Pinal County Corridors Definition Study

Working Paper No. 1 - Existing and Future Conditions, Needs and Deficiencies

ADOT Project No. T04-49-P0001
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LIST OF FIGURES

LIST OF TABLES

1. INTRODUCTION

The Southeast Maricopa/Northern Pinal County Transportation Study (SEMNPTS), completed in September 2003 by the Maricopa Association of Governments, the Central Arizona Association of Governments, and the Arizona Department of Transportation, recommended $12 to $14 billion worth of transportation improvements for the southeastern Maricopa County and northern Pinal County areas. These improvements were recommended to meet the transportation needs of the 1.3 million people that are projected to live in the area roughly bounded by US 60 and SR 79 on the east, Loop 101 and the Gila River Indian Community on the west, US 60 on the north, and Coolidge and Florence on the south, by the year 2030. Recommended improvements included nearly 3,000 lane miles of new and improved arterials, an enhanced transit system, improvements to existing freeway corridors, and 95 miles of new freeways.

The purpose of the SEMNPTS was to document the transportation relationships between Maricopa and Pinal Counties, to examine long-range transportation needs, and to identify realistic projects that address the identified needs. Specific SEMNPTS recommendations included the development and/or improvement of four highway corridors that would improve mobility within the region for both Maricopa and Pinal Counties:

- East Valley Corridor (I-10 to Florence Junction).
- Apache Junction/Coolidge Corridor (I-10 to US 60).
- US 60 Freeway Re-route (Baseline to Ray Roads), and
- Williams Gateway Freeway (loop 202 to US 60).

Since completion of the SEMPTS, several actions were taken to advance the development of the new freeway corridors including:

- The CAAG Regional Council also adopted a resolution and requested that ADOT conduct transportation planning efforts on the four corridors.
- House Bill 2456 was passed by the Arizona House of Representatives assigning to MAG, CAAG, and ADOT the responsibility for carrying out further definition of the corridors identified in the SEMNPTS for right-of-way preservation and to provide the State Transportation Board with information to consider these corridors for adoption into the State Highway System by December 31, 2008.

ADOT has assumed responsibility for initiating and managing the studies required by House Bill 2456 and is conducting three separate studies for the four corridors – the Williams Gateway Corridor Definition Study, the US 60 Corridor Definition Study, and the Pinal County Corridors Definition Study (Apache Junction/Coolidge Corridor and the East Valley Corridor). The purpose of each study is to provide recommendations to the State Transportation Board as to the types of future facilities, the general location of the corridors, and the jurisdictional responsibility for the facilities. Specifically, ADOT is investigating the need for and feasibility of constructing new state highways in the study area. Although the *Southeast Maricopa/Northern Pinal County Transportation Study* will serve as a resource to the three Corridor Definition Studies, the studies will take a fresh approach to defining corridor need and feasibility.

In September 2004 ADOT awarded the contract for the *Pinal County Corridors Definition Study* to Kimley-Horn & Associates. The purpose of the *Pinal County Corridors Definition Study* was to further review the SEMNPTS corridor recommendations for the East Valley and Apache Junction/Coolidge corridors. The initial corridor alignments as proposed in the SEMNPTS are graphically shown in **Figure 1-1**.

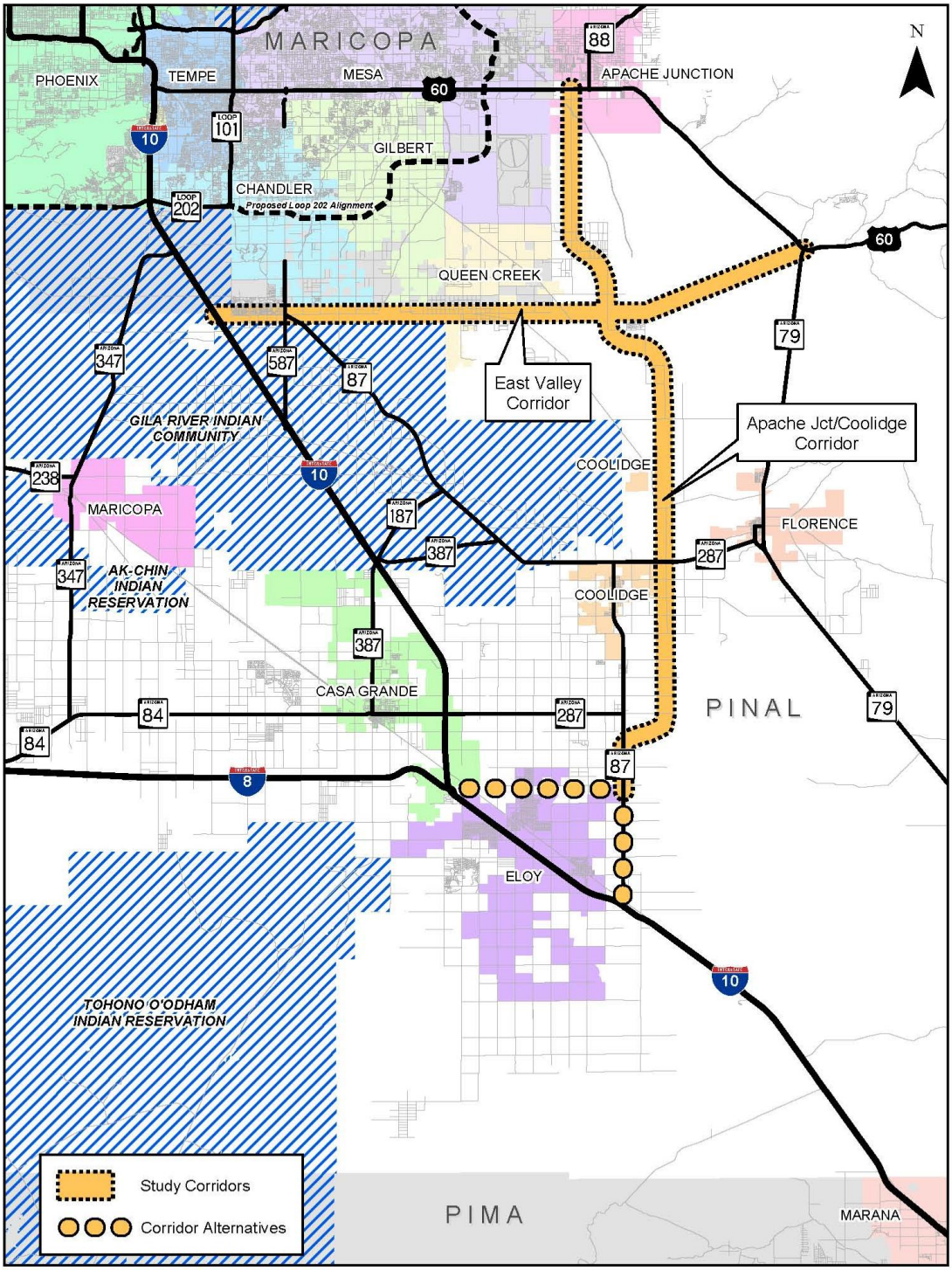


Figure 1-1 – Apache Junction/Coolidge, and East Valley corridors as proposed by the Southeast Maricopa and Northern Pinal County Transportation Study

The scope of the *Pinal County Corridors Definition Study* includes the following activities:

- Confirm the need for the East Valley and the Apache Junction/Coolidge corridors (independently, and in combination with each other);
- Define planning-level corridor definition alternatives based on regional freeway planning principals, existing and future corridor conditions, and input from affected jurisdiction and stakeholders;
- Evaluate the engineering, environmental, and land use compatibility characteristics of alternative corridor definitions through a technical assessment of performance criteria, impact criteria, and implementation criteria;
- Identify to the extent possible, feasible and preferred planning-level corridor definitions on the basis of the technical evaluation;
- Document planning-level costs of corridor development (including studies, design, construction, and right-of-way costs) for feasible and preferred corridor definitions and also the extent to which affected jurisdictions and stakeholders support the recommended corridor definitions.

The *Pinal County Corridors Definition Study* will result in technical recommendations and investment criteria so that ADOT and the State Transportation Board can determine whether the two candidate corridors should be added to the State Highway System. This study will include sufficient detail to provide a basis for the future establishment of geometric roadway alignments and corridor design concepts, the preservation of right-of-way, and the identification of required environmental and clearance studies.

2. CORRIDOR DEFINITION STUDY AREAS

The Pinal County Corridors Definition Study includes two study areas – the East Valley Study Area and the Apache Junction/Coolidge Study Area (refer to **Figure 2-1**). The East Valley Study Area (I-10 to Florence Junction) includes parts of Maricopa County, Chandler, Gilbert, the Gila River Indian Community, Queen Creek, and Pinal County and extends from I-10 to US 60 in Pinal County. This 31-mile long study area lies in the CAAG planning area, with 19 miles bordering the MAG planning area and the Gila River Indian Community. The Apache Junction/Coolidge Study Area is a 36 mile long area connecting US 60 near Apache Junction on the north to I-10 south of Coolidge.

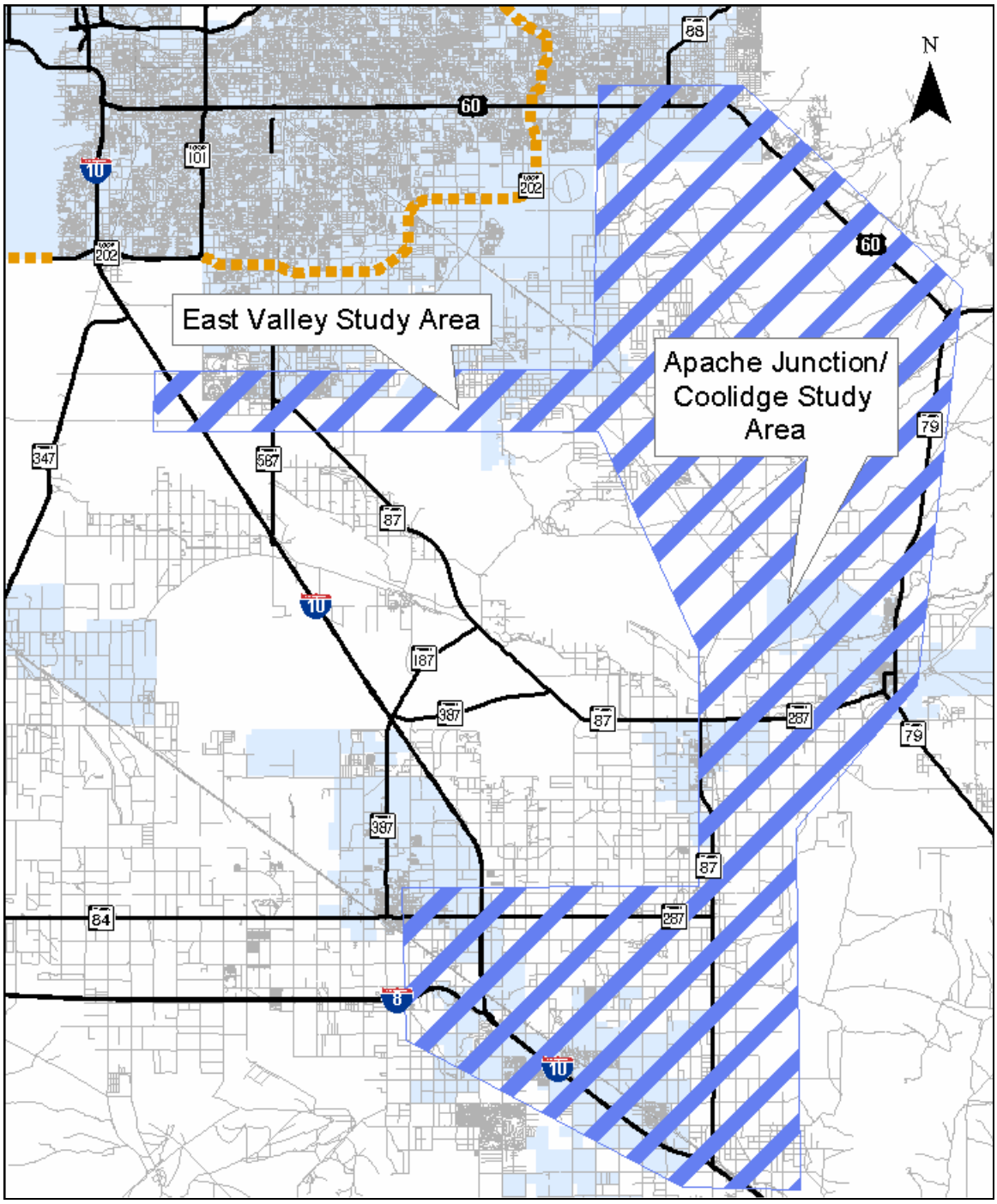


Figure 2-1 – Pinal County Corridors Definition Study Area

3. PLANS AND STUDIES

The first task of the Pinal Corridors Definition Study was to compile available information and data and to prepare a summary of existing conditions within the corridor study areas. This chapter summarizes available relevant information on existing conditions as contained in studies, reports, and other documents.

3.1 Inventory of Studies, Reports, and Documentation

This section lists the reports and studies that were obtained and reviewed as part of the Pinal County Corridors Definition Study. **Table 3-1** provides a listing by reference number of the documents that were reviewed.

Table 3-1 – Summary of Collected Documentation

Ref. No.	Doc. Type	Jurisdiction Agency	Author/ Originator	Document Title	Date
1.1	Proposal	Arizona State University	Morrison Institute for Public Policy	Conceptualization of a Future for "Superstitions Vistas"	September, 2004 (estimated)
1.2	Report	Central Arizona College	Applied Economics	Central Arizona College Bond Feasibility Study Demographic Analysis	May 14, 2004
1.3	Report	City of Apache Junction	Kirkham Michael Consulting Engineers	City of Apache Junction, Arizona Small Area Transportation Study	May, 2004
1.4	Hand-out	City of Apache Junction	City of Apache Junction	General Plan Land Use Element Summary	Not available
1.5	Report	City of Casa Grande	Lima & Associates	Casa Grande Multi-modal Transportation Study	December, 2001
1.6	Report	City of Chandler	DFD	Chandler General Plan	November 1, 2001
1.7	Report	City of Chandler	Parsons Brinckerhoff	Chandler Transportation Study, Final Report	Revised October 23, 2003
1.8	Manual	City of Chandler	N/A	Street Design and Access Control, Technical Design Manual #4	January, 2002
1.9	Report	City of Chandler, Valley Metro, MAG	BRW	City of Chandler Transit Plan Update, Final Report	November, 2002
1.10	Report	City of Chandler, Valley Metro, MAG	BRW	City of Chandler High Capacity Transit Major Investment Study	November, 2002

Table 3-1 – Summary of Collected Documentation (continued)

Ref. No.	Doc. Type	Jurisdiction Agency	Author/ Originator	Document Title	Date
1.11	Report	City of Coolidge	Stantec Consulting	City of Coolidge General Plan Update	November 10, 2003
1.12	List	City of Coolidge	Susan Laybourn/City of Coolidge	Developments Scheduled for Coolidge	January 19, 2005
1.13	Memor-andum	City of Coolidge	Tischler & Associates, Inc.	Demographic Data and Development Projections	February 12, 2004
1.14	Map	Maricopa Association of Governments	Maricopa Association of Governments	Roads of Regional Significance	Changes approved April 28, 1999
1.15	Report	Maricopa Association of Governments	Maricopa Association of Governments	Regional Transportation Plan	November 25, 2003
1.16	Report	Maricopa Association of Governments	Parsons Brinckerhoff	Southeast Maricopa/Northern Pinal County Area Transportation Study	September, 2003
1.17	Report	Maricopa County	Not Available	Maricopa County Major Streets and Routes Plan, Street Classification Atlas	Adopted April 18, 2001 Revised September, 2004
1.18	Report	Maricopa County Department of Transportation	Lee Engineering	Riggs Road Access Control and Corridor Improvement Study, Final Report, Volume I, II, and III of IV	July 20, 1999
1.19	Report	Maricopa County Department of Transportation	CH2M Hill	Corridor Study for Ellsworth Road, Elliot Road to Hunt Highway	November, 1997
1.20	Report	Maricopa County Department of Transportation	AGRA Infrastructure, Inc.	Final Access Control and Improvement Study, Power Road, Hunt Highway to Guadalupe Road	June, 2000
1.21	Report	Maricopa County Department of Transportation	Not Available	Bicycle Transportation System Plan	Adopted May 19,1999
1.22	Report	Pinal County	Lima & Associates	Pinal County Transportation Plan 2000 Update, Final Report and Executive Summary	September, 2000
1.23	Report	Pinal County	Entellus	Hunt Highway and Vineyard Road Limited Access Study	July 2, 2001

Table 3-1 – Summary of Collected Documentation (continued)

Ref. No.	Doc. Type	Jurisdiction Agency	Author/ Originator	Document Title	Date
1.24	Report	Pinal County	Entranco, Inc.	Southern Pinal County Regional Transportation Plan	April 24, 2003
1.25	Report	Pinal County	Not Available	Pinal County Comprehensive Plan 2001	December 19, 2001
1.26	Report	Pinal County Department of Civil Works	JHK & Associates, Johnson-Brittain Associates	Hunt Highway Corridor Assessment Report	October, 1995
1.27	Letter, Support Material	Pinal County Department of Public Works	Kirkham Michael Consulting Engineers	Superstition Freeway Extension – Project Assessment	March 10, 2003
1.28	Report	Pinal County Department of Public Works	Curtis Lueck & Associates	Superstition Valley Transportation Study, Final Report	July 19, 1999
1.29	Report	Town of Florence	URS Corporation	Florence Area General Plan Update	April 9, 2003
1.30	Application	Salt River Project	Salt River Project	Application for a Certificate of Environmental Compatibility, Palo Verde to Pinal West 500kV Transmission Project	Not Available
1.31	Report	Town of Gilbert	Parsons Brinckerhoff	Town of Gilbert Arterial Street Plan	November, 2004
1.32	Report	Town of Gilbert	Parsons Brinckerhoff	Gilbert / East Valley Transit System Study, Long-Range Transit Plan	August, 2003
1.33	Report	Town of Queen Creek	Partners for Strategic Action, Lima & Associates, Design Workshop, PAA	Town of Queen Creek General Plan, 2002	May 15, 2002
1.34	Report	Williams Gateway Airport Authority, and the Maricopa County Department of Transportation	JHK & Associates, Lima & Associates, Transit Plus, Applied Economics	Williams Area Transportation Plan., Final Report and Executive Summary	March, 1997
1.35	Meeting Summary	Pinal County	Kimley-Horn and Associates, Inc.	Ironwood Drive DCR and Final Design	December 7, 2004
1.36	Site Plan	Dell Web	Dell Web	Preliminary site plan	December 9, 2004

3.2 General Findings and Recommendations

This section documents the findings and recommendations from existing studies and reports that are pertinent to the each study area.

3.2.1 General Study Area and Surrounding Region

The following information is applicable to both the East Valley and the Apache Junction/Coolidge study areas. Section 3.2.1.1 contains a summary of socioeconomic data compiled from various reports and studies. Section 3.2.1.2 contains a summary of transportation issues that have been identified in previous reports and studies.

3.2.1.1 Socioeconomic Data compiled from other Studies

Central Arizona College Bond Feasibility Study Demographic Analysis (Ref. No. 1.40)

- The study provides Pinal County demographic projections for the next 20 years in five year increments; these data are provided for the base year of 2000, and for five-year periods from 2005 through 2025;
- As of the 2000 Census, Pinal County was home to a population of 179,727 people, with 49.3 percent residing in the Apache Junction and Casa Grande Study Areas;
- Development information for this study was compiled through interviews with planners, developers, and builders to identify active, planned, and proposed residential projects. The information collected for this study identified 468 active, planned, and proposed projects within Pinal County;
- An influx of housing developments is transforming the privately owned, agricultural land in the northwest portion of Pinal County. Development is primarily driven by the relatively low cost of the land and the proximity to Phoenix;
- Development projects encompassing as many as 160,000 housing units could begin construction in Pinal County within the next five years. Including all projects expected to begin in the next twenty years, the number jumps to nearly 500,000 units. Within five years, the most activity is expected in the San Tan Area and then in the Maricopa-Stanfield Study Area through twenty years;
- By 2025 the population in Pinal County could reach nearly one million residents at about 990,000 – By 2020 the largest share of the population is projected to be living in the San Tan Area – a shift from the current concentrations of residents in the Apache Junction and Casa Grande areas.

Town of Gilbert Arterial Street Plan (Ref. No. 1.42)

- Town of Gilbert population increased 276 percent between 1990 and 2000, the highest percent change in the U.S. for any incorporated city or town. 2000 population is 109,697. July 2004 population is 162,100 (page 1).
- The Town is forecasting a 2030 population of 287,300, representing a 160 percent increase in population compared to the year 2000 (page 2).

City of Coolidge, Demographic Data and Development Projects, (Ref. No. 1.43)

- Report projects an increase of 19,740 housing units over the next ten years, to a total of 23,853 units in 2014 (page 1).

§ By 2024, report projects a population of 127,039, 41,853 total housing units, 23,288 jobs in Coolidge, generating a total of 322,081 trips per day (page 11).

Developments Scheduled for Coolidge, (Ref. No. 1.41)

§ Document lists, as of January 19, 2005, the subdivisions and developments scheduled for construction within the City of Coolidge. The list identifies over 31,000 homes that have been approved, that are in the approval process, or that are under construction.

Maricopa Association of Governments, Regional Transportation Plan, (Ref. No. 1.38)

§ 2025 population projections are 287,000 for Chandler, 281,900 for Gilbert, and 73,100 for Queen Creek. The total projected 2025 municipal planning area population for Maricopa County is 5,664,000 (Executive Summary, page 4).

§ The MAG transportation modeling region extends into Northern Pinal County in order to understand the regional transportation implications of population growth outside of Maricopa County. Based on this joint forecasting effort the Pinal County portion of the MAG transportation modeling area is projected to grow from approximately 150,000 people in 2000 to approximately 917,000 by 2025. Total employment in the area is projected to grow from approximately 45,000 to 201,000 in the same period (Final Report, page 3-9).

Southeastern Maricopa/Northern Pinal County Area Transportation Study, (Ref. No. 1.39)

§ The study projects a 2020 population of 790,372 within the study area in Maricopa County, and of 295,894 within the study area in Pinal County (page 2-16).

Pinal County Transportation Plan 2000 Update, Executive Summary and Final Report, (Ref. No. 1.22)

§ The 2013 population projected by the study in 1994 was exceeded by 10,000 people by the year 2000 (Executive Summary, page 1).

§ Study is based on a population level, rather than a year, because of the uncertainty of the time frame for population growth (Executive Summary, page 3).

§ Study projects that County will reach a population of 220,000 around 2005, 320,000 around 2012, and 520,000 around 2022 (Executive Summary, page 3).

Southern Pinal County Regional Transportation Plan, (Ref. No. 1.13)

§ The study projects 18,000 new homes in southern Pinal County study area, 13,000 new jobs, and a 60 percent increase in traffic over a 20 year time period (page 4).

§ Study projects that most of the development will occur in the western portion of the study area, near Eloy (page 19).

Pinal County Comprehensive Plan 2001, (Ref. No. 1.14)

§ Rapid population growth is identified as a significant transportation issue in the study. Arizona Department of Economic Security (DES) projected a 2013 population of 160,000. However, the 2000 census data indicates a population of 179,727 (page 38).

§ Travel patterns in Pinal County are not focused on a central area where services and employment are concentrated. Travel patterns from residents in the central part of the County (Casa Grande, Eloy, Arizona City, Coolidge, and Florence) include significant travel to/from both Tucson and Phoenix due to their close proximity to both metropolitan areas (page 44).

3.2.1.2 Summary of Transportation Issues Identified by Other Studies

Maricopa Association of Governments, Regional Transportation Plan, (Ref. No. 1.38)

§ Neither the East Valley corridor nor the Apache Junction/Coolidge corridor is included in the MAG 20 year Regional Transportation Plan.

§ No regionally funded improvements to Riggs Road or Hunt Highway are included in the Regional Transportation Plan (Executive Summary, Table 6, page 19).

§ Regional Transportation Plan shows Riggs Road as a 4-lane arterial from I-10 to Meridian Road (Final Report, Figure 9-2).

Southeastern Maricopa/Northern Pinal County Area Transportation Study, (Ref. No. 1.39)

§ The highest traffic volumes for arterial streets are in northern portion of the study area with average daily traffic (2002) of 40,000 to 50,000 vehicles per day on some segments (page 3-6).

§ The study cites a concern that the currently planned transportation system cannot accommodate the rapid development and growth in southeast Mesa, eastern Gilbert, Queen Creek, and northern Pinal County (page 4-1).

§ The study states that topography, existing development such as Williams Gateway Airport and the General Motors Proving Grounds, and planned developments such as Johnson Ranch may prevent a uniform treatment of the arterials. In absence of a grid system, certain trips will be made on a regional freeway system, resulting in more congestion and inefficient overall system usage (page 4-3).

§ Specific issues and needs for arterials identified in the study include (page 4-3):
- Widening of SR-87 and SR-79
- An additional crossing of Central Arizona Project Canal
- Widening and extension of Attaway Road

§ Study recommends expanding the existing arterial street system in Maricopa County eastward into Pinal County, thereby addressing discontinuities in the existing arterial system (page 5-2).

§ The study recommends widening the following state highways by two lanes in each direction:
- SR 79, beginning near the Florence Junction and continuing south to the study boundary near SR 287, a length of approximately 17 miles (page 6-7).
- SR 287, beginning at SR 87 and continuing east to SR 79, a distance of approximately 10 miles (page 6-9).
- SR 87, beginning at SR 387 and continuing to SR 87/287, a length of approximately 8 miles (page 6-9).

§ The study proposes constructing freeway corridors in phases, in segments of 5 to 7 miles in length. An alternative option for phasing is to construct less than

the ultimate number of lanes. Study states that while the proposed facilities (e.g. East Valley Corridor, and Apache Junction/Coolidge Corridor) were analyzed as freeway facilities, they could be developed as expressways or high-level arterials (page 7-1).

- The East Valley Corridor, as proposed in the study, consists of a high-level facility extending form I-10 eastward to US 60 near Florence Junction. The study suggests that if developed as an expressway/controlled access arterial, this facility could utilize portions of the Riggs Road and Hunt Highway alignments (page 7-7). The study states that the corridor on the west end is constrained by existing land use, and that San Tan Regional Park is located south of the corridor, near Ellsworth Road. The study states that the corridor could be a six-lane facility with interchanges at 1-2 mile spacing. According to MAG travel projections, the corridor could carry 84,000 to 110,000 vehicles per day between I-10 and Higley Road, 63,000 to 84,000 vehicles per day between Higley Road and Ironwood Road, and 14,000 to 21,000 vehicles per day between Ironwood Road and US 60. Estimated cost of the facility is $1,390 million as a freeway and $310 million as an expressway/controlled access facility (page 7-7).
- The Apache Junction/Coolidge corridor, as proposed in the study, extends 36 miles in the north-south direction, generally following SR 87 south of Coolidge and continuing north to US 60. This corridor may relieve congestion on I-10, and may provide an alternative for truck traffic to and from industrial developments. The design characteristics of the corridor may change across its length. A facility in this area could carry daily traffic volumes in the range of 60,000 to 80,000 vehicles per day between US 60 and Empire Road, 55,000 to 110,000 vehicles per day between Empire Road and SR 287, and 26,000 to 45,000 vehicles per day between SR 287 and I-10, based on 2030 projections. Estimated construction cost is $1,640 million (page 7-9).

A comparison of the performance statistics of the Pinal County portion of each network is presented in **Table 3-2** (page 8-9).

- Study compares three future network packages that address the projected growth in Southeastern Maricopa County and Northern Pinal County – Future Base, Enhanced, and New Corridors (page 8-1).
  - Future Base Network - Improvement of arterial street system consistent with long-range transportation plans of agencies (page 5-1)
  - Enhanced Future Base - Includes future base improvements plus the following (page 6-1):

    a. Widen existing freeways to add general purpose lanes

    b. HOV Lanes

    c. Widen state highways

    d. New interchanges

    e. Modifications to existing interchanges
  - New Corridors - Five new potential freeway corridors, assuming that future base and enhanced base improvements are implemented (page 7-1)

Table 3-2 – Performance statistics of 2030 Pinal County area SEMNPTS alternative networks

	2000	Future Base	Enhanced	New Corridors
	Existing as of 2000	Build-out arterial system	Widen freeways and state highways	Five new freeways
Centerline Miles				
Arterials	159	482	482	482
Freeway & Expressway	17	17	17	81
Lane Miles				
Arterial	368	1962	1962	1977
Freeway & Expressway	68	68	88	472
Intersection LOS				
D	0	8	6	1
E	0	1	2	0
F	0	1	1	1
% Congested	0	5	4	0
Congested Lane Miles – PM Peak				
Arterial	5	61	28	4
Freeway & Expressway	0	1	1	0
% Congested	1	3	1	0

- The study highlights significant findings from the 2030 performance measures for the Maricopa County portion of the study area, including (page 8-2):
  - Number of congested lane miles is lowest with the New Corridors network
  - Number of congested lane miles is lowest with the New Corridors network
  - The hours of delay for arterials are lowest with the New Corridors and hours of delay are lowest for freeways with the Enhanced network
- The study highlights significant findings from the 2030 performance measures for the Pinal County portion of the study area, including (page 8-2):
  - Number of congested intersections is lowest with the 2030 New Corridors Network
  - Number of congested lane miles is lowest with the New Corridors network.
  - Hours of delay for arterials and freeways are lowest with the New Corridors.
  - For the Pinal County area, intersection congestion is minor with no package (Future, Enhanced, New Corridors) over 5 percent congested intersections in any of the target years. In 2030, the New Corridors package virtually eliminates any congested intersections (page 8-3)

Pinal County Transportation Plan 2000 Update, Executive Summary (Ref. No. 1.22)

§ The plan states that without improvements, most roadways in Apache Junction, Florence, Coolidge, and Casa Grande experience unacceptable levels of congestion (page 4), and that I-10 is noticeably or severely congested over its entire length through Pinal County, operating at a Level of Service of D, E, and F. (page 4).

§ The study states that the transportation network will operate reasonably well if the Hunt Highway/Attaway Road between Arizona Farms Road and SR 287 is widened to 4 lanes, I-10 is widened to six lanes, and portions of SR 79, SR 287, and SR 387 to four lanes (page 4).

§ Specifically, the study recommends widening (page 5):

- SR 79, Florence Junction to Florence to 4 lanes by population 220,000.
- Hunt Highway from Arizona Farms road to SR 287 to 4 lanes by 220,000, and from Combs Road to Arizona Farms Road to 4 lanes by population 320,000.
- Vineyard Road to 4 lanes by population 520,000.

Southern Pinal County Regional Transportation Plan, (Ref. No. 1.13)

§ Study recommends widening SR 79 between Florence and Park Link Drive to 4 lanes (page 22)

Pinal County Comprehensive Plan 2001, (Ref. No. 1.14)

§ The study recommends that future corridor routes be located adjacent to washes (page 37).

Superstition Valley Transportation Study, Final Report (Ref. No. 1.18)

§ The study area of the Superstition Valley Transportation Study is generally bounded by US 60 on the north, SR 287 on the south, SR 79 on the east, and Power Road/Hunt Highway on the west (page 8). The study projects 57,000 new homes and 131,000 new residents within a twenty year time frame (page 33).

3.2.2 East Valley Study Area

The following information pertains to the East Valley study area. Section 3.1.2.1 summarizes roadway characteristics of the Riggs Road and Hunt Highway as identified in local jurisdictions' long-range transportation plans. Section 3.1.2.2 identifies other issues applicable to the study area. A compendium of characteristics of Riggs Road and Hunt Highway is contained in **Table 3-3** and **Table 3-4**, respectively.

