



Transportation Alternatives / CMAQ Application for
FY 2021 and FY 2022 Projects

Western Canal: Central Avenue to 24th Street Shared Use Path

City of Phoenix

**APPLICATIONS ARE DUE AT MAG OFFICES BY
Monday, September 25, 2017 at 10:00 a.m.**

(LATE AND/OR INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED)

Phoenix: Western Canal: 24th Street to 48th Street

| PART A - CONTACT AND PROJECT DESCRIPTION | |
|--|---|
| Contact Information | |
| 1. Name of Sponsoring Agency | Phoenix |
| 2. Agency Contact Name | Eileen Yazzie |
| 3. Phone Number of Agency Contact | 602.534.5692 |
| 4. E-Mail Address of Agency Contact | eileen.yazzie@phoenix.gov |
| 5. Mailing Address of Agency Contact | 200 W. Washington, 5th Floor Phoenix, AZ 85003 |
| Project Description | |
| 6. Please provide the Project Title. | Western Canal: 24th Street to 48th Street |
| 7. Please provide a concise, specific description of the project (250 character limit): | |
| <p>The proposed multi-modal, shared use path on Western Canal between 24th Street and 48th Street will provide a safe off-street bicycle and pedestrian corridor that adds to the area's robust transportation network that includes connections to a park and ride, local and Rapid bus routes, the existing bicycle and sidewalk network, and future light rail and bus rapid transit,. The project will also include treatments at intersecting roads that will provide for safe crossings. The Western Canal is also part of a regional off-street shared use path system that runs through Tempe, Mesa and Gilbert.</p> | |
| 8. Please provide the project limits: | |
| <p style="text-align: center;">Western Canal: 24th Street to 48th Street</p> | |

Phoenix : Western Canal: 24th Street to 48th Street

PART B-DETAILED PROJECT DESCRIPTION

This part of the form identifies the current characteristics and proposed improvements for each project.

The purpose of Part B is to provide sufficient information to evaluate the cost estimate for the project and to provide assurance that the project will be capable of meeting the ADOT administered federal design review and clearance process. This process requires environmental, ROW and utilities clearances and a bid ready design prior to FHWA approval to encumber federal funding for construction.

NOTE: For Part B, Questions 14-20, the specified distance will vary (and update automatically) depending on the project type identified in Part B, Question 1. Pedestrian-only projects will use a distance of 1/4 mile, while bicycle and Shared-Use projects will use a distance of 1/2 mile.

1. Please select which funding source(s) this project is applying for. Check all that apply.

- Congestion Mitigation and Air Quality (CMAQ)
- Transportation Alternatives (TA)

2. What type of project is this? (Check all that apply)

- | | | | |
|-------------------------------------|---|--|--|
| <input type="checkbox"/> | Bicycle Lane (4' min. w/o curb/gutter) | <input type="checkbox"/> | Shoulder paving is within 4-miles of a PM-10 Monitor |
| <input type="checkbox"/> | Bicycle Lane (5' min. with curb/gutter) | <input checked="" type="checkbox"/> | Wide Sidewalk (8' min.) |
| <input type="checkbox"/> | Buffered Bike Lane | <input type="checkbox"/> | Detached Sidewalk with 4' min. buffer |
| <input type="checkbox"/> | Protected Bike Lane | <input checked="" type="checkbox"/> | Signalized Crossing |
| <input checked="" type="checkbox"/> | Shared-use path (10' min.) | Other: | |
| <input checked="" type="checkbox"/> | Sidewalk (5' min.) | The shared use path/sidewalk will be between 8 -10 feet wide, and provide up to 3 connecting sidewalks to neighborhoods. | |
| <input type="checkbox"/> | Planning Study | | |

3. What other major elements are included in this project? (Check all that apply)

- | | | |
|-------------------------------------|-----------------------------------|--|
| <input type="checkbox"/> | Bridge (overpass) | Other: |
| <input type="checkbox"/> | Tunnel (underpass) | The project includes 3 HAWK signals at: 32nd Street, 40th Street, 48th Street, and pathway lighting. |
| <input checked="" type="checkbox"/> | Signalized midblock crossing/HAWK | |
| <input checked="" type="checkbox"/> | Countdown Pedestrian Signal | |

4. What amenities are included in this project?

- | | | | |
|--------------------------|--|--------------------------|---|
| <input type="checkbox"/> | Number of Bike racks/lockers | <input type="checkbox"/> | Number of Seating/Rest Area(s) |
| <input type="checkbox"/> | Number of Drinking Fountains | <input type="checkbox"/> | Number of bicycle/pedestrian counting devices |
| 20 | Number of Way-finding Signs | <input type="checkbox"/> | Number of bicycle/pedestrian counting devices |
| <input type="checkbox"/> | Number of Trash receptacles | Other: | |
| 50 | Number of Trees | | |
| <input type="checkbox"/> | Number of new openings in street walls | | |
| <input type="checkbox"/> | Number of Shade Structures | | |

5. Please describe the existing condition of the project site and any problem(s) being addressed.

Western Canal between 24th Street and 48th Street has unimproved canal banks on both the north and south sides. The canal banks are compressed dirt. At all street intersections: 24th Street, 32nd Street, 40th Street, and 48th Street there are no signalized, signed, or marked crossings for east/west travel along the Western Canal. There is a bike/pedestrian bridge located near the 46th Street alignment that connects to Nevitt Park, which was funded with Federal funds.

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PART B-DETAILED PROJECT DESCRIPTION

6. Please describe the work being done and improvements being made as part of this project.

The project proposes an 8 to 10 foot concrete pathway on either the north or south side of the Western Canal. The project will include pedestrian lighting, minimal landscaping, and two connecting pathways to neighborhoods. Additionally, it will address ADA compliance issues at each intersecting street and related bridges. Three new HAWKS are proposed at 32nd Street, 40th Street, and 48th Street. The crossing improvement at 24th Street will be included in the other Western Canal project. Additional upgrades for ADA compliance are needed on the bridge structure at 48th Street.

7. What do you hope to achieve with this project?

Western Canal is identified as priority #33 in the City's adopted Bicycle Master Plan. The City is moving this project to a higher priority to be able to provide a comprehensive transportation network in the South Phoenix area. This project is proposed in conjunction's with the City's investment of the light rail on Central Avenue and bus rapid transit on Baseline Road. The project will provide a safe, off-street corridor, that connects to existing north/south pedestrian, transit, and bicycling options.

8. Safety improvements to be included for this project: (Check all that apply)

- Medians with pedestrian crossing islands
- Roadway Reconfiguration (Road Diet)
- Striping/re-striping to narrow vehicle lanes
- Color pavement or similar treatment
- Lighting
- Landscape buffer between sidewalk and roadway
- Rectangular Rapid Flash Beacon (RRFB)
- Driver Feedback Sign

Other

This project proposes the following intersection treatments: , 32nd Street - HAWK, 40th Street - HAWK, 48th Street - HAWK. Please know that the intersection of Western Canal and 24th Street will have a traffic signal installed as part of the other Western Canal Project.

9. Does this project include a road safety education component?

- Yes
- No

Please Explain:

10. How does this project or planning study address safety?

The project puts safety as a top priority proposing an off-street east west mult-modal corridor that provides safe crossings at the intersecting streets. It will accomplish this by including 3 HAWKs, and pathway lighting. The pathway will also provide connections to sidewalks and bicycle lanes to access transit, commercial centers, housing, parks and schools.

