



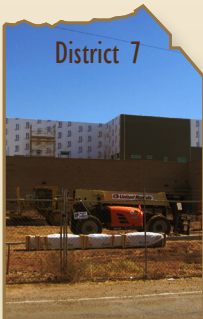
Executive Summary

# Multimodal

# PEDESTRIAN SAFETY

STUDY  
FOR THE

# Gila River Indian Community



District 7



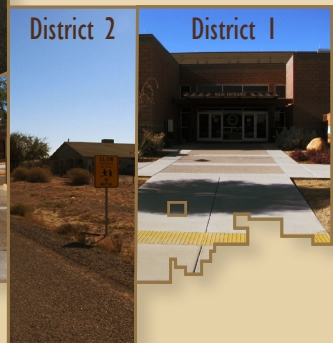
District 6



District 4

Kimley»Horn

December  
2014



District 2

District 1

Task  
Assignment:  
MPD 008-14  
LUPZ  
#15-11607



Prepared for

**ADOT**

# Gila River Indian Community Multimodal Pedestrian Safety Study

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## Executive Summary

*Prepared by:*

**Kimley»»Horn**

Prepared for:

**GILA RIVER INDIAN COMMUNITY**

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LUPZ #15-11607

ADOT Task Assignment MPD 008-14

DECEMBER 2014

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## PROJECT BACKGROUND AND STUDY AREA

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This study is funded by the Arizona Department of Transportation Multimodal Planning Division (ADOT) Planning Assistance for Rural Areas (PARA) program. The purpose of this study was to evaluate pedestrian safety concerns and evaluate pedestrian infrastructure needs on the Gila River Indian Community (GRIC or Community) and recommend a program of multimodal enhancements to address the identified needs. Recommended improvement projects include sidewalks/shared-use paths, bus stops/turnouts, culvert replacement and new culverts, and other infrastructure to support the Community's long-term safety goals. Planning-level cost estimates for each proposed enhancement were developed and potential funding sources have been identified.

The study area consists of areas within the seven Districts that make up the Community. The study areas are shown in Figure 1.

## PROJECT OVERVIEW

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This study resulted in a plan for implementing improved pedestrian facilities for short-, mid-, and long-range planning horizons. The Multimodal Pedestrian Safety Study will also be used by other Community Government departments or Community Districts involved in land use planning and infrastructure improvements in support of pedestrian safety. The study will be used to identify and support funding for projects.

## STUDY OBJECTIVES

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Key objectives of the improvements recommended are:

- ❖ Provide a safer environment for walkers and bicyclists.
- ❖ Expand travel options by providing more non-motorized infrastructure options.
- ❖ Provide drainage improvements in areas with high pedestrian activity to make it easier for persons to walk safely.
- ❖ Provide improved safety through provision of street lighting.

## PROCESS OVERVIEW

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Early work efforts resulted in the development of multimodal pedestrian safety needs that were established from:

- ❖ Guidance provided in the Seven Districts Master Plans - the District Master plans provided the overall vision for pedestrian improvements in each District.
- ❖ Review of crash data for pedestrian and bicycle crashes.
- ❖ Review of previous studies such as the Arizona Department of Transportation Pedestrian Safety Action Plan, and the Gila River Indian Community Indian Community Transportation Study (2011).
- ❖ Pedestrian counts collected at selected locations in each District.

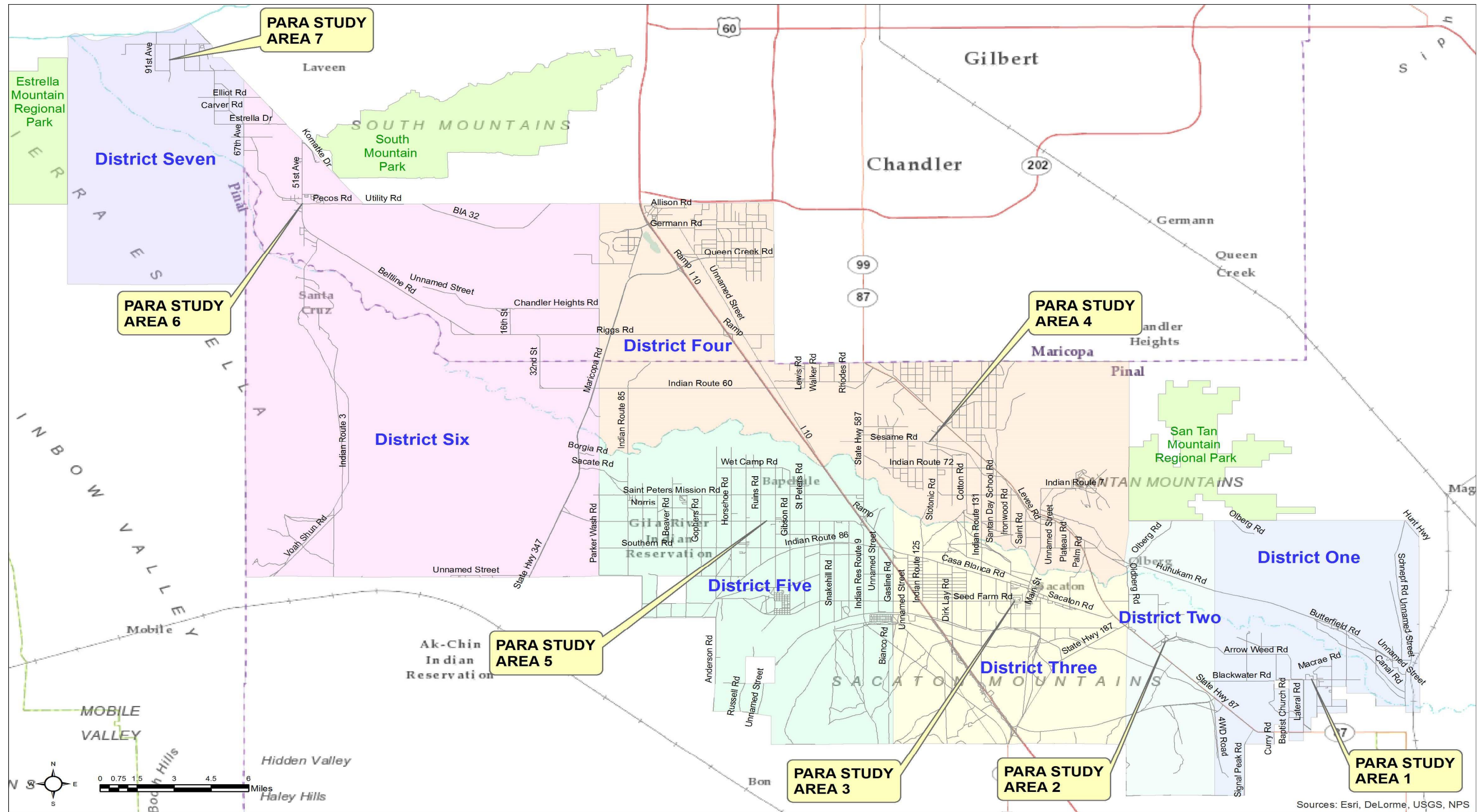


Figure 1: Study Area Map

- ❖ Characteristics of each road, including geometric features, traffic volumes, right-of-way, access, functional classification, and pavement condition.
- ❖ Understanding the locations of activity centers and areas where people were walking to and from.
- ❖ An extensive outreach effort that included discussions with numerous stakeholders including school district transportation staff, members of the public, elder, and youth groups.
- ❖ Study Technical Advisory Committee and Project Management Team input and reviews.

