



BOARD OF SUPERVISORS AGENDA ITEM REPORT

Requested Board Meeting Date: January 16, 2018

Title: Environmental Assessment and Mitigation Report (EAMR) - Kolb Road: Sabino Canyon Road to Sunrise Drive. Project 4KSCSD, Bond Project (DOT-32)

Introduction/Background:

The proposed improvements will widen approximately 1.9 miles of Kolb Road from a two-lane roadway to a three-lane roadway (with the middle lane being a two-way left turn lane), with multi-use paved shoulders suitable for bicycle use, pathways/sidewalks, drainage and landscaping, between Sabino Canyon Road and Sunrise Drive.

Discussion:

A Community Advisory Committee (CAC) was established for the Kolb Road: Sabino Canyon Road to Sunrise Drive. Between January and November, 2017; five CAC meetings were held with the CAC to review the project and obtain input from the local community. The environmental impacts associated with the project, along with draft plans for the roadway were reviewed and commented on by the CAC. The EAMR was then provided to the committee for their comments and recommendations, which resulted in support of the EAMR and moving the project forward.

Conclusion:

The CAC reviewed and provided their endorsement of the project. The letter and CAC meeting notes are found in the Appendix of the EAMR.

Recommendation:

Approval of the EAMR for the Kolb Road: Sabino Canyon Road to Sunrise Drive Project.

Fiscal Impact:

This EAMR is for the Kolb Road CIP project which has an estimated cost of \$16M; funding sources for project are STP, PC Bonds, and Tucson Water.

Board of Supervisor District:

1 2 3 4 5 All

Department: Transportation Telephone: 724-6410

Contact: Paul Bennett Telephone: 724-6408

Department Director Signature/Date: *Grant Oliver* 12/22/17

Deputy County Administrator Signature/Date: *[Signature]* 12/27/17

County Administrator Signature/Date: *C. D. [Signature]* 12/27/17

Kolb Road: Sabino Canyon Road to Sunrise Drive

Environmental Assessment and Mitigation Report

Prepared for:

Pima County Department of Transportation
201 N. Stone Ave., 4th Floor
Tucson, AZ 85701-1207
Pima County Project No. 4KSCSD



Prepared by:

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EcoPlan Associates, Inc.
Environmental Science & Resource Economics

December 20, 2017

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APPENDIX

- Community Advisory Committee Meeting Minutes (January, March, June, August, November, and December 2017)
- December 12, 2017, Open House Public Notice
- December 12, 2017, Open House Information Handout
- December 12, 2017, Open House Meeting Summary
- Board of Supervisors Notice of Public Hearing
- Community Advisory Committee Letter
- Sonoran Desert Tortoise Awareness Program Handout



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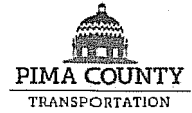


DOCUMENTS AVAILABLE ON PROJECT WEBSITE

<http://roadprojects.pima.gov>

(Select "Kolb Road - Sabino Canyon Road to Sunrise Drive")

Final Design Concept Report	Psomas	December 2017
Environmental Assessment and Mitigation Report	EcoPlan Associates, Inc.	December 2017
Traffic Engineering Report	Psomas	May 2017
Northeast Area Traffic Study	CEI, Inc.	February 2004
Lighting Report	Psomas	June 2017
Preliminary Initial Site Assessment	Ninyo and Moore, Inc.	February 2017
Environmental Screening Questionnaire, Impact Summary Matrix, and Results Memorandum	EcoPlan Associates, Inc.	March 2017
Biological Evaluation	EcoPlan Associates, Inc.	December 2017
Visual and Aesthetic Resource Analysis	McGann & Associates, Inc.	October 2017
Noise Report	Sound Solutions, LLC	August 2017



ACRONYMS AND ABBREVIATIONS

ADEQ	Arizona Department of Environmental Quality
ADOT	Arizona Department of Transportation
AGFD	Arizona Game and Fish Department
APE	area of potential effects
BE	Biological Evaluation
CAC	Community Advisory Committee
CGP	Construction General Permit
CMP	corrugated metal pipe
CNF	Coronado National Forest
Corps	U.S. Army Corps of Engineers
CWA	Clean Water Act
dBA	A-weighted decibel
DCR	Design Concept Report
EAMR	Environmental Assessment and Mitigation Report
EPA	U.S. Environmental Protection Agency
ESR	Environmentally Sensitive Roadway
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
HOA	Homeowners Association
IPaC	Information for Planning and Conservation
LED	light-emitting diode
LOS	Level of Service
MBTA	Migratory Bird Treaty Act
MSCP	Multi-Species Conservation Plan
NRHP	National Register of Historic Places
PAG	Pima Association of Governments
PCDOT	Pima County Department of Transportation
PCRFCDD	Pima County Regional Flood Control District
PISA	Preliminary Initial Site Assessment
RCP	reinforced concrete pipe
RDM	Roadway Design Manual
REC	Recognized Environmental Concern
ROW	right-of-way
SGCN	Species of Greatest Conservation Need
SHPO	State Historic Preservation Office
STP	Surface Transportation Program
TIP	Transportation Improvement Program
USFWS	U.S. Fish and Wildlife Service
vpd	vehicles per day



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EXECUTIVE SUMMARY

Kolb Road: Sabino Canyon Road to Sunrise Drive (4KSCSD) Environmental Assessment and Mitigation Report

Project Location

The project area is in an unincorporated area of east Pima County in the northeast portion of the greater Tucson metropolitan area. The project lies within portions of Sections 17, 18, 19, and 20 of Township 13 South, Range 15 East, on the Sabino Canyon (1996), Arizona, U.S. Geological Survey 7.5-minute quadrangle. Adjacent lands are privately held or are owned by Pima County. The Coronado National Forest boundary is about 1.2 miles northeast of the project limits.

Project Limits

The general project limits extend along Kolb Road from Sabino Canyon Road to Sunrise Drive, a distance of about 1.9 miles. The south project limit ties into the widened Kolb Road/Sabino Canyon Road intersection project (4TSCKR, 2000), and the north end of the project ties into the Kolb Road/Sunrise Drive intersection improvement project (4SRCRA, 2009).

Project Scope

This project consists of widening approximately 1.9 miles of Kolb Road from an existing two-lane roadway to a three-lane roadway (one travel lane per direction and a two-way left-turn lane) between Sabino Canyon Road and Sunrise Drive, in compliance with the 1997 Bond program (DOT-32). Project funding for the project is identified in the Pima Association of Governments Transportation Improvement Program (TIP) Fiscal Year 2018–2022 under TIP ID No. 787.00. Funding sources include the Federal Highway Administration Surface Transportation Program (STP) (Federal No. STP-PPM-0[257]D) and Pima County bonds. Tucson Water is also expected to contribute to the project cost. The federal funding is administered through the Arizona Department of Transportation (TRACS No. 0000 PM PPM T0109 01C).

Funding Source	Funding
Federal (STP) Funds	\$ 8,500,000
Local Funds (Pima County Bonds) - Design	\$ 2,966,000
Local Funds (Pima County Bonds) - Construction	\$ 4,061,000
Tucson Water Contribution	\$ 500,000
Total	\$16,027,000

The overall project cost includes design, environmental clearance, right-of-way, utilities, and construction. Project construction is programmed to begin in fiscal year 2019.



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Project Purpose and Need

Regionally, Kolb Road is an urban arterial road that carries traffic from just south of Interstate 10 to the foothills subdivisions and resorts north of Sunrise Drive, a distance of about 16 miles. Approximately 1.5 miles north of the project limits, Kolb Road becomes Craycroft Road. A 2.2-mile segment of the Kolb Road alignment from the south project limit to Tanque Verde Road is named Sabino Canyon Road. In the project area, the road serves primarily residential land uses, with commercial development at the north end of the project. The Northeast Area Arterial Study identified the need for capacity and safety improvements.

Within the project limits, a length of 1.9 miles from Sabino Canyon Road to Sunrise Drive, Kolb Road has several operational deficiencies due to the lack of turning lanes for the many driveways and side streets along the roadway, no paved shoulders for motorist or bicycle use, and limited facilities (pathways or sidewalks) for pedestrians. One segment of Kolb Road, from Territory Drive to Sunrise Drive, experiences a higher than average crash rate due to shopping center access points.

The purpose of this project will be to improve operational conditions and safety through the additions of a center two-way left-turn lane for motorists, multi-use paved shoulders suitable for bicycle use, and sidewalk or pathways for pedestrian use. The project will also provide intersection improvements to enhance traffic operations at the intersections of Snyder Road, Territory Drive, and Sunrise Drive.

The new roadway will meet projected traffic demand and improve access, safety, and bicycle and pedestrian mobility.