Table 3-3 – Summary of Roadway Characteristics of Hunt Highway from Local Jurisdiction Long-Range Plans

Jurisdiction	Segment Description	Road Classification	Number of Lanes (Future)	Source
Hunt Highway				
Maricopa County	Dobson to Alma School	Minor Arterial	2	Maricopa County Major Streets and Routes Plan, Street Classification Atlas, Revised September, 2004
City of Chandler	Alma School to Val Vista	Major Collector	2	City of Chandler General Plan, Revised 10/23/02, Mid-Range Roadway Plan, page 105
Town of Gilbert	Val Vista Dr to Recker Rd*	Major Arterial	4 (mid-range) 6 (long-range	Town of Gilbert Arterial Street Plan, Figure IV-2 page 46, Figure IV-2, page IV-2 page 53 and Figure IV-3 page 56
Town of Queen Creek	Recker Rd to 1/2 mile east of Power Rd	Rural Principal Arterial	4	Town of Queen Creek General Plan, Figure 5.1 page 64
	1/2 mile east of Power Rd to Hawes Rd	Rural Major Collector	2	
	Empire Rd (straight line ext. of Hunt Highway) - Hawes Rd to Meridian Rd	Rural Major Collector	2	
	Hawes Rd to Ellsworth Rd	Rural Minor Collector	2	
	Hawes Rd to Maricopa County line	Rural Minor Collector	6	
Pinal County	Hunt Highway, Maricopa County line to Arizona Blvd	Principal Arterial	4 (ROW allows for 6)	Pinal County Transportation Plan, 2000 Update, Final Report, Figure 5-5 page 5-16, Figure 11-1 page 11-4
	Combs Road, Hunt Highway to Meridian Rd	Minor Arterial	2 (ROW allows for 4)	

* Current discontinuity exists on Hunt Highway between Val Vista Drive and Higley Rd at Potato Mountain. Gilbert arterial street plan depicts road being extended and connected to eliminate the discontinuity.

Table 3-4 – Summary of Roadway Characteristics of Riggs Road from Local Jurisdiction Long-Range Plans

Jurisdiction	Segment Description	Road Classification	Number of Lanes (Future)	Source
Riggs Road				
Maricopa County	I-10 to Arizona Avenue	Principal Arterial	6	Maricopa County Major Streets and Routes Plan, Street Classification Atlas, Revised September, 2004
City of Chandler	Alma School to Arizona Ave	Major Arterial	6	City of Chandler General Plan, Revised 10/23/02, Mid-Range Roadway Plan, page 105 City of Chandler Transportation Study, Figure VIII-1 (2020 Lane Needs), and Figure VIII-3 (2040 Lane Needs)
	Arizona Ave to Val Vista	Major Arterial	4 (2020) 6 (2040)	
Town of Gilbert	Val Vista to ½ mile west of Power Rd	Major Arterial	6	Town of Gilbert Arterial Street Plan, Figure IV-2 page 46, Figure IV-2, page IV-2 page 53 and Figure IV-3 page 56
Town of Queen Creek	Recker Rd to east of Vineyard Road	Urban Principal Arterial	6	Town of Queen Creek General Plan, Figure 5.1 page 64
Pinal County	Riggs Road is not shown as being extended into Pinal County			Pinal County Transportation Plan, 2000 Update, Final Report

3.2.2.1 Roadway characteristics of Riggs Road and Hunt Highway

Pinal County Transportation Plan 2000 Update, Executive Summary and Final Report, (Ref. No. 1.22)

- Study recommends widening Hunt Highway from Arizona Farms road to SR 287 to 4 lanes by 220,000, and from Combs Road to Arizona Farms Road to 4 lanes by population 320,000 (page 5).
- Hunt Highway is classified as a Principal Arterial from Attaway Road to Combs Road (page 7).

City of Chandler Transportation Study, Final Report (Ref. No. 1.8)

- Roadway Characteristics:

- Riggs Road is designated as a Road of Regional Significance (RRS) by the Maricopa Association of Governments. These roadways are designed to complement the freeway system and are spaced at a distance of three to six miles (page 32).
- Riggs Road is a 2-lane roadway east of Arizona Avenue and 4-lane roadway west of Arizona Avenue (page 40).
- Hunt Highway is a 2-lane roadway through its entirety within City of Chandler (page 40).
- Mid-range recommendations include widening Riggs Road to 6 or more lanes west of Arizona Avenue, and 4 lanes east of Arizona Avenue (page 71). Long-range recommendations include widening of Riggs Road to 6 lanes along the entire corridor (page 76).

§ Projected Traffic Volumes and Level of Service
- Existing traffic volumes (year 2000 data) depict that the highest volumes on Riggs Road are west of Arizona Avenue, extending towards I-10 (13,200 vpd), and decreasing to the east to 4,800 vpd between Gilbert and Lindsay Roads. No traffic volumes are shown for Hunt Highway.
- Riggs Road, between Arizona Avenue and McQueen is shown as LOS 'E' (page 51). Other segments of Riggs road are LOS 'A', 'B', and 'C'.
- Riggs Road projected traffic volumes (2020) exceed 40,000 vpd west of Arizona Avenue, and decrease to 11,000 vpd between Lindsay and Val Vista (page 64). The Level of Service (2020) is at 'D' west of Arizona Avenue, and 'C' and 'B' east of Arizona Avenue.
- Hunt Highway traffic projections are 2,000 vpd between Alma School and McQueen, and 1,000 vpd east of McQueen (page 64). 2020 Level of Service is 'A' throughout the entire corridor (page 67).

City of Chandler Street Design and Access Control Technical Design Manual, (Ref. No. 1.9)

§ Manual states that direct land access to principal arterials is not permitted (Riggs Road), although frontage roads with direct land access is planned for some locations (page 26).

§ For arterial streets, intermediate intersections with collector and local roadways and major driveways should be limited to a maximum of 5 per mile (page 26).

§ All arterial streets within the City shall be provided with medians (page 27).

Hunt Highway Corridor Assessment Report, (Ref. No. 1.17)

§ Report states that the Pinal County Transportation Plan 2013 concludes that a two-lane roadway will be adequate to handle traffic on Hunt Highway. The report proposes that right-of-way should be reserved for future widening to a four-lane highway (page 2-1).

§ The highest ranked roadway improvement alternative includes the Hunt Highway and Attaway Road corridors (page 5-1).

§ Attaway Road alternative follows new alignment from SR87/287 south of Coolidge to Attaway Road, Attaway Road across the Gila River, and the existing Hunt Highway alignment to Arizona Farms Road (2-16)

§ Hunt Highway preferred alternative follows the existing Hunt Highway alignment from Arizona Farms Road to the Maricopa County line at Ellsworth Road (2-8).

Maricopa County Riggs Road Access Control and Corridor Improvement Study, Final Report, Volumes I, II, and III of IV. (Ref. No. 1.21)

§ The report's final recommendation is to develop the Riggs Road corridor as a "Modified No-Build" corridor. The plan states that the 6-lane divided roadway cross-section associated with a RRS is not needed to carry the traffic volumes projected for the year 2020. The cross-section for the recommended alternative is summarized as follows (Page 1-2, 1-2):

- I-10 to Price Road – Implement the currently programmed project to widen Riggs Road from a two-lane roadway to a five-lane roadway.
- Price Road to Arizona Avenue – Maintain the existing roadway without improvement; potential future improvements could include median, minor widening and sidewalks.
- Arizona Avenue to Val Vista –Improves Riggs to a four-lane cross-section, with a wide raised median, and 130' right-of-way, per City of Chandler standards. If traffic conditions warrant in the future, utilize the extra median width to construct two more lanes.
- Val Vista to Recker Road – Improve Riggs Road to a four-lane urban cross-section with a wide raised median. If traffic volumes warrant, utilize extra median width to construct two additional lanes
- Recker Road to Hawes Road – Improve Riggs Road to a four-lane rural major arterial
- Hawes Road to Rittenhouse Road – Construct Riggs Road to a four-lane rural divided.

Maricopa County Major Streets and Routes Plans, Street Classification Policy Document, (Ref. No. 1.26)

§ The plan designates Riggs Road as a Primary Route.

§ Riggs Road is designated as an Oversize Load overlay. The Oversize Load Overlay contains both routes designed for use by oversize vehicles and routes on which usage is restricted. The plan shows that Riggs Road is a preferred route for oversize vehicle (page 4-9).

§ Hunt Highway, near Power Road, is designated as a School Safety Overlay (Basha High school) (page 4-11).

§ Riggs Road is designated as a Road of Regional Significance (page 4-13). The plan states that a Road of Regional Significance shall be six lanes ultimate, be 140 feet right-of-way, limited of eight accesses per mile, left-turn lanes where left turns are permitted, prohibited parking and 40 mph posted speed limit (page 4-14).

Maricopa Association of Governments, Roads of Regional Significance - Map, (Ref. No. 1.37)

§ Map depicts Riggs Road as a designated Road of Regional Significance, beginning west of I-10 and extending east to Ellsworth Road.

Maricopa Association of Governments, Regional Transportation Plan, (Ref. No. 1.38)

§ No regionally funded improvements to Riggs Road or Hunt Highway are included in the Regional Transportation Plan (Executive Summary, Table 6, page 19).

§ The MAG Regional Transportation Plan shows Riggs Road as a 4-lane arterial from I-10 to Meridian Road (Final Report, Figure 9-2).

Southeastern Maricopa/Northern Pinal County Area Transportation Study, (Ref. No. 1.39)

§ Riggs Road is identified as a regional facility because of its multi-jurisdictional nature, and good access to existing freeways (I-10) (page 5-6).

§ Study proposes the Price Freeway Connection. One of the proposed alternatives is to connect I-10 and the Price Freeway (Loop 101) near Riggs Road (page 7-4).

§ The study suggests that if the East Valley corridor is developed as an expressway/controlled access arterial, the facility could utilize portions of both the Riggs Road and Hunt Highway alignments (page 7-7). The study states that the corridor on the west end is constrained by existing land use. The study states that the corridor would be a six-lane facility with interchanges at 1-2 mile spacing. According to MAG travel projections, the corridor would carry 84,000 to 110,000 vehicles per day between I-10 and Higley Road, 63,000 to 84,000 vehicles per day between Higley Road and Ironwood Road, and 14,000 to 21,000 vehicles per day between Ironwood Road and US 60. Estimated cost of the facility is $1,390 million as a freeway and $310 million as an expressway/controlled access facility (page 7-7).

Town of Gilbert Arterial Street Plan (Ref. No. 1.42)

§ Arterial Street Plan reviews classifications of Hunt Highway and Riggs Road by other jurisdictions:
- City of Chandler classifies the Hunt Highway a major collector, and Riggs Road as a minor arterial with a 76' cross-section on a 110' right-of-way (mid-range plan) and as a major arterial (long-range plan) (page 11).
- Queen Creek classified Riggs road as an urban principal arterial (6 lanes, median), and Hunt Highway as a rural principal arterial (4 lanes) (page 13).

§ Plan recommends improving Riggs Road from Val Vista Drive to ½ mile west of Power Road to 6 lanes (page 50).

§ Plan recommends improving Hunt Highway from Val Vista Drive to Recker Road to 4 lanes (page 50) in the mid-term, and 4-6 lanes in the long range (page 54).

§ Riggs Road and Hunt Highway are classified as major arterials by the Town of Gilbert (page 56). Both Hunt Highway and Riggs Road are recommended for improvement to 6 lanes in the Long Range Arterial Street Plan (page 53).

Town of Queen Creek General Plan, 2002 (Ref. No. 1.35)

§ Hunt Highway is considered a minor east-west roadway, classified as a 2-lane Rural Major Collector (page 63-64). Beginning ½ mile west of Power Road, and continuing eastward, the Hunt Highway is classified as a 4-lane, Rural Principal Arterial.

§ Riggs Road is considered a major facility (page 56), and classified as an Urban Principal Arterial. These are 6-lane facilities and include bike lanes and a median (page 63-64).

Williams Area Transportation Plan, Final Report and Executive Summary (Ref. No. 1.20)

- On arterial streets, study recommends preserving 130 feet of right-of-way to ultimately accommodate a six-lane roadway with bicycle lanes (page 1).
- Widening of Riggs Road from 2 lanes to 4 lanes between Price Road and I-10 is recommended in the 5 year plan (page 5-8).
- Construction of 2 lanes and a bridge on Riggs Road between Val Vista and Higley is included in the 5-year Williams Area Transportation Plan (page 6-6).
- Construction of 2 lanes on Riggs Road from Ellsworth Road to Rittenhouse Road is recommended in the 10 year Williams Area Transportation Plan (page 6-9).
- Construction of 2 lanes on Hunt Highway from Price Road to Dobson Road is included in the 20 Year Williams Area Transportation Plan (page 6-12).
- 2005 traffic projections include 1,000 vehicles per day (year 2005) on Hunt Highway between Dobson and Lindsay Road; 8,000 vehicles per day between Higley and Power Road; 9,000 vehicles per day between Power Road and Hawes Road; and 7,000 vehicles per day between Hawes Road and Ellsworth Road (page 5-9).
- 2005 traffic projections include 22,000 vehicles per day on Riggs Road between I-10 and Price Road; between 12,000 – 18,000 vehicles per day between Price Road and Arizona Ave; and 7,000 – 8,000 vehicles per day between Arizona Avenue and Ellsworth Road (page 5-9).
- 2015 traffic projections, with the Loop 202 incorporated into the assignment, show modest increases in traffic volumes on both the Hunt Highway and on Riggs Road. Traffic on Hunt Highway increases by approximately 1,000 vehicles per day over 2005 projections, while traffic on Riggs Road increases by 2,000 vehicles per day over 2005 projections.

3.2.2.2 Other Information Applicable to East Valley Study Area

City of Chandler, General Plan (Ref. No. 1.7)

- Per the General Plan, southeast Chandler, approximately ¼ mile east of Arizona Avenue extending east to Chandler/Gilbert border, is characterized as 'a unique community consisting of rural and low density residential land uses that respect and protect the rural/agrarian lifestyle of this area (page 33).'
- South Price Road, located south of Pecos adjacent to the Gila River Indian Community, is targeted as an emerging employment area, planned for large campus-style, high-tech employment sites (page 33).
- Riggs Road is classified in the General Plan-Mid-Range Roadway Plan as a major arterial with a 40' median and 4 lanes in the first stage (page 105) and as a 6-lane major arterial in the Long-Range Roadway Plan (page 107).
- Hunt Highway is classified as a major collector in the General Plan/Mid-Range Roadway Plan (page 105) as well as in the Long-Range Roadway Plan (page 107).

City of Chandler Transit Plan Update, (Ref. No. 1.10)

- Local transit service is proposed on Riggs Road, between Gilbert Road and Val Vista Drive, to serve Basha High School (Figure E-1, page 5). Route 136 would be extended from its current terminal at Chandler-Gilbert Community

College to Basha High School. The route would continue to stop at the Community College, and then head south on Gilbert Road to Riggs Road. It would turn east on Riggs Road, terminating at Basha High School, near Val Vista Drive.

§ No transit is proposed for Hunt Highway (Figure E-1, page 5).

City of Chandler High Capacity Transit Major Investment Study, (Ref. No. 1.11)

§ No high-capacity transit is proposed for Hunt Highway or Riggs Road

Maricopa County Bicycle Transportation System Plan, (Ref. No. 1.28)

§ Riggs Road, from Ellsworth Road through I-10, is included in the proposed (1999) Maricopa County Bicycle Network (page 12)

§ The document depicts Urban Principal Arterials as a 130-foot right-of-way, with 6-foot bicycle lanes (page 13).

Hunt Highway and Vineyard Road Limited Access Study, (Ref. No. 1.4)

§ Study states that all residential lots proposed adjacent to Hunt Highway and Vineyard Road will have frontage on local residential streets within the planned development (page 2).

§ Study states that Vineyard Road will be extended from Combs Road, southerly to Bella Vista Road following the Union Pacific alignment. Future plans will be prepared to extend Vineyard directly south to Hunt Highway (page 3).

§ Study recommends that access points be limited to the section line streets (minor arterials) and mid section line streets (major collectors). Where not possible, it is recommended that access points be no closer than 1320 feet (page 6).

§ Median breaks should be provided at all minor arterial and major collector intersections, but not spaced more closely than 1320 feet (page 7).

§ Raised medians should be constructed on Vineyard Road and Hunt Highway (page 8).

Hunt Highway Corridor Assessment Report, (Ref. No. 1.26)

§ Report states that consideration was given to the transfer of the roadway to the Arizona Department of Transportation at some time in the future (page 2-1).

§ Implementation of the highest ranking alternatives would provide measurable benefit to Pinal County and Maricopa County residents who commute via the Hunt Highway. Driveability and safety of the roadway would improve (page 5-2).

§ The recommended implementation plan for Hunt Highway Improvements is divided into 8 phases. Phase VIII includes implementation of the ultimate 4-lane divided roadway cross section from Ellsworth Road to SR 287. Phase VIII roadway construction would be triggered by achievement of 8,200 vehicles per day (page 6-7).

Town of Queen Creek General Plan, 2002 (Ref. No. 1.35)

§ The Queen Creek General Plan, Land Use Map (page 33) and General Development Tiers Map (page 47) shows area surrounding Hunt Highway, north to Riggs Road as “very low residential” and as “rural preservation.” Area

north of Riggs Road is "low and medium density residential" and a "suburban transition" with some "urban corridor" areas (page 47)."

§ The following transportation issues were identified in the General Plan (page 55):

- Rittenhouse Road is the major thoroughfare carrying traffic to the Town of Queen Creek. The Town of Gilbert has recently adopted a new general plan and is proposing to convert Rittenhouse Road to a multi-use trail from Williams Field Road to Power Road. This provision will limit the usage of Rittenhouse Road and will redirect the traffic to other north-south and east-west facilities.
- The Plan highlights the challenges that growth in Pinal County places on Queen Creek roadways. Specifically, the plan states that "the current and proposed robust residential developments in Pinal County, southeast of the planning area, will generate more traffic on the roadway system. Pinal County residents will use one or more roadways in the planning area to access work sites or other activities as well as the area freeways. Additionally, the type of development being considered for the General Motors Proving Grounds, just north of the planning area, could have traffic implications on the Queen Creek area's roadways."

3.2.3 Apache Junction/Coolidge Study Area

The following information pertains to the Apache Junction/Coolidge study area. Section 3.1.3.1 summarizes roadway characteristics of the existing roadways within the study area, as identified in other plans. Section 3.1.3.2 identifies other issues applicable to the study area.

3.2.3.1 Existing Roads

Southeastern Maricopa/Northern Pinal County Area Transportation Study, (Ref. No. 1.39)

§ Ironwood Road is located to the west of a potential Apache Junction/Coolidge corridor and runs in a north/south direction. Ironwood Road is described as a regional facility because of its multi-jurisdictional nature and good access to existing freeways (I-10) (page 5-6).

§ The Apache Junction/Coolidge corridor, as proposed in the Southeast Maricopa/Northern Pinal Transportation Study, extends 36 miles in the north-south direction, generally following SR 87 south of Coolidge and continuing north to US 60. This corridor may relieve congestion on I-10, and may provide an alternative for truck traffic to and from industrial developments. The design characteristics of the corridor may change across its length. The facility is expected to carry daily traffic volumes in the range of 60,000 to 80,000 vehicles per day between US 60 and Empire Road, 55,000 to 110,000 vehicles per day between Empire Road and SR 287, and 26,000 to 45,000 vehicles per day between SR 287 and I-10, based on 2030 projections. Estimated construction cost is $1,640 million (page 7-9).

Superstition Valley Transportation Study, Final Report (Ref. No. 1.18)

§ Study depicts Vineyard Road being extended south to Rittenhouse Road (page 15).

- § Study projects that currently committed development may generate as much as 93,000 vehicles per day on Ellsworth Road, 35,000 vehicles per day on Vineyard Road, 61,000 vehicles per day on segments of Combs Road and Hunt Highway and 41,000 vehicles per day on Arizona Farms Road (page 24). Study states that future development cannot occur without substantial improvement to the roadway network (page 27).
- § Study recommends improving (page 28):
  - SR 79, from SR 287 to Arizona Farms Road (2.5 miles), from two to four lanes.
  - Hunt Highway, from Attaway Road to Judd Road, from 2 to 6 lanes.
  - Hunt Highway, from Vineyard Road to Ellsworth Road, from 2 to 4 lanes.
  - Vineyard Road, from Ocotillo Road to US 60, from 2 lanes to 6 lanes.
  - Multiple other arterial streets (Arizona Farms, Rittenhouse, Schnepf, Quail run, Ellsworth) from 2 lanes to 4 lanes. Attaway Road is recommended to be improved to 6 lanes from SR 287 to Hunt Highway.

Pinal County Transportation Plan 2000 Update, Executive Summary and Final Report, (Ref. No. 1.22)

- § Specifically, the study recommends widening (page 5):
  - SR 79, Florence Junction to Florence to 4 lanes by population 220,000.
  - Hunt Highway from Arizona Farms road to SR 287 to 4 lanes by 220,000, and from Combs Road to Arizona Farms Road to 4 lanes by population 320,000.
  - Vineyard Road to 4 lanes by population 520,000.
- § Hunt Highway is classified as a Principal Arterial from Attaway Road to Combs Road (page 7).
- § Vineyard Road is classified as a principal arterial (page 7).
- § SR 87, from I-10 to Florence Blvd is classified as a minor arterial, and as a principal arterial between Florence Blvd and SR 87/287 junction (page 7).

Florence Area General Plan Update (Ref. No. 1.3)

- § Plan notes that Pinal County is investigating the connection of Attaway Road and Vineyard Road/Ironwood Road that would link the city of Apache Junction and City of Coolidge, providing an alternative to Hunt Highway for direct connections to eastern Maricopa County and northern Pinal County destinations (page C-2).
- § Policy 1-3b states that the Town shall aggressively pursue a near-term crossing of the Gila River on the Main Street alignment and longer-term river crossings on the Plant and Coolidge Airport Road alignments (page C-5).
- § The SR-79 Bridge and roadway widening, as well as Hunt Highway widening, are listed as near-term implementation activities, 1-5 year timeframe (page C-21).
- § Gila River crossing at Plant Road alignment is stated as a mid-term activity, 5-10 year timeframe (page C-21)

Ironwood Drive DCR and Final Design, Meeting Minutes December 7, 2004 (Ref. No. 1.48)

- § Interim condition for Ironwood Road will consist of a 4-lane facility, and will be designed with consideration of a 6-lane ultimate section.
- § The northern five miles of the project (Elliot to Germann) is bounded by Arizona State Trust Land, which is largely undeveloped.
- § Access on Ironwood Drive will be access controlled, with a 14' center median. Access points will be limited to ½ mile. Frontage roads may be required to provide access to existing developed properties. Design speed will be 55 mph.

Anthem by Dell Web, preliminary site plan, dated December 9, 2004 (Ref. No. 1.49)

- § Hunt Highway will be improved to a 4-lane facility with a divided median.
- § Felix Road will be improved to a 6-lane facility with a divided median.

3.2.3.2 Other Information Applicable to Apache Junction/Coolidge Study Area

Conceptualization of a Future for Superstition Vista (Ref. No. 1.1)

The Morrison Institute for Public Policy at Arizona State University is beginning a conceptualization study for the "Superstition Vistas" area, a 360 square mile tract of State Trust Land located in Pinal County, east and south of Apache Junction.

- § The project is scheduled to be complete in 18 to 24 months
- § The conceptual plan will include environmental assessment, wash corridor drainage assessment, jurisdictional delineation of the "Waters of the U.S.", transportation assessment, conceptual land use plan, water and dry utilities planning, conceptual drainage plan, conceptual drainage plan.
- § Conceptual roadway plan is based on the preliminary roadway network proposed in the Apache Junction Small Area Transportation Study.

City of Coolidge General Plan Update, (Ref. No. 1.12)

- § A stated transportation and circulation objective is to promote the design and construction of a new freeway along the Apache Junction/Coolidge Corridor, as identified in the Southeast Maricopa/Northern Pinal County Area Transportation Study (page 38).
- § Strategies to support this objective include pursuing funding for the arterial grid network from local, regional, state, and federal sources in order to create the feeder system needed to support a regional facility, and to support the widening of state highways, improvements to existing interchanges, and the construction of new interchanges in order to maintain the accessibility to the existing surface transportation system (page 38).
- § An additional objective is to promote improvements to Coolidge Municipal Airport (page 38).
- § SR-87, west of SR87/287 Junction is forecast to reach a LOS 'F' by 2010, though the study projects that because of the rapid pace of development, these conditions may be reached much sooner (page 69).
- § Study shows Apache Junction/Coolidge corridor along the Attaway Road alignment from SR-87 north through Arizona Farms Road (page 70).

Superstition Valley Transportation Study, Final Report (Ref. No. 1.18)

- Study notes that the Union Pacific Railroad line traverses the study area in a southeasterly to northwesterly direction and crosses Felix Road, Arizona Farms Road, Combs Road and Bella Vista Road. These crossings are all at-grade, signalized crossings. Rail operations in the area are very infrequent, less than four times per week. All operations are freight only (page 10).
- Study lists some of the major developments planned or under construction including Johnson Ranch, Mystic Lake, Dobson Farms, and Bella Vista Farms. Multiple developments are planned for the Hunt Highway corridor, as well as the Attaway Road/Felix Road/Arizona Farms Road corridor (page 11).

Pinal County Transportation Plan 2000 Update, Executive Summary and Final Report, (Ref. No. 1.22)

- The plan states that without improvements, most roads in the Apache Junction-Florence-Coolidge-Casa Grande corridor could experience unacceptable levels of congestion when the population of Pinal County reaches 520,000 (page 4). At this level, I-10 could be severely congested over its entire length through Pinal County (page 4). The alternative route to I-10, SR-79, could also be congested along its entire length through Pinal County of no improvements are made.
- The study states that the transportation network will operate reasonably well if Hunt Highway/Attaway Road between Arizona Farms Road and SR 287 is widened to 4 lanes, I-10 is widened to 6 lanes, and portions of SR 79, SR 287, and SR 387 to 4 lanes (page 4).

Salt River Project, Application for a Certificate of Environmental Compatibility, Palo Verde to Pinal West 500 kV Transmission Project (Ref 1.50)

- The new transmission line would run southeast from the Palo Verde Nuclear Generating Station west of Phoenix to a new substation in the far Southeast Valley, passing through Maricopa and Pinal counties. The nominal length of the Preferred Alignment is 100 miles.
- The document outlines the pathway of the Preferred Alignment of the transmission line. As the alignment extends from the west and into northern Pinal County, the alignment heads east, north of SR 287, paralleling along a section line and portions of the GRIC boundary to Christensen/Sierra Vista Road. The Preferred Alignment then extends north along Christensen/Sierra Vista Road until its intersection with the Union Pacific Railroad. The Preferred Alignment parallels the UPRR until it converges with the Magma Railroad, then extends northeast, paralleling the Magma in a northwestern direction, and then paralleling the Central Arizona Project canal until its intersection with the existing Silver King to Browning 500 kV transmission line. The Preferred Alignment would then parallel the existing Silver King – Browning 500 kV line until terminating at the Browning Substation.
- The Attaway Road Segment Option is an alternative for the northeastern portion of the alignment. This alignment would parallel the midsection between Attaway Road and Felix to Skyline Drive. It would then extend west for a short segment before extending north to follow the Attaway Road section line until it intersects with the existing Silver King – Browning 500 kV line. This alternative would extend west, paralleling the existing Silver King – Browning 500 kV line until converging with the Preferred Alignment before terminating at the Browning Substation.

- The Eastern Alignment, located in the southeastern portion of the Project study area, would diverge east from the Preferred Alignment in the vicinity of Eleven Mile Corner Road and Earley Road, and would head eastward along the mid-section line between Earley Road/Florence Blvd to the UPRR. It would parallel the UPRR north until its intersection with Bartlett Road. The Eastern Alignment would parallel Bartlett Road east until extending north along Valley Farms Road. It would then parallel Valley Farms Road until its intersection with the CAP canal. It would parallel the CAP canal.
- SRP is requesting a nominal 160 to 300 foot ROW within a 500 foot to 0.5 mile wide corridor to accommodate the construction, operation, and maintenance of the proposed transmission line.
- **NOTE:** On May 10, 2005, the Arizona Power Plant and Transmission Line Siting Committee recommended a Certificate of Environmental Compatibility (CEC) for the project. The Arizona Corporation Commission's decision is pending and is expected in summer 2005. As it relates to the Pinal County Corridors Definition Study, the recommended route parallels SR-87 in the Coolidge Area between Early Road and Bartlett Road. The route then turns east and parallels Bartlett Road to approximately Clemens Road. The route follows an existing wash in a northeast direction to Valley Farms Road, and then follows Valley Farms Road north to SR-287. The line then turns westward along SR-287 to Christensen Road. The route then proceeds northward along Christensen Road to the Union Pacific Railroad, then heads northeast to the Central Arizona Project (CAP) Canal. The route follows the CAP alignment northwesterly to approximately the Idaho Road/Elliot Road intersection. The recommended alignment is depicted in **Figure 2-2**.

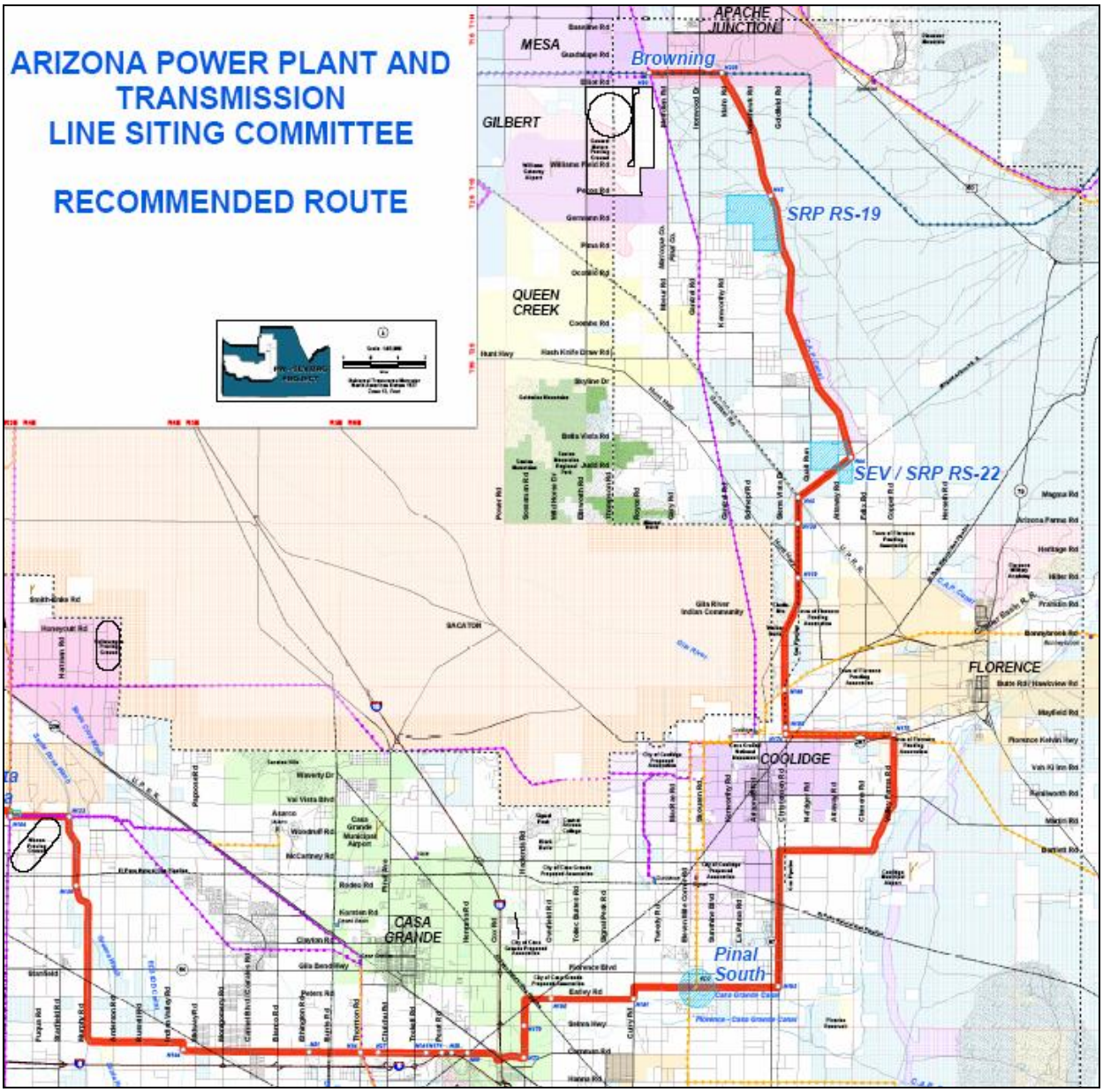


Figure 2-2 – Salt River Project Proposed 500kV line recommended route

4. EXISTING CONDITIONS DATA

This chapter documents data collected from local jurisdictions and agencies that are pertinent to the study. The intent of the summary is to provide an overview of the following information in sufficient detail that the corridor needs and deficiencies can be evaluated during future tasks:

- Land use;
- Roadway conditions;
- Travel data;
- Crash History of selected corridors;
- Traffic Operations;
- Socioeconomic Conditions; and
- Environmental Resources

For the purposes of this task, areas within which existing data are compiled are immediately adjacent to or on SEMNPTS corridor recommendations that follow existing roadways, and within one or two miles where recommendations do not follow existing roadways. Land use information is limited to those developments which impact corridor traffic operations and therefore may extend beyond the area immediately adjacent to the corridors.

