

# **COMPLETION REPORT FOR THE GREENWAY LINKS PROJECT**

## **A Basis for Funding Proposals and Planning Next Steps**

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## **1. Campaign Vision: the Power of the Network**

Boston has an incomparable park legacy, and in particular, a legacy of greenways—tree-lined, non-motorized travelways—through the Emerald Necklace, along the Charles River, and elsewhere. These benefit our urban region in countless ways, as beautiful places for safe walking and bicycling by people of all ages and abilities, as environmental and public health assets, and as economic stimuli.

Yet most of these special places are disconnected from each other and are distant from many who would benefit most from access to them, and are therefore both underutilized and under-supported by our private and public sectors. The Greenway Links Initiative advances the vision of a seamless network of green corridors across the urban core, from the Mystic River in the North to the Neponset River in the south. We seek to extend, connect and improve existing greenways via safe, traffic-separated green links. This will help to create an urban park system for the 21st century that reflects our city's current needs.

Building on the efforts of many others in government and the non-profit sectors, we believe this parallel set of urban travelways for work and recreation will give children and families from every neighborhood easier access to sports fields and open spaces; relieve pressure on our at-capacity roads and transit systems; improve climate change resiliency and sustainability; improve Boston's quality of life and economic competitiveness and help knit together our neighborhoods.

In 2013, with seed funding from the Trustees Collaborative for Boston Parks, Waterways and Open Space and the Lawrence and Lillian Solomon Foundation, the Greenway Links Initiative hired an expert consultant who conducted a fieldwork-verified inventory of existing greenway paths and created a draft map showing how they can be united into a seamless, 200-mile emerald network. The proposed routes are harmonized with existing greenway, path, rail-to-trail, and municipal bicycle network upgrade and construction plans.

The resulting plan is both comprehensive and comprehensible, forming a user-friendly network for non-motorized urban travel that serves every neighborhood. We also developed selection criteria for Greenway Links projects and a list of priority projects in the three rivers area. Finally, we launched a beta website and presented the Greenway Links vision in several venues. These key steps have created a platform for further implementation efforts.

Now that the first phase of this initiative, described in this report, is complete, over the next two year the Greenway Links Initiative will:

- form and administer a core Steering Committee and a larger Advisory Committee to guide this effort;
- refine our vision map into a visually compelling and easily understood concept map with a clear planning rationale;
- create a “tool kit” of materials that make it easier for public agencies and private actors to adopt priority Greenway Links projects;

- identify the most likely opportunities for quick project success;
- monitor planned and proposed infrastructure projects to ensure they address greenway connectivity;
- continue to connect with new allies and to build support for the initiative;
- work with the regional Green Routes Coalition, focused on state-level policy changes that would benefit off-road projects across the Commonwealth.

The idea of an urban park system has deep Boston roots, but the city and the way we use urban space have changed since the era of Olmsted. This effort will help Boston build on our open space legacy to meet the changing needs of our thriving city at the heart of a dynamic region.

## 2. Definitions & Context

- What is a “Greenway”?

Greenways form a multi-use linear park system. A greenway is a protected route or shared use path or pair of bicycle and pedestrian paths that run through or along a parkland or waterfront. Some of these parks are narrow linear parks within historic rail right-of-ways or along the edge of a river, while others are within larger park areas or in former industrial areas. All of the greenways are designed especially for non-motorized travel. Depending on their location, they may be used primarily for recreation or for transportation, but all of them will provide a safe and comfortable trip for users of all ability levels. Greenways are green in two ways: they run along parklands or waterways and are lined with trees and they promote sustainable forms of transportation. The Greenway system will include only a green subset of a city’s much more extensive bicycle and pedestrian networks; not every street with a sidewalk, bike lane, or even cycle track will meet the Project’s criteria.

- What constitutes a “Greenlink”?

The greenlinks tie the greenways together and expand on them to create a seamless network of green routes. A greenlink could take one of several forms. It may be a tree-lined historic parkway where space is taken from the median, carriageway, shoulder or travel lane to create a protected space for cyclists and pedestrians. It may be a quiet street which receives additional traffic calming measures and plantings to enhance its value in the green route network. If the best link between greenway segments is a more traffic-heavy street, the Project envisions the use of cycle tracks or similar protected facilities as well as safe sidewalks and greenery.

- Context:

The Greenway Links Initiative fully integrates complementary efforts by the Boston Transportation Department (through its Connect Historic Boston, Green Links Planning effort, and Complete Streets Policy), the Boston Bicycle Program (through its Bike Network Plan), MassDOT (through its Mode Shift, Healthy Transportation Policy Directive, Community Path and Neponset River efforts, Charles Basin Connectivity Study, and Bay State Greenways Plan),

as well as with DCR (through its work on regional Parkways, Mystic River Ped/Bike Master Plan, and Lower Basin bridges). It also see itself as part of the broader regional Green Routes Coalition's efforts to help the state move towards policies that facilitate off-road and traffic-separated non-motorized routes.

### 3. Work Completed to Date

#### A. Map

- More than 200 miles of trails and roadways have been selected, researched, visited, and analyzed before being added to the Greenway Links Vision Map.
- Initial routes were selected based on maps produced by early members of the coalition through tracing ideal routes in group discussions, produced by Northeastern University Professor Peter Furth along with his students and colleagues, and produced by the Boston Globe in conjunction with David Loutzenheiser. Additional routes were added based on projects in the Boston Bicycle Network plan and finding potential routes through underserved areas.
- The Vision Map is designed to be legible and energize a coalition of actors and advocates to advance the Network by signing, improving, and installing the necessary infrastructure to create a connected and cohesive network of Green Routes.

#### B. Ranking System and Methodology

Potential Greenway Links projects were ranked on the following criteria. This is not considered a final or definitive ranking. Still, it is the first known effort to begin prioritizing these kinds of projects on a regional basis.

- **Current Status – where is this segment in the concept-to-construction continuum?**
  - + Under construction/existing - segments are complete or nearing completion – 4 points
  - + Funded – segments are moving forward with designs and the money to implement them – 3 points
  - + Designed/planned – segments are either designed or planned and the necessary right of way has been purchased – 2 points
  - + Proposed – segments may be ideas that many people have suggested, may appear on official city plans, or may have been proposed for the first time on this map – 1 point
- **Network Value – what is the value of this segment to creating the primary Green Routes Network?**
  - + High – these segments are part of the core network of loops and lines that provide access along the Mystic, Charles, and Neponset Rivers or connections between them – 3 points

- + Medium – these segments are part of the supplemental network that complements the core network with increased connectivity and alternative routes – 2 points
- + Low – these segments are beautiful greenways that are destinations in themselves rather than important connections within the network; this includes small loops within the network or lines extending out from the network – 1 point
- **Technical Difficulty – how challenging will it be to incorporate this into the network given the segment’s current condition?**
  - + Fine as it is – 4 points
  - + Needs only minor upgrades – 3 points
  - + Needs more extensive work – 2 points
  - + Needs major planning, design, permitting, or construction – 1 point

Once categorized in this way, clusters of projects can be selected based on whether they should be sponsored, monitored, or supported by the Greenway Links group. Segments that are considered to be complete, adopted by others, long-term, or low priority are retained in the database and on the map, but will not be the focus of this initiative.

#### C. Meetings and Rides

- Over the summer, an informal advisory group met to discuss the design and contents of the vision map.
- David Loutzenheiser of the MAPC organized four bicycle rides to show possible routes within the network. These included a trip along the East Boston Greenway and into Winthrop, along the Mystic River Paths and Alewife Greenway, down the Canterbury Link to the Neponset and back through Stony Brook Reservation, and through Brookline and Newton primarily on parkways.

### 4. Next Steps

#### A. Outcomes

- Broad acceptance of the Green Routes vision as a desirable goal by public agencies and community leaders as evidenced by the inclusion of Greenway Links projects in government planning documents and funding lists.
- Identification of high priority projects and key opportunities to construct pieces of the overall system.
- A “tool kit” of drawings, feasibility analyses, and conceptual designs that move projects past the difficult first steps.

#### B. Tasks

- Form an expanded Steering Committee representing key constituencies.
  - Advocates, funders, public & private sector leaders.
- Promote the Vision
  - Continue broadening buy-in of the Vision Map.
  - Branding
  - Outreach to a broad range of potentially supportive groups
- Monitoring Opportunities
  - Track projects and trends to see where Greenway Links priority projects overlap with other efforts to increase the chances of success for both.
  - Provide support to other groups that are working on projects that will move the region towards full implementation of the Vision
- Moving Projects Into Action
  - Do feasibility analyses and conceptual designs needed to move a project through the initial steps towards full funding.
  - Advocate for the projects to keep them high on the priority list of public funding and operational agencies.

## 5. Possible Strategic Approaches (Neither Prioritized nor Mutually Exclusive)

### A. Create a Project Committee and Secure Allies to Prioritize & Prepare Projects for Implementation

Develop a structure for the project with an established steering committee that includes parks, transportation, environment, and neighborhood development advocates

1. Pursue grant funding and hire full- or part-time staff person
2. Develop an official group to coordinate this project moving forward with clear mandate and tasks
3. Determine what work should be done by volunteers versus paid staff.
4. Create a master contact list of steering committee, subcommittees, and other affiliated members
5. Establish a clear way organizations can endorse or become members of the coalition

6. Establish a clear way that individuals can become “friends” of this project and define what the relationship is (do people donate a certain amount of money or just sign up? what does being a friend entail?)
7. Create official name and branding materials
8. Expand the coalition and awareness of it by getting support from local neighborhood groups, with particular emphasis on outreach for projects in low-income and minority areas including identification of a community champion who buys into the vision and will share it with others.

