Innovative Traffic Flow Designs

- Median Left-Turn (MLT)
- Single Point Urban Interchange (SPUI)

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Internal Bottleneck Locations
(1990 Era Review)
Typical Right-of-Way
(Preston Road @ Legacy Drive)
Existing Problem
(typical)
Existing Condition (typical)
Existing Condition
(typical)
Existing Condition (typical)
2005 Traffic Study
Summary

- Significant traffic congestion will occur at major intersections
- Conventional designs were least effective at reducing delay and improving air quality
- Benefit from innovative at-grade designs (i.e. Median Left-Turn and Single Point Urban Interchange)
- Council direction to develop innovative at-grade improvements
Recommended Design

- **Median Left-Turn Design** (MLT)
  - Provides a high Benefit-to-Cost Ratio (14.4)
  - Provides additional user benefits over “Added Lanes” or “Normalized Intersection” alternatives.
  - Requires minimal additional R/W
  - Minimizes disruption to traffic during construction.
  - Provides acceptable traffic flow for over 20 years.
  - Keeping existing U-Turn feature enhances operation
  - Increasing in use throughout the U.S. and abroad
MLT Flow Concept

*Modified* Median Left–Turn (MLT)
Project Progress
Preston Road @ Legacy Drive

- Project Cost $2.6M ($2M FHWA, $0.383M TxDOT, $0.25M Local $1.5 is ARRA monies)
- Project due to open 7/2010
- Monitor traffic flow/safety
Planned MLT Locations

- Legacy @ Preston Road (Under construction)
- Plano Prkwy @ Preston Road
- Spring Creek Pkwy @ Coit
Driver Expectation

Existing Condition at highway exit ramp
Existing Problem

*If Allowing Concurrent Movements*
SPUI Flow Concept
Single Point Urban Interchange (SPUI)
Permits Concurrent Left-turn Movements
Project Design
Parker Road @ US-75
SPUI Operation
Parker Road @ US-75
Project Progress
Parker Road @ US-75

- Project Cost $25M ($20M RTR, $0.75M TxDOT, $4M Local)
- Project due to open Fall 2010
- Monitor traffic flow/safety
Questions / Comments

- More Info at:
  www: Planotraffic.org

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