4.1 Land use information

Existing land use information was collected from multiple jurisdictions along the corridors proposed by the Southeast Maricopa/Northern Pinal Transportation Study. The source of the land-use information is both GIS data and land-use elements of jurisdictional general plans. The summarized land-use information is limited to those developments which impact corridor traffic operations and therefore may extend beyond the area immediately adjacent to the corridors. The information is summarized by study area – Apache Junction/Coolidge study area, and the East Valley study area.

4.1.1 Apache Junction/Coolidge Corridor

The Apache Junction/Coolidge Corridor, as proposed in the Southeast Maricopa/Northern Pinal Transportation Study, extends 36 miles in the north-south direction, generally following SR 87 until south of Coolidge and continuing north to US 60 along a combination of new alignments and existing roadway alignments. The land-use characteristics can best be described by separating the corridor into three segments:

- South – SR-87, from I-10 to south of SR-287;
- Central – New alignment, generally following Barlett Road or Attaway Road between SR–287 south of Coolidge through Florence;
- North – from Florence north to the Superstition Freeway/US 60.

Land ownership within the entire project area is illustrated in **Figure 4-1**. Arizona State Trust Lands are depicted as 'purple' shading. As seen in **Figure 4-1**, the largest landowner within the corridor study area is the State of Arizona owning 35.3 percent of all land within Pinal County. The Gila River Indian Community also covers a significant portion of the study area. Land use for each of these three segments is described below.

South: Existing land-use along the southern portion of the Apache Junction/Coolidge corridor is largely agricultural or undeveloped.

Central: Generally speaking, the intensity of development and land use increases towards the north-central segments of the corridor, particularly within the Coolidge-Florence-Queen Creek corridor, as shown in **Figure 4-2.** Only developments approved by the Town of Queen Creek and by Pinal County are shown in **Figure 4-2**. Other jurisdictions including Casa Grande, Coolidge, and Florence have approved sizable planned developments. However, this information is not available in a geographic information system format.

As seen in **Figure 4-2**, development is particularly concentrated between Florence and Queen Creek along the Hunt Highway and Rittenhouse Road corridors. Local jurisdictions, including Coolidge, Florence, Queen Creek, and Pinal County have approved developments containing thousands of homes. Many of these developments are currently under construction. Furthermore, it is anticipated that the rate of development will increase.

As an example of the development pressures within the central corridor area, **Figure 4-3** illustrates the developments that have been approved by the Town of Queen Creek. Over 42,000 homes have been approved, or are in the approval and review process within the City of Coolidge. As of November 2004, nearly 50 subdivisions had been approved within unincorporated Pinal County. Appendix 2, Table B1 and Table B2 list developments planned, as of November 2004, within unincorporated Pinal County and within the City of Coolidge.

North: North and east of Queen Creek, the land is largely owned by the State of Arizona. The Central Arizona Project (CAP) canal traverses this area in a north-northwesterly direction. Ironwood Road/Vineyard Road is the only major continuous roadway providing north-south access this section of land. Pinal County is currently improving Ironwood Road from two lanes to four lanes. Significant housing developments are planned along Ironwood Road south of Germann Road as illustrated in **Figure 4-2.** Commercial development currently exists along the northern terminus of Ironwood Road between baseline and US 60.

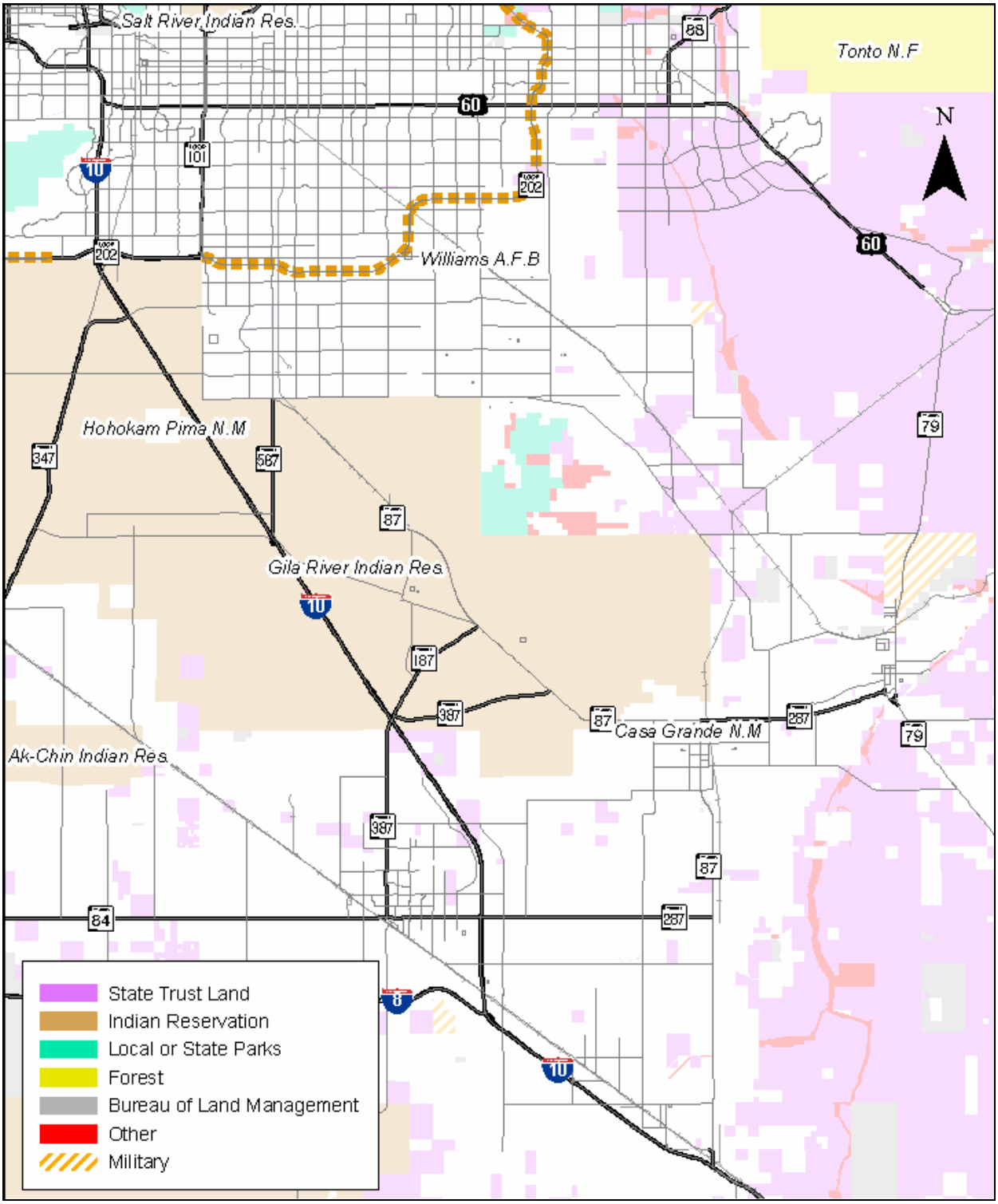


Figure 4-1 – Land Ownership in Project Area

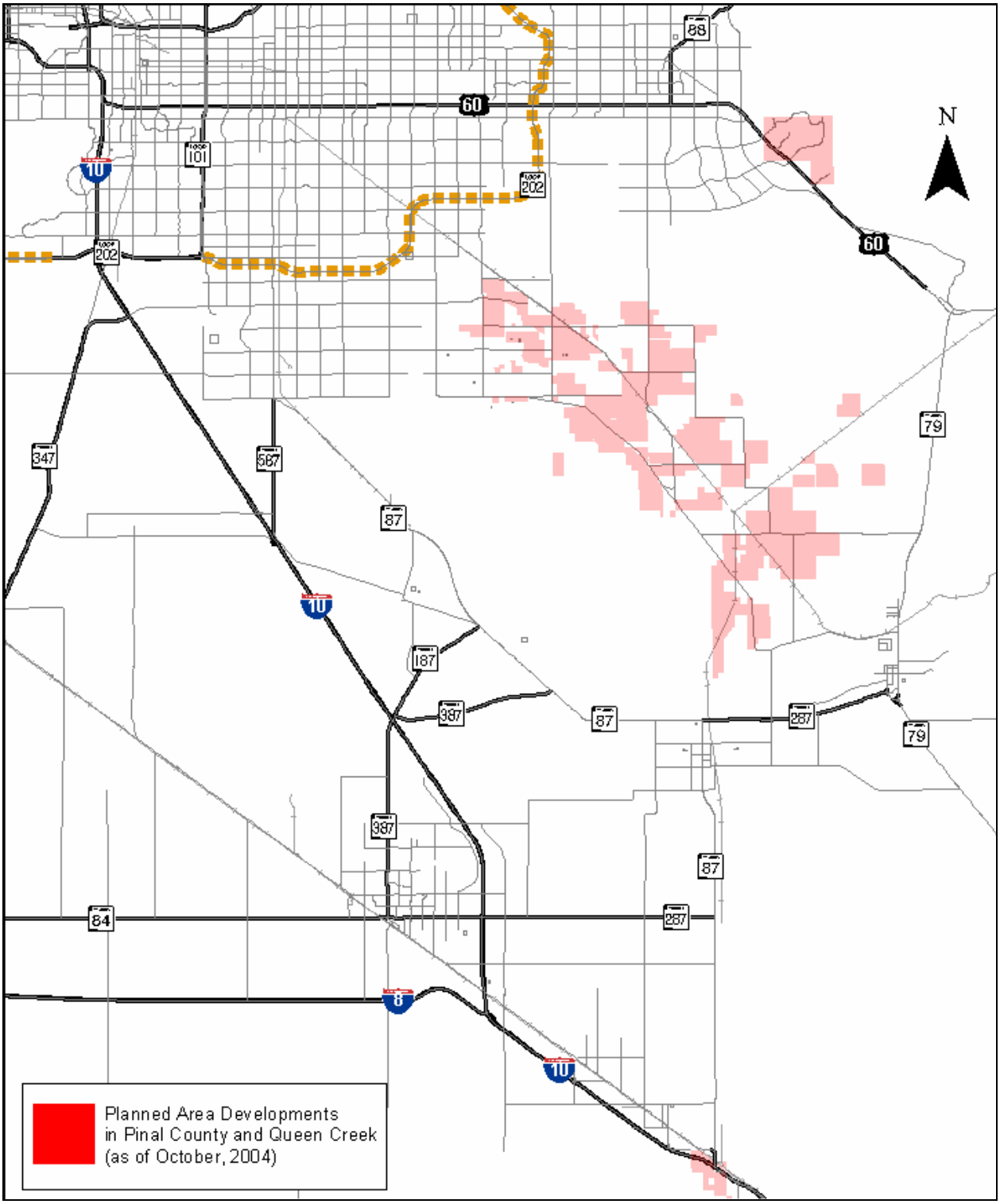


Figure 4-2 – Planned and Existing Developments in Pinal County and Queen Creek

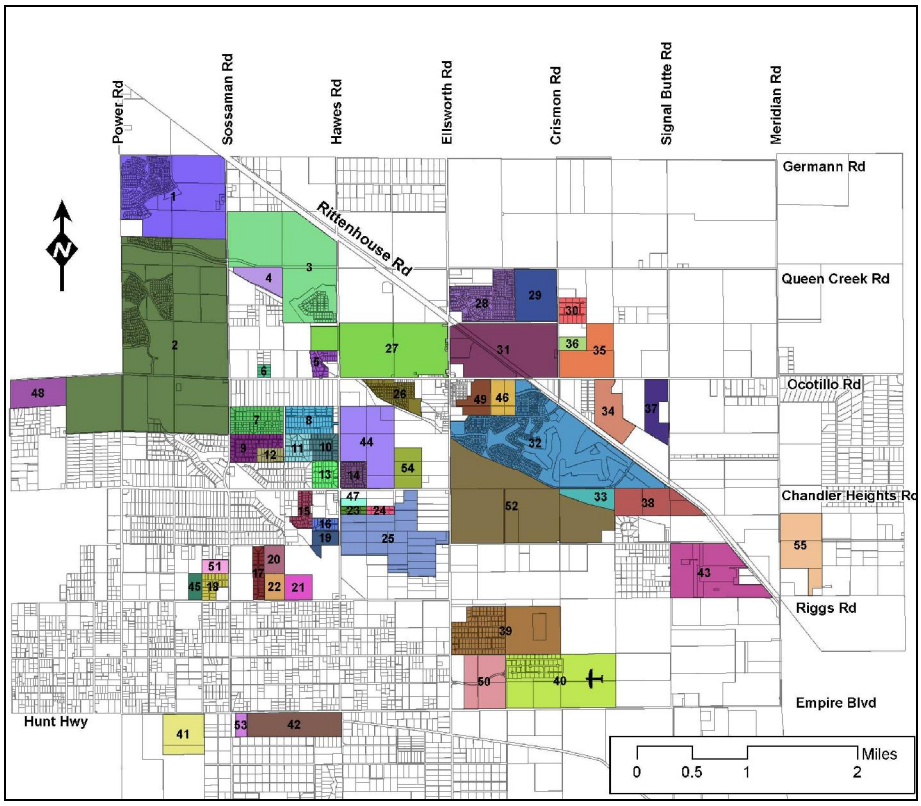


Figure 4-3 – Subdivisions in Queen Creek approved since 1990

Source: Town of Queen Creek

4.1.2 East Valley Corridor

The East Valley Corridor, as proposed in the Southeast Maricopa/Northern Pinal Transportation Study, extends from I-10 eastward to US 60 near Florence Junction. The study suggests that this facility could utilize portions of the both the Riggs Road and Hunt Highway alignments. The eastern portion of the corridor would cross undeveloped State Trust Land. The land use can best be described by separating the corridor into three sections:

- West –I-10 to the Roosevelt Water Conservation District Canal (Near Val Vista)
- Central – Roosevelt Canal/Val Vista, to county line (Meridian Road)
- East – County line to Florence Junction.

West: The Southeast Maricopa/Northern Pinal Transportation Study identifies Riggs Road and Hunt Highway as potential alignments for the East Valley corridor. The western 1 ½ miles of the corridor, between I-10 and Price Road, traverses currently undeveloped land owned by the Gila River Indian Community. However, east of Price Road, both the Hunt Highway and Riggs Road corridors are constrained by significant developments. Specifically, the Riggs Road corridor passes through the center of the Sun Lakes community. Heading eastward, both corridors pass through the City of Chandler.

Central: A discontinuity of Hunt Highway exists between Val Visa and Higley Road, as the corridors pass through the community of Chandler Heights. Between Val Vista and the county line, significant housing developments exist or are planned along the both Riggs Road and Hunt Highway, although the intensity of development is less than on the western end of the corridor.

As the corridors pass through the Town of Gilbert, the land fronting the Riggs Road and Hunt Highway corridors is largely designated as residential, with some elements of commercial land use located at intersections of major arterials.

Within the Town of Queen Creek, the land-use fronting the Hunt Highway and north to Riggs Road is designated as "very low residential" and as "rural preservation."

East: The eastern corridor segment traverses undeveloped Arizona State Trust Land.

4.2 Existing (2004) Population and Employment Data

This section is based on a report prepared by Cambridge Systematics. Cambridge Systematics was responsible for developing population and employment projections for inclusion in the Pinal Corridors Planning Model (PCPM). The PCPM is used to develop existing and projected future traffic volumes within the study area.

This section describes the method used to develop base year (2004) socioeconomic projections to support the Pinal Corridor Planning Model (PCPM). Outlined in this section are the general methodology, including the data sources used; a comparison of data sources, and the final results of the socioeconomic projections.

This section describes the development of base year (2004) socioeconomic estimates for the Pinal Corridor Planning Model (PCPM) that was developed to support the evaluation of potential new highway corridors in northern Pinal County.

4.2.1 Methodology

Population, dwelling unit, and employment estimates were developed for input directly into the PCPM. These data were formatted using the PCPM zone structure (390 total zones in Pinal and Maricopa Counties). The estimates were based on data from three existing regional modeling systems:

- The 2003 Southeast Maricopa/Northern Pinal County Transportation Study (SEMNPTS) model that extended the Maricopa Association of Governments (MAG) model into Pinal County;
- The Pinal County model developed for the 2000 Pinal County Transportation Plan; and
- The Apache Junction model developed for the 2003 Apache Junction Small Area Transportation Study.

In addition, two sources of control data were used:

- The 2004 Arizona Department of Economic Security (ADES) estimates of city and county population; and
- The 2004 Bond Feasibility Study (BFS) developed by Applied Economics for the Central Arizona College.

The variables collected for entry into the PCPM model are shown in **Table 4-1**.

Table 4-1 – Pinal Corridor Planning Model Socioeconomic Parameters

Parameter	Description/Examples
Population	
Population	Total population, excluding prisoners
Dwelling units	Total dwelling units
Employment (Land Use Categories)	
Retail	Convenience stores, big box retailers, car dealers, shopping malls, strip commercial
Office	Business parks, office buildings
General	Manufacturing, extraction/processing of raw materials, warehousing
Government	Courts, state and county complexes, city offices, water treatment facilities
Other	Not identified elsewhere. Includes hospitals, churches, airports, etc.

Source: Cambridge Systematics, Inc., 2005.

The basic steps for developing estimates of population and employment were as follows.

- **Develop a common base year for all existing data**. Each of the three modeling data-bases were brought to a common base year of 2004 using a linear interpolation between the base and forecast years of the particular modeling system.
- **Develop a common future year for all existing data**. Each of the three modeling data-bases were brought to a common future year of 2030 using a linear extrapolation of the future year using the annual rate of change between base and forecast years of the particular modeling system.
- **Develop a consistent zone structure for all existing data**. The zone structure used for the PCPM is a combination of the zone structures from the Apache Junction and SEMNPTS models. In addition, some zones were split to enable the model to account for expected future growth in Pinal County. Using GIS, each zone structure was spliced and merged to conform to the common zone structure. Following standard practice, population and employment within each zone were assumed to be uniformly distributed over the entire area of a zone.
- **Implement controls for land use**. Much of the study area for the Pinal Corridor Definition Studies is currently in control of State or Federal agencies or is Indian Reservation lands. In particular, a significant portion of the study area is State Trust Land controlled by the Arizona State Land Department (ASLD). Though much of this land may be developed in the future, it is important to implement constraints on socioeconomic estimates for 2004 that take into account the current lack of development on this land. The most recent GIS file of land ownership from the Arizona Land Resource Information System (ALRIS) was compared to the estimates of population and employment derived from the three modeling systems. Currently held Arizona State Trust Land was assumed to have no population or employment growth to 2004. Federally protected lands, such as National Forests, were assumed to have no population and limited employment for both 2004 and 2030.
- **Comparison with population control totals**. ADES provides official estimates and projections of population for Arizona's cities and counties. The 2004 estimates were compared against the modeling systems. Notably, the model zones do not match up with city boundaries, so it is impossible to have an exact comparison between ADES and the

modeling systems. The ADES data do provide some general control totals at the city and county level that are useful for estimating current population. The other source used for control totals was the Central Arizona College BFS, developed to assess the future need for facilities and program offerings. Completed in 2004, the BFS includes current estimates and future projections of population for much of Pinal County and a small portion of Maricopa County. This study provided population estimates and projections for 16 aggregate areas, 11 of which overlap with or completely contain zones from the PCPM. The BFS study areas are organized around particular cities. **Figure 4-4** provides a map demonstrating the overlay between the BFS study areas and the PCPM zones. The comparison between the BFS and ADES control totals and previous modeling efforts are described in more detail below.

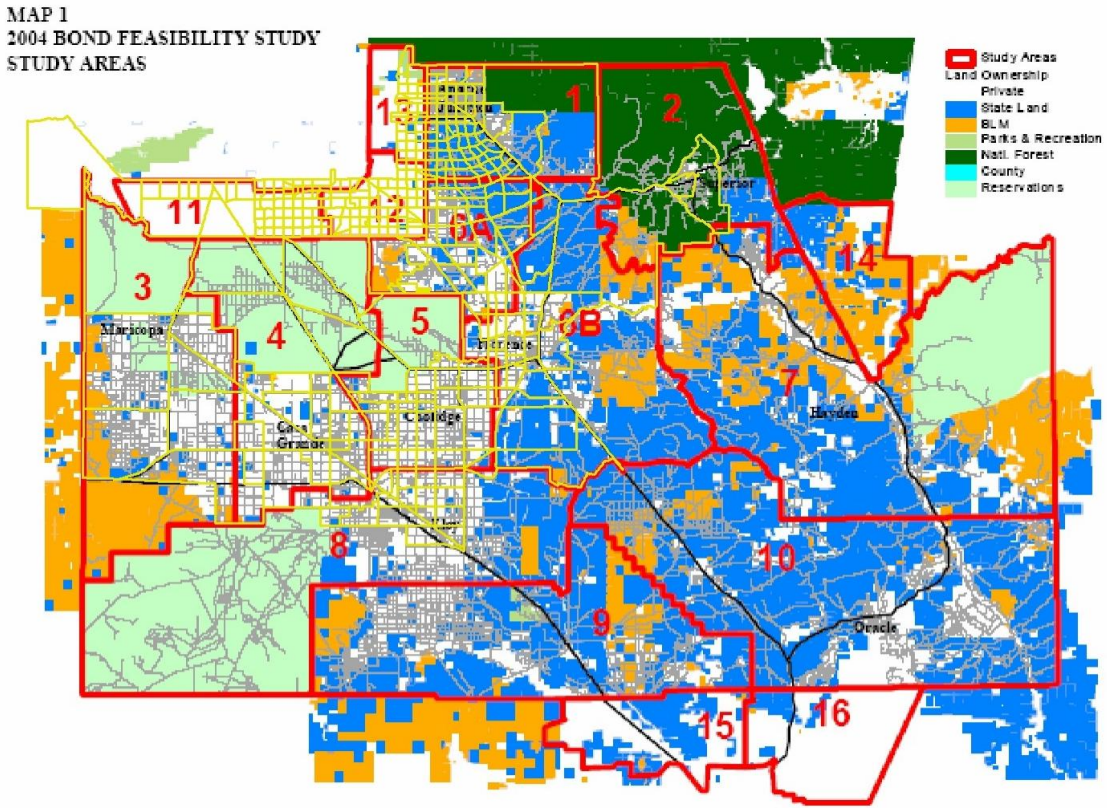


Figure 4-4 – Overlap of Bond Feasibility Study Areas and PCPM Traffic Analysis Zones

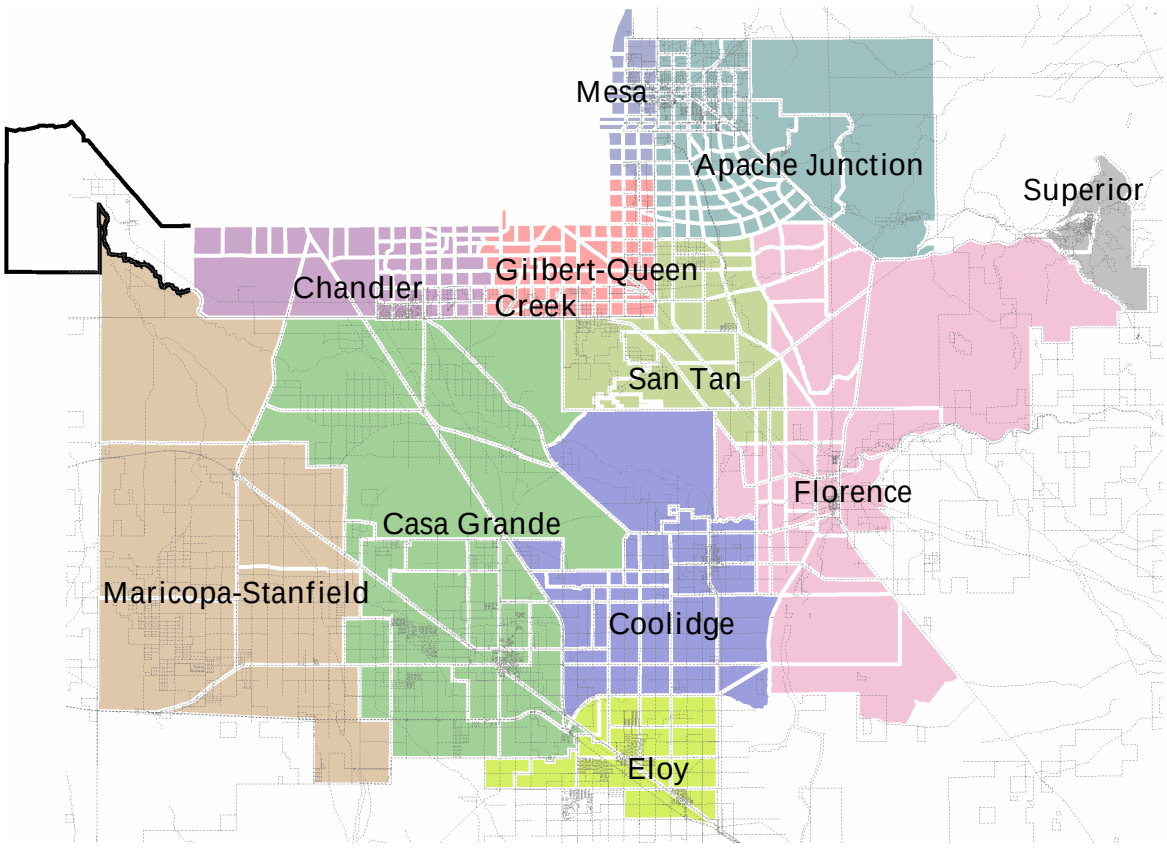
Source: Central Arizona College Bond Feasibility Study and Cambridge Systematics, Inc.

- **Finalizing population totals**. A zone-by-zone check within the PCPM was conducted to ensure the reasonableness of socioeconomic estimates for both base and future years. Population densities were compared against the local road system (e.g., does the base year data show development where there is no infrastructure to support it?) and land use (as described above). In addition, zonal data were compared to prison data in Pinal County to ensure that large numbers of prisoners are not included in the population estimates.
- **Finalizing dwelling unit totals**. Dwelling units were assumed to grow at the same rate as population for a particular zone, i.e., population per dwelling unit was held constant for a particular zone.
- **Finalizing employment totals**. Based on historical estimates and land use plans, employment growth is expected to be slower than population growth in Pinal County.

Pinal County has relatively few established employment centers. For base year data, employment for most zones was estimated from SEMNPTS model data. For future year data, assumptions were developed regarding the relationship between types of employment (e.g., retail, office, etc.) and population. These are discussed in detail in Section 3.1 below.

4.2.2 Data Sources

As described above, five sources of population data and three sources of employment data were used to estimate socioeconomic data for the base year. The three regional modeling systems (SEMNPTS, Pinal County, and Apache Junction) all provided data for population and employment. The area totals from the BFS and ADES only included population estimates and were used to develop control total guidelines in our analysis. **Figure 4-5** illustrates the approximation of the BFS study areas by the PCPM zones. Though the BFS study areas do not line-up perfectly with the PCPM zone boundaries, there is significant overlap. Most areas that do not overlap are large zones that are currently held by public agencies (such as Arizona State Trust Land). In addition, one large zone in Maricopa County does not fall within any of BFS study areas.



Source: Cambridge Systematics, Inc., 2005.

Figure 4-5 – PCPM Zones Organized by BFS Study Areas

4.2.3 National and Regional Trends

It is important to understand future growth in the study area within a national and regional context. Northern Pinal County is becoming increasingly linked to the Phoenix metropolitan

area. This section presents historical information on population and employment that provides this context.

Maricopa County has grown from 1 million to 3 million people between 1970 and 2000. According to projections from MAG, the County will grow by an additional 3 million by 2030. Pinal County has grown only minimally between 1970 and 2000, but is expected to grow much faster over the next 30 years.

Figure 4-6 presents historical population growth for Maricopa and Pinal Counties. It also presents a potential future scenario for Pinal County (set at 1 million additional people by 2030). Finally, it shows the number of people moving into Maricopa and Pinal County each year, both historically and given the two growth scenarios for Pinal County.

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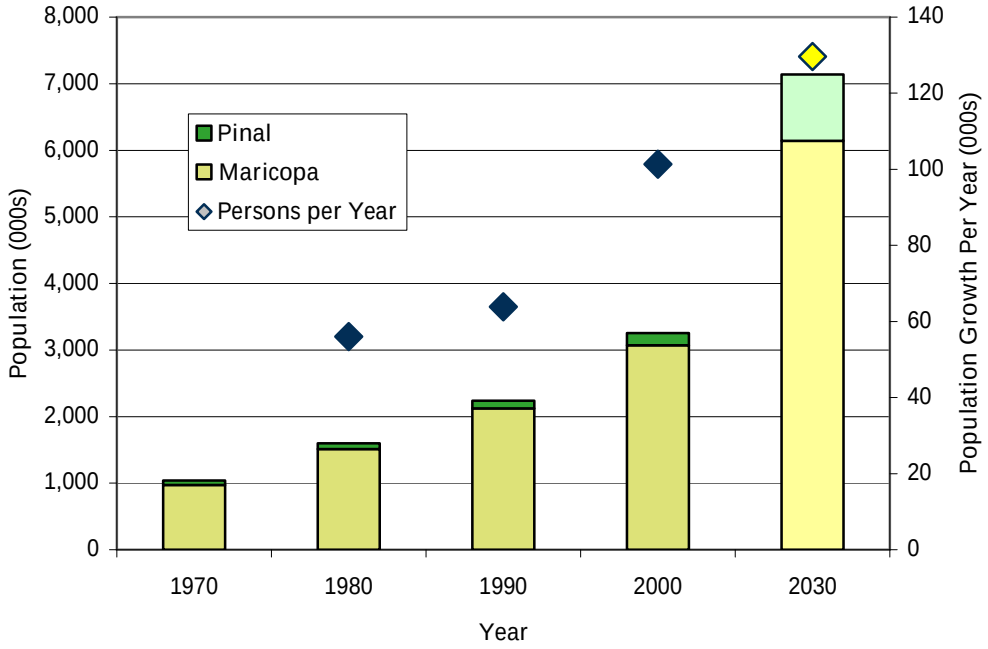


Figure 4-6 – Population Growth Trends and Potential Projections

Note: 1) assumes 1 million in Pinal County in 2030; and 2) assumes 2 million in Pinal County in 2030.
Source: U.S. Bureau of the Census, 2002; Cambridge Systematics, Inc., 2005.

The number of people moving into Maricopa and Pinal Counties has increased substantially over the last 30 years, from roughly 60,000 per year between 1970 and 1990 to over 100,000 per year between 1990 and 2000. To maintain pace with MAG projections and 1,000,000 additional people in Pinal County by 2030 would mean more than 130,000 people would move into the region every year through 2030. **Table 4-2** presents a comparison of historic

and projected growth for Pinal County to the rapidly growing areas of Maricopa County and Las Vegas.

Table 4-2 – Historic and Estimated Population Growth Rates

	Historic (1970-2000)	Projected (2000-2030)
Annual Population Growth (persons per year)		
Pinal County	3,705	30,609
Maricopa County	70,031	102,262
Las Vegas	38,420	37,589
Annual Growth Rate		
Pinal County	3.3%	6.2%
Maricopa County	3.9%	2.3%
Las Vegas	5.6%	2.0%

4.2.4 Base Year Estimates

This section presents the assumptions and methods used to develop base year socioeconomic estimates for the PCPM in support of the Pinal County Corridor Definition Study. As shown above, the sources for the forecasts come from the existing travel demand models (SEMNPTS, Pinal County, and Apache Junction) and the BFS.

4.2.4.1 Pinal County Population

In Pinal County, the BFS study areas are generally larger than the cities they are named to represent. As a result, the ADES population estimates for the incorporated cities in these areas are expected to be smaller than the estimates for the BFS study areas. In addition, not all of the BFS study areas overlap perfectly with the PCPM zones. In particular, the PCPM zones only cover a portion of the BFS study areas for Florence and Eloy. Finally, the estimates for the travel demand models are based on a linear interpolation of population between the base and future year data of those modeling systems. Because the rate of growth in much of Pinal County is expected to increase over time, some areas will likely not have grown as much by 2004 as the linear interpolation would suggest. For example, the Apache Junction area, which includes substantial State Trust Lands, is expected to develop when those lands are released.

