

Final Project Assessment For

Skyline Drive at Sunrise Drive Intersection Improvements

ADOT Project Number: T0204 01C
Federal Project Number: PPM-0(265)D

Pima County Project Number: 4SUNTE

Sponsored by:



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1.0 INTRODUCTION

ADOT Project Number: T0204 01C

Federal Project Number: PPM-0(265)D

Pima County Project Number: 4SUNTE

PAG TIP ID: 1.19

Project Name: Skyline Drive at Sunrise Drive Intersection Improvements

ADOT District: Southcentral

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This Project Assessment has been prepared to present pertinent information related to the Skyline Drive at Sunrise Drive Intersection Improvement Project, located in unincorporated Pima County, Arizona. Sunrise Drive is a very popular recreation route for bicyclists especially on the weekends. Pima County Department of Transportation (PCDOT) has received many complaints about the merge location at the west end of the free right turn lane from the bicycle community. The project will provide improved geometry to the intersection by eliminating the existing free right turn lane from Westbound (WB) Skyline Drive to WB Sunrise Drive. The geometry of the right turn lane on Sunrise Drive will be revised to improve the approach angle for right turning vehicles, which will improve visibility for westbound bicyclists. Vehicular turn movements will also be restricted at the intersection, eliminating the left turn movement from WB Skyline Drive to Eastbound (EB) Sunrise Drive due to heavy traffic volumes. Reconstruction of the intersection will also include pedestrian facilities such as sidewalks and curb access ramps, installing lighting, signing and marking and placing landscape. A detailed list of the proposed work for this project is listed in the Project Scope, Section 3.0. The State, Vicinity and Land Use Maps are shown in Section 8.0, Figures 1, 2 and 3 respectively. The 30% (Stage II) plan sheets are provided in Appendix B.

This project is included in the 2018-2022 Pima Association of Governments (PAG) Five-Year Regional Transportation Improvement Program (TIP) as TIP Number 1.19. Funding for the project will be provided through a combination of the Federal Highway Safety Improvement Program (HSIP) funding, Pima County local match funds (DOT-57) and additional local funding. A funding summary is provided in Table 1, plus an itemized project cost estimate on Page 26.

Pima County received notification that the project was eligible for funding under the Federal HSIP in 2018. The preliminary project schedule shows that the project would be bid in May 2020. Construction is anticipated to begin in August 2020 and the project completed by November 2020. The preliminary project schedule is provided in Appendix C. Pima County will bid and administer the construction of this project according to the County's Certification Acceptance (CA) procedures.

Table 1. Project Funding and Cost

Project Phase and Funding Source	% Funding	Funding Amount
Planning and Design Funding		
Federal HSIP Funds	97.15%	\$154,000.00
Pima County Local Match (DOT-57)	2.85%	\$4,518.00
Local Funds	100%	\$57,482.00
<i>Total Planning and Design Funding</i>		<i>\$216,000.00</i>
Construction Funding		
Federal HSIP Funds	97.15%	\$318,000.00
Pima County Local Match (DOT-57)	2.85%	\$9,329.00
Local Funds	100%	\$142,671.00
<i>Total Construction Funding</i>		<i>\$470,000.00</i>
Total Available Funding		\$686,000.00

2.0 BACKGROUND DATA

2.1 Purpose and Justification

The proposed project will improve intersection geometry by eliminating the existing free right turn lane from WB Skyline Drive to WB Sunrise Drive. The geometry of the right turn lane on Skyline Drive will be modified to improve the approach angle for right turning vehicles and a stop sign will be added at Sunrise Drive. By modifying the right turn lane design to reduce the skew of the Skyline Drive approach, the visibility of WB bicyclists on Sunrise Drive will be greatly improved. Improving the right turn approach angle and reducing the skew of the right turn approach is considered a proven countermeasure having a Crash Modification Factor (CMF) of 0.558 per Crash Modification Factors Clearinghouse, sponsored by the Federal Highway Administration. (FHWA)

Reconstruction of the intersection provides the opportunity to address pedestrian issues by adding ADA access and sidewalks at the intersection. It also provides an opportunity to eliminate left turns from Skyline Drive to EB Sunrise Drive that will also provide safety benefits due to heavy traffic volumes on Sunrise Drive and visibility issues. The proposed intersection improvements also include street lighting thereby improving safety at night.

2.2 Project Area

The project is located at the intersection of Skyline Drive and Sunrise Drive in unincorporated Pima County. The project is approximately one quarter mile in length. The Town of Marana is located approximately 7.5 miles to the west, the Town of Oro Valley is located approximately 3.75 miles to the north, and the City of Tucson is located approximately 3 miles to the southwest of the project area. Skyline Drive runs in the east-west direction through Section 4, Township 13 South, Range 14 East; and Section 9, Township 13 South, Range 14 East.

2.3 Roadway

The intersection has a 500' radius free right turn lane from westbound Skyline Drive to westbound Sunrise Drive. The existing intersection of Skyline Drive to westbound Sunrise Drive is a Tee intersection with Sunrise Drive being the through street. Sunrise Drive is an existing 4-lane urban arterial roadway. The roadway was completed in 1983. In 2001 Sunrise Drive was widened from 2 lanes to 3 lanes west of the Tee intersection at a part of the Skyline-Campbell intersection improvement project.

The posted speed on Sunrise Drive is 45 mph. The ADT on Sunrise Drive is approximately 34,000 vehicles per day (vpd). The ADT on Skyline Drive is approximately 9,300 vpd near Swan Rd. The posted speed on Skyline Drive is 35 mph.

In 2016, PCDOT made improvements to the free right turn lane from WB Skyline Drive to WB Sunrise Drive due to a bicyclist fatality at the merge area. The speed limit on WB Skyline Drive was reduced from 40 mph to 35 mph and two speed tables were added to reduce speed. Sight distance was improved on the free right turn lane by trimming trees and cutting back slopes. As a result, vehicle speeds on the free right were reduced to approximately 30-31 mph which did not meet the anticipated speed reduction goal. In March 2018, the furthest west speed table was reconstructed to be more abrupt in order to slow vehicles down prior to the merge with bicycles WB on Sunrise Drive.

Existing roadside features are consistent within the project limits. Vertical curb and gutter, paved shoulders, raised medians, and landscaping are typical along westbound Skyline Drive and eastbound Sunrise Drive. Eastbound Skyline Drive transitions to a two-lane rural roadway with unpaved shoulders.

2.4 Sidewalks

In 1983, Skyline and Sunrise Drive were widened to a four-lane urban arterial roadway; however, the improvements did not include the installation of sidewalks. Since 1983, there has been significant development within the project corridor, where roadside developments have installed sections of sidewalk in front of their respective properties within the public right-of-way. All these pedestrian facilities are to the west of the project near Campbell Avenue (Photo 1). Skyline Drive and Sunrise Drive do not contain sidewalks east of the Tierra Catalina Apartment Complex (Photo 2).

Pedestrians living in the surrounding neighborhoods walk on dirt or gravel areas. A utility access road is evident within the project limits to the west and north of the intersection used by local residents and mountain bikers. This gravel road runs along Skyline Drive north right of way limit to Swan Road (Photo 3). There are no developed trails in proximity to the project limits. Also, there are no officially designated Pima County Trails within proximity to the project limits.

Photo 1. Existing sidewalk (north side of Sunrise Dr., Tierra Catalina Apartments)



Photo 2. Area with no sidewalk (north of Sunrise Dr west of the tee Intersection)



Photo 3. Utility Access Road (north side of Skyline Dr, along north right of way)



2.5 Crosswalks and Pedestrian Signals

There are no crosswalks or pedestrian signals within the project limits. The nearest crosswalks or pedestrian signals are at the Skyline-Campbell intersection to the West and Sunrise-Campo Abierto intersection to the East. Both intersections are outside the project limits.

2.6 Sun Tran Bus Routes and Bus Stops

The project area serves no bus routes. Per Sun Tran, bus service was discontinued for this area in March of 2017.

2.7 Drainage

Existing drainage within the project limits generally flows to a low spot just west of the tee intersection along the curb and gutter and vertical curb at the outside edge of Sunrise Dr. An existing storm drain system runs along Sunrise Drive, which consists of catch basins and pipes. There is minor wash crossing Sunrise Drive just west of the tee intersection, which has a 4-60” reinforced concrete pipes (RCP) with concrete headwalls on the inlet and outlet sides that convey flow from north to south. (Photo 3) All other wash crossings are outside the project limits.

An existing roadside ditch on the north side of Skyline Drive, just west of Evans Mountain Drive will not be disturbed on the WB side of Skyline Dr. This ditch will collect flow from the Foothills Clusters Neighborhood (Photo 4). The terrain is sloping down to the west and the average project elevation is approximately 2,722 feet.

Photo 4. Unnamed Ephemeral Wash (Just west of the tee intersection)



Photo 5. Roadside Ditch



2.8 Right-of-Way

The existing Pima County public right-of-way width varies with a typical width of 150 feet, 75 feet on each side of the centerline of Skyline and Sunrise Drive. The public right-of-way width is 150 feet along EB Skyline Drive towards Swan Rd.

2.9 Utilities

The existing utility companies within the project limits are summarized in Table 2. An inventory of existing utilities was compiled, including a blue stake request, mapping from the various utilities, a field review, and field survey. The proposed improvements will run parallel and cross over several existing utilities. There is a large utility corridor that runs along the north right-of-way limits that includes various overhead and underground facilities (Photo 6).

Table 2. Existing Utilities

Owner	Facility
CenturyLink	Overhead and Underground Copper Cable & Fiber Optic
Comcast	Overhead and Underground Cable TV, Fiber Optic
Cox	Overhead and Underground Cable TV, Fiber Optic
First Digital	Overhead and Underground Fiber Optic
Tucson Water	Water Lines
Pima County Regional Wastewater	Sewer Lines
Tucson Electric Power (TEP)	Overhead and Underground Power
Southwest Gas (SWG)	High Pressure, Distribution and Service Gas Lines.

Photo 6: Utility Corridor



2.10 Land Use

Within the project limits, the corridor is mixed use with businesses (Photo 8), schools, apartments and single-family homes (Photo 7). Single family housing surrounds the project corridor on the north side and south sides of Skyline Dr. See Figure 2 for property locations and Figure 3 for land use designations.

Photo 7: Foothills Clusters Neighborhood



Photo 8: Business Property



3.0 PROJECT SCOPE

The scope of work for the project includes the following improvements:

- Removal of asphaltic concrete
- Removal of concrete vertical curb & curb and gutter
- Removal of existing signing and pavement marking
- Crack seal and micro seal of existing pavement that is to remain
- Re-align the intersection geometry
- Full depth pavement construction at new curb locations
- Roadway excavation and roadside grading
- Widening of existing roadways
- Constructing concrete vertical curb
- Constructing sidewalk and curb access ramps
- Constructing roadside drainage ditch improvements
- Performing minor utility adjustments
- Removing existing and installing new signs
- Installing intersection street lighting and service
- Obliterating existing and placing new pavement marking
- Constructing slope stabilization adjacent to new sidewalk
- Coordinating the removal of landscape encroachments, including existing irrigation system components
- Removal of trees, which cannot be avoided
- Installing preservation fencing around vegetation to be preserved
- Pruning vegetation that may interfere with construction
- Re-establishing landscape, to be contained to disturbed areas
- Plant native, drought tolerant species, based on the native plant inventory using the ESR Design Guidelines
- Install hardscape paving in new raised islands to match existing median paving on Sunrise Drive.

3.1 Roadway

The existing westbound free flow right turn will be demolished for its entire length (Photo 9). The remaining void will be converted into a landscape area. The existing Skyline Dr. roadway width will be widened to accommodate the modification to the intersection geometry. New curb will be installed at the new curb access ramp locations and the new raised medians. The existing roadway pavement will be saw cut to full depth at the existing curb face and the existing curb removed. New Pavement sections to be constructed will match the existing roadways structural section and meet PAG specifications.

Crack sealing will be performed on the existing pavement surface. A micro seal will then be placed on the existing pavement surface once the crack sealing operation is completed to protect the surface and to accommodate the existing roadways lane re-configuration.

American with Disabilities Act (ADA) facilities, including curb access ramps and sidewalks will be installed in the area of the intersection. Slope stabilization may be required on the cut back slopes beyond the proposed sidewalk in some areas. Stabilization treatments, including riprap will be evaluated as a treatment at various locations reflected in the project plans.

