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Fairmount Greenway - A Community Initiative

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The Fairmount Greenway

From Four Corners to Morton Street
Linking Urban Greening & Community
Acknowledgements

The student studio team of the Department of Landscape Architecture and Regional Planning acknowledge the following organizations and individuals who contributed their time and resources as we worked on this special and significant project.

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* This twelve week studio is divided into two six week segments. Students who participated for the full twelve weeks are marked with an asterisk.
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Our studio team envisioned the Fairmount Greenway as a community tool to mitigate the impacts of the social determinates of health and rebuild a healthy environment. The greenway concept plans and designs in this report seek to promote community, social and environmental health by:

- Encouraging physical activity and recreation
- Increasing access to healthy food production and purchasing
- Addressing crime and safety
- Highlighting safe routes to school
- Increasing safe spaces for youth
- Identifying potential tree planting sites
- Creating and/or restoring multi-functional open spaces
- Incorporating rain gardens and other green infrastructure into the neighborhood

These concepts were supported at the community meeting in November and are evident throughout the master plan and the design alternatives.

Implementation and Funding
The community organizations along the Fairmount Line have been working on the greenway for over two years. This studio recognizes that our work is only one small piece of this on-going community effort. To help future efforts, we spent time researching grants and other funding opportunities that could support future efforts. This research is thematically organized in a Funding Matrix that mirrors the issues identified and addressed throughout the report. Our aim is to link the funding tool with the concepts and assessments outlined in this report to best allow community leaders to use our report in the grant application process.

This studio experience was truly inspiring and rewarding for all the students involved. We hope that our efforts prove both useful and valuable for the community, and that they eventually contribute to the implementation of the Fairmount Greenway.
A coalition of community development corporations (CDCs) developed a plan in 2005, Boston’s Newest Smart Growth Corridor, to transform and improve three neighborhoods of Boston: Dorchester, Mattapan and Hyde Park, which contain some of Boston’s densely populated and low-income neighborhoods. One component of this plan is the Fairmount Greenway, which would improve resident’s quality of life and environmental conditions. Greenways unite three primary components. According to Ryan et al. (2002) a greenway corridor protects and knits together core and sometimes diverse ecological systems. Second, a greenway is a system of recreational corridors that provide opportunity for physical exercise. Recreation along a greenway offers mental relaxation and emotional satisfaction, as the greenway often will pass through a variety of scenic landscapes. Third a greenway links historic, cultural and economic places, bringing cohesion to an area or region and providing alternative means of access to these places in addition to or in lieu of the automobile.

This studio was based on the Fairmount Greenway that was developed through a series of public meetings with the neighborhood community and with consultants from the firm Crosby, Schlessinger and Smallridge (CSS). The Fairmount Greenway, while drawing its identity from the traditional greenway model is in fact a reinterpretation of an urban greenway. The greenway path follows along both primary and secondary city streets because of the lack of space along the rail right-of-way. The Fairmount Greenway begins at what will be a new station stop at New Market South Bay near Upham’s Corner in northern Dorchester. The greenway follows adjacent to the Indigo transit line, the commuter rail that connects South Boston communities with South Station situated in proximity to Boston’s central business and tourist districts. The greenway corridor, like the transit line, stretches along a strong central north-south axis but does not follow a straight line. Instead the greenway veers east and west through Dorchester, Mattapan and Hyde Park crossing the Indigo line at Ceylon Park, Geneva Avenue, Washington Street, under the historic Woodrow Avenue Bridge, Morton Street and River Street near the Neponset River Greenway. The greenway terminates at the Readville Station in Hyde Park. Secondary auxiliary loops extend from the central corridor connecting various recreational, cultural and economic sites with the greenway. These extensions also connect with the greater regional green space network, which will be described more in detail in the assessment to come. The defining third component of the Fairmount Greenway is the periodic greenspaces that fall along the greenway corridor. Some of these public spaces currently exist as parklands and community gardens; others are primarily publicly owned vacant lots that are planned for future development. The community identified these vacant lots as

Source: CSS Landscape Architecture, Planning, Urban Design Figure 1
potential places that could be connected to the greenway such as: community gardens, playgrounds, workout parks, skate parks among others.

The design and development of the Fairmount Greenway is community driven, and though the greenway when complete may serve external communities throughout the Boston region, the Fairmount Greenway is intended to be a centrally important resource serving the communities thorough which it passes.

As is evident from the description above the Fairmount Greenway is an extensive, complex network that passes through several south Boston neighborhoods. This greenway embodies the three components that define a classic greenway, while at the same time adapts the greenway model to fit the particular constraints and opportunities afforded by the urban form—urban ecology, recreation opportunity and socio-cultural resources. Within the context of Dorchester, this interpretation adheres to the needs and desires of the community, and is definitely shaped by the unique social, cultural and historical contexts.

Due to a fourteen-week time constraint the studio team chose to focus their work on a central segment of the greenway to be served by three existing and proposed metro transit station stops; Four Corners, Codman Square and Morton Street, all of which are at different stages of planning and development. The studio team analyzed the proposed central greenway, the associated auxiliary neighborhood loops and the intermittent green public spaces identified by the community. This analysis resulted in suggested additions that might be included as part of the greenway system. Suggestions included potential visions and scenarios for these neighborhoods. In addition, the team considered the larger connections to adjacent urban green areas and relevant green spaces such as: the Emerald Necklace, Franklin Park, and Neponset Greenway; and presented some potential links that extend from the greenway to these outlying public green spaces.

In addition, the second half of the fourteen-week studio focused on implementation and potential funding for this greenway project. Throughout this process the studio team worked primarily with two neighborhoods organizations: Codman Square Neighborhood Development Corporation and the Greater Four Corners Action Coalition.
Currently, only four stations serve Dorchester, Mattapan and Hyde Park: Upham's Corner, Morton Street, Fairmount and Readville stations. The transit service for these areas, segregates neighborhoods from one another as well as from the rest of the city. This isolation has relevant impacts on residents such as: a lack of access to job markets, and to recreation and cultural areas. Moreover, areas with poor transit access tend to have low numbers of visitors, which can have negative consequences for commercial activity. In addition, the fare for this line is between $4 and $6 compared to the rest of Boston’s subway fare, which is $2. It is evident from these conditions that residents from these neighborhoods face high inequalities in terms of social, environmental and economic aspects.

As shown in the transit history chart below the Fairmount Line has been going through a series of improvements since 1987. The Boston’s Newest Smart Growth Corridor Plan (2005) played a key role in instigating these positive changes. The future development of the Fairmount Greenway would help to achieve the visions of this plan, which are:

- More transportation choice and connecting people to jobs: this greenway would encourage the use of other modes of transportation other than a car. People can walk or bike to work. In addition, it would connect the residents to the transit stations.

- Enhancing quality of life: The Fairmount greenway would provide access to parks and cultural areas. By creating recreation access, people would increase their physical activity, which in turn could improve their health.

The development of the greenway would increase the percentage of green spaces and tree canopy, which is very low in these neighborhoods despite the implementation of various urban greening projects. This would support the goals of the City of Boston to achieve the planting of 100,000 trees in Boston and to increase the percentage of tree canopy by 36% and 43% in these neighborhoods.
Figure 7 includes some of the most relevant aspects of the Fairmount Corridor Line, since its construction until the present date.

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<th>Year</th>
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<tr>
<td>1855</td>
<td>The Fairmount Line opened. One of the first commuter rail lines of Boston.</td>
</tr>
<tr>
<td>1944</td>
<td>The line was closed down.</td>
</tr>
<tr>
<td>1979</td>
<td>The Fairmount corridor was reopened because of the Southwest Corridor construction but without any stop between South Station and Fairmount. Dorchester and Mattapan residents did not have an adequate public transit service because the Fairmount station only served Hyde Park neighborhood.</td>
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<tr>
<td>1987</td>
<td>Due to community pressure two stations were open, Uphams Corner and Morton Street.</td>
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<tr>
<td>2002</td>
<td>The Metropolitan Bay Transportation Authority (MBTA) had identified this line as a priority project and developed a plan that includes the proposal of six new stations along the corridor.</td>
</tr>
<tr>
<td>2005</td>
<td>The State assigned $43.5 in funding for new stations and for the improvement of the line service, thanks to the Fairmount/Indigo Line CDC Collaborative for its Boston’s Newest Smart Growth Corridor plan.</td>
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<tr>
<td>2007</td>
<td>Renovations to the Morton Street station were completed.</td>
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<tr>
<td>2010</td>
<td>Four Corners Station is under construction.</td>
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Figure 7

The addition of transit stops will further enrich the community of Dorchester, connecting people with an area that has a rich history with origins reaching back to early Colonial times.
Dorchester, one of the earliest established communities in the United States, was first settled in 1630 and remained one of the largest independent towns in Massachusetts until 1870, after which it became part of Metropolitan Boston. Dorchester was composed of several villages, whose names are still familiar today such as Codman Square and Uphams Corner.

Codman Square, named for John Codman, a respected first pastor of the Second Congregational Church from 1808 to 1847, is the historic heart of Dorchester. (Taylor, 2003-2008) Codman Square maintains the feeling and character of an early New England village, which is now integrated within a vibrant modern urban form. The presence of the Second Congregational Church, the park, the Latin School, the former library building, and classic brick buildings with ground floor businesses that surround the Codman Square intersection give the center of Dorchester an open, cohesive campus-like feel. Though now paved with impervious asphalt, the roads of old Dorchester within the Codman Square area used to be dirt. Cobble was laid on the edges of the street and streetcar rail tracks are visible. Evidence of a modern sewer system can be seen at the lower right hand corner of Figure 12. Franklin Field shown in Figure 13 used to serve as a speedway for horse racing. Today the park serves the youth in the community with baseball fields, play areas, and a Boys and Girl Club.
The abundant water resources such as the Neponset River and the adjacency to Boston Bay contributed to the ability of Dorchester to establish a variety of important industries, many of which were firsts in American history. What is most striking about Dorchester's commercial history is the diversity of industry, among which include furniture making, fisheries, shipbuilding, paper, textiles and playing cards. The first water powered mill in America operated in Dorchester in 1633, which was the start of a long line of creative industries that helped to bring prosperity to Dorchester into the 20th century.

A strong tradition of public and private educational institutions establishes Dorchester as a place that places a high value on learning such as housing such as Girl's Latin School, one of the historical buildings across from Codman Square Park. Many important personalities are associated with Dorchester, significant public figures from George Washington to Rose Kennedy, entertainers Leonard Nemoy, musicians including members from New Kids on the Block, Donna Summer and rapper Akrobatik, writers, and activists. (Boston Neighborhood News, 2001; Taylor, 2003-2008)

Near the turn of the century communities in Dorchester became easily accessible via public transportation in the form of railroad stations, horse drawn carriages and electric street cars. This mobility facilitated an increase in population and the beginning of the suburbanization of Dorchester. (Gamm, 1999) At this time Dorchester consisted of affluent upper class neighborhoods where wealthy residents owned second homes. Areas of Dorchester such as the three that are the focus of this report-Codman Square, Four Corners and the Morton Street- transformed into bedroom communities of Boston (Taylor, 2003-2008; Center for Urban and Regional Policy, 2010)

The story of the mid century dramatic demographic shift that was fully manifest by the middle part of the 20th century in fact began in the 1920's. African American families came to Dorchester in this period as is evidenced by the opening of the first African-American congregation, St. Mark’s Congregational Church in 1926. (Gamm, 1999). Stable black neighborhoods persisted throughout the 1900's, and experienced notable expansion by the mid 1900's (Applied Evaluation Systems-Emmanuel Gospel Center, 2010) This migration did not happen at once but in a few phases. Because of personal wealth and upward social mobility, affluent Jewish families had already begun to leave Dorchester in the early part of the 1900's. By the 1950's the majority of people in Dorchester were working class. The Jewish population continued to leave Dorchester at this time in a second major wave.

A mix of violence, racism, blockbusting and discriminatory institutional redlining by federal agencies and banks contributed to the neighborhood destabilization in Dorchester that culminated in the 1970's; (Gamm, 1999) Throughout this period many vacancies and reduced property values were left. By the mid 19th century this demographic movement produced deterioration and disinvestment in the effected neighborhoods, which in turn further decreased property values. A decade prior to this, one of the
main railroad lines, the Fairmount Corridor Line that had served this area for almost 100 years was closed down in 1944, which exacerbated and increased the community’s isolation from Boston and was a precursor of some of the problems to come. This situation created an environment of opportunity for working class and poorer black families who now could achieve homeownership, an opportunity that had been too many up to this point inaccessible.

Between 1960 and 1970 many African American Jamaican and Haitian families moved to Mattapan, Four Corners and Codman Square with the help of the Boston Bank Urban Renewal Group (BBURG). BBURG later grew into other partnerships such as with the Community Development Corporations in the Dorchester area, including Greater Four Corners Action Coalition (GFAC). They work with the community members to avoid concerns such as foreclosure in tough economic times. (Applied Evaluation Systems-Emmanuel Gospel Center 2010; Center for Urban and Regional Policy, Gamm, 1999)

Racial transition still continues in Dorchester today and periodic violence is still an issue; however the present demographics reflect stable, ethnically diverse neighborhoods. Today Mattapan, Four Corners and Codman Square neighborhoods are home to African American, Haitian, Jamaican, Haitian, West Indian, White, Asian and African people. (Gamm, 1999; Walczek, 2010) Much has changed in the past century, the Dorchester today is a culturally rich, forward thinking community. Families inhabiting Dorchester neighborhoods represent a range of income levels. The next section of the report will present a vision, concept, and associated goals and objectives for the Fairmount Greenway. These ideas rise from those of the communities that the greenway will serve.
Figure 19 Image Collage of Contemporary Dorchester, Top to Bottom: Mural Near Codman Square, Dorchester Heights, Codman Square CDNDC, New Housing Norfolk Street, Second Congregational Church Codman Square, New Housing Near Four Corners Transit Station

Dorchester Today

Student Photos
Vision:

To support the implementation of a community-driven greenway plan that fosters a healthy community from both a social and ecological standpoint.

Mission:

The project team recognizes that the Fairmount Greenway is a community driven, grassroots endeavor and the ideas and resources presented in this report aim to support the vision, goals and objectives identified by the community residents. The Fairmount Greenway is a project of the Fairmount Coalition, a collaboration of community development organizations along the Fairmount line focused on improving equity with particular attention to mixed income housing, better job opportunities and civic participation.* Specific goals target transit equity, transit oriented development, economic development and neighborhood stability. Our studio team developed the Healthy People, Healthy Places greenway theme based on a combination of demographic assessment and community feedback regarding the needs and visions for the area.

* The Fairmount/Indigo Line Coalition was initially prompted by the Four Corners Action Coalition demands for new commuter line stations and transit equity. The Coalition includes four initial CDC’s - Dorchester Bay CDC, Codman Square NDC, Mattapan CDC, Southwest Boston CDC, and now Quincy Geneva CDC. It also includes Law Foundation, ACE, Neponset Valley Watershed and "02136" a in Hyde Park.
Project Goals:

1. Support the community driven process of the Fairmount Greenway by working for and with community-based organizations and community leaders to best address community interests and accomplish identified community goals.

2. Provide background research and correlating visual, conceptual and implementation tools to encourage the development of the Fairmount Greenway as a tool to promote community health.

3. Support the connectivity that the Fairmount Greenway provides linking communities and neighborhoods with each other and with the resources of the greater Boston area, specifically considering transit and green space connections.

Project Objectives:

1. Increase connections in the community and beyond for potential work and recreational access. Complement previous community, consultant and studio work.

2. Create and map a conceptual diagram and master greenway plan.

3. Provide a multi-media tool to promote community interest and funding support.

4. Research and leverage implementation tools and strategies.
Greenway Concept: Healthy People, Healthy Places

HEALTHY PEOPLE

- Active Living
- Food Systems
- Public Safety
- Safe Routes to School
- Youth Spaces

HEALTHY PLACES

- Climate Change
- Ecology
- Open Space
- Tree Canopy
- Water Quality

COMMUNITY GROWN

Based on the assessments, visions, goals and objectives described thus far, our studio team constructed a conceptual greenway diagram for the Fairmount Greenway that brings together issues and opportunities surrounding transit, ecology, social and environmental justice and community and public health. We feel that this greenway is first and foremost a community driven project, and emphasize the community driven nature of the greenway planning and implementation process. We identify the Healthy People, Healthy Places themes to demonstrate specific strategies for greenway conceptual development. Finally, we see this greenway itself as a connectivity tool, shown in intersection of the diagram above.

The following paragraphs briefly describe the diagram components, with further information provided in the following sections of the report body.

Community Driven

Throughout our studio design and planning processes our aim was to serve the local community. Our intention is to create tools for the community to help them increase excitement and leverage funding so that this greenway plan can become a reality. Our work on this project is a small piece of a process that has been going on for over two years and will continue for several more. We worked closely with two community development agencies in this area, the Codman Square Community Development Corporation and the Greater Four Corners Action Coalition. During this semester
Healthy People

We envisioned this greenway as a community tool to mitigate the impacts of the social determinates of health. Widely recognized social determinates of health consider economic conditions such as rates of employment, income, and education. Social determinates can also stem from physical and neighborhood conditions, including factors such as food access, parks and open space, housing, air quality and transportation. Social determinates can also stem from social conditions including neighborhood safety, social networks, social capital and civic engagement. We sought to address these issues in the greenway plan by implementing the strategies listed in the diagram above. Our concept plans and designs seek to promote physical activity and recreation, increase access to healthy food production and purchasing, address crime and safety, highlight safe routes to school and increase safe spaces for youth.

