

# Baxter Boulevard Improvement Plan



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*Recommendations for the Conservation and Improvement  
of One of Portland's Most Important Parks and Roadways*

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## Acknowledgements

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A special thanks to artist, David Clough, who granted us permission to use a copy of his painting, "Reflections," for the cover.

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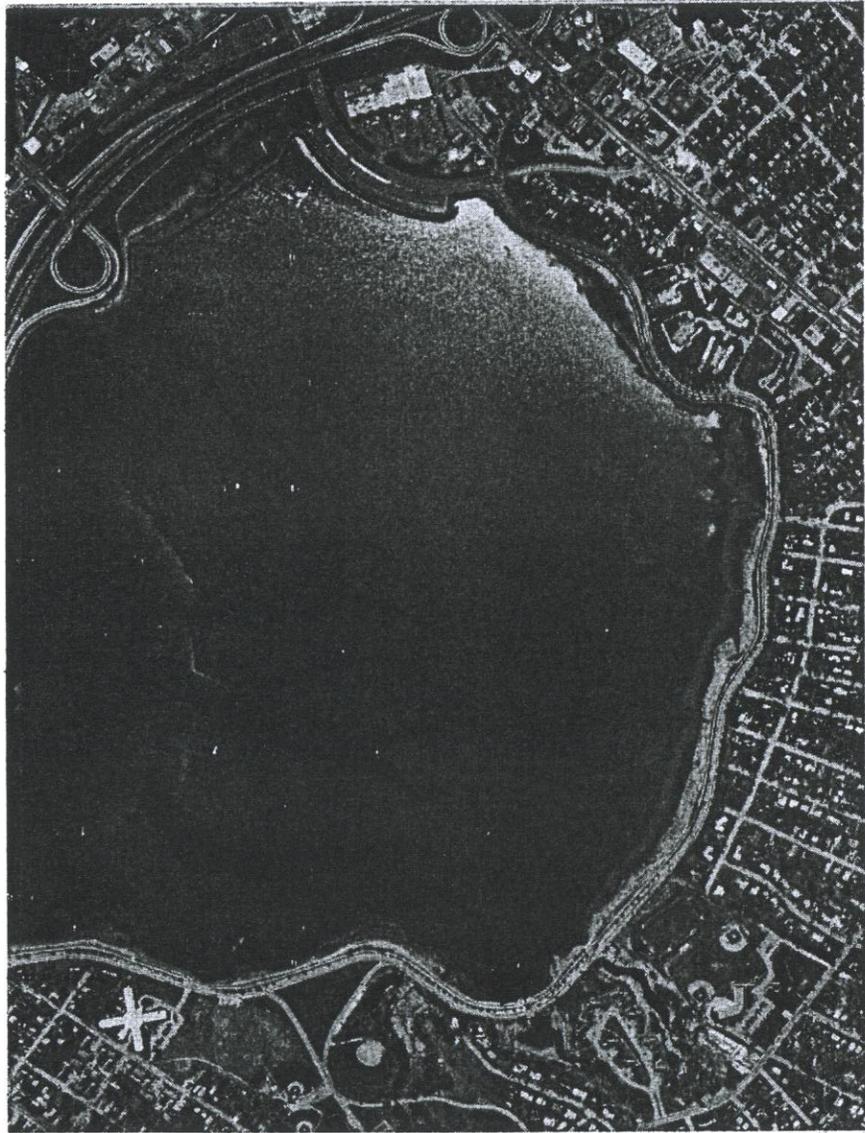
## Advisory Committee

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Project Study Area



## I. Introduction

### Project Mission Statement

*Baxter Boulevard will be developed, enhanced and maintained as both a principal destination and a central hub within the Portland park and trail system. It will be maintained as an historic park and roadway that encourages a diversity of uses for the greatest number of people.*

### A. Project Overview

#### WHAT MAKES THIS PLACE SO SPECIAL?

What has come to be known as Baxter Boulevard is both a roadway and linear park. It skirts the edge of Back Cove, the 660-acre tidal basin in the geographic heart of the City. In literal terms, it is a 100-foot wide strip of roadway, walkway, and shoreline. Its meaning and value, however, far exceed its mere dimensions. Baxter Boulevard is one of the greatest and most widely used treasures within the city of Portland. It is a cultural and a natural resource, offering tremendous views of the city as well as opportunities for activities such as bird watching, jogging, walking, biking, in-line skating, kite flying and sun bathing.

Since its construction in 1917, Baxter Boulevard has played a primary role in shaping the identity of Portland. Today, it is the most heavily used park within the Portland park system. Its tree-lined roadway is traveled by many commuters and visitors daily. In its dual functions as roadway and park, it is both a link to other destinations as well as a destination in and of itself.

Continued care for this cultural and natural open space has numerous social, civic and economic benefits. Open space fulfills many functions that are important for a healthy society. It fulfills a human need for recreation, provides habitats for wildlife, storage of storm water and flood protection, protects water quality, nurtures trees that filter air pollutants from cars and provide shade in summer, and helps support a delicate balance between ecology and human activity. The presence of open space attracts industry, jobs and investment because of the enhanced quality of life for citizens. Recreation also is an important aspect of health maintenance. These benefits are

multiplied in a connected and interdependent system of open spaces and trails or green belt linkages, as is planned or is under development in Portland. In the 1987 *Portland Shoreway Access Plan*, Baxter Boulevard was identified as the central hub of a system of shoreway trails throughout the City.



#### CENTRAL LOCATION

Part of Baxter Boulevard's uniqueness relates to its central location within the city and the diversity of adjacent land uses. The surrounding neighborhoods contain single and multi-family housing, elderly-care housing, schools, commercial businesses, retail stores, a major university, other municipal parks, several arterial streets and an interstate highway.

#### HISTORY

Baxter Boulevard has its origins in the era when natural open spaces for public recreational use were becoming established as a uniquely American tradition. Like many such historic parks and open spaces throughout the United States, Baxter Boulevard must now serve the changing needs and desires of a contemporary user population.

Originally designed by the firm of Olmsted, Olmsted and Eliot, it has never completely fulfilled the potential as conceived by its designers and Portland's visionary park system planners. The original intent to form a fully connected system of parks and pathways throughout the City is now closer to being realized than ever before. The results of this study contribute to this larger planning effort as well as to the longevity of the park which has been identified as the "hub of the wheel" for the entire park system.

#### ABUNDANCE OF USE

Baxter Boulevard is the most heavily used park within the Portland park system. Hundreds use the walkway on a daily basis and thousands during special events. It is cherished for all of the benefits it provides to residents and visitors alike, particularly residents of the adjacent neighborhoods. It is a stage upon which the drama of community life unfolds.

This very popularity has led to degradation of the Boulevard, including the walkway surface, the lawn areas, the roadway and the trees. Conflicts between different types of users, such as bicyclists, walkers, joggers, and dogs, have also increased due to the popularity of the place for a

diversity of purposes. Demands for use of the Boulevard are high and continuing to increase. Planning for the future of this place requires developing sustainable strategies for accommodating this high demand.

## CONTEXT

Baxter Boulevard is not only a major public landscape and significant historic resource for Portland by itself, but is also related to other recreation, open space, and circulation needs of the City. Of particular importance is the Boulevard's connection to Payson Park, which was one of four linked parks included in the 1905 *General Plan for a Park System* with the Eastern Promenade, Deering Oaks Park and the Western Promenade. Additionally, the Boulevard's relationship to nearby commercial and retail uses, neighborhoods and parking areas is an important consideration. Within this context, Baxter Boulevard has an important role to play in contributing to the city's vitality, image and quality of life.



## ECOLOGICAL IMPORTANCE

Beyond its value as a well-loved park, Baxter Boulevard, Back Cove and its tributaries are an important part of a larger ecosystem. Ecologically, Back Cove is very important in the larger context of Casco Bay. It is a semi-enclosed tidal cove that covers approximately 660 acres with a narrow bottle neck opening. With its adjacent water bodies, existing salt pannes, marshes, upland edges and mud flats this is truly an ecologically rich environment above and beyond its cultural benefits as a place to recreate. In fact, the Maine Department of Inland Fisheries and Wildlife gives Back Cove an "A" classification, its highest quality rating.

## DEFINING THE CHARACTER OF PORTLAND

Because of the dominant presence of trees in Portland, the City has been described as "Forest City." Baxter Boulevard, with its allee of linden trees, plays a pivotal role in this Forest City identity and is one of Portland's most enduring designed landscapes.

Visually, the Boulevard's impact has always been great. The scenic views of Portland from within the City itself were recognized early in the City's history as a unique cultural and visual resource. The expanse of Back Cove and the vantage points provided by the Boulevard circling it offer dramatic views of the City's skyline.

## CONSERVING THIS VALUABLE RESOURCE FOR THE FUTURE

The incredible natural and historic environment of Baxter Boulevard and Back Cove is protected by several agencies at varying government levels to ensure its conservation for future generations. Back Cove and Baxter Boulevard fall under the State's Shoreland Zone designation. This is the area 250' inland from the normal high water line in which development must follow standards for the purpose of protecting its ecological and visual integrity. Back Cove has also been nominated for inclusion in the State Legislature's Critical Areas Act. This Critical Areas legislation protects areas with unusual natural, scenic or scientific significance, for the purpose of facilitating their preservation for present and future generations. Additionally, the historic resources of Baxter Boulevard are protected by Federal, State and City historic preservation laws, ordinances and guidelines. Therefore, it should be understood that any changes to Baxter Boulevard will require an extensive review and approval process.

## THE PRESENT OPPORTUNITY

Baxter Boulevard has changed relatively little in its 80-year history other than expected wear from the effects of use and time. For a number of reasons, the Boulevard has received little attention other than routine maintenance and up-keep. With a few exceptions, many of its original, character-defining elements remain relatively intact and unchanged, due in part to this minimal management.

Balancing the diverse demands on the City's transportation and open space resources while maintaining the historic integrity of Olmsted, Olmsted and Eliot's vision for Baxter Boulevard presents an exciting challenge with far-reaching impacts for the future of Portland's park and roadway systems. It is, therefore, important to conserve the elements of this resource that have contributed to its lasting popularity and to sustain and improve its capacity to continuously provide the many benefits it has brought to the citizens of Greater Portland throughout its history.

The Baxter Boulevard Improvement Plan comes at an opportune time in which the possibility, the interest, and the means exist to best conserve and enhance one of Portland's most treasured parks and roadways. For the benefit and fulfillment of innumerable people and for the growth of Portland's identity as a livable city, this opportunity must be seized.

## B. Goals of the Project

This report documents several months of involvement by many individuals committed to the long-term quality and enjoyment of Baxter Boulevard. At the outset of the process, the consultants, together with the Advisory Committee and select City staff, agreed upon the following goals for the development of recommendations for Baxter Boulevard:

1. Strengthen the identity of Baxter Boulevard.
2. Establish unity throughout Baxter Boulevard and with the greater Portland Park System.
3. Improve and develop clear, safe, functional ingress and egress points for motorized and non-motorized users that enhance the visual and physical connections to the Boulevard's surroundings (neighborhoods, greater park system, Back Cove and existing trails).
4. Encourage use of and access to Baxter Boulevard by non-motorized modes of transportation.
5. Maintain the historical integrity of Baxter Boulevard and Back Cove by conserving, adapting or preserving existing historical resources and/or introducing new elements that are reflective of the park's history.
6. Establish a balance between the traffic and recreational needs of Baxter Boulevard in such a way that minimizes vehicular and pedestrian conflicts. Baxter Boulevard is both a roadway and park.
7. The function and use of Baxter Boulevard should respect and complement the functional and aesthetic qualities of the neighborhoods adjacent to Back Cove.
8. Encourage a diversity of active and passive recreation opportunities in order to engage a variety of age groups.
9. Balance human use with protection and enhancement of the environment.
10. Preserve, protect and enhance the street trees along Baxter Boulevard.
11. Where appropriate, use signs to educate people about the cultural, historical, scenic and natural resources of Portland, Back Cove and the region.
12. Preserve and enhance views.
13. Provide universal access that is barrier-free to all users.

### C. Method and Approach

As with the original Baxter Boulevard plan set forth by the Olmsted, Olmsted and Eliot firm, the consultants' approach to improving Baxter Boulevard was intended to be both visionary and pragmatic. Planning for the future of the Boulevard must be derived primarily from an understanding of the use of the area, including the numbers and types of people using it, how they use it, and the times of use. Understanding the uses of the Boulevard included not only quantifying the many uses and user types, but also considering the qualitative attributes of the user's experience from as many perspectives as possible.

It involved:

1. Understanding the **physical resources** of Baxter Boulevard
2. Understanding the **history** of Baxter Boulevard and its implications for potential change
3. Understanding the **current uses** of Baxter Boulevard
4. Understanding **public opinion and concern** about Baxter Boulevard

In preparation for working with the public and with the Advisory Committee, the consultants conducted a historic inventory and analysis for the purpose of understanding the original design intent for the Boulevard. This included comprehensive research of historical documents, including correspondence, photographs, drawings and plans and an inventory of when existing features of the Boulevard were designed and when they were constructed. This information is important in evaluating the integrity, significance and role of the present landscape,. It helps to ensure that the Boulevard's historic integrity is maintained, and where possible, enhanced. The historic analysis is summarized in the following section of this report.

Understanding the current resources of the Boulevard involved a series of quantitative and qualitative analyses and assessments of the natural, physical, historical, visual and cultural resources of the study area. This included field observation, traffic counts, and inventories of each mode of usage at various times of day, as well as formal and informal user surveys and input solicited at two public meetings. The conditions, uses, and relationships of the Boulevard's discrete parts, as well as the problems and opportunities they present, were documented as thoroughly as possible for the specific purposes of this study.

In addition to identifying the resources which define Baxter Boulevard, the team also looked at those contextual resources that have an immediate impact upon the Boulevard, such as nearby intersections effecting traffic entering and exiting the Boulevard's roadway.

Essentially, the consultants' approach to the project was intended to 'diagnose' the landscape in terms of its specific elements and resources, while recognizing and articulating the important relationships between them which define the meaning and value of the Boulevard as a memorable place.

The consultants examined vehicular and pedestrian circulation patterns, origins and destinations of vehicular and pedestrian travel, parking needs, attitudes of individual users about the Boulevard, and current maintenance needs and problems. This information was obtained from field reconnaissance, informal interviews, formal surveys, discussions with the Advisory Committee and City staff, as well as from public meetings.

The magnitude of the project and of its potential impact on people is great and complex. It was very important to the consultants to make every effort possible to ensure that all recommendations are rooted in an understanding of the site and an understanding of the opportunities and constraints that it presents.

#### **D. Decision-Making Process**

The recommendations within this report are built upon a strong foundation of input from a variety of sources. Working under the direction of the Baxter Boulevard Advisory Committee and in conjunction with City staff, the consultants developed, proposed, reviewed, mediated, prioritized and revised a comprehensive set of recommendations for improvements to the Boulevard. The recommendations contained within this report will serve as guidelines for the City in its future decisions effecting Baxter Boulevard and its immediate context.

#### **PARTICIPATORY PROCESS**

Public participation in any planning and design process promotes a sense of understanding and ownership of the project by all those involved. In the development of the Baxter Boulevard Improvement Plan, participation was especially vital to the success of the project. In seeking overall balance between the different and sometimes competing interests, functions and objectives for Baxter Boulevard, it was particularly important for the planning and design consultants to incorporate as much feedback as possible on their work as it developed.

Allowing participants' ideas and concerns to be heard, understood, and applied to the planning and design process on a regular basis was recognized as integral to advancing the goals of the project. The consulting team regularly presented findings and draft recommendations to the Advisory

Committee and to the public for the purpose of soliciting their responses and advancing the goals of the project. The result is a set of recommendations that represents the participation of a much larger constituency than simply the consultants themselves.

#### ROLE OF THE ADVISORY COMMITTEE

The Advisory Committee provided valuable input on a regular basis throughout the project. Their input resulted in the consultants gaining a better understanding of the resources and uses of Baxter Boulevard. They provided a framework of "checks and balances" by bringing a diversity of viewpoints to the planning and design process and by reviewing the work through the criteria and interests of their constituents. The involvement of the Committee has also contributed to the ongoing process of communicating with the broader public about the project's goals and process.

#### PUBLIC MEETINGS

The public meetings served to give interested citizens a voice regarding the issues, concerns and ideas relevant to this project; to educate the public about the specific development of and motivation for the recommendations; and to alert the public to changes they may see in future years at Baxter Boulevard.

#### THIS REPORT

The recommendations contained within this report are the result of consensus which was shared on the majority of the recommendations presented by the consultants. The participatory process allowed for valuable discussion and debate among public meeting attendees, Advisory Committee members, City staff members, and the consultant team. However, a clear consensus was not reached on all issues discussed and debated. The recommendations presented here reflect the current conclusions of the Advisory Committee after careful consideration of all the input.

Part of the decision-making process involved establishing a priority rating for the proposed recommendations. Only those recommendations determined to be of high or medium priority have been included within this report. Those recommendations considered low priority, or those that did not seem relevant to the Advisory Committee are documented in a separate document on file at the City Planning office as an Appendix to this report.

CITY OF PORTLAND

LANDSCAPE ARCHITECTS' REPORT

ON THE

Improvement of Back Cove

1895-96



PORTLAND, ME.  
THE THURSTON PRINT  
1896

## II. History and Development of Back Cove and Baxter Boulevard

One of the primary goals of this improvement plan is to ensure that the future of Baxter Boulevard and Back Cove be inspired by, yet not encumbered by, its past. The hope is that, with an understanding of the layers of history and use of this place, informed decisions will be made about its future.

### A. Historical Summary

Back Cove and its environs have witnessed enormous change over the past century. The area has played host to commercial enterprises, such as tanneries and tile companies, as well as residential neighborhoods and recreational facilities. As the City of Portland grew, and as the polluting commercial operations were removed from the Cove, neighborhoods developed and efforts began to improve the area both from a sanitation and recreation point of view. By uncovering the many layers of its history, one begins to understand Back Cove's identity and change over time.

### 1880 TO 1917: EARLY SANITATION AND BEAUTIFICATION IMPROVEMENTS

Industrial waste as well as residential sewage created unsanitary conditions in Back Cove at the turn of the century. These conditions were found elsewhere throughout the United States as a direct result of the enormous growth of cities and their populations. The landscape architect and planner, Frederick Law Olmsted, Sr., viewed these unsanitary conditions as a major threat to the city dweller and proposed engineering and design solutions to the problem in cities such as Boston. Proposals to improve the waste problem in Portland's Back Cove were offered over time, but it was James Phinney Baxter, as mayor of Portland, who finally was able to put forth an improvement plan which would also serve several purposes at once.

