

BRICK BUILDINGS IN EARLY NINETEENTH-CENTURY PORTSMOUTH

ARCHITECTURAL HISTORY HISTORIC PRESERVATION

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Portsmouth, New Hampshire possesses one of the most intact and varied collections of brick buildings from the first decades of the nineteenth century to be found in coastal New England. These structures vary widely in type, ranging from dwellings, offices, and warehouses to churches and academy buildings, but all display great constructive skill, not only in their brick walls but also in their granite elements. Brick and granite together produce an enduring architecture that, if treated with understanding, will endure for many centuries.

The craft community that designed and built these structures is partially known through surviving building accounts, and our ability to link many of these buildings to specific artisans is another distinction that is probably stronger in Portsmouth than elsewhere along the New England coast. Together, the survival of these buildings—which constitute the heart of the city of today—and our knowledge of their creators, makes Portsmouth's architectural heritage a precious possession.

This architectural legacy was largely born in tragedy. It was made necessary by three great fires, in 1802, 1806, and 1813, which together destroyed the heart of an older wood-built Portsmouth of which we have scant knowledge. It is accurate to say that in the core of the city, architectural history begins in the first years of the nineteenth century.

The introduction of brick architecture in Portsmouth's Federal Period

The first harbinger of the federal style in Portsmouth was the great brick dwelling of Woodbury Langdon (1738/9-1805), built on present-day State Street and supplanted by the later Rockingham Hotel. Described since the nineteenth century as having been built around 1785, at the same time as the house of Woodbury's younger brother John on Pleasant Street, the house is now known to have been still incomplete in 1793. On September 17th of that year, a member of the Manigault family made a diary record of a trip to Portsmouth:

I went to see a House building by M^r. Woodberry Langdon, brother of M^r. John. It will be one of the most elegant in America. The front of Philad^a. Bricks. Dimensions, as one of the Workmen told me 54 by 47. The largest Room below, an Octagon of 30½ by 20. Over it a room of the same Dimensions, but only one end Octagon.¹

A reference in 1871, when the building was remodeled and enlarged as a hotel, describes the Philadelphia brick façade as of “pressed” bricks, and still in excellent condition.² Woodbury Langdon was familiar with Philadelphia, having traveled there in 1791 to serve as a commissioner to settle Revolutionary accounts between the United States and the individual states.³ Langdon would thereby have informed himself about the range of bricks that were being manufactured in Philadelphia on the eve of his beginning construction of the first great brick edifice in Portsmouth since the Macphedris House.

Woodbury Langdon’s new house was a three-story brick dwelling with a five-bay façade, a hipped roof, hammered granite underpinning, walls laid in Flemish bond, and stringcourses, evidently of marble, at each story. While the overall form of the dwelling prefigured that of the classic three-story federal-period dwellings of Portsmouth, the house differed from later examples of the style in having the center of its façade treated as a pavilion. The central the bays projected forward a few inches, and were capped by a low-pitched triangular pediment with a semicircular arched window in its tympanum, much like that of the later Portsmouth Academy building. The house was remarkable in that many of its features, from the front doorway to the interior detailing, derived from William Pain’s *The Practical Builder* (London, 1774; Boston, 1792), a British architectural book that fully reflected the style of Robert Adam.

At the Portsmouth town meeting of March, 1800, the voters considered a warrant article that proposed the construction of a new market house on the Parade, diagonally opposite the eastern end of the State House. Within two weeks, a committee had reported favorably on the possibility of constructing such a building. The new market, which would largely supplant an older waterfront market house on Spring Hill, was to be two stories high, 80 feet long, and 30 to 40 feet wide. Although the report of the committee, as recorded, did not specify the materials for the structure, it is clear that the tacit assumption was that this would be Portsmouth’s first public building of brick. In keeping with the current Boston practice, the building committee recommended that “the Roofs of the building . . . be cover’d with Tar & Gravel, & be render’d in other Respects as secure against fire as possible.”⁴

¹ Diary entry for September 17, 1793, “Tour to the North in 1793&4, and 1801,” by a member of the Manigault family (The South Caroliniana Library, University of South Carolina). This reference was kindly supplied by Richard C. Nylander.

² *Portsmouth Journal*, June 3, 1871.

³ *Provincial and State Papers of New Hampshire*, Vol. 21 (Concord, N. H.: Ira C. Evans, 1892), p. 814 (William Plumer’s biography of Woodbury Langdon).

⁴ Portsmouth Town Records, 3 (1779-1807): 389 (April 7, 1800); *Ibid.*, 3: 391. The current Boston practice of covering buildings with composition (tar and gravel) roofs is cited in *A Volume of Records Relating to the Early History of Boston, Containing Boston Town Records, 1796 to 1813*, pp. 3, 139.

As built, the market house had a low hipped roof covered with shingles rather than a flat roof bearing the “composition” of tar and gravel, but as noted below, the shingles of the brick market were probably protected by a coating of tar and sand or gravel. The first story of the market house, arcaded along the sides in the traditional manner of market buildings, was twelve feet high. The second story, containing a public auditorium soon named “Jefferson Hall,” rose another fourteen feet. The market contained ten stalls, four of them reserved for the use of itinerant country sellers. The building was constructed of 145,000 bricks, which were laid in the remarkably short period of thirty-nine days. The market house cost \$7,565.90.⁵

The bricks for the structure were supplied by Abraham Martin and George Walker. Walker would later supply the majority of the bricks for the Portsmouth Academy building. Evidently not accustomed to firing such a large quantity of bricks at one time, Martin and Walker were in danger of losing money on their contract until the town voted a stipend of \$100 in addition to their \$840 contract price.⁶ Eleven bricklayers and stonemasons, of whom William Marden (1755-1838) was the highest paid, constructed the walls of the market at a cost of about \$830. Twenty joiners were employed on the building, representing an early instance of the recruitment of a large crew of craftsmen for a major building project. The joiners’ work cost a total of \$1,461.91. Chief among the joiners was Bradbury Johnson (1766-1819) of Exeter, who with his neighbor Ebenezer Clifford had been the builder of the Phillips Exeter Academy building (a prototype for the Portsmouth Academy building) in 1794-6, and of the First Parish Meeting House in 1798-9. As a builder-architect, Johnson would figure prominently in the advent of the federal style in Portsmouth and, following a devastating fire in 1802, in the design of other brick buildings.

The fire of 1802 and its results.

At four o’clock on the morning of December 26, 1802, as the town slept, fire burst through the back of an old gambrel-roofed structure that stood opposite the eastern door of the State House and served as the New Hampshire Bank and the insurance office of prominent merchant John Peirce. The flames reached a great height before their discovery, and quickly began an inexorable progress northward toward the Piscataqua River. Over sixty individual structures and ten rows of buildings were destroyed. The new market house, standing close to the origin of the fire, was gutted; only its brick shell remained standing. “The whole beauty of the town is gone! is gone!!” lamented the *New-Hampshire Gazette*.⁷

⁵ Nathaniel Adams, *Annals of Portsmouth* (reprint edition, Hampton, N. H.: Peter E. Randall, 1971), p. 319; account, “Town of Portsmouth to the Committee for Building the Brick Market,” Baker Library, Harvard Business School, MSS: 713 1800-1802 P853.

⁶ Portsmouth Town Records, 3 (1779-1807): 408; account, “Town of Portsmouth to the Committee for Building the Brick Market,” entries 1, 146, 147.

⁷ *New-Hampshire Gazette*, December 28, 1802.

Portsmouth responded quickly to the disaster. In 1803, the New Hampshire Fire and Marine Insurance Company was incorporated to insure buildings against just such fires as had devastated the town, as well as to underwrite policies on the fleet that was Portsmouth's lifeblood. The new company needed an office, and on April 1, 1803, several company members drafted a letter authorizing the purchase of three choice lots on Congress and Market Streets, in the area swept by the fire. The wording of this letter foretold the architectural future of the center of Portsmouth: "These lots are to be purchased for the purpose of erecting handsome Brick Buildings which it is expected will belong to the incorporation."⁸ The rebuilding of the center of Portsmouth by this company, and by a multitude of merchants and private property owners, drew upon all the building talent that was available in the region and greatly advanced the development of the crafts community in Portsmouth and the surrounding area.

