

Gaining Ground: Landmaking in Boston's West End

Enlarging the narrow Shawmut Peninsula to create the residential district called Back Bay is Boston's best-known topographical creation. But land was repeatedly made in the West End as well for wharves, less fashionable dwellings, and the city's necessary institutions—a hospital, a jail, and an almshouse.

Boston is notable among American cities for its large amount of “made land”—land that has been created by filling in areas once covered by water. Despite this distinction there have been surprisingly few studies of when, why, and how this land was made—that is, of the process known as landmaking.¹ The nineteenth-century topographical descriptions of Boston deal primarily with natural features and buildings rather than with the extensive landmaking taking place at the time,² and the one twentieth-century book on the subject—Walter Muir Whitehill's *Boston: A Topographical History*³—also has some defi-

ciencies. Whitehill's study was not only published thirty years ago and contains a number of inaccuracies, but it also omits whole sections of the city. This article examines landmaking in the West End section of the city—an area not covered by Whitehill or any other published study.

The present West End lies between Cambridge Street and Lomasney Way (the street that runs next to Charles River Park under the elevated M.B.T.A. Green Line tracks) and extends from Staniford Street to the Charles River (fig. 1). A comparison of the 1630 and present shorelines (see fig. 1) shows the large amount of land that has been created in the West End. The original shoreline ran roughly along what

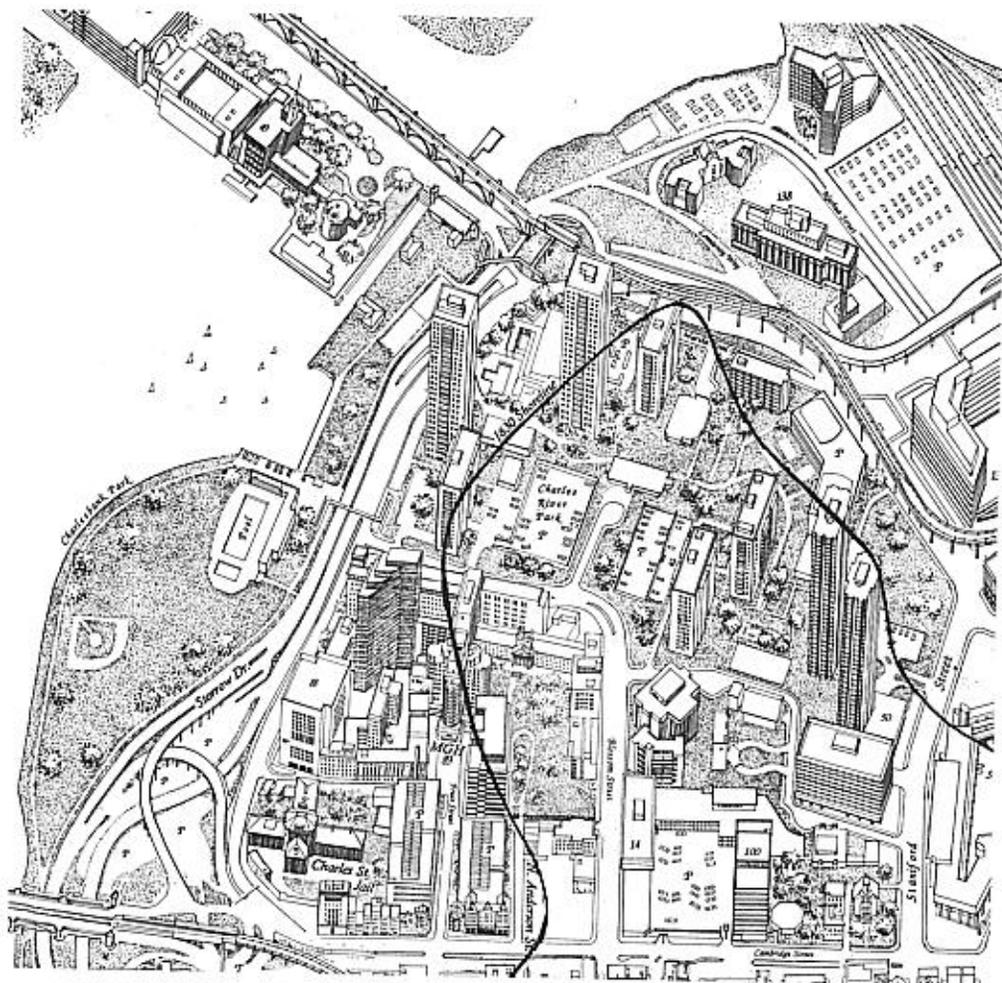


Fig. 1. This detail from a 1991 bird's-eye view of Boston shows the present West End and its shoreline. The 1630 shoreline superimposed on this view shows the extent, location, and use of made land. Courtesy Tom Kane.

is now North Anderson Street, through the present Massachusetts General Hospital (MGH) area and then through the area now occupied by Charles River Park (whose "if you lived here . . . you'd be home now" signs are today a familiar landmark on Storrow Drive). All the rest of the present West End—a large part of the MGH area, the Charles Street Jail, Storrow Drive, Charlesbank Park, and

much of Charles River Park—are on made land. But when, why, and how was this land made?

One way to obtain information about landmaking in Boston is by consulting historical maps of the city. Boston has been mapped frequently, and because the resulting maps were often updates of earlier ones it is easy to trace changes from one map to the next. Historical maps—

provided they are accurate—are thus a good source of data about *when and where* landmaking in a given area of Boston occurred. In addition, such maps often provide clues about the purpose of a land-making project or who conducted it, thereby suggesting what historical records to consult in order to determine why and how the land was made.

In the case of the West End, historical maps indicate that major landmaking began about 1800 and, conversely, that not much land was added between 1630 and 1800. The latter point is demonstrated on a detail from an 1800 map of Boston on which the 1630 shoreline of the West End has been plotted (fig. 2). It is not surprising that only a small amount of land was

added to the West End in the seventeenth and eighteenth centuries, for during that period this section of Boston was very sparsely settled and had little need for more land. The land that was created was probably made by a process known as “wharfing out”—extending wharves out from the shore and eventually filling the slips between them. Wharfing out was usually undertaken by private shoreline owners and was made possible and encouraged by Massachusetts’ unique riparian law, which gives shoreline owners rights down to the low-tide mark (in all other states private property ends at the high-tide line). Although it would be possible, through deed and other comparable research, to document exactly when and

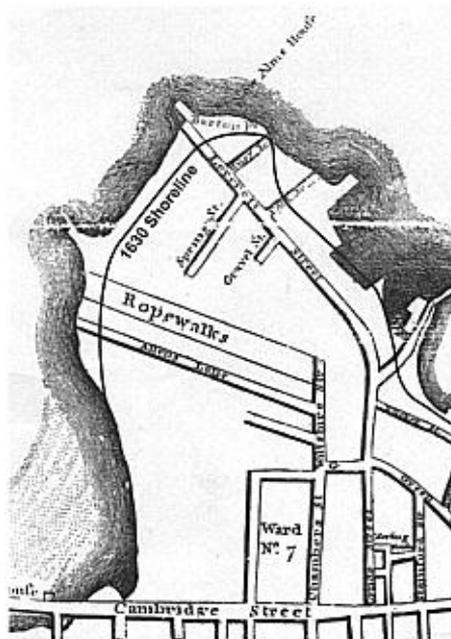


Fig. 2. On this detail of the West End, from an 1800 map of Boston by Osgood Carleton, the 1630 shoreline has been drawn showing how relatively little land was added to the West End in the seventeenth and eighteenth centuries. Carleton labeled the site of the future almshouse on the northeast point of the West End. Courtesy Harvard Map Collection, Harvard University.

by whom land was made by wharfing out, this study instead focuses on landmaking accomplished by projects, that is, by organized groups such as private or public corporations, or by public agencies such as the town, city, or state.

