

Valencia Road Wade Road to Mark Road

Final Environmental Assessment and Mitigation Report

January 2012

Pima County Department of Transportation

Project No. 4RTVMW

Federal Project No. STP-PPM-0(230)A

TRACS No. SS975 01C



January 23, 2012

Mr. Paul Bennett
Project Manager
Pima County Department of Transportation
Public Works Building
201 N. Stone Avenue, 4th Floor
Tucson, AZ 85701

RE: Final Environmental Assessment and Mitigation Report
Valencia Road, Wade Road to Mark Road
Pima County Project No. 4RTVMW
HDR Job No. 152226

Dear Mr. Bennett:

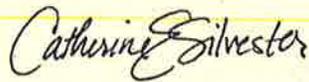
We are pleased to submit the *Final Environmental Assessment and Mitigation Report* for the above-referenced project. This report was prepared by Catherine Silvester, Environmental Planner, and Christine Jacobs-Donoghue, Senior Environmental Planner, and was reviewed by Scott Stapp, Senior Environmental Planner, and by Bob Brittain, HDR Project Manager.

Please feel to contact Ms. Silvester at (520) 584-3656 if you have any questions regarding this report.

Sincerely,
HDR Engineering, Inc.



Robert Brittain, PE
Senior Project Manager



Catherine Silvester
Environmental Planner

Valencia Road Wade Road to Mark Road

Final Environmental Assessment and Mitigation Report

January 2012



Prepared for:
Pima County Department of Transportation
201 N. Stone Avenue
Tucson, AZ 85701
Project No. 4RTVMW
Federal Project No. STP-PPM-0(230)A
TRACS No. SS975 01C

Prepared by:
HDR Engineering, Inc.
5210 E. Williams Circle, Suite 530
Tucson, AZ 85711-4459
HDR Project No. 152226



Contents

Executive Summary	ES-1
1.0 Background.....	1
1.1 Project Cost and Funding.....	4
1.2 Direction by Board of Supervisors	5
1.3 Project Design Process	5
2.0 Purpose and Need	5
2.1 Existing Transportation Planning Objectives	5
2.2 Traffic Capacity and Operations.....	6
2.3 All-weather Roadway	6
2.4 Multimodal Connectivity.....	6
3.0 Project Setting.....	6
4.0 Proposed Project	8
5.0 Environmental Screening.....	14
6.0 Environmental Assessment and Mitigation	14
6.1 Natural/Physical Environment.....	14
6.1.1 Biological Resources.....	14
6.1.2 Drainage and Floodplain.....	19
6.1.3 Clean Water Act and National and Arizona Pollutant Discharge Elimination System.....	23
6.1.4 Air Quality	25
6.1.5 Noise	26
6.1.6 Utilities.....	28
6.1.7 Hazardous Materials	30
6.1.8 Construction Activities	31
6.1.9 Historic/Cultural Resources	32
6.1.10 Visual Resources.....	33
6.2 Neighborhood/Social Environment	35
6.2.1 Right-of-Way Acquisition and Displacement.....	35
6.2.2 Temporary and Permanent Access and Parking.....	38
6.2.3 Parks and Recreational Areas	41
6.2.4 Consistency with Other Plans	41
7.0 Agency Coordination.....	46
8.0 Public Participation.....	47



8.1	Public Participation Activities	48
8.1.1	Public Scoping	48
8.1.2	Community Advisory Committee	48
8.1.3	Public Open House.....	48
8.2	Community Comments	49
9.0	Conclusions and Recommendations	51
10.0	References.....	57

Figures

Figure 1.	Project location in state.....	2
Figure 2.	Project vicinity and land ownership	3
Figure 3.	Project setting, land use, proposed easements, and Section 4(f) resources	11
Figure 4.	Proposed turn lanes at intersections.....	13
Figure 5.	Floodplains in project area	21



Tables

Table ES-1. Impact and mitigation summary	3
Table ES-2. Public participation activities.....	9
Table 1. Project cost.....	4
Table 2. Project funding sources.....	4
Table 3. Plants within the project area requiring notification to the Arizona Department of Agriculture.	16
Table 4. Descriptions and locations of floodplains in project area	22
Table 5. Existing utilities	28
Table 6. Utility relocation responsibilities.....	29
Table 7. Acquisition needs (by acquisition type).....	36
Table 8. Properties with proposed large drainage easements	38
Table 9. Impact and mitigation summary	51

Appendixes

- Appendix A – Public Involvement
- Appendix B – Traffic Noise Analysis
- Appendix C – Viewshed Inventory

Documents available on project website: <<http://www.roadprojects.pima.gov/valenciawade/>>

Environmental Screening Package	HDR Engineering, Inc.	April 2011
Final Traffic Engineering Study	Pima County Department of Transportation	July 2011
Preliminary Initial Site Assessment	HDR Engineering, Inc.	July 2011
Stage II Drainage Report	J.E. Fuller and Associates	September 2011
Final Traffic Noise Report	HDR Engineering, Inc.	October 2011
Final Visual and Aesthetic Analysis	L.J. Design	October 2011
Cultural Resources Assessment (abstract)	HDR Engineering, Inc.	October 2011
Final Biological Evaluation	HDR Engineering, Inc.	December 2011
Final Design Concept Report	HDR Engineering, Inc.	January 2012
Stage II (30% design plans)	HDR Engineering, Inc.	January 2012



Acronyms and Abbreviations

ADEQ	Arizona Department of Environmental Quality
AGFD	Arizona Game and Fish Department
amsl	above mean sea level
APE	area of potential effects
A.R.S.	Arizona Revised Statutes
ASM	Arizona State Museum
AZPDES	Arizona Pollutant Discharge Elimination System
BLM	Bureau of Land Management
CAC	Community Advisory Committee
CE	Categorical Exclusion
C.F.R.	Code of Federal Regulations
CO	carbon monoxide
Corps	U.S. Army Corps of Engineers
CWA	Clean Water Act
dBA	A-weighted decibel
EAMR	environmental assessment and mitigation report
EPA	U.S. Environmental Protection Agency
ESL	environmentally sensitive land
ESR	environmentally sensitive roadway
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
GIS	geographic information system
IMBTA	International Migratory Bird Treaty Act
LOS	level of service



mph	miles per hour
MSCP	Multi-species Conservation Plan
NAAQS	National Ambient Air Quality Standards
National Register	National Register of Historic Places
NEPA	National Environmental Policy Act
NO₂	nitrogen dioxide
O₃	ozone
PAG	Pima Association of Governments
PCDOT	Pima County Department of Transportation
PDEQ	Pima County Department of Environmental Quality
PM_{2.5/10}	particulate matter
RTA	Regional Transportation Authority
RTP	Regional Transportation Plan
R/W	right-of-way
SDCP	Sonoran Desert Conservation Plan
SO₂	sulfur dioxide
SR	State Route
SWIP	Southwest Infrastructure Plan
SWPPP	Stormwater Pollution Prevention Plan
TIP	Transportation Improvement Plan



Executive Summary

Project Overview

The Pima County Department of Transportation (PCDOT), in conjunction with the Federal Highway Administration (FHWA) and Regional Transportation Authority (RTA), proposes to widen 2.91 miles of Valencia Road from two lanes to four lanes from approximately 0.4 mile west of Wade Road to approximately 0.3 mile west of Mark Road. The project also includes providing paved shoulders for bicyclists and multimodal uses, a continuous paved sidewalk along the north side of Valencia Road from Wade Road to Camino Verde and along the south side of Valencia Road from Camino Verde to Mark Road, adding turn lanes at Wade Road, Camino Verde, and Ignacio Baumea; and providing a new traffic signal at Wade Road. The existing traffic signal at Camino Verde will be replaced to accommodate the increased number of lanes at the intersection.

Project name: Valencia Road, Wade Road to Mark Road

Pima County project number: 4RTVMW

Project location and limits: Valencia Road, from approximately 0.4 mile west of Wade Road to approximately 0.3 mile west of Mark Road. The project width is approximately 150–200 feet along Valencia Road, and 200–400 feet at the easements. Improvements to Wade Road will extend 1,700 feet south of Valencia Road; the improvements to Camino Verde will extend 800 feet north of Valencia Road.

Construction fiscal year: 2013

The proposed project design and environmental evaluation and mitigation processes have been prepared consistent with PCDOT's guidelines for environmentally sensitive roadways (PCDOT 2010). A Categorical Exclusion is anticipated for federal environmental documentation requirements.

Estimated Cost and Funding Source

The total cost to Pima County for this project is estimated to be \$19.3 million. Current project funding includes \$14,562,000 of sales tax revenue from the citizen-approved 20-year transportation plan administered by the RTA. Other funding sources include \$6,026,000 in FHWA Surface Transportation Program revenue and \$709,000 in Pima County developer impact fees.

Project Purpose and Need

The purpose of the project is to meet transportation planning objectives, increase traffic capacity and improve traffic operations, provide an all-weather roadway surface, and enhance multimodal connectivity.

The project is included in regional transportation plans, and is included in the 5-year schedule of the Pima Association of Government's (PAG's) Regional Transportation Improvement Program (PAG 2011). The project is needed to fulfill the regional transportation plans and schedule. Traffic volumes in the project



area are projected to increase by approximately 3.5 percent by 2030. The project is needed to accommodate the larger traffic volumes and improve vehicle operations. Valencia Road does not feature drainage structures within the project limits, and the roadway may become inundated during and following large storms. The project is needed to provide an all-weather surface and maintain vehicular access to the area during storms. Continuous sidewalks or other multimodal facilities are not present in the project area. The project is needed to provide multimodal connectivity.

Project Elements

The project will involve reconstructing Valencia Road to include an additional travel lane in each direction that will match the existing roadway configuration east of Ignacio Baumea. The project will include constructing raised medians with dedicated left-turn lanes; installing reinforced concrete box culverts at seven drainages, including Black Wash, and two pipe culverts; constructing roadside drainage ditches; reconstructing the intersections at Camino Verde and Wade Road to include dedicated turn lanes, pedestrian crosswalks, and traffic signals; reconstructing approximately 800 feet of Camino Verde north of Valencia Road to accommodate the new turn lane; reconstructing approximately 1,700 feet of Wade Road south of Valencia Road to accommodate the new turn lane; constructing dedicated turn lanes at Ignacio Baumea; installing a sidewalk north of Valencia Road from Wade Road to Camino Verde, an asphalt multiuse path along the south side of Valencia Road from Wade Road to Camino Rancho Road, and a sidewalk along the south side of the road from Camino Rancho Road to the eastern project limits; paved shoulders for bicyclists and multimodal use; constructing driveways at all properties with their primary access at Valencia Road; and installing landscaping in the right-of-way (R/W) and medians; restoring removed or disturbed vegetation in the easements.



Project Impacts and Recommended Mitigation

Table ES-1 presents potential adverse impacts identified in this assessment, the recommended mitigation or measures to minimize the impacts, the required agency coordination and consultation, and the parties responsible for implementing the measures.

Table ES-1. Impact and mitigation summary

Potential impacts	Recommended mitigation	Agency coordination and consultation	Parties responsible for implementation
<i>Biological resources</i>			
Removal of native plants	Consistent with the Arizona Native Plant Act, Pima County will notify the Arizona Department of Agriculture by a “Notice of Intent to Clear Land” at least 60 days prior to the start of any ground or vegetation disturbing activities.	Arizona Department of Agriculture	Pima County
	The Arizona Native Plant Act and Pima County’s Environmentally Sensitive Roadway Design Guidelines will be adhered to. Removed native vegetation will be replaced to match preconstruction densities and composition of the project area or surrounding environment. Saguaros will be mitigated at 1:1 ratio.	Pima County Department of Transportation	Pima County/ consultant and contractor
Construction traffic or dust affecting Pima pineapple cactus outside of project limits	Fencing will be installed along the project R/W near Pima pineapple cacti outside of the project limits to ensure construction traffic stays within the project limits and to avoid the nearby Pima pineapple cactus during construction activities.	Pima County Department of Transportation	Pima County
	Pima County standard measures for dust abatement will be implemented to minimize construction-generated dust leaving the construction site.		Contractor
Impacts to Regulated Riparian Habitat and Important Riparian Areas	A riparian impact assessment will be prepared and mitigation plans for impacts will be developed in conjunction with the floodplain use permit.	Pima County Regional Flood Control District	Pima County and contractor



Table ES-1. Impact and mitigation summary (*continued*)

Potential impacts	Recommended mitigation	Agency coordination and consultation	Parties responsible for implementation
Introduction or spread of invasive species	Noxious and invasive species infestations will be identified and treated consistent with Pima County Department of Transportation's Special Provision 201-3.04, <i>Noxious and Invasive Vegetation</i> which includes mechanical and chemical removal of invasive species prior to initiation of construction, timing of invasive species removal, disposal of invasive species, prevention of invasive species during the construction process, and control of invasive species after construction is complete.	Pima County Department of Transportation	Pima County and contractor
Disturbance to nesting birds	Trees and staghorn cholla within the project right-of-way and easements that will be removed by the project construction will be cut, between August 15 and December 31 (outside of the migratory bird nesting period) to prevent migratory birds from using those trees and staghorn cholla. If unable to prevent nesting, a 100-foot buffer will be established and the nesting birds will be avoided during construction. No trees or cholla will be removed during the nesting season without being surveyed by an authorized biologist.	Pima County Department of Transportation	Pima County and contractor
	Surveys for burrowing owls will be conducted by a biologist permitted by the Arizona Game and Fish Department 90 days, 30 days, and 96 hours prior to construction.	Arizona Game and Fish Department	Pima County



Table ES-1. Impact and mitigation summary (*continued*)

Potential impacts	Recommended mitigation	Agency coordination and consultation	Parties responsible for implementation
<i>Drainage and floodplains</i>			
Impacts to floodplains	A floodplain use permit will be obtained from the Pima County Regional Flood Control District and mitigation plans for impacts to Regulated Riparian Habitat will be developed.	Pima County Regional Flood Control District	Pima County/ consultant
	A Conditional Letter of Map Revision and Letter of Map Revision requiring Pima County Regional Flood Control District and Federal Emergency Management Agency (FEMA) approval will be submitted to FEMA for project effects to the floodplain before construction and following construction, respectively.	Federal Emergency Management Agency Pima County Regional Flood Control District	Pima County
<i>Waters of the United States</i>			
Impacts to waters of the United States	The contractor will comply with the conditions of the Clean Water Act Section 404 Nationwide Permit No. 14 and the conditional Section 401 certification.	U.S. Army Corps of Engineers	contractor
Stormwater/surface water pollution from soil exposure, erosion, and dust generation.	Pima County and the contractor will file a separate Notice of Intent to use the statewide Construction General Permit with the Arizona Department of Environmental Quality, and a Notice of Intent to use the Construction General Permit with the Environmental Protection Agency, and prepare and implement Stormwater Pollution Prevention Plans for each permit.	Arizona Department of Environmental Quality U.S. Environmental Protection Agency	Pima County and contractor
	Utilities will be responsible for preparing a separate Stormwater Pollution Prevention Plan and filing a Notice of Intent with the appropriate agency for their activities.	Arizona Department of Environmental Quality U.S. Environmental Protection Agency	Utility



Table ES-1. Impact and mitigation summary (continued)

Potential impacts	Recommended mitigation	Agency coordination and consultation	Parties responsible for implementation
Air quality			
Excessive dust produced by construction	The contractor will adhere to Pima County’s standard specifications for dust suppression and comply with the Stormwater Pollution Prevention Plan (referenced above). The contractor will obtain an Activity Permit from the Pima County Department of Environmental Quality.	Pima County Department of Environmental Quality	Contractor
Utilities			
Service interruptions	Affected customers will be notified by the utility 14 days in advance of any planned service interruptions. The contractor will notify affected customers regarding Pima County Regional Wastewater Reclamation Department and Tucson Water Department service interruptions.	Applicable utilities	Utility or contractor
Hazardous materials			
Disturbance to subsurface hazardous materials	If any suspected hazardous materials are encountered during construction, work will cease at the location and the Pima County Engineer will be contacted to arrange for proper assessment and treatment or disposal of the materials.	Pima County Engineer/Pima County Department of Transportation	Pima County and contractor
Lead-based paint during demolition or removal	As needed, lead-based testing will be conducted and the proper measures implemented.	Pima County Department of Transportation	Pima County and contractor
Construction activities			
Noise disturbance from construction	The contractor will comply with Pima County’s Noise Ordinance (Pima County Code Chapter 9.30.070), which sets the construction start and stop times in order to avoid noise disruptions at night. If nighttime work is required, the contractor will obtain a permit from Pima County.	Pima County Department of Transportation	Pima County and contractor



Table ES-1. Impact and mitigation summary (*continued*)

Potential impacts	Recommended mitigation	Agency coordination and consultation	Parties responsible for implementation
<i>Cultural resources</i>			
Disturbance to subsurface cultural resources during construction	Should any archaeological resources, human remains, or funerary objects be discovered during project implementation, all surface-disturbing activities in the area of discovery will immediately cease and the discovery will be reported to the director of the Arizona State Museum at (520) 621-6281 as required by Arizona Revised Statutes §§ 41-844 and 41-865, and to the Pima County archaeologist at (520) 740-6405 to make arrangements for the proper treatment of those resources.	Pima County Cultural Resources, State Historic Preservation Office, and Arizona State Museum	Contractor and Pima County
<i>Visual resources</i>			
Visual changes from widened roadway, medians, sidewalks, and drainage structures	Pima County will incorporate landscaping into the medians and right-of-way to soften the appearance of the new transportation features. Pima County will use colors and materials for the proposed drainage structures compatible with the natural landscape, and incorporate plantings into the drainage easements where feasible to lessen the visual impact of new drainage structures and vegetation removal. To lessen the visual impact of signalized intersections, Pima County will minimize the size and placement of poles, as well as locate and paint cabinets to blend with surroundings.	Pima County Department of Transportation	Pima County



Table ES-1. Impact and mitigation summary (*continued*)

Potential impacts	Recommended mitigation	Agency coordination and consultation	Parties responsible for implementation
<i>Right-of-way acquisition and displacement</i>			
Permanent and temporary easements on public and private property	Pima County will compensate property owners at fair market value for the permanent or temporary use of property consistent the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646), the Uniform Relocation Act Amendments of 1987 (Public Law 100-17), Title VI of the Civil Rights Act of 1964, and Arizona Law.	Pima County Department of Real Property	Pima County
<i>Temporary and permanent access and parking</i>			
Access to businesses and residences during construction	Access to businesses and residences will be maintained throughout the project corridor during construction. The contractor will provide signs to identify business access during construction.	Pima County Department of Transportation	Pima county and contractor
	Adjacent residences and businesses will be notified 14 days prior to the construction start date and will be notified of any access changes.	Pima County Department of Transportation	Pima County and contractor



Public Participation

Table ES-2 summarizes the public involvement activities conducted for this project to date and the methods of public input and documentation. Available public involvement materials are included in Appendix A and on the project website at: <http://www.roadprojects.pima.gov/valenciawade/>.

