



## HEIGHT INSTRUCTIONS – RESIDENTIAL AVERAGE HEIGHT

Last Updated January 2020

### PURPOSE

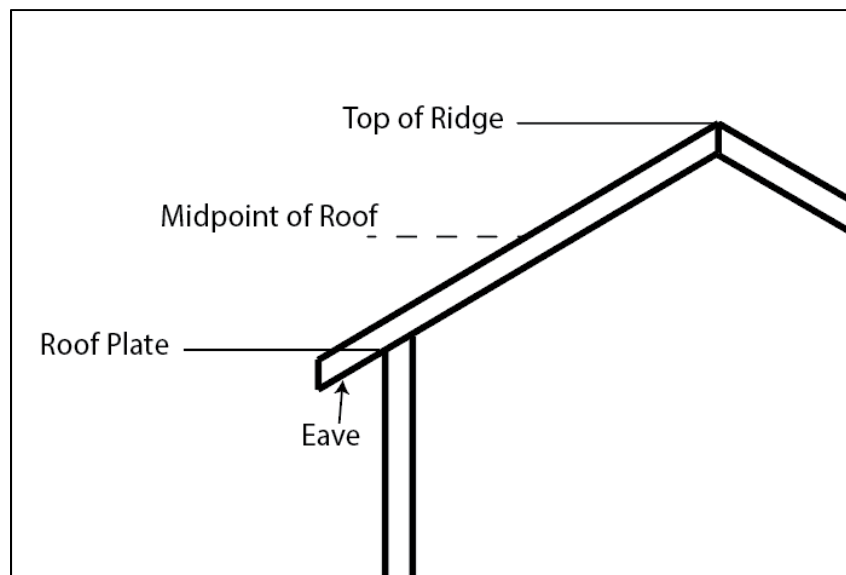
In Berkeley, all Residential Districts include an Average Height limit except the Residential Southside (R-S) District.<sup>1</sup> Height limits listed in R-District development standards are for Average Height.<sup>2</sup> This document provides Instructions to help applicants understand how to calculate and visually depict the Average Height of a residential structure, in order to comply with the development standards of the Berkeley Municipal Code (BMC). These instructions apply to main buildings, and accessory buildings and structures.

### BERKELEY MUNICIPAL CODE DEFINITION

As depicted in Figure 1 below, Average Building Height is defined as:

*The vertical distance from the average level of the highest and lowest point of that portion of the lot covered by the building (or, in the case of residential additions, that portion of the lot covered by the addition) to: in the cases of sloped, hipped or gabled roofs, the average height of the roof between the ridge and where the eave meets the plate (See Figure 1); in the case of a roof with parapet walls, to the top of the parapet wall; in the case of a gambrel roof the average height of the roof between the ridge and the point where the uppermost change in the roof's slope occurs; in the case of a mansard roof, to the height of the deck; and in the case of a shed roof, to the height of the roof ridge. Dormers, as defined in this subsection, shall not be included in the average height calculation (BMC Chapter 23F.04).*

Figure 1. Midpoint on a Gable Roof, Showing where Eave meets Plate



<sup>1</sup> For properties located in a residential district within the Hillside (H) overlay, there is also a maximum building height limit (see Height Instructions – Residential Maximum Height).

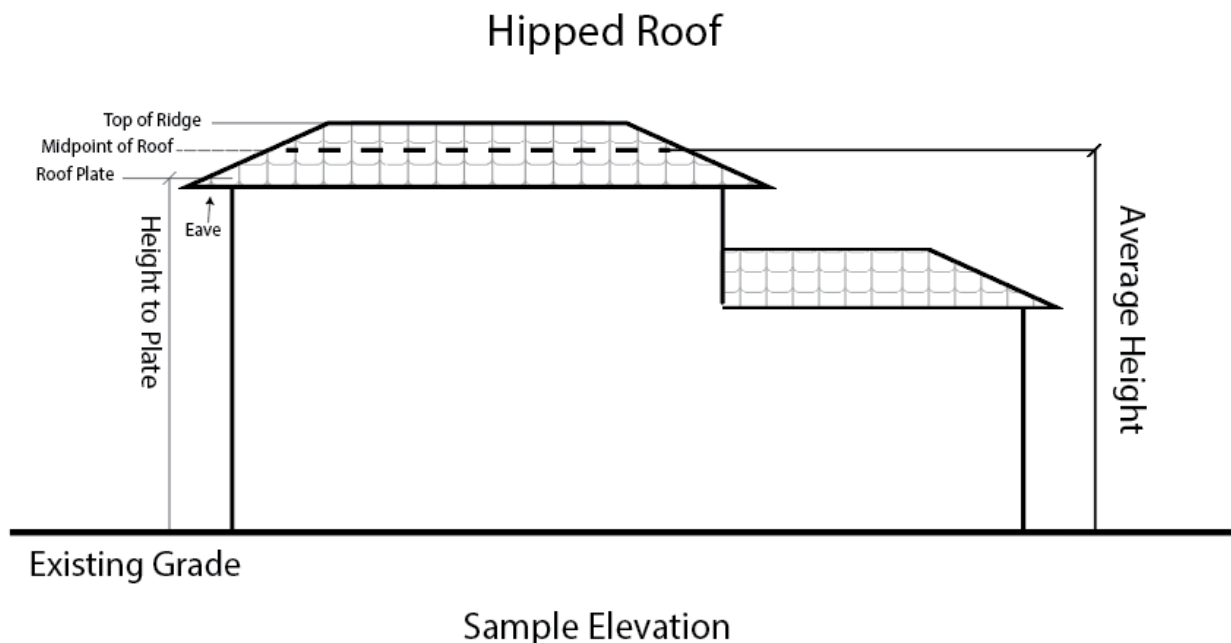
<sup>2</sup> For Residential Districts, R-1 through R-4, if the height limit does not say “average”, it is assumed to be an average height limit

