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SoftPlanTuts

The professional webspace for SoftPlan users

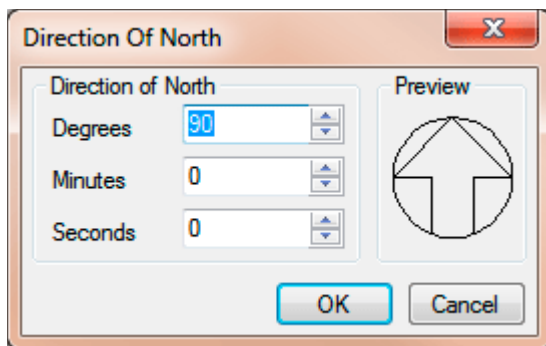# DIRECTION OF NORTH

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SOFTPLAN VERSION: 2012

TOPICS: DIRECTION OF NORTH

SITE

Rotating a Site Plan using the Direction of North command can be quite confusing. If you follow this example you will find that things work much simpler.

Site Lines can contain bearings that designate the direction that the line runs. You can either sketch out a site plan and then edit the bearings or you can enter Surveyor Coordinates as part of the site drawing process.

But what do you do if you want to rotate the site plan to better fit on the page or to allow for a certain orientation of the structure on the page? For instance you might want the front of the house to face the same direction on the site plan as it does in the plan.

The Site Bearings measure angles relative to the Direction of North. If you use Rotate Block to rotate the site then all of your bearings change because you are in effect rotating the lines and arcs that make up the site but the Direction of North remains the same. That is not a good option.

What you should do instead is to change the Direction of North for the site plan. This rotates Direction of North and optionally rotates everything in the site relative to the new Direction of North.

The Direction of North command can be found on the Edit tab when you are in Site Mode. HOME can also be found by going to File ⇒ Drawing Options ⇒ Drawing Options ⇒ Site Options.

Direction of North contains fields for entering Degrees, Minutes, and Seconds as well as a Preview arrow. Initially this is set to 90 Degrees, 0 Minutes, 0 Seconds. This designates that North is rotated 90 degrees counter-clockwise on the screen from an Easterly vector. In other words, 0 degrees points to the Right of the screen, or East. 90 Degrees points to the top of the screen, or North. 180 degrees points to the left of the screen, or West. And 270 degrees points to the bottom of the screen, or South. If Direction of North is set to 90 degrees then North is at the top if the screen.

The tricky part comes when we want North to be some other location besides the top of the screen. This is where the Direction of North setting comes into play. But how do you know what to change the Direction of North to?

You could just start entering numbers and by trial and error get the site rotated the way you want it. But I will show you a better way.

The first thing we need to do is determine a line that you want to be parallel with the bottom of the screen. This could be a site line or a face of the building if there is already one placed on the lot.

If you want to rotate the lot so that a building line is parallel with the bottom of the screen then edit the building line and put a check next to Bearing so that the bearing of that line will display. If you are wanting to have a certain lot line be parallel with the bottom of the screen then make sure that Bearing is checked for that line. If there are no lines existing that should be parallel with the bottom of the screen then draw one in and make the Bearing visible for that line.
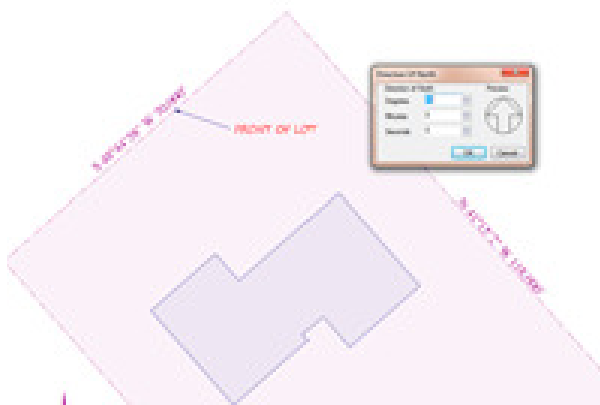
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Before we go to the next step we need to understand what the bearings mean. A bearing of S 48°44'58" W means that the line is rotated 48°44'58" West, or clockwise from due South. A bearing of N 48°44'58" E means that the line is rotated 48°44'58" East, or clockwise from due North. In fact these two lines are parallel. The only difference is that the SW line is drawn in a South/West direction and the NE line is drawn in a North/East direction. You can illustrate this in your own site plan by editing a site line and selecting Reverse. This effectively switches the start point to the opposite end of the line.

