Williamstown Bike Path

Brendan Bossidy, Nikki Caravelli, Annie Tewksbury, Grace Weatherall
Project Goals

- Design a bike path connecting South Street to Water Street
- Increase bikeability of campus and surrounding area
- Improve campus and town health and safety
- Work with College goal of addressing climate change by encouraging behavioral shifts
Background

- Current state of campus and town bikeability
- Future Downtown Developments
  - Water Street
  - New Dorm
  - New Hotel
  - Science Center
Background

Bikeability Study

- 2011 campus bikeability study
- Alta Planning + Design: nation’s leading active transportation firm
Background

Campus Survey

- Established demand for better biking spaces
- Established need for East-West route

“This [path] is something I would use all the time.”

“A dedicated bike lane would be fantastic.”

As a pedestrian, how do you feel about the use of sidewalks on campus by cyclists?

<table>
<thead>
<tr>
<th>Love it</th>
<th>15</th>
<th>3.9%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Like it</td>
<td>32</td>
<td>8.3%</td>
</tr>
<tr>
<td>Neutral</td>
<td>189</td>
<td>49.2%</td>
</tr>
<tr>
<td>Dislike it</td>
<td>113</td>
<td>29.4%</td>
</tr>
<tr>
<td>Hate it</td>
<td>35</td>
<td>9.1%</td>
</tr>
</tbody>
</table>

How likely would you be to use a new bike path connecting Garfield House and Weston Field?

<table>
<thead>
<tr>
<th>Likely</th>
<th>116</th>
<th>30.2%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Somewhat Likely</td>
<td>108</td>
<td>28.1%</td>
</tr>
<tr>
<td>Neither Likely nor Unlikely</td>
<td>66</td>
<td>17.2%</td>
</tr>
<tr>
<td>Somewhat Unlikely</td>
<td>46</td>
<td>12%</td>
</tr>
<tr>
<td>Unlikely</td>
<td>48</td>
<td>12.5%</td>
</tr>
</tbody>
</table>
Background

Safety

- Growing national problem
- Inadequate legal structure
- Williams College problem
- Need for education and promotion of bike culture
- Need for biking safety on campus

19% Feel Unsafe

<table>
<thead>
<tr>
<th>Answers by Cyclists</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>100</td>
</tr>
<tr>
<td>Somewhat Agree</td>
<td>92</td>
</tr>
<tr>
<td>Neither Agree nor Disagree</td>
<td>30</td>
</tr>
<tr>
<td>Somewhat Disagree</td>
<td>40</td>
</tr>
<tr>
<td>Disagree</td>
<td>12</td>
</tr>
</tbody>
</table>

19.0%
Section One
Section One
Section Two
Section Three
Section Three
Section Four
Section Four
Design Standards

- Separate, off-road paths
- On-road one way lanes
  - Separate Accommodation
  - Shared motor-bike lanes
  - Advisory lanes
Shared-Use/Bicycle Only Path (Off Road)
Separate Accommodation for All Users (On-Road)

Source: MassHighway
Shared Bicycle/Motor Vehicle Accommodation (On-Road)
Advisory Bike Lanes (On-Road)

- 4-8 foot bike lane, 16 foot center travel lane, removal of median line
- No current laws or standards
- Ideal for narrow roads with low levels of traffic
Advisory Bike Lanes (On-Road)

- Used in heavily in Europe, Minneapolis, Edina, and planned for Portland
- Wave of the future in bike infrastructure
- Shown to reduce average speed of cars, increase cyclists on the road, and reduce accidents
- Good fit for roads on route:
  - Narrow Roads
  - Future Increased Use
    - Stetson Court Dorm
    - Hotel
    - Water Street Development
    - Tourism

Advisory Lane in Minnesota
ADA Accessibility

- Rehabilitation Act of 1973
- Americans with Disabilities Act of 1990
Bike Path Concerns

