Lake Havasu
Metropolitan Planning Organization

Bicycle and Pedestrian Implementation Plan

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Introduction

The Lake Havasu Metropolitan Planning Organization (LHMPO) scoped the development of this Bicycle and Pedestrian Implementation Plan (BPIP) to address issues and needs for vulnerable transportation users in the Lake Havasu Urbanized Area. The BPIP will address bicycle facilities, including signing and markings, sidewalks, and multiuse paths, building upon the findings and recommendations of the LHMPO Strategic Transportation Safety Plan (STSP) and Regional Transportation Plan (RTP), among other studies. This BPIP will identify bicyclist and pedestrian facilities that will provide safer and more convenient access to parks, schools, churches, activity centers, and commercial centers. The goal of the Plan is to recommend optimal context-sensitive pedestrian and bicycle facilities for people of all ages and abilities who live, work, play, go to school, and vacation in the LHMPO area. As the area continues to grow, so too, will the number of pedestrians, bicyclists, and people with special needs. This will increase the demand for pedestrian and bicycle facilities that provide safe connections to destinations around the city. The Plan recognizes this and recommends and prioritizes projects based on the important destinations and activity nodes that residents, stakeholders, and LHMPO Technical Advisory Committee members have indicated.

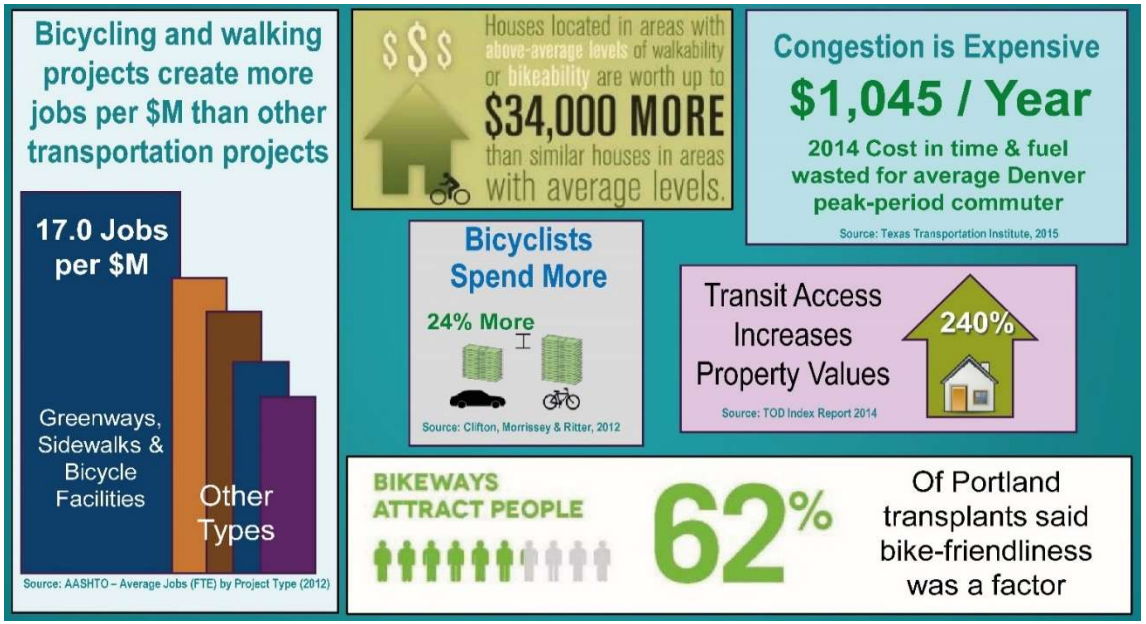
Over 1.5 million people visit Lake Havasu City each year, adding unfamiliar bicyclists and pedestrians to the transportation network. Guiding these unfamiliar users with wayfinding and signing is a key component of this BPIP. Safety is a critical factor in the BPIP: the LHMPO STSP identified that **40% of fatal crashes in the LHMPO region over the past 10 years involved pedestrians and bicyclists**.

Bicyclist and pedestrian facilities should be safe, convenient, and able to be used intuitively. Facilities should also connect users to important recreational and utilitarian destinations in the region and integrate into Lake Havasu City's existing transportation network. In addition, development of facilities should consider in-progress and future planning, development and land use changes. A prime example of this relates to Lake Havasu City's recent $2 million prize from the America's Best Communities competition to accelerate its Vision 20/20 Community Revitalization Plan. Implementing a bicycle and pedestrian plan helps address 4 of the 5 pillars of the Lake Havasu City's Vision 20/20 Plan:

- Economic development
- Workforce talent
- Tourism
- Community engagement

The graphic on the right highlights how implementation of bicycle and pedestrian plans provides multiple benefits to communities.

There is renewed focus at the national and state levels on providing pedestrian and bicyclist accommodations on our roadways. The Fixing America's Surface Transportation Act (FAST Act) encourages additional flexibility in the design of transportation projects to meet the needs of all users and to improve communities. In fact, the **FAST Act requires that all National Highway System projects consider access for all modes of transportation**. The Institute of Transportation Engineers (ITE) recently launched its Transportation and Health Initiative, investigating the connection between transportation and health, and developing appropriate recommendations for traffic engineers to utilize. Many communities have adopted the "8-80" city philosophy – a city and transportation network that is safe, accessible, and enjoyable for everyone, from eight-year-olds to eighty-year-olds. Benefits to creating 8-80 communities include better health, community cohesion, safer neighborhoods, and economic development. It begins with creating safe environments for people to walk and ride their bicycles. This graphic highlights some of the economic development benefits of providing bicyclist and pedestrian facilities.



In terms of the pedestrian facilities network, the Plan and the recommended projects focused on the half-mile radii around Lake Havasu City's schools. In addition, providing opportunities for students to walk or bike to school helps them to get valuable physical activity, and creates healthful, life-long habits.

For the bicycle facilities network, the Plan seeks to connect people to their important destinations and recreational opportunities, including existing and future trails. The Plan recommends enhancing routes that cyclists already use and developing 'low stress' routes that connect neighborhoods, including building upon the city's existing network of streets that have 'parking lanes.'

Another feature of special focus for the recommended pedestrian and bicycle facilities was the "America's Best Communities" award, which will catalyze the construction of a new downtown community center. Allowing people to visit the center by foot and by bicycle is an important strategy to promote facility use, lessen traffic congestion, and create downtown synergy.

Public Involvement

This plan was created with support from local stakeholders, community members and the Technical Advisory Council (TAC), all of which provided important information regarding existing conditions and future needs in the region.

Public involvement was key in getting stakeholder and community feedback to pedestrian and bicyclist issues and concerns. Several opportunities were provided to facilitate participation in the plan development, including public meetings, stakeholder meetings, and TAC meetings. These meetings provided opportunities to obtain input for the plan development and to solicit cooperation in implementing the plan, both on an agency and a community basis.

Stakeholder meetings were held:

- November 28, 2017 (17 participants)
- March 20, 2018 (21 participants)

Public meetings were held:

- September 19, 2017 (52 participants)
- April 18, 2018 (45 participants)

In addition to meetings, the public had an opportunity to provide comments online using a Social Pinpoint mapping tool. The survey was available online from September 11 through November 9, 2017. There were 265 responses received. The Social Pinpoint tool provided users with an easy to use platform to identify specific locations on a map to comment on concerns from a pedestrian and bicyclist perspective.

Appendix B provides more details on the public outreach effort, including comments from the Social Pinpoint mapping tool.

Performance Review

This plan recommends that LHMPO convene an annual review of performance and progress. This meeting should include LHMPO staff, its Technical Advisory Committee, stakeholders, and any other parties pertinent to the discussion. This meeting should be used to discuss implementation of recommendations, including successes and challenges in implementation, and any changes in priorities.

Review of Existing Plans

LHMPO 2040 REGIONAL TRANSPORTATION PLAN (2016)

The purpose of the RTP was to establish a vision, goals and objectives for long term transportation planning based on anticipated growth in the LHMPO region. Community members, stakeholders and technical advisory members all expressed interest in creating new, and improving existing, pedestrian and bicycle facilities in the region. A desire was expressed to create a community-wide pedestrian and bicycle network to make it easier for residents and visitors to safely travel by foot or bike between points of interest. Projects that were recommended as part of this study included restriping roadways for bicycle lanes, adding sidewalks to increase connectivity, constructing a shoulder along London Bridge Road for bicycles, and constructing new trails. Table 1 through Table 4 list the specific mid-term and long-term pedestrian and bicyclist improvements recommended in the RTP.

TABLE 1: RTP MID-TERM PEDESTRIAN RECOMMENDATIONS

Location	Project Description
Lake Havasu City	
Acoma Blvd W: Lake Havasu Ave N to Havasupai Blvd	Sidewalk connectivity
Acoma Blvd S: Paso Dr to Tonto Dr	Sidewalk connectivity
Palo Verde Blvd S: Hummingbird Dr to Starlite Ln	Sidewalk connectivity
Jamaica Blvd S: Monte Carlo Ave to Tahiti Ln	Sidewalk connectivity
Jamaica Blvd S: Power Dr to Chemehuevi Blvd	Sidewalk connectivity
Thunderbolt Ave: Roanoke Dr to Broken Arrow Dr	Sidewalk connectivity
London Bridge Rd: Alley 22 to Palo Verde Blvd S	Sidewalk connectivity
New Trail on the Island	Construct new trail
El Dorado Wash Trail Extension	Construct new trail
Mohave County	
Horizon Six Equestrian Trail	Construct new trail
Arizona Department of Transportation	
SR-95 and Pima Wash Trail/Aquatic Center	Conduct pedestrian crossing study

TABLE 2: RTP LONG-TERM PEDESTRIAN RECOMMENDATIONS

Location	Project Description
Lake Havasu City	
Havasupai Wash Trail: Palo Verde Blvd N to Lake Shore Trail (north)	Construct new trail
El Dorado Wash Trail: Pima Wash Trail to Powerline Trail (align)	Construct new trail
Chemehuevi Wash Trail: McCulloch Blvd N to SR-95	Construct new trail
Lake Shore Trail (south): Rotary Park to SR-95	Construct new trail
Lake Shore Trail (north): City Limits to Shoreline Promenade	Construct new trail
Arizona Department of Transportation	
SR-95 and Pima Wash Trail/Aquatic Center	Implement study findings

TABLE 3: RTP MID-TERM BICYCLIST RECOMMENDATIONS

Location	Project Description
Lake Havasu City	
Kiowa Blvd S: Jamaica Blvd N to Palo Verde Blvd S	Re-stripe road for bicycle lanes
Lake Havasu Ave: Palo Verde Blvd S to Jamaica Blvd S	Re-stripe road for bicycle lanes
Jamaica Blvd S: Lake Havasu Ave to Kiowa Blvd S	Re-stripe road for bicycle lanes
Palo Verde Blvd S: Kiowa Blvd N to Lake Havasu Ave N	Re-stripe road for bicycle lanes
McCulloch Blvd N: SR-95 to Jamaica Blvd	Re-stripe road for bicycle lanes
Mohave County	
London Bridge Rd: Chenoweth Dr to Fathom Dr	Construct shoulder with bicycle lane

TABLE 4: RTP LONG-TERM PEDESTRIAN RECOMMENDATIONS

Location	Project Description
Lake Havasu City	
McCulloch Blvd S: Jamaica Blvd to SR-95	Re-stripe road for bicycle lanes
Thunderbolt Ave: Chemehuevi Blvd to Oro Grande Blvd	Re-stripe road for bicycle lanes
Oro Grande Blvd: SR-95 to McCulloch Blvd S	Re-stripe road for bicycle lanes
Smoketree Ave N: Pima Dr to Kiowa Blvd S	Re-stripe road for bicycle lanes
Palo Verde Blvd N: Aviation Dr to Kiowa Blvd N	Re-stripe road for bicycle lanes
Kiowa Blvd N: Jamaica Blvd to Lake Havasu Ave N	Re-stripe road for bicycle lanes
Havasupai Blvd: Acoma Blvd N to Kiowa Blvd N	Re-stripe road for bicycle lanes
Lake Havasu Ave N: Kiowa Blvd N to Palo Verde Blvd S	Re-stripe road for bicycle lanes
Palo Verde Blvd S: Kiowa Blvd S to Kiowa Blvd N	Re-stripe road for bicycle lanes

LHMPO STRATEGIC TRANSPORTATION SAFETY PLAN (2017)

The STSP was developed with an aim to reduce the number of fatal and serious injury crashes in the region. The plan noted that 40% of the fatal crashes over the previous 10 years (2005-2014) in the region involved pedestrians and bicyclists. Recommendations for pedestrians and bicyclists included:

Pedestrian Recommendations

- Evaluate and install controlled pedestrian crossings and install medians and pedestrian crossing islands where warranted
- Provide sidewalks, multi-use paths, and/or marked crosswalks
- Improve sight distance and/or visibility between motor vehicles and pedestrians
- Utilize the federal Surface Transportation Block Grant Program for pedestrian facilities, including safe routes to school projects
- Provide street lighting at uncontrolled arterial crosswalks

Education

- Develop/maintain training and public information pedestrian safety campaigns
- Increase pedestrian safety education for all roadway users

- Promote the use of pedestrian safety lights and reflective wrist/ankle bands
- Train school crossing guards, and coordinate with them to identify safety issues
- Utilize Dynamic Message Signs for safety messages
- Increase enforcement of existing laws designed to promote pedestrian safety

Bicyclist Recommendations

- Evaluate and install controlled pedestrian or bike crossings
- Provide bicycle detection at signalized intersections
- Provide bike lanes, separated bike lanes, bike boulevards, and off-road multi-use paths
- Utilize the Safe Routes to School program
- Provide street lighting at uncontrolled arterial crosswalks
- Commit to recognizing dedicated lateral space for bicycle traffic under a (modified) standard cross section for one or more road functional classes
- Bicycle striping plan through streets with adequate cross section
- Bicycle service facilities (racks – where to target; other service amenities for bicycle "pit stops")
- Special programs and events – Sunday street closures for bicyclists/pedestrians
- Utilize the federal Surface Transportation Block Grant Program for bicycle facilities
- Develop/maintain training and public information bicycle safety campaigns
- Increase bicycle safety education for all roadway users
- Improve public awareness to promote safer behavior by all roadway users relative to bicycle traffic
- Promote use of helmets by adult bicyclists
- Promote the use of bike safety lights
- Dedicated website clearinghouse on area biking opportunities, routes, safety, reminders, planning, etc.
- Utilize Dynamic Message Signs for safety messages
- Increase enforcement of existing laws designed to promote bicycle safety, such as wrong-way riding and vehicles encroaching on bicycle facilities

LAKE HAVASU CITY TRAILS PLAN (2006)

The main goal of the Trails Plan was to identify opportunities to enhance trails in the region to create an interconnected trails network in the Lake Havasu region. The plan proposed the trail concepts in Table 5.

TABLE 5: TRAILS PLAN PROPOSED TRAILS

Trail Name	Users	Trailheads/Parking	Length	Destinations Served
Powerline Trail	Walkers, bikers	Formalized parking lots; on-street parking	9.4 Miles	Neighborhoods/ Parks
Lakeshore Trail North	Walkers, bikers	Lake Havasu State Park	3.8 Miles	Park, wildlife refuge, lake front
Pima Wash trail	Walkers, bikers	Rotary Park, neighborhood parking	1.6 Miles (New)/ 3.1 Miles (Total)	Park, downtown, neighborhoods
Havasupai/Palm Tree Wash Trail	Walkers, bikers	On-street parking; parking along lakeshore	5 Miles	Mountains, lake front, neighborhoods
Chemehuevi Wash Trail	Walkers, bikers	On-street parking; parking along lakeshore	5.6 Miles	Mountains, lake front, neighborhoods
Recreational Beltway	Walkers, bikers, equestrians	MCC, North Parks, neighborhood parking	8.4 Miles	Parks, Mountains
SR95-to-SARA Park Connector Trail	Walkers, bikers	On-street parking; Rotary Park	0.7 Miles (New)/ 2.9 Miles (Total)	Parks
SR95-to-Airport Connector Trail	Walkers, bikers	Downtown; on-street parking	4.7 Miles	Commercial centers
Lakeshore South/SARA Park Trail	Walkers, bikers, equestrians	Water Safety Center; Commercial development at Body Beach	5 Miles	Park, campgrounds, beaches

LAKE HAVASU CITY PEDESTRIAN AND BICYCLE PLAN (1998)

This plan originated from the 1994 Lake Havasu City General Plan update to plan for a more walkable and bikeable community. Recommendations included:

- Install street lighting along Island multi-use path and Pima Wash multi-use path
- Install bicycle actuated traffic signals
- Enforce a bicycle helmet law for users under 16

- SR95 multi use pathway recommended to be constructed on the west side of 95 between Kiowa Blvd and Smoketree Ave. (This was completed in 2006.)
- McCulloch Blvd downtown: Install sidewalk bump-outs, enhanced and/or elevated crosswalks to enhance pedestrian visibility; install share the road signage to promote bicycle safety
- Increase sidewalk connectivity along all avenues and boulevards of the city
- Recommend not allow bicycles on sidewalks and to educate juveniles about risks of riding on sidewalks
- Emphasize the use of one-way streets for bicyclists. Install bike lanes if none present
- Better education of traffic laws to increase safety for all users
- Provide better access to schools and parks for pedestrians and bicyclists
- Install striped parking lanes for bicycle use on all streets that are wide enough

ARIZONA DEPARTMENT OF TRANSPORTATION (ADOT) STATEWIDE BICYCLE AND PEDESTRIAN PLAN UPDATE (2013)

The purpose of the ADOT Bicycle and Pedestrian Plan Update was to update the 2003 plan and address the most critical bicycle and pedestrian transportation planning needs on the State Highway System, responding to the significant growth in Arizona that has occurred over the last decade. The Plan identified SR 95 from Parker to Lake Havasu City as a priority paved shoulder opportunity. Table 6 lists the SR 95 segments identified as opportunities to add sidewalk.

TABLE 6: STATE HIGHWAYS SIDEWALK OPPORTUNITIES, ADOT BICYCLE AND PEDESTRIAN PLAN

Number	Area	State Highway	Street Face	From	To	Sidewalk Need
43	Parker	SR 95	Both	7th St.	Riverfront Dr.	Highest
44	Lake Havasu	SR 95	South Side	Acoma Blvd.	Fremont Ln.	Moderate
45	Lake Havasu	SR 95	Both	Fremont Ln.	Mulberry Ave.	Moderate
46	Lake Havasu	SR 95	Southwest Side	Mulberry Ave.	Smokertree Ave.	Moderate
47	Lake Havasu	SR 95	Northeast Side	Smokertree Ave.	Mesquite Ave.	Low
48	Lake Havasu	SR 95	West Side	Mesquite Ave.	Industrial Blvd.	Moderate

Crash Data Review

A review of reported pedestrian and bicycle crashes involving a motor vehicle for the 10-year period covering 2007-2016 was conducted. The ADOT Accident Location Identification and Surveillance System (ALISS) database was utilized for this analysis. Eighty-seven (87) pedestrian crashes and seventy-nine (79) bicycle crashes were reported during the 10-year period. Key findings include:

Pedestrian Crash Facts:

- 8.7 annual pedestrian crashes in LHMPO area
- 16% pedestrian crashes are “hit and run”
- 79% pedestrian crashes are intersection related
- 86% pedestrian crashes occurred in good weather condition
- 47% pedestrian crashes occurred due to the pedestrian’s fault
- 22% pedestrian crashes occurred at night dark condition
- 84% crashes resulted in pedestrian injury or fatality
- December thru March is the peak pedestrian crash period
- 46% of pedestrian crashes occurred while crossing the roadways/intersections

Bicycle Crash Facts:

- 7.9 annual bike crashes in LHMPO area
- 9% bike crashes are “hit and run”
- 81% bike crashes occurred at intersections
- 86% bike crashes occurred in good weather
- 61% bicyclists occurred due to the bicyclist’s fault
- 5% bike crashes occurred at night time dark condition
- 82% of bike crashes resulted in bicyclist injury or fatality
- March and April are the peak bike crash period
- 10% bicycle crashes occurred when the bicyclists were crossing the road

Pedestrian and Bicycle crash locations and trends from 2007-2016 are shown in Figure 1 through Figure 3 and on Table 7 through Table 16. It should be noted that while the number of pedestrian crashes decreased in 2016, statewide Arizona had an increase in pedestrian crashes in 2016 over 2015.

FIGURE 1: PEDESTRIAN CRASH LOCATIONS 2007-2016

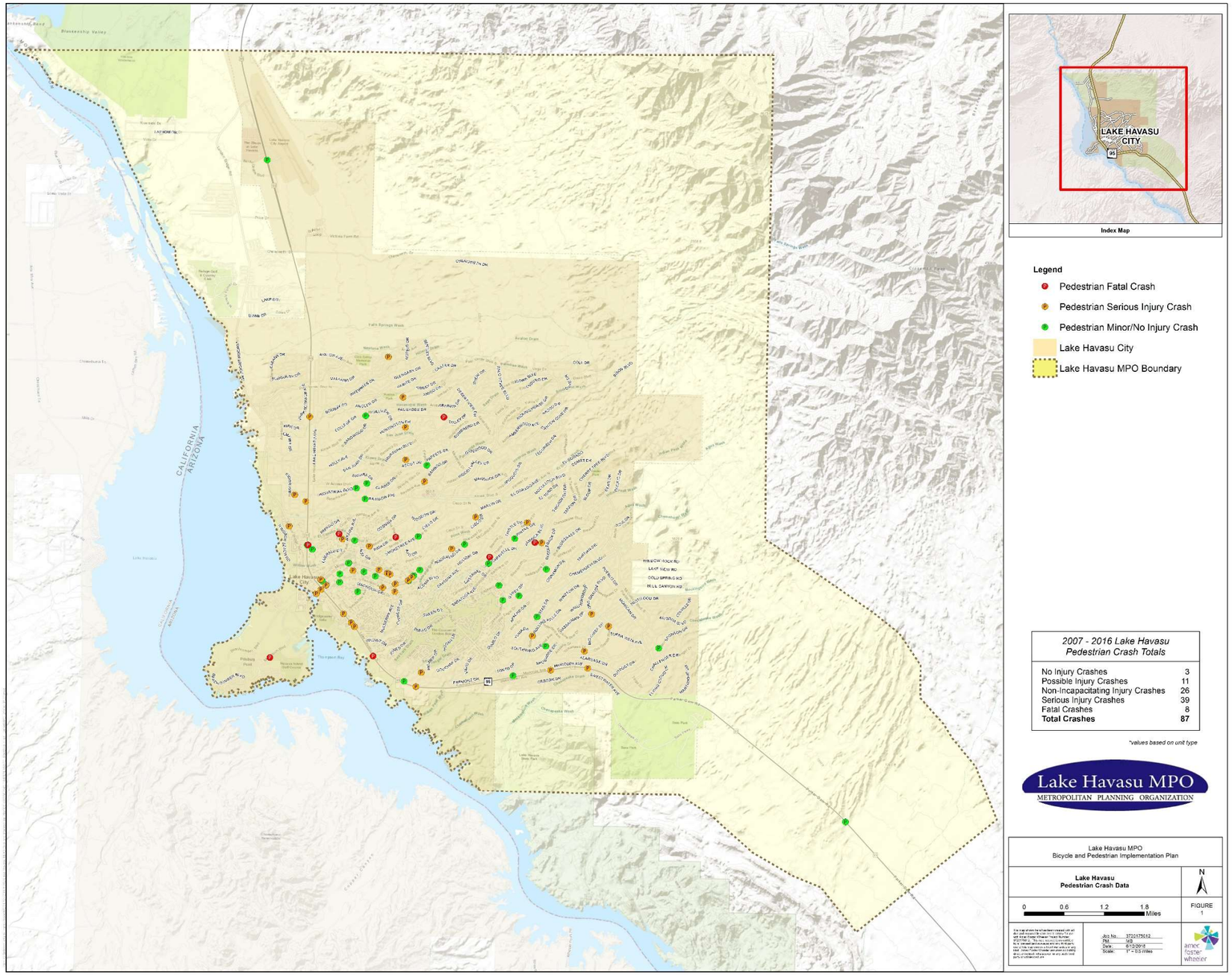


FIGURE 2: BICYCLE CRASH LOCATIONS 2007-2016

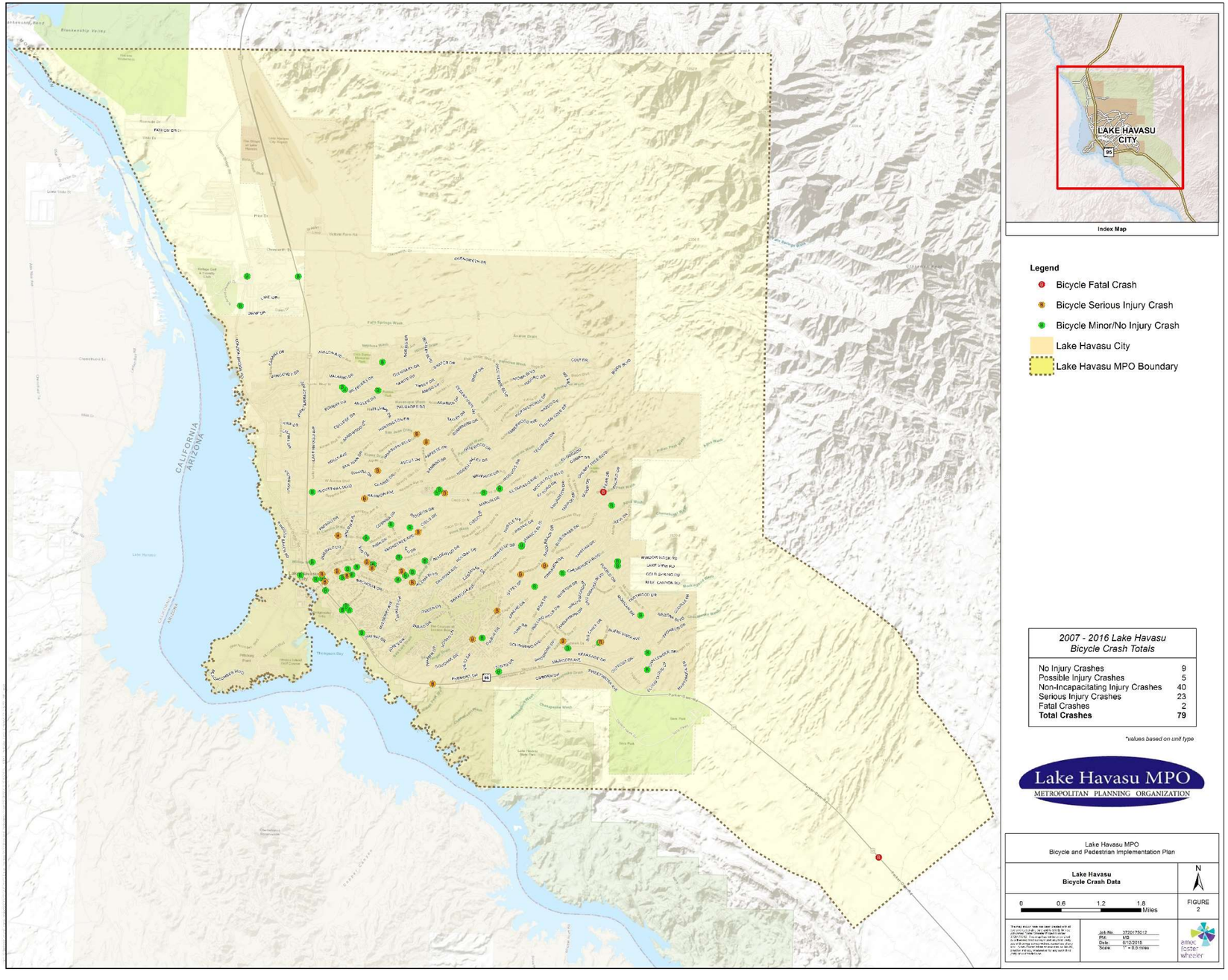


FIGURE 3: BIKE AND PEDESTRIAN CRASH TREND 2007-2016

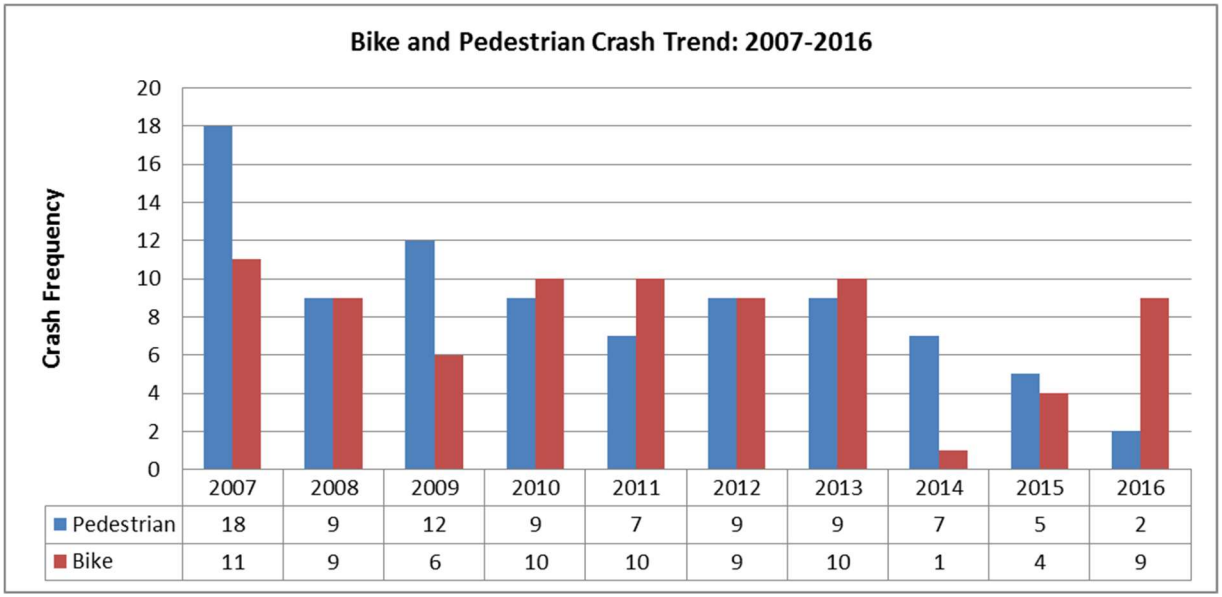


TABLE 7: PEDESTRIAN CRASH DISTRIBUTION BY LIGHTING CONDITION

Lighting Condition	Frequency	Percentage
Daylight	49	56.3%
Night-Lighted	5	5.7%
Night-Not Lighted	19	21.8%
Dawn & Dusk	1	1.1%
Unknown	13	14.9%
Total	**87**	**100.0%**

TABLE 8: PEDESTRIAN CRASH DISTRIBUTION BY INJURY SEVERITY

Injury Severity	Frequency	Percentage
No Injury	3	3.4%
Possible Injury	11	12.6%
Non-Incapacitating Injury	26	29.9%
Incapacitating Injury	39	44.8%
Fatal	8	9.2%
Total	**87**	**100.0%**

TABLE 9: PEDESTRIAN CRASH DISTRIBUTION BY MONTH OF THE YEAR

Incident Month	Frequency	Percentage
January	8	9.2%
February	13	14.9%
March	14	16.1%
April	7	8.0%
May	7	8.0%
June	6	6.9%
July	5	5.7%
August	5	5.7%
September	3	3.4%
October	5	5.7%
November	5	5.7%
December	9	10.3%
Total	**87**	**100.0%**

TABLE 10: PEDESTRIAN CRASH DISTRIBUTION BY UNIT ACTION

Unit Action	Frequency	Percentage
Going Straight Ahead	3	3.4%
Crossing Road	40	46.0%
Standing	10	11.5%
Walking with/aganist Traffic	7	8.0%
Other	5	5.7%
Unknown	22	25.3%
Total	**87**	**100.0%**

TABLE 11: BICYCLE CRASH DISTRIBUTION BY LIGHTING CONDITION

Lighting Condition	Frequency	Percentage
Daylight	69	87.3%
Night-Lighted	2	2.5%
Night-Not Lighted	4	5.1%
Dawn & Dusk	2	2.5%
Unknown	2	2.5%
Total	**79**	**100.0%**

TABLE 12: BICYCLE CRASH DISTRIBUTION BY INJURY SEVERITY

Injury Severity	Frequency	Percentage
No Injury	9	11.4%
Possible Injury	5	6.3%
Non-Incapacitating Injury	40	50.6%
Incapacitating Injury	23	29.1%
Fatal	2	2.5%
Total	**79**	**100.0%**

TABLE 13: PEDESTRIAN CRASH DISTRIBUTION BY TIME OF DAY

Incident Hour	Frequency	Percentage
0:00 - 1:00	3	3.4%
1:00 - 2:00	2	2.3%
2:00 - 3:00	1	1.1%
3:00 - 4:00	1	1.1%
4:00 - 5:00	2	2.3%
5:00 - 6:00	0	0.0%
6:00 - 7:00	4	4.6%
7:00 - 8:00	8	9.2%
8:00 - 9:00	4	4.6%
9:00 - 10:00	1	1.1%
10:00 - 11:00	2	2.3%
11:00 - 12:00	4	4.6%
12:00 - 13:00	5	5.7%
13:00 - 14:00	3	3.4%
14:00 - 15:00	8	9.2%
15:00 - 16:00	5	5.7%
16:00 - 17:00	5	5.7%
17:00 - 18:00	0	0.0%
18:00 - 19:00	9	10.3%
19:00 - 20:00	6	6.9%
20:00 - 21:00	6	6.9%
21:00 - 22:00	5	5.7%
22:00 - 23:00	3	3.4%
23:00 - 0:00	0	0.0%
Total	**87**	**100.0%**

TABLE 14: BICYCLE CRASH DISTRIBUTION BY MONTH OF THE YEAR

Incident Month	Frequency	Percentage
January	6	7.6%
February	7	8.9%
March	14	17.7%
April	12	15.2%
May	7	8.9%
June	1	1.3%
July	3	3.8%
August	5	6.3%
September	7	8.9%
October	8	10.1%
November	3	3.8%
December	6	7.6%
Total	**79**	**100.0%**

TABLE 15: BICYCLE CRASH DISTRIBUTION BY UNIT ACTION

Unit Action	Frequency	Percentage
Going Straight Ahead	56	70.9%
Crossing Road	10	12.7%
Making Left-turn	3	3.8%
Making Right-turn	1	1.3%
Overtaking/Passing/ Changing Lanes	3	3.8%
Slowing/Stopped in Trafficway	3	3.8%
Unknown	3	3.8%
Total	**79**	**100.0%**

TABLE 16: BICYCLE CRASH DISTRIBUTION BY TIME OF DAY

Incident Hour	Frequency	Percentage
0:00 - 1:00	0	0.0%
1:00 - 2:00	0	0.0%
2:00 - 3:00	0	0.0%
3:00 - 4:00	1	1.3%
4:00 - 5:00	0	0.0%
5:00 - 6:00	0	0.0%
6:00 - 7:00	1	1.3%
7:00 - 8:00	12	15.2%
8:00 - 9:00	5	6.3%
9:00 - 10:00	1	1.3%
10:00 - 11:00	7	8.9%
11:00 - 12:00	7	8.9%
12:00 - 13:00	3	3.8%
13:00 - 14:00	5	6.3%
14:00 - 15:00	11	13.9%
15:00 - 16:00	4	5.1%
16:00 - 17:00	5	6.3%
17:00 - 18:00	4	5.1%
18:00 - 19:00	7	8.9%
19:00 - 20:00	1	1.3%
20:00 - 21:00	3	3.8%
21:00 - 22:00	2	2.5%
22:00 - 23:00	0	0.0%
23:00 - 0:00	0	0.0%
Total	**79**	**100.0%**

Unincorporated Mohave County

The majority of the LHMPO planning area lies within the Lake Havasu City boundaries. However, there are several key unincorporated areas of Mohave County that are within the LHMPO region, including Desert Hills, Crystal Beach, Horizon Six, and the north London Bridge Road corridor. The crash data review showed that there were no reported pedestrian and bike crashes in these areas, neither in the ADOT database nor in the County database. However, the potential crash risk is there based on traffic volumes, street conditions, and use by pedestrians and bicyclists. These areas are discussed in more detail below.

