

**Project Assessment**  
**for**  
**Pima Pedestrian Pathway Transportation Enhancement**

North side of Pima Street from Columbus Boulevard to Alvernon Way

**Project No. TEA-TUC 0(237)A**  
**TRACS No. 0000 PM TUC SL678 01C**  
**TIP ID #15.09**



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Submitted to  
Arizona Department of Transportation

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## 1.0 Introduction

Project Number: TEA-TUC 0(237)A  
TRACS Number: 0000 PM TUC SL678 01C  
TIP ID #: 15.09  
Project Name: Pima Pedestrian Pathway Enhancement Project  
Route Number: Pima Street: Columbus Boulevard to Alvernon Way  
ADOT District: Tucson  
ADOT Contact: Natalie Clark  
Local Contact: Jennifer Donofrio, phone 520.837.6721  
[Jennifer.Donofrio@tucsonaz.gov](mailto:Jennifer.Donofrio@tucsonaz.gov)

This project is located within the City of Tucson, Pima County, Tucson District. This 0.5-mile segment of Pima Street runs on an east-west bearing along the half-section line of Section 3, Township 14S, Range 14E, Gila and Salt River Meridian.

This project assessment document has been prepared to present pertinent information related to the Pima Pedestrian Pathway Enhancement Project, located in the City of Tucson, Pima County, Arizona. The project will provide improved pedestrian and bicycle amenities, landscaping, and scenic beautification within the existing right-of-way along a half-mile segment on the north side of Pima Street between Columbus Boulevard and Alvernon Way. Pima Street is classified as an urban collector roadway. Improvements include a pedestrian path along the north side of the road, a landscaped median between the frontage road and Pima Street with vertical curbs to protect the pedestrian pathway and provide separation from vehicles, a better delineated bike lane, landscaped nodes, enhanced ADA facilities, and improved transit stops.

The State Map and Project Location Map are shown on Pages 5 and 6, respectively. The 15% plan sheets are attached, beginning on Page 24.

This project is included in the 2011-2015 Pima Association of Governments (PAG) 5-Year Regional Transportation Improvement Program (TIP) as TIP #15.09. The project will be funded by Federal Transportation Enhancement (TE) funding and local City of Tucson match funds equivalent to 5.7% of the design and construction costs (17.8% of total project costs). The estimated costs of the project are as follows:

Estimated Total Cost	\$527,539
Estimated Federal Aid Funds	\$433,411
Estimated City Local Match Funds	\$94,128

The City of Tucson will bid and administer the construction of this project according to the City's certification acceptance procedures.

