US-20/SH-75 (Timmerman Jct.) Intersection Study

Community Advisory Committee (CAC) Meeting #3
October 5th, 2016
Blaine County Courthouse
Commissioners Large Conference Room

Study Website:
Welcome

Thank you for your commitment to participating with the Idaho Transportation Department (ITD) in this important study!

Who is involved?

- Idaho Transportation Department
- Blaine County & Local City Representatives
- Local Community Representatives:
  - Legislative Representatives
  - Emergency Responders
  - Agriculture & Trucking Services
  - Commerce & Tourism
  - Transportation Providers
  - Major Employers
  - Residents/Citizens
Community Advisory Committee (CAC) Roles & Responsibilities

Roles: Provide a wide range of perspectives and bring valuable information to the Study Management Team (SMT) through the alternatives development, evaluation, and selection process.

Responsibilities:
- Understand the intersection, the study context, the range of alternatives, and the implications of decisions
- Share facts and decisions on the study with your organization and the community
- Maintain a commitment to the study process. Provide open, honest, and continuous communication during the study
Study Purpose: ITD is continuing its commitment to improve safety at the US-20/SH-75 intersection (Timmerman Junction), while providing reliable and efficient mobility.

- Collaborate with local community leaders and representatives
- Evaluate a wide range of intersection alternatives
- Identify proposed mid-term and long-term improvements
- Provide direction to pursue funding for future implementation

Goal #1: Improve safety performance
Goal #2: Maintain acceptable mobility
Goal #3: Collaborate with community representatives
Goal #4: Establish a prioritized implementation plan
Recap

Tiered Alternatives Evaluation Process

We Are Here
# Recap

## Study Schedule

### STUDY SCHEDULE

<table>
<thead>
<tr>
<th>Activity</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review Intersection History &amp; Current Conditions</td>
<td>DEC</td>
<td>MAY</td>
</tr>
<tr>
<td>Develop &amp; Evaluate Alternatives</td>
<td>JAN</td>
<td>JUN</td>
</tr>
<tr>
<td>Proposed Improvements &amp; Implementation Plan (Intersection Study Report)</td>
<td>FEB</td>
<td>JUL</td>
</tr>
<tr>
<td>Community Advisory Committee Meeting</td>
<td>MAR</td>
<td>AUG</td>
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<td></td>
<td>APR</td>
<td>SEP</td>
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<td>MAY</td>
<td>OCT</td>
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- **SMT #3**: Online Survey
SMT & CAC Meeting #2 Follow-Up Items
Safety Comparison to Other Similar Intersections

- SH 6 & US 95
- US 20 & US 95
- SH 55 & US 95
- SH 75 & US 20
- US 93 & SH 25
### Comparison by High Accident Location (HAL) Ranking

<table>
<thead>
<tr>
<th>Statewide HAL Ranking</th>
<th>Intersection</th>
<th>County</th>
<th>City</th>
<th>Signalized?</th>
<th>ITD District</th>
<th>Crash Rate (Per Million Vehicles)</th>
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<td>4</td>
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<td>487</td>
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### Comparison by Crash Rate

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SMT & CAC Meeting #2 Follow-Up Items
Deceleration of Trucks Traveling Down Timmerman Hill

Loaded truck (55mph) begins braking deceleration & comfortably stops (wet pavement)
-Source: NCHRP Report 400: Determination of Stopping Sight Distances

~½ mi (~2600 ft)
~750'
~2,600'
Timmerman Hill

~1%
~4.5%

~¾ mi (~2600 ft)
Online Survey Summary
Advertisement & Participation

Survey Open from August 8th – 21st, 2016


Notification via email, study website, two newspaper articles & two TV news stories and the local public advisory group

Response Total: 762 people

- 551 people completed survey
- 211 people partially completed survey
- #1: 83333 (Hailey)
- #2: 83313 (Bellevue)
- #3: 83340 (Ketchum)

How often do you use the intersection?

- 59% Daily
- 19% Few times a week
- 11% Few times a month
- 11% Rarely
## Online Survey Summary
### Evaluation Criteria Ranking

<table>
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<tr>
<th>Overall Rank</th>
<th>Item</th>
<th>Rank Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Safety Performance:</strong> Effect on frequency and severity of crashes</td>
<td><img src="image" alt="Rank Distribution" /></td>
</tr>
<tr>
<td>2</td>
<td><strong>Mobility:</strong> Effect on the movement of all users through the intersection</td>
<td><img src="image" alt="Rank Distribution" /></td>
</tr>
<tr>
<td>3</td>
<td><strong>Implementation &amp; Maintenance:</strong> Amount of effort needed to construct and maintain the intersection</td>
<td><img src="image" alt="Rank Distribution" /></td>
</tr>
<tr>
<td>4</td>
<td><strong>Cost:</strong> Estimated construction and maintenance costs</td>
<td><img src="image" alt="Rank Distribution" /></td>
</tr>
<tr>
<td>5</td>
<td><strong>Physical and Environmental Impacts:</strong> Impact on the environment and properties near the intersection</td>
<td><img src="image" alt="Rank Distribution" /></td>
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Legend:
- Lowest Rank
- Highest Rank
### Online Survey Summary

#### Intersection Alternatives Ranking

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<tr>
<td>1</td>
<td>Traffic Signal with Addition of Turn Lanes</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Adding Northbound and Southbound Right- and Left-Turn Lanes on SH-75</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Grade-Separated Diamond Interchange</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Single-Lane Roundabout with Approach Curvature</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Remove the Intersection Skew</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>No-Build</td>
<td></td>
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</table>