London Bridge Road

The northern end of London Bridge Road is outside of the City limits. Mohave County has installed paved shoulders from the City limits north to Fathom Drive, creating striped bike lanes that have been a huge success in the biking community. It is recommended that this shoulder widening be extended north to SR 95 to provide a continuous bike facility.

Desert Hills

The Desert Hills community has benefitted from the London Bridge Road improvements. To realize the full benefits and to encourage additional use of the London Bridge Road bike lanes, it is recommended that bike lanes be striped on the following streets:

- Chenoweth Road from London Bridge Road to SR 95
- Lake Drive from London Bridge Road to SR 95
- Pero Drive from London Bridge Road to Lake Drive
- Jacob Row from Diane Drive to SR 95

Crystal Beach

The Crystal Beach community has also benefitted from the London Bridge Road improvements for destinations south of the community. While there are some significant grades in the neighborhood, it is recommended that Fathom Drive be widened to London Bridge Road and Vista Drive be widened to the Castle Rock Access road. A bicyclist rest area should be considered at the intersection of Vista Drive and Castle Rock for riders taking in a short hike or break. The west end of Vista Drive can accommodate striping for bike lanes for bicyclists wanting to use the steeper grades and access the scenic views.

Horizon Six

This community on the southern end of the region recently received a sealing and striping project on all the residential streets. The Friends of the Fair and Horizon Six residents, with support of the County, also

completed an Equestrian Trail project that was recommended in the LHMPO RTP. While no additional projects are recommended, community members should be included in any request for projects to ascertain if priorities have changed in the community.

Regional Trail

Initial stakeholder input indicated the desire for a regional trail to connect Lake Havasu City north to I-40, with the potential for utilizing the old SR 95 corridor. Due to the future use of this corridor as part of the Arizona Peace Trail, it is no longer an option for a regional biking and hiking trail. Instead, local stakeholders have worked with the Bureau of Land Management (BLM) to identify a potential trail alignment that utilizes an existing gas pipeline corridor. Further description of this regional trail is located in the Trails Network section.

Activity Nodes

The plan considers activity nodes throughout the city and generally defines them as areas of relatively concentrated pedestrian and/or bicycle activity. Generally, this activity is generated by retail, restaurant, commercial, recreational, and school-based land uses. Schools are featured as primary destination types, and thus also are considered activity nodes. Aside from the Island, the most significant concentrated activity node is McCulloch Boulevard, which forms a cross-town 'spine.' For the most part, the Island, its land uses, and users, function somewhat 'self-contained,' with a minority of users/visitors venturing into downtown. Another key activity node is the London Bridge Road corridor due to its attraction to recreational bicyclists and as a key route for bicycle competitions, in addition to the numerous events at Windsor Beach that attract pedestrians and bicyclists.

McCulloch/Downtown	The McCulloch downtown 'spine' is an important connector route for all travel modes, including bicyclists and pedestrians. The new Community Center will create an additional downtown destination that will be attractive to pedestrians and bicyclists. This Plan considers the current and future conditions along McCulloch and recommends strategies for safely and conveniently connecting pedestrians and bicyclists of all ages and abilities to this corridor. Wheeler Park is a minor node that is underperforming due to the fact that potential users must cross McCulloch in order to access it.
	

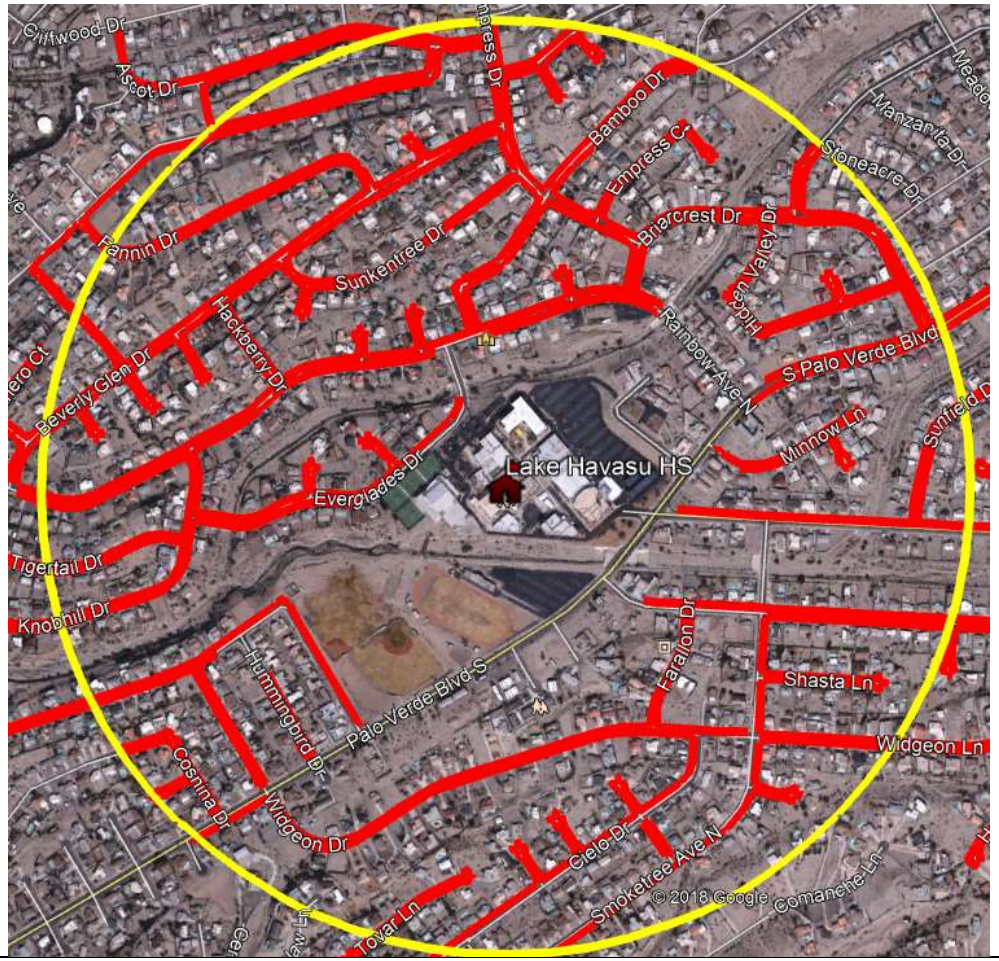
Pedestrian Network

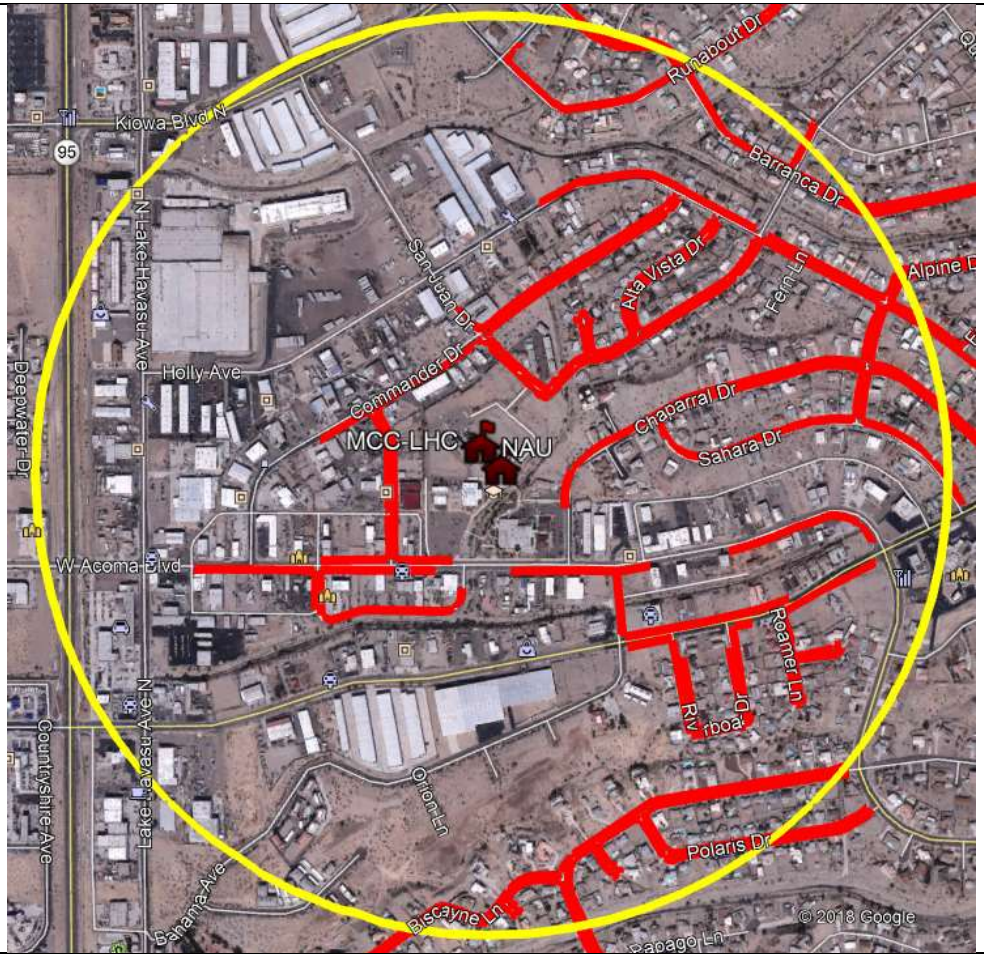
For the purposes of this Plan, the majority of the identified pedestrian destinations and recommended projects focus on Lake Havasu City's schools, as they are the most prevalent destination type in the area. Specifically, the Plan deals with the half-mile radii around the schools, as this distance is generally agreed to be age-appropriate for most elementary students. Surveys show that the most cited barrier to children not walking to school is the lack of sidewalks. Providing opportunities for students to walk or bike to school helps them to get valuable physical activity, and creates healthful, life-long habits. The following images delineate the gaps in the sidewalk system around schools. The yellow circles describe a ½-mile radius, which is considered a walkable distance for most students. Red lines indicate gaps in the sidewalk network.

ASU Colleges at LHC 100 University Way	Located strategically just off downtown, ASU at Lake Havasu focuses exclusively on instruction for high-demand undergraduate degrees. The location creates a unique college-town feel with its nearby lake views, beaches, restaurants, and shops in nearby downtown. ASU expects first-time freshmen to live on campus and guarantees housing to them. Many of these students, and even some of those who commute from elsewhere, will venture off campus and therefore need safe travel options to nearby destinations.
<u>Recommended Improvements</u> Install sidewalks where gaps are indicated by red lines.	
Costs: $2,228,750	

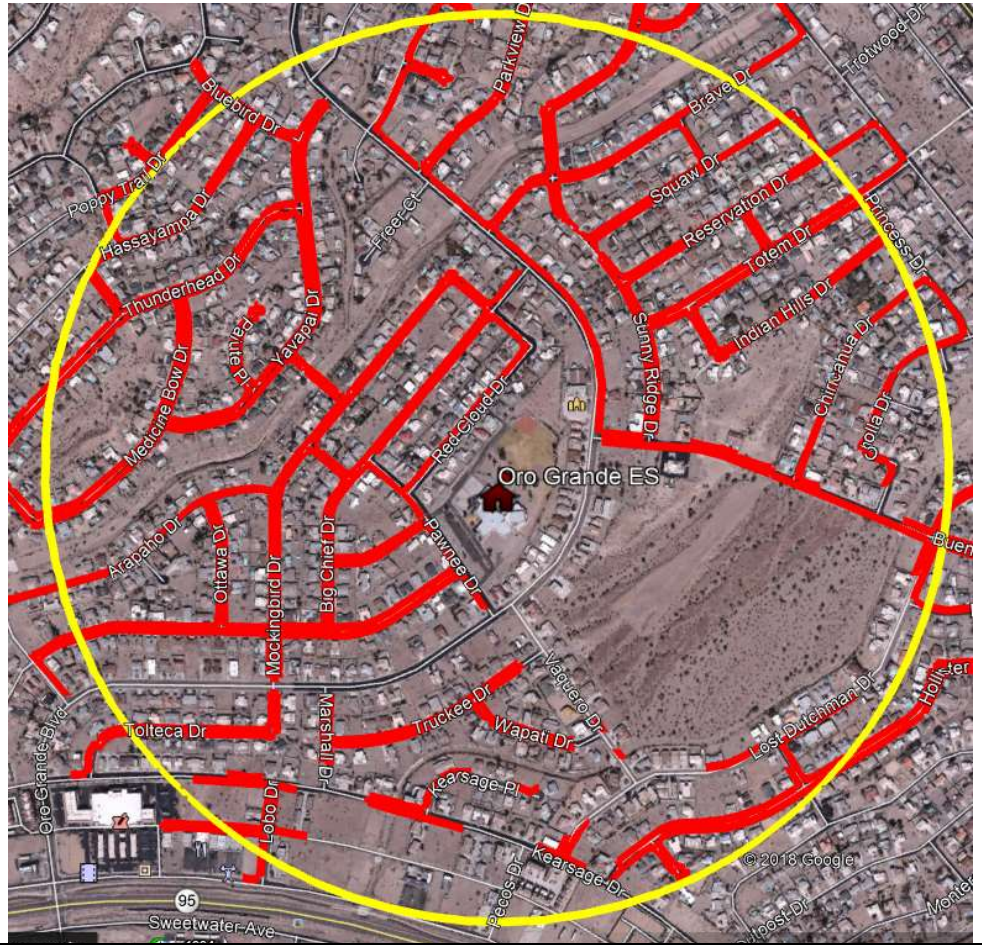
Havasupai Elementary School 880 Cashmere Dr	
<u>Recommended Improvements</u> Install sidewalks where gaps are indicated by red lines.	
Costs: $2,802,475	

Jamaica Elementary School 3437 Jamaica Blvd S.	
<u>Recommended Improvements</u> Install sidewalks where gaps are indicated by red lines.	
Costs: $2,641,025	

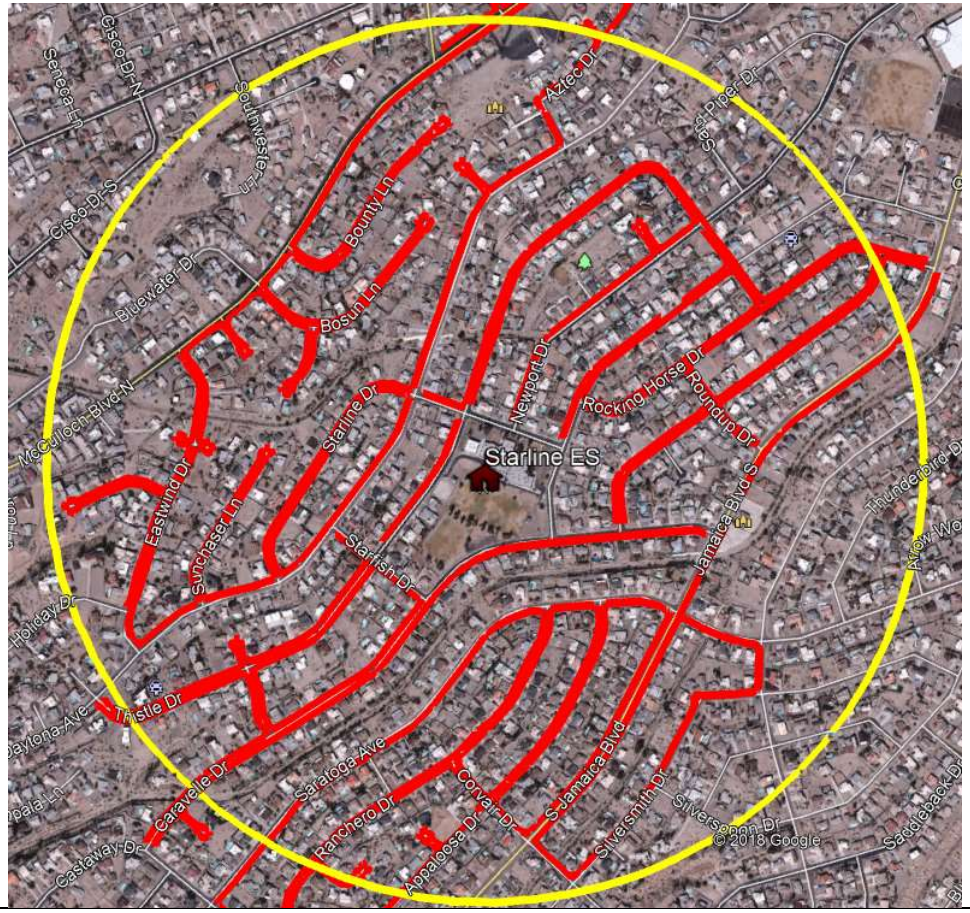
Lake Havasu High School 2675 Palo Verde Blvd. South	
Recommended Improvements Install sidewalks where gaps are indicated by red lines.	
Costs: $3,838,525	

Mohave Community College-LHC/ Northern Arizona University 1977 W Acoma Blvd	
Recommended Improvements Install sidewalks where gaps are indicated by red lines.	
Costs: $1,456,875	

Nautilus Elementary School 2200 Havasupai Blvd.	
Recommended Improvements Install sidewalks where gaps are indicated by red lines.	
Costs: $2,778,325	

Oro Grande Elementary School 1250 Pawnee Drive	
Recommended Improvements Install sidewalks where gaps are indicated by red lines.	
Costs: $2,826,685	

Smoketree Elementary School 2395 N. Smoketree Ave.	
<u>Recommended Improvements</u> Install sidewalks where gaps are indicated by red lines.	
Costs: $1,643,425	

Starline Elementary School 3150 Starline Drive	
<u>Recommended Improvements</u> Install sidewalks where gaps are indicated by red lines.	
Costs: $2,201,425	

Thunderbolt Middle School 695 Thunderbolt Ave	
<u>Recommended Improvements</u> Install sidewalks where gaps are indicated by red lines.	
Costs: $3,280,175	

Bicycle Network

The Plan provides guidance on how to connect people to their important destinations and recreational opportunities, including existing and future trails. A three-pronged strategy was used to select and recommend routes for future improvement: 1) enhance the routes that cyclists currently use by providing wayfinding signage, 2) develop 'low stress' routes that connect people to adjacent neighborhoods, and 3) reconfigure the city's existing network of streets that have parking lanes by creating 'shared bike and parking lanes,' and true bike lanes where there is sufficient street width.

In determining the optimal bicycle routing, the fastest – or most direct -- route isn't always the safest route. Routes are recommended based on how well they connect important destinations, but also. for all ages and abilities of bicyclists. In addition, Lake Havasu City's topography (hills and curves) sometimes can create challenging conditions for novice and family cyclists. Roadways with hills and curves also can create visibility restrictions, preventing vehicles and bicyclists from establishing acceptable sight lines. Therefore, to create safe conditions, the recommended routes may be somewhat circuitous.

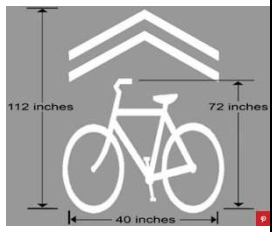
'LOW-STRESS' BICYCLE ROUTES

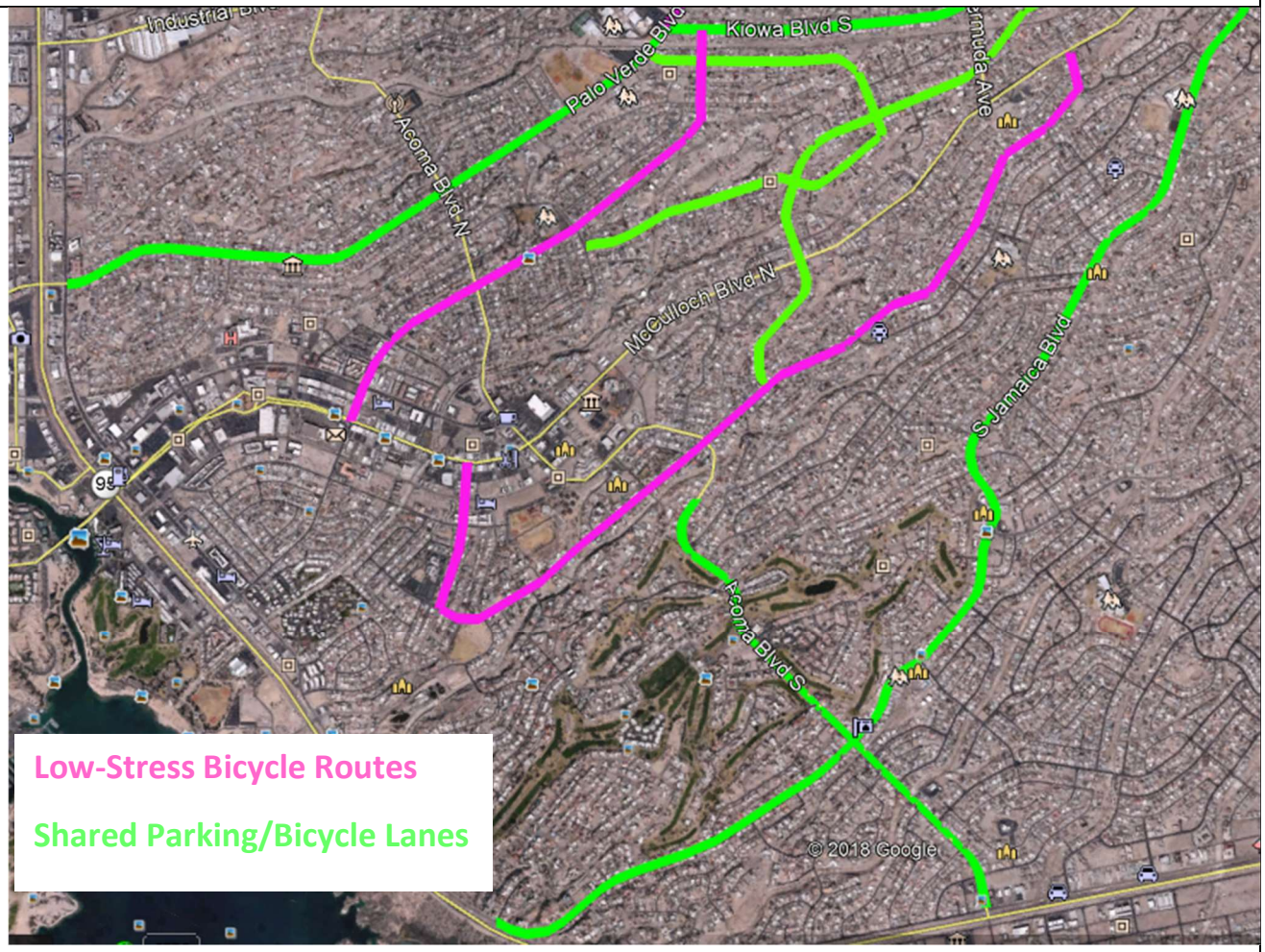
The vast majority of cyclists – in any community – are of intermediate or novice experience levels. To safely accommodate them on roadways, an extra degree of care is required in the facilities and routes a city creates. 'Low-stress' bike routes provide a safe and easy way for family, novice, and intermediate cyclists to travel to their destinations. The recommendations for low-stress routes include several streets that have low traffic volumes and low vehicle speeds. The recommended Shared Parking/Bike Lanes listed in the section following this one also can be considered low stress.

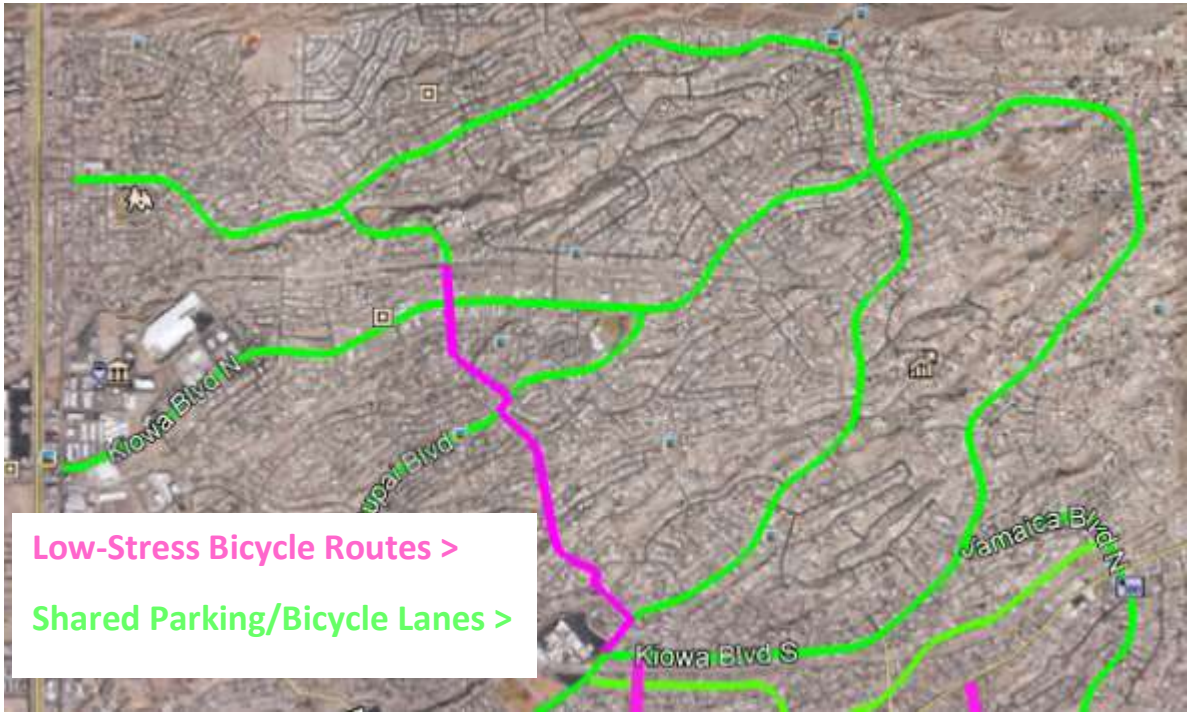
Bicycle Network **Low-Stress Bicycle Routes - South**	The map below shows the recommended low-stress bicycle routes (including shared parking/bike lanes) for the south portion of the city. Green lines indicate routes on streets recommended for Shared Parking/ Bicycle Lanes.

Recommended Improvements

Install directional signage and pavement markings along the indicated routes. Guidance on signage types, and frequency is provided in the Wayfinding section of the Plan. Installing Shared Lane Markings (SLMs, see image below) along these routes can provide additional visual cues to motorists to increase their expectancy of seeing bicyclists on the roadway. SLMs should be installed in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).





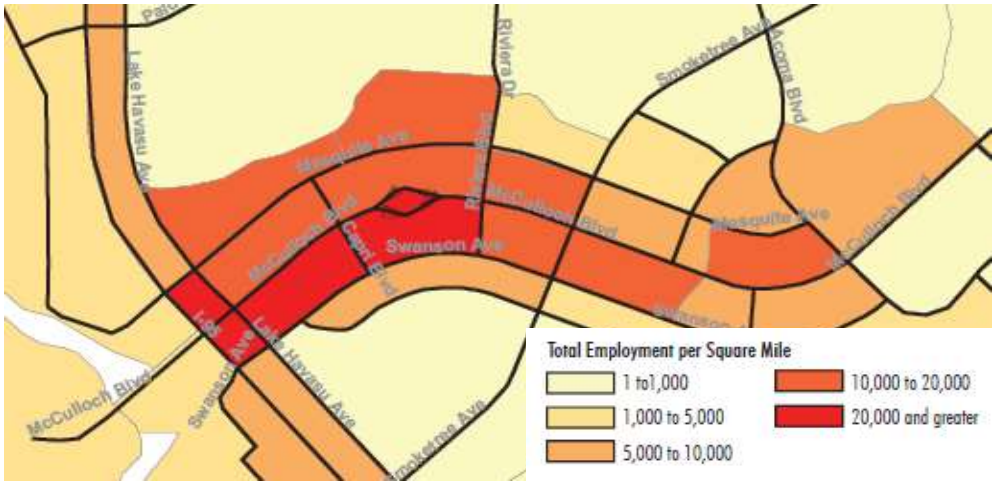
Bicycle Network **Low-Stress Bicycle Routes - North**	The map below shows the recommended low-stress bicycle routes (including shared parking/bike lanes) for the north portion of the city. Green lines indicate routes on streets recommended for Shared Parking/ Bicycle Lanes.
<u>Recommended Improvements</u> Install directional signage and pavement markings along the indicated routes. Guidance on signage types, and frequency is provided in the Wayfinding section of the Plan. Installing SLMs along these routes can provide additional visual cues to motorists to increase their expectancy of seeing bicyclists on the roadway (see inset on previous page). SLMs should be installed in accordance with the MUTCD.	