Photo 9: Existing Westbound Free Flow Right Turn (Looking West)



Photo 10. Existing Intersection Approach (Looking South)



3.2 Drainage

Existing drainage within the project limits generally flows to a low spot just west of the tee intersection along the curb and gutter and vertical curb at the outside edge of Skyline-Sunrise Dr. An existing storm drain system runs along Sunrise Drive, which consists of catch basins and pipes. (Photo 12). There is minor wash crossing Skyline Drive just west of the tee intersection which has a 4-60” reinforced concrete pipes (RCP) with concrete headwalls on the inlet and outlet sides that convey flows from north to south. This channel collects from the north including the Foothills Drive 42” corrugated metal pipe (CMP). This drainage system is anticipated not to be disturbed (Photo 11). All other wash crossings are outside the project limits.

The existing east to west flows along curb and gutter, and the existing storm drain system within the project limits will be maintained (Photo 11). All existing drainage patterns are anticipated to remain as-is with this project improvement.

Photo 11: Foothills Drive Drainage



Photo 12: Storm Drain Catch Basin Inlet to Remain



3.3 Traffic Signing and Pavement Marking

Several existing signs are in conflict with the proposed improvements; therefore, these signs will either be removed or replaced with new sign panels, posts and foundations or the existing sign panel will be relocated to a new post and foundation (Photo 13). Existing signage not in conflict with the proposed improvements will remain in place. New signs will be installed to control vehicular traffic approaching the intersection on westbound Skyline Drive. The new signs will include Right-turn Only signs to indicate that a mandatory movement applies on westbound Skyline Drive at the intersection. Additional new signs will include No Left-turn signs to prohibit left-turns and other signs to direct traffic at the intersection and alert drivers of bicyclist and pedestrians crossing locations.

Existing pavement marking will be removed for the entire length of Skyline Drive from the tee intersection up to the west leg of the Skyline Drive and Evans Mountain Drive intersection by stripe obliteration or full depth pavement removal. This will include the removal of existing raised pavement markers (RPM's). The free flow bike merge area will be removed as a part of the stripe obliteration operation (Photo 14). New pavement marking and RPM's will be provided based on the proposed configuration for the intersection. Pavement markings will include bicycle markings to direct bicyclists traveling westbound on Sunrise Drive across the intersection. In addition, a striped gore area with chevrons and raised pavement markers will be provided adjacent to the bicycle markings to better guide vehicular traffic heading westbound on Sunrise Drive and deter passing maneuvers into the lane addition at the intersection influence area.

Photo 13: Existing Signing and Pavement Marking



Photo 14: Existing Bike Merge Area Pavement Marking



3.4 Traffic Signals and Lighting

Intersection lighting is recommended to illuminate conflict areas and to provide nighttime visibility of bicyclists and pedestrians. The intersection conflict areas include the new bicycle and pedestrian crossings on the north leg of the intersection. Design of intersection lighting, including number and placement of luminaires was conducted following design criteria and guidance provided in the Roadway Lighting Manual prepared by the Illuminating Engineering Society (IES). This manual is an approved standard of practice by the American National Standards Institute - ANSI RP-8-14. The lighting design was also prepared in conformance with the 2012 City of Tucson/Pima County Outdoor Lighting Code (Photo 15)

Based on the illuminance of the intersection conflict areas, it is recommended that one luminaire on the northwest corner of the intersection of Skyline Drive at Sunrise Drive be installed. This will provide adequate illumination levels that follow IES Roadway Lighting Manual recommendations, as well as the City of Tucson/Pima County Outdoor Lighting Code. The source of power is assumed to come from the overhead electric line located on the north side of Foothills Drive. Coordination with TEP will be necessary on the power source location.

Photo 15: Proposed Intersection Lighting Location.



3.5 Roadside Structures

Existing property wall for the Foothills School District parcel on the northeast corner of the tee intersection will not be disturbed as a part of this project (Photo 16). No other roadside structures have been identified within the project limits.

Photo 16: Property Wall



3.6 Landscape

The existing landscape will be modified as needed to accommodate the median and pavement removal. Existing landscape includes both native vegetation in undeveloped areas and introduced landscaping in the median.

Existing plant material found on site includes brittlebush (*Encelia farinose*), prickly pear (*Opuntia engelmannii*), creosote bush (*Larrea tridentate*), staghorn cholla (*Cylindropuntia Versicolor*), palo verde (*Parkinsonia* spp.), and mesquite (*Prosopis velutina*). No noxious or invasive species were observed within the project area.

Landscape plants will be preserved in place wherever feasible with preservation fencing. Plants that can be preserved, but which may interfere with construction will be pruned prior to construction. Landscape establishment will be in accordance with the 2015 PAG Standard Specifications and PCDOT Special Provisions.

Modifications include:

- Coordinating the removal of landscape encroachments, including existing irrigation system components
- Removal of trees, which cannot be avoided
- Installing preservation fencing around vegetation to be preserved
- Pruning vegetation that may interfere with construction
- Re-establishing landscape, to be contained to disturbed areas
- Plant Native, drought tolerant species, based on the native plant inventory using the ESR Design Guidelines
- Install Hardscape paving in new raised islands to match existing median paving on Sunrise Drive.

Two trees within the proposed project limits are anticipated to be impacted. These trees are non-native and will not require mitigation.

3.7 Earthwork

Borrow material is not anticipated for this project. Any waste material generated for this project will be used to fill in the void left by the demolition of the free flow right turn. Earthwork will be in accordance with Section 203 of the PAG Standard Specifications for Public Improvements.

3.8 Access

All existing access points shall be re-established as part of this project. Construction will be phased to maintain access to properties when possible. Temporary closures may be necessary to construct the intersection improvements. This work will be coordinated between any impacted property owners, Pima County and the roadway contractor.

The Valley View Early Learning Center on the south leg of Skyline Drive and Evans Mountain Drive, shall have vehicular access maintained at all times during construction and will be notified of any temporary closures in the vicinity (Photo 17).

See the Vicinity Map, Figure 2 for all referenced locations.

Photo 17. Valley View Early Learning Center



4.0 PROJECT DEVELOPMENT CONSIDERATIONS

4.1 Environmental Overview

This section provides an environmental overview of the project and the project's potential environmental effects. The overview is based upon readily available data and is not meant to be an exhaustive technical assessment. The following sections summarize the environmental issues identified to date and the additional analysis and documentation that will be undertaken.

Based on the scope of the project, it is anticipated that the project meets the criteria of a Categorical Exclusion (CE) as defined in 40 CFR 1508.4 and 23 CFR 771.117(c)(22) and administered under the Memorandum of Understanding between the Federal Highway Administration Arizona Division and Arizona Department of Transportation regarding the State Assumption of Responsibility for Categorical Exclusions, dated January 3, 2018. The project scope meets the criteria under 23 CFR 771.117 (c) (22) – projects that would take place entirely within the existing operational right-of-way, and (23) projects that receive less than \$5,000,000 of Federal funds. All relevant analyses and investigations will be subject to the FHWA/ADOT environmental approval process. Associated technical reports will be prepared. All documents will be reviewed by the Pima County Department of Environmental Quality and ADOT Environmental Planning.

4.1.1 Biological Resources

The project area will be evaluated by a qualified biologist, and a Biological Evaluation Short Form (BESF) will be prepared. The list of protected species and other species of concern that may occur within the project area has been obtained from the United States Fish and Wildlife Service (USFWS) Information, Planning and Conservation System (IPaC) and the Arizona Game and Fish Department (AGFD) Online Environmental Review Tool. The BESF will review, evaluate, and determine the impacts to threatened and endangered species that could result from the project. The BESF will also include the results of literature searches and the findings from agency staff interviews, as appropriate. Mitigation measures applicable to this project will be included, if needed. Species information obtained from USFWS IPaC and AGFD Online Environmental Review Tool is provided in Table 3. Habitat for the species listed in Table 3 does not occur within the project vicinity, therefore the species are not expected to occur in the project limits. No critical habitat occur within the project limits.

Table 3. Endangered Species Act Species List

Common Name	Scientific Name	Status	Critical Habitat
Birds			
California least tern	<i>Sterna antillarum browni</i>	Endangered	None
Mexican Spotted Owl	<i>Strix occidentalis lucida</i>	Threatened	None
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	Threatened	None in area
Mammals			
Jaguar	<i>Panthera onca</i>	Endangered	None in area
Reptiles			
Northern Mexican gartersnake	<i>Thamnophis eques megalops</i>	Threatened	None in area
Sonoyta mud turtle	<i>Kinosteron sonoriense longifemorale</i>	Proposed Endangered	None

Some vegetation removal is anticipated for construction; therefore, Migratory Bird Treaty Act mitigation is anticipated to apply to this project (e.g., nest surveys may be required if vegetation removal occurs during the breeding season between March 1 and August 31). Potential impacts to biological resources will be addressed in the BESF to be developed for this project during the NEPA environmental clearance process.

Landscape material within the project area includes protected species (i.e. mesquite, palo verde, staghorn cholla, and prickly pear). No native trees are being removed as a part of this project, therefore Pima County will not be required to submit a Arizona Department of Agriculture Notice of Intent (ADA NOI) prior to construction.

A field review was conducted on May 15, 2019 and no noxious or invasive species were identified within the project limits.

4.1.2 Wetlands and Riparian Areas

No national or local wetlands or riparian areas are located within the project limits; therefore, there will be no impacts to wetlands as a result of the project.

4.1.3 Section 401/404 of the Clean Water Act

There is one unnamed ephemeral wash that is within the project limits (see Photo 18) that is likely to be classified as Waters of the U.S. (WOUS). The stream is a tributary of the Rillito River. The project is approximately 2.8 miles upstream from the confluence with the Rillito River. The Rillito River flows into the Santa Cruz River which has been designated as a Traditionally Navigable Water. The project will have no impact on the wash, therefore permitting under Section 404 and Water Quality Certification under Section 401 of the Clean Water Act will not be required. Refer to Figures 2 and 3 for the wash location.

4.1.4 Floodplain Encroachment

The project is located on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map 04019C1685L, dated June 16, 2011. The project area is located within Zone X, an area of minimal flood hazard (< 0.2 percent) (see Appendix A). Coordination with Pima County Regional Flood Control District staff will occur during the design and agency outreach phase of this project.

Photo 18. Waters of the U.S. – Unnamed Ephemeral Wash



4.1.5 Sole Source Aquifer

The project falls within the Upper Santa Cruz & Avra Basin Sole Source Aquifer.

4.1.6 Cultural Resources Investigation

A review of prior cultural resource studies identified that the majority of the project limits south of the Skyline Drive alignment was previously surveyed in 1983 and a survey in 2015 included a narrow corridor across the project limits for a communications line. The methods employed for the 1983 survey, however, do not meet current Arizona State Museum (ASM) standards for intensive cultural resource survey. An archaeological site designated AZ BB:9:127(ASM) has been recorded within the project limits and excavations within site AZ BB:9:127(ASM) were conducted in the 1980s. A cultural resources Class III intensive cultural resource field survey and report of the project Area of Potential Effect will occur as part of the environmental clearance.

4.1.7 Section 4(f) Resources

Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. 303) restricts the use of any publicly owned park, recreation area, or wildlife and waterfowl refuge, or any significant historic site that is either listed in or eligible for the National Register of Historic Places (National Register).

Within the project limits or within 1/4 mile of the project vicinity, no known publicly owned parks, recreation areas, or wildlife or waterfowl refuges were identified within the project limits. The nearby Catalina Foothills School District Valley View Early Learning Center does not provide public access to any recreational facilities and therefore is not subject to Section 4(f).

The golf course for the La Paloma Country Club is also within the project vicinity. The country club and golf course are not publicly owned and are not protected under Section 4(f).

Archaeological site AZ BB:9:127(ASM) that was previously documented within the project limits will be reviewed and the National Register eligibility of the site will be evaluated as part of the cultural resource investigation.

There is an unimproved utility access road within the road right-of-way which is used by pedestrians. Because the access road's primary purpose is for utility access and maintenance, it is not subject to Section 4(f).

4.1.8 Section 6(f) Impacts

No parks or recreational facilities in the vicinity of the project were developed with Land and Water Conservation Fund money. Therefore, there is no potential for Section 6(f) impacts.

4.1.9 Visual, Scenic and Historic Route

Pima County classifies Skyline Drive and Sunrise Drive as a scenic route (Ordinance No. 1995-42). The Scenic Routes Plan and ordinance establishes setbacks and other development regulations to preserve and enhance visual resources along designated roadways. The height and color of buildings and structures located within 200 feet of scenic routes are restricted. Pima County Roadway Design Manual identifies visual analysis procedures that will be followed for this project. The nature of the project would have no substantive impact on the visual or scenic quality of the intersection.