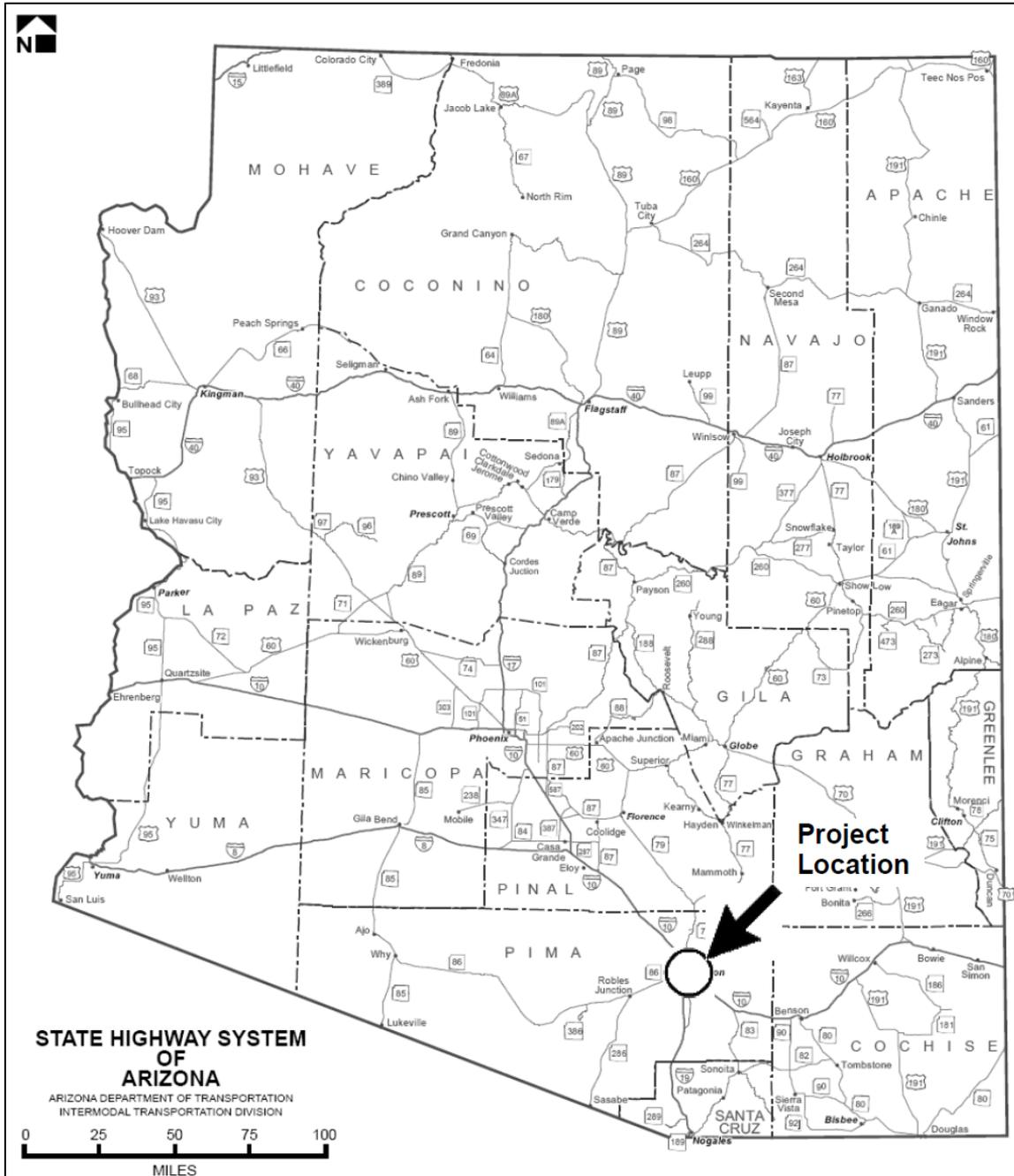


Figure 1. State Map

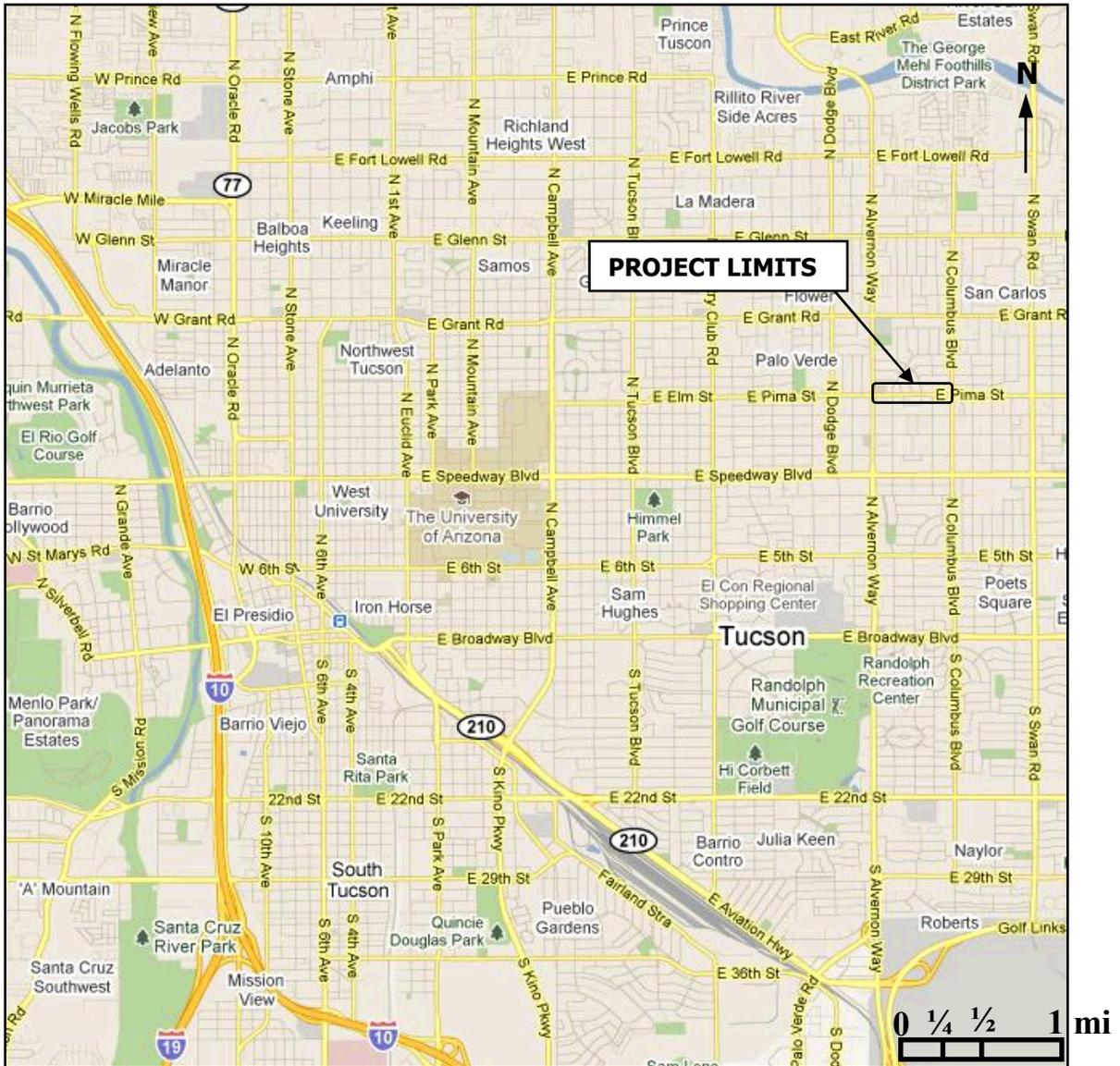


Figure 2. Location Map

This project was initiated by the Midtown Garden District Neighborhood utilizing a service award received from a local non-profit organization, which provided the resources needed to develop and evaluate alternatives, which formed the basis of the Transportation Enhancement Grant Application.

The City of Tucson received notification that the project was approved for funding under Arizona TEA-21 Transportation Enhancement Round 16 in 2008. The estimated project schedule shows that the project will be bid in February 2014, with construction to begin in April 2014, and the project to be completed by August 2014. A detailed estimated project schedule is provided on Page 20.

## **2.0 Background Data**

### **2.1 Summary of Need/Justification**

Pima Street from Alvernon Way to Columbus Boulevard is currently a three-lane (one through lane per direction and a two-way left turn lane) urban collector roadway with striped bike lanes. Along most of the length of the project there are wide paved areas on both sides of Pima Street, as shown in Figure 3. Those areas, which are separated from the traveled way only by a stripe, act as two-way frontage roads, provide room for on-street parking, and serve pedestrians and bicycles. There are four bus stops along the corridor (two on each side of the road), including three that each have a bench and a trash can, and one that has no facilities. The project is approximately 0.5 miles in length, and the travel lanes vary from 11-14 feet in width.



***Figure 3. Pima Street at Justin Lane looking East***

Users of the Pima Street corridor include drivers, pedestrians, and cyclists, despite the fact that there are no sidewalks or multi-use paths in the project area. In addition, Wright Elementary School, St. Cyril K-8 School, and Catalina Magnet High School are all located within ½ mile of the project limits and a significant

number of students walk or bike along Pima Street to and from school. In addition, many of the residents in the area do not have vehicles. While a majority of the corridor is fronted by residences, there are commercial properties at the west end of the project, near Alvernon Way.

A major concern along the Pima Street corridor is the lack of separation between vehicles, bicycles, and pedestrians. The paved width of Pima Street covers the travel lanes, bike lanes and frontage roads without any physical separation other than a painted stripe. In addition, there is no separation of modes within the frontage road itself. The lack of separation can be dangerous, particularly for young school children who walk to and from school without adult supervision. In addition, illegal passing on the right using the frontage road is dangerous for cyclists that use the striped bike lane along the edge of the roadway. Pedestrian accessibility along the roadway is not ADA compliant, and there are no landscape or streetscape enhancements in the area to encourage non-motorized travel modes.

This TE project is aimed at providing users a continuous pedestrian pathway along Pima Street which will improve pedestrian connectivity, accessibility, and safety in the project area. In addition, this project will be ADA compliant, and will provide improved connectivity from the neighborhood to transit services, including recently constructed bus pullouts and shelters at the corner of Alvernon Way and Pima Street. Bicycle travel is expected to be improved through the rebuilding, restriping, and better delineation the outer edge of the bike lanes.

The proposed design calls for the pedestrian path to be constructed on the north side of the street. From Justin Lane to Columbus Boulevard, and from Village Drive to Louis Lane a new raised median will be constructed between the roadway and the frontage road. The median will include a 5-foot sidewalk and a 5-foot landscaped area between Pima Street and the sidewalk. The remaining frontage road pavement, approximately 24 feet wide, will be designated as a one-way (westbound) frontage road with on-street parking allowed through the segment to serve the residences that front Pima Street.

From Louis Lane to Justin Lane, the existing frontage road will be discontinued because there are no residences fronting on Pima Street, and because parking and access are available from the side streets. This will facilitate the addition of an 8-foot sidewalk/path behind a 20-foot landscaped area. In the vicinity of Alvernon Way, a sidewalk will be provided to connect to the crosswalks at the intersection and to the recently constructed bus pullouts and shelters.

It is expected that the landscaping will consist of native vegetation, and water harvesting will be utilized wherever possible. Further, long-term irrigation needs will be considered and facilities implemented where feasible.

## 2.2 Project Development Summary

This project was initiated by the Midtown Garden District Neighborhood. In March 2007, a questionnaire seeking input on priorities for improvements was mailed to all 3400 households in the one square mile Midtown Garden District. Top priorities included safe passage for pedestrians, especially on Pima Street.

