

# Bicyclists at Roundabouts: State of the Practice

TRB National Roundabout Conference

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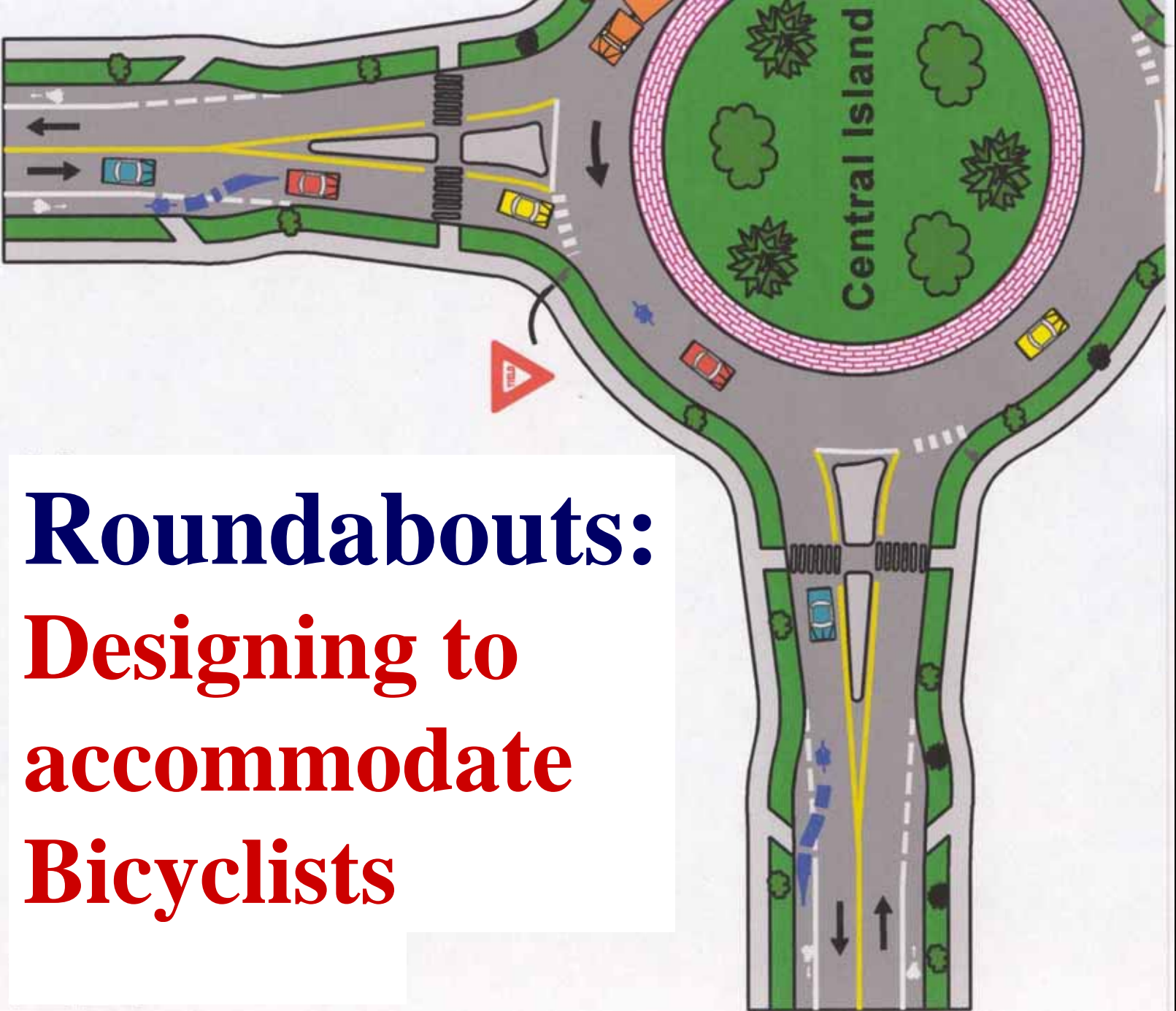
Special thanks for slide contributions:  
Michael Ronkin and John Ciccarelli

# Vail Cascade Bar – 11:50 PM

There once was a designer with clout  
who designed a two-lane roundabout

On its big debut  
a cyclist came through

He got in but he couldn't get out



**Roundabouts:  
Designing to  
accommodate  
Bicyclists**

# Bicycles at Roundabouts: Issues

- Single lane vs. Multilane
- Bike lane treatments at roundabouts
- How do “vehicular” cyclists traverse roundabouts?
- What if cyclists don't want to use the roundabout
- Details to get right

# Single lane vs. Multilane

	Single lane	Multilane
Circulating speed	Can be designed to be bike-compatible (12-20 mph)	Typically faster than bike speeds (20-30 mph)
Cyclist travel	In line with cars No lane changes	May be passed Must change lanes if making left turns