- Traffic Signal - Most combined #1, #2, #3 rankings
- Grade-Separated Interchange - Most #1 rankings
- Grade-Separated Interchange & Roundabout had high numbers of #1 & #6 rankings
- Addition of Turn Lanes & Remove Intersection Skew had most “mid-range” rankings (#2 through #5)
Online Survey Summary

Key Takeaways

- Traffic Signal slightly more favored, but Grade-Separated Interchange, Roundabout, and Addition of Turn Lanes on SH-75 received relatively comparable levels of favor

- No-Build & Remove Intersection Skew less favored, but still received some support

Other Key Comments

- Safety needs to be the biggest concern
- The perception of a problem is greater than the reality of one
- Many of the problems at the intersection are related to drivers not paying attention
- Existing signage needs to be improved with more warnings leading up to the intersection
- Intersection would benefit from clearing weeds and debris
Overview of Draft Intersection Study Report

Report Overview

Section 1: Introduction
- Background & History
- Study Purpose & Need
- Study Goals & Objectives

Section 2: Existing Conditions

Section 3: Future No-Build Conditions
- Expected Safety Performance
- Future Traffic Conditions (Operational Performance)

Section 4: Alternatives Development & Evaluation
- Tiered Alternatives Evaluation Process Including Community Involvement
  - Key Conclusions & Outcomes

Section 5: Implementation Plan
- Summary of Recommendations along with Considerations in Moving Forward

Technical Appendix – Separate Document available from ITD
Overview of Draft Intersection Study Report
Implementation Plan Summary

No Build

Average Rankings
- SMT: 1.2 / 7 (#1)
- CAC: 3.2 / 7 (#3)
- Public: 3.9 / 6 (#6)

Construction Cost: N/A
B/C Ratio: N/A
Time Frame: Short- To Mid-Term (~0-15 years)

Reasonable option, particularly if intersection does not rise high in ITD’s ITIP prioritization

- Lack of crash history; Recent improvements may be enough.
- A build alternative should be planned for the long-term
Overview of Draft Intersection Study Report
Implementation Plan Summary

Remove Intersection Skew

Average Rankings
- SMT: 3.3 / 7 (#3)
- CAC: 2.7 / 7 (#1)
- Public: 3.9 / 6 (#5)

Construction Cost: $1.6M
B/C Ratio: 0.13
Time Frame: Short- To Mid-Term (~0-15 years)

Implementation option if roundabout is not programmed for short- to mid-term time frame

- Cost-effective option that may benefit safety
Overview of Draft Intersection Study Report
Implementation Plan Summary

Single-Lane Roundabout

Average Rankings
- SMT: 2.3 / 7 (#2)
- CAC: 2.7 / 7 (#1)
- Public: 3.5 / 6 (#4)

Construction Cost: $2.8M
B/C Ratio: 0.34
Time Frame: Short- To Long-Term (~0-25 years)

Improvement option best satisfying study goals

- Significant support from SMT & CAC; general public support mixed
- Most anticipated safety benefit with lesser impacts on mobility
Overview of Draft Intersection Study Report
Implementation Plan Summary

Grade-Separated Interchange

Average Rankings
- SMT: 7.0 / 7 (#7)
- CAC: 5.2 / 7 (#6)
- Public: 3.3 / 6 (#3)

Construction Cost: $10.3M
B/C Ratio: 0.20
Time Frame: Very Long-Term (25+ years)

Right-of-way preservation only

- Limited support from SMT & CAC; some support from general public
- Good safety & mobility benefits, but at a high cost given current traffic volumes
Overview of Draft Intersection Study Report
Alternatives Not Included in Implementation Plan

- Add Turn Lanes on SH-75 Alternative
  - Not enough safety & mobility benefit anticipated & not warranted
  - Not recommended for implementation

- Traffic Signal Alternative
  - Support from general public, but not much support from SMT & CAC
  - Lowest benefit/cost ratio and anticipated increase in rear-end crashes
  - Not recommended for implementation
Roundabout Contextual Considerations

- Rural Setting
  - Successive approach curvature progressively slows speeds
- A “New” Intersection Form
  - Well over 3,000 roundabouts throughout the U.S.
  - FHWA – Roundabout is one of nine proven safety countermeasures: [http://safety.fhwa.dot.gov/provencountermeasures/](http://safety.fhwa.dot.gov/provencountermeasures/)
  - “Roundabout Rodeo”
- Accommodation of Large Trucks & OSOW Loads
  - Truck apron – meant for off-tracking of trucks!
  - Several proven strategies available to accommodate OSOW loads
- Maintenance Considerations
  - Many winter weather states have numerous roundabouts
  - Develop a maintenance plan and execute it
  - [https://www.youtube.com/watch?v=OGxbI7fe8Yg](https://www.youtube.com/watch?v=OGxbI7fe8Yg)
Overview of Draft Intersection Study Report

Implementation Plan Considerations

- **Perception of Safety Issues Versus Reality**
  - Average crash rate just slightly more than typical
  - Typically ~2 reported crashes/year
  - No reported fatalities in past 15 years

- **Video Monitoring of Intersection**
  - Obtain extensive data on key items (i.e., drivers running the stop signs, erratic maneuvers, etc.)

- **Encourage Continued Collaboration within the Wood River Valley Community!**
We will take what we heard here today and from other meetings this week and revise the Intersection Study Report as appropriate.

No future meetings planned as a part of this study. ITD will keep public informed of next steps for the intersection.

Final Intersection Study Report expected to be available on the study website by November 2016:


KAI Extends a Special Thanks To:

- Jenny Lovell
- Rosemary Curtin & Kate Reed
- Bruce Christensen