These data and input were used to develop a prioritized plan of improvements. The process involved the following steps:

- ❖ Developing draft improvements for each District study area and a preliminary prioritization.
- ❖ Reviewing these projects at a working session with Project Management Team, and then presenting draft improvement projects to the Technical Advisory Committee.
- ❖ Revising the proposed improvement projects based on review comments.
- ❖ Presenting the projects to the Gila River Indian Community Natural Resources Standing Committee and Tribal Council and the Community's general public.
- ❖ Finalizing the improvement project recommendations, based on all input.

## PROJECT OUTREACH

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Project outreach was an important element of the project and was conducted in a number of different ways: through individual meetings and phone calls with police and fire department staff, District Service Center representatives, school district transportation staff, and others. Because of their knowledge of transportation needs and the road system, these stakeholders provided a unique perspective on pedestrian safety needs.

Other ways that input on pedestrian safety needs was obtained included presentations at District Community meetings, a booth at the Gila River Indian Community Mul-Chu-Tha Fair, meetings with the Youth Council and Elder Council, and discussions with Gila River Indian Community Departments' staff. Presentations were made to the Natural Resources Standing Committee and the Tribal Council at key points during the study.

Two rounds of open houses were conducted for the study. The first mobile open house was conducted at five locations throughout the Community on Friday, March 28, 2014. Locations included the Governance Center, Gila River Health Care, Sacaton Super Mart, Komatke Chevron, and the Komatke Boys & Girls Club. The mobile open house allowed for Community members to learn more about the study, ask questions, and provide input on needed improvements throughout the community. In total, 30 members of the Community signed-in at the various locations.

The second round of public involvement was held at two locations in the Community on Tuesday, August 5, 2014. Locations included the Governance Center and the Komatke Boys & Girls Club. The open house allowed for community members to learn more and provide feedback on the recommended pedestrian safety and transportation improvements that are a result of input from the first round of public involvement. In total, six members of the community signed-in at the two

locations but a larger number were present and chose not to sign in. After the meeting, displays and surveys were made available at District offices and a number of survey responses were received.

## RECOMMENDED PROJECTS AND PRIORITIZATION

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The transportation improvement projects recommended will address critical pedestrian and bicycle safety needs. Projects are shown in Figures 2 through 8. A tabular summary of short-, mid-, and long-range projects, by District, are provided in Tables 1-7. These tables also include a project prioritization score. Using these criteria as guidance, points were assigned in each of these categories, and then assigned to one of three priorities, based on total points:

Short-term improvements scored between 30 and 35 points and are those that can be implemented in the next two to five years, and with generally low cost. Improvement projects that may have the potential to be constructed with a previously programmed improvement are also included in this time frame.

Mid-term improvements scored between 25 and 29 points and are more complex and may require more planning time or may need to be submitted to a funding program. The time frame for these projects is generally 5 to 10 years.

Long-term projects scored between 20 and 24 points and are the most complex, may involve right-of-way acquisition or environmental constraints, and frequently cost the most. These projects generally are in the 10 to 20 year time frame.

The prioritization criteria included the following elements:

- ❖ Sidewalk availability
- ❖ Crossing opportunities
- ❖ Number of pedestrian crashes in five year period
- ❖ Traffic speeds
- ❖ Traffic volumes
- ❖ Project cost (2014 dollars)
- ❖ Addresses recommendations from the District Master Plan
- ❖ Creates a more comfortable, safe environment for pedestrians or bicyclists
- ❖ Improves drainage and/or reduces flooding for walkers
- ❖ Supports safety in walking to school, biking, or taking the school bus.
- ❖ Improves health and wellness by making it easier to walk or bike.
- ❖ Connects activity centers
- ❖ Provides improved multimodal connections
- ❖ Complexity of design – for example, is new ROW required, or environmental issues to be addressed
- ❖ Coordinates with a planned improvement in the Tribal Transportation Improvement Plan (TIP) or Long Range Plan

It should be emphasized that as funding becomes available, or implementation opportunities arise, prioritization can change over time.

In addition to the District projects, an abandoned Union Pacific railroad line has potential to be developed as a regional trail that could potentially span a large area, encompassing areas in Districts 1, 2, and 4. Rail paths are multi-purpose public paths created from former railroad corridors. The abandoned rail line location is shown in Figure 9. Although not specifically within any of the study



areas boundaries, this abandoned rail line has the potential to become a pedestrian resource for the entire Reservation area.

## POTENTIAL FUNDING SOURCES

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Potential funding sources for the multimodal pedestrian safety projects were identified. The Tribal Transportation Program is a potential funding source for many recommended projects; however funding for the program is limited, and participating in the program requires an understanding of the program process and coordination requirements with the Gila River Indian Community Department of Transportation. Other potential funding sources, available through a variety of agencies, are provided in the final report.