Project Elements

The project will widen approximately 1.9 miles of Kolb Road between Sabino Canyon Road and Sunrise Drive. The major project elements include:

- Reconstructing the roadway to provide a three-lane (one 11-foot-wide through lane in each direction and a 12-foot-wide two-way left-turn lane) roadway with six-foot-wide multi-use paved shoulders suitable for bicycle use in each direction
- Adding retaining walls, as needed
- Replacing guardrails, as needed
- Constructing pedestrian facilities
- Constructing drainage improvements (including channels and culverts)
- Reconstructing the traffic signal at Kolb Road and Snyder Road
- Adding a roundabout at Kolb Road and Territory Drive
- Adding or improving street lighting (1) from Sunrise Drive to Territory Drive, (2) at the Kolb Road and Snyder Road intersection, and (3) at the Rural Metro Fire Station



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- Adding landscaping and irrigation
- Relocating utilities, as needed

In accordance with the Pima County Community Participation and Mitigation Ordinance (Pima County Code 10-560.010 et seq.), an Environmental Assessment and Mitigation Report (EAMR) is required for major transportation projects. This document complies with the ordinance and is consistent with EAMR guidance in the Pima County Roadway Design Manual.

Project Impacts and Recommended Mitigation

Reports, studies, and analyses used for the preparation of the EAMR are noted throughout the document, are included in the References section, and are posted on the project website.

Biological Resources - The proposed project will have temporary and permanent impacts on xeroriparian habitat, upland habitat, and native plants. Those impacts are moderate because much of the right-of-way is disturbed due to development and utility corridors. No sensitive habitat or wildlife connectivity issues are present. Impacts to xeroriparian habitat are associated with the multiple drainage crossings and are unavoidable. Mitigation measures for regulated riparian habitat under the Pima County Regional Flood Control District (PCRFCDD) riparian ordinance will be included.

Drainage and Clean Water Act - Multiple drainage structures will impact Waters of the United States. Coordination with the U.S. Army Corps of Engineers is ongoing. A non-notifying Clean Water Act (CWA) Section 404 Nationwide Permit 12 and Nationwide Permit 14 with conditional Section 401 Water Quality Certification are expected. A CWA Section 402 Stormwater Pollution Prevention Plan will be prepared by the Pima County Department of Transportation, and a Notice of Intent will be submitted to the Arizona Department of Environmental Quality.

Floodplains - The project will not result in impacts to the Federal Emergency Management Agency (FEMA) designated 100-year floodplains. No improvements will encroach on the Ventana Canyon Wash floodplain at the south end of the project. The drainage design will convey runoff from 100-year storms under Kolb Road, providing an all-weather roadway. The roadway and drainage structures are in compliance with FEMA and PCRFCDD requirements, and a Floodplain Use Permit will be obtained.

Air Quality - The project will only have temporary, short-term impacts on particulate matter (dust) during construction activities. Those impacts will be minimized by a Pima County Fugitive Dust Activity Permit and Pima County Department of Transportation standard specifications for dust control.

Noise - The noise analysis resulted in a determination that the project will not result in an exceedance of the Pima County Noise Abatement Criteria or the Arizona Department of Transportation Noise Abatement Requirements. No noise barriers are required on the project.



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Temporary impacts during construction are anticipated and will be limited through compliance with the Pima County Noise Ordinance (Pima County Code 9.30.070).

Utilities - The project will impact multiple utilities in the corridor, including gas, electric, communications, potable water, and wastewater. Throughout the design process, coordination with the utility companies has occurred to locate facilities, minimize impacts, and develop relocation schedules.

Pima County Wastewater facilities may be impacted by new drainage structures. If necessary, Pima County Reclaimed Water Reclamation Department lines will be relocated as a part of the roadway construction project. The Tucson Water lines will be impacted by the new drainage structures. Tucson Water lines will be relocated as part of the roadway construction project. The relocation of electric, gas, telephone, and cable lines will be performed prior to road construction by the utility companies.

There are no seasonal restrictions on the relocation of Tucson Electric Power or Southwest Gas facilities in the project area.

Hazardous Materials - No recognized environmental conditions (leaking underground storage tanks, landfills, or land uses associates with hazardous materials) have been identified within the project limits. Field sampling and laboratory testing of roadway paint striping and concrete headwalls determined that no asbestos-containing materials were present and that lead-based paint results were below the 0.5 percent U.S. Department of Housing and Urban Development/ U.S. Environmental Protection Agency action levels but above the U.S. Department of Labor Occupational Safety and Health Administration detection level.

Construction - Project construction is expected to begin with roadway construction in spring 2019 and last approximately 18 months. Utility relocation efforts are expected to occur prior to roadway construction. During construction, access to all residences, businesses, and the fire station will be maintained at all times, with the following exceptions:

- Temporary closures of asphalt residential driveways will not exceed four hours, with 24-hour notice of any such closure given to the property owner (*Note: the Rural Metro fire station driveway width allows reconstruction to occur in halves, keeping a minimum of one-half open at all times*).
- Temporary closures of concrete residential driveways will not exceed seven days for placement of concrete and cure time. The contractor will provide on-street parking for homeowners during this time period.

One lane of traffic in each direction on Kolb Road will be maintained. The reconstruction of the Kolb Road/Snyder Road intersection will require a short term (approximately two weeks) traffic detour on Snyder Road.

Historic/Cultural Resources - The project will not impact historic and cultural resources. No historic or cultural resources are present within the project limits.



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Visual Resources - Kolb Road is designated a Scenic Route in the Pima County Major Streets and Routes Plan. The roadway widening will moderately alter views from adjacent properties. The widened roadway will increase the paved area and require cut and fill slopes. Mature vegetation will be removed and, in areas, replaced with retaining walls or other structural elements. The general visual character of the area will not change, but the project area will be altered by the increased paving, exposed cut slopes, mature vegetation removal, and enlargement of drainage features. A Visual and Aesthetic Resource Analysis was prepared to document impacts and recommend mitigation, including landscaping, structural treatments, and public art.

Right-of-Way Acquisition/Displacement - No acquisition of residences or businesses will occur. Several temporary construction easements, slope easements, and drainage easements will be required to facilitate construction.

Access and Parking - Access will be maintained to all adjacent properties. No parking is currently available within the project limits. Minor traffic delays may occur on Kolb Road and Snyder Road; however, one lane of traffic in each direction is expected to remain open. A traffic control plan approved by the Pima County Department of Transportation Field Engineering Division will be implemented by the contractor.

Neighborhood Disruption - No social services are within the project limits other than Rural Metro Fire Station 73 at 4300 N. Kolb Road. Coordination with, and access to, the fire station will be maintained at all times. No impacts to neighborhoods are expected. Neighborhood access will be maintained throughout construction. Residents will be provided various traffic control communications through preconstruction meetings, direct mailings, media alerts, the project website, and signage. A short-term traffic detour will be required for the reconstruction of the Kolb Road/Snyder Road intersection.

Parks and Recreation - No parks and recreation facilities are within the project limits or the project vicinity. The nearest public recreation facility is the Sabino Canyon Visitor Center, approximately 1.2 miles to the northeast.

Under Pima County, Arizona, Code 10.56-070.B, an EAMR "shall identify adverse impacts of the proposed project and shall provide recommendations for mitigation measures which may be undertaken to minimize the adverse impacts." Though some of the mitigation measures in this report are required to be in compliance with various guidelines or regulations, they are deemed "mitigation measures" in this document.



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Mitigation Measures

Potential Impacts	Mitigation	Agency Involvement	Responsible Parties
Removal of native plants (Section 6.1.1)	Protected native plants are to be preserved in place or mitigated in accordance with the Arizona Native Plant Law, the Environmentally Sensitive Roadway Design Guidelines, and the Pima County Regional Flood Control District Regulated Riparian Habitat Mitigation Standards and Implementation Guidelines.	Arizona Department of Agriculture	Pima County Department of Transportation and contractor
Management of invasive plant species (Section 6.1.1)	Implement invasive species management measures as guided by Pima County specification 201-3.04, Noxious and Invasive Vegetation.	Pima County Department of Transportation	Pima County Department of Transportation and contractor
Impacts to nesting birds (Section 6.1.1)	The contractor shall plan to complete all vegetation-removal activities on the site from September 1 through February 28 to avoid harming any active bird nests.	U.S. Fish and Wildlife Service	Pima County Department of Transportation and contractor
Impacts to Waters of the United States (Section 6.1.2)	Pima County will conduct work under a Clean Water Act Section 404 Nationwide Permit 12 and Nationwide Permit 14 with Section 401 Water Quality Certification, and the contractor shall comply with the permit conditions.	U.S. Army Corps of Engineers	Pima County Department of Transportation and contractor
	<p>The required Section 402 mitigation measures will be determined during preparation of the Arizona Pollutant Discharge and Elimination System Permit application and Stormwater Pollution Prevention Plan.</p> <p>Pima County will prepare a Stormwater Pollution Prevention Plan, and the contractor will implement the Stormwater Pollution Prevention Plan.</p> <p>The Pima County Department of Transportation and the contractor will prepare and file separate Notices of Intent and Notices of Termination with the Arizona Department of Environmental Quality.</p>	Arizona Department of Environmental Quality, Pima County Department of Environmental Quality	Pima County Department of Transportation and contractor
Impacts to regulated riparian habitat (Section 6.1.2)	The Pima County Department of Transportation will provide on-site landscaping mitigation for impacts to regulated riparian habitat in accordance with the Pima County Regional Flood Control District floodplain and riparian ordinance.	Pima County Regional Flood Control District	Pima County Department of Transportation and contractor
Impacts to floodplains (Section 6.1.3)	A Floodplain Use Permit from the Pima County Regional Flood Control District will be required because more than 0.33 acre of riparian habitat will be impacted.	Pima County Regional Flood Control District	Pima County Department of Transportation and contractor



