

Building Evolution

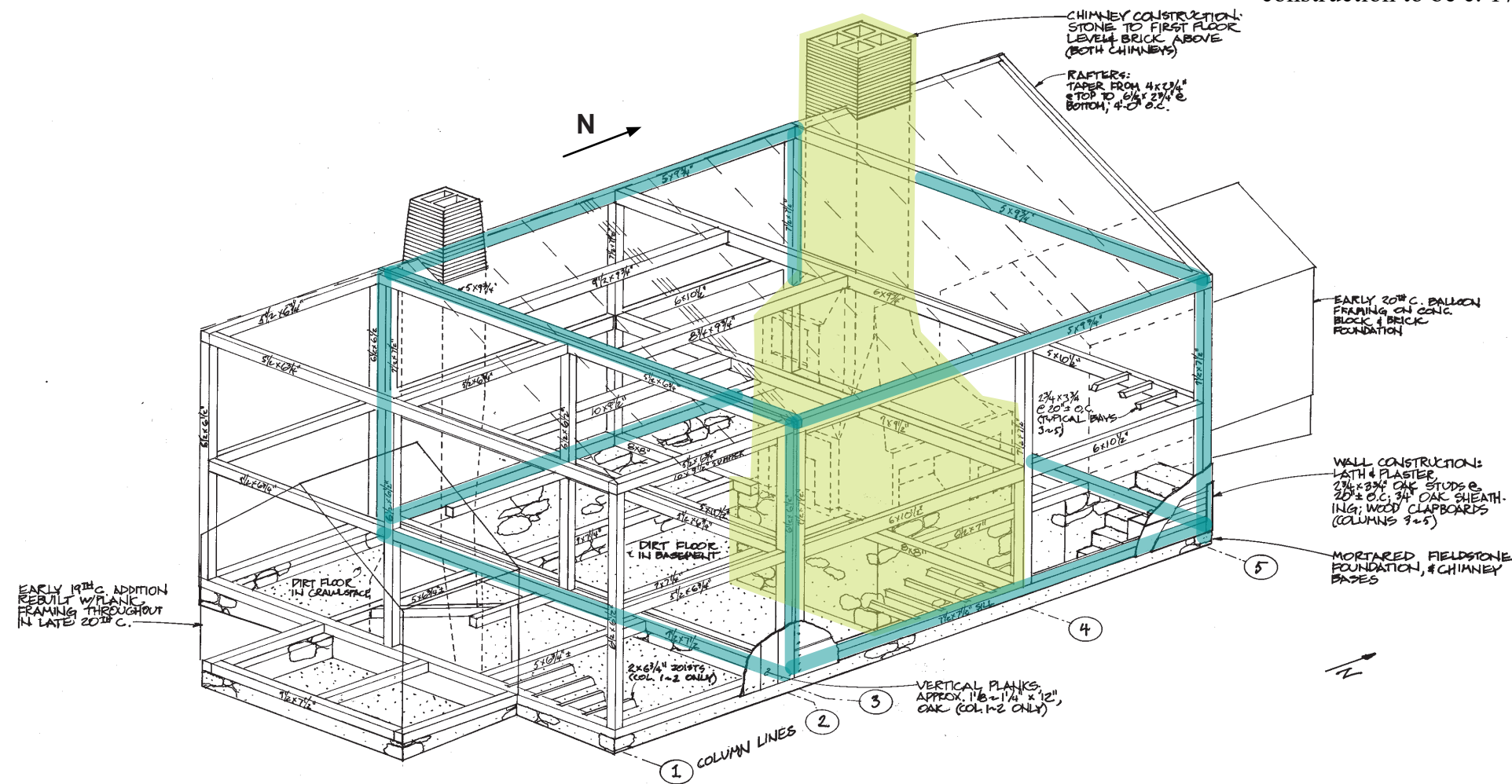
Original House (1724)

The Walker House, two-and-one-half stories in height, is an early example of a Rhode Island square-plan, a plan type believed to have evolved from the four-room-plan Rhode Island stone-ender in the first part of the 18th century. The plan featured a kitchen across one side, a large parlor, and a smaller third room on the first floor all heated by fireplaces.

The square-plan house was cheaper to construct than a central chimney house, permitted greater flexibility in the number and size of heated rooms in a compact house, and still achieved the double pile plan that was increasingly favored.

