15\textsuperscript{th} Street
Separated Bike Lane
Pilot Project

Interim Results
and Next Steps

August 2010
Downtown Bicycling

- Bicycle lanes
- Separated lanes (aka Cycle Tracks)
Why Separated Bike Lanes?

- Research has shown that Cycle Tracks can increase ridership by 18% to 20%, compared to 5% to 7% for bike lanes.
- Provide greater clarity about expected behavior on the part of both cyclists and motorists.
- Can eliminate conflicts between bicycles and parking cars.
- Provide adequate space removes the danger of “car dooring”
Promoting Cycling

• The 2005 District of Columbia Bicycle Master Plan calls for the proportion of bicycle trips to increase from about 1% of all trips in 2000 to at least 3% in 2010 and 5% of all trips in the District of Columbia by 2015.

• Current bicycle mode share is 2.3% (work trips). Reaching the 2010 and 2015 goals will be possible if D.C. continues developing a safe bicycle network.

• NYC commuter cycling increased 26% in 2009 following 2008 installation of cycle tracks on central roadways.
Enhanced Safety

9th Avenue Bike Lane & streetscaping in New York City *

• Injuries to all street users down 56%
• Reported crashes down 48%
• Injuries to pedestrians down 29%
• Injuries to cyclists down 57%

*Dates conducted: 12/1/04 to 11/31/07 & 12/1/07 to 11/30/08
Avoids Curbside Conflicts

- Parking
- Loading
- Valet Parking
- Buses

Photo by davereid2
Goals of Pilot 15th St. Bike Lane

- Calm traffic
- Provide more options for cyclists
- Provide DDOT with a better understanding for future cycle tracks
- Increase bicycle trips
Pilot Results

- **Reduced speeds, especially > 45mph**

<table>
<thead>
<tr>
<th>Collection Dates</th>
<th>85th Percentile mph</th>
<th>Median mph</th>
<th>% &gt; 25 mph</th>
<th>Total &gt; 25 mph</th>
<th>% &gt; 45 mph</th>
<th>Total &gt; 45 mph</th>
<th>Total Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul-09</td>
<td>35.3</td>
<td>28.6</td>
<td>65.60%</td>
<td>6651</td>
<td>1.60%</td>
<td>161</td>
<td>10138</td>
</tr>
<tr>
<td>Jul-10</td>
<td>28</td>
<td>22</td>
<td>26.40%</td>
<td>2990</td>
<td>0.03%</td>
<td>3</td>
<td>11000</td>
</tr>
<tr>
<td>Change</td>
<td>-7.3 mph</td>
<td>-6.6 mph</td>
<td>-59.8%</td>
<td>-3661</td>
<td>-98.28%</td>
<td>-158</td>
<td>862</td>
</tr>
</tbody>
</table>
Pilot Results

More Cycling on 15th Street

• 40% increase in number of cyclists (15th and T)

• 12% decrease n sidewalk riding (southbound, 15th and P)

• (14% are riding the wrong way (northbound) in new cycletrack)
Pilot Results

• Fewer Vehicles on the Street
  39 fewer peak hour vehicle trips daily

<table>
<thead>
<tr>
<th>Mode</th>
<th>Rate</th>
<th>Mode split of non-cyclists (Rate x 1.0233)</th>
<th>Number of trips shifted from each mode on 14th/15th Street (-87)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car (Drive alone or carpool)</td>
<td>43.82%</td>
<td>44.84%</td>
<td>-39</td>
</tr>
<tr>
<td>Transit</td>
<td>35.74%</td>
<td>36.57%</td>
<td>-32</td>
</tr>
<tr>
<td>Walk</td>
<td>12.11%</td>
<td>12.39%</td>
<td>-11</td>
</tr>
<tr>
<td>Bike</td>
<td>2.33%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
INTERCEPT SURVEY RESULTS
15th St. Separated Bike Lane Users

Why 2-Way?

- 81% of respondents would prefer a 2-way cycle track on 15th
- 49% of respondents said they do not feel safe riding Northbound in the sharrow lane
- 44% of respondents said they sometimes ride Northbound in the cycle track (currently designated Southbound only)
Why Extend the Cycle Track?

