



Transportation Alternatives / CMAQ Application for  
FY 2018, 2019, and 2020 Projects

Western Canal Multi-use Path / The Missing Link

Tempe

**APPLICATIONS ARE DUE AT MAG OFFICES BY  
Monday, September 21, 2015 at 10:00 a.m.**

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

## Tempe: Western Canal Multi-use Path / The Missing Link

**PART A - CONTACT AND PROJECT DESCRIPTION****Contact Information**

1. Name of Sponsoring Agency	Tempe
2. Agency Contact Name	Shelly Seyler
3. Phone Number of Agency Contact	480-350-8854
4. E-Mail Address of Agency Contact	shelly_seyler@tempe.gov
5. Mailing Address of Agency Contact	Tempe Transportation Center 200 E 5th Street Tempe AZ 85281

**Project Description**

6. Please provide the Project Title.	Western Canal Multi-use Path / The Missing Link
7. Please provide a concise, specific description of the project (250 character limit):	The Western Canal / Missing Link project is proposed to be a 10' wide concrete shared-use path and on-street facility running .5 miles connecting the Highline and Western Canal pathways. The project will link local and regional facilities, other canal paths, a bicycle boulevard (the "Brake" route in Tempe's BIKEit system), the Tempe North South Rail Spur Path and run through a public golf course, a Salt River Project facility and across a major arterial. The newly formed connection is currently used illegally by travellers and this new facility will reduce vehicle-ped-bike conflicts, introduce lighting, landscaping, and art features; while remaining ADA/MUTCD/AASHTO compliant.
8. Please provide the project limits:	The project will be a half mile total extending from the west at the Highline Canal to the east at the Western Canal, along Divot Drive/Mineral Road and through Ken McDonald Golf Course. The project parallels Elliot Road, half mile to the south.

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**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 checked="" type="checkbox"/> Bicycle Lane (5' min. with curb/gutter) | <input type="checkbox"/> Wide Sidewalk (8' min.)                              |
| <input checked="" 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 type="checkbox"/> Sidewalk (5' min.)                                 | <input type="text" value="bicycle boulevard, railroad crossing"/>             |
| <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)                           | <input type="text" value="safety fencing in golf course area"/> |
| <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="text" value="2"/> Number of Bike racks/lockers           | <input type="text" value="1"/> Number of Seating/Rest Area(s)               |
| <input type="text" value="0"/> Number of Drinking Fountains           | <input type="text" value=""/> Number of bicycle/pedestrian counting devices |
| <input type="text" value="5"/> Number of Way-finding Signs            | <input type="text" value=""/> Number of bicycle/pedestrian counting devices |
| <input type="text" value="0"/> Number of Trash receptacles            | Other:                                                                      |
| <input type="text" value="25"/> Number of Trees                       | <input type="text" value="safety fencing in golf course area"/>             |
| <input type="text" value="1"/> Number of new openings in street walls |                                                                             |
| <input type="text" value="0"/> Number of Shade Structures             |                                                                             |

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

Currently, access to/from Western to the Highline and Kyrene Canals SUP involves trespassing and scaling a fence to gain access through the Ken McDonald Golf Course, crossing a 45 MPH major arterial street (Kyrene), over a railroad crossing, and travelling along an SRP service road. This .5 mile gap in the regional path system discourages bicyclists, pedestrians and people with mobility constraints from utilizing almost 20 miles of local and regional shared use facilities, like Kyrene, Western and Highline Canal multi use paths.

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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 will create continuous and comfortable bicycle and pedestrian access for the entire length of the Western Canal. The project will link a more than 12 mile system along the regional (Chandler, Gilbert, Tempe) Western Canal, while connecting to the North South Rail Spur Path and the Highline Canal Path (both regional pathways). The project will establish a buffered bike lane on a section of roadway, a ten foot shared use path through a public golf course, lighting, landscaping and a traffic signal at Kyrene Road. The project is part of the "Brake" Route Bike Boulevard in Tempe and the Sun Circle Maricopa County Trail. The project will link many transit and bike/ped routes in place and connect neighborhoods to employment centers and activity areas.

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

Tempe hopes to close the half mile gap in a regional path system that exists today. Tempe wants to construct a model bicycle boulevard and pathway that links to multiple other cities, attracts new non-motorized users and encourages a more sustainable and attractive Tempe. Tempe hopes to provide new transportation options with solving this system gap and support economic growth and stable neighborhoods adjacent to the area. Tempe hopes, in the longer vision, to be one of the best walkable and bikeable cities in the country.

