Chapter 6: Intersections

Conflict Points

3-leg intersection 4-leg intersection

9 conflict points 32 conflict points

Intersection Geometry

- Skewed or perpendicular
- Corner radius
- Turn lanes
- Sight distance
Traffic Control Types

- No control
- YIELD
- Stop
  - Two-way
  - All-way (e.g., 4-way)
- Traffic signal
- Roundabout

No Control

- Low volume
- Good sight lines

Yield Control

- Low delay
- Works well with good sight lines
Stop Control

- Use when approach sight triangle is blocked
- Causes delay
- Ineffective at speed control

Two-Way Stop Control

- Intersection of a main road and a side road
- Doesn’t delay main road traffic

All-Way Stop Control

- Intersection of comparable roads
  - Nearly equal volumes
- Delays all traffic
- Guidance in MUTCD
  - Entering volume
  - Crash history
  - Speed
Signals and Roundabouts

- Experienced P.E. should design
- Use when traffic volumes are too high for stop control
- More expensive than sign control

Traffic Signals

- High traffic volumes
- Work best with light side road traffic
- Eight warrants
  - One or more should be met
- Not a cure-all for safety problems

Roundabouts

- Work well for heavy left turn or crossroad traffic
- Safe and efficient if designed properly
- Difficult for pedestrians with poor vision
**Signal**

- Design and spacing affect safety
- Permit should be required

**Driveways**

- Design and spacing affect safety
- Permit should be required

**Access Management**

- Planning of land access
- Can reduce congestion and crash rates
- If your town is developing, act now!
- TRB’s Access Management website
  – www.accessmanagement.gov
Access Management Example

Intersection Problems

Intersection Problem 1
**Intersection Problem 2**

**Intersections**

- Intersection geometry
- Traffic control
- Driveways and access management