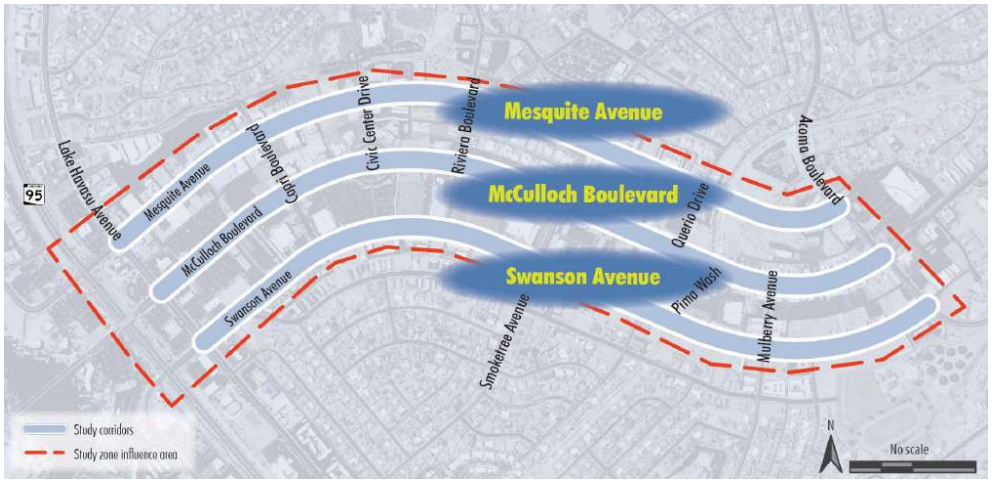
MCCULLOCH BOULEVARD AND 'RELIEVER' BIKE ROUTES

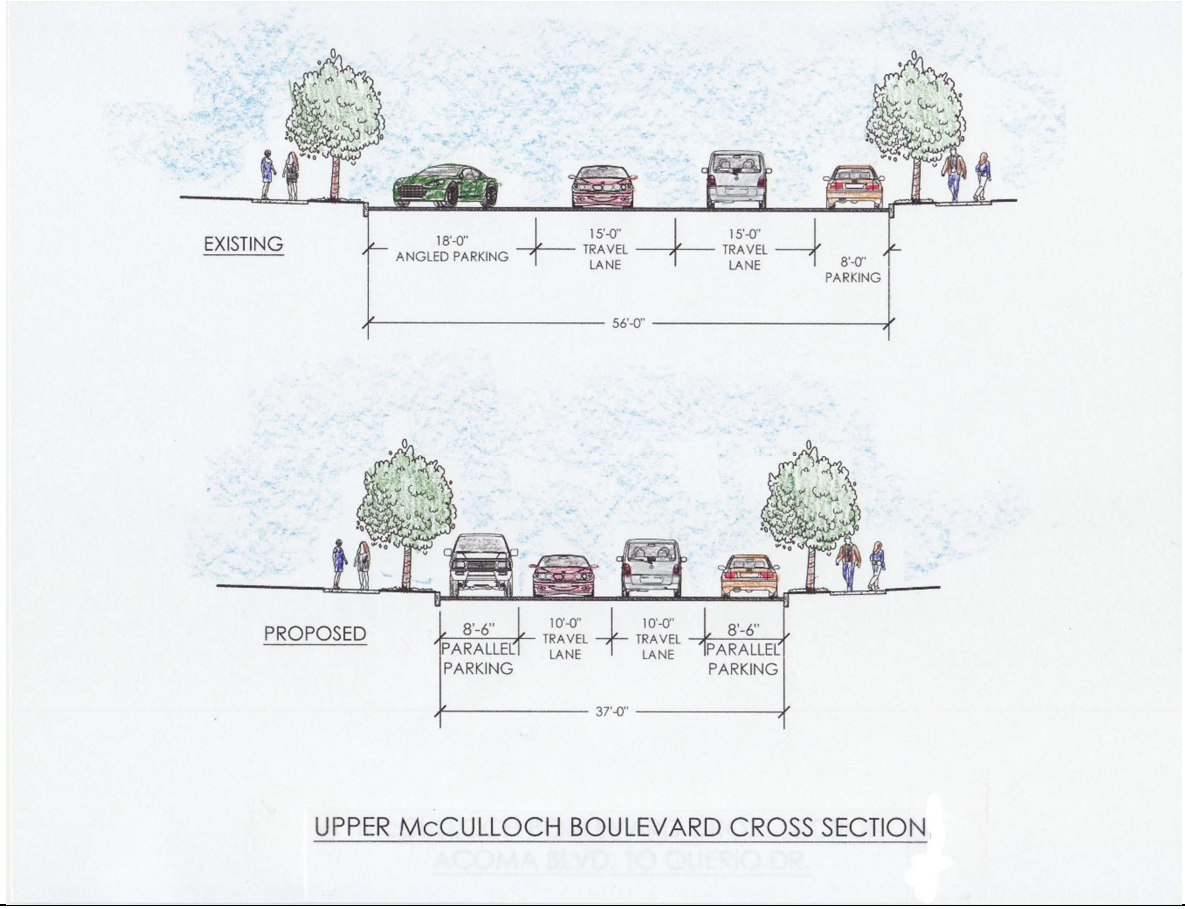
McCulloch is a major cross-town spine and connects to many destinations, including downtown. According to the Arizona Department of Transportation (ADOT) Planning Assistance for Rural Areas (PARA) Study entitled *Lake Havasu City McCulloch Corridor Improvement Study* (September 2012), this corridor is poised to experience even more growth through 2030.

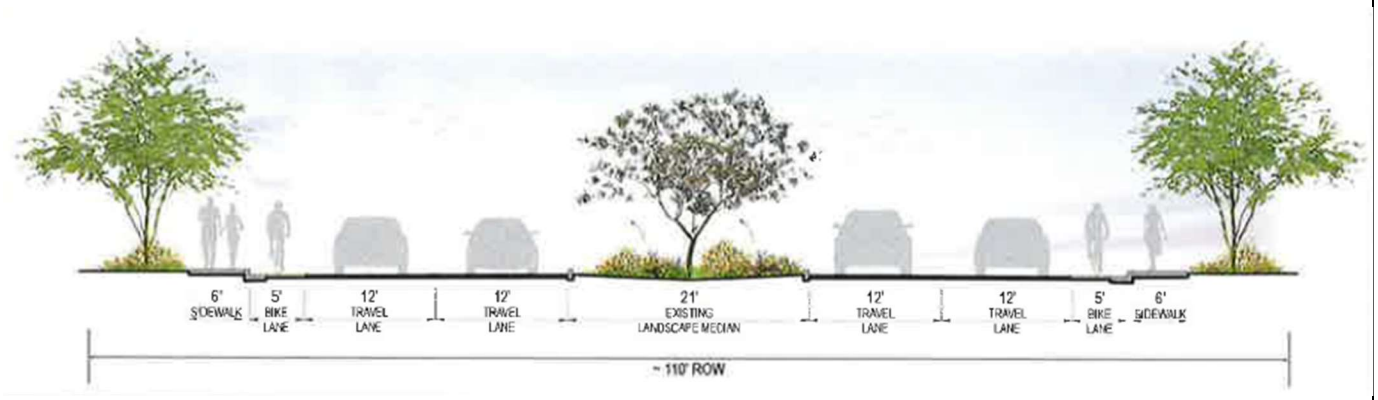
Our recommendations include creating 'reliever' bike routes on streets that run parallel to McCulloch Boulevard. Mesquite and Swanson are well suited to function as relievers, with the former having significantly lower traffic volumes. In addition, planned future changes to Swanson will create wide sidewalks and a multi-use path that will accommodate pedestrians and bicyclists. The recommendations are consistent with the *Lake Havasu City Downtown Design Guidelines* (August 2017)

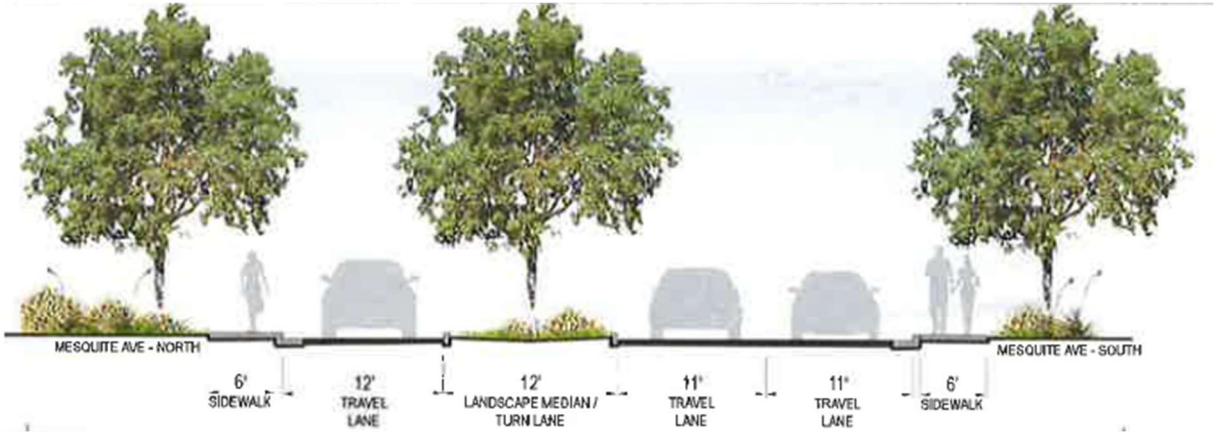
The designation of these roadways as parallel routes that should be treated as a unified corridor is consistent with the above study. The exception is Magnolia Drive, which was added as a potentially even lower-stress alternative. Developing low-stress alternatives to McCulloch could attract more family, novice, and intermediate cyclists.

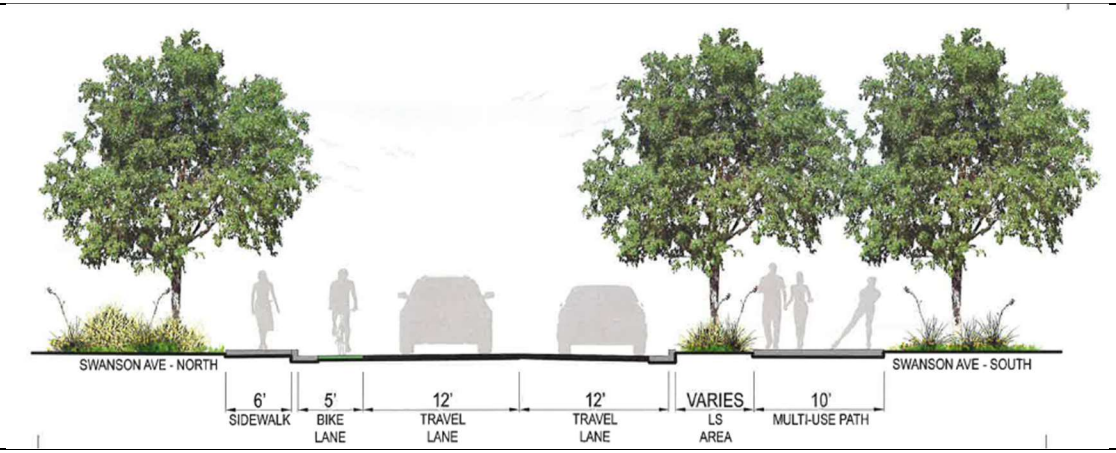


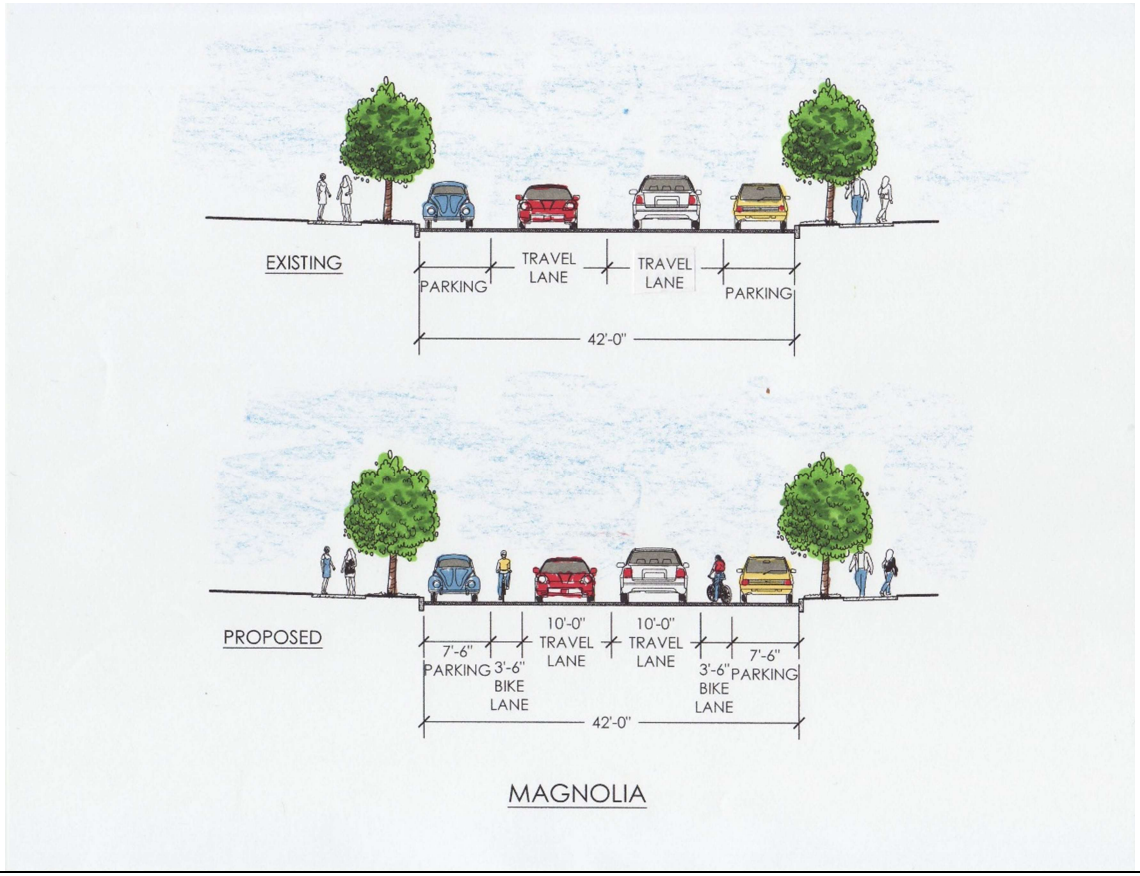


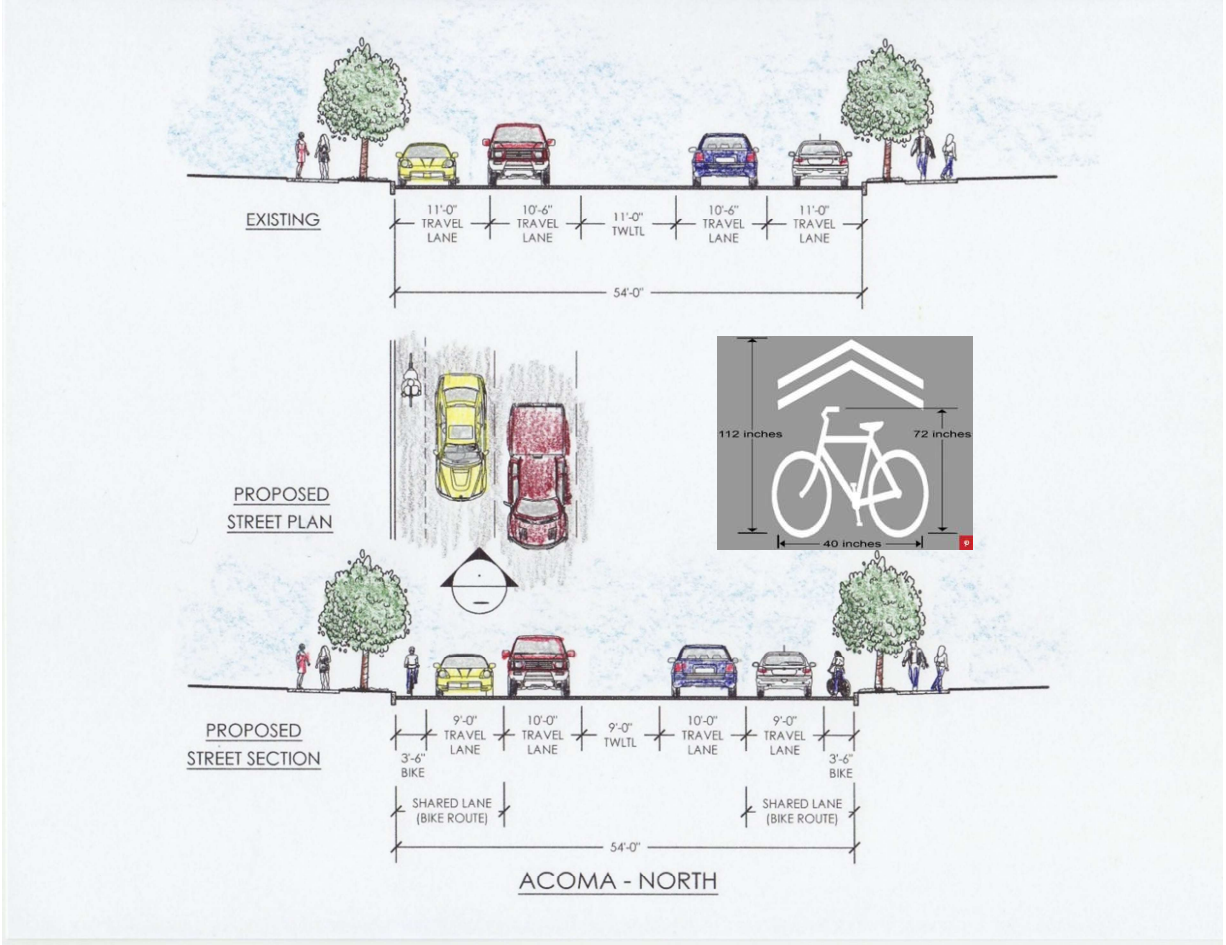
Bicycle Network **Upper McCulloch Boulevard**	
Recommended Improvements Narrow the roadway by installing 10-foot travel lanes and converting the existing angled parking to parallel parking between Smoketree Avenue and Acoma Boulevard. As a result, vehicle speeds likely will decrease, making Upper McCulloch a safer place for pedestrians and bicyclists. This recommendation is consistent with the *Lake Havasu City Downtown Design Guidelines* completed in August 2017.	
Costs $676,000	**Cost estimate excludes landscaping**

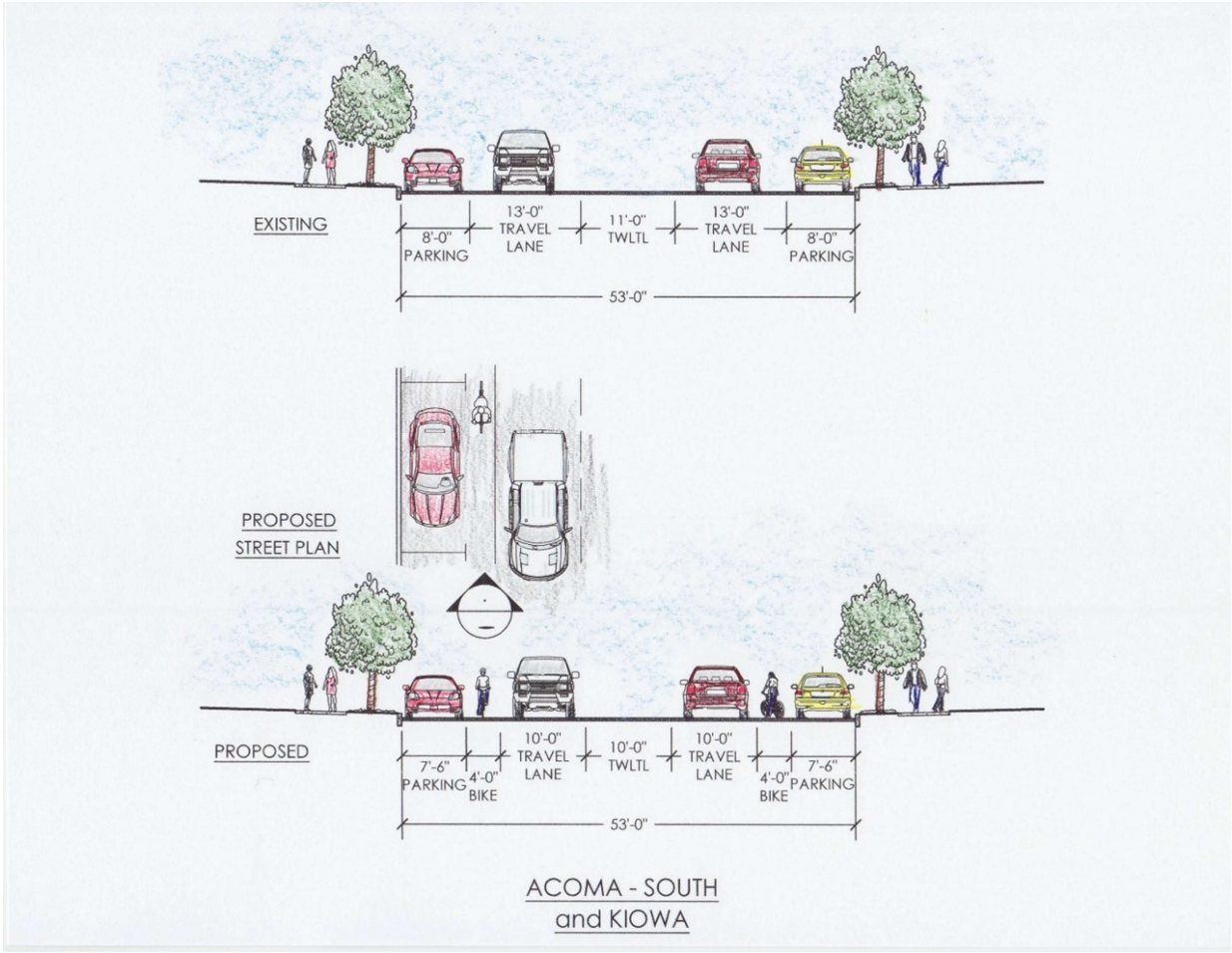
Bicycle Network **Lower McCulloch Boulevard**	
<u>Recommended Improvements</u> Narrow the roadway by installing 12-foot travel lanes and adding 5-foot bicycle lanes between Lake Havasu Avenue and Smoketree Avenue. As a result, vehicle speeds likely will decrease, making Lower McCulloch a safer place for pedestrians and bicyclists. (The rendering at the right is from the *Lake Havasu City Downtown Design Guidelines*)	
Costs $20,000	**Cost estimate excludes landscaping**

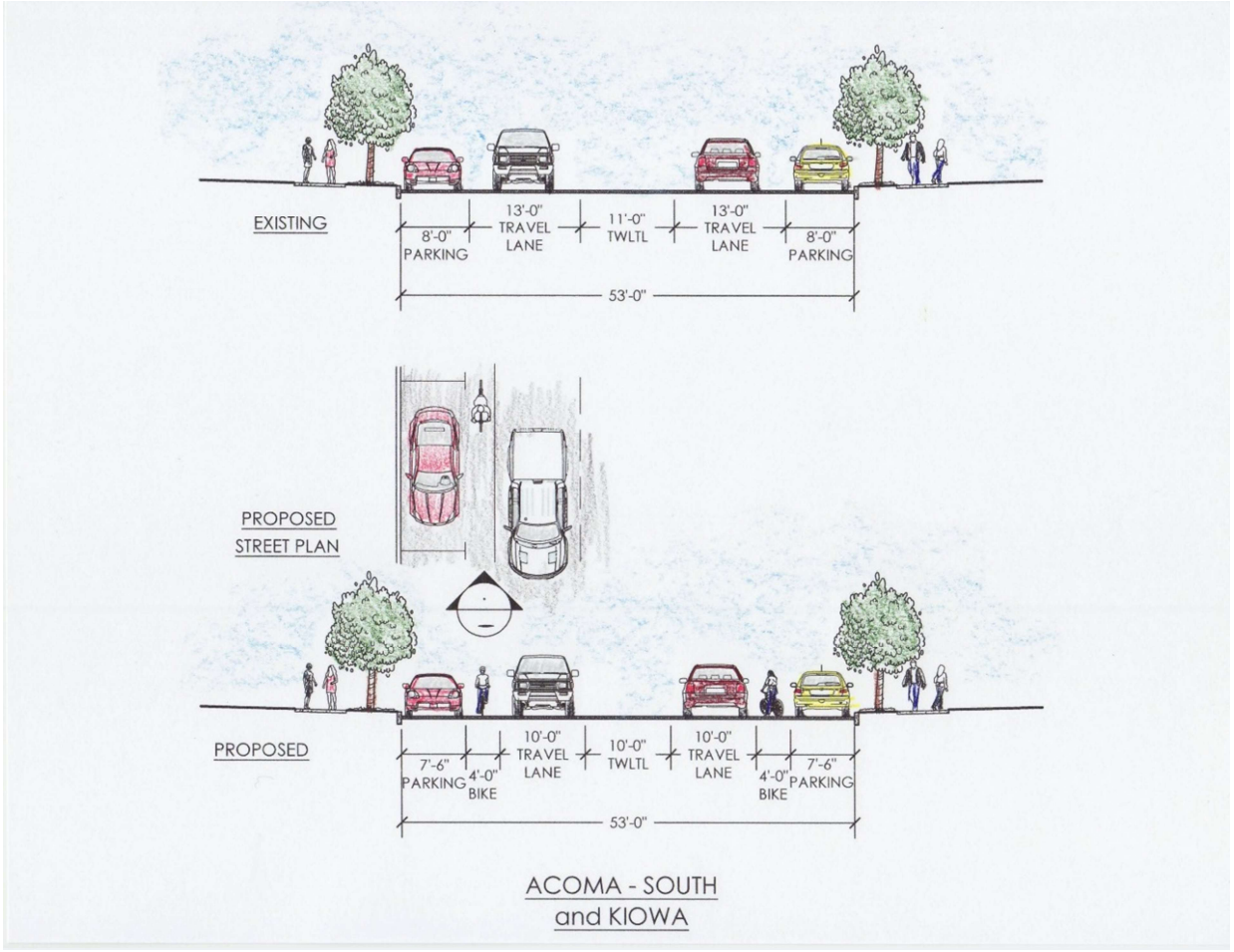
Bicycle Network **McCulloch Boulevard** **'Reliever' bike routes** **Mesquite Avenue**	
<u>Recommended Improvements</u> Narrow the roadway by installing 11- and 12-foot travel lanes and adding a center landscaped median from Lake Havasu Avenue to Acoma Boulevard. As a result, vehicle speeds likely will decrease, making Mesquite Avenue a safer place for pedestrians and bicyclists. (The rendering at right is from the *Lake Havasu City Downtown Design Guidelines*)	
Costs $814,000	**Cost estimate excludes landscaping**

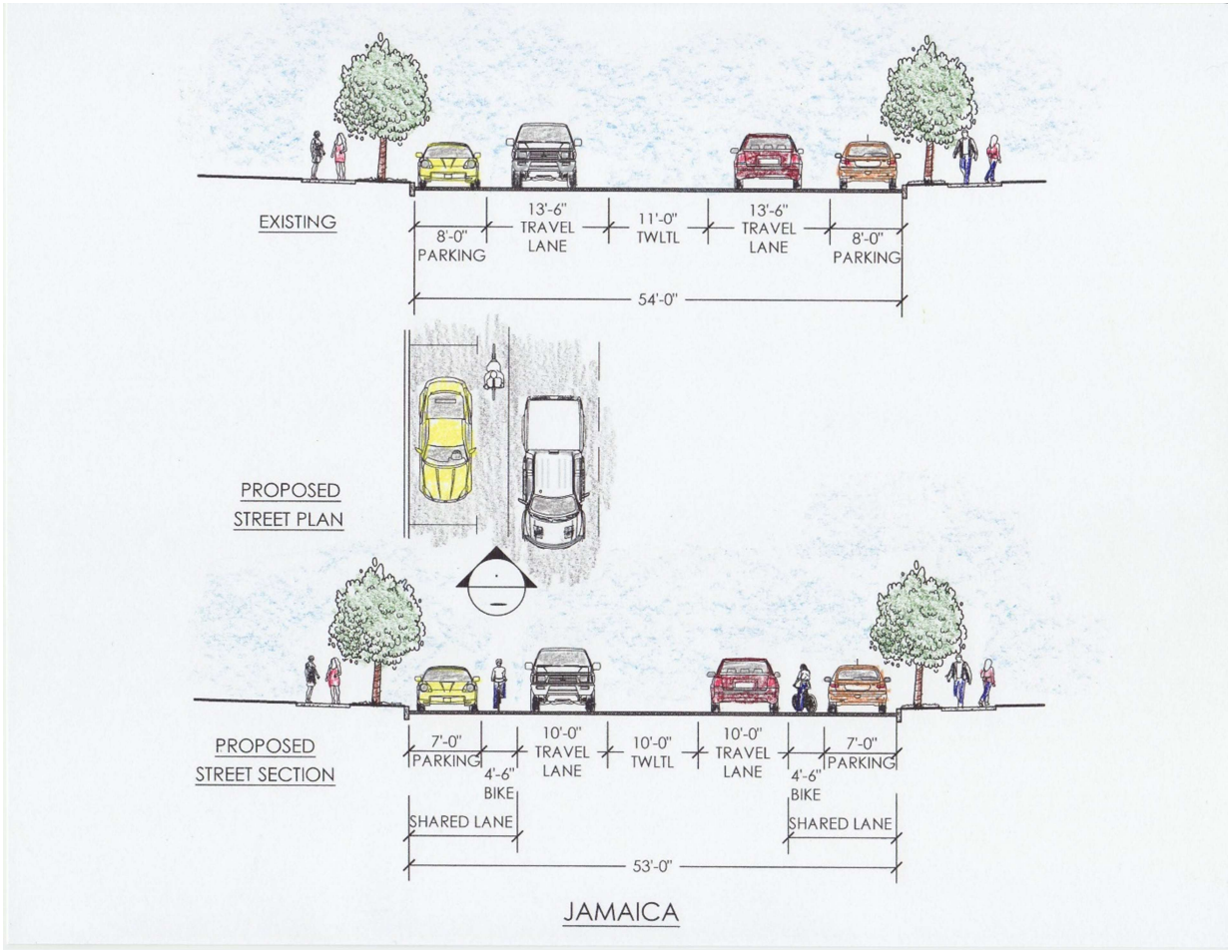
Bicycle Network **McCulloch Boulevard** **'Reliever' bike routes** **Swanson Avenue**	
<u>Recommended Improvements</u> Redistribute the width of the center two-way left-turn lane to stripe a bike lane on the north side of Swanson from Lake Havasu Avenue to Acoma Boulevard. As a result, vehicle speeds likely will decrease, making Swanson Avenue a safer place for pedestrians and bicyclists. (The rendering at right is from the *Lake Havasu City Downtown Design Guidelines*)	
Costs $33,750	**Cost estimate excludes landscaping**

Bicycle Network **McCulloch Boulevard** **'Reliever' Bike Routes** **Magnolia Drive**	
<u>Recommended Improvements</u> Reconfigure the roadway by narrowing both the travel lanes and parking lanes, creating a shared lane for parking and bicycles, and adding tree shade from Swanson Avenue to Cypress Drive. As a result, vehicle speeds likely will decrease, making Magnolia Drive a safer and more inviting place for pedestrians and bicyclists.	
Costs $26,250	**Cost estimate excludes landscaping**

Bicycle Network **Acoma Boulevard – North**	
<u>Recommended Improvements</u> Acoma Boulevard currently is a significant connector for vehicular traffic. Recommendations incorporate 'advisory bike lanes' into the curb lanes to provide accommodation for bicyclists on segments with 5 lanes and no parking (Industrial Boulevard to Stroke Drive). SLMs (see inset) can be added per MUTCD guidance for additional delineation of the bicycle space.	
Costs $65,000	**Cost estimate excludes landscaping**

Bicycle Network **Shared Parking/Bike Lanes** **Acoma Boulevard – South** (Shares similar cross-section with Kiowa)	
<u>Recommended Improvements</u> Acoma South is significantly different in roadway geometry and in character than its northern segment. This includes the segments from Stroke Drive to Fremont Drive, and from Industrial Boulevard to Lake Havasu Avenue. Reconfigure the roadway between the existing curbs by narrowing both the travel lanes and parking lanes, creating a shared lane for parking and bicycles, and adding tree shade. As a result, vehicle speeds likely will decrease, making Acoma Boulevard South a safer and more inviting place for pedestrians and bicyclists.	
Costs $56,250	**Cost estimate excludes landscaping**

Bicycle Network **Shared Parking/Bike Lanes** **Kiowa Boulevard**	
<u>Recommended Improvements</u> Kiowa traverses mostly residential areas and provides connections to two schools. Reconfigure the roadway between the existing curbs by narrowing both the travel lanes and parking lanes, creating a shared lane for parking and bicycles, and adding tree shade from Lake Havasu Avenue to Palo Verde Boulevard. As a result, vehicle speeds likely will decrease, making Acoma Boulevard South a safer and more inviting place for pedestrians and bicyclists.	
Costs $177,500	**Cost estimate excludes landscaping**

Bicycle Network **Shared Parking/Bike Lanes** **Jamaica Boulevard**	
Recommended Improvements Install Shared Parking/Bicycle Lanes on Jamaica from Lake Havasu Avenue to Kiowa Boulevard by narrowing both the existing travel lanes and parking lanes, creating a shared lane for parking and bicycles, and adding tree shade. As a result, vehicle speeds likely will decrease, making Jamaica a safer and more inviting place for pedestrians and bicyclists.	
Costs $122,500	**Cost estimate excludes landscaping**

Bicycle Network
Shared Parking/Bike Lanes

Palo Verde Avenue

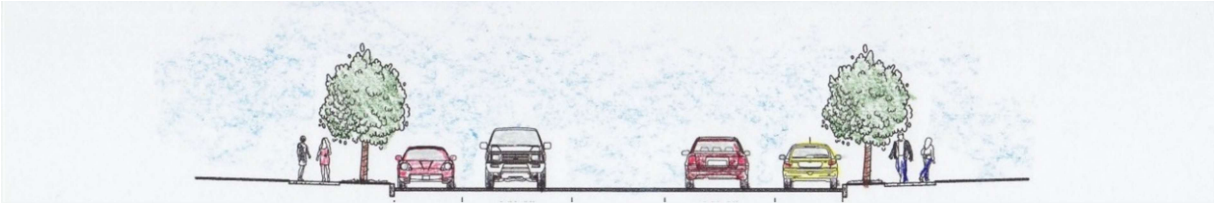
Recommended Improvements

Palo Verde Avenue possesses three different cross-section widths along its length: 48', 50', and 52'. Install Shared Parking/Bicycle Lanes on Palo Verde along its entire length (Lake Havasu Avenue North to Lake Havasu Avenue South) by narrowing the travel lanes and parking lanes, creating a shared lane for parking and bicycles, and adding tree shade.

