Garden District Neighborhood Walkability Assessment Report (June 2015)









This program was made possible through the regional Alternative Modes program at





THANK YOU AND CONTACT INFORMATION

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LIVING STREETS ALLIANCE
THANKS THE PARTICIPANTS IN THE
GARDEN DISTRICT NEIGHBORHOOD
WALKABILITY ASSESSMENT FOR THEIR
TIME AND VALUABLE INPUT.

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ABOUT LIVING STREETS ALLIANCE

Founded in 2011, *Living Streets Alliance* (LSA) is a Tucson-based nonprofit organization dedicated to improving access to active modes of transportation in the region through outreach, education, advocacy, and research. The mission of *Living Streets Alliance* is to promote healthy communities by empowering people to transform our streets into vibrant places for walking, bicycling, socializing, and play.

In 2012, LSA launched a *Pedestrian Safety & Comfort Campaign* with the goal of "making the simple act of walking safe, comfortable, and convenient in the greater Tucson region." The campaign encompassed a variety of initiatives geared toward improving walkability in the region for people of all ages and abilities. Implementation of the *Neighborhood Walkability Assessment Program* was one of many concrete objectives achieved through the campaign. This walkability assessment was made possible through a partnership with Pima Association of Governments as part of their regional Alternative Modes program.

PROGRAM OVERVIEW

Since October 2013, Living Streets Alliance has conducted Neighborhood Walkability Assessments in eight neighborhoods. The Program was informed by participant feedback and lessons learned from the pilot phase of the program (February to April 2013).

Through the Neighborhood *Walkability Assessment Program*, LSA engages residents in thinking and learning about walkability while helping them identify the challenges that discourage walking and the assets that encourage walking in their neighborhoods. The assessments give residents the opportunity to share their personal experiences of their neighborhood streets from a pedestrian perspective and initiate a conversation about neighborhood priorities regarding possible future improvements to the walking environment.

Program Goals

- Engage residents in identifying their neighborhoods' walkability assets and challenges.
- Identify and prioritize walkability improvements needed in neighborhoods based on resident input.
- Promote walking.
- Highlight the importance of creating safe, comfortable, accessible, and enjoyable places to walk throughout the region
- Document walkability needs and challenges across the greater Tucson region.
- Work with elected and appointed officials to incorporate assessment findings into future transportation-related projects.

Each Neighborhood Walkability Assessment consists of two main components: Walkability Workshop, Neighborhood Walk & Talk, and an optional Walkability Audit.

WALKABILITY WORKSHOP

The first form of engagement in each neighborhood is a two-hour interactive *Walkability Workshop* designed to introduce participants to the concept of walkability and identify key elements of the pedestrian environment in the neighborhood. During the workshop, participants are given a brief presentation on walkability, introducing them to various streetscape elements that make an area walkable, as well as the benefits of walking and living in a walkable neighborhood. This is followed by an interactive mapping activity in which participants work in small groups with large aerial maps of their neighborhoods and mark:

- Walking destinations in or around the neighborhood
- Neighborhood walkability assets (shaded sidewalks, convenient crossings, etc.)
- Neighborhood walkability challenges (obstacles on the sidewalk, speeding drivers, etc.)





After the first mapping activity, LSA staff present the "Walkability Toolbox," which consists of various street and intersection treatments aimed at traffic calming, volume management, improved pedestrian crossings at un-signalized and signalized locations, and other elements that can enhance pedestrian comfort and sense of welcome. Another mapping exercise follows, allowing participants to discuss and identify specific locations where these treatments might be beneficial in their neighborhood. Participants are also asked to suggest routes for the second component of the program, the Neighborhood Walk & Talk. After these sessions, the maps are digitized and uploaded to Google Maps to be shared with neighborhoods.

NEIGHBORHOOD WALK & TALK

Following the *Walkability Workshop*, LSA hosts a *Neighborhood Walk & Talk*, which is essentially a group walk and facilitated conversation to observe and discuss existing walking conditions and improvements that can potentially enhance the walkability of each block.

The two-hour walk follows a route suggested by residents during the *Walkability Workshop*. Selected routes typically include different types of streets (for example, a neighborhood residential street and a collector street), to cover a sample subset of the neighborhood streets, from which the findings and recommendations can be extrapolated to other similar streets in the neighborhood.

The Walk & Talk is designed to be participatory, allowing ample time for ideas and discussions. A note-taker and a photographer are designated at each event to document the conversations and the neighborhood features discussed. Additionally, participants complete a short survey for each street segment of the route to give everyone a chance to provide input regarding pedestrian comfort and safety.





WALKABILITY AUDIT

This is an optional component, an opportunity for residents to collect more detailed pedestrian safety and comfort data on additional neighborhood streets of their choice. Volunteers from the neighborhood complete audit surveys of selected blocks to give feedback on safety, traffic, shade, attractiveness of the streetscape, and a number of other items related to overall comfort and safety. Neighbors can chose which street(s) to audit if there are at least three volunteers filling out surveys for each block and the blocks constitute a continuous route.

DATA ANALYSIS SUMMARY

During the *Neighborhood Walkability Assessments*, multiple types of data are collected from participants through the various engagement methods used. Below is a summary of how data from each of the three program components are analyzed.

1. Walkability Workshop

The Walkability Workshop focuses on soliciting information from participants about the general walking environment in their neighborhood. Participants work in small groups on large format neighborhood maps (36" x 48") to identify: walking destinations, walkability assets, walkability challenges, and walkability improvements.

All comments from the maps are digitized using QuantumGIS open



A Walkability Workshop Map

source software, and shapefiles of all data are created. Online Google Maps are created and shared with neighborhood associations as a dynamic tool that can be added to and edited by neighborhood residents on an ongoing basis. Content analysis is conducted by classifying each map comment by theme (i.e. open space, crossings, lighting, etc.).

2. Neighborhood Walk & Talk

During the two-hour *Walk & Talk*, participants complete brief surveys (Appendix 1) assessing each segment of the route based on how safe, comfortable, and welcoming the pedestrian environment feels. In some neighborhoods, a separate intersection survey is also completed (Appendix 2). Openended questions provide an opportunity for participants to share why they rated a segment as they did. All surveys are input by LSA staff and volunteers into online spreadsheets using Google Drive. An online photomap tour is created and key points of the participant discussion are summarized for each neighborhood in its report.

METHODOLOGY



Participants filling out surveys during a Neighborhood Walk & Talk

3. Walkability Audit

The audit survey is intended to collect additional qualitative information about how people feel about walking in their neighborhoods. Completed surveys are entered into an online spreadsheet in Google Drive. A simple content analysis is conducted to provide a summary of findings along the audited segments.