The West End was not the only part of Boston in which little landmaking occurred in the seventeenth and eighteenth centuries. Boston was established in 1630 on a very small peninsula, and this constricted landform sufficed for the town's inhabitants for almost two hundred years. About 1800, however, the population began to increase rapidly, and Boston needed more land. Expanding to a site on the mainland was not even considered at the time—the shipping-based economy was centered around the wharves on the Boston peninsula, and surrounding areas either did not have developed harbors or were part of other towns. Attempts to provide more residential land by annexing South Boston and developing what is now the north part of the South End were not successful. So the solution Bostonians adopted at the beginning of the nineteenth century was simply to *make* more land by filling the tidal flats—areas covered with water at high tide but exposed mud flats at low, and marshes—low-lying land usually above the high-tide line but interlaced with tidal creeks—that surrounded the peninsula.

The expansion of Boston's territory by landmaking is illustrated by the development of the West End in the nineteenth and twentieth centuries. A comparison of an 1803 map of the West End (fig. 3) with the 1800 map (see fig. 2) indicates that

some land had been added in three different locations during this interval—at the northeast tip for what the map key identifies as an “Alms House,” on the northwest shore for the new Copper Street, and north of Cambridge Street in the cove on the west side of the West End.

An almshouse, or poorhouse, was a town-run institution for the poor, so the obvious source of information about this project is the town records, and the published records of Boston town meetings do contain many references to the almshouse between 1790 and 1799. In 1790 a committee reported that the eighteenth-century almshouse, which was on the Common at the corner of Beacon and

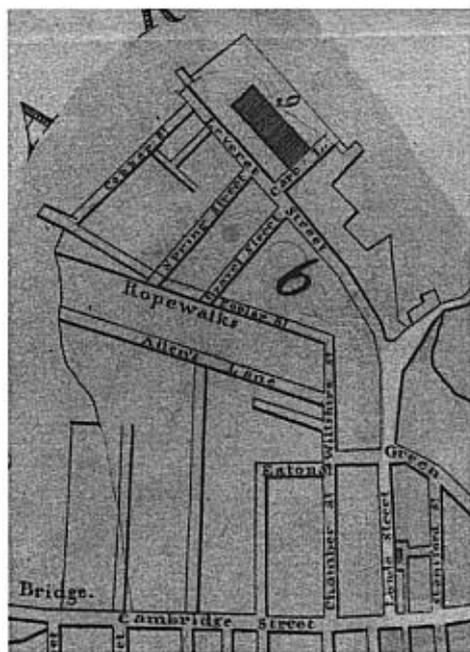


Fig. 3. Carleton's 1803 map shows the newly made land for the almshouse ("9"), Copper Street, and a wharf north of Cambridge Street. Courtesy Harvard Map Collection, Harvard University.

Park Streets across from the site of the present State House, was too near the center of town, seriously overcrowded, and unsanitary. In 1795 another committee recommended that an entirely new almshouse be built and that a "suitable" lot was available on the north side of Leverett Street in the West End.⁴ This site is labeled on the 1800 map (see fig. 2), but unfortunately the committee's report does not explain what made it suitable—perhaps it was its distance from the town center or perhaps its price, which was presumably low in view of the fact that some of the lot was submerged tidal flats. The project was then delayed several years while the town tried to raise the estimated forty to fifty thousand dollars needed to erect the almshouse and to square off the site by filling in the flats. Finally, because the old almshouse was in such a "ruinous" state, in 1799 the town agreed to borrow the twenty thousand dollars still needed, and the project at last got underway.⁵

The town records do not indicate exactly how the land for the new almshouse was made, although a reference to "seawall and other arrangements of the ground"⁶ suggests that the landmaking was accomplished in the manner customary at the time—that is, a stone seawall was built around the perimeter of the area to be filled and then fill was dumped into the area enclosed until the level of fill was above the level of high tide. Other evidence of the landmaking method comes from the published minutes of Boston selectmen's meetings, which mention a permit issued, probably in 1800, to take ballast (small stones) from

Deer Island "for the use of the new Almshouse,"⁷ the ballast probably used to support the inner side of the stone seawall, also a common practice at the time. An antiquarian history records that the almshouse built on the new land, an imposing brick edifice designed by architect Charles Bulfinch, was finished by December 1800.⁸ The almshouse project also involved filling the area east and north of the building in order to make a town wharf (see fig. 3). The Almshouse Wharf is not mentioned in town records, but a reference to it in an 1804 newspaper account indicates that it was finished by that year and, serendipitously, a deposition in an unrelated 1820s legal suit reveals that the wharf area was filled primarily with gravel and also with five to eight hundred scow-loads of mud dug from nearby flats.⁹

The other newly made land shown on the 1803 map—that north of Cambridge Street and for the new Copper Street (see figs. 2 and 3)—was probably created by private wharfing out. Although the town records do not usually note private endeavors, they do mention the filling of both these areas. An entry in the selectmen's minutes indicates that in 1799 the selectmen authorized the proprietors of the West Boston Bridge, which crossed the Charles River from Cambridge Street in the West End to Cambridge on the site of today's Longfellow Bridge, and a Jeremiah Allen, who presumably owned the flats north of the bridge, to build a "head Wharff or Abutment" adjoining the bridge at the intersection of Cambridge and Grove Streets.¹⁰ The abutment was probably a wood bulkhead similar to oth-

ers constructed in Boston at about that time. Once it was built, the shoreward side was filled in so as to create new land up to the line of what is now North Grove Street (see fig. 3). The filling for at least some of Copper Street is dated by another entry in the selectmen's minutes indicating that in 1805, when they gave residents of Copper Street permission to dig up the new street in order to lay a sewer, they allowed the construction of a wooden instead of a brick drain because it was difficult to get a solid foundation for brick in the "new made land."¹¹

The next map that shows additional landmaking in the West End was drawn in 1814 (fig. 4). Some of the new land shown was clearly the result of wharves north of and parallel to Cambridge Street built out from the 1799 abutment and extended into the river from Copper Street (see figs. 3 and 4). But squaring off the southwest corner of the northern part of the West End appears to have been done to connect Copper and North Allen Streets (see fig. 4). Because these were town streets, information about this landmaking project is found in the town records, specifically in the minutes of selectmen's meetings in 1811 and 1812.

The project was precipitated by the construction in 1809 of a second bridge connecting Boston and Cambridge. This bridge ran between Leverett Street on the north side of the West End and Lechmere's Point, now East Cambridge, on the site of what is now the first Charles River Dam and the Museum of Science. The bridge, part of Andrew Craigie's scheme to develop Lechmere's Point and also

backed by the Middlesex Canal Corporation, was called the Canal or Craigie's Bridge. After it opened, residents of the West End were concerned that there was no way to travel directly across their neighborhood between Cambridge and Leverett Streets (see fig. 3), the streets that led to the two bridges, so in 1811 they asked the town to create such a route. The town proposed that a "head wall," presumably a seawall, be built at the foot of North Allen Street, the area between this wall and the shore be filled, and the hill on North Allen Street at the head of Bridge (now North Anderson) Street be cut down. Leveling the hill and making the land would make it possible for both Bridge and Copper Streets to be extended to North Allen Street, thus providing a route across the West End (see figs. 3 and 4). The town estimated that the project would cost \$1,275. The Lechmere Point Corporation, which was then developing East Cambridge and thus was interested in improving access to it, contributed \$700, the town eventually appropriated \$225, and the remainder was evidently raised by West End residents.¹²

The next map that shows land added to the West End was published in 1826 (fig. 5). Changes made on the west side of the district since 1814 (see fig. 4) included adding new land west of what is labeled "Mass. Gen. Hospital" on the 1826 map, truncating Bridge Street, building the hospital on the site over which Bridge Street had been extended in 1812, and extending Blossom Street from South to North Allen Street. As these changes appear to be related to the hospital, MGH