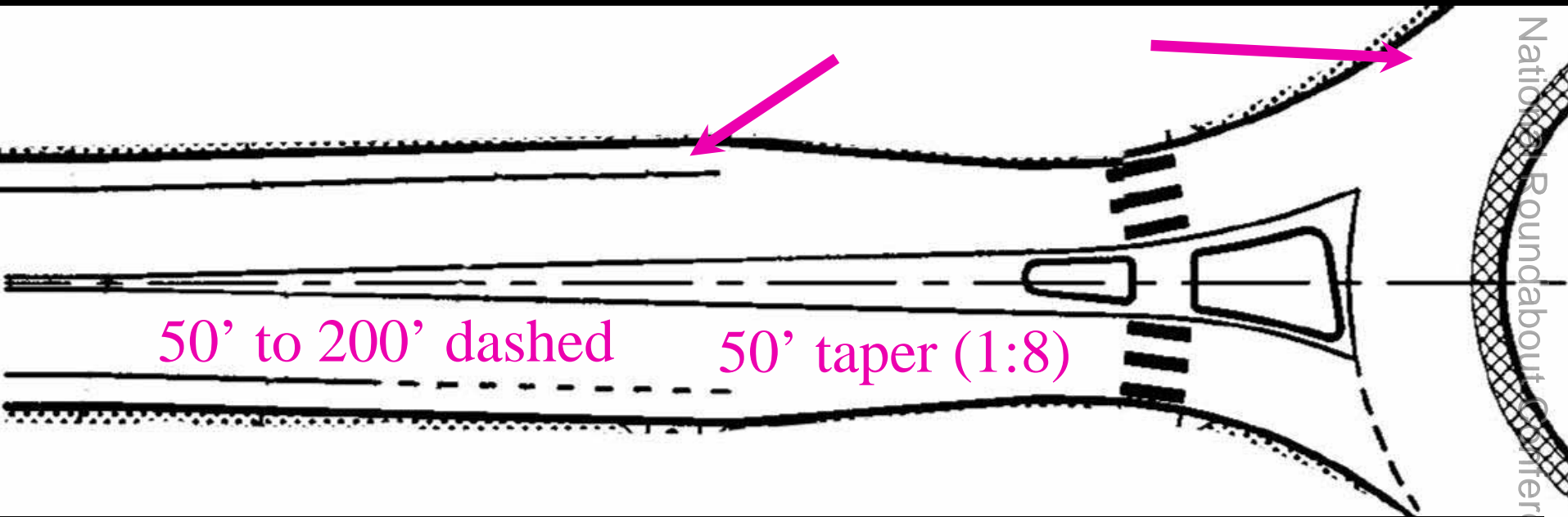
# Single lane: Bike-compatible speeds



# Multilane: Higher speeds, need to choose a lane



# Bike Lane Treatment at Roundabouts



- Drop bike lane on entry with appropriate taper and dashes, (indicates that merging is expected)
- Resume bike lane on exit, after crosswalk
- No bike lane on the circulatory roadway (would put through cyclist to right of exiting traffic)



# How do “Vehicular” Cyclists Traverse Roundabouts?



Entering single lane roundabout: “single up”



Entering single lane roundabout: “single up”



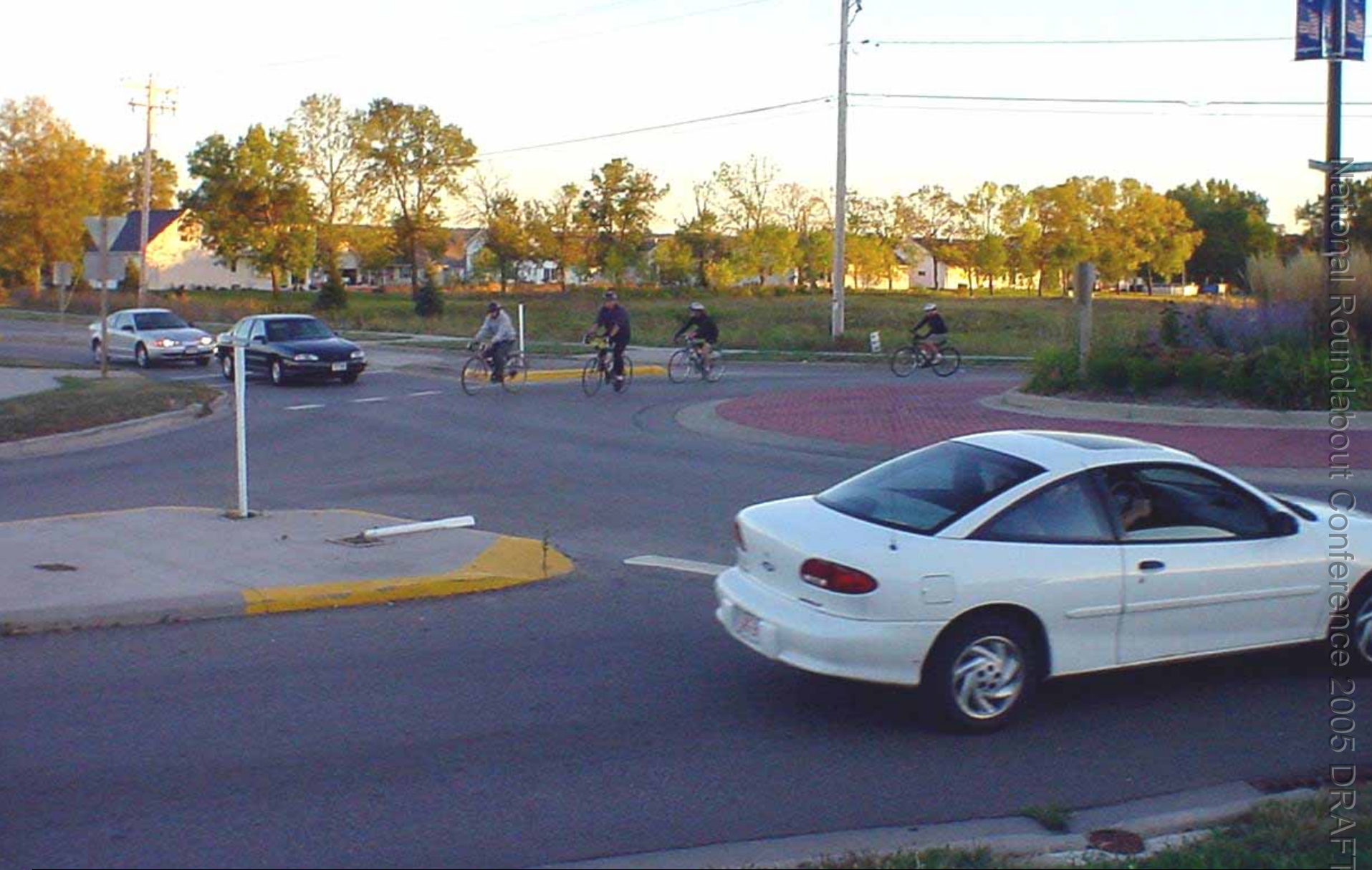
**Drop bike lane on entry, before crosswalk  
(indicates that merging is expected)**



