

# Designing Complete Streets:

## Arizona Avenue, Downtown Tolleson & Fiesta District Improvements



### Presenting Today:

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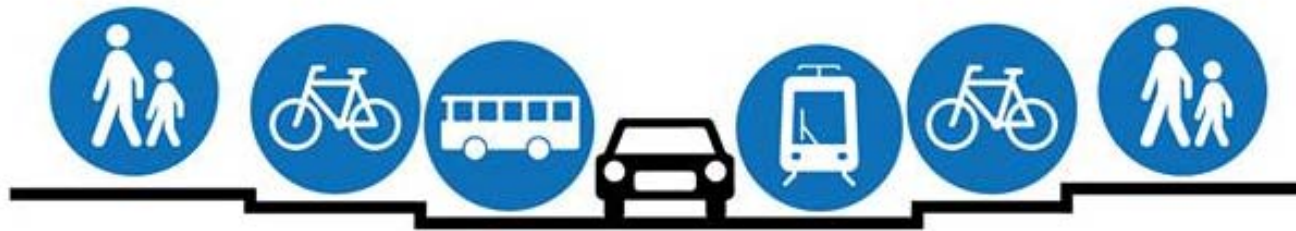
Denise Dunlop, Lead Designer, J2 Engineering & Environmental Design

2014 ASCE-ASHE Conference  
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September 11, 2014



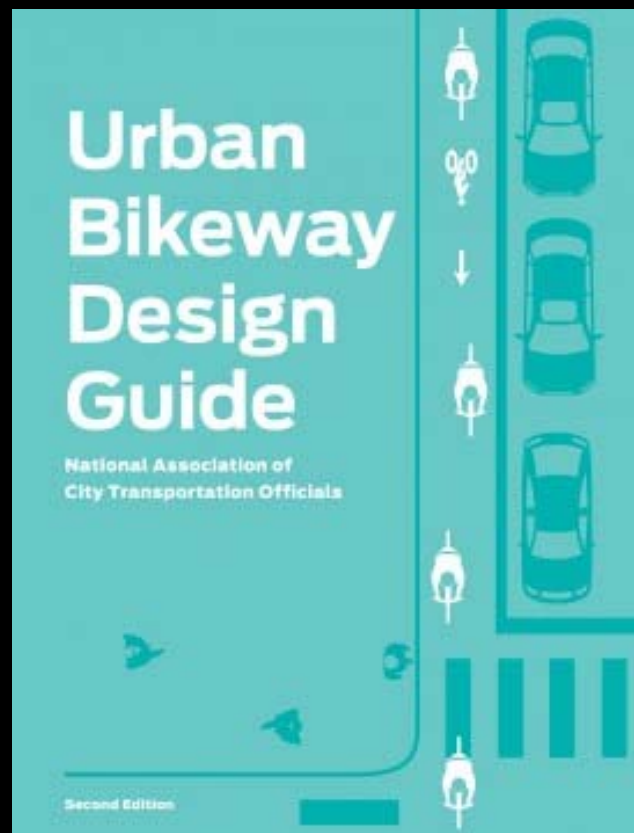
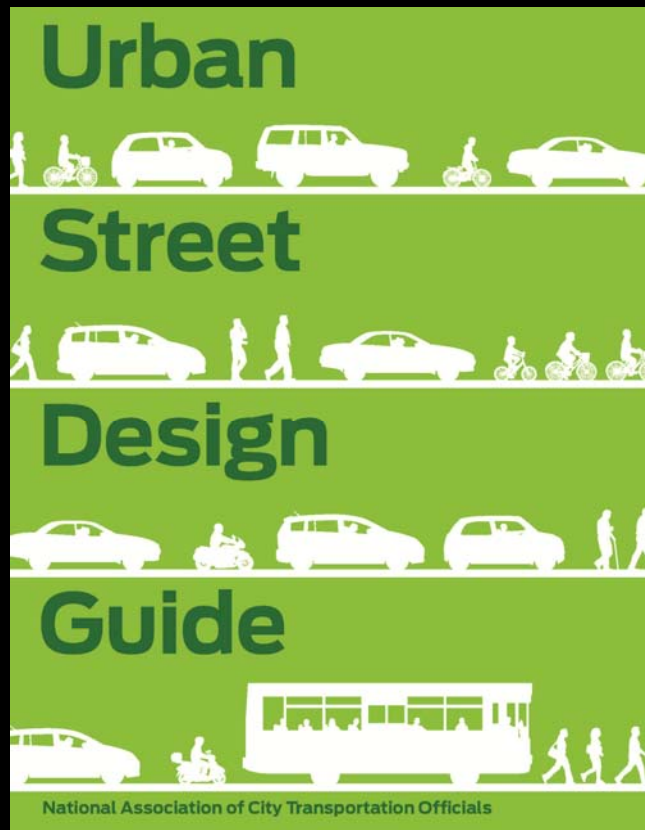


**How streets were built in the 20<sup>th</sup> Century**



**How cities should be designed**





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GRAND AVENUE: BEFORE SEPTEMBER 3, 2013





GRAND AVENUE: OCTOBER 19, 2013





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1<sup>ST</sup> STREET, CITY OF PHOENIX





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# What are “Complete Streets”?

They are streets designed with all users in mind:

- Vehicles
- Bicyclists
- Mass Transit
- Walkers
- ADA-accessibility / Wheelchairs
- People of All Ages



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# What is the “Complete Streets” Movement?

It is the movement to Achieve Balance for all Users.

It is the movement to “Complete the Streets”.

- Build roads that are safer, more livable, and welcoming
- Challenge engineers, planners, and designers to think ‘Beyond the Curb’
  - Increase destination placemaking – live, work, shop, dine, play
- Achieve more sustainable communities (environmental, economic, cultural)



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# The Arizona Avenue Improvement Project

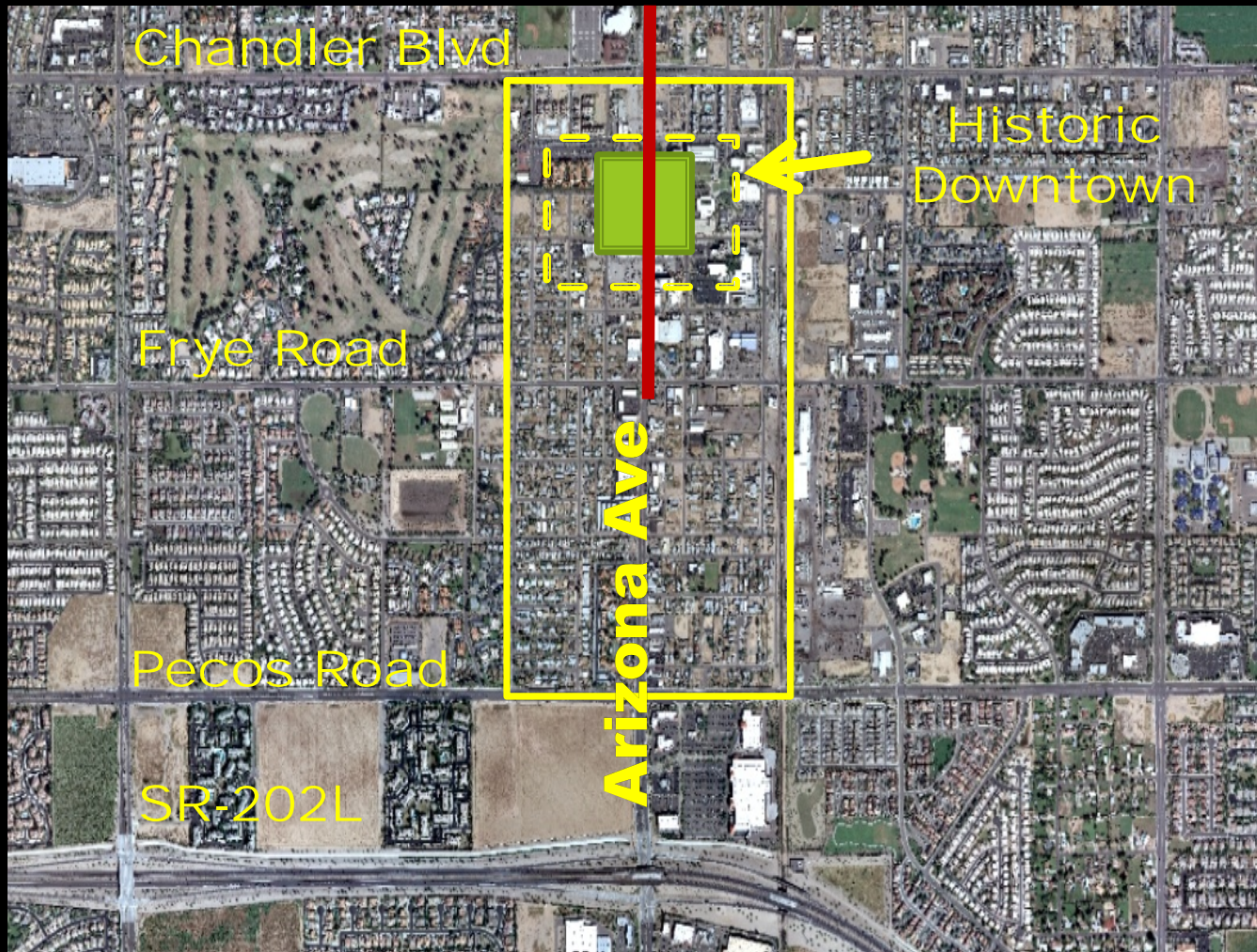
## Streetscape and Downtown Redevelopment Improvements