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Potential Impacts	Mitigation	Agency Involvement	Responsible Parties
Construction dust control (Sections 6.1.4 and 6.1.8)	Comply with all dust control measures identified in the Pima County Department of Transportation standard specifications for construction, the Stormwater Pollution Prevention Plan, and the Pima County Department of Environmental Quality Fugitive Dust Activity Permit.	Pima County Department of Environmental Quality	Pima County Department of Transportation and contractor
Utility service interruptions (Section 6.1.6)	Coordination and planning with the utility companies to determine any service interruptions, and notify customers 14 days in advance.	Multiple utilities	Utility or contractor
Maintenance of access (Sections 6.1.8 and 6.2.2)	Implementation of a traffic control plan and maintenance of access to residential subdivisions, commercial development, and Rural Metro.	Pima County Department of Transportation	Pima County Department of Transportation and contractor
Construction noise (Section 6.1.8)	Construction equipment noise minimized by use of properly muffled equipment, maintenance of equipment, and placement of equipment away from residential receivers. Compliance with Pima County noise ordinance (Pima County Code 9.30.070).	Pima County Department of Transportation	Pima County Department of Transportation and contractor
Impacts to cultural resource sites (Section 6.1.9)	If previously unidentified cultural resources are encountered during construction, work at that location shall be halted immediately and the resources shall be secured and protected. The Arizona State Museum and the Pima County Office of Sustainability and Conservation Cultural Resources and Historic Preservation Division shall be contacted immediately.	Arizona State Historic Preservation Office, Arizona State Museum Pima County Office of Sustainability and Conservation Cultural Resources and Historic Preservation Division	Pima County Department of Transportation and contractor
Visual impacts due to road and drainage structure construction (Section 6.1.10)	Incorporate landscaping, reseeding, structural treatments, and public art, where practical.	Pima County Department of Transportation	Pima County Department of Transportation and contractor



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Potential Impacts	Mitigation	Agency Involvement	Responsible Parties
Potential presence of asbestos-containing material and lead-based paint (Section 6.1.7)	<p>If any hazardous materials are encountered during construction, work shall cease at the location and the Pima County Engineer shall be contacted to arrange for the proper assessment, treatment, and disposal of those materials.</p> <p>No asbestos was detected in paint striping or concrete structures. Lead-based paint was detected in yellow paint striping. The level was below action limits but above the U.S. Department of Labor Occupational Safety and Health Administration detection level. Therefore, the contractor is required to notify workers of the potential presence of lead.</p>	Pima County Department of Transportation	Pima County Department of Transportation and contractor

Agency Coordination

Agency coordination has occurred with the following agencies and will continue through design, permitting, and construction:

- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- Federal Emergency Management Agency
- Arizona Department of Environmental Quality
- Arizona Department of Transportation
- Arizona Game and Fish Department
- Arizona State Historic Preservation Office
- Pima County Department of Environmental Quality
- Pima County Office of Sustainability and Conservation
- Pima County Regional Flood Control District
- Pima Association of Governments

Public Participation

In general, the local public is familiar with the planned project because it was first proposed as part of the Pima County 1997 Bond Program (DOT-32). Earlier planning was directed toward a four-lane roadway section along Kolb Road. This concept required substantive new right-of-way and was not supported by the Community Advisory Committee (CAC) or area residents. In 2004, the Pima County Department of Transportation completed a review of overall traffic flows in the



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area (Northeast Area Arterial Study) and identified the currently proposed three-lane section concept, which keeps improvements within the existing right-of-way and easements. This concept meets transportation needs for the area.

The current Kolb Road project CAC is made up of 14 representatives from the project corridor, including one member from the original CAC in 2004. Regular meetings were held to present the project and seek guidance from the CAC (see CAC Meeting Minutes in Appendix).

January 31, 2017 - This initial meeting focused on introducing the engineering design team, providing a project overview, discussing roles and responsibilities, and selecting a chair, vice-chair, and art committee members. Nine CAC members attended.

March 29, 2017 - The second meeting provided a design status update and overall project schedule. Sidewalk/pedestrian alternatives to be evaluated were discussed. Twelve CAC members attended.

June 15, 2017 - The third meeting included an overview of the Design Concept Report (DCR) components and a presentation on the noise analysis process. Ten CAC members attended.

August 29, 2017 - This meeting provided the opportunity to comment on the Draft DCR, presented the results of the noise analysis, and provided an overview of the EAMR/DCR process. Eleven CAC members and about 15 members of the public attended.

November 8, 2017 - The focus of the fifth meeting was to review the draft EAMR. The project manager presented an overview of project status and an overview of the technical reports that compose the EAMR, including Biological Resources, Drainage/Floodplain (Clean Water Act permitting), Air Quality, Noise Analysis, Hazardous Materials, Historic and Cultural Resources, Visual Resources, and Neighborhood Impacts. The overview of the EAMR was in preparation for the CAC role to review the EAMR and provide comments through a letter to the Board of Supervisors. In addition, the project manager noted that updated traffic counts had been obtained that confirmed the values included in the Traffic Report.

December 12, 2017 - The final CAC meeting presented the Final DCR and EAMR to the committee. The project manager reviewed the changes made in the EAMR in response to comments provided following the November CAC meeting. There were brief discussions on landscaping, street lighting, and access at Territory Drive/Bashas shopping center. The CAC has been fully engaged in the process and is supportive of the project design concepts. Their letter of support is included in the Appendix.

A public open house meeting was held on December 12, 2017, at Ventana Vista Elementary School, 6085 N. Kolb Road. The meeting was advertised through public notices and direct mailings. A summary of the meeting is included in Chapter 8 Public Participation and in the Appendix. A second public open house will be scheduled in mid- to late 2018, prior to project construction, to present the roadway plans and the construction schedule.



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The Pima County Board of Supervisors will hold a public hearing on January 16, 2018 in the Board of Supervisors Hearing Room, Administration Building, 130 West Congress Street, Tucson, Arizona, at or after 9:00 A.M. to consider for approval the EAMR for Bond Project (DOT-32) Kolb Road Improvement Project.

A project website, <http://roadprojects.pima.gov>, is available for current project status and technical reports.



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1.0 BACKGROUND

1.1 PROJECT DESCRIPTION

Project Name - Kolb Road: Sabino Canyon Road to Sunrise Drive

Pima County Project No. - 4KSCSD

Project Location and Limits - The project area is in an unincorporated area of east Pima County in the northeast portion of the greater Tucson metropolitan area (Figures 1 and 2). The project lies within portions of Sections 17, 18, 19, and 20 of Township 13 South, Range 15 East, on the Sabino Canyon (1996), Arizona, U.S. Geological Survey 7.5-minute quadrangle. Adjacent lands are privately held or are owned by Pima County. The Coronado National Forest (CNF) boundary is about 1.2 miles northeast of the project limits.

In accordance with the Pima County Community Participation and Mitigation Ordinance (Pima County Code 10-560.010 et seq.), an Environmental Assessment and Mitigation Report (EAMR) is required for major transportation projects. This document complies with the ordinance requirements and is consistent with Pima County Department of Transportation (PCDOT) Pima County Roadway Design Manual (RDM) (PCDOT 2015) guidance for the preparation of a project EAMR.

The project originated in the 1997 Highway User Revenue Fund Bond program (DOT-32) as a widening to four lanes. Subsequent coordination with the community and a 2004 Pima County Department of Transportation Northeast Area Arterial Study (PCDOT 2004) included the currently proposed three-lane section concept. This concept keeps improvements within the existing right-of-way (ROW) and easements while meeting transportation needs for the area. Kolb Road (Sabino Canyon Road to Sunrise Drive) is identified in the Pima Association of Governments (PAG) Transportation Improvement Program (TIP) Fiscal Year 2018–2022 under TIP ID No. 787.00. The project is described as widening Kolb Road to three lanes for a distance of 2.1 miles. The actual length is 1.9 miles because the project will tie into previously widened intersections at Sabino Canyon Road and Sunrise Drive.

