

Kolb Road: Sabino Canyon Road to Sunrise Drive

Project 4KSCSD

CAC Meeting

March 29, 2017

PSOMAS



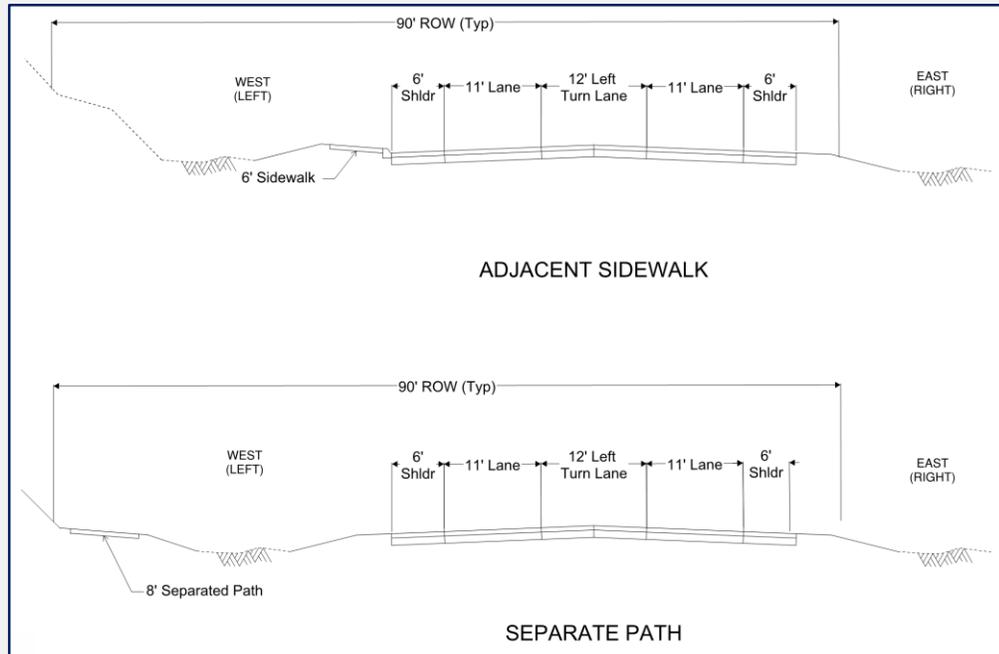
- Introductions
- Project Update
 - Geotechnical Analysis
- Current Activities
 - Sidewalk Alternatives
 - Traffic Analysis
- Questions

- Field work will begin soon
 - 2 week schedule, likely beginning in May/June
 - No major traffic impacts

- 2 Alternatives
 - Alternative 1 – West side only
 - Challenges with continuity on both sides
 - Alternative 2 – Hybrid

