

Inventing the Charles River Basin
Urban Images and Civic Discourse in Boston, 1844-1994

by

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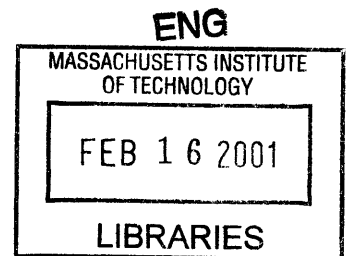
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ABSTRACT

The Charles River Basin, extending from the foot of Beacon Hill upstream past Harvard's Soldiers Field, has been called Boston's "Central Park." The river looks to all appearances tranquil and unchanging, one of the most visible and carefully preserved natural features of Boston. In fact, the Basin is a totally contrived landscape. Before its creation could begin, the river had first to be imagined as a single public space.

Robert Gourlay was the first to envision the Charles as "an amphitheatre of surpassing beauty." In 1844 he called for a "Science of City Building" which would harmonize "the streams, the islands, and the promontories" of Boston into a grand panorama. That vision also encompassed a "New Town" on the mud flats of the city's Back Bay, where education and opportunity would end the oppression of poverty. Two generations later, in their plan for a metropolitan park system, Sylvester Baxter and Charles Eliot advocated the "scientific selection" of public open space to establish a framework for the growth of the region.

At the end of the twentieth century, Boston set out to build the largest highway project in the history of the United States. The Central Artery/Tunnel Project would demolish the forty-year-old elevated highway that cut through the heart of the city and replace it with a new underground road; it would also build the world's widest cable-stayed suspension bridge across the Charles River. In the course of the highway's design, more scientific analysis was brought to bear on the highway and its effects on the Charles River than Gourlay, Baxter, or Eliot could have imagined. Yet the unifying culture of refinement that sustained the creation of the metropolitan park system had dissipated; the planning for the Central Artery took place in a culture of disciplinary rather than civic professionalism. The highway project's critics had no disagreement with the benefits of demolishing the elevated highway. They argued for an equally ambitious vision for the neighborhoods around the Charles River and for the river itself, as the central public space of the metropolis.

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I. THE SCIENCE OF CITY BUILDING

The different professions are not different roads converging on the same end; they are different roads, which starting from the same vantage point *diverge* forever, for all we know.

Charles W. Eliot, 1854¹

The Charles River Basin, extending from the foot of Beacon Hill upstream past Harvard's Soldiers Field, has been called Boston's "Central Park." An open seam between Boston and Cambridge, it reveals along its margins the visible evidence of the making and remaking of the metropolis. The river looks to all appearances tranquil and unchanging, one of the most visible and carefully preserved natural features of Boston. In fact, nothing could be further from the truth. Two hundred years ago Old Cambridge was separated from Boston by more than two miles of open water—three times the present distance—and by thousands of acres of salt marshes and open, unsettled lands extending in all directions from the river's meandering shores. In the nineteenth century the shallow basin, its nine-mile length edged with broad salt marshes, was dammed for mills and filled for commercial and residential ventures. At low tide the bays of the lower Charles became vast expanses of noisome, sewage-laden mudflats. Before the Basin's fragmentary creation could begin, the river had first to be imagined as a single public space.

During an extended stay in Boston in 1844, a Scottish expatriate named Robert Gourlay entreated the city's residents to see in their surroundings the opportunity of the century. Already known in America and Europe as the "cradle of liberty," wrote Gourlay, Boston should also become the "CRADLE of the arts and sciences." No other country ever started with such advantages as the United States, and no city ever had such prospects as Boston did at that moment. Gourlay's was not, however, a general call for advancing human knowledge; he was certain there was one field in particular that demanded the city's attention—the "Science of City Building."²

¹Charles W. Eliot to Theodore Tebbets, Jan. 19, 1854, in Henry James, *Charles W. Eliot, President of Harvard University, 1869-1909* (Boston: Houghton Mifflin, Riverside Press, 1930), 1:56-57.

²Robert Fleming Gourlay, *Plans for Beautifying New York, and for Enlarging and Improving the City of Boston. Being, Studies to Illustrate the Science of City Building* (Boston: Crocker & Brewster, 1844), 16.

Along the western shore of Boston's hallowed Common, the once free-flowing tidal waters of the Charles River had been dammed up to create a series of mill ponds. A decade after authorizing the mill dams, the state permitted new railroad ventures to build trestles across the middle of the ponds, and the mills failed. The increasingly polluted waters became a sanitary menace, and the west winds blowing down the river valley wafted injurious miasmas to the residences along the Charles and beyond. To the irrepressible Gourlay, this was destiny:

The watery waste which surrounds Boston has been designed, first, that the inhabitants should be penned up, and thence feel discomfort, till now that the utmost advantage may be made of it:—that on this waste they may form a city, surpassing all others, either in ancient or modern times.³

Any dozen people of "taste and liberality" could create a society to promote proper city building, and with the proper legislation, a whole "New Town" could be created on the two thousand worthless acres now exposed at low tide and covered with filth (Figure 1.1). Beyond the city's boundaries Gourlay proposed "connecting and exhibiting to the greatest advantage those rare and beautiful features which Nature has here thrown together" so that "the streams, the islands, and the promontories;—all may be made to harmonise, in one grand panorama . . ."⁴

Gourlay was apparently ignored by the governor, the mayor, and all the other officials who were the objects of his pamphleteering, but much of what he imagined was later brought to pass. The filling of the Back Bay began on an unprecedented scale in 1857, and the Public Garden was set aside. After the Civil War a lively public debate resumed on the subject of public parks. Frederick Law Olmsted, the designer with his partner Calvert Vaux of New York's Central Park and the first to call his vocation "landscape architecture," was invited to Boston to address the American Social Science Association on the subject of "Public Parks and the Enlargement of Towns." After further consultations with the city, he began design work in 1878 to resolve the unhealthy drainage of the Muddy River, the first phase of what is now universally known as the Emerald Necklace.⁵

³Gourlay, *Plans*, 38.

⁴*Ibid.*, 37.

⁵Frederick Law Olmsted, *Public Parks and the Enlargement of Towns* (Cambridge, Mass.: 1870), reprinted in *Civilizing American Cities: A Selection of Frederick Law Olmsted's Writings on City Landscapes*, ed. S.B. Sutton (Cambridge, Mass.: MIT Press, 1971), 52-99; Cynthia Zaitzevsky, *Frederick Law Olmsted and the Boston Park System* (Cambridge, Mass.: Belknap Press of Harvard University Press, 1982), 54-58.

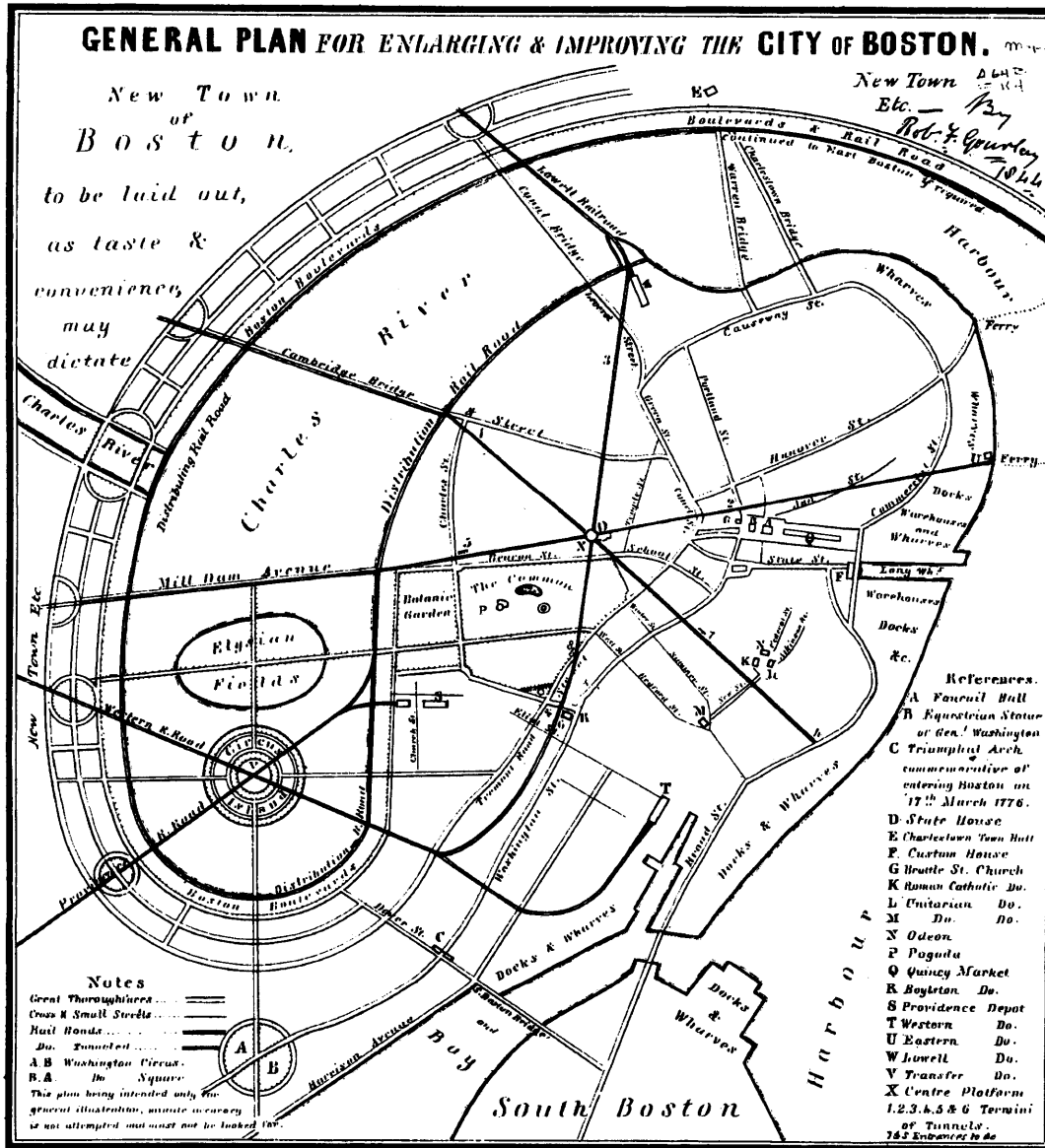


Figure 1.1 Robert Gourlay, "General Plan for Enlarging & Improving the City of Boston," 1844

Charles Eliot, who had apprenticed with Olmsted, and the Boston journalist Sylvester Baxter organized a campaign that resulted in the creation of the Metropolitan Park Commission in 1893. Their plan recognized the same regional topographic logic that Gourlay had so clearly depicted. They proposed setting aside "the rock hills, the stream banks, and the bay and the sea shores" of Greater Boston, and in less than eighteen months almost seven thousand acres were acquired as public reservations. In their first report to the commission, Eliot suggested that his and Baxter's insights were a consequence of "scientific selection" which had brought forth "the facts in the case" and made possible "the scientific selection of lands for public open space."⁶

The concern of Gourlay and Eliot with scientific methods for the study of cities reflected a profound transformation that altered the relationship of public life and work in the second half of the nineteenth century. Aspiring to the prestige of the ancient professions of medicine, theology, and law, numerous other occupations promoted state licensing of certified practitioners, supported university training in their fields, and established professional associations (like the American Social Science Association, where Olmsted's talk on public parks had been given).⁷

One eloquent advocate of the new professionalism was Eliot's father, Charles W. Eliot. In his inaugural address as the new president of Harvard University in 1869, the senior Eliot declared that

As a people, we do not apply to mental activities the principle of division of labor; and we have but a halting faith in special training for professional employments. The vulgar conceit that a Yankee can turn his hand to anything we insensibly carry into high places, where it is preposterous and criminal. . . . This lack of faith in the prophecy of a natural bent, and the value of a discipline concentrated upon a single object, amounts to a national danger.⁸

His sense of the desperate need for professional competence was reinforced by his firsthand observation of the Boston work of Olmsted and his son Charles. Their skills seemed particularly crucial in the modern city because so much of what the fledgling profession of landscape architecture aspired to do was public. City building aspired to the creation of

⁶Commonwealth of Massachusetts, *Report of the Board of Metropolitan Park Commissioners* (Boston: Wright & Potter, 1893), 83. Cited below as *MPC Report* (1893).

⁷Burton J. Bledstein, *The Culture of Professionalism: The Middle Class and the Development of Higher Education in America* (New York: Norton, 1976), 83-86.

⁸In David W. Brown, "Professional Virtue," *Kettering Review*, (Winter 1994), 11. On Eliot's forty-year presidency at Harvard and his contributions to American higher education, see Hugh Hawkins, *Between Harvard and America: The Educational Leadership of Charles W. Eliot* (New York: Oxford University Press, 1972).

places, whether buildings or outdoor spaces; many of its grandest works were open and public, and the experience of such places was broadly shared. From the earliest founding of cities, the collective participation of urban dwellers in public structures and spaces was quite different from the more individual and personal encounters of lay people with the disciplines of medicine and law, or with the newer but also more private professions like accounting and social work. The explosive growth of urban populations in the second half of the nineteenth century demanded public discussion of the form and character of urban living patterns.

The professionalization of city building advanced at an uneven rate across the country, altering the direction of civic discourse in some cities more than others. In important ways, Boston's city fathers were pioneers in promoting what has been called "the new urban landscape."⁹ Olmsted, after his frustrations with the administration of Central Park and the machine politics of New York City, found Boston's city fathers in the 1870s and 1880s far more committed to the provision of urban open space. A few years later, Baxter and Eliot recognized the urgency of broadening the public discussion of urban landscapes in order to realize their regional vision. They also saw the crucial function of visual images in that discourse.

In a series of newspaper articles in 1891 promoting metropolitan government in "Greater Boston," Baxter skillfully described the wooded hills and picturesque ponds that would constitute a metropolitan park system extending from Lynn Beach and the Lynn Woods to the "mountain-like Blue Hills range." The following year Eliot and Baxter guided a bill through the legislature creating a temporary metropolitan park commission, which was the vehicle for a remarkable series of ten day-long expeditions that included mayors, selectmen, and park advocates from Boston and the thirty-odd surrounding cities and towns. When their recommendations were published in the first 1893 Park Commission report, Eliot wrote that his special task for the temporary commission was "the picturing by printed words, photographs, and maps of those open spaces which are still obtainable near Boston." The "details of the legal machinery" could all be resolved once this picturing aroused the necessary public support.¹⁰ Like others before and since who have projected Greater Boston into the future, Eliot and Baxter appealed to the visual as well as to the moral imagination.

⁹David Schuyler, *The New Urban Landscape: The Redefinition of City Form in Nineteenth-Century America* (Baltimore: Johns Hopkins University Press, 1986).

¹⁰Sylvester Baxter, *Greater Boston: A Study for a Federalized Metropolis Comprising the City of Boston and Surrounding Cities and Towns* (Boston: A.J. Philpott, 1891), 31-32; [Charles W. Eliot] *Charles Eliot, Landscape Architect* (Boston: Houghton Mifflin, 1901), 383.

The clarity of their scheme, and its startlingly rapid realization, brought immediate acclaim in Europe and America, as Olmsted had predicted it would. In November 1893 Olmsted wrote to Charles Eliot and to his son John (by then his partners) that

nothing else compares in importance to us with the Boston work, meaning the Metropolitan quite equally with the city work. The two together will be the most important work of our profession now in hand anywhere in the world. . . . In your probable life-time, Muddy River [part of the Emerald Necklace], Blue Hills, the Fells, Waverly Oaks, Charles River, the Beaches *will be points to date from* in the history of American Landscape Architecture, as much as Central Park. They will be the opening of new chapters in the art.¹¹

Exhibits on the Boston parks were included in the Paris Exposition of 1900, in several international fairs held in Buffalo, St. Louis, and Portland between 1901 and 1905, and at an international competition for the planning of Greater Berlin in 1910. More recently, historians have recognized the Boston regional park system as the most notable scheme of comprehensive metropolitan park planning in the United States and the first such organization of land in the world.¹²

At the heart of Eliot's vision for the derelict spaces along the rivers and shores was the tidal Charles River Basin, extending nine miles upstream from Boston Harbor. The basin, he predicted, would become the "central 'court of honor' of the metropolitan district." In 1893, however, when Eliot first proposed the acquisition of the river shores, the Charles Basin was still a noisome expanse of sewage-laden mud flats, unfit for the central role in any story of park design or civic foresightedness. The river's frontage was occupied by two prisons, three coal-burning power plants, and numerous shabby commercial and industrial structures. Two large slaughterhouses, one near the harbor and the other upstream of Soldiers Field and the Brighton marshes, dumped offal into the shallow waters. Even in the elegant Back Bay, said Richard Henry Dana, where a public parkway should face the river,

¹¹Olmsted to Partners (John Olmsted and Charles Eliot), October 28 and November 1, 1893, Olmsted Papers, Library of Congress. All of these parks and reservations except the Muddy River and the Cambridge side of the Charles River were part of the metropolitan system, and as Keith Morgan has pointed out, all but the Muddy River were initiated and directed by Eliot. Keith Morgan, *Held In Trust: Charles Eliot's Vision for the New England Landscape*, (National Association for Olmsted Parks: Bethesda, MD, 1991), 1.

¹²Anthony Sutcliffe, *Toward the Planned City: Germany, Britain, the United States, and France, 1780-1914* (Oxford: Basil Blackwell, 1981), 197; Walter Creese, "The Boston Fens," *The Crowning of the American Landscape: Eight Great Spaces and Their Buildings* (Princeton: Princeton University Press, 1985), 183.

there was instead "a contemptible scavenger's street, thirty feet wide, backing up against the unmentionable parts of private houses."¹³

Three signal interventions made possible the physical construction of Eliot's vision: the acquisition of the river banks by the Cambridge and metropolitan park commissions (beginning in 1894) the construction of the Charles River Dam between 1903 and 1910, and the completion in 1936 of the Storrow Memorial Embankment, now universally known as the Esplanade. The first stabilized the level of the river and forever covered the fetid mudflats; the second greatly enlarged the open margins of the river's shores and established the emerald-edged "water park" about which Bostonians had fantasized for seventy-five years.

Once completed, these public spaces changed the way Bostonians perceived their city. The Charles River Basin, with its expansive views of Boston and Cambridge, has become one of the two fundamental points of reference against which the visual character of the city is measured and remembered (Boston Common is the other).¹⁴ The view from the river suggests an apparent clarity and visual order in a city otherwise well known for its bewildering and irregular geography. The basin has been called the city's most distinguishing physical feature.¹⁵ Its form is straightforward; from below the Longfellow Bridge to Boston University, the basin is one extensive, almost regular space. Upstream, though the river narrows and bends, and the views are much less expansive, we imagine this part of the Charles as a seamless extension of the paths and parkways along both shores.

River Stories

Perhaps because the image of the Charles is so distinct and its physical development so apparently-obvious, its history has merited only passing mention in larger stories that might have paid it more attention.¹⁶ Clearly, most of these accounts had other intentions. Their

¹³Charles Eliot, "The Boston Metropolitan Reservations," *New England Magazine* 15 (September 1896): 117-118. Richard Henry Dana, letter to the editor, *Boston Daily Advertiser*, June 13, 1874.

¹⁴Kevin Lynch, *The Image of the City* (Cambridge, Mass.: MIT Press, 1959), 19-21.

¹⁵Lee Marc G. Wolman, et al., "Boston's Charles River Basin," *American Society of Civil Engineers, Journal of the Boston Society of Civil Engineers Section 67* (Summer 1981): 199.

¹⁶The history of the Charles Basin is briefly considered in Walter Muir Whitehill, *Boston: A Topographical History* (Cambridge, Mass.: Belknap Press of Harvard University Press, 1959; rev. ed. 1968); Bainbridge Bunting, *Houses of Boston's Back Bay* (Cambridge, Mass.: Belknap Press of Harvard University Press, 1967); Zaitzevsky, *Olmsted*; Creese, "The Boston Fens." The exhibit catalog by Alex Krieger and Lisa J. Green, *Past Futures: Two Centuries of Imagining Boston* (Cambridge, Mass.: Harvard University Graduate School of Design, 1985) includes short chapters on the Basin and the metropolitan parks. Alan Emmet, *Cambridge, Massachusetts: The Changing of a Landscape* (Cambridge, Mass.: Harvard University Department of Landscape Architecture, 1978) traces the changes to the Cambridge side of the river. The creation of the metropolitan park system is an important part of David Schuyler's *The New Urban Landscape*, but the integral place of Boston's river reservations and parkways in ordering a topographical pattern for the region is not discussed. Daniel Schodek's study of American engineering landmarks includes the Charles Basin, but the story resolves all the contentious issues in less than ten years and

thematic limits, set by subject matter or by greater Boston's fragmented political boundaries, served the stories they wanted to tell.

Yet these stories have missed crucial differences, not only between the Charles River Basin and other public spaces created in metropolitan Boston, but also between the Charles and its most direct precedent, the designs by Olmsted for the Back Bay Fens and the Muddy River Valley (Figures 1.2, 1.3). Discussions of public parks in nineteenth century Boston usually focused on existing natural scenery that ought to be preserved. The river, though almost always addressed in the park debates, was recognized as early as the 1820s as an enormously difficult sanitary hazard that would require reclamation, not a "reservation" of unique or characteristic New England scenery.¹⁷ While Baxter correctly understood that the entire park system of greater Boston had its beginning in the sanitary hazard of the Fens,¹⁸ it would be hard to imagine a greater contrast in the treatment of urban rivers than between the Fens and the Charles Basin, in metaphorical as well as formal terms.

Olmsted conceived and executed the Fens as a single, unified work. His designs for the Muddy River deliberately and successfully obscured almost all of the visual connections with the city around it. The Charles Basin was imagined by many people as an expansive, open landscape, then built in larger or smaller fragments, and remains under construction into the present.

Unlike Olmsted's unitary, naturalistic, and introspective vision of the Fens, Eliot appealed in his writings to a myriad of outward-looking images of the Charles as "a drainage channel, an open space, a parkway, a chain of playgrounds, and a boating course." Eliot shared Olmsted's conviction that open space was essential to the public health of every crowded urban district, and in spite of the river's deplorable state he believed that nowhere

Charles River Basin," *Landmarks in American Civil Engineering* (Cambridge, Mass.: MIT Press, 1985), 297-301. Lewis Mumford is among the few urban critics to recognize the significance of Eliot's proposed reclamation of the Charles as central to this new metropolitan framework, in *The Culture of Cities* (New York: Harcourt, Brace, Jovanovich, 1938), 220. The most coherent account of the basin's development is found in Max Hall's essay, *The Charles: The People's River* (Boston: Godine, 1987), 34-60.

¹⁷Geoffrey Blodgett recognized this difference in reclaimed rather than reserved nature, and has suggested that Revere Beach "sprang from the imagination of Charles Eliot" and was the "finest single product of the [metropolitan park] commission"; *The Gentle Reformers: Massachusetts Democrats in the Cleveland Era* (Cambridge, Mass.: Harvard University Press, 1966), 126. It will be argued here that while Eliot's design for Revere Beach was realized in his lifetime, his work to create a widely shared image of public open space on the Charles had a far more profound affect on the urban life of the region.

¹⁸Sylvester Baxter, *Boston Park Guide*, (Boston: Small, Maynard & Co., 1898), 5.

west of Beacon Hill could "so much well-distributed open space be had for so little money" as along the shores of the Charles.¹⁹

Another contrast between the Fens and the Charles was the organization of public discourse. The Boston park debates were the result of an active citizenry who insisted on a spirited, open debate. When legislation finally passed and the Boston Park Commissioners were appointed, they had already agreed to confront the sanitary hazard of the Muddy River before they engaged Olmsted to begin the work. Eliot and Baxter, by contrast, not only organized a set of ideas about metropolitan planning and design, but also consciously brought together town officials and interested citizens from the communities along the river, and then promoted the idea that these citizens, working together, could overcome the noisome reality of the polluted river as it was in 1893. They defined the transcendent issue as moving the control of the Charles and its ragged edges from the private to the public realm, and they successfully initiated a series of actions to that end in several jurisdictions on both sides of the river.

Olmsted's Boston parks may also be distinguished from the Basin by their recent history and historiography. Over the last twenty years an "Olmsted Renaissance"—which began with biographies, monographs, and museum exhibits, then spread to newspaper and magazine stories, and televised documentaries—has restored a wide public appreciation for the Fens as a consciously created landscape. "Olmsted's Emerald Necklace"—both the place and the phrase are widely known in the surrounding neighborhoods and across the city. From Jamaica Pond to the Boylston Street Bridge, it is still possible to imagine away the twentieth-century changes and visualize these spaces as they were first designed. Though a state-funded program of landscape restoration was deferred by the recession in the late 1980s, efforts continue to recover the design integrity of the Emerald Necklace.²⁰

There is a parallel singularity in the historiography of Olmsted's Boston work. When Cynthia Zaitzevsky began her research on the Boston park system, she found "a methodological vacuum." Landscape architecture was so different from the visual arts "that the basic discipline of connoisseurship, implicit in all art historical scholarship, [was] unusually difficult to apply." Even more serious, in her view, was the "absence of any

¹⁹Commonwealth of Massachusetts. *Report of the Joint Board consisting of the Metropolitan Park Commission and the State Board of Health upon the Improvement of Charles River from the Waltham Line to the Charles River Bridge* (Boston: Wright & Potter, 1894), 35, 43.

²⁰Christopher M. Greene, *Olmsted Historic Landscape Preservation Program: First Interim Report, 1984-1989: Part I, Reviving the Olmsted Vision* (Boston: Commonwealth of Massachusetts, 1990).

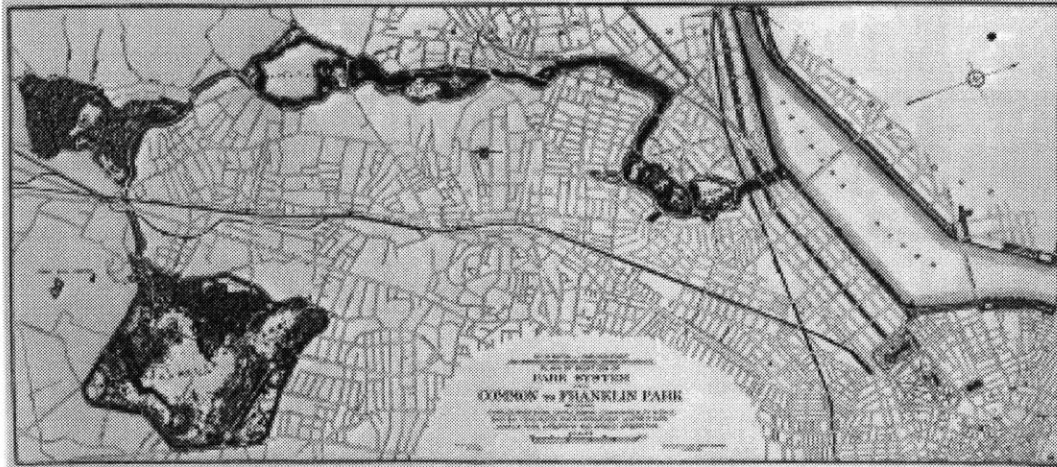


Figure 1.2 Olmsted, Olmsted & Eliot, plan of the Boston Park System from the Common to Franklin Park, 1894.

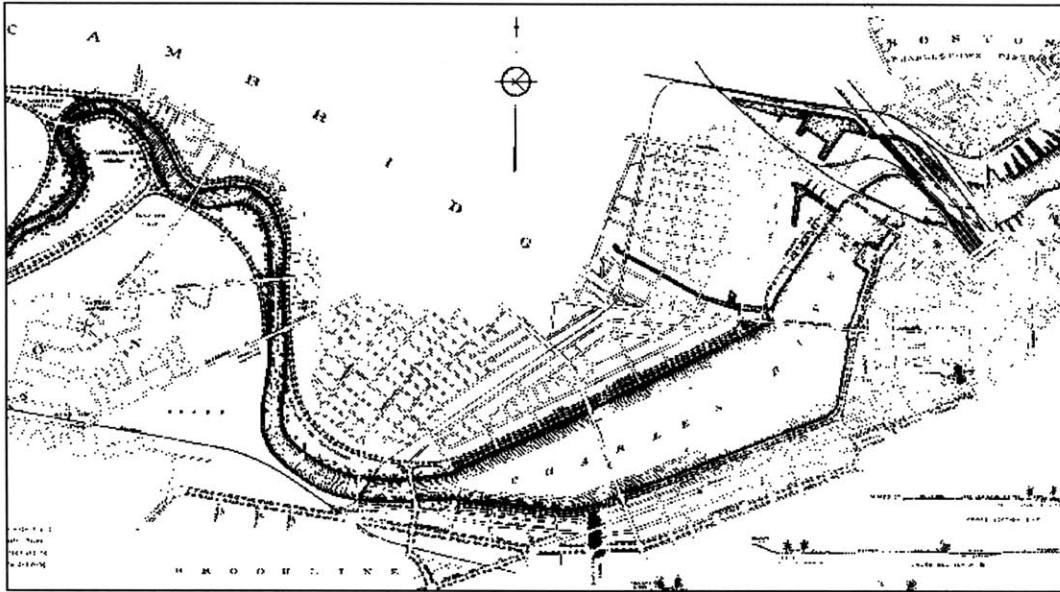


Figure 1.3 Olmsted, Olmsted & Eliot, plan for the Charles River Basin, 1894.

accepted method for its analysis, interpretation, or critical evaluation." Yet by accepting some fundamental assumptions of art historical scholarship, she made an enormous contribution to our understanding of Olmsted, of the urban development of Boston, and of the profession of landscape architecture. In comparing his work with other projects of the period, she consciously contributed to the development of a landscape architectural canon. And she embraced Olmsted's own claim that his successfully realized projects were coherent works of art, trying to "get inside the creative process as nearly as one can" to pursue carefully his documented intentions in designing the parks.²¹

The validity of these art historical assumptions has since been challenged by Dell Upton, who has proposed instead a "landscape history of architecture" (and presumably of landscape architecture as well). In his view, three central concepts of architectural history—all of which are found in the historiography of Olmsted's work—are rejected: "aesthetic universals, the individual work (whether building, ensemble, or urban plan) as the unit of analysis, and the distinction between creator and audience." A landscape history, Upton argues, would abandon the claim for a universal canon of high art. It would focus on the human experience of the built environment and on the imaginative structures by which that environment is construed, and not on the relationship of artist and object. It would take as its unit of analysis the entire cultural landscape.²²

Such a "landscape history of landscape" would seem to be an ideal vantage point from which to understand a large, incrementally created space like the Charles River Basin. The concepts of singular creation and original intent clearly do not apply. Yet it goes too far to say that the meaning of this space is "determined *primarily* by its viewers and users." The ability to create or alter the meaning of a place is bounded—by physical conditions, by individual experience and imagination, and by our political sense of what Hannah Arendt has called "the space of public appearance."²³ If the Muddy River were still a string of shallow, offal-covered mudflats or a channel lined in concrete, it would be difficult to construe the Emerald Necklace as a sylvan framework shaping and defining the city. Because Olmsted's work—its creation as well as its subsequent history—is so at variance with most other public landscapes, Zaitzevsky's historiographical assumptions are productive and illuminating. In

²¹Cynthia Zaitzevsky, "Frederick Law Olmsted and the Boston Park System" (Ph.D. dissertation, Harvard University, 1975), vi-viii.

²²Dell Upton, "Architectural History or Landscape History?" *Journal of Architectural Education* 44:4 (August 1991), 195-199.

²³*Ibid.*, 197, emphasis added; Hannah Arendt, *The Human Condition: A Study of the Central Dilemmas Facing Modern Man* (New York: Doubleday Anchor, 1959), 178-185.

spite of the limits imposed by the scholarly tradition of connoisseurship, her account succeeds because it is compelling as narrative. It attains "the higher level of organization that we might call a fiction"—the deeply satisfying transmission of narrative meaning. Olmsted's ideas may be only part of the story, but to begin the analysis after he has left the story ignores that much of the human experience of landscape.

Both the Muddy and the Charles are entirely designed spaces, "works of man rather than of nature,"²⁴ but even the barest outline of the history of the Charles is largely unknown. Few realize that the open space of the river between Cambridge and Boston is a complete transformation of a now-obliterated natural landscape that proceeded over three or four generations.

What follows is a narrative of river visions—and of the edges of the city that was imagined along its shores—as they have been proposed in drawings, plans, and texts by people who hoped to make the Charles River Basin into something different than it was. This story will take up three episodes in the creation of the Basin. The river was first conceived as a single, great public space in 1844. The second episode, beginning in 1893, is the realization of that first vision. Finally, a plan first sketched in 1894 is to reclaim the mouth of the Charles where it joins Boston Harbor, is revived at the end of the twentieth century.

The place of urban visions in the public discourse of the city will be considered in the context of the debates about Boston and its physical form. Who propounded these urban prophecies? How were these visions communicated and recorded? What motive power did they have? Did these visions make a difference to the present form and life of the city?

Refinement and Professional Culture

At the core of these questions is the cultural matrix in which discussions of the city's design have taken place. The sustaining energy that recreated the Charles as an open, public landscape was rooted in European aristocratic traditions. Studies of public spaces in nineteenth century America have focused on "moral order" and "civilizing the cities," but only recently have the historical origins of this widely shared yearning for "the refinement of America" been carefully revealed.²⁵ The establishment of Boston's parks shows how this aspiration for refinement—as much as the fear of disorder and the impulse to civilize

²⁴Max Hall, "The People's River: How mankind has changed the Charles," *Harvard Magazine* 86 (July-August 1984), 36.

²⁵Paul Boyer, *Urban Masses and Moral Order in America, 1820-1920* (Cambridge, Mass.: Harvard University Press, 1978); Robert Wiebe, *The Search for Order, 1877-1920* (New York: Hill & Wang, 1967); Richard Bushman, *The Refinement of America: Persons, Houses, Cities* (New York: Alfred A. Knopf, 1992).

newcomers to the metropolis—enabled the city’s urban visionaries to cultivate support for parks and public spaces among several generations of Boston and Cambridge elite. The aura of artistic and genteel elegance that suffused the sketches and drawings and the verbal representations of the Charles created a shared vision of the river that sustained continuing public investment in the Basin’s physical spaces.

These shared images illuminated not only the commitment to parks and public spaces—over time they helped alter the perception of the entire city. The eighteenth century convention of American city drawings, a direct descendant of earlier European illustrations, presented urban centers behind a foreground of thriving waterfront commerce. By the end of the nineteenth century, the American invention of the skyscraper and its interpretation by photographers (especially in New York City) profoundly altered our perception of the modern city.²⁶ Yet while capitalists in other American cities rushed to build the most thoroughly modern skyscrapers, conservative city fathers in Boston continued to enforce downtown height restrictions and acceded to new height limits along the Charles.

At some point early in the twentieth century, the popular views of the city from Boston Harbor were overtaken in popularity by photographs taken from across the Charles River looking toward Beacon Hill, a horizontal urban image edged in tranquil blues and greens. When the economic pressure to build higher and higher finally became irresistible even in Boston, the creation of historic districts on Beacon Hill (1955) and in the Back Bay (1966) severely limited the construction of skyscrapers, at least on the river’s lower margins.²⁷ Upstream of the Back Bay and on the Cambridge side, the city’s universities erected the first tall buildings along the Basin, in the 1960s and 70s; commercial developers soon followed their example. In the building boom of the 1980s, towers in downtown Boston went higher and higher, and dramatically transformed the long views from across the Charles. Though the skyscrapers now visible from the basin alter the sense of a linear, emerald-edged city, they are still sometimes half-wished away by the persistence of the older vision (Figure 1.4).

As the unifying effects of the older culture declined, and the new professional mode boldly extended its reach, public discussions of civic design in Boston were completely

²⁶Bushman (1992), 145-148; William R. Taylor, "New York and the Origin of the Skyline: The Commercial City as Visual Text," *In Pursuit of Gotham: Culture and Commerce in New York* (New York: Oxford University Press, 1992), 23-34; Spiro Kostof, *The City Shaped: Urban Patterns and Meanings Through History* (Boston: Little, Brown, 1991), 279-336.

²⁷Lawrence W. Kennedy, *Planning the City Upon a Hill: Boston Since 1630* (Amherst, Mass.: University of Massachusetts Press, 1992), 183.

transformed. The post-Civil War park debates in Boston, and the park construction that followed, established a high-water mark for the culture of refinement. These public dialogues, as they were recorded in newspapers and other records, were high-toned exchanges among cultivated gentlemen, absolutely certain of their domain. Boston's city fathers also acknowledged the advance of professional culture, and they sought out Olmsted and other designers for competent, technical advice—but they remained fully and finally in control. A generation later, Baxter and Eliot did not wait to be consulted. The two men organized a campaign to promote the metropolitan park system that not only moved the state government to acknowledge the need for legislative action; they also created a forum for their professional efforts in public administration and landscape architecture. Like Olmsted, however, they saw their particular expertise in the context of a public discourse that transcended their own professional interests.

This explicit commitment to subordinating professional competence in the service of an overarching public realm also marked the controversy over the first Charles River Dam. After years of witnessing testy and inconclusive arguments, James Storrow persuaded the legislature to hire the best professional engineer they could find. In his report of 1903, John Freeman not only demonstrated a dazzling thoroughness in analyzing the technical issues, he also raised a new issue for public debate: the specter of unprofessional conduct by experts working for hire.

When the transformation wrought by the dam along the lower Basin did not attain the appearance of refinement to which the city aspired, the Boston Society of Architects campaigned actively to alter the river through the creation of new islands and bridges in the river. Twenty years later, yet another state board solicited designs for the river from Arthur Shurcliff, a landscape architect and former apprentice of Charles Eliot. As part of the new park plan the construction of a highway was proposed. There followed the first significant public debate in Boston to take up the conflict between the demands of auto transportation and the opportunities for public spaces. The final design for the Storrow Memorial Embankment—now universally known as the Esplanade—was completed, without the road. Even before the Esplanade was built, however, the City of Boston published the report of a traffic expert which ignored the publicly negotiated commitment not to build a highway through the city's grand new embankment.

Less than fifteen years after Bostonians dedicated the Esplanade and thought the river centerpiece of their "Emerald Metropolis" was finally complete, Storrow Drive, a six-lane,

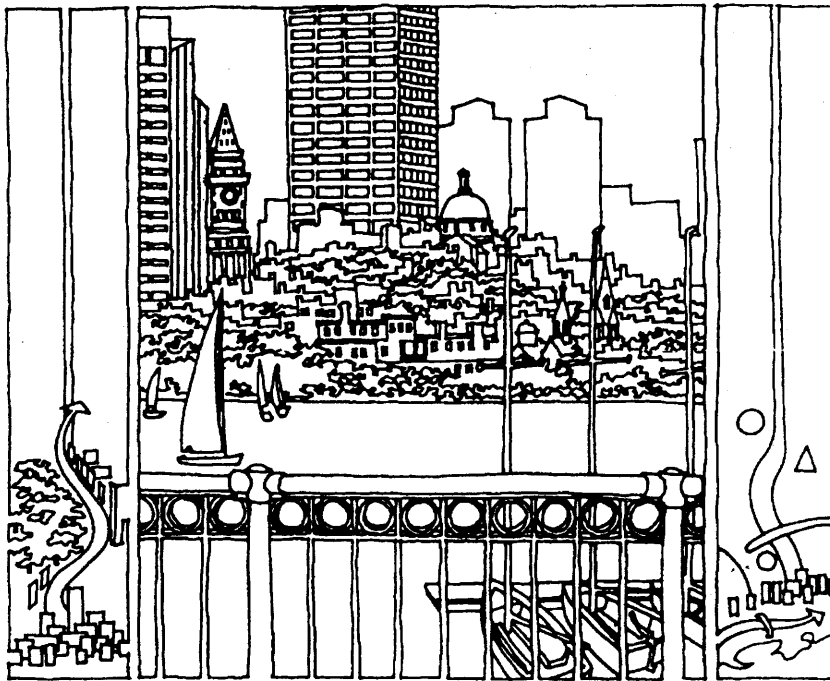


Figure 1.4 Randall Imai, the Kevin Lynch Book Award, facsimile, 1990.

limited access highway, was pushed through the edge of the river from Soldiers Field in Brighton to Boston's West End, in spite of powerful public opposition. The West End itself was demolished in the late 1950s, replaced by the high-rise towers of Charles River Park. Like Storrow Drive itself, the towers reflected a modernist architectural vision of the city widely shared by civic and political leaders.

After the battle over Storrow Drive in 1949, other highway conflicts followed, several of them centered on the Charles. Harking back to the lonely voices who lamented the loss of the salt marshes on the Charles in the 1890s, Bernard DeVoto in 1955 opposed a short stretch of parkway that wiped out "Hell's Half Acre" in Cambridge. This episode anticipated both the national environmental movement of the 1970s as well as the local revival of interest in the suburban and rural stretches of the Charles River above the Basin. Not long after DeVoto's essay, Route 128 and Interstate 93 were laid out, splitting the largest of metropolitan Boston's reservations, the Blue Hills and Middlesex Fells. In 1965 a massive overpass was built over the Charlesgate, the Olmsted park that exquisitely connected the Emerald Necklace with the Charles River. About the same time, the increasing national concern for health and fitness led to a campaign to end the prohibition against bicycles on the Esplanade. Over the next eighteen years continuous bicycle paths were built to Watertown and back. Cyclists were soon joined by joggers, skaters, and then rollerbladers, and the refined and genteel edges of the Charles River Basin became landscapes of speed.

The demonstrations over Storrow Drive paled by comparison with the protracted conflict over the Inner Belt and the Southwest Expressway in the 1960s. After over a decade of preliminary engineering, Governor Frank Sargent declared a moratorium on highway construction in 1971, and soon thereafter a substantial fraction of the state's share of federal highway funds previously committed to road construction were reallocated to fund a massive expansion of public transit.

The final landmark in the twentieth-century transformation of the Basin was the controversy in the 1990s over the Central Artery/Tunnel project, in particular that part of the design known as Scheme Z, the river crossing over the mouth of the Charles. The Artery project was driven by a tenacious commitment to demolishing the elevated Artery through the downtown and rebuilding it underground, with new buildings and public spaces where the old highway had been. Some observers found an equally striking absence of vision in the Artery's proposed design for the Charles River Crossing and the derelict spaces just beyond

Boston, where more lanes of elevated highway would be built than would be taken down in the center of the city.

If there was one overarching criticism of the Artery project, it focused on the approach to public discourse by the state officials who managed the project. The capacity for creating images through computer-aided design, and for sharing these sophisticated new visualizations via television and video tape, had never been greater. Instead, these capabilities were deliberately left unused. Yet when the highway project was compelled by state environmental officials to establish the Bridge Design Review Committee, a panel of forty-two persons representing civic and professional interests, the committee members reached a remarkable mastery of the intricacies of highway and traffic engineering and of the urban design implications of dozens of highway alternatives.

Though the committee spent thousands of hours considering options, their recommendations for the physical form of the Charles River Crossing were overruled by state and federal highway administrators. The design of the project would, in the end, be determined by the highway planners. Proposed revisions to the project were seen as threats to its execution, because the Central Artery's ultimate justification, promoted by elected officials as well as by those who were once called the "city fathers," was not the transportation benefits of the project's design but the massive infusion of federal gas tax monies into the region's economy.

The debates about the Central Artery were spiked with disagreement, exaggerated by the increasing numbers of specialists who tenaciously defended their separate domains in transportation and environmental planning. Ultimately, the public discussions fractured along professional boundaries, and what passed for civic discourse foundered over incommensurable issues. In the analysis of highway design alternatives, no one found a way to compare changes in traffic flow with the concomitant effects of massive, shadow-casting bridges and ramps on the urban life and visual character of the city. Even where dollar values and lost real estate taxes could be assigned to the properties taken for new highway construction, there seemed to be insuperable barriers between various levels of government and between present and future costs and benefits. The state and federal project administrators were unable or unwilling to consider the transfer of future tax revenues from new land uses to fund the more costly highway designs necessary to open up acres of vacant railroad yards north of the Charles. While no one could agree on economic values for civic design and public open space, highway officials could calculate quite exactly the economic benefits from the jobs

created by their plans for the metropolis. And just as in the 1850s it had been considered unseemly to discuss the benefits that would accrue to the owners of property adjacent to the proposed Central Park in New York, in the 1990s there was little public discussion that compared the interests of downtown Boston property owners who would benefit from the Artery with the decline in values that would occur elsewhere in Boston, Cambridge, and Somerville.²⁸

The prospect of increasingly fragmented professional discourse troubled Charles W. Eliot fifteen years before he became the president of Harvard, when, as a new graduate of the college, he pondered his choice of vocation:

What a tremendous question it is—what shall I be? . . . When a man answers that question he not only determines his sphere of usefulness in the world, he also decides in what *direction* his own mind shall be developed. The different professions are not different roads converging on the same end; they are different roads, which starting from the same vantage point *diverge* forever, for all we know.²⁹

In his subsequent efforts to make the university the ultimate guarantor of expert authority, President Eliot contributed to what finally became a great discontinuity in public life. As Thomas Bender has outlined, a model was created of *disciplinary* rather than *civic* professionalism; of experts who abandoned their ties to places; of a "community without locality" based on written exchange between professional peers rather than face-to-face discourse among neighbors and citizens.³⁰

Especially when professional authority became linked with enormous sums of money (whether public or private), the weaknesses of public discourse were excruciatingly revealed. When the national Interstate highway system was authorized in 1956, with its ninety percent funding for urban freeways, this new source of federal money became an almost irresistible supply of outside funds for state and local governments, and public parks and reservations became alluring sites for new construction. Bitter conflicts dogged the planning of ever-larger urban transportation projects, and the efforts to consider the effects of such "public works" on housing, work places, and public spaces. Boston Common, one of the city's two great public spaces, has never been threatened by a highway, but its most staunch supporters could not prevent the construction on its western edge—the border that once faced the open water of the

²⁸Sam Bass Warner, Jr., *The Urban Wilderness* (New York: Harper and Row, 1972), 46; Roy Rosenzweig and Elizabeth Blackmar, *The Park and The People: A History of Central Park* (Ithaca: Cornell University Press, 1992), 15-18.

²⁹James, *Eliot*, 1:56-57.

³⁰Thomas Bender, "The Erosion of Public Culture: Cities, Discourses, and Professional Disciplines," in *The Authority of Experts: Studies in History and Theory*, ed. Thomas L. Haskell (Bloomington: Indiana University Press, 1984), 4, 6.

Charles—of an underground parking garage.³¹ The Basin, by contrast, has been shaped not only by urban visionaries, but just as dramatically by railroads and highways for a hundred and fifty years.

The conflicts between highway planning and other community interests document all too often the dissipation of a unifying culture of refinement and its eclipse by a fragmented and fragmenting professional culture. Only rarely do citizens of the modern metropolis find ways of coming together to consider the common purposes of public life in America's cities.

³¹One Bostonian's view of the garage beneath Boston Common (above which no trees can be planted) is found in Robert Lowell's "For the Union Dead," *For the Union Dead and Other Poems* (New York: Farrar, Straus & Giroux, 1964), 70-72.

. . . One morning last March,
I pressed against the new barbed and galvanized

fence on the Boston Common. Behind their cage,
yellow dinosaur steamshovels were grunting
as they cropped up tons of mush and grass
to gouge their underworld garage.

Parking spaces luxuriated like civic
sandpiles in the heart of Boston.

.....

. . . Everywhere,
giant finned cars nose forward like fish;
a savage servility
slides by on grease.

II. EARTH WORKS AND ELYSIAN FIELDS

The streams, the islands, and the promontories,—all may be made to harmonize in one grand panorama, to display striking and enchanting scenes such as the imagination, once awakened, may conceive better than it is possible to describe.

Robert Gourlay, *Plans for . . . the City of Boston*, 1844¹

For a hundred and fifty years after the founding of Boston in 1630, the town's inhabitants contrived only limited alterations to the region's topography. Beginning soon after the Revolution, however, the schemes of capitalists and builders began to make over their surroundings. The leading lights of the community shared an almost limitless faith in the engineering of what were known throughout the country as "internal improvements." Too late they realized that these ingenious enterprises—especially the mill dams, bridges, and land fills—had turned the region's shallow, meandering rivers into open sewers, creating in the process sanitary hazards that could not be ignored. Yet it was the constrictions of the region's environmental structure—the surficial remains of its geological past, which the improvers fought so tirelessly to overcome—that became the basis for every visionary scheme for the Boston region.

Between the 1780s and the middle of the nineteenth century, the state legislature labored to define the range and limits of private rights and public actions; in those years Massachusetts, like other states, moved from "acquiescence as state policy" to more vigorous intervention in commercial and social issues. Tasks that had initially been viewed as opportunities for chartered corporations and limited monopolies were more strictly regulated or taken over as legitimate activities of state and local government. Bridges, roads, mills, and railways were supported in various ways to promote the economic well-being of the Commonwealth. The profound social consequences of these schemes, even when their effects were manifest in the character and form of cities and towns, were seldom easy to see at the time these internal improvements were chartered by the state. As these effects became more

¹Robert Fleming Gourlay, *Plans*, 1844, 37.

severe, government acquiescence was replaced by the creation of what has been called the "reform state."²

Social reform was at the heart of the first "scientific" city plan for Boston, proposed by Robert Gourlay in 1844, a plan centered visually and symbolically on an island to be created in the center of the Back Bay called the "Elysian Fields." No individual proprietor, not even a corporation like the Mill Dam owners, could carry off the work, Gourlay argued; only the state could create a metropolis that offered health, comfort, and economic prosperity to all its citizens in a gloriously preserved natural setting. To that end, "city building" would become a science, but its work would be directed by Boston's citizens; a society organized by "any dozen individuals of taste and liberality" would disseminate all the necessary plans for buildings, streets, and a "New Town" in the Back Bay.³

The Topography of the River

The earliest known documents showing the entire Charles River Basin from Boston to Watertown include several maps prepared during the Revolutionary War to document the colonists' fortifications in Boston and Cambridge (Figure 2.1). Today these maps evoke startling and unfamiliar realms—scattered uplands separated by broad salt marshes or mudflats that flooded at high tide. The physical reality mapped in the 1770s had changed very little since the first English colonists settled in Boston a hundred fifty years before.

The Charles River estuary, in its full tidal expanse, is almost beyond imagining today. Nineteenth-century drawings, paintings, and photographs of the river suggest the character of these broad salt marshes, though only hinting at their extent. Fragments of similar, once-extensive marshes can still be seen in Boston along the Mystic and Neponset rivers; further north and south of the city, acres of salt-marsh meadows remain, dotted with rocky, tree-covered islands and flooded at high tide.

Though it is only about twenty-five miles over land from the source of the Charles in Hopkinton to the mouth of the river in Boston Harbor, the river's meandering course is almost eighty miles long. About ten miles from the harbor, the meager, unhurried stream flows across the center of a ring of hills that defines the perimeter of what geologists map as the "Boston Basin" (Figure 2.2). On the north, the hills follow a relatively straight line along

²Oscar Handlin and Mary Flug Handlin, *Commonwealth: A Study of the Role of Government in the American Economy: Massachusetts, 1774-1861* (Cambridge, Mass.: Harvard University Press, 1947; rev. 1969).

³Gourlay, *Plans*, 14, 19.



Figure 2.1 Boston and environs, 1775-76.

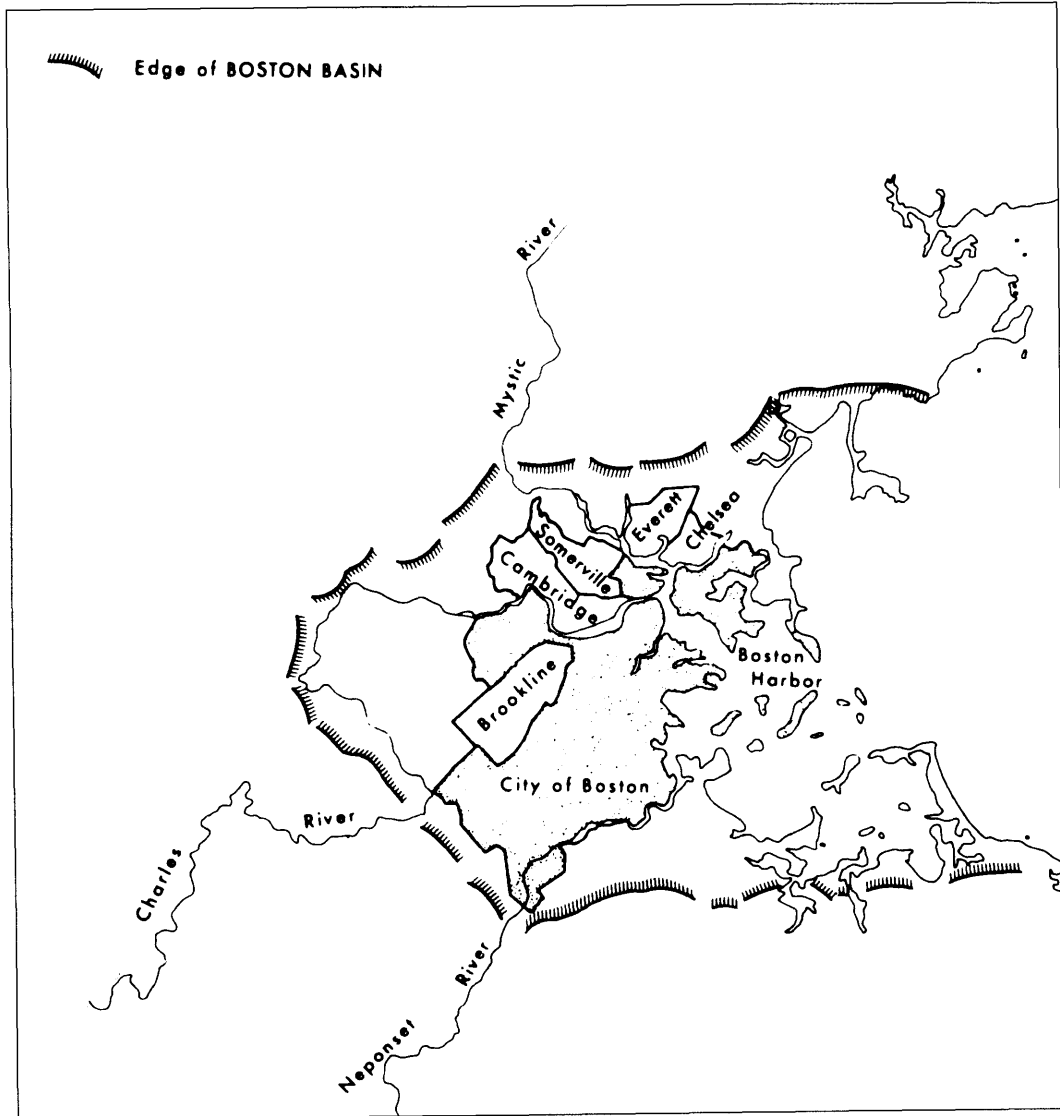


Figure 2.2 The Boston Basin

a single escarpment from Waltham to Lynn. South of Waltham the basin's rim is obscured as the elevations increase more gradually; the Blue Hills form a more visible and dramatic edge just beyond the escarpment. Inside the fault lines of the basin the relatively soft sedimentary soils are manifest in a wide expanse of bays and marshes, not only of the Charles but also of the Mystic and the Neponset rivers to the north and south.⁴ The higher ground is dominated by southeast-facing drumlins, built up by the last glaciers ten thousand years before.⁵

The tidal estuary of the Charles extends eight miles upstream of the harbor to Watertown Square. Charles Eliot concluded in 1892 that the river's physical character "is and always was peculiar:"

In the first place, the so-called 'River' is not a river. It is a tidal estuary, a shallow and muddy trough, broad in its seaward part, narrow and tortuous in its inward extension. . . . When the tide is out, the upper mile of the trough in Watertown is drained practically dry; the four succeeding miles of channel retain only from one to ten feet of water, and the bottom of the lower basin is exposed over at least half its area.⁶

Except for the river edges of the Boston and Charlestown peninsulas, almost the entire length of the estuary was rimmed with salt marsh.

At the boundary between fresh and salt water, the Algonquin had established a large settlement, perhaps as early as six thousand years ago, and had occupied the site continuously for over four thousand years.⁷ Their name for this place was *Mushawwomuk*, "where there is a big river," and the name seems to have encompassed the entire river valley, not just the river itself.⁸ A plague decimated almost the entire Native American population of the Bay Colony in 1617-18, and the rich fishing grounds along the lower Charles were relinquished without resistance or compensation. The small community that remained joined John Eliot's "Praying Indians" in Natick in 1650. During King Philip's War, they were forcibly relocated and held on Deer Island in Boston Harbor, returning to settle in small communities along the Charles in Newton, Wellesley, and Medfield. By 1690 the Algonquin had deeded away all their claims in the Charles River Valley.⁹

⁴Michael P. Conzen and George K. Lewis, *Boston: A Geographical Portrait* (Cambridge, Mass.: Ballinger, 1976), 5-9.

⁵Susan E. Maycock, *East Cambridge: Survey of Architectural History in Cambridge*, rev. ed. (Cambridge, Mass.: MIT Press, 1988), 2.

⁶Charles Eliot, "First Report of the Charles River Improvement Commission," (March 1892), in [Charles Eliot], *Charles Eliot, Landscape Architect* (Boston: Houghton Mifflin & Co., 1902), 559-560. Though the river had been much altered in its particulars when Eliot wrote, the extensive marshes of Soldiers Field still remained to suggest the character of the estuary.

⁷Dena F. Dincauze, *A Preliminary Report on the Charles River Archeological Survey* (Cambridge, Mass.: 1968), 19.

⁸Ives Goddard, Smithsonian Institution, interview by author, September 24, 1992.

⁹Dincauze, 26-28.

The English colonists abbreviated the Algonquin name as "Shawmut" and applied it to the peninsula alone. From the beginning of settlement the colonists oriented the new town toward the harbor, as early engravings like the well-known Bonner map of 1722 make clear (Figure 2.3). The three hills of the peninsula's "Trimountain"—Pemberton, Beacon, and Mt. Vernon—separated much of the growing town from the river. The Charles lapped up against the western edge of the peninsula, where the Common sloped down from the Trimountain, and the mouth of the Charles was fixed on early maps just beyond the North Cove.¹⁰

The broad extent of the lower Charles and its tributaries cut off Boston from the surrounding countryside and from the settlements at Charlestown and Newtowne (as Cambridge was known until 1638). The mouth of the river, between Charlestown and Boston, was less than a third of a mile across, but for a hundred and fifty years ferries offered the only passage linking the two towns. Like Boston, the Charlestown peninsula was mostly well drained upland, without the extensive marshes or mudflats of Cambridge or Roxbury. Immediately upstream of the harbor were Boston's North Cove and the broader expanse of Gibbons' Creek (on some maps marked as "Charles Bay," later Willis Creek, Miller's Creek, and Miller's River). Grave's Neck, now the densely settled community of East Cambridge, was a small island at high tide, cut off from both Cambridge and Charlestown. The shallow flats of Oyster Bank Bay along the southern edge of Cambridge were separated from the uplands by the "Great Marsh." On the Boston side, Stony Brook and the Muddy River flowed into the wide and irregular expanse of the Back Bay, known earlier as "Roxbury Flats and "Charles Bay" (Figure 2.4).

The breadth of the Back Bay at its widest point, from Boston Neck (today the intersection of Washington and Dover streets) to the mouth of Little Cove in Cambridge (near the intersection of Brookline and Auburn streets, not far from Central Square) was over a mile, more than three times the width today at the Harvard Bridge. At high tide the level of the basin rose nine feet above the low-water mark; extreme high tide was as much as fifteen feet above low water.

Upriver, at Captain's Island, the Charles narrows and veers almost due north. Twice a day the marshes on the south side of the river (present-day Soldiers Field and the Harvard Business School campus) were flooded by the incoming tide, creating an expanse of water that extended to Arsenal Street in Watertown. The trip from Boston to Old Cambridge, across

¹⁰Whitehill, 9, 21, 23, figures 15, 16.

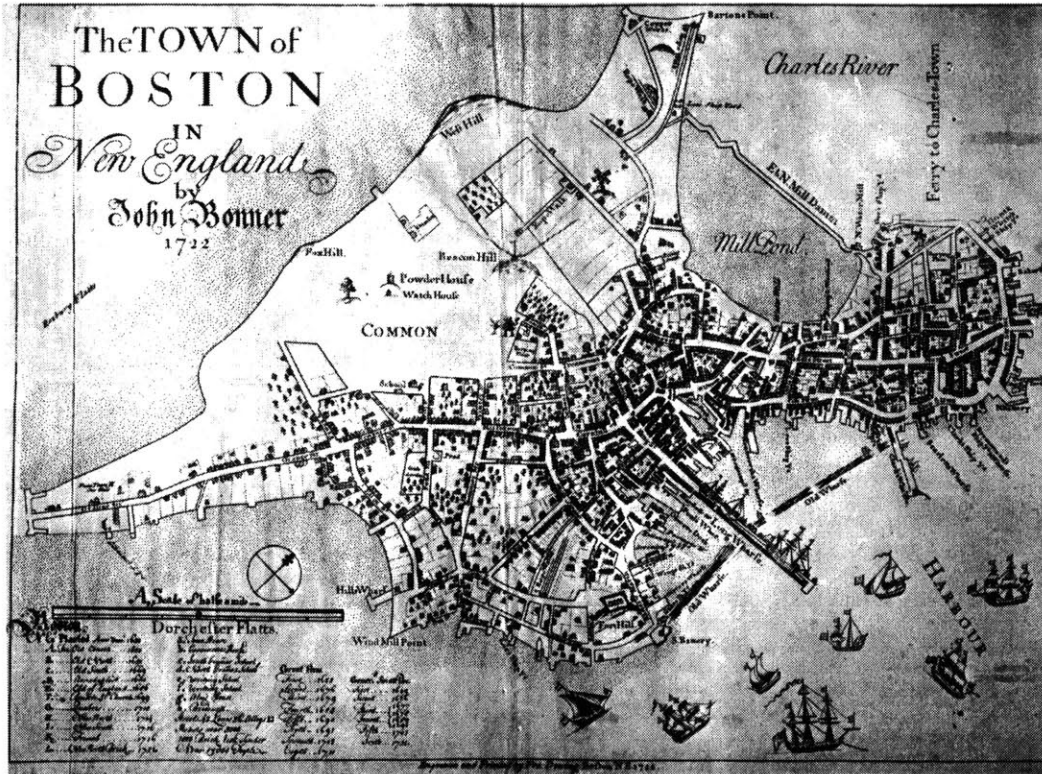


Figure 2.3 Bonner map, 1722.

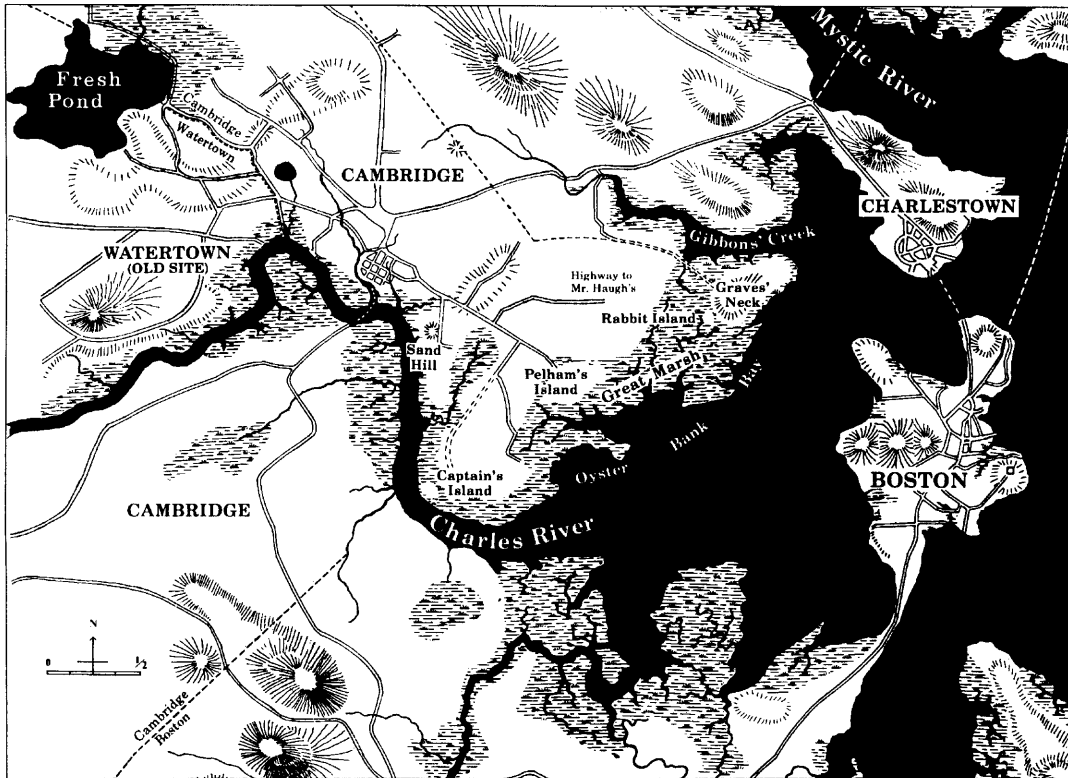


Figure 2.4 The Charles River and environs, 1640.

Boston Neck and then skirting the marshes on the south side of the bay, was eight miles. By ferry to Charlestown, the journey was about half as far.¹¹

Mill Dams and Wharves

In this "watery landscape" the harvesting of salt hay in the marshes began, undramatically, the alteration of the estuary's natural landscape. Far more conspicuous in "the inexorable encroachment of land upon water that has marked the history of Boston" was the construction of wharves on the harbor side of the peninsula, also begun in the first years of settlement. At the end of the eighteenth century, as the city expanded to the west, mill dams and bridges built along the rivers hastened the creation of new land. The mill dams created shallow ponds, and sooner or later the production of the mills was exceeded in value by the prospect of creating new lands by filling the ponds. Bridges, especially when their construction necessitated long causeways across shallow marsh land, attracted fill at their abutments like ships attract barnacles.¹²

The grist mill in Watertown, erected by 1634, was the first dam on the Charles, and is generally regarded as the first dam in the Bay Colony (it is not mentioned in the records of the General Court, perhaps because the right to construct a fish weir had already been given on the same site two years earlier). The mill creek may have been dug at the same time, creating an island in Watertown Square. Built just beyond the head of the tide, the dam established the upper limit of navigation on the river.¹³

The difficulty of maneuvering through the shallow channels downstream of Watertown was one reason for the selection of the site for Newtowne. As the capital of the Bay Colony, the town was to be accessible to the harbor, but also defensible against pirates or attacks from the mother country to revoke the colony's charter. A low hill above the river overlooked both the town and the landing below, and a creek (that followed a curving line from the river along modern Boylston and Eliot Streets) connected the town and the river. A ferry was established from the foot of Water (now Dunster) Street to Little Cambridge across the river (a separate parish in 1679, chartered as the town of Brighton in 1807). The founding of Harvard College in 1636 compensated in part for the loss of the seat of government, which

¹¹The 1630 settlement, originally called "Newtowne," was renamed "Cambridge" in 1638, two years after Harvard College was founded. Bainbridge Bunting and Robert H. Nylander, *Old Cambridge: Survey of Architectural History in Cambridge* (Cambridge, Mass.: MIT Press, 1973), 15.

¹²Maycock, 2; Whitehill, 11.

¹³Thelma Fleishman, *Charles River Dams* (Auburndale, Mass.: Charles River Watershed Association, 1978), 1-2, 24. The "island" in Watertown Square was for many years known locally as "the Delta."

was moved to Boston two years later. A town wharf was built in 1651, and in 1660-62 the Great Bridge was constructed from a levy against the whole colony, the first bridge below the mill dam in Watertown. Extending from the foot of Wood (later Boylston, now Kennedy) Street, the bridge attracted sufficient traffic that Water Street was eclipsed as the center of business in Cambridge.¹⁴

After the Watertown dam and gristmill, the next mill privilege to be granted was in 1643 for a dam across the cove on the north end of the Shawmut Peninsula. There the proprietors were required to erect "one or more corne mills, and maynteyne the same for ever." A narrow island (running roughly along the line of Causeway Street) created a path across the cove at low tide, and served as the foundation for a mill dam across the cove. The mill owners also dug a channel from the mill pond to the Great Cove (also known as Town Cove), which separated the North End from the rest of Boston; bridges over the channel were built at North and Hanover Streets. The fouling of the river and the harbor was presaged by a determination in 1656 that the bridge at North Street was the only place in the town where "beasts entralls and garbidg" could be dumped without a fine.¹⁵

With these few exceptions, the river and its margins remained largely unaltered from the founding of the Bay Colony until the end of the Revolutionary War. The Charles was the principal route from Cambridge and points west to Boston, but through the eighteenth century the city remained oriented to the harbor and saw itself as a seaport, the principal gateway to England and the Continent. The construction of Long Wharf, begun in 1710, heightened that waterfront perspective (Figure 2.5). Beginning at King (now State) Street and extending well beyond Town Cove into the harbor, Long Wharf created what "amounted to a dramatic road from Boston to the sea. . . . the obvious avenue to Boston from the part of the world that really mattered."¹⁶

Bridges and Canals

The insular character of the city began to change at the end of the eighteenth century as bridges were built linking Boston with the mainland. The replacement of the ferry to Charlestown (from present-day Washington Street to City Square) was discussed in Boston town meeting as early as 1720, when, according to Governor Hutchinson, it was "looked

¹⁴Bunting and Nylander, *Old Cambridge*, 15.

¹⁵Whitehill, 11-12.

¹⁶Whitehill, 21.

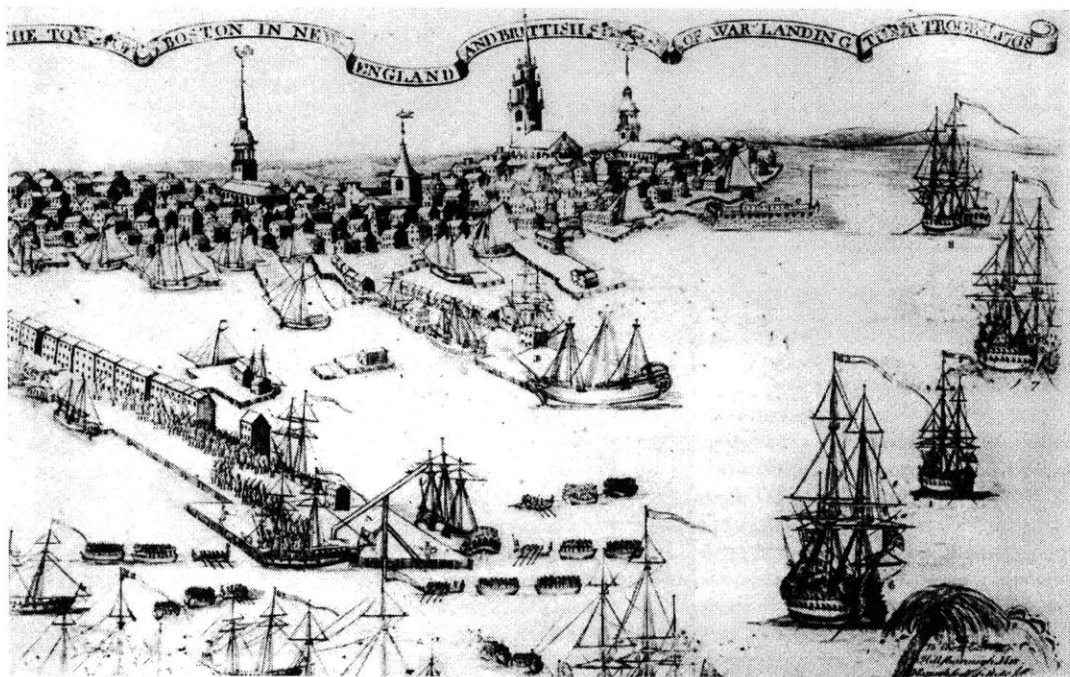


Figure 2.5 The Long Wharf in 1768.

upon as a Quixote enterprise." In 1738 a proposal to construct a bridge from Boston to Lechmere Point was denied by the General Court, though discussions of bridges recurred intermittently until after the Revolutionary War. In 1785, the legislature denied another petition for a bridge to Lechmere Point, this time from Andrew Cabot, who had purchased the confiscated Phipps farm at one end of the proposed bridge. Instead the right to build a toll bridge from Boston to Charlestown was awarded to Thomas Russell, John Hancock, and eighty-two other incorporators. To compensate Harvard College for the loss of its ferry privilege, the proprietors were obligated to pay the college £200 annually. Fifteen hundred feet long, forty-two feet wide, with a thirty-foot draw near the center, the bridge cost £1500 and was the only permanent bridge of any size in America. At the time there were, for example, no bridges at all over the Merrimack, the Connecticut, the Hudson, the Delaware, the Susquehanna, or the Potomac.¹⁷

The dedication ceremonies on Bunker Hill Day (not the Fourth of July) in 1786 attracted "almost every respectable character in publick and private life" in Boston. The bridge (Figure 2.6) was hailed as a triumph of technology, and shortened the route to Boston for merchants and farmers in Charlestown, Malden, and Medford (at the time, these three cities together were about twice as large as the population of Cambridge). A banquet for six hundred people was served on Breed's Hill, and thirteen toasts were offered, beginning with one to the United States and concluding with a wish for the peace, harmony, and happiness of all mankind. In between was an acclamation "to enterprize which shall unite publick advantage with private emolument," a nod toward the still-evolving role of the state in developing the economy. A poem composed for the occasion, "On the flourishing State of CHARLESTOWN," summarized the pastoral ideal to which the town aspired, "Where city life with rural sweets is join'd."¹⁸

The zeal to expand trade with the hinterlands that drove the construction of the Charles River Bridge also resulted in the first major canal project in Massachusetts. Secretary of War Henry Knox commissioned a survey for a canal from the Charles to the Connecticut River in 1791, and a company was incorporated the following year. Knox's venture was a false start; a more feasible proposal to link Boston with the Merrimack was organized in

¹⁷Thomas Pemberton, "A Topographical and Historical Description of Boston, 1794," *Collections of the Mass. Historical Society*, 1794, v. 3 (Reprint: Munroe & Cornhill, 1810), 245; Maycock, 16-17; Whitehill, 48-52; Christopher Roberts, *The Middlesex Canal, 1793-1860* (Cambridge, Mass.: Harvard University Press, 1938), 5. Hancock was the best-known of the proprietors, but Handlin credits Russell as the leader of the project.

¹⁸Caleb H. Snow, *A History of Boston* (Boston, 1828), in Whitehill, 49; Stanley I. Kutler, *Privilege and Creative Destruction: The Charles River Bridge Case* (Philadelphia: Lippincott, 1971), 9, 15; *American Recorder*, 1:56 (June 20, 1786).

1793. The Middlesex Canal, the second to be built in the United States, was described in the 1808 report on roads and canals of the Treasury Secretary as "the greatest work of the kind" in the U.S.¹⁹

Designed by Loammi Baldwin of Charlestown, the last section linking the canal with the mill pond west of Charlestown was opened on New Year's Eve in 1803. Five years later, the canal company rented part of the Almshouse Wharf in Boston's West End (near the future site of Massachusetts General Hospital) and built offices and storage sheds. The annual report for 1808 noted that "a line of direct communication has been fixed" between the wharf in Boston and the canal's termination in Charlestown "by means of buoys and ropes, so that our boats could pass over against the wind and across the tide."²⁰ Floating buoys marked the location of the cables, which were heavily weighted and rested on the river bottom until the canal boatmen pulled them up as they guided their cargoes across the Charles. From there barges continued through Mill Creek Canal past Haymarket to the Town Dock.²¹

The Middlesex Canal struggled to make a profit for two decades. The canal business was chancy until the establishment of the Lowell mills in 1822; during the company's best years in the mid-1830s, the stock paid a dividend of thirty dollars a share.²² The Charles River Bridge, however, made money from the first. Its success opened people's eyes, not only to the prospects for new development in Boston, Charlestown, and the towns to the north, but also to the financial prospects for toll bridges linking Boston more directly to Old Cambridge and the towns to the west. The proprietors of the West Boston Bridge did not wait for a charter, but proceeded in 1793 to sell 200 shares in three hours. This speculative fever alarmed a number of conservative Bostonians; it would be cured, John Adams predicted, "by a few bankruptcies which may daily be expected, I had almost said, desired." Two months later the New York markets crashed.²³ A newspaper editorial argued that the new bridge with its more direct access to Old Cambridge would raise the temptations and therefore the expenses of Harvard College students.²⁴ The high profits from the existing bridge suggested to some that it held an undeserved monopoly, and not surprisingly, the

¹⁹Roberts, 21-22; Mary Stetson Clarke, *The Old Middlesex Canal* (Melrose, Mass.: Hilltop Press: 1974), 3.

²⁰*Report to the Proprietors of the Middlesex Canal, at their Meeting January 25, 1809*, 3.

²¹It is not clear how long the sunken tow-line functioned; in 1826, a petition to build a new bridge to Charlestown described how shipments of lumber on the canal were transferred to wagons in Charlestown to be transported over the old Charles River Bridge to Boston. See Kutler, 23.

²²Edward Chase Kirkland, *Men, Cities, and Transportation: A Study in New England History* (Cambridge, Mass.: Harvard University Press, 1948), 64.

²³Roberts, *Middlesex Canal*, 25.

²⁴*Columbian Centinel*, January 21, 1792.

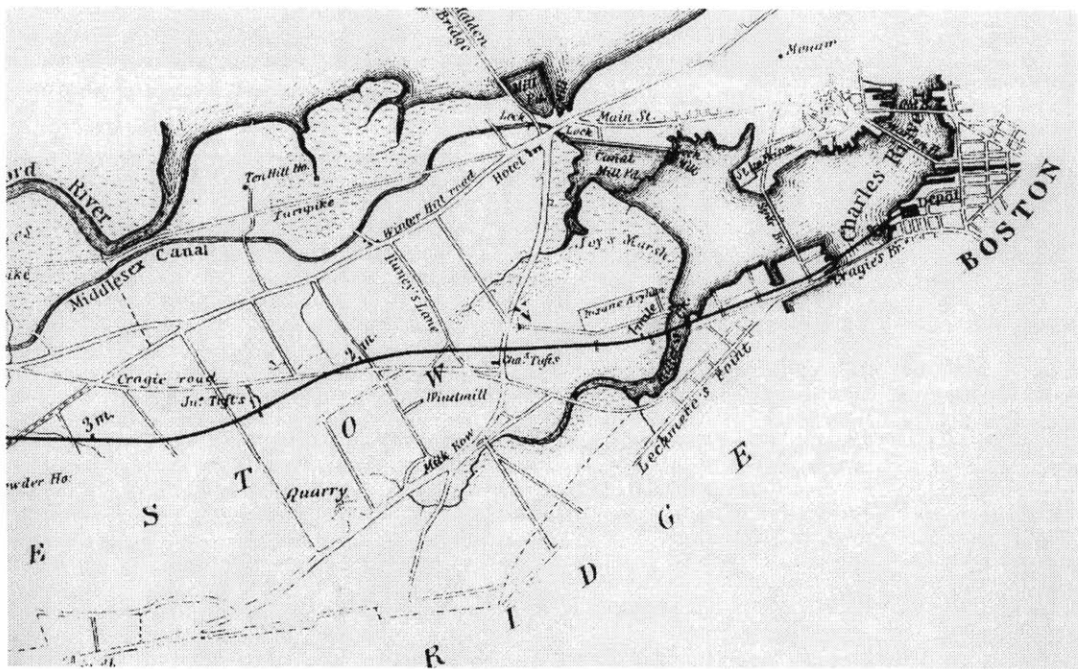


Figure 2.6 The Middlesex Canal and the Charles River, 1801.

Charles River proprietors objected to the new bridge. They were placated by an extension of their right to collect tolls an additional thirty years, and the new bridge was approved.

Built in 1793, the bridge extended from Cambridge Street in Boston over the river to a causeway that ended at Pelham's Island (Figure 2.7). More than twice as long (3,483 feet) as the Charles River Bridge, it also required a causeway 3,344 feet across the Cambridge marshes. It hastened the growth of Boston's West End (where prosperous merchants like Harrison Gray Otis built mansions), and created aspirations for international trade among the proprietors of the new village of Cambridgeport.²⁵

Within a year after the West Boston Bridge was completed, half a dozen buildings had been constructed on Pelham's Island. Canals and dikes were built to drain the marshland around the island and define clear navigation channels, streets were laid out, and house lots plotted. Further development was delayed when one owner's property was confiscated by the federal government in 1798. In 1805 Cambridge was declared a U. S. port of delivery, and the Cambridge and Concord Turnpike (now Broadway) and the Middlesex Turnpike (now Hampshire Street) were authorized. A year later the population of the Port was estimated at a thousand people. Prosperous lumber, coal, and stone wharves along the causeway and the canals relied upon the river for transportation, but the town never fulfilled the commercial aspirations of its proprietors. A half-mile stretch of woods isolated the village from Old Cambridge, and much of the "Great Marsh still remained, a hindrance to development on the east. The opening of the River Street Bridge in 1811 connected the Port to Brighton, but by the end of the War of 1812, the center of manufacturing had shifted to East Cambridge. In twenty-five years, the only outside capital the village attracted was the state powder magazine, built on Captain's Island near the river's edge in 1818.²⁶

The rise of East Cambridge in supplanting Cambridgeport as the center for industrial development north of the river also began with bridge construction, this time promoted by Andrew Craigie. An officer in the Continental Army, eventually appointed Apothecary General, Craigie speculated in land in New England and New York during and after the war. Although he was not an incorporator, he was a member of the first board of directors for the Middlesex Canal. Craigie began buying land in East Cambridge near the terminus of the canal soon after construction started, secretly authorizing friends and relatives to buy land in their names over a period of seven years. By 1805 he controlled all the upland of East

²⁵*Cambridgeport*, 17-18.

²⁶*Ibid.*

Cambridge, and petitioned the General Court for approval of a bridge across the Charles. Over the next two years the Middlesex Canal owners and the Newburyport Turnpike proprietors also applied to the legislature for a bridge from Boston to East Cambridge, though they finally agreed (in spite of their suspicions that Craigie's real estate holdings gave him a significant advantage) to join in a single company. Disagreements over the location were resolved, and Loammi Baldwin designed a structure to connect Leverett Street in the West End with Lechmere's Point.²⁷

Among the leading opponents of Craigie's Canal Bridge were the proprietors of the West Boston Bridge. Their charter required an annual payment to Harvard College, the holder of the original ferry privilege from Boston to Charlestown. The result was a requirement that the Canal Bridge pay the college half the annual annuity owed by the West Boston Bridge to the college. The Charles River Bridge owners, however, did not challenge this third river crossing. They were collecting almost \$20,000 a year in tolls, and the value of their stock had tripled.²⁸

That was not, however, the end of the controversy. Acrimonious debate surrounded the development of roads from Old Cambridge to the West Boston and Canal Bridges. At one point the founders of Cambridgeport refused to allow the construction of Cambridge Street across their property, because it would provide a straight thoroughfare from the Canal Bridge and East Cambridge to the center of Old Cambridge. Petitions and counterpetitions were filed with the legislature, including one which observed that "few men are so old in the Legislature as to remember when Andrew Craigie and his associates were not Petitioners for some grant or indulgence from the Government." The charter was, in the end, awarded to Craigie, and the bridge finally opened in August 1809, on Harvard's commencement day.²⁹

Craigie then turned to developing the three hundred acres he held in East Cambridge. Purchased for less than \$20,000, he sold sixty shares at \$6,000 each, and later named some of the streets after the new shareholders. After lobbying the Middlesex County officials, and making a gift of \$24,000 to the county, Craigie persuaded them to relocate the courthouse to East Cambridge. A grand gala was held to celebrate the opening of the courthouse, but by the time of Craigie's death in 1819 only a few landowners had settled in the new village. The only industrial occupant was New England Glass located northeast of Bridge Street.³⁰

²⁷Maycock, 17-19.

²⁸Kutler, 15.

²⁹Maycock, 21-22.

³⁰Ibid., 28-29.

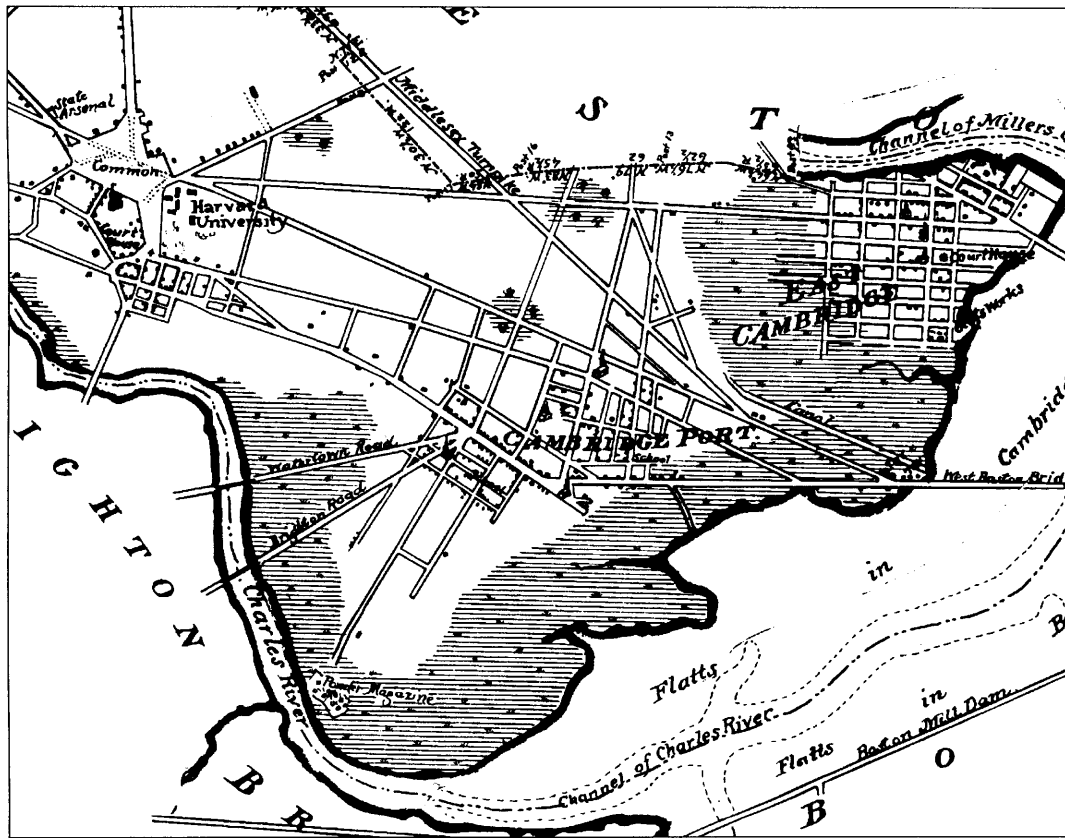


Figure 2.7 Cambridge and the West Boston Bridge, 1830.

The Charles River Bridge Controversy, 1823-1847

In 1823 a petition for yet another bridge on the Charles was filed by John Skinner and Isaac Warren, the first act in a controversy that would take more than twenty years to resolve. The proposed bridge was to be located less than three hundred feet away from the Charlestown abutments of the 1786 bridge, and it was to be toll-free. Wharf owners object to the prospect of further obstructions to navigation, and the president and treasurer of Harvard College were directed to file remonstrances to the General Court. The legislature took no action, and ignored the petition when it was resubmitted in each of the next three sessions. A lengthier petition was filed in 1826, listing the "public exigencies" that required a new bridge. The draw of the old bridge obstructed travel; the streets leading to the bridge were overcrowded; the western part of Boston and the Navy Yard in Charlestown should be served; and the tolls on the old bridge were "burdensome, vexatious, and odious."³¹

This time the General Court acknowledged the filing. A committee report not only refuted all the arguments of the petition, including the claimed benefits of establishing the first free bridge, but also portrayed the proposal as constitutionally indefensible and bad public policy. If there were no tolls, the gain to Charlestown's residents would be at the expense of the proprietors, and more broadly, the state. By jeopardizing the original investment, the whole community would suffer as future ventures would decline to risk their capital in public improvements. The committee summarily rejected the petition. By now however, the petitioners believed that opinion had changed in their favor. They refiled the petition later in the same year, and again early in 1827. For the first time, the petitioners alleged that the proprietors of the old bridge had obtained the thirty-year extension of their charter (at the time the West Boston Bridge was approved) by fraud. Though the proprietors objected strenuously, the yearly profits and the greatly increased value of the stock left many unsympathetic to their claims of abridged property rights.³²

In March the House and Senate ignored committee proposals for compromise and authorized the charter. The Warren Bridge was to be built upstream of the existing bridge, 260 feet upstream on the Charlestown side and 915 upstream on the Boston side 915. Toll collection would cease after the initial capital and expenses were recouped, but no later than six years after completion. In the first of several legal landmarks in the case, Governor Levi Lincoln vetoed the bill, the first use of the executive veto by a Massachusetts governor. A

³¹Kutler, 19-20.

³²Ibid., 21-27.

year later a nearly identical bill was approved again, and though the margin of passage was lower, Governor Lincoln signed the bill. The new bill did oblige the Warren Bridge to pay half the annuity owed to Harvard College by the Charles River Bridge proprietors.³³

The corporation was organized in April; in June work began, and a bill in equity was filed by the Charles River Bridge proprietors (whose legal counsel included Daniel Webster) with the state Supreme Judicial Court. Pending a hearing, the lawyers asked for an injunction to halt the construction. A few days after the hearing in August, the injunction was denied. The bridge was opened on Christmas Day, but the court decision in favor of the Warren Bridge was not announced until January 1830. In order to allow the plaintiffs to appeal to the U.S. Supreme Court, the case was dismissed. Receipts on the old bridge for first half of 1829 were only \$6,000, down from \$15,000 for the first six months of the previous year.³⁴

The first arguments before the Supreme Court were presented in March 1831, but announced less than a week later the Court, failing to reach a decision, ordered the case continued. A motion for reargument was accepted in 1833, but the arguments were not presented. One justice died and another resigned the following year; Andrew Jackson nominated two new justices in January 1835, and in the same month Webster recommended that the Charles River Bridge plaintiffs seek a settlement through the state legislature. In the spring of 1835 Chief Justice Marshall died, and a backlog of sixty cases piled up before Roger B. Taney was confirmed as the new chief justice.³⁵

Meanwhile, the Warren Bridge had collected tolls sufficient to meet its obligations by early 1832. Rather than declaring the bridge free and open, the proprietors asked to have the toll privilege extended to cover their potential liability in the still-pending case. An 1835 report to the state senate showed that for 1832-34 toll receipts for the Charles River Bridge had declined by over half since the new bridge opened (to an average of about \$12,000 per year); the bridge was still profitable, however, and net income had increased from \$6,541 to \$9,383. For the same years the Warren Bridge had averaged about \$22,000 per year in tolls, with profits increasing from about twelve to a little more than sixteen thousand.³⁶

A year later the state senate offered the Charles River Bridge proprietors a settlement of \$25,000, which they declined. Impatient with the continuing delays, the legislature rejected a series of compromises. In the absence of new legislation, the bridge became the

³³Ibid., 31-33.

³⁴Ibid., 35-36, 45.

³⁵Ibid., 54-58.

³⁶Ibid., 75.

property of the state, and therefore free of tolls, on March 2, 1836, and the Warren Bridge Corporation was dissolved. There was a celebration in Charlestown, but in Cambridge Harvard's treasurer reported that the college's Bridge Company stock was now worthless.³⁷

The Supreme Court finally heard arguments in the bridge case in January 1837. Simon Greenleaf was granted a leave of absence from Harvard Law School to argue the defendants' case, a milestone in the history of academic freedom, since Harvard's financial interests were with the plaintiff's side. Daniel Webster argued for the proprietors that the new charter indirectly destroyed the old. Justice Story wrote Charles Sumner a few days later that the arguments on both sides were "a glorious exhibition for old Massachusetts."³⁸

Less than three weeks later, when the Court had decided in favor of the Warren Bridge, Story said in a letter to his wife that "A case of grosser injustice, or more oppressive legislation, never existed. I feel humiliated, as I think everyone here is, by the act which has now been confirmed." The majority opinion observed that the Charles River Bridge had destroyed Harvard's ferry privilege, and the bridge charter did not require Harvard's consent. The legislature then authorized the West Boston Bridge with no hint that the extension of the Charles River charter for an additional thirty years was compensation. If the case were decided in favor of the old bridge, Justice Taney saw the turnpike corporations "awakening from their sleep and calling upon this court to put down the improvements which have taken their place."³⁹

The Charles River proprietors were still obligated to maintain the bridge, to tend the draw, and to pay Harvard \$666 each year. They petitioned legislature for release from those obligations and for compensation for loss of their property. The legislature, acting either from principle or vindictiveness, agreed to take on liabilities, not only refused to offer compensation, but also declined even to study the value of their franchise. The bridge corporation responded by raising the draw and closing the bridge on May 3, 1837. Four years later, the legislature voted a bill that offered a \$25,000 settlement to the proprietors. The act also reinstated the tolls for no more than two years, to repair the bridge (by now in disrepair) and to pay the compensation. The settlement amounted to only \$166.66 per share, and it was paid by the bridge users, not by the state. In 1847, the legislature granted Harvard

³⁷Ibid., 106-108, 74-75.

³⁸Kutler, 76-77; Joseph Story to Charles Sumner, 25 January 1837, in William W. Story, ed., *The Life and Letters of Joseph Story, Associate Justice of the Supreme Court of the United States, and Dane Professor of Law at Harvard University*, (Boston: Little, Brown, 1881), 266.

³⁹February 14, 1837, in Story, 268; Kutler, 87-93.

\$3,333.30 compensation for the loss of the college's annuity during years when the state had ownership of the bridge. So ended Harvard's "ancient" ferry privilege.⁴⁰

Damming the Back Bay

Here and there, especially near the new bridges, marshes were drained and filled to create new land. At the turn of the century, the scale of these operations dramatically increased. In the Back Bay the "first instance of dumping the tops of hills into coves" began in 1799. The Mount Vernon Proprietors had acquired property from the agent of John Singleton Copley, who had left Boston twenty years before, never to return. When Copley learned of the sale, he tried unsuccessfully to stop it. He thought the price was far too low, and refused to sign the deed. Lawsuits over the sale continued into the 1830s. The proprietors then commissioned two surveys, one by Bulfinch and another by Mather Withington, the proprietors' surveyor. Bulfinch's grandiose design made a square of the top of Mount Vernon, 460 feet long and 190 feet wide; the surveyor's simpler plan, which was chosen, required cutting down the hill by fifty or sixty feet. A gravity railroad was constructed to dump the gravel from the hill into the river along Charles Street. The railroad has been described as the first in America, and the land transaction was the largest in Boston up to that time.⁴¹

Beacon Hill was the next peak of Boston's Trimountain to go. The sad tale of the cutting down of the hill has been recounted by Whitehill; the concern here is with where the hill went. First proposed in a contentious town meeting in 1804, an agreement to take the gravel from the highest part of Boston and dump it into North Cove was finally approved three years later. The whole mill pond was to be filled, and the town would get one-eighth of the land. An extension of Mill Creek would be built parallel to the new Canal Street, allowing water to continue to flow from the Charles through the canal to the harbor. The filling went on for twelve years, and when the remains of Beacon Hill proved insufficient, street sweepings and oyster shells were also added to the new building lots.⁴²

⁴⁰Kutler, 112-116.

⁴¹Whitehill, 60-62. For a recent argument that this railroad was the first in America, see Frederick Gamst, "The Context and Significance of America's First Railroad on Boston's Beacon Hill," *Technology & Culture* 33:1 (1992) 66-100. Depositions from the lawsuits are the principal source of information on both the land development and the rail road that was developed; Nancy Stein Seasholes, "Landmaking and the Process of Urbanization: The Boston Landmaking Projects, 1630s-1888" (Ph.D. dissertation, Boston University, 1994), 126.

⁴²Whitehill, 79.

These early landmaking efforts would be overwhelmed in scale by a scheme for the Back Bay. Its original intention was to replace the mills that had been lost in the filling of North Cove. In the end, the failure of this grandiose milling enterprise changed "the shape of Boston more completely than any other single undertaking in its history" (Figure 2.8).⁴³

In June 1813 Uriah Cotting and others petitioned the legislature to establish the Boston and Roxbury Mill Corporation and to allow the new company to dam both the Back Bay and the South Boston Bay, connecting them by raceways across Boston Neck to create tidal ponds for the generation of power. The Back Bay mill dam would extend from the corner of the Common at the foot of Beacon Street to Gravelly Point in Roxbury (today the intersection of Commonwealth and Massachusetts avenues). To help defray the cost, a toll road would be built on top of the dam that would connect with the Worcester Turnpike. A town meeting determined to refer the project to committee. The committee issued a favorable report in October, which was accepted in town meeting "almost unanimously." The following year another scheme proposed to add to the original proposal two additional dams, across the Charles (near the present Harvard Bridge) and across Barrell's Creek in Cambridge.⁴⁴

The town appointed a committee of gentlemen, one from each ward, which reported that there were few objections to the scheme, all of them obviated by suitable provisions in the town's grant to the corporation. The mill dams would retain large amounts of capital "now forcing their way in distant and inconvenient situations," would create "new sources of employment," and would render valuable an extensive tract of land owned by the town. The committee recommended approval of the plan, provided that a portion of the shares in the corporation be made available to all who wished to purchase them.⁴⁵

The legislature then held hearings, and issued a report written by Thomas Handasyd Perkins, which endorsed the Cotting scheme with some changes. Bridges already impeded navigation in both South Bay and the Back Bay, and the Back Bay was very rarely navigated, making both bodies of water "almost a *waste*." The new water-powered mills would give Boston an edge over New York and Philadelphia, whose factories were dependent on steam power. The mills would employ as many as 10,000 people and \$8,000,000 in capital.⁴⁶

The act of incorporation passed in 1814 altered the terms of the project. South Bay would be the full basin, rather than the empty basin, and the dam across Back Bay would

⁴³Ibid., 88.

⁴⁴Seasholes, 220-221. The Back Bay project is also described in Whitehill, Winsor, and Shurtleff.

⁴⁵Uriah Cotting, *The Boston and Roxbury Mill Corporation*, [Boston?: s.n., 1818], 21.

⁴⁶Ibid., 22-23.

extend from Beacon Street to Sewall's Point in Brookline (now Kenmore Square), rather than to Gravelly Point. A third dam, the "Cross Dam," was also authorized, from Gravelly Point to the relocated Back Bay dam. Though the deliberations of the legislature show no objections to the project because of its effects on public health, the act gave the Board of Health the authority to require that the flats in the empty basin be kept covered with water, perhaps a recognition of the generally held belief in the benefits of fresh air. At the close of its session that year the legislature approved the charter with only fifty of the five hundred legislators present and voting.⁴⁷

The sanitary hazards of Boston's rivers have in recent times been described as a post-Civil War issue, created by the city's phenomenal growth in the last third of the nineteenth century.⁴⁸ In fact, the problem was predicted in 1814, before the dam across the Back Bay was built, and had become a disaster by the 1840s. One Boston resident, in a letter to the editor of the *Daily Advertiser* the day after the charter was approved, correctly prophesied that the mill dams would create an "empty mud-basin, reeking with filth, abhorrent to the smell and disgusting to the eye."⁴⁹

The project, as described by Cotting in his public stock offering, was seen entirely in economic terms. It had been delayed by the War of 1812, as well as by the need to gather information and make such calculations that no one who subscribed would be disappointed in the results. With the end of the war, the need for mill sites in Boston was greater in New England than elsewhere; the population was increasing faster than the agriculture and manufacturing enterprises to support them, and the region's only advantage was the "superabundant productiveness in men." Boston had the opportunity, unmatched by any other city in the world, to create all of the water power necessary for its future manufactories, and tide mill power would be ten percent less than steam power, on which other cities relied. To assure prospective stockholders, Cotting pointed out that the same group of men had also successfully developed ventures on Broad and Market Streets, and on India and Central Wharves. He also pointed out the skepticism that greeted the proposal for the Charles River Bridge, whose stock was now worth six times its original price. The mill dams would not only generate power, but the primary dam would also function as a toll road connecting the

⁴⁷Seasholes, 222; Whitehill, 90.

⁴⁸John Olmsted wrote in 1912 that "In 1875 it became apparent that this population had at least one great problem before it which could not be solved effectively by the independent action of the separate municipalities. The problem was the problem of sewage disposal." "The Metropolitan Park System", 56. As the 1878 Board of Health Report makes clear, 1875 was the year the board began investigating the problem.

⁴⁹*Boston Daily Advertiser*, June 10, 1814, in Whitehill, 90.

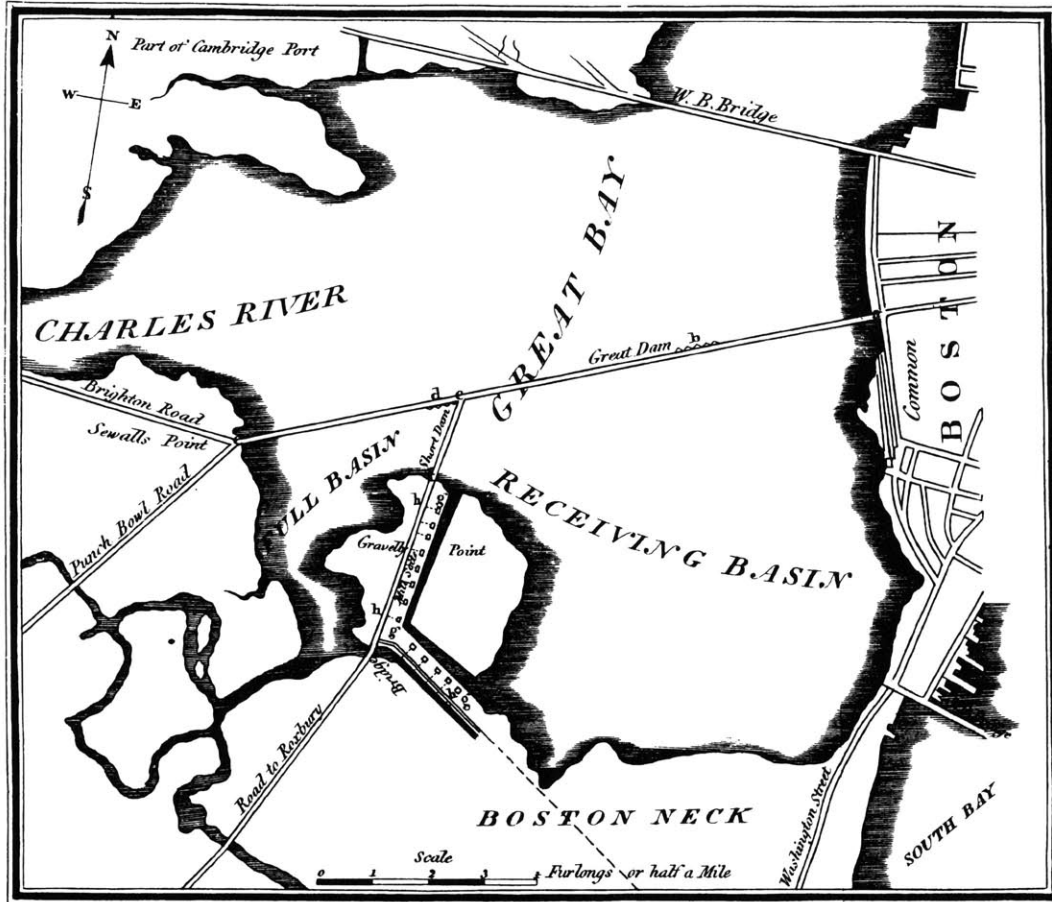


Figure 2.8 The Great Dam and the Short Dam across the Back Bay, 1821.

foot of Beacon Street with the Worcester Turnpike. His pointed final lines observed that "If the public do not have all these improvements it will not be the fault of URIAH COTTING."⁵⁰

The stock subscription sold out in a few hours, the dam was constructed, and Western Avenue, the new toll road, was opened in July 1821. In the opening day address, General William Sumner observed that three decades earlier, Boston Neck was the only land route from Boston to the Mainland.

It was then, our town resembled a hand, but it was a closed one. It is now opened and well spread. Charlestown, Cambridge, South Boston, and Craigie's Bridge have added each a finger, and lately our enterprising citizens have joined the firm and substantial *thumb* over which we now ride.⁵¹

Aspirations for Refinement

Even before the enterprises of roads, bridges, canals, and railroads began to shape American cities, the influence of Renaissance ideas of city life was transplanted from the courts of Europe to England and then to the American colonies. As Richard Bushman has recently shown, this impetus toward more urbane cities was part of a whole "culture of refinement." It began about 1690, and comprised manners, dress, conversation, the decorative arts—all the trappings of what came to be called polite society. It was also manifest in what Bushman calls "its beautification campaign," affecting the design of houses, gardens, public buildings, even city plans. In the process of identifying what was proper and refined, genteel culture scrutinized all these forms and activities. If its standards were not met, persons, houses, even whole neighborhoods would be judged improper, ugly, uncivilized.⁵²

As a cultural system, refinement clashed with the values of capitalism and republicanism. As Bushman explains, refinement "was worldly, not godly, it was hierarchical not egalitarian, and it favored leisure and consumption over work and thrift." But capitalist markets, it turns out, required both "frantic getting and energetic spending"; together these two cultural systems created our economy of consumption. In the larger community, they also allowed self-interest—the impulse to impress, to define social standing, to establish one's importance—to be joined with civic betterments that advanced all classes in the community.

⁵⁰Cotting, 1-20.

⁵¹Josiah Quincy, *Municipal History of the Town and City of Boston during Two Centuries* (Boston: C.C. Little & J. Brown, 1852), 26-27.

⁵²Bushman, *Refinement*, xiv.

City fathers could sponsor the creation or improvement of public spaces that not only increased the value of their own real estate but would also provide "breathing spaces" near densely inhabited tenements and elevate the manners and morals of the lower classes.⁵³

The spreading impulse for refinement, which clashed profoundly with the egalitarian politics of the colonies, was reinforced by another divergence between Europe and the New World, a contrast defined by Leo Marx as "the American ideology of place." The myth of the American continent was rooted in the contrast between the cultured cities and cultivated landscapes of the Old World and the resounding emptiness of the American colonies. The vast unpeopled continent required a mental transformation that John Locke identified in his *Second Treatise on Government*:

Where there is not something both lasting and scarce, and so valuable to be hoarded up, there men will not be apt to enlarge their possessions of land, were it never so rich, never so free for them to take; for I ask, what would a man value ten thousand or a hundred thousand acres of excellent land, ready cultivated in the middle of the inland parts of America, where he had no hopes of commerce with other parts of the world, to draw money to him by the sale of the product? It would not be worth the enclosing, and we should see him give up again to the wild common of nature whatever was more than would supply the conveniences of life to be had there for him and his family.

Thus in the beginning all the world was America. . . .

As Leo Marx has pointed out, the last line has been often quoted out of context. The point is not simply that the Old World, like the New, was once an Edenic landscape. These vast spaces were so unfathomable as to be worthless—until they were drawn into an economy of exchange. Only then would men be driven to advance the edges of civilization. Thus, in the utilitarian version of the American myth, the focus was on the advancing line of civilization as it moves from East to West.⁵⁴

The alternative mode of understanding American space—in fact, its mirror image—was the primitivist version of the myth. Here the worst features of civilization are contrasted with the most pleasing aspects of nature. As Marx has shown, the locus of this second myth was not on the eastern edge of the continent, the expanding realm of ordered society, but on the far western fringe, as far as possible from the decadence of the Old World.⁵⁵

⁵³Ibid., xvii, xix.

⁵⁴Leo Marx, "The American Ideology of Space," in Stuart Wrede and William Howard Adams, eds., *Denatured Visions: Landscape and Culture in the Twentieth Century* (New York: Museum of Modern Art, 1991), 65.

⁵⁵Ibid., 66.

Between these two extremes was a third variation of the myth, an American rewriting of the ancient Middle Eastern pastoral ideal, where nature and culture, like the lion and the lamb, would dwell in harmony together. Thomas Jefferson's famous defense of "those who labour in the earth" as God's chosen people, like his opposition to the development of manufacturing in America, was rooted in this ideal of America as a middle landscape, harmoniously situated between the culture of cities and the wilds of nature. This was not a simple agrarianism, but a rejection of economic standards as the ultimate measure of society. The loss to the economy of keeping factories in Europe would be made up, Jefferson was convinced, in the "happiness and permanence of government."⁵⁶ Both the upward-striving aspirants to refinement and the intellectuals who rejected the utilitarian mode in favor of a pastoral middle ground could join in seeking dignified public landscapes that expressed the hopes of the new republic.