Building More than 'Just a Road'





# Downtown Chandler



State Route 87

1941 AZ Ave  
Relocation

Strip  
Commercial  
and Industrial  
Development  
Follows



Arizona Avenue Improvement Project  
Chandler, Arizona





# Arizona Avenue - Before



# Elements of the Arizona Avenue Streetscape

## Declining Businesses





# Conceptual Options



Concept 'A' Bird's-Eye View



Concept 'B' Bird's-Eye View



Concept 'C' Bird's-Eye View



Concept 'D' Bird's-Eye View

# Arizona Avenue – Selected Option

4 Travel Lanes, Bike Lanes, Parallel On-Street Parking  
(Future Room for Light Rail)





# Dimensions: “Metrics” of the Streetscape



- Reduced Pedestrian Crossings from the 88' to 90' Range Down to the 58' Range
- Reduced Asphalt Width
- Reduced Lane Widths from the 14' range to 10.5' (maintained 35 mph speeds)
- Added Bike Lanes
- Increased Sidewalk / Pedestrian Zone from the 5' to 8' Range to the 15' to 20' Range to Allow for a Variety of Uses
- Designed “Bulb-outs” at Corners to Reduce Crosswalk Width, Enhance Aesthetics, and Visually Reduce Street Width for Vehicular Traffic

# Bulb-out Example



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# Pedestrian Crossings / In-Roadway Lighting



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# Designing for Pedestrian Scale & Vehicular Scale





# Complete Streets & Placemaking

ADA Accessibility / Design for All Ages / Multi-Modal  
Memorable Environment / Signage Wayfinding / Places to Rest

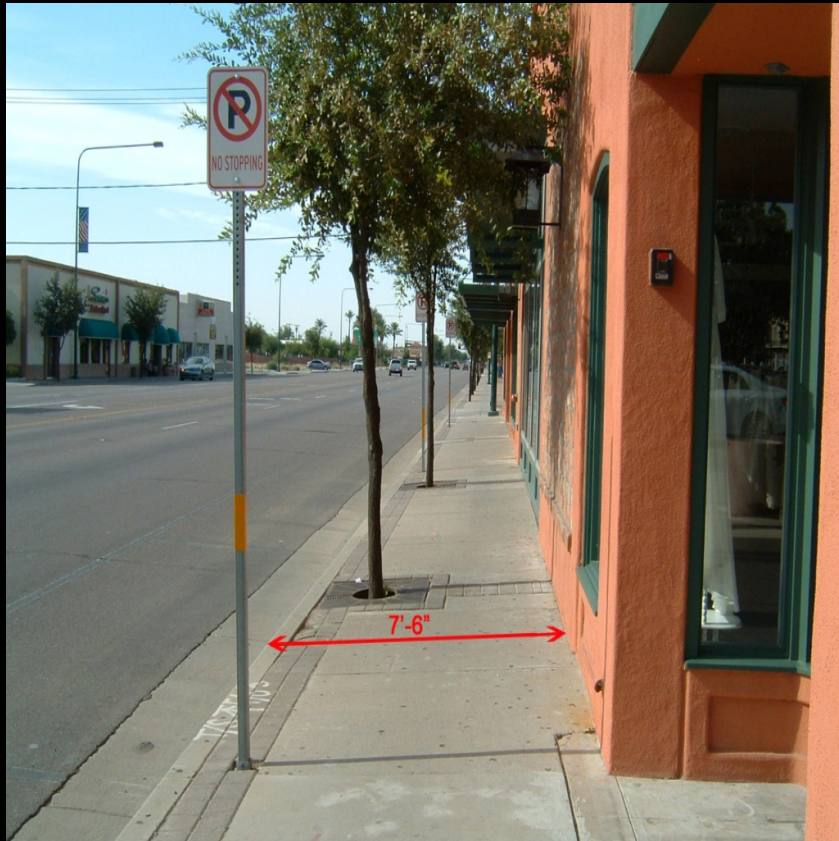


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# A Road in Balance is a 'Place'



# ROW Encroachment



Before



After



# Develop a True Sense of Place For a Variety of Users



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# Design Affects Speed

Date	Average Speed	85th Percentile
June 2008	36.7	40.4
February 2011	29.2	33.6



# Lighting (Before Improvements)

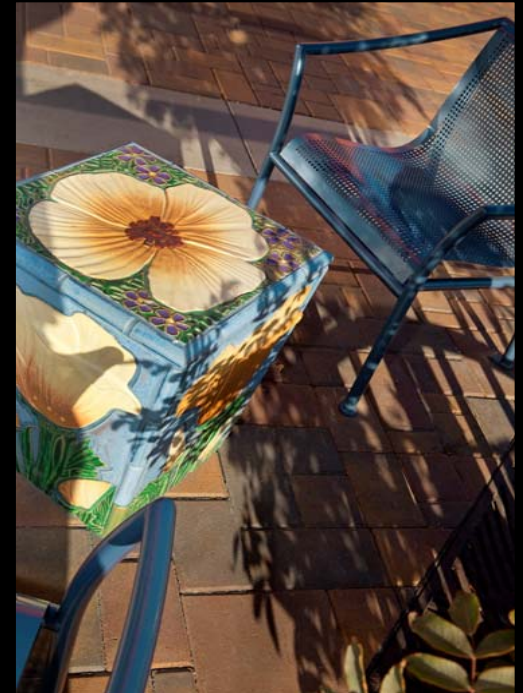


# Custom Lighting (After Improvements)





# Integration of Art



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# Enhanced Paving and Utilities



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# Variety of Seating Options



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# Landscape / Utilize Existing Materials



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# Accommodate Festivals



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# Arizona Avenue



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Chandler, Arizona





# The Power of Place

- *Civic pride*
- *U of A and ASU Downtown campuses*
- *625 new jobs*
- *Double digit Sales Tax Growth*
- *2% Retail vacancy*
- *Positive press – over 100 major spots*
- *Growing Special Events*
- *International, National and Local Awards*
- *20 new businesses*
- *Multiple residential developments being planned*



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# Designing for All Users: Vehicles, Pedestrians, Bicyclists, & Mass Transit