The neighborhood formed a committee to improve pedestrian and bike safety. In 2007, a local nonprofit awarded the neighborhood a PRO Neighborhoods Planning Award which enabled Midtown to work for a year with a professional team to develop enhancement alternatives. The committee sought input and reported monthly at neighborhood meetings and in a newsletter developed for the project. Additional input and support came from the Ward VI Council Office, Cooper Library, Tucson Botanical Gardens, Wright School, Pima County, and the City of Tucson Department of Transportation. The University of Arizona Urban Planning School assisted by developing *The Midtown Garden District Strategic Neighborhood Plan*.

## 2.3 Original and Subsequent Construction Projects

This project was included under the Pima Association of Governments Regional Transportation Improvement Program as TIP #15.09. The TIP includes other similar projects that are shown in Table 1 below.

*Table 1. Related TIP Projects*

TIP ID #	Project Name	Project Description	Status
37.05	Cambio Grande Street Revitalization	Provide and upgrade pedestrian amenities and streetscaping.	Under Construction
32.06	Campbell Avenue Revitalization	Provide streetscaping, bus and pedestrian amenities.	75% Design Plans
103.08	Five Points Transportation Enhancement Project	Fill in gaps in pedestrian network. New sidewalks and lighting.	Environmental process underway, 30% design plans
105.08	Columbus Corridor Pedestrian Path	Construct 6-foot wide pedestrian path on one side.	Environmental process underway, 30% design plans
83.07	El Paso & Southwestern Greenway	Construct new bike path.	Environmental process underway, 30% design plans

## 2.4 Project Area

This project is located on East Pima Street from Columbus Boulevard to Alvernon Way, in the City of Tucson, Pima County, Arizona. The project corridor is located approximately 3.5 miles from the University of Arizona. In addition, Wright Elementary School, St. Cyril K-8 School, and Catalina High School are within ½ mile of the project limits, and many students walk to and from those schools along the Pima Street corridor. The project segment of Pima Street runs on an east-west bearing along the half-section line of Section 3, Township 14S, Range 14E, Gila and Salt River Meridian. The project is approximately 0.5 miles in length.



Figure 4. Project Area

## 2.5 Project Corridor Description

Pima Street from Alvernon Way to Columbus Boulevard is a three-lane urban collector with a posted speed limit of 35 miles per hour. Vehicle lane widths vary from 11-14 feet. There are striped multi-use lanes serving bicycles and disabled vehicles along both sides of the roadway through the segment varying in width from 4-6 feet.

Through the corridor, the south side of the roadway is largely uncurbed, with the exception of a couple short segments at the west end, near Alvernon Way. Roadside treatments vary along the north side of the roadway. Some sections exist with vertical curb, and others with a raised buffer strip. However, most of the length on the north side (Louis Lane to Columbus Boulevard) has a wide paved area that serves as a frontage road for residences along the roadway. The paved area is separated from the travel lanes by striping only. There are no sidewalks or street lighting along the roadway.

Traffic signals in the project area exist at Alvernon Way and Columbus Boulevard. All of the sidestreets along Pima Street are stop controlled approaching Pima Street.

Residences line the corridor, including housing for students, low-income residents, and a significant refugee population. Access to residences is generally uncontrolled. The west end of the project is mostly commercial, including delineated driveways on both sides of the roadway. The wide paved area along the north side of the roadway serves as a two-way frontage road, providing direct access to some residences and allowing for on-street parking. Pedestrians and bicycles also used the paved area to travel along the corridor. Currently, there is no separation between uses.

This collector roadway provides access to Alvernon Way and Columbus Boulevard, which provide many services for residents. Further, Wright Elementary School, St. Cyril K-8 School, and Catalina High School are all located in the project vicinity. The corridor is relatively flat, and follows a straight east-west alignment. The existing Pima Street right-of-way within the project corridor is 105 feet for most of the length, widening to 110 feet near Columbus Boulevard (per City of Tucson plan #I-79-007). The project will be completed entirely within the existing right-of-way, owned by the City of Tucson, with no additional right-of-way needed to accomplish the project. There is a need for temporary construction easements (TCEs) at three driveways that will be improved to the right-of-way line. The TCEs are shown on the plans.

The area is served by Suntran Route 5, which runs between 5:45 AM and 7:30 PM, with headways ranging from 15 minutes during peak periods to 1 hour during off-peak times. There are four bus stops currently located along Pima Street within the project limits. There are two located on the south side of the roadway (one just east of Alvernon Way and one just east of Desmond Lane) and two located on the north side of the roadway (just west of Desmond Lane and just west of Columbus Boulevard). Three of the four include benches and trash cans. The fourth does not have any facilities. Bus pads and shelters are not provided at any of the bus stops, nor are bus pads to provide wheelchair accessibility. A recent project by the Regional Transportation Authority provided bus pullouts, shelters, and benches on Alvernon Road at Pima Street, to serve Suntran Route 9.

There are two existing catch basins on the north side of the roadway near Alvernon Way. This project will not impact those structures (they will remain in place), and will not negatively impact the surrounding watershed.

### **3.0 Project Scope**

#### **3.1 Description**

The scope of the Pima Pedestrian Pathway Enhancement Project includes:

- Adding ADA-compliant sidewalk or asphalt path on the north side of the road. The sidewalk will connect to existing sidewalks to the west, north and south and will provide continuous sidewalk access to Catalina Magnet High School and Wright Elementary School.

- Converting the existing frontage road to one-way operation on the north side of the road with on-street parking (where parking is necessary) to serve local traffic. This is necessary to provide the sidewalk because there is not enough room to provide two-way roadway circulation and a sidewalk. The frontage road will continue to use the existing asphalt, and no improvements will be made other than one-way signage.
- Constructing vertical curb to separate Pima Street from the pedestrian area.
- Building ADA-compliant access ramps.
- Landscaping areas adjacent to the pedestrian pathway.
- Narrowing the vehicular lanes to 10-11 feet to allow widening of the bike lane on the north side of the road to 6 feet.
- Providing concrete pads for future bus shelters (to be funded by the City of Tucson), and construction of a bus pullout (refuge area) west of Desmond Lane.



***Figure 5. Pima Street Before (top) and After Project (bottom)***

Federal funds in the amount of \$433,411 are requested for design and construction of this project. The local match equating to approximately 17.8% of the total project cost (5.7% of design and construction cost) will be provided by City of Tucson in the amount of \$94,128. After project completion, the source of funds for maintenance and operation for the entire design life of the project will be through the City of Tucson's operating budget.

Refer to Pages 5 and 6 for the State Map and Project Location Maps, respectively.

Impacts to traffic are expected to be minimal for this project, as most work will be focused on the roadside. Traffic control will be in accordance with the most current *Manual on Uniform Traffic Control Devices (MUTCD)*, published by the Federal Highway Administration. Existing traffic signals at Alvernon Way and Columbus Boulevard will remain operational during construction. Temporary traffic control will likely be implemented during construction, possibly including partial lane closures and on-street parking restrictions. One travel lane in each direction will remain open at all times during construction and temporary bus stops may be used during construction to mitigate the impact to bus stops.