Table ES-2. Public participation activities

Date, time, and location or date and means of distribution	Notification	Attendance or distribution or coverage	Methods of public input documentation and response
Public scoping			
August 31, 2011	Scoping letter mailed	Private property owners of adjacent properties	Comments and concerns from general public were documented during the scoping period and will be addressed by the project team.
Community Advisory Committee (CAC) formation			
Not applicable	Notices posted in the <i>Daily Territorial</i> on October 12 and 15, 2007 and mailed to property owners within 0.5 mile of the project	Not applicable	14 CAC members were selected from the applicants
CAC meetings			
Thursday, January 31, 2008 6:30 p.m. to 8:15 p.m. Lawrence Elementary School 4850 W. Jeffrey Road Tucson, AZ 85757	Invitation mailed to the CAC	7 CAC members 10 project team members	Comments from the CAC members were discussed during the meeting and documented in the meeting minutes.
Tuesday, May 6, 2008 6 p.m. to 7:15 p.m. Lawrence Elementary School 4850 W. Jeffrey Road Tucson, AZ 85757	Invitation mailed to the CAC and project mailing list dated April 10, 2008	10 CAC members 8 project team members	Comments from the CAC members were discussed during the meeting and documented in the meeting minutes.
Monday, July 25, 2011 6:00 p.m. to 7:00 p.m. Lawrence Elementary School 4850 W. Jeffrey Road Tucson, AZ 85757	Invitation mailed to the CAC and project mailing list dated July 13, 2011	5 CAC members 5 project team members 8 members of public	Comments from the CAC members and general public in attendance were discussed during the meeting and documented in the meeting minutes.
Monday, October 24, 2011 6:00 p.m. to 6:30 p.m. Lawrence Elementary School 4850 W. Jeffrey Road Tucson, AZ 85757	Invitation mailed to the CAC dated October 18, 2011	6 CAC members 6 project team members 2 members of public	The EAMR was presented to the CAC. The CAC recommendation letter was discussed.



Table ES-2. Public participation activities (continued)

Date, time, and location or date and means of distribution	Notification	Attendance or distribution or coverage	Methods of public input documentation and response
Public Open House			
<p>Monday, December 12, 2011 6:00 p.m. to 8:00 p.m. Lawrence Elementary School 4850 W. Jeffrey Road Tucson, AZ 85757</p>	<p>Notice mailed to the CAC and parties on the project mailing list. Notice posted to the project website.</p>	<p>1 CAC member 12 project team members 61 members of public</p>	<p>Comments from the CAC members and general public in attendance were discussed during the meeting and documented in the meeting minutes. Attendees were encouraged to write comments, questions, and concerns for the project team to address.</p>
Public Hearing			
<p>Will be scheduled following completion of the final EAMR</p>	<p>Not applicable</p>	<p>Not applicable</p>	<p>Comments will be documented in a meeting summary.</p>
Project Website			
<p>Established in 2011 and is updated as information becomes available. Content includes:</p> <ul style="list-style-type: none"> • Project overview • CAC meeting announcement • Public Open House notification • Reports, exhibits, and documents related to project 	<p>None</p>	<p>Not applicable</p>	<p>Not applicable</p>



1.0 Background

The Pima County Department of Transportation (PCDOT), in conjunction with the Federal Highway Administration (FHWA) and Regional Transportation Authority (RTA), is planning a roadway improvement project along Valencia Road in Pima County, Arizona (see Figures 1 and 2). The proposed project will involve the addition of travel lanes to Valencia Road from Wade Road to Mark Road and the installation of culverts and roadside ditches to create an all-weather roadway. The project also proposes to add turn lanes at the intersections of Valencia Road with Wade Road, Camino Verde, and Ignacio Baumea and install a new traffic signal at Wade Road. The existing traffic signal at Camino Verde will be replaced to accommodate the increased number of lanes at the intersection..

Project name: Valencia Road: Wade Road to Mark Road

Pima County project number: 4RTVMW

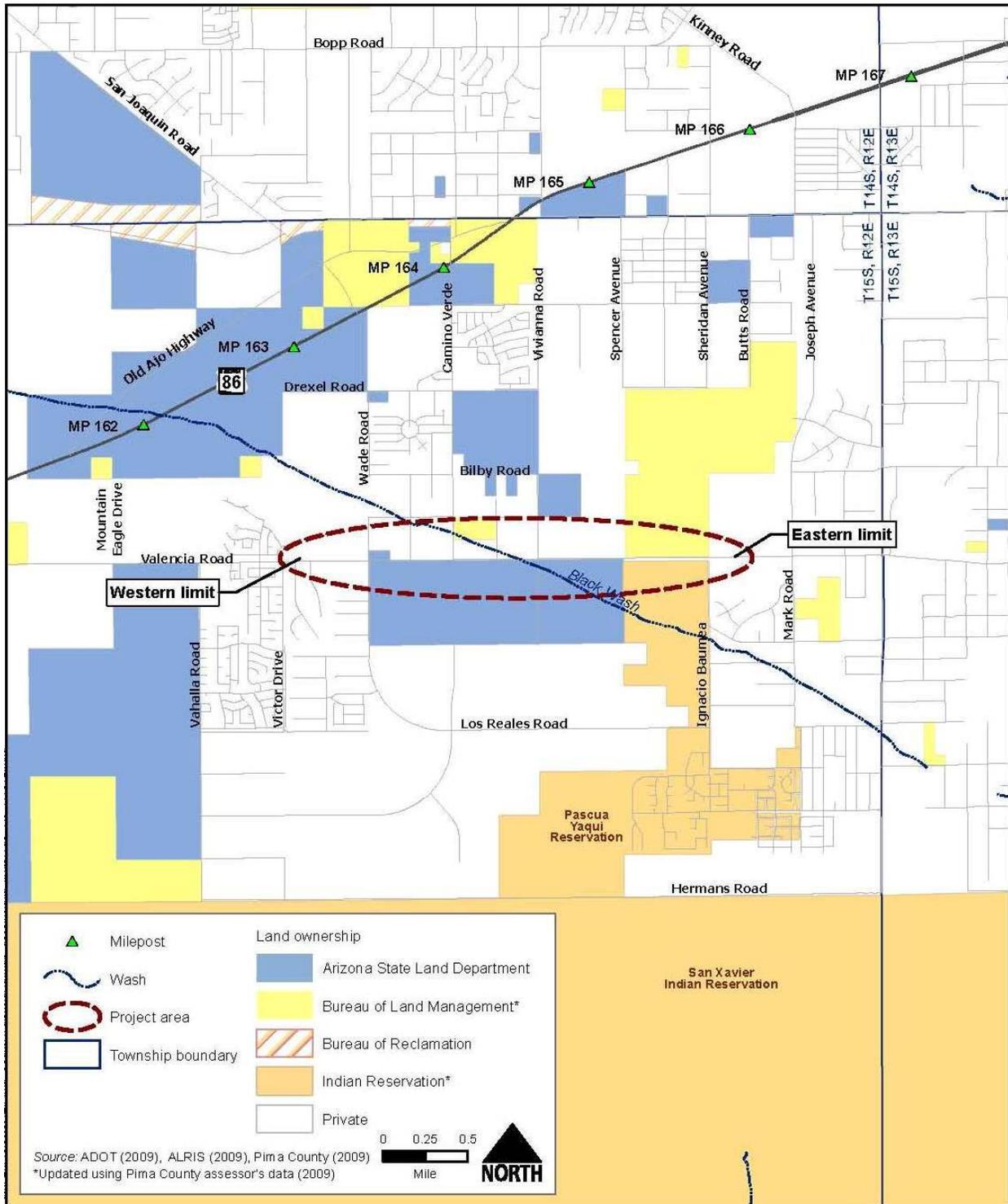
Project location and limits: The total project length is 2.61 miles, extending from 0.42 mile west of Wade Road to 0.35 mile west of Mark Road. Improvements to Wade Road will extend 1,700 feet south of Valencia Road; the improvements to Camino Verde will extend 800 feet north of Valencia Road. The project area is approximately 150 to 200 feet wide along the roadway and 200 to 400 feet wide near intersections and drainage improvements. The project area is located in Township 15 South, Range 12 East, Sections 9, 10, 11, 12, 13, 14, 15 and 16 (Gila and Salt River Meridian, United States Geological Survey 7.5-minute “Cat Mountain, Arizona” Quadrangle).

The proposed project is one of three phases of proposed improvements along Valencia Road from Ajo Highway (Arizona State Route 86) to Mark Road (see the project website at: <<http://www.roadprojects.pima.gov/valenciawade/>>. for more information). The other phases are not currently scheduled for construction. This Environmental and Mitigation Report (EAMR) addresses the proposed project, Valencia Road: Wade Road to Mark Road, and has been prepared in compliance with Pima County’s Community Participation and Mitigation Ordinance (Pima County Code § 10.560.010 et seq.). The purpose of the EAMR is to identify social, economic, and environmental resources and the impacts of the proposed action on those resources. The EAMR is prepared as a public document and will be made available for public review.

This EAMR has been prepared consistent with the *Pima County Roadway Design Manual* (2010). As presented in the manual, Pima County identifies roadways with land that is unique and ecologically or culturally sensitive as environmentally sensitive roadways (ESRs) and applies design and environmental evaluation and mitigation requirements specific to the designation. This segment of Valencia Road has been identified as an ESR; therefore, the proposed project design and environmental evaluation and mitigation measures comply with ESR guidelines. Refer to Section 6.2.4, *Consistency with Other Plans*, for more information.



Figure 2. Project vicinity and land ownership





FHWA involvement requires the project comply with the National Environmental Policy Act (NEPA). A Categorical Exclusion is anticipated to be prepared consistent with FHWA regulation 23 Code of Federal Regulations (C.F.R.) 771, Environmental Impact and Related Procedures and the Council on Environmental Quality regulation 40 C.F.R. Parts 1500-1508, Regulations for Implementing the Procedural Provisions of NEPA.

1.1 Project Cost and Funding

The total cost for the project is estimated to be \$19.3 million, with \$21.3 million budgeted. The estimated cost for each task, based on preliminary design, is presented in Table 1.

Table 1. Project cost

Task	Cost (\$)
Construction	14,000,000
Utility relocation (PCDOT share)	800,000
Artwork	140,000
Easements	400,000
Design and planning	1,880,000
Construction administration	2,100,000
Total	\$19,320,000

The utility relocation costs included in Table 1 represent one-half of the projected costs for the Tucson Water Department to relocate water lines at the drainages where they will conflict with the proposed culverts. Pima County and the Tucson Water Department have an inter-governmental agreement making Pima County responsible for half of the cost of relocating Tucson Water Department’s utilities where they conflict with Pima County’s projects.

The cost for artwork is estimated to be 1 percent of the construction cost, and construction administration is estimated to be 15 percent of the construction cost.

Project funding will be provided by federal and local government sources. Federal funding will be used for construction costs, and all other items will be paid for with local funding. Table 2 presents the sources and the amount of funding from each source.

Table 2. Project funding sources

Source	Amount (\$)
Regional Transportation Authority	14,562,000
FHWA Surface Transportation Program	6,026,000
Pima County Developer Impact Fees	709,000
Total	\$21,297,000



1.2 Direction by Board of Supervisors

The project was identified in the RTA 20-year transportation plan which the Pima County Board of Supervisors approved and placed on the special election ballot in 2006 (see Section 6.2.4, *Consistency with Other Plans*). The Pima County Board of Supervisors approved the contract for the design of this project in January 2010. A notice to proceed was issued by the PCDOT director on January 3, 2011.

1.3 Project Design Process

The project design process commenced in January 2011. The following tasks and reports have been completed:

- four Community Advisory Committee (CAC) meetings
- Public Involvement Plan
- Design Survey
- Quality Control Plan
- Traffic Engineering Study
- Design Concept Report
- Stage II Drainage Report
- Native Plant Preservation Survey
- Arizona Department of Transportation Geotech Environmental Clearance Package
- Environmental reports:
 - Environmental Screening Memorandum, Checklist and Matrix
 - Traffic Noise Report
 - Class III Cultural Resources Survey Report
 - Biological Evaluation
 - Jurisdictional Delineation
 - Preliminary Initial Site Assessment for hazardous materials

2.0 Purpose and Need

The purpose of the project is to meet regional transportation planning objectives, increase traffic capacity and improve traffic operations, provide an all-weather roadway, and enhance multimodal connectivity. The needs for these objectives are described in the following sections.

2.1 Existing Transportation Planning Objectives

Pima County's regional transportation planning objectives are administered by the Pima Association of Governments (PAG). The PAG 2040 Regional Transportation Plan (RTP), and the RTA's 20-year plan which is part of the RTP, identify specific improvements to address regional mobility, reduce traffic congestion, improve safety and security, improve travel modes, and improve bicycle and pedestrian facilities in the region. The proposed project is identified in both plans, as well as PAG's Transportation Improvement Program (TIP), which is a 5-year schedule of capital improvement projects. Improvements are needed along Valencia Road to meet regional transportation planning objectives.



2.2 Traffic Capacity and Operations

The average daily traffic volumes along Valencia Road within the project area currently range from approximately 12,400 to 17,200 vehicles, and are expected to increase by approximately 3.5 percent each year to reach approximately 23,800 to 33,100 vehicles by 2030 (PCDOT 2011a). A two-lane road operating at an acceptable level of service for an urban arterial road can generally accommodate 15,600 vehicles per day, while a four-lane road can accommodate approximately 32,900 vehicles per day (PCDOT 2011a). Therefore, a four-lane roadway is needed to accommodate the traffic volumes projected for 2030 along Valencia Road.

By 2030, as traffic increases, delays at the signalized and unsignalized intersections in the project area will increase (PCDOT 2011a). Crash rates at the Camino Verde intersection with Valencia Road are 26 percent higher than the Pima County average (PCDOT 2011a). Rear end crashes make up 61 percent of the accidents at the intersection. Additionally, rear end crashes make up 44 percent of the accidents at the Wade Road intersection with Valencia Road. Intersection improvements are needed to improve traffic operations at the intersections in the project area and to reduce the crash rates at the Camino Verde and Valencia Road intersection.

Valencia Road is classified as an urban arterial with a design speed of 50 miles per hour (mph). Access along Valencia Road is currently uncontrolled, which produces numerous conflict points between through-traffic traveling at higher speeds and traffic entering or leaving the roadway from driveways and intersecting streets traveling at lower speeds. As development in the area continues, the number of conflict points is expected to increase. A raised center median with designated turn lanes is needed to reduce the number of high-speed conflict points along the corridor.

2.3 All-weather Roadway

An all-weather roadway provides through-access by keeping a travel lane open in each direction during a 10-year storm. The existing profile of Valencia Road generally follows the existing terrain and includes crossings near- or at-grade with numerous drainages. At some points, the road is elevated, causing water to pond behind the road embankment. As a result, rainstorms can impede area access and can impact driving safety until storm flows abate. Drainage improvements are needed to provide an all-weather travel surface by installing culverts to convey flows under the road.

2.4 Multimodal Connectivity

Currently, the project area does not feature pedestrian or bicycle amenities along its entirety. An existing sidewalk is located along the south side of the roadway, from east of Ignacio Baumea to the eastern project limits. Multimodal connectivity improvements are needed in the project area to enhance pedestrian and bicycle connectivity and safety.

3.0 Project Setting

Valencia Road is an east-to-west roadway providing connectivity between State Route (SR) 86 (Ajo Highway) to the west, Interstate 19 and Interstate 10 to the east, and Houghton Road in the Tucson area. The proposed project will be located along Valencia Road from approximately 0.4 mile west of Wade Road to approximately 0.3 mile west of Mark Road.



The project setting is characterized by broad valleys traversed by ephemeral and intermittent washes, giving rise to mountain ranges of low hills and jagged peaks. The west branch of the Santa Cruz River is approximately 3.5 miles east of the eastern project limits. From within the project limits, Red Butte, Golden Gate Mountain, and Cat Mountain of the Tucson Mountains are visually prominent to the north, and Black Mountain is visible to the south. Terrain in the project area is relatively flat, with elevations ranging from approximately 2,477 feet above mean sea level (amsl) to 2,558 feet amsl, sloping toward the north and west.

The project area is traversed by drainages that generally flow from the southeast to the northwest. The roadway profile roughly follows the existing terrain, and crosses the drainages at- or near-grade. In some locations, the roadway is elevated and the road embankment impedes flow, resulting in ponding and flooding at the adjacent properties. Black Wash is the major drainage feature crossing Valencia Road within the project limits.

Land use in the project area is predominantly undeveloped land interspersed with medium- to low-density residential properties. The residential properties are privately owned. The undeveloped lands are under jurisdiction of the Arizona State Land Department, Bureau of Land Management (BLM), and some private ownership. A casino (Casino del Sol) and Chevron gas station operated by the Pascua Yaqui Tribe are located south of Valencia Road, near the eastern project limits. Utility facilities are located throughout the project area. The Central Arizona Project, built by the Bureau of Reclamation, has an underground water pipe crossing the project area near Camino Rancho Road. The casino and gas station are on Tribal Trust Land managed by the Bureau of Indian Affairs for the Pascua Yaqui Tribe. Refer to Figure 2 for land ownership in the project area.

