial capacity analysis of the CAG and PAG 2040 network are depicted in Figure 41, with the Scenario B socioeconomic conditions presented in Figure 42 on the next page. This analysis indicates that there are significant capacity concerns with regard to north-south travel with particular focus on access to I-10 for regional and long distance trips, as well as east-west travel within Eloy. Approximately 41 miles of arterial and 100 miles of collector roadways in this future condition are anticipated to operate at a level of service E (slow movement or frequent stoppages) or F (traffic jams or stoppages of long duration).

Capacity improvements are necessary for these deficient roadways to accommodate future traffic demand as a result of population growth and new developments. Critical roadways include:

East-West

Battaglia Road

Houser Road

Hanna Road

• Selma Highway

#### North-South

- Sunland Gin Road
- Toltec Highway
- Sunshine Boulevard
- Picacho Highway
- Milligan Road/Frontier Street

#### 5.1.2 Proposed Transportation Network

Using the transportation analysis results present in the previous section, the study team proposed a range of transportation improvements to increase roadway capacity and create a more robust circulation network. These improvements, depicted in Figure 43 and listed in Table 12 within the ensuing pages, create a long term transportation network to support the planned residential and employment growth identified as part of Scenario B. The proposed grid framework is needed to support both transportation demand and access, and to create strategic redundancies in the roadway network.

Routes shown with dashed lines in Figure 43 represent needed connections to facilitate regional circulation and connectivity.

Future studies are recommended for these alignments, including detailed environmental and drainage analysis, to determine the specific alignment of these roadways.

The key recommended improvements include developing the major grid network to enhance access to I-10, access to planned residential and employment, and to facilitate overall circulation and build an appropriate level of redundancy into the network. The final recommended network is depicted in Figure 44 along with Table 12, within the ensuing pages, which presents the recommended roadway widths and I-10 interchanges needed to meet the anticipated transportation demand for the population and employment projected in Scenario B. The level of service analysis on this recommended network, as well as the network analysis with the addition of a parkway southwest of Eloy, is included in the Appendix, which verifies the level of future congestion given these improvements. Overall, the improvements proposed address major congestion issues. Outstanding congestion issues reflect limitations in the travel demand model network coverage as well as localized intersection capacity constraints.

Interchanges that will be vital to facilitating regional travel demand are identified based on currently assumed growth forecasts. Several interchanges that were identified in the I-10 DCR were not deemed needed based on currently understood needs. Those are proposed for removal from the network or postponed until socioeconomic forecasts change to reflect higher growth in areas served by those interchanges.

### 5.1.3 Freight and Commuter Corridors

Identification of the backbone freight and commuter network helps to identify key regional corridors. These corridors provide access to jobs and facilitate freight movement. As these corridors are developed, they should follow design standards that support significant commuter and freight movements, such as wider rights-of-way, turning radii and more robust pavement sections to accommodate trucks. The recommended network, identified in Figure 45, focuses on movement throughout the region, including access to I-10 and industrial areas.

![](_page_42_Picture_26.jpeg)

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#### Figure 41: CAG RTP and Adopted PAG 2040 Network

![](_page_43_Figure_3.jpeg)

#### Figure 42: CAG RTP and Adopted PAG 2040 Network Level of Service

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![](_page_43_Figure_5.jpeg)

![](_page_43_Picture_7.jpeg)

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### Figure 43: Proposed Scenario Roadway Changes

![](_page_44_Figure_3.jpeg)

#### Figure 44: Proposed Scenario Network

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![](_page_44_Figure_5.jpeg)

![](_page_44_Picture_7.jpeg)

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## Table 12: Project List

10.#	Pood	From	То	Longth (mile)	luxicdiction		Existing	Propo	osed Improvements		
ישט #	Koau	FIOIII	10	Length (mile)	Julisaiction	# of Lanes	Facility Type	# of Lanes	Facility Type		
1	Battaglia Dr (Phase I)	West of Toltec Rd	East of Sunshine Blvd	4.3	Eloy	2	Collector	4	Major Arterial		
2	Battaglia Dr (Phase II)	West of Toltec Rd	East of Sunshine Blvd	4.3	Eloy	4	Collector	6	Major Arterial		
3	Sunland Gin Rd (Phase I)	Frontier St	Battaglia Dr	4	Eloy/Pinal County	2	Collector	4	Major Arterial		
4	Sunland Gin Rd (Phase II)	Frontier St	Battaglia Dr	4	Eloy/Pinal County	4	Collector	6	Major Arterial		
5	Milligan Rd/Frontier St	Sunshine Blvd	Battaglia Dr	1.7	Eloy	4	Major Arterial	6	Major Arterial		
6	Milligan Rd/Frontier St (Phase I)	Toltec Rd	Peart Rd	7.3	Eloy/Pinal County/Casa Grande	2	Collector	4	Major Arterial		
7	Milligan Rd/Frontier St (Phase II)	Toltec Rd	Peart Rd	7.3	Eloy/Pinal County/Casa Grande	4	Collector	6	Major Arterial		
8	Phillips Rd (Phase I)	Lamb Rd	Sunshine Blvd	8	Eloy/Pinal County	Not exist	Not exist	4	Major Arterial		
9	Phillips Rd (Phase II)	Lamb Rd	Sunshine Blvd	8	Eloy/Pinal County	4	Collector	6	Major Arterial		
10	Phillips Rd (Phase I)	Sunshine Blvd	I-10	2.1	Eloy/Pinal County	2	Collector	4	Major Arterial		
11	Phillips Rd (Phase II)	Sunshine Blvd	I-10	2.1	Eloy/Pinal County	4	Collector	6	Major Arterial		
12	Sunland Gin Rd (Phase I)	Battaglia Dr	Harmon Rd	6	Eloy/Pinal County	2	Collector	4	Major Arterial		
13	Sunland Gin Rd (Phase II)	Battaglia Dr	Harmon Rd	6	Eloy/Pinal County	4	Collector	6	Major Arterial		
14	Sunshine Blvd (Phase I)	Alsdorf Rd	South of Phillips Rd	3.4	Eloy	2	Collector	4	Major Arterial		
15	Sunshine Blvd (Phase II)	Alsdorf Rd	South of Phillips Rd	3.4	Eloy	4	Collector	6	Major Arterial		
16	Toltec Rd (Phase I)	Houser Rd	South of Harmon Rd	7.8	Eloy/Pinal County	2	Collector	4	Major Arterial		
17	Toltec Rd (Phase II)	Houser Rd	South of Harmon Rd	7.8	Eloy/Pinal County	4	Collector	6	Major Arterial		
18	Milligan Rd/Frontier St (Phase I)	SR-87	Sunshine Blvd	2.2	Eloy/Pinal County	2	Major Arterial	4	Major Arterial		
19	Milligan Rd/Frontier St (Phase II)	SR-87	Sunshine Blvd	2.2	Eloy/Pinal County	4	Major Arterial	6	Major Arterial		
20	New Link Parallel Picacho Hwy	I-10	Baumgartner Rd	9	Pinal County	Not exist	Not exist	6	Major Arterial		
21	Battaglia Dr	Trekell Rd	Toltec Rd	7	Pinal County/Eloy	2	Collector	4	Collector		
22	Harmon Rd	Sunland Gin Rd	Sunshine Blvd	6	Eloy/Pinal County	Not exist	Not exist	4	Major Arterial		
23	Harmon Rd	Sunshine Blvd	Picacho Hwy	3	Eloy/Pinal County	2	Collector	4	Collector		
24	Sunland Gin Rd	Harmon Rd	South of Harmon Rd	1	Eloy/Pinal County	2	Collector	4	Collector		
25	Sunshine Blvd	South of Phillips Rd	South of Pretzer Rd	4.6	Eloy/Pinal County	2	Collector	4	Collector		
26	Toltec Rd	South of Harmon Rd	Pretzer Rd	1	Eloy/Pinal County	2	Collector	4	Collector		
27	Trekell Rd	Jimmie Kerr	Battaglia Dr	7	Eloy/Pinal County/Casa Grande	2	Collector	4	Collector		
28	11 Mile Corner Rd	Hanna Rd	Frontier St	4.1	Eloy/Pinal County	2	Collector	4	Major Arterial		
29	Battaglia Dr	East of Sunshine Blvd	SR-87	2.3	Eloy/Pinal County	2	Collector	4	Major Arterial		
30	Milligan Rd/Frontier St	Battaglia Dr	Toltec Rd	3.4	Eloy	2	Collector	4	Major Arterial		
31	Milligan Rd/Frontier St	East End	SR-87	3	Eloy/Pinal County	2	Collector	4	Major Arterial		
32	Picacho Hwy	I-10	South of Pretzer Rd	5.6	Pinal County	2	Major Arterial	4	Major Arterial		
33	Toltec Rd	Hanna Rd	Houser Rd	3.2	Eloy	2	Collector	4	Major Arterial		
34	Houser Rd	Trekell Rd	SR-87	13	Eloy/Pinal County/Casa Grande	2	Collector	4	Minor Arterial		
35	Picacho Hwy	South of Pretzer Rd	Baumgartner Rd	3	Pinal County	2	Major Arterial	4	Minor Arterial		
36	Selma Highway	Jimmie Kerr Blvd	SR-87	11.5	Eloy/Pinal County/Casa Grande/Coolidge	2	Collector	4	Minor Arterial		
37	Deep Well Ranch	Houser Rd	SR-79	3.4	Pinal County	Not exist	Not exist	2	Collector		
38	Harmon Rd	I-10	Pecan Rd	6.3	Pinal County	Not exist	Not exist	2	Collector		
39	Harmon Rd	Picacho Hwy	I-10	3.7	Pinal County	Not exist	Not exist	2	Collector		
40	Houser Rd	East End	Deep Well Ranch	8.5	Pinal County	Not exist	Not exist	2	Collector		
41	Selma Highway	SR-87	SR-79	15.7	Pinal County/Coolidge	Not exist	Not exist	2	Collector		
42	Sunshine Blvd	South of Pretzer Rd	Baumgartner Rd	3	Pinal County	Not exist	Not exist	2	Collector		
43	Baumgartner Rd	Red Rock	Camino Adelant	3.6	Pinal County	Not exist	Not exist	2	Minor Arterial		
44	Baumgartner Rd	Sunland Gin Rd	Picacho Hwy	10.1	Pinal County	Not exist	Not exist	2	Minor Arterial		
45	Pinal Air Park Rd	Red Rock	Trico Rd	6.9	Pinal County	Not exist	Not exist	2	Minor Arterial		
46	Toltec Rd	Hanna Rd	Selma Hwy	2	Eloy	Not exist	Not exist	2	Minor Arterial		
47	New Link Parallel to Pecan Rd	Park Link Rd	Harmon Rd	4.2	Pinal County	Not exist	Not exist	2	Minor Arterial		
48	Pretzer Rd	Sunland Gin Rd	Picacho Rd	10	Eloy/Pinal County	Not exist	Not exist	2	Collector		