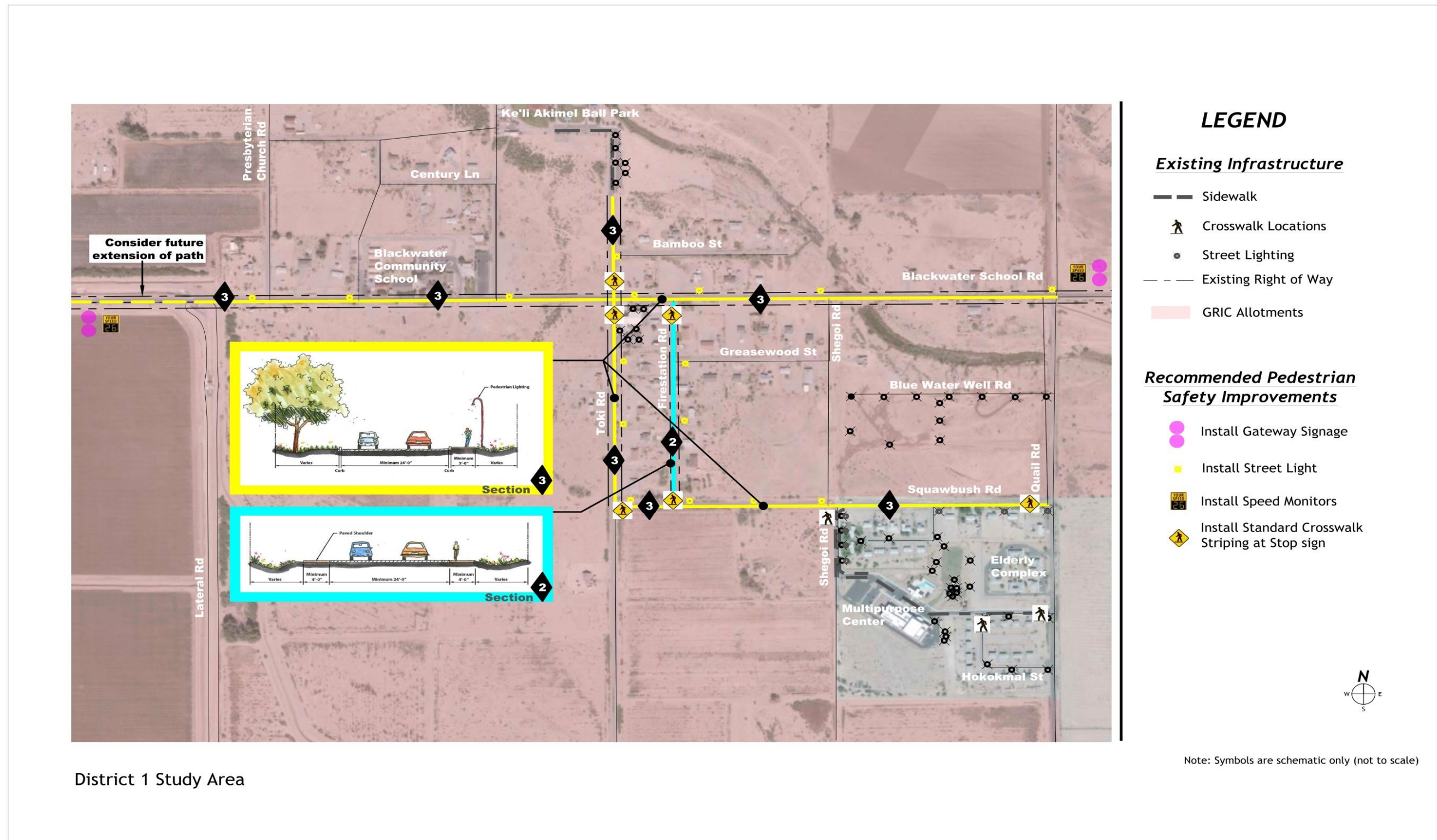


Figure 2: District 1 Recommended Pedestrian Safety Improvements

Table 1: District 1 Recommended Pedestrian Safety Improvements

ROAD NAME AND LIMITS	PROJECT NAME	COST (THOUSAND \$)	PRIORITIZATION SCORE
Short-Range Projects			
Blackwater School Rd, Lateral Road to Quail Road	Install gateway signage (two locations).	3	30
Blackwater School Rd, Lateral Road to Quail Road	Coordinate with Police Department on speed enforcement.	N/A	30
Toki Road, Squawbush Road to Ke'li Akimel Ball Park	Construct sidewalk on east side of road.	170-215*	34
<ul style="list-style-type: none"> <li>• Squawbush Road/ Toki Road</li> <li>• Toki Road/Blackwater School Road</li> <li>• Firestation Road/Blackwater School Road</li> <li>• Squawbush Rd/Quail Road</li> </ul>	District 1 crosswalk striping project at stop sign locations.	4	34
Mid-Range Projects			
Blackwater School Rd, Lateral Road to Quail Road	Install radar speed monitors (2 locations).	15	29
Blackwater School Rd, Lateral Road to Quail Road	Construct sidewalk on one side of road.	445-605*	25
Toki Road, Squawbush Road to Ke'li Akimel Ball Park	Install street lighting.	130	27
Firestation Road, Squawbush Road to Blackwater School Road	Construct paved shoulder on both sides of road.	50	29
Firestation Road, Squawbush Road to Blackwater School Road	Install street lighting.	82	28
Squawbush Rd, Toki Road to Quail Road	Construct sidewalk on one side of road.	240-325*	25
Squawbush Rd, Toki Road to Quail Road	Install street lighting (Toki Road to Shegoi Road).	165	27
Long-Range Projects			
Blackwater School Road, Lateral Road to Quail Road	Construct street lighting.	295	24
Blackwater School Rd, Lateral Road to 1.44 miles west	Construct path extension.	630-800*	24
TOTAL COST		2,229- 2,689*	

\*Note: The range of costs depends on the path material chosen (e.g. asphalt path or concrete for sidewalks; stabilized decomposed granite, asphalt, or concrete for more paths outside of the road right-of-way). Many of the cost estimates for sidewalk improvements include drainage improvements, curb and gutter, and other improvements.

