

To: Sturbridge Conservation Commission  
From: Robert Haveles, Project Architect  
CC: Lenny Jalbert, Deborah Weber, Susan Gross, Heather Bennett  
Date: December 29, 2022  
Re: **16 Mt Dan Road**

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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.

### **GENERAL PROJECT OVERVIEW AND PREMISE OF PROJECT**

The property has been in the same family ownership since the 1920's and it is time to replace the existing house with an energy savings and improved structure that will have a full foundation basement that can be used as living space and a full first floor with stair up to an attic space. The existing house has been a collection of original cabin and some additions that took place since the 1920's.

The existing house sits below road level by approximately 10' with a steep slope with set of stairs to transition the height difference. This becomes a dangerous situation as the steps over time become covered with moss and mold due to the lack of sunlight. Additionally, there are some very large oaks and pines that are located along side of Mt. Dan Road (outside the 50' buffer- closer to 75') that overhang the current structure and have become a danger under certain weather conditions and does limit sunlight to along upper portion of the lot which also creates the issue of mold and moss developing on the roof surfaces. The proposed design will also lessen the extreme slopes and provide improved water infiltration.

Regarding zoning, the existing house is non-conforming as the house violates the northerly side setback limit line with the present structure being within 3.5' of the property line.

The owners have the desire to raze the present structure and rebuild new which provides the opportunity to provide a more efficient and energy savings structure that could be used throughout all seasons. Additionally, the proposed would also position the new structure away from the northern side yard property line to have the new structure comply with the side setback. As part of the building design and it's repositioning, the front of the house (facing Mt. Dan Road) includes expansion on this side of the house which takes place outside of the 50' buffer line. The required front yard setback is 30'. The existing building is non-conforming as it is currently 23.3' +/- . The design of the new house and its main additional space was intentionally placed outside the 50' buffer and will remain as non-conforming. This has been reviewed with the Town Planner and had been noted that improvements to zoning non-conforming conditions is a positive. It is understood that there is still a filing required with the ZBA but we wish to point out that the proposed design has not been performed in a vacuum or solely on the desires and preferences of the owners. It has been a collaboration and respect for all aspects and entities concerns.

Although it will be noted further in this document, the existing vegetation at the southerly end (side property line) around the existing swale is not being touched. That will remain in its current state providing shade and cover to the ground area to the shoreline.

## ALTERNATIVE ANALYSIS

In our evaluation and design alternatives there were many issues that were taken into consideration.

- Conservation – (erosion, vegetation, protection, disturbance, shade, by-laws conforming, shoreline)
- Natural features and their protection
- Existing structure condition
- Existing topography (steep grades from Mt. Dan Road)
- Existing obstructions (rock boulders)
- Access to the site and replacement house
- Views to the lake
- Dangerous conditions
- House design to balance functionality, aesthetics, and affordability
- Zoning
- Consideration was given to providing drive down to lower level – that has been dismissed.

Considering all the above, we came to the following design conclusions and proposed house replacement and site improvements.

The house would be a single-story house with a habitable walkout basement to be used for living and sleeping areas and a stair accessed attic area. The house's first floor level would be approximately 16" +/- above grade of Mt Dan Road. This will require earth fill be brought in to remove the steep grade and provide more permeable fill and infiltration along the roadside and the house's side yards.

The design is also having to deal with natural land features such as significant partially buried boulders. We are not sure as to how big they are, but the current boulder locations dictate that the new house location be positioned between and away from them which moves the proposed primary house back wall further away (but within the 50' buffer) from the 25' buffer no touch zone.

As part of the new house repositioning, it is moved to the south away from the northerly side yard property line which will bring this portion of the house in conformity with zoning. This was also necessary to avoid an existing boulder. Along with this decision comes the ability to provide more open side yard that will provide additional gradual grading and ground area for permeability of water versus it being directed towards the side yard and neighbor's property under the existing conditions of the steep slopes and the current building location being only 3.5' away from the property line.

Under the current conservation by-laws there is the allowance of the reconstruction of the existing footprint of the existing house within the 50' buffer. We have replicated that on the floor plans and site plans provided. With the modifications to the plan there is a net reduction of 32 SF of building construction within the 50' buffer. There is a small section of the existing deck that resides in the 25' buffer zone and we are proposing that all new construction be outside of the 25' buffer zone.