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KEY ASSESSMENT FINDINGS ACROSS NEIGHBORHOODS

- Across all five neighborhoods, participants seemed interested and curious about the concept of walkability.
- The presence of sidewalks (or walking paths) was considered a walkability asset, as were safe and convenient pedestrian crossings. Subsequently, the lack of sidewalks and absence of good crossings were cited as walkability challenges.
- All neighborhoods had areas where safety was a concern, although this was a larger issue in some more than others. Across all neighborhoods, presence or absence of sidewalks (or walking paths) influenced how safety was perceived. Where sidewalks were not present, uneven terrain and obstructions were frequently brought up as issues that compromised pedestrian safety.
 Poor lighting was also a concern in most neighborhoods.
- Areas with difficult and dangerous crossings were identified in all neighborhoods, primarily on arterial or collector streets. Generally, there was great interest in pedestrian refuge islands, crosswalks and HAWKs as a way to facilitate safer pedestrian crossings.
- Traffic and motorist behaviors were connected to how participants perceived safety. Speeding, not yielding to pedestrians, and cut-through traffic led to lower safety scores, while low traffic volumes and traffic calming features enhanced pedestrian safety and comfort ratings.
 Participants expressed interest in traffic calming measures in all neighborhoods.
- Shade trees and landscaping were highly associated with pedestrian comfort and the attractiveness of the streetscape. Participants identified the need for additional trees and shade in all neighborhoods.

GARDEN DISTRICT NEIGHBORHOOD WALKABILITY ASSESSMENT

Garden District Neighborhood is located between Speedway Boulevard and Grant Road, from Alvernon Way to Swan Road.



Garden District Neighborhood

1. Walkability Workshop (11/8/2014 – 14 participants)

The section below presents a summary of the comments and ideas shared during the Garden District Walkability Workshop. A map version of all the participant input can be viewed at: http://bit.ly/1L9rkBQ



Garden District Walkability Workshop

Walking Destinations

- Restaurants: Sonoran hot dog stand, Frank's, Smash Burger, Dunkin Donuts
- Groceries: Fry's, Trader Joe's, Babylon Market, Sprouts, tortilla shop
- Community Resources: Martha Cooper Library, Little Free Library (on Justin Ln.), post office, Assistance League, churches, schools (Wright Elementary, St. Cyril's)
- Transit: Bus stops
- Recreation: Lucky Strike Bowling Alley, Tucson Botanical Gardens, Community Garden (on Bell Ave.)
- Shopping: Walgreens, Petsmart

Walking Assets

- Street trees, plants, and flowers
- Sidewalks
- Quiet streets for strolling

Walking Challenges

- Traffic: high speeds and volumes along Speedway, Alvernon, Pima, Grant and Columbus; traffic makes pedestrians feel unsafe on main roads
- Unsafe crossings: School kids cross Pima at Catalina instead of at Columbus with crosswalk and crossing guard; lack of crosswalks across Swan; Belvedere is too wide to cross easily
- Lack of sidewalks, particularly along Catalina and Belvedere
- Lack of shade, particularly along Alvernon and Pima
- Some crime/safety issues in neighborhood interior
- Aesthetics: Some issues with barren/vacant lots, poorly maintained houses and streets
- Belvedere: Several types of challenges mentioned along Belvedere—flooding, lack of sidewalks, too wide to cross, not enough stop signs

Walking Improvements Needed

- Traffic calming: Along Bellevue and Belvedere
- Traffic circles: Lee/Catalina, Duncan/Bell, Seneca/Madelyn
- Bumpouts/curb extensions: Duncan west of Swan, Bellevue east of Alvernon
- Pedestrian refuge islands: Pima/Catalina, Swan/Duncan, Grant/Ralph
- HAWK Crossings: Grant/Belevedere, Swan/Seneca, Pima/Catalina, Swan/Fairmount
- Countdown on pedestrian signal at Pima/Columbus
- Leading pedestrian interval at Grant/Alvernon
- Lower speed limit on Columbus and Pima
- Street trees: along Pima and Fairmount
- Volume management/access restrictions: From Alvernon onto Seneca and Hampton Pl.; From Grant onto Columbus
- In-pavement crosswalk warning lights: Swan/Duncan, Alvernon/Bellevue

2. Neighborhood Walk & Talk (12/6/2014 - 12 participants)

E Linden St E Lester St St E E Elida St E Fairmount St

For an overview of the Walk & Talk visit the online Garden District Walk & Talk Map Tour at: http://arcg.is/1JP8frv

(See Appendix 6 for map tour slides)

Synopsis of Route Surveys

Walk & Talk participants were asked to fill out surveys (Appendix 1) for each of the segments and intersections shown on the map above. Participant ratings are summarized and presented in the tables below.

Safety

Overall, safety ratings were slightly skewed toward the negative side of the scale with Belvedere receiving the lowest safety scores. The Linden segment had the highest safety ratings of the *Walk & Talk* route. Positive scores were generally attributed to sidewalks, well-maintained private property and public right-of-way, and familiarity with the area. On the negative side, respondents mentioned speeding, lack of sidewalks, and obstructions in the walking area¹.

Segment	Very Safe	Safe	Somewhat Safe	Unsafe	Very Unsafe	Total
1	1	5	3	1	0	10
2	0	1	3	5	1	10
3	0	2	3	4	0	9
4	0	2	2	3	0	7
Total	1	10	11	13	1	36

Comfort and Welcome

Overall, pedestrian comfort ratings were significantly more skewed toward the negative end of the scale. Absence or presence of trees and shade informed the responses to the greatest extent, followed by the maintenance level of an area and adjacent houses and yards. Additionally, neighbors brought up the extreme street width as a major negative contributor to pedestrian comfort along Belvedere.

Segment	Very Comfortable / Welcoming	Comfortable / Welcoming	Somewhat Comfortable / Welcoming	Uncomfortable / Unwelcoming	Very Uncomfortable/ Unwelcoming	Total
1	0	2	6	2	0	10
2	0	0	4	4	2	10
3	0	1	2	5	1	9
4	0	2	2	2	1	7
Total	0	5	14	13	4	36

¹ This term is used to describe the section of the public right-of-way located between the curb and the private property that lacks an actual sidewalk. In other words, this is the area where the sidewalk would be located if it were present.

Intersections

Along the route, two intersections were evaluated through surveys (Appendix 2) filled out by the *Walk & Talk* participants. The Pima and Belvedere intersection crossing received remarkably lower ratings for both safety and ease of crossing, primarily due to the lack of infrastructure to facilitate safe and convenient pedestrian crossings.