Healthy Places

In addition to focusing on public health we sought to promote environmental conservation and sustainability. In this manner we examined the role of the greenway in mitigating climate change and promoting ecological diversity though increasing protected green open space, increasing the urban tree canopy and addressing water quality management. A focus on the greenway as supporting ecological awareness and aiding the integration of “health places” demonstrates the interconnectedness between healthy people and healthy environments. Healthy Places includes the possibility of urban agriculture to provide healthy food options and increase healthy environmental practices. Neighborhood health is increased with the integration of stormwater practices such as rain gardens and curb cuts to allow runoff to water the street side plants decreasing the overall cost of maintenance. Healthy places incorporates environmental sustainability not simply to improve current health outcomes, but further, to maintain our ecological resources for future generations to enjoy.

Connectivity

The proposed Fairmount Greenway is a nine mile corridor through the heart of Dorchester connecting downtown Boston to Hyde Park. The entire nine-mile Fairmount Greenway provides connectivity from Dorchester to the center of Boston, and potentially provides connections to the greater Boston area by promoting tourism. The Fairmount Greenway provides connections to additional greenways, open space and recreation areas through connecting to the Southwest corridor bike path, the harbor walk, the Neponset River greenway, the Blue Hills reservation, Stony Brook Reservation and Franklin Park. The Fairmount Greenway links people to daily activities with a safe option for alternate transportation, either through biking or walking. The greenway connects residents to the emerging rapid transit options in Dorchester by linking to the existing and proposed commuter line stations. Promoting biking and walking encourages healthy activities and healthy lifestyles. Further, decreasing car dependency may reduce motor vehicle use, resulting in lower pollution levels and increased environmental preservation.
Community Involvement

The Fairmount/Indigo Line has a rich history of community involvement. The community organizations we have worked with are the Codman Square Neighborhood Development Corporation (CSNDCC) and the Greater Four Corners Action Coalition (GFCAC) neighborhoods which surround the Indigo Line. These communities have been working hard to bring commuter rail stops to their neighborhoods.

The changes started in service to the area in the late 1980s with the Dudley Street Neighborhood Initiative (DSNI) continuance of service to the area with a track upgrade and stops at Uphams Corner and Morton Street. In 1999 the GFCAC along with the Massachusetts Bay Transportation Authority (MBTA) with the leadership of Marvin Martin and Noah Berger “envision the corridor as the “Indigo Line” with rapid transit-like service, including shorter headways, longer service hours, new attractive and secure stations at key commercial and residential nodes along the corridor, and fare integration with the rest of the subway system” (Fairmount/Indigo CDC Collaborative December 2005). Their work through community effort in 2002 had encouraged the MBTA to take the first steps toward implementing this vision. In 2004 the Fairmount/Indigo Coalition was formed with the Dorchester Bay EDC, Codman Square NDC, Southwest Boston CDC and Mattapan CDC bringing these community organizations and activists together around the goals of more stops and upgraded service. A year later the state committed $43.5 million to the added stations and rail service. This money came partially from mitigation funds for the Central Artery Project. Together this coalition, with all of their supporters, continued to rally around this cause.

Figures 21-24 Community Meeting at the Talbot-Bernard Apartments October 6, 2010 & Holland School November 20, 2010 Photos Evonne Gong & Leah Bamberger
The Greenway Project had its origins around the transit line. With the implementation of the new stops came the concept of integrating a greenway which travels through the community along streets connecting various green spaces. Not only is the greenway a system of connections but a destination itself. This greenway connects various existing features with empty lots and intersections which have potential for higher-density development, particularly transit oriented development, infill and mixed use properties. With the addition of more stops comes increased access to jobs with an approximately 23 minute ride, for the whole length, to work, shopping and other destinations for residents.

At the beginning of the process the Fairmount Greenway Collaborative contracted with a planning and landscape architecture consultant, Crosby, Schlessinger and Smallridge, who helped gather residents to get their input on the greenway and compiled a greenway map for the Indigo Line. This map includes the main greenway as well as additional loops all of which came out of the greenway process. Professor of Landscape Architecture at the University of Massachusetts, Amherst, Robert Ryan, worked with others involved in the Boston Metropolitan Area Urban Long Term Research Area (ULTRA) towards “the goal of understanding the historical and socio-economic processes that led to the current landscape pattern and to project future landscape change scenarios for the region” (LA 609/ RP609 syllabus). The ULTRA grant is an interdisciplinary effort which involves the City of Boston, non-profit Urban Ecology Institute (UEI) and researchers from six universities, including UMass, Amherst, Clark University and Boston College. Through this process Professor Ryan contacted CSNDC about the Fairmount Greenway Project.

Landscape Architecture and Regional Planning Studio

The first half studio included fourteen students organized into four location-oriented groups including the regional group with at least two landscape architects in each along with one planner and an equal split in the regional group. The groups were then given the task of assessing their area to have a framework from which to build from. This work was done primarily around GIS data, a site visit or two, as well as ground-truthing using Google Earth. These assessments were built around the major themes of the studio, primarily environment, public health, community and transportation as shown in our concept diagram (see Figure 20).

From our assessments we began to look at the overall Greenway Plan derived from a two plus year community process with assistance by CSS. We looked at street widths and topography to determine what variations from this plan may be beneficial, such as moving the greenway one street north to add a bike lane while maintaining on-street parking for commercial businesses and residents. This analysis helped us to create designs for the streets and vacant parcels scattered throughout the neighborhoods.

With these new proposals we went to Dorchester to share with the community on October 6th at a CSNDC organized event at Talbot Apartments in Four Corners neighborhood. As location-based groups we presented our visions for the greenway with explanations as well as our street and vacant parcel designs. While the groups were presenting the community members were given a feedback form, an opportunity to comment following each presentation as well as one-on-one time following the entire event to discuss changes/images with individual group members using markers and post-it notes.
The feedback we received in these various forms was that the participants liked the idea of creating areas used by the large cross-section of ages in the population, particularly children. The residents also liked the idea of raised intersections and increased street lighting for pedestrian and vehicle safety. These participants wanted to see more picnic areas with benches and bike rest areas along the greenway. The responses on a whole were positive, particularly during the informal conversations with only a few respondents choosing to use the feedback forms.

**Regional Planning Studio**

After mid-semester studio presentations, November 12th, eight landscape architecture students left our studio to join another studio leaving behind four regional planning students and one dual degree student. From this compilation of students the focus changed to a more holistic view seeing each part of the assessment and process as part of an overall concept plan which then was broken down farther into one of two categories. These categories are healthy people/healthy places. All of the assessment and other previous work can be inserted into these categories.

This second half of the studio is focused primarily around deliverables for the community. These deliverables are a video to highlight the features of the greenway, a report with design alternatives and implementation strategies from a funding matrix to help the communities obtain funding. This report is based on the work done in the first half of the studio integrating the somewhat disparate concepts into a combined whole around the concepts we are utilizing. The studio presented these to our department on December 1st for comments and feedback. Then we will share what we have created, report with designs, project implementation goals, funding matrix and video, with the community during the week of December 13th.

The Healthy People/Healthy Place focused students went to the second Environmental Forum at Holland School in the Four Corners neighborhood on November 20th. This event was a conference addressing issues such as green roofs, weatherizing your home, recycling and other energy efficient measures. We displayed our map of the greenway proposals, image boards of the greenway’s potential vacant parcels and streetscapes at our display table. We also made brochures about the greenway effort which we handed-out to community members (see brochure in appendix). We asked people if they would be willing to fill out a questionnaire or answer our questions on the greenway. We had eleven responses which is not a large enough sample size for statistically significant results but provides an overall framework from which to start.

The themes which are guiding our work were confirmed with these results. The term “greenway” was familiar with all but one of those interviewed of which the majority associated with open spaces and natural vegetation. Those asked were familiar with the Emerald Necklace as well as the Rose Kennedy Greenway. Locally people were using Franklin Park and its Zoo more than any other community area. Walking, gardening and biking were the most popular outdoor activities all of which can easily be accommodated on the Fairmount Greenway. Once again bike paths were mentioned as wanted in their neighborhood followed by sports fields, wooded areas, community gardens and open space. All of the issues and concerns mentioned for ranking were above 4.5 on a 1-5 scale (5 being the highest possible rating). More safe places for youth ranked first, than increased access to healthy food, addressing pollution (air and water), and opportunities for physical activity, addressing crime and safety, and finally increasing public green spaces and trees. For further detail about this information please see Appendix 2 for the full results.
Greenway Future

The studios are part of our academic process both helped student learning but also helped provide the community with resources to further them towards their goals. By having participated in our studio we are hoping to make this process of progression and implementation less cumbersome. With that in mind, the next steps depend on the community. Do the CDCs want to go back to the community with unifying changes in the greenway path or would they rather work on filling in the vacant parcels throughout the community or improving intersection safety? Since it is entirely up to the CDCs we are going to provide resources, the video and report with project implementation in the categories of community, public health, ecology, transit as well as design alternatives for their perusal in any of those ventures or others we have not begun to imagine.
The implementation of the Fairmount Greenway provides a valuable opportunity to promote social equity and community health. For the purposes of this project we take a broad perspective on the topic of public health, examining the social determinants of health and the role that the Fairmount Greenway could play in addressing these issues. Widely recognized social determinants of health consider economic conditions such as rates of employment, income, education and wealth. Social determinants can also stem from physical and neighborhood conditions, including factors such as food access, parks and open space, housing, air quality, liquor and tobacco advertisements and transportation. Social determinants can also stem from social conditions including neighborhood safety, social networks, social capital and civic engagement. The social determinants of health and related health indicators and outcome are valuable to consider for the creation of a Greenway plan that seeks to promote relevant health outcomes, as well as to help identify potential funding sources for the Greenway implementation. The Disparities Project, a branch of the Boston Public Health Commission, discusses these components of health in their Boston Health Disparities Report, noting that “the availability of resources and community assets plays an important role in promoting conditions that support good health” (Boston Public Health Commission 2010). The following section includes a comprehensive demographic and health indicator assessment of the Dorchester area in general and our focus area in specific. Following the assessment we outline specific strategies that we use to address issues of health equity in our Fairmount Greenway master plan and design proposals.

**Dorchester Demographic and Health Assessment**

Population Statistics

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*Source: US Census Bureau and Boston Parks and Recreation Department 2005 Table 1*

Dorchester is the most populous neighborhood of Boston with a total population of 92,115 representing almost 16% of Boston total population (U.S. Census 2000). The Dorchester population increased from 82,912 to 85,698 during the 1980s, with a growth rate of 3.36. This increase accelerated between 1990 and 2000, with a growth rate of 7.5%, which is higher than Boston growth rate of only 2.6% between the same years (See Table 1).

In terms of racial composition, Dorchester is a racially diverse community, with a population of 49% Whites, 32% Blacks, 11% Hispanics and 4% Asians. Mattapan residents are predominantly Black (79%) with smaller percentages of White (15%), Hispanic (5%) and Asian (1%) residents (See Figure 26). “White flight” during the 1960’s led to the high percentages of minority residents that we see today. (Open Space Plan 2008-2014, City of Boston). Although the phenomenon of “white flight” slowed in
the 1980's, decrease in white population in these areas continued past the turn of the twentieth century. As shown in Figure 27, white population in South Dorchester decreased from 65% in 1980 to 30% in 2000, while minorities population increased from 35% on 1980 to 70% on 2000 (Boston Redevelopment Authority, 2000). The rapid changes in racial composition make these areas unique compared to the rest of Boston due to a strong Haitian and Jamaican cultural influence, evident by high numbers of Jamaican and Caribbean food restaurants located throughout the neighborhood.

Dorchester is made up mainly of families with a ratio of 82% families, while the average rate for Boston is 67%. Single-parent families represent 46% of Dorchester residents. Moreover, Dorchester has a high percentage of youth, 27% of the population. This percentage is relatively high compared with Boston’s average youth population of 20%. Figure 28 distinguishes the neighborhoods of Boston by rates of children residents, with the highest rates seen in our concentration area. This map also demonstrates that the areas with high percentage of children have fewer areas of open green space. The implementation of the Fairmount Greenway will provide much needed new green spaces for youth.
Percentage of Children by Census Tract and Open Space

Figure 28 MassGIS and Census 2000

Percentage of Children (Under 18 yr)

- Open Space
- 0.5% - 12%
- 12% - 24%
- 24% - 40%
Household Income and Economic Sectors

Dorchester has a median household income of $38,590, which is similar to Boston household income of $39,629. Both of these median incomes, however, are substantially lower than the Massachusetts State average, which is $50,502 (U.S. Census 2000). In addition, Dorchester has a high rate of residents living at or below the poverty line (18.4%). Figure 29 demonstrates that in our study area there is a high concentration of low-income areas represented by red, particularly along the Fairmount corridor.

Dorchester has 1,474 establishments with the largest number of them in retail trade with 250 establishments, followed by health care and social assistance with 216 establishments. Dorchester has 23,964 jobs, 4% of private total jobs. The largest sector is the professional, business services and information sector at 23%, followed by health care and social assistance represented at 21%. The neighborhood’s largest employer is Carney Hospital, which provides the majority of jobs in this sector. The second largest employer is the Boston Globe (Boston Redevelopment Authority, 2006).

Housing

In the year 2000 Dorchester contained 32,926 housing units, 13% of the total units in Boston. Dorchester had the highest number of housing units in Boston, of which 5% were vacant at that time. As of 2008, Dorchester had the highest number of foreclosure petitions, represented by 39% of the Boston’s total foreclosure petitions. As shown in Figure 30 there is a clear concentration of foreclosure petitions in Dorchester and Mattapan. Figure 31 shows high numbers of abandoned residential buildings. Foreclosures and abandonment of buildings not only have negative impacts on the economy of the neighborhood such as a decrease in property values, but also on social aspects such as an increase in both violent and property crime rates (Immergluck and Smith, 2006). In addition, foreclosures in neighborhoods...
can exacerbate these problems. In addressing the foreclosure crisis, The Codman Square Neighborhood Development Corporation (CSNDC) has prevented almost 50 home foreclosures and they continue with this prevention by creating and strengthening partnerships with the City of Boston and HomeFree USA. CSNDC has been active in preventing foreclosures by offering foreclosure information sessions to residents and homeowners (CSNDC Webpage).

Despite the effort made by various public and private organizations, research groups, and foundations, Dorchester and Mattapan still face high social, economic and environmental inequalities. Residents lack adequate and efficient public transit service, which diminishes access to jobs, as well as recreation and cultural areas. The improvement of streets and the creation of new green areas throughout these neighborhoods can increase property values, attracting more people and small business to the area and offering new economic opportunities for residents. The residents in this neighborhood would be well served by the development of policies that prevent displacement of residents who cannot afford an increase on property taxes.

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Table 2 Abandoned Residential Buildings by Neighborhood, City of Boston 1997 to 2007
Environmental Justice

The residents in the Codman Square area of Dorchester are considered to be an Environmental Justice Population. The goal of defining Environmental Justice populations is to “ensure that minority and low-income communities have access to public information relating to human health and environmental planning, regulations and enforcement” (Environmental Protection Agency website). The Office of Energy and Environmental Affairs in Massachusetts uses four criteria to determine Environmental Justice (EJ) populations: percent English Speaking, percent Foreign Born, Income levels and percent Minority. These concepts are useful to consider as we work within the community to help ensure the construction of both culturally appropriate and equitable design.
Two census block groups in the Codman Square area fall under the EJ criteria as having less than 75% English speakers. It’s important to note that one of these areas (west of the Talbot St. Station) includes only a low-income housing area and a large park, clearly skewing the percentages for this census block (Figure 33). The majority of census block groups in this area have a rate of 85% or higher of English speakers. Census block groups with 25% or more residents who are foreign born are considered to be EJ populations. Over two thirds of the census block groups in this area fall within this category, with some groups having rates as high as 45% or higher (Figure 34).

The median income for the state of Massachusetts in 2000 was $46,967. EJ populations are considered any census block group with an average income level of 65% or less than the state median ($30,515). The majority of census block groups in our target area fall between the state median and the 65% marker. There are, however, a substantial number of block groups that fall within the income level of an EJ population, as well as several block groups that have average incomes at or below the Federal poverty level, $22,050 (Figure 35). Rates of low socioeconomic status are correlated with limited access to health care, adequate housing, quality education, nutritious food, recreational opportunities, and other resources associated with a healthy lifestyle. The final component of an Environmental Justice area is minority status. Census block groups with 25% or more ethnic or racial minority residents are considered part of the EJ population. All of the census block groups within our area are included in this category, with the majority of census block groups having over 95% minority populations (Figure 36). The high rate of minority residents in this area has huge implications on health outcomes, most dramatically in the systemic racism that is deeply rooted in the culture of the United States.