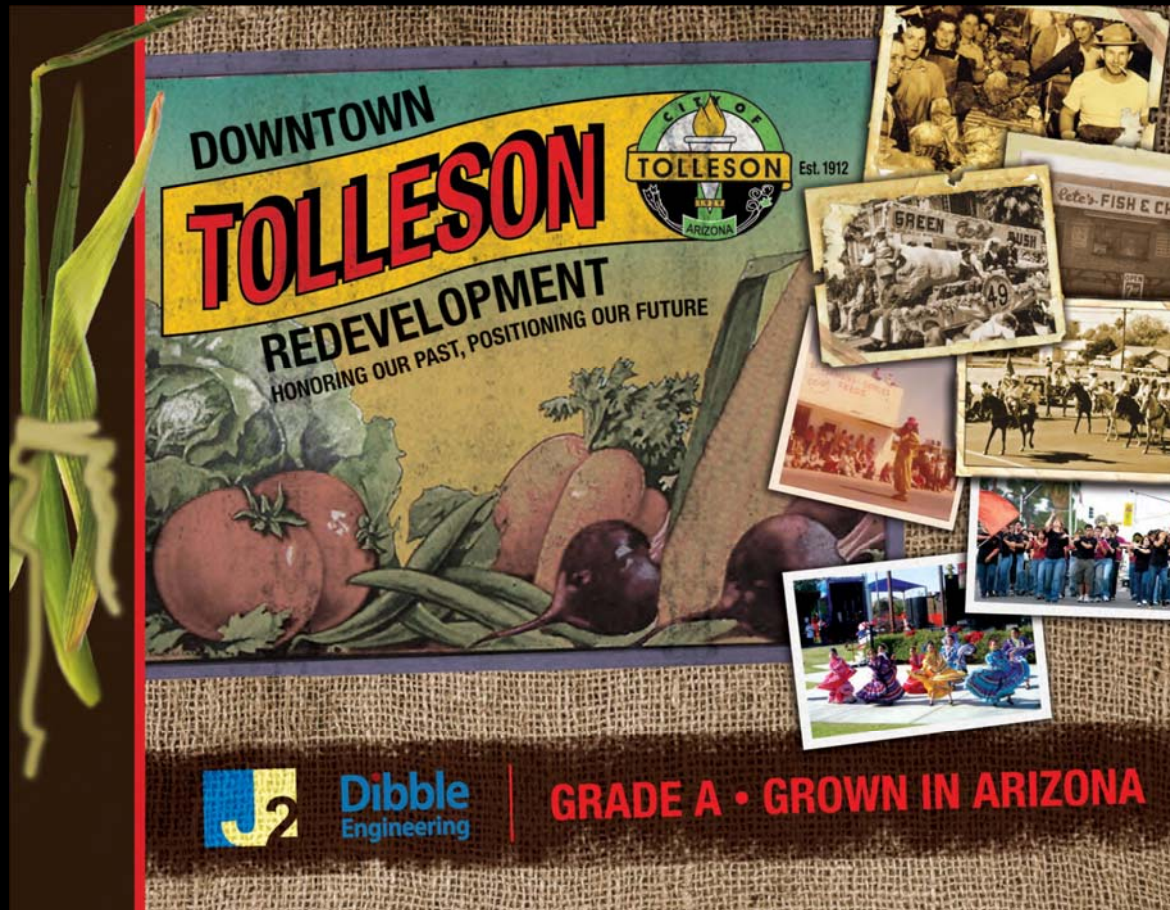




# Downtown Tolleson Redevelopment Project

## Van Buren Street – Developing A True Sense of Place

‘Build on a Proud Heritage’