Safety			Ease of Crossing/Convenience		
	Pima & Belvedere	Columbus & Pima		Pima & Belvedere	Columbus & Pima
Very Safe	0	1	Very Convenient	0	0
Safe	0	2	Convenient	0	4
Somewhat Safe	1	3	Somewhat Convenient	2	3
Unsafe	2	3	Inconvenient	2	2
Very Unsafe	6	0	Very Inconvenient	5	0
TOTAL:	9	9	TOTAL:	9	9

Summary of Discussion and Open-Ended Survey Responses

The sections below present a synopsis of the participant comments from surveys as well as group discussions that took place during the *Walk & Talk* for each segment. The numbers in parenthesis indicate how many times a particular comment was brought up by different participants, indicating that it is a more commonly-shared perspective. Items with no numbers in parenthesis were mentioned once.

Segment 1: Linden between Columbus and Belvedere

Safety

Positive Contributors:

- Sidewalk (3)
- Rare prior occurrence of unsafe activity, familiarity with the block and neighbors, seeing people out (3)
- Well-kept private property (2)
- Low traffic volumes

Negative Contributors:

- Speeding (2)
- Nearby busy street (Columbus)
- Unkempt private property



Neighbors would like to see more shade on Linden

Comfort and Welcome

Positive Contributors:

- Trees and shade (4)
- Well-kept private property (4)
- School (2)
- Sidewalk next to school (2)

Negative Contributors:

- Not enough trees/vegetation/shade (4)
- Weeds
- · Wide street leading to speeding
- "Unfriendly" signage such as "beware of dog" or "no trespassing"

Improvement Suggestions

- More trees (8)
- Traffic calming: neighborhood traffic circles and bump-outs (3)
- Better property and street maintenance: weed removal, cleaned-up yards (2)
- Better street maintenance: filled potholes, cleaned-up streets
- Sidewalks on both sides
- Removal of pea gravel from the walking area
- Stop sign at Belvedere and Linden
- Preventing cars from blocking the "walking area" where there is no actual sidewalk
- Flood mitigation at Linden and Catalina
- Reporting of unleashed dogs

Walk & Talk Discussions

Much of the *Walk & Talk* group conversations along Linden focused on the possibility of adding trees and landscaping planted in basins, and harvesting water through curb cuts, especially along the school property. Neighbors also brought up the idea of adding curb extensions (with reflectors to enhance nighttime visibility), but some were concerned about ensuring ongoing maintenance. Flooding was noted as a big issue along Catalina, where water harvesting came up again as a potential mitigation measure. The group observed different types of obstacles in the walking area including parked cars, concrete steps (on the west side of Catalina, just south of Linden), and challenging walking surfaces like gravel. Neighbors mentioned the importance of making Catalina better for walking since school children are released onto Catalina and take this route to walk to the Martha Cooper Branch Library.

Segment 2: Belvedere between Linden and Lee

Safety

Positive Contributors:

- Familiarity with the area
- Well-kept private property
- Wide street (allows for greater distance from vehicles while walking)

Negative Contributors:

- Lack of sidewalks (5)
- Speeding drivers/lack of traffic calming (4)
- Wide street (3)
- Barking dogs (2)
- Obstructions in the "walking area": poles and mailboxes
- Flooding
- Lack of vegetation

Comfort and Welcome

Positive Contributors:

None noted

- Wide street, "like a superhighway" (4)
- Not enough trees/shade (4)
- Walls/fences/"homes built like fortresses" (2)
- Lack of sidewalks
- Poor drainage
- High crime
- Lack of walkers
- Barking, aggressive dogs



Belvedere is a very wide street with several walkability issues

Improvement Suggestions

- Traffic calming: speed humps, stop signs, and traffic circles (5)
- Trees/vegetation (4)
- Sidewalks (3)
- Bike lanes (3) and other lane markings* (2)
- Water harvesting/curb extensions** (2)
- 3D street painting/mural*** (2)
- Weed removal/cleanup
- Enforcement of the leash law
- * Even though Belvedere is a "residential" street, which typically doesn't have lane markings in Tucson, it is notable that neighbors brought this up frequently because of the extreme street width. (Measured curb to curb, Belvedere at this location is wider than nearby Columbus, a "collector" street.)
- ** Neighbors offered this suggestion but the slope of the roadway is not suitable for harvesting water through curb extensions with curb cuts.
- ***Painting a 3D optical illusion mural on the street (such as hitting an iceberg or falling off a cliff) was offered as a more creative and artistic traffic calming measure.

Walk & Talk Discussions

Speeding was the biggest problem discussed at this segment. Neighbors mentioned that their stop sign requests were declined on the grounds that the amount of traffic didn't warrant a stop sign. Participants also expressed that flooding remains an issue (although not as severe since the drainage project went in) due to the clogging of storm drains during the monsoon season.

Intersection: Pima and Belvedere

This intersection received very low safety and convenience ratings, as summarized in the table at the beginning of this section. Additionally, eight out of nine respondents said that the environment around this crossing did not make them feel comfortable.

Safety

Positive Contributors:

None mentioned

- No marked crosswalk (7)
- Fast traffic (6)
- High volume of traffic (3)
- Poor visibility/lighting (3
- No traffic signals
- Flooding
- Wide street



It is challenging to cross Pima at Belvedere

Convenience

Positive Contributors:

None noted

Negative Contributors:

- No marked crosswalk (5)
- Fast traffic (2)
- High volume of traffic
- No traffic signals
- Wide street

Comfort

Positive Contributors:

None noted

Negative Contributors:

- Unkempt/unattractive area (3)
- Unsafe storm drain* (2)
- No curbs or sidewalks
- Poor visibility
- No traffic signals
- Fast traffic

Improvement Suggestions

- Crosswalk (5)
- HAWK light (3)
- Curbs (3)
- Pedestrian refuge island (2)
- Sidewalks (2)
- Lighting (2)
- Traffic calming/speed enforcement
- Pavement improvements
- Trees

Walk & Talk Discussions

Located a quarter-mile away from both Columbus and Swan, this intersection is an unsafe and challenging one to cross for pedestrians. All participants vocalized the need for a proper pedestrian crossing and some highlighted the even greater need due to the higher foot traffic generated by the bus stops. Poor visibility, especially at night, was also brought up as a safety hazard. Neighbors also emphasized the need for curbs and sidewalks along Pima. One of the participants wondered why Pima was "being treated as a cross-town street when it's not," echoing a similar sentiment that was shared at the Palo Verde Neighborhood Walkability Assessment (the neighborhood directly to the west) last year. A separate discussion also took place regarding the drainage feature on the south side of Pima. In addition to its unattractiveness, some neighbors felt that the large opening posed a safety hazard to dogs and children in the event of a flood.

^{*}Some neighbors felt that the drainage feature on Belvedere just south of Pima was a hazard to dogs or even small children in the event of a severe flood.

