

16.12.020. – “A” definitions.

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Average Building Elevation means the weighted average elevation of the topography, prior to any development activity.

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16.23.050 Maximum building and structure height standards.

A. Application of maximum height standards.

1. Table 16.23.050(A) establishes the maximum height standards for buildings and structures within each zone and overlay.
2. Areas not identified in Table 16.23.050(A) are subject to the height standards specified for the R-20/R-30 zone.
3. Where Table 16.23.050(A) specifies eligibility for a height bonus, a property owner may elect to apply the additional height standards ~~in subsection (C) of this section in lieu of the height standards in Table 16.23.050(A)~~; provided, that:
 - a. The total structural coverage on the lot does not exceed 13 percent, excluding the structural coverage bonus set forth in MMC 16.23.040; or
 - b. If the lot area is 16,000 square feet or less, the total structural coverage on the lot does not exceed 17½ percent, excluding the structural coverage bonus set forth in MMC 16.23.040.

~~B. Maximum height is determined by the zone or height overlay where the building or structure is located and the corresponding unit of height specified for original and finished grade prescribed in the tables. Maximum height is measured from the average building elevation to the highest point of a flat roof, or to the ridge of a pitched roof.~~

- ~~1. The maximum building façade height on a downhill side of a sloping lot shall not exceed the maximum height allowed by Table 16.23.050. The building façade height shall be measured from the existing grade or finished grade, whichever is lower, at the furthest downhill extent of the proposed building, to the top of the exterior wall façade supporting the roof framing, rafters, trusses, etc.~~

~~C. A property owner electing to apply the height bonus allowed pursuant to subsection (A)(3) of this section shall apply the height limits specified in Table 16.23.050(C).~~

~~C.D. The methods for measuring the height determining the average building elevation of buildings and structures are set forth in MMC 16.23.060.~~

~~D.E. Exemptions from maximum height requirements are set forth in MMC 16.23.070.~~

~~F. Eligibility for the bonus height standard in subsection (A)(3) of this section shall not apply where the total structural coverage on the lot exceeds 13 percent, excluding structural coverage that qualifies for the bonus under MMC 16.23.040.~~

Table 16.23.050(A): Maximum Height Standards

| Measurement Points | | Zoning/Height Overlay Maximum Height | | | | | |
|---------------------------|------------|--------------------------------------|-----------|---------|---------|---------|----------------|
| | | R-16 | R-20/R-30 | SR-30 | N-A | Public | Medina Heights |
| Original-Grade | High-Point | 25-foot | N/A* | N/A* | None | None | N/A* |
| | Low-Point | | 25-foot | 25-foot | | | 20-foot |
| Finished-Grade | High-Point | 28-foot | N/A* | N/A* | 30-foot | 35-foot | N/A* |
| | Low-Point | | 28-foot | 28-foot | | | 23-foot |
| Eligible for Height Bonus | | No | Yes | Yes | No | No | No |

| Zoning District / Height Overlay | Maximum Height (feet) | Height Bonus (feet) |
|----------------------------------|-----------------------|---------------------|
| R-16 | 25 | N/A |
| R-20/R-30 | 25 | 30 |
| SR-30 | 25 | 30 |
| N-A (Neighborhood Auto) | 30 | N/A |
| Public | 35 | N/A |
| Medina Heights Overlay | 20 | N/A |

16.23.060. Measuring building and structure height.

This section establishes methods required for applying height standards and is applied in conjunction with the height standards prescribed in MMC 16.23.050.