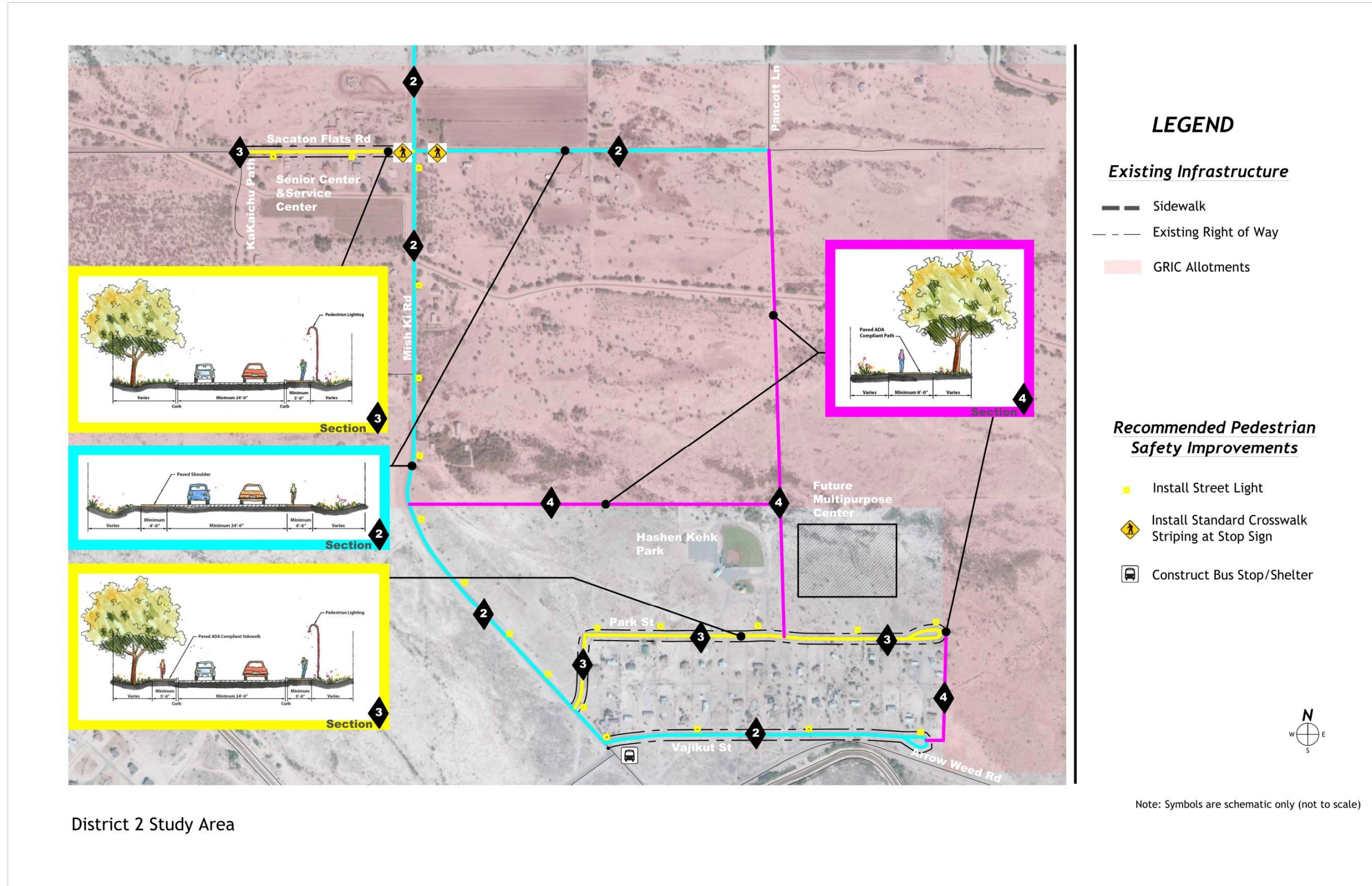


Figure 3: District 2 Recommended Pedestrian Safety Improvements

Table 2: District 2 Recommended Pedestrian Safety Improvements

ROAD NAME AND LIMITS	PROJECT NAME	COST (THOUSAND \$)	PRIORITIZATION SCORE
Short-Range Projects			
Sacaton Flats Road/Mish Ki Road	Stripe crosswalk at stop sign.	1	34
Park Street, Mish Ki Road to east terminus of street	Construct sidewalk with curbs (sidewalk is being constructed on south side of street as part of paving project; construction on the north side is recommended as a mid-range project).	The sidewalks on the south side of the street have been incorporated into the Park Street paving project.	N/A
Vajikut Street/Mish Ki Road	Construct school bus pad and shelter.	11	30
Mid-Range Projects			
Mish Ki Road, Vajikut Street to Community Road	Construct paved shoulder.	270	25
Park Street	Construct sidewalk on north side of street.	250-315	25
Sacaton Flats Road, Ka Kaichu Path to Mish Ki Road	Construct sidewalk on one side of the street with curbs.	110-155*	27
Sacaton Flats Road, Mish Ki Road to Pancott Lane	Construct shoulders.	95-195	27
Sacaton Flats Road, Ka Kaichu Path to Pancott Lane	Install solar street lighting.	85	26
New path, Vajikut Street to Park Street	Construct 10-foot path between Vajikut Road and Mish Ki Road.	15-65*	25
Long-Range Projects			
Mish Ki Road, Vajikut Street to Community Road	Install solar street lighting.	410	24
Pancott Lane alignment, between Sacaton Flats Road and Park Street	Construct path.	65-318*	21
East-west path, Mish Ki Road to Pancott Lane	Construct path.	50-240	21
Park Street, Mish Ki Road to east terminus of street	Install street lighting.	190	24
Vajikut Street, Mish Ki Road to east terminus of road	Construct shoulder.	85	23
Vajikut Street, Mish Ki Road to east terminus of road	Install solar street lighting.	140	22
TOTAL COST		\$1,777- 2,480*	

\*Note: The range of costs depends on the path material chosen (e.g. asphalt path or concrete for sidewalks; stabilized decomposed granite, asphalt, or concrete for more paths outside of the road right-of-way). Many of the cost estimates for sidewalk improvements include drainage improvements, curb and gutter, and other improvements.