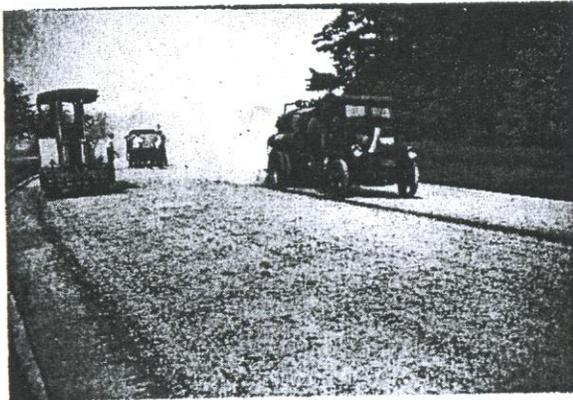
In 1894 Baxter visited Boston and saw firsthand the work done by Olmsted and his firm on that city's system of linked parks and open spaces, dubbed the Emerald Necklace. Many of the parks within the Emerald Necklace were essentially sanitation projects, aimed at restoring the ecological health and sanitation conditions of the area. Baxter envisioned for the Back Cove area an opportunity not only to improve sanitation but also to increase property values and provide recreational opportunities for Portland's citizens.



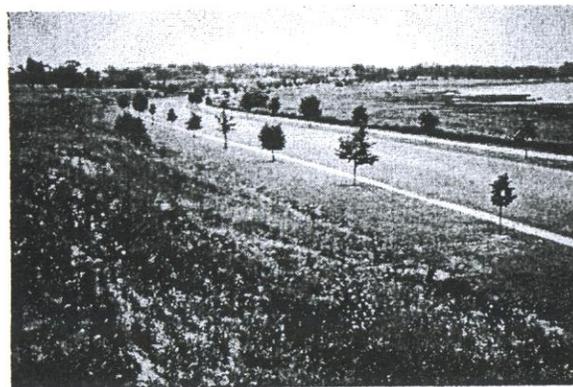
In 1895, Baxter hired the Olmsted, Olmsted and Eliot firm to conduct a study of Back Cove and the possibilities for its improvement. Charles Eliot had a keen interest in natural systems and environmental management. His talents when combined with the vision of the two Olmsteds, would prove to be invaluable. In 1896 the plan was presented to the City. The improvements were to serve three purposes:

1. Improve the health and sanitation of the area
2. Add developable land along the Cove which would generate a higher tax revenue for the City
3. Add public open space providing both a scenic drive and recreational activities associated with a water park

Character-defining features of the plan included construction of a dike, which would improve the stench of the Cove mud flats and create a pleasure basin for marine related activities by controlling the tides. The backbone of the plan was a circulation system integrating a curving circuit drive and pedestrian paths with spectacular views to the City, bordered by allees of trees and areas of vegetation. The plan also proposed a hierarchy of access points to the proposed boulevard from the adjacent streets and neighborhoods. Other important features of the plan were bridges over two tidal inlets as well as small parks within the larger project area, which were to be natural areas with paths and appropriate water-tolerant plantings.



The 1896 plan proved to be too controversial for Baxter and in 1897 he was voted out of office as a direct result of public suspicion as to his intentions for Back Cove. It was viewed as a project benefiting the wealthy. However, in 1904 Baxter was reelected and was able to complete the necessary agreements with landowners and the City for the improvement of the area. He convinced the landowners to donate what resulted in a one hundred-foot strip of land along the shore. The consultants recognized that implementation of the plan would be costly and, of necessity, would be realized over time as funding became available.

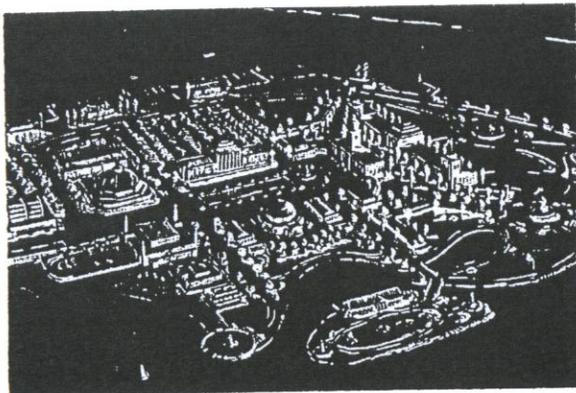
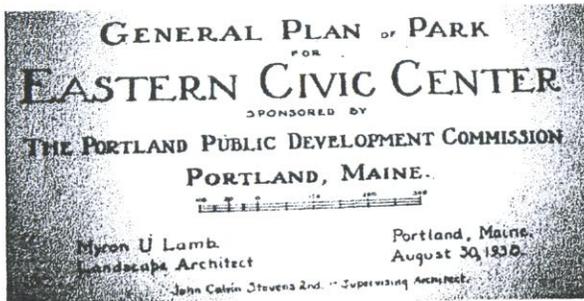


In 1905, Baxter commissioned the Olmsted firm to do a comprehensive plan for all of Portland's parks. Baxter had first-hand knowledge of the linear parks and parkways in Boston which had been designed by the firm. The 1905 *General Plan for a Park System* authored by Baxter called for the connection of the Western Promenade to Deering Oaks, Back Cove and the Eastern Promenade by means of a series of boulevards and tree-lined streets. Recognizing the previous political controversy surrounding the 1896 Plan for Back Cove, the Olmsted Brothers eliminated the "pleasure basin" and dike from the proposal yet maintained the important entrance points to the Boulevard, the allee of trees and the inlet and bridge areas. Thus, the northern portion of Back Cove Boulevard was to serve as a linear park connection to other parts of the park system.

## 1916 TO 1935: REALIZATION OF BACK COVE/BAXTER BOULEVARD

Until 1916, the proposed Back Cove Boulevard was shelved, as a result of Baxter again losing his mayoral bid. Although some grading and related work had been completed before 1916, it was in this year that construction of Back Cove Boulevard began in earnest. The Boulevard was graded, bridges constructed, pedestrian paths built, the Bedford Street entrance graded and esplanade laid out. On November 13, 1917, Back Cove Boulevard was opened to the public. Work continued over the following years with Baxter always an interested party. On Memorial Day, 1921, one hundred linden trees were planted along the Boulevard as a memorial to World War I veterans. In the same year, James Phinney Baxter rode in the first car to drive over the newly renamed Baxter Boulevard. Baxter died later that year.

Throughout the 1920's and 30's, design work was undertaken by the City's Engineers and its Park Commissioners. Olmsted, Olmsted and Eliot had proposed the overall concept, but it was the in-house work of Portland's planners which gave shape to many of their ideas. Trees and shrubs were planted over the years and, with the acquisition of Payson Park in 1917, construction of an entrance from the Boulevard to Payson Park was completed. In 1925, a monument placed on the Boulevard at the intersection with Vannah Avenue by the James Phinney Baxter Memorial Association was dedicated to this visionary believer in the value of urban parks.

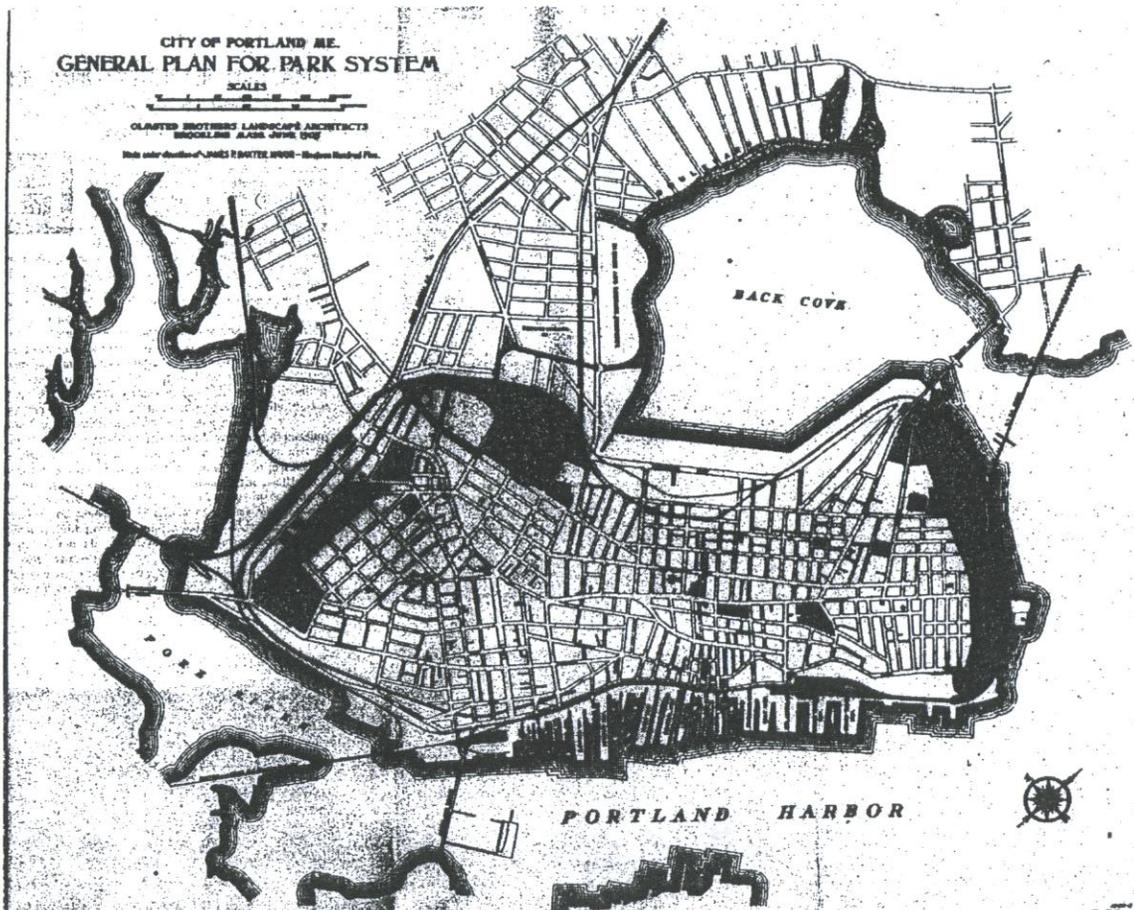


## 1936 TO PRESENT: NEW INITIATIVES

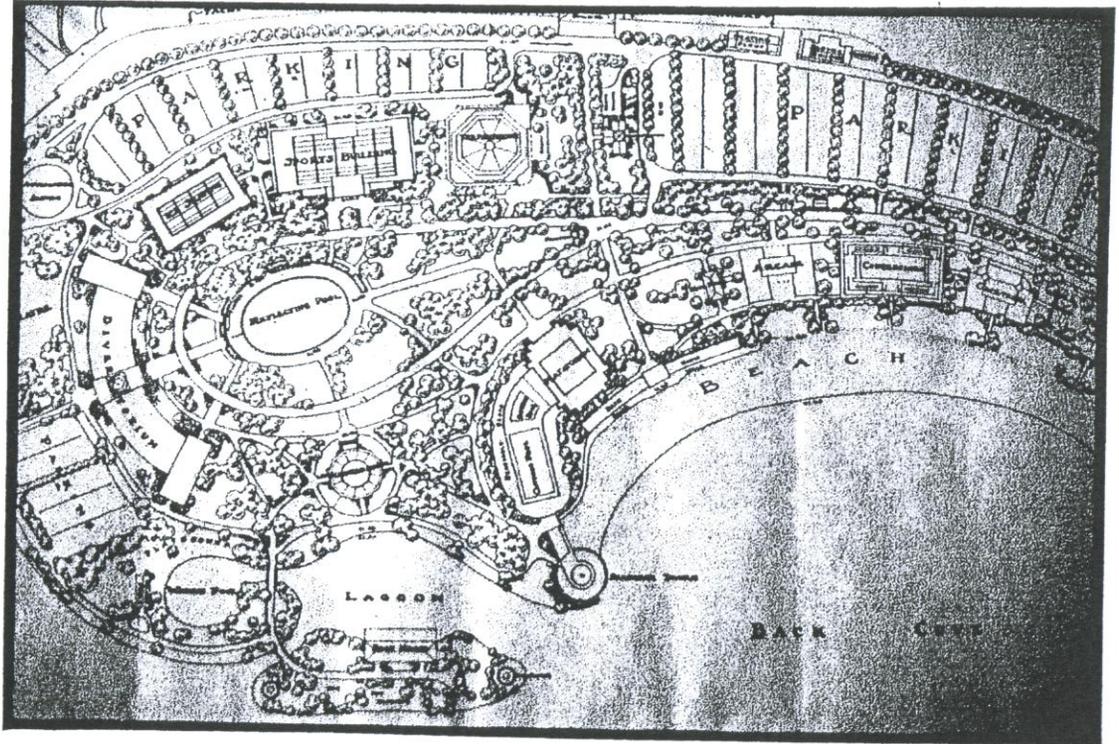
In 1930, the City revived the concept of building a dike and creating a civic center in Back Cove as part of a WPA program. This Depression-era project would provide jobs and an opportunity for new recreational facilities oriented both to land and water. The City called on the Olmsted Brothers to review the "desirability and practicability" of various plans. Years later, the Portland Public Development Commission put forward an elaborate set of plans by Myron Lamb and John Calvin Stevens for a large recreation complex on Back Cove which was never realized. Between 1940 and 1970, Back Cove and Baxter Boulevard fell into a period of benign neglect. Sewage and the odors from the mud flats continued to be a problem until the mid-1970's when the wastewater treatment plant was constructed below the Eastern Promenade.

With the construction of Interstate 295, portions of Back Cove were filled. In 1978 a fitness course system was built on what had previously been the pedestrian path between the Cove's edge and the Boulevard. In 1980, a few replacement linden trees were planted and rededicated, and the first Back Cove Family Day was held in May, 1986 at Payson Park and Baxter Boulevard. In



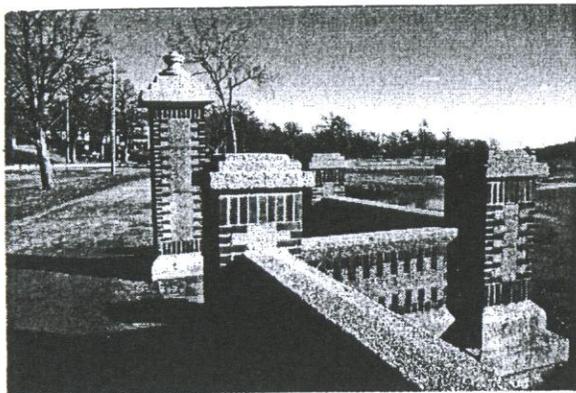


1905 General Plan for Park System



1930 Civic Center in Back Cove Plan

1989, Back Cove was nominated to the National Register of Historic Places. That same year, as a result of the reconstruction of Tukey's Bridge, the walking trail was completed as a continuous circuit path. After almost a century, the circuit route around Back Cove envisioned by Olmsted, Olmsted and Eliot was finally complete--at least for pedestrians.



In the early 1990's more fundraising by veterans enabled tree replacement to continue and the bridges were repaired using ISTEA and historic preservation funds. A link with the recently constructed Eastern Promenade Trail at Tukey's Bridge is being developed and will provide the connection between that trail and the Back Cove area, projected for completion within the next two years.

As Maine's only boulevard and designed linear park, Baxter Boulevard and Back Cove continue to provide today the recreation and enjoyment opportunities which were envisioned a century ago: a leisurely drive along a tree-lined boulevard with spectacular views of the City; pedestrian amenities and recreational opportunities; a memorable sense of place to be experienced both from within the park and from the surrounding neighborhoods; and notable design details such as the granite curb and gutter and the recently rehabilitated bridges over the inlets.

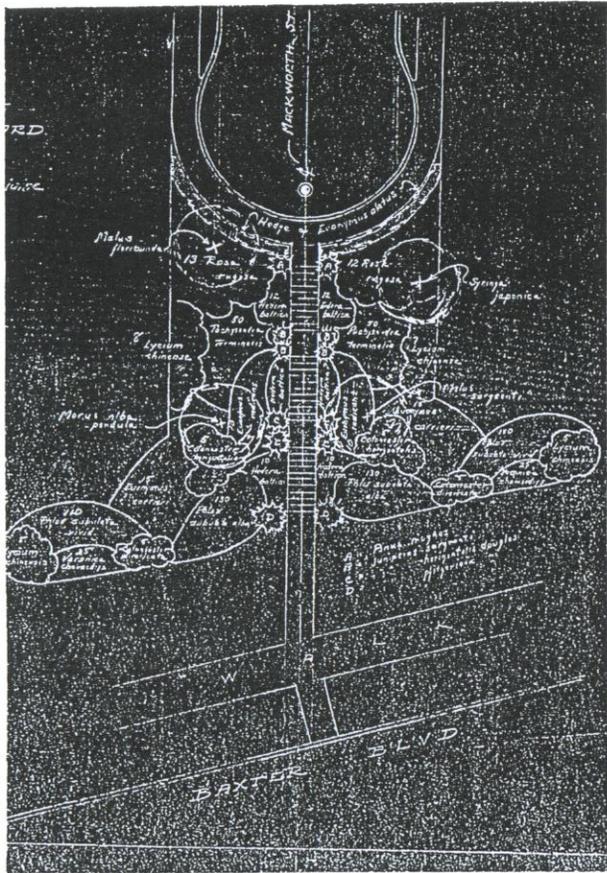
Back Cove and Baxter Boulevard are designated as an Historic Landscape District. Changes to it are governed by the City's *Preservation Ordinance* and *Comprehensive Plan* as well as Section 4(f): *Federal Regulations for the Treatment of Historic Roadways*. Additionally, Baxter Boulevard is on the National Register of Historic Places both as a roadway and a park, one of the few places in Maine with a dual designation.

## B. Time Line of Events in the Development of Back Cove and Baxter Boulevard

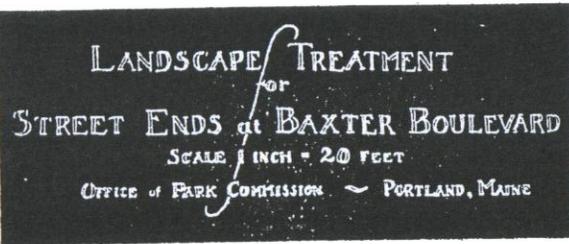
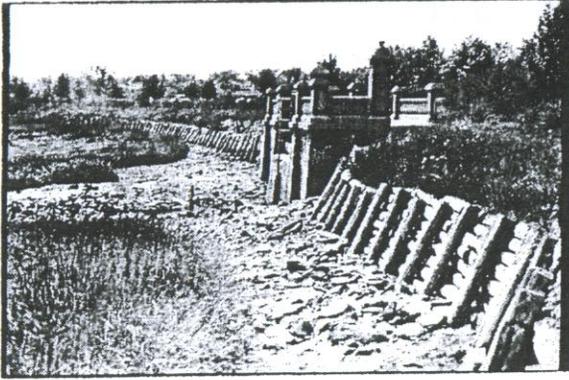
The following timeline represents the sequence of events which have direct relevance to the current process of considering an Improvement Plan for Baxter Boulevard. They highlight the context of foresight and vision in which the participants of this project have been working.



