

How do I use the new height rules?

Example 1, A single family home in the R1 Zone.

Step 1

Contact the City and ask what your G_{AVG} value is. In many cases this will be generated through the City's 2018 LIDAR data; however, in some cases, particularly larger commercial buildings, it may require survey work on your part. In this case the $G_{AVG} = 1006.1\text{m}$ geodetic



Step 2

Determine the H_{ZONE} . To do this, look for the H value for the type of building you are building in the zone that your parcel is in. In this case $H=8\text{m}$.

Step 3

In most regular cases Maximum Height is a geodetic elevation equal to $G_{AVG} + H_{ZONE}$. In the R1 single family example above:

$$\begin{aligned} \text{Max Height} &= G_{AVG} + H_{ZONE} \\ &= 1006.1\text{m} + 8\text{m} \\ &= 1014.1\text{m} \end{aligned}$$

Step 4

Design the building. Pay attention to the roof form and pitch you are using as different forms will have different locations on the building at which maximum height is measured. For example, a roof with a pitch $<3:12$ would be measured to the peak whereas one with a pitch $\geq 3:12$ would be measured to the midpoint of the roof.

Note: If you are using rarer roof form such as a dome, gambrel or mansard you will need to use the special calculations listed in section 3.9 of the zoning bylaw.

Note: No building elevation measure from design grade to the peak of that elevation can exceed $H+2.5\text{m}$. This means that in a walkout condition.

Step 5

As part of your drawing package that you submit with your building permit you will need to include the G_{AVG} value along with your design grades on all building elevations and on your site plan.

Step 6

When you are building ensure you have an accurate datum point for elevation to ensure that the building is built to the heights you have specified in your building permit application.

Example 2, A Duplex in the RWF Zone in the Floodplain

Step 1

Contact the City and ask what your G_{LIDAR} Value is. In this case the G_{LIDAR} is 995m geodetic.

Step 2

Determine your Flood Construction Level (FCL). In this case it is 996.8m

Step 3

Determine your H_{ZONE} by looking at the RWF zone. In this case $H = 7.2m$

Step 3

Take note of the measurement point for maximum height based on the type of roof and its slope that you intend on building. This is typically the peak of the roof for slopes <3:12 and t.

Note: If you are using rarer roof form such as a dome, gambrel or mansard you will need to use the special calculations listed in section 3.9 of the zoning bylaw.

Note: No building elevation measure from design grade to the peak of that elevation can exceed $H+2.5m$. This means that in a walkout condition.

Step 4

Design your building. If any habitable part of your building including a garage is built below FCL, the $G_{AVG} = G_{LIDAR}$

If all habitable areas are built above FCL then the $G_{AVG} = (FCL+G_{LIDAR})/2$. Essentially this means that G_{AVG} equals the midpoint between G_{LIDAR} and FCL

Step 5

As part of your drawing package that you submit with your building permit you will need to include the G_{AVG} and FCL values along with your design grades on all building elevations and on your site plan.

Step 6

When you are building ensure you have an accurate datum point for elevation to ensure that the building is built to the heights you have specified in your building permit application.