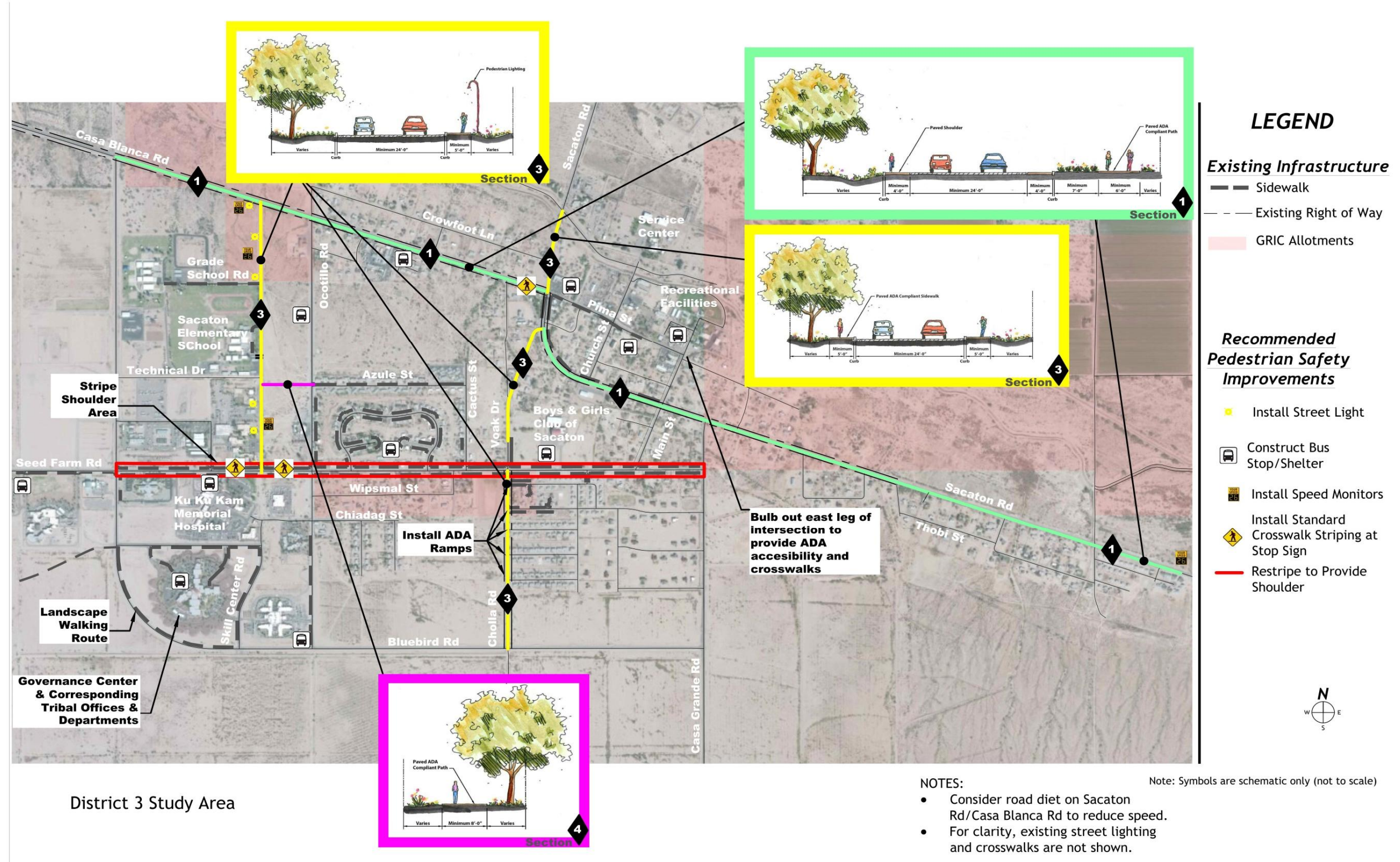


Figure 4: District 3 Recommended Pedestrian Safety Improvements

Table 3: District 3 Recommended Pedestrian Safety Improvements

ROAD NAME AND LIMITS	PROJECT NAME	COST (THOUSAND \$)	PRIORITIZATION SCORE
Short-Range Projects			
Seed Farm Road, Bluebird Road to Casa Grande Highway	Stripe 5-foot shoulder area on Seed Farm Road on both sides of street.	2	32
Seed Farm Road, Bluebird Road to Casa Grande Highway	Construct 4 bus pads and shelters.	44	31
Cholla Road, Seed Farm Road to Sacaton Road	Retrofit curbs to be accessible (5 locations).	21	35
Casa Blanca Road/Sacaton Road	Construct cross walk at west leg of intersection.	3	33
Casa Blanca Road, Bluebird Road to Sacaton Road	Construct 1 bus pads and shelter.	11	32
Casa Blanca Road, Bluebird Road to Sacaton Road	Install solar radar monitor (1 location).	8	31
Casa Blanca Road, Bluebird Road to Sacaton Road	Install gateway signage (1 location).	2	31
Sacaton Road, Casa Blanca Road to east of Thobi Street	Install radar speed monitors (1 location).	8	34
Sacaton Road, Casa Blanca Road to east of Thobi Street	Install gateway signage (1 location).	2	30
Cholla Road, Seed Farm Road to Sacaton Road	Construct sidewalk on east side of road.	145-300*	29
Skill Center Road, Azule Road to Bayberry Road	Construct sidewalk on Skill Center Road.	115-260*	32
Skill Center Road, Azule Road to Bayberry Road	Install solar radar monitor (2 locations) by school.	16	33
Mid-Range Projects			
Casa Blanca Road, Bluebird Road to Sacaton Road	Construct sidewalk with curbs on north side of road.	545-755*	26
Governance Center Area	Landscaping sidewalk areas.	35	29
Pima Street/Main Street intersection	Intersection improvements to east leg of offset intersection and crosswalk striping.	Cost to be determined - needs further study.	25
Sacaton Road, Casa Blanca Road to east of Thobi Street	Construct sidewalk on south side of road.	685-1,000*	29

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ROAD NAME AND LIMITS	PROJECT NAME	COST (THOUSAND \$)	PRIORITIZATION SCORE
District 3-various locations	Install bus shelters (6 locations).	66	27
Skill Center Road	Install street lighting.	260	26
Sacaton Road, Casa Blanca Road to 0.3 miles north	Construct sidewalk on both sides of street.	250-355*	26
Long-Range Projects			
Azule Road alignment	Construct path.	25-65*	22
TOTAL COST		\$2,243- 3,213*	

\*Note: The range of costs depends on the path material chosen (e.g. asphalt path or concrete for sidewalks; stabilized decomposed granite, asphalt, or concrete for more paths outside of the road right-of-way). Many of the cost estimates for sidewalk improvements include drainage improvements, curb and gutter, and other improvements.



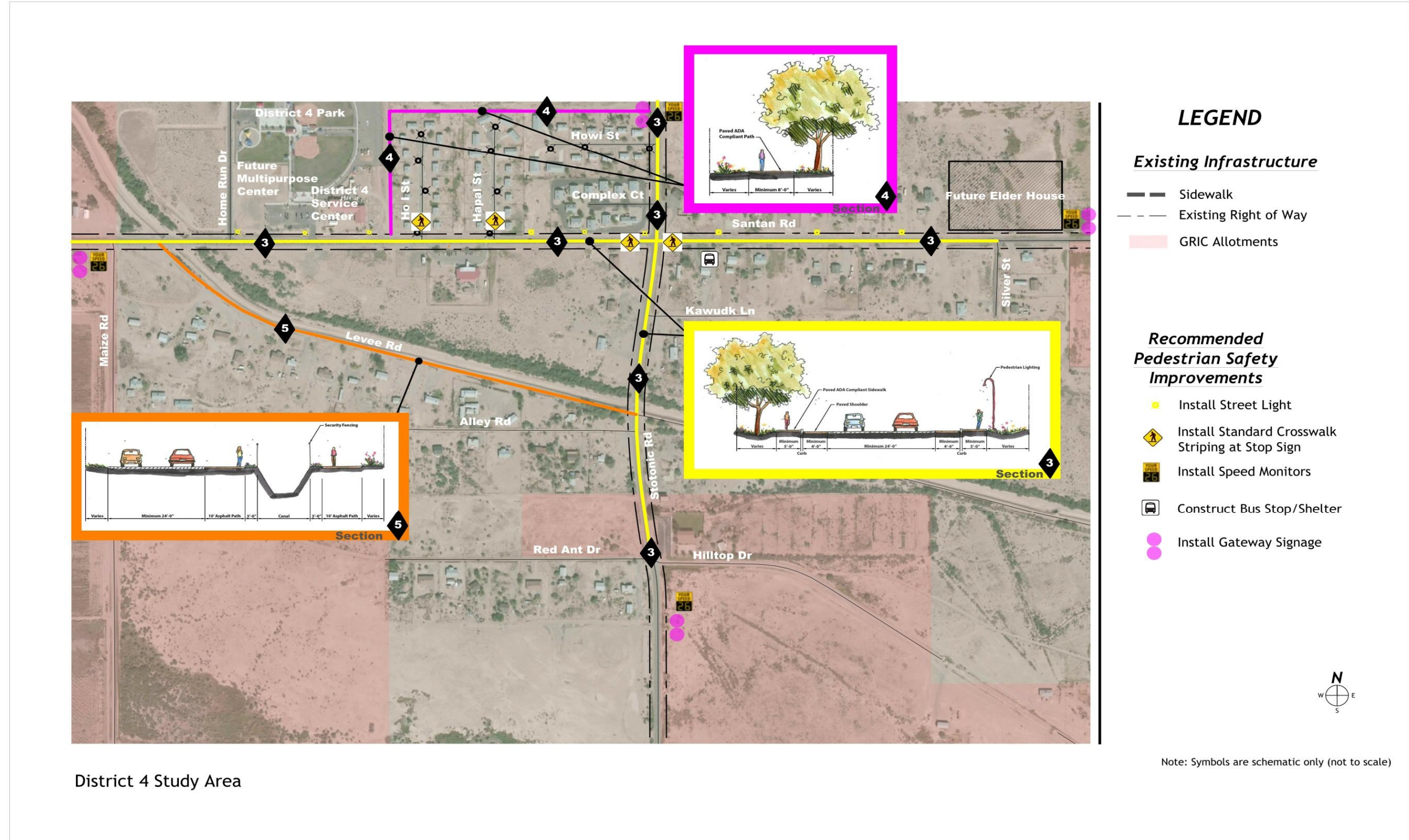


Figure 5: District 4 Recommended Pedestrian Safety Improvements

Table 4: District 4 Recommended Pedestrian Safety Improvements

ROAD NAME AND LIMITS	PROJECT NAME	COST (THOUSAND \$)	PRIORITIZATION SCORE
Short-Range Projects			
Santan Road, Maize Road to Silver Road	Construct street lighting.	260	32
Santan Road, Maize Road to Silver Road	Stripe crosswalk at stop sign controlled intersection at Stotonic Road.	1	35
Santan Road, Maize Road to Silver Road	Install gateway signing (2 locations).	3	30
Santan Road, Maize Road to Silver Road	Install radar speed monitors (2 locations).	15	31
Stotonic Road, Hilltop Drive to Howi Street	Install gateway signing (2 locations).	3	30
Stotonic Road, Hilltop Drive to Howi Street	Install radar speed monitors (1 location).	15	30
Mid-Range Projects			
Santan Road, Maize Road to Silver Road	Construct curbed sidewalk on both sides of the road.	820-1,015*	27
Santan Road/Stotonic Road	Construct bus pad and shelter (1 location).	11	28
Stotonic Road, Hilltop Drive to Howi Street	Construct sidewalk with curbs on both sides of the road.	465-570*	26
Long-Range Projects			
Canal adjacent to Levee Road, Stotonic Road to Santan Road	Construct canal path on both sides of canal.	149-429*	22
Construct path north of Santan Road, to connect Santan Road and Stotonic Road	Construct path north of Santan Road, to connect Santan Road and Stotonic Road.	35-173*	23
TOTAL COST		1,777- 2,495*	

\*Note: The range of costs depends on the path material chosen (e.g. asphalt path or concrete for sidewalks; stabilized decomposed granite, asphalt, or concrete for more paths outside of the road right-of-way). Many of the cost estimates for sidewalk improvements include drainage improvements, curb and gutter, and other improvements.

