



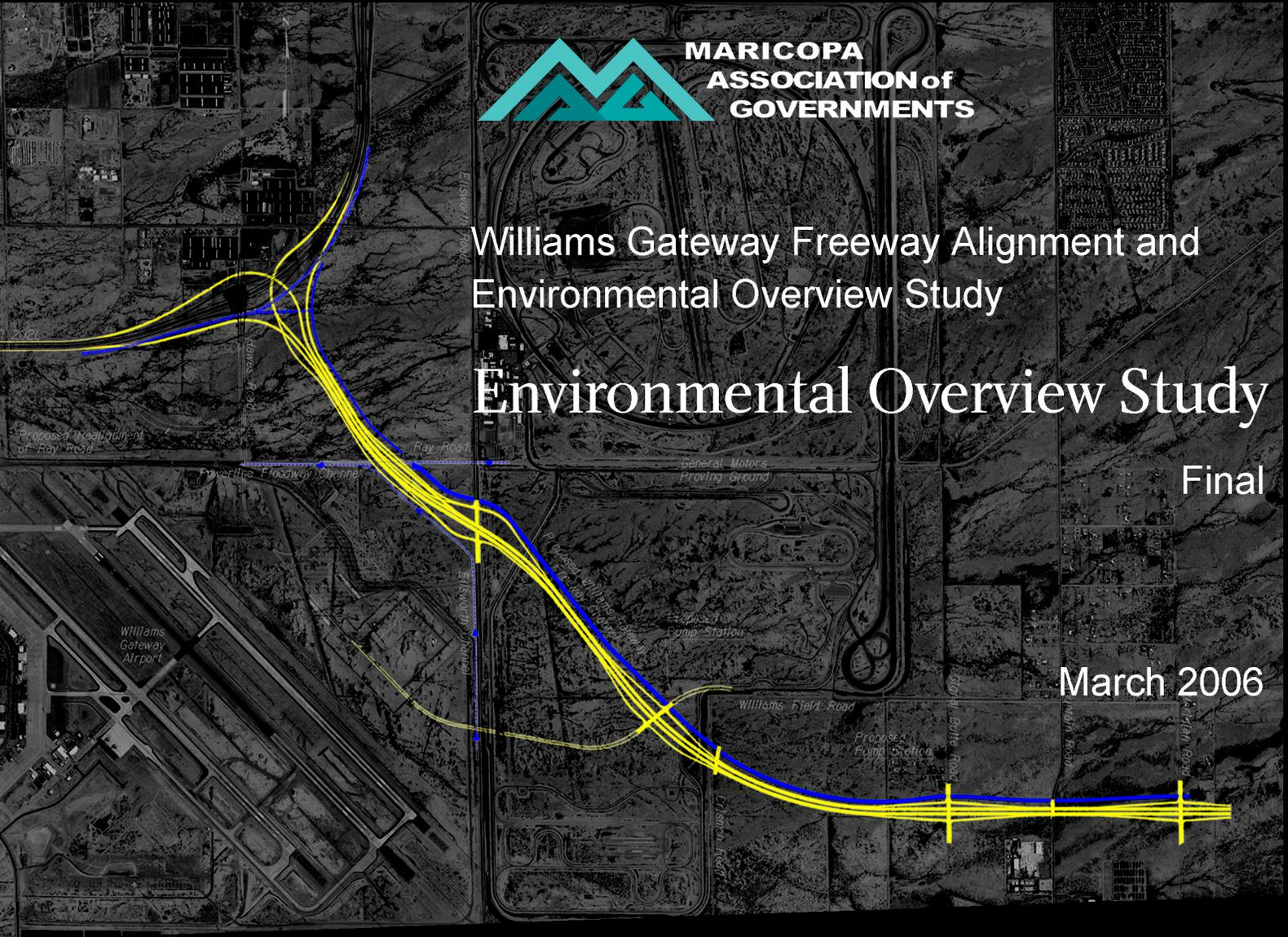
MARICOPA
ASSOCIATION of
GOVERNMENTS

Williams Gateway Freeway Alignment and Environmental Overview Study

Environmental Overview Study

Final

March 2006



Prepared For:

DMJM HARRIS | AECOM

Prepared By:



TABLE OF CONTENTS

Table of Contents	i
List of Figures	i
List of Tables	ii
Introduction.....	1
1.0 Socioeconomic Environment.....	1
1.1 Jurisdiction and Ownership	1
1.2 Existing Land Use	4
1.3 Farmland.....	8
1.4 Zoning	8
1.5 General Land Use Plan	8
1.6 Title VI Summary.....	11
1.6.1. Race and Ethnicity Populations.....	12
1.6.2. Executive Order Relating to Environmental Justice	12
1.7 Section 4(f) Resources.....	15
1.8 Land and Water Conservation Fund, Section 6(f)	16
1.9 Summary of Socioeconomic Environment.....	17
2.0 Physical and Natural Environment	17
2.1 Topography/Physiography	17
2.2 Biotic Communities	18
2.3 Wildlife.....	18
2.4 Listed/Sensitive Species and Habitat	19
2.5 Water Resources	19
2.6 Visual Character.....	20
2.7 Air Quality.....	21
2.7.1. Non-attainment Areas	22
2.7.2. Conformity.....	22
2.8 Noise	22
2.9 Hazardous Material Concerns.....	23
2.10 Summary of Physical and Natural Environment	26
3.0 Cultural Resources	27
3.1 Methods	27
3.2 Results	27
3.3 Summary of Cultural Resources	27
4.0 References and Resources	29
5.0 Appendix.....	31

LIST OF FIGURES

Figure 1. County Location Map.....	2
Figure 2. Study Area Map.....	3
Figure 3. Land Ownership Map	5
Figure 4. Jurisdiction Map.....	6
Figure 5. Zoning Map	9
Figure 6. General Plan Land Use Map	10
Figure 7. Census Tracts	13
Figure 8. Hazardous Materials and Superfund Site Map	25
Figure 9. Cultural Resources Previous Survey Map	28

LIST OF TABLES

Table 1. Existing or Planned Study Area Residential/Commercial Developments..... 7
Table 2. 2000 Population and Racial Demographics 14
Table 3. Environmental Justice Populations By Category 15
Table 4. National Ambient Air Quality Standards..... 21
Table 5. Noise Abatement Criteria..... 23
Table 6. Toxic Release Incidents..... 24
Table 7. RCRA Generators..... 24
Table 8. Drywells 26

INTRODUCTION

The purpose of this environmental overview (EO) is to describe the existing environment of the approximately 6 mile long Williams Gateway Freeway (WGF) Maricopa Association of Governments (MAG) preferred alignment study area, located between the State Route 202L [(SR 202L) Santan Freeway] and the Maricopa/Pinal County line in Maricopa County, Arizona (Figures 1 and 2). Currently, neither Frye Road (the preferred alignment reference road) nor the Williams Gateway Freeway exists between the Santan Freeway and the Maricopa/Pinal County line. The study area is defined as 0.5 mile on either side of an interchange near SR 202L and Hawes Road, extending southeasterly 3 miles until approximately the Crismon Road and Frye Road alignment where it turns east for another 3 miles to the Maricopa/Pinal County line (Meridan Road). The Frye Road alignment is the ½-mile section line road between Williams Field Road and Pecos Road.

Beginning in November 2004, MAG initiated an Alignment and Environmental Overview Study for the future Williams Gateway Freeway. Phase 1 of the study involved a tiered evaluation process, in which a wide range of alignment alternatives was systematically screened down to a single preferred alternative. Phase I was completed in July 2005, and resulted in the MAG preferred alignment (Frye Road). Phase II of the study includes this EO and further assesses the Environmental Justice/Title VI factors and further defines engineering options within the study area, such as traffic interchange (TI) locations, elevating or depressing sections of the main line, the number of general travel lanes, and amount of right-of-way required. The EO describes the study area environment in terms of its socioeconomic, physical, natural, and cultural resources.

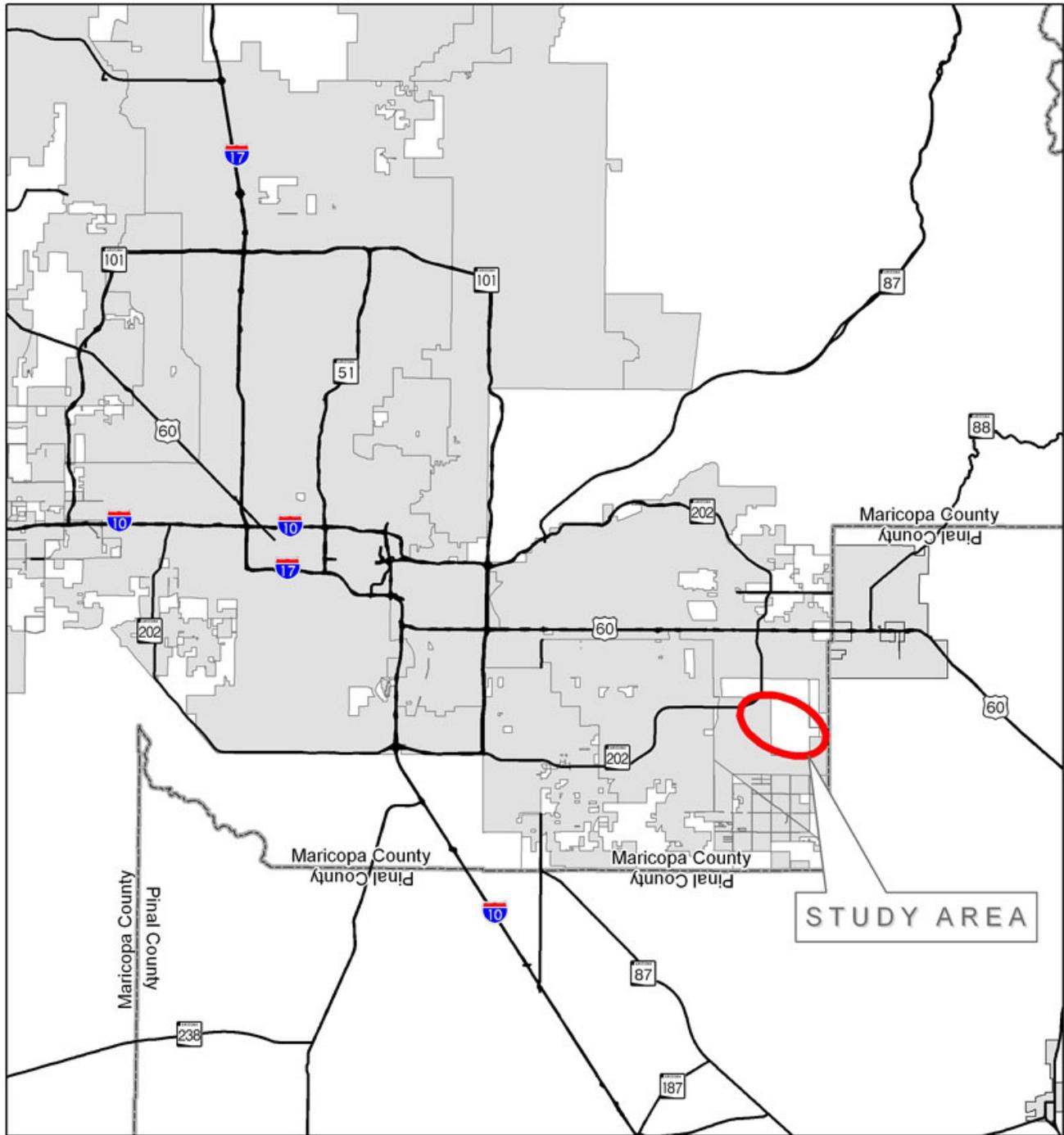
The information described in this EO is based on available data from county, municipal, state, and federal repositories or databases, and a reconnaissance “windshield survey” of the study area. This document is not intended to meet the requirements of the National Environmental Policy Act (NEPA), but will serve as a baseline for future project actions or planning activities. Future improvements however, may require further in-depth analysis and documentation based on the project-nexus as applicable under the regulatory guidance of NEPA or other applicable federal laws or regulations.

1.0 SOCIOECONOMIC ENVIRONMENT

Discussion of the socioeconomic environment includes an overview of the jurisdiction and ownership, existing land use, zoning, general plan land use, and demographic composition of the study area. Planning documents and maps prepared by Maricopa County, the City of Mesa, the Towns of Apache Junction, Gilbert, and Queen Creek, and the Arizona Department of Transportation were used to identify jurisdiction, land use, zoning criteria, and future planning activities. Title VI and Environmental Justice considerations were identified using the U.S. Department of Commerce, Bureau of the Census 2000, Census of Population and Housing.