## B. Promote The Vision

Prioritize building public awareness and support for the vision of a regional greenways system so that particular projects are seen, by proponents as well as decision-makers, not as stand-alone efforts but as part of something bigger. This will require monitoring the status of projects within the urban core and around the region, as well as providing appropriate support. The goal is not merely to help get projects completed but to ensure that they are designed, particularly at intersections, to link strategically to the network.

Build and expand on the website in order to educate the general public and partner advocacy organizations about the full network and targeted projects

1. Public officials working on the Casey Arborway, Route 9, Neponset Greenway connections, Rutherford Ave, and Melnea Cass should be presented with the network to understand how their project is part of creating a really safe, protected, and green system
  - LivableStreets representatives should meet with MassDOT representatives Steve McLaughlin and Michael Trepanier to ensure that design and implementation of the Casey Arborway project effectively link the Arboretum, the Southwest Corridor, and Franklin Park with a Green Routes caliber path system. They should also be made aware of the larger project in order to better explain decisions for off-road bike facilities and the need to invest in high-quality path design with ample tree canopy.
  - LivableStreets representatives should meet with Brookline officials and advocates to ensure that design and improvements to the Route 9 connection effectively link the Riverway and Olmsted Park paths, particularly for bicycles. Crossing improvements and network signage should meet the standards of a Green Routes project. They should also be made aware of the larger project in order to better explain the necessity of their project in the context of the network.



- LivableStreets representatives should meet with Valerie Burns at the Boston Natural Area Network and state officials leading the planning efforts for the Neponset Greenway connections to ensure that the designs are effective in linking this piece of the Green Routes Network together. They should also be made aware of the larger project in order to gain momentum for the project as part of the larger network.
- LivableStreets representatives should meet with BTD and BRA planners (Vineet Gupta, Devin Quirk, and Ted Schwartzberg) to ensure that the design and implementation of the Rutherford Avenue project effectively link the Charles River paths and the Charlestown Harborwalk with the Mystic River Paths through a Green Routes caliber path system. They should also be made aware of the larger project in order to better explain decisions for off-road bike facilities and the need to invest in high-quality path design with ample tree canopy.
- LivableStreets representatives should meet with BTD and BRA planners (particularly Pat Hoey) to ensure that design and implementation of the Melnea Cass project effectively preserves and improves upon South Bay Harbor trail and its connections to the Southwest Corridor and the continuing portions north of Mass Ave with a Green Routes caliber path system. They should also be made aware of the larger project in order to better explain decisions for off-road bike facilities and the need to invest in high-quality path design with ample tree canopy.

#### C. Easy Wins for a Better Network: Closing Gaps

Identify projects already in motion, or even funded, that would – or could with slight modification – close gaps in the proposed Greenway system; work to ensure that these are actually completed in a greenway system compatible manner. Also, look for other short gaps that could be easily and inexpensively bridged but that are not currently “in play” and look for ways to get them addressed.

1. Develop a tool kit of best practices for spot improvements as an easy-to-share document, using existing guides such as Boston’s Complete Streets plan and NACTO’s guides as the starting point.
2. Select 4 – 6 projects to focus on fixing/completing
3. Identify and work with local partners in the area around each project.
4. Do targeted advocacy and outreach to connect the dots that are already close together where spot treatments can make a big difference for connectivity particularly on paths

5. Identify and collaborate foundational funders who can cover the costs of paving, signage, and other way-finding strategies to make these gap closures occur
6. Conduct traffic counts or user studies in problem areas to advocate for change and compare with the after-improvement data

D. Get Buy-in From City, Regional, and State Planning Bodies

Engage DCR, MassPort, MassDOT, CTPS/MPO, MAPC, and municipal planners around the value of improving long segments of the network on roads where there is currently excess capacity and space for short term improvements while continuing to plan for long-term, high quality solutions.

1. Generate public support for adding bike lanes to Hammond Pond, West Roxbury, and VFW parkways in order to link the Charles (or at least Commonwealth Ave in Newton) to the Neponset
  - Finalize and publish a map emphasizing the importance of these routes within the existing and proposed network.
  - Develop a toolkit of simple solutions while preserving a more radical vision for high quality bicycle and pedestrian facilities
  - Meet with DCR officials including Dan Driscoll and Kevin Hollenbeck (in conjunction with Nicole Freedman) to push for changes as part of both the Boston Bicycle Network Plan and the Green Routes Network Vision
2. Generate public support (in partnership with the Harborwalk) to make the waterfront more multi-modal.
  - Turn 1st Street in South Boston and Constitution Road in Charlestown into great greenways with lanes and the capacity for future cycle tracks.
  - Finalize and publish a map emphasizing the importance of these routes within the existing and proposed network.
  - Develop a toolkit of simple solutions while preserving a more radical vision for high quality bicycle and pedestrian facilities
  - Meet with MassPort officials including Andrew Hargens and Jim Doolin (in conjunction with Nicole Freedman) to push for changes as part of both the Boston Bicycle Network Plan and the Green Routes Network Vision

E. Set High Standards

Lead Boston and the surrounding communities to set the new national standard for urban greenways and linear parks.

1. Develop visualizations and language that LivableStreets prepares for these projects that reflects the role of the segment as part of a broader high quality network
2. Work with steering committee and partner organizations to develop standards and benchmarks that explicitly outline what qualifies as a “Green Route”
3. Design and post signage along the exemplary existing Green Routes
4. Reach out to the communities and campaigns listed in the “Other Metropolitan Precedents” section (see 1C above) to ask about their benchmarks for success. Possible questions for collaboration include:
  - Have you studied the outcomes of your network?  
Ex. lower obesity rates, air quality improvements, mode shift
  - How did you broaden/define your coalition? What strategies did you use to balance different agendas?
  - How did you initially draw your geographic boundaries?

F. Identify Allies

What groups are working on this issue locally? Nationally? Internationally? Allies listed in Appendix I are potential partners due to geographic overlap or similar missions. The strongest allies are often those individuals who commit themselves and their organization to this project because they believe in its mission. The success of the Greenway Links Initiative hinges on identifying and working with these key allies in government, academic institutions, consultants, businesses and advocates.

# Appendix A

## Vision Map

Greenway Links in the Urban Core - Vision Map



### The Green Routes Initiative

The Green Routes Initiative strives to build a mixed-use network of linear parks and green streets to connect and expand the existing greenways in the inner core of the Boston region. By widening and improving existing paths, constructing new paths and cycle tracks, and enhancing neighborhood streets with a dense tree canopy and expanded storm water management systems, the Green Routes Network will **enhance the livability and sustainability of the region**. Building on the natural beauty of the rivers and harbor, the legacy of Olmsted, the foresight of the Southwest Corridor, and recently completed trails, this network will link the Neponset, the Charles, and the Mystic for transportation or recreation by people on foot or with a set of self-powered wheels. Whether for people walking, running, pushing strollers, skating, or cycling, and for every age of resident and visitor, the Green Routes Network will help them to link to places along a beautiful series of linear parks.

### Map Overview

This vision map shows the full build-out of the proposed Green Routes Network. It does not capture every good idea in the area but rather shows an intuitive set of loops and lines in Boston and adjacent communities that have the potential to meet the high standards of greenways and greenlinks. The nearly **200 miles** depicted are only the core of a much broader regional network to be planned and expanded in the years ahead.

### What is a "Greenway"?

Greenways form a multi-use linear park system. A greenway is a protected route or shared use path, or pair of bicycle and pedestrian paths, that runs **through or along a parkland or waterfront**. Some of these parks are narrow linear parks within historic rail right-of-ways or along the edge of a river, while others are within larger park areas or in former industrial areas. All of the greenways are designed especially for non-motorized travel. Depending on their location, they may be used primarily for recreation or for transportation, but all of them will provide a safe and comfortable trip for users of all ability levels.

### What constitutes a "Greenlink"?

The greenlinks tie the greenways together and expands on them to create an interconnected network of green routes. A greenlink could take one of several forms. It may be a tree-lined historic parkway where space is taken from the median, carriageway, or a lane diet to create a protected space for cyclists and pedestrians. It may be a quiet street which receives additional traffic calming measures and plantings to enhance its value in the green route network. In order to connect the network, additional tree-lined streets may get cycle tracks or similar protected facilities; however, not every street with a cycle track will be added to the Green Routes Network.

## Appendix B

### Status Map and Complete List of Segments



## Greenway Links in the Urban Core - Segment Status Map

### Green Routes Evaluation

**STATUS:** Where is this segment in the concept to construction phase?

- 4 - Existing or Under Construction
- 3 - Funded
- 2 - Designed, includes planned projects and purchased right-of-way
- 1 - Proposed, by outside organization or this initiative

**VALUE:** What is the value of this segment to the core Green Routes network?

- 3 - High, includes waterside paths except wharves
- 2 - Medium, supplements a "high" route
- 1 - Low, destinations and interior loops or alternatives to a direct route

**TECHNICAL FEASIBILITY:** How challenging will it be to incorporate this into the network given the segment's current condition?