1.2 PROJECT COST AND FUNDING

Project funding identified in the PAG Program (TIP, Fiscal Year 2018–2022) is from the Federal Highway Administration (FHWA) Surface Transportation Program (STP) (Federal Project No. STP-PPM-0[257]D) and Pima County bonds (PAG 2017). Tucson Water is also expected to contribute to the project cost. The federal funding is administered through the Arizona Department of Transportation (ADOT) (TRACS No. 0000 PM PPM T0109 01C).

Funding Source	Funding
Federal (STP) Funds	\$ 8,500,000
Local Funds (Pima County Bonds) - Design	\$ 2,966,000
Local Funds (Pima County Bonds) - Construction	\$ 4,061,000
Tucson Water Contribution	\$ 500,000
Total	\$16,027,000



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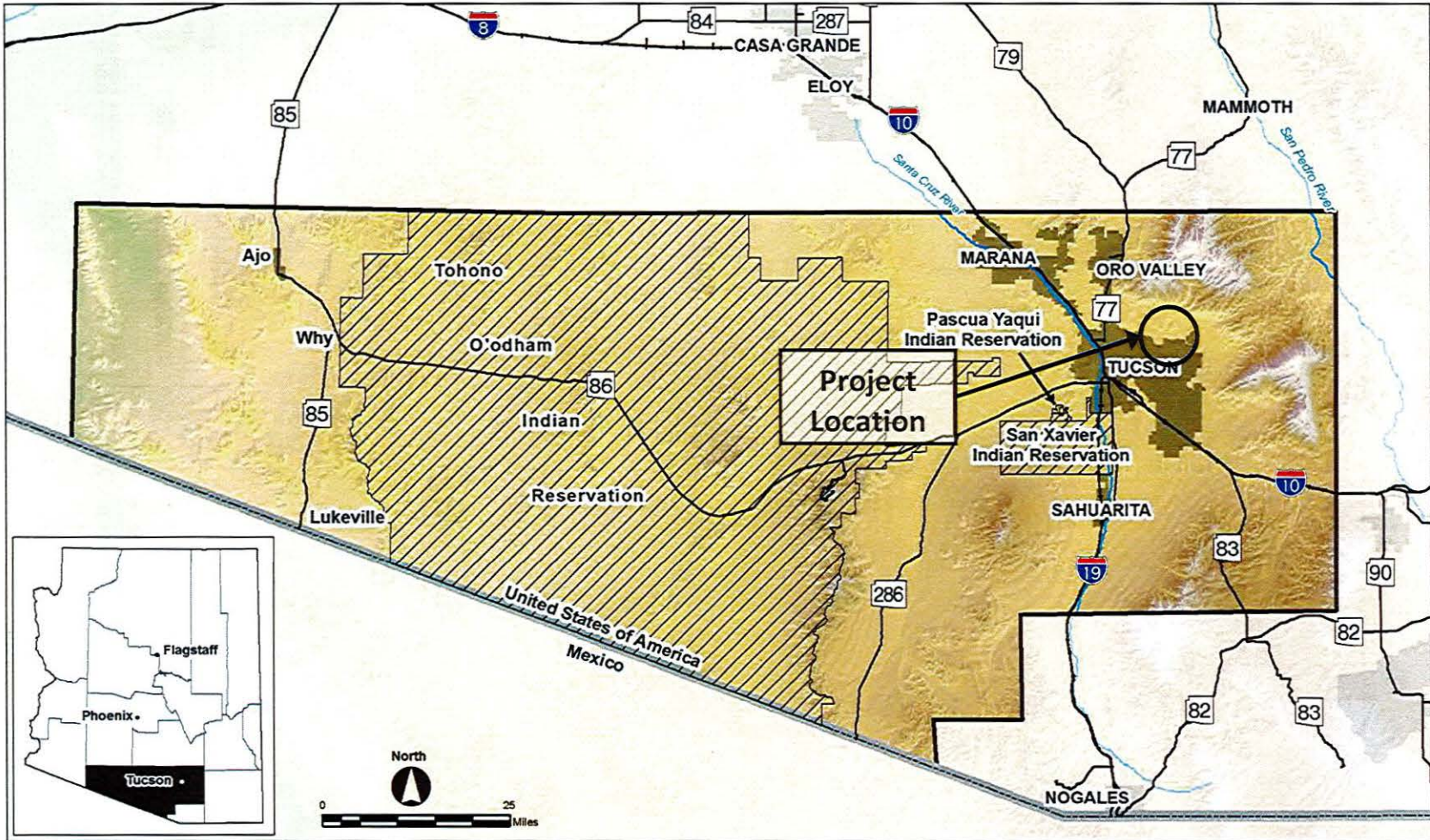


Figure 1. Project location



Kolb Road: Sabino Canyon Road to Sunrise Drive
Environmental Assessment and Mitigation Report

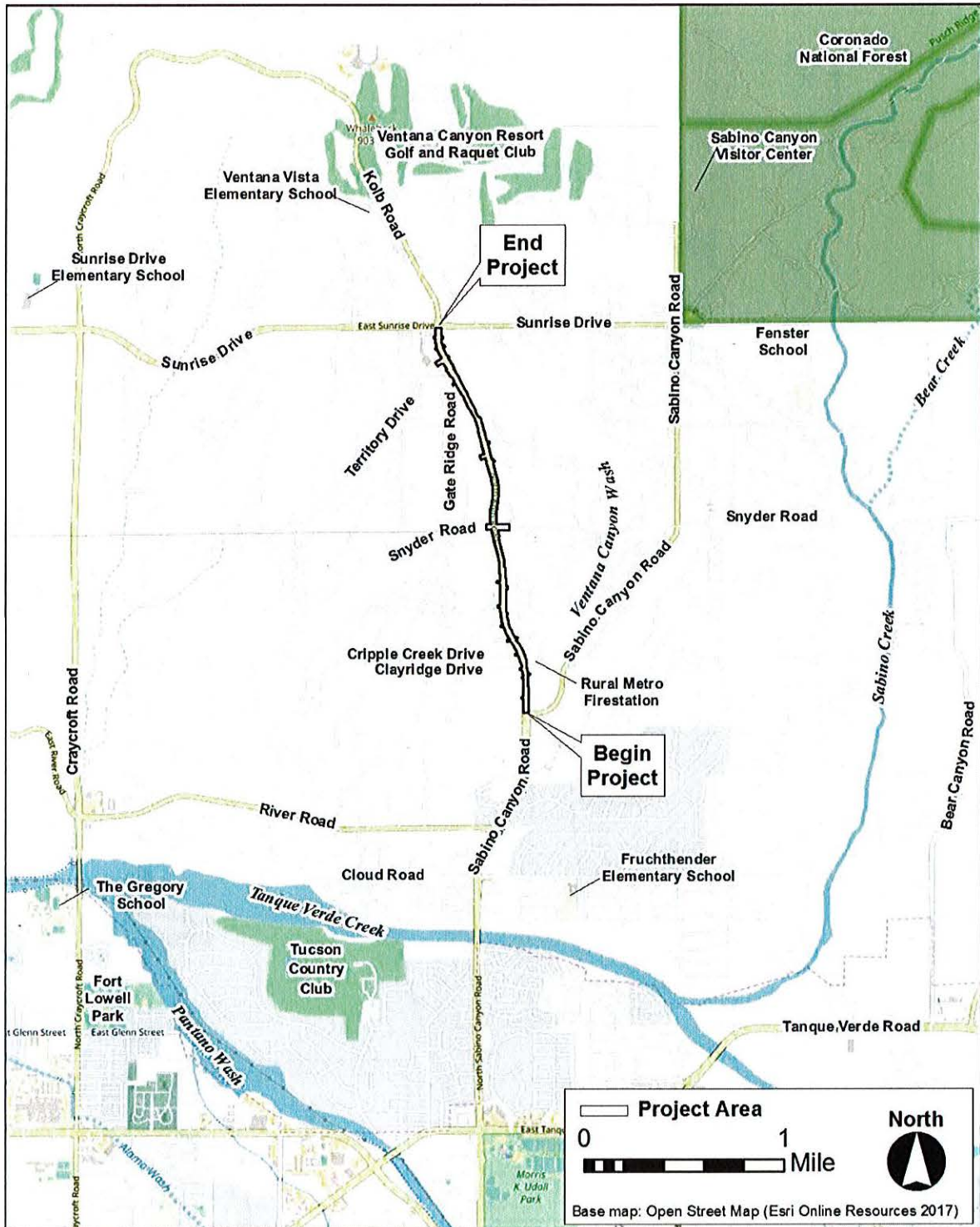


Figure 2. Project vicinity



Kolb Road: Sabino Canyon Road to Sunrise Drive
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The overall project cost includes design, environmental clearance, ROW, utilities, and construction. Construction funding is available in fiscal year 2019. Estimated costs for the project are shown in Table 1.