4.1.10 Socioeconomic Impacts

The project requires no new right-of-way or acquisition of commercial or residential property. The Valley View Early Learning Center is located at the eastern end of the project. The project will have no direct effect on the school. The school will be included in the agency and public scoping for the project and will receive regular updates on the project during construction. The school does not provide public access to any recreational facilities and therefore is not subject to Section 4(f). The project will not have any adverse social or economic impacts on adjoining properties.

4.1.11 Hazardous Materials

A Preliminary Initial Site Assessment (PISA) will be prepared during the environmental clearance process. Pavement markings along Skyline Drive, including the Portland Green Bike merge area for the existing free flow right turn, will be obliterated. Lead-based paint and asbestos sampling and analysis have been completed and no traces of Lead or Asbestos were found. This information will be included in the Preliminary Initial Site Assessment (PISA). No other pavement markings will be impacted by the project. There will be no impacts to load-bearing structures on this project, therefore, no testing for asbestos as regulated under the National Emission Standards for Hazardous Air Pollutants (NESHAP) will be required. All required ADOT documentation and procedures for NESHAP compliance will be followed.

4.1.12 Noise

The project will not result in changes to roadway capacity or use. The roadway footprint will remain within the existing footprint. No quantitative noise analysis is required. This project will adhere to the Pima County Noise Ordinance during construction.

4.1.13 AZPDES Stormwater Permit

Any construction project that will disturb one or more acres of land will require an Arizona Pollutant Discharge Elimination Systems general permit. Because the project will not disturb more than one acre of land (approximately 0.3 Ac), the project will not require a Section 402 permit.

4.1.14 Air Quality

The project is located within an area that is in attainment for all air quality criteria pollutants. The project will not result in any roadway capacity increase or changes in use. No additional analysis for CO is required. A fugitive dust activity permit from the Pima County Department of Environmental Quality will be obtained prior to construction activities.

4.1.15 Public/Agency Scoping

A Project Design Kick-off meeting was held on May 1, 2019, at the Pima County Public Works Building in Tucson, Arizona to discuss the scope of the project. A field review was conducted on May 15, 2019 by several of the attendees representing, PCDOT, Pima County Department of Environmental Quality and members of the AECOM Project Team.

Public and Agency scoping letters will be sent to adjacent landowners and federal, state, and local agencies with resources or interests in the project area. The letters will communicate the planned project elements and seek input. PCDOT will hold an Open House Meeting (TBD) to present the planned improvements. Invitations will be sent to stakeholders in the project vicinity based on Pima County Assessor ownership records. Any public comments or issues received will be identified during the public outreach. Public outreach information will be summarized in the project files.

4.2 Construction Contract Method

This project will be awarded to the lowest responsive and responsible bidder in a design, bid, build sequence. No alternative project delivery methods are anticipated.

4.3 Geotechnical Requirements

This project primarily involves minor roadway excavation where the earthwork will be minimal and a geotechnical investigation has been deemed unnecessary. Pavement reconstruction will be required for the widening and to install new curb and curb access ramps. The new pavement structural section will match the existing section where required. Pavement cores will be taken to match the existing pavement sections once environmental clearance is achieved.

Mitigation of any unsuitable material that is encountered during construction will be coordinated between Pima County and the roadway contractor.

4.4 Critical Outside Agency Involvement

This project will require coordination with Pima County and ADOT to ensure that all of the project components are eligible for HSIP funding.

4.5 Right-of-Way Requirements

New right-of-way acquisitions are not anticipated for this project. No temporary construction easements are anticipated either. All work will be contained within the existing Pima County Right-of-Way. ADOT Right-of-Way Group and Pima County Real Property will review the project plans during the design phase.

The right-of-way clearance will be provided by ADOT once the final design package has been approved. Once the project has been awarded to a contractor, the contractor shall obtain the necessary permits prior to beginning construction activities.

4.6 Utility Relocation Requirements

Adjustments to utilities, like water valve box adjustments are anticipated. Subsurface utility investigation (potholing) will be completed on a as-needed basis to verify horizontal and vertical location of underground utilities during final design. Environmental clearance for potholing will be obtained through the CE. Potholing operations, if necessary, will commence once environmental clearance is obtained.

Tucson Electric Power (TEP) has an underground service vault within the existing channelizing island. Currently, the project is anticipating that the manhole rim elevation will require vertical adjustment to match the new roadway finished grade (Photo 19). TEP is currently evaluating internally if there are any issues/concerns by lowering the manhole for the existing vault. If the vault requires relocation, the vault will be relocated to an area that will be environmentally cleared and to a location that will minimize disturbance to existing vegetation. Coordination with TEP will be required for construction requirements and scheduling of this manhole adjustment or potential relocation.

SWG has a 4" high pressure gas line that runs along the north right of way limits of the project. SWG plans to replace this facility which will require project coordination. The utility corridor running along the north right of way limit is not anticipated to be in conflict with this project.

When feasible, the proposed improvements will be designed to avoid most of the facilities within the project limits. Pima County will obtain utility clearance letters from the utility companies and preparing the utility clearance package for review and approval by ADOT's Utility and Railroad Engineering Section during design.

Photo 19: TEP Underground Vault



4.7 Seasonal Considerations

Construction activities will need to occur during week days and daytime hours due to the close proximity of residences to the project. Construction activities on the weekends will need to be approved by Pima County.

Seasonal restrictions for utilities will be taken into consideration. Any unforeseen utility relocations will be coordinated with the utility company (i.e. TEP and SW Gas) to meet their seasonal restrictions.

Properties in the vicinity of the project area may be exposed to noise from construction activities. The Pima County Noise Code (Chapter 9.30.070) limits construction activities to between 5 AM and 7 PM, April 15 to October 15 and between 6 AM and 7 PM, October 16 to April 14. A noise variance will be required if nighttime construction is necessary.

4.8 Traffic Requirements/Access/Detours

This project will be constructed adjacent to vehicular traffic along Skyline Rd. During construction, temporary traffic control will be implemented; which could include partial lane closures. However, two-way traffic will be maintained and no detours will be required.

There may be some temporary disruptions of access during construction, but traffic will be maintained on Sunrise Drive and Skyline Drive throughout construction. Temporary traffic controls are anticipated. During active periods of construction, access for emergency response vehicles will be maintained to all

properties. Temporary closures of cross streets & driveways may be necessary. The project construction will be phased to where points of entry should not be significantly impacted to these properties.

Traffic control shall be in accordance with the 2009 MUTCD, Pima County Standards, and the project Special Provisions.

Temporary signing and pavement marking for vehicular, bicycle and pedestrian travel will be utilized during construction activities as required.

4.9 Location Survey and Mapping Requirements

A field survey was performed by AECOM for the conceptual phase. Additional survey requests are not anticipated to be needed during the final design.

Roadway Survey monuments will require re-establishment due to the roadway disturbance. Monument re-establishment will be coordinated with Pima County Survey Group.

4.10 Design Criteria

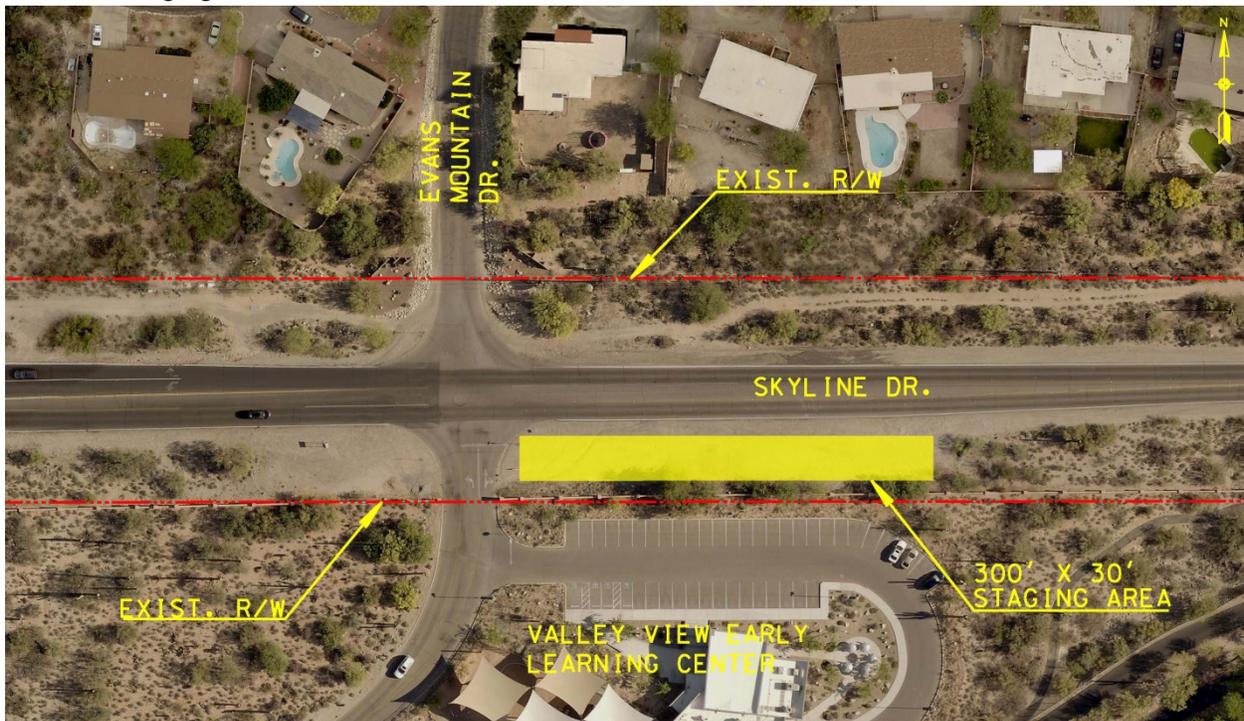
The proposed improvements shall be designed in conformance with Pima County, PAG, Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG) and American Association of State Highway and Transportation Officials (AASHTO) design standards. The construction methods shall be in accordance with Pima County, PAG and AASHTO standards

5.0 OTHER REQUIREMENTS

A material storage, staging and stockpile area has been preliminarily identified for the project and is located on the south east corner of Skyline Dr. and Evans Mountain Dr. within Pima County right-of-way (shown in Photo 20). The approximate dimensions of the staging area are 300' x 30'. Also refer to the project plans (Appendix B) for the staging location.

The contractor will be required to maintain this location as the staging area for the project duration.

Photo 20: Staging Location



6.0 ESTIMATED COSTS

The project cost estimate is based on the preliminary Stage II (30%) plans developed for this report in coordination with Pima County and is summarized in Table 4, Preliminary Project Costs. The estimated costs are based on unit prices obtained from recent PCDOT bid documents. Construction funding will be requested after scoping and design are complete.