Following the fire of 1802, merchant John Peirce, whose family had owned land on Congress Street for a century, purchased most of the land east of his hereditary lot at the corner of Congress and High Streets. Peirce was willing to sell to others, and divided his new holdings into five lots that were purchased by six parties in March 1804.⁹ Lot No. 2, 25 feet wide and 45 feet deep, was bought by the New Hampshire Fire and Marine Insurance Company, whose directors had already committed themselves to building "handsome Brick Buildings."¹⁰

Officials of the insurance company turned to Bradbury Johnson, formerly of Exeter and previously the chief joiner on the Portsmouth Market House, for plans for their building. In April 1804, Johnson submitted a bill of \$30 from Pepperrellborough (now Saco) in the District of Maine for "moddling and drawing" the office.¹¹

The bills for the construction of the New Hampshire Fire and Marine Insurance Company reveal the variety of talent that was assembled to create the building that Johnson "moddled" and drew. Most of the bricks for the building, some 92,000, were supplied by Jeremiah B. Mooney of Dover, with a few thousand special bricks shipped from Boston or supplied by other local brickyards.¹² Among the masons who, as a group, were paid \$562.92 for their work, was Daniel Blasdel, who had also worked on the Portsmouth Market House in 1800. Others included Jacob Nutter, who had also worked on the market house, George and William Plaisted, and Nathaniel Neel.¹³ William Dearing (1759-1813), the region's leading carver since the death of his father, Ebenezer, in 1791, submitted a bill of \$61.00 for the "4 pair of composed [Composite] capitals" and "4

⁸ Benjamin Brierley, John Rindge and Thomas Brown to the "Committee for effecting the incorporation" of the New Hampshire Fire and Marine Insurance Company, April 1, 1803 (Portsmouth Athenaeum).

⁹ Rockingham County Deeds, 165:377, 380, 383, 387; 167:24.

¹⁰ See "Plan of Sundry lots of land in the town of Portsmouth . . . Surveyed June, 1803 by John Stokell," Portsmouth Athenaeum, and a similar plan facing page 1 of Rockingham County Deeds, Vol. 165, but numbered as page 376 of that volume, showing the final subdivision of land as effected by the deeds cited in the footnote above.

¹¹ New Hampshire Fire and Marine Insurance Company bills, No. 71, Portsmouth Athenaeum.

¹² New Hampshire Fire and Marine Insurance Company bills, No. 8, 15, 22, 33, 55, Portsmouth Athenaeum.

¹³ *Ibid.*, Bills No. 88, 88a.

rounds and 4 Ovels” which ornament the front of the insurance office.¹⁴ Dearing would later carve the capitals for the two doorways of the Portsmouth Academy building.

The chief joiner of the insurance office, soon to emerge not only as the “head of his craft” in Portsmouth but also as an inventive designer of local structures, including the Portsmouth Academy building, was James Nutter (1775-1855). Nutter worked in company with four other joiners on most of the insurance office, but in March 1805 was individually paid \$160 for “Finishing the Fire & Insurance Office Chamber” under a separate contract.¹⁵ This room, a first-floor meeting place for officials of the company, individual underwriters, and customers (and now the reading room of the Portsmouth Athenaeum), originally had two fireplaces on opposite walls, one of which has been removed and the other of which was replaced by an elaborate mantelpiece in the colonial revival style. The remainder of the room is unaltered, however, and includes an intricate cornice that may have derived its design from local prototypes and from plates in Asher Benjamin’s *Country Builder’s Assistant* (1797), already in its fourth edition when the insurance office was under construction.

As components of Portsmouth’s first concerted effort at large-scale rebuilding, the buildings flanking the insurance office provided employment for scores of craftsmen and undoubtedly stimulated an exchange of ideas on style and on the still unfamiliar problems of large-scale construction in brick. One joiner who, like James Nutter, derived much work from the project was John Miller (1773-1813). Nutter would soon partner with Miller in finishing a house for John Bowles near the North Mill Dam, and Miller would serve as the leading joiner in the completion of the Portsmouth Academy building, for which Nutter drew the plans. Miller later became the second highest paid joiner in finishing St. John’s Church, earning over \$700 for his work there—roughly equal to his income as chief joiner on the Academy building.

Miller appears to have served as general contractor for the large corner building of merchants Nathaniel A. and John Haven, immediately east of the insurance office. In November 1804, the Havens credited Miller with \$1,239.41 for the “Brick Stores in Congress Street”—a sum so large in comparison with the joiner’s work on adjoining buildings as to imply that Miller served in a supervisory capacity on the Haven stores, as well as doing most of the woodwork.¹⁶ James Rundlet, who built the 24-foot-wide store adjacent to the Havens on the north, paid John Miller \$25 to build a “Walk on top of [the] Brick Store per Agreement.”¹⁷

The evolution of brick construction in Federal Period Portsmouth

¹⁴ Ibid., Bill No. 79.

¹⁵ Ibid., Bill No. 87.

¹⁶ N. A. and J. Haven, Ledger PL No. 3, New Hampshire Historical Society, p. 193.

¹⁷ James Rundlet, Ledger B, Historic New England, entry for December 17, 1804.

As stated above, the introduction of brick construction on a large scale in Portsmouth occurred after the fire of 1802 destroyed the center of town north of the Parade.¹⁸ Few brick structures were to be found in coastal New Hampshire prior to 1800, although the few that did exist were regarded as remarkable examples of their respective periods. The earliest in Portsmouth was said to be the seventeenth-century Richard Wibird house.¹⁹ This was followed by the Samuel Penhallow house, which stood on the Portsmouth waterfront near the intersection of today's State and Marcy Streets. Remodeled as the New Hampshire Hotel in 1797 in conjunction with the building of nearby Portsmouth Pier, the Penhallow building was consumed in the Portsmouth fire of 1813, and little is known about its details. Another more modern brick dwelling was the Macpheadris House, built in 1716 by British immigrant craftsman John Drew as a direct derivative of the current residences of Deptford, at the Royal Dockyards, where Drew had practiced the trades of joiner and painter and had owned several buildings.²⁰ This was probably the first substantial house in New Hampshire to reflect contemporary British forms and details in a direct and undiminished degree.

As already noted, the first brick dwelling to announce the arrival of the federal style in Portsmouth was the grand home of Woodbury Langdon, built on State Street and later superseded by the Rockingham Hotel. Possibly Langdon's choice of brick for his new house resulted from the belief, discussed below, that brick buildings were more resistant to fire than framed buildings, and, once burning, more likely to contain fire within their walls.

Langdon's dwelling was the first since the Macpheadris-Warner House to proclaim brick as an appropriate material for a grand house in a new style. In its scale, its quality of construction, and its display of a formerly unseen style, the Woodbury Langdon House

¹⁸ Newspaper accounts of losses in the fire of 1802 indicate that a few brick buildings stood within the fire zone and were destroyed. Among those that were mentioned were "the large brick stores owned by Joseph Haven, James Sheafe, and Keyron Welsh & occupied by Peter Coffin, Joseph and Joshua Haven, Henry Ladd, N. A. & J. Haven, Saml. Jones, Wm. Jones, Theodore Furber, Nath'l. Dearborn, and part of the middle story as the Custom-House, etc.;" "a large brick store owned by John Goddard, Esq., and occupied by his brother, Jonathan Goddard, as a commodious hard-ware store; a large row of 3 story brick stores, owned by Col. Eliph't. Ladd and occupied by him self, James Foster, Sam'l. Thompson, N. Wire, Mr. Hasty, Widow Hardy, Mr. Gordon, Richard Perry, Mrs. Winkley, and others" (*New-Hampshire Gazette*, December 28, 1802). Further research would be needed to determine the date of construction of these brick buildings. Following the fire of 1802, Eliphalet Ladd inserted a business notice and advertisement in the *United States Oracle*, stating that "said Ladd wishes to contract with a punctual man for the timber, joist, boards and shingles to re-build his brick houses & stores recently burnt" (*United States Oracle*, February 5, 1803).

¹⁹ Nathaniel Adams, *Annals of Portsmouth*, reprint of the 1825 edition (Hampton, N. H.: Peter E. Randall, 1871), p. 214; Charles Warren Brewster, *Rambles About Portsmouth*, second series, reprint of the 1869 edition (Somersworth, N. H.: New Hampshire Publishing Company, 1972), p. 67; *Ibid.*, first series, reprint of the second edition of 1873 (Somersworth, N. H.: New Hampshire Publishing Company, 1972), p. 299.

²⁰ For more detail on the Macpheadris-Warner House, see James L. Garvin, "Academic Architecture and the Building Trades in the Piscataqua Region of New Hampshire and Maine, 1715-1815" (Ph.D. dissertation, Boston University, 1983); Richard M. Candee, ed., *Building Portsmouth: The Neighborhoods and Architecture of New Hampshire's Oldest City* (Portsmouth, N. H.: Portsmouth Advocates, 1992); and Joyce Geary Volk, ed., *The Warner House: A Rich and Colorful History* (Portsmouth, N. H.: Warner House Association, 2006).

was, in fact, an architectural milestone in the same sense that the Macpheadris House had been seventy-five years before.