Segment 3: Lee between Belvedere and Columbus

This intersection received very low safety and convenience ratings, as summarized in the table at the beginning of this section. Additionally, eight out of nine respondents said that the environment around this crossing did not make them feel comfortable.

Safety

Positive Contributors:

- Familiarity with the area (2)
- Well-maintained areas (2)
- Lighting

Negative Contributors:

- Lack of sidewalks (5)
- Obstructions in the "walking area": poles and trash cans (3)
- Cracks on the street*(2)
- Unkempt streetscape/private property (2)
- Lack of curb ramps (2)
- Barking dogs
- Wide street
- Speeding



Walking on the road due to gravel and other obstructions in the "walking area"

*Most neighbors reported walking on the roadway due to the lack of sidewalks and obstructions in the walking area. Therefore the quality of the asphalt became a walkability issue.

Comfort

Positive Contributors:

- Familiarity with the area
- Some well maintained spots

- Lack of sidewalks (3)
- Lack of trees; power lines making it difficult to plant trees (3)
- Obstructions (trash cans and poles) and unfriendly surfaces (gravel) (3)
- Wide street
- High volume of traffic
- Crime
- Unattractive properties
- Not many walkers

Improvement Suggestions

- Sidewalks/pedestrian paths (5)
- More trees (2)
- Filled potholes, fixed cracks (2
- Removal of trashcans from right of way (2)
- Replacement of utility poles
- Curb extensions
- Street cleaning by the City
- Reporting of unleashed dogs

Walk & Talk Discussions

Possibly due to the "role play" activity assigning the participants different roles (a blind person, someone in a wheelchair, an elderly person, and a parent walking with two toddlers), the conversation was noticeably focused on rough surfaces, obstructions, and lack of ADA ramps. Neighbors noted that it was difficult to stay off the roadway due to all these issues. Lighting from the apartments was mentioned as a positive element along this segment, making night walking safer.

Segment 4: Columbus between Lee and Linden

<u>Safety</u>

Positive Contributors:

• Sidewalks (3)

Negative Contributors:

- Fast traffic (3)
- High volume of traffic (3)
- Unwelcoming/unkempt properties (2)
- Narrowness of sidewalk
- Gravel/dirt on the sidewalk
- Circle K driveway
- Circle K clientele

Comfort

Positive Contributors:

- Tiles on the sidewalk
- Traffic light at Columbus and Pima

- Not enough trees (3)
- Commercial area
- Circle K clientele
- Unkempt properties
- High volume, speeding traffic



School crosswalk at Linden and Columbus

<u>Improvement Suggestions</u>

- More trees/landscaping (4)
- Slower traffic (3)
- Weed removal
- HAWK light at intersection of Linden and Columbus

Walk & Talk Discussions

Neighbors mentioned the need for slowing traffic down on Columbus as well as making the school crosswalk (Linden and Columbus) more visible and improving driver behavior in terms of observing the crosswalk laws. Suggestions included a pedestrian refuge island, pedestrian flags, and pedestrian-activated or motion-sensing in-pavement crosswalk warning lights. Other issues brought up in this segment were the narrow sidewalks, poor sidewalk cleanup and maintenance practices, and lack of trees. Some of the neighbors felt that a well-maintained dirt pathway would be better than a sidewalk.

Intersection: Columbus and Pima

This intersection scored better than the Pima and Belvedere intersection in terms of safety and convenience. However, eight out of nine respondents said that the environment around this crossing did not make them feel comfortable.

Safety

Positive Contributors:

- Crosswalk with traffic signal (5)
- Crossing guard

- Speeding (3)
- High volume of traffic/busy intersection (3)
- Poor yielding/stopping
- Poor lighting
- Unkempt corner properties
- Poor accessibility on the SE corner (not just ADA but also in a general sense: narrow sidewalk area and gravel on the sidewalk)

Convenience

Positive Contributors:

- Crosswalk with traffic signal
- School crossing guard

Negative Contributors:

- Fast traffic (2)
- Wheelchairs get stuck at approach
- Crossing button not very accessible



Positive Contributors:

 School makes drivers more aware

Negative Contributors:

- Unattractive/uninviting/dilapidated area (3)
- Unsafe Circle K driveway/traffic (2)
- Lack of a buffer between sidewalk and roadway
- Commercial area
- Poorly paved area
- Lack of curbs
- Circle K clientele

<u>Improvement Suggestions</u>

- More trees/shade (2)
- Sidewalks on Pima (2)
- Lower speed limit
- Better lighting
- Street cleanup
- All-way pedestrian crossing (a.k.a. "pedestrian scramble" intersection where all vehicle traffic stops at the same time to allow pedestrians to cross in either direction, including diagonally)

Walk & Talk Discussions

The conversation focused on commercial corner properties that neighbors found unattractive, as well as the dangerous conditions created by vehicles turning into the Circle K parking lot. There was also some discussion of uncomfortable crossing conditions, especially at the SE corner of the intersection where the sidewalk is narrow and offers no buffer from traffic while pedestrians wait for the light to turn green.



Columbus and Pima intersection

3. Neighborhood Walkability Surveys and On-street Pedestrian Surveys

Each Walkability Workshop and Walk & Talk participant filled out a more general survey to give input about their walking habits and their perceptions of neighborhood walkability. Garden District Neighborhood Association facilitated additional survey participation of neighbors who were not involved in the assessment. The results are included in Appendix 3.

Additionally, some of the neighbors expressed interest in engaging a broader segment of the neighborhood population, especially those who walk by necessity and yet may not be involved in the neighborhood association activities. To facilitate this, LSA conducted an on-street pedestrian survey (Appendix 4) and received input from 17 additional people. Questions 1 through 3 were analyzed along with the general survey mentioned in the paragraph above.

Questions 4 through 7 collected baseline data on people's perceptions of walkability on Pima Street, which is set to receive pedestrian improvements in the coming year. Respondents were asked to rate Pima on a scale from 1 to 5 in response to the following three questions:

Safety: How safe do you feel walking along Pima? (1=very unsafe; 5=very safe) **Comfort:** How comfortable do you feel walking along Pima? (1=very uncomfortable; 5=very comfortable) **Attractiveness:** How inviting/attractive do you find Pima Street? (1=very uninviting/unattractive; 5=very inviting/attractive)

The percent of each response is presented in the table below:

Rating	Safety	Comfort	Attractiveness
1	6%	7%	27%
2	19%	52%	27%
3	44%	27%	40%
4	25%	7%	0%
5	6%	7%	6%

Overall, safety scores are pretty evenly spread across the scale, but ratings for pedestrian comfort and the attractiveness of the area are significantly skewed toward the negative end. Neighborhood residents are encouraged to repeat the survey after the pedestrian facilities are installed, to document the difference in pedestrian feedback.

