THE UNIVERSITY OF ARIZONA

PLAN THE PLAN

A Crowdsource Public Participation, Data-Sharing and Visualization Tool for City of Tucson's Neighborhood Planning

This project aims to apply crowdsource technology to foster greater inclusion and social justice in the city of Tucson's neighborhood planning process. We apply this platform to targeted communities in the City through meaningful community engagement and student mentoring.

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Heather Schmidt, *MLA Candidate, ASLA-Student Chapter*

Drachman Institute

College of Architecture, Planning & Landscape Architecture

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LAR 623 Landscape Planning Studio

PLG 412/512 Comprehensive Planning and Land Use Controls Grant / Alvernon Area Plan Analysis

PLG 458/558 Geodesign Studio

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Community
Grant/Alvernon Stakeholders
Special thanks to:
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Ronni Kotwica

City of Tucson
Rebecca Ruopp
Koren Manning

I. EXECUTIVE SUMMARY

INTRODUCTION

The Grant-Alvernon Area Plan analyzes seven neighborhood. This report generates an analysis of existing conditions, opportunities and constraints for the purpose of future planning within these communities. The students from the **University of Arizona** in the **Masters of Landscape Architecture** program, compiled the data and prepared the updated analysis for this document. These students utilized this information to identify problematic conditions within these communities and hypothesized objectives and goals for the purpose of community planning. The areas of concentration included: storm water management, impervious cover, island heat effect, safety, vehicular and pedestrian circulation, bike safety, improving neighborhood assets, incorporating more green spaces—community gardens, parks and vegetation.

CONCEPT DESIGNS

This report generates a detailed summary of the existing Grant-Alvernon plan. The students worked in teams to identify areas of concern and formulate possible improvements for future planning of the community. Each team chose an area of focus within the seven communities. Team 1 chose ***North Dodge*** and Team 2's focus is the ***Oak Flower*** community. The overarching theme for both T1 land T2 is enhancing road, sidewalk, pedestrian, and bike circulation, while utilizing green infrastructure throughout the site. Team 3's concentration centered around ***Grant Avenue*** by implementing the same GI strategies as previously mentioned. However, they worked to improve human comfort in a series of linear parks and bus stops along the busy corridor. Team 4 worked in the ***Garden District*** section once again applied GI strategies but chose to incorporate residential rain-water harvesting.

Team 5 combined areas within the ***Oak Flower and Garden Districts*** implemented a one-mile loop with linear parks combing green infrastructure and installation of outdoor fitness equipment as well as seating areas in park islands to encourage outdoor activities. Team 6 concentrated on flood solutions for the Palo Verde Neighborhood. Team 6's site selection was the Cabrini Neighborhood where the nucleus of design was walkability of the area incorporating bike lanes, sidewalks and buffers along roadways where currently none exist. Team 7 focused on the ***Cabrini/Winterhaven Square*** to increase use by improving human comfort and safety utilizing GI strategies: lowering island heat effect, providing shade by adding vegetation and mitigating stormwater run-off.

CONCLUSION

This report analyzes the 7 neighborhoods that comprise of the Grant-Alvernon Area Plan. The students gathered pertinent information through site analysis and community discussion. The information gathered was used to formulate goals and objectives to address the constraints by utilizing opportunities within each of the communities. These projects are illustrating the possibilities of a community re-imagined through concepts and designs where the nucleus is ***Green Infrastructure Strategies***. Ultimately, these improvements begin on the small scale of individual neighborhoods to create on the larger scale of strong, viable and sustaining communities.

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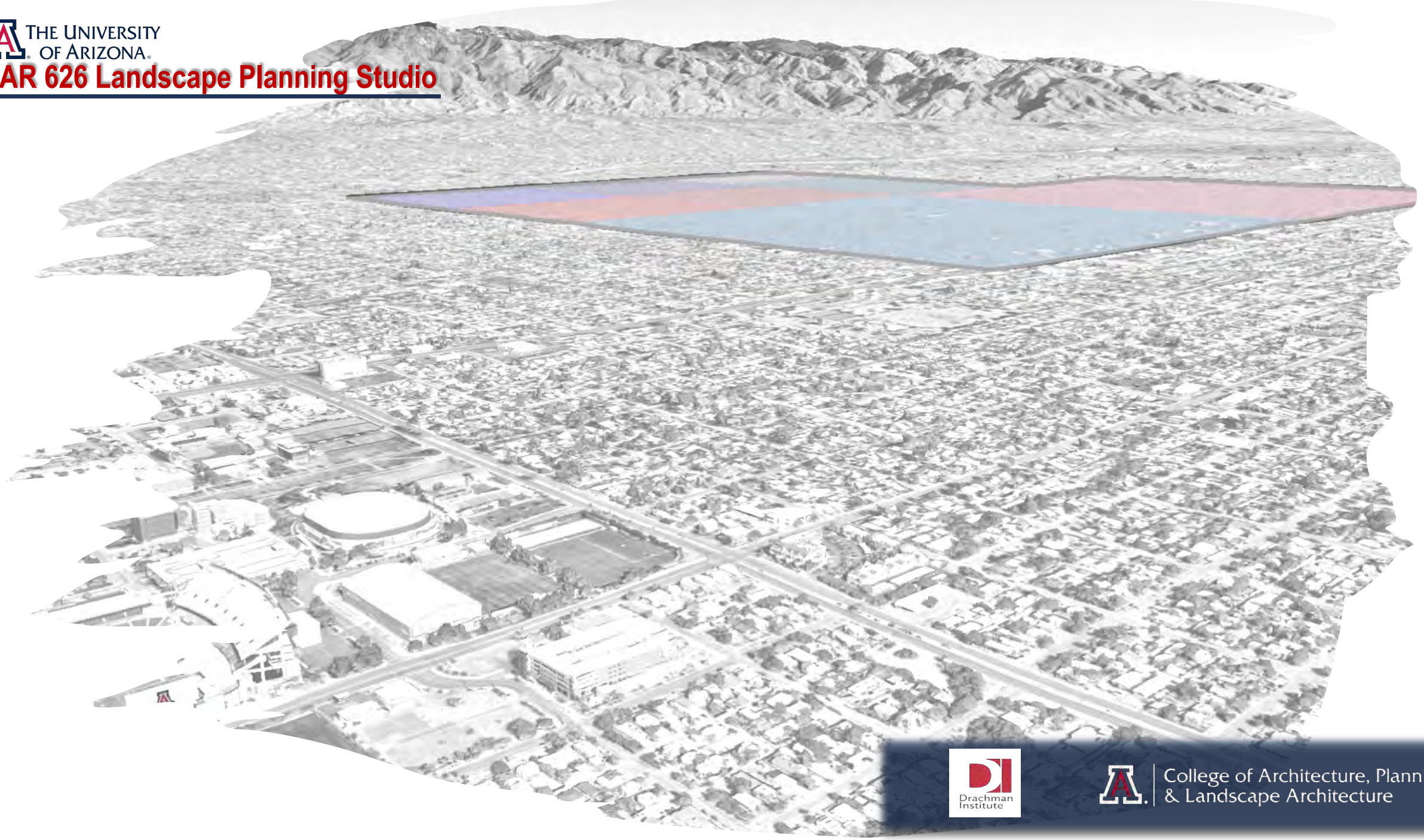
LAR 626 Landscape Planning Studio



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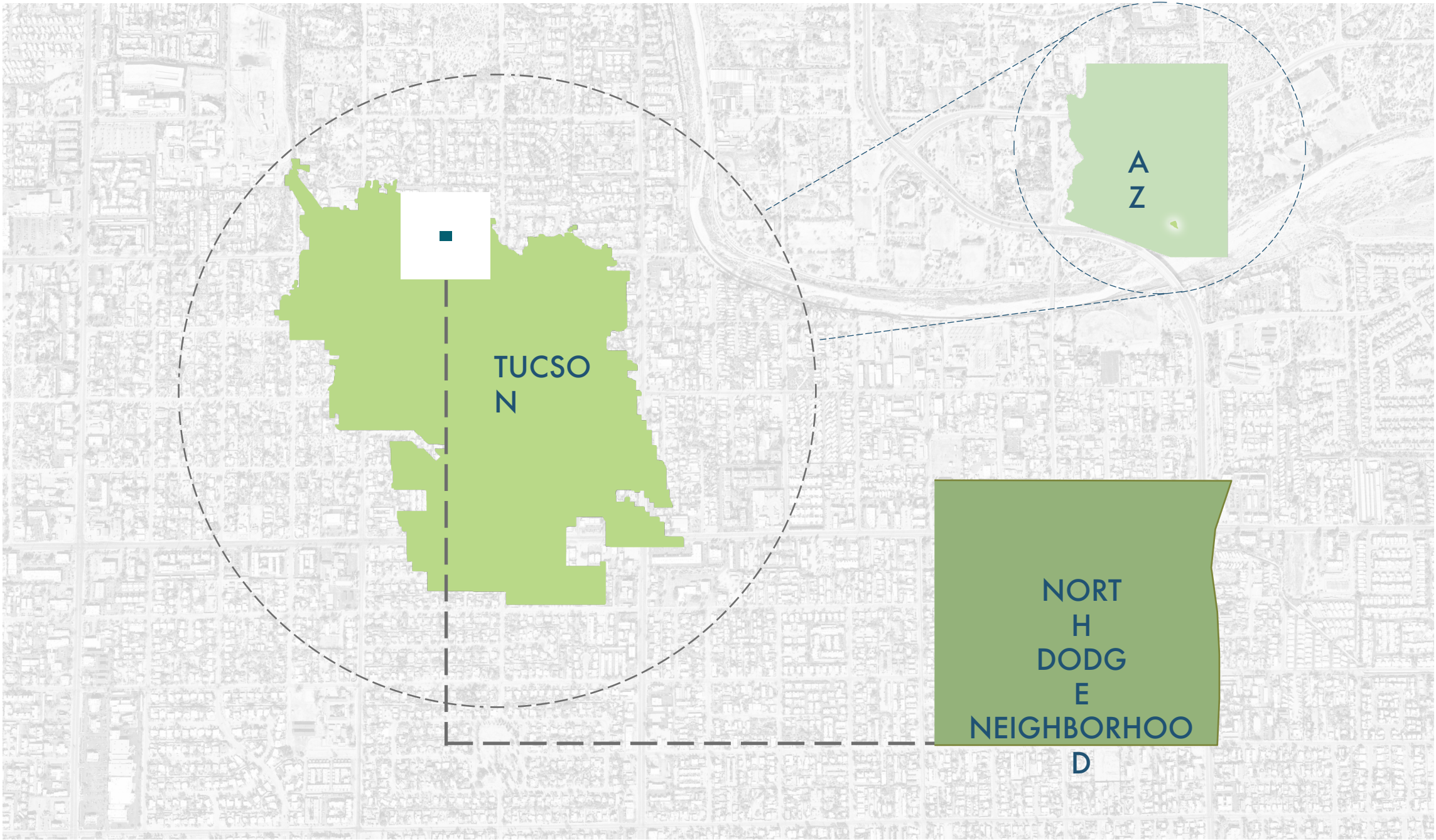
Revitalization of North Dodge Neighborhood

emily lorenz // irene pineda // heather schmidt // austin young

LAR 623: Planning Studio //Dr. Bo Yang // Spring 21

Site // Context



N DODGE NEIGHBORHOOD / ANALYSIS / VULNERABILITY

NOT VULNERABLE

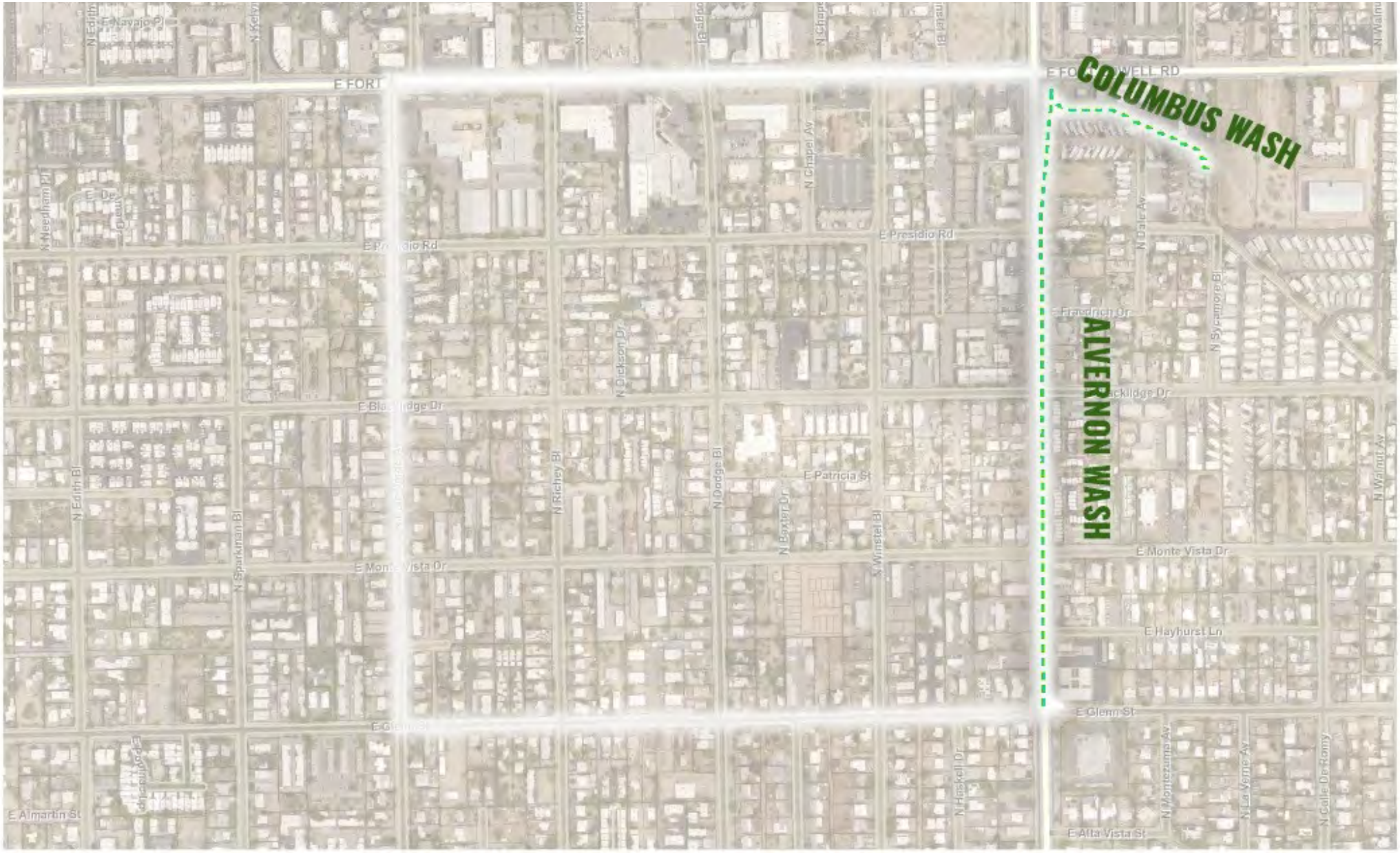
VULNERABLE

MORE VULNERABLE

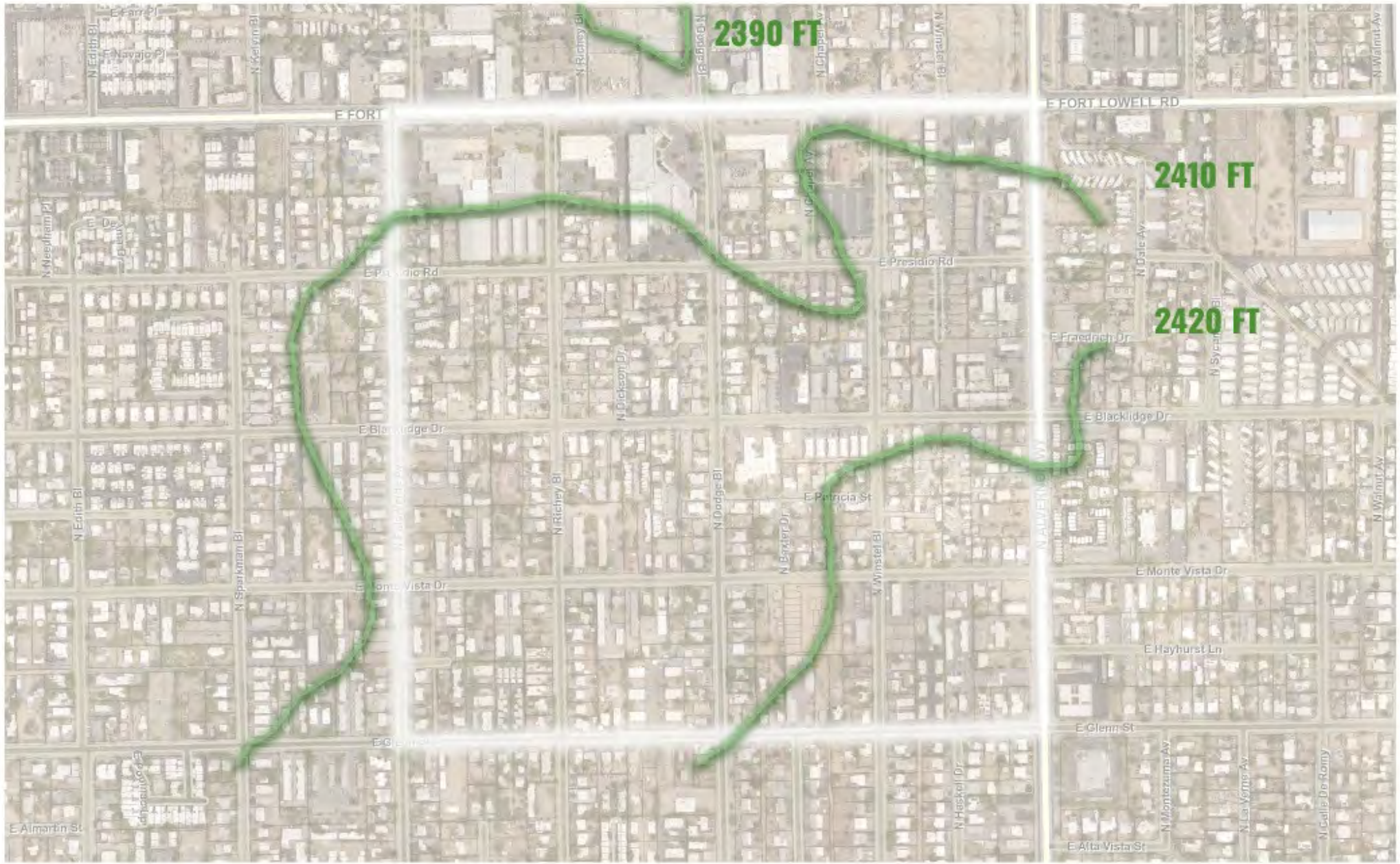
Factors that effect vulnerability:

- Renters
- Persons of Color
- Low Household Income
- Children in Poverty
- Lack of College Degree

N DODGE NEIGHBORHOOD / ANALYSIS / WASH LOCATIONS



N DODGE NEIGHBORHOOD / ANALYSIS / WATER FLOW



URBAN HEAT VULNERABILITY / RESILIENT DESIGN

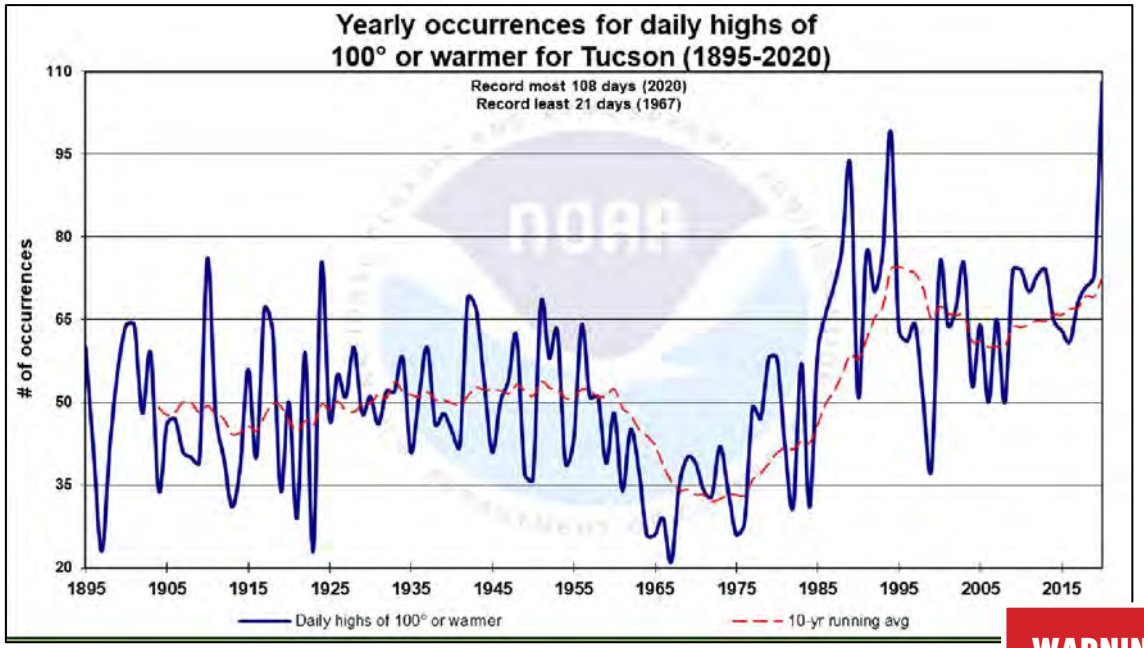
DECREASE IMPERVIOUS GROUND COVER

INCREASE TREE CANOPY BY 30%

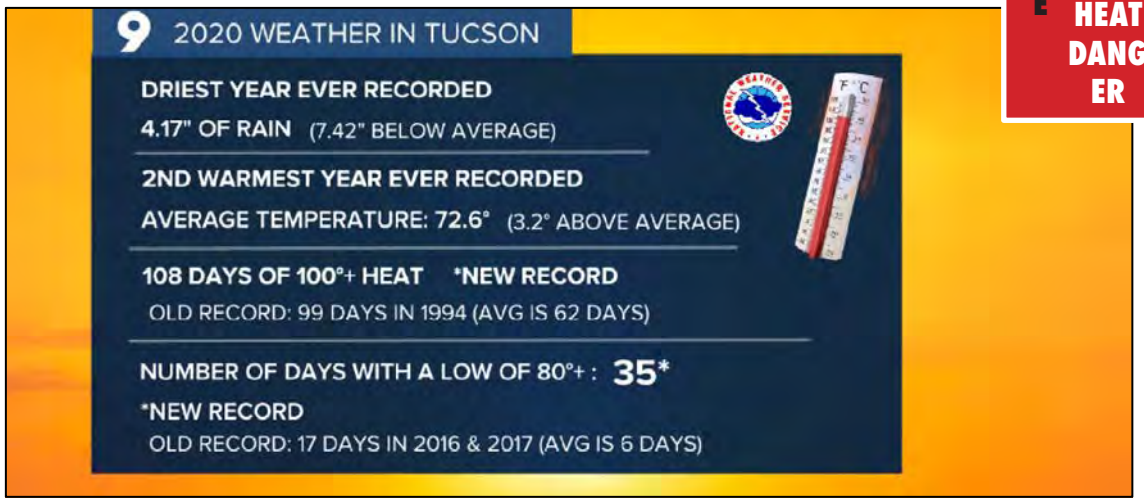
DECREASE ISLAND HEAT EFFECT

Intersection Asphalt Square Footage Change

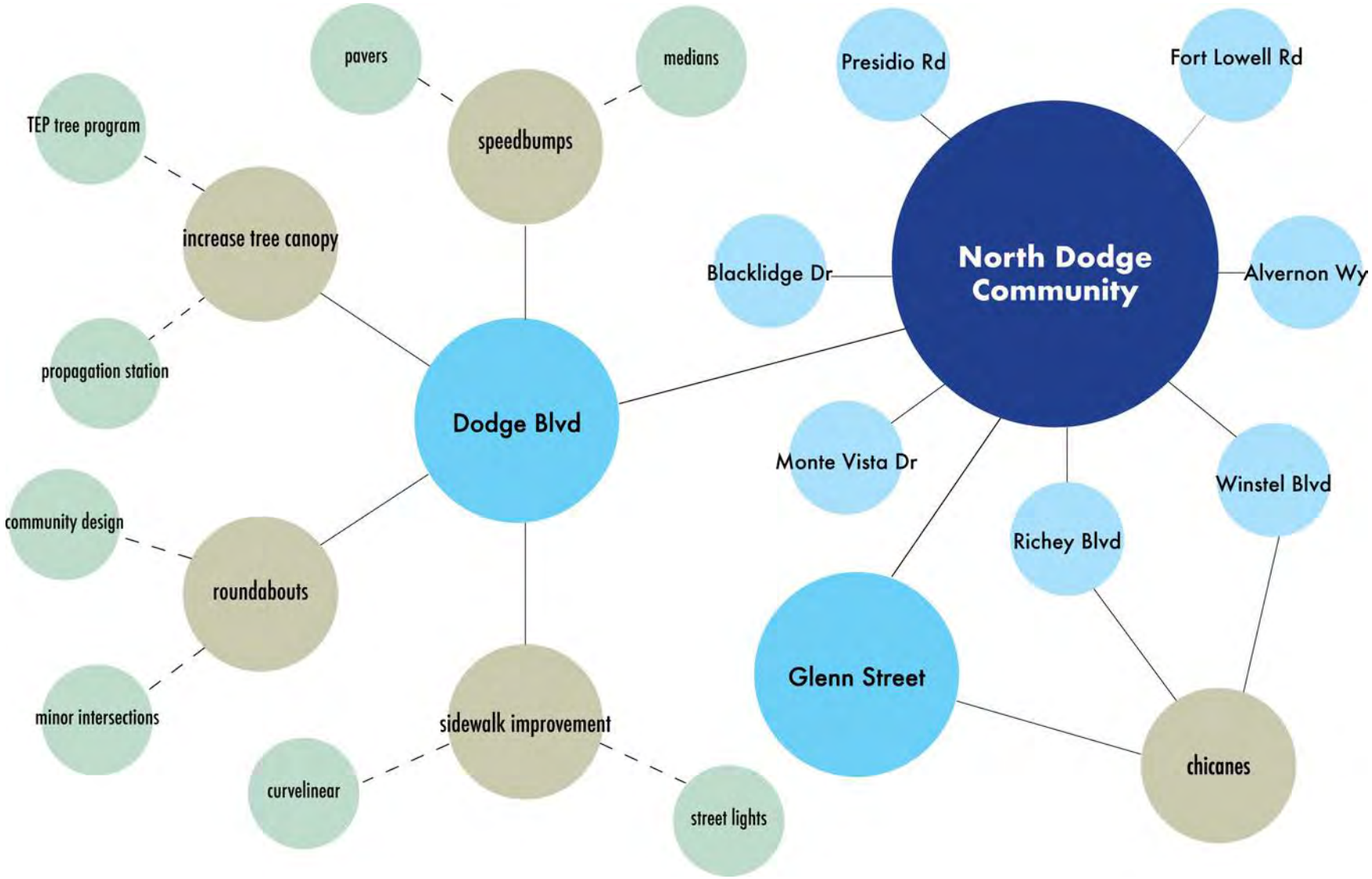
Before	After
4207 sf asphalt	2545 sf asphalt
	955 sf permeable pavement
	707 sf vegetated rain garden
	40% asphalt reduction



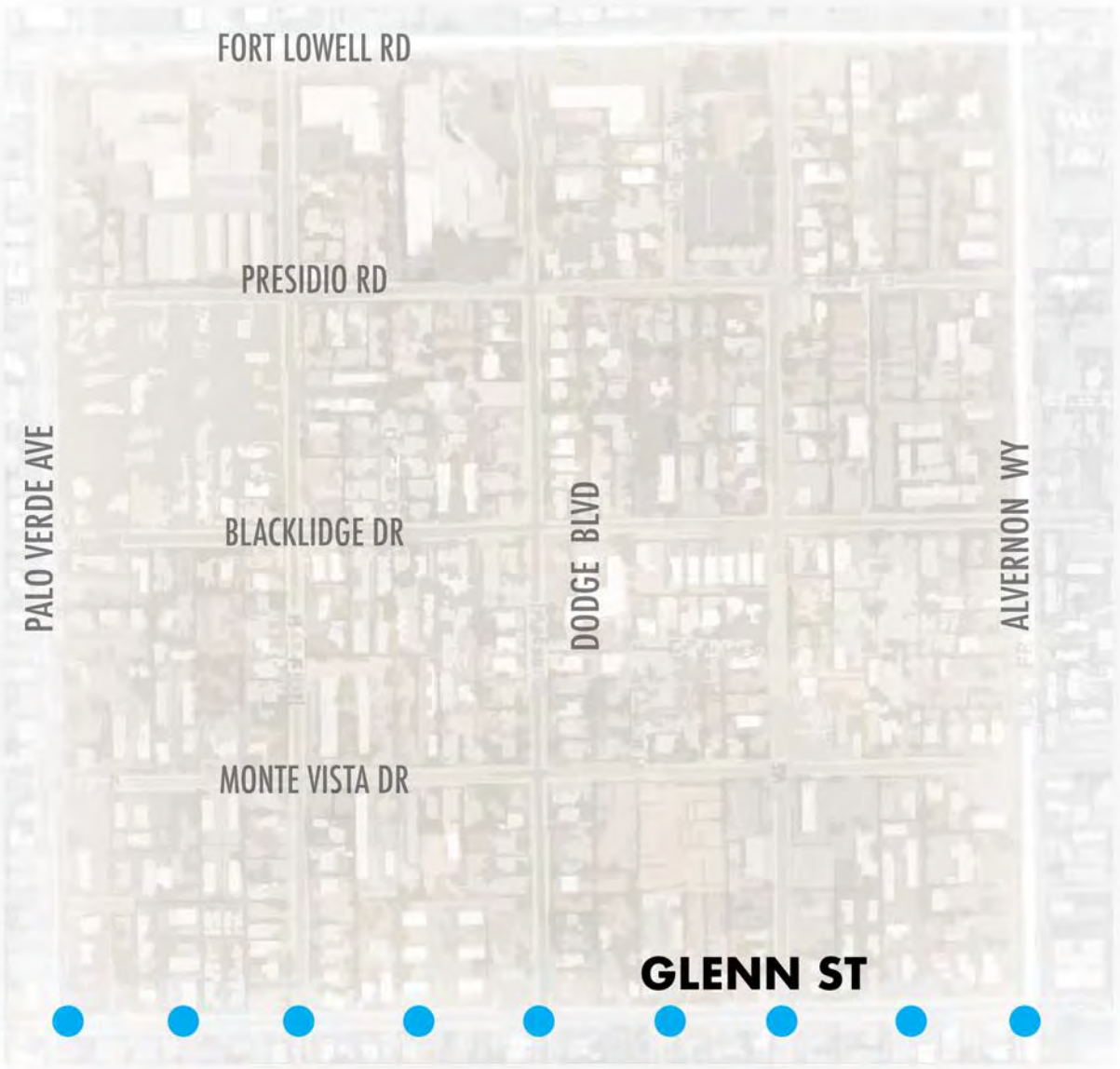
WARNING! EXTREME HEAT DANGER



CONCEPT // BUBBLE MAP



DESIGN PHASE // ONE

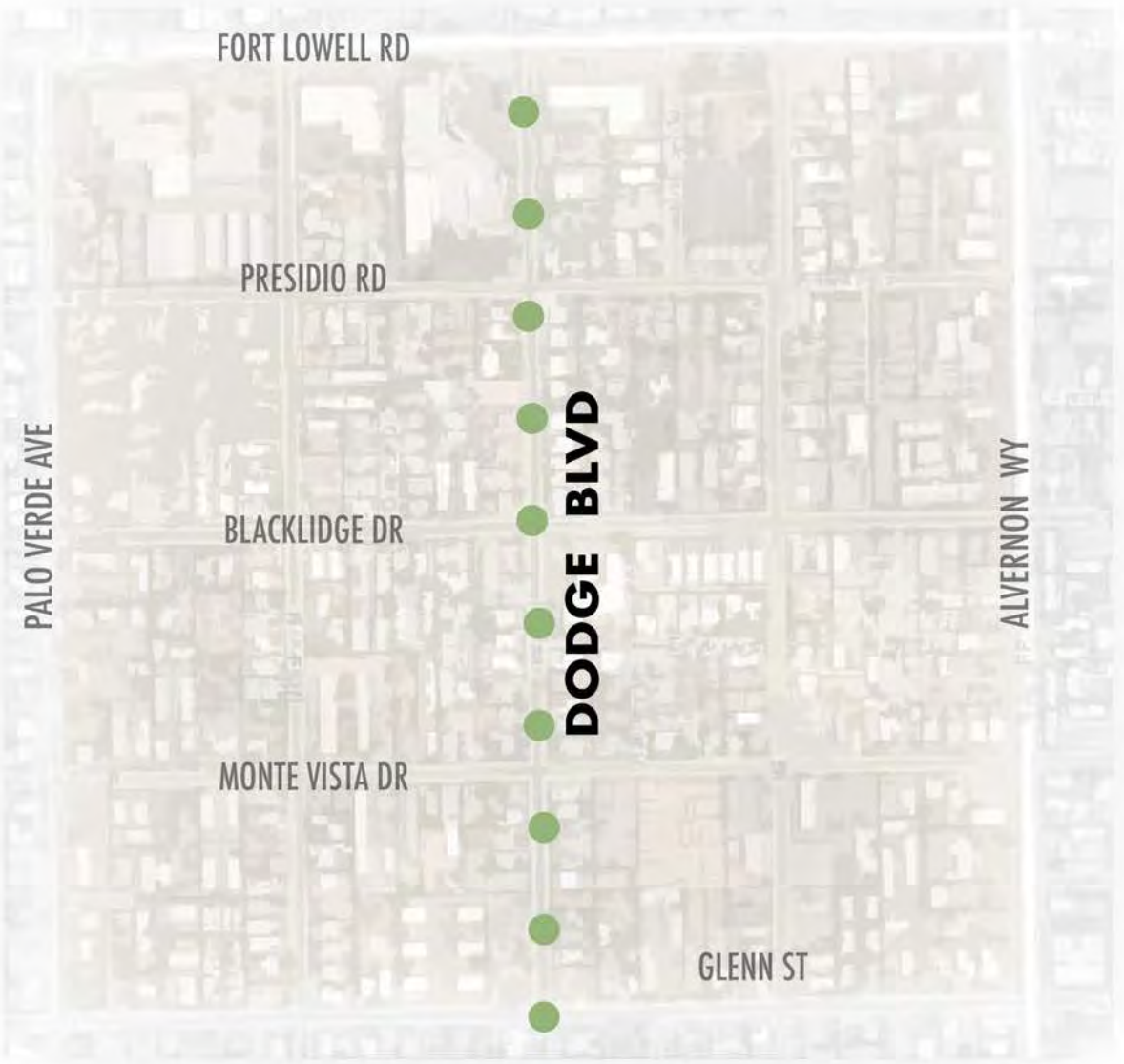


Phase I

Glenn Street

redesign chicanes

DESIGN PHASE // TWO



Phase II

Dodge Blvd

- roundabouts
- speedbumps
- redesign sidewalk path
- increase tree canopy by 30%

DESIGN PHASE // THREE

Phase III

North Dodge Neighborhood

propagation station

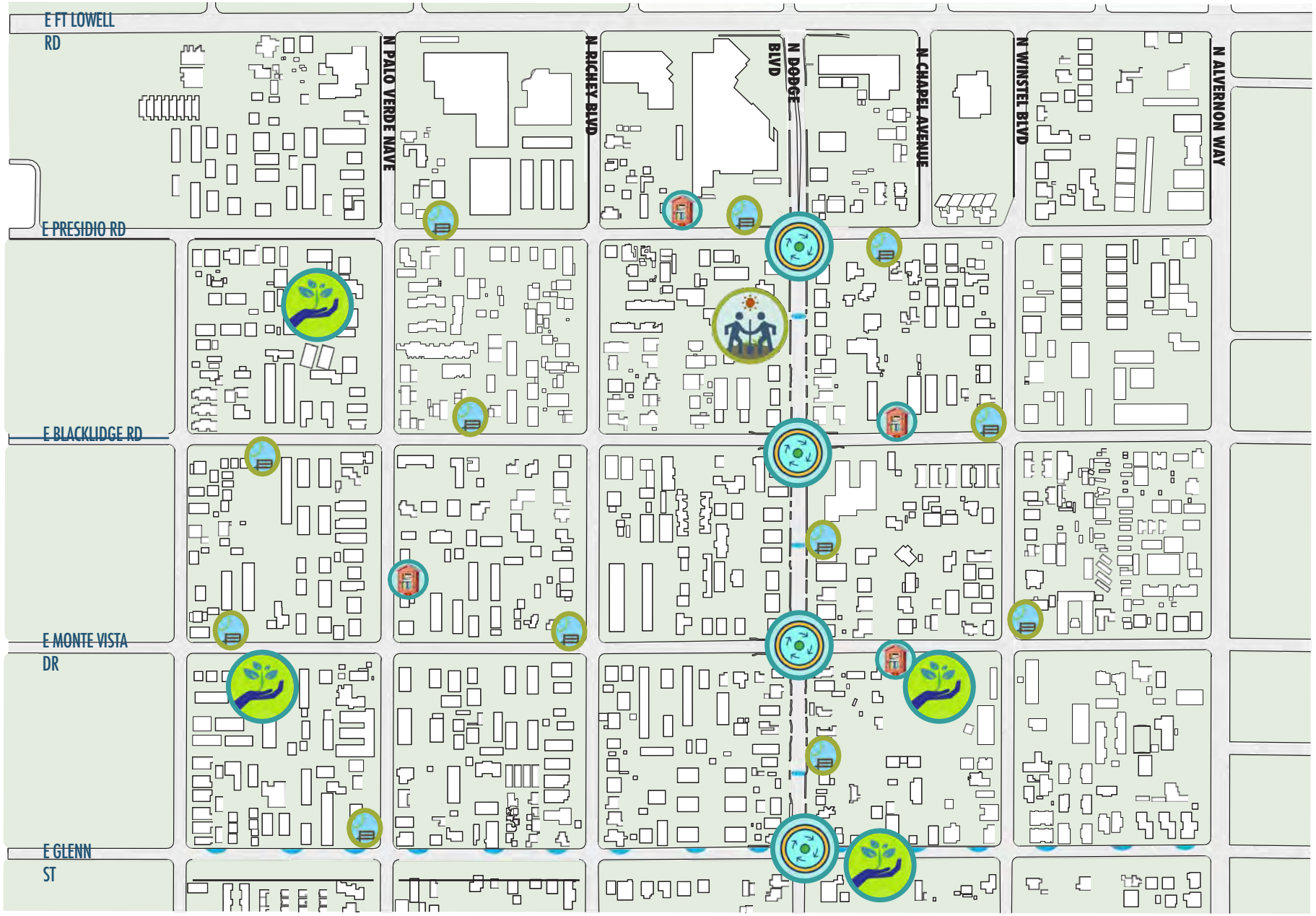
community

garden

PROPOSED LOCATION OF DESIGN ELEMENTS

KEY DESIGN ELEMENTS

- COMMUNITY GARDEN
- PUBLIC BENCH
- PROPAGATION STATION
- NEIGHBORHOOD LIBRARY STATION
- ROUNDABOUT
- CHICANE
- SPEED BUMP

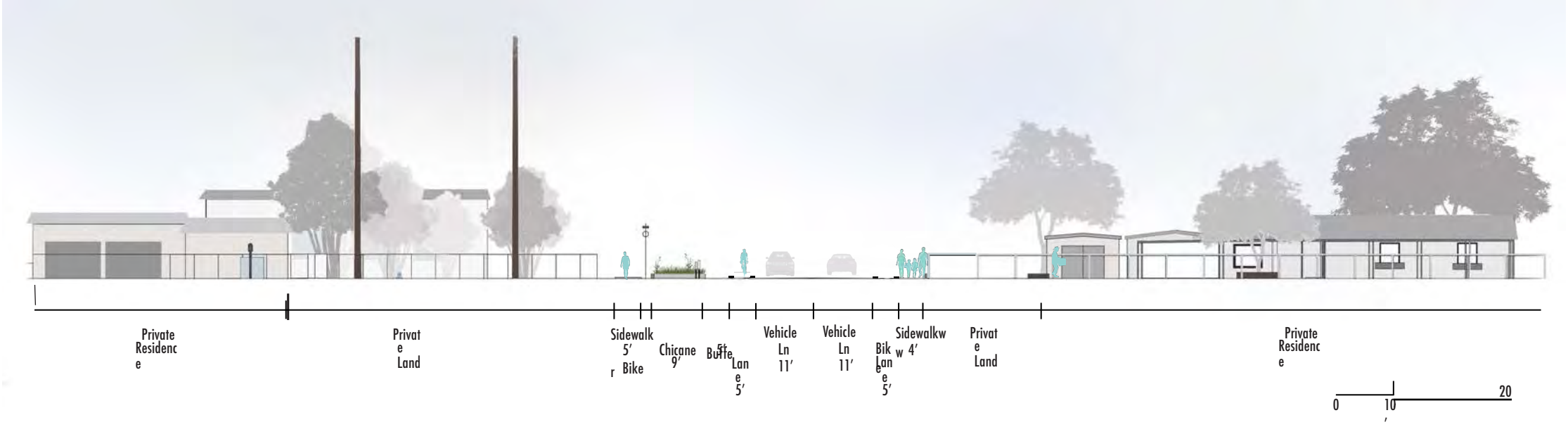


Section / E. Glenn Rd & N. Dodge Blvd / Strategies

Vegetation Enhancement

Circulation Improvements

Human Experience

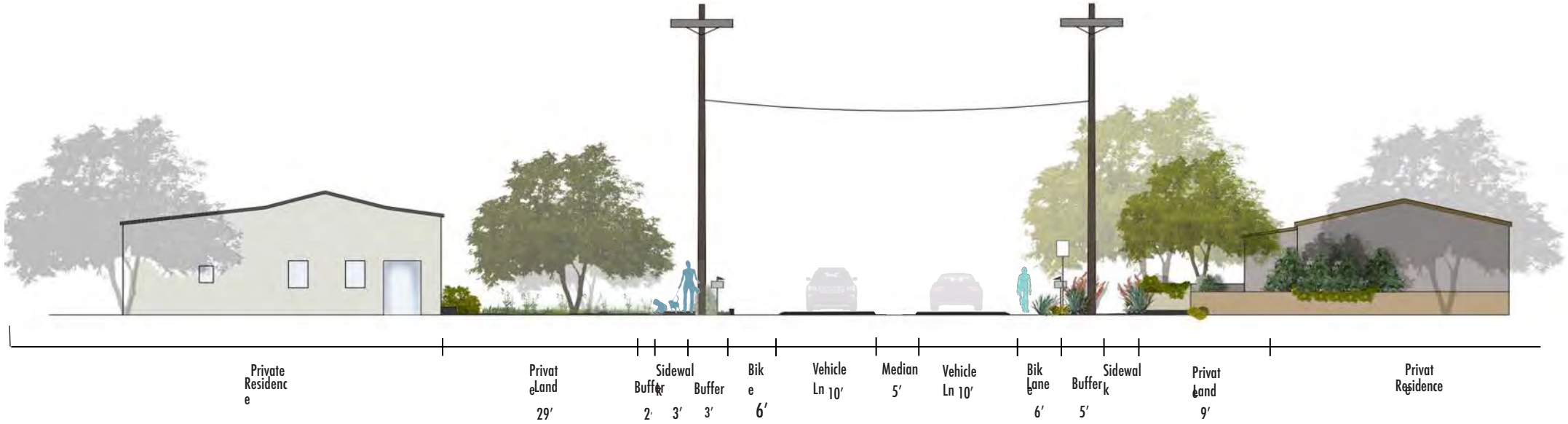


Section / N. Dodge / Strategies

Sidewalk Improvements

Traffic Calming Design

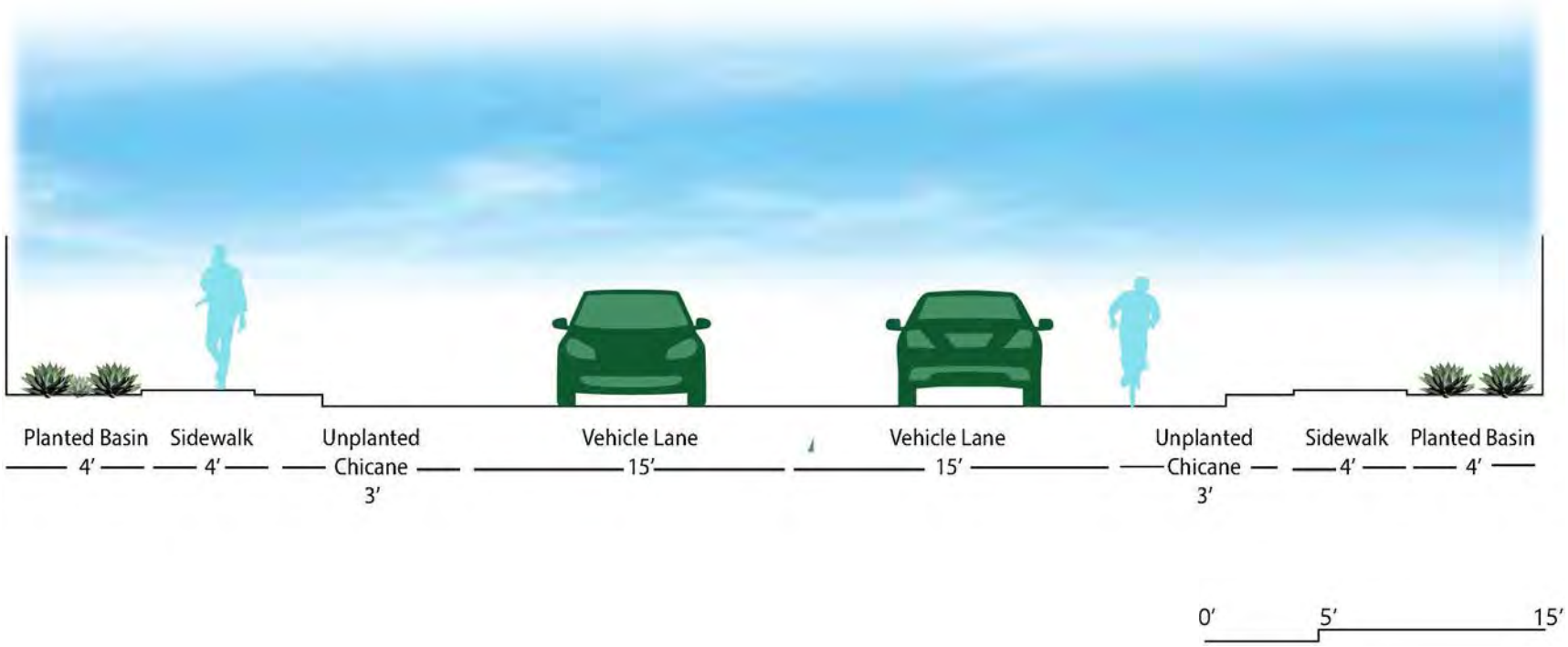
Tree Canopy



SECTION // CHICANE DESIGN W. GLENN RD

PHASE I

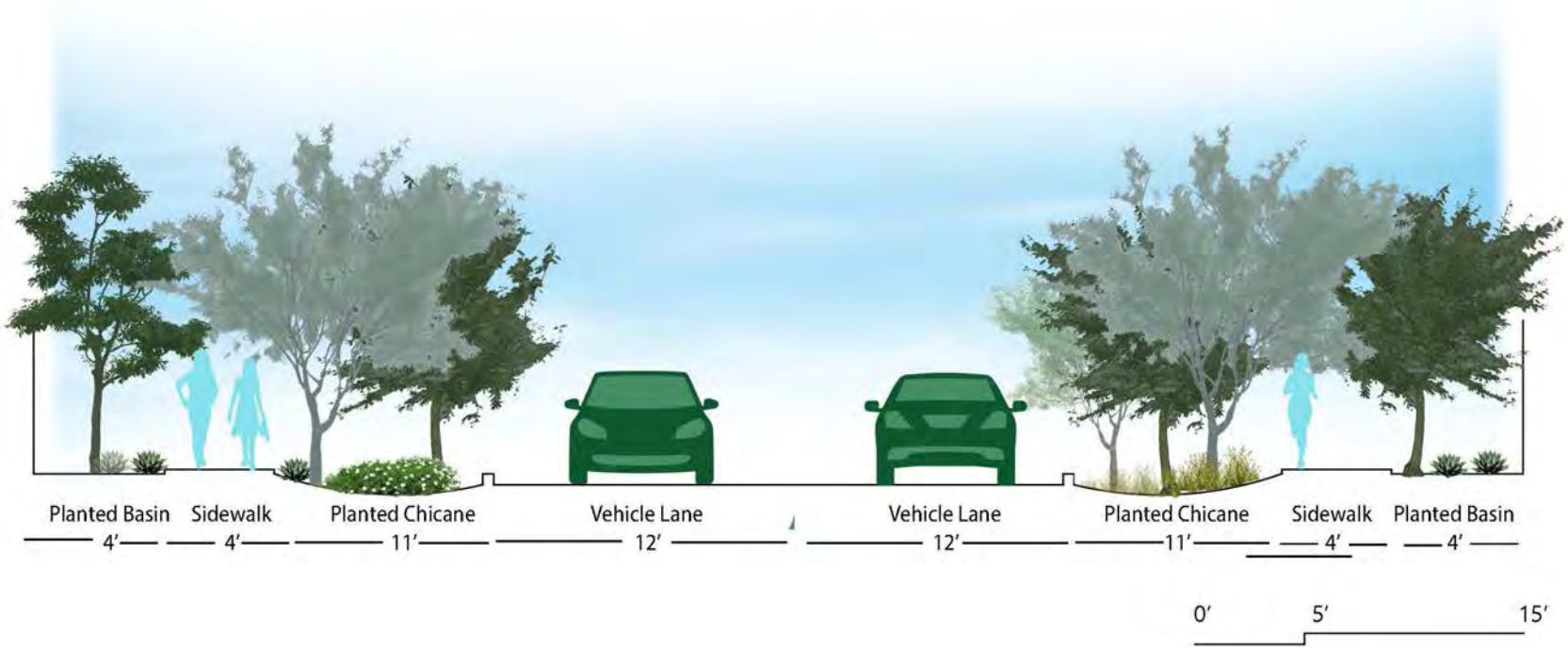
Before



SECTION // CHICANE DESIGN W. GLENN RD

PHASE I

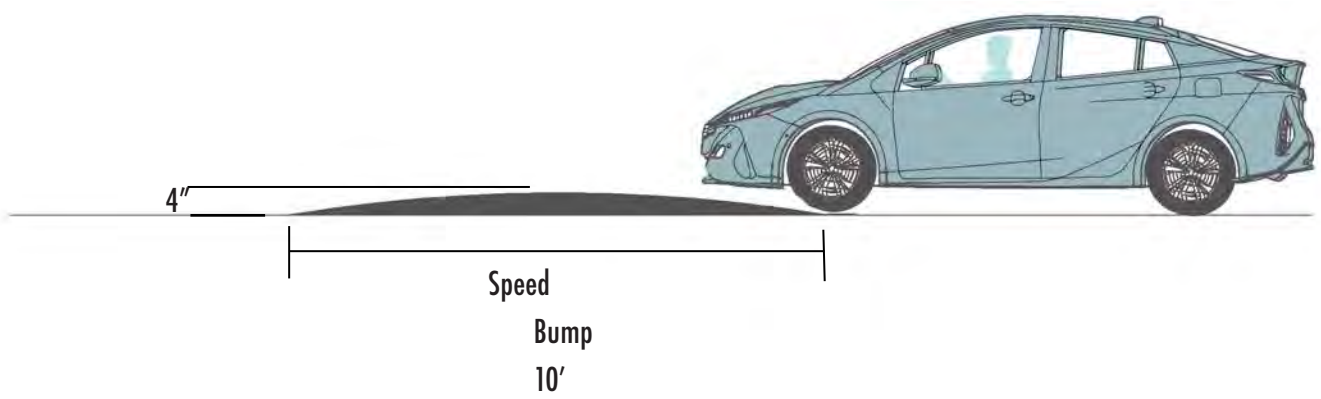
After



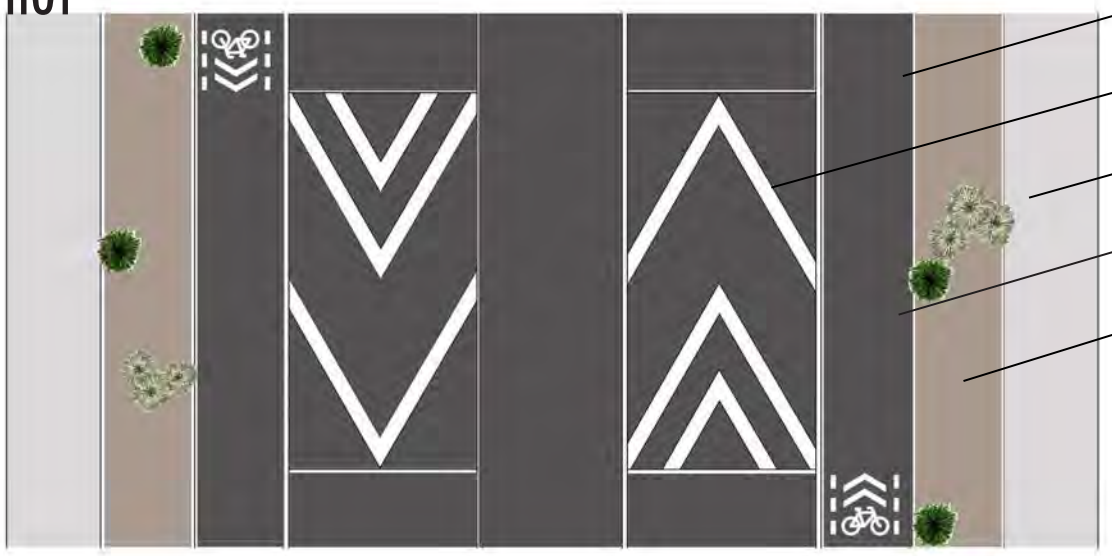
TRAFFIC CALMING CHICANE // E. GLENN ST.