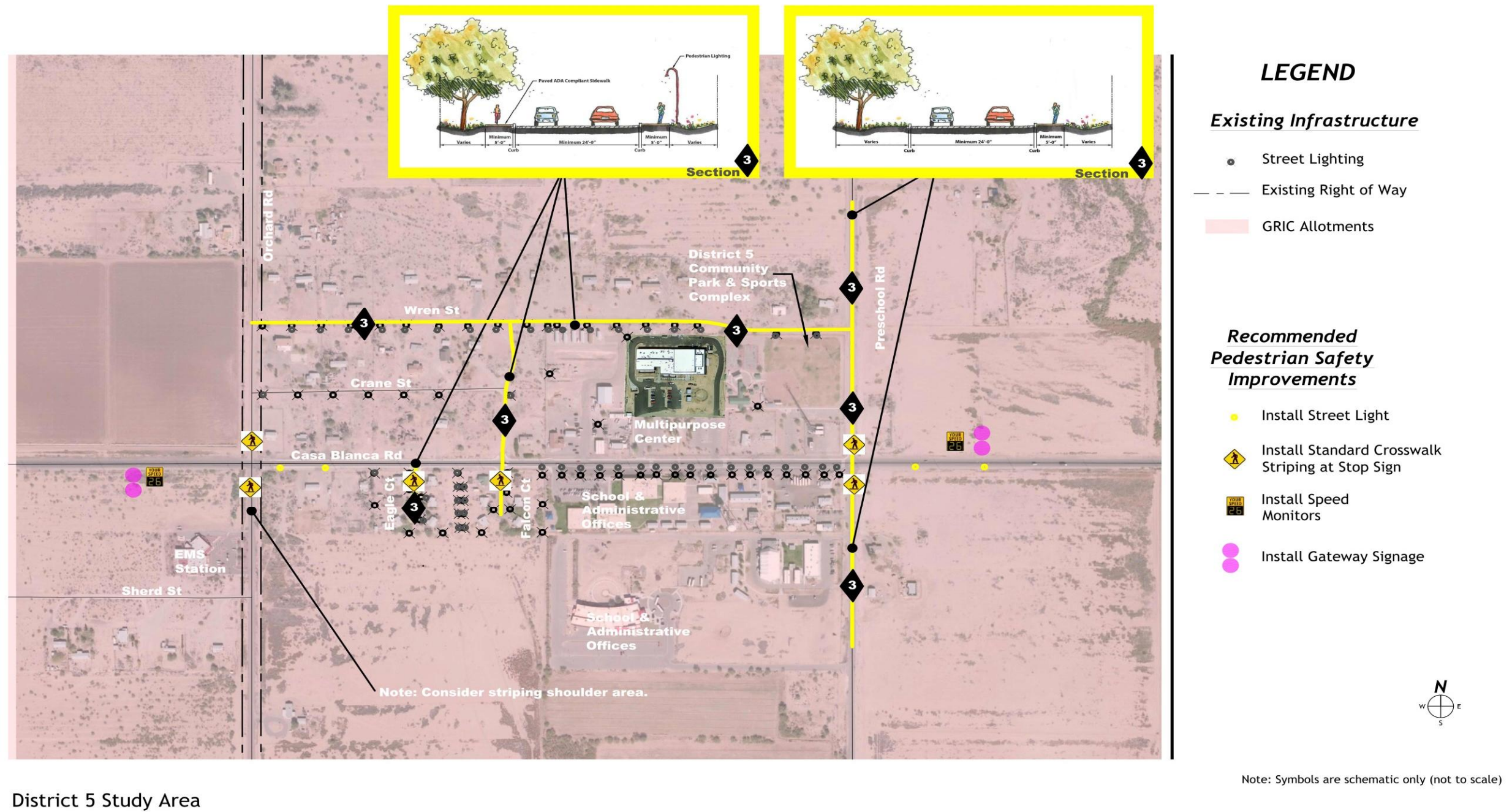


Figure 6: District 5 Recommended Pedestrian Safety Improvements

Table 5: District 5 Recommended Pedestrian Safety Improvements

ROAD NAME AND LIMITS	PROJECT NAME	COST (THOUSAND \$)	PRIORITIZATION SCORE
Short-Range Projects			
<ul style="list-style-type: none"> <li>• Preschool Road/Casa Blanca Road</li> <li>• Eagle Court/Casa Blanca Road</li> <li>• Falcon Court/Casa Blanca Road</li> </ul>	District 5 crosswalk striping project at stop sign locations.	3	32
Casa Blanca Road	Construct radar speed monitor (2 locations).	15	32
Casa Blanca Road	Construct gateway signing (2 locations).	3	32
Mid-Range Projects			
Preschool Road, High School Access Road to unnamed residential street 0.13 miles north of Wren Street	Construct curbed sidewalk on one side of the road.	190-270*	26
Casa Blanca Road, locations to be determined	Construct street lighting.	50	28
Long-Range Projects			
Eagle Court, south end of cul-de-sac to Casa Blanca Road	Construct path.	40-60*	23
Falcon Court, south end of cul-de-sac to Casa Blanca Road	Construct sidewalk with curb on both sides of the road.	40-60*	23
Falcon Court, Casa Blanca Road to Wren Street	Construct sidewalk with curb on one side of the road.	95-160*	23
Wren Street, Orchard Road to Preschool Road	Construct sidewalk on both sides of the road.	190-270*	24
TOTAL COST		626- 891*	

\*Note: The range of costs depends on the path material chosen (e.g. asphalt path or concrete for sidewalks; stabilized decomposed granite, asphalt, or concrete for more paths outside of the road right-of-way). Many of the cost estimates for sidewalk improvements include drainage improvements, curb and gutter, and other improvements.