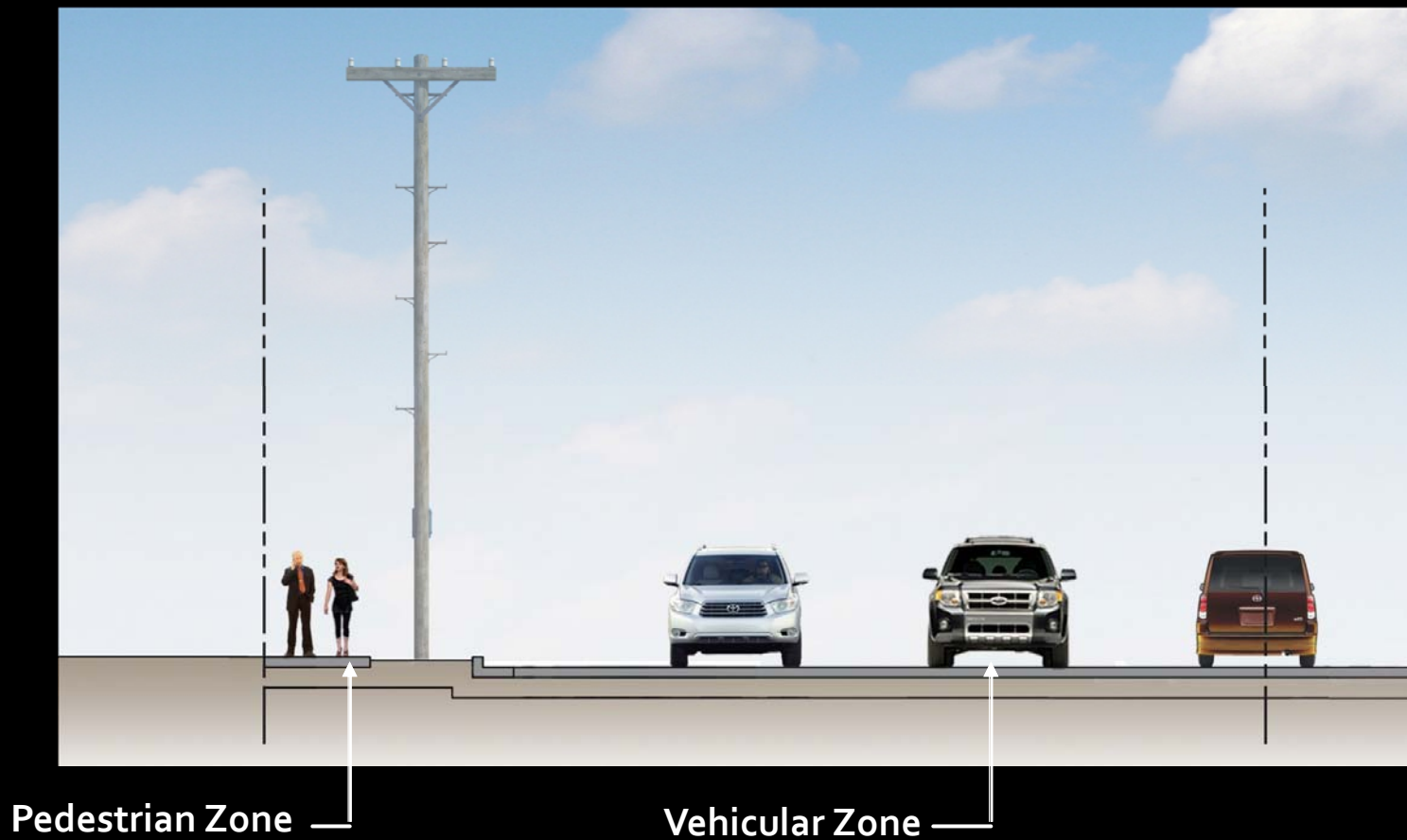


# Elements of the Van Buren Streetscape

## Existing Conditions Looking East

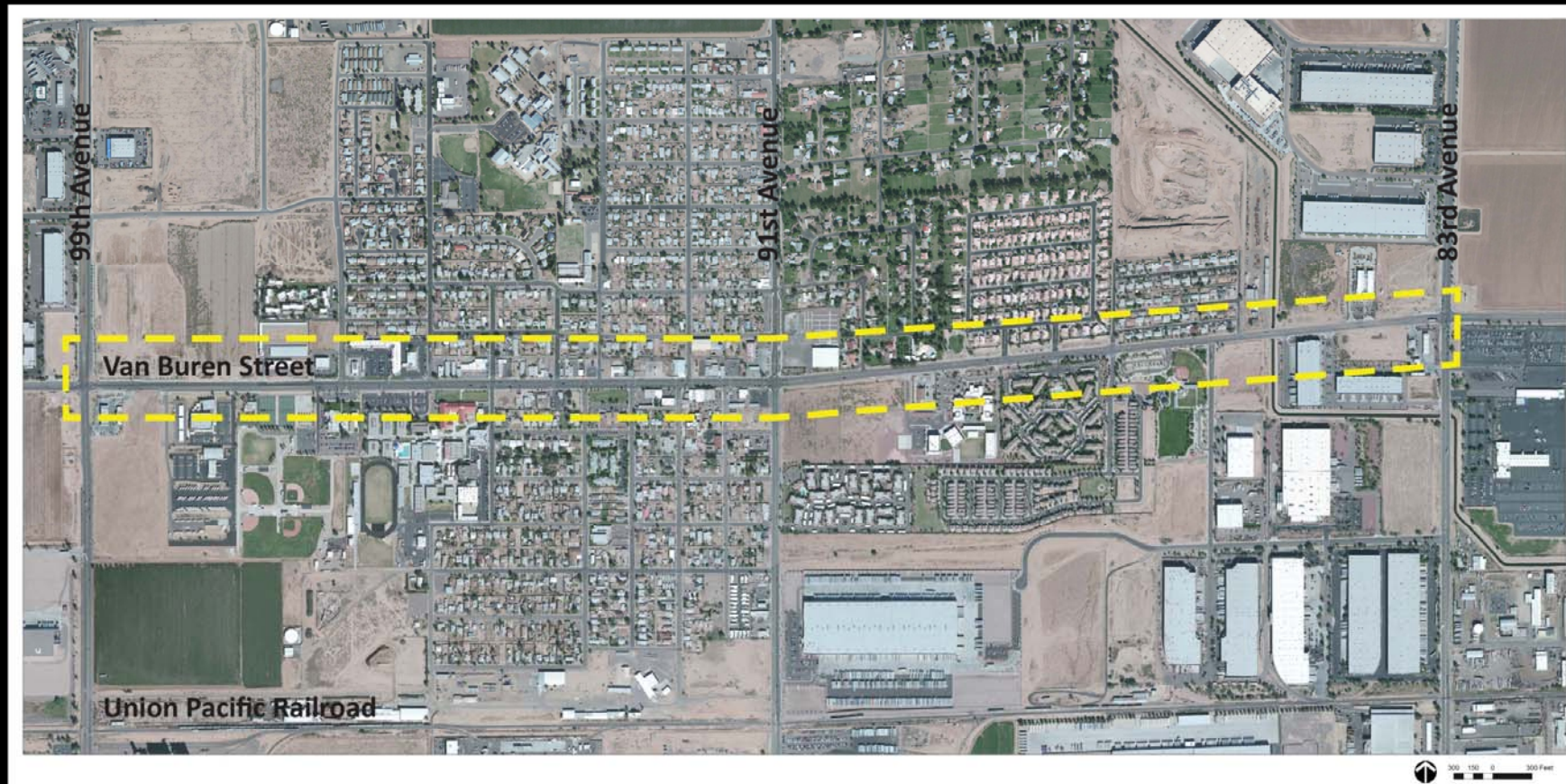


# Van Buren Streetscape – Existing Cross Section





# Project Limits for Conceptual Planning



# Development Zones

1<sup>st</sup> Stage Improvement Project

91<sup>st</sup> to 99<sup>th</sup> Avenue



Zone 3

Zone 2

Zone 1

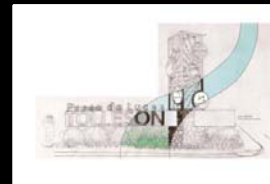
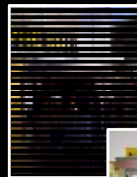
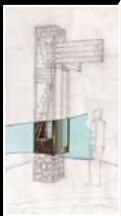
Zone 4



# Van Buren Street

- New Curb & Gutter Reconstruction
- Striping to Include Bike Lanes & On-street Parking
- Pedestrian Zone Improvements
- Lighting Improvement
- Landscape Improvements
- Art Elements
- Signage & Wayfinding Elements

## Zone 1: 91<sup>st</sup> to 94<sup>th</sup> Avenue



# Project Overview

## *"Build Upon Existing Downtown Assets"*

- Street Width / Right-of-Way / Speed Limit (25 mph)
- Available Open Space
- Community Ownership: Residents, Stakeholders & Businesses
- "Activity on the Street": City Hall, Arizona Desert Elementary, Tolleson Union High School, and Post Office
- Existing Buildings on the Right-of-Way / Urban Flavor





# Downtown Open Space Assets





# Intersection Improvements & Gateway Opportunities





# Define The Vision:

## Transition to a Vibrant Downtown that is a Long-term Economic Engine

- Outstanding Opportunity to “Set the Table” for Downtown
- Develop a Destination Environment with a True Sense of Place
- Pay Tribute to Tolleson’s Community, Heritage, & Culture
- Develop a multi-modal Downtown that balances vehicular, pedestrian, bicycle, and mass transit traffic



Van Buren Street Improvement Project  
Tolleson, Arizona



# Van Buren Street

## Proposed Cross Section

- 15' to 18' Pedestrian Zone
- Shade Trees, Seating Opportunities, & Planting Buffer
- Successful Mix of Vehicular, Pedestrian, Bicycle, & Mass Transit Traffic
- Provide Outstanding Opportunity for Private Development to Invest in Downtown



Aesthetic Lighting, Banners, Signage/Wayfinding, Art & Cultural Amenities, and On-Street Dining