Rebuilding after the fire of 1802 transformed the use of brick from an architectural anomaly to the norm, at least for the burned area. As noted above, the directors of the New Hampshire Fire and Marine Insurance Company quickly resolved to acquire property in the burned area and to erect “handsome Brick Buildings” in that area. Others followed suit, so that the area of the fire, extending from today’s Market Square northward through Market Street to the location of Merchants’ Row, and as far east as Penhallow Street, was almost entirely rebuilt in brick and today remains a zone of brick construction. In a report of 1804 to those who had contributed to aid the sufferers of the fire of 1802, the five-man relief committee summed up the changes that had followed the fire:

In compliance with the wishes expressed by many liberal donors, we have endeavored to keep the good of the town in view, and to exert such influence as we justly might, towards guarding against a similar calamity. This important object has engaged the attention of many liberal citizens, and has been promoted by their public-spirited exertions; co-operating with measures taken by the town—the streets have been widened—much for the time, has been done—and much more is about to be done, in building with brick, and fire proof. And the exertions of the more wealthy, in this way, notwithstanding the checks experienced, afford a prospect that the central part of the town may rise, Phoenix like, fairer from its ashes!²¹

Even before the fire of 1802, people began to recognize that the start and spread of fire could best be prevented by constructing buildings of brick rather than wood, and by covering them with something other than combustible wooden shingles. A building so constructed and roofed was less likely to catch fire from brands of nearly burning buildings. If set afire, a brick building would contain the heat and flames largely within its own walls, posing less danger to adjoining structures and permitting firefighters to concentrate their energies on the blaze rather than patrolling nearby streets in search of secondary fires. Even a brick building that composed a unit in a row of connected structures might not set adjacent buildings afire if brick party walls separating the units were sufficiently strong and thick, and if they were carried far enough above the roof in the form of parapets (then called “battlements”). Similarly, a composition roof of tar and gravel was less likely to be set ablaze by sparks than a roof of dry wooden shingles. Once burning, a composition roof cast off no incendiary flakes to endanger other structures.

The ability of brick buildings to endure fire was demonstrated in 1802 by the Portsmouth Market House, which stood south of the point of origin of the fire. The entire interior of

²¹ John Langdon, Daniel Humphreys, Nathaniel Adams, James Sheafe, and John Goddard, “Address of the Committee of the Town of Portsmouth, in the State of New-Hampshire, appointed to receive, and distribute Donations, to the sufferers by the late Fire,” *Portsmouth Oracle*, March 31, 1804.

the market house was gutted. Yet the walls stood, and by 1805 the floors, roof, and interiors were being rebuilt. The building would serve the town for many years, eventually being remodeled into Portsmouth's first city hall in 1864.

The tendency of brick buildings to slow the progress of fire was demonstrated on December 24, 1806, when the cry of fire once again rang through Portsmouth:

The fire was discovered . . . in a large wooden building divided into two stores . . . in Bow-street. When the people had collected and the engines were bro't up, the fire had got to such an alarming height, as to envelope the whole building in conflagration. Every exertion was made to arrest the progress of the fire on both sides; only one store on the west side was burnt . . . its contents were mostly consumed. Here was a convincing proof of the great utility of brick building, although only one side of the range of buildings was of brick with a brick partition between each store; yet the whole range was saved, except one store. To the eastward the flames, assisted by a small breeze of westerly wind[,] spread with irresistable fury.²²

A similar example occurred seven years later when another fire, apparently set by an arsonist, burned a great swath from a point at the intersection of today's Pleasant and State Streets eastward to the Piscataqua River. The *Portsmouth Oracle* noted the key role played by a single brick building, a newly completed house and store standing on today's Pleasant Street south of the North Meeting House, in constraining the flames: "We may attribute much of the safety of the north part of this place to the brick building of Miss [Elizabeth] Hale, as that house confined its heat and its flames very much within itself, and burnt slowly in consequence of its being brick. Had this town been composed of similar buildings we should never have witnessed such a conflagration."²³

Thomas Sheafe, a brother-in-law of Elizabeth Hale, supervised stabilization of the gutted house; he immediately braced the walls with new girders and joists, and covered the tops of the brick walls with boards to prevent frost damage during the winter.²⁴ Consulting with a bricklayer, Sheafe learned that the chimneys of the house and most of the brick walls could be saved; 10,000 bricks would suffice for repairs. By January 8, 1814, seventeen days after the fire, Sheafe was ready to sign an agreement with two joiners, who had evidently finished the house before the fire, to rebuild the interiors completely.²⁵

The two greatest building projects that followed the fire of 1802 confirmed brick as the material of choice for new construction and, at the same time, established certain stylistic attributes for brick architecture. These two projects were the construction of the

²² *Portsmouth Oracle*, December 27, 1806.

²³ *Portsmouth Oracle*, January 1, 1814.

²⁴ Thomas Sheafe to William Hale, December 25, 1813, William Hale Papers, New Hampshire Historical Society.

²⁵ Thomas Sheafe to William Hale, December 30, 1813; January 6, 1814; January 8, 1814, William Hale Papers, New Hampshire Historical Society.

connected brick buildings enclosed by today's High Street, Market Street, and Ladd Street, dominated by the New Hampshire Fire and Marine Insurance Company office (now the Portsmouth Athenaeum), and the building of Merchants' Row on Market Street, backed by Ceres Street and the Piscataqua River.

In keeping with their expressed interest in erected handsome buildings, the Fire and Marine Insurance Company decided to build an office that would rise above its neighbors yet would be architecturally unified with them. Flanking owners, who included John Peirce, Nathaniel A. and John Haven, James Rundlet and Eliphalet Ladd (the latter two having come to Portsmouth from Exeter), apparently agreed to conform to one comprehensive design.

The row of buildings on each side of the insurance office, and the taller office itself, shared one common characteristic that has been hidden by changes over time. Each had a nearly flat roof covered with a composition of 20% pine tar and 80% gravel. The roof of the insurance office, the focal point of the block, had a very slight slope of one foot in thirty toward the rear of the building. This roof survives as an attic floor beneath a higher, pitched roof that was added in 1826. The composition is laid about two inches thick on a plank deck covered with sheathing paper and flashed with lead. The original roofs of the neighboring structures, covered in the same way, are of a low-pitched gable form. They have central ridges about eighteen inches higher than the eaves, and slope toward the fronts and backs of the buildings. As indicated by records of the insurance company and of James Rundlet, most of these roofs originally had "walks"—probably flat wooden decks—that permitted access to the roofs without danger of damage to the rather soft composition. Accounts for two of the buildings, the insurance office and the Rundlet store, show that the roofs for both were laid by Isaac Nelson (1772-1837), a local boat builder. The cost of Nelson's work was low: the insurance office roof required only 8½ man-days of labor and cost \$20.78, including gravel, mop yarn, and rum.²⁶ Rundlet paid \$16.43 for his roof.²⁷

Although flat roofs covered with tar and gravel composition offered economy and fashionable invisibility when viewed from the ground, the vogue for composition was brief. Despite the expectation that composition roofs would offer substantial resistance to fire, problems began to manifest themselves with these roofs within ten years. In the great Portsmouth fire of December 1813, one "fireproof" brick block (described below) stood in the path of the flames.

A few persons entertained some faint hopes that the fire-proof stores in Water-street, between Buck-street and Pitt-street, would have been safe themselves and would have served as a barrier against the progress of the fire. But the heat was so intense that it burnt through the walls, and the composition roofs of tar and gravel melted like ice before the fury of the burning flakes.²⁸

²⁶ New Hampshire Fire and Marine Insurance Company bills, No. 46.

²⁷ James Rundlet, Ledger B, entry for October 17, 1804.

²⁸ *Portsmouth Oracle*, January 1, 1814.

Composition roofs also proved to be no match for New Hampshire winters. Those of the insurance office and flanking buildings began to leak within twenty years. By the 1850s, all roofs in the row had been covered by higher pitched roofs.

The northern limit of the fire of 1802 was at water's edge on Spring Hill, near today's intersection of Market and Bow Streets. Here Merchants' Row, a long row of twelve contiguous brick buildings, was constructed after the fire. While these structures generally lack the architectural detailing (such as marble stringcourses) that gave a unified effect to the Market Square structures, the Merchant's Row buildings are distinguished by their considerable height and their uniformity of design, the latter diminished by subsequent remodeling of some buildings in the row. Like the brick stores that were constructed simultaneously in Market Square and along the adjacent section of Market Street, the Merchants' Row units were designed to be as nearly fireproof as possible. Exterior walls and party walls are brick, and the party walls extend well above the roofs for added protection. All the timber framing of the floors is massive, thus retarding combustion. Originally, these structures probably had composition roofs like those of the Market Square group; like the latter, the buildings of Merchants' Row have since been covered with pitched roofs.

The Merchants' Row buildings are four stories high on their Market Street facades; most are five or six stories high on their Ceres Street or waterfront elevations. The direct prototypes for the Merchants' Row buildings were undoubtedly the similar brick stores built in Boston at a slightly earlier date. Although the Merchants' Row buildings are more significant for their construction features than their design (and their design has been altered considerably over the years), they are nevertheless components of a unified architectural composition that was originally marked by fairly uniform fenestration, brick stringcourses, and other simplified hallmarks of the federal style. They are among the earliest surviving waterfront commercial structures in New Hampshire.

