Design Guidelines for Making Fort Wayne and Allen County a Bicycle-Friendly Community

Presented by Dawn Ritchie, Greenways Manager, City of Fort Wayne

Greenways and Trails

• Currently have 23-mile greenway network
• Plans for another 100+ miles of multi-use trails in Fort Wayne/New Haven/Allen County
• Non-profit, grass-root groups are leading the effort
Share the Road Campaign

• Ron Repka Foundation
  - “Screaming Yellow” Jerseys with Share the Road design on the back
  - PSAs on local cable from April – Aug
  - Billboards from April – May
  - Drivers’ Education Classes
  - Meet with Indiana Drivers’ Education Assoc in April to adopt statewide
  - 158 signs throughout the county
What We’ve Done So Far

• NIRCC Bicycle and Pedestrian Forum
• NIRCC Design Standards & Classifications
• Green City Energy & Environment Action Plan from Green Ribbon Commission
  - 25 miles of bike lanes by 12/31/09
  - 50 more miles of bike lanes by 12/31/12
• Design Guidelines
Pedestrian & Bicycle Facility Planning Manual

- Draft form
- Review Committee
- Chapters
  - Pedestrian Facilities
  - On-road Bicycle Facilities
  - Shared Use Paths
  - Traffic Calming
  - Signs, Pavement Markings & Signals

On-Road Bicycle Facilities

- Design based on the assumption that bicyclists will be operating under the same rules of the road as motorists
- Retrofitting existing roads with bicycle facilities that require 1) sharing; 2) shifting; or 3) creating new road space
- On-road facilities include bike lanes, wide curb lanes, paved shoulders and shared lanes
- Special design consideration paid to areas where motorists and bicyclists will be in conflict with each other like driveways, intersections, etc.
Bicycle Lanes

• One way facilities not physically separated from travel lanes
• Urban areas/towns: both sides of most highways, arterial streets and collector streets
• Rural areas: paved shoulders or shared lanes preferred
• Bridges: bike lane preferably on roadway but may be in sidewalk area
Curbed Streets

- Without on-street parking
  - 5 ft minimum
  - 6 ft preferred
  - 6 ft where use is high and/or grades exceed 5%

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Bicycle Lane, Curbed Street, with Parking

Diagram showing a street with a bicycle lane, curbed street, and parking spaces.
Uncurbed Streets

- Streets without parking
  - 4 ft minimum
  - 5 ft where speeds are 35 mph or less
  - 6 ft where use is high and/or grades exceed 5%
  - 6 ft where speeds exceed 35 mph

- Streets with parking
  - 5 ft minimum
  - 6 ft where speeds are 35 mph or less
  - 7 ft where use is high and/or grades exceed 5%
  - 7 ft where speeds exceed 35 mph

Bicycle Lane, Street or Highway, No Curb, No Parking
Bicycle Lane, Street or Highway, No Curb, with Parking

- 6 inch solid white stripe standard
- On street parking (right side of lane) marked with 4 inch solid white stripe or tick marks
- Do not extend striping through intersections (except at T-intersections) and crosswalks
- Dotted guidelines (2 ft dots and 6 ft spaces) may be extended through complex intersections

Striping
Pavement Markings with No Crosswalks

Pavement Markings with Crosswalks
At T-intersection w/ No Crosswalks

T-intersection with Crosswalks
Striping continued

- At intersections controlled by signals or stop signs and where right-turn lanes exist, use a dotted line with 2 ft dots and 6 ft spaces for the approach in lieu of solid striping for 50 – 200 feet
- Where sufficient width exists, place a separate through bike lane between the right-turn lane and the through travel lane
- At ramps and dedicated right-turn slip lanes, use a minimal turning radius or a compound curve to reduce entry speed

Markings

- Bicycle symbol with directional arrow on pavement
- Symbol with arrow on far side of each intersection no closer than 10-16 feet from intersection; additional symbols placed periodically along uninterrupted sections
Signing

- MUTCD signs R3-16 and R3-17 designate the presence of a bike lane
- Many other signs are available for special situations – refer to MUTCD Part 9
Wide Curb Lanes

- Town or urban streets with insufficient width for bike lanes
- 13 ft wide without on-street parking and 14 ft wide with on-street parking
- Where 15 ft or more width available, consider striping bike lanes or shoulders
Wide Curb Lane with Parking

- Rural – most road and highways
- Urban areas and towns – both sides of lower volume major streets where bike lanes are not appropriate

Paved Shoulders

- Rural – most road and highways
- Urban areas and towns – both sides of lower volume major streets where bike lanes are not appropriate
**Width for Paved Shoulders**

- Recommended minimum value of at least 4 ft wide (six feet is ideal)
- When guardrail, bridge railing or other lateral obstructions are present, provide an additional 1 ft of width
- On steep up-grades where bicyclists require maneuvering room or where downgrades exceed 5% or 0.6 miles, 5 ft minimum
- Where there are 30 or more heavy vehicles per hour in the outside lane, 5 ft minimum
- Where motor vehicle posted speed exceeds 50 mph, 5 ft minimum

**Striping for Paved Shoulders**

- 4 inch solid white edge line
Example of Shoulder Bike Lanes

Figure 13

Shoulder Bike Lanes on Street or Highway Without Curb or Gutter

4' (min.) Shoulder  12'  12'  4' (min.) Shoulder

Motor Vehicle Lanes
Shared Lanes

- Roads are as they exist with no special provisions for bicyclists.
- Common on neighborhood streets, low-volume (<500 ADT) rural roads and highways, and town or downtown centers with constrained right-of-way

Incremental Improvements

- Add usable riding surface to right of roadway edge by:
  - paving extra width – as little as 2 ft extra width is beneficial
  - reducing travel lane width
  - eliminating unneeded travel lanes
  - eliminating parking on one or both sides
Other Issues Addressed

• Bicycle-safe drainage grates
• Bicycle-friendly railroad crossings
• Bicycle-oriented signs and bicycle-sensitive traffic detection devices

Contact Information

• Dawn Ritchie
• (260) 427-6002
• Dawn.Ritchie@ci.ft-wayne.in.us