THE WOODLANDS
ORIGIN-DESTINATION STUDY
What is Origin-Destination (OD) study?

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• Study flow of traffic through an area or along a corridor

• OD Data can be retrieved using Bluetooth devices
How data was obtained?

- Portable Bluetooth devices
- Built-in Bluetooth devices in Montgomery County Precinct 3 traffic signals located along Woodlands Parkway
- Traffic counts using pneumatic tubes
What was identified?

- Traffic flow patterns and traffic trend coming to/from the Woodlands Area
- Robust sample size 2.4% to 5.2% of the daily traffic population
Data Collection Locations
Gate 1: IH 45, North of FM 1488

- 13% to The Woodlands
- 41% Pass-through on IH 45
- 32% to Sawdust
- 14% Other
Gate 2: SH 242, East of IH 45

- 31% to The Woodlands
- 16% Pass-through on IH 45 South
- 17% Pass-through on IH 45 North
- 22% to Sawdust
- 14% Other
Gate 3: Grand Parkway, East of Birnham Woods

- 14% to The Woodlands
- 10% Pass-through on IH 45 North
- 31% Pass-through on Grand Parkway (SH 99)
- 8% to Sawdust
- 5% Pass-through on IH 45 South
- 4% Pass-through Hardy Toll Road
Gate 4: Hardy Toll Road, South of Grand Parkway

- 25% to The Woodlands
- 49% Pass-through on IH 45 North
- 17% to Sawdust
- 9% Other
Gate 5: IH 45, South of Grand Parkway

- 22% to The Woodlands
- 50% Pass-through on IH 45
- 18% to Sawdust
- 10% Other
Gate 6: Grand Parkway, West of Kuykendahl

- 13% to The Woodlands
- 12% to The Woodlands on Kuykendahl Road
- 10% to The Woodlands on Gosling Road
- 25% Pass-through on IH 45
- 13% Pass-through on Grand Parkway (SH 99)
- 27% Other
Gate 7: FM 2978, South of Hardin Store

- 32% to The Woodlands
- 18% Pass-through on FM 2978
- 20% Pass-through on Hardin Store Road
- 30% Other
Gate 8: Hardin Store, West of FM 2978

- 40% to The Woodlands
- 23% Pass-through on FM 2978
- 37% Other
Gate 9: FM 1488, West of Tamina Road

- 25% to The Woodlands
- 18% Pass-through on FM 1488
- 10% Pass-through on FM 2978
- 47% Other
Gate 10: Honea Egypt, North of FM 1488

- 19% to The Woodlands
- 22% Pass-through on FM 1488
- 23% Pass-through on FM 2978
- 36% Other
Gate 11: Kuykendahl, North of Grand Parkway

- 36% to The Woodlands
- 18% Pass-through on Grand Parkway (SH 99)
- 46% Other
Gate 12: Gosling, North of Grand Parkway

- 42% to The Woodlands
- 8% to The Woodlands on Kuykendahl Road
- 11% Pass-through on Grand Parkway (SH 99)
- 39% Other
Cut-Through Traffic
Conclusions

• IH 45 and Hardy Toll Road North/South
  – 13%-25% to The Woodlands
  – 41%-50% Pass-Through
  – 17%-32% to Sawdust

• SH 242 and Grand Parkway from the East
  – 14%-31% to The Woodlands
  – 8%-22% to Sawdust
Conclusions

• FM 2978, Hardin Store Road, FM 1488 and Honea Egypt Road from the West
  – 19%-40% to The Woodlands

• Kuykendahl and Gosling from the South
  – 36%-42% to The Woodlands

• Grand Parkway from the West
  – 13% to The Woodlands
Conclusions

• Cut-Through Traffic in The Woodlands
  – 12% (3,400 veh/day) on Woodlands Parkway
  – 2% (300 veh/day) on Lake Woodlands
  – 13% (2,500 veh/day) on Research Forest
  – 5% (900 veh/day) on FM 2978
  – 9% (1,000 veh/day) on Hardin Store Road
  – 8% (2,600 veh/day) on FM 1488
  – 6% (1,700 veh/day) on Honea Egypt Road
Recommended Projects

- Collaborate with TxDOT to alleviate traffic congestion on IH 45 and the Woodlands Interchanges.
- Develop the Woodlands Loop.
- Widen Sawdust Road to eight lanes.
- Construct Budde/Richard Road under IH 45 to alleviate the IH 45 at Sawdust/Rayford Interchange.