Traffic Calming // current conditions

PHASE II



HOT HOT
HOT



poor storm water management

speed bumps

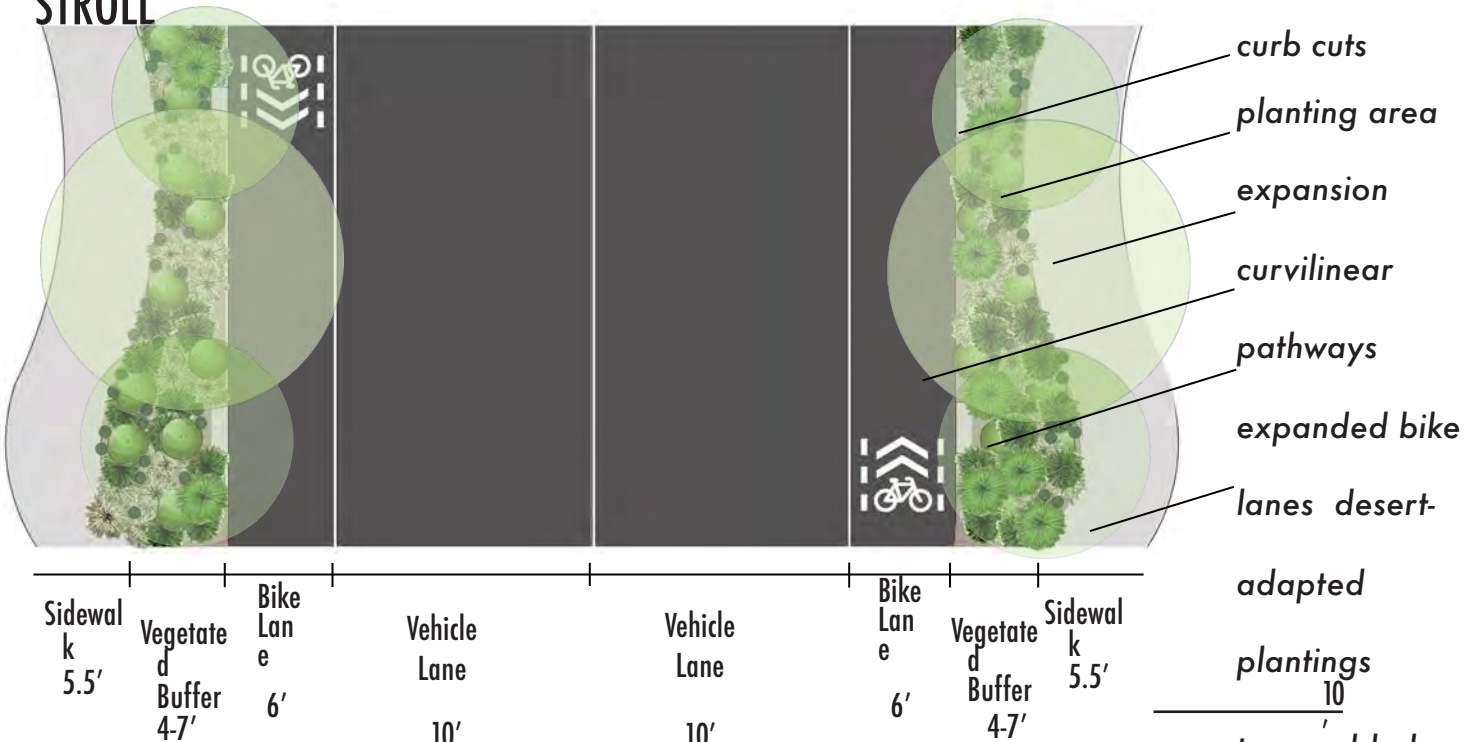
inconsistent sidewalks

narrow bike lanes sparse vegetation

Traffic Calming // proposed sidewalk / chicane design

PHASE II

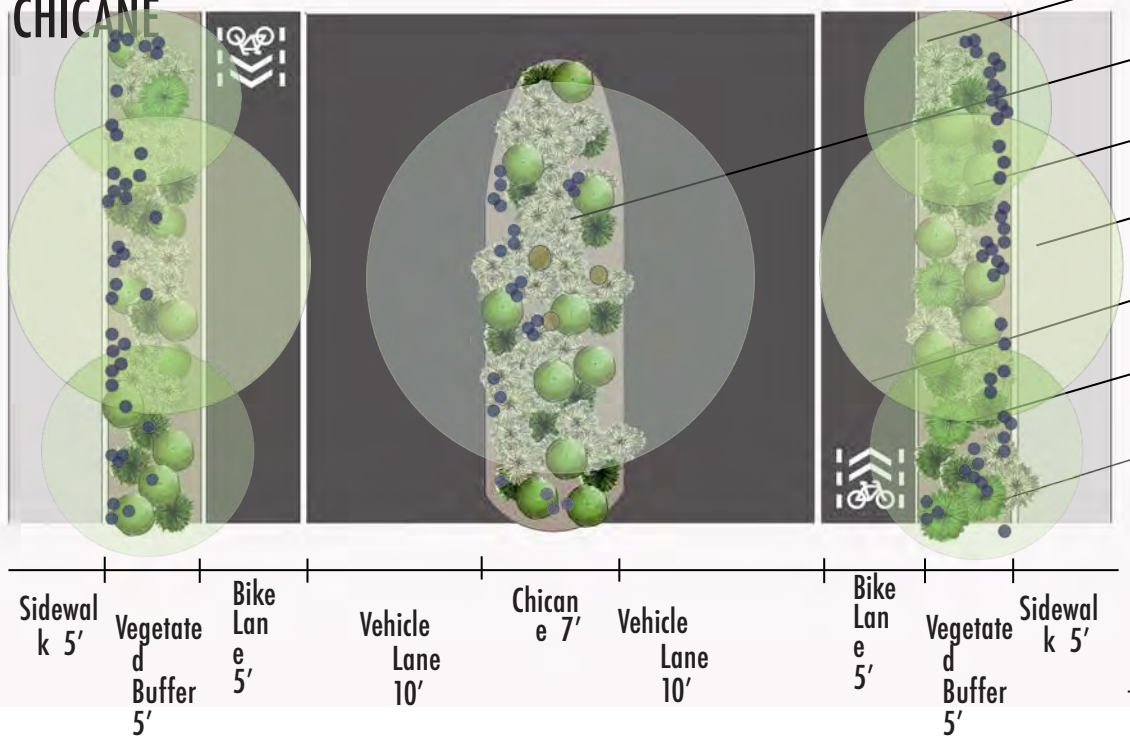
CURVILINEAR STROLL



Traffic Calming //proposed median chicane design

PHASE II

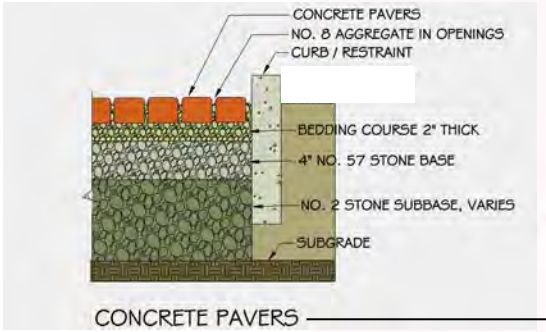
MEDIAN CHICANE



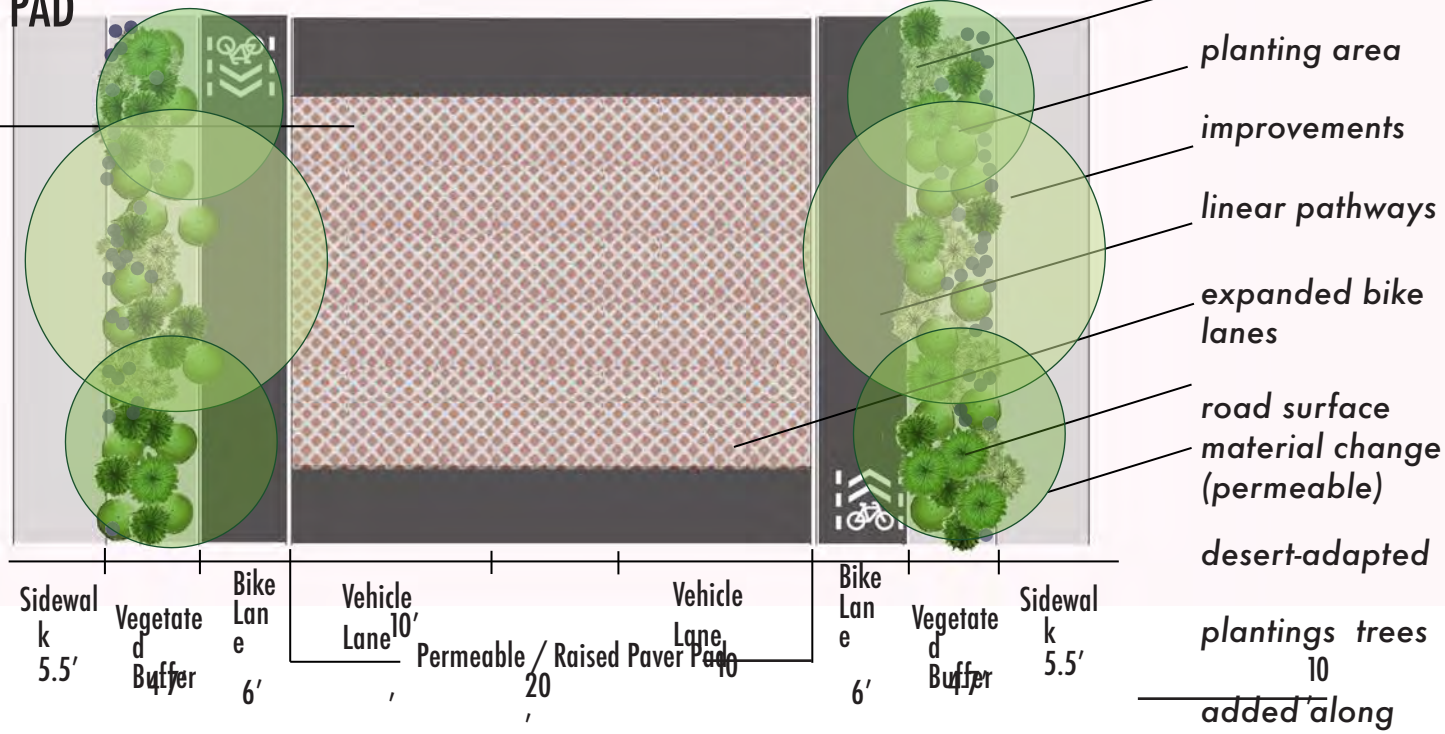
- curb cuts / median curb cuts
- median chicane added planting area
- improvements linear pathways
- expanded bike lanes desert-adapted plantings
- 10 trees added along pathways

Traffic Calming // proposed change of road material

PHASE II

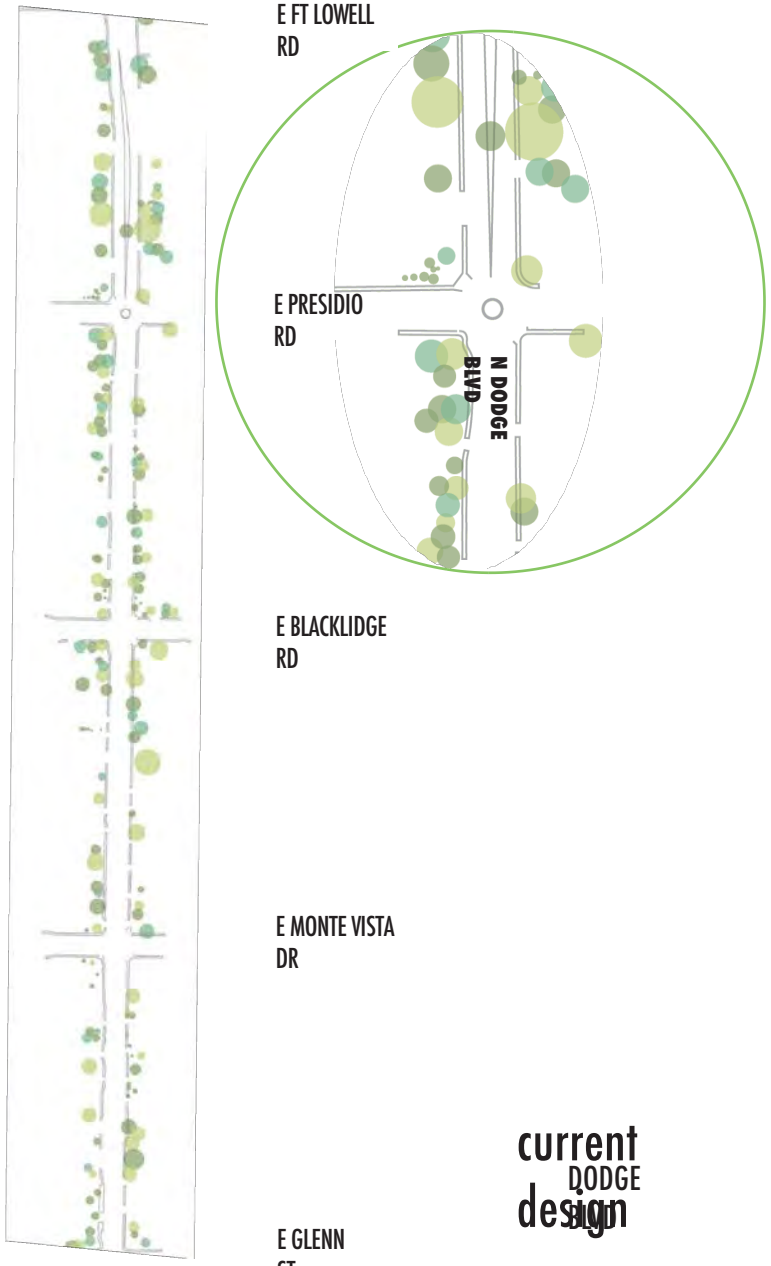


PERMEABLE / RAISED PAVER PAD

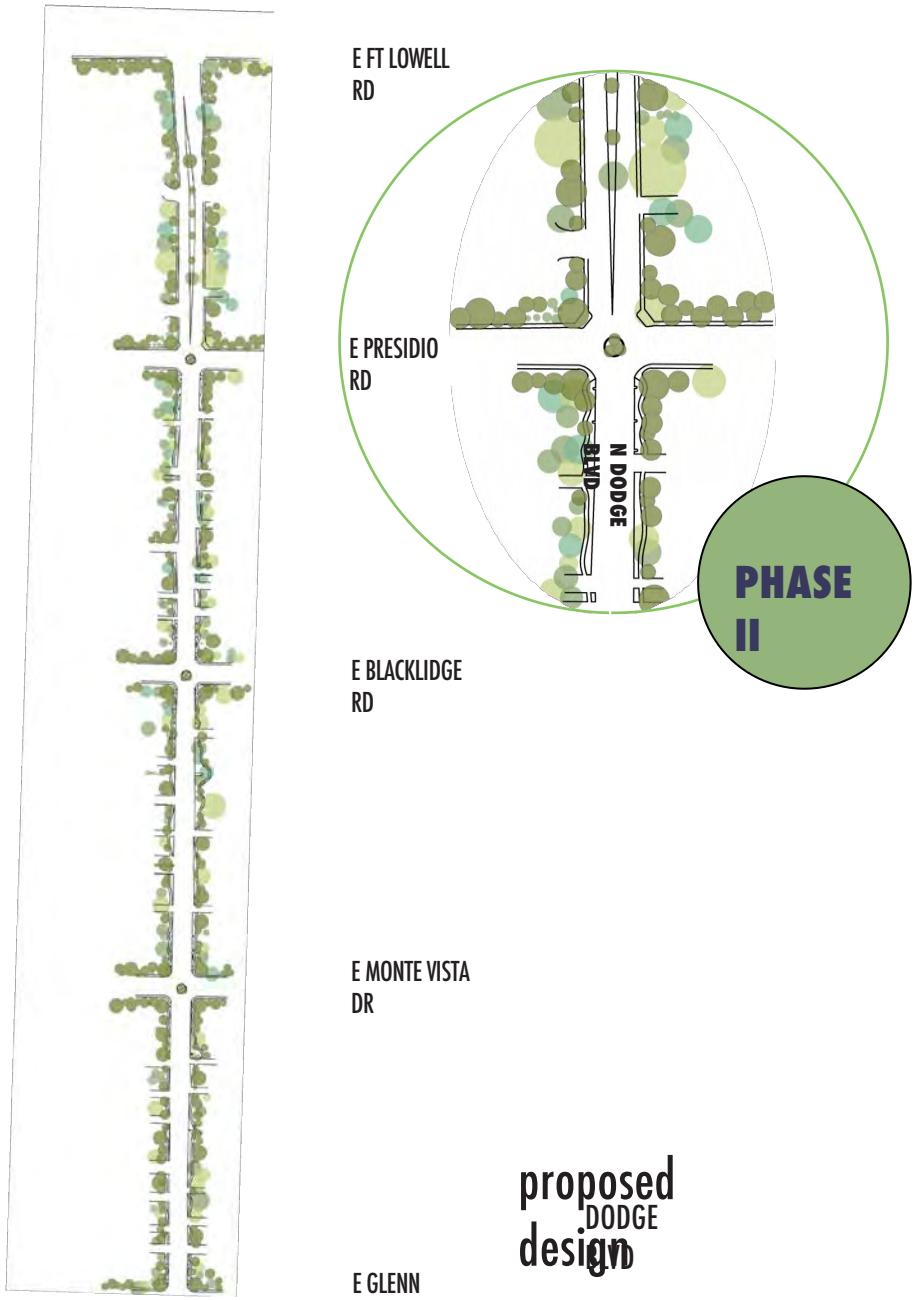


- *curb cuts*
- *planting area improvements*
- *linear pathways*
- *expanded bike lanes*
- *road surface material change (permeable)*
- *desert-adapted plantings trees added along*

Site // N Dodge BLVD / Master Design



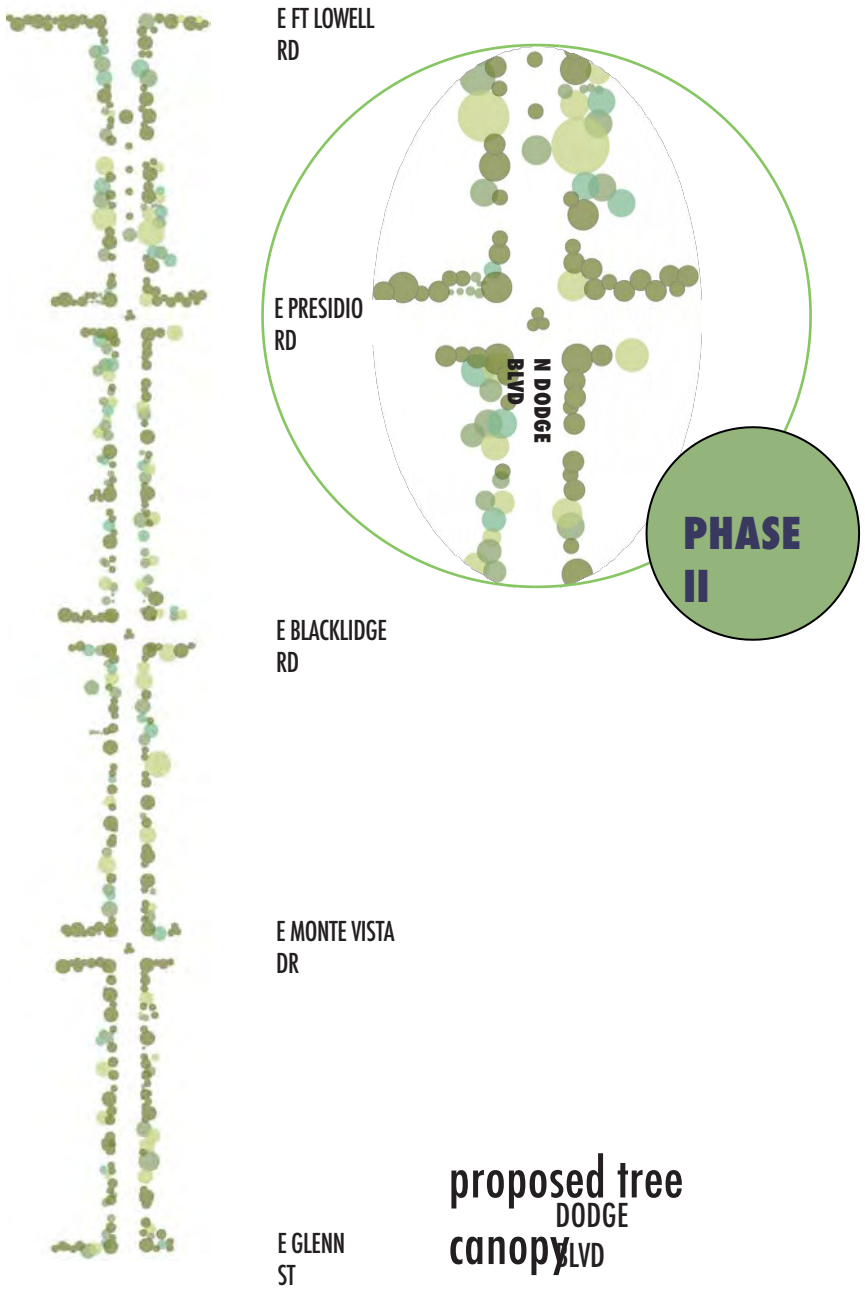
current design



proposed design

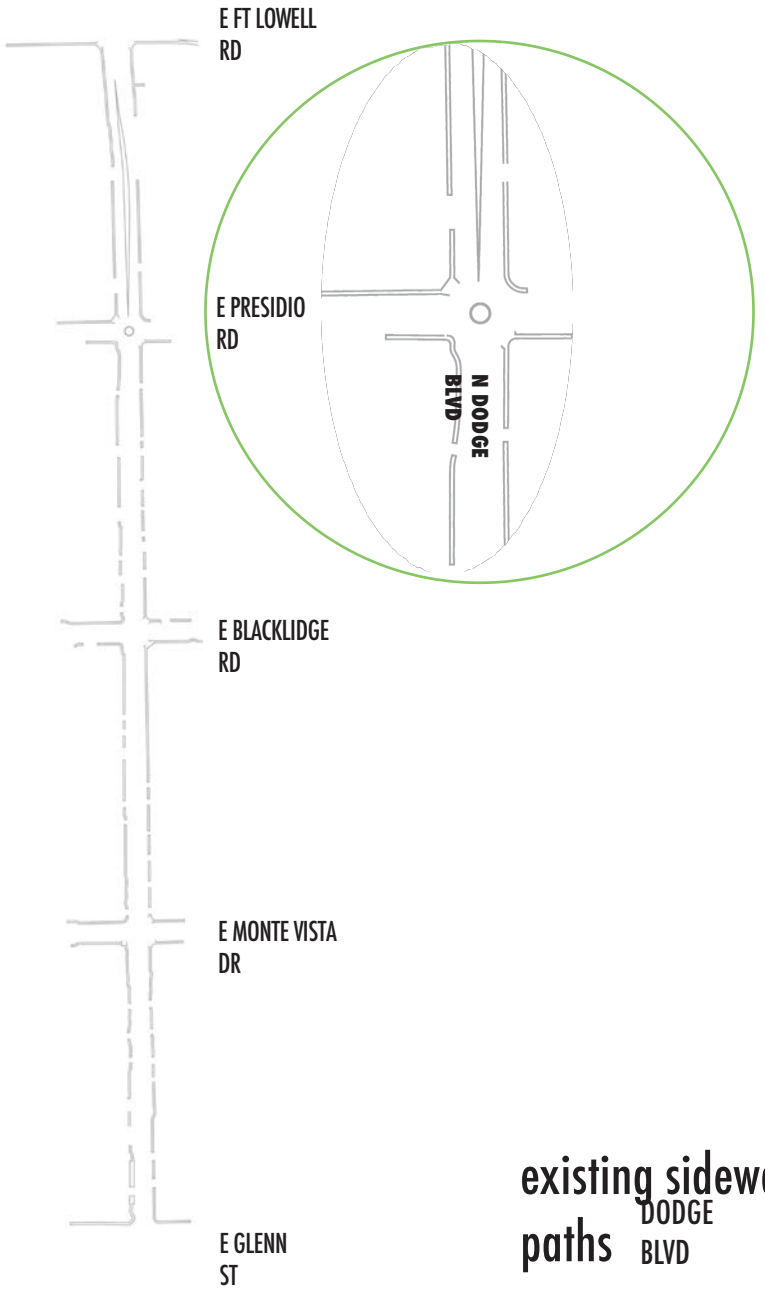
Site // Tree Canopy

current tree canopy



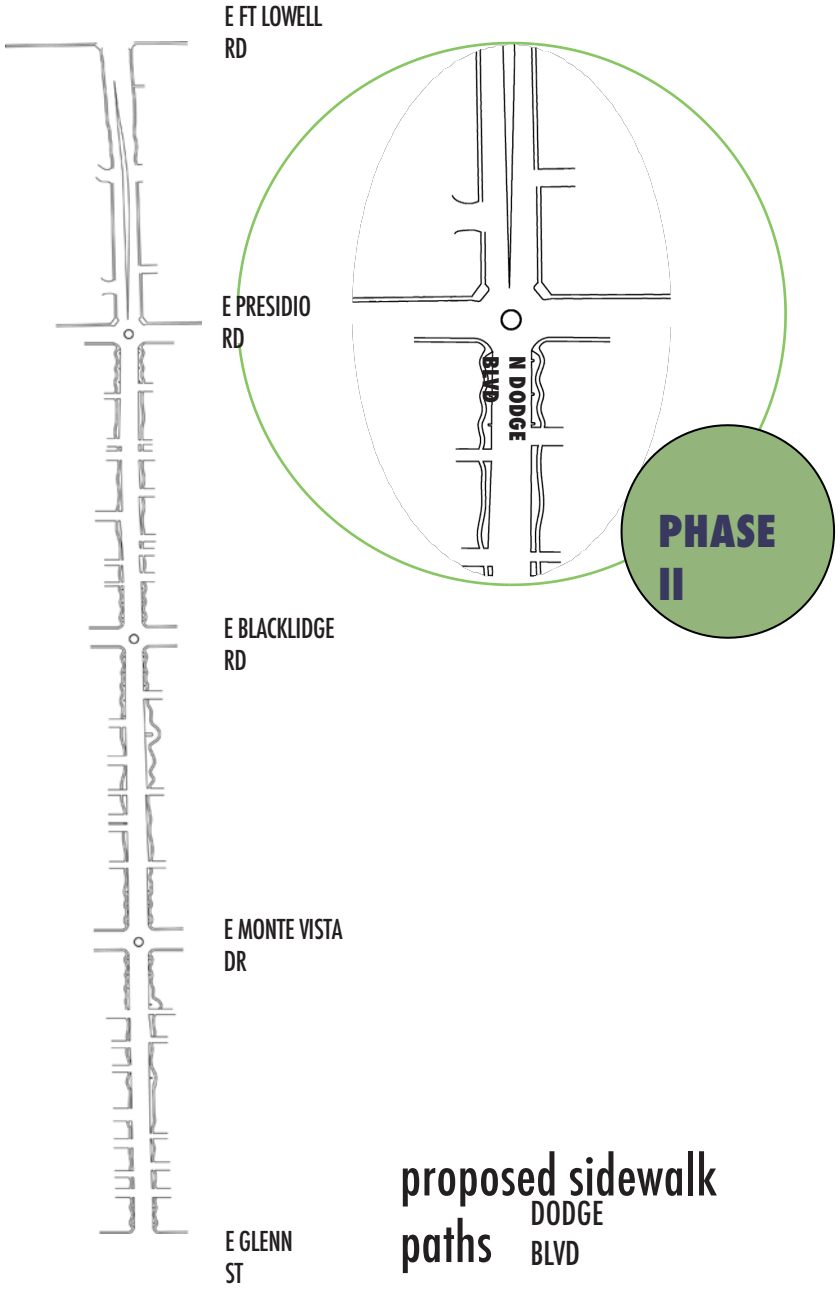
proposed tree canopy

Site // Sidewalk Design



existing sidewalk paths

DODGE BLVD



proposed sidewalk paths

DODGE BLVD

PROPOSED ROUNDABOUT DESIGN

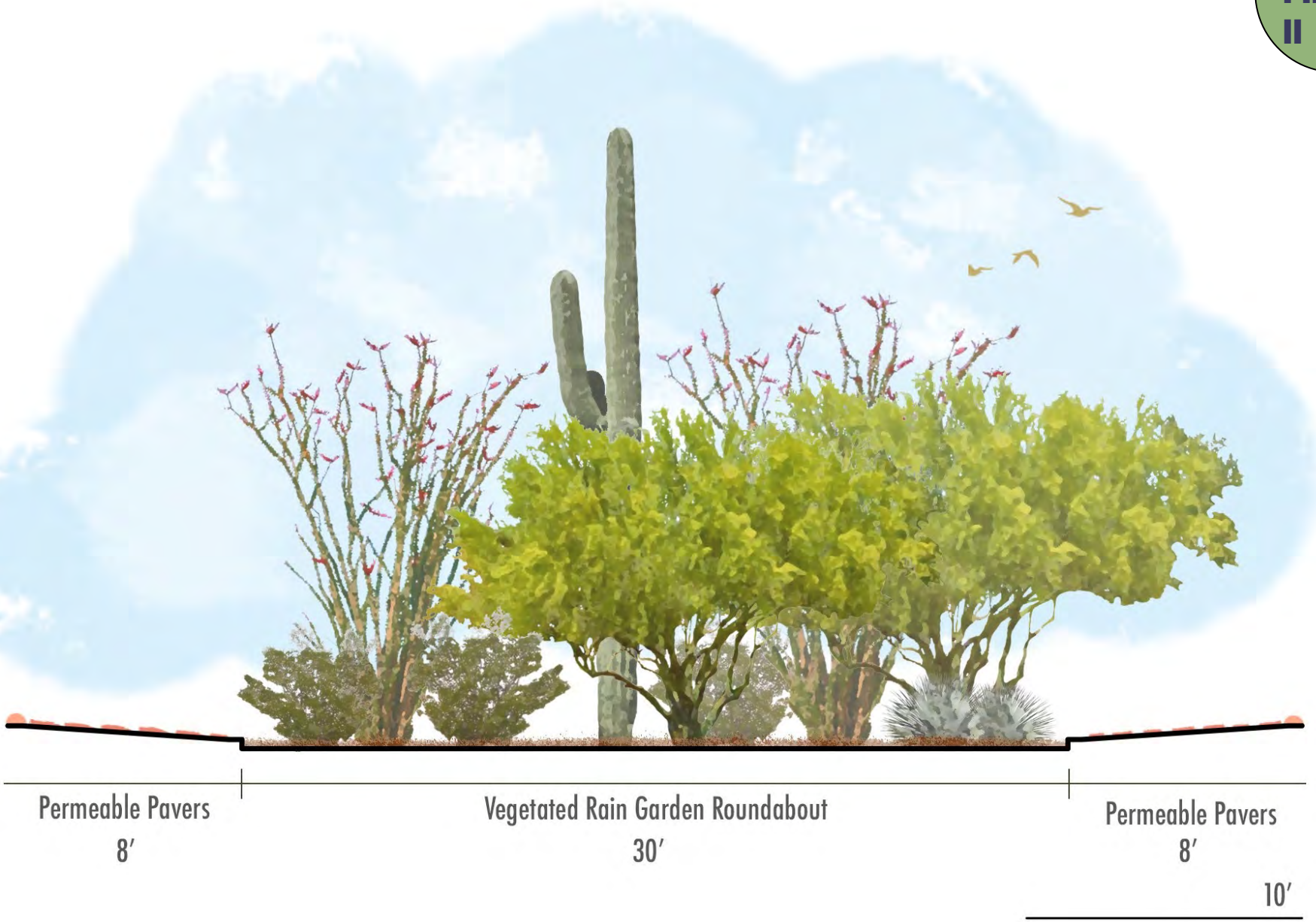
Involving neighborhood residents in the selection of design components will encourage ownership and excitement for the unique roundabouts. They can specialize each design to have whimsical elements while still remaining a cohesive aesthetic.

Roundabout Inspiration, Clockwise from Top Left

Statement Shade Tree
Stepping Stone and
Saguaro Reflective
Ornament Screens
Dancing Sculpture
Agave and Sculpture

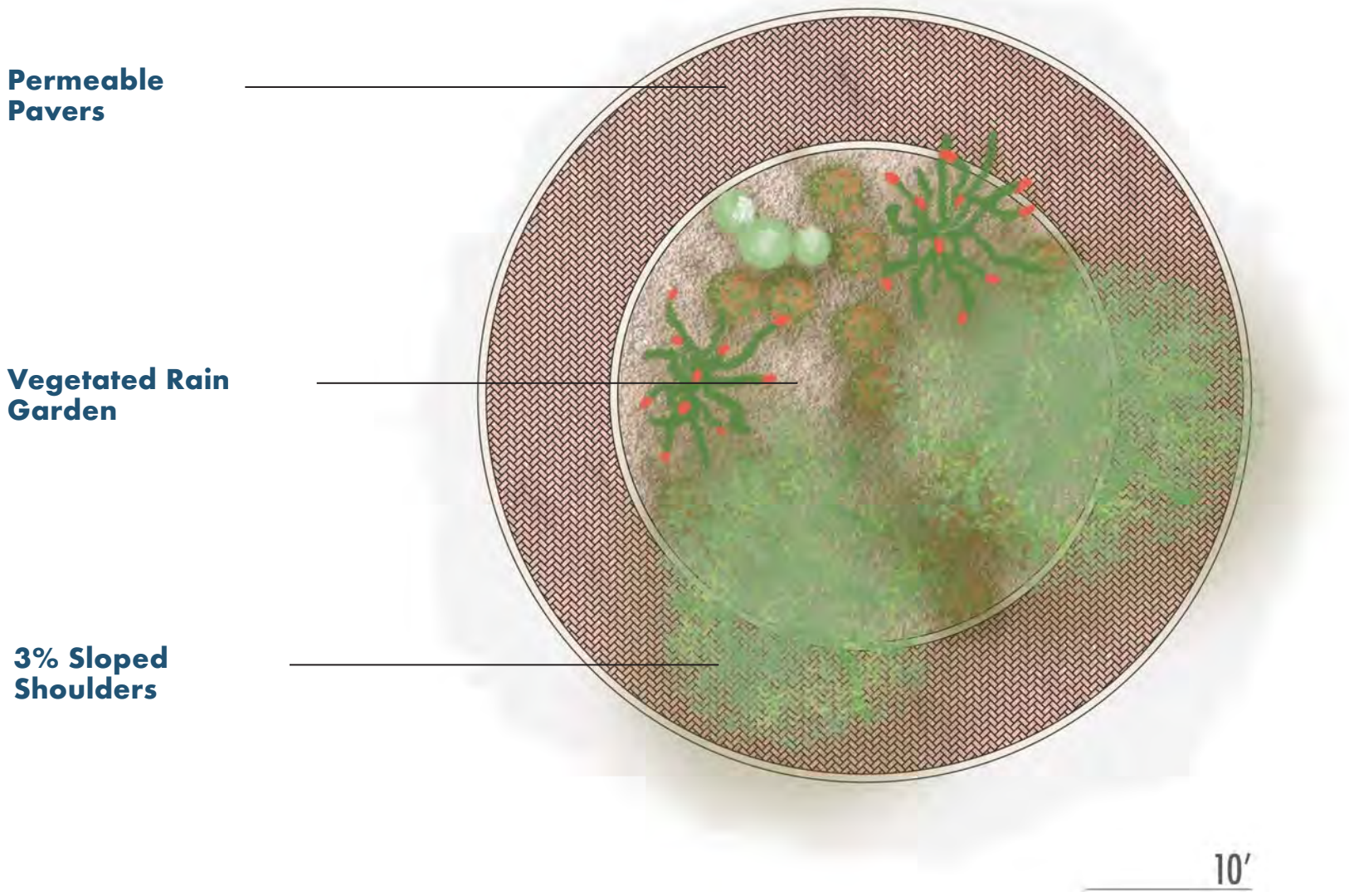
TRAFFIC CALMING ROUNDABOUT // N. DODGE BLVD

PHASE II



PROPOSED ROUNDABOUT DESIGN

PHASE II



PHASE III

PROPAGATION HIGHLIGHTS / HARVEST / SEPERATE / PLANT / GROW / SHARE

Propagation Station

PHASE III

COMMUNITY GARDEN HIGHLIGHTS / CASE STUDY /
AGRITOPIA / GILBERT, AZ

Case Study /Agrotopia Neighborhood / Gilbert Arizona–an ongoing effort to design and build a neighborly community around an urban farm.

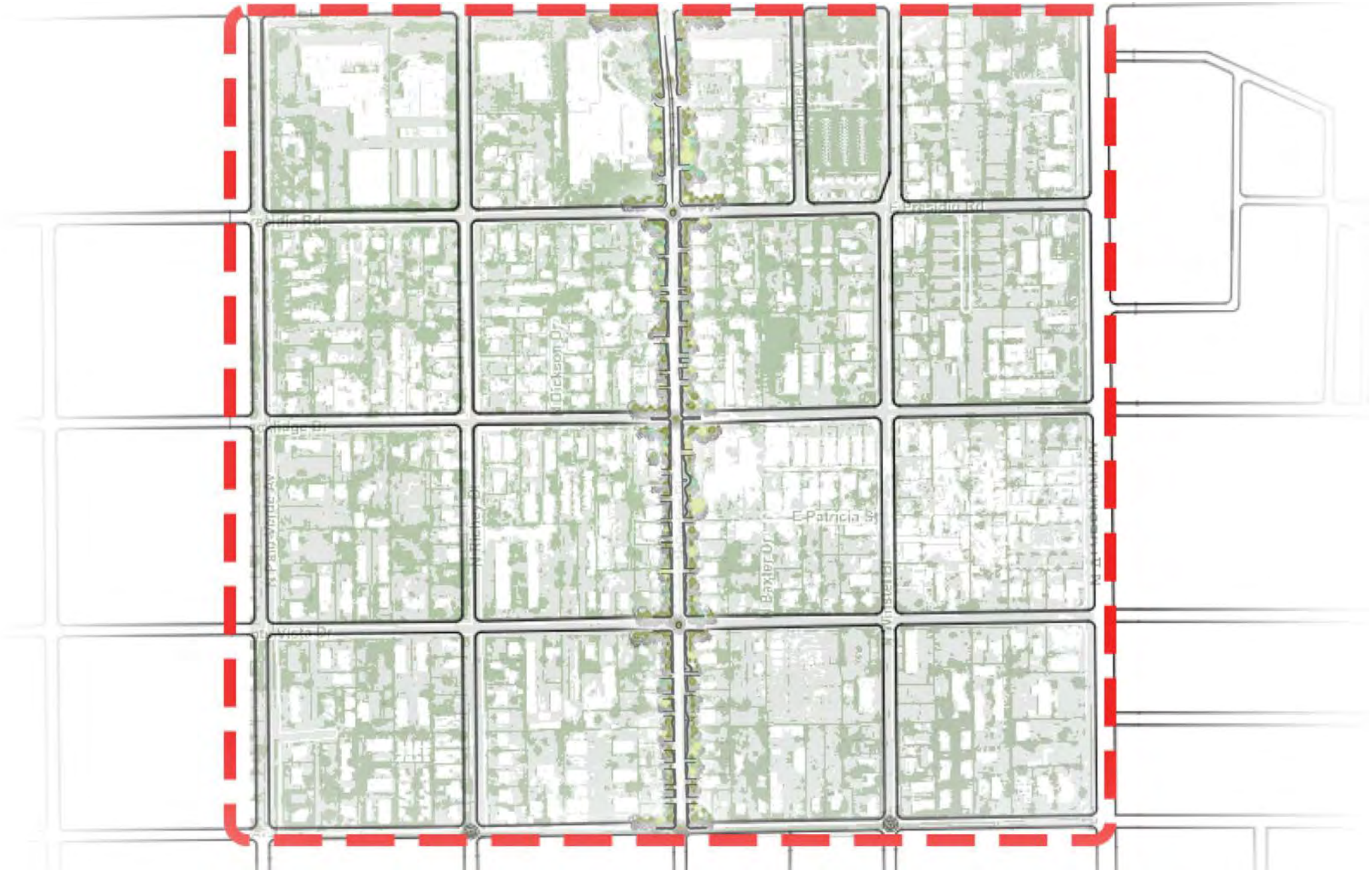
Community Garden

PHASE III

TREE PLANTING HIGHLIGHTS

TEP PLANT A TREE PROGRAM / TUCSON CLEAN AND BEAUTIFUL / TUCSON BOTANICAL GARDEN URBAN FORESTY

A REENVISIONED COMMUNITY



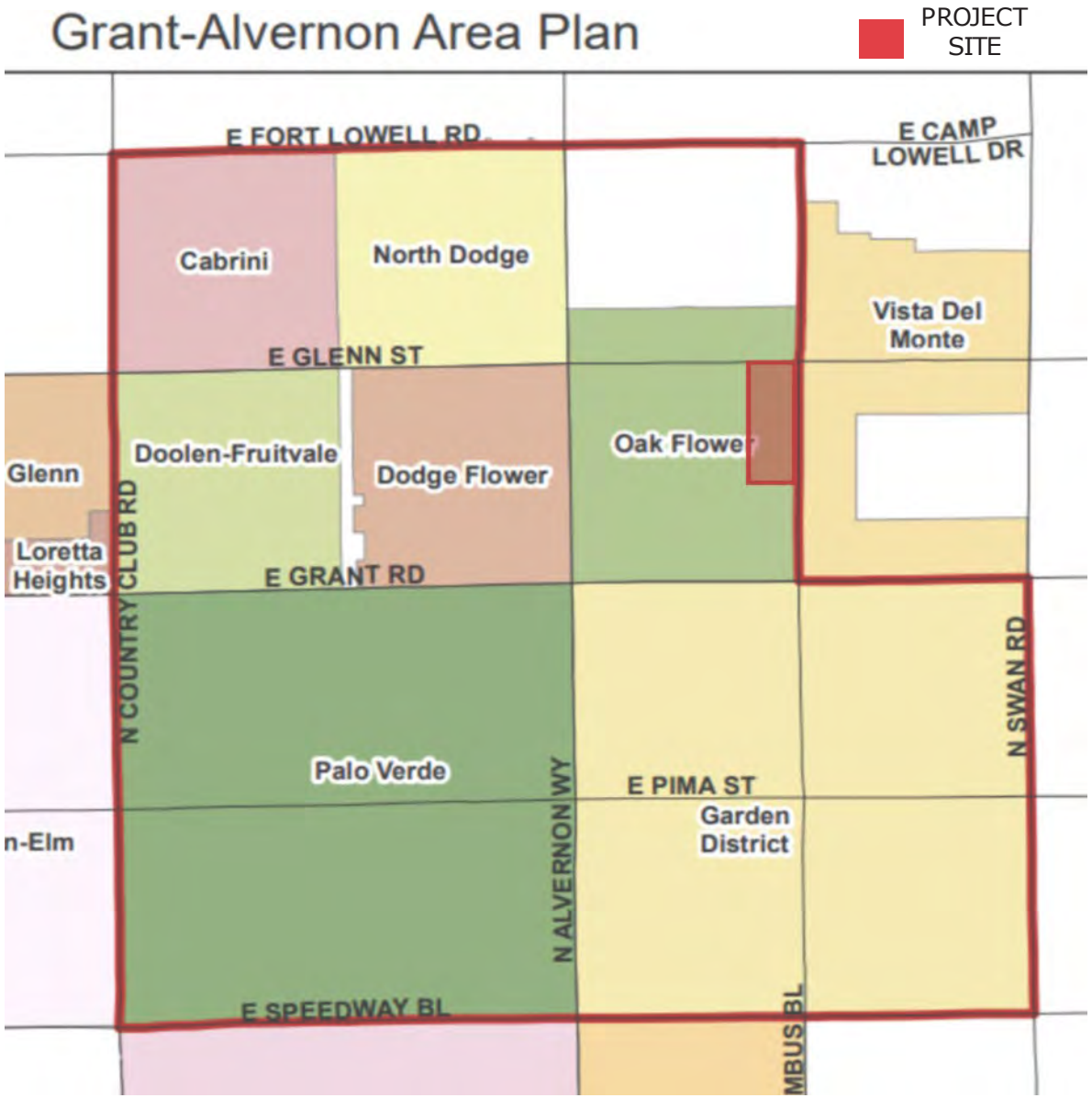
Green Infrastructure Planning Design

Grant-Alvernon Area Plan

City of Tucson, Arizona

For Site in Glenn | Columbus | Flower | FairOaks in Oak Flower District

15 acres



Project Specific Design Principles

Green Infrastructure Goals + Objectives	Design Elements
Increase Shade to reduce heat island effect to increase human comfort to reduce building energy needs	Double Tree Canopy from 15% to 30%
Increase Pervious Surface to increase water infiltration	Replace asphalt and cement with pervious alternatives of GI or other pervious material
Calm Traffic + Provide Pedestrian/Bike Pathways to increase circulation safety	Trees, chicanes, medians, corner pushouts, vegetated ROW, crosswalks, bike lanes, sidewalks
Better Stormwater Management: Slow, capture, and soak stormwater to increase water conservation to reduce flooding to decrease soil erosion	Green infrastructure: chicanes, trees, vegetated right of ways, swales, & basins; native/low water plants

Site Inventory: Existing Tree Canopy

- 2015-2019 Little change over 4 years
- 15% Tree Canopy Cover 2008 Census Block is Above Average/Below Target
- Tucson Ten Thousand Tree Initiative: NOT a priority
- Tucson Green Infrastructure Initiative: NOT a priority

2008 CENSUS BLOCK TREE CANOPY COVER

2015 TREE CANOPY COVER

2019 EXISTING TREE CANOPY COVER

Site Inventory: Surface Condition

- Vulnerable population for extreme heat: Upper Moderate Heat Vulnerability
- Med-High heat severity near Catalina Market, rest of site Medium severity
- Urban Heat Island: #1 cooler end of spectrum
- % of Impervious Surface TBD

EXISTING URBAN HEAT ISLAND RATING

2013-2015 HEAT SEVERITY AVERAGE SURFACE TEMPERATURE

2019 IMPERVIOUS SURFACE

Site Inventory: Water

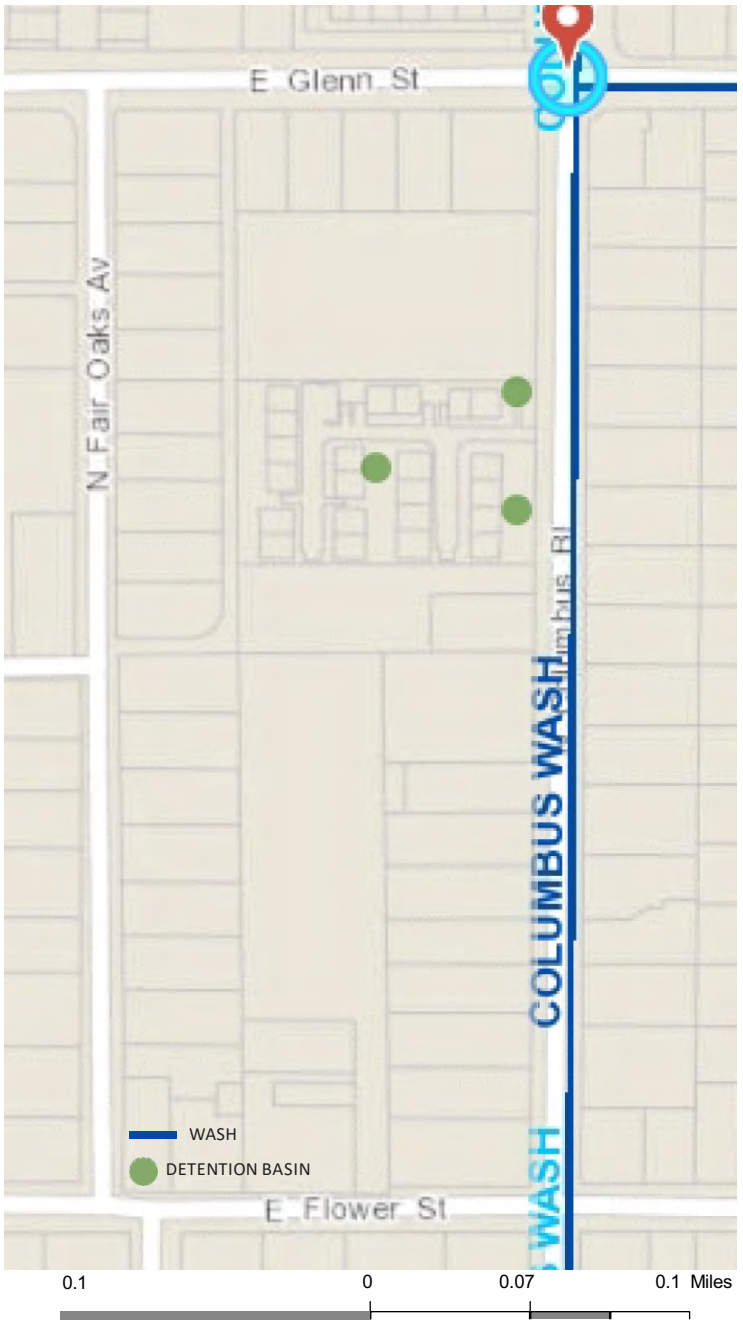
- Basins, drainage in newest development
- Wash runs along East side of site
- High point 2440 ft, elevation sloping NW
- Though no floodplain - sediment deposits evident of flooding & surface runoff
- 2008 Impaired drainage pathways

SEDIMENT DEPOSITS OVER IMPERVIOUS AREA

TOPOGRAPHY

2008 IMPAIRED DRAINAGE PATHWAYS

WASHES & BASINS 2015



Site Inventory: Circulation

- Enhanced bike route on Flower does not exhibit prioritized improvements
- Pedestrian demand areas correleate with bus stops, enhanced bike lanes
- Bus stops near NE arterial intersection
- High traffic automobile arterials E & N
- Lower traffic S + W; internal for residential access

AUTOMOBILE CIRCULATION

High Traffic Arterials
Low Traffic
Residential

AUTOMOBILE CIRCULATION

Flower West
No bike travel improvements or any bike route

BIKE, BUS, PEDESTRIAN CIRCULATION

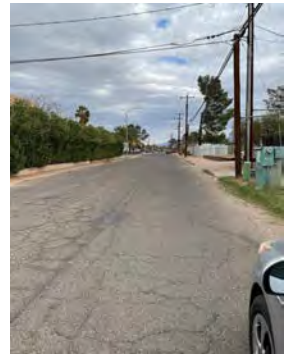
ENHANCED BIKE ROUTE – Lower traffic street with bike travel prioritized improvements

BIKE ROUTE – Lower traffic street with 'Bike Route' signs

BIKE LANE – Painted lane on higher traffic street with higher speeds

PEDESTRIAN DEMAND AREA

PAG BUS STOPS



Flower East - No Bike Route Signs

Site Analysis

Strengths

- Small, walkable blocks
- Nearby transit
- Local market asset
- WIFI hot spot signal
- Mixed housing
- Wide streets

Weaknesses

- Lacks shade & vegetation
- Lacks stormwater management
- Lacks circulation markings & control

Opportunities

- Decrease surface temperature
- Provide sidewalks on boundary streets
- Provide bike, pedestrian, & car traffic calming, signage, markings
- Increase shade
- Increase pervious surfaces
- Green infrastructure streetscapes for traffic calming, stormwater management, & circulation safety

Threats

- High traffic on Columbus & Glenn with no sidewalks or traffic calming devices pose a safety risk
- Significant areas of impervious surface has stormwater runoff, sediment deposit from soil erosion
- Only 15% shade with no City prioritization for tree or GI initiatives
- Basins, drainage installed in newest neighborhood with drainage onto Columbus, no connection to rest of area

Planning Master Plan

Existing

Tree Canopy Doubled = 15% increase to 30%

- increases comfort
- decreases heat island effect
- reduces building energy consumption

Added Green Streetscape & Impervious Soil replaces some cement and asphalt

- provides pathways for pedestrian & bicycle safety
- provides stormwater management
- increases water infiltration
- provides traffic calming via vegetated buffers, narrower travel lanes, & perceived lower ceiling
- increases circulation safety
- increases water conservation
- reduces soil erosion
- reduces flooding
- removes utility poles to prevent conflict with trees

COT Water Well

Roundabout

Green Streetscape

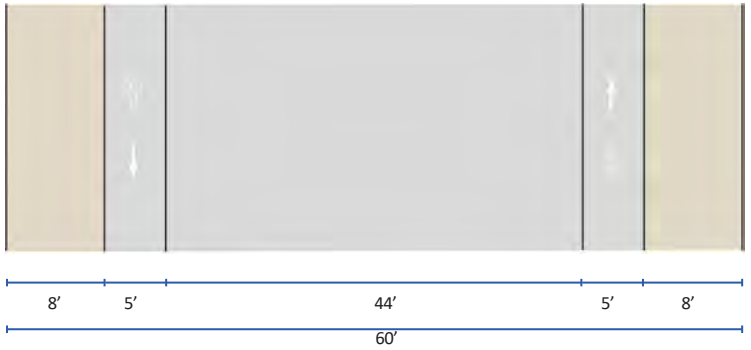
Proposed Trees

Existing Tree Cover

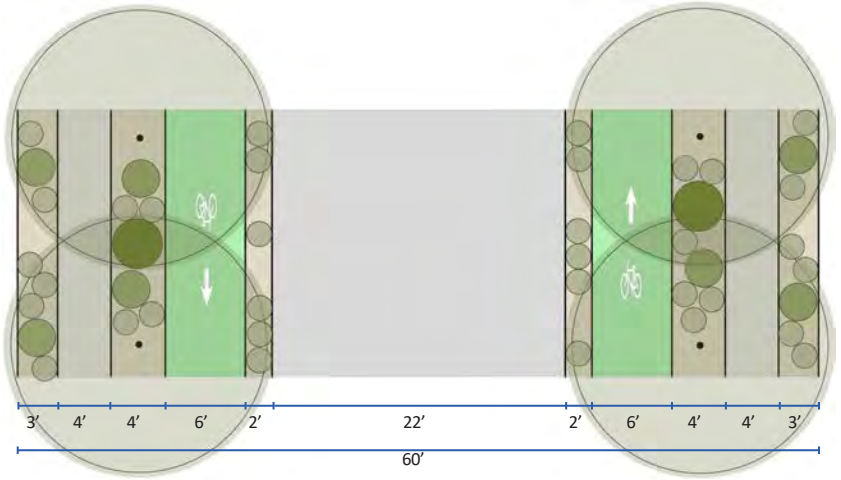
Proposed

Proposed Topologies for Green Streetscape

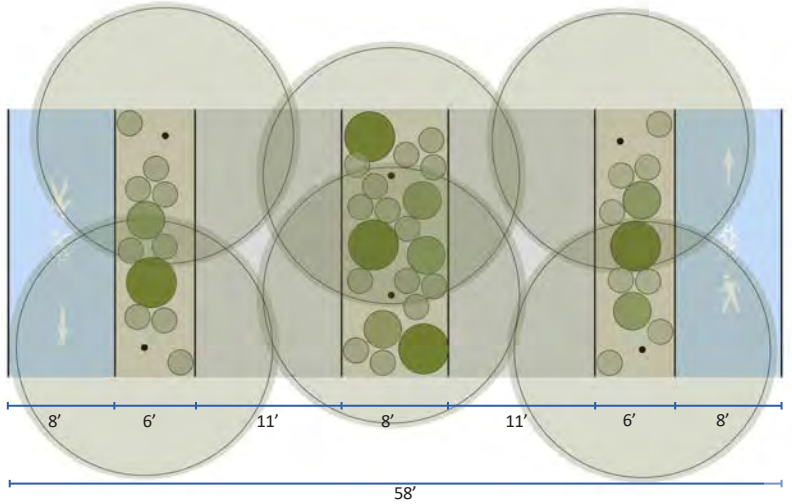
For Main Arterial High Traffic Streets:
N. Columbus Blvd. OR E. Glenn St.



EXISTING N. COLUMBUS BLVD.