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![](_page_45_Picture_5.jpeg)

![](_page_46_Picture_0.jpeg)

#### Figure 45: Freight and Commuter Corridors

![](_page_46_Figure_3.jpeg)

### 5.2 Stakeholder Workshop

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A stakeholder meeting was held on February 10, 2015 in Casa Grande. A total of 39 attendees representing a range of agencies, land owners and interest groups joined the meeting. During the meeting, the stakeholders reviewed and commented on Working Papers #1 and #2, projected population and employment, and preliminary transportation scenarios. Stakeholders provided input into known residential and employment planned in the study area, transportation needs, and major issues that should be addressed. Following the meeting, several stakeholders provided comment and the study team worked with agencies to refine the inputs into the process. These comments were incorporated into the scenario development process as well as the transportation network and evaluation criteria. The workshop is depicted in Figure 46.

#### Figure 46: Workshop 2 Photos

![](_page_46_Picture_7.jpeg)

![](_page_46_Picture_8.jpeg)

![](_page_46_Picture_10.jpeg)

![](_page_46_Picture_13.jpeg)

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#### Evaluation 5.3

The process developed to aid in the documentation, discussion and assessment of the strategic transportation investments that considers the overall regional significance, demand, ranking, sequencing, magnitude of impact and anticipated impacts to associated development. A planning level fatal flaw analysis, including a review of environmental issues, was conducted to understand any major, known issues that may hinder the development of the proposed transportation network.

Throughout the study process, input regarding values and important issues within the study area were provided by the project management team, Technical Working Group, and stakeholders, including representatives from participating agencies. This input was used to develop criteria appropriate for a planning level evaluation in this study. The evaluation was used to rank and prioritize the range of transportation improvements identified. The criteria applied in this assessment were grouped into the following categories:

- Supports Growth and Economic Development,
- Environment,
- Mobility, and
- Safety.

Within each category, specific criteria were identified that could be utilized to qualitatively assess each of the proposed roadway segments using previously documented information as well as the results of the travel demand modeling efforts. As an example, in the environment section of the evaluation matrix "Minimal impact on wildlife corridors" was evaluated using wildlife corridors documented as part of the 2010 Building a Quality Arizona (bzAZ) statewide planning effort. As the development of these transportation corridors advances, more detailed analysis will be required.

The planning level evaluation of the segments is summarized in Table 15 on the next page. The overall ranking of these segments based on this planning level evaluation was utilized to determine project sequencing based on need and potential

impacts. The ranking is such that a high value is a more favorable ranking and a low value is a less favorable ranking, as depicted below.

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#### **Recommendations and Programming** 5.4

Based upon the planning level evaluation of proposed projects described in the previous section, the identified projects were ranked and prioritized. The prioritization of projects was determined by how effectively they address near-term, midterm and long-term needs. Corridor preservation projects addressing regional circulation and connectivity needs beyond projected population and employment thresholds of Scenario B were also identified. These recognized needs beyond the currently understood future condition, identifying opportunities for right-of-way preservation and protection prior to future development approvals. These corridor preservation projects are intended to create the backbone of the circulation network in currently underdeveloped and undeveloped areas. They will require further study in the future to better define alignments, roadway characteristics and cost.

#### 5.4.1 **Programming Thresholds**

Using population and employment projections previously established, the population and employment presented in Table 13 approximate the thresholds were near-term, mid-term and long-term transportation improvements would be needed. Corridor preservation projects are identified to create the backbone of the transportation network that would be needed as the population and employment grows beyond that currently projected long-term condition.

Approximate **Population in Si** Area Approximate **Employment in** Area

#### **Project Ranking and Programming** 5.4.2

Planning Level unit costs are detailed in Table 14. Using these unit costs, planning level costs estimates, not including right-ofway costs, were provided for each of the projects ranked in the near-term, mid-term and long-term categories. Table 16 details the total cost for the near-term, mid-term and long-term program, Table 17 by jurisdiction, and are detailed in Table 18, Table 19, Table 20, and Table 21. A cost range is provided, indicating potential low and high costs, including assumptions for 20-year operations and maintenance (O&M) costs to reflect a reasonable lifecycle assessment. A project summary for corridor preservation projects is provided in Table 21, but does not include costs as further study is needed to better refine these corridors.

