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Akin House: Historical Structural Report by Anne Baker

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Historical Structural Report
October 11, 2004
Akin House
762 Dartmouth Street
South Dartmouth, Massachusetts

The Akin House is an excellent example of the classic Cape Cod building type and as a cultural resource is representative of a local building tradition tied to the 17th and 18th century farming community of South Dartmouth. As such the house stands in mark contrast to the areas existing 19th century town houses.

Deed research and physical examination indicate that the pre-Revolution Akin House was built between 1762 and 1764 by Job Mosher "house carpenter." In March of 1767 Mosher sold the homestead farm to Jonathan Delano, Jr a mariner. Nine months later, December 1767, his widow sold their homestead farm to Elihu Akin, a prominate and wealthy South Dartmouth resident and shipbuilder, who purchased the property as an investment. During the 1778 British occupation of South Dartmouth Elihu Akin's business property's and homestead farm where destroyed by fire. Financially strapped Akin moved his family into the Cape he had purchased in 1767, where he lived until his death in 1794. The ownership of the house remained in the Akin family for 204 years. In 2003 the Akin House was bought by WHALE (The Waterfront Historic Area Leaque) of New Bedford, Massachusetts.

Architectural and Structural Report

The following report is based on careful and extensive analysis of the exterior and interior of the house before removing original and existing fabric.

Exterior

The Akin House is a side gabled, double pile, one-story structure. The house has two structural bays with an off-center brick chimney. The north/south gable ends are 25' 0" wide. The east/west (front/back) façade measures 27' 0".

The house is positioned approximately seventy (70) feet back and east of Dartmouth Street and fifty (50) feet back and north of Rockland Street. It sits on a mound, the slope of which is 2' 4" feet lower on the east (back) side.

A twenty (20) foot long one story, late 19th century barn/shed is located approximately thirty feet south and east of the house. The barn/shed framing material is circular sawn. The exterior is covered with unpainted shingles.

The height of the house's front façade, from the foundation top to eaves, is 8' 0". The gable-end is 19' 0" from the foundation top to the peak.

The roof is shingled and has an 8" boxed eave that meets a 5" wide rake board which has no bead. The roof pitch is 10 inches on 12. In the early 1900's a 9' 6" wide shed dormer with two double hung windows was added to the center of the east roof.

The vertically oak planked exterior walls are covered with unpainted and sawn cedar shingles. The shingles are 5" to weather and extend to the top of the foundation.

The plank window frames are splay headed.

The corner boards are 6" wide and have no bead.

The front door has six panels that consist of four recessed panels below 2 glass panels. The back door is board and batten.

Foundation

The above ground stone foundation rises 16" on the west elevation and 28" in the rear or east elevation.

The west and gable above ground foundation are rubble stone mixed with randomly placed cut stone blocks.

Except for the cellar entrance the remainder of the east exterior foundation wall is not visible due to the addition of a 2' 4" tall by 2' 10" deep wall of dry-laid granite stones intersected by three large granite steps leading to the kitchen door. A 1922 photograph shows that a wooden deck and wooden stairs to the back door had been built on top of the above mentioned wall of stones. A three (3) foot wide cellar entrance is located in the SE corner at the rear of the house.

Fenestration

The fenestration pattern is asymmetrical through out.

West elevation: The two (2) windows have 6 over 6 double hung sash with 7 by 9 lights. (The original sash—8 over 12, with 6 by 8 lights.)

East elevation: There are 3 double hung windows on the first floor. The sash pattern for the two SE first floor windows is 8 over 12 with 6 by 8 lights. The NE window is 6 over 6 with 6 by 8 lights.

The two (2) windows in the attic dormer are 6 over 6 double hung sash with 6 by 8 lights.

South elevation: There are three (3) double hung windows

The sash for the first floor SW window is 6 over 6 double hung with 7 by 9 lights.

The sash in the first floor SE window is 12 over 8 double hung with 6 by 8 lights.

The attic sash is 6 over 6 double hung with 6 by 8 lights.

North elevation: The sash pattern is the same as the south except for the addition of a small window located NE of the attic window.

Cellar

There is a full cellar of random sized un-coursed granite stone which is lime-washed on the interior.

The chimney foundation is built with random sized granite stones to the level of the first floor. The first floor hearths are incorporated with in the chimney foundation.

The chimney above the cellar foundation is brick with a few random granite stones.

The SW corner has a raised bed of stones. Scattered straw suggest that this area was possibly used as a root cellar.