What about NW and SE. They follow the same rule but reversed. So a line with a bearing of N 26°46'9" W would be rotated 26°46'9" West, or counterclockwise of due North. And a line with a bearing of S 26°46'9" E would be rotated 26°46'9" East, or counterclockwise of due South.
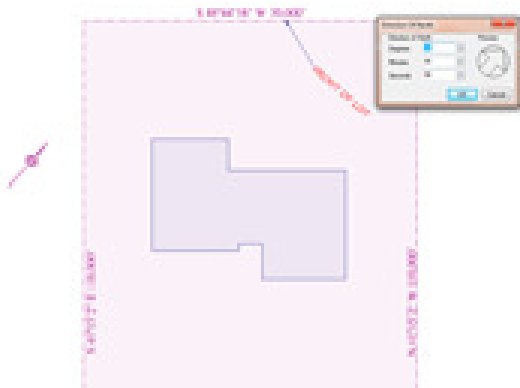
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So now look at the bearing of the line we want to be parallel to the bottom of the screen. It will be in the range between 0°0'0" and 90°0'0". If the bearing is NE or SW then enter that number as the new Direction of North. If the bearing is NW or SE then subtract the bearing from 180 degrees then enter that number as the Direction of North. For example if the bearing were N 26°46'9" W then you would subtract 26°46'9" from 179°59'60", which is the equivalent of 180°. Thus in this case you would enter 153 13 51.
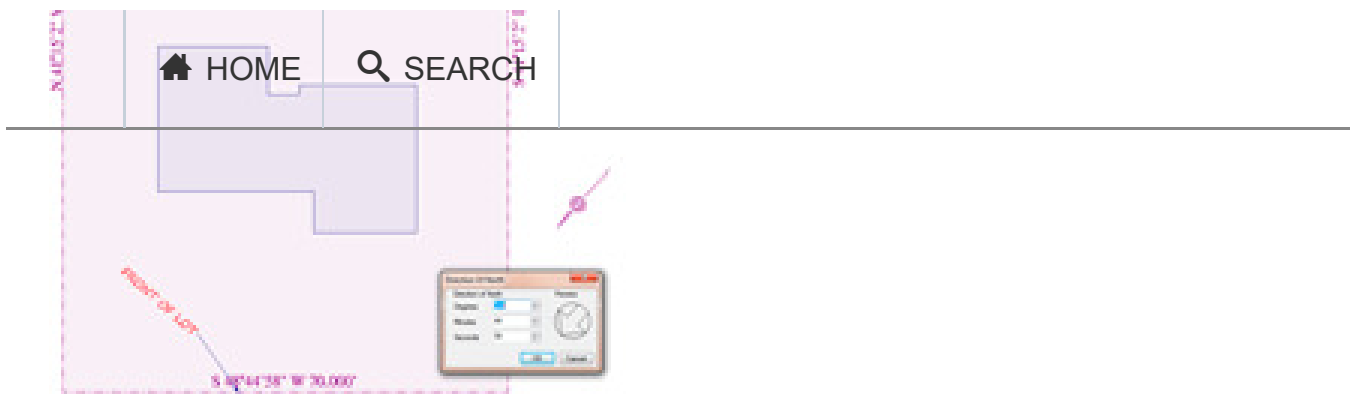
When you are asked "Do you wish to rotate items currently on the drawing?" select Yes. Your line will now be parallel with the bottom of the screen. If the orientation is correct then you are done.

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But what if your site plan is now 180 degrees off from where you wanted it? Not a problem. Edit Direction of North again and add 180 to the number you previously entered. The site plan will rotate around 180 degrees and will be at the desired orientation.

The North Arrow symbol that comes with SoftPlan is defined to always point to the North. So if you enter the North Arrow, even after you have changed the Direction of North, the North arrow will always be pointing North.

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Bill is the owner and maintainer of SoftPlanTuts.com

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