

Leveraging Transportation Investment to Improve Communities

A CASE STUDY: GILBERT ROAD LRT EXTENSION



Meet our Panel:

Jodi Sorrell, Transit Services Director, City of Mesa

Andrew Haines, Vice President & Executive PM, Jacobs

Erik Yingling, Vice President & Area Manager, Stacy and Witbeck, Inc.



Setting the Stage

Jodi Sorrell, Transit Services Director City of Mesa



Why Gilbert Road?



Provided **better use** of limited transportation dollars



Anticipated to **increase ridership** in Mesa by 40 percent



Provides **better access** from L202, US 60, as well as central and east Mesa



Provides opportunity for **redeveloping** portions of Main Street from just east of Mesa Drive to Gilbert Rd



Provided a better site for a long-term **park & ride** lot at Gilbert Road



Improved **transit access** for nearby residents with access to growing regional LRT system

Funding

Challenge: No previously identified funding for LRT extension

Approach:

- No new taxes
- Uses existing transportation resources
- Reallocates Mesa's existing share of federal transportation funds to reflect Council priorities

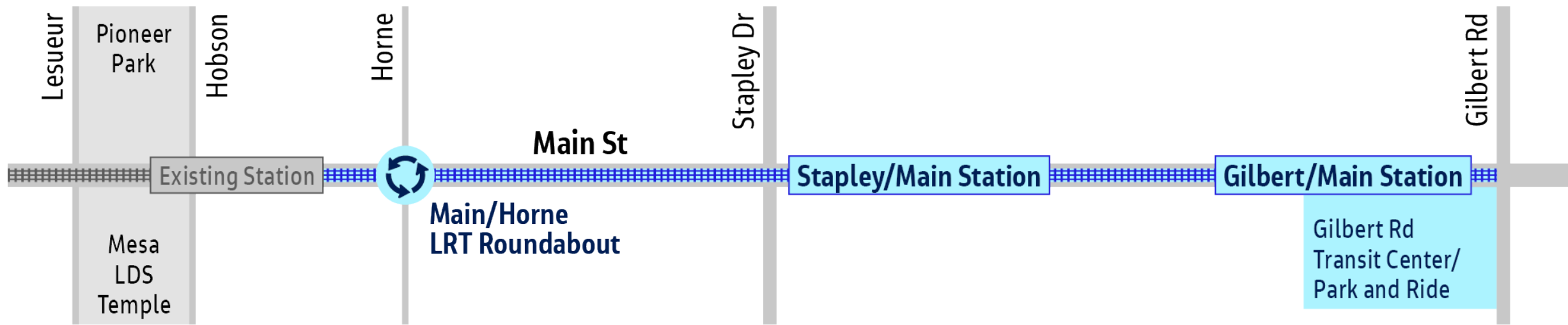
Financing Scenario

- Mesa to issue Transportation Project Advancement Notes (TPANs) to advance funds for Project to begin in 2014
 - Similar to financing used to advance Gateway Freeway (State Route 24)
- Mesa to retire notes as RTP funding becomes available
- Mesa's local match will be funded by existing transportation resources
- ✓ **Result: no new net cost to the City**

Creating a Sense of Place

Art & Aesthetics | Roundabout | Basins | Pedestrian Improvements | Development

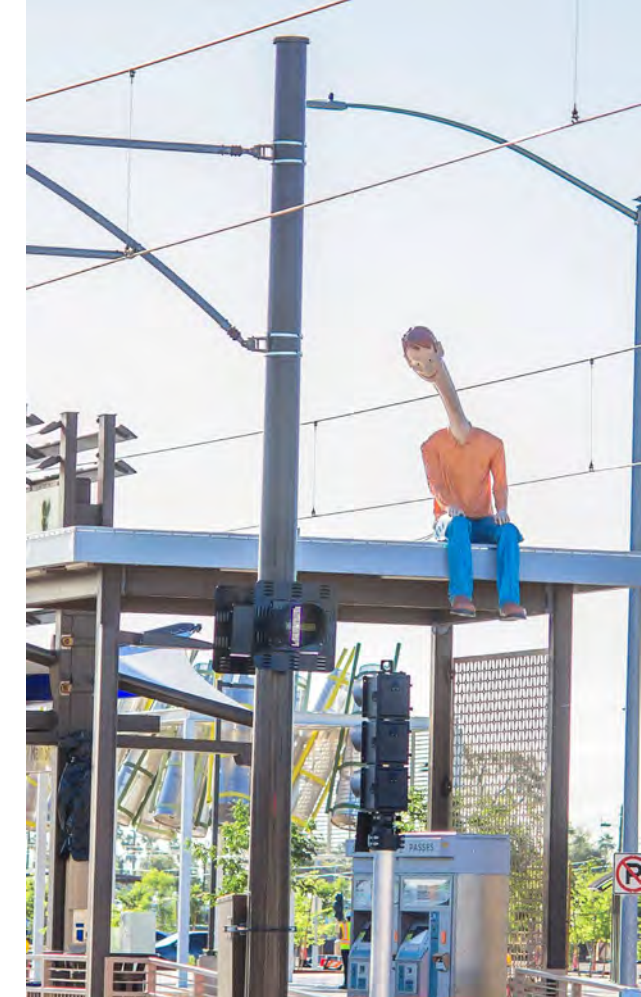
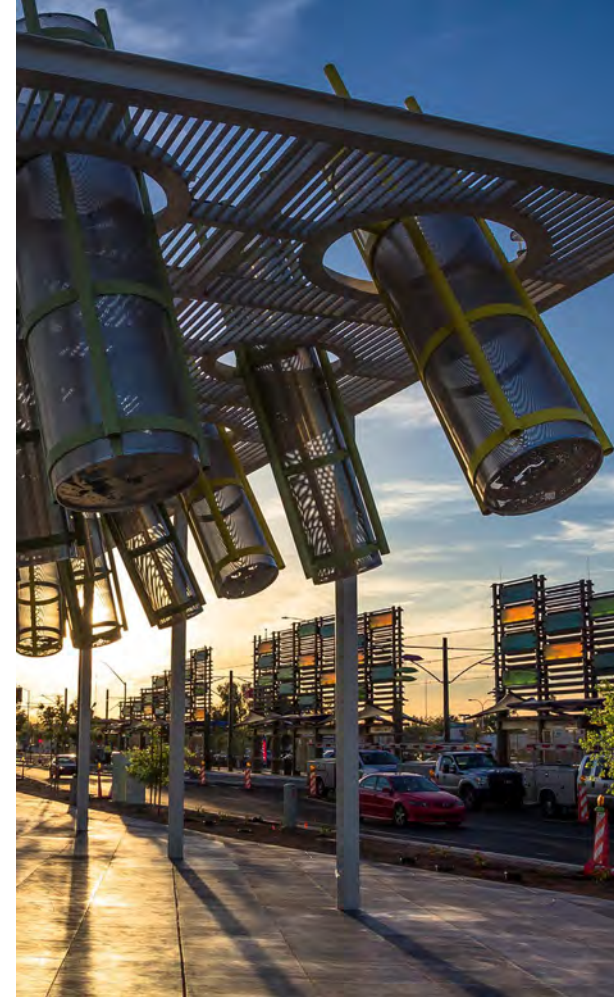