TOPO 1: VEGETATED BUFFERS TO SEPARATE ALL



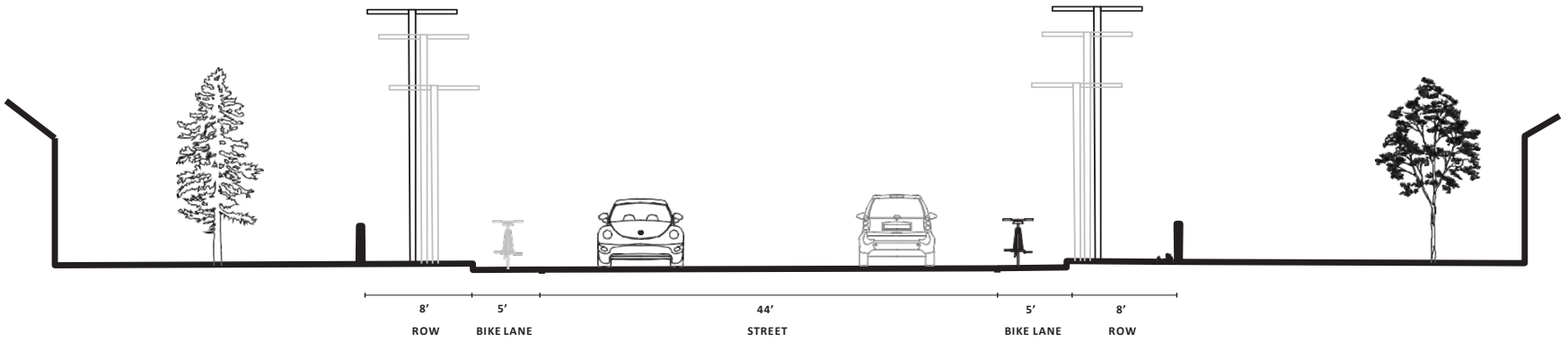
TOPO 2: TRAFFIC MEDIAN WITH MULTI-USE PATHS

Green Infrastructure Sources: http://nrcsolutions.org/_ | http://nrcsolutions.org/green-streets-active-practice-guide-tucson-arizona/ | https://resilientwest.org/case-study/tucson-az-active-policy-guidelines-green-streets/ | https://www.vibrantcitieslab.com/case-studies/4006/ | https://www.epa.gov/region8/green-infrastructure | https://www.epa.gov/green-infrastructure/green-infrastructure-modeling-tools | https://stormwater.pca.state.mn.us/index.php/Available_stormwater_models_and_selecting_a_model | https://www.vibrantcitieslab.com/resources/low-impact-development-and-green-infrastructure-in-the-semi-arid-west/ | http://nrcsolutions.org/green-streets-active-practice-guide-tucson-arizona/

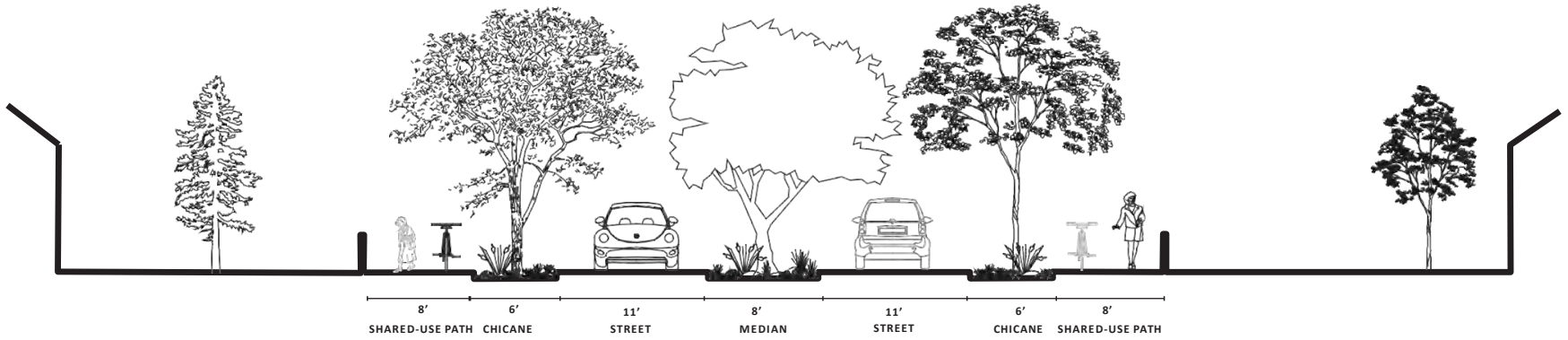
Traffic Design Sources: https://www.tucsonaz.gov/files/transportation/Design_Manual_Working_Working_DRAFT_03_03_2020.pdf | https://azdot.gov/business/engineering-and-construction/traffic/signing-and-marking-standard-sms-drawings

Street Section of Potential Topology for Main Arterials Columbus & Glenn

EXISTING N. COLUMBUS BLVD.

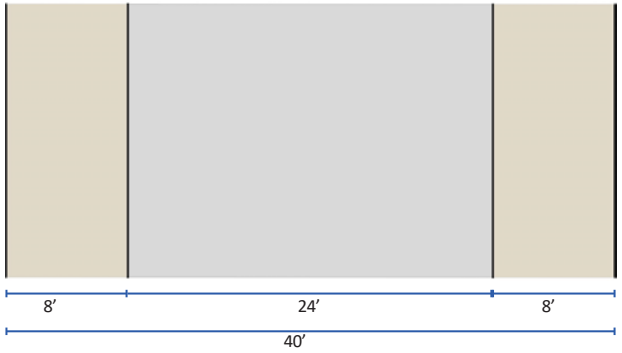


TOPOLOGY: MEDIAN WITH SHARED-USE PATH
N. COLUMBUS BLVD. OR E. GLENN ST.

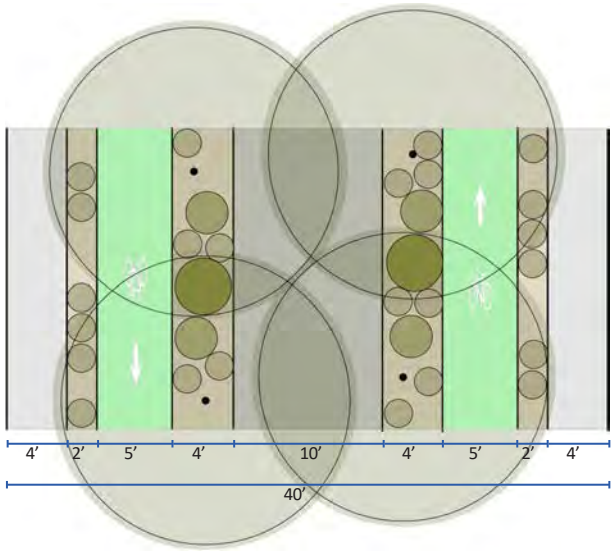


Topologies for Green Streetscape

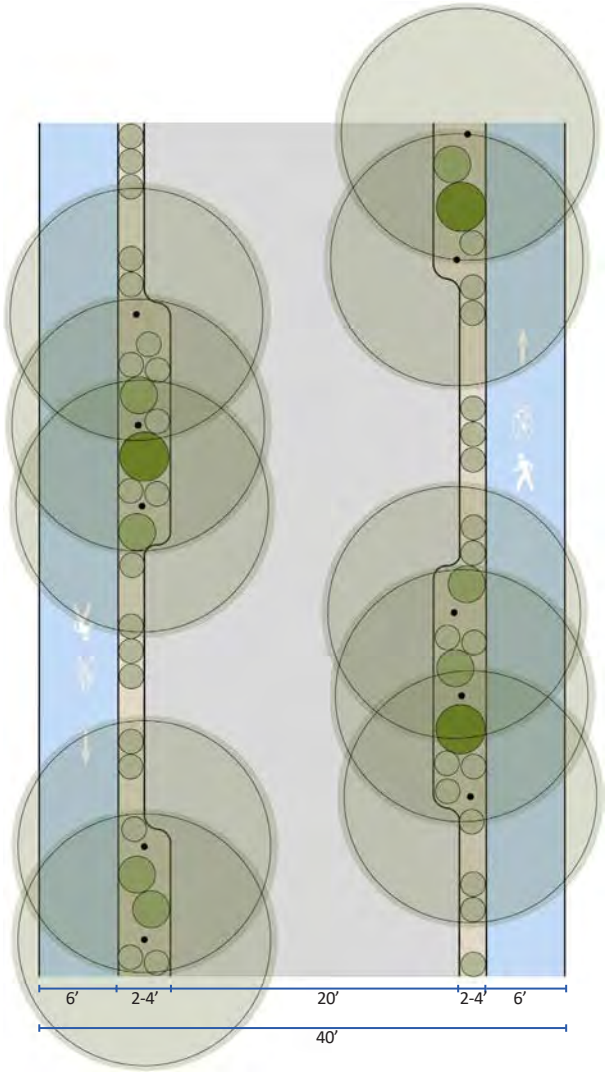
For Lower Traffic Streets:
N. Fair Oaks Ave. & E. Flower St.



EXISTING E. FLOWER ST.



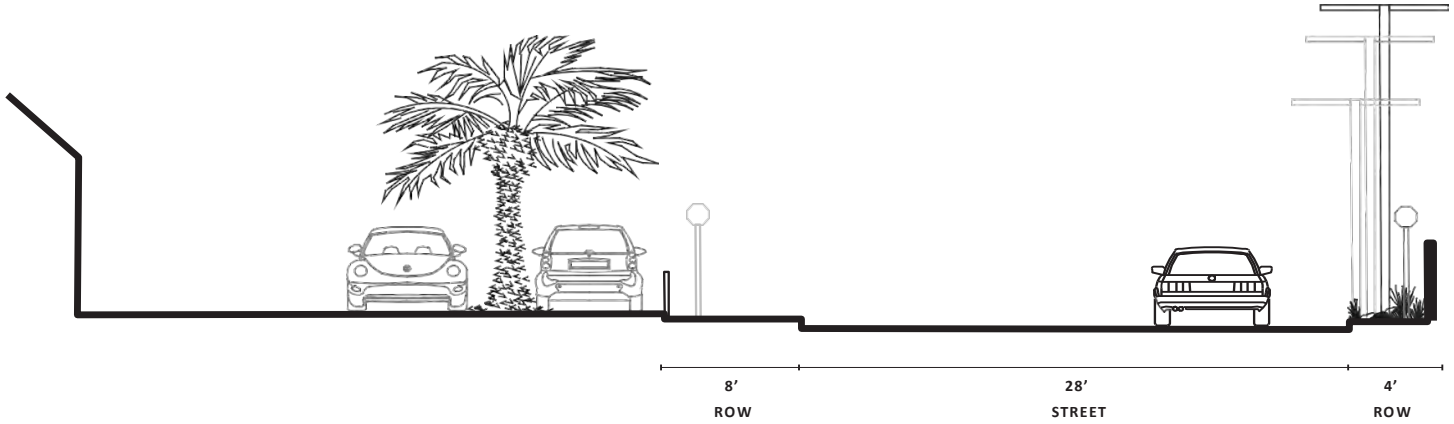
TOPO 3: VEGETATED BUFFERS & TAKE TURNS ROW



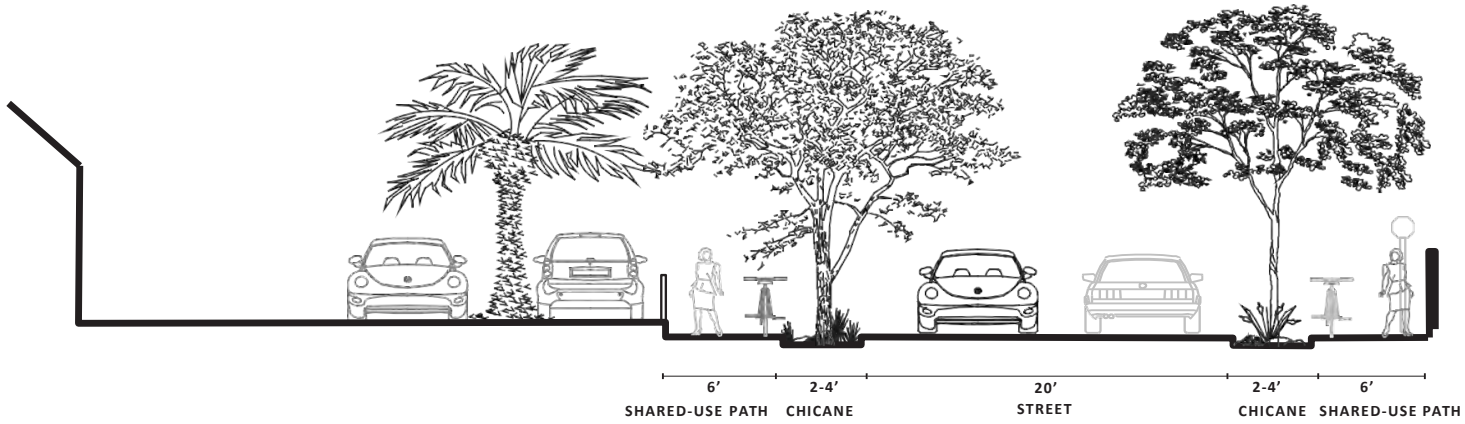
TOPO 4: MEANDERING CHICANES
WITH MULTI-USE PATHS

Street Section of Potential Topology for Lower Traffic Fair Oaks & Flower

EXISTING E. FLOWER ST.



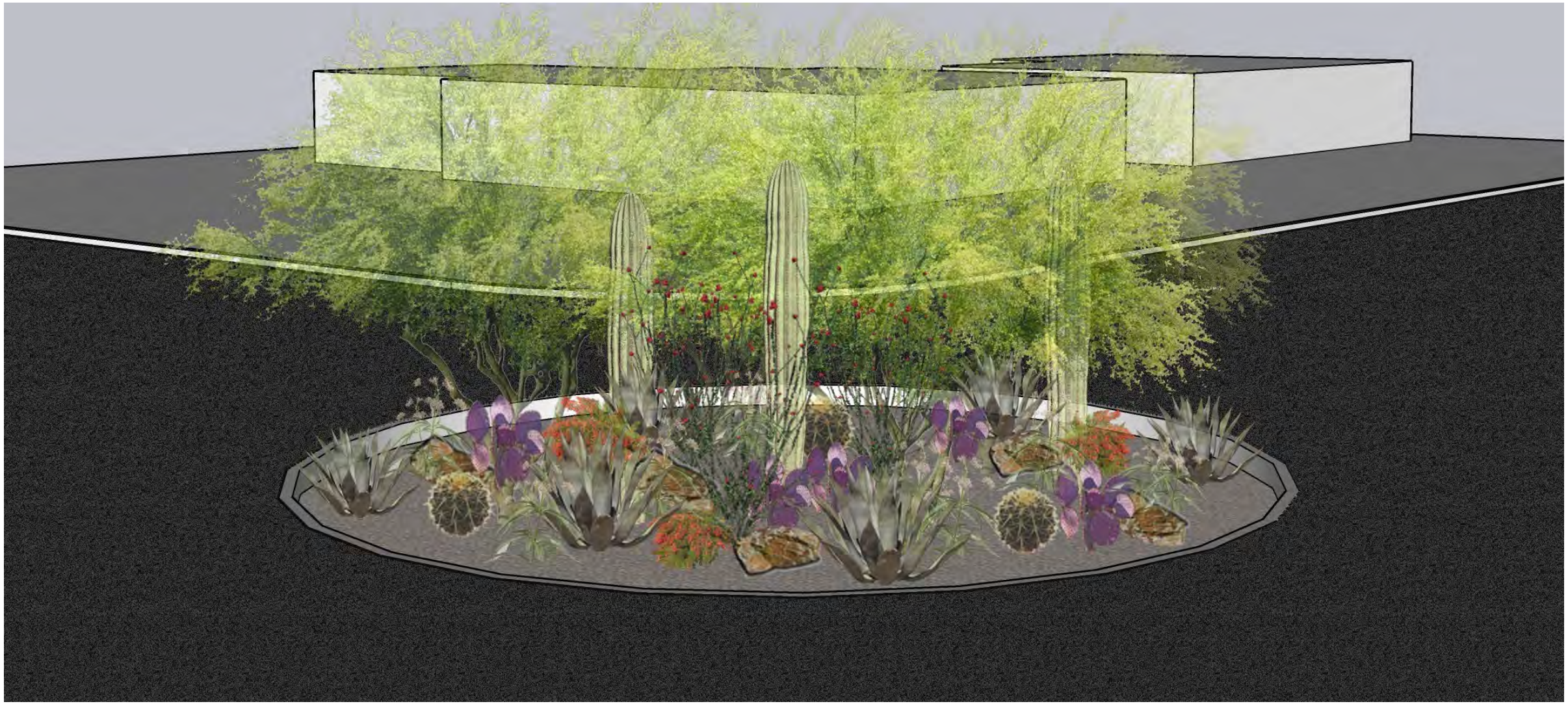
TOPOLOGY: MEANDERING CHICANE WITH SHARED-USE PATH
E. FLOWER ST. STREET OR N. FAIR OAKS AVE.



Topologies for Roundabout - With Trees

SW View @ Potential Roundabout

Glenn & Columbus



Topologies for Roundabout - No Trees

SW View @ Potential Roundabout
Glenn & Columbus

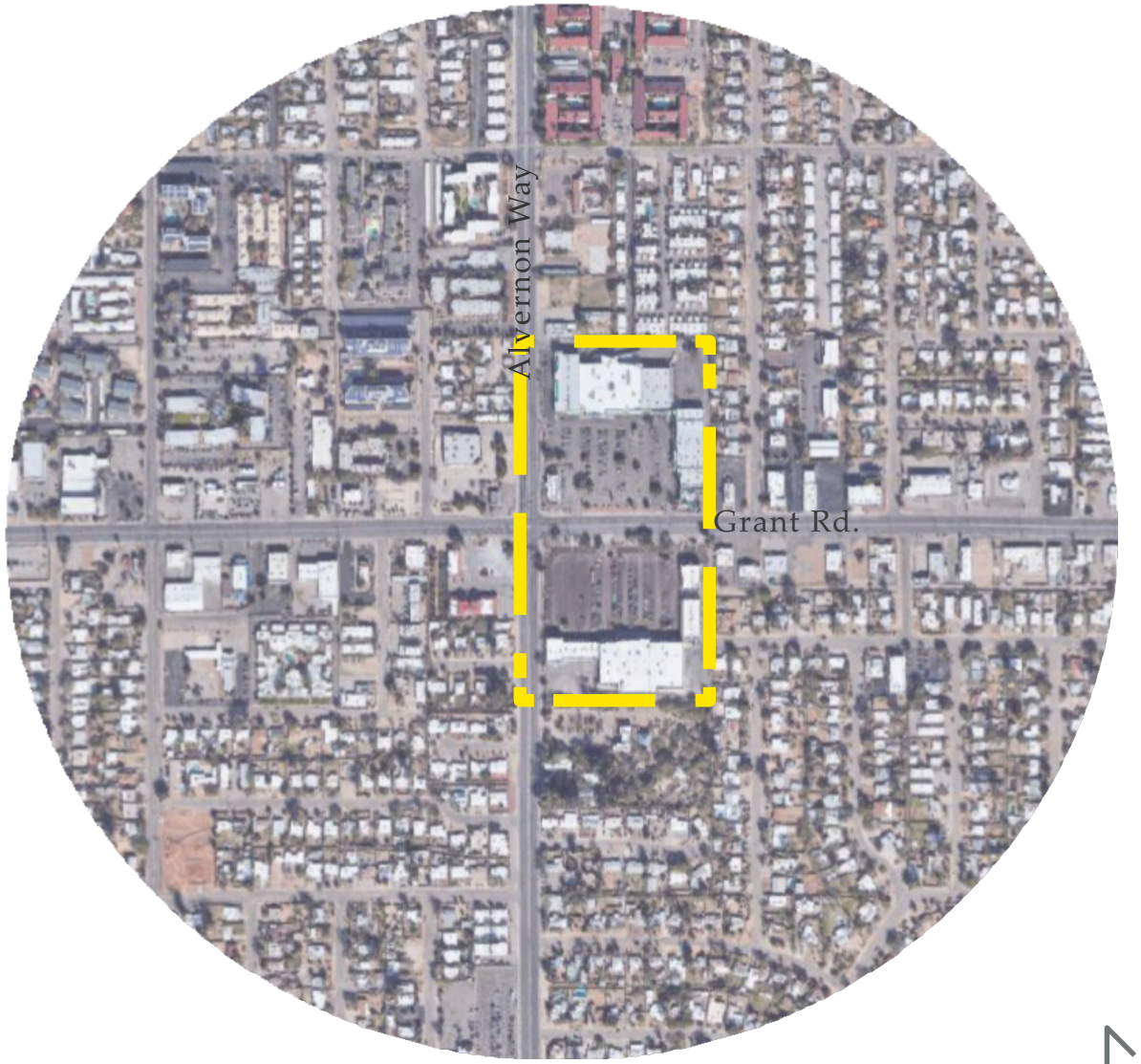
GREENING GRANT

CONTEXT

LAR623 |Land Planning Studio
Spring 2021

Mattea Wallace
Christian Galindo

Bo Yang



Existing

- 7% Tree Canopy Cover
- Upper-Moderate
- Heat Vulnerability
- Poor pedestrian accessibility
- Poor cyclist accessibility
- Sea of asphalt

ANALYSIS

Racial Demographics

72.5% White
12.7% Black or African American
5.5% Asian
18% Hispanic or Latino

Means of Transportation to Work

85.3% by car, truck, or van
9.0% carpool
5.0% public transport
2.7% walk
.5% bicycle
5.2% work from home

Tree Canopy Cover

7%

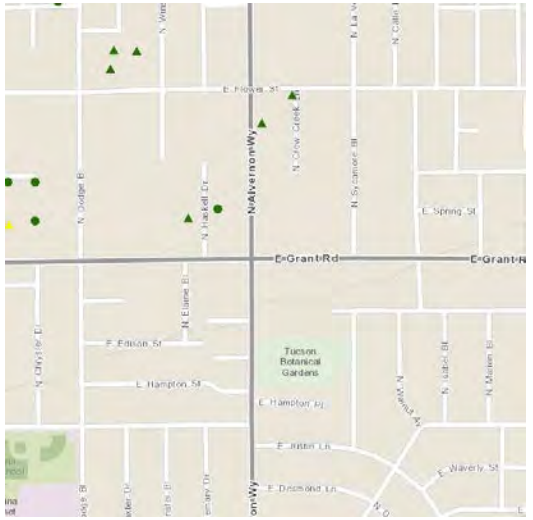
Heat Vulnerability

Upper-Moderate

Topography

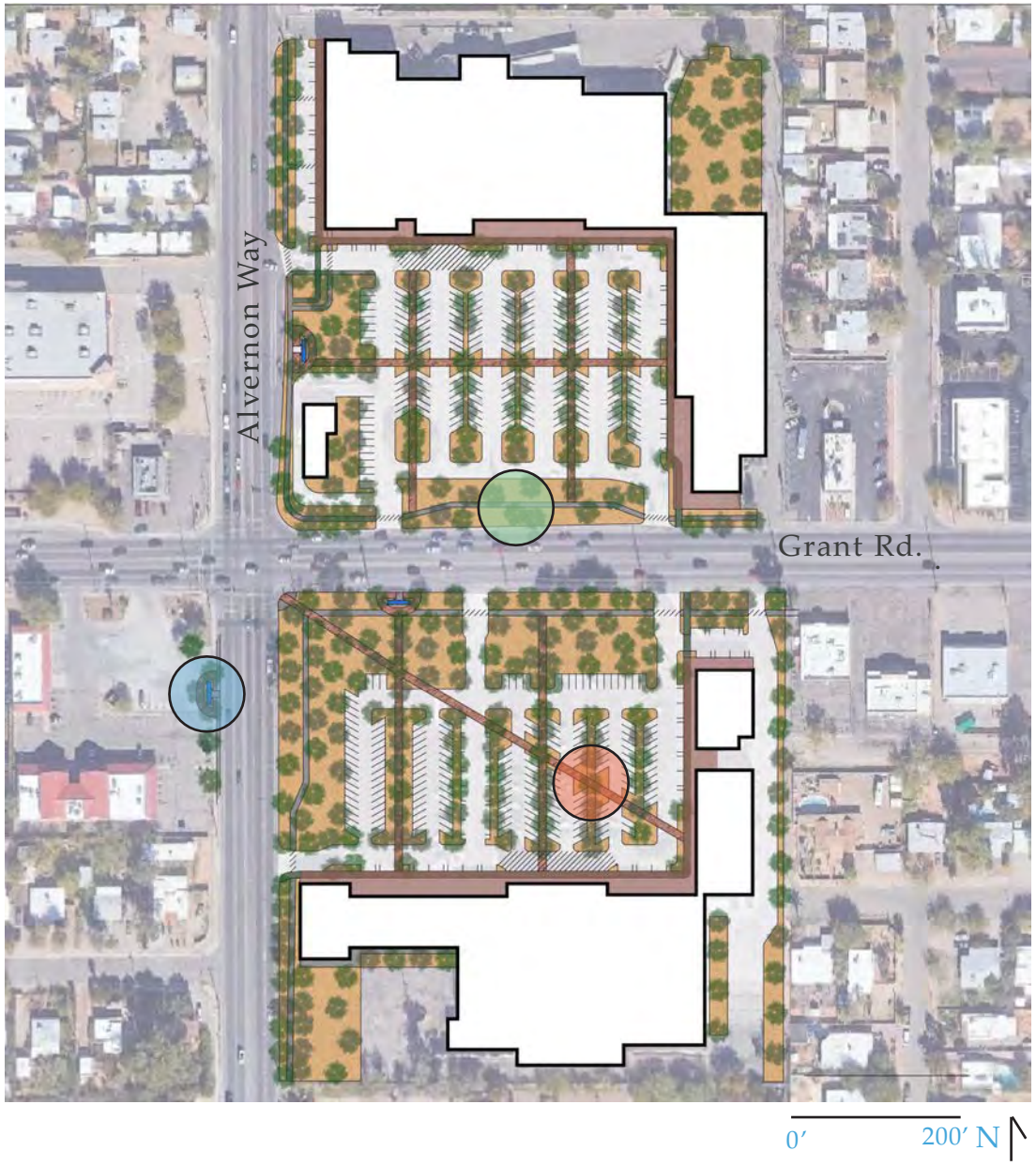
Drainage Pathways

Wash over 10000 CFS



Basins

CONCEPT



3 Major Design Typologies & Potential Development Guidelines

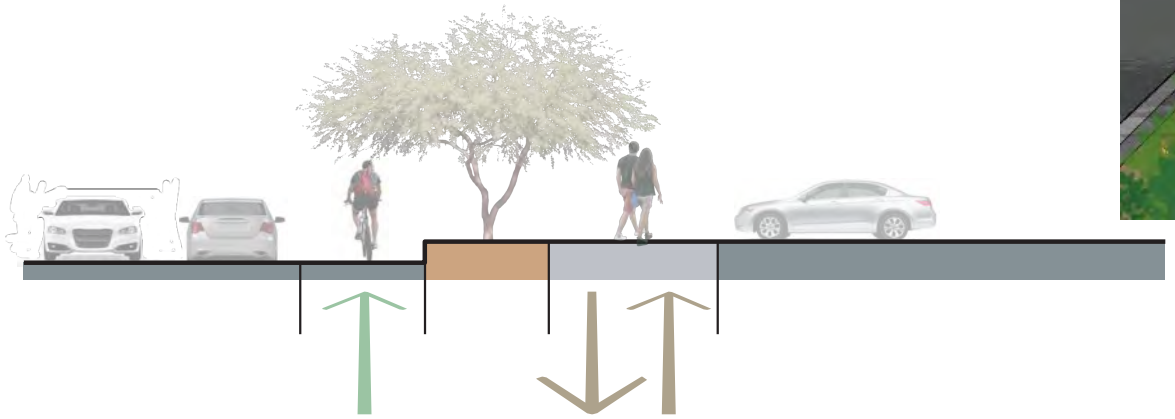
Linear
Pedestrian and
Cyclist Lanes

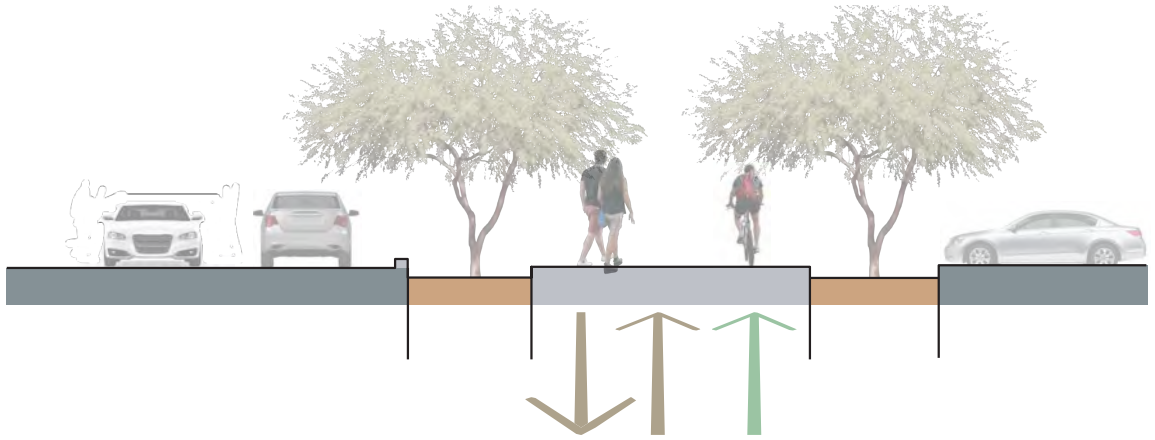
Node
Bus Stop Pocket
Parks and Detention
Basins

Matrix
Green Parking Lots with Green Islands
and Pedestrian Circulation

LINEAR

- Pedestrian and cyclist Safety
- User Experience
- Traffic Flow
- Increased Canopy Coverage





- improved wheelchair accessibility
- safer cycling
- storm water management
- potential lower cost

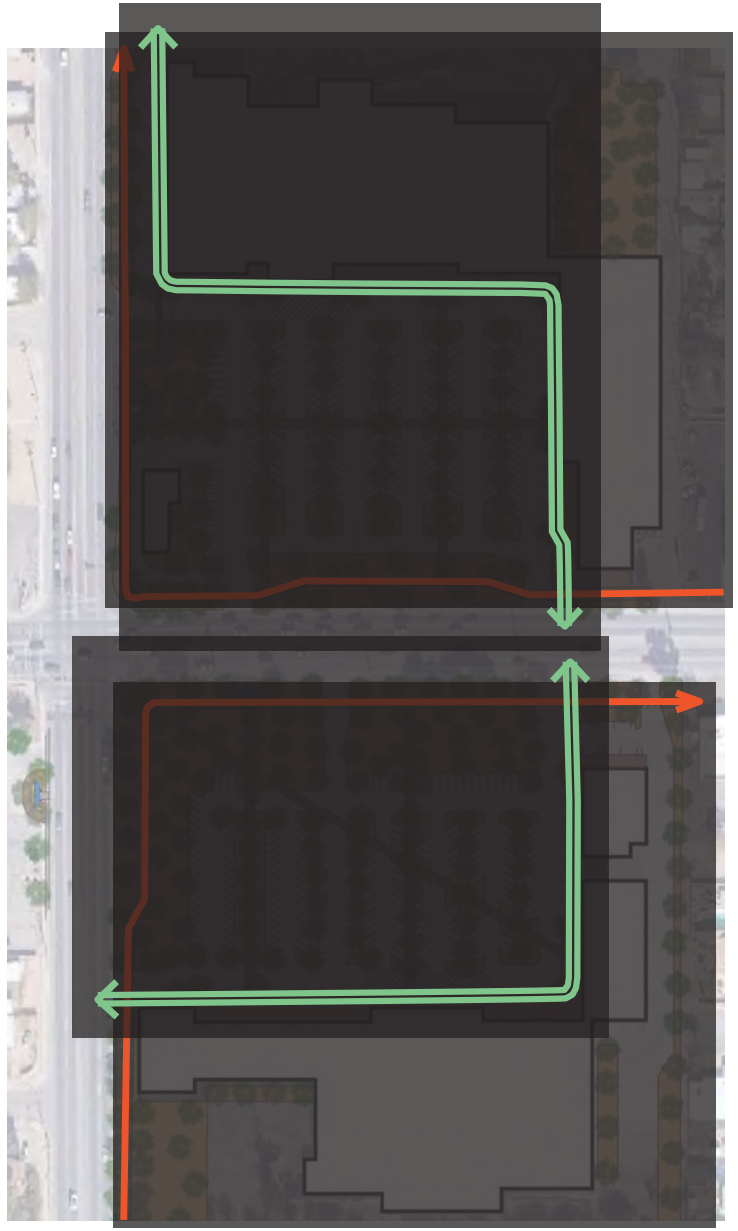
Cycling lane
Walking Path

Linear Park
Greenway Detention Basin

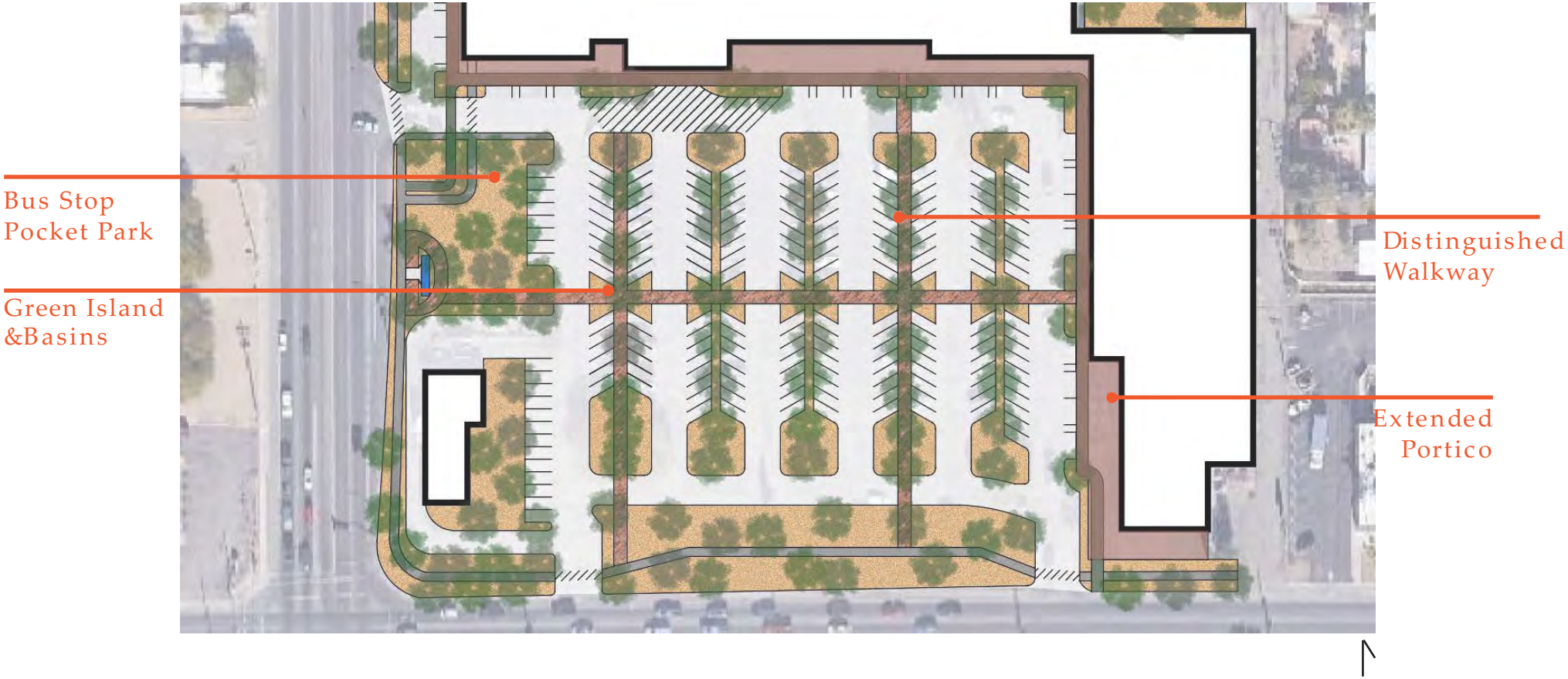
LINEAR

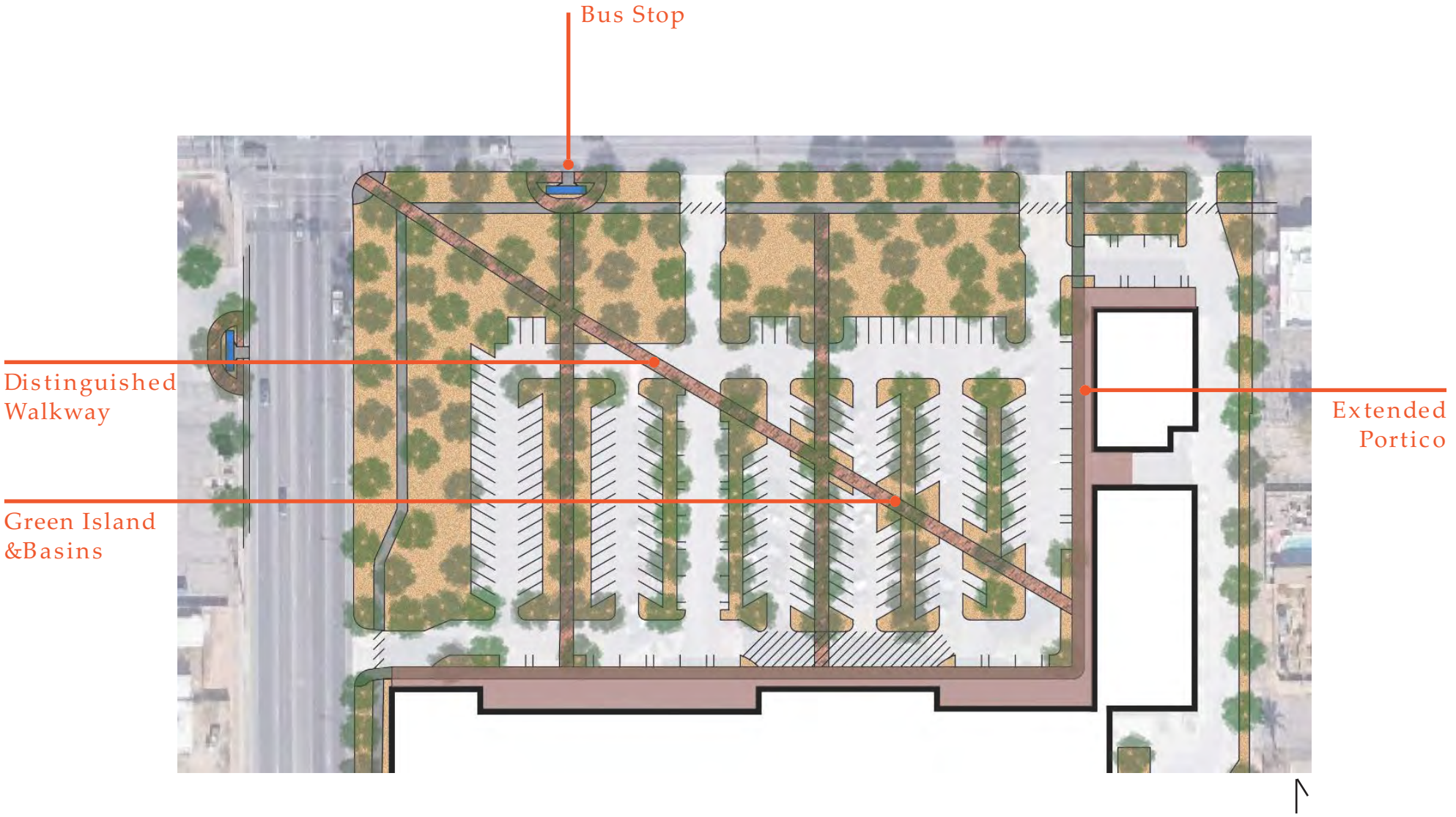
One-way bike path
with two-way
pedestrian walkway

Shaded two-way
bike path



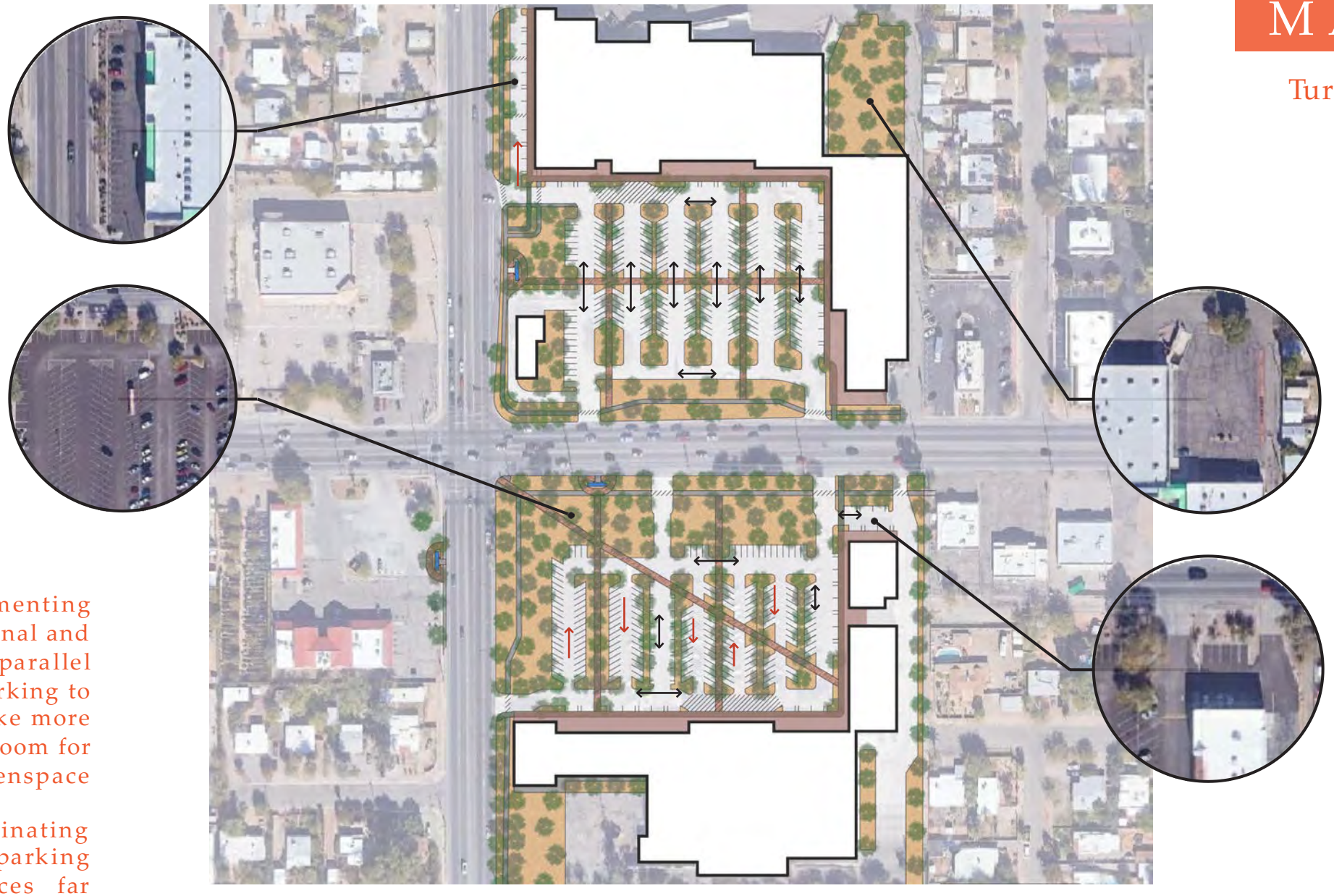
- Pedestrian Safety
- Traffic Flow
- Increase Canopy Coverage
- Green Islands
- Detention Basins
- Increase Pervious Cover
- Maximize Building Efficiency




Bus Stop
Distinguished Walkway
Green Island &Basins
Extended Portico

MATRIX

Turning parking into parks



Implementing diagonal and parallel parking to make more room for greenspace

Eliminating parking spaces far from shops

N

Bus Stop

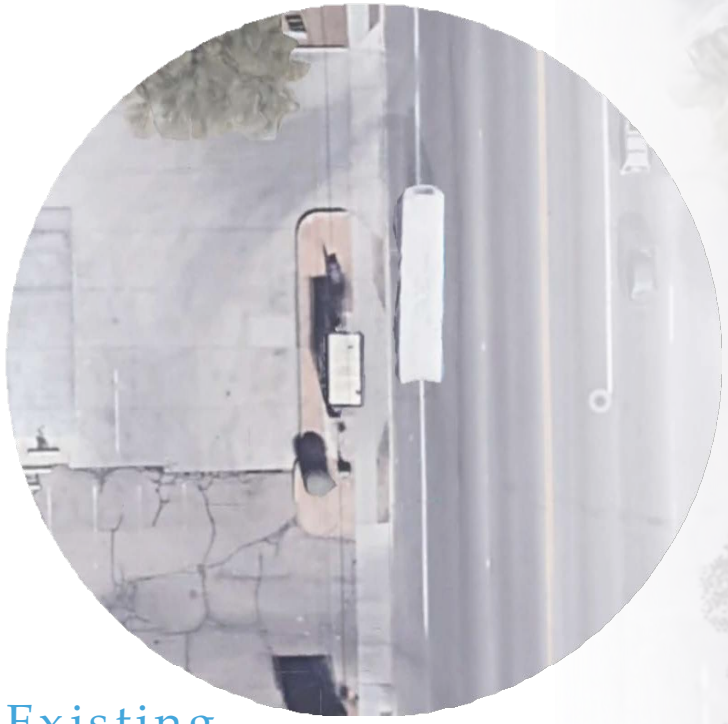
Current Conditions

- Lack of tree canopy
- Lack of shade
- Reflective heat
- Hardscape

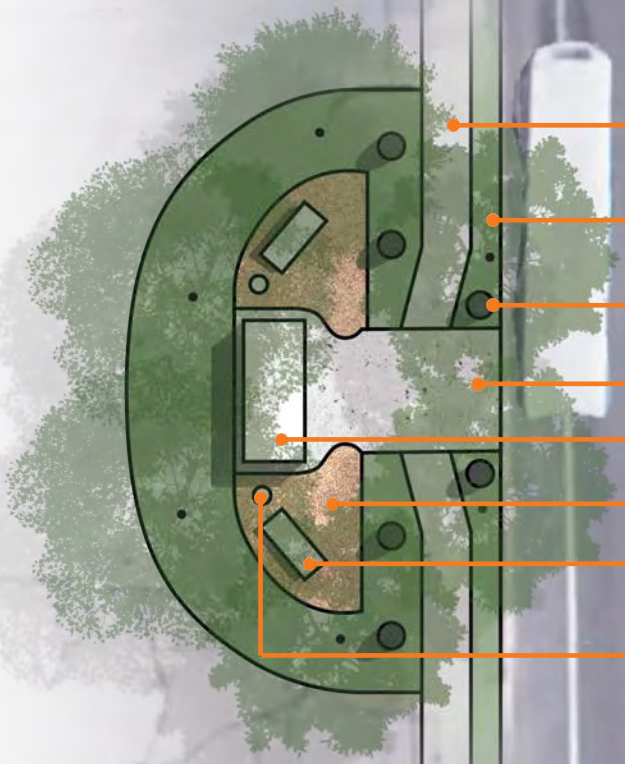
- Safety
- Exposed

- Proximity to vehicles
- Sun exposure
- No vegetation

NODE



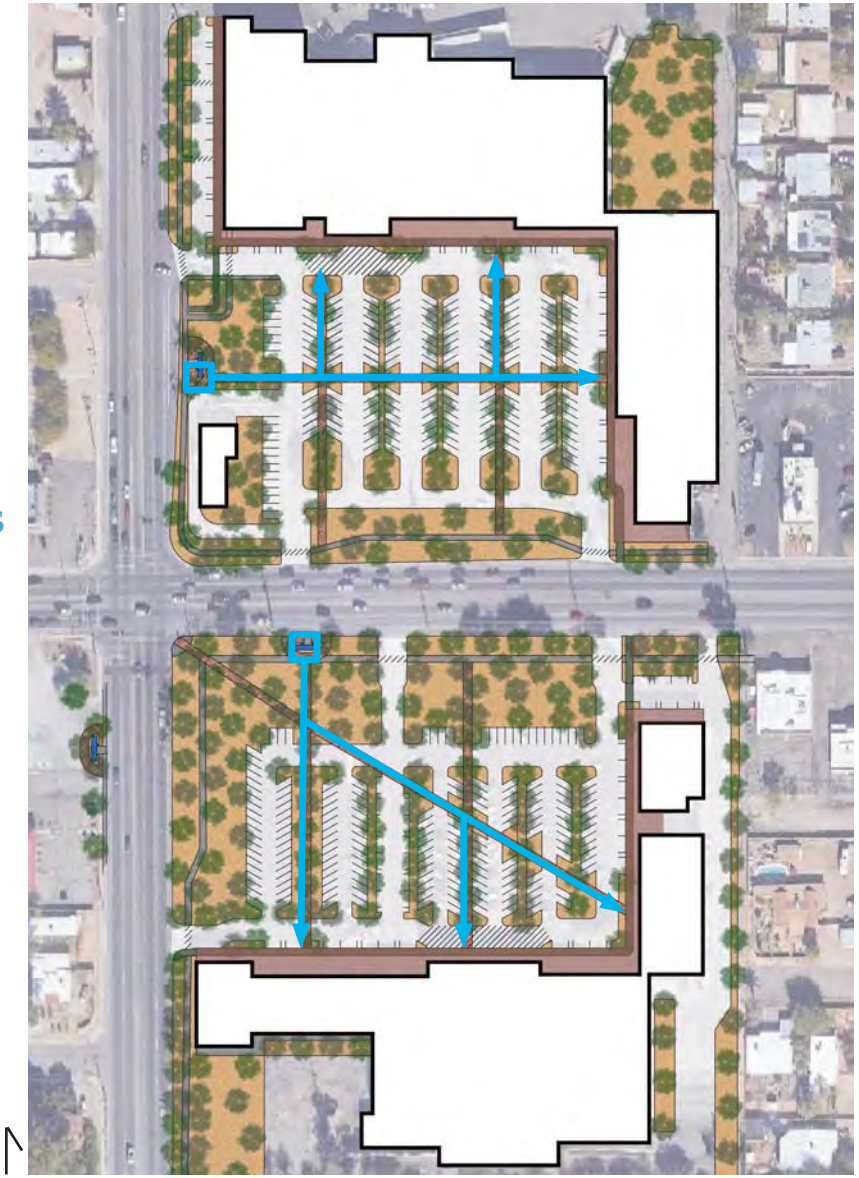
Existing



Proposed

Existing

Connecting Commuters



Bus Stop Pocket Park

1. Setback
- Permeable Pavers
- Decomposed Granite
- Usability

2. Safety
- Lighting
- Bollards
- Options

3. Shade & Microclimate
- Vegetation
- Ample tree canopy

GREENING GRANT

Design

Applying this design to the greater Grant-Alvernon Planning Area

1. Include a minimum of 6ft buffer between street and sidewalks

2. Keep cyclists off of main roads

3. Basins in each buffer space with curb cuts

LINEAR

1. Implement "green islands" in large parking lots

2. Distinguished pedestrian walk-ways

3. Use 60 degree and parallel park-ing to save space

MATRIX

1. Setback, safety, shade

2. Connect stop to destination

3. Minimize ramps for pedestians. Keep walkways at same level as the street

NODE

Community Green Infrastructure Design

DR

STUDY AREA: Garden District, North Street Cul-de-sac
DR. BO YANG
SPRING 2021
A. POTUCEK

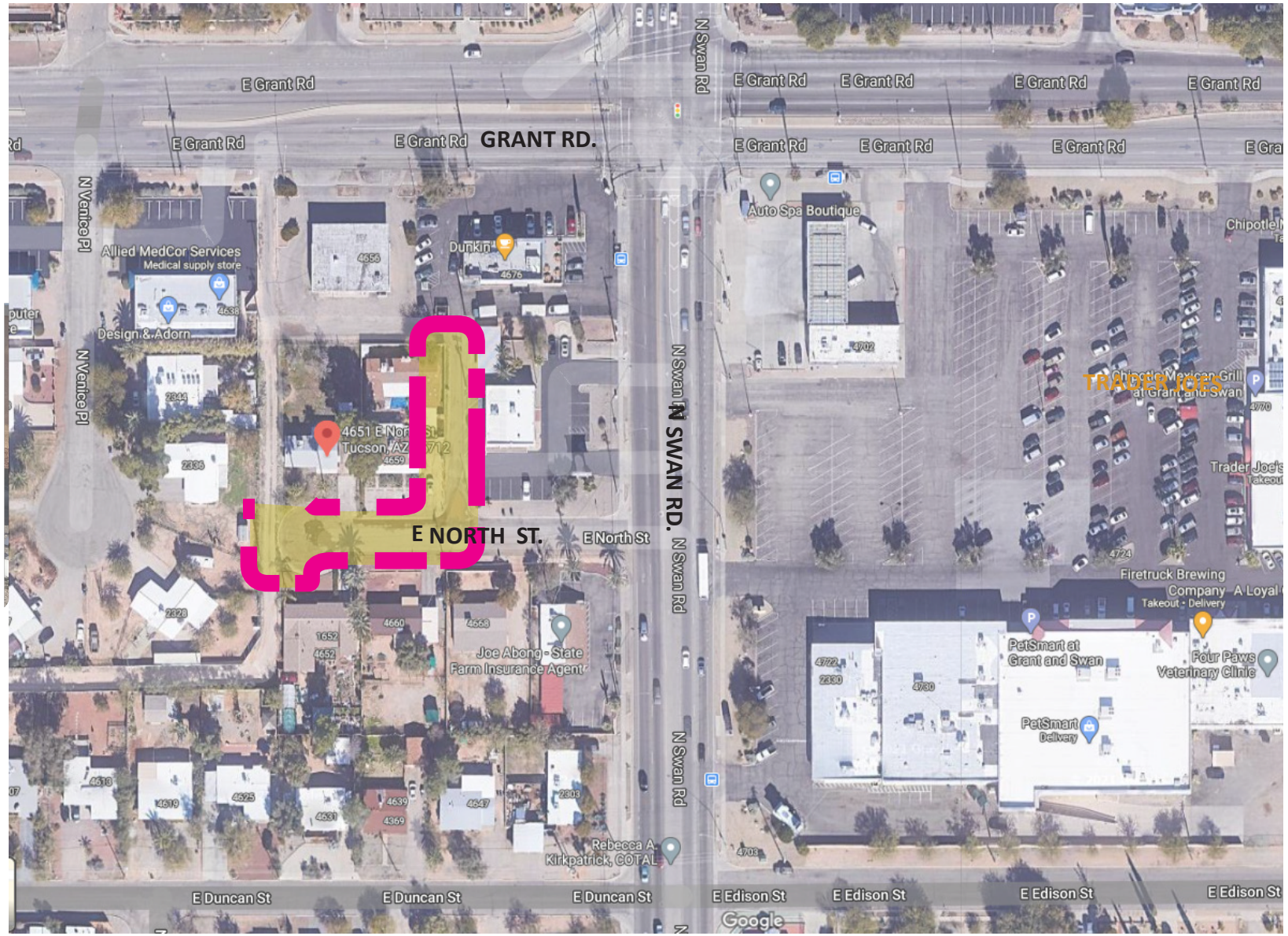
Neighborhood Scale Stormwater Harvesting

Tucson Water has partnered with Tucson Clean & Beautiful (TCB) to have TCB administer a neighborhood stormwater harvesting grant program. This program is to provide neighborhoods with resources to plan and implement neighborhood-scale stormwater harvesting installations within a City of Tucson public area, such as roadway rights-of-way, parks and open space (including Homeowners Association common areas). Neighborhood stormwater harvesting, when coupled with vegetation plantings, provide community benefits by increasing urban tree canopy, providing stormwater management, mitigating urban heat island effects, and enhancing neighborhood walkability and safety through traffic calming.