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

<input type="checkbox"/>	Medians with pedestrian crossing islands	Other bicycle boulevard and Valley Path signage and wayfinding, enhanced railroad bike/ped crossing, traffic signal and pedestrian countdown, fencing in golf course
<input checked="" type="checkbox"/>	Roadway Reconfiguration (Road Diet)	
<input checked="" type="checkbox"/>	Striping/re-striping to narrow vehicle lanes	
<input checked="" type="checkbox"/>	Color pavement or similar treatment	
<input checked="" type="checkbox"/>	Lighting	
<input type="checkbox"/>	Landscape buffer between sidewalk and roadway	
<input type="checkbox"/>	Rectangular Rapid Flash Beacon (RRFB)	
<input type="checkbox"/>	Driver Feedback Sign	

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

<input checked="" type="checkbox"/>	Yes
<input type="checkbox"/>	No

Please Explain:

All Tempe street projects include working with the cor

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

The current conditions harbor unsafe interactions between pedestrians and bikes wishing to to travel to/from the Western, Kyrene, and Highline canals; today users must go to a major arterial to get from one canal to the other. This path will provide a nearly car-free access. It is the city's intent to install a signalized dedicated crossing at the mid-block location of a 45 MPH major arterial at Kyrene. In addition, this project will further reduce bike/ped/vehicle conflicts by implementing a safe railroad crossing, and designating a well lit, wide, shared-use path. Users wanting to make this connection today have to trespass on SRP and Ken McDonald Golf Course property at their own risk. In response, it is the city's intention to create a protected, fenced, direct link through the golf course.

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

This project will result in full upgrade of the all ramps, driveways, sidewalks and other access to meet current ADA guidelines and requirements. The project will also add shade trees for comfort and provide a traffic signal to cross a major arterial and improved access at a railroad crossing.

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**PART B-DETAILED PROJECT DESCRIPTION**

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

This project will provide the only safe and direct connection to/from the Western and Highline canals, directly connecting 12.5 miles of multi-use path, but also improving overall regional connectivity. This project will link adjacent neighborhoods, the new high density multi-family residential in Chandler and Tempe, and the Town of Guadalupe, to employment centers on the west side of Tempe and into Phoenix. By providing for a safe network of travel within Tempe and regionally to users of all abilities, it will encourage biking, walking, and transit as a more attractive option for travel. This connection will enable direct, safe and easy access to local schools, churches, large and small commercial centers, transit services, regional and local parks, and major employment centers in the area.

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

By making a street and pathway that is good for people, rather than just cars, it will be more of a place. Tree selection, wayfinding signage and a strong bicycle and pedestrian corridor that links to regional pathways will contribute to sense of

14. Connectivity: (Check all that apply)

Project fills a gap in the system  
Explain:

The project will further establish a regional bicycle and pedestrian corridor along the Western Canal, Highline Canal, North South Rail Spur Path and link Chandler, Gilbert, Guadalupe and Phoenix.

Project connects to other local bikeways  
List of connected bikeways:

Highline Canal Path, Kyrene Road bike lanes, Western Canal Path, Kyrene Canal Path, North South Rail Spur Path

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

City of Phoenix, Town of Guadalupe

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:

Routes 72, 108, 65, 66, and Express Route 522 all directly link to this proposed path facility. It should also be noted that this connection will also soon be serviced by the planned and funded Tempe circulator route; the Orbit Saturn.

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

Within 1/2 mile  
List:

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## PART B-DETAILED PROJECT DESCRIPTION

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

4 Within 1/2 mile

List:

Ken McDonald Golf Course, Benedict Sports Complex, Kiwanis Park, Celaya 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):

5 Within 1/2 mile

List:

Major retail strip malls on all four arterial corners (Rural, Elliot, Guadalupe, Kyrene) and scattered retail/commercial business parks on Kyrene Road.

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

0 Within 1/2 mile

List:

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

1 Within 1/2 mile

List:

Compadre High

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):

1 Within 1/4 miles

List:

small retail

4 1/4 miles to 1/2 miles

List:

grocery stores, office parks

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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:

Western Canal, Rural to Kyrene, half mile north of Elliot Road

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

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**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

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.