Corridor Map



Art & Aesthetics



Public Art



Aesthetic Elements

Concrete Score Joint Patterns

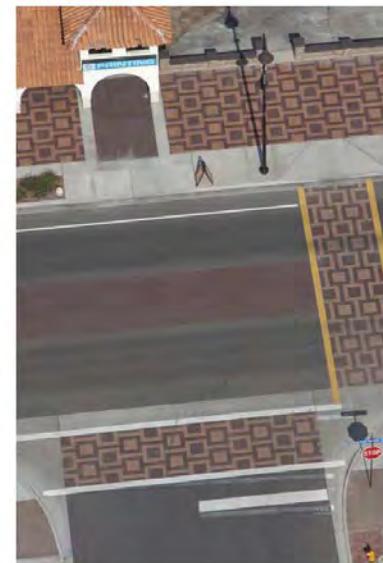
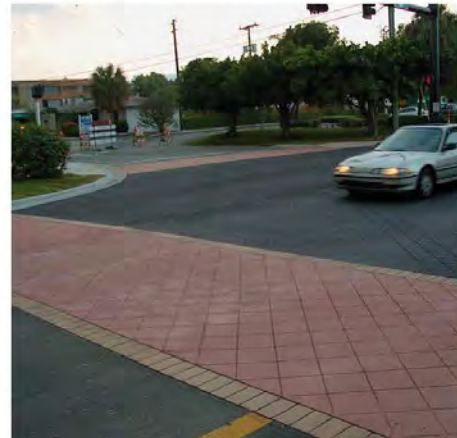


Crosswalk Patterns

Existing LRT Downtown Crosswalk Pattern

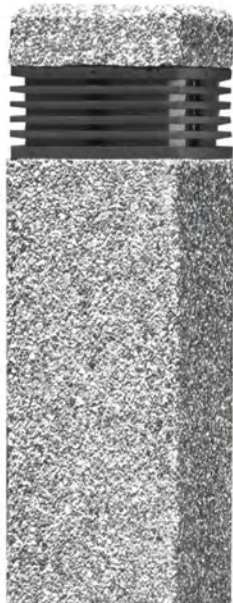


New Crosswalk Approach

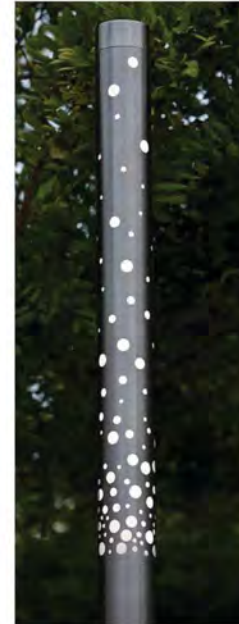


Site furnishings

Pedestrian Level Bollards



Light Sticks



Site furnishings

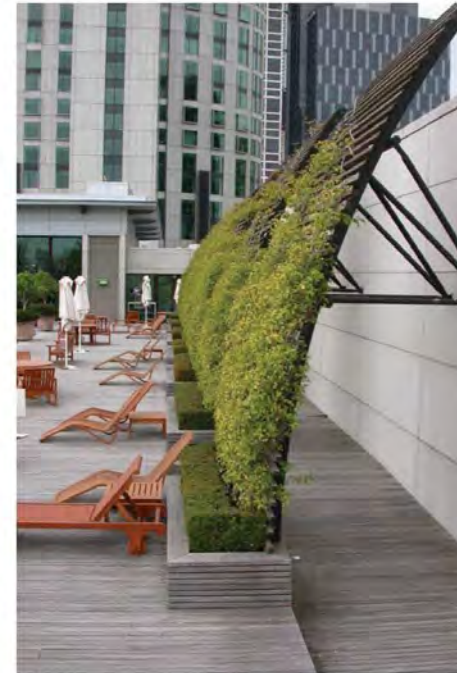
Tree Grates



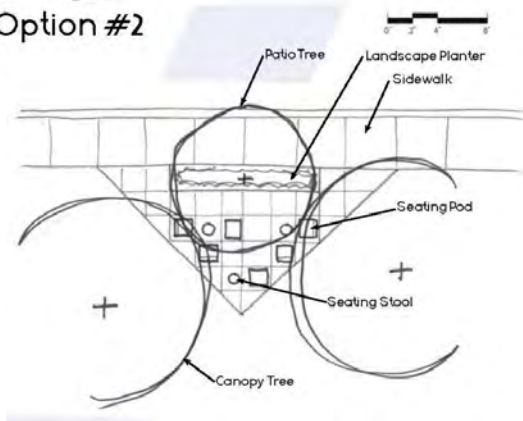
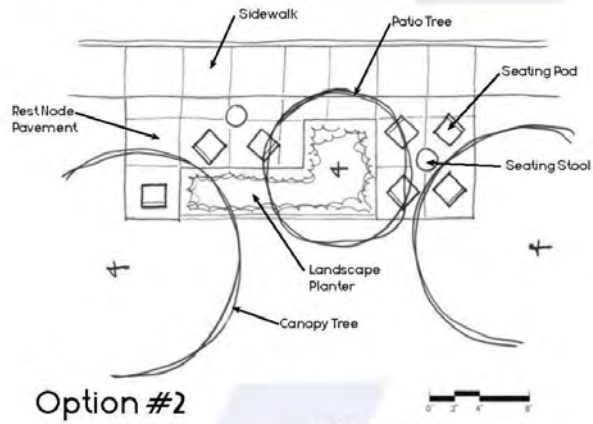
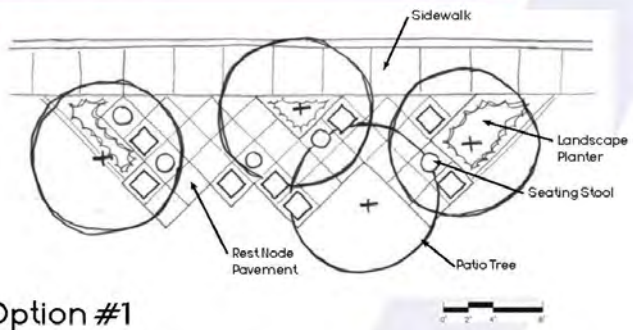
Pedestrian Shade Structure at Cross Walks



