# Transportation Alternatives Application for FY 2015, 2016, and 2017 Projects

**Highland Canal Multi-Use Path Project Phase I**

**City of Tempe/Town of Guadalupe**

**APPLICATIONS ARE DUE AT MAG OFFICES BY**
**Tuesday, October 22, 2013 at 10:00 a.m.**

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

| PART A - CONTACT AND PROJECT DESCRIPTION | |
|---|---|
| **Contact Information** | |
| 1. Name of Sponsoring Agency | Tempe |
| 2. Agency Contact Name | Jeff Kulaga |
| 3. Phone Number of Agency Contact | 480-350-8844 |
| 4. E-Mail Address of Agency Contact | jeff_kulaga@tempe.gov |
| 5. Mailing Address of Agency Contact | City of Tempe<br>City Manager's Office<br>31 E 5th St<br>Tempe AZ 85281 |
| **Project Description** | |
| 6. Please provide the Project Title. | Highland Canal Multi-use Path Phase I |
| 7. Please provide a concise, specific description of the project (250 character limit): | |
| Highland Canal Phase I extends 2.5 miles from Auto Dr. in Tempe to the southern terminus of the SRP -Guadalupe Highland Canal Project. The project includes street crossing treatments, bridges, landscaping, lighting, concrete path and meets all ADA and transportation design standards. | |
| 8. Please provide the project limits: | |
| The Highline Canal Multi-use Path Project Phase 1 project will extend from the southern boundary of the Town of Guadalupe to Auto Drive in the City of Tempe along the Highland Canal. Request for funding for Phase I is to extend the path to Auto Loop Drive from the southern project terminus of the Town of Guadalupe Highland Canal Beautification Project. | |
| **Safe Routes to School (if project is NOT a Safe Routes to School project, proceed to Part B)** | |
| 9. School Name | |
| 10. School Address | |
| 11. School City, State, ZIP Code | |

## PART B-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 12-13 and 15-18, 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. What type of project is this? (Check only one)

| | |
|---|---|
| | Bicycle lane (4' min. w/o curb/gutter) |
| | Bicycle lane (5' min. with curb/gutter) |
| X | Shared-use path (10' min.) |
| | Detached Sidewalk with 4' min. buffer |
| | Sidewalk (5' min.) |

| | |
|---|---|
| | Wide Sidewalk (8' min.) |

Other:

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

| | |
|---|---|
| | Bridge (overpass) |
| | Tunnel (underpass) |
| | Safe Routes to School |
| 0 | Signalized Crossing |
| 1 | Signalized midblock crossing/HAWK |
| 2 | Countdown Pedestrian Signal |
| 10 | Number of Bike racks/lockers |
| 0 | Number of Drinking Fountains |
| 20 | Number of Way-finding Signs |
| 10 | Number of Trash receptacles |

| | |
|---|---|
| 0 | Number of new openings in street walls |
| 80 | Number of Trees |
| 1 | Number of Shade Structures |
| 10 | Number of Seating/Rest Area(s) |
| 10 | Number of bicycle/pedestrian counting devices |

Other:

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

The project area includes Salt River Project and City of Tempe right-of-way area that is largely unpaved, unlit and non-ADA accessible. The proposed multi-use path would connect residents from south Tempe, Guadalupe and Phoenix to numerous shopping and employment centers. The proposed project site is currently an unpaved canal bank and non-ADA accessible. The project would provide a continuous non-motorized path that will connect residents from the cities of Tempe, Phoenix and the Town of Guadalupe to shopping, employment centers, schools, parks and transit services.

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

The project consists of paving 10-foot wide multi use path; striping for bicycle lanes; developing and installing way-finding signs; lighting; signalized crossing; bike and ped amenities, such as bike racks.

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

Provide bike and pedestrian commute and recreational facility that connects activity centers within the City of Tempe and also to the cities of Phioenix, Chandler, and Guadalupe.

6. Please provide a site safety / crash history, and provide a source for this information.

Please describe any car-bicycle and car-pedestrian crashes on streets within 2-mile radius of the project (within the last 5 years). You may attach crash reports or summarize their results below.

From 2010 to 2012: 17 Perdestrian accidents, including 1 incapacitating injury and 33 Bicycle accidents including 3 incapacitating injuries.

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

| | |
|---|---|
| | Wide bike lanes (6'-7') |
| | Wide sidewalk (8' min.) |
| | Grade-separated crossing (overpass or underpass) |
| X | Signalized crossing/Ped countdown/HAWK |
| X | Lighting |
| X | Striping/re-striping of roadway |
| X | Countdown signals |

Buffer Zone, Width

Other

## PART B-PROJECT DESCRIPTION

8. How does this project improve upon an existing safety issue?

The project will provide off-street bike and pedestrian facilities that will minimize conflict between automobiles and bikes and pedestrians.

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

The project will provide 10-foot wide concrete path and ADA compliant access points at canal crossings. The project will also provide signalized crossings that will make it easier for people with disabilities to safely cross major arterial and collector streets. Any non- compliant driveway will also be improved to meet ADA standards.

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

Providing a 10-foot wide multi-use pathway will encourage people to use Highland Canal as recreational destination. With the addition of pedestrian and bike amenities such as benches and shading such as trees, and the addition of art at

11. Connectivity: (Check all that apply)

[X] Project fills a gap in the system
Explain:
Path would link Tempe, Guadalupe, Chandler, and Phoenix. No continous pathway system exist between the

[X] Project connects to other local bikeways
List of connected bikeways:
Western Canal; Kyrene Path;

[X] Multi Jurisdicional Project
List of Participating Jurisdictions:
Town of Guadalupe Phase 1

[15] Total length of facilities connected by this project (in miles)

12. 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.

[28] Within 1/2 mile
List routes and frequency:
RTE 56 - 15 Minute Peak - 30 minute all day; RTE 108 - 30 minute all day (Tempe); RTE 65 - 30 minute all day; RTE 66 - 30 minute all day; RTE 77- 15 Minute Peak -30 Minute all day; RTE 62 - 30 Minute All Day

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

[1] Within 1/2 mile
List:
Arizona Mills Mall

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

This path project would link neighborhoods from the City of Tempe and Town of Guadalupe from Baseline Road to the north to Auto Loop Drive in Tempe. The proposed project would provide a more direct route to major regional shopping and employment destinations and a more comfortable travel corridor for all residents, especially the less experienced and recreational bike users. The project would provide easier access, along a safe, convenient, and dedicated non-

## PART B-PROJECT DESCRIPTION

15. Number of activity centers (parks, libraries, senior centers, recreational centers, etc.) this project will benefit:

5 Within 1/2 mile

List:

Guadalupe Town Hall; 2 Town of Guadalupe Parks; Celaya Park in Tempe

16. 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):

21 Within 1/2 mile

List:

21 Business/Commercial Parks - 88 Businesses - Although the project extends all the way to Avenida del Yaqui, the business parks only included within 1/2 mile of the proposed path to be funded.

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

1 Within 1/2 mile

List:

Frank Elementary School

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

4 Within 1/2 mile

List:

Grand Canyon University; Compadre High School; Lamson College; Everest University;

19. What are the demographics of the area served:

MAG Demographic Mapping

3369 People Per Square Mile

21 % Families in Poverty

Use the MAG Demographic Mapping link above. Zoom in to your project area. On the right-hand side of the screen, under "Reporting," select "Custom." Next, select "Corridor of Interest." Left-click to begin drawing. Draw a line through all census blocks 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 blocks 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.

## PART B-PROJECT DESCRIPTION

20. 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: Highland Canal from Town of Guadalupe to Auto Loop Drive in the City of Tempe.

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:
Not Classified — Link to MAG webpage for Federal Functional Classification Map

Type of Facility the Improvement will be located on:
Project is Off-Street

2.5 Length (in Miles)

n/a Posted Speed Limit (MPH)

n/a Number of Travel Lanes

21. Please provide an estimated traffic volume (ADT) below. If project is not on a road (ex. Canal path), use nearest parallel arterial.

18,830 ADT Estimate

6/1/10 Date Counted

Name of road the traffic count was taken from
Priest Drive

Description of Methodology and Source used for the ADT Estimate
Actual count.

22. 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.
None.