Cyclist entering lined up with other vehicles



Circulating: “Take the lane” in single lane



Circulating: “Take the lane” in single lane



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Circulating: “Take the lane” in single lane





Circulating: “Take the lane” in single lane



Circulating: “Take the lane” in single lane



Circulating: “Take the lane” in single lane



Circulating: “Take the lane” in single lane



Circulating: “Take the lane” in single lane



Circulating: Taking the right lane



Circulating: Taking the shortest route



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No bike lane on the circulatory roadway





Cyclist still in the lane preparing to exit



Cyclist still in the lane on exit



Cyclist still in the lane on exit



Upon exiting, cyclist moves out of the travel lane



Upon exiting, cyclist moves out of the travel lane



Resume bike lane on exit, after crosswalk



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Skater takes the lane



Skater going the wrong way



# Videos of Cyclists Traversing Roundabouts





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**What if a cyclist doesn't want  
to enter the roundabout?**



Ramp can be provided



Using the crosswalk like a pedestrian





Using the splitter island like a pedestrian



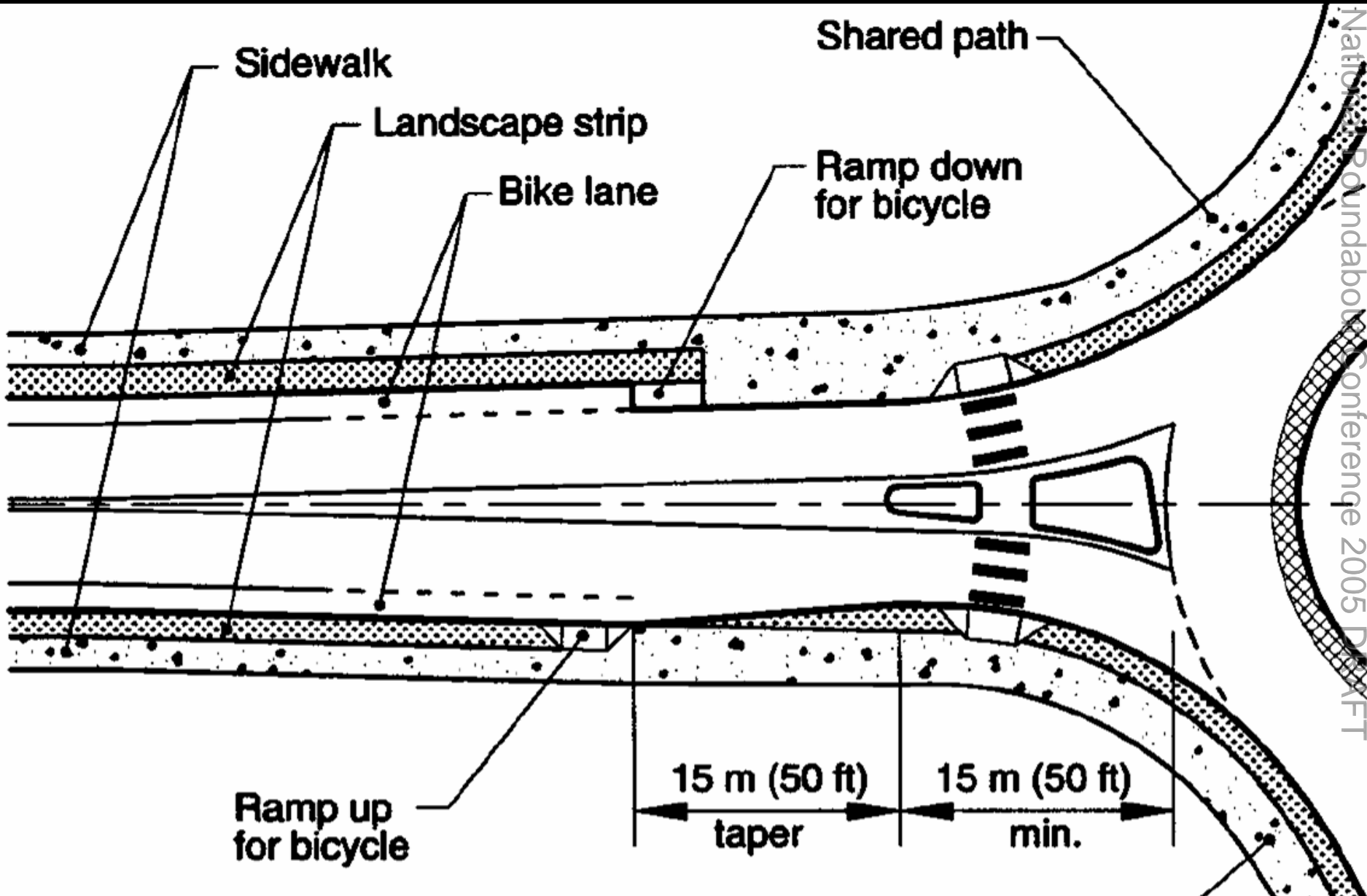
No detectable warning!

