Benefits of Shared Use Paths

FOR YOUR COMMUNITY

Shared use paths make economic, environmental, and social contributions to communities. This primer will help you understand the impacts of four paths in different Massachusetts contexts. The first step in measuring trail impacts is to determine who is using the trail, when, where, why, and how.
Case Studies in Massachusetts

**Minuteman Commuter Bikeway**
- 10 miles in length
- Connects to rail/train service
- Fully paved surface
- Popular route often busy with users

**Northern Strand Community Trail**
- 8-12 miles in length
- Mix of asphalt and stone
- Mostly local trips
- Connects to a larger network of bikeways and trails

**MCRT-Norwottuck**
- 11 miles in length
- Fully paved surface
- Passes through various landscapes (rural farmland, residential neighborhoods, university campus)

**Cape Cod Rail Trail**
- 26 miles in length
- Fully paved surface
- Mostly recreational trips
- Connects to beach access and other bicycle routes
- Attracts tourism

**Photo by Ray Bernoff.**

**Photo by Jeff Dietrich.**

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The Data: When are Paths Used the Most?

Total Trips (July-October 2019)

<table>
<thead>
<tr>
<th>Trail</th>
<th>Total Trips</th>
<th>Total # of surveys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minuteman</td>
<td>322,241</td>
<td>412,371</td>
</tr>
<tr>
<td>Northern Strand</td>
<td>94,017</td>
<td>254,287</td>
</tr>
<tr>
<td>MCRT-Norwottuck</td>
<td>126,382</td>
<td>447</td>
</tr>
<tr>
<td>Cape Cod</td>
<td>124,018</td>
<td>108 Minuteman</td>
</tr>
</tbody>
</table>

Total trips on all paths (July-October 2019): 666,658

Daily Trips

<table>
<thead>
<tr>
<th>Trail</th>
<th>AVG. WEEKEND</th>
<th>AVG. WEEKDAY</th>
<th>BUSIEST DAY</th>
<th>PEAK BIKE: Highest One Day Count</th>
<th>PEAK PED: Highest One Day Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minuteman</td>
<td>3,023</td>
<td>2,466</td>
<td>4,305</td>
<td>July 7</td>
<td>2,504</td>
</tr>
<tr>
<td>Northern Strand</td>
<td>735</td>
<td>776</td>
<td>1,161</td>
<td>October 19</td>
<td>492</td>
</tr>
<tr>
<td>MCRT-Norwottuck</td>
<td>1,397</td>
<td>887</td>
<td>2,315</td>
<td>August 11</td>
<td>1,693</td>
</tr>
<tr>
<td>Cape Cod</td>
<td>1,330</td>
<td>885</td>
<td>2,751</td>
<td>September 1</td>
<td>2,401</td>
</tr>
</tbody>
</table>

Average Hourly Counts- Combined Bicyclists and Pedestrians
**Benefits: What do shared use paths bring to communities?**

Shared use paths can transform communities by benefiting health, economies, transportation systems, access to local destinations, mobility, crime, and the environment.

Residents share their sentiments on paths in their communities:

- **The path is the envy of my friends and family...they wish they had something like it in their town.**
- **I love living near the path. It's very convenient, and I never want to not live on it.**
- **There is nothing like early morning or dusk on the path. The light, the tranquility... seeing [my] community enjoying themselves is always uplifting.**

**“RESOURCE FOR THE COMMUNITY”**

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**Economy**

Shared use paths can contribute significant economic benefits to their communities by providing access to businesses within walking and biking distance, and by creating an attraction for visitors.

The average Path user spends...

- **$4 to $9** on weekdays, and
- **$6 to $13** on weekends

Those surveyed noted that shared use paths influenced home, apartment and recreational equipment purchases.

**Benefits to study trail communities (July-October 2019)**

<table>
<thead>
<tr>
<th>Trail</th>
<th>Jobs Created or Sustained</th>
<th>Total Economic Impact</th>
<th>Total Taxes Generated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minuteman</td>
<td>26</td>
<td>$2.6M</td>
<td>$361K</td>
</tr>
<tr>
<td>Northern Strand</td>
<td>4</td>
<td>$367K</td>
<td>$36K</td>
</tr>
<tr>
<td>MCRT-Norwottuck</td>
<td>20</td>
<td>$1.7M</td>
<td>$250K</td>
</tr>
<tr>
<td>Cape Cod</td>
<td>99</td>
<td>$9.2M</td>
<td>$1.5M</td>
</tr>
</tbody>
</table>

Numbers based on surveys from one city along each trail.
Getting enough physical activity may prevent 1 in 10 premature deaths. Of the following conditions, it may also prevent...

- 1 in 15 cases of heart disease
- 1 in 8 cases of colorectal cancer
- 1 in 12 cases of diabetes
- 1 in 8 cases of breast cancer

Just 150 minutes of physical activity per week measurably improves your health. That’s just **one 22-minute walk a day**. In addition to improving physical health, exercise and exposure to nature can **improve mental health**, including reducing stress, anxiety and depression.

### How much activity is “enough”? **Higher activity levels, lower healthcare costs.**

- 10 minutes of exercise per week: Inactive
- 150 minutes of exercise per week: Active

AVERAGE ANNUAL HEALTHCARE EXPENDITURES


How does Massachusetts measure up?