Left: An example of a Neighborhood scale stormwater harvesting basin installed in 2020 in Barrio Santa Cruz.

Upper Right: An example of a stormwater harvesting basin in a parking lot. Native trees and bushes are well adapted to the Sonoran climate and promote urban ecology.

Tucson Clean & Beautiful Inc. is a non-profit organization with a mission to preserve and improve our environment, conserve natural resources, and enhance the quality of life throughout the Tucson metropolitan area. The organization's educational and hands-on, voluteer-driven programs enable area residents to join together to build community and create visible, sustained improvement to our unique desert environment. Each year the organization's staff provide tools and resources to support the efforts of a diverse base of more than 300 volunteer groups who together represent thousands of volunteers in our community. These groups are helping every day to recycle, clean up litter, remove buffelgrass and other invasive species, plant native and desert adapted shade trees, and harvest and conserve water. Join us today!



Context / Inventory

• 5 Neighbors, 4651 to 4668 E. North St. all in support of project, lead by Garden District Neighborhood Association President- Lois Pawlak

•Water flows North to Grant, but sits in the cul-de-sac

•South parcels, parking lot, and properties to the north and northeast, and alley all drain into site

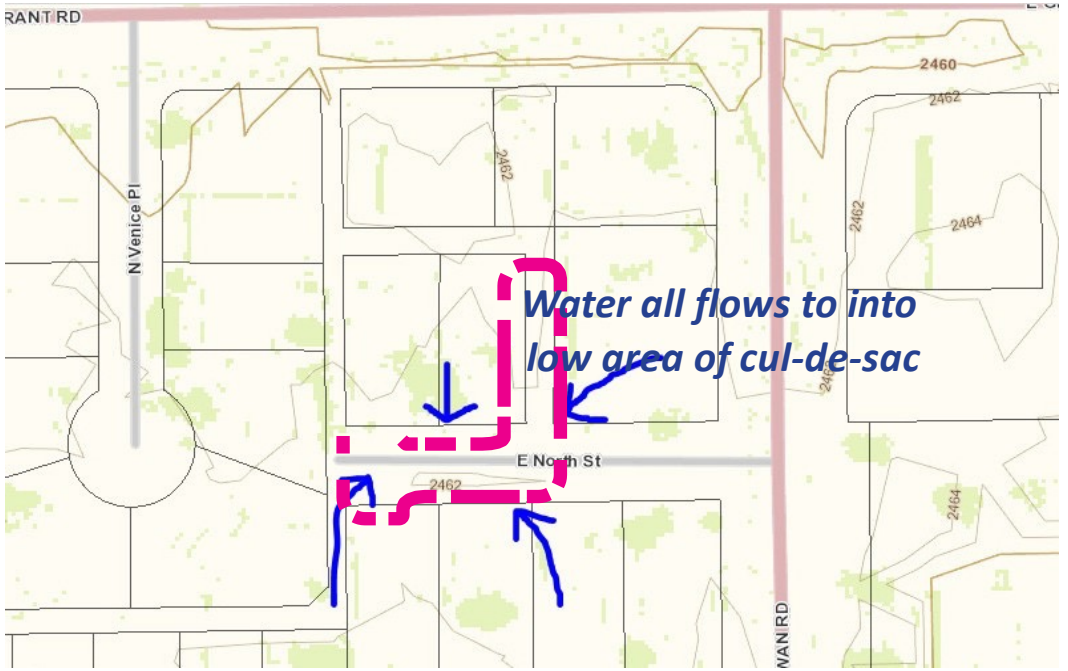
•Request to TDOT Concerns to investigate of the north south alley can be closed off at North St. to help alleviate further destruction of North St. by delivery and trash trucks

Site challenges

•Flooding and standing water in the street that lasts for up to 2 weeks after a rain. Problem has existed for 10 years

• Close proximity to Swan and Grant car noise

•Street does not look nice, neighbors want beautification improvements



Inventory & Analysis

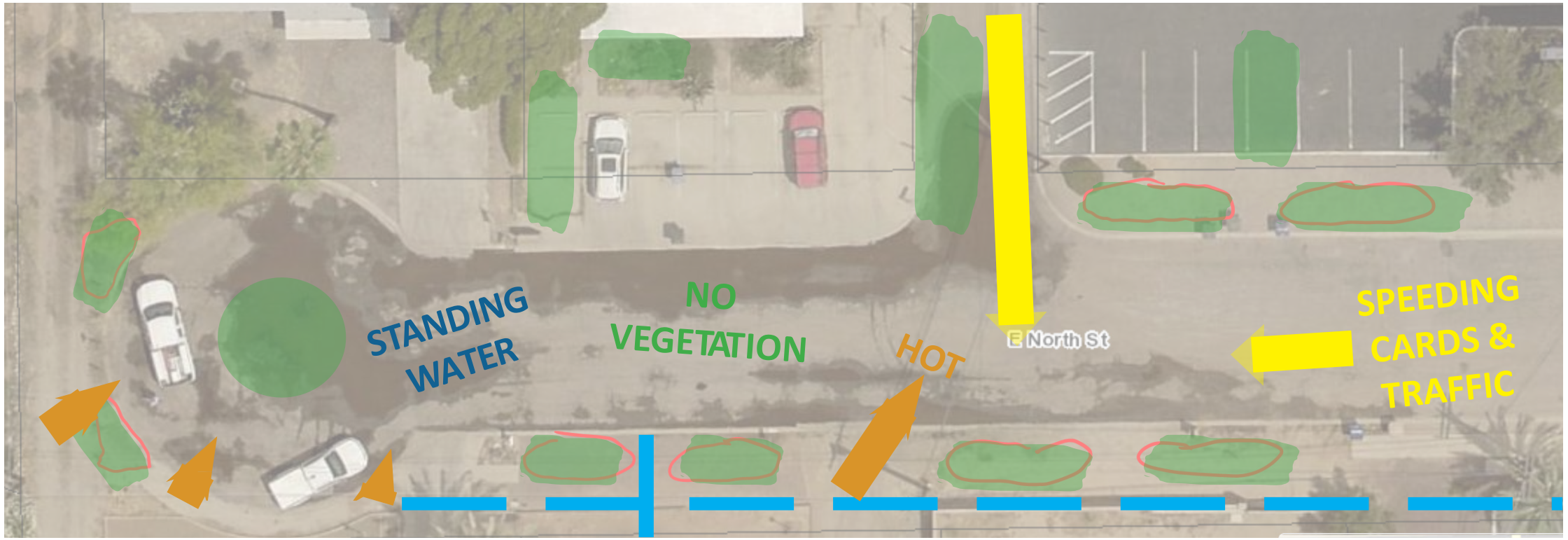
- Private water harvesting, adding trees

- Reducing impervious surfaces upstream on north and northeast properties. Upstream parking lots adding trees, water harvesting basins and removing impervious surface

- Increase tree canopy, green alleyway

- Large back of curb basins with curb cuts

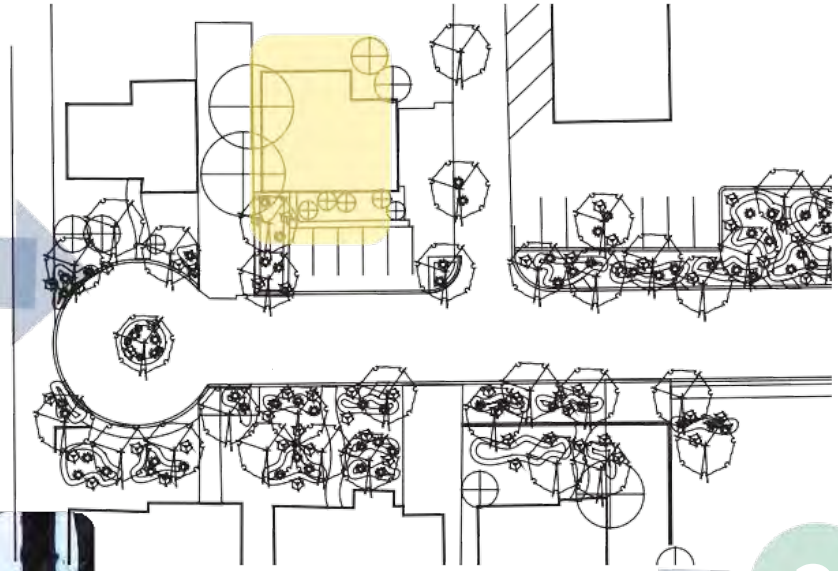
- Green traffic circle in cul-de-sac



Concept Development

The North St GSI project, in collaboration with the Garden District Neighborhood , Tucson Clean and Beautiful (TCB), seeks to address problematic flooding issues in the area while also establishing beneficial native raingardens and tree canopy.

1



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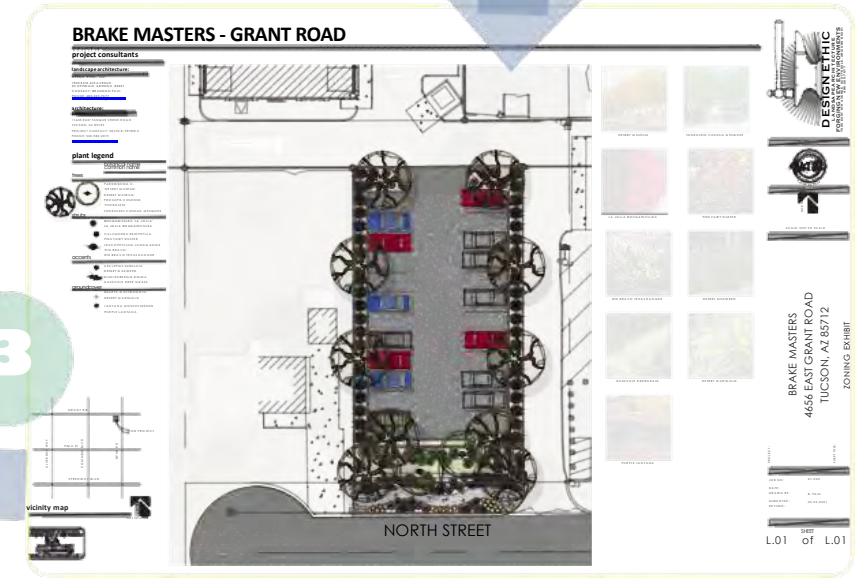
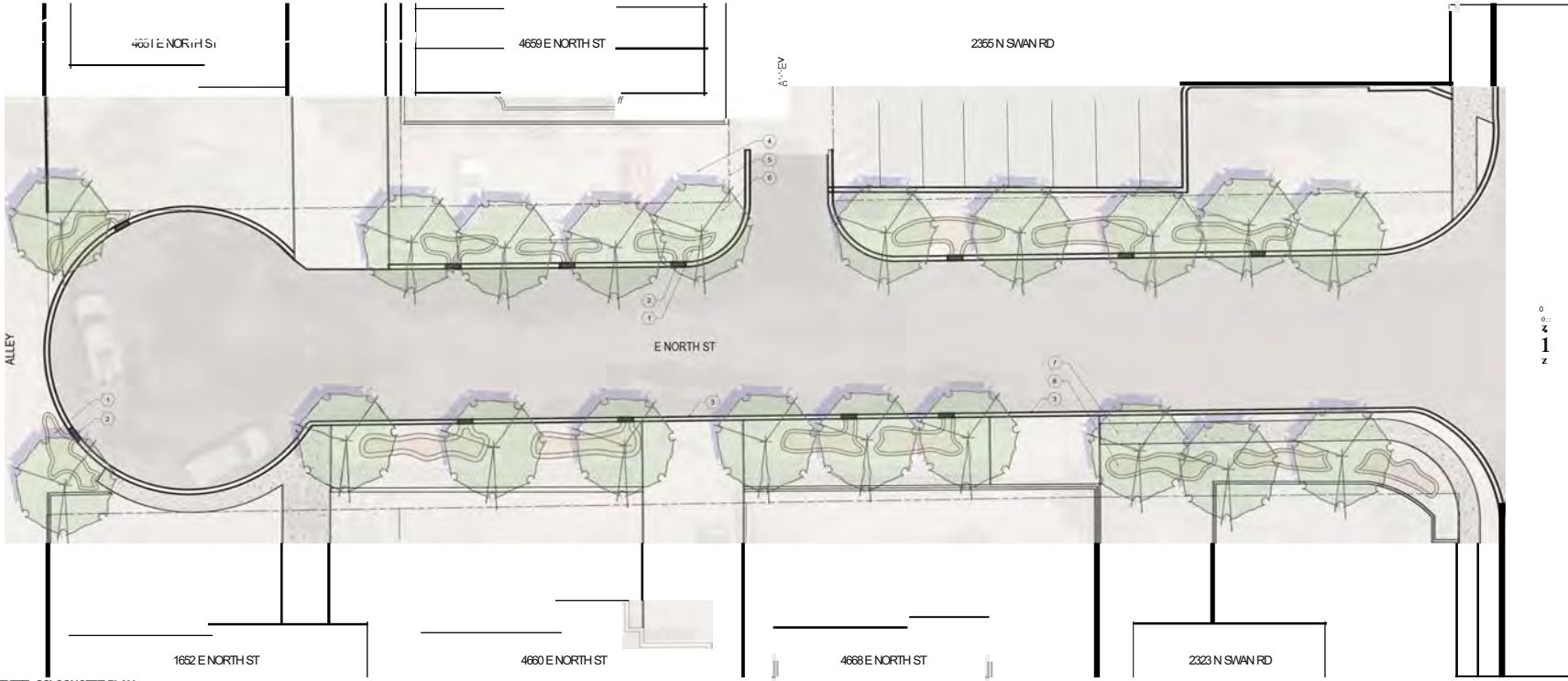


3

4

Community meeting on April 14th, 2021 with Breakmasters, KPB Architecture, Neighborhood Association, Ward 6 Office and North Street Residents



NORTH STREET GSI CONCEPT PLAN

NORTH ST GSI - PROJECT OVERVIEW

The North St GSI project, in collaboration with the Garden District Neighborhood , Tucson Clean and Beautiful (TCB), seeks to address problematic flooding issues in the area while also establishing beneficial native raingardens and tree canopy

GSI treatments proposed for City of Tucson (COT) owned right-of-ways are designed to reduce North St flood volumes and capitalize on stormwater flows for the benefit of native shrubs and trees.

TCB will provide design, project management, permitting oversight, and construction administration for work areas within City-owned right-of-way only.

Development areas associated with the Brakemasters parking lot expansion will be the responsibility of the respective property owner.

PLANTING NOTES

A plant palette consisting of native trees, shrubs, grasses, succulents, and wildflowers will be employed to

1) Enhance neighborhood shade canopy
2) Intercept and infiltrate stormwater flows
3) Improve water and air quality
4) Create wildlife/pollinatohabitat
5) Ensure landscape resiliance and drought tolerance
6) Beautify neighborhood

TCB will provide plant palette feedback and guidance at the request of individual property owners for areas outside City-owned right-of-way (Brakemasters)

DEMOLITION NOTES

GSI treatments proposed at 4659 E North St are contingent on the removal of existing concrete in right-of-way.

TCB will not be responsible for the demolition and removal of existing concrete in right-of-way and suggests that this work take place in coordination with the re-paving of North Street.

GENERAL NOTES

Drawings are conceptual and not for construction.

Detailed plans will be provided by TCB for COT right-of-way areas at a future phase in coordination with work associated with Brakemasters Parking Lot expansion.

Plans will require review and permitting from City of Tucson Department of Transportation and Mobility.

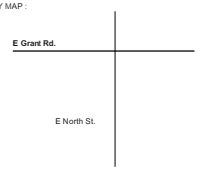
KEYNOTES

0 Rock armored water harvesting basin, 8"-12" depth, 1:1 side slopes
0 Curb cut basin inlet
0 Driveway
0 GSI retention basin - Work area by others (Brakemasters)
0 Property line
0 5' wide - informal decomposed granite path (wet and tamp)
0 Existing concrete sidewalk
0 Shallow water harvesting basin, 6" max depth, no rock armoring

mHTUCSON
I.Lil,// CLEAN &

SHEET INDEX

KEY MAP :



PROJECT INFORMATION

Garden District North St. GSI

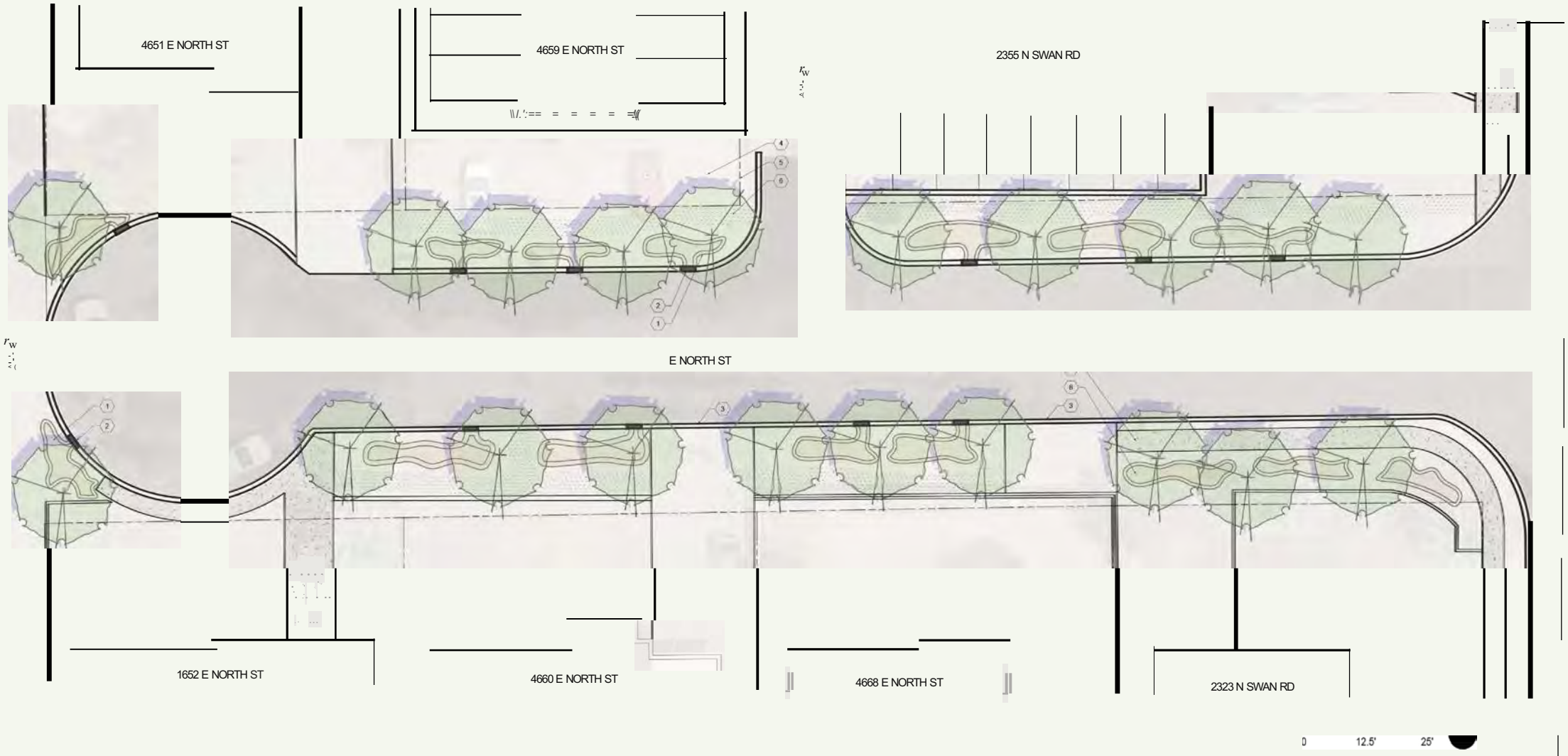
North St.
Tucson AZ 85712

Project Overview

DRAWING NAME

L 1

DRAWING NUMBER


4651 E NORTH ST
4659 E NORTH ST
2355 N SWAN RD
E NORTH ST
1652 E NORTH ST
4660 E NORTH ST
4668 E NORTH ST
2323 N SWAN RD
0
12.5'
25'

After

Before

Green streets on E North Street will add trees and basins in the road ROW edge. This will help capture stormwater run-off and use it to support urban plant life. The stormwater can become and opportunity to increase tree canopy and support native plants.

Street Section

Native plants

Curb cuts

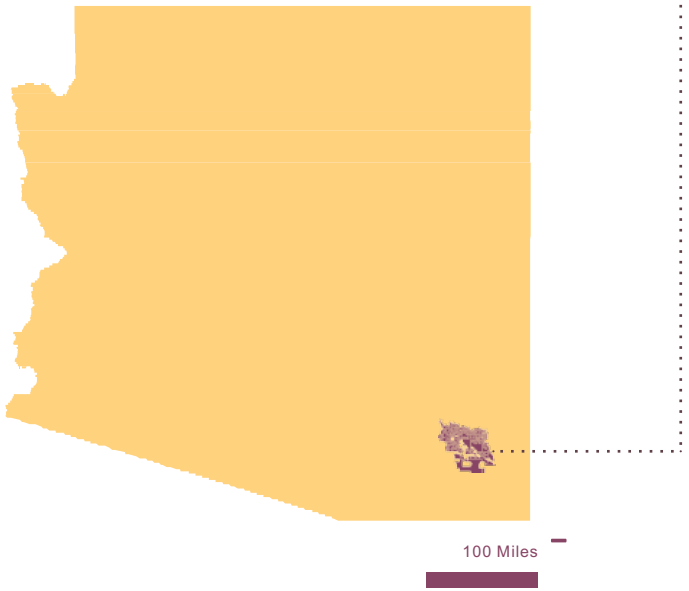
Rock armored slopes

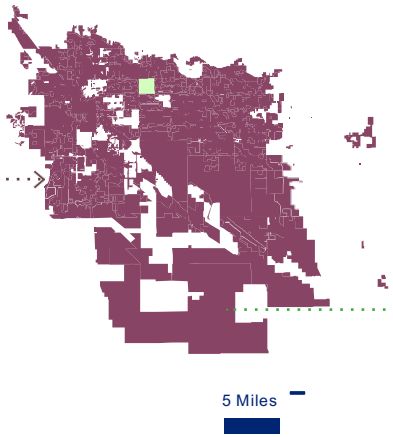
Volunteer & community supported

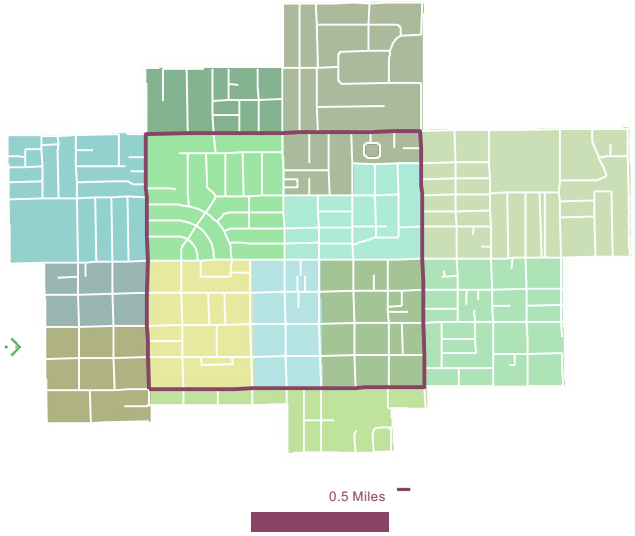
GO PLAY IN THE STREET

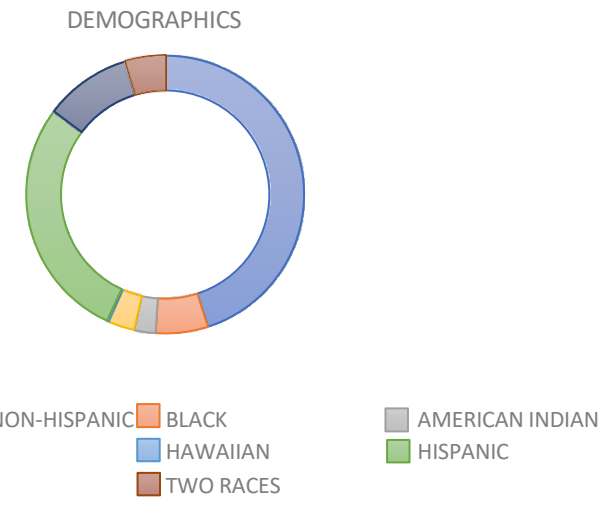
LAR 623
LOHSE // WISSLER

Site Context









Walkability

Garden District Neighborhood
Walkability Assessment Report
(June 2015)

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

Pima Association of Governments

living streets alliance
PROMOTING "STREETS FOR PEOPLE" IN THE GREATER TUCSON REGION
www.livingstreetsalliance.org

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

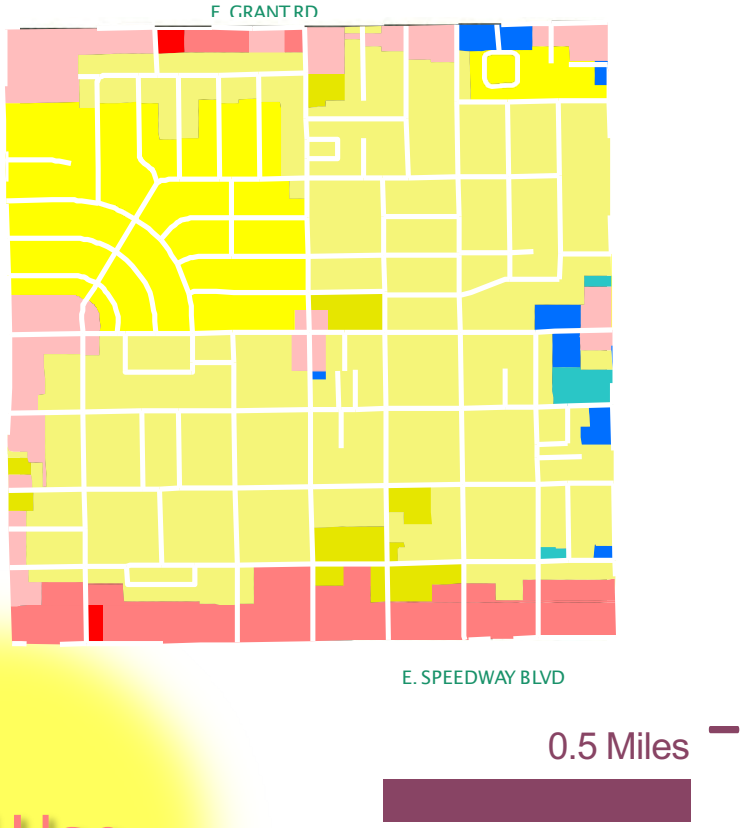
9

NEIGHBORHOOD WALKABILITY ASSSESSMENT RESULTS

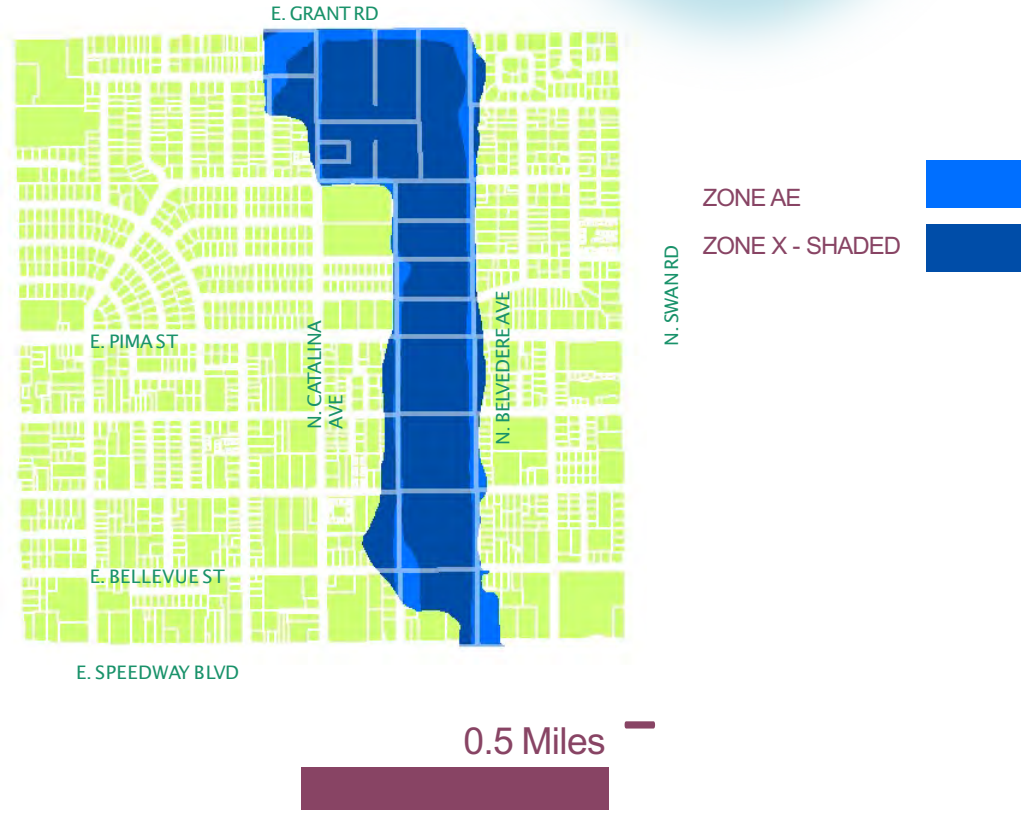
Walking Improvements Needed

- 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

Land Use



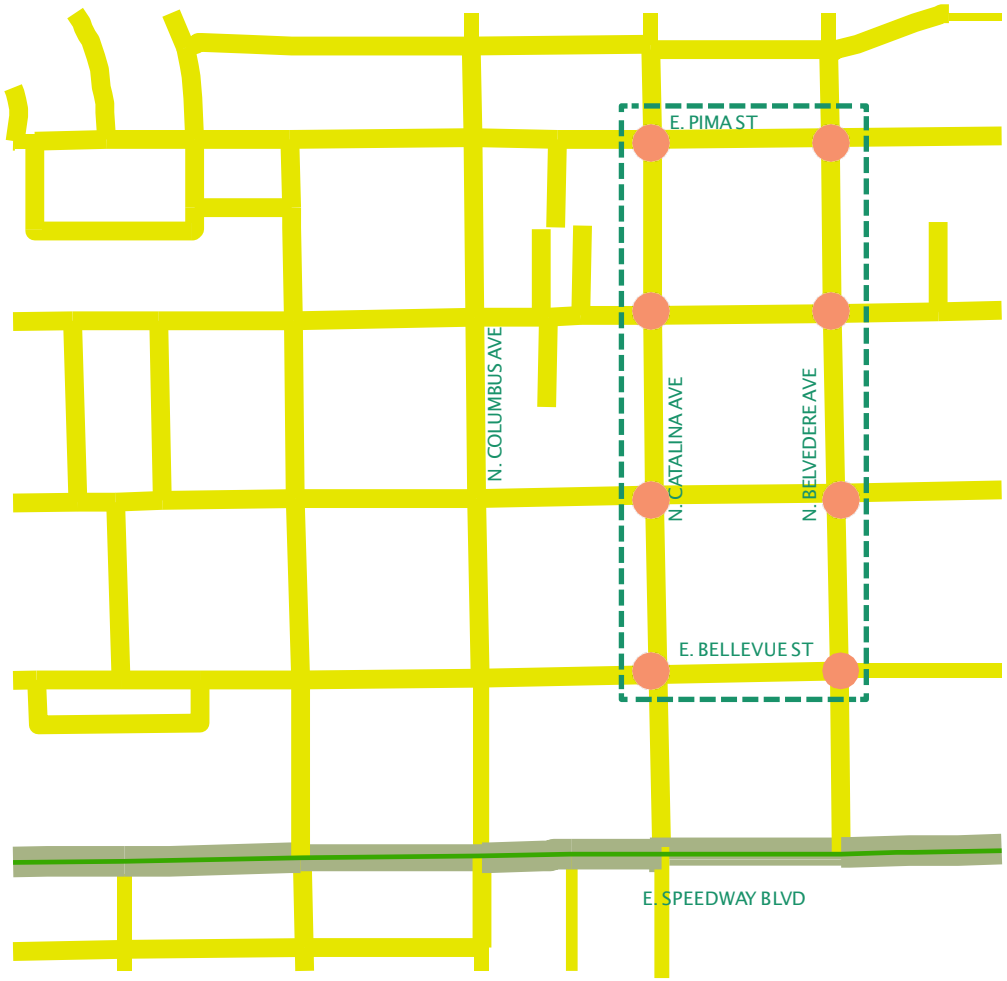
Flood Risk



Community Assessment:

1. Flooding on Catalina and Belvedere Avenues
2. Unnessecarily wide residential streets
3. Speeding
4. Low tree canopy
5. No parks
6. Few sidewalks

Proposed Program:

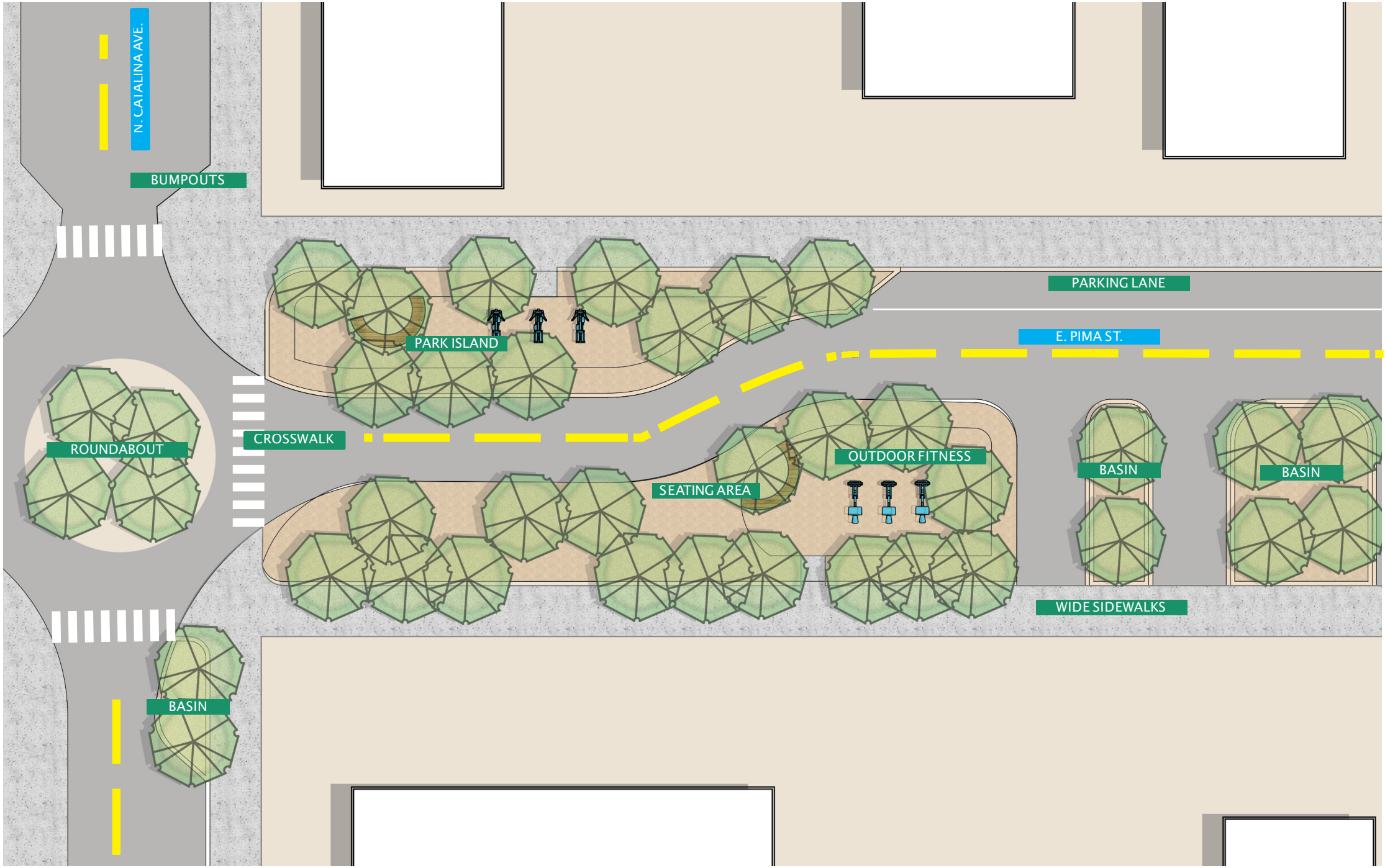


1. Install basins to reduce flooding
2. Narrow streets and use roundabouts to reduce speeding
3. Create 1-mile loop/linear park with wide ADA-accessible sidewalks and traffic crossings
4. Increase tree canopy
5. Create park islands within large basins
6. Install outdoor fitness equipment and seating areas within park islands

Sidewalk Typology

Parking Lane	Driving Lane	Driving Lane	Stormwater Basin	Park Island	Extra-Wide Sidewalk	Green Buffer
10’	10’	10’	min 6’	(varies)	12’	4’


NO SIDEWALKS
N. CAIALINA AVE.
NO TREE CANOPY
2 PARKING LANES
E PIMA ST.
E Pima St
NO CROSSWALK
EXTRA-WIDE TURNING LANE
NON-CONTIGUOUS SIDEWALKS
Google Earth
© 2021 Google
90 ft
N


N. CATALINA AVE.
BUMPOUTS
PARKING LANE
E. PIMA ST.
PARK ISLAND
CROSSWALK
ROUNDABOUT
OUTDOOR FITNESS
SEATING AREA
BASIN
BASIN
WIDE SIDEWALKS
BASIN

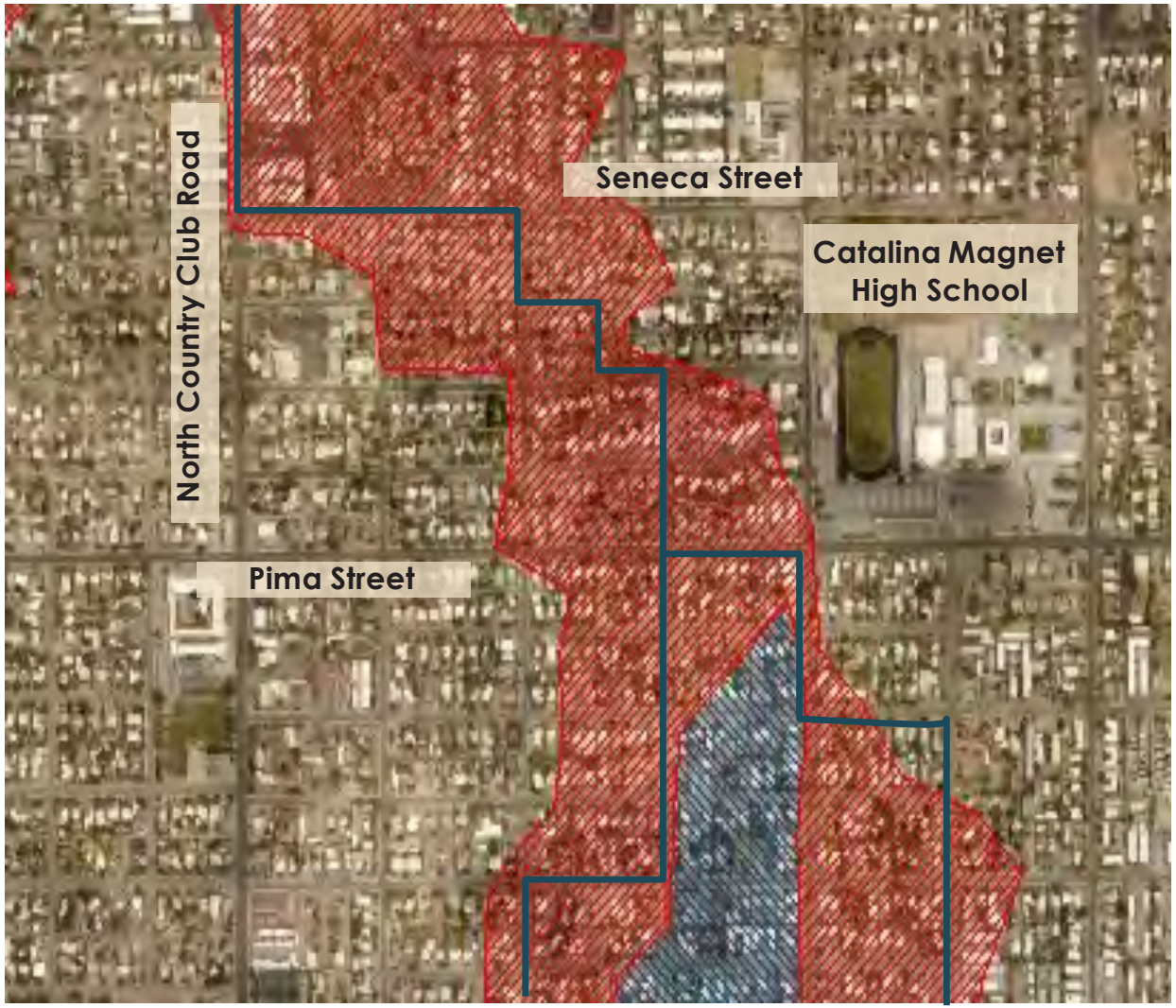
Palo Verde Neighborhood: Flood Solutions

Jacob Siegel | LAR 623 | Professor Bo Yang

Analysis: Overview

Issues to Address: Flooding

Christmas Wash Flood Risk



Notes

Christmas Wash is entirely buried beneath the streets of the Palo Verde neighborhood.

Only two drains are located on the streets in my site that siphon off stormwater into the buried wash.

These drains are quickly overwhelmed during heavy rainfall events, water backs up and nearby areas are inundated.

Issues to Address: Flooding

Notes

Christmas Wash is entirely buried beneath the streets of the Palo Verde neighborhood.

Only two drains are located on the streets in my site that siphon off stormwater into the buried wash.

These drains are quickly overwhelmed during heavy rainfall events, water backs up and nearby areas are inundated.

Drain Locations

Water Flow Direction

Christmas Wash

Issues to Address: Street Racing

Pima Street ***Looking West From*** **Catalina Magnet HS**

Notes

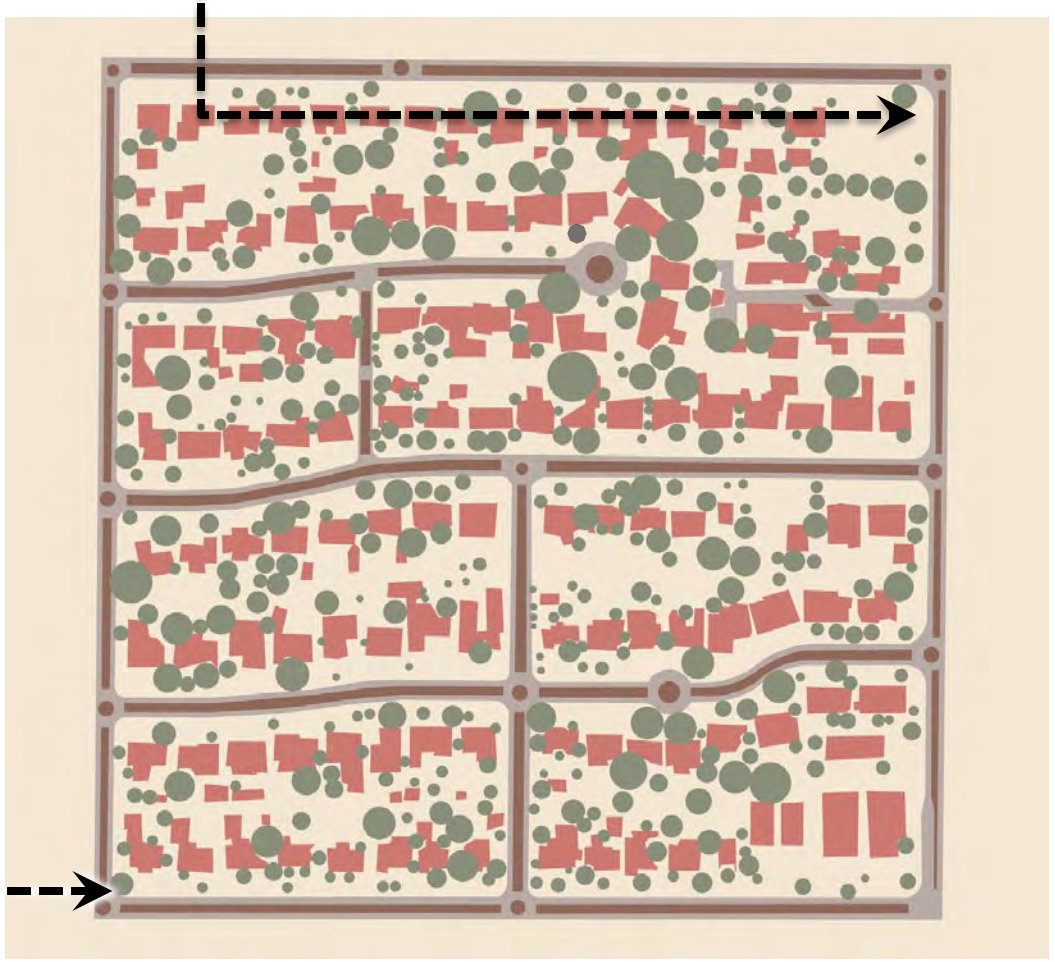
Drag racing along Pima Street is a safety concern

Pima Street is long, wide, and straight with less traffic then the main roads

Traffic calming GI can be incorporated into the street corridor that will eliminate street racing and slow stormwater.

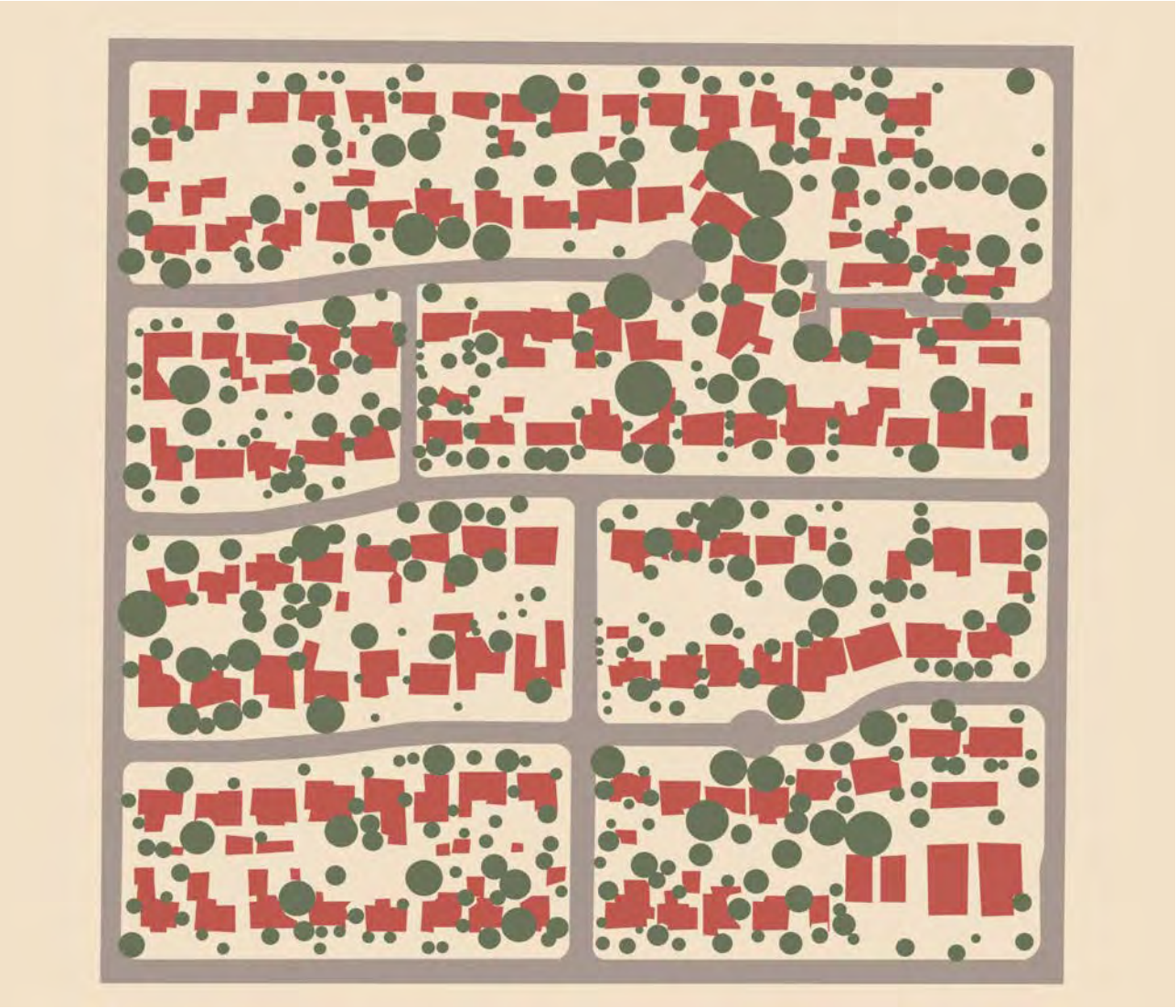
Current speed limit is 30 miles an hour but people drive much faster