Figure 4-7 provides a summary of the total population estimates for 2004 for the sources identified above in Section 1.0. Overall, the four data sources used produce relatively consistent estimates of current population. The SEMNPTS data are somewhat higher, but this is likely a function of the linear extrapolation method used to generate 2004 data.

Table 4-3 provides a summary of the BFS population estimates by study area. Each of the studies used somewhat different definitions of study areas, making a direct comparison between the estimates impossible at the study area level. The remainder of this section describes how the methods were applied to estimate

population and employment for the PCPM zones. This analysis is organized by BFS study areas, which provide control totals for many of the PCPM zones.

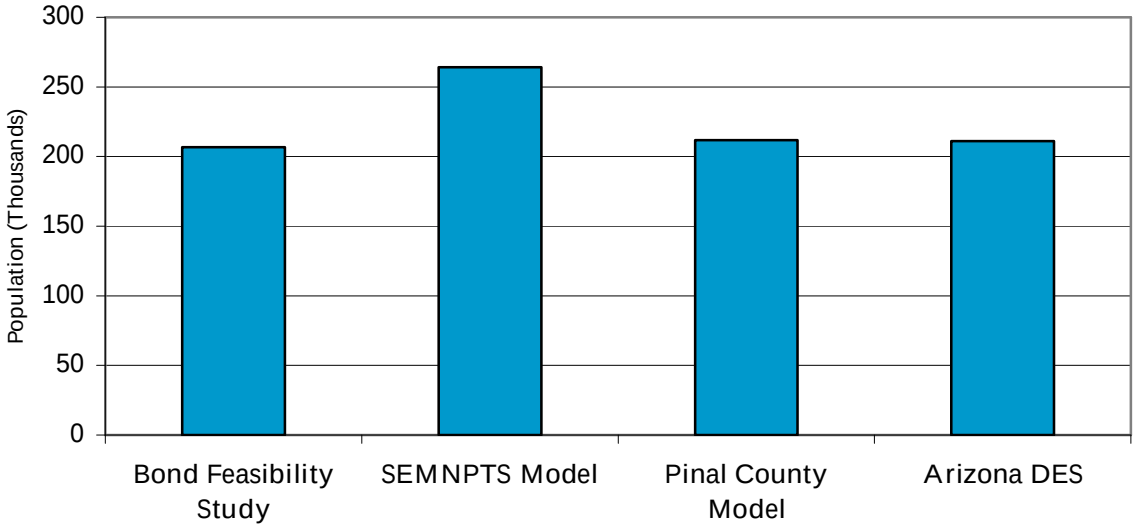


Figure 4-7 – Comparison of Pinal County Population Estimates, 2004

Source: Central Arizona College, 2004; Southeastern Maricopa County/Northern Pinal County Transportation Study, 2003; Pinal County, 2000; Apache Junction, 2003; and Cambridge Systematics, Inc., 2005.

Table 4-3 – BFS Population Estimates by Study Area

BFS Study Area		Population
1	Apache Junction	56,695
2	Superior	4,652
3	Maricopa-Stanfield	20,693
4	Casa Grande	52,486
5	Coolidge	14,933
6A	San Tan	18,663
6B	Florence	21,184
8	Eloy	17,497
Pinal County Total		206,803

Source: Central Arizona College, 2004.

4.2.4.2 Apache Junction

Apache Junction was the only BFS study area in the PCPM where all sources provided a consistent zonal boundary with overlapping population estimates. This zonal area includes the City of Apache Junction, the community of Gold Canyon, some developments outside the Apache Junction city limits, and substantial tracts of undeveloped State Trust Lands. For the purposes of estimating base year

population, the Apache Junction was divided into the following three subareas as shown in **Figure 4-7**:

- **Northwest** – The core of the currently developed Apache Junction, north of Baseline Road and U.S. 60.
- **Southwest** – The area of the Apache Junction study area that is almost exclusively Arizona State Trust Land to the west of U.S. 60.
- **East** – Two zones that are east of Apache Junction and U.S. 60. For these two zones, existing model estimates were available only from the SEMNPTS and Apache Junction models. These two zones include substantial land area controlled by the U.S. Forest Service, as well as Arizona State Trust Land.

PCPM zones in the northwest portion of the Apache Junction study area from the Apache Junction model were used to estimate current year population and employment estimates. The Apache Junction model was completed in 2003, making these the most current data available for this subarea. Discussions with Apache Junction planning staff revealed that no major new developments have been approved within the boundaries of Apache Junction since the completion of this model. The total 2004 population for PCPM zones in this subarea is nearly 47,000.

For PCPM zones in the southwest subarea, unadjusted data from the Apache Junction model were used to estimate current year population and employment. This subarea is almost entirely composed of undeveloped State Trust Lands. In 2003, the population estimated for this area in the Apache Junction model was under 2,000. The unadjusted SEMNPTS model estimates for this area are somewhat higher, at just over 4,000. Given the lack of development in this region, the lower number is most appropriate for use. Within this study area, any zones that were completely under the control of the Arizona State Land Department were assumed to have zero population and employment in the base year.

The PCPM zones in the eastern subarea of Apache Junction were based on SEMNPTS modeling data for current year population and employment estimates. The Pinal County estimates for this area were one-fifth as large as SEMNPTS. Using the SEMNPTS estimates for this subarea brings the total population estimate for the Apache Junction study area to 55,504, which is very close to the BFS control totals (56,695) for this study area.

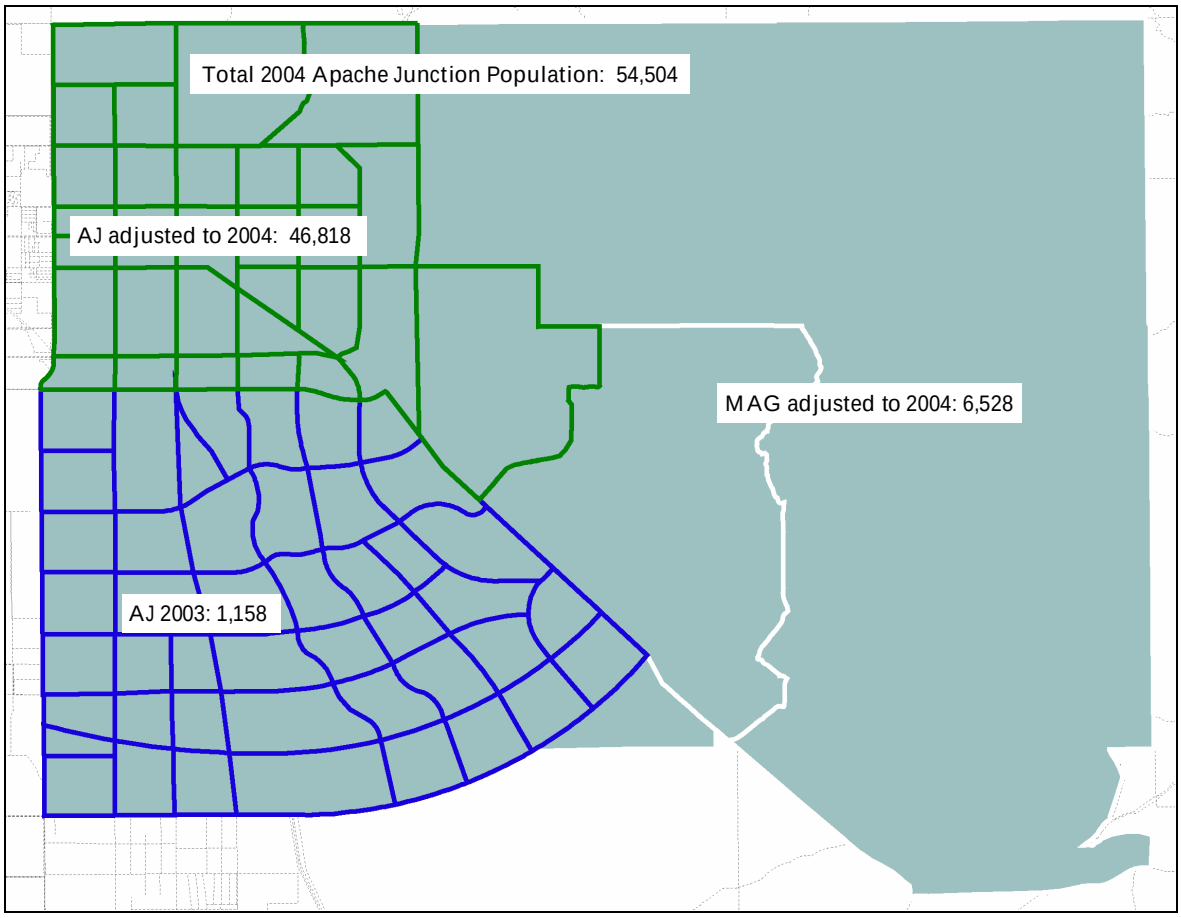


Figure 4-7 – Apache Junction Composite Approach

Source: Cambridge Systematics, Inc., 2005.

4.2.4.3 City of Maricopa

The City of Maricopa, which was incorporated in 2003, is currently engaged in a Small Area Transportation Study (SATS) that will address the future growth and the local transportation system. The distinction between new and existing communities will be more important when examining population growth in the context of each Pinal County Corridor Definition Study.

ADES estimates that the City of Maricopa has a current population of just under 5,000 (as of July 2004). Current population growth in this community is rapid, with an additional 15,000 people expected by 2005. The City of Maricopa SATS, currently under development, estimates that roughly 10,000 people were living within the city limits in December 2004. The 2000 Census estimates an additional 6,346 people living in unincorporated areas and on Indian Reservations in the Maricopa BFS study area. The remainder of the BFS study area includes the Ak-Chin Indian Reservation, the small unincorporated community of Stanfield, and substantial private land outside of any community. Given these factors, a total population of 16,346 was assumed for 2004 for PCPM zones within this study area. This population was distributed using the available information about the location of development within the study area.

4.2.4.4 San Tan

The San Tan study area is expected to experience rapid population growth in the future. The BFS estimates that the area will quadruple between 2000 and 2005. However, it is assumed that the growth is probably non-linear for this area, increasing as development continues over the next 30 years. Recent information about the proposed City of San Tan suggests that, if it incorporates, it will have a base year (likely 2005) population of roughly 20,000. Given the current disposition of this land, the BFS study area total of just under 19,000 was used as a control total for the PCPM zones in this subarea. This control total was distributed to individual zones using the population estimates contained within the SEMNPTS model.

4.2.4.5 Casa Grande

Casa Grande and Coolidge are better established communities that continue to expect growth. ADES estimates current year population of 31,000 for Casa Grande and 8,000 for Coolidge. These estimates are for the unincorporated portions of these communities, which are smaller than the study area boundaries identified above. The BFS estimates that an additional 25,000 people live in unincorporated areas in these two study areas. For the PCPM, these BFS population totals were used and distributed to zones using the SEMNPTS model.

4.2.4.6 Coolidge

The BFS study area estimates for Coolidge are fairly consistent with the SEMNPTS modeling data. Though the Pinal County data are somewhat higher, the current ADES population estimate for Coolidge is just over 8,000. As a result, the BFS estimates were used as population control totals and distributed to the PCPM zones using the SEMNPTS model.

4.2.4.7 Florence

According to ADES, Florence had roughly 17,000 people in 2004. This is relatively consistent with the estimate from the BFS of 21,000 residents, especially including unincorporated areas within the BFS study area. However, Pinal County has several large prisons in the Florence study area. Both the BFS study and ADES include prisoners in their estimates. According to the Arizona Department of Corrections, there were approximately 8,000 prisoners within the Florence study area (see **Table 4-4**). For the PCPM, these prisoners were subtracted from the total population estimate for this area to ensure that the prisoners do not generate trips in the model. The prison itself, in particular the employment at the prison, does generate trips, but not nearly at the level of a housing development of equal size.

Table 4-4 – Zone Adjustments for Prison Population

PCPM Zone	BFS Study Area	Prison	Prison Population	Adjusted Zone Population
275	Florence	Eyman	4,384	2,611
	Florence	Florence West (private)	739	
280	Florence	Florence	3,466	1,809

Source: Arizona Department of Corrections and Cambridge Systematics, Inc., 2005.

4.2.4.8 Eloy

The PCPM zone structure includes only a portion of the City of Eloy, primarily north of Interstate-10. In the 2000 Census, population in the northern portion of the Eloy BFS study area was roughly two-thirds of the total of the Eloy and Picacho-Red Rock BFS study areas. These two study areas had a combined population of 19,642 in the BFS study. For the portion of this study area covered by the PCPM, a control total of 12,957 (two-thirds of the total population in the two BFS study areas) was distributed to PCPM zones using the SEMNPTS model.

4.2.4.9 Superior

Superior includes two PCPM zones that are partially overlapped by the BFS study area. Superior is wedged between National Forest Service lands, limiting the potential for population and employment growth in this area. ADES estimates that just over 3,000 people live within this area. For these two PCPM zones, the ADES data was used to estimate population.

4.2.5 Pinal County Dwelling Units

Dwelling units were estimated based on the SEMNPTS ratio between population and dwelling units for each zone in the PCPM. These ratios were multiplied by the population estimated for each zone, as described above, to generate total dwelling units by zone.

4.2.6 Pinal County Employment

The BFS does not provide control totals that can be used to estimate employment. Overall Pinal County control totals are available from Woods& Poole, however. The following steps were used to estimate employment:

- A control total was generated for all PCPM zones within Pinal County. Woods& Poole identifies the total employment for Pinal County at 57,060 jobs in 2004. Using the ratio between Pinal County employment (from Woods & Poole) and PCPM employment (from SEMNPTS) for 2000, a total of 48,571 jobs were estimated to be within the PCPM zones in Pinal County in 2004.
- Employment data for zones within the Apache Junction study area were replaced with data from the Apache Junction travel demand model. These data were grown from 2003 to 2004 conditions using the County employment growth rate of 2.3 percent.
- The remainder of employment in Pinal County was distributed to zones using the estimates of employment by zone in the SEMNPTS travel demand model.

4.2.7 Maricopa County Population and Employment

Three of the BFS study areas are within Maricopa County – Mesa, Gilbert-Queen Creek, and Chandler. The BFS used data from the MAG model to develop population estimates for these three study areas. As the MAG model provides the only data available for these areas, the PCPM used MAG model data for both population and employment projections for zones in these study areas.

4.2.8 Summary of Base Year (2004) Estimates

Final population estimates for 2004 are shown in **Figure 4-8** and final total employment estimates are shown in **Figure 4-9.**

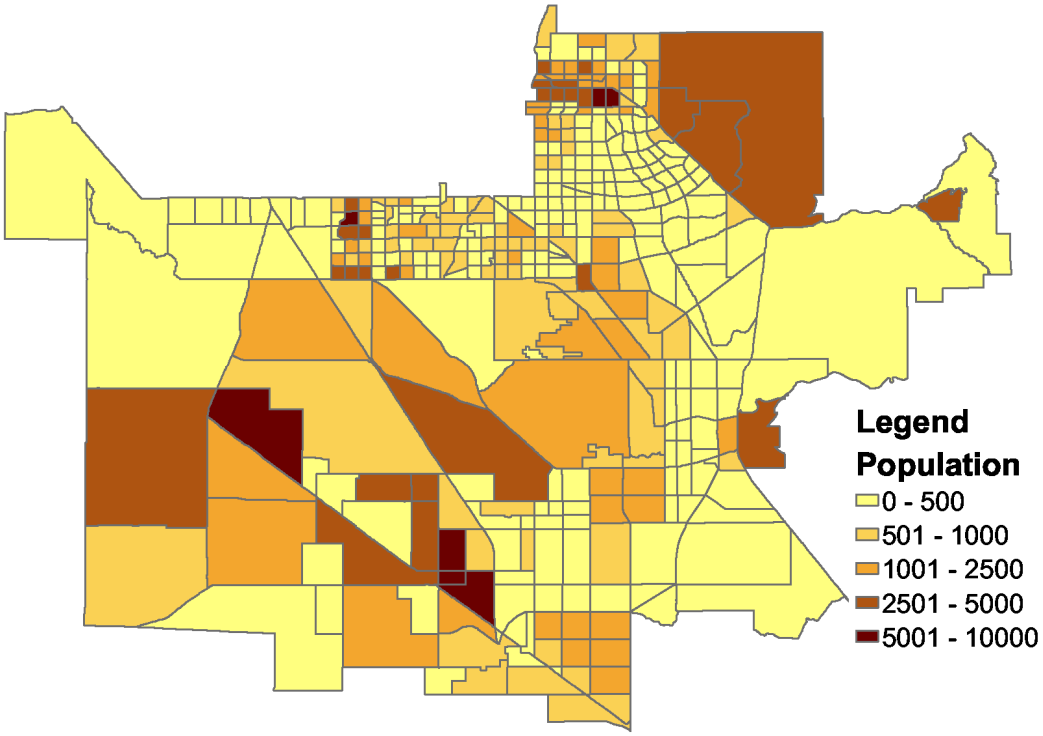


Figure 4-8 – PCPM 2004 Population Estimates by Zone

Source: Cambridge Systematics, Inc., 2005.

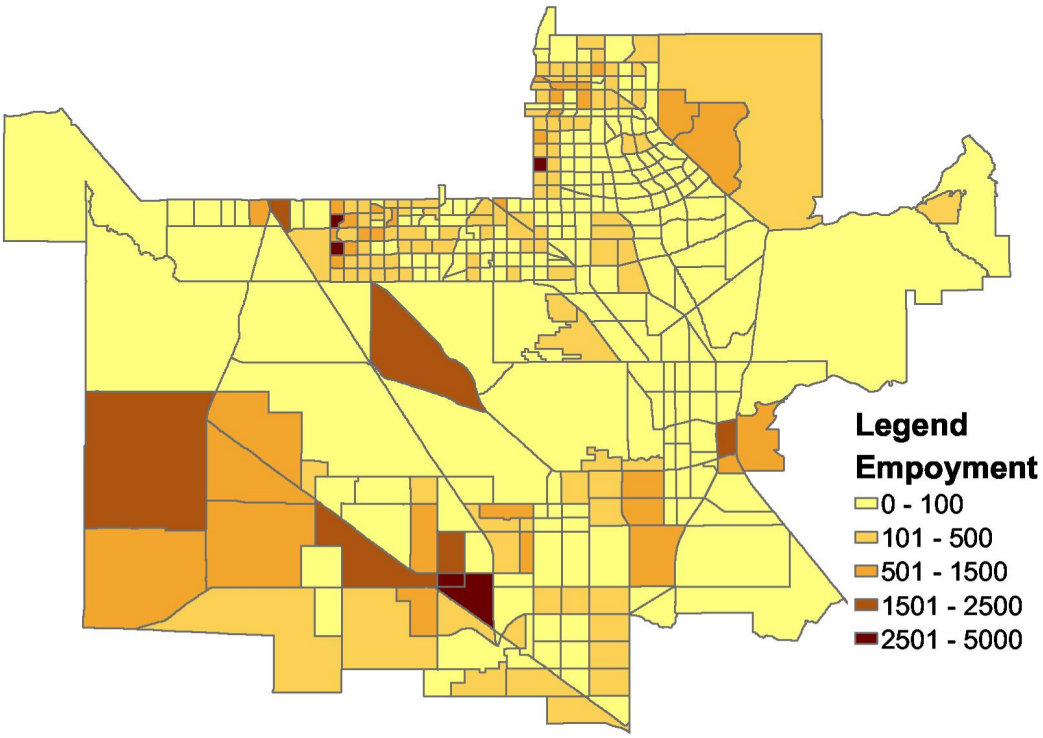


Figure 4-9 – PCPM 2004 Total Employment Estimates by Zone

Source: Cambridge Systematics, Inc., 2005.

4.3 Existing Roadway Conditions

The East Valley Corridor and the Apache Junction Corridor as proposed by the *Southeast Maricopa/Northern Pinal Transportation Study* may be constructed through a combination of improving existing roadways and constructing new roadways on currently undeveloped land. This section highlights conditions on existing roadways that may be incorporated into the corridors. The source of this information is the 2003 Arizona Department of Transportation Highway Performance Monitoring System (HPMS).

Table 4-4 includes data on functional classification, Average Annual Daily Traffic (AADT), number of total thru lanes (Thru Lanes), and the Present Serviceability Rating (PSR) for roadways that potentially could be incorporated into either the East Valley or Apache Junction/Coolidge corridors.

As a matter of explanation, the Present Serviceability Rating (PSR) provides information on pavement condition of the roadway section on a scale of 1 to 5. Roadway segments with a PSR of 1.0 are in an extremely deteriorated condition, and those with a PSR of 5.0 indicate new or nearly new pavement surfaces. A roadway segment for which information is not available is marked with a N/A. As described by the HPMS Field Manual, the riding qualities of pavements of 3.0 to 4.0 are noticeably inferior to those of new pavements, and may be barely tolerable for high-speed traffic. Surface defects of flexible pavements may include rutting, map cracking, and extensive patching. Rigid pavements in this group may have a few joint failures, faulting and/or cracking, and some pumping.

Right-of-way information was also obtained for selected roadways within the study area. For US 60 between Old US 60 and Florence Junction, the right-of-way width is 300 feet. SR-79, from Florence Junction to SR-287 has 200 feet of right-of-way. SR-287 generally has 180 feet of right-of-way, with one small section near SR-79B that has 100 feet of right-of-way. Finally, SR-87 between I-10 and SR-287 has right-of-way that varies between 80 feet and 180 feet. SR-87 through the Gila River Indian Community has right-of-way that varies between 80 feet and 100 feet.

Table 4-4 – Characteristics of Existing Roadways

Road	From	To	Functional Classification	AADT	Thru Lanes	PSR
Attaway Rd	Kenilworth Rd	Vah Ki Inn Rd	Minor Collector	1009	2	3.0
	Vah Ki Inn Rd	SR-287	Minor Collector	475	2	0.0
	SR-287	Hunt Hwy	Major Collector	2326	2	0.0
	Arizona Farms Rd	Judd Rd	Minor Collector	502	2	3.0
Clemans-Felix Rd	Hunt Hwy	Arizona Farms Rd	Minor Collector	465	2	4.7
Combs Rd	Riggs Rd	Vineyard Rd	Minor Collector	502	2	3.5
	Vineyard Rd	Queen Creek Rd	Minor Collector	502	2	3.0
Hunt Hwy	Wild Horse Dr	Ellsworth Rd	Major Collector	1426	2	3.5
	Ellsworth Rd	Hunt (future) Hwy	Major Collector	1426	2	3.5
	Hunt (future) Hwy	Gantzel (future) Rd	Major Collector	1426	2	3.5
	Gantzel (future) Rd	Attaway Rd	Major Collector	1426	2	3.5
	Attaway Rd	Clemans-Felix Rd	Major Collector	1024	2	3.0
	Clemans-Felix Rd	Florence TB	Major Collector	1024	2	3.0

Table 4-4 – Characteristics of Existing Roadways (continued)

Road	From	To	Functional Classification	AADT	Thru Lanes	PSR
Hunt Hwy	Florence TB	SR-79	Collector	1024	2	3.5
(continued)	SR-587 -3	SR-587 -1	Collector	289	2	N/A
	SR-587 -1	SR-587	Collector	535	2	N/A
	SR-587	Mcqueen Rd	Collector	937	2	N/A
	Mcqueen Rd	Mcqueen Rd+ 0.26	Collector	4390	2	N/A
	Mcqueen Rd + 0.26	Cooper Rd	Collector	4390	2	N/A
	Cooper Rd	Gilbert Rd	Collector	821	2	N/A
	Gilbert Rd	Lindsay Rd	Collector	821	2	N/A
	Lindsay Rd	Lindsay Rd + 1	Collector	821	2	N/A
	Higley Rd	Power Rd	Collector	937	2	N/A
	Power Rd	Sossaman Rd -0.1	Collector	3681	2	2.8
	Sossaman Rd -0.1	Sossaman Rd	Collector	3681	2	2.8
	Sossaman Rd	196th St -0.12	Collector	1605	2	2.8
	196th St -0.12	Hawes Rd + 0.0208	Collector	2343	2	3.0
Idaho (future Fwy) Rd	Ray (future) Rd -0.61	Baseline Rd	Local	0	2	N/A
Idaho Rd	Baseline Rd	SR-88	Collector	7000	2	N/A
Ironwood Dr	Vineyard Rd	Vineyard Rd + 0.86	Major Collector	5219	2	3.0
	Baseline Rd -0.255	Baseline Rd	Major Collector	5219	2	N/A
	Baseline Rd	US-60 -0.25	Collector	5219	2	N/A
Ironwood Dr	US-60 -0.25	US-60	Collector	5219	4	N/A
Riggs Rd	Price Rd	Alma School Rd	Collector	7004	2	N/A
	Alma School Rd	Arizona Ave	Collector	13803	2	N/A
	Arizona Ave	Arizona Ave + 0.27	Collector	3103	2	N/A
	Arizona Ave + 0.27	Mcqueen Rd	Collector	3103	2	N/A
	Mcqueen Rd	Cooper Rd	Collector	15656	2	N/A
	Cooper Rd	Gilbert Rd	Collector	1352	2	N/A
	Gilbert Rd	Lindsay Rd -0.25	Collector	1070	2	N/A
	Lindsay Rd -0.25	Lindsay Rd	Collector	1070	2	N/A
	Lindsay Rd	Lindsay Rd + 0.25	Collector	1070	2	N/A
	Lindsay Rd + 0.25	Val Vista Dr	Collector	1070	2	N/A
	Val Vista Dr	Eastern Canal Csr W	Collector	1070	2	N/A
	164th St	Higley Rd	Collector	535	2	N/A
	Higley Rd	Higley Rd + 0.6267	Collector	535	2	N/A
	Higley Rd + 0.6267	Higley Rd + 1	Collector	535	2	N/A
	Higley Rd + 1	Power Rd	Collector	535	2	N/A

Table 4-4 – Characteristics of Existing Roadways (continued)

Road	From	To	Functional Classification	AADT	Thru Lanes	PSR
Riggs Road	Power Rd	Ellsworth Rd	Collector	2475	2	3.5
(continued)	Rittenhouse Rd	Maricopa/Pinal CB	Major Collector	6125	2	0.0
SR-79	Gila Blvd	M136+0.81	Principal Arterial - Other	7422	2	3.2
	M137+0.56	Arizona Farms Rd	Minor Arterial	7422	2	2.9
	Arizona Farms Rd	SR-79 Exit 149 A-Ramp -0.5607	Minor Arterial	7422	2	3.2
	SR-79 Exit 149	US-60 non Card	Minor Arterial	7422	2	3.0
SR-87	M115+0.77	M116+0.38	Major Collector	1989	2	3.4
	M116+0.38	Battaglia Dr	Major Collector	1989	2	3.3
	Battaglia Dr	Selma Hwy	Major Collector	3490	2	3.3
	Selma Hwy	SR-287	Major Collector	3490	2	3.4

4.3.1 Change in Traffic Volumes from 2001 to 2003

The 2003 average annual daily traffic (AADT) for selected existing roadways within the corridor study areas is shown in **Table 4-4**. Additional analysis of traffic volumes was performed for selected major roadways serving the region including Hunt Highway, Riggs Road, and Ellsworth Road. The purpose of the analysis was to demonstrate an increase in traffic volumes and vehicle miles traveled between 2001 and 2003. The analysis compared vehicle miles traveled (VMT), as calculated from an average AADT on the selected roadways between 2001 and 2003. As demonstrated in **Figure 4-10,** vehicles miles traveled increased significantly between 2001 and 2003, particularly on Hunt Highway, Riggs Road, and Ellsworth Road. **Figure 4-11** shows the percent change in vehicle miles traveled between 2001 and 2003.

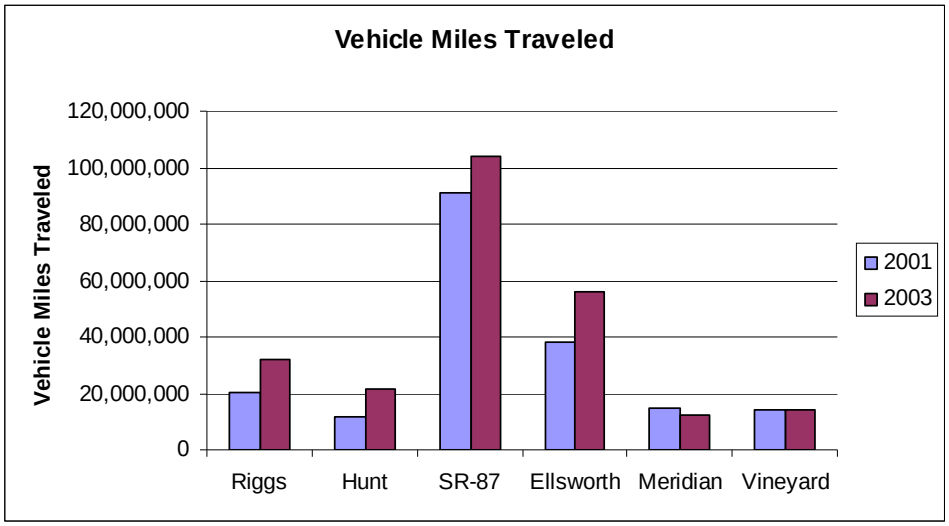


Figure 4-10 – Vehicle Miles Traveled, 2001 and 2003

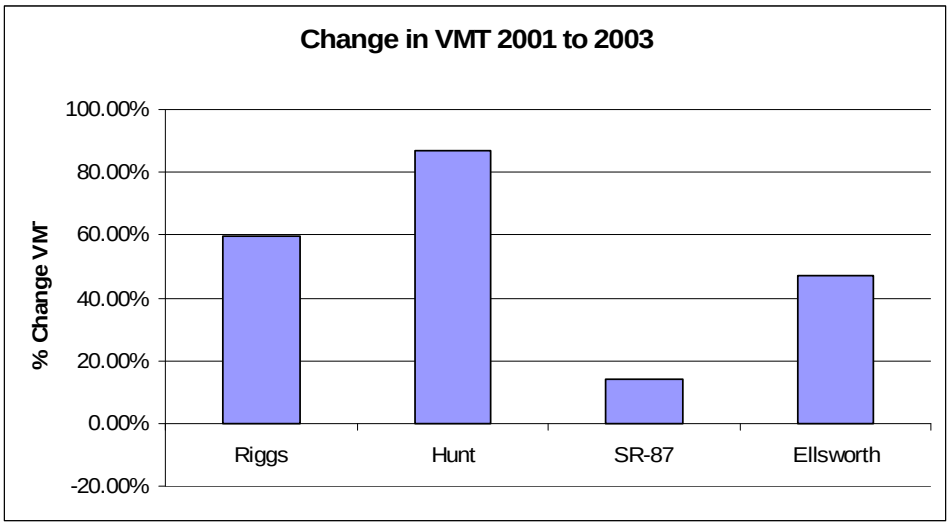


Figure 4-11 – Change in Vehicle Miles Traveled, 2001 to 2003

4.3.2 Crash Data Analysis

The study areas include many miles of state, county, and local roads that may or may not relate to corridor alternatives that will be defined and evaluated later in the study. In order to develop an understanding of the safety characteristics within the study areas, crash data were obtained for only selected roadways in Pinal County for 2001, 2002, and 2003. Roadways for which data were collected include Riggs Road, Hunt Highway, SR-87, Ellsworth Road, Meridian Road, and Vineyard Road. **Table 4-5** shows the number of crashes in 2001, 2002, and 2003 for these selected roadways. As demonstrated in **Table 4-5**, and illustrated in **Figure 4-12,** the number of crashes has been increasing within Pinal County for the past 3 years. Typical of urbanizing areas, while the total number of crashes is increasing, as has the total number of vehicle miles traveled, the total number of fatalities has decreased for each of the past 3 years. **Figure 4-13** shows the crash rate in million vehicles miles traveled (MVMT)

Table 4-5 – Crashes, 2001 to 2003

	2001	2002	2003
Total Number of Crashes	312	419	521
Fatal Crashes	9	8	5
Injury Crashes	107	144	213
No Injury Crashes	189	252	288

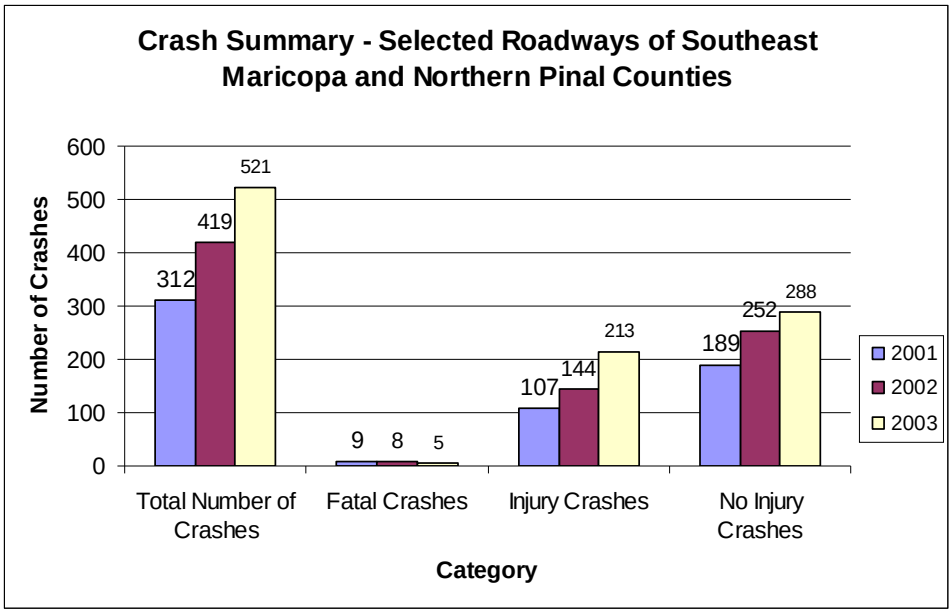


Figure 4-12 – Crashes, 2001 to 2003

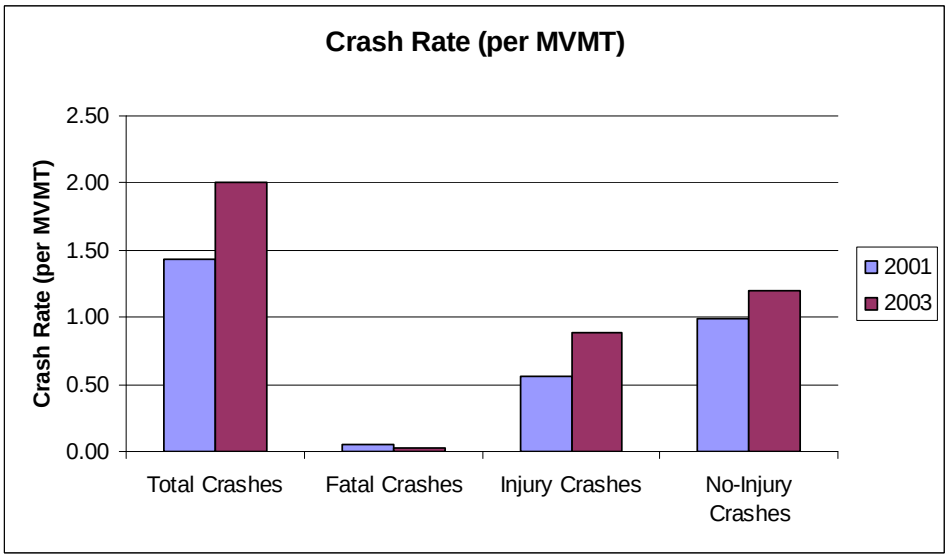


Figure 4-13 – Crash Rate, 2001 and 2003

4.3.3 Existing Traffic Congestion

The volume-to-capacity ratio (v/c) is a performance statistic commonly used to quantify congestion on a roadway. The volume-to-capacity ratio for each roadway within the study area was calculated using two sources of information. These are the 2003 ADOT HPMS data set, and the 2004 Pinal County Planning Model that was developed for the ADOT Corridor Definition Studies.

