# Using perspective grid for three-point perspective

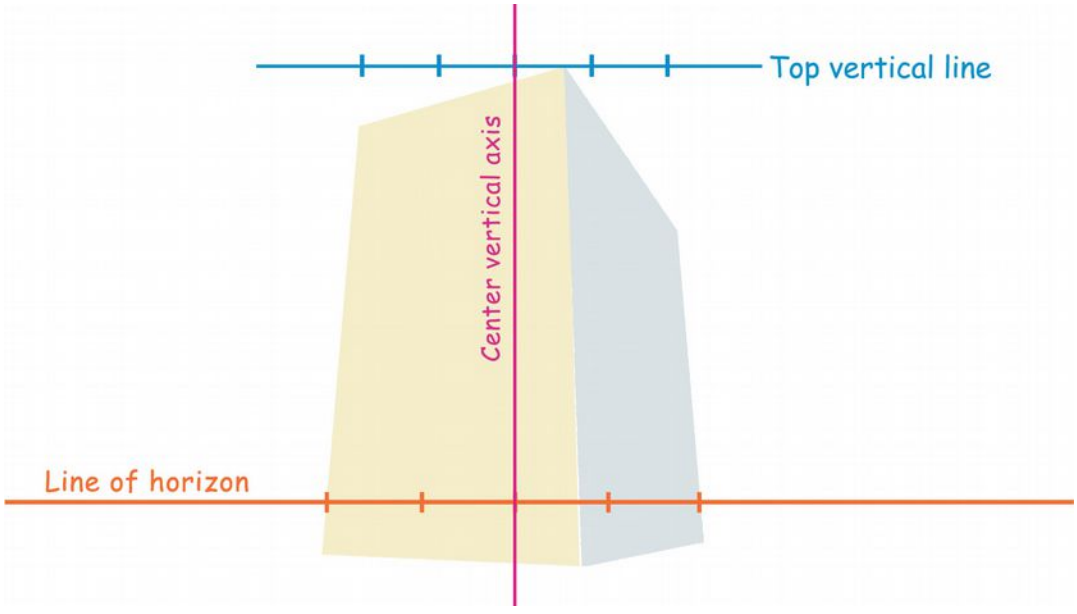
Some notes

## Simple grid for a three-point perspective scheme

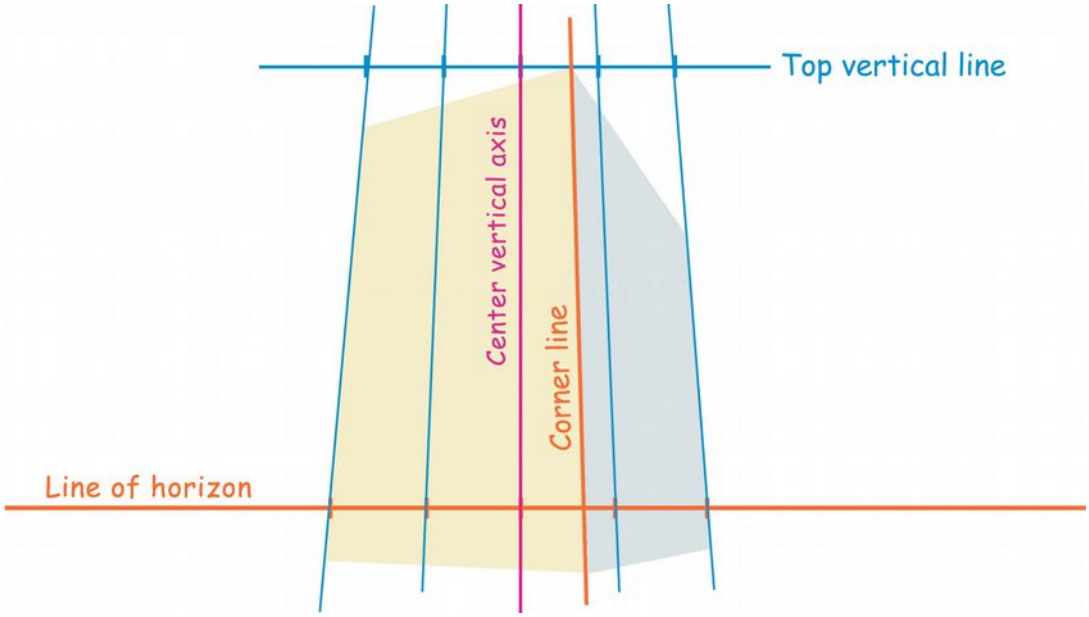
For building up a perspective grid in case of a three-point perspective we need some additional elements: besides the line of the horizon, corner line, two orthogonal lines, and sidelines we need the center vertical axis and top horizontal line.