By the end of the eighteenth century, the spirit of gentility had encouraged a decided preference for straight streets and some sense of urban grandeur in the colonies. One witness to this new civic sense was Josiah Quincy, who later served four terms as mayor of Boston. In 1773 he visited cities and towns on the Eastern seaboard as far south as Charleston, South Carolina, and compared their appearance and orderliness. "The streets of Philadelphia," he wrote, "intersect each other at right angles; and it is probably the most regular, best laid out city in the world."⁵⁷

The medieval street patterns of Boston were based on topography and on the predilections of the town's builders, not on European ideas, and left little room for the new taste in city design. Instead, the desire for gentility in the eighteenth century town was manifest in more elegant residences, in church buildings like Christ Church (Old North), Old South, and King's Chapel, and in new public buildings like the Town House.⁵⁸ Beyond the city elegant country seats were constructed, including several famous estates along the Charles.

After the Revolutionary War, signs of refinement in Boston multiplied at a lively pace. No single person epitomizes the transformation more than Charles Bulfinch, architect of the new State House (1795-98), several churches, a number of the most elegant Federal-era residences, whole blocks of town houses, and street plans for several sections of the growing

⁵⁶Thomas Jefferson, *Notes on the State of Virginia*, Query XIX, in Marx (1964), 125.

⁵⁷Bushman, *Refinement*, 139.

⁵⁸Whitehill, 22-46.

town.⁵⁹ To the north of Boston across the Charles, Bulfinch designed a country seat for his first patron; its location confirms the open and undeveloped character of much of the surrounding towns. The wide expanse of water just upstream of the bridge at the junction of the Charles and Millers rivers still lent an air of remoteness to the undeveloped hills and flats west of Charlestown neck, in spite of the much increased traffic through Charlestown that followed the opening of the first Charles River Bridge. In 1791 the Boston merchant Joseph Barrell purchased two hundred acres overlooking the two rivers, including a fifty-foot rise known as "Cobble Hill," as the site for a new suburban estate. Bulfinch's design for the Barrell mansion included the first oval parlor built in Boston, expressed on the principal facade in a bow-front exterior wall with a curved portico above. This eastern outlook commanded "a superb view over the garden and Charles River, [with] Boston with its many spires in plain sight."⁶⁰

Barrell hired an English landscape gardener named Stevenson to design the grounds, which included "lawns, trees, gardens, terraces, greenhouses, fish-ponds, dove-cotes, poultry-yard, stable, coach-house, a well-stocked barn, and an attractive boat-house." Trout and gold-fish were "domesticated" in a fish pond on axis with the oval parlor; liveried boatmen were employed to pilot a barge across the river, a pleasant alternative in good weather to the land route through Charlestown and then across the new bridge. Barrell's use of a landscape gardener was uncommon in the eighteenth century; both buildings and landscapes were more often the work of gentlemen amateurs.⁶¹

In 1816, after Joseph Barrell's death, his estate in Charlestown attracted the interest of the new Massachusetts General Hospital, organized five years before. The York Retreat in England, one of the first asylums in Europe, had pioneered an approach to the treatment of the insane that came to be known as "moral management." The emphasis on the fundamental connection between mind and body was reinforced by providing care in open, naturalistic settings, representing in the landscape the absence of constraint that was a hallmark of the

⁵⁹On the influence of Bulfinch in Boston, see Whitehill, "The Boston of Bulfinch," in *Boston*, 47-72; Harold and James Kirker, *Bulfinch's Boston* (New York: Oxford University Press, 1964); Harold Kirker, *The Architecture of Charles Bulfinch* (Cambridge, Mass.: Harvard University Press, 1969).

⁶⁰Edward G. Porter, "Demolition of the McLean Asylum at Somerville," *Proceedings of the Massachusetts Historical Society*, Second Series, 10 (1895-96): 549-550.

⁶¹Zaitzevsky, "Education and Landscape Architecture," in *Architectural Education and Boston: Centennial Publication of the Boston Architectural Center, 1889, 1989*, ed. Margaret Henderson Floyd, (Boston: Boston Architectural Center, 1989), 20; Porter, 549; Nina Fletcher Little, *Early Years of the McLean Hospital* (Boston: Countway Library of Medicine, 1972), 149. One nearby example of the gentleman architect was Christopher Gore, who designed the grounds of his estate along the Charles in Waltham.

new regime. The first superintendent of the McLean Asylum was persuaded that the Barrell estate would be an ideal site. The state had constructed a prison on the river's edge in Charlestown in 1805, also designed by Bulfinch, but its unadorned granite facades were probably not seen as a significant intrusion on the pastoral views from the grounds of the Barrell mansion. The Barrell estate offered not only a superbly planted site but also easy access from its own wharf across the Charles to the waterfront site that the new hospital had identified in Boston's West End. Charles Bulfinch was sent off to inspect hospitals and asylums in New York, Philadelphia, and Baltimore, and then retained by the hospital to design two new wings for the Barrell estate as well as the hospital's first structure in Boston (Figure 2.9).⁶²

The Public Realm

The forty-odd acres of Boston Common were acquired by the proprietors of the Massachusetts Bay Company from the Rev. William Blaxton in 1634, four years after the colony moved across the river from Charlestown and five years after Blaxton had settled alone on the Shawmut peninsula. As early as 1674 this public space was described by the English visitor John Josselyn as "a small, but pleasant Common where the Gallants a little before Sun-set walk with their Marmalet-Madams, as we do in Morefields, &c till the nine a clock Bell rings them home to their respective habitations, when presently the Constables walk their rounds to see good orders kept, and to take up loose people."⁶³ Much of the Common was regularly used as a cattle pasture and a military parade ground.

In 1784 a new row of trees was planted along the Tremont Street mall. Eleven years later, land opposite the mall was sold by the town to pay for a new Almshouse, and Colonnade Row (another Bulfinch design) was constructed in 1810. These new rowhouses provided views across the Common to the Back Bay and the hills of Brookline and Brighton; Whitehill describes them as among the city's most agreeable locations. As the harbor side of the Shawmut peninsula was more densely built up, Bostonians became increasingly attached to the wide vistas and the fresh southwest breezes across the Back Bay and the Charles.

According to Josiah Quincy, in his first inaugural address as mayor in 1823, this fresh air was

⁶²Harold Kirker, *Architecture*, 211-215, 307-317. On moral management and therapeutic landscapes, see Andrew Scull, "The Discovery of the Asylum Revisited: Lunacy Reform in the new American Republic," *Madhouses, Mad-Doctors, and Madmen: The Social History of Psychiatry in the Victorian Era*, ed. Andrew Scull (London: Athlone, 1981), 148-159; and Kenneth Hawkins, "The Therapeutic Landscape: Nature, Architecture, and Mind in Nineteenth-Century America" (Ph.D. dissertation, University of Rochester, 1991).

⁶³Whitehill, 15.

now a matter of the general welfare. "The sons of fortune can seek refuge in purer atmosphere. But necessity condemns the poor to remain and inhale the noxious effluvia," he said; the city, therefore, should provide for its poorest citizens "that surest pledge of health, a pure atmosphere."⁶⁴ Along with his active interests in a new market, the city water supply, the sewerage system, and the city's burial places, these concerns would guide Quincy's actions to improve Boston Common.

The necessity of refreshing breezes would be an issue in the repurchase of land on the edge of the Common that the town had given away in 1794. The rope walks on Fort Hill had burned that year, and a small section of land was filled west of Charles Street and granted to the rope walk proprietors. There were fires in the new rope walks in 1806 and 1819, and by then newly settled areas had been built nearby. The proprietors offered to sell the land back to the city, and the purchase was made in 1824 for \$55,000.

Immediately a dispute arose over the disposition of the land. At a town meeting the matter was referred to a committee. They objected to the sale of land until a dispute with the Mill Corporation was resolved, and they also objected to any residential construction on filled lands; the building foundations would be unstable, the city would lose money, and most important, the vitality of the city would decline. Boston was free of disease, according to the committee report, because

there is over the open space, which it is now proposed to alienate, a constant current of fresh air, which revives and purifies the entire atmosphere of the City. . . . this incessant stream . . . comes . . . into the noxious atmosphere of a crowded population, diluting the force of disease . . .⁶⁵

Five questions were submitted to the voters: Should upland and flats west of Charles Street be sold? Should the Common remain open? Should the dispute with the Mill Corporation be settled by renewing their grant but forbidding the construction of buildings? Should the upland and flats southwest of the Common be sold? Should the city construct a cemetery west of the Common? The committee recommended approval of all but the first question; the voters followed their advice on only the first two questions, voting against all but the second proposition, which directed that the Common would be "forever after kept open and free of buildings of any kind, for the use of the citizens." The stewardship of this new land was clearly established. Yet more than thirty years would pass before it was developed as the Public Garden.

⁶⁴Whitehill, 59-60, 65-66; Quincy, *Municipal History*, 378.

⁶⁵Seasholes, 242.

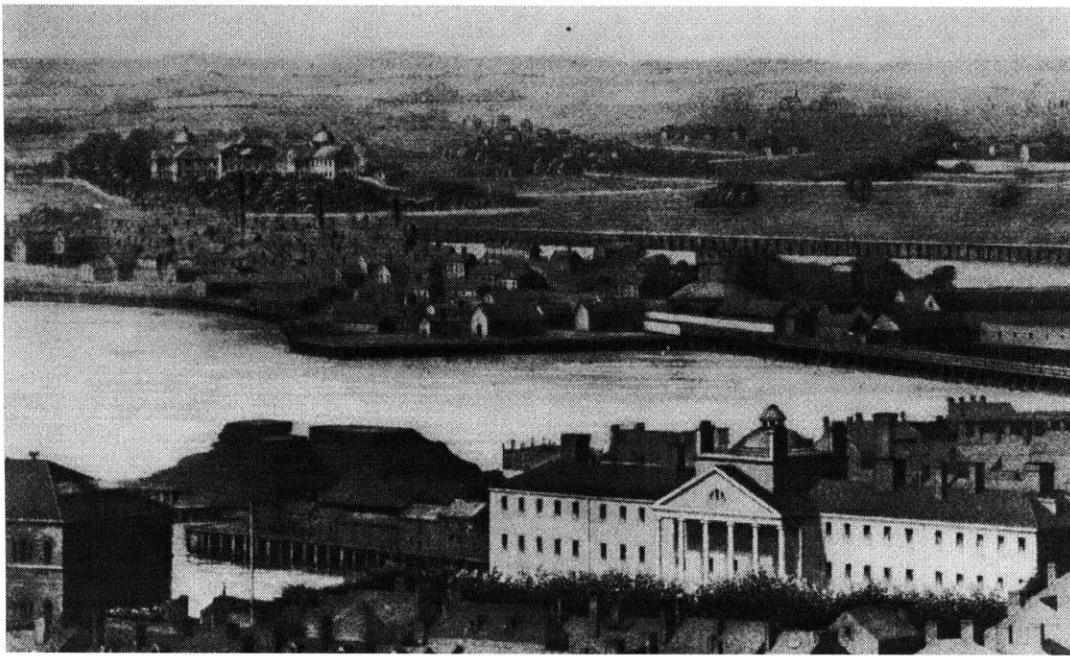


Figure 2.9 View of Massachusetts General Hospital and McLean Asylum across the Charles, 1830.

The refinement of the public realm would be inextricably intertwined with public health and private property rights. Land takings by the state or by local governments were uncommon, and could be highly controversial, as a similar effort in Cambridge about the same time plainly showed. In 1823, a group of landowners who lived near the Cambridge Common presented a petition to the town meeting for "setting out trees, fencing in certain parts, etc." While the Common was owned by the town, the boundaries that separated it from the Concord Turnpike and the "Craigie" road from East Cambridge to Watertown were unclear. Nothing was done immediately, but seven years later the petitioners supported an act of the legislature that authorized them to enclose the Common at their own expense, to level the surface, and to plant trees, for "public use only, as a public park, promenade, and place for military parade." Two commissioners were appointed to lay out new boundaries for the Common and the adjacent roads.⁶⁶

The act provoked strenuous opposition from the turnpike interests, who petitioned for a new highway across the Common. Among those opposed was eighty-year-old Jeduthun Wellington, who twenty-seven years before had laid out a turnpike running on a straight line from the West Boston Bridge to Concord, passing by the Wellington family farm in what is now Belmont Center. The conflict led to largest town meeting in Cambridge history in the Old Cambridge meetinghouse, and led, after a series of committees and reports, to a striking compromise: enclosure of the Common was approved, but so was a new town hall in Cambridgeport. Wellington filed a petition for redress with the state legislature, asserting that the enclosure would require travelers "to pass the said Common, in their travel to and from the city of Boston, by a circuitous route, considerably increasing the distance," simply "to gratify the taste for ornament of a few individuals." His petition was finally rejected by the Supreme Judicial Court two years later, and enclosure of the Common proceeded.⁶⁷

Mt. Auburn Cemetery

As vigorously as the citizenry of Cambridge and Boston defended and improved their commons, the undisputed landmark of refinement in antebellum Boston was the Mt. Auburn Cemetery, chartered in 1831. Though organized by Boston's elite, the cemetery has been open to the public with few restrictions since its founding. Its organizers extolled the

⁶⁶Lucius Paige, *History of Cambridge* (Cambridge: Riverside Press, 1877), 236.

⁶⁷Henry C. Binford, *The First Suburbs: Residential Communities on the Boston Periphery, 1815-1860* (Chicago: University of Chicago Press, 1985), 24, 110; Paige, 238.

physically restorative and morally elevating force of the cemetery's "natural" scenery, advancing the general acceptance of the landscape aesthetic that would guide the creation of public parks in succeeding decades. Henry Dearborn and Jacob Bigelow, the most active of the founders, also designed Mt. Auburn's landscapes and buildings, making the cemetery both a landmark of gentlemanly design.

The city's burial grounds had been the subject of controversy for some years by the time Josiah Quincy was elected mayor in 1823. As one of several actions he immediately took to promote public health, Quincy organized a Joint Committee on Urban Interments to report "on the expediency of prohibiting or limiting the erection of any New Cemeteries or tombs within the precincts of the city." The committee recommended restricting, and ultimately ending, burial within the city's limits. A second committee was appointed to select a site for an "extramural cemetery," but no site was selected, and no report was ever written. Not everyone agreed with Quincy, as he discovered when he consulted Dr. John Warren, one of the founders of Massachusetts General Hospital. Warren not only disagreed with the miasmatic theory of disease espoused by many supporters of rural cemeteries; he thought "it would be advantageous to the health and beauty of the city to open new cemeteries in different parts and especially in the vicinities of churches, in order to obtain the ventilation and comfort of such open spaces." As noted above, Quincy had proposed to the town meeting that the land adjacent to the Common that the city repurchased from the ropewalk owners be used for burials, but the idea was rejected. A burial ordinance did pass in 1826, closing the King's Chapel, Old Granary, and Central (Common) burying grounds, as well as the old section of the Copp's Hill Burying Ground in the North End. That left only the newer section of Copp's Hill and the South Burying Ground on the Neck. Quincy also tried unsuccessfully to close the Middle Burial Ground on the Common in order to extend the mall.⁶⁸

Though the city did not purchase land for a new cemetery, several discussions of landscaped cemeteries outside the city were published in Boston newspapers. And one new resident of the city took action. Jacob Bigelow grew up in rural Sudbury, studied at Harvard College and the University of Pennsylvania Medical School, and then settled in Boston to teach medical botany at Harvard. (He later taught a course and wrote a text on "technology,"

⁶⁸Linden-Ward, *Silent City on a Hill: Landscapes of Memory and Boston's Mt. Auburn Cemetery* (Columbus: Ohio State University Press, 1989), 161, 164-165. On the background of Quincy's actions to promote public health, see John B. Blake, *Public Health in the Town of Boston, 1630-1822* (Cambridge: Harvard University Press, 1959), 220-242.

a word he coined to describe "the application of science to the useful arts.") His Harvard classmate Alexander Everett (Edward Everett's brother), then a student in the law offices of John Quincy Adams, introduced him into Boston social and intellectual circles, and Bigelow was elected to membership in the Anthology Club, the Boston Athenaeum, the Massachusetts Historical Society, and the American Association for the Advancement of Science. In November 1825, Bigelow invited a number of friends to discuss the development of a rural cemetery, including Gen. Henry Dearborn, John Lowell, Judge Joseph Story, Edward Everett, and Nathan Hale (whose father had been a classmate at Yale of James Hillhouse, the organizer of New Haven's rural New Burying Ground). Two members of the group investigated several sites. The owner of the Aspinwall estate in Brookline refused to sell, and properties along Western Avenue near the Charles were too costly and topographically uninteresting.⁶⁹

That same year George Brimmer, a college friend of Bigelow's, purchased the remnant of the Simon Stone farm on the eastern edge of Watertown. Since the turn of the century the property had been a favorite resort of Harvard students, who called the area "Sweet Auburn" after Oliver Goldsmith's poem. The farm extended from the broad semicircular bend in the Charles that framed the low-lying salt marshes in Brighton. In the middle of the old farm a glacial moraine rose 125 feet above the river, surrounded by an irregular landscape of ponds and dells.⁷⁰

Though signs of change were appearing in the rural landscapes around Boston, Mt. Auburn offered pastoral views in all directions. Nearby was Elmwood, the estate built by Thomas Oliver in 1767; just to the northwest was Strawberry Hill (now Belmont Hill), a forty-acre estate with a commanding view of the Charles River Valley. In 1809 Harrison Gray Otis had purchased the property, renamed it "Oakley," and hired Bulfinch to enlarge the hundred-year-old house. Bulfinch added an elliptical salon with an open portico above, making the front facade a near twin to the Barrell estate. In 1825, when Brimmer purchased the Stone farm, Otis (who knew nothing of horticulture) had just sold "Oakley."⁷¹ To the west of Brimmer's property was the new Watertown Arsenal, moved from the Charlestown Navy Yard about 1819. Its two-story red brick buildings were designed "in a plain, neat substantial manner" by Alexander Parris and arranged symmetrically around a small parade

⁶⁹Linden-Ward, 167-173.

⁷⁰Ibid., 177-178.

⁷¹Samuel Eliot Morison, *Harrison Gray Otis, 1765-1848: The Urbane Federalist* (Boston: Houghton Mifflin, 1969), 201.

ground; they would hardly have disturbed the scenic prospects.⁷² Further up the Charles were the country places of the Gores and the Lymans, and the new mill of the Boston Manufacturing Company, built in Waltham in 1815. The hilltop prospect also presented distant views across the Back Bay to Boston and the heights of Dorchester, and a panorama of the Boston Basin and its ring of hills. South of the low hills of Brighton and Brookline were the Blue Hills. Prospect Hill was visible to the west; looking north, the heights of Arlington obscured the hills in Medford and Lynn. Brimmer originally planned to erect a country estate on the old farm.

In 1829 the Massachusetts Horticultural Society was organized, in the words of Gen. Dearborn, its first president, to be "a branch of our domestic industry" and an "association of men of taste, of influence, and industry." The following year some of the society's founders, including Dearborn and Bigelow, met with Brimmer. They had determined to organize a rural cemetery under the auspices of the society, not as an independent institution, and Brimmer agreed to sell his property, which he had not developed, at a loss. In December Bigelow announced a plan for the cemetery and a separate experimental garden. A few months later the General Court amended the society's charter allowing it to establish a rural cemetery and to "plant and embellish the same with shrubbery, flowers, trees, walks, and other rural ornaments" (Figures 2.10 - 2.12). Dearborn's cemetery committee originally included Bigelow, Brimmer, John Lowell, Abbott Lawrence, and Thomas Handasyd Perkins; now with the addition of Joseph Story, Edward Everett, Daniel Webster, and others, it was increased to twenty men.⁷³

The Horticultural Society is one example of how small was Boston's circle of "influence and industry." Dearborn had studied law in Story's Salem office, before Story accepted a professorship at Harvard Law School; now Story would be the unanimous choice of Dearborn and the other members of the cemetery committee to speak at the consecration of the new cemetery. Still mourning the death of his daughter from scarlet fever, the fifth of his children to die in fifteen years, Story struggled at first, then eloquently argued for the unique restorative force of the landscape at Mt. Auburn. The rural cemetery acts, he said, "to gratify human feelings, or tranquillize human fears; to secure the best religious influences,

⁷²The description by Talcott, the Arsenal's superintendent, is quoted in Judy D. Dobbs, *A History of the Watertown Arsenal, Watertown, Massachusetts, 1816-1967* (Watertown: Army Materials and Mechanics Research Center, 1977), 1-3. See also Edward Francis Zimmer, "The Architectural Career of Alexander Parris (1780-1852)" (Ph.D. dissertation, Boston University, 1984), 1:301-312.

⁷³Linden-Ward, 175-182; Acts of 1831, Chap. 69.

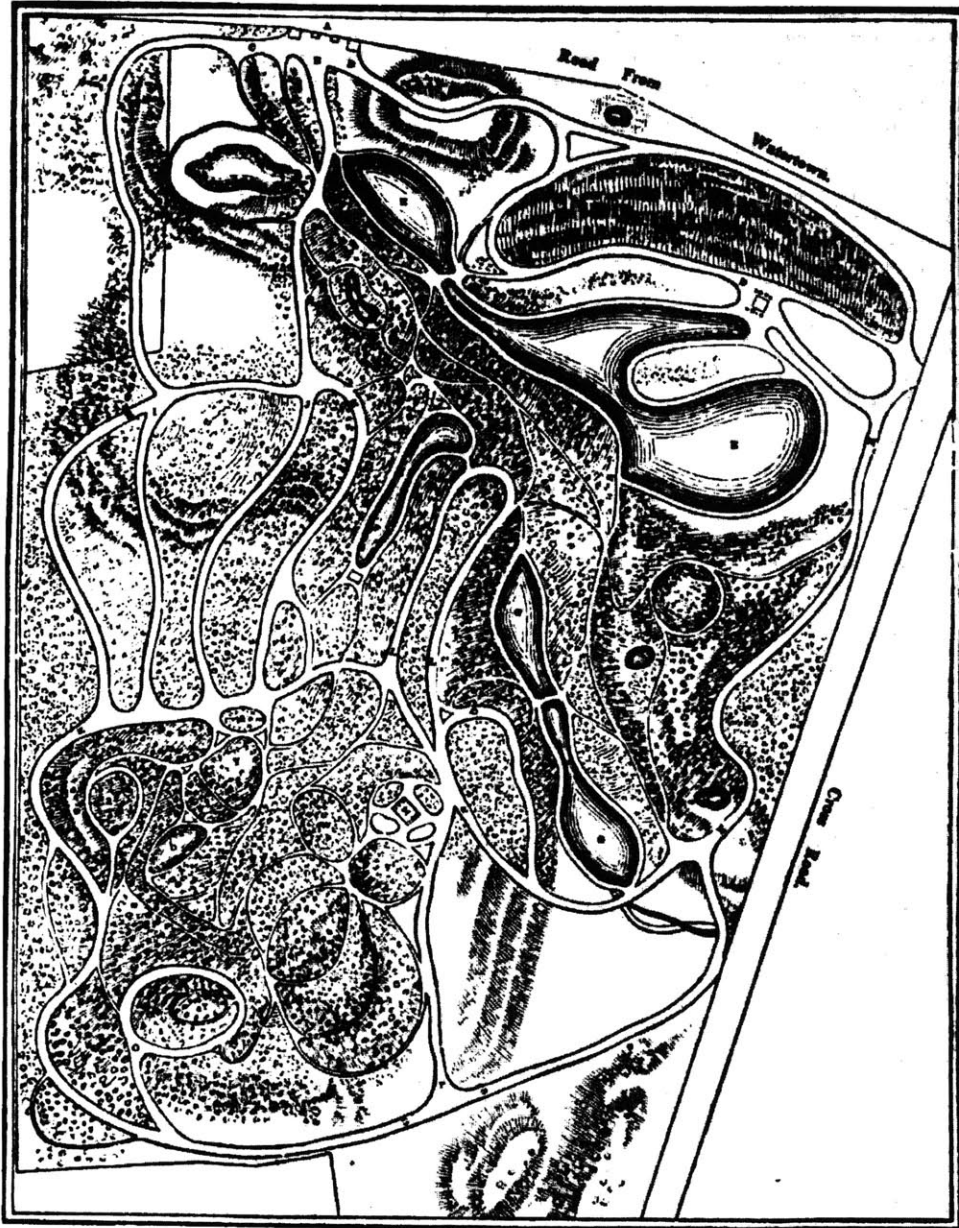


Figure 2.10 First map of Mt. Auburn Cemetery, after a design by Henry A. S. Dearborn, 1831.



Figure 2.11 James Smillie, Yarrow Path, Mt. Auburn Cemetery, 1847.



Figure 2.12 James Smilley, view of Fresh Pond from Mt. Auburn Cemetery, 1847.

and to cherish all those associations which cast a cheerful light over the darkness of the grave." Could there be a more fitting, more beautiful place than this hilly ground along the river?

All around us there breathes a solemn calm, as if we were in the bosom of a wilderness, broken only by the breeze as it murmurs through the tops of the forest. Ascend but a few steps, and what a change of scenery to surprise and delight us. We seem, as it were, in an instant, to pass from confines of death to the bright and balmy regions of life. Below us flows the winding Charles, with its rippling current, like the stream of time hastening to the ocean of eternity. In the distance, the city—at once the object of our admiration and our love—rears its proud eminences, its glittering spires, its lofty towers, its graceful mansions, its curling smoke, its crowded haunts of business and pleasure, which speak to the eye, and yet leave a noiseless loneliness on the ear. Again we turn, and the walls of our venerable University rise before us . . . Again we turn, and the cultivated farm, the neat cottage, the village church, the sparkling lake, the rich valley, and the distant hills, are before us, through opening vistas, and we breathe amidst the fresh and varied labors of man.

In the hour of greatest need, Story concluded, these comforting views offered "every variety of natural and artificial scenery, which is fitted to awaken emotions of the highest and most affecting character. We stand, as it were, upon the borders of two worlds . . ." ⁷⁴ As others would later testify, it was this liminal aspect of landscapes that was so powerfully transcendent.

Many who were drawn to Mt. Auburn found a less sobering aspect in its picturesque variety. The actress Fanny Kemble found it to be "a pleasure garden," not "a place of graves." Many others agreed, and the growing number of visitors—and their behavior—was increasingly a problem. Soon after Dearborn resigned in 1834, Story took over and persuaded the cemetery committee to exclude all but proprietors on Sundays, and to prohibit all carriages except those holding non-transferrable tickets, to be issued annually. Such regulations were criticized, and some suggested that the cemetery association was a private speculation. Story countered that Mt. Auburn was "in the truest and noblest sense a public institution" open to all "upon easy and equal terms"—the price of a lot. There were many, however, for whom that cost was beyond reach; over time, the regulations were reduced, and more and more residents resorted to the cemetery for outdoor excursions. ⁷⁵

⁷⁴Story, 2:65-67.

⁷⁵Linden-Ward, 208, 210.

A more serious disagreement among the founders was the division of expenditures between the cemetery and the gardens. Story and Bigelow wanted to build the chapel, tower, and gate that were in the original plans, which would necessarily reduce the funds for horticultural experiments. Late in 1834, Story chaired a committee to separate the two interests, and soon thereafter he became the first president of the Proprietors of Mt. Auburn Cemetery. Bigelow, the gentleman architect, designed the Gothic chapel, the Egyptian gate, and the crenelated observation tower.⁷⁶

Boston Railroads

The development of mills in the Back Bay and of various industrial enterprises in East Cambridge demonstrated the growing scale of private developments and their increasing effects on the natural setting of Boston. At the same time its citizens were aspiring to greater refinement in the visual character of the constructed city. This conflict would be multiplied as the first Massachusetts railroads were chartered and began construction of tracks, bridges, and causeways into the city. While restrictions about financing, rates, and fees were included in corporate charters, transportation projects were granted powers of eminent domain and were allowed great latitude in their choice of routes and in the location of terminals, bridges, and other structures. These unregulated decisions by railroad companies greatly altered the future geography of Boston, Charlestown, and Cambridge, and were at odds with the growing concern for urban gentility. The awestruck fascination of Americans with railroads, however, accelerated the national love for mobility, and set the stage for physical and philosophical confrontations that continue into the present.

The vigorous debate on the development of railroads in Massachusetts was circumscribed by the state's financial straits in the aftermath of the War of 1812. The prosperity of neighboring New York state, especially after the opening of the Erie Canal, deepened the general sense of the Bay State's economic stagnation. While New York City celebrated its access to vast new markets in the Midwest and beyond, Boston still lacked year-round transportation even to Worcester County and the Berkshires. The state was divided topographically into four regions, isolated from each other by hills and river valleys running north and south. The construction of the Blackstone Canal pushed Worcester into the domain of Providence, and the Connecticut River towns increasingly shuttled their freight to and from

⁷⁶Ibid., 210-212, 258-294.

New Haven and New York. While the Middlesex Canal gave Boston merchants access to the Merrimac Valley and southern New Hampshire, the once-prosperous coastal towns like Salem and Newburyport found no replacement for the declining China trade.

Nathan Hale, the editor of the *Boston Advertiser*, painted a bleak picture of the state's economy:

Between the close of 1825 and the beginning of 1831 gloom and despondency seemed to settle down upon Massachusetts. Her sons left her to build up rival states and cities, and her fairest and richest daughters were courted away to grace more prosperous lands. The grass began to invade the wharves and pavements of her commercial centers and the paint to desert the front of her villages. . . . She seemed to stand at the ancestral tomb, sorrowing that she could not partake of the progress of the age, or to be dropping a tear beside the old hive as it grew yearly darker, or crumbled away while swarm after swarm left it for sunnier skies.⁷⁷

He was certain that the state should immediately underwrite railroad connections to western Massachusetts and New York. Many others shared his view. Harrison Gray Otis, in his first inaugural address as mayor two years later, complained that

All parts of the Union but New England are alive to the importance of establishing and perfecting the means of communication by land and water. The magic of raising states and cities in our country to sudden greatness seems mainly to consist in the instituting of canals and railroads. . . . The state and city must be up and doing, or the streams of our prosperity will seek new channels. . . . Our planet cannot stand still but may go backward without a miracle. . . . The apathy hitherto prevailing, in relation to this scheme, is unaccountable.⁷⁸

Census figures and business profits supported a pessimistic reading of the state's economy.

In 1825 the state appointed three commissioners to investigate canal routes to the Hudson. Loammi Baldwin II, son of the engineer of the Middlesex Canal, was hired by the commission to survey likely routes. Extending west through the Charles River Valley, the canal route to the Connecticut River presented no serious problems. The western section was an altogether different story. Baldwin recommended two alternatives: either a series of 220 locks (nearly as many as the entire Erie Canal), or a tunnel through Hoosac Mountain, estimated to cost only \$920,832. One historian has concluded that the "delusion" regarding

⁷⁷Nathan Hale, *Remarks on the practicability and Expediency of Rail Roads from Boston to the Hudson River and from Boston to Providence* (Boston: W. L. Lewis, 1827), iv.

⁷⁸Quincy, *Municipal History*, 285-286.

the ease of constructing the Hoosac Mountain tunnel "bedeviled for fifty years the commercial and railroad policy of Massachusetts."⁷⁹

It was another project that at first involved Baldwin, however, that rapidly advanced the development of railroads in Massachusetts. The directors of the Bunker Hill Monument hired Baldwin as the engineer for their proposed obelisk. But when the project for a short canal to transport stone from the Quincy granite quarries to the harbor failed, it was Gridley Bryant and not Baldwin who found another way. Bryant was a contractor as well as a student of mechanics and natural philosophy; his solution was a horse-drawn railroad. With the backing of Thomas Handasyd Perkins (already one of Boston's merchant princes, and soon to be the largest shareholder in the new venture), Bryant petitioned the legislature—and found them less than enthusiastic. Their response, he said, was a series of questions: "What do we know about railroads? Who ever heard of such a thing? Is it right to take people's land for a project that no one knows anything about? We have corporations enough already." In spite of the such doubts from the General Court, a charter was finally passed in 1826.⁸⁰

The Quincy Granite Railway was a modest success; but out of it came a series of ingenious mechanical developments by Bryant, including the movable truck. All this encouraged a group of investors to take up what they called "the railroad scheme," hatched in "the obscure chamber and studied privacy," to promote state support of railroad construction in the Commonwealth. In addition to Perkins and Nathan Hale, the group included Josiah Quincy, Jr., Royal Makepeace, and Emory Washburn of Worcester and Theodore Sedgwick of Stockbridge. Five of the men were members of the legislature; Perkins was the only conspirator of wealth.⁸¹

Seeking to create a general enthusiasm sufficient to overcome the fears of opponents, the railroad supporters organized the Massachusetts Rail Road Association. Their most novel form of promotion was the construction of a model railroad in Faneuil Hall. Revealing aspects of the debate on state funding are found in Hale's persistent promotion of railroads in the *Advertiser*. As a rule, Hale did not consider the social consequences likely to follow the construction of railroads; his arguments are generally technical, describing English railroad experiments in miles and yards per hour, and strokes per minute. Occasionally he incorporated a broader view. He excerpted, for example, one English writer's experience of

⁷⁹Kirkland, *Men, Cities, and Transportation*, 99.

⁸⁰Ibid., 100, 103; Charles Francis Adams, Jr., "The Canal and Railroad Enterprise of Boston," in *Memorial History of Boston*, ed. Justin Winsor (Boston: Ticknor & Co., 1881), 4:122.

⁸¹Kirkland, *Men, Cities, and Transportation*, 102-4.

an early Liverpool run: "We flew along at the rate of a mile and a half in three minutes; and though the velocity was such that we could hardly distinguish objects as we passed by them, *the motion was so steady and equable, that we could manage not only to read but to write.*"⁸²

In describing the urgent economic need for railroads, Hale wrote that Boston's market once extended into Rhode Island, Connecticut, New Hampshire, Vermont, and even western New York; now, in the wake of the Erie Canal, it had shrunk to a circle "described from the cupola of the State House." To prevent the city's death, it would necessary to actively support the development of steamships and railroads.⁸³ (Hale described the view from the State House to emphasize the limited vision of Boston's citizens; fifty years later this view would be invoked to promote an expanded, metropolitan view of the city's opportunities.)

The scale of state investment proposed by railroad promoters frightened many of the Commonwealth's citizens. Joseph Buckingham, editor of the *Boston Courier* wrote that a railroad to Albany would cost "little less than the market value of the whole territory of Massachusetts" which, "if practicable, every person of common sense knows would be as useless as a railroad from Boston to the moon." Charles Frances Adams would later write that Boston had once held an early lead over other American cities because of the "early progressive spirit" manifest in the development of the Middlesex Canal and the Granite Railway. As he saw it, pessimism like Buckingham's explained why Boston lost that lead and never regained it.⁸⁴

Adams did acknowledge that the technological innovations of the railroads were paralleled by the need to invent new administrative and professional modes of operation: "just as during the Revolution physicians, farmers and booksellers were turned into generals, so half a century later editors and merchants served as railroad presidents, while mechanics and school masters became engineers and surveyors." The Boston and Worcester (later the Boston and Albany) pioneered in this new scale of management.⁸⁵

While rates, schedules, and even the state's right of repurchase were included in their charters, the first Massachusetts railroads were given almost complete freedom to determine routes and locate terminals, decisions that seemed of no great moment in the 1830s. The

⁸²Ibid., 103; *Boston Daily Advertiser*, November 24, 1829.

⁸³*Boston Daily Advertiser*, March 14, 1829.

⁸⁴Charles Francis Adams, Jr., "Canal and Railroad Enterprise," 4:122.

⁸⁵Ibid., 4:124; Stephen Salisbury, *The State, the Investor, and the Railroad: The Boston & Albany, 1825-1867* (Cambridge, Mass.: Harvard University Press, 1967), 112-132.

state's Board of Internal Improvements said in 1829 that it was not appropriate for them to determine the locations of railroad stations, since the companies needed to negotiate with towns along their routes. The directors of the Boston & Worcester went further; they did not want to discuss publicly routes or terminals until they had signed all the required real estate contracts. The railroad's charter was also amended so that bridges could be located across the Charles wherever the directors wanted, as long as they got the consent of bridge proprietors if they proposed to locate within one hundred feet of an existing toll bridge. The company considering four possibilities. A route to Lechmere Point would save money, since the railroad could connect with the Boston and Lowell, but would require many grade crossings in Cambridge. Constructing a railroad crossing upstream of the West Boston Bridge meant a terminal on Charles Street in Boston, on the wrong side of town and separated from the harbor. The directors tried negotiating with the owners of the Mill Dam for a right-of-way along Western Avenue (now Beacon Street), but concluded the price was too high. The railroad's weak financial position led to an agreement with the South Cove Corporation, chartered in 1833, with the promise of access to deepwater berths which the South Cove proprietors never delivered.⁸⁶

The result was a railroad causeway across the Back Bay (Figure 2.13). The Boston Water Power Company was certain that the causeway violated their corporate charter; the Boston & Worcester was equally sure that taking right-of-way from a corporation was no different from taking the property of individuals, which right was allowed in the railroad's charter. The courts declined to grant an injunction against the railroad, the Water Power Company's stock declined by half, and the case was finally resolved in the railroad's favor seven years later.⁸⁷

In March 1834 the Boston & Worcester was the first company to run a steam locomotive in New England. The *Evening Transcript* recorded the city's sudden fascination:

Crowds of people were assembled yesterday at the Tremont street terminus of the Worcester Railroad, to witness the operation of the Locomotive Engine. It was the first time we ever saw one in motion, and we candidly confess that we cannot describe the singular sensation we experienced, except by comparing to that which one feels when anticipation is fulfilled and hope realized. We noted it as marking the accomplishment of one of the mighty

⁸⁶*Report of the Board of Directors of Internal Improvements* (Boston: Daily Advertiser, 1829); *Report of the Directors of the Boston & Worcester Rail Road Corporation* (Boston: Steam Power Press, 1832), 24; Salsbury, 100-102.

⁸⁷*Ibid.*, 101-102.

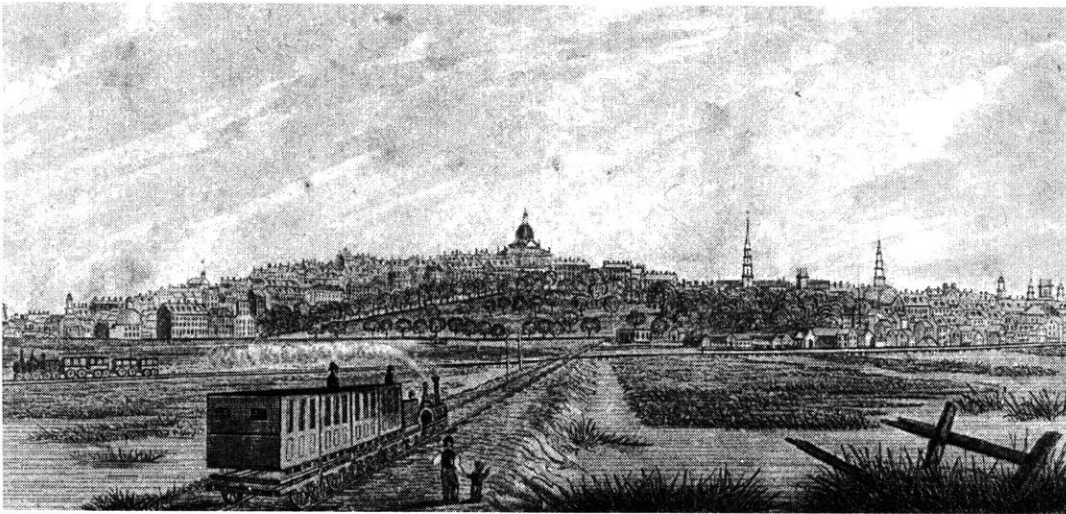


Figure 2.13 Trains across the Back Bay, 1844.

projects of the age, and the mind, casting its eye back upon the past, as it was borne irresistibly onward, lost itself in contemplation of the probable future.

Regular service as far as Newton was established by mid-May, and the formal opening of the line all the way to Worcester was celebrated on July 4, 1835. A few weeks later, Christopher Columbus Baldwin, the respected librarian of the American Antiquarian Society, recorded in his diary the singular event of his thirty-fourth birthday: he saw a "Rail Way Car" for the first time. "What an object of wonder!" he wrote. "How marvelous it is in every particular! It appears like a thing of life. . . . I cannot describe the strange sensations produced on seeing the train of cars come up. And when I started in them for Boston, it seemed like a dream."⁸⁸

The Boston & Providence line also constructed a causeway across the Back Bay, hastening the decline of the mills. Further downstream, at the confluence of the Millers River with the Charles, the construction of the Boston & Lowell Railroad accelerated the industrial development that Andrew Craigie had earlier promoted in East Cambridge (Figure 2.14).

By permitting construction across state-owned tidelands, the legislature avoided a pattern that would later be repeated in so many other American cities, where the advancement of railroads often required the destruction of already established industrial tracts and residential neighborhoods.⁸⁹ While appropriating an open element of Boston's peculiar topography, the construction of causeways across the marshes and the land-making that followed completely transformed Boston and the surrounding towns.

The construction of the railroads was not without conflicts. Only four years after the Boston and Lowell built tracks across the western boundary of the McLean Asylum at Cobble Hill (Figure 2.15), the hospital board ordered its first legal action against an attempt by the Charlestown Branch Railroad to connect with the Boston and Worcester. More than two years later, the hospital, expecting five thousand dollars in damages, was awarded six hundred. The intended uses of quiet and secluded grounds of the hospital for exercise and refreshment "have been impaired and well-nigh prevented by the encroachments of traffic, with its noise and its risks," N. I. Bowditch wrote in a history of the hospital. "Those spacious and beautiful grounds, with their fertile soil and pleasant undulations of surface, are

⁸⁸*Boston Evening Transcript*, April 4, 1834; Christopher Columbus Baldwin, *Diary of Christopher Columbus Baldwin, Librarian of the American Antiquarian Society, 1829-1835* (New York: Johnson Reprint Corp., 1971), 316.

⁸⁹Lewis Mumford, *The City in History: Its Origins, Its Transformations, Its Prospects* (New York: Harcourt, Brace & World, 1961), 458-465.

not only completely encircled by railroads, but their breadth is twice cut through by them."⁹⁰ Litigation by the hospital continued for fifty years, and ended only when the asylum moved to Belmont in 1895 and sold the estate to the Boston and Maine Railroad (which by then had consolidated the interests of the earlier railroads in Cambridge and Somerville).

The arrival of the Boston and Lowell north of the city hastened the demise of the last of the Shawmut peninsula's three peaks. Between May and October 1835, the top sixty-five feet of Pemberton Hill was dumped north of Causeway Street, in anticipation of continuing expansion of the rail yards. A similar pattern of landfill and railroad construction took place in South Boston and along Washington Street at the south edge of Back Bay.⁹¹

Walter Whitehill has suggested that by the 1840s the mill dam had become a walking place for fashionable young people; he cited the recollection of Thomas Handasyd Perkins's granddaughter that the dam was "the resort of couples on the eve of an engagement." That could only have been true when the tides were high or the winds were favorable. As early as 1830 Mayor Harrison Gray Otis observed in his inaugural that "the condition of the flats west of the neck is regarded by eminent physicians as becoming pregnant with danger to the health of the city." The construction of the railroad causeways soon thereafter only aggravated the sanitary hazard. By 1849 a special committee of Boston's Board of Aldermen was directed to investigate. They described the "huge ventilator" that nature had designed to pour "fresh and health-giving breezes" across the Charles into the streets of the city; through ignorance or folly this beneficent creation had been destroyed. The Back Bay had become a "nasty and stagnant" backwater:

In fact, the Back Bay, at this hour, is nothing less than a great cesspool, into which is daily deposited all the filth of a large and increasing population. And it is a cesspool of the worst kind,—contrived, as it were for the purpose of contamination and not of relief; for it is an open one, and, therefore, exposed continually to the action of the sun and weather, and every west wind sends its pestilential exhalations across the entire City.⁹²

The dire forecast made by the anonymous writer in the *Advertiser* in 1814 had come to pass.

⁹⁰N. I. Bowditch, *A History of the Massachusetts General Hospital to August 5, 1851* (Second edition with a continuation to 1872, Boston: The Trustees, 1872), 150-1, 673.

⁹¹Whitehill, 102-109.

⁹²Ibid., 101; *The Inaugural Addresses of the Mayors of Boston* (Boston: Rockwell & Churchill, 1894), 1:136; City of Boston, *Report of the Special Committee of the Board of Aldermen on the Memorial of D. Sears, and the Petition of J.C. Warren and Others, July 2, 1849* (City Document No. 36, Boston, 1849), 3.

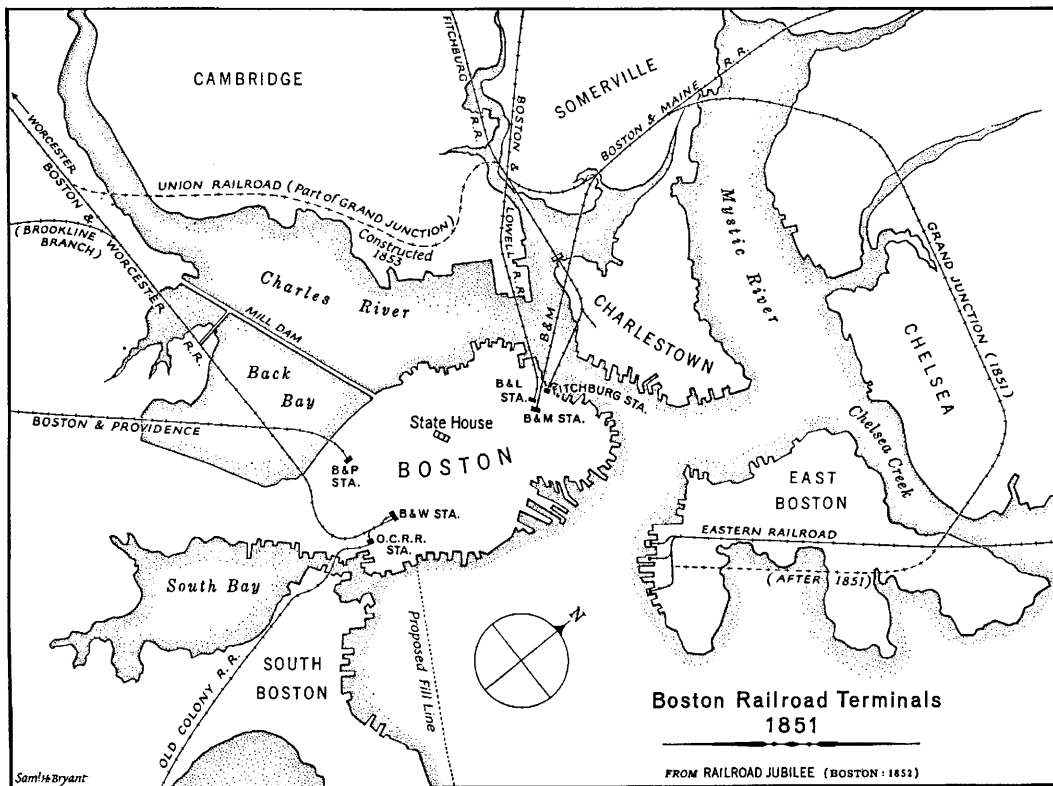


Figure 2.14 Railroad lines in Boston, 1851.

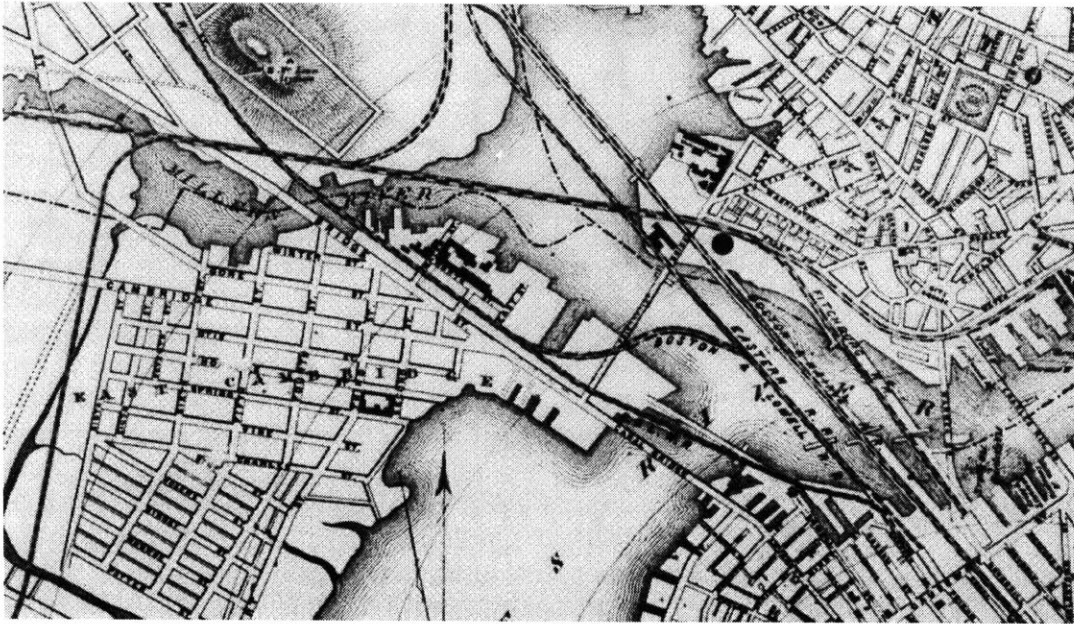


Figure 2.15 McLean Asylum (upper left), railroad causeways across the Charles, 1855.

"Elysian Fields": Boston's First City Plan

The terrible conditions along the lower Charles and its tributaries excited the compulsions of an extraordinarily eccentric visitor to Boston in 1843-44. In those years Robert Gourlay, a native of Scotland, wrote a series of letters to the mayor, the governor, and the legislature, and produced a remarkable drawing and a lengthy accompanying text that has been called visionary and prophetic, the "first great plan for Boston."⁹³ The fragmentary record of his unconventional life helps explain why a recent biography of Gourlay does not mention his city plans, and why the only public reaction to his Boston visions uncovered to date are in letters to Gourlay that he published in his own tracts.

Born in 1778, he left Scotland at the age of 29, pursued by the law because of his outspoken advocacy of electoral reform. In England his work with agricultural laborers was marked by the publication of a series of tracts whose titles make new secret of his politics—including *Tyranny of Poor Laws Exemplified* (1815) and *The Village System, Being a Scheme for the Gradual Abolition of Pauperism, and Immediate Employment and Provisioning of the People* (1817). Harried by opponents of his efforts, he emigrated to New York in 1817 to establish an emigration society to aid the poor, but almost immediately settled in Upper Canada. There he determined to improve the condition of farmers by compiling a statistical account of the province that he was sure would attract greater investment by capitalists. His inquiries into the effects of land speculation soon antagonized the province's ruling council. He was tried and acquitted twice for seditious libel, then arrested for failing to comply with an 1819 order banishing him from Upper Canada. When he demanded a trial on the issue of his banishment, he was jailed for six months until the case was heard, which he lost. After returning to England he was imprisoned on a charge of insanity. One biographical sketch concluded that he was a man without reticence, never doubting the wisdom or propriety of either his conduct or his writings, single-minded in his devotion to causes but unable to brook the slightest opposition. When he later introduced himself to the Massachusetts House of

⁹³Krieger and Green, 28.

Representatives in one of his eccentric pamphlets, he reiterated his commitment, made thirty years before, to "bettering the condition of the Poor of England."⁹⁴

Gourlay came to Boston seeking treatment for acute insomnia. He had gone sleepless for six weeks in 1833, for five months in 1837, and now, six years later, he claimed he had been without sleep for "five years and eight months, with the exception of two hours." Yet it was this "extraordinary calamity" of wakefulness, he claimed, together with a vivid imagination, that led to his extensive plans. He was able to bring objects to his mind's eye for study, which he then "arranged, and rearranged at pleasure, as readily as though material substances were present . . . thus are watches of the night often beguiled." This preoccupation with cities did not, however, begin in Boston. On his way to Canada in 1817, he traveled through Detroit and there was shown a plan for the extension of the city. It struck him then that city building might be reduced to "a science of incalculable value," especially in America "where thousands of cities are yet to be founded." His systematic study of this new science began a decade later, when he completed the first of a projected series on the subject in Edinburgh in 1829. He was detained in New York in 1834, where he says he spent many hours contemplating "improvements of the city" but produced only a single plan.⁹⁵

His initial schemes for Boston were curious, almost bizarre. After four months in the city, Gourlay wrote three letters to the mayor in June and July of 1843. The first letter proposed grazing sheep on the Common, twice a day for three hours. A month later he suggested a pagoda and flower garden on the Common (Figure 2.16). Entry to the first floor of the pagoda would be free, but there would be a charge for the upper floors and for entry into the garden. His third letter described the "wretched appearance" of the Common and offered his services to the city as an "agriculturist" to improve the Common's "green and yellow melancholy." Two days later Gourlay wrote the president of the city's Common Council and sent the mayor copies of the letters he had earlier addressed to him. Mayor Brimmer replied that the council did not believe it was authorized "to place a building of any kind" on the Common; that right had been reserved by the citizens to themselves. Furthermore, the council did not believe it was expedient to graze sheep there. Though

⁹⁴William Smith, *Robert Gourlay*, Bulletin of the Department of Historian and Political and Economic Science in Queen's University (Kingston, Ontario: Jackson Press, 1926), 1-20; Lois Darroch Milani, *Robert Gourlay, Gadfly: The Biography of Robert (Fleming) Gourlay, 17789-1863, Forerunner of the Rebellion in Upper Canada, 1837* ([Thornhill, Ont.]: Ampersand, 1971), xi; Gourlay, *Plans*, 1.

⁹⁵Gourlay, *Plans*, 1, 14, 18.

PLAN AND ELEVATION
OF
A PAGODA, with a FLOWER GARDEN, in Boston Common.

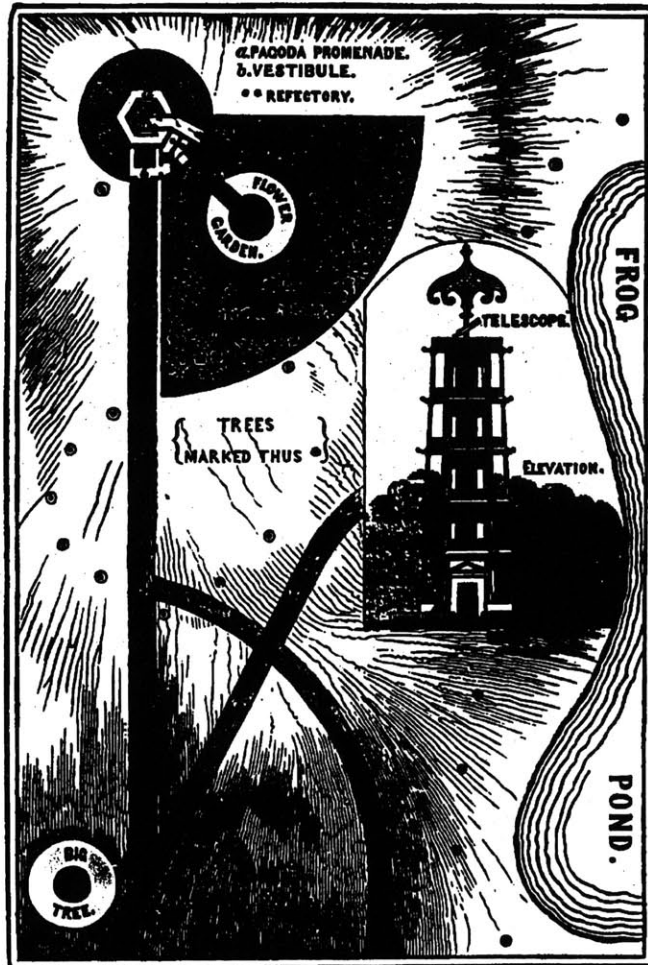


Figure 2.16 Robert Gourlay, pagoda for Boston Common, 1844.

rebuffed, Gourlay published his letters and the mayor's response, together with illustrations, as a small pamphlet in September.⁹⁶

Nothing in his barely developed ideas for New York or his quixotic sketches to improve Boston Common prepares us for the startling and prophetic imagination of his May 1844 "General Plan, for enlarging and Improving the City of Boston" (Figure 1.1) Addressed to the governor and the governor's council, the drawing of the city included a utopian description of the future city across the top of the large sheet, together with a proposal for a society to promote "the Science of City Building." The very next day he wrote a letter, also to the governor's council, acknowledging that at first sight his plan might strike many as "fanciful and extravagant." In June and July he wrote three more letters responding to the "many remarks" he received about his plan.

Equally striking was the extended written elaboration of this plan that Gourlay addressed to the legislature in September 1844 in a single lengthy letter (in the pamphlet he later published, the letter is seventeen pages). These more expansive schemes he saw as in harmony with the "great purpose" of his life, which he described as bettering the conditions of the laboring classes. Whatever the opposition he stirred up, he remained a visionary optimist, believing that if society would

give us Steam-ships and Railroads in abundance; let all be educated and have fair opportunity; let wild lands be rightly laid out, and honestly disposed of;—then, poor-laws and poor-rates may everywhere be dispensed with: pauperism will cease . . .

Gourlay's confident view of the transforming power of transportation technology was widely shared in his time, but he was equally sanguine about the movement of masses of people from country to country:

Emigration and immigration have been so neglected and misunderstood, that both are decried. Europeans deplore and retard the former; while Native Americans are banding together against the latter! Oh, miserable folly and infatuation!—Oh, that all were enlightened,—that all may see, how all may be benefitted, and contribute to each other's happiness.

I have effected nothing, but Time, the greatest reformer, will solve the problem, and harmonize every jarring element. Steamship navigation will speedily bring nations together, and railroads will entwine the branches of the human family in indissoluble union. Prepare then for the grand interchange of civilities. Let the landing-place from Europe give kindly welcome to

⁹⁶Ibid., 9-10; Robert Gourlay, *A Plan of a Pagoda and Flower Garden in the Common, Submitted to the Citizens of Boston* (n.p., 1843).

strangers; and, let their first impressions, in Boston, be those of delight and admiration.⁹⁷

This sense of mission on behalf of urban laborers was expressed by many of Boston's urban visionaries during the next hundred years.

The May 9 plan and the series of letters that followed are important to this story for several reasons. In recognizing both the geographical limitations and the opportunities of the city, his ideas went well beyond the boundaries of the city of Boston as its citizens saw it. His prediction of the city's population fifty and a hundred years hence was startlingly accurate. Only nine years after the arrival of steam trains in Boston, Gourlay clearly described a resolution to the topographic constrictions that have confounded railroad access to and through the city—a conflict that the city's planners have yet to resolve, a hundred and fifty years later. He anticipated both the growth and the character of the suburbs that railroads and streetcars would generate. Gourlay appealed to a wide range of disparate interests (including Bostonians' vanity) in describing its future, and though his drawings were unskilled, the textual images he set down were dazzling. He conceived a plan for the Charles River as a single, defined, publicly created space, susceptible to reasoned analysis and purposeful design. And that plan made the region's natural landmarks the framework for the growth of the metropolis.

His plans appealed to Boston's many-faceted vanities—the city's sense of history, the aspirations of its literary pantheon, the high-mindedness of its citizens' moral sensibilities—and its increasing prosperity. If Boston followed his lead, Gourlay told his readers, the Cradle of Liberty would become "the CRADLE of the arts and sciences," guided by a society for advancing "The Science of City Building" that would both gather and distribute plans for "buildings of every description, villages and cities; and a central point, either to draw intelligence from, or to send intelligence to,—hints, essays, plans, etc." There was nothing, he said, more commendable than "efforts to secure the almighty dollar, provided, that is ever looked to as a means, not an end." In fact, the city's merchants would be stimulated to become rich so they might rightly apply their wealth to "the utmost enjoyment of this world." And since Boston's citizens were already exemplary in "orderly moral and religious habits," it would be easy for them to understand the relationship between physical order and "mental refinement, enjoyment, and perfection." The inhabitants' united

⁹⁷Gourlay, *Plans*, 1, 23, 24.

mental and moral faculties would guide the destiny that history and geography now thrust upon it.⁹⁸

Gourlay understood that until the advent of steam technology, the region's geography been a substantial hindrance. This, too, was part of the city's destiny. The "watery waste" surrounding Boston had been purposefully designed so that its citizens should be "penned up, and thence feel discomfort"—so that they would be driven to make the utmost advantage of the region's "peculiar position and structure" and build a metropolis that would surpass all other cities, ancient and modern. No city had the advantages Boston now possessed. Boston had doubled in population in the previous twenty years, but that was much less than Philadelphia and New York during those two decades. Gourlay was certain that the doubling of population would accelerate prodigiously; there would be 500,000 people in fifty years, and a million a hundred years hence. Boston would become the "grand landing-place from Europe . . . with rail-ways radiating to every point of the continent." To accommodate this expansion, he proposed for the city a pattern of what he called "distributing" and "sub-urban" railways (the texts of his letters and maps suggest that these "sub-urban" railroads were underground). The crossing of the Providence and Worcester railroads in the Mill Dam's receiving basin became the center for a new "Circus Island" in the middle of a reconfigured Back Bay (Figure 2.17). Downstream of this crossing was another island, the "Elysian Fields." New rail lines along Mill Dam Avenue (Beacon Street), the West Boston Bridge, and a line from the Lowell station just north of Causeway Street intersected underground beneath the State House. The extended Lowell line turn then turned west and connected with the Worcester railroad, since many travelers were only passing through from Lowell or Portland to Providence or New York (in the 1970s this idea of linking Boston's northern and southern rail lines, was revived as part of the Central Artery project, then dropped, then studied again in the 1990s).⁹⁹

The heart of Gourlay's scheme was a proposal for a "New Town" (his phrase) on the mudflats of the Back Bay. The lack of forethought in the spatial organization of the Shawmut peninsula had created "confusion past remedy," but the nearby flats and surrounding lands offered the opportunity to remedy the defects of the historic city. It was not necessary to accept these lands as they were, or to wait for private initiatives to produce, piecemeal, whatever the city might become. The scale of action required far exceeded earlier efforts like

⁹⁸Ibid., 16.

⁹⁹Ibid., 17.

the Charles Street flats or North Cove. The city should immediately consider the 2,000 acres of worthless mudflats in the Back Bay, which would be transformed according to this plan into an urban district of immense value. The Mill Dam Corporation had property rights that would be overridden, but since it was clear that they could never carry out this vast plan without legislative action, the corporation would "cheerfully and liberally" cooperate in this scheme. The important issue, said Gourlay, was to adopt the best possible plan—his or a better one—before streets and buildings are laid out and the expense of such forethought was increased.¹⁰⁰

Gourlay's last letter illustrated the deficiencies of the city's street network in great detail. The lack of light and air on the narrowest streets created sinks of disease and infection. In the New Town there should be yard space for every house, where children would play and their elders would garden to "soften their hearts and better their affections." Legislation should protect such spaces against the threat of rapacity. Since "railroads diminish distance," it would no longer be necessary to crowd the buildings of the city together when the luxury of space could now be afforded without the slightest inconvenience.¹⁰¹

Perhaps because Gourlay's drawing focused on the Boston peninsula and on a dramatically reshaped Charles River, subsequent evaluations by historians have neglected the regional context which he carefully described in the accompanying text. This larger area was encompassed within two concentric circles extending from the State House, the first at a distance of two and a half miles, the second six miles out. The General Court, wrote Gourlay, should pass a special act to create the new town in the Back Bay, then a second act to govern the planning of the remaining lands with the first circle, and finally a third act extending out to the six-mile circle. Boston should also see to the natural abundance that graced the margins of the city:

Within the space enclosed by the outer circle round Boston, (call it BOSTON BOUNDS,) fine improvements may be made at little cost, merely by *connecting* (the italics are mine) and exhibiting to the greatest advantage those rare and beautiful features which Nature has here thrown together for the hand of man to work upon.

The high grounds near Roxbury, Chelsea, etc., Mt. Auburn, Fresh Pond, Spy Pond, etc., the streams, the islands, and the promontories,—all may be made to harmonize in one grand panorama, to display striking and

¹⁰⁰Ibid., 18-19.

¹⁰¹Ibid., 35.

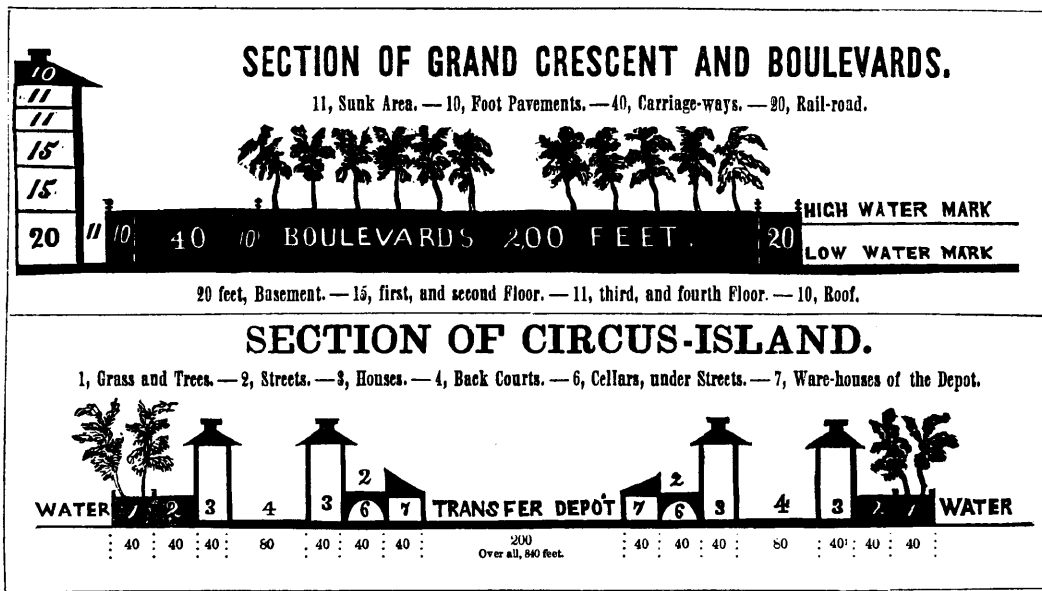


Figure 2.17 Robert Gourlay, Grand Crescent and Circus Island, 1844.

enchancing scenes such as the imagination, once awakened, may conceive better than it is possible to describe.

How easily could paths and rides and drives be conducted round about, and among all these fascinating objects. How agreeable it would be to have public carriages, hourly, to carry up to each place in turn, allowing sufficient time for strangers to be satisfied; to have a steamboat in connection running from Squantum Point touching at certain promontories, islands, etc., and landing at Winthrop Head,—all this needs but legislation, for, if set about, it would pay and yield unspeakable gratification.¹⁰²

In the center of these natural features would be the completely reshaped landscape of the Charles River. Gourlay's beneficent view of railways allowed for a single "distributing" railroad lining the edge of the basin alongside a broad tree-lined boulevard; this, too, he described in visual and visionary phrases:

Imagine yourselves at the top of the State House surveying the finished work. Behold the crescent of three miles in length, with pleasure-grounds in front, and these embracing the outspread waters of Charles River. See the city around, and that embosomed in an amphitheatre of surpassing beauty,—with hills, and dales, and woods, and glittering spires? Next, turn sea-ward, and refresh the eye among the green islands of the harbor, with old ocean bearing towards it ships from every clime. Then, estimate the glory of Boston!!

Gentlemen:—Nothing more is wanted to realize all this, but your sound sense, your patriotism, your religion:—yes, the God whom you worship is a god of harmony, and beauty, and order. He will smile on such an undertaking; for, it is obeying his law and forwarding his design.¹⁰³

In this expansive metropolis, new modes of transportation would provide mobility to all classes; the honest disposition of newly filled lands would offer abundant opportunities; and the glorious natural landmarks of the region would induce refinement and gentility—if Bostonians would only avail themselves of their spectacular providence.

The Pastoral Design

As it happens, Gourlay was neither the earliest nor the most extravagant enthusiast to describe a harmonious middle landscape in which railroads steamed cheerily through a rich and variegated natural setting. In 1831, only two years after George Stephenson's "Rocket" demonstrated steam locomotion, Charles Caldwell delivered an address at the Louisville Branch of the National Lyceum titled "Thoughts on the Moral and Other Indirect Influences of Rail-roads" (subsequently published in the *North American Review*). A student of

¹⁰²Ibid., 35, 37.

¹⁰³Gourlay, "General Plan."

Benjamin Rush at the University of Pennsylvania and later founder of the Louisville Medical Institute (now the University of Louisville), Caldwell argued that railroads would bring together whole nations into singular, refined and highly educated societies, with all of the advantages and few of the vices of crowded populations. Their effects would make the inhabitants of different nations "MORALLY ONE"—or at least remove prejudices and instill mutual regard, "and thus prepared the way to peace."¹⁰⁴

How would this wonder be brought to pass? Caldwell appealed to the law of nature that required every thing to produce after its kind:

Objects of exalted power and grandeur elevate the mind that seriously dwells on them, and impart to it greater compass and strength. Alpine scenery and an embattled ocean deepen contemplation, and give their own sublimity to the conceptions of beholders. The same will be true of our system of Rail-roads.

Such improvement would not come and go like shadows, but would permanently improve the American genius.¹⁰⁵

Only slightly less effusive than Caldwell, Gourlay with his Boston plan appealed directly both to the utilitarian and to the pastoral modes of the American myth. Leo Marx has carefully described how in the 1840s the most formidable challenge to the myth was articulated. In that decade, barely fifteen years after the first successful railroads were constructed in America, native writers introduced the figure that Marx has called "the machine in the garden." In its earliest expressions, for example in the works of Hawthorne and Thoreau, this figure was played out as a simple reverie in an ordinary landscape—suddenly and harshly interrupted by the frightful noise of a steam locomotive. In less literal and more anguished forms, the machine's disruption of the American pastoral is an image that has haunted our literature from then into the present.¹⁰⁶

The antidote for this distress was also offered in the 1840s, in Ralph Waldo Emerson's essay on "The Poet":

For as it is dislocation and detachment from the life of God that makes things ugly, the poet who re-attaches things to nature and the Whole—reattaching even artificial things and violation of nature, to nature, by a deeper insight—disposes very easily of the most disagreeable facts. Readers of poetry see the factory-village and the railway, and fancy that the poetry of the

¹⁰⁴Charles Caldwell, "Thoughts on the Moral and Other Indirect Influences of Rail-Roads," *North American Review* 2 (April 1832): 292, 293.

¹⁰⁵Ibid., 293.

¹⁰⁶Leo Marx, *The Machine in the Garden: Technology and the Pastoral Ideal in America* (New York: Oxford University Press, 1964).

landscape is broken up by these; for these works of art are not yet consecrated in their reading; but the poet sees them fall within the great Order not less than the beehive or the spider's geometric web. Nature adopts them very fast into her vital circles and the gliding train of cars she loves like her own.

Not only poets and writers but also intellectuals working in visual modes could take this way out. The painter Thomas Cole had written in 1836 that "a meager utilitarianism seems ready to absorb every feeling and sentiment, and what is sometimes called improvement in its march makes us fear that the bright and tender flowers of the imagination will be crushed beneath its iron tramp." Yet a few years later, in a number of Cole's Catskill landscapes, as in the work of many other American painters, "a minuscule but conspicuous, often centrally located railroad is made to blend seamlessly into a pastoral prospect."¹⁰⁷

This melding of pastoral New World landscapes with steam locomotives—the most potent symbol of nineteenth-century technology—soon became a commonplace in popular culture. The Eastern Railroad was begun in 1838 from Portland, Maine, through Newburyport to East Boston, and extended across the Charles in 1854. The Eastern's route not only provided competition for the Boston & Maine along the New England coast; it also helped transform Boston's North Shore into an area of upper-class summer estates. In 1847 the *Boston Times* described the route of the railroad as "a glorious ride of nine miles, with a sea view all the way on one side and groves and highly cultivated farms all about."¹⁰⁸

Gourlay's vision of "the streams, the islands, and the promontories," however, offered more than newly accessible scenery. His plan for Boston, crudely mapped but richly imagined in its accompanying text, was more than a simple urban version of the American pastoral, more than an intellectual application of Emerson's injunction to reattach manmade technology to the natural world. He aimed to overcome a fundamental limitation of the pastoral vision, which is essentially static and lacking the means to reach the promised paradise.¹⁰⁹ His vision of the middle landscape—promontories, rivers, and reflecting basins lined with railroad tracks in the very center of the future metropolis—called for free and fair

¹⁰⁷Ibid., 69, 70.

¹⁰⁸Susan Danly, "Introduction," in *The Railroad in American Art: Representations of Technological Change*, eds. Susan Danly and Leo Marx, (Cambridge, Mass.: Mit Press, 1988), 5. See also Joseph Garland, *Boston's North Shore* (Boston: Little, Brown, 1978), 84-89.

¹⁰⁹Sam Bass Warner, Jr., noted this flaw in the pastoral vision in "The Search for the Meaning of Landscapes," *Journal of Urban History* 15:3 (May 1989): 326.

access to land as well as a hitherto unimagined freedom of movement. The railroad offered the prospect of newly opened territories, and the means to get there.¹¹⁰

¹¹⁰On the captivating power of the railroad as a symbol of technology, see Leo Marx, "The Railroad-in-the-Landscape: An Iconological Reading of a Theme in American Art," in Danly and Marx, eds., 183-208.

III. PARKS AND PUBLIC SPACES

It had often been said that a Boston man's ideas were limited by the extent of the Common; that he could comprehend forty-one acres, but not forty-two.

Boston Post, June 17, 1874

Though Gourlay harassed the mayor, the selectmen, the legislature, and the governor, several historians of Boston have concluded that his extravagant designs left no trace on the city. In their view, his scheme was "wholly unrealistic" and had "little to do with the actual problems confronting the builders of the Back Bay"; consequently, "nothing came of all this imaginative planning." It is true that the only written evidence of any reaction by the city fathers to his plans is in the pamphlets Gourlay himself published. Yet Gourlay not only addressed the sanitary, transportation, and development issues of the Back Bay—he also described the regional context in which they should be resolved, and concluded that action by the state would be required. The problems were far too complex to be resolved by the small scale of enterprises like the Mt. Vernon proprietors; only the Commonwealth could settle the disputed property claims and make the long-term investment in land-making that was called for. The future growth of the city would require not only new land, but a system of transportation at a regional scale. The construction of the missing link between the North and South stations was only the beginning; far more significant would be the connections between the city center and the vast suburban developments that would be constructed in the future. This expanded mobility would be shared by the working classes, so that they, too, would participate in Boston's future prosperity. Finally, there was no need for this future growth to destroy the natural setting of the city—in fact, a truly scientific plan would guarantee the preservation and enhancement of "the streams, the islands, and the promontories" of the Boston Basin.¹

Professional designers have found more wisdom in Gourlay's plans than historians. Warren Manning, who had worked in the Olmsted office from 1888 to 1896 and then opened his own office, shared a copy of Gourlay's plan with Fletcher Steele, another Boston landscape architect. In a laudatory article published in *Landscape Architecture* in 1915, Steele

¹Zaitzevsky, *Olmsted*, 96; Bunting, *Back Bay*, 389; Whitehill, 149; Gourlay, *Plans*, 37.

called Gourlay one of the first modern city planners, because his proposal addressed "the replanning of old cities, provision for future expansion, the coordination of traffic systems, housing and garden cities, small open spaces and park systems."² In their recent study of Boston's "Past Futures," Alex Krieger and Lisa Green echoed Steele's judgment, calling Gourlay's map and text the first great plan for the city.³

When Bostonians addressed the city's future, however, their plans were incremental and far less imaginative. The prosperous David Sears published a much more modest proposal five years later; it, too, came to naught. After purchasing several parcels of mud flats in the Back Bay beginning as early as 1822, Sears petitioned the city with a much less ambitious approach to filling south of the Mill Dam (Figure 3.1). A grid of streets would be platted parallel to the dam, but in the center a tree-lined boulevard would open onto a seventy-five acre "Silver Lake," to bring salt water into the center of the new quarter of the city. A channel would carry water into the lake under a row of house lots, but the channel from the lake into the Charles would apparently be open to view. The adjacent Botanic Garden would be extended one block west, with the corner of the lake opening onto the Garden. Health-giving salt air breezes would then carry across the lake to the Common.⁴

Sears's sketch plan for "Silver Lake" hints at some of the complex issues that would have to be resolved in any development of the Back Bay. Property boundaries divided the mud flats between the Mill Corporation and the cities of Boston and Roxbury. The railroad interests seem to be ignored in the plan; streets and lots were platted without regard to the existing tracks. Perhaps Sears was thinking of Gourlay's "sub-urban" railways. There were as many as half-dozen other plans for leaving part of the Back Bay as open water.⁵

The Design of the Back Bay

By the early 1850s, the Commonwealth had determined to resolve the conflicting claims of the mill owners, the city, and the state in the tidelands south of the mill dam (Figure 3.2). The result was a striking contrast with the circumstances in the old Charles River Bay on the border between Charlestown, Somerville, and Cambridge. There, the state had undisputed title in Commonwealth tidelands, yet the railroads were granted great latitude

²Fletcher Steele, "Robert Fleming Gourlay, City Planner," *Landscape Architecture* 6:1 (October 1915): 1-14.

³Krieger and Green, *Past Futures*, 28.

⁴Seasholes, 355; Whitehill, 149-150.

⁵Whitehill, 149-150. In one version of Sear's plan, the Boston and Providence Railroad line runs straight into the shallow waters of the proposed lake, without connecting to the company's depot south of the Botanic Garden; that defect is corrected in other versions of his proposal. See Krieger and Green, 28.

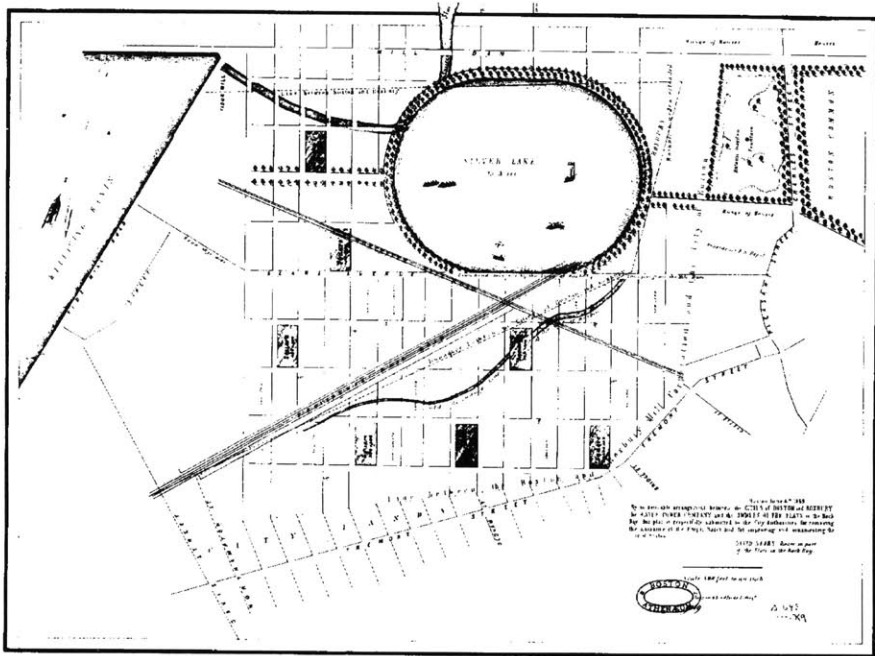


Figure 3.1 David Sears, plan for "Silver Lake," 1849



Figure 3.2 The Back Bay and the Charles River Basin from the State House, 1856

by the state in building over and in the river. Lawsuits, in particular the series of actions filed by the McLean Asylum, were also decided in favor of the railroads. In resolving the claims in the Back Bay, however, the legislature apparently intervened because of the disputed claims of private companies and the limited rights held by the City of Boston.

The first legislative commission to take up the question of the Back Bay was appointed in 1848 and filed a report two years later. They concluded that the Back Bay flats "are lost for every valuable purpose, and may be filled and made into dry land without public injury . . ." The land was more valuable than the water right, and a compromise was required between the State and any other parties with rights in the Bay. The primary claimants were the Boston & Roxbury Mill Corporation, established by the original charter to construct the mills, and the Boston Water Power Company, incorporated in 1824 to purchase water power from the Mill Corporation. In 1832 the Water Power Company acquired the mills and all the land south of the mill dam; in the same agreement the Mill Corporation retained the roads and the land north of the mill dam.⁶

The resolution of the various claims to the flats and recommendations about "improvement" of the Back Bay was assigned to a second commission. This board agreed with the first report that the land was now worth more than the franchise in water power; they made nine recommendations about the process of filling the Bay, but sidestepped the arguments among the various claimants. Instead, another commission was proposed.⁷

The third commission, originally called the Commissioners on Boston Harbor and the Back Bay, would not hear testimony opposing the proposed filling of Back Bay, claiming that the General Court had clearly expressed its intention to fill the Basin. David Sears offered to give up his interest in the flats if the commissioners would build a lake of at least twenty-five acres; the lake would be the setting for music, skating, boating, and fireworks. The following year Sears wrote the governor to say that if lake were not built, "what might now easily be made beautiful and attractive will give place to narrow and filthy streets, with bad sewerage and imperfect ventilation, and filled with a sickly population, and with receptacles of misery, vice and crime." His appeal was ignored.⁸

The Commission reached agreement with the Mill Corporation and the Water Power Company and signed indentures with them in June 1854. In the agreement with the Mill

⁶Seasholes, 272, 354.

⁷Resolves of 1850, Chapter 111.

⁸Resolves of 1852, Chapter 79; Seasholes, 355, 356. In 1855 the board was renamed the Commissioners on the Back Bay.

Corporation, the state released to the corporation the land between the mill dam and a parallel line running two hundred feet to the north. The corporation had to build a seawall on the new property line and fill the land according to the plans of the state. They also released their right in the land south of the dam and the right to collect tolls on the mill dam road.⁹

The indenture with the Water Power Company extinguished the company's right to flow water over the flats; the company received half of the flats below the high tide line, totalling about 102 acres. The Commonwealth retained the area closest to the Common, bounded on the north by Beacon Street, on the west by Fairfield and Exeter streets, and on the south by Providence Street (from Exeter to Berkeley) and Boylston Street (from Berkeley to Arlington). The company would fill the state's lots and construct streets and sewers. In the original plan, the streets were named according to an incomprehensible system of Roman numerals and letters based on the width of the streets and the order in which they were laid out. A second indenture signed in September 1854 changed the street names and opened the way for the Water Power Company to begin filling its section of Back Bay; filling began in May 1855.¹⁰

The City of Boston had no claims to land in the Back Bay, but had reached an agreement in 1827 with the Mill Corporation to lay drains into the receiving basin and to dig mud from the flats. The state was skeptical of the city's competence to resolve the various interests or to oversee filling on such a vast scale; the 1855 Back Bay Commission did not believe that "any grant of land [in the Back Bay to Boston] is . . . expedient or that the city can prudently be clothed with the power of establishing a generous system of streets or an efficient system of drainage for that vast area." The city, according to the commission, "has used, and now uses, the Back Bay as a cesspool."¹¹

The state made a series of proposals to the city, each of them committing the city to add some of the made land to the Public Garden and to keep it "forever open." For two years the proposals were rejected or countered with "uncooperative and rapacious" demands. Contemporary observers criticized the city for "ignorance and want of tact and wisdom" in their conduct of the negotiations.¹²

A settlement was finally reached, not with the commission but with a joint committee of the legislature, though the reasons for the city's change of mind remain obscure. In

⁹Seasholes, 357.

¹⁰Ibid., 358-361.

¹¹Ibid., 362.

¹²Ibid., 362-364; Whitehill, 151.

December 1856 a Tripartite Agreement was executed between the Commonwealth, the City, and the Water Power Company. The state would donate to the city a parcel of land so that the western boundary of the Public Garden would be perpendicular to the mill dam (now Beacon Street). A new street (now Arlington Street) would be built on this line, and the city and the state would each build half of the road. The city gave up the right to dig mud from the flats, and agreed to build a section of the present Dartmouth Street.¹³

The disposition of the Public Garden was finally settled by an act of the legislature in 1859, which decreed that the land would remain a park. The act did allow for a single exception, the use of some of the land for a new city hall, should the city wish to propose it. A competition for the design of the Public Garden was held in 1859, and construction was completed by the early 1860s.¹⁴

The plan for the Back Bay was modified in December 1856, changing the design for Commonwealth Avenue. Originally, it was to be one hundred twenty feet wide; the new plan widened it to two hundred feet. The committee's justification for the change acknowledged the benefits of connected public space: the modification "would give to the plan a feature of great magnificence, not existing elsewhere in this country . . . this feature would make the territory attractive and desirable as a place of residence to an extent which, in the first place, would enhance the prices of the land and facilitate sales; and in the second place, would confer a lasting and permanent benefit upon the public by providing a broad and ornamental avenue connecting the Common and public garden in Boston with the picturesque and pleasing suburban territory."¹⁵

The Public Garden and the Commonwealth Avenue Mall were a local manifestation of what the landscape gardener Andrew Jackson Downing had a few years earlier called "Parkomania." Downing did not live to see the full flowering of this enthusiasm which followed the completion of New York City's Central Park; *Scientific American* in 1856 described the New York park as "an enterprise which we advise every city in the country to imitate." By the end of the decade, according to an article Olmsted wrote on parks for the *New American Cyclopedia*, new public grounds were underway in Philadelphia, Baltimore, Brooklyn, Hartford, and Detroit.¹⁶

¹³Seasholes, 365-366.

¹⁴Commonwealth of Massachusetts, *Acts of the General Court*, 1859, Chapter 210; Zaitzevsky, *Olmsted*, 33-34.

¹⁵Seasholes, 366-367.

¹⁶Schuyler, 101; *The Papers of Frederick Law Olmsted*, vol. 3, *Creating Central Park, 1857-1861*, eds. Charles E. Beveridge and David Schuyler (Baltimore: Johns Hopkins University Press, 1983), 354-357. For a summary of the development of Fairmount Park in Philadelphia, Druid Hill in Baltimore, and Brooklyn's Prospect Park, see Schuyler, 102-127.

The enthusiasm for the Commonwealth Avenue Mall was not universal, however. In 1859, George Snelling wrote an impassioned memorial to the legislature that argued against a boulevard in the center of the Back Bay. The record he created is important for two reasons. It documents the personal relationships among the city's elite that, in spite of substantial growth in population in the first half of the nineteenth century, still constituted an important element in the public discourse on the subject of Boston's urban growth. Second, Snelling seems to have been the first person to circulate images of Hamburg's Alster Basin as the appropriate model for Boston's civic aspirations. Though Boston's setting on the Charles would sometimes be compared with London, Paris, Venice, and other waterfront cities, pictures and descriptions of Hamburg would appear regularly in discussions of the city's future for the next seventy years.

It would be a mistake to fill the entire empty basin under the terms of the Tripartite Agreement, Snelling asserted, first in a letter to the *Boston Transcript* in April 1858 and then a year later in his memorial to the legislature. Instead, Marlborough and Newbury streets should face a seven-hundred-foot wide basin. (Snelling's *Memorial* included a map of the Back Bay (Figure 3.3), on which all the land between Marlborough and Newbury streets was shaded in blue.) Filling the center of the empty basin would rob the city of an invaluable source of life-giving fresh air. The southwest wind, Snelling argued, "blows directly over the Common; and, taking its bracing qualities from the wide area of water over which it now passes—water renewed from the ocean twice in twenty-four hours—it bears health and refreshment to every part of this crowded and closely built city."¹⁷

The memorial was deferred to the next session of the General Court. That December Snelling happened to be walking across the Common when he met Governor Banks, who reported that he was making "a personal survey of the territory in question." Pointing to the area of the empty basin which would be made into dry land, Snelling warned that the sun would beat on it all day, accumulating heat that would last all night. He compared Hingham, with its prevailing summer winds over land, and Nahant, a resort because of its ocean breezes. Then he described for the governor the Alster-damm in Hamburg (Figure 3.4). The freshwater basin was about as large an area as Boston Common, with "magnificent edifices" on three sides; on the fourth side, a public promenade separated the Inner Alster from the outer basin. Boston, Snelling told the governor, had in the Back Bay the same elements that

¹⁷George Snelling, *Remarks* [Memorial and Letters] (Boston, 1860), 3. Nancy Seasholes generously shared this reference to Hamburg's water park, which is the earliest known illustration published in Boston of the Alster Basin.

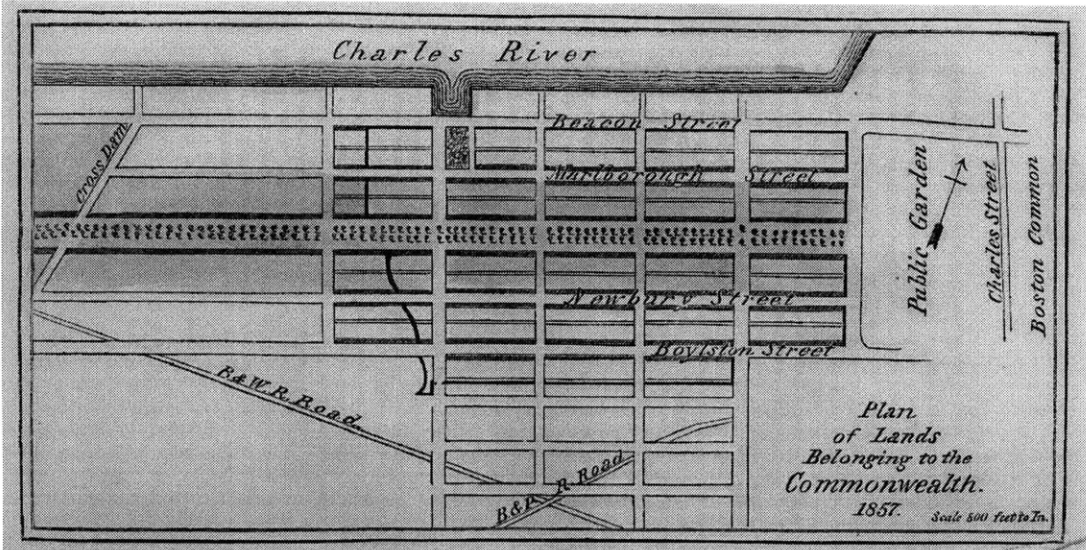


Figure 3.3 George Snelling, *Memorial*, plan for the Back Bay, 1859.

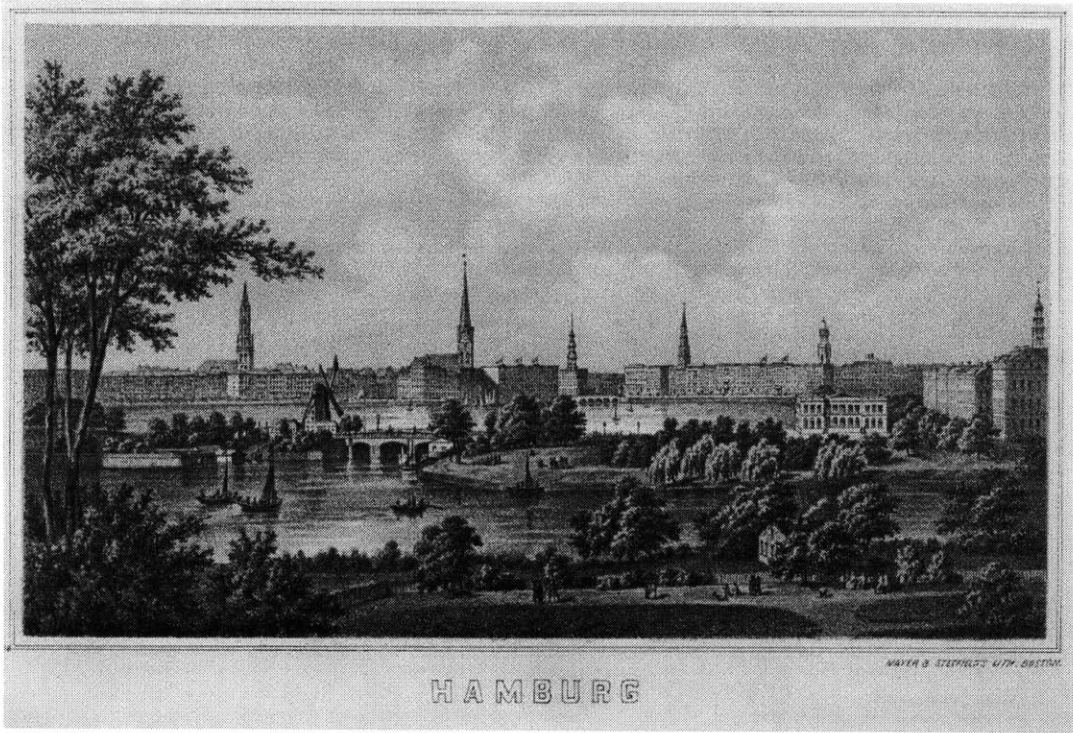


Figure 3.4 George Snelling, *Memorial*, view of Hamburg, 1859

Hamburg had incorporated in creating the Alster. The two men arranged an appointment for the next day. In that meeting the governor requested a copy of a view of Hamburg, though he feared Snelling's proposal was too late.¹⁸

After unsatisfactory responses from legislators, Snelling determined to reprint his memorial, together with testimonials he had solicited in support of his proposed revision to the Back Bay plan. The respondents argued on three principal grounds—civic refinement (and with it increased property values), public health, and justice for the poor. Some argued for all three. E. Y. Robbins found the Common "a great opening into the country," where citizens could not only "inspire the fresh breeze" but also "commune with rural nature." Either through foresight or else a happy accident, the Common opens to the southwest, the direction of the prevailing winds in summer, when fresh air is most beneficial. Daily laborers, he wrote, cannot escape to the country as the rich do; "Necessity holds them prisoners in the city." It would be a cruel injustice if considerations of gain robbed them of "free breath." In signing the memorial to the legislature, former mayor Josiah Quincy "deviated from a rule of conduct" he had prescribed for himself, to avoid questions of local improvement. He found Snelling's plan vital to the future health and comfort of the city's inhabitants. Edward Jarvis copied tables showing mortality and causes of death in English cities, and came to an unambiguous conclusion: "*decrease of life goes in a positive ratio, hand in hand, with the increase of density of population.*"¹⁹

Senator Charles Sumner, writing from Washington, D.C., thanked Snelling for intervening to save the Common "by keeping it open to the western breezes and to the setting sun." He knew well the "value of water in scenery," and cited a friend's view that a landscape without water was "like a face without eyes"; he also understood the value of open spaces as "*out-of door ventilators.*" Orville Dewey thought the Common "the loveliest view of land and water and distant horizon that ever was opened into the heart of any great city . . . except Naples." Neither London nor New York offered anything like it. The unmodified Back Bay plan, according to an unnamed gentleman just returned from Europe,

¹⁸Ibid., ii.

¹⁹Ibid., 11, 13, 14; City of Boston, *Report of the Hearing Before a Committee of the House of Representatives of Massachusetts on the Occupation and Improvement of the Commonwealth Flats on Charles River* (November and December, 1869, City Document No. 128, 1869), 251.

was closing off air and water from the Common and "*spoiling the finest promenade in the world*."²⁰

After the Civil War, the argument for the city's beautification would more and more often be tied to higher land values. But in the letters collected by Snelling in 1859, only John Dix joined the two issues. He pointed out that in every city in the world where a water front existed, unappropriated by commercial interests, it was occupied by the wealthiest inhabitants. As examples he cited St. Petersburg, Hamburg, Dresden, Frankfurt, Florence, Naples, Charleston, and Chicago. The most pragmatic approach was argued by William Parrott. If Snelling's view ultimately were proven wrong, "the remedy is easy. The section may be filled in." The city should simply act on what Dix called the "dollar principle." It would be a mistake *not* to leave the center of the Back Bay unfilled; not a dollar would be lost if Snelling's proposal were adopted. It would mean simply that the cost of filling would not be spent now.²¹

As Snelling saw it, the villains in this story were "a company of Boston land speculators, encouraged by politicians" who eagerly accepted their lavish estimates of the state's financial gain. The well-being of the community was being sacrificed to the narrow financial interests of a few brokers in property.²²

Two years later in his 1861 inaugural, Governor Andrews endorsed Snelling's proposal, suggesting that a basin in the center of the Back Bay might "secure to the public health" the benefits contemplated by the 1814 legislation which had authorized the creation of the full basin.²³ But none of these arguments would be persuasive, and talk of new parks for Boston was set aside by the outbreak of the Civil War.

One lasting legacy of Snelling's campaign was the introduction into the city's consciousness of images of the Alster Basin. In his 1860 reprinting of the previous year's memorial to the legislature, Snelling included an engraving of the Inner Alster as well as two newspaper articles describing the "*crystal lake*" at the center of the most beautiful part of Hamburg.²⁴

²⁰Snelling, 22, 23, 26. Sumner later donated his copy of Snelling's memorial to Widener Library at Harvard. The simile of "the face without eyes" is the inverse of Horace Mann's observation that "water is to the landscape what the eye is to the face" (quoted in Creese, 192).

²¹Ibid., 20, 29, 31.

²²Ibid., 56.

²³Commonwealth of Massachusetts, *Evidences and Arguments before the Committee on Charles River Dam* (Boston: Wright & Potter, 1903), 491.

²⁴Snelling, 43-44, 49-50.

As the focus of Boston's aspirations, Hamburg was a striking choice. According to one of the newspaper articles Snelling cited, the city was widely known as a commercial center but never celebrated for its beauty.²⁵ Founded in the ninth century at the meeting point of the Bille, Alster, and Elbe rivers, the city began almost immediately filling marshes and constructing canals. By 1235 A.D. a mill dam had been built across the Alster. A new fortification was built around the city in 1615-26 during the Thirty Years War, and what is now the Inner Alster was left as open water inside the wall (Figure 3.5). At the same time a new quarter of the city was laid out west of the Alster, reinforcing the perimeter of structures overlooking the basin. In 1842 a four-day fire destroyed a third of the city, including most of the buildings along the basin's edges (Figure 3.6). The city was rebuilt, with some rationalization of the street plan, and the margins of the inner and outer Alster were reconstructed. Photographs and drawings of the city from the 1860s reveal why Bostonians found the reshaping of Hamburg's rivers a worthy pattern (Figure 3.7).²⁶

Snelling's *Memorial* was, in the end, ignored by the General Court; the filling of the Back Bay proceeded according to the original agreements.

Filling the Charles

In the fall of that year, for reasons that remain obscure, a bill was presented to the General Court to approve substantial additional fill north of the new seawall on the water side of Beacon Street, in the main channel of the lower Charles. Hearings on the bill called forth vociferous protests from some of the city's most prominent citizens, and established for the next thirty years the terms for public discourse on the river as a public space.

As it happened, the state's hearings on filling the Charles began about the same time that Boston's city fathers reopened the debate on public parks. On November 5, the two proceedings went on at the same time, and E. H. Derby testified at both hearings. After speaking first to the legislative committee on the Charles River, Derby then testified at the Boston park hearings, where he began by observing that he had just come from a committee "assembled rather to diminish our recreation enjoyments, and breathing places." It was much more satisfying, he said, to speak at a gathering with the opposite purpose. Led by Oliver Wendell Holmes, the witnesses at the Charles River hearings outlined all the arguments for

²⁵Ibid., 17. A century later this generalization about Hamburg persists. Hermann Hipp, *Freie und Hansestadt Hamburg*, 11.

²⁶Hermann Hipp, *Freie und Hansestadt Hamburg: Geschichte, Kultur und Stadtbaukunst an Elbe und Alster* (Köln: DuMont, 1989), 12-14, 28-32.

developing the river as a water park—though it would be more than thirty years before the first steps were taken to that end.²⁷

The committee was officially chartered to look at improvements to the Mystic, the Miller's and the Charles rivers, as well as South Bay, Fort Point Channel, and Dorchester Bay. The hearings, however, addressed only the Charles River. The chairman announced at the first hearing that the committee would assume that the flats from the West Boston Bridge to the cross dam would be filled for a distance of fourteen hundred feet, reducing the channel of the river to between three and five hundred feet. As it turned out, no one testified in favor of the proposal or described any benefits that would follow from it. Following introductory presentations by counsel for the opponents, various experts testified against the scheme. The engineering authorities described how shoaling in the harbor would increase. Medical doctors described the spread of diseases that would follow, and presented statistics on mortality. Real estate brokers enumerated the precipitous decline in property values on the water side of Brimmer and Beacon streets, because of the loss of fresh air and the view of the water and the country beyond. And the community's loss of trust in the state's prior commitments would be shattered.²⁸

The most elaborate testimony was presented by Dr. Holmes, who described his strong attachment to the water side of the new streets in the Back Bay. He acknowledged the classic dilemma of expert witnesses: his expertise followed, in part, from his personal interest in the issue. Holmes emphasized, however, that this matter was not a concern just for the few wealthy residents who had built along the river. He was only one of many citizens of Boston who would be "distressed in mind, body, and estate" if the plan were realized, "In mind, as it threatens one of the principal comforts and enjoyments of our lives. In body, as it contemplates cutting us off from the great air reservoir to which, in the hotter months, we look as the safeguard of our health. In estate, because we have invested our property and our children's inheritance . . ." He put the choice before the committee in the most dramatic terms:

Nothing short of a convulsion of nature, an earthquake, an inundation, a great fire, or the invasion of a hostile army would produce greater dismay, or entail more insupportable losses than the realization of this revolutionary project.

²⁷City of Boston, *Report and Accompanying Statements Relating to a Public Park for the City of Boston* (City Document No. 123, 1869), 44-45.

²⁸*Ibid.*, 3, 9-10, 269.



Figure 3.5 Hamburg city plan, 1643.

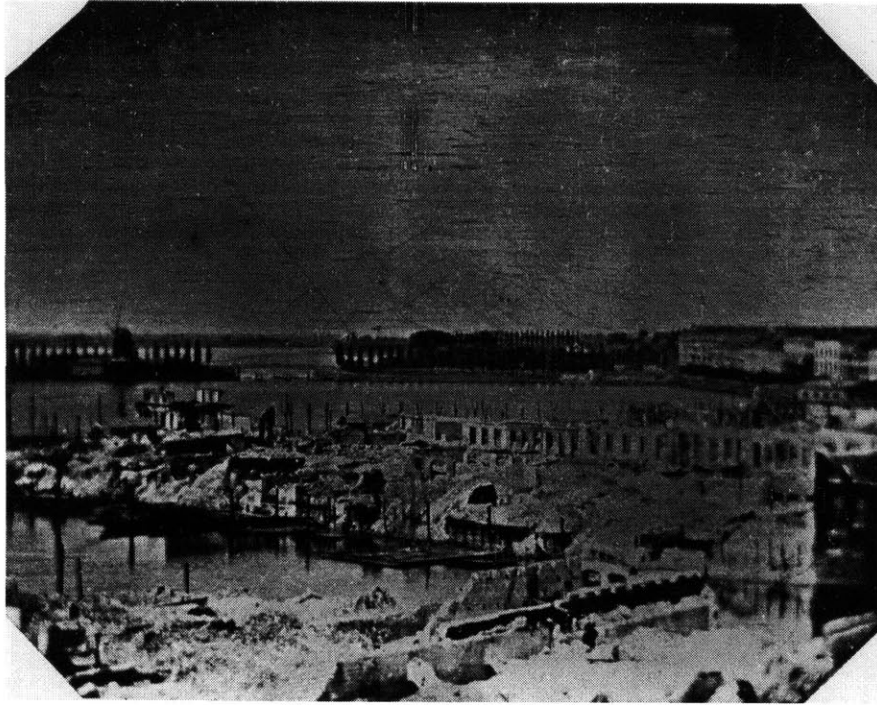


Figure 3.6 The Alster district of Hamburg after the fire of 1842.



Figure 3.7 Hamburg, view from the outer Alster Basin across the Lombard Bridge, 1862.

The exposed mudflats were preferable to a much narrower channel, which would likely be developed as East Cambridge had been, where the smoke and noise of numerous factories made the area "as nearly uninhabitable" as any part of Boston's suburbs, with the exception of the neighborhood near the city's soapworks. Holmes concurred with the widely held view that vitiated air caused or severely aggravated fevers, childhood diseases, cholera, scrofula, and consumption.²⁹

Though analogies between urban life and the human body were centuries old, Holmes extended this imagery almost to parody.³⁰ A great city, he said, has "a collective life, like individual organized beings." Its brain was the municipal government, its muscles the police and "other active servants." Above all, a city required breathing organs. A densely developed city with no internal breathing spaces was like a fish or reptile, breathing with gills; a city with large air spaces was like a higher animal, with lungs. Boston was "peculiarly favored in having both sets of organs. the common and public garden one lung, this [Charles River] basin the other." The proposal before the legislature would cut out the larger part of the right lung and "sell it as the lights and liver of four-footed beasts are sold in the market." He concluded his testimony by paraphrasing a poem:

Down the river did glide, with wind and tide,
 A pig with vast celerity;
 And the Devil he grinned, for he saw all the while
 How it *cut its own throat*; and he thought with a smile
 Of the Bay State's financial prosperity.

Several legislators' questioned Holmes's claim that the air in the Back Bay remained salubrious after passing over the reeking mudflats at low tide. Holmes did not back down; the air was far better, he said, than it would be if more of the river were filled. When asked if there was anything offensive in the appearance of the mud flats, Holmes responded that he would not "go out of the sight and smell of these flats. That is the best proof I can give of what they are. Three times I have had a chance to choose my residence, and each time I have got nearer and nearer to the flats."³¹

The next witness was Dr. George Derby, secretary of the State Board of Health. He was asked whether, if filling the river any further would be a disaster of such magnitude, then why wasn't the filling now underway in the Back Bay—the filling that created the house lots

²⁹Ibid., 73-74, 75-77.

³⁰Richard Sennett has traced this imagery from William Harvey's seventeenth-century discovery of circulation in the human body. See his *Flesh and Stone: The Body and the City in Western Civilization* (New York: Norton, 1994), 255-270.

³¹City of Boston, City Document No. 128 (1869), 78, 80, 94.

Holmes had bought and built upon—equally a mistake? Weren't the opponents of filling the Charles arguing that Boston be put into a straitjacket, where no more change would be allowed? Derby deflected the question by repeating that "any material abridgment of that water area" would be bad for the city.³²

Nathan Matthews, formerly president of the Boston Water Power Company, and Col. Newell Thompson, who had served as auctioneer for the Commonwealth lands in the Back Bay, testified that further filling in the river would inevitably reduce the value of the already filled lots. Both Matthews and Thompson agreed that the money brought in from the sale of new lots would not come close to compensating for the damage claims that would be brought by the owners whose newly built row houses faced the river. Two weeks later four other doctors testified: the City Physician, a member of the Harvard Medical School faculty, a doctor from the Old Ladies Asylum on Revere Street (which backed on the river), and a surgeon from the City Hospital.³³

Holmes solicited letters on the issue, and they were included in the committee's report. Louis Agassiz asked whether it was possible that there were men ignorant of the value of "such a large sheet of sea water, bathing, invigorating and refreshing its surroundings?" He hoped such "vandalism" would not be tolerated; if it came to that, there would be "in Cambridge a host of radical friends ready to be extreme conservatives in this matter." Holmes's nephew Charles Parsons wrote from Providence, Rhode Island, where the filling of the Cove basin had been debated two years before. Parsons included an excerpt from the Superintendent of Health there, but concluded that it needed "no authority to tell us what must be the good of a central expanse of water, open to the purifying influence of sunshine, swept over freely by breezes direct from the hills, and daily stirred like the pool of Bethesda by the health-bring angel of the tide." The letters George Snelling had collected ten years earlier were also published by the committee.³⁴

In the face of unanimous testimony against the proposal, the committee took no action. These arguments against filling the basin—shoaling in the harbor, increased pollution in the river, and cutting off air and light from the houses on the water side of Beacon Street—would be employed against the proposals for a Charles River dam for the next thirty years. New house lots facing the river would be suggested again in 1876 by Richard Henry

³²Ibid., 101.

³³Ibid., 123-158, 209-244.

³⁴Ibid., 264-267.

Dana and in the 1890s by two different state commissions on the improvement of the river. Not until this idea was finally abandoned in 1901 by the proponents of the water park would they persuade the General Court to investigate the effects of a dam on harbor shoaling and public health.

Resuming the Park Debates

Filling the Charles was a straightforward question. The park debates, for a number of reasons, were not so easily resolved. After a group of citizens petitioned the City Council on the subject in the fall of 1869, a joint committee was established. Two hearings were held in November of that year, and they were preceded by numerous editorials and letters on the subject in Boston newspapers. In many of the articles, and in the hearings, the creation of a park along the banks of the Charles was listed as one of the highest priorities.³⁵

Boston's natural setting, so extravagantly celebrated in Gourlay's descriptions of the region, was used as an argument both for and against the expenditure of public funds for parks. One of the most influential essays was written by the landscape gardener Horace W. S. Cleveland, a native of Lancaster, Massachusetts, who had worked as a landscape gardener in Boston from 1854 to 1868. Soon after moving to Chicago in the spring of 1869, Cleveland published an essay on *The Public Grounds of Chicago*. He asserted that every city should follow "its own style of adornment appropriate to its "moral and physical character." In an extended discussion titled "What Boston May Do," he claimed that the city had neither "the necessity or the power" to construct a large central park, and with sea breezes on three sides together with the seventy-five acres of the Common and the Public Garden, the city was adequately supplied with ventilation. If Boston wanted a park comprising attractions of natural scenery, it would have to go beyond the city limits; the best site in the region was the territory around Spot Pond (now known as the Middlesex Fells).³⁶

A visitor coming to Boston for the first time could not ride a mile in any direction without finding great beauty in the region's natural features and evidence everywhere of taste and culture, in the humblest cottages as well as the most extravagant villas. Such a visitor might fairly ask (and Cleveland emphasized that the question was not "an imaginary one"),

³⁵Zaitzevsky, *Olmsted*, 32-47.