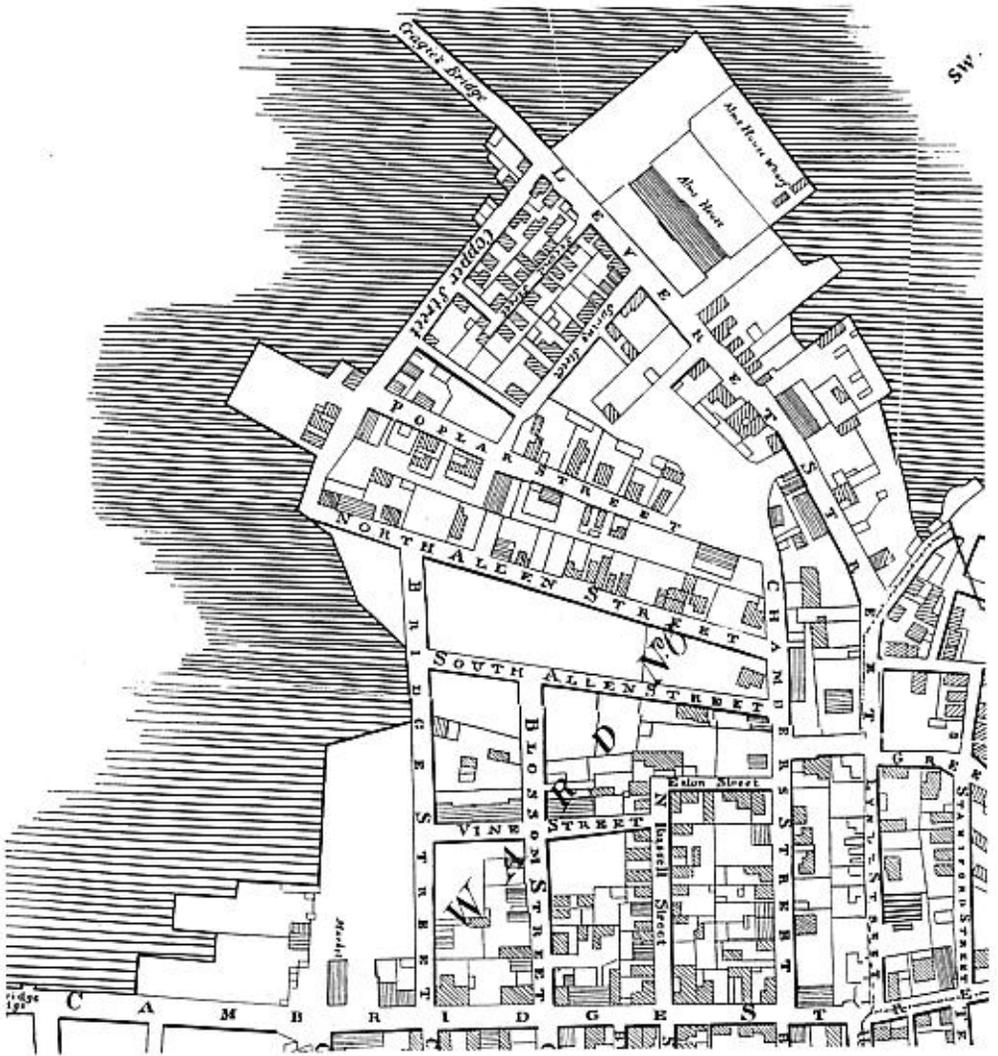


Fig. 4. John G. Hales's 1814 map of Boston was the first to show all the structures in the town. The detail of the West End indicates the land made since 1803—the Almshouse Wharf, at the intersection of Copper and North Allen Streets, and wharves northwest of Copper Street and north of Cambridge Street. Courtesy Boston Redevelopment Authority.

records are an obvious place to look for more information.

The nineteenth-century antiquarian history of MGH, which is based on the trustees' records, indicates that the hospital was chartered in 1811 and that in 1813 the trustees began to look for a site for the new institution while trying to raise the

requisite funds. From the beginning, the site committee wanted a location near the almshouse in the West End and, after considering various sites including one on made land at the foot of the Common and another in Roxbury, in 1817 it chose a site in the West End on North Allen Street. There was a problem, however—the

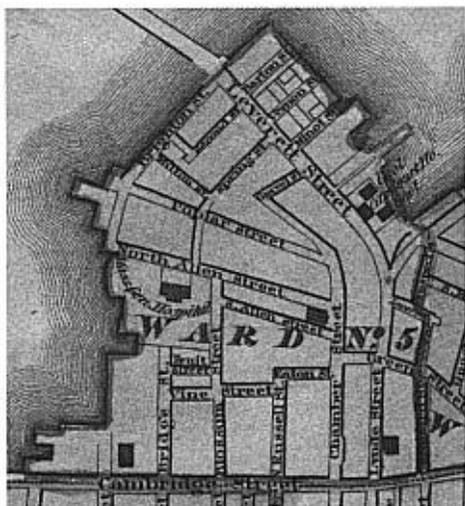


Fig. 5. This detail from an 1826 map of Boston published by Annin and Smith shows changes in the West End since 1814—the Massachusetts General Hospital building and some new land west of it; Bridge Street discontinued and Blossom Street extended to North Allen Street instead; Barton, Vernon, and Minot Streets on the site of the former almshouse; and the new city courthouse and city and county jails on Leverett Street. Courtesy Harvard Map Collection, Harvard University.

recently extended Bridge Street ran right through this location, so the decision was contingent on obtaining permission to discontinue the part of the street that had been built just five years earlier.¹³ Because the street belonged to the town, evidence for the subsequent course of the project is in the town records.

The selectmen at first agreed to discontinue Bridge Street and instead to extend Blossom Street to North Allen Street in order to preserve the route across the West End. But the Lechmere Point Corporation, which had contributed to

the construction of Bridge Street in 1812, objected, and eventually, in order to block off the street, the hospital trustees had to reimburse the corporation for its seven-hundred-dollar contribution and to agree that Blossom Street should remain “forever open,” as it still is (see figs. 5 and 1).¹⁴

The first MGH building, designed by Charles Bulfinch and now known as the “Bulfinch Pavilion,” was built on existing land between 1818 and 1821 (see figs. 4 and 5).¹⁵ The hospital history does not indicate how the additional land along the river, shown on the 1826 map, was created, but town records disclose that more than three hundred loads of gravel fill were required in order to construct Blossom Street from South to North Allen Street,¹⁶ which suggests that that area was marshy.

Another change that a comparison of 1814 and 1826 maps of the West End reveals is not an addition of new land but rather the alteration of an earlier land-making project, namely, the laying out of three streets—Barton, Vernon, and Minot—over the land on which the almshouse had formerly stood (see figs. 4 and 5). The almshouse had been a town institution, but in 1822 Boston had changed its form of government from a town meeting system to a city organization with a mayor, Board of Aldermen, and Common Council, so the fate of the almshouse might be explained in the city equivalent of the town records. Actually, in this case the answer can be found in a detailed history of the city’s first eight years written by Josiah Quincy, the mayor from 1823 to 1828.¹⁷

Quincy recounted that as early as 1812 the almshouse built just twelve years before had proved inadequate for the large number of poor, sick, insane, and petty criminals all housed together there, so in 1821–22 the town had built a new House of Industry in South Boston. But the Overseers of the Poor, the board that ran the almshouse, had strongly resisted moving the poor from its institution to the new one, leading to a prolonged controversy that was only resolved when the city sold the almshouse in 1825. The inmates were then transferred to South Boston, the almshouse demolished, and the new streets laid out over the site.¹⁸

A detail from an 1838 map (fig. 6) shows that more land had been made in the West End since 1826 (see fig. 5). The most dramatic addition, however, was just outside the West End—the large amount of new land northeast of Leverett Street (see figs. 5 and 6). The 1838 map shows a “Lowell R.R. Depot” on this made land, and research confirms that a large area northwest of Causeway Street had, in fact, been filled in 1835 by the Boston and Lowell Railroad to create land for its depots.¹⁹ The new land permitted the laying out of Lowell Street (now Lomasney Way) along the outer line of what had been the Almshouse Wharf, thus defining the northeast boundary of the West End (see figs. 4–6).

