SPUI Design Considerations for the Grand Parkway in Harris County

TexITE 2010 Winter Meeting
Frisco

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Project Location
Operational Improvements (2030)

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<tr>
<th>Intersection</th>
<th>Level of Service</th>
<th>Intersection Delay (sec)</th>
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<td>Diamond</td>
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<td>Clay Rd</td>
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<td>FM 529</td>
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<td>West Rd</td>
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Design Considerations

- Design Speed
- Sight Distance
- Left Turn Geometry
- Bridge Span Configuration
- Signalization
- Pedestrian Movements
- “Single Point Urban Interchange Design and Operational Analysis”
  - NCHRP Report 345, Transportation Research Board
Design Speed

- 25 to 35 MPH recommended
- Increase in design speed = Increase in main bridge span length
- Increase in design speed = Lower clearance times

Sight Distance
Left Turn Geometry

- Compound Curve
- Simple Curve

Left Turn Geometry

- Center Offset
- Median Width
Signalization

Pedestrian Movements