- Environmental Laws
- Economic and Financial Factors
Environmental Concerns

- Wetlands Protection Act
  - Riparian Buffer Zones
- Impermeable Surface Regulations
- Endangered Species Act
Economic Concerns

- Construction
- Obstacles
Bike Path Benefits

- Environmental
- Health and Safety
- Economic
Environmental Benefits

- Climate Change
- Decreased Driving
Health and Safety Benefits

- Increased Activity
- Fewer Traffic Accidents
Economic Benefits

- Global
- Cities
- Personal
Matrix Scoring

<table>
<thead>
<tr>
<th>Cost:</th>
<th>Lowest Cost</th>
<th>Highest Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feasibility:</td>
<td>Fewest Obstacles</td>
<td>Most Obstacles</td>
</tr>
<tr>
<td>Environmental Impact:</td>
<td>Least Environmental Impact</td>
<td>Most Environmental Impact</td>
</tr>
<tr>
<td>Safety:</td>
<td>Least Dangerous</td>
<td>Most Dangerous</td>
</tr>
<tr>
<td>Desirability:</td>
<td>Most Desirable</td>
<td>Least Desirable</td>
</tr>
<tr>
<td>Accessibility:</td>
<td>Most Access</td>
<td>Least Access</td>
</tr>
<tr>
<td></td>
<td>On Road Options</td>
<td>Off Road Options</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Option A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Option E</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feasibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Impact</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desirability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accessibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Section One
Section One

Separate Accommodation for All Users
Score: Cost 1, Feasibility 1, Environmental Impact 2, Safety 2, Desirability 2, Accessibility 1,
Section Two
Section Two

Advisory Lanes

Score: Cost 1, Feasibility 1, Environmental Impact 1, Safety 2, Desirability 2, Accessibility 1
Section Three
Section Three

Advisory Lanes
Score: Cost 1, Feasibility 1, Environmental Impact 1, Safety 2, Desirability 2, Accessibility 1
Section Four
Section Four

Advisory Lanes
Score: Cost 1, Feasibility 1, Environmental Impact 1, Safety 2, Desirability 2, Accessibility 1
Proposed Path
Option B

- Separate Accommodation for All Users
- Shared Bike/Motor Accommodation

Key:
- On-Road Bike Lanes
Further Recommendations

General Bikeability

● Williamstown bikeability
  ○ Water Street
  ○ Route 2
  ○ Syndicate Road

● Ashuwillticook/Mohawk
Further Recommendations

General Bikeability

- Spring Street Contraflow Lane
- Spring Street two-way

To what extent do you agree with the following statement?

<table>
<thead>
<tr>
<th>Option</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>62</td>
<td>16.1%</td>
</tr>
<tr>
<td>Somewhat Agree</td>
<td>82</td>
<td>21.4%</td>
</tr>
<tr>
<td>Neither Agree nor Disagree</td>
<td>27</td>
<td>7%</td>
</tr>
<tr>
<td>Somewhat Disagree</td>
<td>70</td>
<td>18.2%</td>
</tr>
<tr>
<td>Disagree</td>
<td>39</td>
<td>10.2%</td>
</tr>
<tr>
<td>N/A</td>
<td>104</td>
<td>27.1%</td>
</tr>
</tbody>
</table>

28.4% =

“I feel safe biking on Spring Street”
Further Recommendations

On-Campus Infrastructure

- Established need for bike racks and overnight storage

“I find the lack of bike racks on campus extremely frustrating. Many buildings have no place to park a bike and others do but they are extremely overcrowded”

-Survey Respondent
Further Recommendations

On-Campus Infrastructure

● Lighting
● Safety education and on-campus biking information
● Signs and pavement markings
● Information on Advisory Lanes
Acknowledgements

- **Interviewees:**
  - Andrew Groff
  - Rita Coppola-Wallace
  - Dave Boyer
  - Jason Hoch
  - Craig Wilbur

- Sarah Gardner
- Survey Respondents
- Shaun Garvey