Any landscaping installed with the project will be consistent with the character of the area and preserve the views of the potentially historic adjacent neighborhood. Shrubs, cacti, and succulents will be used to minimize the need for irrigation. The contract will include a two-year establishment period with the contractor to ensure plant survivability. Curb cuts will be used to provide supplemental water through water harvesting and to mitigate drainage issues. Residents in the area will be able to add additional plants in the future if desired.

### **3.2 Proposed Cross-Section**

The project will be designed to fit within the existing ROW constraints and pavement width along the corridor, and will provide safe and efficient access to residences in the area; thus, different cross-sections are expected. Cross-section design elements held constant along the entire length of the project include one travel lane in each direction ranging from 10 to 11 feet in width, a 10-foot two-way left turn lane, and a 6-foot bike lane on the north side of the roadway. The project originally included 11-foot travel lanes, but the residents/public requested wider bike lanes. The use of 10-foot lanes for a portion of the project was approved by the City of Tucson because Pima Street is a collector roadway with limited truck traffic and the City has numerous 10-foot travel lanes that operate effectively.

Most of the corridor will include a 5-foot sidewalk behind a landscaped buffer, but between Louis Lane and Justin Lane, the sidewalk will widen to 8 feet, also behind a landscaped buffer. Through the entire project area, there will be vertical curb along the north side of the roadway to separate vehicular traffic from pedestrians and the frontage road.

From the commercial area west of Village Drive to Louis Lane, the existing frontage road will remain in place. There is existing vertical curb in that area, the northern edge of which will remain in place, maintaining access to the frontage road. Sidewalk will be added in the area. From Justin Lane to Columbus Boulevard, the existing pavement that currently serves as a frontage road and parking area will be better delineated as such. New vertical curb will provide separation from Pima Street, and will maintain approximately 23 feet for a one-way (westbound) frontage road and on-street parking. No new pavement will be added in the project area.

Typical cross-sections have been developed for specific segments of the project corridor, depending on the constraints. These cross-sections are provided in the 15% plans starting on Page 24.

### **3.3 Striping and Pavement Markings**

The project includes restriping of the existing pavement to narrow the vehicular travel lanes and two-way left turn lane and to widen the bike lane. Roadway striping will remain consistent with the existing striping. Pavement markings will be added at the proposed enhanced pedestrian crossings where the pedestrian path crosses side streets along the north side of Pima Street. All striping and pavement markings will be designed and constructed in accordance with the MUTCD and City of Tucson standards.

Existing striping in conflict with the proposed striping will be obliterated. In the 1992-93 fiscal year, the City of Tucson made the conversion from using lead based paint in traffic lines and crosswalks to water based paint. This conversion required the acquisition of a new striping truck which was designed for water based paint applications. Because of the different properties of lead based and water based paint, striping trucks must be specific to the type of paint being applied.

On average, the City restripes roadways, including crosswalks and lane stripes, yearly as they are subject to heavy wear due to traffic. In addition, street surfaces are subject to deterioration due to the elements and traffic use. It is standard practice to resurface the roadways every seven years.

In the 18 years since the City has used water based, nonleaded paints, the road surfaces have been overlaid twice. This process varies, but usually consists of chip seal with asphalt slurry overlay. If the road has been badly deteriorated, the road is milled (top asphalt and chip layer removed and new surface applied). Because of these roadway maintenance procedures, it is extremely unlikely that any leaded paint remains on the roadway surface.

Proposed preliminary striping is provided in the attached 15% plans starting on Page 24.

## **4.0 Project Development Considerations**

### **4.1 Environmental Overview**

Based on the project scope, the following environmental requirements have been evaluated as described.

#### **4.1.1 Species Investigation – Animals and Plants**

No known threatened or endangered species habitat exists in the project area. However, a species investigation will be conducted during the Environmental Clearance Process.

#### **4.1.2 Wetland and Riparian Areas**

There are no wetlands or riparian areas present within the project limits. Therefore, there will be no impacts to these areas.

#### **4.1.3 Floodplain Encroachment**

A review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (number 04019C2232 K, panel 2232) shows the project is not in a floodplain. Further, the scope of this project involves installation of ADA access ramps, pedestrian walkways, bus stop amenities, landscaping and water harvesting, and will not substantially modify the topography of the project area. Therefore, no drainage pattern changes are anticipated.

#### **4.1.4 Section 401/404**

There are no jurisdictional waters within the project limits. Therefore, no 404 permit and no 401 certification are required. Section 401/404 impacts will be documented during the environmental clearance process.

#### **4.1.5 Section 4(f) Impacts**

The presence of Section 4(f) resources within a ¼ mile radius of the project will be evaluated in the environmental clearance process. For this project, the adjacent historic neighborhoods (and potentially Pima Street) may be Section 4(f) properties because they may be eligible for the National Register of Historic Properties (NRHP) in the future.

#### **4.1.6 Hazardous Materials**

No known hazardous material sites exist along the project corridor. A Preliminary Initial Site Assessment (PISA) will be prepared during the environmental clearance process.

#### **4.1.7 Socioeconomic Impacts**

This project will enhance pedestrian access to residential and commercial properties along Pima Street, improve the experience of bicyclists by providing wider and better delineated bike lanes, and improve the experience of pedestrians by providing a continuous sidewalk or asphalt path. Additionally, the project will improve accessibility for users with disabilities by providing ADA curb access ramps along the pedestrian path and improved access to transit stops. The path and landscaping will enhance the visual character of the neighborhoods through which the project runs.

During construction, bus stops, residential access, and parking will be affected for brief periods. Temporary bus stops will be used, and coordination will take place

with individual property owners to ensure alternate parking is available. No detours will be required and no work will be performed during severe weather. When construction is complete, parking will no longer be allowed on the north side of Pima Street between Louis Lane and Justin Lane, but homes in that area do not front Pima Street and have access to parking along the side streets. On-street parking east of Justin Lane will be provided as part of the new frontage road, and parking in other areas will be preserved. .

Access to schools, parks and historic areas will be maintained, and the Special Provisions for this project will include this requirement. This project does not include any safety related construction such as concrete safety (jersey) barriers or guardrails. No intersection improvements are proposed. Additionally, no geometric improvements are proposed for the alignment of Pima Street. This project will not address any existing drainage or irrigation facilities. No permanent adverse socioeconomic impacts are anticipated as a result of this project

#### **4.1.8 Cultural Resources Investigation**

A cultural resources evaluation, including an architectural survey, will be conducted during the environmental clearance process to determine the presence of cultural resources in the project area. The Arizona Department of Transportation (ADOT) will provide consultation on behalf of the Federal Highway Administration (FHWA) pursuant to Section 106 of the National Historic Preservation Act of 1966. It should be noted that the adjacent historic neighborhoods may be eligible for listing on the National Register of Historic Properties, and Pima Street may be as well.

#### **4.1.9 Scenic or Historic Route**

This project is not located along a designated scenic or historic route.

#### **4.1.10 Public Outreach**

This project was developed during an extensive coordinated neighborhood planning process. Public support for this project has been documented through the preliminary stages of the project development.

