US 31 at SR 110 Intersection Improvement

Wednesday, September 27, 2017
Welcome

- Purpose/explanation of public hearing
- Public hearing format
- Visit our sign-in table
- Informational handouts
- Participate during public comment session
- Submit written public comments
- Project display area
US 31 at SR 110 J-Turn

- **Introduction of INDOT Project Team**
  - Project Management
  - Public Involvement
  - LaPorte District – INDOT Regional Office
  - Environmental Services
  - Troyer Group
    - Engineering, Design & Environmental Analysis Team
- **Recognition of elected and local public officials**

- Sign-in at attendance table to be added to project mailing list
- *Legal notice of public hearing was published in the Pilot News (Plymouth) on 9/1, 9/8 & 9/15*
- A notice of the public hearing was mailed to known property owners within project area
- Announcement of this hearing was posted to INDOT website. A media release was also issued
- A copy of presentation and project documentation are available for review on-line via INDOT website
Project Stakeholders

- Indiana Department of Transportation
- Indiana Division Federal Highway Administration
- Marshall County & Town of Argos
- Elected & Local officials
- Residents and citizens
- Commuters
- Businesses
- Emergency services
- Schools
- Churches
- Community Organizations
Project Development

Project Selection
Early Coordination

Environmental phase begins
Purpose & Need
Develop alternatives

Preliminary design phase
Release environmental document for public review and comment
HOLD PUBLIC HEARING

Additional work to finalize environmental document and project design
Project Decision

Project Letting
Construction

Public Involvement:

June Public Information Meeting
Public Hearing during environmental analysis phase
Communicate project decision
Environmental Document

National Environmental Policy Act (NEPA)
  • Requires INDOT to analyze and evaluate the impacts of a proposed project to the natural and socio-economic environments
  • NEPA is a decision-making process
    • Purpose and Need
    • Alternatives Screening
    • Preferred Alternative

  • Impacts are analyzed, evaluated and described in an environmental document
    • What are the impacts this project might have on the community?
    • How can impacts be avoided?
    • Can impacts be minimized?
    • Mitigation for impacts?

  • Draft environmental document to be released for public involvement
    • Is available for review via public repositories
Purpose and Need

• **Purpose**
  • To enhance safety for vehicular traffic at the intersection of U.S. 31 and S.R. 110 along the border of Marshall and Fulton Counties

• **Need**
  • To improve the existing intersection configuration and reduce the number of accidents
Alternatives Considered

• **No Build**
  - Would not improve safety at intersection

• **Signalized Intersection**
  - Traffic on minor leg (SR 110) does not warrant a signalized intersection when compared to traffic on major leg (US 31)

• **Interchange**
  - *Implementation would require years of planning and design, would not address safety concerns in a timely fashion*

• **J-Turn Intersection (Preferred Alternative)**
  - Meets purpose & need of project
  - Enhances safety at intersection by eliminating or significantly reducing injury crashes
  - Can be implemented in one construction season
Project Resource Locations

• **INDOT LaPorte District Office**
  315 E. Boyd Boulevard, LaPorte, IN 46350
  • Toll Free 1-855-464-6368
  • [LaPorteDistrictCommunications@indot.in.gov](mailto:LaPorteDistrictCommunications@indot.in.gov)
  • [http://www.in.gov/indot/2705.htm](http://www.in.gov/indot/2705.htm)
  • Planning, Project Development/Delivery, Construction, Maintenance for Northwest Indiana

• **Argos Public Library** - 142 N Michigan St., Argos, IN 46501

• **INDOT Office of Public Involvement**
  100 North Senate Avenue, Room N642, Indianapolis, IN 46204
  Phone (317) 232-6601
  rclark@indot.in.gov
## Crash Data

### Crash Data for US 31 at SR 110 (2012-2016)

<table>
<thead>
<tr>
<th>SEVERITY</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crash with no Injury</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Non-Incapacitating Injury</td>
<td>3</td>
<td>2</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Incapacitating Injury</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>Fatal</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td>9</td>
<td>4</td>
<td>2</td>
<td>7</td>
<td>4</td>
<td>26</td>
</tr>
</tbody>
</table>
Existing Intersection Geometry

- Crashes most often involve through movements and left turns being struck on the far side of the wide intersection.
• Left turns and crossing minor roads are made using U-turn movement on major road.

• Left turns from major road are made under yield (as current)
Benefits of J-Turns

- Conflict points are dramatically reduced
Benefits of J-Turns

- Reduces crashes and severity significantly

<table>
<thead>
<tr>
<th>Case Studies Collision Summary by Type</th>
<th>Before</th>
<th>After</th>
<th>%Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rear End</td>
<td>13</td>
<td>8</td>
<td>-38 %</td>
</tr>
<tr>
<td>Angle</td>
<td>47</td>
<td>0</td>
<td>-100 %</td>
</tr>
<tr>
<td>Turning</td>
<td>32</td>
<td>10</td>
<td>-69 %</td>
</tr>
<tr>
<td>Sideswipe</td>
<td>8</td>
<td>3</td>
<td>-63 %</td>
</tr>
<tr>
<td>TOTALS</td>
<td>100</td>
<td>21</td>
<td>-79 %</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Case Studies Collision Summary by Severity</th>
<th>Before</th>
<th>After</th>
<th>%Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injury</td>
<td>56</td>
<td>10</td>
<td>-82 %</td>
</tr>
<tr>
<td>Fatality</td>
<td>2</td>
<td>1</td>
<td>-50 %</td>
</tr>
</tbody>
</table>

Source “Spot Safety Project Evaluation”, #02-00-208/02-00-209 #11-99-210 #14-97-018 NCDOT Safety Evaluation Group, 2005 and 2006
J-Turn Layout - US 31 at SR 110
North Crossover - US 31 at SR 110

Widening pavement provides additional refuge for turning traffic to avoid mainline lanes.