- 4 - Fine as it is
- 3 - Requires minor upgrades
- 2 - Needs work to be incorporated into the network
- 1 - Requires major work

- Segments Targeted for Gap Closure (17)
- Focus Project Candidate - Segment for Monitor and Support (11)
- Focus Project Candidate - Segment for Adoption (20)

LivableStreets Rethinking urban transportation prepared for the Green Routes initiative

## All Existing and Under Construction Segments

Name	Start/End	miles	City(s)	Status	Value	Tech
• Alewife Greenway	Alewife T Station/Auburn Street	2	Arlington, Cambridge, Somerville	4	3	3
Alewife Linear Path	Somerville Community Path/Minuteman Bikeway	0.3	Cambridge	4	3	4
• Alewife to Fresh Pond connection path	Alewife T Station/Concord Ave	0.6	Cambridge	4	3	3
• Arnold Arboretum	Walter St/Washington St	0.9		4	3	3
Bunker Hill Community College Connection	Rutherford Ave/North Bank Bridge	0.2	Boston	4	2	4
Charles River Connection at Public Garden	Charles River to Public Garden cycletrack	0.1	Boston	4	1	3
• Charles River Path (North bank)	Watertown Dam/Charlestown Bridge	9.6	Watertown, Cambridge	4	3	3
• Charles River Path (South bank)	Watertown Dam/Nashua St	9.2	Newton, Boston	4	3	3
Charles River Path (West of Watertown Dam)	Watertown Dam/Commonwealth Ave at Islington Road	5.7	Watertown, Waltham, Newton	4	2	3
Charles River Path (West of Watertown Dam)	Elm St to Moody St	0.6	Waltham	4	2	2
Charles River Path (West of Watertown Dam)	Auburndale Park	0.5	Newton	4	1	3
Charles River Path (West of Watertown Dam)	Wored Ave and Forest Grove Rd	0.6	Waltham	4	1	2
Chestnut Hill Reservoir Loop		1.6	Newton, Boston	4	1	4
Deer Island Park Loop		2.6	Boston	4	1	4
East Boston Greenway	Marginal St/Neptune Rd	1.2	Boston	4	3	4
East Boston Greenway at Constitution Beach		0.4	Boston	4	2	4
• Emerald Necklace (north loop)	Boylston St/Netherlands Road	3.7	Boston, Brookline	4	3	3
Emerald Necklace (south loop)	Washington & Huntington/Arborway	2.3	Boston, Brookline	4	3	4
Fitchburg Cut-off	Alewife T station/Belmont (Brighton St)	0.8	Belmont	4	2	4
• Franklin Park	Forest Hills St/Blue Hill Ave	1.5	Boston	4	3	3
Franklin Park Loop	Forest Hills St/Blue Hill Ave	2.2	Boston	4	1	2
Fresh Pond Loop		2.3	Cambridge	4	1	4
Fresh Pond Parkway Path	Concord Ave/Huron Ave	0.5	Cambridge	4	3	4
Gateway Park Path	parallel to Mystic View Road	0.6	Everett	4	2	4
Harborwalk	Old Northern Avenue Bridge	0.2	Boston	4	2	3
Harborwalk (Charlestown)	3rd St/Terminal St	1.8	Boston	4	2	4
Harborwalk (Dorchester)	Castle Island/Morrissey Blvd at Bianculli	5.8	Boston	4	3	4
• Harborwalk (Dorchester)	"Calf Pasture"	0.2	Boston	4	3	3
Harborwalk (Massport)	Maverick St/runway	0.5	Boston	4	1	4
Harborwalk (Mystic)	St Martin St/ Alford St	0.4	Boston	4	2	4
Harborwalk (North End)	Foster St/Beverly St	0.5	Boston	4	3	4
Harborwalk (North End)	under Charlestown Bridge	0.1	Boston	4	2	4
Longfellow Bridge	Charles Circle/Kendall Square	0.6	Boston, Cambridge, MassDOT	4	2	2
Minuteman Bikeway	Alewife T Station/Bedford (South Road)	10	Cambridge, Arlington, Lexington	4	2	4
Mystic River Paths	Rt. 16/Draw 7 Park	2	Somerville	4	3	4
• Mystic River Paths	Veterans Memorial Park	0.7	Medford	4	3	2
Mystic River Paths Northbank	Wellington parking lot/Riverside Ave	2.4	Medford	4	2	4
• Neponset River Greenway (east branch)	Conley St/Central Ave	2.9	Boston, Milton	4	3	3
• Neponset River Greenway (west branch)	Wakefield/Blue Hill Ave	2.6	Boston, Milton	4	3	3
North Point Path	North Point Park/East St	0.4	Cambridge	4	3	4
Northern Strand	West St/Lynn St	4.1	Everett, Malden	4	2	4
Over the Mystic	South Street	0.2	Medford	4	2	3
Revere Beach Boardwalk	Eliot Circle/Carey Circle	2.7	Revere	4	1	4
• Somerville Community Path	Cedar St/Alewife T Station	1.7	Somerville, Cambridge	4	3	3
Somerville Community Path (Phase 2)	Cedar St/Lowell St	0.3	Somerville	4	3	4
• South Bay Harbor Trail - Fort Point	Dot Ave/ICA	1.6	Boston	4	3	3
• South Bay Harbor Trail - Melnea Cass	Columbus Ave/Mass Ave	0.9	Boston	4	3	3
Southwest Corridor Park	Dartmouth/Arborway	3.9	Boston	4	3	4
• Stony Brook (north)	Enneking Pkwy/Blue Ledge Dr	1.4	Boston	4	3	2
• Stony Brook (south)	Knight St/Reservation Rd	0.9	Boston	4	3	2
Watertown Branch Greenway	Arlington St/Arsenal St (end of Lexus parking)	0.8	Watertown	4	2	4
• Watertown Branch Greenway - connector	Watertown Greenway/Charles River Path	0.5	Watertown	4	3	3
Winthrop Greenway 2000	Kennedy Dr/Winthrop Pkwy	0.4	Winthrop	4	2	2
		100.5				

## All Funded and Designed Segments

Name	Start/End	miles	City(s)	Status	Value	Tech
• Casey Overpass grounding	Arboretum Forest Hills Gate/Forest Hills Rotary	0.5	Boston	3	3	1
• East Boston Greenway Continuation I	Neptune Rd/Constitution Beach	0.8	Boston	3	3	1
• Neponset River Greenway (Segment II)	Conley St/Bianculli Blvd	1.6	Boston	3	3	1
• Neponset River Greenway (Segment III)	Central Ave to Blue Hill Ave	1.3	Boston, Milton	3	3	1
• Neponset River Greenway (Segment I)	Wakefield Ave/Neponset Valley Pkwy	0.7	Boston	3	2	1
		4.9				

## All In-Design and Planned Segments

Name	Start/End	miles	City(s)	Status	Value	Tech
• Charlesgate	Beacon St/Mass Ave	0.2	Boston	2	3	1
• Emerald Necklace - Route 9 crossing	Netherlands Rd/Washington St	0.4	Brookline, Boston	2	3	1
• Roxbury to the River	Park Dr/Southwest Corridor at Ruggles	0.7	Boston	2	3	1
• Rutherford Avenue	Chelsea St/Alford St	1.3	Boston	2	3	1
• Somerville Community Path (Phase 3)	Lowell St to Northpoint	2.2	Somerville, Cambridge	2	3	1
• South Bay Harbor Trail - Missing Link	Mass Ave/Dot Ave	1.5	Boston	2	3	1
• Summer Street Connection	Atlantic Ave/William J Day Blvd	1.5	Boston	2	3	1
• Watertown-Cambridge Connector	Huron Ave/Arlington St at Nichols Ave	0.9	Cambridge, Watertown	2	3	1
• Downtown Green Link Trail (CHB)	(loop)	3.4	Boston	2	2.5	1
Alford St Bridge		0.3	Boston	2	2	2
Blue Hills Parkway	Neponset River Greenway/Canton Ave	1.5	Milton	2	2	2
East Boston Greenway Continuation II	Thurston St/Saratoga St	0.8	Boston	2	2	2
Harborwalk (East Boston)	Condor St/Tomahawk Dr	4.4	Boston	2	2	2
Mystic to the Northern Strand	Gateway Park Path/Northern Strand		Everett	2	2	2
Commonwealth Avenue Boston West	Lake St/Brighton Ave	2.7	Boston	2	2	1
Grand Junction Corridor	BU Bridge/Somerville Community Path	2	Cambridge	2	2	1
Public Garden Cycle Track		0.8	Boston	2	2	1
Watertown Greenway extension	Arsenal St/Howard St	1.7	Watertown	2	2	1
		26.3				