A public meeting was held on November 16, 2010 during the Garden District Neighborhood Association meeting. The project concept was presented to approximately 20 attendees, with two potential alternatives. Alternative 1 included a frontage road throughout the entire project, even in the areas where residences do not front Pima Street. Alternative 2 replaced the frontage road west of Justin Lane (where no residences front on Pima street) with a landscaped buffer. A vast majority of the attendees preferred Alternative 2, which is reflected in the 15% plans. A total of 10 comment forms were received. Several of the attendees expressed a desire to incorporate water harvesting into the design. In addition, there was concern about the 5-foot wide proposed bike lanes. After evaluating the concern, the Tucson Department of Transportation agreed to provide 6 foot bike lanes and reduce the travel lanes in some areas to 10 feet because Pima Street is a collector with limited truck traffic, and because Tucson

has successfully implemented 10-foot lanes extensively on similar collector roadways.

Additional public outreach will be conducted during the final design of the project and the environmental clearance process. All key stakeholders will continue to be involved in the project development and will be invited to comment on the final design of the project. Prior to construction, a public meeting will be held to discuss the construction process. Upon completion, the neighborhood and ADOT will be invited to the project dedication.

#### **4.1.11 AZPDES Stormwater Permit**

An Arizona Pollutant Discharge Elimination System permit and a Stormwater Pollution Prevention Plan will be required for this project.

#### **4.1.12 Environmental Document**

A Categorical Exclusion (CE) or Condensed Clearance Memo will be prepared by the City's consultant, reviewed by the City of Tucson and then submitted for review and approval by ADOT's Environmental Planning Group. All relevant analyses and investigations will be subject to the FHWA/ADOT environmental approval process. The environmental document will include all areas of ground disturbance, including utility work and temporary construction easements.

### **4.2 Design, Construction and Contract Method**

Upon completion of the design, the City will competitively bid and award the project to the lowest responsive bid. The City will administer the project and has certification acceptance.

### **4.3 Geotechnical and Drainage Requirements**

This project will be installed within the City of Tucson right-of-way, and will include water harvesting methods to collect road runoff in some locations. Vertical curbs will convey the drainage to curb openings leading to the water harvesting areas. This will result on slightly reduced runoff from the project area. However, a drainage analysis will be required to size the curb openings and the water harvesting areas.

Based on the scope of work, only minimal ground disturbance will occur, and the existing pavement will be used. Therefore, no geotechnical studies are warranted.

### **4.4 Critical Outside Agency Involvement**

The areas immediately adjacent to the project limits will be affected by this project. Members of the public traveling through the area may experience minor delays associated with the construction of this project. The City will coordinate construction activities with the City of Tucson Police Department, City of Tucson Fire Department, City of Tucson Environmental Services (trash collection), and Sun Tran Transit Services to avoid any conflicts.

Access to residences and businesses located adjacent to the project will be temporarily impacted by this project, but access will be maintained during

construction. Property owners will be notified in advance of the construction activities.

#### **4.5 Right-of-Way Requirements**

No new right-of-way is needed for this project. There is a need for temporary construction easements (TCEs) at three driveways that will be improved to the right-of-way line. The TCEs are shown on the plans, and will be cleared during the environmental clearance process.

#### **4.6 Utility Relocation Requirements**

There are no bridges, box culverts or other structures within the Pima Pedestrian Pathway project limits. This project will not result in impacts to any major structures, underpasses or railroad crossings.

This project will not affect the grade of the roadway, so there will be no impact on underground utilities. The above-ground power poles along the south side of the roadway will not be affected because the project does not include any widening or geometric changes along the south side of Pima Street. Although this project will be designed to avoid any major utility conflicts, any utility clearances that may be needed will be obtained prior to construction.

#### **4.7 Seasonal Considerations**

No construction activities will take place during severe or inclement weather. Additionally, placement of concrete and bituminous compounds will be conducted in accordance with temperature requirements as specified in the Pima County/City of Tucson *Standard Specifications for Public Improvements, 2003 edition*.

A registered landscape architect will prepare the landscape design plans. Project specifications will include a landscape establishment period and will require supplemental water during that period. The landscape establishment element will allow plant installation at any season of the year.

#### **4.8 Traffic Requirements**

Impacts to traffic are expected to be minimal. If needed, traffic control will be in accordance with the most current *Manual on Uniform Traffic Control Devices for Streets and Highways*, published by the US Department of Transportation, Federal Highway Administration including any revisions or additions, and/or associated provisions in the project plans, as determined by the City of Tucson during the administration of the project.

#### **4.9 Design Criteria**

The project will be implemented in accordance with Pima County/City of Tucson Standard Specifications for Public Improvements, 2003 Edition, which is consistent with Arizona Department of Transportation standards. Additional design guidelines are listed below:

- Transportation Access Management Guidelines for the City of Tucson, Arizona, March 2003
- City of Tucson Water Harvesting Guidance Manual, October 2005
- A Policy on Geometric Design of Highways and Streets (Green Book), AASHTO, 2004
- Manual on Uniform Traffic Control Devices (MUTCD), FHWA, 2003 Edition
- Roadside Design Guide, AASHTO, 2002
- Pima County/City of Tucson Pavement Marking Design Manual, August 2008
- City of Tucson and Pima County Standard Details for Public Improvements, 2003
- Guide for the Development of Bicycle Facilities, AASHTO, 1999

#### **4.10 Design Exceptions**

This project will require a Categorical Exclusion in accordance with 23 CFR 771.117(c) and the Arizona Programmatic Categorical Exclusion.

No AASHTO design exceptions apply to this project.

#### **5.0 Other Requirements**

The federal funding source is the Transportation Enhancement Program. The local match funding source will be the Regional Transportation Authority (RTA). Following design by the City of Tucson's on-call design consultant, the estimated project schedule calls for the project to be competitively bid in February 2014, with construction to begin in April 2014. It is anticipated that the project construction will be completed by August 2014. The City of Tucson will perform project management and has certification acceptance.

#### **6.0 Estimated Cost**

The total project costs are estimated at \$527,539. Federal Transportation Enhancement funds in the amount of \$433,411 have been programmed through the 20011-2015 Transportation Improvement Plan. A local match of \$94,128 will be provided by the City of Tucson, equating to approximately 5.7% of the design and construction cost (17.8% of total project costs). A detailed project cost estimate is provided below in Table 2.