# Design and Operate Entire Right-of-Way



Van Buren Street Improvement Project  
Tolleson, Arizona

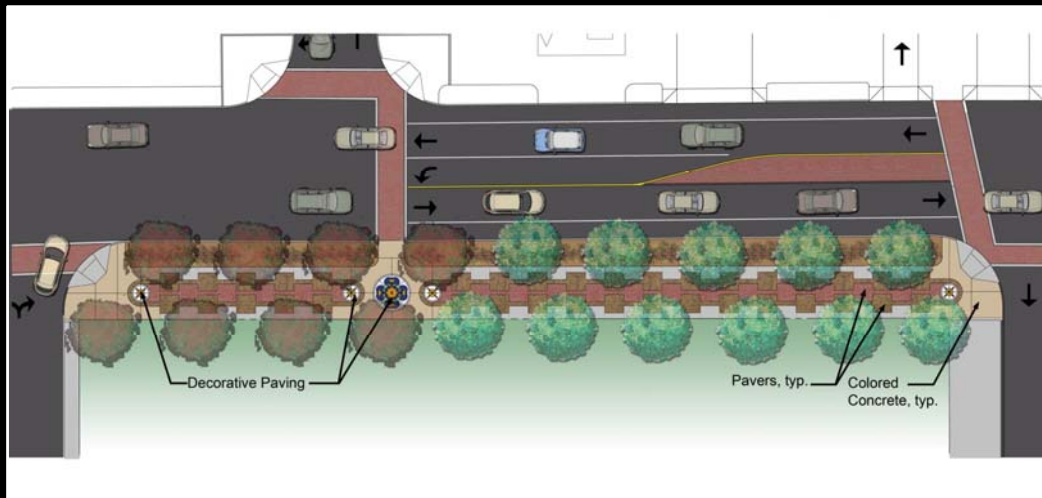


# Economic Revitalization



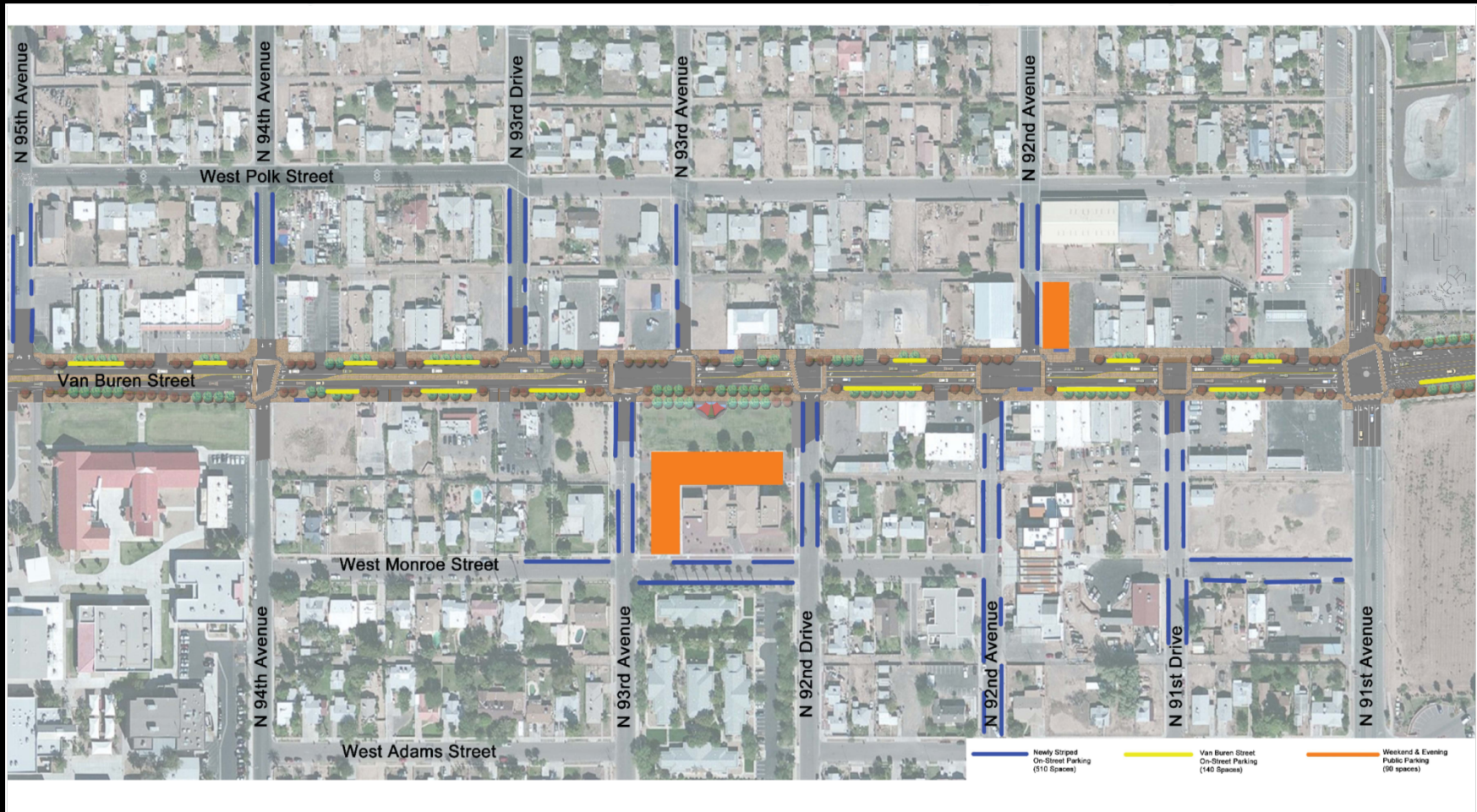


# Pedestrian & Crosswalk Paving



# Schematic Parking Plan

Intent: to Provide Approximately 740 Clearly Marked Parking Spaces in the Downtown Area





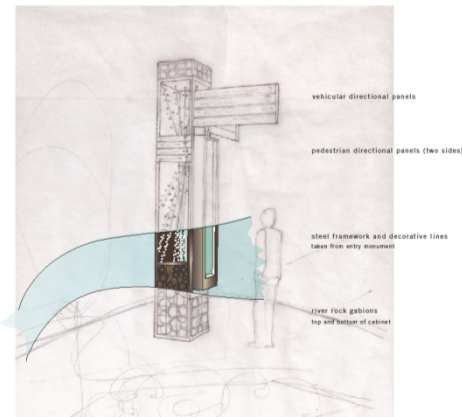
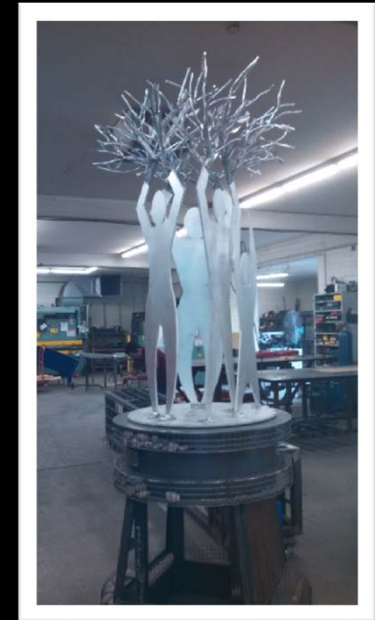
# Branding and Logo



# Gateway Entry Monuments, Pedestrian Wayfinding, and Art Kiosk Opportunities



Gateway Entry Monument



Wayfinding Element



Art Kiosk Element



# Upcoming Enhancements



Before



Façade Renovation Concepts for Future Restaurant

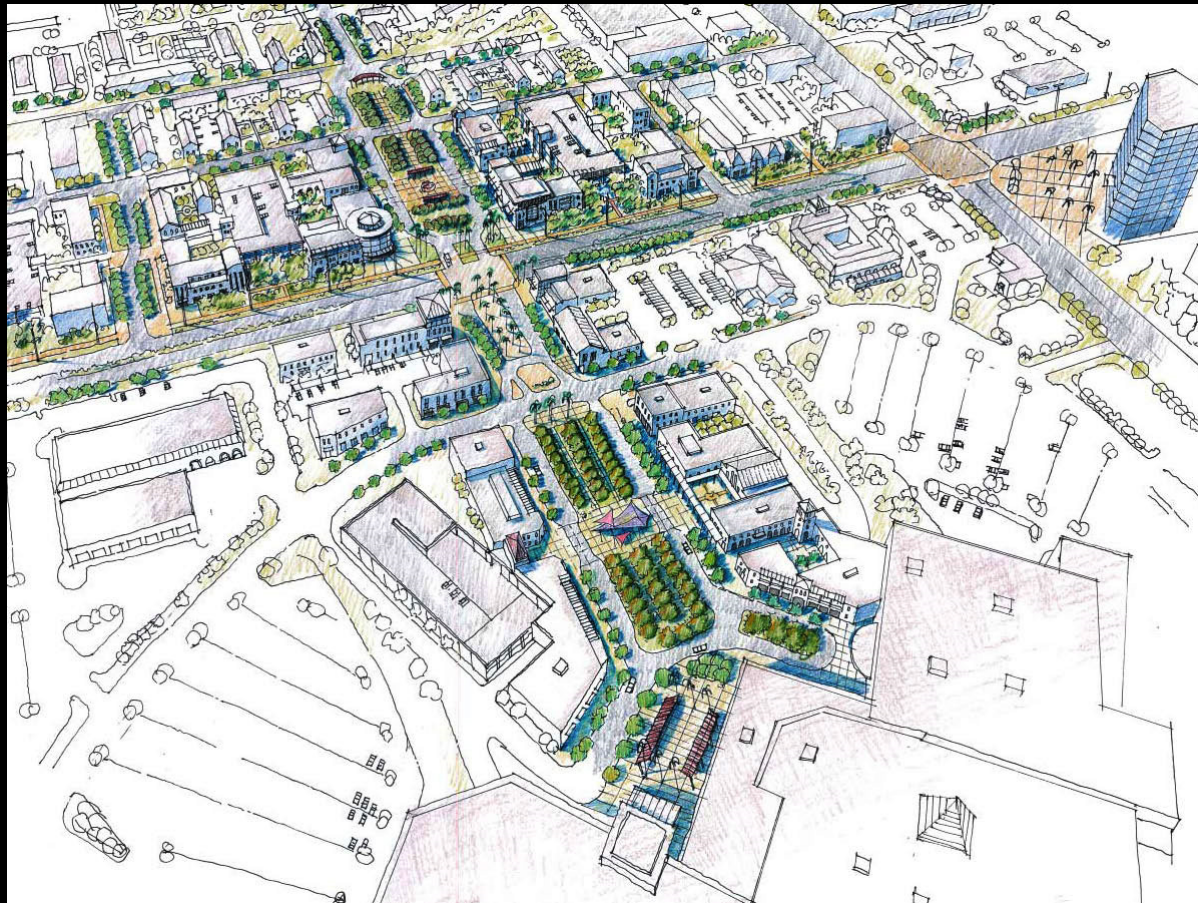






# Fiesta District Improvements Southern Avenue Streetscape Project

District Revitalization / Economic Development / Sustainability





# Fiesta District Improvements

District Area: Tempe Canal to Extension Road





# Fiesta District Improvements

Implement Design Program Based on Established Handbook



# Fiesta District Vision

“The District Vision creates a uniquely identifiable area for Mesa that is economically vibrant, pedestrian friendly, and an active, urban destination. Revitalization of the Fiesta District will again transform this major City employment center to a place of destination...”