SIDEWALKS, UNFAVORABLE SURFACES, AND OBSTRUCTIONS

A continuous network of sidewalks is largely missing throughout the neighborhood. Additionally, uneven surfaces and obstructions in unpaved walking areas including dumpsters, parked cars, and poles make it a challenge to stay off the roadway at times. Gravel poured up to the curb by some homeowners (most likely as a well-intentioned improvement idea) results in a surface unfriendly to all walkers and particularly inaccessible for those with wheelchairs and strollers.

Recommendation 1

[City of Tucson Department of Transportation]:

As funding becomes available, complete the neighborhood sidewalk network by filling in sidewalk gaps to create a safe, comfortable, and fully accessible pedestrian environment.

Recommendation 2

[Garden District Neighborhood Association]:

Where obstructions are present, approach property owners to initiate a conversation about re-moving gravel, relocating dumpsters, and parking cars on the street instead of the walking area. Emphasize that on-street parking can also help bring down speeds by narrowing the street. Each year include a section in the neighborhood newsletter about neighborhood walkability to educate newcomers about keeping these "walking areas" obstacle-free.

Where a sidewalk is not present, Tucson City Code allows cars to be parked on the dirt strip between the curb and the property line as long as they are four feet away from the curb. A more recent ordinance made it legal for cars to not leave any space for pedestrians next to the curb if on-street parking is not allowed on the street. Park Tucson will send a parking enforcement agent upon request to investigate the legality of parking. (See Appendix 5 – Additional Resources for contact information.)

SHADE

Some neighborhood residents have made personal efforts to plant trees; however, the need for more shade was repeatedly highlighted during the Walkability Assessment. Neighbors specifically mentioned the need for shade along Pima, Alvernon, and Fairmont, as well as all segments of the *Walk & Talk* route (Linden, Belvedere, Lee, and Columbus). Shade trees are essential for pedestrian comfort in our desert environment and are an effective way of beautifying neighborhoods and improving the visual quality of the streetscape.

Recommendation

[Garden District Neighborhood Association]:

Work with Trees for Tucson (TFT) to plant shade trees in the neighborhood through their School & Community Shade Trees Program. Encourage more property owners to plant trees in their front yards in locations that provide a shade canopy for adjacent sidewalks. To reduce

or eliminate the need for irrigation, integrate passive water-harvesting practices and choose tree species appropriate for the Sonoran Desert environment. Watershed Management Group (WMG) can provide consulting services regarding passive water-harvesting options, which typically involve creating planting basins with simple land contouring (and in some cases making a small opening in the curb to allow stormwater to come into the basins). This minimizes irrigation, improves water quality, and reduces flooding, among other benefits.

The above-mentioned streets can be a starting point in an effort to prioritize tree-planting corridors in the neighborhood. Pima Association of Governments (PAG) has created an online map of tree canopies that can be helpful in determining additional areas of greater need. (See Appendix 5 – Additional Resources for TFT and WMG contact information and the link to PAG's shade map.)

SPEEDING AND TRAFFIC CALMING

Neighbors observe speeding drivers on various neighborhood streets, particularly along Linden, Belvedere, and Columbus. *Walkability Assessment* participants identified the following areas for traffic calming, in some cases paired with specific infrastructure suggestions (indicated in parentheses):

- Bellevue (curb extensions/chicanes)
- Belvedere (speed humps, neighborhood traffic circles, 3D street mural)
- Linden (neighborhood traffic circles)
- Duncan (curb extensions/chicanes, neighborhood traffic circle at Duncan and Bell)
- Lee and Catalina (neighborhood traffic circle)
- Seneca and Madelyn (neighborhood traffic circle)

Although not considered traffic calming devices, there is anecdotal evidence that street murals can slow down drivers. Artistic intersection murals can be installed through a community-driven process to reclaim streets as a place for neighbors to enjoy. A few communities around the nation have also been experimenting with virtual, 3D speed humps, more directly aimed at getting drivers' attention than building community through public art. For more information, visit: http://www.nytimes.com/2008/07/12/us/12bump.html?_r=1&



Intersection mural (source: hyperallergic.com)

Other types of 3D murals such as holes or large virtual objects that appear on the road would need to be assessed carefully in order to ensure that pedestrian and driver safety is not risked. With close monitoring, Vancouver installed a 2D decal of a child chasing a ball that appears 3D to drivers approaching the image. For more information, visit: http://www.woostercollective.com/post/3d-optical-illusion-painted-on-street-to-make-drivers-slow-down.





Virtual 3D speed humps (source: nytimes.com)

3D optical illusion mural (source:cnn.com)

In addition to traffic calming strategies, neighbors also expressed related desires for a stop sign on Belvedere and Linden, reduced speed limits both on Pima and Columbus, and better speed enforcement on Columbus.

Recommendation 1

[Garden District Neighborhood Association]:

Monitor future funding opportunities that may become available through the City, Pima County Neighborhood Reinvestment Program, and Watershed Management Group for installing traffic calming features.

Currently funding available for these types of improvements is very limited, but the Neighborhood Reinvestment Program may get funded again after the 2015 Pima County Bond election. Watershed Management Group can also be a source of funding for traffic calming features that integrate "green infrastructure," an environmentally friendly stormwater management system utilizing planted basins to capture stormwater runoff from the street. Green infrastructure elements such as chicanes and traffic circles can be implemented to double as traffic-calming strategies along neighborhood streets. On "inverted crown" streets where the runoff flows toward the middle, partial or full medians can be utilized as traffic calming/water-harvesting features.

Recommendation 2

[City of Tucson Department of Transportation]:

Evaluate the above-mentioned streets for implementing traffic calming strategies and work with the Garden District neighborhood to implement traffic calming devices as funding becomes available.

Recommendation 3

[City of Tucson Department of Transportation]:

Conduct an engineering study regarding reducing the speed limit to no more than 30 mph on Pima and Columbus. Initiate an analysis to evaluate the possibility of reducing the urban arterial and collector speeds throughout the City.