For a simple shaped building, we use the perspective grid coinciding with the building itself. We start from the proportions of the building. We mark the bottom width and divide it into four equal segments. In the middle, we draw the center vertical axis - the only line that is really vertical in our picture. Then we find out the height of the building in proportion to the bottom width and draw on this level top horizontal line.

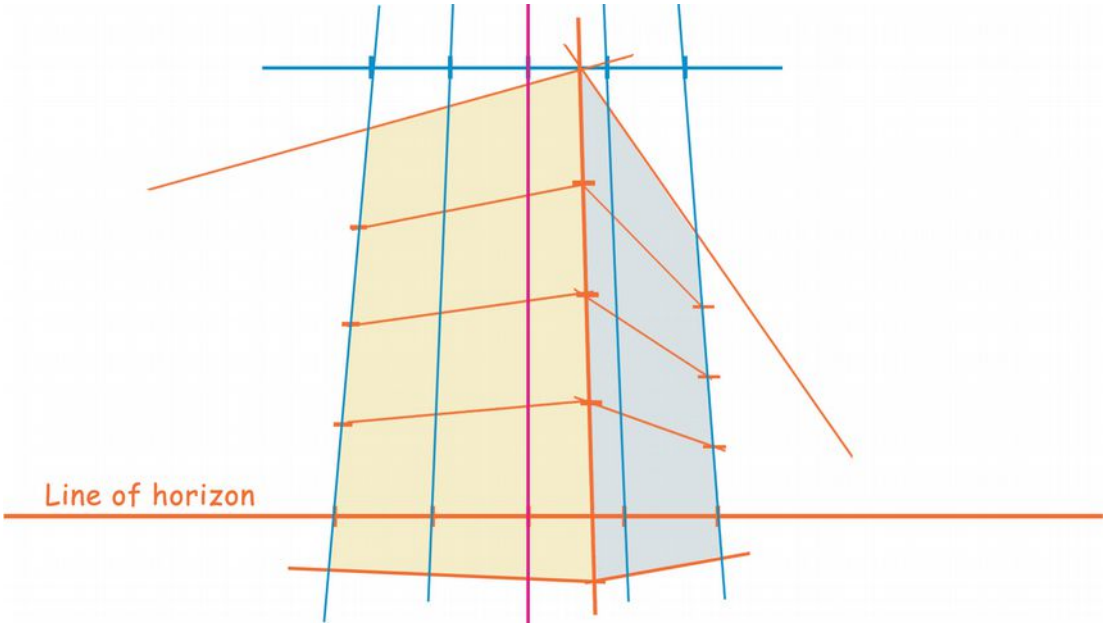
Now we have to discover the top width in proportion to the bottom width and we mark it on the top horizontal line keeping an equal distance from the center vertical axis.




Joining the top and bottom marks we get orthogonal lines which meet in the top melting point on the center vertical axis. And now we can find the position of the corner line, which will be one of the orthogonal lines going to the top melting point too.