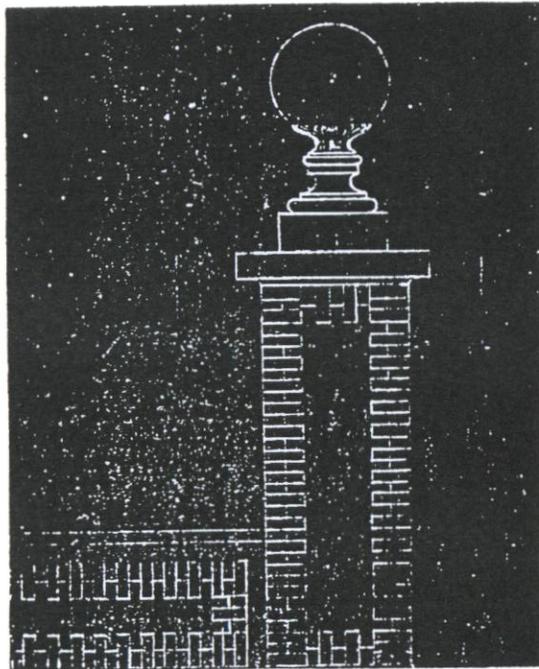
- 1831 Plan of Portland, Engraved for Directory by D. Johnson
- 1876 Bird's Eye View of Portland
- 1876 Elwell's *Portland and Vicinity* mentions creating "a pleasure drive". pp. 116-118
- 1878 City Engineer, William Goodwin, presents paper entitled, "Our Public Grounds"
- 1884 City Engineer, William Goodwin, proposes to construct sewer system to improve Back Cove
- 1887 State conveys rights in Back Bay flats to City of Portland and establishes Back Bay Commission to oversee area
- 1888 Auditor's Report notes expenditures of \$6,800 for Back Bay sewer and labor
- 1893 James Phinney Baxter is elected Mayor of Portland
- 1893 First Back Cove land purchases: Landowners are asked to relinquish 100 foot strip of land for Boulevard
- 1894 Baxter visits Boston to examine Park System
- 1894 Baxter hires sanitary engineer from New York to design intercepting sewer for Back Cove
- 1895 Auditor's Report notes expenditures for a survey of Tukey's Bridge and Back Bay
- 1895 Visit with Olmsted, Olmsted and Eliot by City Engineer, George Fernald and the Secretary of the Parks Commission to discuss Baxter's extension to the park system and his desire to have O, O, and E do "an examination and report on the subject"
- 1896 Auditor's Report notes expenditures of \$20,000 for Back Bay sewer
- 1896 Olmsted, Olmsted and Eliot prepare "A Preliminary Plan for the Improvement of Back Cove", accompanied by the "Landscape Architects' Report on the Improvement of Back Cove 1895-1896"
- 1897 Baxter loses mayoral election
- 1903 Miriam Winslow donates Winslow Park to City in memory of her parents--one of the first neighborhood parks established (Sited near present day USM Library/Forest Avenue)
- 1904 Baxter is elected mayor of Portland
- 1904 Baxter completes right-of-way agreements with Back Cove landowners and the City authorizes lay out of Back Cove Boulevard
- 1904 Auditor's Report notes contingency fund of \$1,000 for Back Bay Boulevard
- 1904 Work begins on west end of Boulevard at Bedford Street (see memo J. C. Olmsted, 3 November 1904 and Mayor's Address of 1904)
- 1905 Olmsted Brothers prepare *City of Portland, Maine, General Plan for Park System* for Baxter. Baxter writes text for report.



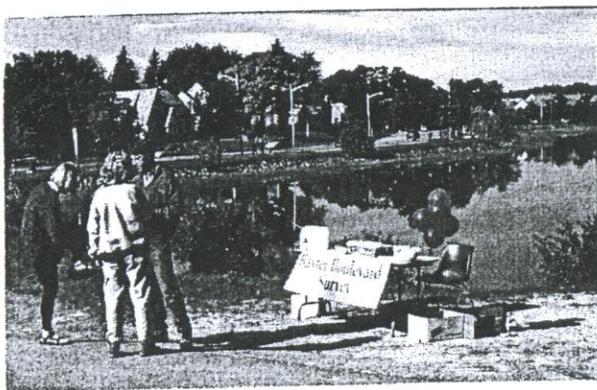
- 1905 Olmsted Brothers prepare revised plan (#2) for Back Cove eliminating the dike and ending the "driveway" at Tukey's Bridge.
- 1905 Design treatment for the inlets (and bridges) are added for health reasons (see Letter from Olmsted Brothers, 13 February, 1905)
- 1905 Baxter loses mayoral election
- 1909 Auditor's Report notes acquisition of land between Forest and Washington Avenues
- 1911 Carl Rust Paker draws up plans for "Boulevard Park", a new sub-division adjacent to Baxter Boulevard (see letter to O. B., 26 October, 1911)
- 1915 State establishes part of Back Cove as bird sanctuary
- 1916 Auditor's Report notes work continuing on Boulevard; east end from bridges to Washington Avenue graded and graveled; bridges completed. Bedford Street entrance graded and esplanade laid out
- 1917 Auditor's Report notes three miles of Boulevard completed; Boulevard widened at Payson Park; sewers extended across the Boulevard to the flats; fill hauled and deposited at different points on the Boulevard for future use; sidewalks, driveways, esplanades built at Forest Avenue extending 1/4 mile
- 1917 Back Cove Boulevard opens to the public on November 13
- 1917 City purchases Payson Park (48 acres) for \$26,000 from William Payson for passive recreation
- 1918 Bates Street entrance is widened; curbing is placed at the Forest Avenue entrance
- 1918 Baxter proposes to plant Back Cove Boulevard as an arboretum
- 1918 City sets aside 20 acres of land at Payson Park for community gardens
- 1919 Bates Street is graded and surfaced with gravel; "used as a short cut to the westerly end of the city and for pleasure driving"
- 1920 Clay barges still enter Back Cove and tie up at the Winslow Pottery Company off Forest Avenue
- 1921 Baxter rides in first car over renamed Baxter Boulevard
- 1921 On Memorial Day, 100 lindens trees are planted along the Boulevard as memorial to WW1 veterans from Forest Avenue entrance to Brown's Point. Esplanade at Bates Street graded and planted with 24 lindens from Payson Park nursery
- 1921 James Phinney Baxter dies
- 1922 "Double roadway sections" resurfaced between the bridges; short sections of vitrified brick gutter and granite curbing were placed at Belmeade Road and at Oakleigh Road
- 1922 Casco Tannery land purchased adjacent to Deering Oaks
- 1923 Trees and shrubbery planted--lindens, Berberi trees, assorted evergreens, deutzia, hydrangea, forsythia, spirea, white birch, maples and privet
- 1924 Heavy grading in vicinity of Payson Park; embankments are protected with heavy stone rip-rap sections; esplanade construction extended and drainage work done
- 1925 James Phinney Baxter Memorial Association dedicates monument to him on Baxter Boulevard



- 1926 Improvements at easterly end for road drainage systems; preparations completed for final permanent road surface for 2.3 miles of parkway; area at lower Woodford Street graded, triangular ornamental area with granite curbing and ornamental lights constructed; esplanades along Vannah Avenue made; bridge repairs necessary
- 1927 Asphalt-macadam construction begins on Bates Street between the Boulevard and Washington Avenue
- 1928 Continuation of construction begun in 1927; construction of stone steps on steep slope, planting of shrubbery, construction of footwalks of gravel and crushed rock
- 1929 Grading for esplanades and walks continues from Hanson's Creek towards Washington Avenue
- 1930 Following devastating ice storm, two miles of barberry hedge cleared and replaced; additional esplanade construction and walk grading on the Boulevard completed
- 1930 City revives idea to build dike and Civic Center in Back Cove as WPA project (John Calvin Stevens, architect; Myron Lamb, Landscape Architect)
- 1930 Portland Newspapers, using New York as an example, encourage development of Back Cove as a summer-winter playground to accomplish the following objectives: clean water, recreation, tourism, increase in property values, employment, increased health and pleasure of Portland citizens
- 1930 Portland City Council votes to call in Olmsted Brothers to consult on "desirability and practicability" of various plans
- 1931 Correspondence between Olmsted Brothers and City of Portland puts on hold any planning
- 1931 Grading continues for approaches to Payson Park, plantings are installed along water side of Boulevard
- 1932 Development of footwalks and esplanade areas from Payson Park to Washington Avenue
- 1932 Last land acquisitions for Baxter Boulevard
- 1933 Minor repairs to structures, lawn, tree and shrub maintenance
- 1934 Proposal to beautify slope areas between Woodford Street and the double road section
- 1935 Landscaping along the Boulevard
- 1935 Portland Public Development Commission proposal for WPA funds
- 1938 Plans for large complex developed by Portland Public Development Commission
- 1939 Portland City Council approves cleaning up Back Bay shoreline along Baxter Boulevard as a WPA project
- 1948 Citizens express concern about stench from Back Bay-Portland Press Herald
- 1950 Introduction into Payson Park of recreation facilities (50's tennis; 60's softball; 70's baseball)
- 1950 Flats clean up estimated to cost 3 million dollars-Portland Press Herald
- 1950 Boston engineer recommends interceptor sewer-Portland Press Herald
- 1951 City to study possible Back Cove dam (to cost \$25,000)-Portland Press Herald
- 1952 Back Bay dredging solution cost estimated at 1.5 million dollars
- 1953 Back Bay pollution study recommends clean up cost of 7.7 million dollars; a dam-bridge would reduce cost by 2 million dollars; Planning Board favors dredging--cost set at 6.2 million dollars for eleven year project
- 1957 Portland Press Herald headlines Back Bay as a health threat
- 1957 President Eisenhower signs bill closing abandoned channel in Back Bay to navigation



- 1960's City removes spruce trees from median strip and tears down deteriorated Smith Creek Bridge and replaces with a culvert. The interior section of the Fall Brook Bridge is removed, repaired and paved over.
- 1971 Construction of I-295 fills in portion of Back Cove. City receives 26 acres of land from the State along I-295 and Back Cove (as a result of taking 4 acre northern portion of Deering Oaks) with proposal of a boating and marina facility. Winslow Park relocated to Baxter Boulevard/Preble Street Ext. location
- 1971 Portland and Rochester Railroad relocated into Deering Oaks
- 1971 Studies conclude that de-icing road salt responsible for deteriorating lindens along Boulevard
- 1976 Three-acre Longfellow Arboretum is established in Payson Park by the City and the Longfellow Garden Club
- 1976 Construction of interceptor sewer line along Baxter Boulevard. Wastewater treatment plant built along Eastern Promenade
- 1976 EPA and City undertake planting of native sea grasses along edge of Back Cove
- 1977 In a report issued by Forestry Consultant, Andrew Phillips points out the damage done to the lindens as a result of the construction of the interceptor sewer construction
- 1978 A "fitness course system" given to the City by Blue Cross/Blue Shield Company in conjunction with USM/Healthline and Maine Track Club introducing "stations" along stone dust pathway (donated by the Blue Rock Company)
- 1980 Rededication of 20 newly planted linden trees in honor of WW1 veterans in vicinity of the intersection of Dartmouth Street and Baxter Boulevard
- 1981 Merging of Parks and Public Works Departments
- 1985 Community led fundraising effort to improve "track" along Back Cove
- 1985 Fall Brook Area Study
- 1986 First Back Cove Family Day (May 19)
- 1989 Back Cove nominated to the National Register for Historic Places
- 1989 Walking trail completed around Back Cove with Tukey's Bridge reconstruction
- 1989 Baxter Boulevard Tree Survey conducted by Jeff Tarling, City Arborist
- 1992 Fundraising effort by Veterans of WW1 for tree replacement planting
- 1993-4 Repair of bridges along Boulevard at cost of \$500,000 with combined ISTEA and historic preservation funding
- 1994 "Green Spaces, Blue Edges: An Open Space and Recreation Plan for the City of Portland" is prepared by the City
- 1994 Capisic Brook Greenbelt Project Plan funded by EPA (based on 1985 Fall Brook Study)
- 1995 Eastern Promenade Trail Plan approved by City
- 1996 Historic bridges on Baxter Boulevard reconstructed
- 1996 Construction of Eastern Promenade Trail begins, Baxter Boulevard Improvement Plan commissioned by City



### III. Inventory of Existing Uses, Issues and Concerns

This chapter summarizes the consultants' efforts to fully understand the existing uses of the site. It attempts to provide answers to the following questions:

- Who visits and uses the project area?
- How do they arrive?
- What do they do there?
- Why do they come?
- What do they like most and least about the area?
- What would they want to change or maintain?

Several tools were used to understand the uses of Baxter Boulevard as a means of quantifying and qualifying the information relevant to any improvements to the area. These included field counts and inventories of numbers of users and types of usage. They also included tools for soliciting input as offered directly by individuals who use the Boulevard. The user survey comprised the heart of this input, grounding the study directly in the words of the people who actually use the Boulevard.

The variety of tools engaged in the use analysis served not only to reach a greater number of people, but also to lend credence to their results, in that they indicated much the same information about the primary concerns and issues about the Boulevard's capacity and use.

#### A. Non-Motorized Usage of Baxter Boulevard

The use of Baxter Boulevard by non-motorized modes of travel was counted on Wednesday, August 28, 1996 and on Friday, August 30, 1996 by T.Y. Lin International. The weather on both days was clear and the temperature moderate. The counts were taken along Baxter Boulevard, immediately north of the Dartmouth Street intersection.

#### WALKING/JOGGING

The number of walkers/joggers along Baxter Boulevard by time period are as follows:

- 195 during the weekday morning peak hour (7:30 - 8:30 AM)
- 124 during the weekday midday peak hour (12 noon - 1 PM)
- 206 during the weekday evening peak hour (4:15 - 5:15 PM)

Observations: Morning and evening uses were higher, probably associated with exercise before and after work.

## BICYCLING

The number of bicyclists along Baxter Boulevard by time period are as follows:

- 16 during the weekday morning peak hour (7:30 - 8:30 AM)
- 23 during the weekday midday peak hour (12 noon - 1 PM)
- 26 during the weekday evening peak hour (4:15 - 5:15 PM)

Observations: It can probably be deduced that people ride bicycles throughout the day at/along Baxter Boulevard. The amount of use during the middle of the day reflects that it is not necessarily commuter bicyclists who are using Baxter Boulevard.

## IN-LINE SKATING

The number of in-line skaters observed along Baxter Boulevard by time period are as follows:

- 0 during the weekday morning peak hour (7:30 - 8:30 AM)
- 0 during the weekday midday peak hour (12 noon - 1 PM)
- 5 during the weekday evening peak hour (4:15 - 5:15 PM)

Observations: In-line skating use along the Boulevard is low.

## B. Parking: Preble Street Lot

Many of the above users of Baxter Boulevard arrive by car and park at the parking lot on Preble Street Extension across from Shop 'n Save. On the same days as the person-counts were conducted, the number of parked cars at the Preble Street lot were counted before and after the morning, midday, and evening peak periods.

- 35 vehicles parked both before and after the weekday morning peak period
- 45 vehicles parked both before and after the weekday midday peak period
- 70 vehicles parked before and 170 parked after the weekday evening peak period

Observations: The higher parking lot use during the evening peak hour is likely associated with people driving to Baxter Boulevard to exercise after work.

## C. Motorized Usage of Baxter Boulevard

The use of Baxter Boulevard by motorized modes of travel was counted between Wednesday, August 21, 1996 and Sunday, August 25, 1996 by T.Y. Lin International. The traffic counts

were taken between Dartmouth Street and Vannah Avenue. Peak volumes of two-way vehicular traffic during summer are as follows:

#### *Weekday Traffic Volumes*

- 900 during the weekday morning peak hour (7:30 - 8:30 AM)
- 900 during the weekday midday peak hour (12 noon - 1 PM)
- 1,400 during the weekday evening peak hour (4 - 6 PM)

#### *Weekend Traffic Volumes*

- 1,100 during Saturday peak hour (3:00 - 4:00 PM)
- 700 during Sunday peak hour (5:00 - 6:00 PM)

#### *Weekday Traffic Flow during Peak Hour*

- Outbound traffic on Baxter Boulevard from Preble Street Extension intersection:
  - 100 turn on to Dartmouth Street
  - 640 turn on to Vannah Avenue
  - 180 turn at Payson Park
  - 120 continue on Boulevard toward Bates Street, Washington Street, I-295
  - 1,040 Total

### ROADWAY FUNCTION

Baxter Boulevard is a road through a park. It also functions as a minor arterial which allows some traffic to bypass traffic congestion along Forest Avenue and Washington Avenue. There is a significant volume of traffic using Baxter Boulevard and its connecting roadways (primarily Vannah Avenue and Dartmouth Street) to reach the arterial street system .

Baxter Boulevard funnels traffic from a large residential area. Although most traffic on Baxter Boulevard passes through the adjacent neighborhoods, some of the traffic begins or ends in the adjacent neighborhoods. Thus, access and egress needs of the neighborhood residents and businesses need to be addressed as well as through-traffic needs.

### MOTORIST SAFETY AND TRAFFIC CONGESTION

Traffic congestion and hazards are of most concern to motorists at the intersections with Vannah Avenue, with Dartmouth Street and at Payson Park. These areas of concern are affected not only

by Boulevard traffic but also by travel patterns on the local streets that feed and are fed by Woodford's Corner and by Ocean Avenue.

#### FOCUS AREA OF CONCERN: VANNAH AVENUE INTERSECTION

The highest volume of traffic through the Vannah Avenue intersection during the evening peak period is traveling northbound on Baxter Boulevard and turning left onto Vannah Avenue. The volume of left-turns is so great it creates a back-up of traffic from the Vannah Avenue/Clifton Street intersection stop sign. When the queue reaches Baxter Boulevard (a frequent occurrence during the evening rush hour), Baxter Boulevard left-turning vehicles are often unsafely stranded mid-intersection.

Complicating traffic conditions at the Vannah Avenue intersection with Baxter Boulevard is a significant volume of traffic attempting to turn left onto Baxter Boulevard from Vannah Avenue. These motorists are frustrated while waiting for a gap in traffic and are shown in accident statistics to be making frequent unsafe maneuvers.

#### D. Group/Event Uses of Baxter Boulevard Area, 1995 and 1996

In addition to regular use by individuals and small groups, Baxter Boulevard is also used for larger, organized activities, including annual and one-time occurrences. The recommendations therefore need to respond to the needs of large group activities and events as well as informal, individual use. The following list includes events and activities which took place in 1995 and 1996 in the Back Cove Area. Sponsorship of the events included a diversity of public, private, and non-profit organizations and businesses of different sizes and types, both regional and city-wide. Sizes of the events ranged from 15 to 5,000 participants.

Please note:

- This list includes only those events registered through the Portland Parks & Recreation Department.
- The total number of participants indicates each group's projected attendance.
- This list does not include organized sports events which may have occurred during this period.