The original 1724 section of the house (**highlighted**) departs from the typical square-plan framing because it lacks intermediate posts on the north and south walls. In other respects, such as the presence of summer beams only in the parlor and the chamber above, the framing is consistent with square-plan practices.

The framing is of vertically sawn oak timbers, concealed in beaded casing, yet lacking chamfered edges and whitewash, decorations common to the 17th and early 18th century. This points to a date of construction closer to the 1740's, however dendrochronology evidence proves the date of construction to be c. 1724, making this the oldest known sawn-timber frame house in Rhode Island.



WHAT IS DENDROCHRONOLOGY?

Dendrochronology, or "tree ring dating," provides insight into the history of a building by revealing the year in which the timbers used in its construction were felled.

Trees of the same species in the same region display similar ring patterns across the tree trunk and in the end grain of timber beams. Each year a tree gains another ring as it grows; the thickness of which depends on the amount of growth. In a year with ideal growing conditions, trees will produce a wider ring than in a year with poor conditions. Trees in the same region are likely to display the same general chronological growth pattern

By plotting the relative thickness of the rings in a newly felled oak of say 200 years old, an identifiable sequence of variations will emerge like a date stamp for each period. By comparing variations in the first 100 years growth with those of the last 100 years growth of a similar timber felled locally 100 years ago, the match should be apparent. If the older timber retains its bark, the year that it was felled will be recorded by the outermost ring, the ring which was grown in the year that the tree was felled.

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Philip Walker House
A Preserve Rhode Island property

STUDY HOUSE
ARCHITECTURAL GUIDE

Building Evolution

Additions to the Original House

1st Addition - Transition from Square to Georgian (1780)

Circa 1780, judging by physical and stylistic evidence, the house was extended by twelve feet to the south, adding two rooms on each floor. This addition was built on the original front wall of the house, making the previously exterior wall an interior partition and closing off the front door. The front door was then moved from the south elevation to the east elevation. Lath, nails, sheathing and brick nogging (an early form of insulation) evidence can all be seen in this wall.

Unlike the studded and nogged walls of the original building, the outer walls of the south addition and its one-story appendage were constructed of oak planks nailed to the outside of the frame. While a seemingly simplistic and archaic method, it was a common and more affordable construction technique that started around the 1780's.

The 1780 addition erected the transition to the increasingly common five-bay Georgian house plan. Though asymmetrical in its fenestration, the doorway was placed properly in the