Existing
Number of Lan
Not Exist
Not Exist
2
4
2

Not Exist

Source: bqAZ unit costs adjusted to 2015 dollars

![](_page_47_Picture_24.jpeg)

#### Table 13: Population and Employment Thresholds

	Near- Term	Mid- Term	Long- Term	Corridor Preservation
udy	45,000 – 250,000	250,000 - 450,000	450,000 - 674,000	Greater than 674,000
Study	8,000 – 42,000	42,000 – 76,000	76,000 – 110,000	Greater than 110,000

#### Future **Rough Magnitude of Cost** Number of Lanes Per Mile \$10 – 12.5 Million 2 4 \$15 – 17.8 Million 4 \$4 – 6 Million \$4 – 6 Million 6 6 \$8 – 9.5 Million \$20 - 23 Million 6

#### Table 14: Estimated Unit Costs

## Table 15: Project Evaluation

		Criteria																					Se	gme	ent	_	_																	
			1	2	3	4	5	6	7 8	<mark>8</mark> 9	) 1(	0 11	12	13	<b>14</b> :	15 1	16 1	.7 18	19	20	21	22	23	24 2	5 26	5 27	28	29	30 3	1 32	33	34	35	36	37	<mark>38</mark> 3	9 40	41	42	43	<mark>44</mark> 4	45 40	5 <mark>47</mark>	48
Supports Growth and Economic	C-1	Compatibility with local plans	•	•	•	•	0	0			•	•	•	•	•	•	•		0	0	•	0	0	•	•	•	0	•	0		•	•	•	•	•	0		•	•	•	•	• •		0
Development	C-2	Supports Infill / Redevelopment	•	•	•	•	•	•				•	•	•	•	•		•	•	0	0	0	0	0		•	•	•	•		•	•	0	•	0	0		0	0	0	0 (	•	• •	0
	С-3	Located Near Existing Municipal Utility Network	•	•	•	•	•	•		•	•		•	•	•	•	• •	•	•	0	•	•	•	•	•	•	•	•	•		•	•	0	•	0	0 0		0	0	0	0 0	•		•
Environment	E-1	Minimal wildlife corridors which may be impacted	•	•	•	•	•	•		•	•	•	•	•	•	•	• •	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	0	0 0		0	•	•	• (	•	• •	•
	E-2	Minimal biological resources which may be impacted	•	•	•	•	•	•		•	•	•	•	•	•	•	• •	•	•	•	•	•	•			•	•	•	•		•	•	•	•	0	0 0		0	•	0	•	•	• •	•
	E-3	Minimal wetlands, flood plaines, rivers, washes and arroyos which may be impacted	•	•	•	•	•	• •		•	•	•	•	•	•	•	• •	•	•	•	•	•	•			•	•	•	• (		•	•	0	•	0	0 0		0	0	0	0 (	•	• •	•
	E-4	Minimal impacts to Environmental Justice Populations	•	•	•	•	•	•				•	•	•	•	•			•	•	0	•	•	•		•	0	•	•		•	•	•	•	•	• •		•	0	•	•	) I	• •	•
Mobility	M-1	Improves Access to Existing Employment and Services	•	0	•	0	•	•				• •	•	0	• (	•		•	0	0	0	0	•	0 0			•	•	• (		•	•	0	•	0	0 0		0	0	0	0 0	<b>)</b> )	• •	0
	M-2	Improves Access to Future Employment and Services	•	•	•	•	•	•				•	•	•	•	•		•	•	•	•	•	•	•		•	•	•	• •		•	•	0	•	0	• •	• •	•	0	0	0	• •	• •	•
	М-3	Improves Access to Existing Residential	•	0	•	0	0	• (				• •	•	0	• (		•		0	0	0	0	•	0 0		•	•	•	0		•	•	0	•	0	0 0		0	0	0	0 0		• •	•
	м-4	Improves Access to Future Residential	•	•	•	•	0	• •	•	•	•	•	•	•	•	•			•	•	•	•	•	•		•	•	•	0		•	•	0	•	•	0 0		0	•	0	0 (	•	• •	•
	M-5	Increased Accessibility for Environmental Justice Populations	•	•	•	0	•	•				•	•	•	•	•			•	0	•	•	•	•		•	•	•	•		•	•	•	•	•	• •		•	•	•	• <	0	• •	•
	M-6	Project Addresses Current Congestion	•	0	•	0	•	• (				• •	•	0	•		•	•	0	0	•	•	•	•	•	•	•	•	•		•	•	0	•	0	0 0		0	0	0	0 0		• •	0
	M-7	Project Addresses Future Congestion	•	•	•	•	•	•				•	•	•	•	•	• •	•	•	0	•	•	•	• •	•	•	•	•	•	•	•	•	•	•	0	0 0		0	0	0	0 (	•		•
	M-8	Currently Has Significant Freight Movements	•	0	•	0	•	• (				• •	0	0	• (	0	• •	•	0	0	0	0	0 (	0 0			•	•	• <		•	•	0	•	0	0 0		0	0	0	0 0	o c		0
	M-9	Projected to Have Significant Freight Movements in Future	•	•	•	•	•	• •			•	•	•	0	•	• •	• •	•	•	•	0	•	•	0 0		•	•	•	• •	•	•	•	•	•	0	• •		0	•	•	•	• 0	• •	•
	M-10	Improves Access Management	•	•	•	0	•	•				•	•	•	• (	•			•	•	•	•	•	•			0	•	•		•	•	•	0	•	• •		0	•	•	•	•	, •	•
Safety	S-1	Creates Redundancies in Network to Improve Evacuation Routes and Emergency Responsiveness	0	0	0	0	•	•		•	•	•	•	•	0				0	•	•	•	•	• •	•	•	•	•	•		•	•	•	•	•	• •	•	•	•	•	• •	• •	•	•
Average Ranking		•	•	•	•	•	•	•				•	•	•	•	э (	•		0	·	0	•	•	•		•	•	•	•		•	•	۰	•	٠	•	•	·	۰	e	•	) <b>(</b>	• •	•
Numerical Ranking			4.2	3.6	4.0	3.6	3.8	4.3 3	.2 3.	.9 3.	2 4.	0 3.2	3.9	3.2	4.3 3	3.6 3	3.9 3.	.4 4.0	3.1	2.2	3.0	2.9	3.1 2	2.9 3	.1 3.2	2 4.4	4.2	4.6	3.9 2	9 2.3	4.4	4.6	2.3	4.1	1.9	1.9 2.	.0 1.8	3 2.0	2.2	2.3	2.2 2	2.9 4.3	1 2.1	2.9

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![](_page_48_Picture_5.jpeg)

## Table 16: Cost by Programmed Timeframe

	Rough Magnitude of Cost (Millions)										
	Total Capital and 20-year O&M (Low)	Total Capital and 20-year O&M (High)									
Total Near-Term	\$ 497.9	\$ 699.5									
Total Mid-Term	\$ 591.8	\$ 809.9									
Total Long-Term	\$ 419.0	\$ 513.3									

