

August 5, 2021

William Callahan  
36 Webaqua Road  
Vineyard Haven, MA 02568

RE: #9 Beecher Park, AP 8-120  
VLS&E Job 698-3

Dear Mr. Callahan,

The following is a report regarding the condition of the single family dwelling located at your above referenced property. On July 30, 2021 our office visited the property to inspect the following systems in order to evaluate the structural integrity of the components as well as the code-compliance and potential code-upgrade requirement associated with any significant renovation.

1. Foundation support
2. First and second floor framing
3. Exterior weather proofing condition.

The dwelling was originally built around 1880 (per assessors records), at a time when building standards of structural support were much lower than current building codes and regulations. The use of structures has also evolved with the addition of large appliances and furnishings. The following are my observations and opinions regarding the building components reviewed:

**1. Foundation system:** The foundation consists of timber and brick pilings. It appears that the brick piles are original and the timber piles were added in later years to add support. The brick piles are in sound condition with no signs of cracking or deterioration. The wood piles, though not failing are not supported on stable bases and do not have adequate connections to the floor frame of the dwelling. Cross-brace members have been added to indicate potential lateral strength issues as well. The dwelling is relatively stable on the existing foundation, however the foundation should not be relied upon for any reconstruction or major remodeling.

**2. First and second floor framing:** The primary support beams consist of approximately 2 x 6 (dimensional) fir with 2 x 6 fir floor joists. The joists and beam have all deflected significantly contributing to unlevel floors and cielings. Though a catastrophic failure has not occurred yet, the beams are undersized for the current loading and would need replacement and reinforcing with any significant remodeling.

**3. Exterior wall and roof framing:** The exterior walls are constructed under traditional “balloon frame” style. Walls are not insulated and framing member are utilized around door and window openings only. Balloon frame techniques have largely been eliminated in recent years in favor of a more structurally sound stud wall system. Beyond the lack of added structural support, the existing walls do not allow for standard insulating techniques with a standard wall cavity. Code-upgrade of the structure would likely result in the addition of wall framing on the interior or the exterior of the building for both strength and insulation standards. Such an upgrade would effectively require the reconstruction of all exterior walls.

The roof framing consists of 2 x 6 (dimensional) roof rafters spaced approximately 30 inches on center. The framing is well below current loading and strength requirements. As with the wall system, the lack of depth of the rafters and roof cavity would make insulating difficult. The rafters would need to be reinforced with any code-upgrade.

**Summary:**

The existing house is not in disrepair and does not exhibit any major structural stability problems, however the structure needs significant structural upgrade in each of the load bearing components with any major renovation project. Most of the existing supports would be either removed or support members added with an upgrade, in which case most of the original balloon frame style will be lost within new wall and roof cavities.

If you have any questions or comments regarding this report, please contact me.

Sincerely,



Reid G. Silva, PE PLS  
Professional Engineer  
Professional Land Surveyor



Foundation area - pilings and first floor framing



Second Floor framing



Second floor framing examples



Roof framing