

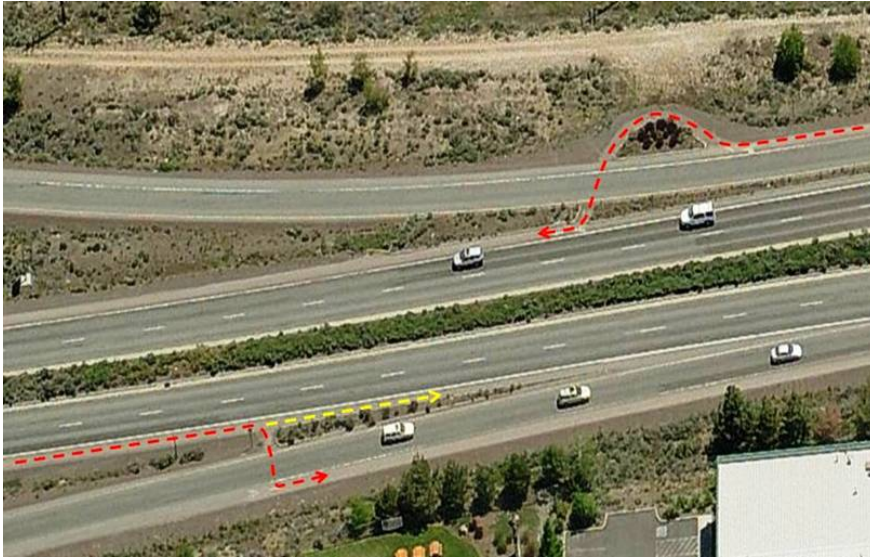
BAC Technical Subcommittee 2014-02-27 – Meeting Summary

1. 360 Ramps.

- Intro including history of fatal and serious crashes involving cyclists and numerous requests for improvements over many years. Current strategies for crossing these ramps vary by cyclist but often rely on cyclist placement within the motor vehicle lanes to increase visibility. These strategies are not known by all cyclists and many cyclists are not comfortable with the strategy. Recognize the need to design for two different types of cyclists - confident cyclists trying to avoid slowing or stopping ('trying to keep their heart rate up') and less confident cyclists who would be willing to slow or stop for a lower risk ramp crossing. Infrastructure improvements should provide an intuitive low risk option without precluding the strategies currently used by some cyclists which may be faster and more direct. Image of 360 at 2222 shown below.



- Discussion of recommended Alternative A. Image below is existing example from Bend, OR. Ramp crossings provide a shelter area for cyclists to wait, if necessary, for a gap in traffic without being exposed and provides better sight lines (cyclists don't have to look 180 deg over shoulder to see traffic). Additional advantage is cyclists can cross off-ramp after vehicles are committed to a direction (staying on or getting off) eliminating concern of car making last minute decision to exit; similar benefit for on-ramp, reduced concern of motor vehicle attempting merge across the solid white lines. This option still allows cyclists to skip the shelter areas if traffic is light or they simply do not want to use them.



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- General agreement that the off-ramp treatment would be a huge improvement. Primary benefit of the on-ramp treatment is the immediate presence of a shoulder at whatever point a cyclist chooses to cross the ramp (not currently present on 360). Agreement that the geometry shown in this example is too sharp and should be designed to allow two abreast riding. Recognition that not all cyclists will like or use this option as they prefer the faster, more direct route, but this option would provide an alternative for those riders not comfortable with the risks. Attendees believe majority of cyclists would use this treatment, particularly if traffic is heavy.
- Discussion of Alt B. Example image below also from Bend, OR. Similar to Alt A, but without the shelter areas (maybe due to right of way or funding constraints). The main benefit here is the continuous presence of shoulders allowing cyclist more time to choose opportunity to cross traffic (and allowing cyclist to wait until the distance they have to cross is significantly shorter than current conditions). Note that these shoulder improvements are a required first step in order to implement Alt A.



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- General agreement that Alt B would be an improvement, but not as preferable as Alt A. Cyclist is not protected, other than by paint, if have to stop and wait for gap to cross exit ramp. In general, attendees believe there should not be locations where cyclists might ride that do not have shoulders.
- Request to consider Alternate C, similar in concept to image below (Stassney at S 1st), possibly including green pavement markings, used in many locations in Austin, to provide clear guidance to cyclists about preferred crossing strategy and to indicate to drivers where cyclists are most likely to cross.



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- Discussion of the significant differences between this example and the 360 ramps follows. This image shows much lower speed road and ‘exiting’ vehicles are slowing down to make a 90 degree right turn. On 360 drivers are travelling significantly faster with low angle deflections on high speed ramps. Alt C implies cyclists have the right of way and cars should yield. Note that in general COA prefers giving priority and right of

way to pedestrians, then cyclists, and then motor vehicles and we promote that concept as far as we feel comfortable that it is a reasonable requirement. With ~65mph traffic, it is not reasonable to assume that any amount of pavement markings will achieve reliable yielding behavior to cyclists traveling ~20mph (or much less on many of the uphill 360 ramps). Also recognize that in these situations if motor vehicles do slow down to yield to cyclists they will be slowing (and in some cases practically stopping) in front of other 65mph traffic which may contribute to traffic back-ups and crashes. These ramps are specifically designed to remove exiting vehicles from high-speed traffic before they have to slow down (and conversely, getting vehicles up to speed before they enter the high speed traffic). Discuss extreme example: pedestrian should not step in front of high-speed train and expect it to yield, this situation is less extreme but still not reasonable to expect these drivers to consistently yield. Given the consequences of applying Alt C on the 360 ramps (occasional non-yielding behavior could result in more fatalities), COA staff feels this design is not reliable enough in this situation and recommends a design with an option where cyclists can yield and choose appropriate crossing opportunity. Cyclists familiar with 360 note that not all ramp situations are as extreme as those at 2222 or 2244, some are lower speed merges near a signal (Las Cimas). General agreement that improvements should be tailored to each ramp and there may be situations on 360 where Alt C is appropriate.

- Discuss option to pilot Alternate A – pick particularly bad ramp, install, and then evaluate. Meanwhile, work to implement Alt B (necessary for Alt A) through striping changes. Group recommends the exit ramps on the north and south sides of 2222 for pilot. Entrance ramps generally not as bad, just having a shoulder would be huge improvement. COA to continue working with TxDOT and assist in field measurements/engineering to determine feasibility of implementing Alt A or Alt B.
- Also briefly discuss 360 from Lamar to Mopac. Recommendations included in discussion item 2.

2. TxDOT Priorities List

- Intro – TxDOT has requested list of priorities for bicycle improvements on TxDOT right of way. Divide list into improvements that can be made solely through striping changes (more easily implemented) and improvements that will require construction. Also divide list into High priority and Medium priority. Note that we're not trying to recreate the bicycle plan recommendations, rather focus on particularly important barriers and improvements that can be easily implemented through striping changes.
- Start from COA draft list and map. Description of map and symbology. Note that active projects (e.g. crossings of Mopac being addressed by the Mopac project) are generally not included.
- Multiple additions suggested by attendees, discussed, and included in list.
- Discussion of priorities (High vs Med). Read through current list and assign priority to all. Recommend emphasizing to TxDOT that even Med priority should happen if opportunities are present, but if making decision based on limited funding choose high priority first.
- Tommy Eden recommends taking list to BAC in support of resolution. David Orr seconds.