## Table 17: Cost by Programmed Jurisdiction and Timeframe

	Rough Magnitude	e of Cost (Millions)
Jurisdiction / Program	Total Capital and 20-year O & M (Low)	Total Capital and 20-year O & M (High)
Pinal County Near-Term	\$ 147.5	\$ 207.3
Pinal County Mid-Term	\$ 251.9	\$ 337.0
Pinal County Long-Term	\$ 419.0	\$ 513.3
Pinal County Total	\$ 818.4	\$ 1057.8
Eloy Near-Term	\$ 309.8	\$ 431.3
Eloy Mid-Term	\$ 334.4	\$ 464.8
Eloy Total	\$ 644.2	\$ 896.1
Coolidge Near-Term	\$ 13.2	\$ 19.8
Coolidge Total	\$ 13.2	\$ 19.8
Casa Grande Near-Term	\$ 27.4	\$ 41.0
Casa Grande Mid-Term	\$ 5.5	\$ 7.9
Casa Grande Total	\$ 32.9	\$ 48.9

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## Table 18: Project Ranking and Programming (Near-Term)

											Rou	gh Mag	nitude of Cost (M	illions)
Programming	ID #	Segment Name	То	From	Existing # of Lanes	Future # of Lanes	Jurisdiction	Length (Miles)	Per Mile (Low)		Pe (ŀ	r Mile ligh)	Total Capital and 20-year O&M (Low)	Total Capital and 20-year O&M (High)
Near-Term	1	Battaglia Dr (Phase I)	West of Toltec Rd	East of Sunshine Blvd	2	4	Eloy	4.3	\$	4.0	\$	6.0	\$ 18.9	\$ 28.4
Near-Term	3	Sunland Gin Rd (Phase I)	Frontier St	Battaglia Dr	2	4	Eloy/Pinal County	4.0	\$	4.0	\$	6.0	\$ 17.6	\$ 26.4
Near-Term	6	Milligan Rd/Frontier St (Phase I)	Toltec Rd	Peart Rd	2	4	Eloy/Pinal County/Casa Grande	7.3	\$	4.0	\$	6.0	\$ 32.1	\$ 48.2
Near-Term	8	Phillips Rd (Phase I)	Lamb Rd	Sunshine Blvd	Not exist	4	Eloy/Pinal County	8.0	\$	15.0	\$	17.8	\$ 132.0	\$ 156.2
Near-Term	10	Phillips Rd (Phase I)	Sunshine Blvd	I-10	2	4	Eloy/Pinal County	2.1	\$	4.0	\$	6.0	\$ 9.2	\$ 13.9
Near-Term	12	Sunland Gin Rd (Phase I)	Battaglia Dr	Harmon Rd	2	4	Eloy/Pinal County	6.0	\$	4.0	\$	6.0	\$ 26.4	\$ 39.6
Near-Term	14	Sunshine Blvd (Phase I)	Alsdorf Rd	South of Phillips Rd	2	4	Eloy	3.4	\$	4.0	\$	6.0	\$ 15.0	\$ 22.4
Near-Term	16	Toltec Rd (Phase I)	Houser Rd	South of Harmon Rd	2	4	Eloy/Pinal County	7.8	\$	4.0	\$	6.0	\$ 34.1	\$ 51.2
Near-Term	18	Milligan Rd/Frontier St (Phase I)	SR 87	Sunshine Blvd	2	4	Eloy/Pinal County	2.2	\$	4.0	\$	6.0	\$ 9.7	\$ 14.5
Near-Term	27	Trekell Rd	Jimmie Kerr	Battaglia Dr	2	4	Eloy/Pinal County/Casa Grande	7.0	\$	4.0	\$	6.0	\$ 30.8	\$ 46.2
Near-Term	28	11 Mile Corner Rd	Hanna Rd	Frontier St	2	4	Eloy/Pinal County	4.1	\$	4.0	\$	6.0	\$ 18.0	\$ 27.1
Near-Term	29	Battaglia Dr	East of Sunshine Blvd	SR 87	2	4	Eloy/Pinal County	2.3	\$	4.0	\$	6.0	\$ 10.1	\$ 15.2
Near-Term	33	Toltec Rd	Hanna Rd	Houser Rd	2	4	Eloy	3.2	\$	4.0	\$	6.0	\$ 14.1	\$ 21.1
Near-Term	34	Houser Rd	Trekell Rd	SR 87	2	4	Eloy/Pinal County/Casa Grande	13.0	\$	4.0	\$	6.0	\$ 57.2	\$ 85.8
Near-Term	36	Selma Highway	Jimmie Kerr Blvd	SR 87	2	4	Eloy/Pinal County/Casa Grande/Coolidge	11.5	\$	4.0	\$	6.0	\$ 50.6	\$ 75.9
Near-Term	46	Toltec Rd	Hanna Rd	Selma Hwy	Not exist	2	Eloy	2.0	\$	10.0	\$	12.5	\$ 22.0	\$ 27.5

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![](_page_50_Picture_5.jpeg)

## Table 19: Project Ranking and Programming (Mid-Term)

											Roug	gh Mag	agnitude of Cost (Millions)				
Programming	ID #	Segment Name	То	From	Existing # of Lanes	Future # of Lanes	Jurisdiction	Length (Miles)	Per M (Lov	lile ⁄)	Per (H	r Mile ligh)	Total Capital and 20-year O&M (Low)	To ai C	otal Capital nd 20-year D&M (High)		
Mid-Term	2	Battaglia Dr (Phase II)	West of Toltec Rd	East of Sunshine Blvd	4	6	Eloy		\$	4.0	\$	6.0	\$ 18.9	\$	28.4		
Mid-Term	4	Sunland Gin Rd (Phase II)	Frontier St	Battaglia Dr	4	6	Eloy/Pinal County		\$	4.0	\$	6.0	\$ 17.6	\$	26.4		
Mid-Term	5	Milligan Rd/Frontier St	Sunshine Blvd	Battaglia Dr	4	6	Eloy		\$	4.0	\$	6.0	\$ 7.5	\$	11.2		
Mid-Term	7	Milligan Rd/Frontier St (Phase II)	Toltec Rd	Peart Rd	4	6	Eloy/Pinal County/Casa Grande		\$	4.0	\$	6.0	\$ 32.1	\$	48.2		
Mid-Term	9	Phillips Rd (Phase I)	Lamb Rd	Sunshine Blvd	4	6	Eloy/Pinal County		\$	4.0	\$	6.0	\$ 35.2	\$	52.8		
Mid-Term	11	Phillips Rd (Phase II)	Sunshine Blvd	I-10	4	6	Eloy/Pinal County		\$	4.0	\$	6.0	\$ 9.2	\$	13.9		
Mid-Term	13	Sunland Gin Rd (Phase II)	Battaglia Dr	Harmon Rd	4	6	Eloy/Pinal County		\$	4.0	\$	6.0	\$ 26.4	\$	39.6		
Mid-Term	15	Sunshine Blvd (Phase II)	Alsdorf Rd	South of Phillips Rd	4	6	Eloy		\$	4.0	\$	6.0	\$ 15.0	\$	22.4		
Mid-Term	17	Toltec Rd (Phase II)	Houser Rd	South of Harmon Rd	4	6	Eloy/Pinal County		\$	4.0	\$	6.0	\$ 34.1	\$	51.2		
Mid-Term	19	Milligan Rd/Frontier St (Phase II)	SR 87	Sunshine Blvd	4	6	Eloy/Pinal County		\$	4.0	\$	6.0	\$ 9.7	\$	14.5		
Mid-Term	21	Battaglia Dr	Trekell Rd	Toltec Rd	2	4	Pinal County/Eloy		\$	4.0	\$	6.0	\$ 30.8	\$	46.2		
Mid-Term	22	Harmon Rd	Sunland Gin Rd	Sunshine Blvd	Not exist	4	Eloy/Pinal County		\$	5.0	\$	17.8	\$ 99.0	\$	117.2		
Mid-Term	23	Harmon Rd	Sunshine Blvd	Picacho Hwy	2	4	Eloy/Pinal County		\$	4.0	\$	6.0	\$ 13.2	\$	19.8		
Mid-Term	24	Sunland Gin Rd	Harmon Rd	South of Harmon Rd	2	4	Eloy/Pinal County		\$	4.0	\$	6.0	\$ 4.4	\$	6.6		
Mid-Term	25	Sunshine Blvd	South of Phillips Rd	South of Pretzer Rd	2	4	Eloy/Pinal County		\$	4.0	\$	6.0	\$ 20.2	\$	30.4		
Mid-Term	26	Toltec Rd	South of Harmon Rd	Pretzer Rd	2	4	Eloy/Pinal County		\$	4.0	\$	6.0	\$ 4.4	\$	6.6		
Mid-Term	30	Milligan Rd/Frontier St	Battaglia Dr	Toltec Rd	2	4	Eloy		\$	4.0	\$	6.0	\$ 15.0	\$	22.4		
Mid-Term	31	Milligan Rd/Frontier St	East End	SR 87	2	4	Eloy/Pinal County		\$	4.0	\$	6.0	\$ 13.2	\$	19.8		
Mid-Term	45	Pinal Airpark Rd	Red Rock	Trico Rd	Not exist	2	Pinal County		\$	0.0	\$	12.5	\$ 75.9	\$	94.9		
Mid-Term	48	Pretzer Rd	Sunland Gin Rd	Picacho Hwy	Not exist	2	Eloy/Pinal County		\$	0.0	\$	12.5	\$ 110.0	\$	137.5		