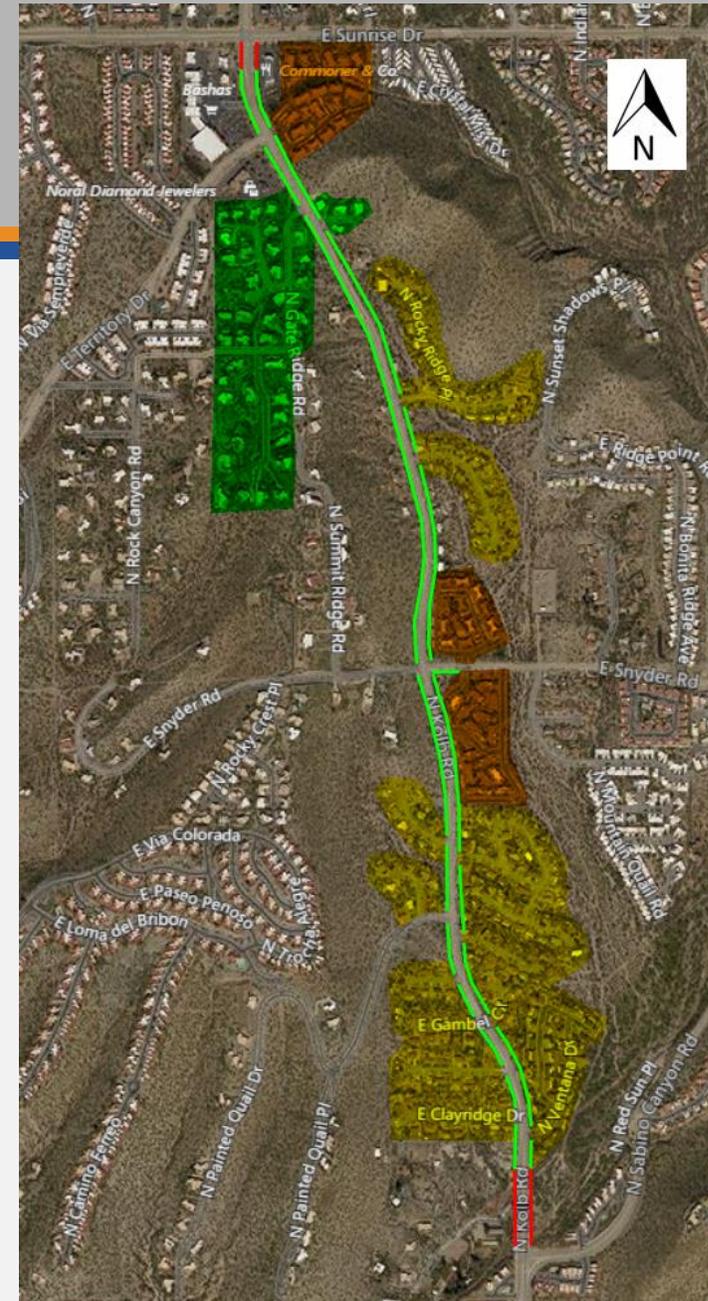
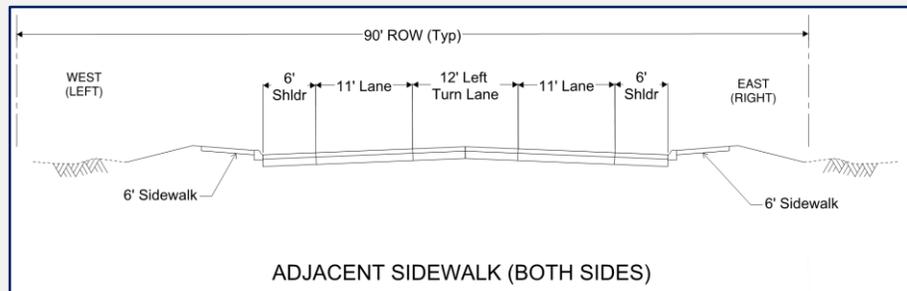
SIDEWALK ALTERNATIVES

- Alternative 1 – West side only
 - Fits the lay of the land
 - Keeps construction costs down
 - Not as favorable for pedestrian connectivity



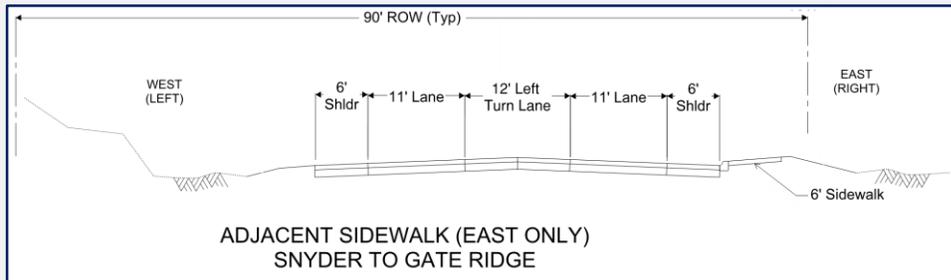
SIDEWALK ALTERNATIVES

- Challenges with continuity on both sides
 - Beyond Budget
 - Widest footprint
 - Retaining walls
 - Steeper driveways
 - Challenging tie-in for Snyder