11. How does the project improve ADA facilities for persons with disabilities?

The pathway provides an immediate enhancement for all users by establishing a consistent shared-use pathway for all users. When connecting to the bridge structures and the instersecting streets, connecting sidewalks will be made ADA compliant and provide accessible push-buttons for all users.

Phoenix : Western Canal: 24th Street to 48th Street

PART B-DETAILED PROJECT DESCRIPTION

12. Describe how this project will improve access from nearby neighborhoods and/or adjacent uses:

The Western Canal abuts both numerous single family and multi-family residential developments, commercial developments, two golf courses, a park, an elementary school, and a community college. This pathway will provide connecting access from neighborhoods, some of which have existing pathways to the canal, and use existing north/south streets and bridges at Nevitt Park, and 36th Street to access both sides. This will also provide a safe, off-street option for people walking and biking that need to directly connect to existing transit routes on Baseline Road, 24th Street, 32nd Street, and 48th Street. The project will also be a supportive asset for the future light rail at Central Avenue and bus rapid transit on Baseline Road.

13. How does the project create a sense of place?

The project will transform the Western Canal from a dirt pathway to a low stress shared use pathway that the neighborhood can embrace as a unique feature in the South Mountain Community. The project includes improvements to several intersections and crosswalks in the vicinity of the Western Canal that are intended to make it easier and safer for cyclists and pedestrians to cross arterial streets.

14. Connectivity: (Check all that apply)

Project fills a gap in the system
Explain:

This project will provide a paved pathway for all users, currently, the banks of both sides of the Western Canal are dirt. At all street intersections: 24th Street, 32nd Street, 40th Street, and 48th Street, there are no signalized, signed, or marked crossings for east/west travel along the Western Canal.

Project connects to other local bikeways
List of connected bikeways:

This project will connect to streets that have existing bicycle lanes: 24th Street, 32nd Street, 40th Street, and Baseline Road.

Multi Jurisdictional Project (please include letter of support (See Part C)
List of Participating Jurisdictions:

Total length of bikeways directly connected by this project (in miles)

15. Number of transit stops this project will connect to. Do NOT count major transit facilities (park and rides, transit centers, etc.) in this question. List associated route(s) and their peak frequency, using Valley Metro as the source.

Within 1/2 mile

16. Number of transit routes serviced by the transit stops in question 15 that this project will connect to. List associated route(s) and their peak frequency, using Valley Metro as the source.

Within 1/2 mile
List routes and frequency:

Route 77 (Baseline) -30 minutes, Route 70 (24th Street) - 15 minutes, Route 30 (University) - 30 minutes , Route 48 - 30 minutes

17. Number of major transit facilities (park and rides, transit centers, etc.) served by this project:

Phoenix : Western Canal: 24th Street to 48th Street

PART B-DETAILED PROJECT DESCRIPTION

1

Within 1/2 mile

List:

24th Street Park and Ride

Phoenix : Western Canal: 24th Street to 48th Street

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18. Number of non-commercial activity centers (parks, libraries, senior centers, recreational centers, etc.) this project will benefit:

Within 1/2 mile

List:

South Mountain Community Library, Nevitt Park

19. Number of commercial and employment destinations (malls, retail centers, business parks, etc.) this project will benefit (for example, a mall is ONE destination; do NOT count every store in a mall as a separate destination):

Within 1/2 mile

List:

The Marketplace at South Mountain and the South Mountain Center

20. Number of K-8 public schools this project will benefit:

Within 1/2 mile

List:

Nevitt Elementary, South Valley Prep and Arts Schools, South Phoenix Prep. And Arts Academy, Awakening Seed School,

21. Number of other schools (charter schools, high schools, colleges, and universities) this project will benefit:

Within 1/2 mile

List:

South Mountain Community College

22. Number of activity centers for air quality cost effectiveness (i.e. bank, church, hospital, health care facility, light rail station, park-and-ride lot, office park, post office, public library, shopping area, grocery store, university or junior college):

Within 1/4 miles

List:

3 Shopping Area/Grocery Store complexes, 1 medical complex, Greater Bethel AME Church

1/4 miles to 1/2 miles

List:

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PART B-DETAILED PROJECT DESCRIPTION

23. What are the demographics of the area served:

[MAG Demographic Mapping](#)

People Per Square Mile

% Families in Poverty

Use the MPO/COG Demographic Mapping link above. Zoom in to your project area. On the right-hand side of the screen, under "Reporting," select "Custom Summary." Next, select "Corridor of Interest." Left-click to begin drawing. Draw a line through all census block groups adjacent to your project, left-clicking where needed to change the direction of the line. Double-click to finish drawing the line. The selected census block groups will become highlighted in blue. A pop-up box will appear with "Results for Selected Block Groups." Select the "Summary Report" tab, and use the data found there. You may export the results to Excel (click the printer icon at the top-right side of the pop-up window) for your records.

24. Please provide the following information on the facility on which the improvement will be located.

For a linear project, please enter the Facility Name, Starting Limit and Ending Limit:

For a point project (e.g. an intersection or crossing), please enter a Facility Name and a Crossing Feature:

Federal Functional Classification of the Facility:

[Link to MAG webpage for Federal Functional Classification Map](#)

Type of Facility the Improvement will be located on:

Length (in Miles)

Posted Speed Limit (MPH)

Number of Travel Lanes Before Project

Number of Travel Lanes After Project

Phoenix : Western Canal: 24th Street to 48th Street

PART B-DETAILED PROJECT DESCRIPTION

25. Please provide an estimated traffic volume (ADT) on the nearest parallel arterial.

ADT Estimate

Date Counted

Name of road the traffic count was taken from

Description of Methodology and Source used for the ADT Estimate

Existing daily traffic volumes were obtained from the counts collected in 2008 by the City of Phoenix. City traffic volume counts using pneumatic tubes and 24-hour weekday averages.

26. Federal law requires that all federally funded projects comply with a federal environmental clearance. For projects that have a minimum ground disturbance, environmental surveys are required and an environmental document will need to be prepared, which typically requires 12 months to complete.

Describe any known cultural, historical and biological resources, hazardous materials or other environmental issues that could affect work on the segment.

The canals in the metro Phoenix area usually have a cultural, biological, and historical component with them. The City of Phoenix just successfully completed the environmental process and received authorization for another federal funded canal project. Knowing that the City is actively working with Bureau of Land Management and Salt River Project (SRP) and the environmental assessment process for canal projects, the City is confident in it's ability to complete the NEPA process for this project in a timely fashion.

27. Current ROW: (Check all that apply)

- Agency owns all ROW Needed
- ROW to be acquired
- Owners will donate ROW

- Agency owns easement
- Agency has right-of-use (i.e. canal)
- Condemnation may be required

28. Please describe any right of way issues associated with the project.

The Bureau of Land Management (BLM) is the ultimate land owner of the Western Canal and its banks. Salt River Project (SRP) is the long term operator. The City of Phoenix will work with both agencies to obtain necessary rights-of-way easements and permits, and construct the project that meets the guidelines of both SRP and the City. Knowing that the City is actively working with SRP and BLM for different canal projects, the City is confident in completing the right of way process for this project in a timely fashion.