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![](_page_51_Picture_5.jpeg)

## Table 20: Project Ranking and Programming (Long-Term)

											Rough Magnitude of Cost (Millions)					
Programming ID #		Segment Name	То	From	Existing # of Lanes	Future # of Lanes	Jurisdiction	Length (Miles)	Per I (Lo	/lile w)	Pei (H	<sup>·</sup> Mile ligh)	Total Capital and 20-year O&M (Low)	Total Capital and 20-year O&M (High)		
Long-Term	20	New Link Parallel Picacho Hwy	I-10	Baumgartner Rd	Not exist	6	Pinal County	9.0	\$	20.0	\$	23.0	\$ 198.0	\$ 227.7		
Long-Term	32	Picacho Hwy	I-10	South of Pretzer Rd	2	4	Pinal County	5.6	\$	4.0	\$	6.0	\$ 24.4	\$ 36.6		
Long-Term	35	Picacho Hwy	South of Pretzer Rd	Baumgartner Rd	2	4	Pinal County	3.0	\$	4.0	\$	6.0	\$ 13.2	\$ 19.8		
Long-Term	42	Sunshine Blvd	South of Pretzer Rd	Baumgartner Rd	Not exist	2	Pinal County	3.0	\$	10.0	\$	12.5	\$ 33.0	\$ 41.3		
Long-Term	43	Baumgartner Rd	Red Rock	Camino Adelant	Not exist	2	Pinal County	3.6	\$	10.0	\$	12.5	\$ 39.6	\$ 49.5		
Long-Term	44	Baumgartner Rd	Sunland Gin Rd	Picacho Hwy	Not exist	2	Pinal County	10.1	\$	10.0	\$	12.5	\$ 110.5	\$ 138.5		

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### Table 21: Project Ranking and Programming (Corridor Preservation)

										Rough Mag	nitude of Cost (Mil	lions)		
Programming	ID #	Segment Name	То	From	Existing # of Lanes	Future # of Lanes	Jurisdiction	Length (Miles)	Per Mile (Low)	Per Mile (High)	Total Capital and 20-year O&M (Low)	Total Capital and 20-year O&M (High)		
Corridor Preservation	37	Deep Well Ranch	Houser Rd	SR 79	Not exist	2	Pinal County	3.4						
Corridor Preservation	38	Harmon Rd	I-10	Pecan Rd	Not exist	2	Pinal County	6.3						
Corridor Preservation	39	Harmon Rd	Picacho Hwy	I-10	Not exist	2	Pinal County	3.7	Not inc	luded at thi	is time due to lack	k of detailed		
Corridor Preservation	40	Houser Rd	East End	Deep Well Ranch	Not exist	2	Pinal County	8.5	3.5 be required.					
Corridor Preservation	41	Selma Hwy	SR 87	SR 79	Not exist	2	Pinal County/Coolidge	15.7						
Corridor Preservation	47	New Link Parallel to Pecan Rd	Park Link Rd	Harmon Rd	Not exist	2	Pinal County	4.2						

![](_page_52_Picture_7.jpeg)

**Executive Summary** 

#### 5.4.3 Recommendations by Focus Area

This section groups the recommended projects by the Focus Area previously presented in Section 2.4 in order to understand the distribution of investment. The previously defined Focus Areas are depicted for reference in Figure 47, which shows the focus areas overlaid on the transportation recommendations. The improvements are summarized and described by Focus Area in the following section. Because there is overlap in the Focus Areas, some roadway segments may be included in multiple focus area. Therefore, the total miles of roadways in all focus areas should not be utilized in summation to avoid double-counting. For a summary of total miles, Table 18 through Table 21 should be used.

As is consistent with previous findings, the primary needs within the study area are contiguous with existing infrastructure development as well as corridors which facilitate local and regional freight movements.

#### Figure 47: Focus Areas

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![](_page_53_Figure_6.jpeg)

![](_page_53_Picture_8.jpeg)

#### 5.4.3.1 Focus Area One – I-10

The improvements in Focus Area One (I-10), summarized in Table 22, are intended to provide better access to I-10 and provide for freight needs as the area develops. Corridor preservation needs focus on providing connectivity across I-10 and access to land to the north and east of I-10.

Programming	ID #	Segment Name	То	From	Existing # of Lanes	Future # of Lanes	Focus Area One I-10 (Total Miles)
Near-Term	10	Phillips Rd (Phase II)	East of Sunshine Blvd	I-10	2	4	1.1
Near-Term	18	Milligan Rd/Frontier St (Phase II)	SR 87	Sunshine Blvd	4	6	1.1
Mid-Term	11	Phillips Rd (Phase II)	East of Sunshine Blvd	I-10	2	4	1.1
Mid-Term	19	Milligan Rd/Frontier St	SR 87	Sunshine Blvd	4	6	1.1
Mid-Term	31	Milligan Rd/Frontier St	East End	SR 87	Not exist	6	1.5
Long-Term	20	New Link Parallel Picacho Hwy	I-10	Baumgartner Rd	2	4	1.5
Long-Term	32	Picacho Hwy	I-10	South of Pretzer Rd	2	4	2.5
Long-Term	43	Baumgartner Rd	Red Rock	Camino Adelant	Not exist	2	6.3
Corridor Preservation	38	Harmon Rd	I-10	Pecan Rd	Not exist	2	2.4
Corridor Preservation	39	Harmon Rd	Picacho Hwy	I-10	Not exist	2	4.2
Corridor Preservation	47	New Link Parallel to Pecan Rd	Park Link Rd	Harmon Rd	Not exist	2	4.2
						TOTAL MILES	26.4

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![](_page_54_Picture_7.jpeg)

#### 5.4.3.2 Focus Area Two – Eloy

A significant number of improvements in Focus Area Two (Eloy), detailed in Table 23, address the near-term and mid-term needs associated with new residential growth as well as employment and freight circulation. They provide capacity to accommodate projected travel demand due to

major regional employment and residential planned in this area. These projects address current congestion, demand from increasing number of residential developments in southern Eloy, and facilitation of freight access to industrial areas intended to grow along the I-10/Frontier Street/Milligan Road corridor.