In the project area, Valencia Road consists of one 12-foot-wide through lane in each direction with 2-to 4-foot-wide paved shoulders for most of its length. A left turn lane is present at Wade Road, and left and right turn lanes are present at Camino Verde. The posted speed limit along Valencia Road is 50 mph from Wade Road to Camino Verde and 45 mph from Camino Verde to Mark Road. From the western Pascua Yaqui Reservation limits at Camino Rancho to Mark Road, Valencia Road consists of four lanes with a continuous center turn lane. Several local roads and driveways intersect Valencia Road. Wade Road south of Valencia Road is paved and intersects Valencia Road in a T-intersection. Wade Road north of Valencia Road is unpaved and offset east of the southern leg. Camino Verde intersects Valencia Road from the north, forming a T-intersection, and is the only signalized intersection in the project limits.

The existing right-of-way (R/W) for Valencia Road varies between 150 to 200 feet wide. Much of the R/W is graded and has been cleared of vegetation for approximately 15 to 60 feet from the edge of pavement. An unpaved access road for overhead power lines parallels the south side of Valencia Road, approximately 40 feet from the edge of pavement, for the entire length of the project. An existing sidewalk is located along the south side of the roadway, from east of Ignacio Baumea to the eastern project limits. No bicycle lanes, curb and gutter, or street lighting exist within the project limits. Sun Tran Route 27 terminates in a park-and-ride lot at the casino. The route enters the casino from the east and does not currently provide bus service farther west on Valencia Road. Refer to Figure 3 for an aerial view of the project area, the project limits, and land use within the project area.



4.0 Proposed Project

The project will involve the addition of travel lanes to Valencia Road from Wade Road to Mark Road. The roadway will be designed to accommodate vehicles travelling at 50 mph, but the speed limit will be posted at 45 mph. The project proposes the following improvements:

- reconstruct Valencia Road along its existing alignment from one lane in each direction to two lanes in each direction—each inside lane will be 12 feet wide, and each outside lane will be 11 feet wide — and will match the existing configuration of Valencia Road east of Ignacio Baumea
- provide dedicated turn lanes at intersections as described below and shown in Figure 4:
 - one dedicated left turn lane and one dedicated right turn lane on eastbound Valencia Road at Wade Road
 - one dedicated right turn lane and one dedicated left turn lane on northbound Wade Road at Valencia Road
 - two dedicated left turn lanes on westbound Valencia Road at Wade Road
 - one dedicated left turn lane on eastbound Valencia Road at Camino Verde
 - one dedicated right turn lane and one dedicated left turn lane on southbound Camino Verde at Valencia Road
 - one dedicated right turn lane and one dedicated left turn lane on westbound Valencia Road at Camino Verde
 - one dedicated right turn lane on eastbound Valencia Road at Ignacio Baumea
 - one dedicated right turn lane and one dedicated left turn lane on northbound Ignacio Baumea at Valencia Road
 - one dedicated left turn lane on westbound Valencia Road at Ignacio Baumea
- construct paved driveway entrances to properties currently directly accessing Valencia Road
- construct raised medians with openings and left-turn lanes in each direction at cross streets and every 0.25 mile to accommodate U-turns
- construct on-road, 6-foot-wide paved shoulders in each direction to accommodate bicyclists and other multimodal uses
- construct a 5-foot-wide pedestrian sidewalk set back approximately 9 feet from the edge of the paved shoulder, north of Valencia Road from Wade Road to Camino Verde
- construct an 8-foot-wide asphalt multiuse path set back approximately 6 feet from the edge of the paved shoulder, south of Valencia Road from Wade Road to Camino Rancho Road, and a 5-foot-wide pedestrian sidewalk set back approximately 9 feet from the edge of the paved shoulder, from Camino Rancho Road to the eastern project limits
- raise the vertical profile of the roadway 2 to 5 feet to accommodate the cross drainage improvements
- construct the following drainage improvements:
 - install a multi-cell box culvert with 10-foot-wide by 5-foot-high cells under Valencia Road at Black Wash



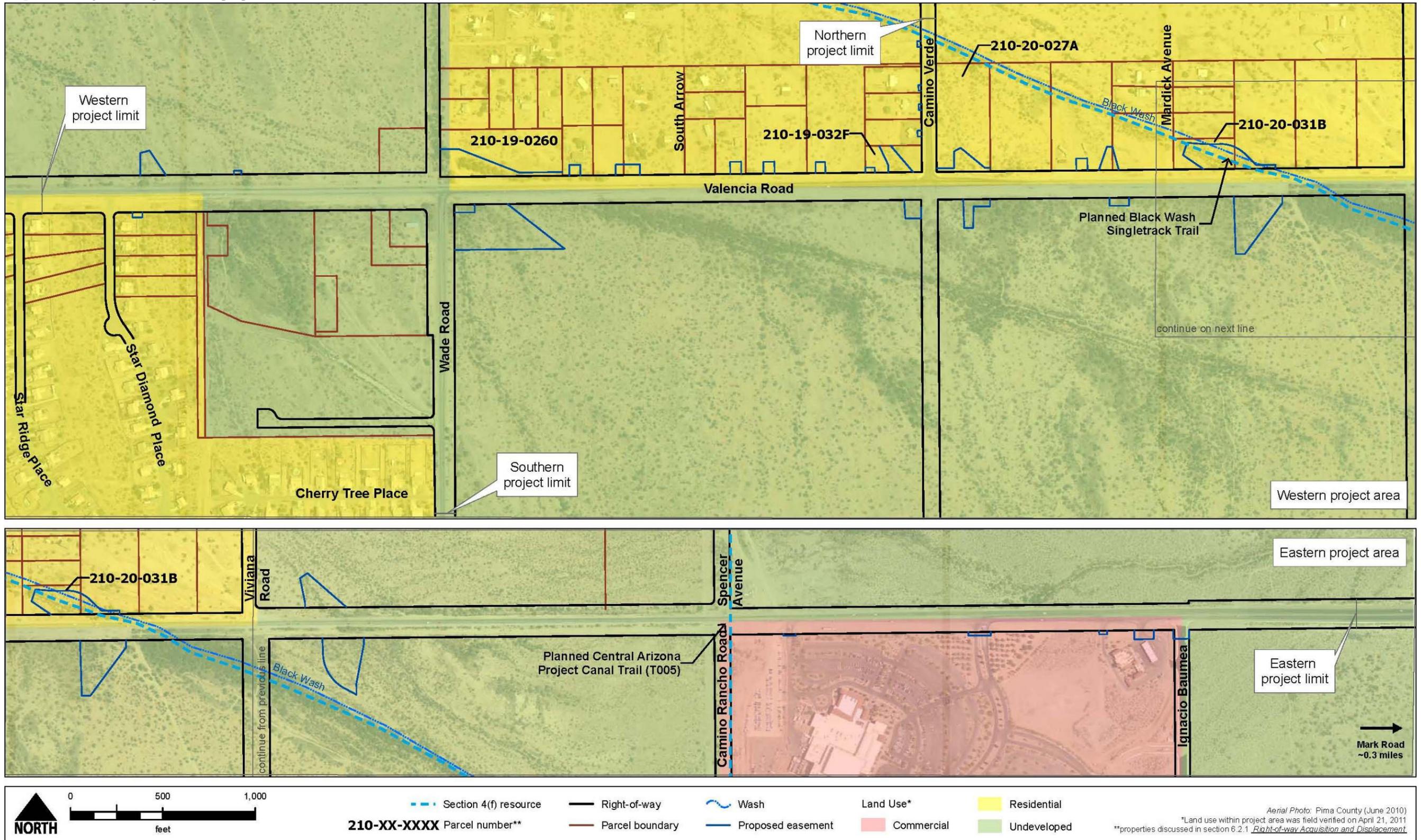
- install six box culverts and two pipe culverts with the capacity to convey 100-year storm flows under Valencia Road at other locations along the roadway
- construct upstream training dikes to direct the water flow through the culverts
- construct roadside ditches designed to keep a travel lane open in each direction—ponding will be limited to the outside lanes—during a 10-year storm
- modify the existing traffic signal at Valencia Road’s intersection with Camino Verde to accommodate the new roadway geometry
- install a new traffic signal at Valencia Road’s intersection with Wade Road
- install landscaping in the raised median and along the outside of the R/W
- replace removed native plants with the same plant species or a native plant that is commonly found in the project area
- install an Intelligent Transportation System conduit along one side of Valencia Road to accommodate future traffic signal connections to an integrated traffic management system



This page is intentionally blank.



Figure 3. Project setting, land use, proposed easements, and Section 4(f) resources

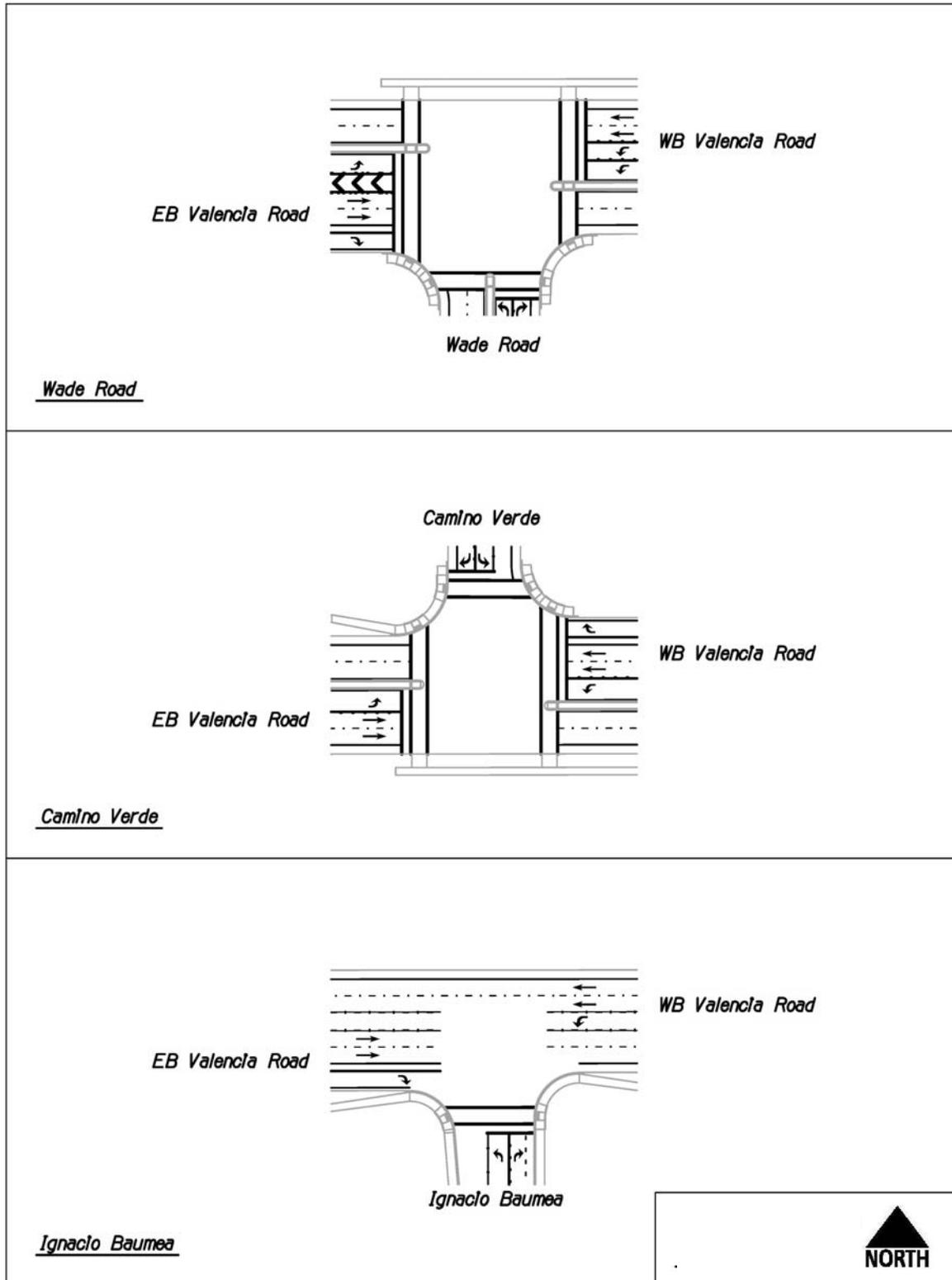




This page is intentionally blank.



Figure 4. Proposed turn lanes at intersections





5.0 Environmental Screening

An *Environmental Screening Memorandum* was completed in April, 2011 (PCDOT 2011b). Environmental screening is conducted early in the project's development to identify key environmental issues requiring consideration during the environmental review and project design process. The screening process involves a review of existing social, economic, and environmental conditions and potential impacts to these resources through completion of Pima County's *Environmental Impact Screening Checklist* and *Environmental Impact Screening Summary Impact Matrix* summarized in the *Environmental Screening Memorandum*.

The environmental screening process considered potential project-related impacts to the following categories: stormwater pollution, waters of the United States, floodplains, biological resources, air quality, noise, utilities, hazardous materials, historic properties, visual resources, and the neighborhood/social environment. A *Preliminary Initial Site Assessment* (PCDOT 2011c) was prepared during the screening process (see Section 6.1.7, *Hazardous Materials*). Additionally, the environmental screening process identified Valencia Road within the project area as a Scenic Major Route¹ and as containing Important Riparian Areas. These characteristics designate the project as an ESR. Refer to Section 6.2.4, *Consistency with Other Plans* for more information regarding these categories and the ESR designation. The complete environmental screening package, including the *Environmental Screening Memorandum*, *Environmental Impact Screening Checklist* and *Environmental Impact Screening Summary Impact Matrix* is available on the project website at: <<http://www.roadprojects.pima.gov/valenciawade/>>..

6.0 Environmental Assessment and Mitigation

Key natural, physical, and social environmental topics are evaluated in Section 6.1, *Natural/Physical Environment*, and Section 6.2, *Neighborhood/Social Environment*, of this report. For each topic evaluated, the existing conditions are described, the necessary permits are identified, and the project-related impacts are evaluated. If necessary, measures for mitigating or reducing adverse impacts are proposed. The proposed measures are also summarized in Section 9.0, *Conclusions and Recommendations*. Section 3.0, *Project Setting*, provides an overview of the existing conditions, including land use and terrain.

A CE is anticipated to be prepared for this project in accordance with FHWA environmental documentation requirements. A CE may be appropriate where federal actions would not individually or cumulatively have a significant social, economic, or environmental effect or where otherwise determined.

6.1 Natural/Physical Environment

6.1.1 Biological Resources

Threatened and endangered species are species identified as warranting federal protection, as defined in the Endangered Species Act of 1973, as amended in 1988. The U.S. Fish and Wildlife Service (USFWS) is the managing agency of species federally protected under the Endangered Species Act. Its Arizona Ecological Field Office maintains lists, by county, of federally protected species and their critical habitat,

¹ Pima County Major Streets and Scenic Routes Plan available at <<http://gis.pima.gov/maps/majscenic/mssr.pdf>>, accessed October 11, 2011.



including those designated as threatened, endangered, proposed endangered, candidate, or conservation agreement, with the potential to occur in the county.

Under A.R.S. Title 17, wildlife species of concern are species identified by the State of Arizona whose occurrence in Arizona may be in jeopardy, species with known or perceived threats, or species suffering population declines throughout all or a portion of their range in Arizona. The Arizona Game and Fish Department (AGFD) is the managing agency of state-protected wildlife species of concern, and the Arizona Department of Agriculture regulates the destruction, removal, or transport of state-protected plants under the Arizona Native Plant Act (A.R.S. § 309-1 et. al).

Impacts to biological resources were evaluated in the *Final Biological Evaluation* (PCDOT 2011d) prepared for this project. The report is summarized in this section, and the final report is available on the project website at: <<http://www.roadprojects.pima.gov/valenciawade/>>.

Existing Conditions

Vegetation and Invasive Species

The project occurs within the expanse of the Arizona upland subdivision of the Sonoran desertscrub biotic community (Brown 1994). The project area is characterized by a combination of arid-vegetation types associated with desertscrub, xeroriparian, disturbed upland, and landscaping. Approximately half of the project area remains undeveloped. Landscaping and groundcover (decomposed granite) within the existing R/W are associated with the residential neighborhoods near the western project limits and with the casino and gas station near the eastern project limits. The remaining R/W within the project area is graded and cleared of vegetation for approximately 15 to 60 feet from the edge of pavement. Native trees and shrubs occurring within the R/W in the undeveloped areas and several residential properties include blue palo verde (*Parkinsonia florida*), catclaw acacia, creosote bush (*Larrea tridentata*), desert broom (*Baccharis sarothroides*), foothills palo verde (*Parkinsonia microphylla*), velvet mesquite (*Prosopis velutina*), and whitethorn acacia (*Acacia constricta*). The understory is moderately to heavily vegetated with nonnative weedy species including buffel (*Pennisetum ciliare*) and Bermuda (*Cynodon dactylon*) grasses, prickly Russian thistle (*Salsola tragus*), and Palmer's amaranth (*Amaranthus palmeri*). Cacti include Engelmann's prickly pear (*Opuntia engelmannii*), fishhook barrel cactus (*Ferocactus wislizenii*), Graham's nipple cactus (*Mammillaria grahammii*), saguaro (*Carnegiea gigantea*), and several species of cholla (*Opuntia* spp.).

Washes and drainages cross through the project limits, and feature an increase in vegetation density typical of xeroriparian habitats. Typical species within the drainages include velvet mesquite, blue palo verde, triangle-leaf bursage (*Ambrosia deltoidea*), and the weedy species mentioned earlier.

Sensitive Species

The project limits are within the range of the federally endangered Pima pineapple cactus. No Pima pineapple cacti were located within the project R/W or easements (the project limits); however, one individual cactus and three clumps were identified within the area, outside of the project limits. Additionally, Table 3 contains a list of plant species protected under the Arizona Native Plant Act that occur within the project area.