Green Screens for Tail Track



Site furnishings



Site furnishings

Seating Pods



Bike Rack Approach

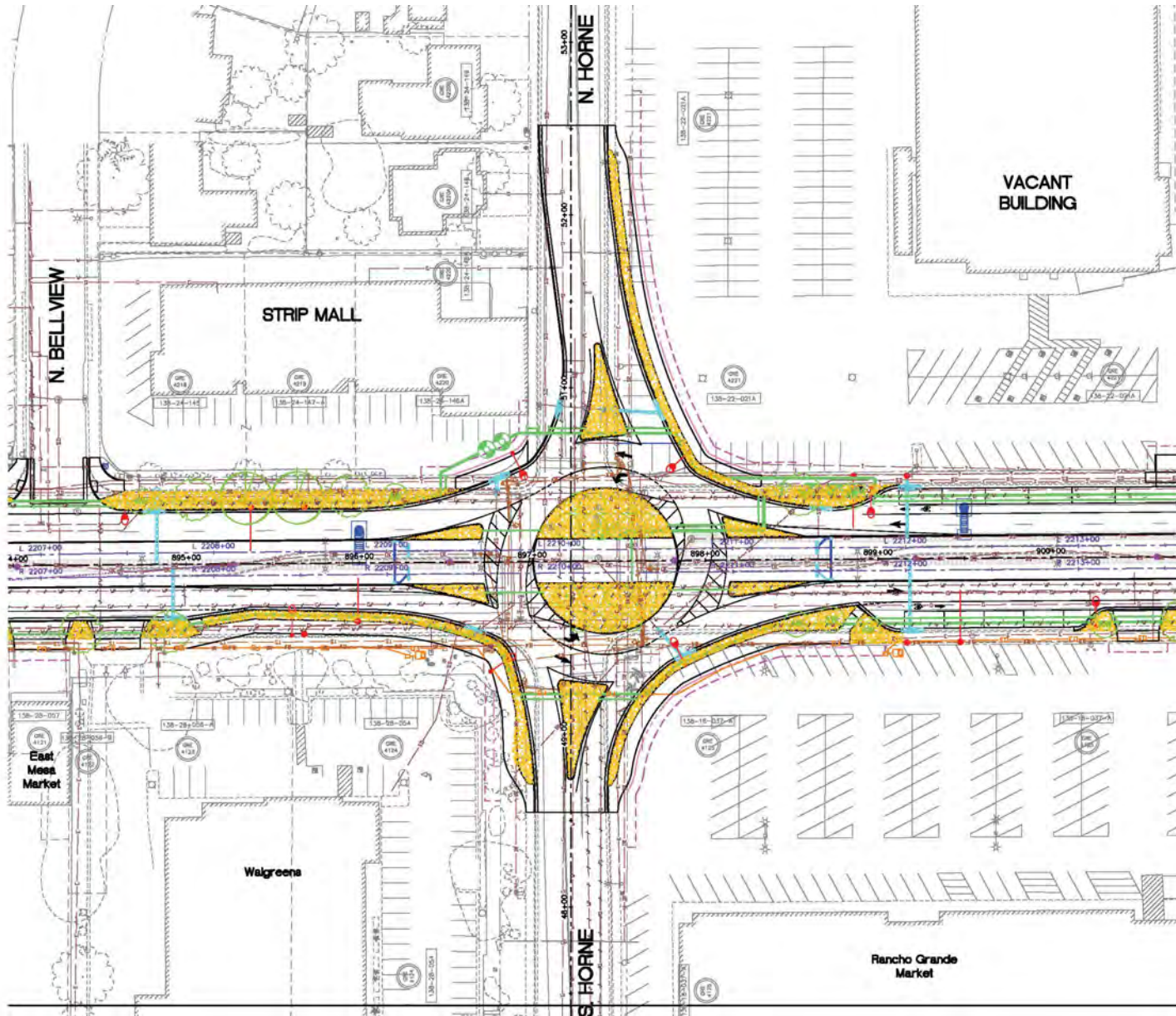




Roundabout

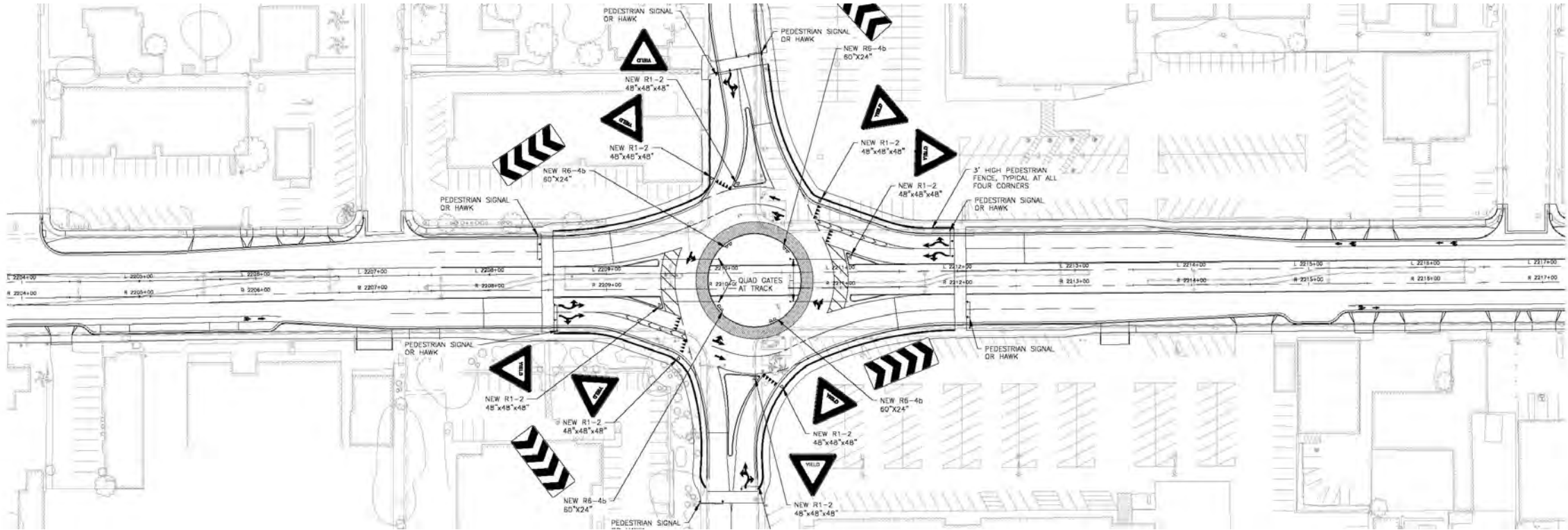


The First Four-Way Turbo Roundabout in the United States



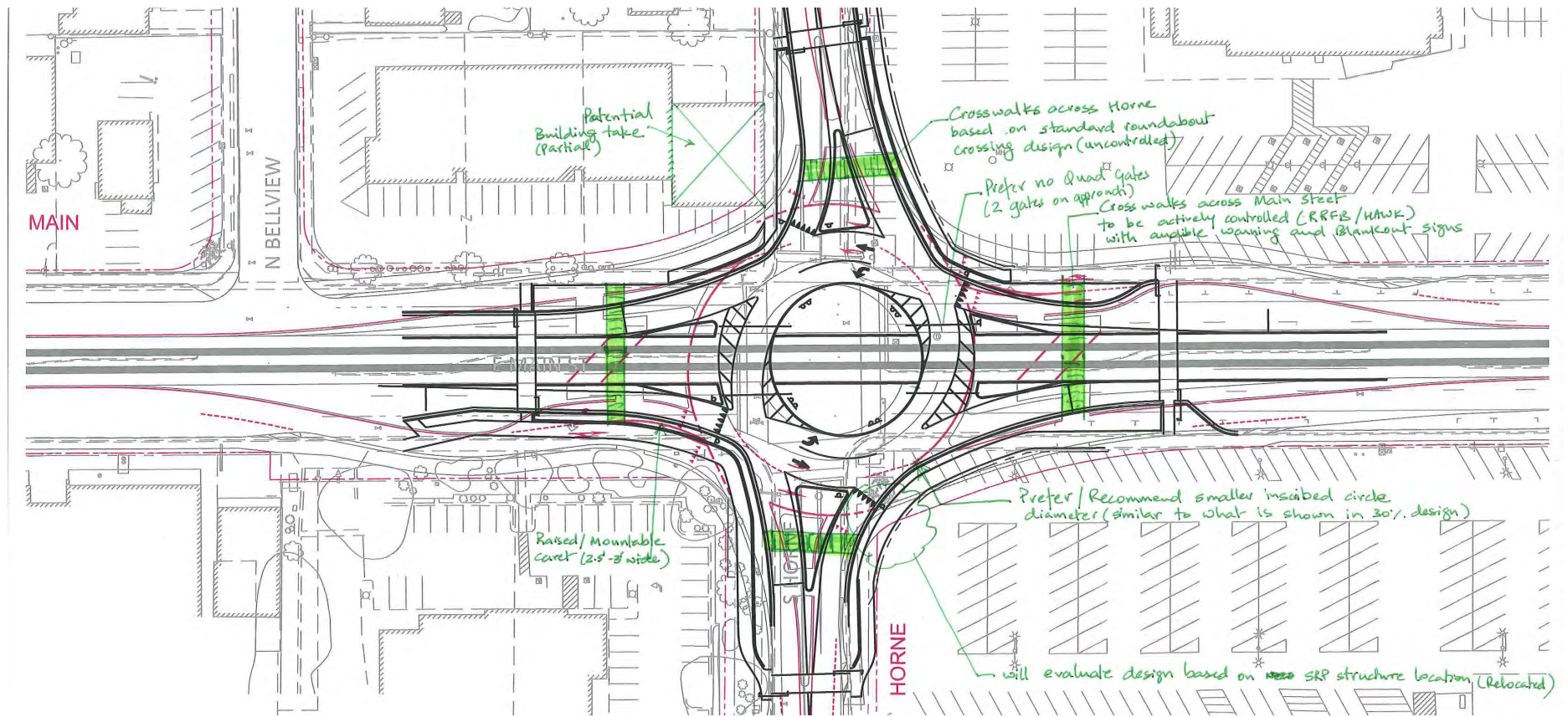
Design & Construction Progression

CMAR PROCESS ALLOWED CITY, DESIGNER, AND BUILDER TO WORK TOGETHER TO REFINE THE FINAL INSTALLATION



Two Lane Roundabout Option

Defining "Turbo" Roundabout



Refining the Design

Valley Metro, the City, and the Jacobs team worked together with the CMAR Contractor, Stacy and Witbeck-Sundt JV during the design process