Stormwater Calculations

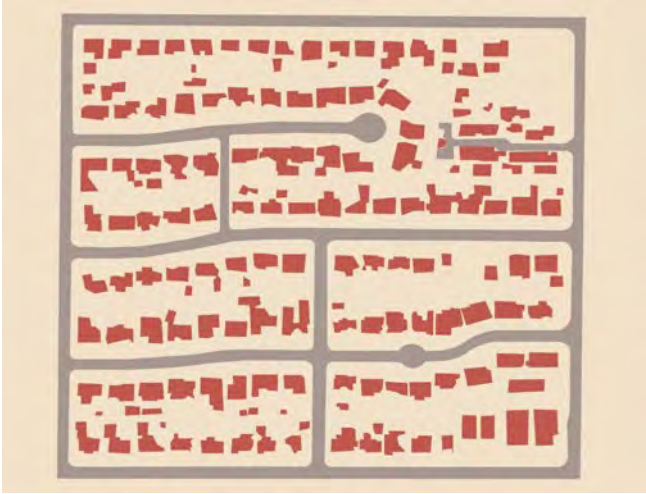


Stormwater Calculations

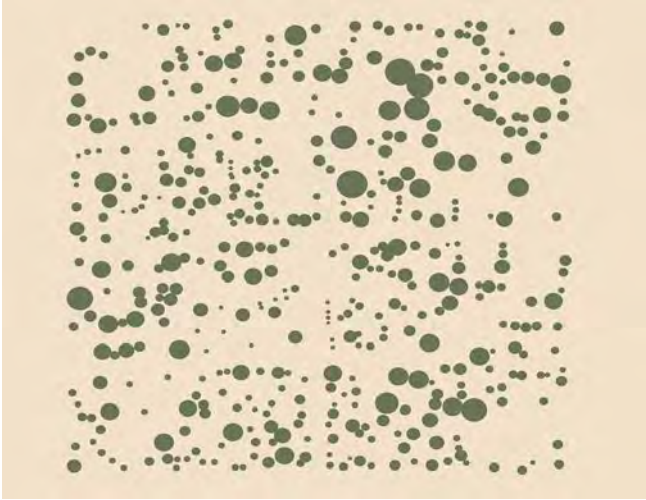
Existing Site Conditions



Impervious Surfaces

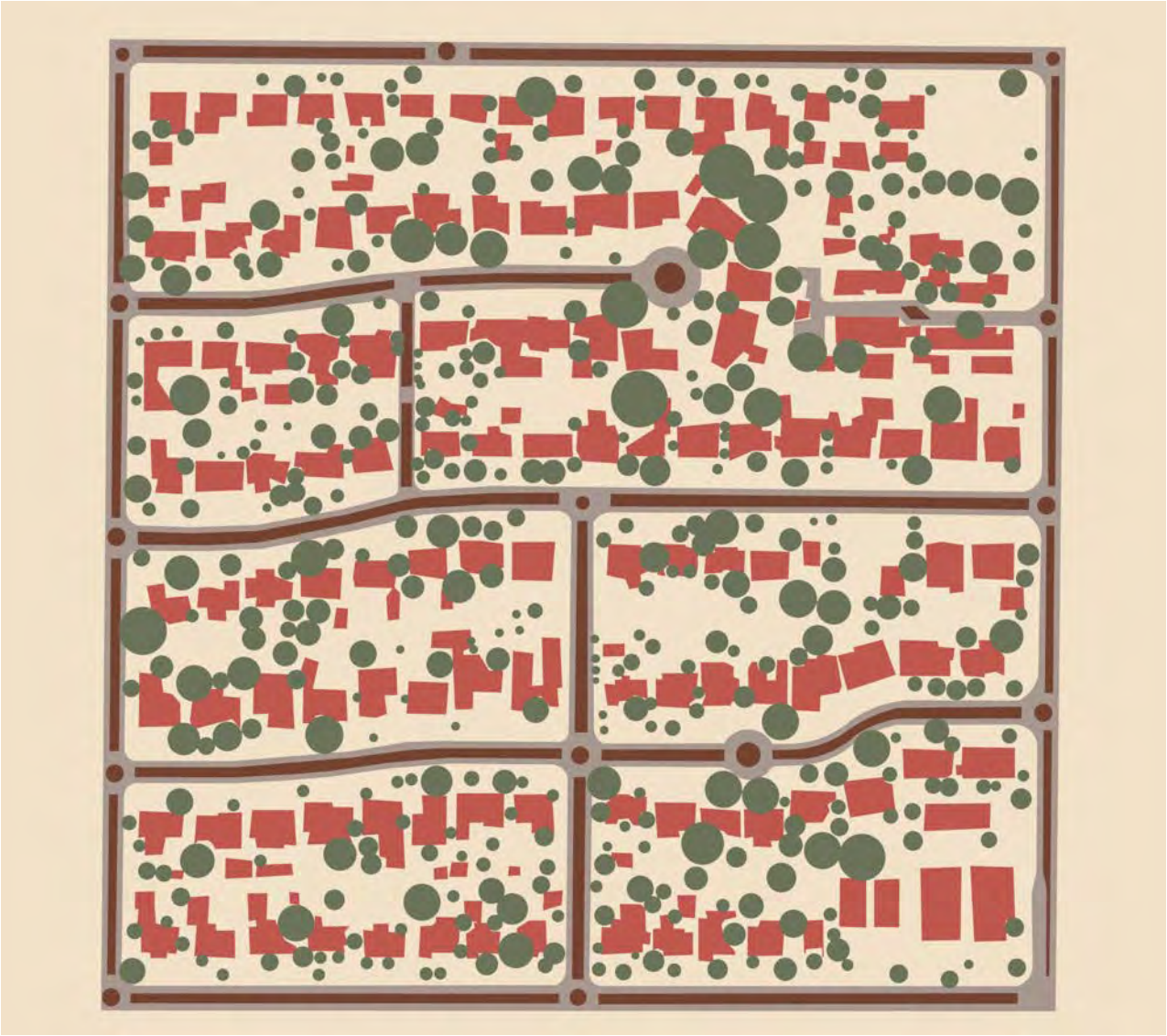


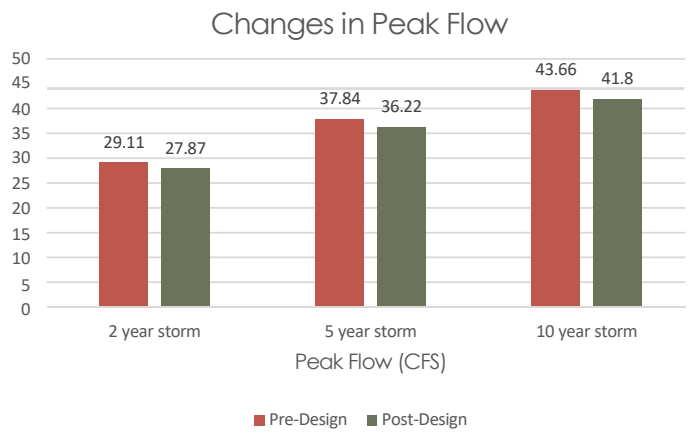
Tree Canopy

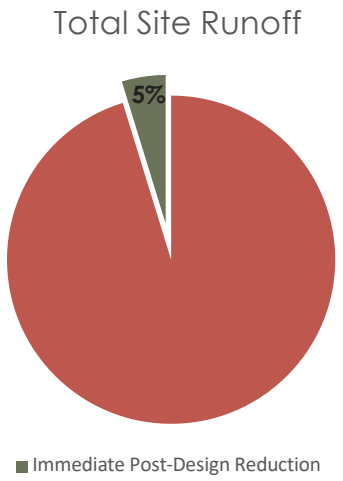


Stormwater Calculations

Green Infrastructure Additions





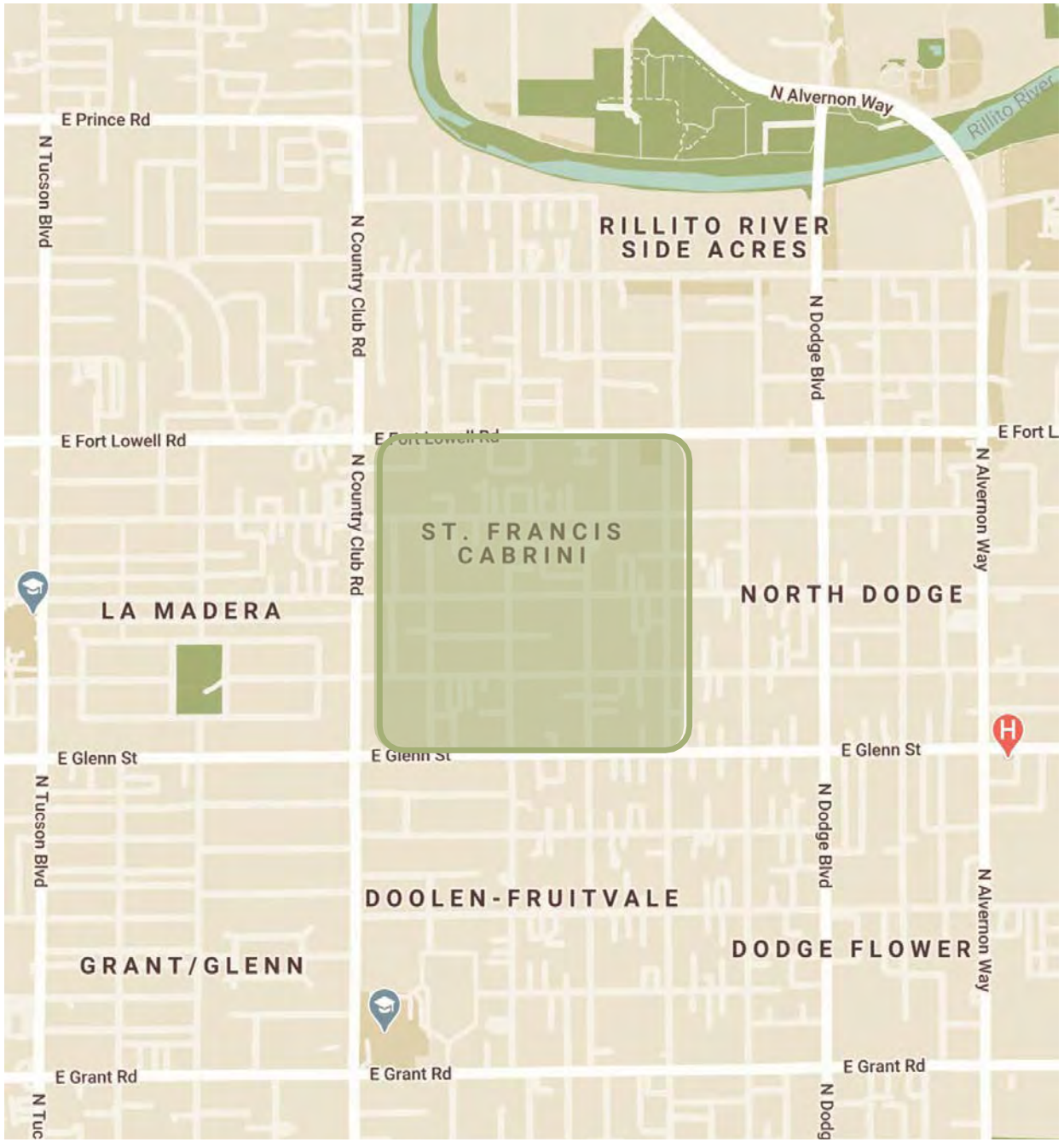


Design Application: Intersection at Jones Blvd and Lester Street

WALK CABRINI

Cabrini Neighborhood Plan

Jordan Lawson Rucha Pandit Shen Shu Ariel Howell



Plan Highlights

New sidewalks

Bike

Lanes Slow

Streets

Green Infrastructure

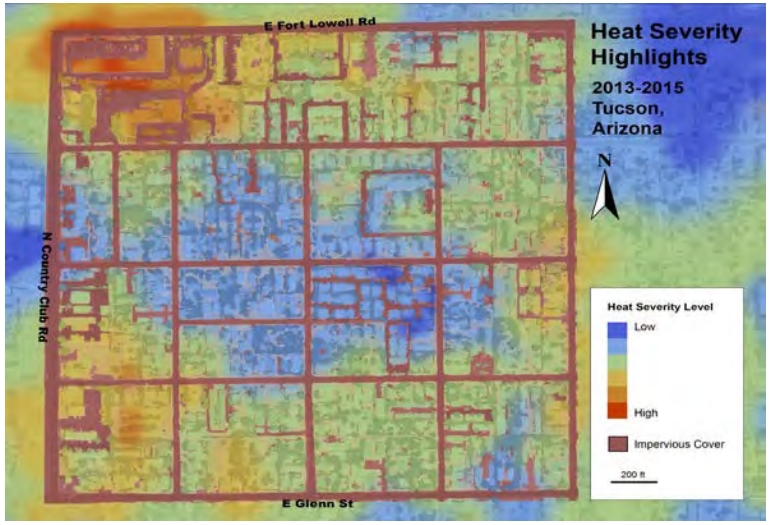
Tree Canopy

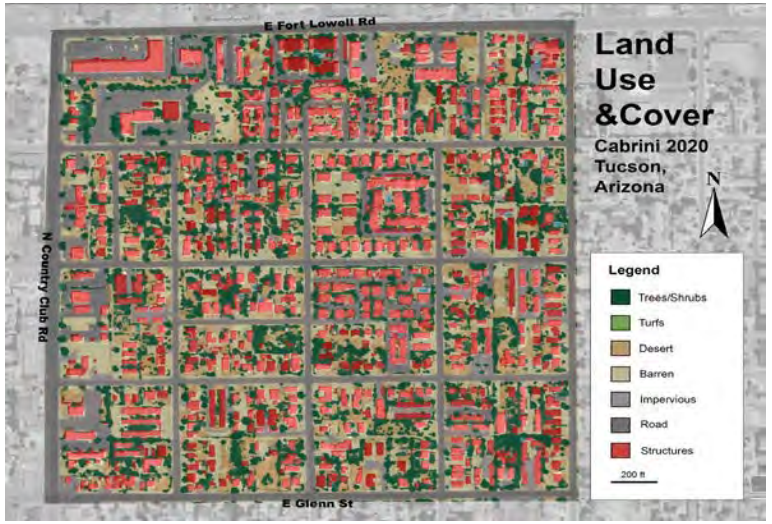
WALK CABRINI

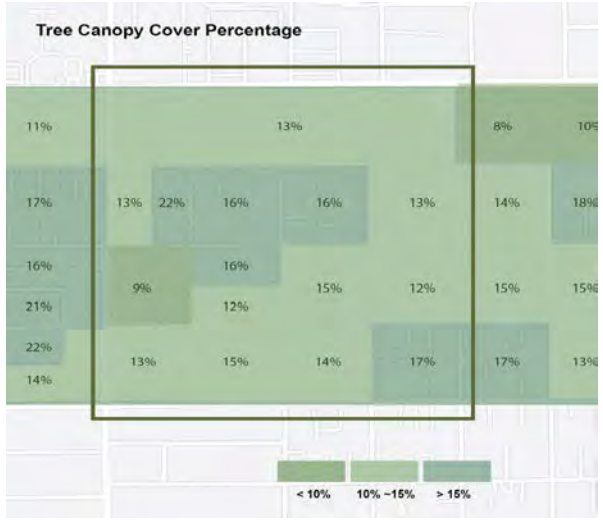
GIS Site Analysis

Findings:

-The canopy average for Cabrini blocks at 15%
-Heat severity mostly around northwest and northeast corners of Cabrini
-Uneven landscape distribution (middle concentration)
-Impervious assembling places having more heat



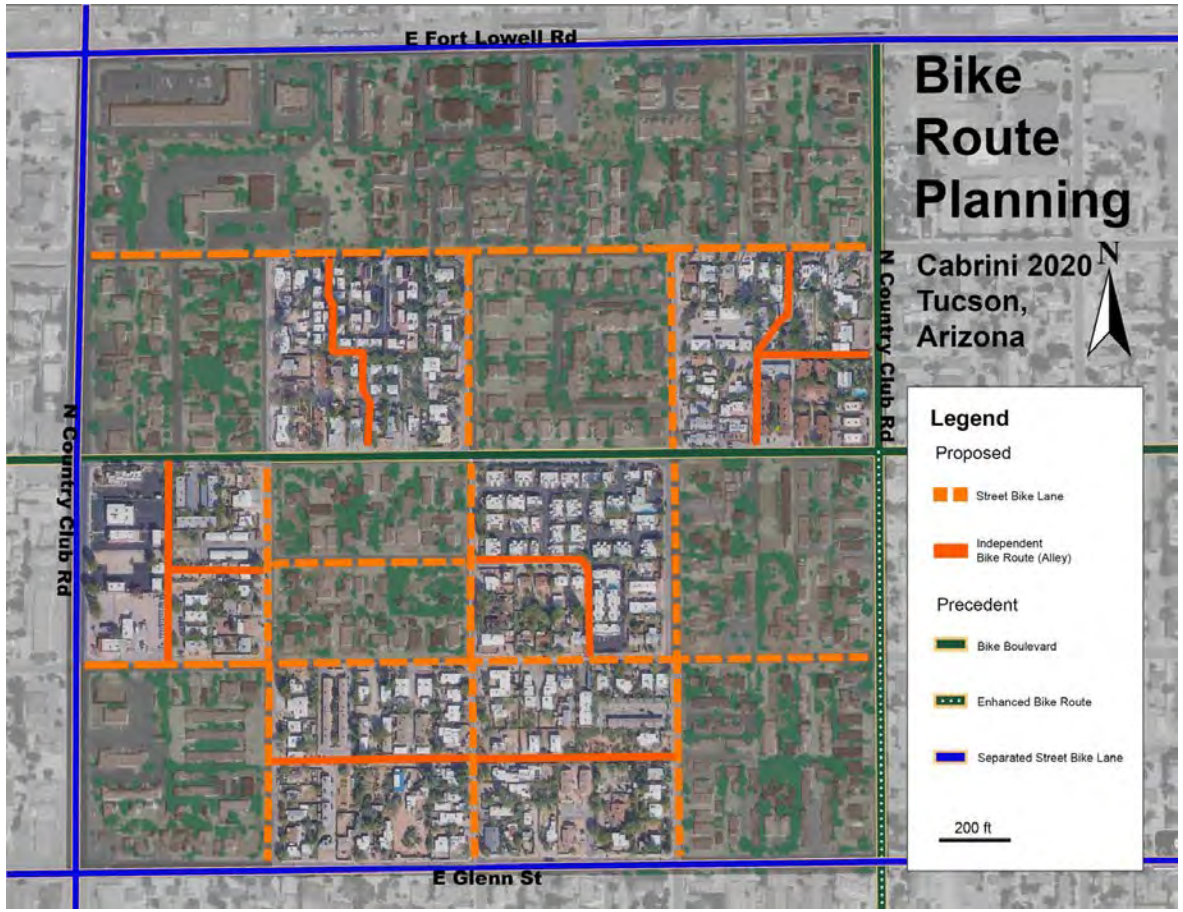


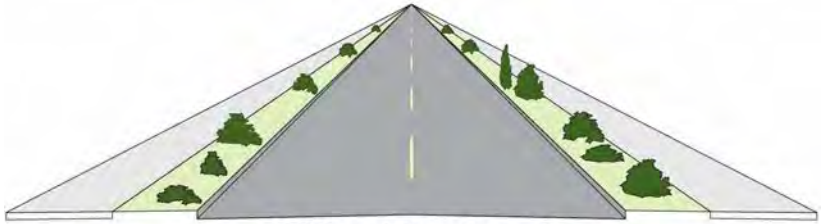


WALK CABRINI

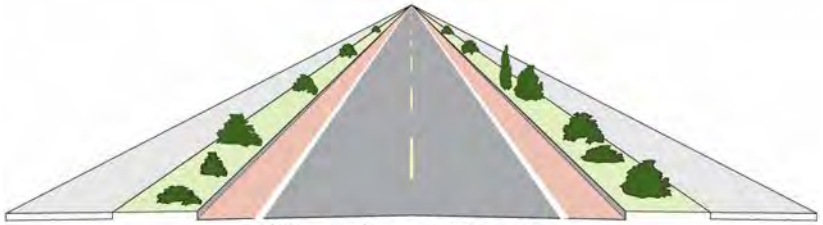
GIS Site Analysis

Findings:
-Inner-block specialized bikelines practicing infeasibly
-Demand for safe designs for inner bike circulation





Without treatments



With colored bike lanes

With color bike lane

Cyclist Facility Design

N Country Club Rd

N Country Club Rd is the south boundary of Cabrini site. This is an arterial urban lane marked with specialized 3'-wide bike route for road security.

Cyclist Facility Design

N Flanwill Blvd

N Flanwill Blvd has satisfactory green coverage and good driving view. However, it has few paved sidewalks. Pedestrians have only walking space on the sides of car lanes as the curb-around is messy with shrubs and gravels. Moverover, the driving place is too wide and space wasting. Some of spaces could be split for bicyclists with shading plants aside.

WALK CABRINI

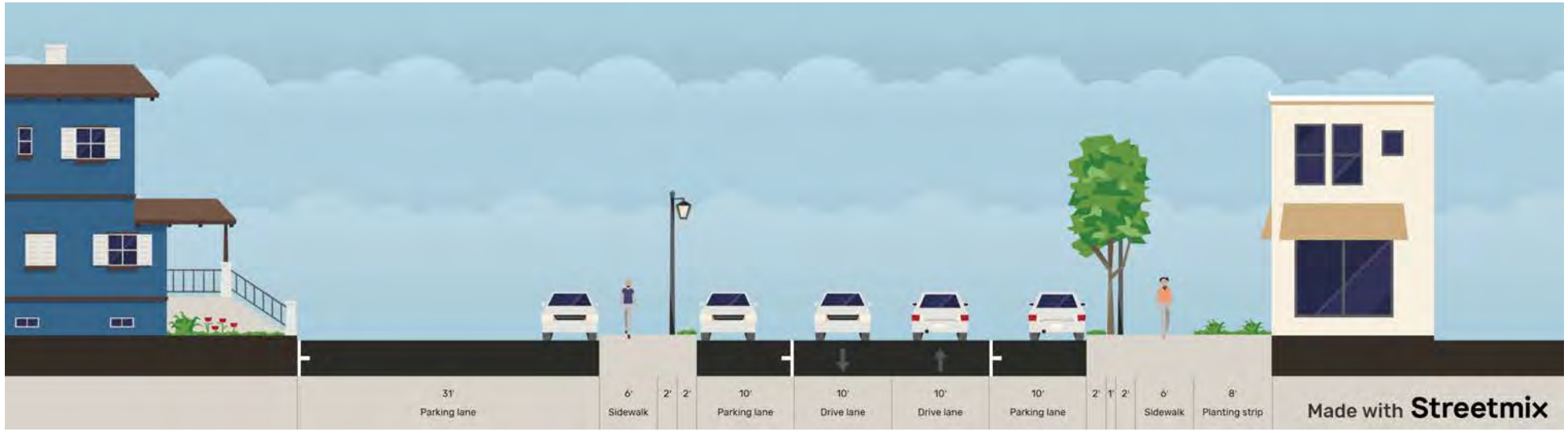
Cyclist Facility Design

N Sparkman Blvd

N Sparkman Blvd has the similar issues in spatial utilization as N Flanwill Blvd. The sidewalk spaces seem non-walker-encouraged. We plan the sidewalk with serpentine pavement on for surrendering to planting spaces and existing landscapes.

Street Analysis: Blacklidge Dr.

Before



Afte

r

WALK GABRINI

Presidio Road

Create space for bike lanes and sidewalks where none exist currently Colored bike lanes help roads appear smaller, slowing traffic
Baby-chicanes slow traffic further, increase permeable surfaces, and buffer cyclists from the street

WALK CABRINI

Presidio Bike Boulevard

Create space for bike lanes and sidewalks where none exist currently Colored bike lanes help roads appear smaller, slowing traffic
Baby-chicanes slow traffic further, increase permeable surfaces, and buffer cyclists from the street

WALK CABRINI

Blacklidge Dr.

Current conditions: Street has sidewalks, lacks overhead shade,
ROW is wide and straight, minimal buffer between pedestrians and vehicles

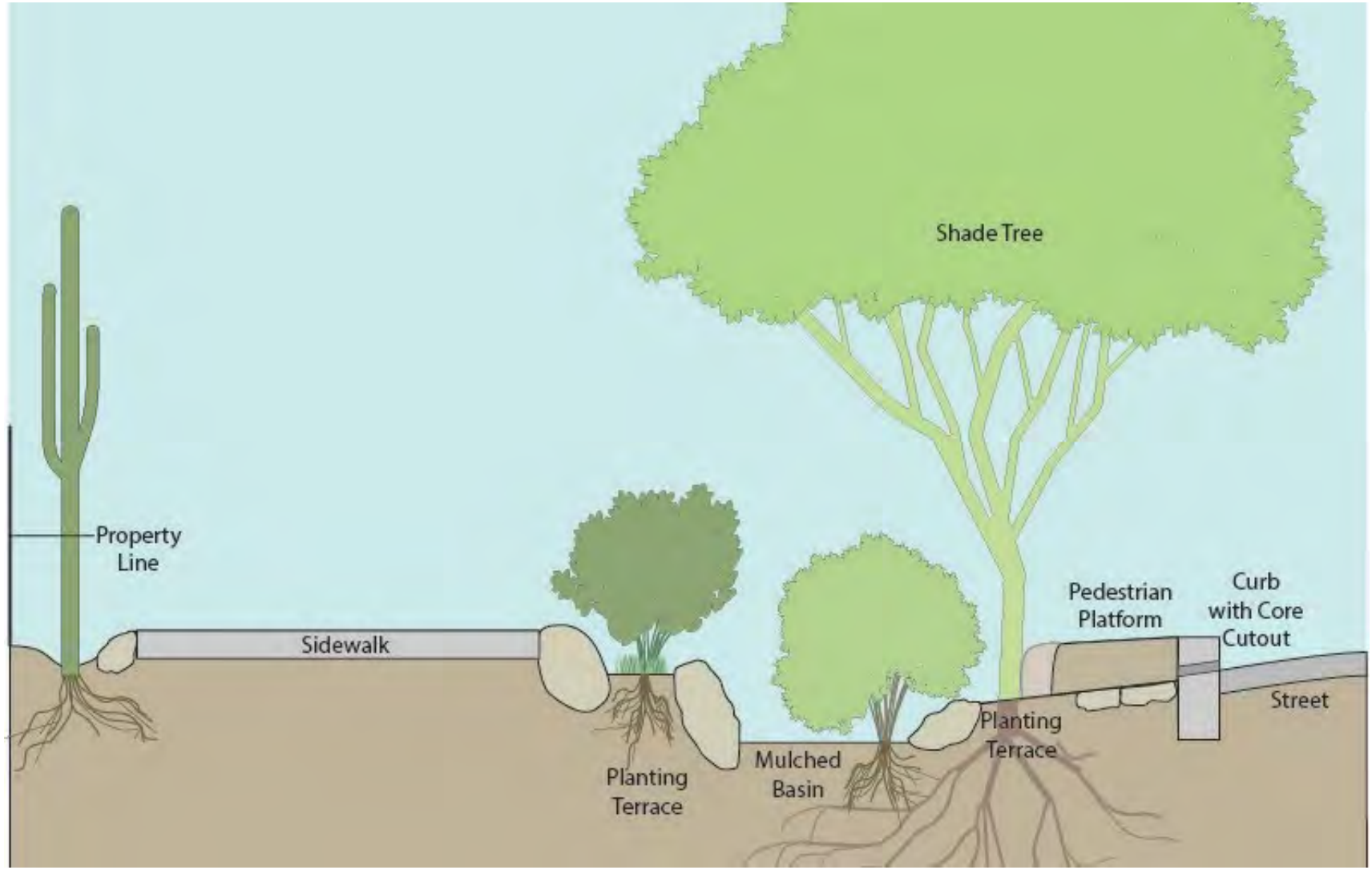
Blacklidge as Slow Street

Curb cuts allow stormwater to drain into chicanes
Basins in the chicanes allow stormwater to collect near drought tolerant plantings
Chicanes slow traffic, increase permeable surfaces, create opportunities for street trees and buffer pedestrians from the street

WALK CABRINI

Harvesting Rainwater

Utilization of curb cuts allows harvested rainwater to enter planted basins
Native plants thrive within the basins and in time produce shade and provide comfortable pedestrian walkways Greenery creates beauty for neighborhood residents to enjoy year round



Case Study

Dunbar Springs neighborhood, Tucson Az
A nearby example of green infrastructure methods in action Demonstrates how effective harvesting rainwater can be

Sidewalk Design

WALK CABRINI

Sidewalk Design

WALK CABRINI

Cabrini Winterhaven Square

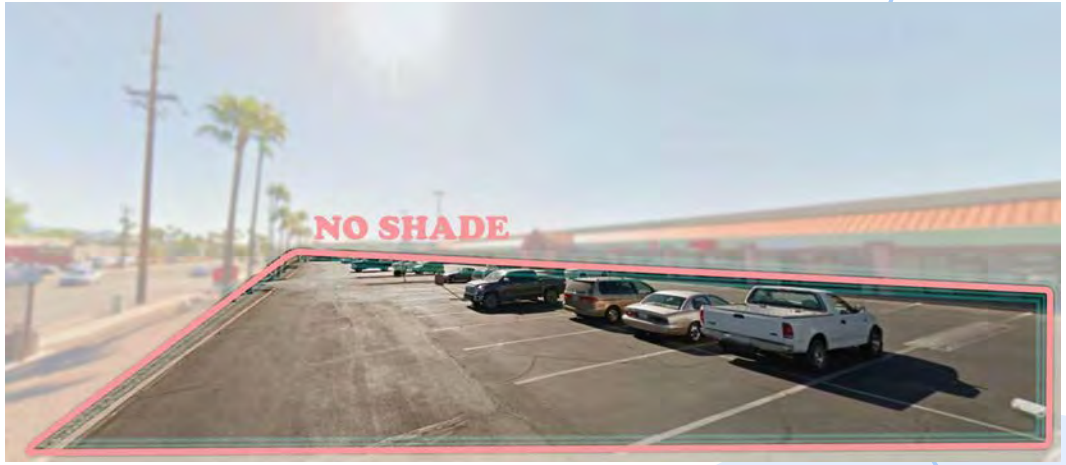
By: Isabella Kazmarek

LAR 623 - Professor Bo Yang - Spring 2021

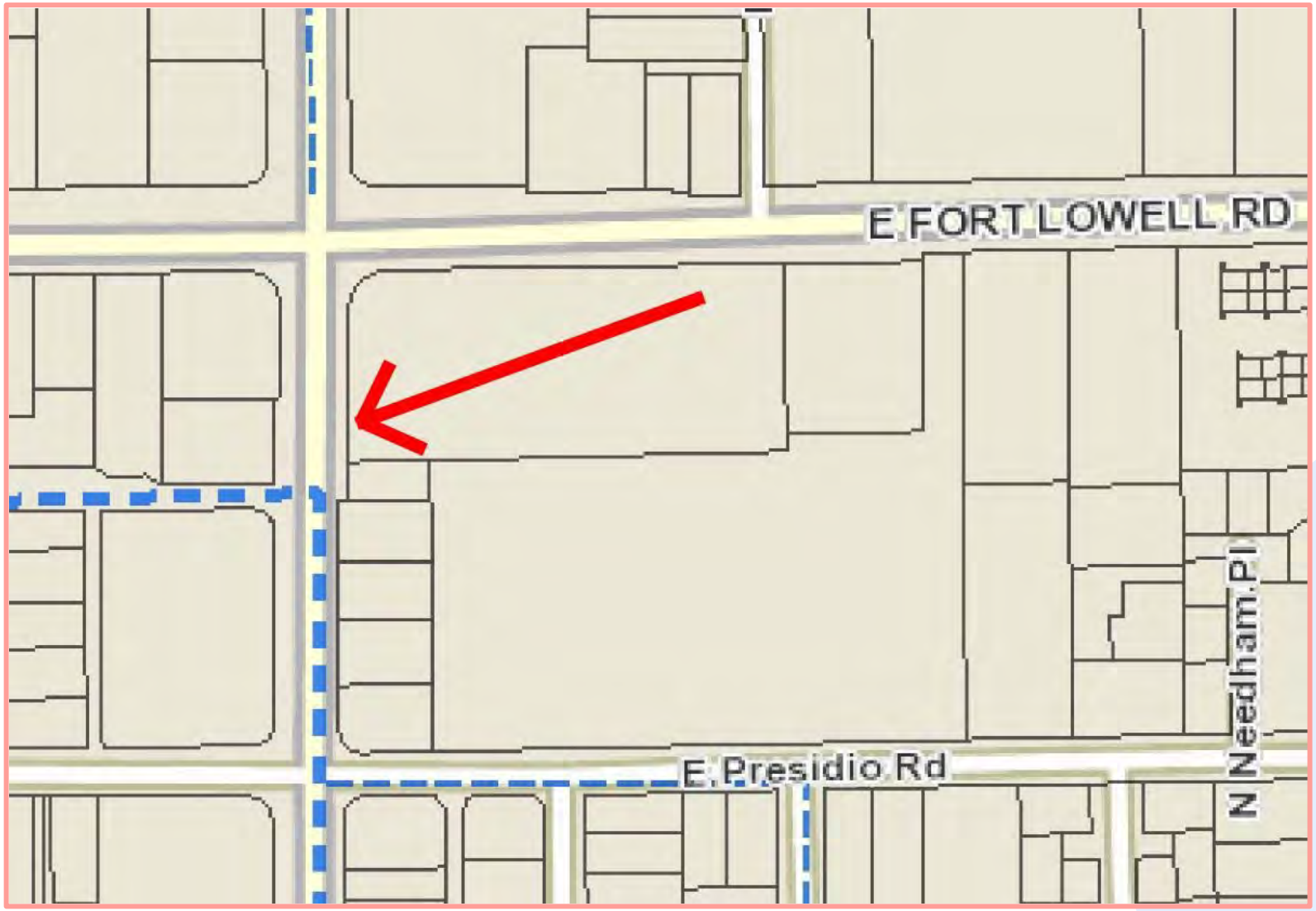
Site Context

Site Photos

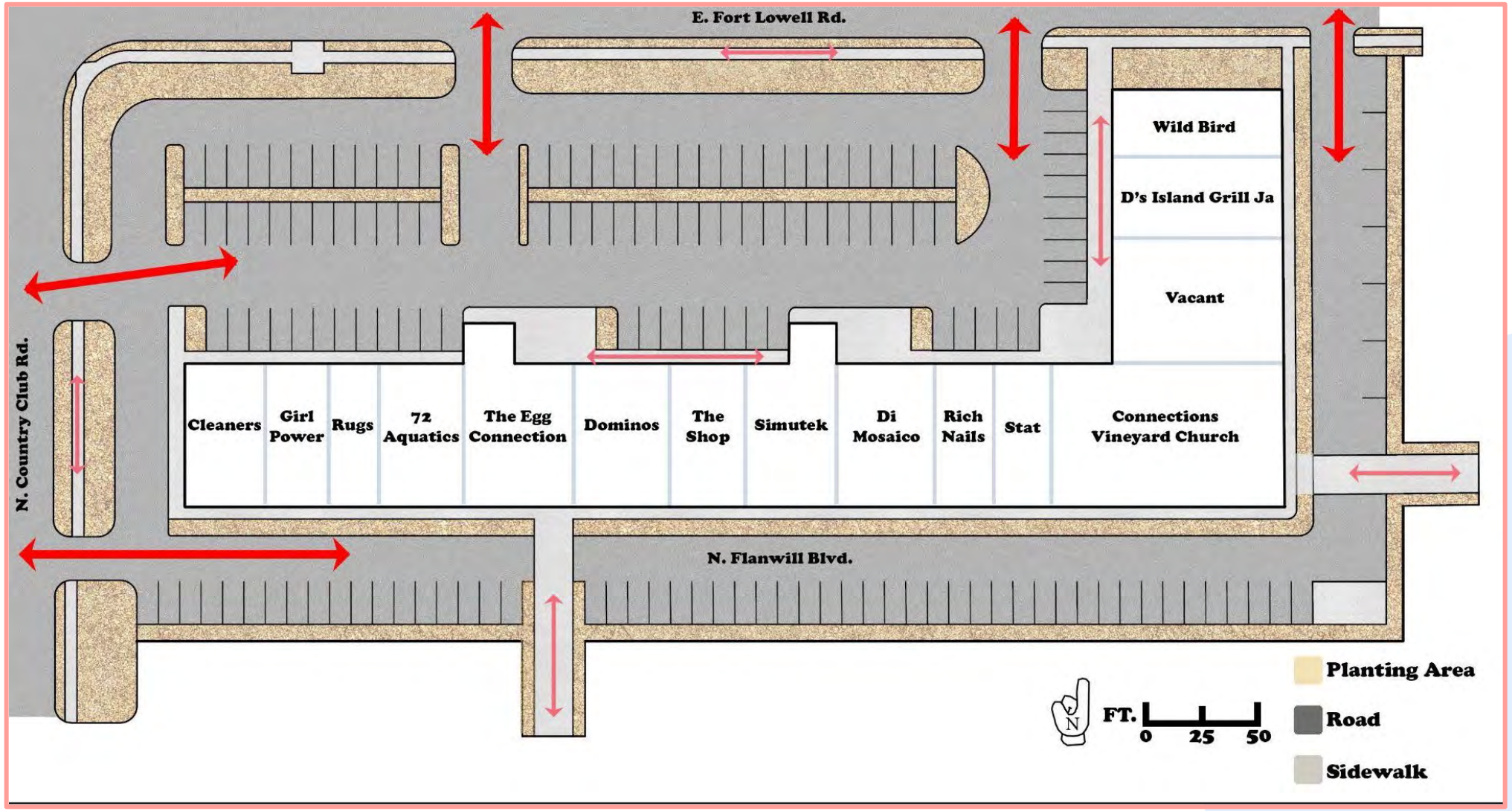
Analysis and Inventory



Site Drainage



Site Circulation



Master Plan


E. Fort Lowell Rd.
N. Country Club Rd.
N. Flanwill Blvd.
AA
Wild Bird
D's Island Grill Ja
Vacant
Cleaners
Girl Power
Rugs
72 Aquatics
The Egg Connection
Dominos
The Shop
Simutek
Di Mosaico
Rich Nails
Stat
Connections Vineyard Church
N
FT.
0
25
50
Planting Area
Road
Sidewalk

Plant Palette

Deergrass

Muhlenbergia rigens

Baja Fairy Duster

Calliandra californica

Chinese Pistache

Pistacia chinensis

Blue Palo Verde

Parkinsonia florida

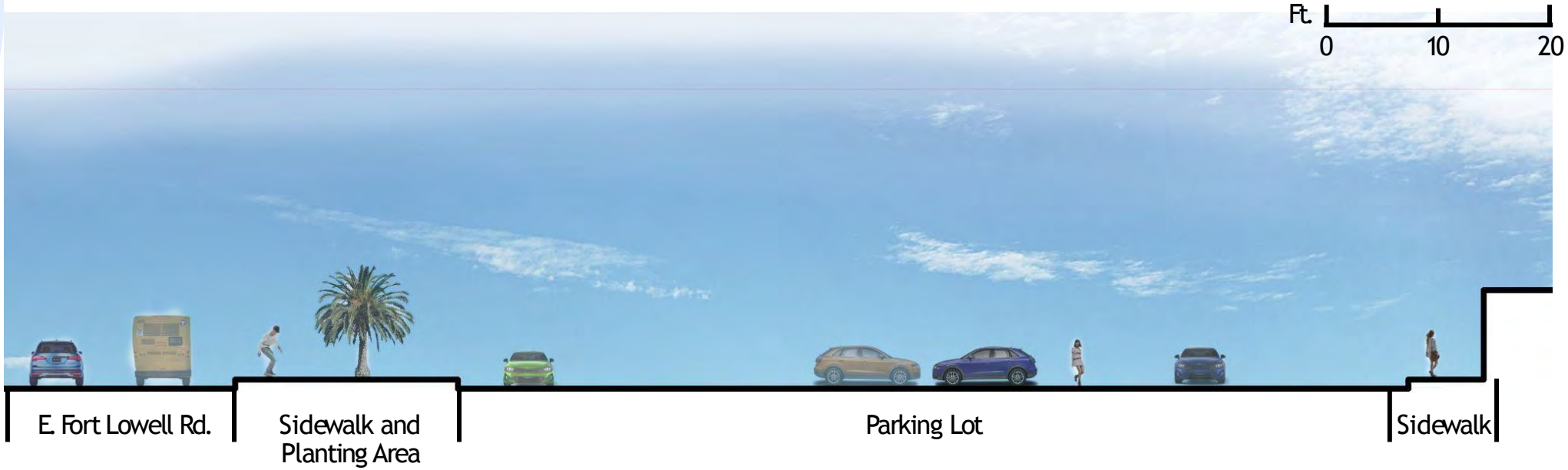
Firecracker Plant

Russelia equisetiformis

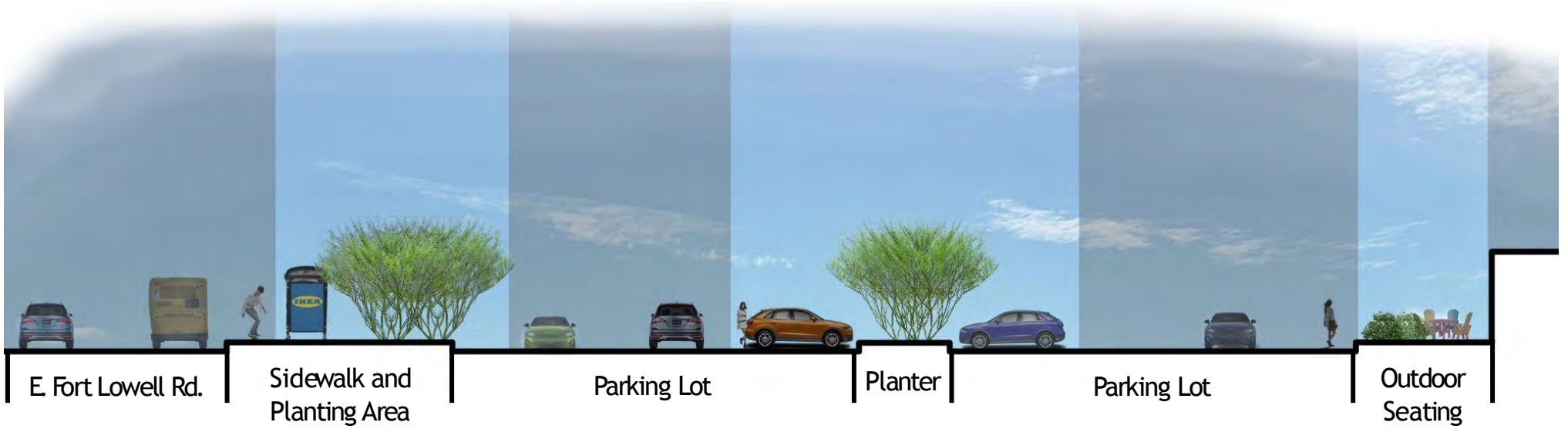
Desert Willow

Chilopsis linearis

Before Section AA



After Section AA



Perspective A

Why The Changes?

Bioswales

Decreasing stormwater runoff and reduce stormwater runoff while filtering out pollutants.

Added Vegetation

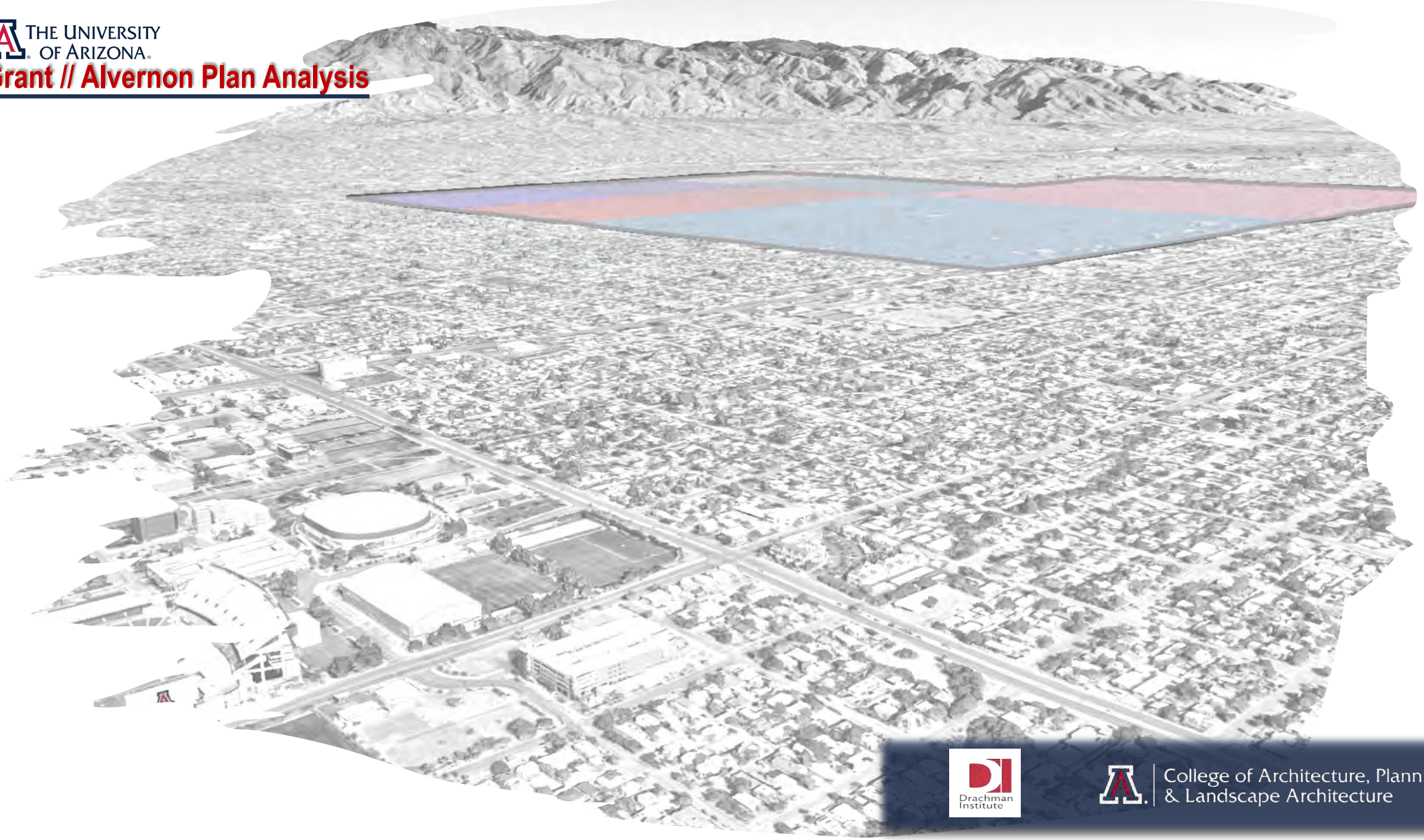
Lowers surface and air temperatures by providing shade and through evapotranspiration.

Outdoor Seating

Helps bring in more customers with more space and added advertising

THE UNIVERSITY OF ARIZONA

Grant // Alvernon Plan Analysis



Drachman Institute

College of Architecture, Planning & Landscape Architecture

GRANT-ALVERNON AREA PLAN ANALYSIS

THE UNIVERSITY OF ARIZONA.

May 2021

TABLE OF CONTENTS

I. EXECUTIVE SUMMARY

I. EXECUTIVE SUMMARY

INTRODUCTION

The Grant-Alvernon Area Plan covers and analyzes seven neighborhoods in central Tucson, Arizona. This report is an analysis of existing plans and conditions for future planning purposes, and provides detailed data and analyses considered by the authors. Graduate students enrolled in the University of Arizona's Master of Science in Urban Planning program collected the data and provided the updated analyses for this document. These students conducted interdisciplinary research to gather the information presented in this update as part of a Comprehensive Planning course.

EXISTING PLANS ANALYSIS

This report provides a summary of the existing Grant-Alvernon Area Plan. This section details the plan's current vision, goals, policies, and recent area planning. This section includes a thorough analysis of existing plans outlined by the City of Tucson and deliberates how these existing plans interact with the Grant-Alvernon Area Plan. Groups of students analyzed existing plans created by various City of Tucson departments to find specific areas of conflict. Policy areas reviewed are housing, economic development, poverty, crime and safety, transportation, planning and development, parks and recreation, sustainability, green infrastructure, flood control, historic preservation, and community services. Each of these policy areas were gathered and reviewed by the authors to identify areas of conflict as well as areas of compatibility.

EXISTING CONDITIONS ANALYSIS

The authors conducted extensive field work for data collection in order to compile the existing conditions analysis section of this report. Data was collected in the field by using a software application that can be accessed via smartphone or other GPS-enabled device. The authors moreover utilized this application to identify neighborhood assets, deficiencies, and opportunity for improvement or redevelopment.

Identified neighborhood assets were documented with a series of maps developed with the University of Arizona's online GIS software. Primary assets are parks and green spaces traffic calming devices, Americans with Disabilities (ADA) compliant sidewalks, and good street lighting at vehicular and pedestrian scales. Other assets are include schools, community centers, community gardens, and additional assets unique to specific neighborhoods.

Neighborhood deficiencies were also noted in this report and documented with the University of Arizona's online GIS software. Examples of deficiencies are abandoned properties, crime and vandalism, poor sidewalk accessibility, and inadequate or missing street lighting. Field collection efforts exposed many areas with no sidewalks, no street lighting, and hostile public rights-of-way that push pedestrian activity into active streets.

Field collection efforts also gathered information on areas that are eligible for development or redevelopment. These opportunities for development or redevelopment can take many forms; most neighborhoods have vacant or underutilized parcels that have potential to be developed as a park or open green space. Most neighborhoods moreover include medium- and high-density residential zoning designations that may support future residential development.

CONCEPT DESIGNS

Many of the report authors created concept plans for development or redevelopment in each neighborhood. These concept plans cover streetscape improvements, mixed-use development, multi-family development, and green spaces.

CONCLUSIONS

This report analyzes the seven neighborhoods that compose the Grant-Alvernon Area Plan. The authors gathered data and researched municipal policies affecting each neighborhood and the plan as a whole. A study of existing plans was completed to identify policy areas of conflict and compatibility. Existing conditions were noted with field collection efforts to identify neighborhood assets and deficiencies. The aforementioned information was ultimately used to create concept plans for neighborhood development and redevelopment opportunities.

Figure 1 Traffic calming device in Palo Verde.

Figure 2. Redevelopment opportunity in Palo Verde.

II. SUMMARY GRANT-ALVERNON AREA PLAN

II. SUMMARY GRANT-ALVERNON AREA PLAN

INTRODUCTION

The Grant-Alvernon Area is L-shaped and encompasses seven neighborhoods comprising of 3.5 square miles. The seven neighborhoods served by the area plan are Cabrini, Dodge Flower, Doolen-Fruitvale, Garden District, North Dodge, Oak Flower, and Palo Verde. These seven neighborhoods are bounded by Fort Lowell Road to the north, Swan Road to the east, Speedway Boulevard to the south, and Country Club Road to the west. Figure 3 displays the boundaries of the Grant-Alvernon Area Plan and its neighborhood associations. Medium-density, single- family residential zoning are insulated within the interior of the plan boundaries. Office, commercial, and high-density residential zoning are permitted along arterial roadways.

PLAN PURPOSE

The purpose of the Grant-Alvernon Area Plan is to guide land use policies and provide design guidelines for future development. This plan addresses community concerns for the preservation of single-family residential neighborhoods in balance with the need for future development as time continues. This plan moreover intends to evaluate diverse community interests through the plan's seven sections, nearly 120 policies and sub- policies, and almost 70 guidelines and sub-guidelines for design and administration. Since its formal adoption by Tucson Mayor and Council in 1999, six amendments modified residential, commercial, and office zoning designations for the Grant-Alvernon Area Plan.

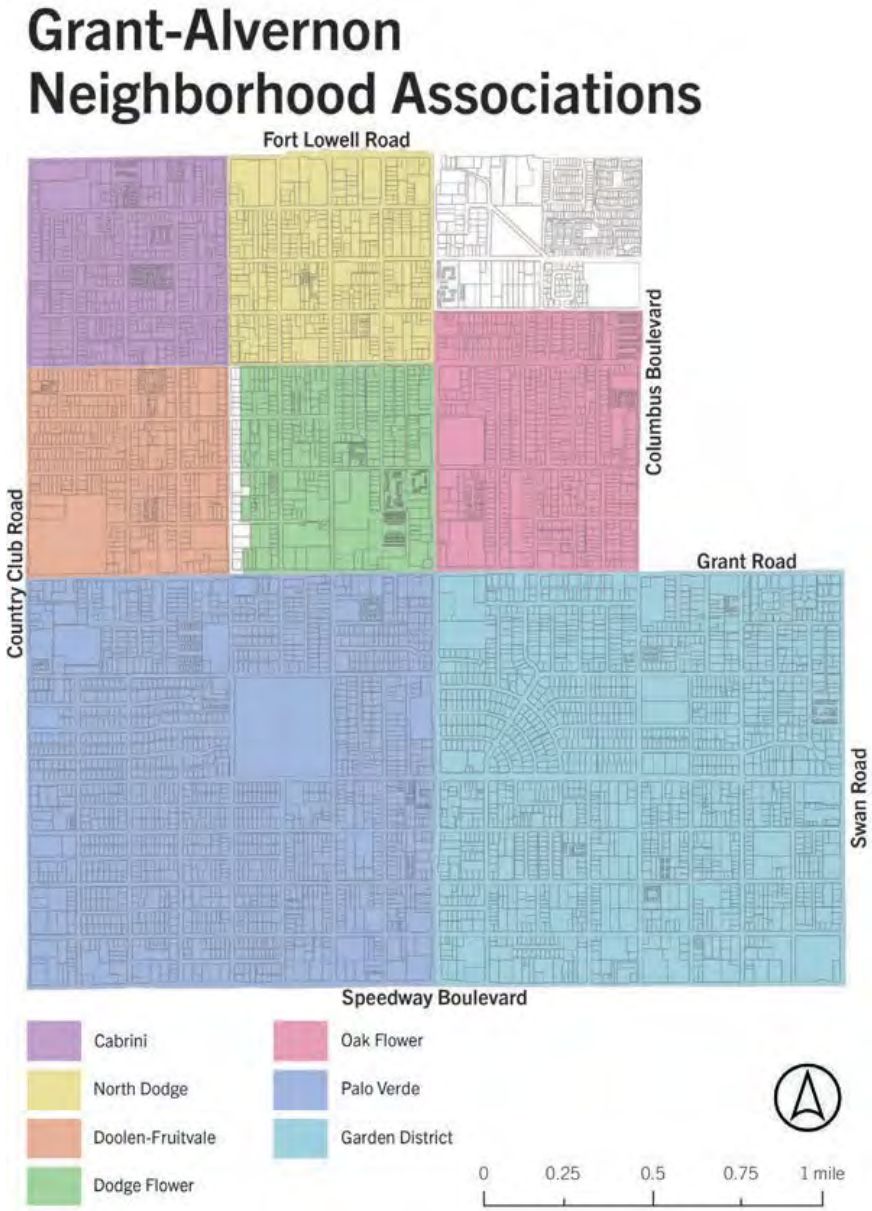


Figure 3. Map of Grant-Alvernon Area Plan neighborhood associations.

II. SUMMARY GRANT-ALVERNON AREA PLAN

***Nine** goals were developed for the **Grant-Alvernon Area Plan** for its formal adoption in 1999. The nine goals are outlined as follows:*

1. Preserve, protect, and enhance the integrity of established neighborhoods;
2. Identify appropriate locations for residential, commercial, and industrial development;
3. Foster the creation of safe and child-friendly neighborhoods;
4. Promote a greater sense of community through the establishment, registration, and participation of neighborhood associations;
5. Encourage developers to communicate with area neighborhood associations and residents, and to design development which respects and bolsters the value of the area;
6. Encourage neighborhood associations to work with the City to provide increased recreational opportunities;
7. Encourage provision of safe and efficient circulation systems for all appropriate modes of transportation; especially pedestrian and bicycle;
8. Encourage an improved visual appearance of the area through the planting of additional drought-tolerant plant landscaping, and by including art as part of public and private developments; and
9. Support commercial revitalization that promotes neighborhood stability and enhancement.

Area residents, property owners, neighborhood association representatives, and businesses and developers formed the Grant-Alvernon Steering Committee to discuss and evaluate issues and concerns. The City of Tucson's Planning and Development Services Department worked with the Steering Committee to weave its goals and policies as well as public participation efforts into the Grant-Alvernon Area Plan.

The policies and guidelines supported through the Grant-Alvernon Area Plan have mainly been implemented through rezoning processes. The plan has also been advanced through new zoning ordinances and regulations, public works projects, and property acquisition. The plan moreover forms the basis for rezoning applications, variance requests, and guides the design for Capital Improvement Projects. In the event a planning application does not comply with establish land use and design guidelines, or does not mitigate the negative impacts of development or redevelopment, the Planning Director must determine the need for a plan amendment before rezoning and development may begin.

Furthermore, the Grant-Alvernon Area Plan has potential to support Plan Tucson. This citywide plan includes goals and policies related to social, economic, natural, and built environments. It is important that the Grant-Alvernon Area Plan reflects these goals and policies moving forward.

III. EXISTING PLANS ANALYSIS

III. EXISTING PLANS ANALYSIS

INTRODUCTION

The purpose of the existing plans analysis is to compare the guidelines and policies of the Grant-Alvernon Area Plan to Plan Tucson. Arizona state law requires each jurisdiction to review, update, and formally adopt its existing general plan every ten years. Plan Tucson was ratified by Tucson voters in 2013 to guide the city's physical, social, economic, and environmental development as well as reflect community values.

Housing, public safety, parks and recreation, arts and culture, public health, urban agriculture, governance and participation, business climate, tourism and quality of life, energy and climate, water resources, green infrastructure, environment quality, historic preservation and redevelopment and revitalization, public infrastructure, as well as land use, transportation and urban design are analyzed and compared between the Grant-Alvernon Area Plan and Plan Tucson.

HOUSING

The primary inconsistency for housing between the Grant-Alvernon Area and Plan Tucson concerns mobile homes. The Grant-Alvernon Area Plan does not explicitly mention mobile home development, although there are these developments within the planning area. Plan Tucson emphasizes the need to reduce housing costs and increase affordability as well as provide housing for the most vulnerable populations in the community.

PUBLIC SAFETY

There were no policy conflicts noted between the Grant-Alvernon Area Plan and Plan Tucson for public safety. Both plans were consistent in policy areas surrounding neighborhood conservation and enhancement.

PARKS AND RECREATION

Two inconsistencies were found between the two plans for parks and recreation. First, the Grant-Alvernon Area Plan emphasizes the restriction of primary access to nonresidential areas such as parks or collector streets; Plan Tucson prioritizes the development of a multipurpose recreational system. Secondly, the area plan discusses the promotion of on-site recreational spaces in medium- and high-density residential areas, whereas the general plan emphasizes the repair, maintenance, and upgrading of existing recreational facilities.

ARTS AND CULTURE

Two inconsistencies were also noted for this policy section. First, the Grant- Alvernon Area Plan recommends encouraging residential development to support secure bicycle parking facilities, network connectivity, and access to institutional nodes and public transportation. Plan Tucson, however, targets public investment toward heritage, arts, and cultural activities. Secondly, the area plan touts that commercial activities should be solely conducted within an enclosed building, whereas the general plan recommends supporting arts and culture within both buildings and open spaces.

III. EXISTING PLANS ANALYSIS

PUBLIC HEALTH

Both plans support increased access to healthcare, reliable and affordable transportation options, and active transportation policies that promote healthy living.

URBAN AGRICULTURE

The Grant-Alvernon Area Plan does not explicitly discuss urban agriculture. However, there are opportunities to increase access to affordable foods and green spaces through various land use policies outlined in the area plan.

GOVERNANCE AND PARTICIPATION

One possible inconsistency exists for governance and participation policies. The Grant-Alvernon Area Plan alludes to the future removal of mobile homes that serve vulnerable populations; Plan Tucson emphasizes the increased participation of traditionally underrepresented populations in the decision-making process.

BUSINESS CLIMATE

The Grant-Alvernon Area Plan and Plan Tucson were consistent with business climate policies. Both plans highlight the development and promotion of business interests and opportunities.

TOURISM AND QUALITY OF LIFE

No inconsistencies or conflicts for tourism policies were found. While the boundaries of the Grant-Alvernon Area Plan are mainly for residential purposes, the Tucson Botanical Gardens is a major tourism destination within Tucson. Both plans moreover support healthy living, the enhancement of outdoor spaces, aesthetics, street improvements, the preservation of views and vistas, and public spaces.

ENERGY AND CLIMATE

Both plans were generally consistent with energy and climate policies. However, the Grant-Alvernon Area Plan rarely addresses energy and climate resilience. The area plan does explicitly support energy efficiency as well as solar photovoltaics for building design.

III. EXISTING PLANS ANALYSIS

WATER RESOURCES

Both plans consistently discuss stormwater management, flood control, and water harvesting. However, Plan Tucson broadly outlines the need to integrate land use with water resource planning, while the Grant- Alvernon Area Plan does not explicitly discuss water resources. Few area plan land use policies mention landscaping in reference to its urban design policy section. The area plan moreover does not consider water efficiency and conservation programs.

GREEN INFRASTRUCTURE

The primary inconsistency between the Grant-Alvernon Area Plan and Plan Tucson for green infrastructure is differences in prioritization. Green infrastructure is clearly illustrated in Plan Tucson policies, but rarely discussed within the Grant-Alvernon Area Plan. The area plan has the opportunity to implement green infrastructure through low-impact development, increased vegetation, and groundwater recharge.