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.

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

Yes

No

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**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 checked="" type="checkbox"/>	Pipelines, Sewer and Water		<input type="text"/>

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

Some overhead and underground utilities have been identified and will be integrated into the careful placement of any elements like light poles and landscaping. Existence of the canal adjacent will be incorporated.

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

<input checked="" type="checkbox"/>	AASHTO Guide for Bicycle Facilities	Other:
<input checked="" type="checkbox"/>	MAG Pedestrian Policies and Design Guidelines	<input type="text" value="Tempe Standard Details, Tempe Transportation Master Plan, Tempe Bicycle Boulevard System"/>
<input checked="" type="checkbox"/>	MAG Complete Streets Guide	
<input checked="" type="checkbox"/>	MAG Designing Transit Accessible Communities	
<input checked="" type="checkbox"/>	MAG Valley Path Brand & Wayfinding Signage Guidelines	
<input checked="" type="checkbox"/>	NACTO Urban Bikeway Design Guide	
<input checked="" 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="Recommended"/>
With new development and capital improvement projects, bike lanes on collector streets are:	<input type="text" value="Recommended"/>
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="Required"/>
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="Tempe General Plan 2040, Tempe Transportation Plan"/>
<input type="checkbox"/>	Consistent with general policy/practices, but not formally identified (provide source)
	Explain: <input type="text"/>
<input type="checkbox"/>	Not addressed by jurisdiction's plans, policies, or practices
	Explain: <input type="text"/>

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## PART B-DETAILED PROJECT DESCRIPTION

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

Tempe will conduct traffic counts, coordinates annual bicycle counts and will monitor the overall performance of the street redesign. Tempe tracks census data on transit, bicycle and pedestrian usage and strives to build higher numbers.

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?

Annual manual bicycle counting is done along this corridor and will continue.

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.

All newly designed projects have extensive outreach, grand-opening events, and educational materials shared in the community newsletter in the water bill, social media and press releases. Every household and property in the project area receives door hangers alerting the project and any public meeting notices.

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

The project will include wayfinding and branding including the Tempe BIKEiT bike boulevard system; this is the Brake route. Additionally this project will link with regional pathways like the North South Rail Spur, that will have the Valley Path signage.