## All Proposed Segments

Name	Start/End	miles	City(s)	Status	Value	Tech
Readville Street	Mill Pond Reservation/Sprague St	0.6	Boston	1	3	3
Stony Brook crossing	River St	0.1	Boston	1	3	3
• 1st St Greenway	Summer St/William J Day Blvd	0.7	Boston	1	3	2
• Emerald Necklace - Arborway	Prince St/South St	1	Boston	1	3	2
• Fort Point Post Office	Rolling Bridge Park/Summer St	0.4	Boston	1	3	2
• Hammond Pond Parkway	Commonwealth Ave (via Hobart St)/Newton St	2.2	Newton, Brookline	1	3	2
• Stony Brook Connector	Reservation Rd/Enneking Pkwy	0.4	Boston	1	3	2
• VFW to Arnold Arboretum		0.2	Boston	1	3	2
• West Roxbury Parkway	Newton St/Washington St	2.5	Brookline, Boston	1	3	2
• Cemetery Greenlink	Morton St/River St	3.4	Boston	1	2.5	2
• Newton Street	Lagrange St/Clyde St	1.2	Brookline	1	2.5	2
• VFW Parkway	Centre St/Spring St	3.5	Boston, Brookline	1	2.5	2
BU Bridge	Comm Ave/Memorial Drive	0.2	Boston, Cambridge, MassDOT	1	3	1
• Carlton St	Riverway Path/BU Bridge	0.6	Brookline, Boston	1	3	1
Charles River Connection at Emerald Necklace	Boylston/Beacon	0.3	Boston	1	3	1
• Columbia Road	Blue Hill Ave/Old Colony Ave	2.3	Boston	1	3	1
Dedham to the Neponset	West Milton St/Milton St	0.9	Boston	1	3	1
• Dorchester Bay to Charles River	Back St/South Bay Harbor Trail	1.4	Boston	1	3	1
Forest Hills T station		0.3	Boston	1	3	1
• Mystic River Paths (A)	Auburn St to South St	0.7	Medford	1	3	1
• Mystic River Paths (C)	Alford St/Draw Seven Park	0.3	Boston	1	3	1
• North Washington Bridge		0.3	Boston	1	3	1
• Southbank Bridge	Nashua Street Park to Beverly St	0.3	Boston	1	3	1
Southampton Street Connector	South Bay Harbor Trail/Joe Moakley Park Loop	1.1	Boston	1	3	1
Waverly Way - Newton	Nonantum/Comm Ave	2	Newton	1	3	1
Boston Common	Charles St and Tremont St	0.5	Boston	1	2	2
Brookline Crossing	Comm Ave/Emerald Necklace at Riverway	3.4	Brookline, Newton, Boston	1	2	2
Charles River (north bank) to Harborwalk	Constitution Road	0.4	Boston	1	2	2
Commonwealth Avenue Newton	Islington St/Lake St	5.1	Newton	1	2	2
Eliot Bridge		0.1	Boston, Cambridge, MassDOT	1	3	2
Fitchburg Cut-off Extension	Alewife T station/Belmont (Brighton St)	2.2	Belmont	1	2	2
Harborwalk (Charlestown)	under Tobin Bridge	0.2	Boston	1	2	2
Harborwalk (Charlestown) - Mystic Connection	Terminal St/St. Martin St	0.7	Boston	1	2	2
Harborwalk (Innovation District)	ICA on Northern Ave/Summer St	3	Boston	1	2	2
Joe Moakley Park Loop		1.4	Boston	1	2	2
Morrissey Boulevard Connector	Bianculli St/William J Day Blvd	0.6	Boston	1	2	2
Mystic to Minuteman	Alewife Brook Parkway/Russel Place	1.7	Arlington	1	2	2
Blue Hill Avenue	Columbia Rd/River St	2.6	Boston	1	2	1
Charles River Connection at Comm Ave	Brighton Ave/Soldiers Field Rd	0.6	Boston	1	2	1
Dedham Rail Trail	High St/Sprague St	2.1	Dedham, Boston	1	2	1
Lee Street	Dudley Way/Newton St	1.1	Brookline	1	2	1
Lower Mills to the Emerald Necklace	Adams St/Columbia Rd	2.7	Boston	1	2	1
Mass Ave Bridge	"Harvard Bridge"	0.4	Boston, Cambridge, MassDOT	1	2	1
Reserve Channel and I St	Summer St/William J Day Blvd	1.2	Boston	1	2	1
Winthrop Greenway	Main St/Deer Island Park	4.6	Winthrop	1	2	1
Amelia Earhart Dam	Mystic River Paths/Gateway Park Path	0.3	Everett, Somerville	1	1	2
Commonwealth Avenue Boston East	Arlington St/Charlesgate	1.1	Boston	1	1	2
Emerald Necklace (south loop)	Perkins and Parkman	0.7	Boston	1	1	2
South Bay Harbor Trail	Necco Ct to Congress St	0.4	Boston	1	1	2
Winthrop to Revere	Winthrop Greenway 2000/Eliot Circle	0.9	Revere	1	1	2
Chelsea Greenway	Crescent St/Broadway	2.8	Chelsea, Boston	1	1	1
East Boston to Chelsea	East Boston Greenway/Chelsea St Bridge	0.6	Boston	1	1	1
Quincy Shore Drive	Hancock St/Shore Ave	3.4	Quincy	1	1	1
VFW to Dedham - Charles Path	Spring St/High St	1.9	Boston, Dedham	1	1	1
		73.6				



# Appendix C

## Gap Closure Projects

**Greenway Links in the Urban Core - Closing the Gaps Map**



**Relatively minor upgrades that will complete longer segments**

What	Where	Municipality	Responsibility	Mileage	
				Full Length	Length to fix
1 Alewife Greenway	Alewife T Station/Auburn Street	Somerville	DCR?	2	0.3
2 Alewife to Fresh Pond connection path	Alewife T Station/Concord Ave	Cambridge	Cambridge?	0.6	0.6
3 Arnold Arboretum	Walter St/Washington St		Boston Parks	0.9	0.4
4 Charles River Path (North bank)	Watertown Dam/Charlestown Bridge	Watertown, Cambridge	DCR	9.6	
5 Charles River Path (South bank)	Watertown Dam/Nashua St	Newton, Boston	DCR	9.2	
6 Emerald Necklace (north loop)	Boylston St/Netherlands Road	Boston, Brookline	Boston Parks	3.7	0.6
7 Franklin Park	Forest Hills St/Blue Hill Ave	Boston	Boston Parks	1.5	0.4
8 Harborwalk (Dorchester)	'Calf Pasture'	Boston	Boston?	6	0.2
9 Neponset River Greenway (east branch)	Conley St/Central Ave	Boston, Milton	Boston?	2.9	0.2
10 Neponset River Greenway (west branch)	Wakefield/Blue Hill Ave	Boston, Milton	Boston?	2.6	0.5
11 Somerville Community Path	Cedar St/Alewife T Station	Somerville, Cambridge	Somerville	1.7	0.2
12 South Bay Harbor Trail - Fort Point	Dot Ave/ICA	Boston	Boston?	1.6	
13 South Bay Harbor Trail - Meinea Cass	Columbus Ave/Mass Ave	Boston	Boston?	0.9	0.9
14 Watertown Branch Greenway - connector	Watertown Greenway/Charles River Path	Watertown	Watertown?	0.5	0.5
15 Mystic River Paths	Veterans Memorial Park	Medford	DCR parks	0.7	0.7
16 Stony Brook (north)	Enneking Pkwy/Blue Ledge Dr	Boston	DCR parks	1.4	1.4
17 Stony Brook (south)	Knight St/Reservation Rd	Boston	DCR parks	0.9	0.9

**Sample Solutions**

Linking these segments will maximize the value of existing assets. Building towards a better system with these gap closures primarily involves widening, paving, and repaving paths that exist today only as well-trodden desire lines. Other segments would benefit from signage or neighborhood treatments. All of these projects are relatively affordable and provide political figures and advocates alike with an "easy win" that can build momentum towards bigger changes.

# Appendix D

## 31 Target Project Candidates

Greenway Links in the Urban Core - 31 Candidates for Monitoring or Adoption



New Links - these segments are only proposals and need to be adopted or supported to enhance the network.

Name	Where	City	How Long	Responsibility
1 1st St Greenway	Summer St/Walton J Day Blvd	Boston	0.7	Massport, Boston
2 Canton St	Parkway Path/DU Bridge	Brookline, Boston	0.6	Brookline
3 Cemetery Greenlink	Morton St/River St	Boston	3.4	Boston
4 Charlestown	Beacon St/Mass Ave	Boston	0.2	Boston, DCR
5 Columbus Road	State St Ave/DJ Colony Ave	Boston	2.3	Boston
6 Dorchester Bay to Charles River	Back St/South Bay Harbor Trail	Boston	1.4	Boston
7 Downtown Green Link Trail (C&B)	(over)	Boston	3.4	Boston
8 Emerald Necklace - Anthony	Prince St/South St	Boston	1	DCR
9 Fort Point Post Office	Rolling Bridge Park/Summer St	Boston	0.4	DCR
10 Hammond Pond Parkway	Commonwealth Ave Iva Hubert Sq/Newton St	Newton, Brookline	2.2	DCR
11 Mystic River Paths (A)	Auburn St to South St	Medford	0.7	DCR, MassDOT

**Additional Notes**  
 1 - nearing 100% design with separate bicycle and pedestrian path  
 2 - this planned path will connect the existing portions of greenway  
 3 - substantial community outreach has already occurred  
 4 - secured funding to connect the existing Greenway to Harborwalk  
 5 - secured funding to connect the existing Greenway to Harborwalk  
 6 - secured funding to connect existing Greenway pieces  
 7 - land has been acquired to build a rail-to-trail path  
 8 - an agreement has been reached, plans are still preliminary  
 9 - this project is incomplete, but funding exists to commence it  
 10 - would require substantial re-greening to meet the standards  
 11 - land has been acquired to build a rail-to-trail path

New Links - these segments are only proposals and need to be adopted or supported to enhance the network.