Table 3. Plants within the project area requiring notification to the Arizona Department of Agriculture

Common name	Scientific name
Highly safeguarded	
Pima pineapple cactus	<i>Coryphantha scheeri var. robustispina</i>
Salvage restricted	
chain fruit cholla	<i>Opuntia fulgida</i>
desert sotol	<i>Dasylirion wheeleri</i>
Engelmann’s prickly pear	<i>Opuntia engelmannii</i>
Fendler’s hedgehog cactus	<i>Echinocereus fendleri</i>
fishhook barrel cactus	<i>Ferocactus wislizenii</i>
Graham’s nipple cactus	<i>Mammillaria grahamii</i>
night blooming cereus	<i>Peniocereus greggii</i>
pencil cholla	<i>Opuntia arbuscula</i>
saguaro	<i>Carnegiea gigantea</i>
staghorn cholla	<i>Opuntia versicolor</i>
Salvage assessed	
blue palo verde	<i>Parkinsonia florida</i>
foothills palo verde	<i>Parkinsonia microphylla</i>
velvet mesquite	<i>Prosopis velutina</i>

Source: PCDOT 2011d

The project area provides suitable habitat for species protected under the International Migratory Bird Treaty Act (IMBTA) including cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*) and Western burrowing owl (*Athene cunicularia hypugaea*), as well as other nesting migratory birds.

Species identified in the SDCP as priority vulnerable species were evaluated for their potential to occur (see Section 6.2.4, *Consistency with Other Plans*). The following non-federal or state-protected priority vulnerable species have the potential to occur within the project area: Abert’s towhee (*Pipilo aberti*); California leaf-nosed bat (*Macrotus californicus*), which may be present while foraging; ground snake (*Sonora semiannulata*); Merriam’s mesquite mouse (*Peromyscus merriami*). Abert’s towhee is also protected under the IMBTA.



Potential Impacts

Vegetation and Invasive Species

The construction of additional lanes, drainage structures, and drainage channel work along Valencia Road will result in ground disturbance and the removal of native vegetation including trees and shrubs. The project will develop planting plans for the area consistent with PCDOT's ESR guidelines (PCDOT 2010), which requires that affected native species be replaced in densities matching the original densities and composition. The Arizona Department of Agriculture will be notified at least 60 days prior to ground-clearing activities for impacts to plants protected under the Arizona Native Plant Act (species listed in Table 3).

Additionally, the Pima County Regional Flood Control District (RFCFD) regulates impacts to riparian habitat (Pima County Zoning Code Chapter 16.30) as defined by the Pima County Board of Supervisors. The project will remove riparian habitat classified as xeroriparian B and hydro/mesoriparian. These areas also have an "important riparian area" designation. A Floodplain Use Permit will be required for impacts to the defined riparian areas, and plans to replace or mitigate for affected habitat will be prepared. See Section 6.1.2, *Drainage and Floodplain*, for more information regarding the Floodplain Use Permit.

Soils exposed as a result of ground-disturbing activities will experience an increased possibility of being revegetated by invasive species. Additionally, increased truck and foot traffic associated with construction enhance opportunities for invasive species to spread between sites. The project will minimize the opportunity for the introduction of new invasive species to the project area and control the spread of invasive species by implementing PCDOT's Special Provision 201-3.04, *Noxious and Invasive Vegetation*.

Sensitive Species

The biological evaluation (PCDOT 2011d) evaluates impacts to the Pima pineapple cactus. The findings indicate the project will have no effect on the Pima pineapple cactus or occupied habitat. No Pima pineapple cacti were identified within the project limits, so no plants will be directly affected and no occupied habitat will be removed. The project will restore native plants to their preconstruction densities and composition within the project R/W. A Pima pineapple cactus clump is located approximately 15 feet from the edge of a drainage easement, outside of the project limits. Fencing will be installed along the easement limit to prevent construction traffic from impacting the cactus. Standard measures for dust suppression during construction and the requirements of will minimize construction-produced dust reaching adjacent properties and potentially affecting the cactus (refer to Section 6.1.4, *Air Quality*). The USFWS responded to the biological evaluation with a technical assistance letter dated November 18, 2011 indicating no impacts to the cactus were anticipated based on the proposed project and proposed measures (PCDOT 2011d). The report was approved by ADOT on December 9, 2011, and the addendum was approved on January 9, 2012.

Although no signs of current or previous use by cactus ferruginous pygmy owls or burrowing owls were identified during site visits, ground-disturbing activities and tree and large cactus removal will affect potential nesting habitat for these species and other nesting migratory bird species including Abert's towhee.



Impacts to suitable habitat for California leaf-nosed bat, ground snake, and Merriam's mesquite mouse will be minimal because construction activities will be limited to within the existing R/W, and easements associated with driveways and drainages.

The proposed project provides an opportunity to incorporate elements supporting wildlife connectivity. The AGFD was coordinated with regarding wildlife connectivity through the project area. While no project-specific suggestions were provided, the AGFD provided general suggestions for incorporating connectivity through culvert size and placement.² These recommendations have been considered during the drainage design process.

Mitigation Measures

The following mitigation measures will apply:

- Pima County will notify the Arizona Department of Agriculture by a "Notice of Intent to Clear Land" at least 60 days prior to the start of any ground or vegetation disturbing activities.
- Prior to the onset of construction, and after the 60 day Arizona Department of Agriculture "Notice of Intent to Clear Land," Pima County will cut trees and staghorn cholla within the project right-of-way and easements that will be removed by the project construction, between August 15 and December 31 (outside of the migratory bird nesting period) to prevent migratory birds from using those trees and staghorn cholla. The trees and staghorn cholla will be cut to approximately 4 inches above the base of the plant and removed from the project area.
- If unable to remove all necessary trees and staghorn cholla from within the project right-of-way outside of the migratory bird nesting period, Pima County will not remove trees, large limbs, or staghorn cholla between January 1 and August 14 unless a qualified biologist has conducted a bird nest search of the trees/limbs/cholla and determined that no active bird nests are present. Trees, limbs, and staghorn cholla may be removed if they have been surveyed within 5 days prior to removal, and as long as any present nests are confirmed inactive and not usable by the qualified biologist. If active nests are present, Pima County will establish a 100 foot buffer around the nest and will avoid the area until a qualified biologist has confirmed that the nest is no longer active.
- Pima County will employ a biologist to complete a pre-construction survey for burrowing owls 90 days, 30 days, and 96 hours prior to construction in all suitable habitat that will be disturbed. The biologist will possess a burrowing owl survey protocol training certificate issued by the AGFD.
- If any burrowing owls are located during the preconstruction surveys and are unable to be relocated on site, Pima County will employ a biologist holding a permit from the USFWS to relocate burrowing owls from the project area.
- Fencing will be installed along the project R/W near Pima pineapple cacti outside of the project limits to ensure construction traffic stays within the project limits and to avoid the nearby Pima pineapple cactus during construction activities.
- The Arizona Native Plant Act and Pima County's Environmentally Sensitive Roadway Design Guidelines will be adhered to. Removed native vegetation will be replaced to match preconstruction

² Personal communication with Shawn Lowery of AGFD on October 19, 2011.



densities and composition of the project area or surrounding environment. Saguaros will be mitigated at 1:1 ratio.

- The contractor shall identify and treat noxious and invasive species infestations consistent with Pima County Department of Transportation’s Special Provision 201-3.04, *Noxious and Invasive Vegetation* which includes mechanical and chemical removal of invasive species prior to initiation of construction, timing of invasive species removal, disposal of invasive species, prevention of invasive species during the construction process, and control of invasive species after construction is complete.
- The contractor shall not remove any trees, large limbs, or staghorn cholla between January 1 and August 14 unless a qualified biologist has conducted a bird nest search of those trees/limbs/cholla and has determined that no active bird nests are present. Trees, limbs, and staghorn cholla may be removed if they have been surveyed within 5 days prior to removal, and as long as any present nests are confirmed inactive and not usable by the qualified biologist. Between August 15 and December 31, tree/limb cholla removal is not subject to this restriction.
- If any burrowing owls are located during construction, the contractor shall employ a biologist holding a permit from the USFWS to relocate burrowing owls from the project area, as appropriate.
- If burrowing owls or active burrows are identified during construction, no construction activities shall take place within 100 feet of any active burrow until the owls are relocated.

Permits

- Arizona Native Plant Act Notice of Intent to the Arizona Department of Agriculture
- Biologist permitted by USFWS to relocate cactus ferruginous pygmy owls, burrowing owls, or migratory birds if found in the project limits and unable to avoid

Due to the presence of suitable habitat for species of concern, species-specific certification or permits will be required to conduct biological surveys for those species, and to remove nests or relocate the species, if needed.

6.1.2 Drainage and Floodplain

Considerations for surface water drainage and groundwater are discussed in this section. Surface water resources involve natural washes and manufactured drainage features. Groundwater is water stored below the ground surface in natural reservoirs called aquifers.

Executive Order 11988 requires federal agencies to avoid impacts to floodplains to the maximum extent possible. Additionally, 23 Code of Federal Regulations (C.F.R.) 650 subpart A establishes FHWA “policies and procedures for the location and hydraulic design of highway encroachments on floodplains.” Pursuant to the requirements and parameters of Executive Order 11988 and 23 C.F.R. 650, FEMA floodplain maps were obtained to determine the locations of floodplains within the project area, and a hydraulic analysis of the proposed improvements was conducted and is presented in detail in the *Drainage Report – Stage II for Valencia Road: Wade Road to Mark Road* (PCDOT 2011e) is available on the project website at: <http://www.roadprojects.pima.gov/valenciawade/>..



Existing Conditions

Surface Water

Several watersheds occur within the project area, including the Black Wash watershed (PCDOT 2011e). The watersheds mostly drain the northern alluvial plain of the Sierrita Mountains, with stormwater flowing from the southeast to the northwest. Within the project area, the watersheds are characterized by relatively flat terrain with large areas of sheet flow and channels typically exhibiting braiding along their upstream portions.

Thirteen drainage features cross the project area, flowing from the southeast to the northwest. Black Wash is the major wash in the project area that drains approximately 21.78 square miles upstream of Valencia Road (PCDOT 2011e). As the wash approaches Valencia Road from the south, it exhibits channel braiding that dissipates into sheet flow and ponding near the roadway. One channel crosses over the roadway and continues to the northwest from north of Valencia Road. At the east end of the project, a wash north of Valencia Road drains from the Tucson Mountains and flows southwest from the northeast. The drainage features and washes are relatively unmodified with few or no drainage structures—one wash crosses under Wade Road in a five-cell corrugated metal pipe culvert, and a portion of its channel has been modified to parallel Wade Road. Black Wash crosses under Camino Verde in a one-cell arch concrete culvert. There are no drainage structures along Valencia Road. As flows reach Valencia Road, they inundate the roadway with shallow sheet flow until they are redistributed to small roadside ditches or drainage features and washes north of the roadway.

Groundwater

The project area is located within the Upper Santa Cruz and Avra Basin. This area is a sole source aquifer designated under the authority of Section 1424(e) of the Safe Drinking Water Act of 1974 (as amended), which requires coordination with the Environmental Protection Agency (EPA) if the level of environmental documentation necessitates preparation of an Environmental Assessment or Environmental Impact Statement. This project is anticipated to proceed with a Categorical Exclusion; therefore, coordination with the EPA will not be required.

Floodplains

Flood Insurance Rate Maps (FIRMs) prepared by FEMA (FIRM panel 04019C2265L effective June 16, 2011³) display the project area as primarily occurring within floodplain Zone AO, with relatively small areas of Zone A and Zone X. Refer to Figure 5 showing the floodplain zones within the project area, and Table 4 describing each floodplain zone within the project area.

³ This firm panel superseded FIRM panel 04019C2225K effective February 8, 1999.



Figure 5. Floodplains in project area

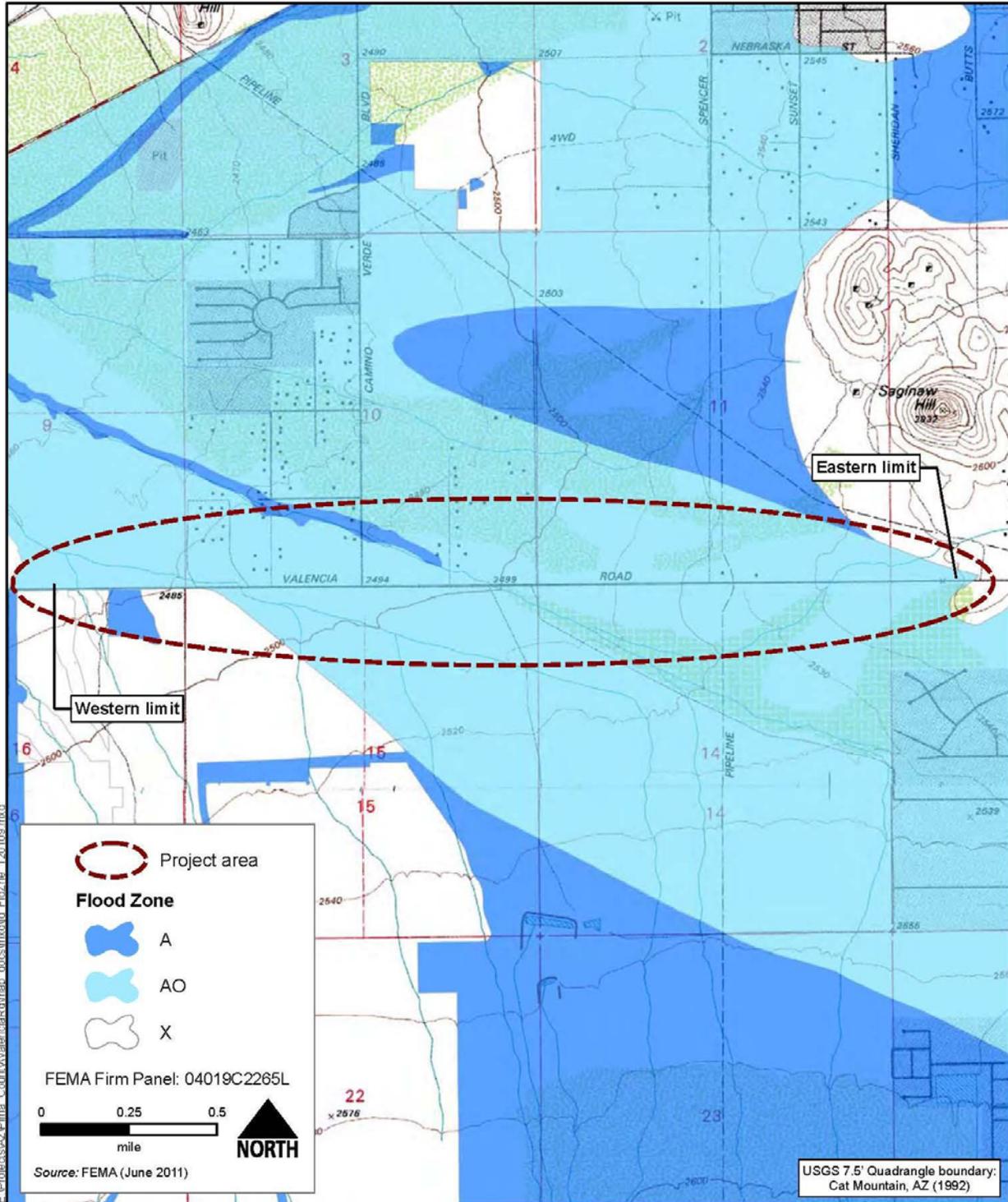




Table 4. Descriptions and locations of floodplains in project area

Floodplain	Description	Location
Zone A	Areas inundated during the 100-year storm without base floodplain elevations determined.	Area south of Valencia Road, between Star Diamond Place and Wade Road, associated with a wash. Black Wash north of Valencia Road as it approaches and crosses Camino Verde.
Zone AO	Special flood hazard areas inundated by the 100-year flood with flood depths of 1 to 3 feet. These areas are typically sheet flow on sloping terrain.	North of Valencia Road from the western project limits to Wade Road, both sides of Valencia Road from Wade Road to the eastern project limits.
Zone X	Areas outside the 0.2% chance annual floodplain.	South of Valencia Road, from the western project limits to Wade Road (except for Zone A at wash crossing west of Wade Road), and a small area east of Wade Road.

Source: FIRM panel 04019C2265L effective June 16, 2011

The Pima County Board of Supervisors designated Black Wash as an Administrative Floodway, which prohibits activities that would cause a detrimental change in flood elevation, flow velocity, or flow diversion from the natural conditions (PCDOT 2012).

Pima County Ordinance 2005 FC-2, Title 16, Chapter 16.30 quantifies and mitigates impacts to floodplains by delineating areas of regulated riparian habitat determined by the Pima County Board of Supervisors. Regulated riparian habitat classified as xeroriparian B, and hydro/mesoriparian occur within the project area.

Potential Impacts

Surface Water

The proposed drainage improvements are designed to convey 100-year peak flows under Valencia Road and eliminate flooding from cross drainage along the roadway. Seven reinforced concrete box culverts are proposed for installation along Valencia Road. Additionally, a pavement drainage system is proposed to keep a travel lane open in each direction during a 10-year storm by limiting ponding to the outside lanes. See Section 6.1.3, *Clean Water Act and Arizona Pollutant Discharge Elimination System* regarding regulatory requirements for impacts to waters of the United States.

Groundwater

The project will not involve digging or excavating activities that would expose or reach groundwater sources. Best Management Practices will be defined in the Stormwater Pollution Prevention Plan (SWPPP) to prevent groundwater pollution through polluted stormwater and groundwater recharge sites. The project as proposed will not result in impacts to groundwater.