**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.

<b>Sponsoring Agency:</b>	Tempe	<b>Project Title:</b>	Western Canal Multi-use Path/Missing Link	<b>Application Date:</b>	Sep-15
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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	\$10,000.00	\$10,000.00	No	\$0.00	\$10,000.00		
	2. PROJECT ASSESSMENT REPORT or DETAILED WORKPLAN	LS	1	\$15,000.00	\$15,000.00	No	\$0.00	\$15,000.00		
	3. ENVIRONMENTAL DETERMINATION (Infrastructure projects, including technical supporting documents)	LS	1	\$35,000.00	\$35,000.00	No	\$0.00	\$35,000.00		
	4. HAZMAT ASSESSMENT	LS	1	\$3,000.00	\$3,000.00	No	\$0.00	\$3,000.00		
	<b>Subtotal Scoping (Part A)</b>				<b>\$63,000.00</b>		<b>\$0.00</b>	<b>\$63,000.00</b>		
B. Final Preliminary Engineering Design - Stages II, III, IV And PS&E	1. Plans, Special Provisions or Bid Manual, Cost Estimate & Schedules.	LS	1	\$65,000.00	\$65,000.00	No	\$0.00	\$65,000.00		
	2. GEOTECHNICAL INVESTIGATION and Materials & Pavement Design Report	LS	1	\$15,000.00	\$15,000.00	No	\$0.00	\$15,000.00		
	3. DRAINAGE REPORT	LS	1	\$5,000.00	\$5,000.00	No	\$0.00	\$5,000.00		
	4. SWPPP	LS	1	\$5,000.00	\$5,000.00	No	\$0.00	\$5,000.00		
	<b>Subtotal PE (Part B)</b>				<b>\$90,000.00</b>		<b>\$0.00</b>	<b>\$90,000.00</b>		
<b>Subtotal Preliminary Engineering (Part A + Part B)</b>					<b>\$153,000.00</b>		<b>\$0.00</b>	<b>\$153,000.00</b>		
C. Right-of-Way Acquisition	1. Right-of-Way Acquisition	LS	1		\$0.00	No	\$0.00	\$0.00		
<b>Subtotal Right-of-Way Acquisition (Part C)</b>					<b>\$0.00</b>		<b>\$0.00</b>	<b>\$0.00</b>		
D. Utility Relocation	1. Utility Relocation	LS	1	\$15,000.00	\$15,000.00	No	\$0.00	\$15,000.00		
<b>Subtotal Utility Relocation (Part D)</b>					<b>\$15,000.00</b>		<b>\$0.00</b>	<b>\$15,000.00</b>		
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	\$35,000.00	\$35,000.00	Yes	\$33,005.00	\$1,995.00
		Site Preparation		LS	1	\$65,000.00	\$65,000.00	Yes	\$61,295.00	\$3,705.00
		Demolition	Sawcut	LF	1		\$0.00	Yes	\$0.00	\$0.00
			Remove Structures and Obstructions	LS	1	\$45,000.00	\$45,000.00	Yes	\$42,435.00	\$2,565.00
			Remove Fencing	LF	1	\$15,000.00	\$15,000.00	Yes	\$14,145.00	\$855.00
			Remove Structural Concrete	CY	1		\$0.00	Yes	\$0.00	\$0.00
			Remove Asphaltic Concrete Pavement	CY	1	\$5,000.00	\$5,000.00	Yes	\$4,715.00	\$285.00
			Remove Concrete Sidewalks, Slabs	CY	1		\$0.00	Yes	\$0.00	\$0.00
		Hazmat Abatement		LS	1	\$5,000.00	\$5,000.00	Yes	\$4,715.00	\$285.00
		Retaining Wall - Reinforced Concrete Cantilevered		SF	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00
		Earthwork	General Excavation	CY	1	\$35,000.00	\$35,000.00	Yes	\$33,005.00	\$1,995.00
			Drainage Excavation	CY	1	\$15,000.00	\$15,000.00	Yes	\$14,145.00	\$855.00
			Structural Excavation	CY	1	\$35,000.00	\$35,000.00	Yes	\$33,005.00	\$1,995.00
			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	\$150,000.00	\$150,000.00	Yes	\$141,450.00	\$8,550.00
		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
		Crosswalk Enhancement	Concrete Pavers	SF	1		\$0.00	Yes	\$0.00	\$0.00
			Stamped Asphalt	SF	1		\$0.00	Yes	\$0.00	\$0.00
			Stamped Concrete	SF	1		\$0.00	Yes	\$0.00	\$0.00
			Concrete	SF	1		\$0.00	Yes	\$0.00	\$0.00
			Integral Color Concrete	SF	1		\$0.00	Yes	\$0.00	\$0.00
Pedestrian ADA Ramp		SF	1		\$0.00	Yes	\$0.00	\$0.00		
Culvert Extensions		LF	1		\$0.00	Yes	\$0.00	\$0.00		
Pedestrian Lighting Including Conduit And Trenching		Each	1	\$120,000.00	\$120,000.00	Yes	\$113,160.00	\$6,840.00		
Handrail	Standard	LF	1		\$0.00	Yes	\$0.00	\$0.00		
	Decorative	LF	1		\$0.00	Yes	\$0.00	\$0.00		
<b>Subtotal Hardscape Construction</b>					<b>\$525,000.00</b>		<b>\$495,075.00</b>	<b>\$29,925.00</b>		