ENVIRONMENTAL QUALITY

Both plans emphasize the complementarity of urban design and transportation to improve environmental quality. Both plans moreover investigate vehicle emissions, multimodality, flood mitigation, noise pollution, and parks and recreation.

HISTORIC PRESERVATION AND REDEVELOPMENT AND REVITALIZATION

Historic preservation policies overlap between the Grant-Alvernon Area Plan and Plan Tucson. The area plan generally discusses the preservation of residential historic use and the existing character of the neighborhoods. Both plans are moreover consistent with redevelopment and revitalization policies. The area plan further details the rehabilitation of underutilized or vacant properties for community use.

PUBLIC INFRASTRUCTURE

There are no major inconsistencies between the Grant-Alvernon Area Plan and Plan Tucson regarding public infrastructure. Both plans operate at different scales that are not necessarily comparable. However, some sections of the area plan specify public infrastructure strategies such as the placement of new and existing utility wires undergrounds.

LAND USE, TRANSPORTATION AND URBAN DESIGN

Both plans are generally consistent regarding land use, transportation and urban design. Consistencies include infill development, the redevelopment of underutilized or vacant properties, land uses sensitive to neighborhood character, improved bicycle and pedestrian networks,

the promotion of child-friendly land uses, and high-density development along arterial streets.

There are, however, slight inconsistencies that may exist. Plan Tucson encourages mixed-use development within the Grant-Alvernon Area Plan boundaries; the area plan intends to maintain low- to medium-density residential land uses. Plan Tucson wants to reduce automobile dependency through compact development, while the Grant-Alvernon Area Plan desires minimal vehicular access points along arterial and collector streets. Additionally, Plan Tucson hopes to adjust future right-of-way widths to increase vehicular capacity, which may interfere with the area plan's goal to reduce capacity on Dodge Boulevard.

CONCLUSION

The Grant-Alvernon Area Plan is generally consistent with the policies outlined in Plan Tucson. Clear consistencies and few conflicts were noted in policies between both plans. Improved clarity in the area plan is necessary for the historic preservation policies as well as land use, transportation, and urban design policies. There are few instances of clear inconsistencies between these documents, most notably highlighted in the parks and recreation and arts and culture policies.

IV. EXISTING CONDITIONS ANALYSIS

IV. EXISTING CONDITIONS ANALYSIS

INTRODUCTION

The Grant-Alvernon Area Plan boundaries consist of seven separate neighborhoods undergoing different stages of change, growth, and development. Current conditions range from new public and private development projects to aging housing stock and underutilized properties. The majority of area plan boundaries contain office/ commercial/residential zoning (OCR-2) that allows for higher density development. Opportunities for high density is an asset to the community as it provides potential for multi-family housing; increasing available housing is a key policy within Plan Tucson. Public transportation amenities within the community are extant and provide multimodal transportation throughout the area plan boundaries and into the greater Tucson region. Current zoning also encourages collaboration and cohesion between area residents and businesses. The seven neighborhoods comprising the Grant-Alvernon Area Plan have some deficiencies, but do not require extensive redevelopment to address these deficiencies. Many of the neighborhood associations have previously engaged with neighbors and city staff to tackle disinvestment. This section of the report ultimately details the existing conditions of the Grant-Alvernon Area Plan boundaries.

CABRINI

The Cabrini neighborhood is bounded by East Fort Lowell Road to the north, North Palo Verde Avenue to the east, East Glenn Street to the south, and North Country Club Road to the west. Much of the neighborhood is composed of medium-density residential housing with commercial zoning flanking North Country Club Road and East Fort Lowell. This section of the existing conditions analysis interprets findings to identify neighborhood attributes that considered assets, deficiencies, or opportunities for development or redevelopment. Assets noted during and after the observation periods include a sense of place illustrated through public art, signage, and community amenities such as green infrastructure. Deficiencies and areas of improvement are lack of shading, inconsistent sidewalks, and inaccessible Americans with Disabilities (ADA) sidewalk ramps. The Cabrini neighborhood displays numerous opportunities for development and redevelopment that build off community assets. Opportunities for green space, increased shading at transit stops, and road diets for residential streets are highlighted within the existing conditions analysis.

IV. EXISTING CONDITIONS ANALYSIS

CABRINI

CABRINI ASSETS

Neighborhood residents and community members successfully registered Cabrini as a neighborhood association in the City of Tucson in February of 1999. The neighborhood association's organizational development includes Bylaws adopted in August of 2011. According to Article I of the Cabrini Neighborhood Association Bylaws, "membership shall consist of residents, property owners, and businesses, including all renters within the specified boundaries." These bylaws furthermore empower all who reside and bring business to the community to engage in the public participation process.

Cabrini's existing social infrastructure is responsible for sponsoring the amenities that foster the neighborhood's sense of place. Field surveying efforts noted evidence of an actively organized community, illustrated by a community bulletin board and an up-to-date flyer for neighborhood clean-up activities. Figures 4 and 5 illuminate these neighborhood event bulletins and clean-up flyer.

Along East Presidio Road, community art supports the positive sense of place that the Cabrini neighborhood provides to residents and passers-by. Figure 6 below displays this community art.

Figure 4. Cabrini bulletin board.

Figure 5. Cabrini clean-up flyer.

Figure 6. Community mural along East Presidio Road.

IV. EXISTING CONDITIONS ANALYSIS

CABRINI

Neighborhood signage symbolizing the Cabrini neighborhood are moreover extant at neighborhood entrance nodes along East Glenn Street. These signs are shown in Figures 7 and 8. Other community amenities for pedestrians are dog waste bag dispensers, as displayed in Figure 9.

Safety features along residential streets in Cabrini are present as well. Field observations noted five traffic-calming devices, three speed bumps on East Presidio Road, and two traffic circles on East Monte Vista Drive. Examples of these safety features can be found to the right within Figures 10, and 11.

Figure 9. Bag dispenser in Cabrini.

Figure 7 and Figure 8. Cabrini neighborhood signage at street corners.

Figure 10. Traffic circle in Cabrini.

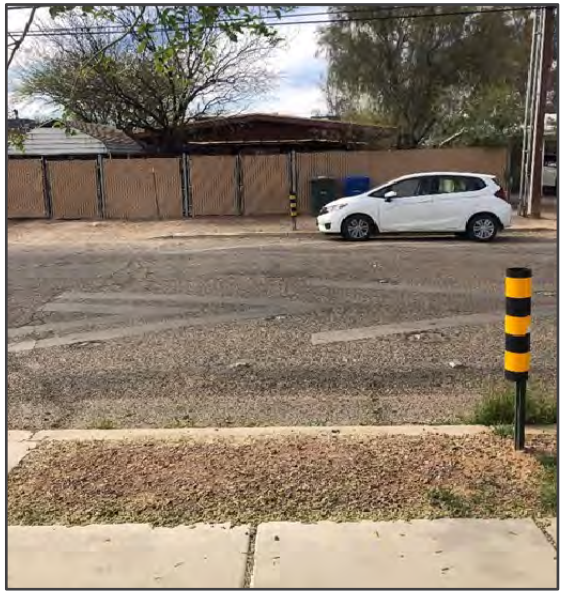


Figure 11. Speed bump in Cabrini.

CABRINI

Street lighting is abundant on arterial and collector streets such as Country Club Road, Glenn Street, and Fort Lowell Road. Street lights illuminate each four-way signalized intersection, further increasing the visibility of motorists, cyclists, and pedestrians. Street lighting is less common within the neighborhood boundaries. Field observations recorded sparse instances of residential street lights along East Presidio Road, East Blacklidge Drive, and East Monte Vista Drive.

Green infrastructure is another asset of the Cabrini neighborhood. Aforementioned traffic circles include trees to promote shade, reduce heat, and retain stormwater during rainfall events. East Glenn Street has numerous green infrastructure mechanisms that have potential to increase shade and decrease the impact of flooding. Examples of these green infrastructure project are expressed in Figures 12, 13, and 14 to the right.

Figure 12 and Figure 13. Green infrastructure and stormwater retention.

Figure 14. Poorly-maintained green infrastructure on Glenn Street.

IV. EXISTING CONDITIONS ANALYSIS

CABRINI

CABRINI DEFICIENCIES

A number of deficiencies within Cabrini were noted during the field observations. The most notable deficiency is unsupportive infrastructure for multimodal transportation. The lack of sidewalks and ADA ramps are likely difficult for many individuals and impossible for others as well. Community members with disabilities, and especially those with mobility devices, are hindered from utilizing public transit due to inadequate infrastructure. Many ADA ramps do not connect to existing sidewalks. Additionally, some street corners at four-way intersections do not have ADA ramps. Figure 15denotes an example of an ADA ramp with no connecting sidewalks.

Wide residential roads can accommodate bicycle lanes, only requiring on- street striping for these bicycle lanes. Residential and collector streets are moreover eligible for road diets to reduce the width of rights-of-way.

Many areas of the Cabrini neighborhood lack adequate tree shading. Figure 16 to the right is an example of inadequate shading at a bus stop. The lack of shading at bus stops introduces environmental justice concerns the City of Tucson must address. Waiting longer than 15 minutes in extreme heat with little shading is likely hazardous for any individual.

Figure 15. ADA ramp with no supportive sidewalk infrastructure.

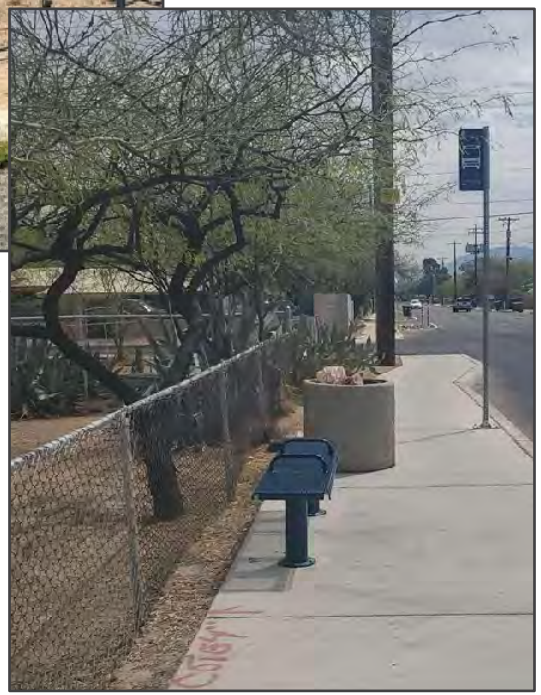


Figure 16. Bus stop without shade Glenn Street / Palo Verde Avenue.

IV. EXISTING CONDITIONS ANALYSIS

CABRINI

CABRINI OPPORTUNITIES

Numerous opportunities for development and redevelopment are extant within the Cabrini neighborhood. As public art and a sense of place are some of the strongest assets within the community, increased public art can have a lasting impact. Additionally, vegetation and landscaping within neighborhood traffic circles can improve aesthetics and reduce stormwater flooding.

The Cabrini neighborhood clearly has a sense of place as well as a committed neighborhood association. Community residents should continue to leverage support for improving the neighborhood. New bus stops with adequate tree shading can be an opportunity the neighborhood plans with the City of Tucson. Residents can also be creative and augment the sense of place at bus shelters. Small-scale art such as Figure 17 can be implemented at parcels to improve aesthetics and wayfinding.

A road diet is a larger-scale project that can support active transportation. Newly constructed sidewalks, bicycle lanes, traffic calming devices, and additional curb extensions can provide street trees, shading, as well as retain stormwater underground.

The progress completed by the neighborhood association is notable. Assets, deficiencies, and opportunity demonstrate that the community can continue to improve and enhance the quality of life for all residents.

Figure 17. Artistic street address indicator.

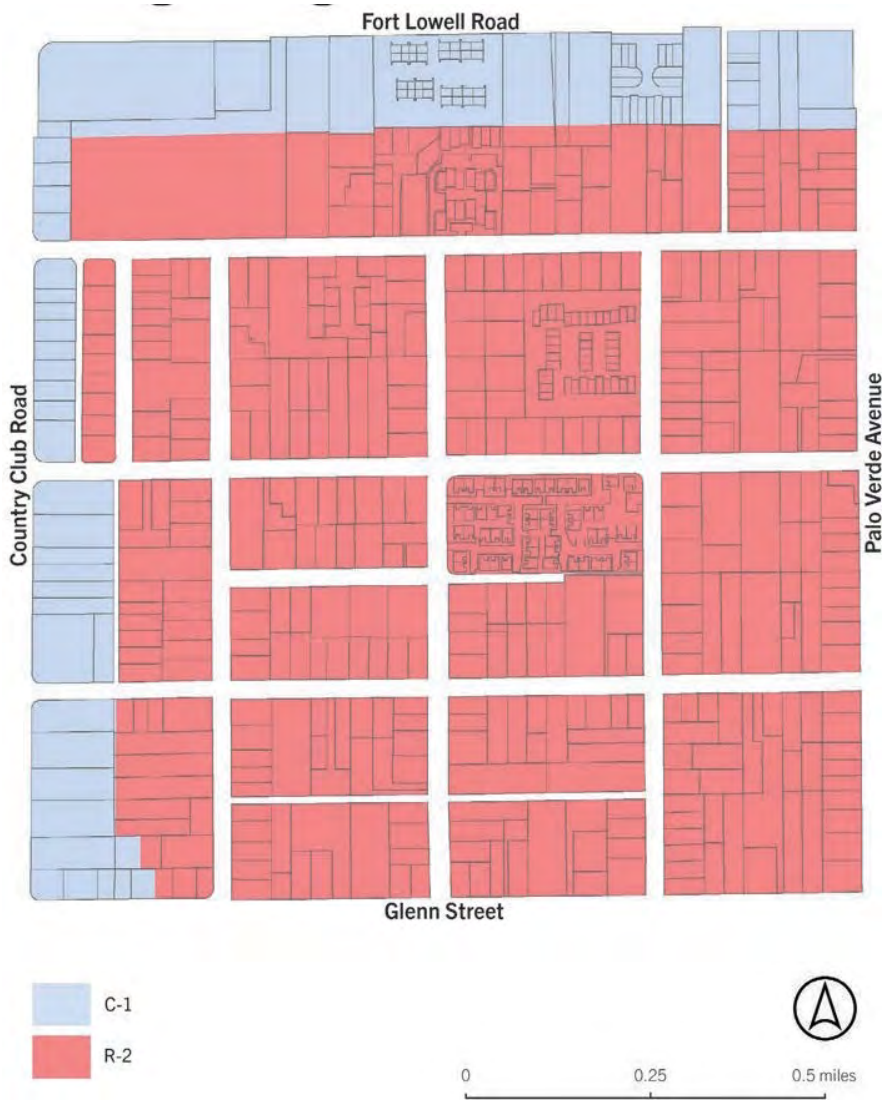
IV. EXISTING CONDITIONS ANALYSIS

LEGEND

CABRINI ZONING

C-1

R-2



Legend

Traffic Calming

Circle

Hump

ADA Ramps

Obstacle

Poor

Sidewalk Condition

Poor

Streetlight Focus

Sidewalk

Street

Unknown

Traffic Signals

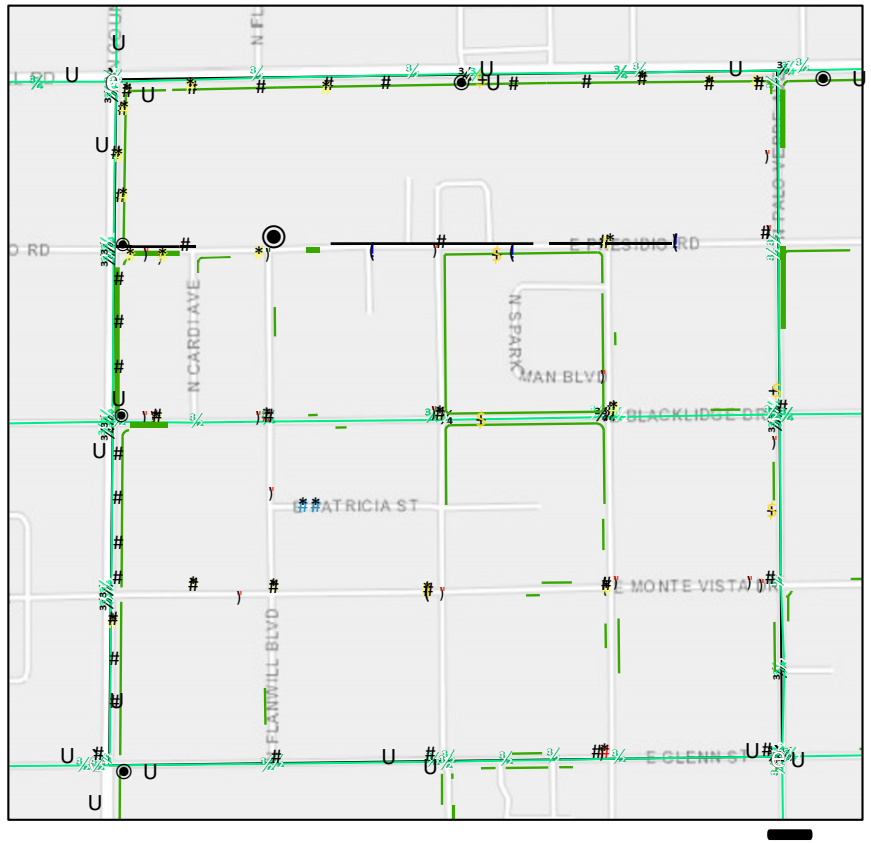
Bus Stops

Streetlights

Sidewalks

Bike Routes

CABRINI STREETS



IV. EXISTING CONDITIONS ANALYSIS

CABRINI CHARACTER

Legend

Maintenance / Vandalism

- Building Maintenance Issues
- Graffiti
- Others
- Overgrown Vegetation
- Vandalism

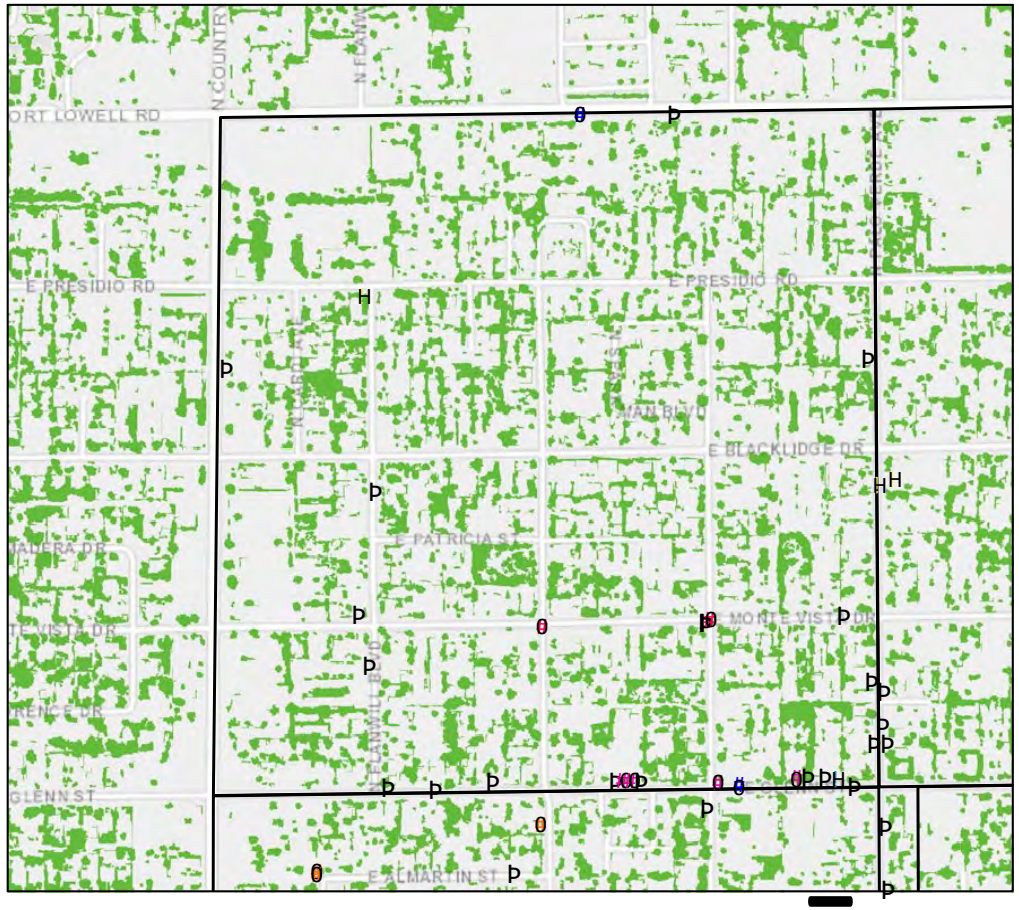
Development Opportunities

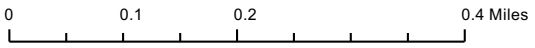
- Other
- Vacant Parcel
- Vacant Storefront

Street Trees

- Survey Data Locations

TreeCanopy/Vegetation





CABRINI STORMWATER

Legend

- 100 Year Flood Zone 500
- Year Flood Zone
- City of Tucson Flood Zones / Washes
- Sheet Flow
- Storm Drains

0 0.1 0.2 0.4 Miles

IV. EXISTING CONDITIONS ANALYSIS

DODGE FLOWER

The Dodge-Flower neighborhood is bounded by East Glenn Street to the north, North Alvernon Way to the east, East Grant Road to the south, and North Palo Verde Avenue to the west. Around half of the neighborhood is zoned for medium-density residences and a quarter of the area zoned for office uses. Commercial zoning is extant along arterial streets as well.

DODGE FLOWER ASSETS

Speed humps along residential streets such as North Winstel Boulevard are major assets to Dodge Flower. Traffic-calming devices and roundabouts at street intersections slow motorist speeds and enhance the visual appeal of the neighborhood. An example of a traffic-calming device is shown in Figure 21. Some streets such as North Winstel Boulevard, North Richey Boulevard, and East Flower Street also have adequate sidewalk infrastructure for pedestrian mobility. Some automobile- and pedestrian-oriented street lighting is present along residential streets. Figure 22 shows an example of adequate lighting.

The visual appeal at the parcel-scale is evident with native plant species and tree shading. Figure 22 to the right demonstrates a well-maintained yard with native vegetation. Most residential properties within Dodge Flower are well-maintained as a result of community-wide efforts to beautify streetscapes.

Figure 21. Traffic-calming device and associated vegetation in Dodge Flower.

Figure 22. Residential street lighting in Dodge Flower.

Figure 23. Well-maintained front yard with native vegetation.

DODGE FLOWER

DODGE FLOWER DEFICIENCIES

A number of deficiencies exist within the Dodge Flower neighborhood. The vast majority of the neighborhood lacks supportive pedestrian infrastructure. North Dodge Boulevard, the main north-south thoroughfare for the neighborhood, entirely lacks sidewalks. Moreover, existing ADA-compliant curb ramps at intersections are not supported by any sidewalk infrastructure. Figure 24 demonstrates inadequate infrastructure related to ADA-compliant curb ramps.

A lack of tree shading is another deficiency noted within the Dodge Flower neighborhood. Inadequate shading mechanisms provoke challenges to pedestrian mobility, especially during extreme heat events.

Some graffiti and vandalism are primarily extant at commercial properties. A lack of maintenance at businesses within Dodge Flower may lead to negative impressions of the neighborhood. Figures 25 and 26 are examples of vandalism.

Street lighting is severely lacking along residential streets. Most street lights are located at signalized intersections. Some residential streets have street lighting at intersections but do not fully support the safety of active transportation users at night.

Figure 24. ADA-compliant ramps hindered by stormwater bollards at North Palo Verde Avenue and East Flower Street.

Figure 25. Graffiti and vandalism at community mailboxes.

Figure 26. Graffiti along the exterior of a Dodge Flower business.

DODGE FLOWER

DODGE FLOWER OPPORTUNITIES

Six vacant and underutilized properties are present within the Dodge Flower neighborhood. Programming for development and redevelopment opportunities are outlined as follows:

Figure 27 showcases a vacant commercial building at the northwest corner of North Alvernon Way and East Grant Road. Although this derelict building is likely slated for demolition for the Grant Road Improvement Project, future redevelopment should provide businesses that cater to the Dodge Flower neighborhood.

Figure 28 displays a vacant commercial and office building at North Dodge Boulevard and East Grant Road. While a healthcare facility is expected to open within this building in 2021, construction appears to have stalled. The location of this property along Grant provides a prime redevelopment opportunity for commercial and office use.

Figure 29 demonstrates a vacant parcel at North Haskell Drive and East Grant Road. Although this lot was likely vacated for the Grant Road Improvement Project, future redevelopment should cater to the Dodge Flower neighborhood.

Figure 27. Vacant business at North Alvernon Way and East Grant Road.

Figure 28. Vacant building at North Dodge Boulevard and East Grant Road.

Figure 29. Vacant lot at North Haskell Drive and East Grant Road.

DODGE FLOWER

Figure 30 highlights a vacant parcel at the northeast corner of North Haskell Drive and East Flower Street. As the neighborhood generally lacks green space, development opportunities for a miniature park or community garden exist.

Figure 31 displays a vacant office near North Dodge Boulevard and East Flower Street. This building once served a community health and intervention center. Although the reason this building was vacated remains unclear, community health services would provide additional land use mix within the Dodge Flower neighborhood.

Figure 32 shows an underutilized wall near East Grant Road. This wall provides opportunities for community art to welcome visitors into the Dodge Flower neighborhood.

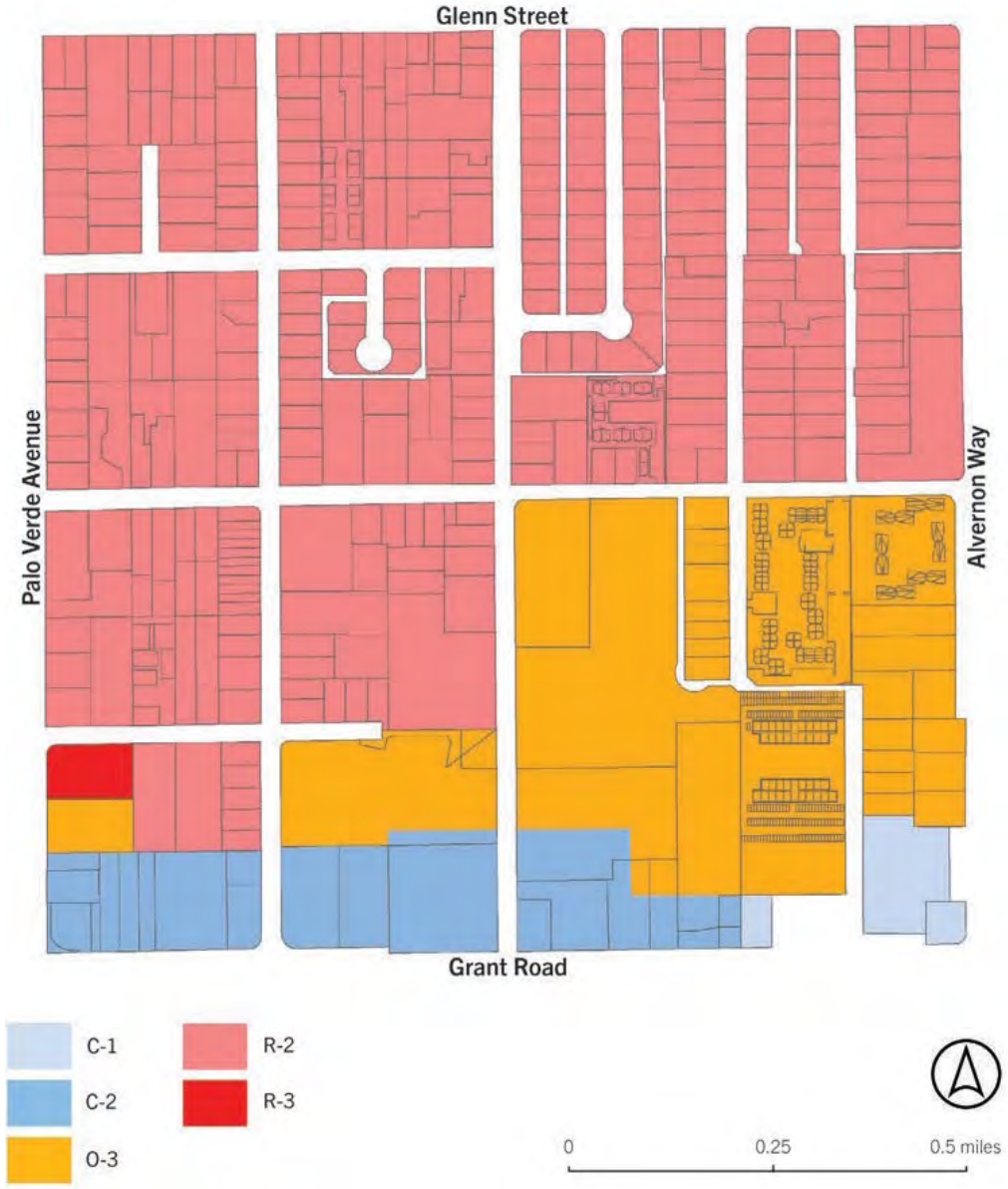
Figure 31. Vacant lot at North Haskell Drive and East Grant Road.

Figure 32. Vacant office building at North Haskell Drive and East Flower Street.

Figure 32. Underutilized vacant wall along East Grant Road.

IV. EXISTING CONDITIONS ANALYSIS

DODGE FLOWER ZONING



LEGEND

C-1

C-2

0-3

R-2

R-3

DODGE FLOWER STREETS

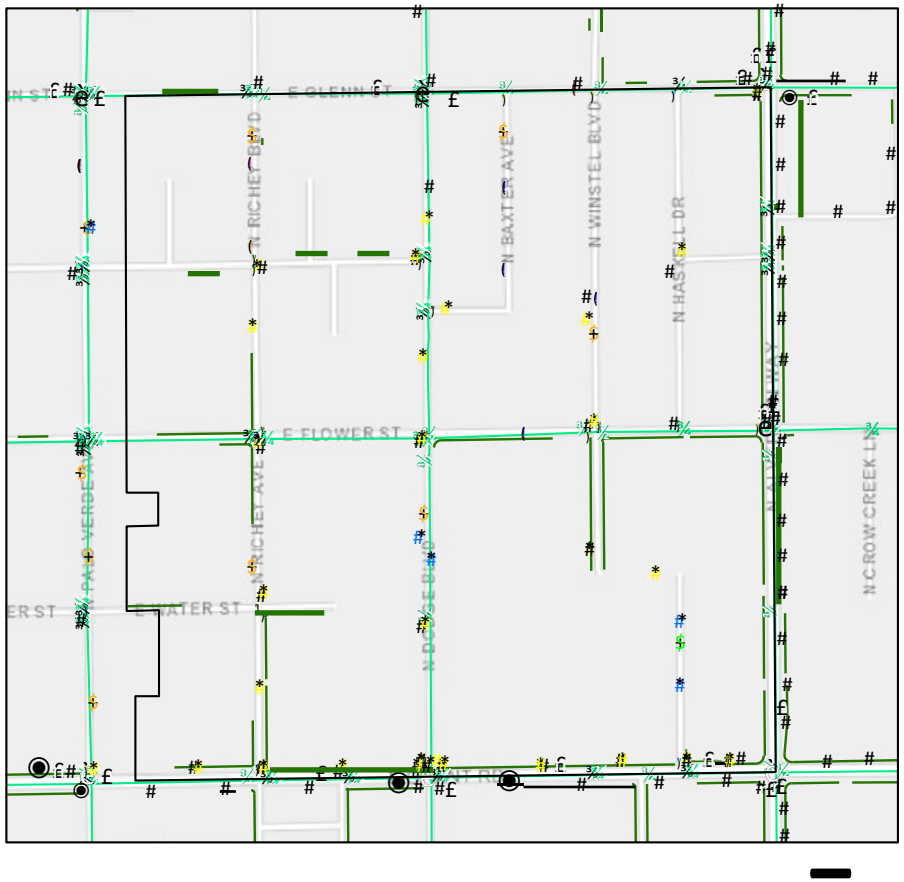
Legend

Traffic Calming
- Circle
- Hump
- Other
- Bump Out

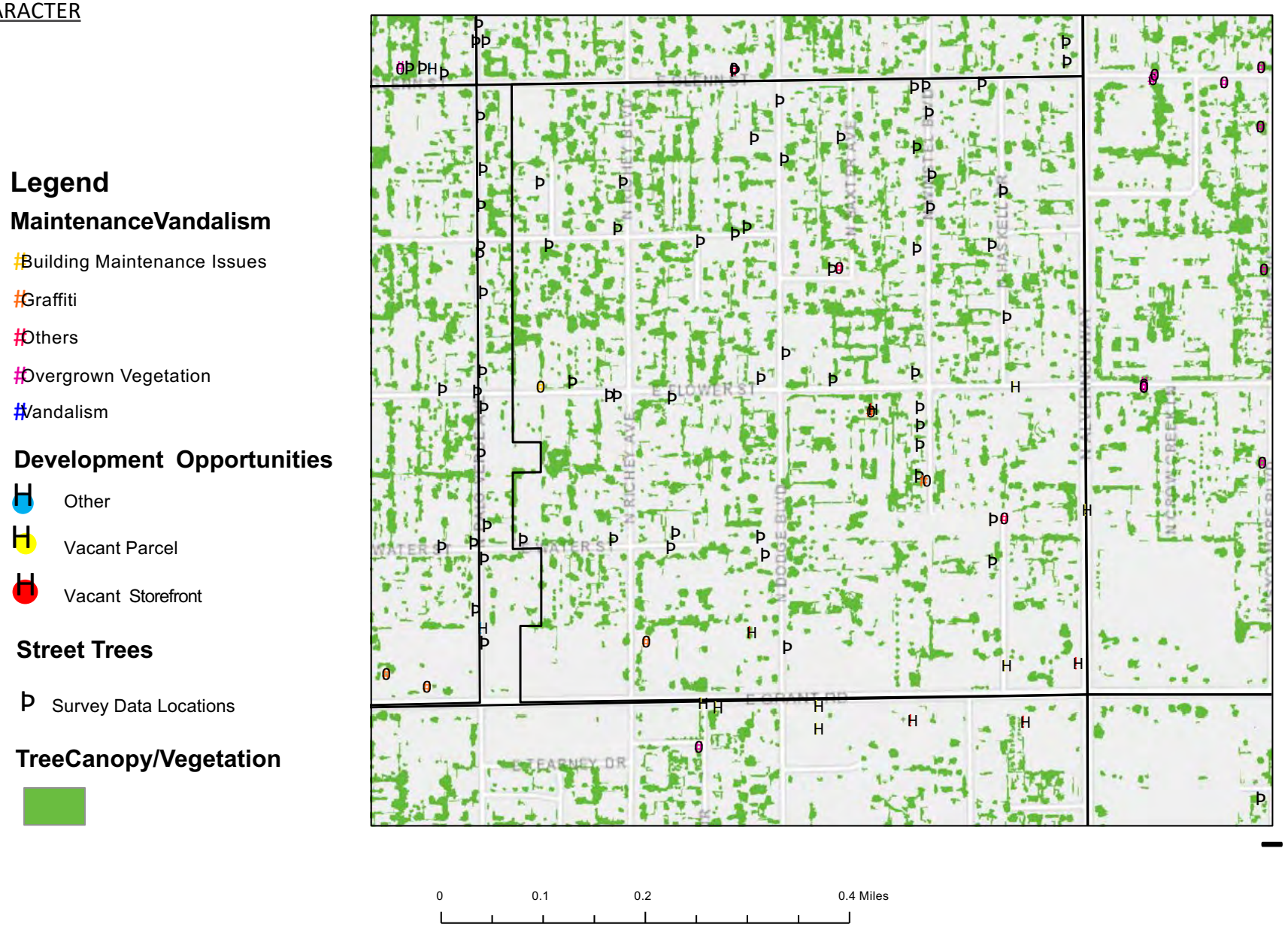
Sidewalk Condition
- Poor

Streetlight Focus
- Sidewalk
- Street

ADA Ramps
- Good
- Fair
- Obstacle
- Poor
- Traffic Signals
- Bus Stops
- Streetlights
- Bike Routes
- Sidewalks



DODGE FLOWER CHARACTER



IV. EXISTING CONDITIONS ANALYSIS

DODGE FLOWER STORMWATER

Legend

- 100 Year Flood Zone 500
- Year Flood Zone
- City of Tucson Flood Zones / Washes
- Sheet Flow
- Storm Drains

IV. EXISTING CONDITIONS ANALYSIS

DOOLEN-FRUITVALE

The Doolen-Fruitvale neighborhood is bounded by East Glenn Street to the north, North Palo Verde Avenue to the east, East Grant Road to the south, and North Country Club Road to the west. Most of the neighborhood is zoned medium-intensity residential zoning and contains mobile home parks as well as multi-family housing. Properties flanking North Country Club and East Grant roads are primarily zoned for commercial and office uses. Doolen Middle School, located at the northeast corner of Country Club and Grant roads anchors the neighborhood.

DOOLEN-FRUITVALE ASSETS

Examples of assets within the Doolen-Fruitvale neighborhood are streetlamps, traffic-calming devices, and community spaces such as the Sparkman Butterfly Garden. Figure 18 to the right showcases a signalized crosswalk asset to the neighborhood. Landscaped, traffic-calming roundabouts enhance traffic safety while providing additional vegetation and aesthetic appeal. Local businesses such as Robert's Restaurant, the Boys and Girls Club, and the Southwest University of Visual Arts are also neighborhood assets.

DOOLEN-FRUITVALE DEFICIENCIES

Much of the neighborhood lacks pedestrian sidewalks. Many intersections have ADA-compliant curb ramps that lack corresponding sidewalks. There are also numerous examples of sidewalks likely built as a condition for development for multi-family housing. These development requirements have exacerbated a patchwork of disconnected sidewalks throughout Doolen-Fruitvale. Figure 19 below shows inconsistent sidewalks. Poor roadway paving as well as potholes are also found on residential streets.

Figure 18. HAWK crosswalk at East Silver Street and North Country Club Road.

Figure 19. Inconsistent sidewalk in Doolen-Fruitvale.

DOOLEN-FRUITVALE

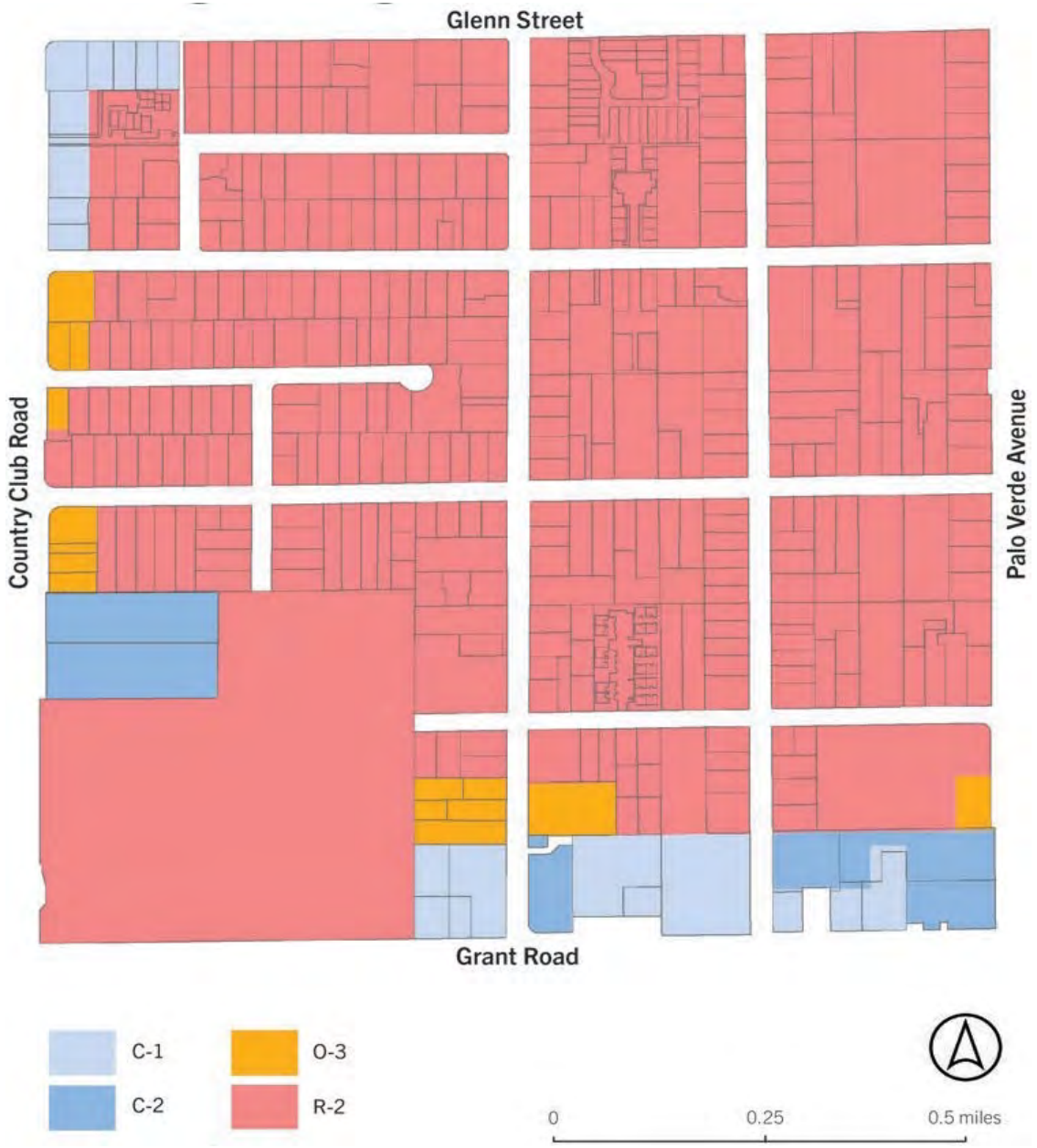
DOOLEN-FRUITVALE OPPORTUNITIES

While the Doolen-Fruitvale neighborhood mostly consists of well-maintained residential properties, development and redevelopment opportunities for underutilized and vacant parcels exist. Most vacant parcels are zoned for commercial use and can be used for economic opportunities. Several examples of graffiti, vandalism, and excess debris were found surrounding underutilized properties; criminal activities may be occurring within these underutilized properties as well. Vacant properties along East Grant Road are moreover located at neighborhood entrance and entry points. Figure 20 to the right displays a vacant property adjacent to Grant Road. These properties likely foster negative first impressions of the Doolen-Fruitvale neighborhood. Residential streets can also benefit from the installation of shade trees and landscaping.

Figure 20. Vacant land at the northwest corner of North Edith Boulevard and East Grant Road.

IV. EXISTING CONDITIONS ANALYSIS

DOOLEN-FRUITVALE ZONING



LEGEND

C-1

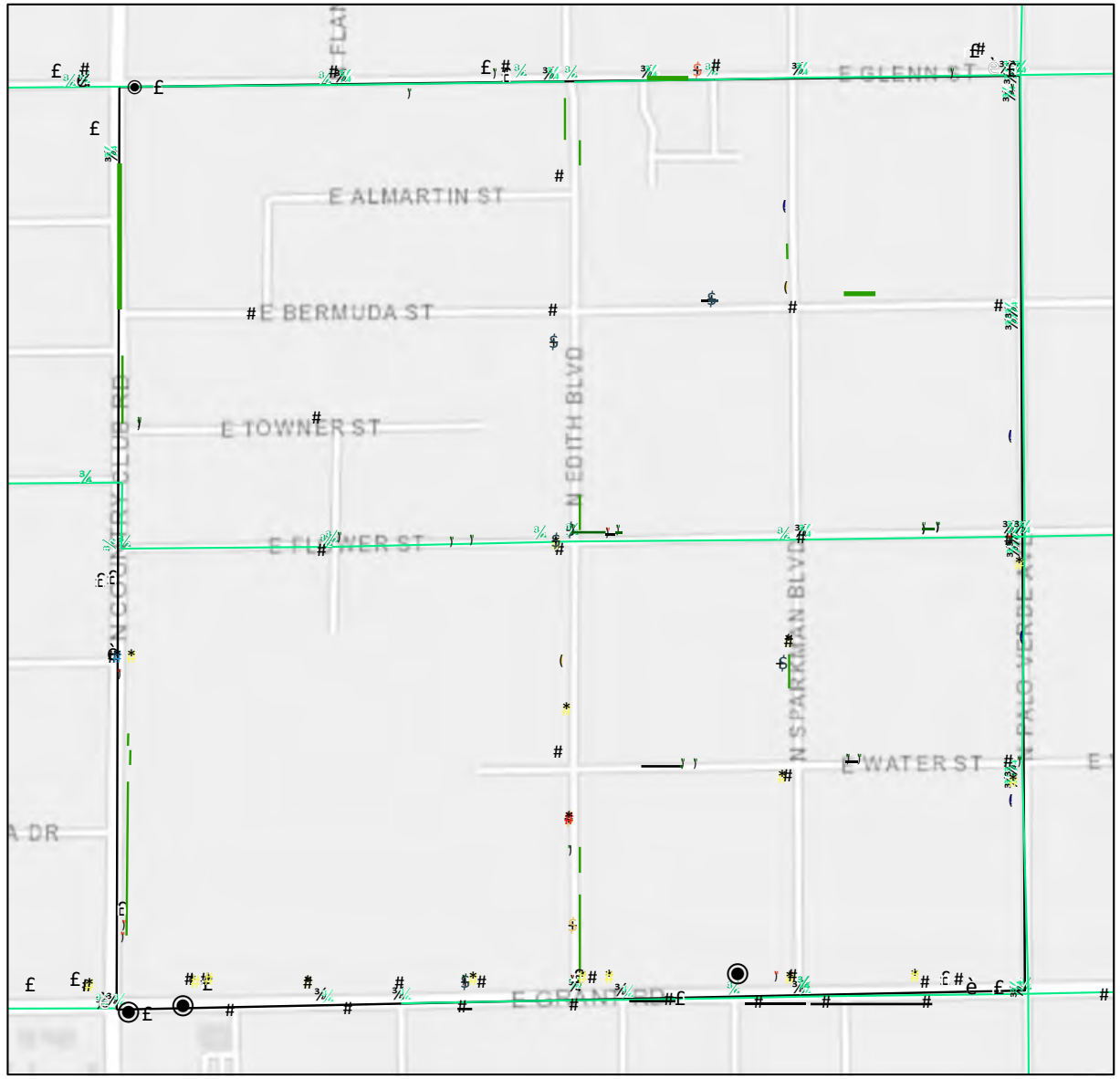
C-2

O-3

R-2

IV. EXISTING CONDITIONS ANALYSIS

DOOLEN-FRUITVALE STREETS



Legend

Traffic Calming
- Circle
- Hump

ADA Ramps
- Obstacle
- Poor

Sidewalk Conditions
- Poor
- No Sidewalk
- Missing Ramp

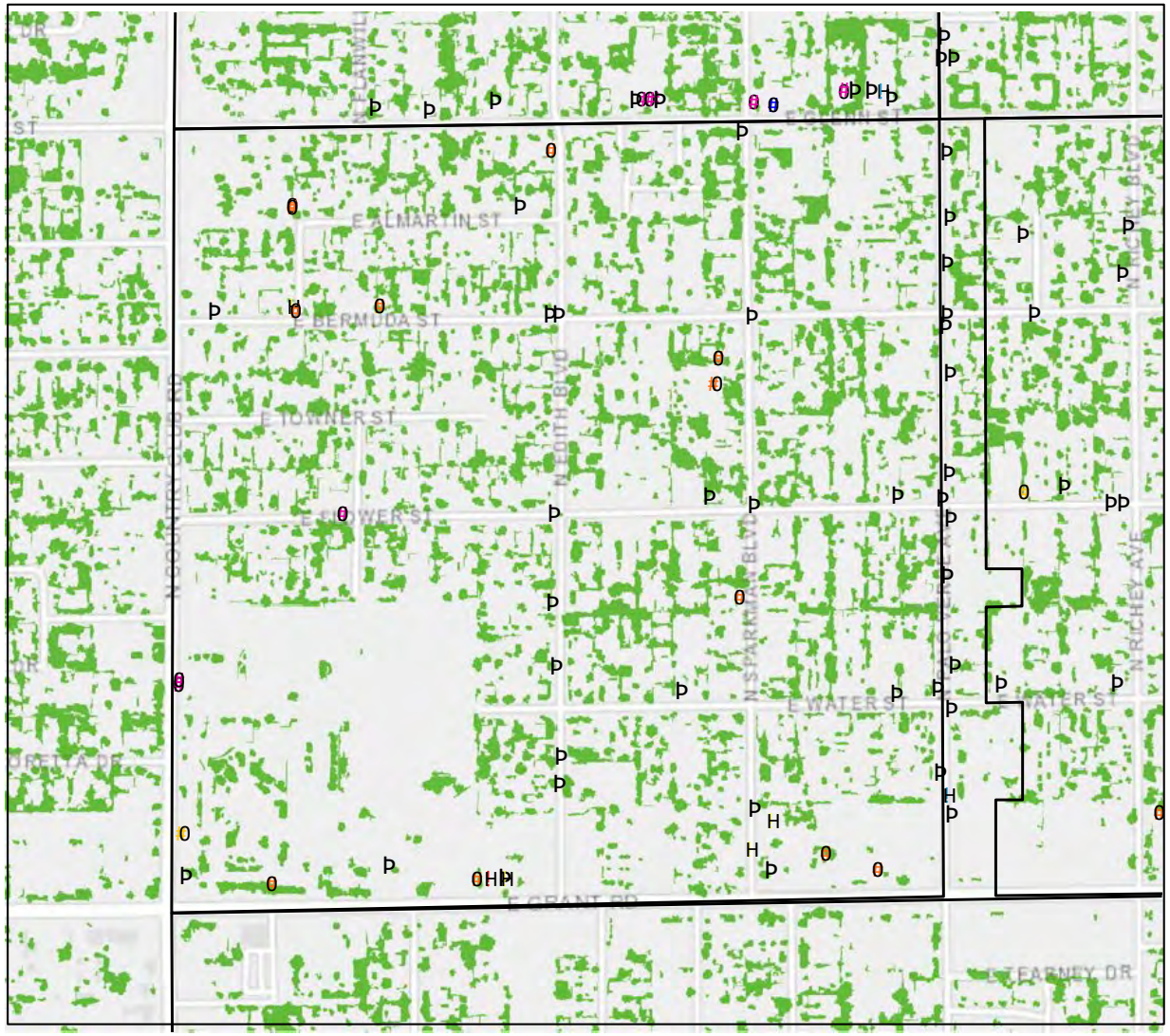
Streetlight Focus
- Sidewalk
- Street
- Unknown

- Traffic Signals
- Bus Stops
- Streetlights
- Sidewalks
- Bike Routes

0 0.075 0.15 0.3 Miles

IV. EXISTING CONDITIONS ANALYSIS

DOOLEN-FRUITVALE CHARACTER



Legend

Maintenance / Vandalism

- Building Maintenance Issues
- Graffiti
- Others
- Overgrown Vegetation
- Vandalism

Development Opportunities

- Other
- Vacant Parcel
- Vacant Storefront

Street Trees

TreeCanopy/Vegetation

0 0.1 0.2 0.4 Miles

DOOLEN-FRUITVALE STORMWATER

Legend

- 100 Year Flood Zone
- 500 Year Flood Zone
- City of Tucson Flood Zones/Washes
- Sheet Flow
- Storm Drains

0 0.1 0.2 0.4 Miles

IV. EXISTING CONDITIONS ANALYSIS

GARDEN DISTRICT

The Garden District covers over one square mile. Palo Verde is bounded by East Grant Road to the north, North Swan Road to the east, East Speedway Boulevard to the south, and North Alvernon Way to the west. The interior of the neighborhood consists of residential housing. The northwest quadrant of the neighborhood is zoned for low-density residential uses; the remaining three quadrants are mostly zoned for medium-density housing with some instances of high-density housing. Office uses are permitted along Swan Road and near the intersection of Grant and Swan roads. Commercial zoning most notably flanks Grant Road and Speedway Boulevard. Only the northwest and southeast quadrants of the Garden District were surveyed due to time constraints.

GARDEN DISTRICT ASSETS

Street trees are an asset to the northwest quadrant of the Garden District. Many properties within this quadrant moreover have mature trees that contribute to overall aesthetics and community identity. Sidewalk infrastructure is present along arterial and collector streets. ADA-compliant curb ramps are extant along North Columbus Boulevard. Some instances of traffic-calming devices were noted within the northwest quadrant and are often represented through speed humps and traffic circles. No vacant parcels were found within the northwest quadrant.

GARDEN DISTRICT DEFICIENCIES

Several deficiencies were found within the northwest quadrant of the Garden District. While are example some instances of public street lighting along arterials and collectors such as North Alvernon Way and North Columbus Boulevard, street lighting is nearly non-existent along residential streets. There are moreover few examples of pedestrian infrastructure such as sidewalks and adjacent ADA-compliant curb ramps within this neighborhood quadrant.

The southeast quadrant of the Garden District is mostly characterized by built environment deficiencies. ADA accessibility features are in poor and fair condition throughout and do not link to supportive sidewalk infrastructure. Neighborhood sidewalks are moreover inconsistent along residential blocks and are less prevalent in this quadrant than the northwest quadrant. Street trees are also much less common in the southeast quadrant. Street paving is in fair or poor condition and deserves upgrading. Vegetation maintenance or a lack thereof were witnessed along some pedestrian rights-of-way within this quadrant. No street lights were found along residential streets in the southeast quadrant. All the areas surveyed throughout the Garden District neighborhood lack adequate pedestrian infrastructure, most notably within the interior.

IV. EXISTING CONDITIONS ANALYSIS

GARDEN DISTRICT

GARDEN DISTRICT OPPORTUNITIES

Field observations revealed small- and large-scale development and redevelopment opportunities for the Garden District. In the northwest quadrant, there are opportunities for new and consistent sidewalks throughout. As construction for the Grant Road Improvement Project occurs in the near future, commercial redevelopment that complements the needs of the Garden District should be constructed. Additionally, enhanced street lighting along residential streets in the northwest quadrant can improve safety for motorists, cyclists, and pedestrians during nighttime hours.