29. Please indicate whether all parcels for this project have been inventoried.

Yes

No

Phoenix : Western Canal: 24th Street to 48th Street

PART B-DETAILED PROJECT DESCRIPTION

30. Current Utilities in or abutting the alignment: (Check all that apply)

| | | | |
|-------------------------------------|---|--------------------------|--------------------|
| <input type="checkbox"/> | No Utility in or abutting the alignment | <input type="checkbox"/> | Private Structures |
| <input checked="" type="checkbox"/> | Canals & Drainage | | |
| <input checked="" type="checkbox"/> | Power Lines & Cables | Other: | |
| <input type="checkbox"/> | Pipelines, Sewer and Water | <input type="text"/> | |

31. Please describe any utility conflicts that will need to be addressed.

The Western Canal has both water and power utilities in the corridor, and a few drainage ways that connect to the canal. The power/overhead utility lines meander from the north to south bank throughout the project. Working closely with SRP on the Grand Canal project, the City of Phoenix is well versed in location of the pathway, utility conflict review, needed access for utility work, guidelines for placement of vertical structures, and acceptable landscaping. The City is prepared to work closely with SRP and the neighborhood to find the right path forward.

32. Guidelines used to develop project: (Check all that apply)

| | | |
|-------------------------------------|---|--|
| <input checked="" type="checkbox"/> | AASHTO Guide for Bicycle Facilities | Other: <input type="text" value="Phoenix Bicycle Master Plan"/> <input type="text" value="Phoenix Complete Street Ordinance"/> |
| <input checked="" type="checkbox"/> | MAG Pedestrian Policies and Design Guidelines | |
| <input type="checkbox"/> | MAG Complete Streets Guide | |
| <input checked="" type="checkbox"/> | MAG Designing Transit Accessible Communities | |
| <input type="checkbox"/> | MAG Valley Path Brand & Wayfinding Signage Guidelines | |
| <input checked="" type="checkbox"/> | NACTO Urban Bikeway Design Guide | |
| <input type="checkbox"/> | RPTA Bus Stop Program and Standards | |

33. Jurisdiction has the following policies for improved bicycle/shared use facilities:

| | |
|--|--|
| With new development and capital improvement projects, bike lanes on arterial streets are: | <input type="text" value="Not Addressed"/> |
| With new development and capital improvement projects, bike lanes on collector streets are: | <input type="text" value="Not Addressed"/> |
| With pavement restoration or regular pavement maintenance on arterial streets, bike lanes are: | <input type="text" value="Recommended"/> |
| With new development or during development retrofits, shared-use paths are: | <input type="text" value="Recommended"/> |
| Bicycle program implemented, including bike education, safety events, and bike maps | <input type="text" value="Yes"/> |
| Complete Streets Policy | <input type="text" value="Yes"/> |

34. The project is: (Check one)

| | |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | Identified in General Plan, council adopted policy, or Capital Improvements Program (provide source) List: <input type="text" value="The Western Canal is identified in the adopted City of Phoenix Comprehensive Bicycle Master Plan"/> |
| <input checked="" type="checkbox"/> | Consistent with general policy/practices, but not formally identified (provide source) Explain: <input type="text" value="City of Phoenix General Plan"/> |
| <input type="checkbox"/> | Not addressed by jurisdiction's plans, policies, or practices |

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PART B-DETAILED PROJECT DESCRIPTION

Explain:

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35. How will the applicant measure the success of this project?

By evaluation of increased walking/biking activity and reviewing collisions records.

36. Will bicycle/pedestrian count technology be incorporated? Will the devices broadcast automatic updates or require manual data collection? If manual, how will the agency identify staff resources to dedicate to collecting the data?

Working with SRP during the design of this project, permanent detection can be part of the project.

37. Will the project include an education/marketing component upon completion of construction, to publicize the project and increase citizen awareness of the project impact and benefits? If yes, please describe below.

The project area will be included in the Phoenix Bicycle and Pedestrian Safety Program and School Safety Program both administered in the Traffic Services Division of the Street Transportation Department. The Department will utilize it's Public Information Process and publize the project through it's media and neighborhood resources.

38. Will the project include wayfinding signage elements? If yes, please describe below.

Yes. Wayfinding signage will be implemented in certain areas along the corridor to show locations of major area activity centers and provide a unifying theme.

| Part C - Required Attachments |
|--|
| <p>Listed below are the required attachments for this project application. These attachments are intended to demonstrate the need of the project. They should clearly show the segment alignment and features that connect to other bicycle, pedestrian, and/or shared-use facilities, as well as washes, canals, railroad crossings, and other crossing features that may affect the project.</p> <p><u>PLEASE INCLUDE EACH ATTACHMENT AS A SEPARATE .JPEG OR .PDF FILE ON YOUR APPLICATION CD.</u></p> <p>Please insert ALL attachments at the end of your printed application, in the order they are listed below. See below for alternate submission requirements for GIS coverage files.</p> |
| Required Attachments: |
| <p>1) Please attach a map showing the general location of the proposed project in relation to the region, including a north arrow.</p> |
| <p>2) Please attach a map with streets labeled showing the detailed location(s) of the proposed project, including a north arrow.</p> |
| <p>3) Please attach up to four photos indicating existing conditions in the project area (two 4x6 photos per page).</p> |
| <p>4) Please attach a simple diagram of the current typical cross section of the segment, that shows the right of way limits, widths, sidewalks and shoulders (if any), and the lanes of travel.</p> |
| OPTIONAL Attachments: |
| <p>(OPTIONAL) Attach up to two photos showing what the completed project will look like, if available (these can be photoshop, renderings, etc.).</p> |
| <p>(OPTIONAL) Attach up to three (3) letters of support for the project.</p> |
| <p>(OPTIONAL) If the applicant will be providing a GIS coverage (shapefile or geodatabase), please see the tab labeled "GIS Transmittal Instructions"</p> |

PART D - TRANSPORTATION ALTERNATIVES COST ESTIMATE FORM

Please provide a detailed cost estimate for this project. The data entered in this cost estimate sheet will automatically transfer into the correct fields in Part E. Rows 1-9 will remain visible at the top of this page at all times.