Table 4. Preliminary Project Cost

Item No	Item Description	Unit	Quantity	Unit Price	Amount
2010011	Clearing and Grubbing	ACRE	0.30	\$5,000.00	\$1,500
2010004	Preservation Fencing (Type A)	L.F.	500	\$3.00	\$1,500
2010006	Preservation Fencing (Type B) (Agency Discretion)	L.F.	200	\$4.00	\$800
2020001	Removal of Structures & Obstructions	L.S.	1	\$16,000.00	\$16,000
2030300	Roadway Excavation	C.Y.	350	\$15.00	\$5,250
3030003	Aggregate Base	C.Y.	144	\$50.00	\$7,200
4040111	Tack Coat	TON	1	\$1,200.00	\$1,200
4040150	Micro Seal	S.Y.	4165	\$4.50	\$18,743
4040300	Crack Sealing (Asphaltic Concrete Pavement)	L.F.	5000	\$2.00	\$10,000
4060001	Asphaltic Concrete (No. 1)	TON	140	\$101.00	\$14,140
4060002	Asphaltic Concrete (No. 2)	TON	93	\$105.00	\$9,765
5103101	Potable Water, Adjust Valve Box and Cover	EACH	1	\$450.00	\$450
5150005	Utility Potholing, Depth <12'	EACH	15	\$300.00	\$4,500
5150007	Utility Potholing, Depth ≥12'	EACH	2	\$550.00	\$1,100
5150101	Utility Impact Allowance	USD	5000	\$1.00	\$5,000
6070010	Sign Post (Perforated) (Single)	L.F.	80	\$20.00	\$1,600
6070110	Foundation for Sign Post (Perforated)	EACH	12	\$250.00	\$3,000
6080020	Sign Panel (Traffic Control) (Permanent) (Diamond Grade)	S.F.	48	\$20.00	\$960
7010005	Traffic Control	L.S.	1	\$30,000.00	\$30,000
7010261	Obsolete Pavement Marking	L.S.	1	\$17,000.00	\$17,000
7040005	Pavement Marking (White Extruded Thermoplastic) (0.090")	L.F.	3357	\$1.20	\$4,028
7040006	Pavement Marking (Yellow Extruded Thermoplastic) (0.090")	L.F.	4896	\$1.20	\$5,875
7040007	Pavement Marking (Yellow Extruded Thermoplastic) (0.090")	L.F.	4847	\$2.20	\$10,663
7040110	Pavement Marking (White Hot Sprayed Thermoplastic) Transverse) (0.09")	L.F.	96	\$1.20	\$115
7040120	Pavement Marking (Yellow Hot-Sprayed Thermoplastic) (Transverse) (0.09")	L.F.	1194	\$1.20	\$1,433
7050030	Pavement Marking, Preformed, Type I, Single Arrow	EACH	2	\$300.00	\$600
7050060	Pavement Marking, Preformed, Type I, Legend, ONLY	EACH	1	\$325.00	\$325
7050080	Pavement Legend, Preformed, Type I, Bike Lane Legend and Symbol	EACH	4	\$325.00	\$1,300
7060020	Pavement Marker, Reflective, (Type C, Clear, Red)	EACH	40	\$10.00	\$400
7060025	Pavement Marker, Reflective, (Type D, Yellow, Two-Way)	EACH	87	\$10.00	\$870
7080001	Painted Pavement Marking	L.F.	9543	\$0.50	\$4,772
7080003	Pavement Marking (Thermoplastic) (Portland Green)	L.F.	84	\$40.00	\$3,360
7080010	Painted Pavement Symbol or Legend	EACH	7	\$75.00	\$525
7310060	Pole (Type 2B Street Light)	EACH	1	\$1,500.00	\$1,500
7310240	Pole Foundation (Type 2A, 2B and 2C Street Light)	EACH	1	\$1,000.00	\$1,000
7310375	Service Pedestal Cabinet Foundation	EACH	1	\$1,000.00	\$1,000
7320020	Electrical Conduit (2") (PVC)	L.F.	400	\$10.00	\$4,000
7320400	Pull Box (No. 3 1/2)	EACH	2	\$500.00	\$1,000
7320600	Conductors (Traffic Signals and Integral Street Lighting)	L.S.	1	\$5,000.00	\$5,000
7320690	Ground Rod (3/4" Dia. X 10')	EACH	1	\$150.00	\$150
7320890	Electrical Service Installation	L.S.	1	\$5,000.00	\$5,000
7320800	Service Pedestal Cabinet	EACH	1	\$2,500.00	\$2,500
7360050	Luminaire (Horizontal Mount) (LED)	EACH	1	\$2,200.00	\$2,200
8050004	Seeding (Class II)	ACRE	0.50	\$2,300.00	\$1,150
8061294	Shrub (Three Gallon) (Agency Provided)	EACH	20	\$20.00	\$400
8061700	Landscape Pruning	HOUR	24	\$80.00	\$1,920
8080111	Miscellaneous Landscape Work Allowance	USD	1000	\$1.00	\$1,000
8090046	Transplant Cactus	EACH	6	\$60.00	\$360
8100001	AZPDES/NPDES (Original)	L.S.	1	\$6,500.00	\$6,500
8100012	AZPDES/NPDES Allowance (Modified)	USD	2000	\$1.00	\$2,000
9010001	Mobilization	L.S.	1	\$34,000.00	\$34,000
9080005	Concrete Curb, (Std. Dtl. 209) (Type 2)	L.F.	289	\$25.00	\$7,225
9080030	Concrete Curb (C-05.10) (Type A)	L.F.	370	\$30.00	\$11,100
9080150	Concrete Median Pavement	S.F.	906	\$7.00	\$6,342
9080201	Concrete Sidewalk	S.F.	3252	\$7.00	\$22,764
9080280	Curb Access Ramp, Std. Dtl. 207 (Type 1)	EACH	3	\$2,000.00	\$6,000
9080285	Median Refuge Area (Type 1)	EACH	1	\$2,500.00	\$2,500
9090021	Survey Monument, Frame and Cover	EACH	1	\$500.00	\$500
9130008	Riprap (Hand Placed)	C.Y.	18	\$130.00	\$2,340
9236001	Manhole Adjustment (Utility)	EACH	1	\$5,000.00	\$5,000
9240002	Provide On-The-Job Training (Federal)	HOURS		\$0.00	\$0
9250001	Construction Survey and Layout	L.S.	1	\$3,400.00	\$3,400
9300100	Incidental Items Allowance	USD	20000	\$1.00	\$20,000
9300121	Miscellaneous Work 11 (Concrete Sidewalk Curb)	L.F.	81	\$25.00	\$2,025
Item				CONSTRUCTION COST SUBTOTAL:	\$343,850
ADM	CONSTRUCTION ADMINISTRATION (14%)	Cost	1		\$48,139.00
PDS	CONSULTANT POST DESIGN SERVICE/RECORD DRAWINGS (1%)	Cost	1		\$3,438.50
CTG	CONTINGENCY (20%)	Cost	1		\$68,770.00
				TOTAL CONSTRUCTION PROGRAM COST	\$464,198

7.0 SERVICE INVOLVEMENT SHEET

ADOT PROJECT NUMBER: T0204 01C

PROJECT NAME: SKYLINE DRIVE AND SUNRISE DRIVE INTERSECTION IMPROVEMENTS

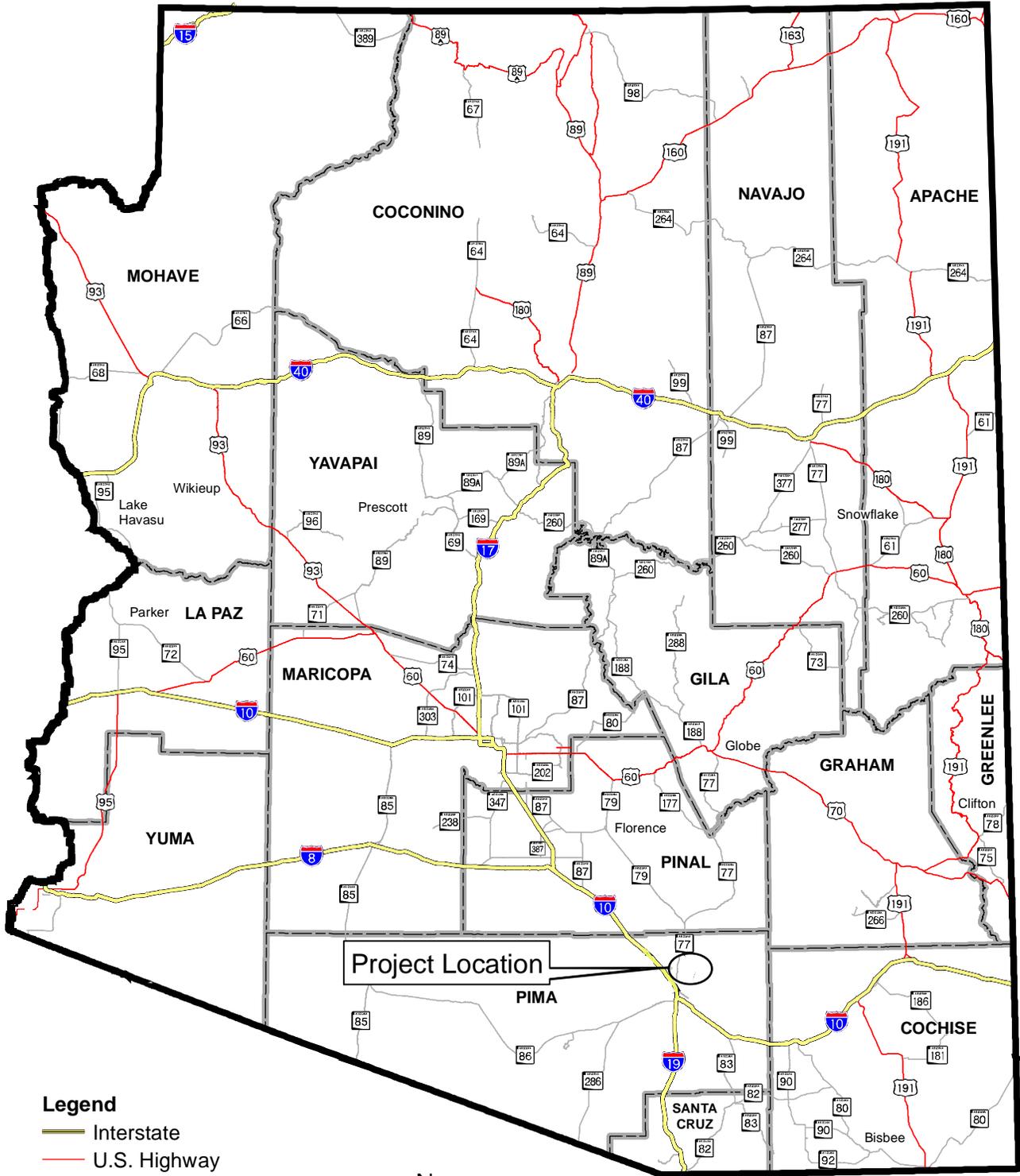
PROJECT LOCATION: PIMA COUNTY, ARIZONA

CONTACTED	FIELD REVIEW	ORGANIZATION	INVOLVEMENT				COMMENTS (ISSUES WHICH MAKE INVOLVEMENT SIGNIFICANT OR MINIMAL)
			SIGNIFICANT	MINIMUM	NONE	UNKNOWN	
X		LOCAL PUBLIC AGENCY PROJECT MANAGEMENT	X				Administer Project Project Manager: Eric Prosnier
		SOUTHCENTRAL DISTRICT		X			
		ROADWAY DESIGN		X			
		PAVEMENT DESIGN			X		
		BRIDGE DESIGN			X		
		DRAINAGE DESIGN			X		
		INTELLIGENT TRANSPORTATION SYSTEMS (ITS) GROUP			X		
		TRAFFIC DESIGN			X		
		PHOTOGRAMMETRY & MAPPING			X		
		ENGINEERING SURVEY			X		
		GEOTECHNICAL SERVICES			X		
X		ENVIRONMENTAL PLANNING GROUP	X				Document Review; Environmental Clearance
		ROADSIDE DEVELOPMENT			X		
		RIGHT-OF-WAY		X			Right-of-Way Clearance
		UTILITIES & RAILROAD		X			Utility Clearance
		CONTRACTS & SPECIFICATIONS			X		
X	X	PIMA COUNTY	X				Review PA, Plans, Estimate and Specifications. Construction Administration Project Manager: Mandley Rust