In the Boston Disparities report, staff from the Boston Public Health Commission writes about the implications of race and racism on health. The report explains that racism impacts health at an institutional, interpersonal and internal level. Institutionally, racism impacts access to services and opportunities essential to living in a healthy environment. Interpersonally, the prejudices accompanying racism can deeply impact the ways that people treat each other. Finally, racism impacts “people’s own beliefs about who they are and what they can do, sometimes leading to self-destructive behaviors such as drug abuse or interpersonal violence” (BPHC June 2005). The Disparities Project demonstrates that across the board different racial and ethnic populations in Boston have clearly different health risks and concerns. The Disparities Project report states that, “Bostonians, as a group, have worse health than all other residents on a broad range of indicators, with higher rates of preterm birth, overweight, diabetes, hypertension, heart disease, hospitalization, cancer mortality, and premature death from a variety of conditions”. (Gary Gottlieb June 2005)

**Health Assessment**

Chronic diseases are among the leading causes of illness, disability, and death in the city of Boston, and these rates are almost consistently disproportional in the Dorchester neighborhood. Chronic diseases include, among others, asthma, diabetes, heart disease and obesity. In 2008 10% of adults in Boston reported having asthma, while 16% of adults in Dorchester reported having asthma. Asthma hospitalization rates for Black and Latino children under five are four times the rate for White children in the City of Boston. Similarly, an average of 6% of Boston adults reported having diabetes between 2006-2008, while the average in Dorchester was between 7-8%. Black residents in Boston have the highest age-adjusted diabetes mortality rate among all racial/ethnic groups. Heart disease is one of
the leading causes of death for Boston residents, with some of the highest rates in North and South Dorchester. In 2008, 23% of Boston adults were obese, while 33% of adults in Dorchester were obese. Higher percentages of Black and Latino residents were obese compared to White residents and higher percentage of residents with a household income of less than $25,000 were obese compared to residents with a household income of $50,000 or more. All of these chronic diseases disproportionately impact our focus area. An overview of health disparities is an important lens through which to consider the implications of greenway and transit development and design though the potential positive impacts that the Greenway can have on the social determinants of health. (Boston Public Health Commission 2010)

Looking more closely at two of these health indicators reveals close links between racial and economic disparities and health outcomes. At a site visit to the Codman Square area one of the community members emphasized that Dorchester has high percentages of asthma. This is a perceived as well as documented health concern. North Dorchester has the second highest rate of asthma hospitalization for children under age 5 in Boston, represented by 16.4 per 1,000 inhabitants (Figure 38). Air pollutants are commonly associated with an increased of asthma episodes and creating healthy environments with greener areas can reduce these episodes. High rates of childhood asthma correlate strongly with the need to increase street greening and actively promote city measures to improve air quality (Boston Public Health Commission 2010).

Rates of obesity surface additional health equity concerns. Mattapan has the highest percentage of obese adults with a ratio of 40%, South and North Dorchester have 32% and 33% of obese adults respectively (Figure 37). Each of these neighborhoods has a higher percentage of obesity than Boston as a whole, which has 23%. One way to improve community health is by providing open spaces for recreation and physical activity. People tend to exercise more if they have access to these spaces and if open spaces that promote physical activity can connect them to where they want to go (Boston Public Health Commission, 2010).
An additional health indicator, sometimes excluded from a more narrow definition and assessment of health, is the role of neighborhood crime and safety. Neighborhood safety deeply impacts health outcomes on different levels. Simply, if homicide rates are high, life expectancy projections in that area will decrease. More complex are the related implications of safety. If local residents do not feel safe outside, they less likely to exercise outdoors, and are more at risk of becoming overweight or obese. Less than 30% of Black, Asian, and Latino adults in Boston report getting the recommended amount of exercise, compared with 42% of White Bostonians. Furthermore, 64% of Black residents and 56% of Latino residents are overweight, compared with 43% of Whites (BPHC June 2005). Mattapan has the highest rate of homicides with a rate of 34.3 deaths per 100,000 people. The average rate for the city of Boston is 8.5. North Dorchester and South Dorchester have high rates of homicides with 18.2 and 21.1 respectively. Dorchester also has high percentages of violent crime, which includes rapes, aggravated assault and homicides, represented by more than 15% of the Boston’s reported crimes (Map 11, Figure 39).

Figure 39 MassGIS City of Boston and the Boston Police Department
Map by the Metropolitan Area Planning Council
Focus Area Health Assessment: Codman Square Community Identified Health Needs

The Boston Public Health Commission (BPHC) and the Boston Alliance for Community Health (BACH) hold yearly community meetings in four different Boston neighborhoods to provide space for community members to outline and discuss their health concerns and needs. In December 2009 the BPHC and BACH held a community health meeting in Codman Square in partnership with the Codman Square Neighborhood Council. Three main health concerns were raised at the 2009 meeting: underage drinking, gun violence and obesity/diabetes. Residents and staff from community organizations discussed health indicator data on these three health concerns, and the issues of racial and ethnic health disparities. In addition, the group discussed and highlighted the strength of the community assets the Codman Square area and the role that the community can play in working to mitigate disproportionate health outcomes. For the purposes of this report, and the health implications that arise from the development of the Fairmount Greenway, we will focus in depth on two of the three community identified health concerns: crime and safety and diabetes and obesity. (Codman Square Neighborhood Council May 2010)

The December 2009 community health meeting looked closely at the rates of crime and safety concerns in the Codman Square area in recent years. Boston police department data shows 10 homicides and 95 guns recovered in a ten-block radius in Codman Square from 2005 through mid-2009 (Maps 12 and 13 Figure 40). Community proposed prevention paths to address issues of neighborhood crime and safety includes promoting “neighborliness” and increase resident-led efforts to join the community together. Further community identified crime prevention measures include engaging with youth, through increasing youth employment and after school opportunities.

The second health issue raised at the December community health meeting was the concern over high rates of neighborhood diabetes and obesity. Hospitalization rates for heart disease and diabetes were significantly higher in Dorchester than in Boston as a whole (Map 14 Figure 41 and Map 15 Figure 42). Proposed prevention paths identified by the community were to increase access to fresh fruits and vegetables in the community and to increase local opportunities for physical activity. Additional prevention measured identified included decreasing fast food outlets and unhealthy food advertising as well as providing a full service grocery store that is pedestrian accessible to Codman Square residents. (Codman Square Neighborhood Council May 2010).
Implementation of the Fairmount Greenway provides an opportunity to address health disparities across the city of Boston by increasing neighborhood health assets in Dorchester including attention to: street greening, crime prevention, outdoor spaces to exercise and play, increased connectivity and increased accessibility to healthy food through either production or purchasing. Further, the implementation of a “Healthy People, Healthy Places” greenway through the heart of Dorchester and Codman Square area directly responds to the health prevention paths identified by the Codman Square community.

**Healthy People Greenway Strategies and Implications**

Based on the comprehensive health and demographic assessment outlined above our studio team identified five core strategies that we incorporate throughout our Fairmount Greenway concept maps, master plan, design proposals, and implementation suggestions. The five strategies, outlined in further detail below, respond directly to identified community needs and support a unique and innovative vision for the Fairmount Greenway. The five core public health strategies suggested are: Active Living by Design, Healthy Food Systems, Enhanced Public Safety (Crime Prevention Through Environmental Design), Safe Routes to School and Youth Spaces.
Healthy People - Active Living

Active Living by Design principles are an essential component to the Fairmount Greenway concepts and design. The U.S. Surgeon General recommendation for adults is to achieve at least 30 minutes of physical activity every day, even three ten minute blocks of activity is enough to cause positive health outcomes. Active Living by Design concepts include:

- Retrofit existing roads to accommodate bicycling and walking
- Maintain roads and sidewalks for easy, safe use by pedestrians and bicyclists
- Make all routes accessible for people with disabilities
- Coordinate transit systems for pedestrian and bicycling services and facilities.
- Traffic Calming
- Promoting Safe Routes to School

The main ways to encourage biking and walking is to support bike and pedestrian safety. Ways to do this include:

- For Pedestrians:
  - Widening the sidewalks
  - Implementing safe crossings
  - Adding buffer zones between the street and the sidewalk (bike lanes or trees)

- For Bicyclists:
  - Increasing bicycle access to/from transit stops
  - Implementing designated bicycle lanes
  - Narrowing the motor vehicle travel lanes
  - Eliminating parking lanes
  - Widening the pavement

Healthy People - Food Systems

The Fairmount Greenway is unique in that it takes into consideration food systems and incorporates connections throughout the neighborhood to healthy food systems. Healthy food systems include production and distribution practices that promote healthy foods. Healthy food systems include residential access to grocery stores that sell produce and other non-processed foods. Healthy food systems incorporate the growing of produce, in both rural and urban areas, through encouraging personal gardens, community gardens as well as larger-scale urban or rural agriculture. Healthy food systems incorporate zoning components, such as permits for urban residents to keep outdoor chickens, which can allow for easy access to fresh eggs and meat.
The implementation of the Fairmount Greenway provides an excellent opportunity to review current food system in the Codman Square area and determine gaps in healthy food delivery and opportunities for increasing access to healthy food (Bussel, Leviton et al. 2009).

Healthy food systems incorporate the following five categories:

- **Production**: Use of natural and human resources to grow edible plants and animals in urban, suburban, or rural settings.
- **Transformation/Processing**: Transformation of raw food to create an end product for consumption.
- **Distribution**: Direct or indirect distribution and transportation of processed and unprocessed foods to wholesalers or retailers.
- **Access & Consumption**: Availability, accessibility and purchase of foods for preparation, ingestion, and digestion.
- **Waste/Resource Recovery**: Disposal of food-related materials, waste and by-products and subsequent disposal, reuse, or recycling.

Our proposed plans for the Fairmount Greenway incorporate the first and fifth aspect of healthy food systems by providing space for healthy food production through increased numbers of community gardens, urban agriculture and permaculture as well as space to compost food waste in an environmentally sustainable fashion. Further, the Greenway plan supports the fourth component of access to healthy food by linking residents to potential sites for grocery stores and farmers markets. In this fashion Healthy Eating is a core component of the Fairmount Greenway, through incorporating residential access to grocery stores that sell produce and other non-processed foods and supporting the growth of local produce (Boarnet and Takahashi 2005).

**Healthy People - Public Safety**

Dorchester has high rates of crime and safety concerns (Boston Globe, 2010). Therefore, we looked at how our designs could help to prevent crime and increase residents’ safety. The model adopted for this report is called Crime Prevention Through Environmental Design (CPTED). Street design implementation that considers crime rates and crime prevention has been shown to positively impact residential safety perceptions and outcomes. The Crime Prevention Through Environmental Design (CEPTED) model was originally conceived in 1972. Since that time various models of Crime Prevention or defensible space have been identified to decrease crime levels.

Traditional CEPTED models include the following key components:

- **Territoriality**: If residents feel ownership over public space, they are less likely to commit crimes or cause nuisances in those areas. Strengthening neighborhood identity and incorporating the broad community in public space decisions helps to increase feelings of spatial ownership.
- **Access control**: Defines public space through clear entry and exit points. Access control encompasses both pedestrian, bike and motor vehicle access, through placing appropriate fences, signs, gates etc. that distinguish spatial lines.
- **Image**: Consistent management and maintenance of the area decrease crime.
- **Natural Surveillance**: Installations of lights and windows to increase visibility, along with reduction of blind spots due to shrubs or buildings, decrease perceived crime opportunities.
Factors that support the CEPTED principles can play out in the following ways:

- **Activity support:** Encourages appropriate use and utilization of public spaces, i.e. scheduling sporting events in local athletic fields to make sure that they are used.
- **Movement predictors:** Creating walkways and trails in a format that does not place pedestrians at risk. This includes special attention to dark or hidden walkways, pathways or stairs, and providing components such as pavement markings, lighting or raised surface treatments to support pedestrian wayfinding.
- **Land use:** Supporting mixed-use development helps to decrease crime.

The Fairmount Greenway attempts to integrate all of the previously mentioned principles to promote public safety and wellbeing, particularly along the Fairmount Greenway route.

**Healthy People - Safe Routes to School**

The Safe Routes to School concept stems from a federal initiative to promote walking and biking to school. Implementation of the Safe Routes to School Program can manifest in the following formats:

- Connecting school sites to the neighborhoods they serve with sidewalks, safe street crossings, bicycle-friendly streets, and trails
- Making all school entrances directly accessible by pedestrians
- Providing good bicycle parking at all schools in safe, secure and convenient locations
- Reducing parking facilities at schools for personnel and students & locating parking to minimize conflicts with pedestrians and bicyclists

The Four Corners to Morton Street area of the Fairmount Greenway connects to three Dorchester public schools, including the well known and often cited for high rates of crime school Dorchester High. Promoting safe routes to school along the Fairmount Greenway and connecting loops is an essential component of encouraging youth to use the greenway and allowing the formation of the Fairmount Greenway to promote alternate healthy, active and safe systems of transportation.

Figure 45
http://www.mybiohazardlabels.com/Crossing-Signs/People-Crossing-Signs.aspx
http://www.wolverhampton.gov.uk/transport_streets/motor/safety/schools/resources/foundation.htm
Youth participation plays an essential role in the successful design and implementation process for the Fairmount Greenway. Encouraging youth engagement in the planning process will help to ensure the development of spaces that young people will use, as well as decrease the youth misuse due to lack of spatial ownership felt by many youth. One of the most important roles of the Fairmount Greenway for the youth population is to provide increased safe places for young people to congregate and to play. Children will be healthier if they have increased opportunities to walk or bike safely in their neighborhoods for recreation or transportation. Increasing spatial ownership and mobility for young adults is also a key component to decreasing youth crime and violence rates. Concern over traffic safety and neighborhood crime is a substantial barrier both to neighborhood investment as well as to parental support of youth exercising or playing outside. Projects like the national Safe Routes to School (SRTS) program encourages sidewalk and bikeway improvements to increase safe, convenient and fun opportunities for children to bicycle and walk to and from school (Bussel, Leviton et al. 2009). An additional important component to provide youth safety is the concept of Localization, which helps to ensure that the spaces designated for youth are in formats and locations that young people will use, and also decreases misuse of public space (Zimmerman 2007). We chose to highlight these concepts by focusing on increasing safe places for young people to congregate and to play, and increasing spatial ownership and mobility for young adults.

Figure 46 Perkins Community Playground Center at Franklin Field Arianna Thompson
A healthy environment is an integral part of creating a healthy community. It impacts the physical, emotional and social healthy of a community by providing natural environments for exercise, relaxation and community gathering. Compared to the built environment, these spaces are unique because they are public spaces for all to enjoy and they provide important ecological functions such as organism habitat and clean air and water. This section will address the environmental issues of hydrology, ecology and climate change and go over strategies including tree canopy, open space, and stormwater management.

Environmental Assessment

Hydrology

Pavement, concrete and other hard (impervious) surfaces prevent stormwater from penetrating into the ground. Figure 47 shows the concentration of impervious surfaces in the Codman Square Neighborhood. Such high concentrations increase the volume of water that is diverted through the stormwater management and sewer systems. Boston has a combined sewer and stormwater system, meaning that both stormwater and sewage use the same pipes (See CSO Figure 48). During periods of heavy precipitation, these pipes often overflow, sending both untreated sewage and stormwater into our waterways. This is why often after heavy rains, Boston beaches are closed during the summer months. The summer of 2009 saw record beach closings in Boston. Between July 8th and Memorial Day, more than 130 Massachusetts beaches faced temporary swimming closures as heavy rains overwhelmed sewer systems. This represented more closings for the period than in 2002 through 2005 combined (Smith 2009). As our climate continues to warm and intense precipitation events become more frequent, beach closures will continue to occur more often. This has ecological implications for Dorchester Bay, as well as quality of life implications for residents whom use the Bay for recreational opportunities such as swimming, fishing and other water activities. A healthy, active waterfront provides an important respite from the summer heat. This is especially important for lower-income families who do not have opportunities to escape to vacation destinations such as Cape Cod.
Ecology

Tree canopy is a vital component of ecology. Tree canopy is often described as the percentage of the land that is covered by the tops of trees. In 2007 Mayor Menino visited Dorchester to announce his goals for 100,000 new trees in Boston by 2020. The City is working with The Boston Urban Forest Coalition to reach this goal. An urban canopy inventory of Boston shows major discrepancies throughout the city. The Urban Ecology Institute in collaboration with the ULTRA grant conducted an urban tree study and the results are displayed in the analytical map in Figure 49. A good portion of our focus area lies in the 20-40% range. The variance in percentages is due to a number of factors such as the tree mortality rate, the amount of open space, and a lack of maintenance and care.