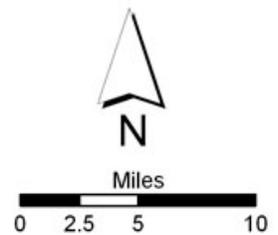
1.1 JURISDICTION AND OWNERSHIP

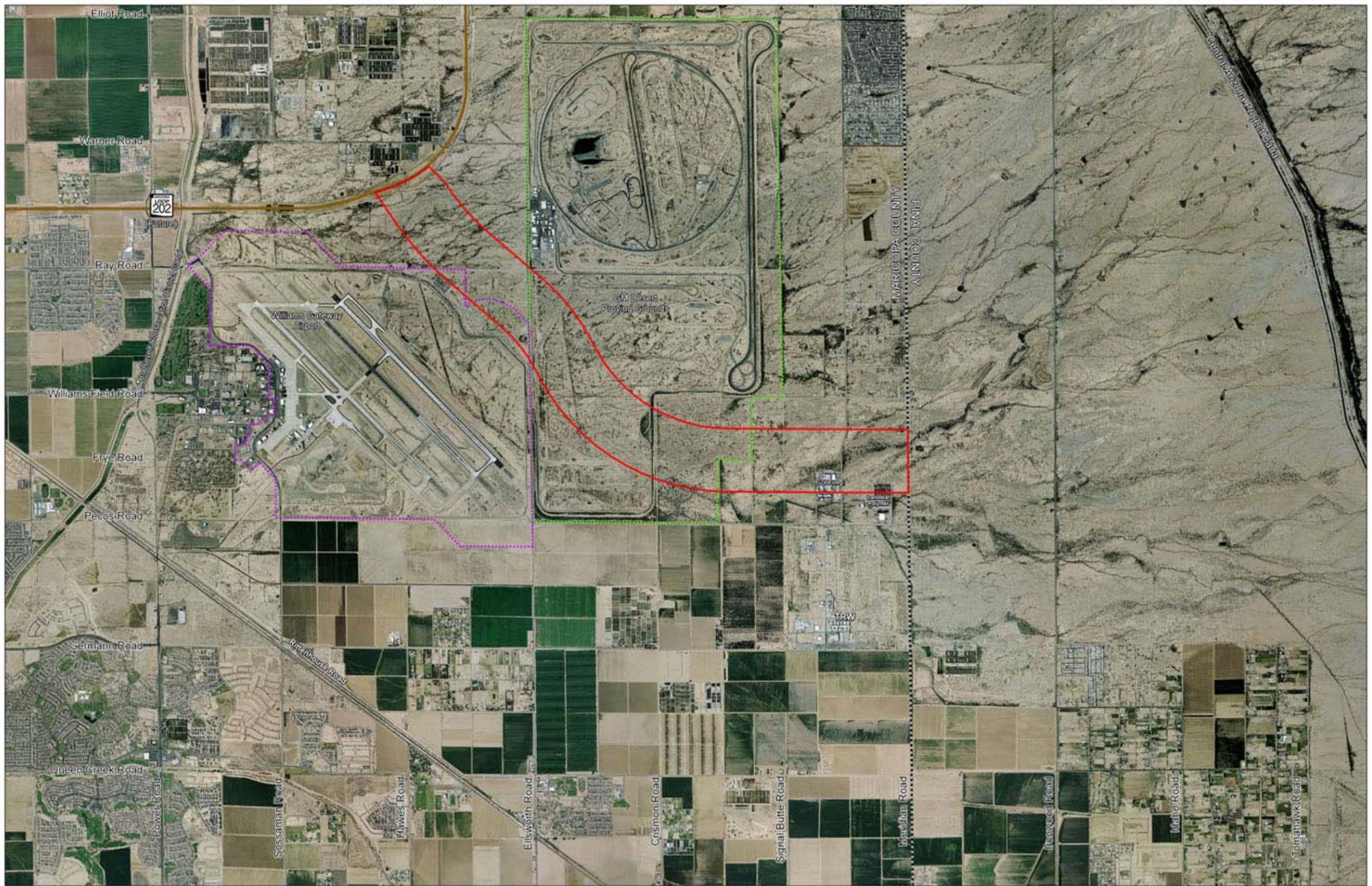
For the purposes of this overview, land ownership is identified in terms of public or private ownership, while jurisdiction refers to the authority of the respective city, county, state, or federal agency to regulate these areas.



Williams Gateway Freeway Alignment and Environmental Overview Study
 Figure 1. County Location Map.

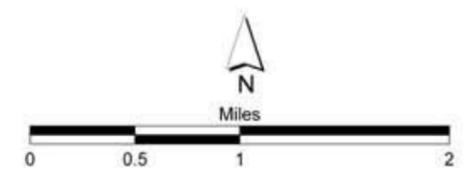
- Highways
- Municipal Boundaries
- County Boundary





Williams Gateway Freeway Alignment and Environmental Overview Study
 Figure 2. Study Area Map.

- ▭ STUDY AREA for MAG PREFERRED ALIGNMENT
- ▭ WILLIAMS GATEWAY AIRPORT BOUNDARY
- ▭ GENERAL MOTORS DESERT PROVING GROUNDS BOUNDARY



Much of the project area contains private land holdings with one of the largest parcel being the site of General Motors' proving ground and research facility (Figure 3). A second large parcel is the Williams Gateway Airport (WGA) owned by the WGA Authority, a consortium of the Gila River Indian Community, the City of Mesa, the Town of Gilbert and the Town of Queen Creek. Included within WGA is the site of the Arizona State University – Polytechnic (Williams) Campus, a branch of the Chandler-Gilbert Campus of the Maricopa Community College, and a variety of other educational institutions.

The study area includes land under the jurisdiction of the City of Mesa. This includes the western end of the study area within the incorporated area of Mesa. The Mesa boundary also encompasses a portion of the study area at the eastern end of the project from Signal Butte Road east to Meridian Road, which forms the Maricopa/Pinal County line. The central section of the study area, which includes the General Motors proving ground and the Powerline Floodway channel, is located within Maricopa County jurisdiction. The eastern end of the study area terminates at the Pinal County line adjacent to land under the ownership of the Arizona State Land Department (ASLD) (refer to Figure 4, page 6).

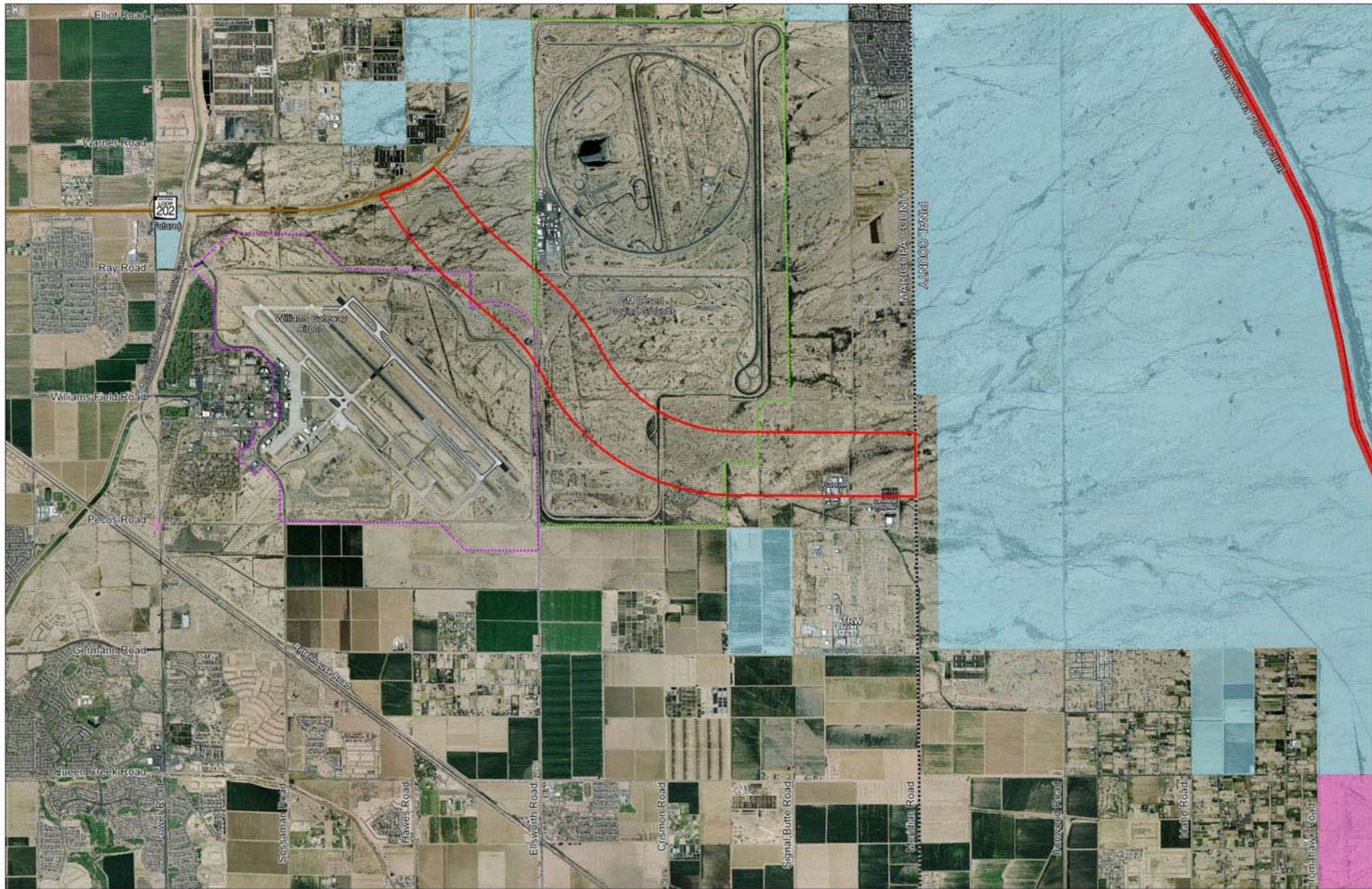
1.2 EXISTING LAND USE

Land use can be defined as the existing physical use of the land, and in some cases, the designated non-use of the land. For example, this non-use status can be observed at many locations throughout Maricopa County in designated mountain preserves or open spaces. Land uses within the study area were identified using current Geographic Information System (GIS) coverage created by Maricopa County and verified using aerial photography and “windshield surveys” of the study area in April 2004, and again in April 2005. Land uses within the study area consist of vacant land (undeveloped desert), residential, industrial (General Motors Proving Grounds, Fuji Film, and TRW), water/utilities including the Powerline Floodway channel, and transportation (including roads and an airport).

Both small and large parcels of vacant land comprise large segments of the study area. Except for a small parcel in the extreme northwest corner, the square mile section encompassing the Santan Freeway/Williams Gateway Freeway Traffic Interchange consists of undeveloped desert. The middle portion of the project, between Ellsworth Road and Meridian Road, is largely undeveloped desert that includes parcels of the Williams Gateway Airport and the GM Proving Ground. The area east of Meridian Road is also undeveloped desert land.

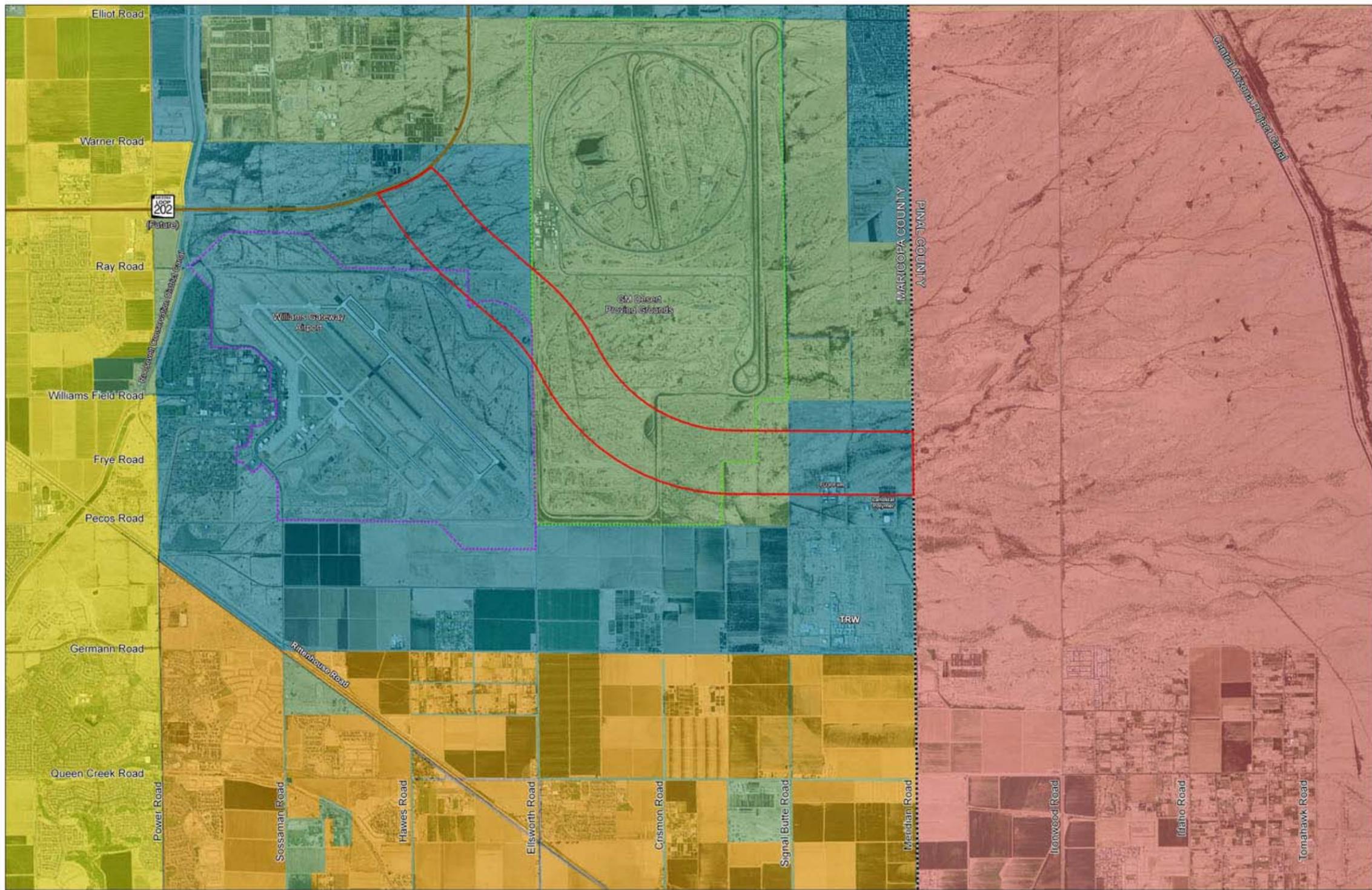
At the present time development in the study area is predominately nonexistent along the preferred alignment with a few commercial developments in the project vicinity. Unimproved (dirt) roads and the Powerline Floodway channel exist within the airport parcel and GM Proving Grounds parcel. The GM parcel also has developed roads (test tracks) found within the GM Proving Ground parcel. Developed industrial parcels south of Frye Road between Signal Butte Road and Meridian Road include Fuji Film, Landstar Polymer, and the TRW facilities. East of Meridian and adjacent to the study terminus, the land in Pinal County is undeveloped (vacant) and owned by ASLD. While the study area is predominately vacant desert land, the Southeast Valley of the Phoenix Metropolitan Area, including the study area, is under dynamic change with large land acquisitions being made for planned commercial and residential development (refer to Table 1, page 7).