PEDESTRIAN CROSSINGS

Walkability Assessment participants identified several locations that pose crossing challenges and offered the following specific measures for improvement:

- Pedestrian refuge islands: Pima/Catalina (deemed critically important; schoolchildren are released onto Catalina and cross here), Swan/Duncan, Grant/Ralph, Pima/Belvedere, Linden/Columbus
- Countdown on pedestrian signal: Pima/Columbus
- Leading pedestrian interval: Grant/Alvernon
- HAWK crossings²: Grant/Belvedere, Swan/Seneca, Pima/Catalina, Swan/Fairmount, Pima/ Belvedere, Linden/Columbus
- In-pavement crosswalk warning lights: Linden/Columbus, Swan/Duncan, Alvernon/Bellevue
- Pedestrian flags: Linden/Columbus

Recommendation

[City of Tucson Department of Transportation]:

Evaluate the above-mentioned locations for enhancements to pedestrian crossings, including treatments such as HAWK lights, pedestrian refuge islands, and leading pedestrian intervals. Existing pedestrian crossing conditions vary greatly across these locations and therefore appropriate treatments are likely to differ in each case. The HAWK crossing sites suggested by the neighbors are generally at critical mid-block locations on busy streets. Currently, the following neighborhood locations are ranked on TDOT's draft potential HAWK ranking list: Alvernon and Bellevue—#42, Speedway and Belvedere—#52, Swan and Fairmont—#61, Alvernon between Pima and Speedway—#73. The list contains a total of 92 locations.

Without any formal studies on the effectiveness of pedestrian flags and mixed reports from communities who piloted or still use them, it is not recommended that the City adopt this measure.

²A HAWK is a pedestrian-activated signal that provides safe pedestrian crossings while minimizing traffic delays. Visit http://tdot.tucsonaz.gov/tdot/pedestrian-traffic-signal-operation for a description of different types of pedestrian crossings.

According to a Pedestrian and Bicycle Information Center analysis, studies have found that in-pavement crosswalk warning lights improved motorist yielding to pedestrians in the short term to varying degrees at most locations examined. However, positive effects may not last over time and yielding may not improve sufficiently or may worsen. The studies are not clear about under what conditions these treatments are beneficial over the long term, nor in



In-pavement crosswalk warning lights (source:gproadwaysolutions.com)

what circumstances they are not recommended. The analysis concludes: "if installed, the treatment should

be carefully evaluated and monitored long term for effects on pedestrian safety and mobility. For more information, visit: http://www.pedbikeinfo.org/data/faq_details.cfm?id=3903.

Among the three locations suggested by participants, Columbus might be the most suitable for these lights, as Swan and Alvernon are wider streets posing bigger crossing challenges. However, due to maintenance problems reported by other cities, a careful examination is recommended before installing this crosswalk treatment.

NEIGHBORHOOD STEWARDSHIP

Neighbors made frequent reference to the condition of adjacent private property and front yards in their comfort ratings of the *Walk & Talk* segments. While it may be difficult to get everyone on board with beautifying their property, due to financial and other reasons, residents can take some proactive steps to encourage property owners to help improve the appearance of their neighborhood streets.

Recommendation 1

[Garden District Neighborhood Association]:

Organize a Garden District front yard contest to encourage residents to make landscaping enhancements in private front yards. Approach local nurseries and other types of neighborhood business about donating prizes for winners of the contest.

Recommendation 1

[Garden District Neighborhood Association]:

Organize neighborhood cleanup and beautification days that can extend to private property upon permission from the owners. These types of events can build community and assist neighbors who may need help maintaining their property. In addition to basic trash removal,

potential projects may include weed removal, landscaping of front yards, and painting of fences and walls. Tucson Clean & Beautiful can provide cleanup tools and the City of Tucson Environmental Services can provide roll-offs for larger cleanup events. (See Appendix 5 – Additional Resources for contact information.)

BELVEDERE AVENUE

Belvedere Avenue received remarkably low pedestrian safety and comfort ratings from the *Walkability Assessment* participants. Neighbors repeatedly mentioned issues regarding the street width, speeding, lack of traffic calming, lack of sidewalks, and continual flooding.

In 2008, underground stormwater infrastructure was installed on Belvedere as part of the 10 million-dollar Columbus Wash Drainage Improvements Project. Concrete curbs and driveways were removed and replaced to enable underground utility modifications. Even though concrete curbs and ADA curb ramps were constructed, no sidewalks were installed during the process. At some spots, the curb ramps were reconstructed as close as three feet from adjacent property lines, hindering future sidewalk construction. This project presented an opportunity to create a better pedestrian environment along Belvedere by building sidewalks and reconstructing the curbs in a way to narrow the road width while leaving space for future tree planting, utilities allowing.

Belvedere is designated as a secondary emergency route, but certain types of traffic calming features can be implemented with the approval of the fire department to mitigate some of the above-mentioned problems. Speed tables, partial medians installed between the stormwater slot drains, and traffic circles that allow the passage of emergency vehicles are among the possibilities.

Recommendation 1

[City of Tucson Department of Transportation]:

Evaluate the feasibility of adding traffic calming features with green infrastructure elements that can work in conjunction with the "gray" infrastructure currently in place. Facilitate conversations between the neighborhood and the Tucson Fire Department, if necessary.

Recommendation 2

[City of Tucson Department of Transportation]:

Adopt a more comprehensive approach to implementing infrastructure projects that combines multi-modal transportation needs with existing project goals and construction plans.

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Walk & Talk Segment Survey

Please fill out a half-sheet survey for each segment marked on the map Segment #: _____ 1. How safe do you feel walking along this segment? □Very safe □Safe ☐Somewhat safe ☐Unsafe □Very unsafe Why?____ 2. How comfortable and welcoming is this segment? □Very comfortable/ □Comfortable/ □Somewhat comfortable/ □Uncomfortable/ □Very uncomfortable/ very welcoming somewhat welcoming unwelcoming very unwelcoming welcoming Why?_____ 3. Do you have any suggestions to improve this segment? Segment #: _____ 1. How safe do you feel walking along this segment? □Very safe □Safe ☐Somewhat safe ☐Unsafe □Very unsafe Why?_____ **2.** How comfortable and welcoming is this segment? □Very comfortable/ □Comfortable/ □Somewhat comfortable/ □Uncomfortable/ □Very uncomfortable/ very welcoming welcoming somewhat welcoming unwelcoming very unwelcoming 3. Do you have any suggestions to improve this segment?

