



Pedestrian Safety Program Update

This report provides the Transportation, Infrastructure and Innovation Subcommittee with an update on the Street Transportation Department's (Streets) Office of Pedestrian Safety activities.

THIS ITEM IS FOR INFORMATION ONLY.

Summary

To address pedestrian fatalities in Phoenix, the City Manager's Office created the Pedestrian Safety Task Force in 2018. Streets' Office of Pedestrian Safety leads and participates in the interdepartmental Pedestrian Safety Task Force, which includes representatives of the Street Transportation and Police departments, the Communications Office, and the City Manager's Office.

The Office of Pedestrian Safety has continued to seek funding for pedestrian safety related grant opportunities, provide increased educational outreach to neighborhood groups and residents, collect data on existing pedestrian safety infrastructure, increase collaboration with outside agencies, and prioritize capital improvement projects with an emphasis on pedestrian safety.

Pedestrian Fatalities

Preliminary numbers from the Arizona Department of Transportation (ADOT) show the City of Phoenix experienced 86 pedestrian fatalities on its roads in 2019. These preliminary numbers represent an increase of 28 percent over the past five years (2015 to 2019) and an increase of 91 percent over the past 10 years (2010 to 2019). Yet these numbers also show a decrease of 17 percent in pedestrian fatalities between 2018 and 2019.

Preliminary partial year data for 2020 indicates that Phoenix has seen a decrease in pedestrian fatalities compared to a year ago. The Phoenix Police Department Vehicular Homicide Unit has reported 37 fatalities from Jan. 1 to Aug. 31, 2020. This is a 36 percent decrease from the 58 fatalities reported during the same time period in 2019.

Pedestrian Safety Funding and Improvements

To address the increase in pedestrian fatalities throughout the City of Phoenix, City Council authorized Streets to allocate \$2 million in ongoing, annual Capital Improvement Program (CIP) funding to the Office of Pedestrian Safety to provide continuous funding to implement pedestrian-related safety improvements. Fiscal Year (FY) 2020 was the first year these funds were programmed.

Streets' Office of Pedestrian Safety utilizes the four "E"s of traffic safety to continue to enhance pedestrian safety in Phoenix: Evaluation, Engineering, Education, and Enforcement. In reference to Evaluation, Engineering, and Education, the following provides an overview of the activities undertaken by the Office of Pedestrian Safety to date and future activities. It should be noted that Enforcement activities are conducted by the Police Department with input from Streets.

FY 2020 Accomplishments

The Office of Pedestrian Safety funded and worked on several pedestrian safety improvements in FY 2020. Highlights are summarized below, but additional details on the accomplishments of the Office of Pedestrian Safety, including progress and projects, are detailed in **Attachment A**.

Engineering

HAWK Timing Adjustments

The Streets traffic signal team completed adjustments to the timing of all HAWK signals throughout Phoenix to provide shorter wait times for pedestrians during non-peak traffic hours. During peak hours, HAWK signals are synchronized with nearby traffic signals, but these timing adjustments allow for HAWK signals to be activated without delay during non-peak traffic hours.

Pedestrian Safety Devices

The Office of Pedestrian Safety developed a plan for the installation of new pedestrian safety devices to create a more seamless design and construction process. As these projects are typically implemented over multiple fiscal years, this part of the plan involves utilizing funds from one fiscal year for design and funds from the next fiscal year for construction.

In FY 2020, the Office of Pedestrian Safety prioritized the design of eight HAWK signals and one traffic signal in high, mid-block pedestrian collision locations. The locations are shown in **Attachment A**. The design and construction of these signals are in various stages of design and construction, but all are anticipated to be completed by the end of FY 2021. In addition, pedestrian safety funding was also used for the construction of a traffic signal at 57th Drive and McDowell Road at the Academy

of Math and Science - Desert Sky.

Streetlighting

The Office of Pedestrian Safety completed design of new streetlighting for a critical half-mile segment along 27th Avenue between Bethany Home Road and Maryland Avenue. Construction is planned for later this fiscal year. The team also began designing an additional half-mile segment along Thomas Road between 32nd and 36th Streets for construction in FY 2022. Both segments have a high incidence of pedestrian collisions over the past five years.

Pedestrian Refuge Median Islands

The Office of Pedestrian Safety designed two pedestrian refuge median islands. The first location at 43rd Avenue south of Baseline Road was installed in May 2020. This location aides school crossings at Legacy Traditional Charter School. The second location on Buckeye Road just east of Sky Harbor Circle was designed, with installation scheduled for completion in December 2020.

Crosswalk Upgrades

The Office of Pedestrian Safety upgraded 85 unsignalized crossing locations to improve driver visibility of these crosswalks. Staff utilized resident requests and field observations to add high visibility striping and yield lines, double-sided street signs, and in some locations, additional streetlights and/or ADA ramp upgrades.

Education

Pedestrian Safety Activity Book

In FY 2020, the Office of Pedestrian Safety designed a Pedestrian Safety Activity Book for children in grades three to six, which was also translated into Spanish. The team printed 13,000 copies in English and 10,000 copies in Spanish.