One residential area with 4-8 residences is located within a county island approximately 0.25 mile south of Williams Field Road in an area bounded by 222nd Street to the west and Mountain Road



Williams Gateway Freeway Alignment and Environmental Overview Study
 Figure 3. Land Ownership Map.

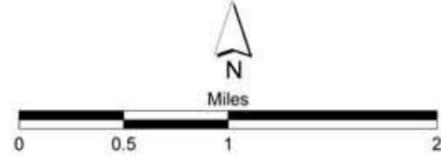




Williams Gateway Freeway Alignment and Environmental Overview Study
 Figure 4. Jurisdiction Map.

- STUDY AREA for MAG PREFERRED ALIGNMENT
- WILLIAMS GATEWAY AIRPORT BOUNDARY
- GENERAL MOTORS DESERT PROVING GROUNDS BOUNDARY

- Jurisdiction**
- Gilbert
 - Maricopa County
 - Mesa
 - Pinal County
 - Queen Creek



to the east. As shown in Table 1, further residential and commercial developments are being proposed and planned in the adjacent communities of Mesa, Queen Creek, Apache Junction and Maricopa County. Proposed developments include land within the proposed corridor, adjacent to the corridor, and in the general vicinity of the Williams Gateway Freeway.

- Several water/utility corridors and facilities parallel or bisect portions of the study area, including:
- The Powerline Floodway channel within the project area is a section of a regional flood control facility maintained by the Maricopa County Flood Control District;
 - The Ellsworth drainage interceptor is located in the project vicinity as the alignment crosses the northeast corner of WGA; and
 - A high voltage transmission line and the Central Arizona Project Canal are in the project vicinity east of the study area. Smaller distribution lines are located near the study area.

There are currently no commercial services for residents and businesses within the study area; however, they can be found in the project vicinity in the developed portions of Mesa, Apache Junction, Queen Creek, and Gilbert.

Table 1. Existing or Planned Study Area Residential/Commercial Developments		
Property Name	Property Location	Existing or Planned
Unknown	Residential homes 0.5-mile south of Williams Gateway Freeway between 222 nd St. and Mountain Rd.	Existing
Signal Butte 10	Residential development 2-miles north of Williams Gateway Freeway alignment on Signal Butte Road.	Planned
Keighley Place	Residential development 2-miles north of Williams Gateway Freeway alignment on Meridian Road.	Planned
Williams Gateway Center	Commercial property through Williams Gateway Freeway alignment at southwest corner of Ray Road and Ellsworth Road.	Planned
Kitchell Development	Multiuse development through Williams Gateway Freeway at Hawes and the Loop 202.	Planned
Gila River Ranches	Residential development 3-miles north of Williams Gateway Freeway alignment on Meridian Road.	Planned
Mountain Horizons	Residential development near Ray Road and Ellsworth Road.	Planned
Dream Catchers	Commercial development on northwest corner of Pecos and Mountain Road.	Planned
Jade Grading	Commercial property along Williams Gateway Freeway alignment on Pecos Road.	Planned
Amsafe	Commercial property north of Pecos Road along the Mountain Road alignment.	Planned
Chas Roberts Air Conditioning	Commercial property 2.5-miles south of Williams Gateway Freeway alignment on Germann Road and Hawes Road.	Planned
Gateway Airport Commerce Park	Commercial development 1.5-miles south of Williams Gateway Freeway alignment on Ellsworth Road and Pecos Road.	Planned

Aircom Industrial Park	Commercial development 1.5-miles south of Williams Gateway Freeway alignment on Ellsworth Road and Pecos Road.	Planned
Viawest	Commercial Development 1-mile north of Williams Gateway Freeway alignment at Warner and Ellsworth Road.	Planned
General Motors	Residential Development on portions of their Proving Grounds.	Planned
Source: AZTEC Field Review, April 2004; City of Mesa – Engineering Division		

1.3 FARMLAND

The Farmland Protection Policy Act of 1981 (FPPA) was implemented to insure that federal agencies “minimize the extent to which programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses and to assure that programs are administered in a manner that, to the extent practicable, will be compatible with State, local government, and private programs and policies to protect farmland.”

As an example, the 1989 Federal Highway Administration (FHWA) Policy Paper, entitled *Guidelines for Implementing the Final Rule of the Farmland Protection Policy Act for Highway Projects*, specifically addresses impacts to farmlands from transportation-related projects. This policy established guidance for special situations, that have bearing on the applicability of the FPPA definition of “farmland” as it relates to urban areas with FHWA funding. The Policy reads as follows: “Prime farmland, which is already in or committed to urban development, is by definition farmland not subject to the FPPA. Unique farmlands and farmlands of statewide or local importance are, however, subject to the FPPA (even in areas already in or committed to urban development). Where right-of-way required for a highway project is wholly within a delineated urban area and the project requires no property from unique farmlands, or farmlands of statewide or local importance, the FPPA does not apply. The completion and processing of Department of Agriculture Form AD 1006 is not necessary” (FHWA, 1989).

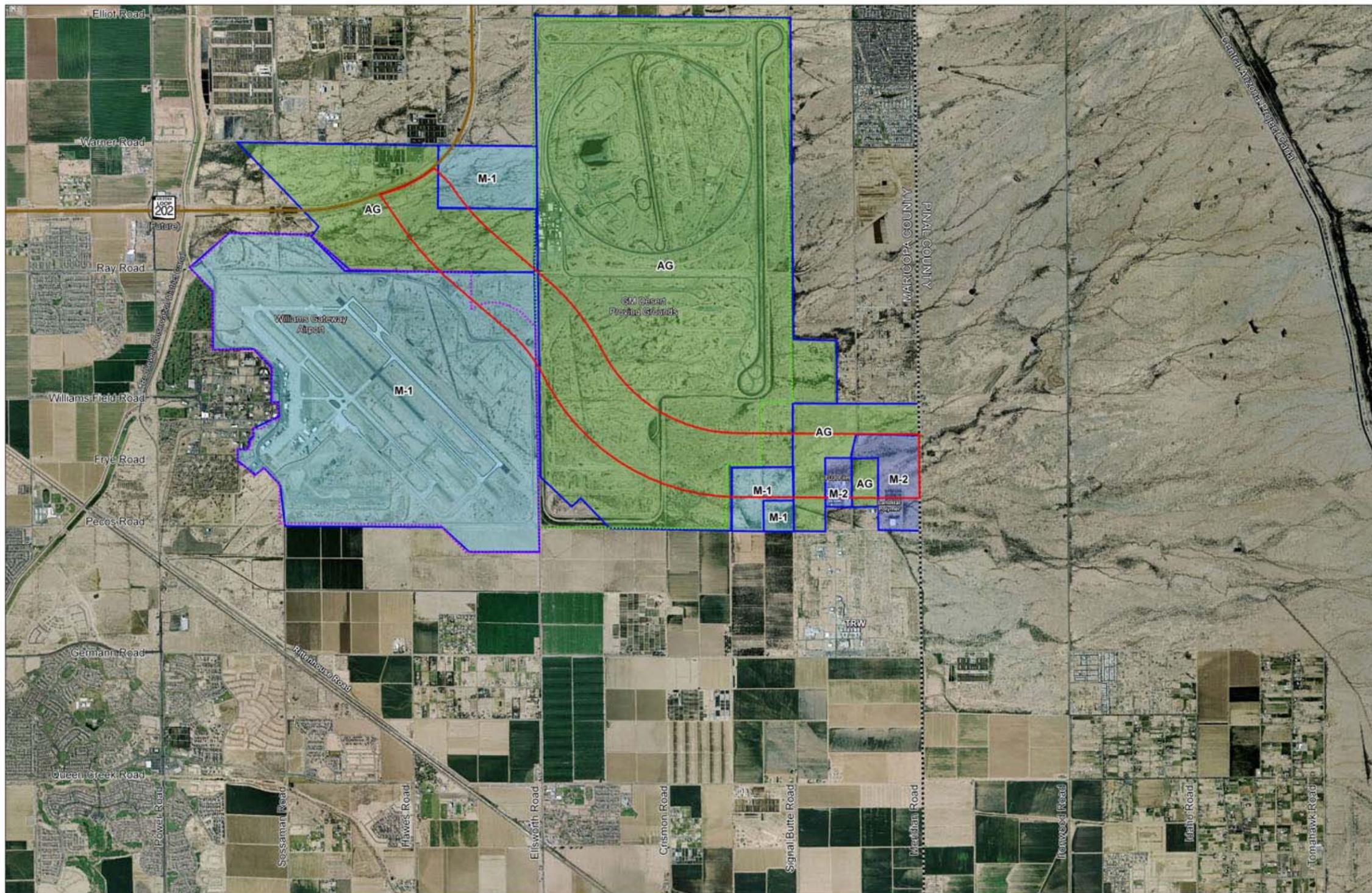
There are no farmlands located within the Williams Gateway Freeway study area. The nearest farmlands are located immediately adjacent to the study area (1/2 mile south of the preferred alignment) on the south side of Pecos Road between Ellsworth Road and Signal Butte Road.

1.4 ZONING

The portion of the study area within Maricopa County is divided into three zoning categories as identified from the compilation of GIS data prepared for the Maricopa County Assessor’s Office based on information from the County Planning and Development Department and from the City of Mesa (Figure 5). Zoning categories include three zoning districts: 1.) M-1 = Limited Industrial Areas, 2.) M-2 = General Industrial, and 3.) AG = Agriculture zoned.

1.5 GENERAL LAND USE PLAN

The Mesa 2025 General Plan from the City of Mesa, the Maricopa County 2020 Comprehensive Plan, the Town of Queen Creek General Land Use Plan, and the Pinal County Comprehensive Plan were used to develop a composite of future land uses and planning activities for the study area and adjacent lands (refer to Figure 6 page 10). While Mesa does not have jurisdiction over the Maricopa County lands within the project vicinity, the City of Mesa has included the county parcels within its planning area.

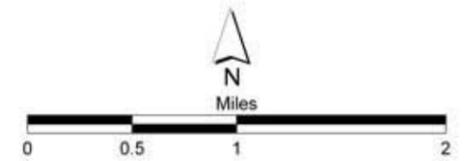


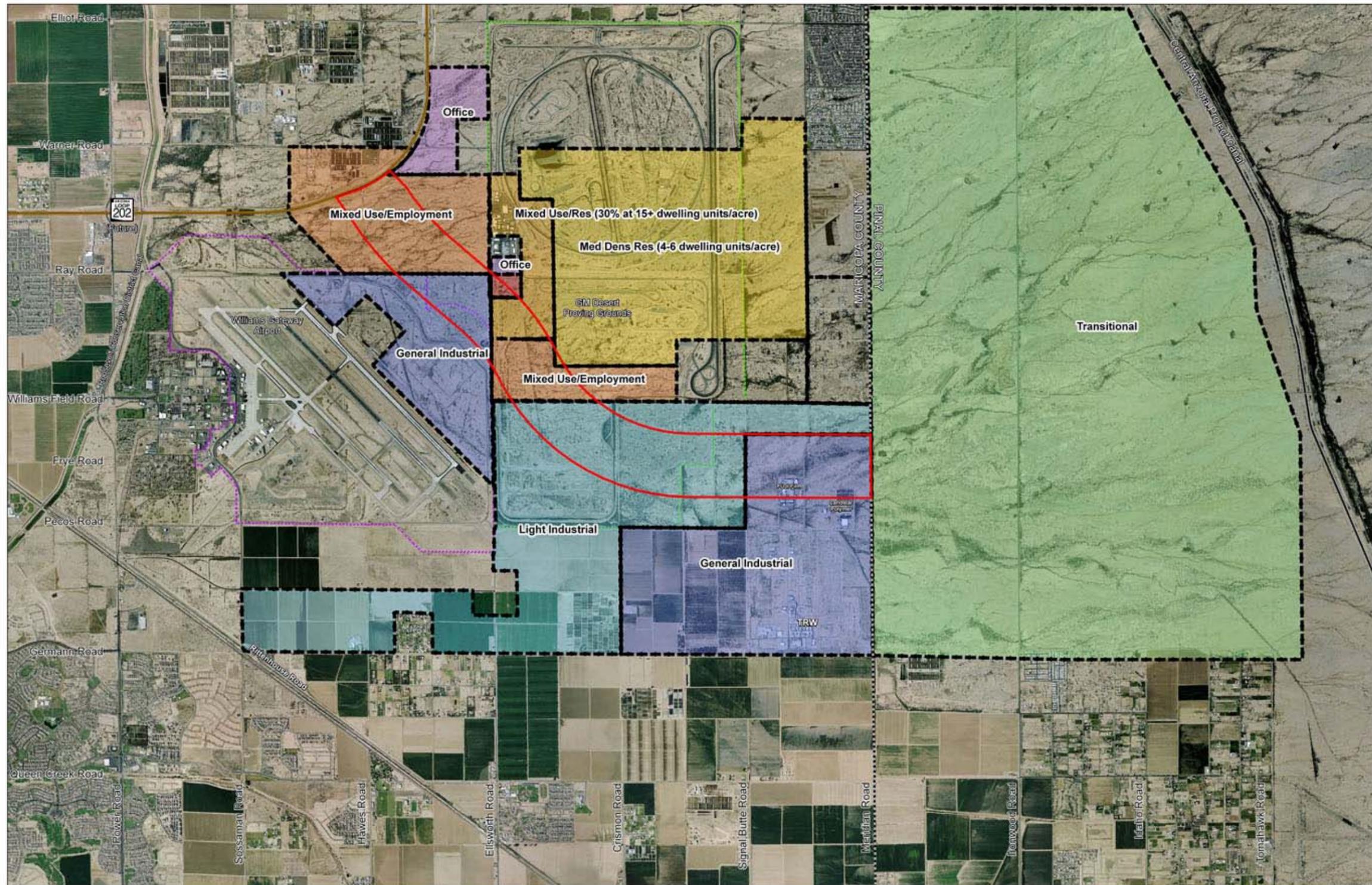
Williams Gateway Freeway Alignment and Environmental Overview Study
 Figure 5. Zoning Map.

