

October 5, 2020

Development Review Board
City of Burlington
Burlington, VT 05401

re: response to staff comments of 11-17 Monroe St appeal

Dear Board Members,

In response to Scott's recommendation to the Board to uphold the determination that the addition of a shed dormer increases building height, I offer the following comments:

- 1) I assume the packet of information you've been given includes the first memo I wrote on this matter, dated July 27, 2020, in which I laid out my thinking about calculation of roof height.
- 2) the two shed dormer examples in the original appeal were included not to demonstrate any particular height, but rather to demonstrate that the addition of a shed dormer, when constructed so as to fall within an existing roof form does not increase building height as such height is defined in the CDO.
- 3) I agree that the addition of a shed dormer within the gable roof form of an existing building does increase interior volume, but I strongly disagree that it increases building height as such height is defined in the CDO. For example, a shed dormer added to a one or two story building would clearly add volume, but I doubt there would be any disagreement as to whether it increased building height.
- 4) I also agree that a double-pitch is not defined in the CDO; however, I believe Scott incorrectly concludes that a "Double-pitch could also simply mean two different roof pitches.", which is the basis for his assertion that the roof height of the shed dormer should become part of the formula for determining roof height. While a double-pitch roof could have two different roof pitches, all definitions I can find for a double-pitch roof very clearly assume that both of those pitches must join at a peak. In other words, if a shed dormer is designed (as the subject of this appeal has been) to intersect the main roof at a point below the ridgeline where the two main roof planes join to form the peak of the roof, then the CDO's direction to measure height half-way "between the roofplate and the ridge of the highest gable" must be held as the only way to measure building height when the predominant form is a gable roof.

Here is a definition from Wikipedia to support the my contention that a double-pitch roof must have two planes joining at a peak:

Multi-pitched roofs: [Gable](#) (ridged, dual-pitched, peaked, saddle, pack-saddle, saddleback,^[5] span roof^[6]): A simple roof design shaped like an inverted V. (Underline added.)

Here is a definition from a building manufacturer's website defining a double pitch roof:

2. Double-pitched roof is a traditional, most often used roof. It is the most popular roof type. Generally, we can describe the double pitched roof as a triangle that consists of two surfaces which are connected with ridge on the top. Two surfaces of the roof are supported by load-bearing walls and in the end the triangles are formed which are named as gables. Gables often have windows installed for the natural light to come inside. The main advantage of this roof is that you can install various types of roof covering with the lowest outcrop. Double-pitched roof can be classified as symmetrical and asymmetrical. The first option is the most popular. It has equal surfaces and can be considered as a perfect triangle. Asymmetrical roof has the roof ridge placed not in the center and the roof surfaces are different by length and area. From the aesthetic point of view – it is very interesting design but it negatively affects the usage of building area below the roof.

The pitched roof shown in the diagram in Scott's comments is an example of a symmetrical double-pitch roof. The following foto shows an example of an asymmetrical double-pitch roof:



Clearly, this double-pitch roof has two different roof pitches; however, both pitches are joined at a peak, and must do so in order to be considered a double-pitch roof.

I think the reference to whether further guidance can be gleaned from Section 5.2.6 (b), *Exceptions to Height Limits* is moot, because we're not looking to find an exception to any height limit, as our contention is that the addition of the shed dormer does not add building height. The height is determined by measuring the half-way point between the roofplate and the ridge of the highest gable. These two points are clearly defined in the CDO as directly connected to each other, and must be the points of the main roof form, as there is no connection between the roofplate of the dormer and the highest ridge.

Finally, while the roof form would be altered, the rooflines of roofplate and highest gable are being maintained. Altering the roof form does not in and of itself alter the calculation of roof height.

Thank you in advance for your consideration of this response to staff comments.

Sincerely,

Handwritten signature of Bob Duncan in black ink.

Bob Duncan, RA, AIA