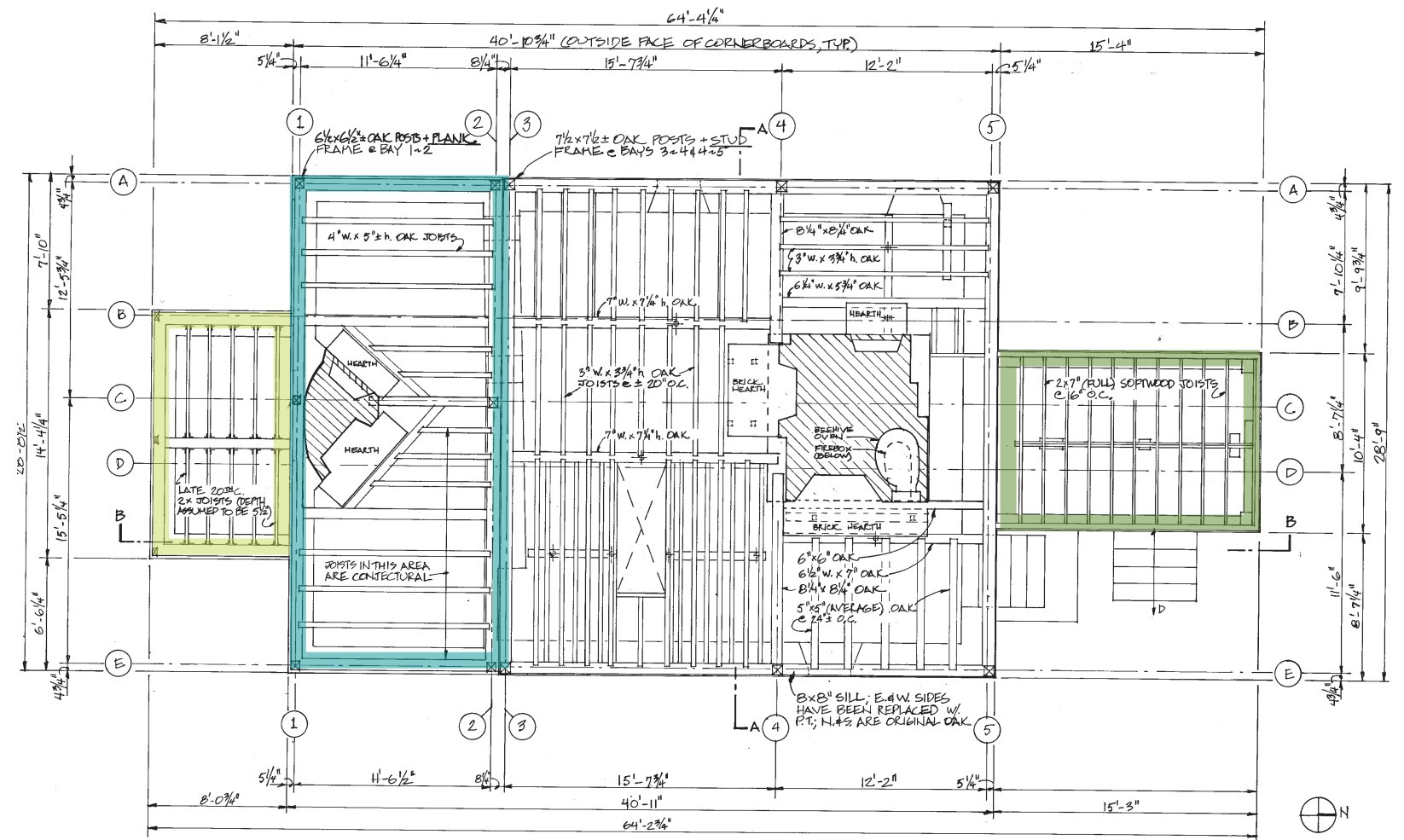
central bay and a new stair hall was created which would provide easy, central access to the new upstairs rooms, whereas it had been located previously behind the chimney at the rear of the house.

2nd Addition - Porch (Inconclusive)

Plank frame, enclosed porch, likely early 19th century. Possibly used to store firewood. Later expanded to an open air, screened porch running the full width of the house in the early 20th century. Restored to enclosed conformation in 1990.

3rd Addition - North Ell (1910)

Stud frame. Early use unknown. Converted to kitchen in 1960's. Upgraded to modern kitchen in 2008.



DRAWN BY: PETER BORGHEISER, ARCHITECT	ENGINEER:	PHILIP WALKER HOUSE 432 MASSASOIT AVENUE, EAST PROVIDENCE, PROVIDENCE COUNTY, R.I.	FIRST FLOOR FRAMING PLAN	SHEET A-2
			SCALE: 1/4" = 1'-0" DATE: MAY 23, 2008 REVISIONS:	

Decorative Evolution

Paneled Room - 2nd Floor Chamber

Stylistically, the panels date to late 17th or very early 18th century with a mixture of 17th century vertical sheathing, wide bevels, unusual homemade groovings, and a provincial version of the stile-and-rail paneling that repeats in the sheathing detail.

Evidence of Retrofit

- Vertical portions of the paneling are shorter than current room, with a beaded board along the top added to fill in the missing portion
- The relationship of the paneling to the windows is awkward, coupled with a discontinuity of wall finishes that change arbitrarily from paneling to sheathing midway along the east wall
- The paneling on part of the east and south walls is typical of shadow or crease-molded vertical sheathing, which was popular for fireplace walls and not often found on outer-walls as it is here
- The plan and size of the room does not relate to the floor plan below or to the framing of the house, which suggests the size of the room may have been altered to accommodate the paneling

When and Why?

