Speed Management Briefing: Recommended Speed Limit Modifications for Urban Core, Residential, and Downtown Streets

Urban Transportation Commission | May 15, 2020
Engineering Recommendation

Based on a comprehensive traffic engineering study, the Office of the City Traffic Engineer has determined that roadway speeds across a wide range of roadways in Austin should be reduced to achieve safe and prudent speeds

- Urban Core Arterials
- Neighborhood Streets
- Downtown Streets
Briefing Agenda

• Speed Management Program Overview
• Engineering Study Methodology
• Detailed Findings and Recommendations
  • Urban Core Study
  • Residential & Downtown Core Streets
• Next Steps
Speed Management Program

Mission:
• Improve safety and enhance the livability of Austin streets
• Implement context-appropriate speed reduction strategies

Objective:
• Reduce the likelihood of serious injury and fatal crashes
• Reduce egregious speeding on all street levels
Speed Management Program

• Speed is one of four behaviors which contribute to most of the fatal crashes
• Speeding is the primary contributing factor in ~1/4 of Austin traffic fatality crashes
• 3,107 Years of Life Lost (2019)
Engineering Study Methodology

Review of Best Practices
Engineering Study Methodology

Historical Engineering Approach → Expert Systems (USLIMITS2)

85th Percentile Speed as Primary Input

Source: FHWA

15 Different Inputs
- 50th percentile speed
- Driveway Density
- Traffic Controls
- Adjacent Land Use
- Bike/Ped Activity
- Crash History
- Plus Others
Urban Core Study

Process

- Office of the City Traffic Engineer can recommend speed limit modifications based on an engineering study
- Texas Transportation Code, Section 545.356, and City of Austin Code, Chapter 12
- Focused on streets with greater operating speeds
- Collected data on 80% Urban Core Network
Street Network

- High-Injury: 8%
- All Others: 92%

Representation by Serious injuries & Fatalities

- High-Injury: 30%
- All Others: 70%

*High Injury Network developed in 2019 based on data from 2013-2017
Urban Core Study

High-Injury Network / Study Boundaries
# Urban Core Study

## Prior Council Action

(Ordinances passed September 19, 2019)

<table>
<thead>
<tr>
<th>Street Name</th>
<th>Prior Posted Speed</th>
<th>New Posted Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airport Boulevard (IH-35 to Glissman Road)</td>
<td>45/50 MPH</td>
<td>40 MPH</td>
</tr>
<tr>
<td>Cameron Road (US 290 to Park Center Drive)</td>
<td>40 MPH</td>
<td>35 MPH</td>
</tr>
<tr>
<td>Grove Boulevard (Riverside Dr. to Montopolis Dr.)</td>
<td>45 MPH</td>
<td>40 MPH</td>
</tr>
<tr>
<td>Lamar Boulevard (Barton Skyway to SH71)</td>
<td>45 MPH</td>
<td>40 MPH</td>
</tr>
<tr>
<td>Montopolis Drive (Riverside Drive to Burleson Road)</td>
<td>45 MPH</td>
<td>35 MPH</td>
</tr>
<tr>
<td>Pleasant Valley Road (Webberville Rd. to Riverside Dr.)</td>
<td>45 MPH</td>
<td>35 MPH</td>
</tr>
<tr>
<td>Riverside Drive (Crossing Place to SH 71)</td>
<td>40/45 MPH</td>
<td>35/40 MPH</td>
</tr>
<tr>
<td>Stassney Lane (Teri Road to Burleson Road)</td>
<td>45/55 MPH</td>
<td>35/50 MPH</td>
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</tbody>
</table>
Office of the City Traffic Engineer has determined a 35 mph speed limit should be established in the Urban Core, with the following exceptions:

<table>
<thead>
<tr>
<th>Street Name</th>
<th>Prior Posted Speed</th>
<th>New Posted Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>7th Street (Brushy Street to Pleasant Valley Drive)</td>
<td>35/40 MPH</td>
<td>30 MPH</td>
</tr>
<tr>
<td>7th Street (Shady Lane to Airport Boulevard)</td>
<td>45 MPH</td>
<td>40 MPH</td>
</tr>
<tr>
<td>51st Street (IH-35 to Berkman Drive)</td>
<td>40 MPH</td>
<td>30 MPH</td>
</tr>
<tr>
<td>Cesar Chavez Street (Shady Lane to Airport Boulevard)</td>
<td>45 MPH</td>
<td>40 MPH</td>
</tr>
<tr>
<td>Cesar Chavez Street (Lamar Boulevard to San Antonio Street)</td>
<td>35 MPH</td>
<td>30 MPH</td>
</tr>
<tr>
<td>Lamar Boulevard (Cesar Chavez Street to 15th Street)</td>
<td>35 MPH</td>
<td>30 MPH</td>
</tr>
<tr>
<td>Manor Road (IH-35 to Berkman Drive)</td>
<td>35/40 MPH</td>
<td>30 MPH</td>
</tr>
<tr>
<td>Martin Luther King Jr. Boulevard (J.J. Seabrook Drive to US 183)</td>
<td>50 MPH</td>
<td>45 MPH</td>
</tr>
<tr>
<td>Oltorf Street (Alvin Devane Boulevard to Montopolis Drive)</td>
<td>45 MPH</td>
<td>40 MPH</td>
</tr>
</tbody>
</table>
Urban Core Study: Findings & Recommendations
Residential Streets and Downtown Core