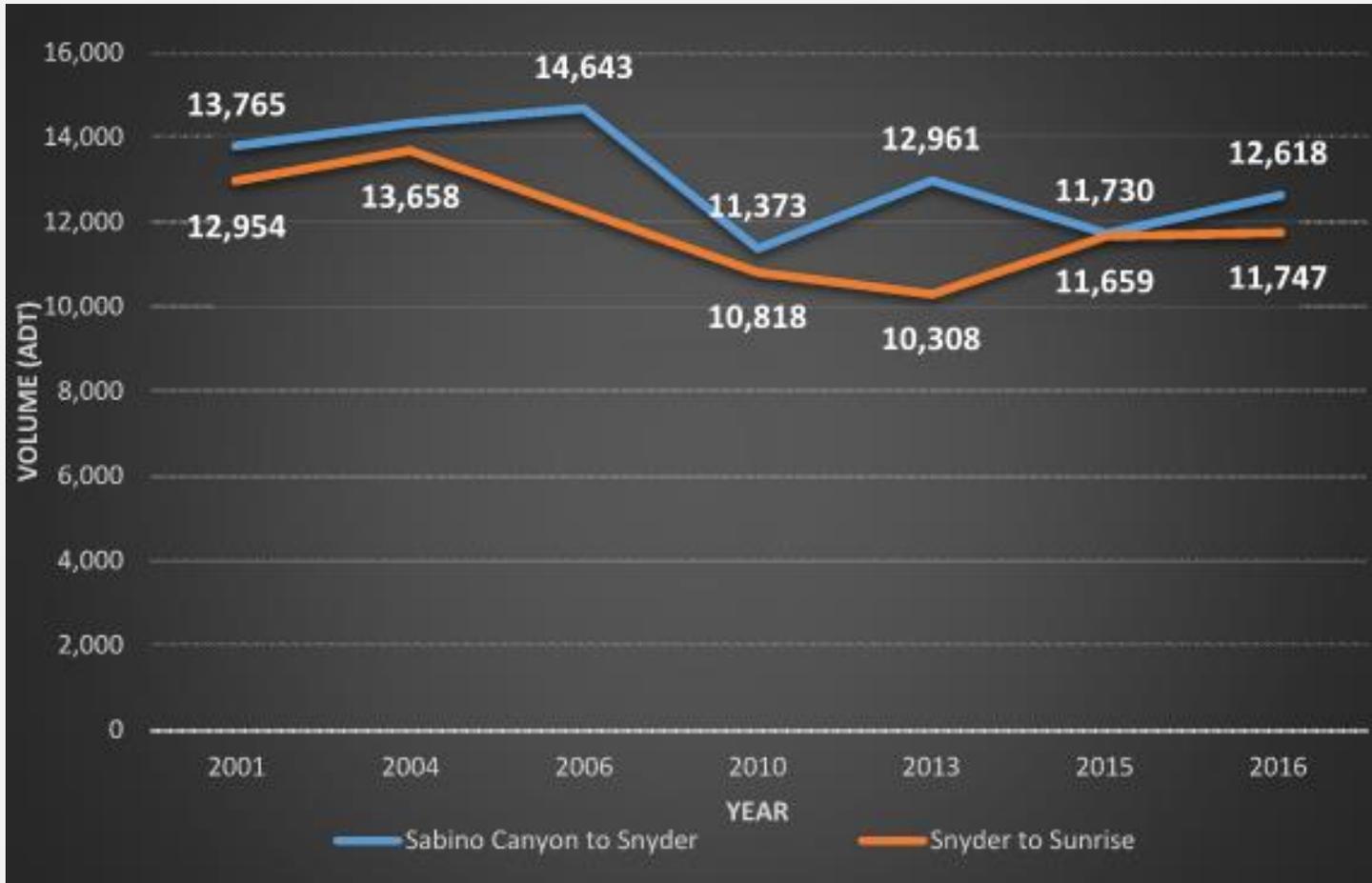
SIDEWALK ALTERNATIVES

- Alternative 2 – Hybrid
 - Costs between Alts 1 and 2
 - Places pedestrian facilities in areas of highest need



- Recommendation – Alternative 2
- Comments/Questions on Sidewalk Alternatives?

HISTORIC DAILY VOLUMES



EXISTING AND PROJECTED VOLUMES

Kolb Road Segment	Existing (2016) Volume (veh/day)	Projected 2040 Volume * (veh/day)
Sabino Canyon to Snyder	12,618	14,200
Snyder to Sunrise	11,747	13,200

* Based upon a projected 0.5% growth rate

MAJOR INTERSECTION CRASHES (09/2011-08/2016)

Intersection with Kolb Road	Angle	Left Turn	Sideswipe	Rear End	Single Vehicle	Head On	Bicycle/ Pedestrian	Other	Total
Sabino Canyon Road	2	0	1	3	4	0	1	0	11
Snyder Road	5	2	0	3	1	0	0	0	11
Sunrise Drive	3	6	1	14	2	0	0	0	26
Territory Drive	1	0	0	1	1	0	0	0	3
Total	11	8	2	21	8	0	1	0	51