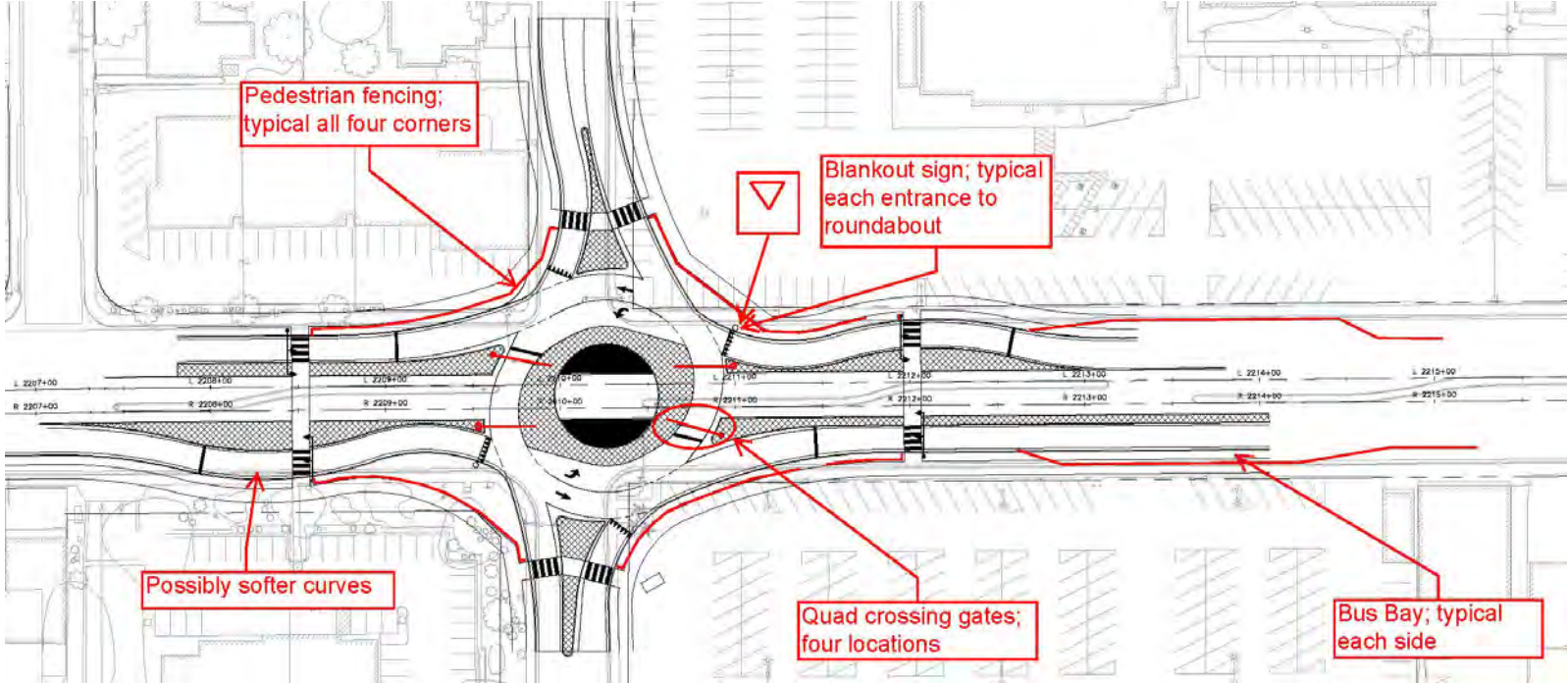


Table 2 – Hazard and Risk Assessment Model

Frequency of Occurrence		1	2	3	4
		Catastrophic	Critical	Marginal	Negligible
(A)	Frequent	1A	2A	3A	4A
(B)	Probable	1B	2B	3B	4B
(C)	Occasional	1C	2C	3C	4C
(D)	Remote	1D	2D	3D	4D
(E)	Improbable	1E	2E	3E	4E

Source: U.S. Department of Transportation, Federal Transit Administration (FTA) Hazard Analysis Guidelines for Transit Projects, 2000

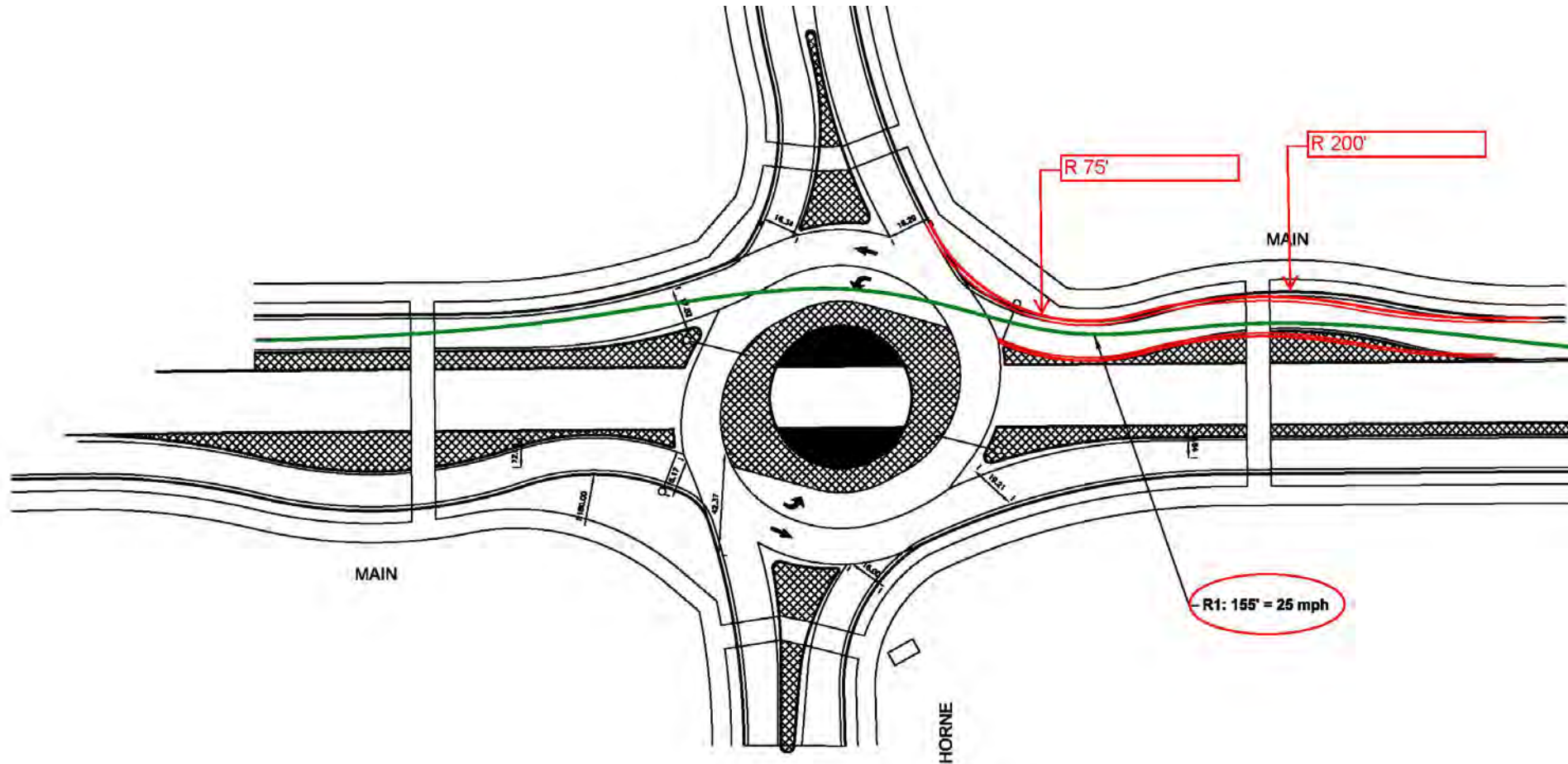
1. Catastrophic: Death, system loss or severe environmental damage.
2. Critical: Severe injury, severe occupational illness, major system, or environmental damage.
3. Marginal: Minor injury, minor occupational illness, minor system, or environmental damage.
4. Negligible: Less than minor injury, occupational illness, or less than system or environmental damage.