Brick manufacturers met the need for the millions of bricks that were used in the rebuilding of Portsmouth after the fires of 1802, 1806, and 1813. Their names are recorded in documents for construction of buildings around Market Square, of St. John's Church and other buildings along Bow Street, and of the Portsmouth Academy building, as well as in newspaper advertisements. These brick manufacturers of 1800 and later were, of course, preceded by others who had been active from the seventeenth century. Yet these earlier brick makers seldom had to meet the challenge of producing the several hundred thousand bricks that typically were needed for a structure built entirely of brick. The production of early brickyards was mostly destined for chimney construction in wooden houses, or else for export in Portsmouth's ships. Nor did the early brick makers have to produce many of the harder bricks that were needed for exterior use and exposure to the elements in brick walls; only the uppermost bricks in a chimney needed to be hard-burned enough to withstand wetting, freezing, and thawing. The remainder of a chimney could be, and usually was, built of softer bricks that were laid in weak mortar composed of clay, sand, and manure rather than in more enduring lime-sand mortar used in brick walls.

The production of bricks even in the clay-rich regions of New Hampshire was also limited in scale well into the nineteenth century because of the difficulty of transporting large quantities of heavy bricks from the point of manufacture to distant markets. Of all brick making regions in New Hampshire and adjacent Maine, the seacoast region was clearly the most favored in terms of transportation. In that area, the best clay beds lie alongside or near tidewater, permitting the easy loading and moving of great quantities of brick by water. Indeed, some bricks were shipped from the Port of Piscataqua to the British West Indies during the eighteenth century. Jeremy Belknap, the former minister of the First Parish Church in Dover and the earliest historian of New Hampshire, noted in 1792 that “the manufacture of bricks . . . may be extended to any degree. . . . Bricks might be carried as ballast in every vessel which goes to ports where they are saleable.”²⁹

The clay beds of the Piscataqua region are composed of marine clays, laid down thousands of years ago when the land was inundated by constantly agitated ocean waters and therefore quite uniform in character through the depth of the deposit. These marine clays have been found in some cases to lie in beds more than forty feet deep.³⁰ The clay contains iron and other minerals which, when burned in a kiln, oxidize to a deep blood-red, making Piscataqua bricks darker in hue than those from many inland locales.

In the eighteenth and early nineteenth centuries, bricks were made by simple processes that depended largely on the muscular power of men, boys, and animals. Clay as taken from the ground is not suitable for molding. Such clay is stiff and sticky, and must be tempered or rendered more plastic. This was traditionally accomplished by digging the clay from the clay bank in the fall and allowing it to freeze and thaw, with repeated turnings, over the winter. This tempering process was followed by re-wetting and mechanical kneading, with the addition of sand to make the clay more workable. This was carried out in early brickyards by driving cattle or horses over the lumps of clay; the pug mill, an animal-powered device for mixing sand with the clay, was probably adopted later in the nineteenth century. Tempering was a slow process, inviting hasty or inconsistent work. Writing in 1792, New Hampshire historian Jeremy Belknap complained that much of the clay used in making bricks in coastal yards was “not sufficiently mellowed by the frost of winter, or by the labour of the artificer.”³¹

After the clay had been tempered to the consistency of a stiff mortar, it could be molded. This was accomplished by taking a lump of clay and throwing it into a wooden mold with rectangular cells slightly larger than the dimensions of the fired brick, then striking off the surplus clay with a straightedge. The molding operation required considerable strength and a degree of skill that developed over the course of molding thousands of bricks. To enable the prism of sticky clay to drop out of the mold as a “green” brick, the

²⁹ Jeremy Belknap, *The History of New-Hampshire*, 2nd ed., vol. 3, reprint edition, edited and with an introduction by G. T. Lord (Hampton, N. H.: Peter E. Randall, 1973), p. 161.

³⁰ Lawrence Goldthwait, Preliminary Report, *Clay Deposits of Southeastern New Hampshire*, part 15, Mineral Resource Survey (Concord, N. H.: State Planning and Development Commission, 1953), pp. 6-10.

³¹ Jeremy Belknap, *The History of New-Hampshire*, p. 161. For more on New Hampshire brick making and the processes of brick manufacture, see James L. Garvin, “Small-Scale Brickmaking in New Hampshire,” *IA: The Journal of the Society for Industrial Archeology* 20 (1994): 19-31.

mold was wetted with water or dusted with dry sand. Physical evidence provided by the smooth surface of bricks in most Portsmouth buildings of the early 1800s suggests that local brick makers usually used water without sand to lubricate their molds. Most Piscataqua face (exterior) bricks from the early nineteenth century exhibit some surface irregularities as a result of their having been dropped out of the mold and handled during air-drying. When seen in a raking light, most also display flat, shallow indentations on their faces. These impressions result from the weight of superincumbent bricks when the still compressible green bricks were stacked in the kiln for firing.

From the seventeenth century on, brick sizes were regulated by law. The dimensions of brick molds were carefully specified in order that the finished product would be more or less uniform. Before the Revolution, laws in both Massachusetts and New Hampshire specified that molds should be sized so that the finished bricks, after firing, would measure nine inches long, four and a quarter inches deep, and two and a half inches high. These dimensions are close to those of the English “statute” or common brick, and the New England brick laws were clearly based on earlier British regulations. Despite such laws, many New Hampshire brick makers manufactured undersized products in the late eighteenth century. Historian Jeremy Belknap cautioned in 1792 that “in this article, as in many others, a regulation is needed; most of the bricks which are made are deficient in size.”³²

In fact, the size of the finished brick depended on more than the size of the mold. All clays shrink during the firing process, some more than others. Those bricks closest to the fires in the kiln shrink more than those farther away from the heat. Bricks from a single firing might vary in size even if every brick in the kiln had been dropped from the same mold.

After being dropped from the mold, the “green” bricks were laid flat on the ground to begin to dry and stiffen. After a few days, they were tipped up on their edges to dry further. After this initial drying, the bricks were carefully stacked in rows, often under the makeshift shelter of boards placed over the rows to protect the unburned bricks from rain, the brick maker’s enemy.

Once molded and air-dried, green bricks were ready for firing or “burning.” The green bricks were carefully stacked in a “clamp”—a rectangular structure with corbelled tunnels running at intervals through its base and with innumerable gaps or interstices throughout the entire construction to allow heat from the fires in the arches to pass upward through the entire pile. The outer faces of the clamp were “scoved” or covered with an un-mortared veneer of hardened refuse bricks from earlier firings, and were carefully parged or plastered with mortar made of clay and sand to contain the heat of the fires.

The bricks in a clamp were vitrified by the heat of wood fires made in each of the arches at the base of the pile. By feeding and adjusting these fires and regulating the draft, the temperature at the bottom of the clamp was gradually raised to a point between 1,500 and

³² Jeremy Belknap, *The History of New-Hampshire*, p. 161.

2,000 degrees Fahrenheit, transforming the prisms of blue clay into red ceramics. Firing and cooling a clamp of bricks could take well over a week. After the firing was complete and the kiln was slowly cooled over a period of several days, the entire pile was taken apart and the bricks sorted for various uses. Despite the best skill of the brick maker, the bricks near the fires would inevitably be more vitrified than those at the top of the kiln. Usually, the bricks from the mid-region of the clamp would be the characteristic bricks of the burning, displaying a color, size, and hardness that reflected the properties of their clay and their method of firing.

Few eighteenth-century brick makers in the Piscataqua region have been researched in detail. One of the earliest and best known of these men was bricklayer Edward Toogood of Portsmouth, who owned land on the creek later known as Puddle Dock. Toogood made bricks from the clay on the banks of the creek, as later brick makers would do from clay on the margins of the North Mill Pond. Toogood acquired land on the north shore of the creek in 1699, building a house on the parcel soon thereafter. Archaeological investigation shows that he excavated clay on this lot and burned bricks here, apparently also making quicklime for mortar from mollusk shells and coral.³³ It is possible that Toogood supplied some or all of the bricks for the nearby Macphedris House of 1716.

We have little information on brick manufacture in or around Portsmouth for a full century thereafter. Only with the construction of the Portsmouth Market House, the town's first known brick public building (other than a watch house that once stood on the Parade), do we begin to learn the identities of brick manufacturers. As the center of Portsmouth was transformed from wood to brick following the fires of 1802, 1806, and 1813, these early nineteenth-century brick makers were compelled to learn to manufacture their products in far greater volume, and presumably of far greater quality, than before. As noted above, bricks that are intended to compose the exposed walls of brick buildings must be harder, stronger, and more uniform in shape and color than bricks intended only for use in chimneys and the like.

As noted above, the first known large-scale brick manufacturers were Abraham Martin and George Walker of Portsmouth, who provided the 145,000 bricks needed for the Market House walls for a contract price of \$840, and were saved from losing money on their agreement by an additional stipend of \$100, provided by a vote of the town. Other brick manufacturers who were active in the first decade of the nineteenth century included the following, whose places of residence are given in building accounts or supplied by the United States Census returns for 1800 and 1810:

Nathaniel Boynton	\$81 worth of bricks for St. John's Church (1807)
James Chapman, Newmarket	With Timothy Murray, to deliver 130,000 bricks "as good a Quality as Samuel Furber of Newington makes" to Langley Boardman in 1809.

³³ Steven Pendery and Helen Chase, "Preliminary Report, Historical Archaeology of the Marshall Pottery Site, Strawberry Banke, Portsmouth, New Hampshire," February 1, 1977; Steven R. Pendery, "Summary Report, Marshall/Toogood Sites Development Project," August 1981.