The 1838 map also indicates that since 1826 new land had been made northwest of Brighton (formerly Copper) Street (see figs. 5 and 6). This land appears to have been created by wharfing out, an assumption supported by the lack of evi-

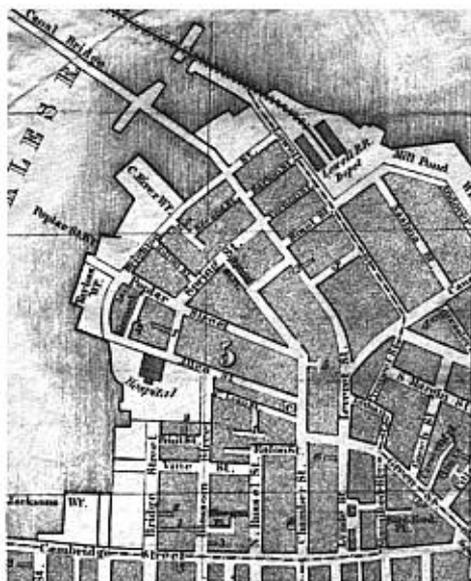


Fig. 6. *The map from the 1838 Boston Directory published by Charles Stimpson Jr. shows the land recently made for the Boston and Lowell Railroad next to the West End, which permitted the laying out of Lowell Street, and new land added to the West End northwest of Brighton Street. Courtesy Harvard Map Collection, Harvard University.*

dence in city records for any landmaking project in this area during that period. The city records do, however, cite an agreement made in December 1835 between the city and the proprietors (owners) of land near Brighton Street that allowed the city to build a sewer extending west from Brighton Street 460 feet toward the “sea” (river) and that permitted the proprietors to fill up and build a street over it.²⁰ The resulting land is labeled “C. River Wf.” on the 1838 map (see fig. 6).

An 1846 map (fig. 7) shows that a great deal more filling had been done northwest of Brighton Street since 1838



Fig. 7. *This detail from an 1846 map of Boston published by George G. Smith shows the land added to the West End since 1838, especially northwest of Brighton Street. Courtesy Harvard Map Collection, Harvard University.*

(see fig. 6). Again, lack of evidence in city or corporate records suggests that this land-making had been accomplished by private parties. City records do, however, document its progress. In 1841, for example, after Auburn Street had been created on the made land as the next street northwest of Brighton Street, residents of the area petitioned the city to extend the new street to Leverett Street (see fig. 7).²¹ And by 1844 enough additional land had been made so that the city could lay out North Charles Street northwest of Auburn (see fig. 7).²²

A detail from an 1852 map (fig. 8) shows a significant change in the West End since 1846 (see fig. 7)—the large amount of new land north of Cambridge Street, presumably made for the “County Jail” depicted on it (see fig. 8). One might expect information about this project to

be in the county records, but actually the answers are in city records because Boston comprised almost all of Suffolk County and was responsible for the county’s public institutions.²³ Although the relevant city records—those of the Board of Aldermen and Common Council—detail the protracted history of this project, a convenient summary was published in 1851 as a long report in the City Document series.²⁴

This report explains that the new county jail was built to replace the former one, which had been erected on Leverett Street in the West End in 1821–23 (see fig. 5)²⁵ according to a design that, it soon became evident, made it impossible to provide heat to the cells in winter. This condition was unacceptable to the authorities as well as to the prisoners, and, beginning in 1834, the city argued for years about whether to remodel or to replace the jail and, if the latter, whether to locate the new one on Leverett Street, in South Boston, or in some other place. Building a new jail on Leverett Street was the solution generally favored until 1848, when some began to advocate building it on a site at the corner of Cambridge and North Grove Streets. In comparison with the Leverett Street site, the one on Cambridge Street seemed to have many advantages: it was exposed to breezes and had good drainage (the Leverett Street site was described as a “pit hole that . . . could never be well ventilated”); was about the same distance from the county courthouse, then on Court Street; was cheaper because much of it was tidal flats; would give the city valuable wharf and dock

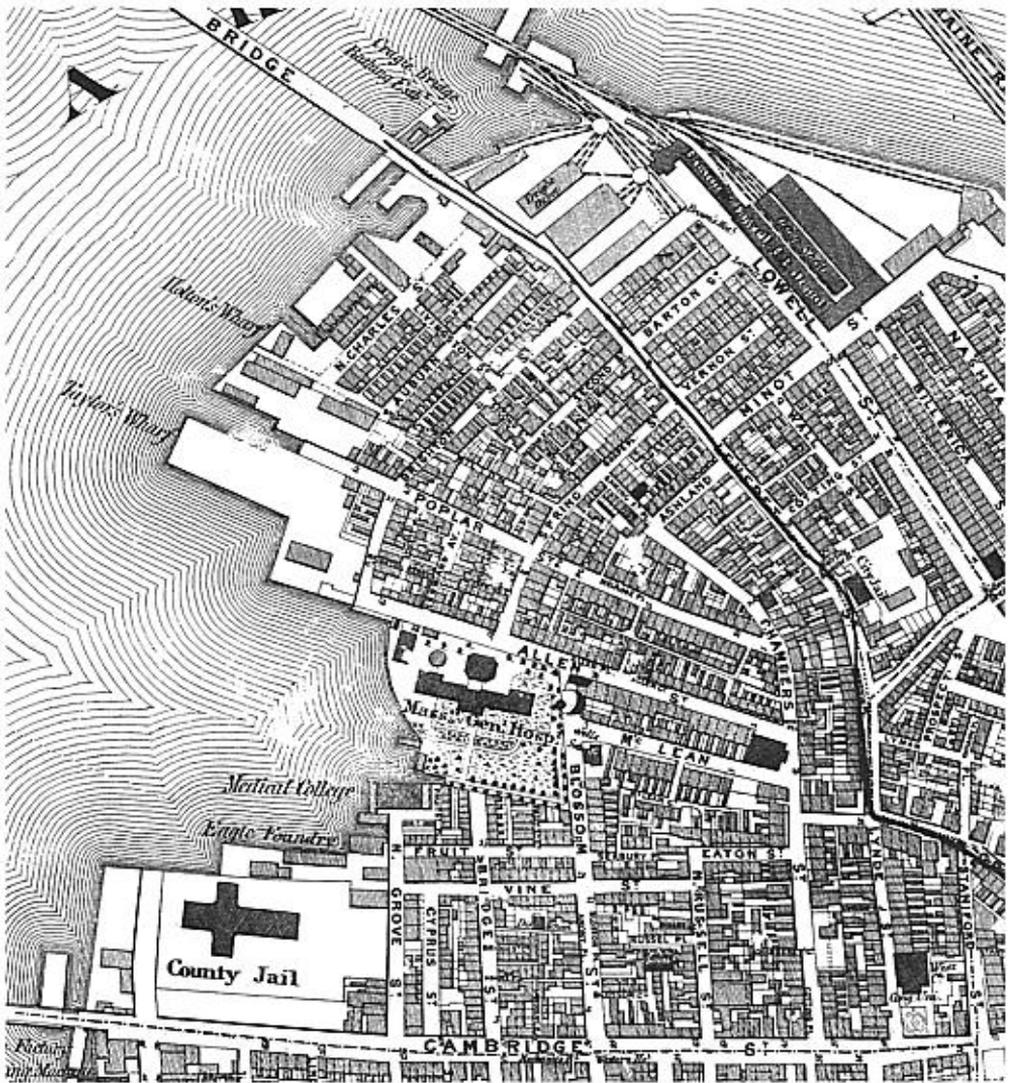


Fig. 8. The 1852 map of Boston by I. Slatter and J. Callan is one of two published that year that shows every structure in the city. The map clearly depicts the new land made for the [Suffolk] County (Charles Street) Jail. Courtesy Boston Athenaeum.

property; would enable the city, after the area was filled, to extend Charles Street between the West Boston and Craigie's Bridges; and, in contrast to a South Boston site, was in the city proper.²⁶ The arguments for the Cambridge Street site prevailed, and in 1848 the city bought the

requisite land and flats.