**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.

<b>Sponsoring Agency:</b>	Tempe	<b>Project Title:</b>	Western Canal Multi-use Path/Missing Link	<b>Application Date:</b>	Sep-15
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Part	Item Description	Unit	Quan.	Unit Price	Total	Federally Eligible	Federal Funds (94.3%)	Local Funds (5.7%)	Note(s)	
<b>E. Construction Or Implementation</b> [For Non-Infrastructure Projects (No Ground Disturbing Activities), Address Only Part 4]	2. Landscaping & Irrigation Items	Requirements	Each	1	\$150,000.00	\$150,000.00	Yes	\$141,450.00	\$8,550.00	
		Trees (15 Gallon Size)	Each	1		\$0.00	Yes	\$0.00	\$0.00	
		Trees (5 Gallon Size)	Each	1		\$0.00	Yes	\$0.00	\$0.00	
		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	
		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
		Topsail	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	
		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					\$150,000		\$141,450	\$8,550	
	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	\$35,000	\$35,000	Yes	\$33,005	\$1,995	
		Tree Grates	Each	1	\$0	\$0	Yes	\$0	\$0	
	Subtotal Site Furnishings					\$45,000		\$42,435	\$2,565	
	4. Other Construction Items. Also, Itemized Line Items For Non-Infrastructure Projects. (Insert Additional Rows if Necessary)	Bicycle and Pedestrian Counter	Each	4	\$8,000	\$32,000	Yes	\$30,176	\$1,824	
		Miscellaneous	Total	1	\$10,000	\$10,000	Yes	\$9,430	\$570	
				1		\$0	Yes	\$0	\$0	
				1		\$0	Yes	\$0	\$0	
				1		\$0	Yes	\$0	\$0	
				1		\$0	Yes	\$0	\$0	
				1		\$0	Yes	\$0	\$0	
				1		\$0	Yes	\$0	\$0	
	Subtotal Other Construction					\$42,000		\$39,606	\$2,394	
	5. Mobilization And Administration Costs	Contractor Mobilization	LS	1	\$15,000	\$15,000	No	\$0	\$15,000	
		Traffic Control	LS	1	\$10,000	\$10,000	Yes	\$9,430	\$570	
		Construction Survey & Layout	LS	1	\$14,000	\$14,000	Yes	\$13,202	\$798	
		Construction Contingencies	LS	1	\$30,000	\$30,000	Yes	\$28,290	\$1,710	
		Construction Administration	LS	1	\$25,000	\$25,000	Yes	\$23,575	\$1,425	
	Subtotal Mobilization & Administration Costs					\$94,000		\$74,497	\$19,503	
	<b>Subtotal Construction Or Implementation Cost (Part E)</b>							<b>\$856,000</b>	<b>\$793,063</b>	<b>\$62,937</b>
	<b>F. Total Scoping, PE, Right-of-Way Acquisition, Utility Relocation, and Construction (Part A, B, C, D, and E)</b>							<b>\$1,024,000</b>	<b>\$793,063</b>	<b>\$230,937</b>
<b>G. Adot Fee Review Fee - \$10,000 for Certified Accepted agencies, otherwise \$30,000</b>							<b>\$10,000</b>	<b>\$0</b>	<b>\$10,000</b>	
<b>H. Total Project Cost Including ADOT Fees (Part F + Part G)</b>							<b>\$1,034,000</b>	<b>\$793,063</b>	<b>\$240,937</b>	

Tempe: Western Canal Multi-use Path / The Missing Link

**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	\$153,000	
3. Right of way	\$0	
4. Utilities	\$15,000	
5. Construction	\$826,000	
6. Contingency	\$30,000	No more than 20% of Construction Cost
7. Total Cost	\$1,034,000	

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

9. Expected Annual Maintenance Cost

10. Identify Source of Maintenance Funds

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)	2017	Environmental/Final Design	Sales Tax	\$153,000	Not Available	\$153,000	100.0%
12. Right of way (Optional)				\$0	Not Available	\$0	
13. Utilities (Optional)	2017	Utilities	Sales Tax	\$15,000	Not Available	\$15,000	100.0%
14. Other (Optional)	2017	ADOT Fees	Sales Tax	\$10,000	Not Available	\$10,000	100.0%
15. Construction	2018	Construct	Sales Tax	\$62,937	\$793,063	\$856,000	7.4%
16. Total Costs				\$240,937	\$793,063	\$1,034,000	23.3%

**PART F - SIGNATURE AND CHECKLIST****Checklist**

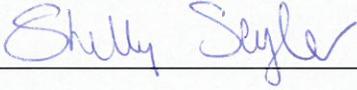
This checklist is included to facilitate applicant review and verification that all required fields in the form have been completed.

<b>COVER SHEET</b>	<b>Complete?</b>
Cover Sheet is completely filled out	Yes
<b>PART A - Contacts and Project Description Fields</b>	<b>Complete?</b>
Contact Information, fields 1 – 5 are complete	Yes
Project Description, fields 6 - 8 are complete	Yes
<b>PART B - Project Description</b>	<b>Complete?</b>
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
<b>PART C - Required Attachments</b>	<b>Complete?</b>
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
Field 4 - 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 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.	No
(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
<b>PART D - Cost Estimate Worksheet</b>	<b>Complete?</b>
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
<b>PART E - Total Project Schedule and Budget Including All Segment Fields</b>	<b>Complete?</b>
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