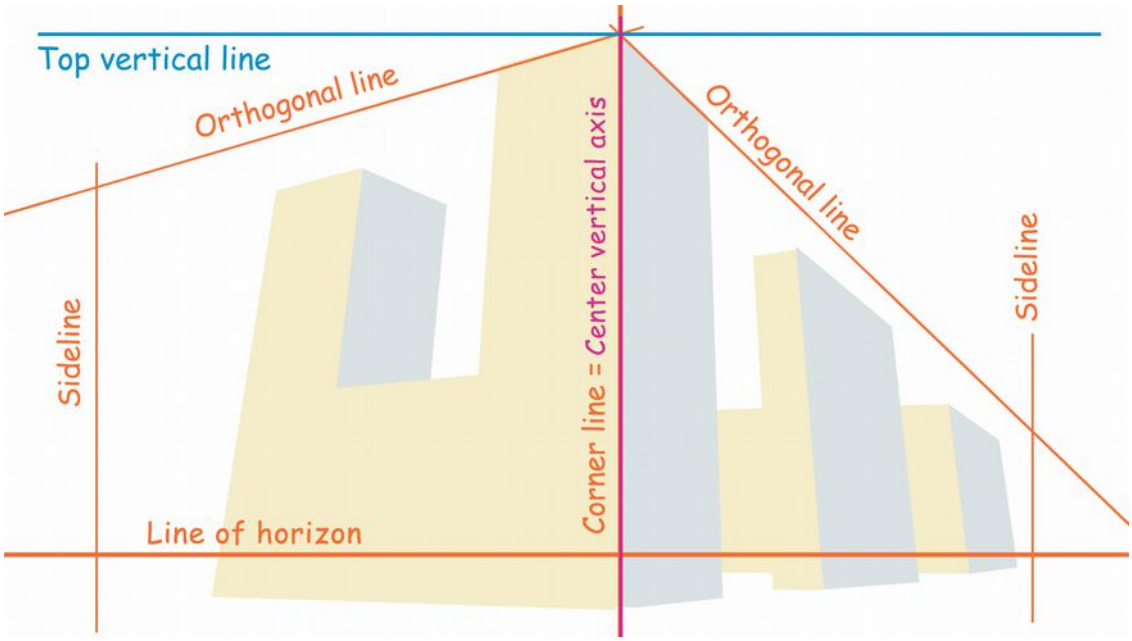

From the corner, we draw roof lines - orthogonals going to the melting points on the horizon line. Then we divide the corner line above the horizon line and right and left vertical sidelines into four equal parts, four quarters.



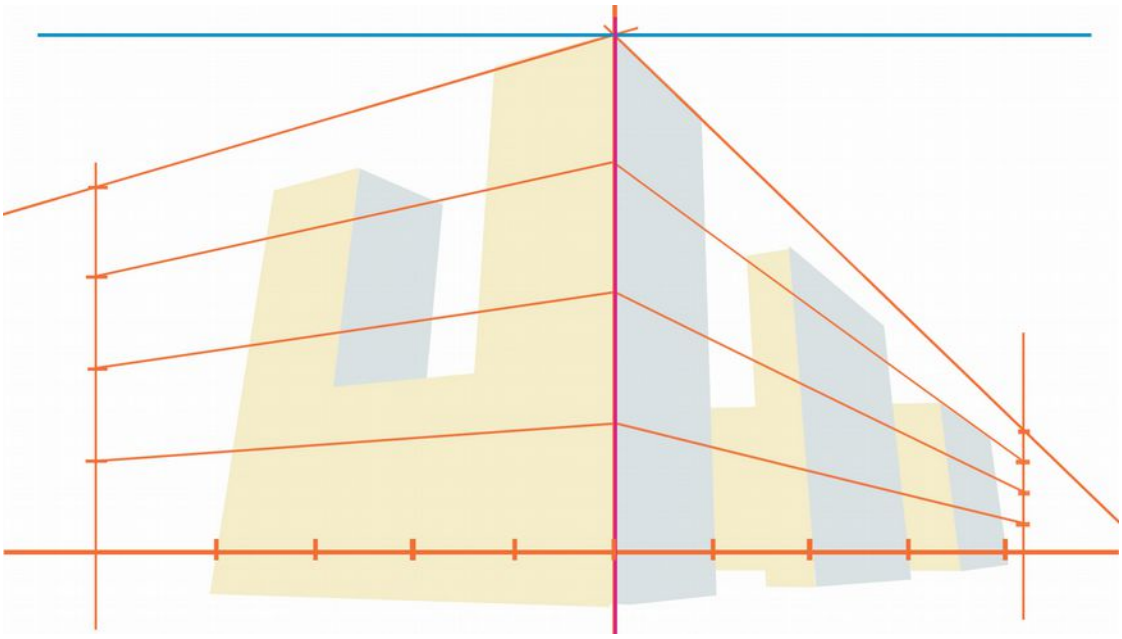

Joining all the marks we get two sets of the orthogonals going to the right and left melting points on the horizon line. And we finalize work by adding baselines.