BioMap and Areas of Critical Environmental Concern (ACEC) are places in Massachusetts that receive special recognition because of the quality, uniqueness and significance of their natural and cultural resources. These areas are identified and nominated at the community level and are reviewed and

Figure 49 MassGIS

Connecting Habitat

Neposnet River
http://www.opengreenmap.org/greenmap/ Quincy- green-map/neposnet-river-621

Stony Brook woodland
http://hydepark.ma.povo.com/#Stony_Brook_Reserva-
tion

Blue Hills’ Ponkopaog Bog
http://semcboston.org/walks/areas1.html

Figure 50

Habitat Sensitive Diagram by Bryan Obara
designated by the state’s Executive of Environmental Affairs (EEA) Secretary. ACEC designation creates a framework for local and regional stewardship of these critical resource areas and ecosystems. The Core Habitat layer depicts the most viable habitat for rare species and natural communities in Massachusetts (MassGIS 2010). These areas are depicted in Figure 52. Notice that there are no designated areas in our immediate focus, however there are just outside of our study area. However, a truly healthy and sustainable habitat is connected to a larger ecological system (Forman 1995). This system should include large patches of core habitat, such as the Blue Hills Reservation, Stony Brook Reservation and the Neponset River, as well as connecting patches and corridors. Such patches and corridors help support healthy organism populations within the larger patches by providing satellite habitats (the patches) as well as a means of organism movement between both large and small patches. In some cases, such as migratory birds, the patches can be remote and still serve important functions. Establishing even the smallest areas of natural habitat along the Fairmount Greenway will help support a healthy regional ecological system.

Dorchester is already densely developed so finding spaces for additional tree plantings or natural areas can be a challenge. Identifying current open spaces is vital for this process. Figure 53 shows the arrangement of open space in the region of the transit corridor. Dorchester lacks significant open space parcels but it is encircled by it on almost all sides, with the Emerald Necklace to the North and West, the Neponset Greenway to the south and the Harbor Walk to the East. Dorchester has 351 acres of protected open space, which translates to a ratio of 3.78 acres of protected open space per 1,000 persons compared to a citywide ratio of 7.47 protected acres per 1,000 persons (City of Boston 2010).
Climate Change

Climate change is already impacting the Northeast. We are facing new challenges such as dealing with more frequent extreme heat, precipitation and flooding events. These changes are expected to grow in the future, with the amount of change depending on whether we follow a pathway of lower or higher greenhouse gas emissions (NCIA 2007). Such changes will have significant impact on our coastal communities, infrastructure, and the economy. In particular, urbanized areas such as Codman Square will be disproportionately affected by extreme heat events due to urban heat island effect. Urban materials such as black top and concrete heat up much faster and retain heat longer than green areas. Trees and other plants have a cooling effect on the environment as they release water vapor into the air by means of transpiration. The annual mean air temperature of a city with 1 million people or more can be 1.8–5.4°F (1–3°C) warmer than its surroundings. In the evening, the difference can be as high as 22°F (12°C). Heat islands can affect communities by increasing summertime peak energy demand, air conditioning costs, air pollution and greenhouse gas emissions, heat-related illness and mortality, and water quality (EPA 2010). Extreme heat events are especially dangerous for children, the elderly and other vulnerable populations such as those suffering from respiratory diseases including asthma. This is of critical concern for this neighborhood due to the high number of families and children as well as the number of asthma related hospital trips already occurring each year. Such increasing public health risks challenge our health and emergency response systems (NCIA 2007). More frequent intense precipitation events will also continue to strain the cities already overwhelmed stormwater management infrastructure. This only emphasizes the importance of addressing the hydrological issues described above.
Healthy Places Greenway Strategy - Urban Greening

Greening the corridor along the Fairmount Line is a key goal of the Greenway, and for good reasons. In this report the term urban greening refers to increasing the amount of natural elements in the built environment. This includes things like increasing the tree canopy and vegetative cover, and preserving and maintaining open spaces. Among the benefits of such strategies, are increased ecological habitat, reduced urban heat island effect and better-managed stormwater runoff.

The benefits of urban trees are numerous and well documented. Trees improve the air quality by filtering out air pollutants, such as ozone, carbon dioxide (CO2) and particulate matter (Center For Urban Forest Research 2005). Since CO2 is a major greenhouse gas, planting more trees also helps mitigate climate change. Given that the neighborhoods of Dorchester and Roxbury have such disproportionately high asthmas rates, more trees should be a priority. A prodigious tree canopy can help reduce stormwater runoff and pollution in nearby receiving waters by reducing soil erosion, increasing infiltration to the soil, and evapotranspiration (breathing the water out to the air) (Center For Urban Forest Research 2005).

Another important benefit of trees and urban greening in general is the cooling effect that it has on the urban environment. Trees provide shade, which cool both outdoor and indoor air temperatures. Trees planted on the south and west side of a home can reduce utility bills by as much as five percent between May and September (Donovan and Burtby 2009). This savings results from a diminished need for air-conditioning and also leads to a reduction in greenhouse gasses.

Furthermore, urban trees have been shown to reduce rates of crime and domestic violence (Kuo and Sullivan 2001), and to improve development of cognitive skills and abilities in children (Taylor, et al. 1998). In addition, urban trees increase property values by as much as ten percent (Anderson and Cordell 1988), and commercial sales receipts by as much as 12 per cent (Wolf 2003).

Other greening strategies involve transforming the built environment to incorporate natural elements. Roofs can be replaced with a greenroof, which is simply a roof with plantings such as grass, shrubs or in some cases, even trees that can absorb rainwater. Pavement can be replaced with permeable pavers such as grasscrete or porous pavement. Green-walls and screens can also be incorporated into the urban environment. These are often simple structures for vines to grow on but they provide both environmental benefits and structural purposes such as screening eyesores or providing privacy.

In some instances, pervious structures are irreplaceable and unavoidable. In these instances, stormwater runoff can be captured in rain gardens and bio-swales. These are all examples of green infrastructure. Green infrastructure mimics natural processes to retain and use stormwater. Benefits of green infrastructure extend beyond simple stormwater utility; it can provide ecological habitat, recreational opportunities, and ecological services such as air purification and increase property values due to their aesthetic appeal.
Left: A Green Screen in Fountain Park Playa Visit, CA from [www.greenscreen.com](http://www.greenscreen.com); Top Right: A Green Roof in Manhattan; Bottom Right: Grass Crete Parking lot from [www.grasscrete.com](http://www.grasscrete.com)  Figure 55

Figure 56 Green Roof Cross-section  
[http://www.abc.nl/blog/?tag=green-roof](http://www.abc.nl/blog/?tag=green-roof)

Figure 57 Rain Garden Median in Parkinglot  

Figure 58 Solar Lights  
Bike Trails

Bike trails have proven to be an efficient mode of transportation and source of recreation as can be seen with the great movements such as Rails-To-Trails Conservancy. The other direction for bike path development has been along waterways to capitalize on viewsheds. The City of Boston offers the Jamaicaway bike path following along the Emerald Necklace, but ends at the Arnold Arboretum. The bike path does not extend directly to the Stony Brook Reservation path, but reveals an open space connection. The Southwest Corridor bike path follows the Orange Line linking South End, Back Bay, Roxbury, and Jamaican Plain. The corridor services a similar direction and scope of Boston as the Jamaicaway bike path, but further east. The Neponset River Greenway currently serves as part of the connection between the Stony Brook Reservation and Blue Hills Reservation, but occurs mainly through a series of parkways and roadways. The bike path follows the estuarine habitat to connect to the Boston Harbor Walk following the water’s edge along South Boston and Downtown. These connections fail to follow the Fairmount Rail Corridor, which becomes evident in the large expanse between the Southwest Corridor and Neponset River Greenway. Besides the lack of connections from Dorchester to the rest of Boston, there is a lack of bike paths and safe sidewalks within the neighborhood, which reduce access to local areas like open green spaces, schools, libraries, cultural centers and transit stations. The Fairmount Greenway implementation would offer another mode of transportation to Dorchester residents such biking and walking, through the development of bike paths and secure sidewalks that would connect residents to Boston as well as to relevant areas within the neighborhood.

Transit and Regional Connectivity

Public transportation

Currently, bus service is one of the main modes of transportation used by Dorchester residents. This is a result of a lack of access to alternative modes of transportation and a lack of car ownership. Within the Dorchester neighborhoods, almost fifty percent of residents do not own a personal vehicle (Boston’s Newest Smart Growth Corridor, 2005). Commuter rail access along the Fairmount line could serve as excellent connection to jobs and cultural and recreational opportunities in downtown Boston. The revitalization of the commuter line itself can help take cars off the road by giving people a viable means of alternative transportation. In addition, the commuter line creates opportunities for new transit-oriented development (TOD), which is dense, often mixed used development that is within walking distance of public transit.

The removal of most of the rail stops along the Fairmount Rail Line has created a sharp inequality in access not only to public transportation, but also to main areas of the City. Furthermore, the rail line costs four dollars one way, twice the cost of riding the subway in Boston. Demand on the bus lines has led to overcrowding on a system already bogged down by traffic jammed streets. Another part of the problem is that all of the buses serving Dorchester are local lines with frequent stops along the way, while the northern neighborhoods of Boston and Brookline have access to express bus lines leading right into downtown Boston. The Fairmount Greenway seeks to connect Dorchester with new and existing transit stations in order to provide more accessibility to employment core areas, as well as to increase access from residents to recreational and cultural areas. In addition, increasing connectivity from Dorchester to the rest of Boston would help the neighborhood in other aspects such as attracting commercial and retail activity to the neighborhood as well as increasing property values (Diaz, 1999).

Bike Trails

Bike trails have proven to be an efficient mode of transportation and source of recreation as can be seen with the great movements such as Rails-To-Trails Conservancy. The other direction for bike path development has been along waterways to capitalize on viewsheds. The City of Boston offers the Jamaicaway bike path following along the Emerald Necklace, but ends at the Arnold Arboretum. The bike path does not extend directly to the Stony Brook Reservation path, but reveals an open space connection. The Southwest Corridor bike path follows the Orange Line linking South End, Back Bay, Roxbury, and Jamaican Plain. The corridor services a similar direction and scope of Boston as the Jamaicaway bike path, but further east. The Neponset River Greenway currently serves as part of the connection between the Stony Brook Reservation and Blue Hills Reservation, but occurs mainly through a series of parkways and roadways. The bike path follows the estuarine habitat to connect to the Boston Harbor Walk following the water’s edge along South Boston and Downtown. These connections fail to follow the Fairmount Rail Corridor, which becomes evident in the large expanse between the Southwest Corridor and Neponset River Greenway. Besides the lack of connections from Dorchester to the rest of Boston, there is a lack of bike paths and safe sidewalks within the neighborhood, which reduce access to local areas like open green spaces, schools, libraries, cultural centers and transit stations. The Fairmount Greenway implementation would offer another mode of transportation to Dorchester residents such biking and walking, through the development of bike paths and secure sidewalks that would connect residents to Boston as well as to relevant areas within the neighborhood.
Regional Connections:

The broad vision for the greenway was expanded upon to complete the gaps existing in the greenway network. It is evident that the residents along the Fairmount Rail Line are not only grossly underserved by public transit, but also through connections to open space. The proposed regional connections for the Fairmount Greenway provides a hierarchy of routes for connecting residents to open space and transit along the Fairmount Rail Line. The proposed routes would connect the Fairmount Greenway with the Stony Brook Reservation and the Blue Hills Reservation, located south of the Fairmount Corridor (Figure 60). Also, the greenway would be linked to The Neponset River Reservation through the Neponset River Greenway. With these regional connections, the Greenway would serve the larger public of Boston with direct connections from the Southwest Corridor and Carson Beach down to the Neponset River and Blue Hills Reservation. The greenway expands with linear bike lanes along suitable roadways in order to connect residents beyond the Four Corners, Talbot Avenue, and Morton Street rail stations. Many of the proposed bike lanes include neighborhood greenway loops, which incorporate pedestrian oriented development leading back to the main greenway. The neighborhoods within one half mile of the Four Corners, Talbot Avenue, and Morton Street rail stations have been highlighted as the focus neighborhoods for greenway development. Their implementation of the greenway connections varies based on neighborhood needs and current street conditions, however the hierarchy of connections remains consistent throughout.

**Connecting People**

![The Arborway](http://images.google.com/landscape_photos/landscape_photos.jpg)

**The Arborway**

![Neponset River Greenway](http://images.google.com/landscape_photos/landscape_photos.jpg)

**Neponset River Greenway**

![Southwest Corridor](http://images.google.com/landscape_photos/landscape_photos.jpg)

**Southwest Corridor**

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Figure 59 Local Reservations & Greenways  Figure 60  Mass GIS Accessed 10/2010, Mod P. Landi
The following assessment map includes the major existing challenges and opportunities along the greenway section considered in this studio project. This assessment also includes the Healthy People, Healthy Places greenway concepts discussed in the previous sections such as access to healthy food and safe routes to schools.

Challenges: Greenway Barriers

The Fairmount Greenway passes through the commuter rail line at two points in our study section. At Morton St the greenway would pass over the railroad line, and at Woodrow Ave the greenway would pass under the railroad line. In this case, the sidewalks are not wide enough, especially where the columns of the bridge are located (See image 1). The intersection between the commuter rail line and the greenway is an important issue that needs to be address during the design process in order to create a safe and secure greenway path.
Challenges: Dangerous Intersections

Some street intersections are dangerous for pedestrians, represented by the dark blue icon on Map 1. Our studio team identified a total of seven dangerous intersections along the greenway, intersections that lack clearly defined crosswalks and secure sidewalks. These intersections are located at the following streets: Morton St and Norfolk; Willowwood St and Norfolk; Talbot Ave and Norwell St; Harvard St and Norwell St; Geneva Ave and Olney St; Geneva Ave and Columbia Rd; Washington St and Columbia Rd. Some schools are close in proximity to some of these dangerous intersections, which represent a high risk particularly for children who are predominant in Dorchester as shown in the demographic assessment section. These intersections can be perceived as an opportunity for the development of new pedestrian-friendly streets along the Fairmount Greenway, which would provide a safe environment for pedestrians, particularly for children.

Opportunities: Historic Centers and Panoramic Views

Our studio team identified two main historic areas as positive opportunities to incorporate and strengthen the Fairmount Greenway, these are Four Corners and Codman Square. Dorchester is a neighborhood with a rich history and its various historic buildings manifest this. For example Codman square has important buildings such as the Second Congregational church, the old Boston Latin Academy and the Codman Square Health Center. These buildings among others form the Codman Square Historic District, which was added to the National Register of Historic Places in 1983. Another relevant opportunity identified is the panoramic view of the harbor at Mother’s Rest Park. This park can be integrated into the Fairmount Greenway through the creation of street connections, this will provide more access from the community to this interesting and important area.
Opportunities: Healthy Food

Similarly, the location of vacant lots throughout the neighborhood can be seen as an opportunity for addressing the greenway concepts mentioned in the previous sections such as the promotion of physical activity and recreation and the increase of healthy food access. Currently, there are few supermarkets and farmers markets throughout the area and some of them are seasonally. Lack of access to healthy food is one of the reasons why this neighborhood in Dorchester is considered a food desert. The local community has been active in promoting healthy food choices, however, by creating new community gardens and promoting urban agriculture. At the same time there are still some underserved areas, particularly in Mattapan and the Four Corners district.

Conceptual Plan Map
As a response to the opportunities and challenges, the studio team developed a concept map identifying potential connections along the Fairmount Greenway and potential areas for future community gardens and farmers markets. The proposed paths would connect the major opportunities identified in the previous assessment into the Fairmount Greenway like the historic areas and the panoramic view. Also, the proposed paths would connect relevant open green spaces into the Fairmount Greenway such as Franklin Park, Franklin Field, Robert’s Playground, Geneva Cliffs among others. In addition, we noticed the need to create more secure paths for children and we identified potential connections that would integrate the schools into the greenway and also connect these schools to other parks and playgrounds. Based on this concept map, our studio developed a master plan which specifies in more detail these potential connections and areas. In summary, we aim to address the challenges, capitalize on the opportunities and connect the relevant and significant areas of these neighborhoods into the Fairmount Greenway, building healthier communities.
The Fairmount Greenway Master Working Plan is based on the original route defined by the community and drafted by the consulting firm Crosby, Schlessinger and Smallridge. Students studied the proposed greenway system and, informed by site analysis and the principles of urban ecology, developed visions that explore the potentials of the greenway.

Study of the central route and associated loops resulted in a few suggested changes to the greenway path. In the Four Corners Area the community proposed route runs from where Geneva Avenue crosses the Fairmount Indigo line to Columbia Road and down Washington Avenue. The team that focused on the Four Corners area noted the heavy traffic that occurred along that section of the greenway, so proposed an alternate path for the greenway that follows Eldon Street. Eldon Street reflects a moderately steep topography, but does not extend much distance. The team that focused on the Codman Square area noticed during their assessment that two neighborhoods could be more integrated with the greenway system, the area south of Harvard Street and the neighborhoods adjacent to Robert’s Playground and Dorchester High School. The response to this is to suggest two additional loop extensions. The first loop south of Harvard Street runs from Talbot Avenue up Westcott Street to W Park Street, follows W Park Street to Benard Street and then follows Browning Avenue to Wales Street where it meets Talbot near Franklin Field. The second loop connecting with Robert’s Playground extends from Norfolk Street down Wentworth Street to Wentworth Terrace/ Dunbar Avenue where it loops back to Codman Square via Washington Street. The team that focused on the Morton Street area suggest extensions from the central route along Ballou Street - on Mascot Street, on Ballou Place and along the dead end near the intersection of Jones and Ballou Avenues at the Ballou to Norfolk footbridge.
The greenway system is made up of three main components - the central greenway corridor, auxiliary loops that extend from the central corridor and a network of green public spaces that are connected by association with the loops along with the central corridor. The grey dashed lines represent bike extensions and connections with key recreational areas such as the Harborwalk, Neponset River Greenway and Franklin Park. Schools are in grey and infill, new development is represented in yellow.