8.0 STATE, VICINITY AND LAND USE MAPS

Figure 1
State Location Map

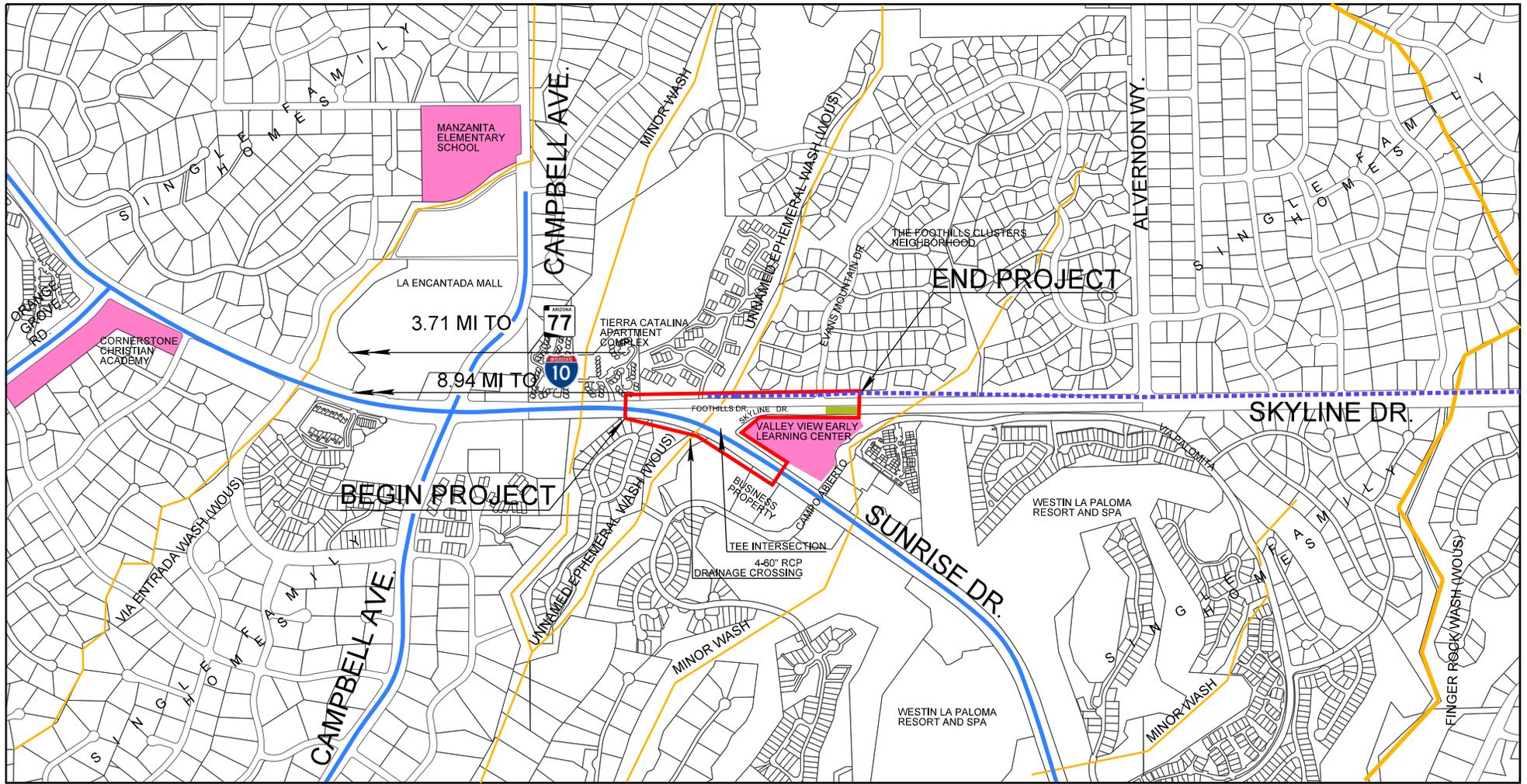
P:\Temporary\psr\PimaCounty\DOT\GIS\mxd\Fig1_State.mxd (PSR)



Legend

- Interstate
- U.S. Highway
- State Route
- State Boundary
- County Boundary





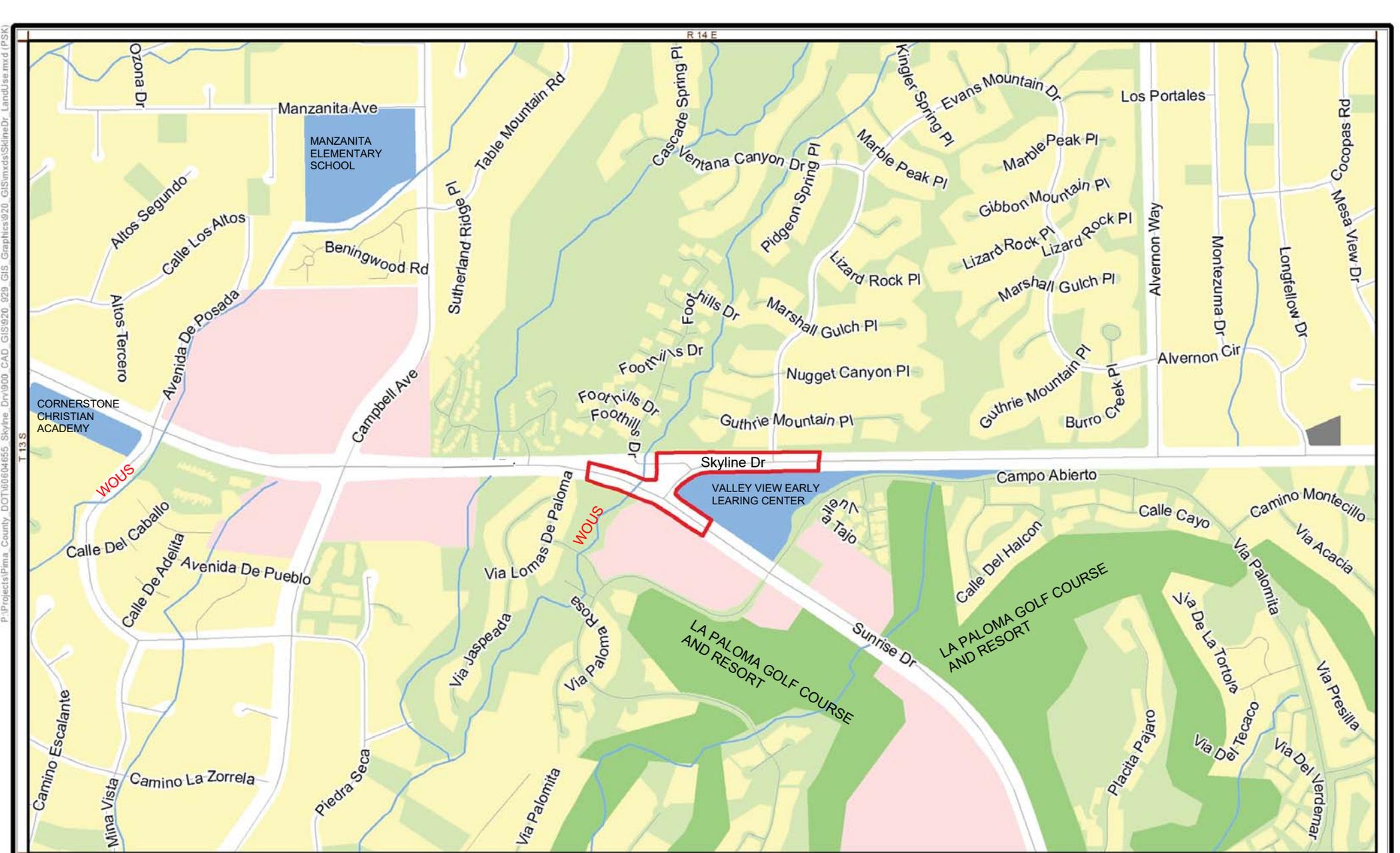
LEGEND

- BICYCLE ROUTES
- PROJECT LIMITS
- - - - UTILITY ACCESS ROAD
- SCHOOL
- DRAINAGE WASH/STREAMS
- STAGING LOCATION

NOT TO SCALE (WOUS) - WATERS OF THE U.S.

**Figure 2:
Project Vicinity Map**





- Legend**
- Project Study Limit
 - Local Road
 - Stream/River
 - WOUS (WATER OF THE US)
- Existing Land Use**
- Residential
 - Commercial
 - School
 - Residential Open Space
 - Recreation
 - Utility

Roads: ADOT 2017
Base Features: ALRIS 1997-2016

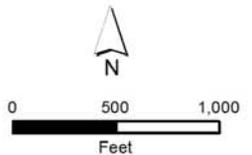


Figure 3
Existing Land Use

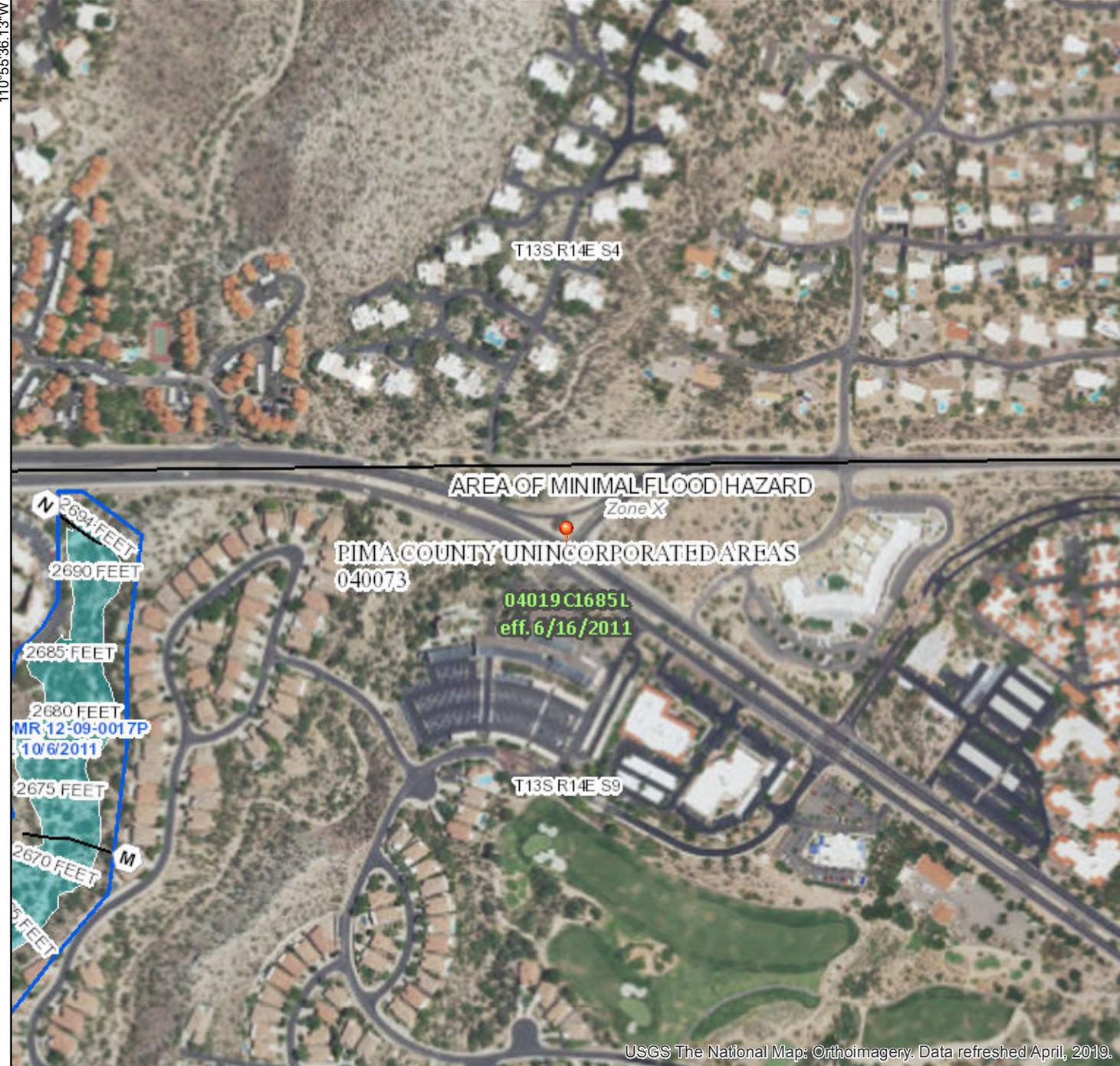
APPENDIX A

FIRM PANEL MAPS

National Flood Hazard Layer FIRMette



32°19'34.98"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
MAP PANELS		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/25/2019 at 7:20:54 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

USGS The National Map: Orthoimagery. Data refreshed April, 2019.



APPENDIX B

PROJECT PLANS

Pima County will be administering and constructing this project. Once construction activities are complete, maintenance and repair operations will be the responsibility of Pima County.



PIMA COUNTY BOARD OF SUPERVISORS

RICHARD ELÍAS, CHAIR, DISTRICT 5
 ALLY MILLER, DISTRICT 1 SHARON BRONSON, DISTRICT 3
 RAMÓN VALADEZ, DISTRICT 2 STEVE CHRISTY, DISTRICT 4
 THIS PROJECT IS LOCATED WITHIN SUPERVISOR DISTRICT 1

SKYLINE DRIVE AT SUNRISE DRIVE INTERSECTION IMPROVEMENTS

GENERAL DESCRIPTION OF PROJECT

INTERSECTION GEOMETRY MODIFICATIONS INCLUDE THE ELIMINATION OF THE FREE RIGHT TURN TO WB SUNRISE DRIVE, AND THE ELIMINATION OF LEFT TURNS FROM WB SKYLINE DRIVE TO EB SUNRISE DRIVE TO IMPROVE TRAFFIC SAFETY AND OPERATIONS. IMPROVEMENTS ALSO INCLUDE THE ADDITION OF ONE STREET LIGHT AT THE SKYLINE DRIVE AND SUNRISE DRIVE INTERSECTION CURB ACCESS RAMPS, SIDEWALKS, RAISED MEDIANS, SIGNING, PAVEMENT MARKINGS AND LANDSCAPING.