**Table 2. Itemized Project Cost Estimate (15%)**

Item	Unit	Quant	Unit price	Total amount	Federal TE Funds (94.3%)	Local Funds
Scoping Document	LS	1	\$ 24,930.00	\$ 24,930.00	\$ -	\$ 24,930.00
Environmental Determination	LS	1	\$ 40,000.00	\$ 40,000.00	\$ -	\$ 40,000.00
<b>Subtotal - Project Scoping Costs</b>				<b>\$ 64,930.00</b>	<b>\$ -</b>	<b>\$ 64,930.00</b>
Design - PS&Es - Plans, Special Provisions, Cost Estimates, Schedules	LS	1	\$ 70,000.00	\$ 70,000.00	\$ 66,010.00	\$ 3,990.00
Stormwater Pollution Prevention Plan	LS	1	\$ 4,000.00	\$ 4,000.00	\$ 3,772.00	\$ 228.00
<b>Subtotal - Project Design Costs</b>				<b>\$ 74,000.00</b>	<b>\$ 69,782.00</b>	<b>\$ 4,218.00</b>
Installation of SWPP Measures	LS	1	\$ 12,000.00	\$ 12,000.00	\$ 11,316.00	\$ 684.00
Clearing and Grubbing	LS	1	\$ 4,000.00	\$ 4,000.00	\$ 3,772.00	\$ 228.00
Sawcut	LF	3100	\$ 2.00	\$ 6,200.00	\$ 5,846.60	\$ 353.40
Remove Structures and Obstructions	LS	1	\$ 4,000.00	\$ 4,000.00	\$ 3,772.00	\$ 228.00
Remove Asphaltic Concrete Pavement	SY	4600	\$ 3.00	\$ 13,800.00	\$ 13,013.40	\$ 786.60
Vertical curb	LF	2017	\$ 20.00	\$ 40,340.00	\$ 38,040.62	\$ 2,299.38
Rolled curb	LF	727	\$ 22.00	\$ 15,994.00	\$ 15,082.34	\$ 911.66
Header	LF	203	\$ 20.00	\$ 4,060.00	\$ 3,828.58	\$ 231.42
Concrete Sidewalk	SF	11600	\$ 5.00	\$ 58,000.00	\$ 54,694.00	\$ 3,306.00
Curb Access Ramp, Longitudinal	Each	15	\$ 1,500.00	\$ 22,500.00	\$ 21,217.50	\$ 1,282.50
Concrete Driveway & Apron	SF	1749	\$ 8.00	\$ 13,992.00	\$ 13,194.46	\$ 797.54
Concrete Bus Bay	LS	1	\$ 15,000.00	\$ 15,000.00	\$ 14,145.00	\$ 855.00
Aggregate Base	CY	29	\$ 50.00	\$ 1,450.00	\$ 1,367.35	\$ 82.65
Asphaltic Concrete	Ton	38	\$ 100.00	\$ 3,800.00	\$ 3,583.40	\$ 216.60
Pavement Markings and Signs	LS	1	\$ 7,200.00	\$ 7,200.00	\$ 6,789.60	\$ 410.40
<b>Subtotal - Site Acquisition &amp; Hardscape Construction</b>				<b>\$ 222,336.00</b>	<b>\$ 209,662.85</b>	<b>\$ 12,673.15</b>
Trees (15 gallon size)	Each	65	\$ 110.00	\$ 7,150.00	\$ 6,742.45	\$ 407.55
Trees (5 gallon size)	Each	30	\$ 35.00	\$ 1,050.00	\$ 990.15	\$ 59.85
Shrubs (5 gallon size)	Each	600	\$ 35.00	\$ 21,000.00	\$ 19,803.00	\$ 1,197.00
Shrubs (1 gallon size)	Each	600	\$ 8.00	\$ 4,800.00	\$ 4,526.40	\$ 273.60
Mulch - decomposed granite	SY	2600	\$ 5.50	\$ 14,300.00	\$ 13,484.90	\$ 815.10
Landscape Establishment	LS	1	\$ 15,000.00	\$ 15,000.00	\$ 14,145.00	\$ 855.00
<b>Subtotal - Landscaping &amp; Irrigation Items</b>				<b>\$ 63,300.00</b>	<b>\$ 59,691.90</b>	<b>\$ 3,608.10</b>
Contractor Mobilization (8%)	LS	1	\$ 22,851.00	\$ 22,851.00	\$ 21,548.49	\$ 1,302.51
Traffic control (5%)	LS	1	\$ 14,282.00	\$ 14,282.00	\$ 13,467.93	\$ 814.07
Construction Survey & Layout (2%)	LS	1	\$ 5,713.00	\$ 5,713.00	\$ 5,387.36	\$ 325.64
Construction Contingencies (5%)	LS	1	\$ 14,282.00	\$ 14,282.00	\$ 13,467.93	\$ 814.07
Construction Administration (15%)	LS	1	\$ 42,845.00	\$ 42,845.00	\$ 40,402.84	\$ 2,442.17
<b>Subtotal - Mobilization &amp; Administration Costs</b>				<b>\$ 99,973.00</b>	<b>\$ 94,274.54</b>	<b>\$ 5,698.46</b>
<b>Total Design and Construction Costs</b>				<b>\$ 459,609.00</b>	<b>\$ 433,411.00</b>	<b>\$ 26,198.00</b>
ADOT Review Fees				\$ 3,000.00	\$ -	\$ 3,000.00
<b>Total Project Cost</b>				<b>\$ 527,539.00</b>	<b>\$ 433,411.00</b>	<b>\$ 94,128.00</b>

## **7.0 Project Schedule**

ID	Task Name	Duration	Start	Finish	2011				2012				2013				2014			
					Q3	Q4	Q1	Q2												
1	<b>Pima Pedestrian Pathway</b>	<b>1378 days</b>	<b>10/11/10</b>	<b>8/30/14</b>																
2	<b>Project Scoping/Pre-design</b>	<b>576 days</b>	<b>10/11/10</b>	<b>5/8/12</b>																
3	Project Scoping	105 days	10/11/10	1/23/11																
4	Draft PA & 15% Plans (Stage I)	60 days	1/24/11	3/24/11																
5	City Review - PA and 15% Plans (Stage I)	21 days	3/25/11	4/14/11																
6	ADOT Review - PA and 15% Plans (Stage I)	45 days	4/15/11	5/29/11																
7	Final PA & 15% Plans (Stage I)	45 days	5/30/11	7/13/11																
8	City Review - PA and 15% Plans (Stage I)	21 days	7/14/11	8/3/11																
9	ADOT Review - PA and 15% Plans (Stage I)	15 days	8/4/11	8/18/11																
10	Prepare Environmental Clearance Documents	120 days	7/14/11	11/10/11																
11	City Review - Environmental Clearance	30 days	11/11/11	12/10/11																
12	ADOT Review - Environmental Clearance	60 days	12/11/11	2/8/12																
13	Final Environmental Clearance	45 days	2/9/12	3/24/12																
14	City Review - Environmental Clearance	15 days	3/25/12	4/8/12																
15	ADOT Review - Environmental Clearance	30 days	4/9/12	5/8/12																
16	<b>Project Design</b>	<b>420 days</b>	<b>5/9/12</b>	<b>7/24/13</b>																
17	Request Design Funds	60 days	5/9/12	7/7/12																
18	Release of Design Funds	60 days	7/8/12	9/5/12																
19	Project Design	300 days	9/6/12	7/24/13																
20	Complete Construction Bid Documents	0 days	7/24/13	7/24/13																
21	<b>Funding Release</b>	<b>165 days</b>	<b>7/25/13</b>	<b>1/25/14</b>																
22	ROW and Utility Clearance	60 days	7/25/13	10/12/13																
23	Assemble Funding release Package	15 days	10/13/13	10/27/13																
24	ADOT Review	30 days	10/28/13	11/26/13																
25	Review and Authorization (ADOT/FHWA)	60 days	11/27/13	1/25/14																
26	<b>Project Construction</b>	<b>210 days</b>	<b>2/2/14</b>	<b>8/30/14</b>																
27	Bid Advertisement	60 days	2/2/14	4/2/14																
28	NTP	0 days	4/2/14	4/2/14																
29	Construction Completion	150 days	4/3/14	8/30/14																
30	Project Acceptance	0 days	8/30/14	8/30/14																