2003 ADOT HPMS Data Set

Existing traffic data from the HPMS database were reviewed for volume-to-capacity information. A review of the 2003 HPMS database revealed that the volume-to-capacity ratio was calculated for only a limited number of roadways within the study area. Furthermore, the vast majority of these roadways are in the southern Maricopa County area.

2004 Pinal County Planning Model

The volume-to-capacity ratio was calculated for each roadway within the study area using traffic volumes generated by the Pinal County Planning Model (2004 PCPM). The results are displayed in **Figure 4-15**. Roadway segments with a volume-to-capacity ratio of less than 0.8 are shown as uncongested. Roadway segments with a volume-to-capacity ratio of between 0.8 and 1.0 are shown as moderately congested. Roadway segments with a volume-to-capacity ratio exceeding 1.0 are shown as highly congested.

It is important to emphasize that while the 2004 PCPM was calibrated against available existing ground counts, the traffic volumes used in the volume-to-capacity calculations are generated by the model, and are not actual 'ground' counts. Furthermore, it is important to clarify that the volume-to-capacity calculation is based on a 24-hour average daily volume, and not a peak-hour volume. As such, drivers may perceive congestion during the peak-hour that is not reflected on the map in **Figure 4-15**.

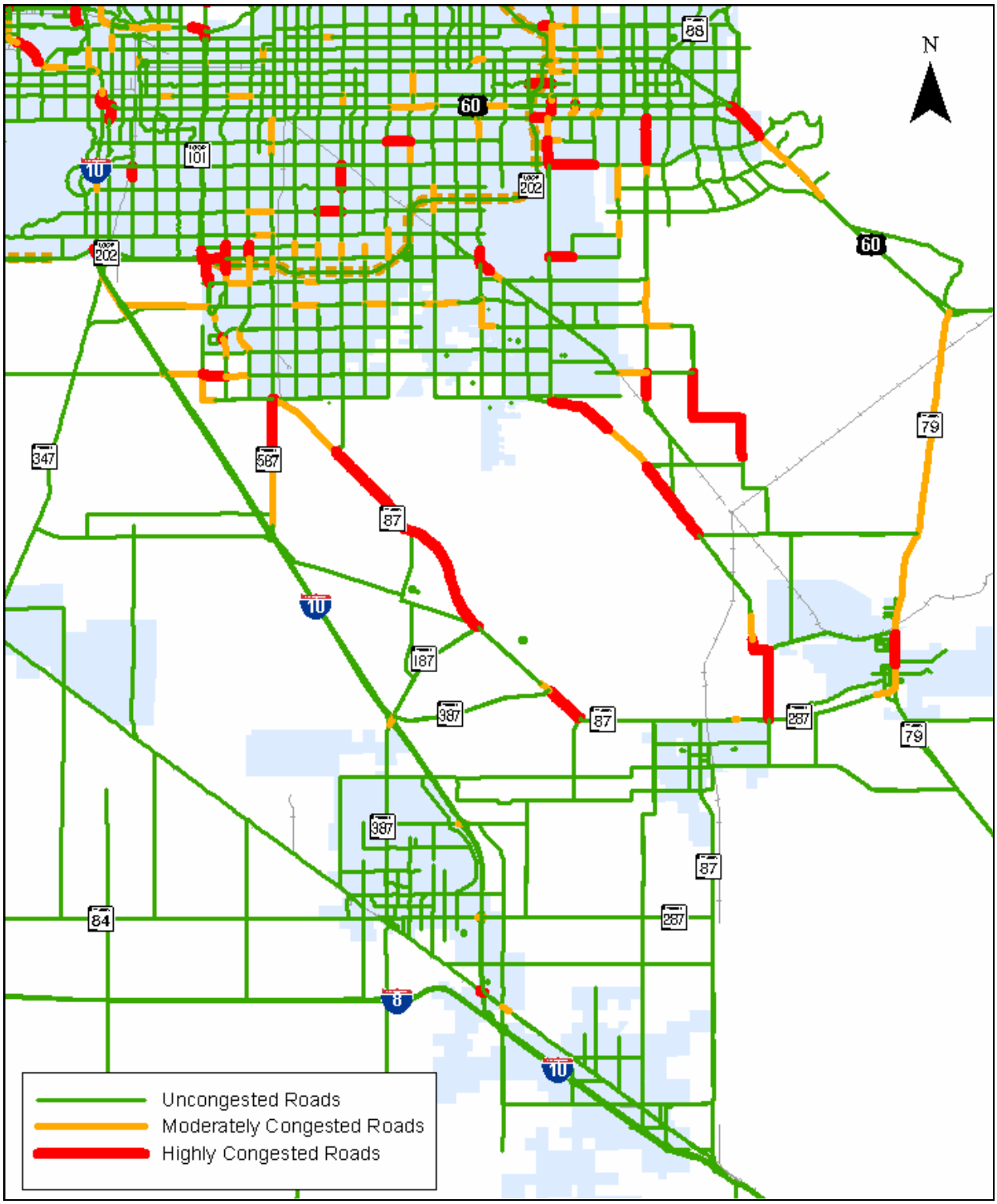


Figure 4-14 – Existing (2004) Road Congestion

4.4 Environmental Data

Environmental data are available from multiple databases and GIS overlays. As the study progresses and identifies specific alternatives for the general locations for potential new corridors, available environmental data along corridor alternatives will be reviewed. The study will not include a full analysis that is required for an Environmental Impact Statement (EIS). An EIS would be performed after a specific alignment for the potential corridors is identified. The environmental analysis within the Pinal County Corridors Definition Study will be conducted using the following existing environmental data:

- Review of USGS 7.5 minute quadrangles and aerial photography to make a preliminary determination of the potential for waters of the U.S. along the corridors that will be subject to Sections 401 and 404 of the Clean Water Act;
- Review of FEMA Flood Insurance Rate Maps to determine the existence of mapped floodways along the corridors alternatives;
- Review of AZSITE database to gather information regarding the location of cultural resources along the corridors alternatives;
- Review of the current list of threatened and endangered species to help determine if there is the potential for designated critical habitat for any of the listed species along the corridors alternatives; this list will also tell us if critical habitat has been designated or proposed for any of the threatened and endangered species.
- Review of soil surveys of the study area and Natural Resource Conservation Service lists of protected farm land soils to determine the potential for protected farm land soils along the corridors.
- Review of Arizona Department of Environmental Quality databases to determine if there are any underground storage tanks or leaking underground storage sites along the proposed routes.
- Review of databases maintained by the Arizona State Land Department containing the following information:
  - Arizona Preserve Initiative boundaries for state trust lands that have been petitioned for preservation
  - Geologic fault formations in Arizona.
  - Geologic Formations
  - Game and Fish Department Natural Vegetation
  - Hydrologic unit code areas (drainage basins) in Arizona.
  - Data derived from the Bureau of Mines Minerals Availability System (MAS) data set.
  - Biotic Communities of the Southwest for Arizona
  - Data developed by the Arizona Game & Fish Department identifying riparian vegetation associated with perennial waters mapped in response to the requirements of the Waters - Riparian Protection Program (Laws 1992, CH. 298)
  - Data set consisting of spring locations in Arizona from both the USGS Geonames database and the USGS Digital Line Graphs (DLG)s.
  - Ephemeral and Perennial Streams in Arizona
  - Data set including Bureau of Land Management, U.S. Forest Service, National Park Service and Fish & Wildlife Service Riparian Natural Conservation areas, Wilderness Study areas and Wilderness or Primitive areas.

4.5 Public Open Houses

Public input is a critical component of the Pinal County Corridors Definition Study. A series of five public open houses were held in the communities of Apache Junction, Coolidge, Queen Creek, Chandler, and Gilbert during the month of April 2005. A significant amount of public comments were received at the open houses. A summary of the information presented and public comments received at the open houses is contained in Summary Report No. 1 – Public Involvement.

5. JURISDICTIONAL PERSPECTIVES

Meetings were held with each study area governmental jurisdiction (town, city, county, and local planning organization). These meetings were informal discussions of approximately one hour in duration. Attendees were invited by members of the Technical Advisory Committee and included individuals that have jurisdictional transportation and land use planning perspectives that relate to the study areas. At the onset of each meeting presentations were made on the study purpose, process and the initial corridors locations, as recommended by the Southeast Maricopa/Northern Pinal Transportation Study. In addition to providing an opportunity for each jurisdiction to raise issues or provide information on any aspect of the study, the following specific considerations were addressed during these meetings:

- Community transportation and land use plans or perspectives that may the affect corridors;
- Preferred locations of corridors;
- Input on the desirability of different transportation facility types.

The meetings were held at the following jurisdictions in December 2004 and January, 2005:

- City of Apache Junction
- Arizona State Land Department
- City of Casa Grande
- Central Arizona Association of Governments
- City of Chandler
- City of Coolidge
- City of Eloy
- Town of Florence
- Town of Gilbert
- Maricopa Association of Governments
- Maricopa County Department of Transportation
- Pinal County
- Town of Queen Creek

The Gila River Indian Community was invited to participate in the jurisdictional meetings but postponed participation pending meetings with ADOT staff on this and other studies that affect the Community.

Sections 5.1 through 5.12 summarize discussions and input received at each of the meetings.

5.1 City of Apache Junction

City of Apache Junction

1001 N. Idaho road
Apache Junction, Arizona
January 5, 2005
2:00 p.m.

Attendees:

- Rudy Esquivas, Development Services Department
- Doug Dobson, Public Works Department
- Ron Grittman, City Engineer
- Shane Kiseow
- Dianne Kresich, ADOT
- Dave Perkins, Kimley-Horn and Associates, Inc.

Key Discussion Points:

- The Arizona State Land Department and the Morrison Institute at Arizona State University commenced a land planning study on January 5, 2005 for the Superstition Vista area. The study includes all State Trust Land south and southeast of Apache Junction, to Florence Junction.
- Apache Junction will submit a permit application to the Arizona State Land Department to develop a Design Concept Report (infrastructure, utilities, etc.) for 7,000 acres (Phase 1 of the Superstition Vista Planning area). This area is referred to as Lost Dutchman Heights. The study will have a $3 million budget, and will be cooperatively funded by the City of Apache Junction and the Arizona State Land Department. Pulte Homes will be involved in the Design Concept Report. The decision to submit the permit application will be made by the Mayor and City Council on February 3, 2005.
- In discussions relating to specific alignments of the Apache Junction/Coolidge corridor, the City of Apache Junction feels that the impacts of a north/south corridor on the Ellsworth and Ironwood alignments are too significant. A corridor would impact trailer parks and the Apache Junction High School, located on Ironwood north of the US 60. The City of Apache Junction prefers the Idaho Road alignment because it would connect to SR 88, north of US 60. The Idaho Road alignment is also strongly supported by the City of Apache Junction Mayor.
- Apache Junction feels that a fully-access-controlled north/south facility should terminate at the Williams Gateway freeway, and continue to US 60 as a parkway to allow significant commercial and retail development. A system interchange of the north/south corridor at US 60 is not desired. The City of Apache Junction feels that the parkway should be a State Highway.
- The City of Apache Junction feels that the north/south facility should be located east of the Central Arizona Project Canal, but interchange with US 60 at the Idaho interchange. This avoids two crossings of the Central Arizona Project (CAP) canal as shown in the Southeast Maricopa/Northern Pinal Transportation Study. The proposed Salt River Project 500 kV line will likely follow the CAP canal. As such, the City is planning a linear park on the east side of the CAP. The City prefers combining the north/south facility with the SRP 500 kV corridor.
- The City stated that the north/south facility should be located as near to Queen Creek as possible to alleviate significant congestion in Queen Creek. The further east the alignment, the less benefit to Queen Creek.

§ The City stated that ADOT should consider impact fees to support the development of State Highways. The city does not consider toll facilities to be a reasonable means of funding the corridors.

5.2 Arizona State Land Department

Arizona State Land Department
1616 W. Adams
Phoenix, Arizona
January 14, 2005
1:00 p.m.

Attendees:

§ Luana Caponi, Planning Project Leader II /Asset Mgmt Division
§ Dianne Kresich, ADOT
§ Dave Perkins, Kimley-Horn and Associates, Inc.
§ Brent Crowther, Kimley-Horn and Associates, Inc.

Key Discussion Points:

§ Arizona State Land Department is pleased that ADOT is listening to the stakeholders and that the corridor alignments have been flexible and have shifted in response to their input. She emphasized that we need to look at the entire picture. She is confident that all interested parties can take their projects, and 'meet in the middle' to produce a quality product.
§ ADOT emphasized that this study does not presuppose that the corridors will be ADOT facilities.
§ ADOT presented the concept of combining the facility with the proposed SRP 500 kV line in a linear park. As proposed by the City of Apache Junction, the linear park would lie on the east side of the Central Arizona Project canal.
§ Arizona State Land Department emphasized that flooding and drainage in this area will be a significant design element of any project.
§ ADOT emphasized to Arizona State Land Department representatives that facility will only be constructed if it is needed, if it is economically feasible, and if it is politically feasible.
§ Arizona State Land Department did not provide any specific information regarding future land use of areas owned by the State of Arizona. They did indicate that the Maricopa Association of Governments prepared a map in 2002 of projected land use throughout this area.

5.3 City of Casa Grande

City of Casa Grande
510 East Florence Blvd
Casa Grande, Arizona
January 5, 2005
8:00 a.m.

Attendees:

§ A.J. Blaha, Public Works Director
§ Scott Bender, Deputy Public Works Director
§ Jaya Rayaprolu, Engineering Project Manager

- John Pein, ADOT
- Dave Perkins, Kimley-Horn and Associates, Inc.
- Brent Crowther, Kimley-Horn and Associates, Inc.

Key Discussion Points:

- Casa Grande has been approving approximately 150 homes per month for construction. Coolidge and Florence have been approving approximately 125 homes per month for construction. The Town of Maricopa has been approving approximately 350 homes per month.
- Because of the tremendous rate of development, Casa Grande is preparing to revise all of its planning assumptions. The City approved approximately 1,000 homes in 2004, and estimates that 1,400 to 1,500 homes will be approved in 2005.
- Casa Grande most recently revised its General Plan in 2000. Because of the rapid development, the City feels that the numbers contained within the plan are meaningless.
- The City of Casa Grande is hopeful that an update of its Small Area Transportation Plan (SATS) will contain improved socioeconomic estimates.
- In total, the City is projecting more than 50,000 homes to be constructed over the next 20 years.
- Casa Grande has been looking at east/west opportunities. They have also considered a 'loop' system around the city. SR 287 has no access control.
- Casa Grande has a sizeable snowbird population, approximately ½ that of Yuma or Apache Junction.
- The east/west connection to the Apache Junction-Coolidge, as proposed as an alternative in the Southeast Maricopa/Northern Pinal Transportation Study, may provide some level of benefit to Casa Grande residents. Specifically, an east/west connection may provide some relief off of I-10.
- Meritage Homes Sun Lakes Casa Grande is considering developing land that lies on the east/west connection alignment, as currently depicted on the Hanna Road alignment.
- There has not been much development activity near the Selma Road alignment.
- Robson Homes may challenge an east/west connection.
- Casa Grande is not averse to a turn back of SR-287, as demonstrated by their taking responsibility for segments of SR-84. As the City annexes land, it generally takes-back responsibility for the roadways that were previously on the State Highway System.
- Casa Grande did not express an opinion concerning the alignment of the north/south corridor.
- Casa Grande views the north/south corridor as an access-controlled facility, comparable to the Loop 303. The facility may begin as a partially-controlled facility that is gradually upgraded to a fully-controlled facility.

5.4 Central Arizona Association of Governments

Central Arizona Association of Governments
271 Main Street
Superior, AZ
January 6, 2005
2:30 p.m.

Attendees:

§ Bill Leister, Transportation Director
§ Dianne Kresich, ADOT
§ Dave Perkins, Kimley-Horn and Associates, Inc.

Key Discussion Points:

§ CAAG stated that the Central Arizona College (CAC) Bond Feasibility Study (BFS), completed by Applied Economics, is the best available source of socio-economic projections for Pinal County. CAAG feels that these projections should be used in the travel demand modeling.
§ CAAG believes that the MAG model contains updated socio-economic data.
§ Pinal County will pursue an impact fee ordinance in the near future to fund transportation improvements.
§ Mojave County recently passed a bond program to fund transportation improvements.
§ CAAG expressed satisfaction that the study is off to a good start and is pleased with the information that is being collected by the study team at the local jurisdictional working group meetings.

5.5 City of Chandler

City of Chandler
215 E. Buffalo Street
Chandler, Arizona
January 15, 2005
10:00 a.m.

Attendees:

§ Dan Cook, Assistant Public Works Director, Transportation & Operations
§ Mike Normand, Transportation Services & Planning Manager
§ Dianne Kresich, ADOT
§ Dave Perkins, Kimley-Horn and Associates, Inc.
§ Brent Crowther, Kimley-Horn and Associates, Inc.

Key Discussion Points:

§ The Chandler Transportation Commission is very interested in the outcome of this study. It was agreed that Kimley-Horn and Associates and ADOT staff would brief the Commission on February 17, 2005.
§ The City of Chandler indicated that they have heard that the Gila River Indian Community (GRIC) is considering a casino on Gilbert Road.
§ Memorial Airport, owned by GRIC, is preparing to provide service to large commercial aircraft. Improvements include a rebuilding and expansion of the runway. If these plans are executed, it will likely be within the next 5 years. City of Chandler staff stated that the sun Lakes community will strongly oppose such operations.
§ Intel has indicated that they will likely expand their existing campus. However, Intel has expressed concern over the potential impact to their manufacturing and research facilities, including vibration that could be caused by the commercial aircraft.

- Several large and expensive communities front the Hunt Highway and Riggs Road corridors. High-end developments include Sunbird, Springfield Lakes, Solera, and Circle-G. A Hunt Highway corridor alignment would involve buying a lot of expensive homes. City of Chandler feels that the only financially feasible alternative would be to locate the corridor to the south of Hunt Highway. City of Chandler noted that even if the corridor is located to the south, the public (Sun Lakes community) will likely be concerned about noise generated by the facility.
- City of Chandler will be improving Riggs Road to 6 lanes from Arizona Avenue to Val Vista.
- City of Chandler presented an alternative to the east/west corridor. They proposed that the corridor follow a northwesterly direction beginning in the Queen Creek area, near Riggs/Val Vista, and extend to the northwest and connect to the Loop 202. This proposed corridor is much less developed, and would provide a connection to the Loop 202 from the east.
- When asked about City of Chandler's desire for the east/west corridor, city staff indicated that a lot of Chandler residents would be pleased if the concept were abandoned. City of Chandler staff is not prepared to provide an opinion on the corridor from a technical perspective. However, City staff believes that the planned 6 lanes on Riggs Road in the area may satisfy a lot of the need for the corridor.
- City of Chandler staff suggested that SR-87 be improved to 4 lanes, with connections at Gilbert Road and Arizona Avenue. SR-587 is a very busy segment, and needs to be improved.

5.6 City of Coolidge

City of Coolidge
Growth and Management Office
141 N. Main St.
Coolidge, Arizona
December 21, 2004
10:00 a.m.

Attendees:

- Donald Peters, Public Works Director/City Engineer
- Alton Bruce, Economic Development Director
- Robert Flatley, City Manager
- Sue Layborn, City Planner
- Dianne Kresich, ADOT
- Dave Perkins, Kimley-Horn and Associates, Inc.
- Brent Crowther, Kimley-Horn and Associates, Inc.

Key Discussion Points:

- City of Coolidge staff stated that the 'consensus corridor' presented by Pinal County generally satisfies their needs, although they do take issue with some segments of the corridor.
- City of Coolidge staff asked if toll roads would be considered as a mechanism to fund the corridors. ADOT and the study team responded that toll roads may be a possible mechanism to fund the corridors.

- City of Coolidge stated that Pulte Homes is concerned about Felix Road alignment, as proposed as a 'consensus corridor' by Pinal County. The Felix Road alignment, as proposed by the Pinal County, would bisect the communities of Arizona Farms and New Anthem.
- Westcor is considering a land purchase of 340 acres for the development of a regional mall on the southeast corner of Bartlett Road and Attaway Road. The City of Coolidge and Westcor would prefer to see the corridor serve the proposed mall, but would be content if the corridor was within 'viewing' distance of the mall.
- Intensive multi-modal use of the corridor, including trucking and connection to rail facilities, could dramatically impact the perspective of this corridor.
- Salt River Project is proposing a 500 kV line along Interstate-8. As the line turns north towards the valley, City of Coolidge prefers that the line follow the Clemens alignment. However, the Town of Florence would like to see the line pushed as far to the west as possible.
- Most development in the next 3 years will occur to the west of town, rather than to the east, because of sewer access and the railroad line. Development on the east side will likely begin within the next 2 to 5 years.
- Clemens Road has become the agreed planning boundary between City of Coolidge and Town of Florence.
- Coolidge provided the study team with the *Tischler Study*. The Southeast Maricopa/Northern Pinal Transportation Study (MAG/CAAG) projected a population of 11,000 for City of Coolidge in the planning year horizon (2020). However, Coolidge anticipates growth to be much higher. The *Tischler Study* projects a population of nearly 80,000.
- Pivotal Group is in the planning stages of Sandia. This planned community will have 9,000 units. Total proposed housing units for Coolidge over the next 20 years exceeds 50,000.
- Coolidge staff did not express a strong opinion concerning the southern connection of the corridor. However, both the connection at Picacho and the extended I-8 alignment are viewed as reasonable alternatives.
- Coolidge has a strong interest in revitalizing the Coolidge Airpark, and has hopes that the north/south corridor could contribute its' revitalization. The City of Coolidge owns the airport, Pinal County owns the land on which it sits, and the State of Arizona owns the land surrounding the airport.
- This area of Pinal County has a significant amount of archeologically sensitive areas, particularly following the Gila River to the east. Many of the existing irrigation canals follow hand-dug canals first constructed by Native Americans.

5.7 City of Eloy

City of Eloy
Public Works Building
226 North Main Street
Eloy, Arizona
January 27, 2005
3:00 p.m.

Attendees:

- Jim Zazoya, Public Works Department
- Bob Jackson, Department of Public Works
- Dave Perkins, Kimley-Horn and Associates, Inc.

Key Discussion Points:

§ The CAC Bond Feasibility Study demographic projections are best available source of information. However, the projections may be conservative. The Greater Casa Grande Valley Economic Development Group may also have population projections.

§ Eloy growth will be to the south and east, not north and west.

§ Discussions are ongoing with Casa Grande to define planning boundaries between the communities.

§ If the Apache Junction/Coolidge corridor connects to the I-10/I-8 interchange, the alignment should follow the planning boundary between Casa Grande and Eloy. Such an alignment should avoid cutting through the existing town and should avoid creating a division for providing services to small islands that would be created if the east/west alignment were constructed as depicted in the MAG/CAAG study.

§ Generally speaking, a east/west connection to I-10./I-8 does not make sense to Eloy, though such a connection to the I-10/I-8 interchange would improve access to the Eloy Airport which currently serves existing industrial uses. Additional industrial land use is anticipated in this area.

§ The SR 87 connections make sense to Eloy for the following reasons:
  - A north/south connection better serves travel between Tucson and the East Valley – traffic between I-8 and the East Valley is comparatively lower;
  - SR 287 already serves Casa Grande to the East Valley;
  - Right-of-way already exists on SR 87;
  - Eloy planning assumes that SR 87 will be there in one form or another.

§ The City understands that issues associated with Gila River Indian Community on improving the I-10 corridor north of Casa Grande has resulted in ADOT turning its focus and attention to the I-10 south of Casa Grande. ADOT has initiated a study of I-10 between I-8 and SR-87, though the City is unsure about the specifics of the study.

5.8 Town of Florence

Town of Florence
775 N. Main Street
Florence, Arizona
December 21, 2004
2:00 p.m.

Attendees:

§ Larry Quick, Planning Director

§ Himanshu Patel, Town Manger

§ Dianne Kresich, ADOT

§ Dave Perkins, Kimley-Horn and Associates, Inc.

§ Brent Crowther, Kimley-Horn and Associates, Inc.

Key Discussion Points:

§ Town of Florence staff believes that based on growth projections, the north/south corridor would likely require more than a 2-lane roadway.

- § The military reservation, located northeast of Florence would like to expand their buffer area and restrict to minimal impact uses. The corridor would be compatible with such a land use.
- § Several large developments are underway in Florence. The Anthem at Merrill Ranch development straddles Felix Road.
- § Hunt Highway in Florence will be expanded to 7 lanes. Felix Road will be expanded to 6 lanes.
- § Preferred alternatives to the Felix Road alignment for the north/south corridor include Valley Farms Road and Plant Road.
- § Town of Florence staff stated that access control can be accommodated through Florence.
- § An on-going Hospital study, focusing on a 20-mile radius of the hospital, projects a population of 350,000 within 25 years.
- § The Town of Florence staff believes that it may be preferable for the corridor to run on the west side of the Central Arizona Project canal to avoid environmental issues.
- § Town of Florence stated that the 500 kV line will likely follow Christensen Road to the railroad, and then follow the railroad across Arizona State Trust Land.
- § Access to the Coolidge Airpark is important to both Coolidge and Florence.
- § New Magma Flood Control Dam may provide a possible corridor.

5.9 Town of Gilbert

Town of Gilbert
50 East Civic Center Drive
Gilbert, Arizona
December 22, 2004
3:00 p.m.

Attendees:

- § Brian Townsend, Governmental Relations Coordinator
- § Michael Milillo, Senior Planner/Zoning Administrator
- § Jerry Swanson, Planning Director
- § Tami Ryall, Deputy Town Manager
- § Dianne Kresich, ADOT
- § Dave Perkins, Kimley-Horn and Associates, Inc.
- § Brent Crowther, Kimley-Horn and Associates, Inc.

Key Discussion Points:

- § Town of Gilbert staff asked what will happen if cooperation from the Gila River Indian Community is not achieved. ADOT and the study team responded that a need for the corridor may be documented, that but the corridor is not feasible from a financial or political perspective.
- § Town of Gilbert staff suggested that improvements to SR-87 may satisfy some of the transportation needs of central and southern Pinal County.
- § Town of Gilbert stated that they would like to correct the discontinuity of the Hunt Highway.
- § The unincorporated area of Chandler Heights, located south and east of the Gilbert planning, is within the Queen Creek planning area. Approximately 80 to 100 people live in the area on approximately 1 acre lots each. They share an irrigation district, and are very well organized.

- The Gilbert General Plan shows both Riggs Road and Hunt Highway as major arterials.
- The Price freeway extension generally makes sense, and should (if built) interchange with the East Valley freeway.
- Gilbert staff stated that an east/west facility would not directly benefit the Town of Gilbert, but that they would be willing to support a corridor if it is needed from a regional perspective.

5.10 Maricopa Association of Governments

Maricopa Association of Governments
301 North 1st Avenue
Phoenix, Arizona
January 4, 2005
9:30 a.m.

Attendees:

- Eric Anderson, Transportation Director
- Roger Herzog, Senior Project Manager
- Dianne Kresich, ADOT
- Dave Perkins, Kimley-Horn and Associates, Inc.
- Brent Crowther, Kimley-Horn and Associates, Inc.

Key Discussion Points:

- ADOT clarified that the legislation governing the Pinal County Corridors Study stated that ADOT has until 2008 to make a designation of the corridors.
- When asked what is meant concerning 'responsibility for the corridor', the study team clarified that this means responsibility for maintenance of the roadway is if the road is not included in the State Highway Transportation system.
- MAG staff stated that significant revisions to socioeconomic data that was used in the SEMNPTDS were made during the development of the Regional Transportation Plan. The RTP process revised the socioeconomic data significantly to take into account the development of state lands.
- MAG stated that they believe that the Gila River Indian Community would like to preserve and maintain the outer reaches of the community as agricultural. MAG believes that the communities' primary interests are on the area west of I-10.
- The study team suggested that it is very likely that this east valley corridor may be the East Valley corridor 'light'. Currently, it is questionable whether the travel demand will support a fully-controlled facility, although the model output is not yet available.
- MAG staff stated that if the north/south facility is constructed, one would anticipate a need for right-of-way donations. He believes that developers will need to be involved, and be willing to participate.
- The study team explained that local jurisdictions have expressed a desire for an additional crossing over the Gila River. The City of Coolidge would like to maintain local control of the Attaway crossing.
- MAG staff stated that there are no plans to improve SR 87/Arizona/County Club.
- MAG models assume approximately 1 million people in Pinal County,, and depict significant traffic volumes on both Hunt Highway and the Loop 202.

- § MAG staff stated that in their study analysis, improvements to Hunt Highway raised the Level of Service of most intersections to LOS C.
- § MAG feels that the north/south corridor should be run independently of the east/west corridor, and the need for each determined
- § MAG staff stated that it is safe to assume that the Maricopa County section of the Williams Gateway Freeway will be constructed. However, questions remain regarding the section of the Williams Gateway Freeway in Pinal County. MAG plans to have a preferred alignment for the Williams Gateway Corridor established by April. The Town of Queen Creek would like the corridor further south, missing the GM proving grounds.
- § MAG stated that they understand that City of Chandler is concerned over the Price freeway extension, and about the potential impacts to Intel and the Sun Lakes area.
- § MAG stated that their study looked at two options for the Price extension, including arterial improvements. The Price extension is in the Phase III group (2010 to 2015) of projects within the Regional Transportation Plan.
- § MAG has had discussions with Pinal County regarding a common socioeconomic model for Yavapai, Maricopa, and Pinal County

5.11 Maricopa County Department of Transportation

Attendees:

Maricopa County Department of Transportation
2901 W. Durango Street
Phoenix, Arizona
December 22, 2004
10:00 a.m.