- A. Where multiple buildings and structures are located on the same lot, and are detached from each other, the height of each building or structure shall be measured independently from the others, except:
 - 1. Excluding trellises, arbors and similar open structures, if the distance between any buildings and/or structures is less than six feet, the buildings and structures that are less than six feet apart shall be considered attached for purposes of measuring height;
 - 2. If buildings are connected by a breezeway or similar above ground types of structures, the buildings shall be considered attached for purposes of measuring height.
- BG.** The following shall be excluded as part of the outside exterior wall/side of a building or structure for purposes of measuring height:
 - 1. Walls adjoining window wells where the area inside of the window well does not exceed 15 square feet of open surface area;
 - 2. Attached structures (e.g., uncovered decks, porches, steps, etc.), not exceeding 30 inches above original or finished existing grade, whichever is lower;
 - 3. Uncovered decks, porches, and verandas not qualifying for the exemption in subsection (BG)(2) of this section where the space below the structure is not

enclosed and not more than 25 percent of the ground surface below the structure is hardscape; and

4. Areas under roof eaves including gutters and areas under balconies provided they extend 24 inches or less from the exterior wall. Gutters extending six inches or less from the outer edge of the roof eaves shall be excluded from counting towards the 24-inch limit.

C. Average building elevation is calculated at the discretion of the applicant using one of the following methods:

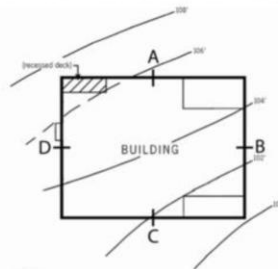
a. At the midpoint, measured horizontally, of each exterior wall of the structure, as shown in Figure 16.23.060(C)(a), or

b. At the midpoint of each side of the smallest rectangle that can be drawn to enclose the structure, as shown in Figure 16.23.060(C)(b).

Figure 16.23.060(C)(a) Calculating Average Building Elevation, Option 1

A, B, C, D... Existing Ground Elevation at Midpoint of Rectangle Segment*
 a, b, c, d... Length of Rectangle Segment

*Rectangle includes the perimeter of a deck or porch, 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.



| 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' |

Site Plan
 Not to scale

FORMULA:

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

EXAMPLE:

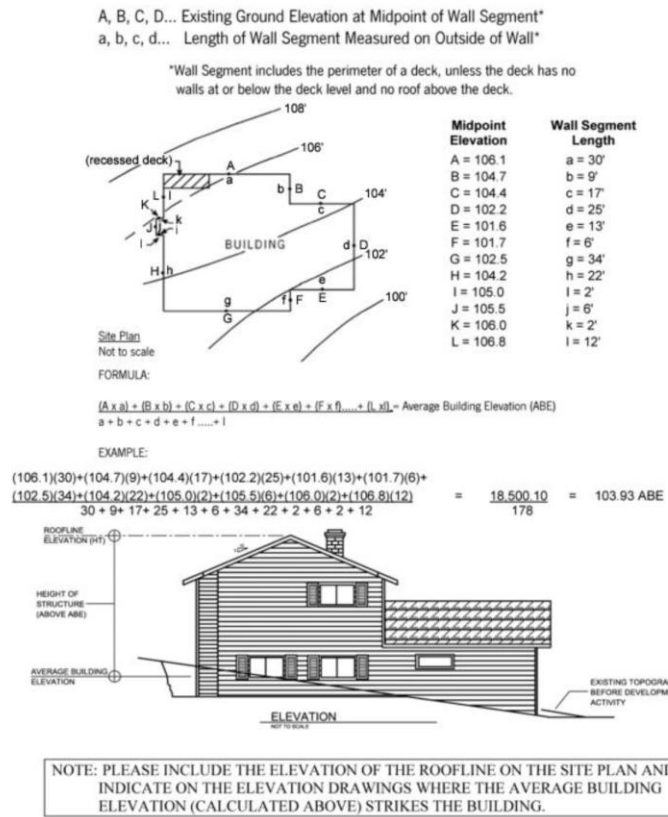
$$\frac{(105.6)(47) + (102.5)(40) + (101.9)(47) + (105.2)(40)}{47 + 40 + 47 + 40} = \frac{18,060.5}{174} = 103.80 \text{ ABE}$$



NOTE: PLEASE INCLUDE THE ELEVATION OF THE ROOFLINE ON THE SITE PLAN AND INDICATE ON THE ELEVATION DRAWINGS WHERE THE AVERAGE BUILDING ELEVATION (CALCULATED ABOVE) STRIKES THE BUILDING.