Name	Where	City	How Long	Responsibility
1 1st St Greenway	Summer St/Walton J Day Blvd	Boston	0.7	Massport, Boston
2 Canton St	Parkway Path/DU Bridge	Brookline, Boston	0.6	Brookline
3 Cemetery Greenlink	Morton St/River St	Boston	3.4	Boston
4 Charlestown	Beacon St/Mass Ave	Boston	0.2	Boston, DCR
5 Columbus Road	Blue Hill Ave/DJ Colony Ave	Boston	2.3	Boston
6 Dorchester Bay to Charles River	Back St/South Bay Harbor Trail	Boston	1.4	Boston
7 Downtown Green Link Trail (C&B)	(over)	Boston	3.4	Boston
8 Emerald Necklace - Anthony	Prince St/South St	Boston	1	DCR
9 Fort Point Post Office	Rolling Bridge Park/Summer St	Boston	0.4	DCR
10 Hammond Pond Parkway	Commonwealth Ave Iva Hubert Sq/Newton St	Newton, Brookline	2.2	DCR
11 Mystic River Paths (A)	Auburn St to South St	Medford	0.7	DCR, MassDOT
12 Mystic River Paths (C)	Alford St/Drive Seven Park	Boston	0.3	MBTA
13 Narrows Street	Lagrange St/Cycle St	Brookline	1.2	DCR, Brookline
14 North Washington Bridge	Boston	Boston	0.3	Boston
15 Roxbury to the River	Park Dr/Southwest Corridor at Ruggles	Boston	0.7	Boston
16 Southbank Bridge	Norfolk Street Walk to Beverly St	Boston	0.3	DCR
17 Story Block Connector	Reservation Rd/Emmery Pike	Boston	0.4	Boston or DCR
18 VFW Parkway	Centre St/Spring St	Boston, Brookline	3.8	DCR
19 VFW to Arnold Arboretum	Centre St & Water St	Boston	0.2	Boston
20 West Forebury Parkway	Newton St/Washington St	Brookline, Boston	2.5	DCR

**Additional Notes**  
 Some of these segments can be jump-started with "quick, easy, cheap" short-term changes, all of them have the capacity to build high-quality green links (and some greenways) within the corridor over the long-term.

## Appendix E

### Other Good Ideas: Regional Projects that Do Not Appear on These Maps

Local projects to highlight –

We are supportive of but have not included numerous great projects in the immediate Boston area for a variety of reasons. Some individual projects to highlight are the [Bridge Underpass Initiative](#) of the Charles River Conservancy and the [Fairmount Greenway](#). While this initiative includes improvements to the north bank of the Charles River path system, one particular subset of this system is the planned improvement of the path along [Greenough Boulevard](#), which is being championed by the Lawrence and Lillian Solomon Foundation.

Areas beyond our scope –

Terminating within the confines of this initiative are the Mass Central Rail Trail, with plans to extend from Boston to Northampton, and Bike to the Sea, which will join the Mystic River in Everett to the edge of Nahant. Similarly, the existing Minuteman Bikeway and the Northern Strand touch the edge of this Green Routes Network. Larger projects within Massachusetts that have similar standards are in the works, including the Border to Boston project. Additionally, work to improve DCR parkways with road diets and other modifications can extend well beyond this network and join to it in places like **Quincy's Furnace Brook Parkway**.

Segments in the Boston core that we may still want to consider –

- Path behind the Science Museum
- Connections across the Mystic, including Amelia Earhart Bridge
- Fairmount Greenway (also above)
- Morrissey Boulevard road diet – this parallels the Neponset Greenway planned extension but could benefit from a changes for future development, neighborhood improvement, and connecting across the west end of Columbia Point
- Reconfiguration or removal of the Bowker Overpass – the network map has a line to connect Emerald Necklace to Charlesgate now, but no plan of how that will happen
- Enneking Parkway and Turtle Pond Parkway – may be widened with new water main installation which would allow for cycle tracks, but the current suggested route in the Green Routes Network plan is on the paths within the Stony Brook Reservation
- Truman Parkway – currently parallel to portions of the Neponset Greenway and has bike lanes in Milton, but it also seems to have excess car capacity and other modifications may make this a new kind of Green Routes corridor
- Reservation Road - provides a cut-off route from the Neponset Greenway to the Stony Brook Reservation that avoids Readville, the commuter rail station, and pieces of the Green Routes Network that may be more challenging to complete

- o Dedham Parkway, Dedham Boulevard and East Boundary Road – perpendicular to Stony Brook Reservation paths, this could provide an additional connection to Dedham if community support surged in this area and called for more paths and bike facilities
- o Glenway St and Talbot Ave – provide connectivity between Franklin Park and Dorchester

Opportunities beyond the Boston core –

- o Quincy: Furnace Brook Parkway
- o Hull: Hull Shore Drive and Nantasket Avenue
- o Milton: Neponset Valley Parkway
- o Milton (in the Blue Hills Reservation): Unquity Road, Hillside Street, Chickatawbut Road, Wapatuck Road
- o Waltham: Forest Street
- o Lynn: Lynn Shore Drive – has an incredible parallel path system along the beach
- o Medford: Fellsway and Fellsway West from Wellington to Roosevelt Circle, Mystic Valley Parkway on the east side of the Mystic Lakes, South Border Road that continues into Winchester, and from Fellsway West can continue up Elm Street to Woodland to Pond to South to North Border Road in Stoneham
- o Malden: Fellsway East, East Border Road, West Border Road – all relatively narrow, but tree-lined
- o Weston: Norumbega Road – very narrow, but remote and through park
- o Newton: Quinobquin Road – incredibly narrow, but also runs just along the Charles River between Washington Street and Boylston Street
- o Revere: Revere Beach Parkway – may not meet standards but makes important connections to Chelsea Creek

## Appendix F

### Precedents and Standards for the Green Routes Initiative

#### Appendix F - Precedents and Standards for the Green Routes Initiative

##### Exemplary Practices

The existing greenways in the network already contain some excellent examples of good wayfinding, design, and construction practices. These are described and illustrated below with photos by Alice Brown.

- By marking sidewalks to show that the path continues beyond an intersection or through a community, users can comfortably transition through discontinuities in the path. The Alewife Greenway and Blue Heron Path (along the Charles River) both use related animal symbols to subtly help path users follow a safe route to where the path resumes.



- Whether with wide paths or separate paths, it is critical that there be sufficient capacity for different user groups. Where there are two narrow paths, signage indicating that one is for people walking and the other is for people cycling helps to reduce conflict. Conversely, when cycling is permitted on sidewalks, signs denoting the need to share and be respectful serve as reminders.



- Crosswalks that go through traffic islands are easier for wheelchairs, strollers, and bikes. Shown below is an example where the Somerville Community Path crosses Massachusetts Avenue in Cambridge. The median island also acts as a way to calm traffic by making the road seem narrower to speeding cars and allows pedestrians to wait midway if they are unable to complete the crossing. [Google maps screen capture]



- Wide ramps at intersections allow numerous users to pass each other safely and comfortably when multiple bikes or strollers are moving through an intersection. This is particularly important in areas where two separate paths and their different users are converging near traffic and where the path turns sharply. Here, a wide path helps multiple users connect from the Community Path to the Alewife Greenway and the Minuteman Bikeway near the Alewife T station.



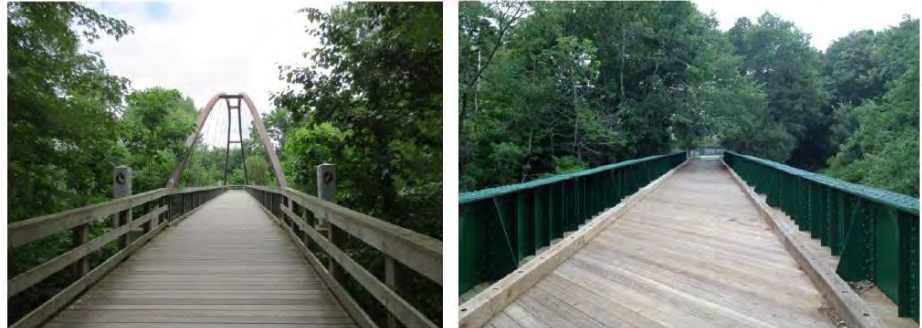
- Providing bridges over the rail road tracks, depressed freeways, waterways specifically for people walking and biking improves connectivity and safety. Brookline has such a bridge where Reservation Road dead ends for cars. This reduces the number of vehicles on this series of potential neighborways while linking two areas with beautiful green canopies.



Some bridges provide a specific alternative to automobile routes and give people better access to the waterfront. The Northbank Bridge between Cambridge's North Point Park and Boston's Paul Revere Park traverses railroad tracks from North Station and entry ramps into the Charles allowing people on foot and on bikes to connect from Charlestown to Cambridge without using the Austin Street Bridge.



At other places in the network, the path system is completely removed from nearby roadway alternatives. Here bridges connect the paths across rivers whether along the Charles or the Neponset.



- Transitions to bike lanes from pathways should be clearly marked for two directional cycle traffic and to ensure that conflicts with pedestrian traffic are minimized. This is well done in Watertown when the Greenway slips into bike lanes on Arsenal Street and on the Fresh Pond Path in Cambridge.



- Areas where paths intersect with bridges are often problematic. However, at two points along the Mystic River, the path design includes special facilities for path users. A clover leaf construction at the Mystic River Parkway Bridge makes it easy to go under the bridge or connect to the sidewalks along the bridge. Further south, at the Fellsway, a boardwalk is under construction under the bridge to allow the path to move continuously without traversing eight lanes of traffic at the current designated crossing.





### Greenway Standards

According to Wikipedia, a greenway is a long, narrow piece of land, where vegetation is encouraged, which is managed for public recreation and slow travel.<sup>1</sup>

In the Boston area, there are many existing corridors that fit this description. These include the Southwest Corridor, the Emerald Necklace, the Alewife Greenway, the Minuteman Bikeway, the Neponset River Trail, the Somerville Community Path, and parts of the Harborwalk. The name East Coast Greenway is a bike route connecting southern Florida to Maine, but given the high frequency of on-road riding within the route, it does not meet our greenway criteria; nor does the Rose Kennedy Greenway, which is a linear park that does not allow bikes.

As outlined in the Completion Report,

Greenways form a multi-use linear park system. A greenway is a protected route or shared use path, or pair of bicycle and pedestrian paths, that runs through or along a parkland or waterfront. Some of these parks are narrow linear parks within historic rail right-of-ways or along the edge of a river, while others are within larger park areas or in former industrial areas. All of the greenways are designed especially for non-motorized travel. Depending on their location, they may be used primarily for recreation or for transportation, but all of them will provide a safe and comfortable trip for users of all ability levels.