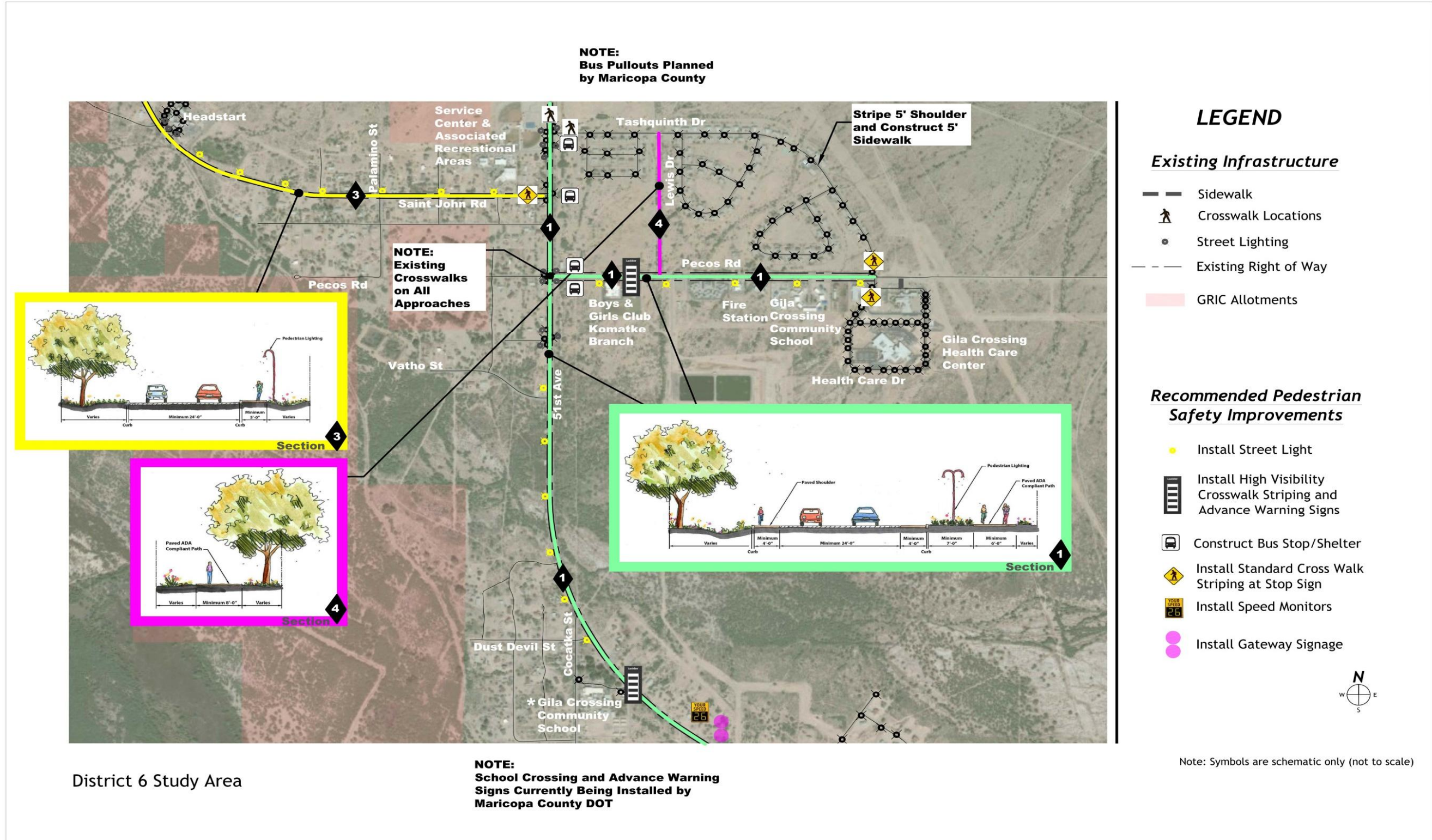


Figure 7: District 6 Recommended Pedestrian Safety Improvements

Table 6: District 6 Recommended Pedestrian Safety Improvements

ROAD NAME AND LIMITS	PROJECT NAME	COST (THOUSAND \$)	PRIORITIZATION SCORE
Short-Range Projects			
Pecos Road, 51st Avenue to Tashquinth Drive	Construct sidewalk on one side of road.	760-980*	26
Pecos Road, 51st Avenue to Tashquinth Drive	Stripe and provide advance signing for high visibility north-south crosswalk at Boys and Girls Club, when warranted.	3	33
Pecos Road, 51st Avenue to Tashquinth Drive	Construct one bus pad and two shelters.	18	33
51st Avenue, Gila Crossing Road to Tashquinth Drive	Construct bus pad and shelters (two locations).	33	34
St Johns Road/51st Avenue	Stripe crosswalks.	1	35
Tashquinth Drive, Pecos Road to 51st Avenue	Construct sidewalks on both sides of street.	220	30
Mid-Range Projects			
Pecos Road, 51st Avenue to Tashquinth Drive	Construct street lighting.	235	27
51st Avenue, Gila Crossing Road to Tashquinth Drive	Construct sidewalk on one side of road.	590-825*	28
51st Avenue, Gila Crossing Road to Tashquinth Drive	Construct street lighting.	445	27
St Johns Road	Construct street lighting.	410	26
St Johns Road	Construct sidewalk on one side of road.	97-381*	27
Long-Range Projects			
Lewis Road alignment	Construct path between Pecos Road and Tashquinth Drive.	33-165	23
TOTAL COST		2,845-3,716*	

\*Note: The range of costs depends on the path material chosen (e.g. asphalt path or concrete for sidewalks; stabilized decomposed granite, asphalt, or concrete for more paths outside of the road right-of-way). Many of the cost estimates for sidewalk improvements include drainage improvements, curb and gutter, and other improvements.