- Pedestrian friendly with integrated mix of uses
- Diversity of entertainment and evening uses
- Unique branding and sense of place
- Urban Atmosphere and activated street scene
- Supported by an improved public transit system
- A place where businesses are eager to locate
- A place to live, work, shop, learn and do business



# Existing Conditions



Fiesta District / Southern Avenue Streetscape  
Mesa, Arizona

# Traffic: Southern Ave Travel Lanes

Dobson Rd

Country Club Dr





# Traffic: Southern Ave Historical Data

	Lanes	ADT	Volume/ Lane	Difference from Peak
1987 Peak	6	47,800	7,967	--
2008/09 Counts	6	34,700	5,783	-27.4%
2030 w/ 6 Lanes	6	38,597	6,433	-19.3%
2030 w/ 4 Lanes	4	30,031	7,508	-5.8%

# Traffic Results Summary

- Southern Avenue traffic volumes have decreased nearly 30% since their peak in the late 1980's.
- Transition of Southern from 6 to 4 lanes will not significantly degrade existing traffic Levels of Service along the corridor.
- Existing “pass through” traffic will generally seek other routes.
- Into the future (2030), congestion will be similar to the historical peak condition with less overall traffic volume.

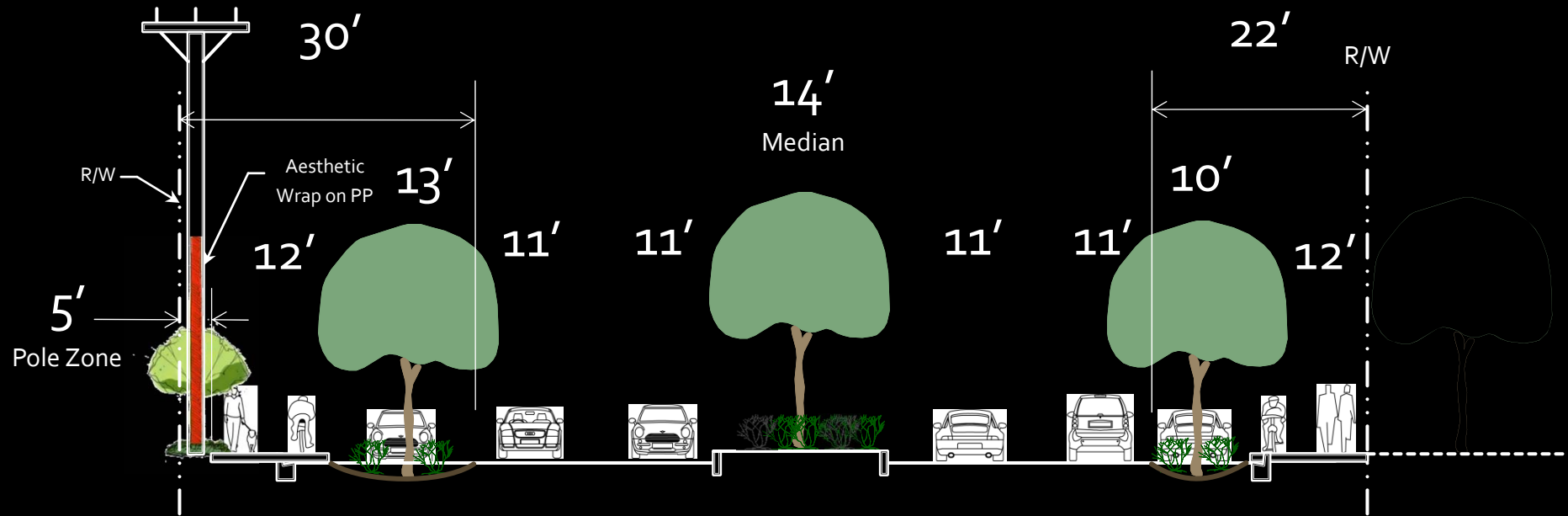


Fiesta District / Southern Avenue Streetscape  
Mesa, Arizona





# Southern Avenue – Existing Cross Section (Looking East)



# Southern Cross Section (Looking East)





# Stormwater Harvesting (Bioswale)

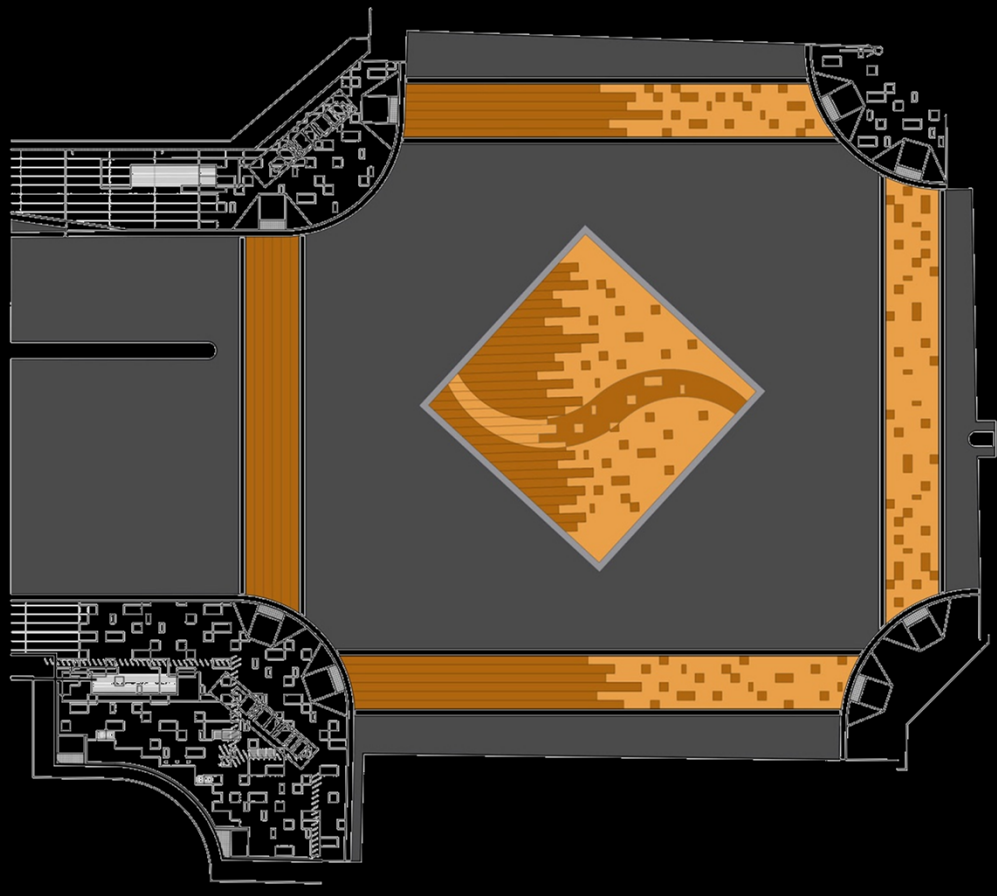


# Stormwater Harvesting (Bioswale)





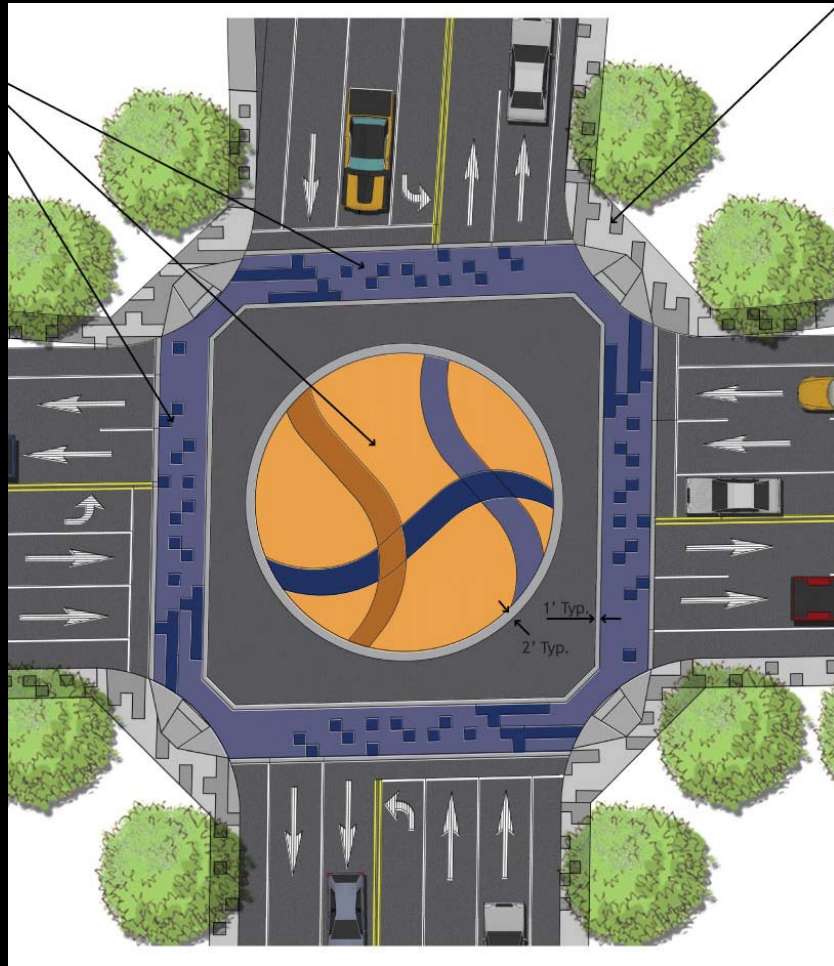
# Primary Intersection Paving Treatment (Reflective Coating)