## 1996 EVENTS AT BACK COVE

Event or Activity	Total Number of Participants
Back Cove Family Day	5,000
Walk-a-thons	2,227
Races	3,150
Other Events near Soccer Field	300
Other Events at Payson Park	900

Baxter Boulevard was closed to vehicular traffic for 3 Sundays in the fall by Parks and Recreation.

### Observations

- Most events and activities occurred during the spring and early summer months and September and October.
- Few events occurred during the summer months of July and August in 1996.
- Most events and activities involved walking or running on or around Baxter Boulevard or Payson Park.

## 1995 EVENTS AT BACK COVE

Event or Activity	Total Number of Participants
Walk-a-thons	4,215
Races	2,860
Back Cove Family Day	5,000
Other Events near Soccer Field	275
Other Events at Payson Park	390

Baxter Boulevard was closed to vehicular traffic for 3 Sundays in the fall by Parks and Recreation.

### Observations

- Most events and activities occurred during the spring and early summer months and September and October in 1996.

Source: Parks and Recreation Department, November 20, 1996  
Observations made by Richardson & Associates

## E. Summary of User Survey Findings

What follows are summary excerpts from the survey data analysis and observations. A copy of the survey, and documentation of the responses and the analysis of data gathered from the surveys is included in the Appendix to this report, which is a separate document available to the public at City Hall.

The user survey consisted of questions pertaining to individual patterns of use of the Back Cove/Boulevard area as well as specific interests or concerns. The survey was developed with the guidance and review of Associate Professor Mary Ann Corsello, of the University of New England. Ms. Corsello is a social scientist recognized for her knowledge and experience in the development and analysis of similar data-gathering surveys.

The aim of this survey was to gather information and opinion in the most objective manner possible. It is, however, an impossibility to completely eliminate all of the factors that might bias the results of a survey in one way or another. It should be noted that factors such as the number of surveys distributed, the days and the times of day at which they were distributed, as well as the location from which the surveys were administered, will inherently influenced the outcome of the results. Despite this effect, the survey results are very informative for the purpose of this study and have been considered important quantitative and qualitative input into the planning and design process.

It should also be noted that the data presented within this document is based directly upon the number of responses and the actual manner in which they were provided for each individual question. As a result, there will be instances where the total number of responses for a particular question will be less or more than the total number of respondents to the survey.

- |                               |     |
|-------------------------------|-----|
| 1. OVERALL SURVEY RETURN RATE | 59% |
| 2. GENDER OF RESPONDENTS      |     |
| Male                          | 63% |
| Female                        | 37% |

#### Observations

- The extremely high return rates for the survey indicate the importance of this place to the people by whom it is used.
- Respondents are mostly male

- |                |    |
|----------------|----|
| 3. AVERAGE AGE | 45 |
|----------------|----|

#### Observations

- 58% of users are adults between 35 and 65 years old
- 12% of users are elderly adults (over 65)
- Very few users are under 25 years old

#### 4. USER RESIDENCE LOCATION

Portland	156
Out-of-Town	67

#### Observations

- Baxter Boulevard is a place used by people throughout the City of Portland as well as many people from outside of the City
- The opportunities offered at this park are of high value or are unique enough to "draw" visitors from out of town
- Respondents travel to use the Boulevard from a wide range of streets and neighborhoods throughout Portland

#### 5. MODE OF ARRIVAL

Car	78%
Foot	20%
Bicycle	2%

#### Observations

- The greatest number of people come by car to use Baxter Boulevard.

#### 6. PARKING LOCATION

Preble Street lot	78%
Payson Park	15%
Shop n' Save	7%

#### Observations

- The Preble Street lot is the most heavily used.
- Respondents identified only 3 parking locations for use of the Boulevard, one of which is privately owned.

#### 7. ARRIVING AT BOULEVARD FROM:

Home	147
School	3
Work	23

#### Observations

- Since so many people exercise at Baxter Boulevard, many may go home after to work to

- change into fitness clothing or pick up their dog before driving or walking to the Boulevard.
- People coming from home, indicated above, are likely to be arriving by car.

#### 8. ACCESS TO BOULEVARD

##### Observations

- Although there are a number of physical access point distributed around the Boulevard, the majority of people access the park at Preble Street Extension. This is probably because so many people come by car and park at the Preble Street lot.
- The most used access points to Baxter Boulevard for pedestrians are at Preble Street Extension and Payson Park.

#### 9. AMOUNT OF USE DURING VARIOUS SEASONS

##### Observations

- People use Baxter Boulevard regularly the spring, summer, and fall seasons.
- Over 50% of the respondents use the Boulevard a minimum of once a week during spring, summer, and fall.
- 22% of the respondents use the Boulevard 5-7 times a week during spring, summer, and fall.
- Winter use drops off significantly, perhaps, due to poor path conditions and cold weather.

#### 10. ACTIVITIES AT BOULEVARD (survey data also includes specific frequency of each activity)

Walking	Getting Fresh Air/Nature
People-Watching	Running
Socializing	Bird watching
Eating Lunch	Walking the Dog
Bicycling Along Roadway	Bicycling Along Walkway
Using Exercise Stations	Pushing a Baby Stroller
In-Line Skating on Roadway	Windsurfing

##### Observations

- Walking, getting fresh air/nature, people watching, running, and socializing stand out as the most popular cluster of activities among Baxter Boulevard users.
- If bicycling along the *roadway* were combined with bicycling along the *walkway*, bicycling would have been reflected as a much more popular activity.
- People who walk their dogs at Baxter Boulevard also visit the Boulevard without their dogs.

### 11. USING BOULEVARD ALONE/WITH OTHERS

#### Observations

- The majority of respondents use the Boulevard alone or with friends.
- Relatively few respondents use the Boulevard with people from work.
- The fact that few of the respondents use the Boulevard with people from work correlates with the data showing that 85% of all respondents arrive at the Boulevard from home.

### 12. TIME OF DAY FOR USE

#### Observations

- People visit the Baxter Boulevard at a wide variety of hours, with the greatest use during the late afternoon.
- Some users are very regular in their schedule (checking only one time of day), while others indicated visiting the Boulevard 2-4 different times of day during a week.

### 13. OPINION AND ATTITUDE ABOUT THE BOULEVARD

Level of Importance	Not at All	Somewhat	Important	Very Important	No Response	Total Value
Opportunity for Exercise	11	17	24	133	34	464
Path Surface	6	11	71	94	37	435
Views	3	17	82	80	37	421
Wildlife	7	23	69	85	35	416
Path Width	8	22	77	75	37	401
Landscaping	12	35	82	56	35	367
Walkway Part of a Loop	17	45	48	71	38	354
Close to my Home	53	34	48	44	40	262
Links to Other	47	59	43	34	37	247
Historical Significance	45	79	34	23	38	216
Get One Place to Another	80	47	39	18	37	179
Close to my Work	92	36	33	18	40	156
Close to Shopping	127	35	14	6	38	81
Close to School	152	16	8	5	40	47

#### Observations

- The majority of respondents go to Baxter Boulevard to exercise on the pathway.
- As may have been expected from this "majority", the width and surface conditions are very important to the respondents.

- Views, wildlife, and landscaping appear to be a naturally related cluster of important factors as does links to other walks/parks, getting from one place to another, and the fact that the walkway is part of a loop.
- These responses support the understanding that Baxter Boulevard is both a destination and a place to travel through.
- It seems less important that Baxter Boulevard is close to one's work, shopping or school.

14. IN FAVOR OF A SEPARATE BIKE LANE ASSOCIATED WITH THE BOULEVARD

Yes	159
No	11
No Opinion	18
No Response	33

Observations

- The majority of respondents favor a bike lane separate from the pathway. This is also supported by the responses to Question 6 of Opinion and Attitude section of the survey.
- While some people favor more places to sit, many people had no opinion or did not respond to this question.
- Although many people favored closing the Boulevard on occasion, there were a number of people that had no opinion or did not respond to this question.

15. HAVE YOU VISITED BAXTER BOULEVARD WHEN IT HAS BEEN CLOSED TO AUTOMOBILES?

Yes	110
No	75
No Response	33

Observations

- The number of "No Responses" is high for a yes or no question.
- Since many people visit Baxter Boulevard at least once a day, it would be likely that they would have visited Baxter Boulevard when it was closed.

16. ISSUES OF CONCERN

Observations

- The combination of responses to this and the two following questions imply that conflicts between the following types of users are an issue of significant concern.

1. Walkers/Runners - Cars

## 17. PREFERRED FOCUS OF ROADWAY IMPROVEMENTS

### Top 5 Most Common Responses:

1. Road Conditions/Paving
2. Crossing Safety for Pedestrians
3. Traffic and Traffic Speed
4. Need for Separate Bike Lane
5. Landscaping

## 18. PREFERRED FOCUS OF PATHWAY IMPROVEMENTS

### Top 5 Most Common Responses:

1. Path Conditions
2. Bike/Pedestrian Conflict
3. Landscaping
4. Lighting
5. Dog Issues

## OVERALL SUMMARY OF USER SURVEY RESULTS

### Top Issues of Concern

1. Safety Along Walkway
2. Dog Waste
3. Walkway Lighting
4. Maintenance of Walkway
5. Aggressive Dogs
6. Safety Along Roadway
7. Roadway Traffic
8. Automobile/Pedestrian Conflicts at Street Crossings
9. Lack of Connections to other Parks and Trails
10. Overcrowding of Walkway

### Top Improvements desired for the Baxter Boulevard ROADWAY

1. Road Conditions/Paving
2. Crossing Safety for Pedestrians
3. Traffic and Traffic Speed
4. Need for Separate Bike Lane
5. Landscaping

### Top Improvements desired for the PATHWAY along Baxter Boulevard

1. Path Conditions
2. Bike/Pedestrian Conflict
3. Landscaping
4. Lighting
5. Dog Issues

### F. Summary of Public Meeting Input

A public meeting was held on March 18, 1997. Over 100 Portland Residents attended and met in small groups to discuss Baxter Boulevard. Participants were asked to make a list of their top issues and concerns regarding Baxter Boulevard.

#### Top Issues of Concern:

1. Traffic
  - High volumes of traffic
  - Boulevard used as a cut-through
  - Noise
  - Speed of traffic
  - Pollution
2. Pedestrian Safety
  - Crossing at Intersections
  - More Crosswalks
  - Increase lighting
3. Road Conditions
  - Excessive Crown
4. Need for a Separate Bike Lane
5. Condition of the Existing Roadway Infrastructure of Baxter Boulevard
6. Condition of Trees

7. Wildlife Preservation and Environmental Protection

8. Condition and Lack of Pedestrian Amenities

- Benches
- Water Fountain(s)
- Trash Cans
- Toilet
- Lighting

9. Condition and Maintenance of Pathway

- In Winter
- After Storms

10. Condition of Preble Street Parking Lot and Fields

- Poor Environment
- Walkway along Water

11. Presence of Dog Waste



## IV. Considering the Separation of Uses within the Existing Right-of-Way

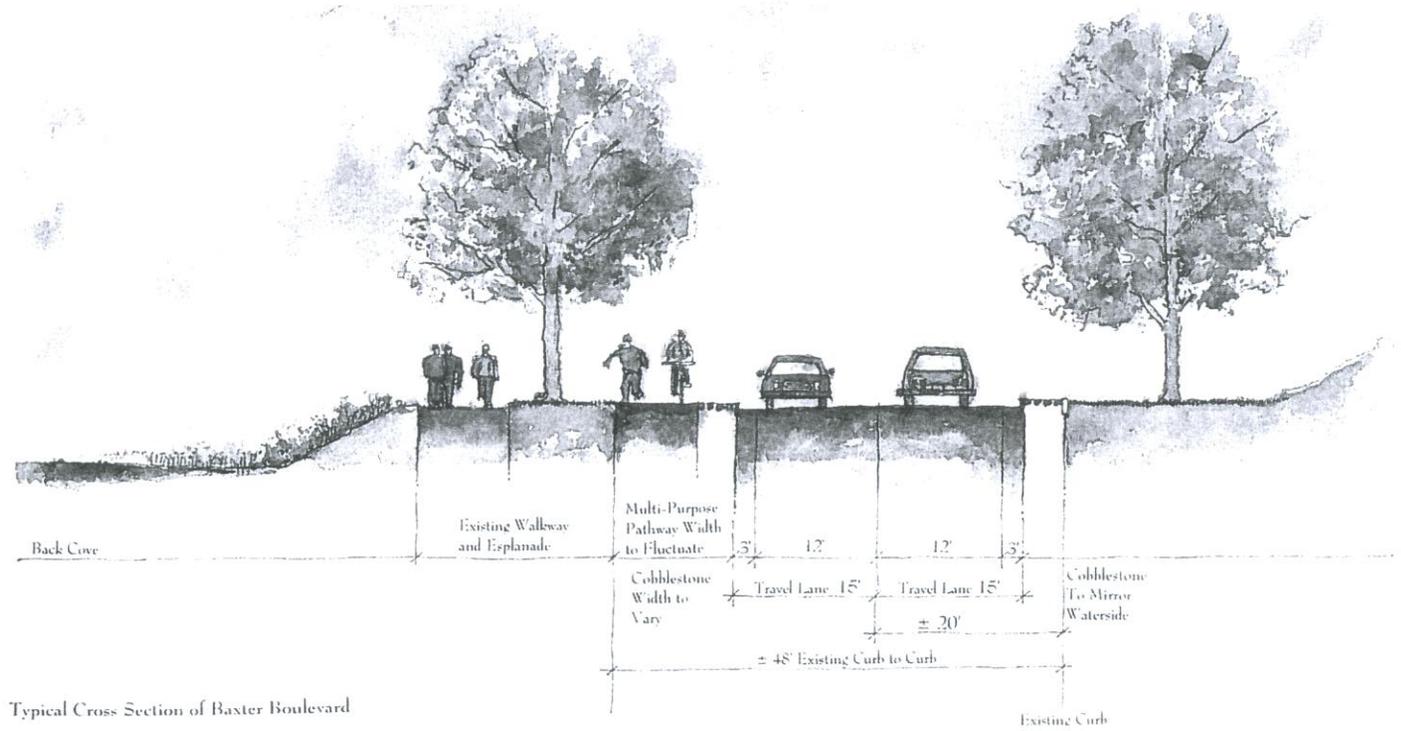
### A. The Process

The concern about conflicts between pedestrians and bicyclists on the walkway was expressed repeatedly by the majority of respondents to the survey and informal interviews, by many at the public meetings as well as by the Advisory Committee.

The consulting team presented several alternatives to the Advisory Committee as strategies to address this outstanding concern. Two alternatives were determined by the committee to be most worthy of further exploration and were presented at the second public meeting. Following this meeting, the Advisory Committee determined by a vote that a separate multi-use path was the best manner in which to address the concern over conflicts between users.

### B. Advantages to Introducing a Separate Multi-Use Path along Baxter Boulevard

- Provides a designated area for recreational bike riding and in-line skating away from both the road and the walkway
- Eliminates existing conflicts on the walkway between pedestrians and recreational bicyclists
- Eliminates existing conflicts on the roadway between bicyclists and motorists
- Allows connections to the bike and walking paths on the Eastern Promenade, which would provide extensive facilities for off-road bicycling and in-line skating
- Allows adults and children to bike and in-line skate safely together
- Allows bikers to travel exclusively on the water side ,where there are the most favorable views



Typical Cross Section of Baxter Boulevard

### C. Description of the Proposed Separate Multi-Use Path

The center line of the Boulevard shall be located 20 feet  $\pm$  from the existing landward curb. The vehicular travelway shall be 15 feet in width on each side of the center line of which 12 feet shall be a travel lane with a 3 foot shoulder. The width of the paved multi-use path (10 feet where feasible) and separator shall fluctuate in width depending upon space available. The separator between the multi-use path and roadway to be the granite curb/cobblestone treatment mirrored on both sides of the roadway.

Warning signs should be placed along the separate multi-use path at all intersections where the multi-use path crosses pedestrian walkways or crosswalks.

Warning and directional signs should be placed at the two termini or turn-around areas of the separate multi-use path.

Warning signs should be placed along the separate multi-use path at all intersections where the multi-use path crosses pedestrian walkways or crosswalks.

Warning and directional signs should be placed at the two termini or turn-around areas of the separate multi-use path.

Note: The consulting team did not support this typical cross section of Baxter Boulevard.



## V. Recommended Improvements - Overall Boulevard

The recommendations within this report are divided into two types:

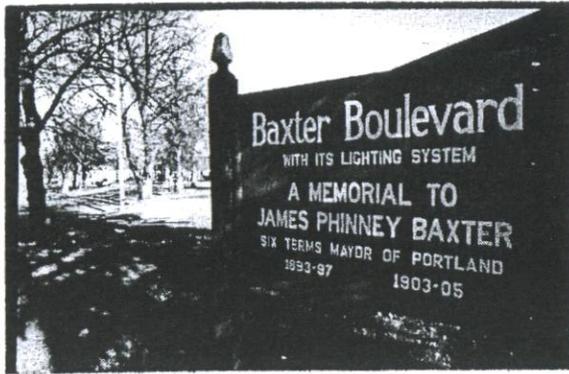
1. Those pertaining to the overall Boulevard
2. Those pertaining to a specific place or area within the Boulevard

The recommendations in this chapter of the report address the overall boulevard. The numerous recommendations are organized by topics which were generated from the findings of the analysis and user survey. For each topic there is a series of recommendations. Each recommendation is presented in summary form. Most recommendations are further supported by additional, specific information on file with the Portland City Planning Staff.

The following goals have been developed for the improvement recommendations:

1. All improvement recommendations should be supported by one or more of the proposed project goals stated previously.
2. All improvement recommendations should strive to balance historic integrity, design excellence, technical concerns as well as cost and maintenance considerations.
3. All improvement recommendations should be consistent with those goals and objectives stated in other relevant City documents, reports and ordinances.

Not all of the recommendations presented by the consulting team are included within this report. Only those which the consulting team and/or the advisory committee have determined as having a high or medium priority are listed.



## A. Recommendations Associated with the Identity of Baxter Boulevard and Its Context

### CURRENT CONDITIONS

Although Baxter Boulevard and the Back Cove area of Portland have many character-defining attributes, its edges are ill-defined and therefore the identity of the park and roadway are compromised. Although many pedestrian connections exist between Back Cove, Baxter Boulevard and the surroundings, they should be improved to reinforce the original intent of connecting the Boulevard to its surroundings, both for visitors to Back Cove and through-travelers.

