

Local Road Safety Training – March 17, 2021

Chat Discussion

00:31:22 Steve Pyburn: FHWA Proven Safety Countermeasures
<https://safety.fhwa.dot.gov/provencountermeasures/>

00:31:42 Steve Pyburn: FHWA Safety website
<https://safety.fhwa.dot.gov/>

00:37:57 Devin Ciriaco: Los Angeles, CA - Kimley-Horn

00:38:27 katherine rice: City of Los Angeles, Vision Zero

00:38:31 Pratyush Bhatia: city of Dublin, Transportation and Traffic

00:39:20 Franci Levine-Grater: nonprofit, Los Angeles Neighborhood Initiative (LANI)

00:39:26 Susie Rico-Vasquez: Health Educator with Fresno County Department of Public Health, CalFresh Healthy Living & State Physical Activity and Nutrition programs.

00:45:30 Alan Ta: Does 55% crash reduction for ped hybrid beacon include other lighted devices e.g. RRFB? Or only ped hybrid beacons?

00:48:11 Maria Bhatti: The 55% crash reduction is only for PHB. The RRFBs can reduce pedestrian crashes by 47%.

00:56:42 Tracy Coan: Safe Systems Approach Video
<https://www.youtube.com/watch?v=MigxAs0KjBw>

01:01:54 Steve Pyburn: Preliminary data shows traffic fatalities are up sharply in 2020 :(Fatality rates may see the highest increase since 1924.

01:04:58 Steve Pyburn: Impacts to peds at various vehicle speeds also apply to cyclists.

01:05:39 Steve Pyburn: There is a direct correlation between higher speeds and higher deaths. A survey in Sacramento found the average speed on residential streets was over 35 mph!

01:06:46 Jonathan Yee: Is there a similar graphic containing 15mph and 25mph? If so, can you share? I'd like to use for 15 mph school speed limits. Thank you

01:08:10 Soutchai Vongsa: Is LPI widely used in California?

01:08:11 Andrew Easterling: Is there a warrant for LPI or a standard condition that could be used for justifying the installation?

01:10:18 Steve Pyburn: LPI is used in a number of locations. I know the City of Sacramento has been using them for years, also used in South Lake Tahoe.

01:11:38 Steve Pyburn: There have only been 8 known pedestrian and bicycle fatalities at all roundabouts in the US since 1990!

01:12:04 Garland Wong: I think there continues to be a perception that roundabouts are less safe for pedestrians and bikes.

01:13:15 Hillary Isebrands: Here is a link to an FHWA informational video on LPIs with some additional information. <https://www.youtube.com/watch?v=BWzUkpgngGo>

01:13:29 Hillary Isebrands: FHWA's Handbook for Designing Roadways for the Aging Population recommends the use of the LPI at intersections with high turning vehicle volumes.

01:14:03 Steve Pyburn: Not likely to be warrants for LPI, but here is some information on where to use them. Use LPIs at intersections where heavy turning traffic comes into conflict with crossing pedestrians during the permissive phase of the signal cycle. LPIs are typically applied where both pedestrian volumes and turning volumes are high enough to warrant an additional dedicated interval for pedestrian-only traffic.
<https://nacto.org/publication/urban-street-design-guide/intersection-design-elements/traffic-signals/leading-pedestrian-interval/>

