Bicycle and Pedestrian Connectivity Study Phase 2

BICYCLE INSPECTION BY CHIEF OF POLICE WILLIAM H. BROWN

Enthusiasm for bicycles ran high in 1897, as evidenced by this race through town the day after Independence Day.
Process
STEP I
Public Participation and Outreach
STEP II
Planning and Goal Development
STEP III
Problem/Need/Opportunity Identification
STEP IV
Project Initiation
STEP V
Public Consultation and Education
STEP VI
Environmental/Design/ROW Process
STEP VII
Programming of Funds
STEP VIII
Procurement
STEP IX
Construction

PROCESS OUTCOMES
1. RTP Outreach activities, and development of the Bike and Ped Task Force
2. RTP Goals and Objectives, and Bicycle & Pedestrian Level of Service Findings
3. Project Need Form (PNF)
4. Project Initiation Form (PIF) Identification of appropriate funding. Definition of appropriate next steps. Project review committee action.
5. Workshops and Public Meetings Present priority projects identified by communities to the public. Distribute educational safety info.
7. Identification of Funding Opportunities Regional TIP, TE, CMAQ, SRTS and other funding sources.
8. Construction Bids and Contract Selection
9. Built Project

Phase
Phase 1
2011
Phase 1
2011
Phase 2
2012
Phase 2
2012
Phase 3
2013
Phase 3
2013
Phase 4
2014
Phase 4
2014

Prepared By
OCPC
OCPC Municipalities and Task Force
Municipality (Assisted by OCPC)
Municipality (Assisted by OCPC)
OCPC
OCPC MassDOT Municipality
OCPC
OCPC MassDOT Municipality
Selected Contractor

Prepared By
OCPC
OCPC Municipalities and Task Force
Municipality (Assisted by OCPC)
Municipality (Assisted by OCPC)
OCPC
OCPC MassDOT Municipality
OCPC
OCPC MassDOT Municipality
Selected Contractor
Bicycle and Pedestrian Connectivity Study: Phase 1 Outcomes

Public Participation and Outreach Activities

Distribute Educational Safety Information
Bicycle and Pedestrian Connectivity Study: Phase 1

Outcomes

Development of a Regional Advocacy Group

Regional Bicycle and Pedestrian Task Force Meeting
## Bicycle and Pedestrian Connectivity Study: Phase 1 Outcomes

### Development of Regional Goals and Objectives

#### Goal 1: Enhance and Protect Regional Mobility

<table>
<thead>
<tr>
<th>OUTCOMES</th>
<th>METRICS</th>
<th>PROPOSED PERFORMANCE MEASURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a. Increased bicycle and pedestrian infrastructure networks and amenities in the region</td>
<td>- Pedestrian Compatibility Index (pedestrian level of service)</td>
<td>- By 2015, determine bicycle and pedestrian short and long term infrastructure projects.</td>
</tr>
<tr>
<td></td>
<td>- Bicycle Compatibility Index (bicycle level of service)</td>
<td>- By 2020, complete 40% of short-term infrastructure projects identified in the 2011 Bicycle Connectivity Study</td>
</tr>
<tr>
<td>1b. Increased multimodal transportation centers (Transit Oriented Development) that serve business, residential, and mixed-use developments</td>
<td>- Support the development of TODs in Kingston, Plymouth, Bridgewater, Hanson, and Easton Commuter Rail stations</td>
<td>- By 2035, implement 50% of the identified long-term bicycle and pedestrian projects</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- By 2035, Kingston, Plymouth, Halifax, Hanson, Whitman, and Easton Commuter Rail stations will be TOD designated</td>
</tr>
</tbody>
</table>
## Bicycle and Pedestrian Connectivity Study: Phase 1

### Outcomes

Development of Regional Goals and Objectives

---

#### Goal 2: Foster Sustainable, Healthy, and Livable Communities

<table>
<thead>
<tr>
<th>OUTCOMES</th>
<th>METRICS</th>
<th>PROPOSED PERFORMANCE MEASURES</th>
</tr>
</thead>
</table>
| **2a.** Improved networks that accommodate pedestrians and bicycles | - Pedestrian Compatibility Index (pedestrian level of service)  
- Bicycle Compatibility Index (bicycle level of service) | - By 2035, create a contiguous, region-wide network of sidewalks, walkways, bicycle paths, and bicycle lanes  
- By 2035, bring Pedestrian Level of Service B or better at intersections with high pedestrian activity |
| **2b.** Revitalized downtowns and town centers | - Additional mixed-used developments with bicycle and pedestrian amenities in downtowns and town centers | - Support local initiatives, which enact, implement and enforce laws and regulations regarding pedestrian and bicycle traffic in downtowns.  
- Support policies that encourage cluster development.  
- By 2035, Kingston, Plymouth, Hanson, Whitman, and Easton Commuter Rail stations will be in designated TODs |
### Bicycle and Pedestrian Connectivity Study: Phase 1