## RESIDENTIAL AVERAGE BUILDING HEIGHT DRAWING

As stated in the [BMC Chapter 23F.04](#), the Average Building Height dimension is dependent on the roof type of the subject building. Each Elevation drawing in your Plan Set should show the average grade of the site on that elevation of the house, as well as a dimension provided to the point on the roof described in the above definition (which is dependent on roof type).

For simplicity in describing average height, a flat lot is shown in Figure 2, below. **Please note: most sites are not flat.** Each elevation must include height dimensions from average grade to: 1) roof plate, 2) top of ridge, 3) midpoint on the roof, and 4) average height:

Figure 2. Flat-Lot Building Elevation Showing Average Height

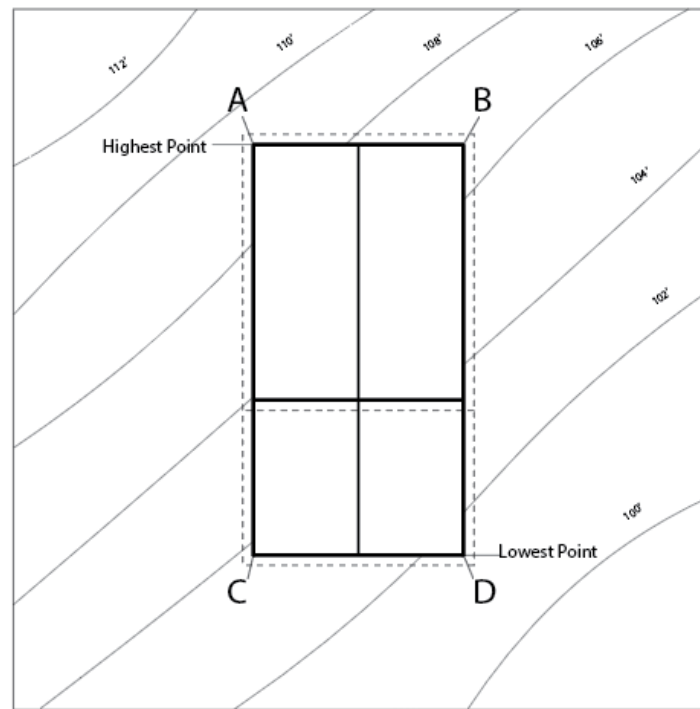


## AVERAGE GRADE

Most sites have a “cross slope” (such as a front-to-back and a side-to-side slope). On sites with a cross-slope the average grade is determined by averaging the lowest and highest points on the lot that are covered by the building (see Figure 3, below). The resulting average grade elevation should then be used to determine the average height of the building.

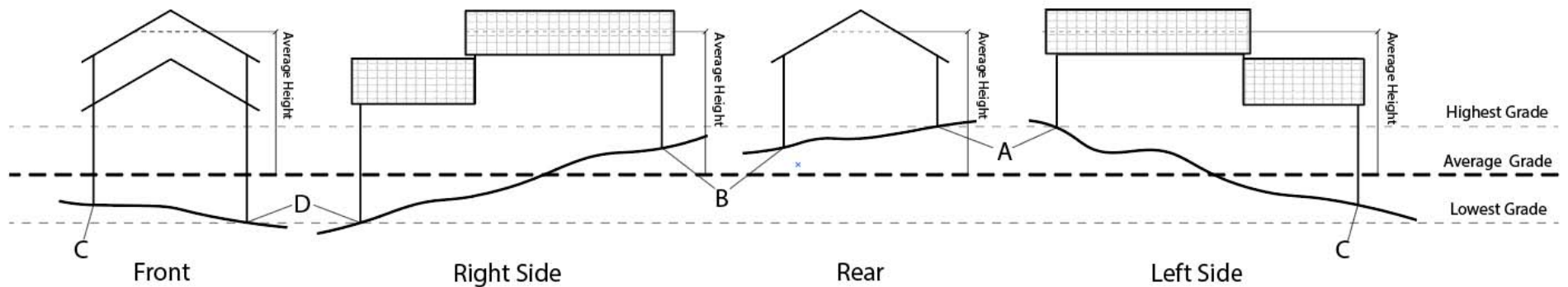
Once the average grade is determined, elevation drawings from each side of the house must be provided, depicting the dimensions from average grade to: 1) roof plate, 2) midpoint on the roof (if applicable), 3) roof ridge, and 4) Average Height. As described above and shown in Figure 3, below, the highest and lowest point of the site covered by the building may not be along one elevation. As such, the average grade shall be determined by taking the average between the highest and lowest points (Points A and D, in the below scenario), and shown in elevation like Figure 4.