Jacob M. Currier, Dover	Advertised 140,000 bricks for sale on June 16, 1801
Timothy Dame, Newington, Portsmouth	Advertised 150,000 bricks for sale at Christian Shore, January 1811; 250,000 for sale, and 2,000 well (compass) bricks, December 7, 1813.
Samuel C. Drew, Durham	\$156 worth of bricks for St. John's Church (1807)
Joseph Drowne, Portsmouth	Advertised 70,000 bricks, 20 dozen tiles for sale in the "South End," November 1803
S[hem] Emery, Portsmouth	5000 "pickd Bricks" and 5 dozen [hearth] tiles for the Portsmouth Academy building in 1809.
F. Furber	3000 bricks at \$8.00 per thousand for the Portsmouth Academy building in 1809.
Samuel Furber, Newington	1000 hard burned bricks plus six dog (hearth) tiles sold in 1804 for the New Hampshire Fire and Marine Insurance Company Building; Samuel Furber's bricks were cited as the standard of quality for bricks to be supplied by Timothy Murray and James Chapman in a contract of 1809.
Thomas Henderson, Dover	\$103 worth of bricks for St. John's Church (1807)
James Joy, Durham	120,000 bricks at \$6.00 per thousand contracted for in 1807 for new stores of Ebenezer Thompson on Bow Street
John Mason, Portsmouth	Advertised "making a quantity of <i>BRICKS</i> , near the North Mills," to be ready in June 1803
Jeremiah B. Mooney, Durham	92,000 bricks delivered "as per agreement" in 1803 for the New Hampshire Fire and Marine Insurance Company Building, Portsmouth
Timothy Murray, Newmarket	With James Chapman, to deliver 130,000 bricks "as good a Quality as Samuel Furber of Newington makes" to Langley Boardman in 1809.
Sargent Patten, Dover	7700 bricks sold in 1804 for the New Hampshire Fire and Marine Insurance Company Building
Bradbury Robinson, Newmarket	Advertised 50,000 bricks for sale, June 14, 1808

George Walker, Portsmouth	145,000 bricks supplied with Abraham Martin for the Portsmouth Market House in 1801; \$3465 worth of bricks supplied for St. John's Church in 1807; 154,400 bricks at \$6.25 per thousand for Portsmouth Academy building in 1809 (and possibly an additional 29,400 which were bought from an unnamed supplier). Advertised 300,000 bricks, 10,000 Sand Bricks, and 1100 dozen [hearth] tiles for sale, February 9, 1811
Gideon Walker, Portsmouth	6900 hard burned bricks sold in 1804 for the New Hampshire Fire and Marine Insurance Company Building; 7 dozen [hearth] tiles sold to James Rundlet in 1807

Some specialty items appear in various building accounts. Several accounts itemize "Boston" bricks, but it is not clear how these differed from local products or why it was deemed worthwhile to obtain them from afar. Other accounts mention "Philadelphia" bricks, and it appears that these were re-pressed bricks that permitted precise bricklaying and very narrow mortar joints; Woodbury Langdon's house of 1793 was described as having been built of Philadelphia bricks, which were later portrayed as "pressed."³⁴ One newspaper advertisement in 1814 describes "80 or 90,000 best Danvers PRESSED BRICKS" for sale, indicating that re-pressed bricks were being made much closer to Portsmouth than Philadelphia.³⁵ Pressed or re-pressed bricks are bricks that were allowed to stiffen when green, then placed in a mold or press and subjected to pressure, giving them a perfect, smooth face and very sharp edges after they were fired.

Although not itemized in his accounts for St. John's Church, George Walker presumably supplied the ovolo and cavetto brick moldings that compose the unusual masonry cornice of the building. These represent the only known local instance of a cornice made of molded bricks; later brick cornices in Portsmouth, common after the fire of 1813, are composed of several corbelled courses, with a single course of bricks laid diagonally to create a "sawtooth" pattern, or projecting alternately to resemble dentils or modillions.

The ability to manufacture excellent bricks for exterior use in walls was matched by the appearance of bricklayers who had the ability to construct entire buildings of brick. Such men were rare in Portsmouth in the eighteenth century, making their appearance in considerable numbers only from 1800. Edward Toogood, mentioned above as an early eighteenth century brick maker, was best known as a bricklayer. His name appears from time to time in early records, most significantly in a contract in which he and another

³⁴ Diary entry for September 17, 1793, "Tour to the North in 1793&4, and 1801," by a member of the Manigault family (The South Caroliniana Library, University of South Carolina); *Portsmouth Journal*, June 3, 1871, mentions "pressed" bricks.

³⁵ Advertisement of Shepherd J. Frost and William Palmer, *Portsmouth Oracle*, February 12, 1814.

bricklayer named Samuel Hill agreed to dig and stone a cellar and erect a brick chimney in a new house to be built near present-day Washington Street in 1697/8.³⁶

When merchant Archibald Macpheadris built his brick house in Portsmouth in 1716 under the supervision of immigrant builder John Drew, he apparently had to recruit bricklayers from Boston. Drew charged Macpheadris £23 for “Attend[ing] of Bricklay[ers] of 23 weeks & giving them directions in their work.” And he charged bricklayer William Doak (1688-1786) £2 for measuring the brickwork of the Macpheadris house, thereby acting as a “surveyor” in the British sense and providing an independent verification of the amount of work for which Doak was entitled to payment.³⁷

Two masons whose names appear in the latter years of the eighteenth century were Abner Blasdel, Sr. and Jr. In 1783, Abner Blasdel, Sr., had agreed with John Langdon to build and point the high stone foundations of Langdon’s house on present-day Pleasant Street in Portsmouth, and to construct “Three Stacks of Chimneys in his [Langdon’s] said House including their Foundations – Three Arches. The Chimneys to be plastered inside and out[,] Jams and Backs set[,] point the Chimneys if wanted.”³⁸

In April 1795, perhaps inspired by his brother’s example in erecting a great brick house, John Langdon contracted with Abner Blasdel, Jr., to build one of very few pre-1800 brick buildings for which any record survives. Blasdel

agreed with John Langdon Esq to Build a brick house near the Bridge in Washington Street, to Compleat the Brick work for, and at the Rate of two dollars p^r m [thousand] Brick, Compleat, said Langdon to find Brick and Lime on the spot.³⁹

Since bricks cost just over \$6.00 per thousand in the years after 1800, we may assume that the cost of brick buildings around the turn of the nineteenth century, including both labor and materials, was just over \$8.00 per thousand bricks laid in the walls and chimneys. This cost reflected only the brick shell of such buildings, not the interior framing or the joiner’s work.

Despite the seeming paucity of skilled bricklayers in Portsmouth in the eighteenth century, some eleven masons were recruited to build the Portsmouth Market House in 1800, and this sizeable crew possessed the skill to construct the brick walls in thirty-nine days, proclaimed at the time as a remarkably quick job.⁴⁰

³⁶ Contract between Capt. John Hill of Saco and Edward Toogood and Samuel Hill of Portsmouth, March 15, 1697/8, Historic New England archives.

³⁷ James L. Garvin, “Academic Architecture and the Building Trades in the Piscataqua Region of New Hampshire and Maine, 1715-1815,” pp. 55-56. Doak is shown to have come from Boston in the following Suffolk County (Massachusetts) deeds, the citations for which were kindly provided by Dr. Abbott Lowell Cummings: Vol. 41, p. 194; Vol. 43, p. 44; Vol. 69, p. 35; and Vol. 76, pp. 258-59.

³⁸ Langdon Papers, 1716-1820, New Hampshire Historical Society, Box 2, folder 13, part 2.

³⁹ Langdon Papers, 1716-1820, New Hampshire Historical Society, Box 2, folder 13, part 2.

⁴⁰ Nathaniel Adams, *Annals of Portsmouth*, p. 319.