Construction of the Suffolk County Jail, now known as the Charles Street Jail, began in December 1848 when piles were driven for the foundation of the granite seawall to enclose the north and west sides of the site (see fig. 8). Filling the area

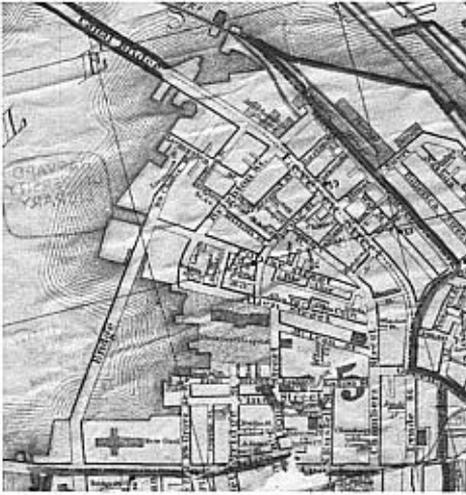


Fig. 9. *The detail of the West End from an 1859 map of Boston published by George G. Smith shows the North Charles Street Bridge. Courtesy Harvard Map Collection, Harvard University.*

enclosed with dirt and mud was completed in 1849, and then the granite cruciform building, designed by Louis Dwight and Gridley J. F. Bryant, was built on the made land and opened in November 1851.²⁷

A map published in 1859 (fig. 9) shows the next major change in the West End shoreline—a bridge that crossed the flats next to MGH, thus connecting the part of Charles Street in front of the new jail with the part laid out in 1844 west of Brighton Street. Because the bridge was a city street, information about this project is found in the aldermen's records.

Just as the city had predicted, filling the area for the jail opened the possibility of extending Charles Street across the West End from Cambridge to Leverett Street (see fig. 8), and in March 1851, even before the jail was finished, residents

began to petition the city for such a project. In 1854 the city drew up a plan for the street. The intention was to build a seawall across the intervening flats, most of which were owned by MGH, and to fill the interior with coal ashes. (After coal came into common use as a fuel for heating and cooking about 1840, the city had instituted regular collection of household ashes—much as trash is collected today—and, needing a place to dispose the ashes, sometimes used them as fill.) The city appropriated funds for the North Charles Street seawall in 1855, but MGH refused to permit its construction—undoubtedly because it would have obstructed the hospital's flats—so in 1856 the city decided to

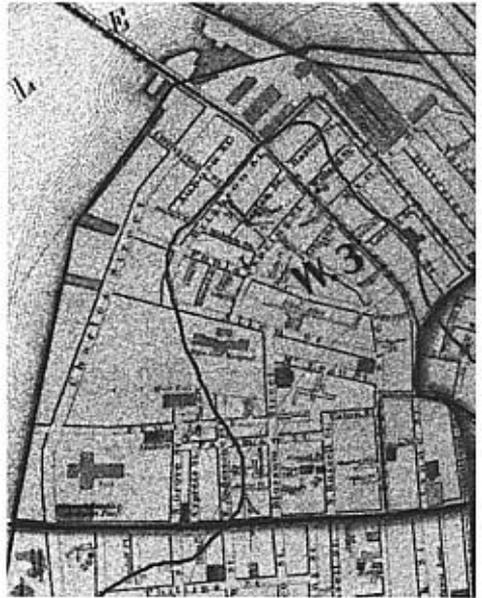


Fig. 10. *By the late 1860s, as shown in a detail from an 1868 map of Boston by City Engineer N. Henry Crafts, a seawall had been built west of Charles Street and the MGH flats filled. This map also shows the 1630 shoreline. Courtesy Harvard Map Collection, Harvard University.*

build a pile bridge across the flats instead. Construction of the bridge apparently started in 1857 and was finished by 1858 (see fig. 9).²⁸

The North Charles Street Bridge was presumably intended as a relatively long-term solution to the problem of extending North Charles Street across the MGH flats in spite of MGH's opposition to a street on made land. A detail from an 1868 map (fig. 10), however, shows the bridge gone and the flats filled. What had happened? And had the landmaking been done by MGH, the city, or some other group? It turns out that both MGH and the city were involved in this project.

MGH records indicate that no sooner had the North Charles Street Bridge been built than the hospital board decided to fill its flats after all, probably because the bridge prevented them from being adequately flushed out by the tide and they had become what at the time was called a "nuisance"—an obnoxious appearance or smell. In 1859 the state authorized MGH to build a seawall outside the line of the bridge and to fill the flats, the hospital trustees then apparently arranged to have the city do the landmaking, and in December the city contracted for the seawall.²⁹ The wall was evidently built in early 1860, and then the city began to fill the flats with city trash. Using trash as fill caused problems: in 1860 the MGH trustees protested that the fill had caused a new nuisance, and in April 1863 the city ordered its superintendent of health to take up the east sidewalk of the North Charles Street Bridge and fill underneath it in order to stop the problem caused by

water flowing over the "house dirt" being dumped on the flats.³⁰

Filling the flats also made the bridge constructed across them just five years earlier superfluous, so in May 1863 the City Council ordered the bridge be taken down and North Charles Street itself filled in.³¹ The bridge was apparently still standing in December, however, when the Board of Aldermen ordered that it be removed by sections as fast as the space under it could be filled with city ashes and that, when the fill had been "traveled over and become sufficiently settled," the street be repaved with cobblestones from the bridge.³² This time the superintendent of streets seems to have complied promptly, for in March 1864 the city authorized him to sell the timber and iron from the bridge.³³ City records do not indicate when filling the flats was completed, and for once maps fail to provide the necessary evidence; the 1862 edition of the 1868 map shows the flats already filled at this earlier date and, as city records make clear, this was not the case. An 1866 bird's-eye view (fig. 11) indicates, however, that filling was still in progress at that time.

The next landmaking project in the West End is shown on a detail from an 1894 map (fig. 12)—a narrow strip added outside the seawall constructed in the 1860s (see fig. 10), the whole area labeled "Charles River Embankment" (see fig. 12). This new land was created for one of the first parks in the Boston public park system, and information about it is found in the records of the Boston park commissioners.

The park commissioners' reports



Fig. 11. *This detail from an 1866 bird's-eye view of Boston shows the MGH flats being filled. On the newly made land are horse-drawn wagons and pilings that would be driven to form the foundations of new buildings. Other West End landmarks are also visible: Cambridge Street is at the right, the Charles Street Jail is on Charles Street, behind the made land are the Harvard Medical School building and the Bulfinch Pavilion of MGH, Allen Street runs behind the latter, and Poplar Street is at the left (see fig. 10). Courtesy the Trustees of the Boston Public Library.*

reveal a long history of attempts to establish a public park system in Boston, attempts that began in the late 1860s but did not reach fruition until 1876, when the newly established park commission recommended a comprehensive system of ten public parks in the city. Only one of these proposed parks—the Back Bay Fens—was approved in 1877, however, but it was an opening wedge, and finally in 1881 the city appropriated funds for six more parks.³⁴

One of the parks approved in 1881 was the Charles River Embankment. When first proposed in 1876 it had been conceived as a narrow park along the river to be formed by building a seawall and filling in the riverbank from Leverett Street in the West End to the Cottage Farm (now Boston University) Bridge, but it had been scaled back in 1879 to encompass only the area between Leverett and Cambridge Streets in the West End

(see fig. 12).³⁵ The park was intended to serve the working-class population who lived in the densely packed four- and five-story tenements that were then rapidly replacing the earlier single-family houses of the West End. These workers, in the words of the park commissioners, “are necessarily confined to these sections throughout the year, and must chiefly find their recreation in the immediate vicinity of their homes.”³⁶

The park department’s plan for the park, drawn up in 1880, called for construction of a new seawall outside the one built in the 1860s and for filling the intervening flats, thus burying the old wall under fill.³⁷ Work on the park began in 1883 when the commissioners filled one of the docks in the 1860s seawall (see fig. 10) with dirt from sewer and building excavations and the next year removed some of the structures on the site.³⁸ Construction of the seawall finally began in

1885 and was completed in October 1886.³⁹ The area inside the seawall was then filled, most of it with material dredged from the river but some also with coal ashes and with dirt from various construction sites in the city, including that for the Suffolk County Courthouse then being built in Pemberton Square.⁴⁰

Filling, loaming, and grading the park were completed in 1888 according to a plan prepared by Frederick Law Olmsted, the consulting landscape architect for the Boston park system. Olmsted's plan included a promenade along the river screened from the city by a landscaped embankment (fig. 13), exercise spaces for women and girls at the south end, and an outdoor gymnasium for men and boys at the north.⁴¹ The recreational facilities at Charlesbank, as the park was soon called, were innovative—the outdoor gymnasiums were the first in the country to be operated free of charge; the “sand courts” (or sand boxes) installed for children were also among the first in the nation; and exercise classes for boys and for women and children were conducted by trained instructors. The park soon became enormously popular with residents of the West End, many of whom were recent Jewish immigrants.⁴²

A 1909 chart shows the next land added to the West End—an L-shaped area spanning the river next to the former Canal Bridge (fig. 14). This land was part of the first Charles River Dam,⁴³ so information about the landmaking is found with records of the dam project.