Theory #1

- Installed c. 1724
- Paneling was salvaged and immediately reinstalled from an earlier house on the site documented to have been constructed in 1679

Theory #2

- Installed c. 1800-1850
- Approximate date range of the latch that is secured to the board and batten door to the room
- A handwritten note found behind a section of horizontal beaded board near the ceiling dates to c. 1830, though it could have fallen from attic above at a later date

Theory #3

- Installed c. 1876
- Centennial celebration room — casual speculation of a surge of interest in colonial architectural



“...the most interesting 17th century paneling to survive in New England.” Anne Grady, architectural historian

details and objects around the centennial, which lead to the colonial revival period in the early 20th century

- Oral history “rumors” suggest installation from another house in mid-19th century
- Paint analysis shows:
 - the only part of the room that has the same paint sequence as other parts of the house is the rail on the door to the hallway
 - the beam cases, the wide board that fills the gap below the beam case, and the paneling all have a distinctive, but separate paint histories
 - the paint layers in the room begin with a lemon-yellow color not found elsewhere in the house and the placement of paint suggests the paneling was unpainted when installed or was stripped prior
 - the existence of only three layers of paint above the yellow layer supports a relatively late installation date

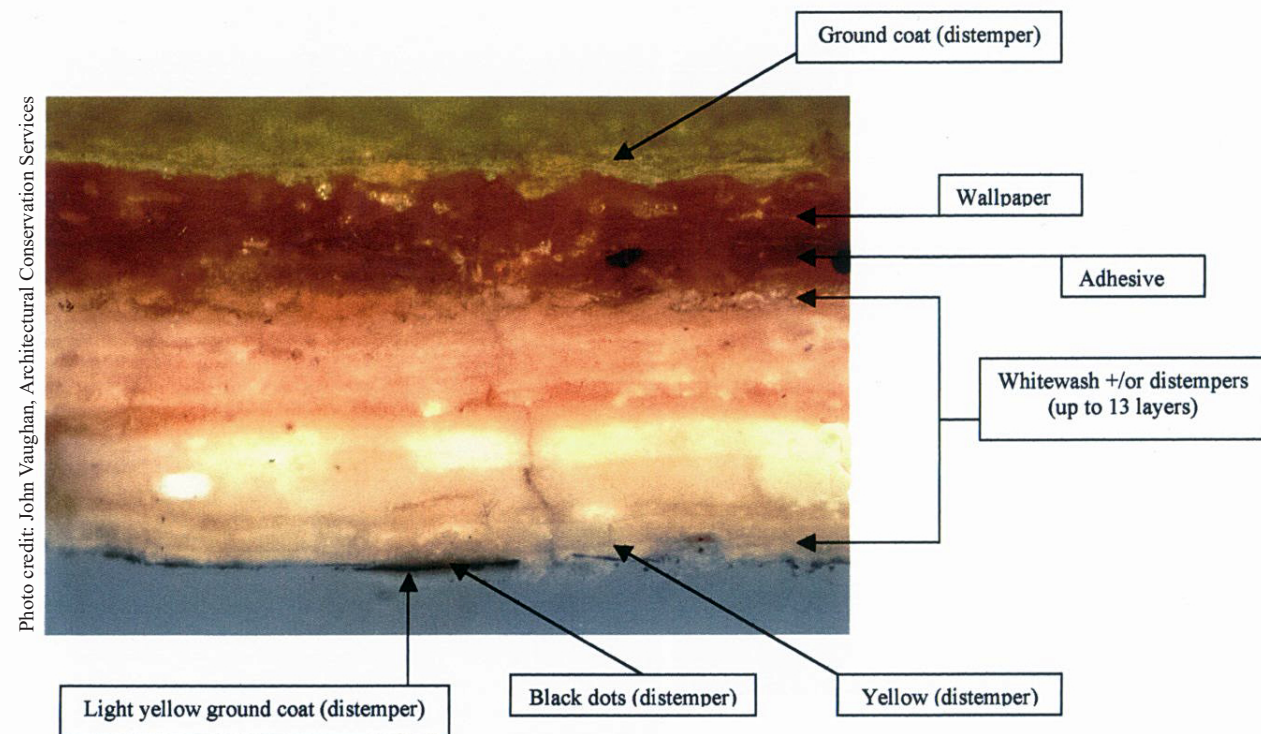
Decorative Evolution

Spotting - China Closet

Evidence of whitewash and spotting can be seen in the China Closet (accessed through the dining room in the 1780 addition).

Dots as early decoration

- Created using a carrot or turnip cut as a stamp to the desired diameters and applied over a light yellow ground coat
- Paint analysis concludes dots were applied to the base coat and are under up to thirteen layers of whitewash and wallpaper indicating the dots were an early treatment



When was the spotting applied?