Floodplains

The improvements associated with the project will result in impacts to the 100-year floodplain; therefore, coordination with the Pima County RFCD and FEMA will be required. A Conditional Letter of Map Revision will be submitted to FEMA, indicating the proposed design encroaching on the 100-year floodplain. Additionally, a Letter of Map Revision will be submitted to FEMA, presenting the postconstruction as-built plans. Both letters will need the approval of the Pima County RFCD and FEMA. Pima County is coordinating with ASLD and will obtain ponding easements from ASLD where the project will result in impacts to the 100-year floodplain on State Trust Land,

The proposed drainage design at Black Wash are consistent with the conditions of the Administrative Floodway designation for Black Wash (refer to Section 6.2.4, *Consistency with Other Plans*).

More than $\frac{1}{3}$ acre of Pima County Regulated Riparian Habitat will be affected by the project; therefore, the impacts will be mitigated for consistency with guidance provided in Pima County RFCD's Watercourse and Riparian Habitat Protection and Mitigation Policy.

Mitigation Measures

- Impacts to Pima County Regulated Riparian Habitat exceeding $\frac{1}{3}$ acre will be restored consistent with the mitigation measures outlined in the *Pima County Regulated Riparian Habitat Mitigation Standards and Implementation Guidelines* (Pima County RFCD 2010).
- A Conditional Letter of Map Revision showing the proposed design, and Letter of Map Revision with the post construction as-built plans will be submitted to FEMA for project effects on the floodplain. Both letters will require Pima County RFCD and FEMA approval.

Permits

- Pima County RFCD Floodplain Use Permit consistent with Pima County Ordinance 2005 FC-2, Title 16, Chapter 16.30

6.1.3 Clean Water Act and National and Arizona Pollutant Discharge Elimination System

Section 404 of the Clean Water Act (CWA) establishes a permitting program regulating activities resulting in the discharge of dredge or fill materials into waters of the United States. The program is jointly sanctioned by the U.S. Army Corps of Engineers (Corps) and the EPA, although the permit is administered by the Corps. Under Section 401 of the CWA, the Arizona Department of Environmental Quality (ADEQ) issues certification of federal permits and verifies that the draft permit is in compliance with effluent limits, the State's water quality standards, and any other appropriate requirements of state law. The Corps may issue a conditional Section 401 certification with a Section 404 nationwide permit if ADEQ certification is not required.

Arizona is recognized by the EPA as authorized to operate the National Pollutant Discharge Elimination System (NPDES) Section 402 of the CWA) at the state level, except on tribal land. ADEQ authorizes the Arizona Pollutant Discharge Elimination System (AZPDES) permit program, which regulates ground-



disturbing activities resulting in the discharge of pollutants (e.g. soil, materials, etc.) into waters of the United States. An NPDES permit issued by the EPA will be required for work on Tribal Trust Land⁴.

Existing Conditions

Eleven of the 13 drainage features within the project area contain segments proposed as waters of the United States. Because the area is relatively flat, upstream portions of the washes and drainages (south of Valencia Road) typically feature sheet flow and ponding. For six of the washes, the proposed waters of the United States are north of Valencia Road, where the channels feature jurisdictional characteristics. Black Wash is a major water of the United States transecting the project area (Feature 10 in the Preliminary Jurisdictional Delineation). The other ten washes are unnamed, but are referred to as Features 1, 3, 4, 5, 6, 7, 8, 9, 12 and 13 in the Preliminary Jurisdictional Delineation prepared for this project (PCDOT 2011f). Approximately 1.9 acre of proposed jurisdictional waters occur within the project area.

Potential Impacts

Project impacts to waters of the United States are anticipated to remain less than 0.1 acre at each wash and meet the requirements of a non-notifying CWA Section 404 Nationwide Permit No. 14 for transportation projects. If project impacts exceed 0.1 acre at any wash, a preconstruction notification to the Corps for use of the permit would be necessary.

The use of construction equipment and materials, and temporarily disturbed and exposed soils associated with construction could introduce potential stormwater pollutants. More than 1 acre of soil will be disturbed within the project limits; therefore, prior to construction, a Notice of Intent will be submitted to ADEQ to use the Section 402 AZPDES General Permit for the project, and to the EPA to use the Section 402 NPDES General Permit for impacts to the Pascua Yaqui Reservation. SWPPPs will be prepared with best management practices for preventing or minimizing stormwater pollution, to meet the requirements of each construction permit.

Mitigation Measures

The following mitigation measures will apply:

- PCDOT will ensure that SWPPPs meeting the requirements of the current AZPDES and NPDES General Permits for discharge from construction activities to the waters of the United States are prepared and approved prior to construction.
- PCDOT will approve the SWPPPs and, upon approval PCDOT and the contractor, will file separate Notices of Intent with ADEQ and the EPA prior to construction. Upon final acceptance of the project once construction is complete, PCDOT and the contractor will file separate Notices of Termination with ADEQ and the EPA. The contractor shall provide copies of the completed final SWPPP and the contractor's Notices of Intent and Notices of Termination to PCDOT.
- Utilities are responsible for preparing a separate SWPPP and filing a Notice of Intent with the appropriate agency for their activities.

⁴ Verified by personal communication with Eugene Bromley of the EPA on September 15, 2011.



- The contractor shall comply with the conditions of the Clean Water Act Section 404 Nationwide Permit No. 14 and the conditional Section 401 certification.

Permits

- CWA Section 404 permit No. 14 with conditional Section 401 certification
- CWA Section 402(a) AZPDES General Permit
- CWA Section 402(a) NPDES General Permit for ground-disturbance to the Pascua Yaqui Reservation

6.1.4 Air Quality

EPA has established National Ambient Air Quality Standards (NAAQS) for six criteria pollutants: ground-level ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter (PM_{2.5} and PM₁₀), and lead.

In 1999, Pima County exceeded the PM₁₀ NAAQS. The Pima County Department of Environmental Quality (PDEQ) developed a Natural Events Action Plan to protect public health, educate the public about high wind events, mitigate health impacts from future events, and identify and implement control measures for human-made sources of dust. The Natural Events Action Plan requires an activity permit from PDEQ before activities such as earthmoving, trenching, or road construction exceeding 50 feet are conducted. Pima County Code Air Quality Control, Title 17, Chapter 16.050, limits the amount of dust generated to a maximum opacity of 20 percent.

The City of Tucson historically violated the NAAQS for CO and was designated as nonattainment. In 2000, the City of Tucson was redesignated as attainment with a limited maintenance plan, which establishes procedures and contingency measures to be implemented, if necessary, in the future.

Existing Conditions

The proposed project is located within an area that is in attainment for all criteria pollutants. It is also located within the limited maintenance plan area for CO.

Potential Impacts

Construction-related soil disturbance and operation of heavy equipment will produce an increase in particulate matter during roadway construction, but these impacts will be short-term. Measures will be implemented to minimize dust generated from construction activities and the amount of generated dust reaching adjacent properties.

Overall air quality would be improved in the project area as a result of enhanced vehicle efficiency.

Mitigation Measures

The following mitigation measures will apply:

- Prior to initiating any construction activities such as earthmoving, trenching, or road construction, the contractor shall obtain an activity permit from PDEQ.
- The contractor shall monitor dust generation from the construction area and limit the amount of dust generated to a maximum opacity of 20 percent.



- The contractor shall follow PCDOT standard specifications for dust suppression (Section 207) during construction and shall comply with the SWPPP prepared for this project (see Section 6.1.3, *Clean Water Act and National and Arizona Pollutant Discharge Elimination System* for more information regarding the SWPPP).
- The contractor shall obtain an activity permit from PDEQ prior to construction.

Permits

- Activity permit from PDEQ with dust control measures

6.1.5 Noise

Noise is unwanted sound that interferes with normal activities or otherwise diminishes the quality of the environment. Title 23 C.F.R. 772 requires that a traffic noise analysis be conducted for proposed federal-aid highway projects that will construct a highway on new location or physically alter an existing highway resulting in considerable change to either the horizontal or vertical alignment of the road or an increase in the number of through traffic lanes. A traffic noise study was conducted for this project according to PCDOT's *Traffic Noise Analysis and Mitigation Guidance for Major Roadway Projects*, Procedure No. 03-5 (2003), and in accordance with FHWA's noise abatement criteria outlined in *Highway Traffic Noise Analysis and Abatement, Policy and Guidance* (FHWA 2011). The FHWA approved traffic noise model (TNM 2.5) was used to predict traffic noise levels for this project. The noise analysis methods and results are presented in detail in the *Draft Traffic Noise Report* (PCDOT 2011g) prepared for this project, and are summarized in this section. The final report is available on the project website at: <http://www.roadprojects.pima.gov/valenciawade/>..

23 C.F.R. 772 establishes traffic noise levels warranting consideration for abatement based on land use—67 dBA at residential properties, and 71 dBA at commercial properties, as well as others. State and local governments may define the level at which traffic noise “approaches” the noise abatement criteria, and at which point design year (2030) traffic noise levels “substantially increase” over existing traffic noise levels. PCDOT's Noise Abatement Policy applies a 1 dBA approach to the federal noise level threshold; therefore, according to PCDOT's Noise Abatement Policy, a traffic noise impact occurs when the predicted traffic noise levels are at or exceed 66 dBA at residential properties, or 71 dBA at commercial properties, and should be considered for traffic noise abatement measures. PCDOT's policy defines “substantially exceed” as a 15-dBA increase over existing noise levels. Refer to Appendix B *Traffic Noise Analysis*, for figures showing the evaluated properties (represented by numbered receivers), and a summary of the noise prediction results.

Existing Conditions

Noise-sensitive properties within the project area are predominantly single-family homes. Commercial properties include the Casino del Sol and the Chevron station.

During peak traffic hours, roadway noise is the dominant noise source in the project area. Field readings were taken at two locations to measure existing noise conditions during the peak traffic hours (refer to Appendix B for figures showing the field reading locations and the noise measurement results). Readings were taken on April 21, 2011, from 6:50 a.m. to 8:30 a.m. and from 5 p.m. to 6:29 p.m. Field conditions were replicated in the traffic noise model, and noise levels were then calculated by the model. Existing



traffic noise levels from the field measurements were then compared with the model's calculations to verify the accuracy of the model. For this project, the traffic noise model calculated noise levels 1 to 3 dBA less than the measured levels. This discrepancy is largely attributable to the condition of the roadway at the monitoring sites and ambient noises. No adjustments were made to the model to represent the noise produced by the degraded roadway because the new roadway will have new pavement without the existing cracking and associated noise.

Existing noise levels were modeled at 11 noise-sensitive receiver locations within the project area representing residences and commercial properties. Modeled existing peak-hour noise levels along Valencia Road ranged from 53 to 61 dBA. Therefore, modeled existing noise levels did not exceed the PCDOT's Noise Abatement Policy criteria of 66 dBA at any of the noise-sensitive properties. Refer to Appendix B for figures showing the noise-sensitive receiver locations and the modeled existing noise levels at each receiver location.

Potential Impacts

The addition of travel lanes to Valencia Road will move the noise source (tires on the roadway) closer to the noise-sensitive properties, thus increasing traffic noise levels at these properties. Additionally, the project design year is 2030, and traffic volumes on Valencia Road are expected to increase (see Section 2.2, *Traffic Capacity and Operations*). The increased traffic volumes will result in an increase in traffic noise along the roadway whether or not the project is constructed.

Future (2030) noise levels were predicted at the 11 receiver locations adjacent to Valencia Road. Future peak-hour noise levels will range from 58 to 64 dBA. The expected increase from existing levels will range from 2 to 6 dBA at individual locations, with an average increase of approximately 4 dBA. Predicted future noise levels did not exceed the 66-dBA criterion at any of the 11 noise-sensitive receivers (see Appendix B for figures showing the field reading locations and the noise measurement results). Additionally, no properties were predicted to experience a substantial increase in traffic noise levels. No evaluation of noise abatement measures is warranted.

PCDOT will apply rubberized asphalt to the improved roadway. Although FWHA does not consider rubberized asphalt to be a noise mitigation measure, rubberized asphalt may result in a 3-dBA or greater traffic noise reduction from the predicted future traffic noise levels.

See Section 6.1.8, *Construction Activities*, for a discussion of construction noise impacts.

Mitigation Measures

No mitigation measures are warranted.

Permits

No permits with regard to traffic noise impacts have been identified.



6.1.6 Utilities

This section identifies the utilities present in the project area, the anticipated utility relocations that will occur as a result of the project, and the potential impacts to utility customers. The parties responsible for notifying customers of planned service interruptions are included in this section. For more information regarding utilities, refer to the *Final Design Concept Report* (PCDOT 2012) which will be made available on the project website at: <http://www.roadprojects.pima.gov/valenciawade/>..

Existing Conditions

Table 5 presents the existing utility owners and facilities in the project area.

Table 5. Existing utilities

Owner	Facility
Central Arizona Project/Bureau of Reclamation	84-inch water, 46 kV overhead electric
Comcast	Cable television
El Paso Natural Gas	9-inch high pressure gas
Pascua Yaqui Tribe/Bureau of Indian Affairs	Street lights
Pima County Regional Wastewater Reclamation Department	12-inch sanitary sewer
Pima County Department of Transportation	Traffic signals, street lights, ^a and conduits
Century Link	Telephone
Southwest Gas	4-inch distribution gas
Trico Electric	25 kV overhead and underground electric
Tucson Electric Power	46 kV overhead electric
Tucson Water Department	12-, 24- and 42-inch water

^a Pima County street lights are limited to the intersection at Camino Verde.

Source: (PCDOT 2012)

Potential Impacts

The proposed improvements—especially culverts—will conflict with existing utilities in the project limits. Table 6 presents the utilities that will require relocation to avoid conflicts, the party (utility or Pima County contractor) responsible for conducting the relocation, the party responsible for notifying the affected customers, and constraints for when the utility could be relocated—for instance, electricity outages cannot be accommodated during the summer months when electricity demand is high.



Table 6. Utility relocation responsibilities

Owner	Relocation needed?	Party to conduct relocation	Party to notify customers	Relocation times ^a
Central Arizona Project/Bureau of Reclamation	no	—	—	—
Comcast	yes	utility	utility	—
El Paso Natural Gas	no	—	—	—
Pascua Yaqui Tribe/Bureau of Indian Affairs	no	—	—	—
Pima County Regional Wastewater Reclamation Department	yes ^b	contractor	contractor	—
Pima County Department of Transportation	yes	contractor	—	—
Century Link	yes	utility	utility	—
Southwest Gas	yes	utility	utility	—
Trico Electric	yes	utility	utility	September–May
Tucson Electric Power	yes	utility	utility	October–April
Tucson Water Department	yes	contractor	contractor	October–April

^a Relocation times listed for those utilities that apply them.

^b Manhole rim adjustments only.

Trico Electric utility poles for overhead power lines will need to be relocated where they conflict with proposed culverts. No additional utility poles are expected to require relocation. Several underground utility lines will be relocated, including water, gas, electric, and communications. Most of the relocation work will be conducted by the applicable utilities in advance of project construction. The Pima County contractor will be responsible for making adjustments to sewer manholes for Pima County Regional Wastewater Reclamation Department facilities, and relocating Tucson Water Department facilities.

Utility relocation work may result in temporary disruption of utility services. The interruptions would be short-term in duration, and would occur during low-usage times (i.e., during daylight hours when many people are at work). Customers would be notified in advance of the planned service interruptions.

Mitigation Measures

The following mitigation measures would apply:

- The utility provider shall notify customers 14 days in advance of a planned service interruption.
- The contractor shall notify affected customers 14 days in advance of planned service interruptions to Pima County Regional Wastewater Reclamation Department and Tucson Water Department services.



Permit

- Public sewer construction permit from Pima County Regional Wastewater Reclamation Department for work related to the municipal sewer system
- Right-of-way use permit obtained from PCDOT for utility relocation (requires the authorization number issued by ADEQ for the AZPDES General Permit—see Section 6.1.3, *Clean Water Act and National and Arizona Pollutant Discharge Elimination System* for more information regarding the AZPDES General Permit)

6.1.7 Hazardous Materials

The project area was reviewed for hazardous materials, and the methods and results are documented in the *Preliminary Initial Site Assessment* (PCDOT 2011c) prepared for this project. The results are summarized in this section, and the full report is available on the project website at: <http://www.roadprojects.pima.gov/valenciawade/>..

Existing Conditions

An operating Chevron service station in the immediate project vicinity was identified as a potential hazardous materials site of concern for the project. The station is anticipated to contain underground storage tanks, which indicate a moderate to high risk of environmental impacts from hazardous materials. Aerial imagery indicates the station was constructed in 2006.⁵

Potential Impacts

Ground disturbance is not anticipated in the vicinity of the underground storage tanks; therefore, no impacts to the underground storage tanks are anticipated. If acquisition is required within 200 feet of the Chevron service station, a site-specific Phase I Environmental Site Assessment is recommended.

Relocation or demolition of structures containing paint may require testing for lead-based paint. No potentially-asbestos containing materials (such as load-bearing structures) would be impacted by the project; therefore, no asbestos testing is anticipated.

Mitigation Measures

The following mitigation measure will apply:

- If any suspected hazardous materials are encountered during construction, work shall cease at the location and the Pima County Engineer shall be contacted to arrange for proper assessment and treatment or disposal of the materials.
- Milling asphalt with pavement striping would not require testing for lead-based paint; however, for all other paint removal methods, testing for lead-based paint shall be conducted prior to demolition and removal.

Permits

No permits in regard to hazardous materials have been identified.

⁵ Provided by Karla Reeve-Wise of PCDOT on October 24, 2011.



6.1.8 Construction Activities

This section evaluates impacts that may result from construction activities associated with the project such as traffic control, dust generation, and noise.

Existing Conditions

Land use within the project area is primarily undeveloped properties, with low- to medium-density residential developments, and commercial development near the eastern project limits.

Potential Impacts

Utility relocation will begin in the fall of 2012 and roadway construction will begin in the spring of 2013. Construction is expected to take 24 to 30 months to complete.

Earthmoving, grading, and demolition activities will temporarily generate dust within the project area (see Section 6.1.4, *Air Quality*).

