

To: Sturbridge Conservation Commission
From: Robert Haveles, Project Architect
CC: Lenny Jalbert, Sean and Johnna Doyle
Date: November 23, 2022
Re: **63 Beach Avenue**

Please consider the following as a supplement to the project narrative created by Jalbert Engineering and submitted at the time of the original application filing.

The current owners of the house are looking to expand the living area of the house primarily within the existing foundation footprint with the exception of expanding the foundation by about 8' towards the road, away from the water and for the width of the existing house. The expanded area will be a porch and shed replacing an existing concrete slab.

ALTERNATIVE ANALYSIS

There was consideration of building a 2nd floor, however upon viewing the condition of the existing foundation which is a combination of concrete and stone where there is evidence of moisture infiltration it was determined the foundation condition needed to be addressed and improved upon. Therefore, it was determined that the prudent approach to this would be to replace the foundation that can be properly waterproofed and raise the height of the house by approximately 4'-5". This would resolve the issue of not adding a structure on top of existing house that is supported by a foundation that has evidence of deterioration. In addition, by raising the first floor only approximately 4'-5" it preserves the current site lines from the road and the house behind so not to obstruct view to the lake, which surely would be affected if a full second floor was constructed. The proposed addition is midpoint between the 50' and 100' buffers. The only construction that would take place within the 50 buffer and within the 25' buffer is to replace the existing foundation and pier supports that already exist in those locations. There are no external enlargements within these zones. Per the by-laws a waiver is possible to permit construction within the 50' buffer particularly if it is replacing a pre-existing condition and not further detrimental to the surrounding area. Therefore, we are requesting that waiver.

The current basement has a walkout, however the basement level is accessed by steps down from grade creating additional water drainage and infiltration issues. Along with raising the height of the house it would allow a new concrete slab to be placed at an elevation above the current grade to help prevent the infiltration of surface water into the basement. By replacing the foundation and providing a new concrete floor and proper ceiling heights at the basement level it will create a "daylight basement" which will contain year round habitable space.

There is currently a utility shed next to the house at the lower portion of the site toward the water. With the addition being constructed at the opposite end (higher ground) of the house (away from the water) the freestanding shed will be removed and its functions moved to an enclosed area of the addition at the front of the house facing the road.

There are two existing piers supporting the existing first floor structure. They will be replaced and supported by helical screw pile by Techno Metal posts. This type of structural support is less disruptive to the ground area.

SEQUENCE OF RAISING OF PRINCIPAL STRUCTURE AND FOUNDATION REPLACEMENT

As soon as ground is ready (frost and snow free - hoping for March), NM Construction will begin to dig around the existing foundation with a mini-excavator. Shed near water, existing cement walkways on the left side (facing water) and roadside of house as well as pavers within 3' of water side of house will be removed. Pavers will be stored on site, cement will be hauled away. Approximately 3' around the current foundation will be dug and exposed to get workers and materials in. Material will be hauled away. Every effort to save the two trees to the left side of the house will be used, one tree should be no issue, however one tree is within 5' of foundation and may not make it. Trees will be replaced 2:1 if necessary.

Holes will be poked into the current foundation for I beams to be placed. Lifting company will determine whether these run front to back or side to side. Using the existing cement floor in the basement, hydraulic lifts will be set up to raise the house from the current foundation. Cribs will be built under the I Beams inside the house foundation on the current cement floor as the house is lifted. House will be raised approximately 3 feet above where new foundations will end. (could be about 13-15' in the air)

Once cribs are situated and house is stable, existing foundation and flooring will be removed (flooring under cribs will not be removed at this time, it will be removed by hand after house is resettled). With the house in the air, foundations (insulated cement forms) and footings for columns will be poured. Wood walls of foundation will then be added (step down foundation, so sides and water side (walk out) will be built). Window opening will be placed to correspond to I beam locations for removal.

Once foundation is complete, the house will be lowered, temporary lally columns added, I beams and cribs then removed. Backfill will be brought in and added to the outside of the house around the foundation. Finally cement under where cribs were placed will be broken up and removed.

NM Construction estimates 6-8 weeks for completion of this stage. Then sub-contractors will be brought in for plumbing in the basement, floor will be poured last.

Hay waddles and silt fence will be used throughout the construction process to provide containment of any incidental runoff.

EXISTING VEGETATION

Because the house's footprint extension is only proposed towards road where there are no trees, whereas the sides of the existing house and new foundation will be placed in same locations as they exist today, the intention is to retain the existing tree vegetation. One tree may be affected by the necessary excavation to install the foundation. In the unlikely situation that is impacted, it will be replaced 2:1 as indicated in the plan map.

SITE IMPROVEMENTS

Improvements to site.

1. Removal of shed on right side of house near water (8'5"x8'5")
2. A portion of the impervious concrete patio will be replaced by pervious landscaping (12'x21') and tiered landscaping beds (vegetable, herb, ground cover plantings)
3. Impervious cement walkway and porch on left side of house will be removed (5'x20' concrete & 8.5'x19' concrete/covered porch). Drip edge pervious gravel bed will be added, in addition to native plantings ((Boxwood, Hydrangea, Lilac, Hosta's, Spirea, Phlox etc).
4. Removal of a portion of existing pavers on the right side of the house next to the water to be replaced with grass (continuation of lawn area like neighboring property). (7'x25')

5. Landscaping beds with native shrubs and perennials between house addition and driveway will replace some existing impervious concrete and asphalt.
6. Drip edge will replace gutters around entire house.