Sponsoring Agency: _____ **Project Title:** _____ **Application Date:** _____

| Part | Item Description | Unit | Quan. | Unit Price | Total | Federally Eligible | Federal Funds (94.3%) | Local Funds (5.7%) | Note(s) | |
|--|--|---|------------------------------------|---------------------|---------------------|--------------------|-----------------------|---------------------|-------------|------------|
| A. Scoping (15% Preliminary Engineering Design) | 1. SITE TOPOGRAPHIC SURVEY | LS | 1 | | \$0.00 | No | \$0.00 | \$0.00 | | |
| | 2. PROJECT ASSESSMENT REPORT or DETAILED WORKPLAN | LS | 1 | \$50,000.00 | \$25,000.00 | No | \$0.00 | \$25,000.00 | | |
| | 3. ENVIRONMENTAL DETERMINATION (Infrastructure projects, including technical supporting documents) | LS | 1 | \$3,500.00 | \$3,500.00 | No | \$0.00 | \$3,500.00 | | |
| | 4. HAZMAT ASSESSMENT | LS | 1 | | \$0.00 | No | \$0.00 | \$0.00 | | |
| | Subtotal Scoping (Part A) | | | | \$28,500.00 | | \$0.00 | \$28,500.00 | | |
| B. Final Preliminary Engineering Design - Stages II, III, IV And PS&E | 1. Plans, Special Provisions or Bid Manual, Cost Estimate & Schedules. | LS | 1 | \$565,000.00 | \$565,000.00 | No | \$0.00 | \$565,000.00 | | |
| | 2. GEOTECHNICAL INVESTIGATION and Materials & Pavement Design Report | LS | 1 | | \$0.00 | No | \$0.00 | \$0.00 | | |
| | 3. DRAINAGE REPORT | LS | 1 | | \$0.00 | No | \$0.00 | \$0.00 | | |
| | 4. SWPPP | LS | 1 | | \$0.00 | No | \$0.00 | \$0.00 | | |
| | SRP Design Review Fee | | 1 | \$30,000.00 | \$30,000.00 | | | | | |
| | Design Admin Fee & Soft Costs for Materials and Utility | LS | 1 | \$456,520.00 | \$310,000.00 | No | | | | |
| | Procurement | | 1 | \$3,000.00 | \$3,000.00 | | | | | |
| | Environmental Clearance | | 1 | \$45,000.00 | \$45,000.00 | | | | | |
| Subtotal PE (Part B) | | | | \$953,000.00 | | \$0.00 | \$565,000.00 | | | |
| Subtotal Preliminary Engineering (Part A + Part B) | | | | | \$981,500.00 | | \$0.00 | \$593,500.00 | | |
| C. Right-of-Way Acquisition | 1. Right-of-Way Acquisition | LS | 1 | | \$0.00 | No | \$0.00 | \$0.00 | | |
| | Real Estate TCE Charge for Federal Aid projects | | 8 | \$10,800.00 | \$86,400.00 | | | | | |
| | Subtotal Right-of-Way Acquisition (Part C) | | | | \$86,400.00 | | \$0.00 | \$0.00 | | |
| D. Utility Relocation | 1. Utility Adjustment and Inspection | LS | 1 | \$225,000.00 | \$225,000.00 | No | \$0.00 | \$225,000.00 | | |
| | Subtotal Utility Relocation (Part D) | | | | \$225,000.00 | | \$0.00 | \$225,000.00 | | |
| E. Construction Or Implementation [For Non-Infrastructure Projects (No Ground Disturbing Activities), Address Only Part 4] | 1. Hardscape Construction | Installation Of SWPP Measures | | LS | 1 | | \$20,515.00 | Yes | \$19,345.65 | \$1,169.36 |
| | | Site Preparation | | LS | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 |
| | | Demolition | Sawcut | LF | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 |
| | | | Remove Structures and Obstructions | LS | 1 | | \$58,614.00 | Yes | \$55,273.00 | \$3,341.00 |
| | | | Remove Fencing | LF | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 |
| | | | Remove Structural Concrete | CY | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 |
| | | | Remove Asphaltic Concrete Pavement | CY | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 |
| | | | Remove Concrete Sidewalks, Slabs | CY | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 |
| | | Hazmat Abatement | | LS | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 |
| | | Retaining Wall - Reinforced Concrete Cantilevered | | SF | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 |
| | | Earthwork | General Excavation | CY | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 |
| | | | Drainage Excavation | CY | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 |
| | | | Structural Excavation | CY | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 |
| | | | Structural Backfill | CY | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 |
| | | | Borrow (In Place) | CY | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 |
| | | Curb & Gutter | | LF | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 |
| | | Aggregate Base | | CY | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 |
| | | Pathway Or Sidewalk Materials | Concrete | SF | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 |
| | | | Colored Concrete | SF | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 |
| | | | Stamped Color Concrete | SF | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 |
| Precast Concrete Pavers | SF | | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 | | |
| Asphaltic Concrete | Ton | | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 | | |
| Polymer or Resin Stabilized Surface | SF | | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 | | |
| Concrete Pavers | SF | | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 | | |
| Stamped Asphalt | | SF | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 | | |

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| | | | | | |
|---------------------------|--|-----------------------|--|--------------------------|--|
| Sponsoring Agency: | | Project Title: | | Application Date: | |
|---------------------------|--|-----------------------|--|--------------------------|--|

| Part | Item Description | Unit | Quan. | Unit Price | Total | Federally Eligible | Federal Funds (94.3%) | Local Funds (5.7%) | Note(s) |
|------|---|------|-------|------------|-------------|--------------------|-----------------------|--------------------|---------|
| | | | | | \$0.00 | Yes | \$0.00 | \$0.00 | |
| | | | | | \$0.00 | Yes | \$0.00 | \$0.00 | |
| | Crosswalk Enhancement | | | | \$0.00 | Yes | \$0.00 | \$0.00 | |
| | Pedestrian ADA Ramp | | | | \$0.00 | Yes | \$0.00 | \$0.00 | |
| | Culvert Extensions | | | | \$0.00 | Yes | \$0.00 | \$0.00 | |
| | Pedestrian Lighting Including Conduit And Trenching | | | | \$0.00 | Yes | \$0.00 | \$0.00 | |
| | Handrail | | | | \$0.00 | Yes | \$0.00 | \$0.00 | |
| | | | | | \$0.00 | Yes | \$0.00 | \$0.00 | |
| | Subtotal Hardscape Construction | | | | \$79,129.00 | | \$74,618.65 | \$4,510.35 | |

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|---------------------------|-----------------------|--------------------------|
| Sponsoring Agency: | Project Title: | Application Date: |
|---------------------------|-----------------------|--------------------------|