**Our shared use paths save our health and our healthcare dollars.**

Percentage of surveyed trail users whose physical activity increased because of the presence of the trail in their community:

- 31%
- 40%
- 28%
- 14%

Altogether, the four counties involved in this study had an estimated healthcare cost savings of...

**$2.9M**

Estimate based on weekly trail use in peak summer (Jul-Oct).
Transportation

The presence of shared use paths increases the likelihood residents will walk or bike to work.

An average of 13% of total commuters in the path areas (half mile buffer) commute by active mode.

Path users avoided 90,509 one-way motor vehicle commuter trips from July-October 2019.

<table>
<thead>
<tr>
<th></th>
<th>Minuteman</th>
<th>Northern Strand</th>
<th>MCRT-Norwottuck</th>
<th>Cape Cod</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elderly Population (65+)</td>
<td>5,420</td>
<td>2,800</td>
<td>555</td>
<td>75</td>
</tr>
<tr>
<td>Youth Population (19-)</td>
<td>7,635</td>
<td>6,050</td>
<td>900</td>
<td>35</td>
</tr>
<tr>
<td>Population with a Disability</td>
<td>2,885</td>
<td>3,000</td>
<td>385</td>
<td>30</td>
</tr>
<tr>
<td>Population of a Racial or Ethnic Minority</td>
<td>6,145</td>
<td>9,720</td>
<td>475</td>
<td>10</td>
</tr>
<tr>
<td>Population Experiencing Poverty</td>
<td>7,275</td>
<td>5,870</td>
<td>560</td>
<td>30</td>
</tr>
<tr>
<td>Households with Limited English Speakers</td>
<td>1,125</td>
<td>3,740</td>
<td>30</td>
<td>1</td>
</tr>
<tr>
<td>Households with No Vehicle Access</td>
<td>1,375</td>
<td>2,230</td>
<td>300</td>
<td>5</td>
</tr>
</tbody>
</table>

This equates to 170,638 fewer vehicle miles traveled.

Access & Equity

People from all over the world use the paths, but those who live near receive the most direct benefits. The following shows estimates of the communities that can readily access the path within 10 to 15 mins using low-stress walking and biking routes.

Types of Essential Destinations:

Number of essential destinations near each trail:
Impacts on Perceived Crime

Shared use paths can deter crime by creating lively, inhabited spaces, where residents can look out for one another. Crime perceptions are based on intercept surveys.

“Do you think the path has affected crime rates in the area?”

<table>
<thead>
<tr>
<th>Trail</th>
<th>Crime Rates are Unaffected</th>
<th>Less Crime Occurs</th>
<th>More Crime Occurs</th>
</tr>
</thead>
<tbody>
<tr>
<td>MINUTEMAN</td>
<td>24%</td>
<td>76%</td>
<td></td>
</tr>
<tr>
<td>NORTHERN STRAND</td>
<td>38%</td>
<td>62%</td>
<td></td>
</tr>
<tr>
<td>MCRT-NORWOTTUCK</td>
<td>38%</td>
<td>1%</td>
<td>62%</td>
</tr>
<tr>
<td>CAPE COD</td>
<td>26%</td>
<td>74%</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>32%</td>
<td>68%</td>
<td></td>
</tr>
</tbody>
</table>

Environment

The reduction in single-occupancy vehicle trips attributed to shared use path commuting reduces harmful pollutants like particulate matter, nitrogen oxide, volatile organic compounds, and carbon dioxide released into the air.

- 9.6 mile trip weekdays (11 on weekends)
- 90,500 fewer single-occupancy vehicle trips

\[\text{Average weekday daily savings} = \frac{90,500 \text{ fewer trips}}{\text{days}} \times \text{average savings per trip} = \frac{90,500}{60} \times \text{savings per trip} = \$23,000\]

\[\text{Average weekend day savings} = \frac{90,500 \text{ fewer trips}}{365} \times \text{average savings per trip} = \frac{90,500}{365} \times \text{savings per trip} = \$3,600\]

\[\text{Annual environmental savings} = \frac{90,500 \text{ fewer trips}}{365 \times 12} \times \text{average savings per trip} = \frac{90,500}{4,380} \times \text{savings per trip} = \$6.4M\]

Total Environmental Savings (July-October 2019)*

<table>
<thead>
<tr>
<th>Trail</th>
<th>Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>MINUTEMAN</td>
<td>$1,265,000</td>
</tr>
<tr>
<td>NORTHERN STRAND</td>
<td>$32,000</td>
</tr>
<tr>
<td>MCRT-NORWOTTUCK</td>
<td>$784,000</td>
</tr>
<tr>
<td>CAPE COD</td>
<td>$95,000</td>
</tr>
<tr>
<td>Total of All Four Trails</td>
<td>$2.18M</td>
</tr>
</tbody>
</table>

As the data shows, shared use paths attract tourism, provide a safe and comfortable route for commuting, create local jobs, and help reduce carbon emissions. They encourage people to get outside, exercise, connect with friends and neighbors, and contribute to their local economies.

*Numbers rounded to nearest 50.
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