## US16/Neck Yoke Road Intersection

### Traffic Operations, Safety, and Cost Build Option Measures (PRELIMINARY)

#### Planning Horizon 2050 Traffic Operations

<table>
<thead>
<tr>
<th>Reduced Conflict Intersection (RCI)</th>
<th>Main Intersection LOS(^1)</th>
<th>Experienced Travel Time (ETT) through Intersection(^2) [sec]</th>
<th>Additional US16 Through Lane Needed to Meet LOS Goals(^3)</th>
<th>Does US16 Through Traffic Need to Stop at Bottom of Hill?</th>
<th>Total Crashes(^4)</th>
<th>Fatal and Injury Crashes(^5)</th>
<th># of Access Points 1 (main) / 2 (main + secondary)</th>
<th># of Access Points 1 (main) / 2 (main + secondary)</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 RCI at Neck Yoke Road</td>
<td>A / A</td>
<td>4 / 8</td>
<td>No</td>
<td>No</td>
<td>-215 / -153</td>
<td>-107 / -76</td>
<td>4.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2 RCI at Central Driveway</td>
<td>A / A</td>
<td>4 / 8</td>
<td>No</td>
<td>No</td>
<td>-215 / -153</td>
<td>-107 / -76</td>
<td>3.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3 RCI at Central Driveway with US16 Realignment</td>
<td>A / A</td>
<td>4 / 8</td>
<td>No</td>
<td>No</td>
<td>-215 / -153</td>
<td>-107 / -76</td>
<td>5.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Traffic Signal

1. **Traffic Signal at Neck Yoke Road**
   - A / A
   - 4 / 8
   - Yes - Eastbound
   - Yes – traffic signal
   - -173 / -108
   - -91 / -59
   - 5.5

2. **Traffic Signal at Central Driveway**
   - A / A
   - 4 / 8
   - Yes - Eastbound
   - Yes – traffic signal
   - -173 / -108
   - -91 / -59
   - 5.7

#### No Build Condition

<table>
<thead>
<tr>
<th>No Build Condition</th>
<th>Study LOS Goal: B</th>
<th>Comparative measure of how long it will take the average vehicle to traverse through the intersection.</th>
<th>Truck and lane utilization sub-analysis. Contributes to overall Build Option cost and LOS.</th>
<th>Denotes operational benefits afforded to US16 through traffic that does not need to stop, and then accelerate, at the bottom of the hill.</th>
<th>Comparative measure of safety and operational effects of geometric design.</th>
<th>Comparative measure of safety and operational effects of geometric design.</th>
<th>Comparative measure of total cost to construct.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C / F</td>
<td>23 / 581</td>
<td>n/a</td>
<td>Truck and lane utilization sub-analysis. Contributes to overall Build Option cost and LOS.</td>
<td>Denotes operational benefits afforded to US16 through traffic that does not need to stop, and then accelerate, at the bottom of the hill.</td>
<td>Comparative measure of safety and operational effects of geometric design.</td>
<td>Comparative measure of safety and operational effects of geometric design.</td>
<td>Comparative measure of total cost to construct.</td>
</tr>
</tbody>
</table>

**Key:**
- Greatest Improvement/Benefit
- Least Improvement/Benefit
- Experienced Travel Time (ETT) = control delay + extra distance travel time
- Highway Capacity Software measure
- Vissim microsimulation measure
- Blend of Highway Capacity Software and Vissim microsimulation measures
- Interactive Highway Safety Design Model (IHSDM) measure