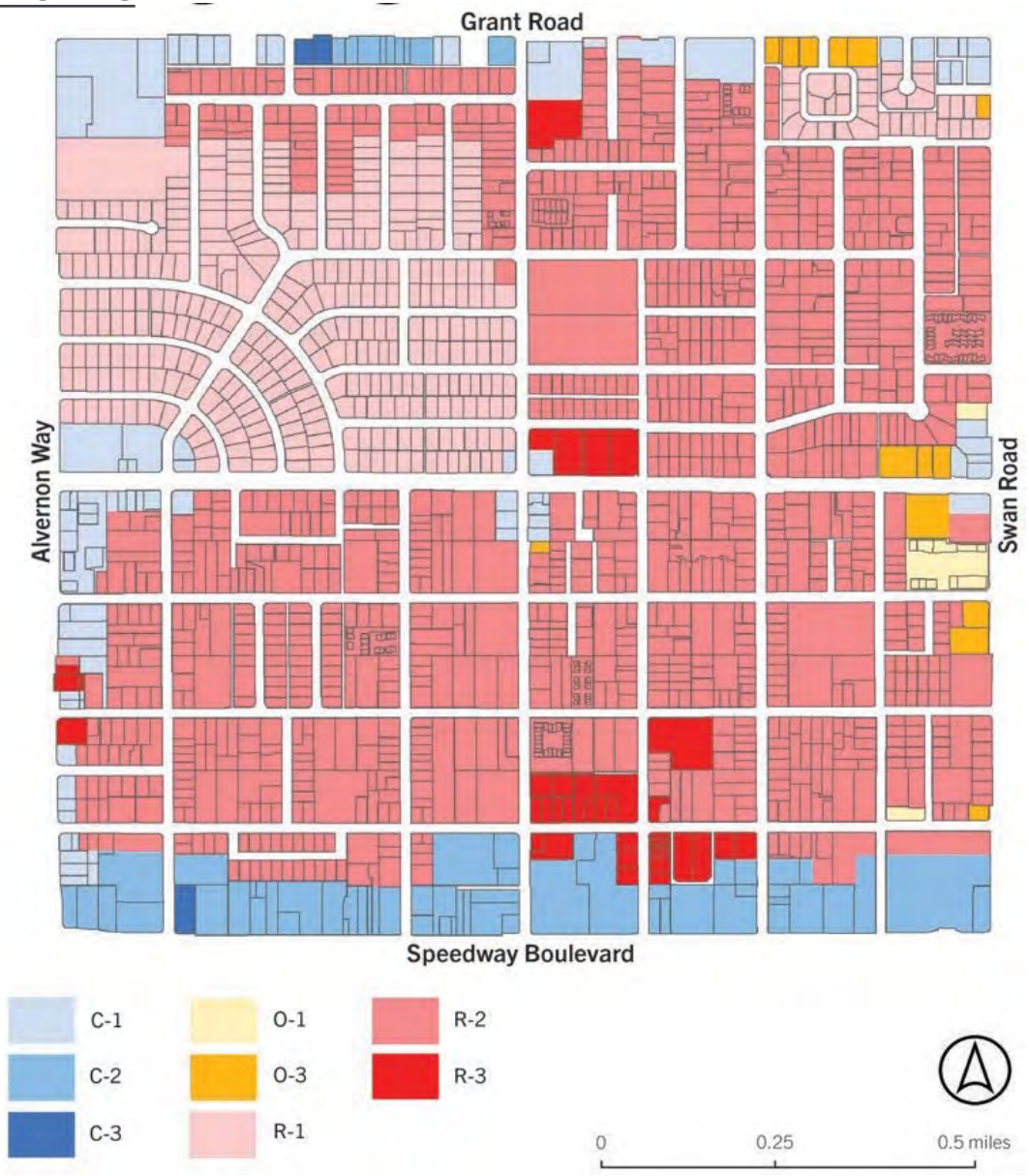
Small-scale opportunities for improvement in the southeast quadrant of the Garden District include increase tree canopy cover, traffic-calming devices, new sidewalks, and upkeep and maintenance. Increased tree shading can help combat the urban heat island effect and promote aesthetic appeals. Traffic-calming infrastructure such as speed humps, traffic circles, and bump outs can increase shade canopies and reduce motorist speeds for the benefits of cyclists and pedestrians. Traffic circles and bump outs can also retain stormwater runoff during rainfall events. New sidewalks in the southeast quadrant should be constructed to further promote multimodal transportation. Upkeep and maintenance in front of residences can moreover support walkability within the neighborhood.

Three parcels for future development and redevelopment were identified in the southeast quadrant of the Garden district. These three parcels are located along Belvedere Avenue between Pima and Lee streets, along Bellevue Street between Catalina and Belvedere avenues, and at the northwest corner of Bellevue Street and Venice Avenue. All three vacant lots are designated for medium-density residential uses.

The two mid-block vacant lots noted during surveying efforts have potential to be redeveloped for additional neighborhood housing. The vacant property at Bellevue Street and Venice Avenue may be appropriate for a community garden or a public park due to its corner location. In order to make a more vibrant and livable neighborhood, public resources for the Garden District will need to be pooled.

IV. EXISTING CONDITIONS ANALYSIS

GARDEN DISTRICT ZONING



LEGEND

- C-1
- C-2
- C-3
- O-1
- O-3
- R-1
- R-2
- R-3

IV. EXISTING CONDITIONS ANALYSIS

GARDEN DISTRICT STREETS

Legend

Traffic Calming
- Circle
- Bump Out
- Hump

ADA Ramps
- Good
- Fair
- Obstacle
- Poor

Sidewalk Conditions
- Poor
- Other
- Missing Ramp

Streetlight Focus
- Sidewalk
- Street
- Traffic Signals
- Bus Stops
- Streetlights
- Bike Routes
- Sidewalks

IV. EXISTING CONDITIONS ANALYSIS

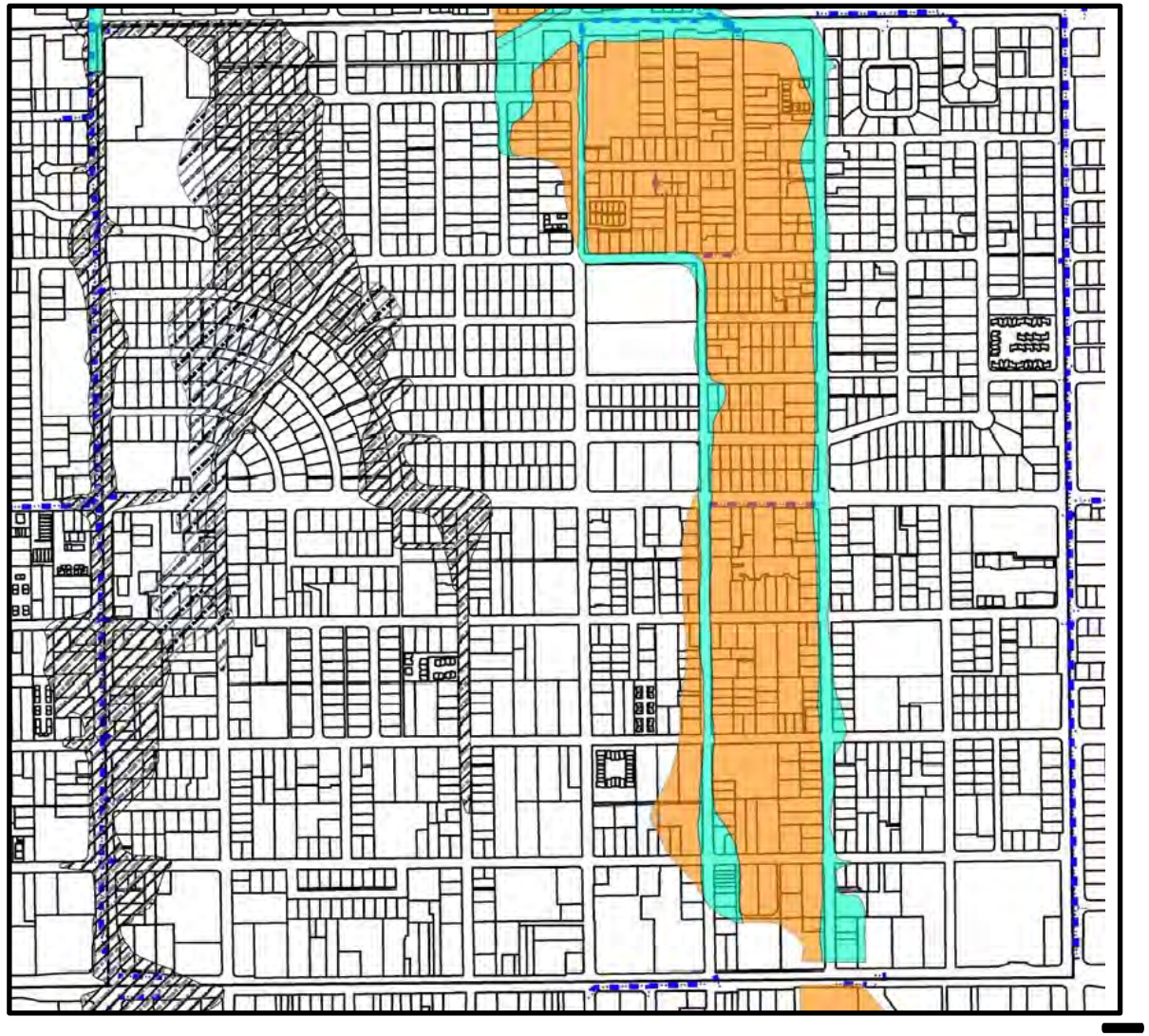
GARDEN DISTRICT CHARACTER

IV. EXISTING CONDITIONS ANALYSIS

GARDEN DISTRICT STORMWATER

Legend

- 100 Year Flood Zone 500
- Year Flood Zone
- City of Tucson Flood Zones / Washes
- Sheet Flow
- Storm Drains



0 0.15 0.3 0.4 Miles

IV. EXISTING CONDITIONS ANALYSIS

NORTH DODGE

The North Dodge neighborhood has mostly medium-intensity development. Much of the neighborhood is composed of medium- density residential, with other high-density residential, local commercial, general and intensive commercial, office, park industrial, and off-street parking zones. Current development comprises of a mixture of single- and multi-family housing as well as various commercial businesses. The neighborhood is bounded by East Fort Lowell to the north, North Alvernon Way to the east, East Glenn Street to the south, and North Palo Verde to the west. The 16-block neighborhood is located 2.5 miles northeast of the University of Arizona and nearly 4 miles northeast of downtown Tucson.

NORTH DODGE ASSETS

The North Dodge neighborhood consists of a grid system that is both aesthetically pleasing and easily structured. The grid system allows for a steady flow of traffic throughout the neighborhood. Public transportation has a strong presence as well. There are multiple bus stops located on arterial and collector boundary roads: three are extant on East Fort Lowell, three on North Alvernon Way, and two on East Glenn Street. The presence of public transportation moreover indicates that the North Dodge neighborhood is walkable and provide multimodal transportation options.

Commercial businesses along East Fort Lowell Road are in high-traffic areas of the neighborhood. Businesses naturally face toward East Fort Lowell Road and present ideal placements to attract customers. An area formerly dedicated to manufactured homes (Midtown Mobile Home Park) is currently under construction for new multi-family housing. This multi-family housing complex blends into the neighborhood by maintaining comparable housing and market values for the area. Most housing in North Dodge is a mixture of older domiciles (at North Winstel Boulevard and East Glenn Street) as well as updated, unique forms of architecture (Hidden Gem Lodge on North Richey Boulevard). Neighborhood condominium complexes mirror motel-like buildings that feel more transient than permanent. Many single-family residences have landscaping with custom walls or fences near the street. Extant sidewalks are mostly in good condition throughout the neighborhood. Trees planted along sidewalks moreover provide decent shade for pedestrians.

Recent improvements to North Dodge have provided new benefits to residents. Road improvements along East Glenn Street provide 20 bump- out curbs for stormwater mitigation as well as water-runoff collection points for wildflowers and other plantings. New bicycle lanes were also implemented along East Glenn Street. Other improvements include a traffic-control roundabout at North Dodge Boulevard and East Presidio Road. Speed bumps are moreover extant throughout the neighborhood.

NORTH DODGE

NORTH DODGE DEFICIENCIES

Numerous deficiencies must be address to improve the North Dodge neighborhood. The most notable deficiency is the lack of sidewalks along streets. Sidewalks not only provide adequate road safety for pedestrian, but support attractive and inviting public spaces. Many roads within the neighborhood do not have supportive pedestrian infrastructure. These roads include North Richey Boulevard, North Chapel Avenue, North Winstel Boulevard, East Monte Vista Drive, East Blacklidge Drive, East Presidio Road, and East Patricia Street. Numerous street corners have ADA-compliant curb ramps; however, not all corners have curb ramps nor are all ramps currently compliant. For safety purposes, all street corners need to ensure curb ramps are ADA-compliant. Once curb ramps are implemented, the endorsement of neighborhood sidewalks can be stronger.

More shading must be added to key areas of the neighborhood near public transit stops. One area for improvement is along stormwater infiltration basins, where shade trees can provide shading for bicycle and pedestrian rights-of-way. Shade trees within multi-family housing common areas can moreover give additional privacy to residents and cool ambient temperatures. Privacy should be afforded to all residing within North Dodge; providing street trees can help alleviate this deficiency.

Some specific problems also harm neighborhood amenities and require immediate action. Where sidewalks are extant, instances of buckling concrete and uneven surfaces are dangerous for pedestrians. Examples of unsafe sidewalks include: nine on North Alvernon Way, one on North Palo Verde Avenue, one on East Fort Lowell Road, nine on North Dodge Boulevard, and three on North Winstel Boulevard. Renovations to these dangerous areas must be addressed before other improvements are completed.

NORTH DODGE OPPORTUNITIES

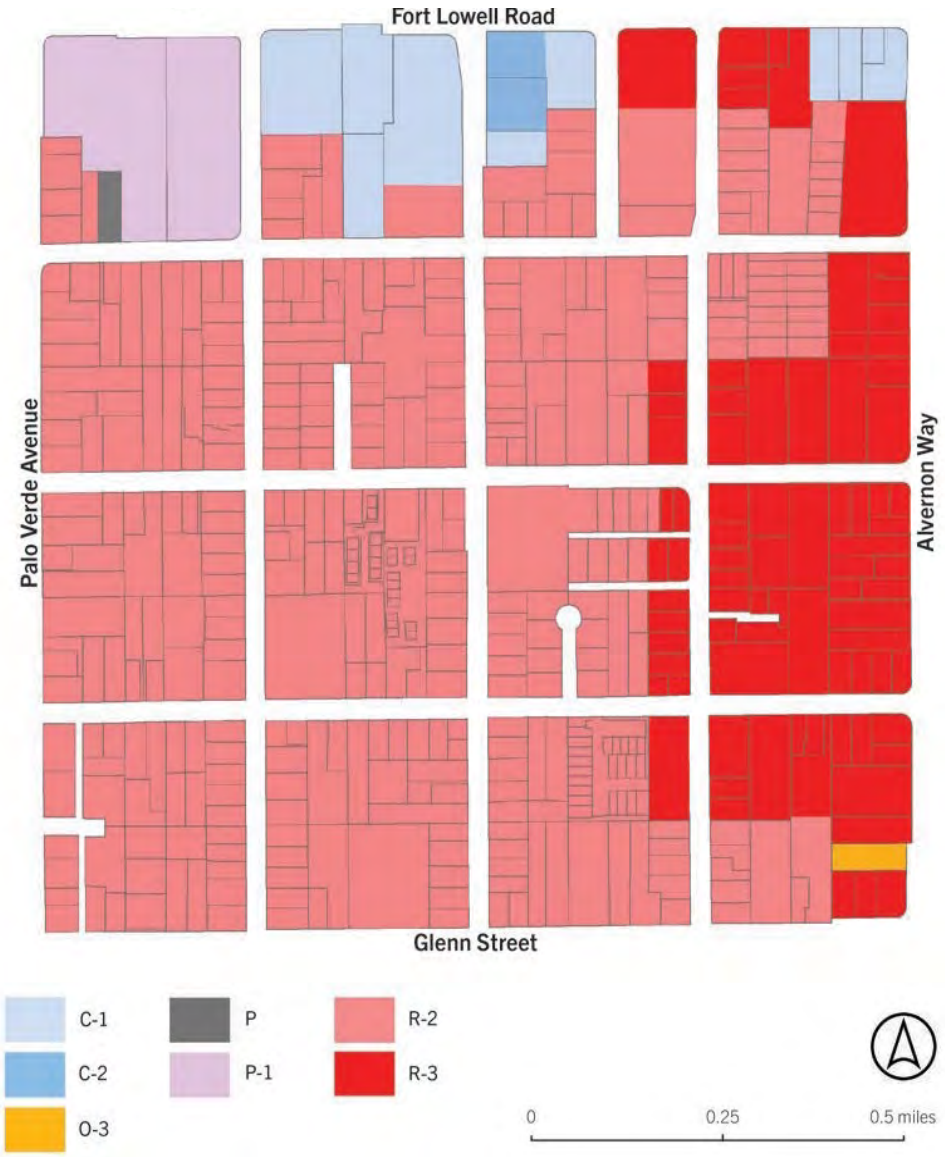
Several vacant parcels provide opportunities for development and redevelopment in North Dodge. Vacant parcels are located at North Winstel Boulevard and East Fort Lowell Road, North Winstel Boulevard at East Presidio Road, and near the corner of North Palo Verde Avenue and East Monte Vista Drive. These parcels are infill opportunities that can further improve North Dodge. These vacant parcels are designated as either medium- or high-intensity residential zoning and can contribute to new housing. A vacant storefront is also available for lease at the corner of East Fort Lowell Road and North Dodge Boulevard. This attractive building is likely suitable for a business office or retail store opportunity. The building's orientation along East Fort Lowell does not provide a better opportunity for commercial development in the North Dodge neighborhood.

IV. EXISTING CONDITIONS ANALYSIS

NORTH DODGE ZONING

LEGEND

C-1
C-2
O-3
P
P-1
R-2
R-3



IV. EXISTING CONDITIONS ANALYSIS

NORTH DODGE STREETS

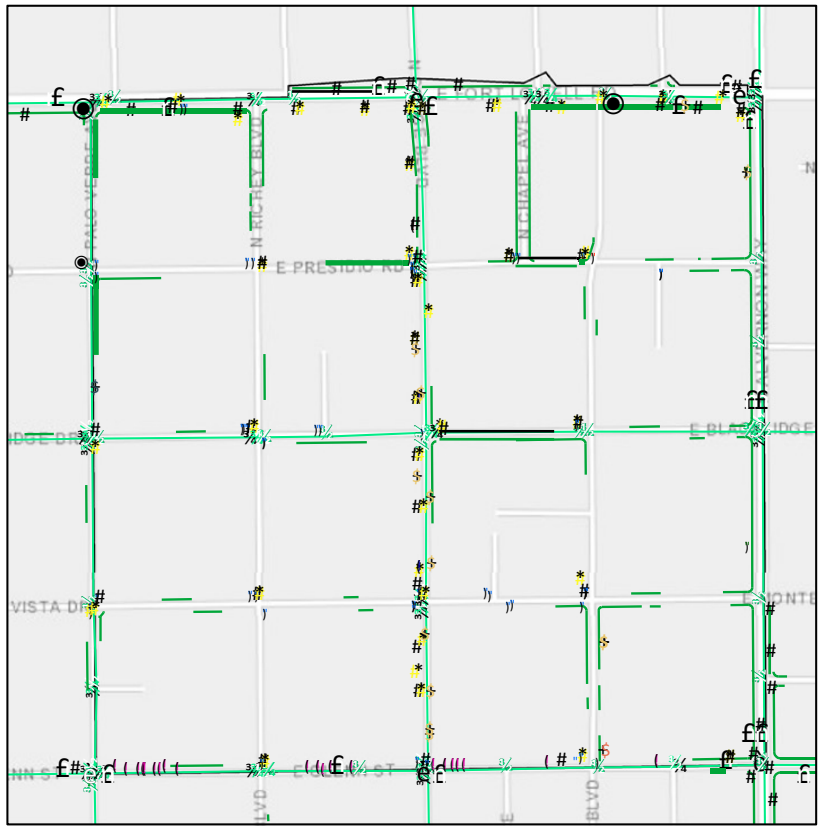
Legend

Traffic Calming
- Circle
- Hump
- Other
- Bump Out

ADA Ramps
- Good
- Obstacle
- Poor

Sidewalk Conditions
- Poor
- Buckling Sidewalk
- Missing Ramp

Streetlight Focus
- Street
- Traffic Signals
- Bus Stops
- Streetlights
- Sidewalks
- Bike Routes



IV. EXISTING CONDITIONS ANALYSIS

NORTH DODGE CHARACTER

NORTH DODGE STORMWATER

Legend

- 100 Year Flood Zone 500
- Year Flood Zone
- City of Tucson Flood Zones / Washes
- Sheet Flow
- Storm Drains

0 0.1 0.2 0.4 Miles

IV. EXISTING CONDITIONS ANALYSIS

OAK FLOWER

Oak Flower is bordered by East Glenn Street, North Columbus Boulevard, East Grant Road, and Alvernon Way. Nearly the entire interior of the neighborhood is zoned for medium-density residential use, with additional commercial and office zoning along arterial streets. Mobile homes are also allowed within Oak Flower.

OAK FLOWER ASSETS

Field observations found that nearly every residential street in the Oak Flower neighborhood includes public street lighting. Street lighting is often oriented at the vehicular-scale for nighttime visibility. Figure 33 highlights street lighting infrastructure. Sidewalks are moreover present along some streets such as East Grant Road, East Flower Street, and North Alvernon Way.

OAK FLOWER DEFICIENCIES

A major deficiency within the Oak Flower neighborhood is a lack of supportive pedestrian infrastructure. Extant sidewalks are often the width of a property's boundaries and are non-extant any many Oak Flower streets. Areas with sidewalks are not typically served with ADA-compliant curb ramps. Figure 34 demonstrates sidewalks without ADA-compliant curb ramps. A lack of shading is another major deficiency within the neighborhood. Many residential properties moreover have vegetation or fences that inhibit pedestrian use separated from the street.

Figure 33. Public residential street lighting in the Oak Flower neighborhood.

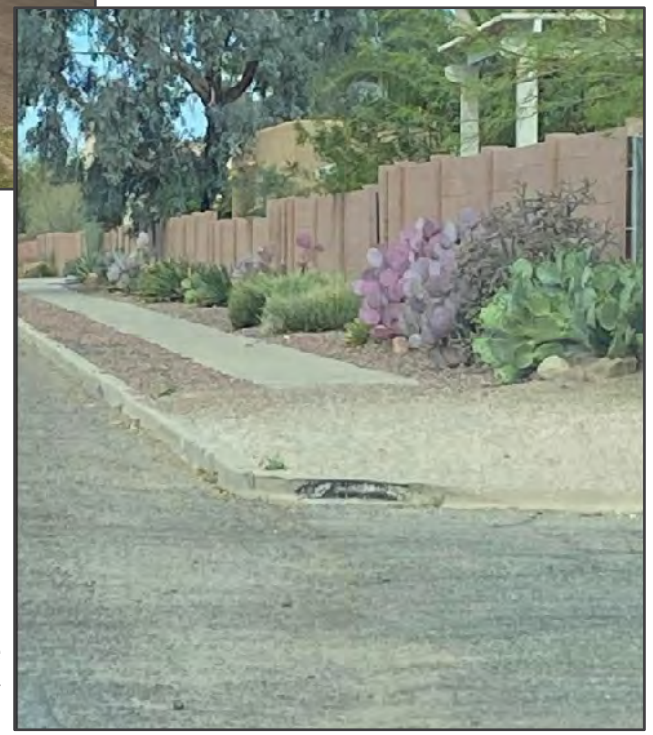


Figure 34. Sidewalk infrastructure without complementary ADA-compliant curb ramps.

OAK FLOWER OPPORTUNITIES

OAK FLOWER

Opportunities for development and redevelopment are mainly confined to the eastern sections of Oak Flower. Figure 35 on the right displays a potential redevelopment opportunity at North Fair Oaks Avenue and East Monte Vista Drive for multi-family housing. Many of the underutilized or vacant properties identified are best suited for new community amenities such as open spaces, public art, and community gardens.

Figure 35. Adequate sidewalks without tree shading at North Fair Oaks Avenue and East Monte Vista Drive.

IV. EXISTING CONDITIONS ANALYSIS

OAK FLOWER ZONING

LEGEND

C-1
C-2
MH-1
MH-2
O-1
C-1
C-2
P
R-1
R-2
R-3

IV. EXISTING CONDITIONS ANALYSIS

OAK FLOWER STREETS

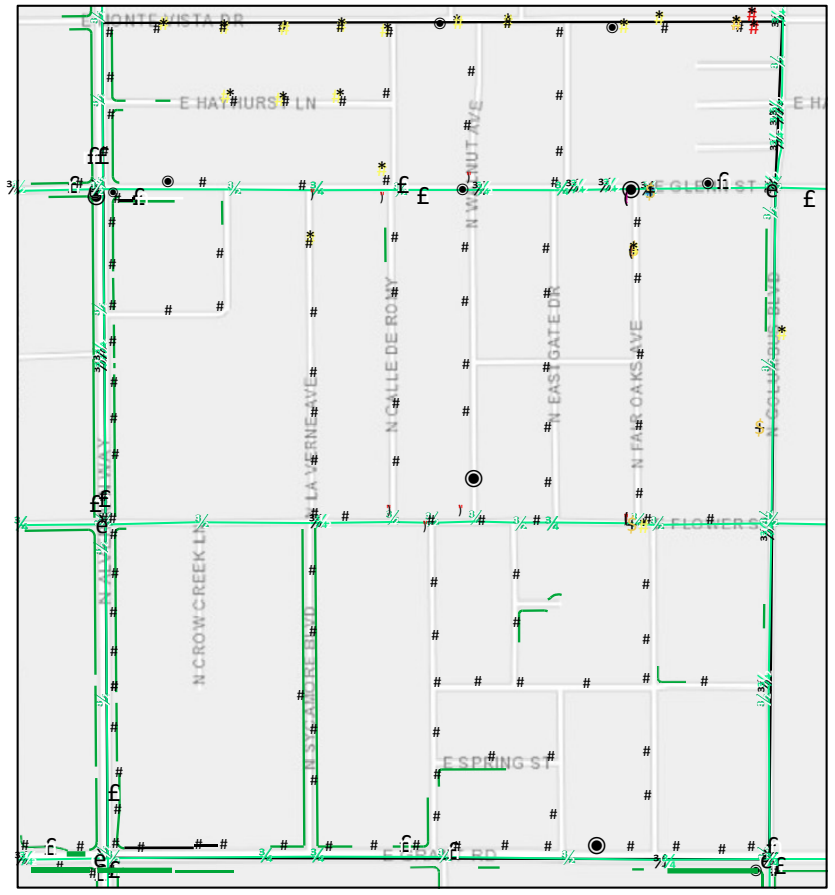
Legend

Traffic Calming
- ! Other
- ! Bump Out

ADA Ramps
- " Poor

Sidewalk Conditions
- $ No Sidewalk

Streetlight Focus
- # Sidewalk
- # Street
- # Unknown
- è Traffic Signals
- £ Bus Stops
- # Streetlights
- Sidewalks
- ¾ Bike Routes



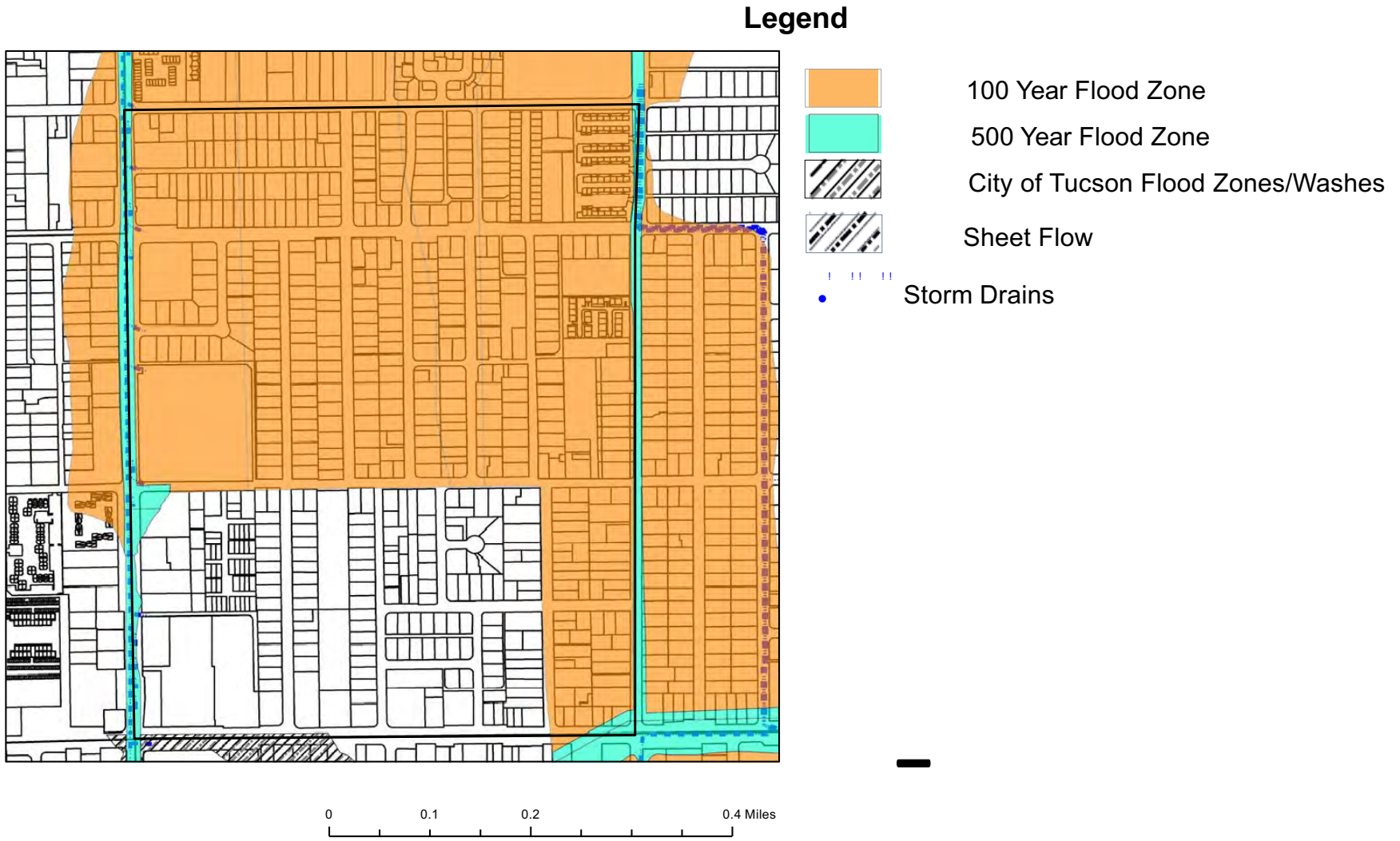
0 0.075 0.15 0.3 Miles

IV. EXISTING CONDITIONS ANALYSIS

OAK FLOWER CHARACTER

IV. EXISTING CONDITIONS ANALYSIS

OAK FLOWER STORMWATER



IV. EXISTING CONDITIONS ANALYSIS

PALO VERDE

The Palo Verde neighborhood covers over one square mile. Palo Verde is bounded by East Grant Road to the north, North Alvernon Way to the east, East Speedway Boulevard to the south, and North Country Club Road to the west. East Speedway Boulevard and East Grant Road serve a variety of commercial uses. North Alvernon Way and North Country Club Road mainly consist of residential zoning, with occasional office and commercial uses permitted. The interior of the neighborhood is entirely zoned for residential use and includes low-, medium-, and high-density housing.

PALO VERDE ASSETS

The neighborhood possesses many strong assets for its quality of life. One of the chief assets of Palo Verde is the current land use designations throughout. Much of the neighborhood consists of medium and high-density housing, allowing for future development to increasing housing stocks. Opportunities for accessory dwelling units are available to property owners within higher intensity zoning. Accessory dwelling units can moreover provide older adults the option to age in place within Palo Verde.

Another asset to the neighborhood is Catalina High School. This institution provides large green spaces that reduce the urban heat island effect and support recreation for neighborhood residents. Catalina High School is moreover flanked by ADA-compliant sidewalks and curb ramps as well as traffic-calming mechanisms.

Palo Verde Avenue is an additional neighborhood asset with its traffic- calming devices and aesthetic appeal. There are numerous traffic circles along Palo Verde Avenue that serve as stormwater retention basins and support increased tree shading. These traffic circles also have barrels ringed in reflective tape to increase nighttime visibility for motorists. This street moreover has many speed humps to effectively slow collector street traffic. Figure 36 below highlights a traffic circle within Palo Verde.

Figure 36. Traffic calming circle at an intersection with Palo Verde Avenue.

IV. EXISTING CONDITIONS ANALYSIS

PALO VERDE

PALO VERDE DEFICIENCIES

Various deficiencies are present within the Palo Verde neighborhood. Deficiencies are either small-scale and require minimal efforts or large- scale and require more resource intensive efforts. One of the most apparent deficiencies within Palo Verde is the lack of tree canopy coverage. Many areas of the neighborhood have extremely little tree shading. Increasing the tree canopy, especially at the parcel level, can have dramatic effects.

The Palo Verde neighborhood also lacks basic streetscape infrastructure. The neighborhood moreover lacks street lighting throughout its interior; lighting is only provided along arterial streets, Palo Verde Avenue, and near Catalina High School. The interior of the neighborhood is nearly devoid of sidewalks. Extant sidewalks are likely unsupportive due to buckling and age.

Chronic vandalism is present in many areas of Palo Verde. Areas around the perimeter of the neighborhood appear to be consistently vandalized; many properties subject to chronic vandalism are underutilized or vacant. Figure 37 on the right shows a derelict property with vandalism.

Lastly, pedestrian rights-of-way often lack sufficient clearance for movement. This lack of access forces pedestrians into the street, exposing them to heightened risk levels while navigating Palo Verde. Vegetation overgrowth must be controlled and maintained by property owners for pedestrian safety.

PALO VERDE OPPORTUNITIES

Numerous opportunities for development and redevelopment are available within Palo Verde. Many vacant and underutilized lots have potential to be converted to public spaces and parks. One such lot is on the north side of Bellevue Street between North Country Club Road and North Camilla Boulevard. This site has multiple derelict structures that are heavily vandalized. This property is moreover subject to squatting, vandalisms, and disrepairs that violent city codes. Open spaces such as a park are appropriate for this parcel.

Figure 37. Derelict property within Palo Verde.

IV. EXISTING CONDITIONS ANALYSIS

PALO VERDE

An image of this derelict parcel is expressed in Figure 38. An existing park along East Willard Street between Howard and Jones boulevards serves as a model for the redevelopment of this site.

In addition to vacant and underutilized parcels, pockets of the Palo Verde neighborhood are underutilized due to water wells and pumps that require easements. These properties are typically barren and present an opportunity to plant trees and vegetation to increase tree shading. These spaces may also be used as community gardens such as the Desert Courtyard Apartments garden along North Alvernon Way.

Palo Verde moreover experiences major flooding events and utilizes some residential streets as arroyos. This situation represents an opportunity to pull water into the ground from street runoff. Many streets acting as arroyos are 30 to 40 feet wide and can also benefit from bump outs for landscaping and water harvesting. A primary benefit of bump outs for stormwater retention is their abilities to function as de facto traffic- calming devices. Each residential street presents an opportunity to reduce street widths without impacting traffic flows or parking availability. An example of a bump out in the Rincon Heights neighborhood that acts as a water collection basin and a traffic-calming device is shown in Figure 39 to the right.

Figure 38. Derelict residence at 3139 East Bellevue Street.

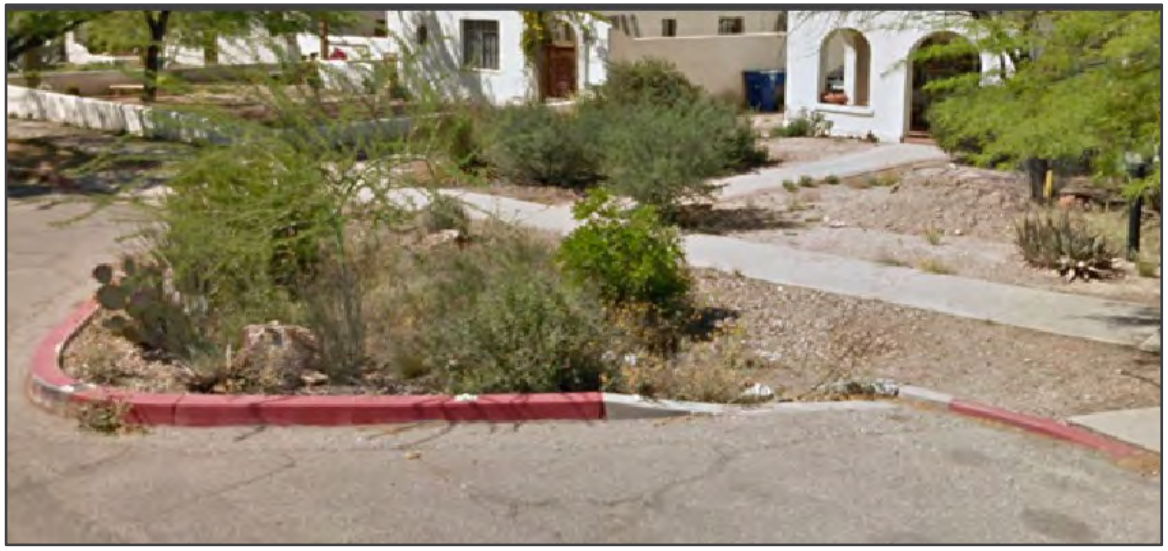


Figure 39. Green infrastructure and traffic-calming device examples in Rincon Heights.

IV. EXISTING CONDITIONS ANALYSIS

PALO VERDE

The Palo Verde neighborhood is home to many commercial businesses and real estate enterprises. However, many of these businesses have closed over the years, leaving many buildings and structures subject to vacancy. Figure 40 displays a vacant business within Palo Verde. These vacant properties represent redevelopment opportunities for the neighborhood. Redeveloping these parcels can create a more walkable neighborhood, buffer against crime and antisocial behaviors as well as reduce vandalism.

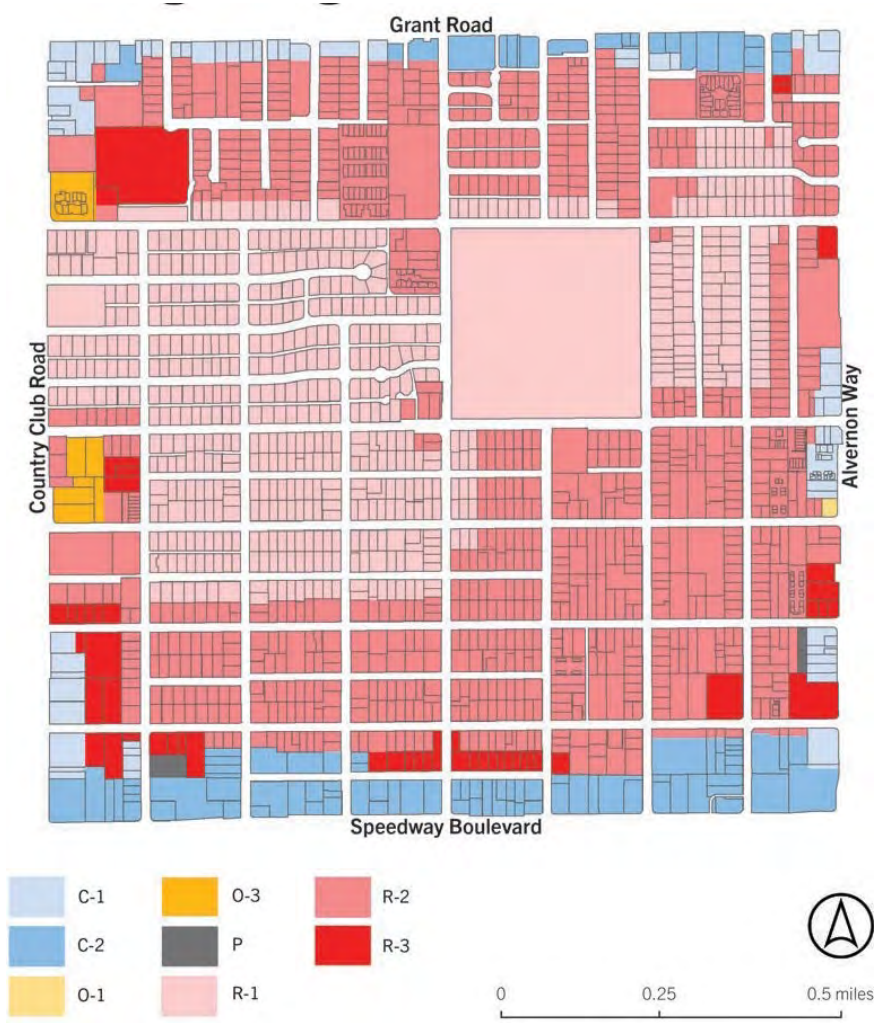
Figure 40. Redevelopment opportunity for a vacant business in Palo Verde.

IV. EXISTING CONDITIONS ANALYSIS

PALO VERDE ZONING

LEGEND

- C-1
- C-2
- O-1
- O-3
- P
- R-1
- R-2
- R-3



IV. EXISTING CONDITIONS ANALYSIS

PALO VERDE STREETS

Legend

Traffic Calming
- Circle
- Hump

ADA Ramps
- Poor
- Traffic Signals
- Bus Stops
- Streetlights
- Sidewalks
- Bike Routes

IV. EXISTING CONDITIONS ANALYSIS

PALO VERDE CHARACTER

IV. EXISTING CONDITIONS ANALYSIS

PALO VERDE STORMWATER

IV. EXISTING CONDITIONS ANALYSIS

CONCLUSION

Each neighborhood encompassing the Grant-Alvernon Area Plan has its own unique history and character. These unique qualities help frame the character of each neighborhood and highlight their strengths and assets. Many of the neighborhoods have community art, picturesque street signage, and quaint community bulletin boards that complement open spaces and green infrastructure. In addition to these physical attributes, the area plan boundaries maintain safety measures within traffic-calming devices as well as accessibility to housing and commerce. Residents benefit from public schools, anchoring institutions, and multimodal transportation options.

In spite of these various assets, opportunities for improvement remain in each of the neighborhoods. Additional improvements on sidewalks, ADA-compliant curb ramps, residential street lighting, and high-visibility bicycle lanes would improve public safety throughout. The removal of graffiti, vandalism, and poorly-maintained landscaping can increase aesthetic appeal and community identities. Planting shade trees would add neighborhood beauty and, more importantly, reduce the urban heat island effect at high-risk locations such as bus stops and bicycle lanes. Development and redevelopment opportunities are likely realistic for vacant parcels and derelict businesses spread throughout each neighborhood. These opportunities will furthermore improve the quality of life within the seven neighborhoods comprising the area plan.

V. NEIGHBORHOOD OPPORTUNITIES

V. NEIGHBORHOOD REDEVELOPMENT OPPORTUNITIES

CABRINI

The Cabrini neighborhood provides welcoming first impressions with an abundance of character throughout. From the welcome mural and up-to- date bulletin boards to the dog bag dispensers and residences with artistic touches, visitors gain a strong sense of Cabrini provide. The concept plan proposed for Cabrini is a streetscape plan for East Glenn Street at the corner of North Edith Boulevard. This plan focuses on enhancing bicycle lanes, upgrading the bioretention basins with new trees, and installing a much-needed bus shelter. This plan presents an opportunity to celebrate and display the Cabrini neighborhood.

In 2016, the City of Tucson began the Glenn Street Neighborhood Improvement Project between North Country Club Road and North Columbus Boulevard. This project implemented ADA-compliant sidewalks and curb ramps, bioretention basins, and six-foot wide bicycle lanes on both sides of East Glenn Street. Since project completion in 2018, the streetscape has become extremely weathered. The section requiring immediate needs is at East Glenn Street and North Edith Boulevard.

For the purpose of this concept plan, green painted bicycle lanes should be implemented for increased visibility and reduced urban heat island effects. Additional bicycle bollards should be added to protect cyclists from motorists, as is shown in an example from the Barrio Anita neighborhood. The City of Tucson's Complete Streets Program as well as the Bicycle and Pedestrian Program are appropriate resources for completing these improvements.

The existing bioretention basins need maintenance and are an opportunity for trees and vegetation to provide increased shading for cyclists and pedestrians. An example of these bioretention trees can be found near the Pima Country Recorder's office on North Stone Avenue. Collaboration with the City of Tucson and the Tucson Clean and Beautiful non-profit will help enhance these basins and increase tree canopies.

Lastly, the main motivation for this streetscape concept plan is the existing Sun Tran bus stop. Improving this bus stop presents an opportunity to expand the Cabrini neighborhood's character by introducing public art behind the bus shelter. The bus shelter can moreover provide necessary shading for its users, encourage public transportation, and retain the visual character of Cabrini. A community art competition can be sponsored to have residents design a new bus shelter and complementary mural, or receive assistance from a local muralist. Additionally, adding trees or other vegetation surrounding the bus shelter will beautify and add tree shading to the area. Assistance can also be requested from the City of Tucson's Bus Shelter Program as well as with Sun Tran and its contractor, AdVision Outdoor.

V. NEIGHBORHOOD REDEVELOPMENT OPPORTUNITIES

CABRINI CONCEPT PLAN

LEGEND

This is the Cabrini Neighborhood Streetscape Plan, which uses the legend above and graphics to provide an illustration of the current conditions (orange boxes) versus the proposed concepts (blue boxes) for enhancing bike lanes, bioretention basins, and installing a bus shelter featuring public art and tree canopy.

V. NEIGHBORHOOD REDEVELOPMENT OPPORTUNITIES

DODGE FLOWER

The proposed lot for redevelopment is part of a much larger parcel hosting apartments along North Alvernon Way. Current redevelopment intentions for this vacant lot are unclear. As such this concept plan must be seen as representative of the Dodge Flower neighborhood interests. The small lot size and the existing neighborhood conditions provide inspiration for a small park accessible to all residents.

The Dodge Flower neighborhood lacks public green spaces for recreation and social gatherings. Additionally, there are very few vacant lots within the neighborhood, which constrains future redevelopment opportunities. Although this parcel is small, this concept plan presents an ideal location for a neighborhood park because of its corner lot configuration at North Haskell Drive and East Flower Street.

This concept plan is inspired by family functions. This concept plan illuminates the ability to have birthdays, reunions, or get-togethers while maintaining inclusiveness for the neighborhood as a whole. In addition to the proposed gazebo, other amenities would include shade trees, benches, pedestrian-scale lighting, and open green space.

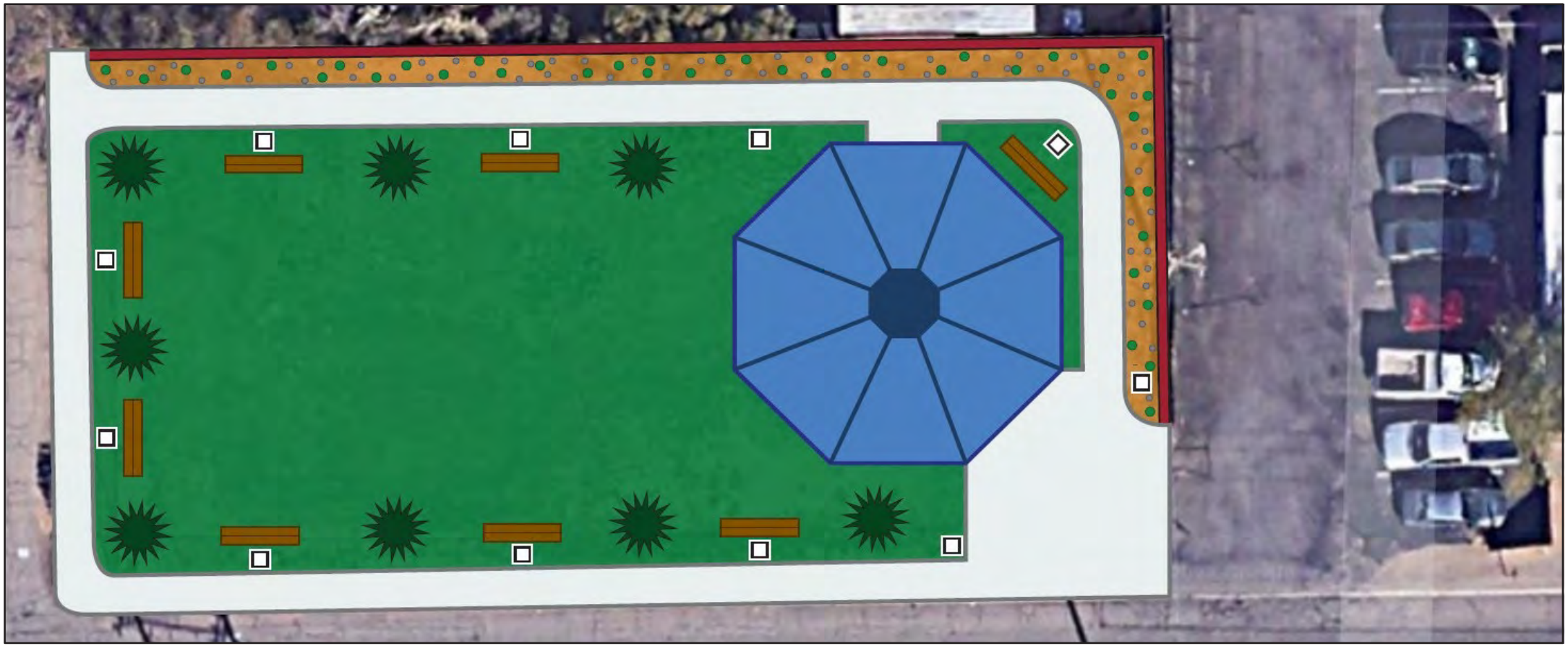
The existing parcel contains the proposed lot and a series of apartments.

Current state of proposed lot.

Gazebo in Lincoln Park, Tucson.

V. NEIGHBORHOOD REDEVELOPMENT OPPORTUNITIES

CONCEPT PLAN



LEGEND

- Shade trees
- Pedestrian lights
- Gazebo
- Sidewalk
- Landscaping
- Benches
- Boundary wall

PARCEL INFORMATION

Address: 3870 E Flower St.
APN: 111-08-190B
Existing Parcel Size: Approx. 1.65 acres (71,732 sq. ft.)
Proposed Lot Size: Approx. 0.23 acres (10,019 sq. ft.)
Zoning: Residential (R-2)

V. NEIGHBORHOOD REDEVELOPMENT OPPORTUNITIES

DOOLEN-FRUITVALE

This 0.79 acre parcel is located at the northwest corner of North Edith Boulevard and East Grant Road within Doolen-Fruitvale. As a gateway into the neighborhood, this vacant lot is an opportunity to development a property that has a good impression on residents and visitors. The final phase of the Grant Road Improvement Project, expected to be completed in 2026, will reduce the size of the parcel to around 0.67 to support the future roadway right-of-way. Plan Tucson's future growth scenario considers this parcel within a mixed-use corridor to encourage high-density residential development. The current Grant-Alvernon Area Plan moreover designates this site appropriate for office, neighborhood commercial, and high-density residential use. Small two-story apartments or a series of connected townhomes with ground floor commercial spaces are recommended for this site. Currently zoned for C-1 development, this parcel can also be rezoned to accommodate higher densities.

V. NEIGHBORHOOD REDEVELOPMENT OPPORTUNITIES

CONCEPT PLAN

LEGEND

- New curbline
- New right-of-way
- Screening wall
- Sidewalk
- Dumpster
- Bus Stop
- Velvet Mesquite
- Palo Verde
- Creosote
- Jojoba

- Address: 3265 E. Grant Rd.
- APN: 111-07-365A
- Lot Size: Approx. 0.67 acres (29,380 sqft)
- Zoning: Commercial (C-1)
- Max Density:
  MF: 36 units/acre (24 units)
- Max Res. Height: 25'
- Max Lot Coverage: 75% (22,035 sqft)
- With Individual Parking Plan: 1space per 1unit, including 24 off-street spaces.

V. NEIGHBORHOOD REDEVELOPMENT OPPORTUNITIES

GARDEN DISTRICT

This 1.26 acre parcel is located at the southeast corner of North Alvernon Way and East Lee Street. This redevelopment opportunity consists of two combined vacant parcels. The pop-up El Sinaloaense Hot Dog Cart occupies the space. As a gateway into the Garden District, these vacant lots represent a commercial opportunity that defines the neighborhood and leaves positive first impressions. The concept plan ultimately helps solve problems associated with a lack of shade trees, ADA-accessible pedestrian infrastructure, and the need for rainwater harvesting and stormwater mitigation.

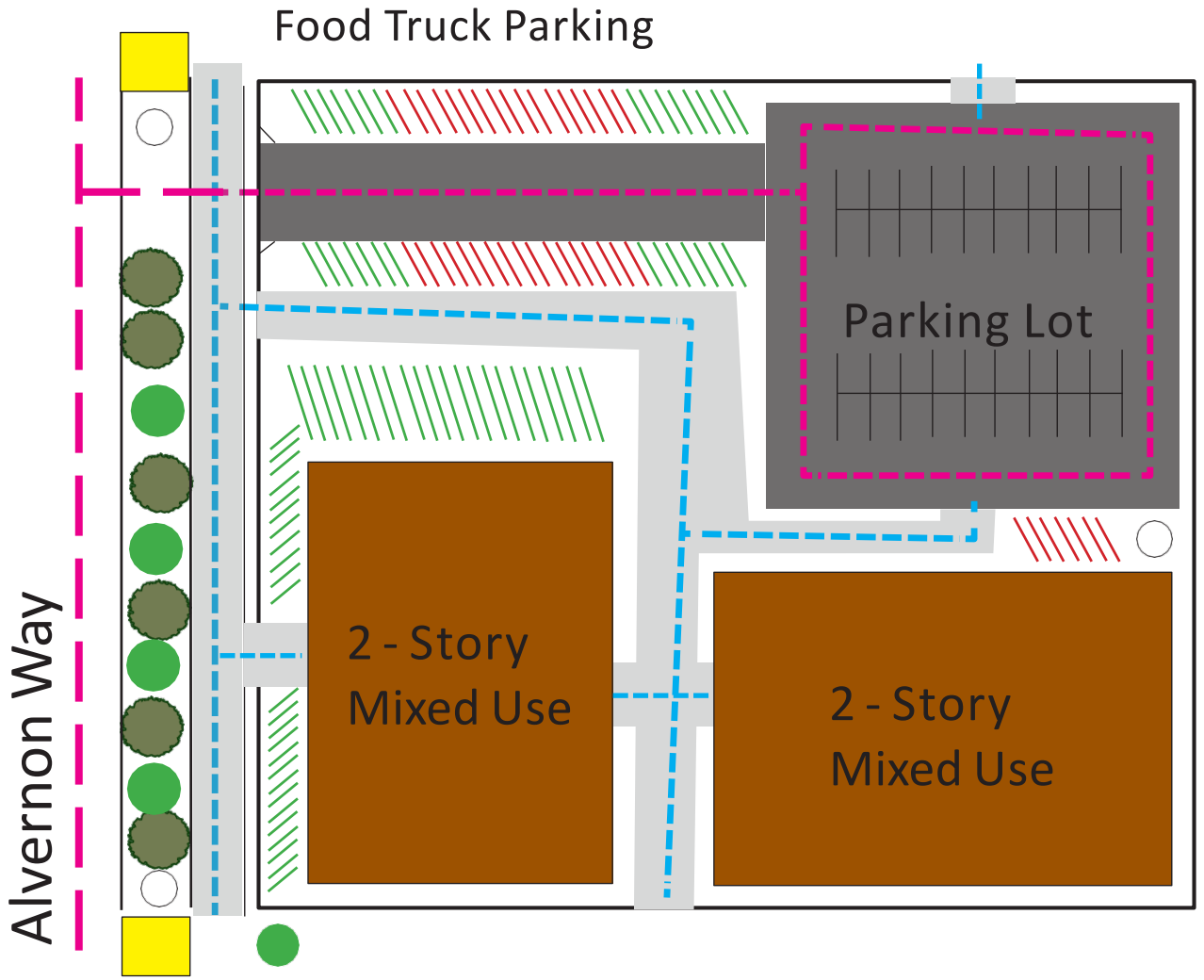
V. NEIGHBORHOOD REDEVELOPMENT OPPORTUNITIES

CONCEPT PLAN

Legend

- Palo Verde
- Velvet Mesquite
- Streetlamp
- Landscaping
- Rainwater harvesting area
- Sidewalk
- Pedestrian circulation
- Car circulation
- ADA ramp

- Address: 1500 N. Alvernon Way
- Lot Size: Approx. 126 acres (29,380 sqft)
- Zoning: Commercial (C-1)
- Max Density:
  MF: 36 units/acre (24 units)
- Max Res. Height: 25'
- Max Lot Coverage: 75% (22,035 sqft)
- With Individual Parking Plan: 1space per 1unit, including 24 off-street spaces.



