Traffic Safety Improvements Countywide for the areas of Sabino Canyon Road, Sunrise Drive at Remount Place, Tanque Verde Road, and Tanque Verde Loop Road

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Pima County Department of Transportation

Welcomes You!

Traffic Engineering Division Staff

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Project Life Cycle

Public Input

You are here

Planning/Programming
6 months

Development/Design
18 months

Construction
10 months

Life Cycle of the Project Development Process
Improvement Project Locations

Proposed safety / capacity related projects

- Sabino Canyon Rd at Sunrise Dr/Remount Pl
- Tanque Verde Rd at Tanque Verde Loop Rd
Project Goals

1. Reduce the total number of crashes and reduce crash severity.

2. Improve bicycle and pedestrian safety and access

3. Improve safety by reducing traffic congestion

4. Maintain existing access to businesses and driveways

5. Analyze life-cycle costs with predictive safety methodology

6. Provide improvements based on safety benefits
Project Site #1

Sabino Canyon Rd at Sunrise Dr / Remount Pl

Visitor Center

Sabino Canyon Rd

Sunrise Drive

Remount Place (private)
Traffic Operations

Traffic backs-up from the toll booth onto Sabino Canyon Rd
Traffic Operations

Bicycle, Pedestrian and vehicular conflicts on Sabino Canyon Road
Traffic Operations

Existing Traffic Signal
Traffic Operations

Overflow parking along Sabino Canyon Road

NB Sabino Canyon Road. Photo taken at the School Main Driveway. TAR 31768
Possible Solutions

Sabino Canyon Road at Sunrise Drive / Remount Place

Reasonable alternatives:

• Expand USFS parking lot at the Sabino Canyon Visitor Center
• Improve the intersection of Sabino Canyon Rd at Sunrise Dr/Remount Place
• Relocate entrance to Sabino Canyon Visitor Center Parking Lot
• Increase vehicular storage for toll booth
Project Site #2
Tanque Verde Rd at Tanque Verde Loop Rd

Emily Gray Junior High School

Tanque Verde Rd
Traffic Operations

Tanque Verde Rd at Tanque Verde Loop Rd

Safety and Capacity related issues:

• Crash History - 7 property damage crashes, 2 injury crashes and no fatal crashes

• Average Daily Traffic (ADT) – 9,372 vpd and 3,081 vpd on Tanque Verde Rd and Tanque Verde Loop Rd respectively.

• Congested Area
Traffic Operations

Traffic backs-up on Tanque Verde Loop in peak hour
Traffic Operations

Congested area due to Emily Gray Junior High School drop-off and pick-up
Project Site

Tanque Verde Rd at Tanque Verde Loop Rd
Possible Solutions

Tanque Verde Rd at Tanque Verde Loop Rd

Reasonable alternatives to solving safety and capacity related issues:

• Improvements to the intersection of Tanque Verde Rd at Tanque Verde Loop Rd

• Improve pedestrian facilities adjacent to Emily Gray Junior High School
Intersection Types

Stop Control

Traffic Signals

Roundabouts

Hannah Olsen E.I.T
Continuous Green T-Intersection

Provides Continuous Green for through movement
Modern Roundabout Example

96th Street and Cholla Street in Scottsdale
Roundabouts vs. Traffic Signals

- Fewer & Less Severe Accidents
- No Red Light Running
- Slower Speeds (operating speeds 15–23 mph)
- Improved Pedestrian Safety
- Faster Commute Travel Times
- Less Congestion and Delay
- Increased Capacity
- Aesthetics
- Reduced Air Pollution
Roundabout Conversion
(click on image to play video)
Roundabout Locations in Pima County:

- Hardy Rd/ Calle Buena Vista (Town of Oro Valley)
- I-19 at Canoa Rd Traffic Interchange (Green Valley)
- Continental Rd/Camino Del Sol (Green Valley)

Approximately 30 roundabouts in Arizona

Source: Nokia’s 2014 Here Maps (Graphic by Damien Hauser with ESRI)
Roundabout Locations

Camino Del Sol at Continental Road in Green Valley

Before: 12 crashes in five years  After: 0 crashes in five years
Frequently Asked Questions

- How to Use Them
- Vehicular Safety
- Pedestrian Safety
- Bicycle Safety
- Large Trucks
- Buses
- Fire Engines
- Emergency Vehicles
- Access to Businesses
- Cost
- Aesthetics
Roundabouts and Safety

Reduction in collisions

- 37% reduction in overall collisions
- 75% reduction in injury collisions
- 90% reduction in fatality collisions
- 40% reduction in pedestrian collisions

Source: Federal Highway Administration and Insurance Institute for Highway Safety (FHWA and IHS)
Conflict Points at Intersections

Vehicle conflict points: Conventional intersection

- Diverge: 8
- Merge: 8
- Crossing: 16
- Total: 32

Vehicle conflict points: Roundabout

- Diverge: 4
- Merge: 4
- Crossing: 0
- Total: 8

vs.
Pedestrian Safety

- Roundabouts are safer than signalized intersections
- Slower traffic speeds
- Two-stage crossing for pedestrians
- Crosswalk set back from circulatory roadway
Bicycle Safety

TIPS for using a Roundabout:

• Riders follow the same rules as vehicles.

• Be assertive when merging with traffic.

• Riders should travel at approximately the same speed as motorists.

• Cyclists should ride in the center of the lane, not along the curb line.

• Be sure to use proper hand signals when exiting the roundabout.
Buses

104th Street & Cactus Street in Scottsdale
Semi-Tractor Trailers
(click on image to play video)
Fire Trucks
(click on image to play video)
Access to Businesses

- Most business owners agree that slower speeds and safer travel enhance business.

- Roundabouts provide better access to businesses near the intersection than traffic signals because roundabouts do not have left-turn storage lanes with raised medians.
Roundabouts Landscaping
More Information on Roundabouts

Pima County Department of Transportation website:  
http://webcms.pima.gov/Transportation/Single-Lane Roundabouts

Arizona Department of Transportation website:  
https://azdot.gov/about/transportation-safety/roundabouts/overview

Federal Highway Administration Roundabouts - An Informational Guide:  

NCHRP Report 672 – Roundabouts: An Informational Guide  
https://onlinepubs.trb.org/.../nchrp_rpt_672.pdf

RoundaboutsUSA:  www.roundaboutsusa.com

Roundabout Resources:  www.roundaboutresources.org