The relatively new Watertown Greenway, shown below, is a shared use path along a former rail corridor that is tree-lined and well-marked.



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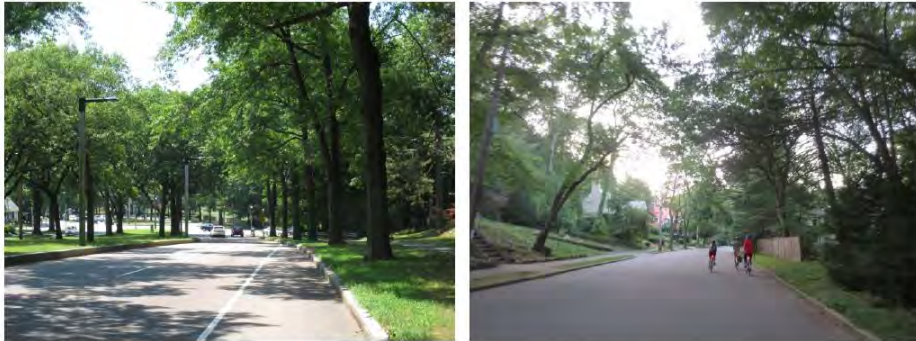
<sup>1</sup> [http://en.wikipedia.org/wiki/Greenway\\_\(landscape\)](http://en.wikipedia.org/wiki/Greenway_(landscape))

## Greenlink Standards

The Completion report explains that

The greenlinks tie the greenways together and expands on them to create an interconnected network of green routes. A greenlink could take one of several forms. It may be a tree-lined historic parkway where space is taken from the median, carriageway, or a lane diet to create a protected space for cyclists and pedestrians. It may be a quiet street which receives additional traffic calming measures and plantings to enhance its value in the green route network. In order to connect the network, additional tree-lined streets may get cycle tracks or similar protected facilities; however, not every street with a cycle track will be added to the Green Routes Network.

Veterans of Foreign Wars Parkway is one of these historic parkways that should be improved as a greenlink if not transformed into a full greenway. Hobart Road in Newton is a street that has excess capacity, few cars, and a beautiful tree canopy. Here road markings and design may be sufficient to add it to the network without adding a full cycle track.



Bike lanes should be avoided at all cost and shared lanes are not acceptable pieces of the network. Rather than adding poor quality pieces to the network, these segments should be marked as missing pieces with continued advocacy to build excellent bicycle and pedestrian infrastructure.

Where possible, new routes on streets will also be enhanced with additional green infrastructure such as tree plantings, bioswales, and permeable pavers.<sup>2</sup> The Green Routes may also be populated with water features, public art, and gathering spaces. Signage and branding will also help users to navigate the network.

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<sup>2</sup> More examples @ <http://nacto.org/cities-for-cycling/design-guide/bicycle-boulevards/green-infrastructure/>

### **Technical Information about Designs and Costs**

Additional guidance on urban standards for bike paths and on-street bicycle facilities, the following resources provide comprehensive examples and standards:

- MUTCD guidelines <http://mutcd.fhwa.dot.gov/htm/2009r1r2/part9/part9b.htm>
- NACTO bikeway design guide <http://nacto.org/cities-for-cycling/design-guide/>
- Sign samples [http://www.ssshinc.com/t/Signs\\_and\\_Identification/Regulatory/R9 -  
\\_Pedestrian\\_and\\_Bicycle/Use\\_Ped\\_Signal\\_With\\_Bicycle\\_Pictorial](http://www.ssshinc.com/t/Signs_and_Identification/Regulatory/R9_-_Pedestrian_and_Bicycle/Use_Ped_Signal_With_Bicycle_Pictorial)
- Benefit/Cost analysis of bikeway systems <http://www.bicyclinginfo.org/bikecost/>

## Appendix G

### Historic Precedents: Maps and Plans

#### Appendix G - Historic Precedents: Maps and Plans

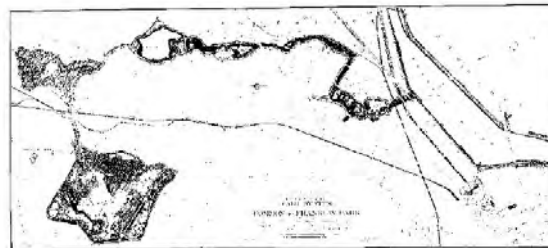
Boston was built up on the Shawmut Peninsula surrounded by water, but for the first two and a half centuries the local residents saw the center of the city as a destination while the water's edge was ignored, avoided, or incorporated into industrial uses.

This map of Boston's bicycle routes from 1893 shows the numerous "lines" that point to Boston but a noticeable lack of "loops" ringing the area and connecting the paths to each other. Nahant is the only place where paths travel along or even near the harbor. The rivers are avoided.



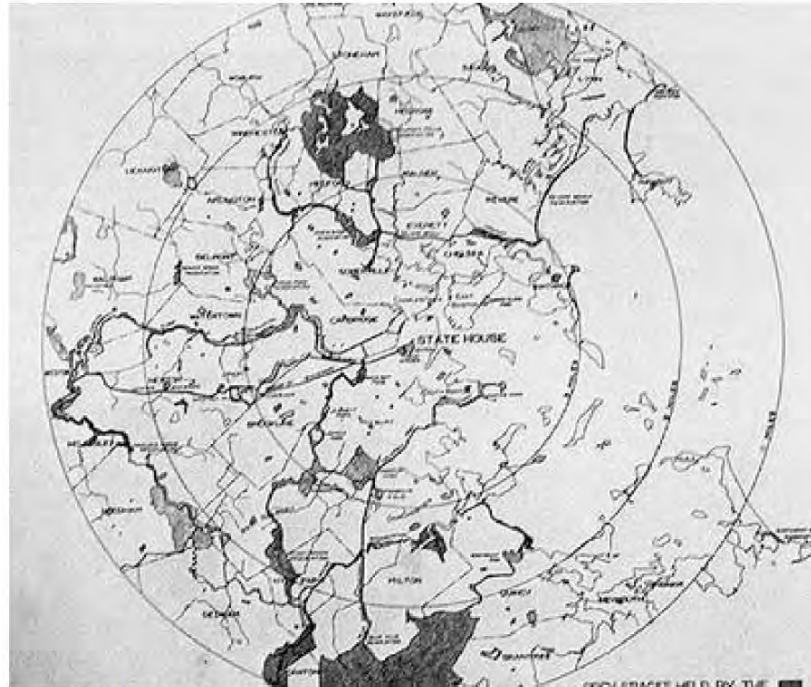
<http://www.etsy.com/listing/120910363/massachusetts-cycling-maps-of-1893-part?ref=related-3>

The first loop system was the Emerald Necklace - Frederick Law Olmsted's 1870's design for a series of parks and parkways that took advantage of natural waterways and spread green into the surrounding neighborhoods.



[http://upload.wikimedia.org/wikipedia/commons/4/4b/Olmsted\\_historic\\_map\\_Boston.png](http://upload.wikimedia.org/wikipedia/commons/4/4b/Olmsted_historic_map_Boston.png)

In the following decades, Charles Eliot developed a Metropolitan Park System plan to expand on this ringed system, which shows parkland along the Charles and Mystic Rivers as well as larger land reservations all connected by a series of parkways. Here Columbia Road, Blue Hill Avenue, Commonwealth Avenue, and West Roxbury Parkway all play a prominent role.



[http://www.columbia.edu/itc/architecture/wright/6769\\_2002/images/week4/iv05.jpg](http://www.columbia.edu/itc/architecture/wright/6769_2002/images/week4/iv05.jpg)

This vision of the city with has been recreated and replicated over time – a recognizable silhouette but a vision that has yet to be fully realized over a century later.



[http://www.nps.gov/history/history/online\\_books/ncr/designing-capital/images/fig2-4.jpg](http://www.nps.gov/history/history/online_books/ncr/designing-capital/images/fig2-4.jpg)



Metropolitan Park System, 1893–1919 KARL HAGLUND

During the 1860s Boston park debates, advocates proposed a series of large parks and carriageways extending beyond the city limits, to be acquired by a regional authority. The Metropolitan Park Commission (MPC), the nation's first regional park system, was finally authorized in 1893, largely through the efforts of landscape architect Charles Eliot and journalist Sylvester Baxter. Eliot, who had apprenticed in the Olmsted office during the planning of the Boston parks, in 1893 wrote a letter to the governor asking that a plan be drawn up for metropolitan "reservations of scenery." Three months later, Baxter wrote a series of articles in the *Boston Herald* promoting regional government for what he called "Greater Boston," beginning with a system of parks. The legislature authorized a temporary park commission, and Eliot and Baxter wrote a report proposing a new vision for the city

that would set aside "the rock hills, the stream banks, and the bay and the sea shores"—the region's natural paths, edges, and landmarks. Though Massachusetts was still recovering from the depression of 1893, the legislature authorized \$3,500,000 in bonds and appropriations that the Metropolitan Park Commission used to acquire over 9,000 acres in six years. The largest of the early reservations were the Blue Hills (over 4,000 acres) and the Middlesex Fells (1,800 acres) south and north of Boston. Also acquired were Muddy Pond Woods (later Stony Brook Reservation, 475 acres) in the city; over 900 acres along the Neponset River, the southern boundary of the city; and almost 600 acres along the Charles River. The MPC built the Blue Hills and Middlesex Fells Parkways to connect Boston residents to the large forest reservations

north and south of the city proper as well as other parkways to seashore parks. The most dramatic transformation was along the lower Charles. In 1873 the new state board of health had designated the lower Charles tidal estuary the most polluted and dangerous hazard in Massachusetts. Thirty years later, after a series of reports, the state agreed to construct a earthen dam across the river to create a freshwater basin that would permanently cover the polluted flats and create a "water park." As part of the project, a narrow margin of flats was filled between the Cambridge (later Longfellow) Bridge and Charlesgate, the first phase of the present Esplanade. In 1919, the Metropolitan Park Commission merged with the Metropolitan Water and Sewerage Board to become the Metropolitan District Commission.