³⁶[Horace William Shaler Cleveland], *The Public Grounds of Chicago: How to Give Them Character and Expression* (Chicago: Charles D. Lakey, 1869), 8. Before moving to Chicago, Cleveland worked with Olmsted and Vaux on Prospect Park in Brooklyn. See William H. Tishler, "H.W.S. Cleveland," in Tishler, ed., *American Landscape Architecture: Designers and Places* (Washington, D.C.: National Trust for Historic Preservation, 1989), 24-30; and Karl Haglund, "Rural Taste, Rectangular Ideas, and the Skirmishes of H.W.S. Cleveland," *Landscape Architecture* 66 (January 1976), 67-70, 78.

"What do you Bostonians want of a park, with such wealth of natural beauty all around you, and almost every foot of it so tastefully improved by private hands?"³⁷

All that Boston needed to do was finish and adorn the roads that connected these delightful scenes, and so make a park of the "whole surrounding country." Such a plan would exert a moral influence far beyond any that would follow from the creation of a single large park. The construction of drainage and roads would be the work of a competent engineer, and the beautification of the highways should be designed by "an artist of the best attainable class." Was this not, Cleveland asked, the "most simple and practicable scheme" that could be devised? He doubted the city's will to realize even this simple idea, however, and could not resist saying that Chicago was preparing to create a series of parks and reservations in her third decade that Boston was finding impossible to do "in the third century of her existence." Perhaps not surprisingly, Cleveland's imaginary visitor was cited in an editorial in the *Boston Evening Transcript* opposing public expenditure for parks the day after the second hearing.³⁸

With one exception, the witnesses at the hearings were in favor of parks. There was much discussion of large and small parks, parks close to the city and rural parks accessible by public conveyance. A few speakers asked whether the parks were for the rich, the poor, or for both. Settling these questions would require "very liberal views of space and time," according to Elizur Wright. He argued that a city park should be large (at least two thousand acres), well wooded and well watered, with the finest lake scenery (natural or artificial), and "should be capable of being made a museum for the study of every branch of natural history, as well as an attractive retreat into the domain of wild Nature herself. It should not only have luxuriant gardens, groves, and forests, but rocks that are both instructive and sublime." Such a park, he said, had been discovered by Gov. John Winthrop in 1631 at what was now known as Spot Pond. For two more decades, Wright would campaign for the reservation that Sylvester Baxter in the 1880s named the Middlesex Fells. Wright was one of several who expressed the view that if "Boston makes a park that will only do for the present municipality of that name, a large Boston will soon have to make another."³⁹

Three weeks after the hearings, on December 2, the landscape gardener Robert Morris Copeland (who had been Cleveland's partner in the 1850s) published a remarkable

³⁷Cleveland, 9.

³⁸Cleveland, 10, 12; *Boston Evening Transcript*, November 10, 1869.

³⁹City of Boston, City Document No. 123 (1869), 36-37.

editorial in the *Boston Advertiser* that elaborated on Cleveland's suburban parkway and added to it a series of parks he thought should be realized in Boston's near future. All the towns surrounding the city, he wrote, "are now Boston and are populated with our citizens, who come here to earn money, and go home to enjoy it." Whether or not annexation proceeded, park sites should be acquired beyond the present city limits now. Parks would not only invigorate Boston's citizens, but also increase the wealth of the city. Public open spaces, wrote Copeland, were no more a debt than the store in which a merchant keeps goods for sale.⁴⁰

Copeland's proposal matched Gourlay's 1844 plan in its expansive view of the future city, and described in captivating detail the reservations and grand boulevards that would surround Boston. He agreed with Cleveland's assessment of the picturesque scenery in the region, but he went beyond his former partner's ideas and advocated public acquisition of the most significant natural areas. Near the city there were two superb opportunities for large parks; the first extended from the Back Bay basin (the full basin, not the receiving basin) to Parker Hill, the second included the Roxbury highlands, and the valley of Stony Brook. The basin would be filled with fresh water from Stony and Muddy brooks, and provide a striking foreground to the hill beyond.⁴¹

A grand boulevard would extend from Squantum Point on the south and continue in a great arc around the city all the way to Chelsea (now Revere) Beach. In between it would pass by the Bussey Farm (now the Arnold Arboretum) and the Chestnut Hill Reservoir, then cross the Charles on its way to Wellington Hill in Belmont. The hill, the falls of Beaver Brook, and the East Lexington meadow would become a park of five to eight hundred acres. The boulevard might then divide, with one branch enjoying the view inland to Mount Wachusett and Monadnock; joined again, the road would then pass between Spy and Fresh Pond across Arlington to Spot Pond and continue to the beach at Chelsea. That was not the end, however—bridges and ferries would connect the harbor islands and complete the circle back to Squantum Point. This scheme would open up lands for development in every suburban community, and make Boston "truly the most beautiful city in America."⁴²

Like Gourlay, Copeland believed that since all the surrounding communities would benefit, it would be reasonable for the legislature "to appoint a metropolitan commission with

⁴⁰Robert Morris Copeland, "The Park Question," *Boston Daily Advertiser*, December 2, 1869. On Copeland, see Zaitzevsky, *Olmsted*, 227, n. 21.

⁴¹Ibid.

⁴²Ibid.

power to under take this plan." Even the future upkeep of the parks was addressed. The commission would condemn the necessary properties to construct the boulevard, then offer the improved lands for sale, providing enough to maintain all the public grounds in good order. Copeland's metropolitan plan would "unite and harmonize every interest," including all those who have advocated other park schemes as well as every property owner within twelve miles of the State House.⁴³

The opposite approach was taken by Uriel H. Crocker, a Boston lawyer, in a letter to the *Advertiser* published two days after Copeland's plan had appeared in the paper (Crocker addressed a similar letter to the Selectmen's special committee on parks two weeks later). Crocker focused on creating a single road, less than four miles in length, from the Mill Dam (now Beacon Street) at Hereford Street to Corey's Hill and then continuing to Chestnut Hill Reservoir (Figure 3.8). This approach was "superior to all hitherto offered" for at least five reasons. First, it would be centrally situated (as contrasted with the proposed parks in Dorchester or Spot Pond). It incorporated natural features that already existed. Corey's Hill offered one of the most expansive views in the metropolitan area, but it was private and inaccessible; the reservoir was already a favorite resort for walking and driving; and the Back Bay (described in language later echoed by Eliot) offered an expansive open space "furnished by nature without cost," large enough to cool the breezes that passed over it, with room for all who wanted to row or sail, an attractive site for a drive and promenade along its shores. At Craigie's Bridge, a two- or three-foot dam could be constructed to keep the mud flats continually covered. The plan would meet the wants of both rich and poor, "those who ride and those who walk." It could be done for little expense: the promenade on the river would have to be built, but the route beyond the river to Corey's Hill and the Reservoir already beautiful enough that they could be left for a time as they are. Finally, this four-mile park would be accessible to far more people than a compact park of the same size.⁴⁴

Though modest, almost constrained, by comparison with Copeland's grand scheme, Crocker's plan echoed Copeland's ideas about the importance of connected open space. It would give the city "a continuous line of ornamental grounds" from the State House to Chestnut Hill. This was far superior to the plans that took a "compact" area like Central Park in which "a drive of considerable length might be made to wind so ingeniously that those who passed over it should not be made unpleasantly aware of the fact that they were riding round

⁴³Ibid.

⁴⁴"Letter from Uriel H. Crocker," in *City of Boston, City Document No. 123 (1869), 91-92.*

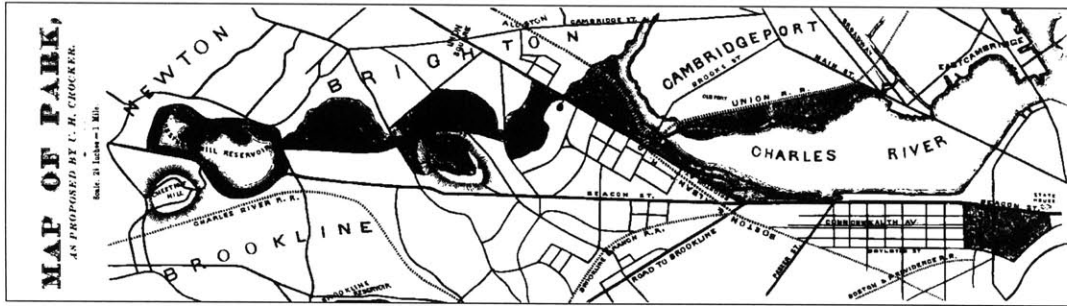


Figure 3.8 "Map of Park, as Proposed by U. H. Crocker," 1869.

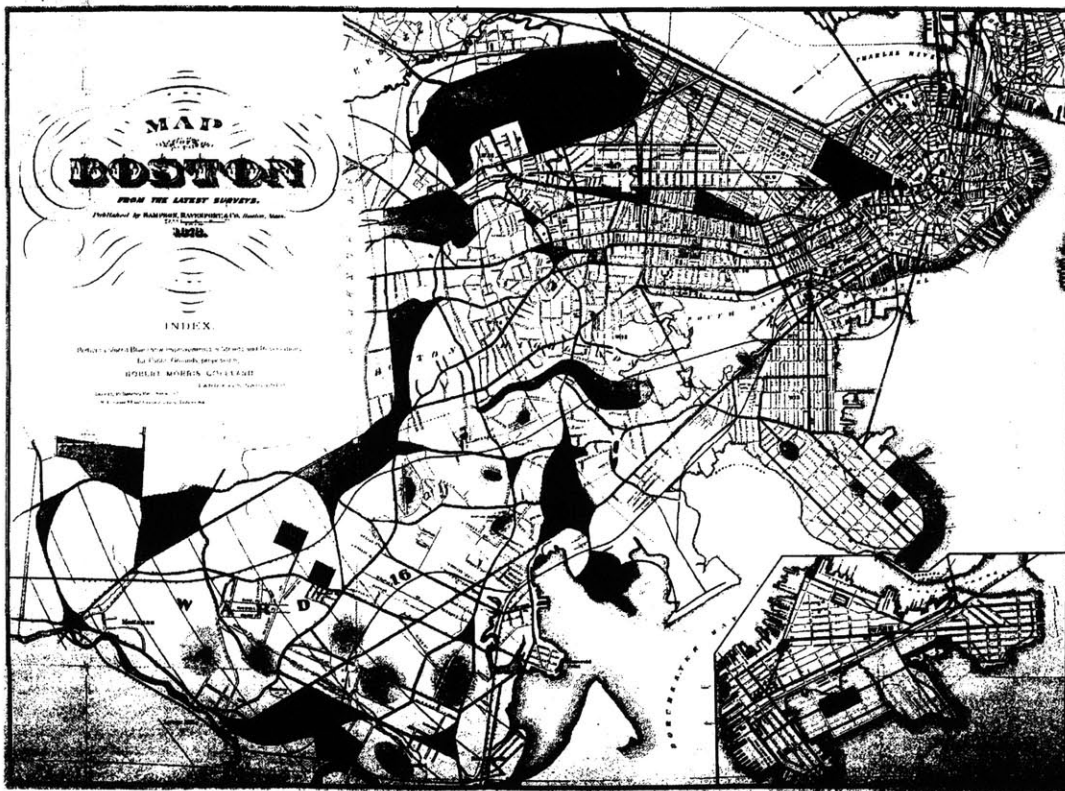


Figure 3.9 Robert Morris Copeland, "Improvements in Streets and Reservations for Public Grounds," *The Most Beautiful City in America*, 1872.

and round within narrow and confined limits." Crocker couched his ideas in rich visual language:

The manner in which the proposed park unites and combines the varied charms of the Chestnut Hill reservoir, of Corey's Hill, and of the large tidal basin of Charles River, seems to us peculiarly happy. Either one of these, the two rural lakes among the hills, the lofty elevation with its wide-reaching view of country on the one side and of city and ocean on the other, in the west the green hills and valleys, in the east the red bricks of the city and the blue of the ocean, and on the north and south the white houses of the suburbs swarming over the green fields for miles away—or the broad body of salt water, large enough for thousands to sail or row upon without crowding—either one of these elements, we say, would alone suffice to make a park famous; to make it a place of which a city might well be proud; but to unite all these in one pleasure ground is to do something worthy of Boston.

In addition to writing the committee on parks, Crocker wrote two newspaper articles. The second article concluded with a visual metaphor that never caught on, that the park scheme "would give a golden spoke to the Hub of the Universe."⁴⁵

Crocker shared with Copeland a regional view of the responsibility as well as the opportunity for public parks. The bill he drafted for the legislature proposed a metropolitan (not a Boston) commission with nine members—the mayor of Boston, four members appointed by the Boston City Council, and four appointed by the governor. The commission would be empowered to take land outside the city limits of Boston.⁴⁶

While the bill was under consideration in the General Court, a number of Bostonians wrote to Olmsted and asked for his help. Several urged him to testify before the legislature. He declined to do so, but did agree to speak at a meeting of the American Social Science Association on February 25, 1870.⁴⁷ His talk on "Public Parks and the Enlargement of Towns" did not discuss any of the Boston park schemes. He did echo Gourlay and Copeland in asserting that "The Boston of today is the mere nucleus of the Boston that is to be. It is practically certain that it is to extend over many miles of country now thoroughly rural in character."⁴⁸

The bill, which required approval by two-thirds of the eligible voters in Boston, passed the state legislature on May 27. Just before the city election, a handbill was circulated

⁴⁵Ibid., 90, 93; *Boston Daily Advertiser*, December 18, 1869.

⁴⁶Commonwealth of Massachusetts, *Acts of the General Court*, 1870, Chapter 283.

⁴⁷On the founding of the American Social Science Association (1865) and other national professional groups, see Bledstein, 80-92.

⁴⁸Olmsted, *Public Parks*, 68.

that claimed the parks outside the city limits would be paid for by city residents, a line of reasoning that would plague all future proposals for metropolitan government. In fact, a special commission was to be appointed to assess the surrounding cities and towns. Out of fifteen thousand voters, the bill fell short of the required margin by about nine hundred votes. In the debates on the Charles River dam in 1903, counsel for the supporters of the dam argued that the principal argument against the 1870 park bill was that it created a state and not a Boston park commission.⁴⁹

A new petition was presented to the City Council in December, but the council took no action for three years. Essays and exhortations continued to appear in the local press, and in 1872 Copeland revised of his earlier editorial and published it as a pamphlet titled *The Most Beautiful City in America: Essay and Plan for the Improvement of the City of Boston*. Some of the major features of his first plan remained, including the park joining the Back Bay with Parker Hill, Fort Hill in Roxbury, Williams Park in West Roxbury, and the Stony Brook valley (Figure 3.9). The Back Bay would be dammed to create a "sheet or lake of fresh water, diversified by islands, and crossed by the great avenues on suitable bridges."⁵⁰

Copeland changed his mind about some elements of his 1869 plan. The suggested parks were all located within the city limits, an acknowledgement, perhaps, of the failed referendum. And though he agreed that the Back Bay was now the city's finest residential district and that the residents would be delighted with a park along the Charles Basin, he now said that all of the city's streams, even those of "small volume," would be needed to support manufacturing. The Neponset River already demonstrated this general rule, and in time, "every foot of the Charles river bank will be wanted for yards and wharves." The harbor islands would likely be used for residences or commercial ventures (for example, private resorts), but should not be improved by the public unless they could be connected to the mainland with bridges and made accessible to "all classes of population." Though the plan incorporated many of the city's natural features, all connected by widened streets, the resulting plan did nothing to improve the visual order of Boston's chaotic geography.⁵¹

In his inaugural in 1874, the city's new mayor Samuel Cobb renewed the call for the establishment of public parks, and a month later a special commission was appointed by the city council. In June two more hearings were held. Most of people who spoke supported a

⁴⁹Zaitzevsky, *Olmsted*, 37; Commonwealth of Massachusetts, *Evidences* (1903), 492.

⁵⁰Robert Morris Copeland, *The Most Beautiful City in America: Essay and Plan for the Improvement of the City of Boston* (Boston: Lee and Shepard, 1872), 14.

⁵¹Zaitzevsky, *Olmsted*, 38; Copeland, *The Most Beautiful City in America*, 14, 44.

"water park" on either the Back Bay or the Charles, and a petition was presented with fifteen hundred signatures in favor of a Back Bay water park. Among the most articulate speakers at the hearings was Richard Henry Dana. He claimed that the Charles River was an opportunity not available to any other city, because "a park in the heart of the city with sea water was worth ten thousand parks out of the reach of the people, especially of the poorer portion of the population." The city should never have built houses on the north side of Beacon Street, Dana said; where there should be "a great public driveway," there was instead "a contemptible scavenger's street, thirty feet wide, backing up against the unmentionable parts of private houses." Boston should not only construct the water park, the city should consider building another row of house lots to create a suitably dignified frontage on the park.⁵²

Public health remained a great concern. "Pure atmosphere" was the surest guarantor of well-being, as one speaker phrased it (quoting an address fifty years before by Mayor Josiah Quincy), "not merely in the wide street and splendid avenue, *but in every lane, in every court and every alley.*"⁵³

The engineer Ernest W. Bowditch, who had been associated with Copeland for three years until Copeland's death in 1874, described a plan that drew heavily on Copeland's earlier ideas. By including several public reservoirs and rural cemeteries, the acquisition of land would be reduced, and the region's water supplies would be protected. With the exception of land in Cambridge around Fresh Pond, most of the proposed parks were inside Boston city limits. The following year he revised his scheme; to the southern and western parks of his previous plan he added parks north of the city, including Spy, Mystic, and Spot ponds, Prospect Hill in Malden, and Chelsea Beach, making a full circle from Chelsea to Squantum. Anticipating Olmsted's later designs, he included the valley of Muddy River to connect Back Bay with Jamaica Pond. As others had suggested earlier, he argued that the cost of these parks should be divided between Boston and the surrounding towns.⁵⁴

The special commission filed its brief report in December 1874. It began by comparing park acreage in Boston with New York, Brooklyn, Philadelphia, Baltimore, and Chicago. Boston suffered in the analysis, with only 115 acres; Brooklyn (the next lowest) had already acquired 550 acres, and Philadelphia headed the list with 3,074 acres. The report then summarized the financial benefits of park construction, drawing on data from the same

⁵²Zaitzevsky, *Olmsted*, 39; *Boston Daily Advertiser*, June 13, 1874.

⁵³[George A. Shaw], *Speech of Hon. George A. Shaw in the Common Council of the City of Boston, March 25, 1875, On the Subject of Public Parks* (Boston: n.p., 1875), 19.

⁵⁴Zaitzevsky, *Olmsted*, 40-41.

six cities. Since the start of park construction in New York, the city's real estate valuation had increased 91%, but the three wards around Central Park had increased more than \$200 million (over 700 percent), and the park had cost only \$14 million. In the other four cities, total valuation increased from 21% to 143%, but the property surrounding new parks increased from one hundred percent to more than four hundred percent. Following the financial analysis was a brief consideration of the sanitary problems of the city, and the public health benefits that would follow from building parks.⁵⁵

Though far less expansive than Copeland or Bowditch's plans, the commissioners emphatically endorsed immediate action, since "every day's delay will add so greatly to the cost . . ." They repeated Cleveland's view that the city did not need a large "Central Park," but should instead build a series of parks of various sizes "connected by broad driveways." Looking out from the center of the city, they suggested laying out a series of parks of moderate size "between the third and fourth mile circles." Land for a second band of larger parks beyond the first series should be purchased but need not be improved. Since any park acquisitions would require legislation, however, it would be imprudent to recommend specific sites until the city council was granted the power to act.⁵⁶

Though there was considerable opposition in the council, an order was finally passed petitioning the General Court for a new parks bill. The act approved by the legislature followed the city's order closely, including a provision drafted by Uriel Crocker that allowed not only Boston, but also adjoining cities and towns to take land for parks. The bill required that parks ordinances be passed by a simple majority in each city, not the two-thirds approval mandated in the 1870 bill. Three park commissioners would be appointed by the mayor, and all appropriations had to be approved by a two-thirds majority in both branches of the city council. The bill was passed by Boston voters in June 1875.⁵⁷

The First Park Plans

The Park Commission was appointed in July, and two months later another public hearing was held. The notice of the hearing in the city newspapers invited "civil and landscape engineers" and other citizens to comment on lands for public parks. Then the commissioners began keeping daily office hours, and at least eighty people came to the office

⁵⁵City of Boston, *Report on the Establishment of a Public Park* (December 3, 1874, City Document No. 105, 1874), 3, 7-11.

⁵⁶*Ibid.*, 11-13.

⁵⁷Zaitzevsky, *Olmsted*, 41-42.

during the winter of 1875-76. Many of them presented papers or plans, and by the spring almost every possible site in the city had been endorsed by someone. In October they asked Olmsted to join them in a visit to proposed park sites. The following spring, as they were making final decisions, they again invited Olmsted to inspect the parks. Only a draft of Olmsted's observations survives; it focuses on four of the proposed sites. He had no reservations about the Charles River Embankment or Jamaica Pond; some changes were suggested in the boundaries of West Roxbury (now Franklin) Park, and Back Bay and Parker Hill parks. He also reviewed the plans for approach roads to the parks, and suggested "greater liberality in the new parkways and bolder and more sweeping improvements of existing streets leading toward the park than you seem to contemplate."⁵⁸

The 1876 park report was a landmark not only for Boston but in the history of American park development. More than that, the report mirrors the vision and commitment of the park commissioners. Given the lengthy deliberations of the city fathers on the subject, reflected in the skepticism of observers like H. W. S. Cleveland, this commitment was crucial in allowing the Olmsted office the freedom to develop their designs.

Four criteria were established for selecting parks and parkways. The first was "*Accessibility*, for all classes of citizens by walking, driving, riding, or by means of horse or steam cars." "*Economy*" required the choice of lands that as much as possible were not now producing income and would not disturb the business or domestic growth of the city. The third factor, "*Adaptability*" meant identifying lands with appropriate natural features, that would require the least cost for development. Finally, properties with "*Sanitary advantages*" for development as parks would become "unhealthy if neglected or built upon."⁵⁹

Waterfront parks were recommended at City Point, Savin Hill, on the harbor, and on the Charles River. Two urban parks were suggested, on Parker Hill overlooking Back Bay, and at South Bay. Between the fourth and fifth mile circles was the land adjacent to the Brighton reservoir and the West Roxbury (later Franklin) Park. The plan also included Jamaica Pond (Figure 3.10).⁶⁰

The report described each proposed park in some detail. The Charles River Embankment would extend from Leverett street to Cottage Farm Bridge, would provide space for a parkway two hundred feet wide, walks, drives, saddle-pads and boat-landings. The

⁵⁸Ibid., 43-44.

⁵⁹City of Boston, *Second Report of the Board of Commissioners of the Department of Parks for the City of Boston* (April 24, 1876, City Document No. 42, 1876), 1.

⁶⁰Ibid., 4-5.

perspective drawing in the report did not show new row houses facing on the basin, as Dana had suggested the year before (Figure 3.12). The commissioners hoped to connect the Embankment with Brighton Park, but the best route would be through Brookline, and the park act did not grant the authority to create a parkway in another jurisdiction.⁶¹

A meeting in Faneuil Hall in June 1876 enthusiastically endorsed the commissioners' recommendations. Richard Henry Dana claimed that Boston was behind every city in the United States in providing parks. Edwin Clarke identified the issue at the root of every debate on the cost of parks: it was difficult to compute the educational or sanitary value of parks "on any scale that the market acknowledges." That value was nonetheless "real, substantial, and potent." The city council, however, did not support the suggested appropriation of five million dollars, and the report was ignored for a year. Opposition to the parks came from several directions. The city was still recovering from the Great Fire of November 1872, and from the crash of 1873. A sewer bond was also under review, and the park bill was seen as competing for those funds.⁶²

The council finally approved \$450,000 for the Back Bay park, perhaps hoping to kill the entire project. The commissioners proceeded with land acquisition, which was largely completed by March 1878. As the city had done with the design of the Public Garden two decades earlier, the park commissioners decided to hold an open competition. The first prize was awarded to Hermann Grundel (a florist, according to the city directory), but the commissioners were not satisfied with the plan. A few months later they hired Olmsted to complete a design for the park.⁶³

The Back Bay Fens and the Muddy River

The primary purpose of the Back Bay park was sanitary improvement, by providing storage for flood water from Stony Brook. Olmsted hoped to join that objective with the construction of a salt marsh. This would not be a re-creation, since much of the Fens would be built on had always been open water or mud flats. In fact, his new marsh would require the diversion of Muddy River and Stony Brook into conduits running into the Charles,

⁶¹Ibid., 16, 18.

⁶²*Parks for the People: Proceedings of a Public Meeting held at Faneuil Hall, June 7, 1876* (Boston, 1876), 13, 41-42; Zaitzevsky, *Olmsted*, 46.

⁶³Zaitzevsky, *Olmsted*, 46-47.

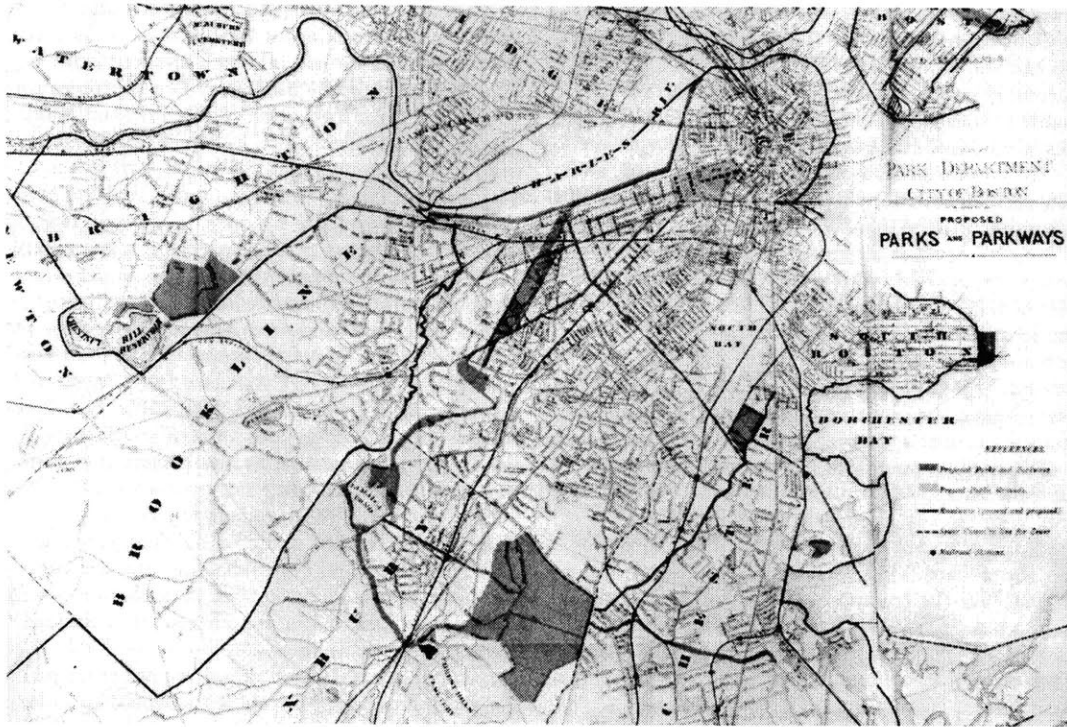


Figure 3.10 "Proposed Parks and Parkways," Boston Park Department, 1876.

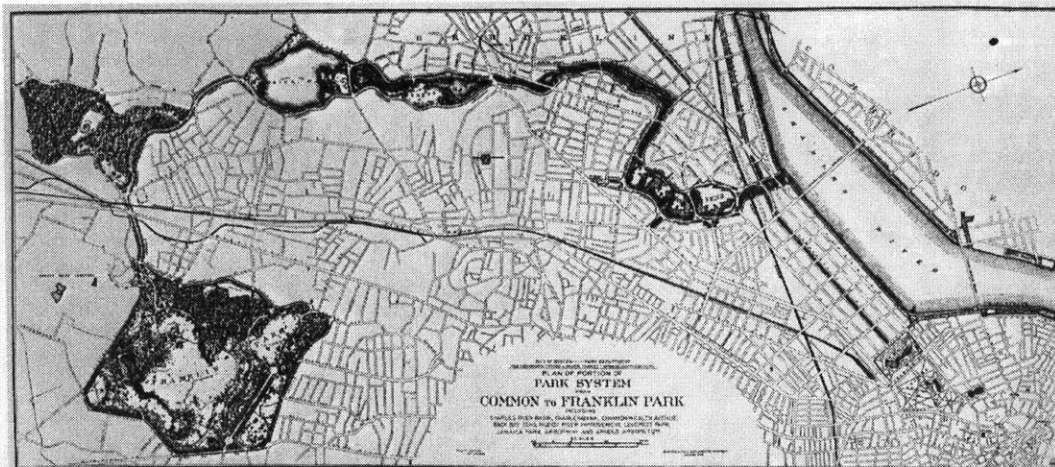


Figure 3.11 Olmsted, Olmsted & Eliot, the Boston Park system from the Common to Franklin Park, 1894.

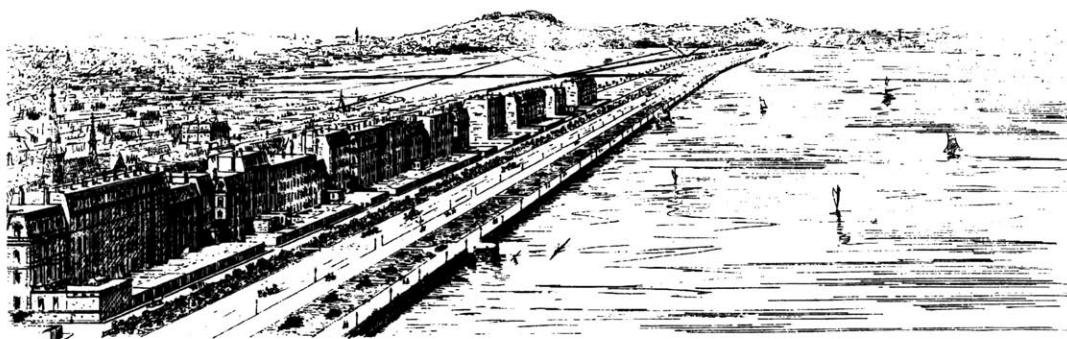


Figure 3.12 Charles River Embankment, Boston Park Department, 1876.

followed by extraordinarily careful engineering of the substructure beneath the proposed plantings of wetland shrubs and grasses.⁶⁴

The clarity and appeal of Olmsted's naturalistic landscape is apparent in the site plans, particularly in comparison with the park commission's original plan of 1876 (Figures 3.10 - 3.11, 3.13 - 3.14). In a letter to the chairman of the Brookline Park Commission in 1890, Olmsted described how at the center of the city would be

the broad dignified, urban residence street—Commonwealth Avenue—with its formal tree-shaded central mall. This extends to the cross street called Westchester Park [now Massachusetts Avenue], where the avenue turns a slight angle and the formal arrangement yields to a gracefully curving drive and walk embellished by long irregularly planted, undulating grass plots, which prepare the mind for the strong contrast to everything urban presented by the next link in the chain, called the Back Bay Fens. This is a ground of considerable breadth and extent, which in its general aspect, will appear a fortunately preserved reservation of a typical small passage of New England sea shore landscape, including a salt creek bordered in part by salt meadows and in part by gravelly shores, both hemmed in by steep, irregular sylvan banks. There will be in it no shaven lawns or pastured meadows: the planted ground above the salt marsh being occupied by bushes or low, creeping flowering plants, in a condition suggestive of natural wilderness.⁶⁵

Construction on the park, which Olmsted persuaded the Boston commissioners to rename the Back Bay Fens, was largely complete by 1890.

Olmsted's description of the Fens was written to persuade the Brookline park board to join with Boston so that the landscape of the Fens could be extended up the valley of the Muddy River to Jamaica Pond. Though the area was included in Bowditch's 1875 plan, the Boston park commissioners had not included it in their report the following year (Figure 3.10). The residential areas along the Muddy River were declining in both Boston and Brookline. Near Brookline Village were forty condemned houses, an uncharacteristic departure from the town's tradition of careful stewardship guarded by an elite group of educated and prosperous residents. The river was overloaded with sewage, and much of it was a breeding ground for mosquitoes.⁶⁶

In 1880, about a year after Olmsted prepared the first drawings for the Back Bay, he sketched his first "Suggestion" of a plan for the valley. It was published in the park reports of both towns, and his revised scheme the following year was approved by the two park

⁶⁴Ibid., 55-57

⁶⁵Frederick Law Olmsted to Francis W. Lawrence, January 28, 1890, quoted in Creese, 175.

⁶⁶Ibid., 81-82.

boards. Both towns, however, made unrealistically small appropriations for the work. Construction was delayed for years by difficulties in land acquisition, and in 1890 Olmsted revised the design and recommended that the boundary between the two towns be changed, which required an act of the General Court. The construction of the Muddy River, largely completed by 1893, filled in the last link of Boston's "continuous chain of pleasure-grounds" (Figures 3.15, 3.16).⁶⁷

Charlesbank Park

The Boston Park report of 1876 had imagined a Back Bay reservation linked to an embankment along the Charles River. Four years later, however, the board determined to begin with a smaller park along the Charles, extending from Leverett Street (at the Craigie Bridge) only as far as the West Boston bridge. Filling the river and constructing a new seawall required approval of the harbor commissioners, a lengthy process, and a preliminary plan was not prepared by Olmsted until 1887. The plan was straightforward: a gymnasium for men and boys at one end, a similar area for women and girls at the other end, and a large greensward edged with benches and lights extending for most of the park's length along the river. An open fence surrounded the men's running track and gymnastic apparatus, opened in 1889; for the women's gymnasium, completed two years later, the running track was arranged around a "turf playground for little girls" and heavily screened by a dense planting of shrubs (Figures 3.17, 3.18). Professor Charles Follen had constructed gymnastic equipment in Cambridge in 1826, importing the idea from Germany; Charlesbank was the first open air gymnasium in a public park. The children's play areas also included "sand courts" (sometimes called "sand gardens"), which had been introduced by a group of women in the North End in 1886.⁶⁸ With its heavily used promenade along the water's edge, Charlesbank was the first public park on the Boston side of the Basin.

As Olmsted later explained to the Metropolitan Park commissioners, the Charlesbank had been "designed solely with reference to itself" and "as an isolated feature for the enjoyment and health of the crowded working class population near by." It was consequently

⁶⁷Ibid., 83-84.

⁶⁸Ibid., 96-98; Suzanne M. Spencer-Wood, "Domestic Reform and the Design of Cities, Parks and Playgrounds," unpublished paper presented at Radcliffe College, February 20, 1992, 6.

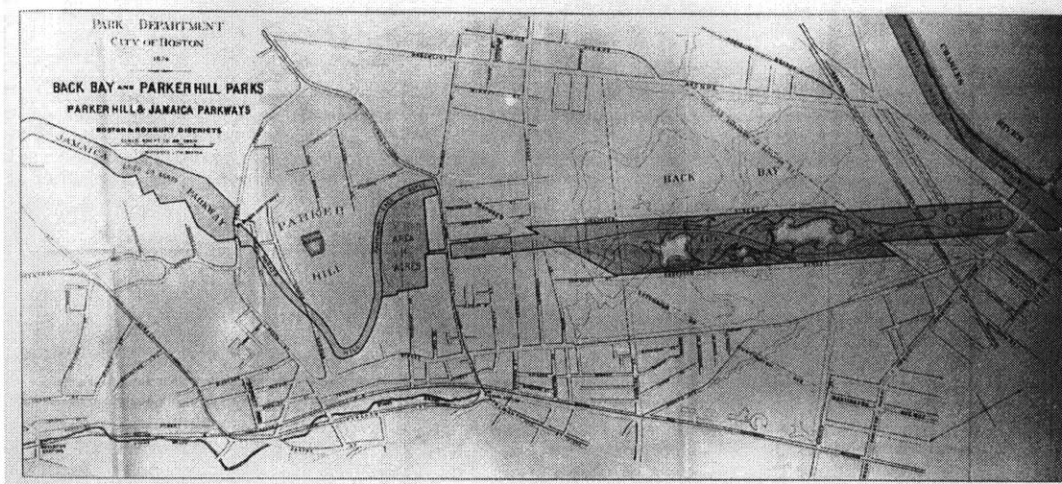


Figure 3.13 "Back Bay and Parker Hill Parks, Parker Hill & Jamaica Parkways," Boston Park Department, 1876.

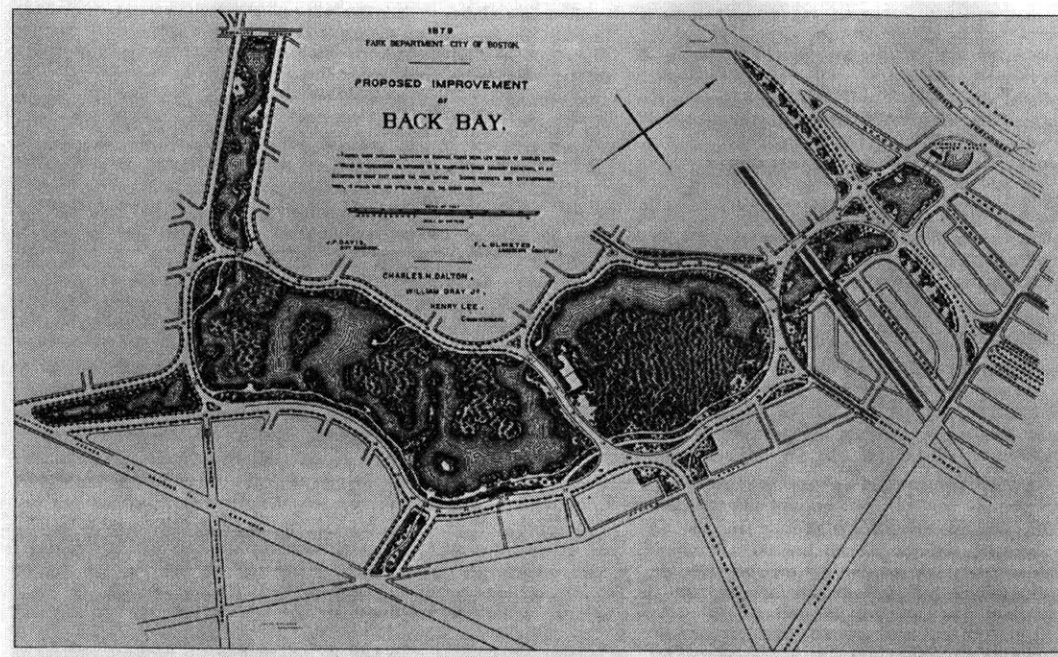


Figure 3.14 Frederick Law Olmsted, "Proposed Improvement of Back Bay," for the Boston Park Department, 1879.



Figure 3.15 Muddy River under construction, 1892.

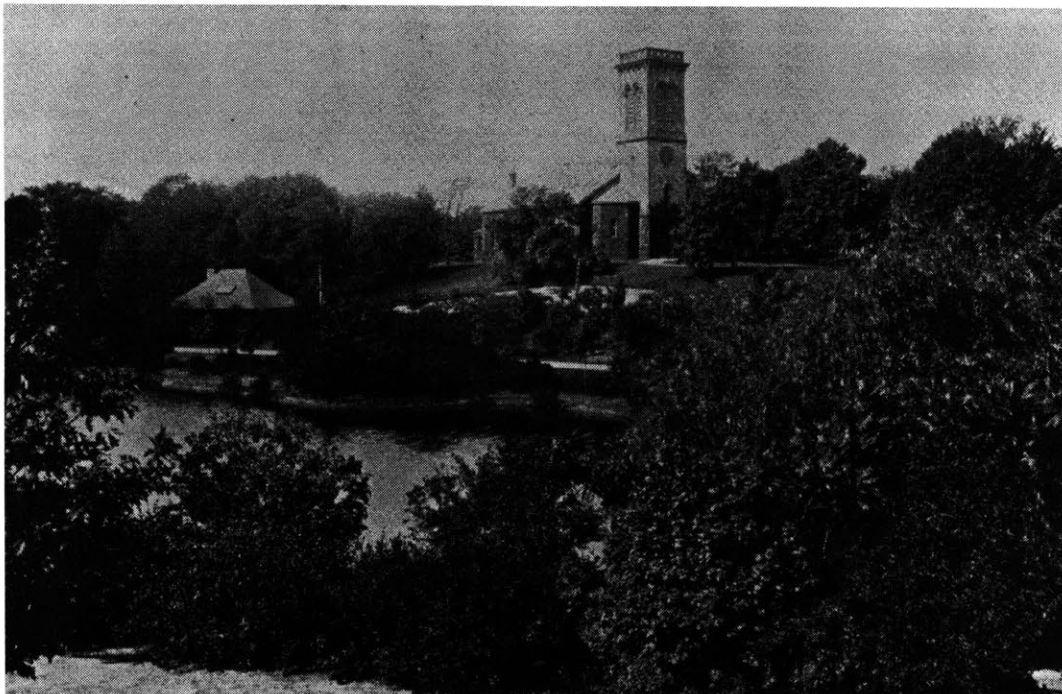


Figure 3.16 Muddy River, about 1900.

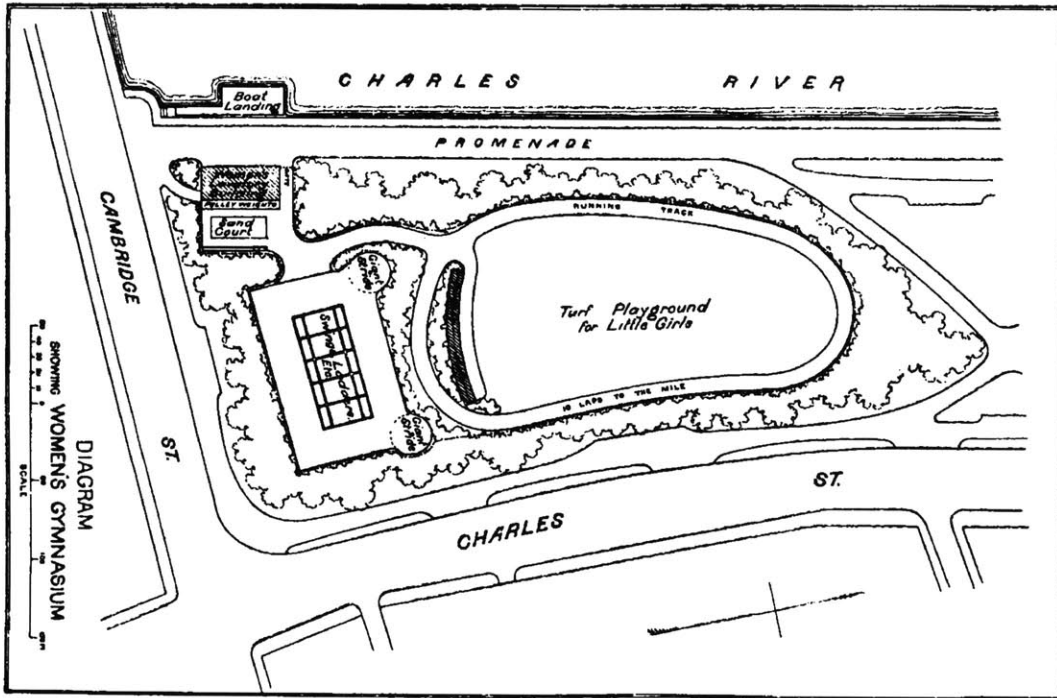


Figure 3.17 Charlesbank Park, Women's Gymnasium and Turf Playground

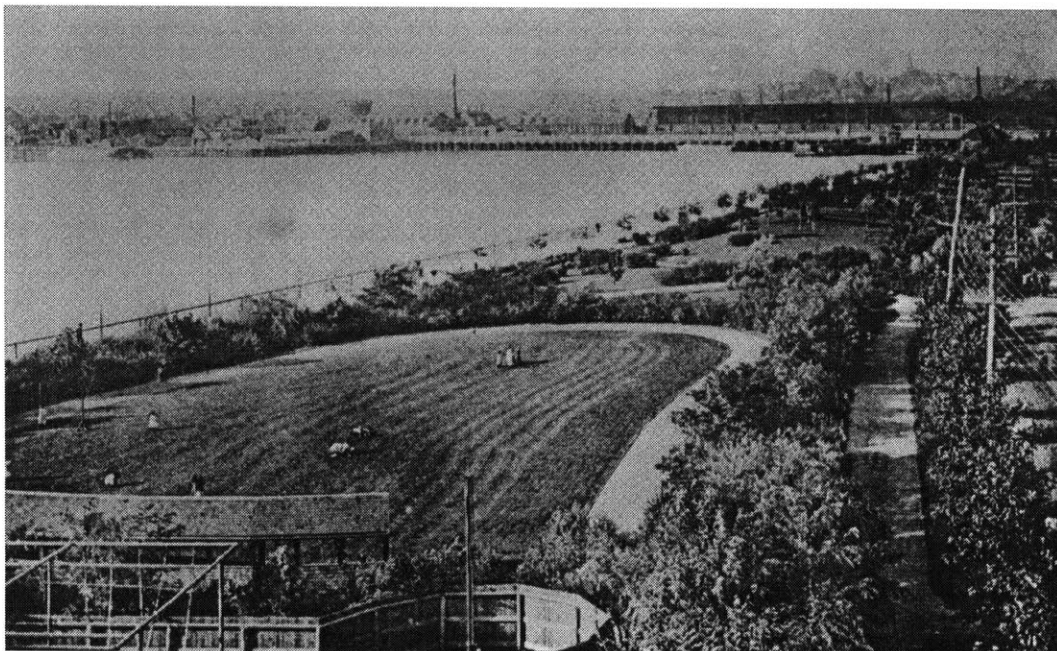


Figure 3.18 Charlesbank Park, Women's Gymnasium and Turf Playground

very different from the treatment that would be suitable for the continuous esplanades planned for other sections of the river banks.⁶⁹

Longfellow Meadows and Longfellow Park

The last decades of the nineteenth century also marked the beginning of riverfront landscape improvement in Cambridge. In 1870 Henry Longfellow, his family and friends gave thirty acres to Harvard College, motivated perhaps in part by the construction of the Brighton Abattoir just upstream. Twenty years later, with a gift from Henry Lee Higginson of twenty acres adjoining what became known as the Longfellow Marshes, the university established Soldiers Field as the new athletic fields of the college. Higginson's words at the dedication suggest how different the marshes were before the buildings and fences and high-speed roads were constructed. Soldiers Field was a "great lovely plain, bordered by the sunset and other irreclaimable gifts of the sky and landscape, and set forever there in memory of valor and of love."⁷⁰

In 1887, Longfellow's children donated about two acres of land to the Longfellow Memorial Association, which had been founded five years earlier. The open land would connect the Longfellow house and Brattle Street with the river at the point where Mt. Auburn Street touched the water's edge at high tide. Charles Eliot, who had just returned from a lengthy European tour after a two-year apprenticeship with Olmsted, agreed to do the design; it would be his first park.⁷¹

The long, narrow site connected Brattle and Mt. Auburn streets. It was divided by a "steep terrace-like bank," which offered pleasing views over the river marshes to the hills of Brookline. Eliot determined that the monument or memorial should be located on the edge of this terrace in the center of a stone exedra. The natural terrace divided the site into what Eliot called "the green" and "the garden." A road was required along the edges of the green to provide access to the properties along either side, which would make the area "a wholly public place." A minimal design for this portion of the site would reinforce the memory of

⁶⁹Commonwealth of Massachusetts, Metropolitan Park Commission, Minutes, November 2, 1892; Archives, Metropolitan District Commission.

⁷⁰Samuel Eliot Morison, *Three Centuries of Harvard, 1636-1936* (Cambridge, MA: Harvard University Press, 1936), 411-412, n. 1.

⁷¹Eleanor McPeck, Keith Morgan, and Cynthia Zaitzevsky, eds., *Olmsted in Massachusetts: The Public Legacy* (Brookline, MA: Massachusetts Association for Olmsted Parks, 1983), 13-14.

"the village green of old times." A low wall would separate the green from Brattle Street, with a line of maple or elm trees along the edges of a loop road extending to the memorial.⁷²

The design of the garden, the lower portion of the site, should be adapted "to the use and enjoyment of all orderly citizens, and of women and children in particular." It was to be quiet and restful, and "would be spoilt by flower beds"; the only plantings in the design were lawn, shrubs, and trees. Water from a spring on the site would be led across the oval of the garden. The northeast corner of the garden was higher than the other corners, and the view was even better than from the exedra, because it included the woods and tower of Mt. Auburn Cemetery (Figures 3.19, 3.20).⁷³

Even this first park design by Eliot, and his careful explanation of it to the Longfellow Memorial Association, revealed his inclination to magnify the site's scenic characteristics through landscape design, and his interest in preserving and enhancing what have come to be called cultural landscapes. Throughout his brief career, as the work on the metropolitan parks would make plain, Eliot sought to reveal the nexus between natural processes and human imprints on landscapes.

The Cambridge Esplanade

Though public landscapes in Boston generally developed at cross purposes with industrial enterprises, a curious link between the two shaped the first extensive open space on the Cambridge side of the Charles. In 1832 Charles Davenport founded a carriage manufactory, to make carriages and stages in East Cambridge. The company later constructed railroad engines and cars. In the 1840s, Davenport began to acquire land in the marshes and mudflats between East Cambridge and Cambridgeport. Eight years later Davenport was one of three incorporators of the Union Railroad, chartered to build a line from the Fitchburg railroad in Somerville across the Cambridgeport flats to Brookline. It would cross the Charles at Cottage Farm and connect with the Boston & Worcester railroad, filling in one crucial link from the west to the deep-water piers in Charlestown and East Boston (Figure 3.21).⁷⁴

In 1846, two years before the founding of the Union Railroad, the Chelsea Branch Railroad was incorporated to connect East Boston with Chelsea, another move to link the expanding rail network north of the city with Boston Harbor. The Chelsea Branch was

⁷²[Eliot], *Charles Eliot*, 211.

⁷³*Ibid.*, 211-213.

⁷⁴*Cambridgeport*, 22; Maycock, 73-74.

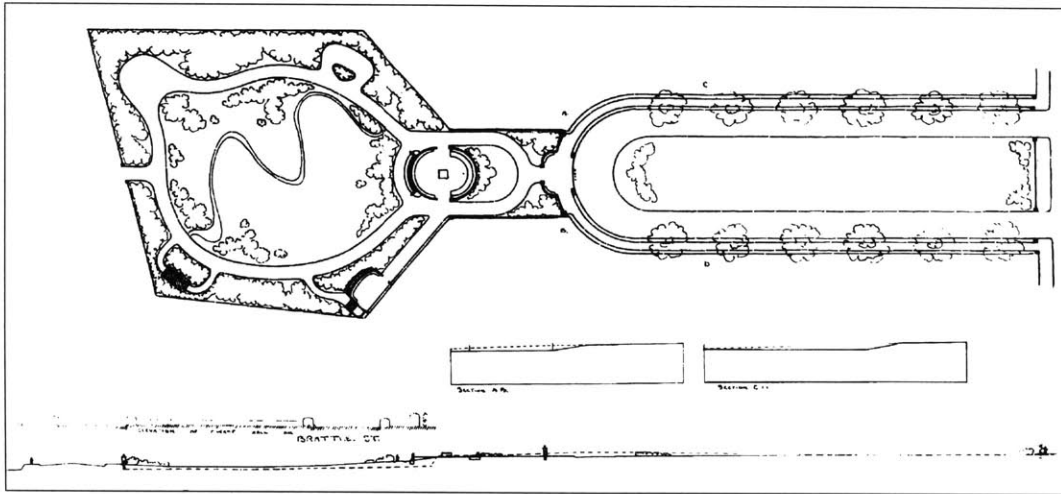


Figure 3.19 Plan for Longfellow Park, Charles Eliot, 1887.

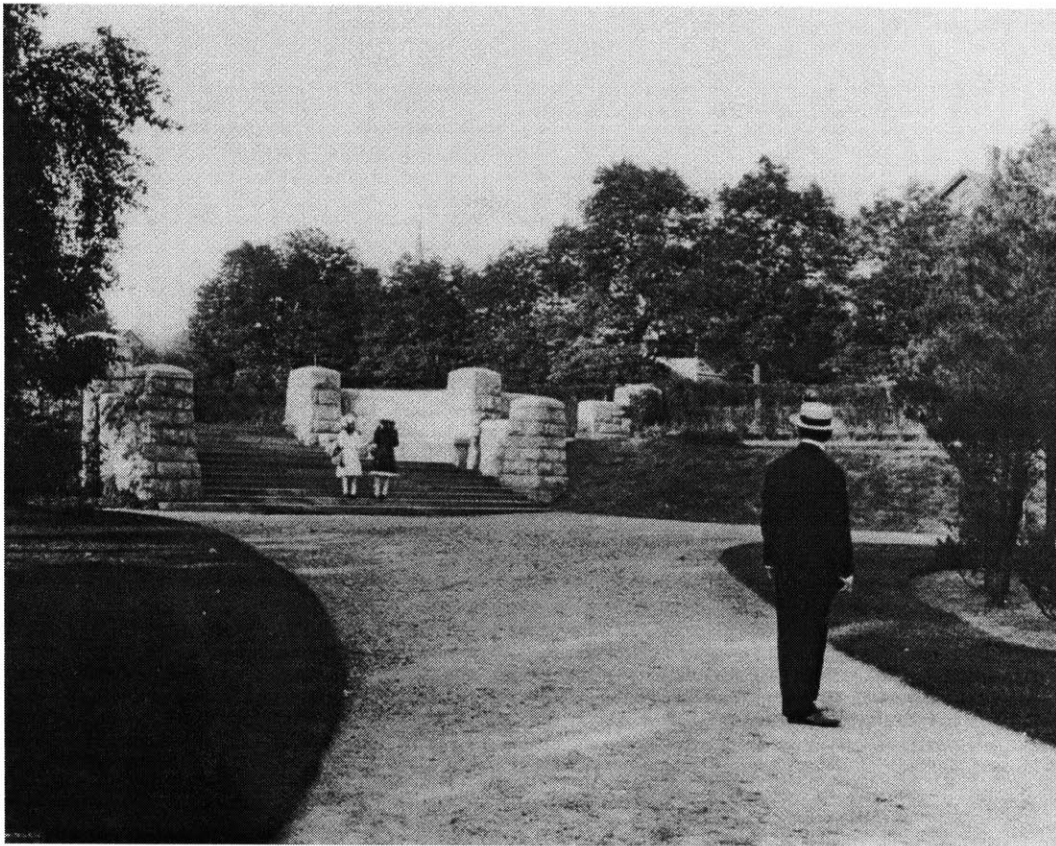


Figure 3.20 Longfellow Park, about 1900.

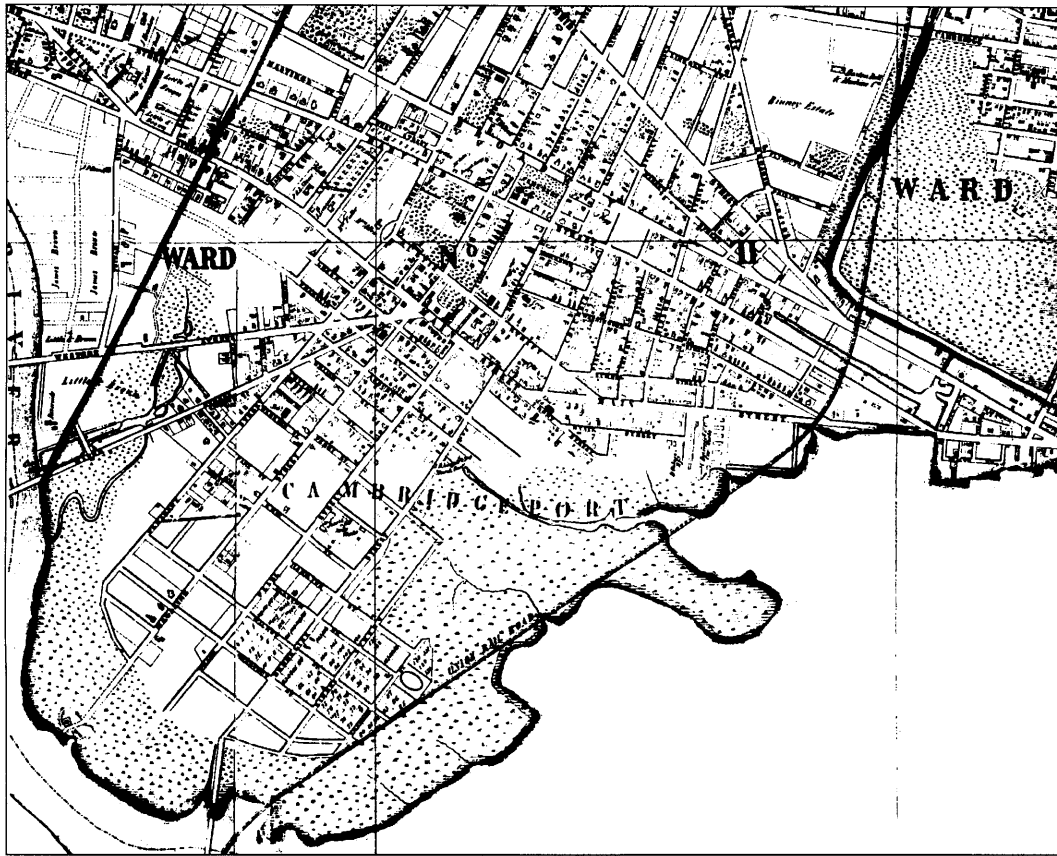


Figure 3.21 The Cambridgeport marshes and the Union Railroad, 1854.

renamed the Grand Junction in 1848, when it was authorized to cross the Mystic River into Somerville and tie into the Boston & Maine and other northern railroads. Five years later the Union line was authorized to lease its property in Cambridgeport to the Grand Junction, and the Boston & Worcester agreed to help construct the tracks from Brookline through Cambridge and Somerville in exchange for lease rights to harborfront property in East Boston.⁷⁵

More than eighty percent of the rail line across Cambridge was built on a high embankment across marshes and mudflats. With few culverts, the embankment reduced the flow of water over the marshes, drying out the land and making it more attractive for development. But the marshes on the river side—and the rail line itself—attracted industries and discouraged residential development on the river side of Cambridgeport. Service began in 1855, but soon thereafter a bridge was washed out by a storm. The Boston & Worcester refused to invest in rebuilding the line, and sued the Grand Junction; a decade later, the Worcester line was authorized by the legislature to take over the Grand Junction. In 1868 the Boston & Worcester merged with the Western Railroad (which was operating the route from Worcester to Albany) to create the Boston & Albany Railroad. The new company reconstructed the Grand Junction tracks, and the line through Cambridge began operating again in 1869. Today, the Worcester railroad's willingness to wait ten years for the collapse of the Grand Junction seems inconsistent with the strategic importance of the Grand Junction branch, which was (and still is) the only practical connection between northern and southern railroads in Boston.⁷⁶

Davenport, meanwhile, continued to acquire property in the area between the Grand Junction line, Main Street, and the low-tide mark of the Charles. The Charles River Embankment Company was incorporated in 1880 to build a seawall along the Charles and to fill the flats behind the seawall. Davenport had been promoting this scheme since the mid-1870s, though the development of his ideas is hard to reconstruct from the many undated drawings he circulated (Figure 3.22). In 1882 Boston and Cambridge agreed to construct a new Charles River bridge across the widest part of the basin at Massachusetts Avenue, and in turn Cambridge and the Embankment Company negotiated the transfer of land for an approach to the bridge and the creation of a two-hundred-foot esplanade along the river in exchange for a postponement by the city of any tax increases during the company's

⁷⁵Maycock, 73.

⁷⁶*Cambridgeport*, 27; Maycock, 74.

construction. Frederick Vieux drafted a street plan for the company in 1889, which was published in the 1894 Cambridge atlas. The building restrictions established by the Embankment Company reinforced the substantial images of Davenport's drawings. They included a twenty-foot building setback from the esplanade; a prohibition against commercial and industrial buildings; minimum and maximum heights of three to eight stories; and a restriction of building materials to brick, stone, or iron.⁷⁷

Construction on the seawall began in 1883, but the company went bankrupt in the depression ten years later. Davenport had clearly underestimated, among other things, the difficulty of selling house lots on the water side of the railroad line whose franchise he once shared. Only the Riverbank Court apartments (now M.I.T.'s Ashdown House) and a few other buildings were completed. The land for the Cambridge Esplanade was set aside, but the unoccupied, water-filled lots remained unsold for two decades.

Public Health and the River

In 1864 Charles Eliot Norton wrote to Charles W. Eliot that Old Cambridge was growing "a little more citylike every day . . ." He confessed that he did not like "this process of suburbanization,—or the results of it."⁷⁸ Yet from his home near Harvard College Norton was spared the worst of the increasing public health hazards that followed the construction of railroads and manufacturing concerns in Boston and surrounding towns.

The residents of East Cambridge, on the other hand, found themselves in the middle of one of Boston's booming industrial centers. By 1854, half a dozen lines had been built across what had once known as "Charles River Bay," including the Boston & Lowell in 1835; the Boston & Maine (from Portland via Haverhill) in 1844; and the Eastern Railroad (originally constructed from Portland through Newburyport to East Boston in 1838) in 1854. All the lines opened depots in Boston, on Causeway Street or at Haymarket.⁷⁹ In this area of the lower basin there were no contested property rights, as there had been with the mill corporation in the Back Bay; the Commonwealth held title to all the "flowed tidelands" (the land that was under water at low tide) of the Charles. The railroads were nonetheless given extraordinary freedom to compete for entry into the city from the north.

⁷⁷*Cambridgeport*, 31-32.

⁷⁸Morison, *Three Centuries of Harvard*, 314.

⁷⁹Maycock, 71-73.



NEW BOSTON AND CHARLES RIVER BASIN.

Figure 3.22 Charles Davenport, plan and perspective of the Basin, 1875.

One consequence was the creation of a maze of moveable bridges in the lower half mile of the Charles, hastening the decline of shipping on the Charles. A more serious result was the expansion of industries like meatpacking, attracted by the availability of rail transportation on the open sewer that the Miller's River had become. By the 1870s, the tenants of the riverbanks included two meatpacking companies in Cambridge and seven in Somerville. The largest was John P. Squires & Co., founded in 1842 in Boston. The company expanded from its quarters in Faneuil Hall to East Cambridge in 1855. By 1868, Squires employed 330 people, owned three acres of buildings with a processing capacity of 7,000 swine, and booked a third of the Cunard Line's total cargo capacity to Liverpool. At its peak in the 1890s, the company's operation covered twenty-two acres and employed a thousand people, making it one of the largest businesses in Boston.⁸⁰

Complaints from Boston, Cambridge, and Somerville about the area around the Miller's River led to the creation of the state Board of Health in 1869, and three years later a joint board of the Harbor Commissioners and the Board of Health was established to abate the nuisance. In its 1873 report the Board of Health wrote that there was "no territory of equal extent within the borders of Massachusetts in so foul and so dangerous a condition, and none in which so virulent forms of epidemic disease, if ever introduced would be likely to commit such ravages as in the Miller's River District and its immediate surroundings." Squires's lawyer responded that the problem was "in the neighborhood, in the people who inhabit the tenement houses about there and who are allowed to throw their filth upon the ground or into the basins of Miller's River." The board recommended chartering an abattoir, as had been done in Brighton, but failed to make a finding against any individual companies.⁸¹

In 1874 Cambridge and Somerville built sewers and filled in the remaining open water around the packing plants. The two cities, acting under the state health legislation, were immediately sued by the Commonwealth under another new state ordinance regulating waterways. Chapter 91 of the Acts of 1866 gave the state harbor commissioners jurisdiction over construction in Commonwealth tidelands. In 1873, the Boston & Lowell Railroad wanted to expand its rail yards, and decided to fill north of the Prison Point Bridge. The Board of Harbor Commissioners sued the railroad as well as Cambridge and Somerville for their unlicensed filling operations. The Supreme Judicial Court decided in favor of Commissioners against the railroad, though the company had to pay only for damages since

⁸⁰Ibid., 202-204.

⁸¹Ibid., 205.

the suit begun. The most extensive filling occurred in 1878, covering the flats on either side of the Prison Point Bridge. Another round of filling in 1896 turned the last remnants of the old Charles Bay and the Miller's River into a virtual canal, extending under the Prison Point Bridge to what was left of the main channel of the Charles.⁸²

Though conditions in the neighborhood of the Miller's River were somewhat improved, the pollution of the marshes and mud flats along the Charles remained a great concern, as increasing numbers of residential and commercial structures were erected along the river banks. In 1878 the Boston Board of Health published a "Map Showing the Sources OF SOME OF THE OFFENSIVE ODORS Perceived in Boston" (Figure 3.23). Mud flats in Boston and Cambridge were crosshatched in bright red, with the prevailing winds across the flats marked by arrows. The board observed that "Large areas have been at once, and frequently, enveloped in an atmosphere of stench so strong as to arouse the sleeping, terrify the weak, and nauseate and exasperate nearly everybody. . . . It visits the rich and the poor alike. It fills the sick-chamber and the office. . . . It travels in a belt half way across the city, and at that distance seems to have lost none of its potency, and, although its source is miles away, you feel it is directly at your feet." The largest areas on the map were the remnants of the Back Bay and the Miller's River. In the summer of 1892 Old Cambridge was subjected to such "disagreeable and probably injurious emanations" from the river that people had to close their windows at low tide. Several hundred residents, including many of the town's physicians, petitioned the State Board of Health for relief.⁸³

Just one week after the permanent Metropolitan Park Commission was approved in June 1893, a joint board consisting of the Park Commission and the State Board of Health was directed to "investigate the sanitary conditions and prepare plans for the improvement of the beds, shores and waters of the Charles river" The Joint Board's report one year later (discussed below) included a remarkable map that graphically documented the current state of the river from Watertown to Boston Harbor (Figures 3.24 - 3.26). The map shows prisons in Boston and Charlestown, slaughterhouses in East Cambridge and Brighton, and Charles Davenport's partially filled, bankrupt development in Cambridge. The roundhouses and yards of the Boston & Albany Railroad filled most of the area that had once been Eben

⁸²Ibid., 49, 206.

⁸³City of Boston, *Sixth Annual Report of the Board of Health* (May 1, 1878, City Document No. 68, 1878), 3; Commonwealth of Massachusetts, *Report of the Joint Board* (1894), ix.

Jordan's "Cottage Farm"; shabby commercial ventures and tenements extended from the Cambridge Hospital to River Street.⁸⁴

Such was the state of the Charles River Basin at the time the new Metropolitan Park Commission proposed to reclaim it for the public domain.

⁸⁴Commonwealth of Massachusetts, *Acts of the General Court*, 1893, Chapter 475; *Report of the Joint Board*, 1894. The 1898 maps produced by the Sanborn Map Company name some of the riverfront structures that are unidentified on the 1894 *Joint Board* map, including the Bowker Fertilizer Works, the Boston Fresh Tripe Works, and the Boston Glue Works.

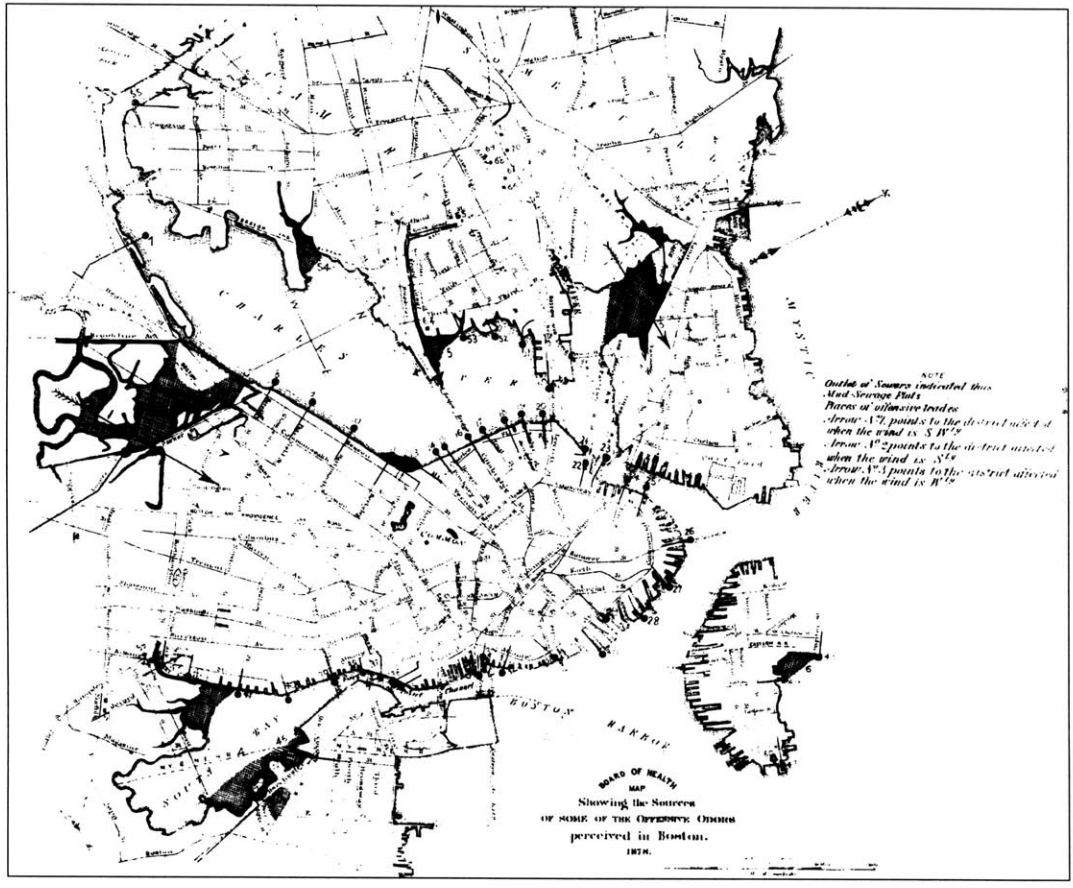


Figure 3.23 "Sources OF SOME OF THE OFFENSIVE ODORS perceived in Boston," State Board of Health, 1878.

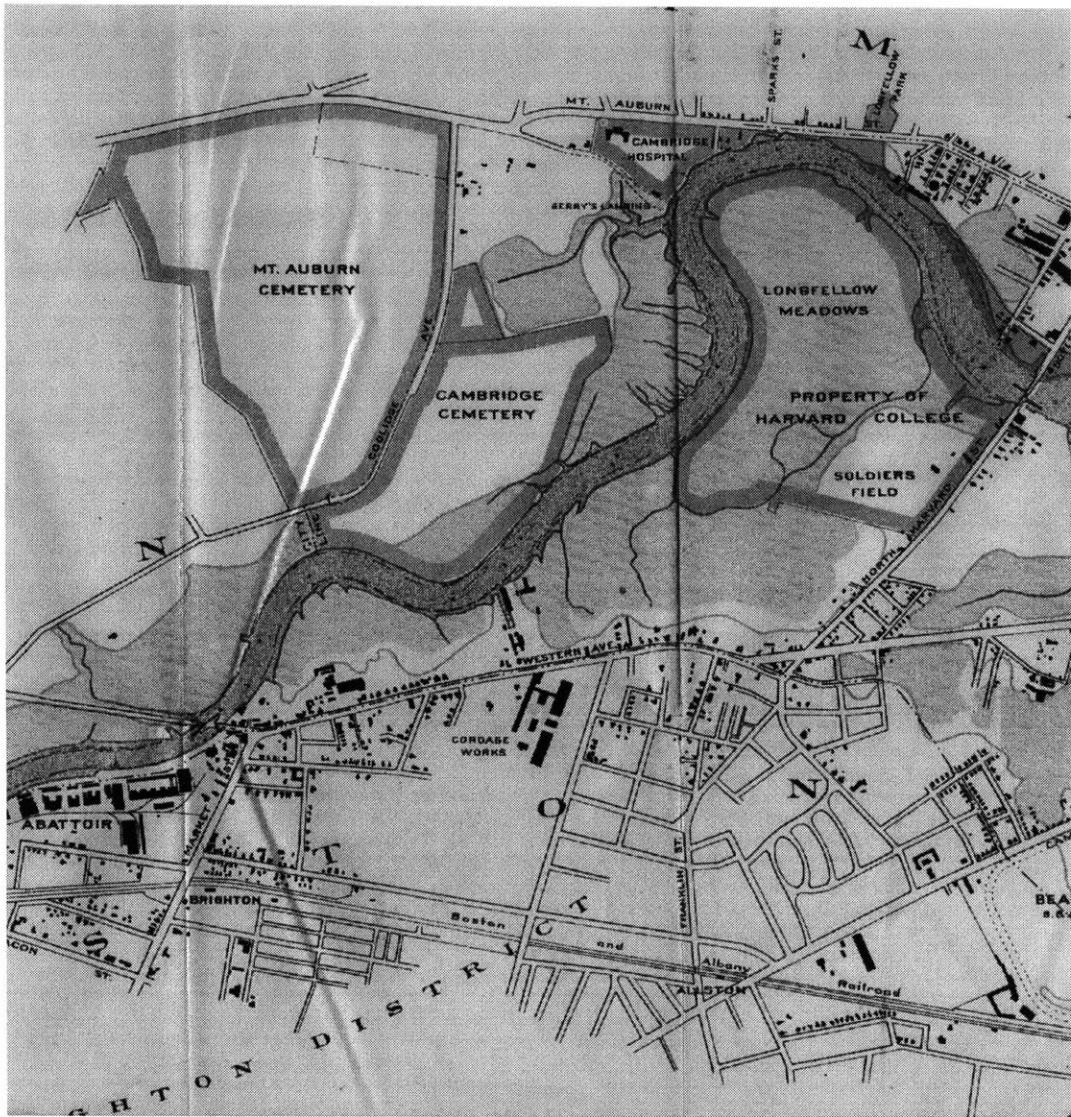


Figure 3.24 Charles River Basin, Western Avenue to North Harvard Street, Brighton
Report of the Joint Board, 1894.

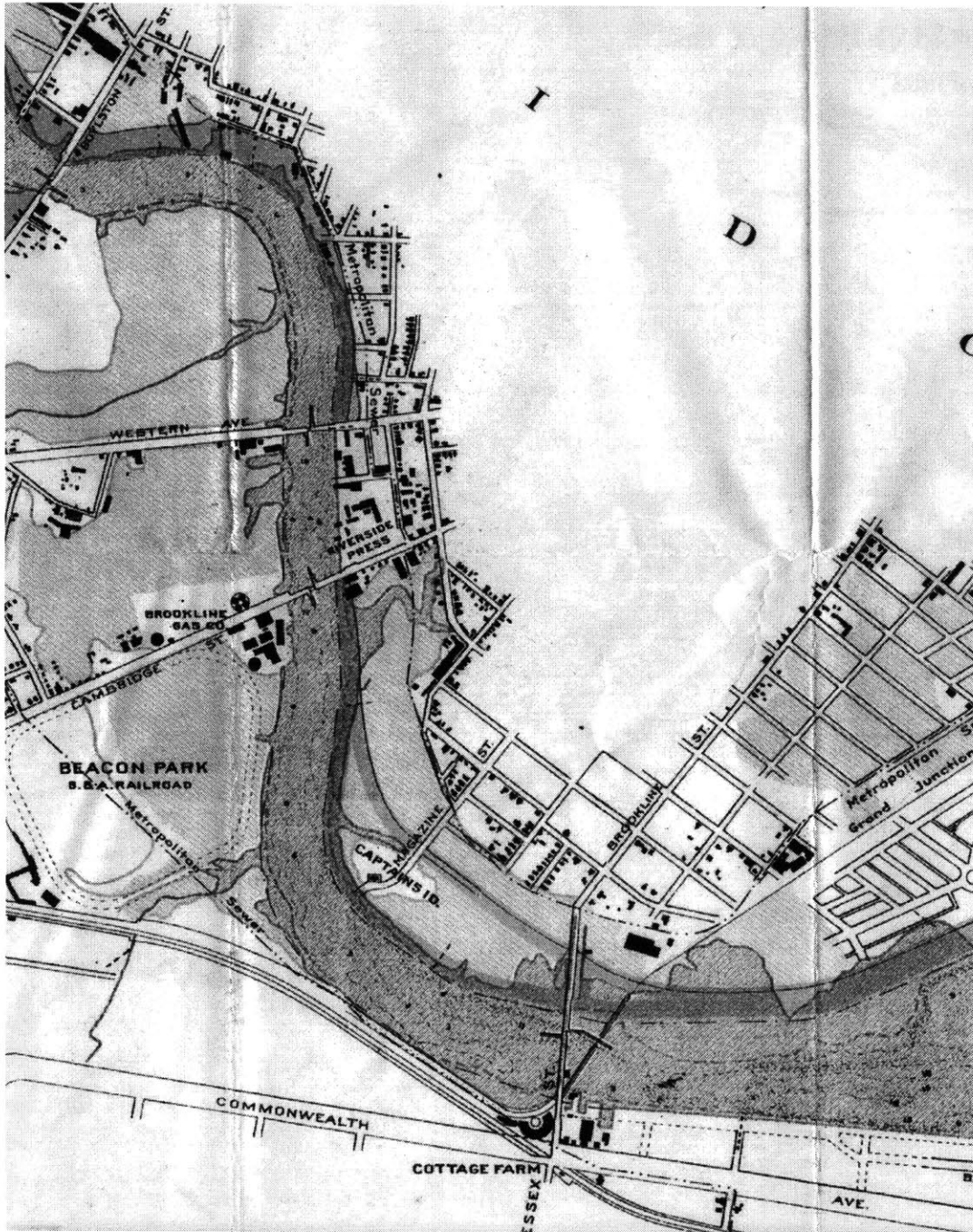


Figure 3.25 Charles River Basin, Boylston Street to Cottage Farm, Report of the Joint Board, 1894.

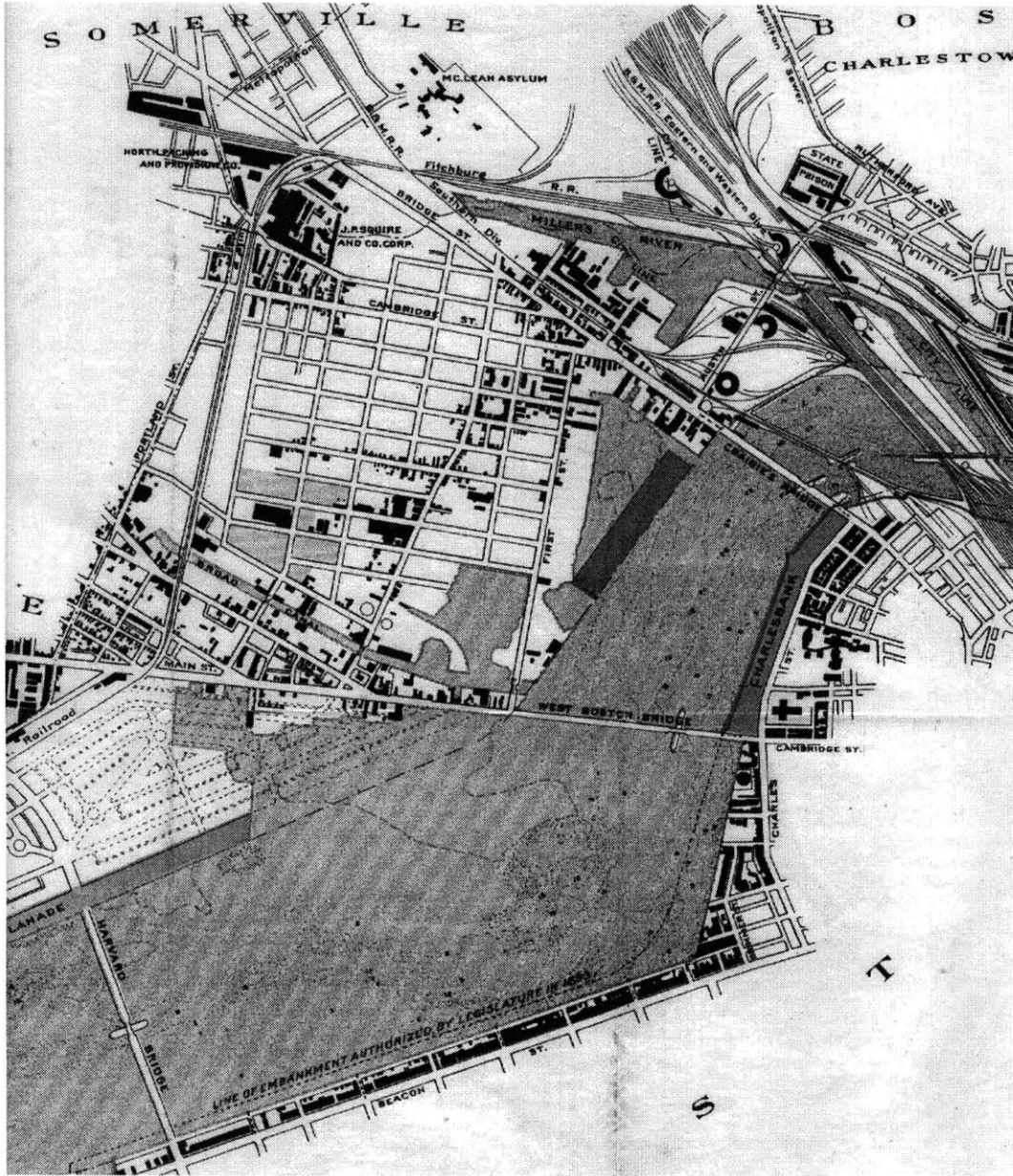


Figure 3.26 Charles River Basin, Harvard Bridge to Charlestown, Report of the Joint Board, 1894.

IV. THE HILLS, THE RIVERS, AND THE SHORES

The provision of ample open spaces for public recreation and the promotion of public health is now universally regarded as an essential feature in the proper equipment of urban communities. . . . There are already . . . well settled expanses of suburban population [in Boston], with acres and acres of streets and houses where a few years ago were pastures and woodland, possessing no open space whatever . . .

Sylvester Baxter, 1893

Thus has nature placed and preserved at the very gates of Boston riches of scenery such as Chicago or Denver or many another American city would give millions to create, if it were possible. Stupid indeed will be the people of greater Boston if they fail to perceive and attend to their interests in this matter before the opportunity is lost.

Charles Eliot, 1893¹

At the height of the Panic of 1893 Charles Francis Adams and his brother Henry "packed up our troubles and made for Chicago" to see the World's Columbian Exposition. Like thousands of others they were captivated and astonished by the fantastic ensemble of images they saw there—neoclassical buildings all perfectly white, arrayed according to Frederick Law Olmsted's general plan to display "the successful grouping in harmonious relationships of vast and magnificent structures." Employing the talents of America's best architects, the fair's "White City" generated enormous enthusiasm for what soon came to be called the City Beautiful movement.² The buildings of the Exposition comprised a grandiose and overwhelming representation of a society remade by professional expertise.

In his autobiography, Henry Adams puzzled over the exhibits and the architecture of the exposition. These extraordinary white structures had been "artistically induced to pass the summer on the shore of Lake Michigan"; the question was, did they seem at home there? More than that, Adams wondered whether Americans were at home in the fair's idealized

¹*MPC Report* (1893), [Baxter], 1, 9; [Eliot], 90.

²Jack Shepherd, *The Adams Chronicles: Four Generations of Greatness* (Boston: Little, Brown, 1975), 424. Thomas S. Hines, *Burnham of Chicago: Architect and Planner* (New York: Oxford University Press, 1974), 101, 115, quotes Daniel Burnham, the chief architect of the Chicago Fair, on the color of the buildings and Charles Eliot Norton, Harvard professor of Fine Arts, on their arrangement.

New World city.³ But neither Henry nor his brother, in their published works or private writings, connected the urban visions they saw in Chicago with Charles's labors as chairman of the Metropolitan Park Commission in Boston.

In January 1893 the six-month-old park commission had published its first report, written by Sylvester Baxter and Charles Eliot, the Commission's secretary and landscape architect; Adams wrote the introduction. Their report addressed the urban environment, but not by focusing on the city center, as Chicago's White City had done. Nor did they advocate complete control of suburban development—street plans and public transportation as well as parks—an approach that Olmsted and others had unsuccessfully urged in New York City in the 1870s. Looking instead to the margins and the in-between spaces of the region, they envisioned an "Emerald Metropolis." More than a city in a park, more, even, than a *system* of parks, it was a visual definition of the region's structure that could be sustained, they were convinced, even in the face of unimagined growth. The Emerald Metropolis would help Bostonians feel at home by preserving what Eliot called "the rock-hills, the stream banks, and the bay and the sea shores" of greater Boston—the natural edges, paths, and landmarks of the region.⁴

Eliot and Baxter moved to shape the region by reserving as open space large tracts hitherto unbuildable but now on the verge of development; the shores of rivers and beaches still marshy or shabbily built up; and the most picturesque remaining fragments of the aboriginal New England landscape. In their metropolitan vision, the *natural* features of the area—the hills, the rivers, and the shores—should establish the armature for urban development, not the haphazard assemblage of streets, lots, railroads, and streetcar lines. Once set aside, these reservations would add forever to the fitness of the city for human habitation, joining unique and characteristic landscapes to the place-making power of the city's historic landmarks. The park commission's plan offered the citizenry of Boston an opportunity to see the metropolis in an entirely new way. In painterly terms, the figure and ground of the region would be reversed: the natural features, not the built environment, would constitute the visual structure of greater Boston.

³[Henry Adams], *The Education of Henry Adams* (Boston: Houghton Mifflin, 1974), 340.

⁴It oversimplifies the metropolitan park system to reduce it to a second "Eliot's Emerald Necklace"; see Creese, *The American Landscape*, 167. For a discussion of Olmsted and J. J. R. Croes' 1876-77 plans for the Bronx, see Schuyler, *The New Urban Landscape*, 174-179. *MPC Report* (1893), 91.

The Park System's Founders

The proposed reservations represented the first metropolitan application of the idea of "reserving" natural landmarks that began with Yosemite, Yellowstone, the Adirondacks, and Niagara Falls. It is impossible to attribute the authorship of the metropolitan park system to a single creator. Yet it is clear that the strenuous efforts of a small number of citizens were crucial to the transformation of metropolitan Boston's image of itself.

Sylvester Baxter, after concluding that he could not afford MIT's recently opened architecture school (the first in America, founded in 1869), went to work for the *Boston Daily Advertiser* in 1871. He probably read Bowditch's proposal in the *Advertiser* in 1874 advocating a metropolitan park system. From 1875 to 1877, Baxter studied at the universities of Leipzig and Berlin, and was particularly interested in German municipal administration.⁵ On his return to Boston, he joined Elizur Wright and others in the campaign to preserve "Stone's Woods" in Malden, Medford, and Winchester. He also advocated renaming the area the "Middlesex Fells," and wrote Olmsted (who had not yet moved to Boston) about the area in 1880.⁶

Baxter's interests extended over an extraordinary range. In 1881 he joined an archeological expedition to investigate Zuni ruins in the southwest, and the following year wrote an article about the visit of several Zuni chiefs to Washington and Boston (where the Zuni conducted a sunrise ceremony on the beach at Deer Island). In 1888 Baxter and Cyrus Willard wrote separate letters to Edward Bellamy about working together to realize the ideals in Bellamy's *Looking Backward*, and when the Nationalist Club of Boston was organized in that year, Baxter became the secretary. He also wrote several books of poetry and a history of Spanish Colonial architecture in Mexico after wintering there with the landscape painter Frederick Church.⁷ His abiding interest, however, was his vision for what he named "Greater Boston." Though he never studied architecture, Baxter made his own way to what Gourlay had called "the science of city building."

⁵Sylvester Baxter, transcripts, University of Leipzig; Humboldt University, Berlin. Baxter's study in Germany predates by more than a decade the study tours of English and American experts that Christiane Crasemann Collins dates to the 1890s. Collins, "A Visionary Disciple: Werner Hegemann and the Quest for the Pragmatic Ideal," *Center: A Journal for Architecture in America* 5 (1989), 75.

⁶Zaitzevsky, *Olmsted*, 123.

⁷Sylvester Baxter, "An Aboriginal Pilgrimage," *Century* 24 (1881-82): 526-36; Cyrus Field Willard, "The Nationalist Club of Boston (A Chapter of History)." *Nationalist* 1:1 (May 1889), 16-20; see also Baxter's articles, "What is Nationalism?" *Nationalist* 1 (May 1889): 8-12; "Why the Name, Nationalism?" *Nationalist* 1 (July 1889): 82-3; [Sylvester Baxter] "Sylvester Baxter," in James Phinney Baxter, *The Baxter Family: A Collection of Genealogies* (n.p., 1921), 94-102.

For Charles Eliot, periods of contentment and tranquility (especially when he was away from Cambridge in rural Boston or the wilds of Maine) alternated in his adolescence with recurring episodes of self-doubt and depression. His mother died when he was nine, and by the time he began his studies at Harvard, his father had been president of the college for ten years and was well on his way to Olympian status in American higher education. The burden of family privilege and accomplishment heightened Charles' anxieties when as an upperclassman he realized that he "could find no practical bent or ambition anywhere about me." At one point in his senior year he came near to giving up his studies entirely.⁸

Not long after graduation, a conversation with his uncle Robert Peabody (an architect who lived near Frederick Law Olmsted in Brookline) persuaded Eliot that he should become a landscape architect. Since there was then no recognized training for the field, he determined to enter Harvard's Bussey Institution, where the Department of Agriculture and Horticulture was located. The following spring, Eliot was introduced to Olmsted by Peabody, and offered an apprenticeship. Within a week he had dropped out of his classes and taken his first inspection tour with Olmsted as a full-time employee of the firm. He soon discovered how well his endeavors outside of school had prepared him for his profession—the childhood drawing lessons, the adolescent mapping of imaginary towns and real neighborhoods (like Norton's Woods in Cambridge), the long hikes around Boston, the summers during college organizing a group of friends to study the natural sciences on Mt. Desert Island.⁹

After an apprenticeship of two years, he left for Europe. On Olmsted's advice, Eliot ignored the monuments of the "Grand Tour" in favor of lengthy studies, carefully documented, of public parks, botanical gardens, and city streets. Most of one winter he spent reading landscape books in the British Museum. He returned with an extraordinary breadth of professional knowledge—from landscape construction to styles and philosophies of design.¹⁰ After five years of managing his own office, he was well equipped for his part in the creation of the Metropolitan Park System.

In contrast with Eliot's years of preparation, Charles Francis Adams claimed to have "blundered into" his role as the first chairman of both the temporary and the permanent park commissions. Rejecting the family traditions in politics, history, and literature, after college he consciously "endeavored to strike out a new path and fastened [himself], not, as Mr.

⁸[Eliot], *Charles Eliot*, 5-31; Charles Eliot, unpublished autobiography.

⁹[Eliot], *Charles Eliot*, 1-34.

¹⁰Keith N. Morgan, *Held in Trust: Charles Eliot's Vision for the New England Landscape* (Bethesda, MD: National Association for Olmsted Parks, 1991), 3.

Emerson recommends, to a star but to the locomotive-engine." He was the first commissioner of railroads in Massachusetts, and later became the president of the Union Pacific Railroad. Yet his friendship with Olmsted, his work with Eliot on a proposed town site in Garfield, Utah, for the Union Pacific, and his unhappiness with the transformation of Quincy by what he called the "development fiends" drew him to the work of organizing the park system.¹¹

Defining The Region

The framework of ideas behind the parks and reservations went back at least half a century, but the immediate precedents were a series of articles written by Baxter and Charles Eliot. In a February 1890 editorial in the new periodical *Garden and Forest*, Charles Sprague Sargent (the director of the new Arnold Arboretum) urged the preservation of the ancient Waverly Oaks in suburban Waltham and Belmont (Figures 4.1, 4.2). Eliot's published reply a few weeks later began by acknowledging the pressing need for public squares and playgrounds, as well as the failure of the cities and towns around Boston to act. Addressing that need would probably require a metropolitan commission, just as a similar authority for sanitary sewerage had finally been created in 1889 after decades of bickering among the cities and towns of the region. The primary concern of Eliot's letter, however, was not the future prospect of government action; that would require months or years to implement. To promote immediate action, Eliot described a scheme to preserve not only the Waverly Oaks, but also many of "the finest bits of natural scenery" in the region. He looked out from the State House and saw, within a ten-mile radius, many still-surviving remnants of the New England wilderness. There were half a dozen scenes of uncommon beauty, "well known to all lovers of nature near Boston . . . in daily danger of utter destruction." Eliot urged the immediate creation of an association to hold "small and well-distributed parcels of land . . . just as the Public Library holds books and the Art Museum pictures—for the use and enjoyment of the public." Generous men and women would bequeath these irreplaceable properties to such a group, just as others give works of art to the city's museums.¹²

Though Eliot did not note the distinction in his 1890 letter to *Garden and Forest*, the analogy with the Art Museum and the Public Library suggested *two* approaches to preserving

¹¹Shepherd, *Adams Chronicles*, 379; [Eliot] *Charles Eliot*, 286-91; Edward Chase Kirkland, *Charles Francis Adams, Jr., 1835-1915, The Patrician at Bay* (Cambridge, MA: Harvard University Press, 1965), 187.

¹²Charles Eliot, "The Waverly Oaks," *Garden and Forest* (March 5, 1890): 117-8.

open space, one private and the other public. Even before the campaign to organize the Trustees was completed, Eliot and Baxter moved—first separately and then jointly—to promote a public regional parks authority. Eliot wrote a letter to his boyhood friend Gov. William Russell in December 1890, recommending that the State Board of Health develop a plan for metropolitan reservations.¹³

Three months later, Baxter wrote a series of articles in the *Boston Herald* about what he called "Greater Boston." His articles set the opportunity for regional parks in the context of metropolitan government, and addressed a much wider audience than *Garden and Forest*. He, too, scanned the ten-mile view from the State House, but he described an image which was the very inverse of Eliot's fast-disappearing landscapes. From that height he observed "a billowy sea of buildings stretching away in nearly every direction, apparently without interruption, as far as the feet of the chain of hills that encircles the borders of the bay from Lynn around to Milton." The constructed pattern of buildings paid little heed to the configuration of town boundaries, and the limits of Boston covered only a fraction of the true city. The proper management of this Greater Boston called for a metropolitan commission with the authority for all the major public services—water supply, sewerage, fire, police, schools, highways, transit, parks.¹⁴

Baxter's appeal for regional action built on prior discussions of water and sanitary issues. As early as the 1870s, the threat to the public water supply in the region prompted proposals for metropolitan solutions, including annexation and the creation of regional authorities. Boston did expand substantially between 1867 and 1874, annexing Roxbury, Dorchester, Charlestown, Brighton, and West Roxbury. In 1874 annexation was rejected by the voters in Brookline, marking, in political terms, the end of the movement in the region. The problems of water supply and sewerage, however, continued to worsen. An editorial in the *Boston Daily Advertiser* in 1872 asked "whether the interest of the metropolitan community . . . would not be better served . . . for the purposes of water supply and drainage if it were treated as one district, and were placed under the care of a single board, aided by the best engineering skill available." Finally in 1886 a state commission on the "General System of Drainage for the Valleys of the Mystic, Blackstone and Charles Rivers" recommended a regional sewerage system to be managed by "a central agency and authority,

¹³Charles Eliot to Gov. William Russell, December 19, 1890, quoted in [Eliot], *Charles Eliot*, 356.

¹⁴Baxter, "Greater Boston." Baxter believed that his use of the term "Greater Boston" predated its use in New York City, a reflection of Baxter's fascination with place names as well as the long-standing rivalry between the two cities.



Figure 4.1 The Brook at Beaver Brook Reservation, MPC Report, 1895.



Figure 4.2 The Waverly Oaks at Beaver Brook Reservation, MPC Report, 1895.

which can for this special purpose override town boundaries and disregard local susceptibilities." The following year the Metropolitan Sewerage Commission was established.¹⁵

The creation of commissions with limited, functional jurisdictions was less politically threatening, but also, in Baxter's view, ultimately far less effective than genuinely regional government. He saw the disparity between the richer and poorer cities and towns of the region as an unnecessary evil, open to correction if the appropriate administrative structure were created and then supported by a tradition of honest, competent civil service. His arguments in the *Herald* for a new governmental structure were clear and direct:

The true Boston—geographical Boston, as distinguished from political Boston—comprises all that territory lying around the city which is covered by a compact mass of population, with social and business interests substantially identical. Nothing but a legal fiction stands in the way of its being known as such. The interests of this great metropolitan district now require that that fiction should disappear.

Of all these public functions, Baxter reserved his lengthiest description for a chain of pleasure grounds under regional administration, extending from Lynn Beach and the Lynn Woods to the "mountain-like" Blue Hills range. Taken together with the recently completed parks in the City of Boston, these large woodland reservations would constitute one of the grandest park-systems in the world.¹⁶

Olmsted urged Baxter to publish the *Herald* articles, and soon after *Greater Boston* appeared, Eliot read it and proposed to Baxter that they work together to realize the metropolitan park system.¹⁷ The two men immediately set out to construct a constituency for their ideas. Starting with the governing board of the Appalachian Mountain Club, Eliot helped organize a standing committee of twenty-nine to consider a new organization, which set to work in the spring of 1890. As an energetic member of the committee, Baxter drew on his ties to newspaper editors and writers across the state and to other veterans of the twenty-year-old campaign to preserve the Middlesex Fells. The organizing process was not always smooth, as Eliot complained to his wife Mary. He described one committee meeting held to plan for the public hearings as "a farce" that ended in the usual result—Eliot was delegated to

¹⁵Kennedy, 67-70; Boston Daily Advertiser, March 7, 1872, quoted in Martha H. Bowers and Jane Carolan, *The Water Supply System of Metropolitan Boston: 1845-1926* (Boston: Metropolitan District Commission, 1984), 9, 11.

¹⁶Baxter, *Greater Boston*, 3, 8.

¹⁷Baxter's recollection that Eliot proposed a joint effort to realize the park system is found in his "Wonderful Progress During the Past Seven Years of Work on the Great Metropolitan Park System," *Boston Sunday Herald* (May 20, 1900), 41; and in Baxter, "Greater Boston's Metropolitan Park System," *Boston Evening Transcript*, Part Five (September 29, 1923), 1.

solicit other speakers, to speak himself, and to send postcards "to make sure of an attendance."¹⁸ The legislation to create a privately endowed Trustees of Public Reservations was signed in May of 1891.¹⁹

At the urging of Eliot and Baxter, the Trustees of Public Reservations agreed to organize a meeting of park commissions from across Greater Boston in December 1891. After public hearings the following spring, a temporary Metropolitan Park Commission was authorized by the legislature in June 1892.

Among Baxter's primary concerns were the administrative inefficiencies and parochial jealousies of the myriad cities and towns in the Boston Basin. Eliot also knew first-hand how the wariness of town officials affected the development of public open space. From his extensive explorations of the region's fringes, he knew that town boundaries often bisected the most scenic areas, especially along ponds and river valleys; it would be senseless, he said, for one town to act without the other, but too often one city had refused to spend money for fear the adjoining city would enjoy what it had paid for.²⁰

It was clear that these local interests would have to be drawn together. To that end the new metropolitan park commissioners planned a series of eleven day trips in the fall of 1892, and invited city officials and prominent residents of the towns to join them. The secretary's minutes recount the itinerary of these "tours of inspection" (ten of them in the five weeks from mid-September to mid-October), which took the commissioners and their guests throughout the metropolitan district.²¹

Two trips were given to exploring the shores of the harbor and the bay by steam launch, one from East Boston to Nahant, Lynn, Swampscott, and the Saugus River (Figure 4.3), and one to Castle Island, Quincy Bay, Peddock's Island, then south to Hingham and the Fore River. The tours of the Fells and the Blue Hills each took a day. On the trip to Revere they traveled by train to Winthrop, where they were met by carriages on loan from the livery service at Franklin Park. After driving past the beautiful grounds of the Chelsea Naval Hospital, they took a launch up the Mystic River, passing the two small parks then under construction in Charlestown at Bunker Hill and Tuft's Mill Pond.²²

¹⁸Charles Eliot to Mary Eliot, February 1892.

¹⁹Eliot first proposed that the association be called "The Trustees of Massachusetts Scenery." The name chosen, "The Trustees of Public Reservations," was the source of some confusion, since the organization was privately organized and funded; in 1954 it became "The Trustees of Reservations." Its history is described in Gordon Abbott, Jr., *Saving Special Places: A Centennial History of the Trustees of Reservations: Pioneer of the Land Trust Movement* (Ipswich, MA: Ipswich Press, 1993).

²⁰Charles Eliot to Gov. William Russell, December 19, 1890, quoted in [Eliot], *Charles Eliot*, 356.

²¹Minutes of the temporary Metropolitan Park Commission, August 30-November 2, 1892.

²²Ibid., September 14, 26, 30; October 3, 10, 1892.

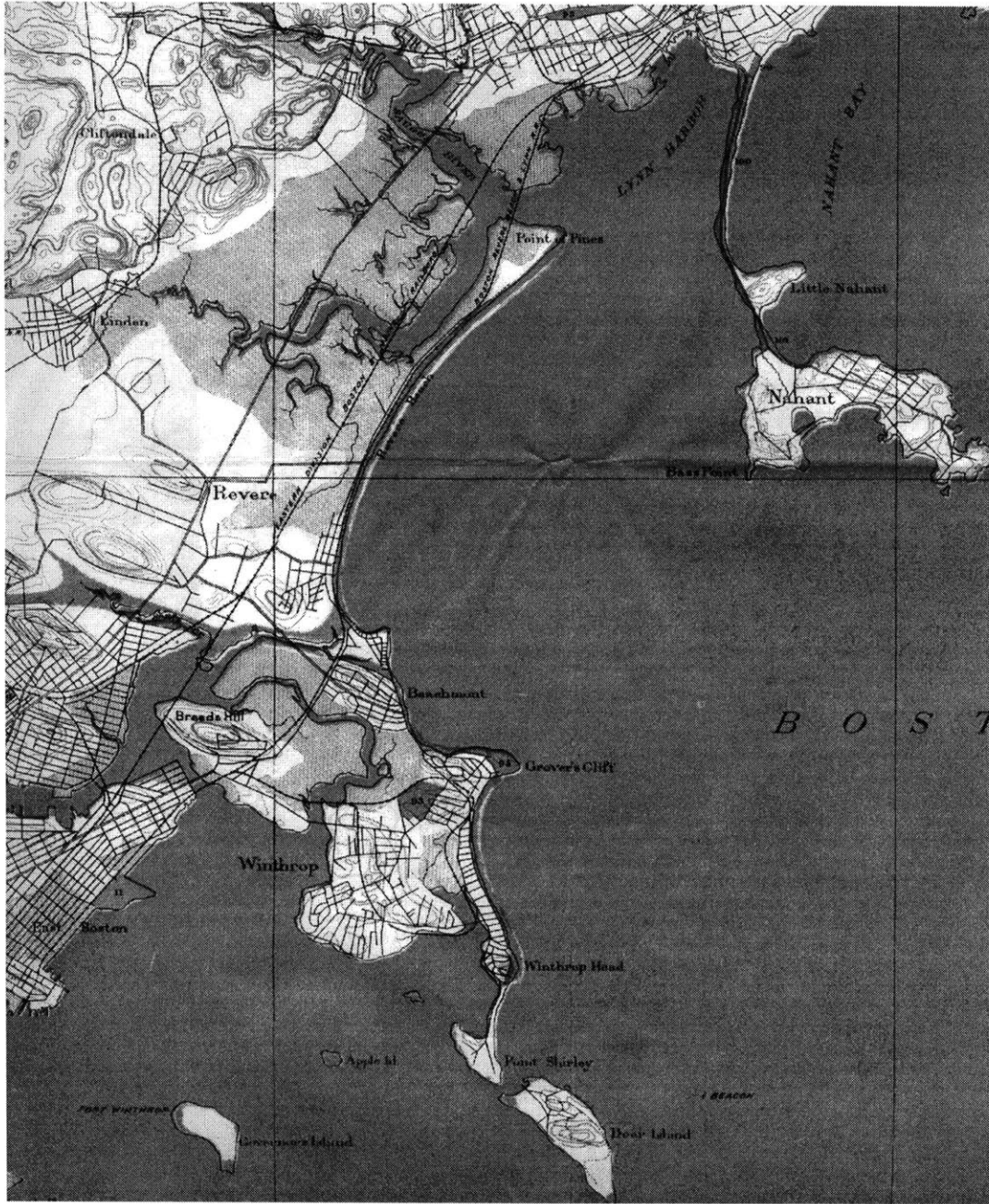


Figure 4.3 Charles Eliot, "Existing and Proposed Open Space," Metropolitan Park Commission, detail of Revere Beach and Winthrop, 1893.

Again and again the minutes of these journeys underline a fascination with grand and scenic views. On Milton Hill the commissioners found one of the "noblest prospects" in the neighborhood of Boston (Figure 4.4). The outlook down the valley of the Saugus River toward the meadowland, the serpentine stream, and the uplands "formed a picture of exceptional charm." The view from the twin summits of Prospect Hill in Waltham was "wide and glorious." Thompson's Island presented "a remarkable appearance with its well grown plantations of trees," an example of what ought to be done on the other harbor islands.²³

The travelers also noted the unique and distinctive landscapes on their inspection tours; they were deeply impressed with the remarkable beauty of the landscape of the ancient Waverly Oaks in Belmont and with the need to preserve them for the public. The only disturbing sight noted by Baxter during the first ten trips was a collection of "ugly fish houses and an equally ugly Hotel" on Nahant Beach, but he thought it was nonetheless one of the most beautiful sites on the Massachusetts coast. The places they visited were unfamiliar to most of the members, and Baxter wrote later that the outings "were like voyages of discovery about home."²⁴

The last inspection, on the first day of November, was of the Charles River between Boston and Watertown. Baxter's account of this tour is twice as long as his other entries in the minute book, and is filled with harsh judgments about the condition of the river. The entourage included the secretary and engineer of the Boston Park Commission, the chairman of the State Board of Health, two members of the Harbor and Land Commission, all but one of the members of the Cambridge Park Committee, two members of the Charles River Improvement Commission, and Frederick Law Olmsted.²⁵ The commissioners began with a walk along the edge of the Charlesbank park, with Olmsted as guide. The group then crossed over the Harvard Bridge to inspect the work of the Charles River Embankment Company, and continued on to Captain's Island and Soldiers Field. The Charles River shore "was marred by industries merely in search of cheap land," with no need of water transportation, and made ugly by "squalid hovels, dump heaps and other nuisances" Its banks were "inky black" with foul sewage deposits, though they should be a popular pleasure ground. The commission had visited several scenic estates on other tours, but on this trip they visited the grounds of the old

²³Ibid., September 14, 26; October 10, 14, 1892.

²⁴Ibid., September 14; October 10, 1892.

²⁵For a discussion of the Charles River Improvement Commission, see below.

Stickney place, once a beautiful country house "but now fast going to decay" because of the undesirable developments along the river.²⁶

Two weeks later the commissioners met to review their findings. Adams and Baxter submitted their comments in writing, so the minutes record only the observations of Philip Chase and William de las Casas, the other two commissioners, and Charles Eliot. The two commissioners agreed that the Charles River was the most important site to be addressed, and that the Fells should be the second priority. Eliot thought the most significant subject had not yet been addressed, which was providing "numerous small spaces" throughout the region. The ocean beaches and the reforestation of the harbor islands should be considered next. Then should follow the provision of "pleasant routes" to the bay and sea shores "and incidentally to the heart of the City"; the river valleys would be the most natural locations.²⁷

During the following two months, the board considered the terms of the legislation to establish a permanent commission. In January Adams's draft of a report was approved, and the board voted to publish Baxter's report over his own signature; though not noted in the minutes, Eliot's report was published as the third part of the document.²⁸

Picturing the Park System

The rationale for the Metropolitan Park System as outlined in the 1893 report drew on a reservoir of ideas that had now gained widespread acceptance as a critical aspect of the culture of refinement. Eliot summarized the need for the visible presence of nature in the genteel city:

The life history of humanity has proved nothing more clearly than that crowded populations, if they would live in health and happiness, must have space for air, for light, for exercise, for rest, and for the enjoyment of that peaceful beauty of nature which, because it is the opposite of the noisy ugliness of towns, is so wonderfully refreshing to the tired souls of townspeople.²⁹

These general principles gave strong support for the *concept* of the park system. Like Gourlay, Crocker, Copeland, and others before and since who have projected Greater Boston into the future, Baxter and Eliot linked urban images with profound moral obligations. The real genius of Baxter and Eliot's plan, though, was not in its rationale, but in its integration

²⁶Minutes of the temporary Metropolitan Park Commission, November 2, 1892.