Table 1. Project cost (based on preliminary design estimates)

Task	Cost
Right-of-way	\$290,000
Design	\$3,170,000
Construction	\$10,342,000
Construction engineering	\$1,750,000
Utility relocation/oversight	\$375,000
Artwork (1%)	\$100,000
Total	\$16,027,000

The utility relocation costs assume that half of the relocation costs are being paid by Tucson Water. The Pima County Regional Wastewater Reclamation Department reimburses the project the full costs of sewer facility adjustments. No costs are included for Tucson Electric Power or Southwest Gas relocations.

Artwork is estimated at 1 percent of the construction costs, and construction administration is assumed to be 15 percent of the construction costs. The costs for drainage easements and temporary construction easements are included in ROW costs.

1.3 DIRECTION BY BOARD OF SUPERVISORS

The project is part of an approved PAG TIP to be funded by the FHWA STP and Pima County Bonds. The Pima County Board of Supervisors approved entering into a contract for Roadway Planning and Design Engineering Services for Kolb Road: Sabino Canyon Road to Sunrise Drive on August 2, 2016, and issued a Notice to Proceed under Contract No. CT-TR-16*368 to Psomas.

1.4 PROJECT DESIGN PROCESS

The development of the proposed project is following Pima County RDM Chapter 3 and has included the following engineering design and environmental documents to date:

- State Historic Preservation Office Survey Report Summary Form, Kolb Road: Sabino Canyon Road to Sunrise Drive, Pima County, Arizona (EcoPlan Associates, Inc., February 2017)
- Environmental Screening Questionnaire, Impact Summary Matrix, and Results Memorandum (EcoPlan Associates, Inc., March 2017)
- Noise Review, Kolb Road, Sabino Canyon Road to Sunrise Drive (Sound Solutions, LLC, August 2017)
- Clean Water Act Section 404 Preliminary Jurisdictional Determination (EcoPlan Associates, Inc., October 2017)



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- Final Traffic Engineering Report, Kolb Road, Sabino Canyon Road to Sunrise Drive (Psomas, May 2017)
- Preliminary Initial Site Assessment, Kolb Road from the Intersection of Sunrise Drive South to Intersection of Sabino Canyon Road, Catalina Foothills, Pima County, Arizona (Ninyo and Moore, Inc., February 2017)
- Biological Evaluation, Valencia Road: Wade Road to Ajo Highway (EcoPlan Associates, Inc., December 2017)
- Visual and Aesthetic Resource Analysis, Kolb Road: Sabino Canyon Road to Sunrise Drive (McGann & Associates, Inc., October 2017)
- Environmentally Sensitive Roadway Vegetation Inventory and Relevé Analysis Report (McGann & Associates, Inc., September 2017)
- Final Drainage and Hydrology Report (Psomas, November 2017)
- Final Design Concept Report, Kolb Road: Sabino Canyon Road to Sunrise Drive (Psomas, December 2017)
- Geotechnical/Pavement Design Report (SCE, October 2017)
- Final Lighting Report, Kolb Road: Sabino Canyon Road to Sunrise Drive (Psomas, June 2017)
- Initial Roadway Design Plans (Psomas, August 2017)

The development of final plans will occur following approval of the Design Concept Report (DCR) and EAMR. Design is expected to be completed in August 2018, and construction is expected to begin in spring 2019, with completion in summer 2020.



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2.0 PROJECT PURPOSE AND NEED

The project purpose and need is defined by regional and site-specific issues. The discussion below identifies roadway needs and identifies the project objectives for solving or meeting those needs.

2.1 PROJECT NEED

Regionally, Kolb Road is an urban arterial road that carries traffic from just south of Interstate 10 to the foothills subdivisions and resorts north of Sunrise Drive, a distance of about 16 miles. Approximately 1.5 miles north of the project limits, Kolb Road becomes Craycroft Road. A 2.2-mile segment of the Kolb Road alignment from the south project limits to Tanque Verde Road is named Sabino Canyon Road. In the project area, the road serves primarily residential land uses, with commercial development at the north end of the project. The Northeast Area Arterial Study (PCDOT 2004) identified the need for capacity and safety improvements.

Within the project limits (1.9 miles from Sabino Canyon Road to Sunrise Drive), Kolb Road has several operational deficiencies due to the lack of turning lanes for the many driveways and side streets, limited paved shoulders for motorist or bicycle use, and limited facilities (pathways or sidewalks) for pedestrians. One segment of Kolb Road, from Territory Drive to Sunrise Drive, experiences a higher than average crash rate due to shopping center access points. The proposed project is needed to increase safety and improve multimodal connectivity to respond to these deficiencies along Kolb Road.

The project area is fully developed and consists primarily of privately owned single-family residential homes east and west of Kolb Road. Multifamily residential units are east of Kolb Road, north and south of Snyder Road and east of Kolb Road as it approaches Sunrise Drive. Businesses are also at the north end of the project as Kolb Road approaches Sunrise Drive. A fire station (Rural Metro Fire Station 73) is at the south end of the project, east of Kolb Road near Cripple Creek Drive. The numerous intersecting streets and residential and commercial driveways result in more than 50 access points directly to Kolb Road between Sunrise Drive and Sabino Canyon Road. The multiple turning locations and lack of turn lanes results in safety issues and delays.

Kolb Road currently carries approximately 11,750 vehicles per day (vpd) north of Snyder Road and approximately 12,600 vpd south of Snyder Road. Daily volumes on Snyder Road and Territory Drive are significantly lower. Under existing conditions, the signalized intersections at Sabino Canyon Road, Snyder Road, and Sunrise Drive are currently operating at Level of Service (LOS) C or better during the peak hour.



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In addition, all movements at all four study intersections are operating at LOS D or better in the morning peak hour and at LOS C or better in the afternoon peak hour. Most of the movements are operating at LOS B or better. Note that all roadway segments currently operate at LOS D or better (Psomas 2017a). LOS designations are as follows:

- *A* - Free flow. Traffic flows at or above the posted speed limit and motorists have complete mobility between lanes.
- *B* - Reasonably free flow. LOS A speeds are maintained, maneuverability within the traffic stream is slightly restricted.
- *C* - Stable flow, at or near free flow. Ability to maneuver through lanes is noticeably restricted and lane changes require more driver awareness.
- *D* - Approaching unstable flow. Speeds slightly decrease as traffic volume slightly increases. Freedom to maneuver within the traffic stream is much more limited and driver comfort levels decrease.
- *E* - Unstable flow, operating at capacity. Flow becomes irregular and speed varies rapidly because there are virtually no usable gaps to maneuver in the traffic stream and speeds rarely reach the posted limit.
- *F* - Forced or breakdown flow. Every vehicle moves in lockstep with the vehicle in front of it, with frequent slowing required. Travel time cannot be predicted, with generally more demand than capacity.

PAG maintains a travel demand model that estimates the future volumes for the Tucson metropolitan area. Current traffic numbers reflect 11,750 vpd on Kolb Road north of Snyder Road and 12,600 vpd south of Snyder Road. Though most of the area is already developed, it is reasonable to assume that residual development, combined with economic recovery and an improved roadway, will result in small increases in traffic volumes. Therefore, to be conservative and to provide a consistent estimate throughout the project area, an annual growth rate of 0.5 percent was used for this project. The resulting projected daily volumes indicate that Kolb Road is expected to carry approximately 14,200 vpd south of Snyder Road and approximately 13,200 vpd north of Snyder Road (Psomas 2017a). A two-lane roadway (one lane in each direction) is capable of reasonably handling those volumes.

Pedestrian or bicycle facilities are limited along Kolb Road within the project limits. Sidewalks (6 feet wide, paved) are only present at the commercial area approaching Sunrise Drive and at the intersection with Sabino Canyon Road. Useable paved shoulders (8 feet wide) are only present approaching the south end of the project, at the Sabino Canyon Road intersection. The remainder of the project has 1- to 2-foot-wide paved shoulders, and they are deteriorated in many locations. The limited dirt shoulders are rough and unstable due to slope and cross drainage. The roadway corridor is not conducive to bicycle or pedestrian use.

The crash history on Kolb Road between Sunrise Drive and Territory Drive notes 11 crashes from 2011 to 2016. Six of the crashes involved drivers exiting the shopping center on the west side of Kolb Road. At least four of the crashes involved drivers making a left turn out of the



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shopping center; one crash involved a right turn out of the shopping center, and the other is unclear from the data. Though this is a short segment, the crash rate is higher than Pima County's average rate.