[http://www.atlasofbostonhistory.org/images/full/plate30\\_right.jpg](http://www.atlasofbostonhistory.org/images/full/plate30_right.jpg)

## Appendix H

### Other Metropolitan Precedents

Philadelphia - <http://www.pecpa.org/southeast-pa-regional-trail-network>

“The Regional Trail Network is an emerging system of interconnected multi-use paths and on-street bikeways that connects all of Southeastern Pennsylvania into New Jersey and Delaware. Not only does it connect some of the best recreational areas in the state, but as the network expands, it will create more and more transportation choices. When completed, the network will link over 6 million people through more than 400 miles of trails and when combined with a growing network of bike lanes, it will become the backbone of a cutting-edge active transportation system.

“The Greater Philadelphia Regional Trail Network has three major spines. First, the Schuylkill River Trail extends approximately 130 miles from Philadelphia northwest into Valley Forge, Pottstown and Reading. It serves as a major trail spine in Philadelphia, Delaware, Montgomery, Chester, Berks and Schuylkill Counties. Second, the PA section of the East Coast Greenway runs along the Delaware River and connects NJ, PA and DE. When completed, this section will be approximately 60 miles long. Finally, the Camden Greenways Network connects across the Delaware River into Philadelphia, as well as linking NJ suburbs to the Camden Waterfront.”

With additional questions, contact Alex Doty, Executive Director  
[alex@bicyclecoalition.org](mailto:alex@bicyclecoalition.org) (215)242-9253 ext. 301

Quebec: Route Verte - <http://www.routeverte.com/rv/home>

“The Route Verte puts all of Quebec within reach of your handlebars!

Made up of over 5,000 km of bikeways crisscrossing the most beautiful regions of Quebec, the Route Verte puts you on the right track for the vacation of your dreams. No matter which bikeway you cycle on—the Parcours des Anses in Lévis, the Véloroute des Bleuets encircling Lac Saint-Jean, the Berri Street bike path in Montreal or the Estriade in the Eastern Townships—you’re riding on the Route Verte.

“This vast bicycle route—the most extensive in North America—includes all types of bikeways: bike paths, designated shared roadways and paved shoulders.”

Pittsburgh: Riverlife - <http://www.riverlifepgh.org/>

This is the organization that has already captured the Three River Loop concept. Working first as a collaborative task force and now as an independent organization, their mission is to “reclaim, restore and promote Pittsburgh’s riverfronts as the environmental, recreational, cultural and economic hub for the people of this region and our visitors.” They describe their vision as a “seamless sequence of open spaces for civic engagement will ultimately knit our neighborhoods together and reconnect us with our living environment.” Though not a network in the same way as the Greenway Links Project’s

plan, their website is an excellent model for how projects can be featured and tracked in a user-friendly way with images, an overview, project partners, and the process for implementation.

St. Louis: Great Rivers Greenway - <http://www.greatriversgreenway.org/home.aspx>

The Great Rivers Greenway District was created in 2000 by a vote which created the organization that would develop paths through the City of St. Louis, St. Louis County, and St. Charles County. “The fundamental purpose of the Great Rivers Greenway District is to make the St. Louis region a better place to live, by creating a clean, green and connected region. Through this work, Great Rivers Greenway strives to build a vibrant legacy for future generations.” For the past two years, they’ve been committed to five goals: connecting communities and neighborhoods, preserving and connecting people to nature, improving economic vitality, providing transportation choices, and promoting good health.

Their website allows people to discover trails, greenways, and on-street bicycling as separate categories to search. Additionally, their communities are consciously collaborating - Bike St. Louis is a partnership of four communities who have created an interconnected network of 80 miles of on-street bicycle facilities and plan to link a total of 900 miles.

Detroit - <http://www.detroitriverfront.org/>

With the slogan “from the waterways to the greenways,” the Detroit RiverFront Conservancy is rapidly expanding the path system in Detroit primarily with grant support in a city with few municipal resources to support them.



## Appendix I

### Ally Landscape

#### A. Local Municipalities

[Develop and approve plans, acquire federal and state grant money for design and implementation.]

##### 1. Boston

- Boston is nearing completion on the Boston Bicycle Network Plan, which complements the Green Routes Network with some identical routes, some parallel routes, and a more fine-grained installation of on-street bicycle infrastructure. Working in partnership with the BTM, we can help to implement the Boston portions of the Green Routes Network.
- Boston is working on changes to the South Bay Harbor Trail.
- Boston's PWD has proposed a cycle track on Commonwealth Ave from Brookline to Packard's Corner. These improvements could add a new link to the Green Routes Network.
- BTM has funding to work on "Green Links" and will use grant money to work up to 100% design for a new Green Link (possibly Roxbury to the Fenway)

##### 2. Somerville

- Somerville has a growing cycling population that they are working to accommodate with on-street bike facilities and bike parking. Their collaboration on the Somerville Community Path extension as well as the re-design of Davis Square will improve the Green Routes connections.
- Their portions of the Mystic River paths are improving but could continue to use our support, particularly where the path ends abruptly at the MBTA bus station or intersects with the Mystic Valley Parkway in Medford.

##### 3. Cambridge

- Cambridge has been very enthusiastic about the Grand Junction Corridor rail with trail plan, but little has been done with this project in the past few years. They are also responsible for a more critical link in the network connecting from Fresh Pond to the Watertown path which was recently acquired by the city. They are supportive of a new green route proposed by the Solomon Foundation between Fresh Pond and the Charles River by way of

Mount Auburn and Cambridge cemeteries. (not yet on the greenway diagrams)

4. Brookline

- Brookline has recently added a series of contraflow lanes and other bike facilities that will enhance portions of the neighborways. It is unclear though how supportive they would be of additional improvements or of road diets.

5. Everett

- Everett is working hard to connect the Northern Strand to the waterfront and just expanded the path this summer. While outside the urban core focus on the Greenway Links Project, this “next layer out” trail makes the hub sections even more valuable.

6. Newton

- Newton has been interested in Hubway expansion and has bike lanes, but it’s not clear if they’re prepared to sign on to the Green Routes Network particularly when it comes to making a neighborway route on Waverly/Hobart or a high-quality bike route on Commonwealth Ave. However, the intersection improvements at Newton Corner help EVERYONE who is not in a car.

7. Dedham

- Dedham is working on a bike plan with the MAPC and doing a preliminary study of a rail trail. While just outside the urban core focus, this is a valuable extension to the greenway-underserved southern areas.

8. Winthrop

- Winthrop completed a bike plan with the MAPC and is hoping to expand and extend its path system from the Boston border to Deer Island.

9. Medford

10. Arlington

11. Watertown

- Watertown is supporting the extension of the Watertown bicycle path to Fresh Pond and beyond to the Minute Man bike path and

looking to add a critical link down to the Charles River by way of Arsenal Park.

12. Chelsea, Malden, Revere, Quincy, Milton – peripheral but possibly supportive of particular projects

B. State and Regional Agencies

1. MassDOT

- Particularly important for roadway reconstruction and specific projects like the Casey Arborway. They are funding the Neponset connections/extension. Likely to be the largest funder of many of these projects.
- Strengthening and enforcing their design guidelines would be invaluable for promoting safer facilities.
- MassDOT has agreed to fully fund the first phase of the Charlesgate Greenway between the Fens and Esplanade as part of their bridge repair initiative.

2. MassPort

- Does planning and implementation for property it owns in South & East Boston + Charlestown
- Supportive of helping with path construction in East Boston, hesitant to incorporate bicycle facilities near ports or along truck routes.

3. Department of Conservation and Recreation (DCR)

- Does planning and implementation; sets design standards
- Have shown a long term commitment to certain regional greenway routes including the upper Charles River reservation, Neponset Greenway, and Alewife corridor.
- Parkland - Currently they control some of the most heavily used bike routes in the area including the Southwest Corridor Park and the Charles River Paths. They are committed to a 10-foot wide share path standard to support recreational use. It's not clear whether they're prepared to create wider paths or dual paths in parks for heavier use
- Roadways – The DCR Parkways often contain 5 foot shoulders but they are not marked as bike lanes even when they could be and often taper into the curbs at intersections.
- Big Dig mitigation - The Northbank Bridge has dramatically improved bike connections between Cambridge and Charlestown.

Future projects to make a Southbank Bridge or an alternative to the locks/North Washington Bridge are still not being planned although some design funding exists.

4. Massachusetts Bay Transportation Authority (MBTA)

- Limited funding potential and has not yet been briefed on this project. They are not usually present at regional meetings that are not focused on transit. The most significant partnership is in completing a missing link in the Mystic River when they rebuild their seawall by the bus depot. However, the T might be interested in a “Safe Routes To Transit” component and be motivated by the ability of the network to reduce strain on the transit system.

5. Central Transportation Planning Staff (CTPS) –

- Working on a regional list of project priorities to present to the regional MPO for inclusion in future TIP funding decisions.
- CTPS has their own Green Routes project with similar criteria but a much larger scope and work being done almost exclusively in GIS without much fieldwork or partnerships.