PIMA COUNTY PROJECT NUMBER

4SUNTE

ADOT PROJECT NO. - T0204 01C

FEDERAL ID NO. - PPM-0(265)D

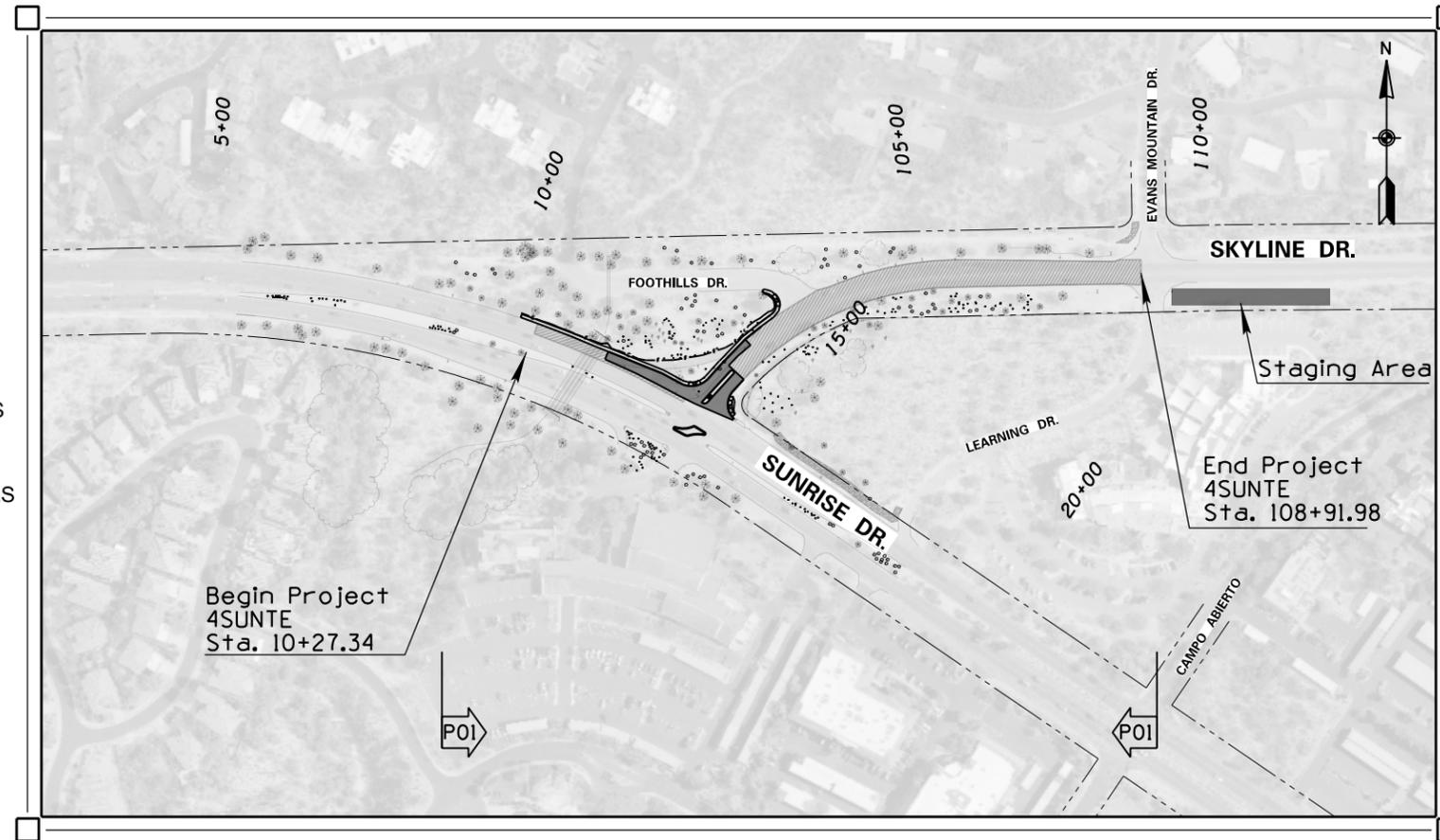
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORDED
9	ARIZ.	PPM-0(265)D			

T0204 01C

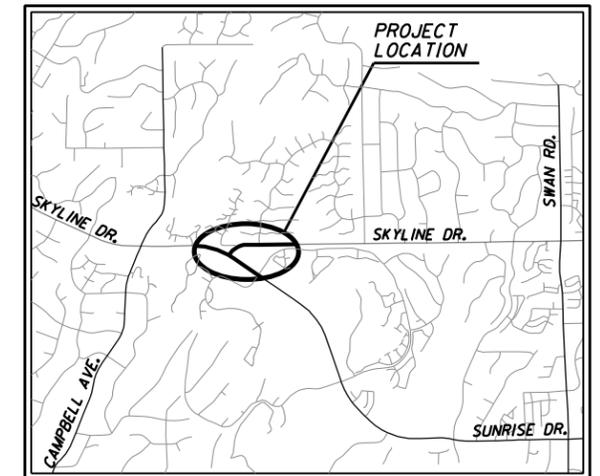


PIMA COUNTY
TRANSPORTATION

SHEET NO.	PAGE NO.	DESCRIPTION
CS01	1	COVER SHEET
GN01	2	GENERAL NOTES SHEET
TY01-TY02	3-4	TYPICAL & PAVEMENT SECTIONS
HC01	5	HORIZONTAL CONTROL SHEET
GN02	6	MISCELLANEOUS GENERAL NOTES
D01	7	DEMOLITION SHEET
P01	8	ROADWAY PLAN
PRO1	9	ROADWAY PROFILE
PM01	10	PAVEMENT MARKING PLAN



INDEX TO PLAN SHEETS
 NOT TO SCALE



Location Map
 NOT TO SCALE

Section 4 & 9
 T - 13 - S, R - 14 - E,
 G & SRM
 Pima County, Arizona

SKYLINE DRIVE AT SUNRISE DRIVE INTERSECTION IMPROVEMENTS - PROJECT NO. 4SUNTE

PCRWRD UPC-2019-034

No.	Revisions	Engineer	Date	STAGE II (30 %) NOT FOR CONSTRUCTION AUGUST 2019	Pima County Department of Transportation 201 N. Stone Ave, 4th floor Tucson, Arizona 85701 Phone Number: 724 - 6410 Ana M. Olivares, P.E. - Director	Approved: _____ 20__
No.	As Built	Engineer	Date			Director
Project No. 4SUNTE				Sheet No. CS01 of CS01		Page No. 01 of 10



TRANSPORTATION
 AECOM Technical Services, Inc.
 333 E. WETMORE RD, STE 400
 Tucson, Arizona 85705
 T 520.887.1800 F 520.887.8438



www.aecom.com

GENERAL NOTES:

- Construction Shall be in Conformance with the Specifications and Details Listed in the Special Provisions.
- Utility Locations Shown on the Plans were Compiled Based on the Best Information Available to the Department, Utility Locations are not Intended to be Exact or Complete. Prior to Commencing Construction, the Contractor Shall Verify the Location of all Utilities with the Appropriate Organizations. Contact "Arizona 811" at 1-800-782-5348 Two Full Working Days Prior to Beginning Construction (Saturdays and Sundays are Not Considered Working Days).
- Right-of-Way Encroachments Shall be Removed Only by Order of Pima County, Unless Otherwise Noted.
- Removal of all Cacti and Native Plants Shall be in Accordance with the Provisions of the "Arizona Native Plant Law" A.R.S, Chapter 7.
- The BASIS OF BEARING for this project was established using the Arizona Coordinate System, NAD 1983 (2011), Central Zone 0202, along the north line of Section 9, T.13S, R.14E as observed from the Northwest Corner and said Section 9, being 2" brass cap stamped "LS 31038" (south monument of two) and North Quarter Corner of said Section 9, point also being Pima County/City of Tucson Geodetic Control Point "BE11" being 2" brass cap with unreadable stamping. Said bearing being N88 46' 34"E.
- The BASIS OF ELEVATION for this project is Pima County OPUS control point "13S14E_E09" having an NAVD88 elevation of 2727.42 feet (831.317 meters), as determined by the OPUS Solution dated November 19, 2012 using the GEOID12A geoid model.
- The BASIS OF COORDINATES:
The published combined scale factor value of 0.99988170 at the Pima County OPUS control point "13S14E_E11" was used to convert grid coordinates to surface/ground coordinates for this project, as determined by OPUS Solution dated November 8, 2012. Though the said control point was searched for and not found in the field published combined scale factor was used due to the closest vicinity to the project area. The surface/ground coordinates are derived from the state plane values by the the following formulas:

Surface/ground Northing coordinates are derived by dividing the grid coordinates by 0.99988170
Surface/ground Easting coordinates are derived by dividing the grid coordinates by 0.99988170

Surface/ground coordinates for Pima County OPUS control point "13S14E_E11" are:
Northing: 482,500.922 / 0.99988170 = 482,558.009'
Easting: 1,008,290.226 / 0.99988170 = 1,008,409.521'
- THE BASIS OF STATIONING: The Stations for Skyline/Sunrise Drives Increase from West to East. The Stationing is Based on Osborn, Petteron, Walbert & Associates Plans for Sunrise Drive Project Number R-776 (1983). A Section Corner (Control Point #1) is Sta. -3+52.29.
- Soils Information is not Available for This Project. the Contractor May Encounter Unsuitable Material, Including Large Rocks and Boulders Which Will Need to be Removed and Replaced with Suitable Material. Removal and Replacement of this Material will be a No Additional Cost to the Agency.
- The Contractor Shall Maintain Access to All Driveways, Alleys, and Mailboxes During Construction. The Contractor Will Not Restrict Emergency Vehicles, U.S. Postal Delivery, Solid Waste Collections, and/or Access to the Adjacent Properties, Except as Approved by the Engineer.
- Omissions or Conflicts Between the Various Elements of the Drawings, Notes, or Details Shall be Brought to the Attention of the Engineer and Resolved Before Proceeding with the work.
- All Stationing Shown on the Plans and Profiles is Along the Construction Centerline Unless Otherwise Noted.
- Existing Utilities Include, But May not be Limited to, Overhead and Underground Electric, Telephone, Television, Sewer, Gas, and Water, and Shall be Moved by Others Unless Otherwise Noted and Shown in These Plans.
- The Contractor's Attention is Called to the Limited Area Available on the Site for Excavation, Embankment and Other Construction Activities.
- Existing Topographic Conditions Shown on Plan Sheets Reflect Conditions as of May 22, 2019.

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORDED
9	ARIZ.	PPM-0(265)D			

T0204 01C

DESIGN DATA				
	ADT	DESIGN SPEED	POSTED SPEED	DESIGN VEHICLE
SUNRISE DR.	34,000 VPD	50 MPH	45 MPH	WB-62
SKYLINE DR.	9,300 VPD	40 MPH	35 MPH	WB-62

LENGTH OF PROJECT		
SUNRISE DR.	10+28 TO 14+30,	0.076 MILES
SKYLINE DR.	100+47 TO 108+92,	0.160 MILES

APPROX. EARTHWORK QUANTITIES SUMMARY		
ITEM #	ITEM DESCRIPTION	TOTALS VOL. (C.Y.)
2030300	Roadway Excavation	350
	Total Excavation	350
	Total Shrinkage (10% Assumed)	35
	NET EXCAVATION (Available for Embankment)	315
	Roadway Embankment	15
	Ground Compaction (0.10 Ft.)	5
	NET EMBANKMENT (Embankment Demand)	20
	TOTAL EXCESS MATERIAL*	295

Note* Excess Material (Minus Bituminous Pav't Removals) to be Used to Fill in Void left by Demolished Free Right Turn.

ABBREVIATION NOT INCLUDED IN PAG STD. DTL. 101

Aluminum Cap on Pipe	A.C.P.	Intelligent Traffic System	ITS
Abandoned	Aband.	Median	Med.
Asphalt Rubber Asphaltic Concrete	ARAC	Point of Compound Curve	P.C.C.
Correction	Corr.	Point Of End	P.O.E.
Decomposed Granite	D.G.	Raised Pavement Marker	R.P.M.
Detail	Dtl.	Shoulder	Shld.
Drainage Easement	D.E.	Standard	Std.
Edge Of Pavement	E.P.	Stopping Sight Distance	SSD
General Land Office	G.L.O.	Temporary Construction Easement	T.C.E.
		Vertical Curve	V.C.