- § Tim Oliver, MCDOT Systems Planning Manager
- § Mike Sabatini, MCDOT Planning Division Manager
- § Mathew Holm, Maricopa County, Principal Planner
- § Dianne Kresich, ADOT
- § Dave Perkins, Kimley-Horn and Associates, Inc.
- § Brent Crowther, Kimley-Horn and Associates, Inc.

Key Discussion Points:

- § MCDOT staff understands that Apache Junction has included the area south of the US 60 in their Metropolitan Planning Area via the 208 process.
- § MCDOT understands that the City of Apache Junction is interested in a corridor that would increase the accessibility of Apache Junction from Johnson Ranch.
- § MCDOT staff indicated that Meridian Road will be a 6 lane facility in Maricopa County and a 4 lane facility in Apache Junction.
- § On the Hunt Highway, west of Arizona Avenue, the centerline straddles the border of the Indian Community. Approximately 1 to 1 ½ miles east of Arizona Avenue, the road shifts north to get the entirety of the roadway off of the reservation.
- § The Sun Lakes community will not be amenable to a fully-access controlled facility.

- § MCDOT feels that the East Valley corridor, if constructed, will primarily serve development in the eastern portion of the county. Gilbert and Chandler are primarily served by the Loop 202.
- § MCDOT stated that the Riggs Road corridor will not be a viable corridor through Sun Lakes and Chandler because of development constraints. Likewise, the Seville development, located on Riggs Road in Gilbert, would object to a freeway corridor. In summary, the Riggs Road corridor is not a feasible alternative within Maricopa County.
- § MCDOT understands that Queen Creek would like to maintain the rural nature of the area.
- § MCDOT staff question whether the 2030 population projections will justify the need for an east/west corridor.
- § MCDOT believes that if constructed, the corridor should be a state highway. If the corridor is left to the responsibility of the local jurisdictions, it is likely to be discontinuous.

5.12 Pinal County

Pinal County Complex, Building A
31 North Pinal Street
Florence, AZ
January 13, 2005
8:00 a.m.

Attendees:

- § Doug Hansen, Planning Section Chief
- § Sandie Smith, Board of Supervisors
- § Ken Buchanan, Assistant County Manager for Development Services
- § D.R. Rittenback, Pinal County Planning
- § David Kuhl, Planning Director
- § Andy Smith, ADOT
- § Dave Perkins, Kimley-Horn and Associates, Inc.
- § Brent Crowther, Kimley-Horn and Associates, Inc.

Key Discussion Points:

- § The study team summarized that a key objective of the study is to determine the need and feasibility of the corridors. They study team emphasized that while state highways may serve local communities as development occurs, that is not their primary purpose, nor is it the mission of ADOT.
- § Pinal County stated that the Central Arizona College Bond Feasibility study provides the best source of socioeconomic data. However, they still feel that the CAC Bond Feasibility Study is conservative.
- § Pinal County staff stated that within 15 years, Pinal County will be the primary growth area of the Phoenix metropolitan area, as all other areas will be built-out. It is reasonable to assume a build-out year of 2030.
- § Pinal County staff stated that the Arizona State Land Department has commenced a master plan and infrastructure study for “Lost Dutchman Heights” – 34,800 acres roughly bounded by Germann Road to the south, Meridian Road to the east, and US 60 to the north and east. “Lost Dutchman Heights” is contained within a much larger area of State Trust Land, known

was Superstitions Vistas. This area contains nearly 360 square miles of state trust lands that may be developed.

§ Pinal County planning uses an average of 3.5 dwelling units per acre to estimate the number of future dwelling units within the county. Currently, nearly 300,000 lots are currently planned for Pinal County. Pinal County issued 10,000 building permits last year (unincorporated areas)

§ Pinal County explained that they held a meeting with public works directors or their representatives to develop the "Consensus Map" of the Pinal County corridors. Developers were not invited to this meeting.

§ Pinal County is open to the potential turn-back of state highway, as they demonstrated with Jimmie-Kerr Blvd.

§ Pinal County does not object to the Plant Road alignment, as preferred by the Town of Florence.

§ Pinal County is improving Ironwood Road to 5 lanes. They stated that this should provide significant relief to Queen Creek.

§ Pinal County does not want a corridor constructed that would duplicate the Ironwood corridor, providing justification for Pinal County's desire to shift the corridor eastward. Pinal County stated that the corridor can't go westward.

§ Improvements are also underway for Ellsworth Road.

§ The study team presented the concept, preferred by the City of Apache Junction, for a corridor east of the Central Arizona Project canal, and potentially integrated into a linear park. The corridor would aim for the Idaho Road alignment. Pinal County agrees with the Apache Junction concept, and their vision of a 'parkway' between the Williams Gateway corridor and the US60 to serve commercial development, and their position that this corridor should still be a state highway because it would connect to SR 88.

§ Queen Creek would like the north/south corridor closer to Queen Creek to alleviate through traffic on roadways within Queen Creek.

§ Riggs Road serves as the primary east/west route in this area. The Town of Queen Creek has designated Riggs as their primary east/west route. Pinal County sees a lot of potential issues with the east/west corridor.

§ Skyline Drive serves as Pinal County's primary east/west route.

§ Pinal County staff was agreeable to the arterial street network depicted by the study team., with the following additions:

- Extend Bartlett to the west
- Pinal County is considering connections at Skyline
- Extend Florence/Kelvin Highway to the east

§ Pinal County stated that their sales tax base could not support a program such as the MAG Freeway System.

5.13 Town of Queen Creek

Town of Queen Creek
22350 S. Ellsworth Road
Queen Creek, AZ
January 4, 2005
1:30 p.m.

Attendees:

- Mark A. Young, Public Works Department
- Dick Schaner, Public Works Director
- Tom Condit, Town Engineer
- John Pein, ADOT
- Dave Perkins, Kimley-Horn and Associates, Inc.
- Brent Crowther, Kimley-Horn and Associates, Inc.

Key Discussion Points:

- The Town of Queen Creek recently closed Hunt Highway for work on Higley Road. Traffic naturally diverted to the Power Road corridor.
- The Town of Queen Creek stated that San Tan, where incorporation efforts are underway, will eventually contain about 400,000 people. The best source of information regarding San Tan is Maricopa County.
- The Meridian Road Study is based on 2030 projections, but the study is missing Pinal County traffic projections.
- The Town of Queen Creek will be 95% built-out by 2016. The Town believes that the *Tischler Report* may already be outdated, as the 2016 projections have already been met.
- Queen Creek is acquiring 70' half-width ROW on Riggs Road
- Queen Creek is concerned about the Pinal County preference to align the east/west corridor south of Riggs Road where it can't go through the mountain.
- Queen Creek views the north/south corridor as very logical. The east valley corridor may be needed, but it likely is not feasible. They also have concerns that the East Valley corridor will only be accessible to traffic from one side, as the land south of the corridor is on the Gila River Indian Community. The primary need of the Queen Creek community is for a north/south corridor to alleviate traffic congestion on arterials.
- Queen Creek would like the Williams Gateway corridor shifted further to the south, closer to Germann Road.
- Queen Creek would prefer that the east/west corridor follow the Combs/Riggs Road alignment through the Queen Creek planning.
- On Riggs Road, Queen Creek is preserving 140' of right-of-way, in addition to a 30' landscape area on each side of the roadway, for a total of 200' right-of-way for a 6-lane arterial. They would not be opposed to it becoming a freeway if it needs to. There may be an issue of the alignment within the vicinity of the landfill.
- Queen Creek prefers the Southeast Maricopa/Northern Pinal Transportation Study alignment for the north/south corridor because it is closer to Queen Creek. Moving the corridor eastward does not relieve the traffic congestion coming from the southeast through town.
- Railroad crossings must be an overpass or underpass. Queen Creek is dismayed that Power Road was constructed without a grade separation over/under the railroad.
- Queen Creek has identified Vineyard Road as a major north/south route.

5.14 Pinal County Rural Consultation Meeting

On February 16, 2005 ADOT invited elected officials in Pinal County within the study area to attend an ADOT Rural Elected Officials Consultation Meeting. The purpose of the consultation meeting was to present the work plan and initial findings of the Pinal County Corridors Definition

Study and to receive input on corridor needs and location. Project managers Dianne Kresich of ADOT Transportation Planning Division and Dave Perkins of Kimley-Horn and Associates, Inc. were on hand to present an overview of the study process, as well as a summary of input gathered thus far from the staff of jurisdictions in the study area. The following is a summary of input received at the meeting.

- Officials voiced strong support for all four corridors currently under study by the ADOT Transportation Planning Division (US 60, Apache Junction – Coolidge, Williams Gateway, and East Valley) to be constructed as part of the State highway system and, therefore, built and maintained by ADOT.
- Officials inquired as to what criteria are used to determine whether or not a road should become a State highway. The project managers explained that for ADOT to accept a road onto the system, it must largely serve a State function. In other words, it should connect population centers and not primarily handle regional or local traffic. Only the State Transportation Board has the authority to designate a road as part of the system. Other policy-related considerations also play a role in this decision. If the Board determines that any of these corridors are to become State highways, further study would be necessary.
- A question was raised regarding the branching of the study area south and west of Eloy. ADOT staff explained that both areas are being evaluated, and that the Definition Study could recommend one, both, or none as potential new facilities. Officials were divided on which option would be more beneficial.
- Some officials recognized that rapid development was driving the need to recommend the north-south corridor be located as far to the east as possible. Dave Perkins explained that SR 79 would be evaluated as a potentially improved corridor. Others believed that keeping the corridor further west would provide better access to prospective employment centers in the Williams Gateway area.
- Some in attendance stated a preference for the north-south corridor to head directly north and link to the Williams Gateway corridor. Others prefer a corridor that would veer to the west and follow an alignment on Idaho Road. In addition, widespread support was expressed for an additional bridge over the Gila River, echoing the views of jurisdictional staff. Attendees were assured that a new crossing would be considered in the Definition Study.
- ADOT staff was asked to what extent the Definition Study would prioritize the possible construction of any recommended corridors. Staff explained that the study teams for the three studies were cooperating closely. This will ensure that the three sets of recommendations will be consolidated into a system of corridors to be recommended to the Board. In doing so, priorities would be determined at a general planning level.
- An official inquired as to which population projections would be used in the travel demand modeling conducted for the study. Attendees were assured that jurisdiction staff had provided the study teams with the most accurate population data available.
- The issue of turnback was raised by some in attendance. Some officials accepted the possibility that in order for new corridors to be taken onto the State system, their jurisdictions would be willing to take responsibility for maintaining roads that are currently on the State system. Also, an official requested that Coolidge be the site of one the four upcoming public open houses. Central Arizona College has since been selected as a location that would serve the populations of Florence, Coolidge, Casa Grande, and Eloy.

6. FUTURE CONDITIONS

The purpose of this chapter is to summarize future conditions within the study areas. This section includes a review of projected population and employment figures and projected travel demand volumes on roadways within the study area.

6.1 2030 Population and Employment

This section summarizes a report prepared by Cambridge Systematics. Cambridge Systematics was responsible for developing population and employment projections for inclusion in the Pinal Corridors Planning Model (PCPM). The PCPM is used to develop existing and projected future traffic volumes within the study area.

This section presents the assumptions and methods used to develop future year socioeconomic forecasts for the PCPM in support of the Pinal County Corridor definition studies. As shown above, the sources for the forecasts come from the existing travel demand models (SEMNPTS, Pinal County, and Apache Junction) and the BFS. In addition, the Pinal County land use plan served as an additional point of reference to estimate the extent of future year development. Information from the land use plan was used to help estimate potential development in unincorporated areas. The remainder of this section provides estimates of population and employment for the PCPM.

6.1.1 Pinal County Population Projections

Figure 6-1 provides a summary of the population projections for Pinal County from the sources identified above. These comparisons are shown for the entire model area used by the PCPM. Except for the Arizona Department of Economic Security (ADES) numbers, the comparisons are for the same geographic area. The ADES projections are the lowest, but are for the largest area, covering all of Pinal County. The other data sources are for the model area only, which does not include some smaller communities in the southern part of Pinal County. Each of the other studies has developed subregional population projections that are reasonably consistent across the three studies. Because each of the studies used a different definition of these subregions, the direct comparisons are not reproduced here.

BFS projections were available for 2025. These were extrapolated to 2030 using a continuation of the rate of growth projected in the BFS. As shown in **Figure 6-2**, the rate of growth is expected to moderate over time.

For the purposes of the PCPM, BFS projections were used for each of the study areas as control totals. These estimates are the best available estimates of population growth in Pinal County. They were developed using sophisticated methods that take into account actual development plans, available developable land in the County, expected demographic changes, and other related information. These estimates were distributed to PCPM zones using the distribution of population used in the SEMNPTS and Apache Junction models and land use data from individual jurisdictions and Pinal County.

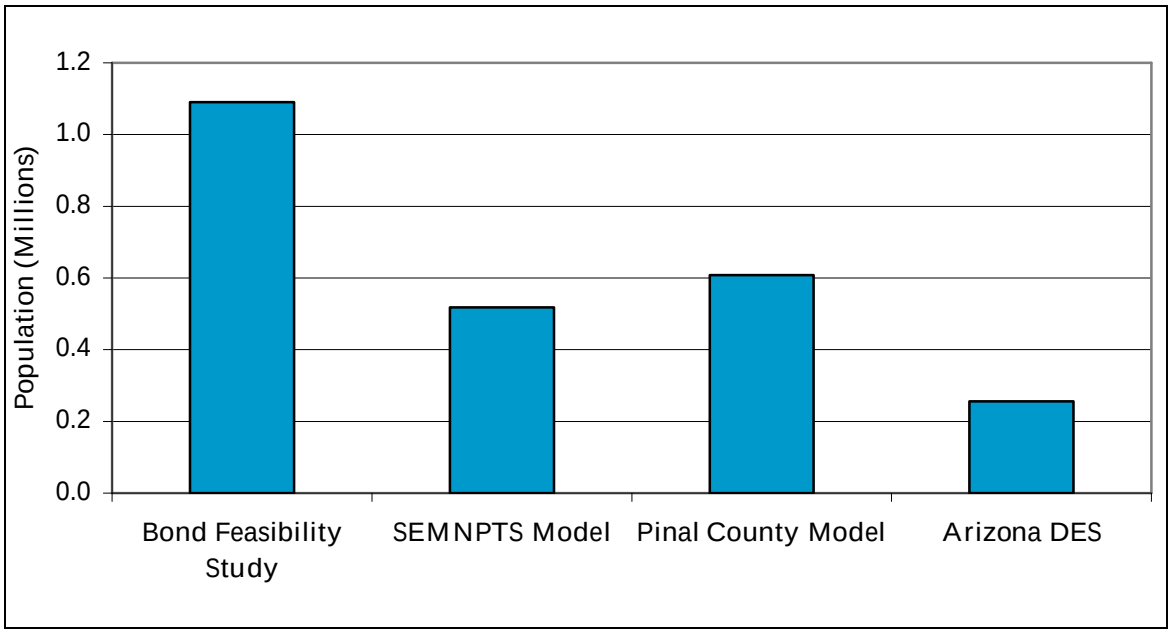


Figure 6-1 – Comparison of Pinal County Population Projections, 2030, from four different data sources

Source: Central Arizona College, 2004; Southeast Maricopa/Northern Pinal County Transportation Study, 2003; Pinal County, 2000; Apache Junction, 2003; and Cambridge Systematics, Inc., 2005.

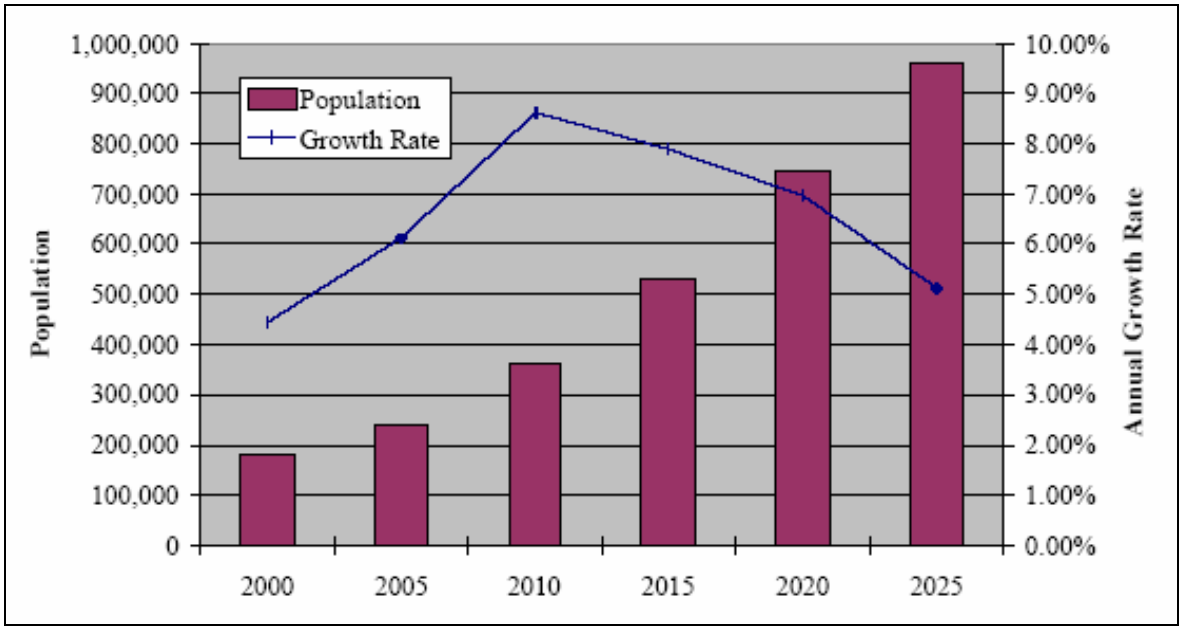


Figure 6-2 – Projected Population Growth in Pinal County

Source: Central Arizona College Bond Feasibility Study, 2003.

6.1.2 Pinal County Dwelling Unit Projections

The BFS estimates total housing units to be constructed by study area. Housing units are slightly different than dwelling units, in that they do not include group quarters (prisons, dorms, etc.). For most of the study area, this is not a significant issue, especially because many group quarters, such as prisons, are not intended to be included in the population forecasts.

For the PCPM, BFS estimates of housing units were used as control totals for each study area. These totals were distributed to zones using the dwelling units identified in the Apache Junction and SEMNPTS travel demand models.

After the initial distribution was generated, these numbers were checked against the carrying capacity of individual zones. The distribution method used has the potential to allocate more population and dwelling units to a zone than could reasonably be housed there. For the purposes of the PCPM, an upper bound of 3.5 dwelling units per acre was used as the maximum housing density. This represents the upper bound of current planning used by Pinal County for unincorporated areas, and is significantly denser than most of the development currently taking place in Pinal County. The City of Maricopa, which has been developing rapidly over the last several years, expects between 2.9 and 3.4 dwelling units per acre.

After applying the dwelling unit cap, the population for the zone was set based on the population per dwelling unit already established for that zone. The remaining population and dwelling units were then distributed to adjacent zones within the study area based on the level of development of that zone. These adjustments were applied iteratively using the dwelling unit per acre cap until no zones had above 3.5 dwelling units per acre.

6.1.3 Pinal County Employment Projections

The BFS does not provide employment projections. Employment projections are available from existing travel demand models and, at the County level, from the proprietary Woods & Poole dataset.

The following estimation steps were applied to estimate future employment:

- Employment control total for entire study area within Pinal County;
- Employment control totals for each BFS study area;
- Employment control totals for each land use category used in the model;
- Employment by land use category for each BFS study area; and
- Employment by land use category for each PCPM zone.

Each of these steps is described in detail in the following sections.

6.1.3.1 Employment Control Total for Pinal County

The first step was to estimate an employment control total for the entire study area within Pinal County. PCPM zones in Maricopa County were handled separately, as described below. Because of the lack of existing sophisticated employment projections for the PCPM study area, the employment control totals were estimated relative to population growth. Both the existing models and Woods & Poole data

provided potential estimates of the ratio between population and employment used in this analysis.

Figure 6-3 presents historical and projected future population-employment ratios from Woods & Poole forecasts of population and employment for Pinal and Maricopa Counties. Since the 1980s, Maricopa County has had a fairly constant ratio of about 1.6 persons per job. This reflects Phoenix's status as the major employment center in the State. Until the late 1990s, Pinal County had held relatively constant at about 2.8 persons per job, but recent housing development has spiked the ratio to roughly 3.6 persons per job. For the future, Woods & Poole has projected population and employment to grow together in both Counties. This seems appropriate for Maricopa County, which is well established, but seems to rely heavily on more recent housing growth trends and not longer-term trends.

Because there is no definitive, well-researched estimate of even near-term employment growth in Pinal County, the PCPM will use the ratio identified in the Woods & Poole data to generate an employment control total for the overall study area. This may be a somewhat conservative forecast of employment, but reflects the best data available. The resulting total employment representing the study area and contained in the PCPM is approximately 300,000 jobs in 2030.

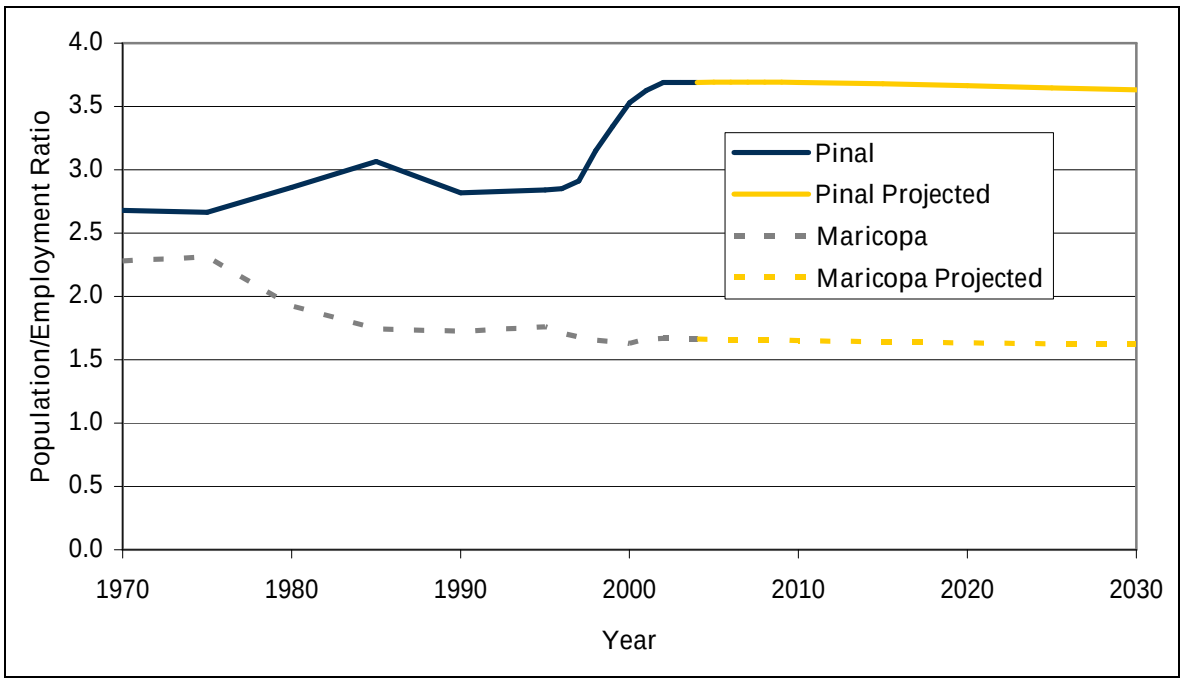


Figure 6-3 – Population-Employment Ratio, Maricopa and Pinal Counties

Source: Woods& Poole, 2004.

Because there is no definitive, well-researched estimate of even near-term employment growth in Pinal County, the PCPM will use the ratio identified in the Woods & Poole data to generate an employment control total for the overall study area. This may be a somewhat conservative forecast of employment, but reflects the best data available. The resulting total employment representing the study area and contained in the PCPM is approximately 300,000 jobs in 2030.

6.1.3.2 Employment Control Totals by Study Area

The next step was to estimate an employment control total for each BFS study area. Each of the BFS study areas exhibit different development characteristics. The San Tan area has recently been a rapidly growing residential area with little employment. Casa Grande, by contrast, is a more established area with a substantial employment base. Again, the SEMNPTS and Pinal County models provide some guidance on which areas are likely to have higher or lower employment totals. **Table 6-1** presents the percent of total employment in each of the BFS study areas in Pinal County and an average of the two sources.

Table 6-1 – Percent of Total Employment by Study Area

BFS Study Area		Data Source		
		SEMNPTS	Pinal County	Average
1	Apache Junction	19.5%	18.3%	18.9%
2	Superior	0.7%	0.4%	0.6%
3	Maricopa-Stanfield	15.8%	7.7%	11.7%
4	Casa Grande	35.4%	31.4%	33.4%
5	Coolidge	4.3%	9.3%	6.8%
6A	San Tan	8.0%	15.8%	11.9%
6B	Florence	10.4%	14.1%	12.2%
8	Eloy	6.0%	3.0%	4.5%
Pinal County Total		100.0%	100.0%	100.0%

Source: Southeast Maricopa/Northern Pinal County Transportation Study, 2003;; Pinal County, 2000; and Cambridge Systematics, Inc., 2005.

Several areas are relatively consistent between the two modeling systems, including the largest and the more established areas – Apache Junction, Casa Grande, and Florence. Superior has too little employment in either travel model to represent a substantial difference between the two. For these areas, a rough average of the two modeling systems was used to generate an initial total employment forecast for 2030.

The estimates for the Eloy study area in the SEMNPTS model are double the Pinal County model (six percent versus three percent). However, because this study area has relatively little employment compared to most of the other study areas in Pinal County, an average of the SEMNPTS and Pinal County modeling systems was used to generate an initial 2030 forecast of employment for this study area.

Coolidge also has relatively low employment estimates in both modeling systems. This area, however, has been targeted by economic development planners for future employment growth. As a result, the 2030 employment estimates for this area use the upper range of these estimates (12 percent, slightly more than identified in the Pinal County model).

The two most challenging areas for estimating reasonable employment growth are the two fastest growing ones – Maricopa-Stanfield and San Tan. In the two

modeling systems, these two study areas are the reverse of one another. The SEMNPTS model predicts roughly double the number of employees in Maricopa-Stanfield than in San Tan; the Pinal County model predicts the exact opposite. Currently, neither of these areas is a major employment center, both within a reasonable drive of employment centers in the Phoenix metropolitan area. In the BFS, both areas are expected to have roughly 250,000 residents in 2030. Given their proximity to Phoenix, it is expected that these study areas will continue to see relatively higher population-employment ratios than other parts of Pinal County. As such, future employment was estimated to the low end of the available estimates, at roughly nine percent each.

These rough approximations account for nearly 99 percent of the total employment in the PCPM modeling area. Because these estimates are necessarily imprecise, estimates were averaged upwards to generate a full 100 percent of potential expected employment. **Table 6-2** presents the estimated percent and total employment, as well as the resulting population-employment ratio, for each BFS study area as defined in the PCPM.

Table 6-2 – PCPM Projected Employment by Study Area

BFS Study Area		Projected Employment	Percent	Population-Employment Ratio
1	Apache Junction	57,000	19.0%	3.74
2	Superior	1,500	0.5%	3.38
3	Maricopa-Stanfield	27,000	9.0%	8.54
4	Casa Grande	102,000	34.0%	1.62
5	Coolidge	36,000	12.0%	3.14
6A	San Tan	27,000	0.0%	9.23
6B	Florence	36,000	12.0%	1.58
8	Eloy	13,500	4.5%	4.16
Pinal County Total		300,000	100.0%	3.63

Source: Cambridge Systematics, Inc., 2005.

6.1.3.3 Employment Control Totals by Land Use Category

As described above, the PCPM uses five employment categories– retail, office, general (industrial), government, and other. The third step is to estimate total employment in the study area by land use category. This provides a second set of control totals that are useful for generating employment projections by zones. This step is one of the most difficult, because the current distributions of employment are likely to change over time as the cities in Pinal County mature.

Two primary sources are available to estimate future employment by land use category: SEMNPTS model data and Woods& Poole data. The Apache Junction model also provides projected employment by land use category, but only for one of the BFS study areas. The results from the Apache Junction model are consistent with those for the SEMNPTS model.

Although both the SEMNPTS model and Woods& Poole forecast employment by industry, each uses a different means of disaggregation. The SEMNPTS model

data predicts employment by land use type (e.g., retail stores, office buildings, etc.). The Woods& Poole data predict employment by industry, but the industries do not always correspond neatly to land uses. For example, the headquarters of a manufacturing establishment would be categorized as manufacturing and not an office use. As such, comparisons have to be made carefully. **Table 6-3** presents the SEMNPTS model distribution of employment by land use category for 2004 and 2030.

Table 6-3 – Employment Estimates, 2004 and 2030

Employment Category	Percent of Employment	
	2004	2030
Retail	21%	16%
Office	10%	7%
General	28%	45%
Government	14%	13%
Other	26%	18%
Total	100%	100%

Source: Southeast Maricopa/Northern Pinal County Transportation Study, 2003;

Retail: The SEMNPTS model predicts that retail's share of employment will decline between 2004 and 2030. Woods & Poole predicts retail employment to decline only slightly between 2004 and 2030. Retail employment is largely dependent on population. As a result, the PCPM expects retail employment to hold steady in the future, at roughly 20 percent.

Office: The SEMNPTS model predicts office's share of employment to decline between 2004 and 2030. Given the changing nature of Pinal County from an agricultural and extractive economy to a more industrial and office-based economy, this seems inappropriate. Woods & Poole predicts that professional employment (finance, insurance, real estate, and services) will be the fastest growing category of employment between 2004 and 2030. These types of employment are expected to grow 90 percent between 2004 and 2030, compared to 65 percent for all types of employment. As a result, office's total share of employment in the PCPM is expected to grow to 15 percent.

General: General employment includes a wide variety of employment types, including agriculture, manufacturing, warehousing, and others. Pinal County is focusing economic development efforts on light industrial, warehousing, and other similar industries. These industries also frequently develop on the periphery of major urban areas, such as Phoenix. At the same time, extractive industries are expected to decline over this time as farms are replaced by homes and industrial buildings. As a whole, Woods & Poole predicts that this category will grow by roughly 35 percent between 2004 and 2030, much slower than the rate predicted in the SEMNPTS model. Because many of these industries are being targeted for growth by economic development planners in Pinal County, the total employment in this category is expected to grow faster than predicted by Woods& Poole, but somewhat less than predicted by SEMNPTS. General employment is projected at 34 percent of total employment for the PCPM in 2030.

Government: Government employment should be fairly consistent, as is shown in the data derived from the SEMNPTS model. The SEMNPTS distribution to government for 2030 (13 percent) was used to estimate a control total for government employment for the PCPM in 2030.

Other: Other employment is a catch-all category for types of employment that may not be clearly represented in the other land use categories. It also includes facilities such as hospitals, churches, and other similar facilities. Woods& Poole provides no information to estimate employment in these land uses. As a result, the SEMNPTS' percent of employment for 2030 (18 percent) was used for the PCPM. Final employment projections by category and the resulting population-employment ratios are provided in **Table 6-4**.

Table 6-4 – PCPM Employment by Land Use Category

Category	Projected Employment	Percent	Population-Employment Ratio
Retail	60,000	20%	18.17
Office	45,000	15%	24.22
General	102,000	34%	10.69
Government	39,000	13%	27.95
Other	54,000	18%	20.18
Total	300,000	100%	3.63

Source: Cambridge Systematics, Inc., 2005.

6.1.3.4 Employment by Land Use Category and Study Area

The next step combines the previous two steps to develop employment estimates by land use category and study area. Two methods were used to develop initial estimates:

- **Expected Value.** The control totals for employment by land use category and by study area were used to generate the expected value for each combination (e.g., Apache Junction retail employment), assuming that the distribution of employment by category was the same for each study area. This generates an initial table of values that is consistent with the control totals generated above.
- **SEMNPTS Model**. The distribution of employment by land use category from the SEMNPTS model was applied to study area control totals to develop total employment by land use category and study area. This generates a second table of values that better represents local conditions in each study area.

