Communicating the Safety Benefits of Alternative Intersections

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The most Common Design

- The Majority of Intersections will still have “Traditional” or common designs. accommodate 3 and 4 road approaches.
- In most cases they provide reasonable levels of service and safety.
- Most Traditional Intersections operate well...
- Most of the time.
Are All of our Intersections Bad?

- Congestion, Crash Risks and/or Unusual Geometry can alone (or together) cause poor intersection performance.
- Pedestrians, Bike Riders and other non-motorized road users can be at risk.
- The Public can and will often call for a Fix!
Conflict Leads to Crashes

- Sometimes Traffic Demands cause driver confusion and conflicts.
A Traffic Light Will Fix It!

- So, just put up a Traffic Signal!
  - Traffic Lights move traffic efficiently
  - And they *Always* make the crashes go away…Right?
  - Crashes at Intersections make up about 1/3 of all Severe Crashes in Indiana
Give Us an.... Interchange?

- So that means that we need an Interchange.... Right!
Alternative Intersections - Why?

- The Public wants to know what’s so wrong with traditional 3 and 4 leg intersections?
  - If it Ain’t Broke - Don’t Fix it!
  - Why do we need these Merry-go-Round things? Someone’s going to get hurt!
  - Not In My Town – City – County!
  - Don’t you know that Change Is Bad!!
Alternative Intersections - Why?

NOT SURE IF I'M IN THE CORRECT LANE...

OR IF I'M EVEN ON THE ROAD AT ALL.

[Image of a car on the roof of a house]
What Does the IDG Produce?

- Greater awareness of alternative/innovative intersections – their characteristics & applications
- More extensive statewide use of alternative forms
- Better choices in selection of intersection improvements and new intersection designs
- More cost-effective intersection investments toward improving traffic safety and congestion
- Agreement on an agency decision-making process for this purpose, as a matter of policy
Makeup of Intersection Decision Guide

- Targeted Users: moderately advanced understanding
- Model centered on 2 stage decision trees
- Handles small and large intersection treatments
  - 9 chapters + 4 appendices
  - Explicitly lists 9 intersection forms, with flexibility to handle others
  - Includes at-grade junctions of interchanges
- Your Decisions are Documented in the
  Intersection Decision Guide
Decision Trees

Stage 1: Initial, Feasibility Screening

- Alternative Screening Questions
  - Feasible or Infeasible Determination
    - Q1: Is feasible and reasonable given site and geometric constraints, including non-urban constraints, observation of the junction (3 vs. 4 legs), and presence or absence of median potential?
      - Yes
      - Next alternative
      - Infeasible alternative
    - Q2: Is there a realistic expectation it will address the core problem, if it addresses the core problem, what is the basis for the expectation, and what will be the scale of the project?
      - Yes
      - Next alternative
      - Infeasible alternative
    - Q3: Does it likely improve or preserve an existing state of performance relative to traffic safety, for all modes, including population, irrespective of economic impact, or is it mobility or safety?
      - Yes
      - Advance to Stage 2 Assessment
      - Infeasible alternative
    - Q4: Is it feasible and reasonable with respect to all other factors?
      - Yes
      - Feasible alternative
      - Next alternative
      - Infeasible alternative

Stage 2: Secondary, Expanded Performance Assessment

- Feasible Alternative
  - 4 Performance Questions
    - Q1: How well does the alternative perform relative to traffic mobility service?
      - A1: Record performance for traffic mobility measure
    - Q2: How well does the alternative perform relative to traffic safety service?
      - A2: Record performance for traffic safety measure
    - Q3: How effective is the alternative in terms of service performance versus cost?
      - A3: Record traffic mobility performance vs. cost
    - Q4: How well does the alternative perform relative to other measures?
      - A4: Record qualitative assessment of other performance measures

- Infeasible Alternative
  - 4 Performance Questions
    - Q1: How well does the alternative perform relative to traffic mobility service?
      - A1: Compare performance for traffic mobility measure
    - Q2: How well does the alternative perform relative to traffic safety service?
      - A2: Compare performance for traffic safety measure
    - Q3: How effective is the alternative in terms of service performance versus cost?
      - A3: Compare traffic mobility performance vs. cost
    - Q4: How well does the alternative perform relative to other measures?
      - A4: Compare qualitative assessment of other performance measures

- Decision of best alternative based on aggregate performance assessment. Relate to Alternatives 1 to 4 in relation to essential project intent.
Other Information Tools

- There are numerous Videos that can be used to help educate the public on the Concepts that you want to impart.
Median U-Turn Intersections

- Boulevard Left or Michigan Left
  - FHWA Video: https://www.youtube.com/watch?v=fshW_O_Xggl
R-Cuts and J-Turns

- Restricted Crossing U-Turn intersection types:
  - https://www.youtube.com/watch?v=BLwl01NCp9I
  - https://www.youtube.com/watch?v=nPcMeh0gDC0
Median U-Turn Intersections

- R-Cut or Superstreet Intersection
Displaced Left Turn

- [Link to YouTube Video](https://www.youtube.com/watch?v=3wIv0a9fuB0)
Continuous Green T

- Also known as the Florida T
Roundabout Intersection

- FHWA Video: 10:52 minutes
- https://www.youtube.com/watch?v=ns2k71K46g8
What if Opposition Remains?

- Accept that there will likely be opposition no matter what you say.
  - Be a Sympathetic Listener
  - Help them get their comments recorded
  - Be open to their concerns and new ideas
  - There is nothing like success to change minds!