Task		Milestone		External Tasks	
Split		Summary		External Milestone	
Progress		Project Summary		Deadline	

## 8.0 Service Involvement Matrix

Project Number: TEA-TUC-0(237)A

TRACS Number: 0000 PM TUC SL678 01C

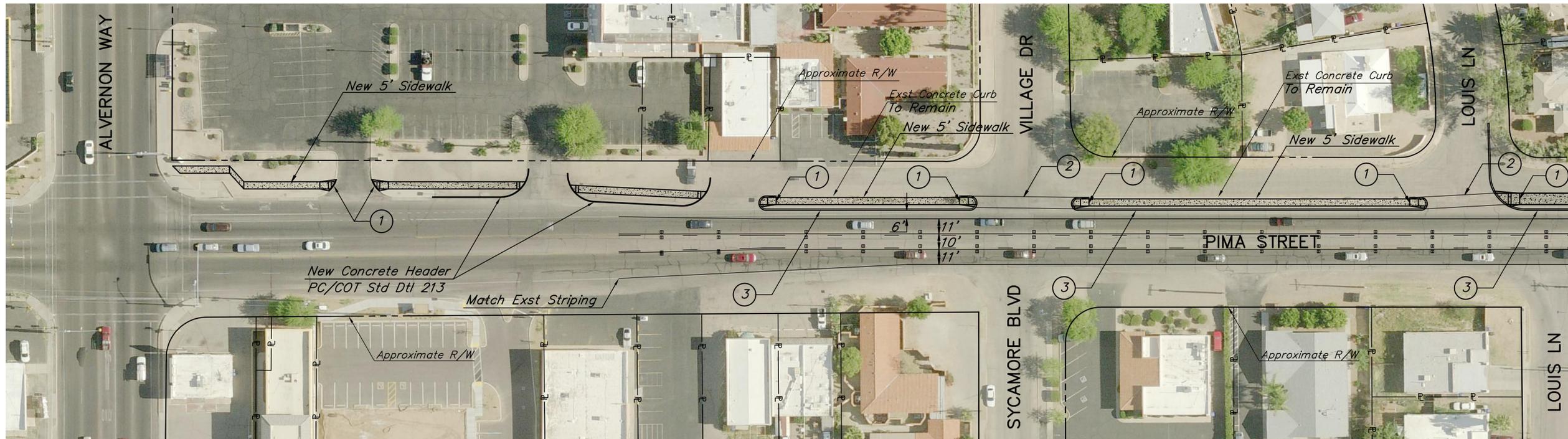
TIP ID #: 15.09

**Project Name: Pima Pedestrian Pathway Transportation Enhancement**

Project Locations: City of Tucson, Pima County, Arizona

CONTACTED	FIELD REVIEW	ORGANIZATION	INVOLVEMENT				COMMENTS (ISSUES THAT MAKE INVOLVEMENT SIGNIFICANT OR MINIMAL)
			SIGNIFICANT	MINIMUM	NONE	UNKNOWN	
		ADOT Technology Group (For IT)			X		
		ADOT Local Government Section			X		
		ADOT Tucson Maintenance District			X		
		ADOT Roadway Design			X		
		ADOT Pavement Design			X		
		ADOT Bridge Design			X		
		ADOT Drainage Design			X		
		ADOT Transportation Planning			X		
		ADOT Traffic Design			X		
		ADOT Photogrammetry & Mapping			X		
		ADOT Engineering Survey			X		
		ADOT Geotechnical Services			X		
X		ADOT Environmental Planning Group		X			Categorical Exclusion Document Review
X		ADOT Roadside Development		X			Review
		ADOT Right-of-Way Group			X		
		ADOT Utilities & Railroads			X		
		ADOT Contracts & Specifications		X			Review
		ADOT Procurement					
		FHWA		X			Funding Authorization
X		City of Tucson Department of Transportation	X				Project Management
		Pima Association of Governments		X			Administration of TIP
		City of Tucson Police Department		X			Project Coordination
X		City of Tucson Fire Department		X			Project Coordination
X		City of Tucson Environmental Services		X			Project Coordination
		Sun Tran Bus Service Provider		X			Project Coordination
		ParkWise Parking Service Provider		X			Project Coordination

## **9.0 15% Plans**

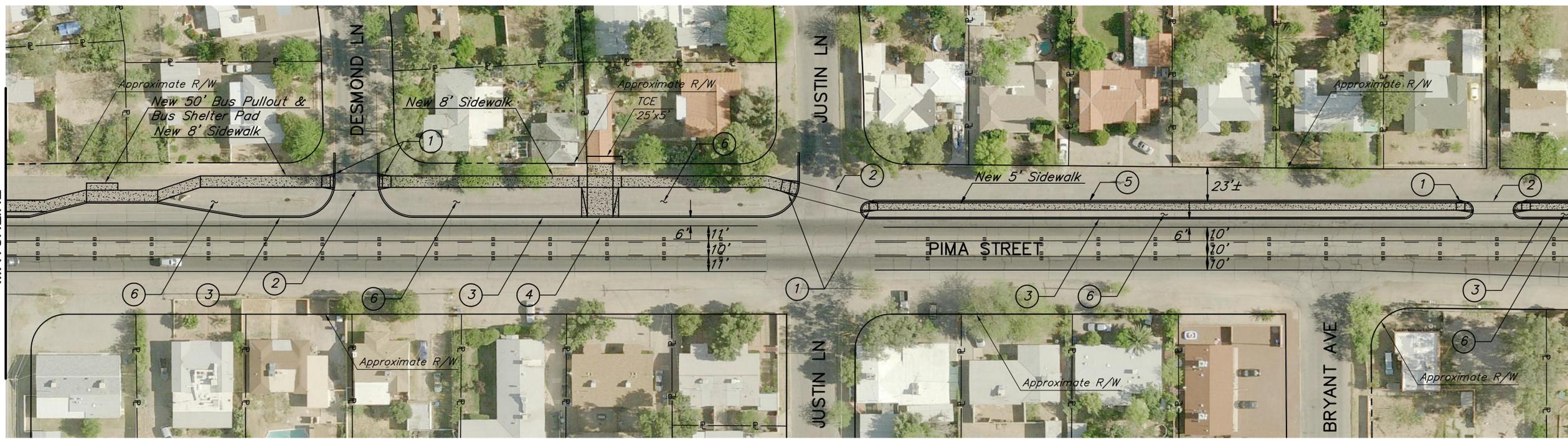


MATCHLINE  
SEE BELOW LEFT

- ① New Curb Access Ramp  
PC/COT Std Dtl 207
- ② New Pedestrian Crosswalk
- ③ New Concrete Curb  
PC/COT Std Dtl 207, h=6"
- ④ New Concrete Driveway  
PC/COT Std Dtl 206
- ⑤ New Roll Curb and Gutter (Type C)  
MAG Std Dtl 221
- ⑥ New Landscaped Area



SEE ABOVE RIGHT  
MATCHLINE



MATCHLINE  
SEE SHEET 02

Two working days before you dig,  
CALL FOR THE BLUE STAKES  
**1-800-STAKE-IT**  
Blue Stake Center  
CALL COLLECT

**15%  
PRELIMINARY  
NOT FOR  
CONSTRUCTION**

DEPARTMENT OF TRANSPORTATION/ENGINEERING DIVISION  
**PIMA STREET PEDESTRIAN PATHWAY**  
ALVERNON WAY TO COLUMBUS BLVD



DRWN. BY BG	1/11	REF.	SCALE: 1"=40'	01 OF 02
DSGN. BY BG	1/11		N/A	
CHKD. BY AA	1/11	PLAN NO.		