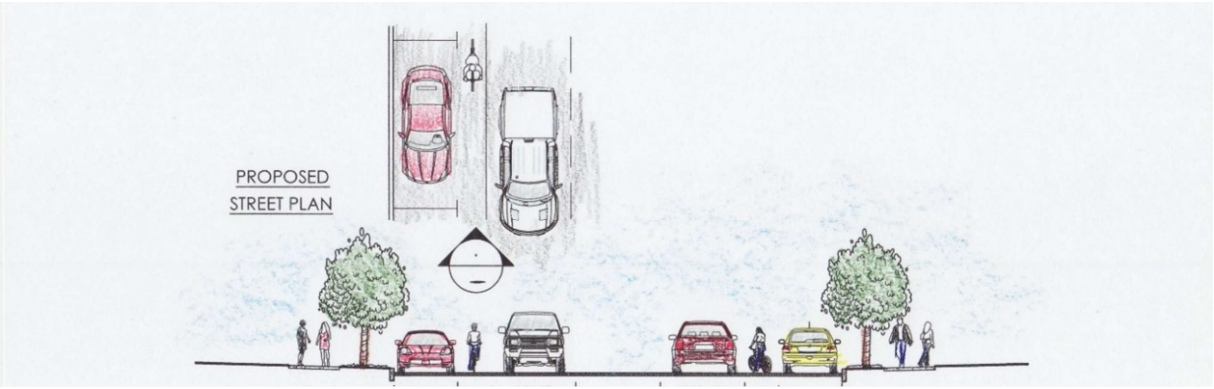
Maintain 10'-0" travel lanes, 10'-0" TWLTL, and 7' parking lanes for each of the various available cross-section scenarios, and, use the following recommendations for the bicycle 'space' within the shared parking/bicycle lanes:

Cross-section	Bike space
48'-0"	2'-0"
50'-0"	3'-0"
52'-0"	4'-0"

As a result of these modifications, vehicle speeds likely will decrease, making Palo Verde Avenue a safer and more inviting place for pedestrians and bicyclists.



EXISTING 8' | ← 32'-36' → | 8'



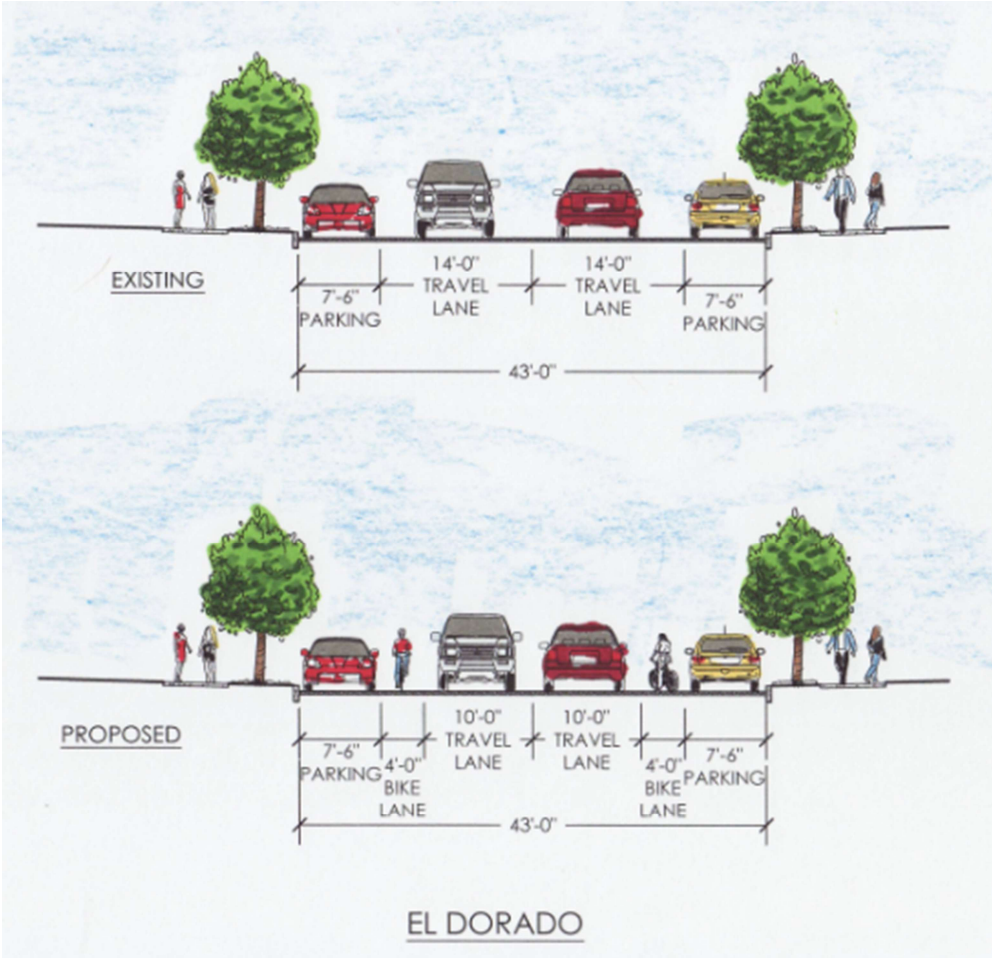
48' = 7' 2' 10' 10' 10' 2' 7'

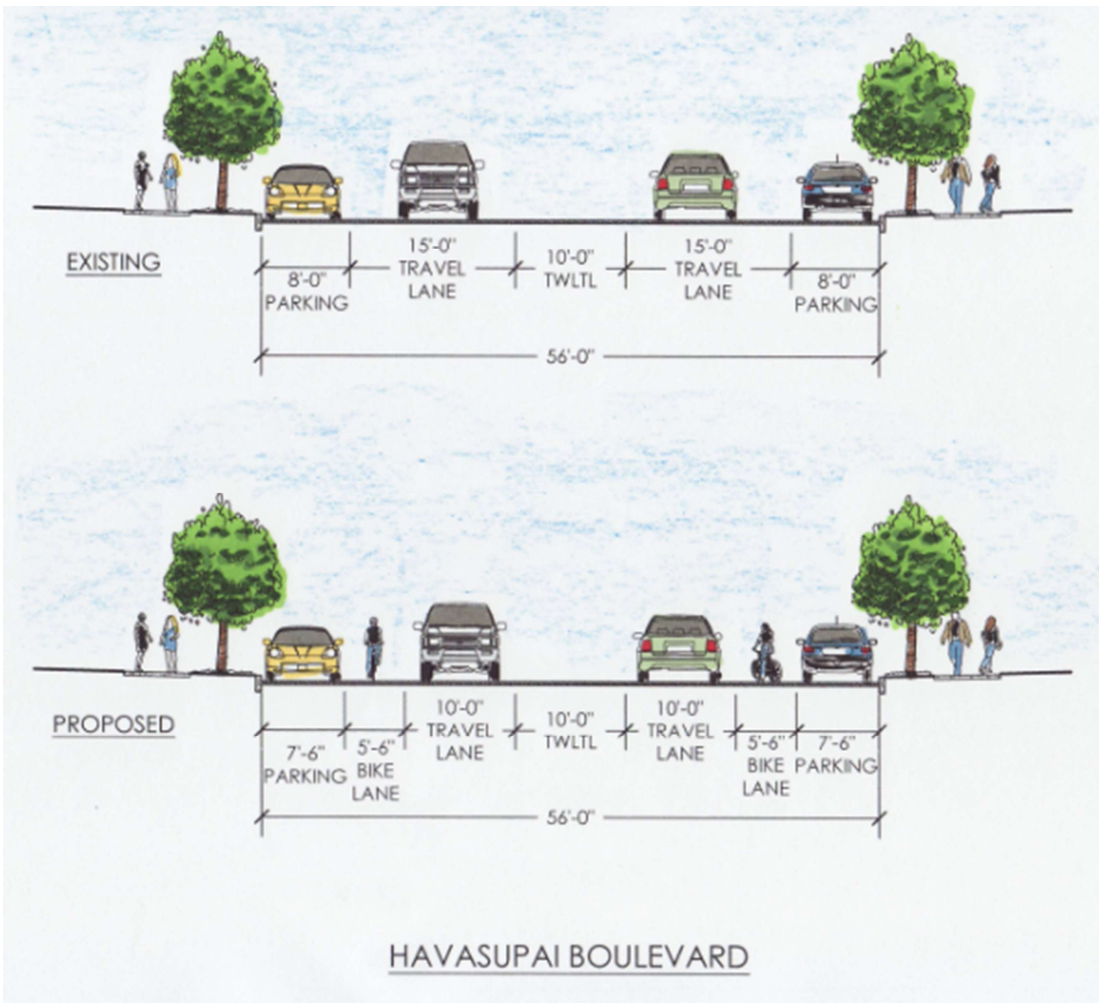
50' = 7' 3' 10' 10' 10' 3' 7'

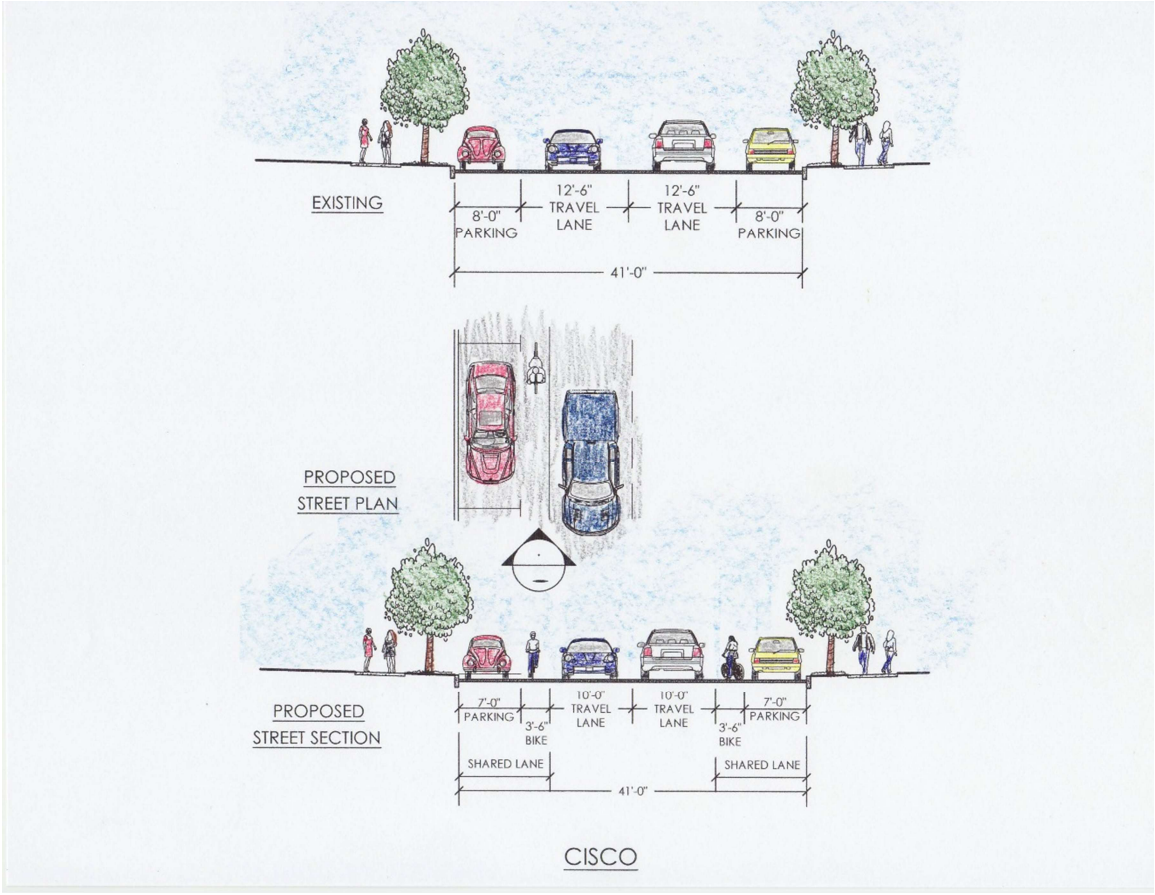
52' = 7' 4' 10' 10' 10' 4' 7'

Costs $187,500

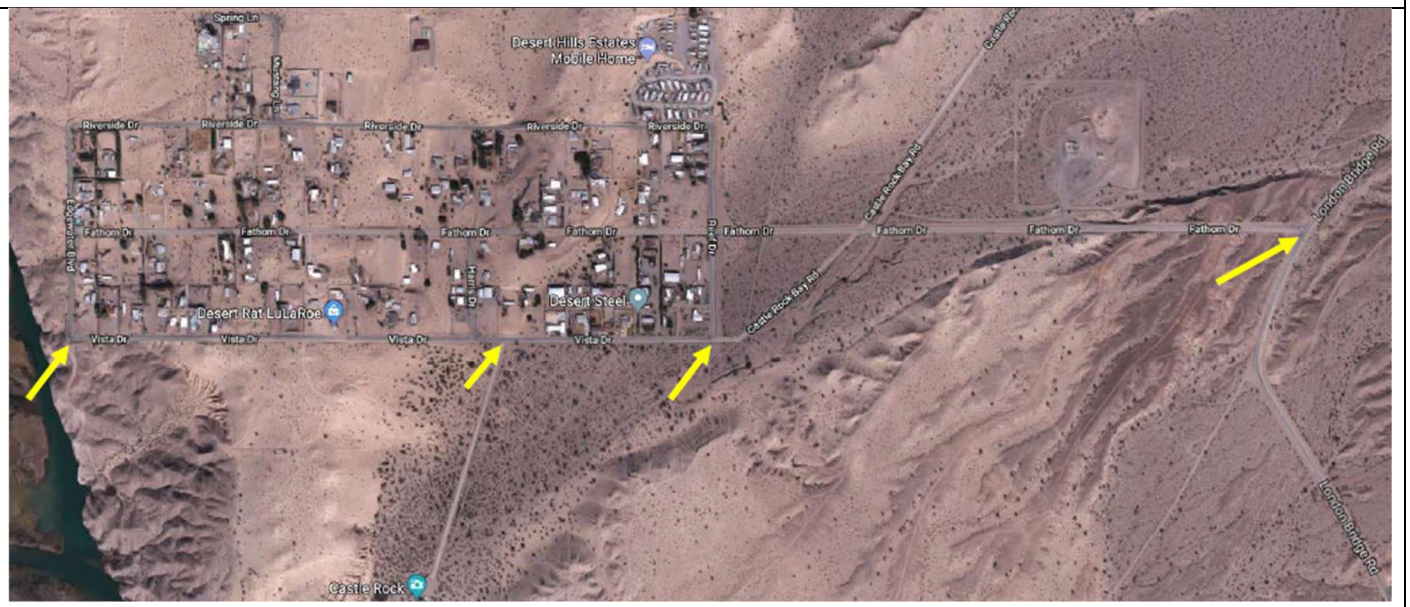
Cost estimate excludes landscaping

Bicycle Network **Shared Parking/Bike Lanes** **El Dorado Avenue**	
<u>Recommended Improvements</u> Install Shared Parking/Bicycle Lanes on El Dorado from Daytona Avenue to Jamaica Boulevard by narrowing both the existing travel lanes and parking lanes, creating a shared lane for parking and bicycles, and adding tree shade. As a result, vehicle speeds likely will decrease, making El Dorado a safer and more inviting place for pedestrians and bicyclists.	
Costs $57,500	**Cost estimate excludes landscaping**

Bicycle Network **Shared Parking/Bike Lanes** **Havasupai Boulevard**	
<u>Recommended Improvements</u> Install Shared Parking/Bicycle Lanes on Havasupai Boulevard from Acoma Boulevard to Kiowa Boulevard by narrowing both the existing travel lanes and parking lanes, striping a bicycle lane, and adding tree shade. As a result, vehicle speeds likely will decrease, making Havasupai Boulevard a safer and more inviting place for pedestrians and bicyclists.	
Costs $40,000	**Cost estimate excludes landscaping**

Bicycle Network **Shared Parking/Bike Lanes** **Cisco Drive**	
<u>Recommended Improvements</u> Install Shared Parking/Bicycle Lanes on Cisco Drive from Palo Verde Boulevard to Pima Drive by narrowing both the existing travel lanes and parking lanes, creating a shared lane for parking and bicycles, and adding tree shade. As a result, vehicle speeds likely will decrease, making Cisco a safer and more inviting place for pedestrians and bicyclists.	
Costs $45,000	**Cost estimate excludes landscaping**

Bicycle and Pedestrian Facilities **London Bridge Road**	
Recommended Improvements Windsor Beach hosts numerous events that draw pedestrians and bicyclists. There are sidewalk gaps and no bicyclist facilities along the segment of London Bridge Road near Windsor Beach. Recommendations include installing sidewalk and restriping to provide bike lanes on London Bridge Road, beginning with the segment from Dover Avenue to Countryshire Avenue.	
Costs $101,500	

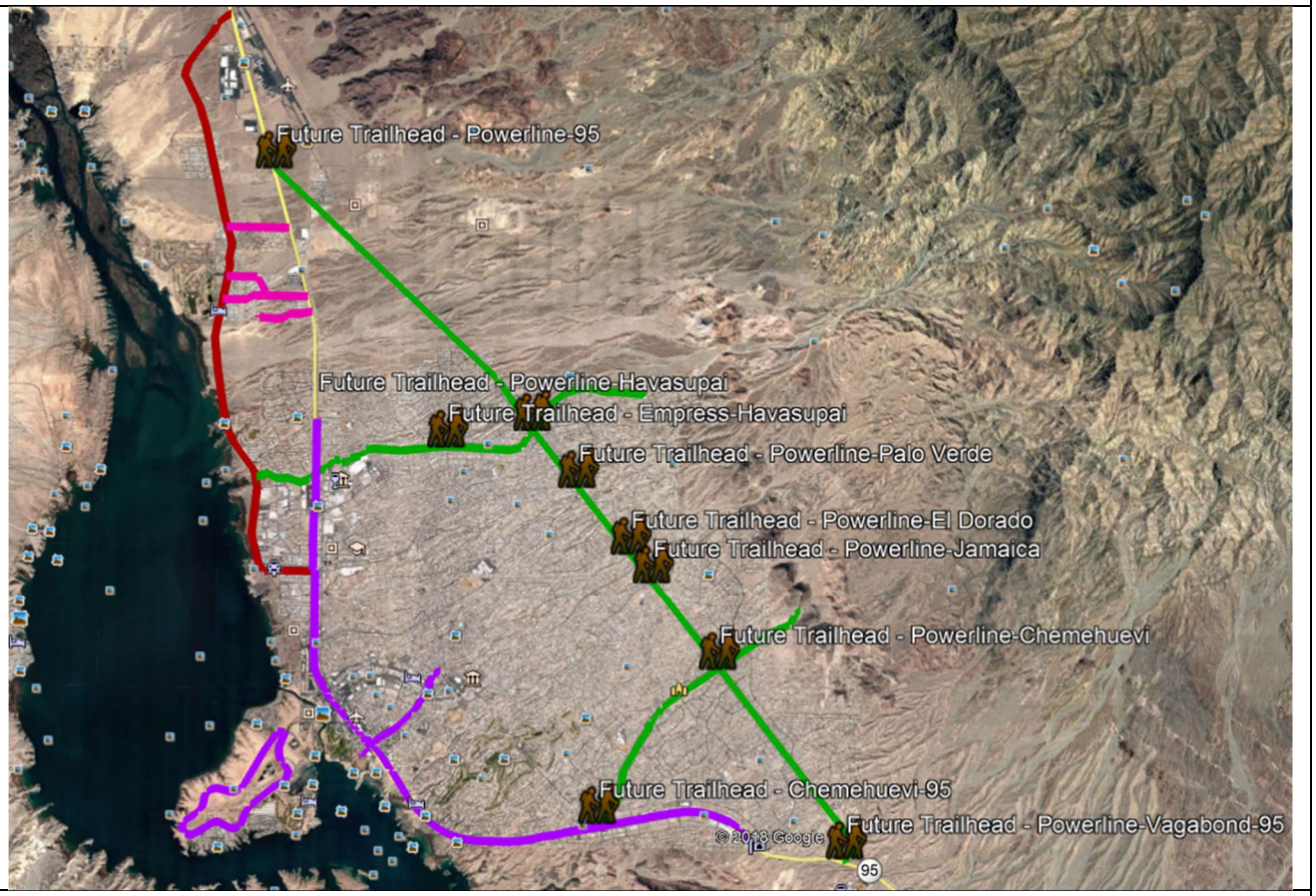
Mohave County Bicycle Facilities **“Castle Rock Loop”**	
Recommended Improvements The LHMPO jurisdiction includes several areas of unincorporated Mohave County. The County recently has identified several other roadways that could be improved to accommodate safe bicycle travel for the recreational and utilitarian needs of the residents. The recommended “Castle Rock Loop” includes bike lane striping and SLMs, and Fathom Drive shoulder widening for bike lanes to London Bridge Road. Recommendation also includes installing bike parking and furniture for rest area at the Castle Rock access point.	
Costs $417,000	

Mohave County Bicycle Facilities **London Bridge Road**	
<u>Recommended Improvements</u> Widening London Bridge Road between Fathom Drive and SR 95 for the installation of bikeable shoulders will provide a lower volume, lower speed continuous bike facility on the northern section of London Bridge Road.	
Costs $370,000	

Mohave County Bicycle Facilities **Desert Hills Unincorporated Area**	
Recommended Improvements Recommendations for the southern portion of Desert Hills include striping several wide roads for bike lanes, including Chenoweth Road, Pero Drive, Lake Drive, and Jacob Row.	
Costs $70,000	

Trails Network

The goal of this Plan is to provide guidance for the future installation of uninterrupted, long, fast bike trails wherever possible and with the safety of bicyclists in mind. The Lake Havasu City area has several existing trails, including the trail along State Route 95, which travels approximately 10 miles between SARA Park and the north city limits. The map below shows a view of the combined current and future trail system. Existing trails are shown in purple, future trails are shown in green, and London Bridge Road is shown in red.

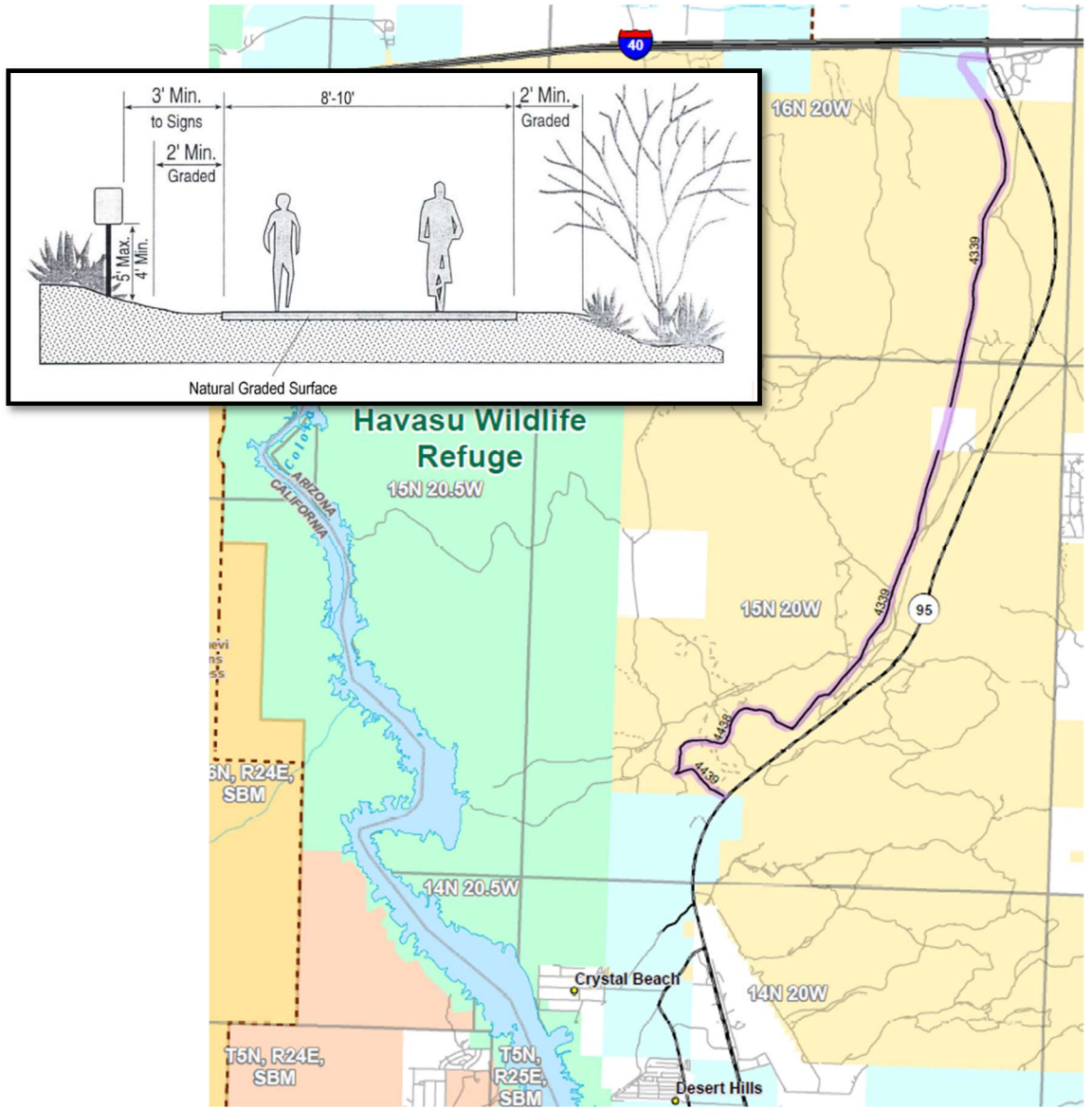
Trails and Trailheads **Existing and Future**	
<u>Recommended Improvements</u> Trailheads are recommended at intersections of trails and key on-street bicycle routes. In addition, a "Scenic Connector Trail" within the existing gas line easement is recommended from Lake Havasu to I-40 for future use as an off-road bicycle and hiking trail. **Existing Trails >** **Future Trails >** **London Bridge Road >** **Mohave County Facilities >**	
Costs $300,000 for Scenic Connector Trail	

Trails and Trailheads
Existing and Future

Scenic Connector Trail

Recommended Improvements

A "Scenic Connector Trail" within the existing gas pipe line easement is recommended from Lake Havasu to I-40 for future use as an off-road bicycle and hiking trail. The inset, taken from the Lake Havasu Trails Plan indicates the recommended cross-section for this trail.



Costs $300,000

Existing Trails – Island	The Island Loop Trail currently provides pedestrian and bicycle connections around the interior of the island. From a multimodal safety and convenience viewpoint, challenges exist in connecting users of these travel modes safely between the hotels, restaurants, and shops at the island's primary activity node and to a) the island's interior, b) the 'mainland' and the McCulloch corridor, and c) the SR95 Trail.
<u>Recommended Improvements</u> Improve pedestrian and bicycle connections between main activity node, the island interior/trail, and the McCulloch corridor.	
Costs $200,000	

Future Trail Improvements

State Route 95

Recommended Improvements

Install wider shoulders on SR95 near "The Curve" – from Indian Rock to Havasu Heights (in the vicinity of mileposts 196 to 197). The existing installed rumble strips restrict the useable width and prevent bicyclists from safely using this roadway.

In addition, the multiuse path adjacent to SR95 crosses SR95 at five locations through Lake Havasu City. Each crossing movement executed by a user is a conflict point with vehicular traffic. This plan recommends that, with future improvements of SR95, the multiuse path should be provided on both sides of SR95 to eliminate these crossing points.

Costs $300,000 for SR95 shoulder widening; $850,000 for SR95 multiuse path

LHMPO Current and Future Multimodal Network

Pedestrian Network (sidewalks) >

McCulloch and Reliever Bike Routes >

Shared Parking/Bicycle Lanes >

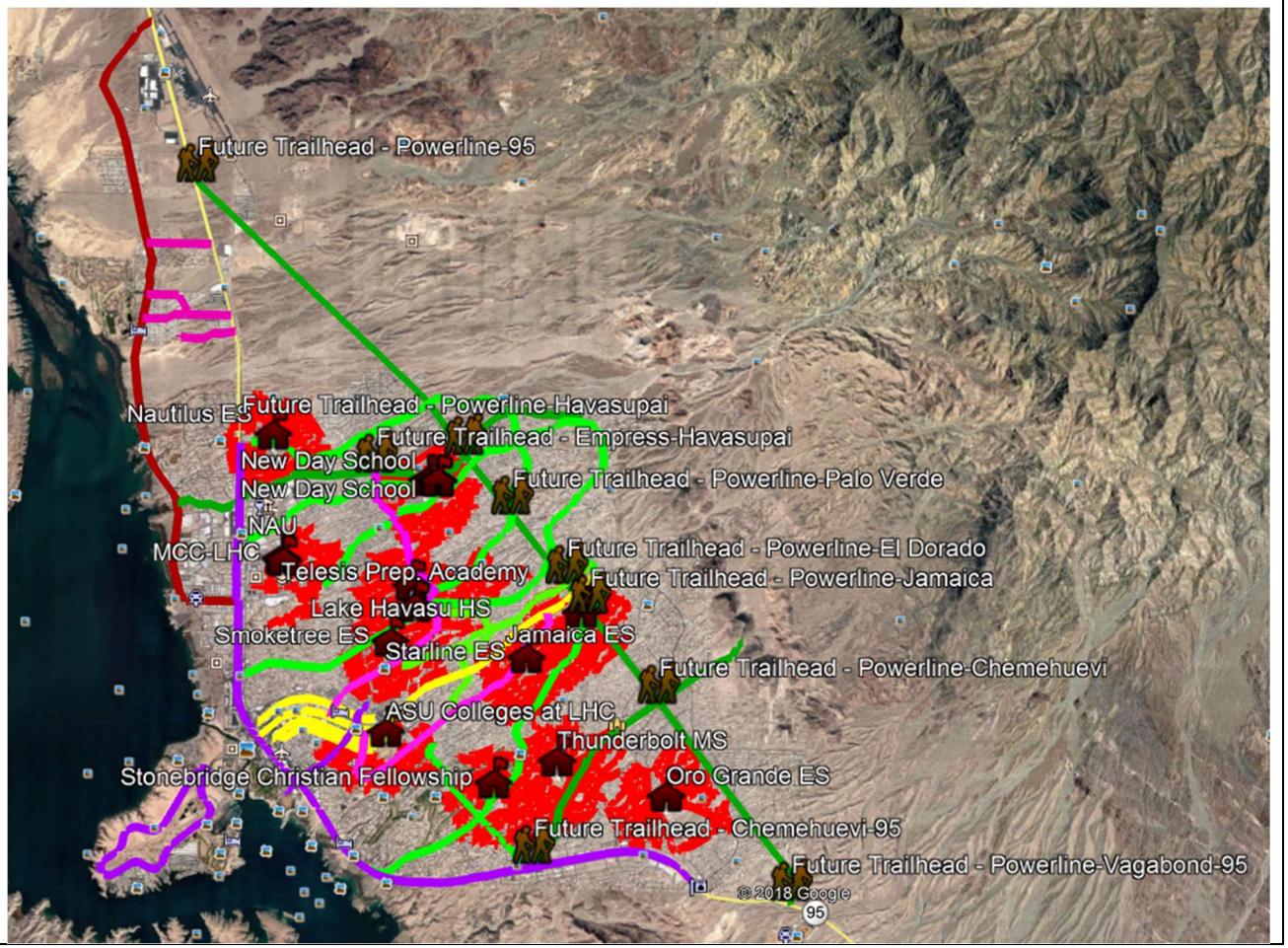
Low-Stress Bicycle Lanes >

Existing Trails >

Future Trails >

London Bridge Road >

Mohave County Facilities >



Project Recommendations and Estimated Cost

Table 17 lists the recommended pedestrian and bicyclist facility projects, potential funding sources, and estimated costs. These recommendations were developed based on public and stakeholder input, crash data analysis, and facility gaps near destinations. Projects 1 through 6 were ranked as the highest priority by the TAC for inclusion in the current LHMPO TIP. Top priorities after these 6 projects should include:

- Striping for bike lanes and shared bike/parking lanes
- Sidewalks near schools

The sidewalk cost estimates include installing sidewalks within a half-mile radius of the schools, which is the typical walking and biking distance used in safe routes to school analyses. For more feasible and less costly projects, the City may want to concentrate on addressing the missing sidewalks immediately adjacent to the schools, developing a multi-year plan to install sidewalks with smaller projects until the pedestrian needs around schools are met. Priority in selecting sidewalk projects could be the elementary schools with the highest enrollment, to impact the highest number of potential pedestrians (Starline, Jamaica, and Smoketree Elementary Schools).

Another high priority voiced by the biking community is regular sweeping of the streets, shoulders and paths. While this is not listed as a specific project in the table, it should be noted as a high priority operational item.