| Part | Item Description | Unit | Quan. | Unit Price | Total | Federally Eligible | Federal Funds (94.3%) | Local Funds (5.7%) | Note(s) | | |
|--|--|---|--------------------------------|------------|-------------|--------------------|-----------------------|--------------------|----------|-----|--|
| E. Construction Or Implementation [For Non-Infrastructure Projects (No Ground Disturbing Activities), Address Only Part 4] | 2. Landscaping & Irrigation Items | Requirements | Each | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 | | |
| | | Trees (15 Gallon Size) | Each | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 | | |
| | | Trees (5 Gallon Size) | Each | 350 | \$20.00 | \$7,000.00 | Yes | \$6,601.00 | \$399.00 | | |
| | | Shrubs (5 Gallon Size) | Each | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 | | |
| | | Shrubs (1 Gallon Size) | Each | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 | | |
| | | BOX TREE 24" | Each | 50 | \$250.00 | \$12,500.00 | Yes | | | | |
| | | Cactus (5 Gallon Size) | Each | 1 | | \$0.00 | Yes | \$0.00 | \$0.00 | | |
| | | Mulch | Decomposed Granite | CY | 1 | | \$0 | Yes | \$0 | \$0 | |
| | | | Organic | CY | 1 | | \$0 | Yes | \$0 | \$0 | |
| | | Topsoil | | CY | 1 | | \$0 | Yes | \$0 | \$0 | |
| | | Seeding | | Acre | 1 | | \$0 | Yes | \$0 | \$0 | |
| | | Turf Sod | | SY | 1 | | \$0 | Yes | \$0 | \$0 | |
| | | Boulders | | Each | 1 | | \$0 | Yes | \$0 | \$0 | |
| | | LANDSCAPING (INCL PLANTS, IRRIG, GRANITE, ETC. | | | 8,000 | \$ 5.00 | \$40,000 | Yes | | | |
| | | LANDSCAPE CONTROLLER AND REMOTE CONTROL | | | 8 | \$ 8,000.00 | \$64,000 | Yes | | | |
| | | Irrigation System | Drip | SF | 1 | | \$0 | Yes | \$0 | \$0 | |
| | | | Turf | SF | 1 | | \$0 | Yes | \$0 | \$0 | |
| | | Sleeving For Irrigation System | Directional Bore | LF | 1 | | \$0 | Yes | \$0 | \$0 | |
| | | | Cut and Patch | LF | 1 | | \$0 | Yes | \$0 | \$0 | |
| | | Landscape Header Curb | | LF | 1 | | \$0 | Yes | \$0 | \$0 | |
| | Landscape Establishment | | LS | 1 | | \$0 | Yes | \$0 | \$0 | | |
| | Subtotal Landscaping & Irrigation Items | | | | | \$123,500 | | \$6,601 | \$399 | | |
| | 3. Site Furnishings | Benches | Each | 1 | | \$0 | Yes | \$0 | \$0 | | |
| | | Seatwalls | LF | 1 | | \$0 | Yes | \$0 | \$0 | | |
| | | Bike Racks | Each | 1 | | \$0 | Yes | \$0 | \$0 | | |
| | | Trash Receptacles | Each | 1 | | \$0 | Yes | \$0 | \$0 | | |
| | | Drinking Fountains | Each | 1 | | \$0 | Yes | \$0 | \$0 | | |
| | | Signage (Standard Traffic Control) | Each | 1 | | \$0 | Yes | \$0 | \$0 | | |
| | | Signage (Wayfinding) | Each | 1 | | \$0 | Yes | \$0 | \$0 | | |
| | | Tree Grates | Each | 1 | | \$0 | Yes | \$0 | \$0 | | |
| | | Subtotal Site Furnishings | | | | | \$0 | | \$0 | \$0 | |
| | | 4. Other Construction Items. Also, Itemized Line Items For Non-Infrastructure Projects. (Insert Additional Rows If Necessary) | Bicycle and Pedestrian Counter | Each | 1 | | \$0 | Yes | \$0 | \$0 | |
| | SUBGRADE PREPARATION | | SY | 17,892 | \$ 16.00 | \$286,276 | Yes | \$269,958 | \$16,318 | | |
| | EARTHWORK | | CY | 4,473 | \$ 18.00 | \$80,515 | Yes | \$75,926 | \$4,589 | | |
| | AC PAVEMENT (SURFACE COURSE) | | Ton | 6,341.00 | \$ 122.00 | \$773,602 | Yes | \$729,507 | \$44,095 | | |
| | AC PAVEMENT (BASE COURSE) | | Ton | 6,341.00 | \$ 122.00 | \$773,602 | Yes | \$729,507 | \$44,095 | | |
| | SURFACE TREATMENT (MICRO/SLURRY) | | SY | 6,341.00 | \$ 7.00 | \$44,387 | Yes | \$41,857 | \$2,530 | | |
| | TACK COAT | | Ton | 15.80 | \$ 1,250.00 | \$19,750 | Yes | \$18,624 | \$1,126 | | |
| | AGGREGATE BASE COURSE | | Ton | 3,065.00 | \$ 17.00 | \$52,105 | Yes | \$49,135 | \$2,970 | | |
| | ARCHEOLOGY TRENCHING | | | 3 | \$ 3,100.00 | \$9,300 | Yes | | | | |
| | BRIDGE, GUARDRAIL/RAMPS/VEHICULAR IMPACT SUPPORT | | | 1 | \$285,000 | \$285,000 | Yes | | | | |
| | CONCRETE DRIVEWAY ENTRANCE | | | 1,500 | \$15 | \$22,500 | Yes | \$21,218 | \$1,283 | | |
| | FOUNDATION FOR SIGN POST | | | 14 | \$100 | \$1,400 | Yes | | | | |
| | HAWK SIGNAL | | | 3 | \$125,000 | \$375,000 | Yes | | | | |
| | PAVEMENT MARKING - WHITE | | | 2,700 | \$2 | \$5,400 | Yes | | | | |
| SIDEWALK 6FT MAJOR STREET (<1000SF \$12) | | | 810 | \$9 | \$7,274 | Yes | | | | | |
| SIGN POST (P-1)(PERFORATED)(SINGLE) | | 14 | \$200 | \$2,800 | Yes | | | | | | |
| STREETLIGHT - REMOVE/REPLACE WITH LED | | 6 | \$5,000 | \$30,000 | Yes | | | | | | |

PART D - TRANSPORTATION ALTERNATIVES COST ESTIMATE FORM

Please provide a detailed cost estimate for this project. The data entered in this cost estimate sheet will automatically transfer into the correct fields in Part E. Rows 1-9 will remain visible at the top of this page at all times.

| | | |
|---------------------------|-----------------------|--------------------------|
| Sponsoring Agency: | Project Title: | Application Date: |
|---------------------------|-----------------------|--------------------------|

| Part | Item Description | Unit | Quan. | Unit Price | Total | Federally Eligible | Federal Funds (94.3%) | Local Funds (5.7%) | Note(s) | | |
|------|--|---|-------|------------|-------------|--------------------|-----------------------|--------------------|-------------|-------------|----------|
| | STREETLIGHT TRENCHING/POWER/J-BOX | | 1,500 | \$40 | \$60,000 | Yes | | | | | |
| | SURVEY | | 3 | \$3,000 | \$9,000 | Yes | \$8,487 | \$513 | | | |
| | Environmental Monitoring | | 1 | \$250,000 | \$250,000 | | | | | | |
| | PIO | | 1 | \$25,000 | \$25,000 | | | | | | |
| | Testing & Materials | | 1 | \$38,000 | \$38,000 | | | | | | |
| | Sutotal Other Construction | | | | \$3,150,910 | | \$1,944,218 | \$117,519 | | | |
| | 5. Mobilization And Administration Costs | Contractor Mobilization | LS | 1 | \$58,615 | \$58,615 | No | \$0 | \$58,615 | | |
| | | Traffic Control | LS | 1 | \$58,615 | \$58,615 | Yes | \$55,274 | \$3,341 | | |
| | | Procurement | LS | 1 | \$8,000 | \$8,000 | Yes | \$7,544 | \$456 | | |
| | | Construction Contingencies | LS | 1 | \$586,150 | \$586,150 | Yes | \$552,739 | \$33,411 | | |
| | | Construction Administration | LS | 1 | \$754,365 | \$754,365 | Yes | \$711,366 | \$42,999 | | |
| | | Subtotal Mobilization & Administration Costs | | | | \$1,465,745 | | \$1,326,924 | \$138,821 | | |
| | Subtotal Construction Or Implementation Cost (Part E) | | | | | | \$4,819,284 | \$3,352,361 | \$261,250 | | |
| | F. Total Scoping, PE, Right-of-Way Acquisition, Utility Relocation, and Construction (Part A, B, C, D, and E) | | | | | | | \$6,112,184 | \$3,352,361 | \$1,079,750 | |
| | G. Adot Fee Review Fee - \$10,000 for Certified Accepted agencies, otherwise \$30,0000 | | | | | | | \$10,000 | No | \$0 | \$10,000 |
| | H. Total Project Cost Including ADOT Fees (Part F + Part G) | | | | | | | \$6,122,184 | \$3,352,361 | \$1,089,750 | |

Phoenix: Western Canal: 24th Street to 48th Street

PART E - TOTAL PROJECT SCHEDULE AND BUDGET

Please verify that the cost and programming estimates for the total project are correct below. The numeric values on this sheet (in GREY) are automatically populated from the cost estimate sheet (Part D) and cannot be modified. If there are any errors in the numeric values on this sheet, please verify and correct the numbers you have entered into the cost estimate sheet (Part D). You MUST fill in the GREEN portions of Part E manually.