Among the bricklayers who worked on some of the documented Portsmouth buildings of the first decade of the nineteenth century were the following:

Daniel Blasdel	Portsmouth Market House (1801) New Hampshire Fire and Marine Insurance Company Building (1804)
William (?) Clark	St. John's Church (1807)
Ephraim Dennett	Portsmouth Academy (1809)
Nathaniel Dennett, Sr.	Portsmouth Market House (1801) New Hampshire Bank (1804) St. John's Church (1807) Portsmouth Academy (1809)
Nathaniel Dennett, Jr.	Portsmouth Market House (1801) New Hampshire Bank (1804)
Edward Dimsey, Portsmouth	Portsmouth Market House (1801) (as "Dimsey and Nutter"); James Rundlet Store (1804), Market Street; Ebenezer Thompson Store (1807), Bow Street; possibly Portsmouth Powder House (1812) (initials "E.D." in parging on dome)
John Fogerta (Fogerty)	James Rundlet Store (1804), Market Street
Simeon Hardy	Portsmouth Market House (1801)
Heyman Hastings	James Rundlet Store (1804), Market Street
Daniel Hazeltine (son of James Hazeltine)	
James Hazeltine (1776-1849)	Portsmouth Market House (1801) New Hampshire Bank (1804) St. John's Church (1807) Portsmouth Academy (1809)
Moses Hazeltine	James Rundlet Store (1804), Market Street
William Marden (1755-1838), Portsmouth (father of Daniel and David)	Portsmouth Market House (1801)

Daniel Marden (1779-1816) (brother of David)	Portsmouth Market House (1801) Portsmouth Powder House (1812) His own brick dwelling, somewhat remodeled, stands on Cabot Street at the corner of Coffin's Court
David Marden (1783-1828?) (brother of Daniel)	Portsmouth Market House (1801)
Nathaniel Neel	New Hampshire Fire and Marine Insurance Company Building (1804)
Jacob Nutter	New Hampshire Fire and Marine Insurance Company Building (1804)
George Plaisted	New Hampshire Fire and Marine Insurance Company Building (1804)
William Plaisted	New Hampshire Fire and Marine Insurance Company Building (1804)
D. Rundlet	New Hampshire Bank (1804)
James Rundlet	New Hampshire Bank (1804)
John Shortridge	Portsmouth Market House (1801)
John Snell	Portsmouth Market House (1801)

These masons were, of course, experts on the quality of bricks. In 1803, the New Hampshire Fire and Marine Insurance Company reimbursed Edward Dimsey \$1.75 for a trip from Portsmouth to Dover to inspect a kiln of bricks. Dimsey would ultimately not work on the walls of the insurance office, although he was a principal mason on the nearby store of James Rundlet, built at the same time.

The exterior walls of virtually all the buildings of the first decade of the nineteenth century were laid in Flemish bond, a complex but strong brick bond that utilizes alternating headers and stretchers in each course and requires considerable precision in laying the bricks. The fact that Portsmouth bricklayers were familiar with the more easily-laid common or "American" bond is shown by the use of that bond on the hard-to-see rear wall of St. John's Church. American bond was seldom employed for the more visible walls of Portsmouth buildings, or those of inland towns, until the late 1820s.

Granite and marble masonry

The advent of brick construction in coastal New Hampshire was accompanied by a corresponding improvement in stone masonry. The art of splitting and hammering granite was a necessary adjunct to the construction of brick buildings. Brick buildings required foundations of great solidity and permanence, capable of supporting the immense weight of superincumbent brick walls without settlement. Brick buildings also required high courses of stone underpinning at grade, preventing ground water from reaching the brickwork as rising damp. Many brick buildings were also accompanied by broad exterior steps of hammered granite, by granite fence posts, and by stone troughs to conduct roof water away from the foundations.

Beginning in the late 1700s, a few stonecutters began to utilize new techniques for splitting and shaping stone. The area around Durham, New Hampshire, is underlain by sheared grano-diorite, some ledges of which are exposed on the banks of the Oyster River. This stone invited quarrying by simple methods. Because of their sheared state, the ledges easily cleaved into large, flat flagstones ideal for paving and for some structural uses. In 1791, the town of Portsmouth began to lay its first sidewalks of this Durham stone.⁴¹ Private homeowners used the same stones around their dwellings, as when James Rundlet paid both Robert and Benjamin Mathes of Durham \$25 for “1 load paving rocks” in 1807. By the same period, both Benjamin Mathes and local quarryman Thomas Pinkham (1780-1851) of Durham were supplying split and hammered granite in large sizes and precise dimensions, while William Clark of Portsmouth was hammering stone into elaborate forms such as “basons” and troughs.

Pinkham figured with special prominence in the building and finishing of the major brick buildings built in Portsmouth from 1800 to 1810. In 1804, he provided cut granite from Durham for the New Hampshire Fire and Marine Insurance Company building on Market Square. He charged the company \$15.00 by separate bill for the large granite step that still stands at the door of the building, now the Portsmouth Athenaeum. Also in 1804, Pinkham charged merchant James Rundlet \$41.35 for stone for Rundlet’s brick store near the insurance office, on Market Street. In 1807, Pinkham charged \$1,500—one of the largest bills rendered by any individual craftsman—for his work on St. John’s Church. And in 1809, he charged \$749.53—again one of the largest bills rendered by an individual craftsman—for “compleat^s cellar & Stone work” on the Portsmouth Academy building.

Another development in local masonry accompanied the increasing use of local granite. Beginning with the construction of the New Hampshire Fire and Marine Insurance Company building, Portsmouth’s brick structures occasionally employed marble detailing as a contrast for the brick walls. Bills for the insurance company building included charges for two Philadelphia marble window sills, plus their freight. Local stonecutter John Marble also charged for marble details, including keystones for the arched openings of the office façade. Merchant James Rundlet purchased marble window sills and lintels for his store on Market Street—one of the unified group of buildings on each side of the insurance office—from Mark Simes in 1804.

⁴¹ Portsmouth Town Records, March 25, 1791; April 8-9, 1791; March 26, 1793.

These precedents prepared the way for the rather extensive and very effective use of marble elements on the Portsmouth Academy building, now the Discover Portsmouth Center. The two stories of the Academy building are visually divided on the exterior by a white marble stringcourse that surrounds the entire building. Each window has marble lug sills and lintels, the latter with splayed ends. These features were supplied by local stonecutters Smith and Treat at the substantial charge of \$462.07. Repeating some of the features seen on St. John's Church of two years before, these marble details proclaim the Academy to have been an institution of stature and importance.

Prominent builders of the early 1800s

James Nutter (1775-1855), a native of Newington, New Hampshire, rose to become the "head of his craft" in Portsmouth by the age of thirty. In 1807, Nutter confirmed his reputation by serving as "contractor and master builder" of St. John's Church, the first brick church ever built in New Hampshire and, at a total expense of \$30,000, one of the most costly single buildings erected there during the federal period. Building of the church was necessitated by the destruction of the old Anglican church of 1732, originally called Queen's Chapel, in a second conflagration that followed the fire of December 1802. On December 24, 1806, as noted earlier, a wooden store on Bow Street burst into flame. The fire quickly spread easterly, destroying several other wooden stores and then catching the steeple of the church, which was above the reach of the town's fire engines.⁴²

The building of St. John's Church exposed Nutter to the skills of many of the finest workmen in all the building trades in the Piscataqua region. Such a costly project naturally attracted the talents of much of the fraternity of builders who had worked fruitfully together since the building of the Portsmouth Market House in 1800. Although Nutter's bill of \$1,770 was more than twice that of any other joiner who worked on St. John's Church, the building also benefited from the talents of John Miller, who would later be the chief joiner on the Portsmouth Academy building, and from the work of a dozen other joiners, including Hilliard Sanborn from Kensington, who often worked in Dover and Portsmouth. The church also exposed Nutter to the architectural design skills of Alexander Parris of Portland, who provided plans for the building, and to the ornamental vocabulary of Asher Benjamin's new book, *The American Builder's Companion*, which was used as a design source for details of the building.⁴³

In 1809, Nutter provided plans and a timber schedule for the Portsmouth Academy building, now the Discover Portsmouth Center. This is the most substantial and significant building that Nutter is known to have designed. It is clear from the Academy building accounts that most (but not all) of the bricks were provided by George Walker, who billed for three separate deliveries totaling 154,400 bricks and who may have provided an additional 29,400 bricks not credited to a specific supplier. Each delivery of

⁴² *Portsmouth Oracle*, December 27, 1806.

⁴³ For details on the design and construction of St. John's Church, see James L. Garvin, "St. John's Church in Portsmouth: An Architectural Study," *Historical New Hampshire* 28 (Fall 1973): 153-175.

about 50,000 bricks probably represented the merchantable contents of a single clamp or kiln of bricks.

Although stonemason Thomas Pinkham did not submit his bill for “compleat^s cellar & Stone work” until November 1809, it is clear that his labor in laying the foundations of the building preceded all work on the superstructure. As noted above, Pinkham was noted as a supplier of split and hammered granite, so he may be credited with the stone underpinning that is displayed on the north and east elevations of the Academy building, as well as with the skillfully laid rubble walls beneath the underpinning. The south and west sides of the building are largely obscured by new construction, but it is clear that Pinkham did not provide hammered ashlar for these two less public elevations. Rather, he employed split stone, laid carefully to provide a level top surface to receive the base of the brick walls. To judge from the cost of stone supplied by Durham mason Benjamin Mathes for the house of James Rundlet in 1807, the cost of hammered granite underpinning was about 4 shillings or 67¢ per foot.

The accounts list large quantities of lime and sand. These two materials would have been needed for the mortar used in laying or pointing the foundation stones, in laying all the bricks of the outer walls and the brick basement partition, and (with the addition of hair) in making the plaster for interior partitions and ceilings. It is not possible to quantify the consumption of lime and sand used in stone and brick masonry versus the quantities used in plastering. Lime was bought by the cask, and sand by the bushel. In total, the accounts list 48 casks of lime and 1,768 bushels of sand, although some surplus sand was sold at the end of construction.