Walk & Talk Intersection Survey

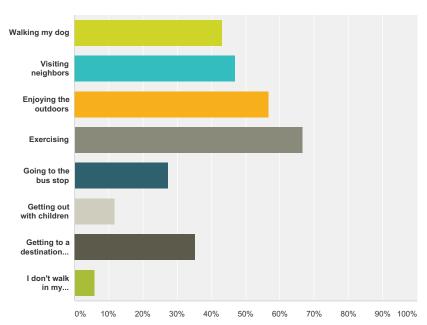
Location:		a half-sheet survey			
		_St./Ave. and	St	./Ave. (Crossing di	rection:)
1. Safety: How	safe do you f	eel crossing this inters	section?		
□Very safe	□Safe	\square Somewhat safe	\square Unsafe	□Very unsafe	
Why?					
□Very conven	ient □Coi		at convenient	□Inconvenient	□Very inconvenient
3. Comfort/We	elcome: Does	the environment arou	und this crossing	g make you feel cor	mfortable?
□Yes	□No	□Neutral			
Why?					
Location:		St /Ave and	C+	./Ave. (Crossing di	rection:)
			3i		
		eel crossing this inters			
1. Safety: How	safe do you f		section?		
1. Safety: How □Very safe	safe do you f □Safe	eel crossing this inters	section? □Unsafe	□Very unsafe	
1. Safety: How ☐ Very safe Why?	safe do you f □Safe	eel crossing this inters ☐Somewhat safe	section? □Unsafe	□Very unsafe	
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1. Safety: How Very safe Why? 2. Convenience Very conven	safe do you f Safe E: How easy/c ient Cor	eel crossing this inters Somewhat safe onvenient is it to cros	section? Unsafe s this intersection of the convenient	□Very unsafe on? □Inconvenient	□Very inconvenient
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Garden District Neighborhood Walkability Survey Results

How Walkable is Garden District Neighborhood?

Q1 When you walk in your neighborhood, what are the reasons you walk? (Click all that apply.)



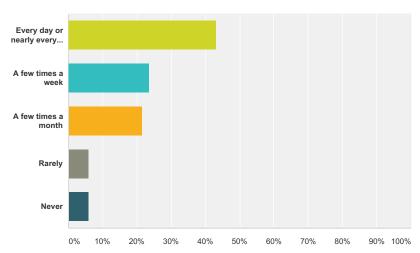


Answer Choices	Responses	
Walking my dog	43.14%	22
Visiting neighbors	47.06%	24
Enjoying the outdoors	56.86%	29
Exercising	66.67%	34
Going to the bus stop	27.45%	14
Getting out with children	11.76%	6
Getting to a destination (shop, restaurant, school, etc.)	35.29%	18
I don't walk in my neighborhood	5.88%	3
Total Respondents: 51		

How Walkable is Garden District Neighborhood?

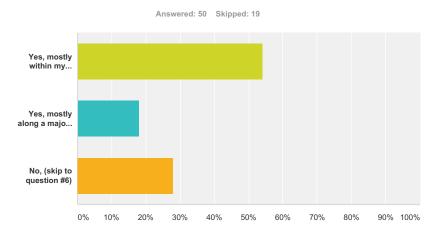
Q2 How often do you walk in your neighborhood? (for any reason)





Answer Choices	Responses
Every day or nearly every day	43.14% 22
A few times a week	23.53% 12
A few times a month	21.57% 11
Rarely	5.88% 3
Never	5.88% 3
Total	51

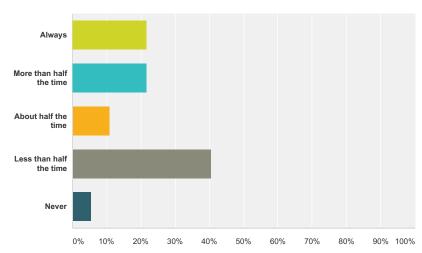
Q3 Are there destinations you like to go within easy walking distance (10-15 minute walk) of your home? (Check all that apply.)



Answer Choices	Responses	Responses	
Yes, mostly within my neighborhood	54.00%	27	
Yes, mostly along a major roadway	18.00%	9	
No, (skip to question #6)	28.00%	14	
Total		50	

Q4 How often do you walk to these destinations when you need to get to them?

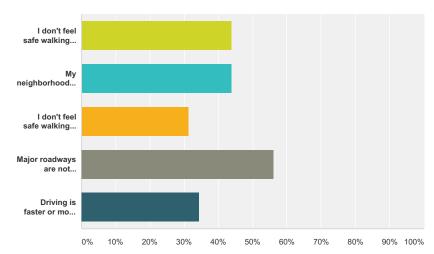




Answer Choices	Responses
Always	21.62% 8
More than half the time	21.62% 8
About half the time	10.81% 4
Less than half the time	40.54% 15
Never	5.41% 2
Total	37

Q5 When you decide NOT to walk, what discourages you from walking to destinations within roughly a 10 - 15 minute walk from your home? (Check all that apply.)

Answered: 32 Skipped: 37



nswer Choices		
I don't feel safe walking on my neighborhood streets (traffic issues, concerns about crime, etc.)	43.75%	14
My neighborhood streets are not comfortable or welcoming for walking (lack of shade, unattractive streets, etc.)	43.75%	14
I don't feel safe walking along or crossing major roadways.	31.25%	10
Major roadways are not attractive or welcoming (I don't like walking there.)	56.25%	18
Driving is faster or more convenient than walking.	34.38%	11
tal Respondents: 32		

Q6 Are there aspects of your neighborhood that make it especially walkable? (What are the assets?)

Answered: 56 Skipped: 13

- Neighborhood aesthetics Nice looking houses and landscaping, well-kept areas, clean streets
- Friendly feeling Good neighbors, enjoy seeing people out, like greeting other walkers
- Shade and trees Areas where there is shade and street trees (some even mentioned good bird watching)
- Quiet neighborhood with little traffic
- Safety Low crime, neighbors look out for each other, feel safe most of the time
- Sidewalks
- Traffic calming Traffic circles, medians, speed bumps
- Wide streets and wide ROW
- Destinations restaurants, shopping, bus stops, library
- Lighting At crosswalks and street lights

Q7 Are there aspects of your neighborhood that make it less walkable? (What are the barriers to walking)

Answered: 59 Skipped: 10

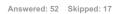
- Sidewalks Lack of sidewalks or sidewalks in poor repair. Lack of other walking paths
- Lighting Lack of street lights throughout neighborhood
- Shade Lack of shade and street trees
- Safety Crime in the area and not enough police presence
- Obstructions in the ROW forcing people to walk in the street
- Traffic Speeding traffic and not a sufficient amount of speed bumps in the neighborhood. Also high volumes of traffic, cut-through traffic and drivers that don't yield for pedestrians at intersections
- Street maintenance Streets in need of repairs (large potholes). This is made more dangerous when walkers are forced into the street, and there is poor/no lighting at night.
- Neighborhood aesthetics Unkempt properties, litter, weeds and lack of trees.
- Dogs Barking dogs are intimidating. Some owners don't keep their dogs on leashes.

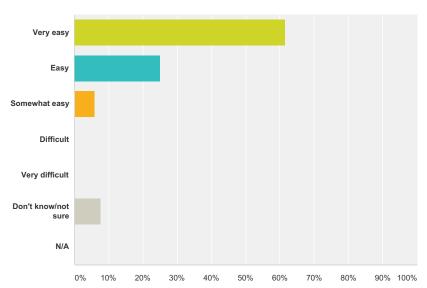
Q8 What changes could be made to encourage you to walk more in your neighborhood or to nearby destinations?