Ramp back to the bike lane

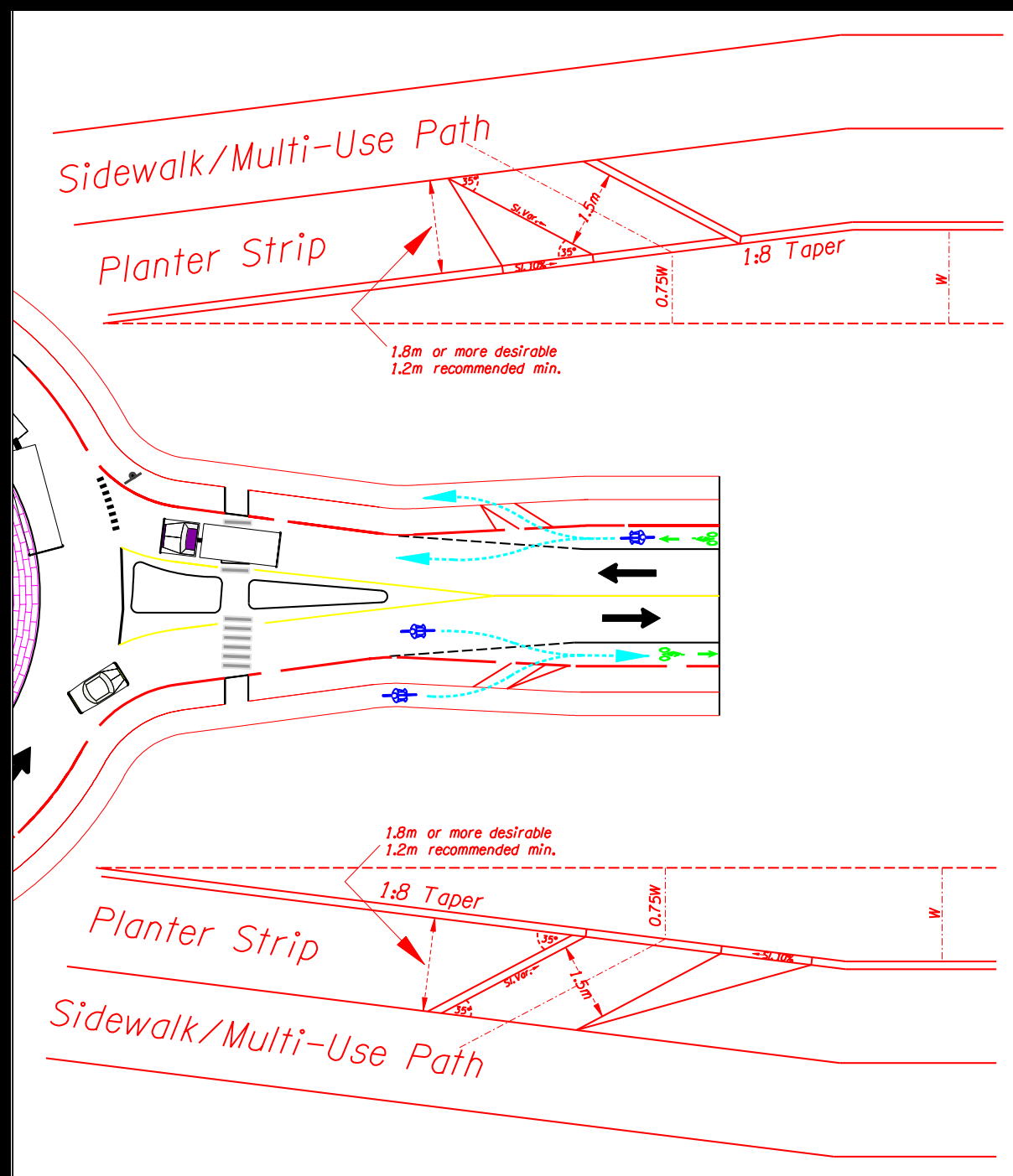


This cyclist went clockwise on the sidewalk is now transitioning from the sidewalk to the roadway