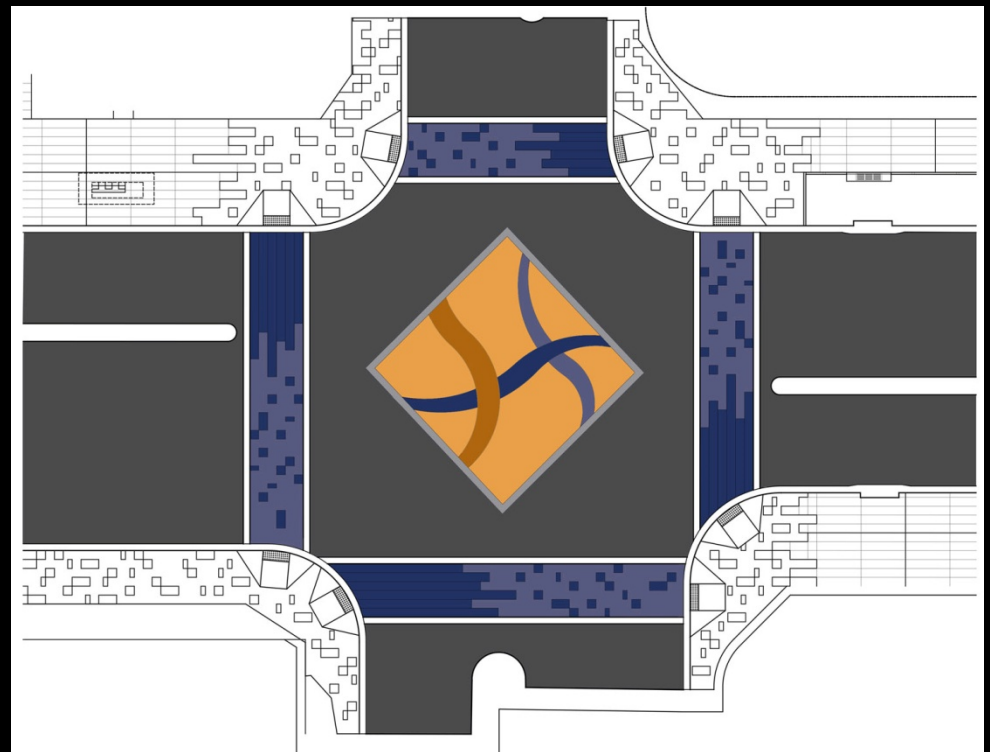
Fiesta District / Southern Avenue Streetscape  
Mesa, Arizona

