

Rural Road Standards

Workshop #3
Monday, January 8th, 2007

Workshop Agenda

- Feedback Loop
- Rural Road Improvements - Key Issues Discussion
- Visual Preference Survey
- Next Steps

Feedback Loop

- Miscellaneous Updates:
 - JPA Agreement
 - Approach on issues outside the project scope
- Short answers to easy questions:
 - Lighting standards at intersections

Rural Road Improvements – Key Components

1. Rural Road Improvement Policy
 - Proposed change to local policy on timing and phasing of road improvements in the rural area
2. Rural Road Improvement Standards
 - New context based design standards for rural roadways

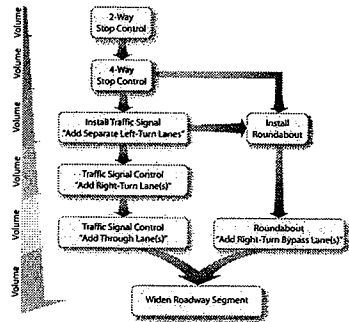
Rural Road Improvement Policy

- Value based policy (preservation over efficiency)
- New system of roadway and intersection improvements based on volume thresholds
- Responds to input and concerns from rural residents
- Needs to be developed, reviewed/refined, and ultimately adopted by CC

Volume Thresholds – How it Works

- When traffic volumes reach X number (trigger threshold) at X location, X improvement is necessary
- Would allow for incremental improvements (phasing) so improvements respond to volume impact, but may not reflect ultimate build out

Volume Thresholds – How it Works



Volume Thresholds – Important Considerations

- Safety – accident rates may also trigger need for improvements
- Intersection improvements can delay the need for road widening of adjoining road segments
- Signalized intersection phasing and alternative designs (e.g., roundabouts)

Signalized Intersection Phasing Considerations

- Volumes and turning movements
- Number of approach lanes
- Placement of signal posts and phasing of pavement
- Cost of interim and ultimate improvements
- Interim and ultimate right-of-way issues

Signalized Intersection Design Alternatives

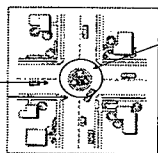


- **Traffic Circles** typically fit within the existing curb line and are used as a traffic calming device at intersections



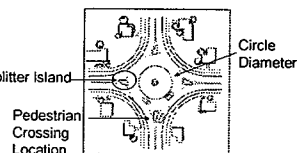
- **Roundabouts** are much larger and are used to allocate right-of-way for competing movements

Traffic Circle



- Used at lower volume unsignalized single-lane intersections
- Can be controlled with stop or yield signs
- Diameters range from 10 – 30 feet
- Circulatory speed is usually <15 mph
- Larger vehicles may turn left in front

Roundabout

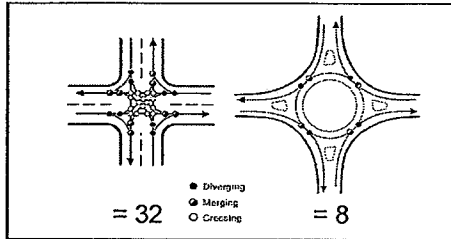


- An alternative to all-way stops or traffic signals at higher volume intersections
- 2-4 lane cross section roadways
- Yield control used at each approach
- Diameters range from 45 - 130 feet
- Circulatory speed of 20 mph

Key Considerations for Roundabouts

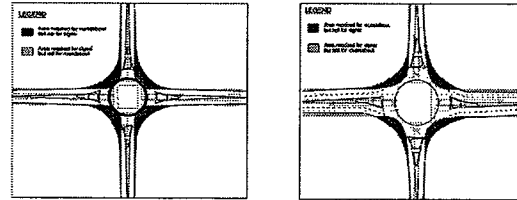
- Relatively balanced volumes on each approach
- Peak hour circulatory flows < than 1,800 vehicles/hour
- Peak hour exiting flows < than 1,200 vehicles/hour
- Daily approach volumes < 20,000 ADT
- Typically requires more right-of-way
- Roundabouts present trade-offs for pedestrians and visually impaired
- Maintenance costs are less than a traffic signal
- Construction costs may be similar due to rising traffic signal equipment costs

Reduction in Vehicle Conflicts



Source: Roundabouts: An Informational Guide FHWA, 2000

ROW Requirements



Area required for Urban Single-lane Roundabout vs. comparable signalized intersection

Area required for Urban Double-lane Roundabout vs. comparable signalized intersection

Source: Roundabouts: An Informational Guide FHWA, 2000

Volume Thresholds – Next Steps

- Consider information on existing conditions, build out conditions, and incremental phasing opportunities
- Input from residents on service thresholds, incremental improvements, and intersection design alternatives

Rural Road Improvement Standards

- Creates unique improvement standards for rural area
- Establishes context sensitive design solutions for road improvements in the area
- Ultimately adopted by City Council

Rural Road Improvement Standards – Draft Outline

- Purpose and Applicability
- Definitions
- General Requirements
- Street Design
- Intersection Design
- Street Light Design
- Utilities
- Signage
- Storm Drain Design
- Noise Attenuation Design Options

Visual Preference Survey

- Objective to understand preferences on a few roadway design features
- Results will be used to help guide design in the improvement standards
- Please score images and write any comments
- Survey available on line through end of January

Next Steps

- Workshop Tuesday, February 20th, 2007 6:30 pm in Council Chambers at City Hall
 - Survey Results
 - Work on both Rural Road Improvement Policy and Standards
- Continue to access project information on the project website http://www.eqplanning.org/rural_roads/