#### Table 23: Focus Area Two (Eloy) Improvements

Programming	ID #	Segment Name	То	From	Existing # of Lanes	Future # of Lanes	Focus Area One I-10 (Total Miles)
Near-Term	1	Battaglia Dr (Phase I)	West of Toltec Rd	East of Sunshine Blvd	2	4	4.3
Near-Term	3	Sunland Gin Rd (Phase I)	Frontier St	Battaglia Dr	4	6	4.3
Near-Term	6	Milligan Rd/Frontier St (Phase I)	Toltec Rd	Peart Rd	2	4	2.5
Near-Term	8	Phillips Rd (Phase I)	Lamb Rd	East of Sunshine Blvd	4	6	2.5
Near-Term	10	Phillips Rd (Phase I)	East of Sunshine Blvd	I-10	4	6	1.7
Near-Term	12	Sunland Gin Rd (Phase I)	Battaglia Dr	Harmon Rd	2	4	3.5
Near-Term	14	Sunshine Blvd (Phase I)	Alsdorf Rd	South of Phillips Rd	4	6	3.5
Near-Term	16	Toltec Rd (Phase I)	Houser Rd	South of Harmon Rd	Not exist	4	8.0
Near-Term	18	Milligan Rd/Frontier St (Phase I)	SR 87	Sunshine Blvd	4	6	8.0
Near-Term	27	Trekell Rd	Jimmie Kerr	Battaglia Dr	2	4	1.0
Near-Term	28	11 Mile Corner Rd	Hanna Rd	Frontier St	4	6	1.0
Near-Term	29	Battaglia Dr	East of Sunshine Blvd	SR 87	2	4	2.0
Near-Term	33	Toltec Rd	Hanna Rd	Houser Rd	4	6	2.0
Near-Term	34	Houser Rd	Trekell Rd	SR 87	2	4	3.1
Near-Term	36	Selma Hwy	Jimmie Kerr Blvd	SR 87	4	6	3.1
Near-Term	46	Toltec Rd	Hanna Rd	Selma Hwy	2	4	7.8
Mid-Term	2	Battaglia Dr (Phase II)	West of Toltec Rd	East of Sunshine Blvd	4	6	7.8
Mid-Term	4	Sunland Gin Rd (Phase II)	Frontier St	Battaglia Dr	2	4	1.1
Mid-Term	5	Milligan Rd/Frontier St	Sunshine Blvd	Battaglia Dr	4	6	1.1
Mid-Term	7	Milligan Rd/Frontier St (Phase II)	Toltec Rd	Peart Rd	Not exist	6	1.5
Mid-Term	9	Phillips Rd (Phase II)	Lamb Rd	East of Sunshine Blvd	2	4	2.0
Mid-Term	11	Phillips Rd (Phase II)	East of Sunshine Blvd	I-10	Not exist	4	5.5
Mid-Term	13	Sunland Gin Rd (Phase II)	Battaglia Dr	Harmon Rd	2	4	1.1
Mid-Term	15	Sunshine Blvd (Phase II)	Alsdorf Rd	South of Phillips Rd	2	4	3.0
Mid-Term	17	Toltec Rd (Phase II)	Houser Rd	South of Harmon Rd	2	4	1.0
Mid-Term	19	Milligan Rd/Frontier St (Phase II)	SR 87	Sunshine Blvd	2	4	1.0
Mid-Term	21	Battaglia Dr	Trekell Rd	Sunland Gin Rd	2	4	4.1
Mid-Term	22	Harmon Rd	Sunland Gin Rd	Sunshine Blvd	2	4	0.5
Mid-Term	23	Harmon Rd	Sunshine Blvd	Picacho Hwy	2	4	3.4
Mid-Term	25	Sunshine Blvd	South of Phillips Rd	South of Pretzer Rd	2	4	3.2
Mid-Term	26	Toltec Rd	South of Harmon Rd	Pretzer Rd	2	4	12.0
Mid-Term	30	Milligan Rd/Frontier St	Battaglia Dr	Toltec Rd	2	4	7.5
Mid-Term	48	Pretzer Rd	Sunland Gin Rd	Picacho Hwy	Not exist	2	2.0
Long-Term	20	New Link Parallel Picacho Hwy	I-10	Baumgartner	Not exist	2	7.0
<u>U</u>			•		•	TOTAL MILES	122.8

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#### **Executive Summary**

#### 5.4.3.3 Focus Area Three – Red Rock

The Red Rock area that is included in Focus Area Three accommodates long-term and corridor preservation needs that would be required as the area grows. These improvements are detailed in Table 24. The roadways that are identified are all new alignments facilitating network circulation and redundancies in the network. As these are new roadways, specific alignments should be determined in future corridor studies. As this Focus Area is not inclusive of or adjacent to any currently planned developments, it therefore does not have significant near-term demand for roadway improvements. The recommendations do support the development of the Union Pacific Red Rock classification yard, providing freight focused connectivity to proposed industrial area between I-10 and the CAP canal, as well as ensuring access and circulation to the area east of the CAP canal.

#### Table 24: Focus Area Three (Red Rock) Improvements

Programming	ID #	Segment Name	То	From	Existing # of Lanes	Future # of Lanes	Focus Area One I-10 (Total Miles)
Long-Term	43	Baumgartner Rd	Red Rock	Camino Adelant	Not exist	2	6.3
Corridor Preservation	38	Harmon Rd	I-10	Pecan Rd	Not exist	2	3.6
Corridor Preservation	39	Harmon Rd	Picacho Hwy	I-10	Not exist	2	4.2
Long-Term	47	New Link Parallel to Pecan Rd	Park Link Rd	Harmon Rd	Not exist	2	4.2
						TOTAL MILES	18.3

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#### 5.4.3.4 Focus Area Four – Pinal Airpark

Focus Area Four (Pinal Airpark) has one additional transportation improvement beyond current plans, detailed in Table 25, which will accommodate additional access to the Pinal Airpark. As the area grows as a major center, redundancies in the transportation network beyond I-10 will be needed to connect to potential workforce, residential and employment opportunities, and accommodate increasing freight needs.

#### Table 25: Focus Area Four (Pinal Airpark) Improvements

Programming	ID #	Segment Name	То	From	Existing # of Lanes	Future # of Lanes	Focus Area One I-10 (Total Miles)
Mid-Term	45	Pinal Air Park Rd	Red Rock	Trico Rd	Not exist	2	3.5
						TOTAL MILES	3.5

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![](_page_57_Picture_0.jpeg)

#### 5.4.3.5 Focus Area Five - Marana

Within Focus Area Five (Marana), no additional roadway improvements were required beyond those currently programmed. Spot operational improvements and interchange improvements, beyond the requirements of the local jurisdiction, will be necessary and are discussed in subsequent sections.

5.4.3.6 Focus Area Six – SR 87

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Improvements identified within Focus Area Six, located along SR 87, are detailed in Table 26, address the near-term needs of this area emerging as an industrial corridor, which will require additional freight accommodations. Corridor preservation provides for overall area circulation.