# Secondary Intersection Paving Treatment (Reflective Coating)

OLD



NEW



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# Bus Shelters



Fiesta District / Southern Avenue Streetscape  
Mesa, Arizona

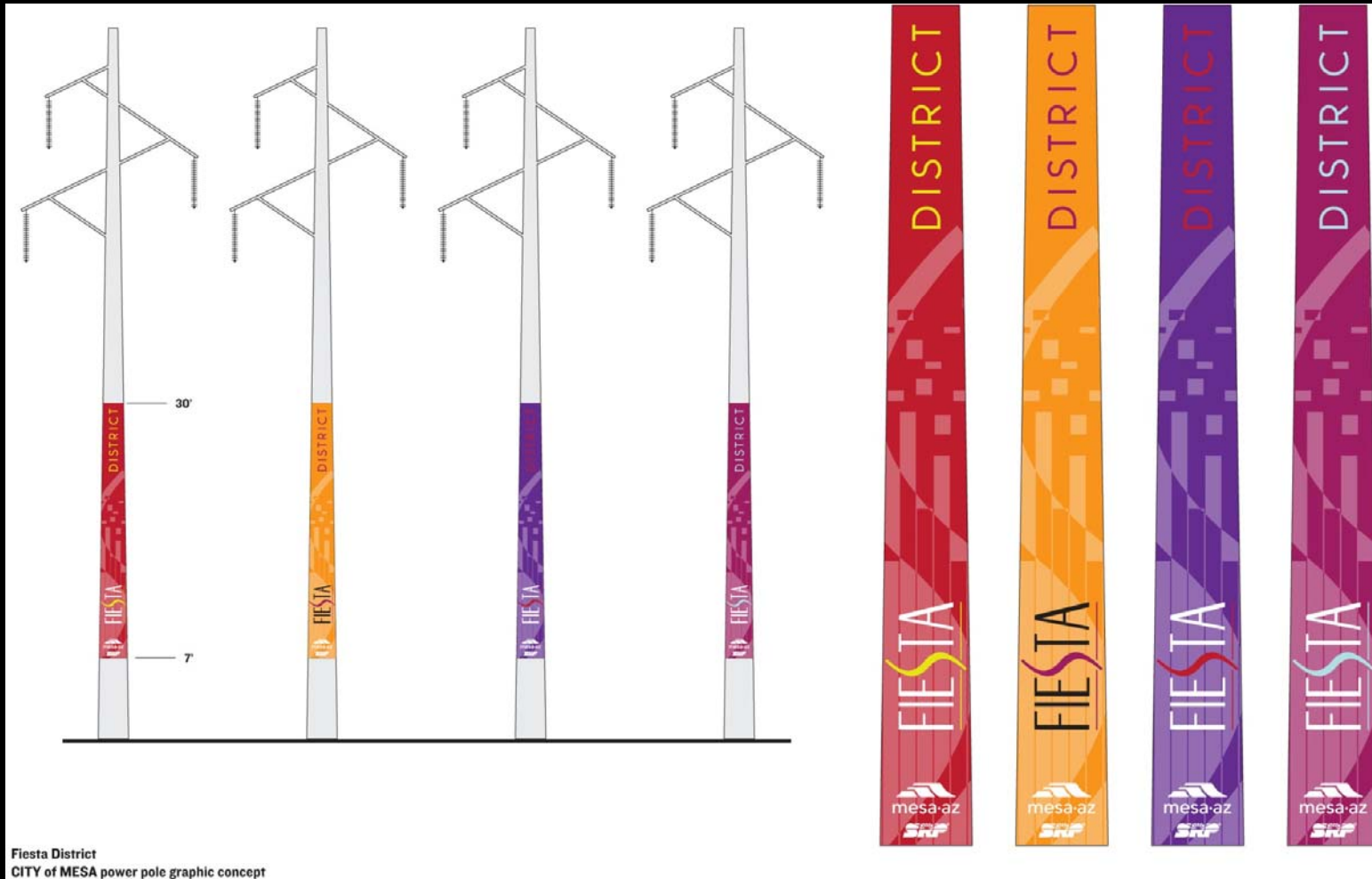
# Pole Wraps



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Mesa, Arizona



# Pole Wraps



# Median Monuments



Fiesta District / Southern Avenue Streetscape  
Mesa, Arizona



# Median Monuments



Fiesta District / Southern Avenue Streetscape  
Mesa, Arizona

# Southern Avenue Gateway Monumentation



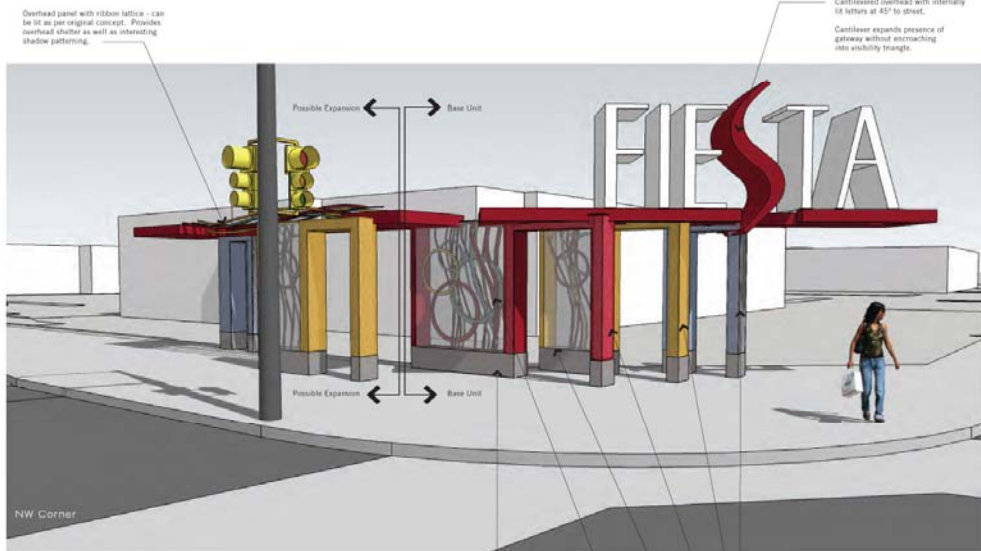
Base Gateway



Expanded Gateway



Expanded Gateway Concept with "DISTRICT" Element



Stand alone element in 6', 10' and 15' heights - 10' height. Can be arranged/added as needed to accommodate corner configurations while retaining a consistent presentation.

Composition creates a dynamic visual for passing vehicles and an interesting sequence for pedestrians

Glass mesh frame around opening - internally lit for nighttime glow.

Typical for all.

Taken from original concept.

Concrete Base

Public Art piece - LED/Metal Ribbon Composition with metal mesh cover.

Taken from original concept and made transparent to meet CPTED standards.

Mesh cover provides vandalism protection for exposed LEDs and creates a more pattern as drivers move past.



# Southern Avenue Gateway Monumentation



Fiesta District / Southern Avenue Streetscape  
Mesa, Arizona



# Southern Avenue Corner Treatments



Fiesta District / Southern Avenue Streetscape  
Mesa, Arizona





# Southern Avenue Corner Treatments



Fiesta District / Southern Avenue Streetscape  
Mesa, Arizona



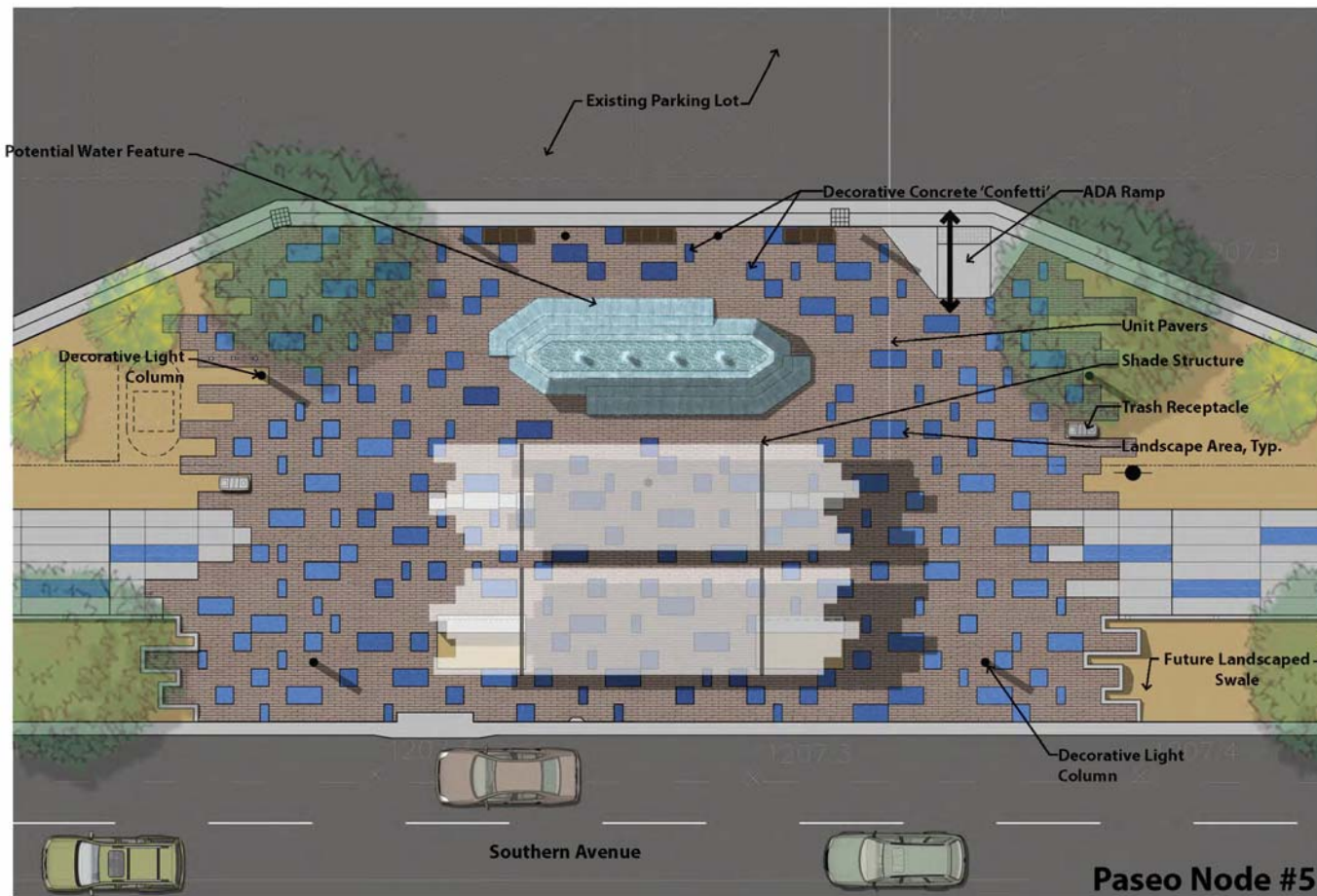
# Southern Avenue Corner Treatments





# Fiesta Paseo Nodes

## (5 Southern Avenue Pocket Parks)



# Fiesta Paseo Nodes

## (5 Southern Avenue Pocket Parks)





# Fiesta Paseo Nodes

## (5 Southern Avenue Pocket Parks)



# Fiesta Paseo Nodes

(Adjacent Private Development in Progress)



Fiesta District / Southern Avenue Streetscape  
Mesa, Arizona



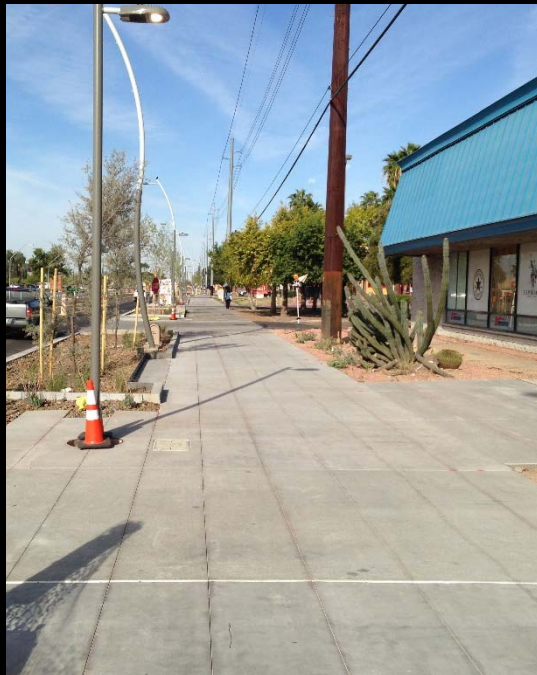
# Fiesta District / Southern Avenue Phase 1

## Construction Complete November, 2014



# Thank You

## Questions & Answers



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Thank You

## Questions & Answers

For More Information on Complete Streets:

[www.smartgrowthamerica.org](http://www.smartgrowthamerica.org)

[www.planning.org/research/streets](http://www.planning.org/research/streets)



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