Educational Events and Materials

The Office of Pedestrian Safety completed the Spanish translation and printed 10,000 copies of the Pedestrian Safety Activity Book, which is geared to elementary school-aged children (in third through sixth grades).

The Office of Pedestrian Safety developed a six-week curriculum for pedestrian safety to be delivered at elementary schools. This curriculum was provided for approximately 100 third graders at Mitchell Elementary School in Maryvale. Additional classes were scheduled at other schools but were canceled due to COVID-19. Class sessions will resume as soon as it is safe to do so.

Evaluation

Partnerships for Research

As part of its evaluation efforts, Streets partnered with the Design Studio for Community Solutions at Arizona State University (ASU). This partnership aims to create a multi-pronged, interdisciplinary, and solutions-oriented engagement between both institutions on the issue of curtailing pedestrian fatalities and serious injuries in the City of Phoenix. This collaboration involved a variety of expert researchers from ASU who conducted two research studies analyzing Phoenix's pedestrian collision data. The findings and recommendations of these studies are currently being reviewed by Streets staff.

FY2021 Recommended Improvements

The Office of Pedestrian Safety's plan for utilizing its FY 2021 funding is included in **Attachment B**. The plan will continue to be focused on Engineering, Evaluation, and Education, and highlights of the FY 2021 projects and efforts are shown below:

- Improving pedestrian visibility by adding streetlights on both sides of a street where only one-sided lighting exists;
- Addressing gaps in pedestrian safety by adding single streetlights at existing crosswalks, or in roadway segments, and improving crosswalk infrastructure;
- Constructing five HAWK signals and one traffic signal at high pedestrian activity and/or collision locations;
- Designing six new HAWK signals and one traffic signal;
- Installing raised pedestrian refuge median islands at locations with high pedestrian activity;
- Improving signalized crosswalk visibility and standardize citywide details for pedestrian infrastructure;
- Funding a safety analysis tool to aid in the identification, evaluation, and prioritization of infrastructure installation projects; and
- Creating educational videos to raise awareness of pedestrian safety.

Responsible Department

This item is submitted by Deputy City Manager Mario Paniagua and Street Transportation Department.



FY 2020 Office of Pedestrian Safety Budget Accomplishments

ENGINEERING

Streetlighting: \$250,000

The Office of Pedestrian Safety completed the design of new streetlighting for a critical half-mile segment along 27th Avenue between Bethany Home Road and Maryland Avenue. Design has been completed, with construction planned for later this fiscal year.

The Office of Pedestrian Safety also initiated design of new streetlighting for an additional half-mile segment along Thomas Road between 32nd Street and 36th Street. In the last five years, there have been three pedestrian fatalities and four incapacitating injuries during the nighttime hours in this segment of Thomas Road. Construction is anticipated using FY 2021 funding and should be completed in FY 2022.

HAWK and Traffic Signals: \$780,000

The Office of Pedestrian Safety initiated the design of HAWK and traffic signals at nine high-crash locations.

Design work has been completed for three of these locations. Construction is scheduled to be completed later this fiscal year using FY 2020 funding.

- 7th Avenue and Cocopah Street (HAWK signal)
- 27th Avenue and Rovey Avenue (HAWK signal)
- 41st Street and McDowell Road (HAWK signal)

Design work is underway at six additional locations and is scheduled to be completed later this fiscal year. Construction is scheduled to be completed later this fiscal year using FY 2021 funding.

- 7th Avenue near Pima Street (HAWK signal)
- 7th Avenue and Turney Avenue (HAWK signal)
- 20th Avenue and Indian School Road (Traffic signal)
- 43rd Avenue near Pinchot Avenue (HAWK signal)
- 43rd Avenue south of Rose Lane (HAWK signal)
- Indian School Road near Amelia Avenue (HAWK signal)

The Office of Pedestrian Safety also constructed a traffic signal to signalize the crosswalk at the Academy of Math and Science – Desert Sky campus at 57th Drive and McDowell Road. Construction has been completed and the signal was activated in October 2020.



FY 2020 Office of Pedestrian Safety Budget Accomplishments

Pedestrian Refuge Median Islands: \$100,000

The Office of Pedestrian Safety designed two pedestrian refuge islands. Installation has been completed at one location, with the other planned for later this fiscal year.

- 43rd Avenue south of Baseline Road (completed)
- Buckeye Road east of Sky Harbor Circle (installation in December 2020)

Crosswalk Upgrades: \$607,000

The Office of Pedestrian Safety initially planned to upgrade 55 unsignalized crossing locations to improve driver visibility. However, through resident requests and field observations, the Office of Pedestrian Safety upgraded 85 locations. The upgrades included high visibility striping and yield lines; double-sided street signs; and in some locations additional streetlights and/or ADA ramp upgrades.