Appendix C highlights federal funding opportunities for pedestrian and bicyclist facilities.

TABLE 17: PROJECTS AND ESTIMATED COST

Project	Location	Description	Potential Funding Source	Estimated Cost
1	London Bridge Road: Fathom Drive to SR 95	Shoulder widening for bike lane delineation	LHMPO	$370,000
2	Fathom Drive: London Bridge Road to Reef Drive	Shoulder widening for bike lane delineation	LHMPO	$392,000
3	"Castle Rock Loop" to tie into Fathom Drive shoulder widening, including Reef Drive and Vista Drive	Stripe for bike lanes where there's adequate width; otherwise, install shared lane markings; include bike furniture at Castle Rock access point	LHMPO	$25,000
4	Chenoweth Road: London Bridge Road to SR 95	Stripe for bike lanes	LHMPO	$17,500
5	Lake Drive, Pero Drive, and Jacob Row	Stripe for bike lanes	LHMPO	$52,500
6	London Bridge Road in vicinity of Windsor Beach	Stripe for bike lanes; install missing sidewalk	LHMPO	$101,500
7	McCulloch Boulevard: Smoketree Avenue to Acoma Boulevard	Narrow the roadway by striping 10-foot travel lanes and converting the existing angled parking to parallel parking	LHMPO, City	$676,000
8	McCulloch Boulevard: Lake Havasu Avenue to Smoketree Avenue	Narrow the roadway by striping 12-foot travel lanes and adding 5-foot bicycle lanes	LHMPO, City	$20,000
9	Mesquite Avenue: Lake Havasu Avenue to Acoma Boulevard	Narrow the roadway by striping 11- and 12-foot travel lanes and adding a center landscaped median	LHMPO, City	$814,000
10	Swanson Avenue: Lake Havasu Avenue to Acoma Boulevard	Redistribute the width of the center two-way left-turn lane to stripe a bike lane on the north side of Swanson	LHMPO, City	$33,750
11	Magnolia Drive: Swanson Avenue to Cypress Drive	Reconfigure the roadway by narrowing both the travel lanes and parking lanes, creating a shared lane for parking and bicycles	LHMPO, City	$26,250
12	Acoma Boulevard: Industrial Boulevard to Stroke Drive	Stripe 'advisory bike lanes' into the curb lanes	LHMPO, City	$65,000
13	Acoma Boulevard: Stroke Drive to Fremont Drive; Industrial Boulevard to Lake Havasu Avenue	Reconfigure the roadway between the existing curbs by narrowing both the travel lanes and parking lanes, creating a shared lane for parking and bicycles	LHMPO, City	$56,250

Project	Location	Description	Potential Funding Source	Estimated Cost
14	Kiowa Boulevard: Lake Havasu Avenue to Palo Verde Boulevard	Reconfigure the roadway between the existing curbs by narrowing both the travel lanes and parking lanes, creating a shared lane for parking and bicycles	LHMPO, City	$177,500
15	Palo Verde Boulevard: Lake Havasu Avenue to Lake Havasu Avenue	Reconfigure the roadway between the existing curbs by narrowing both the travel lanes and parking lanes, creating a shared lane for parking and bicycles	LHMPO, City	$187,500
16	Jamaica Boulevard: Lake Havasu Avenue to Kiowa Boulevard	Install Shared Parking/Bicycle Lanes by narrowing the existing travel lanes and parking lanes	LHMPO, City	$122,500
17	El Dorado Avenue: Daytona Avenue to Jamaica Boulevard	Install Shared Parking/Bicycle Lanes by narrowing the existing travel lanes and parking lanes	LHMPO, City	$57,500
8	Havasupai Boulevard: Acoma Boulevard to Kiowa Boulevard	Install Shared Parking/Bicycle Lanes by narrowing the existing travel lanes and parking lanes	LHMPO, City	$40,000
19	Cisco Drive: Palo Verde Boulevard to Pima Drive	Install Shared Parking/Bicycle Lanes by narrowing the existing travel lanes and parking lanes	LHMPO, City	$45,000
20	Scenic Connector Trail	Utilize/upgrade the existing gas pipeline utility corridor for off-road biking and hiking from Lake Havasu City to I-40	LHMPO, City	$300,000
21	Island	Improve pedestrian and bicycle connections between main activity node, the island interior/trail, and the McCulloch corridor	LHMPO, City	$200,000
22	SR95 curve near Havasu Heights	Widen shoulders to accommodate bicyclists	ADOT	$300,000
23	SR95 Multiuse Path	Provide multiuse path on both sides of SR95	ADOT	$850,000
24	ASU Colleges at Lake Havasu City	Construct sidewalks within 1/2 mile radius of school	LHMPO, City, ASU	$2,228,750

Project	Location	Description	Potential Funding Source	Estimated Cost
25	Havasupai Elementary School	Construct sidewalks within 1/2 mile radius of school	LHMPO, City	$2,802,475
26	Jamaica Elementary School	Construct sidewalks within 1/2 mile radius of school	LHMPO, City	$2,641,025
27	Lake Havasu High School	Construct sidewalks within 1/2 mile radius of school	LHMPO, City	$3,838,525
28	NAU MCC- Lake Havasu City	Construct sidewalks within 1/2 mile radius of school	LHMPO, City	$1,456,875
29	Nautilus Elementary School	Construct sidewalks within 1/2 mile radius of school	LHMPO, City	$2,778,325
30	Oro Grande Elementary School	Construct sidewalks within 1/2 mile radius of school	LHMPO, City	$2,826,685
31	Smoketree Elementary School	Construct sidewalks within 1/2 mile radius of school	LHMPO, City	$1,643,425
32	Starline Elementary School	Construct sidewalks within 1/2 mile radius of school	LHMPO, City	$2,201,425
33	Thunderbolt Middle School	Construct sidewalks within 1/2 mile radius of school	LHMPO, City	$3,280,175

Appendix A Wayfinding

Trail and Path Signage

The current and future paths and trail network in the LHMPO area also can benefit from wayfinding. The current trail network eventually may connect with on-street bicycle and pedestrian facilities as designated in this Plan. As both networks grow, more connections will be created, and therefore the need to provide guidance. Tourists visiting the area also will benefit from such guidance, as they likely are not familiar with the destinations and their available options.

The following text is excerpted from the *Valley Path Brand & Wayfinding Signage Guidelines* developed by the Maricopa Association of Governments.

Destination Selection and Prioritization

Following the first principle, "connect places," these guidelines describe an approach for selecting and prioritizing the potential destinations to which cyclists may want to travel. Bicycle signs only allow for three slots of information or destinations per sign. Thus, a consistent approach to selecting destinations to be included on wayfinding elements is necessary, given the multitude of potential destinations possible. Signs should follow the same approach throughout the region so that the system is clear and predictable. Destinations and their names should be referred to consistently until they are reached.

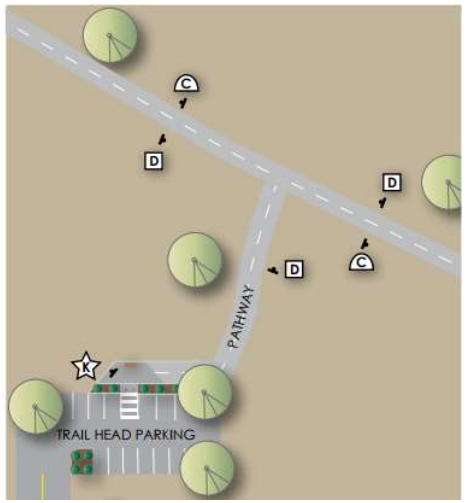
Potential destinations for inclusion on signs were categorized within a range of four levels. Level 1 destinations should receive first priority on wayfinding signs on regional pathways, followed by Level 2 and then Level 3. Level 4 destinations should only be included when other destinations are not present to fill available slots on a sign. These levels have been broadly organized as follows:

Level 1 – Cities, Communities
Level 2 – Districts and Neighborhoods
Level 3 – Landmarks
Level 4 – Local Destinations

Community and local pathways typically serve shorter trips within their immediate community. Signs on such facilities may prioritize Level 2 through Level 4 destinations, recognizing that longer, regional trips are more likely to occur via the regional pathway network. Also, destinations that are smaller in scale and regional significance are less likely to have direct connections from the off-street bicycle network than higher level destinations. The off-street bicycle wayfinding system will typically need to work in conjunction with the on-street bicycle navigational information to provide direction over the last mile of one's journey to reach the front door of destinations.

Decision Sign

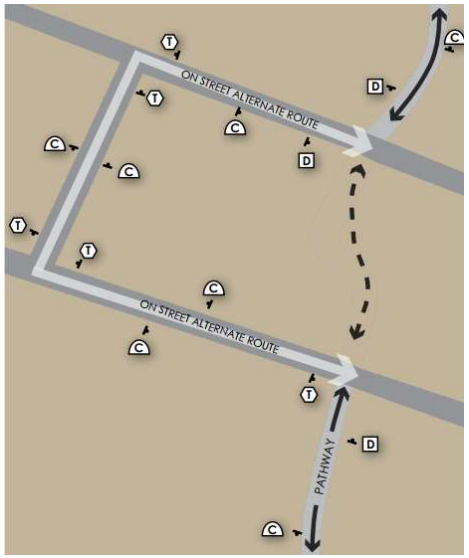
Function and Content: Decision signs clarify route options when more than one potential route is available. The diagram at right indicates the basic wayfinding needs of trail and street users and the corresponding signing logic. (D = Decision, C = Confirmation, K = Kiosk) Decision signs are posted in advance of any point where the trail/street user will need to choose between two or more routes/destinations. It is advisable to display on these signs between one and three of the Level 1-4 destinations listed above.



System brand mark, space for up to three destinations, distance in miles and time (based on 10 mph or 6 minutes per mile travel speed). May include specific path name or roadway name as appropriate. Placement: Placed prior to decision-making points or intersections with routes having bicycle facilities. Sufficient distance prior to the intersection should be provided to allow for safe recognition and response to information provided. Care should be taken so that the turn or options the sign refers to are obvious. Decision signs should not be placed near side or access paths that could be confused with the primary route.

Confirmation Sign

Function and Content: Placed after a turn movement or intersection to reassure cyclists that they are on the correct route. System brand mark, pathway name. Placement: Signs should be placed 50 to 100 feet after turns. Confirmation signs need not occur after every intersection. They should be prioritized at locations where a designated route is not linear, as well as after complex intersections. Complex intersections include those having more than four approaches, non-right angle turns, roundabouts, or indirect routing. Place these signs after a turn movement or intersection to reassure cyclists that they are on the correct route. Signs should be placed 50 to 100 feet after turns. Confirmation signs need not occur after every intersection (see graphic at right).



Turn Sign

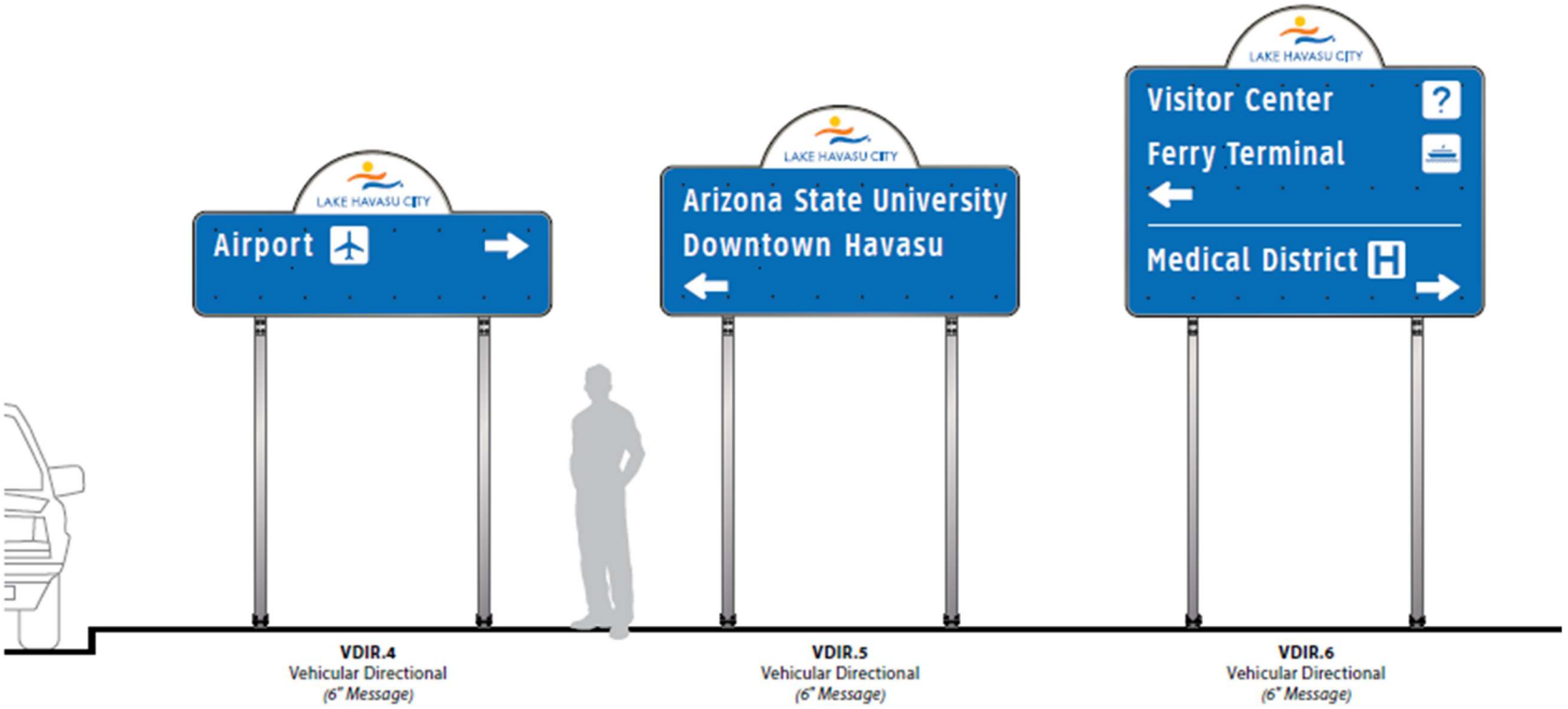
Function and Content: Used to clarify a specific route at changes in direction when only one route option is available. System brand mark, pathway name, directional arrow. Placement: Placed at turns prior to the turning action to provide cyclists advance notice of a change in direction. Also may be used in conjunction with a decision sign at complex intersections warranting additional information (see graphic at right).

Mile Markers

Function and Content: Aids pathway users with measuring distance travelled. Also provides pathway managers and emergency response personnel points of reference to identify field issues such as maintenance needs or locations of emergency events. System brand mark, distance in whole number miles or decimal miles. Path name and jurisdiction may be included. Placement: To be placed every ¼ to ½ mile along the pathway network. Point zero should begin at the southern and westernmost terminus points of a pathway. Mile numbering should be reset at zero as a pathway crosses a jurisdictional boundary. Distances along on-street routes should be included within mile measurements. Mile markers may be installed on one side of a pathway, back-to-back.

Existing Lake Havasu City Wayfinding

Lake Havasu City's *Wayfinding and Signage Program* includes Design Intent Drawings (see examples below), which will be followed for any wayfinding signage needs throughout the city. Wayfinding signage currently is installed throughout the city using these designs. Any additional wayfinding signage added in the future will conform to these designs, styles, and color palette.



The cost estimates below are excerpted from the Maricopa Association of Governments' *Valley Path Branding and Wayfinding Signage Guidelines*.

VALLEY PATH - ESTIMATE OF UNIT COSTS

MUTCD BIKE SIGNS

Sign Type	Unit Cost Range (Includes Installation)
BIKE.1 - Bike Decision Sign	$800.00 - $1,200.00
BIKE.2 - Bike Decision Sign in Park	$1,200.00 - $1,400.00
BIKE.3 - Path Confirmation Sign	$800.00 - $1,200.00
BIKE.4 - Turn Sign	$850.00 - $1,150.00
BIKE.5 - Turn Sign Alternate	$800.00 - $1,200.00
BIKE.6 - Logo Panel	$200.00 - $400.00

BRAND PATH SIGNS

Sign Type	Unit Cost Range (Includes Installation)
PATH.1 - Primary Path ID (no enhancements)	$7,500.00 - $9,500.00
PATH.2 - Secondary Path ID	$2,000.00 - $3,500.00
KIOSK.1 - Trail Kiosk	$4,000.00 - $6,000.00
PDIR.1 - Pedestrian Directional	$3,750.00 - $5,500.00
MILE.1 - Mile Marker	$900.00 - $1,100.00

This resource can be found at:

http://www.azmag.gov/Portals/0/Documents/BaP_2015-05-26_Valley-Path-Brand-and-Wayfinding-Signage-Guidelines.pdf?ver=2017-04-06-110810-073

Appendix B Public Involvement

Lake Havasu MPO
METROPOLITAN PLANNING ORGANIZATION

BICYCLE AND PEDESTRIAN IMPLEMENTATION PLAN
Public Outreach Survey Report

NOVEMBER 2017 | VERSION 1

PREPARED BY:

gci

ON BEHALF OF:

amec foster wheeler

INTRODUCTION

The Lake Havasu Metropolitan Planning Organization (LHMPO) is developing a comprehensive Bicycle and Pedestrian Implementation Plan for the area to address issues and needs of those who walk and bicycle within the region. The plan will address necessary steps to implement bicycle signage and striping, complete or add sidewalks, and potentially enhance the area with multiuse paths. The plan will establish regional objectives, identify strategies to plan and construct the above facility types, and evaluate/prioritize projects for completion within 5-, 10-, and 20-year time horizons.

This report summarizes the experiences of four types of stakeholders:

- People who currently ride a bicycle
- People who currently do not ride a bicycle
- People who currently walk
- People who currently do not walk

1. OVERVIEW

KEY ISSUES

The majority of survey respondents identified themselves as people who walk (80%). Additionally, there were more bicyclists (56%) than non-bicyclists (44%) who completed the survey.

Key issues identified include:

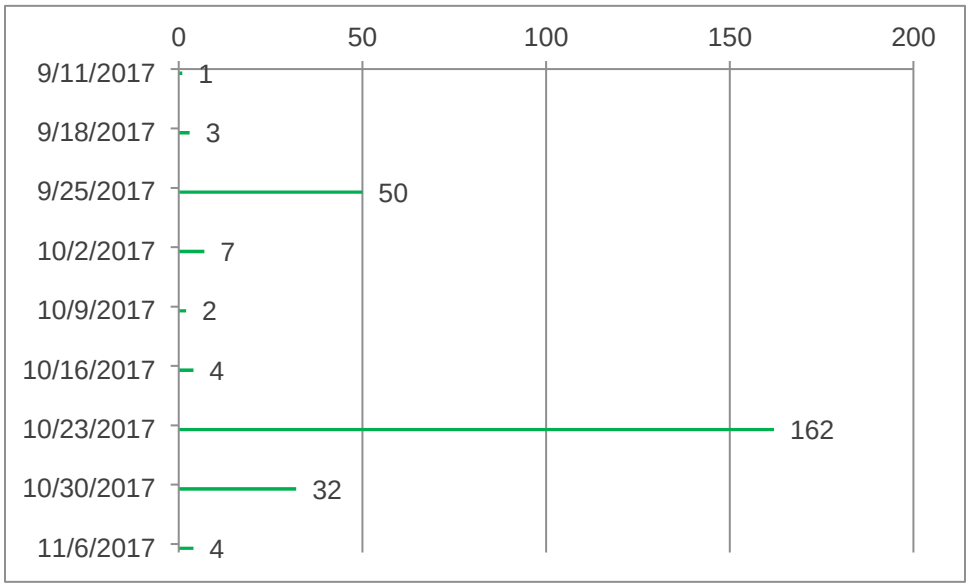
- Bicyclists report a variety of unsafe motorist and pedestrian activities that contribute to negative bicycling experiences.
- The vast majority of bicyclists do so for exercise or recreation, or simply for fun.
- Popular bicyclist destinations range from bike paths, parks, schools, and stores to specific intersections.
- The top three concerns of bicyclists are all associated with the interaction between bicyclists and motorists.
- It is unlikely that negative experiences while riding a bike contributes to respondents' decisions to not ride a bike.
- Top concerns among people who do not ride a bicycle include interactions with motorists, lack of bike lanes, difficulty crossing intersections, and street lighting.
- The most popular suggestion from who do not ride a bicycle is to add bike lanes.
- A variety of locations is cited regarding negative bicycling experiences, with both Acoma and London Bridge Road mentioned more frequently.
- A variety of additional locations is cited regarding places to which respondents would like to bicycle, with McCulloch Blvd. and Acoma mentioned more frequently.
- People who walk report a variety of unsafe motorist or bicyclist activities that contribute to negative walking experiences.
- Similar to bicyclists, those who walk reported that they do so for exercise or recreation, and also to have fun.
- Popular walking destinations range from parks, paths and stores to specific intersections.
- The top concerns among those who walk are lack of sidewalks/trails and cars driving too fast.
- People who do not walk cite reasons including the distance to their desired destination and street lighting.
- Among those who do not walk, lack of sidewalks is a concern.
- A variety of locations is cited regarding negative walking experiences, with both Daytona and McCulloch Blvd. mentioned more frequently.
- A variety of additional locations is cited regarding places to which respondents would like to walk, with schools, stores, and parks mentioned more frequently.

2. SURVEY PROCESS

The purpose of the LHMPO Bicycle and Pedestrian Survey is to assess current conditions, experiences, and desires of those who currently bike or walk and those who do not currently bike or walk. Information obtained through the survey and other sources will be used to customize the approach for the planning process and validate the resulting recommendations in order to meet the unique needs of the community.

The survey was available online from September 11 through November 9, 2017. Printed copies of the survey were also available at meetings as noted. There were 265 responses received.

Figure 1: Survey Responses by Week



NOTIFICATION

Notification regarding the availability of the survey and/or opportunities to complete printed copies at a meeting included:

- 9-5-17: LHMPO Bicycle and Pedestrian Plan Public Meeting notice
- 9-5-17: Facebook Boosted Post promoting the public meeting ran September 5-19 to 1,042 people with 49 reported engagements
- 9-13-17: LHMPO Bicycle and Pedestrian Plan Public Meeting notice reminder
- 9-19-17: LHMPO Bicycle and Pedestrian Plan Public Meeting (approx. 46 attendees)
- 9-25-17: Press release sent to 16 representatives of local media outlets
- 10-2-17: Email with survey link sent to 180 stakeholders including local schools, bicycle shops, local businesses, business organizations, recreation contacts, government agencies, religious organizations, public health and safety representatives, and other interested residents
- 10-13-17: Facebook Boosted Post promoting the survey ran October 13-30 to 1,082 people with 39 click-throughs
- 10-30-17: Survey to Close/final notice to 180 stakeholders

3. SURVEY RESULTS

Survey responses are categorized by four groups of stakeholders:

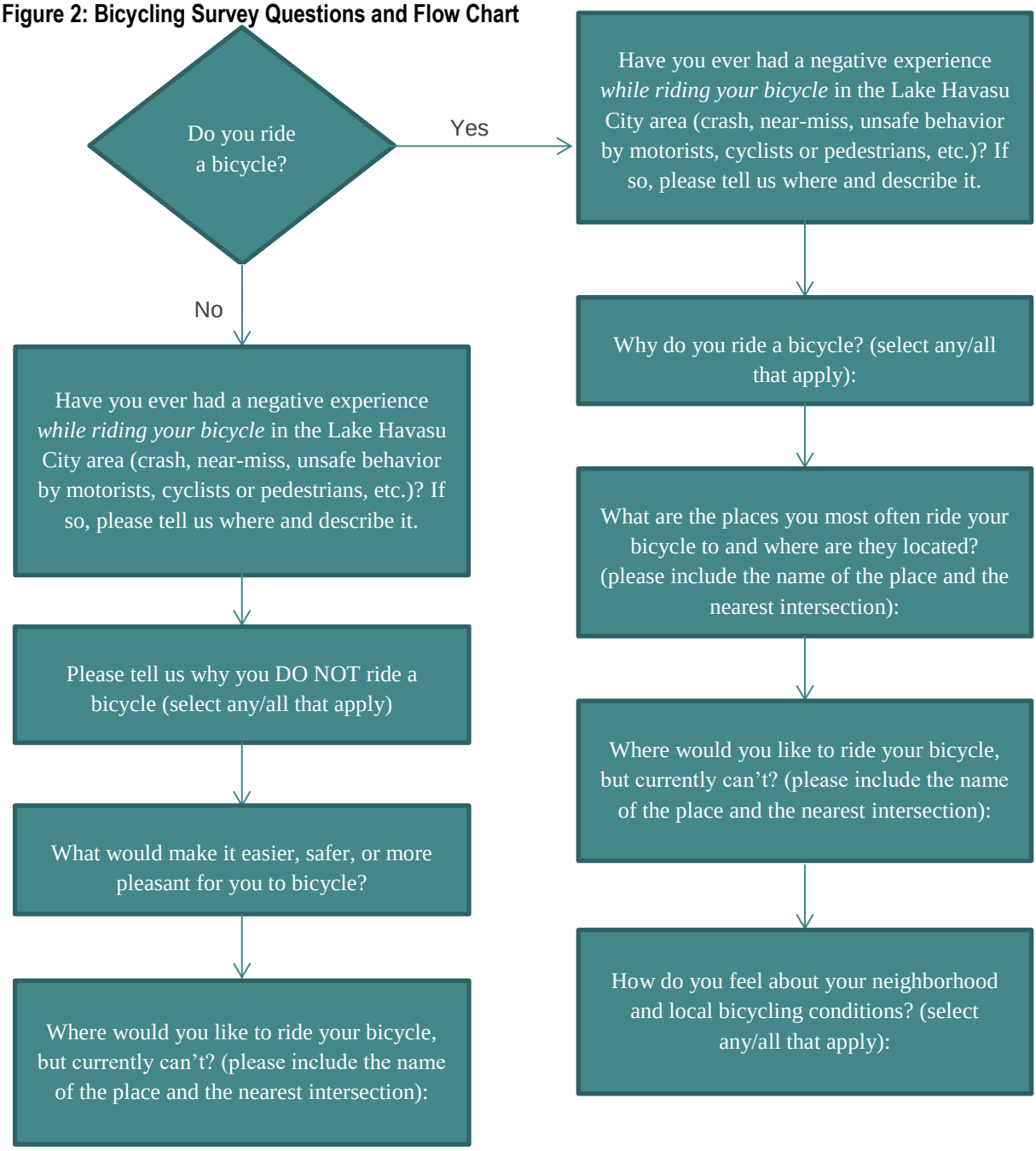
- People who currently ride a bicycle
- People who currently do not ride a bicycle
- People who currently walk
- People who currently do not walk

Where appropriate, similar questions were asked of both bicyclists and non-bicyclists, and pedestrians and non-pedestrians. Flow charts for survey questions are provided in Figures 2 (bicycling) and Figure 3 (walking). Verbatim answers to questions are shown in Section 4, Survey Reponses.

An overview of responses follows. In some cases, categories were applied to open-ended questions after the responses were received. In responses that included multiple answers to one question, the main topic or the topic listed first was used to categorize the response.

BICYCLING

Figure 2: Bicycling Survey Questions and Flow Chart

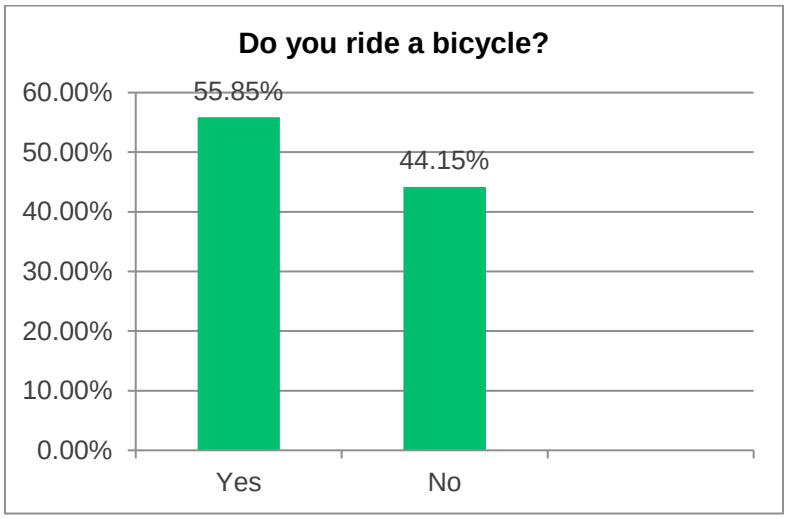


ALL RESPONDENTS

1. Do you ride a bicycle?

- *All respondents were asked whether they ride a bicycle. Slightly more than half (56%) of respondents reported that they ride a bicycle.*

- No: 117 responses (44%)
- Yes: 148 responses (56%)



BICYCLING—THOSE WHO DO NOT RIDE A BICYCLE

Of the 117 respondents who indicated that they do not currently ride a bike, the following questions were asked and responses received.

2. Have you ever had a negative experience while riding your bicycle in the Lake Havasu City area (crash, near-miss, unsafe behavior by motorists, cyclists or pedestrians, etc.)? If so, please tell us where and describe it.

Of those who reported that they do not ride a bike, 9% indicated that they have not had a negative experience (11 responses), 4% reported a negative experience (5 responses), and 86% did not respond. A list of locations of negative experiences cited by bicyclists and non-bicyclists is detailed at the end of the bicycling section.

- *It is unlikely that negative experiences while riding a bike contributed to respondents' decisions to not ride a bike.*

16 responses* were received including:

- 11 – no/none/not apply
- 2 – unsafe motorist or unsafe pedestrian activity
- 1 – condition/maintenance
- 1 – lack of infrastructure
- 1 – yes

* Categories shown above were not provided as part of the survey; rather, they were applied during analysis.

3. Please tell us why you DO NOT ride a bicycle (select any/all that apply):

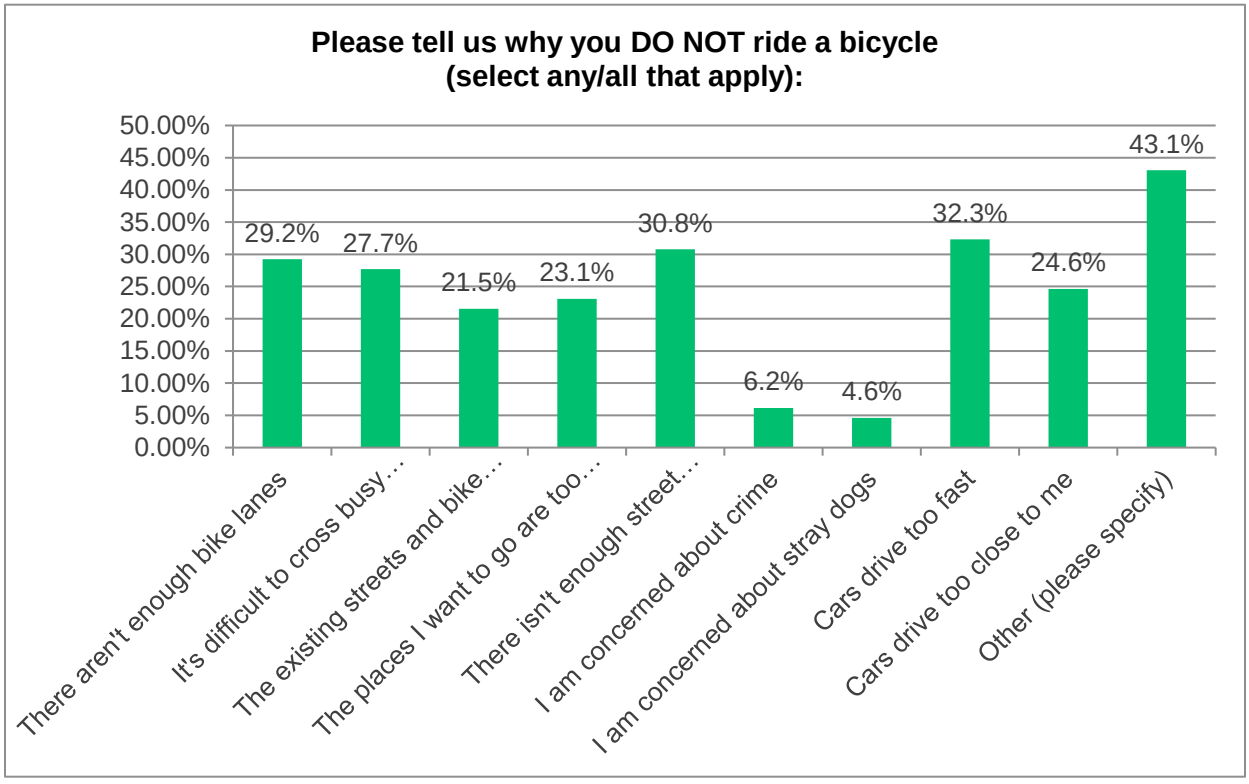
Of those who reported that they do not ride a bike, 56% provided one or more reasons.