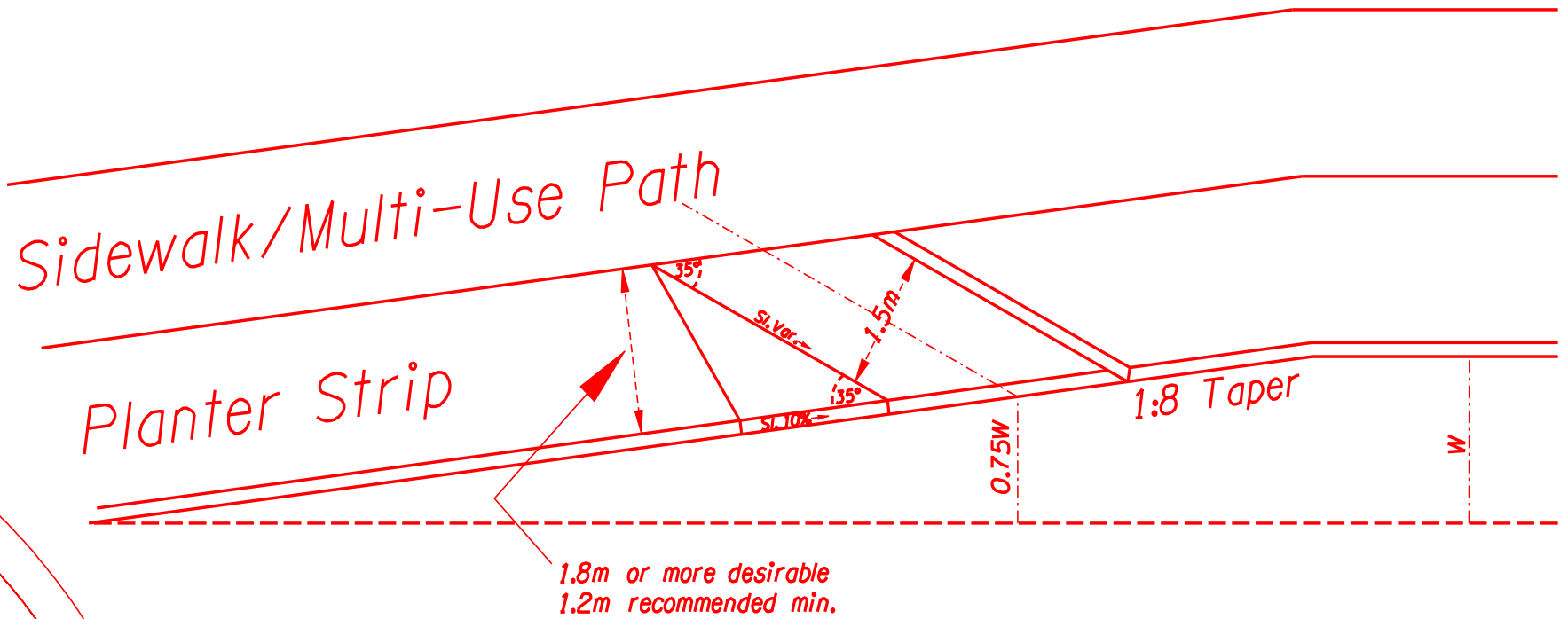
# Roundabout Guide Bike Ramp Detail



# Oregon DOT Bike Ramp Detail

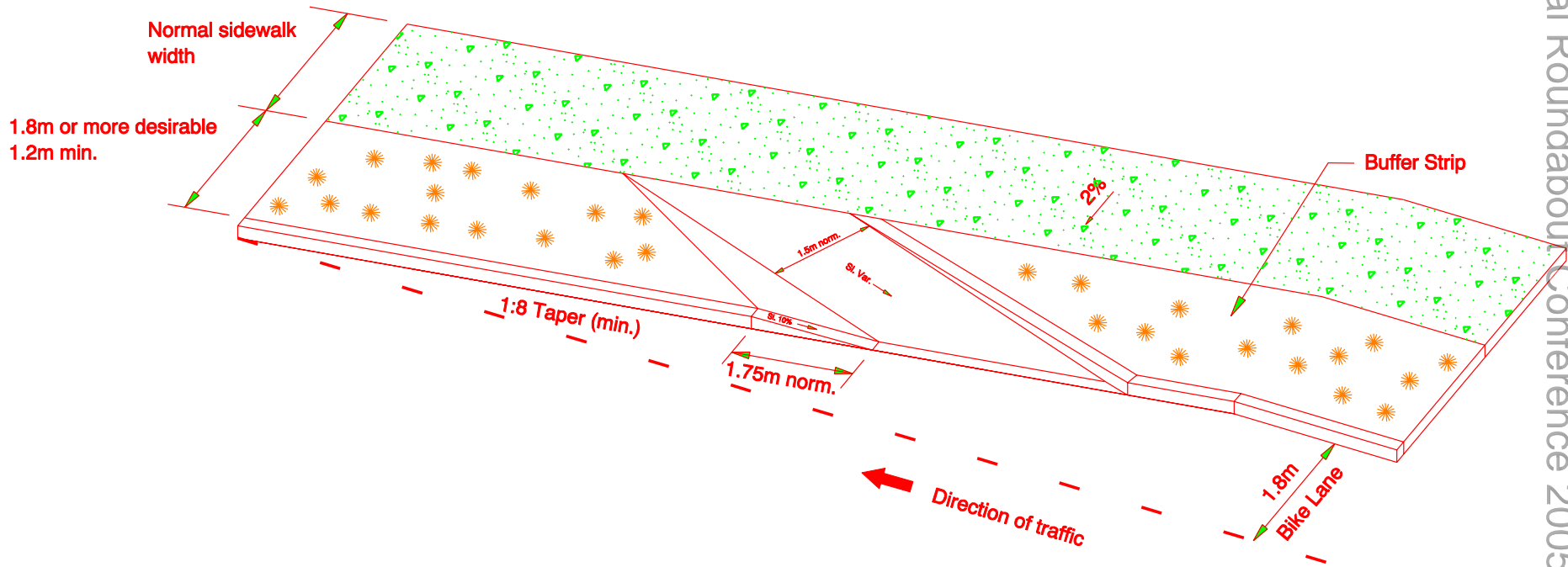


# Oregon DOT Bike Ramp Detail



35° angle; 1:8 taper, located after taper starts