#### Outcomes

## Development of Regional Goals and Objectives

**Goal 3: Ensure Equity and Public Participation**

<table>
<thead>
<tr>
<th>OUTCOMES</th>
<th>METRICS</th>
<th>PROPOSED PERFORMANCE MEASURES</th>
</tr>
</thead>
</table>
| 3 a. Improved public participation and awareness of new initiatives and programs | - Number of active multidisciplinary task forces  
- Number of surveys and feedback forms during the year | - Meet quarterly with stakeholders and the public to discuss key Environmental Justice issues on Sustainability and Livability, bicycle and pedestrian, regional mobility, and climate change  
- Develop surveys during the year to collect public opinion on different transportation issues |
| 3 b. Partnered with other agencies with similar goals and objectives | - List of existing and potential partners | - Extended partnerships with agencies that have similar goals and objectives |
Goal 4: Improve Transportation Safety and Security

<table>
<thead>
<tr>
<th>OUTCOMES</th>
<th>METRICS</th>
<th>PROPOSED PERFORMANCE MEASURES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4 a. Reduced transportation-related fatalities</strong></td>
<td>-Annual crash data report &lt;br&gt;-Road safety audits</td>
<td>- Reduce the number of transportation-related fatalities in the Old Colony region by 40 percent in 2035 compared to 2008.</td>
</tr>
<tr>
<td><strong>4 b. Reduced transportation-related injuries</strong></td>
<td>-Annual crash data report &lt;br&gt;-Road safety audits</td>
<td>- Reduce the number of transportation-related accidents in the Old Colony region by 20 percent in 2035 compared to 2008.</td>
</tr>
</tbody>
</table>
Goal 5: Promote Environmental Protection and Climate Change Adaptation

<table>
<thead>
<tr>
<th>OUTCOMES</th>
<th>METRICS</th>
<th>PROPOSED PERFORMANCE MEASURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 a. Reduced carbon emissions, improved energy efficiency, and reduced dependence on oil</td>
<td>-1993 to 2008 Department of Motor Vehicle (Average Vehicular Daily Miles Traveled in the Old Colony region)</td>
<td>- Decrease fuel consumption per vehicle-miles traveled, per passenger miles traveled, and per (net) freight ton-mile</td>
</tr>
<tr>
<td>5 b. Increased the use of environmentally sustainable practices in transportation to prevent climate change effects</td>
<td>- Data comparison of 2000 and 2010 US Census Journey to Work data</td>
<td>- Increase percent of transit vehicles using alternative fuels</td>
</tr>
<tr>
<td>5 c. Increased development of waste water treatment capacity and drainage systems</td>
<td>- 2011 Climate Change Roadway Drainage and Runoff Program</td>
<td>- By 2035, stop increasing greenhouse emissions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- By 2035, reduce average daily miles traveled to 10% below 2008</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- By 2035, increase the use of transit by 20% compared to 2000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Increase carpool/vanpool and non-motorized transportation modes such as bicycle and walking compared to 2000 census</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- By 2035, upgrade 20% of the drainage systems in areas identified as high risk in the Climate Change Study</td>
</tr>
</tbody>
</table>
Bicycle and Pedestrian Connectivity Study: Phase 1

Outcomes

Development of Regional Goals and Objectives

Goal 6: Promote Policies that Ensure Economic Vitality and Sustainability

<table>
<thead>
<tr>
<th>OUTCOMES</th>
<th>METRICS</th>
<th>PROPOSED PERFORMANCE MEASURES</th>
</tr>
</thead>
</table>
| 6 a. Increased mixed use centers, re-use of existing infrastructures, and transit oriented development districts in the Old Colony region | - Number of Transit Oriented Development Studies  
- Number of Economic Development Studies  
- Number of projects under Chapter 40B of the state’s affordable housing law and the 40R smart growth act  
- Number of Brownfield projects | - By 2035, Plymouth, Halifax, Hanson, Whitman, and Easton Commuter Rail stations will be TOD designated  
- By 2035, all OCPC communities will have overlay districts that encourage economic development |
| 6 b. Pursued policies of sustainable development | - Number of communities that opt to modify their subdivision rules and regulations to require bicycle/pedestrian easements to tie into a binding adopted region-wide bicycle/pedestrian system | - Revision of local Subdivision Rules and Regulations to require bicycle/pedestrian easements and paths to adjacent property, located so as to tie into binding adopted region-wide bicycle/pedestrian system |
Bicycle and Pedestrian Connectivity Study: Phase 1 Outcomes