Local Road Safety Training – March 17, 2021

Chat Discussion

- 01:16:11 michael roberts: Does the data indicate the non-intersection fatalities are crossing related? Are uncontrolled crossing locations the same as non-intersection locations?
- 01:16:18 Steve Pyburn: The increase in bike use is likely a contributing factor, along with higher vehicle speeds. E-bikes allow people to ride faster, and that may lead to some cyclists getting into situations they can't control.
- 01:17:09 Steve Pyburn: There are ped crossing conflicts at roundabouts. However, at most roundabouts, the peds only have to look one direction at a time to cross from the side to the splitter island, and while crossing from the splitter island to the side. In addition, vehicles are travelling much slower coming out of the roundabout and have the opportunity to see and stop for peds.
- 01:18:48 Ken Kochevar: Vongsa, Caltrans has institutionalized LPIs. Shortly they will be coming out with a memo that provides guidance on the installation of them.
- 01:19:42 Steve Pyburn: Of the 8 bike and ped fatals at roundabouts I mentioned earlier, only 5 were peds in 30 years. That is remarkable.
- 01:21:07 Andrew Easterling: Thank you. I have implemented LPIs at several intersections with high right turn volumes in my city. Now I've received questions from the public why it isn't installed at other locations, and I don't have a great response without policies to point to. Without warrants or standard procedures it is difficult to explain. My other concern is liability, if there is an injury in another intersection without LPI, the personal injury lawyers will ask why different standard are being applied. Really hoping the CAMUTCD can be elaborate on this in the next update.
- 01:21:31 Rob Bregoff: David Chiu introduced AB 550 to allow cities in CA to install speed cameras to control driver speed.
- 01:21:33 Rob Bregoff:
https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB550
- 01:22:28 Steve Pyburn: You can consider uncontrolled and mid-block to be the same thing.
- 01:23:28 Scott Collins: For PHB, MUTCD calls out to look at the # of Peds crossing at that location during a specified time frame. the countermeasure table you showed earlier uses speed and volumes only. Should the # of peds crossing be taken into account when designing for a PHB
- 01:25:20 Steve Pyburn: I would advise developing numeric criteria and guidelines for guiding the use of LPIs then prioritizing locations based on that criteria,. Your jurisdiction's attorney may have additional advice to lower liability.
- 01:26:29 Steve Pyburn: Yes, ped volumes, as well as ped types, are an important consideration. Drivers need to see the reason they are stopped.
- 01:26:31 Soutchai Vongsa: Without CA-MUTCD guidance/standards, LPI can create a liability issue for agencies.
- 01:27:06 James Winslow: Fig. 54 has a better sign for PHBs to use. Clearer communication and education to drivers on how to use a PHB that the one show on the slide (which is basic). Stop when flashing, then proceed when clear
<https://www.fhwa.dot.gov/publications/research/safety/16040/006.cfm>
Also at <https://www.ci.neenah.wi.us/departments/public-works/traffic/traffic-signals/>
- 01:27:17 Steve Pyburn: Rob, thanks for mentioning the speed cameras.
- 01:27:39 James Winslow: here is a better quality image
https://austintexas.gov/sites/default/files/images/ped_hyb_signal.JPG
Education is key we have found.

Local Road Safety Training – March 17, 2021

Chat Discussion

01:28:54 Steve Pyburn: Bike/ped tunnels can be short to get people around short obstacles.

This is the Mouse Hole in Truckee. <https://www.google.com/maps/@39.317342,-120.2052229,3a,75y,322.36h,93.75t/data=!3m6!1e1!3m4!1sUFn1XfNRLjkgzVM1nlh7FA!2e0!7i16384!8i8192?hl=en>

01:29:43 Steve Pyburn: Another case study. La Jolla Boulevard case study for road diet that included roundabouts to reduce delay and improve safety.

<https://www.pps.org/article/road-diet-la-jolla-a-jewel-of-a-street>

01:32:08 Steve Pyburn: Bike Safety Links

FHWA Proven Safety Countermeasures

<https://safety.fhwa.dot.gov/provencountermeasures/>

NHTSA Data Visualization Tool (May take some time to load)

https://explore.dot.gov/views/DV_FARS_PD/Home?:iid=1&:isGuestRedirectFromVizportal=y&:embed=y

Safe Transportation for Every Pedestrian (STEP)

https://safety.fhwa.dot.gov/ped_bike/step/resources/

STEP Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations

https://safety.fhwa.dot.gov/ped_bike/step/docs/STEP_Guide_for_Improving_Ped_Safety_at_Unsig_Loc_3-2018_07_17-508compliant.pdf