# Oregon DOT Bike Ramp Detail

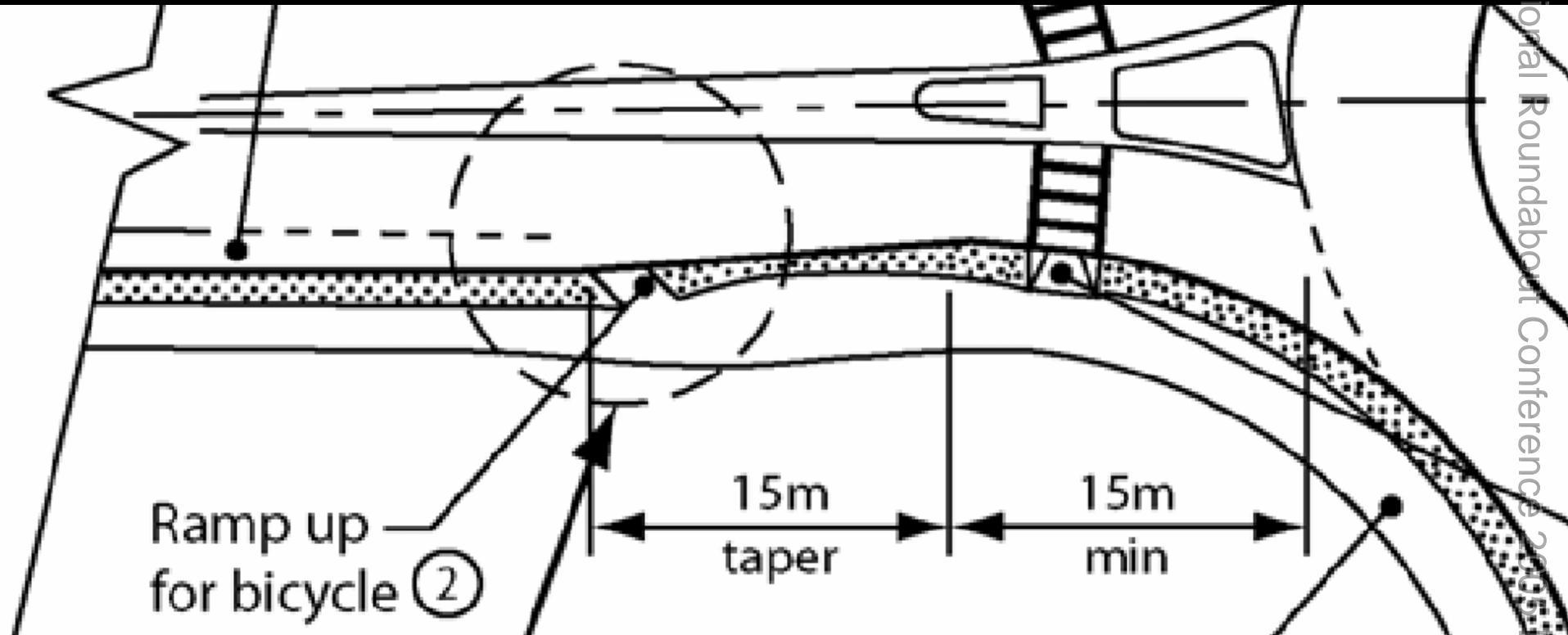


# Photo of Ramp With ODOT Design



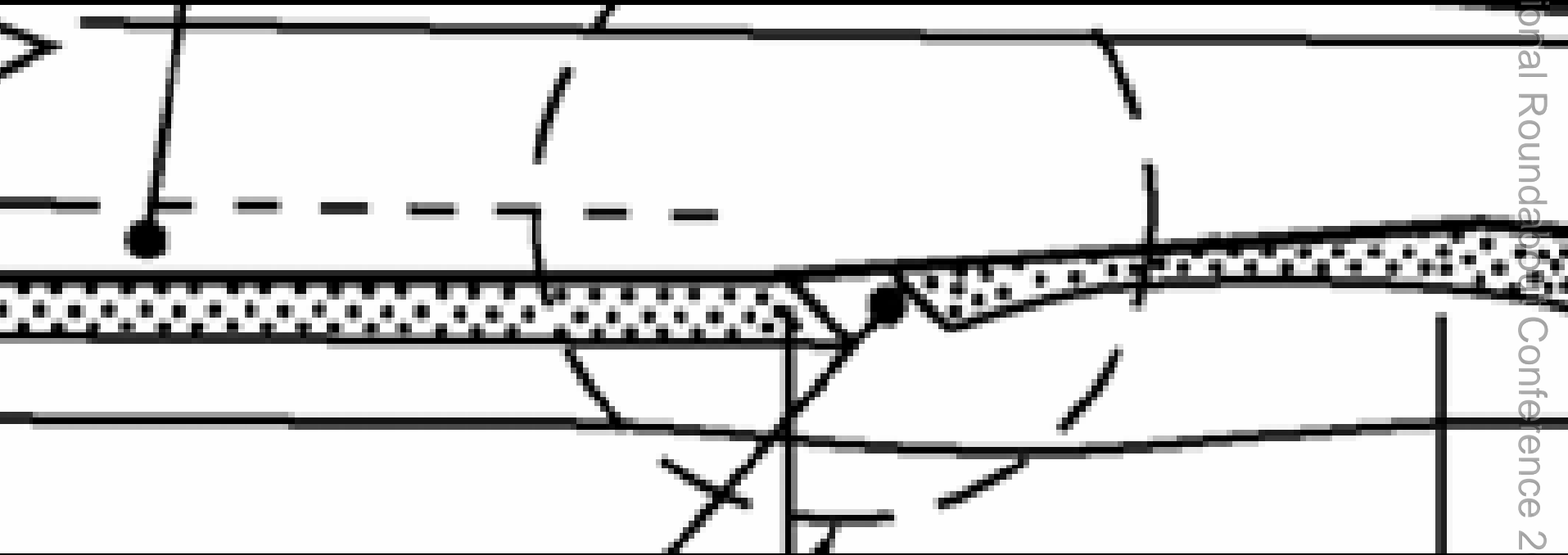


# CalTrans Bike Ramp Detail

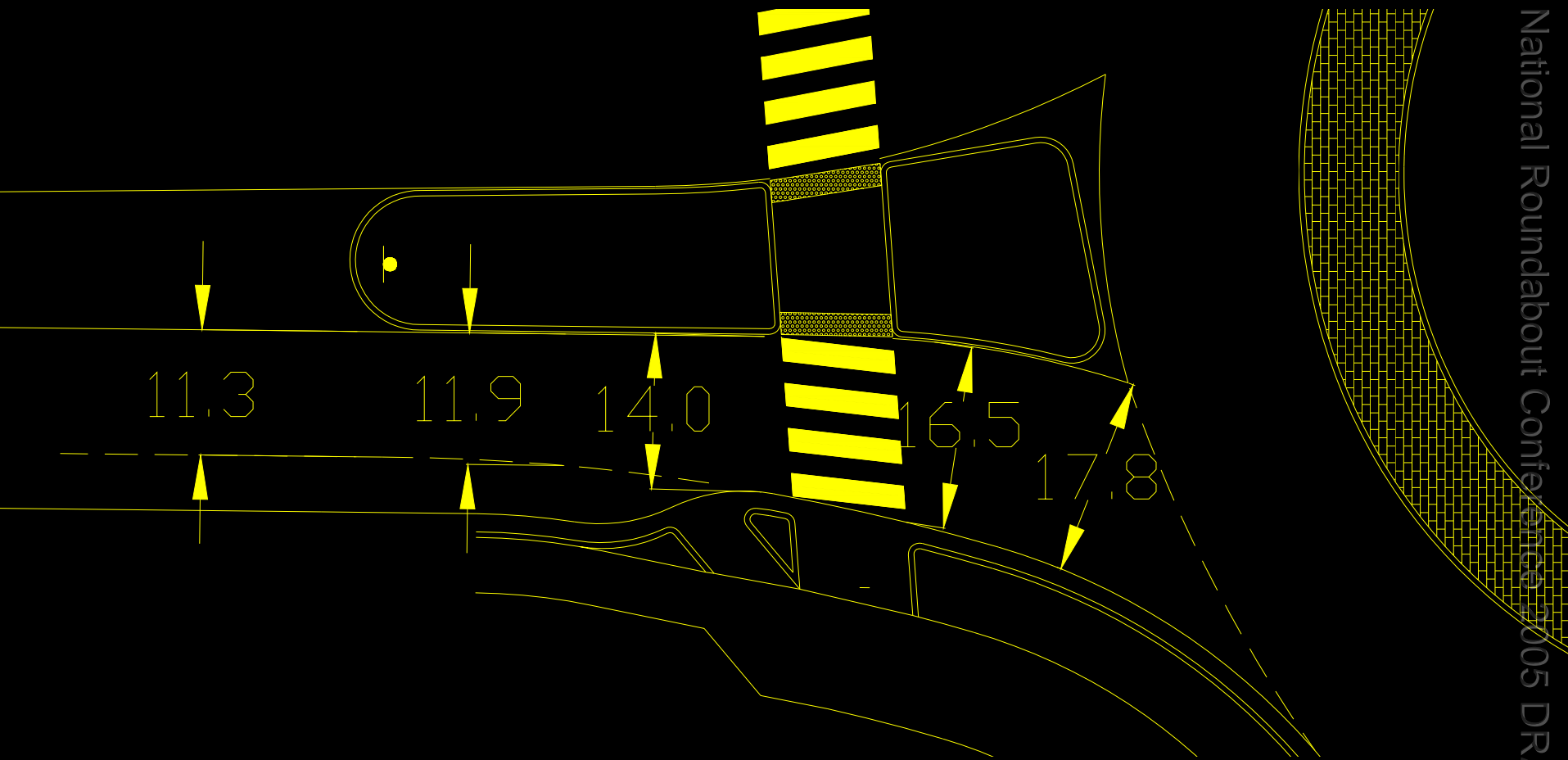