The square footages are as follows:

Existing House footprint and deck = 1240 SF

Existing House within 50' buffer = **804 SF**

Existing Deck and Stairs within 50' buffer = **164 SF**

Existing Total within the 50' buffer = **968 SF**

Total Proposed House and deck footprint: 1,470 SF

Portion of Proposed House area within the 50' buffer = **716 SF**

Proposed Deck and Stairs area within 50' buffer: **220SF**

Proposed Front Entry: 52 SF – None within 50' buffer.

Total construction area within the 50' buffer = **936 SF**

Total construction in the 50' buffer area is a **NET REDUCTION of 32 SF.**

**We are requesting a waiver for the allowance of construction within the 50' buffer zone.**

## **DEMOLITION AND PROPOSED REPLACEMENT HOUSE CONSTRUCTION**

### **Demolition**

One of the first steps would be to remove the existing trees that have been marked for removal. This is necessary as some are deemed dead and some that are required to be removed to allow for placement of the new house. This would require the removal of the trees along Mt Dan Road in particular.

Once the trees have been removed, it permits the necessary equipment required to demolish the existing house. All remains to be removed including any concrete piers or partial foundations concrete or otherwise will be removed. As to the timing of this, may depend on weather conditions. Some of the work may be best performed during the winter months while ground is more solid but safety needs to be considered.

### **New Construction**

A standard concrete foundation is proposed for the new house. A 3' over dig will be required around the perimeter of the proposed principal house. Any piers or foundation post supports will be performed by Sonotubes or helical piles that provide less disruption to the ground area.

As soon as ground is ready (frost and snow free - hoping for March), construction of new house may begin.

Hay waddles and silt fence (as standard practice or as conditions are set by the Conservation Commission) will be used throughout the construction process to prevent containment of any incidental erosion or runoff.

## **EXISTING VEGETATION**

There is existing vegetation that is along the southerly property line and also borders an existing drainage swale. This vegetation REMAINS EXISTING AND UNTOUCHED. There is nothing relating to the new house construction that affects this existing stand of vegetation.

Arborist Tom Chamberlain has been consulted on the existing trees and proposed plantings.

There is a stand of 6 major trees that border the vegetation along the swale that REMAIN AND UNTOUCHED.

There are several trees that have been identified on the proposed site plan prepared by Jalbert Engineering Inc., that have been reviewed by an arborist and have been designated to be removed due to disease and/or are dead and dangerous.

Trees along Mt. Dan Road are scheduled to be removed for the purposes of dealing with lessening of steep slopes and providing eased grading and more permeable ground area and for construction of the new house.

On the first submission, there were 3 trees designated for removal along the shoreline. The revised submission is proposing that only 2 trees be removed (instead of 3) based on the recommendation from Tom Chamberlain due to their condition.

## **SITE IMPROVEMENTS**

Improvements to site.

1. Grading around the house will be improved by eliminating steep slopes immediately around the house and mitigating water run off near neighboring property line. An approximate 3.5' high precast decorative modular retaining wall system will be provided on the north end of the house.

2. Pervious pavers will be used under the elevated deck.
3. New indigenous trees and plantings along with some ornamental plantings to be provided. Refer to Proposed Site Plan dated updated 12/29/22.
4. Existing deck portion currently within the 25' buffer zone will not be in the 25' buffer zone with the new design.
5. The proposed stairs leading from the deck originally shown on the plans to the north end of the deck have been repositioned to the south side of the elevated. This moves the stairs further back a couple of feet from the 25' buffer line than the original. It would be the request of the owners to have the stairs positioned as originally shown on the north side of deck which will be more functional for circulation. We ask the Board's favor to allow the stair be positioned on either the north or south side of the elevated deck.
6. Stormwater chambers proposed to control runoff and provide controlled infiltration.
7. Based on various design considerations and with the decision to not provide a drive under in the new house design, it is necessary to create additional and improved parking area on the west side of Mt. Dan Road. This requires the removal of one tree (Outside the 100' buffer) which will allow modifications to the grading to provide additional parking. This will be beneficial not only to the applicants but also to all those who travel Mt. Dan Road by providing additional parking so not having to straddle the road's edge thus narrowing the travel lane.
8. By raising the grade along Mt. Dan Road, the level of safety to the driver's using Mt. Dan Road is created. The steep slopes that abut the road now would be minimized and made more gradual. The installation of landscaping modular retaining walls on each side of the house to be installed.
9. The removal of the existing drive which was used to access the lower level of the lot for the well will be removed, loamed and seeded. A timber walkway will be provided to assist in providing a safe transition from the upper grades to the lower grade.
10. Granite steps are being added at the shoreline for safe access