Access within the project area will be temporarily affected during construction. A traffic control plan will be implemented by the contractor in conjunction with PCDOT's Field Engineering Division, and will include the use of construction signs, cones, and reduced speed limits. No detours or temporary roads are anticipated (see Section 6.2.2, *Temporary and Permanent Access and Parking*).

Construction of any part of the proposed project may cause temporary noise impacts. Construction equipment used during site clearing, earthwork/grading, foundation preparation, and base preparation will result in a noise increase within the project area. Construction noise will be intermittent, with the highest noise levels (instantaneous sound levels of 93 dBA) occurring at the project R/W during the grading/earthwork phase (PCDOT 2011g).

Noise impacts from construction equipment may be minimized by using properly designed equipment, maintaining equipment, and placing equipment away from noise-sensitive properties. The contractor will comply with Pima County's Noise Ordinance (Pima County Code, Title 9, Chapter 9.30.070), which sets construction daily start and stop times in order to avoid noise disruptions at night. If nighttime work is required, the contractor will need to obtain a permit from Pima County.

Mitigation Measures

The following measures are recommended to address construction-related noise impacts:

- The contractor shall comply with Pima County's Noise Ordinance (Pima County Code Title 9 Chapter 9.30.070), which sets the construction start and stop times in order to avoid noise disruptions at night. If nighttime work is required, the contractor shall obtain a permit from Pima County.

Refer to Section 6.1.4, *Air Quality* for measures addressing construction-related impacts on air quality, Section 6.1.6, *Utilities* for measures addressing construction-related impacts on utilities, and Section 6.2.2, *Temporary and Permanent Access and Parking* for measures addressing construction-related impacts on access.



Permits

Permits required for construction are listed in the section for the environmental issue that the permit addresses.

6.1.9 Historic/Cultural Resources

This section discusses potential impacts to cultural resources based on a project-specific Class III Cultural Resources Survey conducted in accordance with Section 106 of the National Historic Preservation Act of 1966 (Lundin 2011); the abstract from the final report is available on the project website at: <http://www.roadprojects.pima.gov/valenciawade/>.. The report includes the results of a Class I records review, Class III pedestrian surveys conducted in June, September, and December 2011, and an assessment of the built environment; it also evaluates the potential impacts of the project to cultural resources. Assessment of the built environment was based on a review of tax data, aerial photographs from 1967, and a windshield survey to determine whether any historic buildings are within 0.25 mile of the project.

Existing Conditions

A records search of previous surveys indicates that 32 surveys have been undertaken within 0.5 mile of the project. Four isolated occurrences and three roadside memorials were recorded as a result of the 2011 Class III surveys. All of these isolated occurrences and roadside memorials are recommended ineligible to the National Register. A previous cultural resources survey, conducted in 1993, that covered a portion of the current project area, identified one site whose reported boundary intersected the current project area. This site, AZ AA:16:380 (ASM), was reported in 1994 to have been heavily eroded, and was determined to be ineligible to the National Register by the State Historic Preservation Office on May 5, 1994. The 2011 Class III cultural resources surveys found no trace of this site within the current project area.

The built environment was assessed for the presence of historic structures. The assessment consisted of a review of Pima County Assessor tax records and parcel maps, and 1967 aerial photographs, to determine if there were historic aspects of the built environment (buildings, structures, ranches, etc.) in the vicinity of the project that could potentially be affected by the project. The data review was supplemented with a windshield survey of the project limits plus a 0.25 mile buffer to identify historic architecture. One potential historic structure—Valencia Road—was identified. Valencia Road was legally established by Pima County in 1959; the segment within the project limits was built sometime between 1959 and 1967. The road fails to meet any of the criteria for evaluation and, therefore, is recommended as “not eligible” for listing in the National Register. There are no other historic buildings or structures within 0.25 mile of the project limits.

Potential Impacts

Because no National Register-eligible properties are present within the APE, a finding of *no historic properties affected* is recommended. FHWA will seek concurrence on this finding from the State Historic Preservation Office, Arizona State Land Department, Bureau of Indian Affairs, BLM, Bureau of Reclamation, Pima County, Pascua Yaqui Tribe, and other interested tribes.



The memorials located within the APE will be affected by the project. If possible, Pima County may contact the families to determine the disposition of the memorials, attempt to preserve the memorials in place or relocate the memorials on site.

Mitigation Measures

There are no known National Register-eligible properties present within the APE. The following mitigation measures are recommended.

- Should any archaeological resources, human remains, or funerary objects be discovered during project implementation, all surface disturbing activities in the area of discovery shall immediately cease and the discovery shall be reported to the director of the Arizona State Museum (ASM) at (520) 621-6281 as required by A.R.S. §§ 41-844 and 41-865, and to the Pima County archaeologist at (520) 740-6405 to make arrangements for the proper treatment of those resources.
- In the event that the roadside memorials cannot be avoided, the Pima County Community Relations Department (520) 740-6410 in coordination with the Pima County project manager, will attempt to contact the families of the deceased so that the memorials can be moved. If Pima County is unable to reach the family, Pima County will either store or relocate the roadside memorial outside the construction footprint.

Permits

Surveys on Arizona State Trust and Pima County-owned land were permitted under Arizona Antiquities Act Blanket Permit 2011-009bl, issued by the ASM. Work on land administered by the BLM was authorized under BLM Permit AZ-000472 and Field Authorization No. 8110 (AZG020). HDR accessed Pascua Yaqui Tribal Trust and fee land based on approval from Tony Fortes with the Pascua Yaqui Tribe Land Department.

6.1.10 Visual Resources

This section discusses potential impacts to viewsheds and the viewers within the project area. Visual resources were identified and evaluated consistent with PCDOT's ESR guidelines. The methods and results are documented in detail in the *Final Visual and Aesthetic Resource Analysis, Valencia Road: Wade Road to Mark Road*. (PCDOT 2011h) prepared for this project. The report is summarized in this section, and the final report is available on the project website at: <http://www.roadprojects.pima.gov/valenciawade/>.

Existing Conditions

Within the project area, Valencia Road is identified as a Scenic Major Route in the Pima County Major Streets and Scenic Routes Plan (see Section 6.2.4, *Consistency with Other Plans*). The foreground, Valencia Road and the cleared R/W are the dominant visual features. Overhead power lines paralleling the roadway to the north and the south are visually prominent, as well as the xeroriparian and desertscrub vegetation lining the R/W. Overhead lighting is visible at the Valencia Road and Camino Verde intersection. Scattered, low-density residential development and natural vegetation are visual features set back from the roadway. Toward the east, the casino and gas station are visually prominent as middle ground views to and from the project area. Mountain ranges are visible in the background in all directions



to and from the project area. Scattered residential development is visible on the surrounding hillsides. Motorists travelling through the project area would not expect dramatic or unique scenery, although distant views of the surrounding mountain ranges and hills might be anticipated. Refer to Appendix C *Viewshed Inventory*, for photographs and conditions at viewpoints in the project area.

Potential Impacts

The proposed roadway will include the addition of travel lanes, paved shoulders, turn lanes, raised medians, a multiuse path, and sidewalks. These elements will result in a moderate visual impact from the adjacent properties and to motorists travelling through the area. However, the widened roadway and new sidewalk will be constructed within the existing R/W, minimizing the amount of vegetation removed to construct the new transportation facilities. Additionally, the raised median and sidewalk set back from the roadway will visually interrupt the extent of the additional hard surfaces that will be constructed.

The Valencia Road intersection with Camino Verde is currently signalized, while the intersection at Valencia Road with Wade Road is currently not signalized. Additional overhead lighting is proposed for the Camino Verde intersection, and Wade Road is proposed to be signalized. The addition of traffic signal poles, overhead lighting, and electrical cabinets at these intersections will affect the foreground views in the immediate vicinity, and will moderately but intermittently affect background views from elsewhere in the area. The middle ground views will not be affected by the project.

The project will incorporate drainage structures along the roadway where there are currently no structures. Construction of the box culverts with concrete or riprap inlets and outlets will require vegetation removal from areas currently containing mature trees, resulting in a substantial alteration to the existing visual character.

Pima County Zoning Code Chapter 18.77.040, *Scenic Routes* stipulates design standards specific to scenic routes in Pima County, including placement for new utilities and the color and materials used for new structures within 200 feet of the roadway. No new utilities are proposed for installation with the project; therefore, existing overhead utilities will not be required to be relocated underground. The colors and materials of the proposed drainage structures will be designed consistent with the standards in the ordinance. Pima County's roadway design standards specify the sizes and placements of intersection signals, project design may incorporate elements to minimize the visual impact of the new traffic signals and lighting. These include placing electrical cabinets underground or in an area where they are less visually apparent, strategically placing trees and shrubs to shield the conduit boxes from view, and/or painting the boxes a neutral color that will incorporate it into the surrounding landscape. The visual impact from the overhead lighting and traffic signals could be reduced by limiting the number of poles needed, and limiting or securing loose or dangling wires. The additional overhead lighting proposed at Camino Verde could introduce additional light at the adjacent properties. The intersection currently features overhead lighting; therefore, the affects from additional lighting at the adjacent properties will be minimal. The overhead lighting will be designed to direct lighting towards the intersections and roadway, minimizing the light spill-over to the adjacent properties.

A landscape plan will be prepared to incorporate plantings in the raised median and within the new roadside R/W and drainage easements. The landscape design will be developed consistent with PCDOT's ESR design guidelines, which require plantings to match existing densities and composition of native



plants in the area; thus restoring the natural character and minimizing the effects of the new structures and facilities on the existing visual resources.

Mitigation Measures

The following measures are recommended:

- Design landscaping to include plantings in the raised median, along roadside buffer areas and beyond, using species typical of the surrounding biotic community. Avoid arranging plants in unnaturally straight rows, and place trees to obscure undesirable views and frame more desirable views. The plant design, density, and spacing of species should emulate the natural surroundings as much as possible.
- Use overhead light and traffic signal pole diameters as small as structurally possible and limit the number of poles needed by placing as many signals and signs as possible on each pole. Limit or secure any loose or dangling wires.
- Locate electrical cabinets underground or in an area where they are less apparent. Paint the cabinets a neutral color (such as tan or brown) to match the surrounding ground or soil.
- Design landscape plantings to make electrical boxes visually less apparent (while maintaining access for service).
- Use colors and materials for the proposed drainage structures compatible with the surrounding natural landscape and do not use materials or paint with a light reflecting value greater than 80 percent. Angular riprap in brown and tan colors should be used in drainage areas where necessary. Railings installed in the project area and around drainage structures should be painted in brown tones to blend in with the natural surroundings.
- Pima County will mitigate disturbance to native vegetation in drainage easements by replanting them to the extent practical with vegetation similar to what was removed by construction.

Permits

No permits pertaining to visual resources have been identified for the proposed project.

6.2 Neighborhood/Social Environment

6.2.1 Right-of-Way Acquisition and Displacement

This section describes the existing land use, zoning, and planned development in the project area, and evaluates the potential impacts resulting from acquisition of new R/W, temporary construction easements, and drainage easements for the project, including displacement of uses.

Existing Conditions

Zoning in the project area is Rural Residential, Rural Homestead, and Mixed Dwelling Type, and—to a lesser extent—Suburban Ranch, Local Business, Multiple Residence, and Country Manufactured and Mobile Home.

Proposed development along the corridor includes residential, commercial, and municipal uses. The Star Valley Commercial Center is proposed for construction at the southwest corner of Valencia Road and Wade Road. A hotel and a conference center are under construction at Casino del Sol. The Pima County



Southwest Infrastructure Plan (SWIP) proposes a neighborhood activity center on the private property north of Valencia Road, west of Wade Road, and low-density (one to two residences per acre) urban development on the Arizona State Trust Land (PCDOT 2007). The Black Wash floodway is identified in the SWIP and will not be developed (PCDOT 2007). Refer to Section 6.2.4, *Consistency with Other Plans* for more information regarding the SWIP.

Potential Impacts

The proposed project will require 10.47 acres from 26 properties. The property acquisitions will include 7.07 acres of drainage easements from 13 properties, 2.38 acres of ponding easement from one property, and 1.02 acre of temporary construction easements from 14 properties. Table 7 presents the property acquisitions by parcel number and owner.

Table 7. Acquisition needs by acquisition type

Parcel	Physical Address ¹	Land Ownership	Acreage ²
Drainage easements			
210-15-1940	—	Title Security Agency of AZ TR 913	0.28
210-15-1990	—	Title Security Agency of AZ TR 913	0.02
*210-19-0260	—	State of Arizona	1.09
*210-19-032F	6470 S. Camino Verde	Roxanne Hernandez and Jesus F. Bonillas Jr. JT/RS	0.30
*210-20-027A	—	Gordon Dong and Helen Yee, JT/RS	0.38
210-20-029A	6452 W. Valencia Road	Ruben R. Padilla and Olivia JT/RS	0.15
210-20-030C	6402 W. Valencia Road.	Ignacio Garcia Fierros and Blanca Luz De Garcia CP/RS	0.05
*210-20-031B	—	Pima County Flood Control District	0.76
210-20-032A	—	Pima County Flood Control District	0.25
210-22-024A	—	Pascua Yaqui Tribe	0.61
210-30-008A	5899 W. Valencia Road	State of Arizona	1.25
210-31-0120	6211 W. Valencia Road	State of Arizona	1.90
310-32-2650	6517 S. Star Diamond Place	Rita L. Romero	0.03
Ponding easements			
210-31-0120	6211 W. Valencia Road	State of Arizona	2.38



Table 7. Acquisition needs by acquisition type (*continued*)

Parcel	Physical Address ¹	Land Ownership	Acreage ²
Temporary construction easements			
210-19-017F	—	La Rena Investment Group	0.01
210-19-027C	6886 W. Valencia Road	Richard Carrasco and Kathleen A. JT/RS	0.08
210-19-027D	6850 W. Valencia Road	Guadalupe Alvarado	0.06
210-19-028A	6802 W. Valencia Road	Tabor Lovell Dean and Dorothy J. Trustees of Lovell Dean & Dorothy J. Tabor Rev. TR	0.12
210-19-029F	6750 W. Valencia Road	Lonnie Shaw	0.09
210-19-030B	6720 W. Valencia Road	Seng, Heng and Sreytoch CP/RS	0.09
210-19-031B	6650 W. Valencia Road	Seng, Heng and Sreytoch CP/RS	0.07
210-19-032D	6436 S. Camino Verde	Philip B. and Andrea L. Lloyd JT/RS	0.01
210-19-032E	6240 S. Camino Verde	Gustavo and Edilia Arce CP/RS	0.01
210-19-032F	6470 S. Camino Verde	Roxanne Hernandez and Jesus F. Bonillas Jr. JT/RS	0.03
210-19-032G	6452 S. Camino Verde	Joel A. and Kathy G. Rios JT/RS	0.02
210-20-029A	6452 W. Valencia Road	Ruben R. Padilla and Olivia JT/RS	0.09
210-30-008B	5655 W. Valencia Road	United States of America in Trust for Pascua Yaqui Tribe (Bureau of Indian Affairs)	0.33
210-32-2620	—	Stewart Title and Trust	0.01

Source: Preliminary right-of-way plans, Pima County Map Guide <http://gis.pima.gov/maps/mapguide>.

Bold font and shading indicate the parcel is listed more than once (i.e. more than one type of easement is needed from the parcel).

1. —, indicates that no physical address is assigned to the parcel
2. * indicates parcel is included in Table 8

Temporary construction easements will be needed to construct driveway access to Valencia Road from the adjacent properties. This would facilitate access to Valencia Road from the adjacent properties and would not result in adverse impacts to the property owners or their properties.

The proposed drainage improvements are designed to minimize acquisition requirements. A majority of the proposed drainage easements are associated with existing drainage features and are typically unsuitable for development. The proposed drainage easements at these properties will have minor impacts on the property owners and not affect the continued use or future development of the properties. The proposed drainage easements at four properties involve 25 percent or more of the property or follow the entire property line at the Valencia Road R/W. The size and/or location of these easements may affect the future use of the property. Table 8 presents each property with substantial drainage features, and the amount (in acres and percentage) of each property required for the proposed drainage easement. Refer to Figure 3 for the proposed easements and properties identified in Table 8.



Table 8. Properties with proposed large drainage easements

Parcel	Land use/ Ownership	Proposed easement/ Total parcel (acres)*	Percentage of parcel as easement	Description
210-19-0260	vacant/ Arizona State Trust Land	1.09/ 4.40	25%	Follows the entire property line at the Valencia Road R/W.
210-19-032F	vacant/ private	0.33/ 1.21	27%	Extends northwest from the southeast through the center of the property.
210-20-027A	vacant/ private	0.38/ 4.12	9%	Follows the entire property line at the Valencia Road R/W.
210-20-031B	vacant/ Pima County Flood Control District	0.76/ 1.26	60%	Extends northwest through most of the property. Ownership indicates that property is intended for flood control purposes.

*Source (for parcel size): Pima County Assessors <http://www.asr.pima.gov/index.aspx> accessed 1/6/2012

The owners of properties requiring acquisition for easements will be compensated at fair market value.

Mitigation Measures

The following measure is recommended:

- Pima County will implement a property acquisition program in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646), the Uniform Relocation Act Amendments of 1987 (Public Law 100-17), Title VI of the Civil Rights Act of 1964, and Arizona law. Private property owners will be compensated at fair market value for land to be acquired for project R/W and easements.

Permits

No permits pertaining to R/W acquisitions and displacements have been identified for the proposed project.

6.2.2 Temporary and Permanent Access and Parking

This section evaluates temporary and permanent project-related impacts to vehicular and multimodal access and parking, as well as compliance with the Americans with Disabilities Act.

Existing Conditions

Local roads (Star Diamond Place, Vincent Drive, Wade Road, South Arrow, Mardick Avenue, and Viviana Road) intersecting Valencia Road provide access to the adjacent residential properties. They typically do not connect to other neighborhoods or through-roads to provide alternate routes between neighborhoods or through the project area; therefore, adjacent residential properties and neighborhoods are primarily accessed by Valencia Road. The commercial properties are accessed from Valencia Road or from Ignacio Baumea. Ignacio Baumea does not provide direct access to another through-road.