### RECOMMENDATIONS

#### 1. Develop Well Defined Entrances to Baxter Boulevard - Roadway, Walkway, and Bicycle Related

Establish recognizable edges to the Boulevard by creating a hierarchy of entrances to provide identity

##### *Primary Entrances:*

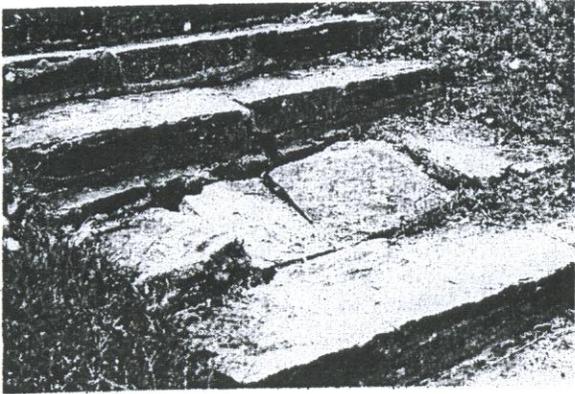
- Baxter/Forest Avenue
- Baxter/Tukey's Bridge Area
- Baxter/295 Underpass
- Baxter/Preble Street from North

##### *Secondary Entrances:*

- Baxter/Vannah Avenue
- Baxter/Dartmouth Street
- Bates Street
- Payson Park

Define entrances by using a number of interrelated elements to create gateways, such as:

- Structures (historically related)
- Signs
- Plantings
- Lighting



Indicate transitions by marking pavement and including signs  
Vary treatment of entrances according to established hierarchy

## **2. Improve Neighborhood Entrances to Baxter Boulevard**

Repair, replace (if necessary) and improve stairs and access points and leading to/from neighborhoods

Improve entrances with attention to safety (railings, consistent riser to tread relationships, landings etc.)

Make improvements respectful of the materials and dimensions originally intended for these structures

Encourage interested neighborhood groups to plant and maintain the areas adjacent to the stairs at neighborhood entrances, as they were historically intended.

## **3. Develop Stronger, Better Defined Connections to and from Baxter Boulevard for Pedestrians and Bicyclists**

Make the city more accessible in ways other than by automobile

Improve links to other areas within the City as originally intended in the plan for the Portland park system. Suggested links to be strengthened:

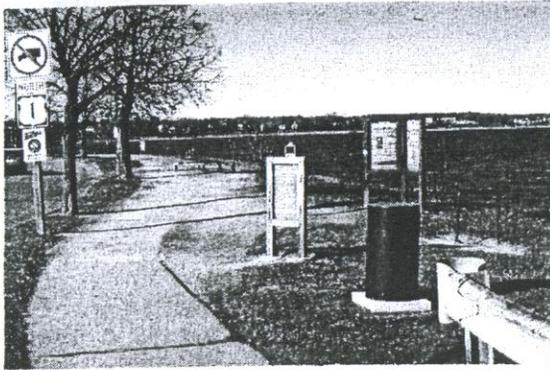
- Downtown Portland Under 295 via Preble Street Extension
- Deering Oaks Park (Bedford Street to Brighton Avenue and/or Preble Street Extension to Park Street)
- Fall Brook to North Deering Area
- Eastern Promenade Trail via Tukey's Bridge
- To and Through Payson Park

## **4. Develop Water-Side Portion of Preble Street Parking Lot and Adjacent Open Spaces into an Integrated Component of Baxter Boulevard and Back Cove**

- See Section VI.A. Recommendations for Preble Street Extension Area

5. Develop A New Trail Segment Along the Water's Edge of Back Cove from the I-295 Franklin Arterial Off-Ramp to the Existing Cove-Side Trail at the Intersection of Baxter Boulevard and Preble Street Extension

- This new trail segment will allow the walkway to be continuously adjacent to Back Cove around its entire perimeter.



## B. Recommendations for Amenities for Pedestrians and Bicyclists

### CURRENT CONDITIONS

Generally speaking there are limited number of pedestrian amenities such as trash receptacles, seating, bike racks, water fountains, call boxes, signs and walkway lighting on Baxter Boulevard. The location and number of those existing amenities are the result of independent, incremental introductions and not an overall intended plan.

### RECOMMENDATIONS

**1. Introduce and Coordinate Pedestrian Amenities which are Historically Respectful. Show Restraint in the Number of Items so as not to Clutter the Boulevard with an Excessive Number of Accessories.**

The following benefits will be achieved:

- Visual Simplification and Unity
- Improved Function
- Safety
- Strengthened Identity

#### a. Benches

Existing Condition:

Six Simple Wooden Benches with Concrete Ends

Recommendation:

Place Benches in Two General Locations:

- i. Along the Walkway (resting, socializing, viewing and waiting)
- ii. Nearer to the Edge of Back Cove (resting, viewing, lunching, solace, wildlife, birding)

#### b. Lighting

Existing Condition:

High Pressure Sodium - Yellowish Color

Spacing: 200 feet apart

Staggered on opposite sides of Boulevard

Recommendation:

Modify the Existing Lighting System to Include Heads Directing Light onto the Walkway

Add Additional Pedestrian Lights for Walkway and at Crossing Points (both sides of Blvd) where Illumination from above is Inadequate

*Important considerations relating to safety and visual impact:*

- Height and placement
- Style (historically respectful)
- Aesthetics (both day and night)
- Quality of fixture (durability and maintenance)
- Quality of light (consider alternatives to high pressure sodium lamps for better color rendition)
- Directed or diffused light (cut-off lenses)
- Keep it simple!

c. Bike Racks

Existing Condition:

None

Recommendation:

Provide Bike Racks along Baxter Boulevard at Access Points and Destination Places

Allow for and Encourage People to Arrive by Bike and to Walk

d. Trash Receptacles

Existing Condition:

Blue Metal Cylinder with Cap

Recommendation:

Provide Limited Number of Trash Receptacles Along Pedestrian Pathway and at Crossing Points

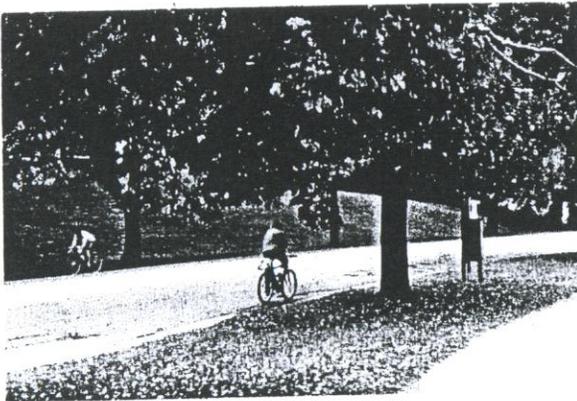
e. Signs

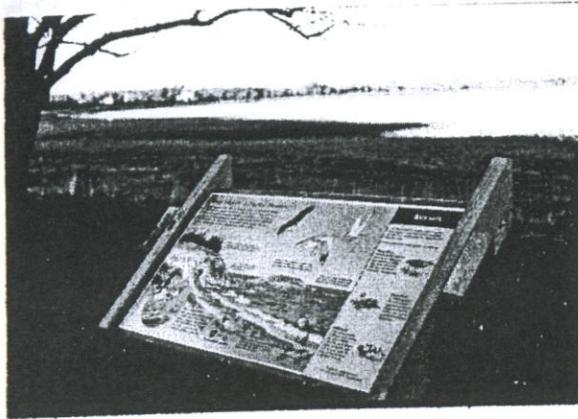
Existing Condition:

Very Diverse Signs Poorly Placed

Recommendation:

Develop a Comprehensive Sign System for Baxter Boulevard that is Consistent with City-Wide Park System Signs, both Existing and Future, which Limits the Overall Number of Signs on the Boulevard





Sign types to include:

- Identification Signs
- Directional Signs
- Regulatory Signs
- Interpretive and Educational Signs - Natural, Historic and Cultural

f. Water Fountains

Existing Condition:

Three Locations

Recommendation:

Place No Additional Fountains, but Consider Fountains with Provisions for Dogs

g. Information Kiosk

Existing Condition:

None

Recommendation:

Build Permanent Kiosk Structure at Preble Street Parking Lot Area with Maps and Information

No Paper Hand-outs

Kiosk Covered and Contents Protected from Vandalism and Weather

h. Call Boxes

Existing Condition:

One at Entrance Point to Tukey's Bridge

Recommendation:

Provide Emergency Call Boxes at Uniform Intervals along the Walkway

i. Non-Motorized Water Craft

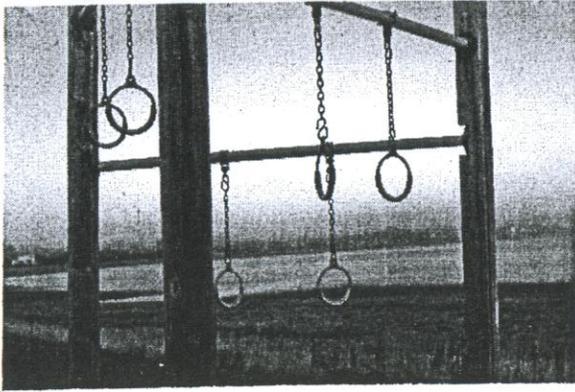
Existing Condition:

None Promoted

Recommendation:

Encourage Windsurfing, Canoeing, Sea Kayaking in Back Cove

- Increases recreational opportunities in Portland
- Unique opportunity in an urban setting



**2. Remove Existing Exercise Equipment and Develop a New Area for Runners to Prepare for Exercising**

- Minimizes visual impact and safety liability of equipment
- Concentrated area would be easier to maintain
- New equipment would better meet the needs of runners

**3. Select and Develop all Amenities to be Universally Accessible and Barrier Free**

- Adheres to one of the overall project goals for a barrier free , handicapped accessible Boulevard
- Universal amenities include all those listed in Items 1a. - 1i. above

**4. Develop Boat Access for Sailboarders, Kayakers, and Canoeists at the Sandy Beach near Payson Park**

- An established access area will limit erosion of shoreline

**5. Designate Areas for Push Cart Food Vendors at Preble Street Parking Lot and Payson Park.**

- Prohibit vendors from other locations except with permission during special events



## C. Recommendations for Linden Trees Lining Baxter Boulevard

### CURRENT CONDITIONS

In determining why the lindens along the Baxter Boulevard are in decline, we observed that the trees along the Back Cove side of Baxter Boulevard are in noticeably greater decline compared to those on the opposite side of the Boulevard.

A number of interrelated factors collectively contribute to their decline. Trees that are under stress are predisposed to premature decline and will inevitably die sooner. Cumulative, stressful conditions hasten this declining process.

The Boulevard was divided into four sections to make it easier to compare sides and sections with one another. As a result this created eight test sites. The following factors contribute to the decline of the linden trees along Baxter Boulevard as observed over eight test sites along the Boulevard. These existing conditions have been categorized, and their influences on decline are described below:

#### 1. Cultural Impacts

##### a. Salt

The sodium levels were very high on *both* sides of the boulevard due to the elevation of the land being only 3'-4' above sea level, along with the contribution of salt used by the city during the winter months. Test sites along the Back Cove side of the Boulevard showed a six percent higher sodium content.

##### b. Bulk Density

A bulk density of 1.5 is a clear indication of soil compaction. The *average* soil bulk density findings taken near the base of the linden trees (within the test locations) was 1.04 which indicated a moderate level of compaction. Some sites were found to have slightly more or less compaction than others.

##### c. Relative Density

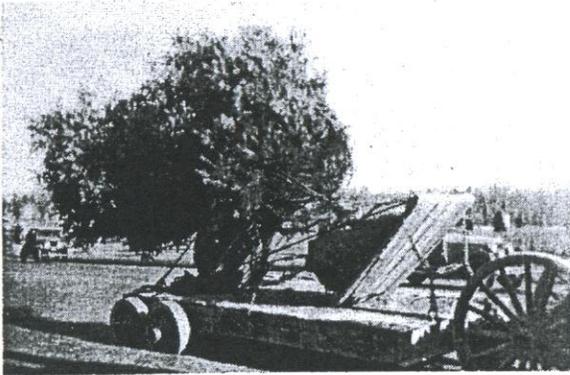
Fifty two 52 sites were tested to determine the relative density of the soil. The area along the exercise trail is fifteen 15 percent more compact. The areas closer to the trees were slightly more compacted. This is not a significant increase in soil compaction; however it does appear to be a contributing factor to decline.

## 2. Root Collar Disorders

Many tree and shrub problems are the result of damage to the root collar, which is the lowest few inches of the trunk just at its juncture with the roots. In most trees the root collar is typified by a flaring out of the trunk just above the ground. The constant presence of moisture on the trunk tissue inhibits the movement of oxygen and carbon dioxide in or out of the phloem. Over extended periods of time, this lack of gas exchange kills phloem cells, resulting in restriction of the downward movement of plant food to the roots. The weakness of the roots reduces the availability of water and nutrients for uptake, effecting the entire plant system.

### a. Settling Trees

Along Baxter Boulevard there are a number of the newly planted trees (particularly along the water side) that have settled in their planting holes, causing the mulch and soil to cover the root collars. There are also many mature trees that do not exhibit a root collar at all.



### b. Girdling Roots

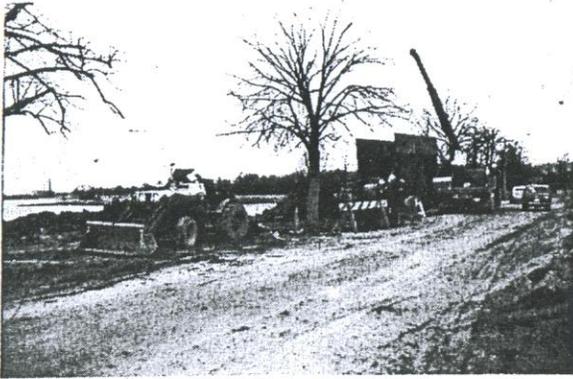
Girdling roots are a problem for the lindens along Baxter Boulevard. This condition of having the roots growing around the base of the tree and/or cross over other existing roots cuts off the movement of plant food to the major roots. This weakens the effected roots and reduces the availability of watered nutrients for uptake, effecting the entire plant.

### c. Insufficient Mulch

The majority of the trees along Baxter Boulevard are not mulched properly, causing additional stress on the linden trees. Grasses growing near the base of the trees create an effect called allelopathy, by producing chemicals that inhibit the growth of absorption roots. By removing sod from the root zone area of a tree and mulching properly, an increase in the density of the absorption roots occurs. The increased uptake of moisture and nutrients results in a much healthier tree. Mulching will also eliminate the need for mowing and weed whacking the root zone of the trees, greatly reducing soil compaction and damage to the tree trunks. In addition, mulching retains moisture for uptake by the tree.

### d. Injury

A number of trees on the Boulevard show signs of past injuries perhaps caused by mowers, vehicles or vandals.



### 3. Environmental Impacts

#### a. Salt

When the trail freezes over during the winter months, salt used to melt ice adds to the stress problems of the trees. This problem is further compounded by the proximity of the roots to the high tide levels of Back Cove.

#### b. Foot Traffic/Compaction

Foot and equipment traffic near the base of the lindens contributes to soil compaction over the root zone causing problems to the tree roots.

#### c. Insects

There is evidence of past aphid problems. Portions of some trees are blackened to sooty mold, a fungus that thrives on the excrement of aphids. An aphid population weakens a tree by depleting the fluids from the trees' foliage.

#### d. Construction Damage

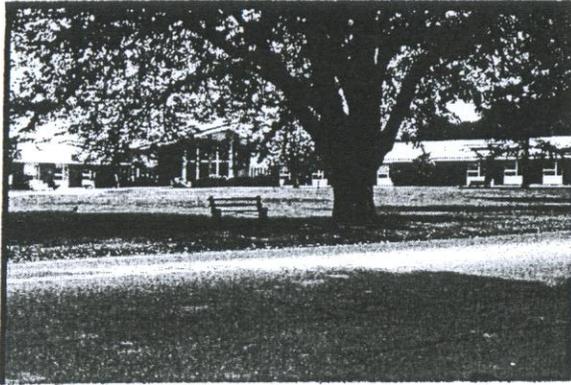
The single most contributing factor to the decline of the lindens along the Back Cove Side of Baxter Boulevard occurred during the mid 1970's, when the City of Portland installed an interceptor storm drain system around the perimeter of Back Cove. The construction excavation severely damaged the root systems of many lindens along this side of Baxter Boulevard. The ends of the damaged roots deteriorated back towards the tree causing a slow decline. Many of the trees have since been replaced. It is also probable that the soil around the trees became compacted during the construction, further complicating the situation.

### RECOMMENDATIONS

#### 1. Develop a Prioritized, Short and Long-Term Comprehensive Plan for the Care of the Existing Lindens

Care and improvement of the allee of trees is considered to be of great urgency in the implementation of this plan. Many measures should be taken to improve both the condition in which the trees are growing as well as the condition of the trees themselves. They are as follows:

- Correct Soil Density
- Fertilize Linden Trees
- Mycorrhizae Inoculation
- Reduce Salt Levels
- Root Collar Excavations
- Crown Thinning of Linden Trees
- Mulch Rings for Lindens
- Nematode Treatment
- Remove Girdling Roots



## 2. Develop a Long Term Strategy for the Replacement and Infill of the Existing Lindens

The linden allee was identified as one of the most important character-defining aspects of Baxter Boulevard. Specifically the canopy form, and spacing of the trees as they contribute to the Boulevard's formality. The strategy developed and described below recommends the following:

- Maintain the existing tree spacing
- Replace declining lindens with lindens in most situations (see below)
- Intersperse plantings of new trees of differing species in limited and select locations north of Fall Brook
- Where replacement planting is needed, replace trees in blocks of three or more wherever possible

The majority of the Boulevard should remain as an allee of linden trees, with the exception of some areas north of Fall Brook (see below). To maintain this goal, it was determined that lindens which *need* replacing due to their condition, or are currently missing, should be replaced with new lindens. This replacement should preferably occur in blocks (3 or more trees) identified by missing, dead, or significantly declining trees to maintain a sense of uniformity. When a block is identified, the replacement spacing should be 50 ft. on center. New tree sizes should be 2 1/2-3" caliper. Where only one or two trees together (not a block) define an area for replacement, these should be replaced by larger (3 1/2" - 4" caliper) new linden trees.

If major modifications to or a rebuilding of Baxter Boulevard occur (in which the impacts of construction necessitate tree replacement) then planting large, new blocks of lindens should be considered.

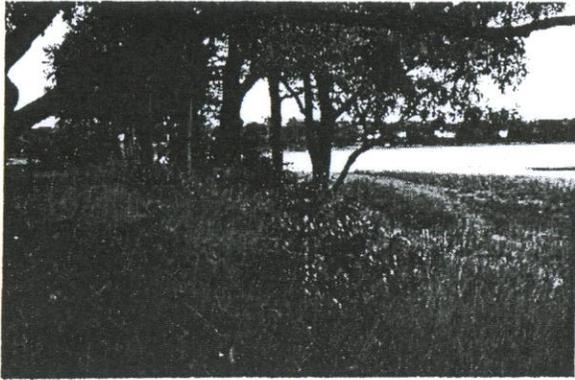
The importance of species diversification is also an important consideration for Baxter Boulevard because of the potential impact disease could have on the single species of linden Trees that line the roadway. An relatively recent example of this is the Dutch Elm disease, which nearly eradicated the Elm which was, like the linden, commonly used as a street tree. Although species diversification was considered, there was consensus that the introduction of new species should be done only if it can be achieved in ways that do not jeopardize the current allee experience of the Boulevard.