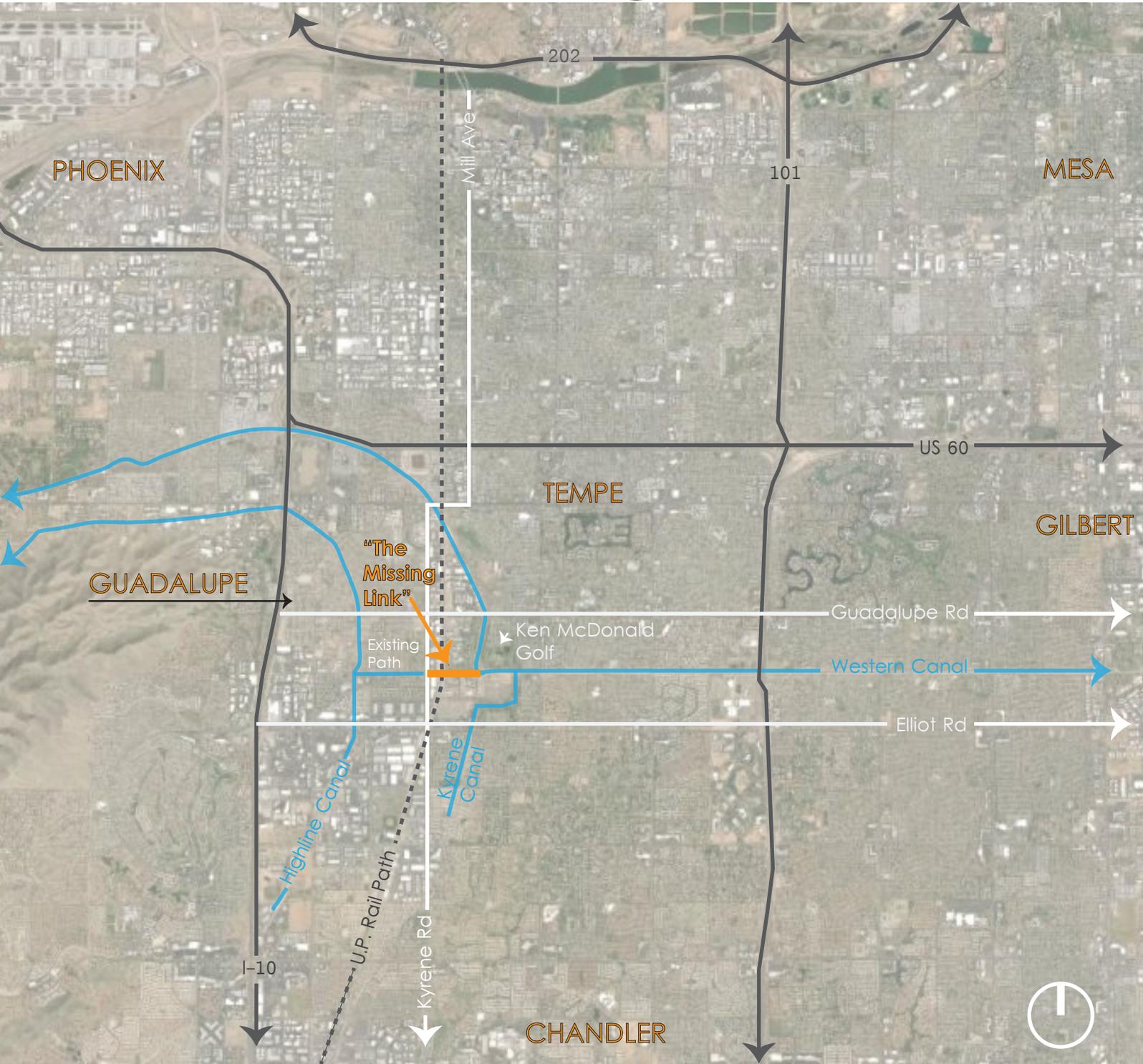
Field 11 - 15 Federal Costs are complete and accurate	Yes
Field 16 Total Costs are complete and accurate	Yes
<b>PART F - Signature and Checklist</b>	<b>Complete?</b>
Entire checklist is completed.	Yes
Form is signed by MAG member agency's manager/administrator or designated representative.	Yes
Name, 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:	
Name:	Shelly Seyler
Title:	Deputy Public Works Manager - Transportation
Date:	9/18/15

