NCHRP 17-79
Safety Effects of Raising Speed Limits to 75 mph and Higher

Update of Ongoing Status

- Texas A&M Transportation Institute
- University of South Florida
- Leidos
Research Objective

To provide guidance that can be used by highway agencies to better understand the expected safety implications of increasing speed limits to 75 mph or greater.
Approach:

• Literature Review
  – Identify and document current published body of knowledge related to elevated speed limits (road operational performance as well as roadside hardware current speed assumptions)

• State-of-Practice for Individual States
  – Examine State documents available online for all 50 states
  – Contact State representatives for those that have increased speed limits to 75 mph or higher
Literature Review

- Repeal of National Maximum Speed Limit (1995 – present)
Maximum Speed Limits by State
# Changes from NCHRP Report 350 Standard to MASH Standard – Test Matrices

<table>
<thead>
<tr>
<th></th>
<th>NCHRP 350</th>
<th>MASH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small car impact angle</td>
<td>20°</td>
<td>25°</td>
</tr>
<tr>
<td>Impact speed for the single-unit truck</td>
<td>80 km/h (50 mph)</td>
<td>90 km/h (56 mph)</td>
</tr>
<tr>
<td>Length-of-need testing of terminals and crash cushions (to match that for longitudinal barriers)</td>
<td>20°</td>
<td>25°</td>
</tr>
<tr>
<td>Gating terminals and crash cushion impact angle</td>
<td>15 degrees</td>
<td>5-15 degrees</td>
</tr>
<tr>
<td>Variable message signs and arrow board trailers</td>
<td>No mention</td>
<td>Added to TMA crash test matrix</td>
</tr>
<tr>
<td>Support structure and work zone traffic control device testing</td>
<td>Only small car tested</td>
<td>Small car and light truck tested</td>
</tr>
</tbody>
</table>
State of Practice of “Background” Responses

• Elevated speed limits, in general, result of legislative process

• Opposition to elevated speed limits was limited

• Following implementation, states have noted some isolated safety concerns and generally address these on an individual basis (by reducing the speed limit of modifying road)
State of Practice
“Implementation” Responses

- Many states limited implementation of higher speed limits to rural locations
- Speed limit decisions are generally determined by a centralized DOT or a designated committee
- States have introduced a variety of engineering changes to accommodate elevated speeds
- Enforcement strategies vary by state and are generally left up to the enforcement agencies
Current Status / Efforts
Ongoing Analysis Activities

• Speed limit (before/after) study for Kansas & Texas to determine safety of 75 mph or greater
• Speed limit (cross-sectional) study for Kansas & Texas to determine safety of 75 mph or greater
• Speed limit (before/after) study for Texas to determine safety of converting from 75 to 80 mph
Ongoing Analysis Activities (cont.)

• Acquiring some speed data for subset of sites
• Conduct time-series socioeconomic comparison for Kansas and Iowa so as to determine scalability
• Conduct spillover study for study sample
• Roadside hardware suitability study
Additional Discussion & Questions

Please forward additional thoughts or suggestions to:
Karen Dixon, Ph.D., P.E.
Phone: 979-845-9906
Email: k-dixon@tti.tamu.edu