Legend:	<u>Hazard Risk Index</u>	<u>Acceptance Criteria</u>
	1A, 1B, 1C, 2A, 2B, 3A	Unacceptable
	1D, 2C, 2D, 3B, 3C	Undesirable (decision required)
	1E, 2E, 3D, 3E, 4A, 4B	Acceptable with review
	4C, 4D, 4E	Acceptable without review

Working with the State Safety Oversight Committee

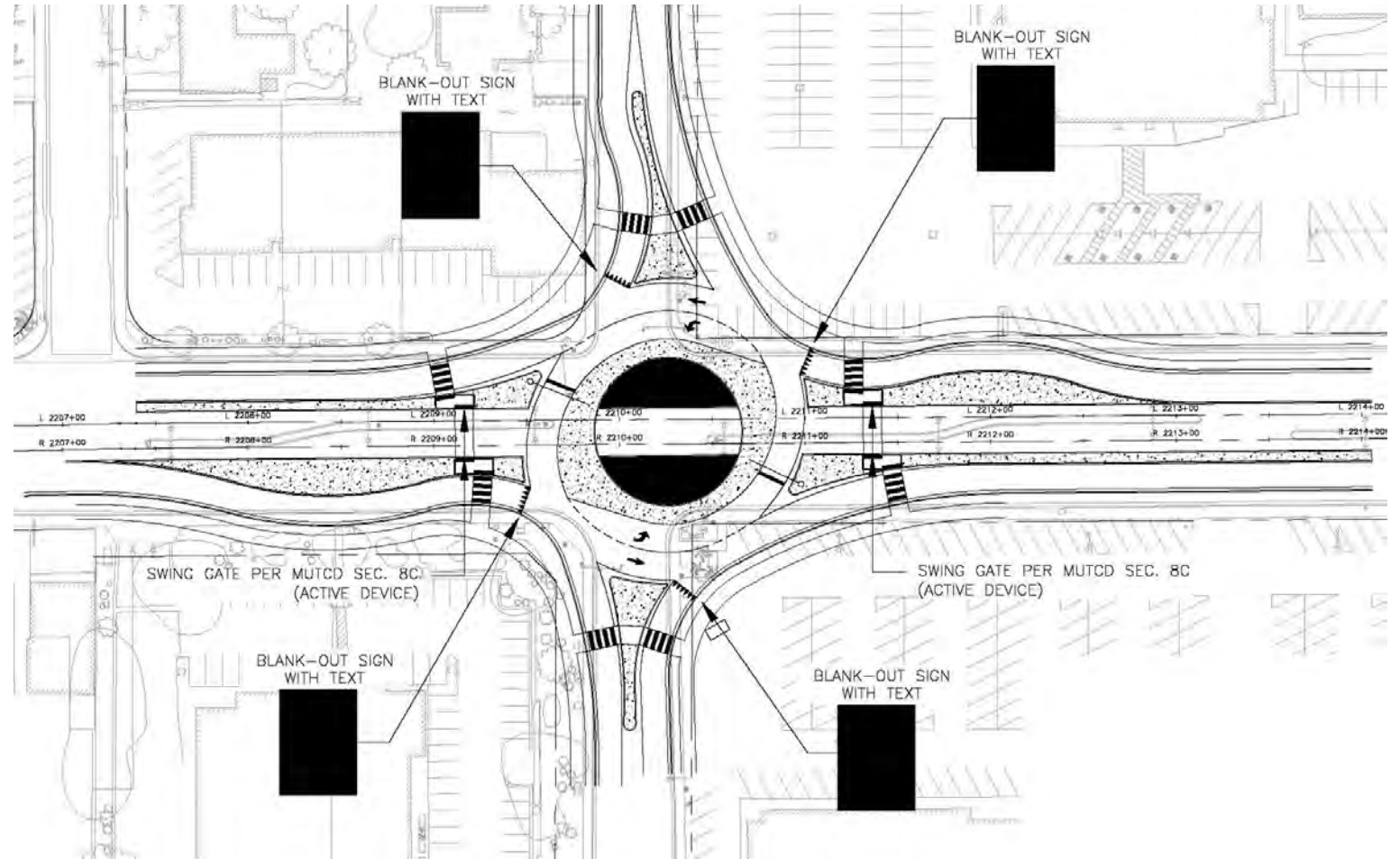
- Preliminary Hazard Analysis
- Reduce Project Risk

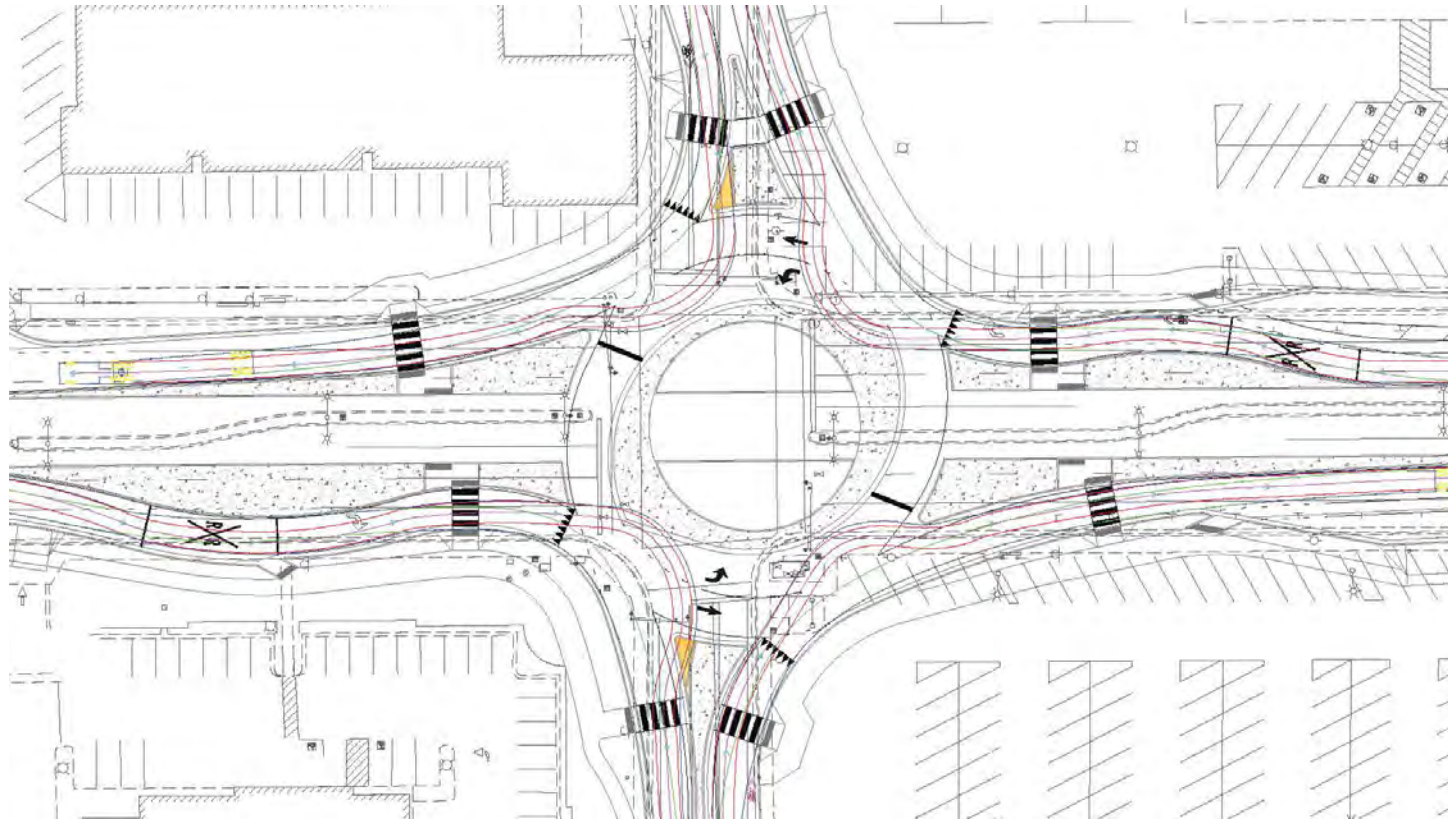
Safety: Determining the “Fastest Path”