The cells of the two tables generated using these methods were averaged to generate a starting distribution of employment by land use category and study area. The totals by study area and land use category were compared to the control totals generated above and minor adjustments were made to ensure that these values were consistent with those control totals. A total of under 15,000 jobs were shifted between employment categories to maintain consistency with the control totals. These adjustments were made based on the observed distribution in the table. **Table 6-5** presents the final distribution of employment by study area and land use category.

Table 6-5 – Employment by Land Use Category and Study Area

BFS Study Area		Retail	Office	General	Govern-ment	Other	Total
1	Apache Junction	14,755	9,155	14,200	6,960	11,930	57,000
2	Superior	255	133	660	178	275	1,500
3	Maricopa-Stanfield	4,605	3,960	11,820	2,300	4,315	27,000
4	Casa Grande	19,215	16,095	38,260	15,570	12,860	102,000
5	Coolidge	7,675	5,430	10,710	5,345	6,840	36,000
6A	San Tan	4,945	3,850	7,370	2,460	8,375	27,000
6B	Florence	5,920	4,030	14,625	4,455	6,970	36,000
8	Eloy	2,630	2,348	4,355	1,733	2,435	13,500
Pinal County Total		51,010	60,000	45,000	102,000	39,000	54,000

Source: Cambridge Systematics, Inc., 2005.

6.1.3.5 Employment by PCPM Zone

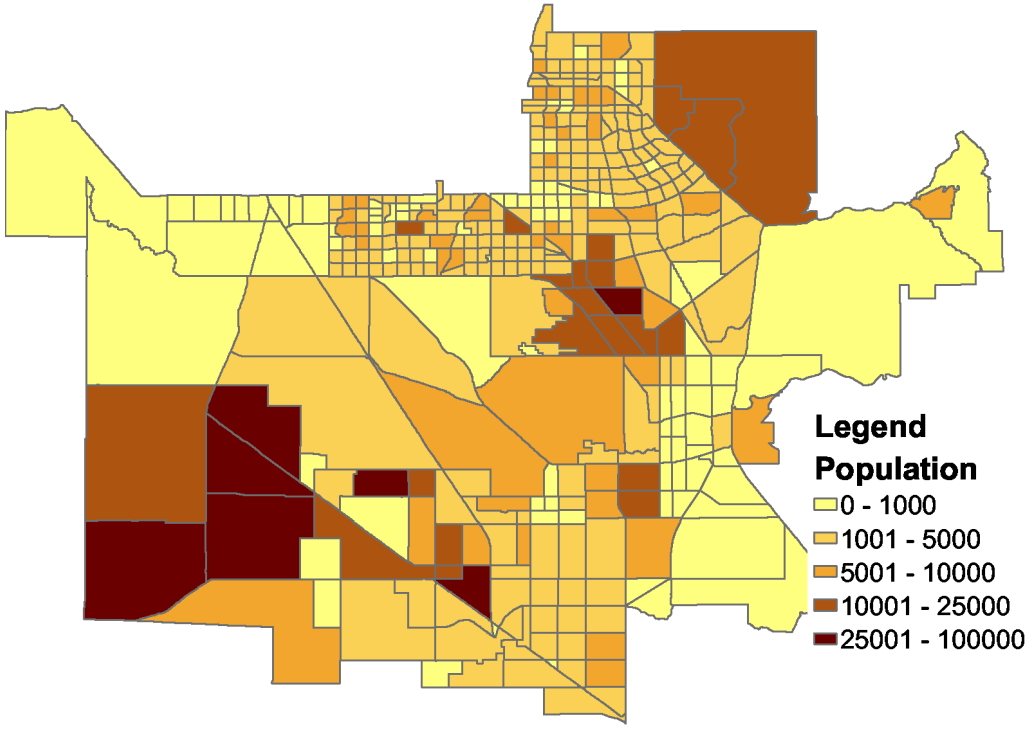
The final step is to estimate employment by land use category for each of the zones in the PCPM. The distribution from study areas to zones was made using the SEMNPTS model distribution of employment by zone, retaining the final control totals established in **Table 6-7**.

6.1.4 Maricopa County – Population and Employment

Three of the BFS study areas are within Maricopa County – Mesa, Gilbert-Queen Creek, and Chandler. The BFS used data from the MAG model to develop population forecasts for these three study areas. As the MAG model provides the only data available for these areas, the PCPM used MAG model data for both population and employment projections for zones in these study areas.

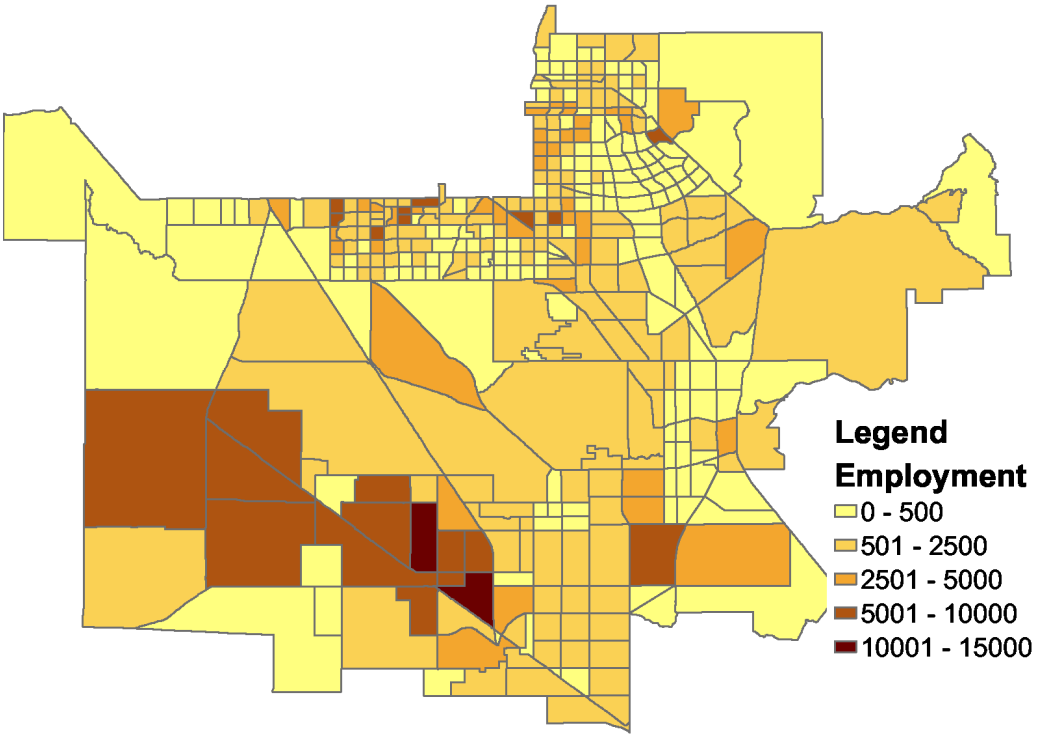
6.1.5 Summary of Future Year (2030) Projections

Final population projections for 2030 are shown in **Figure 6-4** and final total employment projections are shown in **Figure 6-5.**



Source: Cambridge Systematics, Inc.

Figure 6-4 – PCPM 2030 Population Projections by Zone



Source: Cambridge Systematics, Inc., 2005.

Figure 6-5 – PCPM 2030 Employment Projections by Zone

6.2 Programmed/Planned Roadway Improvements

Local jurisdiction transportation improvement programs were reviewed to identify major improvements to corridors within the study area.

6.2.1 ADOT State Transportation Improvement Program, FY 2005 – 2009

The ADOT State Transportation Improvement Program was reviewed. Maricopa Association of Governments and Central Arizona Association of Governments projects were identified.

6.2.1.1 Maricopa Association of Governments

The ADOT STIP 2005-2009, Maricopa Association of Governments projects, was reviewed for project improvements to Hunt Highway and Riggs Road. The following projects were identified:

- Riggs Road from Gilbert Road to Val Vista Road – add 2 lane urban arterial half-street;
- Traffic signal construction at intersection of Hunt Highway and SR 587/SR 87
- Lindsay Road from Chandler Heights Road to Hunt Highway – Reconstruct 2-lane section to 4-lane urban section;
- Arizona Avenue from Ocotillo Road to Hunt Highway – Reconstruction roadway adding 2 lanes.

6.2.1.2 Central Arizona Association of Governments

The ADOT STIP 2005-2009, Central Arizona Association of Governments projects, was reviewed for project improvements to major north/south and east/west corridors. The following projects were identified:

- Martin Road – Arizona Blvd to 9th Street Reconstruction
- 11 Mile Corner – Selma Highway to Hanna Road Reconstruction
- Christensen Road Bridge Replacement, 1.25 miles north of Kenilworth Road.

6.2.2 Pinal County Five Year Transportation Plan, FY 2004-2005, to FY 2008-2009

The Pinal County Five Year Transportation Plan was reviewed for project improvements to major north/south and east/west corridors within the Pinal Count Corridors study area. The following projects were identified:

- Combs Road, Schnepf Road east, design and new construction.

It should be noted that a significant amount of roadway improvements are being constructed and funded by developers that are not included in the Five Year Transportation Improvement Program.

6.3 Travel Demand Volumes and Traffic Operations

The travel demand model developed for the ADOT Definition Studies was used to establish future travel demand patterns. **Figure 6-6** depicts traffic congestion on study area roadways. Traffic congestion is based on the volume-to-capacity ratio. Roads with a volume-to-capacity ratio of less than 0.8 are classified as uncongested roads. Roads with a volume-to-capacity ratio between 0.8

and 1.0 are classified as moderately congested roads. Finally, roads with a volume-to-capacity ratio exceeding 1.0 are classified as highly congested roads.

The base transportation network depicted in **Figure 6-6** assumes the following:

- A comprehensive 4-lane arterial system will be developed in Pinal County by the year 2030.
- Roadway improvements depicted in Maricopa County are consistent with the Maricopa Association of Governments Regional Transportation Plan
- The number of lanes on state highways remains constant between 2004 and 2030.

Analysis of the 2030 future roadway network shows that a large percentage of roads will likely operate under congested conditions, even if the existing arterial network is enhanced. Analysis of the roadways depicted in **Figure 6-6** reveals that 690 miles out of 1,111 total center-line miles of roads within the study area will operate at volume-to-capacity ratios exceeding 0.8. On a percentage basis, sixty-two percent (62%) of roads within the study area will be moderately or highly congested in the year 2030.

The areas of highest congestion are in the northern sections of the study area including Chandler, Gilbert, Queen Creek, San Tan, and Apache Junction. As seen in **Figure 6-6**, roadways within these jurisdictions are expected to operate at near-capacity or over-capacity conditions. The lack of a continuous grid-system in the Queen Creek, San Tan, and Apache Junction areas exacerbates the congested conditions.

Roadways within the Coolidge and Florence areas are projected to operate reasonably well, though roadways carrying traffic to and from these areas, in a north/south direction, including Hunt Highway, SR-87, and SR-79, are projected to be congested in 2030. Roadways west of I-10, in the Casa Grande and Maricopa areas are projected to operate under severely congested conditions.

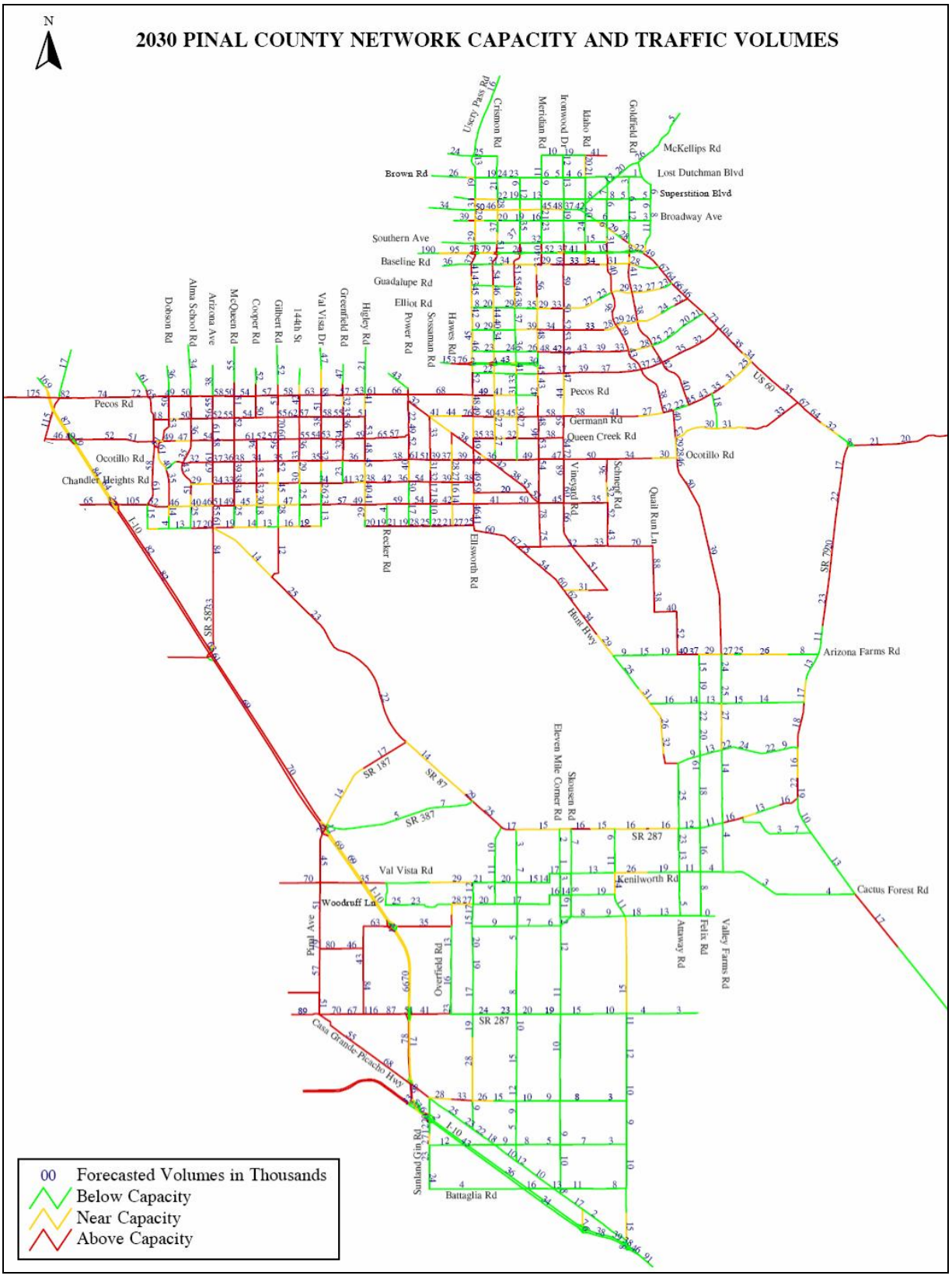


Figure 6-6 – Projected Road Congestion and Traffic Volumes on Future (2030) Transportation Network

7.0 STUDY AREA TRANSPORTATION DEFICIENCIES

This section summarizes transportation deficiencies within the Pinal County Corridors Study area based on the existing and future conditions documented in this Working Paper. Identified deficiencies will provide justification for enhancements to the existing transportation system within each study area and will provide a baseline for use in evaluating alternative planning level corridor definitions during the next phase of the Pinal County Corridors Definition Study.

7.1 Transportation Network Safety

As presented previously in section 4.3.2, indicates that the number of vehicle crashes within the Pinal County Corridors Definition Study Area has risen significantly between 2001 and 2003. Crash statistics on a sample of roadways within the study areas for 2001 to 2003 are consistent with those of urbanizing areas – an increase in the total number of crashes has accompanied an increase in the number of vehicle miles traveled. It is anticipated that as the area continues to urbanize, the number of crashes will continue to increase without enhancements to the transportation network within the study areas.

7.2 Transportation Network Performance

The urban boundary of the Phoenix metropolitan area is quickly expanding in southeast Maricopa County and northern Pinal County. Current travel patterns in Pinal County are not focused on a central core where services and employment are located, but include significant travel to and from Phoenix. It is anticipated that a majority of employment will remain in Maricopa County as areas such as Williams Gateway develop as major employment centers.

Today, a limited arterial system currently provides connectivity between Pinal County and Maricopa County. Mobility between Maricopa and Pinal Counties is currently served by arterials such as Ironwood Road, Vineyard Road, and Hunt Highway. As development continues, it is projected that the performance of these roads, even if they are improved to major 6-lane arterials, will continue to degrade. As previously illustrated in **Figure 6-6**, a large percentage of roads may experience congestion in the year 2030 - even with an enhanced arterial network. Analysis of the roadways depicted in **Figure 6-6** reveals that 690 out of a total of 1,111 center-line miles of roads will operate under moderately congested or highly congested conditions.

7.3 Local Transportation Planning

On April 14, 2005 the U.S. Census Bureau released their latest county and state population estimates. The report showed that Arizona's most dramatic growth, in terms of percentage increase, was in Pinal County where population increases in Gold Canyon, Johnson Ranch, and in the City of Maricopa led to a 4.8 percent overall increase in population. The report showed that 9,830 people moved to Pinal County between July 1, 2003 and July 1, 2004, increasing the total population to 214,259. Neighboring Maricopa County led the nation in numerical growth as 112,000 people moved into Maricopa County between July 1, 2003 and July 1, 2004.

Population increases and the associated increase in traffic are beginning to exceed the capacity of local and regional transportation system and in some cases exceeding the capacity of the system enhancements resulting from current planning efforts. Several local jurisdictions recognize that current general plans and transportation studies do not

adequately account for the amount of development that has occurred and will continue to occur with the study area over the next several years. Agencies agree that the current and planned transportation network may not be able to accommodate the anticipated population.

In an effort to respond to the rapid pace of development, several jurisdictions including the City of Casa Grande, City of Maricopa, and Pinal County are conducting Small Area Transportation Studies (SATS). The primary objective of the SATS is to develop a transportation plan to guide programming on local roads (i.e., city and county roads) over a 20-year time frame. A key variable that is required to complete these SATS, particularly the Pinal County SATS, will be a determination by the State Transportation Board which segments, if any, of the of the Apache Junction/Coolidge and East Valley corridors should be included in the state highway system. Designation of freeway corridors within the study area would significantly impact the local roadway network.

However, regardless of the potential for new corridors within the study area, local agencies must develop an arterial system within the study to accommodate growth. This must happen whether or not new corridors are constructed. If corridors are not recommended for construction, travel demand must be met by the local arterial network. If corridors are recommended, a local transportation network must accommodate traffic to and from the corridors.

7.4 Development Pressure within Study Area

The rapid pace of development within the study area will continue to limit opportunities for transportation corridors – particularly along the Hunt Highway through the Gilbert/Chandler/Queen Creek area. Local jurisdictions agree that recommendations from previous studies, including the *2003 Southeast Maricopa/Northern Pinal Transportation Study* completed in 2003, are no longer feasible because of the rapid pace of development in the study area.

Corridor opportunities (e.g., large linear tracts of vacant land where a new transportation corridor could be constructed without negatively impacting existing homes and neighborhoods) are quickly disappearing as new homes and subdivisions are constructed. If this study confirms that projected traffic volumes necessitate all or portions of the study area corridors, they may prove infeasible to construct because of the high costs of right-of-way and the potential negative impact of the corridors on adjacent neighborhoods. If feasible corridor alternatives can be identified, immediate action is required to preserve right-of-way.

APPENDIX A – SUMMARIES OF PLANS AND STUDIES

Appendix A contains summaries of the plan and studies that were discussed in section 3. The information presented in section 3 was extracted from the summaries in **Appendix A** and presented by category as appropriate (socioeconomic, Riggs Road, Hunt Highway, etc.).

A.1 Conceptualization of a Future for Superstition Vista (Ref. No. 1.1)

The Morrison Institute for Public Policy at Arizona State University is beginning a conceptualization study for the "Superstition Vistas" area, a 360 square mile tract of State Trust Land located in Pinal County, east and south of Apache Junction.

- The project will is scheduled to be complete in 18 to 24 months
- The conceptual plan will include environmental assessment, wash corridor drainage assessment, jurisdictional delineation of the "Waters of the U.S.", transportation assessment, conceptual land use plan, water and dry utilities planning, conceptual drainage plan, conceptual drainage plan.
- Conceptual roadway plan is based on the preliminary roadway network proposed in the Apache Junction small area transportation study.

A,2 Central Arizona College Bond Feasibility Study Demographic Analysis (Ref. No. 1.2)

- Pinal County demographic projections for the next 20 years in five year increments; these data are provided for the base year of 2000, and for five-year periods from 2005 through 2025;
- The Study divided the county into eleven study areas which are organized around current and future major population centers and existing Central Arizona College campuses;
- Projections of new housing were translated into population growth trends;
- As of the 2000 Census, Pinal County was home to a population of 179,727 people, with 49.3 percent residing in the Apache Junction and Casa Grande Study Areas;
- Development information for this study was compiled through interviews with planners, developers, and builders to identify active, planned, and proposed residential projects. The information collected for this study identified 468 active, planned, and proposed projects within Pinal County;
- An influx of housing developments is transforming the privately owned, agricultural land in the northwest portion of Pinal County, driven by the relatively low cost of the land and the proximity to Phoenix;
- Development projects encompassing as many as 160,000 housing units could begin construction in Pinal County within the next five years. Including all projects expected to begin in the next twenty years, the number jumps to nearly 500,000 units. Within five years, the most activity is expected in the San Tan Area and then in the Maricopa-Stanfield Study Area through twenty years;
- By 2025, the population in Pinal County could reach nearly one million residents at about 990,000 – By this time period, the largest share of the population is projected to be living in the San Tan Area, a shift from the current concentrations of residents in the Apache Junction and Casa Grande Areas.

A.3 City of Apache Junction, Arizona Small Area Transportation Study (Ref. No. 1.3)

- Study assumes that Apache Junction/Coolidge corridor will be constructed (page 25)
- Study assumed a future roadway network for roads south of Baseline Road, providing interconnection opportunity between City of Apache Junction, Gold Canyon, and City of Mesa (page 26).
- Proposed arterial network follows radial alignments that would allow roadways to follow existing washes, limiting the number of bridge structures needed to cross washes (page 26)

- Introduces Apache Junction/Coolidge Corridor, as recommended by SEMNPTS
- Cites SEMNPTS proposed connection at Ironwood Road, and states that Ironwood Road alignment corridor is experiencing a tremendous amount of commercial and residential development. The study concludes that establishing the 'freeway' along Ironwood Road would not be feasible (page 26).
- States that because of the fact that a 'high-speed' interchange cannot be constructed at US 60 interchange at Ironwood Road further verifies the validity of moving the alignment to a more preferred location (page 26).
- Study states that Idaho Road (SR-88) alignment south of the US 60 has not yet been constructed nor developed. As a result, the future Idaho Road corridor to the south is better suited to right-of-way preservation for the proposed Apache Junction/Coolidge corridor (page 26).
- Study assumes that the proposed Apache Junction/Coolidge corridor will be constructed in phases with initial phase including a single point urban interchange with a six-lane principal arterial to the south. Once funding of the freeway has been approved, studies will be undertaken to construct a system interchange at the Intersection of Idaho Road and US 60, and upgrade the principal arterial to freeway classification (page 26).
- Study states that Idaho Road/US 60 Interchange for Apache Junction/Coolidge corridor would be a single point urban interchange utilizing signal control. Study suggests a high-speed directional three-leg of high-speed trumpet system interchange, though these require additional study (page 32).
- Study shows potential traffic interchanges of the Apache Junction/Coolidge corridor at US 60, Elliot Road, Warner Road, and Ray Road (Exhibit 7).
- Study depicts Apache Junction/Coolidge corridor as 4 lane facility (Exhibit 8), and suggests 6-lane facility (Exhibit 11).
- Study projects the following traffic volumes on the Apache Junction/Coolidge corridor:
    - US 60 to Elliot Road – 74,925 vpd
    - Elliot Road to Warner Road – 70,451 vpd
    - Warner Road to Ray Road – 54,152 vpd
- City of Apache Junction is proposing new interchanges with US 60 at Meridian Road, as well as along the realignment of US 60 at Baseline Road, Elliot Road, Warner Road, and Ray Road (page 11)
- Idaho Road and Ironwood Road are designated as arterials in the City of Apache Junction General Plan, 1999 (page 13-14)
- Study collected right-of-way limits from the City Assessor Maps. Major arterials, including Ironwood Drive and Idaho Road, have 100 feet of right-of-way of-way (page 14)
- Characteristics of Ironwood Road and Idaho Road are as follows (page 15):

Roadway	Intersections Between		Speed Limit	Lane Configuration	Roadway Length (miles)
Ironwood Drive	Baseline Rd	US 60	35	2 Lanes	.5
	US 60	Southern Ave	35	5 Lanes	.5
	Southern Ave	Broadway Ave	35	5 Lanes	1.0
	Broadway Ave	Apache Trail	35	5 Lanes	.5
	Apache Trail	Superstition Blvd	35	5 Lanes	.5
	Superstition Blvd	Lost Dutchman Rd	35	2 Lanes	1.0
	Lost Dutchman Rd	McKellips Rd	35	2 Lanes	1.0
Idaho Road	Baseline Rd	US 60	35	2 Lanes	.5
	US 60	Southern Ave	35	5 Lanes	1.0
	Southern Ave	Broadway Ave	35	5 Lanes	.3
	Broadway Ave	Old West Hwy	35	5 Lanes	.3
	Old West Hwy	Apache Trail	35	5 Lanes	.3
	Apache Trail	Superstition Blvd	35	5 Lanes	1.0
	Superstition Blvd	Lost Dutchman Rd	35	2 Lanes	1.0
	Lost Dutchman Rd	McKellips Rd	35	2 Lanes	1.0

§ Idaho Road is signalized at the following locations (page 18):
- Superstition Blvd
- Broadway Ave
- Old West Highway
- Apache Trail

§ Ironwood Road is signalized at the following locations (page 18):
- Baseline Road
- Southern Blvd
- Broadway Ave
- Superstition Blvd
- Apache Trail

§ High-crash intersections, as identified by study, include (page 19):
- Ironwood Road & Apache Trail – Mitigating recommendations including modifications to signal timing, review of sight-distance, and intersection geometry
- Ironwood Road & Southern Ave – High speed cites as probably cause
- Ironwood Rd & Baseline Road – High speed and sight distance cited as probably cause
- Ironwood Road & Broadway – High speeds cited as contributing factor. Study recommends reviewing intersection geometric configuration.
- Idaho Road & Apache Trail – Study cites skew in roadway as probably cause of crashes, recommends reviewing signal timing, sight distance, and intersection geometry.

- Idaho Road & Old West Highway – High speeds cited as contributing factor to many of the crashes
- Idaho Road & Broadway – A review of signal timing is recommended

§ Study also identified roadway segments with a high number of crashes. These included (page 22):

- Idaho Road, between Old West Highway and Broadway Avenue – Deceleration lanes are recommended to reduce the number of crashes
- Ironwood Road between Apache Trail and Broadway Avenue

A.4 City of Apache Junction, General Land use Plan Element Summary (Ref. No. 1.4)

§ Map does not reflect proposed Apache Junction/Coolidge corridor, shows Ironwood Drive as arterial

§ Map shows large open space area extending from CAP, east to Tomahawk Road. Proposed corridor (Idaho and Ironwood) alignments would bisect this proposed open space. Idaho Road is not shown as a 'through' street, but ends approximately ½ mile south of Baseline.

§ Plan shows commercial use along Idaho Road alignment, south of Baseline north to US 60.

A.5 City of Casa Grande, Casa Grande Multi-modal Transportation Study (Ref. No. 1.5)

§ The Apache Junction/Coolidge corridor is outside of the study area limits of the Casa Grande Multi-modal Transportation Study

§ East of I-10, Florence Blvd is a 2 lane arterial (page 3-6).

§ Selma Hwy is a 2 lane arterial (page 3-6), with discontinuity over Union Pacific Railroad (page 3-6)

§ Hanna Road only extends from Bianco Road, east to Casa Grande Avenue, terminating west of I-10 (page 3-6).

§ No roadways exist south of Hanna, and north of Shedd Road (page 3-6), though the majority of the area of interest to the Apache Junction/Coolidge corridor is not included in the study Casa Grande Multi-modal Transportation Study Area (page 3-8).

§ Hanna Road is unimproved (non-paved) between Bianco and Pinal Avenue. Less than 1 mile of Hanna Road is improved (page 3-8).

§ Shedd Road is unimproved (page 3-8).

§ Interstate-10 is assumed to be widened to an eight lane facility (4 lanes in each direction) through the study area by 2020 (page 4-13).

§ Study recommends interchanges on I-10 at Val Vista Blvd and Kleck/Korsten Rd., though the study recognizes that ADOT currently has no plans to construct interchanges at these locations (page 4-13). Study also recommends a new interchange on Henness Road at I-8 and improvements to I-10 near the I-8 interchange (page 5-6).

§ Study proposes to widen Selma Hwy to 4 lanes between Jimmie Kerr Blvd (west of I-10) and Hacienda Road (east of I-10) (page 5-6).

A.6 City of Chandler, General Plan (Ref. No. 1.6)

§ Southeast Chandler, approximately ¼ mile east of Arizona Avenue extending east to Chandler/Gilbert border is characterized as 'a unique community consisting of rural and low

density residential land uses that respect and protect the rural/agrarian lifestyle of this area (page 33).'

- § South Price Road, located south of Pecos adjacent to the Gila River Indian Community, is targeted as an emerging employment area, planned for large campus-style, high-tech employment sites (page 33).
- § Riggs Road is classified in the General Plan, Mid-Range Roadway plan as major arterial, with a 40' median, 4 Lanes first stage (page 105) and as a 6-lane major arterial in the Long-Range Roadway Plan (page 107).
- § Hunt Highway is classified in the General Plan - Mid-Range Roadway plan (page 105) and Long-Range Roadway (page 107) plans as major collector.

A.7 City of Chandler Transportation Study, Final Report (Ref. No. 1.7)

- § Plan highlights that Riggs Road is designated as Road of Regional Significant (RRS) by the Maricopa Association of Governments. RRS are designed to complement the freeway system and are spaced at a distance of three to six miles (page 32).
- § Riggs Road is a 2-lane roadway east of Arizona Avenue, and 4-lane roadway west of Arizona Avenue (page 40)
- § Hunt Highway is a 2-lane roadway through its entirety within City of Chandler (page 40).
- § Existing traffic volumes (year 2000 data) are shown. Highest volumes on Riggs Road are west of Arizona Avenue, extending towards I-10 (13,200 vpd), and decreasing to the east to 4,800 vpd between Gilbert and Lindsay Roads. No traffic volumes are shown for Hunt Highway.
- § Riggs Road, between Arizona Avenue and McQueen is shown as LOS 'E' (page 51). Other segments of Riggs road are LOS 'A', 'B', and 'C'.
- § Riggs Road projected traffic volumes (2020) exceed 40,000 vpd west of Arizona Avenue, and decrease to 11,000 vpd between Lindsay and Val Vista (page 64) Level of Service (2020) is at 'D' west of Arizona Avenue, and 'C' and 'B' east of Arizona Avenue .
- § Hunt Highway traffic projects are 2,000 vpd between Alma School and McQueen, and 1,000 vpd east of McQueen (page 64). 2020 Level of Service is 'A' throughout the entire corridor (page 67).
- § Mid-range recommendations include widening Riggs Road to 6 or more lanes west of Arizona Avenue, and 4 lanes east of Arizona Avenue (page 71). Long-range recommendations include widening of Riggs Road to 6 lanes along the entire corridor (page 76).

A.8 City of Chandler Street Design and Access Control Technical Design Manual, (Ref. No. 1.8)

- § States that direct land access to principal arterials is not permitted (Riggs Road), although frontage roads with direct land access are planned for some locations (page 26).
- § For arterial streets, intermediate intersections with collector and local roadways and major driveways should be limited to a maximum of 5 per mile (page 26).
- § All arterial streets within the City shall be provided with medians (page 27).
- § Collector streets are constructed with flush medians (page 27).

A.9 City of Chandler Transit Plan Update, (Ref. No. 1.9)

- Local transit service is proposed on Riggs Road, between Gilbert Road and Val Vista Drive, to serve Basha High School (Figure E-1, page 5). Route 136 would be extended from its current terminal at Chandler-Gilbert Community College to Basha High School, which opened in 2003. The route would continue to stop at the Community College, and then south on Gilbert Road to Riggs Road. It would turn east on Riggs Road, terminating at Basha High School, near Val Vista Drive.
- No transit is proposed for Hunt Highway (Figure E-1, page 5).