23. Current ROW: (Check all that apply)

| | | | |
|---|---|---|---|
| | Agency owns all ROW Needed | | Agency owns easement |
| | ROW to be acquired | X | Agency has right-of-use (i.e. canal) |
| | Owners will donate ROW | | Condemnation may be required |

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

None

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

| | | | |
|---|---|---|---|
| | No Utility in or abutting the alignment | | Private Structures |
| X | Canals & Drainage | | |
| X | Power Lines & Cables | Other: | |
| | Pipelines, Sewer and Water | | |

## PART B-PROJECT DESCRIPTION

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

None

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

| | |
|---|---|
| X | AASHTO Guide for Bicycle Facilities |
| X | MAG Pedestrian Policies and Design Guidelines |
| X | MAG Complete Streets Guide |
| X | MAG Designing Transit Accessible Communities |
| X | NACTO Urban Bikeway Design Guide |
| | RPTA Bus Stop Program and Standards |

Other:
City of Tempe Design Guidelines

28. Jurisdiction has the following policies for improved bicycle/shared use facilties:

| | |
|---|---|
| With new development and capital improvement projects, bike lanes on arterial streets are: | Recommended |
| With new development and capital improvement projects, bike lanes on collector streets are: | Recommended |
| With pavement restoration or regular pavement maintenance on arterial streets, bike lanes are: | Recommended |
| With new development or during development retrofits, shared-use paths are: | Required |
| Bicycle program implemented, including bike education, safety events, and bike maps | Yes |
| Complete Streets Policy | Yes |

29. The project is: (Check one)

X Identified in General Plan, council adopted policy, or Capital Improvements Program (provide source)
List:
Tempe General Plan 2030; Tempe Capital Improvement Program FY 2013- 2017

Consistent with general policy/practices, but not formally identified (provide source)
Explain:

Not addressed by jurisdiction's plans, policies, or practices
Explain:

30. Identify the organization(s) responsible for on-going maintenance and repairs of the project:
City of Tempe Public Works -Transportation

31. How will the applicant measure the success of this project?
Bike and Pedestrian counts.

32. 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?
Yes. As part of the project, Tempe is requesting web accessible bicycle and pedestrian counters to be installed at locations along the proposed facility.

33. 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.
Yes. The City of Tempe will prepare news releases, post opening date on City oif Tempe website, and send postcards to neighborhoods within 1/4 mile of the facility.

## Part C - Required Attachments

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.

**PLEASE INCLUDE EACH ATTACHMENT AS A SEPARATE .JPEG OR .PDF FILE ON YOUR APPLICATION CD.**

Please insert ALL attachments between Part B and Part D on your printed application, in the order they are listed below. See below for alternate submission requirements for GIS coverage files.

## Required Attachments:

1) Please attach a map with streets labeled showing the location(s) of the proposed project, including a north arrow.

2) Please attach up to four photos indicating existing conditions in the project area (two 4x6 photos per page).

3) Please attach a simple diagram of the current typical cross section, including widths, of the segment that shows the right of way limits, sidewalks and shoulders (if any), and the lanes of travel.

## OPTIONAL Attachments:

(OPTIONAL) Attach up to two photos showing what the completed project will look like, if available (these can be photoshop, renderings, etc.).

(OPTIONAL) Attach any crash report(s) referenced in Part B, Section 2, #6.

(OPTIONAL) If the applicant will be providing a GIS coverage (shapefile or geodatabase), please see the tab labeled "GIS Transmittal Instructions"

## 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: | City of Tempe/Town of Guadalupe | Project Title: | Highland Canal Multi-Use Path Project Phase I | Application Date: | October 21 2013 |
|---|---|---|---|---|---|

| 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 | $5,000.00 | $5,000.00 | No | $0.00 | $5,000.00 | |
| | 2. PROJECT ASSESSMENT REPORT or DETAILED WORKPLAN | | | LS | 1 | $5,000.00 | $5,000.00 | No | $0.00 | $5,000.00 | |
| | 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 | $15,000.00 | $15,000.00 | No | $0.00 | $15,000.00 | |
| | **Subtotal Scoping (Part A)** | | | | | | **$60,000.00** | | **$0.00** | **$60,000.00** | |
| B. Final Preliminary Engineering Design - Stages II, III, IV And PS&E | 1. Plans, Special Provisions or Bid Manual, Cost Estimate & Schedules. | | | LS | 1 | $95,000.00 | $95,000.00 | No | $0.00 | $95,000.00 | |
| | 2. GEOTECHNICAL INVESTIGATION and Materials & Pavement Design Report | | | LS | 1 | $5,000.00 | $5,000.00 | No | $0.00 | $5,000.00 | |
| | 3. DRAINAGE REPORT | | | LS | 1 | $10,000.00 | $10,000.00 | No | $0.00 | $10,000.00 | |
| | 4. SWPPP | | | LS | 1 | $7,500.00 | $7,500.00 | No | $0.00 | $7,500.00 | |
| | **Subtotal PE (Part B)** | | | | | | **$117,500.00** | | **$0.00** | **$117,500.00** | |
| | **Subtotal Preliminary Engineering (Part A + Part B)** | | | | | | **$177,500.00** | | **$0.00** | **$177,500.00** | |
| C. Right-of-Way Acquisition | 1. Right-of-Way Acquisition | | | LS | 1 | $0.00 | $0.00 | No | $0.00 | $0.00 | |
| | **Subtotal Right-of-Way Acquisition (Part C)** | | | | | | **$0.00** | | **$0.00** | **$0.00** | |
| D. Utility Relocation | 1. Utility Relocation | | | LS | 1 | $15,000.00 | $15,000.00 | No | $0.00 | $15,000.00 | |
| | **Subtotal Utility Relocation (Part D)** | | | | | | **$15,000.00** | | **$0.00** | **$15,000.00** | |
| 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 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Site Preparation | | LS | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Demolition | Sawcut | LF | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | | Remove Structures and Obstructions | LS | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | | Remove Fencing | LF | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | | Remove Structural Concrete | CY | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | | Remove Asphaltic Concrete Pavement | CY | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | | Remove Concrete Sidewalks, Slabs | CY | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Hazmat Abatement | | LS | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Retaining Wall - Reinforced Concrete Cantilevered | | SF | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Earthwork | General Excavation | CY | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | | Drainage Excavation | CY | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | | Structural Excavation | CY | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | | Structural Backfill | CY | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | | Borrow (In Place) | CY | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Curb & Gutter | | LF | 600 | $12.00 | $7,200.00 | Yes | $6,789.60 | $410.40 | |
| | | Aggregate Base | | CY | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Pathway Or Sidewalk Materials | Concrete | SF | 32,860 | $10.00 | $328,600.00 | Yes | $309,869.80 | $18,730.20 | |
| | | | Colored Concrete | SF | 1,500 | $15.00 | $22,500.00 | Yes | $21,217.50 | $1,282.50 | |
| | | | Stamped Color Concrete | SF | 0 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | | Precast Concrete Pavers | SF | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | | Asphaltic Concrete | Ton | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | | Polymer or Resin Stabilized Surface | SF | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Crosswalk Enhancement | Concrete Pavers | SF | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | | Stamped Asphalt | SF | 1,000 | $18.00 | $18,000.00 | Yes | $16,974.00 | $1,026.00 | |
| | | | Stamped Concrete | SF | 0 | $25.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | | Concrete | SF | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | | Integral Color Concrete | SF | 5 | $5,000.00 | $25,000.00 | Yes | $23,575.00 | $1,425.00 | |
| | | Pedestrian ADA Ramp | | SF | 10 | $2,500.00 | $25,000.00 | Yes | $23,575.00 | $1,425.00 | |
| | | Culvert Extensions | | LF | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Pedestrian Lighting Including Conduit And Trenching | | Each | 50 | $4,500.00 | $225,000.00 | Yes | $212,175.00 | $12,825.00 | |
| | | Handrail | Standard | LF | 201 | $35.00 | $7,035.00 | Yes | $6,634.01 | $401.00 | |
| | | | Decorative | LF | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Subtotal Hardscape Construction | | | | | $658,335.00 | | $620,809.91 | $37,525.10 | |

