



August 2, 2021

Maggie Burke
margritburke@gmail.com

Reference: Crawlspce Inspection
375 Sharkeyville Road, Bolton, Vermont

Dear Maggie,

As requested, on July 9, 2021, I visited the above referenced site to complete an inspection of the floor framing and beams in the crawlspace of the home. My review of the home was limited to the crawlspace due to concerns about the crawlspace framing raised in a recent inspection.

The crawlspace is a shallow crawlspace with limited access through an access hatch at the rear of the home. Although the access was limited, once inside the crawlspace all of the interior framing, bottom of first floor sheathing, beams, and posts were visible. The exterior sill was covered with spray foam insulation and could not be inspected. The home is approximately 24'-6"x32'-6" (exterior dimension). It is single story with a small loft area. The foundation of the home is concrete masonry units in average condition. The first-floor framing appeared to be in average condition with the exception being the first-floor beams and posts. One of the first-floor beams had recently been repaired using LVL material. Although the material used in the repair was quality material several holes and splices were installed in the LVL beams resulting in an unacceptable installation.

The framing of the floor is comprised of 2x6 floor joists spaced at 16" on center. The floor joists and floor sheathing show signs of minor moisture damage. The sheathing appears to be in acceptable condition. Some areas show signs of moisture staining but there does not appear to be any structurally significant rot in the floor sheathing. In general, the floor joists appear to have minor rot damage at the bottom edge of the joists that appears to be where nails or fasteners previously penetrated the bottom of the joists. Based upon the spacing of the fasteners that were removed, we suspect that at some point there was strapping or sheathing installed on the bottom of the joists. The minor areas of rot do not appear to be structurally significant. The floor beams show signs of significant rot throughout the beams. Based upon observations of the framing, we suspect that the beams were not protected by whatever material was previously attached to the bottom of the floor joists and therefore the beams were exposed to moisture from the crawlspace. Furthermore, the existing beams rest on steel columns which in turn are supported on 16"x16" concrete footings that are buried slightly below the crawlspace floor. In at least one location the steel post has rusted out and is no longer supporting the floor beam. The condition of the posts warrants replacement of the posts. The crawlspace is a dirt floor that is covered by a rudimentary vapor barrier that is not properly installed. The moisture level in the crawlspace at the time of inspection appeared to be high.

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Based upon the conditions present at the time of the site visit, we recommend that the beams supporting the first floor be replaced with new pressure treated beams and posts on new concrete footings. We further recommend that a new vapor barrier be installed in the basement to reduce future moisture issues. We have attached SSK-1 which outlines the recommendations for beam replacement. After completion of the beam replacement, installation of a vapor barrier such as 15 mil StegoWrap is warranted to reduce vapor transmission from the dirt floor into the crawlspace.

Current market volatility makes it difficult to estimate the cost of repairs to the crawlspace beams and vapor barrier. If a qualified contractor can be found to complete the work in the crawlspace, we expect that the cost of repairs would be between \$10,000 and \$15,000. This estimate is an engineer's estimate based upon past experience with repair costs of similar limited access projects. To get an accurate estimate of the repair costs a qualified contractor interested in completing the work should be consulted.

If you have any questions concerning this report or the attached sketches, please contact us. We also have several photographs from the site visit that are available in digital format if desired.

Sincerely,



Christopher J. Temple, P.E.

Enclosures: SSK-1 Floor Framing Plan