EDUCATION

Pedestrian Safety Activity Book Design and Printing: \$38,000

The Office of Pedestrian Safety designed, translated to Spanish, and printed copies of our Pedestrian Safety Activity Book geared to elementary school-aged children (in third through sixth grades). Staff printed 13,000 copies of the book in English and 10,000 copies in Spanish.

Pedestrian Safety School Outreach: \$0

The Office of Pedestrian Safety developed a six-week school curriculum focused on the use of and teaching around the Pedestrian Safety Activity Book. Staff prioritized schools within ¼-mile of pedestrian “hotspot” locations in Phoenix to provide pedestrian safety education classes.

In January 2020, the Office of Pedestrian Safety provided this curriculum for approximately 100 third graders at Mitchell Elementary School in Maryvale. Additional teaching was scheduled at other schools, but due to COVID-19 were canceled. Staff will work to reschedule with other schools as soon as it is safe to do so.



FY 2020 Office of Pedestrian Safety Budget Accomplishments

EVALUATION

Arizona State University Research: \$50,000

The Office of Pedestrian Safety worked with Arizona State University (ASU) to undertake two research studies investigating pedestrian crashes in Phoenix. ASU has finalized studies with summaries of findings and recommendations. These are currently under review by Office of Pedestrian Safety staff.

UNOBLIGATED FUNDING

FY 2020 Funds Carried Over to FY 2021: \$175,000

These funds were not obligated in FY 2020 but were carried over for use in FY 2021. The funds will be utilized for street lighting, pedestrian refuge median islands, and educational outreach materials.



FY 2021 Office of Pedestrian Safety Budget

ENGINEERING

Streetlighting for Half-Mile Single-Sided Segments: \$250,000

The Office of Pedestrian Safety is planning to fund the design of new streetlighting along 51st Avenue from Campbell Avenue to Camelback Road. In the last five years, two pedestrian fatalities and three incapacitating injuries have occurred during nighttime hours in this segment of 51st Avenue. Construction is anticipated to be funded and completed in FY 2022.

The Office of Pedestrian Safety will fund installation of new streetlighting along Thomas Road between 32nd Street to 36th Street. In the last five years, there have been three pedestrian fatalities and four incapacitating injuries during the nighttime hours in this segment of Thomas Road. Construction would utilize FY 2021 funding and should be completed in FY 2022.

HAWK and Traffic Signals: \$939,000

The Office of Pedestrian Safety will fund construction of HAWK and traffic signals at six high-crash locations.

- 7th Avenue near Pima Street (HAWK signal)
- 7th Avenue and Turney Avenue (HAWK signal)
- 20th Avenue and Indian School Road (Traffic Signal)
- 43rd Avenue near Pinchot Avenue (HAWK signal)
- 43rd Avenue south of Rose Lane (HAWK signal)
- Indian School Road near Amelia Avenue (HAWK signal)

The Office of Pedestrian Safety will also fund the design of six new HAWK signals and one traffic signal at high-crash mid-block locations. The locations will be determined and studied this fiscal year. Construction is anticipated using FY 2022 funding and should be completed in FY 2022.

Pedestrian Refuge Median Islands: \$50,000

The Office of Pedestrian Safety will fund design and construction of one pedestrian refuge median island at a location with high pedestrian activity. The location will be determined later this fiscal year.



FY 2021 Office of Pedestrian Safety Budget

Rectangular Rapid Flashing Beacons Upgrade: \$200,000

The Office of Pedestrian Safety will upgrade rectangular rapid flashing beacons (RRFBs) at eight existing crosswalk locations with circular beacons. Circular beacons are larger and more visible to drivers. The upgrade locations are:

- 3rd Avenue and Merrell Street
- 7th Street and Monroe Street
- 12th Street and the Grand Canal
- 15th Avenue and the Grand Canal
- 40th Street and Danbury Road
- 48th Street and the Grand Canal
- Oak Street and the Grand Canal
- 3221 West Van Buren Street

Crosswalk Upgrades: \$146,000

The Office of Pedestrian Safety will fund crosswalk location safety upgrades to enhance pedestrian infrastructure. These upgrades will include building or relocating ADA ramps, improving street markings and signage, and installing additional streetlights. Locations will be determined throughout this fiscal year.

Safety Standards: \$50,000

The Office of Pedestrian Safety will fund improvements to standard City details applicable to pedestrian crossing infrastructure, which will ensure consistency in how drivers and pedestrians see and interpret safety infrastructure.

EDUCATION

Outreach Videos: \$50,000

The Office of Pedestrian Safety will fund the development of four pedestrian safety educational videos.



FY 2021 Office of Pedestrian Safety Budget

EVALUATION

Safety Analysis Tool: \$200,000

The Office of Pedestrian Safety will fund the development of a traffic safety analysis tool. This tool will assist staff in the identification, evaluation, and prioritization of locations for pedestrian safety infrastructure improvements.

OTHER

Additional Pedestrian Safety Funding for Unanticipated Needs: \$115,000

The Office of Pedestrian safety will maintain funding to be initially set aside to address additional pedestrian safety needs that may come up during the fiscal year.