The next few pages will follow a thematic tour to different points along the greenway. On this tour a number of studio derived images are showcased. These images link the concepts presented at the start of the report with concrete strategies that could be incorporated along the greenway. These ideas are suggestions that aim to stretch the boundaries of what is possible with the hope that they will stimulate conversation and ultimately contribute to the greenways realization.
A Thematic Walk Along the Fairmount Greenway

Figure 80 Locator Map

Figure 81 Near Mothers Rest (Before) Student Photo

Figure 82 Near Mothers Rest Reconfigured As Bike and Pedestrian Right of Way Jie Su
Active Living - Claybourne Street near Mother’s Rest, Four Corners Area

By nature and function a greenway is about active living. As the rendering in Figure _suggests a greenway encourages people to move on foot or on bicycle. In fact all of the streets in the greenway system include bike lanes and pedestrian sidewalks. In this picture we are seeing a street radically altered to restrict traffic to park at one end and to allow the bike path to run both ways as the central corridor with walking paths to either side. This particular scenario requires a shift in mind set, as residents would need embrace a new pattern of living that requires walking from their cars to their homes. Various communities have been developed in the past 20 years in different areas of the country that encourage active living and which are pedestrian centric with collective garages or parking lots on the periphery of the residential area. Residents walk a short distance to their front door, without having to compete with traffic while at the same time enjoy a continuous park-like green space around their homes. This creates safe open community space where children can play freely without the dangers associated with traffic. The selected road dedicated to movement along the greenway is designed with a width that could accommodate service and emergency vehicles. Retractable bollards on either end could protect the greenway from unwanted traffic, allowing only permitted vehicles through. On the north of Claybourne Street, there are large vacant areas that could be reconstructed as green parking lots for the Claybourne street residents, parking lots paved with permeable materials such as non mortared pavers, grasscrete or porous asphalt. At the southern part of Claybourne Street is a community park. A second parking lot could be placed at this location for pedestrians and bikers of the greenway.

The plan requires the widening of the existing sidewalk to ten feet. Trees are added to create a denser canopy cover with the goal of obtaining a continuous canopy. The sidewalks, bike lane and street parking are constructed with permeable pavements to allow a greater percentage of storm water runoff to penetrate the ground plane instead of redirected off site. The added benefit of using permeable pavements is the increase in street tree survival, as the roots will have access to more rain water. The tree roots also will be able to spread without the constraints of traditional tree pits. The street design along Claybourne includes the placement of street furniture. Although this is primarily a movement corridor, the absence of traffic and the proximity to greenspaces like Mothers Rest gives the corridor a park-like character. Street furniture will encourage people to rest in a place cooled by trees, where they can enjoy watching people pass along the greenway. Street lights are added for safety and evening illumination. Many forms of solar lighting are now available in a wide range of styles that will add to the street character. Plantings such as ground cover and perennial flowers add color and texture along the streetscape, while addressing erosion on banks with steeper slopes.

Closing a segment of Claybourne Street is a more radical solution. A second option could be to limit the bike lane to one side of the street and to allow parking along the other side of the street. (see Appendix 1 on pages 107 and 108 Green ‘Living Streets’ and Parking number 9 for perspective and cross section images)
Figure 83 Locator Map

Figure 84 Willowood Ave (Before)
Seth Morrow

Figure 85 Willowood Ave Urban Orchard
Adam Monroy
Food Systems are about both distribution and production. In keeping with the guiding principles of sustainable self-sufficient active living, and access to the healthiest food, the studio teams focused their ideas on the potentials for urban agriculture. One exception was to envision a supermarket on the corner of New England and Talbot Avenues, in proximity to the Talbot Avenue train station at a central location along the Fairmount Greenway. The market is located on an important, but presently dangerous intersection. The rendering in Figure 86 illustrates both the market and a broad raised intersection that boldly addresses pedestrian safety. Like the Levedo building, the design and construction should be in accordance with Leadership in Energy and Environmental Design (LEED) principles. Underground or above ground parking could be constructed into this design with potential for adding one or more floors of residential mixed use development. A green roof could be designed and installed on the roof to collect storm water.

In urban areas ample opportunity for food production exists; in residential front yards, on school property, in parks and on vacant city owned or private owned lots. Many existing community gardens that fall within the loops will be connected as part of the Fairmount Greenway system. The qualitative site analysis on page 49 shows that several community gardens and farmers markets exist in proximity to the Fairmount Greenway. Also evident are areas that appear undeserved by fresh food markets. The Woodrow Avenue loop is one of those areas. In this area permaculture treatments to empty parcels and an existing urban wild site celebrates local neighborhood food production. Serving the Ballou Avenue community the Willowwood loop spurs off from the greenway and links to permaculture lots along Woodrow and Willowwood Avenues, that in the rendering Figure 85 have been transformed into urban orchards.

In addition to their agricultural value, permaculture gardens are planted with perennial plants that do not require intensive management, and provide habitat and food for local wildlife. Integrating traditional open space pockets into these lots furthers their value to the community as they go beyond food production to become in themselves green open space destinations.

The idea for a community orchard was also addressed within the Four Corners area. Four vacant lots side-by-side and back-to-back, extend from Norwell across the block to Radcliffe Street. The two lots on Radcliffe are sunny, while the two on Norwell are shady. The suggestion is to plant a community orchard on the Radcliffe side. Enough space for a variety of nine or ten trees exists. Some members of the community responded favorably to this suggestion, as they often cannot travel to the countryside for a “pick-your-own” experience. Those same community members suggested the shady side be programmed as a picnic area, so that families can enjoy eating together outdoors and picking dessert right off the trees in season.

Figure 86 Grocery and Raised Crosswalk
Talbot & New England Avenues
Mary Dehais
Figure 87 Locator map

Figure 88 Ballou Intersection Seth Morrow

Figure 89 Morton St Near T, Plan View Above & Before Photo Below Seth Morrow

Figure 90 Cross-Section Morton St Seth Morrow
Safe Routes to School - Morton Street Crossing, Morton Street Area

One of the key criteria in providing safe routes to school are safe crossings over busy intersections with high volumes of traffic. Many such crossings occur along the Fairmount Greenway and each studio team has addressed this issue at numerous of these crossing junctures. Specific intersection treatments are cataloged in the appendix at the end of this report. Each in some way share the same design principals that aim not only for safety but address the comfort of the pedestrian. The intersection on Morton Street near the Morton Street transit station illustrates some of these important design principles that can be applied to intersections throughout to the greenway system.

In order to support increased pedestrian traffic at the Morton Street Station, and to facilitate the Fairmount Greenway, Morton Street should be redesigned between Norfolk Street and Evans Street to include traffic calming measures. When the Fairmount Line is completed and service to the Morton Street Station reaches its projected level, the instances of mid-block pedestrian crossing will increase at Hannon Street. To facilitate safe crossing across Morton Street, a combination of measures should be taken.

Measures that should be implemented are:
1. A cross-walk across Morton Street on the east side of Hannon Street
2. A planted divider separating the east and westbound lanes Morton Street, blocking left hand turns onto Hannon Street.
3. Widening the sidewalks on Morton Street between Norfolk Street and Evans Street
4. Create an ADA compliant connection from the Morton Street to Astoria Street.

The affects of these design modification will have multiple affects on street use in this area. Widening the sidewalks and adding a planting strip with street trees will narrow the travel lanes on Morton Street, and discourage speeding. This planting strip will also discourage jay-walking, and direct pedestrian traffic to the cross-walk. The widened sidewalks and planting strip can be planted with street trees, increasing urban greening and giving this portion of Morton Street a more pedestrian scale.

Creating a clear connection to the Fairmount Greenway from the Morton Street Station to Hannon Street starts with establishing safe pedestrian linkages across Morton Street. At the intersection of Hannon Street and Morton Street, a clear visual connection can be made to the Greenway by building planted bump-outs. These bump-outs also act as a traffic calming measure by narrowing the roadway as it enters Hannon Street. Continuing north on Hannon Street, the Greenway design proposal includes; porous parking strips, and alternating planted bump-outs. The porous parking strips enforce the visual way finding, and decrease storm run-off by allowing for infiltration. The planted bump-outs act as a traffic calming measure and allow for increased space for street tree planting, thus helping in the urban greening process. The combination of these measures will give Hannon Street a more park-like feel and giving it more pedestrian scale.

The intersection of Hannon Street and Willowood Street, at Norfolk Street is a dangerous crossing for pedestrians. To facilitate the Fairmount Greenway, a raised pedestrian crossing should be built at this sight. Supporting this design, and the safe crossing of pedestrians, planted bollards in the center of Norfolk Street will offer a refuge from traffic, and alert drivers to the crossing area. These design implementations will not only serve to protect people who are using the Greenway, but will assist in way-finding.
Youth - Norwell Street near Talbot Avenue Station, Codman Square Area

Conversations with community members in conjunction with the survey results demonstrated clear community need for safe active spaces for youth. Numerous playgrounds currently exist and are connected along the Fairmount Greenway. Many of these parks are play areas for young children. Robert’s Field and Franklin Field have sporting fields and basketball courts geared to young adolescents. Franklin Park has a golf course. Several swimming facilities are available throughout Dorchester. One facility that does not currently exist along the greenway addresses a popular sport skateboarding. A series of vacant lots on Norwell Street at the intersection of Park Street is an ideal location for a skate park because of its proximity to the rail line and its location along the greenway main corridor. The parcel is approximately 1/3 an acre, flat and mostly devoid of trees except along the rail line. The closest youth oriented recreational places are located approximately 1/2-mile away, making this area a prime open space along the greenway to program for youth oriented activity. Inspiration for the skate park design comes from the Westblaak Skatepark in Rotterdam, The Netherlands. However, the design plan for this Dorchester skatepark aims to involve young skaters and the community in all aspects of the design process. The adult community, the youth and the city could form a strong alliance to determine design elements such as skate obstacles and ramps as well as establish together how maintenance, security and management of the park should be structured in order to keep the park clean and safe. Engaging local artists and youth in the design and production of murals to enhance the appearance of the park could provide a unique and creative experience for all involved.

The main goal of the skate park design is to provide a challenging and safe environment for local youth riders who want to learn and practice the sport of skateboarding. Providing such a destination directly serves the youth in this area and connects the community to the Fairmount Greenway. Components such as half and quarter pipes, launch boxes, banks, grind rails, skate benches and skate stairs if designed into this park will promote skateboarding in a fun and exciting way. In addition, special lighting embedded into the floors, ramps and obstacles could illuminate the skaters as they skate in the park at night. Native vegetation and lighting effects would define the boundaries of the skate park.

This idea that the community can harness creativity and design their own play or recreation areas is an important one. Using the imaginations and collective energy of the people who live in neighborhoods along the greenway for specific projects like a skate park or a playground could be both fun and rewarding, definitely one that would inspire ownership and instigate community pride.

Figure 94  Potential skate park  Westblaak Skatepark in Rotterdam, The Netherlands  http://www.westblaak.com/skatepark/userpics/webfoto_1.jpg
Figure 95 Locator map

Figure 96 Vacant Lot (Before)

Columbia Road Student Photo

Figure 97 Proposed Bus Stop Park on Columbia Road (After)

Yuanfang Gong
Green Space - Columbia Avenue & Washington Street, Four Corners Area

Green Space whether it be in the form of pocket parks, or larger areas of non-developed land is one of the most valuable resources of an urban area. While contributing to residents quality of life and ecological health green space also contributes greatly to community character, promoting active living, places for food production and recreation spots for youth and seniors. While green spaces are described as a tertiary component of the greenway system with a strong emphasis on the central corridors and loops that connect with the intermittent green spaces, community members see the green spaces as one of the most important aspects that defines the greenway. These spaces infuse the greenway with neighborhood character, acting as points of entry or activity along the corridor.

In Dorchester (these figures were taken from Dorchester-Mattapan area) the open space ratio is 4.65 acres/per thousand population compared with metro Boston 7.43 acres/per thousand population, which demonstrates the need for additional public green space in the area neighborhoods along the Fairmount greenway. Taking vacant lots and transforming them into new green spaces is one of the key strategies defining the greenway. A pocket park located on Columbia Road near Four Corners takes its inspiration from Bus Stop Park on Norfolk Street near Codman Square. The park addresses Safe Routes to School in that the park on Norfolk provides a cool, comfortable, safe and attractive place for parents to wait for their children as they return home from school. A public bus stops at the north corner of Columbia Road and Washington Street intersection near a vacant lot. This pocket park reclaims this under utilized space as an attractive place to wait for the bus. In this park ecological design techniques are employed. The ground surface is covered in brick colored permeable pavers. Trees with horizontal branching create a broad area of shade. Vertical green wall technology softens the edge of the park, while acting as an exterior temperature regulator, improving the functions of heating and cooling to the building on which the modules are attached. There are many possible ideas for new green spaces along the greenway. One idea is to locate dog parks. Dog parks are immensely popular in other areas of Boston and around the country, They not only are areas where dogs can exercise, but social arenas where people can meet, share a common interest, converse and potentially form friendships. Small parks can also act as outdoor rooms in which the addition of small gardens, public art or water features contribute to peaceful, restful and cool setting. Another idea is to design pocket parks that particularly accommodate the needs and interests of the senior members of the community. Safe, bike and car free strolling paths with better than adequate width and grade that meets high level ADA requirements, the addition of outdoor game tables, comfortable site furnishings, attractive pavilions and ample tree cover to shelter people from the elements and to maintain a cool environment are components that could be integrated into the park design.

It is also possible to conceive of some green spaces as urban wilds, places that are not programmed for people, but are managed purely for their ecological benefit, places that manage storm water and allow for undisturbed native plant growth -a smaller patch that functions like a mini-nature reserve. In these places dead wood could be left, with little concern of the potential for property damage or personal injury, to follow the natural cycle of decay, which opens up nesting cavities for woodland birds whole presence in an ecological community is one indicator of an area’s ecological health (particularly in New England). These urban wilds still would require a management, maintaining health through regular removal of invasive species, and debris cleanup. The design and program of new green spaces along the Fairmount Greenway is only limited by imagination, however one of the greatest challenges with regard to green open space like Bus Stop Park, or community gardens like Nightingale Garden will be generating the community ownership to ensure their long term maintenance, and integration with community life.
Figure 98 Locator Map

Figure 99 Above Left Intersection New England and Southern Avenues (Before)
Google Map Street View Accessed 10/2010

Figure 100 Above Intersection New England and Southern Avenues (After)

Figure 101 Intersection Treatment New England and Southern Avenues Plan View

P. Landi
The Fairmount Line Transit Oriented Development initiative is selected as one of five national Sustainable Community pilot sites that bring together the U.S. Environmental Protection Agency, Housing and Urban Development and the Department of Transportation in partnership to merge public transit with the need for affordable housing (CSNDC Newsletter, 2010). Implementation of new sustainable water systems infrastructure along the Fairmount Greenway complements, and though adjunct, seems to be an important component to consider in the context of this sustainable designation. From GIS assessments Dorchester has only 15% permeable surfaces (85% impervious). Only 10% impervious landcover will negatively impact the affected ecological systems. Old forms of storm water consolidation, such as channelling water into conveyance pipes to the sewer system and into the bay or in the case of a storm event to problematic combined sewer overflows (CSOs) are no longer viable long term solutions to urban storm water management. They are proven not sustainable.

The greenway offers numerous opportunities to address water systems in new creative, sustainable ways. Rain gardens, swales, permeable pavements, storm water sculpture that showcase storm water processes are among some of the design strategies employed in urban areas to minimize the amount of storm water that is channeled away from a given site. Renderings of the intersection at New England and Southern Avenues and the segment of New England Avenue that runs along the Fairmount/Indigo Line exhibit new techniques for storm water management. The vegetated strip that separates the Fairmount/Indigo Line from New England Avenue offers an opportunity to apply innovative storm water treatment technology that cleanses storm water running from the rail line and New England Avenue, while infiltrating the water back into the ground water table. Removal of the sidewalk on this side, and consolidating sidewalk and bike lane to the opposite side of the street will provide room for a continuous rain garden system that runs down New England Avenue to the intersection with Southern Avenue. Concrete or granite curbing set in a triangular pattern along the road edge urbanizes the edge, but still allows water to flow into appropriately sized vegetated swales at multiple intervals. For a nighttime effect, pin lights could be added to the breaks in the curb, illuminating the bumpouts and displaying where the water infiltrates into the swale - another color could be used such as indigo, making reference to the Fairmount Indigo line. New plantings of low vegetation consist of grasses and native plants that both beautify and function to support the ecology of the unbroken urban wild strip. Regular removal of invasive plants would further the overall health of the system. The vegetated strip could widen dramatically at the head of the intersection, becoming an aesthetic focal point with vegetation and carefully placed stones. This design intervention would make the system strongly visible. The design would gain further accentuation if the road surface at the intersection also were raised. The design of this widened area not only serves to celebrate the greenway by featuring green infrastructure technology, but it would also induce vehicles to curve slightly when passing, causing them to slow.
Tree Canopy - Along Ballou Street, Morton Street Area

The urban tree canopy is one of the most important components of the greenway plan. The addition of trees simultaneously addresses quality of life, comfort and aesthetic. Figure 104 illustrates the street level effects of tree cover. Street character is greatly enhanced along Ballou Street and expresses well what it might feel like to be on the street under a 30 or more percent canopy. The qualities that the urban canopy supports impact both greenway users, but also impacts the ecological systems in the Dorchester area. For instance, tree canopy provides continuous cover for bird movement.