45° angle; 15m (50') taper, located at angle point

# CalTrans Bike Ramp Detail



# Wallwork Bike Ramp Design



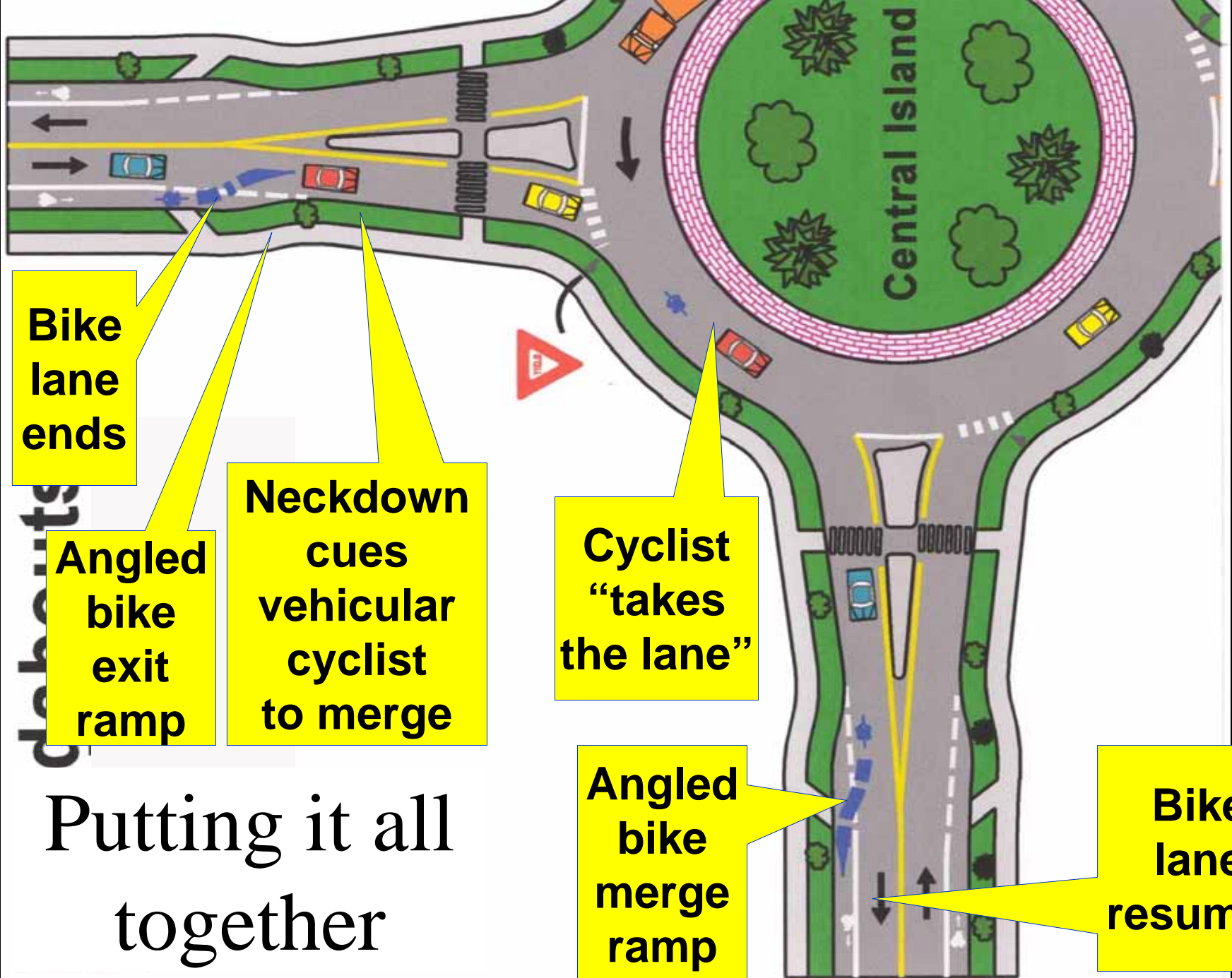
45° angle; short taper, located in taper