- *Of the top four responses, three directly relate to potential interactions with motorists (32%-cars drive too fast; 29%-there aren't enough bike lanes; 28%-difficult to cross busy intersections). There is also concern regarding street lighting (31%).*

65 responses were received including:

- 28 – Other (please specify) (43%)
- 21 – Cars drive too fast (32%)
- 20 – There isn't enough street lighting (too dark) (31%)
- 19 – There aren't enough bike lanes (29%)
- 18 – It's difficult to cross busy intersections (28%)
- 16 – Cars drive too close to me (25%)
- 15 – The places I want to go are too far away to bike (23%)
- 14 – The existing streets and bike lanes/routes don't go where I want to go (22%)
- 4 – I am concerned about crime (6%)
- 3 – I am concerned about stray dogs (5%)

Totals are greater than 100% due to multiple responses. The list of "other" reasons is included in Section 4, Survey Responses.



4. What would make it easier, safer, or more pleasant for you to bicycle? (open-ended)

Of those who reported that they do not ride a bike, 28% provided a response.

- *The most popular response was to add bike lanes, which received 10% of the responses. All other suggestions rated 4% of the responses or less.*

33 responses* were received including:

- 12 – Bike lanes (10%)
- 10 – Nothing/not apply (9%)
- 5 – Better lighting (4%)
- 2 – Motorist attitudes (2%)
- 2 – Sidewalks (2%)
- 2 – Traffic control (2%)

* Categories shown above were not provided as part of the survey; rather, they were applied during analysis.

5. Where would you like to ride your bicycle, but currently can't? (please include the name of the place and the nearest intersection):

This question offered five response areas. Sixteen individuals (14%) provided 25 responses as summarized below. A list of locations cited by bicyclists and non-bicyclists is detailed at the end of the bicycling section.

- 10 – Locations, including:
  - Acoma & Daytona
  - Downtown
  - Drifter Drive crossing McCulloch to Daytona
  - English Village
  - McCulloch and Chesapeake
  - McCulloch and Jamaica
  - McCullough and El Dorado
  - Most of Lake Havasu Avenue headed north
  - Outskirts of town
  - Smith/McCulloch
- 5 – Other
- 3 – Schools, including:
  - Oro Grande School
  - Thunderbolt School
  - From the Mohican Drive area to Jamaica Elementary
- 3 – Trails, including:
  - Establish a power line trail through Lake Havasu City
  - Establish trails along wash banks throughout city
- 2 – Parks, including:
  - SARA Park off SR 95
- 2 – Stores

BICYCLING—CURRENT BICYCLISTS

Of the 148 respondents who indicated that they currently ride a bike, the following questions were asked and responses received.

6. Have you ever had a negative experience while riding your bicycle in the Lake Havasu City area (crash, near-miss, unsafe behavior by motorists, cyclists or pedestrians, etc.)? If so, please tell us where and describe it.

Of those who reported that they ride a bike, 42% reported a negative experience (62 responses), 8% indicated that they have not had a negative experience (12 responses), and 50% did not respond. . A list of locations cited by bicyclists and non-bicyclists is detailed at the end of the bicycling section.

- *In this open-ended question, respondents reported a variety of unsafe motorist and pedestrian activities (23%) that contribute to negative bicycling experiences.*

74 responses* were received including:

- 34 – unsafe motorist or unsafe pedestrian activity (23%)
- 17 – lack of infrastructure (11%)
- 12 – no (8%)
- 6 – condition/maintenance (4%)
- 5 – yes (3%)

* Categories shown above were not provided as part of the survey; rather, they were applied during analysis.

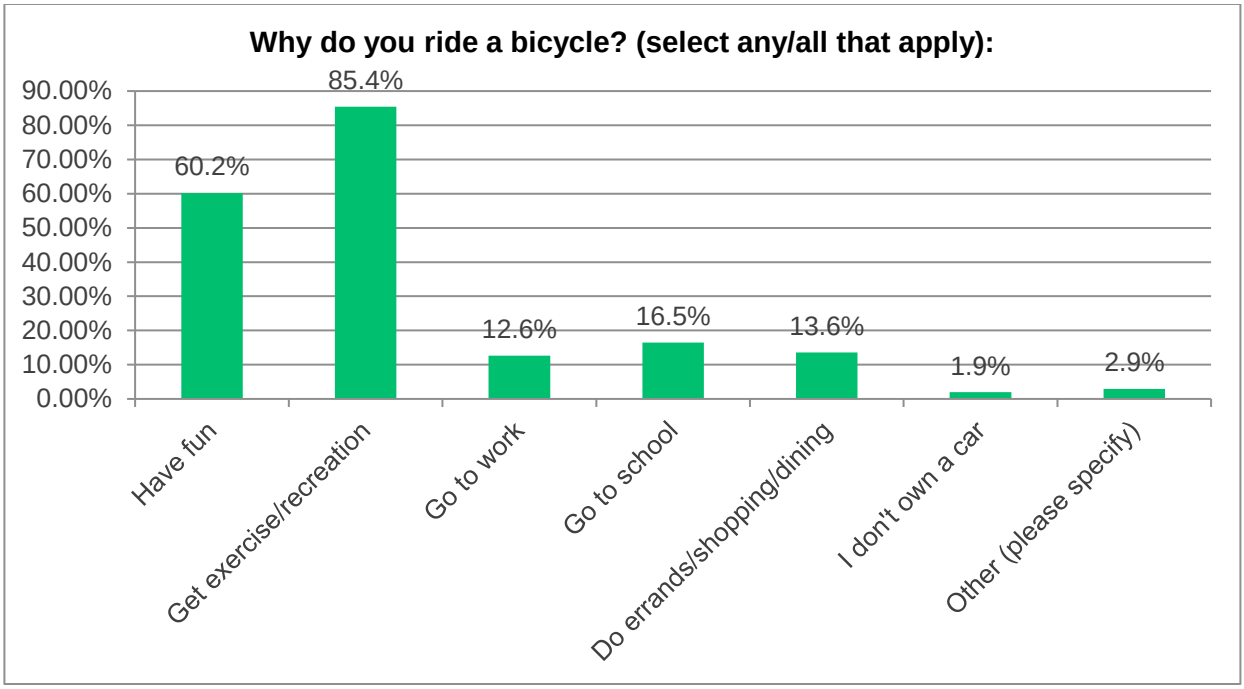
7. Why do you ride a bicycle? (select any/all that apply):

Of those who reported that they ride a bike, 103 individuals (70%) responded to this question and provided 199 responses.

- *The vast majority of respondents bicycle for exercise or recreation (85%), or simply for fun (60%).*

- 88 – Get exercise/recreation (85%)
- 62 – Have fun (60%)
- 17 – Go to school (17%)
- 14 – Do errands/shopping/dining (14%)
- 13 – Go to work (13%)
- 3 – Other (please specify) (3%)
- 2 – I don't own a car (2%)

Totals are greater than 100% due to multiple responses.



8. What are the places you most often ride your bicycle to and where are they located? (please include the name of the place and the nearest intersection):

This question offered five response areas. Of those who reported that they ride a bike, 90 individuals (61%) provided 207 responses as shown below.

- *Popular destinations range from bike paths, parks, schools, and stores to specific intersections. A complete list of destinations in provided in Section 4, Survey Responses.*

- 87 – Locations including:
  - General locations (46 responses)
  - Specific locations (23 responses)
  - London Bridge Road (9 responses)
  - McCulloch (7 responses)
  - Airport (2 responses)
- 44 – Bike path, including:
  - Bike path on island (37 responses)
  - Highway path (7 responses)
- 29 – Park
  - Rotary Park (12 responses)
  - SARA Park (12 responses)
  - Other (5 responses)
- 22 – School
  - Elementary/middle schools (13 responses)
  - High school (6 responses)
  - ASU Havasu
- 20 – Store/business
  - Grocery store (8 responses)
  - Mall (6 responses)
  - Other business locations (6 responses)

- 3 – Golf Course
- 2 – Church

9. Where would you like to ride your bicycle, but currently can't? (please include the name of the place and the nearest intersection):

This question offered five response areas. Of those who reported that they ride a bike, 53 individuals (36%) provided 86 responses as shown below. A list of locations is detailed at the end of the bicycling section.

- 67 – Locations including:
  - Specific locations (48 responses)
  - General locations (16 responses)
  - Nowhere/I can ride everywhere I want to go (4 responses)
- 9 – Store/business
  - Grocery store (4 responses)
  - To Work
  - City Hall
  - Dollar General (South Side)
  - Gym - Lake Havasu Ave & Industrial
  - Post Office - McCulloch
- 4 – Park
  - Rotary Park (2 responses)
  - SARA Park (2 responses)
- 3 – Bike path
- 2 – School

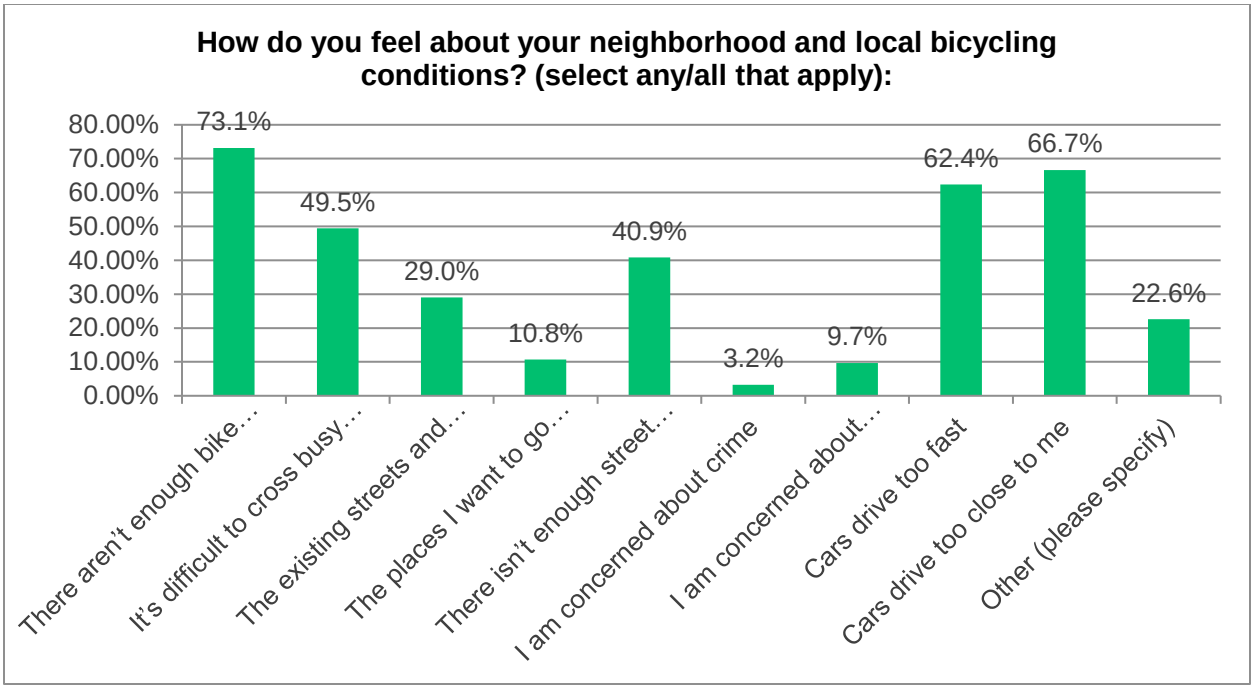
10. How do you feel about your neighborhood and local bicycling conditions? (select any/all that apply):

Of those who reported that they ride a bike, 93 individuals (63%) responded to the question.

- *The top three concerns all received more than 60% of the responses, and all are associated with the interaction between bicyclists and motorists.*

- 68 – There aren't enough bike lanes (73%)
- 62 – Cars drive too close to me (67%)
- 58 – Cars drive too fast (62%)
- 46 – It's difficult to cross busy intersections (49%)
- 38 – There isn't enough street lighting (too dark) (41%)
- 27 – The existing streets and bike lanes/routes don't go where I want to go (29%)
- 21 – Other (please specify) (23%)
- 10 – The places I want to go are too far away to bike (11%)
- 9 – I am concerned about stray dogs (10%)
- 3 – I am concerned about crime (3%)

The list of "other" reasons is included in Section 4, Survey Responses.



BICYCLING—OTHER

(Questions 2 and 6): Locations with noted negative experiences as reported by both bicyclists and non-bicyclists.

44 locations were provided by respondents:

- 8 – Acoma, including:
  - Swanson/Acoma
  - Acoma/Smoketree
  - Acoma/S. Palo Verde
  - Acoma/Daytona
- 8 – London Bridge Road
- 5 – Jamaica, including:
  - Jamaica Elementary
- 5 – McCulloch Blvd
- 3 – Island Loop Road
- 3 – Lake Havasu Avenue, including:
  - Mesquite/Lake Havasu Avenue
- 3 – US 95, including:
  - Mulberry/US 95
- 2 – Bamboo and Empress
- 2 –Chemehuevi, including:
  - Chemehuevi and Saratoga
- Avalon Avenue
- Daytona
- Kiowa
- Palo Verde
- Thunderbolt

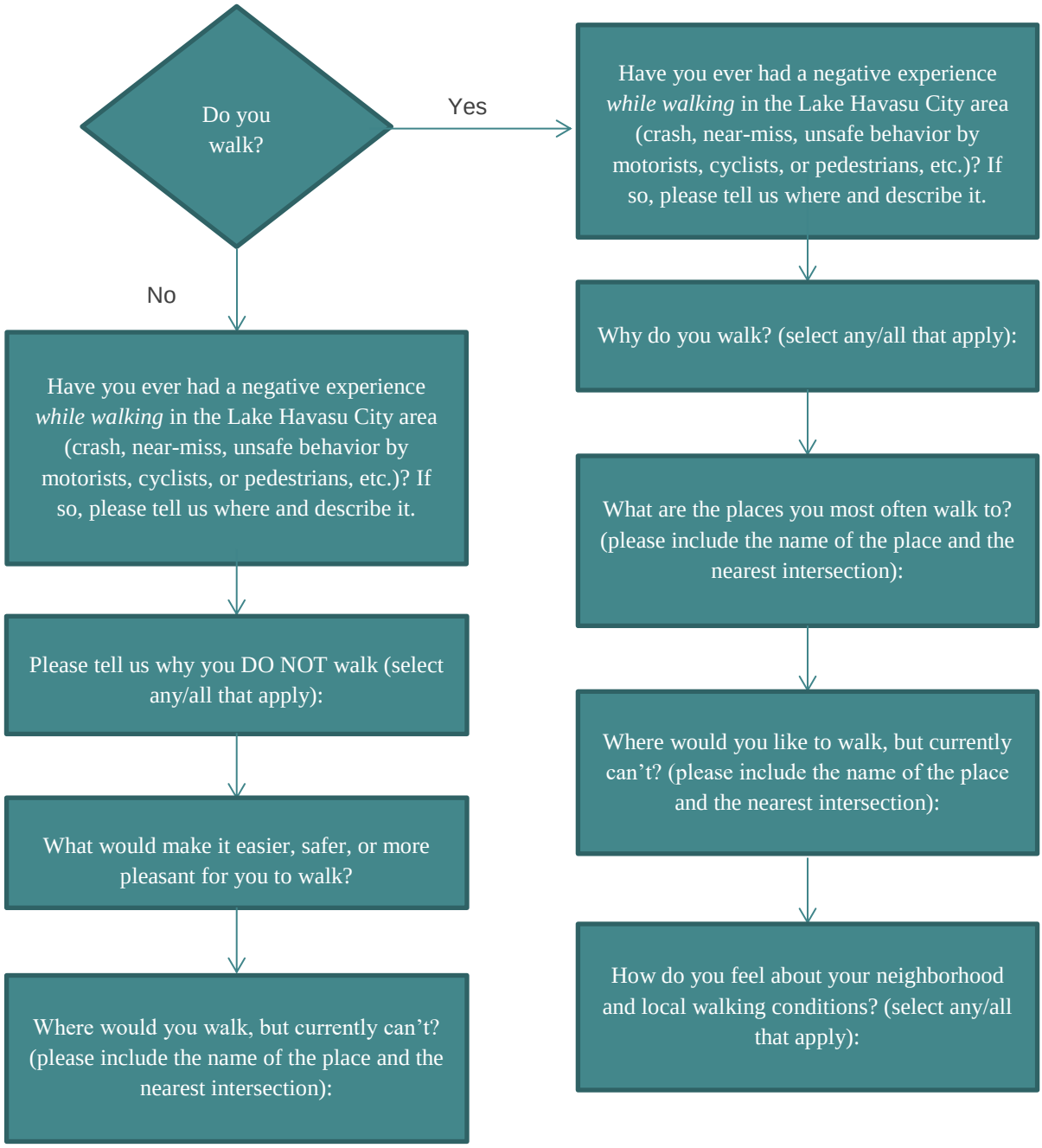
(Questions 5 and 9): Locations both bicyclists and non-bicyclists would like to be able to bicycle to, but currently can't do so.

Street/general locations including:

- 11 – McCulloch Blvd. including:
  - McCulloch/Chesapeake
  - McCulloch/Jamaica
  - McCulloch/El Dorado
  - McCulloch Blvd North/Capri Blvd
  - McCulloch - Jamaica to 95
  - Drifter Drive crossing McCulloch to Daytona
  - Smith/McCulloch
  - US 95/McCulloch Blvd South
- 7 – Acoma Blvd including:
  - Acoma/Daytona
- 5 – Lake Havasu Blvd including:
  - Most of Lake Havasu Avenue headed north
- 3 – London Bridge Road
- Other locations:
  - Airport
  - Along Route 95 beyond Palo Verde North to Route 40
  - Arapahoe
  - Avalon/N. Palo Verde Blvd.
  - Avalon Ave.
  - Bridge
  - Central City
  - Close to the water
  - Downtown
  - Downtown Lake Havasu
  - English Village
  - Havasu to Parker
  - Highway 40 toward Kingman
  - SR 95 toward Parker
  - Island
  - Jamaica
  - Kearsage
  - Kiowa
  - Lake Havasu to Parker
  - Library - McCulloch
  - Maricopa Ave.
  - Maverick Drive/Kiowa Blvd.
  - North Palo Verde
  - Outskirts of town
  - Palo Verde North
  - Parker
  - Pilot (I-40)
  - Route 95
  - Saratoga - Jamaica to Acoma
  - Thunderbolt

    - To Bill Williams
    - To the Hualapais
    - Winnebago Dr.
- Stores/businesses including:
    - 3 – Home Depot/Walmart
    - City Hall
    - Dollar General (South Side)
    - Gym - Lake Havasu Ave/Industrial
    - Post Office - McCulloch
    - Smith's (McCulloch/Acoma)
    - Smiths - Acoma/McCulloch
- Parks including:
    - 3 – SARA Park
    - 2 – Rotary Park
- Bike paths/trails including:
    - Across the bridge from the one bike path to the other
    - Establish a power line trail through Lake Havasu City
    - Establish trails along wash banks throughout city
    - From our house to the island
- Schools including:
    - From the Mohican Drive area to Jamaica Elementary
    - McCulloch S/US 95 to Starline Elementary
    - Oro Grande School
    - Thunderbolt School

Figure 3: Walking Survey Questions and Flow Chart

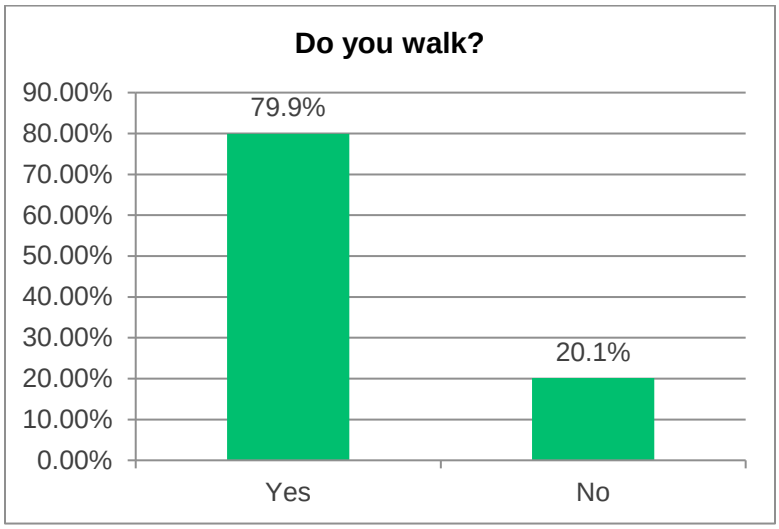


ALL RESPONDENTS

11. Do you walk?

- *All respondents were asked whether they walk. A significant portion of respondents (80%) reported that they walk.*

- No: 35 responses (20%)
- Yes: 139 responses (80%)



WALKING—THOSE WHO DO NOT WALK

Of the 35 respondents who indicated that they do not currently walk, the following questions were asked and responses received.

- *Of the 265 people surveyed, only 35 people (20%) reported that they do not walk; therefore, the results in this section may not represent the typical experience of those who do not walk.*

12. Have you ever had a negative experience while walking in the Lake Havasu City area (crash, near-miss, unsafe behavior by motorists, cyclists, or pedestrians, etc.)? If so, please tell us where and describe it.

Of those who reported that they do not walk, 29% indicated that they have not had a negative experience (10 responses), 3% reported a negative experience (1 response), and 71% did not respond.

- *Only one negative response was received.*

- No. Hiking on the trails at SARA Park occasionally.

This site is included in the list of locations provided at the end of the walking section.

13. Please tell us why you DO NOT walk (select any/all that apply):

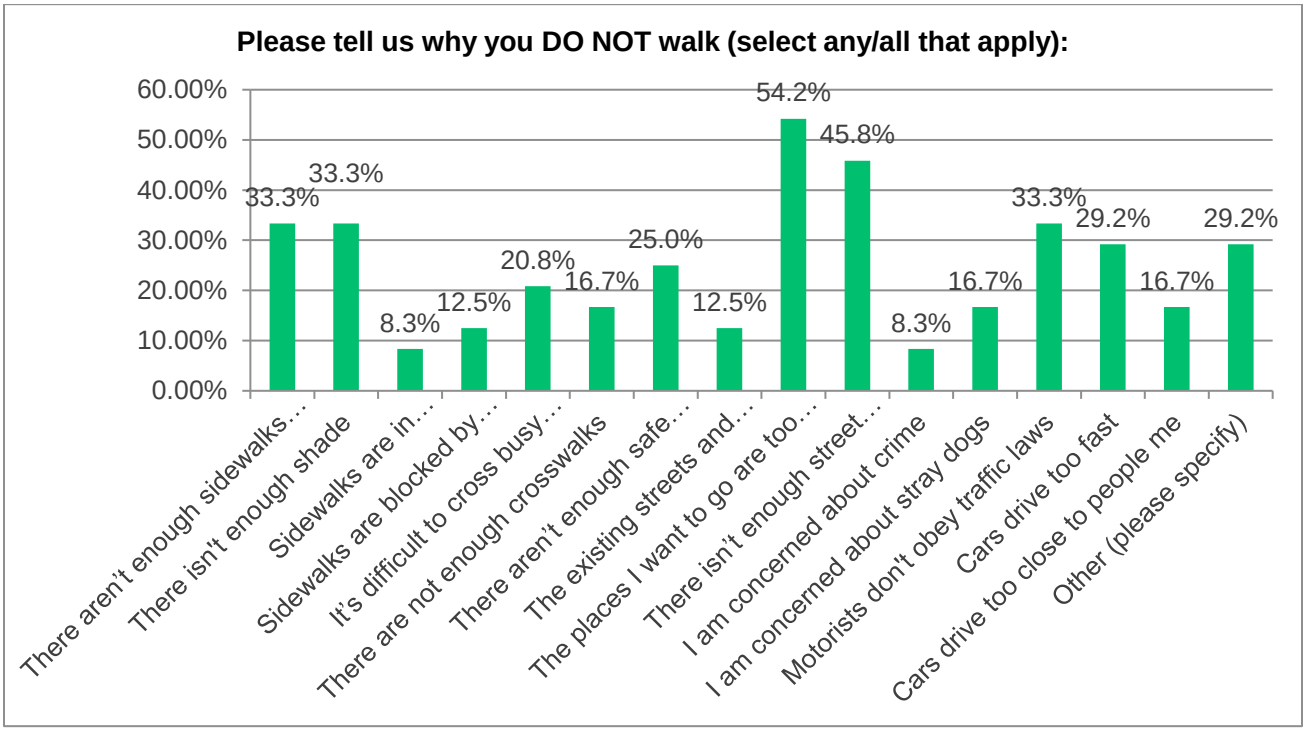
Of those who reported that they do not walk, 69% provided one or more reasons.

- *The top two responses in this category include distance to destination (54%) and street lighting (46%).*

95 responses were received including:

- 13 – The places I want to go are too far away to walk (54%)
- 11 – There isn't enough street lighting (too dark) (46%)
- 8 – Motorists don't obey traffic laws (33%)
- 8 – There aren't enough sidewalks and trails (33%)
- 8 – There isn't enough shade (33%)
- 7 – Cars drive too fast (29%)
- 7 – Other (please specify) (29%)
- 6 – There aren't enough safe places to cross the street between intersections (25%)
- 5 – It's difficult to cross busy intersections (21%)
- 4 – Cars drive too close to people/me (17%)
- 4 – I am concerned about stray dogs (17%)
- 4 – There are not enough crosswalks (17%)
- 3 – Sidewalks are blocked by trash/recycling bins or mailboxes (13%)
- 3 – The existing streets and sidewalks don't go where I want to go (13%)
- 2 – I am concerned about crime (8%)
- 2 – Sidewalks are disrepair/cracked (8%)

Totals are greater than 100% due to multiple responses. The list of "other" reasons is included in Section 4, Survey Responses.



14. What would make it easier, safer, or more pleasant for you to walk?

Of those who reported that they do not walk, 8 provided a response* (23%).

- *In this open-ended question, lack of sidewalks (11%) was the top response.*

- 4 – Sidewalks (11%)
- 4 – Other (11%)
    - Car
    - I don't enjoy walking
    - Street lighting

* Categories shown above were not provided as part of the survey; rather, they were applied during analysis.

15. Where would you walk, but currently can't? (please include the name of the place and the nearest intersection):

This question offered five response areas. 4 individuals (11%) provided 6 responses. A list of locations is detailed at the end of the walking section.

- 2 – Locations, including:
    - McCulloch
    - Neighborhood around my house (Tahitian area)
- 4 – Other, including:
    - Park
    - Trails
    - Not on roadways

WALKING—CURRENT PEDESTRIANS

Of the 139 respondents who indicated that they currently walk, the following questions were asked and responses received.

16. Have you ever had a negative experience while walking in the Lake Havasu City area (crash, near-miss, unsafe behavior by motorists, cyclists, or pedestrians, etc.)? If so, please tell us where and describe it.

Of those who reported that they walk, 45% reported a negative experience (63 responses), 19% indicated that they have not had a negative experience (27 responses), and 35% did not respond. . A list of locations is detailed at the end of the walking section.

- *The top response to this open-ended question cites unsafe motorist or bicyclist activity (26% combined) in association with a negative walking experience. Also of note, 19% of respondents wrote in "no" regarding negative walking experiences.*

90 responses* were received including:

- 36 – Unsafe motorist/bicyclist activity (26%)
- 27 – No (19%)
- 15 – Lack of infrastructure (11%)
- 8 – Yes (6%)

- 2 – Dogs (1%)
- Condition/Maintenance
- Other

* Categories shown above were not provided as part of the survey; rather, they were applied during analysis.

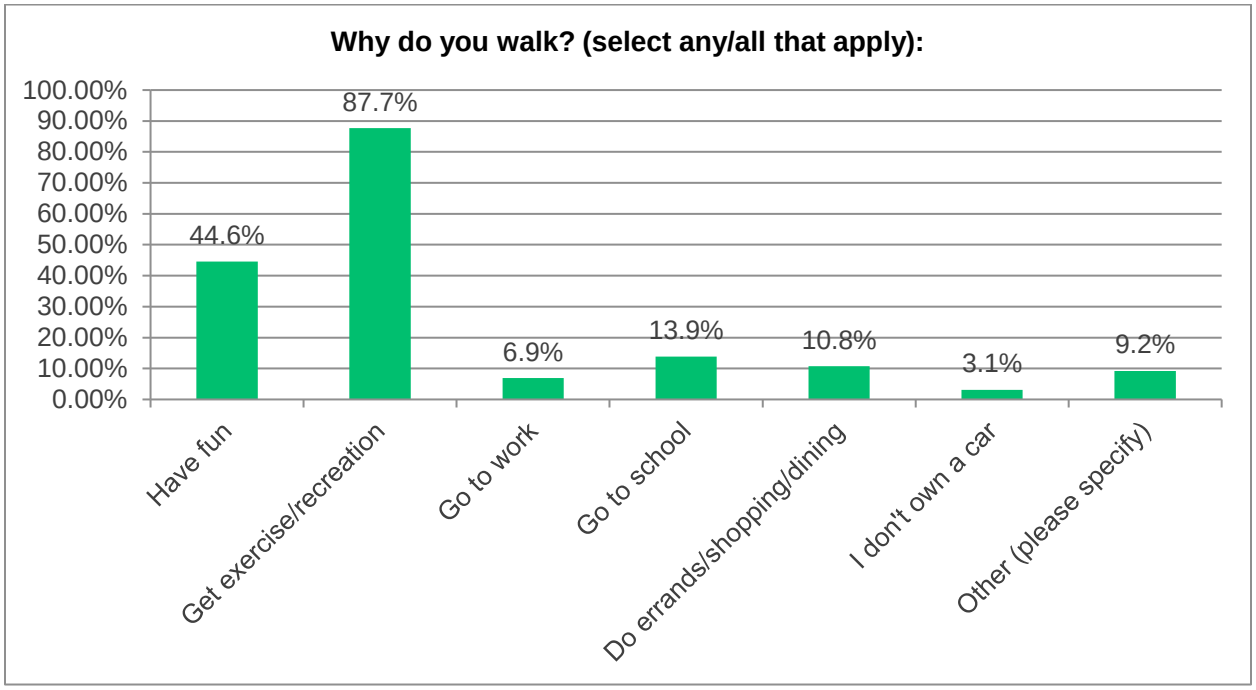
17. Why do you walk? (select any/all that apply):

Of those who reported that they walk, 130 individuals (94%) responded to this question and provided 229 responses.

- *Similar to those who bicycle, walkers reported that they do so for exercise or recreation (88%) and also to have fun (45%).*

- 114 - Get exercise/recreation (88%)
- 58 - Have fun (45%)
- 18 - Go to school (14%)
- 14 - Do errands/shopping/dining (11%)
- 12 - Other (please specify) (9%)
- 9 - Go to work (7%)
- 4 - I don't own a car (3%)

Totals are greater than 100% due to multiple responses. The list of “other” reasons is included in Section 4, Survey Responses.



18. What are the places you most often walk to? (please include the name of the place and the nearest intersection):

This question offered five response areas. Of those who reported that they walk, 97 individuals (70%) provided 193 responses as shown below. A list of locations is detailed at the end of the walking section.

- 116 – Locations including:
  - Specific locations (81 responses)
  - General locations (14 responses)
  - Around home/my neighborhood (12 responses)
  - Downtown (8 responses)
- 26 – Parks
  - 19 – Rotary Park
  - 5 – SARA Park
- 18 – Paths/trails
- 17 – Stores/businesses
- 13 – Schools

19. Where would you like to walk, but currently can't? (please include the name of the place and the nearest intersection):

This question offered five response areas. Of those who reported that they walk, 36 individuals (26%) provided 44 responses as shown below. A list of locations is detailed at the end of the Walking Section.

- 26 – Locations
  - Specific locations (16 responses)
  - General locations (10 responses)
- 4 – Comments
- 4 – Nowhere/not apply
- 4 – School including:
- 4 – Stores/businesses
- 2 – Parks

20. How do you feel about your neighborhood and local walking conditions? (select any/all that apply):

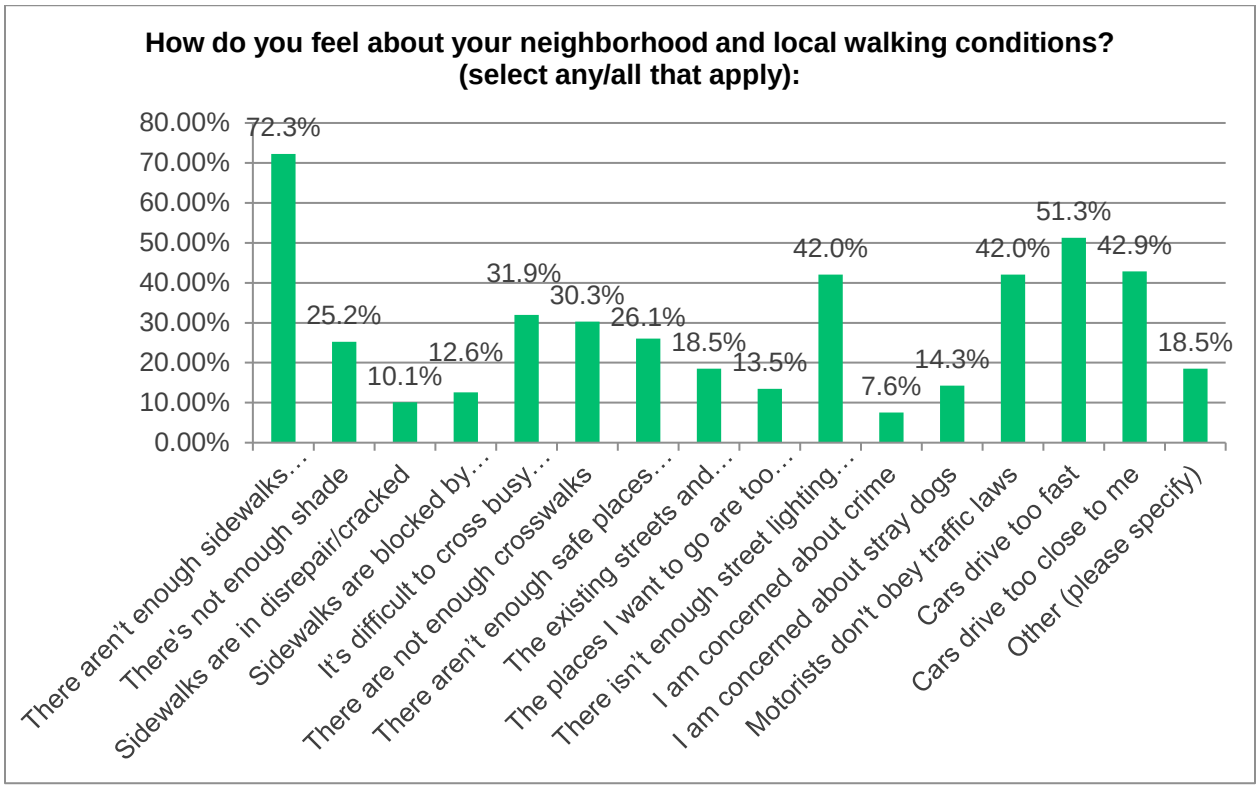
Of those who reported that they walk, 119 individuals (86%) responded to the question.