- STUDY AREA for MAG PREFERRED ALIGNMENT
- WILLIAMS GATEWAY AIRPORT BOUNDARY
- GENERAL MOTORS DESERT PROVING GROUNDS BOUNDARY

ZONING DISTRICTS

- AG = AGRICULTURE
- M-1 = LIMITED INDUSTRIAL
- M-2 = GENERAL INDUSTRIAL





Williams Gateway Freeway Alignment and Environmental Overview Study
 Figure 6. General Plan Land Use Map.



Within the City of Mesa, as identified within their 2025 General Plan, employment/office development is currently planned for the immediate area around the proposed interchange with the SR202L. From the proposed interchange at Hawes Road and SR 202L to the Williams Gateway Airport and the GM proving grounds, parcels are planned for mixed use/employment development. The portion of the Williams Gateway Airport within the study area, as well as the area around the eastern terminus of the proposed alignment, is planned for general industrial development. The southern portion of the GM Proving Ground within the project area has been designated light industrial. Smaller areas east of Ellsworth Road and north of Williams Field Road, also within the Proving Ground parcel, have been designated mixed use/employment, mixed use/residential, community commercial, and office. Areas within the WGA are designated as educational use as part of Arizona State University's Polytechnic campus and other related educational institutions located there. It has been identified that additional detailed planning in conjunction with the WGA, GM Proving Ground, and other properties will be needed to define the exact nature of future development in the Williams Gateway Freeway – MAG Preferred Alignment study area.

The Mesa 2025 General Plan also identifies the expected need for community facilities and parks. Proposed fire station locations are identified in the vicinity of Williams Field Road and Ellsworth Road, and Pecos Road and Signal Butte Road, both locations within the study area. A major drainage channel is proposed along Ellsworth Road that will intercept surface waters and convey them to the Powerline Floodway channel. The Plan does not identify any existing or planned community parks within the study area. It does identify new park target areas in the general Williams Gateway area for both a metro, and a regional park.

The Pinal County Comprehensive Plan (December 2004) indicates that land east of the study area is located within Planning Area 1A which includes the communities of Apache Junction, Gold Canyon and Queen Valley. The land use designation for the study area is "Transitional". This designation is for those areas currently rural in character, but which are anticipated for growth in the future. These areas could sustain uses consistent with the Urban, Industrial, Rural, Foothills, or Rural Community designations. The purpose of the Transitional Area designation is to encourage the retention of existing parcels of land in large tracts for potential development.

1.6 TITLE VI SUMMARY

"Title VI of the Civil Rights Act of 1964" and related statutes assure that individuals are not excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal financial assistance on the basis of race, color, national origin, age, sex, and disability. "Executive Order 12898" on environmental justice, dated February 11, 1994, directs that programs, policies, and activities not have a disproportionately high and adverse human health or environmental effect on minority and low-income populations.

The demographic composition of the study area was calculated using the U.S. Department of Commerce, Bureau of the Census 2000, Census of Population and Housing statistics. Census tracts are small, relatively permanent statistical subdivisions of a county for tallying census information, and do not cross county boundaries. They are delineated with the intention of being maintained over a long period of time to allow statistical comparisons from census to census. The size of census tracts varies depending on the population density of the area. Census tracts are comprised of smaller geographic subdivisions, called block groups, which aid in increasing the resolution of demographic information. Each census tract contains a minimum of one block group and may have a maximum of nine block groups. As part of this study, only census tracts are discussed due to population density. The study area is located within Maricopa County (Pinal

County is adjacent) and encompasses portions of Mesa. The municipalities of Gilbert, Queen Creek, and Apache Junction are located within the vicinity of the study area. The study area traverses census tracts 5227.57 and 5228.00 (Figure 7). Census tract numbers 4226.00 and 2.02. have been included due to their proximity to the study area and for comparative purposes.

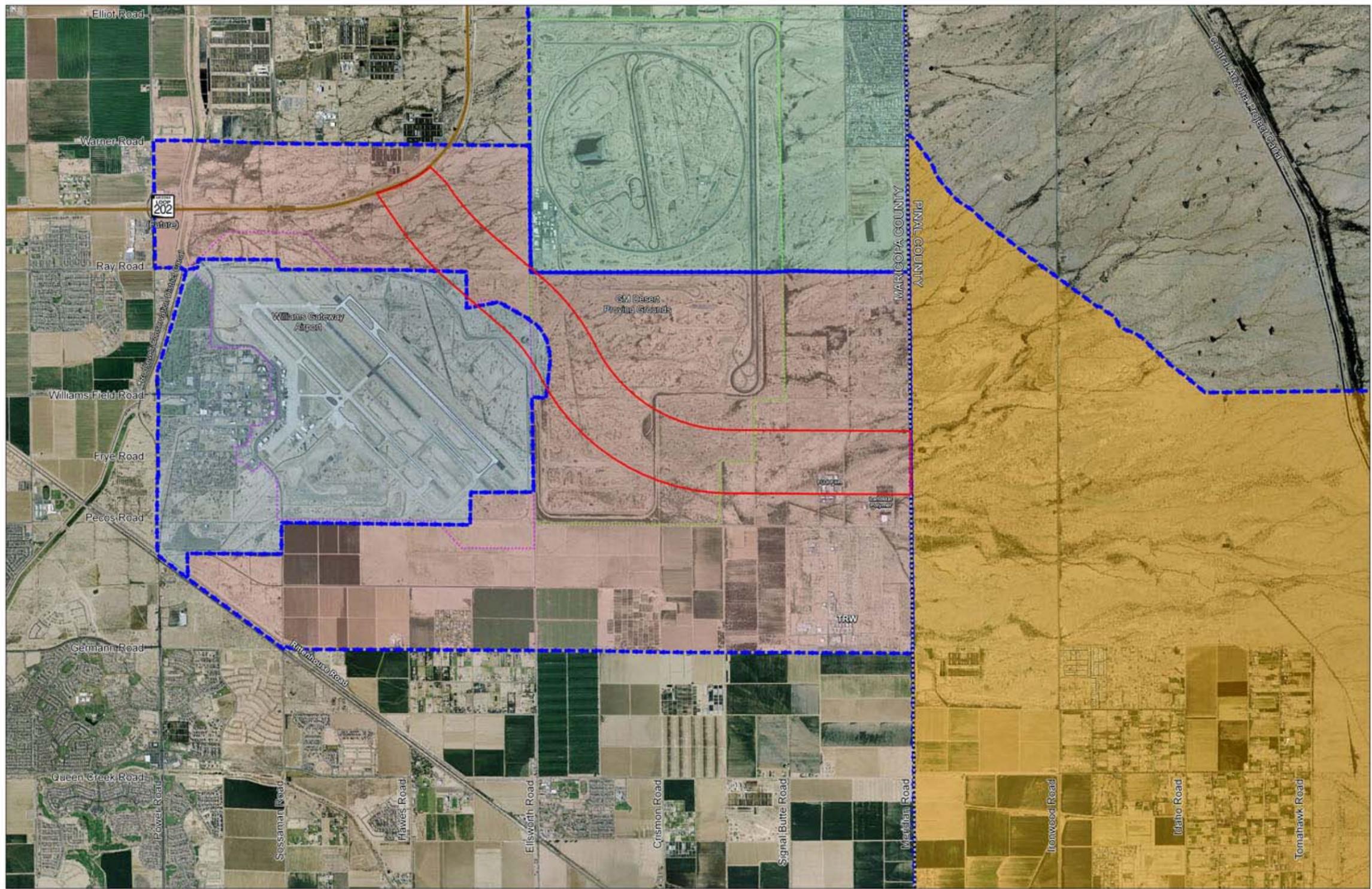
1.6.1. RACE AND ETHNICITY POPULATIONS

According to the U.S. Bureau of Census 2000 data, the study area is comprised primarily of populations identified as white, which represent approximately 72.1% of the 8,425 individuals recorded within the four tracts (Table 2, page 14). This percentage is slightly lower when compared to census data recorded for Maricopa County (77.4%), Chandler (77.2%), Mesa (81.7%), Queen Creek (82.1%), and Gilbert (85.7%) but larger than Pinal County (58.87%). No other substantial populations, meaning those populations that comprise greater than 50% of a population, are located within the study area. However, Tract 2.02 in Pinal County contains population of Hispanic ethnicity with a percentage over 25% of the tallied populations. The summation between percentages of the racial categories and those of the ethnicity categories: 1) Some other race alone; 2) Two or more races; and 3) Hispanic or Latino, may equal more than 100% of the total population. This is due to the fact that some respondents that identify themselves as “white” or of another race may also be of Hispanic decent and consider themselves under both criteria.

1.6.2. EXECUTIVE ORDER RELATING TO ENVIRONMENTAL JUSTICE

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed on February 11, 1994, reinforces the provisions set forth from Title VI of the Civil Rights Act of 1964 and provides additional guidance on identifying and addressing disproportionately high or adverse effects on minority and low-income populations as well as disabled individuals, women as head of household, and elderly populations. Specifically, those programs, policies, or benefits should ensure that they prevent discriminatory effects including: discriminating against or excluding individuals or populations from participation, denying benefits of a proposed action/activity, or otherwise adversely affecting the human health or environment of these populations.

A minority person can be defined as an individual who is racially classified as African American, Asian American, Native American or Alaskan Native, or anyone who classifies himself or herself as “other” race. Hispanics are also considered minorities regardless of their racial affiliation. Elderly refers to individuals who are older than 60 years of age. Low-income is defined as a person 18 years or older who is below the poverty level estimated from the current census. Disabled individuals are persons aged greater than 16 who are non-institutionalized. “Female head of Household” is a family household where there is a female with no spouse present, regardless of whether she has any children less than 18 years of age. Study area data are compared and contrasted with the data for all of Maricopa County, Pinal County, and the local municipalities in order to assess whether minority, elderly, low-income, disabled, or female populations are disproportionately represented near the study area (Table 3, page 15).



Williams Gateway Freeway Alignment and Environmental Overview Study
 Figure 7. Census Tracts.

