Complete Street Corridors Don’t Have to be Expensive!

Amy Rosepiler, PE
Kendra Schenk, PE, PTOE, RSP
Approaching the Project
Home Road and Derr Road
Springfield, Ohio
An Opportunity Presents Itself....
Why Bikes?
Safety Concerns

<table>
<thead>
<tr>
<th></th>
<th># Crashes</th>
<th>% of Total Crashes</th>
<th>% of Statewide Crashes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rear End</td>
<td>65</td>
<td>34.6%</td>
<td>20.7%</td>
</tr>
<tr>
<td>Angle</td>
<td>46</td>
<td>24.5%</td>
<td>17.6%</td>
</tr>
<tr>
<td>Left Turn</td>
<td>19</td>
<td>10.1%</td>
<td>3.9%</td>
</tr>
<tr>
<td>Wet Road</td>
<td>48</td>
<td>25.5%</td>
<td>19.4%</td>
</tr>
</tbody>
</table>
Repurposing the Road

- Road diet to create room
Recommendations

Buffer Bike Lane

- Existing Curb
- Varies 2.5' Minimum
- 5'
- 11'
- 11'
- 11'
- Varies 2.5' Minimum
- 5'

Cycle Track

- Existing Curb
- Varies 5' Minimum
- 11'
- 11'
- 11'
- 10'
The Existing Footprint
Safety in the Corridor

- Angle (76, 29%)
- Sideswipe - Passing (30, 12%)
- Left Turn (30, 12%)
- Fixed Object (21, 8%)
- Backing (10, 4%)
- Other (18, 7%)

Number of Crashes vs. Year

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What do we want?

The South Limestone Street Corridor is a welcoming, vibrant, and beautiful gateway to the City of Springfield that is bustling with people walking, biking, and driving. The corridor is cohesive in its visual design and the set of land uses it serves. People feel safe and comfortable in the corridor.

The corridor is known as the premier passageway to the City and is a true destination that attracts high quality development and growth.
A Tale of Two Corridors

- Heavy commercial/industrial land use vs residential and light commercial
- Getting stakeholders on the same page
Figure 8-6: 2 Lanes + Median + Sharrows + Wider Sidewalks & Tree Lawns
Roadway Realignment

Limestone Road

Selena Road

Limestone Road

Spring Street
Reconnecting Downtown
The Final Product
Highway Commercial & Neighborhood Commercial South

8'  12'  10'  12'  10'  12'  8'

Existing R/W 60'

Required R/W 72'

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Where do we put the bikes?

Figure 10-4: Recommended Scenario - Bicycle Network Improvements
Neighborhood Commercial North
Reusing Public Right of Way
Managing the Money – Phasing the Corridor
Funding Opportunities

- Safety
- CMAQ
R/W & Practical Design
North Main Street (MOT-48)
Dayton, Ohio

Ideas in motion.
The Project Corridor

4 Miles

City of Dayton

ODOT

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What we were challenged with..

- Primarily 4-lane cross section with turn lanes at major intersections
- Mix of commercial and residential land uses
The Existing Footprint

Curb-to-Curb Width 40 - 41 Feet
Safety in the corridor

2015 – 2017: 900 Crashes

Frequency of Crashes by Year and Severity

- 2015: 158 Fatal Crashes, 102 Property Damage Crashes, 1 Injury Crash
- 2016: 180 Fatal Crashes, 137 Property Damage Crashes, 3 Injury Crashes
- 2017: 199 Fatal Crashes, 117 Property Damage Crashes, 3 Injury Crashes

7 Fatalities
Safety in the corridor

Frequency of Crashes by Type of Crash

- Parked Vehicle
- Pedalcycles
- Other Non-

15%
14%
Injury Crash Locations
Fatal and Serious Injury Crash Locations
Safety in the corridor

43 Bicycle and Pedestrian Crashes

- 36 Pedestrian Crashes
- 7 Bicycle Crashes

Frequency of Bicycle and Pedestrian Crashes by Month

17 Crashes (40%)

Frequency of Crashes by Year

- 2015: 11 (26%)
- 2016: 16 (37%)
- 2017: 16 (37%)

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Safety in the corridor

Frequency of Bicycle and Pedestrian Crashes by Hour

15 Crashes (35%)
Identifying parallel routes
Identifying parallel routes

<table>
<thead>
<tr>
<th></th>
<th>Main Street</th>
<th>Riverside Drive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed Limit</td>
<td>35 mph</td>
<td>40 mph</td>
</tr>
<tr>
<td>Lane Widths</td>
<td>10 feet</td>
<td>12 feet</td>
</tr>
<tr>
<td>Signalized Intersections</td>
<td>16</td>
<td>5</td>
</tr>
<tr>
<td>AADT</td>
<td>18,400</td>
<td>14,400</td>
</tr>
</tbody>
</table>
Initial Cross Section Brainstorm

1. 14' Sharrow
2. 12' Center turn lane
3. 14' Sharrow
4. 7' Parking lane
5. 10' Drive lane
6. 10' Drive lane
7. 3' Bike lane
8. 5' Bike lane
9. 5' Bike lane
10. 5' Bike lane
11. 5' Bike lane
12. 10' Drive lane
13. 10' Drive lane
14. 10' Drive lane
15. 4' Buffer
16. 11' Drive lane
17. 11' Drive lane
18. 4' Buffer
19. 5' Bike lane
20. 5' Bike lane
21. 5' Bike lane
22. 10' Drive lane
23. 12' Center turn lane
24. 8' Parking lane
25. 12' Drive lane
26. 12' Drive lane
27. 8' Parking lane
# Vulnerable User Prioritization

Maintain lane continuity....

<table>
<thead>
<tr>
<th>Use extra width for pedestrians....</th>
<th>Lanes are too wide...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Like narrow lanes...</td>
<td></td>
</tr>
<tr>
<td>Include two way left turn lane...</td>
<td>Not sure how much bicycle traffic.....</td>
</tr>
<tr>
<td>Gives complete street feel – good for traffic calming...</td>
<td>Not enough cycling in the area for cycle track...</td>
</tr>
</tbody>
</table>

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Potential Cross Section to Prioritize Pedestrians

<table>
<thead>
<tr>
<th>Width</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8'</td>
<td>Parking lane</td>
</tr>
<tr>
<td>10'</td>
<td>Drive lane</td>
</tr>
<tr>
<td>12'</td>
<td>Center turn lane</td>
</tr>
<tr>
<td>10'</td>
<td>Drive lane</td>
</tr>
</tbody>
</table>
Changes in the corridor

SHORTER PEDESTRIAN CROSSING DISTANCES WITH PARKING BULB-OUTS
Changes in the corridor

CURVE CORRECTIONS WITHIN EXISTING CURB
Changes in Corridor

- Curb extension
- Lighting
- Signage
- Strategic midblock crossings
Questions?

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