2.2 PROJECT PURPOSE

The purpose of this project is to improve operational conditions and safety through the addition of a 12-foot-wide center two-way left-turn lane for motorists. The project will also improve safety and reduce delays by controlling access between Territory Drive and Sunrise Drive and providing a roundabout at the intersection of Territory Drive and Kolb Road. The project will also improve pedestrian mobility, with the addition of sidewalks or pathways and access ramps that meet Americans with Disabilities Act requirements, and bicycle mobility through the inclusion of multi-use paved shoulders suitable for bicycle use. These improvements and features are consistent with the Northeast Area Arterial Study.

The new roadway will meet projected traffic demand and improve access, safety, and bicycle/pedestrian mobility. This is supported by the funding partners, the FHWA and Pima County (PAG 2017). The project federal environmental clearance through ADOT and the FHWA is expected to occur in January 2018.



Kolb Road: Sabino Canyon Road to Sunrise Drive
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3.0 PROJECT SETTING

3.1 EXISTING CONDITIONS

The project area is in an unincorporated area of east Pima County in the northeast portion of the greater Tucson metropolitan area (see Figure 1). The project lies within portions of Sections 17, 18, 19, and 20 of Township 13 South, Range 15 East, on the Sabino Canyon (1996), Arizona, U.S. Geological Survey 7.5-minute quadrangle. Adjacent lands are privately held or are owned by Pima County. The County owns nine parcels adjacent to Kolb Road, totaling approximately 5.03 acres. The CNF boundary is about 1.2 miles northeast of the project limits.

3.1.1 Built Environment

The existing Kolb Road is generally an uncurbed two-lane paved roadway, with 12-foot-wide lanes and paved shoulders varying from 1 to 2 feet wide. The horizontal alignment of the roadway is curvilinear through rolling, hilly terrain. The vertical profile varies as the roadway climbs from Sabino Canyon Road at an elevation¹ of 2,560 feet to Sunrise Drive at 2,750 feet.

Segments of the roadway at the north and south ends have additional lanes at the intersections. The Kolb Road and Sabino Canyon Road intersection consists of two through lanes and a left-turn lane southbound and two through lanes and a U-turn lane northbound. Sabino Canyon Road has one right-turn lane northbound where Sabino Canyon Road forks away from Kolb Road. Westbound Sabino Canyon Road has two left-turn lanes and one right-turn lane.

North of the Kolb Road and Sabino Canyon Road intersection, Kolb Road transitions from four lanes to two lanes. One left-turn bay exists northbound onto Little Savannah Lane. The section of Kolb Road between Sabino Canyon Road and Snyder Road has no shoulder once the transition is complete. The existing intersection of Kolb Road and Snyder Road consists of one through lane northbound and southbound, and one combined through/turn lane eastbound and westbound. Left-turn lanes are also present northbound and southbound. The existing intersection of Kolb Road and Sunrise Drive consists of one through lane, a left-turn lane (double turn lanes for northbound traffic), one right-turn lane, and one bicycle lane in each of the four directions.

The posted speed limit is 35 miles per hour, and the roadway has a posted load limit to preclude trucks above 18,000 pounds. The load limit for the roadway will be retained.

Fifteen existing culverts are under Kolb Road, and six are under driveways or side streets. Existing culverts vary in size and material; however, the majority are composed of corrugated metal pipes (CMPs). Eleven of the culverts are inadequately sized to convey the 100-year storm event peak discharge under the roadway. Four at-grade crossings also exist within the project limits (Psomas 2017b).

¹ Elevations in this document are referenced to mean sea level.



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Kolb Road ROW varies but is generally 90 feet wide. The existing ROW along Snyder Road varies between 90 and 145 feet wide west of the intersection with Kolb Road and is 150 feet wide east of Kolb Road.

The land uses within the study area are primarily residential: single-family subdivisions, single-family homes on one- to five-acre lots, and multifamily buildings. Apartment complexes are at the southeast corner of the Sunrise Drive and Kolb Road intersection and east of Kolb Road at its intersection with Snyder Road. Vacant residential sites are sporadic along Kolb Road and in adjacent subdivisions.

Commercial land use occurs within the project limits. A Bashas' grocery store anchors a group of retail stores and restaurants on the southwest corner of the Kolb Road and Sunrise Drive intersection. A second group of retail stores is on the southeast corner of the same intersection. One four-acre commercial site west of Kolb Road and south of Territory Drive has been developed (restaurant and shops). Rural Metro Fire Station 73 is across from Cripple Creek Drive.

Existing utilities that can be found within the Kolb Road corridor include sanitary sewer, cable, gas, electric, telephone, water, fiber optic cable, and landscaping irrigation. Most utilities fall within the existing roadway ROW and therefore may fall beneath the proposed roadway. Utilities will be evaluated for conflicts during final design to determine whether relocations are necessary. Utility companies within the project limits are as follows:

- CenturyLink
- Comcast
- Cox Communications
- Level 3
- Pima County Regional Wastewater Reclamation Department
- Southwest Gas
- Tucson Electric Power
- Tucson Water

3.1.2 Natural Environment

The project area is in the north Sonoran Desert biotic region and the south portion of the Basin and Range physiographic province. Despite the scarce and unreliable precipitation and the high summer temperatures, this region supports a biologically diverse desert vegetative community indicative of the foothill paloverde (*Parkinsonia* [*Cercidium*] *microphylla*)–saguaro (*Carnegiea gigantea*)–dominated Arizona Upland subdivision of Sonoran desertscrub (EcoPlan 2017a). Undisturbed native vegetation representing this community adjacent to Kolb Road in the project area is rich and diverse.



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The project is within foothills descending the south limits of the Santa Catalina Mountains northeast of Tucson. Elevations range from 2,560 feet at Sabino Canyon Road to 2,750 feet at Sunrise Drive. The major drainage feature in the vicinity is Ventana Canyon Wash, an ephemeral drainage that roughly parallels the project limits to the east, crossing and paralleling Kolb Road and connecting with Tanque Verde Creek.

Twenty-four drainage structures, including the multiple box culvert structure over Ventana Canyon Wash, occur along Kolb Road and driveways or cross streets within the project limits. Stormwater runoff is handled by box culvert, pipe culverts, at-grade crossings, and adjacent drainage channels. However, stormwater flows overtop the roadway at several locations, resulting in debris, safety, and operational concerns. The Federal Emergency Management Agency (FEMA) has designated a 100-year floodplain (FEMA 2011) along Ventana Canyon Wash (Figure 3).



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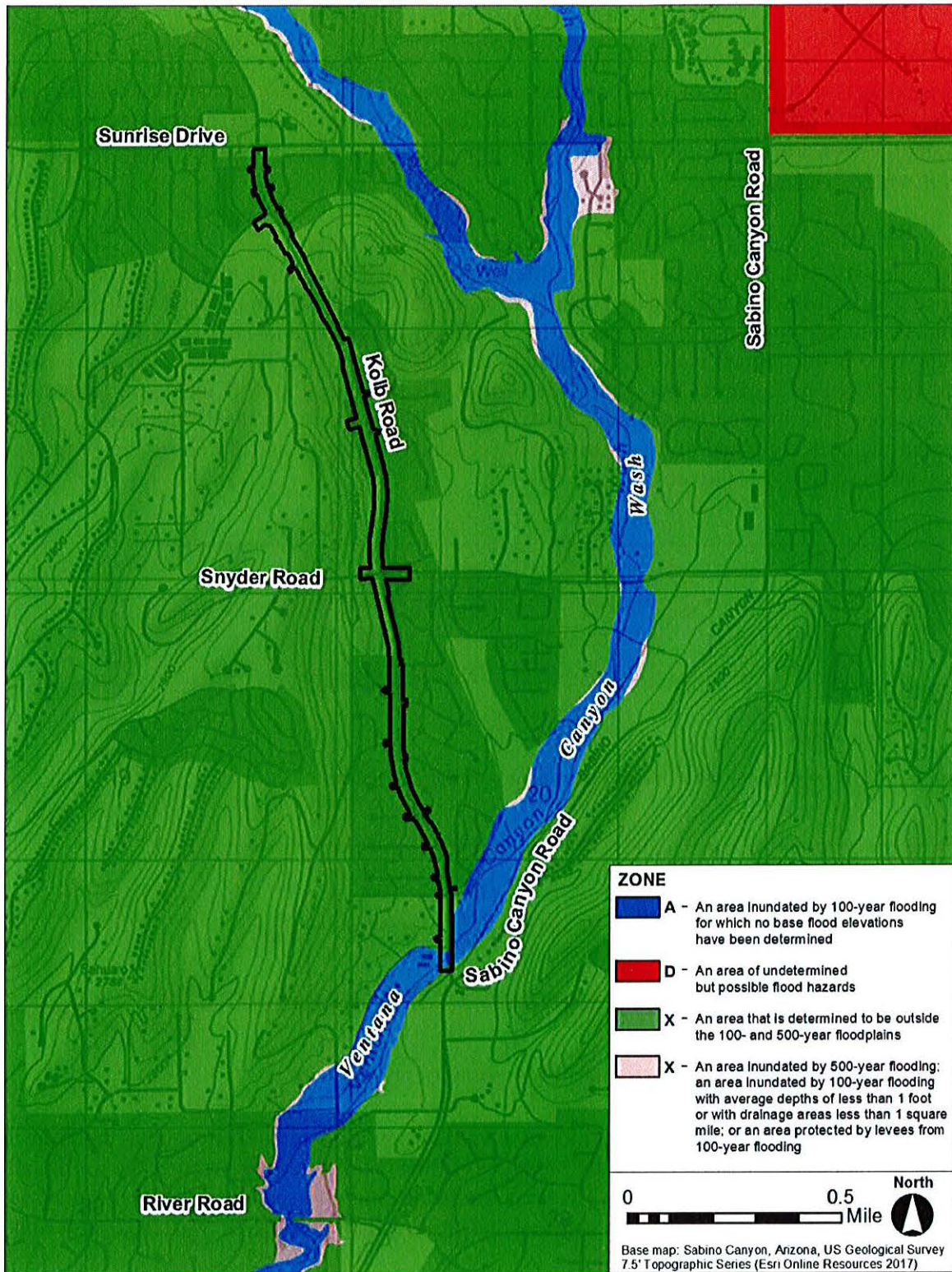