- *The top two responses cite lack of sidewalks and trails (72%) and cars driving too fast (51%).*

- 86 – There aren't enough sidewalks and trails (72%)
- 61 – Cars drive too fast (51%)
- 51 – Cars drive too close to me (43%)
- 50 – There isn't enough street lighting (too dark) (42%)
- 50 – Motorists don't obey traffic laws (42%)
- 38 – It's difficult to cross busy intersections (32%)
- 36 – There are not enough crosswalks (30%)

- 31 – There aren't enough safe places to cross the street between intersections (26%)
- 30 – There's not enough shade (25%)
- 22 – The existing streets and sidewalks don't go where I want to go (18%)
- 22 – Other (please specify) (18%)
- 17 – I am concerned about stray dogs (14%)
- 16 – The places I want to go are too far away to walk (13%)
- 15 – Sidewalks are blocked by trash/recycling bins or mailboxes (13%)
- 12 – Sidewalks are in disrepair/cracked (10%)
- 9 – I am concerned about crime (8%)

The list of "other" reasons is included in Section 4, Survey Responses.



WALKING—OTHER

(Questions 12 and 16): Locations with noted negative experiences as reported by both pedestrians and non-pedestrians.

26 locations were provided by respondents:

- 3 – Daytona including:
  - Daytona/Starline
  - Daytona/Acoma
- 3 – McCulloch including:
  - McCulloch/Jamaica
  - McCulloch Blvd South near Calvary Christian Academy

- 2 – Lake Havasu Avenue including:
    - Lake Havasu Avenue South/Jones Drive
- Bahama
- Bamboo/Empress
- Kiowa at Havasupai Elementary
- London Bridge Plaza near Paseo Del Sol
- Maverick near Kiowa
- Near the high school
- North side of town
- Oro Grande Blvd/Beechwood Drive
- Oro Grande/Thunderbolt
- Palo Verde Blvd. South/Starlite Lane
- Pepsi
- Rotary Park
- SARA Park
- Southwind Ave.
- Starlite Lane off Palo Verde
- Telesis Campus
- Thunderbolt Street
- US 95/South Palo Verde

(Questions 15 and 19): Locations both pedestrians and non- pedestrians would like to be able to walk to, but currently can't do so.

Street/general locations including:

- 29 – Locations
    - Acoma
    - Airport
    - All over town-Acoma & El Dorado
    - All streets
    - Any neighborhood without sidewalks
    - Any street but to many hills
    - Around my neighborhood. McCulloch and Aqua Drive
    - Cisco Dr. North and El Dorado
    - Downtown
    - Downtown to library
    - Island Path if it was lighted
    - Jamaica
    - Jamaica Blvd from Monte Carlo to Kiowa
    - Just about everywhere. The sidewalks just end
    - London bridge road
    - McCulloch
    - McCulloch Blvd South
    - McCulloch from Daytona to Jamaica
    - More side-streets in the City
    - Most streets because there are no sidewalks.
    - My neighborhood (El Dorado Ave)
    - My neighborhood. I live at the end of Winnebago.
    - Neighborhood around my house (Tahitian area)

    - North Palo Verde
    - On sidewalks in neighborhoods
    - Possibly commute to work
    - Street right below starters and Daytona. There is no crosswalk
    - Trails
    - Work
- 6 – Comments
    - I can walk anywhere I just don't because cars speed a lot.
    - I'm considering moving out of LHC over the lack of accessibility
    - Other than the downtown area, I feel most of the city lacks safe areas to walk or ride a bicycle
    - Same, I drive there, then walk
    - See above. Bike Lanes and signs on boulevards
    - Not on roadways
- 4 – Nowhere/not apply
- 4 – School
    - Kiowa from Bermuda to High School
    - Neighborhoods by the high school
    - School
    - to school (Starline Elementary)
- 4 – Stores/businesses
    - Downtown to Safeway
    - Mall
    - Shops but there are hardly any in residential areas
    - Walmart
- 3 – Parks
    - SARA Park
    - Yonder Park
    - Park

ALL RESPONDENTS

21. For more information about this project ONLY, please provide your information below.

Forty respondents (15%) provided their names; however, only 36 (14%) included email addresses. Responses are provided in Section 4, Survey Responses.

22. Last Question – Show us on the map where you have concerns about walking or bicycling. (Click here to access the map.)

Forty respondents (15%) provided 92 mapped comments (attached separately). The mapped comments are also available in an interactive format at: https://gci.mysocialpinpoint.com/lhmpo#/.

Additionally, 12 respondents (5%) provided written responses as shown.

Locations:

- Acoma coming from the high school
- All school zones

- Bamboo and Empress then Bamboo and Rainbow
- Crosswalks needed at McCulloch on the south side.
- New, wider shoulder on SR 95 attracts the bike riders; however, there is a 1.5 mile strip south of Havasu Heights where it was eliminated, forcing bicyclists onto the road.
- Stop sign needed at Empress/Bamboo

Comments:

- Awareness/education regarding cyclists and pedestrians should be the top priority.
- I am a wheelchair user and have encountered too many near misses and accessibility issues in Lake Havasu City.
- Need bike lanes
- Sidewalks and bike paths needed
- Traffic volume

4. SURVEY RESPONSES

Survey questions and verbatim responses are included below.

ALL RESPONDENTS

1. Do you ride a bicycle?

- No: 117 responses (44%)
- Yes: 148 responses (56%)

BICYCLING—THOSE WHO DO NOT RIDE A BICYCLE

2. Have you ever had a negative experience while riding your bicycle in the Lake Havasu City area (crash, near-miss, unsafe behavior by motorists, cyclists or pedestrians, etc.)? If so, please tell us where and describe it.

Categories shown below were not provided as part of the survey; rather, they were applied during analysis.

- 11 – no/none/not apply
- 2 – unsafe motorist activity
  - Drivers making U-turns in front of Jamaica Elementary
  - My son rides his bike home from the Highschool and he was hit by a car backing out of their driveway. He has had several near misses as well
- 1 – condition/maintenance
  - Too much gravel on sides of road and drivers not watching for you.
- 1 – lack of infrastructure
  - While driving n on SR 95 a bicyclist was riding s next to my lane. There was no road shoulder in this area. The bicyclist should not be allowed on that roadway/highway where speed is posted at 55mpg.
- 1 – yes
  - My son occasionally rides his bike home from school. The only issues he's experienced is at the corner of Acoma & Daytona. Personally I've seen most motorist around Starline and Thunderbolt be respectful to bicyclists in the morning. Wife picks the boys up in the afternoon.

3. Please tell us why you DO NOT ride a bicycle (select any/all that apply):

Categories shown below were not provided as part of the survey; rather, they were applied during analysis.

- 28 – Other (please specify) (43%)
  - Bicycling is not a good sport. Walking is safet
  - Bicyclists have no business on roadways and highways--they are not licensed vehicles. Put them on bike paths! God knows we have enough parks here, so give them pathways to get there!
  - bicyclists impede traffic and are hard to see. They shouldn't be in the roads at all. Many don't follow ANY traffic laws at all.
  - Bike is broken, when fixed I will ride.
  - cars failing to come to a full stop at lights and signs and not paying attention
  - Daughter likes to walk for now
  - Do not currently own a bicycle

    - Do not currently own a bike
    - Don't own one
    - Faster by car
    - Hard to ride bike up hills. I'm 59
    - I dont own a bike
    - I have 3 kids. Kind of hard to get them all on a bike
    - I prefer my children to ride on a sidewalk rather than a bike lane. Much safer.
    - I what to be safe
    - It is mostly uphill where I live and I back up to McCulloch and it is not safe to ride on McCulloch.
    - Many roads are too narrow, and runoff from rain puts a lot of gravel in the streets
    - Most roads do not have adequate bike lanes and sidewalks to accommodate a mix of walkers and bike riders, forcing someone into the road to pass.
    - Never been an avid bike rider.
    - Not interested in bicycle riding
    - Our family drives to school.
    - Parents drive to school
    - Prefer my car
    - Skin cancer
    - Terrain (hills)
    - There aren't sidewalks where I live to take my kids on a bike ride
    - Too damn hot
    - Up and down terrain in my neighborhood
- 21 – Cars drive too fast (32%)
- 20 – There isn't enough street lighting (too dark) (31%)
- 19 – There aren't enough bike lanes (29%)
- 18 – It's difficult to cross busy intersections (28%)
- 16 – Cars drive too close to me (25%)
- 15 – The places I want to go are too far away to bike (23%)
- 14 – The existing streets and bike lanes/routes don't go where I want to go (22%)
- 4 – I am concerned about crime (6%)
- 3 – I am concerned about stray dogs (5%)

4. What would make it easier, safer, or more pleasant for you to bicycle?

Categories shown below were not provided as part of the survey; rather, they were applied during analysis.

- 12 – Bike lanes
    - Bicycle lanes.
    - Bike lanes, wider shoulders, more bike racks/water stops.
    - Bike lanes.
    - Bike paths--not bike lanes in roadways.
    - Dedicated bicycle lanes, some separated from the traffic lanes.
    - Dedicated bicycle paths.
    - Designated bike lanes.
    - making a bicycle lane on party of your sidewalks, therefore keeping them out of traffic and allowing them to safely travel.
    - More bike lanes. Gravel-free roads.
    - More bike paths, not lanes on existing roads.

    - Sidewalks everywhere or bike lanes.
    - Wider bike lanes and sidewalks to accommodate pedestrians on all major roads - especially those leading to/from schools.
- 10 – Nothing/not apply, including:
    - cooler weather.
    - Never been an avid bike rider.
    - Nothing. Cars pay for roads, not bicycles.
- 5 – Better lighting
    - More lighting, more bike lanes and easier intersections.
    - More street lighting; if people knew how to work a 4-way stop.
    - Street lights.
    - Street lights and more bike lanes.
    - Wider roads with more lighting, bike lanes, and curbs to prevent gravel getting into the roads.
- 2 – Motorist attitudes
    - If people in this town knew how to drive properly.
    - People pay more attention to driving.
- 2 – Sidewalks
    - Sidewalks in my neighborhood (Mohican Dr area).
    - The street I live on is busy, so sidewalks would help and a 25-mph speed limit.
- 2 – Traffic control
    - More no turns on RED lights.
    - Stop lights at some of the busier intersections with controlled signals for pedestrians.

5. Where would you like to ride your bicycle, but currently can't? (please include the name of the place and the nearest intersection):

Categories shown below were not provided as part of the survey; rather, they were applied during analysis.

- Locations
    - Acoma & Daytona
    - Downtown
    - Drifter Drive crossing McCulloch to Daytona
    - English Village
    - McCulloch and Chesapeake
    - McCulloch and Jamaica
    - McCullough and El Dorado
    - Most of Lake Havasu Ave headed north.
    - Outskirts of town
    - Smith to Mcculloch
- Other
    - Been awhile
    - Exercise
    - Many side streets that don't get swept regularly
    - N/A
    - Outside
- Schools
    - Oro Grande school
    - Thunderbolt school

    - From Mohican Dr area to Jamaica Elementary
- Trails
    - Establish a power line trail through Lake Havasu City
    - Establish trails along wash banks throughout city
    - Trails
- Parks
    - Parks
    - SARA Park off SR 95
- Stores
    - The store
    - To stores but there are so few in the residential areas

BICYCLING—CURRENT BICYCLISTS

6. Have you ever had a negative experience while riding your bicycle in the Lake Havasu City area (crash, near-miss, unsafe behavior by motorists, cyclists or pedestrians, etc.)? If so, please tell us where and describe it.

Categories shown below were not provided as part of the survey; rather, they were applied during analysis.

- 34 – unsafe motorist or unsafe pedestrian activity
    - Almost got hit at a four way stop sign, due to a driver going out of turn on Acoma & Smoketree.
    - Cars don't share
    - Danger caused by speeding cars. Often runs bikes off the road.
    - Drivers sometimes do not pay attention to bicyclists nor do they watch for some walkers and skateboarders.
    - Frequently people don't notice me when turning at major intersections such as Mulberry and US 95.
    - I am a cyclist that follows the rules of the road as is proper. Many drivers are unaware that they are to treat cyclists as a moving vehicle. This has caused near misses at intersections when I have stopped at a four-way and tried to take my turn only to be almost rear-ended, cursed at, or run over by motorists. As a driver, I see far too many cyclists that ride on the wrong side of the street, don't stop at intersections, and generally feel as though they own the road and the motorists should treat them as pedestrians.
    - I ride my bike 3-5 times a week on the street in and around Lake Havasu. I have had multiple incidents where vehicle turning right do no yield to bikes with a clear walk signal at an intersection. Also there are not enough bike lanes on the main boulevards. Vehicle do not seem to want to share the road, even if you are riding as far right on the road. More signs and markings on the road for bike lanes. Have you ever traveled to any other major city? They realize how important bike traffic is. Not only for transportation, but for the health and wellness of their community.
    - Motorist seem to think they have the right away. Also yell for us to get out of the street, yet there are no sidewalks for children to ride on.
    - Motorists not paying attention and giving the right of way.
    - Near miss, drivers do not recognize cyclists as a vehicle.
    - Near miss on the Island loop road. Also a crash on the Island multi-use path with spectators watching hot air balloons and not paying attention to path activity.
    - Near-miss, unsafe behavior by motorists, distracted driving.
    - People don't pay attention to at stop lights on the high way.
    - Speeding cars on MuCulloch,Kiowa,Daytona, and both Palo Verde and Acoma.

- Speeding motorists mostly.
- There are Bike Runs that go from McCulloch south to McCulloch north, with some of the routes turning up Jamaica towards Kiowa. Vehicles are always barely missing us on bikes and most times almost collide with oncoming traffic to avoid us.
- Unsafe behavior by motorists.
- Unsafe motorist - London Bridge Road - around the island and various streets in neighborhood.
- While riding along 95 in the mornings the motorists come really close to the white line.
- Yes, anywhere near a school. People are always in a rush around the schools. Walking or biking extremely unsafe!
- Yes, cars drive way too close.
- Yes, more than once I have almost been side swiped more than once husband and I both almost hit at stop light on more than one occasion, and vehicles going by at high rates of speeds and close to us.
- Yes, my kids have almost been hit several times trying to cross Bamboo and Empress people fly over the hill and don't watch for kids. It's not a safe cross street for the kids trying to get to school every day.
- Yes, Acoma/S. Palo Verde intersection - in turn lane and motorist yelled at me. S. McCulloch driver on white line, mirror nearly hit me. London Bridge Road cars stay too close to white lines.
- Yes, Calvary Christian Academy is located on a downhill grade on a very busy street. The curve, and downhill slope on McCulloch Blvd makes is a very dangerous road to walk or ride a bicycle.
- Yes, close call on Swanson and Acoma. Too many older drivers in town or distracted drivers.
- Yes, I have had a handful of negative experiences. None of them were near-misses or crashes. Three were due to angry drivers being mad at cyclists being on the road.
- Yes, in the winter on Thunderbolt, speeding traffic.
- Yes, many people speeding past us an driving as close as possible to us. This is usually on London Bridge Road.
- Yes, on London Bridge Road. Cars/trucks often come dangerously close to bikes. Sometime intentionally or out of frustration that the bike is delaying them.
- Yes, people going too fast over speed limit - Lake Havasu Avenue - Jamaica.
- Yes, there is constant evidence of vehicles encroaching on what should be bike-pedestrian friendly zones (shoulders) on busy streets like McCulloch, Jamaica, Acoma, Cheme.
- Yes. Cars pull out in front of me frequently. They look for cars but not cyclists in the bike lanes. They have also turned into me while we are both traveling in the same direction. Drivers are not aware of cyclists on the road and I'm sure there are many who may believe that cyclists should not be on roads that cars are on.
- You haven't close to enough space here. Pick-up trucks have steered toward me in the parking lane-- seemingly on purpose. Semi-truck flew by us bicyclists once at high speeds and no more than 18 inches from us. Have had things thrown at us from motor vehicles. Innumerable times on Acoma had vehicles pass far too fast and close. Had an ADOT patrol officer pass us on the highway, put on his brakes and aggressively to communicate with us to "move over" while pumping his finger toward the right in a fairly threatening gesture. PLEASE NOTE: the multi-use path in Havasu is quite difficult to access, unless you travel at least a mile down a fairly unsafe road to a fairly unsafe intersection for access. VERY difficult with kids.

- 17 – lack of infrastructure
    - Actually, I ride a WHEELCHAIR. Due to the lack of sidewalks and ramps, I am often forced to ride in the street which presents an obvious risk that motorists often do not see me and I have to quickly get out of their way. Additionally on Avalon Ave (by the dog & kid park) the speed limit is 25 but people go 50 down that hill which makes the limited visibility even worse.
    - Discontinued because Lake Havasu City does not accommodate pedestrians.
    - Everywhere. There are no sidewalks this is especially dangerous around schools
    - Few dedicated pedestrian/bicycle right of ways or trails.
    - It is difficult to ride a bicycle across the bridge to the island to gain access to the bicycle trail around the island.
    - Not all of the streets have bike lanes and vehicles drive way too fast through "neighborhoods". My street is also a "narrower" street with no sidewalks or bike lanes so when 2 cars are driving up/down the street at the same time, there is no room for a pedestrian or bicyclist; you have to walk in someone's yard to get out of the way. A lot of the smaller streets are becoming "busy" streets and too dangerous to ride a bike on.
    - Poor or non-existant bike lanes. Debris on side of road made worse by the fact that 80% of homes park vehicles in yard thus drag stone etc out onto street.
    - So many streets like Blugrass or Saddleback that have no lines or shoulder and you're in traffic. Also, intersections with no sidewalk or shoulder there is nowhere to go on a bike when you have a young rider with you. i.e. Chemuhevie and Saratoga.
    - Too many near- miss incidents too count. There are not enough roads to travel safely.
    - Yes, London Bridge Road bike path needs to go all the way to mall.
    - Yes, on numerous occasions and I think primarily due to lack of sidewalks. Around the school zones people drive too fast.
    - Yes, it is very dangerous. The roads do not have adequate bike lanes.
    - Yes, it's dangerous to cross the bridge on the road. We really need a bridge for kids, bicyclists and pedestrians to cross SR 95.
    - Yes, just about everywhere I ride. We need bike Lanes.
    - Yes, on the island bike/walk path. There needs to be a center line on the pathway.
    - Yes. Due to no shoulder or bike lanes, cars have come close to knocking me off my bike while passing. It's even more dangerous is the cyclist needs to go around a parked car.
    - You have to ride on the road a lot because there are no bike lanes or sidewalks and this makes us drive way too close to speeding cars.
- 12 – no
    - (9 additional "no" responses)
    - I have had concerns while riding but have not had a bad experience.
    - I have never had one, but I see a lot of younger bicyclists being unsafe.
    - Never - LHC is a very bike-friendly place, with the exception of the mailboxes on Acoma.
- 6 – condition/maintenance
    - Bike "paths" piled with debris. Vehicle not stopping and yielding while turning. No bicycle lane. Sidewalks have mailboxes and over grown weeds blocking them. No bicycle racks to secure bicycle once arrive at location.
    - Crash from tire hitting rock on McCulloch Blvd.
    - I was riding on the street and there was so much loose gravel that I didn't have a clear path to ride next to the curb. Streets are narrow enough without having a clean surface to ride on.
    - On Jamaica, I hit a crack in the sidewalk and it ejected me from the bike.
    - Poor quality of roads.
    - Yes, on Jamaica the section the curb to white lane is very dirty. Rough road conditions.

- 5 – yes
    - Corner of Mesquite/Lake Havasu Ave and SR 95.
    - Going across the London bridge to the island trail.
    - I wouldn't dare ride my bike on a Havasu street.
    - The intersection of Bamboo and Empress in Feb 2017 my son Jomar Lee was hit by a car while riding his bike down to the high school by a woman named Randi Benbow. The woman said she could not see him, the sun was in her eyes. Thankful he is alive! There NEEDS to be a stop sign placed there for these kids. He still rides this route every single day and every single morning I fear for his life waiting, wondering, if I will get that call again. Due to my work schedule I cannot take him, so bicycle is his only form of transportation to the high school daily.
    - Yes

7. Why do you ride a bicycle? (select any/all that apply):

- 88 – Get exercise/recreation (85%)
- 62 – Have fun (60%)
- 17 – Go to school (17%)
- 14 – Do errands/shopping/dining (14%)
- 13 – Go to work (13%)
- 3 – Other (please specify) (3%)
    - Again, I am not a bicycle rider, but wheelchair user but this survey forgot to include that option (and should have)
    - I would consider commuting or running errands if we had more bike trails.
    - To take my family out - we own a cargo bike
- 2 – I don't own a car (2%)

8. What are the places you most often ride your bicycle to and where are they located? (please include the name of the place and the nearest intersection):

Categories shown below were not provided as part of the survey; rather, they were applied during analysis.

- 87 – Locations including:
    - Acoma
    - Acoma near Rainbow
    - Acoma south to north
    - Airport
    - all over the town
    - All perimeter streets
    - Around my house
    - Around my neighborhood (3 responses)
    - Around the neighborhood: Highlander & Mohican
    - Avalon Ave & Palo Verde N.
    - Aviation
    - Bamboo and Empress
    - Bison Blvd
    - Boulder
    - Buena Vista
    - Cherry Tree Blvd
    - Cherry Tree Blvd.

- Cisco Dr. S
- Daytona and any intersection
- Down town
- Downtown
- East and west on Havasupai
- El Dorado N
- Friends
- Highlander
- Home to Cherry Tree and/or Bison
- Home, all over town
- SR 95 and North Palo Verde
- I-95 and S McCulloch Blvd.
- Inca Drive
- Kiowa
- Lake Havasu avenue
- Lake Havasu blvd
- LHCPD Acoma/Daytona and Acoma/
- London Bridge Road (8 responses)
- London Bridge Road (needs bike lanes!!!!)
- McCulloch & Arizona to Foothills
- McCulloch Blvd (4 responses)
- McCulloch Downtown
- McCulloch south to McCulloch north
- Mockingbird drive
- Mohave County Library (Capri & Swanson)
- My neighbor hood
- My neighborhood, blugrass and hornet
- N. Palo Verde Blvd.
- Near home - Kiowa and Palo Verde Intersection
- Near home, prefer not to specify
- Neighborhood for fun
- North end of town
- North Pablo vede
- North palo verde
- Oconowac
- Opossum from Hiawatha to Canyon Cove
- Oro grande
- Orogrande
- Outpost Drive-Kearsage-alley-Maricopa-S. Mcculloch
- Palmer drive
- Palo Verde
- Palo Verde North and South
- Parker
- Rocking Horse, Pintail
- Rolling Hills Drive
- S. Acoma Blvd
- Smoketree
- Southend Arizona
- State Farm 2138 McCulloch
- Street
- Swift drive

    - Swordfish and Jamaica
    - Ted Lane
    - Thistle, Starfish
    - Thunderbolt
    - Thunderbolt
    - Uptown
    - Volunteer
- 44 – Bike path, including:
    - Drive my bike to the island pathway then bike around the island.
    - From south side around island
    - Home to Island
    - Highway Path
    - Highway walking path
    - Island (28 responses)
    - Island bike path and loop road
    - Island, Dirt trail, Rotary Park
    - On the bike path by 95 but hate having to cross back and forth. Should be on one side or the other or both.
    - On the island--Lk Havasu Ave and McCulloch Blvd
    - multi-use path-- McCulloch South to Kiowa-- most often McCulloch to Oro Grande
    - Path along highway
    - Path along the highway
    - The bike trail along the highway is great
    - The Island because there is a safe track
    - The Island or SR 95 multi-use trails
- 29 – Park
    - Home to SARA Park
    - I like to go around Wheeler Park and do laps at Civic Center Ave.
    - Jack Hardie Park (Acoma & Bunker)
    - Parks
    - Parks
    - Rotary Park (10 responses)
    - Rotary Park - Channel
    - Rotary Park (US 95 & Rotary Park Dr)
    - SARA Park (9 responses)
    - SARA Park - 95/McCull several vehicles turn right on green light when the crosswalk sign is on and cyclist is x the HWY
    - SARA Park (road-- not the trails)
    - Skate park
- 22 – School
    - All around the Highschool
    - ASU Havasu (Acoma & Swanson)
    - Ceilo near Smoketree Elementary and around to local neighborhood.
    - Havasupai and empress to the high school
    - High school
    - High school
    - Jamaica Elementary
    - Jamaica Elementary area
    - Lake Havasu High School
    - Nautilus Elementary
    - Oro Grande and Route 95

    - Oro grande elementary
    - Oro grande school
    - School
    - School
    - Smoketree school
    - Starline elementary
    - Starline Elementary (Starline & Daytona)
    - Starline Elementary, Starline Drive, Newport Drive
    - Thunderbolt middle school
    - Thunderbolt middle school area
    - To school They come down Bamboo to Rainbow to the High School.
- 20 – Store/business
    - Bahamas Business Plaza
    - Basha's Area
    - Basha's
    - Food City - SR 95 & Kiowa
    - Doctor offices on Mesquite and Lake Havasu Avenue
    - Dollar General - Avalon Ave & Kiowa
    - Home to Bike Shop (Havasu Bike & Fitness)
    - Home to Mall/Crystal Beach
    - Mall (4 responses)
    - Restaurant
    - To the mall London Bridge Road
    - Tractor supply
    - Smiths
    - Smiths
    - Smith's Area
    - South Basha's area
    - To Basha's out to mall
- 3 – Golf Course
    - Around the golf course area because it's safe.
    - Golf Course
    - Mulberry Lake Havasu up the hills around golf course
- 2 – Church
    - Church
    - Presbyterian Church chemuhevie and saratoga

9. Where would you like to ride your bicycle, but currently can't? (please include the name of the place and the nearest intersection):

Categories shown below were not provided as part of the survey; rather, they were applied during analysis.

- 67 – Locations
    - Acoma
    - Acoma
    - Acoma Avenue
    - Airport
    - All over
    - All over town. No bike lanes
    - All places

- All the main streets. McCulloch blvd.
- All the streets around schools
- Along Acoma Blvd
- Along Route 95 beyond Palo Verde North to Rt 40
- Arapahoe
- Around town
- Avalon and N Palo Verde Blvd
- Avalon Ave by dog park the ramp is unlevel and I must go into the street
- Bridge
- Central City
- Close to the water
- Difficult in downtown areas
- Downtown Lake Havasu
- Downtown McCulloch
- Downtown McCulloch Blvd - Awkward car parking along curbs
- Everywhere where there are main roads
- Friends
- Havasu to Parker
- SR 95 towards Parker
- Highway 40 towards Kingman
- SR 95 and McCulloch Blvd South
- I can ride everywhere I want to go
- Island
- Jamaica
- Kearsage
- Lake Havasu
- Lake Havasu - traffic too fast, inconsistent sidewalks, not enough room by curbs, tons of foreign object debris along curbs and in intersections
- Lake Havasu Avenue
- Lake Havasu Blvd
- Lake Havasu to Parker
- Library - McCulloch
- London Bridge Road (3 responses)
- Many main roads
- Many others-- including Acoma Blvd
- Maricopa Ave.
- Maverick Dr and Kiowa Blvd
- McCulloch - Jamaica to 95
- More mountain bike facilities
- Most of Lake Havasu.
- My neighborhood. I live at the end of Winnebago Dr.
- N/S Along Acoma Blvd North
- None
- None
- North palo verde
- Nowhere
- On the streets
- Our sidewalks on Palo Verde N require I illegally cross the street
- Parker
- Pilot (I-40)
- Rte 95

    - Saratoga - Jamaica to Acoma
    - Sidewalks on Kiowa require that I cross the street illegally
    - Streets
    - there is a Crossing area at McCulloch Blvd N and Capri Blvd that the a Signal Pavement sticks up and if you don't know it's there can put you on the ground
    - They should widen Acoma - it is a major arterial!!!
    - Thunderbolt
    - To Bill Williams
    - To the Hualapais
- 10 – Store/business
    - Home Depot/Walmart
    - To Work
    - Walmart
    - Walmart
    - City Hall
    - Dollar General (South Side)
    - Gym - Lake Havasu Ave & Industrial
    - Post Office - McCulloch
    - Smith's (McCulloch and Acoma)
    - Smith's - Acoma & McCulloch
- 4 – Park
    - Rotary
    - Rotary Park
    - SARA Park
    - SARA park
- 3 – Bike path
    - across the bridge from the one bike path to the other
    - Bike lanes on the above streets would help bring awareness to sharing the lanes with bikes.
    - from our house to the island - getting there feels unsafe
- 2 – School
    - with kids to school (McCulloch S & SR 95 to Starline Elementary)
    - To School

10. How do you feel about your neighborhood and local bicycling conditions? (select any/all that apply):

- 68 – There aren't enough bike lanes (73%)
- 62 – Cars drive too close to me (67%)
- 58 – Cars drive too fast (62%)
- 46 – It's difficult to cross busy intersections (49%)
- 38 – There isn't enough street lighting (too dark) (41%)
- 27 – The existing streets and bike lanes/routes don't go where I want to go (29%)
- 21 – Other (please specify) (23%)
    - Bicycle riders ride sometimes 2 or 3 people wide, which is actually a hazard, the cars on the road aren't the hazard, it's the people wanting to have 2-3 people wide on the road that moves into the lane of traffic. We don't need any changes to the streets.
    - Coyotes, drunk and drug driving fools.
    - Curbs and sidewalks on swordfish.
    - Gravel in the street.
    - Hills.
    - I live near the edge of town so traffic is light.

    - I live on Inca Dr and it has a couple of curves. It connects to Southwind Ave and I think alot of people use Inca Dr. to get to Southwind, which makes my street busy with fast drivers. I have a very hard time letting my children ride their bikes just around the block because of drivers that go way too fast on my street, especially around the bends. We need more police presence or perhaps a few speed bumps throughout.
    - Limited bikes lanes and many are full of debris.
    - My neighborhood is good.
    - No sidewalks in the neighborhoods.
    - Poor surface.
    - Sidewalks for kids.
    - The pavement is horrible compared to other cities I've lived and biked in. Other cities have street sweepers that operate on a more consistent and regular basis.
    - There aren't enough sidewalks. The hills are too steep for my small children.
    - There is little sense of Share-the-road and general respect for or awareness of bicyclists
    - These choices are clearly loaded for the propaganda of the biking community not for true fact gathering.
    - To many people on their phones texting and do not see us.
    - Too many uneducated drivers and cyclists.
    - Too much gravel and glass in bike lanes.
    - Way too much gravel on all streets. It's like riding on dirt roads. The streets aren't laid out square because of the washes, so it's easier to cut through neighborhoods for a shorter route. Otherwise you have to ride on the highway where there are no bike lanes.
    - Wheelchair users use the sidewalk, but often the sidewalks are unlevel, broken or blocked by vehicles. We need better enforcement and improved accessibility.
- 10 – The places I want to go are too far away to bike (11%).
- 9 – I am concerned about stray dogs (10%).
- 3 – I am concerned about crime (3%).

ALL RESPONDENTS

11. Do you walk?

- No: 35 responses (20%)
- Yes: 139 responses (80%)

WALKING—THOSE WHO DO NOT WALK

12. Have you ever had a negative experience while walking in the Lake Havasu City area (crash, near-miss, unsafe behavior by motorists, cyclists, or pedestrians, etc.)? If so, please tell us where and describe it.

- 8 – No.
- No. Hiking on the trails at SARA Park occasionally.
- Same response for bicyclists.