Programming	ID #	Segment Name	То	From	Existing # of Lanes	Future # of Lanes	Focus Area One I-10 (Total Miles)
Near-Term	1	Battaglia Dr (Phase I)	West of Toltec Rd	East of Sunshine Blvd	2	4	0.5
Near-Term	14	Sunshine Blvd (Phase I)	Alsdorf Rd	South of Phillips Rd	2	4	1.0
Near-Term	18	Milligan Rd/Frontier St (Phase I)	SR 87	Sunshine Blvd	2	4	2.2
Near-Term	29	Battaglia Dr	East of Sunshine Blvd	SR 87	2	4	2.3
Near-Term	34	Houser Rd	Trekell Rd	SR 87	2	4	2.1
Near-Term	36	Selma Hwy	Jimmie Kerr Blvd	SR 87	2	4	2.5
Mid-Term	2	Battaglia Dr (Phase II)	West of Toltec Rd	East of Sunshine Blvd	4	6	0.5
Mid-Term	15	Sunshine Blvd (Phase II)	Alsdorf Rd	South of Phillips	4	6	1.0
Mid-Term	19	Milligan/Frontier St (Phase II)	SR 87	Sunshine Blvd	4	6	2.2
Mid-Term	31	Milligan Rd/Frontier St	East End	SR 87	2	4	2.0
Corridor Preservation	41	Selma Hwy	SR 87	SR 79	Not exist	2	1.3
						TOTAL MILES	17.6

#### Table 26: Focus Area Six (SR 87) Improvements

![](_page_57_Picture_9.jpeg)

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#### 5.4.3.7 Outside Focus Areas

Many projects exist outside of the study focus areas. This is due to the growth within the region outside of the currently developed areas. Projects identified outside the focus areas, detailed in Table 27, provide local and regional circulation, addressing needs associated with planned development. Projects within focus areas support economic development within these areas that

are most likely to support the regional vision. Projects identified for corridor preservation will retain opportunities for a backbone circulation network in the State Land area east of I-10. Identification of these corridors now provides for the preservation of rights-of-way for these future corridors as development activity in the area occurs. Proposed interchanges provide access to I-10 for long distance travel. Additionally, creating network capacity redundancy facilitates regional circulation which reduces dependency on I-10 by offering alternative routes through the area.

Programming	ID #	Segment Name	То	From	Existing # of Lanes	Future # of Lanes	Focus Area One I-10 (Total Miles)
Near-Term	3	Sunland Gin Rd (Phase I)	Frontier St	Battaglia Dr	2	4	1.5
Near-Term	6	Milligan/Frontier St (Phase I)	Toltec Rd	Peart Rd	2	4	3.8
Near-Term	12	Sunland Gin Rd (Phase I)	Battaglia Dr	Harmon Rd	2	4	4.0
Near-Term	27	Trekell Rd	Jimmie Kerr Blvd	Battaglia Dr	2	4	6.0
Near-Term	36	Selma Hwy	Jimmie Kerr Blvd	SR 87	2	4	1.6
Mid-Term	4	Sunland Gin Rd (Phase II)	Frontier St	Battaglia Dr	4	6	1.5
Mid-Term	7	Milligan Rd/Frontier St (Phase II)	Toltec Rd	Peart Rd	4	6	3.8
Mid-Term	13	Sunland Grin Rd (Phase II)	Battaglia Dr	Harmon Rd	4	6	4.0
Mid-Term	21	Battaglia Dr	Trekell Rd	Sunland Gin Rd	2	4	5.0
Mid-Term	22	Harmon Rd	Sunland Gin Rd	Sunshine Blvd	Not exist	4	0.5
Mid-Term	23	Harmon Rd	Sunshine Blvd	Picacho Hwy	2	4	1.9
Mid-Term	24	Sunland Gin Rd	Harmon Rd	South of Harmon Rd	2	4	1.0
Mid-Term	25	Sunshine Blvd	South of Phillips Rd	South of Pretzer Rd	2	4	1.6
Mid-Term	45	Pinal Airpark Rd	Red Rock	Trico Rd	Not exist	2	3.4
Mid-Term	48	Pretzer Rd	Sunland Gin Rd	Picacho Hwy	Not exist	2	3.0
Long-Term	32	Picacho Hwy	I-10	South of Pretzer Rd	2	4	3.0
Long-Term	35	Picacho Hwy	South of Pretzer Rd	Baumgartner Rd	2	4	3.0
Long-Term	42	Sunshine Blvd	South of Pretzer Rd	Baumgartner Rd	Not exist	2	3.0
Long-Term	44	Baumgartner Rd	Sunland Gin Rd	Picacho Hwy	Not exist	2	10.1
Corridor Preservation	37	Deep Well Ranch	Houser Rd	SR 79	Not exist	2	3.4
Corridor Preservation	40	Houser Rd	East End	Deep Well Ranch	Not exist	2	8.5
Corridor Preservation	41	Selma Hwy	SR 87	SR 79	Not exist	2	14.4
						TOTAL MILES	88.0

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#### Table 27: Improvements Outside Focus Areas

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#### 5.4.4 Operational Improvements

The project recommendations include ancillary intersection, signal, and intelligent transportation system (ITS) improvements associated with these listed projects. However, additional operational improvements should be expected throughout the study area to address spot improvements at intersections, ITS advancements, and other operational improvements.

A range of types of transit would be appropriate within the study area, including local circulator buses, regional commuter bus, commuter rail, and intercity rail. As the communities within the options to support transit access to residential and employment centers.

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#### 5.4.5 Traffic Interchanges

The traffic interchanges recommended as part of this study provide for regional access and circulation needs within the study area. The new interchanges would be beyond local jurisdictions' programs, most likely to be included as part of an ADOT-funded program and include the following:

- Tortolita Boulevard
- Battaglia Road
- Missile Base RoadPark Link Drive
- Sunland Grin RoadSelma Highway
- Harmon Road

#### 5.4.6 Multimodal Transportation

Detailed bicycle, pedestrian, transit and trails recommendations from previously adopted studies were detailed in Section 2.2. As the region grows, these detailed corridor level recommendations accommodating a range of modal choices should be included as mobility options to reduce dependency on personal vehicles.

Roadway design should accommodate bicycles and pedestrians to facilitate short distance trips that can be made by bicycles and pedestrians. This includes design accommodating continuous bicycle lanes, sidewalks, and trails. It is important to have continuity in the networks so that users can make a complete trip. Also, the transportation network design should consider bicycle and pedestrian access, such as pathways at cul-de-sacs and ingress/egress to gated communities. Future considerations should be made to develop detailed bicycle and pedestrian guidelines.

![](_page_59_Picture_16.jpeg)

#### **Executive Summary**

### 5.5 Corridor Preservation Needs

The identification of needs beyond that projected in Scenario B is important to ensure corridor preservation as the region grows beyond the population and employment projected. Corridor preservation allows for advanced planning for future studies, right-of-way preservation and an understanding of future circulation to provide access to undeveloped and underdeveloped areas as interest and activity as those areas begin to materialize.

Future growth needs include access to areas to the north and east of I-10, as well as higher capacity facilities in addition to I-10. Higher capacity facilities would facilitate regional circulation within the study area as well as longer distance trips through the study area. Additional studies are being conducted by the ADOT to examine higher capacity needs including the *I-11* and *Intermountain West Corridor Tier I Environmental Impact Statement (EIS)* and *North-South Corridor Study*. Additionally, the 2008 Pinal County *Regionally Significant Routes for Safety and Mobility (RSRSM)* identified the need for a parkway to the southeast of Eloy. Although this study could not verify a need for this parkway based on currently understood growth plans, this future parkway could be needed as growth in the areas exceeds current plans, providing for higher capacity movement in the southwest of the study area and possibly serving as a viable alternative in the *Intermountain West Corridor Tier I ElS*.