LEGEND:

-  New Asphaltic Concrete
-  Dumped Riprap
-  AC Micro Seal
-  Roadway Plan Reference Number (Refer to Sheet No. PO1)

GENERAL NOTES

Scale:	N/A	Sheet GNO1 of GNO1	Page 02 of 10
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Ana M. Olivares, P.E. - Director
 Pima County Department of Transportation
 SKYLINE DR. AT SUNRISE DR. INTERSECTION IMPROVEMENTS
 PROJECT NO. 4SUNTE
 August 2019
 NOT FOR CONSTRUCTION
 STAGE 1/ (30%)
 AECOM TECHNICAL SERVICES, INC.
 333 E. WETMORE RD, STE 400
 TULSA, OK 74106
 T 500.887.1800 F 500.887.9438
 www.aecom.com

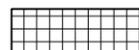
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORDED
9	ARIZ.	PPM-0(265)D			

T0204 01C

DEMOLITION GENERAL NOTES:

- Contractor is Responsible for the Preservation of Existing Plant Materials According to the Special Provisions Section 201-3.02. Overhanging Branches Within the Right of Way That May Impact Construction Shall be Pruned in Accordance with Special Provisions Section 201-3.05 and Item #8061700.
- Existing Trees on Adjacent Private Property May Have Overhanging Branches that will Require Pruning. See Special Provisions 201-3.05. No Pruning Shall be Performed Without the Notification of Pima County Community Relations.
- Where Construction Impacts Unforeseen Existing Landscape or Irrigation Encroachments Within Right of Way, the Contractor Shall Coordinate Required Adjustment with Project Engineer and Adjacent Property Owner. Removal Shall be Handled Under Item #2020001.
- Contractor is to Install Preservation Fencing as Directed by Engineer Prior to Clearing. Locations Shown on Plans Shall be Adjusted in the Field as Required. Preservation Fencing is to Remain During Duration of Project. See Item #2010004.
- Removal of All Cacti and Native Plants Shall be in Accordance with the Provisions of the "Arizona Native Plant Law", A.R.S. Chapter 7. Cacti Under the Protection of Native Plant Laws will Have Been Removed Prior to Construction. If, During Construction, Additional Saguaro or Barrel Cacti will be Impacted, Contractor is to Contact PCDOT Landscape Contact (TBD). Contractor is to Assist PCDOT in Coordinating Salvage by the Pima County Native Plant Nursery or the Tucson Cactus and Succulent Society (TCSS). Contact Information: (520) 256-2447 or tcss@tucsoncactus.org

Legend:

-  Stripe Obliteration Limits
-  AC Removal (Full Depth)
-  Conc. Curb Removal

① Demolition Plan Reference Number (Refer to Sheet No. D02)

PCRWRD GENERAL NOTES:

- The Contractor Shall Contact "Arizona 811" (Dial 811 or 1-800-782-5348) a Minimum of Two (2) Business Days Prior to Commencing Construction Activities. The Contractor Shall Keep all Underground Facility Location Requests Up-to-Date and Comply with Arizona Revised Statutes (A.R.S.), Title 40, Chapter 1, Article 6.3, Section 40-360.22. Concerns Regarding the Accuracy Between the Underground Facility Markings and the Project Plans Shall be Immediately Reported to the Design Engineer.
- Contractor Shall Maintain Access to All Sanitary Sewer Manholes at All Times.
- Any House Connection Sewer (HCS) or Business Connection Sewer (BCS) Lines Encountered During Construction Shall be Protected, Repaired or Rerouted, as the Situation Dictates, Per PCRWRD SSDC 2016 Detail No. RWRD 400 and at no Expense to the Property Owner or PCRWRD. HCS and BCS Lines are not Owned or Maintained by PCRWRD. Private Connection Sewers Constructed Prior to January 2006 are not Required to be Located and Marked.
- Immediately Report and of the Following to the PCRWRD Operations Control Center (OCC) at (520) 724-6500: Any Release of Sewage, any Damage to the Public Sanitary Sewer System or the Dropping of Debris into a Public Sanitary Sewer Manhole. A PCRWRD Representative will be Dispatched to the Site. The Contractor Shall Take Immediate Action to Contain a Sanitary Sewage Overflow (SSO). The Contractor Shall be Responsible for All Cost to Repair the System, Mitigate the Release of Sewer, Disinfect the Release Areas, and any Regulatory Penalties Levied on PCRWRD for Sewage Entering a Natural Drainage Way of Storm Water Drainage System. The Contractor Shall Repair All Damage as Directed and Approved by the PCRWRD Field Representative.

MISCELLANEOUS GENERAL NOTES

Scale:	N/A	Sheet GN02 of GN02	Page 06 of 10
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Ana M. Olivares, P.E. - Director
 Pima County Department of Transportation
 SKYLINE DR. AT SUNRISE DR. INTERSECTION IMPROVEMENTS
 PROJECT NO. 4SUNTE
 SKYLINE DRIVE AT SUNRISE DRIVE INTERSECTION IMPROVEMENTS - PROJECT NO. 4SUNTE

Date	7/19
T/W	RM
Designed	BR
Drawn	T/W
Checked	
Proj. Engr.	

No.	Revision Description	Engineer	Date

STAGE // (30 %)
 NOT FOR CONSTRUCTION
 August 2019

AECOM
 TRANSPORTATION
 AECOM TECHNICAL SERVICES, INC.
 335 E. WETMORE RD, STE 400
 T 520.887.1800 F 520.887.9438
 www.aecom.com

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORDED
9	ARIZ.	PPM-0(265)D			

T0204 OIC

Date	Checked	Drawn	Designed
7/19	BR	RM	TW
7/19	BR	RM	TW
7/19	BR	RM	TW

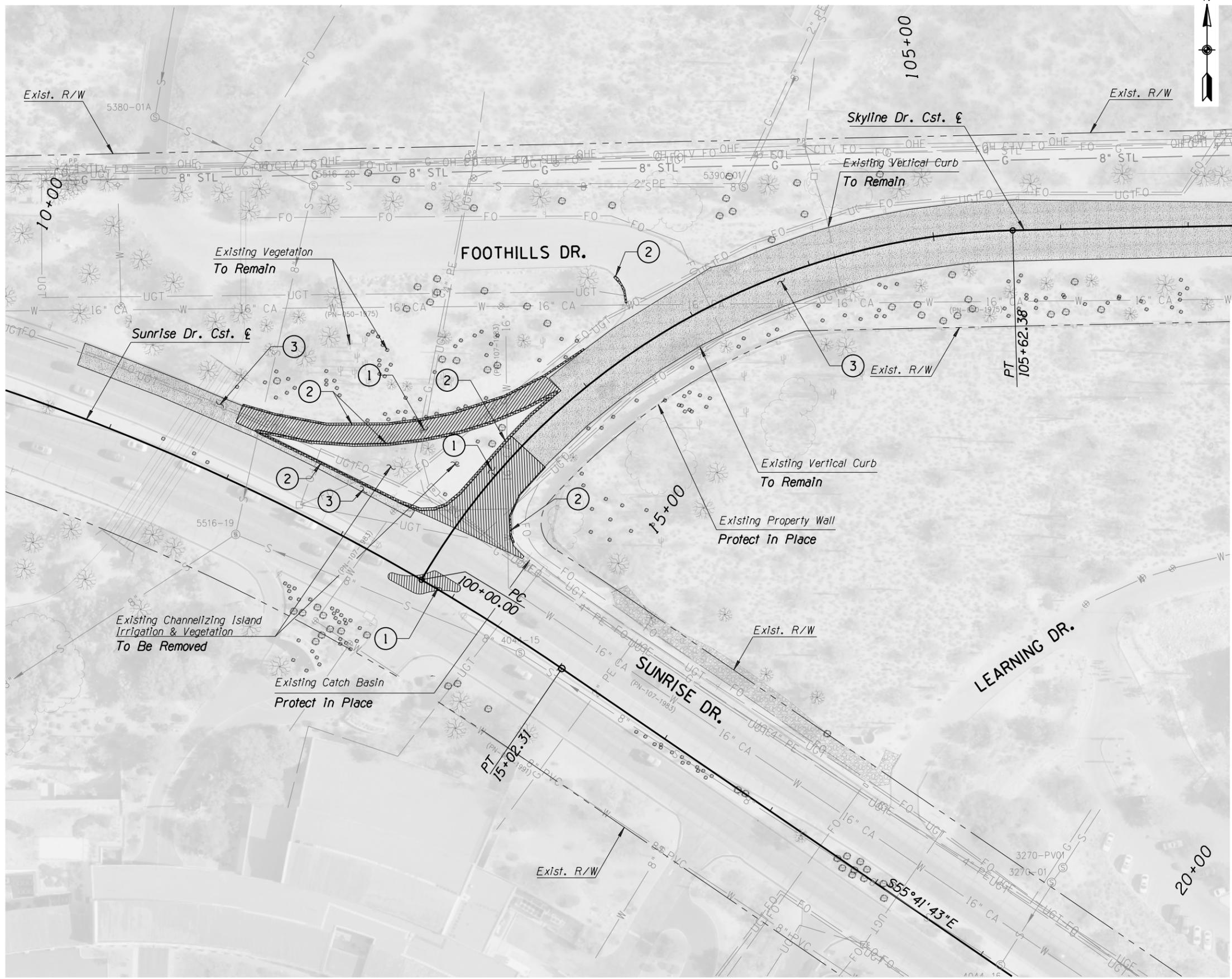
No.	Revision Description	Engineer	Date

STAGE II
(30%)
NOT FOR CONSTRUCTION
August 2019

TRANSPORTATION
AECOM TECHNICAL SERVICES, Inc. 400
335 E. WETMORE RD, SITE 400
T 520.887.1800 F 520.887.9438
www.aecom.com



Pima County Department of Transportation
SKYLINE DR. AT SUNRISE DR.
INTERSECTION IMPROVEMENTS
PROJECT NO. 4SUNTE



- Removal Items:**
- ① Existing AC Removal (Full Depth) 7,800 S.F.
 - ② Existing Concrete Curb Removal 867 L.F.
 - ③ Existing Stripe Obliteration, 1 L.S. (5,294 L.F., 16 Symbols)
 - ④ Existing Sign Removal, 1 L.S.

- REMOVAL NOTES:**
1. Sawcutting Incidental to Project Items.
 2. Existing Curb to Remain, Unless Otherwise Noted in the Plans for Removal.
 3. RPM Removal Incidental to Project Items.