²⁷Ibid., November 12, 1892.

²⁸Ibid., November 15, 26; December 3, 6, 8, 1892; January 5, 9, 12, 16, 1893.

²⁹*MPC Report* (1893), 82.



Figure 4.4 Charles Eliot, "Existing and Proposed Open Space," Metropolitan Park Commission, detail of the Neponset River and the Blue Hills, 1893.

and extension, in visual and practical terms, of a series of earlier, fragmentary proposals for the Boston region.

Here, as throughout the two men's writings, images were crucial to their visionary narratives. During the report's preparation Eliot had written to the commissioners that his special work for the park commission was "the picturing by printed words, photographs, and maps of those open spaces which are still obtainable near Boston." The details of the "legal machinery" could all be resolved once this picturing aroused the necessary public support.³⁰

As secretary and landscape architect to the Commission, Baxter and Eliot submitted separate and strikingly different reports, but both documents were generously illustrated with diverse maps and views—fifteen photographs, a dozen line drawings, and a dozen black and white maps and site plans, including foldout maps of the Middlesex Fells and the Blue Hills, and a twenty-four by twenty-four-inch color map of existing and proposed open space.³¹

The Report of the Secretary

The first part of Baxter's eighty-page report addressed three questions: the need for metropolitan open space; the "Logical Method of solving this Problem"; and the value to the region, as well as the advantages to the cities and towns of contributing to reservations outside their boundaries. Elaborating on the image he first presented in his 1891 article on "Greater Boston," Baxter suggested that an observer of the area within ten or twelve miles of Boston would see what appeared to be one city, set in a region of striking landscape diversity. The residents of the southern half of the region were well provided with parks, parkways, and playgrounds, but the rest of the area had "almost nothing of the kind." This had occurred because part of the region had made itself into one municipality (a circumlocution for Boston's annexation of the surrounding towns), while the rest of the area was cut up along "political and not natural lines." If these circumstances continued, much of the region was "in danger of becoming a vast desert of homes, factories and stores, spreading over and overwhelming the natural features of the landscape."³²

Other large American cities—Chicago, Minneapolis, Washington, D.C.—had taken steps at or near their founding to anticipate the future. Boston had instead followed a process of "gradual community dis-integration." Many of the ancient villages of the region had split

³⁰[Eliot], *Charles Eliot*, 383.

³¹The drawings were done by W. Bodwell; the color map was prepared by Charles Eliot.

³²*MPC Report* (1893), 2-3.

into several new towns, as Charlestown, for example, had divided to become Somerville, Woburn, and Winchester. More recently, these suburbs had seemed to be the answer to the evils of crowded city tenement-houses, but now many of them were becoming acres of houses and streets unrelieved by any public open space.³³

In greater Boston, the creation of a single municipal authority appeared to be out of the question. And local jealousies persisted, in spite of the growing number of cities and towns enacting parks legislation. The current owner of Norton's Woods in Cambridge (bordering the city of Somerville) for some time had allowed its use as a neighborhood pleasure ground, and making the area a public park had been much discussed. But the City of Cambridge was not interested in acquiring the property because it was on the edge of the city, and Somerville didn't have the authority or the money to take it.³⁴

A final obstacle noted by Baxter was the rapid growth of many of the suburbs around Boston. The new residents of these communities were demanding schools, streets, water and sewer service, yet the increases in land values and local tax revenues were lagging behind, even as complaints about higher taxes were increasing. Measured against the demand for "the more absolutely utilitarian improvements," public open space seemed a luxury. Yet without the reservation of natural scenery, these communities would someday discover that their suburban charm had vanished.³⁵

The way out of these dilemmas was for the Commonwealth to lend its credit to the communities of the district, a method already tested in the Metropolitan Sewerage Act passed four years previously. Cities and towns could then take advantage of the state's lower cost of credit and avoid excessive short-term taxation. And for one million dollars (far less, Baxter pointed out, than the two and a half million dollars the national government was then spending for harbor fortifications in just one small town on Boston bay) a metropolitan commission could purchase at least one of the harbor islands; Revere Beach; the lands along the Snake Creek Valley in Chelsea and Revere; the Middlesex Fells; a reservation along the Mystic River; the Muddy Pond woods, and the Blue Hills—and still leave a large amount to secure land and rights along the Charles, the Neponset, and the Mystic to protect against their pollution.³⁶

³³Ibid., 4-6.

³⁴Ibid., 8-11.

³⁵Ibid., 12-13.

³⁶Ibid., 14-18.

In addition, the temporary park commission had already received offers of cooperation from private individuals "of public spirit and of large means" that would protect other picturesque and historic landscapes. Such areas included the Waverley Oaks in Waltham and Belmont, the region of Pranker's Pond in Saugus, and a stretch of the Charles in Weston. And the protection of the region's water supplies, for example in the Lynn Woods, the Fells, the Blue Hills, and along the Charles, would lead to cooperation between water boards and the park commission, and create opportunities to preserve additional tracts of open land. Olmsted's "recreative treatment" of the Back Bay Fens showed that the most pleasing remedy to a sanitary hazard could also be the cheapest.³⁷

In reviewing the sites that should constitute a "general system of open spaces for public recreation and the promotion of health," Baxter based his discussion on the commission's series of inspection tours and on the conversations during those inspections with park commissioners and other local officials. In Baxter's view, this provided first-hand knowledge of both the natural features of the region and of the needs and wants of the communities. The discussion of particular open spaces which followed was organized geographically, starting with Boston Bay. Then the report reviewed the sites north and west of the city, discussed the problems and prospects for the Charles River, continued with potential open spaces south of Boston, and concluded with a review of the lakes and ponds of the region.³⁸

The opportunity to improve the bay had already been suggested in Olmsted's 1887 report to the Boston Park Commission on the importance of replanting trees on the harbor islands (which was reprinted in the appendix of the report). Olmsted had suggested that residents of Boston took for granted the extraordinary recreational activity in Boston harbor; with the possible exception of Venice, "the people of no other city in the world make as much or as good use of their harbor, otherwise than commercially, as those of Boston have been long accustomed to do." Reestablishing trees on the islands would only add to the enjoyment of the bay. There would also be less tangible benefits from following Olmsted's advice. As "the main portal of the New England metropolis" the harbor should be treated "in a manner worthy of that character."³⁹

³⁷Ibid., 16, 19-20.

³⁸Ibid., 25.

³⁹Ibid., 28, 132.

The assessment of potential open spaces in the cities and towns began with Winthrop. It offered the waters of the bay on one side and the ocean on the other, and easy access to Boston. In the 1880s it was the second-fastest growing town in the state. Unfortunately, it was also an example of how the "ordinary class of real estate operations" destroy the attractive local character "as effectively as if that were their main object." North of Winthrop Great Head was Revere Beach, "one of the finest stretches of ocean beach on the Atlantic coast." It was now occupied by "cheapest kind of shanties," attracting such "rough and disorderly elements" that women and children could not safely go there.⁴⁰

Inland from the northern beaches were the Lynn Woods, already acquired by the city of Lynn, and the Middlesex Fells. Sixteen hundred acres of the Fells were already public, most of that set aside to protect the water supply. A part of the Fells known as "Virginia Woods" had been donated to the Trustees of Public Reservations. Another thousand or fifteen hundred acres should be acquired to unite these scattered tracts (Figure 4.5). Further west was Prospect Hill in Waltham, already protected as a city park. The second highest elevation in the region after the Blue Hills, it looked directly down at the Charles River.⁴¹

The pollution of the river presented a threat to public health, but the alternative use of the river was already realized between Riverside in Newton and center of Waltham. Canoeing and boating there had made Riverside among the most popular resorts in the region. Another example was the Muddy River. Its sanitary hazards could have been remediated with sewers or canals, but "the cheapest way turned out to be the most beautiful way." Already much of the river banks were public: Charlesbank Park and the proposed embankment in Boston, Embankment Company's Esplanade and the Longfellow Memorial Garden in Cambridge, the Watertown Arsenal, and Soldiers Field in Brighton.⁴²

South of Boston was the Neponset River with its expansive salt marshes, and Muddy Pond (now Stony Brook) Woods. Beyond the Neponset was the range of the Blue Hills. Though only 635 feet above sea level, they offered "really mountain-like character," and remained almost as wild as they were at the time they gave their name to the Massachusetts Bay Colony.⁴³

In the third part of his report, Baxter addressed two particular concerns, "Special Pleasure-ways, or Roads for Light Traffic," and local pleasure grounds and playgrounds.

⁴⁰Ibid., 31-32, 36, 37.

⁴¹Ibid., 39-46.

⁴²Ibid., 51.

⁴³Ibid., 58.



Figure 4.5 Charles Eliot, "Existing and Proposed Open Space," Metropolitan Park Commission, detail of the Middlesex Fells, the Mystic Lakes, and the Mystic River, 1893.

Eliot had listed these two issues as among his highest priorities in the board's discussion on November 12, and described the opportunity to incorporate parkways into the metropolitan park system twice (though almost figuratively) in his own report. Baxter once again focused on establishing a clear precedent for action. In endorsing a series of special roadways to link the metropolitan parks and reservations, Baxter cited the Illinois boulevard act, which allowed the Chicago park commissioners to gain the consent of municipal authorities and abutting land owners to connect parks with such pleasure roads. Good and bad examples of roadway planning in Boston were also noted. Commonwealth Avenue, the parkways of the Emerald Necklace, the planned improvements to Blue Hill Avenue, and the proposed parkway from the Arnold Arboretum to Stony Brook were made possible because the annexation of several adjoining towns had given the City of Boston the necessary geographical range. By contrast, the region north of the Charles River, cut up into many small cities and towns, lacked not only extensive parks but also clearly delineated routes to the center of Boston.⁴⁴

The Report of the Landscape Architect

As Olmsted had transformed the disjointed schemes of the Boston Park Department in his designs for the Emerald Necklace, Eliot unified the proposals of Crocker, Copeland, and others for metropolitan reservations of open space. His summation is a startling but almost certainly unconscious echo of Gourlay's "grand panorama" of "the streams, the islands, and the promontories." In Eliot's words, the "rock hills, the stream banks, and the bay and sea shores," were both "the available and the valuable sites for public open space." These three images—the hills, the rivers, and the shores—also provided a simple and legible visual framework for the metropolitan district.⁴⁵

Eliot began by noting that the great population centers of the world "have now accepted the teachings of bitter experience, and have provided themselves with the necessary and desirable open areas, albeit at immense expense and with great difficulty" (Figure 4.6). The people of the metropolitan district of Boston, on the other hand, had the opportunity of doing so while the cost was still modest. Then the concern should be the basis of selecting such public open space.⁴⁶

⁴⁴Ibid., 62-81.

⁴⁵Gourlay, *Plans*, 37; *MPC Report* (1893), 91.

⁴⁶*MPC Report* (1893), 82.

A study of the natural features of the region, Eliot believed, would "bring forth the facts in the case" and result in the "scientific selection" of lands for public open space. His report, therefore, was divided logically into three parts. First was a physical and historical geography of the parks district, with each section of text carefully cross-referenced to several drawings and photographs. Next was a study of the way in which the "peculiar geography" of the metropolitan district ought to govern the selection of public open spaces. Finally, the report documented the opportunities for acquiring open space according to these governing principles.⁴⁷

The analysis of the region's physical geography began with the "Rock Foundation" of the metropolitan district, exposed in two bands north and south of the city. The Wellington Hills, from Waltham to Cape Ann, presented a "steep, wall-like front," about one hundred feet high (Figure 4.7), punctuated with a few higher summits like Bear Hill in Stoneham (325 feet) and Burrill's Hill in Lynn (285 feet). The Blue Hills on the south were divided into a dozen rounded hills, much higher than the northern ridges, from three to six hundred feet above sea level (Figure 4.8). In between two ranges of hills, the sea has flowed over the ancient rocks and created Boston Bay. The underlying rock is exposed in only a few places: against the sea at Swampscott and Cohasset, Nahant and Squantum, and the outer islands; on land, in the ledges of Roxbury puddingstone and a few other places; and at some of the falls in the rivers.⁴⁸

On this stony foundation, between the exposed hills and the ocean, was a variegated pattern of "Glacial Rubbish." The retreating ice flows left rounded hills in Chelsea and in the harbor, with ridges and hollows scattered here and there. But most of the debris had been scoured into level plains, with few sharply defined valleys, leaving the streams to wander in an "unusually aimless" way (Figure 4.9). Rainwater was caught in the hollows, or dammed behind glacial drift, making for numerous ponds and swamps, a striking addition to the "already wonderfully varied and picturesque" landscape. Into this landscape the sea moved in and out, on the north extending the salt creeks to the rock highlands, on the south "flowing about the half-sunken drumlins" (Figure 4.10).⁴⁹

⁴⁷Ibid., 82-110.

⁴⁸Ibid., 83-4.

⁴⁹Ibid., 85-6.

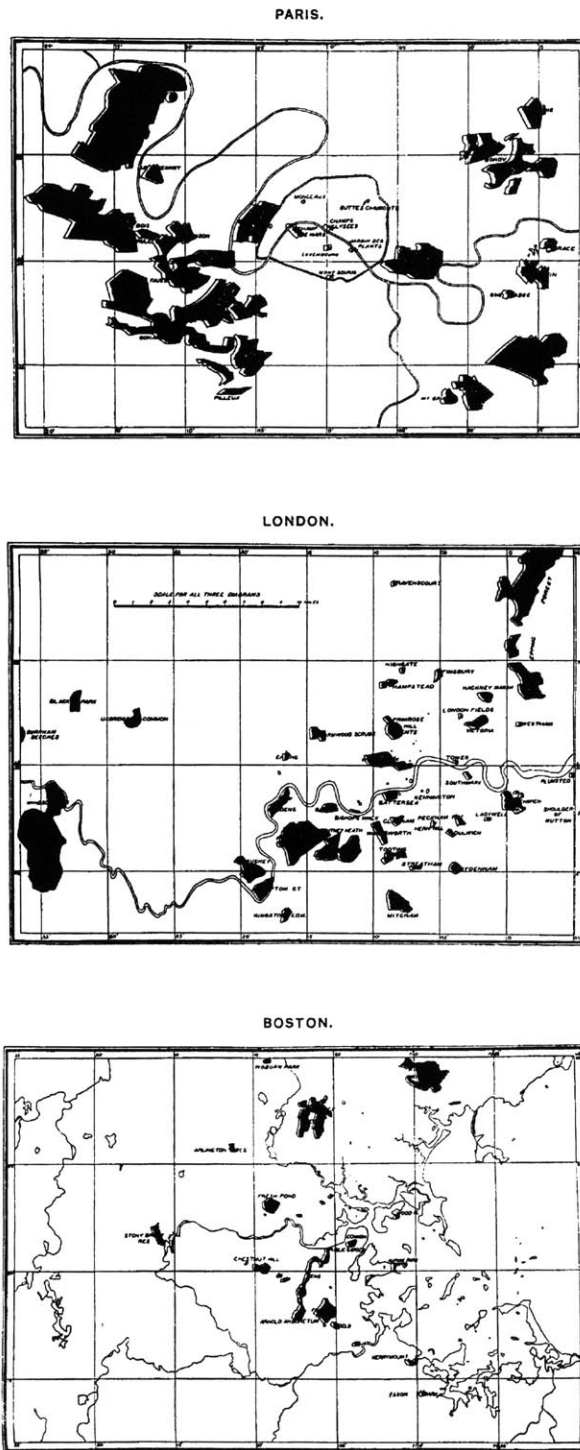


Figure 4.6 “The open spaces of Paris, London and Boston . . .”
MPC Report, 1893.

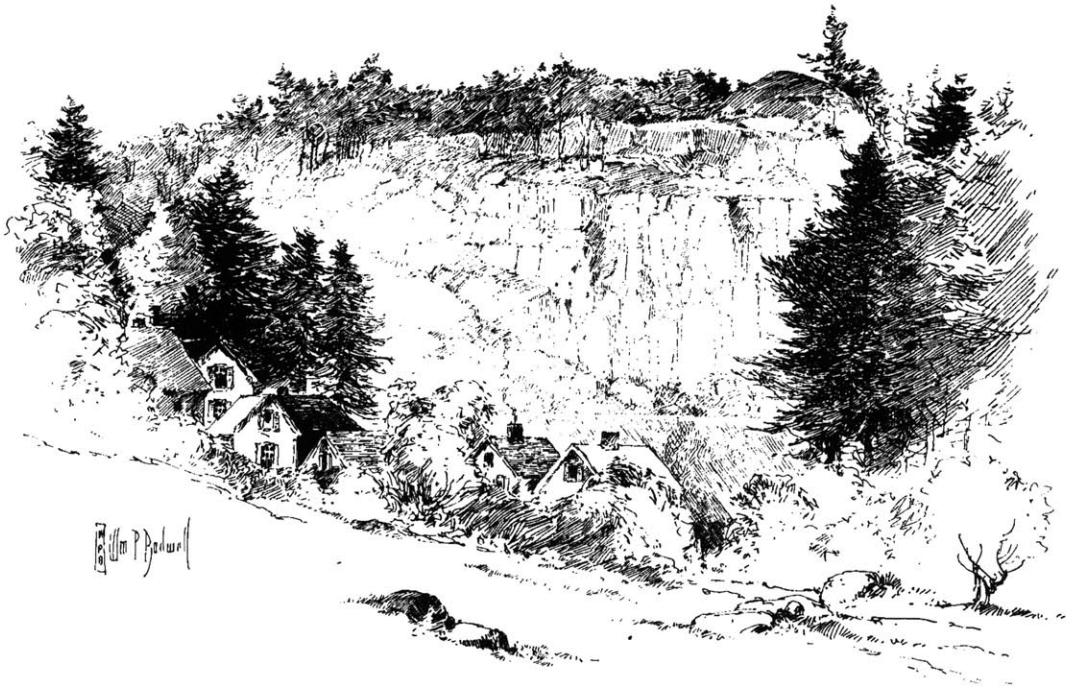


Figure 4.7 One of the Malden Cliffs, MPC Report, 1893



Figure 4.8 The Blue Hills from Muddy Pond Woods, MPC Report, 1893



Figure 4.9 Snake Creek, Chelsea and Revere, MPC Report, 1893.



Figure 4.10 Thompson's Island from Little Squantum, MPC Report, 1893.

Eliot then delineated the "Effects of Human Occupancy" on this landscape, that is to say, the visible marks of the first two hundred years of European settlement. What he saw was as pleasing as the natural landforms:

Generation after generation labored with the trees and stones, and at last the rounded hills stood forth as mounds of green, marked and divided by walls of field stones, and sometimes crowned . . . with the white churches of the victors. . . . After two hundred years of these arduous labors, the neighborhood of Boston was a lovely land. The broad or narrow marshes still lay open to the sun and air, through them the salt creeks wound inland twice a day, about them lay fields and pastures backed by woods upon the steeper slopes, and across their sunny levels looked the windows of many scattered houses and many separate villages.

But that idyllic landscape was disappearing under waves of urban and suburban immigration in the nineteenth century. In his report Baxter wrote of the crowded suburbs without open space. Eliot described how factories had taken over the riverbanks, building tenements for the workers, "always with their backs to the stream," so that the rivers and brooks were "at one blow made both foul and ugly."⁵⁰

From this strikingly clear exposition of the region's geography, Eliot shifted to a cryptic discussion of governing principles. Land for building upon was scarce, and so all the lesser mudflats and marshes in the heart of the city should be filled, to increase the taxable real estate and to reduce sanitary nuisances. On the other hand, filling the water courses presented great dangers, and should not go too far; the larger streams, both salt and fresh, could not "safely be meddled with." Public ownership of the stream banks would preserve the most important of the many scenic elements of the city, preventing harmful uses and encouraging beneficial ones like recreation. Since the principal rivers flow toward the center of the city, public lands along the rivers would also offer sorely needed routes from the suburbs to the city and to the bay beyond. These roads along ponds and streams would also mean that "good houses" would have "their fronts, and not their back yards, turned towards water-side roads."⁵¹

For the lands in the proposed reservations, private ownership would be not only harmful to the general welfare, but bad "public financial policy." If the larger spaces were not purchased in time, they could never be had. Therefore, "All scientific planning of open spaces proceeds thus from the greater to the less." The larger reservations would offer not

⁵⁰Ibid., 87-8, 89.

⁵¹Ibid., 90-1.

only the "fresh air and play-room" of smaller spaces but also the "free pleasures of the open world of which small spaces can give no hint." Though the smaller parks in every neighborhood were crucial, they should be a local responsibility.⁵²

In considering the available sites whose acquisition would be consistent with these principles, Eliot recapitulated the sequence of "the hills, the rivers, and the shores." While Baxter's observations regarding the proposed sites had been more general, Eliot pointed out particular issues of design and management. An example was Prospect Hill in Waltham. Baxter described the site's place in the park system; Eliot mapped the connection between Prospect Hill, the Charles River, and Doublet Hill to the south (Figure 4.11). To emphasize the wild state of the Blue Hills, he noted that they constituted "such a barrier that the railroads, 'the creators of suburbs,' have completely avoided them." Their scenery was finer than the public woods of Paris, and far surpassed Epping Forest in London. Once acquired, the hills should cost little for maintenance and nothing for improvement for many years. All the large reservations—the Fells, Muddy Pond, the Blue Hills—could be acquired now for a million dollars, "only as many dollars as there are inhabitants of the metropolitan district."⁵³

The ponds and streams of the region presented an opposite set of challenges. While the burgeoning population of greater Boston had avoided the hills, it had, "like the waters, settled in the valleys." A first look might suggest that public ownership would be almost impossible, but it should not be abandoned without careful study. Even small streams would benefit from public ownership; at Cheese-Cake Brook in Newton, for example, the stream bed was preserved by building roadways on either side. The pollution of the stream was prevented, a handsome roadway created, and the value of the adjacent property would increase more than the cost of the small amount of land taken by the public (Figure 4.12). The larger rivers, the Charles and the Muddy, showed the same advantages at work. A map of the Muddy River diagrammed the relationship of the railroad (now the streetcar line) on one side and the parkway on the other (Figure 4.13).⁵⁴

The bay and sea shores appeared as Boston's one great "open space," comprising one fourth of all the surface within a fifteen-mile circle of the State House. Yet while the waters were free to all, the shores were not. Only Nahant Beach, a highway, belonged to the public. The first task of a metropolitan commission should be the acquisition of the beaches from

⁵²Ibid., 91-2.

⁵³Ibid., 97-8.

⁵⁴Ibid., 98-104.

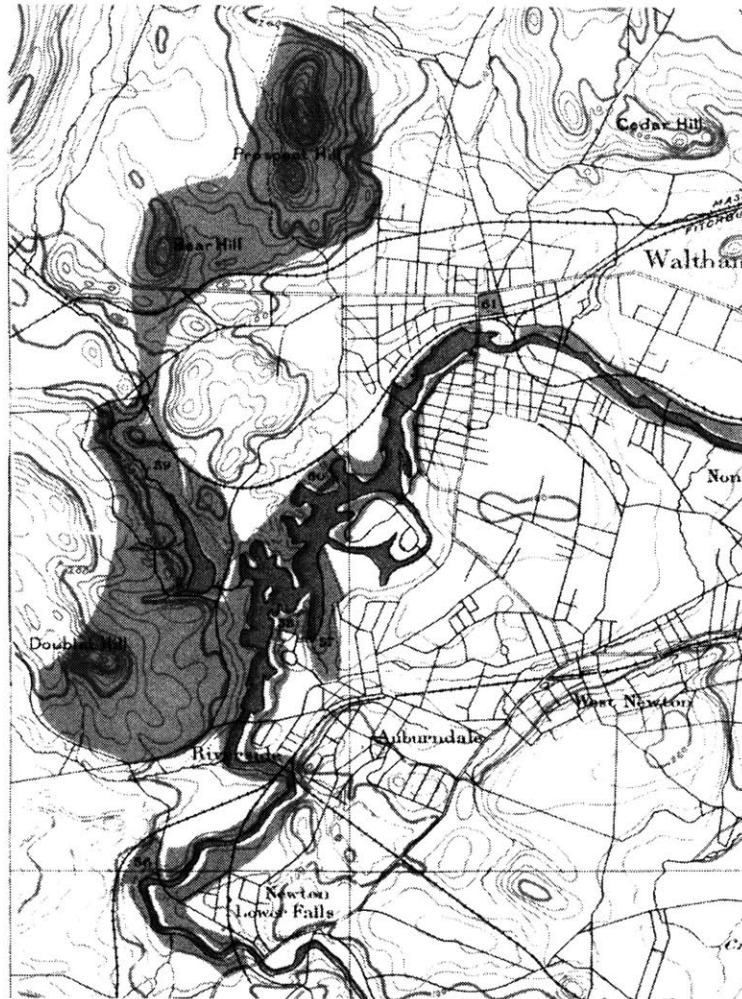


Figure 4.11 Charles Eliot, "Existing and Proposed Open Space," Metropolitan Park Commission, detail of Prospect Hill and the Charles River in Waltham, 1893.

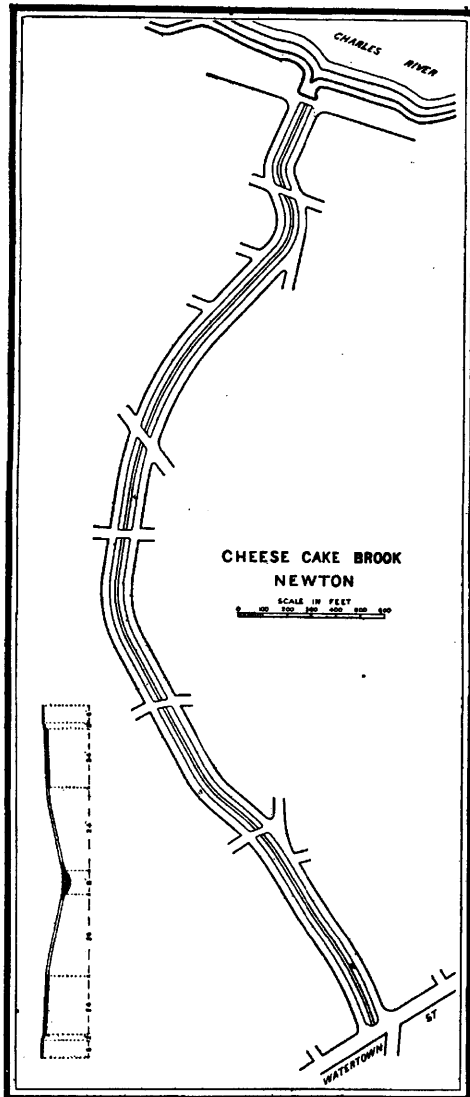


Figure 4.12 Cheese Cake Brook
MPC Report, 1893

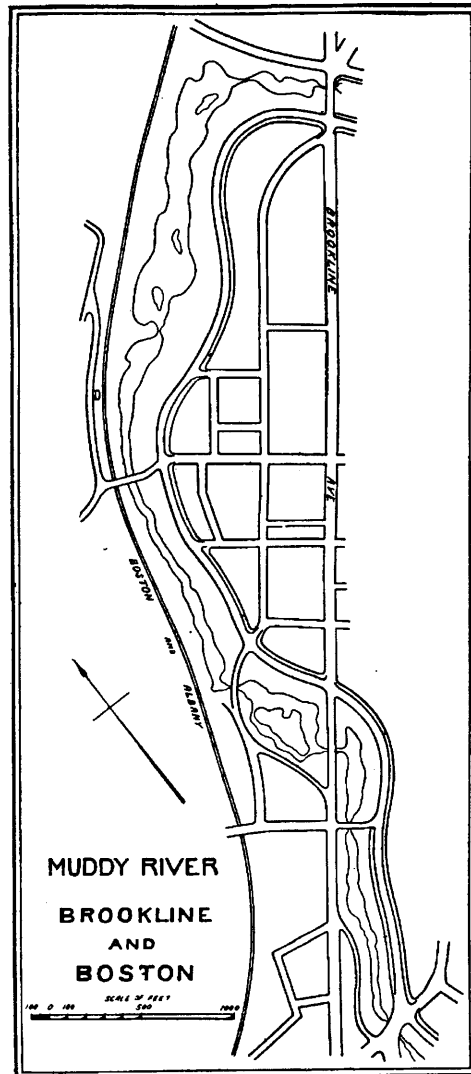


Figure 4.13 Muddy River
MPC Report, 1893

Great Head in Winthrop to Point of Pines. Here, too, parkways were essential to the image of the emerald metropolis. In the future, Revere Beach should be "a place of residence, equipped with a broad esplanade and drive, and lined with houses and hotels facing the south-east and the sea . . ." ⁵⁵

Eliot's proposal to reserve the rivers and their margins, in spite of their then-degraded state, was seen as unique in a system of park development.⁵⁶ Near the end of his report, Eliot sketched the symmetry the proposed river reservations added to the metropolitan plan :

As the ocean at Revere Beach was reached by a ten-mile drive from Winchester down the valley of the Mystic River, so now the bay shore at Squaw Rock is reached by a ten-mile drive from Dedham down the lovelier valley of the Neponset. Half-way between these northern and southern riverways we find Charles River, leading, by another course of ten miles, from Waltham through the very centre of the metropolitan district to the basin just west of the State House. Nature appears to have placed these streams just where they can best serve the needs of the crowded populations gathering fast about them.

There was also a natural symmetry in the proposed forest reservations—Lynn Woods on the north, the Blue Hills on the south; the Fells and Muddy Pond; the Waverly Oaks and Hemlock Gorge. Taking no credit for perceiving this order in the region's topography, Eliot said it was simply "due to nature"; to that inherent symmetry he brought his professional judgment of the public needs for open space and "the district's financial powers."⁵⁷

The Report of the Commissioners

The recommendations of the board, drafted by Adams, were considerably more cautious than Baxter and Eliot's expansive schemes. The commissioners were satisfied with the need to organize a metropolitan district, and argued that it should include all the communities served by suburban railroads around Boston. Together these twelve cities and twenty-four towns, with 888,000 residents, comprised forty percent of the state's population.⁵⁸

⁵⁵Ibid., 108-9.

⁵⁶Baxter considered Eliot's "comprehensive reservation of the banks of the three rivers" unique in a system of park development; see Baxter, "Wonderful Progress," 40; in *The Culture of Cities* (Harcourt Brace Jovanovich, 1938), 220, Lewis Mumford wrote that Eliot added to Olmsted's conception of the park system "the further necessity of using the riverside and sea-coast areas" to create a complete environment where the country and the city were "continuously inter-related and inter-penetrating."

⁵⁷Ibid., 106, 109.

⁵⁸Ibid., viii-ix.

The scheme of park development outlined in the report could not, in the commissioners' view, "be carried out in its entirety at once." Nor would it be wise or economical to do so. Many common needs of the city and its suburbs were already recognized: police, drainage, water supply, transportation. To these acknowledged needs should be added open-space reservations. A single example was sufficient to document this requirement—the movement in summer toward the ocean by rich and poor. The islands and beaches of greater Boston should be public, but that could not be done except through "combined actions."⁵⁹

The report included a bill to create the administrative machinery for a metropolitan park board, and under "ordinary circumstances" they would have gone no further for now. To carry out the plan in the reports of the secretary and the landscape architect would require further financial analysis and engineering. But the commissioners determined that two of the proposed open spaces required immediate action, the Fells and the Blue Hills; delay would involve irreparable injury and much greater future expense. While the schemes suggested in the report were attractive, the board declined to make further recommendations.⁶⁰

Assembling the Reservations and Parkways

The effort of picturing the metropolitan parks in the report, aimed at Boston's "both high-handed and liberal" Yankee aristocracy, was a complete success. The report became a best seller, according to Adams's biographer, and the General Court distributed 9,000 copies. The parks bill was passed by the legislature and signed by Governor Russell, permanently establishing the Metropolitan Park Commission on June 3, 1893. Charles Dalton, chairman of the Boston Park Commission, thought the report would be one of the most important contributions to the literature of public parks ever made. Adams observed to the board that "Our work is chiefly educational. We cannot expect to accomplish practical results immediately, but to prepare the public to do something in these directions some years hence."⁶¹

Eliot, however, had other intentions. He moved with what now seems almost incomprehensible speed to map the reservation boundaries, and the Park Commission acquired

⁵⁹Ibid., x-xiii.

⁶⁰Ibid., xiii-xvi.

⁶¹The characterization of Boston politics in this period as "both high-handed and liberal" is from Martin Meyerson and Edward C. Banfield, *Boston: The Job Ahead* (Cambridge, MA: Harvard University Press, 1966), 106; Kirkland, *Charles Francis Adams, Jr.*, 188; Baxter, "Wonderful Progress," 41.

almost seven thousand acres of mostly open land in its first eighteen months. Its first taking was Beaver Brook, including the Waverly Oaks, which the Trustees of Reservations had tried unsuccessfully (in the face of title difficulties) to acquire. More than 5,500 acres were acquired for the Blue Hills and the Middlesex Fells, two of the three large reservations in the 1893 plan (Prospect Hill, the reservation proposed for the western portion of the district, was never acquired from the City of Waltham). Another 475 acres was taken along Stony Brook.

The acquisition of the reservations proceeded with little apparent opposition. The land takings followed a lengthy process that typically included topographical surveys by the Engineering Department; review of the surveys by the Landscape Architects and the plotting of taking lines; cost estimates and a review of "both the artistic and financial aspects" of the plans; usually some modification of the original plans; the preparation of taking plans based on surveys; and finally, the preparation of the necessary papers by the Law Department. Though this was a lengthy and tedious process, Eliot's familiarity with the natural areas around Boston, and the involvement of local officials and the Metropolitan Park commissioners in touring the proposed reservations, greatly accelerated the extensive acquisitions in the early years.

Eliot pressed vigorously to acquire as much of the identified reservation land as possible, but he struggled in vain to educate the park board on the need for what he called "general plans" for each reservation before roads and structures were built. When the pace of acquisition slowed in 1896, he organized a project to document the current state of vegetation throughout the park system. Published in 1898 (after Eliot's death at the age of thirty-seven the previous year), *Vegetation and Scenery* is a detailed complement to Eliot's planning principles outlined in the 1893 report. Though it does not address riverine landscapes, the *Vegetation* report reveals fundamental attitudes toward the management of landscapes.⁶²

The MPC report had advocated a "scientific" selection of lands, but Eliot averred that the vegetation study would merely record the existing conditions in the reservations, and was neither "an historical or even a scientific inquiry." But what did Eliot mean by "historical" and "scientific"? Certainly the *Vegetation* report documented his earlier statements that both the beauty and ugliness of the existing vegetation were primarily the work of men, "chopped over, or completely cleared, or pastured, or burnt over, time and time again." While the

⁶²Charles Eliot, *Vegetation and Scenery in the Metropolitan Reservations of Boston: A Forestry Report Written by Charles Eliot and Presented to the Metropolitan Park Commission, February 15, 1897* (Boston: Lamson, Wolfe, 1898), 8.

reservations were sharply distinguishable in their topography, recent human actions had made the vegetation of the woodlands very much alike and "remarkably uninteresting."⁶³

Then why—apart from a few scattered natural and geologic oddities—had these parks been acquired? Natural reservations, Eliot had said, "were the cathedrals of the modern world," and the Boston metropolitan reservations had been acquired as a "treasure of scenery." The stewards of the park system should "control, guide, and modify the vegetation generally that the reservations may be slowly but surely induced to present the greatest possible variety, interest, and beauty of the landscape." In the preparation of *Vegetation and Scenery*, Eliot encouraged his protege Arthur Shurcliff to sketch "before" and "after" scenes in the reservations, after the manner of the English landscape gardener Humphrey Repton. They were included in the printed report to suggest the enhancement of the landscape through the judicious use of the axe (Figures 4.14, 4.15).⁶⁴

Standing in the way of such landscape improvements, he wrote, was a "small but influential body of refined persons" who opposed such efforts to adapt landscapes to new requirements. These people "talk of 'letting Nature alone' or 'keeping nature natural,' as if such a thing were possible in a world which was made for man." The idea that it might be sacrilegious to control or modify the existing verdure was nonsense. Even the six thousand acres of the Blue Hills, situated as it was on the rim of the metropolis, did not constitute a wilderness—in fact, the vegetation was "really artificial in a high degree." Eliot's priorities for both the large and small reservations were clear: first, to safeguard the scenery of these natural areas before it was too late; second, to make that scenery accessible to the public; finally, to enrich and enhance the beauty of the reservations.⁶⁵

Even if there should be sufficient public support to accomplish the first and second of these tasks, could the enhancement of scenery ever be justified at public expense, when "ordinary people will never appreciate the difference"? Eliot answered emphatically in the affirmative. Following Olmsted, he argued that in the presence of "unaccustomed beauty or grandeur," even the average person experienced "sensations and emotions, the causes of which are unrecognized and even unknown." In Eliot's mind this principle was the basis for the public commitment to schools, libraries, and art museums. It was well exemplified in

⁶³*Vegetation and Scenery*, 9; *MPC Report* (1895), 31.

⁶⁴Olmsted, Olmsted & Eliot to the Metropolitan Park Commission, June 22, 1896, quoted in *Charles Eliot*, p. 655; Eliot, *Vegetation and Scenery*, 9, 22.

⁶⁵Charles Eliot, "The Necessity of Planning," *Garden and Forest* (August 26, 1896), 342; Eliot, *Vegetation and Scenery*, 9, 22; *MPC Report* (1895), 32.

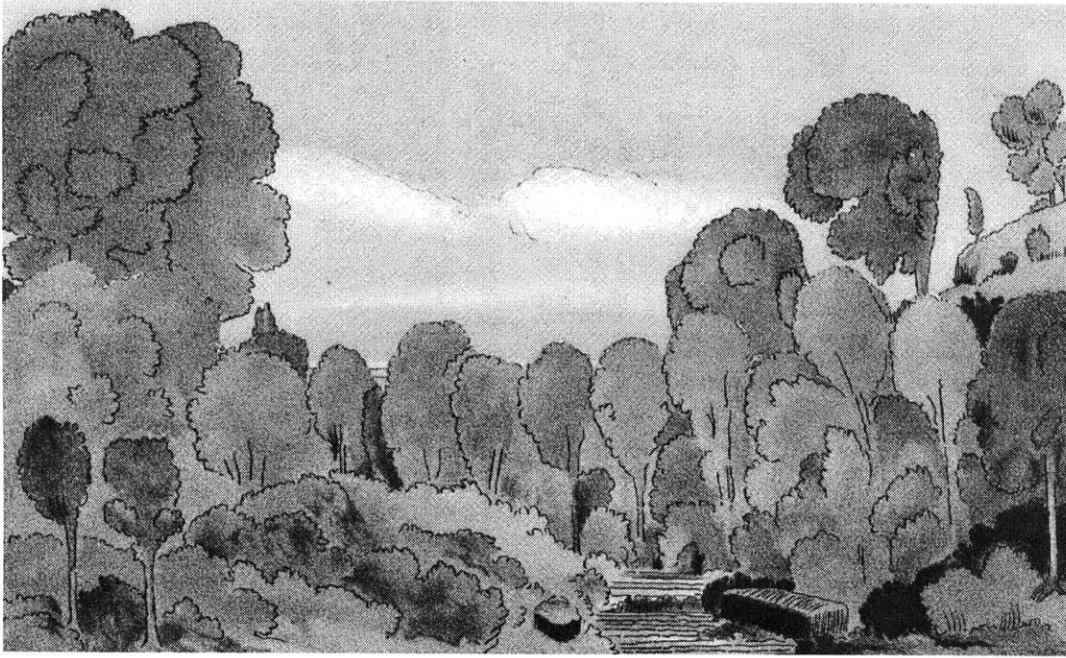


Figure 4.14 Arthur Shurcliff, Tree-clogged notch in the Middlesex Fells, 1896.

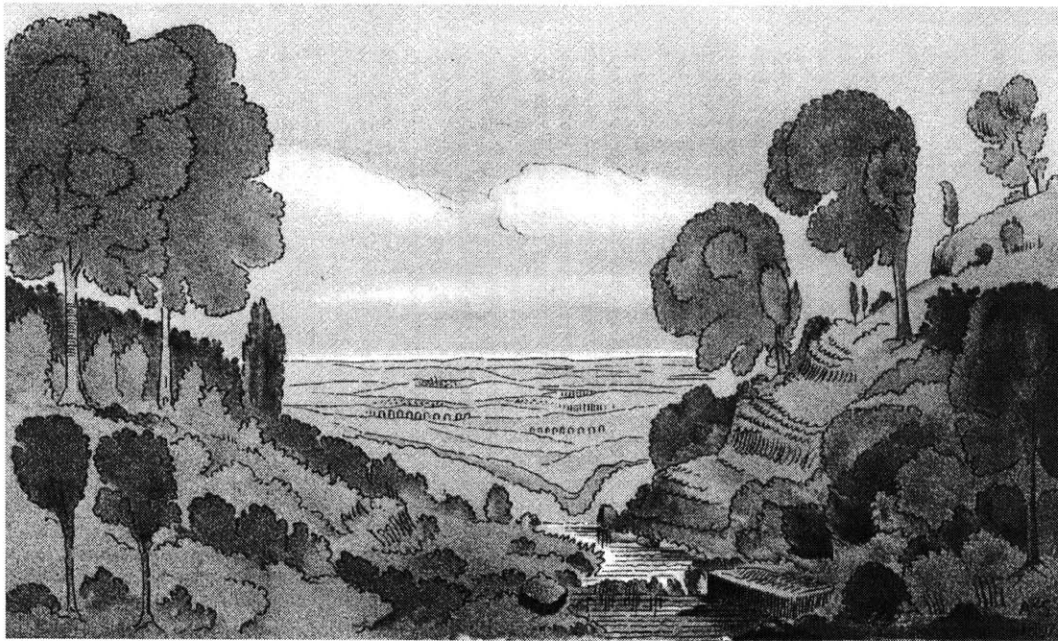


Figure 4.15 Arthur Shurcliff, Notch in the Middlesex Fells after clearing, 1896.

many already completed public parks, and for him it was the foundation for the metropolitan reservations.⁶⁶

In 1894 the legislature passed the Boulevard Act and appropriated \$500,000 for the Park Commission to build roads. Immediately a number of schemes were proposed. One suggested that the park commission assume the maintenance and policing of all "pleasure driveways exempt from the dangerous intrusion of electric cars." An alternate view suggested that the legislature was interested only in relief for the unemployed, and it didn't matter which highways were improved.⁶⁷

The "Report of the Landscape Architect" in the 1895 annual report, written by Eliot only thirteen months after first acquisitions at Beaver Brook and the Blue Hills, was divided into three sections, on existing reservations, proposed reservations, and on metropolitan parkways. The analysis of the newly acquired reservations revealed a number of policy questions confronting the new commission: opening many carriage roads immediately; widening the old road to the top of Great Blue Hill; hiring "woodsmen" to save the best trees. The landscape architects urged caution in all things, so that all the work would be "directed solely to preserving, enhancing or making available the charm, the beauty or the impressiveness" of the scenery. A lengthy study of the vegetation and topography would be necessary to determine the best location of roads; only the "absolutely necessary ways should be opened in the reservations."⁶⁸

This was, however, a caution for the short term, as the third section of the report on parkways makes plain. Three guiding principles for the expenditure of boulevard funds were suggested. The roads should be built in the interior of the park district, so more people benefitted. Access should be improved to the Fells and the Blue Hills. The roads should provide not only for cyclists and carriage owners, but also for "cheap, agreeable and rapid transportation of the multitude" by street cars. Finally, the report sketches a parkway solution to the difficult problem of access from the Charles River to the Middlesex Fells. Here, as in several later reports, Eliot's belief in the integral nature of parkways as part of the metropolitan park system was clear and unequivocal.⁶⁹

⁶⁶*MPC Report* (1897), 51.

⁶⁷*MPC Report* (1895), 41.

⁶⁸*MPC Report* (1895), 28.

⁶⁹*Ibid.*, 42, 41-47.

Charles River Improvement Commissions

In 1892, a year before the temporary Metropolitan Park Commission was organized, the legislature appointed a commission on the improvement of the Charles. The board included the mayors of Boston, Cambridge, and Newton, and the chairman of the Watertown Board of Selectmen. The governor appointed three additional board members, one of whom was Charles Eliot. Though all the members of the commission were "familiar enough" with the state of the river, they began by taking a tow-boat up and down the length of the basin. Following the usual pattern, the commission then held a series of public hearings. After weighing the "solid and pertinent facts" and the "diverse and conflicting" opinions, the commission presented their conclusions in a report written by Eliot.⁷⁰

The report began by observing that the natural or physical character of the river "is and always was peculiar." Below Watertown the Charles is not a river but a tidal estuary, "broad in its seaward part, narrow and tortuous in its inward extension, and filled and almost emptied by the tide twice every day." Although the shoreline was greatly altered near the harbor, further upstream "the natural rim of this tidal trough is the ragged edge of a salt marsh. These marshes are plains of mud . . . covered with salt grasses and penetrated by numerous crooked and narrow creeks." The river's historical development was "equally distinctive and peculiar," characterized above all by large and small landfill ventures and ever-increasing pollution.⁷¹

The commission's conclusions established the framework for the next decade of debate on the river. Though no engineering studies were completed, the report stated unequivocally that the Charles was no longer the source of harbor scour it once was, a consequence of the filling upstream and the piles of the railroad bridges at its mouth. The river had become "relatively unimportant as a highway," and to most people in the metropolitan district it now served primarily as a barrier to travel. For far too many people, it had also become a "dangerous nuisance." Where the Charles was wide, there seemed to be no hesitation by enterprises like Davenport's Charles River Embankment Company in Cambridge and the Roxbury Mill Corporation in Boston to fill and improve the marshes. Above Cottage Farm, where the river narrows, the owners on one side seemed fearful of "unsightly occupation" of the opposite side, and so did nothing. All the property owners might develop a binding plan, but if they did not, they "must expect to see their shore lands taken from them by right of

⁷⁰*First Report of the Charles River Improvement Commission, 1892*; in [Eliot], *Charles Eliot*, 557-9.

⁷¹*Ibid.*, 559-61.

eminent domain." If they could not cooperate, there should be legislation allowing cities and towns to work together.⁷²

By this time, seven of the sixteen miles of riverbank between Boston and Watertown were already owned by public or "semi-public institutions"—Harvard, the Cambridge hospital and the Cambridge cemetery, and the Watertown Arsenal. The two-and-a-half miles of the Back Bay were "dedicated in the public mind, if not in fact, to the custody of the Boston Park Commission"; an embankment along the water side of Beacon Street was authorized by the legislature in 1893 (though it was not constructed until 1910). Only two miles were occupied by "practically irremovable" industrial concerns (the three largest were the Boston and Albany Railroad, the Brookline Gas Company, and the Brighton Abattoir) and five miles were in private hands. In this optimistic view, the remaining three or four miles of riverfront could be acquired without great difficulty for public use.⁷³

Though the commercial use of the river had declined, the report recommended that the opportunity for boat traffic be maintained. The hindrance to boat traffic presented by the twelve draw bridges and five railroad bridges could be removed if the existing bridges were replaced by drawless spans elevated above the river. At North Station, the railroad "bridges" were so wide that they "fairly roof the river, serving "as rent-free switching yards, where engines engaged in making up trains cross and recross continually." A single broad, high-level bridge would eliminate the conflict with barge and tow-boat traffic on the river, as such elevated railroad approaches at terminals in Philadelphia and London had shown.⁷⁴

The commission's second report was much briefer than the first. It included a draft bill creating a commission with the authority to make improvements. It also recommended granting the authority to Boston and Cambridge to construct embankments along the entire frontage of the river.⁷⁵

The General Court chose not to create a new commission. Instead, only a week after the permanent Metropolitan Park Commission was established in June 1893, the state legislature authorized the Joint Board on the Improvement of the Charles River, consisting of the park commission and the state board of health. The joint board was to investigate the sanitary conditions of the river between the Charles River Bridge at the mouth of the harbor and the Waltham town line, and also to prepare plans for improvement of "the beds, shores

⁷²Ibid., 563-9.

⁷³MPC Report (1895), 38.

⁷⁴[Eliot], *Charles Eliot*, 564, 565.

⁷⁵Ibid., 565.

and waters" of the river and the "removal of nuisances therefrom." A sum of five thousand dollars was authorized to employ "engineers and experts." The board appointed Frederick Stearns (the engineer for the board of health) as engineer, Olmsted, Olmsted & Eliot as landscape architects, and Dr. Robert Greenleaf as sanitary consultant. In a departure from common practice, the joint board did not hold any public hearings.⁷⁶

The 1894 report of the Joint Board pointed out that at the Charlesbank Park the commercial use of the river "has already been abandoned in favor of the more profitable use thereof for purposes of residence and recreation."⁷⁷ River traffic would decline further after the federal government approved the construction of the new West Boston (now Longfellow) Bridge without a draw; the legislature compensated wharf owners above the bridge on the Cambridge side for their losses.

The board also endorsed the twenty-year-old idea of new house lots north of Beacon Street. The idea seemed sound: the houses facing the river should be "worthy adjuncts to the superb location," and there would be "better policing and care which all public grounds receive when the neighboring householders walk through them habitually, or constantly have them under view." The report cited in support an excerpt from Mayor Nathan Matthews's inaugural address in 1891:

We have in this [Charles River] basin the opportunity for making the finest water park in any city in the country; an opportunity which should be grasped before it is too late. The eventual solution of this whole problem should . . . be an imitation of the plan adopted by the city of Hamburg, under similar circumstances.

The first five plates in the report were of the Alster Basin in Hamburg, and the text noted that "some of the finest of the private houses, the principal hotels, and such shops as are usually found in the better quarters of a city" faced directly onto the Alster (Figures 4.16, 4.17). A photograph of boating on the Thames near London was also included, reinforcing the argument that the outdoor life along the Alster in Hamburg was "not peculiar to the German nation."⁷⁸

The report was thorough, concise, and logical. The recommendations were summarized in fifteen pages; the reports of the board's engineer and landscape architect were

⁷⁶*Report of the Joint Board* (1894), vii.

⁷⁷*Report of the Joint Board* (1894), 34.

⁷⁸*Report of the Joint Board* (1894), xv, xvii. This argument for "eyes on the park" has in recent times been extended to city neighborhoods in general. See, for example, Jane Jacobs, *The Death and Life of Great American Cities* (New York: Vintage, 1963, 35-41).

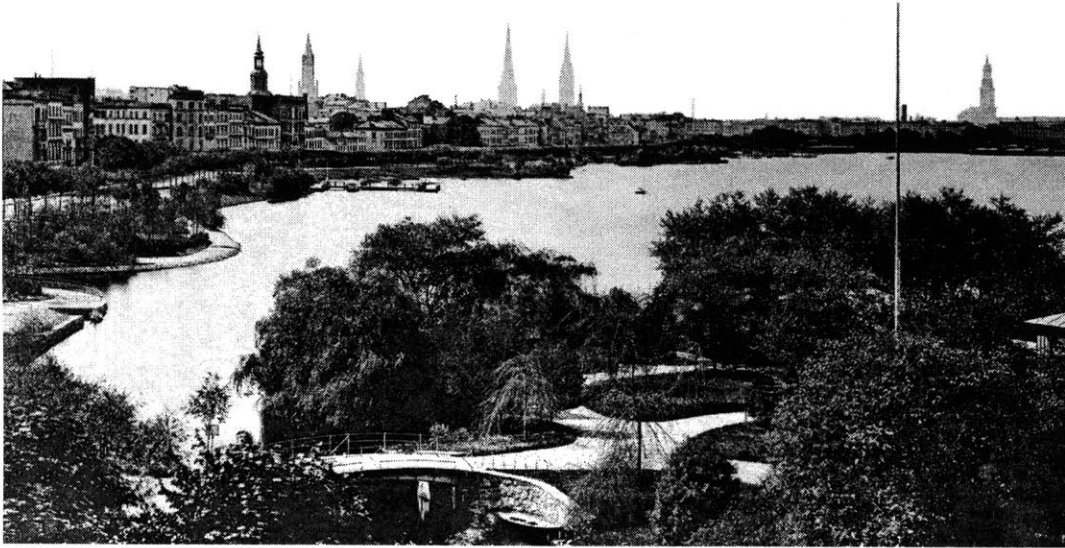


Figure 4.16 "Upper Alster Basin, Looking Toward the City," *Report of the Joint Board*, 1894.



Figure 4.17 "Lower Alster Basin, Looking toward the Upper Basin," *Report of the Joint Board*, 1894

only fifty pages. But it was submitted to the legislature without any hearings, and infuriated many residents of Beacon Street. Rather than acting on the Joint Board's conclusions, the legislature passed the problem of a Charles River dam to the Harbor and Land Commission, directing the commission in 1894 to hold hearings and produce a written report—with an appropriation of only fifteen hundred dollars. The commission held seventeen hearings between October and December, and its report, a transcription of the hearings, was more than a thousand pages.⁷⁹

To represent them at the 1894 hearings the opponents of the dam hired several engineering experts and as counsel two former governors, John Long and William Russell (who had signed the legislation establishing both the park commission and the joint board). At the second hearing, Long's impassioned opening statement on behalf of his Beacon Street clients reflects the acrimony elicited by this issue:

There was sprung upon this community suddenly one of the most radical changes in the natural situation of the city of Boston that has ever been suggested, a plan to put up a permanent dam obstructing navigation, changing a body of salt water to fresh, affecting millions of property, affecting commercial interests, raising great questions of sanitation, unprecedented, for this is no parallel to it—

The indignation of the remonstrants was only heightened by accusations that the opponents of a dam were selfishly guarding their property interests against the general welfare of the community.⁸⁰

Among the speakers in favor of the dam was Charles W. Eliot, who introduced himself "with considerable reluctance" as a citizen of Cambridge, having "no representative quality whatever." He immediately raised two issues of regarding the authority of professionals in the hearings. First, he asked why the Harbor and Land Commission was allowing witnesses at the hearings to judge the expertise of the Board of Health and the Park Commission, rather than limiting their discussion to the effects of the dam on the harbor. The chairman indicated that the Harbor Commission was taking that approach after consulting with the legislator whose committee had directed the commission to hold the hearings. Eliot then pointedly observed that among all the witnesses, "there is not one of the citizens who have testified here, including myself, whose opinion upon these expert questions is of any

⁷⁹Board of Harbor and Land Commissioners, *Charles River Dam: Evidences and Arguments before the Board of Harbor and Land Commissioners and Report Thereon* (Boston, 1894).

⁸⁰*Ibid.*, 5.

value whatever." In fact, every question that had been raised had already been addressed in the report of the Joint Board.⁸¹

This was not an issue of individual property owners and their rights, Eliot argued, but "a question for the happiness and health of the five or six hundred thousand people that belong to this metropolitan district." Perhaps after expert testimony had been presented, everyone in favor would change their minds, but "at present the principal opposition, we all know, proceeds from property owners on the water side of Beacon Street." In an appeal to logic that fell on deaf ears, Eliot concluded by observing that the proposal to build a dam was entirely separate from the idea of building a row of houses facing the basin. In fact, since the cost of not building a dam would be much greater than the cost of building one, there would be more pressure on the state to create and sell new house lots if a dam were *not* built.⁸²

The remonstrants countered with several well-known local experts on their side, including Dwight Porter, a professor of hydraulic and sanitary engineering at MIT, and Col. George E. Waring, who near the beginning of his career had been the drainage engineer for Central Park in New York. The proponents of the dam responded by asking Frederick Stearns and William Sedgewick of the Board of Health to testify. Since the Harbor Commission had no money for new studies, the testimony consisted largely of citations from previous studies of the river and the harbor, and of conflicting judgments about the conclusions of those studies from the experts hired by the two sides.

Turning the tables on Eliot, Gamaliel Bradford attacked the supposedly disinterested testimony of the joint board's experts—Eliot's son and the health board's engineer—as well as the experience of the joint board's members. Comparing the boards with the authority and experience of the state and federal supreme courts, he pointed out that the park commission was only two years old: "They are not trained men in their line. They are only reputable citizens who take this position. And I think their opinion is entitled to just so much weight as their individual character carries with it, and no more." He suggested that if a dam were built, Stearns would be the engineer to direct it. And as for "young Mr. Eliot,"

He sees in these marshes a splendid opportunity to develop a landscape gardening park. He sees he may find employment probably for years in a most congenial occupation, and that he can make himself a reputation that will spread all over the country, and perhaps last for centuries.

⁸¹Ibid., 48, 50.

⁸²Ibid., 57-8, 58.

By accepting fees from the joint board, Stearns and Eliot's judgments were rendered suspect.⁸³

At the conclusion of the hearings, the Harbor Commission determined that no one could say what the effect of a dam would be. In the absence of overwhelming evidence in favor of the proposal, the commissioners were unwilling to risk the "incalculable injury" that might result to the harbor and the city.⁸⁴

Beyond addressing the question of the dam itself, Eliot's work for the several Charles River commissions confirms his view of the relationship of parkways and public open space. The 1894 report of the Joint Board indicated that the advantage of "a continuous parkway from Waltham to Boston" was so obvious that it need only be mentioned. Roads built on the borders of the public reservations along the Charles would benefit both private owners and the public treasury.⁸⁵

In his work on the Basin, Eliot also sketched two proposed bridges, one at Cottage Farm and the other at North Station. To replace the old structure at Cottage Farm, he proposed the "Charlestown Bridge" further downstream, where it would connect the Charles with the new parkways laid out by Olmsted along the Muddy River. The new bridge would also mark the passage from the "Marsh Section" to the "Basin Section" of the lower Charles, and would create a fine view extending all the way to the State House. (Figures 4.18, 4.19).⁸⁶

In 1892 the Improvement Commission had suggested a single high-level bridge to make the river more accessible for boating. At that time the objection of the railroads was sufficient to block any new legislation, and the work of the Improvement Commission was later seen, in the case of the railroads at least, to be "wholly fruitless." Two years after the Improvement Commission's report, in an unpublished letter, Eliot proposed a more radical solution. To avoid the full cost of "a suitable union station on the mainland of Boston," Eliot wrote, the railroads have covered the Charles with a series of timber platforms which they use as "a rent-free switching yard and terminal." In his opinion, state and national legislation allowed this only on a temporary basis, and he hoped that sooner or later the renewal of these permits would be refused and the railroads would then build a terminal on the north side of

⁸³Ibid., 405, 407.

⁸⁴Ibid., xix-xx.

⁸⁵*Report of the Joint Board* (1894), 36.

⁸⁶Ibid., 42.

the river. That would allow bridges and park lands "susceptible of fine architectural treatment."⁸⁷

In a drawing to accompany the letter Eliot diagrammed two new bridges. One would connect from City Square in Charlestown diagonally across the river just above the Warren Bridge. A landscaped boulevard would extend from the river along the line of Canal Street to Haymarket. The second bridge would connect the new Union Station to Leverett and Charles Streets at the Craigie Bridge, just downstream of Olmsted's Charlesbank Park. On the Cambridge side, Union Station would be connected by a landscaped boulevard along the river to Craigie Bridge and "The Front," a park proposed for the water's edge (Figures 4.20, 4.21).⁸⁸

The Joint Board report also includes a scheme that seems out of character with the park commission's resolute statements on natural scenery. The broad marshes adjoining Harvard's Soldiers Field, according to the board, were the only location along the river where a mile-long speedway could be constructed, uninterrupted by cross streets. No hint is given of who wanted such a speedway, or why the park was seen as an appropriate location (Figures 4.22, 4.23).⁸⁹

Public Discourse and Private Conflict

The transcripts of the committee hearings only begin to suggest the tensions this issue engendered in the small world of elite Boston society. One fictional but nonetheless valuable witness to the social context of this conflict is John Marquand's novel *The Late George Apley*, in which the proposal for a dam on the Charles is one emblem of the transition from one generation to the next. The first hint of the controversy came in a letter to George from his father Thomas. The father had recently heard some disturbing rumors that "a small group of hare-brained meddlers [was] agitating to have the Charles River dammed," covering forever the flats behind the Apley house on the water side of Beacon Street, which Thomas enjoyed watching at low tide. When a group of mostly "younger men" started up a campaign for the dam, the senior Apley was among the first to organize the opposition, with the aim of stopping what was clearly an encroachment on the rights of property owners. Thomas took the drastic step of writing an angry letter to the *Boston Evening Transcript* to say that it was

⁸⁷*Evidences* (1903), 494; [Eliot], *Charles Eliot*, 592.

⁸⁸[Eliot], *Charles Eliot*, 592.

⁸⁹*Report of the Joint Board* (1894), 41.

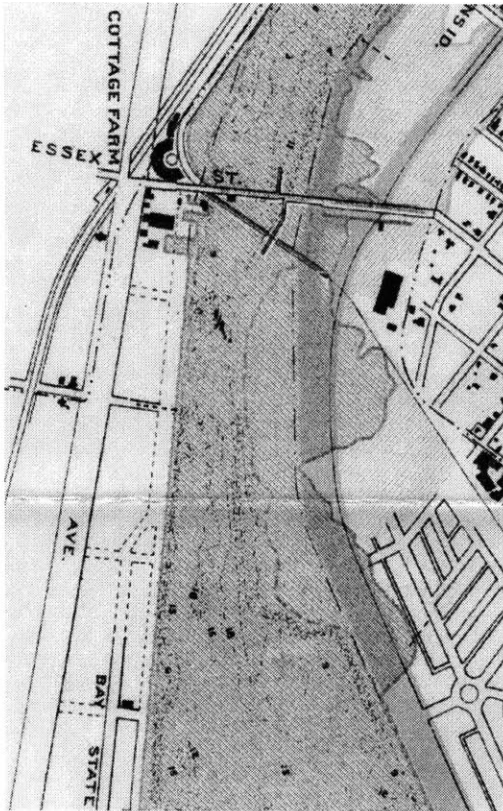


Figure 4.18 Cottage Farm Bridge,
Report of the Joint Board, 1894

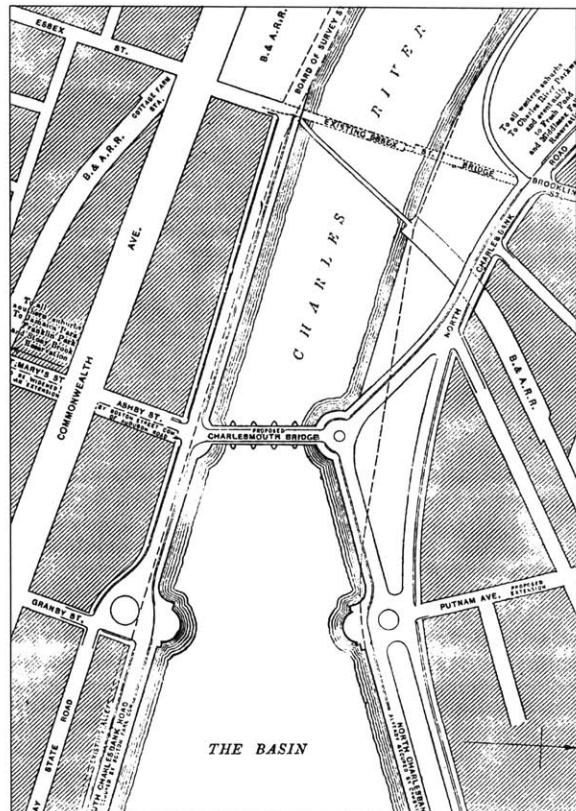


Figure 4.19 Charles Eliot, proposal
for Charlesmouth Bridge, 1894

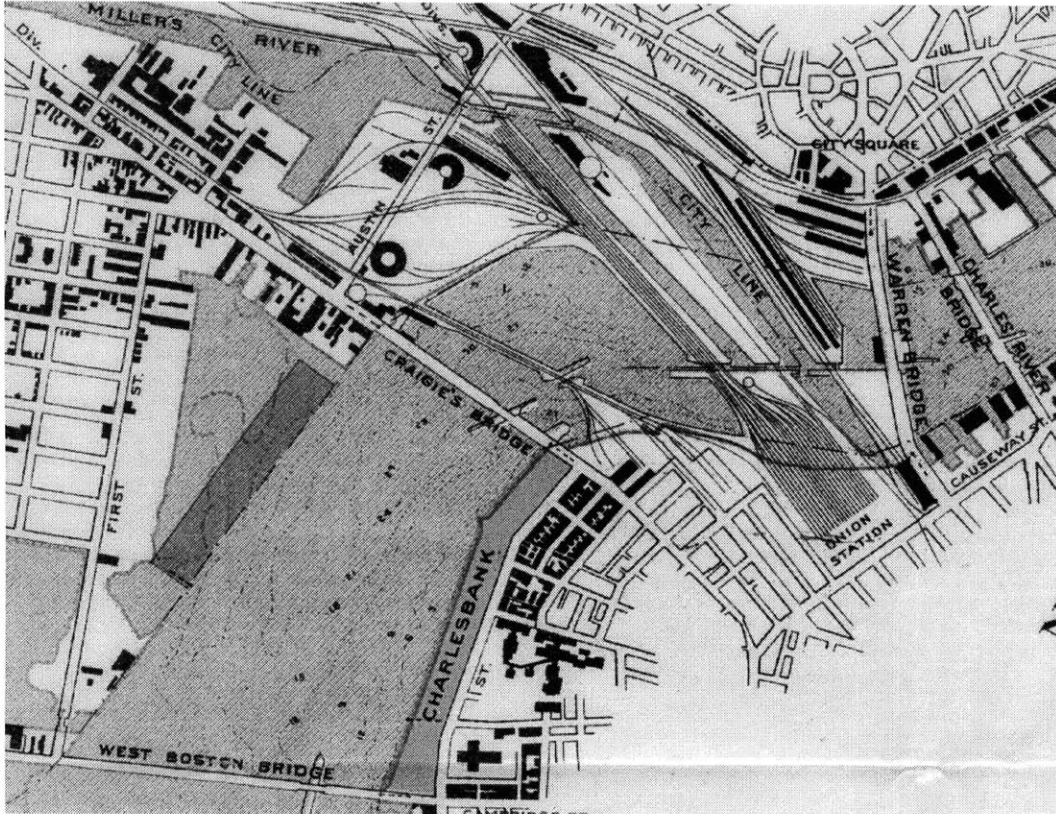


Figure 4.20 "Plan of Charles River from the Waltham Line to Boston Harbor," detail, *Report of the Joint Board*, 1894.

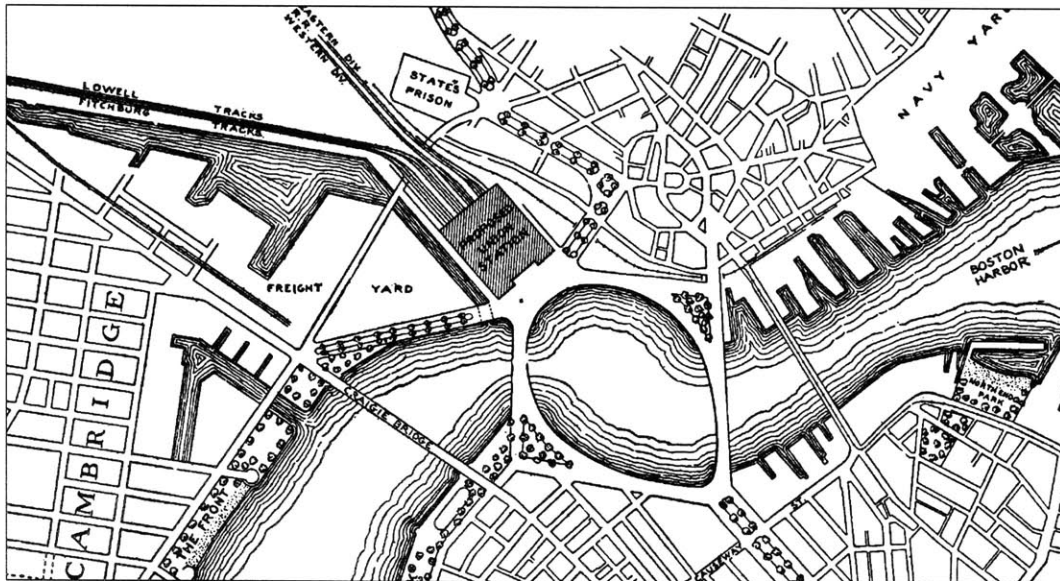


Figure 4.21 Charles Eliot, "A New North Station North of Charles River," 1894

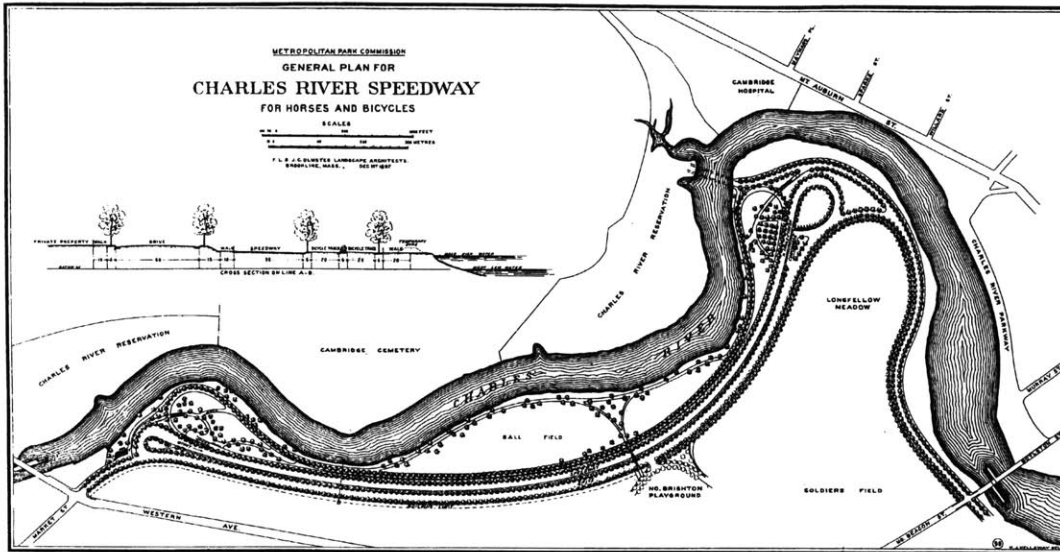


Figure 4.22 F. L. & J. C. Olmsted, Charles River Speedway plan, MPC Report, 1897.



Figure 4.23 Charles River Speedway, MPC Report, 1901.

beyond his "ability to see . . . why Boston should want another pool of stagnant water at her gates":

There are enough stagnant pools in the Fens already . . . It will be done to gratify the unbalanced whim of a small group who believe there are not sufficient places for the citizens of Boston to walk and play. It is not the purpose of those who built upon the Charles River to have playgrounds in their back yards. The Boston Common was intended for recreation, and also the Public Gardens; and these generous contributions to the city's welfare are enough.

His son George took the opposite side in the controversy, the only time in his life that he "crossed his father."⁹⁰

Some years later the son delivered a memorial sketch of his father to the Centennial Club. In the sketch he recalled a scene in his father's private office that followed the letter to the editor. In vain the senior Apley advocated his own position: "I do not care as much for the water, as I do for the principle of the thing. It is a bitter blow, at my time of life, to know that my son has turned traitor to his class This talk about the common good is arrant Socialism and nonsense. You and I do not stand for the common good. We stand for a small class . . ." George responded by citing the opinions of men he knew his father respected who favored the dam, but Thomas was unmoved. To him this was clearly the end of the city he once knew; the great men of Boston from his youth are gone, and the stuff of which they were made was not to be found in his son's generation.⁹¹

George held firm against his father. He lent his name to the cause, and "was actually present at several State House hearings, though he did not speak." George's wife sided with her father-in-law, and the strain between father and son "caused his mother to take to her bed." Tension in the family did not dissipate until George's sister announces her engagement some months later.⁹²

As he retold the story of their intense disagreement, George wondered if perhaps "in certain respects" his father was right after all. Had the city fallen to the static state of ancestor worship, in which "the achievements of the past are beyond our present capacities"?⁹³

⁹⁰John P. Marquand, *The Late George Apley* (Boston: Little, Brown, 1936), 122, 147.

⁹¹*Ibid.*, 149.

⁹²*Ibid.*, 151.

⁹³*Ibid.*, 150.

The attachment to the Back Bay as it was in the second half of the nineteenth century was also recalled in his autobiography by George Santayana, who grew up at 302 Beacon Street, the water side. In those favored townhouses, every room was "initially attractive," since each one had either the sun on the street side or the view over the water. The summer sunsets were "more gorgeous, good Bostonians believed, than sunsets anywhere else in the world," and Santayana's limited experience did "not belie them." As for the view of Cambridge, "darkness added to distance [and] made the shabby bank opposite inoffensive." But there were two "counter-effects discovered eventually by enthusiastic purchasers":

Under your nose was a mean backyard, unpaved, with clothes or at least clotheslines stretched across it; and mean plank fences divided it from other back yards of the same description, with an occasional shed or stable to vary the prospect. Under your nose too—and this was the second counter-effect—rose now and then the stench from mudflats and sewage that the sluggish current of the Charles and the sluggish tides that penetrated to the Basin did not avail to drain properly.

So why did the residents remain on the water side of Beacon? Because the smell "was chiefly noticeable in summer, when Beacon Street people were expected to be out of town; they made no loud complaints; and the democracy in general was not yet aroused to the importance of town planning for its own sake. The age was still enamoured of *laissez-faire*; and its advantages were indeed undeniable. For the government it meant a minimum of work, and for the public it meant a minimum of government."⁹⁴

Though the construction of the dam and the creation of the basin would later be reckoned among the city's signal accomplishments, Bostonians like Thomas Apley successfully blocked those projects for another decade.

The First Riverside Land Takings

The Metropolitan Park Commission had clearly stated its intentions to reclaim the edges of Charles, a claim buttressed in 1894 by a \$300,000 appropriation for land acquisition. It was the new Cambridge Park Commission, however, that acted first, purchasing in January of that year almost the entire shoreline that was the city's southern boundary.

Cambridge was not represented among the town officials and residents of Boston and surrounding communities who petitioned for the establishment of a temporary metropolitan park commission in the spring of 1892, though several Cambridge residents did join the

⁹⁴George Santayana, *Persons and Places: Fragments of Autobiography*, William G. Holzberger and Herman J. Saatkamp, Jr., eds., (Cambridge, MA: MIT Press, 1986), 138-9.

metropolitan commissioners' inspection tour of the river that fall. Instead, Cambridge moved vigorously to set up its own park commission, without waiting to see what actions the MPC would take along the river. The mayor appointed a temporary committee on parks for the city that year, and the following year a permanent park commission was appointed. Charles Eliot was directed to prepare a report on the opportunities for open space in Cambridge, which he completed in December 1893.⁹⁵

Given his work for the metropolitan parks and for the commission on the Charles, it was not surprising that Eliot's recommendations to the city emphasized the opportunities for reservations along the river. The Charles offered almost 650 acres "of permanently open space provided by nature without cost to Cambridge," unused except by boaters, "like money hoarded in a stocking, yielding no return to owners." Before acquiring anything else, the city should first purchase the entire frontage from the Craigie Bridge in East Cambridge upstream to Cambridge Cemetery.⁹⁶

The Board endorsed this view in its report soon thereafter to City Council, and also recommended the construction of a parkway that would connect the Harvard, Brookline, and Boylston Street bridges. In 1894 the city made its first takings along the river, including two-thirds of the frontage between the Craigie and West Boston bridges.⁹⁷

The Casino boathouse was moved from Hawthorne Street to DeWolfe Street in 1895, the Weld Boathouse was moved and remodelled two years later, and in 1901 the Harvard varsity boathouse at Winthrop's Wharf and the adjoining boat builders' shop were demolished, as the city began construction of the parkway and the new public landscapes along the river. In April 1895 the Metropolitan Park Commission made the first takings on the Boston side of the Charles, extending from Western Avenue opposite Cambridge all the way to the Abattoir above the other end of Western Avenue, including the river frontage along Harvard's Soldiers Field.⁹⁸

In spite of the association of low-lying wetlands with disease, there were some who were not happy with the filling of the marshes. William Brewster, the Harvard ornithologist, had grown up in Cambridge and gone birding in his school days with the sculptor Daniel Chester French. In his view,

⁹⁵Minutes of the temporary Metropolitan Park Commission, November 2, 1892; Cambridge Park Department, *Report* (1894), 5.

⁹⁶[Eliot], *Charles Eliot*, 423.

⁹⁷Cambridge Park Department, *Report* (1894), 5.

⁹⁸Acquisition maps, Metropolitan District Commission Archives.

The work of reclaiming—or as some of us prefer to characterize it, of *destroying*—the Charles River Marshes has progressed rapidly and relentlessly of late. Although not as yet nearing completion, it has already resulted in the total obliteration or very serious disfigurement of most of these once primitive and beautiful salt meadows.

"More practical men," said Brewster, did not appreciate the marshes the way Longfellow, Lowell, and a few others did; to such men the marshes "were but waste lands, unsightly to the eye and more or less prejudicial to the health of humankind."⁹⁹

It was not, however, only practical men who felt this way. Charles Eliot reported to the Metropolitan Park Commissioners in 1897, for example, that the ten miles of salt-marsh river bank "must sooner or later be made usable" (Figures 4.24, 4.25).¹⁰⁰

The Park System at the Turn of the Century

In spite of the commission's initial success in acquiring land, the press of administrative details grew increasingly frustrating to Adams. In the fall of 1894 he wrote in his diary that the board had spent the day at Middlesex Fells and "gravely pondered divers problems involving the purchase with public money of land at 10c a foot for which private money would not give 2." The following June, after a visit with the commission to the Fells, Adams noted that he was "bored to death and fast getting cross." His private impatience notwithstanding, when his resignation from the board was made public two days later, he considered it "the successful ending of a successful piece of work."¹⁰¹

When he looked back two decades later on his time with the park board, Adams was still startled by the speed of their progress: "Wholly opposed to the policy of rapid growth and what I could not but regard as premature development, I found myself powerless to check it. I was, in fact, frightened at our success in the work we had to do." He had come to believe, however, that never in his life had he done "work more useful or so permanent in character . . . as saving to the people of Massachusetts the Blue Hills and the Middlesex Fells."¹⁰²

By the time of Eliot's death in the spring of 1897, Revere Beach was complete. Extensive land takings had been made along the Charles River, including all of the lower

⁹⁹William Brewster, *Birds of the Cambridge Region of Massachusetts*, (Cambridge, Massachusetts), 1906, p. 33.

¹⁰⁰[Charles Eliot], "Landscape Architects' Report," in *Report of the Board of Metropolitan Park Commissioners* (Boston, 1897), p. 43.

¹⁰¹Charles Francis Adams, diary, October 3, 1894; June 10, 11, 13, 1895.

¹⁰²*Charles Francis Adams, 1835-1915, An Autobiography* (Boston: Houghton Mifflin, 1916), 185.



Figure 4.24 Charles River marshes near Cambridge Hospital, 1899.



Figure 4.25 Charles River near Cambridge Hospital, 1900.

Charles to Watertown and Hemlock Gorge on the upper Charles. The park system included almost seven thousand acres. Takings had also been made for the first five parkways, at the Blue Hills, the Fells, Revere Beach, and along the Neponset River and the Mystic Valley (Figure 4.26). Including interest to be paid, the cost of these acquisitions was \$6,800,000.¹⁰³

The original act which established the permanent park commission also appropriated \$1,000,000 through the issuance of bonds, to be repaid by assessments on the cities and towns of the parks district. Subsequent amendments through May 1896 added \$2,300,000. In response to lobbying near the end of the 1896 legislative session, the apportionment was set aside, and the commission was directed to limit expenditures to the amount of the initial appropriation. The net result was the withholding of \$1,000,000 which precluded new work and rendered the Board "practically bankrupt." The following year, rather than repeal the previous year's restrictions, the legislature made new appropriations to cover interest and expenses through 1900. It was presumed that all the land takings would be completed by then, so that the costs could be apportioned among the towns. An additional \$500,000 was authorized for acquiring lands on the Charles River.¹⁰⁴

At the end of 1900 a total of nine thousand acres had been acquired in thirteen reservations, and the nine constructed parkways included an additional six hundred acres. A note of caution appeared in the report for that year, suggesting that "the cost of any further additions must be weighed with the utmost caution against their advantages."¹⁰⁵ Whether this was a political judgment on the part of the landscape architects, or a reflection of a more conservative mood from the commissioners, is impossible to tell at this remove. For whatever the reasons, there were few land acquisition during the next twenty years.

Because the legislature had required the apportionment of costs to the cities and towns in 1900, that year was the occasion for taking stock of the park system. Substantially all of the land acquisitions proposed in 1893 were either complete or then in process. Until that year the interest and maintenance charges for the parks had been paid for by the park loans, but thereafter annual appropriations were made instead.

The successful prosecution of Baxter and Eliot's plan for metropolitan parks had brought almost the entire length of the lower Charles River in Boston and Watertown into the

¹⁰³*MPC Report* (1898), 7.

¹⁰⁴*MPC Report* (1898), 5-7.

¹⁰⁵*MPC Report* (1900), 74.

public realm by the turn of the century. The Cambridge Park Commission had acquired most of the north bank of the river, and had constructed large sections of the riverfront parkway (now Memorial Drive). To a number of the citizens of greater Boston, it was time to reopen the debate on damming the Charles so that the great water park could at last be realized.

DIAGRAM OF THE PARKS & PARKWAYS OF THE BOSTON METROPOLITAN DISTRICT.
TO ACCOMPANY REPORT OF OLMSTED, OLMSTED & ELIOT, DATED DECEMBER, 1896.



Figure 4.26 Olmsted, Olmsted & Eliot, the view from the State House, MPC Report, 1897.

V. THE CULTURE OF REFINEMENT

The broad Basin, surrounded as it will be by handsome promenades, is destined to become the central "court of honor" of the metropolitan district . . .

Charles Eliot, 1896¹

The 1893 plan for the metropolitan reservations was a vision—a clear, easily understood vision of a great city built in the spaces between its natural landmarks—the hills, the rivers, and the shores. This vision secured the creation of the parks because it built upon and extended a culture of refinement that was shared among those in Boston who once were called the "city fathers." Though expansively vague, this vision of greater Boston's future was enough to inspire two more crusades to dam the Charles River. The second campaign finally succeeded, resolving an eighty-year debate.

There were also limits to this metropolitan vision. While some natural areas were reserved for limited public uses, other landscape types were almost totally obliterated. Some students of the natural features of the region were deeply frustrated with what they saw as the limited range of Eliot's depictions of the future. Neither the objections of natural scientists nor the romantic poetry of Longfellow and Lowell that celebrated the estuarine environment near Old Cambridge were enough to spare even a fraction of the Charles River marshes.

The actions of the Cambridge and metropolitan park commissions, and fond memories of Oxford and the Thames, inspired a small group of Harvard alumni to purchase land along the river in the university's behalf. The construction of the Harvard houses remade a waterfront of industrial wharves and tenements. Following Harvard's example, first M.I.T. and then Boston University relocated to the river. Once the universities were enthroned along the Basin, the Commonwealth finally determined to make something of its share of the Charles. With the completion in 1936 of the Storrow Memorial Embankment, now universally known as the Esplanade, the city created at last the imposing water park about which Bostonians had fantasized for almost a hundred years.

¹Charles Eliot, "The Boston Metropolitan Reservations," *New England Magazine* 15 (September 1896): 117-8.

A New Campaign for the Dam

Five years after the hearings, Frederick Law Olmsted, Jr., wrote a letter to the *Boston Herald*, endorsing an upstream location for the dam as a compromise. It was better, he said, to stabilize the river for part of its length than not at all. The dam at Craigie Bridge could still be built later, and if it were, the only objection to a second dam near Cottage Farm was its effect on boating on the river. Olmsted suggested that in all the comparisons of the Charles with the Thames, everyone in Boston was forgetting how people managed to row at Oxford in spite of the number of locks there.²

James Storrow, an investment banker and past captain of the Harvard crew, thought the idea of a dam at Cottage Farm was "an absurd proposition"; in 1901 he organized a new campaign for a dam at the mouth of the basin. He had recently given up law practice and gone to work with the investment banker Henry Higginson. Together with his wife Helen Osborne Storrow he had actively supported children's philanthropies in the city, including settlement houses, Girl Scouts, and Newsboys; he was also elected to the School Committee that year.³

By now several significant factors had turned in favor of building the dam on the site originally proposed at Craigie Bridge. The metropolitan sewer had been completed. All of the wharf rights in Cambridge and all but three in Boston had been relinquished, largely as a result of the negotiations with property owners for the bill passed by Congress to permit a drawless bridge as a replacement for the West Boston Bridge.⁴

All of these factors added weight to the earlier findings of the Joint Board. A dam was a less expensive solution to the problem of the flats than filling or dredging. It would provide a recreation area "the cost of which sinks into insignificance compared with the prices that have been paid for parks and open spaces within the city limits and surrounding suburbs." And the recently constructed parks in other parts of the city were not enough. As Storrow would later testify, the children of the North End will not find their way to Franklin Park more than once or twice in their lives; as their ordinary playground, "it might as well be on another planet."⁵

²*Boston Herald*, January 17, 1899.

³Constance K. Burns, "The Irony of Progressive Reform, 1898-1910," in Ronald P. Formisano and Constance K. Burns, *Boston, 1700-1980: The Evolution of Urban Politics* (Westport, Conn.: Greenwood Press, 1984), 142.

⁴*Boston Transcript*, March 27, 1901.

⁵Commonwealth of Massachusetts, *Evidences and Arguments* (1903), 155-156.

And time had worked against the opponents of a dam. George Waring, the sanitary engineer who had testified on their side in 1894, had died of yellow fever in Havana. Of their former counsel, ex-governor William Russell had died, and John Long was in Washington in Roosevelt's cabinet. There was now almost universal support for the measure: all of Boston's newspapers, the city governments of Boston, Cambridge, Newton, and Watertown, the State Board of Health, and the Metropolitan Park Commission.

Higginson was the first signatory in a widely circulated pamphlet (probably put together by Storrow) asking that the matter be "duly investigated by the proper authorities." Once again the Back Bay was compared with the Alster Basin in Hamburg and the Thames, but the old proposal for a new row of house lots facing the river was dropped. Ten thousand letters were mailed out, and five thousand postcards and two thousand letters in favor came back. Storrow introduced legislation in 1901, but failed to meet the notice requirements. He then presented a bill authorizing a commission to study the problem. At the commission hearings the following year, Storrow observed that this would be the third or fourth commission to take up the problem; there would continue to be more commissions, until the whole question "is made sufficiently plain that the ordinary citizen can understand it and be satisfied with the justice of the result"—a high and optimistic standard for public discourse.⁶

This time the commission was given an appropriation to study the issue, and the commission's members represented both civic and professional authority: Henry Pritchett, the president of M.I.T., had recently been superintendent of the U.S. Coast Survey; Colonel Samuel M. Mansfield had supervised improvements in the Boston harbor channel as an officer in the Corps of Engineers; Richard Henry Dana was well known in the community and would have the confidence of people in Boston and Cambridge.⁷

The supporters of the project engaged as counsel Nathan Matthews, the former mayor who had endorsed the dam as early as his inaugural in 1891 and who lived on the water side of Beacon Street. Storrow also got the endorsement of John J. Fitzgerald, the three-term congressman representing the North End and the West End.⁸ The Roman Catholic Vicar

⁶*Boston Herald*, January 17, 1899; Higginson, Henry L., et al, *The Improvement of the Charles River Basin* (Boston, 1901); Lee, Higginson & Co., et al, *The Proposed Commission to Investigate the Feasibility of Turning Charles River Basin into a water park* (Boston, 1901); Henry Greenleaf Pearson, *Son of New England: James Jackson Storrow, 1864-1926* (Boston: Todd, 1932), 35-36; Commonwealth of Massachusetts, *Evidences and Arguments* (1903), 153.

⁷John R. Freeman, "Some Problems of the Charles River Dam," paper presented to the Boston Society of Civil Engineers, June 24, 1903, published in *American Society of Civil Engineers, Journal of the Boston Society of Civil Engineers Section*, 67 (Summer 1981), 217.

⁸Fitzgerald would later defeat Storrow in the fiercely contested mayoral election of 1910; the margin was 47,177 to 45,775, with a record turnout of 90% of the city's eligible voters. Burns, 153-159.

General and the Episcopal Bishop of Eastern Massachusetts supported the project on behalf of the tenement neighborhoods near the river. Storrow's committee negotiated with many of the riverfront property owners in Cambridge and their objections were withdrawn. The Associated Board of Trade and the Citizens Association of Boston had opposed the project in 1894, and they, too, changed their position.⁹

The opponents of the dam presented a petition signed by seventy-six residents of Beacon Street. They claimed there was no evidence to show that a dam would not increase shoaling in the harbor. Prof. Dwight Porter once again attacked every argument in support of the proposal. The Alster Basin, he said, was not analogous; it was sixty miles from the sea, eight hundred miles further north, and no sewer drainage was ever permitted into the basin. The Charles would never be used for boating or skating, the air and water temperature of a fresh-water basin would be higher in the summer, and the incidence of malaria in the basin, already recognized by the Metropolitan Park Commission in 1893, would increase. The basin would become offensive "both to sight and to smell."¹⁰

Gamaliel Bradford, who seven years before had challenged the judgment of the Joint Board's experts, claimed at the 1901 hearings that the whole idea was a conspiracy on the part of Cambridge and Harvard College, since "the President of the United States, the outgoing and incoming Secretaries of the Navy, both of the Senators from Massachusetts, and, I suppose, some of the members of Congress, are all loyal sons of Harvard."¹¹ Though he was also a Harvard graduate, he nonetheless opposed the dam: "It is not that I love Harvard less," he said, "but that I love Boston more." It was true that Storrow and Higginson had rowed for Harvard, and Storrow had coached the college crew. Bradford may also have known that a committee on athletics of Harvard's Board of Overseers had discussed the proposed dam and that all the members "pledged to do everything in their power to carry out our plans for it."¹²

By now Storrow was convinced that all the experts except Porter supported the dam. In his opening testimony for the petitioners in favor, James Storrow showed several photographs of the basin at low tide that depicted slimy exposed seawalls, sewer outfalls, and dingy mudflats. He quoted a resident of Beacon Street who lived near one of the private

⁹Deborah A. Cozort, "John Ripley Freeman and the Honest Doubters of Boston: How the Charles River Dam was Won," *American Society of Civil Engineers, Journal of the Boston Society of Civil Engineers Section 67* (Summer 1981): 209-211; Commonwealth of Massachusetts, *Evidences and Arguments*, 453.

¹⁰Commonwealth of Massachusetts, *Evidences and Arguments*, 423-431.

¹¹Commonwealth of Massachusetts, *Evidences and Arguments*, 343-344.

¹²Quoted in Hall, "The People's River," 44.

sewers, when Storrow asked if he favored the dam: "he said never, for he considered the right to drain into that basin 'a priceless privilege.'" Storrow outlined the history of the proposal and the reasons it had not been passed, which he attributed primarily to the lack of funding for the various commissions that had considered it and the ample financial support provided by those who opposed the dam, who solicited expert testimony against it in previous hearings. His conclusion reflected complete confidence in the ability of experts to find a solution, once the community agreed on what it wanted: "nothing in this matter in any way really presents a difficult *engineering* problem. It is merely a question of doing certain things if they are worth doing at a certain cost."¹³

As in 1894, Charles W. Eliot also testified in favor. His son Charles had been in the middle of the riverfront design work for the metropolitan commissioners as well as for the Cambridge park commission at the time of his death in 1897 at the age of thirty-seven. President Eliot had finished a lengthy biography of his son just before the hearings began.¹⁴ He forcefully advanced his interest in the river and in the planning of Boston:

It is my feeling that the proposed improvement of the Charles River Basin and the banks of the river is of the greatest interest to thousands of people. The principal ground for favoring the improvement of the basin has seldom been put forward. It is to increase the health and happiness of four hundred thousand people who live within an easy walk of this seven-mile park which nature has really provided.

I wonder if any member of this committee has walked of a June or an October evening along the Charlesbank and noted the thousands who use it. The sight of the people gathered on the Charlesbank park on any fair evening between the first of May and the first of November would go far to convince any person, who really believes that cities exist and that commonwealths exist to promote the well-being of the people, that this great improvement of the Charles River Basin and of the banks of the Charles River is a thing fit to be done by this intelligent Commonwealth. There are, of course, objections, but these objections, after all, seem to me to be of second rank, because great modern communities do not exist ultimately for commerce, but commerce exists for them. Nor do municipalities exist for profit in money, but for the people who live in them, and the supreme object of any city should be the happiness of the community.¹⁵

¹³Commonwealth of Massachusetts, *Evidences and Arguments*, 159-160, 178.

¹⁴Norman T. Newton, *Design on the Land* (Cambridge, Massachusetts, 1971), 320-336. On President Eliot's involvement in the profession of landscape architecture, see Creese, 200-204.

¹⁵Commonwealth of Massachusetts, *Evidences and Arguments*, 135-6. These paragraphs from Eliot's testimony would be cited in 1929 and again in 1949 when highways through the Boston embankment were proposed. See below.

Almost three months later, after eleven hearings and almost six hundred pages of testimony, the committee concluded that the two outstanding questions were technical: shoaling in Boston Harbor and the pollution of the river. These issues were placed in the hands of the committee's Chief Engineer, John R. Freeman.

A graduate of M.I.T. and a member of the M.I.T. Corporation, John Freeman had recently completed a report on the water supply for New York City and was widely known and respected in his profession. He knew most of the men on both sides of the controversy; several were friends or former classmates.¹⁶ As an engineer, Freeman concluded that the proposal in 1894 had failed "from lack of investigation and presentation complete enough to satisfy the conservatives and the honest doubters . . . insufficient exact reliable data was at the bottom of all the difficulties."¹⁷

He recognized the political aspects of the proposal, but he also felt there were significant ethical issues involved for those whose expertise was sought by the community. He "almost began to envy those experts of the court room whose lawyer friends tell them what they are expected to prove." He was especially contemptuous of Dwight Porter's testimony for the opposition:

For an expert to do what a certain engineer friend of ours . . . did in the Charles River Dam case, leaves a very unpleasant odor, and I believe that every time that you or anyone of us enters a lay case as a partisan for hire, he dulls his keenness of perception of the truth and impairs his moral strength and his highest usefulness.

Freeman's own rule was not to allow himself "to be used by a lawyer for the manufacture of testimony," and not to participate in legal disputes unless he was "well convinced of the merits and justice" of the side that sought his services.¹⁸

He originally thought he was to be only an advisor to the committee, and was already over-committed, apparently the usual condition of his professional life. In addition the scope of the survey had been underestimated, the appropriation was inadequate, and the report deadline was unrealistic. He soon determined that there was no satisfactory existing survey of the basin, and that the authorized study on mosquitoes should be expanded into a real bacteriological survey. He was directed to meet with representatives of the railroads, and

¹⁶A recent history on American hydraulics said that Freeman was the most influential engineer in his field. Wolman, et al., "Boston's Charles River Basin," 200. For parallel careers that place the professionalization of engineering in context, see Sam Bass Warner, Jr., "Charles A. Stone and Edwin S. Webster," *The Province of Reason* (Cambridge, Mass.: Harvard University Press, 1984), 52-66.

¹⁷Freeman, "Charles River Dam," 218, 220.

¹⁸Ibid., 220; Freeman to William Otis Crosby, May 11, 1903, in Cozort, 221.

toward the end of his work he was also asked to consider other sites and to revise the report and the cost estimates.¹⁹

Because so much had been said on both sides of the argument with so little basis in actual investigation of the issues, Freeman exhaustively set forth in his report the outstanding questions as he saw them:

- I. In general, the benefits and disadvantages resulting from proposed dam.
- II. Best type of dam, complete or half tide.
- III. Best location.
 - (a) Just above Broad canal.
 - (b) Just above Lechmere canal.
 - (c) At Craigie bridge.
- IV. Most advantageous elevation of water surface; grade 8, Boston base, or higher. Effect on ground-water levels of neighboring territory.
- V. Fresh water basin v. salt water; comparative advantages.
- VI. Necessity for large tidal sluices.
- VII. Present condition of Fens basin; analogy to proposed basin.
- VIII. Quantity of upland water flowing into the proposed basin.
- IX. Purity of this upland water.
- X. Extent of the present pollution of Charles River basin; means of lessening this.
- XI. Amounts of pollution admissible without offence.
- XII. Remedies for the unavoidable pollution.
- XIII. Means for circulating water in Fens basin and Cambridge canals.
- XIV. Lessening pollution of basin by extending separate system of sewerage.
- XV. Effect of stagnation of water in proposed Charles River basin.
- XVI. Effect of this stagnant fresh water basin on health; malaria.
- XVII. Effect of lessening the tidal prism upon the shoaling of Boston harbor.
- XVIII. Effect of dam upon navigation and commerce in Charles River basin, in Cambridge canals and in upper harbor.
- XIX. Storm flood levels in proposed basin; frequency or probability of ever flooding the marshes after dam is built.
- XX. Cost of dam and lock, with and without special tidal sluices.
- XXI. Cost of marginal conduits for increasing cleanliness of waters of basin.
- XXII. Cost of making good any injury to navigation resulting from dam.
- XXIII. Cost of dredging foul sludge banks.
- XXIV. Cost of shore line improvements.²⁰

To answer these questions, twenty separate studies were undertaken. Since dredging and other operations had substantially altered the river bottom, a new survey of the basin was prepared. The effect of the tidal basin on air and water temperatures was analyzed.

¹⁹Cozort, 203.

²⁰Commonwealth of Massachusetts, *Report of the Committee on Charles River Dam*, (1903), 38.

Chemical and bacterial analysis of the water was completed, and a separate study by a pathologist reviewed malarial conditions. Because of the frequent comparison in previous hearings and newspaper articles of the basin with the Fens, separate studies compared the circumstances of the two rivers. (Among other conclusions, this analysis suggested that the pollution of Stony Brook first became serious in 1897, and could be substantially reduced at low cost.) Studies were done of sewage overflow and dilution, and a separate investigation was made of the pollution in the Broad and Lechmere canals. The amount of water entering the basin was measured for two months, and the flood discharge of the Charles and Stony Brook was investigated. The geology of Boston Harbor was reviewed, a map of harbor dredging was prepared, the velocity of harbor currents was measured, and borings of silt deposits were taken. At Freeman's request, the city engineers in Boston and Cambridge conducted or reviewed studies of the progress on separating sewage and storm water discharge, and of the benefits to the rivers and canals of constructing marginal conduits.

In addition to discussing these issues "briefly" (forty-four pages) in the final report Freeman insisted on including appendices outlining the methods, the data, and their interpretation. He, like Storrow, believed that after all the years this question had been debated in Boston, anyone who was interested should have a "full and convenient opportunity to judge of the adequacy of the new data secured and of the reasonableness of our conclusions."²¹

The deadline for the report was January 14, 1903. The next day Freeman wrote a friend that "the Committee submitted its Report yesterday noon together with a statement that the Engineer's Report and the appendices were *in the hands of* the printer. Literally, this may be understood that the printer has hold of one end while I have hold of the other end." Freeman finally turned in the last proofs in April.²²

Completed after almost a year of constant overtime for Freeman and his assistants, the final report was unequivocal in its conclusions:

It appears that the advantages of the dam and the basin at nearly constant level largely overbalance the possible disadvantages; that sanitary conditions will be improved, and danger of malaria not increased; that interests of navigation and manufacturing will be bettered; that the harbor will not be shoaled by loss of tidal currents; that a magnificent opportunity for wholesome recreation and

²¹Ibid., 39.

²²Cozort, 208, 212. Freeman then had to argue for months with Pritchett over his fees.

the enjoyment of a more beautiful landscape will be made possible by the construction of this dam.²³

As a result of the survey's careful estimates, the "remarkable fact appears that this *great public improvement* . . . need not cost a dollar more" than the cities of Boston and Cambridge and the metropolitan district were already committed to spending for the bridge, sewer, and sanitary construction that would be necessary with or without the basin.²⁴

Satisfied with Freeman's flood of evidence, the legislature at last created the Charles River Basin Commission to design and construct the dam.

Constructing the Dam

Since the chosen site extended from the Charlesbank park in Boston to "The Front" in Cambridge, the decision to build an earthen dam created an opportunity to connect these first two riverfront parks. Soon after the Basin Commission began work, its designers concluded that the dam could be made much wider than the design of the roadway required. This would reduce the height of the retaining walls on the basin side, so the expense for additional fill would be nearly balanced by the savings in the size of the walls. The park would be almost seven acres, and its cost would be one-eighth the cost of an equal amount of nearby land in Boston, and about one-fourth the cost of an equivalent parcel in Cambridge.²⁵

In 1904 Guy Lowell was retained by the Basin Commission as the consulting architect and landscape architect. After graduating from Harvard College, Lowell completed the course in architecture at the Institute of Technology and then spent four years in Europe. He studied at the Ecole des Beaux Arts in Paris, and worked there for the famous landscape architect M. Andre. On his return to Boston in 1900, he opened his own office, and was appointed a lecturer in landscape architecture at M.I.T., a position he held through 1913.²⁶

In addition to the park, Lowell designed five structures erected on the dam. The two lock houses were located adjacent to the Charlesbank park. The upper lock house was a one-story structure to protect the sliding lock mechanism. The two-story lower lock house included a residence for the lock superintendent, with an attached tower for the draw bridge tender. Soon after the dam was completed, the superintendent's residence was converted to a

²³Commonwealth of Massachusetts, *Report . . . on Charles River Dam*, 108.

²⁴*Ibid.*, 109.

²⁵Commonwealth of Massachusetts, *Report of the Charles River Basin Commission* (1904), 16.

²⁶*National Cyclopaedia of American Biography* (New York: White & Co., 1931), 21:48. Lowell's best-known Boston building is the Museum of Fine Arts, completed in 1907.

police station. On the north side of the lock was a elegant open pavilion. At the Cambridge end of the dam a stable and boathouse were built for the park police. (Figure 5.1).

Visions of the Basin

The dam covered the mudflats of the Back Bay and stabilized the water level from Boston to Watertown. The undeveloped banks of the river in Cambridge were improved and the parkways were begun. As a public open space, however, many people declared the basin a failure:

It is, indeed, a wondrous picture—of still life. The breathing space is there, plenty of it, the broad sheet of almost currentless water is there, but the people—where are they? They are not there.²⁷

The new granite wall on the Boston side of the basin continued to reflect the waves blown up on the wide expanse of water by the prevailing winds. If anything, the water was more rough than before the dam was built. Although the lower Charles was a "scenic and sanitary triumph, it failed to live up to expectations as a water park." The Boston architect Robert Bellows said that the basin "resembles a huge bath tub, and the oarsman feels like a piece of soap in it. It is an extremely wide and uninteresting body of water."²⁸

One approach to the basin's improvement was first published in 1907, shortly before the dam was completed. The landscape architect Arthur Shurcliff had been working in the office of Olmsted, Olmsted and Eliot (later Olmsted Brothers) in Brookline since 1896, and had worked on several of the firm's projects on both sides of the river. In his autobiography written forty years later, Shurcliff recalled first sketching a plan for a large island in the middle of the Charles in about 1905.²⁹ His sketches were printed two years later in a publication of the Boston Society of Architects sponsored by the Chamber of Commerce and the Boston Merchants Association (Figure 5.2). The basin was one of thirteen major areas that were studied in the report of the Society's Committee on Municipal Improvement, published in 1907 (the other sites included Copley Square, the Fenway, and several major street improvements). The report included an illustrated comparison of the Charles River

²⁷Earl F. Gates, "The Charles River Lower Basin: Wanton Waste of Recreation Resources," *New Boston*, 2 (August 1911), 162. Daniel Schodek, *Landmarks in American Civil Engineering* (Cambridge, Mass.: MIT Press, 1987), 299, concludes that the Basin "was an immediate success." Gates's article was one of numerous contemporary opinions to the contrary.

²⁸Leonard Ware, *Helen Osborne Storow, 1864-1944, A Memoir* (Northampton, Mass.: n.p. 1970), 19.; Robert P. Bellows, "Developing the Basin: An Island for Recreation and Boating Purposes," *New Boston*, 2 (October 1911): 199.

²⁹Eliot had suggested courses in landscape architecture at Harvard after Shurcliff's mechanical engineering studies at M.I.T. Although he left the Olmsted office about 1907, Shurcliff was a consultant for forty years to both the Metropolitan Park Commission (the Metropolitan District Commission after 1919) and the Boston Park Department. Arthur A. Shurcliff, "Autobiography," (1947), 46.

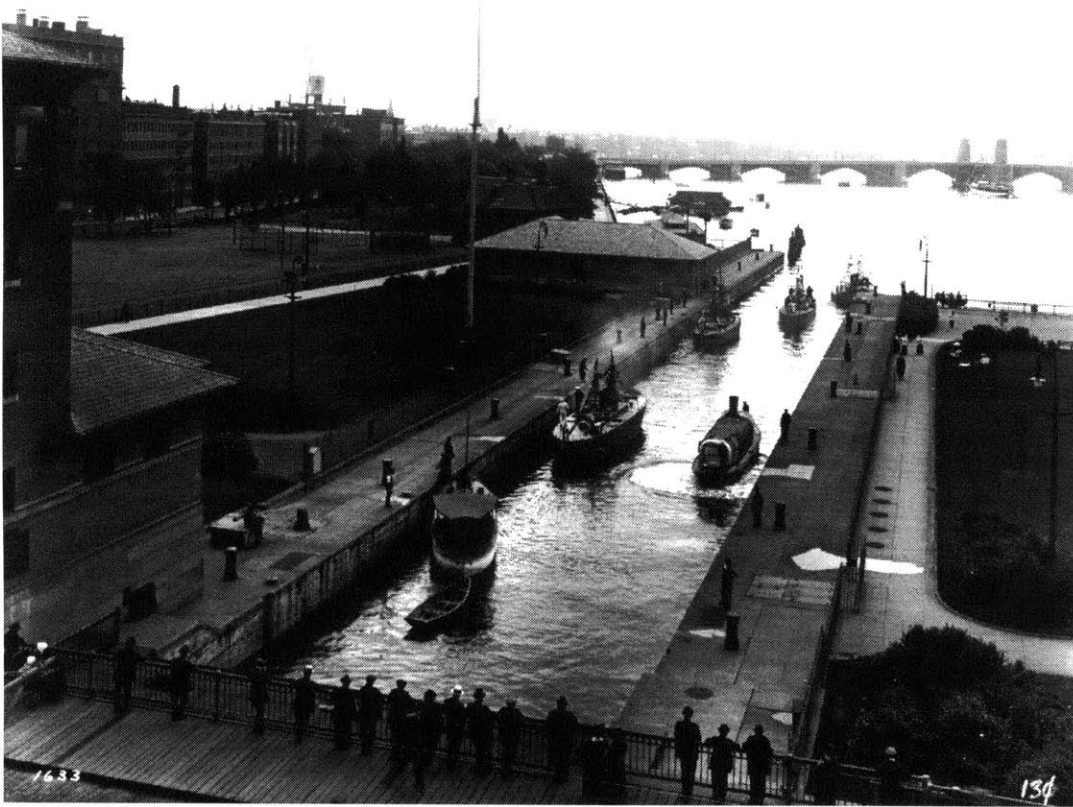


Figure 5.1 Guy Lowell, upper and lower lock houses, stable, boathouse, and landscape design for the Charles River Dam, 1904-10; photograph, 1911.

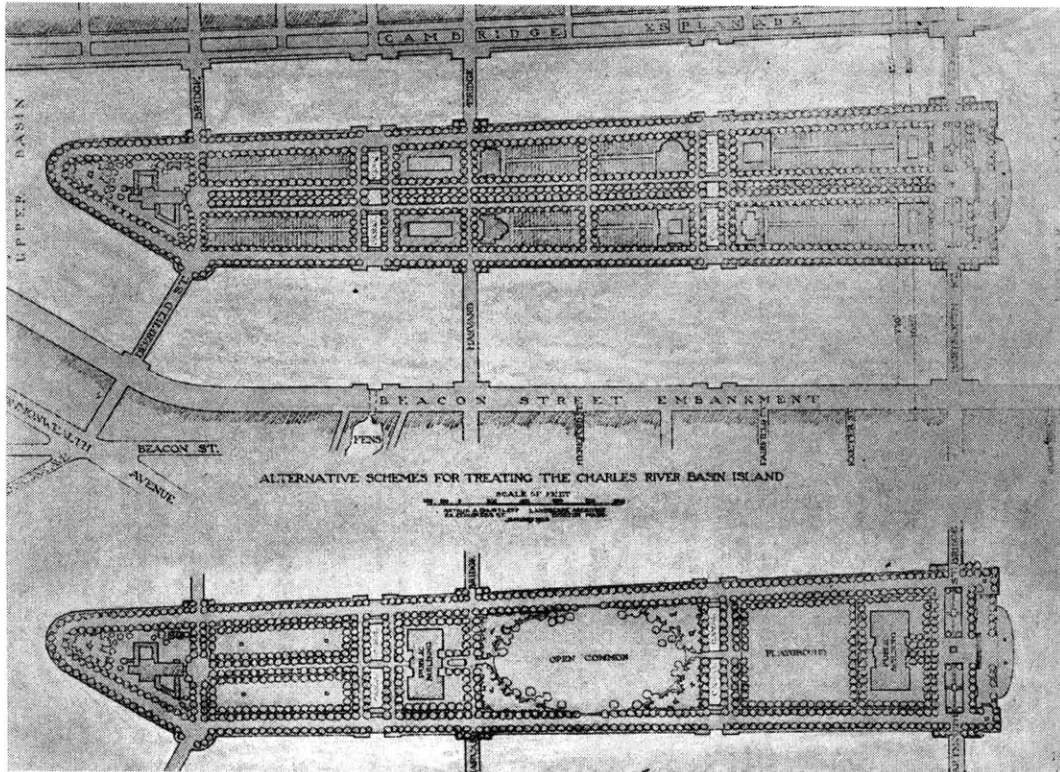


Figure 5.2 Arthur A. Shurcliff, plans for an island in the Charles River, 1906.

with London, Paris, Rome, and Hamburg, all drawn to the same scale. Niagara, Detroit, and Jackson Park in Chicago were also mentioned, as were the European examples of the Margaretheninsel in Budapest and the Moldau in Prague. It was noted that the river channels passing the proposed island were four hundred feet on one side and seven hundred feet on the other; these were the widths of the Thames in London and the Seine near the Louvre in Paris.