New species should be planted on both sides of the street rather than only on one side and they should be planted in "linear blocks" that relate to logical sections of the roadway; for example, along a curve, from one curve to another, or in an identifiable, limited straight section of road. New species should also possess similar growth habits (form, height, canopy) to the existing

lindens to maintain the formality and character of the Boulevard. These species should also be suited to the unique conditions of Baxter Boulevard.

It was determined that the area north of Fall Brook offers the most logical opportunities for the introduction of new species using one of the methods stated. However, since many healthy mature linden trees exist in this location, particularly on the upland side of the Boulevard, new species should be planted *interspersed* with existing trees on a "trial basis" on this side of the Boulevard, with the understanding that the older lindens would eventually be removed resulting in an allee of a single species on both sides of the Boulevard.

If this method is successful as demonstrated by the "trial", other interspersed plantings should be implemented to increase species diversity. If major modifications to or a rebuilding of Baxter Boulevard along the stretch north of Fall Brook necessitates tree replacement, the opportunity to diversify species may be increased.



## D. Recommendations for Groundcovers and Shrubs

### CURRENT CONDITIONS

While the allee of linden trees is one of the most character-defining elements of Baxter Boulevard, these trees are not the only vegetation within this linear park. A closer look reveals a great diversity of plant types. Several species of trees as well as numerous shrubs and ground covers grow along the shores of Back Cove. Very few of the shrubs or groundcovers are introduced plants; native shrubs and groundcovers grow near the water's edge, creating a natural transition to the water. The intertidal zone includes many species of salt water plants. Contributing fresh water bodies also exhibit a diversity of shoreland plants. Together, these plants contribute to the visual character of Baxter Boulevard and provide valuable habitat for wildlife.

### RECOMMENDATIONS

#### 1. Use Additional Ground Covers and Low Shrubs in Select Areas for Aesthetics, Maintenance, Wildlife Habitat Enhancement and Erosion Control Purposes

Use groundcovers and low shrubs as an alternative to a maintenance-intensive lawn

Plant in ways that do not interfere with views or jeopardize safety

Plant native species (lower maintenance, less susceptible to disease and drought damage)

Plant native *Ground Cover* species such as: low bush blueberry, wintergreen, cranberry, bearberry

Plant shrubs in low growing, ground hugging masses

Plant native *Shrubs* such as: select juniper varieties, rhodora, hybrid blueberry, bayberry, native viburnums, winterberry, beach plum, shadblow, sweetfern, etc.

**2. Develop a Long-Term, Comprehensive Plan for the Care of all Vegetation (including Native Vegetation) Associated with the Boulevard**

A plan specifically addressing the differing needs of Baxter Boulevard's plants will ensure that they continue to contribute to the ecology and visual character of Baxter Boulevard.



## E. Recommendations for the Natural Environment

### CURRENT CONDITIONS

Back Cove is a remarkable, semi-enclosed tidal cove that covers approximately 660 acres, with a narrow bottle neck opening to Casco Bay. Together with its contributing fresh and salt water tributaries in, around and adjacent to the Boulevard, this estuarine environment creates a unique ecosystem right in the heart of the City. In fact, this ecosystem has been given an "A" classification by the Maine Department of Inland Fisheries and Wildlife. These natural areas act as filters for water quality, are interesting to look at, contain unique plant life and provide excellent habitat for wildlife, primarily waterfowl.

The natural environment of Baxter Boulevard/Back Cove plays a pivotal role in the identity of this area of Portland. The beauty of this natural environment is accessible to many because of its central location within the city and the fact that it is surrounded by a public park and roadway.

Protecting such valuable resources is not a new phenomenon. From its conception, the inclusion of natural areas was an important consideration in the development of the Portland park system in which parks, open space, recreation areas, and natural features form a connected and interdependent whole, a system of parks linked with an arborway. The following recommendations are aimed at protecting and enhancing these qualities for the future.

### RECOMMENDATIONS

#### 1. Create a Wildlife Management Plan for Back Cove

Sound management that pays attention to environmental and human needs is essential. This includes planning, design, advocacy, stewardship and maintenance of the natural environment.

- Urban Ecology
- Health
- Visual Interest





## **2. Modify and Improve Shore Edge in Select Locations to Benefit Ecology of Back Cove**

The existing embankment to the water's edge is an engineered stone rip-rap slope. This condition is nearly continuous around Back Cove. Although this slope plays an important role in bank stabilization and erosion control, modifications to allow for a more natural environment can be achieved without sacrificing the function of the rip-rap currently.

## **3. Resolve Slope, Rill and Sheet Erosion Problems**

Several locations around Back Cove are eroding and contributing undesirable sediment to Back Cove. Stabilize these areas with native plantings and rip-rap where required.

## **4. Remove Invasive Plants from Marsh Edge and Introduce Native Species**

Phragmites, among other invasive marsh species, has begun to take hold in some areas along the shores of back Cove. This species inhibits growth of native plant species and blocks views of the Cove.

## **5. Naturalize areas of the Back Cove Shore Edge with Lower Growing, Native Shrubs and Trees**

- The function of the riparian zone (the land adjacent to the water's edge) is important to the health of the ecosystem.
- Naturalizing this area will increase habitat for wildlife.
- Naturalizing this area will improve the visual quality of the waters edge.

## **6. Create a Wastewater Watershed Management Plan for Back Cove**

Currently, the combined sewer and storm water system overflows directly into Back Cove during certain storm conditions. A comprehensive strategy is needed to curb or eliminate this polluting condition.

## **7. Maintain or Upgrade Existing Catch Basins**

Some catch basins along Baxter Boulevard drain directly into Back Cove. When sedimentation fills the "sumps" of these catch basins, the siltation from the roadway dumps directly into the Cove. Regular maintenance of the sumps would eliminate this problem. Pollutants from the roadway currently entering the catch basins drain directly into Back Cove. In the future, this can be eliminated by replacing existing catch basins with those specially designed to prevent petroleum-based pollutants from entering the watershed.



## F. Recommendations for the Walkway

### CURRENT CONDITIONS

A simple stone dust path parallels Baxter Boulevard along its Back Cove side. It is very heavily used by walkers, runners and people pushing baby strollers. In general, the condition of the walkway is good, although there are some areas of erosion throughout the walkway that are especially noticeable after heavy rainfall. The walkway within the study area is part of a larger loop walkway that extends completely around Back Cove. Although most of the walkway is handicapped-accessible, many of the access points onto the walkway lack curb cuts and are, therefore, not accessible. Very few of the desired access points to the walkway from adjacent roadways and sidewalks have crosswalks, making it difficult for pedestrians to gain safe, convenient access to the walkway.

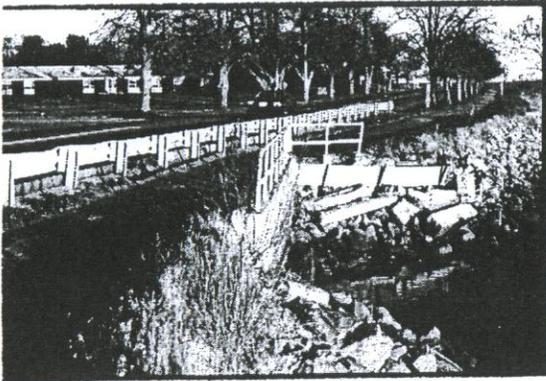
### RECOMMENDATIONS

#### 1. Make All Walkways and Crosswalks Barrier-Free and ADA-Compliant

- Curb Cuts
- Surfaces (warning strips)
- Handrails
- Guardrails
- Materials

#### 2. Provide Crosswalks across Baxter Boulevard at the Following Key Crossing Points:

- |                                   |                                  |
|-----------------------------------|----------------------------------|
| • Shop n' Save Plaza              | • Preble Street (all directions) |
| • Belmeade Street                 | • Dartmouth Street               |
| • Neighborhood Access (2)         | • Vannah Avenue                  |
| • High School/Fall Brook Vicinity | • Payson Park                    |
| • Nursing Home                    | • Bates Street                   |



### 3. Construct Crosswalks using Permanent Paving Materials

- Suggested Materials: Brick and Granite or some other compatible permanent material
- Change in materials, color and texture alerts motorists

### 4. Install Signs at Crosswalks to alert Motorists

### 5. Provide a Permanent Walkway along the Eastern Side of Baxter Boulevard from Forest Avenue to Preble Street Extension

- Suggested Material: Brick

### 6. Limit the Use of Existing Walkway to Walking, Running, and Beginner Bicyclists

### 7. Re-Grade Existing Walkway and the Immediate Vicinity to Improve Drainage

- Crown walkway; drain to catch basins and Cove
- Prevents puddling and icing
- Keeps roadway salt away from base of trees

### 8. Repair Eroded Areas of Walkway and Secure Areas of Potential Erosion

Two sections of the walkway need immediate attention due to erosion:

#### a. In the vicinity of Dartmouth Street

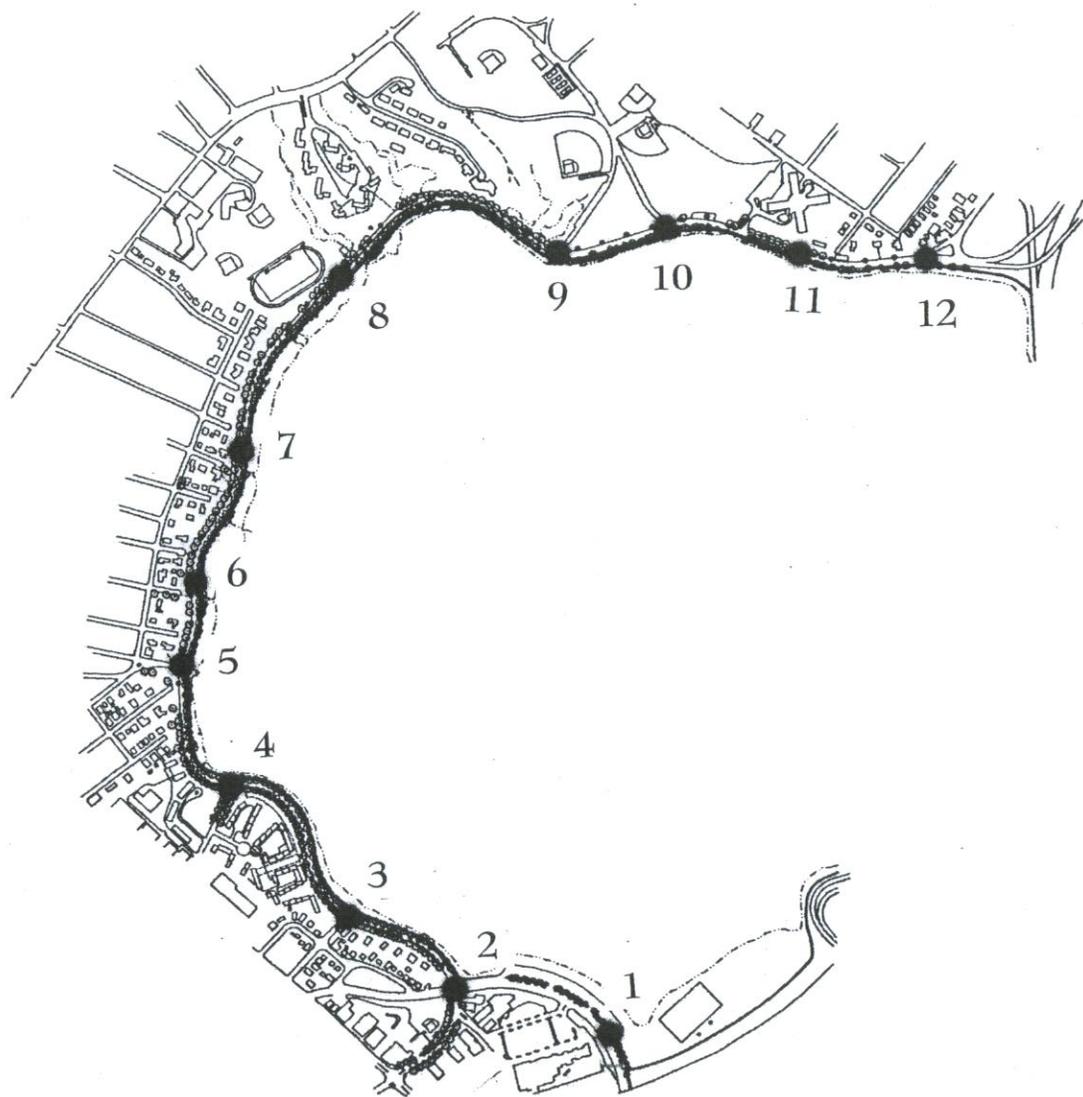
- Water Erosion from Back Cove is beginning to undermine the walkway

#### b. In the vicinity of Seaside Nursing Home

- All of the land mass from the Cove to the walkway is severely eroded. The shore banks adjacent to the walkway have been reinforced by granite blocks.
- Consider bridging the trail rather than filling this eroded area in order to minimize the environmental impact to Back Cove.

### 9. Ensure that Walkway Surface Remains Stone Dust

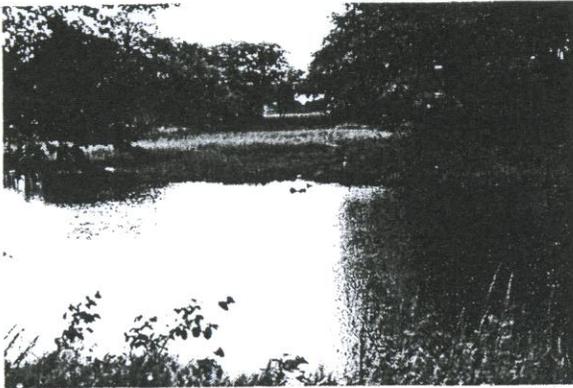
- Preferred by runners



- Reduces speed
- Discourages in-line skaters from using walkway

**10. Increase Funding for Walkway Surface Maintenance**

- Improves the safety and appearance of the walkway
- Increases its use throughout the year



**11. Develop Additional Walking and Running Routes Connected with Payson Park**

- Provides an opportunity for loop trail
- Increases distance of route
- Provides access from Ocean Avenue area and neighborhoods to Back Cove and beyond

**12. Develop Foot Trails at Fall Brook and the Fresh and Salt Water Wetland Areas Near Payson Park**

- Excellent opportunity for unique recreational opportunities (wildlife observation, resource interpretation and education)
- Extends Back Cove Recreation Opportunities



## G. Recommendations for the Roadway

### CURRENT CONDITION

Baxter Boulevard is a road through a park. The expectation is that motorists should both expect and accept slower travel speeds which come with the benefits of attractive views and no trucks. Baxter Boulevard is also a collector street for a large residential area. Although most of the traffic on Baxter Boulevard passes through the adjacent neighborhood, some of the traffic is destined to or from the neighborhood.

#### 1. Roadway

- a. The roadway width is typically 45 feet in sections with no median. Where the median exists, it is 12-15 feet wide without curbs.
- b. The existing gutters are cobble ( $\pm 2$  feet wide) with cobble curb from 200 feet north of the Preble Street intersection to the beginning of the median. The gutter and curb are typically in fair to poor condition and pose safety hazards to bicyclists.
- c. The roadway has a 12"-18" crown due to multiple paving overlays. Because the cobble gutters have remained in place, it appears that pavement grinding was done only next to the gutter, thus building up the crown as the roadway was repeatedly repaved.
- d. The gutters are relatively flat and in poor condition, allowing local puddling. Cobble paving tends to collect sand and debris and does not promote smooth, positive runoff collection.
- e. A normal roadway crown appears to be achievable even though the curb reveal is minimal or non-existent.
- f. In median areas, there are no curb or cobble gutters, but there are inlet stones at catch basin locations.
- g. The roadway crown is a constraint in its current condition. It creates an abnormal driving condition around curves where the adverse crown is unusually high. The existing crown can not be restored to normal conditions without total depth reconstruction of the roadway.
- h. New curb installation may be slightly constrained by existing grades behind the curb on the upland side of the Boulevard. Additional grading may be required to continue runoff over the curb and into the gutter drainage system. If this presents a problem, field inlets behind the curb could be installed to intercept drainage behind the curbs and connect them to the existing storm drainage system. On the shore side of the Boulevard, installation of a higher curb would not

appear to create a problem, since, in general, drainage flows across the pedestrian path into Back Cove.

i. Roadway width does not appear to create any constraint. It appears wide enough to incorporate a median and bike lane or lanes.

## 2. Pavement

a. The pavement condition is severely deteriorated.

b. The recent re-paving/reconstruction completed on Baxter Boulevard near Preble Street should be viewed as only a stop-gap measure.

## 3. Pavement Width

a. The current curb-to-curb width is substantially greater than that needed for a roadway carrying the volume of Baxter Boulevard. Consideration will be given to narrowing the travel lanes in conjunction with providing turn lanes at each intersection as necessary. (See Section V. Considering the Separation of Uses within the Existing Right-of-Way.) A narrower travelway will not only cause a reduction in the "comfortable" operating speed of motorists, but will also free up some space which could be converted into use for bicyclists, in-line skaters, or pedestrians.

## 4. Motorist Safety and Traffic Congestion

a. Safety and mobility at the intersections with Vannah Avenue and Dartmouth Street are influenced by the travel patterns on the local streets that feed and are fed by Woodfords Corner. Street closures, one-way streets, turn restrictions, traffic signal installation, signal re-timing, and traffic calming measures such as roundabouts will be considered.

## RECOMMENDATIONS

### 1. Maintain the Current 30 mph Speed Limit on Baxter Boulevard South of Vannah Avenue and Reduce the Speed Limit East of Vannah Avenue to 30 mph

It is likely that the safety of bicyclists traveling along the Boulevard and of pedestrians crossing the Boulevard would improve with slower vehicle speeds. Modest speed reductions along the Boulevard would not likely divert traffic from Baxter Boulevard to alternate routes. The original plan for Baxter Boulevard envisioned a leisurely shore drive and promenade. Therefore, slower speeds would comply with the historical precedence.

2. Establish Regulations which Prohibit Additional Curb Cuts to Baxter Boulevard

3. Maintain Single Through-Travel Lane in each Direction

- Except at intersections which may be identified in future traffic studies as needing turn lanes

4. Improve Surface Pavement Condition throughout the Length of Baxter Boulevard for the Safety of all Users

5. Maintain Designation of Baxter Boulevard as Route 1

There is no apparent advantage to redesignating Route 1 to a different route. Because most motorists use only a portion of Baxter Boulevard, removal of the Route 1 designation would not be expected to have a noticeable effect on traffic demand.

6. Maintain Current Truck Restrictions

This recommendation should have no effect on current users. The current restriction prohibits all truck except emergency vehicles, maintenance vehicles and snowplows. The Advisory Committee expressed concern over the enforcement of these restrictions, reporting a significant level of violations.