DEMOLITION PLAN

Scale: 1" = 40' Horiz Sheet 001 of 001

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORDED
9	ARIZ.	PPM-0(265)D			

T0204 OIC

Ana M. Olivares, P.E. - Director

Date	TW	RM	BR	TW
6/19				
6/19				
6/19				
6/19				

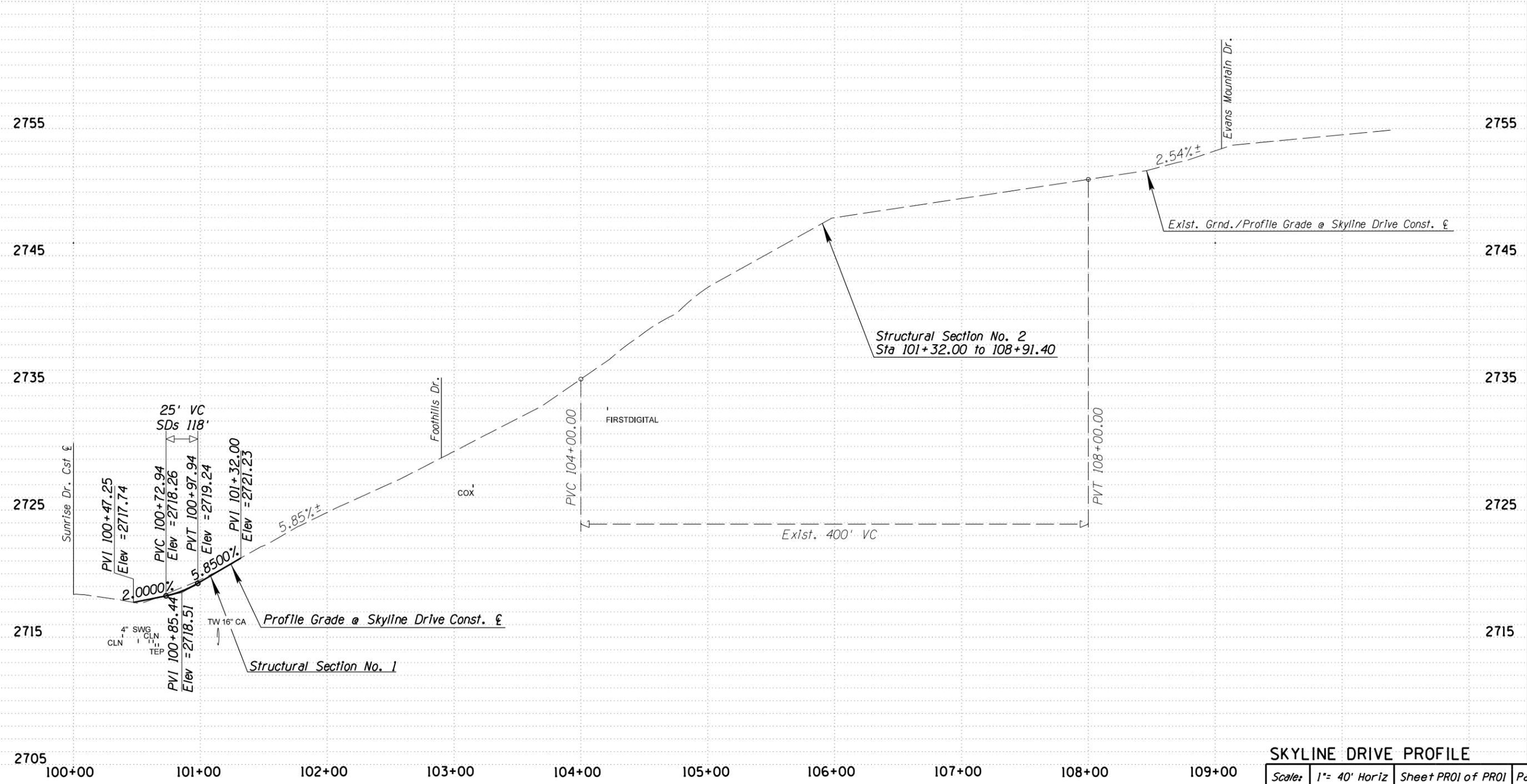
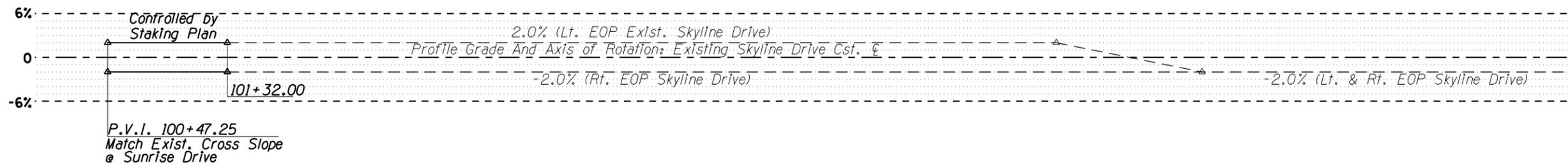
No.	Revision Description	Engineer	Date

STAGE 1
(15 %)
NOT FOR
CONSTRUCTION
JULY 2019

TRANSPORTATION
AECOM
AECOM TECHNICAL SERVICES, Inc.
333 E. WETMORE RD, STE 400
T 520.887.1800 F 520.887.9438
www.aecom.com

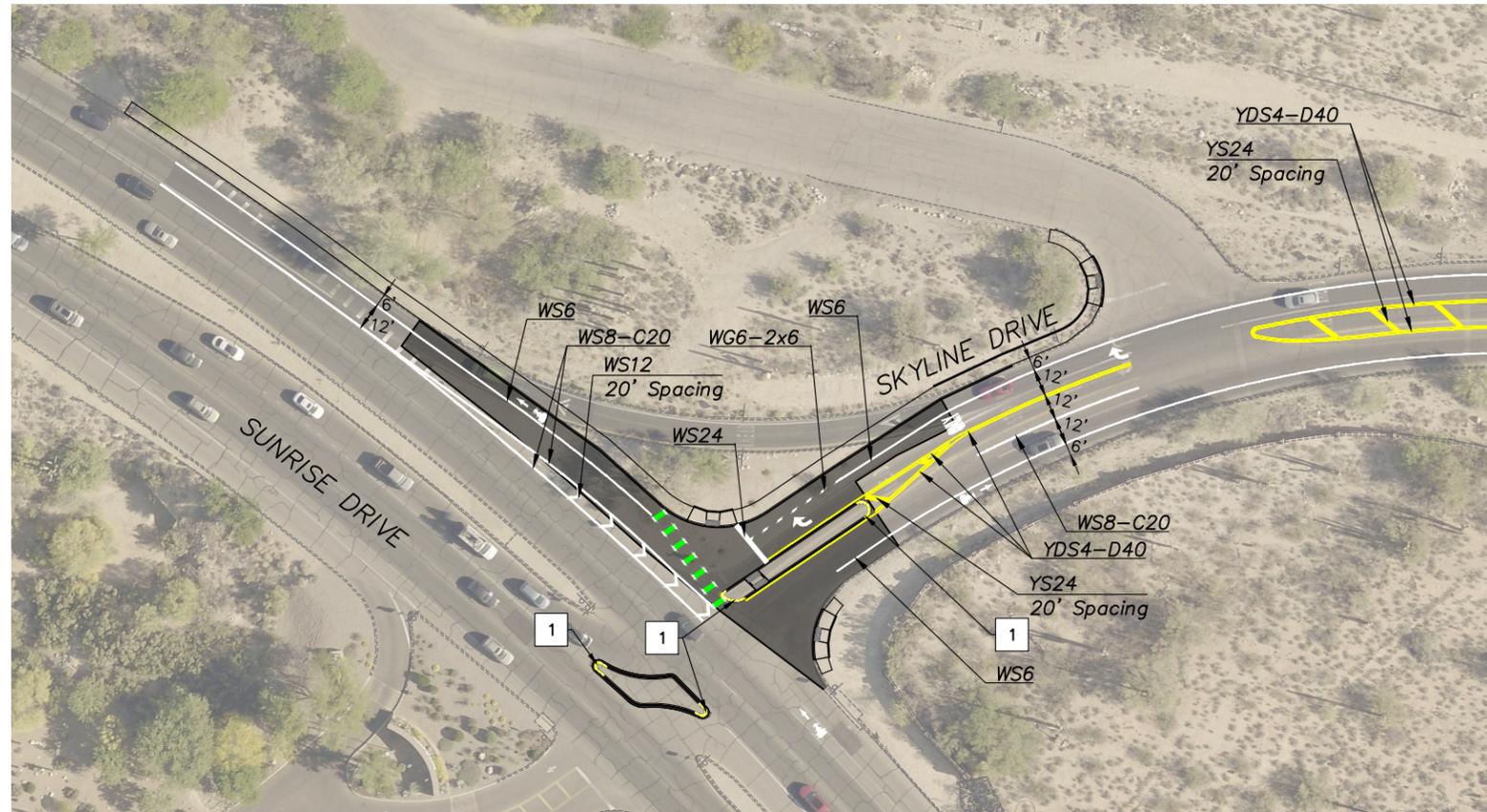


Pima County Department of Transportation
SKYLINE DR. AT SUNRISE DR.
INTERSECTION IMPROVEMENTS
PROJECT NO. 4SUNTE

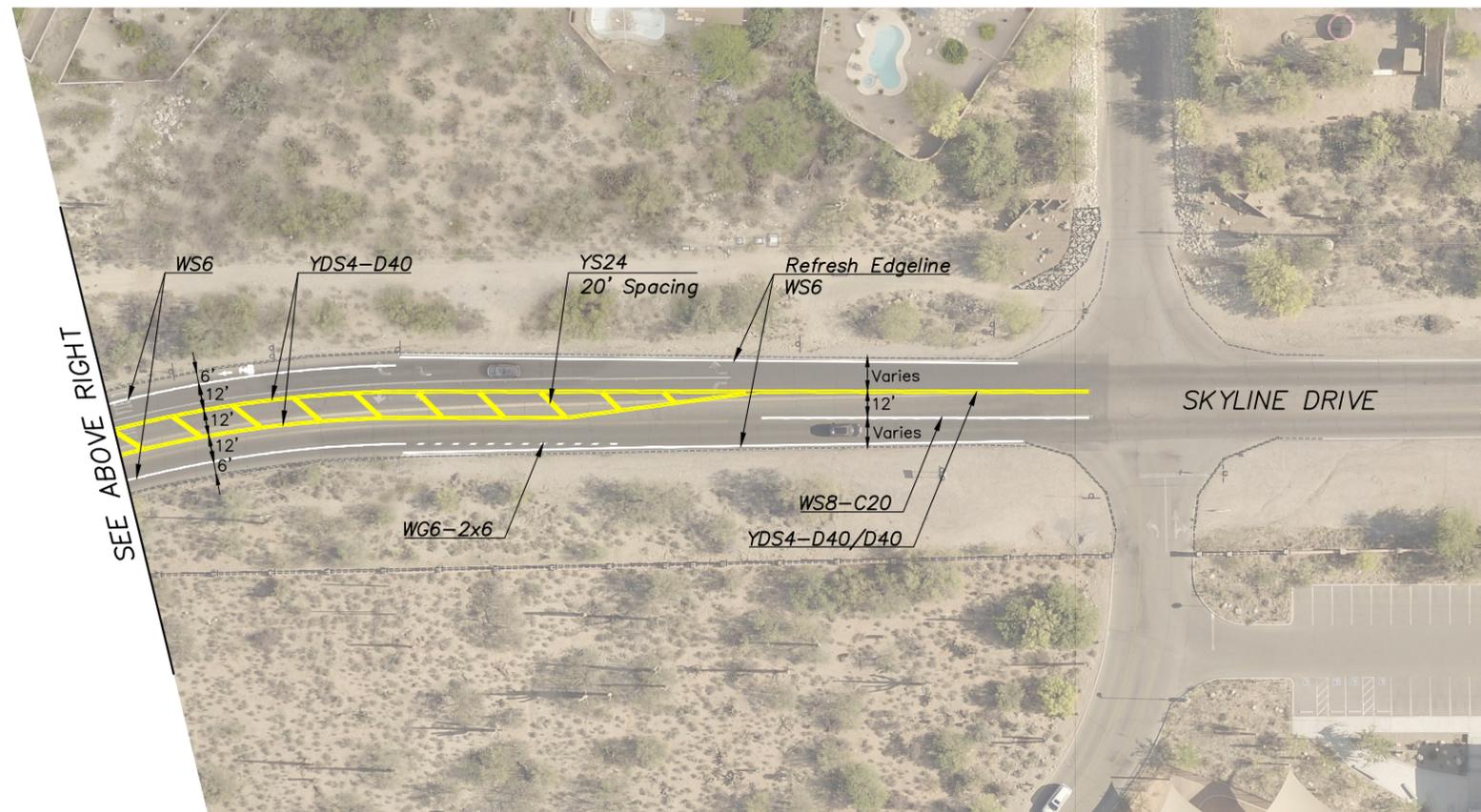


SKYLINE DRIVE PROFILE

SKYLINE DRIVE AT SUNRISE DRIVE INTERSECTION IMPROVEMENTS - PROJECT NO. 4SUNTE



SEE BELOW LEFT



SEE ABOVE RIGHT

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORDED
9	ARIZ.	PPM-0(265)D	10	10	

T0204 01C

Construction Notes

- 1 Place Yellow Paint and Type D RPMs on Median End Per PCDOT Pavement Marking Std Dtl 5-13.

No.	Revision Description	Engineer	Date

Date	Checked	Drawn	Designed
8/19	FLG	LAW	LAW
8/19	FLG	LAW	LAW
8/19	FLG	LAW	LAW
8/19	FLG	LAW	LAW

STAGE II
(30 %)
NOT FOR
CONSTRUCTION
AUGUST 2019

KITTELSON & ASSOCIATES
2 E CONGRESS STREET, SUITE 706
TUCSON, AZ 85701
P 520.544.4067 F 520.544.9616



Pima County Department of Transportation
SKYLINE DR. AT SUNRISE DR.
INTERSECTION IMPROVEMENTS
PROJECT NO. 45UNTE

Ana M. Olivares, P.E. - Director

SKYLINE DRIVE AT SUNRISE DRIVE INTERSECTION IMPROVEMENTS - PROJECT NO. 45UNTE

APPENDIX C

PROJECT SCHEDULE

The project schedule calls for the project to be designed from May 2019 to May 2020. The project is tentatively scheduled to go to bid in the fourth quarter of Fiscal Year (FY) 2020, with construction anticipated to begin in the summer of 2020 with completion in winter of 2020. Pima County will perform bidding and construction administration through its CA Program.

The construction duration is estimated to be 80 working days.