Raised corrugated apron provides additional turning space for semi-trailers, while limiting space for cars.

Wide lanes permit semi-trailers to safely navigate left-turning movements.

Channelizing islands direct turning traffic, aiding navigation and discouraging wrong-way movements through intersection.

Raised Corrugated Island at US 31-US 6 Interchange NW Corner
South Crossover - US 31 at SR 110

- Raised corrugated apron provides additional turning space for semi-trailers, while limiting space for cars.
- Widening pavement at turn lane provides additional refuge for turning traffic to avoid mainline lanes.
- Lengthen full-length turn lane 456 ft to provide additional capacity and accommodate greater turning volume.
- Left-turn Crossover (See North Crossover Exhibit for Additional Information)
Recent Case Study

- US 41 at SR 114, near Morocco, IN
- First J-turn intersection in Indiana
- Improvement needed to reduce injury accidents
- New intersection alignment opened in May, 2015
- **Zero injury accidents** in nearly two ½ years since opening
Summary of Comments  Public Inf. Meeting (June)

- **The public stated their preference for an interchange**
  - Project purpose is to improve safety - immediately and cost-effectively
  - Immediate improvements will not prohibit an interchange in the future
INDOT is developing a strategy to upgrade US 31.

Potential location of interchanges based on:
- Traffic Volume
- Safety
- Access
- Consistency with regional road network
- Cost

Immediate operational and safety concerns on US 31 will be addressed with small, cost-effective solutions.

Immediate improvements will not impact plan for upgraded US 31 corridor.
"Maneuverability of large vehicles will be decreased." (semis, livestock trailers, farm equipment, school buses)
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- Case Study: US 41 at SR 114
Summary of Comments  

Public Inf. Meeting (June)

"Economic Impact will result from restriction of truck access"

- Truck access will not be eliminated
- Time increase for cross traffic is approx. 30 seconds
- Traffic Simulations have been performed
Summary of Comments  Public Inf. Meeting (June)

• Proposed Configuration will maintain or improve capacity of intersection.

<table>
<thead>
<tr>
<th>Location Description</th>
<th>Node ID</th>
<th>Approach LOS</th>
<th></th>
<th></th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Existing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EB SR 110 @ US 31</td>
<td>7</td>
<td>C</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>WB SR 110 Crossover</td>
<td>7</td>
<td>C</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>WB SR 110 @ US 31</td>
<td>8</td>
<td>C</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>EB SR 110 Crossover</td>
<td>8</td>
<td>C</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>North U-Turn</td>
<td>11</td>
<td>-</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>South U-Turn</td>
<td>5</td>
<td>-</td>
<td>B</td>
<td></td>
</tr>
</tbody>
</table>

Source: 2000 HCM, Exhibit 17-2, Level of Service Criteria for TWSC Intersections
Summary of Comments | Public Inf. Meeting (June)

"Project purpose is to reduce travel time between South Bend and Indianapolis"
- No reduction from project

"Emergency vehicle response across US 31 will take longer"
- No more than 30 seconds added to response time

"J-turns will not accommodate horse and buggy traffic"
- J-Turn will maintain refuge area off US 31 travel lanes
- Current refuge is in center crossover area
- J-Turn refuge is in shoulders along left and right turn lanes
Summary of Comments  Public Inf. Meeting (June)

"US 31 traffic volumes are too high for a J-Turn."

• J-turns have been implemented successfully in areas across the U.S.

• Many on four lane divided highways with higher traffic than on US 31.
  • Missouri - 1 ½ times the traffic
  • Maryland - 2 ½ times the traffic
  • Michigan - 5 ½ times the traffic
Project Schedule

• Public Information Meeting – June 2017

• NEPA document released for public involvement August 2017

• Public Hearing - September 2017

• Finalize environmental document and design - November 2017

• Proposed construction - Summer 2018
Submit Public Comments

- Submit public comments using the options described in first page of information packet:
  - Public Comment Form
  - Via e-mail
  - Participate during public comment session following formal presentation

- **INDOT respectfully requests comments be submitted by Friday, October 13, 2017**

- All comments submitted will become included in an official public hearings transcript and made part of the public record

- Comments will be reviewed, evaluated and given full consideration during decision making process
Next Steps

- **Public and project stakeholder input**
  - Submit comments via options described on page 1 of information packet

- **INDOT review and evaluation**
  - All comments are given full consideration during decision-making process
  - Finalize/approve environmental document, complete project design

- **Communicate a decision**
  - INDOT will notify project stakeholders of decision
  - Work through local media, social media outlets, paid legal notice
  - Make project documents accessible via repositories

- **Questions? Contact Public Involvement Team**
Thank You

• Please visit with the design team and INDOT project officials following the presentation and Q&A.

• Project Open House
  - Project maps, displays, INDOT project team and informal Q & A
  - INDOT LaPorte District page http://www.in.gov/indot/2705.htm
  - LaPorteDistrictCommunications@indot.in.gov