Example from Kirkland – Temp placeholder for our own example

Figure 16.23.060(C)(b) Calculating Average Building Elevation, Option 2



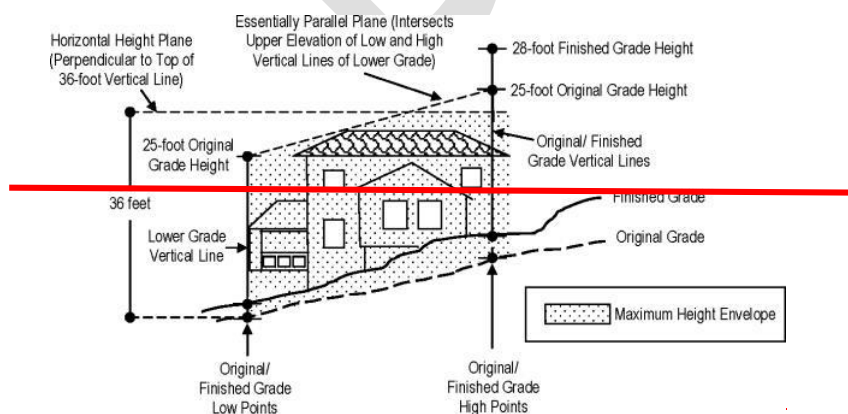
Example from Kirkland – Temp placeholder for our own example

~~B. In the R-16 zone, height shall be measured as shown in Figure 16.23.060(B) and as set forth in the following procedures:~~

- ~~1. The original grade shall be established as set forth in MMC 16.23.080;~~
- ~~2. The base for measuring height shall be established as follows:
 - ~~a. Base elevations shall be taken at four points where the outside of the exterior walls/sides of the building or structure intersect the following:
 - ~~i. The lowest point of the original grade;~~
 - ~~ii. The highest point of the original grade;~~
 - ~~iii. The lowest point of finished grade; and~~
 - ~~iv. The highest point of finished grade;~~~~
 - ~~b. The lower grade between original and finished grade shall be used for measuring height, which is determined as follows:~~~~

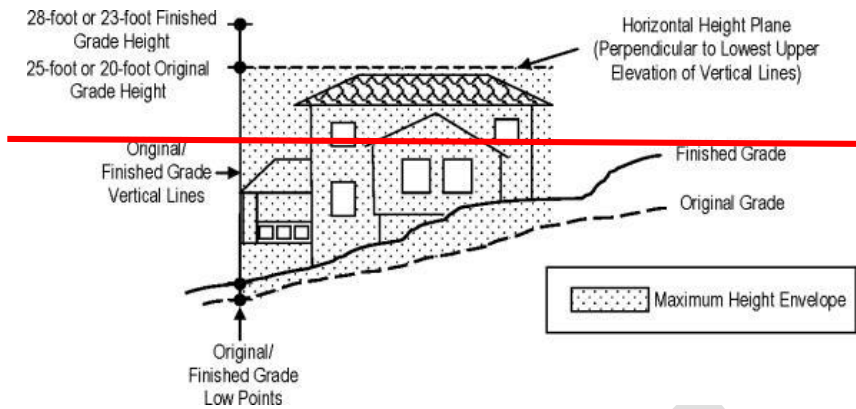
- i. ~~Starting at the two highest original and finished grade elevations determined under subsection (B)(2)(a)(ii) and (iv) of this section, a vertical line shall be extended by the applicable maximum height prescribed in Table 16.23.050(A);~~
 - ii. ~~The grade (original or finished) whose vertical line has the lower upper elevation (measured from a zero-elevation surface) shall be designated the "lower grade" to be used for measuring height;~~
3. ~~Maximum height shall be measured by extending a vertical line from the lowest and highest base elevations established in subsection (B)(2)(a) of this section of the lower grade by the distance of the applicable maximum height prescribed in Table 16.23.050(A);~~
 4. ~~Maximum height shall be a plane essentially parallel to the lower grade drawn by a line intersecting the upper elevation of the two vertical lines extending from the lower grade;~~
 5. ~~An additional height limitation shall apply to buildings and structures on sloping grades established as follows:~~
 - a. ~~A vertical line shall be extended a distance of 36 feet from the lowest point of original grade ascertained in subsection (B)(2)(a)(i) of this section;~~
 - b. ~~A horizontal plane shall be extended perpendicular from the top of the 36-foot vertical line;~~
 6. ~~The maximum height envelope shall be the area between the lower grade and the two height planes established in this section and shown in Figure 16.23.060(B);~~
 7. ~~No part of the building or structure, including roof lines, shall protrude above the maximum height envelope, except as allowed otherwise by law;~~
 8. ~~See subsection (E) of this section for establishing height plane parameters, subsection (F) of this section for establishing the orientation of the height plane, and subsection (G) of this section for height calculation exemptions.~~