Safety

Accommodating pedestrians while maintaining traffic and train flows





Safety

Turning Analysis



Final Design Rendering

- Wide, scored concrete sidewalks
- Colored concrete
- Colored, stamped asphalt
- Landscaping

Construction

The phased construction process incorporated considerations related to school schedules, reducing impacts, and safety.





Finished Roundabout

Basins

- Low spot East of downtown Mesa
- Historic flooding area
- Capacity less than a 2-year event
- Needed creative solutions



Engaging Stakeholders

Allen / Sally's Fabric Basin

Vicinity Map

The image presents three landscape design options for the Allen / Sally's Fabric Basin. Each option is shown as a plan view and a cross-section A-A. The plan views include labels for 'Main St', 'Electrical Cabinets', 'Bus Shelter', 'Bike Racks', 'Pedestrian Rest Node', and 'DC Walking Path'. The cross-section A-A shows a street scene with trees, a sidewalk, and a car. A 'PLANT LEGEND' is located at the bottom right of the plan views.

Decomposed Granite Option

Angular Rip Rap Option

Angular Rip Rap and Turf Option

Symbol	Plant Name
Small circle	PLANT SPECIES
Circle with cross	ORNAMENTAL TREE - PLANT
Circle with dot	ORNAMENTAL TREE - PLANT
Circle with horizontal lines	ORNAMENTAL TREE - PLANT
Circle with vertical lines	ORNAMENTAL TREE - PLANT
Circle with diagonal lines	ORNAMENTAL TREE - PLANT
Circle with wavy lines	ORNAMENTAL TREE - PLANT
Circle with solid fill	ORNAMENTAL TREE - PLANT
Circle with dashed lines	ORNAMENTAL TREE - PLANT
Circle with solid fill and dot	ORNAMENTAL TREE - PLANT
Circle with solid fill and cross	ORNAMENTAL TREE - PLANT
Circle with solid fill and horizontal lines	ORNAMENTAL TREE - PLANT
Circle with solid fill and vertical lines	ORNAMENTAL TREE - PLANT
Circle with solid fill and diagonal lines	ORNAMENTAL TREE - PLANT
Circle with solid fill and wavy lines	ORNAMENTAL TREE - PLANT
Circle with solid fill and dashed lines	ORNAMENTAL TREE - PLANT
Circle with solid fill and cross-hatch	ORNAMENTAL TREE - PLANT
Circle with solid fill and dots	ORNAMENTAL TREE - PLANT
Circle with solid fill and horizontal dashes	ORNAMENTAL TREE - PLANT
Circle with solid fill and vertical dashes	ORNAMENTAL TREE - PLANT
Circle with solid fill and diagonal dashes	ORNAMENTAL TREE - PLANT
Circle with solid fill and wavy dashes	ORNAMENTAL TREE - PLANT
Circle with solid fill and dashed cross-hatch	ORNAMENTAL TREE - PLANT
Circle with solid fill and dots in a grid	ORNAMENTAL TREE - PLANT
Circle with solid fill and dots in a grid with cross-hatch	ORNAMENTAL TREE - PLANT
Circle with solid fill and dots in a grid with horizontal lines	ORNAMENTAL TREE - PLANT
Circle with solid fill and dots in a grid with vertical lines	ORNAMENTAL TREE - PLANT
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Circle with solid fill and dots in a grid with dashed lines	ORNAMENTAL TREE - PLANT
Circle with solid fill and dots in a grid with cross-hatch	ORNAMENTAL TREE - PLANT
Circle with solid fill and dots in a grid with dots	ORNAMENTAL TREE - PLANT
Circle with solid fill and dots in a grid with horizontal dashes	ORNAMENTAL TREE - PLANT
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Circle with solid fill and dots in a grid with dashed cross-hatch	ORNAMENTAL TREE - PLANT
Circle with solid fill and dots in a grid with dots and cross-hatch	ORNAMENTAL TREE - PLANT
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Circle with solid fill and dots in a grid with dots and dots and dashed cross-hatch	ORNAMENTAL TREE - PLANT

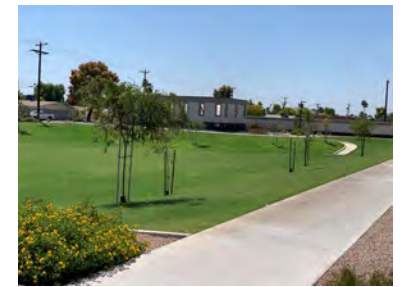
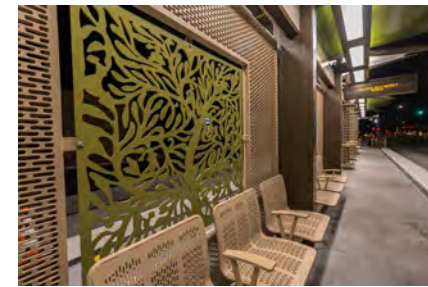
From Function to Form