## 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: | City of Tempe/Town of Guadalupe | Project Title: | Highland Canal Multi-Use Path Project Phase I | Application Date: | October 21 2013 |
|---|---|---|---|---|---|

| 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 | $35,000.00 | $35,000.00 | Yes | $33,005.00 | $1,995.00 | |
| | | Trees (15 Gallon Size) | Each | 60 | $600.00 | $36,000.00 | Yes | $33,948.00 | $2,052.00 | |
| | | Trees (5 Gallon Size) | Each | 20 | $250.00 | $5,000.00 | Yes | $4,715.00 | $285.00 | |
| | | Shrubs (5 Gallon Size) | Each | 150 | $120.00 | $18,000.00 | Yes | $16,974.00 | $1,026.00 | |
| | | Shrubs (1 Gallon Size) | Each | 50 | $80.00 | $4,000.00 | Yes | $3,772.00 | $228.00 | |
| | | Cactus (5 Gallon Size) | Each | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Mulch - Decomposed Granite | CY | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Mulch - Organic | CY | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Topsoil | CY | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Seeding | Acre | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Turf Sod | SY | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Boulders | Each | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Irrigation System - Drip | SF | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Irrigation System - Turf | SF | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Sleeving For Irrigation System - Directional Bore | LF | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Sleeving For Irrigation System - Cut and Patch | LF | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Landscape Header Curb | LF | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Landscape Establishment | LS | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Subtotal Landscaping & Irrigation Items | | | | $98,000.00 | | $92,414.00 | $5,586.00 | |
| | 3. Site Furnishings | Benches | Each | 10 | $400.00 | $4,000.00 | Yes | $3,772.00 | $228.00 | |
| | | Seatwalls | LF | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Bike Racks | Each | 10 | $65.00 | $650.00 | Yes | $612.95 | $37.05 | |
| | | Trash Receptacles | Each | 10 | $300.00 | $3,000.00 | Yes | $2,829.00 | $171.00 | |
| | | Drinking Fountains | Each | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Signage (Standard Traffic Control) | Each | 20 | $65.00 | $1,300.00 | Yes | $1,225.90 | $74.10 | |
| | | Signage (Wayfindlng) | Each | 12 | $300.00 | $3,600.00 | Yes | $3,394.80 | $205.20 | |
| | | Tree Grates | Each | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Subtotal Site Furnishings | | | | $12,550.00 | | $11,834.65 | $715.35 | |
| | 4. Other Construction Items. Also, Itemized Line Items For Non-Infrastructure Projects. (Insert Additional Rows If Necessary) | Bicycle and Pedestrian Counter | Each | 6 | $5,800.00 | $34,800.00 | Yes | $32,816.40 | $1,983.60 | |
| | | HAWK Signal | | 1 | $150,000.00 | $150,000.00 | Yes | $141,450.00 | $8,550.00 | |
| | | Canal Bridge Crossings | | 2 | $120,000.00 | $240,000.00 | Yes | $226,320.00 | $13,680.00 | |
| | | Irrigation Control System | | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Shade Structure | | 1 | $20,000.00 | $20,000.00 | Yes | $18,860.00 | $1,140.00 | |
| | | | | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | | | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | | | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | | | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | | | 1 | $0.00 | $0.00 | Yes | $0.00 | $0.00 | |
| | | Sutotal Other Construction | | | | $444,800.00 | | $419,446.40 | $25,353.60 | |
| | 5. Mobilization And Administration Costs | Contractor Mobilization | LS | 1 | $18,000.00 | $18,000.00 | No | $0.00 | $18,000.00 | |
| | | Traffic Control | LS | 1 | $15,000.00 | $15,000.00 | Yes | $14,145.00 | $855.00 | |
| | | Construction Survey & Layout | LS | 1 | $60,000.00 | $60,000.00 | Yes | $56,580.00 | $3,420.00 | |
| | | Construction Contingencies | LS | 1 | $125,000.00 | $125,000.00 | Yes | $117,875.00 | $7,125.00 | |
| | | Construction Administration | LS | 1 | $35,584.00 | $35,584.00 | Yes | $33,555.71 | $2,028.29 | |
| | | Subtotal Mobilization & Administration Costs | | | | $253,584.00 | | $222,155.71 | $31,428.29 | |
| | **Subtotal Construction Or Implementation Cost (Part E)** | | | | | **$1,467,269.00** | | **$1,366,660.67** | **$100,608.33** | |
| **F. Total Scoping, PE, Right-of-Way Acquisition, Utility Relocation, and Construction (Part A, B, C, D, and E)** | | | | | | **$1,659,769.00** | | **$1,366,660.67** | **$293,108.33** | |
| **G. Adot Fee For Pe Reviews And Staff Charges (The higher of $20,000 or 2% of Total Cost (Part F))** | | | | | | **$33,195.38** | No | $0.00 | $33,195.38 | |
| **H. Total Project Cost Including ADOT Fees (Part F + Part G)** | | | | | | **$1,692,964.38** | | **$1,366,660.67** | **$326,303.71** | |

## PART E - TOTAL PROJECT SCHEDULE AND BUDGET INCLUDING ALL SEGMENTS

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 23-26 in Part B.

| Cost Estimate for the Project Including ALL Segments | Cost | Additional Notes (if needed) |
|---|---|---|
| 1.ADOT Fee | $33,195 | Tempe only pays environmental and design review fees. |
| 2. Design | $177,500 | |
| 3. Right of way | $0 | |
| 4. Utilities | $15,000 | |
| 5. Construction | $1,467,269 | |
| 6. Total Cost | $1,692,964 | |

| | |
|---|---|
| 7. Will the agency maintain the improvement after it is completed? | Yes |
| 8. Expected Annual Maintenance Cost | 4,000 |
| 9. Identify Source of Maintenance Funds | Transit Tax |

| Requested MAG Programming | Year | Local Funding Source | Local Cost | Federal Cost | Total Cost |
|---|---|---|---|---|---|
| 10. Design | 2014 | Sales Tax | $177,500 | Not Available | $177,500 |
| 11. ADOT Fee | 2015 | Sales Tax | $33,195 | Not Available | $33,195 |
| 12. Right of way and Utilities | 2015 | | $15,000 | Not Available | $15,000 |
| 13. Construction | 2016 | Sales Tax | $100,608 | $1,366,661 | $1,467,269 |
| 14. Total Costs | | | $326,304 | $1,366,661 | $1,692,964 |

## PART F - SIGNATURE AND CHECKLIST

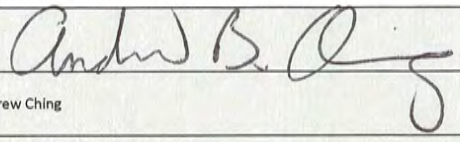
# Checklist

**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 |
| Safe Routes to School, fields 9-12 are complete (if applicable) | Yes |
| **PART B - Project Description** | **Complete?** |
| Fields 1 - 11 (Project Description) are complete | Yes |
| Fields 12– 14 (Transit and Access) are complete | Yes |
| Fields 15 – 19 (Attractors and Demographics) are complete | Yes |
| Fields 20 – 26 (Traffic, Environmental, ROW, and Utilities) are complete | Yes |
| Fields 27 – 29 (Guidelines, Policies, and Plans) are complete | Yes |
| Fields 30 – 33 (Maintenance and Performance Measurement) are complete | Yes |
| **PART C - Required Attachments** | **Complete?** |
| Field 1 - Project map is provided in the printed application and the PDF application | Yes |
| Field 2 - Up to 4 photos of existing conditions are provided in the printed application and the PDF application (two 4x6 per page). | Yes |
| Field 3 - Cross-section(s) provided in the printed application and the PDF application. | Yes |
| (OPTIONAL)- Up to 2 photos/renderings of the completed project are provided in the printed application and the PDF application. | Yes |
| (OPTIONAL) - Crash report(s) are provided in the printed application and the PDF application | Yes |
| (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 – 6 are complete and costs are accurate | Yes |
| Field 7 - 9 are complete | Yes |
| Fields 10 – 13 Years are complete | Yes |
| Fields 10 – 13 Local Funding Sources are complete | Yes |
| Fields 10 – 13 Local Costs are complete and accurate | Yes |
| Field 10 - 13 Federal Costs are complete and accurate | Yes |
| Field 14 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 |
| (SAFE ROUTES TO SCHOOL PROJECTS ONLY) - Additional signatures and related name, date, and title are completed. | No |

## 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: | Andrew Ching |
| Title: | City Manager- City of Tempe |
| Date: | 21-Oct-13 |

## Complete the following ONLY if this is a Safe Routes to School Project.

Note: All signatures indicate an agreement in principle and a partnership on this project between the applicant and the signing organization. Although not all signatures are required, applications that include more signatures will be ranked higher