High capacity transportation corridors provide key regional access and circulation, highlighted in Figure 48. The corridors identified here needs further, more detailed study. The map also depicts a base layer of known constraints or impediments, including the Arizona Game and Fish Habi-map, flood zones and canals. This is intended to convey the areas which may be more developable in the near term versus areas which have long-term development potential. These documents are not regulatory in nature. Areas which have better access to existing infrastructure and limited environmental impacts are most likely to be developed sooner than areas which will require more investment in infrastructure development.

Figure 48: Long Term High Capacity Transportation Corridors

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![](_page_60_Figure_7.jpeg)

![](_page_60_Picture_9.jpeg)

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#### POLICY OPPORTUNITIES 6.0

This section defines the policy elements of a strategy that will allow the study findings to be built into a coherent implementation plan. The underlying focus of the study has been to improve mobility in the study area recognizing how it will change in the future. The policy strategies that will foster the realization of the plan must be specific and flexible to meet expectations for sustainable growth and improved circulation and access. The policy guidance will also encourage a long range view of how the area will develop to preserve opportunities for facilities that will accommodate increased growth that may not yet be identified in local plans or technological opportunities still under development.

In many cases, the guidance offered by the Pinal County Comprehensive Plan will serve as a point of departure in organizing policy and strategic planning for the region and the study area. The study, however, identifies some insights and opportunities that require their own emphasis in how they will be accomplished. Findings related to the six Focus Areas, for example, will call for focused policy support to encourage compliance with the unique transportation objectives within the Focus Areas. The Pinal County Comprehensive Plan should be reviewed and updated to reflect policy advancements and refinements.

The three main components of the policy opportunities and recommendations include:

- Governance / Planning Strategy 1.
- 2. Capital Improvements
- 3. Services and Performance Monitoring

These will be discussed individually for the study area in the pursuing sections. Where appropriate, each proposed policy presented here may need to be modified to fit within an individual jurisdiction's program.

#### Governance / Planning Strategy 6.1

How the plan or portions of the plan are implemented will depend on who manages the policies for implementation and what that implementation is designed to achieve. In general, the Comprehensive Plan will provide direction, but the affected local agency, through its own policies, will be responsible for the implementation of specific projects.

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- Ensure compatibility between the county-wide transportation system and local community networks. Each community's local and network should have seamless access to the regional network (e.g., Interstate 10) for regional trips and be planned to be as effective as possible in handling local trips without reliance on the regional network.
- Encourage Pinal County's and local communities' development patterns to support a diverse range of travel modes (single-occupant vehicle, multi-occupant auto, pedestrian, bicycle, and public transit) designed to effectively meet regional and local mobility needs.
- The identified network and character of proposed facilities should encourage the development pattern in Pinal County to support a diverse range of travel modes.
- Develop bicycle and pedestrian designed guidelines to ensure multimodal transportation options are included in development of communities.
- Promote vehicular and pedestrian access to corridors in the development of all commercial centers, mixed use activity centers, employment centers, and public facilities.
- Identify and adopt freight focus areas to ensure compatible land uses and transportation network such as in the Focus Areas of Red Rock, I-10 (in Eloy), State Route 87 (between Eloy and Coolidge) and Pinal Airpark (in Marana).

- centers.

#### **Capital Improvements** 6.2

The approach to constructing facilities must be guided by the objectives set forth in the study and in supporting plans. These proposed implementation policies also recognize anticipated changes in growth practices and locations, travel options and sustainability opportunities.

- County.
- sidewalks.
- •

![](_page_61_Picture_27.jpeg)

Provide connectivity among county, cities and towns, the six identified Focus Areas and other major activity

Maintain continuity of network and access to all developable lands throughout the study area.

• Work with ADOT to ensure the efficiency and functionality of Interstate 10 or other high capacity transportation facilities to serve anticipated growth in population, employment and recreation within Pinal

• Construct principal arterials, parkways, and enhance parkways as multimodal roadways, incorporation design features such as bus queue jumps or dedicated high capacity vehicle lanes where warranted, and sufficient right-of-way width to accommodate bicycles and

Design supporting transportation systems for each of the six Focus Areas to address their unique needs and to strengthen their economic development appeal.

• Require development to adhere to the *Pinal County* Regionally Significant Routes for Safety and Mobility (RSRSM) Access Management Manual on designated facilities to ensure functionality that mitigates congestion and encourages sustainable growth.

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- Construct key facilities, such as the freight and commuter corridors identified in Section 5, that provide access and circulation to freight centers such as in Focus Areas at Red Rock, I-10, SR 87 and Pinal Airpark, to standards that will accommodate the higher loads of heavy freight activity to help reduce long term maintenance and replacement costs.
- Identify long term right-of-way corridors to be preserved as development activity warrants, ensuring future system continuity, capacity and integrity. These corridors must also consider emerging options for the use of highway rights-of-way to provide for evolving transportation and other societal-related needs (e.g., automated technology such as vehicle-to-vehicle (V2V), solar and wind power, kinetic-energy recapture, transmission line placement, truck idling facilities and inter-modal uses).
- Coordinate with the Arizona State Land Department (ASLD) and future development interests on corridor placement to maximize land use access and minimize impacts to sensitive resources.
- Acquire designated rights-of-way necessary to construct roadways through dedication and/or easements as development approvals are requested.
- Identify opportunities for funding infrastructure construction through development or investment opportunities adjacent to and/or within the corridor rights-of-way.

#### Services and Performance Monitoring 6.3

Integrating services into existing processes and addressing new performance monitoring requirements from MAP-21 must be supported moving forward in order to integrate multimodal transportation and economic development. This will meet local needs as well as help to achieve regional, statewide and national requirements.

• Development information across Pinal County will continue to be aggregated by CAG. Updates on development should occur on an ongoing basis or through a defined and agreeable schedule by all member agencies.

- Engage the State Demographer as the currently anticipated development in the study area would significantly alter the state's understanding of long-term infrastructure needs.
- Identify and preserve desired locations for employment centers, which will require the Pinal County Comprehensive Plan to be reviewed and refined.
- Refine land use categories in the *Comprehensive Plan* to better understand transportation impacts. This includes more detailed types of employment, refined residential categories, refine open space, and more detailed characteristics for Mixed Use Activity Centers. In general, the land use categories should evolve to prescribe "either/or" instead of "and/or".
- Continually assess timing of anticipated development, allowing the region to advance the planning, preservation, and study of regional corridors. The ultimate timing of development will require a continual assessment corresponding to the timing of infrastructure needs.
- Adopt appropriate performance measures compatible with the requirements of MAP-21 and ADOT's Planningto-Programming (P2P) Link process.
- Establish a performance review cycle to assess the quality of transportation performance across the region.
- Define a formal process in the Comprehensive Plan to strengthen the connection between ongoing development monitoring of the impacts of land use on transportation system with transportation the

projects.

## 7.0 NEXT STEPS

This study recommended near-term, mid-term, and long-term transportation improvements based on population and employment thresholds, to address needs as the region grows. These improvements identify infrastructure needs to accommodate known development, build out the transportation network to create redundancies and facilitate economic development. These improvements will enable freight movements and development of the region as a major freight center. An update to the Pinal County Comprehensive Plan is recommended to be able to accommodate the recommended policy level changes that are recommended. Additionally, the various municipalities encompassed in this study area will also need to revisit various adopted plans and policies to advance the recommended improvements.

![](_page_62_Picture_22.jpeg)

performance-based requirements for development

• Review and revise the Comprehensive Plan checklist to ensure development review process and approvals reflect County vision and performance measures.