First Floor Interior

The house has a five-room plan arranged around an off-center chimney. There is an entry hall, two parlors and a central back room (kitchen) that is bracketed by two (2) smaller rooms. Except for the rear dormer there is no evidence of expansion to the core.

There are 3 brick fireboxes on the first floor.

North parlor firebox opening is 4' 3" wide, 21" deep and 3' high. The brick hearth is 21" deep.

The brick size for both firebox and hearth is 7" by 2".

South parlor firebox opening is 3'7" wide, 17 1/2" deep. and 2'8" high. The brick hearth is 17" deep.

The firebox bricks measure 7" by 2". The hearth bricks measure 8" .

Central back room (kitchen firebox opening is 3'4 1/2" wide, 17" deep and 2' 11" high. The brick hearth is 2'11" deep. The brick size is 8". On the right of the firebox is a brick beehive oven.

The 20th century masonry and large opening in the firebox throat suggests that the firebox was rebuilt in the late 1800s or early 1900s. It is possible that the original firebox is still behind the present one.

All of the firebox openings had been sealed with plywood when a gas Humphrey heater was installed.

Interior surface features

North parlor

This room is twelve and one half feet by twelve and one half feet.

There are two (2) doorways. The one remaining door is a raised four (4) panel with butt hinges. The molding on the door casings is federal and is attached with wrought nails.

The corner cupboard, located in the NE corner, has an arched opening, with scrolled shelf's, and a raised panel door below with H hinges. The empty nail holes in the woodwork suggests that the cupboard was originally located elsewhere.

The ceiling is covered with ship-lapped pine boards painted white and nailed in place with wrought nails. These boards, average 18" in width and are suspended from the joists by hand made wooden holders attached to the joists by wrought nails.

Studs have been added to the north wall.

The firebox opening is surrounded by Federal trim nailed to a ceiling to floor wall of hand planned pine boards. There is no over mantle.

The three (3) visible corner posts have a beaded casing. The fourth post is behind the cupboard and not visible.

The original floorboards have been replaced by 4" wide tongue-and-groove boards.

Entry hall:

The three and one half foot deep entry hall is directly opposite the front door and stairway to the attic. The narrowness of the entry suggests that the location of the stairway is not original.

The stairway is constructed with cut nails.

South parlor

This room is 7' wide by 11' deep. The two corner posts are cased without a bead.

The firebox has a Greek revival surround. Above and to the side of the firebox are two shallow cupboards with board and batten doors.

The original floorboards have been replaced by 4" wide tongue-and-grove boards. Due to the fact that the ceiling and walls are sheet rocked no further information is available at this time.

Central Back Room (Kitchen):

The ceiling in this room is of particular interest because under the area where portions of the ca.1890 plaster have fallen off the original second floor framing is visible; construction that includes a hand planned and chamfered east west oak mid (chimney)girt, hand planned and dressed oak joists, and whitewashed ceiling boards that average fourteen (14) inches in width.

It is possible that under the south end of this room, under the still attached later plastered ceiling there will be evidence of the original stairway.

The original floorboards have been replaced by 4" wide tongue-in-grove boards.

A buttry and small bedroom are located in the NE corner. During the 20th century the buttry was converted into a bathroom and the small bedroom a kitchen. At this writing no further investigation was possible as this area is in poor condition.

Attic

The attic is accessed by a three (3) foot wide stairway.

A two (2) foot wide hall, between the top of the stairs and the west side of the chimney, leads to the NW bedroom. The east side of this bedroom is separated from the small SW room by a wall of whitewashed vertical pine boards. The west side of this room has an under-the-eave knee-wall with built in drawers.

The south bedroom runs full length from east to west with knee walls at both ends.

The back mid section of the attic has been interrupted by a 20th century dormer.

Under the existing 4" wide tongue-and-grove boards are pine boards that average 12 inches in width.

Frame

Most of the first floor framing has been replaced by 20th century 2 by 8 joists. The original sills and seven (7) original beams remain. The joist pockets in these beams will aid in determining the original layout of the first floor framing.

The nine posts, three across the west, three across the mid section and three across the back or east wall are original. All are cased.

The North Parlor has a longitudinal hewn oak summer beam (8 1/2" by 6 1/2") with no chamfering. The oak joists are 3 by 4 spaced 23" on-center. The joist joinery is butt/cog

The South Parlor framing is not visible.

The Central Back Room's (kitchen) mid girt (chimney girt) is . a 6 by 6 oak beam hand planned, chamfered and tenoned in to the east 6 by 6 oak post.