The brick walls of the Academy building were laid principally by James Hazelton and Ephraim Dennett. Mason Nathaniel Dennett also submitted a bill of \$191.39 for “labor;” this could have been for plastering rather than bricklaying. Daniel Marden submitted a small bill of \$8.66 in August 1809, some months before the principal bills for bricklaying; possibly this was for the brick partition that divides the basement into two zones. The accounts list the cost of making three hods for use by the laborers who tended the masons, carrying bricks to the locations of the work on the walls.

All four elevations of the building are carefully laid in Flemish bond with narrow mortar joints that in some areas retain the concave impression of a fine jointing tool. Although the bricks are somewhat variegated in color, the masons distributed the darker bricks evenly throughout the wall fabric, giving a generally uniform appearance to the walls.

Private brick buildings before the fire of 1813

Standing just behind the Portsmouth Academy building and now attached to it as part of the former Portsmouth Public Library and now as a component of the Discover Portsmouth Center, the Morton-Benedict House was one the first freestanding brick dwellings to be built outside the zones that had been destroyed in the fires of 1802 and 1806. John G. Hales’ Portsmouth map of 1813 provides a key to the construction materials of the buildings that were standing in that year, just prior to a third great

Portsmouth fire, which occurred on December 22, 1813. The map shows only four buildings that are clearly coded as brick dwellings within the compact portion of the town: the Woodbury Langdon House (1793-4), then owned by Thomas Elwyn; the Morton-Benedict House (1811); the George Long House (1811-12) at the corner of Richards Avenue and Middle Street, recently built by Jonathan Folsom; and the house of bricklayer Daniel Marden (c. 1810) on Cabot Street.

Another brick house stood on the north side of Congress Street, midway between Vaughan and Mason (now Fleet) Street. Although it was not clearly coded as a dwelling on Hales' map, it served that function, at least when new. This was a four-story building for which Langley Boardman contracted for 130,000 bricks in 1809,⁴⁴ and advertised as a "house" in December, 1811.⁴⁵ The building was large enough to serve as hotel kept by John Davenport when his Mason's Arms Tavern was destroyed in the fire of 1813.⁴⁶ The brick building later continued in use as a hotel and stage stop, and in 1819 Boardman built the imposing brick "Franklin Hall" next door to the east.

The few other brick buildings outside the burned area are coded as "stores," including the brick building that Abner Blasdel, Jr., had built as a house for John Langdon on Washington Street in 1795. The cartographer could therefore have mislabeled a few of the brick buildings, but the map nevertheless illustrates the extreme rarity of brick dwellings before the third great Portsmouth fire of December 22, 1813.⁴⁷ Newspaper advertisements before 1813 confirm that some of these "stores" were fitted with habitable dwellings on the upper floors, thus serving as commercial buildings on the street level and as houses above. One such range of four contiguous brick buildings stood on Water (now Marcy) Street, extending south from the corner of State Street. One advertisement describes the northernmost of these buildings as "a new, three story (partly Brick) Dwelling House, chiefly finished, with a convenient store," suggesting that it resembled the brick-and-frame building (1815) now standing farther south at the corner of Jefferson and Marcy Streets.⁴⁸ Another advertisement for three of the contiguous "Fire Proof Brick Buildings" in this row describes them as "four stories high, the lower story fitted for Shops with safes in the counting Rooms, the chambers are finished for the accommodation of families, having good kitchens, ovens, and other conveniences—the Aqueduct in the cellars."⁴⁹ One of the few other brick buildings outside the areas of the fires of 1802 and 1806 was built a short distance south of the Water Street block described above. This large building was constructed in 1810 at the street end of Shapley's Wharf, and accommodated merchants Abraham Wendell and Reuben S.

⁴⁴ Contract, Langley Boardman with Timothy Murray and James Chapman, April 4, 1809, Frost-Sawyer Papers, New Hampshire Historical Society.

⁴⁵ *New-Hampshire Gazette*, December 24, 1811.

⁴⁶ *New-Hampshire Gazette*, April 12, 1814.

⁴⁷ John G. Hales, *Map of the Compact Part of the Town of Portsmouth in the State of New Hampshire* (Boston: Engraved by T. W. Wightman, 1813), reprint ed. Hales failed to hatch the Macphedris-Warner House as a brick dwelling (possibly because the house then had a large frame addition), or to indicate the New Hampshire Hotel at Portsmouth Pier as brick, so his coding cannot be trusted implicitly.

⁴⁸ *New-Hampshire Gazette*, February 6, 1810.

⁴⁹ *New-Hampshire Gazette*, March 5, 1811.

Randall; it is unknown whether this building had dwellings above the stores and counting rooms.⁵⁰

Despite the devastations of the fires of 1802 and 1806, most of the compact part of Portsmouth remained a district of wooden construction when Hales carried out the survey for his Portsmouth map in 1813. Anxiety periodically mounted in the community when it became evident that one of more “incendiaries” were intent on setting fires in out-of-the-way places.⁵¹

Then, on the evening of December 22, 1813, fire broke out in the barn of Mrs. Woodward, near the North Meeting House; it was immediately evident that the blaze had been set. As the *Portsmouth Oracle* reported, “from the violence of the wind and flames, immense flakes were driven through the air to a great distance and fell in showers upon the roofs in the direction of the wind.”⁵² Soon several buildings, some of them a sixth of a mile from the Woodward barn, were enveloped in flames:

The fire seemed a torrent of desolation rushing through the midst of the town, and with humility we saw its destructive energies mocking the impotence of man. Not only this place, but the whole adjacent country was illuminated with a crimson splendor. The deep and majestic river awfully reflected the blazing deluge of ruin, and contributed greatly to heighten the grandeur of the scene. . . . It is ascertained with considerable accuracy that in this fire . . . there were burnt 108 dwelling houses, 64 stores and shops, and 100 barns and outhouses—making in the whole about 272 buildings. It is said 350 families were burnt out. We can form no estimate of property lost.⁵³

After the fire of December 1813—the most devastating of all in the extent of its destruction—the city petitioned the New Hampshire legislature to pass a law forbidding the construction of buildings of more than one story within a great triangular zone bounded by lines running from the North Mill Bridge to the intersection of Middle and Cabot Streets, and thence to the South Mill Bridge.⁵⁴ Following the passage of that law on June 23, 1814, brick buildings, including individual brick houses and brick row houses like those on Sheafe Street, became almost universal within the fire zone and fairly common elsewhere in the compact part of Portsmouth; many survive there today.⁵⁵ The

⁵⁰ *New-Hampshire Gazette*, January 8, 1811; *Portsmouth Oracle*, March 16, 1812.

⁵¹ Nathaniel Adams, *Annals of Portsmouth*, pp. 330, 336, 358; Brewster, *Rambles About Portsmouth*, second series, pp. 201-2.

⁵² *Portsmouth Oracle*, January 1, 1814.

⁵³ *Ibid.* Another estimate calculated the loss at 120 dwellings, 100 stores, and 159 barns and woodsheds on fifteen acres (Thomas Sheafe to William Hale, December 30, 1813, William Hale Papers, New Hampshire Historical Society).

⁵⁴ “An Act to Secure the Town of Portsmouth from Damage by Fire,” *Laws of New Hampshire*, Vol. 8, Second Constitutional Period, 1811-1820 (Concord, N. H.: Evans Printing Company, 1920), pp. 353-354.

⁵⁵ For more on the 1814 legislation, see Richard M. Candee, “Social Conflict and Urban Rebuilding: The Portsmouth, New Hampshire Brick Act of 1814,” *Winterthur Portfolio* 32 (Summer/Autumn 1997): 147-168.

area that was rebuilt after this third fire extends roughly from Pleasant Street to the Piscataqua River between Court Street and Daniel Street. It includes the elegant brick custom house on Penhallow Street, described below, and several buildings, at street intersections, displaying curved bays at the corners where the two street elevations meet.

But before 1813, the Morton-Benedict House was one of only a handful of private brick dwellings standing anywhere in Portsmouth, and must have been regarded as an exceptional house when new. At this period, brick buildings were universally described as “fire-proof,” and it was this noncombustible quality, rather than architectural attractiveness, that seems to have been most highly regarded in such structures. The rarity of brick buildings, especially in the form of freestanding houses, may help to explain the description of the Morton-Benedict House in the fall of 1811, when it was just completed, as that “*New & Elegant Brick House*, built this season, now occupied by said Morton, near the Brick Academy—its elegance and delightful situation is not exceeded by any in town.”⁵⁶ The same exceptional qualities of the house when it was new may help to explain Morton’s otherwise cryptic defense of the dwelling a few months later, when he asserted that “the materials and workmanship of said House, is so far from what has been represented by the illiberal, and unfriendly, that it will bear the examination even of critics.”⁵⁷ The extraordinary nature of the Morton-Benedict House when it was first completed was quickly obscured by the rebuilding of much of the eastern portion of Portsmouth in brick within three years, following the fire of December 1813.

The façade of the Morton-Benedict House owes much to the inspiration of an important predecessor: the Langley Boardman House of circa 1804 on Middle Street. The Boardman House provided a prototype for the semicircular Ionic portico of the Morton dwelling. The portico of the Boardman House, in turn, is thought to have been inspired by the somewhat more elaborate portico of the brick Gardner-Pingree House (1804) in Salem, Massachusetts, the town where Boardman had learned the cabinetmaking trade.