7. Close Baxter Boulevard to Motor Vehicles on a Regularly Scheduled Basis and for Special Events

There is substantial traffic demand on Baxter Boulevard every day of the week. On occasion, portions of the Boulevard are closed for special events. When the Boulevard is closed on Sundays, the traffic is diverted to alternate routes which presumably can handle the additional traffic. Regular closure of Baxter Boulevard on Saturdays could create problems on alternate routes and closure of Baxter Boulevard on weekdays would severely worsen traffic congestion on alternate routes (e.g., Forest Avenue at Woodfords Corner; Washington Avenue).

8. Institute Roadway Design Features which Constrain Vehicle Speeds

- Narrower Travelway
- Tighter Curve Radii
- Eliminate Excessive Crown

The current travelway width is excessive for motorists traveling at the speed limit. However, it does permit motorists to enjoy Back Cove/Baxter Boulevard scenery more easily and safely,



without fear of running off the road or of a head-on collision. Reducing lane widths will require reconstruction throughout the length of roadway.

Tightening curves in the roadway will contribute to reducing motorist speeds, because maneuvering tighter curves safely and with control requires driving at a slower speed.

The existing crown permits motorists to easily increase their speed along the roadway, especially along outside curves. Removal of the excessive crown will make both driving and pedestrian crossings easier and safer. However, it will require complete reconstruction of the roadway at a significant expense. Any changes to the crown must be carefully implemented to maintain positive drainage of the roadway.

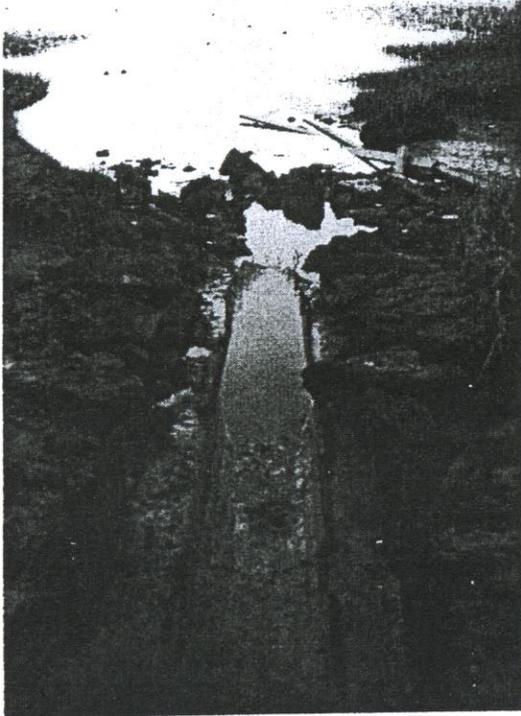
#### **9. Rebuild Curb and Gutters along Baxter Boulevard**

The cobble curbs and gutters are a unique, character-defining element of this roadway. They were built with the original roadway and maintained over time, but disrepair has compromised their drainage function and resulted in a hazardous bicycling surface. Rebuilding them is possible, with a thorough understanding of the design, construction, and the role they play in the aesthetics of the Boulevard.

The consulting team recognizes that despite the condition and function of the cobble gutters, it may be necessary to include them as part of any roadway improvements because of their historic significance. If this is determined to be true, it is recommended that the cobble gutters be re-laid to improve their function.

If their historical significance is determined to be unimportant, however, the Advisory Committee recommends their removal and replacement with a standard curb and paved gutter.

## H. Recommendations for Utilities



### CURRENT CONDITIONS

Catch Basins - Current catch basin locations along Baxter Boulevard appear sporadic and additional structures may be needed. There is local puddling in gutters due to the flat profile and poor condition of gutters. Cobbles don't promote smooth, positive runoff collection. They tend to build up with sand and debris. There are inlet stones at catch basin locations even without curb.

Interceptor and Force Main - The Portland Water District (PWD) interceptor and force main runs along Baxter Boulevard. Many Portland Water District wet weather sewage discharge pipes outlet from the local CSO into Back Cove.. There are also numerous, visible concrete bulkhead structures associated with the interceptor and forced main throughout the Boulevard and along the shore edge.

The cobble gutters which line both sides of the Boulevard for nearly its entire length are typically in poor condition and do not fulfill their intended drainage function.

The trees and their root structures may present constraints for installation of additional subsurface drainage structures, if these are required.

Existing storm drainage, PWD interceptors, Fall Brook and Smith Creek structures should not create any problems with normal road reconstruction, although the Fall Brook and Smith Creek structures are major structural elements and should be incorporated as is.

### RECOMMENDATIONS

#### 1. Reduce Visual Impact of Utilities

##### a. Outfall Pipes

Shift the endwalls back to the upland break at the shore's edge and redesign endwalls to match the existing edge condition.

##### b. Concrete Bulkhead Structures



Access covers and manholes can be raised , allowing room for soil and plants to be placed over the bulkheads.

c. Grade at Bulkhead Structures

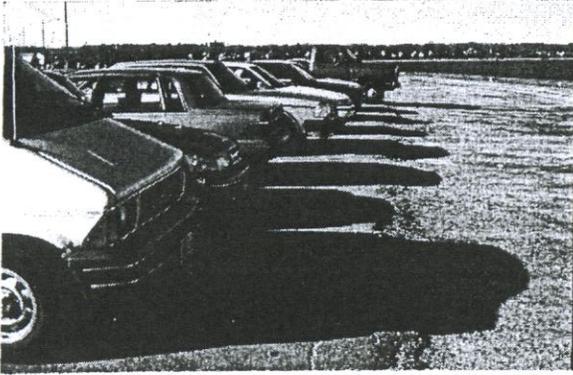
Fill around bulkheads to hide exposed concrete edges and surfaces.

**2. Provide Additional Drainage Structures**

Although regrading Baxter Boulevard is the best solution to the puddling problem, additional drainage structures (catch basins) should be placed at existing low-points where extensive puddling occurs.

**3. Increase Routine Maintenance of Sumps within the Existing Catch Basins**

(See also Section V.E. Recommendations for the Natural Environment.)



## I. Recommendations for Parking

### CURRENT CONDITIONS

There are two predominant areas where people park to use Baxter Boulevard:

- Preble Street Extension Parking Area
- Payson Park (two locations)

#### 1. Preble Street Parking Area

The Preble Street parking lot is much larger and more heavily used than the two locations at Payson Park.

The water-side pavement edges of the Preble Street parking lot are broken and in disrepair from people driving off the pavement onto the adjacent gravel/lawn area.

Within the parking lot there are two large recycling bins and a large area covered in yellow and white paint where street striping has been tested.

Many of the people who use Baxter Boulevard arrive by car and park at the parking lot on Preble Street Extension across from Shop 'n Save. Currently the parking lot has a confusing and potentially hazardous layout. The number of vehicles parked at the Preble Street parking lot reaches its peak in the early evening. On a typical summer weekday there are:

- 35 vehicles parked during the morning peak period
- 45 vehicles parked during the midday peak period
- 70 vehicles parked before and 170 parked after the evening peak period

#### 2. Payson Park Parking Areas

There are two small gravel parking areas in Payson Park used by those recreating at Baxter Boulevard. One of these areas is located along the southern entrance to Payson Park and the other just north and adjacent to the Park directly on the Boulevard. There are other paved parking areas within Payson Park; however, they are further away from Baxter Boulevard and therefore not used by those recreating there.

## RECOMMENDATIONS

### 1. Condense Existing Parking at Preble Street Extension Parking Lot

- Minimize the number of entrances to the parking lot.
- Avoid aligning entrances to the Preble Street Extension parking lot with the entrance to the Shop 'n Save parking lot.
- Apply parking space criteria from the MDOT access management manual.
- Consider current and future demand, function and aesthetics.

### 2. Reclaim the Eroded, Water-Side Area of Preble Street Parking Lot as Park/Green Space

### 3. Relocate Recycling Bins Less Visible Location

- Marginal Way parking lot
- Shop 'n Save parking lot

### 4. Direct Overflow Parking to Marginal Way Parking Lot

- Provide clear directional signs
- Improve pedestrian circulation

### 5. Prohibit School Busses from Using Preble Street Extension Parking Lot at Peak Times

- Encourage use of the Marginal Way parking lot for busses (see Recommendation 4 above).

### 6. Encourage Use of the Parking Lot on Marginal Way for Back Cove Users

- Provide signs for motorists.
- Improve pedestrian connections to this parking area.
- Primary entrance improvements can reinforce this connection. (See Section IV.B. Recommendations Associated with the Identity of Baxter Boulevard and its Context.)

### 7. Provide Additional Parking at Payson Park that could be Shared by the Users of both Baxter Boulevard and Payson Park

### 8. Develop Designated Drop-Off Sites at Payson Park and Preble Street Parking Areas to Reduce the Overall Demand for Parking at Baxter Boulevard

(This recommendation will need to be coordinated with further study of Payson Park and its needs.)



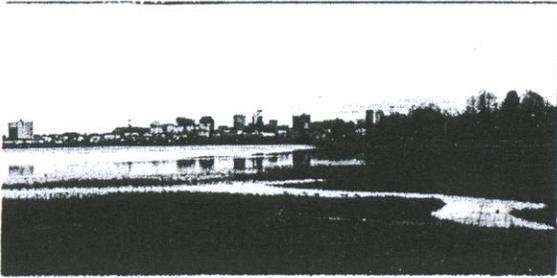
## J. Recommendations Associated with Dogs

### CURRENT CONDITIONS

From the results of the survey and through informal interviews with those using the walkway at Baxter Boulevard, it was discovered that sharing the walkway with dogs is a concern many people share. The results of the user survey identify "dog waste" as the second top issue of concern and "aggressive dogs" as the fifth top issue of concern.

### RECOMMENDATIONS

1. **Encourage Dog Owners to Form a 'Dog Owners of Baxter Boulevard' Group to Enforce Leash and Pooper-Scooper Laws**
  - Encourage People with Pets to become involved in discussing situations and solutions
  - Dog owners may have more influence over other dog owners than other park users or regulations.
  - Education and encouragement are keys to solving the problem.
  - Provide information when dog owners register their dogs.
2. **Encourage the City of Portland to Enforce Pooper-Scooper Laws**
  - Increase patrol or ranger attention to this enforcement need.
3. **Encourage the City of Portland to Enforce Leash Laws**
  - Provide information when dog owners register their dogs.



## VI. Recommended Improvements - Specific Places and Areas along the Boulevard

In addition to recommendations which apply to the overall Boulevard, specific places and areas within and along the Boulevard were identified as warranting a separate set of focused recommendations. These areas are as follows:

- Preble Street Extension Area
- Baxter Boulevard from Preble Street Extension to Forest Avenue
- Intersection: Baxter Boulevard and Preble Street Extension
- Intersection: Baxter Boulevard and Dartmouth Street
- Intersection: Baxter Boulevard andannah Street
- Payson Park Area
- Intersection: Baxter Boulevard and Bates Street

A specific set of recommendations for each follows.



## A. Recommendations for Preble Street Extension Area

### CURRENT CONDITIONS

The area between Preble Street Extension and Back Cove presents an opportunity for improving the recreation potential and visual quality of this part of the City. It was identified in the original plan for Back Cove as well as the 1930's J. Calvin Stevens WPA Plan as an area of particular recreational and visual importance. Currently, it is a heavily used area, containing a large parking lot and two play fields.

The parking lot primarily services those who have driven to use the walkway or adjacent playfields. For the majority of people using the Back Cove area, particularly those arriving by car, this is a starting point for their use of the walkway. Some motorists come to park and look out over Back Cove., especially at the lunch hour. The parking lot also houses City recycling facilities and has been used as a roadway-striping test area.

Spatially, the parking lot acts as a divider between Back Cove and the walkway, and it interrupts the nearly continuous open space surrounding Back Cove. This bituminous parking area is excessively large, compared to standard dimensions for parking. Its ill-defined edges allow people to park on the adjacent gravel and lawn areas, causing the grass to die and erosion to become prevalent. There is very little vegetation around this parking lot.

The Preble Street Extension area of Baxter Boulevard is also a prominent visual landmark for travelers driving from downtown Portland. Upon passing under I-295 on Preble Street Extension, one arrives at the first full view of Back Cove and the western part of the City.

In the context of these functions, the area is currently in a relatively neglected condition. The potential in capitalizing on the high visibility and popularity of this area is great, and the impact of improvements here could be far-reaching.

### RECOMMENDATIONS

#### 1. Make Visual and Functional Improvements to this Area in Ways that Relate It to Baxter Boulevard and Back Cove.

- Strive to create a park like environment
- Opportunity for additional supportive uses (picnic, sitting, gathering spaces)

2. Re-configure the Parking to be Most Efficient

3. Screen the Parking Because of the Area's Visual Prominence

Screening can be achieved with:

- Vegetation
- Earth berms
- Combination of earth berms and vegetation

4. Consolidate Parking Lot Entrances to Reduce Traffic Congestion

5. Define the Edges of the Parking Lot in Ways that Prevent Cars from Traveling on the Adjacent Lawn Areas

6. Provide Convenient, Safe Drop Off/Pick Up Areas

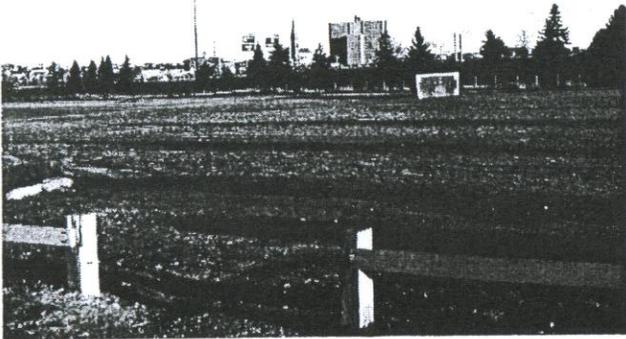
7. Consider Developing a New Trail Segment Along the Edge of Back Cove

- Logical connection based on use and proximity
- Contributes to cohesiveness of entire walkway and overall identity

8. Consider the Restoration of the Wetland to the North of the Play Fields

Note: The City is currently undertaking a detailed design study for this area.

See also Section V.A. Recommendations Associated with the Identity of Baxter Boulevard and its Context and V.I. Recommendations for Parking





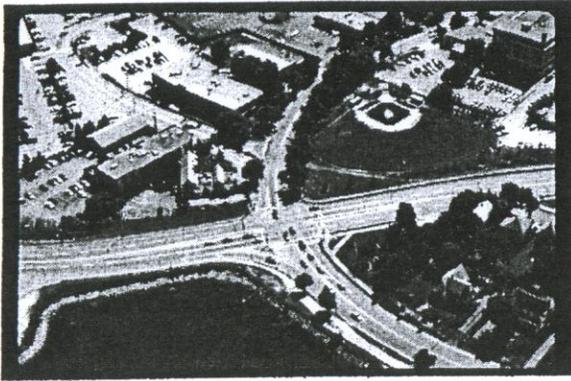
## B. Recommendations for Baxter Boulevard from Preble Street Extension to Forest Avenue

### CURRENT CONDITIONS

This short section of Baxter Boulevard is one of the major access points for motorists and pedestrians to the Boulevard. This section is unique in that it includes a diversity of land uses and types from a little league play field (Pedro Field) to access to a major commercial, office and retail uses. A heavily worn dirt path reflects the amount of use this section of Baxter Boulevard receives. There are many drives and access roads off of the Boulevard in this section. This stretch of Baxter Boulevard is not accessible to handicapped people and is difficult to maintain because of the lack of a hard surfaced walkway.

### RECOMMENDATIONS

1. **Develop a Barrier-Free Brick Sidewalk Along the Southern Side of Baxter Boulevard**
2. **Create a Grassed Area Along Both Sides of the New Walkway**
  - Will make visual connections to the rest of Baxter Boulevard
3. **Define a Significant Entrance to Baxter Boulevard at the Intersection at Forest Avenue**  
*(See also Section IV.B. Recommendations Associated with the Identity of Baxter Boulevard and its Context.)*
4. **Consolidate Access Drives to Businesses and Parking Areas**
  - This will minimize the amount of pavement and necessary curb cuts
5. **Add Pedestrian-Activated Crosswalk Signals All Ways at the Intersection of Baxter Boulevard and Forest Avenue**



## C. Recommendations for Intersection: Baxter Boulevard and Preble Street Extension

### CURRENT CONDITIONS

During the weekday morning peak hour, the largest traffic movements are both from inbound Baxter Boulevard -- turning left onto Preble Street Extension and continuing straight on Baxter Boulevard toward Forest Avenue. During the evening peak hour, the largest traffic movements through the intersection are the right-turns from Preble Street Extension onto outbound Baxter Boulevard, straight through on Preble Street Extension toward Forest Avenue, and straight through on Baxter Boulevard toward Dartmouth Street.

During both the weekday morning and evening peak hours, there is moderate delay for motorists passing through this intersection. One objective of this plan, as identified by the Baxter Boulevard Advisory Committee, is to improve motorist and pedestrian safety and mobility at this intersection.

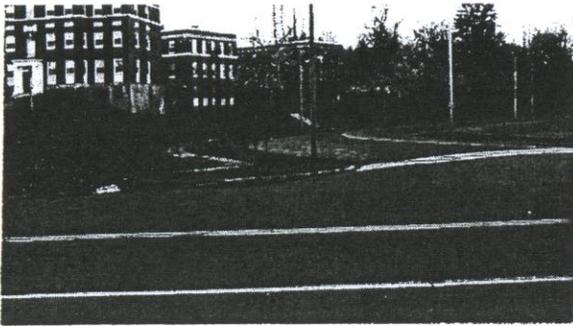
Any reduction in the curb-to-curb pavement width or in the size of the channelized right-turn lane from Preble Street Extension onto Baxter Boulevard would free more space for an improved and wider walkway along the east side where it is currently squeezed by Back Cove. If the roadway curb is moved, drainage structures would need to be modified.

### RECOMMENDATIONS

1. Retain the Current Traffic Signal Control at the Intersection
2. Maintain the Current Lane Configuration on the Intersection Approaches
3. Shorten the Length of the Channelized Right-Turn Lane from Outbound Preble Street Extension onto Baxter Boulevard



Intersection:  
Preble Street Extension & Baxter Boulevard



## D. Recommendations for Intersection: Baxter Boulevard & Dartmouth Street

### CURRENT CONDITIONS

During the weekday evening peak hour, roughly 200 vehicles turn from Dartmouth Street onto Baxter Boulevard (100 to the left and 100 to the right).

During the weekday evening peak hour, a total of roughly 220 vehicles turn onto Dartmouth Street from Baxter Boulevard:

- 100 vehicles turn left from northbound Baxter Boulevard (nearly 10 percent of the northbound traffic volume); and
- 120 vehicles turn right from southbound Baxter Boulevard (nearly 25 percent of the southbound traffic volume).

There is a significant amount of delay experienced by motorists on Dartmouth Street who desire to turn left onto Baxter Boulevard. Those same motorists have very limited sight distance to the right along Baxter Boulevard due to a horizontal curve.

The intersection is wide open with limited sight distance to the south, toward downtown. A sharp horizontal curve to the north of the intersection further contributes to the perceived safety problem at the intersection. The current roadway width does allow some room for evasive maneuvers on all three approaches to the intersection.