- STUDY AREA for MAG PREFERRED ALIGNMENT
- WILLIAMS GATEWAY AIRPORT BOUNDARY
- GENERAL MOTORS DESERT PROVING GROUNDS BOUNDARY

CENSUS TRACT AND POPULATION

- 2.02 = 5,962
- 5227.57 = 518
- 5228 = 1,079
- 4226.01 = 4,132

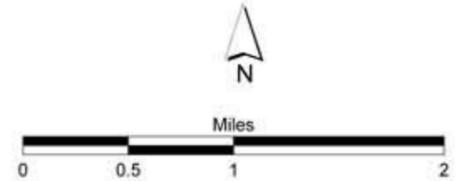


Table 2. 2000 Population and Racial Demographics

Area	Total Population	White alone		Black or African American alone		American Indian and Alaska Native		Asian		Native Hawaiian and Other Pacific Islander		Some other race alone		Two or more races		Hispanic or Latino	
		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Tract 4226.01, Maricopa County	4,132	3,330	80.6	52	1.3	119	2.9	59	1.4	0	0.0	58	1.4	84	2.0	430	10.4
Tract 5227.57, Maricopa County	518	472	91.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	46	8.9
Tract 5228.00, Maricopa County	1,079	676	62.7	40	3.7	101	9.4	0	0.0	0	0.0	0	0.0	73	6.8	189	17.5
Tract 2.02, Pinal County	5,962	3,947	66.2	91	1.5	65	1.1	13	0.2	26	0.4	0	0.0	90	1.5	1,730	29.0
All Block Groups	11,691	8,425	72.1	183	1.6	285	2.4	72	0.6	26	0.2	58	0.5	247	2.1	2,395	20.5
Maricopa County	3,072,149	2,376,359	77.4	114,551	3.7	56,706	1.8	66,445	2.2	4,406	0.1	364,213	11.9	89,469	2.9	466,312	20.8
Pinal County	179,727	126,559	70.4	4,958	2.8	14,034	7.8	1,086	0.6	146	0.1	28,149	15.7	4,795	2.7	53,782	29.9
Queen Creek	4,316	3,545	82.1	15	0.3	23	0.5	14	0.3	3	0.1	617	14.3	99	2.3	785	28.2
Mesa	396,375	323,655	81.7	9,977	2.5	6,572	1.7	5,917	1.5	932	0.2	38,271	9.7	11,051	2.8	48,289	16.8
Gilbert	109,697	94,043	85.7	2,639	2.4	676	0.6	3,937	3.6	134	0.1	5,233	4.8	3,035	2.8	7,631	10.6
Apache Junction	31814	29478	92.7	194	0.6	316	1.0	166	0.5	23	0.1	991	3.1	646	2.0	2,674	8.5

Source: U.S. Census Bureau, Census 2000 Redistricting Data (Public Law 94-171) Summary File 1, Matrices PL1 and PL2.
 Available: <http://factfinder.census.gov/servlet>

Table 3. Environmental Justice Populations By Category

Area	Total Population*	Age 60 Years and Over*		Below Poverty Level**1		Disabled**2		Female head of Household**	
		#	%	#	%	#	%	#	%
Tract 4226.01, Maricopa County	4,132	332	8.0	104	3.5	247	8.2	140	9.8
Tract 5227.57, Maricopa County	518	20	3.9	18	5.1	55	15.7	0	0.0
Tract 5228.00, Maricopa County	1,079	0	0.0	43	6.8	65	9.6	87	30.7
Tract 2.02, Pinal County	5,962	638	10.7	443	10.9	962	22.8	321	16.7
All Block Groups	11,691	990	8.5	608	7.6	1,329	16.1	548	14.6
Maricopa County	3,072,149	465,849	15.2	226,957	10.1	478,892	20.6	303,905	26.8
Pinal County	179,727	38,665	21.5	16,343	12.1	33,596	24.1	15,136	24.6
Queen Creek	4,317	362	8.4	259	8.8	447	14.4	158	12.3
Mesa	397,215	65,701	16.5	23,139	8.0	61,100	20.4	39,043	26.6
Gilbert	109,936	6,237	5.7	2,356	3.3	9,643	12.8	6,013	16.9
Apache Junction	31,281	9,956	31.8	2,420	9.7	7,589	29.7	3,580	26.4

Source: * Summary File 1 (SF1)

** Summary File 3 (SF3)

¹ Calculated using number of persons aged greater than or equal to 18 whose income is determine to be below the poverty level

² Calculated using number of persons aged greater than or equal to 16 with a work disability, mobility disability, or self care disability.

While the percentage of elderly varies in the study area from 0% to 10.7%, the percentage of elderly for the combined tracts is about 8.5%, which is comparatively lower than the two counties and the municipalities, except for Queen Creek and Gilbert having 8.4% and 5.7% of their populations as elderly respectively. The elderly make up over 31% of Apache Junction's population and approximately 21% of Pinal County's population (refer to Table 3).

The percent disabled illustrated for the combined four tracts, 16.1%, shown in Table 3 is under the Maricopa and Pinal County figures of 20.6% and 24.1%, and lower than the municipalities of Mesa

and Apache Junction at 20.4% and 29.7%. This figure represents a slightly greater percent than found in Queen Creek and Gilbert. Additionally, the percentage of households identified as “Female head of Household” for the four tracts at 14.6% is still substantially less than the percentages for Maricopa County and Pinal County at 26.8% and 24.6%. No protected population exceeds 50% in the study area. While disproportionate impacts to protected populations are not anticipated, the alignment corridor could impact isolated populations within a census tract. The census data does not indicate protected populations; however, during the actual design/environmental stage when the NEPA document is prepared further evaluation of the area will be performed to determine if minority or disadvantaged populations are disproportionately impacted.

1.7 SECTION 4(F) RESOURCES

Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. 303) stipulates the FHWA may not approve the use of land from a significant publicly owned park, recreation area, or wildlife and waterfowl refuge, or any significant historic site that is either listed, or eligible for listing, on the National Register under Criterion A, B, or C. Public schools are designated as Section 4(f) resources if public access to and/or use of sports facilities (e.g. baseball diamonds, tracks) on these properties are impacted.

There are no publicly owned parks, recreation areas, or wildlife and waterfowl or refuges areas within the Williams Gateway Alignment study area. There are no known significant historic sites that are listed, or eligible for listing, on the National Register under Criterion A, B, or C. There are no public schools in the study area and no associated sports facilities.

The City of Mesa, in their 2025 General Plan, has identified a broad section that includes the study area as proposed target land sections for both a metro and a regional park but no specific sites have been planned for acquisition or development.

1.8 LAND AND WATER CONSERVATION FUND, SECTION 6(F)

The Land and Water Conservation Fund (LWCF) Act was signed into law on September 3, 1964, as Public Law 88- 578, 16 U.S.C. 460l-4. The Act was established to provide a funding source for acquisition of park and recreation lands by federal, state, and local governments. As a part of the Act, the provisions under Section 6(f)(3) mandates that these investments are protected, but realizes that changes in land use especially in growing urban area can impact these protected areas. As detailed in the following excerpt from the Act, the LWCF Act contains a clear and common sense provision to protect these areas from conversions (National Park Service 2004).

SEC. 6(f)(3) No property acquired or developed with assistance under this section shall, without the approval of the Secretary, be converted to other than public outdoor recreation uses. The Secretary shall approve such conversion only if he finds it to be in accord with the then existing comprehensive statewide outdoor recreation plan and only upon such conditions as he deems necessary to assure the substitution of other recreation properties of at least equal fair market value and of reasonably equivalent usefulness and location.

The 2003 Arizona Statewide Outdoor Recreation Plan (Arizona State Parks 2004) was reviewed to determine whether any LWCF funds were expended within the study area. No Section 6(f) funded properties are currently located within the Williams Gateway Freeway – MAG Preferred Alignment study area. However, if a park, as identified in the City of Mesa’s 2025 General Plan, were to be developed within the study area and LWCF funds were used to construct this park,

requirements under the provisions of Section 6(f)(3) could apply. In the event this were to occur, coordination with the Arizona State Parks LWCF Grants Coordinator and the National Park Service would be required, regardless of highway construction funding [meaning Section 6(f)(3) of the LWCF applies even if a project is state or locally funded].

1.9 SUMMARY OF SOCIOECONOMIC ENVIRONMENT

The study area consists primarily of private lands and the Williams Gateway Airport, which is owned by a consortium of local and tribal governments. The study area traverses two portions of land within the City of Mesa corporate boundary with an intervening segment of unincorporated Maricopa County land. ASLD manages the state land located east of Meridian Road. The eastern end of the study area terminates at the Maricopa-Pinal county line. Existing land uses consist primarily of vacant desert land with some residential, industrial and transportation development. According to local zoning and general plans, most of the area is planned for industrial and mixed-use development with lesser amounts of agricultural, commercial and residential uses.

No publicly owned parks, recreation areas, wildlife or waterfowl refuges occur within the Williams Gateway Freeway Alignment study area. There are no known significant historic sites that are listed, or eligible for listing, on the National Register under Criterion A, B, or C. The City of Mesa, in their 2025 General Plan, has identified a broad area that includes the study area as proposed target areas for both a metro and a regional park but no specific sites have been planned for acquisition or development. If FHWA funds were used for future improvements that could impact these resources, a Section 4(f) evaluation would be required.

No existing protected population exceeds 50% in the study area. While disproportionate impacts to protected populations are not anticipated, the alignment corridor could impact isolated populations within a census tract. Further analysis of the potential impacts to protected populations should occur during future engineering and environmental studies for this project.

2.0 PHYSICAL AND NATURAL ENVIRONMENT

This section describes the existing physical and natural environment within the study area in terms of topography/physiography, biotic communities, wildlife, sensitive species and habitat, water resources, visual character, noise and air quality, and hazardous materials. The inventory of the physical and natural environment of the study area consisted of gathering resource data and information from various local, state, and federal regulatory agencies having jurisdiction within the study area. These agencies include the Arizona Department of Environmental Quality (ADEQ), the Arizona Game and Fish Department (AGFD), the Arizona Department of Water Resources (ADWR), and the U.S. Fish and Wildlife Service (USFWS). The characteristics of the physical and natural environment were also identified based on reconnaissance surveys of the study area.

2.1 TOPOGRAPHY/PHYSIOGRAPHY

The study area is located within the Basin and Range Physiographic Province of Central Arizona (Hendricks, 1985). This province is characterized by broad areas of alluvial fans and fan terraces, separated by isolated desert mountain ranges such as the Santan Mountains. These mountain ranges represent metamorphic core complexes, evidenced in the sheared metamorphic rock often associated with them. The study area is down-slope from the nearby Superstition Mountains that are within the more mountainous, Transition Province.

Although the study area is generally flat at approximately 1,300 feet above mean sea level, the general drainage pattern of the corridor slopes towards the Gila River to the southwest. Queen

Creek, an ephemeral drainage east and south of the study area and a tributary to the Gila River, is the only natural drainage that has not been precluded from routing most of the area-wide drainage towards the Gila River. The Central Arizona Project Canal east of the study area intercepts overland flow and minor drainages up gradient from the corridor. The Powerline Floodway Channel and other constructed flood control structures divert water across the study area to existing channels and canals. The canals are used for the primary purpose of providing water to the agricultural parcels within the vicinity of the study area, but in some cases are designed to capture run-off. In these cases, run-off is contained and continued within the distribution of water in the canal system.

Soils in the study area consist entirely of the Torrfluvents Association. This soil association has characteristics of well-drained soils in sandy- to clay-mixed alluviums, and is most represented along the Gila River valley. All soils that comprise this association are subject to seasonal flooding, where runoff is usually slow and the occurrence of erosion is slight, except along stream channels.

Land subsidence in the basin and range physiographic province is found more frequently where there are large, low-relief basins, bounded by mountain ranges with much steeper topographic relief. While uncommon in the study area earth fissures in the general region have occurred and can cause extensive damage to property and infrastructures such as roadways and flood control structures. These earth fissures are generally due to soil compaction caused by the lowering of the water table from excessive groundwater pumping. The closest known land subsidence is in the vicinity of Baseline Road and more recently in the Queen Creek area near the Santan Mountains.

2.2 BIOTIC COMMUNITIES

The study area lies within the Lower Colorado River Valley Subdivision of the Sonoran Desertscrub Biotic Community (Brown, 1994), which covers most of southwestern Arizona at elevations below 3,450 feet. A portion of the study area is undeveloped or vacant desert land and still supports native vegetation. Native vegetation commonly found in more undisturbed areas includes annuals such as fiddleneck, heron's bill, peppergrass, and desert marigold; shrubs such as creosote bush, triangle-leaf bursage, saltbush, brittlebush, wolfberry, desertbroom, and cat-claw acacia; trees such as mesquite, paloverde and ironwood; and cacti such as prickly pear, hedgehog, pincushion, cholla, and saguaro. Vegetation in the area is typically denser along wash corridors, where tree and large shrub species become more prevalent; however, these locations are limited to those segments of the study area in the vicinity of the Pinal County line. Outside of wash corridors, vegetation becomes less dense and is dominated by smaller shrub species and cacti. The areas that have been developed or are disturbed generally contain native and non-native landscaping plant species.

2.3 WILDLIFE

In the undeveloped natural desert areas, wildlife consists of a broad range of bird species, small and larger mammal species, and reptiles. Common bird species that may be found in the study area include house finch, mourning dove, cactus wren, verdin, white-crowned sparrow, Abert's towhee, curve-billed thrasher, and great-horned owl. Common mammal species include white-throated wood rat, ground squirrels, desert cottontail rabbit, pocket mice, black-tailed jackrabbit, and coyote. Common reptiles in the area include whiptail lizards, side-blotched lizard, zebra-tailed lizard, western diamondback rattlesnake, and kingsnake.

2.4 LISTED/SENSITIVE SPECIES AND HABITAT

The U.S. Fish and Wildlife Service (USFWS) list of threatened, endangered, proposed, and candidate species for Maricopa County was obtained from the USFWS Arizona Ecological Services Field Office website (www.arizonaes.fws.gov). Potentially suitable habitat for two listed species occurs in the vicinity of the study area: cactus ferruginous pygmy-owl (CFPO) and lesser long-nosed bat. Lands adjacent to the study area located in Pinal County are within CFPO Survey Zone 3, which includes “Areas within the historic range of the pygmy-owl with a low potential for occupancy”. If construction is required in CFPO Survey Zone 3 and a U.S. Army Corps of Engineers (Corps) permit under Section 404 of the Clean Water Act is required, the Corps/USFWS “*Guidelines to Ensure the Nationwide Permit Program will not Adversely Affect the Cactus Ferruginous Pygmy-owl*” would apply to the proposed project. According to these guidelines, the project would warrant Section 7 consultation with USFWS in the event federal funds are used for potential impacts to the CFPO because the project is located within CFPO Survey Zone 3 and will likely impact CFPO habitat components.

Other special status species for consideration include Arizona Game and Fish Department’s Wildlife of Special Concern in Arizona (WSCA) that may occur within the study area. The study area contains suitable habitat for the western burrowing owl, a WSCA species. Literature provided by AGFD on burrowing owls states that it is possible to find them where the land is “flat and open” and that the most likely locations are near agricultural fields where the burrows are found in dirt canal banks and pipe culverts. Burrowing owls are also found in undisturbed desert and grassland areas where vegetation is relatively sparse. Potential burrowing owl habitat occurs in the vicinity.