**School/Site Official (required):**
(Principal, assistant principal, teacher-in-charge, PE Teacher, SRTS coordinator)

| | |
|---|---|
| Signature: | |
| Name: | |
| Title: | |
| Date: | |

**School District official (required):**

| | |
|---|---|
| Signature: | |
| Name: | |
| Title: | |
| Date: | |

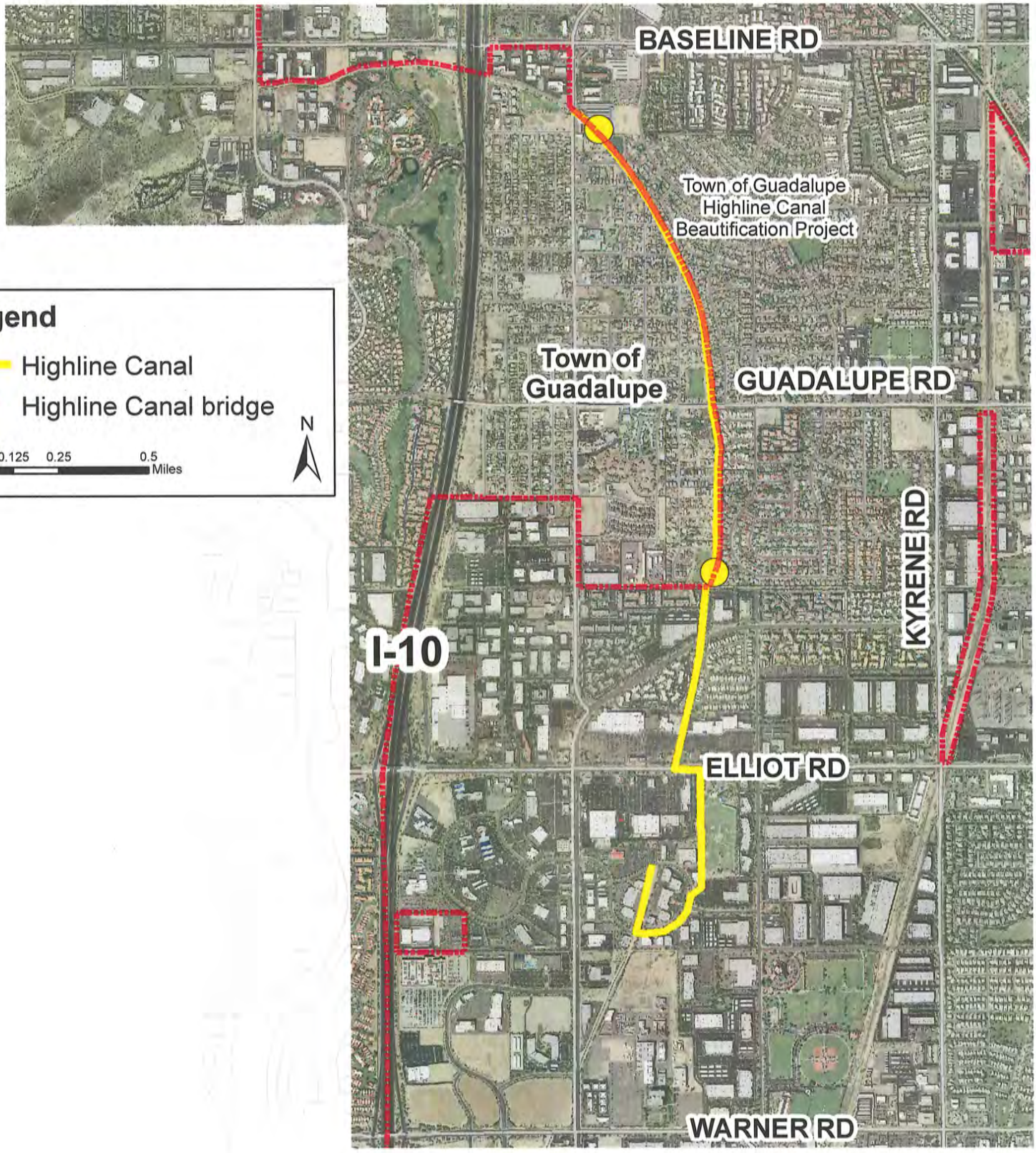
**Law Enforcement Official (required):**