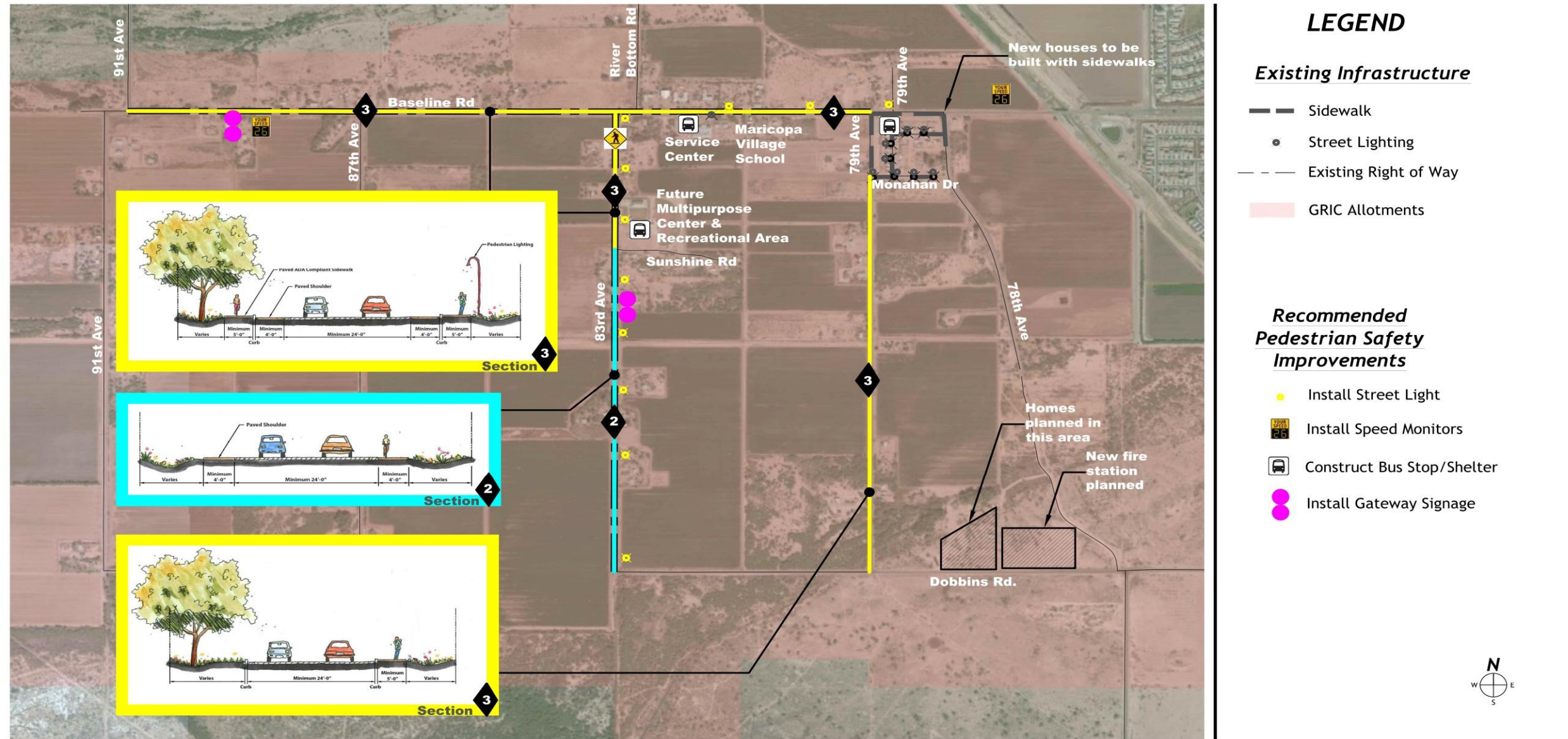


Figure 8: District 7 Recommended Pedestrian Safety Improvements

Table 7: District 7 Recommended Pedestrian Safety Improvements

ROAD NAME AND LIMITS	PROJECT NAME	COST (THOUSAND \$)	PRIORITIZATION SCORE
Short-Range Projects			
Baseline Road, 91 <sup>st</sup> Avenue to 83 <sup>rd</sup> Avenue	Install pads and shelters (two locations).	22	34
Baseline Road, 91 <sup>st</sup> Avenue to 83 <sup>rd</sup> Avenue	Install gateway signage (two locations).	3	31
Baseline Road, 91 <sup>st</sup> Avenue to 83 <sup>rd</sup> Avenue	Coordinate with Police Department on speed enforcement.	N/A	N/A
83 <sup>rd</sup> Avenue, Baseline Road to Dobbins Road	Construct bus pad and shelter (1 location).	11	32
83 <sup>rd</sup> Avenue, Baseline Road to Dobbins Road	Install gateway signage (1 location).	2	31
Mid-Range Projects			
Baseline Road, 91 <sup>st</sup> Avenue to 79 <sup>th</sup> Avenue	Construct sidewalks on both sides of road.	1,370-1,970*	28
Baseline Road, 91 <sup>st</sup> Avenue to 79 <sup>th</sup> Avenue	Construct street lighting.	164	27
Baseline Road, 91 <sup>st</sup> Avenue to 83 <sup>rd</sup> Avenue	Install radar speed monitors (two locations).	15	30
83 <sup>rd</sup> Avenue, Baseline Road to Sunshine Road	Construct sidewalks on both sides of road.	375-625	27
83 <sup>rd</sup> Avenue, Multipurpose Center to Dobbins Road	Construct 6-foot shoulders on both sides of road.	150	27
83 <sup>rd</sup> Avenue, Baseline Road to Dobbins Road	Construct street lighting.	320	26
Long-Range Projects			
79 <sup>th</sup> Avenue, Baseline Road to Dobbins Road	Construct sidewalk on one side of the road	900-1,300	24
	TOTAL COST	3,332- 4,582*	

\*Note: The range of costs depends on the path material chosen (e.g. asphalt path or concrete for sidewalks; stabilized decomposed granite, asphalt, or concrete for more paths outside of the road right-of-way). Many of the cost estimates for sidewalk improvements include drainage improvements, curb and gutter, and other improvements.



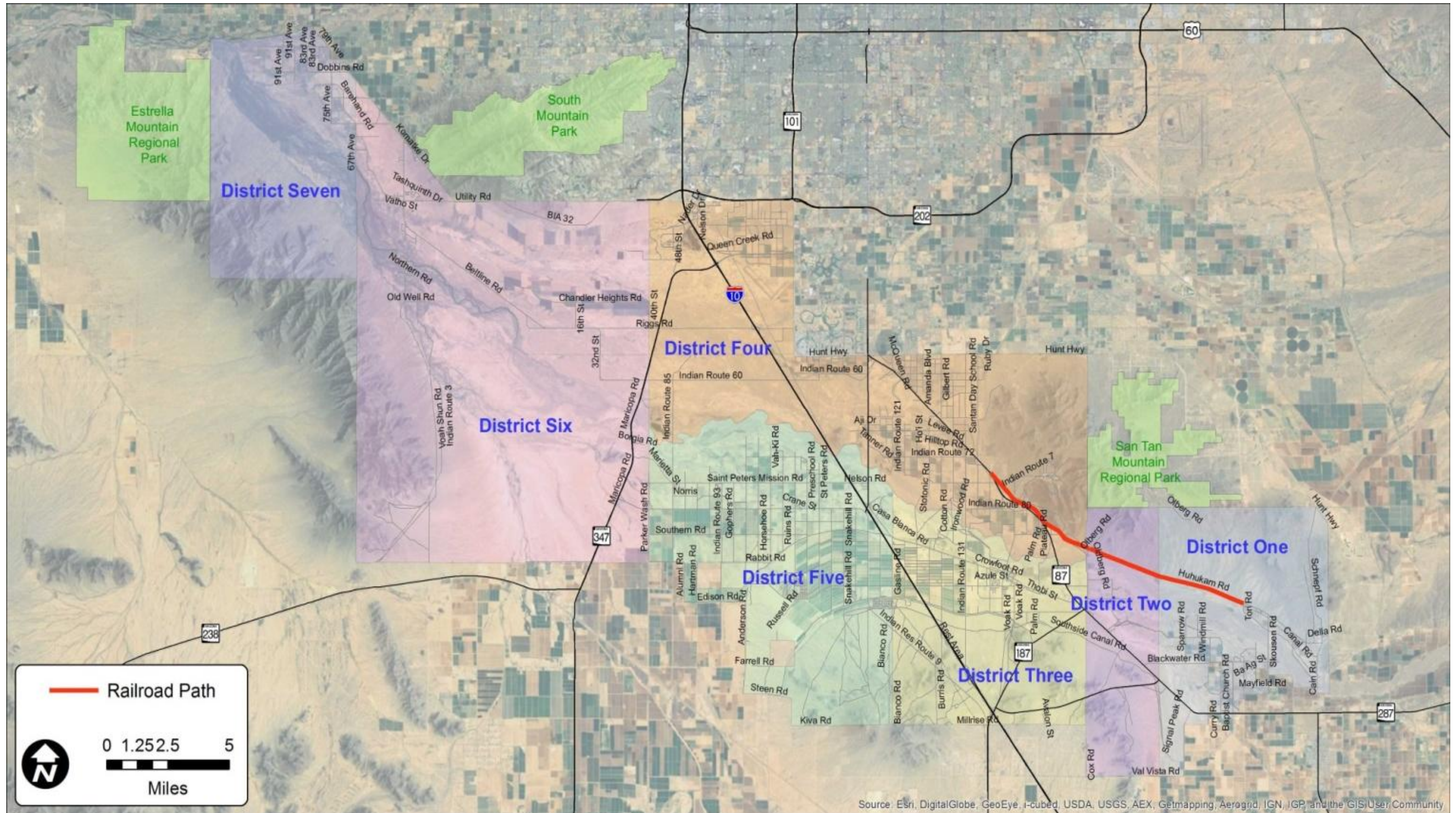


Figure 9: Potential Trail Location Using an Abandoned Rail Line