Bikeway Selection Guide

https://safety.fhwa.dot.gov/ped_bike/tools_solve/docs/fhwasa18077.pdf

Road Diet Informational Guide

https://safety.fhwa.dot.gov/road_diets/guidance/info_guide/

01:32:36 Steve Pyburn: Additional Links

01:32:38 Steve Pyburn: Crash Factors in Intersection-Related Crashes: An on-Scene Perspective

<https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/811366>

FHWA Raised Crosswalks

https://safety.fhwa.dot.gov/ped_bike/step/docs/techSheet_RaisedCW2018.pdf

FHWA Safety website

<https://safety.fhwa.dot.gov/>

01:39:51 Rob Bregoff: SF has been using LPI for years without negative litigation, that I know of.

01:40:10 Diego Corvera: Additional Bike Safety Resource: <https://rethinkingstreets.com/>

01:41:18 Alan Ta: Average cost for PHB in bay area?

01:43:12 Ryan Murray: With cities implementing more bike/ped countermeasures over the last ten years, do we know why severe/fatal collisions are still on the rise? More cyclists/peds on the road in general?

01:54:49 Steve Pyburn: The MUTCD webinars have a registration limit, and the capacity was doubled a day or two ago. Sign up quick! The webinars will also be recorded.

01:58:20 Hillary Isebrands: Link to MUTCD webinars -

<https://mutcd.fhwa.dot.gov/index.htm>

02:03:21 Scott Collins: The City of Modesto has installed the High Friction Surface treatment at two locations within the City. Three years prior we had 4-6 accidents a year. The year after we had 0 accidents!

Local Road Safety Training – March 17, 2021

Chat Discussion

- 02:04:23 Ken Kochevar: Thanks Scott. Were these locations at intersections, curves or someplace else?
- 02:07:43 Scott Collins: Both locations were sharp curves
- 02:20:30 Andrew Easterling: Is there any guidance for clear zones in urban areas? We are receiving a lot of request for parklets, and outdoor dining, or noticing businesses are installing themselves without consulting with the City. Are there clear zone standards for more urban/suburban settings?
- 02:24:13 Ken Kochevar: Andrew, I believe there is some guidance in the Roadside Safety Design course. I will look in my notes to see if I can find anything. I would say you want to minimize any trees greater than 4" as well as poles or other obstacles as far as possible away from the curb and gutter. Stay tuned...
- 02:25:09 Michael Britton: Have there been any considerations or study made for Rolling Barriers, as used in Korea?
- 02:26:30 Ryan Murray: Space is the biggest factor in urban areas and it would seem that narrower roadways, slower vehicle speeds (20mph) and safer bike/ped protected infrastructure is favored over expanding clear zones of shoulders.
- 02:27:24 Andrew Easterling: Thank you, I know AASHTO requires 18" from face of curb and that's the standard we typically apply. However we are starting to see outdoor dining on the encroaching into the on street parking areas with no curb and very little separation from edge of travel way
- 02:27:31 Tracy Coan: Local/Rural/Tribal Resources VIRTUAL Booth
https://safety.fhwa.dot.gov/local_rural/tribal/Local_Rural_Local_Road_Virtual_Trade_Show.pdf
- 02:29:04 Tracy Coan: Roadway Departure Safety Webpage:
https://safety.fhwa.dot.gov/roadway_dept
- 02:32:50 Diego Corvera: <https://wonderfulengineering.com/new-rolling-barrier-system-could-save-many-lives/>
- 02:32:50 Ken Eichstaedt: <https://interestingengineering.com/this-new-korean-rolling-barrier-system-could-save-millions-of-lives>
- 02:32:56 Michael Britton: see attached - <https://interestingengineering.com/this-new-korean-rolling-barrier-system-could-save-millions-of-lives>
- 02:41:37 Hillary Isebrands: Link to PENNDOT Amends Rumble Strip Guidelines To Improve Bicycle Compatibility - <https://bicyclecoalition.org/penndot-amends-rumble-strip-guidelines-to-improve-bicycle-compatibility/>
- 02:50:44 Ken Kochevar: Another countermeasure to consider when discussing edge lines is to increase the width from 4" to 6". Recent studies show when this is done on a 2 - lane rural road, there can be up to a 17.5% crash reduction factor for all crashes and up to a 36.5% crash reduction factor for all F and I crashes as per Park CMF ID 4736 and 4737.
- 02:56:12 Steve Pyburn: All that kinetic energy has to go somewhere in a crash. People are not good at absorbing energy!
- 02:57:32 James Winslow: <https://www.youtube.com/watch?v=6B8gmCpMXMw>