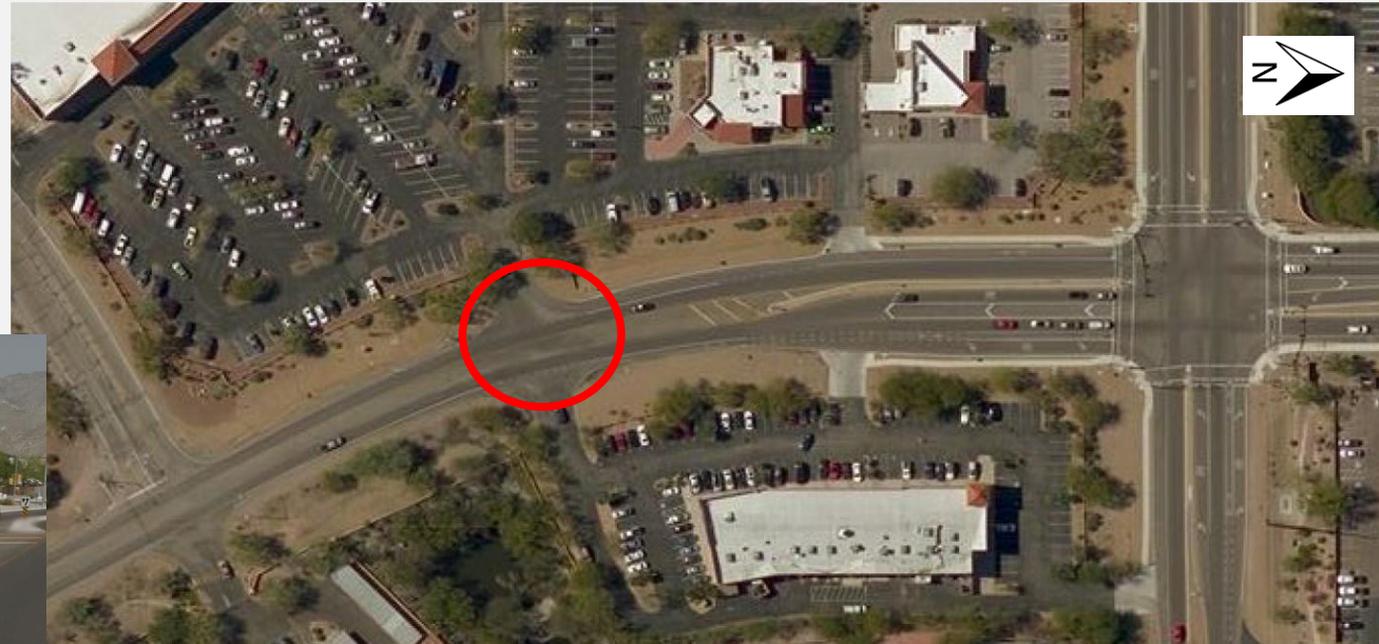
NON-INTERSECTION CRASHES (09/2011-08/2016)

Kolb Road Segment	Angle	Left Turn	Sideswipe	Rear End	Single Vehicle	Head On	Bicycle/ Pedestrian	Other	Total
Sabino Canyon Rd to Snyder Rd	0	0	5	5	10	1	1	1	23
Snyder Rd to Territory Dr	0	0	1	4	3	0	0	0	8
Territory Dr to Sunrise Dr	7	0	0	3	1	0	0	0	11
Total	7	0	6	12	14	1	1	1	42

- Most common crashes are rear-end, single vehicle and angle crashes
- Project (center turn lane, shoulders) will improve these issues

- Hot-spot – Kolb from Sunrise to Territory
 - Crash rate is 3X Average County rate (3.02 vs. 1.04 crashes/MVM)

- Crash History
 - 11 total crashes
 - 6 crashes involving drivers exiting Basha's shopping center – at least 4 making left turns
 - No apparent visibility issues
 - Busy driveway
 - Territory Dr - 1,700 veh/day
 - Basha's driveway – 4,175 veh/day



- *AASHTO Highway Safety Manual*
 - Provides tools to quantify effect of improvements on roadway safety
 - Based on facility type (two-lane undivided road, four-lane road with median, unsignalized intersection, signalized intersection, etc.)
 - Considers standard locations, site-specific crash history, and traffic volumes