Figure 16.23.060(B): R-16 Height Measurements



- ~~C. In the R-20, R-30, and SR-30 zones (except where the bonus height standards in Table 16.23.050(C) are used) and in the Medina Heights overlay, height shall be measured as shown in Figure 16.23.060(C) and as set forth in the following procedures:~~
- ~~1. The original grade shall be established as set forth in MMC 16.23.080;~~
 - ~~2. The base elevation for measuring height shall be taken at two points where the outside of the exterior walls/sides of the building or structure intersect the following:
 - ~~a. The lowest point of original grade;~~
 - ~~b. The lowest point of finished grade;~~~~
 - ~~3. Starting at the two base elevation points ascertained under subsection (C)(2) of this section, a vertical line shall be extended by the distance of the applicable maximum height prescribed in Table 16.23.050(A);~~
 - ~~4. The grade (original or finished) and corresponding vertical line established under subsection (C)(3) of this section that has the lower upper elevation (measured from a zero-elevation surface) shall be used to measure maximum height;~~
 - ~~5. Maximum height shall be a horizontal plane intersecting the upper elevation of the vertical line established in subsection (C)(4) of this section for measuring maximum height and shall be perpendicular to the same vertical line as shown in Figure 16.23.060(C);~~
 - ~~6. The maximum height envelope shall be the area between the applicable grade (original or finished) and the horizontal height plane established in this section and shown in Figure 16.23.060(C);~~
 - ~~7. No part of the building or structure, including roof lines, shall protrude above the maximum height envelope, except as allowed otherwise by law;~~
 - ~~8. See subsection (E) of this section for establishing the height plane parameter and subsection (G) of this section for height calculation exemptions.~~

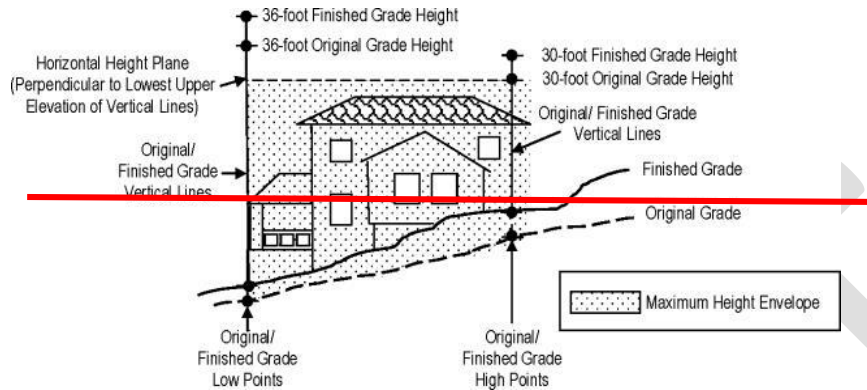
Figure 16.23.060(C): R-20, R-30, SR-30, and Medina Heights, Height Measurements



D.—Where the bonus height standards in Table 16.23.050(C) are used, height shall be measured as shown in Figure 16.23.060(D) and as set forth in the following procedures:

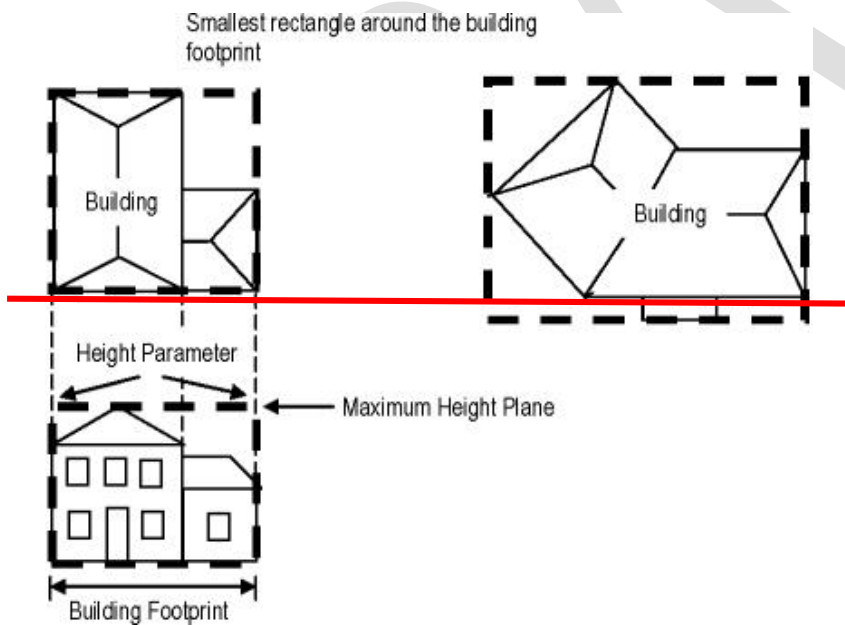
- 1.—The original grade shall be established as set forth in MMC 16.23.080;
- 2.—The base elevation for measuring height shall be taken at four points where the outside of the exterior walls/sides of the building or structure intersect the following:
 - a.—The lowest point of the original grade;
 - b.—The highest point of the original grade;
 - c.—The lowest point of finished grade; and
 - d.—The highest point of finished grade;
- 3.—Starting at the four base elevation points ascertained under subsection (D)(2) of this section, a vertical line shall be extended by the distance of the applicable maximum height prescribed in Table 16.23.050(C);
- 4.—The grade (original or finished) and corresponding vertical line established under subsection (D)(3) of this section that has the lower upper elevation (measured from a zero-elevation surface) shall be used to measure maximum height;
- 5.—Maximum height shall be a horizontal plane intersecting the upper elevation of the vertical line established in subsection (D)(4) of this section for measuring maximum height and shall be perpendicular to the same vertical line as shown in Figure 16.23.060(D);
- 6.—The maximum height envelope shall be the area between the applicable grade (original or finished) and the horizontal height plane established in this section and shown in Figure 16.23.060(C);
- 7.—No part of the building or structure, including roof lines, shall protrude above the maximum height envelope, except as allowed otherwise by law;
- 8.—See subsection (E) of this section for establishing the height plane parameter and subsection (G) of this section for height calculation exemptions.

Figure 16.23.060(D): Bonus Height Measurements



~~E.— The parameters of a maximum height plane shall be parallel to a parameter created by the smallest rectangle that can be drawn around the footprint of the building or structure. See Figure 16.23.060(E).~~

Figure 16.23.060(E): Height Plane Parameters

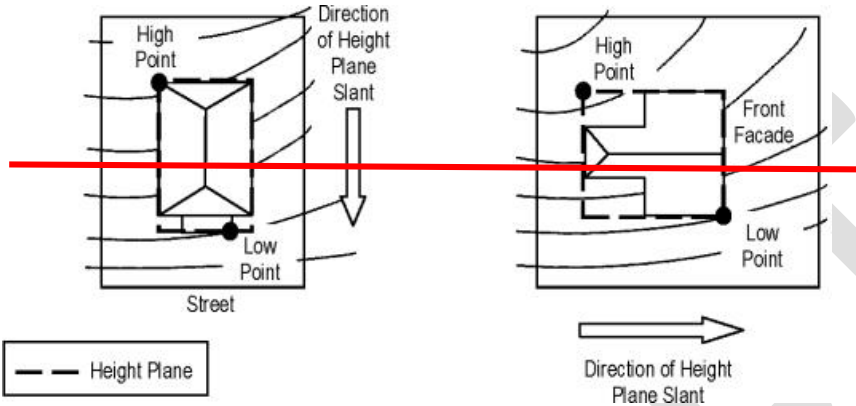


~~F.— Where a building or structure is placed within the R-16 zone on a slope, the property owner may elect for the slant of the essentially parallel height plane to be in the direction of either:~~