| | |
|---|---|
| Signature: | |
| Name: | |
| Title: | |
| Date: | |

# Highline Canal Multi-Use Path Phase I

# Attachments

# Tempe Highline Canal - Phase 1

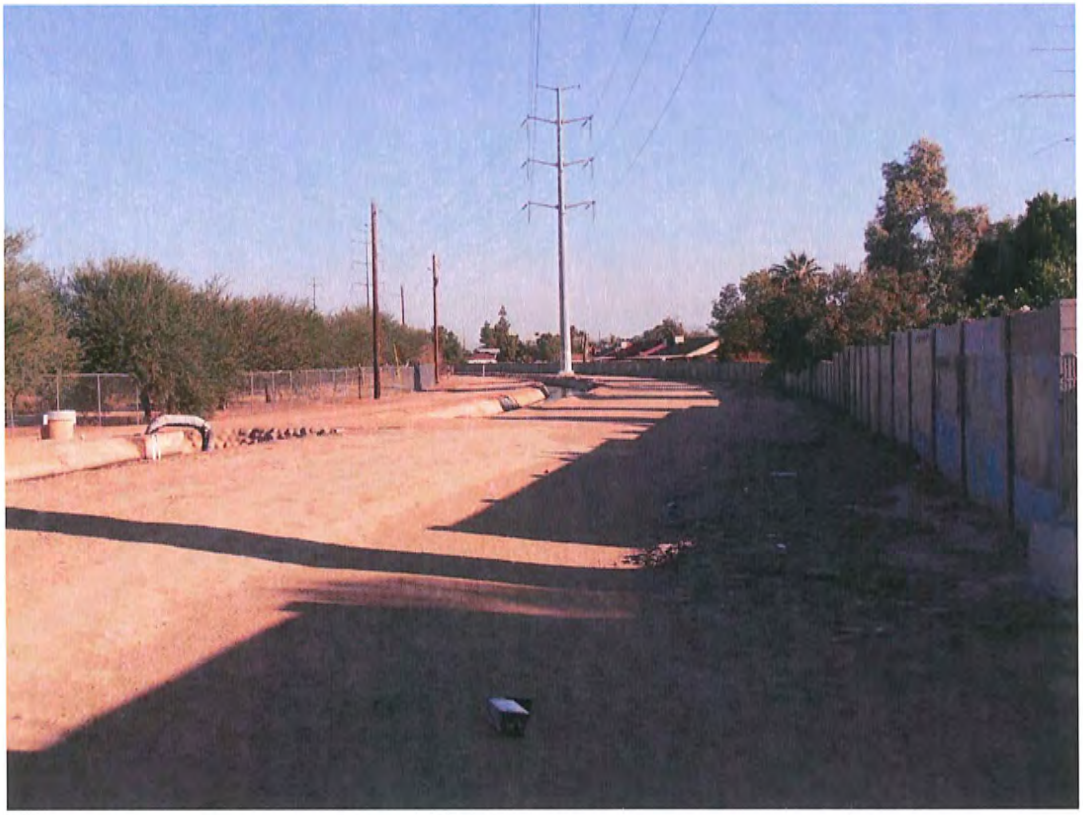



Source:
City of Tempe, Public Works, Transportation Division

Created: October 21, 2013

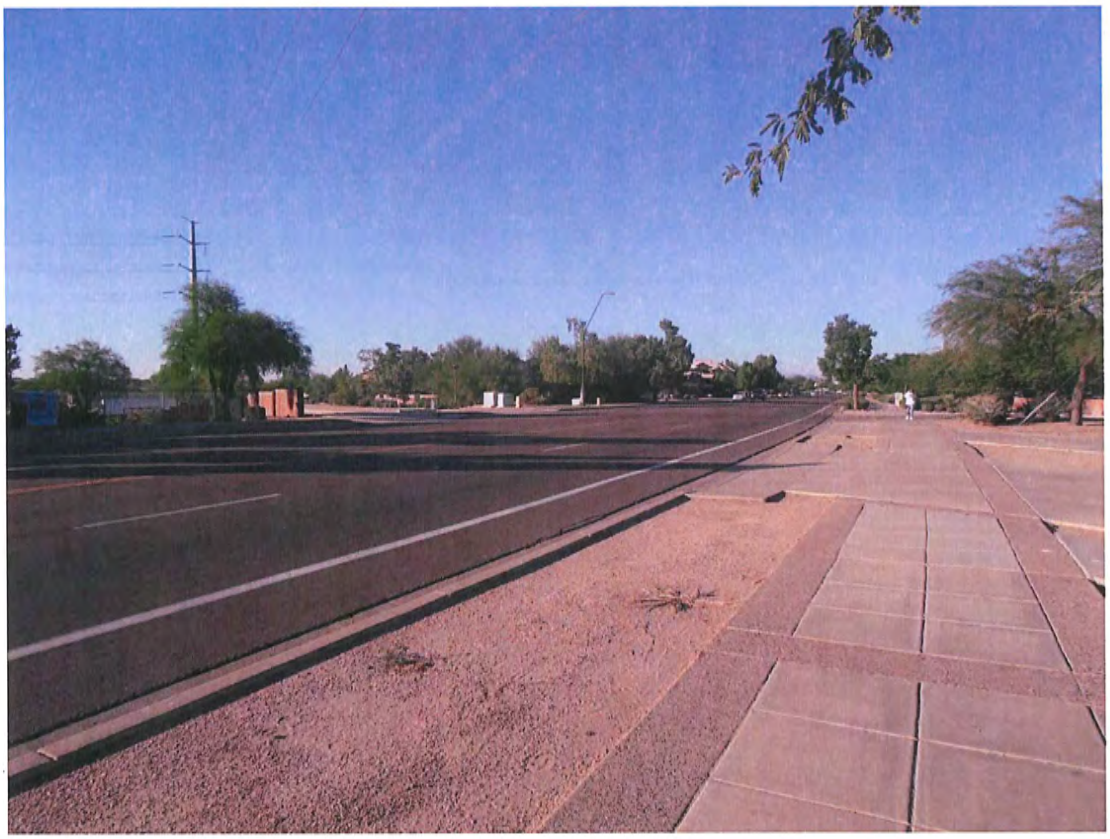
# Highline Canal Multi-Use Path Phase 1

Town of Guadalupe and City of Tempe Border



Town of Guadalupe and City of Tempe Border

# Highline Canal Multi-Use Path Phase 1



Highline Canal at Grove Parkway

Highline Canal at Grove Parkway

# Bicycle Crashes Between 2010 and 2012 North of Auto Drive

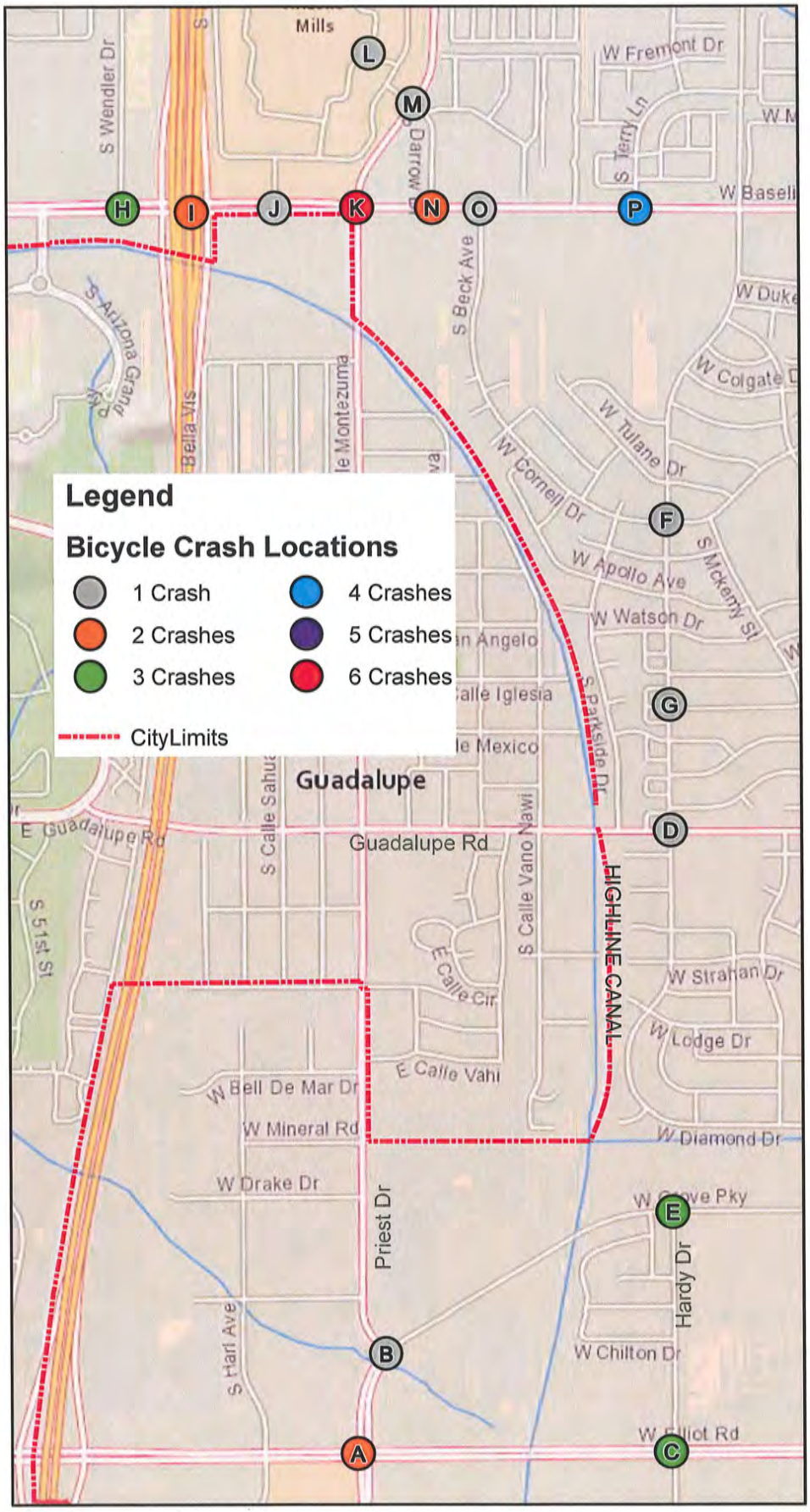
| | |
|---|---|
| **A-Elliot Rd & Priest Dr** | |
| Possible Injury | 1 |
| Non-Incapacitating Injury | 1 |
| **B-Priest Dr & Grove Pkwy** | |
| Non-Incapacitating Injury | 1 |
| **C-Elliot Rd & Hardy Dr** | |
| Possible Injury | 2 |
| Non-Incapacitating Injury | 1 |
| **D-Guadalupe Rd & Hardy Dr** | |
| No Injury | 1 |
| **E-Hardy Dr & Grove Pkwy** | |
| Possible Injury | 2 |
| Non-Incapacitating Injury | 1 |
| **F-Hardy Dr & Cornell Dr** | |
| Non-Incapacitating Injury | 1 |
| **G-Hardy Dr & Westchester Ave** | |
| Incapacitating Injury | 1 |
| **H-Baseline Rd & Wendler Dr** | |
| Possible Injury | 3 |
| **I-Baseline Rd & I-10 Fwy** | |
| Non-Incapacitating Injury | 2 |
| **J-Baseline Rd & Lindon Ln** | |
| Incapacitating Injury | 1 |
| **K-Baseline Rd & Priest Dr** | |
| No Injury | 1 |
| Possible Injury | 2 |
| Non-Incapacitating Injury | 3 |
| **L-Darrow Dr & AZ Mills Cir** | |
| Non-Incapacitating Injury | 1 |
| **M-Priest Dr & Darrow Dr** | |
| Possible Injury | 1 |
| **N-Baseline Rd & Darrow Dr** | |
| No Injury | 1 |
| Possible Injury | 1 |
| **O-Baseline Rd & Beck Ave** | |
| Non-Incapacitating Injury | 1 |
| **P-Baseline Rd & Terry Ln** | |
| No Injury | 1 |
| Possible Injury | 2 |
| Non-Incapacitating Injury | 1 |

| Injury Severity | Count |
|---|---|
| No Injury | 4 |
| Possible Injury | 14 |
| Non Incapacitating Injury | 13 |
| Incapacitating Injury | 2 |
| Fatal | 0 |
| **Total Crashes** | **33** |

Crashes shown are located within a half mile of the portion of the Highline Canal located within Tempe city limits between Auto Drive and Priest Drive.