Figure 3. Federal Emergency Management Agency–designated floodplains



4.0 PROPOSED PROJECT

This section is a summary of the proposed project description in the Design Concept Report (DCR) (Psomas 2017c) and the engineering design and environmental documents noted in Section 1.4. For additional information, please refer to the documents on the project website: <http://roadprojects.pima.gov>.

4.1 ROADWAY SECTION

This project will widen approximately 1.9 miles of Kolb Road between Sabino Canyon Road and Sunrise Drive from the existing two lanes to three lanes and will include multi-use paved shoulders suitable for bicycle use, pedestrian facilities, drainage, and landscape features. The design year for this project is 2040. The design speed is 40 miles per hour; however, the posted speed limit will be 35 miles per hour. The project roadway section will include a three-lane roadway (one lane in each direction and a two-way left-turn lane). Dual left-turn lanes will be provided at the Kolb Road/Sunrise Drive intersection. Figures 4a and 4b show the proposed typical cross sections for the project.

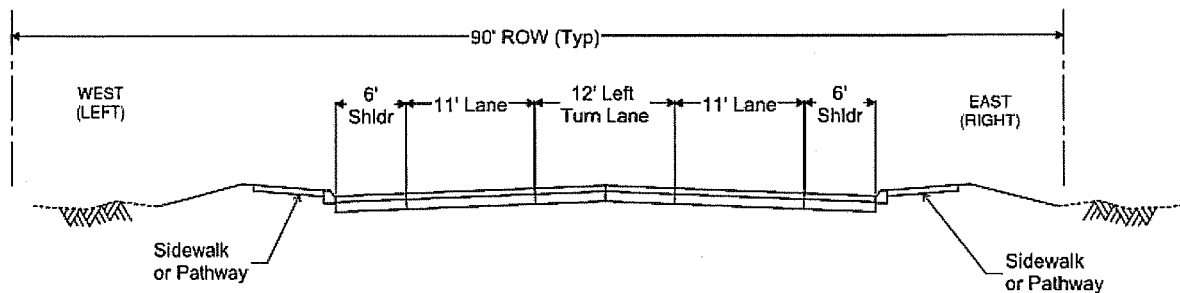


Figure 4a. Typical section with adjacent sidewalk or pathway, both sides

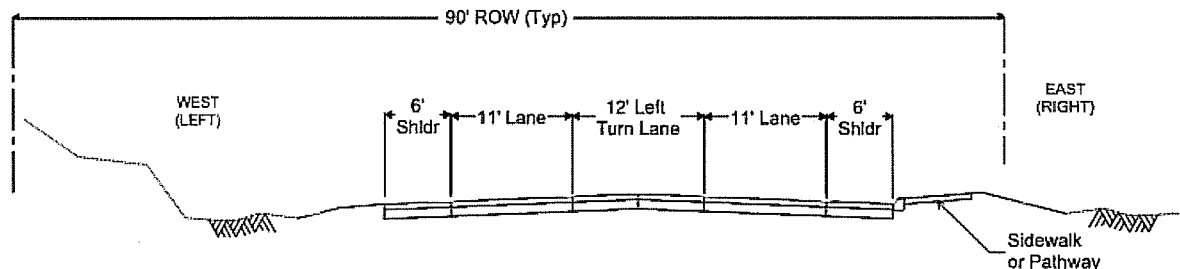


Figure 4b. Typical section with adjacent sidewalk or pathway, east side only

Project features will comply with the Americans with Disabilities Act and ensure that the project meets the guidelines set for accessibility include a pathway and sidewalk meeting the minimum width and maximum slope criteria. All culvert headwalls and end sections will be designed to comply with clear zone requirements. Metal handrail will be placed at warranted sidewalk locations adjacent to drainage facilities.



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The intersection of Kolb Road and Snyder Road will be modified to fit the new roadway geometry. Based on the projected volumes, a northbound right-turn lane is warranted at the Kolb Road and Snyder Road intersection. However, geometric and physical constraints prohibit the inclusion of a fully developed, standard right-turn lane. Traffic analyses show that the intersection will operate efficiently with or without the right-turn lane.

The crash rate is significantly (three times) higher at Kolb Road between Sunrise Drive and Territory Drive than the County's average rate. To provide better access management and help improve safety in the area, three alternatives were evaluated:

- Alternative 1 - Improve shoulders, add lighting, and clarify southbound shared right-turn/bicycle lane
- Alternative 2 - Restrict Bashas' shopping center driveway access to right-in, right-out only with a raised pork chop median
- Alternative 3 - Extend the median past the shopping center and add a roundabout at the Kolb Road and Territory Drive intersection

Alternative 3 was selected. The Alternative 3 improvements will occur between Territory Drive and Sunrise Drive to address safety issues at the shopping center. A roundabout intersection will be constructed at the intersection (Figure 5), and the following measures will be implemented:

- The shopping center driveway (west side) access will be restricted to right-in, right-out only, with a raised pork chop median to prohibit left-turn movements out of the driveway and eliminate the left-turn conflicts with northbound through traffic on Kolb Road. Drivers wishing to travel north will likely divert to Territory Drive; however, they can also access Sunrise Drive directly. The south driveway to the businesses on the east side of Kolb Road will operate with a right-in, right-out, left-out configuration.
- The median on Kolb Road will continue past the shopping center driveways with a one-lane roundabout constructed at the intersection of Kolb Road and Territory Drive.

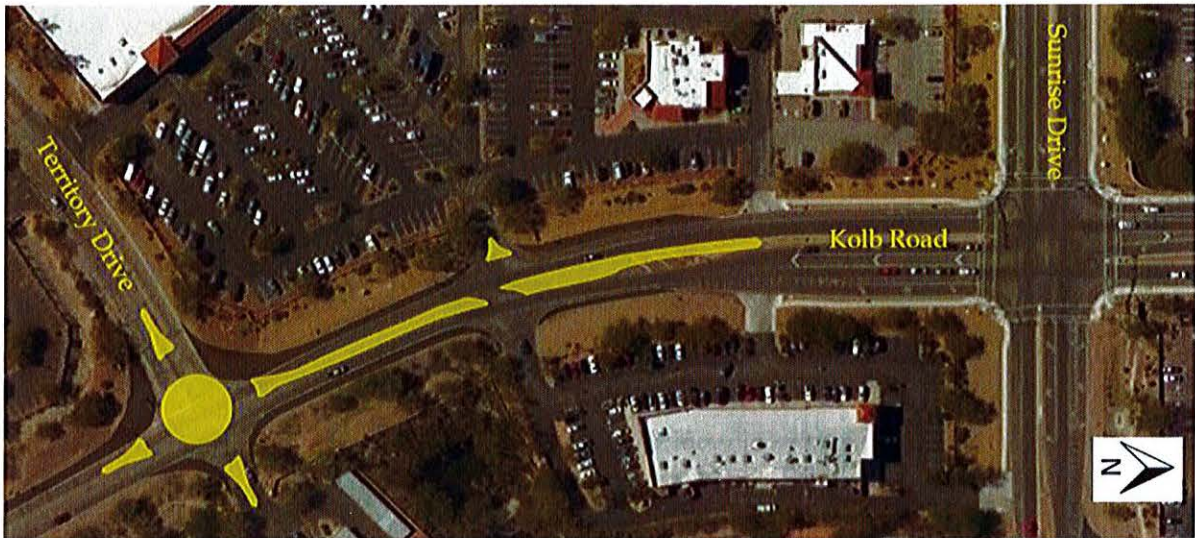


Figure 5. Roundabout concept at Territory Drive (note that north is to the right)

Three existing traffic signals are within the project limits: at the intersections of Kolb Road and Sabino Canyon Road, Kolb Road and Snyder Road, and Kolb Road and Sunrise Drive. The signals at Sabino Canyon Road and Sunrise Drive will not be altered by the project. The signal at Kolb Road and Snyder Road will be modified to fit the proposed geometry and intersection improvements.

