Planning for Bicycles in Central Oklahoma

OTEA
October, 2014
What is ACOG?

- Council of Governments
- Metropolitan Planning Organization
- Coordinates all regional transportation planning for Central Oklahoma
- Redistributes some federal transportation funding
  - Including bicycle and pedestrian funding
ACOG’s Bicycle and Pedestrian Program

• Bicycle and Pedestrian Advisory Committee
  • City Staff
  • Engineers
  • Planners
  • Elected Officials
  • Interested Citizens
  • Advocates

• Transportation Alternatives Program money

• Bicycle and Pedestrian Master Plan
ACOG’s bicycle priorities
(as established by BPAC in July 2013)

- Increase the number of cyclists on the road
  - “interested but concerned”
  - Utility transportation to activity centers
- Increase miles of facilities, decrease the number of injuries
- Designate/recognize a bike interstate system
  - Also arterials and neighborhood facilities
Types of Bicycle-Riding People

- No Way No How: 33
- Interested but concerned: 60
- Enthused & Confident: 6
- Strong & Fearless: 1

Legend:
- Strong & Fearless
- Enthused & Confident
- Interested but concerned
- No Way No How
Reasons you may be interested

• Secretary Foxx’s recent bicycle and pedestrian safety initiative
• Bicycles are good for health, wealth, congestion
• Some people don’t have or can’t afford a vehicle
• Citizen surveys stating Oklahomans want bikeable, walkable places
• New people moving in, bringing knowledge of other places
Bottom Line...

**What she wants from bike planning:**

to get where she needs to go without thinking her kids will die
Why she won’t ride

- Out of shape
- My hair
- My clothes
- Too far
- Not far enough
- Too hot
- Too cold
- Too scary

- Too unsafe
- Too exposed
- Drivers are too mean
- No showers
- Too many errands
- Emergency kid pick-up
- Not enough time
Problems Traffic Engineers can Solve

- Out of shape
- My hair
- My clothes
- Too far
- Not far enough
- Too hot
- Too cold
- Too scary

- Too unsafe
- Too exposed
- Drivers are too mean
- No showers
- Too many errands
- Emergency kid pick-up
- Not enough time
Shared Road Stress Levels

<table>
<thead>
<tr>
<th>Posted speed</th>
<th>Average Annual Daily traffic (AADT) volume</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Less than 2000</td>
</tr>
<tr>
<td>Less than 30 mph</td>
<td>Low Stress</td>
</tr>
<tr>
<td>30-40 mph</td>
<td>Medium-Low Stress</td>
</tr>
<tr>
<td>41-50 mph</td>
<td>Medium-Low Stress</td>
</tr>
<tr>
<td>Over 50 mph</td>
<td>Medium Stress</td>
</tr>
</tbody>
</table>
Low Stress, Heritage Hills, OKC
M-L Stress, Walker & 10th Midtown, OKC
High Stress, NW Expressway
Stress is an inversion of the way we have thought about bicycle facilities
Connectivity – facility “network”
Connectivity - low-stress network
## Miles of bike facilities vs miles of neighborhood streets

<table>
<thead>
<tr>
<th></th>
<th>Facility</th>
<th>Low Stress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Streets</td>
<td>6500 miles</td>
<td>6500 miles</td>
</tr>
<tr>
<td>Bikeable Streets</td>
<td>845 miles</td>
<td>4479 miles</td>
</tr>
<tr>
<td>Barrier Streets</td>
<td>5655 miles</td>
<td>2021 miles</td>
</tr>
<tr>
<td>%-age Bikeable</td>
<td>13%</td>
<td>69%</td>
</tr>
</tbody>
</table>
Stressful Streets are Problems to be Solved
Bicycle Facility Options, arranged (sort of) in order of protection

1. Shared Lane/Roadway
2. Sharrow
3. Wide Shoulder
4. Bike Lane
5. Buffered Bike Lane
6. Cycle Track

Special (and intriguing) option: Bicycle Boulevards
Shared Lane/Roadway
Wide Shoulder
Bike Lane
Buffered Bike Lane
Cycle Track
Official Guidance

Guide for the Development of Bicycle Facilities
2012 • Fourth Edition

Manual on Uniform Traffic Control Devices for Streets and Highways
2009 Edition

NACTO

Urban Bikeway Design Guide
April 2011 Edition
<table>
<thead>
<tr>
<th>Average motor vehicle operating speed</th>
<th>Less than 2000</th>
<th>2000-10000</th>
<th>Over 10000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Less than 30 mph</strong></td>
<td>Low Stress</td>
<td>Medium-Low Stress</td>
<td>Medium Stress</td>
</tr>
<tr>
<td></td>
<td>Signs, sharrows, bike boulevard or nothing at all</td>
<td>Sharrows or striped/buffered bike lanes; wide paved shoulder in rural areas</td>
<td>Striped or Buffered bike lanes</td>
</tr>
<tr>
<td><strong>30-40 mph</strong></td>
<td>Medium-Low Stress</td>
<td>Medium Stress</td>
<td>Medium High Stress</td>
</tr>
<tr>
<td></td>
<td>Sharrows or striped/buffered bike lanes; wide paved shoulder in rural areas</td>
<td>Striped or Buffered bike lanes</td>
<td>Buffered bike lanes or cycle tracks</td>
</tr>
<tr>
<td><strong>41-50 mph</strong></td>
<td>Medium-Low Stress</td>
<td>Medium High Stress</td>
<td>High Stress</td>
</tr>
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<td></td>
<td>Sharrows or striped/buffered bike lanes; wide paved shoulder in rural areas</td>
<td>Buffered bike lanes or cycle tracks</td>
<td>Cycle Path or shared use path, wholly separated.</td>
</tr>
<tr>
<td><strong>Over 50 mph</strong></td>
<td>Medium Stress</td>
<td>Medium High Stress</td>
<td>High Stress</td>
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<td>Striped or Buffered bike lanes</td>
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</tbody>
</table>
Low Stress:
Signs, Sharrows, Bike Boulevard or no treatment
M-L Stress:
Sharrows or striped bike lanes
High Stress: Cycle Tracks or Shared Use Paths
Barriers

• Those facilities address travel along streets, but not crossing

• 3 types of barriers in networks
  • Bridges or Underpasses
  • Major arterials
  • Neighborhoods that don’t connect

• Bridges & Underpasses are of particular concern
Connectivity - low-stress network
Locations that lack sidewalks and shoulders along bike routes.
A word about Safety Stats

- 1 Crash
- 2 Crashes
Additional Data from Tube Counters
Additional Data from Signal Videos
Permanent Bike/Ped Counters
Temporary Bike/Ped Counters
RECAP

• Planning for all users
• Safety Issues
• Low Stress Analysis
• Types of Bicycle Facilities
• Barriers
• Data Collection
RECAP

- Planning for all users
  - Safety Issues
  - Low Stress Analysis
  - Types of Bicycle Facilities
  - Barriers
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- New and interesting challenges to make our transportation system work for everyone.
We need you engineers to solve these problems with us!
QUESTIONS?

Kate Brady
Associate Planner—Bicycle, Pedestrian, Livability
Association of Central Oklahoma Governments
kbrady@acogok.org
405-778-6169