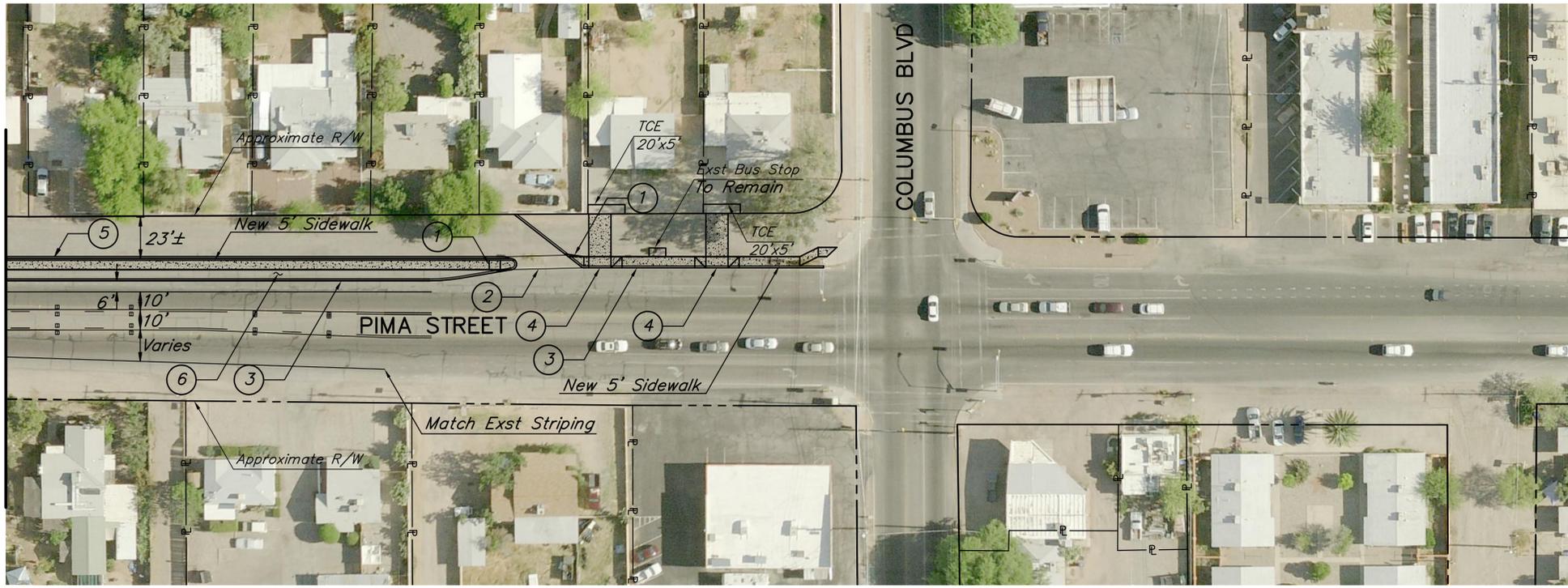
NO.	DATE	REVISION	BY	CHKD.	APPR.

**PSOMAS**  
800 E. Wetmore Road, Suite 110  
Tucson, AZ 85719  
(520) 292-2300 (520) 292-1290 fax  
www.psomas.com

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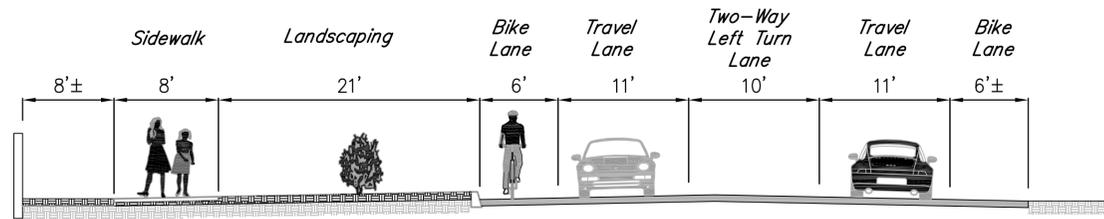


SEE SHEET 01  
MATCHLINE

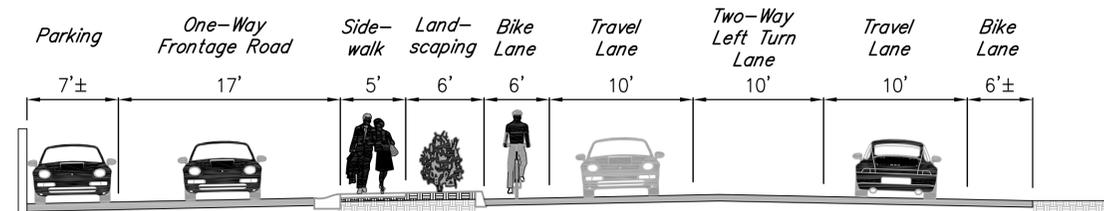


- ① New Curb Access Ramp  
PC/COT Std Dtl 207
- ③ New Concrete Curb  
PC/COT Std Dtl 207, h=6"
- ⑤ New Roll Curb and Gutter (Type C)  
MAG Std Dtl 221
- ② New Pedestrian Crosswalk
- ④ New Concrete Driveway  
PC/COT Std Dtl 206
- ⑥ New Landscaped Area

### TYPICAL SECTIONS



East Pima Street  
Louis Ln to Justin Ln



East Pima Street  
Justin Ln to Columbus Blvd

Two working days before you dig,  
CALL FOR THE BLUE STAKES  
**1-800-STAKE-IT**  
Blue Stake Center  
CALL COLLECT

<p><b>15% PRELIMINARY NOT FOR CONSTRUCTION</b></p>	<p>DEPARTMENT OF TRANSPORTATION/ENGINEERING DIVISION <b>PIMA STREET PEDESTRIAN PATHWAY</b> ALVERNON WAY TO COLUMBUS BLVD</p>			
		<p>DRWN. BY BG 1/11</p> <p>DSGN. BY BG 1/11</p> <p>CHKD. BY AA 1/11</p>	<p>REF. _____</p> <p>SCALE: 1"=40'</p> <p>N/A</p>	<p><b>02 OF 02</b></p>
	<p>PLAN NO. _____</p>			

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www.psomas.com

NO.	DATE	REVISION	BY	CHKD.	APPR.

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