ISOAP 2-Day Workshop, June 16-17, 2025

Audience/Presenter Q&A Handout

Q: For step 1.3, is there a place somewhere to include bike/ped counts in the ISOAP form if we have the data?

[John Liu] - There is not a box for ped counts, but you could add that information in one of the existing boxes, or you can edit the form to add that information. The form is locked but can be unlocked by anybody. We'll consider adding a field for such information in the next update of the form.

Q: If adding a 4th leg to an existing 3-leg signalized interchange intersection in State right of way, is an ISOAP required?

[John Liu] - Yes, adding a leg to an intersection is one of the triggers for ISOAP.

Q: "https://www.kittelson.com/work/penndot-web-ice-tool/" … Is this the ICE Tool? I am getting an error code when I click on it on the website.

[John Liu] - PennDOT ICE tools can be accessed here: https://docs.penndot.pa.gov/Public/Bureaus/BOO/TSPortal/ICE.html

Q: Does the 20 Flags framework include any language or other elements to discourage eliminating pedestrian access where there is a flag that is difficult to mitigate?

[answered live]

Q: Is there a way to quantify the safety improvement of the different mitigation measures (i.e., raised crosswalk in free right lane)?

[answered live]

Q: What are the maintenance implications of these quick-build projects? Do maintenance crews find them easier or more difficult to maintain, do they require special equipment, etc.?

[Phil Rust] - Crews were very skeptical due to their experience with other products, but now that they have hands-on with the material and have maintained it for over 2 years, they were eager and asking for more. The second version (v2) has needed no maintenance at all in the 8 months it has been installed.

Q: Can you share the brand name/vendor for the plastic anchored curbs for the San Diego roundabouts?

[Phil Rust] - Vendor is Vortex: https://vortexroundaboutscom.wordpress.com/

Q: Our recent experience is that our tools to determine truck turning are very conservative and our ICD designs end up being larger than we need. Are we making any progress on refining our tools?

[not answered]

Q: At the intersection assessment, you showed reduced percentages for bikes and pedestrians. How do you assign a percentage reduction without have the intersection built and collecting data?

[from Chat]

Q: When an overhead sign structure is not a standard Roundabout sign, what approvals do you need to install the overhead sign?

[Bing Yu] – Overhead signs are a modified G24-5(CA). No special approval is needed.

Q: Does the Turbo Roundabout accommodate U-turn type movements?

[Bing Yu] - Technically no, but drivers change lanes in the circulating roadway. A U-turn is possible but not encouraged.

Q: Can a link be provided for the Complete Intersections document please?

[John Liu] - https://dot.ca.gov/-/media/dot-media/programs/safety-programs/documents/ped-bike/f0018151-intersection-guide-bicycles-pedestrians-a11y.pdf

[Sam To] - Two other references: https://dot.ca.gov/-/media/dot-media/programs/esta/documents/complete-streets/2024-25_completestreetsactionplan_publicdraft-a11y.pdf and https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/active-transportation-complete-streets/partnerships-report-jan-2025_a11y.pdf

Q: Where does the CMF Clearinghouse get their values from?

[answered live]

Q: Did I hear you correctly that Caltrans HQ will provide the "Benefit" portion of the cost benefit calculation after the collision rates are provided? Or is that something that the Districts and/or consultants can calculate?

[Bernice Chan] - Yes. At this time, only HQ Caltrans Division of Design has the crash costs to be applied to the predicted number of crashes.

Q: A previous slide mentioned "Part C" is needed for an economic analysis. In this example, since alternative B used Part D CMFs, can an economic analysis still be conducted for that alternative? Or how would it be compared to Alt A?

[Bernice Chan] - Alternative B utilized a Part D CMF that is applied to a completed Part C result. This approach is still considered a quantitative analysis, and an economic analysis can be completed.

Q: Where can we access the CCA worksheet?

[answered live]

Q: Where can we find this DPHD spreadsheet?

[answered live]

Q: There's a different pavement I've been noticing on exit off-ramps or freeway junction ramps (e.g., I605 and SR91), it makes a similar sound as rumble strips. What is that called?

[John Liu] – The pavement is high-friction surface treatment.

Q: If a Short JPCP is only for low volume traffic, how do they have that certain portion in Texas when it looks like there is heavy vehicles passing.

[answered live]

Q: For Step 1.6, where did you get the fatal + injury collision rate (0.53 * 9 = 4.77)? Does a different level of injury have a different weight?

[answered live]

Q: In the case study example, which software tools were used to analyze delay and level of service at the roundabout and signalized intersections to ensure a fair comparison?

[answered live]

Q: Have you considered taking the roundabout stuff out of the MUTCD and creating a roundabout design and installation manual?

[John Liu] – At this time Caltrans does not plan to have a standalone roundabout manual or guide.

Q: Is the change from Intersection Control Evaluation (ICE) to the Intersection Safety & Operations Assessment Process (ISOAP) happening only within Caltrans, or are other state DOTs also making the same shift?

[Brian Ray] - ISOAP is an ICE, it's just a revision of the 2013 version. Other states are still calling it "ICE" most commonly. The name can change but the approach is similar: performance-based evaluations.

Q: How much does it cost to install a traffic signal system at an intersection, including annual power and maintenance costs?

[John Liu] - Costs for traffic signals vary wildly based upon the improvements that are needed. It can vary from about a half million dollars with minimal geometric improvements and just some ADA improvements to many millions of dollars if widening is needed to add turn lanes or do a profile correction.

With LED signal heads and lighting, electricity costs are relatively low and could be just a few thousand dollars a year for electricity and routine maintenance. There would be additional personnel costs for occasional retiming and additional lifecycle costs to upgrade the electrical equipment over time.

Q: Is the ISOAP required during the Traffic Engineering Performance Assessment (TEPA) in the PSR-PDS?

[John Liu] - ISOAP Stage 1 should be done during preparation of a PSR-PDS.

Q: When comparing different traffic scenarios—considering that traffic operations and safety are handled by separate divisions with different performance objectives, to what extent should safety measures be prioritized at the expense of operational efficiency?

[John Liu] - ISOAP Stage 1 should be done during preparation of a PSR-PDS.

[Gina Lopez] - ISOAP is all about selecting an intersection form and control type that typically balances both. Safety takes precedence, but every project will be unique in the sense of its goals and objectives. It shouldn't matter that operations and safety are housed in different divisions.

[Jerry Champa] - Good news for intersections: at least four Tier 1 Safe System Strategies (and Proven Countermeasures) also IMPROVE mobility. The results of ISOAP performance analysis studies will inform decision-makers how and how much each alternative will reduce (or increase) crashes and delay.

Q: Why don't we do a 40-year design analysis? TIs for truck traffic can be high.

[Gina Lopez] - See Index 103.2 of the HDM.

Q: Who would do the analysis or provide recommendations if designers decided to go with a roundabout approach? Or does it go the other way around?

[from Chat]