13. Please tell us why you DO NOT walk (select any/all that apply):

- 13 – The places I want to go are too far away to walk (54%)
- 11 – There isn't enough street lighting (too dark) (46%)
- 8 – Motorists don't obey traffic laws (33%)
- 8 – There aren't enough sidewalks and trails (33%)

- 8 – There isn't enough shade (33%)
- 7 – Cars drive too fast (29%)
- 7 – Other (please specify) (29%)
    - M
    - None
    - Parents drive to school
    - Same response to bicyclists
    - Spend most of my time training on my road or dirt bike.
    - The only walking my family does is down by the channel
    - Too hot
- 6 – There aren't enough safe places to cross the street between intersections (25%)
- 5 – It's difficult to cross busy intersections (21%)
- 4 – Cars drive too close to people/me (17%)
- 4 – I am concerned about stray dogs (17%)
- 4 – There are not enough crosswalks (17%)
- 3 – Sidewalks are blocked by trash/recycling bins or mailboxes (13%)
- 3 – The existing streets and sidewalks don't go where I want to go (13%)
- 2 – I am concerned about crime (8%)
- 2 – Sidewalks are in disrepair/cracked (8%)

14. What would make it easier, safer, or more pleasant for you to walk?

- Sidewalks (4 responses)
    - Bike/Running Lane.
    - Designated areas to walk/ride.
    - N/A - Bike lanes on the main Boulevards would improve the safety for pedestrians traffic on these areas.
    - Sidewalks are always safer than bike lanes to me especially for children.
- Other (4 responses)
    - Car.
    - I don't enjoy walking.
    - Same response as with bicyclists.
    - Street lighting.

15. Where would you walk, but currently can't? (please include the name of the place and the nearest intersection):

- McCulloch
- Park
- See above. Bike Lanes and signs on Boulevards.
- Neighborhood around my house (Tahitian area)
- Trails
- Not on roadways

WALKING—CURRENT PEDESTRIANS

16. Have you ever had a negative experience while walking in the Lake Havasu City area (crash, near-miss, unsafe behavior by motorists, cyclists, or pedestrians, etc.)? If so, please tell us where and describe it.

- 36 – Unsafe motorist/bicyclist activity
    - Crossing streets the cyclists will run you over for being in THEIR way.
    - It is unsafe to walk in the park or in the long channel. Bicyclists are dangerous, especially to older people. Biking should be banned in those areas.
    - Walking in Rotary Park was intense as the bicyclists are not courteous to pedestrians.
    - Almost been hit several times while walking my kids to Starline (Daytona/Starline intersection).
    - Almost hit in an intersection once.
    - Busy road is Daytona daughter sometimes is nervous.
    - Cars driving too fast and no street lights.
    - Cars don't like to yield to pedestrians. I've had drivers that have stop signs act Irritated that I am crossing gas into the intersection and inch closer to me acting as though they're going to hit me. Mainly residential areas not main streets.
    - Drivers don't pay attention to crosswalks.
    - Hit by a car in a marked, signalized crosswalk when I had the right of way.
    - I walk the northside. It doesn't matter what street, there are close calls. You can tell by the movement of the vehicles and driver, that the driver believes they don't have to move for pedestrians. Most of the time when I make direct contact with the driver's eyes, that tends to make the driver slow down and start veering away.
    - Lake Havasu Ave. S. @ Jones Drive.
    - Car went beyond stop line onto Lake Havasu Ave while I was entering crosswalk.
    - Most intersections, cars do not stop for pedestrians. Hiway 95 and S PV intersection, no arrow for cars, they wait for green and if you're in the intersection they'll go anyway.
    - Near miss.
    - Near misses.
    - Near-miss London Bridge Plaza near Paseo Del Sol.
    - Near-miss with car. Oro Grande Blvd, Beechwood drive. There is a curve in the road and you cannot see far away oncoming traffic. People speed around the corner.
    - Near-misses.
    - On McCulloch cars are traveling too fast (over speed limit) that it does not feel safe to walk on McCulloch.
    - Oro Grande and Thunderbolt the car fly around the corner too fast to cross the road for my son to walk home from school.
    - Other kids in cars swerving at me and yelling at me while passing.
    - People can't drive or pay attention.
    - Unsafe behavior by motorists and animal issues.
    - Yes, almost run over by a truck in the crosswalk at Jamaica & McCulloch.
    - Yes, cars not stopping at red lights and stop signs.
    - Yes, cross walks need to be visible. Drivers get distracted and don't see you. Drivers don't know the law on pedestrians. When in the cross walk cars think it is ok think they can drive while you are in the cross walk.
    - Yes people drive way over the speed limit and I literally have to jump out of the way everyday. Most commonly occurs on Bahama.

    - Yes, as a school superintendent, I see near-misses with children ages 4.5 to 18 every day. Starlite Lane off Palo Verde has become a dangerous cul-de-sac due to an adjacent piece of property that does not belong to Telesis Prep.
    - Yes, at the drop off area for Telesis Campus. It's not safe for children.
    - Yes, car going over the speed limit coming over streets that have hills and not seeing you because of their speed.
    - Yes, cars just driving way too fast down a "neighborhood" street trying to get to a larger connecting street like Southwind Ave. No sidewalks to walk on and no bike lanes so when cars drive up/down my street (Inca Dr) I have to walk in people's yards to get out of the way with my dog. When my kids are out too, we often walk "facing" traffic because we don't trust having traffic coming behind us. People drive way too fast and don't pay attention at all. Inca Dr. also has a few curves so cars that are driving way too fast don't have enough reaction time to stop or get out of the way if there's someone riding their bike or walking.
    - Yes, motorists failing to yield to pedestrians - even when in a crosswalk!
    - Yes, Speeding cars.
    - Yes, unsafe motorists driving too close and not paying attention.
    - Yes, walking with my family and dogs and a car not staying on her side of the road crossing the center line
    - Yes. Cars forget to look right when turning. They are too focused on looking left for oncoming cars that they nearly hit pedestrians.
- 27 – No responses, including:
    - No but I always cross at cross walks. Only negatives have been while driving and having parents and kids J-walk and step out right in front of my car in school zones. It is particularly bad at Jamaica Elementary and at the high school.
- 15 – Lack of infrastructure
    - Biggest negative is needing to walk in gravel because there are no sidewalks on McCulloch south.
    - I'm so tired of jumping out of the way of cars in areas with no sidewalks. Havasu needs a "complete streets" program with curbs and sidewalks.
    - In my neighborhood and other housing areas where there are no sidewalks, the cars can get too close and don’t slow down.
    - Many of the streets in Lake Havasu are so narrow and windy/hilly that many motorists don't see you until they are passing right by you. As the pedestrian walking, we really have to be the ones keeping an eye out for motorists because the motorist doesn’t usually have enough time to react by the time they see us, and they are bound to be close to us with the roads being so narrow. I have had many instances where motorists have driven extremely close to me as they are coming up over a hill or around a turn, and I think it has more to do with the fact that they don't see me until it is too late to react. I would feel much safer with more sidewalks or biking lanes and wider roads in general.
    - Motorists and walkers do not fit on streets that don't have bike lanes.
    - No sidewalks anywhere in actual neighborhoods.
    - No sidewalks in neighborhood for children to walk home from school.
    - Not all motorist are considerate of pedestrians and there are not sidewalks in many locations.
    - Palo Verde Blvd. South & Starlite Lane - this intersection is unsafe to walk due to the encroaching fence on city easement space.
    - people yell at you. bike/walk lane ends abruptly. Sidewalk just stops. Mailboxes on sidewalks mean you have to walk single file.
    - Pepsi dont stop.

    - See comment for bicycling. There are no sidewalks. Lake Havasu is not a friendly area for families. No sidewalks. I don't want my child walking on the street to get to school and yet there are no buses. Unacceptable.
    - There are no sidewalks in the neighborhoods, or even on busy streets.
    - There is only one crosswalk on the intersection of N. Kiowa and Havasupai going across Havasupai. Havasupai elementary is right around the block and many kids cross across Kiowa to get to their houses across the street. I've witnessed many children coming close to cars while trying to gauge a safe time to cross. The only crosswalk across Kiowa is off Cashmere and is a long way to back track for a crosswalk.
    - Yes. There are no sidewalks on many streets. Unsafe lighting at night. Cars drive fast and some drivers are not attentive. Also, Lake Havasu City has a lot of impaired drivers.
- 8 – Yes responses, including:
    - Crossing at Daytona and Acoma near impossible.
    - McCulloch Blvd South, near Calvary Christian Academy.
    - Near the high school in the morning.
    - Walking on the North side of town.
    - Yes at Bamboo and Empress it's a bad street walking riding a bike or driving.
    - Yes, fell down crossing street.
    - Yes, at the top of Maverick near the Kaiowa intersection.
- 2 – Dogs
    - Dog bites (Not by strays, but by "owned" dogs); (seeming) drug trade/activity.
    - Dogs not on leashes running towards me on thunderbolt street.
- Condition/Maintenance
    - Gravel issues and dog crap.
- Other
    - I am a wheelchair user, and already answered this question under bicycle rider.

17. Why do you walk? (select any/all that apply):

- 114 – Get exercise/recreation (88%)
- 58 – Have fun (45%)
- 18 – Go to school (14%)
- 14 – Do errands/shopping/dining (11%)
- 12 – Other (please specify) (9%)
- 9 – Go to work (7%)
- 4 – I don't own a car (3%)

18. What are the places you most often walk to? (please include the name of the place and the nearest intersection):

Categories shown below were not provided as part of the survey; rather, they were applied during analysis.

- 116 – Locations including:
    - Acoma
    - Acoma and McCullock
    - All over town
    - Along McCulloch
    - Along the channel
    - Arapahoe to Maricopa to Acoma

- Around home
- Around home Kiowa and N. Palo Verde
- Around my neighborhood (5 responses)
- Around my neighborhood for fun and exercise
- Around my neighborhood, south side
- Around my neighborhood. Near Palo Verde N, Avalon, and Inverness
- Around our block for exercise
- Around our house, saratoga/silversaddle/indianpeak
- Around the london bridge area
- ASU Havasu (Acoma & Swanson)
- ASU soccer fields
- Avalon
- Avalon Avenue
- Avalon Drive
- Aviation
- Bahama Ave
- Beechwood dr.
- Buena vista
- Channel and Bridge Area
- Chip Dr & Snead Dr
- Church
- Cisco Dr. S
- Contact Point
- Cousin's House on Mulberry Ave & Swanson
- Daytona
- Downtown Area (6 responses)
- Downtown district during the work day - for lunch
- Downtown McCulloch for work
- El Dorado N
- Empress
- Empress and Avalon
- English Village
- Exercise
- Highlander
- Hillside Drive
- Inca Dr
- Iroguors
- Just around my neighborhood.
- Kiowa Blvd & Amberwood
- Kirk
- Krestview
- Lake Havasu Ave
- Lake Havasu Avenue
- LBB
- London bridge
- London bridge beach
- London bridge road
- Loop to home-JamaicaxMcculloch & MccullochxDaytona
- Main Street
- Main streets in town
- Maracaibo

    - Maverick
    - Mc Colloch
    - McCormick
    - McCulloch Blvd
    - McCulloch Blvd and Lake Havasu Ave
    - McCulloch south to north
    - My kids walk home sometimes and trying to cross Bamboo and Empress is crazy
    - My neighborhood (4 responses)
    - My neighborhood (between Saratoga and Chemehuevi)
    - My neighborhood, blugrass and hornet
    - Near the bridge
    - Near the bridge
    - Near work (College Drive, multi-use path, Kiowa)
    - Neighborhood Jam/Saratoga
    - Neighborhood on the southside off of mohican and oro grande
    - Neighborhood. McCulloch.
    - Neighborhood: squaw drive
    - Newport Dr
    - North Palm Verde
    - North Palo Verde Blvd (3 responses)
    - Oconowac
    - On the golf course because it's safe.
    - Oro grande
    - Palo Verde Blvd. South & Starlite Lane
    - Palo Verde to Acoma
    - Paseo Dorado, Edgewood Dr, Saratoga Ave, Acoma Blvd W
    - Patrician
    - Realtor Park
    - Rolling Hills Drive
    - S Palo Verde and London Bridge Rd
    - Smuts mculloch
    - Southend Arizona
    - Star line/ daytona
    - Starline
    - State Farm 2138 McCulloch
    - Streetside Cafe
    - Swordfish and Jamaica
    - Ted Lane
    - The channel
    - Thunderbolt
    - Tracks
    - Up town area
    - Var
    - Work
    - Work
- 26 – Parks
    - Parks
    - Along the channel and Rotary Park
    - City Parks - Rotary/ LBB
    - Currently when I walk it is at Rotary Park on path.
    - LH State Park London Bridge Road & Industrial

    - Rotary Park (13 responses)
    - Rotary park - channel
    - Rotary Park (uS 95 & Rotary Park Dr)
    - SARA Park (4 responses)
    - SARA park trails & paved road
- 18 – Paths/trails
    - Bike Path
    - Island because there is a safe track
    - Island Path (10 responses)
    - On the island on the walk/bike path.
    - On the path by 95.
    - the path from Mesquite to Rotary
    - To the island via different routs
    - Trails around the lake
    - Multi-use pathway
- 17 – Stores/businesses
    - Grocery Store
    - Store
    - Bashas (3 responses)
    - Bashas Oro Grande and Kearsage
    - Doctors on Mesquite & Lake Havasu Ave
    - Dollar General (South Side)
    - Downtown businesses along McCulloch
    - from home on Brodie Dr. to Bashas
    - Kmart
    - Local stores/restaurants N. Kiowa @ Avalon
    - Lowes
    - McCulloch South to Basha's Grocery
    - Rite-Aid Lake Havasu Ave & Mesquite
    - Walmart
    - Mini mart
- 13 – Schools
    - School (3 responses)
    - Havasupai Elementary - crossing N. Kiowa to get to Havasupai
    - Lake Havasu High School (Kiowa/S. Palo verde)
    - Kearsage to Arapahoe to Thunderbolt to middle school
    - Streets near the high school.
    - Near thunderbolt middle school
    - Oro Grande Elementary
    - Oro Grande school
    - Starline Elementary
    - Telesis Campus
    - Thunderbolt school

19. Where would you like to walk, but currently can't? (please include the name of the place and the nearest intersection):

Categories shown below were not provided as part of the survey; rather, they were applied during analysis.

- 26 – Locations
    - Acoma
    - Airport
    - All over town-acoma & el dorado
    - All streets
    - Any neighborhood without sidewalks
    - Any street but to many hills
    - Around my neighborhood. McCulloch and Aqua Drive
    - Cisco Dr North and El Dorado
    - Downtown
    - Downtown to library
    - Island Path if it was lighted
    - Jamaica
    - Jamaica Blvd from Monte Carlo to Kiowa
    - Just about everywhere. The sidewalks just end.
    - London bridge road
    - McCulloch Blvd South
    - McCulloch from Daytona to Jamaica
    - More side-streets in the City.
    - Most streets because there are no sidewalks.
    - My neighborhood (El Dorado Ave)
    - My neighborhood. I live at the end of Winnebago.
    - North Pablo verde
    - on sidewalks in neighborhoods
    - Possibly commute to work
    - Street right below starters and Daytona. There is no crosswalk
    - Work
- 4 – Comments
    - I can walk anywhere I just don't because cars speed a lot
    - I'm considering moving out of LHC over the lack of accessibillity
    - Other than the downtown area, I feel most of the city lacks safe areas to walk or ride a bicycle
    - Same, I drive there, then walk.
- 4 – Nowhere/not apply
- 4 – School
    - Kiowa from Bermuda to High School
    - Neighborhoods by the high school
    - School
    - to school (Starline Elementary)
- 4 – Stores/businesses
    - Downtown to Safeway
    - Mall
    - Shops but there are hardly any in residential areas
    - Walmart
- 2 – Parks
    - SARA Park
    - Yonder Park

20. How do you feel about your neighborhood and local walking conditions? (select any/all that apply):

- 86 – There aren't enough sidewalks and trails (72%)
- 61 – Cars drive too fast (51%)
- 51 – Cars drive too close to me (43%)
- 50 – There isn't enough street lighting (too dark) (42%)
- 50 – Motorists don't obey traffic laws (42%)
- 38 – It's difficult to cross busy intersections (32%)
- 36 – There are not enough crosswalks (30%)
- 31 – There aren't enough safe places to cross the street between intersections (26%)
- 30 – There's not enough shade (25%)
- 22 – The existing streets and sidewalks don't go where I want to go (18%)
- 22 – Other (please specify) (18%)
    - concerned about coyotes
    - Crossing guard or light that works only during school hours on Daytona and Starline
    - dogs are left unattended in the front yard
    - every street in town needs sidewalks and curbs!
    - Fence posts encroaching on city property inappropriately.
    - Good
    - Have to walk in street
    - hills are difficult
    - I am more concerned about OWNED dogs than strays. I think most of us are bit by "owned" dogs-- often with the owner present.
    - Lack of continuous sidewalks down main streets especially those leading to schools
    - My area is ok
    - my neighborhood has sidewalks and is good
    - No problem walking
    - No sidewalks
    - quite often see hypodermic needles on the ground during walks
    - Roads are not curbed
    - Snowbirds.
    - The stray dog thing in LHC is a major issue for me, as many dogs are frightened by wheelchairs, also the fake service dog problem - had one in a store growl and snap at me.
    - There are no sidewalk
    - There is a lot of runoff after storm events in which gravel gets into the streets. This makes it more difficult to walk at the edge of the road, and runs a risk of motorists kicking up sand and gravel as they pass you. We need more curbs installed to prevent gravel getting into the streets.
    - vehicles Dont stop for people crossing on a green walking arrow happens all the time and its dangerous
    - Where is the bus system
- 17 – I am concerned about stray dogs (14%)
- 16 – The places I want to go are too far away to walk (13%)
- 15 – Sidewalks are blocked by trash/recycling bins or mailboxes (13%)
- 12 – Sidewalks are in disrepair/cracked (10%)
- 9 – I am concerned about crime (8%)

ALL RESPONDENTS

21. For more information about this project ONLY, please provide your information below.

Name	Organization (if applies)	Email
Lisa		lisalovesdiezsi@tahoo.com
Steven J Alexander		drdirt@citilink.net
Remo Inglese		ringlese@icloud.com
Jeremy Palmer		jeremyep@gmail.com
Dawn Zeyouma-Hicks	Tri-Tech Auto	dawnmzh@gmail.com
Holly		kalaeswahine@gmail.com
Any Nickel		nickelemin@hotmail.com
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Sandra Breece	Telesis Academy	sbreece@telesis-academy.org
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Athena Eskridge		aleskridge1@gmail.com
Nicole Boon		boonfamily03@gmail.com
Collin Bangs		
Justin Demaret		
Owen Brasher		beccamah@gmail.com
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Sandy McCormack		mccormack2620@gmail.com
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Terry Robey		mriterrible@yahoo.com
Patricia Perez		mrspatriciaperez@yahoo.com
Mike		hotshotmike1001@gmail.com
Trinna Ware		twareinaz@gmail.com
Scott Craine		scraine@penguindata.com
Daniel Castle	lhc	castled@lhcaz.gov
Terence Concannon		terence@golakehavasu.com

Anna Scherzer		ascherzer@yahoo.com
Maureen Lastra		rolloverbuddy@yahoo.com

22. Last Question – Show us on the map where you have concerns about walking or bicycling. (Click here to access the map.)

Please see the attached report or view the interactive site at: https://gci.mysocialpinpoint.com/lhmpo#/.

Additional locations:

- Acoma coming from the Highschool
- All school zones, because of careless parents/drivers whp,dont pay attention and speed and because of students and parents who have no respect for other drivers and insist on using everywhere but the crosswalk.
- Bamboo and Empress then Bamboo and Rainbow
- Too many places in havasu. When there isnt a side walk you have to walk or ride a bike in the street. There arent a lot of sidewalks. Also except at the lights when you cross like McCulloch and you're not at a light it is dangerous. These roads curve and turn too much and are very busy. There arent enough crosswalks. Look at McCulloch on the south side.
- Lastly - SR 95 was recently just widened to improve the shoulder on 90% of the Hwy from North o Lake Havasu to Pilot. However, there is a 1.5-mile strip in both directions were the should is eliminated. The wide shoulder attracts the bike riders looking for that longer ride, and then the bikes are forced to ride in a lane of traffic in each direction for the 1.5 miles. This makes this ride very dangerous as vehicle do not yield space to bikes at hwy speeds. Not sure why they did not complete the shoulder widening through these sections. At least come back and make a normal 3 ft shoulder in these areas. This area is just South of Havasu heights area.
- Intersection of empress and bamboo just above lake Havasu high school there needs to be a stop sign put there before a child dies!!

Comments:

- In my opinion, lack of AWARENESS towards cyclists and peds in LHC is the #1 issue here. It can be as easy and cost effective as increasing the amount of signage that 'encourages' drivers to think. Let's paint bike symbols on the roads to define dedicated bike lanes or even shared lanes - a parking lane and a bike lane. Let's post MANY signs to SHARE THE ROAD. The more visuals the better. We can take the existing bike path that unsafely jogs across SR 95 (twice) and send it UNDER or OVER (build bridge) the 95. Utilize the areas where traffic is not heavy...BEHIND the mall. Utilize the washes throughout town... create bike paths HIGH within washes as thoroughfares. As far as gravel in roads...additional street cleaning or how about the city curbing all streets? Pricy, I'm sure.
- I hope my survey arrived ok. When I clicked the map it did not return me to my survey and I had to reload the survey. If my answers are not there, please call me at 928-302-1493. I am a wheelchair user and have encountered too many near misses and accessibility issues in LHC
- There is not just one place where I have concerns about bicycling. The sidewalks are not a good place to ride. Many roads do not have bike lane or even shoulders. I love to ride bicycle. Mostly quit after moving because conditions are so bad. Lake Havasu is not a bicycle friendly city. Motorists are horrible drivers. Talk with the organization "People for Bikes.org" People for Bikes program "helps cities and towns quickly build and connect great places to ride." Do something.

Anything. Get rid of those center "turn lanes" for the entire length of roads. Secure bicycle racks. Education for drivers. More traffic enforcement. Especially with snowbirds in town.

- Everywhere! Put sidewalks in for pedestrians! Put bike paths in for bicyclists -- If you want it to be safer for them! They don't belong in roadways!
- There is too much traffic everywhere to be safe.
- Could not figure out how to place a pin

Appendix C Federal Funding Opportunities

Pedestrian and Bicycle Funding Opportunities
U.S. Department of Transportation Transit, Highway, and Safety Funds

Revised August 12, 2016

This table indicates potential eligibility for pedestrian and bicycle projects under U.S. Department of Transportation surface transportation funding programs. Additional restrictions may apply. See notes and basic program requirements below, and see program guidance for detailed requirements. Project sponsors should fully integrate nonmotorized accommodation into surface transportation projects. Section 1404 of the Fixing America's Surface Transportation (FAST) Act modified 23 U.S.C. 109 to require federally-funded projects on the National Highway System to consider access for other modes of transportation, and provides greater design flexibility to do so.

Key: $ = Funds may be used for this activity (restrictions may apply). $* = See program-specific notes for restrictions. ~$ = Eligible, but not competitive unless part of a larger project.

	Pedestrian and Bicycle Funding Opportunities U.S. Department of Transportation Transit, Highway, and Safety Funds														
Activity or Project Type	TIGER	TIFIA	FTA	ATI	CMAQ	HSIP	NHPP	STBG	TA	RTP	SRTS	PLAN	NHTSA 402	NHTSA 405	FLTTP
Access enhancements to public transportation (includes benches, bus pads)	$	$	$	$	$		$	$	$						$
ADA/504 Self Evaluation / Transition Plan								$	$	$		$			$
Bicycle plans			$					$	$		$	$			$
Bicycle helmets (project or training related)								$	$SRTS		$		$*		
Bicycle helmets (safety promotion)								$	$SRTS		$				
Bicycle lanes on road	$	$	$	$	$	$	$	$	$		$				$
Bicycle parking	~$	~$	$	$	$		$	$	$	$	$				$
Bike racks on transit	$	$	$	$	$			$	$						$
Bicycle share (capital and equipment; not operations)	$	$	$	$	$		$	$	$						$
Bicycle storage or service centers at transit hubs	~$	~$	$	$	$			$	$						$
Bridges / overcrossings for pedestrians and/or bicyclists	$	$	$	$	$*	$	$	$	$	$	$				$
Bus shelters and benches	$	$	$	$	$		$	$	$						$
Coordinator positions (State or local)					$ 1 per State			$	$SRTS		$				
Crosswalks (new or retrofit)	$	$	$	$	$*	$	$	$	$	$	$				$
Curb cuts and ramps	$	$	$	$	$*	$	$	$	$	$	$				$
Counting equipment			$	$		$	$	$	$	$	$	$*			$
Data collection and monitoring for pedestrians and/or bicyclists			$	$		$	$	$	$	$	$	$*			$
Historic preservation (pedestrian and bicycle and transit facilities)	$	$	$	$				$	$						$
Landscaping, streetscaping (pedestrian and/or bicycle route; transit access); related amenities (benches, water fountains); generally as part of a larger project	~$	~$	$	$			$	$	$						$
Lighting (pedestrian and bicyclist scale associated with pedestrian/bicyclist project)	$	$	$	$		$	$	$	$	$	$				$
Maps (for pedestrians and/or bicyclists)			$	$	$			$	$		$	$*			
Paved shoulders for pedestrian and/or bicyclist use	$	$			$*	$	$	$	$		$				$

Key: $ = Funds may be used for this activity (restrictions may apply). $* = See program-specific notes for restrictions. ~$ = Eligible, but not competitive unless part of a larger project.															
	Pedestrian and Bicycle Funding Opportunities U.S. Department of Transportation Transit, Highway, and Safety Funds														
Activity or Project Type	TIGER	TIFIA	FTA	ATI	CMAQ	HSIP	NHPP	STBG	TA	RTP	SRTS	PLAN	NHTSA 402	NHTSA 405	FLTTP
Pedestrian plans			$					$	$		$	$			$
Recreational trails	~$	~$						$	$	$					$
Road Diets (pedestrian and bicycle portions)	$	$				$	$	$	$						$
Road Safety Assessment for pedestrians and bicyclists						$		$	$			$			$
Safety education and awareness activities and programs to inform pedestrians, bicyclists, and motorists on ped/bike safety								$SRTS	$SRTS		$	$*	$*	$*	
Safety education positions								$SRTS	$SRTS		$		$*		
Safety enforcement (including police patrols)								$SRTS	$SRTS		$		$*	$*	
Safety program technical assessment (for peds/bicyclists)								$SRTS	$SRTS		$	$*	$		
Separated bicycle lanes	$	$	$	$	$	$	$	$	$		$				$
Shared use paths / transportation trails	$	$	$	$	$*	$	$	$	$	$	$				$
Sidewalks (new or retrofit)	$	$	$	$	$	$	$	$	$	$	$				$
Signs / signals / signal improvements	$	$	$	$	$	$	$	$	$		$				$
Signed pedestrian or bicycle routes	$	$	$	$	$		$	$	$		$				$
Spot improvement programs	$	$	$			$	$	$	$	$	$				$
Stormwater impacts related to pedestrian and bicycle projects	$	$	$	$		$	$	$	$	$	$				$
Traffic calming	$	$	$			$	$	$	$		$				$
Trail bridges	$	$			$*	$	$	$	$	$	$				$
Trail construction and maintenance equipment								$RTP	$RTP	$					
Trail/highway intersections	$	$			$*	$	$	$	$	$	$				$
Trailside and trailhead facilities (includes restrooms and water, but not general park amenities; see guidance)	~$*	~$*						$*	$*	$*					$
Training					$	$		$	$	$	$	$*	$*		
Training for law enforcement on ped/bicyclist safety laws								$SRTS	$SRTS		$			$*	
Tunnels / undercrossings for pedestrians and/or bicyclists	$	$	$	$	$*	$	$	$	$	$	$				$

Abbreviations

ADA/504: Americans with Disabilities Act of 1990 / Section 504 of the Rehabilitation Act of 1973
TIGER: Transportation Investment Generating Economic Recovery Discretionary Grant program
TIFIA: Transportation Infrastructure Finance and Innovation Act (loans)
FTA: Federal Transit Administration Capital Funds
ATI: Associated Transit Improvement (1% set-aside of FTA)
CMAQ: Congestion Mitigation and Air Quality Improvement Program
HSIP: Highway Safety Improvement Program
NHPP: National Highway Performance Program
STBG: Surface Transportation Block Grant Program
TA: Transportation Alternatives Set-Aside (formerly Transportation Alternatives Program)
RTP: Recreational Trails Program
SRTS: Safe Routes to School Program / Activities
PLAN: Statewide Planning and Research (SPR) or Metropolitan Planning funds
NHTSA 402: State and Community Highway Safety Grant Program
NHTSA 405: National Priority Safety Programs (Nonmotorized safety)
FLTTP: Federal Lands and Tribal Transportation Programs (Federal Lands Access Program, Federal Lands Transportation Program, Tribal Transportation Program, Nationally Significant Federal Lands and Tribal Projects)

Program-specific notes

Federal-aid funding programs have specific requirements that projects must meet, and eligibility must be determined on a case-by-case basis. For example:

- TIGER: Subject to annual appropriations.
- TIFIA: Program offers assistance only in the form of secured loans, loan guarantees, or standby lines of credit, but can be combined with other grant sources, subject to total Federal assistance limitations.
- FTA/ATI: Project funded with FTA transit funds must provide access to transit. See Bikes and Transit and the FTA Final Policy Statement on the Eligibility of Pedestrian and Bicycle Improvements under Federal Transit Law.
  - Bicycle infrastructure plans and projects funded with FTA funds must be within a 3 mile radius of a transit stop or station, or if further than 3 miles, must be within the distance that people could be expected to safely and conveniently bike to use the particular stop or station.
  - Pedestrian infrastructure plans and projects funded with FTA funds must be within a ½ mile radius of a transit stop or station, or if further than ½ mile, must be within the distance that people could be expected to safely and conveniently walk to use the particular stop or station.
  - FTA funds cannot be used to purchase bicycles for bike share systems.
  - FTA encourages grantees to use FHWA funds as a primary source for public right-of-way projects.
- CMAQ projects must demonstrate emissions reduction and benefit air quality. See the CMAQ guidance at www.fhwa.dot.gov/environment/air_quality/cmaq/ for a list of projects that may be eligible for CMAQ funds. Several activities may be eligible for CMAQ funds as part of a bicycle and pedestrian-related project, but not as a highway project. CMAQ funds may be used for shared use paths, but may not be used for trails that are primarily for recreational use.
- HSIP projects must be consistent with a State's Strategic Highway Safety Plan and either (1) correct or improve a hazardous road location or feature, or (2) address a highway safety problem.
- NHPP projects must benefit National Highway System (NHS) corridors.
- STBG and TA Set-Aside: Activities marked "$SRTS" means eligible only as an SRTS project benefiting schools for kindergarten through 8th grade. Bicycle transportation nonconstruction projects related to safe bicycle use are eligible under STBG, but not under TA (23 U.S.C. 217(a)).
- RTP must benefit recreational trails, but for any recreational trail use. RTP projects are eligible under TA and STBG, but States may require a transportation purpose.
- SRTS: FY 2012 was the last year for SRTS funds, but SRTS funds are available until expended.
- Planning funds must be used for planning purposes, for example:
  - Maps: System maps and GIS;
  - Safety education and awareness: for transportation safety planning;
  - Safety program technical assessment: for transportation safety planning;
  - Training: bicycle and pedestrian system planning training.
- Federal Lands and Tribal Transportation Programs (FLTTP) projects must provide access to or within Federal or tribal lands:
  - Federal Lands Access Program (FLAP): Open to State and local entities for projects that provide access to or within Federal or tribal lands.
  - Federal Lands Transportation Program: For Federal agencies for projects that provide access within Federal lands.
  - Tribal Transportation Program: available for federally-recognized tribal governments for projects within tribal boundaries and public roads that access tribal lands.
- NHTSA 402 project activity must be included in the State's Highway Safety Plan. Contact the State Highway Safety Office for details: http://www.ghsa.org/html/about/shsos.html
- NHTSA 405 funds are subject to State eligibility, application, and award. Project activity must be included in the State's Highway Safety Plan. Contact the State Highway Safety Office for details: http://www.ghsa.org/html/about/shsos.html

Cross-cutting notes

- FHWA Bicycle and Pedestrian Guidance: http://www.fhwa.dot.gov/environment/bicycle_pedestrian/
- **Applicability of 23 U.S.C. 217(i) for Bicycle Projects:** 23 U.S.C. 217(i) requires that bicycle facilities "be principally for transportation, rather than recreation, purposes". However, sections 133(b)(6) and 133(h) list "recreational trails projects" as eligible activities under STBG. Therefore, the requirement in 23 U.S.C. 217(i) does not apply to recreational trails projects (including for bicycle use) using STBG funds. Section 217(i) continues to apply to bicycle facilities other than trail-related projects, and section 217(i) continues to apply to bicycle facilities using other Federal-aid Highway Program funds (NHPP, HSIP, CMAQ). The transportation requirement under section 217(i) is applicable only to bicycle projects; it does not apply to any other trail use or transportation mode.
- There may be occasional DOT or agency incentive grants for specific research or technical assistance purposes.
- Aspects of many DOT initiatives may be eligible as individual projects. For example, activities above may benefit Ladders of Opportunity; safe, comfortable, interconnected networks; environmental justice; equity; etc.