The Charles River Dam project had its genesis in the mid-nineteenth century



Fig. 12. *The newly created Charles River Embankment (Charlesbank) is shown in a detail from an 1894 map of Boston published by George H. Walker and Co. This map also shows the 1630 shoreline. Courtesy Harvard Map Collection, Harvard University.*

when some Bostonians began to advocate keeping part of the Back Bay open rather than filling it in order to create a water park similar to the Alster Basin in Hamburg, Germany. The idea of a water park was promoted in the 1870s in various proposals for converting the Charles River basin into such a park with landscaped banks.⁴⁴ By the 1890s, however, interest was directed more toward solving a sanitary problem than creating a recreational area, for after years of being at the receiving end of sewers discharging raw sewage the river flats were malodorous and disgusting-looking when exposed at low tide. A commission recommended building a dam to convert the river basin from salt to fresh water and to maintain it at a constant



Fig. 13. *This 1901 photograph shows children playing on the raised central embankment in Charlesbank park. The promenade along the river is visible at the right. Courtesy National Park Service, Frederick Law Olmsted National Historic Site, Brookline, Massachusetts.*

level, thus keeping the flats always covered with water and concealing the obnoxious sights and smells. A proposal for such a dam failed in 1894, but the idea was revived at the turn of the century and the dam finally approved in 1903.⁴⁵

The plans called for building a dam and lock on the site of the Canal Bridge, filling a narrow esplanade on the Boston side of the river between the Longfellow Bridge and Charlesgate, and constructing new sewers on both the Boston and Cambridge shores to carry sewage out below the dam. The commission established to run the project soon decided that

the dam would include a park of about seven acres on the upriver side, allowing the walls of the dam itself to be lower than would otherwise have been possible.⁴⁶ Construction of the dam began in 1905 and by 1909 was sufficiently completed so that the park area could be filled with material dredged from the river and with dirt from excavation sites in Cambridge,⁴⁷ thus creating the land where the Museum of Science is now located (see figs. 13 and 1). No other landmaking took place in the West End during the Charles River Dam project, although Charlesbank park was severely disrupted both by the construc-



Fig. 14. The L-shaped area of made land created as part of the first Charles River Dam is shown spanning the river on this detail from the 1909 chart of Boston Harbor published by the U.S. Coast and Geodetic Survey. Courtesy Harvard Map Collection, Harvard University.

tion through it of the new sewer and by work on the new Longfellow Bridge, then being erected to replace the old West Boston Bridge.

Maps do not show more land added to the West End until the 1930s. Then a 1931 plan (fig. 15) depicts a bulge of new land at the south end of Charlesbank. Because by this time Charlesbank was administered by the Metropolitan District Commission (MDC), information about this project is located in MDC records.

MDC reports mention the land added to Charlesbank in the 1930s and indicate that the project was part of larger changes then being made to the esplanade that had been created south of the West End when the dam was built. The Charles River Basin created at the beginning of the

century by the dam had not become the water park its proponents had envisioned. Wind-whipped waves bouncing off the bordering seawalls created a chop that made the basin too dangerous for small boats and rowing shells, and, in addition, the esplanade was too narrow for boathouses. After years of complaints, in

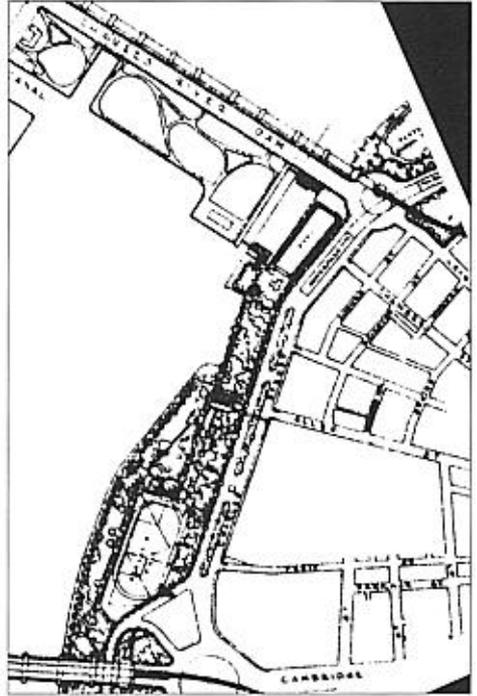


Fig. 15. The land to be added to Charlesbank in compensation for the land taken to widen Charles Street in the early 1930s is shown in this detail from a 1931 MDC plan of the Charles River Basin. The plan also shows the track that replaced the women's and children's playground at the south end of the park and the pool that superseded the men's gymnasium at the north end. Annual Report of the Metropolitan District Commission for the Year 1931, Pub. Doc. 48 (1931). Courtesy Metropolitan District Commission.

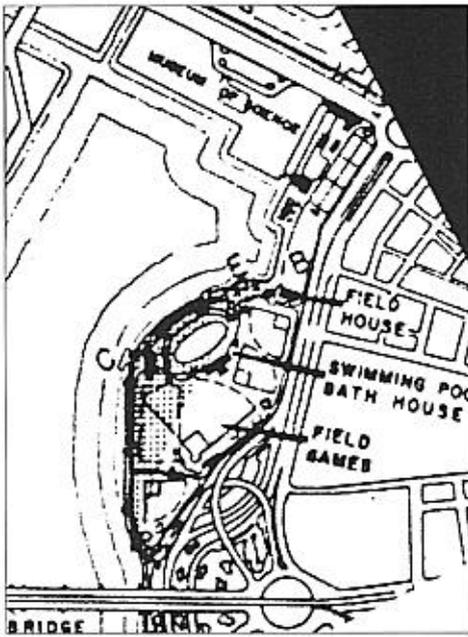


Fig. 16. A detail from a 1949 plan of Storrow Memorial Embankment shows the land to be added to Charlesbank to compensate for that taken for Storrow Drive and the proposed new recreational facilities in the park. Drawing in Sidney N. Shurcliff, "Boston's Proposed Development of the Charles River," *Landscape Architecture* 40, 1 (1949): 20.

1929 a commission recommended almost doubling the width of the esplanade south of the Longfellow Bridge and adding some recreational amenities. Part of the project also involved widening Charles Street next to Charlesbank, the land for the broader street to be taken from the park and to be compensated for by adding fill on the water side of Charlesgate, thus increasing the size of the park from 9.6 to 15.4 acres (see figs. 14 and 15).⁴⁸

Most of the filling next to Charlesgate was done in 1933 with dirt that came from the reconstruction of

Charles Street, from excavation for a pedestrian underpass at the intersection of Charles and Cambridge Streets, and from construction of what is now the Charles/ MGH station of the M.B.T.A. Red Line.⁴⁹ In order to reduce the chop in the river, the fill was sloped down to the water's edge instead of being finished with a stone seawall, as in previous landmaking projects. The changes made to Charlesbank in the 1930s obliterated Olmsted's plan for the park: the newly made land blocked the promenade along the river, the central embankment was leveled, a track and baseball diamonds replaced the women's and children's play areas at the south end, and a swimming pool was constructed next to the dam where the men's gymnasium had been located (see fig. 15).

Even more land was added to Charlesbank in the 1950s when Storrow Drive was constructed, as shown on a 1949 plan of changes to be made during construction of the drive (fig. 16). Like many twentieth-century landmaking projects, however, information about the Storrow Drive project is hard to find: there are no written reports, and in this case it has been necessary to rely on newspaper articles and construction photographs.