V. NEIGHBORHOOD REDEVELOPMENT OPPORTUNITIES

GARDEN DISTRICT

Public parks can absorb air pollution, mitigate urban heat, provide opportunities for recreation, decrease crime, and more. Parks can offer a wide variety of activities for the family throughout the year

such as play area, barbecues spaces, pedestrian paths, curbside, and sidewalks with ADA Ramps. Sitting areas in the parks are a crucial element to escape from daily routines. Furthermore, parks allow individuals to relax, especially during nice weather.

Barbecues are staples of American social events. Many public parks have free barbecue facilities with picnic tables and open grass areas to spread out, eat, relax, and play games.

Playing with pets offer enjoyment to children. Also, getting outside with pets to play games will stimulate their minds and bodies. Therefore, parks play important role for children life.

Adults could also obtain sence of nature at parks. Children also can be entertained through playing in fountains pools. Consequently, water fountains are considered the suitable place to the community members to feel frolic.

Play areas provide space for children's enjoyment, imaginative play, physical activities, and creativity through built structures and direct interaction with nature.

Playing in parks gives children the chance to explore the natural environment and have adventures. Parks offer children more space and freedom for biking.

V. NEIGHBORHOOD REDEVELOPMENT OPPORTUNITIES

CONCEPT PLAN

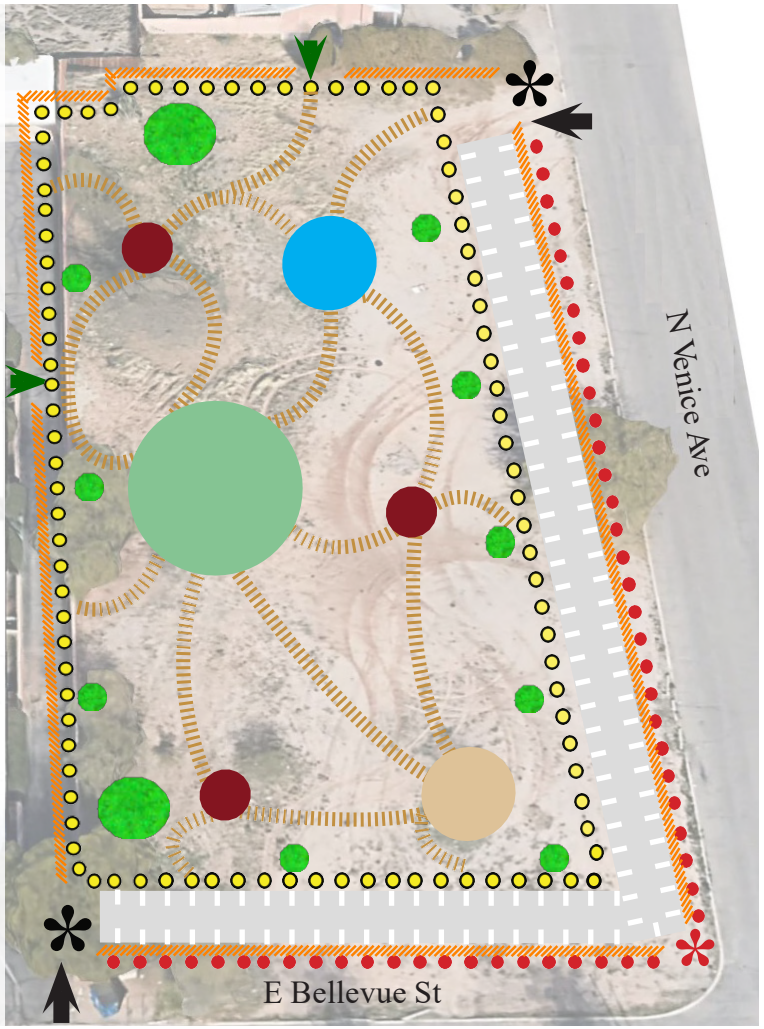
ZONING LIMITATIONS

The vacant parcel land is located in the Garden District in zoning R-2 between Nort Venice Avenue and East Bellevue Street. The width is 36 m and height is 90 m with an area of nearly 3240 m^2.

The vacant parcel needs development including neighborhood sidewalks with no ADA ramps for street crossing. The sidewalks are inconsistent and there is a lack of vegetation along sidewalks.

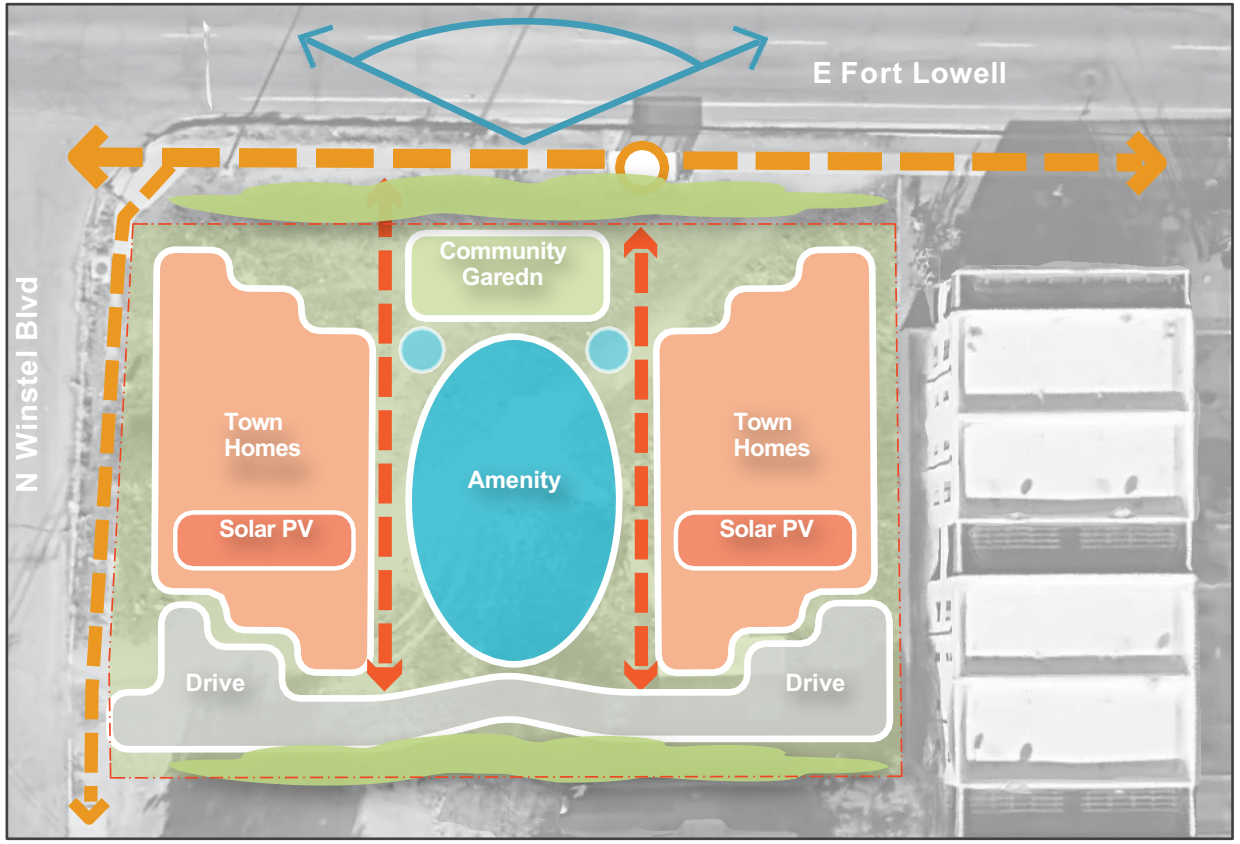
Design Elements	Description
Fence	The whole park is surrounded by fence from all sides.
Parking Areas	Situated in the south and east directions in the proposed plan.
Pedestrian Paths	Achieve the accessibility between all sides of the park and service areas.
Curbside	Located between N Venice Ave. and E Bellevue St. and the proposed park.
Sidewalks with ADA	Covers all parts in the park.
Trees	Two sizes are suggested including small and big to reduce noise and purify air.
Water Fountain	Located in suitable location to be accessible from all park structures.
Wooden Canopy	Several canopies are available for sitting and protection from sunlight.
Barbecue Area	Proposed in in suitable location in the park to let families to prepare their meals.
Play area	Designed to be far from main streets for kids' safety.

Vechile Direction
Park Access
* Vechile Access
* No Vechile Access



V. NEIGHBORHOOD REDEVELOPMENT OPPORTUNITIES

CONCEPT PLAN



Buffer landscaping

NORTH DODGE

3820 E. Fort Lowell

Parcel 11-05-29-28

Lot Size: 16, 486sf/0.378 acres

Zoning: R-3

Max Density:

MF: 36 units/acre (13 units)

SF: 1unit/5,000sf (3 units)

Max Height: 40'

Max Lot Cover: 70% (11,539sf)

Parking Required: 15 spaces per 1bdr

V. NEIGHBORHOOD REDEVELOPMENT OPPORTUNITIES

PROGRAM

This 0.378 acre lot is located at the corner of East Fort Lowell Road and North Winstel Boulevard. Situated adjacent to multi-family housing with clear views of the Santa Catalina Mountains, this site is well-suited for attached housing. The Church of Jesus Christ of Latter-Day Saints is located to the west of the vacant lot, providing a sense of community. Apartments and duplexes are appropriate redevelopment opportunities. Casita-style condominiums with an interior parking court similar to San Xavier Apartments on East Glenn Street also fit nicely into redevelopment contexts. The proposed plan shows six townhouse-style lofts that can accommodate live-work or first-floor mixed uses. Sustainability, community amenities, and strong views and vistas are central to this conceptplan. Roofscanmoreoveraccommodate solar panels and rainwater catchment systems that support community gardens. Greywater harvesting can also support xeric landscaping to shade and buffer the street.

TOWNHOUSE/LOFT

SUSTAINABILITY AMENITIES

V. NEIGHBORHOOD REDEVELOPMENT OPPORTUNITIES

OAK FLOWER

PROPERTY

Address:
2508 N
Alvernon
Way Parcel:
11007412B

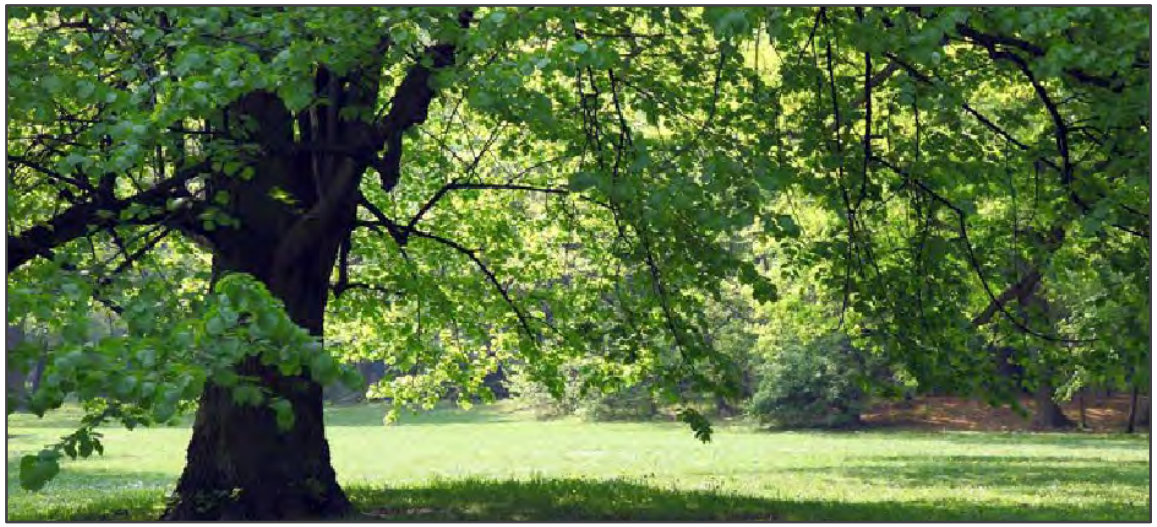
Zoning: O-3 UDC 4.7.15

This zone provides for mid-rise, office, medical, civic and select other uses, such as urban agriculture and renewable energy generation, that provide reasonable compatibility with adjoining residential uses.

Shade structure example

PROPOSED PROGRAM

This 0.66-acre vacant lot is best suited as a small park for the Oak Flower community to utilize. This park can serve as an area for family-friendly gatherings, community meetings, and public green space. The implementation of a neighborhood park will provide Oak Flower increased shade trees, vegetation, and reduce the urban heat island effect. The addition of parking to the existing to the current site will moreover allow for both use of the proposed park as well as access to the adjacent parcel to the south.



Large shade tree example

V. NEIGHBORHOOD REDEVELOPMENT OPPORTUNITIES

DETAILS

Lot Dimensions:
Length: 110 ft
Width: 260 ft
Area: 0.66 Acres Amenities:
9 Parking spaces Large shade trees Shade structure Benches Picnic tables BBQ grill

V. NEIGHBORHOOD REDEVELOPMENT OPPORTUNITIES

CONCEPT PLAN PALO VERDE

1508 NORTH RICHEY BOULEVARD

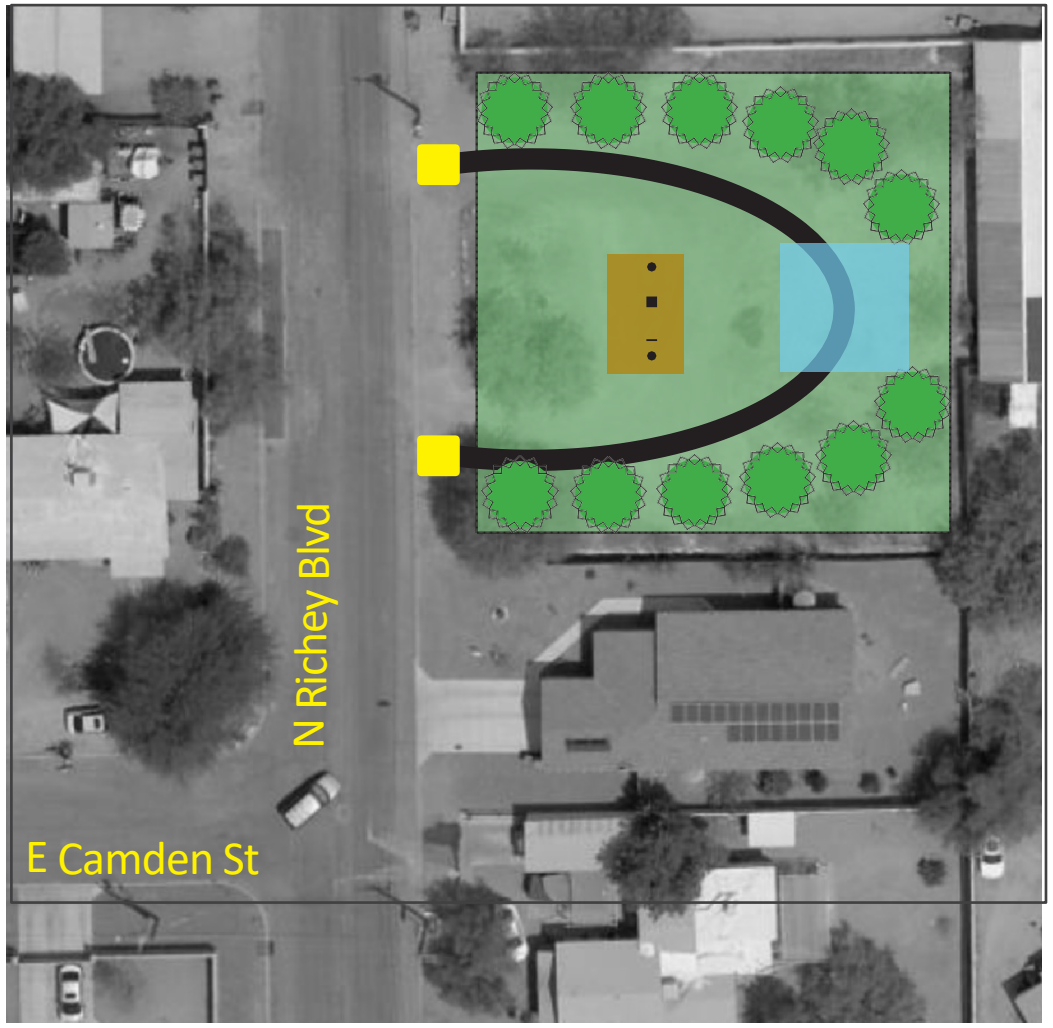
0.33 Acres
Zoned: R-2
Max. Density:
Single Fam. 5,000 Sq. Ft.
Multi. Fam. 15/Acre

Adjacent Uses:
Single Family & Multi-Family Homes

Proposed Use:
Shaded Green Space, Small Play Area

LEGEND

- Pomegranate tree
- ADA-compliant curb ramp
- Pedestrian pathway
- Ramada/shaded structure
- Swing sets
- Sand area



V. NEIGHBORHOOD REDEVELOPMENT OPPORTUNITIES

DESCRIPTION

This 0.33 acre vacant lot is composed of two adjacent parcels. The property is located near the southeast corner of North Richey Boulevard and East Lee Street. Both vacant parcels are owned by Pima County. Located one block south of Catalina High School, the subject property is surrounded by single- and multi- family residences. This parcels is ultimately well-suited for a communal gathering space with tree shading and play areas.

The proposed concept plan includes 10-14 trees along the perimeter of the property. Pomegranate trees are suggested for native resiliency and fruit production. ADA-accessible ramadas and shaded areas will also be implemented near child swing sets. While grass is difficult to maintain, this landscaping would be ideal for family and community gatherings.

The proposed park concept would be open and visible to neighborhood residents as well as passers-by. Promoting communal gatherings within the neighborhood will enhance aesthetics, increase green spaces, and improve livability.

BUFFERING AND OPEN SPACE

VI. REPORT SUMMARY

VI. REPORT SUMMARY

This report is the product of data and research materials gathered by graduate urban planning students at the University of Arizona's College of Architecture, Planning and Landscape Architecture during the spring of 2021. The purpose of this report is to provide detailed analysis to residents and stakeholders within the seven neighborhoods comprising the Grant-Alvernon Area Plan. Over the course of the semester students endeavored existing plans, existing conditions, and provided concept plans to assist in the rewriting of the area plan.

Student teams gathered information from the Grant-Alvernon Area Plan as well as Plan Tucson to analyze the documents for incompatibility. Parks and recreation as well as arts and culture policies contained the largest inconsistency between the two documents. Housing, public safety, parks and recreation, arts and culture, public health, urban agriculture, governance and participation, business climate, tourism and quality of life, energy and climate, water resources, green infrastructure, environment quality, historic preservation and redevelopment and revitalization, public infrastructure, as well as land use, transportation and urban design were compared and contrasted. Additionally, policy maps were generated by students to display area amenities.

Students later conduced field work to document the existing conditions of the seven Grant-Alvernon Area Plan neighborhoods. In this section students identified and documented neighborhood features and conditions. These features were captured in a software application that allows users to target features on a map. Maps were moreover created for each neighborhood to show land use, tree canopies, flood zones, and transportation-related amenities. Assets were identified within each neighborhood. The strongest assets include parks, schools, community centers, traffic-calming devices, ADA-compliant infrastructure, public art, and vegetation. Deficiencies for each neighborhood were also documented, and mainly consisted of missing or non-extant sidewalks, inadequate street lighting, vandalism, maintenance and upkeep, as well as derelict properties.

Students moreover developed concept plans for each neighborhood my utilizing the data previously collected. These plans envision improvements to neighborhood spaces in the event finances and other resources are available for implementation. Concept plans range in sizing and scopes from large multi-family housing developments to miniature parks.

VI. REPORT SUMMARY

The intent of student work and this report were to gather information about each neighborhood in the Grant-Alvernon Area Plan. Additionally, students conducted analyses of existing plans and existing conditions as well as provided guidance for future development and redevelopment. This report ultimately seeks to inform neighborhood and area plan committees as they develop their amended area plan.

VII. ACKNOWLEDGMENTS

VII. ACKNOWLEDGEMENTS

The authors of this report thank the City of Tucson, Pima County, and Pima Association of Governments for their support in undertaking this area plan report. In particular, we would like to extend our gratitute and appreciation to Rebecca Ruopp, Principal Planner, Planning and Development Services, Koren Manning, Planning Administrator, Planning and Development Services, Jennifer Toothaker Mabry, City of Tucson Transportation Planning Programming, Ann Chanecka, Deputy Director at Housing and Community Development, and Greg Jackson, Deputy Director at Tucson Parks and Recreation.

The authors would also like to thank neighborhood community leaders Vicky France, Kris Yarter, Meg Johnson, Fran Garcia, Ryan Twica, Candi Filipek, and Anna Marie Patti. Your expertise of your respective neighborhoods helped students understand your values and visions for the future of the Grant-Alvernon Area Plan.
Special thanks are extended to planning students Wyatt Berger, Ben Carpenter, and Chrissy Scarpitti for designing, compiling, and editing this document.

We also extend appreciation for students Garrett Aldrete, Osama Asiri, Wyatt Berger, Jacob Burg, Noah Cannold, Eric Carlson, Jackson Cassidy, Nathan Dyhre, Lincoln Edwards, Longhao Guo, Paul La Farga, Chris Monahan, Melanie Olson, Fabian Romero, Chrissy Scarpitti, Elliot Welch, and Blake Zetter for completing this plan update. We are moreover grateful to University of Arizona professors Shujuan Li, Ph. D.; Gina Chorover, AICP; and Bo Yang, Ph. D., AICP for guiding us through the process of putting this report together.

Finally, thank you to the residents of the Grant-Alvernon Area Plan neighborhoods. We sincerely hope this report is a benefit to you.

VIII. REFERENCES

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THE UNIVERSITY OF ARIZONA College of Architecture, Planning & Landscape Architecture

PAG

United States Census Bureau

TUCSON CLEAN & BEAUTIFUL

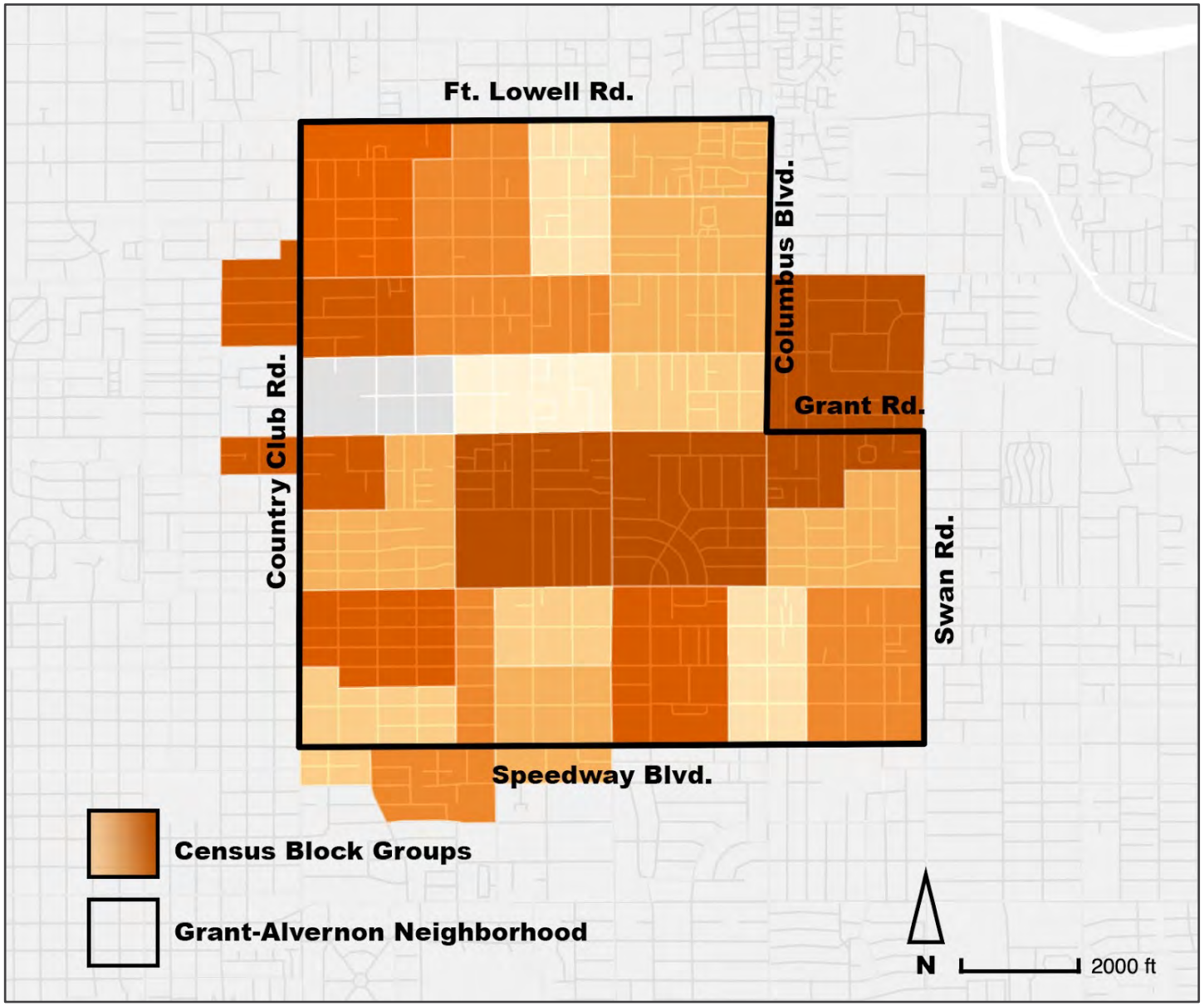
CITY OF TUCSON

PIMA COUNTY

IX. APPENDICES

IX. APPENDICES

FIGURE 1 CENSUS BLOCK GROUP POPULATIONS



Sources: ACS 2019 (5-Year Estimates); U.S. Census Bureau.

IX. APPENDICES

TABLE 1. POPULATION DISTRIBUTIONS

Sources: ACS 2019 (5-Year Estimates); U.S. Census Bureau.

	Tucson		Grant-Alvernon Boundaries	
Total Population	541,482		25,990	
Male	269,403	49.8%	12,951	49.83%
Female	272,079	50.2%	13,039	50.17%

TABLE 2. AGE DISTRIBUTIONS

Sources: ACS 2019 (5-Year Estimates); U.S. Census Bureau.

	Tucson		Grant-Alvernon Boundaries	
Total Population	541,482		25,990	
Under 5 Years	32,691	6.0%	1,516	5.83%
5 to 9 Years	31,514	5.8%	1,200	4.62%
10 to 14 Years	31,369	5.8%	1,224	4.71%
15 to 17 Years	19,133	3.5%	967	3.72%
18 to 24 Years	83,202	15.4%	2,510	9.66%
25 to 34 Years	81,723	15.1%	5,064	19.48%
35 to 44 Years	64,466	11.9%	3,330	12.81%
45 to 54 Years	58,999	10.9%	3,085	11.87%
55 to 64 Years	60,691	11.2%	3,527	13.57%
65 to 74 Years	44,864	8.3%	2,415	9.29%
75 to 84 Years	22,532	4.2%	864	3.32%
85 Years and Over	10,298	1.9%	288	1.11%

IX. APPENDICES

TABLE 3. RACE AND ETHNICITY DISTRIBUTIONS

	Tucson		Grant-Alvernon Boundaries	
Total Population	541,482		25,990	
White Alone	390,156	72.1%	19,919	76.64%
Black or African American Alone	28,136	5.2%	2,152	8.28%
American Indian and Alaska Native Alone	19,913	3.7%	852	3.28%
Asian Alone	17,584	3.3%	542	2.09%
Native Hawaiian and Other Pacific Islander Alone	1,181	0.2%	375	1.44%
Some Other Race Alone	55,043	10.2%	1,134	4.36%
Two or More Races	29,469	5.4%	1,016	3.91%

Sources: ACS 2019 (5-Year Estimates); U.S. Census Bureau.

IX. APPENDICES

TABLE 4. HOUSING OCCUPANCY

Sources: ACS 2019 (5-Year Estimates); U.S. Census Bureau.

	Tucson		Grant-Alvernon Boundaries	
Occupied Housing Units:	212,491		12,883	
Owner Occupied	107,516	50.6%	3,606	27.99%
Renter Occupied	104,975	49.4%	9,277	72.01%

TABLE 5. MEANS OF TRANSPORTATION TO AND FROM WORK

Sources: ACS 2019 (5-Year Estimates); U.S. Census Bureau.

	Tucson		Grant-Alvernon Boundaries	
Workers 16 Years and Over:	244,220		12,452	
Car, Truck, or Van	207,764	85.1%	10,002	80.32%
Drove Alone	181,877	74.5%	8,849	71.06%
Carpooled	25,887	10.6%	1,153	9.26%
Public Transportation (Includes Taxicab)	8,677	3.6%	853	6.85%
Motorcycle	1,102	0.5%	127	1.02%
Bicycle	5,796	2.4%	469	3.77%
Walked	7,657	3.1%	282	2.26%
Other Means	2,276	0.9%	86	0.69%
Worked At Home	10,948	4.5%	633	5.08%

IX. APPENDICES

TABLE 6. MEDIAN HOUSEHOLD INCOME

	Tucson	Grant-Alvernon Boundaries
Median Household Income (In 2019 Inflation Adjusted Dollars)	$43,425	$32,460* (avg median income of 25 block-groups)

Sources: ACS 2019 (5-Year Estimates); U.S. Census Bureau.

TABLE 7. EDUCATIONAL ATTAINMENT FOR POPULATION 25 YEARS AND OLDER

	Tucson		Grant-Alvernon Neighborhood	
Population 25 Years and Over:	343,573		18,573	
Less than High School	51,685	15.00%	2,597	13.98%
High School Grad- uate (Includes Equivalency)	81,045	23.60%	4,222	22.73%
Some College	116,746	34.00%	6,843	36.84%
Bachelor's Degree	56,860	16.60%	2,761	14.87%
Master's Degree	26,894	7.80%	1,568	8.44%
Professional School Degree	4,724	1.40%	247	1.33%
Doctorate Degree	5,619	1.60%	335	1.80%

Sources: ACS 2019 (5-Year Estimates); U.S. Census Bureau.

IX. APPENDICES

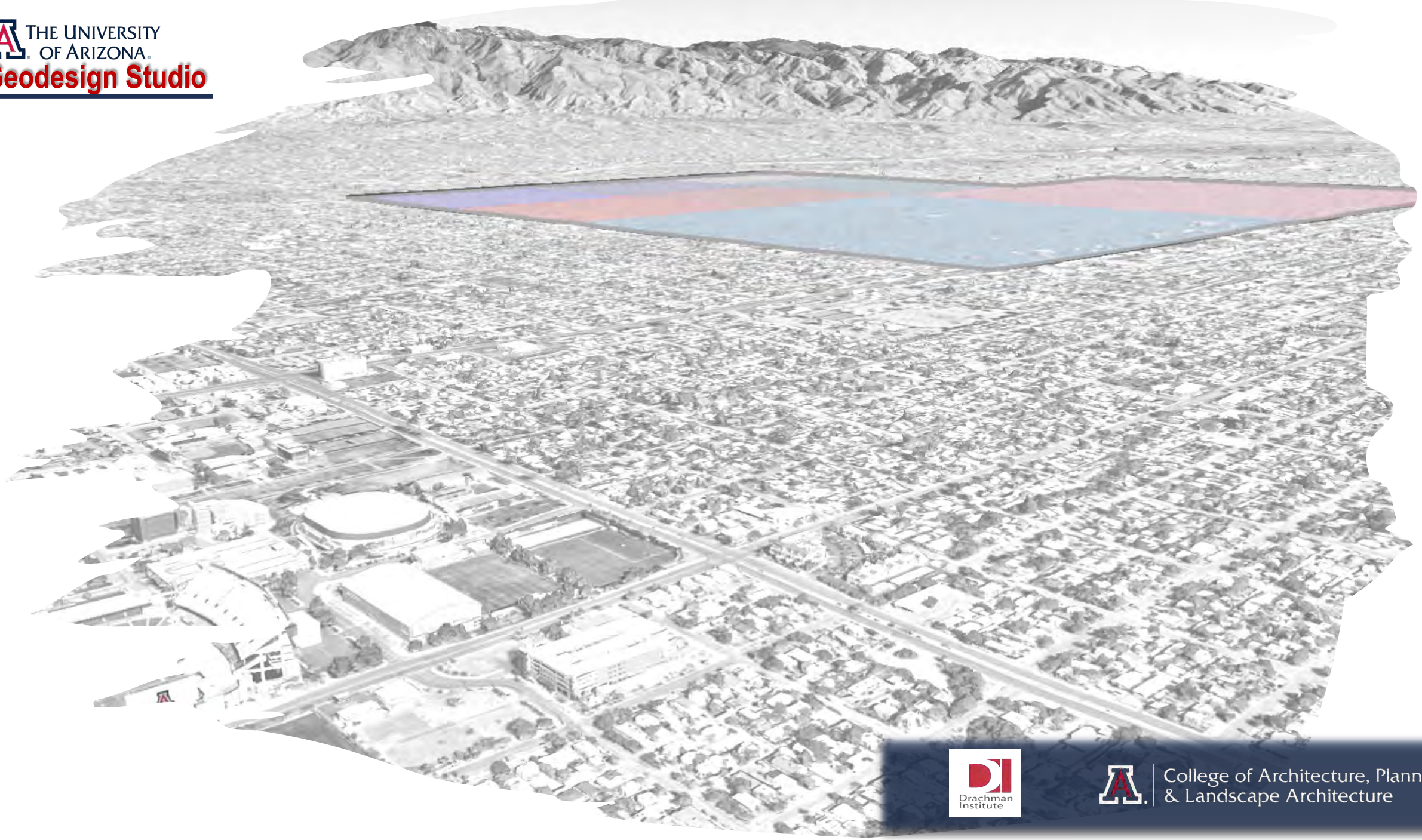
TABLE 8. UNEMPLOYMENT RATE

Sources: ACS 2019 (5-Year Estimates); U.S. Census Bureau.

	Tucson		Grant-Alvernon Neighborhood	
Civilian Population in Labor Force 16 Years and Over:	265,919		13,810	
Employed	245,250	92.20%	12,602	91.25%
Unemployed	20,669	7.80%	1,208	8.75%

THE UNIVERSITY OF ARIZONA

Geodesign Studio



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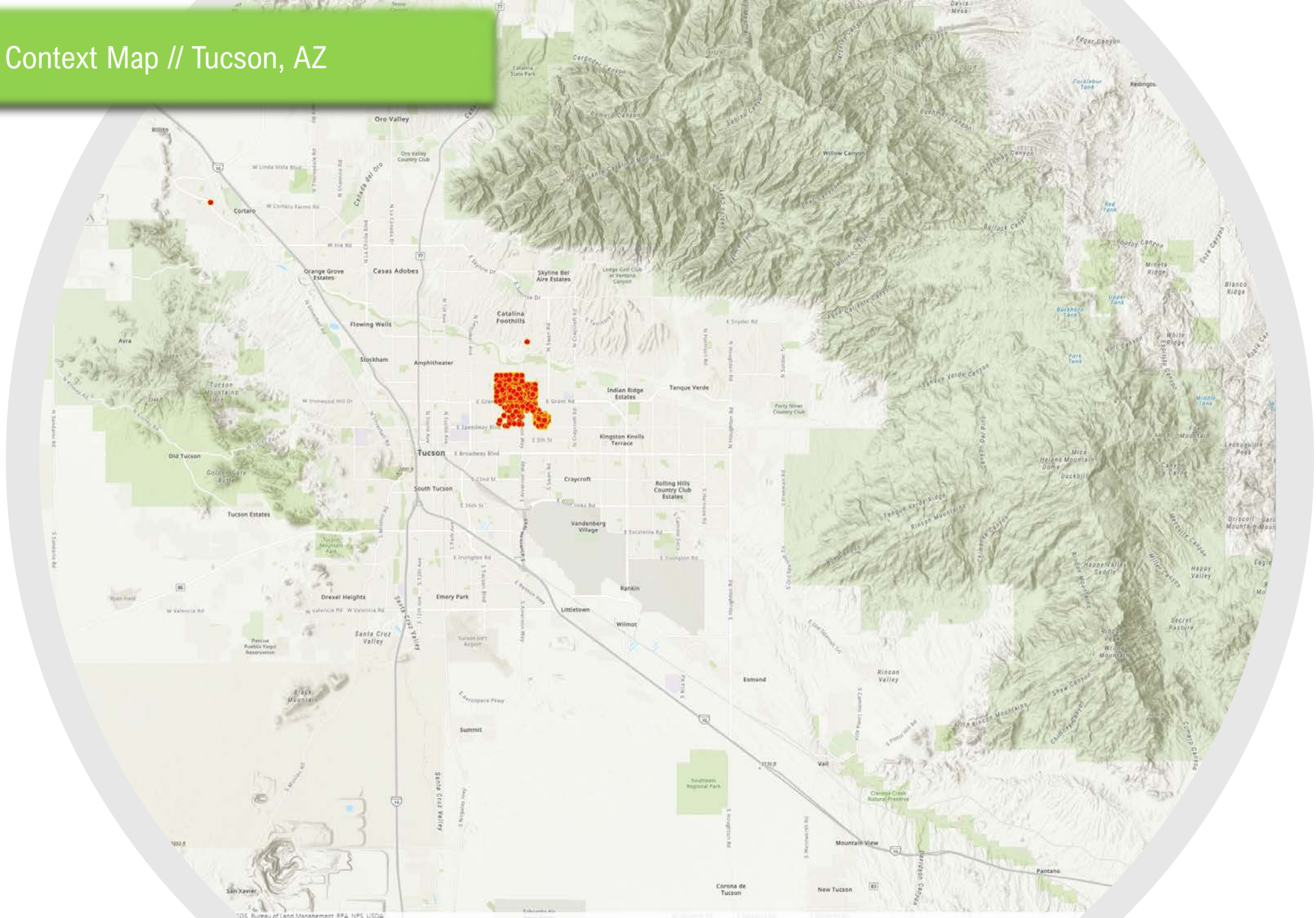
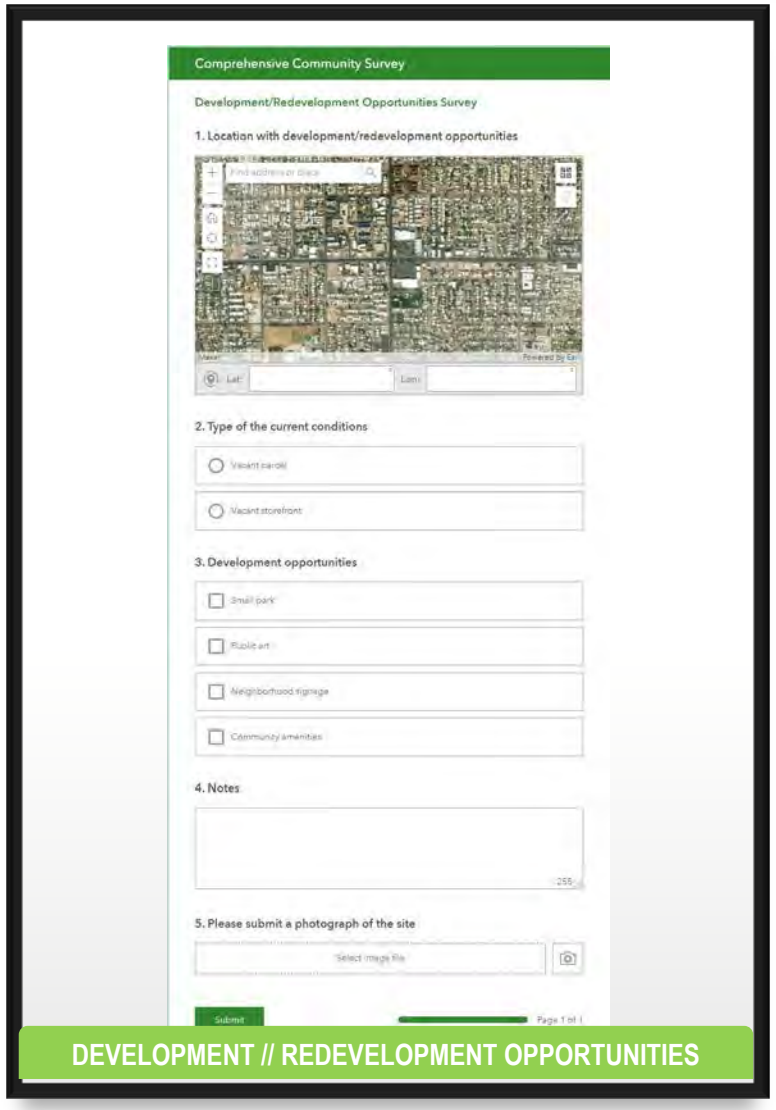
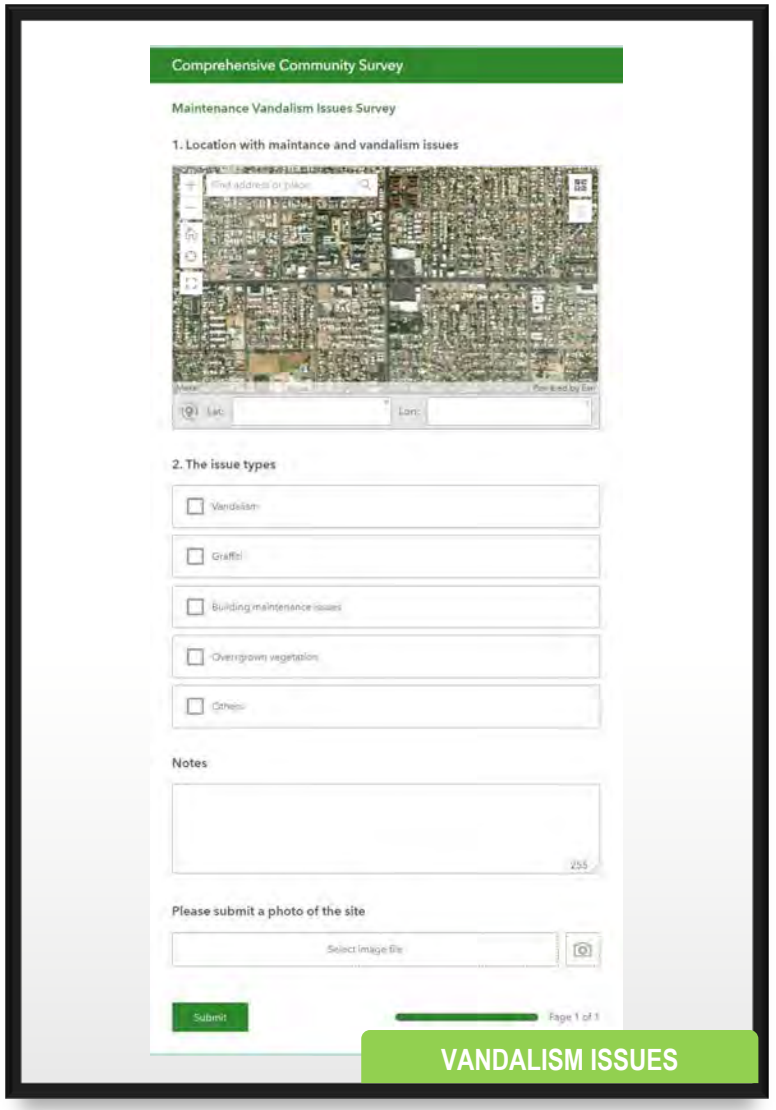
Context Map // Tucson, AZ



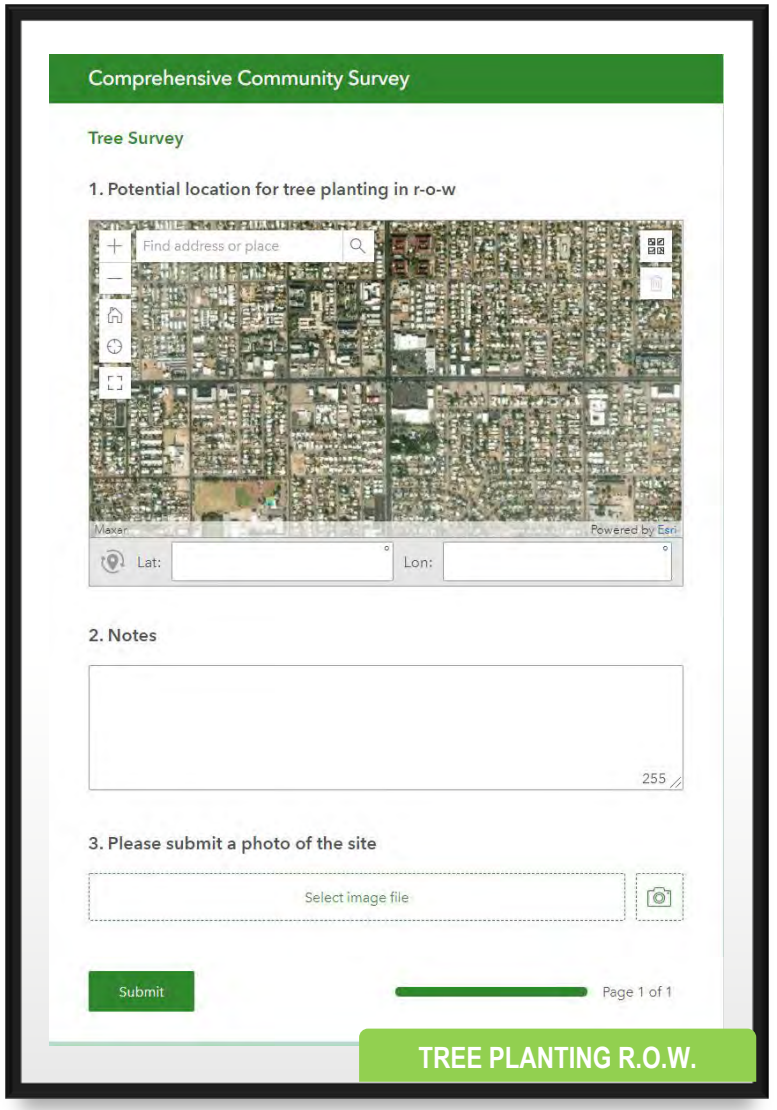
Grant // Alvernon Community Survey



DEVELOPMENT // REDEVELOPMENT OPPORTUNITIES

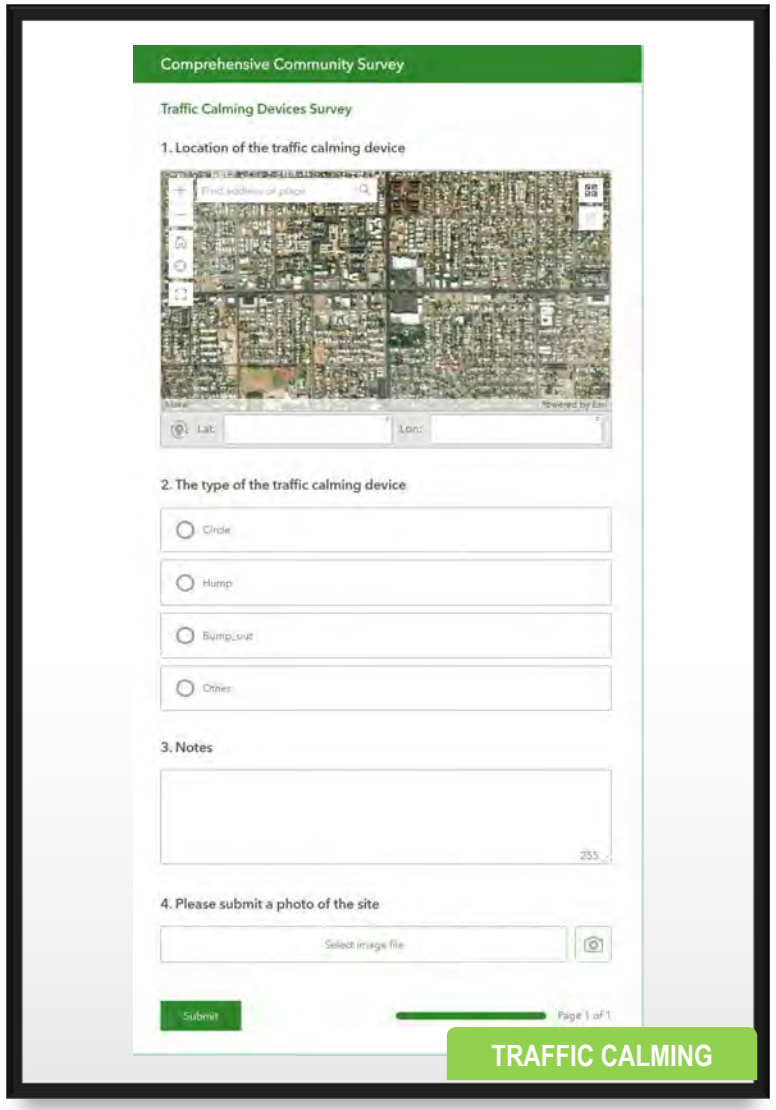


VANDALISM ISSUES



TREE PLANTING R.O.W.

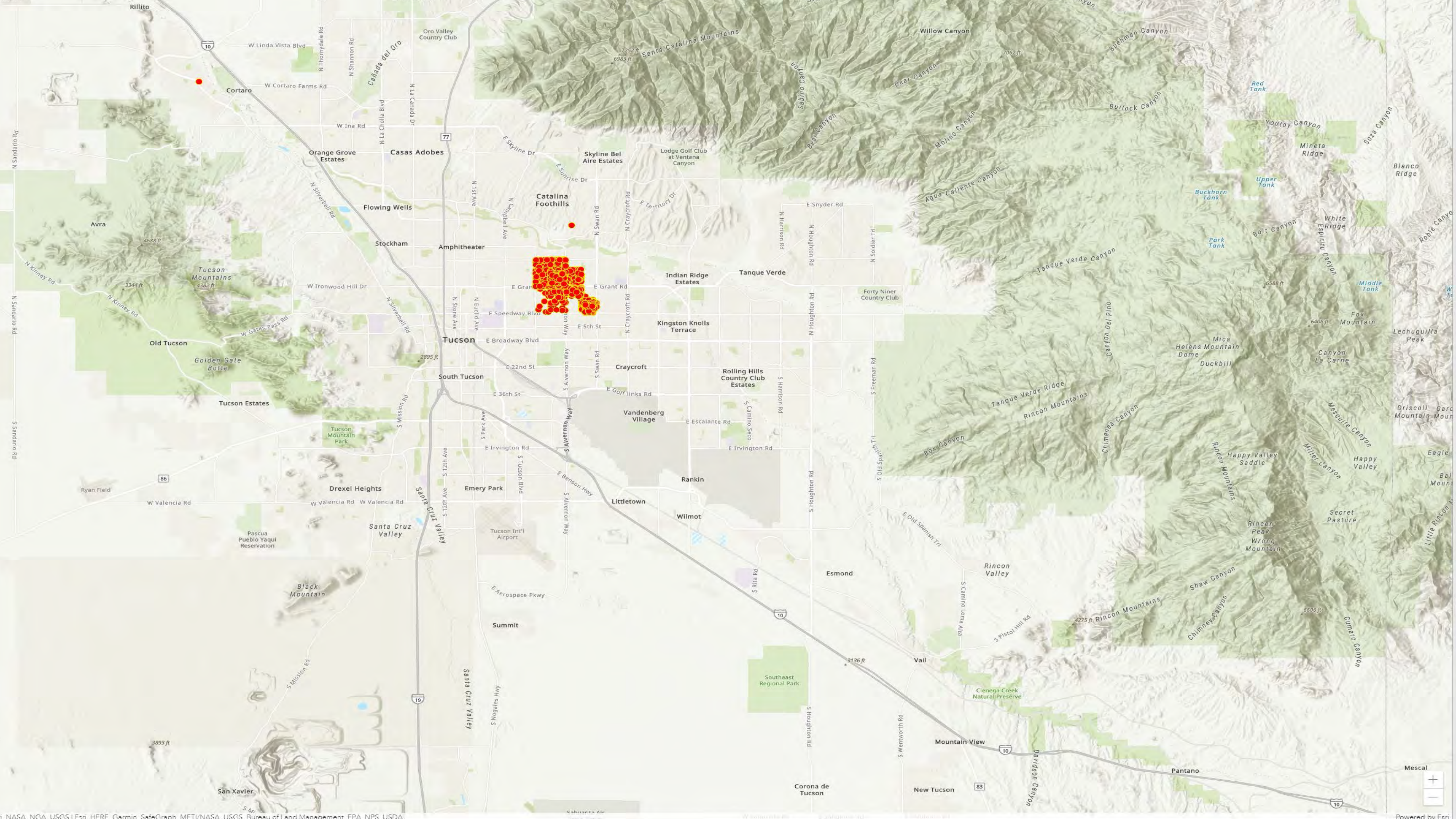
Grant // Alvernon Community Survey



TRAFFIC CALMING

SIDEWALK ACCESSIBILITY

PUBLIC STREET LIGHTS


Rillito
W Linda Vista Blvd
Oro Valley Country Club
Cañada del Oro
Willow Canyon
Santa Catalina Mountains
Cortaro
W Cortaro Farms Rd
W Ina Rd
Orange Grove Estates
Casas Adobes
Skyline Bel Aire Estates
Lodge Golf Club at Ventana Canyon
E Skyline Dr
E Sunrise Dr
Sabino Canyon
Bear Canyon
Molino Canyon
Bullock Canyon
Youtoy Canyon
Mineta Ridge
Soza Canyon
Red Tank
Upper Tank
Buckhorn Tank
Blanco Ridge
Agua Caliente Canyon
E Snyder Rd
Flowing Wells
Catalina Foothills
Avra
Stockham
Amphitheater
Tucson Mountains
Indian Ridge Estates
Tanque Verde
Tanque Verde Canyon
Forty Niner Country Club
W Ironwood Hill Dr
E Grant Rd
E Speedway Blvd
E 5th St
Kingston Knolls Terrace
Old Tucson
Golden Gate Butte
Tucson
E Broadway Blvd
E 22nd St
Craycroft
Rolling Hills Country Club Estates
South Tucson
E 36th St
E Golf Links Rd
Tucson Estates
Vandenberg Village
E Escalante Rd
Tucson Mountain Park
E Irvington Rd
Tanque Verde Ridge
Rincon Mountains
Box Canyon
Chimenea Canyon
Happy Valley Saddle
Happy Valley
Miller Canyon
Mesquite Canyon
Helens Mountain Dome
Duckbill
Mica
Fox Mountain
Canyon La Carne
Lechuguilla Peak
Driscoll Mountain
Ryan Field
Drexel Heights
Emery Park
Rankin
W Valencia Rd
Littletown
Wilmot
Santa Cruz Valley
Tucson Int'l Airport
Pascua Pueblo Yaqui Reservation
E Old Spanish Trl
Rincon Valley
Rincon Peak
Wrong Mountain
Secret Pasture
Black Mountain
E Aerospace Pkwy
Esmond
Shaw Canyon
Chimney Canyon
Summit
Vail
Southeast Regional Park
Cienega Creek Natural Preserve
Mountain View
Pantano
Mescal
San Xavier
Corona de Tucson
New Tucson
Davidson Canyon
NASA, NGA, USGS | Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
Powered by Esri

Survey Results

Tree Survey	Sidewalk Accessibility
286	71

Street Lights	Development/Redevelopment Opportrunities
160	44

Traffic Calming	Maintenance and Vandalism Issues
113	116

ADA Accessibility

183

Grant Alvernon Community Survey
By PLG 512
2021