6. Massachusetts Water Resources Authority (MWRA)

- Recently established a new public access policy opening up miles of aqueducts west of the city to recreational use.

C. Academic and Cultural Institutions

[Provide support and a forum for exchanging ideas]

1. Peter Furth’s Civil Engineering Class at Northeastern University

NEU students regularly conduct studies and research proposals that produce designs for many of the corridors in our study. Peter is a vocal advocate for this network although he primarily focuses on accommodations for bicycles.

D. Planning and Design Businesses and Organizations

[Technical expertise on designs and outreach]

1. Metropolitan Area Planning Council (MAPC)

The MAPC has been a strong partner of the project, but as an organization they have both a wider geographic vision and a different framework for analysis. Their bike and walk routes are often separate and have a lower threshold for inclusion.

The MetroFuture and Sustainable Communities Programs are both logical partners because they work on urban open space and green infrastructure planning, local pedestrian and bike planning, and municipal or multi-municipal land use planning.

2. NBBJ

NBBJ is committed to working on projects that restore Boston's tree canopy and historic parkways. Principal Alex Krieger brings decades of Boston history to the project and along with work on focused connectivity projects like the Walk to the Sea.

3. Toole Design Group

TDG provide technical support for planning green routes and have all of the GIS data on the Boston Bicycle Network Plan that they developed.

4. Klopfer Martin Design Group

Brings the perspective of a landscape architect to the project.

5. Boston Society of Architects:

Interested in working with us on charrettes and other aspects of designing projects; currently using a Barr Foundation grant to generate public discussion of transportation alternatives.

6. Continuum – Branding

7. A Better City – has a long-standing interest in transportation issues both for downtown and for getting people to and from downtown.

8. Alta Planning and Design –

9. Did most of the work on the Charles River Connectivity Study that was released in 2013.

10. Solomon Foundation

Provides technical assistance on specific greenway and park initiatives in addition to funding support. Produced the Charles River Basin master plan, Charlesgate connection study, Roxbury to Fens concept plan, and various other conceptual design studies related to parkland access.

E. Broad Advocates

1. Boston Cyclists Union

2. MassBike

3. WalkBoston
  4. Institute for Human Centered Design
  5. Green Streets Initiative
  6. Boston Collaborative for Food and Fitness
- F. Focused Advocates
1. Emerald Necklace Conservancy  
Circle the City events are instrumental in demonstrating the potential to change street dynamics and prioritize non-motorized travel.
  2. Arborway Coalition  
Particularly interested in improvements to the Arborway, but linked to projects in Boston and Brookline and supportive of this work more broadly.
  3. Sustainability Guild  
Particularly focused on Dorchester and low-income communities in Boston more generally. Already invested in improving the Columbia Road corridor and improving access to Franklin Park.
  4. Somerville Path Friends  
Particularly focused on Somerville Community Path extension and projects that connect to it, but Alan is also very detail oriented and tracks projects throughout the region.
  5. Groundwork Somerville
  6. Charles River Conservancy  
Focused on building underpasses at the Anderson, River, and Western Ave Bridges over the Charles to improve safe connectivity along the Charles River paths.
  7. Boston Natural Areas Network  
Primarily focused on the Neponset connections, but Jessica is also passionate about a broader set of connections and the organization would be supportive of connecting people better to urban wilds. Once a major proponent of greenways, their focus has shifted to community gardening leaving a higher demand for our work.
  8. Charles River Watershed Association  
Experts in stormwater management and other environmental damage mitigation

9. Esplanade Association  
May help with improved paths along the Charles and improved connections to the Charles River Paths
10. The Boston Harbor Association  
Primarily focused on the Harborwalk and important partners in realizing components of the plan that effectively serves as “Harborbike.”
11. Save the Harbor/Save the Bay  
Supports efforts to raise awareness of the Harbor and would likely help with projects to fill gaps along the Harborwalk and Neponset trails.
12. Bike to the Sea  
Advocates for the Northern Strand trail which is currently a vector on our map. Valuable partner for projects northeast of the current scope.
13. Bikes Not Bombs  
Already uses many of the routes in southern Boston for their youth rides. Likely to be vocal supporters if invested in the project.
14. Neighborhood Groups: JPBikes, RozzieBikes, Common Wheels, DotBike, Planet Southie
15. Boston Bicycle Advisory Group  
Advises the city on the bicycle network plan. Steady advocacy early on lead to a greater commitment to bicycle boulevards and greenways.
16. Brookline Bicycle Advisory Committee
17. Bike Newton
18. Roxbury YMCA
19. Roxbury Boys and Girls Club
20. Boston Parks Associates —volunteer coordinating group of Parks leaders, currently led by Friends of Franklin Park, FOPG, and NA

G. Statewide Advocacy Groups

1. Border to Boston Trail  
Developing a plan to connect New Hampshire to Boston, will likely support a subset of projects that can eventually link to their network.
2. Massachusetts Smart Growth Alliance
3. Massachusetts Public Health Association

## H. National Advocacy Groups

[Expertise, advocacy, and possible grant funding partnerships]

1. Alliance for Biking and Walking  
Launching campaign to increase bike mode share to 10% in major cities across the US, including Boston.
2. Rails to Trails Conservancy  
Focused primarily on a handful of paths like the Somerville Community Path, Watertown Greenway from Cambridge, and Dedham Rail Trail. Very eager to be involved but also seem to have their own agenda and may not be on board with the work completed so far.
3. East Coast Greenway  
Focused primarily on the Harbor to Mystic connections that contribute to their route through the Boston area. Have established precedents for signage, mapping, and iterative improvements.
4. National Park Service  
Involved in the Connect Historic Boston initiative and could provide support for building a downtown loop in the city's core.
5. Trust for Public Land  
Was involved in the East Boston Greenway and continues to support projects that reclaim space for parks and park-like uses. Important partner for jumpstarting projects. Their Massachusetts mission focuses on providing "communities with the green space they need."
6. League of American Bicyclists  
While focused exclusively on bicycles, they may be able to assist with plans for road diets on parkways and other advocacy outreach.
7. Smart Growth America  
Working to protect open space and revitalize neighborhoods, they may have a toolkit for neighborhood projects and broader support.
8. American Trails  
Hosts an International Trails Symposium that might be a good place to network, get ideas, or share our ideas.
9. Urban Land Institute (ULI), Congress for the New Urbanism (CNU), and American Planning Association (APA)  
All of these organizations have local chapters looking for projects to support. The Green Routes Network embodies some subset of each of their missions and may find valuable partnerships with some or all of these organizations.



10. Conservation Law Foundation (CLF)
11. Sierra Club
12. Appalachian Mountain Club (AMC)

## **Appendix J**

### **Structure of the Initiative**

#### **Present**

To date, the Green Routes Initiative has been spearheaded by Steve Miller and Matthew Kiefer with preliminary mapping meetings led by David Loutzenheiser at the Metropolitan Area Planning Council (MAPC) and additional work, including consulting by Alice Brown, being housed at LivableStreets. Given their ability to leverage volunteers and a history of collaborating with all the user groups represented in a Green Routes vision, LivableStreets is a logical home for the initiative in the foreseeable future.

#### **Future**

This initiative will be housed within an existing non-profit organization. It will be comprised primarily of volunteers interested in moving it forward, but a paid staff person will likely be hired to do planning, organizing, and outreach work. This person would be compensated through grant funding.

A small Steering Committee will direct most of the ongoing activities of the initiative. It should be comprised of a balanced group of experts on and advocates for parks and public space, transportation, walking and cycling, public health, and planning. If grant funding is secured for organizing purposes, one model for distributing it would be to give a portion of the funds to a technical staff member who is working full time at one organization and to divide the rest among members of the coalition who will contribute staff time towards attending meetings, doing outreach, and sharing ideas.

A larger Advisory Board will meet on an ad hoc basis to provide feedback on the initiative, while a still larger coalition of different organizations will be periodically gathered for input and support.

Although concentrated most heavily in Boston, the initiative will also work with surrounding communities including Somerville, Cambridge, Watertown, Brookline, Newton, Dedham, and Everett. At later phases, there will also be collaboration with Winthrop, Medford, Arlington, Chelsea, Revere, Quincy, and Milton.

Most of the roadways and public spaces in the current map of the proposed Green Routes Network are owned by these municipalities. However, the initiative will also need to collaborate with state organizations including the Massachusetts Department of Transportation (MassDOT) and Department of Conservation and Recreation (DCR). A small number of projects involve the Massachusetts Bay Transportation Authority (MBTA).

For the most part, government agencies will be primarily responsible for planning, designing, and implementing the changes that we have outlined. Few of the projects could be completed solely with

private grant funding, but grant money may provide sufficient resources to complete the planning stage. Most of the funding will likely come from the local, state, or federal level, with federal money coming through the Boston Region Metropolitan Planning Organization (MPO). The MPO is also involved in data collection and planning long with the MAPC.

Academic groups, particularly Peter Furth and his students at Northeastern University, may provide additional insights on routes, planning, and cost/benefit analysis through research, design, and modeling.

Advocacy groups may be represented on the advisory board, participate in the ad hoc group, or simply voice their support for the coalition. Depending on the progress of a particular project, some advocates may increase their involvement for a limited period time or with a specific focus. Groups can supply expertise, vocal support, volunteers, programmed events, and outreach to their members.

An additional group may form to supplement this work with a focus on developing cohesive signage standards and guidelines for designating routes for walking and cycling in the Boston region. The work of the initiative will not duplicate this effort, but should support and contribute to this committee.