# Bike Ramp Issues

- Design to give bikes the option (left or right)
  - Dash for 50' to 200'
  - Bike ramp not in line with bike lane
- Use appropriate taper –  $\sim 1:8$  or  $\sim 50'$  ( $WS^2/60$ )
- Proved angled ramps (about  $45^\circ$ )
- Design to limit confusion for pedestrians with visual impairments (angle, distance, no DW)
- When should bike ramps be used?
  - May not be needed on slow-speed, single-lane
  - More important on multi-lane roundabouts



**Bike lane ends**

**Angled bike exit ramp**

**Neckdown cues vehicular cyclist to merge**

**Cyclist "takes the lane"**

**Angled bike merge ramp**

**Bike lane resumes**

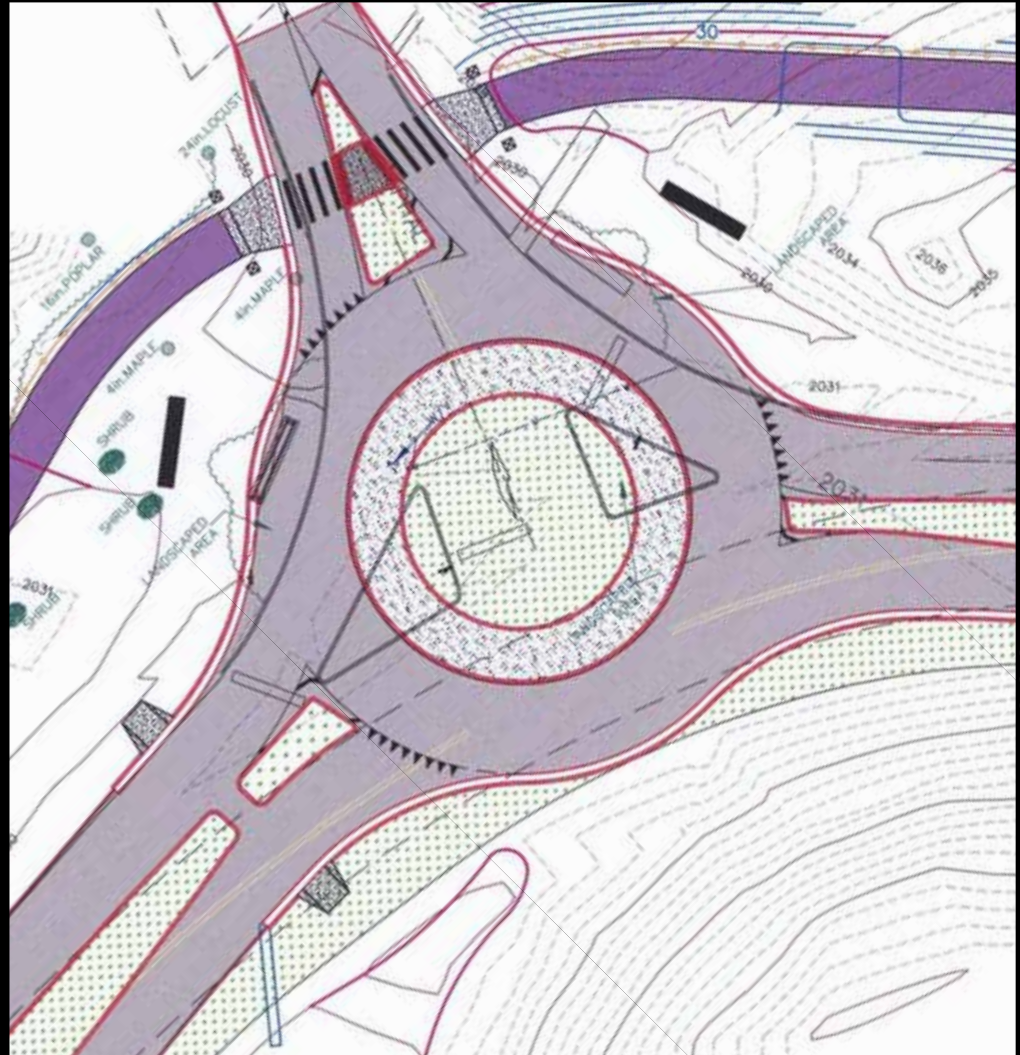
**Putting it all together**



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# Weaver Blvd @ UNC-Asheville Main Entrance





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# Questions?



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