About the same time Ralph Adams Cram also drew up a perspective sketch showing an island graced by a large Gothic cathedral and a new bridge at the island's eastern end (Figure 5.3). A formal axis running the full length of the island culminated in a large, domed edifice, with streets radiating outward to a large semicircular shoreline beyond. His drawing was also included in the 1907 publication. Shurcliff proposed an even larger island, adding a second new bridge at Dartmouth Street. In his 1907 proposal the island was lined with structures; a later version left most of the island open, with buildings and monuments at each end.³⁰

The idea of artificial islands in the Charles was endorsed by the mayor of Boston and was also incorporated in the report of the Joint Board on Municipal Improvements, a commission established by the legislature in 1907 to consider public works, highways, the harbor, and issues of civic beautification. The Joint Board went so far as to endorse the island as a site for M.I.T., which had outgrown its quarters in the Back Bay. In 1911 the architectural firm of Bellows & Gray proposed an island that would expand over time (Figures 5.4, 5.5). Islands in the Charles would continue to fascinate Bostonians for the rest of the century.

The Metropolitan Park Commission had put off planting trees or installing benches the entire length of the new park, in part because of a proposed subway extension under the Embankment. Another continuing obstacle to development was the opposition of the residents of Beacon Street, even though many of the houses on the Boston side of the basin were closed from late spring to early fall. Their resistance was officially acknowledged by the Metropolitan Park Commission, whose report of 1911 defended their cautious lack of landscape development along the basin. The commission's inaction "has arisen in most instances from a desire to avoid serious mistakes, and from consideration for the plainly expressed disinclination of property owners in the neighborhood of the Basin to have its

³⁰Boston Society of Architects, Committee on Municipal Improvements, *Report Made to the Boston Society of Architects by its Committee on Municipal Improvements* (Boston: Alfred Mudge, 1907); Shurcliff, "The Development of the Charles River Basin."

present clean-shaven formal look and the uninterrupted vista from their houses interfered with." Instead of a public driveway, recommended by the Basin Commission, the abutters insisted on maintaining Back Street as it was, a small, private street that ran along the edge of the embankment.³¹ Uriel Crocker's son George, recalling his father's proposal for a park along the lower Basin, thought the property owners on the water side of Beacon Street "had succeeded in saying to the public, 'You may come down and look at the basin if you wish, but you must walk, and you must walk in the sun. You must not have any public boathouses, bathhouses, trees, restaurants, or anything of the kind.'"³²

"Boston-1915"

In 1909, a group of seven Boston business and professional leaders, including Louis D. Brandeis, Edward Filene, John Fahey, and James Storrow (at the time president of the Boston Merchants Association), held a dinner for about two hundred people to organize "Boston-1915." Their intention was to develop an exposition for the city, "not an ordinary fair but a graphic display of a living, working city, a display of Boston as a going concern."³³

A first exposition was held in November 1909 at the old Museum of Fine Arts building on Copley Square, with several hundred exhibits by public and private Boston organizations. The exhibits focused a disproportionate level of attention on the Charles River. The Basin had a room of its own, with a dozen photographs of the Charles and the Alster Basin in Hamburg, and a rendering of Cram's island proposal.³⁴

Boston-1915 also began publishing a monthly journal called *New Boston*, and in 1911 the magazine included a harshly critical article on the failure of the basin as a recreation area. In a subsequent issue, *New Boston* followed with essays by Shurcliff and Bellows on their island proposals and a detailed, illustrated description of the Alster Basin written by Arthur Comey, a landscape architect and planning consultant in Cambridge. Shorter articles

³¹John F. Fitzgerald, Richard C. Cabot, John D. Adams, and George U. Crocker, "Popularizing the Basin," *New Boston*, 2 (October 1911): 198; *MPC Report* (1911), quoted in Gates, "The Charles River Lower Basin," 165.

³²Fitzgerald, Cabot, Adams, and Crocker, "Popularizing the Basin," 198.

³³"The Exposition in 1915," *New Boston* 1 (May 1910): 36.

³⁴Boston-1915, *Boston-1915, Official Catalogue of the Exhibits Shown at Its First Exposition of Boston, November 1-17, 1909* (Boston, 1909).

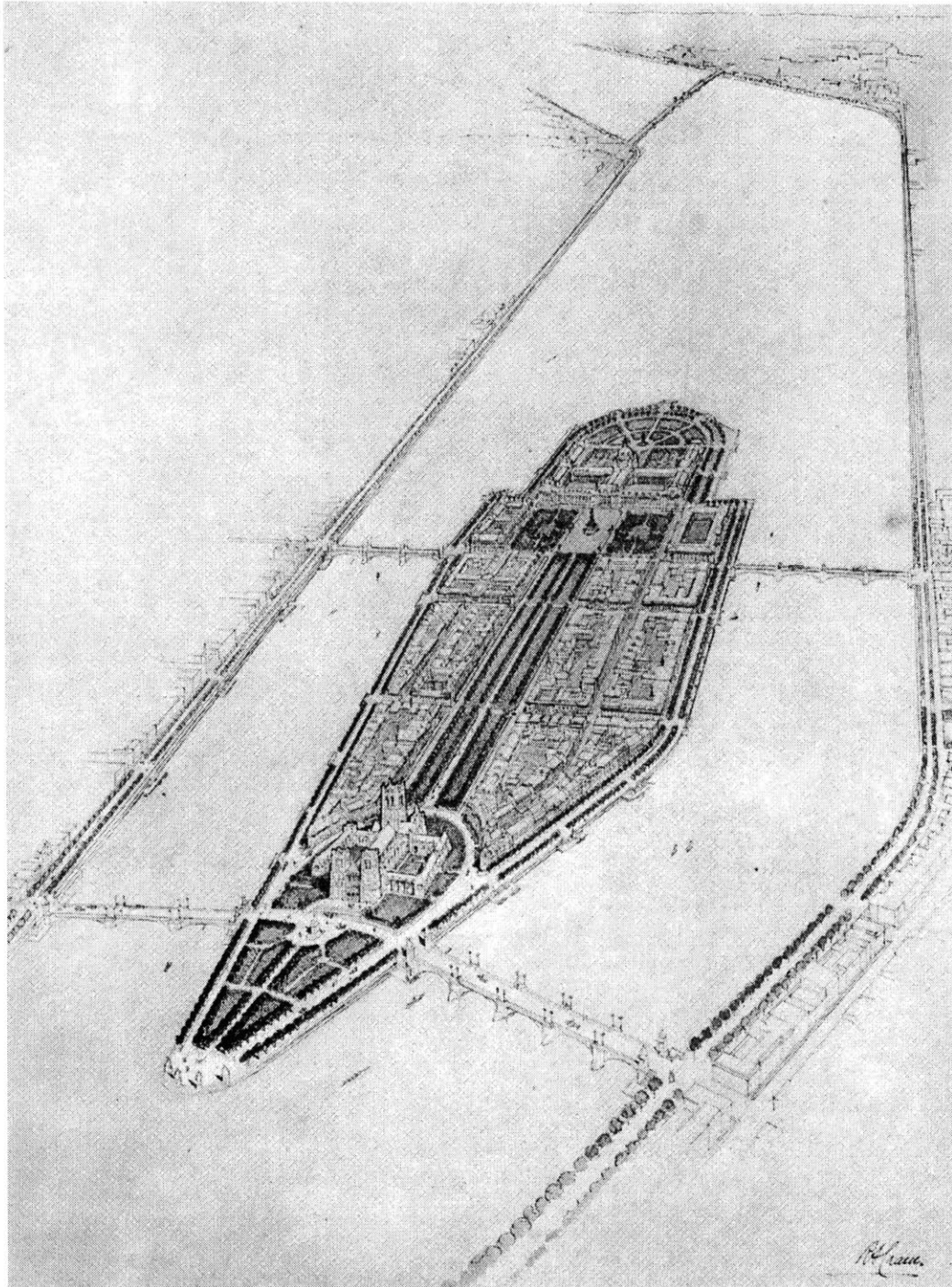


Figure 5.3 Ralph Adams Cram, plan for an island in the Charles River, 1907.

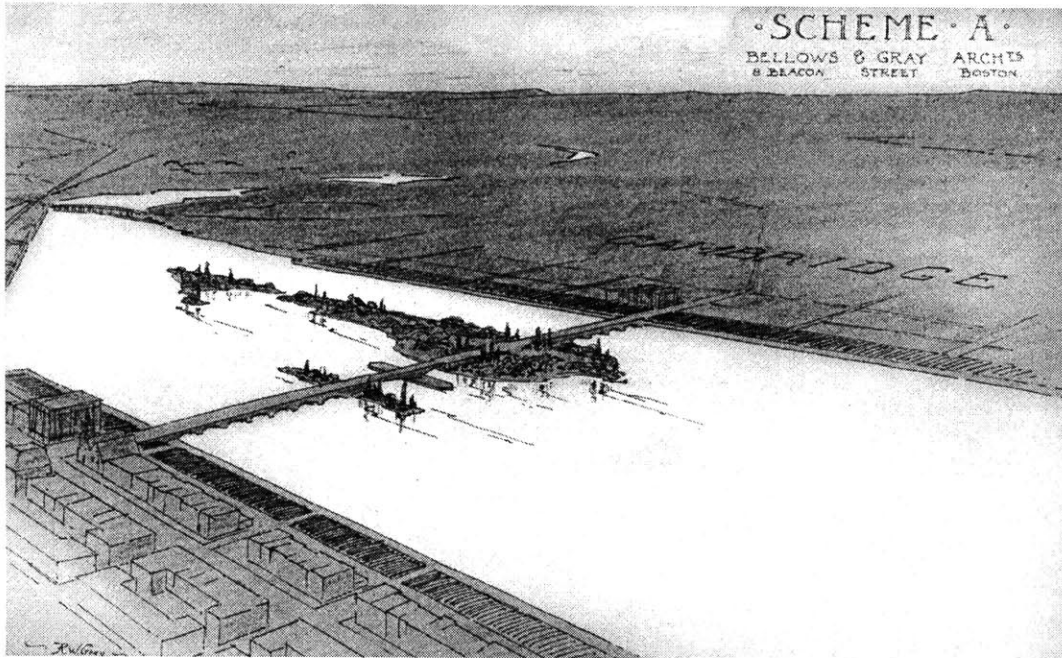


Figure 5.4 Bellows & Gray, "A Small Island, For Recreation and Boating Purposes only,"
Metropolitan Improvements Commission, 1911.

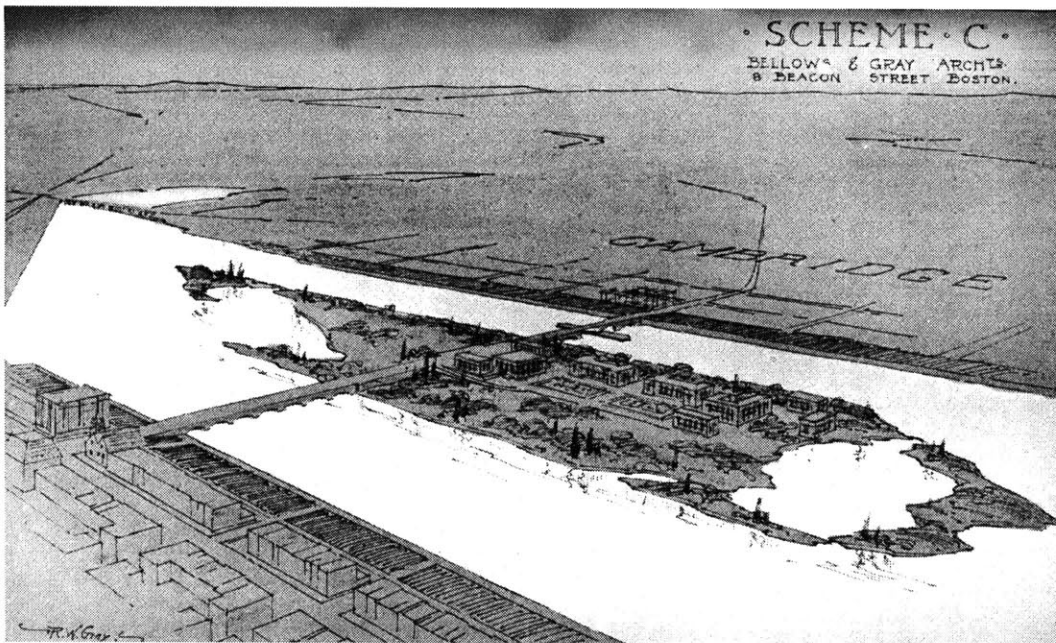


Figure 5.5 Bellows & Gray, "Larger Island, For Recreation and Other Purposes,"
Metropolitan Improvements Commission, 1911.

endorsing the proposed basin development were written by Mayor John Fitzgerald, Richard Cabot, John D. Adams, and George Crocker.³⁵

One of the secretaries of Boston-1915 suggested putting aside the proposed capital improvements like islands and parkways, and consider things that might be done immediately. His suggestions included band concerts, refreshments, fireworks, electrical displays, an annual "Charles River Basin Fete," official water sports contests, and moving pictures on floating screens. The subjects for moving pictures might include "tuberculosis, the safe and sane Fourth, pure milk and the fly, . . . historical pictures, views of other cities, city planning schemes and popular dramas and humorous pictures."³⁶

The idea of an island in the Charles was revived again in 1921. The mayor of Boston appointed a committee for a veterans' memorial chaired by Charles Coolidge whose members included Cram, Shurcliff, and the sculptor Cyrus Dallin. The imposing memorial building proposed in their final report was to be constructed as part of a new Harvard Bridge. Since the island would shorten the span of the bridge by eight hundred feet and reduce its estimated cost by \$1,600,000, the memorial structure's projected cost of two million dollars would be nearly paid for. Five years later the MDC's annual report noted that the idea of embankments either at the center of the Basin or along the edges of the river had been widely discussed, to reduce the length and consequently the cost of bridge structures, since a bridge or tunnel at Dartmouth Street would be needed sooner or later.³⁷ The *Cambridge Tribune* published another memorial proposal in 1928, with the observation that "people come here from the West and turn up their noses at the Charles river basin. They state flatly what they would do with that basin if people out West had the handling of it. It would be 'something else than a wash basin with some ducks in it.'³⁸

A more subtle design proposal was also never executed. With the basin no longer tidal following the completion of the dam, Olmsted's ingenious solution to the problem of salt water in the Muddy River was no longer necessary. In 1910 changes in the original design were recommended by J. C. Olmsted, Frederick Law Olmsted, Jr., and Arthur Shurcliff.

³⁵Gates, "The Charles River Lower Basin;" Arthur Coleman Comey, "The Alster Basin in Hamburg," *New Boston*, 2 (October 1911): 204-208; Fitzgerald, Cabot, Adams, and Crocker, "Popularizing the Basin."

³⁶Gates, "The Charles River Lower Basin," 165-166.

³⁷*MDC Annual Report* (1926), 5.

³⁸City of Boston, *Report of the Mayor's Committee on Proposed Memorial . . .* (Boston, 1921); *Cambridge Tribune*, fiftieth anniversary edition, 1928, 8.

Their proposed revision was ignored, as was another proposal by them in 1921; instead the area was used as a dump for fill from subway construction.³⁹

Harvard and the River

Even before the dam was approved, the plans for parks and parkways along the river had immediate consequences for the planning of Boston's universities. Harvard had avoided buying land in Riverside, as the neighborhood below Mt. Auburn Street was then called, but the work of the Cambridge Park Department and the anticipated stabilization of the river made the area considerably more appealing. Over a period of at least a decade Harvard asked several respected firms to prepare plans for connecting the Old Yard with the river; in addition, official and unofficial proposals were developed, not only for landscaped boulevards, but also for constructing new college buildings along the Charles.

Several of the university's consultants thought these efforts at campus planning were long overdue. After supervising the grounds of the college from 1887 to 1890, Charles Eliot concluded that "permitting donors of buildings and gates to choose their sites is fatal to general effect. Outside the quadrangle the Yard is already a jumble of badly placed buildings and roads."⁴⁰

In the fall of 1894, the Board of Overseers approved two resolutions, one to develop a plan for Harvard's properties, and the second recommending the appointment of an advisory committee to approve all plans for the future development of the university. The committee would be composed of members of Harvard's governing boards as well as appropriate professional advisors. The following spring the President and Fellows, rejected both ideas, but did inform the overseers that they had solicited plans for open areas, roads, and future building sites from Olmsted, McKim, H. H. Richardson, and others (Figure 5.6).⁴¹

The following year Harvard's treasurer asked the New York architect Charles Follen McKim for a copy of a drawing that McKim had prepared sometime before. In his reply McKim described the plan's objectives, including "the possibility for a front door or connecting link" between the university and the river. A broad "alleyway," planted with elm trees four abreast like the Beacon Street Mall on Boston Common, would "afford numerous plots for the development of the University upon a definite system." When the plan was

³⁹Zaitzevsky, *Olmsted*, 57.

⁴⁰Bunting, *Harvard*, 124.

⁴¹Mandelbaum and Fitzsimons, 60.

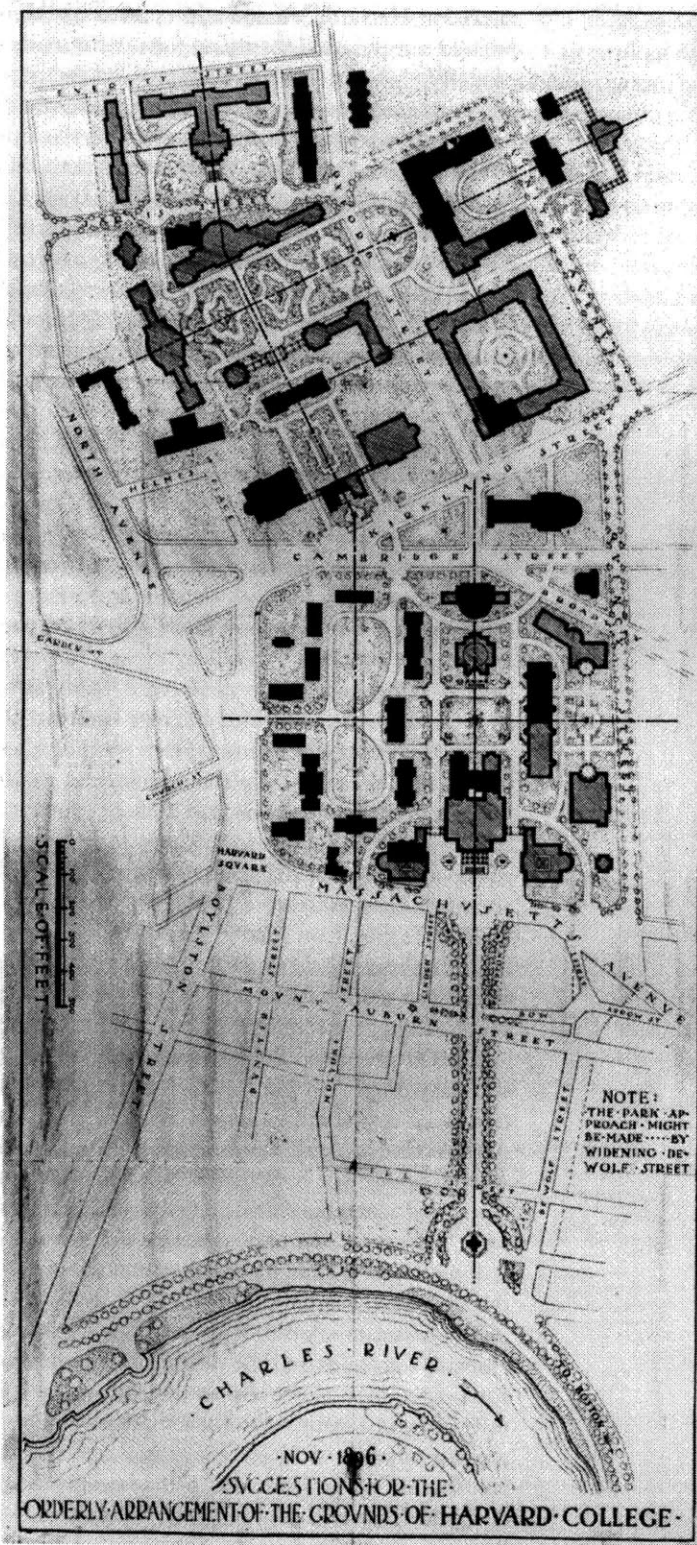


Figure 5.6 Plan for Harvard College, 1896, author unknown.

conceived, McKim had also asked about the likelihood of acquiring the whole area and demolishing what McKim disdainfully called the "inch-plank architecture" of the Riverside neighborhood (Figure 5.7). His recollection in 1896 was that the cost of acquiring the entire district had been estimated at \$450,000. McKim concluded his note with an observation about the university's haphazard building program: "What difficulties may stand in the way of this plan I do not know; but this I do know—that *some* plan is woefully needed at Harvard to restore, at least in a measure, the sense of order and repose which belong chiefly to her early buildings."⁴²

The first Harvard buildings on the river were erected at Soldiers Field on the marshlands donated by the Longfellow family in 1870 and Henry Higginson in 1890. Carey Cage, completed in 1897, was the first university building designed by faculty from the School of Architecture. Newell Boathouse (1899) was the work of Robert Peabody, and replaced a long series of wooden boathouses on the river. Like the Carey Cage, it was built of concrete, a material that members of the Engineering faculty were experimenting with. Seven years later Peabody designed the Weld Boathouse, just downstream of the old wooden bridge at Boylston Street and directly in front of the coal-burning power plant of the West End Street Railway.⁴³

The monumental change to the old Longfellow meadows came with the construction of the Harvard Stadium in 1902-03. A collaboration of professors in architecture, civil, and mechanical engineering, the stadium involved new techniques for pouring and erecting concrete that required modification during the course of construction. The system of classical proportions, and the decision to orient the open end of the stadium to the river, were contributed by McKim and Daniel Burnham.⁴⁴

The athletic facilities at Soldiers Field accelerated the interest in connecting the Old Yard and Massachusetts Avenue with the river parkway and the stadium. The Olmsted office prepared one approach based on widening DeWolfe Street; a later plan drew a straight axis tying the river with the buildings in the old Yard (Figure 5.8). In 1902 Harvard alumni

⁴²Charles Moore, *Life and Times of Charles Follen McKim* (Boston: Houghton Mifflin, 1929), 98.

⁴³Bunting, *Harvard*, 116-117, 120-121.

⁴⁴*Ibid.*, 117-119.

raised \$50,000 and proposed to enlarge and landscape DeWolfe Street, with the city, the state, and the Metropolitan Park Commission also contributing.⁴⁵

The appeal of axial spatial arrangement taught at the *Ecole des Beaux Arts* in Paris was reinforced by the publicity surrounding the planning for Stanford University by Olmsted and Charles Coolidge (1886-1888) and for the University of Chicago by Henry Ives Cobb (1893).⁴⁶ At Harvard it was manifest not only in most of the proposed street alterations, but also in the surviving proposals for buildings along the river, from the time of McKim's letter until the final drawings for new freshman dormitories were completed in 1912. An unsigned drawing, perhaps by Charles Wetmore and probably completed before 1902, shows a massive open quadrangle facing the river, with buildings disposed symmetrically around the edges. A large new bridge crosses the river at Dunster Street, just downstream from the old span. A 1909 drawing by Wetmore's firm retains the grand quadrangle and the new bridge, with a new boulevard ending in an arc of ninety degrees to provide an imposing entrance to the new stadium (Figure 5.9).⁴⁷ Even the early sketches done by Charles Coolidge after his firm was selected to design the new dormitories were organized on a grid plan, with only the roadway following the bend of the river (Figure 5.10).

None of these plans would be realized, however, unless the university acquired the land. It is difficult to tell at this remove why Harvard did not do so. A 1909 *Harper's* article, written to explain the Wetmore drawing of the river properties, suggested the reason was pending legislation to increase the taxation on educational institutions (the article also noted that as early as 1895, Wetmore commenced buying property in the area with a view to "making the development on a dividend-paying basis"). As late as 1898, Harvard sold land between Massachusetts Avenue and the river. It is also possible that for whatever reason, President Eliot had determined that the opportunity could not be addressed immediately, or thought that a group of alumni should act instead—which they soon did. Edward Forbes had been an undergraduate at Harvard from 1891 to 1895, when some of the university's early plans for building in Riverside were first discussed, and by the time he returned to Cambridge after two years at Oxford he was convinced that the university ought to "make use of the

⁴⁵Bunting and Nylander, *Old Cambridge*, 186; Morison, *Three Centuries of Harvard*, 445; Beth Andrea Mandelbaum and Marjorie Kitchen FitzSimons, "Edward Forbes: City Planner," in *Edward Waldo Forbes, Yankee Visionary* (Cambridge, Massachusetts, 1971), 58. The Class of 1880 Gate, now blocked off from behind by Lamont Library, was built as the focus of the DeWolfe Street axis.

⁴⁶Paul Venable Turner, *Campus: An American Planning Tradition* (Cambridge, Mass.: MIT Press, 1985), 169-177; on "The University as City Beautiful," see 169-177.

⁴⁷*Harper's Weekly* (December 18, 1909), 18.

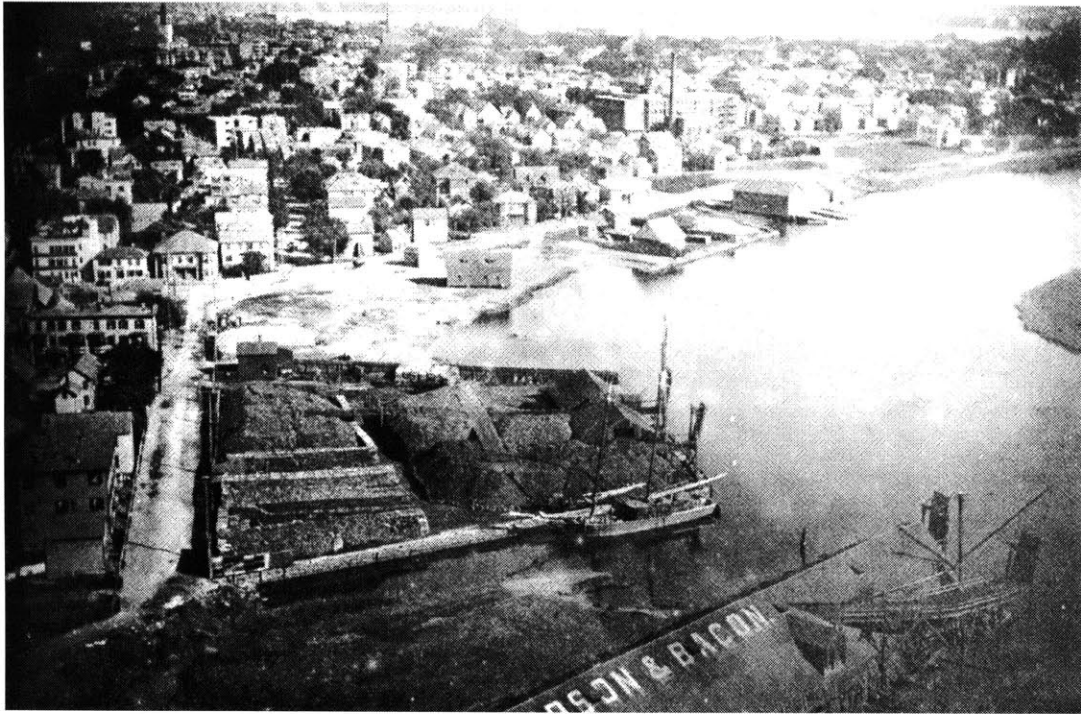


Figure 5.7 The Harvard College coal wharf and the Riverside neighborhood, about 1896.

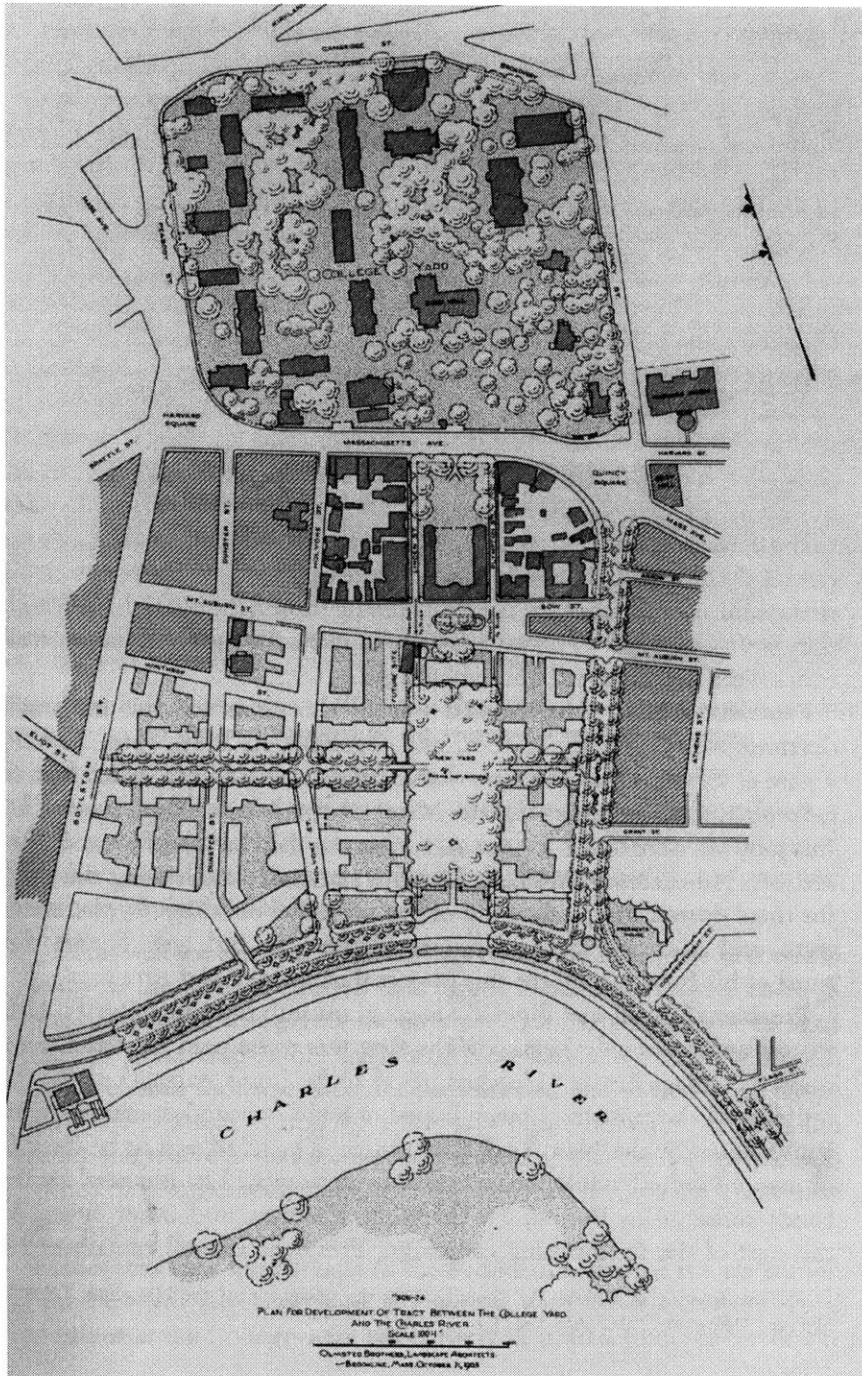


Figure 5.8 Olmsted Brothers, Plan for Harvard College, 1903.

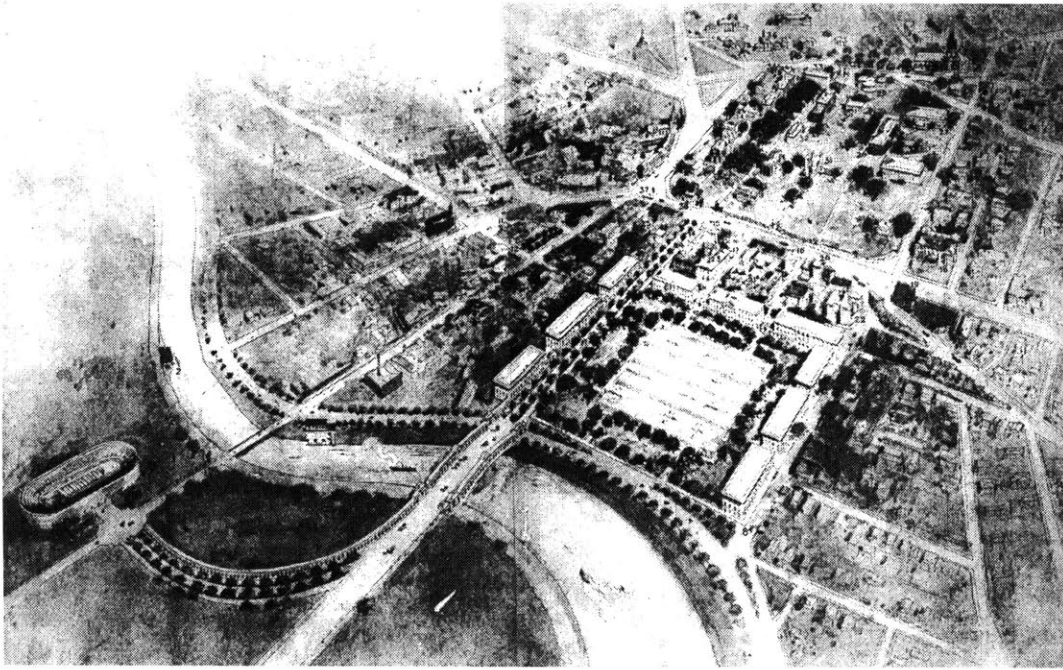


Figure 5.9 Warren and Wetmore, "The New Plans for the Enlargement of Harvard University, The Great Projected Quadrangle, the Memorial Bridge, and the Boulevard to the Stadium," 1909.

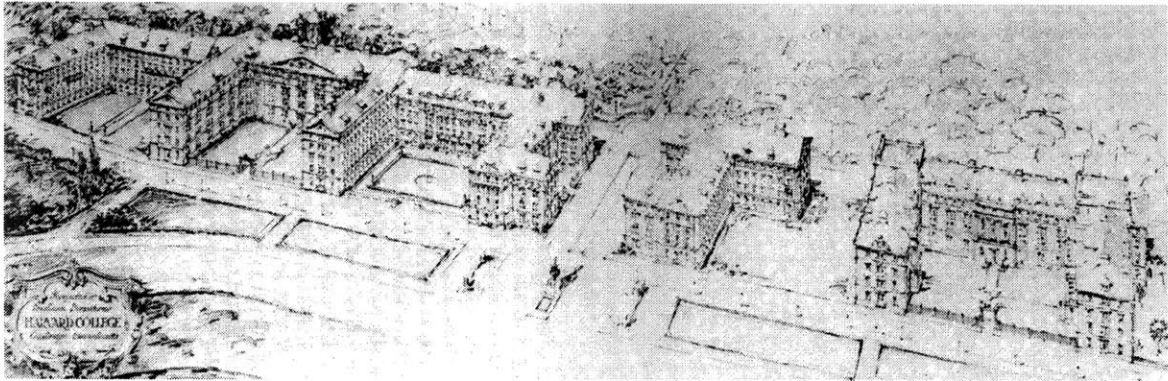


Figure 5.10 Charles Coolidge, plan for Harvard College freshman dormitories, 1910.

Charles River as did Oxford, of its river." The director of the Fogg Museum from 1909 to 1944, Forbes's love of the visual arts included a concern for landscape architecture and city planning. In the late 1890s he helped to secure Governor Hutchinson's Field in Milton for the Trustees of Reservations.⁴⁸

When Forbes's brother Cameron heard about the proposed widening of DeWolfe Street in 1902, he wrote Edward from Florence and suggested that a group of ten men each contribute fifty thousand dollars "to buy the land to be improved, not only by this boulevard but by the river park." Soon thereafter Edward organized the Harvard Riverside Associates, and an acquisition plan was completed by January of the following year. The area bounded by the river, Mt. Auburn, Boylston, and DeWolfe streets, totaled almost 610,000 square feet, and only 141,000 square feet were owned by Harvard or by university-affiliated clubs. Forbes solicited letters endorsing the plan from Charles Eliot Norton, Henry Higginson, and President Eliot, who made it clear that the university would not provide any funds. By mid-March of 1903, the Associates had raised \$100,000 and had acquired two-thirds of the planned 468,000 square feet of land.⁴⁹

Though the project was private, its public benefits were immediately endorsed in the press. When the plan was made public in the *Boston Globe* in mid-March, the paper noted that "The value of the broad open space in front of the college buildings can hardly be estimated. It would make it possible to drive the entire length of Cambridge without leaving the park system."⁵⁰

The associates turned over the land to the university when planning was begun for freshman dormitories along the river but retained the right to review the architectural proposals. They required that part of the land be kept open and that vistas to the river and the parkway be developed; they also participated actively in the design process for the new buildings. A formal visual connection linking the river with Harvard Yard, however, was never built.⁵¹

Though he was careful not to say so when the freshman halls were built along the river in 1914, President Lowell acknowledged in 1926 that the freshman halls were planned "with a view to building upon them a set of colleges for the remaining three years." And each of those colleges, as he had explained in a speech twenty years earlier, should be

⁴⁸*Harper's Weekly* 53 (December 18, 1909), 18; Bunting, *Harvard*, 179.

⁴⁹Mandelbaum and FitzSimons, 59, 66.

⁵⁰*Ibid.*, 67

⁵¹Bunting and Nylander, *Old Cambridge*, 186-7; Mandelbaum and FitzSimons, 64-86.

"national and democratic," restoring the spirit that had animated the college when its extent was limited to the Old Yard. In the end, Lowell's democratic aims were reflected in a considerable alteration to the axial, *Beaux Arts* spirit that had dominated the university's early plans along the Charles.⁵²

M.I.T. Moves to Cambridge

Unlike Harvard's acquisition of property along the river, which was conducted under the cover of anonymous real estate agents, the decision of M.I.T. to move to Cambridge was the subject of very public discussion. Incorporated in 1861, the Massachusetts Institute of Technology offered its first classes four years later. By the turn of the century, the Institute had clearly outgrown its limited space in the Back Bay. Though the school had by now trained some of the country's best-known engineers, the school was not wealthy, certainly not by the standards of many of the much older New England colleges. Charles W. Eliot taught chemistry at M.I.T. for four years before accepting the presidency at Harvard in 1869, and recognized the success of the Institute, in particular by comparison with Harvard's struggling Lawrence Scientific School. He proposed a merger to each of the four new presidents of the Institute between 1870 and 1900, and by the turn of the century his proposals became intertwined with the Institute's search for a new campus.⁵³

Henry Pritchett, who became president in 1900 (and who chaired the commission on the proposed Charles River dam established the following year), endorsed the proposal to move the Institute from the Back Bay in his annual report of 1902. Apparently no action was taken during the next year, but in January 1904 the *Boston Daily Advertiser* announced that the Institute and Harvard had agreed to merge. The school's faculty and staff vigorously protested, but upriver, in anticipation of the agreement, a group of men that included Henry Higginson and Andrew Carnegie purchased the riverfront property in Brighton east of Soldiers Field as the site for the Institute's new campus. After more than a year of debate, the faculty voted against the merger by a margin of fifty-six to seven. About 3,200 alumni were invited to send in ballots; 2,900 voted, with 2,035 opposed. The Technology Corporation nonetheless approved the merger, twenty-three to fifteen, in June 1905.⁵⁴

⁵²Douglas Shand Tucci, "Charlesbank Harvard: Radical innovation, architectural masterwork," *Harvard Magazine* 83 (November-December 1980): 28.

⁵³Samuel C. Prescott, *When M.I.T. was "Boston Tech," 1861-1916* (Cambridge, Mass.: Technology Press, 1954), 69, 193.

⁵⁴Prescott, 192-201.

In September the state's Supreme Judicial Court denied the Institute's title to the land it occupied on Boylston Street, and enjoined the corporation from either selling the property or building new structures on the land. Without the anticipated proceeds from the sale of its old site, the school was unable to execute the merger, and Pritchett resigned.⁵⁵

When Richard Maclaurin assumed the presidency two years later, the search for a site remained unresolved. In April 1909, Charles Stone, a founding partner in the firm of Stone and Webster, invited Maclaurin to dinner at his home on the water side of Beacon Street. They could see the Embankment Company site in Cambridge that had been rejected by the Institute before Pritchett resigned. Stone explained that purchasing a property in Cambridge would be opposed by the city, and would likely create problems with Harvard as well. In June Harvard awarded Maclaurin an honorary degree, only to follow with a letter from President Lowell a few days later saying that choosing a Cambridge site "would not improbably imperil the financial stability of both institutions" and might result in a loss of the tax exemption for all educational institutions.⁵⁶

In October of that year a group that included Arthur Shurcliff and the architect Walter Kilham (probably functioning as a site selection committee, though the document is not titled) filed a report with Maclaurin that analyzed various sites in the Boston area. Their review was based on four considerations: accessibility for students, faculty, and the public; the potential to construct a dignified group of buildings "worthy of the Institute's importance"; a price that would not use up the funds for buildings and equipment; finally (in an obvious reference to their failed negotiations with Harvard, and perhaps to the land in Brighton purchased by Higginson, Carnegie, and others), a location that would be "independent of the influence of other institutions."⁵⁷

The group reviewed eleven sites, including two adjoining Huntington Avenue, one in West Roxbury, one in Dorchester and three along the Fenway. Thirteen other sites were "not seriously investigated," including the possibility of an island in the Charles Basin. They concluded that only three merited further review: the Allston Golf Course, the Riverbank site, and the Fenway parcel (located at the corner of Longwood Avenue and Avenue Louis Pasteur, near the new Harvard Medical School campus as well as a number of other colleges). In their view, the Allston property was "liable to deteriorate in importance." The Fenway was, on the

⁵⁵Ibid., 201.

⁵⁶Ibid., 249-250; Francis Ernest Wylie, *M.I.T. in Perspective: A Pictorial History of the Massachusetts Institute of Technology* (Boston: Little, Brown, 1975), 44.

⁵⁷Arthur Wallace Rice, Arthur A. Shurtleff, Henry J. Carlson, and Walter Kilham, report to Robert Maclaurin, October 27, 1910.

whole, the best site in terms of size, location, and the possibilities for development, which they measured against the new standards of the "City Beautiful": the new Institute campus would be "one more group of semi-public buildings in that locality and practically establish an interesting civic center . . ." Their discussion of the Riverbank property was largely a list of problems: the cost of land, the number of owners, the "encroaching manufacturing district," the nearness to Harvard, and Cambridge's objection to more untaxed real estate.⁵⁸

Though a final site decision was not yet made, Maclaurin solicited a contribution toward the new campus from Andrew Carnegie two months later. He was turned down. Carnegie pointed out that he had just given \$3,800,000 to the Institute of Technology in Pittsburgh, and he did not "put the Pittsburgh school behind even the Massachusetts Institute of Technology." He added in a postscript: "If I mistake not, I am a part owner of that ground that my friend Lee Higginson and some of us purchase to unite the two institutions, *which should be done*." Maclaurin then approached Coleman duPont of the Class of 1884, who offered \$500,000 toward the purchase of the Commonwealth Avenue site in Allston.⁵⁹

Perhaps hoping to encourage local support, Maclaurin told a reporter that M.I.T. might have to move where the cost of living was within the school's means. The comment spread, and almost immediately the city of Springfield offered a site. The *Chicago Evening Post* claimed that "We could support a 'Boston Tech' with our loose change, and we wouldn't, like some cities we know of, have to search all the hinterland roundabout to find the money." A spate of letters in support of the Institute was directed to Maclaurin, from the mayor and other Cambridge residents. George Cox, a longtime member of the Cambridge Park Commission, wrote that he had spent nineteen years on "the development of the Cambridge shore, the Dam and the Drawless Bridge. The Basin is the future great water park of Metropolitan Boston, and its proper treatment demands the erection of handsome buildings facing it." The tax question should not even be raised, he said, since the Institute would attract taxable property far in excess of the land to be occupied by the school. The conditions at Kendall Square were "quite the reverse from the situation in and about Harvard Square."⁶⁰

The Cambridge City Council passed a resolution in support of a local site, and duPont offered to amend his pledge to contribute to the Embankment property. In March Maclaurin received a formal resolution from the President and Fellows of Harvard College indicating

⁵⁸Ibid.

⁵⁹Andrew Carnegie to Richard C. Maclaurin, December 7, 1910: Prescott, 250-1.

⁶⁰Prescott, 251; George Howland Cox to Richard Maclaurin, February 4, 1911.

that the president of Harvard should notify the president of M.I.T. that "the Corporation withdraws any objection . . . raised on the ground that the exemption from taxation . . . might endanger the stability of the existing provisions relieving educational institutions from taxation." By the fall of 1911, negotiations were completed with the thirty-five owners of the Cambridge property.⁶¹

With the site chosen (though not yet announced), Maclaurin embarked on a fund-raising tour that winter to raise money for the new buildings. When he visited Rochester, where a number of M.I.T. graduates were employed at the Eastman Kodak company, he found that George Eastman was out of town. A meeting of the two men was quickly arranged in New York City, and Eastman pledged \$2,500,000. Eastman insisted that the gift remain anonymous, and until 1920, only Maclaurin's wife and secretary (and two of the staff at Kodak) knew the donor; for seven years he was identified as "Mr. Smith."⁶²

Maclaurin promised the faculty and alumni that the school would not build factory buildings or skyscrapers, but would create a "great white city" on the river. Preliminary studies were completed by Desire Despradelle, a member of the architecture faculty, but following his death in 1912, the Institute gave the commission to Wells Bosworth, a graduate of M.I.T. (1889) and of the Ecole des Beaux Arts. In announcing the selection of Bosworth, Maclaurin described his skill in landscape and exposition design, and his ability to bring simplicity and grandeur to the site.⁶³

As the design was progressing, Bosworth persuaded Maclaurin and Charles Stone to travel with him to inspect Thomas Jefferson's "academical village" at the University of Virginia. It was, however, the visual focus of the domed library and not the openness of "the Lawn" that Bosworth saw in Charlottesville. In his M.I.T. plan, the space under the dome was to be occupied by the principal auditorium; when that was deleted to save money, he moved the library there to preserve the form.⁶⁴

Bosworth departed from the American college tradition in two fundamental ways. He proposed one great structure organized on a grid plan, rather than a series of separate buildings.⁶⁵ This left several of the small quadrangles completely enclosed, and created what came to be called the "infinite corridor," extending five hundred feet from Massachusetts

⁶¹The President and Fellows of Harvard College to Richard C. Maclaurin, March 13, 1911. The final conveyance of the property took place in March 1912; Prescott, 264.

⁶²Prescott, 289.

⁶³*Cambridgeport*, 128; Prescott, 276.

⁶⁴Wylie, 45.

⁶⁵Turner, 196.

Avenue to the colonnade facing the Great Court and continuing another five hundred feet beyond. The movement of students and faculty happened largely within the structure. And the severe exterior landscape recalled Mediterranean temples, not a sylvan New World campus. The plan for the Great Court on the river side of the dome included an imposing statue of Minerva, but few plantings and almost no lawn. Photographs at the time of the dedication of the campus in 1916 show the expanse of the Great Court with a gravel surface (Figures 5.11, 5.12). By the mid-1920s, the gravel had been replaced with grass.⁶⁶

The original design for the Great Court proposed a series of sharply defined terraces that opened onto the river. The rows of trees along the Embankment parkway and the uniform line of the seawall were broken, and a pair of stairs framed a long, narrow platform on the water's edge (Figure 5.11). Even without this more dramatic embrace of the river, Bosworth's architectural *cour d'honneur* is a fitting complement to Eliot's vision of the Charles as the "Great Court" of the metropolitan district.

Following the triumphal announcement of Eastman's gift in March 1912, it must have seemed only a minor annoyance when one of the Institute's distinguished engineering graduates questioned the structural integrity of the Cambridge site. Only a month later, Hiram Mills declined Maclaurin's invitation to contribute ten thousand dollars to the new campus. Though it seems to have created little alarm among the administration, Mills responded that he was unable to advise his friends "to put money into permanent buildings for an institution which by the time it gets to be vigorously performing its use is faced by a continually increasing expense to protect it against the encroachments of the sea, with a distant future when submergence is inevitable."⁶⁷

Mills thought that the "general subsidence of this region" had been sufficient to eliminate the site from consideration, and recent evidence, in his view, only confirmed the hazard. The storage warehouse on Vassar Street had sunk 1.19 feet since its construction, and the metropolitan sewer running through the site was two feet lower after only thirteen years. In his reply to Maclaurin, Mills pointed out that he had recently spoken to one of Maclaurin's advisers. He had plainly said that the proposed campus was within two feet of extreme high tide, and that "before this site has been a seat of learning as long as have been Oxford and Cambridge the extreme high tides will rise to be five feet above the level of the ground here." The advisor's response, according to Mills was that the school "must not try

⁶⁶*Cambridgeport*, 128.

⁶⁷Hiram Mills to Richard Maclaurin, April 18, 1912.

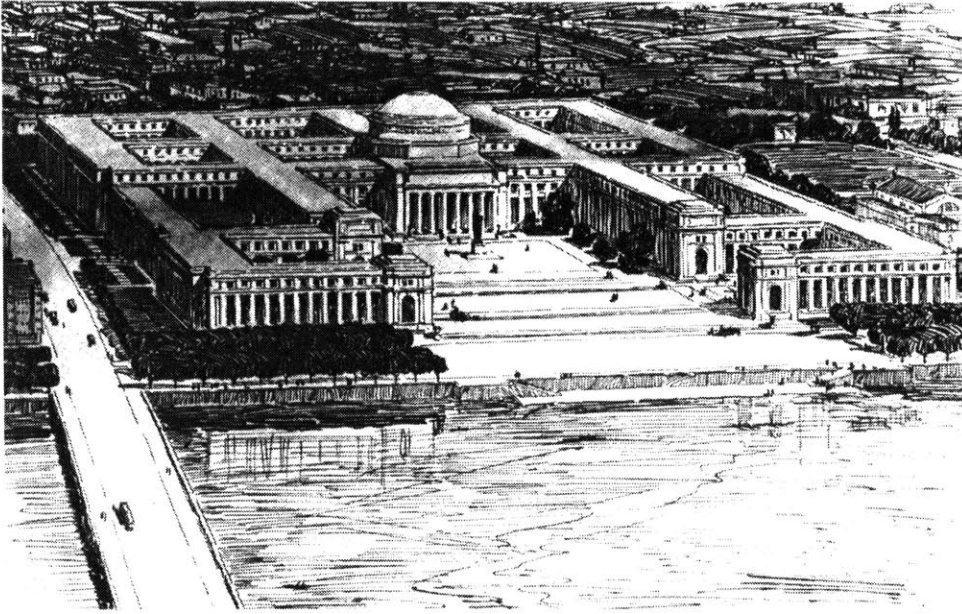


Figure 5.11 Wells Bosworth, Massachusetts Institute of Technology, about 1913.

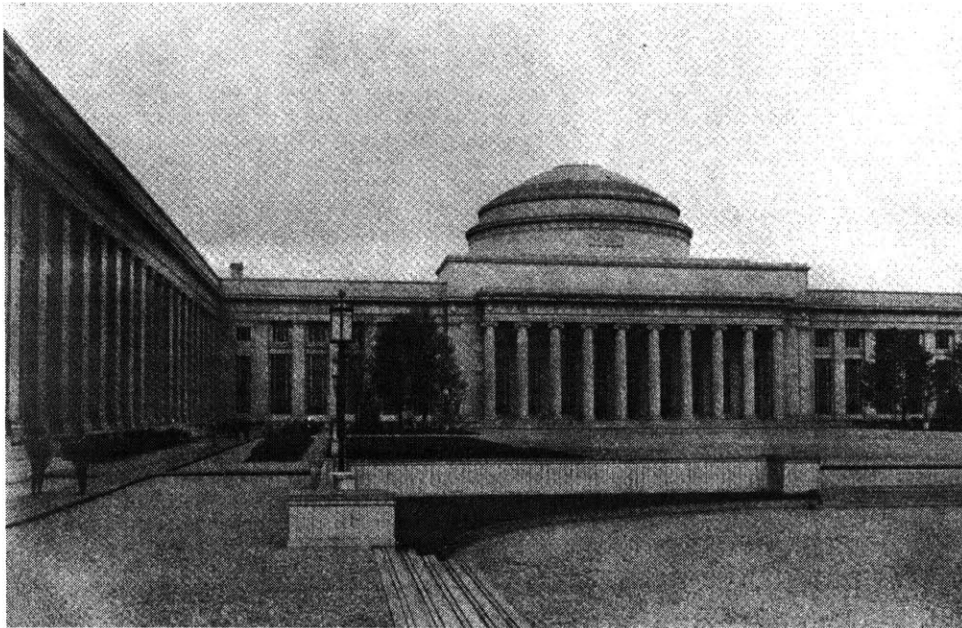


Figure 5.12 Massachusetts Institute of Technology, 1916.

to look farther ahead than a century or two . . . " The Cambridge property was "unquestionably unfit" for its intended purpose, in Mill's opinion, and his "promptings as an engineer" urged on Mills the burden of asking that even at this late date, the mistake of choosing the site be corrected.⁶⁸

With the successful construction of the campus, Mills's concern is now only a curious footnote. Yet he was following his best professional judgment, and his letter is an intriguing example of the dilemmas for civic discourse when experts disagree.

Boston University's Gothic Campus

Founded in 1869, only a few years after the first classes were held at M.I.T., Boston University began its life in a series of buildings scattered on Beacon Hill. The center of gravity of the university shifted westward to Copley Square in 1907, when the old home of the Harvard Medical School on Boylston Street was acquired. A number of departments moved from other locations to the 1883 building, located behind the recently completed Public Library.⁶⁹

For decades, the school lived on the edge of insolvency, frequently running deficits from year to year. Lemuel Murlin, who became president in 1911, aspired not only to end the annual losses and to raise faculty salaries, but to make the University one of "the four or five dominating factors in the material, intellectual, and spiritual life of Boston." A significant part of that ambition was Murlin's plan for a new campus. In 1919 he told the trustees that it was time for the university to find "a permanent location with reference to the future development of the city of Boston and the University's position therein."⁷⁰

Less than a year later, the university purchased fifteen acres of land between Commonwealth Avenue and the Charles, extending west from Granby Street to the Cottage Farm Bridge.⁷¹ Three acres of vacant land and an acre of tidal flats were acquired from the Riverbank Improvement Association, developers of rowhouses in the area between Olmsted's Charlesgate and the Cottage Farm Bridge;⁷² the balance, held by twenty-six different owners, included four apartment houses and twelve private residents. Title to the Association

⁶⁸Ibid.

⁶⁹Nancy Lurie Salzman, *Buildings and Builders: An Architectural History of Boston University* (Boston: The Trustees of Boston University, 1985), 35. The Medical School moved to a newly constructed campus in the classical style on Longwood Avenue.

⁷⁰Kathleen Kilgore, *Transformations: A History of Boston University* (Boston: Boston University, 1991), 127-8.

⁷¹Boston Transcript, March 10, 1920; quoted in Warren O. Ault, *Boston University: The College of Liberal Arts, 1873-1973* (Boston: Boston University, 1973), 146.

⁷²The chairman of the Association was Charles Francis Adams, Jr., who had chaired the Metropolitan Park Commission from 1892 to 1895.

land included deed restrictions against commercial development, which restricted the height of buildings and reduced the purchase price. The university successfully petitioned the Boston Zoning Board to raise the height limit from 80 to 155 feet.⁷³

In 1922, Murlin unveiled the campus plan, which would be dominated by a 400-foot-high tower modelled on St. Botolph's Church in Boston, England. Exhausted from his fund-raising efforts and unable to begin the new campus, Murlin resigned the following year.⁷⁴

The depth of the original site between Commonwealth Avenue and the river was shallow, given the university's ambitious plans, though a hundred-foot-wide extension was filled to form a riverside terrace. The future campus was reduced when the MDC made land takings in the 1920s to extend Soldiers Field Road, the planned riverside parkway. The Park Commission had clearly set out its intentions in 1893 to acquire the entire shoreline of the Charles Basin and had made similar takings from Harvard beginning in 1895; there is no record to indicate whether Boston University was surprised by the park commission's takings in the 1920s. It is certain that the reduction in available land heightened an already difficult problem for the university's architects.⁷⁵ When the MDC offered \$25,000 for the loss of land and tidal flats, the university's treasurer countered with a figure of \$100,000. That amount was rejected by the MDC, and the university sued. A Superior Court decision awarded the university \$390,000, and the amount was affirmed on appeal.⁷⁶

Daniel Marsh, Murlin's successor, faced the problem of paying the debt from the land acquisition during the Great Depression, and several times the trustees recommended selling the riverfront site. As it happened, the decision to build along the Charles was hastened by M.I.T. For some years Boston University had rented the Rogers Building on Boylston Street, which M.I.T. still owned. Then in 1938, apparently without warning, the building was sold and the university was given six months' notice to vacate. The Hayden Memorial Building, the first new structure on the Charles River campus, was hurriedly rushed to completion the following year.⁷⁷

The university published a revised master plan in 1940, along with drawings and a model of the entire site (Figures 5.13, 5.14). A joint effort of Cram and Ferguson with

⁷³Kilgore, 128-9; Ault, 146-7.

⁷⁴Kilgore, 129.

⁷⁵On the Cambridge side of the river, the riverfront parkway had already been developed when Harvard and M.I.T. laid out their new buildings. The construction of Storrow Drive as a limited-access highway in 1951, however, greatly multiplied the volume and speed of traffic.

⁷⁶Salzman, 10, Kilgore, 148.

⁷⁷Kilgore, 184.

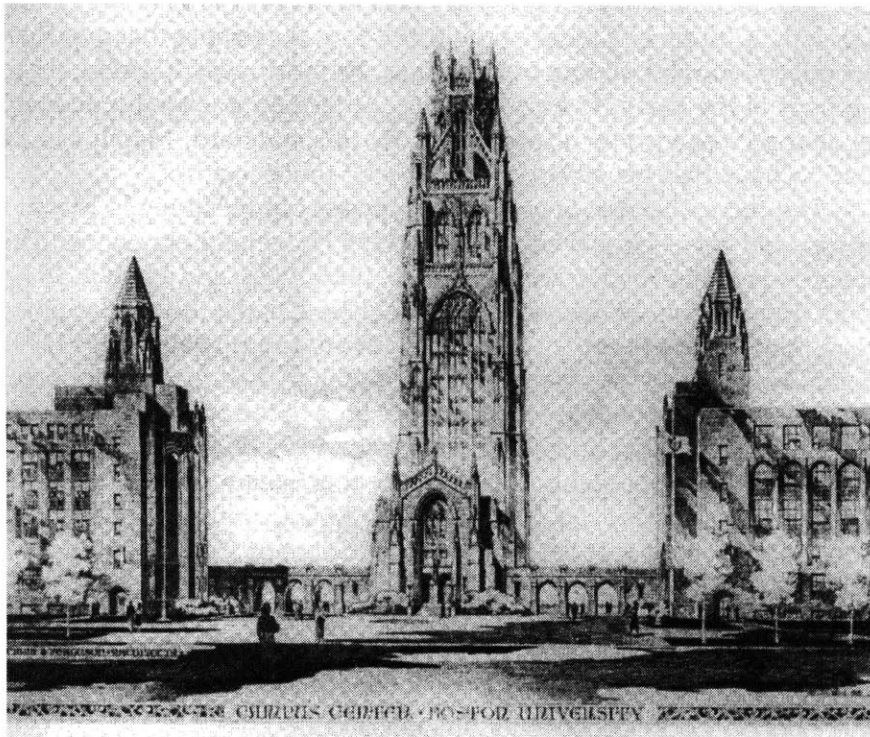


Figure 5.13 Cram and Ferguson, Boston University, 1940.

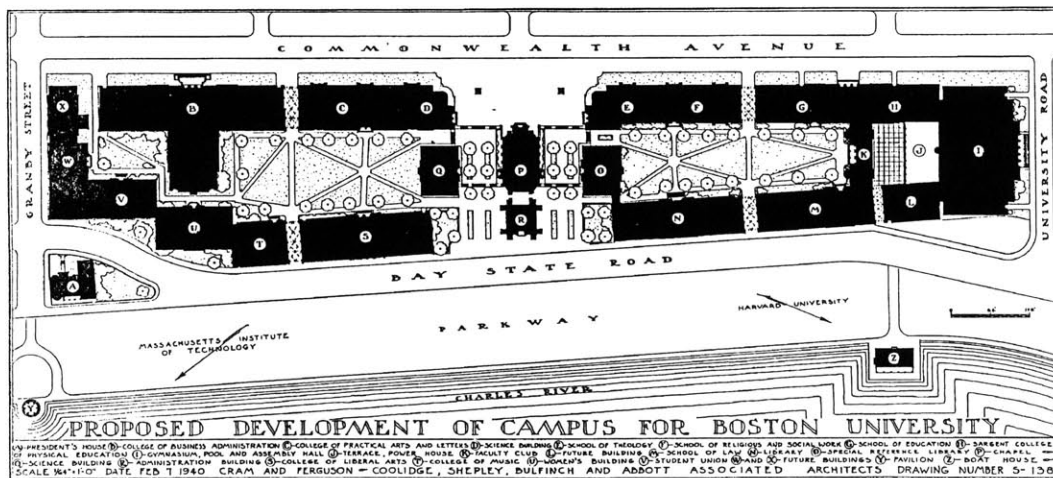


Figure 5.14 Cram and Ferguson with Coolidge, Shepley, Bulfinch and Abbott, Boston University campus plan, 1940.

Coolidge, Shepley Richardson and Abbott, the design realized Murlin's original commitment to Collegiate Gothic. The revised 1940 site plan made plain the narrowness of the site; the quadrangles extending east and west of the chapel pushed the buildings to the edge of Commonwealth Avenue and Bay State Road. In a none too subtle marking of the physical context of the site, the published plan also suggested the academic standing to which the university aspired: arrows on the river side of the campus pointed upriver toward Harvard and downstream toward M.I.T.⁷⁸

The Storrow Memorial Embankment

In April 1928 a new commission was approved by the legislature to consider developing the Basin. Its objectives were to develop parks, playgrounds, beaches, and promenades along the river; to complete the parkway system connecting Watertown Square with Boston and Cambridge; and to make the basin itself safer and more attractive for boating and water sports. The commission was made aware in discreet Boston fashion of an offer from Helen Storrow to bear a substantial part of the cost of developing the embankment as a memorial to her husband. Whether the commission was organized before or after the proposed bequest is not clear.⁷⁹

Almost immediately the commission became embroiled in a debate over a proposed parkway along the river. It was inconceivable, said the commission, that the Charles River should be bordered by highways at all other locations but not have a roadway in the one place where it would do the most to relieve traffic congestion and add to the pleasure and safety of motorists. One newspaper suggested that more cars along the river might not be a bad thing, and pointed to other parks: Franklin Park was "unused" until a parkway was put through it; more people enjoy Jamaica Pond from cars, but few walk along it; the Arboretum has no cars, but also few people.⁸⁰

The Basin Commission's large-format report was short but extensively illustrated with photographs, elevations, plans, and perspectives, including large color foldout plans. The first published plan for the Embankment itself was almost severe in its mostly open landscape (Figure 5.15). The design consisted of a single sidewalk on either side of the parkway, broken only by a boat landing at the end of Dartmouth Street and a large semicircular

⁷⁸*Boston University* (Boston: The University, ca. 1940).

⁷⁹Ware, *Helen Osborne Storrow*, 19.

⁸⁰Commonwealth of Massachusetts, *Report of the Special Commission*, 10; *Boston Herald*, March 21, 1929, 1, 4.

memorial plaza upstream from the Longfellow Bridge. Elevations showed the proposed road depressed below the height of the original seawall, making the auto traffic invisible from Back Street but not from the new park.

As it was interpreted in newspaper accounts, the commission's report plainly said that a pedestrian on the Esplanade would not even see the automobiles along the roadway; this was to be "an ingenious combination of park and boulevard . . . devised so as to be mutually exclusive."⁸¹ With the parkway depressed, vehicles would not be visible from the "main portion of the Esplanade," by which the commission apparently meant the area between Back Street and the parkway, not the section of the Esplanade between the parkway and the river.

A plan by Perry, Shaw and Hepburn to create a much larger lagoon (extending from Arlington Street to Bay State Road) and to locate the parkway on the water side of the lagoon was included in the report, but the board opposed it because of the additional expense and the proposed siting of the road (Figure 5.16).

By now automobile traffic had become an issue not only along the river, but also along the congested radial roadways: the report showed a perspective for new overpasses through the Charlesgate park that were not constructed at the time but foreshadowed what would to be built there in the 1960s (Figures 5.17, 5.18).

A group called the Charles River Basin Protective Association was organized to do battle against the highway. They were convinced that the road would be a disastrous safety hazard next to the new park. It was true that a parkway on both sides of the Charles from Boston to Watertown had been suggested as early as the first Boston Park Commission reports, and had been supported by Charles Eliot and others in the 1890s. But by the nineteen-twenties the nature of automobile traffic had clearly changed. Sylvester Baxter had written in the *Transcript* on the thirtieth anniversary of the metropolitan park system in 1923 that "the parkways and boulevards . . . intended to be strictly subordinate . . . to make the reservations pleasantly and easily accessible . . . have become the primary factor in the scheme of the park system." In a 1925 report on parks and parkways for the city, Shurcliff noted that in "this epoch of the revolution of vehicular transportation" there was a powerful temptation to overdevelop the parkways "as a matter of immediate relief and instant

⁸¹*Boston Evening Transcript*, January 23, 1929, part 2, 14; *New York Times*, January 29, 1929, 6E.

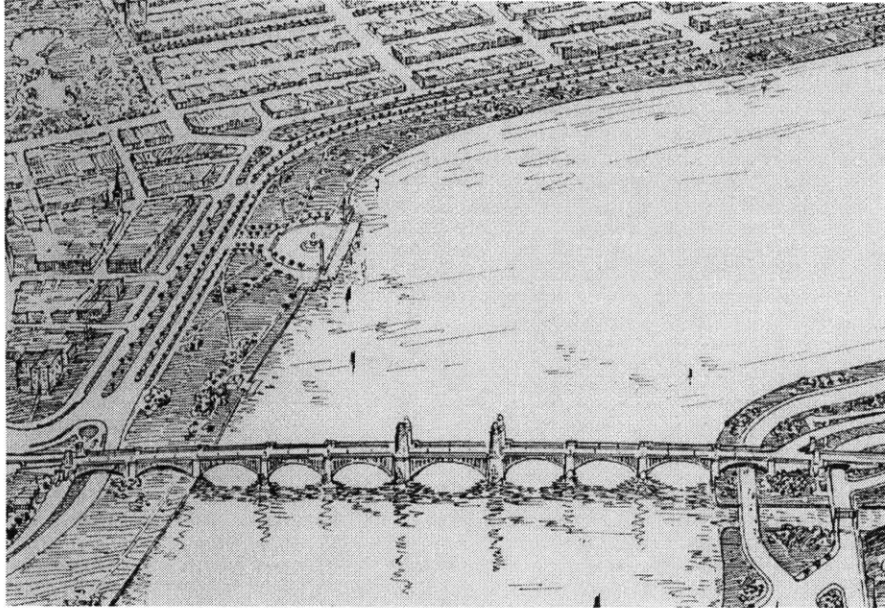


Figure 5.15 Arthur Shurcliff, Proposed Improvements to the Charles River Basin, 1928.

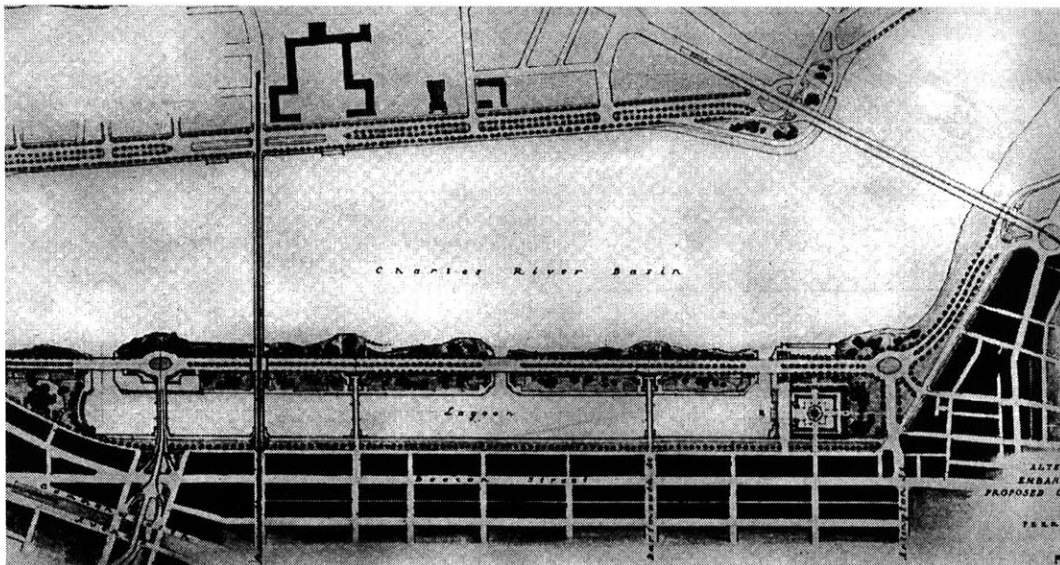


Figure 5.16 Perry Shaw and Hepburn, alternate plan for the proposed Charles River roadway, 1928.

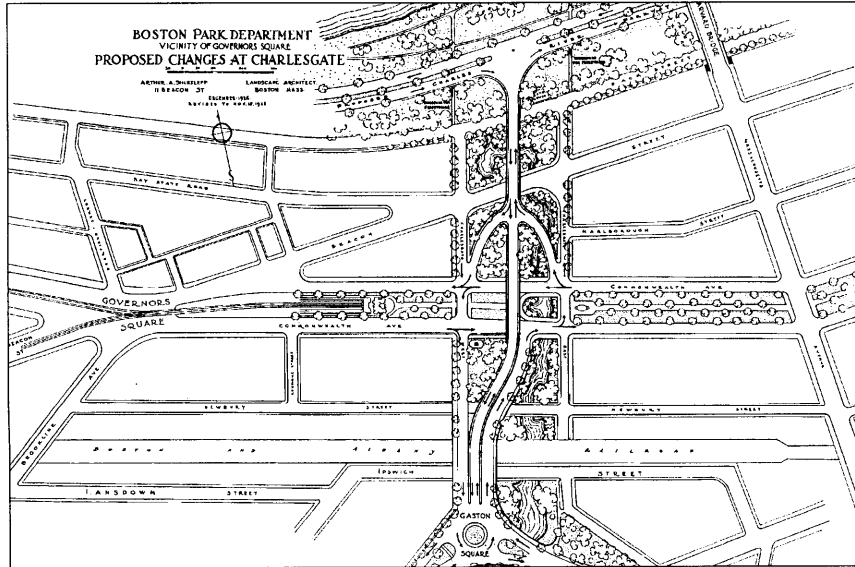


Figure 5.17 Arthur Shurcliff, proposed overpass at Charlesgate, for the Boston Park Department, 1936.

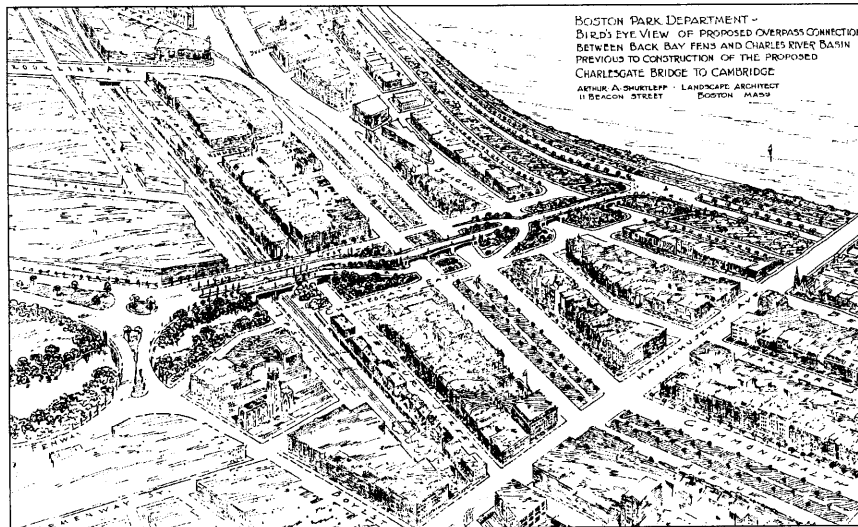


Figure 5.18 Arthur Shurcliff, bird's eye view of the proposed overpass at Charlesgate, for the Boston Park Department, 1936.

economy"; the only antidote was to recognize the parkways as adornments essential to the welfare of the city.⁸²

Helen Storrow was also opposed to the road, but was reluctant to say so in public. When the debate dragged on, she felt compelled to have her attorney read a letter at a hearing indicating her agreement with the Protective Association.⁸³

The issue was lively and divisive, the most protracted and public fight over road construction in the city since the advent of auto traffic. According to the *Boston Herald*, the plan for the basin "changes not only from week to week but from day to day." In their coverage of the controversy, the *New York Times* observed that "in no city is unification of public sentiment more difficult to obtain. In none are more numerous or more various plans offered every time a public improvement is proposed. . . . Will the thing be done? Who can tell? This is Boston." In March the road was dropped from the park plans, and the revised legislation was finally approved in June.⁸⁴

Once the plan for a four-lane parkway was dropped, the design was considerably revised. The sloping banks of rounded stones laid over gravel were chosen not to "escape from an architectural treatment" but primarily to prevent the formation of the steep-sided waves that had bothered boaters on the basin for twenty years. The semicircular memorial of the 1929 scheme was replaced by two large granite squares, sited to create visible landmarks at the termination of Dartmouth and Gloucester streets. In between the two formal granite platforms was a long, oval lagoon intended for small pleasure boats, skating, and toy boat sailing. The section of the Embankment between Berkeley Street and the Longfellow Bridge was also designed in a roughly symmetrical but informal style. Behind two arched breakwaters was a boat haven, with a wide granite landing along the shore. On either side of the landing were two large grass ovals, a "Music Oval" edged with linden trees for the Boston Pops concerts (which had begun in 1929) and a nearly matching oval on the other side.⁸⁵ Like Eliot's work on the Cambridge side of the river, Shurcliff's design was grounded in simplicity and restraint.

In 1936 the new park was dedicated as the Storrow Memorial Embankment (Figures 5.19, 5.20). Invoking the language of an earlier generation's urban activists, the chairman of

⁸²*Boston Evening Transcript*, September 29, 1923, quoted in Newton, *Design on the Land*, 333; Shurcliff, *Future Parks, Playgrounds and Parkway* (Boston: Boston Park Department, 1925), 46; Shurcliff, "Park Development and Recreation at Boston," *Parks and Recreation* 32 (October 1949), 20.

⁸³Ware, *Helen Osborne Storrow*, 19; *Boston Globe*, March 20, 1929, 16.

⁸⁴*New York Times*, January 29, 1929, 6E; *Boston Herald*, March 21, 1929, 1, 4. Acts of 1929, Ch. 371.

⁸⁵Shurcliff, "Autobiography," 46.

the Metropolitan District Commission said that the embankment "sends hope, health, and goodwill through the streets, factories and tenements of the city."⁸⁶ Though completed a generation later, the design and the programmed activities of the Embankment were a realization of Olmsted, Eliot, and Baxter's hopes for "landscape design as conservative reform."⁸⁷

⁸⁶*Boston Herald*, September 11, 1936.

⁸⁷Geoffrey Blodgett, "Landscape Design as Conservative Reform," in *Art of the Olmsted Landscape*, eds. Bruce Kelly, Gail Travis Guillet and Mary Ellen W. Hern, eds. (New York: New York City Landmarks Preservation Commission and Arts Publisher, 1981), 111-122.



Figure 5.19 Arthur Shurcliff, Storrow Memorial Embankment, for the Metropolitan District Commission, 1936.



Figure 5.20 Arthur Shurcliff, Storrow Memorial Embankment, for the Metropolitan District Commission, 1936.

VI. METROPOLITAN HIGHWAYS

We will have as many motor vehicles as these facilities will accommodate.

Bentley W. Warren, a member of the Charles River Basin Association, predicting in 1929 the number of automobiles on Boston roads in 1950¹

No other land use came to compete so directly with public open space as transportation. The conflict was as old as New York's Central Park, but after the Civil War, railroads and then highways made over the face of American cities. In Lewis Mumford's judgment, "the railroad was permitted, or rather, was invited, to plunge into the very heart of the town and to create in the most precious central portions of the city a waste of freight yards and marshalling yards, economically justifiable only in the open country." Then, even before railroads had finished their vast urban makeover, highway planners "repeated all the errors of the early railroad engineers."² Boston's peculiar topography created some variations in this pattern. As private ventures, railroads were given free reign to fill extensive areas of marsh lands and open water near the historic center of the city, and rail yards and tracks established boundaries for neighborhoods and industrial districts. Though greater Boston was unusual in setting aside waterfront land for parks and public reservations, the parkways designed as carriage drives through these early parks were widened for ever-increasing volumes of auto traffic, the connections between parks and adjacent neighborhoods became increasingly tenuous and unsafe.

In the nineteenth century, when public parks found support across a wide spectrum of urban dwellers, from social workers to real estate speculators, park advocates documented the increase in land values near parks, a crude approach to determining the dollar value of public spaces. As the scale of new highways became ever larger, those approximations of the value of public open space were not enough to prevent the use of parks for highway projects. Public open space, along with private property of low value, became the optimal location for roads.³

¹*Boston Transcript*, March 27, 1929.

²Lewis Mumford, *The City in History: Its Origins, Its Transformations, and Its Prospects* (New York: Harcourt, Brace & World, 1961), 461, 508.

³Sam Bass Warner, Jr., *The Urban Wilderness: A History of the American City* (New York: Harper & Row), 46.

The relationship between parks and transportation is not well documented in the histories of Boston's urban development. Two recent highway projects are exceptions to that rule. The planning of the Inner Belt, proposed in 1948 and canceled in 1971, generated several monographs in the mid-1970s. The proposal to depress the city's Central Artery also generated several case studies and a lengthy monograph during the project's twenty-five-year history. Yet in these few investigations of highway planning in Boston, the narrow context and the misreading of even the recent past reflect the limited historical scrutiny of transportation planning and its relationship to other urban issues, including public parks and open space.⁴ The definitive political history of the Central Artery/Tunnel, for example, asserts that the highway coalition "was unchallenged from the end of World War II until the mid-1960s."⁵ In fact, beginning in the late twenties with a proposed limited-access road along the lower Charles, every major highway project in Boston provoked vigorous opposition. The construction of the first Central Artery was plagued with dissent beginning with the first land takings in 1950. Three years later, with the project well underway, the southern half of the highway through the edge of Chinatown was redesigned in response to community protests; instead of an elevated structure, a tunnel was constructed under Dewey Square.⁶

Just as the subject of parks has attracted few economists, the development of the nation's highways has been neglected by historians. The patterns of conflict and accommodation between parks and highways along the Charles are a part of a much larger history of transportation and urban development in metropolitan Boston that remains unwritten. The following sketches suggest at least the outline of that lengthier story.

The Massachusetts Highway Commission

The professionalization of highway design and construction occurred in both state and local governments, but in quite different ways. For most of the nineteenth century, the responsibility for roads was seen as a local function. By the 1890s, it was clear that counties

⁴Alan Lupo, *Rites of Way: The Politics of Transportation in Boston and the U.S. City* (Boston: Little, Brown, 1971); Allan K. Sloan, *Citizen Participation in Transportation Planning: The Boston Experience* (Cambridge, Mass.: Ballinger, 1974); Ralph A. Gakenheimer, *Transportation Planning as Response to Controversy: The Boston Case* (Cambridge, Mass.: MIT Press, 1976).

⁵David Luberoff, Alan Altshuler, and Christie Baxter, *Mega-Project: A Political History of Boston's Multibillion Dollar Artery/Tunnel Project* (Cambridge, MA: Kennedy School of Government, Harvard University, June 1993, rev. October 1995), 2.

⁶The construction of the first Central Artery in the 1950s, including the community opposition it provoked, is briefly described in Thomas H. O'Connor, *Building a New Boston: Politics and Urban Renewal, 1950-1970* (Boston: Northeastern University Press, 1993), 82-86; see also Kennedy, *Planning the City*, 138-39, 167.

and townships were not keeping up with the increasing clamor for more and better rural roads. Under pressure from farmers, bicycle enthusiasts, and politicians, states and the federal government began tentative efforts to investigate highway planning and road construction in rural areas.

The establishment of the Massachusetts Highway Commission followed the pattern of other state commissions created at the end of the nineteenth century. A study commission was established first, in 1892 (the same year as the temporary Metropolitan Park Commission). Its membership joined citizen representation with the authority of experts: a member of one of the vocal and well-organized bicycle associations; the city engineer of Chelsea, and Prof. Nathaniel S. Shaler, dean of Harvard's Lawrence Scientific School. Shaler was an authority on geological and topographical surveys, and on the geology of road construction, and established the first university courses in highway engineering. Their primary focus was on the state of roadways outside the Commonwealth's cities and towns. The commission wrote a summary of the state's topography, including soil conditions as they would affect road building and the materials available across the state for construction. They conducted a survey of existing road conditions for the 600 miles of highway in every county but Nantucket, did traffic counts on some of the roads into Boston, and estimated the savings of improved construction methods based on the weight and volume of traffic. Their report concluded that roads outside of cities and towns were in deplorable condition, and that only counties or the state could provide sufficient funds. The legislation to establish a permanent highway commission was enacted the following year, creating the first state highway department in the nation.⁷

By the turn of the century, Massachusetts was the only state with minimum engineering standards for state-aided local projects, as well as the only state to expend a significant amount on roads, providing \$6.75 million to improve 480 miles of highways between 1894 and 1903. The commission supported demonstration projects, and operated outside the boundaries of cities and towns, whose jurisdiction over road construction was well established.⁸

⁷Commonwealth of Massachusetts, *Acts of the General Court*, 1892, Chapter 338; Bruce E. Seely, *Building the American Highway System: Engineers as Policy Makers* (Philadelphia: Temple University Press, 1987)13; Arthur W. Dean, "Massachusetts Highways," *Proceedings of the Boston Society of Civil Engineers* 16 (December 1929), 496-9.

⁸*Ibid.*, 16, 22.

Metropolitan Improvements

At the local level, public discussion of the need for more concerted highway planning in greater Boston was more visible than the state's efforts in rural areas, but it also followed a more haphazard course. Arousing a local professional culture likewise lagged. Parkways were included in the Metropolitan Park Commission's report of 1893 because they were essential to the regional vision of the park system's founders, who actively solicited the interest of city and town officials. The Boulevard Act of 1894 authorized an appropriation for the Metropolitan Park Commission to build parkways, for a second reason — there was no other regional authority authorized to do such work.

The limited parkway construction undertaken under the Boulevard Act, however, did not even begin to address the congestion in downtown Boston. A decade later, the Boston Society of Architects assembled a coalition that included the Chamber of Commerce and a half dozen other business and civic groups to promote a plan for municipal improvements. The report of their Committee on Municipal Improvements began by analyzing a troubling symptom: why were there "vast activities in New York and throughout the country," while building operations were almost at a standstill in Boston?⁹

The committee did consider briefly the improvement of the Port of Boston, and even resurrected the century-old idea of inland waterways extending to the Connecticut and Hudson river valleys. The report found the greatest issues, however, in the heart of the city, where they hoped to "consolidate the population by filling the gaps in the city plan; avoid congestion by enlarging the business district; and keep within the city limits the prosperous and educated class that now goes to the suburbs."¹⁰

An unnamed committee member offered two reasons for the area's decline. First, large areas of unoccupied space in the heart of Boston, both land and water, cut off communications between sections and neighborhoods of the city, increasing traffic congestion and preventing expansion of the business district. Second, overly restrictive building laws affected height and materials, limiting construction and driving people to the suburbs. Five large vacant spaces were identified. The Boston & Albany Railroad yard separated the Huntington Avenue section from the residential district of the Back Bay between Beacon and Boylston streets. In the same way, the Boston & Providence yards were blighting the

⁹Boston Society of Architects, Committee on Municipal Improvements. *Report Made to the Boston Society of Architects by its Committee on Municipal Improvements* (Boston: A. Mudge, 1907), 7.

¹⁰*Ibid.*, 8.

Columbus Avenue neighborhood. The South Bay should simply be filled and developed. The last two "vacant spaces" hindering development were more surprising: "the park system of the Fenway, which obstructs the city's growth to the southwest"; and the Charles River, which "isolates the Riverbank lands in Cambridge [the future site of MIT], owing to lack of means of communication."¹¹

According to the committee, most of these problems could be addressed by changing the street plans, which would not only create "monumental sites" but would cut streets through deserted districts, raise tax valuations, and "add to the riches of the city." If the South Bay were filled, a substantial portion of the railroad yards could be relocated there. For the recently completed parks and parkways along the Muddy River and the Back Bay Fens, broad new boulevards would break open the enclosed spaces of Olmsted's pastoral landscapes (Figure 6.1). The "adequate" new street leading to the new campus for Harvard Medical School would be "perfected" with "a suitable ending where the new street joins the park." The monumentality of important new buildings like the Museum of Fine Arts would be revealed, and future structures might then follow their "worthy" example. The "City Beautiful" would reign triumphantly over Olmsted's fusty, outmoded pastoral ideals. Altering the street pattern for the "vacant space" of the Charles Basin would require building new bridges, whose cost could be reduced by various schemes for creating magnificent building sites on islands in the middle of the river.¹²

The proposal for "Inner and Outer Boulevards" was an early application of the analogy of "the spokes of a wheel" to the growing problem of city traffic (Figure 6.2). It was relatively easy, according to the authors, to get from the center of the city to the suburbs. By contrast, the routes from Cambridge to Roxbury, or from Brookline to the Revere Beach Parkway, were "inconvenient and circuitous." The solution was an Inner Boulevard, which would cut through Cambridge on the Grand Junction railroad alignment, then turn southeast across the Fens (where the "Inner Belt" would be proposed fifty years later).¹³

A number of issues identified by the Boston Society of Architects were clearly metropolitan in scope. Encouraged by the architects' report, the General Court appointed the Metropolitan Improvement Commission the same year. The new commission's charge was to review "any public works in the metropolitan district" that would improve convenience,

¹¹Ibid.

¹²Ibid., 3.

¹³Ibid., 8.

develop local business, or beautify the district, and the commission extended the Society's work on several fronts. Beyond that, the work of the Commission reflected a continuing development of the vision of metropolitan government, and was an early effort to integrate the expertise of several disciplines. The choice of authors for the commission's studies revealed, however, that professional specialization had progressed only so far. Sylvester Baxter wrote on the commercial uses of the rivers and harbors, and the landscape architect Arthur Shurcliff (with little engineering training or experience) was considered sufficiently equipped to serve as the Commission's expert on roads and highway traffic.¹⁴

The final report of the Metropolitan Improvement Commission noted that the broad scope delegated to the commission was "almost as comprehensive as the whole question of the public welfare and progress of the Metropolitan District." The most pressing issue for the Commission, however, was clearly transportation, or as they described the problem, a "systematic method of internal communication" that would include highways, the control of traffic and transportation, and the location of docks and terminals. Witnesses at the commission's hearings confirmed that transportation was the most urgent public works question in the district, and that the future prosperity of the state would be contingent on the growth of the city as a commercial port. The longest sections in the final report addressed railroads and terminals, docks, and waterways, and all three were written by civil engineers. Though the emphasis on transportation ignored other important urban public works issues, the commission's aspirations to look comprehensively at all modes of transportation reflected the growing sense that cities could be planned, and that professionals would do the planning.¹⁵

Shurcliff's essay on metropolitan highways, based on eighteen months of investigation, was at the same time naive and prophetic. He correctly diagnosed the weaknesses in the existing street network, but grossly underestimated the burdens that would quite soon overwhelm the pattern he described. His deductions were based on the assumption that the typical American gridiron plan was "not applicable to the steep, isolated hills, radiating valleys and irregular shoreline" of greater Boston. The "bewilderment of strangers" at the unusual street system of Boston should be of little concern, since with few exceptions it is logical for those who know it. Only in most densely settled sections would it be difficult to adjust highways to modern needs. The radial streets were sufficiently wide and well

¹⁴Commonwealth of Massachusetts, *Public Improvements for the Metropolitan District. Report of the Commission on Metropolitan Improvements* (Boston: Wright & Potter, 1909), 40.

¹⁵*Ibid.*, 3, 5-6.

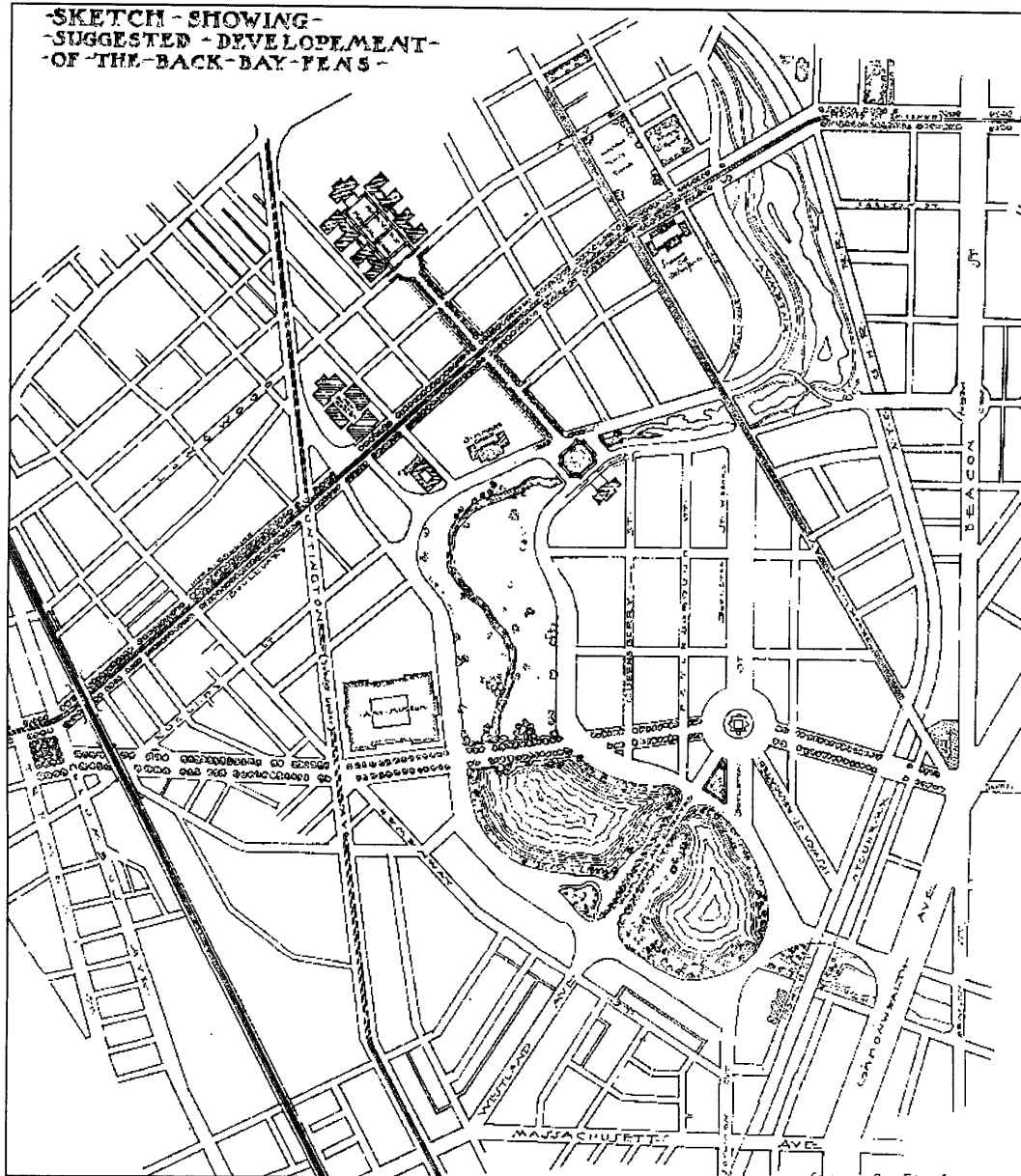


Figure 6.1 "Suggested Development of the Back Bay Fens,"
Boston Society of Architects, *Report*, 1907.

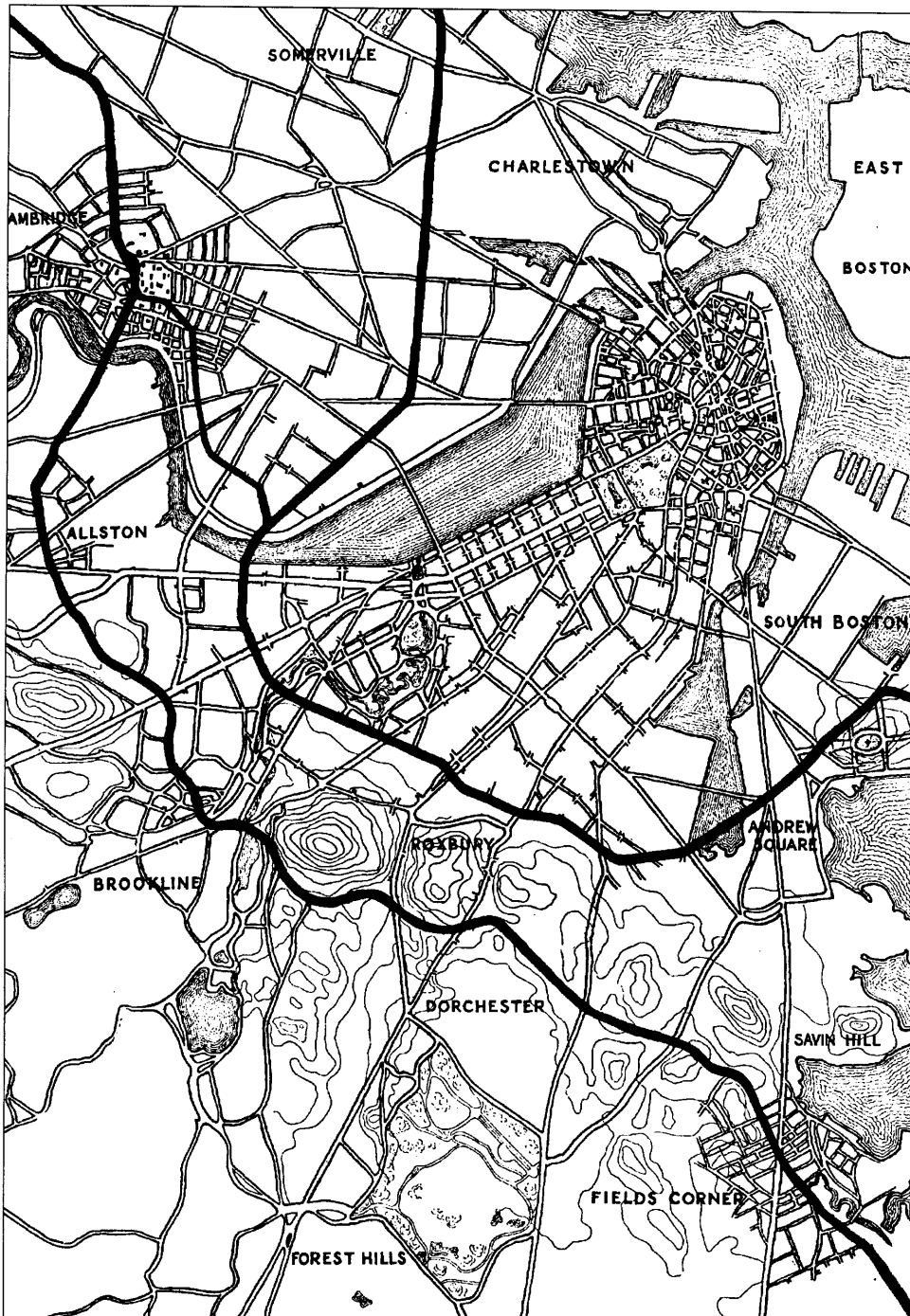


Figure 6.2 "Proposed Inner and Outer Boulevards,"
Boston Society of Architects, *Report*, 1907.

distributed, but were not being expanded to meet increased demands (Figure 6.3). The circumferential roads, on the other hand, were generally "narrow, crooked and broken in their alignment" and unnecessarily increased the load on the radial roadways (Figure 6.4).¹⁶

Shurcliff believed that if the missing connections in the radial and circumferential networks were built, there would be no need to establish "a new general system." He also apparently assumed that parkways would continue to be constructed where the regional road network intersected with the metropolitan reservations; there was therefore no contradiction between his support for public open space and his recommendation to build new roads through the reservations, for example, south of Spot Pond in the Fells and north of Houghton's Pond on the south side of Great Blue Hill. He identified the need for what was later called the "Northern Artery" from Harvard Bridge in Cambridge to the Wellington Bridge on the Mystic River; the plan also called for a major route from Allston across the Charles past Fresh Pond to Davis and Powderhouse squares in Somerville.¹⁷

Like the authors of subsequent studies completed during the next two decades, Shurcliff concluded that additional bridges across the Charles would be required, on either side of the Harvard Bridge and upstream of the Cottage Farm Bridge at Magazine Street. That approach would have resulted in a finer grain and lower maximum speeds for the future highway network than was ultimately built, beginning in the 1950s; it is not clear whether the actual average speeds would have been any lower.¹⁸

Since new bridges would be expensive, "earth causeways" could be built in the river to reduce the costs, as Shurcliff and Ralph Adams Cram had illustrated in the 1907 report of the Boston Society of Architects. The causeways might be islands, or peninsulas perpendicular to the basin, creating the effect of the Binnen Alster in Hamburg. In either approach, the tree-lined earthworks would save a third to half of the cost of bridges, and would make the basin far more popular for boating and skating, and render it "more human in scale." They should not be considered as projects for making land, however, since there was already ample provision for recreation and so much vacant land nearby that the islands as building sites or parks would not be needed for some time.¹⁹

How would all these roadway improvements be realized? Shurcliff cited the successful merger of the metropolitan water and sewer commissions, and recommended a

¹⁶Ibid., 188, 211.

¹⁷Ibid., 195.

¹⁸Ibid., 218.

¹⁹Ibid., 218-219.

second merger with the park and highway commissions. A regional agency should execute these improvements without abridging local authority. Yet the report did not describe in any detail how the continuing local opposition to metropolitan government might be overcome.²⁰

Baxter's contribution to *Metropolitan Improvements* was a general study of "The Water Front of Boston Bay," which described the Charles, the Mystic, the Fore River, and Lynn Harbor. Baxter was certain the Charles was an essential part of the harbor, and echoed Eliot's observations in 1894-95 on the obstacles to navigation created by the railroad bridges at North Station. Boating traffic was restricted by the railroad bridges at the mouth of the river, "practically roofed in" by more than thirty-one acres of platforms used as a switching yard. Shipping on the river had nonetheless doubled between 1891 and 1905, but only the lower Charles saw much activity. Less than a fifth of the commercial traffic went above the Cambridge Bridge, the Watertown Arsenal was now shipping entirely by rail, and the wharf there was "deserted and overgrown."²¹

In spite of the Commission's work, improvements were slow in coming. Though it had little to do with the city's economy, the images of islands in the Charles would exercise a fascination into the present among Boston's designers. In the extended chain of Boston urban visions, the most influential images of the 1907 report were the "Inner and Outer Boulevards" and the "Circumferential Thoroughfares." When the city later determined to construct these improvements, however, the scale of their design would be determined not in Boston but by the administrators of the federal highway program.

The 1930 Thoroughfare Plan

In the two decades following the publication of the "Improvement" reports, almost nothing came of the ambitious roadway plans. In 1929 the Commonwealth accepted Helen Storrow's gift for the construction of the Esplanade, after agreeing to cancel the embankment highway. But at the same time, the Boston City Planning Board was paying for a traffic study by a New York City consultant that endorsed the construction of a parkway along the Charles, along with nine other "major" projects and fifty-six other road improvements (Figure 6.5).

²⁰Ibid., 46-48, 212.

²¹Ibid., 296-7. In the *Public Improvements* report Baxter claimed that the Charles Basin was by then "popularly known as 'Charlesmere,'" though there is no evidence that anyone else ever used the word.

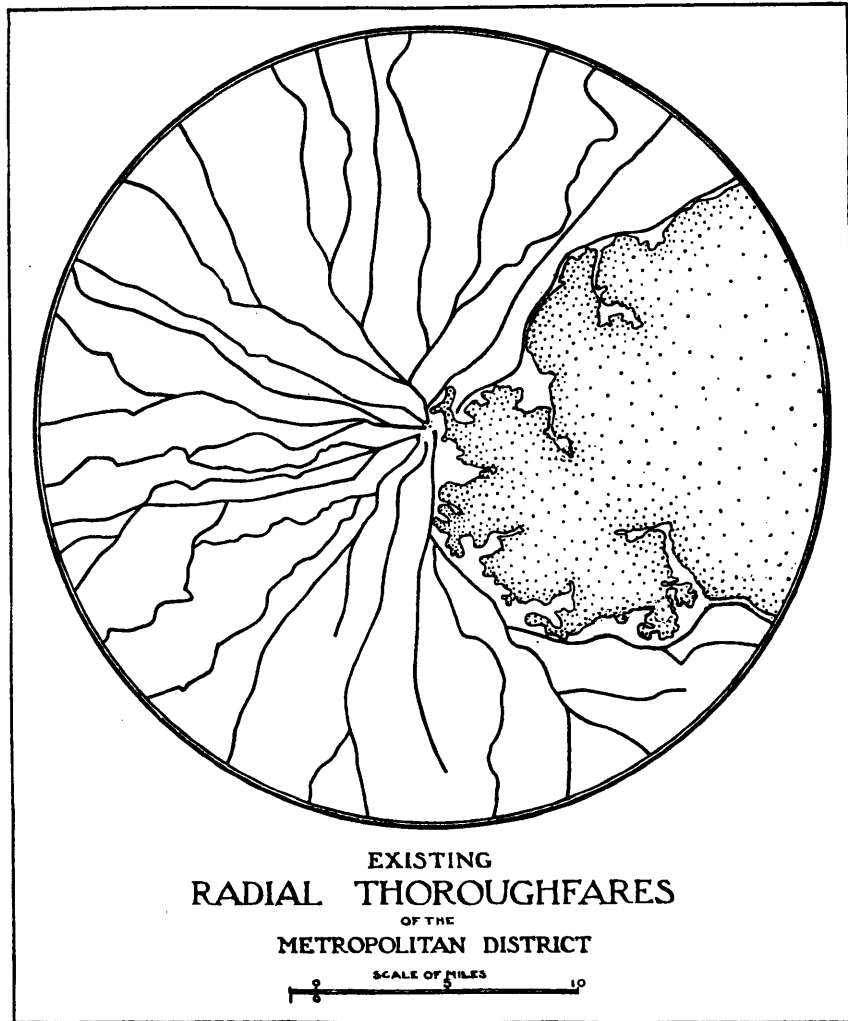


Figure 6.3 Arthur Shurcliff, "Radial Thoroughfares,"
Metropolitan Improvement Commission, 1907.

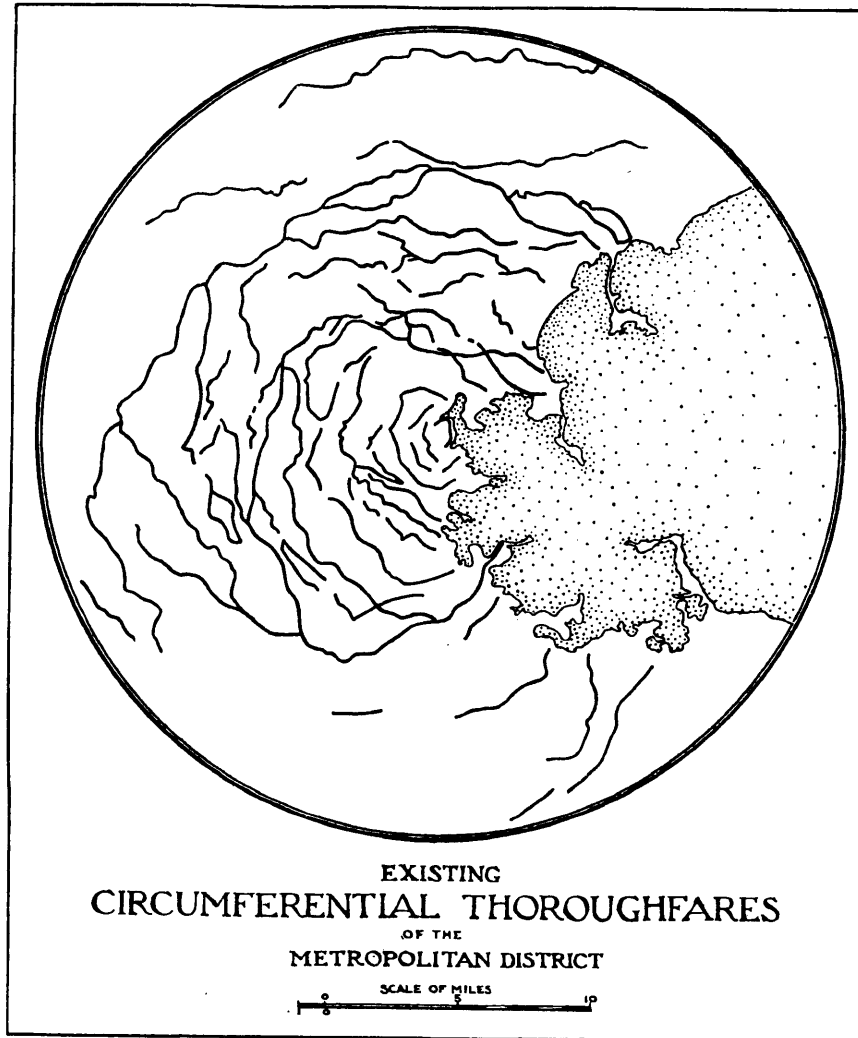


Figure 6.4 Arthur Shurcliff, "Circumferential Thoroughfares,"
Metropolitan Improvement Commission, 1907.

Robert Whitten, the study's author, held a quite clear view of transportation's role in the city. Echoing Gourlay almost a century before, his 1930 plan asserted that prosperity depended on the "utmost freedom of circulation for goods and persons." In creating that freedom, the roadway network should be designed for as much traffic as will use city streets. The report acknowledged the argument that "it is useless to increase street capacities in central areas as any additional capacity provided will be immediately taxed to the saturation point." It was claimed that this argument, though valid for certain business streets, was not valid for major traffic arteries. This approach, however, failed to define how future capacity would be determined, and how this logic might quickly become circular.²²

Whitten argued that "the private automobile has long since ceased to be primarily a 'pleasure car.' The number of trips made on city streets just for the pleasure of driving is negligible. Automobiles are used to get somewhere." All these assumptions were linked to Whitten's view that rapid transit would continue to provide for most of the commuting traffic to and from the city; when transit was cheaper and more efficient than the car, people would choose it, saving their car for those trips when it was the more efficient mode. He completely underestimated the preference for auto commuting, even when it was clearly more expensive and less efficient.²³

Ten major projects were described in the thoroughfare plan, including a proposed elevated "Central Artery" along the route of Atlantic Avenue (where there was already an elevated streetcar line (Figures 6.6, 6.7). (An elevated highway through downtown had been proposed by William Stanley Parker, chairman of the Boston City Planning Board, in 1923.)²⁴ Of the ten recommended projects, the first to be constructed was the East Boston (now Sumner) Tunnel; the second was the embankment roadway, built in 1951.