The east west original joists are 5 1/2" by 4" wide, by 30" on center, hand planned and dressed. The joist joinery is butt/cog. Intermediate 5 1/2" by 1 3/4" joist were installed when the ceiling was plastered.

The two small rooms in the NE corner have 3 by 4 oak joists. The joists run north south and are 32" on center. Due to the deteriorated area in the NE rooms the east /west joist supporting beam is not visible at this writing.

The plate is a 6" by 6" oak beam. Joinery not visible.

Attic:

The rood system consists of seven oak rafters that measure 5" by 5", 4' 6" on center and are bridled joined and pegged at the apex.

The collar ties are 2 3/4" by 4", tenoned and pegged to the rafters.

Present Condition

Due to the fact that the house was neglected for 17 years the north end of the building has suffered extensive water damage from leaks in the roof.

All the first floor joists and sills will need to be replaced.

A water damaged section of the plate in the north west corner will need repair.

The seven (7) original joists in the second floor north east corner will need to be replaced.

The Central Back Room (kitchen) has water damage at the top of the mid east post, the east end of the adjoining mid girt (chimney girt) and several of the original abutting joists. Some sections can be saved and repaired while others will need to be replaced. Replacement will follow the same construction methods and material as the originals.

The chimney and fireboxes appear to be in good condition.

No further damage is expected as WHALE has covered the entire roof with a tarp.

All repairs to the house will comply with The Secretary of the Interiors Standards for the Treatment of Historic Properties.

Anne W. Baker
Architectural Historical Consultant

Attachments:

Measured Drawings: Profiles, floor plans and framing
Photos. Exterior and Interior

6/06.

questions MHC has on the age of the house.

“However, interior photographs showing shallow hearths, a beehive oven located on the face of the chimney stack outside the hearth and modest federal era trim suggest that the building may more likely date to the late 18th or early 19th century. A National Register nomination would need to incorporate additional expert assessment of the surviving early fabric of the building, with a fuller history of its 19th and 20th century ownership and use by the Akin family.” Michael Steinitz April 8, 2004

[Answers to Michael Steinitz 's questions on the date of the Akin House.:](#)

Fireplace Hearths

After removing linoleum from the three hearths the measurement are 1' 6", 1' 7" and 2' 0" in depth.. These depths are typical of hearths found in early to mid 18th century Southern Massachusetts and Rhode Island.

All three hearths are incorporated in the chimney foundation. See attached plan.

The fireplace, in the Kitchen/Chamber with a beehive oven located on the face of the chimney stack is included as part of the existing hearth. It should be noted that this firebox has been rebuilt. The brick size is 8" x 4" and the face courses are at a right angle to the firebox.

We will not know if there is a larger firebox behind the present one until the chimney is repaired.

Surviving early fabric:

First Floor:

90% of the framing had been replaced.

Second Floor Framing. Rooms D, E, and F.:

The oak joists in rooms E and F are 3 x 4 spaced 30" on center.

The east/west oak chimney girt in D room is a 6" x 6" beam with a 1' chamfer on each side. The oak joists in D room are 3 1/2" by 6" deep with a 1" chamfered on each side.

Their average spacing is 30" on center.

The oak beams, ceiling boards (the underside of the second floor boards) and the interior side of the vertical oak sheathing in D, E, and F are white-washed.

These rooms remained this way until lath and plaster was applied to the walls and ceiling in the late 18th or early 19th century.

During conservation the location of an early window was discovered on the east wall of room D (Kitchen/Chamber). See drawing.

Second Floor Framing. Room A— (North west parlor) The oak summer beam is 8 1/2" x 6 1/2" and is not chamfered. The oak joists are 3 x 4 spaced 20" on center.

Ceiling—Shiplapped pine boards (average width 19") are attached to the joists by hand carved wooden hangers fastened with wrought nails.

The south fireplace wall, and the east and west walls have whitewashed, hand planed, shiplapped vertical pine boards which are attached directly to the vertical sheathing boards with wrought nails. The north wall has been replaced with studs.

A corner cupboard, federal door trim and raised 4 panel door were added in the late 18th or early 19th century.

Second Floor Framing. Rooms B and C:

Because the condition of these rooms did not require conservation the framing is not visible at this time.

Second Floor:

The partition boards dividing the 4 bedrooms are whitewashed. The north west bedroom was plastered in the late 18th or early 19th century.

The 5 x 5 oak rafters are spaced 4' 6" on center and are mortise and tenoned, and pegged at the peak. The oak collars are 2 3/4" x 3 7/8" deep.