To comply with the Migratory Bird Treaty Act (MBTA), areas containing suitable nesting habitat for the burrowing owl should be searched prior to the start of any ground-disturbing activities. If active burrows are found within the construction limits, it is recommended that mitigation be implemented to avoid harming the owls. Typical burrowing owl mitigation outside the nesting season includes non-lethal hazing to flush owls, then covering the burrow so the owl won’t return. During the nesting season, owls and eggs/nestlings are removed by a permitted wildlife rehabilitator for later relocation to other suitable habitat.

The focus of the MBTA was the “Establishment of a Federal prohibition, unless permitted by regulations, to pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention for the protection of migratory birds, or any part, nest or egg of any such bird” (16 US Code 703). A list of migratory birds protected under the MBTA is contained in 50 CFR 10.13, and includes hundreds of species, including most bird species in Arizona. The exception to this generality of protected birds within Arizona includes most game bird species (excluding the white-winged and mourning dove which are protected), European starling, Gambel’s quail, and house sparrow to name a few.

2.5 WATER RESOURCES

Water resources evaluated in the context of this EO include: 1) wetlands and other waters of the U.S. as defined under Section 404 of the Clean Water Act; 2) canals or ponds not regulated under Section 404 of the Clean Water Act, 3) sole source aquifers; 4) unique waters; and 5) 100-year floodplains. Wetlands are those areas that are periodically or permanently inundated by surface

or groundwater, and support vegetation adapted for life in saturated soils. According to guidance from the Corps, an area is considered a wetland based on the presence of hydric soils, hydrology, and hydrophytic vegetation. In general, the study area is relatively flat, sloping towards the Gila River.

Jurisdictional waters of the U.S. likely occur within the study area in the form of several ephemeral washes and the Powerline Floodway, which intercepts sheet flows in the region and conveys the surface waters to East Maricopa Floodway and then onto the Gila River. Further investigation of these washes and constructed floodways would need to be investigated for their status as jurisdictional waters prior to future project specific actions. Additionally, because of some noticeable saturation of soils and possible wetland obligate species noticed during the field review within the floodway channel, further investigation of this site would be necessary to determine if it would meet the criteria of a wetland under Corps jurisdiction.

The irrigation canals located within the study area may also capture some run-off and, depending on the area (acres) or source that contributes to the run-off (e.g., a jurisdictional wash cut-off by development and diverted into a retention basin that overflows into a canal), could in a few cases be jurisdictional. Further studies would be warranted at the time of design for Section 404 permitting.

There are no sole source aquifers or unique waters within the study area.

A review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps and information provided by the Flood Control District of Maricopa] County (pending FEMA approval and therefore not included graphically at this time) indicates that several portions of study area are located within a designated 100-year floodplain. Areas within designated 100-year floodplains are located adjacent to several natural drainages and manmade structures in the study area. Impacts on floodplains typically occur when the topography within a floodplain is substantially modified either by placement or removal of materials.

Numerous water wells are registered in the project vicinity; however, only two are located within the 1-mile project wide corridor. If property is acquired and the water wells are abandoned proper closure procedures must be coordinated with ADWR.

2.6 VISUAL CHARACTER

The Williams Gateway Freeway study area is situated within a semi-rural area that has been the site of historic agricultural and industrial development. The area is generally flat with slopes of less than 2 percent, except for areas of the GM proving grounds. A 10-foot high privacy berm exists around GM's proving ground property. Until the late 1980s the area was generally open desert land with scattered farms in the project vicinity along with scattered residents. The area is transforming from the rural open desert setting into one with new commercial developments and residential development. Foreground features, in general, consist of browns and tans of the Sonoran desert with greens from the desert scrub that covers much of the study area.

The Superstition Mountains can be observed with minimal obstructions due to the flat topography to the east and northeast, the Santan Mountains to the southwest, and the Estrella and South Mountains are a distant view to the west. Much of the study area is still undisturbed sonoran desert scrub with scattered adjacent parcels currently under construction, existing residential areas, commercial sites occurring within and adjacent to the study area.

2.7 AIR QUALITY

The Clean Air Act and Amendments (CAAA) and NEPA require that air quality impacts be addressed in the preparation of environmental documents. The level of effort utilized to evaluate these impacts may vary from a simplified description to a detailed micro-scale analysis depending on factors, such as the type of document to be prepared, the project location and size, the meteorology of the project area, and the state air quality standards. Under the CAAA, areas are classified by levels of ambient air pollution existing at the time of the 1990 amendments as to whether they attain the National Ambient Air Quality Standards or are in non-attainment of the standards as described below.

The Federal Clean Air Act of 1970 established National Ambient Air Quality Standards (NAAQS) for six pollutants. These pollutants, referred to as the “Criteria Pollutants”, include carbon monoxide, nitrogen dioxide, ozone, particulate matter, sulfur dioxide, and lead. In 1987, the standard for particulate matter was revised by the U.S. Environmental Protection Agency (EPA) from total suspended particulate matter, aerosols with diameters up to approximately 45 microns, to those aerosols with aerodynamic diameters of 10 microns or less. In July 1997, the EPA revised the standards for both particulate matter and ozone. The EPA revised the PM₁₀ standard, added standards for particulates with diameters of 2.5 microns or less (PM_{2.5}) and also revised the method for the determination of exceedances. To ensure an effective transition to the new standards, the existing standards will remain in effect until it is determined that they have been met. The State of Arizona standards are identical to the NAAQS (Table 4).

For ozone, the 1-hour standard was replaced with an 8-hour standard. In addition, the level of ozone standard was lowered from 0.12 parts per million (ppm) to 0.08 ppm, and the method for the determination of exceedances was also revised.

Pollutant	Averaging Time	Primary $\mu\text{g}/\text{m}^3$ (ppm)	Secondary $\mu\text{g}/\text{m}^3$ (ppm)
Carbon Monoxide	1-hour	40 (35)	*
	8-hour	10 (9)	0
Nitrogen Dioxide	Annual	100 (0.05)	100 (0.05)
Ozone	1-hour	(0.12)	(0.12)
	8-hour	(0.08)	(0.08)
PM ₁₀	24-hour	150	150
	Annual	50	50
PM _{2.5}	24-hour	65	65
	Annual	15	15
Sulfur Dioxide	3-hour	0	1300 (0.5)
	24-hour	365 (0.14)	0
	Annual	80 (0.03)	0
Lead	Calendar Quarter	1.5	1.5

Source: Arizona Department of Environmental Quality

2.7.1. NON-ATTAINMENT AREAS

The CAAA of 1990 directed the EPA to designate those areas that have not met the NAAQS as non-attainment and to classify them according to their degree of severity. States that fail to attain the NAAQS for any of the criteria pollutants are required to submit State Implementation Plans (SIPs), which outline those actions that will be taken to attain compliance.

The Phoenix non-attainment area for O₃ (ozone) is defined as the MAG Urban Planning Area, which includes the greater Phoenix area. The non-attainment area for PM₁₀ (particulate matter less than 10 microns) is an area encompassing approximately 48 by 60 miles including the study area. Recently Maricopa County was placed in a maintenance classification for CO (carbon monoxide) which also includes MAG's Urban Planning Area. For transportation purposes, a maintenance area is treated as a non-attainment area for evaluation and modeling purposes.

2.7.2. CONFORMITY

Since 1977 federal agencies and Metropolitan Planning Organizations (MPOs) have been required by Section 176c of the CAA to ensure that all transportation projects conform to the approved air quality SIPs. The CAAA enacted in 1990 defined conformity to a SIP as meaning "conformity to a SIP's purpose of eliminating or reducing the severity and number of violations of the NAAQS" (Federal Register, November 30, 1993). The conformity determinations for federal actions related to transportation projects must meet the requirements of 40 CFR Parts 51 and 93.

The Williams Gateway Alignment study area is located in a non-attainment area for O₃ and PM₁₀ and is in a maintenance area for CO. Individual projects as they are implemented over time, whether in entirety or segmented, will need to be included in an approved Transportation Improvement Program (TIP) at least 1 year, and no more than 3 years, prior to construction. The TIP will have to conform to the SIP. Any construction activity located within Maricopa County must obtain dust permits and adhere to the local air quality rules and ordinances, including Maricopa County Rules 310 and 310.01.

On August 13, 2005, a finding of air quality conformity was made by the US Department of Transportation, in coordination with the EPA, for the MAG Transportation Improvement Program and the Regional Transportation Plan (2005 update), which includes the WGF corridor.

2.8 NOISE

Traffic noise tends to be a dominant noise source in urban as well as rural environments. In response to the problems associated with traffic noise, the United States Code of Federal Regulations Part 772 (23 CFR 772), "Procedures for Abatement of Highway Traffic Noise and Construction Noise," establishes standards for mitigating highway traffic noise.

As directed by 23 CFR Part 772, the FHWA has developed specific, hourly, A-weighted noise abatement criteria (NAC) that serve as the upper limit of acceptable traffic noise levels for various types of land use (Table 5, page 23). A-weighting emphasizes certain frequencies to approximate how sound is perceived by human hearing.

Activity Category	Description	Leq(h)
A	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities are essential if the area is to continue to serve its intended purpose.	57 dBA (Exterior)
B	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.	67 dBA (Exterior)
C	Developed lands, properties, or activities not included in Categories A or B.	72 dBA (Exterior)
D	Undeveloped lands.	None
E	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.	52 dBA (Interior)

Source: Title 23, Code of Federal Regulations (CFR), Part 772.

Noise activity categories B, C, and D occur within the study area. Activity category B sites include residential areas within the study area and/or any planned residential areas. Activity category C sources within the study area are comprised primarily of the industrial and agricultural land uses. Undeveloped (vacant) lands are represented by activity category D.

Noise impacts occur if the anticipated sound levels for this study area meet or exceed the thresholds for each of the land-use categories or approaches 67 dBA Leq for Category B-type land uses. "Approach" is considered to be 66 dBA Leq. These levels are typically applied to exterior areas where lower noise levels would be of benefit. The FHWA guidelines also state that noise abatement should be considered when the noise levels "substantially exceed the existing noise levels." This criterion, as defined by FHWA, is an increase of 15 dBA or more above existing conditions. Potential sensitive noise receptors within the study area include residences and undeveloped lands.

Existing noise data are not currently available for the study area. During subsequent environmental documentation activities for the study area, ambient noise levels would need to be monitored at specific locations. The future noise levels for projects that would result from new freeway construction, or the widening or realignment of existing roads as part of future freeway construction, would need to be evaluated to conform to the FHWA Procedures for Abatement of Highway Traffic Noise and Construction Noise and the Highway Traffic Noise Analysis and Abatement Policy.

During roadway transportation planning and design, noise analysis studies will be conducted; however, the aviation noise contours around WGA will not be factored into or be part of the roadway noise studies.

2.9 HAZARDOUS MATERIAL CONCERNS

Hazardous materials are regulated by the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The ADEQ implements CERCLA, commonly known as Superfund, and its amendment, the Superfund Amendments and Reauthorization Act (SARA) of 1986. The inherent environmental concerns associated with hazardous materials and solid waste landfills require a preliminary investigation

into the location of permitted and non-regulated hazardous material sites and solid waste facilities within the study area.

In December 2005, a Preliminary Initial Site Assessment for hazardous materials was conducted for the study area. References used included the State’s Water Quality Assurance Revolving Fund (WQARF) Registry; the Arizona Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDFs) List; the ADEQ Underground Storage Tank (UST) List; the ADEQ Leaking Underground Storage Tank (LUST) List; the ADEQ Drywell Registration List; the ADEQ Hazardous Material (HAZMAT) Incident Logbook (HMIL); the EPA’s Toxics Release Inventory (TRI); the Arizona Directory of Active/Inactive Landfills and Closed Solid Waste Landfills; and the Directory of Arizona’s Waste Tire Collection Sites and Waste Tire Processing Facilities. These references were reviewed for evidence of hazardous materials within the study area.

The document review and a “windshield survey” of the study area revealed the following hazardous materials related information (refer to Figure 8):

No open (municipal) solid waste landfills are located in the study area. Two closed solid waste landfills are located in the project area; one at the General Motors Proving Grounds and the other at the former Williams Air Force Base. One Waste Tire Collection and/or Processing facility (CRM of America, LLC) is located in the project area on Pecos Road 2.5 miles east of Ellsworth Road.

One Superfund Site (the former Williams Air Force Base) is located in the study area. The former Williams Air Force Base is approximately 4,127 acres in size and includes the entire Base. The site boundaries are Power Road to the west, Ray Road to the north, Pecos Road to the south, and Ellsworth Road to the east. Contaminants from base activities included organic solvents and paint strippers, petroleum spills, metal plating wastes, hydraulic fluids, pesticides, and radiological wastes. Discharges and disposals at WAFB have resulted in soil and groundwater contamination.