### RECOMMENDATIONS

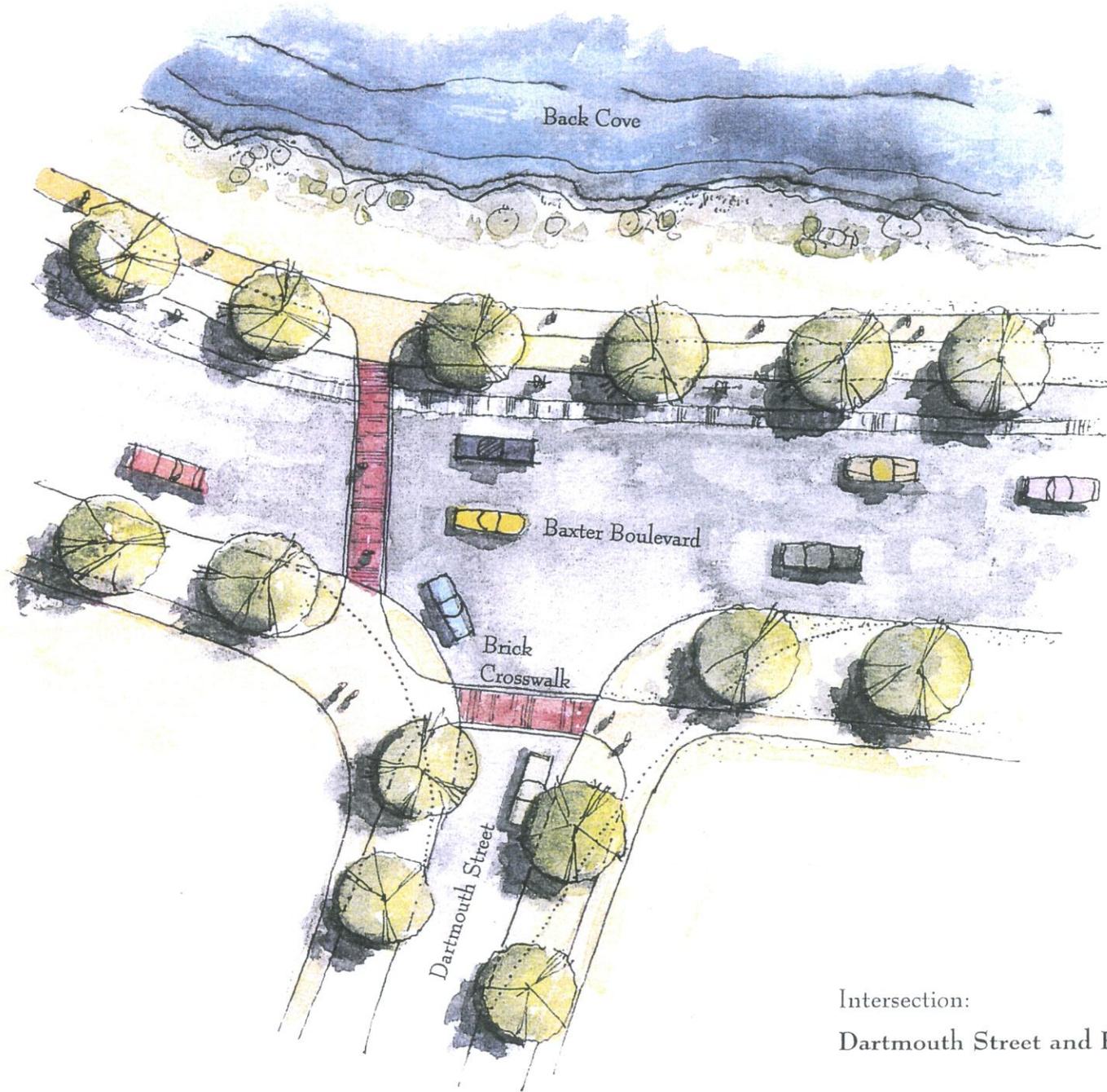
1. Position the Intersection as far to the North Within the Existing Right of Way as Possible to Increase Sight Distances and Improve Motorist Safety
2. Modify the Intersection to Create a 90 Degree Intersection
3. Reduce the Width and Turning Radii of Dartmouth Street at Baxter Boulevard

**4. Provide Crosswalks of Permanent Materials on the North Side of the Intersection and Across Baxter Boulevard.**

- Will maximize the available sight distance to pedestrians for motorists if placed on the north side of the intersection
- Materials: Brick and Granite or some other compatible permanent material

These actions would have the following benefits:

- Slow the speed of southbound right-turning vehicles on Baxter Boulevard.
- Offer additional green space/lawn along Baxter Boulevard and Dartmouth Street.
- Improve safety for pedestrians as they attempt to cross either Dartmouth Street or Baxter Boulevard.



Walkway

Multi-Purpose Path

Cobble Separator

Baxter Boulevard

Brick  
Crosswalk

Dartmouth Street

Intersection:  
Dartmouth Street and Baxter Boulevard



## E. Recommendations for Intersection: Baxter Boulevard & Vannah Avenue

### CURRENT CONDITIONS

One objective of this plan, as identified by the Baxter Boulevard Advisory Committee, is to improve motorist and pedestrian safety and mobility at the intersection of Baxter Boulevard and Vannah Avenue. Currently, it is very difficult (and sometimes unsafe) for motorists leaving Vannah Avenue to turn left onto eastbound Baxter Boulevard. It is also nearly impossible for pedestrians to cross Baxter Boulevard or Vannah Avenue near this intersection during weekday peak hours.

During the weekday morning peak hour, the dominant traffic movements are southbound Vannah Avenue traffic turning right onto Baxter Boulevard and westbound Baxter Boulevard (i.e., from the direction of Payson Park) passing straight through the intersection -- both headed toward downtown Portland.

During the weekday evening peak hour, the two dominant traffic movements are both on eastbound Baxter Boulevard (i.e., from the direction of downtown Portland): nearly 650 vehicles turn left onto northbound Vannah Avenue and 400 pass straight through the intersection on Baxter Boulevard. During both peak periods, southbound Vannah Avenue traffic turning left onto Baxter Boulevard (i.e., toward Payson Park) experiences excessive delay.

Of the motorists turning left from Baxter Boulevard onto Vannah Avenue during a weekday evening peak hour, nearly one-half then turn right onto eastbound Clifton Street; one-fourth continue north on Vannah Avenue toward Woodfords Corner and the remaining one-fourth turn left onto Woodford Street or onto westbound Clifton. Clearly, there is a great deal of cut-through traffic because the residences along Clifton, Vannah, and their feeder streets do not generate any where near the peak hour trips routed their way.

### ALTERNATIVES CONSIDERED

#### 1. Limit, Restrict, or Prohibit Left-Turns

Any action which would limit, restrict, or even prohibit left-turns from Baxter Boulevard onto Vannah Avenue during selected peak periods would divert some traffic back onto Forest Avenue, onto Washington Avenue, and through Payson Park. This diversion could result in significantly increased traffic congestion on Forest Avenue (south of Woodfords Corner) and on Washington Avenue (for example, at Ocean Avenue). The spin-off effects could include increased traffic through neighborhood streets and through Payson Park unless appropriate countermeasures are taken.

Another concept considered for improving motorist and pedestrian mobility and safety at the Vannah Avenue intersection is to prohibit left-turns from Vannah Avenue onto Baxter Boulevard during time periods. Much of the weekday traffic making this maneuver is coming from Woodfords Corner and therefore could be re-routed via Ocean Avenue and Payson Park to get to Baxter Boulevard. However, the concept directly limits the accessibility of Baxter Boulevard for neighborhood residents in deference to accommodating "through" traffic turning onto Vannah Avenue.

## 2. A Traffic Signal

A traffic signal at the intersection of Baxter Boulevard and Vannah Avenue would not be compatible with the Vannah/Clifton four-way stop-controlled intersection located immediately north of Baxter Boulevard. The traffic signal would function properly only if the stop-control on Vannah Avenue was removed. A signal at this intersection would not reduce queue lengths or delay for Baxter Boulevard traffic although it would reduce delay and improve safety for Vannah Avenue traffic destined for eastbound Baxter Boulevard.

## 3. A Three-Way Stop

Placement of stop signs on the Baxter Boulevard approach (as well as on Vannah Avenue) would likely improve safety for pedestrians and for Vannah Avenue motorists. It would however, increase delay for Baxter Boulevard motorists and would result in more traffic accidents at the intersection and on its approaches.

## 4. A Roundabout

Another option for the intersection of Vannah Avenue and Baxter boulevard is to construct a roundabout. Each approach would have a single-lane, as would the roundabout. The roundabout design offers one approach for accommodating the criss-cross turning movements at the intersection. With trucks prohibited on Baxter Boulevard, geometric constraints are not as severe (e.g., turning radii can be tighter and travel lanes can be narrower on the roundabout).

The City of Portland would need to thoroughly review the roundabout option in terms of maintenance issues (e.g., plowing), its geometry/size requirements, how unfamiliar motorists will adapt to "roundabout etiquette" and the acceptability of a roundabout to City residents as a traffic calming measure. At the current stage of analysis, it does not appear that a roundabout would fit within the existing curb-to-curb dimension of Baxter Boulevard.

#### 5. Closure of Vannah Avenue

Closing of the Vannah Avenue entrance to and exit from Baxter Boulevard would cause a redistribution of traffic throughout the street network feeding and parallel to Forest Avenue and Washington Avenue. The potential for significant impacts would result for area businesses and neighborhood residents. These would need to be fully understood and evaluated before any further action is considered.

#### RECOMMENDATIONS

*It is recommended that the City undertake an appropriate study of the potential impacts of the full-range of traffic mitigation alternatives at the Baxter Boulevard/Vannah Avenue intersection.*

The safe and efficient operation of the Baxter Boulevard/Vannah Avenue intersection is currently a key element in the movement of traffic through this area of Portland. Any action taken at this intersection must be studied thoroughly to determine its impacts on traffic congestions (e.g. along Forest Avenue, through Woodfords Corner, along Washington Avenue as well as through Payson Park and Up Dartmouth Street), on accessibility of area businesses (along Forest Avenue and Washington Avenue), and on the accessibility to and through area neighborhoods.



## F. Recommendations for Payson Park Area

Payson Park, immediately adjacent to Baxter Boulevard, has direct implications to the way both motorists and pedestrians use the Boulevard. Recommendations from this study have been developed to improve the function and strengthen the important relationships between these two parks. A master plan currently being developed for Payson Park will continue to define and improve how these two adjacent open spaces can enhance each other. The following considerations have been developed to provide some guidance to this master plan.

### CURRENT CONDITIONS

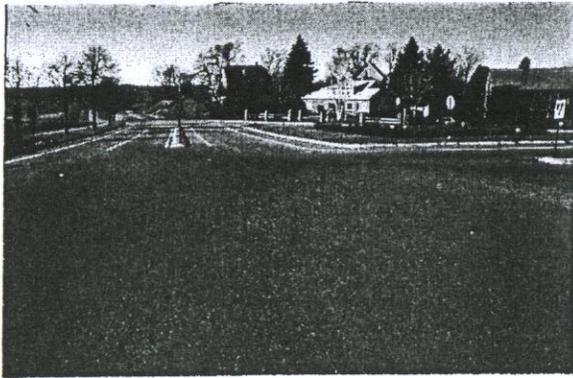
During a weekday evening peak hour in Payson Park, the heaviest traffic volumes are (1) between eastbound Baxter Boulevard and eastbound Ocean Avenue and (2) between westbound Baxter Boulevard and westbound Ocean Avenue. Another significant travel pattern involves eastbound Baxter Boulevard vehicles passing through the park and turning left onto Ocean Avenue, which would appear to be a back-tracking movement but is likely preferred by motorists avoiding Vannah Avenue/Clifton Street on their way to Reed Street and beyond.

The configuration of the two Payson Park entrances facilitates traffic flow between Baxter Boulevard and Payson Park (which is contrary to any efforts to reduce through-traffic use of Payson Park). Both intersections have too many accidents for the level of traffic which passes through them. Recently, there have been several accidents at the westerly intersection.

Only one cross walk exists across Baxter Boulevard from Payson Park. This is located near the northern access road into the park off of Baxter Boulevard.

There are also two small informal parking areas associated with the park that are predominantly used by those who use the walkway at Baxter Boulevard. These lots are dirt or gravel and are ill-defined.

*The City is currently undertaking a master planning effort for Payson Park which will more fully address the relationships between Baxter Boulevard and the Payson Park area.*



## G. Recommendations for Intersection: Bates Street & Baxter Boulevard

### CURRENT CONDITIONS

The Bates Street intersection can be noticeable for the excessive speeds at which motorists are traveling when entering Baxter Boulevard at this point. These high speeds are developed by motorists coming from the following directions:

#### 1. Bates Street onto Baxter Boulevard

There is currently a yield sign at the end of the access road to Baxter Boulevard. With the angle of this approach and clear visibility of Baxter Boulevard, this configuration is used as an on-ramp, with motorists reaching a full 30 miles per hour merging onto Baxter Boulevard.

#### 2. Exiting off of 295 onto Baxter Boulevard

Motorist are traveling at speeds near 50 miles per hour exiting Interstate 295 onto Baxter Boulevard. Since the off-ramp slopes downward to Baxter Boulevard, high speeds are often maintained through the vicinity of Bates Street.

These conditions, combined with the absence of any crosswalks, contribute to an unsafe pedestrian situation at this intersection.

### RECOMMENDATIONS

#### 1. Provide Permanent Crosswalks at Bates Street

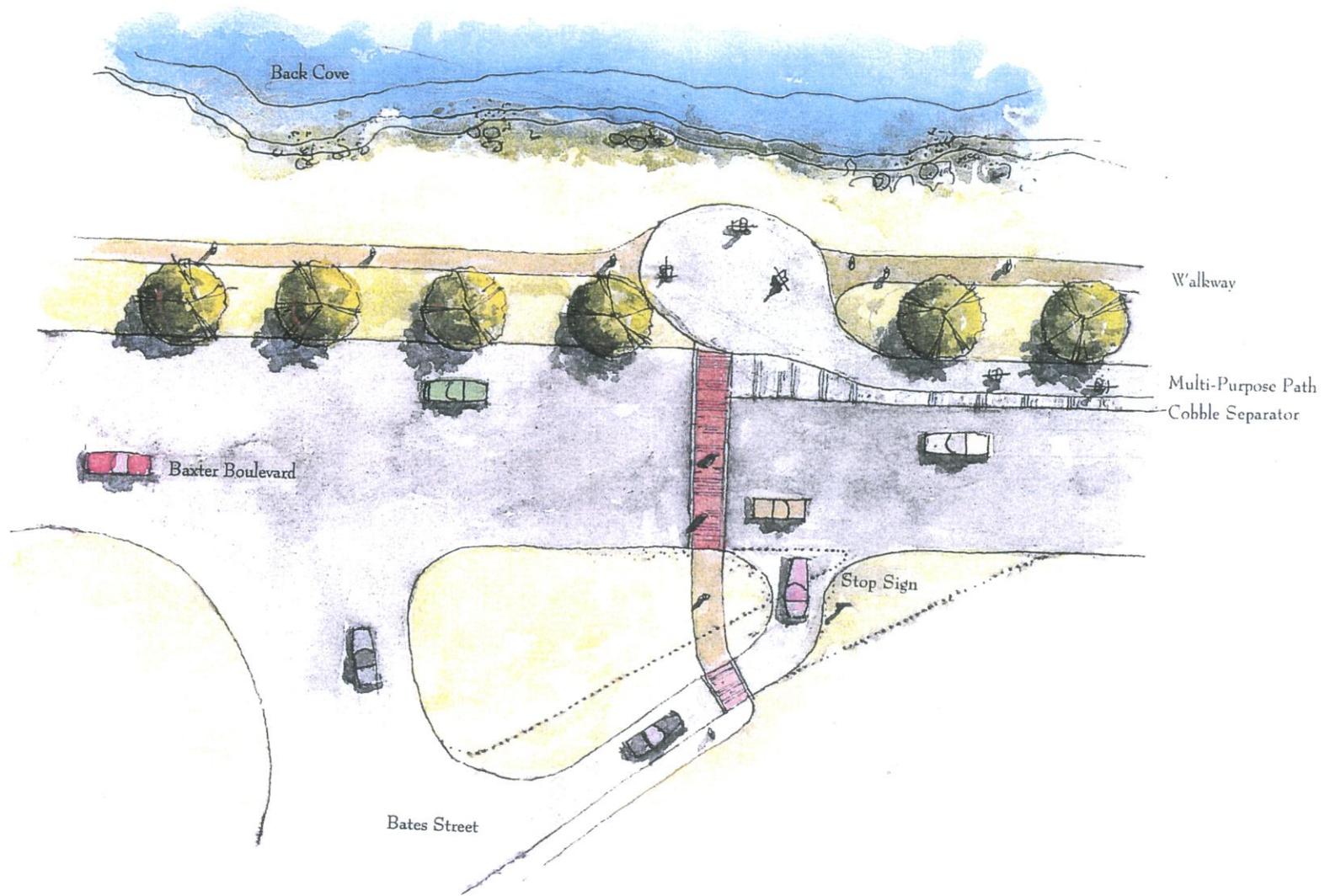
- Across to Island
- Across Baxter Boulevard to Walkway

Materials: Granite and Brick or some other compatible permanent material

*(See also Section V.F. Recommendations for the Walkway)*

2. Re-configure the End of the Access Road Heading South onto Baxter Boulevard by Making it a 90 Degree Intersection with a Stop Sign

3. Place a "Warning Sign" at the Off-Ramp from I-295 Identifying the Bates Street Intersection and Pedestrian Crossing



Intersection:  
Bates Street and Baxter Boulevard



## VII. Conclusion

Throughout the course of this project, the consultants were often asked by the public about the purpose and intent of this study. Upon hearing that the goal was to develop recommendations for improving Baxter Boulevard and the area around Back Cove, the person inquiring often said anxiously -

*"We love this place, please don't change it..."*

Further questioning of these individuals, as well the results of an extensive survey that was administered to hundreds of people who use Baxter Boulevard, revealed that what was really being said was -

*" We hope you can address our issues and concerns without changing the very reasons we love this place..."*

There may be no better way to describe both the motivation for and the complexity of this project. The challenge from the beginning has been in answering the question, "What are the aspects of this place for which people care so much?" The goal has been to recommend changes for the Boulevard's future that best strengthen rather than diminish its well-established and much appreciated sense of place. The scope and scale of the recommendations which have been presented here address a broad range of issues with varying depth and specificity. If implemented at once, the impact would be dramatic. If implemented incrementally, a less dramatic but cumulative impact would also be made. With either approach, Baxter Boulevard will remain the beautiful, multi-use park and roadway it has been for nearly a century; and the improved health, quality, and longevity of this natural, historical and cultural resource will benefit current and future generations.