Local Road Safety Training – March 17, 2021

Chat Discussion

02:58:29 Erin Haagenon: One of our Board of Supervisors said at a public meeting that Roundabouts are a "Caltrans Socialist Plot". How do we change public perception of these safety features? has anyone been successful.

02:59:26 Susie Rico-Vasquez: our local council voted against roundabouts too.

03:00:22 Lisha Mai: Has there been data regarding effectiveness Flashing Yellow Arrow signals?

03:00:25 Lisa Dock: You have to educate them on the conflict points. Our council was resistant but it takes time for people to get used to it. Not all are convinced its the best, but they cannot deny the safety enhancement

03:01:42 Susie Rico-Vasquez: because there is a lot of ag semi ad trucks at hwy99 and merced street entrances and exits

03:01:44 Edrie Delos Santos: Fatality reduction data convinced our City Council

03:02:07 Edrie Delos Santos: And maintenance cost comparison

03:08:17 Thomas Conti: RCUT seems counter to the fast lane on a highspeed road. Does it increase rear end conflicts (acknowledging rear ends are not as severe)?

03:08:43 Ken Kochevar: Andrew, To better answer your question about CRZ in urban areas, this area should be a combination of lateral or operational offset (1.5') plus a clear zone. In a study to evaluate crashes with fixed objects on urban corridors with a raised curb, 93% + of the crashes happened within 6' of the travel way, 82%+ within 4' and 62%+ within 2'. This should give you a little idea of how much CRZ to provide with what impediments you have on the side of the road. I would shoot for 4 - 6'. In regards to trees being a barrier for pedestrians, FARS data from 2008 showed 48 pedestrians were killed on the roadside vs. 395 people were killed from impacts with trees on the same streets. This goes back to the comment about no trees greater than 4". Finally, I can pictures the scene you present regarding seating for restaurants outside close to the curb. I don't have any answer for this other than view the speed and volume of vehicles passing by and talk with owners about the safety impacts.

03:09:35 Steve Pyburn: Here is one source for FYA, with some research. Some locations have seen mixed results. Effectiveness will likely vary based on the approach used for left turns – whether they are protected, permitted, or protected-permitted.

<https://www.dot.state.mn.us/trafficeng/signals/flashingyellowarrow.html#:~:text=A%20safer%2C%20more%20efficient%20left,after%20yielding%20to%20oncoming%20traffic>

03:10:24 Steve Pyburn: In 2016, Caltrans did a before and after study of crashes of roundabouts on state state highways. At that time, they found a 100% reduction in Fatal and Serious Injury crashes and 67% reduction of total crashes.

03:10:45 Steve Pyburn: The skepticism for roundabouts is often unfounded and based on fear of change. Obviously, these are hard to overcome, regardless of overwhelming safety data. The Kansas State University ListServe has a lot of professionals that address this. You can sign up for the listserve at <https://trbroundabouts.com/listserv/> Persistence is certainly needed. It may also be beneficial to

Local Road Safety Training – March 17, 2021

Chat Discussion

work with community advocates to get support, and meet with city leaders one on one.

03:12:02 Ken Kochevar: Erin and Susie, You need to have Hillary with Steve and Ivy's support help you persuade your Boards about these misconceptions. Once one goes in and their fears are relieved, they will want more. This is what I was referring to as far as the assistance we (FHWA and Caltrans) can offer to you! Take advantage of it.

03:12:35 Jonathan Yee: Are the roundabout crash % reductions the same for an urban intersection of 2-lane roadways with 25mph speed limits?