# The Missing Link - Area Map



Current Arterial Crossing Routes to/from Canals



Bike/Ped Accidents 09'-12'  
Source: ADOT

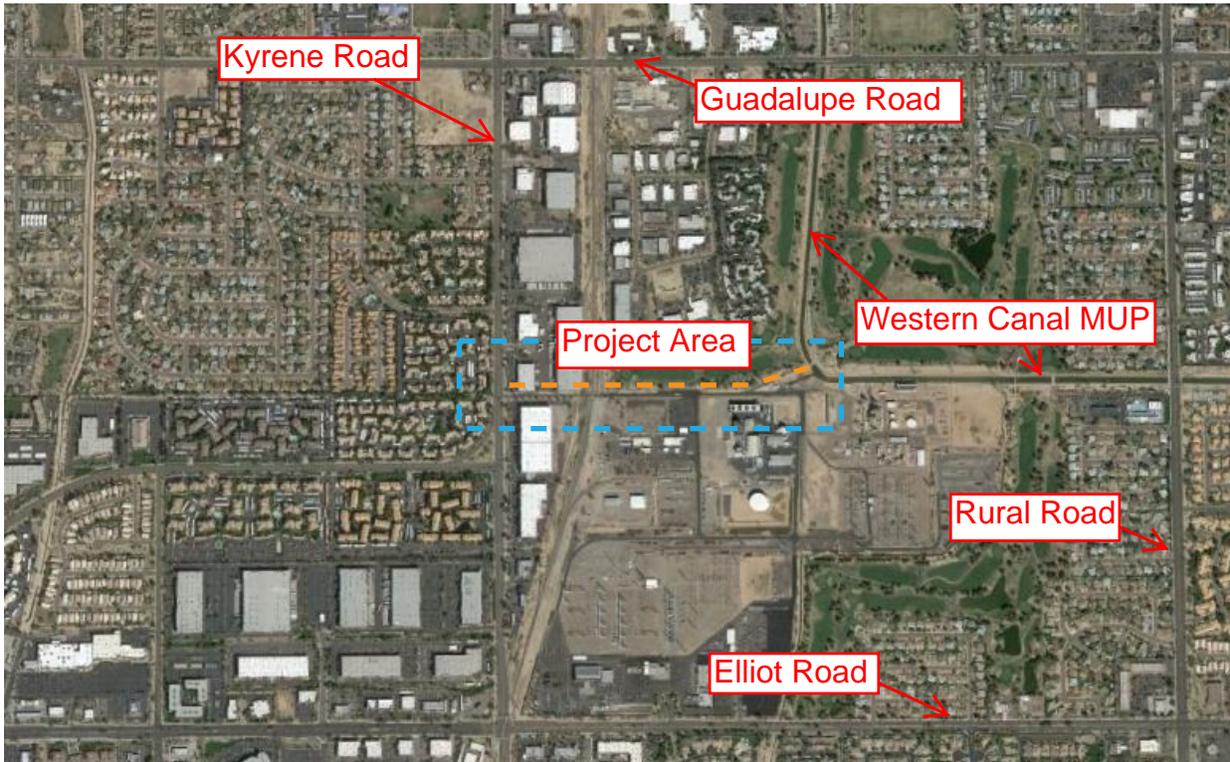


● Ped. Accident ● Bike Accident

Within .5 Mile of Tempe Western Canal

- 5 Schools
- 5 Parks
- + Arizona Mills Mall  
Ken McDonald Golf  
Tempe Y.M.C.A  
Kiwanis Park

Attachment 2 - Western Canal Path/The Missing Link



### Attachment 3 - Images

#### Western Canal Path / The Missing Link



Simulated path connection to existing Western Canal Shared Use Path, adjacent to SRP Plant and along edge of Ken McDonald Golf Course, with Sun Circle Trail signage (facing west)



Path alignment where golf course meets SRP drive and is separated by chain link fencing (facing east)



Missing Link connection at approved railroad crossing, SRP drive and golf course access (facing east)



Missing Link connection across Kyrene Road and future signalized crossing to existing pathway that connects to Highline Canal Path (facing west)

Attachment 4 Western Canal Path – The Missing Link Typical Cross Sections



Path fencing adjacent to golf course



Path alignment through golf course



Existing Roadway Conditions



Desired Final Cross Section