Used HSM Analysis to evaluate safety of alternatives in year 2040



SUNRISE DRIVE TO TERRITORY DRIVE ALTERNATIVES

Alt 1 - Planned project improvements

- Widen/improve shoulders
- Add street lighting
- Separate bike lane and SB right turn lane
- All movements would be allowed as they are today

Location	2040 Crash Reduction (compared to no project)
Kolb Rd, Territory Dr. to Sunrise Dr.	18%
Kolb Rd/Territory Dr Intersection	0% (No change)



SUNRISE DRIVE TO TERRITORY DRIVE ALTERNATIVES

PSOMAS



- Alt 2 - Prohibit left turns to/from Basha's Driveway
 - Add raised median or porkchop at driveway
 - Extend raised median to Territory Drive
 - Left turn delays on Territory would increase to ~55s
 - Too close to signalize (<800')

Location	2040 Crash Reduction (compared to no project)
Kolb Rd, Territory Dr. to Sunrise Dr.	34%
Kolb Rd/Territory Dr Intersection	6% Increase in crashes



SUNRISE DRIVE TO TERRITORY DRIVE ALTERNATIVES

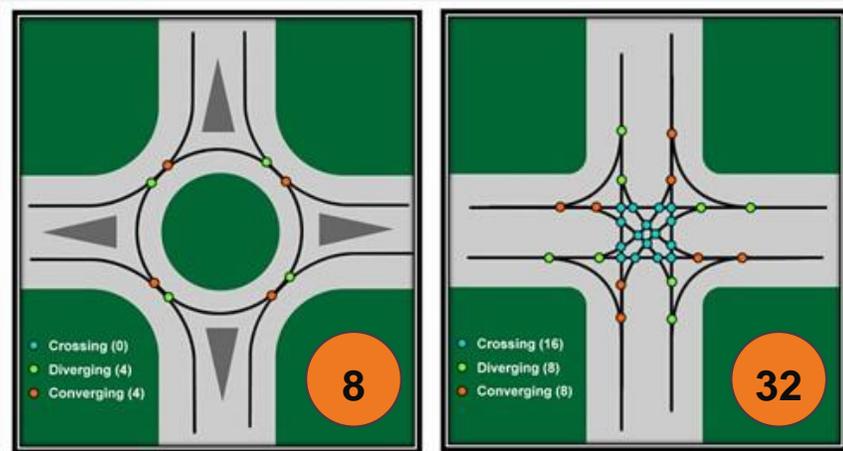
- Alt 3 – Prohibit left turns to/from Basha’s and build roundabout at Territory
 - Would include extending median to Territory Drive
 - Roundabout would be single lane
 - Delays for all movements at Kolb /Territory would be <10s

Location	2040 Crash Reduction (compared to no project)
Kolb Rd, Territory Dr. to Sunrise Dr.	34%
Kolb Rd/Territory Dr Intersection	33%

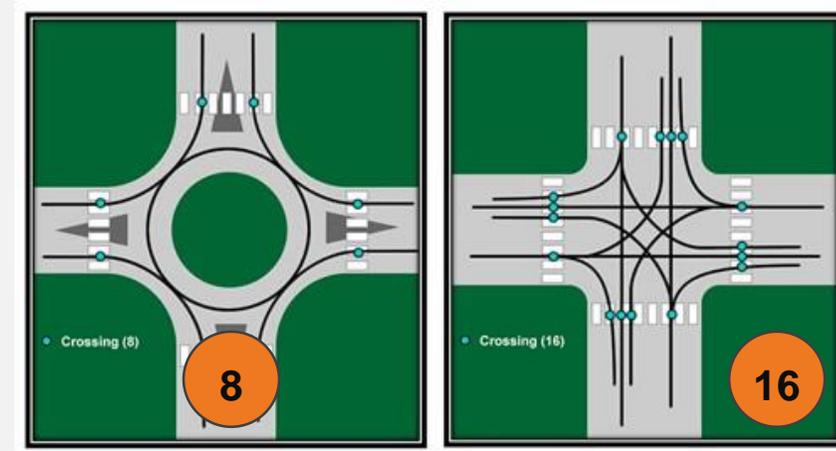


- Safety Principles
 - Lower travel speeds
 - Fewer conflict points
 - Reduction of delays – driver frustration