N

1 inch equals 0.25 miles



# Pedestrian Crashes Between 2010 and 2012

## Legend

### Pedestrian Crash Locations

- 1 Crash
- 3 Crashes
- CityLimits

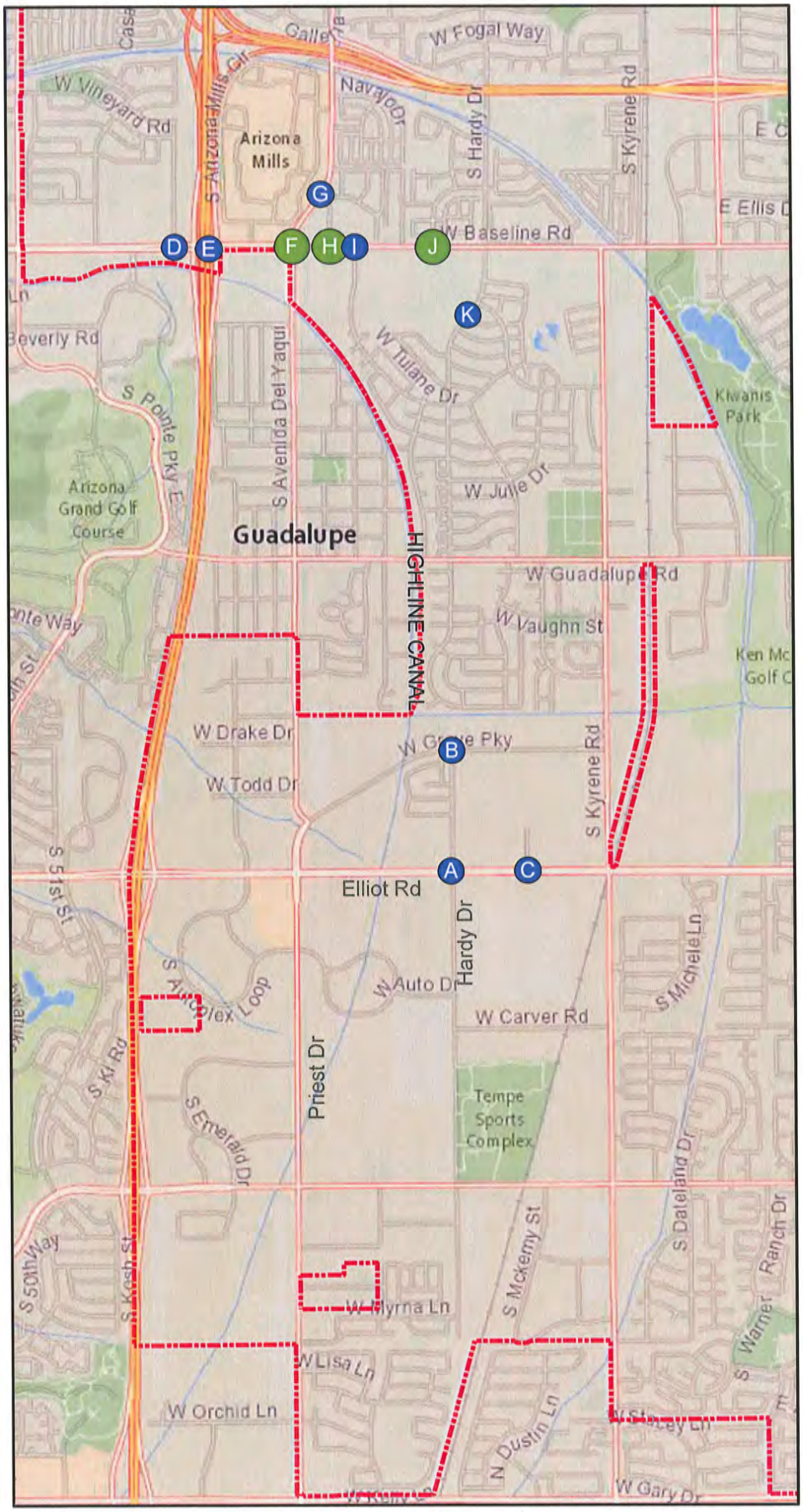
| | |
|---|---|
| **A-Hardy Dr & Elliot Rd** | |
| Non Incapacitating Injury | 1 |
| **B-Hardy Dr & Grove Pkwy** | |
| Possible Injury | 1 |
| **C-Roosevelt St & Elliot Rd** | |
| Non Incapacitating Injury | 1 |
| **D-Baseline Rd & Wendler Dr** | |
| Non Incapacitating Injury | 1 |
| **E-Baseline Rd & I-10 Fwy** | |
| Possible Injury | 1 |
| **F-Priest Dr & Baseline Rd** | |
| Possible Injury | 1 |
| Non Incapacitating Injury | 2 |
| **G-Priest Dr & Darrow Dr** | |
| Non Incapacitating Injury | 1 |
| **H-Baseline Rd & Darrow Dr** | |
| Possible Injury | 2 |
| Non Incapacitating Injury | 1 |
| **I-Baseline Rd & Beck Ave** | |
| Possible Injury | 1 |
| **J-Baseline Rd & Terry Ln** | |
| Possible Injury | 2 |
| Incapacitating Injury | 1 |
| **K-Hardy Dr & Harvard Dr** | |
| Non Incapacitating Injury | 1 |

| Injury Severity | Count |
|---|---|
| No Injury | 0 |
| Possible Injury | 8 |
| Non Incapacitating Injury | 8 |
| Incapacitating Injury | 1 |
| Fatal | 0 |
| **Total Pedestrian Crashes** | **17** |

Crashes shown are located within a half mile of the portion of the Highline Canal located within Tempe city limits between Ray Road and Priest Drive.