- Not conclusively dated
- Technique was used throughout the 18th century so the dots could correlate to the 1724 original structure or the 1780 addition



WHAT IS WHITEWASH AND SPOTTING? "Whitewash" a mixture of slaked lime and whiting (chalk) was the first paint-like substance to be applied to the interior of colonial homes — often covering every surface, including plaster walls, woodwork, floors and ceilings. Pigmented whitewash, created by adding natural pigments, was used to add decoration. "Spotting" was the technique of using root vegetables as stamps or other tools to create dots or brush patterns. Spotting was used in the colonies throughout much of the 18th century.

- Reconfiguration of the china closet over time makes dating difficult
 - During construction of the new addition, and when the new east entry door (current front door) was installed, a passageway to the southeast room (dining) was created by cutting off the easternmost four feet of the small room south of the stairs. The truncated small room was thereafter accessed from the southeast room in the addition.
 - Architectural evidence suggests that the door to the southeast room and its casing were cut through at the end of the passageway when the addition was built
 - Red dots were discovered more recently over the door in the passageway, but have not been analyzed.
 - Hand-wrought nails in the passageway suggest the dots may have been applied around the same time as the 1780 addition

Fireplace Evolution

Kitchen

Upon construction, the fireplace mantel was a simple brick and lintel construct. Wood grain evidence (highlighted) of the original oversized lintel (highlighted) can be seen in the remaining mortar on the left side of the fireplace. A beehive oven (highlighted) was constructed at the rear of the firebox (the original dome can be viewed to the right down the hallway). The large square-sided firebox was dangerous and inefficient, leading to the modifications in the next period.

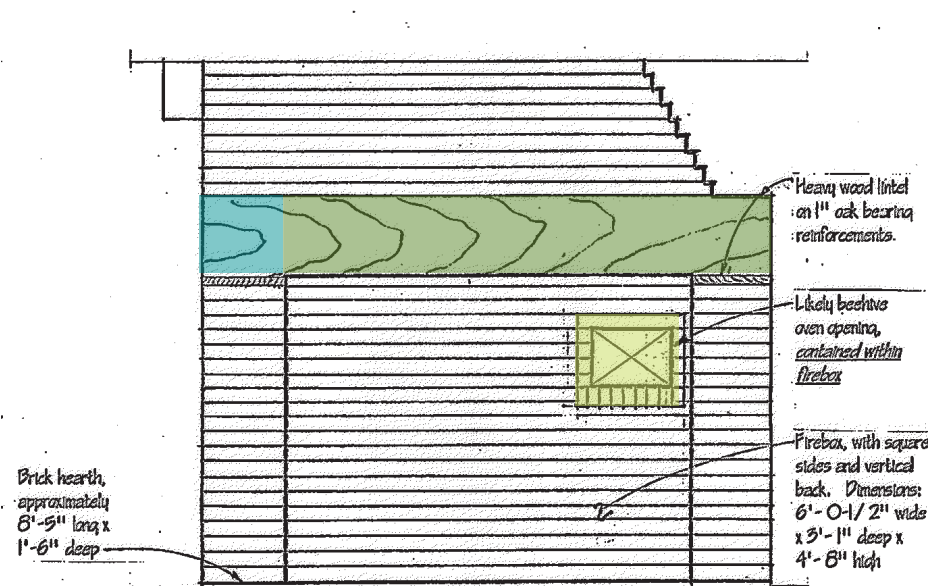
Circa 1770, the firebox was modified to remove the dangers associated with accessing the beehive oven beyond the burning hearth. The firebox was made smaller through the addition of a mortared-stone shelf (highlighted) and angled brick sides. The beehive oven was brought forward in front of the original to place its opening outside and to the right of the new firebox (highlighted). These modifications also reduced the size of the flue and allowed the use of a smaller lintel (highlighted).

These modifications were coupled with new decoration, adding wide-board panels over the mantel (highlighted) and finishing the beehive oven with a raised-panel door (highlighted). A herb drying cupboard (highlighted) was also added above the new beehive oven.