The mayor of Boston set a goal to achieve a 30% tree canopy throughout Metropolitan Boston. Our area of Dorchester has 20-40% trees. Suggested additions to the tree canopy was primarily applied along the street corridors. Green open spaces also provide the area sufficient to support tree groupings, or larger canopy tree types. Figure 105 demonstrates in plan view what a complete system of tree cover might look like at the neighborhood level when tree plantings are maximized along corridors and in available open spaces. This particular neighborhood is in the Codman Square area south of Harvard Street and North of Talbot Avenue. An important note when developing a strategy for urban tree cover is to recommend that the selection of trees and shrubs represent a variety of genus and species. Planting a monoculture can have serious consequences should a fatal infection or insect infestation take hold.

Another concept that offers new spatial opportunity for additional tree cover is the “Living Street” idea. (See Figure 107) The concept for this street type is to decrease the drivable road surface and increase the common living space. Sidewalks are no longer necessary as the street becomes a multi-modal shared thoroughfare. The advantage of this type of street design is that drivers travel more slowly than on straight streets, and are more aware of their surroundings because of the structures set into place that forces the vehicle to slow down and carefully navigate through the space. This design recommendation accommodates on-street parking in front of individual residences, increases common space in-front of the homes, decreases non-local traffic, increases community interaction through shared common space. Incorporated into this design are a combination of storm water run-off mitigation measures, such as porous pavement, retention basins at the end of parking spaces, and the removal of curbs to allow for infiltrated into open spaces. The cumulative effects of these design recommendations results in a street that is more supportive to alternative transportation, enhances the urban tree canopy and under plantings, creates an environment that encourages activity on the street and creates livable common spaces.
Figure 108: Locator Map

Figure 109  Vacant Lot on Spencer & Whitfield Streets (Before)  Student Photo

Figure 110  Rendering for a family park between Spencer & Whitfield Streets (After)  P. Landi
Climate change impacts water systems, quality of life, public health and food systems. The development of the Fairmount Greenway is an important means to address climate change, in that it can provide opportunities to employ strategies that help to mitigate climate change and help communities adapt to the effects of a changing climate. The thematic concepts that have been presented in this report, water systems, food systems, tree canopy, and open space directly relate to climate change. Climate change can lead to greater incidences of flooding, therefore increases the necessity to develop new systems of water management. Climate change is about rising temperatures, regulated by the urban tree canopy. Climate change may have negative impact on public health, and potentially put a strain on food systems. Consuming locally grown food reduces greenhouse gas emissions that are released during food transport. The concepts as they relate to climate change are interlinked and best framed in tandem. A park rendering generated for a vacant lot between Spencer and Whitfield Streets illustrates one example of how in small deliberate ways design and development along the greenway can effectively reduce the impact of climate change.

A number of concepts converge to shape this family oriented park. Like the Perkins Community Playground Center and the Elmhurst Street Playground, a water feature is incorporated into the playground design; which acts as a cooling center in the warm summer months. In the foreground is a butterfly rain garden, planted with low water perennial plantings. With little management the garden can add beauty, provide nectar to marauding monarchs and infiltrate water into the ground. Other rain garden swales are strategically placed in the park where storm water is most likely to collect. These planted areas also help to define the shape of the spaces throughout the park. The park is heavily planted with trees that line the walkways and cluster where people are invited to sit, providing shade and cooling. An open lawn area is incorporated into the design, which is large enough to designate space for a few small community gardens. Clustered fruit trees placed near the entrances and near the playground, can create a miniature orchard for food production. With their sculptural trunks and horizontal branches, these trees create a miniature orchard under which children could sit or play.

Though one example, the ideas expressed through Family Park models how neighborhoods vulnerable to the impacts of heat, storm water runoff, or other stresses on human ecology will benefit from the presence of a greenway. By choosing to build a greenway system using one or many of the strategies like those presented throughout this report, the Dorchester community will be able to address the issues that are becoming more apparent as a result of climate change.

Finally, the breadth and scope of the Fairmount Greenway system relies on massive community engagement and advocacy. In a time of climate change this collaborative energy and collective imagination is ever important to keep the greenway system healthy, alive and evolving. The Family Park on Spencer Street is just one of many green public spaces that will need to be sustained over time. As a precedent, the non-profit *Battery Park City Parks Conservancy manages thirty-six acres of public parks that run along the Hudson River in southern Manhattan. This organization is in charge of park maintenance and programming. Organizing a similar group of community stakeholders each with an investment in a particular segment of the greenway is one way to develop a vehicle of management whose mandate is to stimulate a high level of community stewardship.

(*More information about the Battery Park City Parks Conservancy go to: http://www.bpcparks.org/bpcp/bpcp/operations.php)
Funding Implementation

To best support the Fairmount Coalition and partner agencies with greenway implementation, our team created a grant implementation tool. The tool is organized by four categories that mirror the vision and report outlining the major greenway objectives and strategies. Our vision for the Fairmount Greenway is a community driven project promoting healthy people and healthy places along the redevelopment of the Fairmount/Indigo commuter train line. Consequently, our funding tool is divided in the following four categories:

- Community: Social Justice, Equity, Crime Prevention, Youth Engagement, and Economic Development
- Ecology: Water Systems, Street Greening, and Public Open Space
- Public Health: Active Living, Food Systems, and Urban Renewal
- Transit: Connectivity, Bikeways, Walkways, and Commuter Line Connections

Each of the four sections includes foundation and grant information such as the foundation contact information, historical program funding, current funding application opportunities and relevant deadlines. The tool is created to mimic the report format to provide support to the agencies seeking grant funding, as applicable background assessment and plan material can be drawn from the studio report and utilized in grant applications.

Proposed Phasing

Funding Sources for the Priorities:

Community

**TIGER II and Community Challenge Grants**-designed to help communities form more sustainable forms of transportation integrated with housing and economic development (Community).

**City of Boston-Trustee of Public Charitable Trust**- Recreation, sports, leisure, athletics, environmental beautification and open spaces, youth centers and clubs, admissions to cultural & sports venues. (Community).

**Biogen Idec Foundation**-scientific focus, could be a potential money source for Environmental Education center in Four Corners (Community).

Ecology

**Small Business Administration**-money is to purchase trees for planting along streets and in parks and is used to develop contracts with local businesses for planting (Ecology).

**Merck Family Fund**-create green and open space and support youth as agents of social change (Ecology).

**Conservation Partnership**-assist not-for-profit corporations in acquiring land and interest in lands suitable for conservation and recreation purposes (Ecology).
Public Health

**Community Food Projects**-Competitive Grant- help meet the food needs of low-income people, increase the self-reliance of communities in providing for their own food needs, and promote comprehensive responses to local food, farm, and nutrition issues, and/or meet specific State, local or specific neighborhood needs.(Public Health).

**Saucony**-Run for Good Program-designed to encourage active living and healthy lifestyles for children (Public Health).

Transit

**Tony Hawk Foundation**- promotes high quality, public skate parks in low-income areas throughout the United States (Transit).

**TEA-21**- Creates a $750 million Job Access and Reverse Commute program to help lower-income workers and those making the transition from welfare rolls to payrolls get to jobs (Transit).

**Bikes Belong**-Encourage ridership growth, Support bicycle advocacy, Promote bicycling, Build political support, Leverage funding (Transit).

Phasing Possibilities for Grant Applications

Phase 1:
1. Increase tree canopy
2. Implement bike lanes and signage on greenway.

Phase 2:
3. Change use of some vacant CDC owned parcels to open space/parks/etc...
4. Integrate energy efficient streetlight use
5. Increase production of healthy food with community gardens

Phase 3:
6. Environmental Education Center for Four Corners
7. Skate park for Codman Square

Phase 4:
8. Acquire city lots for greenway usage
9. Decrease cost of Indigo Line
**COMMUNITY: Social Justice, Equity, Crime Prevention, Youth Engagement and Economic Development**

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<td>Monday - Friday</td>
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<td>scheduled local</td>
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<td>8 a.m. – 8 p.m. Eastern</td>
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<td>market leader-</td>
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COMMUNITY: Social Justice, Equity, Crime Prevention, Youth Engagement and Economic Development