03:12:42 Steve Pyburn: Proven Safety Countermeasures

<https://safety.fhwa.dot.gov/provencountermeasures/>

FHWA Intersection Safety Case Study

https://safety.fhwa.dot.gov/intersection/innovative/roundabouts/case_studies/fhwasa09013/

Guidelines for Timing Yellow and All-Red Intervals at Signalized Intersections (NCHRP Report 731)

<http://www.trb.org/Publications/Blurbs/168017.aspx>

FHWA Traffic Signal Timing Manual

<https://ops.fhwa.dot.gov/publications/fhwahop08024/index.htm>

Restricted Crossing U-Turn Intersection

https://safety.fhwa.dot.gov/intersection/alter_design/pdf/fhwasa14070_rcut_infoguide.pdf

FHWA Safety website

<https://safety.fhwa.dot.gov/>

03:13:40 Andrew Easterling: We are installing more roundabouts as a result of the documented safety, operational, and air quality benefits. However, after digging into the ICE safety analysis, the CMFs for roundabouts don't usually distinguish between single lane and multi-lane roundabouts. The data in the CMF clearinghouse is a bit of mixed bag when it comes to multilane roundabouts. We have a few multi-lane roundabouts under design and the complexity and costs have increased tremendously to include additional safety measures recommended in the NCHRP reports. I've been revisiting the original ICE analysis and wondering if the B/C ratios are still accurate. Are you aware of any available resources on the safety effects of a single lane roundabout versus a multilane roundabout?

03:14:08 Rob Bregoff: What is throughput of a 4-lane roundabout compared to signalized intersection?

03:14:53 Hillary Isebrands: @Jonathan Yee - there are different crash experiences for urban vs rural and single lane vs multi-lane roundabouts. NCHRP 672: Roundabouts: An informational guide

03:18:36 Hillary Isebrands: Rural roundabouts on high speed roadways have nearly a 90% reduction in fatal and injury crashes. Most of these are single lane roundabouts. The break down on roundabout safety can be found in the Highway Safety Manual and in the NCHRP 672 Exhibit 5-9 that shows the breakdown by setting.

03:19:06 Erin Haagenon: that is very helpful. does anyone have links to staff reports or presentations they did to convince councils or boards?

03:24:21 Hillary Isebrands: @ Rob Bregoff - Single lane roundabouts have capacities upwards of 27,000 AADT and two lane roundabouts have capacities near 45,000 AADT. Of course, the peak hour flows and turning movements make a difference on specifics including delays and queues. FHWA capacity research can found here and is the basis for HCM 6 roundabout models

<https://safety.fhwa.dot.gov/intersection/roundabouts/fhwasa15070.pdf> .

Local Road Safety Training – March 17, 2021

Chat Discussion

03:24:38 Edrie Delos Santos: Good videos from WSDOT

03:24:41 Danielle Casey: Danielle Casey, Lake County APC here. We are the land of Roundabouts. It is very hard and a long process for drivers to learn the mechanics of roundabouts.

03:25:04 Susie Rico-Vasquez: Thank you for the encouragement

03:25:15 Edrie Delos Santos: Lake County's roundabouts are done really well

03:25:18 Danielle Casey: Yes the data is good, but educating the population about the proper way to use them is difficult and a big learning "curve"

03:25:30 Susie Rico-Vasquez: small rural town sometimes change is hard

03:26:10 Hillary Isebrands: Here are some roundabout facts from National Roundabouts Week from the past - <https://safety.fhwa.dot.gov/NRW/> and #Roundaboutsweek

03:26:30 Edrie Delos Santos: Monterey County started Roundabout education since 2003 - our City is on its 4th roundabout project

03:28:00 Diana Nuttman: @Edrie Delos Santos, great job on the roundabout at Hwy 1 & 68!

03:28:06 Steve Pyburn: We did a presentation to elected officials in Monterey County on roundabout safety about five years ago!

