STREET CROSSINGS

Module 3 Part 1: General Principles
Learning Outcomes

At the end of this module, you will be able to:

- Describe how and why people cross the street
- Describe how drivers and pedestrians perceive each other
- Describe principles for users to cross a road safely
- Select midblock vs. intersection locations
- Identify how speed affects pedestrian safety
Why do people cross the street?

Because there’s someplace good on the other side
People shouldn’t have to run to cross a street
Ideally, we’d always cross at locations with positive control
But we can’t provide signals everywhere people cross
These people are not criminals…

- They’re simply trying to deal with a situation
Pedestrian behavior varies: Some use crosswalks, others don’t
Ped behavior varies: some cross midblock (and do so safely)
Ped behavior varies: others cross at signal (and do so safely)
General Principles

1. Pedestrians want & need to cross streets safely
2. Drivers need to understand pedestrians’ intent
3. Keep crossings short
4. Speed Matters
5. Pedestrians will cross where it’s convenient

☐ Good design makes use of these principles
Principle # 1

Pedestrians want & need to cross the street safely
Principle # 2

Drivers need to understand pedestrians’ intent
Principle # 3

Keep Crossings Short

Impacts of long crossing distance:
- Increases exposure time
- Increases vehicle-pedestrian conflict
- Increases vehicle delay
- Decreases ability of slower pedestrians to cross
Principle # 4: Speed Matters

- Drivers’ field of vision & ability to see pedestrians
- Drivers’ ability to react and avoid a crash
- Crash Severity
As speed increases, driver focuses less on surroundings
As speed increases, driver focuses less on surroundings
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Speed Affects Crash Avoidance

High speeds equate to greater reaction and stopping distance.
Australian PSA on Speed

- 60 kph vs. 65 kph
- 37 mph vs. 40 mph
Speed Affects Crash Severity

- High speeds lead to greater chance of serious injury & death

Adapted From:
Traffic-calming methods such as curb extensions help slow traffic.

Resources:
- PEDSAFE http://www.pedbikesafe.org/PEDSAFE/countermeasures.cfm
- ITE Traffic Calming Library http://www.ite.org/traffic/
Speed Management

- Speed management is the single most effective way to increase safety for all modes
- Speed limits must be realistic, consistent, and enforceable and able to be adjudicated.
German Speed Management
Comprehensive Speed Management Program
Speed Management Guidance and Strategic Initiatives

http://safety.fhwa.dot.gov/speedmgt/

https://safety.fhwa.dot.gov/local_rural/training/fhwasa010413spmgt/speedmanagementguide.pdf

USLIMITS

- Web-based expert advisor system.
- User friendly, logical, and objective.
- Calculates speed limit based on site specific information.
- https://safety.fhwa.dot.gov/uslimits/
USLIMITS Benefits

- Encourages consistent speed limits;
- Addresses Public and Political awareness acceptance and concern;
- Reduces speed differential;
- Supports the integrity of engineering, enforcement, and adjudication.
Discussion:

- What are your policies & practices regarding setting, enforcing, and adjudicating speed limits?
Principle # 5

Pedestrians will cross where it’s most convenient.
Discussion:

How far are you willing to go out of your way for an “improved” crossing?

Would you walk: 25’ 50’ 75’ 100’ 125’
What is the relative risk of crossing midblock vs. crossing at an intersection?
Midblock: Pedestrian faces 2 directions of traffic
Intersection: pedestrian must walk out-of-direction
Intersection: pedestrian faces other conflicts
Midblock vs. Intersection

- People choose based on their perceived risk
- The data is inconclusive
Let’s look at the State laws

- Duties of drivers toward pedestrians
- Duties of pedestrians
- Is crossing midblock illegal?
New Mexico laws governing pedestrian crossings

- Definition
- 12-1-13 CROSSWALK. “Crosswalk” means:
  - A. That part of a street at in intersection included within the connections of the lateral lines of the sidewalks on opposite sides of the street measured from the curbs or, in the absence of curbs, from the edges of the traversable roadway.
  - B. Any portion of a street at an intersection or elsewhere distinctly indicated for pedestrian crossing by lines or other markings on the surface. (66-1-4.3 NMSA 1978)
New Mexico laws governing pedestrian crossings

- Definition
- 12-1-69 SIDEWALK
- “Sidewalk” means that portion of a street between the curb lines, or the lateral lines of a roadway, and the adjacent property lines, intended for use of pedestrians. (66-1-4.16 NMSA 1978)
New Mexico laws governing pedestrian crossings

- Definition

- 12-1-30 INTERSECTION

- A. “Intersection” means:

- The area embraced within the prolongation or connection of the lateral curb lines, or, if none, then the lateral boundary lines of the roadways or two streets which join one another at, or approximately at, right angles, or the area within which vehicles travelling upon different streets joining at any other angle may come into conflict.

- Where a street includes two roadways thirty feet or more apart, every crossing of each roadway of such divided street by an intersecting street shall be regarded as a separate intersection. . . .

- B. The junction of an alley with a roadway shall not constitute an intersection.
New Mexico laws governing pedestrian crossings

- **12-6-14.2 Pedestrians’ right-of-way in crosswalks**
  - **A.** When traffic-control signals are not in place or not in operation the driver of a vehicle shall yield the right-of-way, slowing down or stopping if need be to so yield, to a pedestrian crossing the roadway within a crosswalk when the pedestrian is upon the half of the roadway upon which the vehicle is traveling, or when the pedestrian is approaching so closely from the opposite half of the roadway as to be in danger.
  - **B.** No pedestrian shall suddenly leave a curb or other place of safety and walk or run into the path of a vehicle which is so close that it is impossible for the driver to yield. <…>
  - **D.** Whenever any vehicle is stopped at a marked crosswalk or at any unmarked crosswalk at an intersection to permit a pedestrian to cross the roadway, the driver of any other vehicle approaching from the rear shall not overtake and pass such stopped vehicle. (Multiple-threat crash) (66-7-334 NMSA 1978)
New Mexico laws governing pedestrian crossings

- 12-6-14.4 Crossing at other than crosswalks
  - A. Every pedestrian crossing a roadway at any point other than within a marked crosswalk or within an unmarked crosswalk at an intersection shall yield the right-of-way to all vehicles upon the roadway.
  - <...>

- C. Between adjacent intersections at which traffic-control signals are in operation pedestrians shall not cross at any place except in a marked crosswalk. (66-7-335 NMSA 1978)

Designing for Pedestrian Safety – State Laws
Can You Cross Legally?

Is it legal to cross Beach Boulevard in the middle of a block, like at A or B?

- It’s only legal at A
- It’s only legal at B
- A and B are both legal places to cross
- Neither A nor B is a legal place to cross
Are There Legal Crosswalks?

Let’s look at the T-shaped intersection, where no crosswalk is marked. Can you legally cross here?
Questions?