A.10 City of Chandler High Capacity Transit Major Investment Study, (Ref. No. 1.10)

- No high-capacity transit is proposed for Hunt Highway or Riggs Road

A.11 City of Coolidge General Plan Update, (Ref. No. 1.11)

- Stated transportation and circulation objective is to promote the design and construction of a new freeway along the Apache Junction/Coolidge Corridor identified in the Southeast Maricopa/Northern Pinal County Area Transportation Study (page 38).
- Strategies to support this objective include pursing funding for the arterial grid from local, regional, state, and federal sources in order to create the feeder system needed to support a regional facility, and to support the widening of state highways, improvements to existing interchanges, and the construction of new interchanges in order to maintain the accessibility to the existing surface transportation system (page 38).
- An additional objective is to promote improvements to Coolidge Municipal Airport (page 38).
- SR-87, west of SR87/287 Junction is forecast to reach a LOS 'F' by 2010, though the study projects that because of the rapid pace of development, these conditions may be reached much sooner (page 69).
- Study shows Apache Junction/Coolidge corridor along the Attaway Road alignment from SR-87 north through Arizona Farms Road (page 70).

A.12 Developments Scheduled for Coolidge, (Ref. No. 1.12)

- Contains a list (January 19, 2005) of subdivisions and developments scheduled for construction within the City of Coolidge. List outlines over 31,000 homes that have been approved, that are in the approval process, or are under construction.

A.13 City of Coolidge, Demographic Data and Development Projects, (Ref. No. 1.13)

- Demographic data and development projects to be used in development fee study (page 1).
- Report projects an increase of 19,740 housing units over the next ten years, to a total of 23,853 units in 2014 (page 1).
- By 2024, report projects a population of 127,039, 41,853 total housing units, 23,288 jobs in Coolidge, generating a total of 322,081 trips per day (page 11).

A.14 Maricopa Association of Governments, Roads of Regional Significance - Map, (Ref. No. 1.14)

- Map depicts Riggs Road as a designated Road of Regional Significance, beginning west of I-10 and extending east to Ellsworth Road.

A.15 Maricopa Association of Governments, Regional Transportation Plan, (Ref. No. 1.15)

- Population projects for 2025 are 287,000 for Chandler, 281,900 for Gilbert, and 73,100 for Queen Creek. The total projected 2025 municipal planning area population for Maricopa County is 5,664,000 (Executive Summary, page 4).
- Neither of the SEMNPTS corridors are included in the MAG 20 year Regional Transportation Plan
- No regionally funded improvements to Riggs Road or Hunt Highway are included in the Regional Transportation Plan (Executive Summary, Table 6, page 19).
- MAG transportation modeling region extends into Northern Pinal County, in order to understand the regional transportation implications of population growth outside of Maricopa County. Based on this joint forecasting effort, the Pinal County portion of the MAG transportation modeling area is projected to grow from approximately 150,000 people in 2000, to approximately 917,000 by 2025. Total employment in the area is projected to grow from approximately 45,000 to 201,000 in the same period (Final Report, page 3-9).
- Regional Transportation Plan shows Riggs Road as a 4-lane arterial from I-10 to Meridian Road (Final Report, Figure 9-2).

A.16 Southeastern Maricopa/Northern Pinal County Area Transportation Study, (Ref. No. 1.16)

- Study was jointly sponsored by Maricopa Association of Governments, Central Arizona Association of Governments, and the Arizona Department of Transportation
- Purpose of the study was to document the transportation relationships between Maricopa and Pinal Counties, examine long-range transportation needs of the region, and identify realistic projects to address the area needs.
- For areas within the MAG Region, MAG-maintained socio-economic data was utilized. For Pinal County, the Pinal County Transportation Study was used as a resource for socio-economic data (page 2-1).
- The study area population projection (2020) for Maricopa County is 790,372 and for Pinal County the projected population is 295,894 (page 2-16).
- Highest traffic volumes for arterial streets are in northern portion of the study area with average daily traffic (2002) of 40,000 to 50,000 vehicles per day on some segments (page 3-6).
- Rapid development in southeast Mesa, eastern Gilbert, Queen Creek, and northern Pinal County, and concern that the current planned transportation system cannot accommodate this growth, is cited as a significant concern (page 4-1).
- Topography, existing development such as Williams Gateway Airport, and planned developments such as GM and Johnson ranch may prevent a uniform treatment of the arterials. In absence of a grid system, certain trips will be made on a regional freeway system, resulting in more congestion and inefficient overall system usage (page 4-3).
- Specific issues and needs for arterials included (page 4-3):
    - Widening of SR-87
    - Widening of SR-79
    - Need of additional crossing of CAP
    - Widening and extension of Attaway Road

- § Study identified three new freeway corridors (page 4-4):
  - Corridor from I-10 in Pinal County north to the East Valley area
  - Freeway facility from Loop 202 in Mesa east to Williams Gateway Airport and extending east into Pinal County
  - Corridor south from US 60 around Queen Creek and west toward Loop 101 and/or I-10.
- § Arterial street system is projected to be expanded eastward into Pinal County. Discontinuities in existing arterial system will also be addressed (page 5-2).
- § Riggs Road and Ironwood Road are identified as regional facilities because of their multi-jurisdictional nature, and good access to existing freeways (I-10) (page 5-6).
- § Study recommends widening the following state highways to two lanes in each direction:
  - SR 79, beginning near the Florence Junction and continuing south to the study boundary near SR 287, a length of approximately 17 miles (page 6-7).
  - SR 287, beginning at SR 87 and continuing east to SR 79, a distance of approximately 10 miles (page 6-9).
  - SR 87, beginning at SR 387 and continuing to SR 87/287, a length of approximately 8 miles (page 6-9).
- § Study proposes constructing freeway corridors in phases, in segments of 5 to 7 miles in length. An alternative option for phasing is to construct less than the ultimate number of lanes. Study states that while the proposed facilities were analyzed as freeway facilities, they could be developed as expressways or high-level arterials (page 7-1).
- § Study proposes the Price Freeway Connection. One of the proposed alternatives is to connect I-10 and the Price Freeway (Loop 101) near Riggs Road (page 7-4).
- § East Valley Corridor, as proposed in the SEMNPTS, consists of a high-level facility extending form I-10 eastward to US 60 near Florence Junction. The study suggests that if developed as an expressway/controlled access arterial, this facility could utilize portions of the both the Riggs Road and Hunt Highway alignments (page 7-7). Study states that the corridor on the west end is constrained by existing land use. The San Tan Regional Park is located south of the corridor, near Ellsworth Road. The study states that the corridor would be a six-lane facility with interchanges at 1-2 mile spacing. According to MAG travel projections, the corridor would carry 84,000 to 110,000 vehicles per day between I-10 and Higley Road, 63,000 to 84,000 vehicles per day between Higley Road and Ironwood Road, and 14,000 to 21,000 vehicles per day between Ironwood Road and US 60. Estimated cost of the facility is $1,390 million as a freeway and $310 million as an expressway/controlled access facility (page 7-7).
- § Apache Junction/Coolidge corridor, as proposed in the SEMNPTS, extends 36 miles in the north-south direction, generally following SR 87 south of Coolidge and continuing north to US 60. This corridor may relieve congestion on I-10, and may provide an alternative for truck traffic to and from industrial developments. The design characteristics of the corridor may change across its length. The facility is expected to carry daily traffic volumes in the range of 60,000 to 80,000 vehicles per day between US 60 and Empire Road, 55,000 to 110,000 vehicles per day between Empire Road and SR 287, and 26,000 to 45,000 vehicles per day between SR 287 and I-10, based on 2030 projections. Estimated construction cost is $1,640 million (page 7-9).
- § Study notes that Arizona State Land Department is an important stakeholder, as the manner in which State Trust Land is developed will significantly influence the nature and magnitude of future transportation needs in the area (page 8-11).

A.17 Maricopa County Major Streets and Routes Plans, Street Classification Atlas and Policy Document, (Ref. No. 1.17)

- § Contains cross-sections and right-of-way requirements for principal arterials and expressways.
- § Introduces concept of overlays for roadway system within Maricopa County, stating that "overlays acknowledge the special importance of roads for purposes other than mobility." Six overlays are introduced, including:
  - Scenic/recreational
  - Public transportation
  - AZTech
  - Oversize Load
  - School Safety
  - Roads of Regional Significance
- § Riggs Road is designated as a Scenic/Recreational overlay. The plan states that "scenic/recreational overlay acknowledges the need to minimize impacts to, or preserve, characteristics of a road's environment, or it recognizes a road's importance as access to recreational facilities. Characteristics such as design speeds, right-of-way, cuts and fills, and existing vegetation and view sheds will be carefully analyzed for these roadways (page 4-1)."
- § Riggs Road is designated as an Oversize Load overlay. The plan states that "routes designed for usage by oversize vehicles and restricted routes where oversize vehicle use is discouraged are included on the overlay." The plan shows that Riggs Road is a preferred route for oversize vehicle (page 4-9).
- § Hunt Highway, near Power Road, is designated as a School Safety Overlay (Basha High school) (page 4-11).
- § Riggs Road is designated as a Road of Regional Significance (page 4-13). The plan states that a Road of Regional Significance shall be six lanes ultimate, be 140 feet right-of-way, limited of eight accesses per mile, left-turn lanes where left turns are permitted, prohibited parking and 40 mph posted speed limit (page 4-14).

A.18 Maricopa County Riggs Road Access Control and Corridor Improvement Study, Final Report, Volumes I, II, and III of IV. (Ref. No. 1.18)

- § Study evaluated the characteristics of the existing Riggs Road corridor to develop a corridor plan that is consistent with the regional transportation needs, and addresses concerns of the Sun Lakes residents (page 1-1).
- § Multiple alternatives for each segment of Riggs Road were considered. Considerations included construction of a by-pass, depression of Riggs Road, and widening of Riggs Road, among others. Final recommendation is to develop the Riggs Road corridor as a "Modified No-Build" because the 6-lane divided roadway cross-section associated with a RRS is not needed to carry the traffic volumes projected for the year 2020. The cross-section for the recommended alternative is summarized as follows (Page 1-2, 1-2):
  - I-10 to Price Road – Implement the currently programmed project to widen Riggs Road from a two-lane roadway to a five-lane roadway.
  - Price Road to Arizona Avenue – Maintain the existing roadway without improvement; potential future improvements could include median, minor widening and sidewalks.
  - Arizona Avenue to Val Vista –Improves Riggs to a four-lane cross-section, with a wide raised median, and 130' right-of-way, per City of Chandler

standards. If traffic conditions warrant in the future, utilize the extra median width to construct two more lanes.

- Val Vista to Recker Road – Improve Riggs Road to a four-lane urban cross-section with a wide raised median. If traffic volumes warrant, utilize extra median width to construct two additional lanes
- Recker Road to Hawes Road – Improve Riggs Road to a four-lane rural major arterial
- Hawes Road to Rittenhouse Road – Construct Riggs Road to a four-lane rural divided.

A.19 Maricopa County Corridor Study for Ellsworth Road, Elliot Road to Hunt Highway, Volumes I of II. (Ref. No. 1.19)

§ Corridor study for Ellsworth Road from Hunt Highway north to Elliot Road (Figure 1-1).

§ Recommended Ellsworth Road improvements consist of a 5-lane section with a 140 ft right-of-way, except through the Town of Queen Creek. The 140 ft right-of-way will ensure that the ROW needed for an ultimate 7-lane section is available

§ Ellsworth Road will intersect with Riggs Road on the section lane, and follow the section line to the Hunt Highway (page 5-17).

A.20 Maricopa County Corridor Final Access Control and Improvement Study , Power Road, Hunt Highway to Guadalupe Road (Ref. No. 1.20)

§ Ultimate right-of-way for Power Road is 140 feet, with areas near intersections requiring additional right-of-way to provide for auxiliary lanes (page 1).

§ Proposed alternative is a four-lane section from Hunt Highway to Chandler Heights Road, and a six-lane section from Chandler Heights Road to Guadalupe Road (page 2).

§ Study recommends that signal be constructed, when warranted, at the section line cross streets and at mid-mile streets (page 49).

§ Study recommends that when traffic signals are installed at any location along Power Road, the cross-street should also be improved with additional lanes to minimize the amount of crossroad green time required (page 50).

§ Riggs Road intersection will require 140 feet of right-of-way since it is classified as a Road of Regional Significance (page 53).

§ The Power Road alignment should tie into the Riggs Road alignment in a location such that Power Road may be extended south without impacting the Indian Community. Recommendation is to shift intersection east of the section line (page 64).

A.21 Maricopa County Bicycle Transportation System Plan, (Ref. No. 1.21)

§ Riggs Road, from Ellsworth Road through I-10, is included in the proposed (1999) Maricopa County Bicycle Network (page 12)

§ The document depicts Urban Principal Arterials as 130’ ROW, with 6’ bicycle lanes (page 13).

A.22 Pinal County Transportation Plan 2000 Update, Executive Summary and Final Report, (Ref. No. 1.22)

§ Update of 1994 Pinal County Transportation Study, which used Arizona Department of Economic Security population projections (Executive Summary, page 1)

- § 2013 population projected in 1994 study was exceeded by 10,000 people by the year 2000 (Executive Summary, page 1).
- § Study is based on a population level, rather than a year, because of the uncertainty of the time frame for population growth (Executive Summary, page 3).
- § Study projects that County will reach a population of 220,000 around 2005, 320,000 around 2012, and 520,000 around 2022 (Executive Summary, page 3).
- § Without improvements, most roadways in Apache Junction, Florence, Coolidge, and Casa Grande experience unacceptable levels of congestion (page 4). I-10 is noticeably or severely congested over its entire length through Pinal County (page 4).
- § Transportation network will operate fairly well if Hunt Highway/Attaway Road between Arizona Farms Road and SR 287 is widened to 4 lanes, and I-10 is widened to six lanes, and portions of SR 79, SR 287, and SR 387 to four lanes (page 4).
- § Study recommends widening (page 5):
    - SR 79, Florence Junction to Florence to 4 lanes by population 220,000.
    - Hunt Highway from Arizona Farms road to SR 287 to 4 lanes by 220,000, and from Combs Road to Arizona Farms Road to 4 lanes by population 320,000.
    - Vineyard Road to 4 lanes by population 520,000.
- § Hunt Highway is classified as a Principal Arterial from Attaway Road to Combs Road (page 7).
- § Vineyard Road is classified as a principal arterial (page 7).
- § SR 87, from I-10 to Florence Blvd is classified as a minor arterial, and as a principal arterial between Florence Blvd and SR 87/287 junction (page 7).

A.23 Hunt Highway and Vineyard Road Limited Access Study, (Ref. No. 1.23)

- § Purpose of the study is to provide a list of recommended locations for limited access points for existing, planned, and future development along Hunt Highway (page 1).
- § Study area consists of Hunt Highway from Ellsworth Road to Attaway Road, and Vineyard Road from Hunt Highway to Germann Road (page 1).
- § All residential lots proposed adjacent to Hunt Highway and Vineyard Road will have frontage on local residential streets within the planned development (page 2).
- § Report states that Vineyard Road will be extended from Combs Road, southerly to Bella Vista Road following the Union Pacific alignment. Future plans will be prepared to extend Vineyard directly south to Hunt Highway (page 3).
- § Study recommends that access points be limited to the section line streets (minor arterials) and mid section line streets (major collectors). Where not possible, it is recommended that access points be no closer than 1320 feet (page 6).
- § Median brakes should be provided at all minor arterial and major collector intersections, but not spaced more closely than 1320 feet (page 7).
- § Raised medians should be constructed on Vineyard Road and Hunt Highway (page 8).

A.24 Southern Pinal County Regional Transportation Plan, (Ref. No. 1.24)

- § Study found that more than 43 miles of county roadway require some level of improvement over the next 20 years, excluding improvements to SR 77 and SR 79 (page 4).

- § Projects 18,000 new homes in southern Pinal County, 13,000 new jobs, and a 60% increase in traffic over a 20 year time period (page 4).
- § Most of the development will occur in the western portion of the study area, near Eloy (page 19).
- § Recommends widening SR 79 between Florence and Park Link Drive to 4 lanes (page 22)
- § Proposes a "fee-per-unit" cost sharing method to fund required improvements (page 26).

A.25 Pinal County Comprehensive Plan 2001, (Ref. No. 1.25)

- § Plan states that routes should be identified in the comprehensive transportation plan, and be located adjacent to washes (page 37).
- § Rapid population growth is identified as a significant transportation issue. DES projected a 2013 population of 160,000. 2000 census data indicates a population of 179,727 (page 38).
- § Growth in northern Pinal County will be significant, as well as in areas such as Casa Grande (page 38).
- § Travel patterns in Pinal County are not focused on a central area where services and employment are concentrated. Travel patterns from residents in the central part of the County (Casa Grande, Eloy, Arizona City, Coolidge, and Florence) include significant travel to/from both Tucson and Phoenix due to their close proximity to both metropolitan areas (page 44).

A.26 Hunt Highway Corridor Assessment Report, (Ref. No. 1.26)

- § The purpose of the study was to develop and evaluate roadway corridor improvement alternatives connecting central Pinal County with the East Valley urbanized area of Phoenix.
- § According to the Pinal County Transportation Plan, traffic forecasts (2013) indicate that a two-lane roadway will be adequate to handle traffic in the Hunt Highway corridor. However it has been proposed that right-of-way should be reserved for future widening to a four-lane highway (page 2-1).
- § Consideration was given to the transfer of the roadway to the Arizona Department of Transportation at some time in the future (page 2-1).
- § Preferred (highest ranking) northern alternative included large segments of existing, unimproved Hunt Highway. Recommended implementation plan for Vineyard Road ultimately involved the southerly extension of Vineyard Road south to Hunt Highway (page 4-1).
- § Highest ranking southern alternative improves Hunt Highway to Attaway Road, improves Attaway Road to Bartlett Road, and then transitions eastward to SR-287 (page 4-5).
- § Implementation of the highest ranking alternatives would provide measurable benefit to Pinal County and Maricopa County residents who commute via the Hunt Highway. Driveability and safety of the roadway would improve (page 5-2).
- § Recommended implementation plan is divided into 8 phases. Phase VIII includes implementation of ultimate four-lane divided roadway cross section from Ellsworth Road to SR 287. Roadway construction would be triggered by 8,200 vpd (page 6-7).

A.27 Superstition Freeway Extension – Project Assessment, (Ref. No. 1.27)

- § Pinal County contracted with Kirkham-Michael to conduct an independent assessment for the section of US 60 between MP 199.7 and Florence Junction (MP 212.2), and recommend an

alignment that meets Pinal County's needs of providing access to Gold Canyon and Apache Junction without compromising regional mobility requirements (page 3 of 4).

- § States that Pinal County is in favor of by-pass as it least impacts the Gold Canyon community
- § Apache Junction is in favor of bypass alignment, as it helps the City with its future roadway network planning in the southern portion of the City (page 3 of 4).
- § The Arizona State Land Department favors the by-pass alignment as it renders their land more developable in the future (page 3 of 4).
- § ADOT, as documented in the report, favors the existing alignment, but is not opposed to the by-pass alignment, though it is concerned about the high right-of-way costs (page 3 of 4).
- § Kirkham-Michael, based on discussion with stakeholders, states that the by-pass alternative best meets the needs of the major stakeholders (page 3 of 4).
- § Report states that high cost of right-of-way for By-Pass Alternative is attributable to environmental impact to a potential Pygmy-owl habitat and the need for purchasing the right-of-way from Arizona State Land Department (page 3 of 4). Kirkham-Michael recommends that an environmental assessment for the Pygmy-owl should be conducted to determine if it in fact owl territory (page 3 of 4).
- § Report recommends that right-of-way should be reserved and developers who intend to build property along the alignment dedicate the right-of-way at the time of development planning (page 4 of 4).

A.28 Superstition Valley Transportation Study, Final Report (Ref. No. 1.28)

- § Project study area is generally bounded by US 60 on the north, SR 287 on the south, SR 79 on the east, and Power Road/Hunt Highway on the west (page 8).
- § Study projects 57,000 new homes and 131,000 new residents within a twenty year time frame (page 33).
- § Study notes that the Union Pacific Railroad line traverses the study area in a southeasterly to northwesterly direction and crosses, Felix Road, Arizona Farms Road, Combs Road and Bella Vista Road. These crossings are all at-grade, signalized crossings. Rail operations in the area are very infrequent, less than four times per week. All operations are freight only (page 10).
- § Study lists some of the major developments planned or under construction including Johnson Ranch, Mystic Lake, Dobson Farms, and Bella Vista Farms. Multiple developments are planned for the Hunt Highway corridor, as well as the Attaway Road/Felix Road/Arizona Farms Road corridor (page 11).
- § Study depicts Vineyard Road being extended south to Rittenhouse Road (page 15).
- § Study projects as much 93,000 ADT on Ellsworth Road, 35,000 ADT on Vineyard Road, 61,000 on segments of Combs Road on Hunt Highway and 41,000 on Arizona Farms Road (page 23).
- § Study states that future development cannot occur without substantial improvement to the roadway network (page 27).
- § Study recommends improving (page 28):
    - SR 79 from SR 287 to Arizona Farms Road (2.5 miles) from two to four lanes.
    - Hunt Highway, from Attaway Road to Judd Road from 2 to 6 lanes.
    - Hunt Highway from Vineyard Road to Ellsworth Road from 2 to 4 lanes.
    - Vineyard Road from Ocotillo Road to us 60 from 2 lanes to 6 lanes.

- Multiple other arterial streets (Arizona Farms, Rittenhouse, Schnepf, Quail run, Ellsworth) from 2 lanes to 4 lanes. Attaway Road is recommended to be improved to 6 lanes from SR 287 to Hunt Highway.

§ Study states that HURF funding allocated to Pinal County is inadequate to fund roadway improvements (page 29).

§ Study estimates a reduced 'fee per unit' of $856 and a full fee of $1,426 (page 31).

A.29 Florence Area General Plan Update (Ref. No. 1.29)

§ Plan notes that Pinal County is investigating the connection of Attaway Road and Vineyard Road /Ironwood Road that would link the city of Apache Junction and City of Coolidge, providing an alternative to Hunt Highway for direction connections to eastern Maricopa County and northern Pinal County destinations (page C-2).

§ Policy 1-3b states that the Town shall aggressively pursue a near-term crossing of the Gila River on the Main Street alignment and longer-term river crossings on the Plant and Coolidge Airport Road alignments (page C-5).

§ SR 79 Bridge and Roadway Widening, as well as Hunt Highway widening are listed as near-term implementation activities, 1-5 year timeframe (page C-21).

§ Gila River crossing at Plan Road alignment is stated as a mid-term activity, 5-10 year timeframe (page C-21)

A.30 Salt River Project, Application for a Certificate of Environmental Compatibility, Palo Verde to Pinal West 500 kV Transmission Project (Ref 1.30)

§ The new transmission line would run southeast from the Palo Verde Nuclear Generating Station west of Phoenix to a new substation in the far Southeast Valley, passing through Maricopa and Pinal counties. The nominal length of the Preferred Alignment is 100 miles.

§ The document outlines the pathway of the Preferred Alignment. As the alignment extends from the west and into northern Pinal County, the alignment heads east, north of SR 287, paralleling along a section line and portions of the GRIC boundary to Christensen/Sierra Vista Road. The Preferred Alignment then extends north along Christensen/Sierra Vista Road until its intersection with the Union Pacific Railroad. The Preferred Alignment parallels the UPRR until it converges with the Magma Railroad, then extends northeast, paralleling the Magma in a northwestern direction, and then paralleling the CAP canal until its intersection with the existing Silver King to Browning 500 kV transmission line. The Preferred Alignment would then parallel the existing Silver King – Browning 500 kV line until terminating at the Browning Substation.

§ The Attaway Road Segment Option is an alternative for the northeastern portion of the alignment. This alignment would parallel the midsection between Attaway Road and Felix to Skyline Drive. It would then extend west for a short segment before extending north to follow the Attaway Road section line until it intersects with the existing Silver King – Browning 500 kV line. This alternative would extend west, paralleling the existing Silver King – Browning 500 kV line until converging with the Preferred Alignment before terminating at the Browning Substation.

§ The Eastern Alignment, located in the southeastern portion of the Project study area, would diverge east from the Preferred Alignment in the vicinity Eleven Mile Corner Road and Early Road, and would head eastward along the mid-section line between Earley Road Florence Blvd to the UPRR. It would parallel the UPRR north until its intersection with Bartlett Road. The Eastern Alignment would parallel Bartlett Road east until extending north along Valley

Farms Road. It would then parallel Valley Farms Road until its intersection with the CAP canal. It would parallel the CAP canal.

§ SRP is requesting a nominal 160 to 300 ft. ROW within a 500 ft. to 0.5 mile wide corridor to accommodate the construction, operation, and maintenance of the proposed transmission line.

A.31 Town of Gilbert Arterial Street Plan (Ref. No. 1.31)

§ Town of Gilbert population increased 276% between 1990 and 2000, the highest percent change in the U.S. for any incorporate city or town. 2000 population is 109,697. July 2004 population is 162,100 (page 1).

§ The Town is forecasting a 2030 population of 287,300, representing a 160% increase in population compared to the year 2000 (page 2).

§ City of Chandler classifies the Hunt Highway a major collector, Riggs Road as a minor arterial with a 76' cross-section on a 110' right-of-way (mid-range plan) and as a major arterial (long-range plan) (page 11).

§ Queen Creek classified Riggs road as an urban principal arterial (6 lanes, median), and Hunt Highway as a rural principal arterial (4 lanes) (page 13).

§ Plan recommends improving Riggs Road from Val Vista Drive to ½ mile west of Power Road to 6 lanes (page 50).

§ Plan recommends improving Hunt Highway from Val Vista Drive to Recker Road to 4 lanes (page 50) in the mid-term, and 4-6 lanes in the long range (page 54).

§ Riggs Road and Hunt Highway are classified as major arterials by the Town of Gilbert (page 56). Both Hunt Highway and Riggs Road are recommended for improvement to 6 lanes in the Long Range Arterial Street Plan (page 53).

A.32 Town of Gilbert/East Valley Transit System Study (Ref. No. 1.32)

§ Study did not provide any information applicable to Hunt Highway or Riggs Road Corridors. No transit is recommended for these corridors.

A.33 Town of Queen Creek General Plan, 2002 (Ref. No. 1.33)

§ Queen Creek General Plan, Land Use Map (page 33) and General Development Tiers Map (page 47) shows area surrounding Hunt Highway, north to Riggs Road as "very low residential" and as "rural preservation." Area north of Riggs Road is "low and medium density residential" and a "suburban transition" with some "urban corridor" areas (page 47)."

§ The following transportation issues have been identified in the General Plan (page 55):

- Rittenhouse Road is the major thoroughfare carrying traffic to the Town of Queen Creek. The Town of Gilbert has recently adopted a new general plan and is proposing to convert Rittenhouse Road to a multi-use trail from Williams Field Road to Power Road. This provision will limit the usage of Rittenhouse Road and will redirect the Town access to other north-south facilities and east-west.
- The Plan highlights the challenges that growth in Pinal County places on Queen Creek roadways. Specifically, the plan states that "the current and proposed robust residential developments in Pinal County, southeast of the planning area, will generate more traffic on the roadway system. Pinal County residents will use one or more roadways in the planning area to access work sites or other activities as well as the area freeways.

Additionally, the type of development being considered for the General Motors Proving Grounds, just north of the planning area, could have traffic implications on the Queen Creek area's roadways.

- § Hunt Highway is considered a minor east-west roadway, classified as a 2-lane Rural Major Collector (page 63-64). Beginning ½ mile west of Power Road, and continuing eastward, the Hunt Highway is classified as a 4-lane, Rural Principal Arterial.
- § Riggs Road is considered a major facility (page 56), and classified as an Urban Principal Arterial. These are 6-lane facilities and include bike lanes and a median (page 63-64).

A.34 Williams Area Transportation Plan, Final Report and Executive Summary (Ref. No. 1.34)

- § Recommends preserving 130' of right-of-way to ultimately accommodate a six-land roadway with bicycle lanes (page 1).
- § Widening of Riggs Road from 2 lanes to 4 lanes between Price Road and I-10 is recommended in the 5 year plan (page 5-8).
- § Construction of 2 lanes and a bridge on Riggs Road between Val Vista and Higley is included in the 5-year Williams Area Transportation Plan (page 6-6).
- § Construction of 2 lanes on Riggs Road from Ellsworth to Rittenhouse Road is recommended in the 10 year Williams Area Transportation Plan (page 6-9)
- § Construction of 2 lanes on Hunt Highway from Price Road to Dobson Road is included in the 20 Year Williams Area Transportation Plan (page 6-12).
- § 2005 traffic projections include 1,000 ADT (year 2005) on Hunt Highway between Dobson and Lindsay Road, 8,000 ADT between Higley and Power Road, 9,000 ADT between Power Road and Hawes Road, and 7,000 ADT between Hawes Road and Ellsworth Road (page 5-9)
- § 2005 traffic projections include 22,000 ADT on Riggs Road between I-10 and Price Road, and between 12,000 – 18,000 ADT between Price Road and Arizona Ave, 7,000 – 8,000 ADT between Arizona Avenue and Ellsworth Road (page 5-9).
- § 2015 traffic projections, with the Loop 202 incorporated into the assignment, show modest increases in traffic volumes on both the Hunt Highway and on Riggs Road. ADT Hunt Highway increase by approximately 1,000 ADT over 2005 projections, while ADT on Riggs Road increases between by 2,000 ADT over 2005 projections.

A.35 Ironwood Drive DCR and Final Design, Meeting Minutes December 7, 2004 (Ref. No. 1.35)

- § Interim condition for Ironwood Road will consist of a 4-lane facility, and will be designed with consideration of a 6-lane ultimate section.
- § The northern five miles of the project (Elliot to Germann) is bounded by Arizona State Trus Land, which is largely undeveloped.
- § Access on Ironwood Drive will be access controlled, with a 14' center median. Access points will be limited to ½ mile. Frontage roads may be required to provide access to existing developed properties. Design speed will be 55 mph.

A.36 Anthem by Dell Web, preliminary site plan, dated December 9, 2004 (Ref. No. 1.36)

- § Hunt Highway will be improved to a 4-lane facility with a divided median.
- § Felix Road will be improved to a 6-lane facility with a divided median.

APPENDIX B – LIST OF PLANNED DEVELOPMENTS IN UNINCORPORATED PINAL COUNTY AND COOLIDGE, ARIZONA

Table B-1 – Planned Developments in Pinal County

Arizona Farms	Dobson Farms	Ware Farms
Mesquite Groves	Johnson Ranch	Johnson Farms
Daybreak at Picacho Peak	Morning Sun Farms	Cambria
Mirage at Magic Ranch	San Tan Shadows	Barnes Farm
Rancho Sendero	Skyline Ranch	Pecan Creek
Walker Butte	The Villages at San Tan	Peralta Preserve
Oasis at Magic Ranch	Wild Horse Estates	Peralta Heights
Magma Ranches	San Tan Ranch	Gold Canyon
Skyline Resort	The Commons At Era Mae	Taylor Ranch
Quail Run	Home Place	Ocotillo Trails
Superstition Views	Castlegate	San Tan Gateway Center
Copper Basin	Dobson Farms	Bella Vista Farms
Johnson Ranch	Bella Vista	Caballero
Rancho Bella Vista	Quail Run Estates	Ocotillo Verde
Johnson Ranch	Silverado Ranch	Caballero
Circle Cross Ranch	Magma Ranches Ii	Sun Valley Farms

Table B-2 – Planned Developments in Coolidge

Development Name Source: City of Coolidge Growth Management/ Community Services	Anticipated Number of Homes
Crosscreek Ranch	1,700 homes
Skousen Farms	1,300 homes
Sandia	10,000 homes
Heartland Ranch	1,816 homes , plus 546 homes
Carter Ranch	253 homes (under construction)
McLellan Meadows	342 homes
Los Arboles	115 homes (under construction)
Landmark Ranch	2,800 homes
Coolidge Ranch	6,065 homes
Coles Farm	5,000 homes
Village at Coolidge	51 homes
Cota Ranch	67 homes (under construction)
Elizabeth Ranch	62 homes
Coolidge Country Village	100 homes
Sun Creek	60 homes (under construction)
Aviara	4,880 homes
Clark Farms	4,899 homes
Kenilworth Gardens	1424 single-family homes, 677 multi-family units
KLC Ranch	745 homes