03:29:22 Erin Haagenson: thank you

03:30:26 Hillary Isebrands: Freakanomics podcast on roundabouts from March 10, 2021 <https://freakanomics.com/podcast/roundabouts/>

03:30:38 Erin Haagenson: thank you so much everyone

03:31:15 Samuel Lux: Why do roundabouts cost so much more to construct than installation of a traffic signal?

03:31:31 Ivy Attah: @Hillary, thanks for sharing these resources on roundabouts for the audience.

03:32:26 Edrie Delos Santos: Higher Costs are usually associated with ROW acquisition

04:45:24 Michael Britton: We have a CT funded SSARP (that we just finished in '18/'19); we are not averse to doing an LRSP, but want to know what the purpose and value in doing so is now, right on the heels of doing the SSARP enabled and funded by CT.

04:46:06 Diego Corvera: <https://www.palmbeachpost.com/news/protected-bike-lanes-are-coming-west-palm-what-are-they/fuIC7VgBeiJTiwobF1VKmJ/> article on the west palm beach "dutch style" roundabout.

04:47:05 Susie Rico-Vasquez: Can you drop the video link

04:49:05 Ken Kochevar: Michael, I'm sure Robert wants to chime in here, but I'll just add that the LRSP includes all 4 Es (eng., enf., ed., emsa) whereas the SSAP only focuses in on engineering countermeasures. This is the value of the LRSP as there are more layers of redundancy in preventing F + SI crashes under the safe systems approach.

04:50:01 Tracy Coan: New South Wales Video: <https://www.youtube.com/watch?v=ra5LK8x86zU>

04:50:32 Michael Britton: How can we be "proactive" on roadways that have no collisions, or very low collisions? The perspective in the past has been, if there are no collisions, then the roadway/intersection is functioning as intended - thus, there are no problems to solve.

04:52:12 Ken Kochevar: Michael, You can be proactive by using the systemic approach as we will discuss in the last presentation today. Crashes especially in rural areas are random and we will give an example to show this.

Local Road Safety Training – March 17, 2021

Chat Discussion

04:53:00 Alan Ta:emsa?

04:53:06 Michael Britton: we do "data based decision making". How can we use anecdotal information in a data-based framework? We see all the time that "speeding" is often overestimated. If we get anecdotal information that cars are just driving "too damn fast", how is this actionable? Perception is not always reality.

04:53:45 Ken Kochevar: Sorry, Emergency Medical Services Authority

04:54:29 Michael Britton: And thank you Ken - I saw your message after I had the last one typed. I do want to do what is best - but we must be careful going forward. If we implement one things, too many times citizens take that as permission to demand it elsewhere.

04:57:24 Tracy Coan: Local Road Safety Plan Video

<https://www.youtube.com/watch?v=Wzdm798Mol8>

05:01:14 Erin Haagenson: In our region, we combined all of the funds and our MPO hired a consultant to make a plan for our entire region, so the money should go farther.

05:06:03 Ken Kochevar: I like it Erin. We have seen this in other parts of CA too. I think this will help the individual local agencies with their priorities as well as the continuity and consistency across jurisdictions.

05:10:07 Susie Rico-Vasquez: @Robert, is the Fresno County Transportation Safety Improvement Plan equivalent to the LRSP?

05:10:38 Tracy Coan: Caltrans HSIP Webpage: <https://dot.ca.gov/programs/local-assistance/fed-and-state-programs/highway-safety-improvement-program>

05:11:10 Tracy Coan: Tribal Safety Plan Resources: <https://www.tribalsafety.org/safety-planning-resources>

05:11:47 Tracy Coan: LRSP DIY Website: <https://safety.fhwa.dot.gov/LRSPDIY/>

05:13:03 Robert Peterson: Hi Susan, It should be. Take a look at the areas that LRSPs cover and if your plan is very similar, it should be ok. You can send it to me, if you want me to confirm.

05:23:08 Devin Ciriaco: Is there a geospatial analysis component on the LRSP DIY website?

05:27:45 Kimberly Overton: This is wonderful. I am so glad to see the personal connection being added here. :)

05:31:50 Rob Bregoff: From 1973 to 1974, fatalities dropped by 17% per capita (similar VMT) because national highway speed limit was capped at 55MPH. Shouldn't this be part of the conversation?