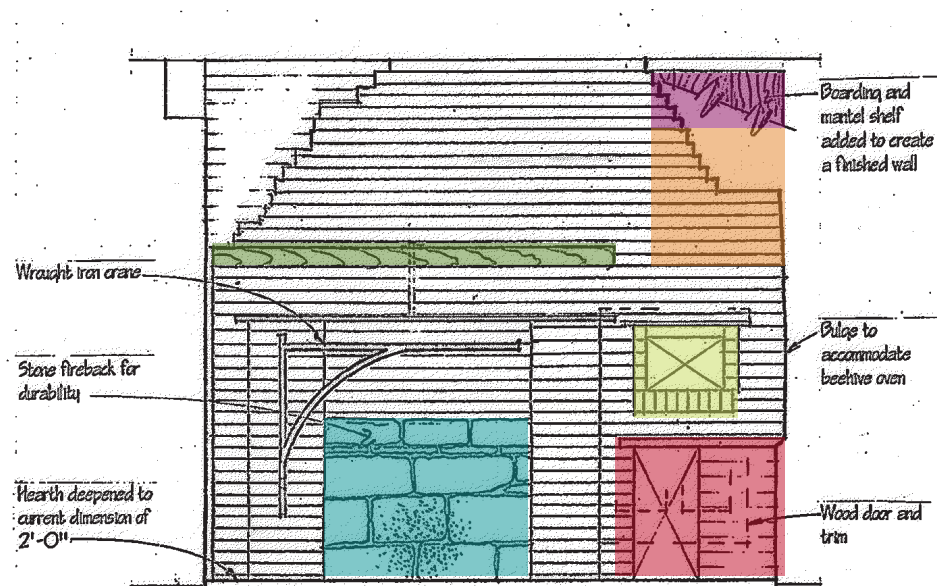
By 1850, greater efficiency was desired and the firebox was made smaller by adding new bricks above and in front, thereby enclosing the mortared-stone shelf (highlighted). Large stones were also mortared into place above the new, smaller firebox to shrink the size of the flue and decrease the draft that drew too much heat up the chimney (highlighted).

A cast-iron, wood-fired cooking stove (highlighted) was eventually installed in the firebox, was converted to gas by the 1890's, and was later abandoned in place in favor of the new kitchen-ell constructed in the early 20th century.

By the 21st century, all these modifications, coupled with the movement and settling of the house over time, caused significant structural cracks that necessitated the demolition of the chimney mass to the stabilized, reconstructed state seen today.



1st. PERIOD: ca. 1725 to ca. 1770
SCALE: 1/2" = 1'-0" (ALL)



2nd PERIOD: ca. 1770 to ca. 1850



ca. 1850 to 2008

Fireplace Evolution

Great Room

Upon construction, the fireplace mantel remained for a short period of time as a simple brick and lintel (highlighted) construct with minimal decoration and were soon finished in the popular Georgian style of the time.

An early Georgian chimneypiece was found behind the existing wall and paint evidence places it ca. 1730.

The two short pilasters, with scotia moulding for bases and a half-round fillet moulding for the necking (highlighted), have not been duplicated in other houses. However, there are similar chimney breasts with short pilasters in other Rhode Island houses.

This period also saw the addition of an enclosed storage cupboard (highlighted), which added the floor to ceiling paneling decoration common in the Georgian style.

In 1890, the great room was updated, removing the storage cupboard and paneling, and replacing the elaborate Georgian chimneypiece with a simple mantelshelf reflecting the revival period becoming popular in the late 19th century. This mantelpiece (highlighted) had a broad frieze, pilaster caps, central panel, and mantel shelf all nailed with countersunk hand-wrought nails. This was subsequently altered to accommodate a franklin-type cast iron stove insert (highlighted) set on the brick hearth, a modification that provided increased heat from fewer logs, an early energy-efficiency innovation.



Fireplace Evolution

Keeping Room

The Keeping Room was one of the most used rooms in the house, especially in winter. The small footprint of the room, coupled with the presence of the fireplace thanks to the square-plan design, meant this was the warmest room in the house and the easiest to heat. It therefore served as the primary, private living space where daily tasks such as sewing, correspondence and other household functions took place. Storage was generous with large and deep cupboards (highlighted) and decoration was minimal as it was not a public room.

As the Kitchen fireplace was modified, made safer and more efficient, the kitchen became more central to daily life and the Keeping Room took on a less functional role. Storage cupboards were plastered over and the firebox was widened to accommodate a new mantelpiece (highlighted). These updates likely established its use primarily as an office-space for the increasingly wealthy Walker family.

By the early 20th century, steam radiators were installed throughout the house to provide central heat, supplied by a gas, and later oil, boiler located in the basement. The Keeping Room fireplace was closed off to create a flue for the new heating system and the mantelpiece removed.