• 33% of respondents reported riding more now that the cycle track is in place
• 7% of respondents said they didn’t ride a bike for transportation prior to the installation of this cycle track
• Average daily commute of respondents was 3 miles
• 55% of respondents indicated that they had recently considered purchasing a new bicycle or bicycle equipment
Non-cyclists

- Non-bicyclists observed in peak hours in one day:
  - 33 Joggers
  - Four razor scooters
  - Three motorized wheelchairs
  - Three skateboarders
  - Three pedestrians
  - One electric bicycle
  - One motorbike
  - One pedestrian with a roller suitcase

- Cycle track also acts as an urban trail
While driving on 15th Street, have you noticed driver behavior change since the 15th Street cycle track was installed last fall?

- Much safer and calmer
- Somewhat safer and calmer
- No change
- Somewhat more dangerous and/or aggressive
- Much more dangerous and/or aggressive

NEIGHBORHOOD SURVEY RESULTS
15th St. Cycle Track Users
In your opinion, if DDOT eliminated the northbound “sharrow” symbols and made the separated cycle-track 2-way, would this make driving on 15th Street safer and/or more comfortable?
In your opinion, does the Leading Pedestrian Interval (LPI) cause a noticeable delay?

Circle chart showing the majority of respondents answered 'Yes'.
Flex Posts

What is your opinion of the aesthetics of the yellow flexposts?

- Attractive
- Ugly
- No opinion

What is your opinion of the effectiveness of the yellow flexposts to keep motor vehicles out of the cycle track on 15th St.?

- Very effective
- Somewhat effective
- Not effective
- No opinion
Return on Investment Study $$$

As part of a larger initiative to look at the costs and benefits of transportation projects, DDOT analyzed the Return on Investment (ROI) of the 15th Street project.
## ROI Summary

<table>
<thead>
<tr>
<th>Factors</th>
<th>Year 1</th>
<th>Net Present Value over 6 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discount Factor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Budget/Direct Costs - Allocations</td>
<td>$89,750.00</td>
<td>$(89,750.00)</td>
</tr>
<tr>
<td>Indirect Costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Driving related to installation</td>
<td>$136.00</td>
<td>$(136.00)</td>
</tr>
<tr>
<td>Crash resulting in property damage instead of injury</td>
<td>$4,841.21</td>
<td>$(28,343.34)</td>
</tr>
<tr>
<td>Direct Benefits - Sources</td>
<td></td>
<td>$0</td>
</tr>
<tr>
<td>Indirect Benefits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>39 trips/day switched from vehicle to bicycle, 3.17 miles average, 250 days/year ($2.73/mile)</td>
<td>$84,377.48</td>
<td>$493,996.37</td>
</tr>
<tr>
<td>Increased Activity (71 new trips from vehicles and transit)</td>
<td>$9,088.00</td>
<td>$53,206.60</td>
</tr>
<tr>
<td>Injury Reduction (0.89 Serious injuries/year)</td>
<td>$296,815.00</td>
<td>$1,737,733.10</td>
</tr>
</tbody>
</table>

| Total Return on Investment of the Project | $2,166,706.73 |
| Return on Investment Ratio             | 19.33          |
What Will It Cost Taxpayers & What Kind of Benefits Result?

• Current cycle track cost under $90,000 to install .9 miles
• Planned extension is estimated at approximately $250,000 for the full 2.1 mile length
• Projected annualized benefits amount to over $360,000 for the existing cycle track, or a projected $2,167,000 over a six year period.
Next Step: Extension of the 15th St. Cycle Track

- Connect DC Neighborhoods to Downtown Employment Areas
- Create additional linkages in the bicycle network.
- Provide high quality non-motorized route for residents and tourists
- Implement successful practices from pilot project
- Increase bicycle trips

*Photos from Montreal
Approach

- Install 2-way cycle track from E St. to Euclid St. NW
- Create separation between bicycles, cars, and pedestrians
- Maintain existing motor vehicle operations and parking insofar as possible
Implementation

• September - October 2010
• 4 Weeks “construction” (phased)
Connections

• Pennsylvania Ave Bike Lanes
• L street Cycle Track
• M street Cycle Track
• Q street Bike Lanes
• R street Bike Lanes
• T Street Bike Lanes
• V street Bike Lanes
• W street Bike Lanes
• Existing Bike Lanes at 15th & Euclid