Figure 3. Sample Site Plan showing “cross slope”



Site Plan

Figure 4. Sloped-Lot Building Elevations Showing Average Grade and Height (for a Gabled roof)



Residential Additions

When designing an addition to an existing home, the average grade and average height of the addition must be calculated and depicted on the plans and each elevation drawing. The Site Plan must show the area of the addition, including the highest and lowest points of the grade in the area of the addition (See Figures 5 and 6, below). The average height of the addition is then measured from this average grade level to the top or midpoint of the roof (dependent on roof type, as shown in Figure 7).

Figure 5. Sample Site Plan showing Area of Addition

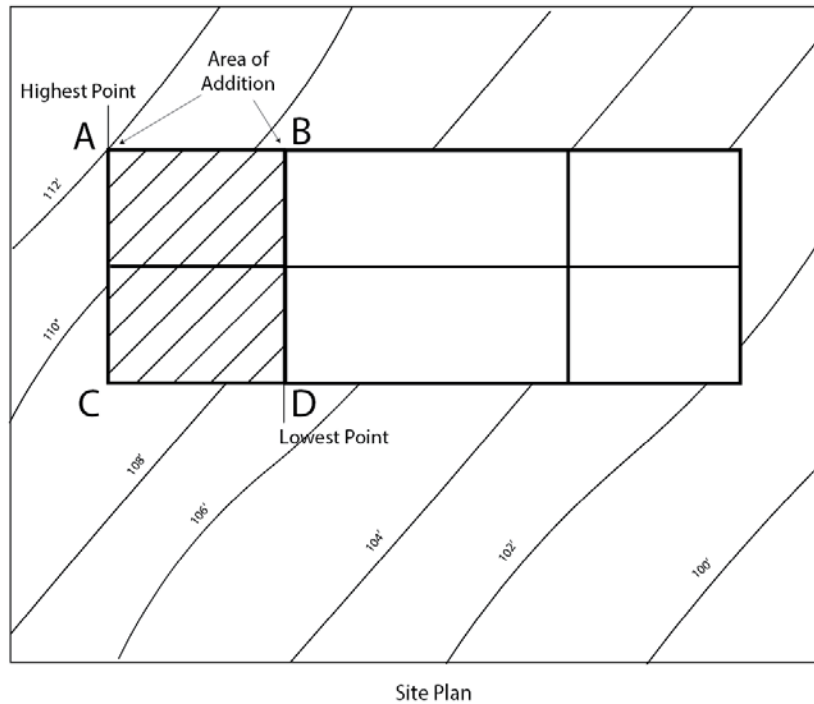


Figure 6. Elevation Drawing showing Average Height of Addition

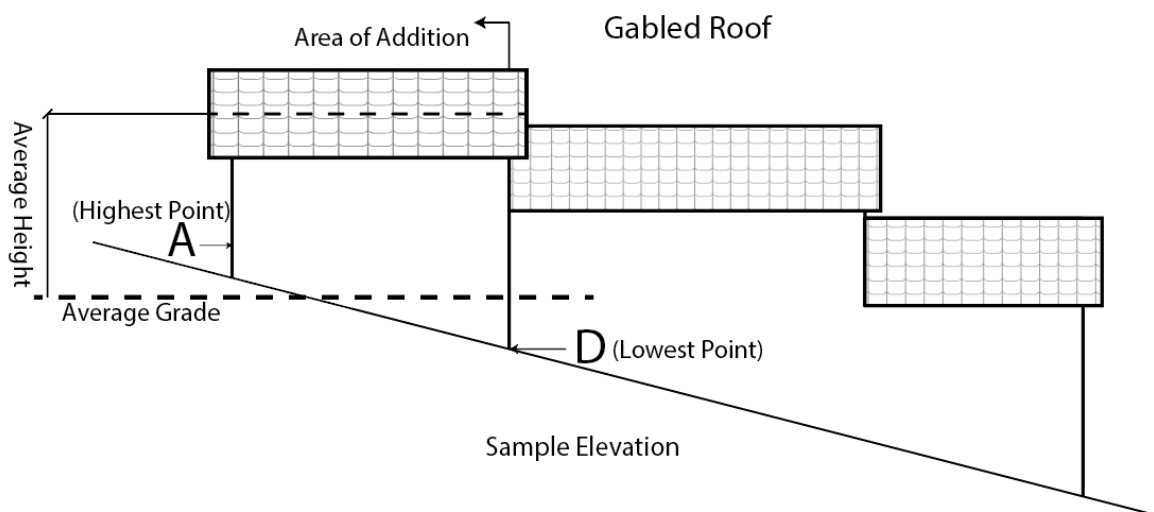


Figure 7. Sample Average Heights of different Roof-Types

