



CITY OF KIRKLAND

Planning and Community Development Department
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CALCULATING AVERAGE BUILDING ELEVATION

NOTE:

INCOMPLETE AVERAGE BUILDING ELEVATION INFORMATION COULD SUBSTANTIALLY DELAY THE PROCESSING OF YOUR APPLICATION.

SEE CITY OF KIRKLAND SURVEY POLICY FOR ADDITIONAL INFORMATION AND PROFESSIONAL SURVEY REQUIREMENTS.

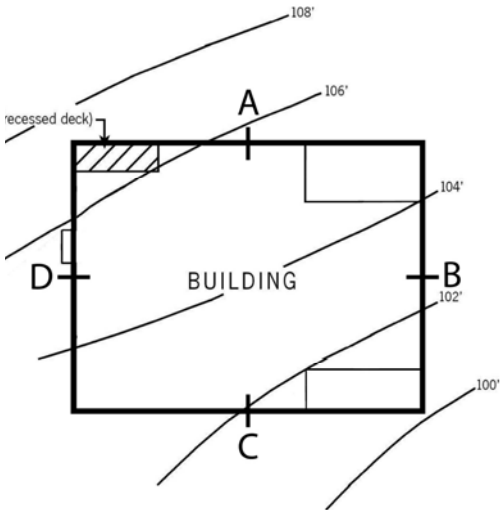
No part of a structure may exceed the maximum height above "Average Building Elevation" specified in the applicable use zone section of the Zoning Code except for minor elements of a structure as specified in Zoning Code Section 115.60. Zoning Code Section 5.10.045 **defines Average Building Elevation as:**

"The weighted average elevation of the topography, prior to any development activity, either (1) under the footprint of a building as measured by delineating the smallest rectangle which can enclose the building footprint and then averaging the elevations taken at the midpoint of each side of the rectangle, or (2) at the center of all exterior walls of a building or structure." The measurement includes decks and porches, unless the deck or porch has no walls at or below the deck level and no roof above the deck or porch, as well as cantilevered portions of a building which enclose interior space. When a building or structure contains townhouses or other attached but otherwise independent building units, the average building elevation is calculated separately for each unit.

AVERAGE BUILDING ELEVATION FORMULA

$$\frac{(\text{Midpoint Elevations}) \times (\text{Length of Wall Segments})}{(\text{Total Length of Wall Segments})}$$

You may choose between two formulas to complete the average building elevation calculations. The first formula—"Option 1," shown on this sheet—is a simplified version of the calculation. The second formula, "Option 2," is a more complicated version, using all wall segments of the building rather than just a rectangle drawn around it. If you are interested in comparing and/or using the Option 2 formula, please see Plate 17B in the Zoning Code.



Site Plan
Not to scale

Calculating Average Building Elevation

Option 1

$$\frac{(A \times a) + (B \times b) + (C \times c) + (D \times d)}{a + b + c + d} = \text{Average Building Elevation (ABE)}$$

Where A, B, C, D...= Existing Ground Elevation at Midpoint of Rectangle Segment*

And a, b, c, d...= Length of Rectangle Segment

Midpoint Elevation	Rectangle Segment Length
A = 105.6	a = 47'
B = 102.5	b = 40'
C = 101.9	c = 47'
D = 105.2	d = 40'

CALCULATION EXAMPLE:

$$\frac{(105.6)(47) + (102.5)(40) + (101.9)(47) + (105.2)(40)}{47 + 40 + 47 + 40} = \frac{18,060.5}{174} = 103.80 \text{ ABE}$$

*Rectangle shall not include those items allowed to extend into required yards through KZC 115.115(3)(d).

BEFORE SUBMITTING YOUR CONSTRUCTION DRAWINGS, CHECK TO SEE THAT YOU HAVE PROVIDED THE INFORMATION BELOW. CALL THE PLANNING DEPARTMENT TO FIND THE MAXIMUM HEIGHT ABOVE ABE FOR YOUR ZONING DISTRICT.

- The site plan and the elevation drawings must be drawn to scale, for example 1"=20' for the site plan.
- Clearly show existing topography on your site plan. Topography should be shown in 2' increments.
- Submit (with the site plan) your average building elevation calculations using one of the formulas described on the front side of this page.
- Indicate on an **elevation drawing** where the average building elevation strikes the building, the elevation of the finished first floor, the proposed elevation of the highest point of the structure, and the elevation of the maximum allowable height (see example below).
- Indicate on the **site plan** the elevation of the finished first floor.
- Indicate the **elevation** and **location** of a **fixed point (benchmark)** within the ADJACENT RIGHT-OF-WAY or other point approved by the Planning Department. The benchmark elevation and location **must** be provided and cannot be a part of the proposed structure. Note: Benchmark must be established, verified and remain during construction so height can be verified when completed. See City of Kirkland Survey Policy for additional requirements.
- Include portions of the structure that are covered by roof in the ABE calculation even if they do not have walls. Cantilevered portions enclosing interior space must be included in the ABE calculation.
- Sections of the structure that are below the finished grade are not used in the ABE calculation. Building wall segments more than 4 feet in height above finished grade and enclosing interior space are included in the calculation.
- For additions, you must provide an average building elevation calculation for the entire structure.
- Vents & chimneys may exceed the maximum height (for detached dwelling units)

CROSS-SECTION REPRESENTATION OF ABE