The report asserted that the shores of the basin offered the only satisfactory route for the uninterrupted movement of large volumes of traffic to the western suburbs. While acknowledging that the Charles Basin improvement plan approved by the legislature in 1929 provided that no portion of the new park should be used for roadway construction, Whitten believed that congestion along Beacon Street and Commonwealth Avenue would eventually require the building of a basin parkway. This was so even though the report proposed both a "Roxbury Crosstown" expressway and a "B & A Highway" over the Boston and Albany

²²Boston City Planning Board, *Report on a Thoroughfare Plan for Boston* (Boston, 1930), Robert Whitten, consultant, 22-23.

²³*Ibid.*, 23.

²⁴City of Boston, *Tenth Annual Report of the City Planning Board*, 1923, Appendices 4-6.

tracks from the Cottage Farm Bridge to Arlington Square in South Boston (once a change in "motive power" permitted the construction of a viaduct over the tracks).²⁵

In addition to the Basin Parkway, Whitten proposed two other new parkways, one along the Neponset River and the other from the Neponset to the proposed Blue Hills Radial. And the proposed "expressways" were closer to the model of Commonwealth Avenue than to the limited-access highways that would be mandated by federally imposed standards after World War Two. The expressways included short underpasses to separate traffic and broad medians of trees (Figure 6.8). A number of new or extended parkways were also described.²⁶

A thoroughfare plan should be just one part of a comprehensive city and regional plan, Whitten argued. Traffic ought to be analyzed in relation to "zoning, parks, public buildings, rapid transit" and all the other factors of comprehensive planning. It was, however, beyond the scope of the 1930 report. Whitten did conduct the first origin and destination studies in Boston, and he applied the logic of cost savings to justify the new roads. For the proposed embankment highway, which was expected to carry ten million cars per year by 1940, the annual savings were calculated at \$920,000, at a rate of two minutes per mile for each driver for a little over two miles.

The Whitten report would define the general alignment of all the major highway projects built during the next thirty years. Though the Great Depression and the Second World War would delay the implementation of these projects for two decades, Whitten's images of the elevated Central Artery vividly represented what many agreed was Boston's most critical highway project.

The 1948 Master Highway Plan and Storrow Drive

A much more comprehensive and ambitious engineering study, the *Master Highway Plan for the Boston Metropolitan Area*, was completed in 1948. It recommended the embankment road as a supplemental connection to a proposed belt route which would cross the river just above the Cottage Farm (now Boston University) Bridge. The beltway was to be the hub of a system of radial expressways: southeast, southwest, west, northwest, north, northeast (Figure 6.9).

²⁵Ibid., 6-8, 101-2, 113.

²⁶Boston City Planning Board, *Thoroughfare Plan*, 102.

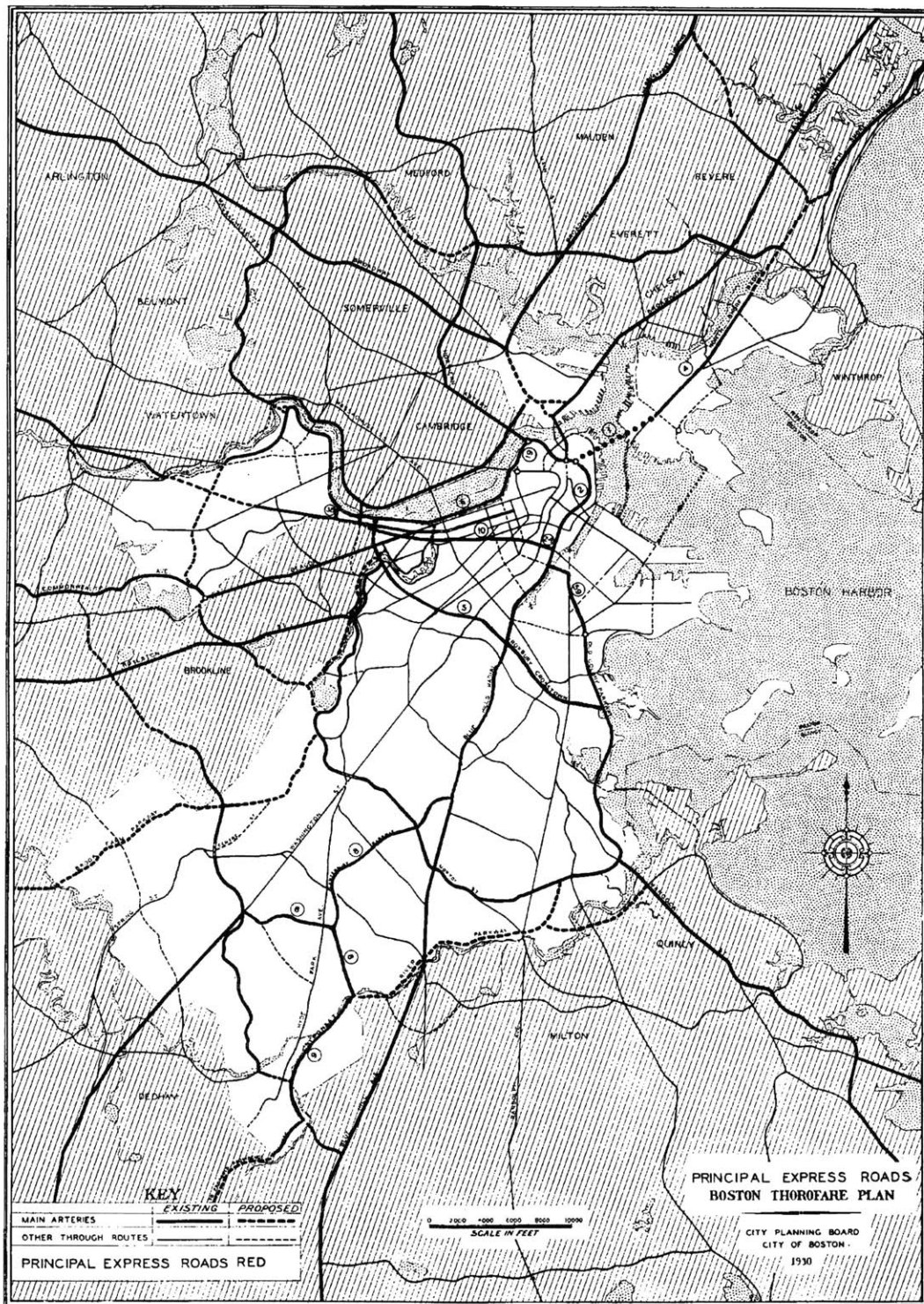


Figure 6.5 Robert Whitten, "Principal Express Roads," Boston City Planning Board, 1930.

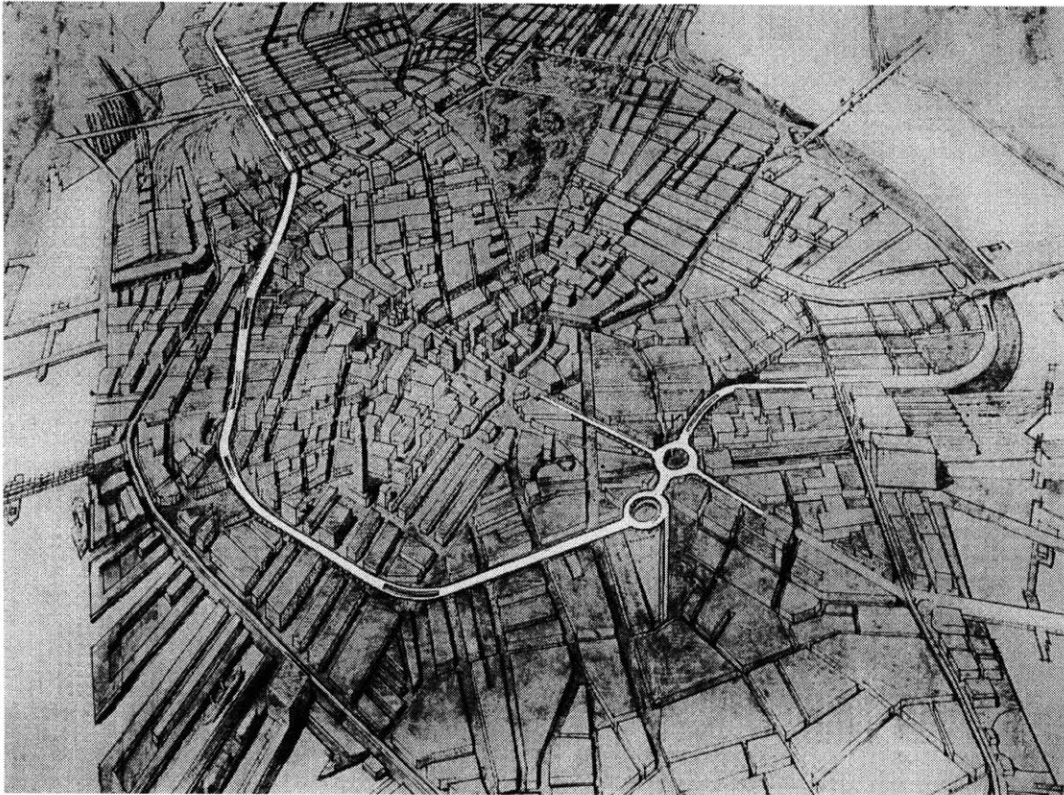


Figure 6.6 Robert Whitten, proposal for the Central Artery, Boston City Planning Board, 1930.

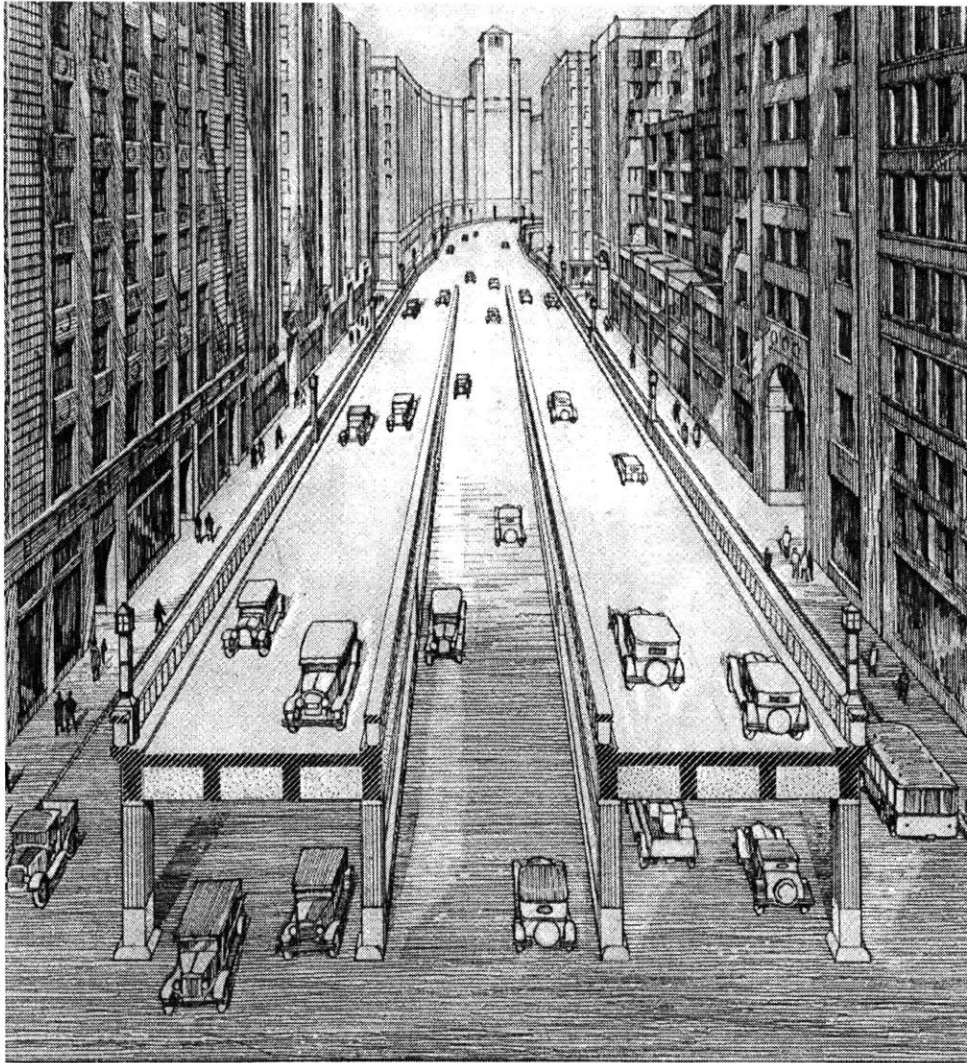


Figure 6.7 Robert Whitten, perspective of the Central Artery, Boston City Planning Board, 1930.

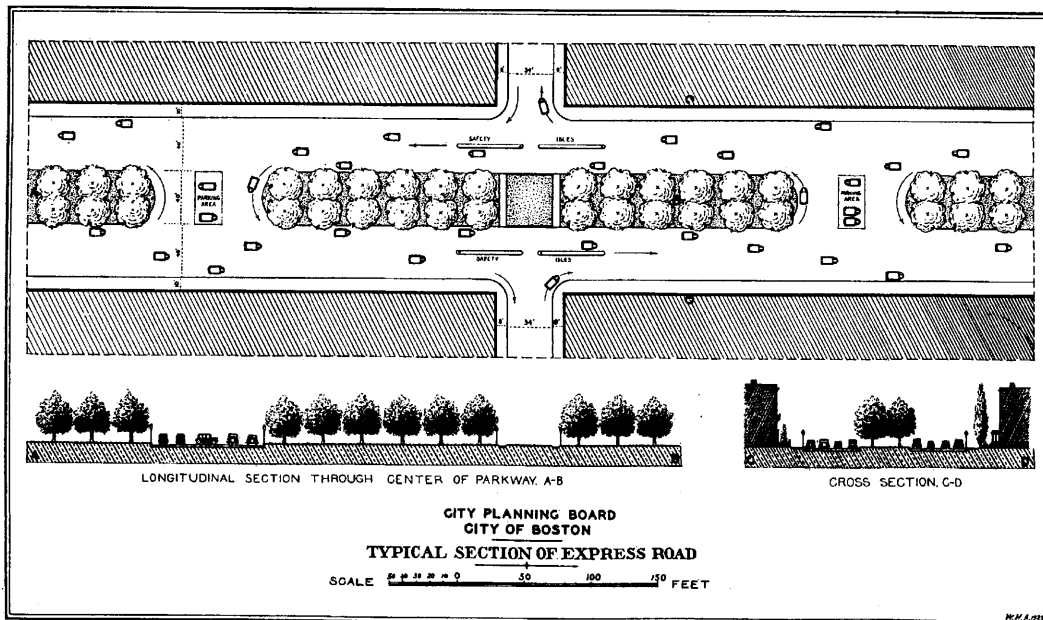


Figure 6.8 Robert Whitten, "Typical Section of Express Road," Boston City Planning Board, 1930.



Figure 6.9 Maguire Associates, *Master Highway Plan*, 1948.

The 1948 plan responded to the logic dictated by the federal Bureau of Public Roads report on *Toll Roads and Free Roads* (1939) and by the federal legislation of 1944 with its description of a national Interstate system. In seeking solutions to the traffic congestion of the 1930s, the *Toll Road* report was committed to uniform solutions applied across the country. While the Bureau recognized that the new expressway network would also require the development of parking and transit facilities to function well, it was authorized to fund only highway facilities. The federal standards only considered one approach to highway design: the high-speed expressway.²⁷

Finally, to guarantee the implementation of federal standards, it was proposed to raise the share of federal funding significantly above the fifty-fifty split then established. In 1943 William Cox, a highway engineer and head of the Connecticut Highway department, began campaigning against raising the federal share. He wrote to Robert Moses that if the state share was reduced to twenty-five percent, the states would be "'licked' from the start." The professional relationships between state and federal engineers, it was feared, would be shattered. Thomas MacDonald, director of the Bureau of Public Roads from 1919 to 1953, later was reported to have said that the ninety-ten split in federal funding was "the greatest mistake in highway development."²⁸

The new federal mandate, however, proved irresistible. The *Master Highway Plan* rejected the comprehensive but finer-grained arterial improvements proposed by Shurcliff and Whitten. The high-speed, limited access radial highways and the connecting Inner Belt proposed in 1948 would be far larger than the "expressways" of the 1930 report. While consideration of most of the master plan took another two decades, the embankment road became an immediate issue.²⁹

The governor's message to the legislature in 1946 had emphasized that the metropolitan highway system required two projects immediately: a second tunnel under the harbor and the embankment parkway. The parkway had not, however, been mentioned in the Special Postwar Highway Commission's report published that year; it said that the major transportation issues in Boston were the harbor tunnel, off-street parking, and the central artery. A study prepared by the Metropolitan District Commission concluded in a separate

²⁷Jonathan Lewis Gifford, "An Analysis of the Federal Role in the Planning, Design and Deployment of Rural Roads, Toll Roads and Urban Freeways," Ph.D. dissertation, University of California, Berkeley, 1983, 134-140, 152-185; Warner, *Urban Wilderness*, 38-41.

²⁸Mark H. Rose, *Interstate: Express Highway Politics, 1939-1989* (Knoxville: University of Tennessee Press, 1990), 24; Seely, 17.

²⁹Maguire, Charles A. and Associates, *Master Highway Plan for the Boston Metropolitan Area* (Boston, 1948).

study that it would be a mistake to run a highway through the embankment; the study showed a plan that ended the riverside parkway just east of the Harvard Bridge. The legislature nonetheless authorized the Metropolitan District Commission to prepare plans for extending the Embankment Road.³⁰

The urgency behind these studies reflected the fact that the state was substantially behind in collecting federal matching funds. Highway construction had dropped from an average of a hundred million dollars during the years 1894-1935 to between thirty and forty million in 1947 and 1948.³¹ The proponents of the embankment parkway were led by state senator Philip Bowker, a former Metropolitan District Commissioner, and supported by real estate leaders and the Greater Boston Development Committee, a group organized in 1944. The Committee published a high school textbook on the future development of Boston, called *Surging Cities*. It began with a consideration of ancient urban development and then analyzed in some detail the cities of New York, Boston, Philadelphia, Chicago, and Los Angeles. The authors endorsed the 1930 *Thoroughfare Plan* by Robert Whitten, the "eminent city planning consultant," and reproduced the map of proposed expressways from the frontispiece of the 1948 *Master Highway Plan*.³² (The textbook included "before" and "after" photographs to suggest the benefits that would follow the demolition of elevated streetcar tracks; the proposed elevated Central Artery, however, was sketched as an up-to-date element of urban architecture (Figures 6.10 - 6.13)).

Opposed to the road, according to the *Globe*, were neighborhood residents, those who think recreation will lose, and music lovers. They wrote letters to newspapers and the legislature, and organized baby carriage marches at the Statehouse. Community leaders from the West End, who probably had as much at stake as any of the adjoining neighborhoods, objected on the same grounds as they had in 1929.³³

When a bill to construct the embankment highway was drafted in 1948, a group of Boston residents organized the Storrow Memorial Embankment Protective Association. The Protective Association included among its members some of the same Boston families that had been active in planning for the basin in 1902 and 1929, as well as the secretary of the Trustees of Reservations, the president of Boston University, and Arthur Fiedler, the popular

³⁰Commonwealth of Massachusetts, *Report of the Special Post-War Highway Commission*, House No. 1612 (Boston, 1946); Commonwealth of Massachusetts, Metropolitan District Commission, *Study of the Traffic Situation in Boston* (Boston, 1946).

³¹*Boston Globe*, April 15, 1949, 17.

³²Theodore T. McCroskey, Charles A. Blessing, and J. Ross McKeever, *Surging Cities, A Secondary School Textbook in Two Parts* (Boston: Greater Boston Development Committee, 1948), 51, 195-198.

³³*Boston Globe*, April 15, 1949, 1, 17.

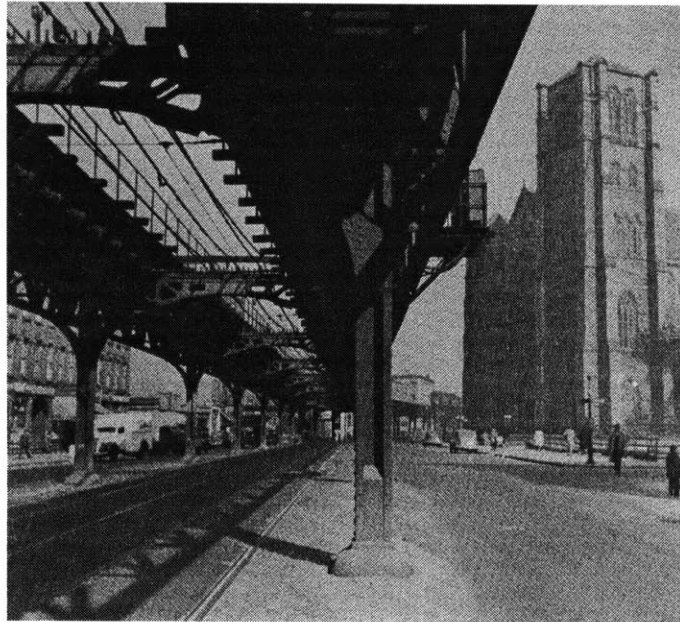


Figure 6.10 “Washington Street . . . 1948,” *Surging Cities*, 1948.

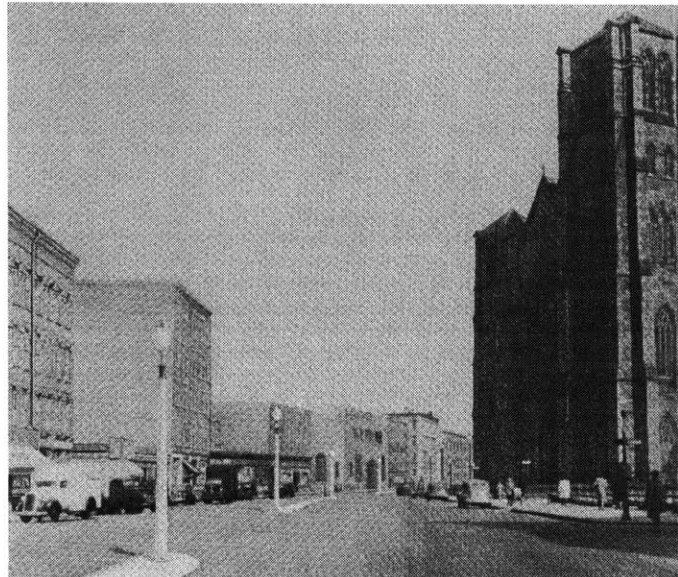


Figure 6.11 “Washington Street . . . Soon,” *Surging Cities*, 1948.

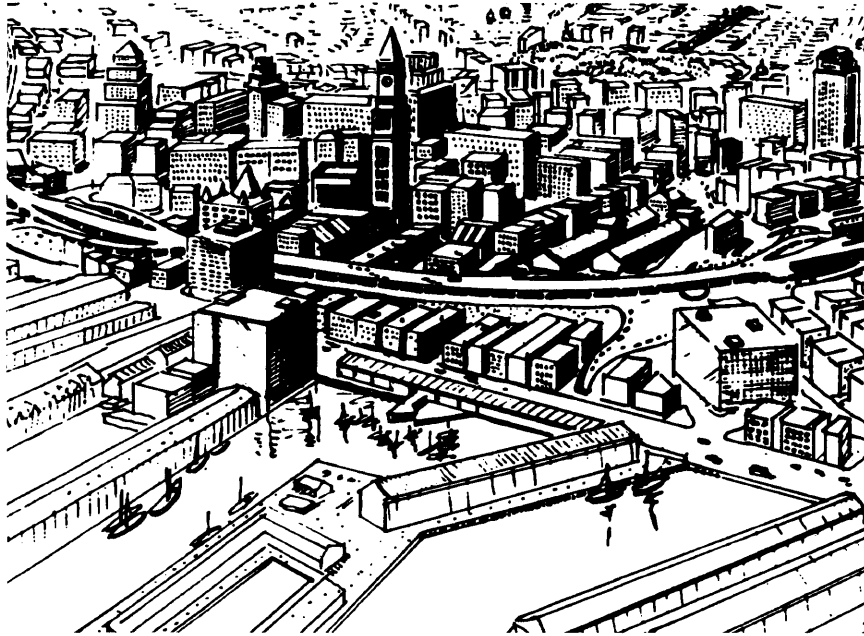


Figure 6.12 Proposed Central Artery, *Surging Cities*, 1948.

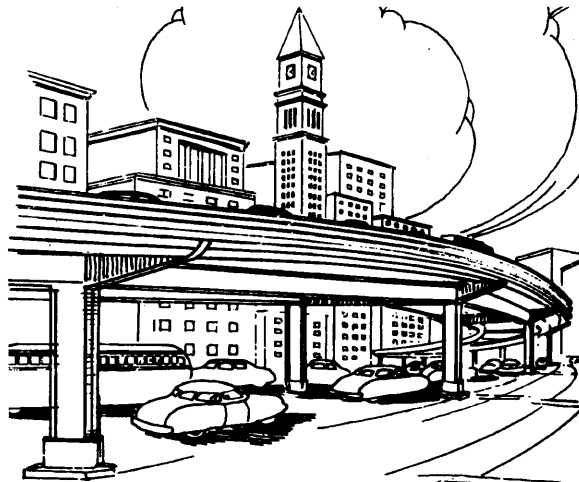


Figure 6.13 Proposed Central Artery, *Surging Cities*, 1948.

conductor of the Boston Pops. James Storrow, the son of James and Helen Storrow, was originally on the executive committee, but when the legislature proposed naming the roadway after his parents he withdrew from the committee.³⁴

In justifying the embankment freeway, the report asserted in its summary that there was a very strong traffic demand paralleling the Charles River. In fact, the *Highway Plan* appeared to show the heaviest traffic demand from the west of Boston to be south of Newbury Street, as the Protective Association claimed. The association also cited the master plan's own conclusion that the river freeway would provide only a measure of temporary relief from congestion until the entire beltway was completed. For the opponents of Storrow Drive, the issue was clearly the park versus the freeway; a moderate improvement for drivers would come at enormous cost to the nearby neighborhoods. There were no engineering or geological subtleties, as there had been in 1902 with the Charles River dam.³⁵

An alternative alignment proposed by Senator Richard Lee would connect Boylston Street just east of Massachusetts Avenue with Soldiers Field Road upstream of the Cottage Farm Bridge, avoiding the Embankment entirely. Two variations were diagrammed in the *Boston Herald*. One showed Boylston Street extended straight across the Fens to intersect with Park Drive; the other linked Boylston Street with an elevated highway built over the Boston and Albany tracks (the route of the turnpike extension in 1969).³⁶

The battle was intense, and its last days were covered on the front pages of Boston's newspapers. Senator LoPresti of the West End pleaded on behalf of the neighborhood's underprivileged children. Another state senator claimed that the Storrows' "gift to the people was being turned into a high-speed highway, where children will be killed."

On April 12, the Storrow Drive bill was defeated by eight Democrats. But the defeat was short-lived. Two weeks later, the doors of the house chamber were locked. Then the House provided for the required three readings of the bill by adjourning twice and then reconvening. The roadway was passed by one vote. Efforts to require a referendum and to make the road a separate bond issue failed.³⁷

³⁴Letter to the House of Representatives from the Storrow Memorial Embankment Protective Association, April 18, 1949; Donald C. Starr, interview by author, May 23, 1984.

³⁵Maguire, 20; Storrow Memorial Embankment Protective Association to the House of Representatives, April 18, 1949; Starr.

³⁶Undated newspaper article, "Charles River Basin" file, Frances Loeb Library, Harvard University Graduate School of Design.

³⁷*Boston Globe*, April 13, 1949, 1, 7; April 29, 1949, 1.

The opponents of the road did succeed in passing amendments to widen the embankment to replace some of the park land to be taken for the freeway, to build two swimming pools, and to depress a section of the roadway. Arthur Shurcliff and his son Sidney were the landscape architects for the new plan, which extended the single large lagoon by constructing very narrow islands up- and downstream to create a series of smaller lagoons. The Shurcliffs revised the 1929 plan for overpasses on top of the Charlesgate, which devastated the park beneath it; they also designed a new "Recreation Center" on new fill extended from the old Charlesbank park site. Although the elder Shurcliff had at first joined in the protest against the highway, in an interview after the father's death his son said "he became convinced that the road really was necessary."³⁸

The new highway demolished both Olmsted's Charlesbank Park on the edge of the West End and the recreation center between Exeter and Fairfield streets that had been built as part of the Storrow Embankment construction, completed just thirteen years earlier in 1936. The loss of the Charlesbank foreshadowed the bulldozing of the entire neighborhood of the West End, which proceeded with near-unanimous support from the city's business community and from architects and city planners.³⁹

Other changes near the mouth of the Charles reflected the changing view of the city center. "The Front," the park first proposed on the Cambridge side of the river by Charles Eliot in 1894, had been intended as the neighborhood park for East Cambridge, though heavy auto traffic along Commercial Avenue separated the park from the nearby residents. Community gardens were developed there during the First World War. In 1950 the city saw a more profitable use for the area, and sold the whole river front to private interests. The Cambridge annual report called it the most important piece of industrial development for the year.⁴⁰ That same year, the MDC leased the grounds of the park on the Charles River Dam to the Museum of Science. Though the museum's first buildings fit comfortably in the park, a parking garage was completed in 1972 that filled the entire park space between the roadway on the dam and the river, and severed pedestrian access on the waterside of the park. The commitment to urban parks had clearly declined.

³⁸Karen Madsen, ed., *An Interview with Sidney N. Shurcliff on Arthur A. Shurcliff, Conducted by Melanie L. Simo, Introduced by Charles W. Eliot II, 1980* (Watertown, MA: Hubbard Educational Trust, 1992), 6.

³⁹On the West End, see Herbert J. Gans, *Urban Villagers: Group and Class in the Life of Italian-Americans*, updated and expanded edition (New York: Free Press, 1982); Sean M. Fisher and Carolyn Hughes, eds., *The Last Tenement: Confronting Community and Urban Renewal in Boston's West End*, with a foreword by Herbert J. Gans (Boston: Bostonian Society, 1992).

⁴⁰City of Cambridge, *Mid-Century Cambridge, Annual Report, 1950*, 45.

The Image of the Road

While many of Boston's professional planners were involved with urban renewal and housing issues (including the West End), Kevin Lynch at M.I.T. began a series of studies on the "visual quality of the American city." In *The Image of the City*, Lynch considered what he called the "legibility" of Boston, Newark, and Los Angeles, and the contribution that visual clarity made to the satisfaction of city dwellers. He sought to determine how residents made sense of the places they lived, by asking them for "descriptions, locations, and sketches, and for the performance of imaginary trips."⁴¹

The visual structure of the historic center of Boston is clear to most residents, Lynch concluded, and the city's visual legibility is strongest along the edge of the Charles (Figures 6.14, 6.15). The city is symbolized by the Common, the gold dome of the State House, and the view across the Charles River Basin from Cambridge. Yet to many people the city is "one-sided," and as they move away from the basin, their sense of the city "loses precision and content." That clarity is also lost at the lower end of the basin; most people in Lynch's interviews were unable to link the river with Boston Harbor.⁴²

Storrow Drive (like the Central Artery) was perceived ambiguously. For pedestrians it was a barrier, and in people's sense of the city, the drive made for an unclear connection between the river, Beacon Hill, and the Back Bay. On the other hand, if people imagined themselves in a car on Storrow Drive, the road was perceived as a high-speed path, and contributed to the sense that along the edge of the Basin, at least, the city could be visually understood.⁴³

The legible structure that contributed so greatly to Boston residents' sense of their city was missing in the observations of people in Newark and Los Angeles. The new freeways in American cities, according to many urban critics, seemed to exacerbate that problem by erecting massive barriers between city neighborhoods. Lynch and his colleagues Donald Appleyard and John Myer were persuaded that well-designed highways could contribute to the life of urban dwellers. By planning for *The View from the Road*, they were convinced that the urban freeways "might be one of our best means of re-establishing coherence and order" on a metropolitan scale. The highway is, or at least might be, a work of art:

The view from the road can be a dramatic play of space and motion, of light and texture, all on a new scale. These long sequences could make our vast

⁴¹Kevin Lynch, *The Image of the City* (Cambridge, Mass.: MIT Press, 1960), 2, 15.

⁴²Ibid., 17, 20.

⁴³Ibid., 23.

metropolitan areas comprehensible: the driver would see how the city is organized, what it symbolizes, how people use it, how it relates to him. To our way of thinking, the highway is the great neglected opportunity in city design.

Those who were distressed by modern highways focused on the repression of ugliness, rather than on making something positive of the highway experience. The authors acknowledged in passing the parkway tradition, dating back to Olmsted and other nineteenth-century landscape architects, but claimed that the original parkways had been intended primarily for pleasure driving, not "general traffic." In the affluent society of postwar America, they asserted, we could once again choose to make driving more pleasurable.⁴⁴

The design of Boston's Inner Belt would be a good test of this hypothesis, since the highway would intersect with the Charles River Basin at Boston University, and at the mouth of the river below North Station — among the city's most and least imaginable areas. That determination led to conclusions that sharply contradicted Lynch's earlier work. Based on their analysis, the authors revised the DPW plan for the beltway, cutting the number of intersections was cut from five to three, and making the road a gently-rounded triangle rather than an irregular circle (Figures 6.16, 6.17). One objective was to draw on the surroundings of the three highway segments so they would each have a distinctive character: the Riverway, from East Cambridge to the Boston University Bridge; the Crossing, cutting diagonally through the Back Bay; and the Centerway, roughly along the alignment of the existing Central Artery (Figures 6.18, 6.19). The first and third of these segments would have a strong visual identity because of their relationship to the river and the harbor (Figure 6.20). Two of the three intersections (in Charlestown and Brighton) were located in rail yards, and the third would be on the Charles, minimizing the disruption of existing street and block patterns.⁴⁵

The visual opportunities in the new plan are appealing. Yet the difficulties, only some of which are acknowledged, are equally clear. There are many conflicts between the view from the road and the view of the road, and those conflicts bear directly on issues of legibility and urban structure. If expansive views of the river and the harbor are allocated to drivers, they are lost to the neighborhood on the opposite side of the road. The triangular scheme forced a crossing at Fort Point Channel, which had been avoided in the Maguire plan. The choice of elevated sections (rather than tunnels) across the Fenway seems inconsistent

⁴⁴Kevin Lynch, Donald Appleyard, and John R. Myer, *The View from the Road* (Cambridge, Mass.: MIT Press, 1964), 2, 3.

⁴⁵*Ibid.*, 45.

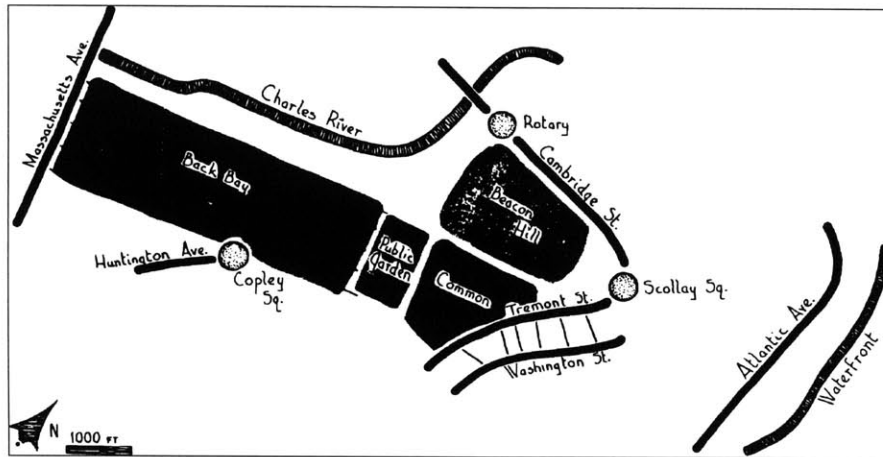


Figure 6.14 Kevin Lynch, "The Boston that everyone knows,"
The Image of the City, 1960.

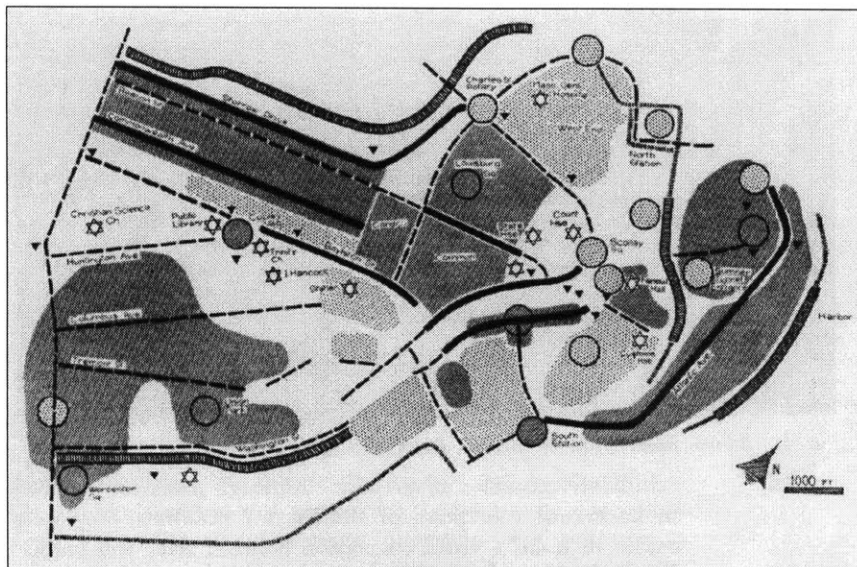


Figure 6.15 Kevin Lynch, the visual form of Boston, *The Image of the City*, 1960.

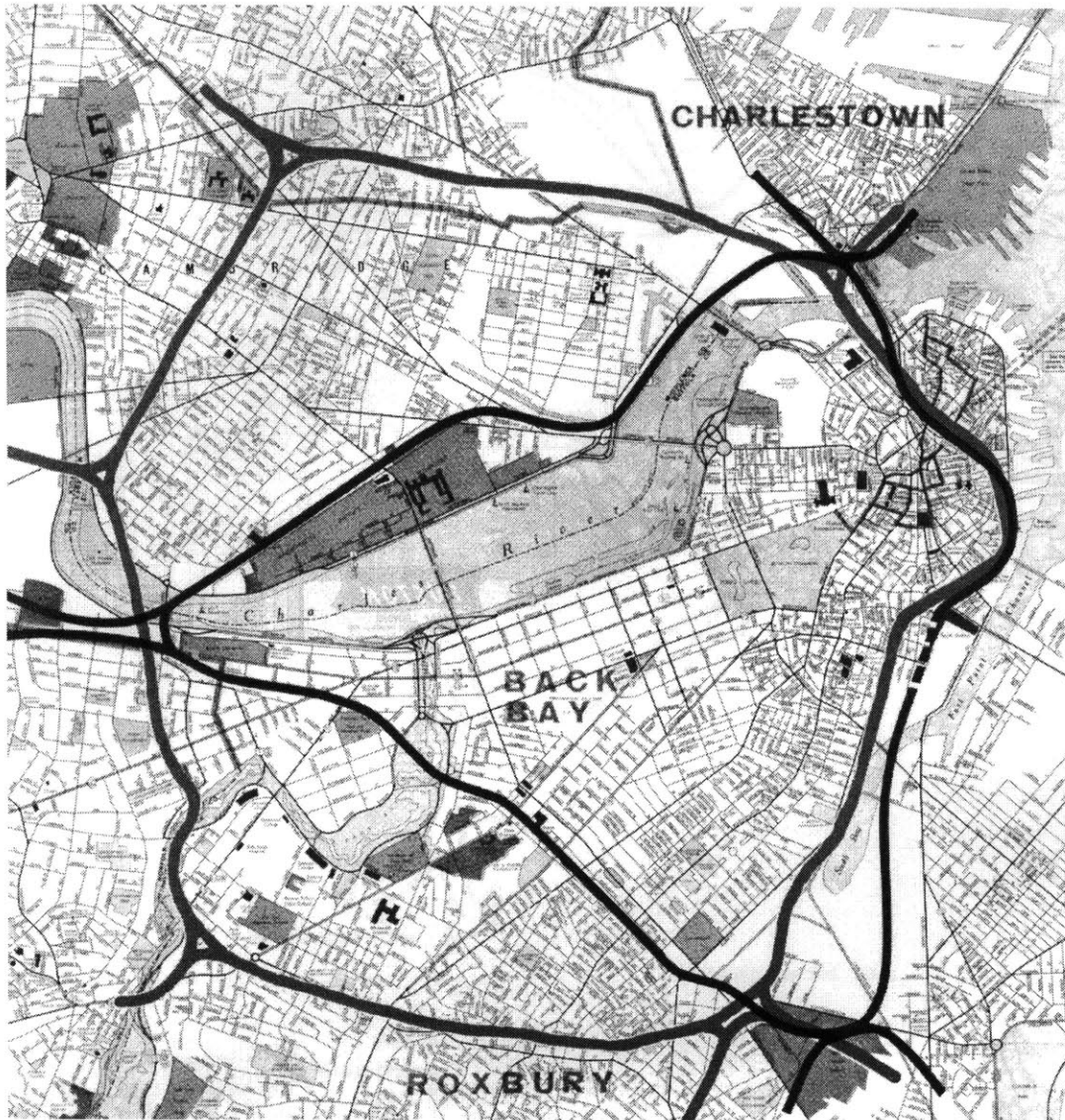


Figure 6.16 Lynch, Myer, and Appleyard, *The View from the Road*, proposal for the Inner Belt, 1964.



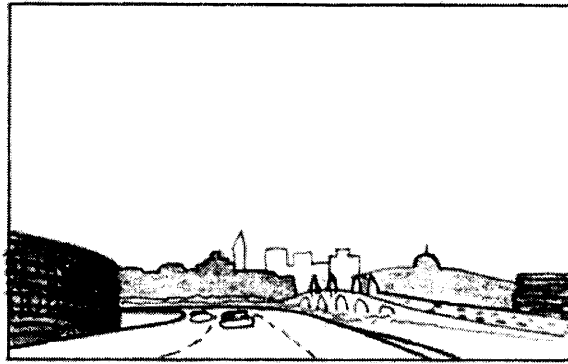
Figure 6.17 Lynch, Appleyard, and Myer, proposal for the Inner Belt, 1964.



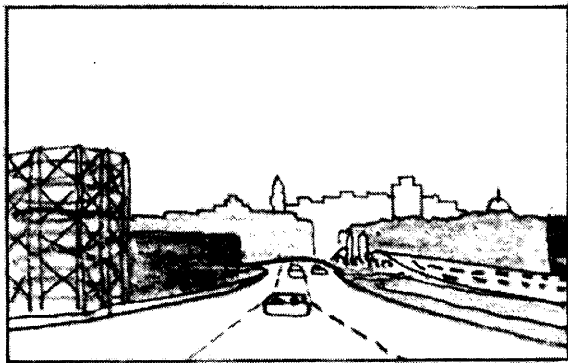
Figure 6.18 Lynch, Myer, and Appleyard, proposal for the Inner Belt, "Centerway and "Riverway" segments, 1964.



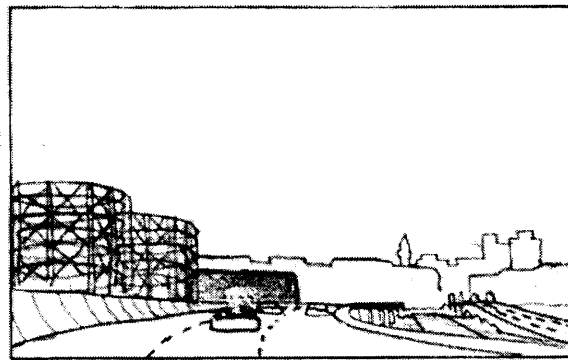
Figure 6.19 Lynch, Myer, and Appleyard, proposal for the Inner Belt, "Riverway" and "Crossing" segments, 1964.



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12



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Figure 6.20 Lynch, Myer, and Appleyard, driving sequence on the Riverway, 1964.

with Lynch's keen observations in *The Image of the City* about the discontinuities between Beacon Hill and the Esplanade created by Storrow Drive.

More fundamentally, the long history of neighborhood resistance to elevated structures — first streetcars and then roadways — might have suggested the possibility of fundamental flaws in the basic assumptions of urban freeway design. Nowhere in their argument did they raise the issues of scale or highway speed, or question the fundamental logic of a small number of very large highways through complex old cities like Boston.

Stopping the Inner Belt

Soon after *View from the Road* was published, that opposition to elevated transportation projects overtook the authors' hope of improving the Inner Belt's design. In December 1969, Boston Mayor Kevin White asked for "an immediate halt to any land taking, demolition, or construction now taking place or contemplated for new highways" including the entire Southwest Expressway, the Inner Belt from Somerville through Cambridge and including the South End, the third harbor tunnel, I-93, and the Winthrop connector. Two months later Governor Sargent went on television to say that "Nearly everyone was sure highways were the only answer to transportation problems for years to come. But we were wrong." He announced that he had decided to reverse the transportation policy of the state by declaring a moratorium on highway construction inside Route 128 (Boston's "outer beltway").⁴⁶

Two projects were not included in the moratorium (Figure 6.21). The Leverett Circle Bridge (finally canceled in 1971) and Interstate 93 through Somerville, completed in 1972, had raised many of the same issues that would later confound the Charles River Crossing. Both of these project included substantial elevated highway construction, and neither required planning studies of any issues besides traffic. In both cases, one of the lessons of the original Central Artery was ignored: that the community opposition to elevated roadways was a symptom of deeper stresses that such structures imposed on surrounding households and neighborhoods.

⁴⁶Lupo, 94, 106, 107.

The Leverett Circle Connector

In 1960 the Port Authority offered the MDC \$10 million as its share of a bridge linking Storrow Drive with the Mystic River Bridge (Figure 6.22). Four years later the legislature authorized the MDC to build the bridge, but did not appropriate funds for its construction (the Port Authority had already announced the sale of bonds for its share). In 1966, money was finally authorized to complete a study of the bridge; by this time, planning for the Inner Belt was accelerating and disastrous traffic congestion was already predicted for the merge of Route 1 with the proposed Interstate 93 at the edge of the Charles. Sketch plans published by the Port Authority called for the demolition of the Green Line viaduct in front of the Museum of Science, and the construction of loop ramps near Leverett Circle. The plan was opposed by city officials (including Fred Salvucci, who worked at the Redevelopment Authority and then for the mayor), as well as by residents of Back Bay and Beacon Hill. They feared the bridge would increase traffic on Storrow Drive and result in another widening of the road (it had been increased from four to six lanes only a few years after it was opened).⁴⁷

The study dragged on, and the project was caught in the demands by community activists for a halt to highway construction inside Route 128. In his December 1969 letter to the governor requesting a moratorium, Mayor White dropped his opposition to the proposed Leverett Circle connector. After the broadcast announcing the moratorium the following February, Sargent indicated he, too, would not oppose the Leverett bridge.⁴⁸

The governor did not, however, intervene to prevent John Sears, the newly appointed MDC commissioner, from undertaking a careful review of the whole idea. A Beacon Hill resident himself, Sears shared the neighborhood concern that the bridge would eventually lead to the widening of Storrow Drive and require filling part of the lagoons. By this time new regulations had been added to federal transportation law (Section 4(f), approved in 1966) that substantially increased the protection for parks, recreation areas, and historic sites. The standard established was relatively straightforward. Federally funded transportation projects would not be approved if they required

the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance as determined by the Federal, State, or local officials having jurisdiction thereof,

⁴⁷*Boston Globe*, May 18, 1960; *Boston Evening Globe*, August 31, 1964, 1, 9; *Boston Herald*, August 16, 1964; *Boston Globe*, April 25, 1967, 52; Luberoff (1993), 211-213.

⁴⁸Lupo, 107, 271.

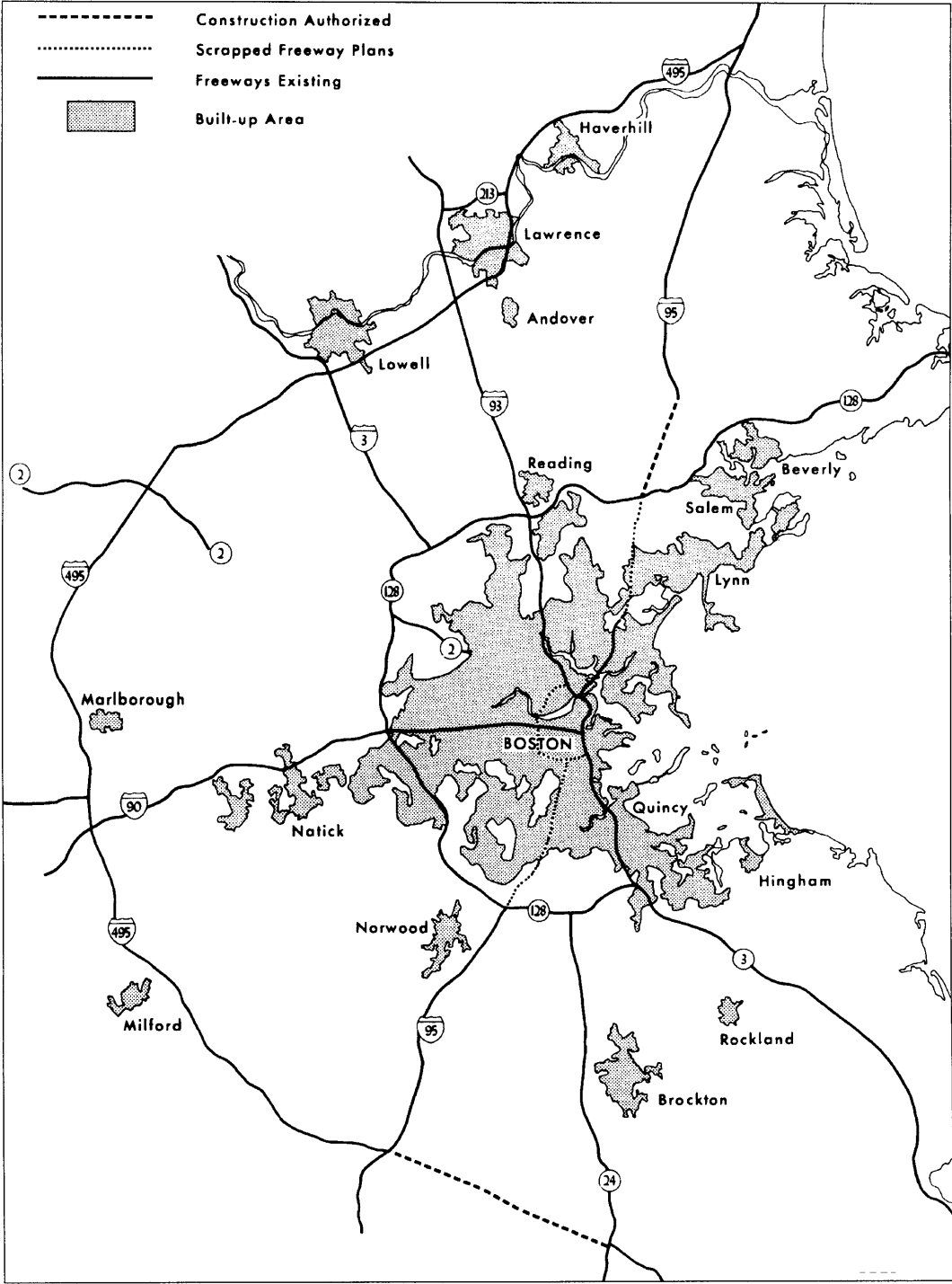


Figure 6.21 Existing, proposed, and cancelled highways, 1971.

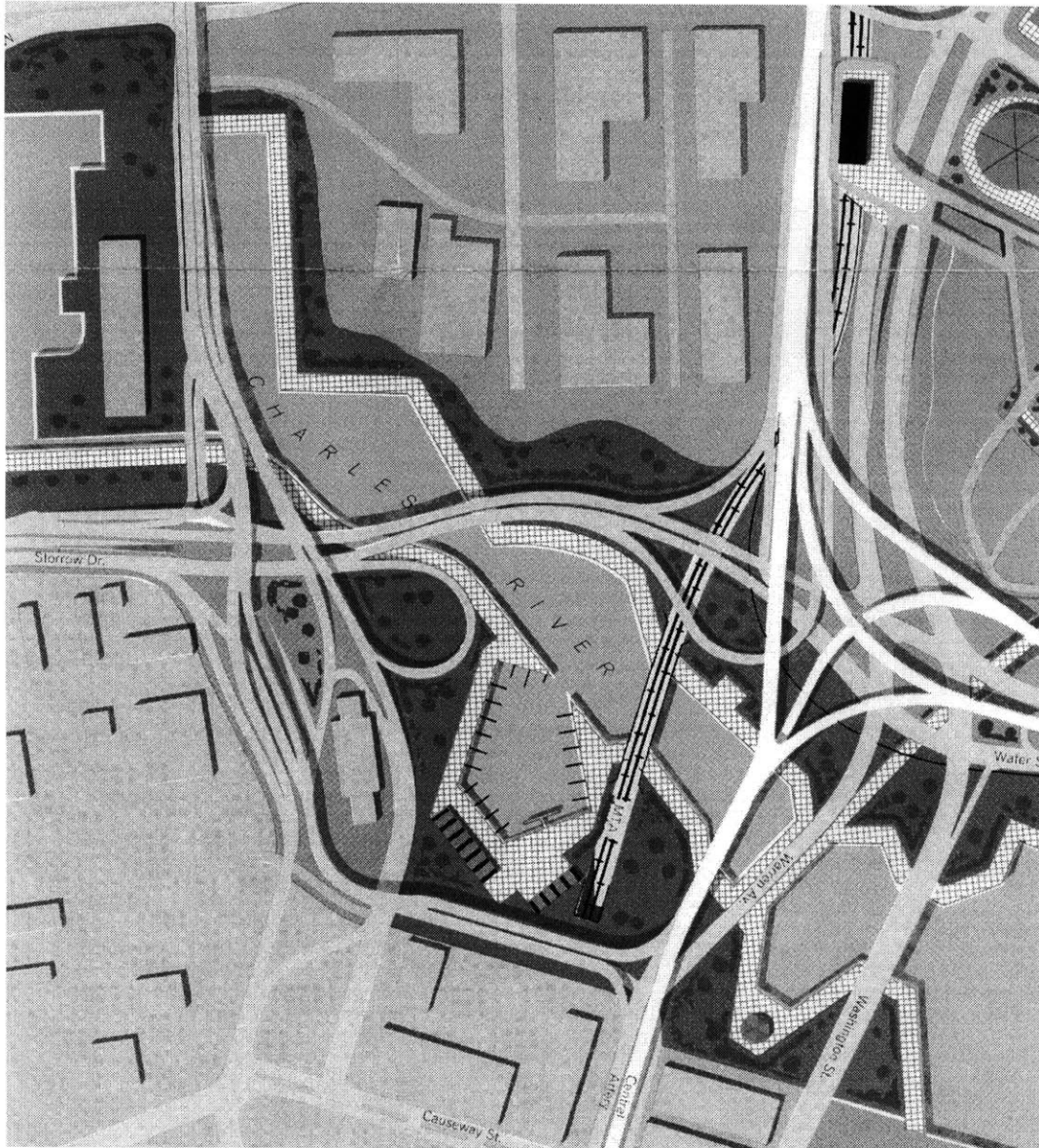


Figure 6.22 Barton Aschman Associates, *North Terminal Area Study*, detail of the Charles River and the Leverett Connector, 1962.

or any land from an historic site of national, State, or local significance as so determined by such officials unless (1) there is no feasible and prudent alternative to the use of such land, and (2) such program includes all possible planning to minimize harm . . . from such use.

First, a determination of significance was to be made by the agency having jurisdiction over the land; second, a written review by the transportation agency was required to show that there was no "feasible and prudent alternative" to the use of the land; third, the transportation agency was to provide "all possible planning to minimize harm" to the land. The first test of the law to reach the U.S. Supreme Court was sustained in the *Overton Park* case in 1971. The application of Section 4(f) was also a major issue in the Inner Belt and radial highway studies commissioned by Sargent, and was cited in the decisions against the alignment of I-95 through the Lynn Woods and Fowl Meadow. The experience of state and local agencies with the new law, however, was still limited; its applicability to the widening of Storrow Drive could be circumvented by using only state highway funds.⁴⁹

By now a Back Bay group had filed a bill to kill the project. Two months later Sears (a resident of Beacon Hill) met with officers of the neighborhood associations of Beacon Hill, the Back Bay, and the Fenway who presented him a petition signed by two thousand people from seventy-four cities and towns; the petition called the bridge an "irrevocable error" that would result in the ultimate destruction of the entire Esplanade. In August, however, Alan Altshuler, the state Secretary of Transportation, agreed that the bridge was an essential project, and that two controls should be established: neither the Central Artery nor Storrow Drive be widened. A year later the plan was dropped. Edward King, the director of the Port Authority, was not surprised; King later said he knew when Sears was appointed that the bridge would not be built. Even after his election as governor in 1978, King was not able to resurrect either the "big-build" six-lane version of the Third Harbor Tunnel or the Leverett Connector.⁵⁰

The confrontation over the Leverett Connector would affect highway planning long into the future. Beacon Hill residents, who feared that changes at Leverett Circle would lead to the ruination of the Esplanade, thwarted the consideration of all the proposed tunnel alternatives for the Charles River Crossing in the 1990s.

⁴⁹*Boston Globe*, March 10, 1970; Title 49, United States Code, Section 1653(f), quoted in [Federal Highway Administration], "Section 4(f) Policy Paper," September 24, 1987, 1; Sloan, 107-112.

⁵⁰*Boston Globe*, March 10, 1970; *Boston Globe*, May 17, 1970, 64.; *Boston Globe*, August 6, 1970; *Boston Globe*, August 22, 1971; Luberoff (1993), 5-6.

Extending Interstate 93

As with the Leverett Bridge, Mayor White and Governor Sargent determined at the time of the general highway moratorium not to oppose the construction of I-93 through Somerville to City Square in Charlestown. This construction project was the missing limited-access link between the original Central Artery and the Interstate construction that had divided the MDC's Middlesex Fells Reservation in the 1960s. White's letter to the governor had exempted from the requested moratorium any projects already under contract, and at the time Sargent announced the moratorium the last of four DPW contracts for this section of I-93 was out for bids.⁵¹

Alan Altshuler said later that there didn't seem to be any controversy about I-93 or the bridge when the moratorium was announced. The governor's office was asked if there were any highway projects they could endorse; they said they checked with the City of Boston and with community activists and found no opposition. Others involved with highway planning at that time have suggested that the state didn't look hard enough. The successful reform candidate for mayor of Somerville in 1970 made the highway project a major issue in his campaign. Everyone, including Altshuler, agreed that soon after the moratorium was announced, "both issues [I-93 and the Leverett Bridge] blew up." Residents of Somerville stood in front of bulldozers and filed a lawsuit to halt construction and change I-93 to a depressed road.⁵²

The governor's task force in 1970 made an explicit commitment to look at housing, employment, open space, and pollution—and not just at the highway system. Nothing like that was done for the completion of I-93. The traffic studies alone, however, might have stopped the Interstate if there hadn't been pressure to build at least one highway somewhere. By the end of 1972, according to Altshuler, nobody in the state transportation department wanted to complete I-93 to the Central Artery for fear it would create "traffic pandemonium" at the merge of I-93 and Route 1 on the high bridge over the Charles.⁵³

The decision came down to the money. If the project were suspended, the state would face \$10 million in breach-of-contract payments to firms which had already been awarded the construction contracts. On the other hand, completing the \$40 million highway would only cost the state \$4 million, because the federal government was paying the other 90

⁵¹Lupo, 271.

⁵²Ibid., 106-10.

⁵³*Boston Globe*, November 26, 1987, 28.

percent. The task force had curtly laid out the temptation of federal money before the decision was made to build I-93 through Somerville: "To be blunt, we perceive a great mindless system charging ahead. The interstate highways within Route 128 will be built as planned, it appears, not because they are the best public investment—or even the best highway investment—for the money. They will be built solely because they involve ten cent dollars . . . "⁵⁴

There is no better example in Boston of the consequences for transportation planning (predicted as early as the 1940s) once state funding was reduced to a small fraction of project costs. The design of I-93 was substantially below federal standards and would create a merge so dangerous that the opening of the completed highway was delayed for months. In addition, given the intense study of these dilemmas by the 1970 governor's task force, it should have been apparent how much more difficult this project would make any future resolution of the link between I-93, Route 1, Storrow Drive, and the Central Artery. If any substantive land-use analysis had been completed, it might have revealed the potential of the four hundred acres of nearly empty rail yards in Somerville, an area far larger and better connected to the regional transportation network than the Fan Pier/Pier Four development that attracted so much political attention in the 1980s. To the protestors in Somerville, those concerns paled against the immediate social and economic harm to their city.

⁵⁴Ibid.; Lupo, 96-97.

VII. THE LOST HALF MILE

Most subjects were unable to interconnect the Charles River and Boston Harbor in any concrete way. Partly this must be due to the screening of the water at the tip of the peninsula by railroad yards and buildings, partly to the chaotic aspect of the water, with its myriad bridges and docks, at the meeting of the Charles River, the Mystic River, and the sea.

Kevin Lynch, *The Image of the City*, 1960

Planning for the half mile of the river between the 1910 dam and the mouth of the harbor, and the edges of the city on both sides of the Charles, would prove far more complex than creating the eight miles of the esplanades upstream. This part of the city, entirely open water in 1830, was transformed over the next hundred years by road and railway construction. By the 1950s the area was a collage of public and private parcels, cut up by railroads, highways, viaducts, bridges, and a multitude of massive underground pipes and high-voltage electrical lines. The local jurisdiction of the area was divided among Boston, Cambridge, and Somerville; state and federal agencies regulated highways; surface, elevated, and underground rail lines; fish and wildlife, flood control, tidelands, and navigable waterways.

In *The Image of the City*, Kevin Lynch identified the widely shared sense of visual clarity created by the Charles River Basin. At the same time, he found that almost no one could connect the river with the harbor. Lynch speculated that this might be due to the screening of the mouth of the river by bridges, buildings, and rail yards, as well as the lack of continuous paths where the river met the harbor. So many people passed over or around this part of the city without seeing it that the area came to be called "the lost half-mile" of the Charles.¹

Beginning with the administration of Mayor John Collins, enormous public energy and professional attention was fixed on the urban renewal projects for Government Center and the West End.² The Central Artery between Haymarket and the river, completed in the 1950s, erected an enormous barrier between the commercial establishments in the Bulfinch

¹Lynch, 20; Max Hall, "The lost half mile on the Charles," *Boston Globe*, May 25, 1986, 65.

²O'Connor, 122-140.

Triangle and the residents of the North End. Passenger traffic into North Station was dwindling. The whole area seemed to be lost in the shadows of the more alluring projects to the west and south.

Eliot's 1894 proposal to recapture the banks of the "Lost Half Mile" of the Charles would not be revived because private capital discovered the potential value of this area, so close to the center of the city, nor as a consequence of planning or urban renewal efforts instigated by Boston, Cambridge, or the Commonwealth. Hurricanes struck the city in 1954 and 1955, and Cambridge and the Back Bay suffered large losses from flooding. Seven years later the General Court approved the construction of a new Charles River dam on the site of the Warren Bridge; the level waters of the Charles River Basin would be extended a half-mile closer to the harbor. Once the new dam was approved, consultants to the city conceived an urban vision for the area that revived the prospect of islands crowned with resplendent architecture in the "lost half mile." Then while one set of city, state, and federal agencies worked to reclaim the New Charles River Basin, another set of agencies created increasingly complex and overlapping regulations that would apply to this peculiar, urban riverfront.

Charles Eliot had predicted in 1894 that the railroads would sooner or later lose the state permits that allowed them to "temporarily" cover the mouth of the river with timber bridges and switching platforms.³ That did not come to pass. In fact, the expansion of the railroads at the mouth of the Charles continued into the first several decades of the twentieth century. In 1928 the Boston & Maine Railroad was authorized by the state to build a seawall and to fill permanently much of what remained of the meeting point of the Millers and the Charles southeast of the Prison Point (now Gilmore) Bridge.

The filling was only part of a much larger plan to consolidate the railroad's interests in Boston. The design for a whole complex of buildings along Causeway Street was presented to the city in glamorous drawings that played up the buildings' spare Art Deco motifs. The station incorporated a new Boston Garden above the station level, and was flanked by an office building on the east and the Hotel Manger on the west. New bascule bridges over the Charles replaced several existing structures, including the original jackknife draw bridge built in the 1830s. The buildings of the McLean Asylum, including the expanded Barrell Mansion, were demolished. Cobble Hill was levelled in 1929, and the railroad gave a dinner for 2,000 people on the site to celebrate.⁴ Soon after the dinner, a freight warehouse

³[Eliot], *Charles Eliot*, 592.

⁴*Somerville Journal*, August 30, 1929; September 25, 1931; May 19, 1994.

(recently converted to artists housing) was constructed on the remains of the once-famous eminence.

The Boston & Maine misjudged its own future. Auto and truck traffic exploded after World War II, and the railroad's passenger service at North Station began a long, slow decline. The elevated structures of Interstate 93, completed in 1972, took acres of the once-vast rail yards, reinforcing the barriers that divided Somerville and separated Cambridge from Charlestown.

City and Regional Plans

It was not just the lower Charles River that seemed to disappear in the minds of Boston residents; after World War II, large areas on both sides of the river seemed to be in eclipse. The clearance of the West End for public housing was suggested in the late 1930s, and ten years later the Boston Planning Board identified the West End, as well as the North End and the South End of Boston as sites for slum clearance.⁵

In 1957, the city organized the redevelopment authority to take control of the West End urban renewal project. In the grand renewal schemes that were executed in Boston in the 1960s, the proposal for new public open space at the mouth of the Charles was a minor element. It was, however, one more example of the challenges facing the City of Boston in dealing with the plans of numerous state and federal agencies. As Mayor Collins asked in 1960, "Who, if not the City of Boston, is to coordinate the activities of the State Department of Public Works, the Turnpike Authority, the Port Authority, the MDC, and the railroads as they make their presently uncoordinated plans about what to do for Boston?"⁶

Five years later the Redevelopment Authority published its *1965/1975 General Plan for the City of Boston and the Regional Core*. The plan included regional as well as local transportation and land-use planning issues, and attempted to assess the potential for both private and public development. The "City of Ideas," according to the report, faced a host of troubling issues: "economic stagnation; antiquated public services; an inadequate transportation system; loss of population; deteriorating housing; and extensive commercial and industrial blight, to name a few." By mid-century, in contrast to growth and prosperity in

⁵O'Connor, 125-6.

⁶O'Connor, 191.

other parts of the Region, Boston had the appearance of a city that had "already seen its best years."⁷

Though the analysis of open space and recreation was only a fraction of the report's consideration of public facilities, the plan made two essential points about public spaces. First, a variety of recreational opportunities was essential to Boston's reputation. Second, the non-recreational use of Boston's harbor and river shores was a blight; if these spaces were developed for recreation, they would significantly enhance the city's economic soundness. The Neponset River, the Harbor Islands, and Fort Point Channel were seen as major large-scale opportunities. Smaller potential waterfront sites were described briefly, including harbor frontage in East Boston, the North End, the North Station area, and South Boston. The extension of the Charles River Basin to the proposed new dam was included in this list, the first time this project was described in a public planning document. However, only the south side of the river was mapped as future open space; the complex geometry of the proposed Leverett Connector took most of the Charlestown side of the river (Figure 7.1).⁸

The first detailed planning for open space along the New Basin was a consequence of hurricanes in 1954 and 1955 that caused severe flooding on both sides of the lower Charles. The 1955 storm dumped twelve inches of rain on Boston in two days, and the water in the basin rose more than four feet above normal. Damage was estimated at more than five million dollars. The MDC commissioned several engineering studies of the river, and all the reports concluded that a new dam should be constructed downstream of the 1910 earthen structure, with a pumping station of sufficient capacity to push the flood waters of the river into the harbor even in the face of high storm tides in Boston Harbor. In 1962 the legislature approved a new dam at the mouth of the Charles, but did not appropriate funds for its construction. Controversy over the cost of the project led eventually to a comprehensive study of the whole watershed by the Army Corps of Engineers, and a federal appropriation for the dam was passed in 1968.⁹

As Olmsted's re-creation of the Muddy River had seamlessly woven the re-creation of a salt marsh landscape into a program of flood control and sanitary improvement, the proposed new dam, together with the dramatic decline in railroad activities along the river,

⁷Boston Redevelopment Authority, *1965/75 General Plan*, 74-75.

⁸Ibid.

⁹Hall, *The Charles*, 67, 74-5. In a remarkable departure from the typical civil engineering solutions to flood control, the Corps of Engineers study also recommended "Natural Valley Storage" along the upper Charles in Medfield and Millis. The purchase of 3,200 acres of existing wetlands (as well as easements on several thousand additional acres) obviated the need to construct artificial flood storage areas.

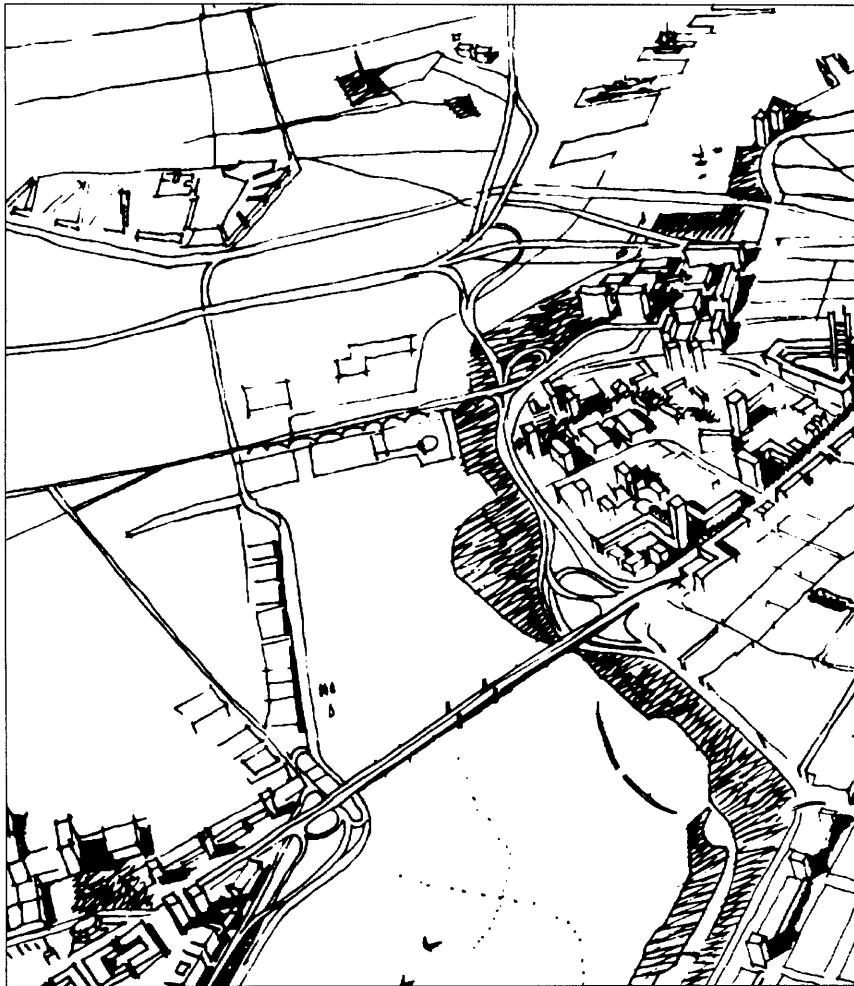


Figure 7.1 Boston Redevelopment Authority, *1965/1975 General Plan for the City of Boston*, detail of the Charles River Basin, 1965.

seemed to open the way for the first time in a century to link the open space of the Charles with Boston Harbor. The 1962 legislation for the new dam granted control of the "lost half mile" of the river and the adjoining lands to the MDC, extending the same powers outlined in the 1903 and 1909 statutes that authorized construction of the first dam to create a "water park."¹⁰

In the mid-1960s the Boston Redevelopment Authority and the Metropolitan Area Planning Council undertook studies in which the Charles was a major focus. *Boston's Scenic Corridor*, a study of the Charles Basin and the Muddy River by the landscape architect Roy Mann, responded explicitly to the Corps of Engineers studies of the Charles. Mann argued that the Charles should not be analyzed alone, but as part of a larger open space system that suffered from truncated links to Boston Harbor and the Muddy River (which had been all but severed from the basin by the construction of the Route 1 overpass over the Charlesgate). Tying the basin to the harbor would not only connect the Boston and Cambridge esplanades with Charlestown and the North End, but would also provide the matrix for real estate development on both sides of the river near North Station.¹¹

The Charles and the "lost half mile" also figured importantly in the report of the Metropolitan Area Planning Council. With the support of the MDC and the state Department of Natural Resources, the Planning Council published in 1969 a comprehensive *Open Space and Recreation Program for Metropolitan Boston*. The study was part of the federally funded Eastern Massachusetts Regional Planning Project sponsored by the state Departments of Public Works and Commerce and Development (later sponsors included MAPC and the MBTA), and 152 of the region's cities and towns. One of the *Program's* primary goals was to address the relationship of open space systems to transportation facilities and development patterns. In analyzing that nexus, several assumptions were made. First, the U.S. was becoming a nation of city dwellers; urban areas were expanding at the rate of one million acres a year (no distinction was drawn between urban and suburban populations). Second, rising incomes and increased leisure time were driving a rapid rise in the demand for recreation. The study did not limit itself to recreation alone; in addition to active and passive

¹⁰Commonwealth of Massachusetts, *Acts of the General Court*, 1962, Chapter 550. The language of these statutes would be an issue in the lawsuits filed in 1990 over the Charles River Crossing element of the proposed Central Artery.

¹¹Boston Redevelopment Authority, *Boston's Scenic Corridor: The Parkland of the Muddy River and the Charles River Basin* (Boston, 1969), Roy Mann, Landscape Architect. Incomplete copy, Government Documents, Boston Public Library.

recreation it considered the conservation of natural resources and the organization of urban space.¹²

The *Open Space and Recreation Program* presented the development of the "lost half mile" of the Charles in a clearly delineated regional context.¹³ The third of the study's four volumes addressed the three primary rivers of metropolitan Boston and the opportunities they presented for creating continuous open space. The Mystic, Charles and Neponset rivers, the report asserted, form "the backbone of the inland open space system," dividing the urban area into four roughly equal sectors and providing linear open space within easy walking distance or driving time of every community.¹⁴

In emphasizing the unique character of the region's rivers, the study echoed the Metropolitan Park Commission's first report of 1893. Like Baxter and Eliot, the authors of the *Open Space and Recreation Program* asserted that the quality of metropolitan life depended as much on the provision of recreation and the enhancement of natural areas as it did on "homes, jobs, or highways." Yet seventy-five years after the first acquisitions along the region's rivers, and in spite of the international renown of the Charles Basin, only sixty-five of the 224 miles of river banks in greater Boston were in public ownership. The new report repeated the 1893 park commission's recommendation that the shores of all the region's rivers should be publicly owned or controlled.¹⁵

The *Open Space and Recreation Program* acknowledged the state legislature's approval of the new Charles River dam seven years earlier, as well as the planned Inner Belt highway construction, and urged that park land should be acquired immediately upstream of the proposed dam, prior to the start of highway construction (Figure 7.2). The dam was to be built on the site of the Warren Bridge, which had provided both vehicular and pedestrian connections from City Square and the Navy Yard to Causeway Street. To replace that pedestrian link the report recommended the construction of a walkway across the locks, the lock gates, and the pumping station at the new dam.¹⁶

¹²Commonwealth of Massachusetts, Metropolitan Area Planning Council, Metropolitan District Commission, and Department of Natural Resources, *Open Space and Recreation Program for Metropolitan Boston*, Vol. 1 (Boston: April 1969), 5.

¹³By contrast, the MDC regional master plan of 1956, though it recommended the acquisition of large tracts in the suburbs, did not describe the possibility of linking the Charles with Charlestown, the North End, and the Harbor. Commonwealth of Massachusetts, Metropolitan District Commission, *Study and Recommended Program of Development of Park and Reservation and Recreational Facilities of the Metropolitan Parks District*, Edwards, Kelcey and Beck, consultants (Boston, 1956).

¹⁴Commonwealth of Massachusetts, *Open Space and Recreation Program for Metropolitan Boston*, Vol. 3, *The Mystic, Charles and Neponset Rivers* (Boston: April 1969), 5.

¹⁵*Ibid.*, vol. 3, 5.

¹⁶*Ibid.*, 5, 36.

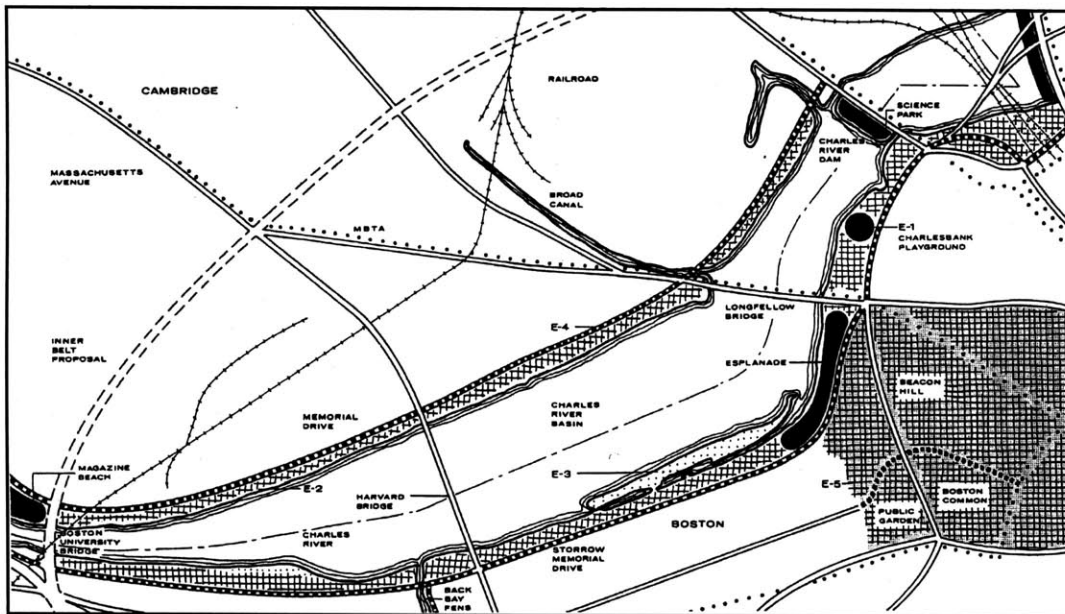


Figure 7.2 Lower Charles River Basin, *Open Space and Recreation Program for Metropolitan Boston, 1969.*

Creating the New Basin

Begun in 1974, the dam, locks, and pumping station were completed four years later. Six pumps were installed, each driven by a 2,700 horsepower diesel motor, with a total capacity of more than three million gallons a minute. The new dam had been completed but not opened at the time of the blizzard of February 7, 1978, when the storm tide rose five and a half feet above mean high water, as high as the record high tide of April 1851. The locks and sluices were closed, and the pumps ran for several days straight after the storm. The permanent opening of the locks at the old dam to stabilize the water level in the New Basin was delayed until the ten-story-deep Prison Point Pumping Station was completed in February 1981.¹⁷

An early design for the dam proposed locating the walkway above the upper story of the pumping station, but that idea was rejected; as the *Open Space* study had recommended, fenced pedestrian walkways were instead built across the new dam and on the lock gates. On either side of the pumping station and the locks, the dam was an earthen structure faced with stone riprap along the Charles and the harbor, creating (as the old dam had done) gently sloping open spaces. On the north side of the pumping station a fish passage was built to accommodate the spring spawning runs of alewife and blueback herring, shad, and smelt. Lighted paths on the Boston side extended along the shore as far as the railroad bridges upstream (in anticipation of a future pedestrian crossing over the tracks). Walkways also connected the dam with the commercial buildings that faced Causeway Street. The three acres on the north side of the dam was named Revere Landing Park. Though of unexceptional design, these parks and pedestrian ways would later be of crucial legal importance in the debates over the scale and form of the Charles River Crossing.

Unlike the meandering shores and planted meadows of the Fens, which were integral to Olmsted's 1880s design for managing the Muddy River, the proposed park land upstream of the new dam was not a functional necessity in the new flood control program at the mouth of the Charles. No property was purchased along the "Lost Half Mile" until the late 1980s, long after the highway plans were well advanced. During this time, the MDC struggled as an agency; six different commissioners served between 1978 and 1982, and new parks and reservations were not a high priority.¹⁸

¹⁷Hall, *The Charles*, 69-70.

¹⁸Otile McManus, "Wrestling with an octopus," *Boston Globe Magazine*, March 2, 1986, 19-20, 48.

The North Station Development Plan

Ignored during the urban renewal of Government Center and the West End, "Downtown North" was one of the last major underdeveloped areas in the city. From the Redevelopment Authority's perspective, the riverfront parks were significant as part of a much larger scheme that included a substantially renovated and expanded Boston Garden and North Station. The first step in that scheme was securing the site for a new federal office building in downtown Boston. The federal General Services Administration initially preferred a location facing Boston Common, but the Redevelopment Authority believed that a more beneficial site would be in the North Station area.¹⁹ The architectural firm of Moshe Safdie Associates was hired to produce a plan that would document the benefits of the proposed location and the development that was likely to follow the federal investment in the area. The Safdie study, completed in 1980, included the first elaboration of the urban design opportunities in the "lost half mile" since Eliot's 1894 sketch.²⁰

The study emphasized the significant advantages of the North Station area. Both transit and auto access were well developed, and it was close to Government Center, Faneuil Hall, and the Charles River. The red brick buildings, mostly four to eight stories, established a distinctive character for the Bulfinch Triangle. But there were also obvious reasons for the commercial neglect. The elevated structures of the Green Line and the Central Artery, and the rail lines and railroad bridges across the Charles, divided the area, already small, into fragments: the viaduct between Leverett Circle and the Artery cut off most of the riverbank; North Station was squeezed between the viaduct and the Green Line. Almost seventy percent of the property was owned by the city or the state, including all of the riverfront except for the Rehabilitation Hospital.²¹

Perhaps the most striking aspect of the plan was its optimism about the work to be completed in the first three years or less. These included "the most important and immediate public initiative," the removal of the Green Line elevated tracks on Causeway Street. A commitment by the federal General Services Administration to build a new office building and the renovation of Boston Garden were also to be finished during that time. Those projects would be followed by the permanent relocation of the Green Line. Consistent with the late 1970s preliminary planning for the Artery, the plan recommended that in the long term the

¹⁹Kennedy, 207.

²⁰Moshe Safdie and Associates, *A Development Plan for the North Station District* ([Boston], [1980]).

²¹Ibid.

northbound Storrow connector should be relocated in a tunnel under the Charles, and the southbound Storrow connector rebuilt on grade or in a tunnel. The rail lines on the river side of North Station should be relocated downstream, or rebuilt below grade as part of the Artery construction. Simplifying the tangle of elevated and underground transportation structures would be crucial if the vision for the area were to be realized.²²

These publicly funded actions would be followed by a major renovation of Boston Garden and 1,500,000 square feet of private construction, all of it surrounded by "Rockefeller Center-type" open space. Over five hundred thousand square feet of building renovation was expected in the Bulfinch Triangle south of Causeway Street. Along the river eleven hundred units of housing and a four-hundred-room hotel would be developed with connections to Canal Street, the Freedom Trail, and upriver to the Esplanade.²³

The architects, unconstrained by the existing seawalls and river edges, took a bold approach to reconfiguring land uses along the river. Two schemes made only modest alterations in the shoreline, in architectural configurations labeled "Back Bay Fabric" and "Towers in the Park." Gourlay's 1844 fantasy of an island in the river was revived, in two quite different variations. A plan for "Piers and Canals" would create a "one-of-a-kind environment" like Amsterdam and Venice. A "Mixed Use Island" proposed a single, more articulated island, large enough for new development and open space, with public spaces on both sides of a reshaped river channel.²⁴ Like the new dam, all these schemes reflected an entirely artificial view of nature in the city (Figures 7.3 - 7.5).

City and state officials succeeded in the primary objective of the *Development Plan*, which was persuading the federal government to build a new office building on Causeway Street. Everything else outlined in the *Plan*, including the "immediate" public-sector initiatives, was delayed—the demolition of the elevated Green Line, the creation of a "super-station" linking the Orange and Green Line with the commuter rail platform, the North Station-South Station rail link. The owners of the Boston Garden later determined to construct a new building, but that, too, became inextricably entwined with the planning for the Central Artery.

²²Ibid.

²³Ibid.

²⁴Ibid.

The First New Basin Master Plan

In 1980, the MDC responded to the escalating scope of highway planning for the Central Artery. The agency's chief landscape architect drew a "master plan" for the "Proposed New Charles River Basin," which consisted of a single drawing (Figure 7.6). To establish a formal record of its future intentions, the MDC commissioners voted to endorse the master plan.²⁵

The proposed New Basin extended the design approach of the Storrow Embankment. New fill would create an island along Nashua Street, with a lagoon on the landward side, and would enlarge the open space on the water side of Spaulding Hospital (Figure 7.7). Continuous pathways would link the New Basin with the esplanades upstream and with the surrounding city. A foot bridge was proposed across the lock on the old dam to the pavilion behind the Museum of Science. The drop in elevation from the drawbridge south to Leverett Circle created the possibility of a walkway underneath the O'Brien Highway to the new park space along Nashua Street. Both sides of the Millers River would be landscaped, and a footbridge would be constructed where the Millers met the Charles (Figure 7.7). Walkways would be extended over the railroad tracks, along the harbor side of the old Austin Company (later Stop and Shop) building, and would continue under the Charlestown Bridge to the North End (Figure 7.8).

Though the MDC had been granted the power of eminent domain at its founding, money for land acquisition was limited, and several years passed without progress on the plan. The only publication of the MDC's plan for the New Basin was in the environmental impact study for the north area of the Central Artery project.²⁶

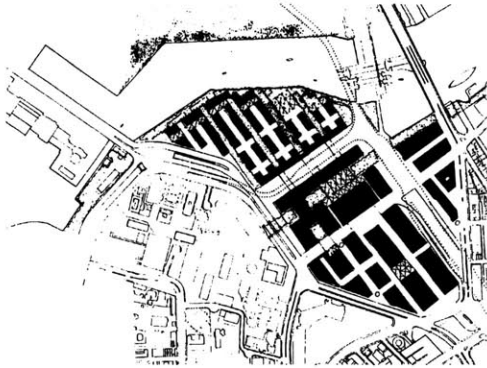
Commonwealth Tidelands

A major regulatory reinterpretation was the impetus for the first open space acquisitions in the New Basin. The state waterways legislation, Chapter 91 of the Acts of 1866, established regulations for construction and development along waterways, including tidelands, rivers, and streams. Following the passage of Chapter 91, the railroads were required to obtain licenses for temporary or permanent fill along the lower Charles.

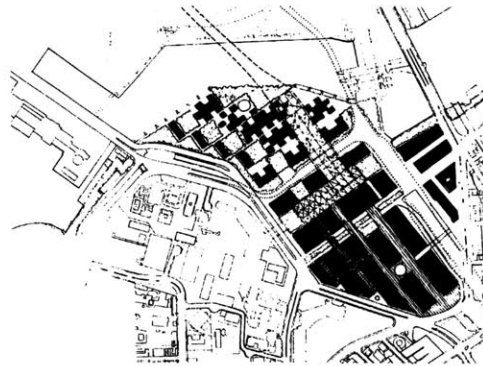
The origin of Chapter 91 goes back to the 1630s, when the government of colonial Massachusetts granted ownership rights in tidal flats, the land exposed at low tide, to promote

²⁵Minutes of the Metropolitan District Commission, June 12, 1980.

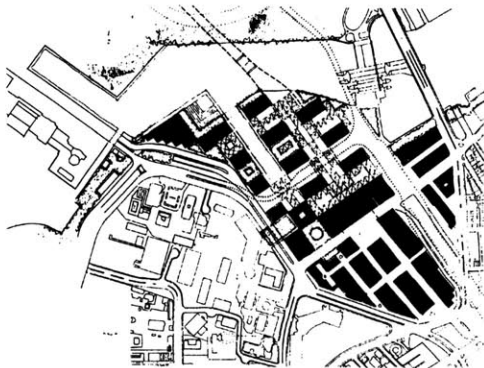
²⁶Louis Berger and Associates, *North Area Central Artery: Final Report* (Boston, July 1982), 338.



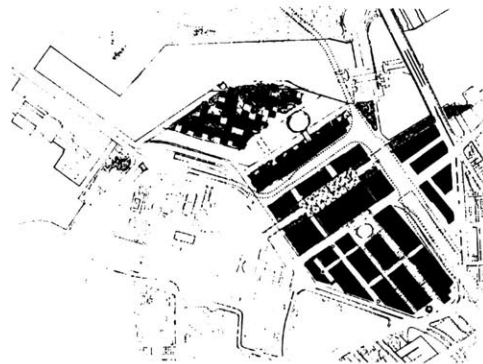
■ Back Bay Fabric



■ Towers in the Park

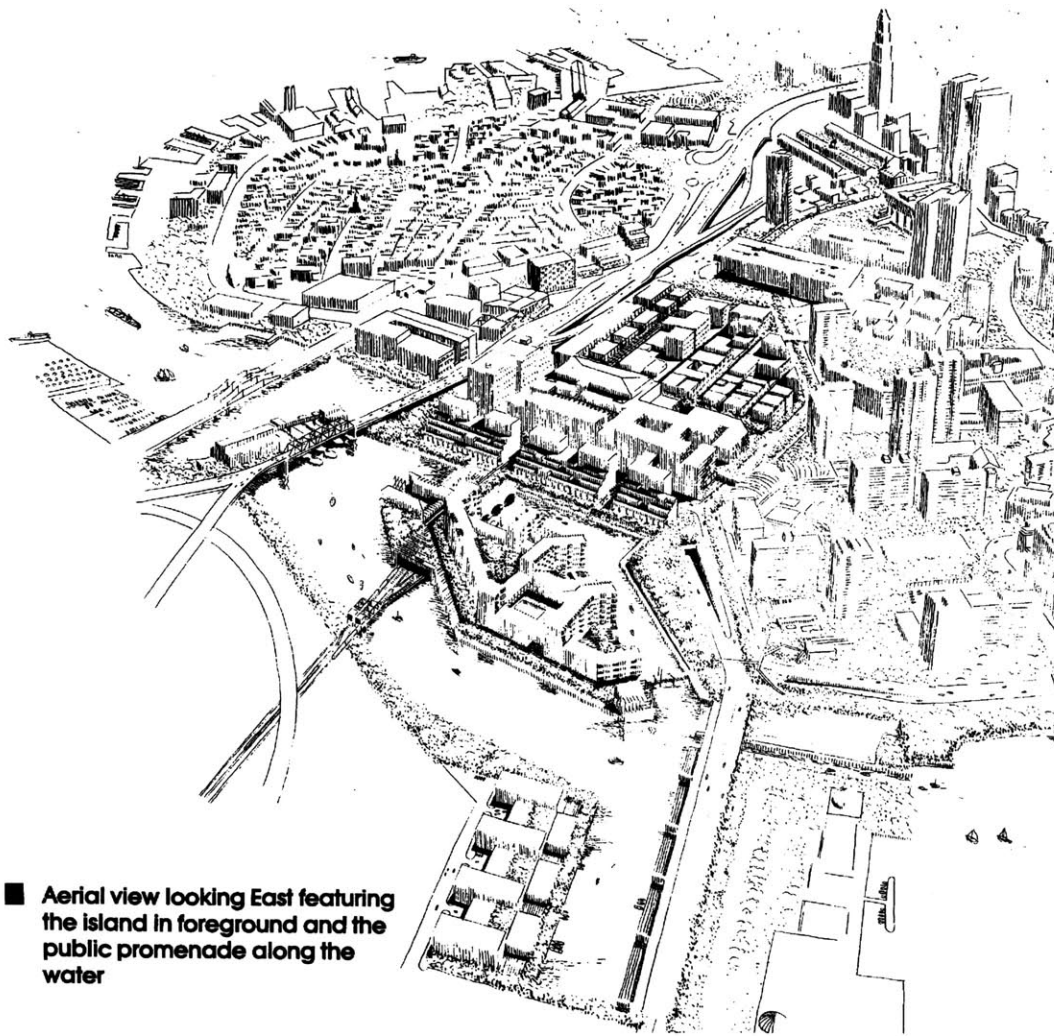


■ Piers and Canals



■ Mixed Use Island

Figure 7.3 Moshe Safdie Associates, *A Development Plan for North Station*, site plan alternatives, 1980.



■ Aerial view looking East featuring the island in foreground and the public promenade along the water

Figure 7.4 Moshe Safdie Associates, *A Development Plan for North Station*, 1980.

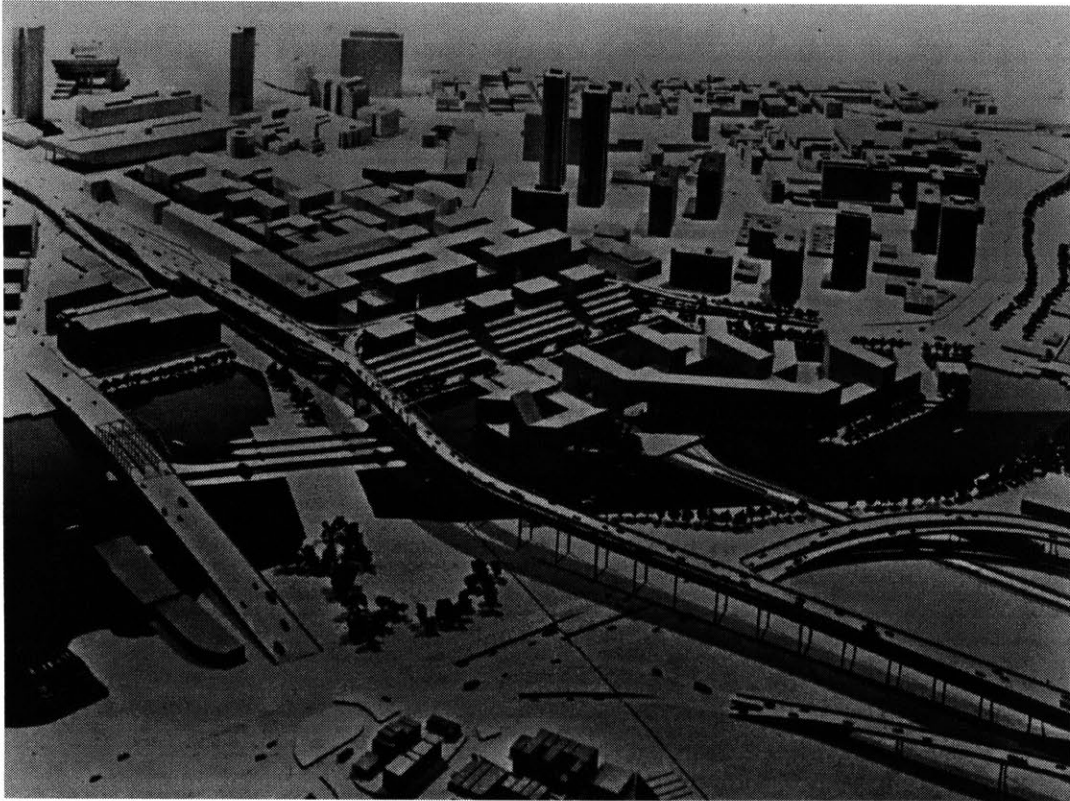


Figure 7.5 Moshe Safdie Associates, *A Development Plan for North Station*, photograph of model, 1980.

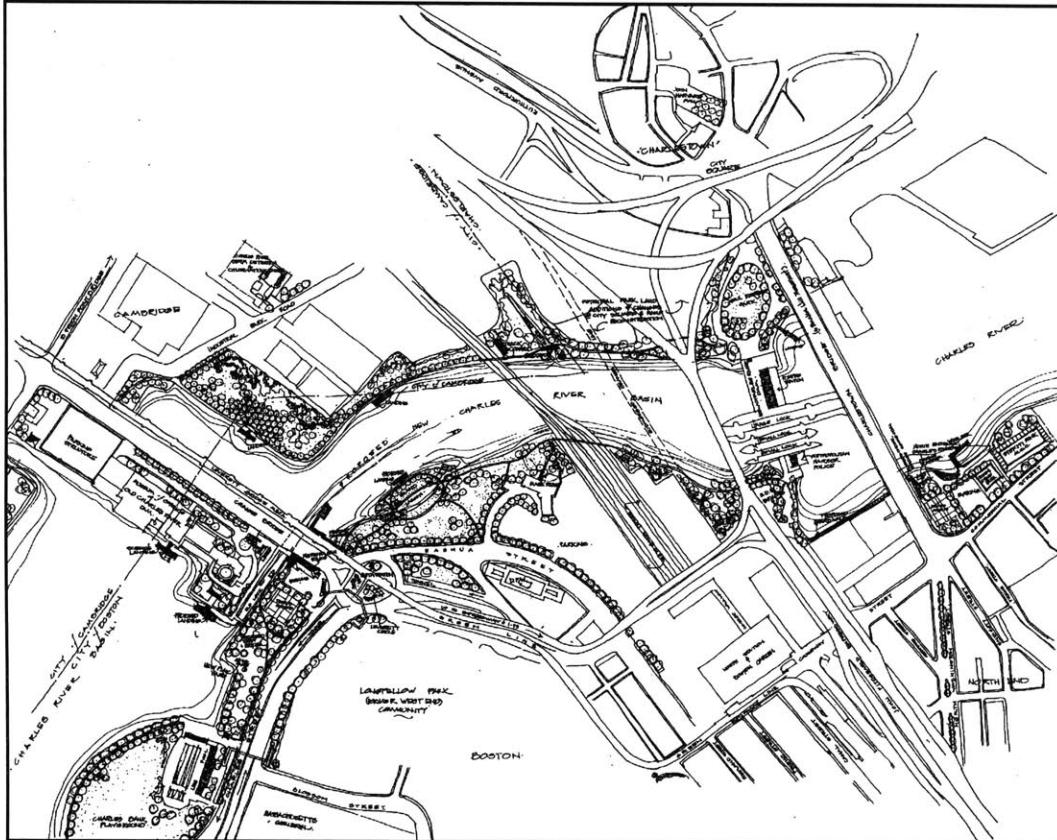


Figure 7.6 James Falck, "New Charles River Basin Master Plan,"
Metropolitan District Commission, 1980.

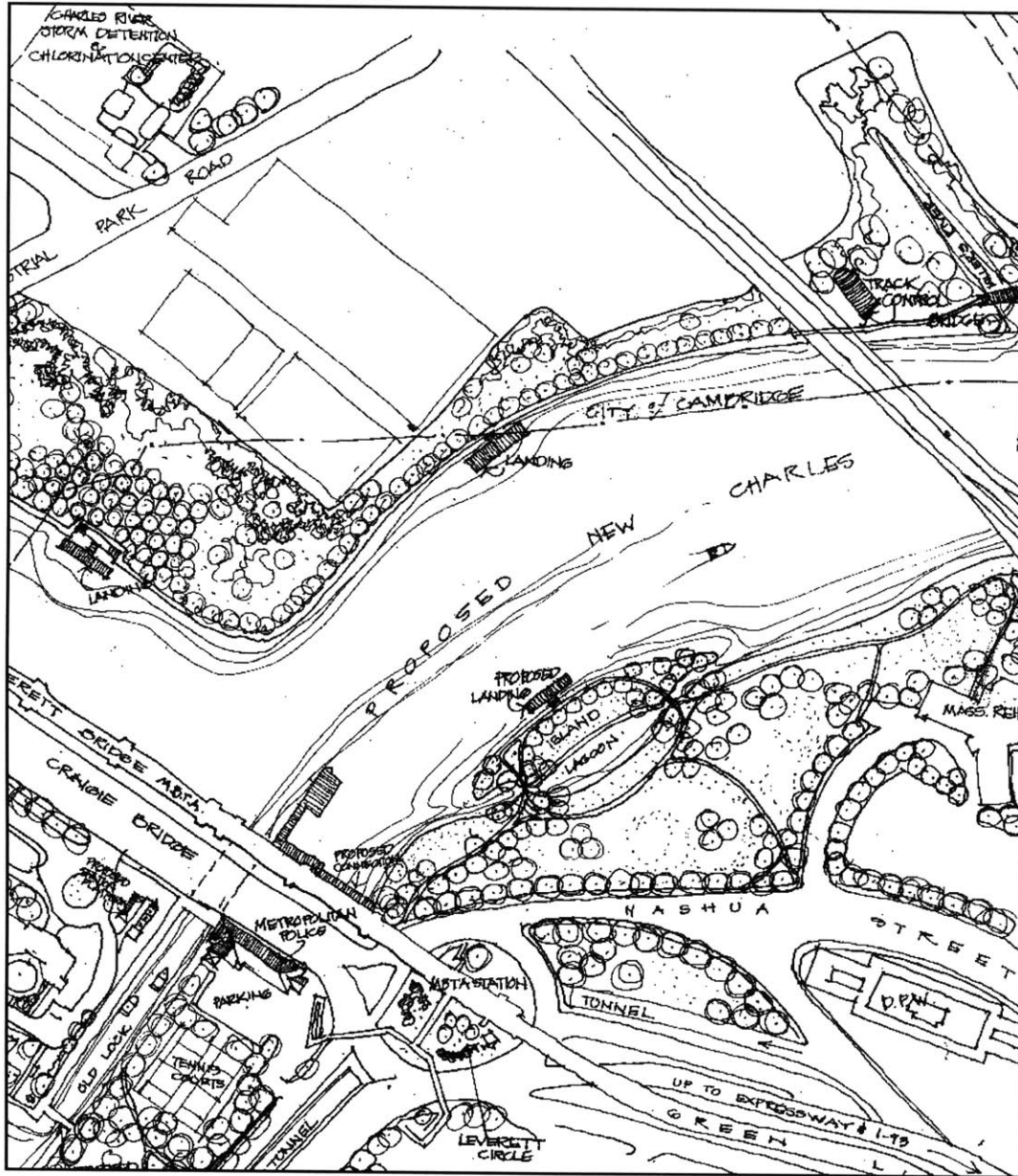


Figure 7.7 New Charles River Basin Master Plan, detail of Nashua Street and North Point, 1980.

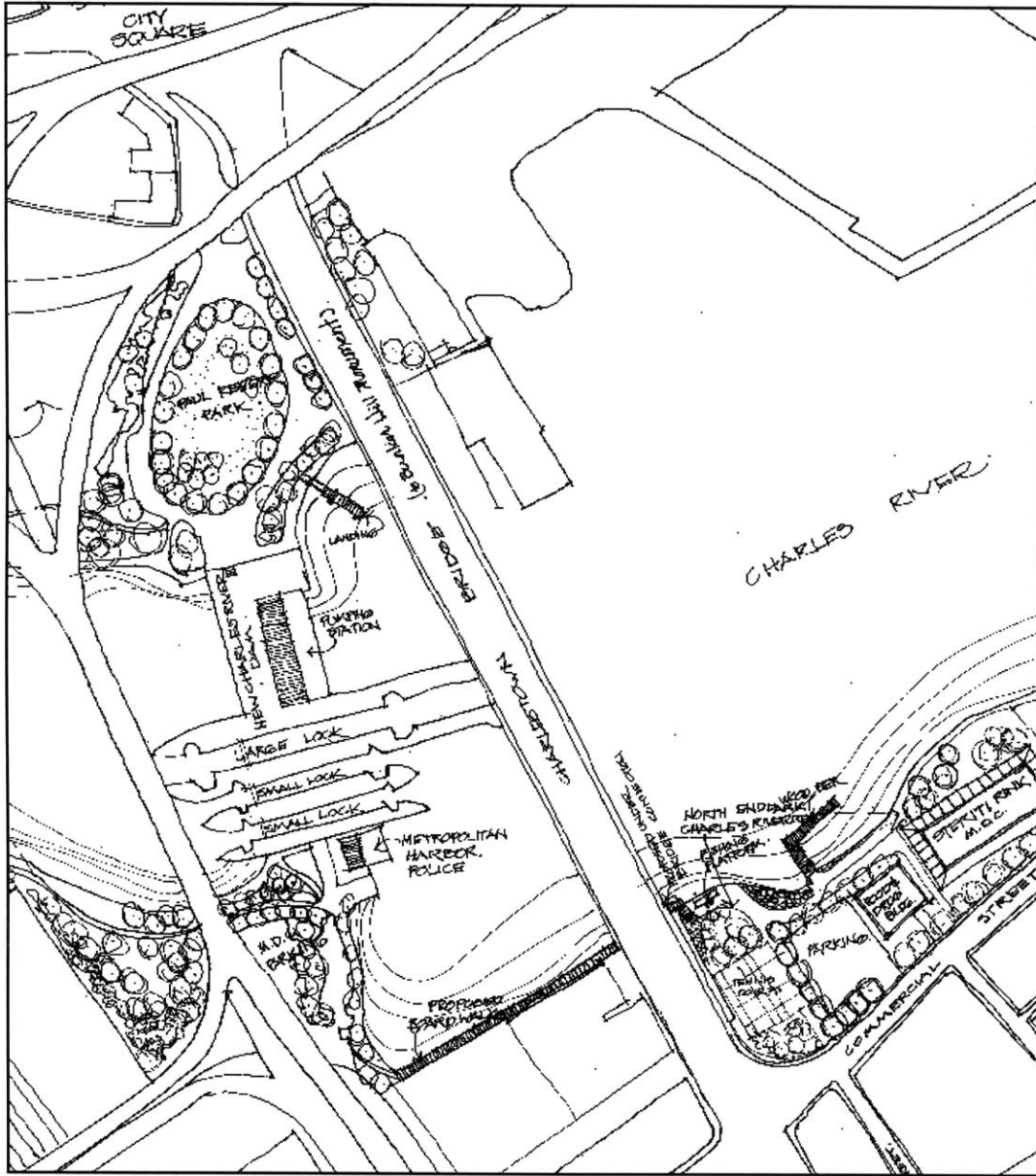


Figure 7.8 New Charles River Basin Master Plan, detail at the new dam, 1980.

commercial ventures and to raise money for the colony. These grants were subject to a guarantee of public access for fishing, fowling, and navigation, an acknowledgement of the doctrine of public trust in Roman and English law, which recognized broad rights in natural resources as well as the state's obligation as trustee of the public interest.²⁷

The law was amended in 1983 to codify procedures that would license the use of tidelands for "water-dependent uses" (fishing, shipping by water, etc.) or for other public purposes, in particular, public access to the water. Chapter 91 licenses would be required for all projects on, over, or under "flowed tidelands," that is, seaward of the present mean high water shoreline. The regulation also applied to "filled tidelands," the area between the present mean high water line and the historic high water line; that jurisdiction was bounded, however, by a line 250 feet from mean high water or the first public way, whichever was further landward (Figure 7.9). Along the Charles River, for example, the law applied to the area of the once-vast salt marshes, but generally only between the river and the nearest public way.²⁸

A new development of a "non-water-dependent use" on land filled by the railroads would be required to create an appropriate public benefit like waterfront parks or public walkways. Over time, the revised regulations added significantly to the public access in the New Basin, but their application was dependent on the piecemeal pattern of new public and private development. The Chapter 91 licensing procedures constituted one more regulatory overlay in the fragmented, parcel-by-parcel reclamation of the New Basin.²⁹

Between 1984 and 1988 the Chapter 91 waterways licenses for three projects along the "lost half mile" mandated the construction of several waterfront pathways and required the transfer of two large parcels of waterfront land for future park development. The first construction was to replace the railroad trestles at North Station that burned in 1984, shutting down all the commuter lines into North Station. At least one person realized the opportunity this offered. Roy Mann, author of the 1967 Charles Basin study (described above), had later published a study of *Rivers in the City*, an analysis of the river fronts in a score of cities around the world.³⁰ Soon after the trestle fire his letter to the editor of the *Globe* reminded

²⁷William L. Lahey, "Waterfront Development and the Public Trust Doctrine," *Massachusetts Law Review* 55 (1985): 55-57.

²⁸*Ibid.*, 61-66. This limited jurisdiction granted after-the-fact approval to all post-1863 construction landward of the roads and parkways along the Charles. Licenses granted for specific purposes like the railroad bridges, trestles, and switching yards extending from North Station, applied only to the original use; new structures on such filled land would be subject to the new regulations.

²⁹Commonwealth of Massachusetts, Department of Environmental Protection and Massachusetts Coastal Zone Management, *Chapter 91: An Introduction to the Massachusetts Public Waterfront Act and Its Regulations* (n.p., n.d.), 4-15; see also Lahey, 55.

³⁰Roy Mann, *Rivers in the City* (New York: Praeger, 1973).

the paper's readers of both the 1967 report and Charles Eliot's proposal of 1894. The fire, Mann wrote, was another indication of the hundred-year-old conflict between the surface rail crossing and the frequent proposals for riverfront open space. Instead of rebuilding the trestle, the rail crossing should be buried in a tunnel, which would not only allow for open space at North Station but would encourage taxable private development where the train platforms were located. Mann also pointed out that the highway ramps proposed in Charlestown should be pulled back from the river's edge so that the proposed Esplanade extension "could see the light of day."³¹ Mann's notion was never seriously entertained by any state or local agencies. Instead, a new concrete trestle was built on the site of the old one. The Chapter 91 license for the new trestle required the construction of walkways on the upstream and downstream edges of the new structure; even though the walks dead-ended in the middle of the river at the railroad drawbridges, they were seen as an essential next step in linking the fragmented parcels of public land along the river.