05:37:39 Matiel Holloway: How would DUI's addressed?

05:39:39 Ken Kochevar: Matiel, Our sister agency, the National Highway Traffic Safety Administration (NHTSA) have been and will continue to focus on this issue (DUI) through their "Countermeasures that Work."

05:45:49 Hillary Isebrands: CalSTA did a series of workshops in 2019 for the " Zero Traffic Fatalities Task Force." Workshop 3 focused on speed limits, speed management and speed enforcement. Here is the link to that ongoing effort that may be helpful regarding your question on speed limits.

<https://calsta.ca.gov/subject-areas/enforcement-and-safety/zero-traffic-fatalities>

Local Road Safety Training – March 17, 2021

Chat Discussion

06:15:32 Susie Rico-Vasquez: Would a Community Pedestrian and Bicycle Safety Training formal enough to meet RSA? Calwalks and UC Berkeley Safe Trec helped us conduct this audit.

06:22:01 Susie Rico-Vasquez: limited view

06:22:02 Jan Devera: site distance - chevrons - advance warning signs

06:22:05 Soutchai Vongsa: T-Intersection warning sign w/ probably a 25 to 30 mph advisory speed plaque

06:22:06 Chris Buonomo: guard rail before the rock outcropping.

06:22:06 Rene Cifuentes: No signs, need chevron signs needed

06:22:26 Susie Rico-Vasquez: how about a stop sign

06:22:34 Rene Cifuentes: Or slippery when wet

06:22:41 Susie Rico-Vasquez: yield maybe

06:22:45 FRANCIS BALDONADO: Advanced warning signs, esp for road/driveway

06:22:59 Sina Oshaghi: curve ahead

06:23:01 Samuel Lux: limit movement to right in right out

06:23:04 Susie Rico-Vasquez: high friction

06:23:10 Edrie Delos Santos: little to no shoulder

06:23:17 FRANCIS BALDONADO: new striping/more reflective

06:23:18 Diana Nuttman: Reflective chevrons

06:23:25 Michael Britton: not enough clear zone

06:23:26 Ryan Cardoza: mirror

06:24:25 Jonathan Yee: Does FHWA/Caltrans have specific guidance on the use of mirrors?

06:27:25 Soutchai Vongsa: I don't think Caltrans has any guidance on the use of mirrors. Our county received a request to install mirrors on our road. Our county did not install any mirrors citing liability issues.

06:28:34 Marissa Garcia: We also had vandalism issues with mirrors that became a hazard.

06:30:24 Alan Ta: right edge line

06:30:25 Sina Oshaghi: no stop ahead sign

06:30:28 Michael Britton: chevrons/intersection ahead sign ... stop sign ahead as well.

06:30:35 Lisa Dock: chevrons, edgeline, stop ahead

06:30:36 Jan Devera: Advance warning - Need Stop ahead pavement markings, edge lines

06:30:42 Chris Buonomo: advance warning sign

06:30:45 Rene Cifuentes: Flashing

06:30:58 Rene Cifuentes: Flashing stop sign

06:31:11 Soutchai Vongsa: W3-1 SIGN AND PM

06:31:11 Steven Young: Stop ahead pavement markers, rumble strips, flashing beacons

06:31:13 Scott Collins: rumble strips

06:31:14 James Winslow: roundabout

06:31:21 Ramnik Mungra: T intersection

06:31:22 Soutchai Vongsa: botts dots

Local Road Safety Training – March 17, 2021

Chat Discussion

06:31:28 Sherina Lam: lighting
06:31:34 Soutchai Vongsa: increase the r1 to 36"
06:31:45 Diana Nuttman: Roundabout!
06:31:50 Soutchai Vongsa: STOP AHEAD sign W3-1
06:32:05 amaan: signs For both roads

6:52:48 Hillary Isebrands: FHWA Systemic safety short video - <https://youtu.be/iGIFGvxmoiQ>