N

1 inch equals 0.5 miles

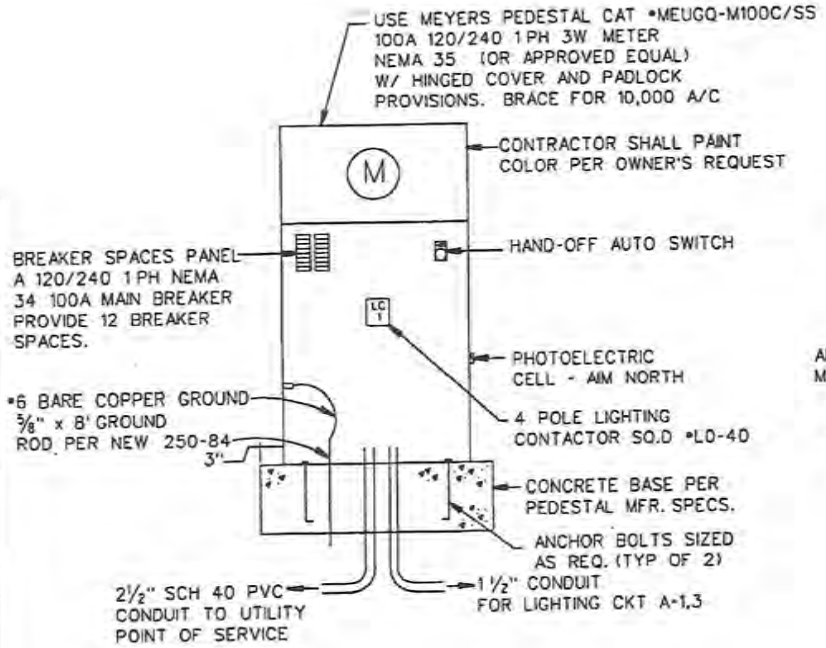


# TEMPE SUPPLEMENT TO THE M.A.G. UNIFORM STANDARD DETAILS AND SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

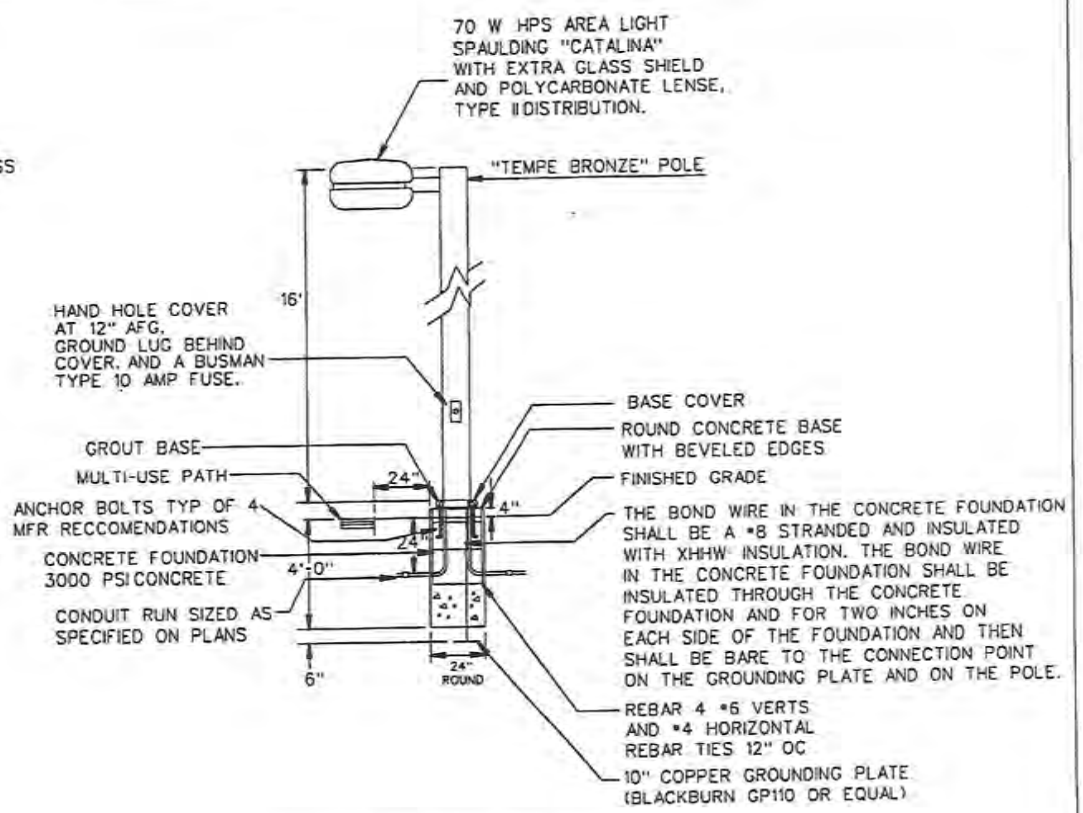
## PUBLIC WORKS DEPARTMENT

2010
ARIZONA

The details and specifications are also accessible through our web site at www.tempe.gov/engineering




ELECTRICAL SERVICE - PEDESTAL DETAIL
MEYERS #MEUGLD/S-M200/TB-AZ-24 CKT
OR APPROVED EQUAL




MULTI-USE PATH LIGHT DETAIL

GENERAL NOTES

1. MULTI-USE PATH LIGHT TO BE INSTALLED 2' BACK OF PATH TO FACE POLE UNLESS NOTED OTHERWISE ON PLANS

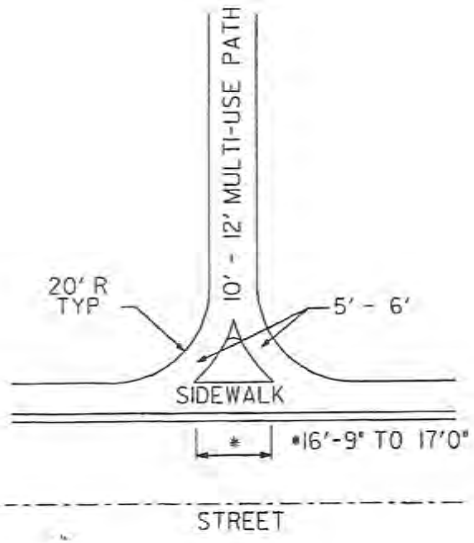
2. MULTI-USE PATH LIGTING WITHIN RIO SALADO OVERLAY DISTRICT SHALL FOLLOW THE RIO SALADO DESIGN GUIDELINES AND DETAILS

3. ALL POLES TO BE FUSED USING WATERPROOF FUSE HOLDERS IN HAND HOLE AND IN J-BOX. BUSMAN BUHEBAA OR EQUIVALENT FUSE HOLDER.

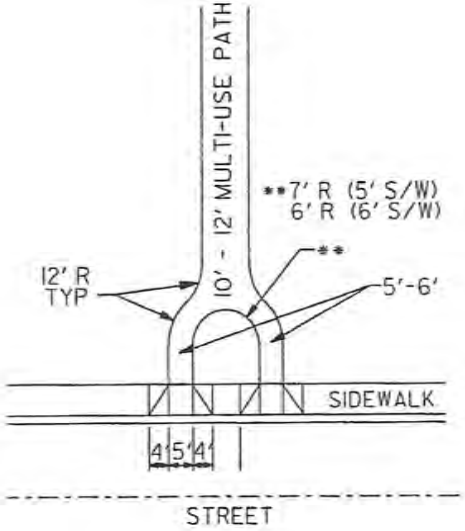
4. FOR INSTALLATIONS IN APS AREA, A BUSMAN TYPE 15 AMP FUSE IS REQUIRED IN THE J-BOX AND A 10 AMP INLINE FUSE IN THE HANDHOLE.

APPROVED: Andrea 6/11/2010
DEPUTY PUBLIC WORKS MANAGER / CITY ENGINEER — DATE

| CITY OF TEMPE<br>PUBLIC WORKS DEPARTMENT | MULTI-USE PATH LIGHTING DETAILS | DETAIL T-656<br>1 OF 3<br>REVISED 4, 2010 |
|---|---|---|

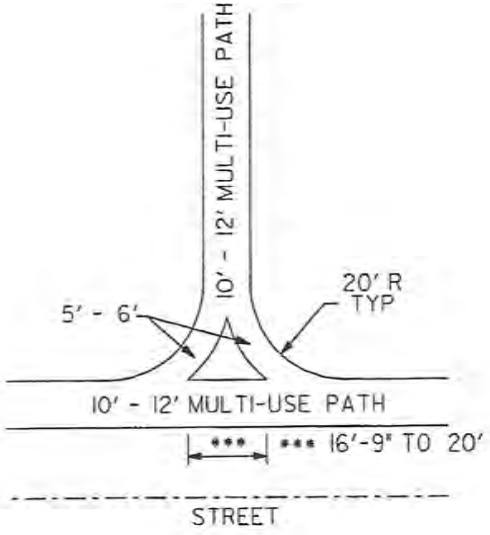



Example 'A'
MULTI-USE PATH INTERSECTION AT STREET WITHOUT A CROSSING




WING WIDTH
4" CURB = 4' WING
6" CURB = 6' WING
7" CURB = 7' WING

Example 'B'
MULTI-USE PATH INTERSECTION AT STREET WITH CROSSING

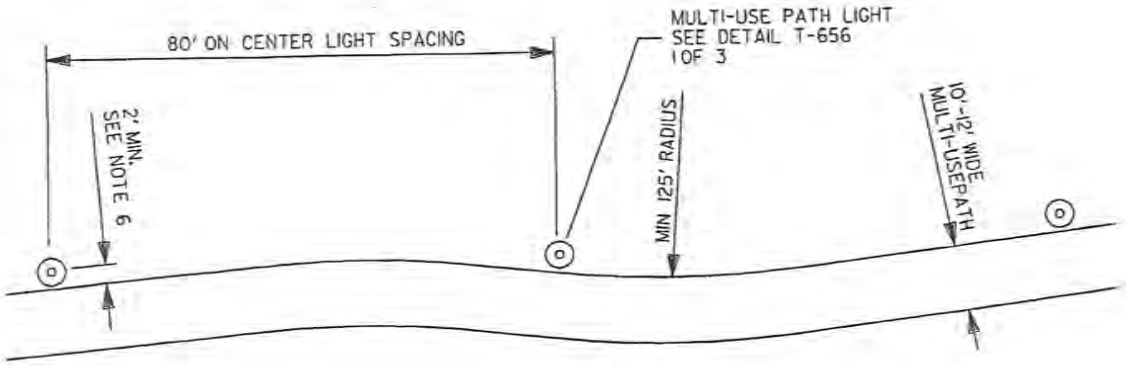



Example 'C'
MULTI-USE PATH AT MULTI-USE PATH INTERSECTION

APPROVED: Harry Fredrickson 6/19/98
DEPUTY PUBLIC WORKS DIRECTOR — DATE

APPROVED: Howard C. Hayes 12/3/98
CITY ENGINEER — DATE

| CITY OF TEMPE<br>PUBLIC WORKS DEPARTMENT | MULTI-USE PATH AT T-INTERSECTIONS | DETAIL T-656<br>2 OF 3<br>REVISED 1998 |
|---|---|---|




LIGHTING

1. LUMINAIRE FIXTURE SHALL BE SPAULDING "CATALINA" OR EQUAL.

2. LUMINAIRE SHALL BE 70 WATT HIGH PRESSURE SODIUM VAPOR, TYPE II DISTRIBUTION.

3. LUMINAIRE SHALL BE MOUNTED AT 16 FOOT MOUNTING HEIGHT ON POLES TO CONCRETE FOUNDATIONS PER MANUFACTURER'S SPECIFICATIONS.