Two years later a court-ordered settlement mandated the construction of a new Suffolk County jail. Though in the middle of the city, the "lost half mile" was visually removed from residential neighborhoods and therefore a politically acceptable site for the prison. Again, a Chapter 91 license was required; it mandated the transfer to the MDC of a hundred-foot-wide strip of land on the river side of the jail site, extending from Leverett Circle to Spaulding Hospital. Under the license, park construction was to be completed within two years after the last lease on the property (for a state-run helicopter landing site) expired. While it was argued during the planning that the new jail would be incompatible with the vision for the New Basin, the new building was criticized after its completion for being unnecessarily luxurious.³²

The most complex waterways license in this area was for the new Central Artery, which had been divided into three study areas—north, central, and south. By the mid-1970s, the Central Artery North Area (CANNA) project was split off as an independent project. The state DPW argued that the northern section could be designed to accommodate a depressed Central Artery; and even if the depression of the center section was never approved, the North Area project would remove the dangerous weave at the merge of Route 1, Interstate 93,

³¹Roy Mann, letter to the editor, *Boston Globe*, April 23, 1984.

³²Hall, "The lost half mile," 86.

CHAPTER 91 JURISDICTION

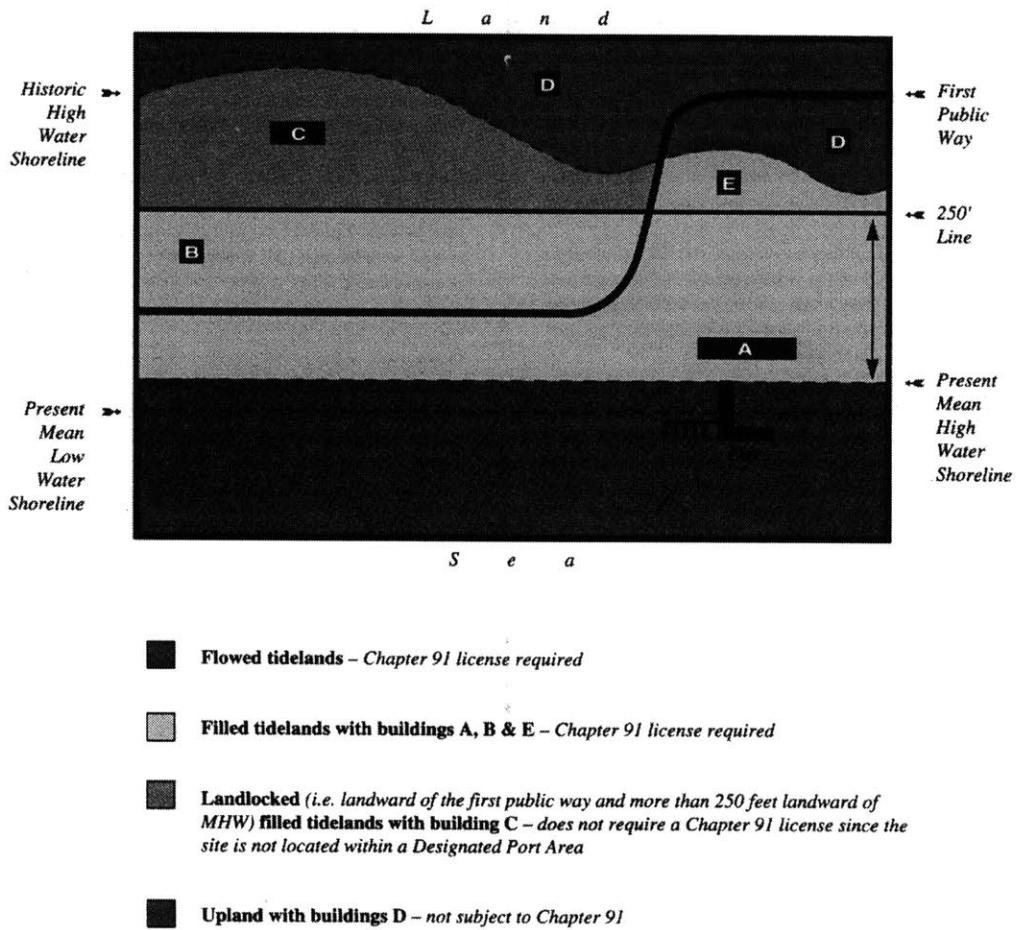


Figure 7.9 Massachusetts Department of Environmental Protection, Chapter 91 Jurisdiction.

and the Storrow Drive connector.³³ The plans for the North Area called for the demolition of the elevated highway over City Square in Charlestown, to be replaced by a tunnel and loop ramps that made the connection between the Mystic River Bridge and Interstate 93. The loop ramps would extend in a rising semicircular arc from the proposed City Square tunnel over the last remnant of the Millers River and encircle the large plant of the Boston Sand & Gravel Company. The loops would take up most of the portion of the now-vacant rail yards south of the Gilmore Bridge, and might also require the demolition of a nondescript assemblage of warehouses in Cambridge.

The construction of the City Square tunnel and loop ramps would dig up the edge of the recently completed Revere Landing Park between the highway and the dam, and the highway department proposed using the balance of the park as a staging area. The federal Section 4(f) review of the North Area project approved the temporary use of the park during construction, and required the redesign of the park after the highway was completed. Because the loop ramps were built on filled tidelands, the state Chapter 91 license went beyond the federal 4(f) requirements and mandated that the DPW transfer to the MDC a large portion of the land under the demolished elevated highway and around the new loop ramps as an extension to Revere Landing Park.

The Lechmere Triangle and North Point

While the state DPW was beginning the early planning for the North Area project, the Cambridge Community Development Department completed a planning study for redevelopment of the Lechmere Canal area, immediately to the west. Industrial production in the area after World War II had declined dramatically, and many old buildings, including historic landmarks like Bulfinch's Middlesex County Courthouse, were vacant. In 1950 the city sold the park land along the river for the construction of commercial buildings and a hotel. Because the area was zoned for industrial development, with no height limit and no housing allowed, the adjoining residential neighborhood, extending west from Second and Third Streets, feared the possibility of more large-scale commercial development.³⁴

Following a two-year planning study of the Lechmere area, the city published its *East Cambridge Riverfront Plan* in 1978. A planned unit development was established,

³³*Central Artery Corridor: Central Area Planning Study* (Boston: October 1977), 7. In fact, the compatibility of the separately design north and central sections proved to be impossible; when the Charles River Crossing was finally designed in the early 1990s, the North Area ramps had to be redesigned, and an already constructed ramp connection to City Square was demolished in 1997.

³⁴Maycock, 43-45, 53-54.

substantially limiting the scale of new construction in the area. A federal Urban Development Action Grant funded the reconstruction of roads, a new parking garage, and a park around the reconfigured Lechmere Canal, completed in 1987. The new park reestablished pedestrian access from the riverfront to the canal, and new commercial and residential structures followed the construction of public improvements (Figure 7.10).³⁵

The city hoped to follow its successful Lechmere Canal development with a similar process for the area east of the O'Brien Highway on the old rail yards of the Boston & Maine, which the city named North Point. The MBTA's commuter lines from North Station continued to use the railroad's old roundhouse, but much of the old switching yards had been abandoned; only a few warehouses operated in the area. Though about the same size as the Lechmere Triangle, this area was cut off from Cambridge and Charlestown by the Green Line viaduct, the Gilmore Bridge, and the railroad tracks.

The first Chapter 91 license for a private development in the New Basin resulted in a substantial contribution of land and park improvements. In 1988 the city granted a building permit for "Museum Towers," a ten-story hotel and two twenty-two-story apartment towers at North Point. The state Chapter 91 license for Museum Towers required the transfer of an acre of riverfront land to the proposed park as well as the reconstruction of the rubble seawall on the river edge of the project.³⁶ The project was postponed in the collapse of the real estate market in the late 1980s. Nonetheless, the city remained confident that its urban design plan demonstrated the potential of the area, which included the largest remaining undeveloped parcels in the city. The city's plans for North Point would lead directly to the conflict that arose ten years later, when the highway department unveiled its final, much expanded plans for roadway connections to the Central Artery.

Landscape Architecture and Modernism

In the spring of 1987, with funds from a recently passed bond issue, the MDC began planning to complete the missing links in the river corridors of the Metropolitan Park System, including the "lost half mile" of the Charles. By this time, the agency's view of the New Basin, already complicated by overlapping layers of state and federal regulations, was influenced as well by academic and professional debates about the nature of public spaces, and

³⁵Ibid., 53-54.

³⁶Commonwealth of Massachusetts, Department of Environmental Protection, Chapter 91 Waterways License No. 3156, December 30, 1992.

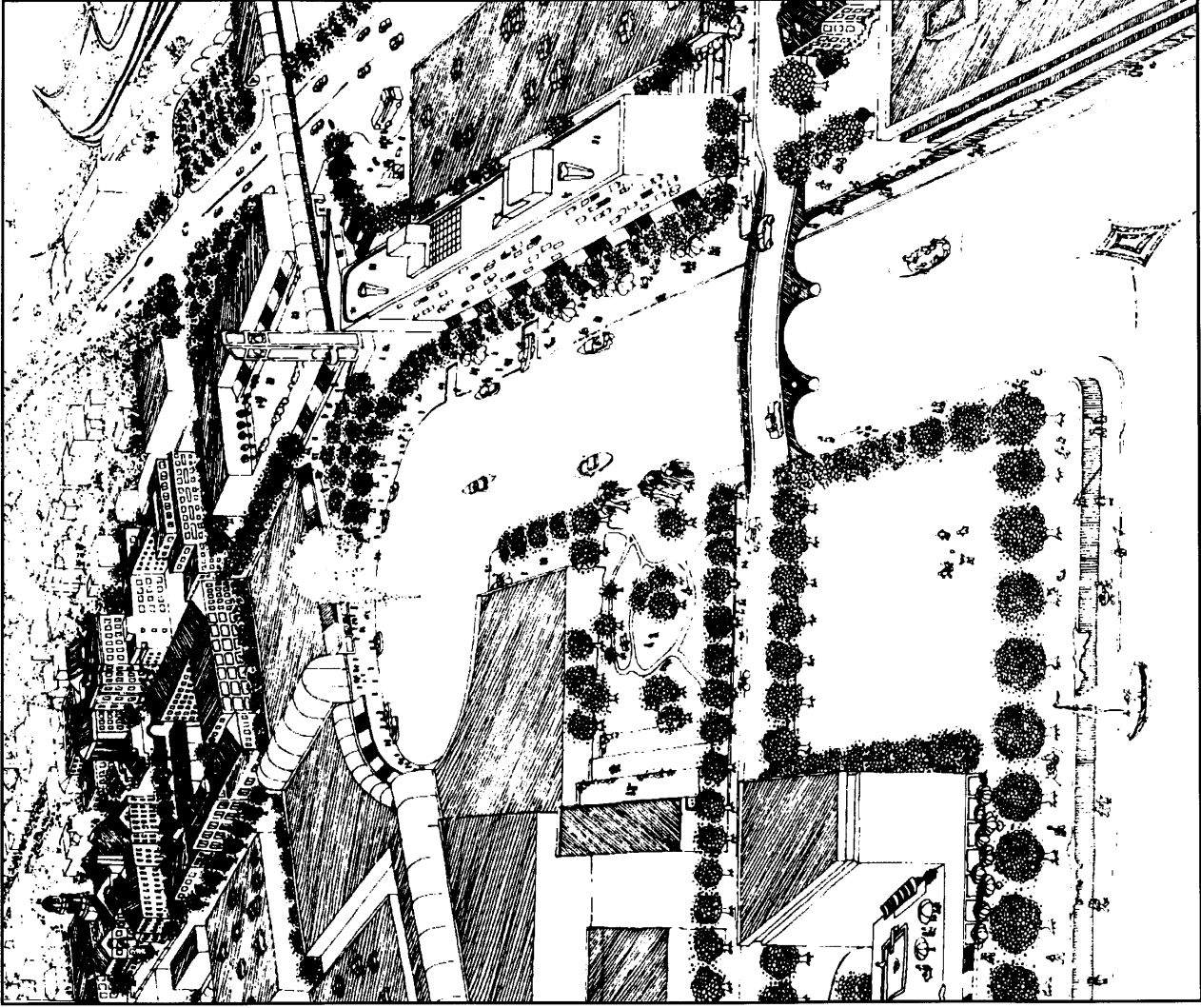


Figure 7.10 East Cambridge Riverfront Plan, 1978.

by newly constructed public landscapes. The assumptions reflected in the 1980 "Master Plan" seemed to invite, if not complete revision, then at least thoughtful reconsideration.

Signs of change and discontent in the profession of landscape architecture had multiplied during the previous two decades. As far back as 1965 at a White House Conference on Natural Beauty, Julia Broderick O'Brien (later involved in the 1969 Metropolitan Area Planning Council *Open Space* study and then the Director of Planning for the MDC) suggested that, as builders of public parks, "We have not shown the ability to design anything much larger than a tot lot which reflects the differences between our way of life and that of Olmsted." The historian Albert Fein completed a study of the profession of landscape architecture in 1972; the following year he proposed a merger of landscape architecture and planning.³⁷

In a 1985 essay in *Landscape Architecture*, the only American journal directed to practicing professionals, Steven Krog (himself a landscape architect) described the field as "a discipline in intellectual disarray," plagued by a "deficiency of theoretical discourse." At a 1988 conference on landscape architecture at the Museum of Modern Art he elaborated on his earlier argument, and concluded that the field was "thoroughly confounded by self-doubt." About the same time John Dixon Hunt, a landscape historian and later chair of the Department of Landscape Architecture at the University of Pennsylvania, asserted that "one of the most striking aspects of modern landscape architecture is its ignorance of history."³⁸ After almost a hundred years of conscious efforts to establish the profession, how had the discipline of landscape architecture arrived at such a state?

One argument was that the aesthetics of twentieth-century art were, by and large, "fundamentally hostile to nature," precipitating an outright divorce between architecture and the natural world, and "a vital, modern landscape tradition never emerged." Modernism, and its impact on public spaces, however, did not begin in this century. In many fields, historians traced its roots to the late eighteenth century. It was then, according to Hunt, that many of the arts abandoned the notion of "their service to some general, collective public will" and

³⁷Julia J. Broderick, cited in *Beauty for America: Proceedings of the White House Conference on Natural Beauty* (Washington, D.C.: U.S. Government Printing Office, 1965), 531; Albert Fein, *A Study of the Profession of Landscape Architecture: Technical Report* (McLean, Va.: American Society of Landscape Architects Foundation, 1972); Albert Fein, "A Merger of the Professions of Planning and Landscape Architecture," *New York Planning Review* 15 (Summer 1973), A 30-32.

³⁸Steven R. Krog, "The Language of Modern," *Landscape Architecture* 75:2 (1985), 56; Krog, "Whither the Garden?" in Stuart Wrede and William Howard, eds., *Denatured Visions* (New York: Museum of Modern Art, 1991), 94; John Dixon Hunt, "The Dialogue of Modern Landscape Architecture with its Past", in Marc Treib, ed., *Modern Landscape Architecture: A Critical Review* (Cambridge, Mass.: MIT Press, 1993), 134.

chose instead to pursue individual, largely private expression. At the same time, the Romantic glorification of personal experience meant that every person "could enjoy—nay, could only have—his or her own . . . response to everything around them, including gardens, parks, and the wilderness." The meanings attached to nature and the natural world proliferated, and the production and interpretation of the fine arts became increasingly fragmented.³⁹

By the last decades of the twentieth century, landscape architects and urban critics were heatedly contesting the value of the hundred-year-old public spaces designed by Olmsted and his followers. Had people ever responded to these picturesque landscapes as Olmsted had hoped? Did anyone today? Or were these spaces now anachronisms, a hundred years removed from today's kinetic sports and high-speed recreation, irrelevant to Americans who are now "escaping a different city . . . in search of a different Mother Nature"? Had public parks, like other post-Civil War reforms, failed as "structures of social and political intercourse . . . defined for the popular mass by a cultured elite hovering above"?⁴⁰

In this tumult of opinions, how could a public agency define a program for parks and public spaces? Several choices presented themselves, in highly regarded examples of public spaces recently constructed in eastern Massachusetts, especially the state Department of Environmental Management programs for urban heritage state parks and Olmsted historic landscapes.

Public History and Public Landscapes

In the late 1960s a few long-time residents of Lowell, Massachusetts, began discussing the idea of a "Lowell Urban Cultural Park." They hoped to create "a new kind of park" with the aim of making Lowell "a showcase of America's industrial history." Walter Hickel, then Secretary of the federal Department of the Interior (which included the National Park Service) endorsed the idea in 1970, but no action was taken by the city or the Park Service. The initial suggestion was followed by a 1973 report assembled by several groups in Lowell, and

³⁹Wrede and Adams, "Introduction," 4; Hunt, 136.

⁴⁰Sam Bass Warner, Jr., review of Laura Wood Roper, *FLO*, *The New Republic*, March 23, 1972, 30; Geoffrey Blodgett, "Landscape Design as Conservative Reform," 122. For contrasting views of the Olmsted legacy, see Albert Fein, "The Olmsted Renaissance: A Search for National Purpose," in *Art of the Olmsted Landscape* eds. Kelly, Guillet, and Hern; Tony Hiss, *The Experience of Place* (New York: Knopf, 1990), 42-8.

then the state Department of Natural Resources completed a study in 1974.⁴¹ Two goals were established: to preserve the cultural heritage of the city; and to increase the public appreciation and enjoyment and Lowell's cultural resources. In particular, there was a specific concern to protect and improve the water-related open space, including the system of locks and canals, so that the citizens of Lowell could "integrate recreation into the daily pattern of their lives." It was hoped that a major commitment by the state would be followed by city, federal, and private investments, so that "the utopian dream of its founders for a humanized cityscape" could be realized.⁴²

The new administration of Governor Michael Dukakis, elected in 1974, aggressively developed the program of heritage parks. As Dukakis phrased it, "we don't throw away cities." One of the state's planners elaborated on the importance of bringing a "visible, physical improvement into the heart of a city that hadn't had a nickel of private money invested in it for fifty years." After Lowell, the idea was extended first to Fall River, where the waterfront was a tangle of highways and fuel storage tanks, without a single foot of public access; a dozen other cities developed parks designed around local historic resources and themes.⁴³

From this historic perspective, the lost half mile of the Charles comprised the region's ultimate collection of transportation artifacts. This short stretch of river was the site of the Charles River Bridge, the first bridge from the town of Boston to the mainland in 1786; the terminus of the Middlesex Canal, completed in 1803; and the first movable railroad bridge in America. The unusual sliding lock gates of the historic Charles River Dam, designated a national Civil Engineering Landmark in 1981, were still in place in the upper and lower lock houses, secured forever in the open position since the opening of the new dam downstream. Two of the single-leaf rolling-lift bascule bridges (each with a 629-ton overhead concrete counterweight) constructed by the Boston and Maine Railroad in 1928 still halted the traffic of boats for every crossing of commuter trains over the river.⁴⁴ The large steel wheels and

⁴¹Massachusetts Department of Natural Resources, Office of Planning, *A Proposal for an Urban State Park in Lowell, Massachusetts*, (August 1974), 2. The origin of the Massachusetts heritage state parks program is discussed in Hiss, 208-210; Robert Yaro, a regional planner for the Commonwealth, indicates that before the state became involved, there was only "a hazy notion abroad that it might be possible to give cities a lift by setting up urban state parks that had some kind of education-and-preservation component" (209). For an extended discussion of these issues, see Dolores Hayden, *The Power of Place: Urban Landscapes as Public History* (Cambridge, Mass.: MIT Press, 1995), 4-78.

⁴²Ibid., 5.

⁴³Hiss, 209-10.

⁴⁴Peter Stott, *A Guide to the Industrial Archeology of Boston Proper* (Cambridge, Mass.: MIT Press, 1984), 54-5.

gears remained clearly in view on the underside of the Charlestown Bridge, though the bridge no longer operated as a rotating span.

At the same time, the still active transportation structures—the commuter rail lines, especially the highway bridge and the double-decked structures extending into Somerville and Charlestown—visually dominated the area and made it hard for many people to imagine any sort of public space downstream of the old dam. And the existing double-decked highway would be dwarfed by the design for this part of the new Central Artery. In meetings with community groups in Charlestown as late as 1987, Artery project engineers were showing drawings of a six-lane bridge over the Charles, even though the decision to widen the project to ten lanes had been made in 1983.⁴⁵ The straightforward goal of creating continuous pedestrian links on both sides of the river through this expanding maze of highway bridges and ramps would demand considerable negotiation. Added to that was the challenge of creating safe, visible public spaces in this highway construction zone before much of the adjacent land was developed. Could those issues be resolved in a park aesthetic?

The planners in charge of implementing the new heritage parks programs in Lowell, Holyoke, and Fall River in 1983 were struck as they began work in those cities by the "perilous" condition of the existing public parks. With the exception of a 1978 federal program for "Urban Park and Recreation Recovery," which lasted only two years, there were no state or federal funding programs to support the replanning or restoration of municipal parks. In 1981 a group of historians, designers, park administrators, and community leaders had founded the Massachusetts Association of Olmsted Parks to promote the appreciation and preservation of Olmsted parks. One of their first ventures was a survey of ten parks designed by the Olmsted office in the Commonwealth. In the course of that work, the Association found that the firm had consulted on at least 280 parks in more than 150 cities and towns in Massachusetts, many of them by then in terrible condition.⁴⁶

By joining the interest in Olmsted's work with the tools of historic preservation, advocates of "adaptive restoration" of these city parks secured funding for the program in six months. The development of a commitment in the community for stewardship of the parks was as important to the program as the funding for design and construction, and the Olmsted firm's original design intentions provided a significant vehicle for the discussion of historic and contemporary design principles and community values. In the first five years, the

⁴⁵Luberoff (1995), 65-67.

⁴⁶Greene, 6-7; McPeck, et al., i. The National Association for Olmsted Parks was founded a year earlier, in 1980.

Olmsted landscape program completed construction projects at Buttonwood Park in New Bedford and Elm Park in Worcester, as well as inventories, surveys, and historic landscape reports for a number of other parks.⁴⁷

The Biophilia Hypothesis

At a more fundamental level, several strands of academic research in environmental psychology and biological diversity came together in what was called the "Biophilia Hypothesis." Designers and environmental psychologists began investigating landscape preferences in the 1960s. After a series of more general studies, the psychologist Roger Ulrich published a widely read study in 1984 in the journal *Science* titled "View Through a Window May Influence Recovery from Surgery" that compared benefits to patients in a hospital where the view on one side of the building was a parking lot and on the other was a parking lot.⁴⁸

That same year the basis of these investigations was profoundly broadened when the biologist E.O. Wilson suggested that the "deep history" of evolution was at work in the human response to certain landscapes. The origins of the human species on the plains of Africa had predisposed not only the body, but also the mind, to life on the savanna, "such that beauty in some fashion can be said to lie in the genes of the beholder." The elements of this partiality were "open tree-studded land on prominences overlooking water." In cities or landscapes where these elements were absent, people went to great lengths to create the "savanna gestalt." This preference was an aspect of a profound human sense that Wilson called *biophilia*. It is, he said, "the innate tendency to focus on life and lifelike processes."⁴⁹ Wilson later identified the diversity of plant and animal life as an essential hereditary need of human beings, and a crucial link to the older ethic of conservation.⁵⁰

In many fields, including landscape architecture, the principle of biodiversity was increasingly recognized. The dramatic eradication of well-known but more remote environments like rain forests and tropical reefs was widely and repeatedly publicized, and as these debates continued, the biological diversity of natural areas closer at hand was

⁴⁷Ibid., 9-28.

⁴⁸Ervin H. Zube, *Landscape Assessment: Values, Perceptions, and Resources* (Stroudsburg, Pa.: Dowden, Hutchinson, and Ross, 1975); Roger Ulrich, "View Through a Window May Influence Recovery from Surgery," *Science* 224:420-421.

⁴⁹Edward O. Wilson, *Biophilia* (Cambridge, Mass.: Harvard University Press, 1984), 109-10, 1.

⁵⁰Edward O. Wilson, "Biophilia and the Conservation Ethic," in *The Biophilia Hypothesis*, eds. Stephen R. Kellert and Edward O. Wilson (Washington, D.C.: Island Press, 1993), 31-41. See also the extensive bibliography in the same volume in Roger Ulrich, "Biophilia, Biophobia, and Natural Landscapes," 127-137.

acknowledged. State and federal legislation sought to protect rivers, wetlands, lakes, and ponds. The City of Boston mapped its "urban wilds," and many park departments and natural resource agencies sought to protect and increase the diversity of plants and animals, in undeveloped areas as well as in the interstices of the urban environment.⁵¹

Imagining the New Basin

Only a fraction of this widening perspective appeared in the proposals submitted in 1988 to develop the New Basin Master Plan. Though most of the competing design firms edged cautiously toward an assimilation of the history and the massive artifacts of the site, two proposals, both from Cambridge architectural firms, went further. One sought a nexus between landscape architecture and public art, the other joined landscape diversity with the interpretation of the natural and cultural history of the river.

The proposal by Moore-Heder Architects asserted outright that it was impossible to repeat in the New Basin the "wide open water and bucolic park space" mode of the old esplanades. Their consultant team included Peter Walker and Martha Schwartz, both landscape architects; and Joan Brigham and Mags Harries. Lajos Heder was the principal author of *Aesthetics in Transportation*, a 1980 set of federal "Guidelines for Incorporating Design, Art and Architecture into Transportation Facilities."⁵² Brigham and Walker had collaborated on the Tanner Fountain at Harvard. Mags Harries was well-known in Boston for the bronze "Asaroton" at Haymarket and for "Glove Cycle" at the Porter Square MBTA Station. Martha Schwartz's Boston work included the "Bagel Garden" in the Back Bay and the rooftop garden at the Whitehead Institute at M.I.T.

The weight of the "overpowering" transportation structures would have to be mastered in the spirit of judo, in their view, to be made integral elements of the design. Such a spirit was beyond the skills of traditional landscape architecture, and called for a collaboration with environmental artists. A striking set of photographs illustrated their reading of the existing landscape of the New Basin: the railroad bridges as "giant sculptures of the industrial revolution"; the two unconnected highway ramps originally planned as part of the never-built Inner Belt, "surreal and evocative . . . already a kind of historical exhibit of highway planning." One example of their approach was the suggestion—unique to their proposal—to

⁵¹Boston Redevelopment Authority, *Boston Urban Wilds: A Natural Area Conservation Program* (Boston, 1976).

⁵²Lajos Heder with Ellen Shoshkes, *Aesthetics in Transportation* (Washington, D.C.: U.S. Department of Transportation, 1980). Heder also wrote a chapter in *Bridge Design: Aesthetics and Developing Technologies*, a 1986 study sponsored by the Massachusetts Department of Public Works and the Mass. Council on the Arts and Humanities.

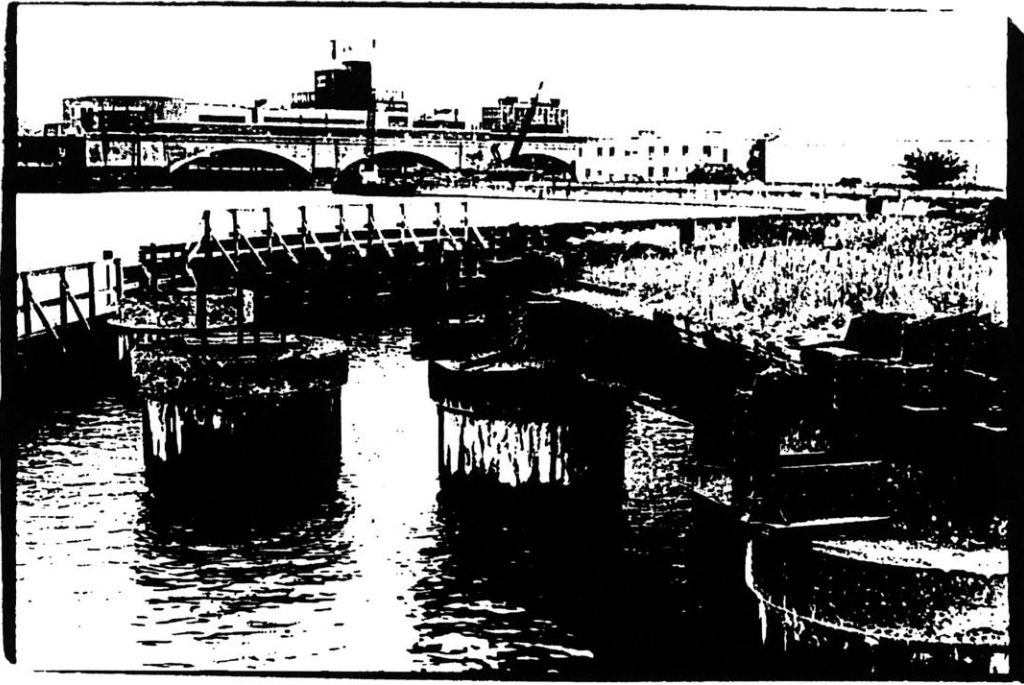
build a walkway along the downstream edge of the dam, directly underneath the elevated tracks of the Green Line viaduct. Much of what would be significant in the new public spaces, they argued, "is already there, waiting to be seen in a new way!" (Figures 7.11, 7.12).⁵³

The selected consultant was Carr, Lynch Associates, another Cambridge firm. They, too, asserted that "a bold vision" would be required to "transform obstacles into opportunities." Their analysis began with Kevin Lynch's conclusion in *The Image of the City*, that most people were unable to connect the river with the harbor; their proposal focused on the opportunity to create an identity for the New Basin. This would be done with activities to create uses and attractions, and would be reinforced with interpretive elements and with rich and diverse plant materials. A carefully designed public process would engender a sense of collaboration in the final design choices.⁵⁴

Like a number of other public open space projects in Massachusetts, the New Basin Master Plan was caught in the wake of the regional economic recession and the contraction of state budget at the end of 1988. Before the consultants could begin work, the funding for the project was withdrawn. Two years later, after protracted public and private negotiations with the Central Artery project over the impact of the proposed highway bridges over the Charles River, the master plan was revived as one of many "mitigation measures" to be funded as part of the highway construction.

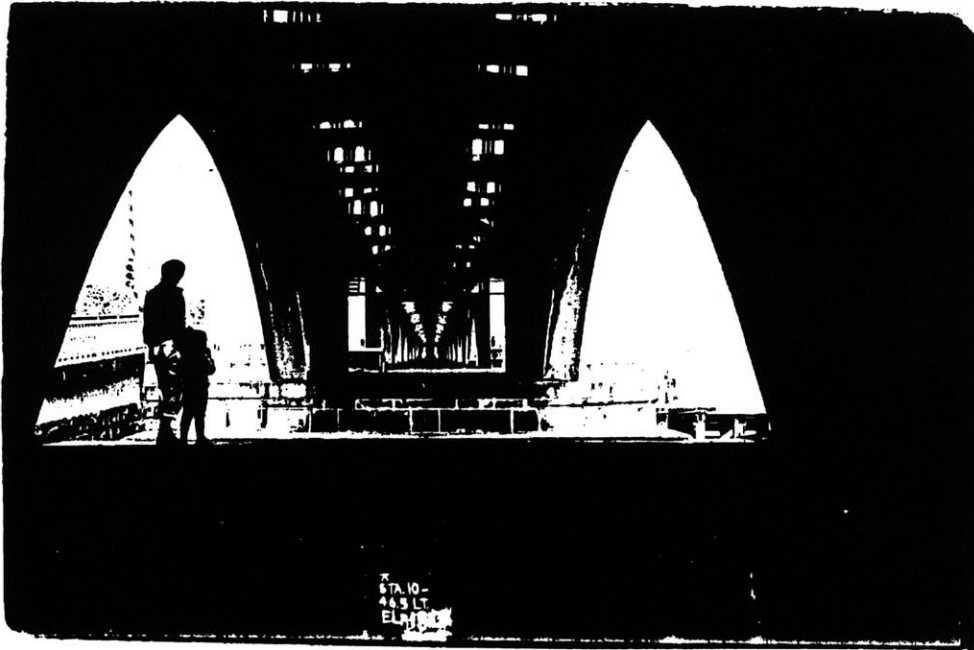
⁵³Moore-Heder Architects, et al., "The New Charles River Basin: Proposal," 1988.

⁵⁴Carr, Lynch Associates, Inc., "Proposal for the New Charles River Basin," 1988, 1-15. To develop a rich and diverse landscape, Carr, Lynch proposed to collaborate with Wolfgang Oehme and James van Sweden. On the twenty-year collaboration of Oehme van Sweden, see "Wolfgang Oehme and James van Sweden: New World Landscapes," *Process Architecture* 130 (1996).



Beyond the two designated park sites more of the New Basin's complexities and possibilities unfold. The area is full of both current transportation structures and sculpturally interesting ruins of older ones. These old bridge piers may not have to be demolished. They could become small islands or pedestals for sculptural events.

Figure 7.11 Moore-Heder Architects, "New Charles River Basin Proposal," 1988.



Finally, we returned to this wonderfully monumental view under the Green line, now never seen, that will be made available to joggers, bikers and walkers - special spaces and some activities may be created under the spans - it could become a link between a walkway along the old locks and a crossing to North Point.

A LOT OF WHAT WILL BECOME THE NEW BASIN PARK IS ALREADY THERE, WAITING TO BE SEEN IN A NEW WAY!

Figure 7.12 Moore-Heder Architects, "New Charles River Basin Proposal," 1988.

VIII. THE CENTRAL ARTERY

Currently the most popular and effective means of destroying a city is the introduction of multiple-lane expressways, especially elevated ones, into the central core. This came about immediately after elevated railways for passenger service were being demolished as public nuisances. Though Los Angeles presents the hugest example of large-scale urban demolition by incontinent expressway building, Boston is perhaps an even more pitiable victim, because it had more to lose, since it boasts a valuable historic core, where every facility is within walking distance, and a metropolitan transit system that, as far back as the eighteen-nineties, was a model of effective unification. . . . Boston's planners are attempting to cover over their initial mistakes by repeating them on a wider scale.

Lewis Mumford, *The City in History*, 1961, on Boston's first Central Artery

Unlike every other major twentieth-century highway plan in Boston, the singular objective of the early 1970s proposal to depress the Central Artery as it was first conceived centered on urban design, not transportation. The elevated Artery would be replaced by a tunnel of the same size in the same location. Relatively modest improvements in the location of on- and off-ramps were subsequently developed with the aim of meeting the requirements for federal funding. The passion of its initial proponents derived from the promise it offered to make Boston's historic downtown whole again, to correct what were seen as the disastrous consequences of the original elevated highway. The idea could not have been more straightforward. As it was later promoted in an eight-page, full-color insert in the Sunday editions of Boston's two daily newspapers in 1989, the proposal was reduced to a simple epigram: "Now you see it, now you don't" (Figures 8.1, 8.2).

From the first, however, this uncomplicated concept was seen as a logistical nightmare and a financial impossibility. As the project planning went from preliminary design to final engineering, the constrictions of the city's geography were exceeded by a byzantine convergence of local politics with professional culture. The urban design vision for the city center created heightened expectations that ultimately collided with the complete absence of civic vision for the northern portion of the project, the Charles River Crossing. In 1994, the sesquicentennial of Robert Gourlay's proposal for the "scientific planning" of

Boston, the design for the depressed Central Artery was still unfinished after more than twenty years of work and hundreds of millions of dollars in consultants' fees.

By that time it was no longer clear that open civic discourse was possible for a project of this magnitude. The federal, state, and local requirements for transportation planning had become so highly specialized that it was nearly impossible even to understand them, to say nothing of balancing incommensurable categories of analysis. Over each professional discipline at work on the design — whether more quantitative, like the chemistry of air quality, or more abstract, like the architecture of the highway structures — hovered the faith in expertise, the sense that only the specialists really understood. When the experts arrived at conflicting solutions, the traffic planners and the highway engineers, with their trip tables and computer-generated alignment drawings, were almost always granted the ultimate authority by state and federal administrators. And since the transportation bureaucracy controlled the budgets for all the other disciplines, there was, in the end, no appealing their decisions.

The protracted battle over the Charles River crossing became the last remaining obstacle to the construction of the Central Artery. The Artery had already been through more than two decades of public discussion, political infighting in Boston and Washington, and an almost incomprehensible bureaucratic history at the state and federal level that culminated in the override of a presidential veto.¹ They were followed by local contests that matched Cambridge against Boston, environmental groups against the downtown business community, and mass transit proponents challenging the experts from one of the world's largest private engineering and construction enterprises. The river crossing must be seen in its complex relationship to the rest of the project to understand how the plans for public open space along the Charles became the focal point in the public debate over the largest U.S. public highway project ever planned.

Open discussions of major public works projects have also been hindered by what seemed to be an ever-shorter public memory. The public debate over the Central Artery in the 1990s — including the Charles River Crossing — was marked by few open discussions of the relationships between highway planning and other kinds of urban development or even the regional transportation legacy from the previous generation.

¹The most extensive source on the Central Artery project is David Luberoff, Alan Altshuler, and Christie Baxter, *Mega-Project: A Political History of the Central Artery/Third Harbor Tunnel Project* (Cambridge, MA: Kennedy School of Government, Harvard University, May 1993; revised ed. October 1995). A personal, more critical point of view is found in Steve Kaiser, "A Grass-Roots Perspective on the Battle of Scheme Z," (September 1993).

Now you see it.

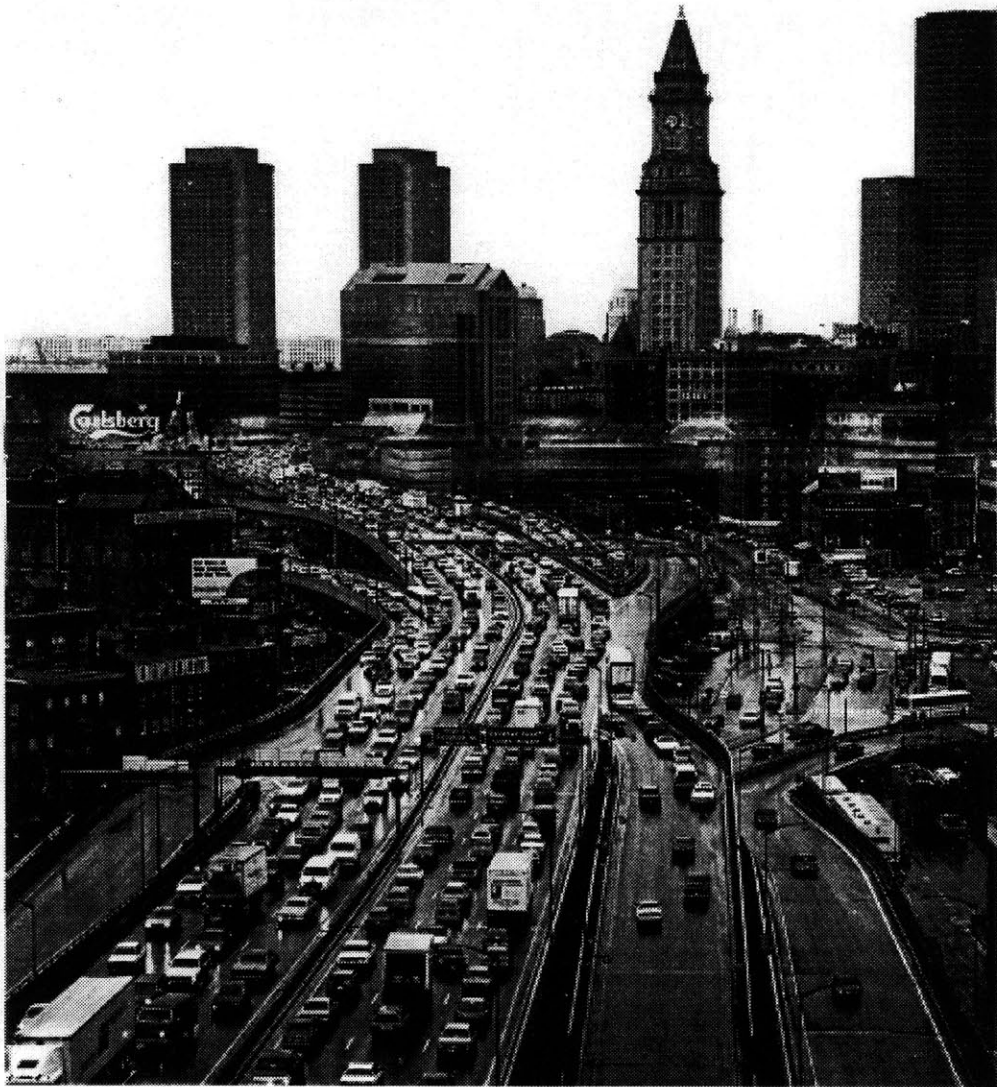


Figure 8.1 *Boston Globe*, advertising supplement, July 30, 1989.

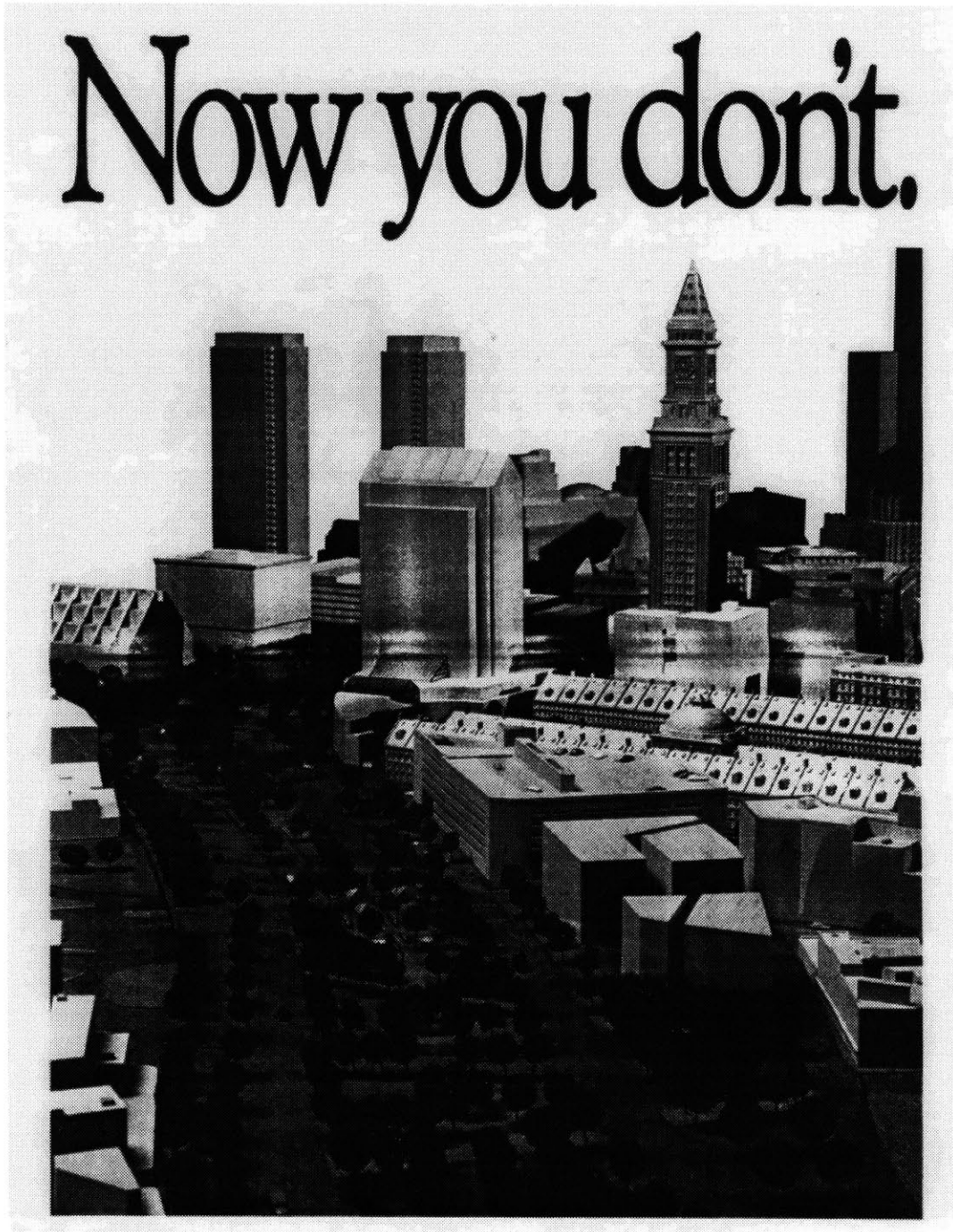


Figure 8.2 *Boston Globe*, advertising supplement, July 30, 1989.

Depressing the Central Artery

The community pressure to depress the final portion of the Artery in the 1950s signaled the intense public dislike of the elevated highway even before it opened. Accepting the highway's function, they assailed the damage caused by the mode of its implementation.

Twenty years later, as some people saw it, the fierce antipathy to the elevated Central Artery was casting a dark shadow over the rest of the 1948 highway plan. Bill Reynolds, who broached the idea of dismantling the Artery during the controversy over the Inner Belt and the Southwest Expressway, was a construction contractor with an engineering degree from MIT, and had been described by the *Boston Globe* as "one of the state's most respected engineer-road builders."² He had concluded that while people in other parts of the country loved highways, in Boston people hated them. The reason was the Central Artery. It was like a giant billboard that said highways are ugly. If the Artery were put underground, then people would love it, and the state could resume building the other expressways in the Maguire plan.³ (This anxiety over the image of the elevated Artery is especially striking since Reynold's proposal surfaced just as the state was making the decision to build the elevated section of I-93 in Somerville.)

The appeal of the idea was reflected in the multiplicity of images later developed to sustain the basic scheme. It would "heal the scar" of the original bad highway, it would "knit the city back together," it would allow the economic lifeblood of the region to flow freely on the new expressways. The political benefits were also obvious. Anti-highway people could support a road construction project that would not take any homes, as the extension of the Massachusetts Turnpike into Boston had done. It would not take more property in the North End, and it might be possible to include the rail link between North and South stations.⁴

One of the first people Reynolds talked to was Fred Salvucci. As head of East Boston's Little City Hall, Salvucci had served as spokesman for the opposition to Logan Airport expansion; in 1971 he joined the mayor's staff. Salvucci thought the idea of depressing the Artery was insane. The state, he told Reynolds, would have to post a sign at the Charles River saying "City Closed for Alterations, Come Back in Ten Years."⁵

²*Boston Globe*, June 13, 1983, 17.

³Luberoff (1993), 22.

⁴Luberoff (1993), 23.

⁵William Kramer, "Transportation Policy in Massachusetts (C)," Kennedy School of Government, 1975, 5.; Luberoff (1993), 22.

Studies completed by the city's Redevelopment Authority persuaded Salvucci that the project was not only technically feasible, but that it would transform the center of the city. Though Salvucci changed his mind, others remained skeptical for their own reasons. State Transportation Secretary Alan Altshuler regarded the Artery proposal as a diversionary tactic, since Salvucci had never supported a highway project, and this one had two obvious, probably fatal, flaws. The first was the enormous logistical difficulty of maintaining existing traffic while the depressed road was built. New developments just underway in the financial district and along the waterfront would be jeopardized by severe congestion during construction. The second problem was paying for the project. Without federal funding it would be impossible. Barney Frank, then a state representative, spoke for many skeptics when he asked whether it would "be cheaper to raise the city than to depress the artery."⁶

Initially, the project had nothing to do with the Charles River. In the earliest schemes the depressed highway came out of the ground near Haymarket, just north of the exit from the Sumner Tunnel, and connected with the double-decked high bridge that crossed into Charlestown, built as part of the original elevated Artery. Like some other Interstate projects of the 1960s, the new road would be only partially covered and would not require mechanical ventilation. Planned first as eight lanes, it was reduced after Governor Sargent's policy decision in 1972 that no new roads larger than six lanes would be built inside Route 128. A 1974 study by the Boston Redevelopment Authority studied six alternatives. The least expensive option was estimated at \$360 million, and did not increase the capacity of the road. It did not alter the Dewey Square tunnel near South Station, and it did not include funding for the North Station-South Station rail link, estimated to cost \$130 million. The existing intersection of Route 1 and I-93 just north of the Charles would be unchanged. Though the study said the Artery was technically feasible, the cover letter from the Redevelopment Authority director stated bluntly that neither the state nor the federal government could afford the project. It should be looked at after higher priorities like the third harbor tunnel and the transit extensions were completed.⁷

After Michael Dukakis defeated Governor Sargent in the 1974 election, he appointed Salvucci secretary of transportation. Dukakis was opposed to the special purpose tunnel connecting the airport with the Turnpike extension, the other road project (along with the

⁶Luberoff (1993), 22-26.

⁷Luberoff, 24-26; Boston Transportation Planning Review, *Central Artery Summary Report*, 1972.; Boston Redevelopment Authority, *Central Artery Depression Preliminary Feasibility Study* (Boston, 1974), cited in Luberoff (1993), 29.

depressed Artery) for which Governor Sargent had allowed studies to continue after the 1971 expressway moratorium. He told people that "we had a Third Harbor Tunnel. It was called the Blue Line . . ." ⁸ Dukakis did approve additional planning work on the proposed Artery, though Salvucci later recalled that the governor "didn't even like the artery. It was the railroad [the North Station-South Station rail link] that convinced him to be for it." ⁹

Soon after the new administration took office, the Federal Highway Administration (FHWA) notified the state that the state's request to include the Artery in the state's Interstate highway cost estimate, an essential step in the federal funding process, had been rejected. Salvucci was in favor of all the measures included in the report's most expensive alternative, but he chose to lobby FHWA to reverse their decision, without pressing for increased funding. A year later, the project was revived under a compromise that recognized the need for significant improvements in the Charlestown (Interstate 93-Route 1) merge and at the other end of the Artery near South Station. Planning would be divided into three areas; federal funding would not be available for the center section. FHWA in this case agreed with the state's claim that the north, central and southern Artery projects could "fit together in a unified series" but could also be constructed "essentially independently of one another." ¹⁰

The "open study" mode of citizen participation established during the Sargent administration, however, was abandoned, and between election years the Central Artery planning attracted little public discussion; reports occasionally surfaced in the press. At the beginning of 1977 the project released a cost estimate that totalled almost a billion dollars: the north section would cost \$70 million; the center section (depressing the elevated roadway) would be \$600 million; and the southern section would cost \$150 million. Responding to the new cost estimate, John Larkin Thompson, speaking for downtown business interests, countered that there was no evidence supporting the north-south rail link (without saying what sort of evidence would settle the question), and that if the third tunnel were built there would probably be no need to bury the center or southern sections of the artery. ¹¹

⁸Luberoff (1993), 19.

⁹Interview, 1991; quoted in Luberoff (1993), 29.

¹⁰Luberoff, 29-33; Boston Redevelopment Authority, *Central Artery Corridor: Central Area Planning Study* (Boston, MA: October 1977), 7. In 1993, temporary ramps were constructed and one newly built ramp was abandoned, because the revised design of the river crossing was no longer compatible with the original North Area plans; the hope that the projects could be designed independently proved impossible to carry out.

¹¹*Boston Herald*, January 2, 1977.

Dropping the Artery, Promoting the Tunnel

Transportation policy was not among the major issues in 1978, when Edward King ran against Dukakis in the Democratic primary. King had actively promoted the Leverett Connector as director of the Port Authority; he had also favored a six-lane general purpose tunnel under the harbor to the airport, but was adamantly opposed to the depressed Artery plans. Once elected governor, King made clear how deeply he was committed to his view of the regional highway network. He successfully blocked a move by the lame-duck Dukakis administration to transfer the approved third harbor tunnel funding to mass transit projects. He officially withdrew from federal consideration the state's previous planning studies for the central and southern sections of the Artery. He delayed the studies of the northern section for two years to reconsider the bridge at Leverett Circle.¹²

The third year of the King administration was a trying year for state transportation planning. In the spring of 1981 the DPW published a report that compared the "no-build" option, two different tunnel alternatives, and a combined artery/tunnel scheme. As they explained in a letter to FHWA soon thereafter, the state had determined to drop the artery because of its "astronomical" cost of \$855 million and its impact on 107 businesses and 47 downtown buildings. In May the state transportation secretary was arrested for accepting a bribe, and his replacement found the department in complete disarray. Two months later, federal officials notified the state that they would not fund the environmental impact statement (EIS) for the tunnel. They did not believe the state could finish the EIS by the 1983 national deadline for Interstate highway projects, or that the state was capable of managing the tunnel's design and construction. State executives dropped everything to lobby FHWA, which reversed its decision in September and agreed to let the impact study proceed.¹³

The revival of the tunnel study provoked a fierce reaction in East Boston, just as a rematch for governor was shaping up between King and Dukakis. The Coalition Against the Third Tunnel was organized, and soon many of the state's elected officials had joined the opposition. Some people suggested that a lot of the dispute had more to do with King's bad relations with other politicians than it did with the tunnel. In February four members of the state's Congressional delegation — Ted Kennedy, Paul Tsongas, Tip O'Neill and Ed Markey — signed a letter to the federal Secretary of Transportation, claiming, among other things, that it was "shortsighted to build another tunnel without first addressing the problems of the

¹²Luberoff (1993), 41-43.

¹³Ibid., 47-48.

Central Artery and its connections with [Interstates] 93 and 95." O'Neill told the *Globe* that the only way the tunnel would be built was over his dead body.¹⁴

James Carlin, the state transportation secretary, responding by not only defending the tunnel but also criticizing the highway policies of both the previous governors. Sargent and Dukakis, he said, both refused to acknowledge that "Americans are married to the automobile." The "young activists" including Dukakis and Salvucci had fought for the moratorium and then "continued the no-build policy" during Dukakis's term as governor. They were wrong:

What were the results of this highway moratorium? Massachusetts stopped the completion of I-95 from Route 128 into Boston — a bad decision. Massachusetts stopped construction of the Inner Belt from the proposed I-93 to the proposed I-95 in Roxbury — a bad decision. Massachusetts stopped the Leverett Circle Connector from Charlestown to Storrow drive — a bad decision. Massachusetts decided on a reconstruction of the Southeast Expressway without expanding its capacity — a bad decision. Gov. Dukakis couldn't sell the Federal Highway Administration on depressing the Central Artery, and he was one of President Carter's favorite governors.

What has Massachusetts started and finished in terms of major road improvements inside Route 128 since 1960? The answer is almost nothing. It's a disgrace.

He speculated about whether the Turnpike extension would have been constructed in the face of "resistance of the no-build environmentalists, utopia-seeking pseudointellectuals, and community groups." Neighborhoods don't want prisons, waste treatment facilities, power plants, or big highways and bridges, he said, but it is impossible to solve "big transportation problems without making people mad." Public officials in Massachusetts must "push those projects that must be built for the long-term good, even if it means jeopardizing their political careers." The proposed Third Harbor Tunnel might, Carlin suggested, be one such test of political courage.¹⁵

The Dukakis primary campaign focused on corruption and incompetence, not transportation policy, and offered no forceful response before the election to Carlin's challenge on this issue. Salvucci asked Dukakis to trust his professional judgment that there were other options for the tunnel besides the design that East Boston opposed, but those alternatives could not be fully analyzed until after the election. There was no need to antagonize either the neighborhood or the construction industry with superficial explanations.

¹⁴*Boston Globe*, June 1, 1982; February 21, 1982.

¹⁵*Boston Globe*, August 11, 1982, 15.

In a campaign speech to construction contractors, Dukakis indicated that he intended to look again at the design of the third tunnel, but by and large he avoided the subject.¹⁶

There was apparently just one exception to this strategy of avoiding the tunnel controversy. In East Boston just before the primary, Dukakis left his prepared text in his car, and then, throwing caution to the winds, denounced the tunnel: "I don't know why in 1982 we are talking about spending a half billion for another tunnel. There's no reason, no excuse, and no need for it." Except for the local East Boston papers, the statement was not widely reported.¹⁷

Reviving and Widening the Artery

Dukakis won the primary easily. Almost immediately, well before the governor took office, Salvucci began recruiting allies to restart the planning for a depressed Central Artery. The urban design benefits were downplayed, in favor of three other arguments: first, the project was essential to the region's transportation network; second, the project's minimal impacts would be mitigated; finally, there was no alternative. Repairing the existing Artery would be a traffic nightmare; upgrading it, with or without the Leverett Connector, was indefensible transportation policy.

A few critics attacked the mitigation strategy early on; Congressman Brian Donnelly called it "blood money for siting decisions." This viewpoint failed to differentiate between those measures required by state and federal regulations to mitigate documented findings of "adverse effects", and mitigation offered to affected property owners or neighborhoods to deflect political opposition to the project.¹⁸

Early in 1983, the new state transportation administration approved two crucial revisions in the plans for the depressed Artery. The roadway was widened by two lanes in each direction, and the North Station-South Station rail link was dropped. Federal transportation officials had never accepted the state's arguments that redesign of the existing six lanes (closing some ramps and adding breakdown lanes) by itself would increase traffic flow. Widening the road addressed that objection, but it also meant a deeper, mechanically ventilated tunnel, with no room for the rail link. The locomotives used throughout the state's

¹⁶Luberoff (1993), 57.

¹⁷Ibid.

¹⁸Ibid., 69-70.

commuter rail network were still diesel-powered, and ventilation in the revised tunnel design would have been extraordinarily expensive.¹⁹

There was almost no public discussion of these changes or their consequences. No one seemed to notice that for ten years DPW traffic studies had justified six lanes as the right size for the project, given the capacity constraints on I-93 north and south of downtown Boston; now, the engineering analysis rationalized the need for four additional lanes, which would substantially increase the cost of the project. The larger roadway was mentioned in passing in the *Boston Globe* in March, and was discussed briefly in a transportation discussion at the Boston College Citizen Seminar in June, when Salvucci argued that the new harbor tunnel wouldn't work without a widened and depressed Artery. There was apparently no public reaction to the ten-lane roadway; the Sargent administration's commitment to limit the width of new highways inside Route 128 to six lanes was now eleven years old, and apparently forgotten. Governor Dukakis did, however, react angrily when a front-page story in July announced that Salvucci was working to get approval for the tunnel.²⁰

A draft environmental impact report was published in December 1982, a supplemental report was released the following July, and both were reviewed in public hearings in August.²¹ There was no mention of the now-deleted rail link, and both depressed roadway alternatives were drawn at the new widths. Residents of East Boston had fought the tunnel for years; now it was the North End neighborhood angered by the revived Artery plans.²²

The most serious criticism of the draft report came in the "Certificate of the Secretary of Environmental Affairs" required by state regulations. According to the certificate, the traffic improvement appeared "surprisingly slight for a \$2 billion capital project having top transportation priority for the next decade." The net result of the project would be "simply a shifting of congestion from one location to other locations." The certificate also singled out the project's potential "major impacts" on the Charles River Basin, and said that the Environmental Affairs staff had been unable to find "any meaningful discussion of the issue" in the environmental impact report. There were already two master plans for developing this part of the Charles River Basin, and the Central Artery project apparently was ignoring both of them. One was the "North Station Master Plan" prepared for the Boston Redevelopment

¹⁹Ibid., 62-66.

²⁰*Boston Globe*, March 9, June 13, July 7, 1983, 1; Luberoff (1993), 53.

²¹The federal review requires an Environmental Impact Statement (EIS); the state review process requires an Environmental Impact Report (EIR). Often, though not always, a single document is submitted as an Environmental Impact Statement/Report (EIS/R).

²²*Boston Herald*, August 24, 1983.

Authority by the office of Moshe Safdie in 1979, which revived the idea of constructing an island in the river (Figures 7.3 - 7.5). The other was the MDC's 1980 "master plan" (Figure 7.8). The ramps at Leverett Circle "might be a permanent barrier to that plan."²³

The 1983 "Certificate" was the first legally mandated review to comment on the conflict between the Artery project and the plan to reclaim the river's lost half-mile. Yet the only press coverage was a single article in the *Boston Herald* four months later. The *Herald* raised four issues that were almost universally ignored (until they finally exploded in 1990). First, Fred Salvucci had pushed this "wildly costly project" in the face of massive deficits. Promoting the project was made much easier by "a largely uncritical" press. Third, the article pointed out that the "most devastating critique of this massive building plan" in the Environmental Affairs certificate was its impact on the Charles River. Finally, the article quoted the observation of the Secretary of Environmental Affairs, that the \$2 billion investment only slightly relocated the traffic congestion.²⁴

These last two flaws in the analysis of the Artery project — the inadequate consideration of regional transportation consequences, and the failure to address the impacts on the Charles — were only two of many problems with the impact statement. State planners recalled later that the report "basically was a mess." The approach was "almost a tacit admission that we know we are not perfect but if we are not unified we won't get a chance to do it at all. . . ." All these objections, they thought, could be resolved in the project's final design. That perspective did, however, reflect a dim view of the regulatory process as a mechanism to guarantee a minimal level of open discussion. In late September the governor officially endorsed the combined Artery-Tunnel project.²⁵

More Federal Objections

The combined Artery/Tunnel project faced federal objections on two levels. To the FHWA, the administrative agency responsible for technical review, there appeared to be major technical flaws in the highway design, as well as significant unresolved environmental impacts. From a political perspective, the substantially increased cost of the Artery and Tunnel together became a national issue both for the Congress and the White House.²⁶

²³Commonwealth of Massachusetts, Executive Office of Environmental Affairs, "Certificate of the Secretary of Environmental Affairs on the Supplemental Draft Environmental Impact Report, Project Name: Third Harbor Tunnel and Depressed Central Artery," August 29, 1983.

²⁴*Boston Herald*, December 22, 1983.

²⁵Luberoff (1993), 80-81.

²⁶*Ibid.*, 83-130.

The federal response to the Environmental Impact Statement was released one week after Reagan was reelected in 1984. The tunnel was approved, subject to Congressional authorization, but the depressed Artery was flatly rejected. It was found ineligible not just for 90% Interstate construction funds, but for any federal highway money. A number of major technical flaws in the project were pointed out. It added capacity for only 13,000 cars a day, at a cost of \$1.3 billion. It took five parcels protected by Section 4(f), including a parcel owned by the MDC and included in its "New Charles River Basin Master Plan," published by the state highway department just two years previously in its impact statement for the North Area project in Charlestown.²⁷ There were serious operational and safety issues, including sight distances, grades, and poorly designed ramps. The project displaced 97 businesses and restricted access to numerous other businesses during construction, and required the disposal of a projected two million cubic yards of excavate.²⁸ Of all these objections, the dispute over the Charles River and the land along its banks would become the most contentious chapter in the history of the Basin, more protracted and acrimonious than even the battle for the first Charles River Dam.

The Reagan administration was committed to completing the Interstate system, and had already supported a 1981 transportation bill that eliminated a number of projects and reduced the total remaining cost from \$53 billion to just under \$40 billion. The combined Artery/Tunnel project was large enough by itself to skew the whole budget, and so Ray Barnhart, the FHWA Administrator, began a vocal campaign in the Western states against "Tip's Tunnel."²⁹

The state's response was to begin a lobbying effort targeted at federal highway officials as well as the Congress. Roger Allan Moore, a Boston lawyer who had worked on Reagan's campaigns since 1968, developed a strategy that included an invitation to Barnhart to come to Boston and see the MDC property along the Charles River. A Massachusetts assistant secretary of transportation later recalled the visit:

The Garden is on your left and there is an old building on your right and there is a walkway that comes down to the dam. The walkway was the 4(f) site that they claimed we were impinging. Now if you have ever been in that walkway you know it is all full of pigeon droppings because it is all dank and dark. Needless to say, here is a conservative Republican from Texas claiming

²⁷Louis A. Berger, *North Area Central Artery: Final Report* (Boston: Commonwealth of Massachusetts, July 1982), 338, 347.

²⁸*Boston Globe*, November 18, 1984.

²⁹Luberoff (1993), 87.

this was an environmental question. It was an embarrassing position to be in.³⁰

Though it was not widely understood, federal regulations applied to the area as "planned parkland," even in its undeveloped state. Massachusetts highway administrators had been through extensive review of these regulations in the late 1960s in the battles over the Inner Belt and the Southwest Expressway. On this site visit to the edge of the Charles River, the two men were only a few hundred feet from the locks of the new dam, through which thirty thousand recreational boats passed every year. The "dank, dark" walkway that led to the river was full of pigeon droppings only because the existing elevated Central Artery was fifty feet over their heads, and the proposed bridge would be several times wider and much lower, less than fifteen feet above the riverfront walkway. On the Boston side, that path had been built as the first link in the connection between the river and the harbor. Under federal regulations, neither of them had any role whatsoever in the determination of the park's status under federal law; that question was to be addressed by the local park authority. According to the 1983 "Certificate" signed by the Secretary of Environmental Affairs, that determination had already been made.

This episode was only one example of the private negotiations that were pursued to resolve some of the project's major public issues. The deliberations between the state and federal highway agencies over Artery funding had been closed for years; some of the Artery funding studies that were financed with public funds were withheld for months after their completion by private consultants. After the environmental impact statement on the Artery was filed, the enormous increase in the estimated cost made the cost of the project a much more public issue. Massachusetts legislators hoped to avoid the fate of New York City's Westway, the \$1.5 billion project on Manhattan's West Side, which was scuttled on the House floor. They crafted a strategy to make sure that a similar vote on the Artery appropriation did not occur. A compromise with FHWA was reached late in 1985. The federal surface transportation bill would allow a four-lane tunnel (estimated at \$1.25 billion), and the north and south sections (\$650 million) would be eligible for Interstate funding. The centerpiece of the project, however — depressing the Artery from High to Causeway streets, estimated at \$600 million — would not be eligible.³¹

³⁰Luberoff (1993), 101, 108.

³¹Luberoff (1993), 113-130, 157.

The compromises in the transportation bill were strongly opposed by the White House, and the likelihood of a presidential veto raised the stakes for both Congress and the White House. Reagan vetoed the transportation bill in March, as expected, saying that he hadn't "seen this much lard since [he] handed out blue ribbons at the Iowa State Fair."³² He singled out two projects by name, a subway project for Los Angeles and Boston's Central Artery. The brutal battle to override Reagan's veto ultimately came down to a single vote; North Carolina Senator Terry Sanford changed sides, and the bill passed. The project had survived yet another close call. At long last, state officials believed, the political issues they had battled for over a decade were resolved.³³

For fifteen years, the Artery project had faced a series of fundamental questions: Should an "urban beautification" project be eligible for Interstate funding if it did not increase the capacity of the highway system? Should the funding for the proposed Artery be used instead for public transit improvements? Did the regional transportation network require both a new east-west tunnel and a major increase in the system's north-south highway capacity? Could the state afford its share of the Central Artery/Tunnel project without sacrificing highway construction in the rest of the state? Would the bonding for road-building squeeze out the public funds for other priorities — health, education, public safety, open space? At the end of 1987, with the passage of federal funding, senior Artery staff thought these controversies had been addressed.

Even before these general issues were finally resolved, the proposed alignment of the harbor tunnel had aroused heated opposition in both South Boston and East Boston. In South Boston, the interests of Gillette, the largest manufacturing employer in the City of Boston, a choice had to be made between an intricately engineered tunnel and a bridge that would affect Gillette's property. East Boston neighborhood groups had battled the airport for years, and had acquired substantial political skills; their objections were also finally overcome.

Two substantial tasks remained: the design of the Charles River Crossing design, and the preparation of the Supplemental Environmental Impact Statement for the river crossing. The first would demand first-class highway engineering skill; the second called for the marshalling of experts in a number of related but distinct disciplines. In 1985 the state had gone outside the Department of Public Works and hired a joint venture of Bechtel Civil and Parsons Brinckerhoff, two of the largest engineering firms in the world. Their qualifications

³²Ibid., 125; *Washington Post*, March 28, 1987.

³³Luberoff (1993), 157.

seemed well matched to the work at hand, which was seen as primarily technical, not political. The public debate had been intense, but except for a few outspoken critics, state officials believed they had succeeded in uniting a coalition to support the project.

IX. THE CHARLES RIVER CROSSING

Citizen lawsuits are a terrible way to make public policy.

A plaintiff, on the Charles River Crossing Coalition lawsuit, 1995

By 1988, it appeared that the battles for FHWA staff approval and Congressional funding authorization were finally over. Feasible preliminary designs appeared to resolve the complexities of engineering technology and construction phasing for the third harbor tunnel and the southern and central portions of the highway. Only then were the enormous difficulties of widening and replacing the highways that intersected near the Charles River revealed. Highway planners in Massachusetts had discovered in the early 1970s the intricacies of connecting Interstate 93 with Route 1 and the first Central Artery, and the 1983 agreement between state and federal highway administrators to widen the depressed Artery to ten lanes had increased the complexities enormously. The advent of computer-aided design, on the other hand, offered not only extraordinary opportunities to generate alternative highway configurations, but also to make the options comprehensible to the public.

Never before had there been a public works project in Boston with the technical resources of the Bechtel/Parsons Brinckerhoff joint venture. At the project headquarters in the newly renovated South Station, one of the lobbies came to be lined with awards, including numerous citations of the project's capabilities in computer-aided design and geographic information systems. Yet this capacity for electronic image-making was not applied to Scheme Z, the Charles River Crossing alternative selected after three years of analysis—even though this was arguably the most difficult area of the project to visualize because of the massive scale of the proposed bridge. While a full-motion video was produced using computer-generated images to represent the driver's experience of the Third Harbor Tunnel, no public presentations of Scheme Z's appearance were made for months after the design was selected—no computer-aided elevations or perspectives, not even the centuries-old techniques of three-dimensional models or hand-drawn bird's-eye views.

The Artery's director of urban design finally persuaded state highway administrators to build a large-scale model of the proposed bridges and ramps. Images of the future Charles River Crossing began to appear in the press and on television, and a noisy and very public

opposition surfaced. The political process in the 1990s, however, were utterly unlike the 1929 and 1949 decisions on the Embankment highway, or the 1971 highway moratorium. The legislature was never presented a final budget or an unequivocal choice. Instead, there were best- and worst-case scenarios that depended on Congressional authorizations, projections of state tax and toll revenues, and estimates of construction costs years into the future. The almost unfathomable complexity of both the design and funding of the project, and the divisive effects of the culture of professionalism—all these factors rendered a sustained and meaningful public discourse on the project well-nigh impossible.

In approving Scheme Z in January 1991, the state Secretary of Environmental Affairs required the appointment of the Bridge Design Review Committee to evaluate alternative designs. Between early 1991 and mid-1992, forty-two people invested thousands of hours to master the intricacies of the highway project, and their deliberations were summarized in the public press. For those few months in the twenty-year history of the project,

Redesigning the River Crossing

After Congress finally approved funding for the project in 1987, the joint venture budgeted 18,800 hours to complete the required Supplemental Environmental Impact Statement (SEIS). By August 1989, the joint venture had billed 131,520 hours for work on the impact statement and estimated that another 31,000 hours would be required. Significant conflicts had continued in East and South Boston, and new issues arose downtown. The regulatory permits required to dump most of the excavate on a greatly enlarged Spectacle Island (to create two 13-story hills) involved numerous state and federal agencies. The Conservation Law Foundation negotiated directly with the project on a mitigation program to improve public transit.¹ But the most controversial Central Artery issue by far was the proposed crossing over the Charles River. Nowhere in the project did the state more dramatically reject citizen participation and the "open study" model that were the hallmark of Boston's transportation planning in the early 1970s.

The studies of the Leverett Connector, begun a decade earlier, had already considered a number of design variations between Leverett Circle and Route 1, but the now-completed Central Artery North Area (CANA) design eliminated some of these options and imposed additional design constraints. The approved design would remove the elevated ramps over City Square in Charlestown that merged directly with I-93 and replace them with a tunnel

¹Luberoff (1993), 157-210.

under City Square. The tunnel would come out of the ground just west of City Square and split into two large elevated loop ramps encircling the Boston Sand & Gravel plant in Cambridge.² Traffic from Route 1 bound for Storrow Drive, instead of entering from the left and weaving in a few hundred feet to the Storrow Drive off-ramps, went under I-93 and then merged with I-93 from the right. This configuration could proceed even if the central and southern portions of the Artery project were not funded, and would eliminate the dangerous merge on the existing high-level bridge. Highway planners also assumed that this configuration could be made to work with any of the revised schemes for the central section of the project. Unfortunately, the new Artery would not only be wider; traffic planners wanted to separate traffic on I-93 from the traffic between Route 1 and Storrow Drive.

The problem with the river crossing was space, and the increased width of the Artery made that problem much worse. It was not a simple crossing of two highways that could be engineered in an "x" and cloverleaf configuration. Within a few hundred yards, Interstate 93 intersected with Route 1 from the east, then Storrow Drive from the west, and finally the Sumner and Callahan tunnels from East Boston. The proximity of Charlestown, the proposed North Point development in Cambridge, the river, the new dam, and the tracks entering North Station left very little space on the ground. Instead of the four sets of connections required in a standard cloverleaf intersection, there would be six sets of ramps. Only one section of the six-sided cloverleaf—between Charlestown and North Point—was open, and it had railroad tracks and a concrete plant down the middle of it.

A sense of the crossing's complexity was already apparent when the 1985 environmental impact statement was filed. The proposed crossing of the Charles River, called Scheme 5A, was listed in the impact statement as one of four "major unresolved issues" because it was "not consistent with MDC proposals for extension of Charles River Reservation pedestrian walkways along the River's edge." The 1985 preliminary design would have replaced the so-called "high bridge," the existing double-decked structure, with two bridges, one on either side of the old structure (Figure 9.2). The bridge on the east would have crossed directly over the MDC locks at the new dam, and the low clearance of the bridge would not have allowed the lock gates on the dam to be hoisted up for repair or replacement. The connections to and from Storrow Drive to I-93 northbound and to Route 1 were made, like the existing highway, on viaducts; traffic between Storrow Drive and the Artery south of Causeway Street moved in tunnels along the south bank of the Charles River.

²Louis Berger, 35-51.

Where the tunnels came to the surface, the "boat sections" (the transitions from tunnel to surface roadway) would have required some fill along the shore, creating adverse impacts under state and federal regulations on the river itself and on the proposed park land on the river's margins.³

Engineers for the joint venture began looking at new designs for the river crossing as soon as the 1985 EIS was approved, and over the next two years developed thirty-one alternatives, designated "A" through "DD." There were three different approaches to the Storrow Drive connections with Route 1 and I-93: in tunnels, on bridges, or with hybrid designs that combined tunnels and bridges. These three approaches also varied in the number of loop ramps required in Cambridge. The "A" family of designs made the connections from Storrow Drive to the southbound Artery in tunnels just north of North Station, and northbound connections on viaducts above the tunnels. The "M" family included the options that made all the connections in tunnels under the Charles. The "E" family made all of the connections on viaducts. One option from each of the three families was selected for further work— options "S," "T," and "Z" (Figures 9.1, 9.2).⁴

Since the hybrid design of Scheme S combined many of the disadvantages of both the tunnel and the viaduct schemes, the choice focused on the drastic differences between Schemes T and Z (Figures 9.3, 9.4). Several arguments weighed against Scheme T. Because of the tunnel connections, it would be more expensive to construct. Some Artery staff argued that it would be more difficult to permit. There would be over a million cubic yards of muck (much of it contaminated soils) excavated from the bottom of the Charles. To proponents of the tunnel alternative, however, this line of reasoning seemed strikingly at odds with the justification offered for the rest of the project. From the beginning, it had been the long-term urban design benefits that justified the cost of depressing the center section of the Artery, in spite of the ten million cubic yards of material to be excavated, the need to relocate all the utilities that crossed under the Artery, and the long and difficult construction period. The state Department of Environmental Protection consistently indicated (first in meetings, and later in written comments on the draft and final impact statements) that Scheme T would be *easier* to permit because of the long-term waterway and open space benefits of the tunnel.⁵ Another significant potential benefit was the land that would be available for real estate

³Federal Highway Administration and Massachusetts Department of Public Works, *Final Environmental Impact Statement and Final Section 4(f) Evaluation, Third Harbor Tunnel, Interstate 90/Central Artery, Interstate 93* (August 1985), 11-12.

⁴Commonwealth of Massachusetts, Department of Public Works, *Final Supplemental Environmental Impact Report* (November 1990), IIB 1-6.

⁵*Ibid.*, IV 5.2-30.

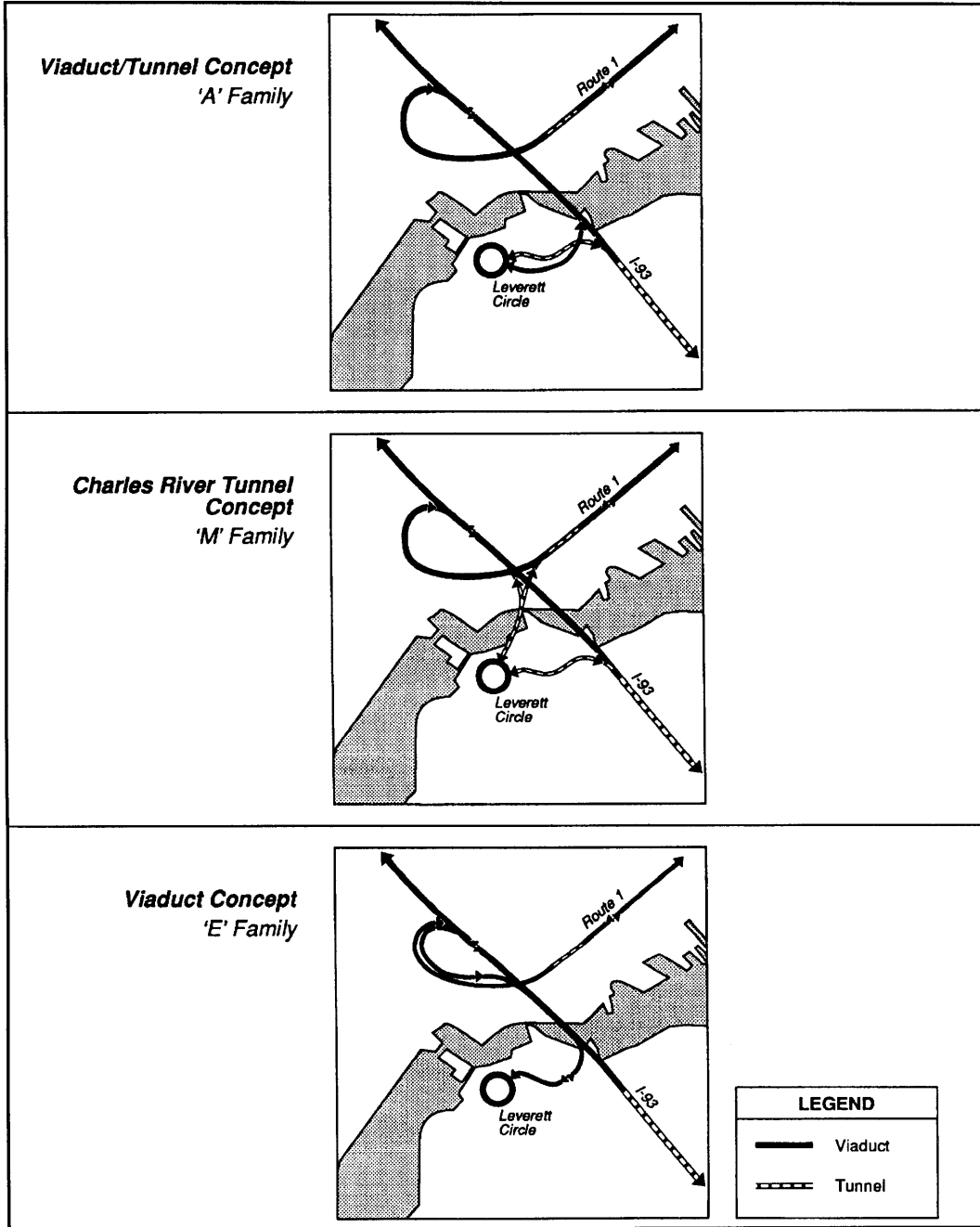


Figure 9.1 Families of river crossing alternatives, *Final Supplemental Environmental Impact Report*, 1990.

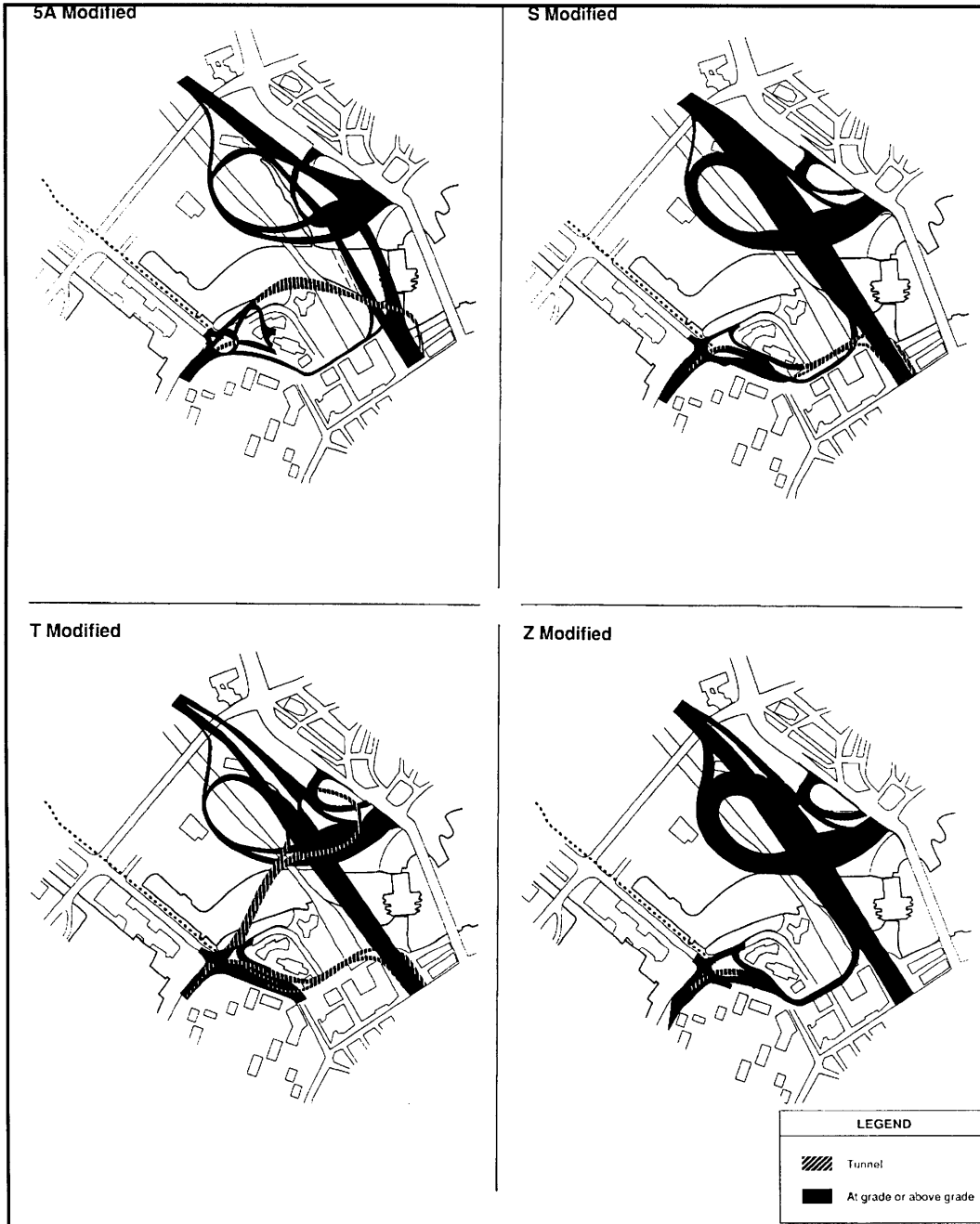


Figure 9.2 Charles River Crossing alternatives, *Final Supplemental Environmental Impact Report*, 1990.

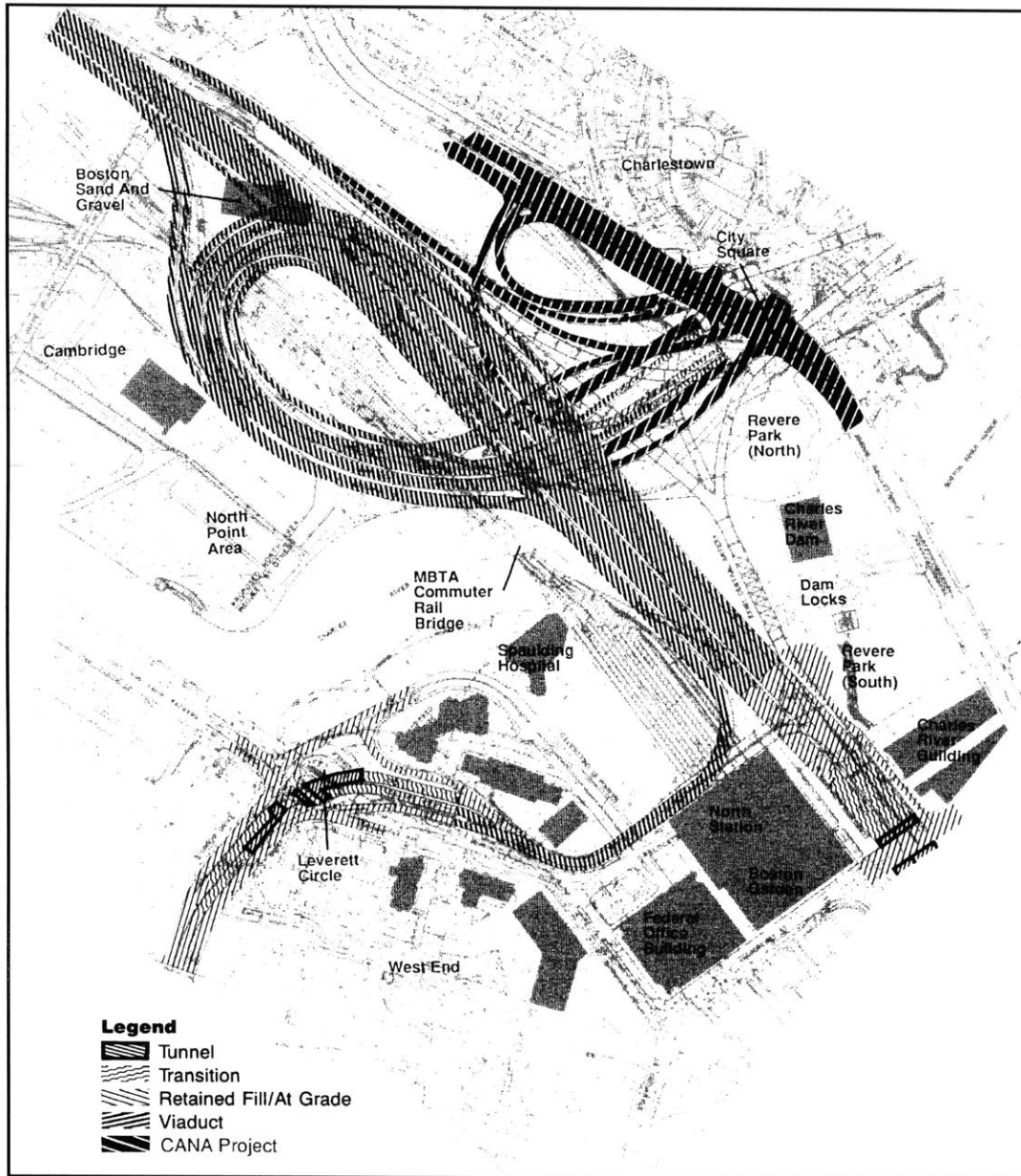


Figure 9.3 Scheme Z Modified, 1990.

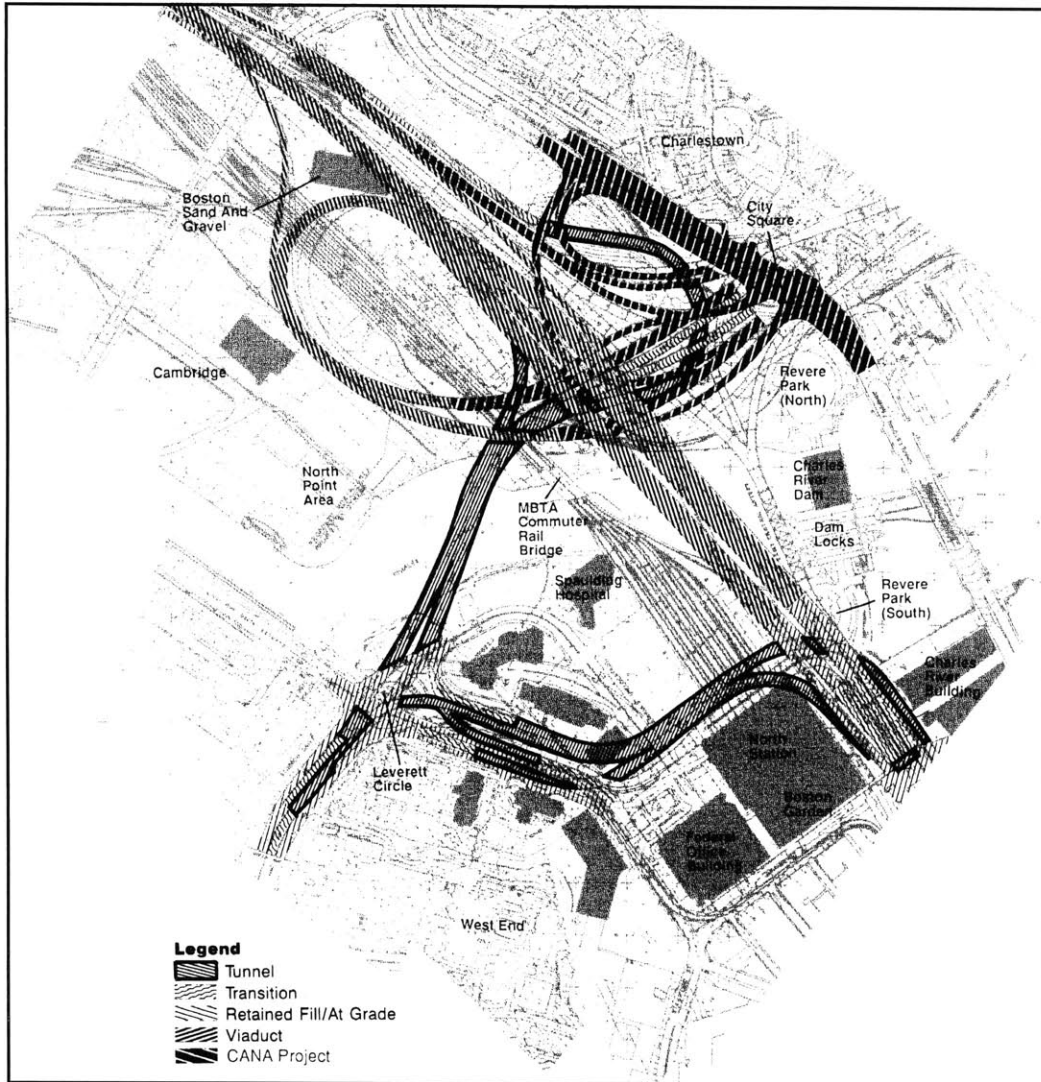


Figure 9.4 Scheme T Modified, 1990.

development, since the highway ramps would be in tunnels. Yet there was no easy way to balance the increased state and local taxes from new building construction in the area with the higher highway construction costs, ninety percent of which were expected to be reimbursed by the federal highway trust fund.

Scheme Z made all of the connections on viaducts. This added four additional loop ramps to the two CANA ramps, two more than Scheme S and four more than Scheme T. The two North Area ramps were about fifty feet high; the stack of six ramps in Scheme Z would be over a hundred feet. The extra ramps were connected to four bridges across the Charles, more than in any other scheme—two five-lane bridges for the mainline traffic, a two-lane bridge downstream for the north-bound on-ramp from Traverse Street in the North End, and a four-lane, double-decked bridge connecting the ramps to Leverett Circle. This configuration required a double crossing of the river for traffic between Storrow Drive and I-93 southbound. From Storrow Drive, for example, cars would travel north across the river, circle around a loop ramp, and then recross the river to I-93. This was touted by the project as an advantage, since the lengthened ramps, though more costly, increased the storage capacity of the highway. The additional ramps would take up more land in Cambridge's proposed new development at North Point, further constricting an already difficult site.

The viaduct alternative with its wider elevated bridges also had significantly greater impacts on the planned public park land along the river. Many of the project's senior managers had been involved in the environmental review of the Southwest Expressway (one of the projects canceled by the governor following the 1971 highway moratorium). They were therefore familiar with the requirements for federal review under Section 4(f) of the federal transportation statutes.⁶

Many of the Artery staff objected to Scheme Z, including the manager of urban design, the manager of planning and environment, and an assistant secretary of transportation. Martha Bailey, the manager for planning, told Salvucci that Scheme Z was "environmentally unsound and unsound from a community point of view and you name it." She predicted mass protests.⁷ Steve Kaiser, a long-time observer of the project who would later develop an alternative of his own, claimed that there were no senior managers except Salvucci who liked the viaduct plan.⁸

⁶Sloan, 107-112, reviews in detail the Section 4(f) issues for the proposed Interstate 95 routes through the Lynn Woods, the Saugus Marshes, and Fowl Meadow.

⁷Luberoff (1993), 214.

⁸Kaiser, 22.

Long after Salvucci was replaced as transportation secretary, senior highway managers as well as project outsiders still puzzled over the reasons why Scheme Z seemed to him to be the only practicable solution. Part of their bewilderment was that his arguments shifted over time. The project environmental impact statements all asserted that Scheme Z was the least environmentally damaging of the alternatives, though many of the state and federal environmental agencies disagreed with that position in their written comments on the impact statements.⁹

Salvucci later came to embrace a line of reasoning advocated by some Beacon Hill residents. In their view, the indirect highway connection from Route 1 to Leverett Circle that Scheme Z offered would reduce traffic on Storrow Drive and in the neighborhoods of Beacon Hill and Back Bay. Drivers with destinations to the west of the Artery—Beacon Hill, Back Bay, Cambridge or the northern and western suburbs—would find other routes, if the connection to Storrow Drive were lengthened by long loop ramps and the double crossing of the river. The specter of the abandoned Leverett Connector was raised: a direct route to Storrow Drive would lead to more traffic, which sooner or later would result in the widening of Storrow Drive. The idea that a delay of one or two minutes would cause people to take alternate routes instead of Storrow Drive seemed illogical to the supporters of the tunnel scheme, and no traffic studies were ever produced to sustain it. (On the other hand, the fear of some Beacon Hill residents that the Section 4(f) regulations would not be enough to prevent the further alteration and widening of Leverett Circle would turn out to be well founded. In 1994 the Artery received state and federal environmental approvals to widen Storrow Drive and build an eastbound underpass in front of Charles River Park. By then, however, the most vocal Beacon Hill representatives had dropped their opposition to the proposed Leverett Circle changes.)

In the early summer of 1988 Salvucci overrode the objections of his staff, and on August 14, Scheme Z was announced as the preferred alternative.¹⁰

Selling Scheme Z

The urban design of the Central Artery air rights, was—for the first decade, at least—the justification of the project. Images of a transformed downtown were crucial in promoting the depressed roadway. Once Scheme Z was chosen as the recommended

⁹Massachusetts Department of Public Works, *Central Artery (I-93)/Tunnel (I-90) Project, Final Supplemental Environmental Impact Report* (November 1990) IV, "Written Comments and Responses."

¹⁰Luberoff (1993), 213-216.

alternative for the Charles River Crossing, however, the project severely restricted the number of elevations, sections, perspectives, and models of the design—normally an essential part of such a large project. The few published drawings minimized the scale and mass of the bridges (Figure 9.5)

An early example of this image-less strategy was a plan for two Charles River bridges, discussed in the neighboring communities in December 1987. Building two three-lane bridges, one on each side of the existing bridge, was one way to maintain traffic until the new crossing was completed. Charlestown community groups reacted angrily to this alternative, since this meant the northbound bridge would be two hundred feet closer to the nearby neighborhood than the existing double decks of I-93. Yet the public presentation of this option, and the newspaper account of it, used only large-scale site plans.¹¹ A public presentation of Scheme Z was not made in Cambridge until the middle of 1989, and it included no models or renderings, only site plans. Many Charlestown residents, the project's immediate neighbors, were not shown the design for Scheme Z until the late 1989.

Rebecca Barnes, the CA/T's manager of urban design, determined to have a model built of Scheme Z, so that the design would be more comprehensible to the community. The model was completed in August 1989, and photographs of it appeared in the daily papers in mid-September, with a front-page headline, "Artery bridges raise doubts" (Figure 9.6). (Models were later built of Schemes 5A and T (Figure 9.7), and photographs of the models were included in the 1990 environmental impact reports.) While concerns were raised about what was left of the Millers River, "conservationists" said the broader issue is the "panorama" of the lower Charles once the new structures are built. Elizabeth Epstein, director of the Cambridge Conservation Commission, said that the scheme didn't seem to fit Boston—it "appears to be a road system like I would imagine in Los Angeles." MDC Commissioner Bhatti said he had asked Salvucci in several meetings to find ways to lessen the visual impact of the bridges on the beauty of the river, so that the vision of Charles Eliot for the river could be extended. Cambridge officials were also concerned about the proximity of the ramps to the planned developments at North Point. Salvucci responded to the criticism by saying that FHWA had been pressuring the state to complete the environmental impact statement.¹²

The problem of restricted information was not just an issue for the wider community. Even the professional staffs at other agencies had considerable difficulty getting data and

¹¹*Boston Globe*, December 11, 1987, 34.

¹²Luberoff (1993), 216; *Boston Globe*, September 14, 1989, 1, 14.

graphic material on Scheme Z from the highway department. Once they did, they were, almost without exception, appalled. When he first saw the design, Stephen Coyle, the outspoken director of the Boston Redevelopment Authority, thought it was "horrendous." He was certain it would have to be redesigned, but he nonetheless lobbied the Boston Civic Design Commission (a city panel chaired by John deMonchaux, the dean of M.I.T.'s School of Architecture and Planning, whose membership included a number of the city's best-known designers) to reverse their original vote opposing Scheme Z. After a presentation by Salvucci a few days later, the commission endorsed the proposed crossing.¹³

As the most powerful and articulate voice for urban design issues in the City of Boston's administration, why would Coyle not challenge Scheme Z and its impact on Charlestown and the Bulfinch Triangle? Several reasons suggest themselves. As far back as Boston's 1965 general plan, the city's urban design staff had incorporated the Leverett Connector in redevelopment schemes, with the Charlestown edge of the river allocated to highway construction. No strong constituency had developed in Charlestown for making a connection to Cambridge along the Charles. Another likely factor was the BRA's focus in the 1965 *General Plan* and in Moshe Safdie's North Station Master Plan of 1980 on a new or renovated Boston Garden. As the plans for both the Artery and the Garden advanced in the late 1980s, it became clear that there was barely enough space on the south bank of the river for the two projects; a breakdown in coordination between the city, the state highway department, and the Garden developers would jeopardize both the new arena and the highway. And like every other senior public official, Coyle faced the responsibility of helping to realize the fifteen thousand jobs the Artery project was promising on billboards around the city.

Most of all, Coyle was committed to a particular vision for the space that would be opened above the depressed Artery. The city chose to make their cause the air rights over the future depressed artery, and not Scheme Z. When he left Boston two years later, he explained why the Artery air rights issue—and not down-zoning, height limits, or a revised public review process—was the most important question he faced during his seven years at the Redevelopment Authority. Since "the *image* of the city is defined by those four or five square miles that are the downtown," adding four or five million square feet of moderately scaled buildings on top of the Artery, "no matter how well designed, wasn't going to add to

¹³Luberoff (1993), 193-4; *Boston Globe*, December 13, 1990, 81.

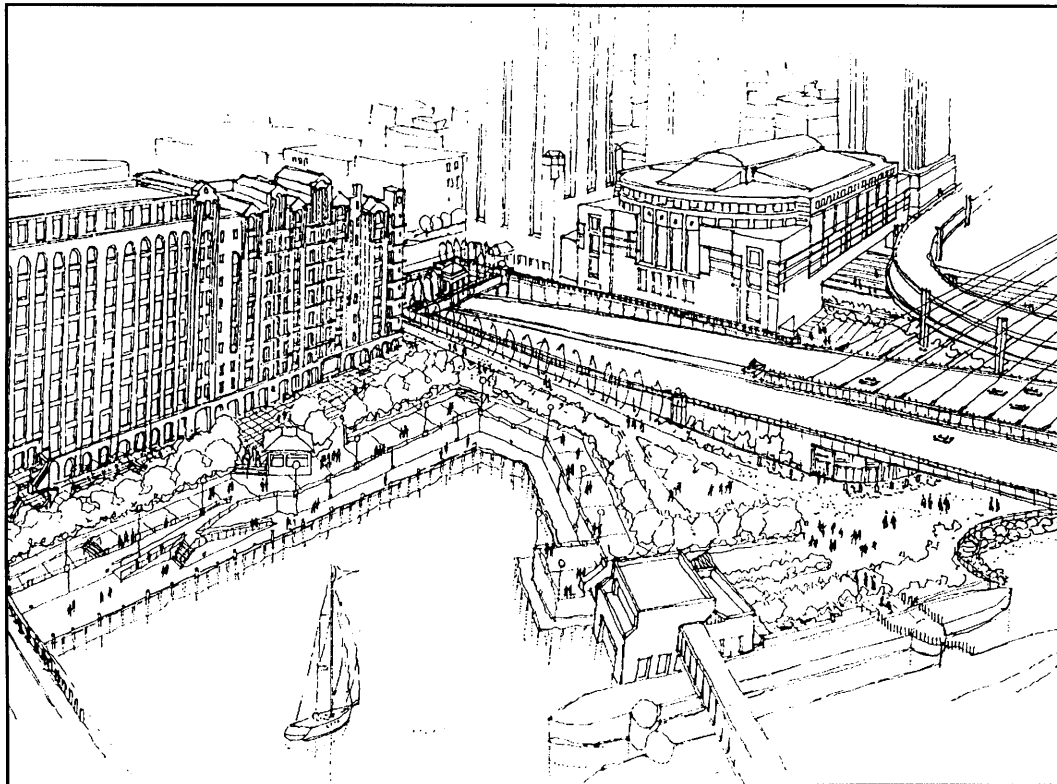


Figure 9.5 Illustrative Development Concept at Revere Landing Park (South Bank) and Lovejoy Wharf, *Final Supplemental Environmental Impact Report*, 1990.

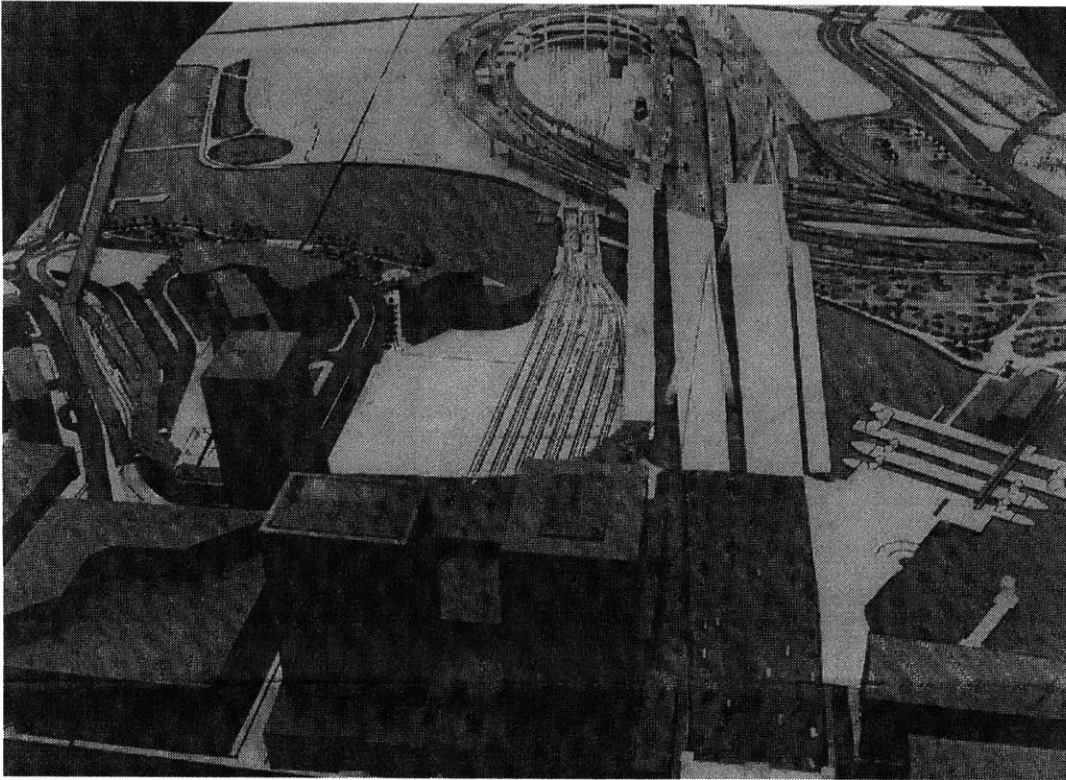


Figure 9.6 "Artery bridges raise doubts," *Boston Globe*, September 14, 1989.

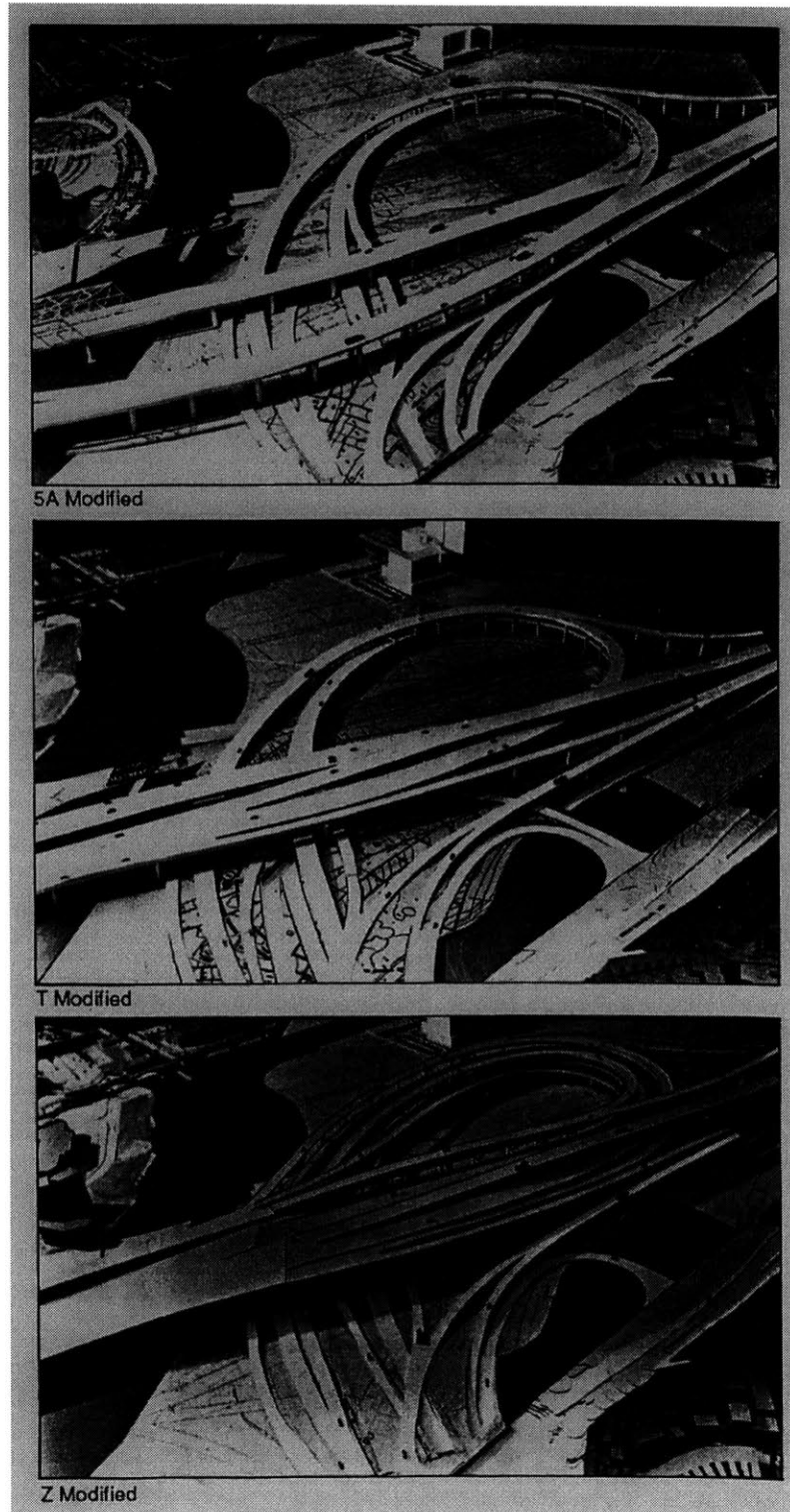


Figure 9.7 Charles River Crossing, views of models, *Final Supplemental Environmental Impact Report*, 1990.

the quality of life in the city as much as providing a pathway for parks and open space and civic uses."¹⁴

City staff and elected officials in Cambridge, on the other hand, expected less direct benefits from the Artery project. The Cambridge Community Development Department began preliminary planning for their side of the "lost half mile" in the 1970s. The city's architects and planners were convinced they could repeat the success of the Lechmere Triangle at North Point, but from their point of view, Scheme Z threatened that prospect. The nested loop ramps of Scheme Z were more than twice as high as the original North Area design, and they covered the banks of the river at the crucial edge where North Point was to connect with Charlestown and the new developments at North Station. Elizabeth Epstein, the head of the city's conservation commission, was understandably interested when Julia O'Brien, the MDC's planning director, proposed a meeting in August 1989 with Karen Pelto, the acting director of the Charles River Watershed Association, to discuss the Artery's preferred bridge design. Steve Kaiser noted that these three women were challenging the traditional alliance of the highway establishment and the business community by creating an "Old Girls Network."¹⁵ Their network would later be actively supported by Alice Wolf, the mayor of Cambridge, and Elizabeth Merritt, Assistant General Counsel for the National Trust for Historic Preservation, one of the most active private organizations over the previous twenty years in litigation over federally funded transportation projects.¹⁶

The MDC's plans for the area would also be drastically altered if the elevated bridges and ramps of Scheme Z were built. It was much more difficult, however, for the park commission to challenge another state agency, and the DPW was one of the most powerful departments in state government even under ordinary circumstances. In this case, their power was magnified by the billions of federal dollars that would flow into the local economy.