# Grid for a group of buildings or one complex building

In case of simple form, all the elements were placed inside the building. But, in case of the complex form, we build up the perspective grid for all the space of our sketch. Again we need main elements of the perspective grid: the line of the horizon, corner line, sidelines, and two orthogonal lines, the center vertical axis, and top horizontal line.

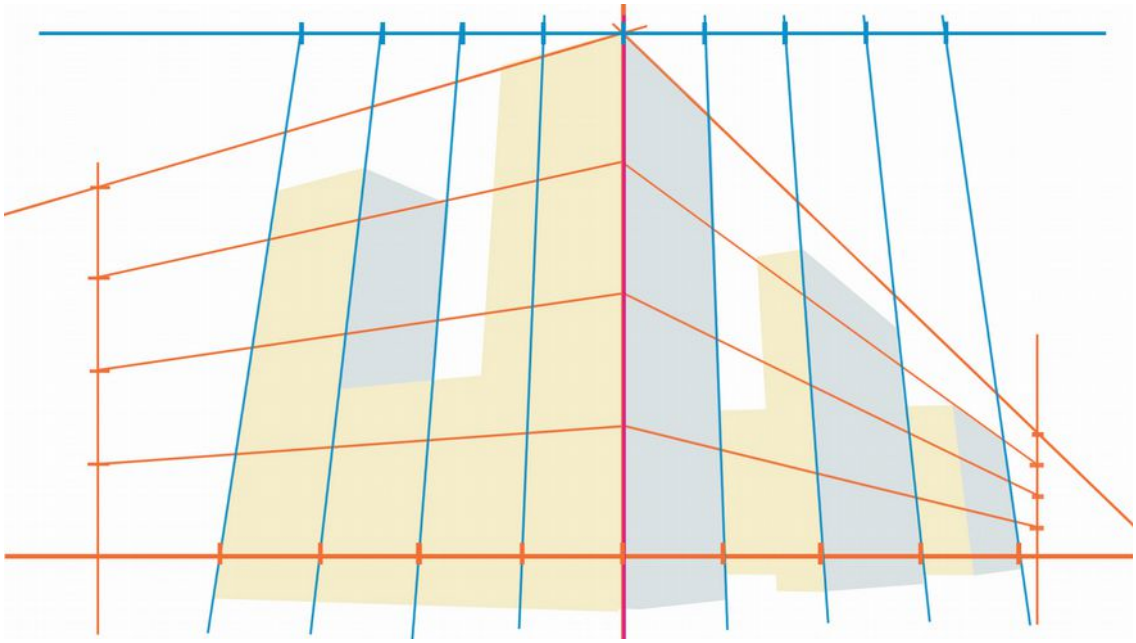



In case of the complex form is convenient to merge the corner line and the center vertical axis together into a single line. As the sidelines, we'll be using vertical lines somewhere close to the borders of the page. They are not related to any particular part of the buildings.



On the horizon line, we mark the bottom width and divide it into even number of equal segments. In the middle, we draw the center vertical axis which is, in this case, the corner line too. Then we find out the height of the building in proportion to the bottom width and draw on this level top horizontal line.

From the corner, we draw roof lines - orthogonals going to the melting points on the horizon line. Then we divide the corner line above the horizon line and right and left vertical sidelines into four equal parts, four quarters. Joining all the marks we get two sets of the orthogonals going to the right and left melting points on the horizon line. It looks about the same as the grig for two-point perspective.



Now we have to discover the top width in proportion to the bottom width and we mark it on the top horizontal line to the left and to the right from the center vertical axis. Joining the top and bottom marks we get orthogonal lines with a melting point on the center vertical axis.

Our grid is ready. Using this grid we can find out the direction of every orthogonal line in our three-point perspective scheme.