Most three-story brick houses in Portsmouth followed a two-room-deep plan rather than the one-room-deep plan of the Morton-Benedict House. Nevertheless, the latter seems to have acted as a prototype for a few similar houses that were built on small lots. Although no survey of three-story houses in Portsmouth has been carried out, there are brick imitations of the Morton-Benedict House, with subordinate kitchen wings, at 19 and 20 Atkinson Street and 74 Deer Street. The Atkinson Street houses were built after the fire of 1813, and the Deer Street house likewise bears the hallmarks of a somewhat later date than the Morton-Benedict House. All of these houses stand on small, narrow lots, and are oriented with their narrow ends toward the street. Filling much of their available land and providing three full stories, these houses take maximum advantage of the proportions of their lots.

As noted above, the Morton-Benedict House is one of the earliest freestanding brick dwellings to survive in Portsmouth, representing one of only four or five such dwellings

⁵⁶ *New-Hampshire Gazette*, October 15, 1811. The advertisement shows that Morton was willing to dispose of this property virtually upon its completion.

⁵⁷ *New-Hampshire Gazette*, March 17 and March 31, 1812.

when it was new. Immediately following its construction, however, a number of other brick houses were constructed in the western parts of Portsmouth, some of them very large and grand in appearance. Most of those houses are associated with the young builder Jonathan Folsom (1785-1825), a former apprentice of Ebenezer Clifford and a prolific builder and speculator who sometimes financed his projects in partnership with other craftsmen.

Folsom demonstrated his ambitious nature when he moved to Savannah, Georgia, at the end of his apprenticeship in 1806. Evidence suggests that he took advantage of his time away from Portsmouth to visit Philadelphia and other major eastern cities. Finding the Georgia climate “not congenial to his constitution,” Folsom returned to Portsmouth and was purchasing ironwork for buildings from whitesmith Henry Cate by March 1810. Folsom died at the age of forty, yet his ambitious efforts left a powerful mark on Portsmouth. As his obituary noted, “his native genius could not brook the toilsome path of his contemporaries, but with characteristic assiduity, applied himself to the study of Architecture. By indefatigable exertion, he rose from the *base* to the *summit* of this noble science. His plans were approved, and his execution satisfactory. Independent of public structures, we are indebted (in a great degree,) to his ingenuity for many of the most elegant buildings which adorn the town.”⁵⁸

Although the Morton-Benedict House cannot yet be documented as the work of a particular designer or builder, an attribution to Folsom seems reasonable in light of his contemporaneous and subsequent projects. As the Morton-Benedict House was rising in 1811, Folsom was building another brick dwelling a few blocks away. This was the three-story dwelling that was purchased by George Long in December 1812.⁵⁹ This building differs from any other brick house in Portsmouth in having four Ionic pilasters on its façade, in the manner of the earlier Peirce House a few doors away and of the New Hampshire Fire and Marine Insurance Company office in Market Square. Still more unusual for Portsmouth, the Long House has a rectangular Ionic porch that shelters the central three bays of the five-bay façade, perhaps an idea suggested by Folsom’s residence in Savannah.

Several important brick buildings in Portsmouth may be attributed to Folsom on circumstantial evidence, including the second Samuel Larkin House (1815) on Middle Street and Franklin Hall (1819), formerly on Congress Street. But those buildings that can actually be documented to Folsom’s authorship, often having been built on a speculative basis in partnership with other craftsmen, provide a solid context for the Morton-Benedict House as one of the earliest freestanding brick dwellings built in Portsmouth.

⁵⁸ *New-Hampshire Gazette*, October 25, 1825. For more detailed accounts of Folsom, see James L. Garvin, “Academic Architecture and the Building Trades in the Piscataqua Region of New Hampshire and Maine, 1715-1815” (Ph.D. dissertation, Boston University, 1983), pp. 484-508, and Jane Molloy Porter, *Friendly Edifices: Piscataqua Lighthouses and Other Aids to Navigation, 1771-1939* (Portsmouth, N. H.: Peter E. Randall for the Portsmouth Marine Society, 2006), pp. 111, 114, 123-126, 172.

⁵⁹ Rockingham County Deeds, 199:294.

Following his completion and sale of the George Long House a few blocks from the Morton-Benedict House in 1812, Folsom turned to the construction of one of the most ambitious single dwellings ever constructed in Portsmouth. This new brick house stood directly opposite the George Long House, on the western corner of the intersection of Middle Street and Joshua Street (now Richards Avenue). By the fall of 1813, Folsom had constructed on that lot a grand dwelling that resembled William Thornton's "Octagon House" in Washington, D. C. The awkward proportions of the available lot gave the house a wedge-shaped floor plan. The two flanking pavilions of the house, each of which presented a side elevation on one of the two intersecting streets, embraced a curved façade. This was the first known example of a brick wall built upon a radius in Portsmouth except for the curved corners of the Haven and Sheafe buildings (1805-7) on opposite corners of Market Street, and the circular powder magazine built by Daniel Marden in 1812. The first story of the façade was sheltered by a curved Ionic porch that reflected the rectangular porch of the Long House across the street. On the second story, above an entrance with an elliptical fanlight, was a Palladian doorway that provided access to the porch roof and was, like the Palladian window of the Morton-Benedict House, set beneath a relieving arch. The arch of Folsom's new house, however, was made all the more complex by being laid out within the bowed front wall.

In October 1813, the cabinetmaking partners Jonathan Judkins and William Senter purchased a "moiety" (half share) in the dwelling for \$3,000—one of several instances when Folsom partnered with fellow craftsmen. The three partners sold the property the following March to merchant Thomas Haven for \$4,000. Haven's former dwelling had been one of the first to burn in the fire of December 1813. The Thomas Haven House was demolished in 1865 to make way for a more modern brick house that still stands.

Immediately after selling this house to Thomas Haven, Folsom bought a lot on Islington Road east of the county jail. On this lot, Folsom erected a three-story brick dwelling that still stands opposite the end of Summer Street. In 1815, Folsom sold this new house to merchant Joshua Haven, whose brother had just purchased the house at the junction of Middle and Joshua Streets. While the Joshua Haven House is a rectangular structure with a less advanced design than that of the Thomas Haven House, it is a dignified structure with stringcourses, a mutuled cornice, an arched doorway sheltered beneath a portico, and a curved rear wall on its wing.

Immediately after completing this outstanding group of private buildings, Folsom was involved in an enterprise that gave Portsmouth one of its best public buildings. In 1815, Folsom formed a partnership with cabinetmaker Langley Boardman and tanner John Abbott. The three craftsmen began to purchase lots at the intersection of Daniel Street and Ark Lane (now Penhallow Street), within the district that had been swept by fire in December 1813, and close to the location where Boardman had opened a cabinet shop in 1801. The three partners bought and sold lots among themselves, agreed to open up an eighteen-foot-wide lane for access behind the buildings that they intended to construct there, and eventually erected several brick structures on the property. Chief among these was a large block on the corner of Daniel Street and Ark Lane, built on a lot that Folsom

had sold to Boardman and Abbott in 1816. In 1817, Boardman and Abbott sold this building to the United States of America for use as a custom house.⁶⁰

It seems certain that the custom house was designed by Folsom, who was the only builder among the partners who speculated on these contiguous lots. The building bears some of the same hallmarks seen in Folsom's other buildings: a range of Palladian windows on the second story, set beneath brick arches, and a curved corner, with a window arch set into the curved wall. The building originally had a wooden Ionic frontispiece on its Ark (Penhallow) Street elevation, bearing turned drops that are reminiscent of those on the exterior cornice of the Morton-Benedict House.

These handsome brick buildings, designed by Folsom, followed quickly upon completion of the Morton-Benedict House. Just as earlier structures like the Market House and the New Hampshire Fire and Marine Insurance Company provided an institutional context for the Portsmouth Academy and Saint John's Church, these later brick structures provide an architectural context for the maturing federal style in Portsmouth. Collectively, these early and exceptional buildings are milestones in the development of the federal style and the ever-increasing adoption of brick as a building material in the early years of the nineteenth century.

Portsmouth today is a virtual museum of the earliest brick construction in New Hampshire. Portsmouth's transformation from a wooden village to a small city of brick was the result of tragic fires that destroyed an untold treasure of architecture, personal possessions, written records, and family fortunes. Yet the great fires of 1802, 1806, and 1813 brought to Portsmouth a new treasure, giving the center of town the character of an urbane brick community that endures to this day. The masonry buildings that characterize the center of Portsmouth are a legacy both of tragedy and loss and of the community's resilience, its natural resources, the skill of its craftsmen and native builder-architects, and the planning and taste of its inhabitants. Few other New England cities possess a brick center as intact and as varied as does Portsmouth. Each of the surviving brick buildings of the heart of the city deserves study, stewardship, and the highest standards of preservation.

⁶⁰ HABS, NH, 8—PORT, 28