Process

• Office of the City Traffic Engineer can recommend speed limit modifications based on an engineering study
• Texas Transportation Code, Section 545.356, and City of Austin Code, Chapter 12
• Residential streets: non-arterial (non-major) streets with some portion of adjacent front- or side-facing residential land use
• Sampled data on ~600 streets and calculated statistical values for ~100 to determine how the built environment influences prevailing speeds
Residential Streets and Downtown Core

Findings

• Speeds increase in a nearly linear relationship to street width

• Speeds are most influenced by on-street parking utilization, conflicts from driveways, and visual cues from adjacent front-facing residences

• Street widths less than 36 feet cause yield-flow operation
Residential Streets and Downtown Core

Recommendation 1

- Residential Streets 36 feet or less in width
  - Establish a citywide speed limit of 25 mph
  - Based on determination this is a safe and prudent speed by means of this engineering evaluation

- Residential Streets between 36 feet and 40 feet in width
  - Establish a speed limit of 25 mph if determined to be reasonable and prudent
  - Would be based on subsequent individual evaluation or by implementation of appropriate speed mitigation measures
Residential Streets and Downtown Core

Recommendation 1
Residential Streets and Downtown Core

Findings

• ATD studied residential streets with existing speed limits greater than 30 mph or widths greater than 36 feet
• ATD considered each residential street to determine whether more safe and prudent speed limits should be set consistent with other residential streets of similar operating characteristics
Residential Streets and Downtown Core

Recommendation 2

• Lower the speed limits on eighteen (18) specific residential streets to be consistent with others having similar operating characteristics and which do not meet with criteria under Recommendation 1.

• Streets and recommended speed limits:
  • Beckett Rd: 35
  • Berkman Dr: 30
  • Bilbrook Pl: 30
  • Bull Creek Rd: 30
  • Deer Ln: 30
  • Duval St: 30
  • Exchange Dr: 35
  • Exposition Blvd: 30
  • Hancock Dr: 30
  • Jones Rd: 30
  • La Crosse Ave: 35
  • Latta Dr: 35
  • Manor Rd: 30
  • McCarty Ln: 30
  • Oak Springs Dr: 30
  • Parker Ln: 30
  • Lakeshore Blvd: 30
  • St. Johns Ave: 30
Residential Streets and Downtown Core

Findings

• Downtown core is bounded by N Lamar Boulevard, E/W Martin Luther King Jr Boulevard, IH-35 Southbound Frontage Road, and Lady Bird Lake
• Much of the downtown core of the City was built on a grid layout with consistent block lengths
• Operation is typically controlled by traffic signals set at a progression speed or all-way stop signs
• Streets have consistent, and generally slower, prevailing speeds less than the nominally posted speed limit of 30 mph
Residential Streets and Downtown Core

Recommendation 3

• Set a speed limit of 25 mph on the Downtown Street network bounded by N Lamar Boulevard, E/W Martin Luther King Jr Boulevard, IH-35 Southbound Frontage Road, and Lady Bird Lake

• Streets to remain at 30 mph include N Lamar Boulevard, Guadalupe Street, Lavaca Street, and E/W Martin Luther King Jr Boulevard

• Streets to lower from 35 mph to 30 mph include E/W 15th Street and E/W Cesar Chavez Street

• Traffic signal timings should be reviewed and set to 25 mph progression speed where possible
Residential Streets and Downtown Core

Recommendation 3
Next Steps

Public Process

• May 15 – Urban Transportation Commission (Briefing and discussion)
• May 28 – Mobility Committee (Briefing and discussion)
• June 11 – City Council Meeting (Ordinance posted for approval)

Sign Installation Plan

Public Awareness Effort
Questions

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austintexas.gov/department/speed-management