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<tr>
<td>Barr Foundation</td>
<td>The Foundation's vision is that of a city with deep connections to nature and community, rich cultural expression, and hopeful futures for children and youth. Funding support concentrates on building energy efficiency through retrofits, comprehensive planning and zoning reform, and high-quality transportation options.</td>
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<td><a href="http://www.barrfoundation.org">http://www.barrfoundation.org</a></td>
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<tr>
<td>Biogen Idec Foundation</td>
<td>Kathryn Bloom, Director of Communications 14 Cambridge Center, Cambridge, MA 02142 <a href="http://www.biogenidec.com/citizenship_biogen_idec_foundation.html">http://www.biogenidec.com/citizenship_biogen_idec_foundation.html</a></td>
<td></td>
<td>Proposals reviewed on a quarterly basis</td>
<td>Priority to science education, general education, but they consider community service/local giving</td>
<td>No special events. Online eligibility quiz (we qualify).</td>
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<tr>
<td>Funding Source</td>
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<tr>
<td>City of Boston, Trustee of Public Charitable Trusts</td>
<td>Robert J. Fleming Executive Director/ Fund Manager Boston City Hall, Room M5 Boston, MA 02201</td>
<td>Occasional use for equipment, matching funds, special projects.</td>
<td>Apr. 15, July 15, Sept. 15, Dec. 15</td>
<td>Recreation, sports, leisure, athletics, environmental beautification and open spaces, youth centers and clubs, admissions to cultural &amp; sports venues. Provides funds to community organizations in Boston’s neighborhoods. These grants cannot be utilized for staff or operating expenses of the organization applying.</td>
<td>Occasional use for equipment, matching funds, special projects. Submit to City of Boston Trust Office. Full proposal. Letter of inquiry.</td>
</tr>
<tr>
<td>Foley Hoag Foundation</td>
<td>Mr. Philip Hall, Program Officer Mossik Hacobian, Executive Director GMA Foundations 77 Summer Street, 8th Floor Boston, MA 02110 Phone: 617-391-3094 <a href="http://foleyhoag.gmafoundations.com">http://foleyhoag.gmafoundations.com</a></td>
<td>$1,000-5,000 on avg. Program development, seed money, start-up, special programs, projects.</td>
<td>Apr.1</td>
<td>Eliminating racism, improving race relations, recreation, sports, leisure in the Boston area. African Americans, Asian/Pacific Islander, Boys, Brazilians, Children, Ethnic/Racial minorities (in general), Families, Girls, Haitians, Hispanic/Latinos, LGBT lesbians, gays, Low income/Economically disadvantaged, Men, Native Americans, Teens, Women, Youth</td>
<td>Occasional support for capacity building, publications. Initial phone contact preferred, though email contact LOI or full proposal also acceptable.</td>
</tr>
<tr>
<td>Frederick A. Bailey Trust</td>
<td>Sandra Brown-McMullen Vice President c/o Mellon Bank One Boston Place Boston, MA 02108</td>
<td>$85,000 given in FY2006. No details available.</td>
<td>Mar. 1</td>
<td>Programs that use sports and recreation to address problems facing inner-city youth, children and youth services, access programs for the handicapped, community organizations, social services in general.</td>
<td>Initial contact by phone preferred. Then application. Meets in May</td>
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<tr>
<td>HUD.GOV US Department of Housing &amp; Urban Development</td>
<td>HUD No. 10-131 HUD Contact: Andrea Mead (202) 708-0685 DOT No. 122-10 DOT Contact: Olivia Alair (202) 366-4570 Boston Regional Office 10 Causeway Street Room 301 Boston, MA 02222-1092 RICHARD A. WALEGA Regional Administrator (617) 994-8200 Fax (617) 565-6558 Email Region I Boston MA</td>
<td>Deadline 2010 Passed: Program available 2011?</td>
<td>The new program builds on the Partnership for Sustainable Communities, an innovative new interagency collaboration, launched by President Obama in June 2009, between the Department of Transportation (DOT), the Department of Housing and Urban Development (HUD) and the Environmental Protection Agency (EPA). Guided by six Livability Principles, the Partnership is designed to provide communities the resources they need to build more livable, sustainable communities.</td>
<td><a href="http://portal.hud.gov/portal/page/portal/HUD/program_offices/sustainable_housing_communities">http://portal.hud.gov/portal/page/portal/HUD/program_offices/sustainable_housing_communities</a></td>
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<td><strong>Kresge Foundation</strong></td>
<td>The Kresge Foundation 3215 West Big Beaver Road Troy, Michigan 48084 248.643.9630 telephone 248.643.0588 fax</td>
<td></td>
<td></td>
<td>Awards grants to small, mid-size, and large nonprofit organizations in six fields of interest (described below): health, the environment, community development, arts and culture, education, and human services. Working with our grantees, we endeavor to improve the life circumstances and opportunities for poor, disadvantaged and marginalized individuals, families, and communities.</td>
<td><a href="http://www.kresge.org/index.php/what/index/">http://www.kresge.org/index.php/what/index/</a></td>
</tr>
<tr>
<td><strong>Raytheon Company Contributions Program</strong></td>
<td>Carol J. Ramsey, Director, Corporate Contributions 141 Spring St., Lexington, MA 02421 Tel: 781-862-6600</td>
<td>$5,000-$10,000</td>
<td>No deadlines</td>
<td>Heavy priority to science education, general education, but they consider community service/local giving</td>
<td><a href="mailto:corporatecontributions@raytheon.com">corporatecontributions@raytheon.com</a></td>
</tr>
<tr>
<td><strong>The Boston Foundation</strong></td>
<td>75 Arlington Street, 10th Floor Boston, MA 02116 Phone: 617-338-1700, Email: <a href="mailto:info@tbf.org">info@tbf.org</a></td>
<td>Quarterly</td>
<td></td>
<td>Public Health Education Civic &amp; Cultural Vibrancy Affordability, Livability and Safety</td>
<td><a href="http://www.tbf.org/GrantSeekers">http://www.tbf.org/GrantSeekers</a></td>
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<td><strong>The Home Depot Foundation</strong></td>
<td>Sustainable Cities Institute The Home Depot Foundation 2455 Paces Ferry Road, C-17 Atlanta, GA 30339 Phone: 770-384-3889 Fax: 770-384-3908 Toll-Free Phone: 1-866-593-7019 Toll-Free Fax: 1-866-593-7027</td>
<td>MA grants 2007-2009 $2,767,578.00</td>
<td>First Cycle January 15, 2010 March 15, 2010 June Second Cycle July 1, 2010 September 15, 2010 December</td>
<td>Support efforts in environmental stewardship initiatives and provide proactive solutions to helping create healthy “green” communities. The desire to support healthy family and community life has inspired us to look at how we can help cities move more quickly toward sustainability.</td>
<td>Preference is given to proposals that include community engagement that result in the production, preservation, or financing of housing units for low- to moderate-income families.</td>
</tr>
<tr>
<td><strong>The Stannard and Dorothy Dunn Foundation</strong></td>
<td>Barbara D. Roby, Trustee. 7 Bliss Lane, Lyme, NH 03768 Tel: (603) 795-2080</td>
<td>Annual giving $57,000</td>
<td></td>
<td>Human services; youth development; arts; education; environment, natural resources; historic preservation. Geographic focus on MA, NH, VT</td>
<td>Send letter, perhaps LOI/proposal</td>
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<td>TIGER II and Community Challenge Grants to Help Foster Sustainable Communities (Transportation Investment Generating Economic Recovery)</td>
<td>See HUD</td>
<td>The Department of Transportation will distribute nearly $600 million to 75 infrastructure projects that will create sustainable and livable communities.</td>
<td></td>
<td>The grants are designed to help communities encourage more sustainable forms of transportation, such as transit, bicycling and walking. Nearly $28 million of these grants will be used to implement localized plans that ultimately lead to projects that integrate transportation, housing and economic development. In tandem with the TIGER II grants, HUD is awarding $40 million in new Sustainable Community Challenge Grants to help support local planning designed to integrate affordable housing, good jobs and public transportation.</td>
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<td>America the Beautiful Fund-Operation Green Plant</td>
<td>Conservation/Restoration non-profit w/ a program for giving out &quot;free&quot; seeds (w/ shipping and handling costs), seeds can be flower bulbs or gardening seeds</td>
<td>$15/first 100 packets of seeds, each after that is $5</td>
<td>As available basis</td>
<td>Explain your need, fill out the application, send w/ check for Shipping and Handling</td>
<td><a href="http://www.america-the-beautiful.org/free_seeds/index.php">http://www.america-the-beautiful.org/free_seeds/index.php</a></td>
</tr>
<tr>
<td>Beatrice K. &amp; Woolsey S. Conover Foundation</td>
<td>Mr. Woolsey S. Conover President 668 Route 3/25 Holderness, NH 03245</td>
<td>Annual giving $68,000</td>
<td></td>
<td>Restricted to Greater Boston, MetroWest. Recreation, sports, leisure, athletics, volunteerism, natural resources conservation and protection, and children &amp; youth services</td>
<td>Send letter with brief history and mission, description of project and funding request</td>
</tr>
<tr>
<td>Commonwealth Urban Parks Initiative</td>
<td>MA Executive Office of Energy and Environmental Affairs (EEA)</td>
<td>Average Grant Size: $406,000; Average # of Grants: 2; FY 2008 Spending: $812,330</td>
<td>TBD</td>
<td>This program, presently under development, is intended to fund the creation and restoration of parks and recreational facilities in underserved urban neighborhoods.</td>
<td>Kurt Gaertner, (617) 626-1154</td>
</tr>
<tr>
<td>Crane &amp; Company Fund</td>
<td>John R. Schulte Trustee 30 South Street Dalton, MA 1226</td>
<td>$211,850 in FY2006</td>
<td></td>
<td>Recreation, sports, leisure, athletics, environmental beautification and open spaces, Natural resources conservation &amp; protection. Focus on general MA.</td>
<td>Support for annual campaign, capital, general operating</td>
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<td>EPA - Clean Water State Revolving Fund (CWSRF)</td>
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<td><a href="http://www.epa.gov/npdes/pubs/gi_cwsrf.pdf">http://www.epa.gov/npdes/pubs/gi_cwsrf.pdf</a></td>
<td></td>
<td>Provided more than $5 billion annually in recent years to fund water quality protection projects for wastewater treatment, nonpoint source pollution control, and watershed and estuary management</td>
<td><a href="http://water.epa.gov/grants_funding">http://water.epa.gov/grants_funding</a></td>
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<tr>
<td>EPA - Community Action for a Renewed Environment (CARE)</td>
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<td>Level 1 grant - $90,000. Level 2 - $275,000.</td>
<td></td>
<td>A competitive grant program that offers an innovative way for a community to organize and take action to reduce toxic pollution in its local environment.</td>
<td><a href="http://www.epa.gov/care">http://www.epa.gov/care</a></td>
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<tr>
<td>Federal 319 Nonpoint Source Grant Program</td>
<td>Eligible Applicants: Any Massachusetts public or private organization</td>
<td>Average Grant Size: $145,000; Average # of Grants: 15; FY 2008 Spending: $1,908,431</td>
<td>June</td>
<td>To prevent, control and abate nonpoint source pollution through implementation of structural and nonstructural best management practices</td>
<td><a href="http://www.mass.gov/dep/water/grants.htm">http://www.mass.gov/dep/water/grants.htm</a></td>
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<td><strong>Fiskars Project Orange Thumb Garden Grants and Makeovers</strong>&lt;br&gt;Project Orange Thumb, Fiskars, link: <a href="http://www2.fiskars.com/Activities/Project-">http://www2.fiskars.com/Activities/Project-</a>&lt;br&gt;Grant size: $5,000 cash and tools, Number of awards-11&lt;br&gt;Deadline is 12/31/10</td>
<td>Program provides tools, materials, and other support to help communities reach their goals for neighborhood beautification, community collaboration, and healthy, sustainable food sources</td>
<td>Can apply for garden makeovers as well as gardening grants.</td>
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<tr>
<td><strong>Kresge Foundation</strong>&lt;br&gt;The Kresge Foundation&lt;br&gt;3215 West Big Beaver Road&lt;br&gt;Troy, Michigan 48084&lt;br&gt;248.643.9630 telephone&lt;br&gt;248.643.0588 fax&lt;br&gt;Focus on environmental conservation, innovation, collaboration, creating opportunity, and diversity</td>
<td>Aim to assist society in mitigating the severity of climate change and proactively addressing its unavoidable impacts. Our mitigation grantmaking focuses on reducing energy use through the adoption of efficiency measures and the conversion to clean energy sources. Our adaptation grantmaking supports efforts to develop strategies and resources that promote resilience to climate change in both human and natural systems.</td>
<td><a href="http://www.kresge.org/index.php/what/index/">http://www.kresge.org/index.php/what/index/</a></td>
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<td><strong>MA DEP - Clean Water State Revolving Fund (SRF) Loan Program</strong>&lt;br&gt;Provides subsidized loans to assist municipalities and wastewater districts in the implementation of capital projects that protect, enhance or mitigate water quality and public health.&lt;br&gt;Average Grant Size: $5,290,704; Average # of Grants: 70; FY 2008 Spending: $338,605,030&lt;br&gt;August</td>
<td>Eligible Applicants: Any Massachusetts wastewater district or municipality</td>
<td><a href="http://www.mass.gov/dep/water/wastewater/wastewat.htm">http://www.mass.gov/dep/water/wastewater/wastewat.htm</a></td>
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<td><strong>Massachusetts Environmental Trust - Executive Office of Energy and Environmental Affairs (EEA)</strong></td>
<td>The Trust’s mission is to develop, coordinate, and fund projects that encourage cooperative efforts to raise environmental awareness and enable innovative approaches that can restore, protect, and improve water and water-related resources of the Commonwealth.</td>
<td>Estimated FY 2009 Spending: $950,000; Average Grant Size: $5,000-$50,000; FY 2008 Spending: $849,307</td>
<td>October</td>
<td>Eligible Applicants: Nonprofit organizations; schools and institutions of higher education; Municipalities</td>
<td><a href="http://www.mass.gov">http://www.mass.gov</a></td>
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<tr>
<td><strong>Merck Family Fund</strong></td>
<td>Jenny Russell, Executive Director, Merck Family Fund, 95 Eliot Street, Suite 2, Milton, MA 02186-4253, telephone: (617) 696-3580), email: <a href="mailto:merck@merckff.org">merck@merckff.org</a></td>
<td>Total funds available: approximately $2.8 million annually Range of grants: $15,000 to $100,000</td>
<td>Rolling for letters of inquiry</td>
<td>Supports work by communities with few resources who are confronting significant social, economic, and environmental challenges. The two areas of focus for the fund are to a) create green and open space, and b) support youth as agents of social change. Promotes youth as important stakeholders in the health and well-being of the community.</td>
<td><a href="http://www.merckff.org/grantguidelines.html">www.merckff.org/grantguidelines.html</a></td>
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<td>Small Business Administration</td>
<td>Tree planting funds for small businesses who partner with the state to purchase trees to plant in state property</td>
<td>up to $10,000</td>
<td></td>
<td>Money is to purchase trees for planting along streets and within parks. Grants are used to develop contracts with local businesses for the plantings.</td>
<td><a href="http://wwwpps.org/funding-sources-for-greenway-projects/">http://wwwpps.org/funding-sources-for-greenway-projects/</a></td>
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<tr>
<td>Stonyfield Farm - Profits for the Planet</td>
<td>President's Office, Special Projects Manager <a href="mailto:pfp@stonyfield.com">pfp@stonyfield.com</a></td>
<td></td>
<td></td>
<td>Profits for the Planet (PFP) supports efforts that help protect and restore the environment and generate measurable results.</td>
<td><a href="http://www.stonyfield.com/about_us/stonyfield_profits_for_planet">http://www.stonyfield.com/about_us/stonyfield_profits_for_planet</a></td>
</tr>
<tr>
<td>TAG (Technical Assistance Grants) Program</td>
<td>Department of Environmental Protection (DEP) Patti Mulan, 617-556-1018</td>
<td>Average Grant Size: $10,000; Average # of Grants: Maximum of 10</td>
<td>May</td>
<td>Grants provide resources for municipalities and community groups to hire technical experts to help them better understand and get involved in hazardous waste site cleanups that impact them. Eligible Applicants: Communities and citizen groups</td>
<td><a href="http://www.mass.gov/dep/cleanup/tagnote.htm">http://www.mass.gov/dep/cleanup/tagnote.htm</a></td>
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<td>The Boston Grants Initiative</td>
<td>provides grants to groups working on environmental justice, environmental health, greenspace and other environmental projects</td>
<td>Grants range from $500 to $10,000.</td>
<td>Next deadline: Tuesday January 18, 2011</td>
<td>in the neighborhoods of Boston, Chelsea, Somerville and Cambridge, Massachusetts.</td>
<td><a href="http://grassrootsfund.org/grants/urban_grants_boston_grants_initiative/">http://grassrootsfund.org/grants/urban_grants_boston_grants_initiative/</a></td>
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<tr>
<td>The George Gund Foundation</td>
<td>1845 Guildhall Building 45 Prospect Avenue, West Cleveland, Ohio 44115 Email: <a href="mailto:Info@GundFdn.org">Info@GundFdn.org</a> Fax: 216.241.6560 Phone: 216.241.3114</td>
<td>The Foundation’s Board of Trustees made 56 grants totaling $9,379,900 during the first meeting of 2010</td>
<td></td>
<td></td>
<td><a href="http://wwwgundfdn.org/CONTACT/contact_a">http://wwwgundfdn.org/CONTACT/contact_a</a> ddress.asp</td>
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<tr>
<td><strong>The Kodak American Greenways Program</strong></td>
<td>1655 N. Fort Myer Drive, Suite 1300 Arlington, Virginia 22209-2156 Phone: 703-525-6300 Fax: 703-525-4610 Email: <a href="mailto:postmaster@conservationfund.org">postmaster@conservationfund.org</a>, <a href="mailto:kodakawards@conservationfund.org">kodakawards@conservationfund.org</a></td>
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<td>&quot;Seed&quot; grant awards to organizations that are growing our nation's network of greenways, blueways, trails and natural areas. The Conservation Fund also accepts nominations for outstanding achievements related to the creation of greenways, blueways, trails and open space systems throughout America.</td>
<td><a href="http://www.gunpdfdn.org/CONTA/C/contact_address.asp">http://www.gunpdfdn.org/CONTA/C/contact_address.asp</a></td>
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<tr>
<td><strong>Urban and Community Forestry Challenge Grants</strong></td>
<td>Department of Conservation and Recreation (DCR) Eric Seaborn, (617) 626-146</td>
<td>Up to $30,000</td>
<td>Estimated Application Deadline: November 1 &amp; May 1</td>
<td>Assists in building support for the long term protection and management of community trees and forests; This program is a merger of 3 former separate grant programs: Heritage Tree Care, Mass Re-Leaf Program and Urban Forest Planning and Education.</td>
<td><a href="http://www.mas.gov/dcr/stewardship/forestry/urban/urbanGrants.htm">http://www.mas.gov/dcr/stewardship/forestry/urban/urbanGrants.htm</a></td>
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<td>Community Food Projects Competitive Grant Program</td>
<td>The USDA's Community Food Projects (CFP) Competitive Grants Program provides the major funding source for community-based food and agriculture projects nationwide.</td>
<td>Applicants may request up to $300,000 for projects of up to three years' duration. Only private nonprofit organizations are eligible to receive CFP funds directly, but collaborations with public and private, for-profit entities are recommended.</td>
<td>Apply next year (November) for funding on 2012</td>
<td>The CFP program supports projects that help meet the food needs of low-income people, increase the self-reliance of communities in providing for their own food needs, and promote comprehensive responses to local food, farm, and nutrition issues, and/or meet specific State, local, or neighborhood food and agriculture needs for infrastructure improvement and development, long-term planning, or the creation of innovative marketing activities that mutually benefit agricultural producers and low-income consumers.</td>
<td><a href="http://www.foodsecurity.org/funding.html">http://www.foodsecurity.org/funding.html</a></td>
</tr>
<tr>
<td>ConAgra Foods Foundation Community Impact Grants</td>
<td>ConAgra Foods Foundation, One ConAgra Drive, Omaha, NE 68102, email: <a href="mailto:foundation@conagrafoods.com">foundation@conagrafoods.com</a></td>
<td>Grants range from $10,000 to $100,000, average grant size is $25,000</td>
<td>Orange-Thumb/Grant-and-Garden-Makeover-Application Letters of interest will begin being accepted in January</td>
<td>Promote non-profits who work to teach children/families about good nutrition, healthy habits and ways to combat diseases/problems such as malnutrition, food insecurity and obesity; encouraging physical activity for children; foster collaboration between organizations to streamline services, strengthen an organization’s ability to collect, analyze and distribute its effect on the community.</td>
<td><a href="http://www.conagrafoodsfoundation.org">www.conagrafoodsfoundation.org</a></td>
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<td>FUNDING SOURCE</td>
<td>FOUNDATION INFORMATION</td>
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<td>Kaiser Permanente - Healthy Eating, Active Living (HEAL) initiative</td>
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<td>Addresses the obesity epidemic through community partnerships. HEAL grants are available to school districts and community organizations that have developed programs to promote healthy eating and active living, including walking clubs and other programs.</td>
<td><a href="http://www.kpsouthsacramento.org/healthy_eating.php">http://www.kpsouthsacramento.org/healthy_eating.php</a></td>
</tr>
<tr>
<td>Kresge Foundation</td>
<td>The Kresge Foundation 3215 West Big Beaver Road Troy, Michigan 48084 248.643.9630 telephone 248.643.0588 fax</td>
<td></td>
<td></td>
<td>Supports efforts that promote the physical health and well-being of low-income and vulnerable populations by improving the environmental and social conditions affecting them and their communities. Four values are important in this area: creating opportunity, working in underserved geography, promoting diversity, and strengthening community impact.</td>
<td><a href="http://www.kresge.org/index.php/what/index/">http://www.kresge.org/index.php/what/index/</a></td>
</tr>
<tr>
<td>NIFA-Food and Agricultural Research Initiative- Global Food Security</td>
<td>Food availability and access. Funds for-profit and non-profits plus those working w/ Hispanic communities.</td>
<td>$19 million total w/ a range from $0 to $10 million</td>
<td>March 22, 2010 solicitation due, closing August 2nd, 2010</td>
<td>This AFRI Challenge Area focuses on Food Availability and Food Accessibility. The long-term outcomes for this program are to increase global food availability through increased sustainable food production and to decrease the number of food insecure individuals, families, and communities by addressing key constraints to food accessibility and implementing solutions that enhance sustainable food systems.</td>
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<td>FUNDING SOURCE</td>
<td>FOUNDATION INFORMATION</td>
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<td>PepsiCo</td>
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<td></td>
<td>PepsiCo's goal is to strengthen the communities where we live and work through community investment. The agency is committed to advancing objectives related to education, health and wellness, diversity and inclusion, and thought leadership.</td>
<td></td>
</tr>
<tr>
<td>Robert Wood Johnson Foundation Local Funding Partnership</td>
<td>Curtis Holloman, deputy director. Telephone: (609) 275-4128. Email: <a href="mailto:cholloman@localfundingpartnerships.org">cholloman@localfundingpartnerships.org</a>.</td>
<td>Total funds available: $1,000,000 Range of grants: $50,000 and $200,000 in matching funds Range of grants: $50,000 and $200,000 in matching funds Number of awards: eight</td>
<td>1/5/2011</td>
<td>A matching grants program that connects the Foundation with local grantmakers to fund new, community-based projects to improve health and health care for vulnerable populations. The Foundation will provide grants to diversity-focused funders for projects to reduce violence in communities that are defined by race, ethnicity, tribe, gender, sexual identity, or traditionally underserved rural location.</td>
<td><a href="http://www.rwjf.org/application/solicited">www.rwjf.org/application/solicited</a></td>
</tr>
<tr>
<td>Saucony-Run for Good Program</td>
<td>Information: Saucony, 191 Spring St, Mail Drop 318S, Lexington, MA 02420-9191, Email: <a href="mailto:info@sauconyrunforgood.com">info@sauconyrunforgood.com</a></td>
<td>Total funds available: approximately $50,000, Number of awards: up to seven</td>
<td>Deadline: 12/13/2010</td>
<td>The program gives preference to organizations that serve youth populations not traditionally exposed to running programs. The Saucony Run for Good Program is designed to encourage active and healthy lifestyles in children.</td>
<td><a href="http://www.sauconyrunforgood.com">www.sauconyrunforgood.com</a></td>
</tr>
<tr>
<td>The 1772 Foundation</td>
<td>Questions regarding your project can be referred to <a href="mailto:maryanthony@1772foundation.org">maryanthony@1772foundation.org</a></td>
<td>Letters of inquiry until Jan 18th, 2011 and applications due by Feb 18, 2011</td>
<td></td>
<td>Foundation looking for sustainable agriculture—particularly urban agriculture, farmer training, farm to cafeteria programs, innovative approaches to sustainable food systems and youth farm education.</td>
<td><a href="http://www.1772foundation.org">www.1772foundation.org</a></td>
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PUBLIC HEALTH: Active Living By Design, Food Systems, Urban Renewal