Answered: 56 Skipped: 13

- Improved aesthetics Clean up neighborhood, better kept houses, more street trees and other plantings. Street furniture such as benches
- Walking paths and sidewalks Many suggested designated walking paths that do not need to be sidewalks, or even a marked "pedestrian zone."
- More street lighting
- More shade
- Destinations More places that people want to walk to such as restaurants and affordable shopping
- Improved crossings better pedestrian crossings and more signed crosswalks.
- Address speeding lower speed limit, more speed bumps.
- Access Improve access to neighborhood for cul-de-sacs.
- Safety Lower crime and increased policing
- People Seeing more neighbors out walking

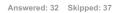
Q9 Is it easy to walk to a transit (bus, streetcar) stop from your home?

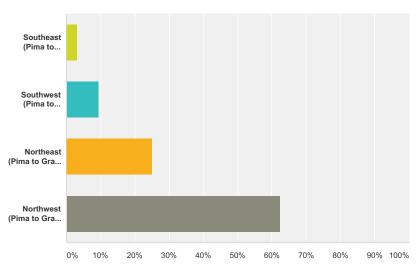




Answer Choices	Responses	
Very easy	61.54%	32
Easy	25.00%	13
Somewhat easy	5.77%	3
Difficult	0.00%	0
Very difficult	0.00%	0
Don't know/not sure	7.69%	4
N/A	0.00%	0
Total		52

Q10 Which Quadrant of Garden District Neighborhood do you live in?





Answer Choices	Responses	
Southeast (Pima to Speedway, Swan to Columbus)	3.13%	1
Southwest (Pima to Speedway, Columbus to Alvernon	9.38%	3
Northeast (Pima to Grant, Swan to Columbus)	25.00%	8
Northwest (Pima to Grant, Columbus to Alvernon)	62.50%	20
Total		32

Garden District On-Street Pedestrian Survey

Garden District Neighborhood On-Street Pedestrian Survey May 2015

1.	What are the aspects of your neighborhood that make it a good place for walking? (Assets such as sidewalks, shade, etc. – only mention if people are struggling with coming up with an answer.)						
2.						e? (Challenges such as lacking with coming up with an	
3.	What impro		n be made to en	ncourage you	to walk more in	your neighborhood and to	
4.	How safe do	o you feel w	alking along P	ıma? (1=very	unsafe; 5=very	sate)	
	1	2	3	4	5		
5.	How comfortable		ou feel walking	along Pima?	(1=very uncomf	ortable; 5=very	
	1	2	3	4	5		
6.	How inviting/attractive do you find Pima Street? (1=very uninviting; 5=very inviting)						
	1	2	3	4	5		

APPENDIX S

Additional Resources

Walking and Walkability Literature/Resources

America Walks http://americawalks.org/

Walkable and Livable Communities Institute http://www.walklive.org/

Jeff Speck (Author of "Walkable City: How Downtown Can Save America, One Step at a Time") http://www.jeffspeck.com/

Project for Public Spaces www.pps.org

Pedestrian and Bicycle Information Center http://www.pedbikeinfo.org

Smart Growth America http://www.smartgrowthamerica.org

Pedestrian Safety Guide and Countermeasure Selection System http://www.pedbikesafe.org/PEDSAFE/

Local Organizations/Resources for Improving Neighborhood Walkability

City of Tucson Bicycle and Pedestrian Program (all walkability concerns and issues) http://tdot.tucsonaz.gov/bicycle
520-837-6691 (Program Coordinator: Ann Chanecka)

Neighborhood Reinvestment Program (funding for neighborhood infrastructure projects such as sidewalks, streetlights, traffic calming features)

http://webcms.pima.gov/community/neighborhoods/neighborhood_reinvestment_program/520-724-6769

Watershed Management Group (green infrastructure/traffic calming project consultation/funding)

http://watershedmg.org/ 520-396-3266 Trees for Tucson (low-cost trees for private property and neighborhood streets) http://tucsoncleanandbeautiful.org/trees-for-tucson/
520-791-3109

PAG Tree Canopy Map (shade/tree canopy information) http://gismaps.pagnet.org/PAG-GIMap/#/About

Desert Harvesters (native tree list) http://www.desertharvesters.org/native-tree-information/native-tree-list/

<u>Harvesting Rainwater (plant water requirements for Tucson)</u>
http://www.harvestingrainwater.com/wp-content/uploads/2006/05/Rainwater-Harvesting-Vol-1-Appendix-4-7-3-14.pdf

Tucson Clean & Beautiful (neighborhood cleanup supplies and assistance) https://tucsoncleanandbeautiful.org/adopt-a-park-public-areas/
520-791-3109

City of Tucson, Department of Environmental Services (roll-offs for neighborhood cleanups) http://www.tucsonaz.gov/es/neighborhood-cleanups
520-791-3171

Park Tucson (parking enforcement/cars parked in the "walking area") http://www.tucsonaz.gov/park-tucson 520-791-5071

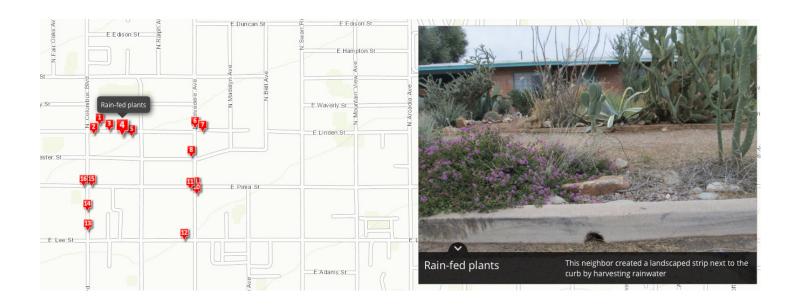
APPFNDIX 6

Walk & Talk Map Tour Go online for interactive version: http://arcg.is/1JP8frv













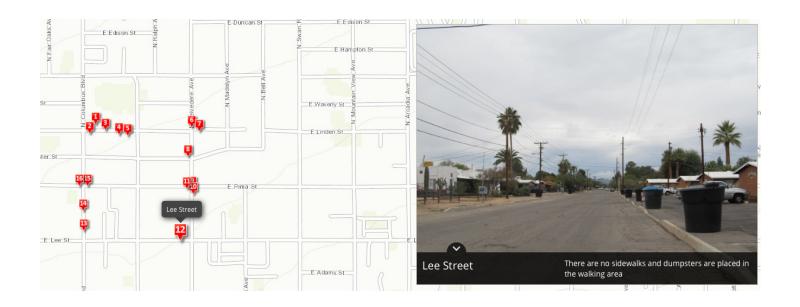












APPENDIX 6