The design for the project should be programmed at least 1 year, preferably 2 years, prior to construction. Utilities and right of way should be programmed at least 1 year prior to construction, but may occur in the same year as construction depending on utility and right of way concerns that are identified in questions 24-27 in Part B.

| Cost Estimate for the Project Including ALL Segments | Cost | Additional Notes (if needed) |
|--|-------------|------------------------------|
| 1. ADOT Fee | \$10,000 | |
| 2. Design | \$981,500 | |
| 3. Right of way | \$86,400 | |
| 4. Utilities | \$225,000 | |
| 5. Construction | \$4,819,284 | 20% contingency included |
| 6. Contingency | | |
| 7. Total Cost | \$6,122,184 | |

8. Will the agency maintain the improvement after it is completed? Yes

9. Expected Annual Maintenance Cost \$ 7,500.00

10. Identify Source of Maintenance Funds Street Transportation Dept. operating expenses

| Requested MAG Programming | Year | Short Work Description (E.g. Construct Multiuse Path) | Local Funding Source | Local Cost | Federal Cost | Total Cost | Local Share |
|-----------------------------|------|---|----------------------|-------------|---------------|-------------|-------------|
| 11. Design (Optional) | 2019 | Funding is from SRP Aesthetic funds and Capital Construction funds | Other | \$991,500 | Not Available | \$991,500 | 100.0% |
| 12. Right of way (Optional) | 2020 | Funding is from Capital Construction funds | Other | \$86,400 | Not Available | \$86,400 | 100.0% |
| 13. Utilities (Optional) | 2020 | Funding is from Capital Construction funds | Other | | Not Available | | |
| 14. Other (Optional) | | | | \$0 | Not Available | \$0 | |
| 15. Construction | 2021 | Construct shared use path. This includes Utility relocation costs. Funding is from SRP Aesthetic funds and Capital Construction funds | Other | \$1,859,284 | \$3,250,000 | \$5,109,284 | 36.4% |
| 16. Total Costs | | | | \$2,937,184 | \$3,250,000 | \$6,187,184 | 47.5% |

PART F - SIGNATURE AND CHECKLIST

Checklist

This checklist is included to facilitate applicant review and verification that all required fields in the form have been completed.

| COVER SHEET | Complete? |
|--|------------------|
| Cover Sheet is completely filled out | Yes |
| PART A - Contacts and Project Description Fields | Complete? |
| Contact Information, fields 1 – 5 are complete | Yes |
| Project Description, fields 6 - 8 are complete | Yes |
| PART B - Project Description | Complete? |
| Fields 1 - 14 (Project Description) are complete | Yes |
| Fields 15 - 17 (Transit) are complete | Yes |
| Fields 18 – 22 (Attractors and Demographics) are complete | Yes |
| Fields 23 – 30 (Traffic, Environmental, ROW, and Utilities) are complete | Yes |
| Fields 31 – 33 (Guidelines, Policies, and Plans) are complete | Yes |
| Fields 34 – 37 (Maintenance, Performance Measurement, and Wayfinding) are complete | Yes |
| PART C - Required Attachments | Complete? |
| Field 1 - Map showing the general location of the proposed project in relation to the region, including a north arrow provided in the printed application and the PDF application. | Yes |
| Field 2 - Map with streets labeled showing the detailed location(s) of the proposed project, including a north arrow provided in the printed application and the PDF application. | Yes |
| Field 3 - Up to four (4) photos of existing conditions are provided in the printed application and the PDF application (two 4x6 per page). | Yes |
| limits, widths, sidewalks and shoulders (if any), and the lanes of travel in the printed application and the PDF application. | Yes |
| (OPTIONAL)- Up to two (2) photos/renderings of the completed project are provided in the printed application and the PDF application. | Yes |
| (OPTIONAL) - Up to three (3) letters of support for the project are provided in the printed application and the PDF application. | No |
| (OPTIONAL) - GIS coverage (shapefile or geodatabase) is provided on the CD with the application. | No |
| PART D - Cost Estimate Worksheet | Complete? |
| Sponsoring Agency, Project Title, and Application Date are complete | Yes |
| Part A - Scoping is complete | Yes |

| | |
|--|------------------|
| Part B - Final Preliminary Engineering Design is complete | Yes |
| Part C - Right-of-Way Acquisition is complete | Yes |
| Part D - Utility Relocation is complete | Yes |
| Part E - Construction or Implementation is complete | Yes |
| Parts F, G, and H - Costs are complete and accurate | Yes |
| PART E - Total Project Schedule and Budget Including All Segment Fields | Complete? |
| Fields 1 – 7 are complete and costs are accurate | Yes |
| Field 8 - 10 are complete | Yes |
| Fields 11 – 15 Years are complete | Yes |
| Fields 11 – 15 Local Funding Sources are complete | Yes |
| Fields 11 – 15 Local Costs are complete and accurate | Yes |

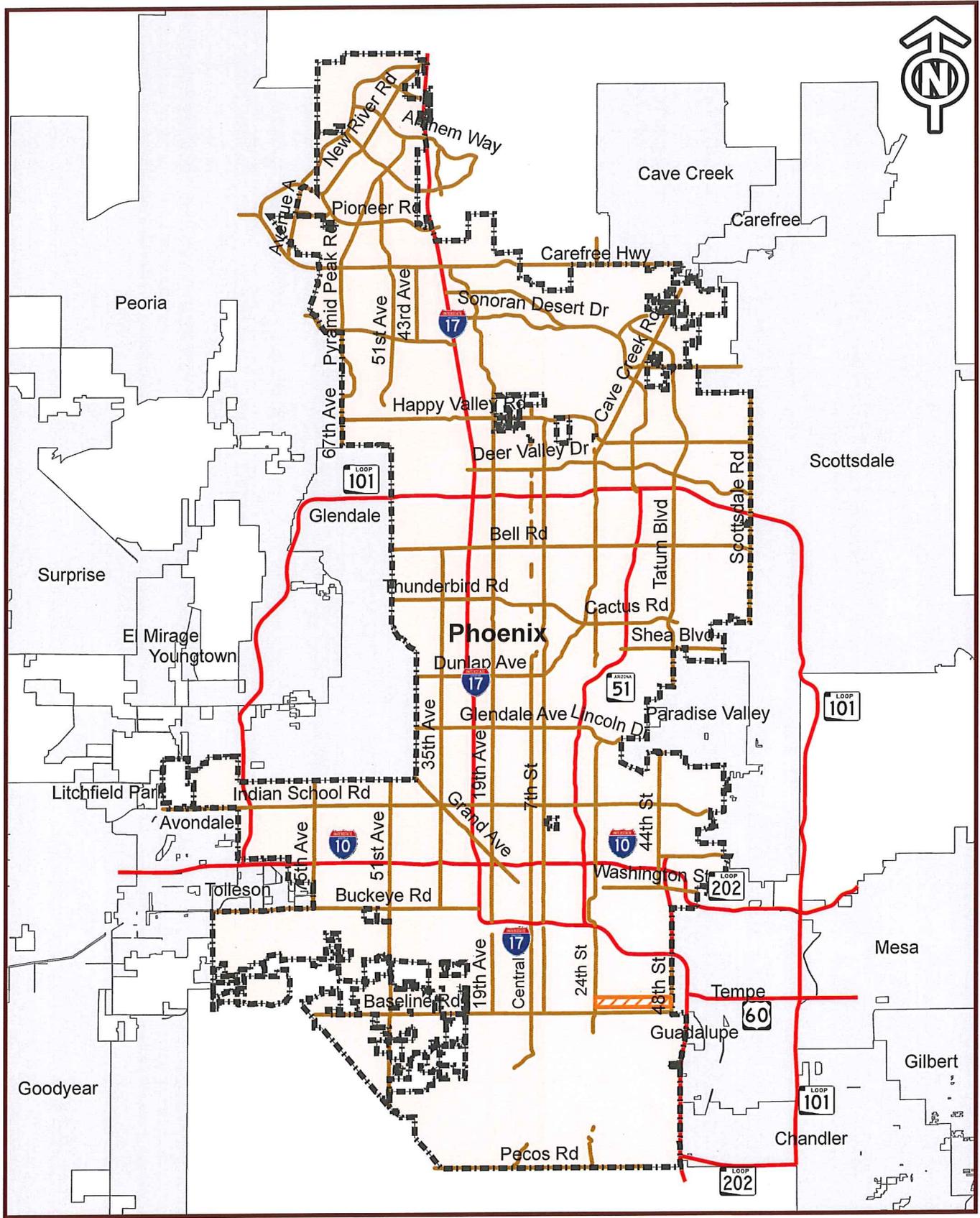
| | |
|---|------------------|
| Field 11 - 15 Federal Costs are complete and accurate | Yes |
| Field 16 Total Costs are complete and accurate | Yes |
| PART F - Signature and Checklist | Complete? |
| Entire checklist is completed. | Yes |
| Form is signed by MAG member agency's manager/administrator or designated representative. | Yes |
| Name, title and date fields under the signature are completed. | Yes |