- ~~1.— The front facade of the building where the primary entrance of the building is located; or~~
- ~~2.— The building facade facing a public street or private lane.~~

3. ~~Figure 16.23.060(F) provides further direction on determining the orientation of the height plane slant.~~

Figure 16.23.060(F)- Direction of Slant for Essentially Parallel Height Plane

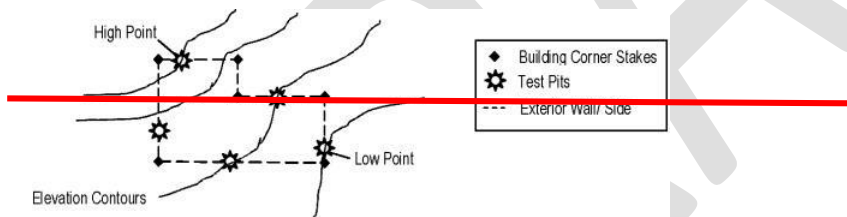


16.23.080. Determining original grade. Repealed

The following outlines the general procedures to establish the original grade on a lot. These procedures may be administratively modified by the director pursuant to subsection (F) of this section on a case-by-case basis to fit unique circumstances.

- A. The placement of proposed exterior walls/sides of the building/structure on the lot is identified first and these locations are marked on the property. It is preferred, but not required, that a surveyor stake the proposed exterior wall corners of the building or structure.
- B. A geotechnical engineer shall conduct an investigation of the soils along the parameters of the proposed exterior walls/sides to determine the elevations of the original grade:
 - 1. The investigation should include exploring and testing a reasonable number of test pits to substantiate the findings of the geotechnical engineer; and
 - 2. Based on the findings of the soil investigation, the geotechnical engineer shall determine the original grade underneath the entire building or structure.
- C. A surveyor shall set the vertical elevations of the applicable low and high base points required to measure height using the determination of original grade by the geotechnical engineer.

Figure 16.23.080: Confirmation of Original Grade



- D. A written report of the determination of original grade shall be prepared by the geotechnical engineer for submission to the city. The content of the report shall at a minimum include the following:
 - 1. The applicant's and property owner's name and contact information;
 - 2. Project location (include parcel number);
 - 3. Written narrative regarding the scope of work for which the original grade determination is being made;
 - 4. The name and qualification of the persons preparing the report;
 - 5. Written narrative of the investigation and findings;
 - 6. A site plan showing:
 - a. An outline of the footprint of the building or structure on the lot;
 - b. The locations of the test pits where the soil exploration was performed;
 - c. The location and vertical elevation of the assumed high and low base points of the original grade, as applicable, for measuring height;

- ~~d. Reserved;~~
- ~~e. Topographical information including contour intervals of five feet or less, as appropriate; and~~
- ~~7. Other pertinent information determined to be necessary by the director in supporting an original grade determination.~~
- ~~E. The applicant must obtain approval from the city for an original grade determination. An approved determination of original grade report shall be used in determining plan review compliance with height standards prior to issuing construction permits.~~
- ~~F. The director may approve modifications to these procedures if:
 - ~~1. The modification is evaluated and applied on a case-by-case basis;~~
 - ~~2. The modification is to address a unique circumstance on the property such as an inability to conduct site investigation due to existing buildings and structures;~~
 - ~~3. Modifications are based on accepted methods and/or practices found within the geotechnical engineer's profession;~~
 - ~~4. The applicant requests the modification in writing to the director and provides justification for the modification; and~~
 - ~~5. The modification is processed as a Type 1 decision pursuant to the review procedures in Chapter 16.80 MMC.~~~~