Some private properties that abut Kolb Road have privacy walls. The design of the roadway is such that the expansion of the pavement width will be to the west, which should minimize any impact to walls on private property. In addition, both the County and the contractor will be assessing the condition of all facilities within the construction limits (including these walls) prior to the start of construction and will monitor the facilities during construction.

From Sabino Canyon Road to Snyder Road and from Gate Ridge Road to Sunrise Drive, pedestrian facilities will be provided on both sides of Kolb Road by an attached sidewalk or pathway. The pathway on the west side of Kolb Road from Sabino Canyon Road to Snyder Road will be a decomposed granite pathway. From Gate Ridge Road to Snyder Road, pedestrian facilities will be provided only on the east side of Kolb Road by an attached sidewalk or pathway. Six-foot-wide shoulders suitable for bicycle use will be provided along Kolb Road.

Improvements to existing street lighting include replacing high-pressure sodium luminaires with light-emitting diode (LED) luminaires. All LED luminaires will be full cut-off, so there should be no “up lighting.” Shielding can be provided on a case-by-case basis, as necessary. The recommended lighting improvements are as follows:

- *Kolb Road from Sunrise Drive to Territory Drive* - New light poles with LED luminaires are proposed to be added to illuminate the roadway and proposed roundabout at the intersection of Kolb Road and Territory Drive.



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- *Kolb Road and Snyder Road Intersection* - Replace the existing high-pressure sodium luminaires on the signal poles with LED luminaires.
- *Kolb Road at the Rural Metro Fire Station* - Add LED luminaires on two light poles, one on each side of the fire station driveway or on two fire station flasher poles.

Existing guardrail within the project limits will be replaced with new guardrail where necessary, and the new guardrail will be designed and specified to meet the latest guidance and standards.

Driveways will be provided to properties that currently access Kolb Road. Several undeveloped properties also may require driveways at final design, depending on the status of their access.

4.2 DRAINAGE IMPROVEMENTS

Fifteen cross culverts convey stormwater runoff from west to east under Kolb Road. Another eight culverts are beneath driveways and cross streets and convey flows from north to south. The size of these crossings range from a single-barrel, 24-inch-diameter culvert to a three-barrel, 48-inch-diameter culvert and are made of a mix of CMP and reinforced concrete pipe (RCP). Eleven of the existing culverts, including cross culverts and driveway culverts, are inadequately sized to convey the 100-year storm event peak discharge without overtopping onto Kolb Road. Two at-grade crossings are along Kolb Road in addition to flows conveyed along the west shoulder of the roadway, breaking out across Kolb Road. Overtopping flows will either cross Kolb Road or flow along the roadway to the south. Proposed improvements will generally replace all CMPs with RCPs, upsize all culverts to provide 100-year capacity under the roadway and its driveways, and provide new crossings or roadside channels to convey flows to a nearby crossing where none currently exist.

At Snyder Road and Kolb Road, drainage will be captured at the proposed culvert inlet on the northwest corner of the intersection. Erosion control will be provided within the limits of the proposed Snyder Road reconstruction (approximately 60 feet from the west edge of the existing Kolb Road).

Ventana Canyon Wash is just south of the project limits and was recently upsized as part of the Sabino Canyon Road (4TSCKR) intersection improvements such that 100-year conveyance is provided beneath Kolb Road in the box culverts. No improvements are proposed to the Ventana Canyon Wash culvert crossing.



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4.3 UTILITY AND IMPROVEMENTS

Numerous utilities run through the project corridor, including sanitary sewer, cable, gas, electric, telephone, water, fiber optic cable, and landscaping irrigation. Many utilities are within the existing roadway ROW and therefore may be beneath the proposed roadway. There are also utilities in existing easements east and west of the ROW that may be impacted by the roadway widening. Utilities will be evaluated for conflicts during design to determine if relocations are necessary.

Utilities present are noted below:

- CenturyLink
- Comcast
- Cox Communications
- Level 3
- Pima County Regional Wastewater Reclamation Department
- Southwest Gas (planned upgrades to system within project limits)
- Tucson Electric Power
- Tucson Water

4.4 RIGHT-OF-WAY

Kolb Road ROW varies in width but is generally 90 feet wide. An existing 35-foot-wide utility and setback easement is on the east and west sides of Kolb Road for the majority of the corridor south of Snyder Road. North of Snyder Road, there is an existing 35-foot-wide utility setback and slope easement on the east and west sides of Kolb Road for the majority of the corridor. North of Territory Drive, the ROW width is 150 feet. At the south end of the of the project, the Kolb Road ROW width is 150 feet, tapering to 90 feet wide near Clayridge Drive. The existing ROW along Snyder Road varies from 90 to 145 feet wide west of Kolb Road and is 150 feet wide east of Kolb Road. Pima County currently owns nine parcels adjacent to Kolb Road within the project limits, totaling approximately 5.03 acres. The County also has several slope and utility easements along Kolb Road. No additional ROW needs are anticipated, but small temporary construction easements or drainage easements may be required.

4.5 LANDSCAPING

This project will include the installation of landscaping improvements along the roadway shoulders to the ROW limit in accordance with the PCDOT Landscape and Irrigation Design Guidelines and the RDM. The placement of landscape improvements will consider the existing underground utilities in the project area and follow sight distance requirements. Where feasible, stormwater runoff will be captured to supplement irrigation, and landscaping may be more strategically located to aid in providing screening along the roadway. However, it should be noted that there may be some limitations due to space availability and the location of various slopes and drainage features along the project corridor.



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Landscaping will consist of species native to the Tucson Basin that are appropriate in the project's vegetative communities. Native plant species identified on-site during the plant inventory and Relevé process will be supplemented with additional species commonly occurring in the respective plant communities. The landscaping design will focus on sustainable objectives, using native species that will require minimal irrigation and maintenance, and water harvesting where possible. Plantings will be placed within the ROW to provide aesthetic qualities to the corridor. Significant quantities of cut slopes are anticipated on the west side of the roadway, and slope revegetation will be an important feature of the landscape strategy. The project team will coordinate efforts to employ proven slope revegetation strategies to ensure timely and aesthetically pleasing results.

The planting plans will be in accordance with Pima County Environmentally Sensitive Roadway (ESR) Design Guidelines. A short summary of ESR requirements and how they are addressed is noted as follows. Protected native trees within the ROW that will be impacted were inventoried by measuring caliper inches of the tree. These trees will be replanted using a coefficient to be determined when the engineering plans are further developed. The caliper inches for each species are totaled, and 125 percent of the caliper inches is replaced in the project area where it is technically possible to plant a tree. For example, if there are 100 caliper inches of foothills paloverde removed and 90 percent of the project area consists of paved areas, utility easements, and areas where safety would be compromised by tree planting, then 12.5 caliper inches of foothills paloverde would be replaced (125 percent of 10 inches = 12.5 inches). All saguaros impacted will be replaced at a 1:1 ratio, with a maximum 8-foot saguaro used for replacement. A more detailed description of the ESR process can be found here:

http://webcms.pima.gov/UserFiles/Servers/Server_6/File/Government/Transportation/Roadway%20Design/Roadway%20Design%20Manual/Appendix%204D%20-%20July%202022%202015.pdf

Disturbed areas that will not be paved or otherwise stabilized will be reseeded with a seed mix of plants native to the project area at seasonally appropriate times.

4.6 PUBLIC ART

The County has selected a local artist (Robin Riley) to complete the public art component of this project. The design team and a Community Advisory Committee (CAC) will coordinate with the artist during the development of the project construction documents to incorporate the artwork into the plans.



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5.0 ENVIRONMENTAL SCREENING

As required by the Pima County RDM, the environmental screening process for this project began at the onset of the engineering design process in August 2016. After field reviews and coordination with regulatory agencies, an Environmental Screening Questionnaire, Impact Summary Matrix, and Results Memorandum document was prepared to identify potential environmental impacts to resources (EcoPlan 2017b). The process considered construction activities and regulatory permitting issues and needs, including water resources, biological resources, cultural resources, air quality, noise, hazardous materials, and neighborhood/socioeconomic issues. The reports completed for these resource topics are available on the project website: <http://roadprojects.pima.gov>. The findings of the reports and analyses conducted during the environmental screening process have been carried forward into this EAMR, as appropriate. For each environmental aspect in the following section, existing conditions are described, potential impacts are identified, mitigation measures are recommended, and permits necessary for project construction are noted.



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