SIGNATURE(S):

As the MAG member agency's manager/administrator or designated representative, I certify that this application is accurate and complete and that the project will be included in the sponsoring MAG member agency's local CIP/TIP if the project is selected for federal funding.

| | | |
|------------|---|---------|
| Signature: |  | 9/22/17 |
| Name: | Ray Dovalina, P.E. Kiri Knudsen | |
| Title: | Assistant Street Transportation Director / city Engineer | |
| Date: | 9/21/2017 | |

Vicinity Map Western Canal: 24th St to 48th St City of Phoenix

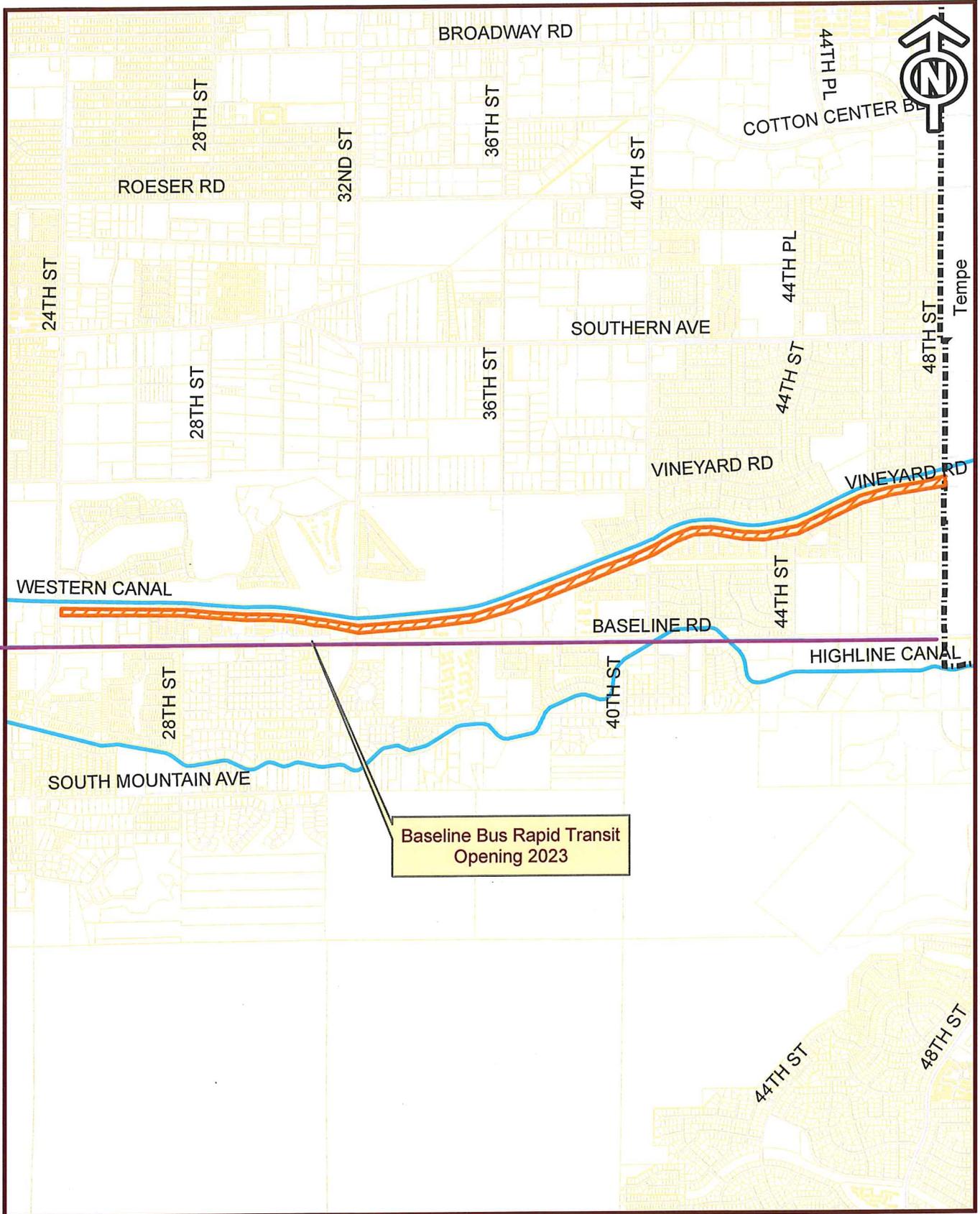


City Limits
 Project Location
 Freeways
 Major Streets

Project Location Map

Western Canal: 24th St to 48th St

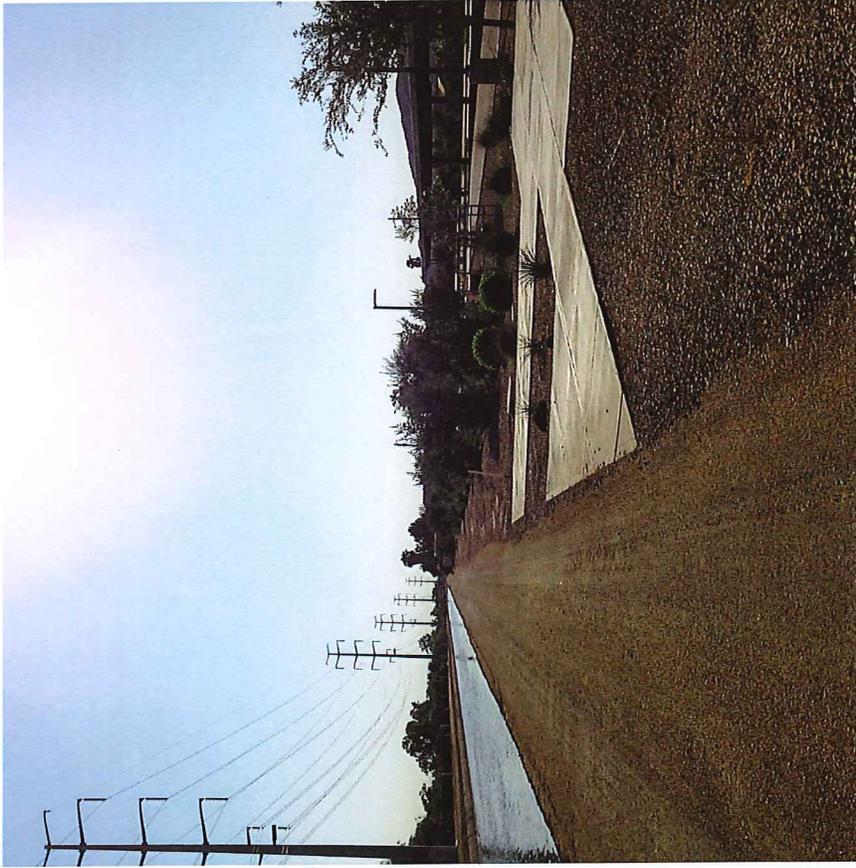
City of Phoenix



- City Limits
- Future Bus Rapid Transit
- Project Location
- Canals

Date: 9/13/2017

Western Canal: 24th Street to 48th Street

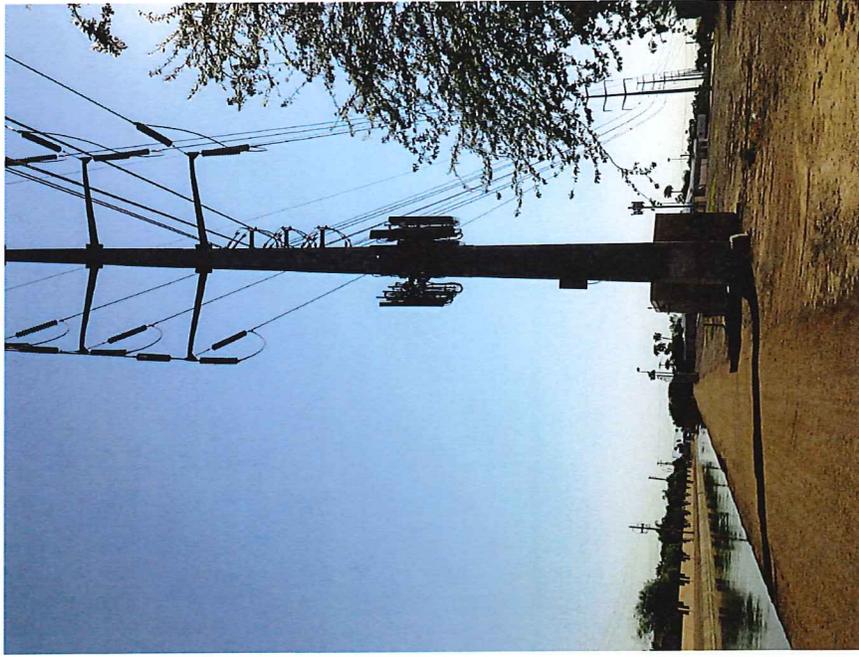


1) On south bank of Western Canal, east of 24th Street looking east; sidewalks from 24th Street Park and Ride connecting to nowhere.