The Storrow Drive project was controversial. When the esplanade was widened in the 1930s, a major component of the original proposal was omitted—a highway along the river between the Longfellow and Cottage Farm (Boston University) Bridges. The proposed highway had provoked a storm of protests and jeopardized project funding, some of which was to come from a one-million-

dollar gift given by Mrs. James J. Storrow in memory of her husband, who had been instrumental in getting the Charles River Dam and Basin projects approved in the first place. When Mrs. Storrow joined a group opposing the highway, the roadway had been dropped from the plans in order to preserve her gift.⁵⁰ The idea did not die, however, and after World War II the highway was again proposed as one solution for Boston's notorious "traffic mess." The proposal again met violent opposition. When the highway bill was being debated in the legislature, for example, one representative claimed, "Mr. and Mrs. Storrow would turn over in their graves if they knew their gift to the people was being turned into a high-speed highway where children will be killed," and the senator from the West End argued, "In the name of decency, please leave this park [Charlesbank] alone for the sake of our underprivileged children." But in spite of such pleas and with the help of some extraordinary parliamentary procedures, the legislature finally passed the bill in the spring of 1949. The act stipulated that new land be created by filling to replace that taken for the highway and, ironically, that because the new roadway was to be located on the Storrow Memorial Embankment, named in the 1930s in recognition of Mrs. Storrow's gift, it be called the James J. Storrow Memorial Drive.⁵¹

Storrow Drive was constructed in 1950–51. In the West End, to compensate for land taken from Charlesbank along Charles Street and for the ramps that now entwine the Massachusetts Eye and Ear Infirmary parking lot (see fig. 1), 5.1 acres

of fill were added to the southern half of the park (see figs. 15 and 16). The fill was dirt trucked in from the suburbs at the rate of ninety loads a day, and this traffic combined with the ramp construction completely disrupted the park. The project also used materials recycled from an earlier landmaking project, for the shore of the newly filled area at the south end of Charlesbank was faced with granite blocks taken from a seawall built south of the Longfellow Bridge in the 1860s.⁵² Elaborate plans were drawn up for new recreational facilities at Charlesbank (see fig. 16), but perhaps because the West End neighborhood itself was demolished in the late 1950s during an urban renewal project, only a new outdoor swimming pool, some tennis courts, and softball fields were eventually built (see fig. 1).⁵³

The land added to Charlesbank during construction of Storrow Drive moved the shoreline of the West End out to its present location (see figs. 1 and 16) and was thus the last landmaking project in this section of the city. (The "Big Dig" will not add any land to the West End.) The 1991 bird's-eye view of the West End on which the 1630 shoreline has been plotted (see fig. 1) is a good reminder of just how much land has been added in this area, most of it made during the last two hundred years by projects that created land for institutions (the almshouse, MGH at several different times, the Charles Street Jail), streets (Copper Street, Copper/North Allen streets, North Charles Street), commercial use (Almshouse Wharf, wharves north of Cambridge, northwest of Brighton, and northeast of

Leverett Streets), residential use (northwest of Brighton Street), and recreational areas (original Charlesbank and the several additions, the park on the dam).

The West End is not the only section of Boston with made land. In fact, land-making has taken place in all sections of the city that front on the water, especially in the days before the present wetlands permitting process when, if more land were needed near an area already developed, it could be created relatively easily by filling in the adjacent tidal flats. Although this landmaking is relatively well understood in some sections of Boston, such as Back Bay, very little is known about how the land was made in many other parts, such as the West End. But by applying the method illustrated here—first using historical maps to identify where and when land was added and then the labels and other clues on the maps as guides to sources that explain who made the land and why—it is possible to trace how land was made in all parts of Boston. ❧

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NOTES

1. “Landmaking,” a term coined by archaeologists, is used here because it describes what really occurred in Boston—filling tidal flats to make land. Some use the terms “landfill” or “land reclamation” to describe this process, but these terms are misleading. “Landfill” not only evokes images of garbage dumps but can also mean fill added on top of existing dry land. “Land reclamation” is not accurate, either, for it implies diking, pumping, and draining to reclaim land from the sea whereas in Boston land was made by actually dumping fill onto tidal flats.
2. Thomas Pemberton, “A Topographical and Historical Description of Boston, 1794,” *Collections of the Massachusetts Historical Society* 3 (1794): 241–304; Charles Shaw, *A Topographical and Historical Description of Boston* (Boston: Oliver Spear, 1817); Nathaniel B. Shurtleff, *A Topographical and Historical Description of Boston*, 3d ed. (Boston: City Printers, 1890). Shaw is the exception, for, in the first part of his description of Boston, he notes areas of made land.
3. Walter Muir Whitehill, *Boston: A Topographical History*, 2d ed. (Cambridge, Mass.: Belknap Press of Harvard University Press, 1968).
4. Boston Record Commissioners, *Records Relating to the Early History of Boston*, vol. 31, *A Volume of Records Relating to the Early History of Boston Containing Boston Town Records, 1784 to 1796* (Boston: City Printers, 1903), 239, 398 (hereafter cited as B.R.C.).
5. B.R.C., vol. 35, *A Volume of Records Relating to the Early History of Boston Containing Boston Town Records, 1796 to 1813* (Boston: City Printers, 1905), 25, 46, 48–49, 65–67.
6. B.R.C. 35: 65.

7. B.R.C., vol. 33, *A Volume of Records Relating to the Early History of Boston Containing Minutes of the Selectmen's Meetings, 1799 to, and Including, 1810* (Boston: City Printers, 1904), 90.
8. Caleb H. Snow, *A History of Boston, the Metropolis of Massachusetts, from Its Origin to the Present Period; with Some Account of the Environs*, 2d ed. (Boston: Abel Bowen, 1828), opp. 52, 324.
9. *New-England Palladium* (Boston), May 11, 1804, 2; Deposition of John S. Perkins, July 24, 1826, Suffolk County Deeds, Suffolk County Courthouse, Boston, Mass., 303: 203–4.
10. B.R.C. 33: 45.
11. *Ibid.*, 260.
12. B.R.C., vol. 38, *A Volume of Records Relating to the Early History of Boston Containing Minutes of the Selectmen's Meetings, 1811 to 1817, and Part of 1818* (Boston: City Printers, 1908), 46–47, 56, 258.
13. N. I. Bowditch, *A History of the Massachusetts General Hospital*, 2d ed. (1872; reprint, New York: Arno Press and The New York Times, 1972), 17–18, 22, 23, 27–28, 29 (hereafter cited as *History of MGH*).
14. B.R.C. 38: 239–40, 241, 244, 259–60, 265–67.
15. Bowditch, *History of MGH*, 38, 55.
16. B.R.C. 38: 284, 286.
17. Josiah Quincy, *A Municipal History of the Town and City of Boston, during Two Centuries from September 17, 1630, to September 17, 1830* (Boston: Charles C. Little and James Brown, 1852).
18. Quincy, *Municipal History*, 34–40, 46–54, 88–96, 138–47; see also B.R.C. 35: 351–54; Records of the Common Council, Sept. 23, 1822, Apr. 25, 1825, Boston City Archives (hereafter cited as Council Records), Hyde Park, Mass.
19. Asa Sheldon, *Yankee Drover: Being the Unpretending Life of Asa Sheldon, Farmer, Trader, and Working Man, 1788–1870* (1862; reprint, Hanover, N.H.: University Press of New England, 1988), 85–100.
20. Records of the Mayor and Aldermen (hereafter cited as Aldermen Records), June 4, 1844, Boston City Archives.
21. Aldermen Records, Apr. 12, 1841.
22. *Ibid.*, Dec. 9, 1844.
23. *Documents of the City of Boston for the Year 1854*, no. 78 (Boston: City Printers, 1854), 3 (hereafter cited as City Doc.).
24. City Doc. No. 61 (1851).
25. B.R.C., vol. 37, *A Volume of Records Relating to the Early History of Boston Containing Boston Town Records, 1814 to 1822* (Boston: City Printers, 1906), 232; Quincy, *Municipal History*, 40; Harold Kirker, *The Architecture of Charles Bulfinch* (Cambridge, Mass.: Harvard University Press, 1969), 381 n. 2.
26. City Doc. No. 61 (1851), 19–20.
27. *Ibid.*, 21–22, 25–26, 36–37.
28. Aldermen Records, Mar. 18, 1851, Sept. 29, 1851, Mar. 6, 1854, Apr. 3, 1854, May 25, 1854, Oct. 2, 1854, Apr. 30, 1855, July 30, 1855, Aug. 6, 1855, Sept. 3, 1855, Oct. 22, 1855, July 28, 1856, Nov. 6, 1856, Nov. 19, 1856, Apr. 27, 1857, May 4, 1857, May 25, 1857, Nov. 30, 1857, Oct. 18, 1858; Bowditch, *History of MGH*, 514; City Doc. No. 63 (1856).
29. Bowditch, *History of MGH*, 536; *Acts and Resolves Passed by the General Court of Massachusetts in the Year 1859* (Boston: State Printers, 1859), Chap. 147 (hereafter cited as Acts); Record of Committees, Committee on Sea Wall West of General Hospital, Nov. 4, 1859, Nov. 9, 1859, Nov. 28, 1859, Nov.