Nine months after Scheme Z was selected, the Artery still had not consulted with the MDC on the anticipated impacts of the bridge on existing and proposed parks, or completed even a draft of the analysis required under Section 4(f). Concerned that its objectives for the river appeared to be seriously compromised in the design of the river crossing, the MDC wrote to the highway department in May 1989 to summarize the agency's view of the status of the Charles River under the federal transportation regulations. The MDC's letter cited the 1909 legislation that transferred "exclusive care and control" of the Charles River Basin and

¹⁴Stephen Coyle, interview, October 1991; quoted in Luberoff (1993), 217; *Boston Globe*, January 19, 1992, 68.

¹⁵Kaiser, "Grass-roots Perspective," 1993, 30.

¹⁶On the review of the Artery Project by the National Trust, see below.

the parks and parkways along its edges "*as part of the metropolitan parks system.*" The agency also quoted the 1962 statute authorizing the new dam, which extended the powers and duties of the park commission to the "waters and lands lying between the present Charles River dam and the [new] dam to be constructed."¹⁷ On the legal status of the river, the MDC concluded, "the statutory language [was] clear: that the Charles River Basin itself is a park, and that this park extends to the new dam."¹⁸

Highway Department officials claimed in subsequent interviews that the MDC was trying to "advance other agendas" and was seeking concessions from the project through "adversarial processes."¹⁹ The MDC, on the other hand, felt that Artery proponents were trying to short-circuit the process required by the Artery's own "patron," the Federal Highway Administration. That process was first mandated in federal legislation passed in 1966. Even though the legislation has been revised several times, the required review is still known as Section 4(f) after the section in the original statute. The implementation of Section 4(f) was substantially clarified in a 1987 FHWA policy paper.²⁰ The required process addressed three issues: the significance of protected resources; the evaluation of highway design alternatives, including the analysis required to determine the preferred alternative; and the determination of the impacts of the highway design, after the preferred alternative had been selected.

The determination of significant resources, as outlined in the federal regulations, follows a straightforward sequence. Protected resources are defined as recreational, historic, and archeological sites as well as existing and planned park land. Agencies that administer park land are directed by the statute to address two questions. First, is the land affected by the transportation project park land? Second, is the affected park land "significant"? The transportation agency proposing the project should then analyze whether there are any "prudent and feasible alternatives" to the taking of park land. If there are no such alternatives, the transportation agency evaluates the effects of the proposed project. If the effect on significant park land is adverse, "all possible planning" is required to minimize the adverse effects of the project.²¹

MDC administrators believed their position was supported by the 1987 policy paper. Several sections of the paper address the issues of park mitigation and the issue of significance

¹⁷Commonwealth of Massachusetts, *Acts of the General Court*, 1909, Chapter 524; 1962, Chapter 550.

¹⁸M. Ilyas Bhatti, MDC Commissioner, to William V. Twomey, CA/T Project Director, May 1, 1989.

¹⁹Luberoff (1993), 160, 217-218.

²⁰[Federal Highway Administration], "Section 4(f) Policy Paper," September 24, 1987.

²¹*Ibid.*, 3-6.

as it applies to rivers and other bodies of water included in the boundaries of protected park properties. The policy paper notes that while neither the Section 4(f) statute nor FHWA regulations require the replacement of 4(f) land used for highway projects, mitigation usually includes the replacement of land and facilities or monetary compensation to enhance the remaining park land. The paper defines the circumstances under which Section 4(f) applies to portions of rivers contained within the boundaries of protected parks and specifically addresses publicly owned rivers, as well as bridging over park and recreational resources "if the bridge harms the purposes for which these lands were established."²² Since the MDC had jurisdiction of the large parcels at the corners of the New Basin (Nashua Street, North Point, and Revere Landing Park) as well as of the river itself, the Charles appeared to be clearly protected under Section 4(f).

The federal statute required the selection of the river crossing with the least impact on the Charles River Reservation, even if that alternative was substantially more costly. Project officials, on the other hand, had made a public commitment to Scheme Z as the preferred alternative. They feared the loss of federal funding if a more expensive river crossing were required.

The All-Tunnel Plan

A radical alternative to Scheme Z, was developed by Steve Kaiser, at the time an elementary school computer instructor. Kaiser had worked as a traffic analyst in the MEPA office after receiving a Ph.D. in political science from M.I.T. In November 1988 he was invited to a briefing at which a model of Scheme Z was unveiled. Though he felt there was no chance whatever for any alternatives, Kaiser thought someone should put on record an alternative to the river crossing "in the interests of history," to demonstrate that not everyone had acquiesced to the awful design proposed by the project. The obvious option, in his mind, was to continue the approach that had spawned the whole project—to bury not only the existing downtown segment of the highway, but also the high bridge over the Charles.²³

When a December 1989 letter to the Secretary of Transportation proposing a tunnel crossing went unanswered, Kaiser determined to come up with a design himself, working at home on his own time. The following April he mailed to Salvucci Version 3.02 of what he called the "all-tunnel" plan.²⁴ After showing the plan for the first time in the summer of

²²Ibid., 6, 16, 20.

²³Kaiser, 16-17.

²⁴Stephen H. Kaiser to Frederick Salvucci, December 12, 1989; April 2, 1990.

1989 to the East Cambridge Planning Team (a neighborhood advocacy group), Kaiser made additional revisions.²⁵

In spite of the likely cost, the all-tunnel scheme seemed to many people to be a legitimate—perhaps even a legally mandated—alternative to Scheme Z. And the cost of the tunnel would be greatly reduced if the project were to revisit the decision to widen the project. Even the all-tunnel proposal's provenance as the design of an amateur added to its appeal, reflecting Kaiser's commitment to an open public discussion of alternatives.

Public and Private Opposition

Early in 1990 scattered public criticism of the project appeared in meetings and in the press. At first the stories were technical, usually focussed on transportation policy. In January a federal EPA official called Scheme Z "the single ugliest structure in New England," a phrase that would be frequently repeated in the press and in public discussions.²⁶ In April 1990, the *Globe* asked the Secretary of Environmental Affairs about rumors of an impending conflict between his office and the highway department. A day later one of the *Globe*'s business columnists raised the specter of New York City's Westway. Westway turned back \$1.7 billion in federal highway funds after 10 years of planning.²⁷ The following week a story asserted that the DPW was sitting on \$391 million in federal highway trust fund dollars because the department couldn't match them with state funds; the head of the state's engineers union claimed Salvucci was hoarding general road maintenance funds for the Artery.²⁸

The escalating objections to Scheme Z in 1990 were the subject of increasingly frequent news stories as the year went on. A quite visible schism developed between the *Globe* editorial board, who supported the project, and the paper's reporters and columnists. The press coverage of the Artery debate became increasingly graphic; even when pictures or maps were not included, verbal shorthand was often used to convey the magnitude of Scheme Z. While the stories seldom described the proposed riverfront open space in any detail, the image of extending the Esplanade figured often in depictions of what was wrong with the proposed river crossing. This image-making helped to enlarge the range of issues beyond the realm of the traffic engineers and, for a time, opened the discussion to a broader public.

²⁵*Cambridge Tab*, October 9, 1990, 3.

²⁶*Globe*, January 31, 1990, 17, 18.

²⁷*Boston Globe*, April 4, 1990.

²⁸*Boston Globe*, April 8, 1990, 25, 37.

At the same time, the early 1970s images of "knitting the city back together," that had been used to support the dismantling of the elevated highway downtown, were turned against the proposed river crossing. In April, in a *Globe* column called "Mending the City," Jane Holtz Kay, architecture critic for the *Nation*, attacked all the medical metaphors attached to the Artery project: "Heal the scar? No way. Stitch the city? Not from the plans underway." The elevated highway might be removed, she wrote, but six—and sometimes eight or ten—lanes would remain on the surface, cutting off the city from the sea.²⁹

On the last Sunday in June, two of the *Globe's* columnists filled the entire front page of the "Arts" section with their views of Scheme Z. In a piece on how he "learned to stop worrying and love Scheme Z," M.R. Montgomery compared the bridge with the Eiffel Tower. He observed that "to make a grand bridge, you must have great approaches—bare, open, undeveloped shores—but Scheme Z must link the quirky cow paths of Boston and Charlestown with the awesome modernist crush of I-93 . . ." We should not worry, he assured readers, that Scheme Z would block the views—the bridge itself would be the view. "Like Grand Coulee or Hoover Dam, like the Long Beach-San Diego Freeway stack in Los Angeles or the Quaker Oats silos in Cedar Rapids, Iowa, it will be concrete, undecorated, unabashed, unglamorous."³⁰

Robert Campbell, the paper's Pulitzer prize-winning architecture critic included a close-up photo of the model to illustrate the construction of what he called "a Great Wall across the Charles" (Figure 9.8). He quoted at greater length the January comment of EPA that this would be "the ugliest structure in New England" because "it will be a low, dark roof over the Charles." Next to this Great Wall of Concrete would be the "Stadium of Ramps." In another image that would be repeated often in public meetings, he suggested that the Artery was following "some perverse law of physics: 'if you push it down in one location, an equal and opposite mass will pop up somewhere else.'"³¹

The present condition of the area was irrelevant, Campbell wrote; thirty years ago the downtown waterfront was also an industrial wasteland. The community should simply say that "the Great Wall of Concrete and the Stadium of Ramps of Scheme Z" are counter to the premise on which the new Artery was advanced, that is, to improve the quality of life on the city's water edges. One sure sign that the project needed improvement was the "rush to judgment," the increasingly repeated threat that any further opposition would kill the project.

²⁹*Boston Globe*, April 11, 1990, 14.

³⁰*Boston Globe*, June 24, 1990, B29, B33.

³¹*Ibid.*, B29, B32.

The myriad experts working on the project did not vouchsafe the public good, Campbell implied; in fact, they could easily obscure it. The community should not allow itself to be drawn into discussions of traffic planning or the countless other technical questions that surrounded this project, since professionals "have a way of rendering amateurs impotent by seducing them into debate about technicalities."³²

The increasing public criticism of Scheme Z came in the final months of the Dukakis administration and heightened the anxiety of CA/T managers over the outstanding approvals still required from state and federal agencies. In August the state's mediation service was asked to convene the principal parties and address the unresolved issues.

In the mean time, several potential litigants had written to both the MDC and the DPW. The Conservation Law Foundation, a Boston non-profit advocacy organization, wrote to the MDC Commissioner in July 1990. A senior attorney for the foundation claimed that the governor and the secretary of transportation had pressured the MDC to sign a Section 4(f) statement denying the significance of the river and the public lands along its banks. His letter emphasized that under Massachusetts law, "*the Charles River itself, as well as the land along its banks, is a park.*"³³

Attorneys from the Conservation Law Foundation and MDC staff met in July with Elizabeth Merritt from the National Trust, and a week after the CLF letter, Merritt wrote to the Federal Highway project manager and to the state Secretary of Environmental Affairs. Citing the July 13 CLF letter, Merritt emphasized that if state officials had requested the MDC to find that the Charles River was not subject to Section 4(f), such action would "subvert the purpose and intent" of the transportation statute. She also pointed out that the Trust "has a long history of leadership in the enforcement of Section 4(f)" as well as "a strong institutional interest in protecting the integrity of this important mandate."³⁴ Two months later, the Trust's vice president for law and public policy commented on the draft impact statement on the Artery project. Among his concerns was the failure of the impact statement to acknowledge the "constructive use" of protected resources, which federal case law, in the Trust's judgment, had interpreted broadly to include "noise and visual impacts as well as the impairment of enjoyment of Section 4(f) sites." Scheme Z would cast a permanent shadow "of several acres over recreational lands and waters," and would "create a concrete

³²Ibid.

³³Stephen H. Burrington to M. Ilyas Bhatti, July 13, 1990 (emphasis in the original).

³⁴Elizabeth S. Merritt to John DeVillars and Alexander Almeida, July 20, 1990; in *Final Supplemental Environmental Impact Statement*, November 1990, IV 5.5-355.

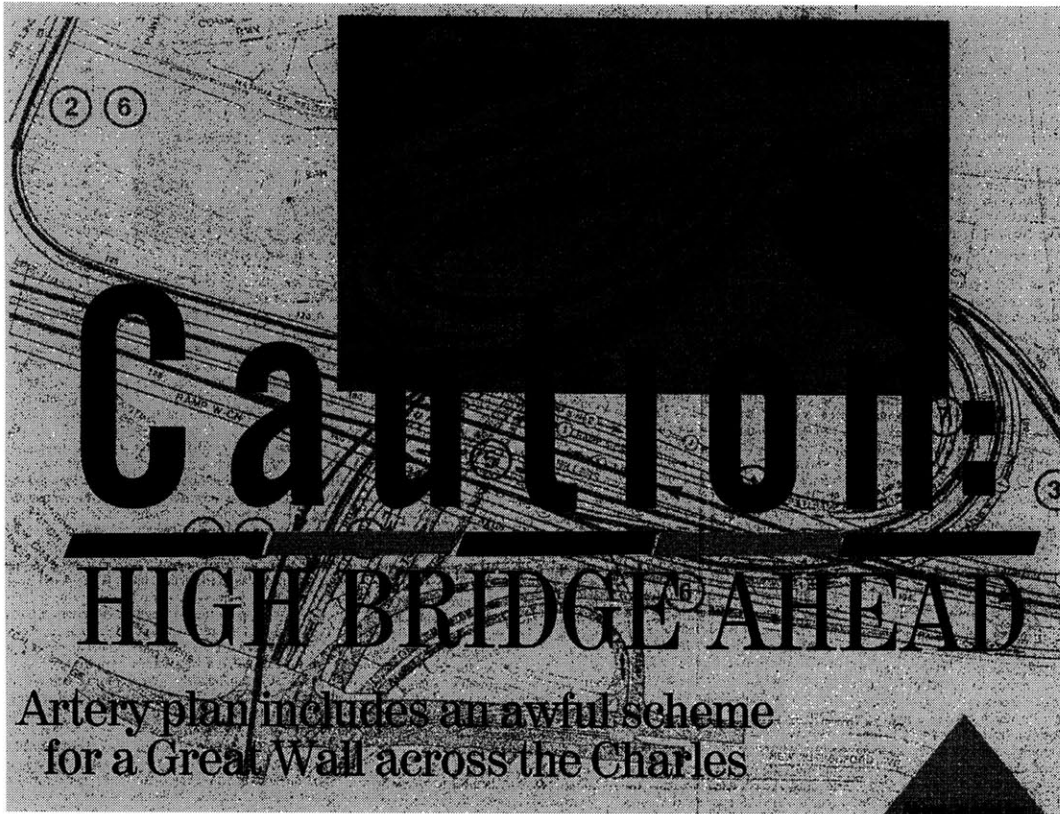


Figure 9.8 *Boston Globe*, June 24, 1990.

'ceiling' over several hundred feet of existing pedestrian walkways." Another issue was the number and types of alternatives that had been studied for the Charles River Crossing, which seemed "severely limited, especially given the five billion dollar project budget." The impact statement, the Trust noted, did not discuss a full tunnel option, even though that alternative would clearly preserve the parkland in the New Basin; Artery project staff had even ignored two public document requests for studies that analyzed alternatives to Scheme Z.³⁵

The prospect of litigation, especially over Section 4(f), made the MDC determination of the status of the river and the adjacent MDC-owned land a crucial issue. Both CLF and the National Trust agreed to join the state's mediation process.

Under state regulations, the state secretary of environmental affairs was required to sign off on the draft environmental impact statement. In an interview in August he announced that he intended to "extract every last ounce of environmental and recreational benefit that the law and common sense allow," including \$20 million for improvements along the Charles and \$25 million for a park on Spectacle Island, where the project planned to dump most of the ten million cubic yards that would be excavated to build the new Artery and tunnel. He also hoped to force the project to design a suspension or cable-stay bridge on the river by requiring a reduction in the number of bridge piers in the Charles.³⁶ The *Globe* characterized the statement as a "weekend raid on Salvucci's turf," and indicated that many of these requirements had never been presented to the Artery. Salvucci would not comment on the requirements, but the next day another cabinet secretary disavowed any dissension between the offices of transportation and environmental affairs.³⁷

CLF's concern over the river crossing was not the foundation's primary issue with the Artery project; they were also negotiating a multi-billion-dollar program of public transit mitigation, to compensate for the project's impact on traffic and air quality.³⁸ In the fall, with the state's mediation process going nowhere, staff from CLF and the National Trust began meeting privately with Artery lawyers. A senior CLF attorney wrote to the Artery in early November and indicated that the Foundation would agree to Scheme Z provided the project agreed "to a set of mitigation measures that approximates what would flow from the 4(f) accounting which we consider to be ultimately the legally correct one."³⁹ In other

³⁵David A. Doheny to John DeVillars and Alexander Almeida, September 21, 1990, in *Final Supplemental Environmental Impact Statement*, November 1990, IV 5.5-351-2. Given the record of the National Trust in litigating transportation cases, it is puzzling that Luberoff fails even to mention the role of the Trust in the discussions of Scheme Z in 1990.

³⁶*Boston Globe*, August 26, 1990, 1, 78, 79.

³⁷*Boston Globe*, August 27, 1990, 13, 15.

³⁸For a discussion of CLF's transit issues, see Luberoff (1993), 205-7.

³⁹Stephen H. Burrington to Douglas McGarrah, November 1, 1990.

words, CLF would not require a Section 4(f) determination stating that Schemes S or T were "prudent and feasible alternatives" to Scheme Z, provided the level of mitigation was appropriate.

While the closed negotiations between the highway department, CLF, and the National Trust were taking place, Bob Weinberg, a long-time colleague and friend of Salvucci, was asked to mediate the dispute with the MDC. A marathon session on November 9, 1990, with senior staff and legal counsel from the two agencies resulted in a letter from the MDC to the Federal Highway Administration, and an agreement by the Artery project to fund most of the mitigation measures the MDC had proposed, including all the public open space along the river.

The November 9 letter from the MDC became the basis for the required Section 4(f) evaluation, written by the CA/T Project and cosigned by FHWA; it was also crucial in the subsequent lawsuits filed against the project. The letter did not withdraw the assertion in the MDC commissioner's May 1989 letter, that the river and the planned parks on MDC-owned riverfront land were protected park land as defined in the federal statute. But the letter did not repeat that assertion or make a "determination of significance" as the agency having jurisdiction (as required by Section 4(f)), stating clearly that the river and the MDC-controlled lands were "significant."⁴⁰ Several statements in the letter are at least confusing, if not misleading. After describing the acquisition of the North Point and Nashua Street parcels, a claim was made that "based upon these changes over the past five years, the MDC has designated the portion of the Basin extension river surface area upstream of the railroad bridge, for park and recreational purposes." In fact, no such act of designation of the upper half of the New Basin had ever occurred.⁴¹ The New Basin had been the subject of designation by the MDC only once, in the vote on the 1980 master plan, which defined the New Basin as the entire length of the river between the old and new dams (figure 7.6). And the 1980 New Basin master plan had already been published, in the 1982 impact statement on the Central Artery North Area.⁴²

The Section 4(f) evaluation included as part of the environmental impact statement, found that the river was a protected resource upstream of the proposed highway crossing, but not where the bridge would be built (Figure 9.9). The evaluation also left out most of the

⁴⁰M. Ilyas Bhatti to Anthony Fusco, November 9, 1990, in Massachusetts Department of Public Works, *Central Artery (I-93)/Tunnel (I-90) Project, Final Supplemental Environmental Impact Statement*, Appendix 3.

⁴¹Ibid.

⁴²Berger, 338.

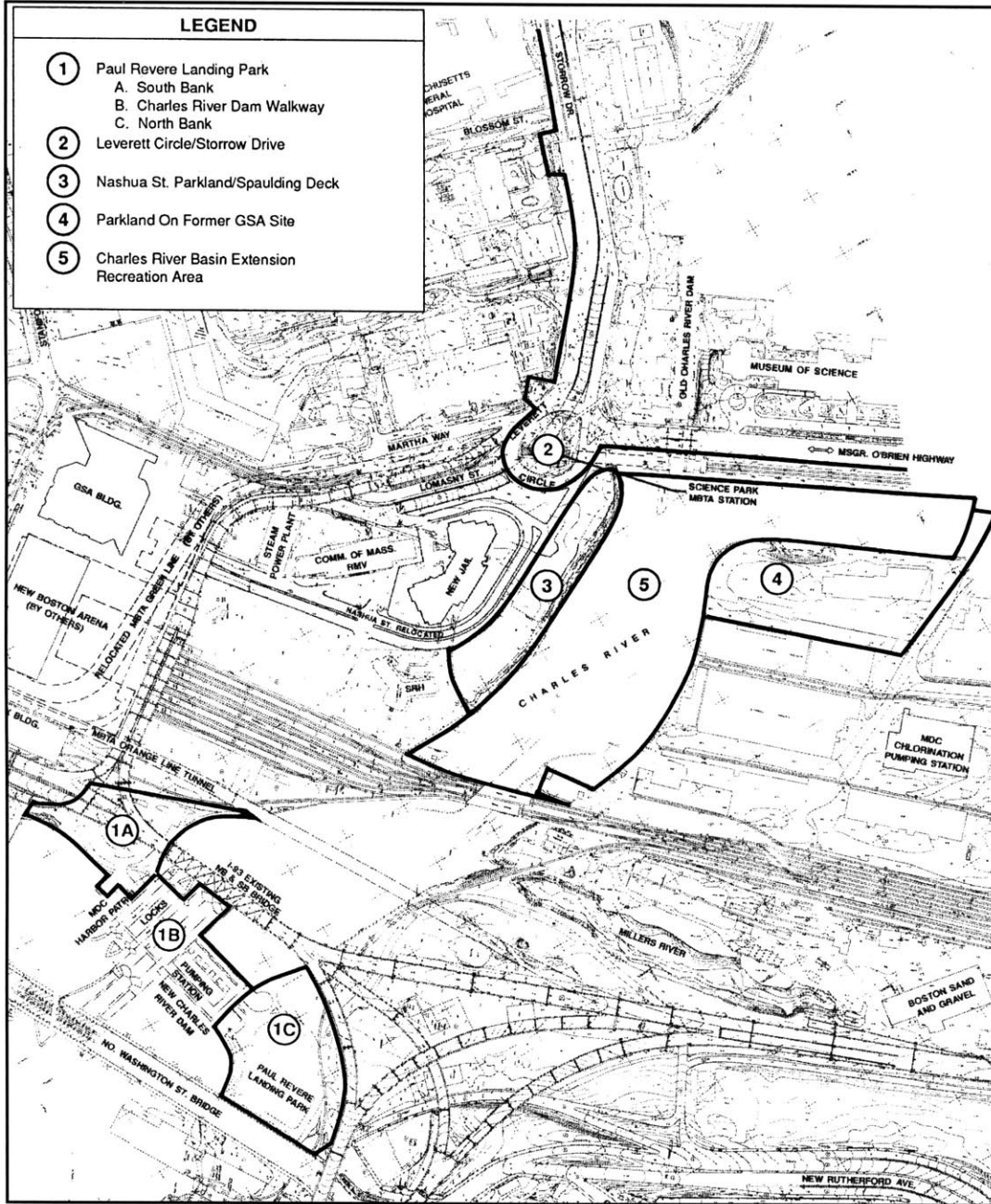


Figure 9.9 Section 4(f) Resources in the Area North of Causeway Street, *Final Supplemental Environmental Impact Statement*, January 1991.

public open space previously planned under the separate CANA highway project, which the MDC had asserted in its May 1989 letter was part of the planned park.

The National Trust had seen firsthand the pressure brought to bear on the MDC. The Trust's first two letters to FHWA had been as unequivocal as CLF had been in endorsing the MDC's 1989 position that the river was a protected resource under the federal statute. The Trust nonetheless concurred with the December Section 4(f) finding that the entire river basin was a protected resource—except in the area where the new bridge would be built.⁴³

As it happened, the agreement later signed between the highway department and the MDC stated that the proposed mitigation measures were subject to the availability of federal and state funding. And since the final Section 4(f) Evaluation filed by the FHWA as part of the federal environmental impact statement concluded that the river directly under the highway bridges was not a protected resource, FHWA was legally obligated to pay for only a small fraction of the proposed park developments. The commitment to fund the parks in the state environmental impact report, however, could be overturned by a future administration, and some open space advocates feared that the financial burden of the Artery project might lead the legislature to determine that the cost of these open spaces was beyond the state's budget.

The MDC's 1988 contract for the New Basin Master Plan had been withdrawn, and now, more than two decades after the initial planning for the "lost half mile," the only graphic representation of the future New Basin was the single drawing done in 1980. One consequence was that the proposed improvements to the New Charles River Basin were not well understood, even by urban design professionals. Stephen Coyle of the BRA, for example, said in an interview in 1991 that

the abatements to Z were silly. They had lights under the over pass. For what? So the pigeons could signal to each other? . . . Z just had to be redesigned. Not redesigned away from the state's transportation assumptions but away from its physical answer to the problem. It was not a good answer. That led to Fred saying, 'OK, here is \$70 million to mitigate it.' Whoa! The air rights package [for the park space above the artery in downtown Boston] is \$40 million. The park [downtown] is going to be used by millions of people. Who in their right minds is going to go to the [New Basin] park underneath an overpass?⁴⁴

In fact, the Scheme Z mitigation measures in the New Basin included the development of over forty acres of new parkland, almost double the twenty-plus acres to be constructed above the

⁴³David A. Doheny to John DeVillars and Alexander Almeida, December 23, 1990, 1.

⁴⁴Quoted in Luberoff (1995), 215. The Charles River mitigation is incorrectly described in *Mega-Project* as "a park under the bridge and a walkway to North Station. It would also install lighting under the bridge."

depressed downtown Artery. About eight acres of the proposed open space was underneath the highway or inside the loop ramps; the balance was up- or downstream of the new bridges. The new open space would be well connected with the esplanades upstream and with Boston's Harborpark, even if the connections under the highway and over the commuter rail tracks proved unbuildable.

Open discussions were made difficult not only by the complexities of the project and the almost incomprehensible variations in traffic analysis and design alternatives. Some critics of the Artery argued that there appeared to be an explicit strategy of minimizing the required public discussions and substituting in their place more and more private bargaining. The public mediation that included the MDC, the National Trust, and the Conservation Law Foundation was displaced by a private negotiation that included only the Artery, CLF, and the National Trust.

In 1990 one project insider observed that the public review process was about to begin "and already a million deals have been cut."⁴⁵ Many of those agreements were addressed to private interests affected by the project. Such discussions seemed unavoidable when the highway would dramatically affect so much downtown real estate.

More troubling were the repeated efforts to keep the judgments of the project's own experts from the public view. Restricting the production and circulation of visual images of the river crossing was one example. As the debate became more contentious, the discussion of more basic traffic analysis was also thwarted. A lengthy 1989 memo on traffic in the North Area ramps and tunnels, written by a member of the Central Transportation Planning staff, was leaked to the *Boston Herald*. It described the possibility that traffic on the mainline bridge of I-93 would be shut down under certain circumstances, because of the proposed off-ramp locations in Charlestown. Instead of a public discussion of the issues raised by the memo, Jane Garvey, the Public Works Commissioner, said the memo took a "narrow" traffic perspective and was not considering safety issues. "It's one person's opinion," she was quoted as saying. "If you ask four engineers, you'll get four different opinions." Copies of the memo were not made available for public review.⁴⁶

In the summer of 1989, when project administrators were asserting that the schemes for tunnels under the Charles were unbuildable, an in-house study concluded that the project had not done sufficient test borings to evaluate the permitting and construction difficulties of

⁴⁵Suzanne Costas, "The Power Broker," *Boston Business Journal* (June/July 90), 22.

⁴⁶*Boston Herald*, June 14, 1989, 16.

tunnel designs for the river crossing. The study disappeared, and project administrators ignored requests for copies of the study under the state's freedom of information statutes from City of Cambridge and from the Conservation Law Foundation.⁴⁷

If there was an issue as troublesome as permitting, it was the project's estimated cost, which was rising substantially faster than the rate of inflation. Commitments had been made to federal officials that the cost, inflation excepted, would not go up. The level of federal funding for various pieces of the project was uncertain, and the possible use by the Artery project of non-Interstate federal money, intended for road projects across the state, jeopardized the support of state legislators outside metropolitan Boston. Here, too, the project went to extraordinary lengths to contain public discussion. The New York firm of Lazard, Freres was hired to analyze funding alternatives, and completed a draft before the beginning of the public comment period. But Salvucci insisted the report was incomplete, and therefore could not be released until after the comment period ended.⁴⁸

What had happened to citizen participation in the twenty years since the "open study" of the Inner Belt? Fred Salvucci, the Artery project's mastermind and champion, had years of experience with Boston's Little City Halls program, had vocally supported the East Boston neighborhood's opposition to airport expansion, had never forgiven the Turnpike Authority for the condemnation and relocation process that took his mother's home in Brighton. One state official who has known Salvucci for years suggested that "maybe the inevitable frustration of planning huge projects has caused him to leave his beliefs behind." Another long-time observer was more critical. He thought that Salvucci, "a creature born of process—the balancing of issues, ideas and interests that defines government," at some point in the twenty years of discussion "fixed upon the cynical conclusion that, to get things done, big things, one must do more than participate. One must *control* the process."⁴⁹

It could also be argued that at crucial points in the project's history, for example, the decision to widen the Artery to ten lanes, that Salvucci was severely constrained in both design and budget issues by the Federal Highway Administration and the Congress.

Managing the politics of the project had been made both easier and more difficult because of the nature of its financing. Unlike the two battles over Storrow Drive or the protracted conflict over the Inner Belt, the Artery project never came to the legislature for a one-time, yes-or-no vote. Instead, legislators had only to include enough money in state bond

⁴⁷Stephen H. Burrington to Frederick Salvucci, December 11, 1989, 2.

⁴⁸Costas, 22.

⁴⁹Ibid., 72.

bill legislation to match the federal funding, which because of the massive scale of the Artery stretched over three different federal transportation appropriations.

For a time in 1990, however, it looked like the Artery might become an election issue. Before the primary elections in September, Kaiser told the Artery project manager that if the state would undertake a technical analysis of Version 4.0 of his all-tunnel plan, Kaiser would not raise the issue during the gubernatorial campaign.⁵⁰ In a few weeks Kaiser's proposal had been transferred to the Artery's computerized data base. It appeared to fit within the project's seemingly innumerable physical constraints, and was found to be technically feasible. The joint venture staff, however, concluded that there would be serious permitting problems, even though the MDC and the state DEP, two of the state agencies that would have to grant permits for the project, consistently indicated their strong preference for schemes that included tunnels. Both agencies argued in comment letters on the Artery project's impact reports that the environmental issues for Charles River tunnels were an order of magnitude less than those for depressing the Artery or building the Third Harbor Tunnel. The Artery, for example, had to dispose of ten million cubic yards of dirt for the harbor tunnel, while the Charles River tunnels were estimated to require the disposal of only a tenth of that amount.⁵¹

The Artery review of the all-tunnel design also determined that the plan would cost an additional \$400 million. This was a far more serious objection, since even after the 1987 veto override, Congress continued to scrutinize the project closely. Only a few weeks after the tunnel scheme was reviewed by Artery engineers, the chairman of the Senate Finance Committee proposed revisions in the highway program, including a drastic reduction in the Central Artery project.⁵²

In October Kaiser presented the all-tunnel plan to a public meeting in Cambridge; several weeks later he delivered Version 5.0 to the MDC, the BRA, and the Federal Highway Administration.⁵³ Because the plan so clearly had less impact on the Charles River Reservation, whatever the disputed boundaries of the existing and planned park land might be, Kaiser's design was the most "green" of all the alternatives. It would eliminate not only the proposed "Stadium of Ramps" and the "Great Wall" over the river; it would also take down the double-decked barrier of I-93 between Cambridge and Charlestown.

⁵⁰Kaiser, 1993, 16-17.

⁵¹Luberoff (1993), 220.

⁵²Ibid.; *Boston Globe*, September 12, 1990.

⁵³*Boston Globe*, December 7, 1990, 29,33.

The all-tunnel plan was vigorously promoted by the Committee for Regional Transportation, a group funded primarily by the owner of a parking and shuttle business near the airport. Kaiser was among the founders of the group, whose members included Charlestown and Cambridge residents as well as active members of the local Sierra Club and the National Railroad Passengers Association. The group hired an engineering firm, legal counsel, and a public relations consultant, and was a major factor in altering the terms of the public debate in the fall of 1990.⁵⁴ Dun Gifford, another member of the Committee for Regional Transportation, challenged the state's argument that this part of the Charles River was an unredeemable wasteland in a lengthy *Globe* essay. It was ironic, he thought, that Artery planners who disparaged the "lost half mile" were claiming at the same time they could turn Spectacle Island, once a garbage dump, into a "glorious park" with the excavate from the Third Harbor Tunnel.⁵⁵

Defining the New Public Spaces

In the face of increasing opposition to Scheme Z, the Artery project's managers tried to redirect public attention to other aspects of the project, in particularly to the open space above the depressed Artery and to the project's public arts program. In 1988 the BRA had selected two consultants to advise them on the future Artery open space, Alex Krieger of Boston and Ricardo Bofill, a Spanish architect described by the *Globe* as an avant-garde neo-classical designer. Stephen Coyle suggested at the time that the choice of Bofill would "elevate the profile" of the open space design; according to the BRA director of urban design, Coyle decided a neo-classical would be appropriate, and the selection of Bofill followed.⁵⁶ His design may have altered perceptions in the city and state bureaucracy, reinforcing the BRA's preference for open space along the Artery (Figure 9.10). But in the public discussions of the open space to be created by the Artery project, Bofill's work had no discernible impact.

Now, two years later, the *Globe* published full-page drawings and a lengthy discussion of proposals by the BRA, the Boston Society of Architects, and Chan Krieger Levi Associates (Figures 9.11 - 9.13). The BRA advocated using most of the twenty-seven acres for parks, including an urban arboretum and a winter garden. The architects proposed buildings for most of the parcels. Krieger suggested a literal middle ground — buildings on

⁵⁴Luberoff (1993), 220-221.

⁵⁵K. Dun Gifford, "The Artery Project: Unnecessary Surgery?" *Boston Globe*, October 21, 1990, A21, A24.

⁵⁶*Boston Globe*, August 16, 1988, 17, 18.

alternating parcels, to frame what he called "a fantasy of seven Copley Squares." All three plans agreed that surface roads should run the length of the corridor, and that the major connections from the city to the water that were broken by the old Artery, like State Street, should be visually highlighted as boulevards. The plans shared a recognition of the activities and historic character of surrounding districts — for example, more active uses near Quincy Market, and low-density residential development near the North End.⁵⁷

The fundamental differences between the plans reflected perplexing questions. How important is open space? How much open space is enough? When all the construction is finished, should the city look as if the Artery had never existed? What are the roles for public and private development?

"Knitting back the city" meant, to architects, erecting buildings on this historically built-upon swath of land. Coyle challenged that interpretation of the metaphor: "which city are you knitting back to which city? Are we talking about knitting back Governor Winthrop's Boston, or the city of Frederick Law Olmsted, or James Michael Curley's Boston, or the post-Civil War city, or the new Boston? When you really get the read of Boston, you see that it's really six or seven cities woven together. So what are we supposed to knit to what?" It would be easier to get new development in the five million square feet to be opened up by the demolition of the old Artery, but building downtown would divert investment from other parts of Boston. The city administration was more interested in moving the growth out to the neighborhoods. Coyle was convinced that if ten citizens were brought into City Hall, and all the "lawyers, architects, developers, and planners" — all the professionals — were just thrown out of the process, "the citizens who remained would all go for a park . . ." ⁵⁸

The Boston Society of Architects took the opposite view, and argued for buildings along the entire length of the corridor. As Larry Bluestone, the co-chair of the BSA task force, put it, "like anything, you can have too much park. Look at City Hall Plaza — it's too much plaza. . . . So size itself is not what makes a good public space." Besides, the city was trying to develop Harborpark along the waterfront; open space above the new Artery would create a second string of parks parallel to the first, and only a half block away, in the center of the city.⁵⁹ That argument did not acknowledge that Harborpark, for most of its planned length, was only a narrow public walkway along the water's edge.

⁵⁷D.C. Denison, "The 27-acre opportunity," *Boston Globe Magazine*, October 14, 1990, 18-21, 31-43.

⁵⁸*Ibid.*, 36, 37.

⁵⁹*Ibid.*, 39.

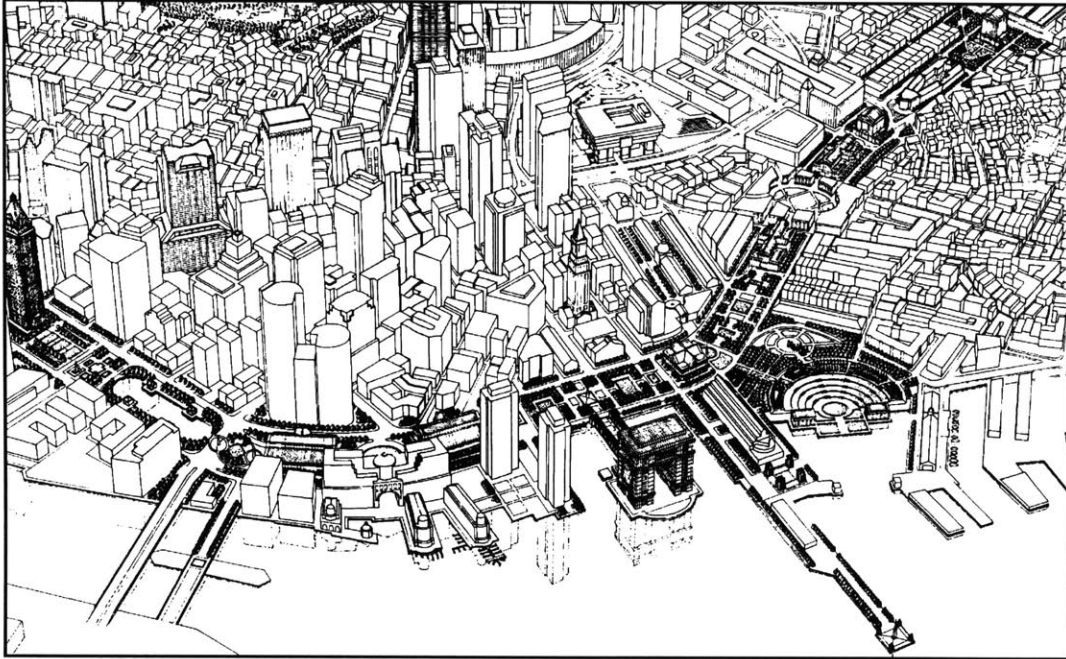


Figure 9.10 Ricardo Bofill, Taller Associates, Central Artery surface plan, 1990.

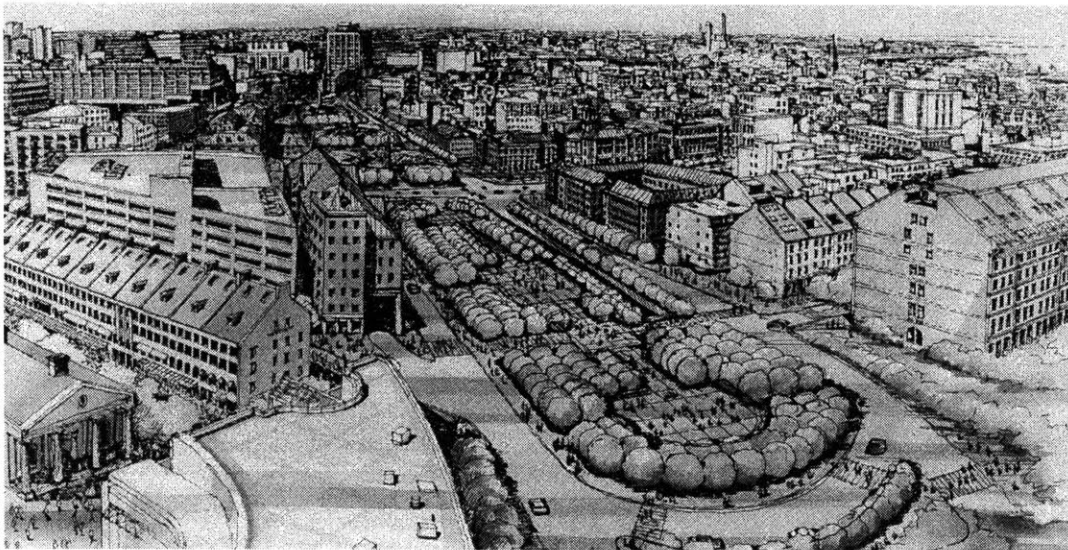


Figure 9.11 Boston Redevelopment Authority, Central Artery surface plan, 1990.



Figure 9.12 Boston Society of Architects, Central Artery surface plan, 1990.

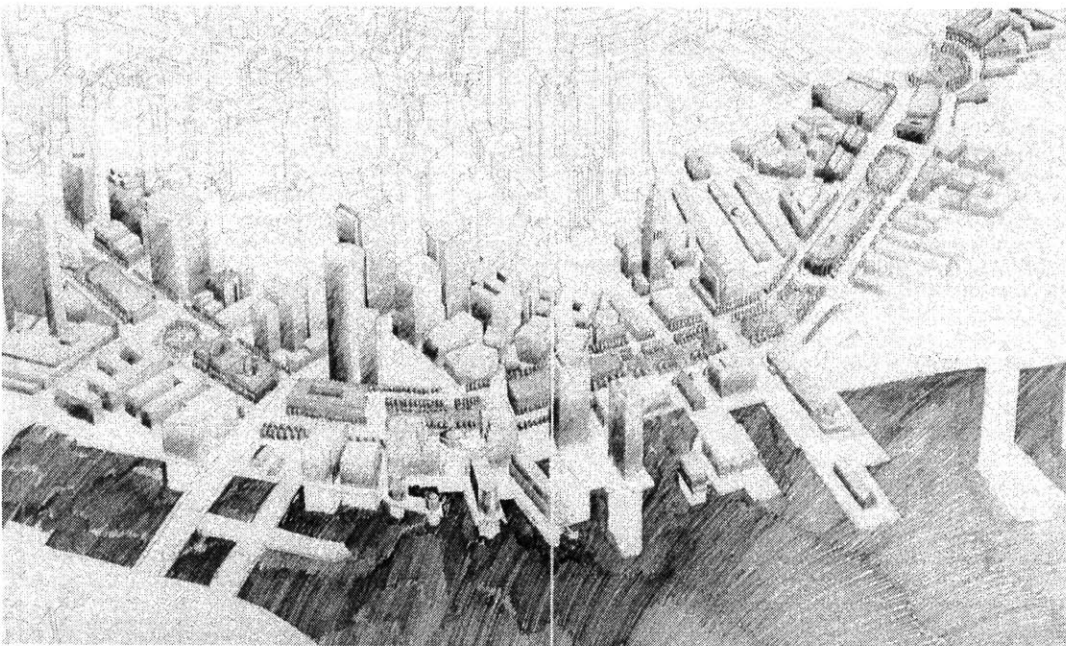


Figure 9.13 Chan Krieger Levi, Central Artery surface plan, 1990.

Like Coyle, Alex Krieger saw Boston as a patchwork city, but his conclusions were quite unlike the BRA's. Since Boston had to grow by filling along the shoreline, the land under the Artery offered the opportunity to create a new, identifiable district with a variety of buildings, taller near the downtown and shorter near the North End. On alternate parcels between the buildings, landscaped squares would relate to the nearby neighborhoods and would reconstruct the links across the Artery, staying true "to the most basic intent of Boston originally . . . its connection to the sea."⁶⁰ In this scheme, large squares would face Rowe's Wharf, Central Wharf, and Long Wharf. Reducing the amount of new park land, and constructing new adjacent buildings might offer the means for long-term park maintenance, an issue that troubled many open space advocates. Even if the Artery paid for the construction of parks in East Boston, City Square in Charlestown, the Charles River, as well as Spectacle Island, who would maintain them? Post Office Square, almost everyone's favorite example of public space created through a successful private design and construction process, also charged the abutters who built the park for its upkeep.

Krieger's plan literally divided the difference between the BRA plan (three-fourths open space) and the BSA proposal (three-fourths built space). He feared, though, that his proposed design guidelines would be subjected to "the reaction against anything that is bold or visionary." There was "a risk that the highway planning will overwhelm the town planning, the townscape planning," he suggested, as if that had not already happened.⁶¹

The boldest strategy to overcome the opposition to Scheme Z was the change to a long-span bridge, to reduce the number of piers in the river and provide the city with a landmark structure at the northern gateway to the downtown. Though more expensive than the seventeen-pier design, the new crossing, supported by two large towers, was expected to defuse the opposition of the U.S. Coast Guard and other environmental groups. A cable-stay design was announced in October, and engineers rushed to develop the design in time to receive the required approvals before the Dukakis administration left office. Only weeks before the November 15 deadline to file "Scheme Z Modified" with the state, it became clear that a crucial downtown on-ramp to the bridge at Traverse Street would be dropped because of engineering problems in connecting the ramp to the bridge.

The decision to drop the ramp was a political disaster. Residents at a public meeting were incensed that additional traffic would now have to drive through Charlestown to reach

⁶⁰Tbid., 42.

⁶¹Tbid., 43.

the north-bound highway. They complained to the mayor, who went directly to Salvucci. The Artery Business Committee had been organized to represent downtown business interests, and up to this point had been one of the project's most vigorous supporters. The committee made it clear that without the Traverse Street ramp they would oppose Scheme Z. They were told that the project's environmental impact statement had already been sent to the printer, and could not be changed.⁶²

By December opposition to Scheme Z was surfacing on many fronts, and for several weeks stories appeared in the Boston papers almost daily, accompanied by images that tried to communicate the scale and impact of the proposed bridges (Figure 9.14). The transportation imperatives that led to Scheme Z were not at issue. The accounts consistently challenged the plan as a failure on urban design grounds, or because the public process was seen as manipulative, distorted, or simply bogus. A lengthy *Boston Globe* article reported claims that the state's environmental review process had been compromised both for the Artery and for the new Boston Garden underground garage.⁶³

The garage at North Station had been designed to include the foundations for a new Boston Garden. In the spring of 1990 the garage project had been criticized by the state Inspector General as "a wasteful, imprudent, and unnecessary use of scarce public funds."⁶⁴ It was crazy, his office said, for the public transportation agency to build parking spaces for motorists at the downtown end of its transit lines. Separate from the financing and transportation issues was the question of an environmental permit for the garage. John DeVillars, the Secretary of Environmental Affairs, had been lobbied by environmental groups to delay approval of the garage until it was demonstrated that it did not preclude alternatives to Scheme Z. After seeing a presentation by the Artery showing that minor changes would make the garage compatible with alternatives, DeVillars determined to accelerate the permitting for the garage, although he acknowledged that he had not seen the plans for a new Boston Garden, and didn't know whether a different highway design would force a redesign of the arena. At the same time, the director of the Artery acknowledged in the *Globe* that the alternative plans for the river crossing were "inconsistent with current arena plans."⁶⁵

The December *Globe* story also revealed that the state's environmental review of the Artery's draft impact statement at the end of the summer had been altered by other state

⁶²Luberoff (1993), 223.

⁶³*Boston Globe*, December 2, 1990, 37, 44.

⁶⁴*Boston Globe*, March 28, 1990, 17.

⁶⁵*Boston Globe*, March 28, 1990, 34.

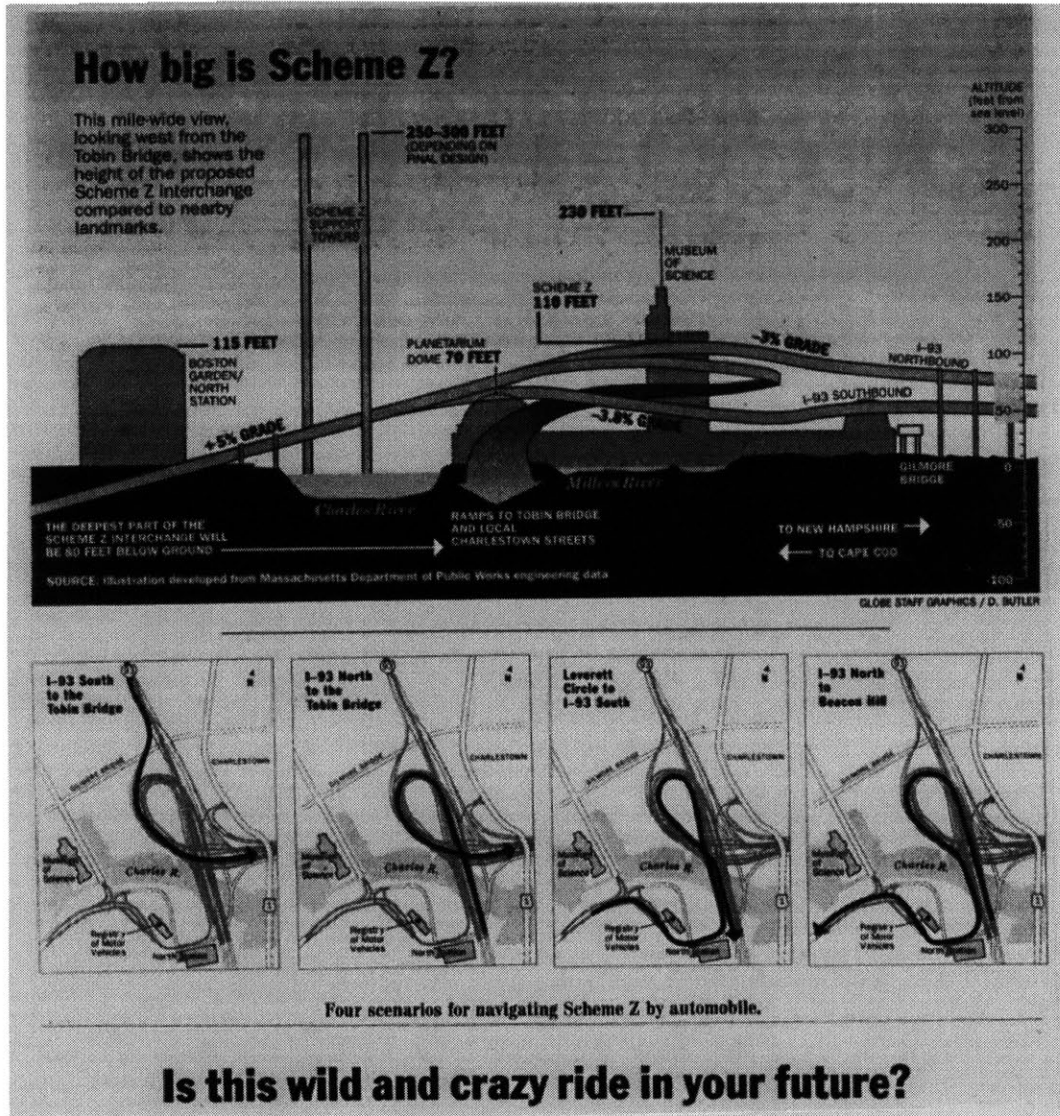


Figure 9.14 *Boston Globe*, December 9, 1990.

officials after the Secretary of Environmental Affairs left for Europe. Favorable comments about the all-tunnel plan had been deleted, and requirements for public transit improvements had been watered down. A statement not in the original draft was added, which excused the project's failure to file a "Notice of Project Change," even though Scheme Z was "a massive change" from the interchange in the 1985 report. Had the Artery complied with the requirement, said the *Globe*, Scheme Z would have been subjected "to the public debate it is now undergoing months or years sooner." A state environmental official, speaking anonymously, said there had been "a complete prostitution of the process." The article also repeated what community activists had been saying since the spring, that "project officials for months refused to make non-blueprint illustrations of Scheme Z available." The opposition to the river crossing developed as community leaders were finally able to understand the size and scale of the project.⁶⁶

Two days after the front-page story on the altered environmental permits, the state representative for the North End and part of Charlestown filed a bill that would halt the construction of Scheme Z and require a citizens' panel to review a redesign of the bridge. The *Globe* also described the all-tunnel option for the first time.⁶⁷ Later that same week, Kaiser presented the tunnel plan to the BRA, the MDC, and to the regional FHWA administrators. He acknowledged that the all-tunnel scheme would cost up to \$1 billion more than Scheme Z, but it would avoid "re-creating the Central Artery on top of the Charles River," and would also accommodate the North Station-South Station rail link. One federal official said it would be up to the state to determine if the plan should be adopted. The director of environmental review for the EPA said the all-tunnel plan was "a serious proposal that deserves serious consideration." He was also interested in a variation of the plan that located two-thirds of the crossing in tunnels.⁶⁸

In order for the environmental affairs secretary in the outgoing Dukakis administration to approve the Artery, the state's review process had to be completed by January 3, 1991. With only weeks to go before that deadline, the *Globe* twice published lengthy reviews of Scheme Z, including extensive photographs, maps, and charts. Three broad arguments were made in favor of the design. First, tunnels generally cost more than bridges; each alternative with more tunnel and less viaduct would cost more, up to \$1.7 billion more for the all-tunnel plan. Second, some unspecified complications would affect the Orange Line and North

⁶⁶*Boston Globe*, December 2, 1990, 45.

⁶⁷*Boston Globe*, December 5, 1990, 1, 28

⁶⁸*Boston Globe*, December 7, 1990, 29, 33.

Station commuter trains. Finally, Scheme Z, according to Salvucci, was the only plan that did not contain tunnels or ramps that would conflict with the new Boston Garden.

(Subsequent analysis in 1992 found solutions to the last two problems; by then, the cost of two years' additional design work plus the delay in construction was approaching the cost of the all-tunnel plan.) A spokesperson for the project argued in the *Globe* that the internal review of more than two dozen different schemes should make people feel better about supporting Scheme Z as the final choice. Many people took the opposite tack; Dan King, a Charlestown resident and a member of the Committee for Regional Transportation, concluded that when "they say they've done 31 versions and this monstrosity is the one that works best, that's not a reason to accept it. That's a reason to ask for our money back."⁶⁹

On its editorial pages, the *Globe* continued to defend Scheme Z, repeating arguments and images that Robert Campbell had eviscerated in a lengthy article six months earlier. One editorial said that the area along the river banks was "a grimy combination of railyards, the I-93 overpass and a cement factory. Most of it can never become parkland."⁷⁰ Another editorial three weeks later claimed that the issue of the Charles River crossing "is more aesthetic than environmental. That section of the Charles, littered with warehouses and railyards, can never be as beautiful as the Esplanade nearby. Even an ugly bridge would do little environmental harm."⁷¹ The paper's editorial writers did not mention that by this time, the Artery project had already promised to fund the construction of these same forty-plus acres of planned open space that could "never become parkland."

In the middle of December a *Globe* writer sought out the views of design professionals. Several architects and planners echoed earlier comments that the project had failed to make information about Scheme Z available when it was selected eighteen months earlier. One noted that the architectural model had been completed only six months ago, and even for professionals who work with them every day, "models can be very deceptive." They also suggested new images and visual comparisons to explain the bridge design. Tony DeMambro, a Boston architect, brought Campbell's "perverse law of physics" down to earth. The project was like squeezing a sausage; the Artery goes underground, but the bad stuff appears somewhere else. Another designer suggested that the state was building "a parking garage over the Charles." The Scheme Z interchange would be taller than the Statehouse and

⁶⁹*Boston Globe*, December 9, 1990, A18.

⁷⁰*Boston Globe*, December 15, 1990, 26.

⁷¹*Boston Globe*, January 7, 1991, 14.

as big as Boston Common, and, according to one opposition group, would be the largest highway intersection in the world.⁷²

The Boston Civic Design Commission had first voted against Scheme Z in August, and then reversed the vote a few days later. Now John DeMonchaux, the chair of the commission, said that the challenge was "to bring more information out into the open." Alex Krieger, a member of the Design Commission, was more blunt. The state, he said, was "trapped in a mess of its own making, out of a reluctance to air its plans in a timely manner."⁷³

According to the *Globe*, only one professional could be found who supported the project. Gary Hack, a city planner and professor at M.I.T. as well as a consultant to the Artery Business Committee, was "virtually a lone voice of support for Scheme Z." He suggested that the opposition to the bridge design was the result of an attitude that "man-made things ought to be secondary to natural things." We don't like parking lots, he said, because we don't like to look at them, but we all like to drive.⁷⁴

The Conservation Law Foundation announced that it had reached an agreement with the state office of transportation on a list of public transit commitments. That story, too, was turned against Scheme Z. The MBTA advisory board estimated that the total cost of the foundation's agreement would be one billion dollars, and said it would be impossible for the transit authority to comply.⁷⁵

The Boston City Council voted unanimously to oppose Scheme Z on December 20. The Cambridge and Somerville city councils followed a few days later. More bills were filed in the state legislature to kill the project.⁷⁶ Finally the project's staunchest backers reversed themselves. The Artery Business Committee confirmed its opposition, and hired Perini International, a large local engineering and construction firm, to evaluate the all-tunnel alternative.⁷⁷

On his last day in office in January, the secretary of environmental affairs approved the Artery. Two major requirements were imposed for the Charles River Crossing. First, the project would be obligated to fund the design and construction of new public open space on the forty-plus acres of land owned or controlled by the MDC, with no dollar limit

⁷²*Boston Globe*, December 13, 1990, 81.

⁷³*Ibid.*

⁷⁴*Boston Globe*, December 13, 1990, 81.

⁷⁵*Boston Globe*, December 30, 1990, 21, 26.

⁷⁶*Boston Globe*, December 20, 1990.

⁷⁷Luberoff (1993), 223.

specified for the total cost. Second, a design review committee would be established to evaluate alternatives to Scheme Z.⁷⁸

The Bridge Design Review Committee

Enormous skepticism marked the first meeting of the committee in February. Appointed by Richard Taylor, the new secretary of transportation, the appointments reflected a disjunction between civic inclusiveness and professional — some would say special — interests, and portended the conflicts to come. A minority of the members represented old-line civic groups like the Beacon Hill Civic Association and the Neighborhood Association of the Back Bay, but the committee was dominated by professionals from non-profit associations and from state and city agencies. Cambridge and Boston were represented, but no one was invited from Somerville, a few hundred yards beyond the project's supposedly unalterable northern boundary at the Gilmore Bridge. (For more than a decade, Artery staff insisted that FHWA would not allow any construction beyond the Gilmore Bridge. Before the end of the Bridge Committee meetings a year later, design changes in the river crossing required the breaking of that boundary.)

From the beginning, participation in the Bridge Committee meetings regularly exceeded the forty-two appointed members. The meetings compelled the attendance of a large retinue from the joint venture staff, representing the disciplines of traffic planning, highway engineering, architecture, landscape architecture, and urban design; often, design-related issues required expertise from the legal, regulatory, environmental permitting, cost estimating, and budgeting groups. More remarkable was the large number of interested citizens who came, even though they were seldom invited to participate: residents of affected neighborhoods, professionals *not* collecting consultants' fees on the project, and observers of the city-making process. Attendance at the meetings was often double the size of the committee.

Committee members broached several major conflicts immediately. The committee was split over the issue of recommending changes that would increase the cost or delay the project. Specific design alternatives divided the committee in different ways. The Traverse Street ramp divided neighborhood groups from some representatives of environmental groups

⁷⁸"Certificate of the Secretary of Environmental Affairs on the Final Supplemental Environmental Impact Report, Project Name: Central Artery/THT," January 2, 1991, in Commonwealth of Massachusetts, Department of Public Works, *Central Artery (I-93)/Tunnel (I-90) Project, Final Supplemental Environmental Impact Statement* (Boston, January 1991), Appendices.

and business associations. Cambridge and Boston residents were often on opposite sides; changes that improved the design on one side of the river often made it worse on the other side. The committee gave itself ninety days to complete its review, even though that date was several weeks after the legal deadline facing the groups who had threatened to sue to stop Scheme Z; filing by the plaintiffs might of itself hinder the progress of negotiations.⁷⁹

With little publicity, Richard Taylor engaged a local mediation consultant to facilitate the discussions, and also approved substantial expenditures by the committee for experts in many of the disciplines already included in the project. In the first two months, \$500,000 in consultant studies and engineering work for the committee was approved.⁸⁰

In April, two very different prospects were presented to the committee. One was as sweeping as Gourlay's original 1844 plan for the Back Bay — in fact, it took the re-creation of the Back Bay as the model for the "lost half mile." A single image tellingly embodied this vision, elaborated by two local architects, Peter Roudeboush (who had worked on the 1970 Boston Transportation Planning Review) and Brad Bellows. On a black-and-white photograph of the vast acreage of the old Boston and Maine yards the two architects superimposed a green and blue image of the Esplanade and the neighborhood of the Back Bay. This representation showed the scale of the area at issue, and graphically demonstrated that there was more than enough space for all of the Back Bay and all of the Esplanade in the area surrounding the highway project.

Two economists working with Roudeboush and Bellows outlined a plan for tax increment financing, where the increase in property values would be taxed to help fund the more expensive highway alternatives. They pointed to the Back Bay, where the state paid for the filling, donated nine acres of land to churches and schools, and still made \$3.4 million between 1856 and the last land auction in 1886. The four hundred acres north of the Charles might generate four to six billion dollars in new development over time.⁸¹ Because of the perceived financial obstacles to the all-tunnel plan, Kaiser, Bellows, and Roudeboush later drew up an alignment with two-thirds of the river crossing in tunnels and a bridge of only four lanes, which they compared to the Longfellow Bridge. The reactions of committee members ranged from enthusiastic interest to complete skepticism.

More startling was the response of the Bridge Committee to the proposals of the Swiss bridge designer Christian Menn. While in Boston to give a lecture at the Harvard Graduate

⁷⁹*Boston Globe*, February 2, 1991, 25, 28.

⁸⁰*Boston Globe*, April 4, 1991, 21.

⁸¹*Boston Globe*, April 14, 1991, A27, A28.

School of Design, Menn was invited by a local architect (who was a consultant for the Artery) to inspect the site of the Charles River Crossing and asked if he would be interested in designing a new bridge. Soon thereafter he was hired by the Bridge Committee.

Menn's first presentation to the committee took only a few minutes, and was as spare and elegant as the bridge designs he presented. His design intentions were straightforward. First, there should not be a conflict between the bridge and its environment. The design should make Bostonians proud, not litigious. Finally, there should be order, unity, and attention to detail. The collective reaction was an almost audible sense of unexpected delight.⁸²

The preceding weeks of contentious debate had seemed to focus on which scheme was disliked the least by the fewest people. Now, quite suddenly, there was a sense that a range of graceful and harmonious choices was possible. The adversarial spirit that had exploded in opposition to Scheme Z at the end of 1990 dissipated. The new bridges seemed to cast a new light, not only on the crossing itself, but on every related issue — ramps, pedestrian access, adjacent land development, new public spaces.⁸³

Menn subsequently developed three different bridges, to accommodate the bridge widths required by the tunnel and non-tunnel variants of the river crossing — one with eight lanes and two towers, one with ten lanes and six towers, and a third with two decks (four lanes over eight lanes) and two towers. The towers in all designs were at least a hundred feet lower than the preliminary bridge scheme by the joint venture. Menn also addressed the North Area loop ramps, the connection between Route 1 and I-93. In Scheme Z, the ramps came out of the ground as soon as they passed under City Square in Charlestown, directly under the mainline bridge. Menn proposed that the ramps remain in tunnels until they passed under the bridge, because they obscured the north tower of the bridge behind a screen of piers and roadway structures and created a concrete backdrop for pedestrians walking along the river.⁸⁴

The drama of Menn's designs seemed to eclipse the investigations into tunnel construction by the other internationally renowned expert hired by the committee, Prof. Herbert Einstein of M.I.T. Based on the alignment first proposed by Steve Kaiser, Einstein analyzed alternative methods of tunnel construction, and outlined the likely cost savings. His ideas were never developed to the same level of engineering detail as Menn's bridges. For

⁸²*Boston Globe*, April 29, 1991, 30, 33.

⁸³*Ibid.*

⁸⁴Bridge Design Review Committee, minutes, April-May 1991.

various reasons the tunnel schemes never seemed politically feasible, and a few weeks later, the committee chair unilaterally removed the all-tunnel scheme from the list of alternatives. No one on the committee objected to this decision at the time, and the vision of a new Back Bay — or anything else — filling the hundreds of acres of abandoned railyards quietly sank out of sight.⁸⁵

As the discussion of Menn's bridge designs continued, variations and sub-variations were developed based on the Bridge Committee's first twelve or thirteen numbered schemes. A number of the open space advocates on the committee favored the double-deck bridge designs. Since they were narrower in width and took less park land, committee members argued, they appeared to be required by the Section 4(f) regulations. That approach, however, was seen as narrow and legalistic by some of the architects on the committee, who saw the single-deck designs as more "visually elegant." The improved visual profile of the bridge more than compensated for the increased width of the concrete "roof" above the pedestrian paths and the river. They were not dissuaded by the suggestion that the wider bridge would look like an elevated parking lot suspended from two elegant towers. The advocates of the wider bridge prevailed.⁸⁶

The clarity of vision that followed the discussions of Menn's bridge designs slowly dissipated as new requirements were added to the crossing, and as old demands were tenaciously defended. The representatives of Beacon Hill on the committee, for example, refused to abandon their demand that there should be no changes at Leverett Circle. They argued that retaining the existing circle, with its single westbound underpass, would prevent any substantial increase in traffic on Storrow Drive.⁸⁷ Members of the committee from Cambridge could not persuade the rest of the Bridge Committee that their proposed changes would not adversely affect a number of design problems in Boston.

The committee worked almost two months beyond their original ninety-day deadline and developed a set of variations with a new naming scheme for "Committee Improvement Proposals." It appeared that a variation of Scheme T known as CIP 5 would be approved, in spite of the opposition of the Beacon Hill delegation. Many members of the committee, however, were visibly startled when the formal vote was taken. The staff from the City of Boston, who had supported this variation in numerous formal and informal discussions, all

⁸⁵Ibid.

⁸⁶Ibid.

⁸⁷One of the Beacon Hill representatives was identified by the *Boston Globe* as "a close friend and political ally" of Fred Salvucci, and as the principal opponent of all the schemes that included tunnels under the Charles (March 13, 1992, 9).

voted against the scheme. Richard Dimino, the Boston Transportation commissioner, had lobbied at the last minute in favor of CIP 8; this effort was supported by Stanley Miller, chair of the Bridge Committee. In counting the votes, Miller refused to accept the absentee votes of several committee members, and Scheme 8, opposed by the City of Cambridge and two environmental groups, was declared the winner by a vote of seventeen to fifteen. The mayor of Cambridge immediately announced that the city would proceed with its lawsuit.⁸⁸

Another year of public and private discussions followed. In March 1992 the Bridge Committee unanimously agreed on "Scheme 8.1D Modification 5," an awkward name that reflected the numerous sub-variations it incorporated. "Mod 5" included a three-lane tunnel under the river connecting Leverett Circle with City Square, replacing some of the loop ramps. One transportation consultant suggested that "Mod 5" failed the test of simplicity; any design that visually complex should not be built. The numerous and subtle differences among the schemes, over which committee members and the project staff had labored for so many months, were difficult to summarize in project publications and in press reports. Committee members joked that even they now had trouble telling the variations apart.

On the same day as the committee vote, the Conservation Law Foundation announced that the foundation had agreed to a federal court order that would enforce major public transit improvements as a part of the Artery project; consequently its lawsuit would be dropped. The two biggest threats to the project — the lawsuits over transit mitigation and the design of Scheme Z — appeared to be resolved. The state secretary of transportation optimistically declared that the ghost of Westway was finally laid to rest.⁸⁹

The press coverage of the vote for "Mod 5" noted that there remained opposition to the design from some Beacon Hill residents. In fact, the resistance to Mod 5 was much more serious than the news report suggested.⁹⁰ The City of Boston had hired its own traffic consultant (with money provided by the CA/T Project), and two months after Mod 5 was approved the Boston Traffic Commissioner announced that the city had developed a new variation of the bridge design.⁹¹ The decision was not final after all.

⁸⁸Luberoff (1995), 243.

⁸⁹*Boston Globe*, March 14, 1992, 31.

⁹⁰*Boston Globe*, March 13, March 18, 1992.

⁹¹*Boston Globe*, May 22, 1992, 22.

The New Basin: the Other Regional System

The work of the Bridge Committee on the design of the Charles River Crossing and the surrounding environment focused extraordinary attention on the proposed extension of the Charles River esplanades — the most public discussion of the "lost half mile" since the regional open space study of 1969. During the frequent Bridge Design meetings that addressed the proposed pathway connections along the river, Julia O'Brien, the MDC's Director of Planning, repeatedly advanced the idea that in the "lost half mile" two substantial systems crossed — the metropolitan park system and the regional transportation network. Over time, the opportunity to link the river and the harbor with over forty acres of new parks and greenways became, for several committee members, the primary justification for permitting such huge highway structures in the center of Boston. No one on the committee challenged the necessity of the highway project; the issue was whether the thirty-year-old plan to link the Charles with Boston Harbor was still possible, given the scale of the road construction.

One month after the committee's vote in favor of the river crossing known as "8.1D.Mod 5" in March 1992, the highway department finally transferred the money to the MDC to begin the New Charles River Basin Master Plan. The funding had been promised "immediately" during the intensive negotiations over Section 4(f) with the park agency more than fifteen months before. Some observers of the Artery believed that the delay was deliberate, since it put off the publication of the park plan (which in turn might have required a revised 4(f) determination) until after a river crossing design had been approved.

Some people felt that neither the most sophisticated planning, nor any level of creative design along the river by architects or public artists, could overcome the barriers to public access first created by the railroads and now to be greatly expanded by the proposed Charles River Crossing. According to this view, the east-west pedestrian links under the new highway bridge would be dark and dangerous, especially on the Boston side, even if they could be engineered. The MDC acknowledged the challenges in designing the connections over the railroad tracks and under the bridges. Nonetheless, the new parks on either side of the bridges would provide the opportunity to connect Charlestown with Causeway Street and the North End, and to link the Esplanade with new development along Nashua Street in Boston and at North Point in Cambridge. And those the construction of the parks and pedestrian connections outside the boundaries of the highway project could be started immediately.

In approving Scheme Z on his last day in office in January 1991, outgoing Secretary of Environmental Affairs John DeVillars required not only the creation of the Bridge Design Review Committee but also a citizens advisory committee for the New Basin. Seven of the New Basin Advisory Committee members would be appointed by DeVillars's successor as Secretary of Environmental Affairs, and the mayors of Boston and Cambridge would each appoint seven members. This formalization of public discussion reflected the increasing bureaucratization of city design, as well as the continuing (sometimes ambivalent) state commitment to community participation, aggressively promoted by activist groups in Boston since the planning of the Inner Belt in the 1960s. The state appointments included the director of the state environmental review office (MEPA) and the executive director of the Massachusetts Historical Commission, both with review responsibilities for public and private projects, including the Central Artery and the New Basin; the directors of two non-profit environmental groups, the Boston Greenspace Alliance and the Charles River Watershed Association; and two lawyers with backgrounds in environmental issues. The mayor of Boston appointed the director of the city's Environmental Department, a senior staff member from the Parks and Recreation Department, and five Boston residents, four from Charlestown and one from Charles River Park. Cambridge was also represented by two city staff, the director of the Conservation Commission and the urban design director; and five Cambridge residents, including two architects, a doctor active in state and local bicycle groups, and a resident of the nearby condominiums on Lechmere Canal. Seven members of the Advisory Committee were also members of the Artery project's Bridge Design Review Committee.

Neither the planners from the MDC nor the agency's design consultants referred to the 1970s work of the Boston Transportation Planning Review, but the Advisory Committee meetings followed the same approach to community participation.⁹² The committee functioned in an advisory role, not as a forum for decision-making; unlike the Bridge Committee, no votes were taken. Where a clear consensus was reached, the MDC generally followed the committee's recommendations. The MDC actively solicited participation from neighborhood organizations and other interest groups, and the meetings were open to anyone, not just the twenty-one appointed members.

It was clear to most members of the Advisory Committee, especially those who had been through a year of the Bridge Committee meetings, that the new highway bridges across the Charles would dwarf the engineering works that had dominated the river and shoreline

⁹²On the citizen participation process of the Boston Transportation Planning Review, see Sloan, 35-36, 41-42.

spaces between the railroad bridges and the new dam. Nonetheless the committee members, especially those from city agencies in Boston and Cambridge, clearly hoped that the realization of the New Basin Master Plan would establish an appropriate setting for new commercial and residential development in the upper half of the "lost half mile." In meetings of both the Bridge Design committee and the New Basin Advisory Committee, several designers spoke frequently about creating a public landscape that would respond appropriately to the scale of the existing transportation artifacts and the new highway. Yet they all found this verbal abstraction extraordinarily difficult to translate into visual images of such landscapes, and no one could point to real places where this idea had been realized at this scale. The committee was optimistic that somehow the park spaces, pathways, and pedestrian bridges would tie the edges of the "lost half mile" together, in spite of the design character and the enormous scale of the proposed Artery bridges.

At the committee's first meeting, Julia O'Brien, the MDC director of planning and a former student of Kevin Lynch, cited some of Lynch's observations about Boston and the Charles River in his *Image of the City*. She described Lynch's pioneering methods of inviting city residents to make diagrams that marked out their perceptions of the places they lived. She then asked committee members to draw the New Basin as it now existed. After that exercise, slides of the history of the New Basin were presented. Historic photographs documented the reclamation of the basin above the old dam and suggested that the historic esplanades were just as artificial as the proposed new parks. Filling in the New Basin by the Boston & Maine Railroad in the late 1920s had narrowed the river to less than a third of the width of the basin above the old dam, making it that much easier to ignore the presence of the Charles behind North Station. While the land devoted to railroads had shrunk, the visible remnants of the railroads were not going away, and highway construction would now take up much of the abandoned railyards.⁹³

In the first meetings, the Advisory Committee considered general objectives, then park programming and landscape design. There was strong support for the conditions established in the 1990 environmental review documents, which required the construction of pedestrian and bicycle connections both up- and downstream, to establish links between the river and the harbor, from the Esplanade in Boston to the North End, and from Cambridge to Charlestown and the Navy Yard. The committee also concurred with the required

⁹³Commonwealth of Massachusetts, Metropolitan District Commission, *New Charles River Basin Master Plan, Appendix, A-6, A-7*. There was no discussion at the time of the enormous structure then being planned by the MBTA to replace the old Boston & Maine roundhouse just beyond North Point.

connections across the river, at or near the commuter rail bridges. The existing walkways across the old and the new dam, though not on the list of required mitigation measures, presented opportunities for substantial improvement. There was general agreement that the New Basin should include spaces for active as well as passive recreation, and that both the enjoyment and safety of the New Basin would be enhanced by park programming and interpretive activities — a Charles River visitors center, for example. The greatest concern of the committee was all too familiar to almost every park agency in America: could these public spaces, once built, be maintained? And given the issue of future maintenance, how should these spaces be designed now?

Following the first months of planning by Carr, Lynch Hack and Sandell of Cambridge, the MDC's consultants, two alternatives were developed. The "New Esplanade," the first schematic design, was based on the formal vocabulary of Shurcliff's Esplanade design of the 1930s (Figure 9.15). The large geometry of this approach was arguably closer in scale to the existing and proposed engineering works in the New Basin, and represented "the familiar and comfortable nineteenth-century pattern pushing its way through these large structures to reach the sea." The second alternative, "Charlesbank Meadows," was compared with Olmsted's design for the Fens. It would "create landscapes that evoke pastoral, natural areas" in urban setting without recreating them." This scheme would appear as if "nature had reclaimed this ragged edge of the city and then been developed into a park" (Figure 9.16).⁹⁴

The response of the Advisory Committee to these alternatives was divided. The large geometry of the "New Esplanade" seemed appropriate, but the cost of the formal elements like the granite detailing was a major concern. There was more enthusiasm for the "Meadows," in particular for the introduction of more diverse plantings than in the "Esplanade" approach. The contrary view was that the naturalistic approach was inappropriate or plainly overpowered by the new highway construction. The design solution was a synthesis of the two schemes, which "maintains the reverence for nature, in its curving forms and details, while welcoming the large elements of the urban landscape as parts of the whole. The design is based on the reconciliation of opposites — space and mass, centrality and extension, nature and culture — that characterized the Baroque architectural synthesis."⁹⁵

This synthetic approach shared a number of elements with the MDC "Master Plan" of 1980 (Figure 7.6). The MDC scheme had proposed an island and lagoon on the Boston side

⁹⁴Commonwealth of Massachusetts, Metropolitan District Commission, *New Charles River Basin Master Plan*, 23; *New Charles River Basin Master Plan Appendix*, A-16.

⁹⁵*New Charles River Basin Master Plan*, 24.

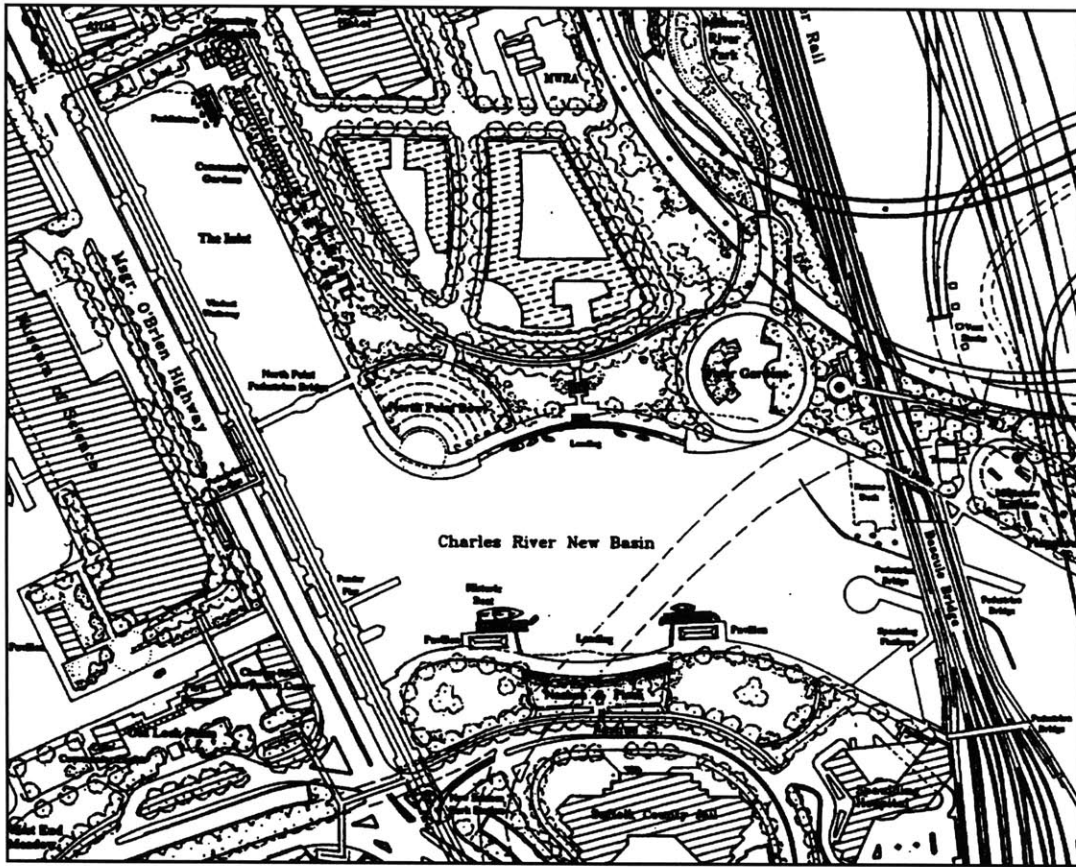


Figure 9.15 Carr, Lynch, Hack and Sandell, proposal for the "New Esplanade," detail of Nashua Street and North Point, 1992.

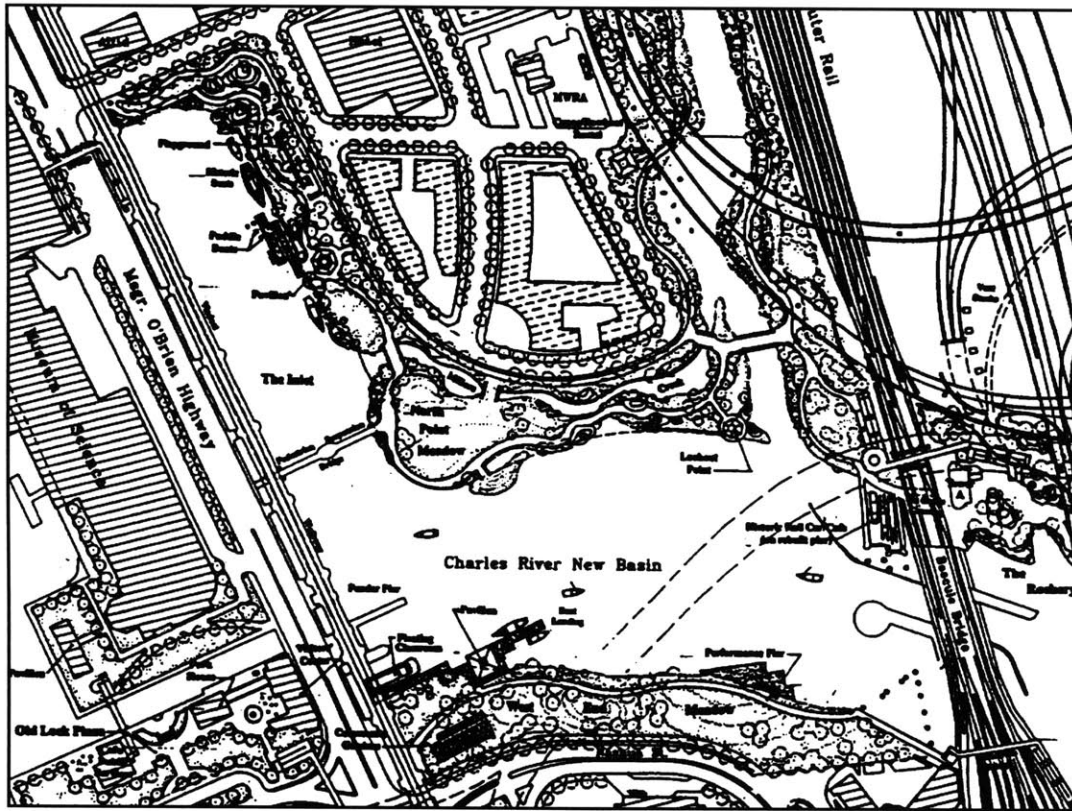


Figure 9.16 Carr, Lynch, Hack and Sandell, proposal for "Charlesbank Meadows," detail of Nashua Street and North Point, 1992.

of the river, but the 1980s construction of the new jail on Nashua Street since that first plan had narrowed the available land. In the Carr Lynch plan, strongly geometric islands (including a large circular island) and a winding lagoon were laid out at North Point. Substantial areas of new fill in the river were proposed on both sides of the river, extending a history of land-making that began in the seventeenth century (Figures 9.17 - 9.20). The regulation of waterfront construction had changed substantially since 1980, however, and during the public review of the master plan it was suggested that neither the state Department of Environmental Protection nor the Army Corps of Engineers would allow the realization of the plan's vigorous geometry.

The greatest departure of the 1993 master plan from Charles Eliot's nineteenth-century vision of the river was its commitment to public art and public history. The MDC's Reservations Division, created in 1984, had developed extensive interpretive programs that presented the natural and cultural history of individual sites and reservations.⁹⁶ But the Metropolitan Park System was seldom presented to the public as a linked network of parks, established to reveal and "reserve" the natural character of the region.

The Master Plan proposed the renovation of Guy Lowell's 1910 structures on the first Charles River Dam, with one or more of the buildings devoted to interpreting the history of the park system and the region. The theme would be "connections" — the river and its margins as a system of visible connections between the natural and the built environment, as a place linking the past, the present and the future, and as a place where connections would be established among the people who came to the river. This set of connections among people, though, was not cast in the nineteenth-century sense of the middling crowds learning from association with their betters — this would be a free association of the city's increasingly diverse populace.

There would also be spaces for public art; the most prominent would be a pair of beacons framing the entrance from the New Basin to the old locks and to the Longfellow Bridge beyond. In all the public discussions of the master plan, the approach to public art elicited the strongest dissent. A group called the Reclamation Artists had been organized in the late 1980s; its members included the architect Lajos Heder, whose photographs of the New Basin sought to capture its essence in the Moore-Heder proposal for the master plan in 1988 (Figures 7.10, 7.11). Their aim was to focus attention on areas of neglected urban land by creating temporary outdoor installations of public art, open to any artists interested in

⁹⁶McManus, 56.

participating. By the spring of 1994 the Reclamation Artists had produced four "exhibitions" along the Charles, and were included in an exhibit on "Public Interventions" at Boston's Institute for Contemporary Art. They took exception to the clean, carefully landscaped sites in the New Basin suggested for large-scale art works. Mags Harries wanted instead an area that could be dug up, rearranged, reconstructed — transformed by "the big loud things" on the site. As an alternative to the long elevated pedestrian bridges over the railroad tracks, Harries and Heder proposed a floating walkway under the railroad bridges. Laura Baring-Gould told the *Globe* that "Olmsted should end at the viaduct."⁹⁷

Most of the participants in the community discussions disagreed. For them the traditional values associated with pastoral open spaces in the city were still valid. This was apparent in the discussion about the first park to be built, in Charlestown adjacent to the new dam. The project was a reconstruction of Revere Landing Park, the open space that had been completed at the time of the new dam's construction. Since 1987, the site had been used as a construction area for the new highway tunnel under City Square. It was large enough, as the consultants showed, to accommodate a baseball diamond with longer foul lines than Fenway Park, but the Charlestown residents at the committee meetings were unanimous in rejecting ball fields. They said they wanted "a real park," and they described what Olmsted called a "country park" — a planted, pastoral oasis. Their preference was shared by the master planners and the park commission. There would be space in the park for sound art and mosaics and interpretive sculpture and public programming, but the matrix of those spaces would be a shaded, oval greensward.

A New Bridge Design

In September 1992 the project filed a "Notice of Project Change" for Scheme 8.1.d Mod 5. The notice was required because the previously approved project would now be substantially revised. In an enormous reversal of years of previous arguments, the notice described the benefits of tunneling under the Charles instead of building viaducts to connect Leverett Circle with City Square.⁹⁸

The new administration of William Weld, however, rejected the changed design. Concerned by the loss of consensus, a business group convened its own search for a bridge

⁹⁷"Reclamation Artists at North Point, April 30 - May 28, 1994"; *Boston Globe*, May 11, 1994; *New Basin Master Plan Appendix*, A-41 (July 23, 1992); John Chandler, "The Wasteland Reclaimed," *Art New England* (February/March 1993), 18-19.

⁹⁸Commonwealth of Massachusetts, Massachusetts Highway Department, "Notice of Project Change: Area North of Causeway Street," (Boston, September 1992).

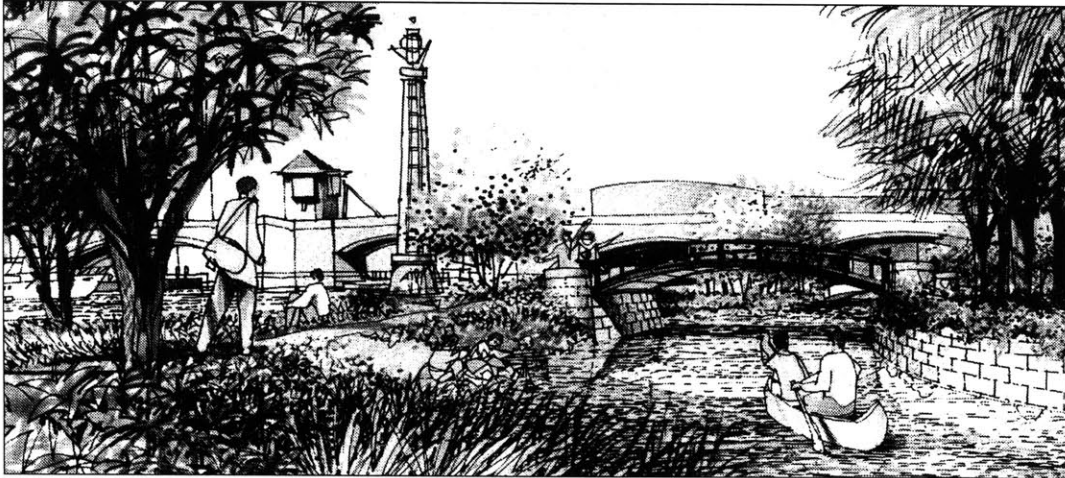


Figure 9.17 Carr, Lynch Hack & Sandell, *New Charles River Basin Master Plan*, perspective of North Point, 1995.

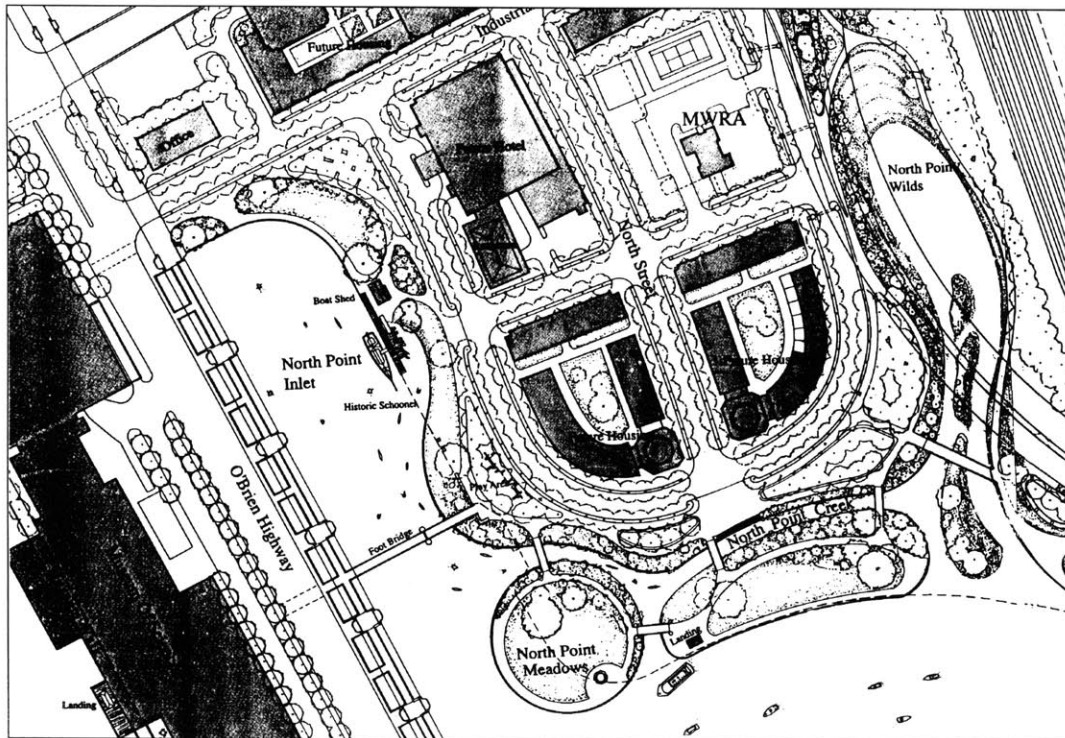


Figure 9.18 *New Charles River Basin Master Plan*, detail of North Point, 1995.

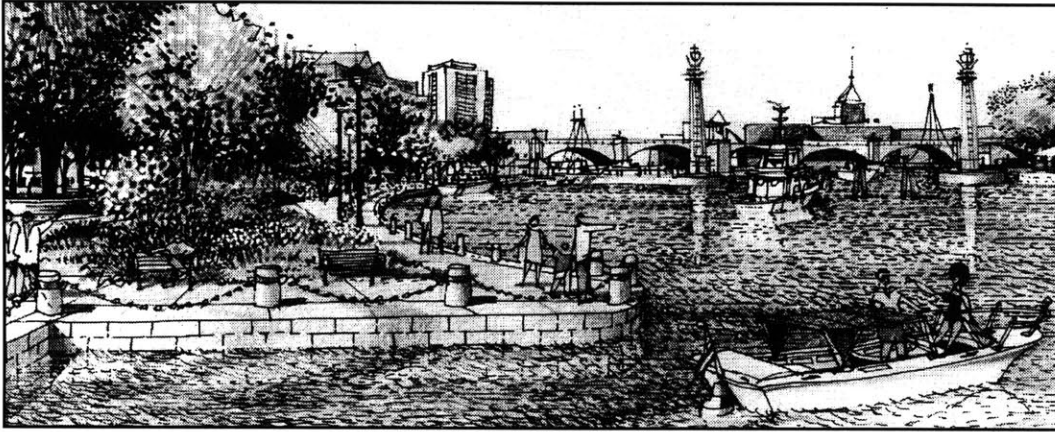


Figure 9.19 Carr, Lynch Hack & Sandell, *New Charles River Basin Master Plan*, perspective of Nashua Street, 1995

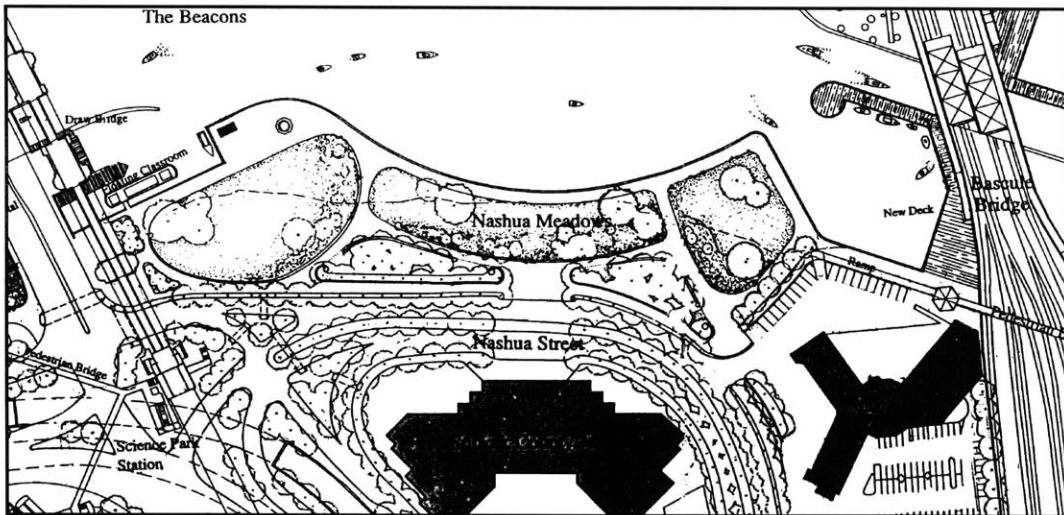


Figure 9.20 *New Charles River Basin Master Plan*, detail of Nashua Street, 1995.

solution. By making some adjustments previously thought to be out of the question, a tunnel was proposed downstream of the commuter rail tracks, in the same alignment as the proposed Leverett viaduct. Supporters of the proposal included Fred Salvucci, who had never before endorsed a tunnel design. The City of Cambridge and the private coalition, whose pending lawsuits had been joined in federal court, were approached about their support of this new alternative, but were given only a few days to commit to withdrawing their lawsuits. The state took the new option off the table, and approved an all-viaduct scheme. It had fewer and lower loop ramps in Cambridge, but still had two bridges. The cable-stayed bridge was twelve lanes wide, and the Leverett Connector bridge was four lanes. Some Cambridge critics immediately labeled this design "The Son of Z." In 1994, the new alternative was approved by state and federal agencies.⁹⁹

⁹⁹Luberoff (1995), 250-255.

X. URBAN IMAGES AND CIVIC DISCOURSE

"The Future of America" was the title of a series of articles in *Harper's Weekly* by H. G. Wells recounting his visit to the United States in 1906. After his first stop in New York City, he took the Fall River steamer to Boston. There he found himself "in a singularly short space of time . . . climbing into a tremulous impatient motor-car with three enthusiastic exponents of the work of the Metropolitan Park Commission," including Sylvester Baxter. The three men presented Wells with "a neatly tinted map, large and framed and glazed," and set off "to explore a fresh and more deliberate phase in this great American symphony, this symphony of growth."¹

The region extending fifteen or twenty miles from the State House had been "planned out and prepared for growth." The woodland reservations and the banks of the streams and rivers and meres had been made into parks, and tree-lined avenues a hundred and fifty yards wide were built. The "fair and ample and shady new Boston, the Boston of 1950, grows visibly before one's eyes." Wells compared "the disciplined confidence" of these proposals with "the blind enlargement of London," and confessed to moments when it all seemed too good to be true. "All cities do not grow," he told Baxter. "Cities have shrunken." Yet he could not deny the unfolding vision he saw:

If possible, it is more impressive even than the crowded largeness of New York to trace the serene preparation Boston has made through this [Metropolitan Park] Commission to be widely and easily vast. New York's humanity has a curious air of being carried along upon a wave of irresistible prosperity, but Boston confesses design. I suppose no city in all the world (unless it be Washington) has ever produced so complete and ample a forecast of its own future as this Commission's plan of Boston.

The metropolitan vision that Wells described was a consequence of what Lewis Mumford called a "journalism of ideas," a public discourse that employs the issues of design to illuminate broader social concerns.²

Civic discourse was a profound concern of the first generation of American landscape architects. Thomas Bender has argued that in the writing of Frederick Law Olmsted,

¹H.G. Wells, "The Future in America: A Search after Realities," *Harper's Weekly* 50 (1906), 1018.

²Thomas Bender, "Architecture and the Journalism of Ideas," *Design Book Review* 15 (1988), 47.

"architectural and general cultural and political issues converge"; and in a larger sense, "his purposes and career as a designer cannot be understood apart from his purposes and career as a writer."³ Olmsted found writing difficult, however, and most of his discussions of landscapes and public space were prepared for professional reports and were therefore unavailable to a broad public.⁴ It is in the light of his own frustrations that we should understand the urgency in Olmsted's exhortations to Eliot. After receiving some of Eliot's descriptions of landscapes, Olmsted replied that he had not seen "such justly critical notes . . . on landscape architecture" from anyone in a generation. Eliot should "write for the public, a little at a time if you please, but methodically, systematically." It was "part of [his] professional duty to do so."⁵

Eliot willingly accepted this calling, and wrote three dozen essays and several lengthy and widely circulated reports in his brief career. Sylvester Baxter took a different path to the same point. Starting from his interests in parks and municipal administration, he determined to use the campaign for metropolitan reservations as a vehicle for addressing more encompassing problems in regional government. It was therefore not surprising that Baxter and Eliot chose to work together to promote the metropolitan park system. They undertook a vigorous campaign to engage business and political leaders in a series of eleven "inspection tours" of proposed parks in greater Boston—in fact, an extended traveling discourse on the subject of cities and public spaces. They were sufficiently persuasive that the Metropolitan Park Commission was able to acquire almost nine thousand acres of natural reservations, including the banks of the Charles River, extending from the lower basin as far as Newton and Wellesley.

At several points in Boston's city-building, as the history of the Charles River Basin makes plain, its citizens have not waited for professionals to show the way. Seeing connections between design and larger issues confronting the community, they have enticed or provoked designers into joining them in extended public discussion. The post-Civil War campaign for parks in Boston was organized by the city's elite, who persuaded Olmsted first to speak in Boston and then to accept the commission for the Back Bay Fens. In much the same way, the 1894 campaign to construct a Charles River dam did not succeed immediately, but the lengthy public debates aroused James Storrow and others to organize and finally gain

³Ibid.

⁴Laura Wood Roper, *FLO: A Biography of Frederick Law Olmsted* (Baltimore: Johns Hopkins University Press, 1973), 403.

⁵*Charles Eliot*, 207.

legislative approval for the Charles River Dam in 1903. Edward Filene took the lead a few years later in assembling the committee for "Boston-1915," which produced both a remarkable exhibition and the journal *New Boston* with the aim of making the ongoing design of the city open to all.

These public discussions reflect significant changes over time in the language of refinement and its connections to culture and society. Robert Gourlay was absolutely certain in 1844 that if land in America were "rightly laid out, and honestly disposed of," beginning with his "New Town" in the Back Bay, pauperism would end. In Olmsted's famous 1870 speech in Boston, he urged the creation of "a ground to which people may easily go after their day's work is done, and where they may stroll for an hour seeing, hearing and feeling nothing of the bustle and jar of the streets. . . . We want, especially the greatest possible contrast with the restraining and confining conditions which compel us to walk circumspectly, watchfully, jealously, which compel us to look closely upon others without sympathy."⁶ At the 1876 Faneuil Hall meeting to discuss public parks, the Reverend J. P. Bodfish urged "the men who possess capital to look out and provide for the wants and necessities of the poor, on whom they depend to a great extent; for capital cannot be independent of labor."⁷

A generation later President Eliot argued in more modulated diction in favor of the Charles River Dam. He summarized his testimony at the 1901 public hearings with the argument that "great modern communities do not exist ultimately for commerce, but commerce exists for them. Nor do municipalities exist for profit in money, but for the people who live in them, and the supreme object of any city should be the happiness of the community."⁸ His words were recited in 1929 and again in 1949 when a highway was proposed through the Esplanade, his language of community still seen as fitting for the cause at hand.

At the end of the twentieth century, the master plan for the New Charles River Basin is peopled by pedestrians, bicyclists, and skaters, by visitors making historical and thematic connections, by "communities coming together."⁹ The diversity of the community is expressed in a vocabulary of interests, not of social or economic status.

⁶Olmsted, "Public Parks," quoted in Greene, 9.

⁷*Parks for the People*, 1876, 2.

⁸Commonwealth of Massachusetts, *Evidences and Arguments*, p. 135-136. These paragraphs from Eliot's testimony would be cited in 1929 and again in 1949 when highways through the Boston embankment were proposed. See below, pp. {}.

⁹Commonwealth of Massachusetts, Metropolitan District Commission, *New Charles River Basin Master Plan*, 9-11.

The public concern for the poor so often expressed in the earlier rhetoric of parks—even the vestiges of that discourse in our own language of diversity—has been criticized for its implicit fear of urban disorder. The creation of parks, it has been argued, was just one more mechanism to sustain the security and economic superiority of the rich. A more recent critique of parkmakers and other arbiters of morality and refinement, drawing on Freud, claims that nineteenth-century civility was only a facade, a barrier to expressions of the "real" self.¹⁰

In fact, like all public works, parkmaking has always drawn on a variety of motives—"to make money, to display the city's cultivation, to lift up the poor, to refine the rich, to advance commercial interests, to retard commercial development, to improve public health, to curry political favor, to provide jobs."¹¹ The fact that the wealthy also benefitted from parks and urban reservations does not lessen the importance of such improvements to all of the city's residents. The idealistic rhetoric of the leaders of the Boston park movement, including the proponents of the Charles Basin—Olmsted, Baxter, Eliot, and the Storrows—was matched by their lifelong participation in public life. And the spaces they helped create have proven strikingly adaptable to the changing life of the city.

Neither the old language of public space nor a new one will make any difference, though, unless we still identify with local communities. Profound social and economic changes have disabled the discourse of city building in our own time. The multiplication of professional specializations, the powerful, inescapable influence of federal and state governments, and the transformation of local business and social elites—all serve to disconnect people from places.

Nineteenth-century landscape architects pushed back against the centrifugal movement of the professions by promoting their discipline as the "mother art" of modifying the earth for human habitation, carefully nurturing the subsidiary arts of building and gardening. Not surprisingly, the older profession of architecture never accepted that definition of professional relationships. Early in this century, landscape architects like Frederick Law Olmsted, Jr., took the lead in establishing the new profession of city planning, and then struggled to comprehend every discipline that promised to make the metropolis comprehensible—economics, public health, sociology, political science. Architects invented the specialty of urban design to address projects at a scale larger than individual structures, an

¹⁰Richard Bushman, "The Genteel Republic," *Wilson Quarterly* 22 (Autumn 1996), 22.

¹¹Rosenzweig and Blackmar, 18.

approach that built on the work of Daniel Burnham and other architects of the "City Beautiful."

On the one hand, the nature of their work makes city designers more aware than other professionals of the physical environment of their local communities. Yet the same interests may also make them more inclined to travel and to aspire to the largest possible geographic realm for their professional practice. The effect of railroads on the life of small towns, first apparent after the Civil War, has been more than matched in our time by the influence of airlines on metropolitan life. Henry Bellows described the consequences in 1872:

Thousands of American towns, with an independent life of their own, isolated, trusting to themselves, in need of knowing and honoring native ability and skill in local affairs—each with its first-rate man of business, its able lawyer, its skilled physician, its honored representative, its truly *select-men*—have been pierced to the heart by the railroad which they helped to build. . . . It has annihilated their old importance . . . removed the necessity for any first-rate professional men in the village, destroyed local business and taken out of town the enterprising young men, besides exciting the ambition of those once content with a local importance, to seek larger spheres of life.¹²

While the scope of professional work narrowed, its geographic scale increased. The relative ease of travel also widened the reach of professionals in government, making possible more extensive state and federal influence of local and regional design.

More significant for public open space than all these other changes in professional culture was the series of decisions, beginning in the late 1930s, that provided for ninety percent federal funding of highways. Highway engineers predicted at the time that relationships previously built on professional competence would be transformed by the pressures to conform to the opinions of federal officials. Boston's *Master Highway Plan* of 1948 abandoned the fine-grain network of arterials that Shurcliff and Whitten had advocated; the federal government would fund only the network of fewer, larger expressways required by the Interstate program. The cancellation of the Inner Belt in 1971 would have been politically impossible if the state had been required to return the federal highway money. Instead, state officials successfully lobbied to transfer the federal highway subsidy to transit improvements. The opportunity for the state to make its own professional choices was apparently not available in 1983, when the Federal Highway Administration insisted that the Central Artery

¹²Quoted in Thomas Bender, "The Cultures of Intellectual Life: The City and the Professions," in *Intellect and Public Life: Essays on the Social History of Academic Intellectuals in the United States* (Baltimore: Johns Hopkins University Press, 1993), 9.

project be widened if the state wanted federal funding. The substantial increase in the scale of the project vastly multiplied the cost and design conflicts that followed.

As the largest public works project in the nation's history, the Artery project faced a series of seemingly intractable issues. The most visible disagreement was the debate over the project's Charles River crossing. To review "Scheme Z," the proposed set of bridges and ramps over the river, the Bridge Design Review Committee was appointed in 1991. In a few months, committed amateurs became literate in the languages of traffic planning, highway engineering, urban design, and a host of related disciplines. They weighed incommensurable variables from all of these specialties, and came to see the effects of traffic and construction alternatives on all the surrounding neighborhoods. For a little over a year, the design of the highway debate was the starting point for wide-ranging discussions of how Boston would change because of this unfathomably huge project.

Yet all these questions were distorted by the ultimate issue, which was to vouchsafe the federal money appropriated for the Central Artery. When the Bridge Committee was unilaterally dissolved and its recommendations ignored eighteen months later, there was a deafening silence from the design community. Since almost every design and engineering firm in the region was under contract to the Artery project, or hoped to be, that was perhaps to be expected. The committee, and a wider public who had participated in the hundreds of hours of review, were worn down and outlasted by state and federal administrators, whose responsibility was, at some point, to stop weighing alternatives and build the highway.

The Central Artery project was the realization of a simple vision—the demolition of an ugly, elevated highway that cut through the heart of Boston. The project's critics had no disagreement with that purpose. They argued for an equally ambitious vision for the several hundred acres of abandoned railyards just north of the Charles River, for the neighborhoods that surrounded this "lost half mile," and for the river itself, as the central public space of the metropolis.

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