2) On south bank of Western Canal, between 24th Street and 32nd Street looking east; adjacent subdivision ready to connect.

Western Canal: 24th Street to 48th Street



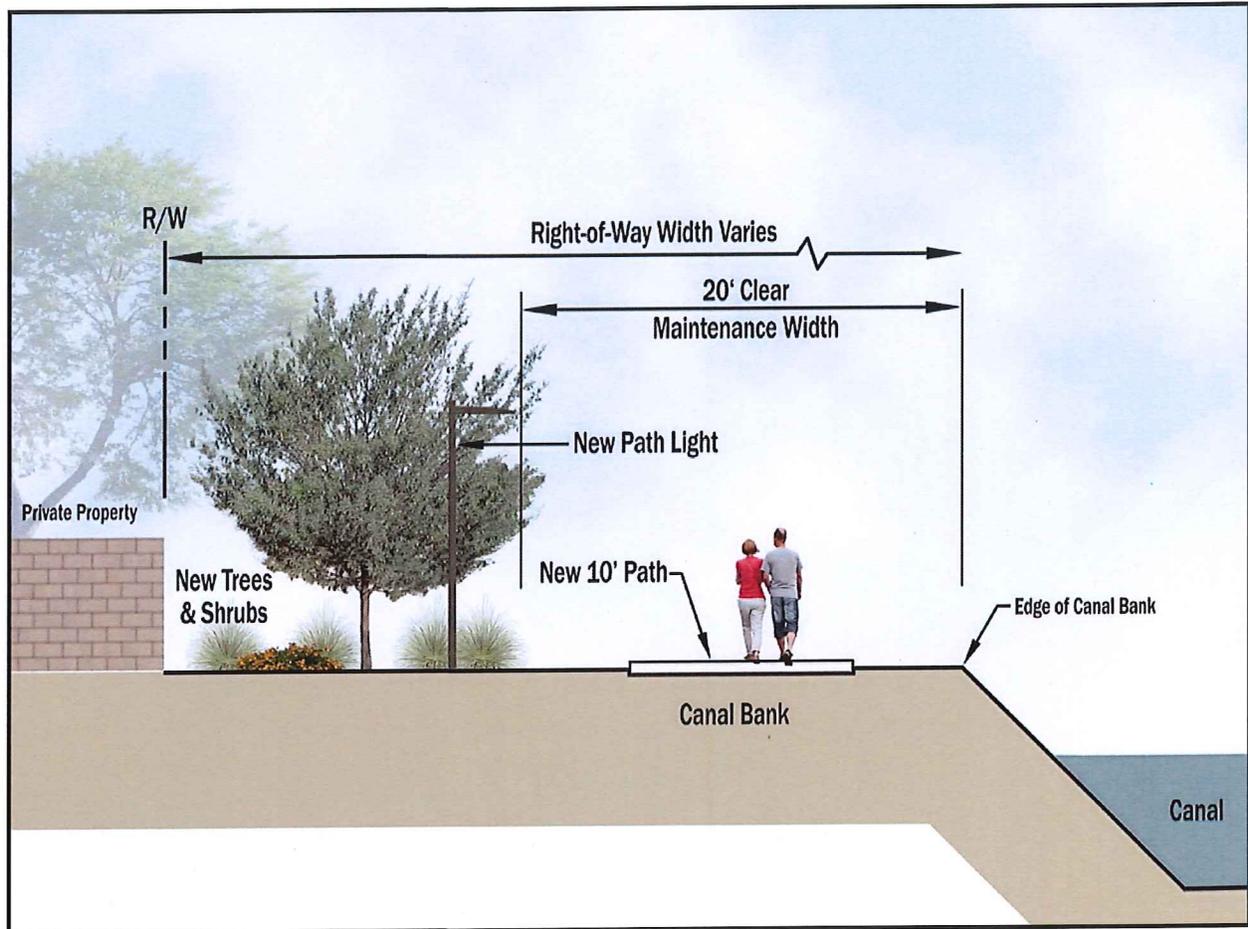
3) On south bank of Western Canal, approaching 40th Street; no pathway. Landscaping and lighting will need to meet SRP guidelines related to existing utilities.



4) On south bank of Western Canal approaching 48th Street from the west; no safe crossing. This bridge will be upgraded for ADA compliance

Western Canal: 24th Street to 48th Street

Cross Section



Note: Landscaping and lighting is dependent on the Salt River Project (SRP) required 20-foot clearance for maintenance operations. SRP's preference for the location of the pathway is on the north side; yet maybe open to the pathway on the south side depending on variables. Opportunities for the pathway, landscaping, and lighting will be explored on both sides of the Western Canal.