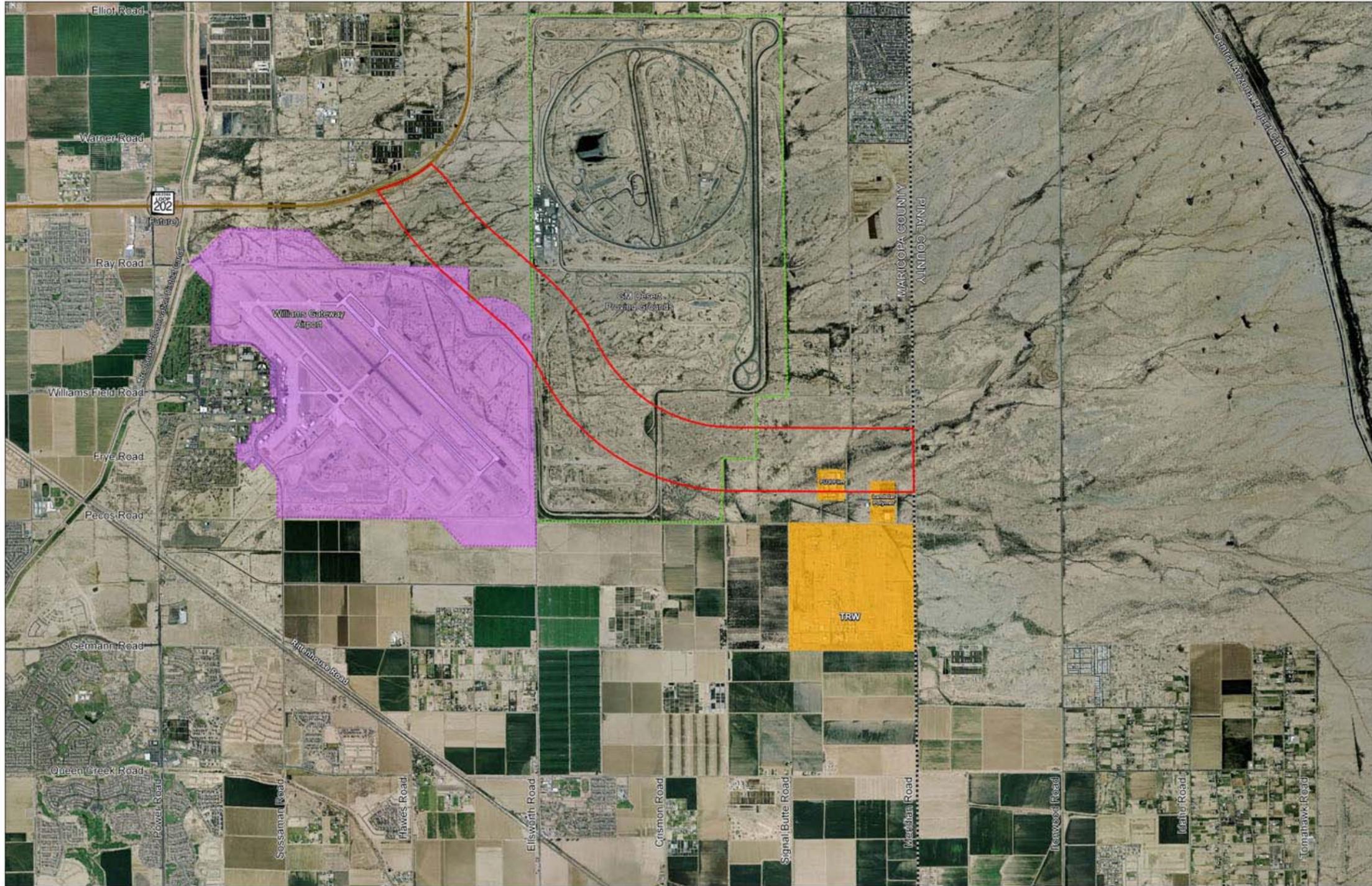
No TSDFs are found in the study area.

According to the EPA website (<http://www.epa.gov/tri/>), the Toxics Release Inventory (TRI) is a publicly available EPA database that contains information on toxic chemical releases and other waste management activities reported annually by certain covered industry groups as well as federal facilities. Two facilities are listed in the TRI within the study area. Although “ARCH Chemical Inc.” is the facility name listed in various EPA databases, this facility has been recently purchased and is currently known as Fuji Film.

Table 6. Toxic Release Incidents		
TRI ID	Name	Address
85242LNMCR6550S	ARCH Chemical Inc. (Fuji Film)	6550 South Mountain Road
85208TRWVS11202	TRW Vehicle Safety Systems Mesa II	11202 East Germann Road

Three facilities regulated by the EPA under RCRA are located within the study area.

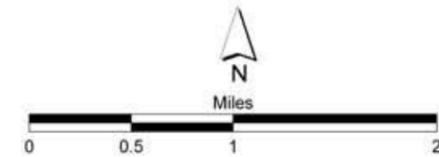
Table 7. RCRA Generators		
Handler ID	Name	Address
AZ757002582	USAF Williams Air Force Base	6001 South Power Road
AZR00000106	ARCH Chemical Inc. (Fuji Film)	6550 South Mountain Road
AZD9822491649	TRW Vehicle Safety Systems Mesa II Facility	11202 East Germann Road



Williams Gateway Freeway Alignment and Environmental Overview Study
 Figure 8. Hazardous Materials and Superfund Site Map.

- STUDY AREA for MAG PREFERRED ALIGNMENT
- WILLIAMS GATEWAY AIRPORT BOUNDARY
- GENERAL MOTORS DESERT PROVING GROUNDS BOUNDARY

- Hazardous Materials Sites**
- National Priorities List Superfund Site
 - RCRA Regulated Facilities



The ADEQ database revealed a total of 9 drywells located in the study area at 2 different locations.

Registration No.	Name	Address	No. Drywells
10538	ARCH CHEMICALS, INC	6550 SOUTH MOUNTAIN ROAD	5
18605	TRW VSSI	11202 EAST GERMANN ROAD	1
10266	TRW VSSI/MESA II	11202 EAST GERMANN ROAD	3

A review of the ADEQ UST database revealed no tanks located within or adjacent to the project.

A review of the ADEQ LUST database revealed no tanks located within or adjacent to the project.

A search of the ADEQ Hazardous Materials Incident Logbook database revealed 78 incidents reported within the study area (refer to the Appendix).

2.10 SUMMARY OF PHYSICAL AND NATURAL ENVIRONMENT

The study area is generally flat, and the drainage pattern slopes west southwest and towards the Maricopa floodway channel. Queen Creek, south of the study area, is the only prominent, natural drainage in proximity to the study area.

Much of the study area remains as vacant or undisturbed desert land with areas of native vegetation, especially near the natural washes that occur in the area. Undisturbed open desert areas offer some nesting and foraging habitat for birds, small rodents, and other small mammals. The AGFD's Heritage Data Management System does indicate the presence of a special status species, the burrowing owl, located within 3-miles of the study area. The burrowing owl is also afforded protection under the MBTA. No critical habitat for any listed threatened or endangered species or habitat in general for any threatened or endangered listed species occurs within the study area. Lands adjacent to the study area located in Pinal County are within CFPO Survey Zone 3, which includes "Areas within the historic range of the pygmy-owl with a low potential for occupancy". Proposed activities confined to Maricopa County would not involve potential impacts to the CFPO because they would be occurring outside of CFPO Survey Zone 3.

Several ephemeral washes and the Powerline Floodway are likely jurisdictional waters of the U.S. as defined under Section 404 of the Clean Water Act. Portions of the study area are located within 100-year floodplains. These include the ephemeral washes, the Powerline Floodway, and areas along Ellsworth Road.

The study area is in air quality non-attainment areas for O₃ and PM₁₀ and is considered a maintenance area for CO. Any individual project will need to be included in an approved TIP prior to construction.

Noise activity categories B, C, and D are found within the study area. Potential noise receptors include a small residential area near the western end of the study area.

Within the study area, 1 NPL Superfund site was identified as the Williams Gateway Air Force Base. In addition, no solid waste landfills and 78 hazardous material incidents were recorded in the study area. There were no underground storage tank or leaking underground storage tank sites documented within the study area. A total of 9 drywells were recorded within the study area; however, these occurred at only 2 different locations.

3.0 CULTURAL RESOURCES

3.1 METHODS

Sources examined for this overview included site and project files at the State Historic Preservation Office (SHPO) and the AZSITE Cultural Resources Database.

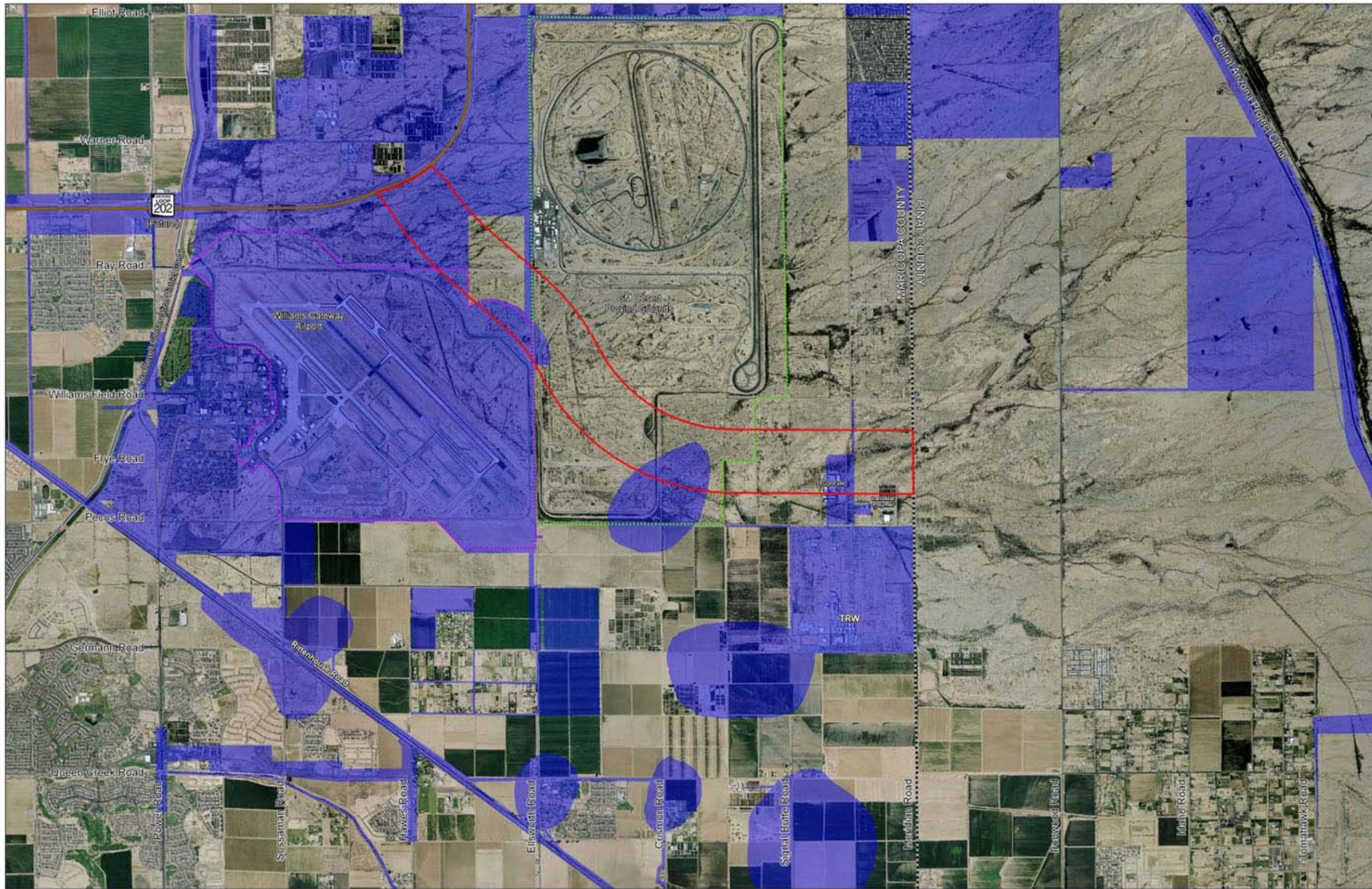
3.2 RESULTS

Few archaeological sites have been documented in the study area, and none have been located along the preferred alignment; however, prehistoric and protohistoric Native American groups exploited the lands in the area. Historic homesteads also may be present in the vicinity. Any of these sites could be eligible for inclusion on the National Register of Historic Places (Register) under Criterion D for their potential to yield important information regarding prehistoric and historic land use and occupation of the vicinity.

Most nearby studies have focused on Williams Air Force Base/Williams Gateway Airport. Arizona State University tested one of the prehistoric village sites on the base (Schoewetter et al. 1973) (refer to Figure 9). More thorough archaeological studies of the numerous sites occurred prior to the transfer of ownership to the City of Mesa (Greenwald et al. 1993; Hill and Bruder 2000). Several large surveys occurred north of the airport property (Macnider and Adams 1998; Mitchell 1993). Another study centered on Ellsworth Road (Brown 1998). Finally, expansion of the Greenfield Elementary School was surveyed (DeMaagd 1994).

3.3 SUMMARY OF CULTURAL RESOURCES

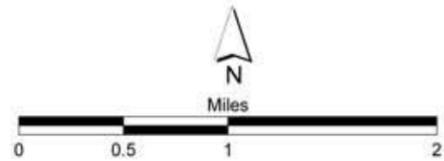
The preferred alignment should be surveyed for cultural resources during subsequent environmental studies. The resources, which could include archaeological sites as well as historic structure, should be treated in accordance with Arizona Revised Statutes 41-841 et seq., and consultation with the SHPO should be conducted regarding impacts to these properties. If federal funds or permits are used on future projects, cultural resources should be treated in accordance with all applicable federal legislation including, but not limited to, the National Historic Preservation Act (NHPA, 16 USC 470 et seq.) and applicable regulations (36 CFR 800). In addition, compliance with Section 106 of the NHPA should be completed if federal funding or permits are utilized.



Williams Gateway Freeway Alignment and Environmental Overview Study
 Figure 6. Cultural Resources Previous Survey Map.