- 29, 1859, Dec. 10, 1859, Dec. 12, 1859, Dec. 14, 1859, Dec. 19, 1859, Boston City Archives.
30. Bowditch, *History of MGH*, 552; City Doc. No. 36 (1894), 22; Aldermen Records, Apr. 23, 1863.
 31. Aldermen Records, May 4, 1863; Council Records, May 14, 1863.
 32. Aldermen Records, Dec. 21, 1863.
 33. *Ibid.*, Mar. 14, 1864; Council Records, Mar. 17, 1864.
 34. City Doc. No. 123 (1869); City Doc. No. 42 (1876); *Seventh Annual Report of the Board of Commissioners of the Department of Parks for the City of Boston for the Year 1881*, City Doc. No. 16 (1882), 6, 13–20 (hereafter cited as *A.R. Park Commissioners*). For a more complete discussion of the establishment of the Boston park system, see Nancy S. Seasholes, *Landmaking and the Process of Urbanization: The Boston Landmaking Projects, 1630s–1888* (Ann Arbor, Mich: University Microfilms, 1994), 462–70, and Cynthia Zaitzevsky, *Frederick Law Olmsted and the Boston Park System* (Cambridge, Mass.: Belknap Press of Harvard University Press, 1982), 34–46.
 35. City Doc. No. 42 (1876), 15–18.
 36. *Fifth A.R. Park Commissioners for 1879*, City Doc. No. 15 (1880), 18.
 37. Boston Park Department, in *Fifth A.R. Park Commissioners for 1879*, City Doc. 15 (1880).
 38. *Ninth A.R. Park Commissioners for 1883*, City Doc. No. 9 (1884), 16; *Tenth A.R. Park Commissioners for 1884*, City Doc. 7 (1885), 23.
 39. The seawall was constructed in the manner customary for such walls at that time. The wall was set on a foundation of wood piles that were driven into the underlying clay and topped with a plank platform. The wall itself was built of granite blocks, some of which came from the 1860s wall and in this case were mortared (perhaps because the area was under water even at low tide) rather than dry-laid, as was more common. The wall did, however, have the usual battered cross-section—that is, it was wider at the base than at the top. This wall was almost 13 feet high, 7.67 feet wide at the base, and 4.6 feet wide at the top and was capped with a five-foot-wide granite coping. The back of the wall was “ballasted” (supported) with small stones banked up against it. See *Tenth A.R. Park Commissioners for 1884*, City Doc. No. 7 (1885), 31; *Twelfth A.R. Park Commissioners for 1886*, City Doc. No. 24 (1887), 22.
 40. *Twelfth A.R. Park Commissioners for 1886*, City Doc. 24 (1887), 10–11, 22; *Thirteenth A.R. Park Commissioners for 1887*, City Doc. No. 14 (1888), 58.
 41. F. L. Olmsted & Co., *Plan of Charlesbank, 1892* (Boston: Park Department, 1892); *Twelfth A.R. Park Commissioners for 1886*, City Doc. No. 24 (1887), 11–12; *Thirteenth A.R. Park Commissioners for 1887*, City Doc. No. 14 (1888), 11; *Fourteenth A.R. Park Commissioners for 1888*, City Doc. No. 72 (1889), 12, 29.
 42. Zaitzevsky, *Olmsted*, 97–98; Robert A. Woods, ed., *Americans in Process: A Settlement Study* (1903; reprint, New York: Arno Press and The New York Times, 1970), 40–41, 43–44, “Map Illustrating the Distribution of the Predominant Race Factors in the West End, Boston.”
 43. Although the first Charles River Dam may not be generally considered part of the West End, it is certainly closer to that section of the city than to any other part of Boston (see

- fig. 1), for the opposite side of the river is part of Cambridge.
44. George H. Snelling, "[Remarks on a Memorial in Favor of Modifying the Plan of Building in the Back Bay Printed in Senate No. 186 (1859) and Supporting Letters]" (Boston, City Printers, 1860), frontispiece, 43–44, 49–51. For examples of proposed plans, see Charles Davenport, *New Boston and Charles River Bay* (Boston: J. Bufford's Sons, [1879]), and Zaitzevsky, *Olmsted*, 41, fig. 26.
 45. *Report of the Joint Board Consisting of the Metropolitan Park Commission and the State Board of Health upon the Improvement of Charles River*, in *Documents Printed by Order of the House of Representatives of the Commonwealth of Massachusetts during the Session of the General Court A.D. 1894* (Boston: State Printers, 1894), No. 775, x–xiv, xx–xxi, 9–12, 20, 25–28 (hereafter cited as House Doc.); *Charles River Dam: Evidence and Arguments before the Board of Harbor and Land Commissioners and Report Thereon* (Boston: State Printers, 1894), ix, xix–xx; John R. Freeman, "Some Problems of the Charles River Dam," *Boston's Charles River Basin: An Engineering Landmark, Journal of the Boston Society of Civil Engineers Section/ASCE* 67, 4 (1981): 214–17; *Evidence and Arguments before the Committee on Charles River Dam Appointed under Resolves of 1901*, Chapter 105 (Boston: State Printers, 1903), 497–500; *Report of the Committee on Charles River Dam Appointed under Resolves of 1901*, Chapter 105 (Boston: State Printers, 1903), 27–30; Acts of 1903, Chap. 465.
 46. *Second Annual Report of the Charles River Basin Commission, October 1, 1904, in Public Documents of Massachusetts: Being the Annual Reports of Various Officers and Institutions for the Year 1904*, No. 71 (Boston: State Printers, 1905), 16 (hereafter cited as *A.R. CRBC; Pub. Doc.*).
 47. *Seventh A.R. CRBC*, December 1, 1909, Pub. Doc. 71 (1910), 40.
 48. House No. 1050 (1929), 12, 23.
 49. *Annual Report of the Metropolitan District Commission for the Year 1933*, Pub. Doc. No. 48 (1933), 2, 6; "Charles Street Station Under Construction," *Boston Elevated Railway Co-Operation* 10, 8 (1931): 123, 125; "Charles River Basin to Be the World's Most Beautiful Water Park With Completion of Huge Development Project Now Well Under Way," *Boston Herald*, Aug. 30, 1931.
 50. House No. 1050 (1929), 8–10, 18–19; "Fight Begins on \$4,855,000 Basin Project," *Boston Evening Transcript*, Mar. 6, 1929; "Basin Protest Aimed Only at Highway," *Boston Evening Transcript*, Mar. 7, 1929; "To Draft New Basin Bill, Cutting Out Speedways," *Boston Herald*, Mar. 20, 1929; Acts of 1929, Chap. 371.
 51. Acts of 1946, Chap. 572; Charles A. Maguire and Associates, *Master Highway Plan for the Boston Metropolitan Area* (Boston: n.p., 1948), 62; "Revolt Beats Esplanade Highway," *Boston Globe*, Apr. 13, 1949; "Embankment Road Approved by House in Stormy Session," *Boston Globe*, Apr. 29, 1949; Acts of 1949, Chap. 262.
 52. "Construction of Huge Charlesbank Recreation Center Progressing," *Boston Globe*, May 28, 1950.
 53. "Construction of Huge Charlesbank"; "New Play Areas Assured in Basin," *Boston Herald*, Aug. 21, 1949.