4. POLES SHALL BE PLACED AT 80 FEET ON CENTER.

5. PROVIDE 1" CONDUIT SCHEDULE 40 FOR CONDUIT RUNS AND TO THE BASE OF THE POLE.

6. POLES SHALL BE 2 FEET FROM THE EDGE OF THE MULTI-USE FACILITY TO THE FACE OF POLE UNLESS NOTED OTHERWISE ON PLANS.

7. LUMINAIRES SHALL BE WIRED FOR 120/240 VOLT APPLICATION.

8. LIGHTING SYSTEMS SHALL BE METERED USING MEYERS 100 AMP 120/240 SINGLE PHASE 3W METER PEDESTAL. THIS INCLUDES A HAND-OFF-AUTO SWITCH, PHOTO ELECTRIC CELL AIMED NORTH, AND A 4 POLE LIGHTING CONTACTOR SQ. D" LO-40.

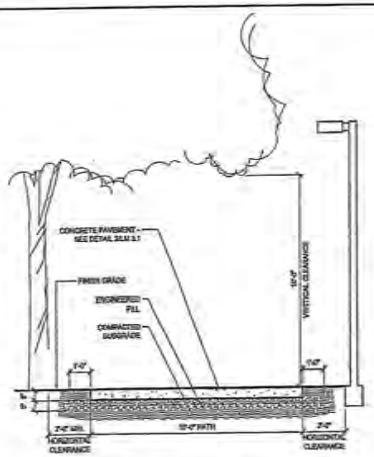
| RECOMMENDED MULTI-USE PATH DESIGN CRITERIA | |
|---|---|
| DESIGN SPEED | 20 MPH |
| MAXIMUM GRADE | 5% |
| MINIMUM PATH WIDTH | 10 FEET |
| RECOMMENDED PATH WIDTH | 12 FEET |
| * MINIMUIM CURVE RADIUS | 95 FEET |
| * RECOMMENDED CURVE RADIUS | 125 FEET |
| HORIZONTAL CLEARANCE | 2 FEET ON EACH SIDE OF MULTI-USE FACILITY |
| VERTICAL CLEARANCE | 8 FEET FOR ANYTHING OVER MULTI-USE FACILITY |
| DIRECTIONAL DIVISIONS | MULTI-USE PATHS SHALL HAVE DIRECTIONAL DIVISIONS AT INTERSECTIONS WITH A STREET OR ANOTHER MULTI-USE PATH |

*CURVELINEAR MULTIUSE PATHS NOT DESIRABLE, BUT WHEN UNAVOIDABLE, THESE RADII APPLY.

APPROVED: Harry Trudsow 12/19/98
DEPUTY PUBLIC WORKS DIRECTOR — DATE

APPROVED: Howard C. Nevins 12/3/98
CITY ENGINEER — DATE

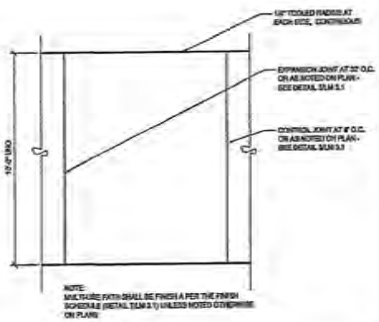
| CITY OF TEMPE<br>PUBLIC WORKS DEPARTMENT | MULTI-USE PATH<br>DESIGN AND LIGHTING DETAILS | DETAIL T-656<br>3 OF 3<br>REVISED 1998 |
|---|---|---|




NOTES:
1. CONCRETE COLOR AND FINISH PER FINISH SCHEDULE
2. WHERE PATH MEETS EXISTING OR NEW PAVED SURFACES THE TWO SURFACES SHALL BE FLUSH.
3. MAXIMUM LONGITUDINAL GRADE SHALL BE 4.8%.

## 1 MULTI-USE PATH

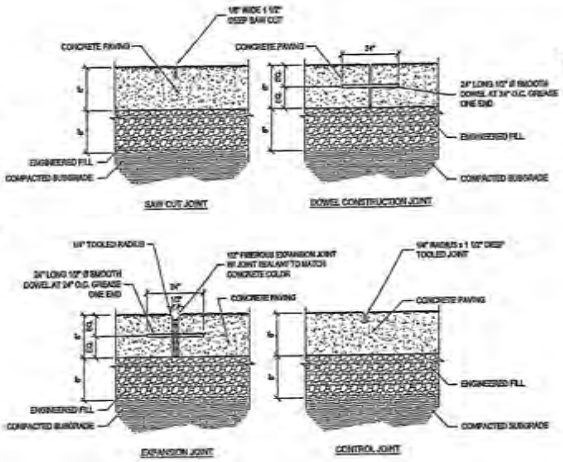
SCALE: 3/8" = 1'-0"




NOTE:
MULTI-USE PATH SHALL BE FINISH A PER THE FINISH SCHEDULE (METAL TEAM 3.1) UNLESS NOTED OTHERWISE ON PLANS

## 2 CONCRETE PAVEMENT

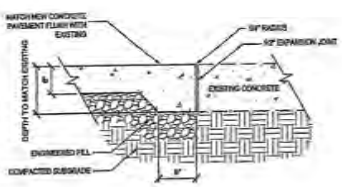
SCALE: 3/8" = 1'-0"




NOTES:
1. WALKWAYS SHOWN ON PLANS AS HAVING CONVEX/CONCAVE SHAPES ARE TO HAVE SMOOTH RADII AND CURVE TRANSITIONS, AND ARE TO BE FORMED TO ACHIEVE THIS CONDITION.
2. INSTALL VOID CAP OVER TOP EDGE OF EXPANSION JOINT PRIOR TO POURING CONCRETE. REMOVE ONLY PRIOR TO CAULKING INSTALLATION.
3. FINAL GRADE AT DECOMPOSED GRANITE TO BE 1" BELOW ADJACENT PAVING. FINISHED GRADE AT TURF TO BE 1" BELOW ADJACENT PAVING.

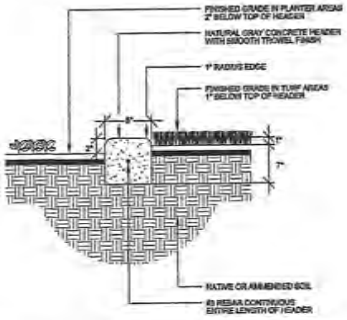
## 3 CONCRETE JOINTS

SCALE: N.T.S.



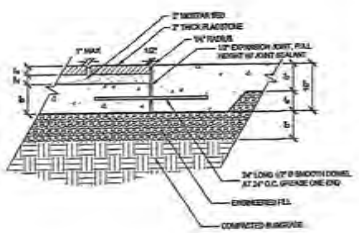

## 4 NEW CONCRETE ADJACENT TO OLD

SCALE: 1" = 1'-0"




## 5 CONCRETE HEADER
## CITY OF TEMPE DETAIL SLD011

SCALE: NTS




## 6 FLAGSTONE PAVING

SCALE: 1"=1'-0"

RECORD DRAWINGS

### FINISH SCHEDULE

CONCRETE FINISHES

| LABEL | FINISH | COLOR |
|---|---|---|
| A | MEDIUM BROOM | NATURAL GRAY |
| B | EXPOSED AGGREGATE | W/SEDIAL COLOR ELITE |
| C | EXPOSED AGGREGATE | INTEGRAL COLOR SAHARAN |
| D | FINISH | LIGHT AND CREAMY TAN |
| E | MEDIUM BROOM FINISH | INTEGRAL COLOR WHITE |
| F | WOOD FLOAT SWIRL | INTEGRAL COLOR BROWNTAN |
| G | WAVY HEAVY BROOM | INTEGRAL COLOR BROWNTAN |
| H | SMOOTH | INTEGRAL COLOR BROWNTAN |
| I | HEAVY SAND BLAST | INTEGRAL COLOR BROWNTAN |

METAL FINISHES

| | | |
|---|---|---|
| J | ELECTROSTATIC | BLUE |
| K | ELECTROSTATIC | BROWN |

## 7 FINISH SCHEDULE

SCALE: NO SCALE

epg
4445 EAST COTTON CENTER BLVD. SUITE 102
PHOENIX, ARIZONA 85040
PHONE: 602-414-4270
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SCOTT C. PETERS
EXPIRES: 09/30/2009

DEPARTMENT OF PUBLIC WORKS

CITY OF TEMPE
DIVISION OF ENGINEERING
P.O. BOX 5002 TEMPE, ARIZONA 85280

| | |
|---|---|
| SURVEYED: DRBLE | DESCRIPTION: [redacted] |
| DESIGNED: EPG | |
| DRAWN: EPG | |
| CHECKED: MSP | |
| SCALE: AS NOTED | |

DATE: APRIL 2008
PROJECT NO. 6000421
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