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<tr>
<th>FUNDING SOURCE</th>
<th>FOUNDATION INFORMATION</th>
<th>FINANCIAL INFO</th>
<th>TIMELINE</th>
<th>SPECIFIC PROGRAMS FUNDED</th>
<th>OTHER NOTES</th>
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<tr>
<td>USDA-National Institute for Farming and Agriculture-Beginning Farmer &amp; Rancher Program</td>
<td>To address the impending change in farmer demographic the federal government is offering $17.2 million for beginning farmers and ranchers in the 2011 fiscal year</td>
<td>$17.2 million divided among recipients</td>
<td>12/22/2010</td>
<td>34% of applicants were funded last year and there is a 25% cost sharing associated with this grant. Beginning farmer qualifies as at least one person w/ less than 10 years experience and it must be a collaborative effort.</td>
<td><a href="http://www.nifa.usda.gov/fo/beginningfarmerandrancher.cfm">http://www.nifa.usda.gov/fo/beginningfarmerandrancher.cfm</a></td>
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<tr>
<td>W.K. Kellogg Foundation</td>
<td>Foundation grants programs focus on: educated kids, healthy kids, secure families, racial equity, and civic engagement. All information on-line at: <a href="http://www.wkkf.org/grants/for-grantseekers.aspx">http://www.wkkf.org/grants/for-grantseekers.aspx</a></td>
<td>No deadlines. Applications are accepted throughout the year.</td>
<td>Foster stress mitigation and reduction efforts (physical activities, violence prevention) designed to improve mental health and well-being. Transform food deserts into food oases by increasing engagement of local communities in all aspects of food production and delivery.</td>
<td>Submit all applications through online application service.</td>
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<td>FUNDING SOURCE</td>
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<td>Bikes Belong</td>
<td>Bikes Belong will accept requests for funding of up to $10,000 for facility and advocacy projects.</td>
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<td>08/27/10 &amp; 11/30/10</td>
<td>All proposals must: Encourage ridership growth, Support bicycle advocacy, Promote bicycling, Build political support, Leverage funding. Priority for bicycle organizations, coalitions, and associations and projects that build coalitions for bicycling by collaborating the efforts of bicycle industry &amp; advocacy.</td>
<td><a href="http://www.bikesbelong.org">www.bikesbelong.org</a></td>
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<td>ECO-logical Grant Program</td>
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<td>The Federal Highway Administration’s Eco-Logical Grant Program is currently accepting applications for projects that will establish or assist in efforts to conduct an integrated planning effort while developing ecosystem-based approaches for transportation projects.</td>
<td><a href="http://www.environment.fhwa.dot.gov/ecological/eco_index.asp">http://www.environment.fhwa.dot.gov/ecological/eco_index.asp</a></td>
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<td>TEA-21 Transportation Equity Act-21st century</td>
<td>U.S. Department of Transportation</td>
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<td>Expands provisions to make bicycling and walking safer and more viable ways of travel. Access to Jobs: Creates a $750 million Job Access and Reverse Commute program to help lower-income workers and those making the transition from welfare rolls to payrolls get to jobs</td>
<td>Federal funding for states and large urban centers &gt;200,000 people</td>
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<td>FUNDING SOURCE</td>
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<td>Tony Hawk Foundation</td>
<td>The foundation primarily considers skatepark projects that are designed and built by qualified and experienced skatepark contractors. Funds amounts between $1,000 - $25,000.</td>
<td>10/01/10 &amp; 12/01/10</td>
<td>The mission of the Tony Hawk Foundation is to promote high quality, public skateparks in low-income areas throughout the United States. The foundation primarily considers skatepark projects that: include local skaters throughout the planning, fundraising, and design process; are in low-income areas and/or areas with a high population of &quot;at-risk&quot; youth and are in areas that currently have no skateboarding facilities.</td>
<td><a href="http://www.tonyhawkfoundation.org/skatepark-grants/apply/">www.tonyhawkfoundation.org/skatepark-grants/apply/</a></td>
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In addition to providing funding opportunities we sought to provide further materials and tools for the CDC collaborative to use as promotion and outreach support to encourage the continuation of greenway planning and implementation momentum. We created two distinct outreach tools. The first is a 10-minute documentary film about the Fairmount /Indigo commuter line and the community development of the Fairmount Greenway to date. Our intention for the creation of the film is to provide a multi-media tool for the Fairmount Coalition to help raise awareness and harness support for the Fairmount Greenway. We hope that this film can serve as a low-maintenance tool for the collaborative to incorporate within their own community outreach programs and advertising.

The second tool that we are providing along with the report and promotion film is an expansion of our thematic greenway walkthrough. This visual tool will provide a quantity of design alternatives for streets and parcels along the section of the Fairmount Greenway between the Four Corners and Morton Street commuter rail stations. The Design Alternative tool will link visual renderings for specific street and parcel designs along our Greenway route. Our intention for the Design Alternative tool is two-fold. First, we aim to expand the thematic greenway walkthrough demonstrated in our report body by illustrating a further variety of design options. Second, our intention is to provide further street and parcel renderings to the Fairmount Coalition and CDC collaborative partners to use as tools for greenway promotion outreach and grant support as they see fit.

Our studio team found tremendous support from the Codman Square Community Development Corporation, the Greater Four Corners Action Coalition, the Fairmount Coalition and other neighborhood partners in our analysis, design and planning work. The majority of our visions and plans stem directly from the suggestions and identified needs shared with us from the community and community leaders. It is our greatest hope that the Fairmount Greenway will become a reality, and that the Coalition and CDC partners will find merit and value in our report, implementation and outreach materials.
Appendix 1
Studio Team Design Ideas for the Fairmount Greenway

FOOD SYSTEMS

BRIDGING THE RAIL LINE
FOOD SYSTEMS
Supermarkets located along the Fairmount Greenway near the Transit lines can serve local neighborhoods distributing healthy food from convenient central locations.

Using the permaculture model vacant lots are transformed into an urban orchard, providing residents fresh seasonal produce.

1. Grocery Store at the corner of Norfolk Street, New England and Talbot Avenues  
   M. Dehais

2. An urban orchard along Willowwood and Woodrow Avenues  
   A. Monroy

BRIDGING THE RAIL LINE
The greenway passes over and under the transit line in several places. Designing pedestrian bridges at strategic locations creates important connections between neighborhoods. The bridges could be designed for safety and ADA accessibility using creative architecture and lighting design that will add character and even landmark status, becoming not just functional but transitional spaces that excite community pride.

See page 114 for plan rendering for overpass concept

The pedestrian underpass on the proposed greenway route on Woodrow Avenue passes under the railroad tracks. Installing a green screen on the sides of the bridge would provide a vegetative wall capturing diesel off puts before they fall over pedestrians. The aesthetics of the walk would be improved and noise pollution reduced.

1. Pedestrian bridge design near Norwell and Park Street  
   M. Dehais

2. Historic Woodrow Avenue bridge with green screen  
   A. Monroy
INTERSECTIONS

Reconfiguration of intersections can create safer and more comfortable conditions for pedestrians. Strategies employed for street calming include curb extensions, bumpouts, broad crosswalks, flashing bollards, raised intersections, changes to the color and texture of the intersections and crosswalks, street trees along medians and roadsides, small turning radii.

1. Traffic calming measures at North Olney Street  Jie Su

2. Traffic calming at Washington Street and Columbia Avenue  Y. Gong

3. Safe crossing at Bowdoin Avenue and Nottingham Street  Jie Su
Raised intersection at Talbot and New England Avenues and Norwell Street
M. Dehais

Rain garden bumpouts and raised intersection at New England and Southern Avenues
P. Landi

Broad raised crosswalk, mid road medians with street trees, permeable pavement at Hannon, Norfolk and Willowwood Streets
S. Morrow

GREEN ‘LIVING STREETS’ & GREEN PARKING

Green living streets apply creative, ecological technology to reduce storm water runoff, conserve energy, design for bikes and pedestrians, reduce heat island effect to name a few. Strategies include curb breaks as storm water inlets, large continuous tree pits, permeable pavement, raingardens, diverse plantings, plants as erosion control, green medians and sidewalk buffers, bike lanes and wide sidewalks.

Bike and pedestrian lanes buffered from traffic lane with green strip median planted with canopy trees, grasscrete parking lane and one way traffic on Intervale St & Blue Hill Ave
Y. Gong
2. Columbia Ave cross-section with planted central median and bikelanes  
Y. Gong

3. Geneva Avenue cross-section featuring street trees, 11’ wide sidewalks, parking lane on one side  
Y. Gong

4. Curb breaks direct water into rain garden medians on North Olney Street  
Jie Su

5. Eldon Street and Urban Wild  
J. Hulsey
Designated two way bike lanes and permeable paved sidewalks on Eldon Street in Front of Urban Wild

Vacant lots along Washington Street and Columbia Avenue intersection are converted into green parking lots using grasscrete pavers for ecological storm water management.

Right J. Hulsey
Below Y. Gong
Street greening at Mt. Bowdoin Avenue near Mt. Bowdoin Green  Jie Su

Mt. Bowdoin Street cross-section Jie Su

Green parking lot near Mt. Bowdoin Street Jie Su

Norwell Street above Harvard with permeable parking lane, green median buffer and bike lanes. J. Hulsey
Variation 1 modeling the ‘Living Street’ on Claybourne Street near Mother’s Rest.  

Variation 2 shows a single bike land and a one way designation along Claybourne Street near Mother’s Rest.  

Variation 1 Claybourne Street cross-section  

Variation 2 Claybourne Street cross-section
Norwell Street near Talbot Avenue
street treatment variation 1  M. Dehais

Norwell Street near Talbot Avenue
street treatment variation 2  M. Dehais

New England Avenue variation 1
street treatment and water systems
management  P. Landi

New England Avenue variation 2
street treatment and water systems
management  P. Landi
A pedestrian bridge off of Ballou Avenue is redesigned with ADA accessibility.
L. Bamberger

Ballou Avenue reconfigured as a Living Street. Vehicles still are permitted, but the street is narrowed, fitted with permeable surface, and configured with traffic calming techniques. The street becomes like a residential front yard, open to walk, bike, socialize and play.
L. Bamberger

A segment of Ballou Avenue redesigned with a central green island narrowing the road near an intersection in order to slow traffic.
S. Morrow

Hannon Street is narrowed to a one way street with rain gardens and bike lanes, narrow Hannon Street to one way with signage to caution motorists to the presence of bicyclists.
S. Morrow
PARKS

Public and private vacant lots offer opportunities for ecological design and building a network of new public spaces serving many purposes. Parks and plazas can incorporate permeable pavement, tree and shrub planting, green walls, solar lighting, strolling paths following preferred path lines, uniquely designed amenities such as benches or trash receptacles, place and wayfinding signage, water features for cooling.

At Puritan Park at Puritan Avenue and Richfield Street matching set of stone wall signs identifying the park name as well as the Fairmount Greenway. Perennial beds planted around the sign draw attention to the entrance to the park. Programming in the park might include benches, a fitness station and an outdoor room with a water feature and a community garden. J. Hulsey

A unique green wall defines one edge of Bus Stop Park at the intersection of Columbia Road and Washington Street. Y. Gong

Mt. Bowdoin Park is redesigned to provide place for teens to play basketball as well as stations for outdoor adult exercises. Jie Su
Skate park designed on a series of contiguous vacant lots along Norwell Street near the new Talbot Avenue transit station. New parks are great opportunities to engage the creativity of the community who can contribute to the design and development of these special places.

M. Dehais

Family park on Spencer street is designed for fun and family activity. Features of the park could include a designed play area, a unique fence created by a local artist, a cooling play water feature, interesting benches, clusters of trees, an open grassy area for free play, picnic tables, permeable pavement, raingardens, butterfly garden, space for potential community garden plots and groupings of fruit trees.

P. Landi
BP Pedestrian Bridge in Millennium Park provides an interesting design precedent for the conceptual bridge on Norwell Street (http://www.som.com/resources/category/5/0/3/8/9/9/images/001_21589600.jpg, 2010)
Appendix 2 * FAIRMOUNT GREENWAY QUESTIONNAIRE *

11 Number of Survey Respondants Total

Community Responses are in **BOLD**

Q1. Have you heard the term “Greenway” before? 10 -YES 1- NO

Q2. What thoughts come to mind when you think of a “Greenway”? **

- A system of parks, green space & public areas that connect different neighborhoods and services
- Rose Kennedy Greenway, Elevated Orange Line (barrier), depressed Big Dig,
- Bike paths, Rail Trail
- A contiguous or collection of open space/green parcels used to provide a single service
- Usually on an old railroad, linear
- Parks, Clean air, birds, exercise
- Healthy living

- Rose Kennedy, big dig, running, bike paths along river and ocean
- Plants and trees and vegetation in general covering a path

Q3. Have you been to any other Greenways in Boston? 9 - YES 0 - NO

If yes, which ones:

- The Emerald Necklace 6
- The Neponset Greenway 3
- The Rose Kennedy Greenway 6
- The Southwest Corridor 4

Other: **Harbor Walk, Arboretum, Red line & Orange Line (Forrest Hills & Roxbury),**

Q4. What playgrounds, fields, gardens or parks in your neighborhood do you use?

- 0 - Ceylon Park
- 4 - Franklin Fields
- 3 - Mother’s Rest Park
- 2 - Robert’s Playground

- 0 - Eldon Street Park
- 6 - Franklin Park
- 1 - Nightingale Community Gardens
- 1 - Ripleys’ Park

Other: **Fenway area, Community Gardens in South End & Roxbury, Emerald Necklace, Millennium Park, VFQ & Independence Road, Newton – Auburndale, JP, Jamaica Pond**

Q5. What outdoor activities do you enjoy?

- 5 - Biking
- 4 - Grilling
- 2 - Organized outdoor sports (basketball, soccer, baseball, etc.)
- 5 - Picnics
- 3 - Running

- 3 - Dog walking
- 4 - Jogging
- 2 - Rollerblading
- 1 - Skateboarding
- 6 - Gardening
- 1 - Roller-skating
- 9 - Walking

Other: **Tent camping, Canoeing, Raking Leaves, Volley ball, playground, Climbing**
Q6. What type of spaces would you like in a Greenway in your neighborhood?
Please rate how important this activity is to you from 1 to 5
1 = Not Important and 5 = Very Important

<table>
<thead>
<tr>
<th>Activity</th>
<th>Average Rating</th>
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<tbody>
<tr>
<td>Basketball Courts</td>
<td>4.22</td>
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<tr>
<td>Bike paths</td>
<td>5</td>
</tr>
<tr>
<td>Community Gardens</td>
<td>4.71</td>
</tr>
<tr>
<td>Fields/Open Space</td>
<td>4.71</td>
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<tr>
<td>Open Music Space</td>
<td>4.2</td>
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<tr>
<td>Picnic Areas</td>
<td>4.43</td>
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<tr>
<td>Playgrounds</td>
<td>4.38</td>
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<tr>
<td>Skatepark</td>
<td>3.57</td>
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<tr>
<td>Sport fields (Soccer, Baseball, etc)</td>
<td>4.85</td>
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<tr>
<td>Walking paths</td>
<td>5</td>
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<tr>
<td>Wooden areas</td>
<td>4.83</td>
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<tr>
<td>Urban Farms</td>
<td>4.14</td>
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<tr>
<td>Urban Orchards</td>
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</tbody>
</table>

Other: Nature Sanctuary, Tennis, Soccer, Basketball, Golf, Exercise, Simple exercise aids - pull-up bars & push-up, etc.

Q7. What local issues and concerns are most important to you?
(We ask because we want these to be addressed in the Greenway plans if possible)
Please rate from 1 to 5: 1 = Not Important and 5 = Very Important

<table>
<thead>
<tr>
<th>Issue</th>
<th>Average Rating</th>
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<tbody>
<tr>
<td>Addressing Crime and Safety</td>
<td>4.67</td>
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<tr>
<td>Addressing Pollution (Air &amp; Water)</td>
<td>4.78</td>
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<td>Increased Access to Healthy Food</td>
<td>4.88</td>
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<tr>
<td>Increasing Public Green Spaces</td>
<td>4.63</td>
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<tr>
<td>Increasing trees</td>
<td>4.63</td>
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<td>More safe spaces for youth</td>
<td>5</td>
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<tr>
<td>More safe spaces for walking</td>
<td>4.57</td>
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<tr>
<td>Opportunities for physical activity</td>
<td>4.75</td>
</tr>
</tbody>
</table>

Other: Affordable Housing (5), Kids with nothing to do, Fishing, Canoe, Kayaking, EVERYWHERE!

Q8. Is there anything else that we should know?

Nice work
Benches, Grouping for people to watch chess tables
Local workers
This initiative should be well known all over Dorchester!
Get more inner urban youth aware and involved
Concern about maintenance, safety, well lit
More smoke-free cities like Brookline

UMASS, AMHERST DEPARTMENT OF LANDSCAPE ARCHITECTURE & REGIONAL PLANNING
References


Ryan, Robert. Landscape Architecture and Regional Planning 609. University of MA, Amherst. Course Syllabus-first half


