

Bill Wundram
16805 Loma St.
Los Gatos, Ca. 95032

March 31, 2025

Re: Existing Structural Conditions

Dear Bill,

Per your request, I have reviewed the structural conditions of the existing one story residential structure at 16805 Loma St. in Los Gatos, Ca. The following is a summary of what was observed.

1. Roof Framing: The existing roof framing consists of 2x4 rafters at 24 inches on center and a 1x ridge full length front to rear down the middle. The existing rafters are over spanned without any purlins or bracing throughout. In addition, the existing 1x ridge is also unbraced. The existing roof system should be replaced completely using upgraded 2x6 rafters, braced purlins, and a new 2x8 ridge braced at 4 feet on center throughout it's length.

2. Wall Framing: The existing wall framing consists of 2x4 studs covered with horizontal siding at the exterior and 1/4 inch sheetrock at the interior. Unfortunately, the entire structure has no insulation, and knob and tube wiring throughout. The only lateral bracing currently is the existing sheetrock. The horizontal siding does not provide any lateral capability. Replacing the knob and tube wiring as well as adding insulation would require the removal of the sheetrock throughout. Since sheetrock bracing is no longer allowed in this seismic zone, removing the existing sheetrock would then trigger new lateral bracing. The entire structure would have to be redesigned for lateral loads and new lateral bracing would need to be provided throughout.

3. Floor Framing: Like the roof framing, the existing floor framing is over spanned and not adequately supported. The existing floor was out of level and shims were added in an attempt to re-level the framing. Shims were found between the floor joists and the girders, between the girders and their support posts, between the girders and the mudsill, and between the mudsill and the foundation. In addition, the mudsill is not connected to the foundation with anchor bolts. Despite all the shims, the floor continues to be out of level and would need to be re-leveled. The entire floor system should be replaced, properly re-leveled, and the new mudsill should be anchor bolted to the foundation.

4. Foundation: While the exiting foundation was not observed to be badly damaged, there were several cracks and signs of efflorescence in a number of places. These are signs of excess water at the foundation that will eventually cause

the foundation to deteriorate and lose strength. In addition, the uneven floors discussed in item 3 above is probably due to the water at the foundation causing differential settlement and cracks in the foundation. At a minimum, drainage should be provided to remove the water from near the foundation to help stabilize the foundation. This may require additional retrofit to the foundation if correcting the drainage is not enough. Any attempt to re-level the floor should only be done only after the foundation has been stabilized. It is entirely possible that a new deeper foundation may be required to eliminate this problem.

Given the numerous problems with the existing structure at every level, it would not be economical to repair the existing structure. Therefore, it is my recommendation the existing structure be demolished and replaced with a new structure that addresses all the concerns listed above. As always, this review is strictly limited to the structural items listed above. Please feel free to contact me if there are any further questions.

Sincerely



Charles Williams
Registered Civil Engineer



04/03/2025