The residential and commercial driveways and local roads have unrestricted vehicular access to the eastbound and westbound lanes of Valencia Road. Dedicated or continuous center turn-lanes are not consistently present within the project limits; therefore, left-turns can be difficult during peak traffic times, and stopped vehicles attempting left turns from Valencia Road can contribute to delays for through-traffic.

Multimodal facilities are minimal within the project limits. An existing sidewalk is located along the south side of the roadway, from east of Ignacio Baumea to the eastern project limits. No bicycle lanes or multiuse trails exist within the project limits. Pedestrian crosswalks are provided at all three legs of the Valencia Road and Camino Verde intersection.

The SunTran bus route (Route 27—Midvale Park) provides bus service along Valencia Road from east of the project limits to a park-and-ride lot and the Ava Amphitheatre at Casino Del Sol. The route does not currently provide bus service farther west on Valencia Road.

Potential Impacts

Temporary Access

Access to businesses and homes will be maintained during construction, and no detours through neighborhoods will be necessary. Additionally, through-traffic on Valencia Road will be maintained during construction, allowing continued access to community resources in the area and vicinity. During construction, pedestrians and bicyclists will be directed around construction activities, maintaining connectivity for the duration of construction.

Permanent Access

The project proposes to construct a raised median along Valencia Road with dedicated turn lanes and openings at intersecting roadways. Additionally, median openings with dedicated turn lanes will be provided every ¼ mile to allow U-turns along the corridor. A raised median will restrict access to Valencia Road from the adjacent properties and will require that some residents make a U-turn to access side streets or driveways. However, the medians will result in a safer roadway by separating opposing traffic, and the controlled access will improve vehicular operations at the turn points.

The project will provide driveways to properties that currently access Valencia Road. All of these parcels have sufficient area for a car to turn around; therefore, backing out onto Valencia Road will not be required.

Access to the area will also be improved by installing culverts to carry flows under the road, making Valencia Road an all-weather roadway. The proposed drainage improvements will improve emergency service access and commuter reliability.

A widened roadway will take longer for pedestrians and bicyclists to cross the road. Support for pedestrian facilities has been expressed during public meetings held by Pima County (PCDOT 2011a). The project will improve multimodal connectivity by constructing 6-foot-wide paved shoulders in both directions able to be used by bicyclists or other multimodal uses, 5-foot-wide sidewalks set back approximately 9 feet from the edge of the paved shoulder, and an 8-foot-wide multiuse path set back



approximately 6 feet from the paved shoulder. From Wade Road to Camino Verde, the sidewalk will be located on the north side of the road to provide convenient access to the adjacent homes. From Camino Rancho Road to the east end of the project area, the sidewalk will be located on the south side to serve the casino and to tie into the existing sidewalk east of Ignacio Baumea. The multiuse path will be located south of Valencia Road from Wade Road to Camino Rancho Road, where it will provide continuity with the sidewalk at the casino.

Pedestrians could cross Valencia Road at the signalized Camino Verde intersection with crosswalks. The project also proposes to install crosswalks on Valencia Road at Wade Road. Americans with Disabilities Act-compliant ramps will be provided at intersections and driveways, and crosswalks will be provided at signalized intersections. Pima County NRPR proposes to construct two trails that will cross the project area – refer to Section 6.2.3, *Parks and Recreational Areas* for the locations and how the project will incorporate the trails.

Parking

Access to the park-and-ride lot at Casino del Sol will be maintained during construction. No additional parking exists within the project limits or is proposed for construction. Therefore, no impacts to parking will occur.

Mitigation Measures

The following measures are recommended:

- Pima County will communicate traffic control measures with the public, local officials, and the media prior to and during construction activities. Communication may include, but is not limited to, media alerts, direct mailings to area businesses and property owners, information on changeable message boards, and paid newspaper notices.
- Pima County will provide a construction notice to residents and businesses in the general project area at least 14 days prior to construction.
- The contractor shall notify the public, business owners, and schools of temporary access changes during construction at least 14 calendar days in advance of the change.
- At least 14 calendar days prior to construction, the contractor shall place advance-warning signs at locations designated by Pima County to notify motorists, pedestrians, and bicyclists of construction-related delays.
- With the exception of temporary, short-term closures (less than 3 hours) of driveways, the contractor shall maintain driveway access to all businesses, residences, and parks for the duration of construction. If a given property has multiple driveways, at least one shall remain open at all times.
- The contractor shall provide signs to identify business access during construction.



6.2.3 Parks and Recreational Areas

Existing Conditions

No parks or recreational areas are located within the project limits; however, three schools are located along Mark Road, within 1 mile of the eastern project limits. The Star Valley Community Park is located along Wade Road, approximately 0.5 mile south of Valencia Road.

The *Pima County Regional Trail System Master Plan* (City of Tucson, et. al. 2010) includes two proposed trails that would cross the project limits: the proposed Black Wash trail would be a single track trail crossing Valencia Road at Black Wash, and the proposed Central Arizona Project Canal Trail would cross Valencia Road at Camino Rancho.

Potential Impacts

The project will not result in direct impacts to the schools or their recreational facilities, or to Star Valley Community Park. During construction, residents travelling through the project area to reach the school properties or Star Valley Community Park may experience delays; however, these will be temporary and only for the duration of construction.

Project-related impacts to the development of the proposed trails will be evaluated consistent with Section 4(f) of the Department of Transportation Act of 1966 (49 United States Code § 303) and 23 CFR 771.13, in preparation of the CE that will be completed for this project. The proposed sidewalks and paved shoulders for multimodal use will enhance access to the properties by providing multimodal methods to reach the facilities and would not inhibit future development of the trails.⁶

Mitigation Measures

The project will not affect the school properties or Star Valley Community Park; therefore, no mitigation measures for direct impacts are warranted. Temporary delays during construction will be expected, and the public will be notified (see Section 6.1.8, *Construction Activities*, and Section 6.2.2, *Temporary and Permanent Access and Parking Impacts*).

6.2.4 Consistency with Other Plans

Pima Association of Governments

PAG is a nonprofit metropolitan planning organization for the Pima County region. PAG is governed by a nine-member Regional Council with an elected official serving from each member jurisdiction, including the Cities of South Tucson and Tucson; Pima County; the Towns of Marana, Oro Valley, and Sahuarita; the Pascua Yaqui Tribe; the Tohono O'odham Nation; and the Arizona State Transportation Board. PAG's programs focus on cross-jurisdictional planning issues including transportation.

⁶ Personal communication with Steve Anderson of the Pima County Natural Resources, Parks and Recreation Department on October 4, 2011.



PAG 2040 Regional Transportation Plan

The PAG 2040 RTP identifies current and future transportation and funding needs, and presents transportation solutions and financial strategies through 2040. It guides the investment of regional transportation resources in the region’s roadway, bus, pedestrian, bicycle, aviation, freight, and rail facilities over the next 20 to 30 years. It presents growth projections, proposed project costs, expected revenues, and broad public participation in the planning process. The RTP is required by federal law and has been developed according to regional planning principles and federal guidelines requiring that the RTP:

- demonstrate financial feasibility
- meet federal air quality requirements
- maintain a horizon year of at least 20 years into the future
- be updated at least every 3 years

The 2040 RTP was adopted by the PAG Regional Council on July 1, 2010. The proposed project is identified in the RTP and the proposed project conforms to the project description in the RTP.

PAG Transportation Improvement Program, 2012–2016

The PAG TIP for 2012–2016 is a 5-year schedule of proposed transportation capital improvements within eastern Pima County. It implements the RTP. Projects included in the TIP must have an identified funding source consistent with regional revenue expectations. The TIP is updated annually through a multi-step process. The proposed project is included in the TIP for 2012–2016 and the proposed project is in conformance with the TIP.

Regional Transportation Authority 20-Year Plan

The RTA is a government entity consisting of members of the PAG Regional Council that manages the \$2.1 billion, 20-year plan. The RTA plan and half-cent sales tax to fund the plan were approved by voters on May 16, 2006. The RTA plan includes roadway, safety, transit, and environmental and economic vitality projects in Pima County. The RTA plan identifies improvements along Valencia Road from SR 86 (Ajo Highway) to Mark Road. The plan proposes the section to be designated as a “desert parkway” with consideration of the following elements: additional travel lanes, landscaped medians and R/W, paved shoulders for multimodal use, drainage improvements, pedestrian facilities, noise mitigation as required, and intersection improvements. The project, as proposed in this EAMR, will improve Valencia Road from Wade Road to Mark Road, as identified in the PAG TIP. Improvements to the segment of Valencia Road from SR 86 to Wade Road will be implemented as a separate project with different funding. According to the RTA plan, the proposed project will enhance multimodal connectivity, which will improve safety, reduce congestion, improve operations, and increase mobility for current and future transportation needs. The proposed design has evaluated the project area for noise impacts as a result of the project, incorporated elements of multimodal transportation (sidewalks and paved shoulders for multimodal uses), as well as additional travel lanes, landscaped medians and R/W, and drainage improvements. Therefore, the proposed project conforms to the RTA plan.



Pima County Comprehensive General Plan Update

The Pima County Comprehensive Plan was adopted by the Board of Supervisors in October 1992. The plan includes a Land Use Plan, Regional and Special Area Plan Policies, and a Strategic Action Plan. The Regional Plan Policies (revised in 2003) presents transportation infrastructure-specific policies in the Circulation Element Regional Plan Policies (Chapter 2 of the Regional Plan Policies). The project elements consistent with key policies are provided below:

- A. Timing/Concurrency: Off-site transportation infrastructure shall be developed concurrently with land use development to the greatest extent possible, recognizing that much infrastructure development is needed to meet existing traffic demand.

The project is consistent with this policy. Refer to Section 2.0, *Project Purpose and Need*.

- B. Environment: Roadway and transportation infrastructure shall be designed in an environmentally or context-sensitive manner to the greatest extent feasible.

The project is consistent with this policy. Refer to Section 5.0, *Environmental Screening*.

- C. Neighborhoods: Existing residential areas shall be mitigated from vehicular traffic impacts to the greatest extent feasible when roadway improvements occur.

The project is consistent with this policy. Refer to Section 6.1.5, *Noise*

- D. Alternative Modes: Multimodal transportation infrastructure shall balance the needs of all users and provide viable alternatives to driving where appropriate and to the greatest extent feasible.

The project is consistent with this policy. Refer to Section 2.4, *Multimodal Connectivity*, and Section 6.2.2, *Temporary and Permanent Access and Parking*.

- E. Funding: Alternative and equitable funding sources for transportation infrastructure shall be developed, in addition to current funding sources.

The project is consistent with this policy. Refer to Section 1.1, *Project Cost and Funding*.

- F. Bikeways:

- 1. All arterial and collector streets which are part of the Regional Bikeway Plan shall be constructed according to the classification shown on the plan. All other major streets should have sufficient pavement width to accommodate bicycle travel.

The project is consistent with this policy. Refer to Section 2.0, *Project Purpose and Need* and Section 4.0, *Proposed Project*.

- 3. Where appropriate, bike systems within developments shall connect to the Regional Bikeway System. In addition to or in place of connecting to the Regional Bikeway System, a bicycle connection may be provided to adjacent developments. This is



encouraged particularly when the adjacent development is adjacent to the Regional Bikeway System.

The project is consistent with this policy. Refer to Section 2.0, *Project Purpose and Need* and Section 4.0, *Proposed Project*.

The proposed project conforms to the design elements identified in the circulation element regional plan policies.



Pima County Roadway Design Manual and Environmentally Sensitive Roadway Guidelines

The proposed project is being designed and evaluated consistent with PCDOT's *Pima County Roadway Design Manual* (2010). Chapter 4 of the manual specifies design and evaluation criteria for roadways designated as ESRs which were developed to comply with the Pima County SDCP. The Pima County SDCP has been implemented by the Pima County Board of Supervisors to address long-term conservation needs of natural and cultural resources by developing planning tools, policies, and strategies. The SDCP combines short-term actions with long-range land-use decisions in Pima County through science-based planning. The SDCP fulfills three areas of need: a science-based conservation plan, an update of the comprehensive land use plan, and compliance with the Endangered Species Act through development and implementation of a multi-species conservation plan.

Valencia Road is identified as a Scenic Major Road within the project area and the SDCP Conservation Land System identifies the project area as containing Important Riparian Area; therefore, the project is being designed and constructed consistent with the ESR design guidelines from Chapter 4 of PCDOT's *Pima County Roadway Design Manual* (2010). The purpose of the ESR design guidelines is to achieve a postconstruction environment duplicating the preconstruction environment to the greatest extent possible. The following are elements of the environmental evaluation and project design process for this project specific to the ESR design guidelines:

- follow a Visual and Aesthetic Resource Evaluation Process
- use a maximum design speed of 50 mph
- use minimum lane widths
- provide a maximum of four lanes
- consider larger-than-required drainage culverts to allow wildlife to cross below the road
- replace affected vegetation with appropriate native plant species commonly found in the area, and achieve preconstruction densities and composition
- mitigate impacts to Important Riparian Areas unable to be avoided, through revegetation
- incorporate design elements consistent with Pima County Zoning Code Chapter 18.77.040, *Scenic Routes*

Additionally, species identified in the SDCP as priority vulnerable species were evaluated for their potential to occur in the project area (see Section 6.1.1 *Biological Resources*). The project is consistent with PCDOT's *Pima County Roadway Design Manual* (PCDOT 2010) and ESR guidelines.

Pima County Southwest Infrastructure Plan

The Pima County SWIP was approved by the Board of Supervisors in December 2007. The plan presents infrastructure and land use planning with environmentally sensitive approaches (conforming to the SDCP) for a 70 square mile area with Tucson Mountain Park to the north, Mission Road to the east, Tohono O'odham San Xavier District and Pascua Yaqui Tribe lands to the south, and Sandario Road to the west. The plan was reviewed for proposed developments and infrastructure planning in the project area (refer to Section 6.2.1, *Right-of-Way Acquisition and Displacement*). The Black Wash floodway is identified in the plan and was evaluated for recommended flood control features and drainage improvements to mitigate



current flooding conditions, provide critical all-weather access along major transportation corridors, and to the extent possible, preserve the Black Wash drainage corridor in the current natural condition.

The drainage improvements and flood control features included in the SWIP were considered during the drainage analysis and proposed cross-drainage improvements evaluation conducted for this project (PCDOT 2011e). The proposed drainage improvements are consistent with those specified in the SWIP for Valencia Road within the project area. The project is consistent with the SWIP.

7.0 Agency Coordination

Pima County has implemented agency coordination, and will continue to coordinate with several agencies for this project. The project involves coordination with the following agencies:

Federal Agencies

- Federal Emergency Management Agency
- U.S. Army Corps of Engineers
- U.S. Department of Agriculture, Natural Resources Conservation Service
- U.S. Department of the Interior, Bureau of Indian Affairs
- U.S. Department of the Interior, Bureau of Land Management
- U.S. Department of the Interior, Bureau of Reclamation (Central Arizona Project)
- U.S. Environmental Protection Agency, Region 9
- U.S. Fish and Wildlife Service
- U.S. Forest Service
- U.S. Postal Service, San Xavier Office
- U.S. Representative, 7th District of Arizona Tucson District Office
- U.S. Representative, 8th District of Arizona Tucson District Office
- U.S. Senator (McCain and Kyl), Tucson Offices
- Western Area Power Administration

State Agencies

- Arizona Department of Agriculture
- Arizona Department of Environmental Quality
- Arizona Department of Public Safety
- Arizona Department of Transportation
- Arizona Game and Fish Department Arizona State Land Department

Tribal Agencies

- Tohono O'odham Nation
- Pascua Yaqui Tribe



Local Agencies

- City of Tucson City Council
- City of Tucson City Manager
- City of Tucson Fire Department
- City of Tucson Mayor
- City of Tucson Police Department
- City of Tucson Transportation
- Drexel Heights Fire District
- Pima Association of Governments
- Pima County Chamber of Commerce
- Pima County Cultural Resources
- Pima County Development Services
- Pima County Environmental Quality
- Pima County Natural Resources, Parks and Recreation Department
- Pima County Public Works
- Pima County Planning
- Pima County Regional Flood Control District
- Pima County Schools Superintendent
- Pima County Sheriff
- Pima County Solid Waste Division
- Pima County Supervisors for Districts 1, 2, 3, 4, 5
- Pima County Traffic Engineering Division
- Pima County Department of Transportation
- Pima County Wastewater Reclamation Department
- Regional Transportation Authority
- Ryan Airfield
- SunTran
- Three Points Fire District
- Tucson Airport Authority Planning and Development
- Tucson Unified School District
- Tucson Veterans Hospital
- University Physicians Hospital

Additionally, coordination with the Arizona State Historic Preservation Office will be required for environmental clearance.

8.0 Public Participation

FHWA policies and NEPA delegate a responsibility to involve cooperating agencies, stakeholders, and members of the public to ensure objective and responsible transportation decisions are made. Pursuant to 23 United States Code 128 and 40 C.F.R. Parts 1500 through 1508, states must carry out an FHWA-approved public involvement program. These processes are implemented to ensure that all stakeholders, agencies, members of the public, and affected parties have an opportunity to provide comments and contribute to decision-making processes.

Pima County prepared a public involvement plan that outlines the project's strategy for holding public information meetings, developing a CAC, arranging continuous contact with affected parties and media, and developing informational materials. The goals of the plan include educating the public about the project's purpose and need, soliciting the public's comments on the project, reviewing the comments, and addressing the public's concerns. Available public involvement materials are included in Appendix A and on the project website at: <http://www.roadprojects.pima.gov/valenciawade/>..



8.1 Public Participation Activities

8.1.1 Public Scoping

Scoping letters dated August 31, 2011, were sent to members of the public with properties adjacent to the project limits. The letters presented the proposed scope of work and requested concerns or suggestions pertaining to the project. The public scoping period ends on October 3, 2011; however, the project team will continue to accept and address public comments throughout the project design.