Pedestrian Improvements



Creating Walkable Space





Development

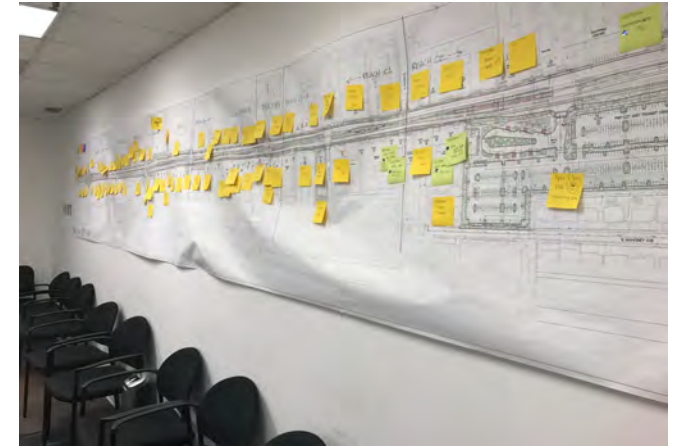
Development

Key to success was ensuring as little disruption as possible to existing businesses and the community



Successful Project Delivery Took Careful Planning

- Daily Team Meetings
- Night Construction
- Wayfinding
- Pedestrian Safety & Signage





The team also rallied to support local business

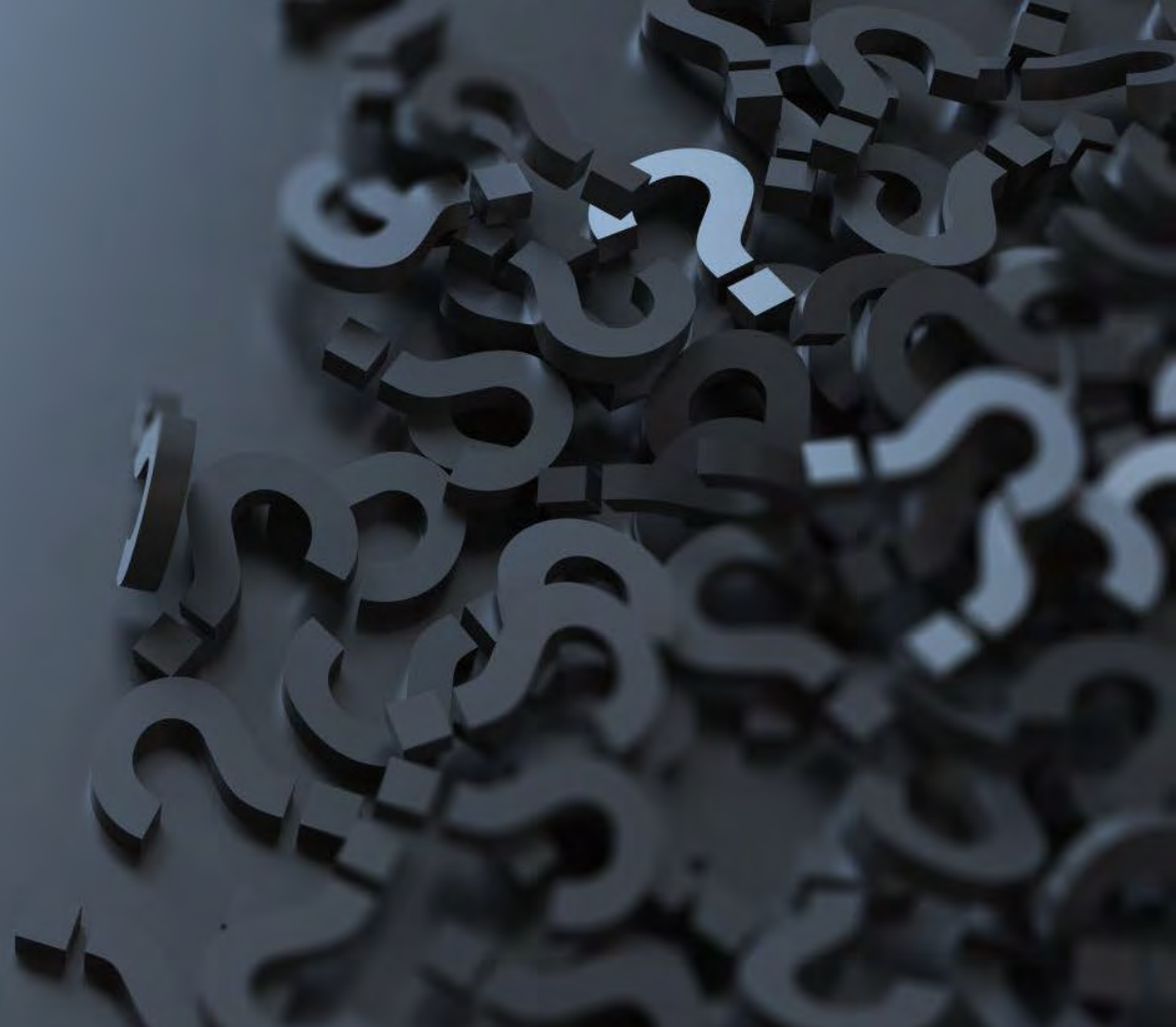
Economic Development



Downtown Redevelopment | Transit Oriented Development | Development Spreading East to Gilbert Rd
Multi-Family Housing | Healthcare | Education | Recreation | Dining

Lessons Learned

- Educate Stakeholders
 - Engage stakeholders early; help identify their concerns and desires
 - Know you're not going to make everyone happy
 - Address community fears such as impacts from lane reduction
 - Demonstrate how solutions meet their desired end-results – **be creative!**
 - A lane reduction versus widening provided better long-term results for the community
- Have long-term vision for your community (needs and wants)
 - Mesa developed a “Stitch” document to define the City’s vision for the corridor
 - Prioritize what can be funded via project
 - Secure local funding where possible
 - Incorporate into future development components to realize the cohesive vision
- Transportation investments result in “wish list” from communities
 - Manage expectations while you lay the ground-work for the future
 - Recognize that every extension is different
 - Partner in good faith (Mesa, Valley Metro, Design Consultant, Contractor)
 - “Here’s what we want, what can we do?”



Questions?