Evaluation Tools:

Between Segments

Bicycle and Pedestrian Level of Services (BLOS and PLOS) models developed by the 2010 Highway Capacity Manual

At Intersections

Pedestrian Infrastructure Index model developed by FHWA to evaluate the pedestrian conditions at intersection
Bicycle and Pedestrian Connectivity Study: Phase 1 Outcomes

**Stoughton Pedestrian Level of Service Findings**

**Stoughton Bicycle Level of Service Findings**

*Level of Service is a grade assigned to a roadway based on factors that facilitate or impede connectivity.*

**Good**

**Poor**
**Process**

**STEP I**
Public Participation and Outreach

**STEP II**
Planning and Goal Development

**STEP III**
Problem/Need/Opportunity Identification

**STEP IV**
Project Initiation

**STEP V**
Public Consultation and Education

**STEP VI**
Environmental/Design/ROW Process

**STEP VII**
Programming of Funds

**STEP VIII**
Procurement

**STEP IX**
Construction

**PROCESS OUTCOMES**

1. RTP Outreach activities, and development of the Bike and Ped Task Force

2. RTP Goals and Objectives, and Bicycle & Pedestrian Level of Service Findings

3. Project Need Form (PNF)

4. Project Initiation Form (PIF)
   - Identification of appropriate funding
   - Definition of appropriate next steps
   - Project review committee action

5. Workshops and Public Meetings
   - Present priority projects identified by communities to the public
   - Distribute educational safety info

6. Plans, Specs and Estimates (PS&E)
   - Environmental Studies and Permits
   - Right-of-Way Plans, Permits

7. Identification of Funding Opportunities
   - Regional TIP, TE, CMAQ, SRTS and other funding sources

8. Construction Bids and Contract Selection

9. Built Project

**Phase**

**Phase 1**
2011

**Phase 2**
2012

**Phase 3**
2013

**Phase 4**
2014

**Prepared By**

**OCPC**

**Municipality (Assisted by OCPC)**

**OCPC**

**MassDOT**

**Selected Contractor**

Prepared By

OCPC Municipalities and Task Force

Municipality (Assisted by OCPC)

OCPC

OCPC MassDOT Municipality

Selected Contractor
Bicycle and Pedestrian Connectivity Study: Phase 2
Data Collection

Sidewalks Inventory

Crosswalk and Sidewalk in West Bridgewater

Trails Inventory

Trail in East Bridgewater  Seaside Trail in Plymouth
Bicycle and Pedestrian Connectivity Study: Phase 2
Next Steps

Data Analysis, Evaluation, and Prioritization

1. Pick routes for community bike network
2. Identify “weak links” in bicycle or pedestrian network
3. Prioritize sites needing improvement
4. Evaluate alternate treatments during design
Bicycle and Pedestrian Connectivity Study: Phase 2

Next Steps

Identify “weak links” in pedestrian network
Bicycle and Pedestrian Connectivity Study: Phase 2

Next Steps

Identify “weak links” in pedestrian network
Bicycle and Pedestrian Connectivity Study: Phase 2

Next Steps

Explore Complete Streets Design Guideline

Complete streets feature curb cuts, high visibility crosswalks, and other designs for travelers with disability
Bicycle and Pedestrian Connectivity Study: Phase 2
Next Steps

Explore Complete Streets Design Guideline

Designs for travelers with disability
Bicycle and Pedestrian Connectivity Study: Phase 2

Next Steps

Transit Benefits

Connect transit to work, to shops, to schools, to homes through appropriate planning and design for transit users.
Bicycle and Pedestrian Connectivity Study: Phase 2
Next Steps

Pick Routes for Community Bike Network
Bicycle and Pedestrian Connectivity Study: Phase 2

Next Steps

Identify “weak links” in bicycle network
Bicycle and Pedestrian Connectivity Study: Phase 2
Next Steps

Explore Bicycle Design Guide Options

Conventional Bike Lanes
Buffered Bike Lanes
Contra-flow Bike Lanes
Left-Side Bike Lanes
Bicycle and Pedestrian Connectivity Study: Phase 2

Conclusion

Five Things to Make a Bicycle and Pedestrian Friendly Community:

1. Political Leadership
2. Advocates
3. Municipal staff, who are supported and trained and walk or bike on a regular basis
4. A Really Good Bicycle and Pedestrian Plan
5. Money (the money tends to come when you have all the other factors in place)