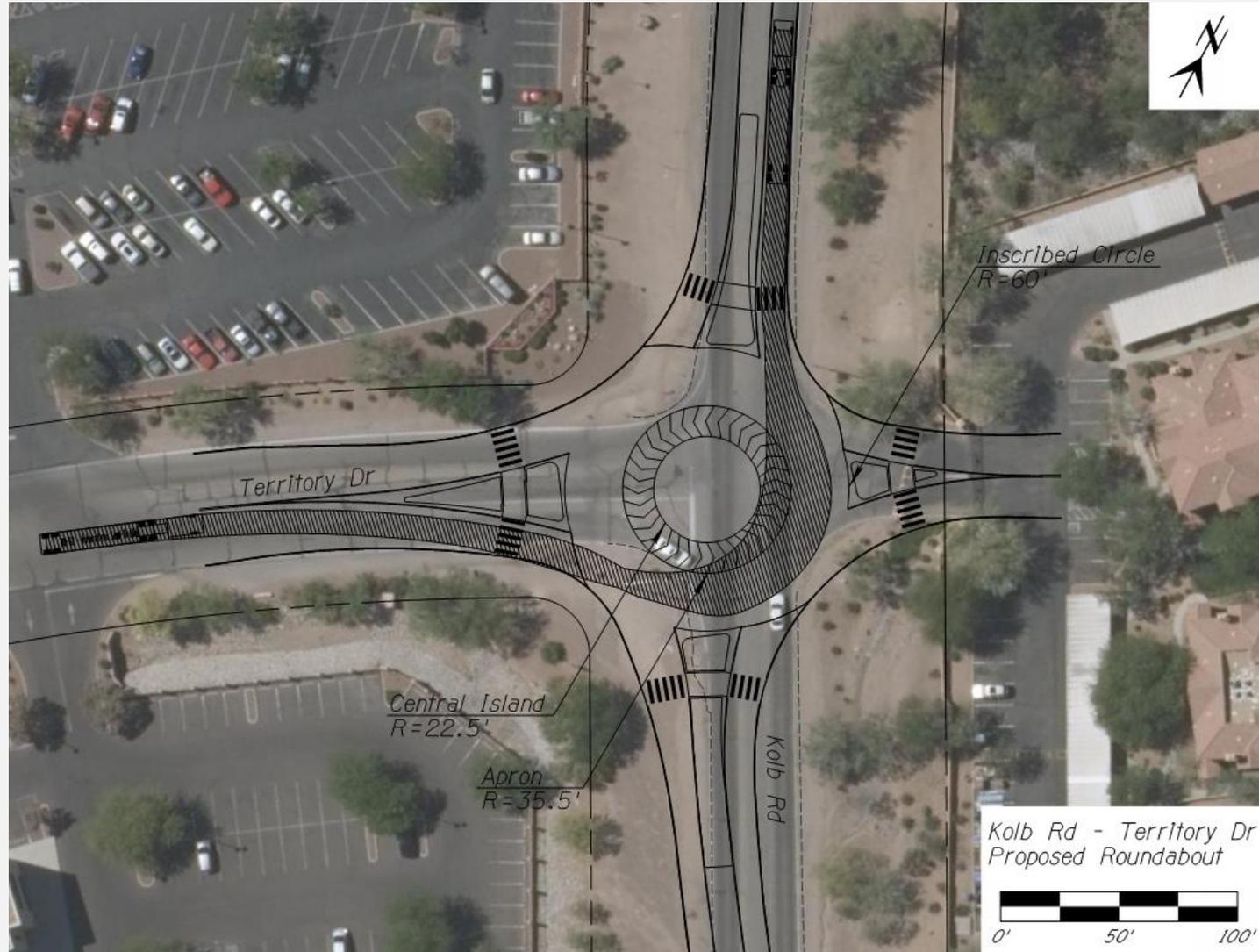
VEHICLE-VEHICLE CONFLICT POINTS



VEHICLE-PEDESTRIAN CONFLICT POINTS



- Typical concerns are construction and right-of-way costs
- In this case
 - No right-of-way needed
 - Low construction/maintenance costs



- Provides separation of commercial/residential areas
- Traffic Calming
- Art/character opportunity



SR 179 / Schnebly Hill (Sedona)

- Similar volumes
- Same footprint





Comments/Questions?