- STUDY AREA for MAG PREFERRED ALIGNMENT
- WILLIAMS GATEWAY AIRPORT BOUNDARY
- GENERAL MOTORS DESERT PROVING GROUNDS BOUNDARY

Cultural Resource Survey Areas



4.0 REFERENCES AND RESOURCES

- Arizona Department of Environmental Quality. UST, LUST, Hazardous Incident Log. Accessed November 2005 via <http://www.azdeq.gov/databases/ustsearch.html>
- Arizona Department of Water Resources. WQARF Sites, Earth Fissures. Accessed November 2005 via
http://www.azwater.gov/dwr/content/Find_by_Program/Hydrology/WQARF/content/Reports/azwqarf_2004.pdf
http://www.azwater.gov/dwr/Content/Hot_Topics/Earth_Fissures_in_Arizona/fissuretest.pdf
- Arizona State Parks. Arizona Statewide Comprehensive Outdoor Recreation Plan. 2003. Accessed April 2004 via <http://www.pr.state.az.us/partnerships/planning/scorp03.html>,
<http://www.azwater.gov/dwr/Content/ImagedRecords/default.htm>
- Brown, David E., Editor. Biotic Communities of the Southwestern United States and Northwestern Mexico. The University of Utah Press. 1994.
- Brown, Gregory B. *An Archaeological Survey of a Seven-Mile Long Segment of the Maricopa County Department of Transportation Ellsworth Road Right-of-Way Between Germann Road and Baseline Road, Mesa, Maricopa County, Arizona*. Logan Simpson Design, Tempe. 1998
- City of Mesa. General Plan Update. 2002. Accessed April 2005 via <http://www.ci.mesa.az.us/planning/pdf/MesaGeneralPlan.pdf>
- Greenwald, David H., Richard A. Anduze, and Mary-Ellen Walsh-Anduze. *Archaeological Survey and Test Excavations at Williams Air Force Base, Arizona*. SWCA Archaeological Report 93-12b. Phoenix. 1993
- Hendricks, David M. *Arizona Soils*. College of Agriculture, University of Arizona. 1985.
- Hill, Matthew E., and J. Simon Bruder. *Passive Accumulations: Archaeological Investigations in Support of Reconstruction and Extension of Runway 12L – 30R at Williams Gateway Airport, Mesa, Arizona*. Dames & Moore (now URS), Phoenix. 2000
- Macnider, Barbara S., and Kim Adams. *Cultural Resource Assessment of the Santan Freeway, Chandler, Mesa, and Gilbert, Maricopa County, Arizona*. Archaeological Consulting Services, Ltd., Tempe. 1998
- Mitchell, Douglas R. *An Archaeological Survey of 200 Acres Near Ray and Hawes Roads, Maricopa County, Arizona*. SWCA Archaeological Report 93-90. Phoenix. 1993
- National Park Service, Land and Water Conservation Fund Homepage. Accessed April 2004 via <http://www.nps.gov/ncrc/programs/lwcf/index.html>
- Schoenwetter, James, Sylvia W. Gaines, and Donald E. Weaver. *Definition and Preliminary Study of the Midvale Site*. Department of Anthropology, Arizona State University, Tempe. 1973

Town of Apache Junction. Census Data 2000. Accessed via http://www.ajcity.net/econ_dev_web/DeptofCommerceAJExecutive%20SummaryMay2004.htm

Town of Gilbert. General Plan. 2003. Accessed April 2004 via <http://www.ci.gilbert.az.us/generalplan/default.html>

Town of Queen Creek. General Plan. 2002. Accessed April 2004 via <http://www.queencreek.org/>

US Census Bureau. Census Data 2000. Accessed November 2005 via <http://www.census.gov/main/www/cen2000.html>

5.0 APPENDIX

Hazardous Materials Incident Reports						
Incident number:	Incident date:	Name:	County:	Address:	Chemical material:	Quantity:
91-081-D	10/27/1991	USAF Williams AFB	Maricopa	Williams Air Force Base	PCB	3 gals.
88-179	6/15/1988	USAF Williams AFB	Maricopa	Williams Air Force Base	Methylene Chloride	45 gallons
98-103-D	2/23/1998	TRW Safety Systems II	Maricopa	11202 E. Germann Rd.	Ozone	8 lbs.
00-024-B	9/24/1999	Mesa, City of	Maricopa	Williams Gateway WWTP	Mercury	20 lbs.
96-002-C	1/2/1996	BEM Systems	Maricopa	Williams Gateway Airport	Plating Waste	5 gals.
92-171-C	12/9/1992	USAF Williams AFB	Maricopa	Williams AFB Bldg 550	JP-4 Waste	50 gals.
92-069-C	3/31/1992	USAF Williams AFB	Maricopa	Storm Drain Line/Catch Basin	Petro contam. Wastewater	Unknown
92-011-A	1/27/1992	TRW	Maricopa	11202 E. Germann Rd.	Oil/Transformer	Not Reported
92-041-B	3/31/1992	USAF Williams AFB	Maricopa	Williams Air Force Base	Wastewater	Unknown
88-204	7/6/1988	USAF Williams AFB	Maricopa	Williams Air Force Base	Fuel (JP-4, Jet)	50 gallons
00-023-B	9/4/1999	TRW	Maricopa	11202 E. Germann Rd.	Wastewater (Sodium Azide)	100 gals.
88-102	4/6/1988	USAF Williams AFB	Maricopa	Williams Air Force Base	Fuel (JP-4 Jet)	300 gallons
98-014-D	7/25/1997	TRW	Maricopa	11202 E. Germann Rd.	Sodium Azide	< 1 lb.
99-066-D	11/9/1998	Bestway Trucking	Maricopa	11202 E. Germann Rd. (TRW)	Sodium Metasilicate	3-5 gals.
00-194-D	6/12/2000	TRW	Maricopa	11202 E. Germann Rd.	NOX Gas	.9 lbs.
99-016-C	8/7/1998	TRW	Maricopa	11202 E. Germann Rd.	Iron Oxide	Not Reported
00-109-D	1/21/2000	TRW	Maricopa	11202 E. Germann Rd.	Sodium Azide	1-2 lbs.
98-061-E	10/16/1997	TRW	Maricopa	11202 E. Germann Rd.	Ammonia Gas	100 lbs.
99-007-C	7/16/1998	TRW	Maricopa	11202 E. Germann Rd.	Dust	Not Reported
99-031-D	8/28/1998	TRW	Maricopa	11202 E. Germann Rd.	Iron Oxide	.66 lbs.
97-023-E	3/18/1997	TRW	Maricopa	11202 Germann Rd.	Sodium Azide	1700 lbs.
99-033-D	9/23/1998	TRW	Maricopa	11202 E. Germann Rd.	Sodium Azide	100 gals.
99-062-D	11/5/1998	TRW	Maricopa	11202 E. Germann Rd.	Sodium Azide	4.6 lbs.
99-152-D	3/10/1999	TRW	Maricopa	11202 E. Germann Rd.	Wastewater	100 gals.
99-044-E	10/7/1998	TRW	Maricopa	11202 E. Germann Rd.	Iron Oxide	< 1 lb.
00-062-D	10/14/1999	TRW	Maricopa	11202 E. Germann Rd.	Azide based gas generant	320 g.
99-057-D	10/11/1998	TRW	Maricopa	11202 E. Germann Rd.	Ammonia	<1 lb.
98-045-D	10/20/1997	TRW	Maricopa	11202 E. Germann Rd.	Sodium Azide	2 lbs., etc.
00-049-D	9/20/1999	Arch Chemicals	Maricopa	6550 S. Mountain Rd.	Hydrochloric Acid	25 gals.
00-055-E	11/18/1999	TRW	Maricopa	11202 E. Germann Rd.	Sodium Azide	1 g.
00-136-D	3/27/2000	Arch Chemicals	Maricopa	6550 South Mountain Rd.	Boron Tri-Bromide	Unknown
98-017-C	8/8/1997	TRW	Maricopa	11202 W. Germann Rd.	Sodium Hydroxide	14 lbs.
98-049-D	10/24/1997	TRW	Maricopa	11202 E. Germann Rd.	PVC Propellent	< 2 lbs.

99-034-D	9/24/1998	TRW	Maricopa	11202 E. Germann Rd.	Sodium Azide	2 lbs.
98-044-D	10/17/1997	TRW	Maricopa	11202 E. Germann Rd.	Sodium Azide	350 lbs., etc.
99-065-E	9/13/1998	TRW	Maricopa	11202 E. Germann Rd.	Sodium Azide	.03 lbs.
99-031-C	9/29/1998	TRW	Maricopa	11202 E. Germann Rd.	Iron Oxide Pre-Mix	.2 lbs.
99-010-C	7/27/1998	TRW	Maricopa	11202 E. Germann Rd.	Sodium Azide	Not Reported
96-011-A	1/18/1996	TRW	Maricopa	11202 E. Germann Rd.	Air Bag Propellant	1 lb.
98-115-E	3/7/1998	TRW	Maricopa	11202 E. Germann	Anhydrous Ammonia	643 lbs.
99-056-D	10/9/1998	TRW	Maricopa	11202 E. Germann Rd.	Sodium Azide	<1 lb.
98-062-E	10/16/1997	TRW	Maricopa	11202 E. Germann Rd.	PVC Propellant	40 lbs.
99-128-D	4/5/1999	TRW	Maricopa	11202 E. Germann Rd.	Unidentified Raw material	<1 lb.
99-029-C	10/1/1998	TRW	Maricopa	11202 E. Germann Rd.	Iron Oxide, Sodium Azide	3-5 lbs.
98-016-C	7/25/1997	TRW	Maricopa	11202 W. Germann Rd.	Sodium Azide Mix	< 1 lb.
99-030-C	8/26/1998	TRW	Maricopa	11202 E. Germann Rd.	Iron Oxide, Sodium Azide	.3, .15 lbs.
01-102-E	2/27/2001	TRW	Maricopa	11202 E. Germann Rd.	Sodium Azide, etc.	2.5 lbs.
98-155-D	6/16/1998	TRW	Maricopa	11202 E. Germann Rd.	Copper Azide	.1 gram
99-068-C	4/14/1999	TRW	Maricopa	11202 E. Germann Rd.	SWECO	~ 2 lbs.
99-068-C	4/14/1999	TRW	Maricopa	11202 E. Germann Rd.	SWECO	~ 2 lbs.
00-110-D	1/18/2000	TRW	Maricopa	11202 E. Germann Rd.	Sodium Azide	3 grams
99-111-D	2/16/1999	TRW	Maricopa	11202 E. Germann Rd.	Sodium Azide Wastewater	60 gals.
99-017-C	8/14/1998	TRW	Maricopa	11202 E. Germann Rd.	Sodium Azide	Not Reported
99-006-C	7/15/1998	TRW	Maricopa	11202 E. Germann Rd.	Iron Oxide	Not Reported
99-063-D	11/10/1998	TRW	Maricopa	11202 E. Germann Rd.	Sodium Azide	12.7 lbs.
99-048-E	10/8/1998	TRW	Maricopa	11202 E. Germann Rd.	Iron Oxide, Sodium Azide	< 1 lb.
96-017-D	6/18/1996	TRW	Maricopa	11202 E. Germann	Sodium Azide	1200 lbs.
99-038-C	11/16/1998	TRW	Maricopa	11202 E. Germann Rd.	Wastewater	Unknown
98-068-E	11/3/1997	TRW	Maricopa	11202 E. Germann Rd.	Sodium Azide	1500 lbs.
96-016-E	12/18/1996	TRW	Maricopa	11202 E. Germann Rd.	Sodium Azide	5 grains
98-047-D	10/23/1997	TRW	Maricopa	11202 E. Germann Rd.	PVC Propellant	1 lb.
96-077-D	11/17/1996	TRW	Maricopa	11202 E. Germann Rd.	Sodium Azide	380 + lbs.
94-037-F	5/31/1994	TRW	Maricopa	11202 E. Germann Road	D003	475 lbs.
99-008-C	7/22/1998	TRW	Maricopa	11202 E. Germann Rd.	Iron Oxide	Not Reported
99-177-D	5/26/1999	TRW	Maricopa	11202 E. Germann Rd.	Copper Azide	1 gram
99-031-B	9/4/1998	TRW	Maricopa	11202 E. Germann Rd.	Copper Azide	<1 gram
99-126-D	4/16/1999	TRW	Maricopa	11202 E. Germann Rd.	Smoke	Unknown
99-037-C	11/12/1998	TRW	Maricopa	11202 E. Germann Rd.	Nitrogen/Sod. Hydroxide	.25 lbs.
00-193-D	6/2/2000	TRW	Maricopa	11202 E. Germann Rd.	Copper Azide	1 gram

00-114-D	1/19/2000	TRW	Maricopa	11202 W. Germann Rd.	Process Water	Not Reported
00-131-E	4/12/2000	TRW	Maricopa	11202 W. Germann Rd.	Sodium Azide	32 g.
00-192-D	5/31/2000	TRW	Maricopa	11202 E. Germann Rd.	Copper Azide	< 1 gram
99-008-D	7/15/1998	TRW	Maricopa	11202 E. Germann Rd.	Oxidizer Premix Material	3 lbs.
99-136-D	4/21/1999	TRW	Maricopa	11202 E. Germann Rd.	Smoke (Electric Motor)	20 min duration
99-009-C	7/22/1998	TRW	Maricopa	11202 E. Germann Rd.	Copper Azide	Not Reported
00-003-D	7/2/1999	Arch Chemicals, Inc.	Maricopa	6550 S. Mountain Rd.	Nitric Acid	Unknown
00-076-D	11/26/1999	TRW	Maricopa	11202 E. Germann Rd.	Unknown	Unknown
99-185-D	6/27/1999	PolyTek Southwest	Maricopa	11400 E. Pecos Rd.	Tires	Lge. Pile