

# Improving Line Intersections

When a line pattern is drawn in a single pass, line intersections may have crossing lines that appear more like an overpass/underpass crossing than a true intersection. Line patterns can be composed of a number of different, styled elements in a number of configurations. Different configurations of line elements may appear the same for single-pass but not for multi-pass drawing. Multi-pass line drawing draws each element of the line separately until all elements are drawn. Thus, the first element is drawn for all lines in the same layer in the first pass for that layer, the second element of all lines in the second pass, and so on. A wide line with two narrow flanking lines appears the same with single- and multi-pass drawing (left). A wide line on top of a wider line (single-pass at left, multi-pass at right), however, loses the crossing lines at intersections when multi-pass drawing is used.

Multi-pass line drawing is turned on with the *Use multi-pass for improved style joining* toggle on the Lines tabbed panel of the Vector Layer Controls. Line drawing is somewhat slower in the multi-pass mode, so if your line patterns do not benefit from multi-pass drawing, you do not need to use this feature. You can control whether this feature is on by default using the *Automatically use multi-pass rendering where available* toggle on the Layer panel of the View Options window.

single-pass drawing

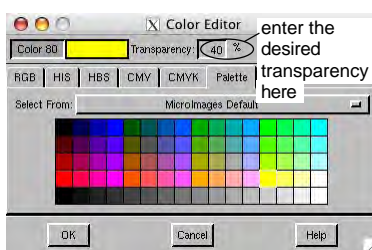
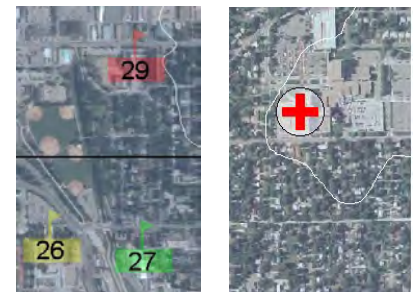
multi-pass drawing

The line pattern shown at the center can be made from two (above, left) or three (above, right) elements. The line pattern made from two elements benefits from multi-pass drawing; the line pattern made from three elements drawn in this order does not.

# Partially Transparent Symbols

You can create and assign symbols to point elements for viewing in 2D and 3D. These symbols can use solid or partially transparent colors for each symbol element. Three sample views of symbols with some partially transparent and some solid elements are shown at the right in 2D views and below, right in a 3D view.

There are 64 standard colors and 16 shades of gray available in the symbol color palette along with 144 palette tiles that can be assigned custom colors. To create a custom color, click on a tile for color 80 or greater and click on the Adjust button. In addition to creating colors not found in the standard



The Color Editor opens when you click on the Adjust button in the Symbol Editor.

palette, you can introduce transparency of the desired percentage to these custom colors. Partially transparent symbol elements let you see underlying image detail through the symbol.