8.1.2 Community Advisory Committee

A CAC was developed before the project was put on hold in 2008. Community representatives were selected to participate in the CAC through an application process.

Four CAC meetings have been held to date. The first two meetings were held in 2008. The first meeting was held on Thursday, January 31, 2008 at Lawrence Elementary School from 6:30 p.m. to 8:15 p.m. Seven members of the CAC and 10 project team members were in attendance. The project team presented the responsibilities of the CAC to the members. The second meeting was held on Tuesday, May 6, 2008 at Lawrence Elementary School from 6:00 p.m. to 7:15 p.m.. Ten members of the CAC and eight project team members were in attendance. The project team presented the basics of road engineering and the design process. The third meeting was held on Monday, July 25, 2011 at Lawrence Elementary School from 6:00 p.m. to 7:00 p.m. to reestablish the CAC and present the current project design. Five CAC members, five project team members, and eight members of the public were in attendance. The fourth meeting was held on Monday, October 24, 2011 at Lawrence Elementary School from 6:00 p.m. to 7:00 p.m.. Six CAC members, six project team members, and two members of the public were in attendance. The project team presented an overview and key findings of the draft EAMR to the CAC, and distributed copies for review by the CAC. The CAC was asked to prepare a letter to the Pima County Board of Supervisors in response to the EAMR.

Additional CAC meetings will be held to obtain the CAC's input on the artwork, aesthetic treatments, and other items for which they have responsibilities.

8.1.3 Public Open House

A public open house was held on Monday, December 12, 2011 at Lawrence Elementary School from 6:00 p.m. to 8:00 p.m.. Meeting announcements were mailed to the project contact list consisting of affected residents and businesses as well as elected officials. The announcement and corresponding information was posted on the dedicated project website. The purpose of the open house was to obtain community input on the Design Concept Report and EAMR. One CAC member, 12 project team members, and 61 members of the public were in attendance. The project team presented an overview of the project design and attendees were invited to make comments or ask questions. Following the presentation, attendees were invited to review project design information and visit with the project team, including the designers, environmental planners, and project artists. Attendees were encouraged to submit comments on the forms provided at the meeting. Comments collected during the open house and submitted during a 2-week period following the meeting are summarized in Appendix A.

A public hearing will be held before a meeting of the Pima County Board of Supervisors upon completion of the EAMR.



8.2 Community Comments

Key community and CAC comments and concerns obtained through scoping, CAC meeting, and the public open house are summarized below. Responses included below have been provided by the project team.

Utilities. Residents have expressed an interest in having the overhead utilities relocated underground. The project does not have the funding to relocate the utilities underground; however, joint utility trenches could be considered by the utilities. Future developers may choose to place utilities underground. Refer to Section 6.1.10, *Visual Resources* regarding requirements for utility locations along Scenic Routes, and the project's application of those requirements.

Multimodal and recreational facilities. Residents have expressed an interest in bike paths or lanes and equestrian paths, as well as additional recreational spaces. The addition of sidewalks has had mixed responses. One resident wondered if they are needed and if the funding could be used elsewhere, whereas other residents have expressed a desire for pedestrian amenities. The CAC requested continuous pedestrian facilities along the south side of Valencia Road, from Wade Road to the casino.

The project will provide an 8-foot-wide multiuse path south of Valencia Road, from Wade Road to Camino Rancho Road. From Camino Rancho Road to Ignacio Baumea, a 5-foot-wide sidewalk will be constructed, providing continuity along the south side of Valencia Road from Wade Road to the existing sidewalk east of Ignacio Baumea. A 5-foot-wide pedestrian sidewalk will be constructed north of Valencia Road from Wade Road to Camino Verde. Pedestrians could cross Valencia Road at the signalized Camino Verde intersection with crosswalks. The project also proposes to install crosswalks on Valencia Road at Wade Road. Americans with Disabilities Act-compliant ramps will be provided at intersections and driveways, and crosswalks will be provided at signalized intersections. Six-foot-wide paved shoulders will be installed on Valencia Road in each direction for bicyclists and other multimodal uses.

Refer to Section 4.0, *Proposed Project* regarding the proposed facilities, and Sections 6.2.2 and 6.2.3 regarding existing and proposed multimodal and recreational facilities.

Drainage. Residents have expressed concerns regarding the modified drainage creating flooding on their properties. The affects of the design on drainage are being evaluated through the design process. Refer to Section 6.1.2, *Drainage and Floodplain* regarding the effects of the design on the project area.

Construction. Residents have expressed concerns regarding through-access and access to properties during construction. Access to properties would be maintained during construction. No detours are planned during construction. Refer to Section 6.2.2, *Temporary and Permanent Access and Parking* regarding access during construction.

Medians and access. Residents have expressed concerns regarding access to and from the properties with the medians constructed. The medians would be designed with openings and designated turn lanes at intersections and additional median openings with turn lanes would be included to accommodate U-turns. The locations of the median openings were determined in consideration of existing development and not planned, unpermitted development. Where feasible, the project team will provide median openings to



accommodate specific turning requirements identified by property owners. The project team has provided the property owners of properties directly accessing Valencia Road with plans showing the proposed locations of the driveways. The property owners may decide where their newly constructed driveways will be located on their properties. Refer to Section 4.0, *Proposed Project* regarding the proposed median openings and Section 6.2.2, *Temporary and Permanent Access and Parking* regarding existing and proposed access from the adjacent properties.

Future development. Property owners have expressed interest in relocating the drainage extending northward from Valencia Road at its intersection with Wade Road to provide access to future development at adjacent properties. Although extending Wade Road northward to State Route 86 is part of the long-range planning for the area, the limited budget and scope of work, as well as the construction schedule for the Valencia Road: Wade Road to Mark Road project would not allow for the substantial alteration to the channel.

Extend Camino Verde south of Valencia Road. Property owners have expressed a desire to extend Camino Verde from its current terminus at Valencia Road, southward to provide connectivity to neighborhoods to the south. Extending Camino Verde to the Star Valley neighborhood is outside of the RTA scope for this project and will not be included in the project.

Curbs. The CAC has requested that curbs be constructed along Valencia Road. Curbs were considered during the initial design phases of the project, and will be installed along the median and where appropriate at intersections. However, curbs are not proposed at additional areas because the project is designed to match the existing improved section of Valencia Road east of Ignacio Baumea which does not have curbs. Further, installing curbs may result in negative drainage issues, and curbs are not typically included along rural county roads, such as Valencia Road in the project area.



9.0 Conclusions and Recommendations

Adverse impacts identified in this assessment, recommended measures to mitigate or minimize impacts, necessary coordination with other agencies, and the parties responsible for implementing the mitigation or measures are presented in Table 9.

Table 9. Impact and mitigation summary

Potential impacts	Recommended mitigation	Agency coordination and consultation	Parties responsible for implementation
<i>Biological resources</i>			
Removal of native plants	Consistent with the Arizona Native Plant Act, Pima County will notify the Arizona Department of Agriculture by a “Notice of Intent to Clear Land” at least 60 days prior to the start of any ground or vegetation disturbing activities.	Arizona Department of Agriculture	Pima County and contractor
	The Arizona Native Plant Act and Pima County’s Environmentally Sensitive Roadway Design Guidelines will be adhered to. Removed native vegetation will be replaced to match preconstruction densities and composition of the project area or surrounding environment. Saguaros will be mitigated at 1:1 ratio.	Pima County Department of Transportation	Pima County/consultant and contractor
Construction traffic or dust affecting Pima pineapple cactus outside of project limits	Fencing will be installed along the project R/W near Pima pineapple cacti outside of the project limits to ensure construction traffic stays within the project limits and to avoid the nearby Pima pineapple cactus during construction activities.	Pima County Department of Transportation	Pima County
	Pima County standard measures for dust abatement will be implemented to minimize construction-generated dust leaving the construction site.		Contractor
Impacts to Regulated Riparian Habitat and Important Riparian Areas	A riparian impact assessment will be prepared and mitigation plans for impacts will be developed in conjunction with the floodplain use permit.	Pima County Regional Flood Control District	Pima County/consultant and contractor



Table 9. Impact and mitigation summary (*continued*)

Potential impacts	Recommended mitigation	Agency coordination and consultation	Parties responsible for implementation
Introduction or spread of invasive species	Noxious and invasive species infestations will be identified and treated consistent with Pima County Department of Transportation’s Special Provision 201-3.04, <i>Noxious and Invasive Vegetation</i> which includes mechanical and chemical removal of invasive species prior to initiation of construction, timing of invasive species removal, disposal of invasive species, prevention of invasive species during the construction process, and control of invasive species after construction is complete.	Pima County Department of Transportation	Pima County and contractor
Disturbance to nesting birds	Trees and staghorn cholla within the project right-of-way and easements that will be removed by the project construction will be cut, between August 15 and December 31 (outside of the migratory bird nesting period) to prevent migratory birds from using those trees and staghorn cholla. If unable to prevent nesting, a 100-foot buffer will be established and the nesting birds will be avoided during construction. No trees or cholla will be removed during the nesting season without being surveyed by an authorized biologist.	Pima County Department of Transportation	Pima County and contractor
	Surveys for burrowing owls will be conducted by a biologist permitted by the Arizona Game and Fish Department 90 days, 30 days, and 96 hours prior to construction.	Arizona Game and Fish Department	Pima County/consultant



Table 9. Impact and mitigation summary (*continued*)

Potential impacts	Recommended mitigation	Agency coordination and consultation	Parties responsible for implementation
<i>Drainage and floodplains</i>			
Impacts to floodplains	A floodplain use permit will be obtained from the Pima County Regional Flood Control District and mitigation plans for impacts to Regulated Riparian Habitat will be developed.	Pima County Regional Flood Control District	Pima County/ consultant
	A Conditional Letter of Map Revision and Letter of Map Revision requiring Pima County Regional Flood Control District and Federal Emergency Management Agency (FEMA) approval will be submitted to FEMA for project effects to the floodplain before construction and following construction, respectively.	Federal Emergency Management Agency Pima County Regional Flood Control District	Pima County
<i>Waters of the United States</i>			
Impacts to waters of the United States	The contractor will comply with the conditions of the Clean Water Act Section 404 Nationwide Permit No. 14 and the conditional Section 401 certification.	U.S. Army Corps of Engineers	Contractor
Stormwater/surface water pollution from soil exposure, erosion, and dust generation	Pima County and the contractor will file a separate Notice of Intent to use the statewide Construction General Permit with the Arizona Department of Environmental Quality, and a Notice of Intent to use the Construction General Permit with the Environmental Protection Agency, and prepare and implement Stormwater Pollution Prevention Plans for each permit.	Arizona Department of Environmental Quality U.S. Environmental Protection Agency	Pima County and contractor
	Utilities will be responsible for preparing a separate Stormwater Pollution Prevention Plan and filing a Notice of Intent with the appropriate agency for their activities.		Utility



Table 9. Impact and mitigation summary (*continued*)

Potential impacts	Recommended mitigation	Agency coordination and consultation	Parties responsible for implementation
Air quality			
Excessive dust produced by construction	The contractor will adhere to Pima County’s standard specifications for dust suppression and comply with the Stormwater Pollution Prevention Plan (referenced above). The contractor will obtain an Activity Permit from the Pima County Department of Environmental Quality.	Pima County Department of Environmental Quality	Contractor
Utilities			
Service interruptions	Affected customers will be notified by the utility 14 days in advance of any planned service interruptions. The contractor will notify affected customers regarding Pima County Regional Wastewater Reclamation Department and Tucson Water Department service interruptions.	Applicable utilities	Utility or contractor
Hazardous materials			
Disturbance to subsurface hazardous materials	If any suspected hazardous materials are encountered during construction, work will cease at the location and the Pima County Engineer will be contacted to arrange for proper assessment and treatment or disposal of the materials.	Pima County Engineer/Pima County Department of Transportation	Pima County and contractor
Lead-based paint during demolition or removal	As needed, lead-based testing will be conducted and the proper measures implemented.	Pima County Department of Transportation	Pima County and contractor
Construction activities			
Noise disturbance from construction	The contractor will comply with Pima County’s Noise Ordinance (Pima County Code Chapter 9.30.070), which sets the construction start and stop times in order to avoid noise disruptions at night. If nighttime work is required, the contractor will obtain a permit from Pima County.	Pima County Department of Transportation	Pima County and contractor



Table 9. Impact and mitigation summary (*continued*)

Potential impacts	Recommended mitigation	Agency coordination and consultation	Parties responsible for implementation
<i>Cultural resources</i>			
Disturbance to subsurface cultural resources during construction	Should any archaeological resources, human remains, or funerary objects be discovered during project implementation, all surface-disturbing activities in the area of discovery will immediately cease and the discovery will be reported to the director of the Arizona State Museum at (520) 621-6281 as required by Arizona Revised Statutes §§ 41-844 and 41-865, and to the Pima County archaeologist at (520) 740-6405 to make arrangements for the proper treatment of those resources.	Pima County Cultural Resources, State Historic Preservation Office, and Arizona State Museum	Pima County and contractor
<i>Visual resources</i>			
Visual changes from widened roadway, medians, sidewalks, and drainage structures	Pima County will incorporate landscaping into the medians and right-of-way to soften the appearance of the new transportation features. Pima County will use colors and materials for the proposed drainage structures compatible with the natural landscape, and incorporate plantings into the drainage easements where feasible to lessen the visual impact of new drainage structures and vegetation removal. To lessen the visual impact of signalized intersections, Pima County will minimize the size and placement of poles, as well as locate and paint cabinets to blend with surroundings.	Pima County Department of Transportation	Pima County



Table 9. Impact and mitigation summary (*continued*)

Potential impacts	Recommended mitigation	Agency coordination and consultation	Parties responsible for implementation
<i>Right-of-way acquisition and displacement</i>			
Permanent and temporary easements on public and private property	Pima County will compensate property owners at fair market value for the permanent or temporary use of property consistent the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646), the Uniform Relocation Act Amendments of 1987 (Public Law 100-17), Title VI of the Civil Rights Act of 1964, and Arizona Law.	Pima County Department of Real Property	Pima County
<i>Temporary and permanent access and parking</i>			
Access to businesses and residences during construction	Access to businesses and residences will be maintained throughout the project corridor during construction. The contractor will provide signs to identify business access during construction.	Pima County Department of Transportation	Pima County and contractor
	Adjacent residences and businesses will be notified 7 days prior to the construction start date and will be notified of any access changes.	Pima County Department of Transportation	Pima County and contractor



10.0 References

- Arizona Game and Fish Department (AGFD). 2007. *Burrowing Owl Project Clearance Protocol*. July. Prepared by the Arizona Burrowing Owl Working Group.
- Brown, D. E. (editor). 1994. *Biotic Communities: Southwestern United States and Northwestern Mexico*. The University of Utah Press, Salt Lake City, Utah.
- City of Tucson Parks and Recreation Department and Pima County Natural Resources Parks and Recreation (City of Tucson, et. al.). 2010. *Pima Regional Trails System Master Plan*. August.
- Federal Highway Administration (FHWA). 2011. *Highway Traffic Noise Analysis and Abatement, Policy and Guidance*.
- Lundin, Deil. 2011. *A Cultural Resources Assessment for the Valencia Road, Wade Road to Mark Road, Project in Pima County, Arizona*. October. Prepared by HDR Engineering, Inc., for the Pima County Department of Transportation. Tucson, Arizona.
- Pima Association of Governments (PAG). 2011. Regional Transportation Improvement Program, FY 2012 through 2016. June. Tucson, Arizona.
- Pima County Department of Transportation (PCDOT). 2003. *Traffic Noise Analysis and Mitigation Guidance for Major Roadway Projects*. Procedure No. 03-5.
- . 2007. *Final Report, Pima County Southwest Infrastructure Plan*. November. Prepared by Stantec Consulting, Inc. Tucson, Arizona.
- . 2010. *Pima County Roadway Design Manual: Third Edition*.
- . 2011a. *Final Transportation Engineering Study, Traffic Engineering Study for Valencia Road, Mountain Eagle Drive to Mark Road*. July. Prepared by Pima County Department of Transportation, Traffic Engineering Division. Tucson, Arizona.
- . 2011b. *Environmental Screening Package: Memorandum, Checklist, and Summary Impact Matrix*. April. Prepared by HDR Engineering, Inc., for the Pima County Department of Transportation. Tucson, Arizona.
- . 2011c. *Preliminary Initial Site Assessment: Valencia Road, Wade Road to Mark Road*. June. Prepared by HDR Engineering, Inc., for the Pima County Department of Transportation. Tucson, Arizona.
- . 2011d. *Final Biological Evaluation, Valencia Road: Wade Road to Mark Road*. December. Prepared by HDR Engineering, Inc., for the Pima County Department of Transportation. Tucson, Arizona.
- . 2011e. *Drainage Report – Stage II for Valencia Road: Wade Road to Mark Road*. September. Prepared by J. E. Fuller Inc. for HDR Engineering, Inc. Tucson, Arizona.



-
- . 2011e. *Preliminary Jurisdictional Delineation for Valencia Road: Wade Road to Mark Road*. October. Prepared by HDR Engineering, Inc., for the Pima County Department of Transportation. Tucson, Arizona.
 - . 2011f. *Final Traffic Noise Report Valencia Road: Wade Road to Mark Road*. October. Prepared by HDR Engineering, Inc., for the Pima County Department of Transportation. Tucson, Arizona.
 - . 2011g. *Final Visual and Aesthetic Resource Analysis Valencia Road: Wade Road to Mark Road*. October. Prepared by LJ Design and Consulting, for the Pima County Department of Transportation. Tucson, Arizona.
 - . 2012. *Valencia Road: Wade Road to Mark Road Final Design Concept Report*. January. Prepared by HDR Engineering, Inc., for the Pima County Department of Transportation. Tucson, Arizona.
- Pima County Regional Flood Control District. 2010. *Regulated Riparian Habitat Mitigation Standards and Implementation Guidelines*. January. Tucson, Arizona.