



Most people don't realize that there are two types of PDF files - vector and raster

Vector PDF files are produced by other applications when saved, exported or printed to file. It quickly and accurately extracts CAD entities, objects and editable text for further editing in a program such as AutoCAD or Micro-Station. This is a very precise conversion because the drawing is recreated from data contained in the file. It's sometimes referred to as vector-to-vector (v2v).

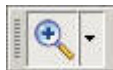
Raster PDF files are converted in a very different way. Because these files are produced when paper drawings are scanned or photo-copied or when applications are saved in archive formats such as TIFF, they only contain **flat images** comparable to digital photocopies. To make editable CAD files from them, they must be redrawn, either manually or with **tracing** software. This is an approximate conversion method since the tracing software does not know much, if anything, about the drawing it is duplicating. It's known in the industry as raster-to-vector (r2v).

Sometimes, a PDF file will contain both vector objects and raster images. We call this a Hybrid PDF file. This type of file must be examined closely to determine what is of importance to you.

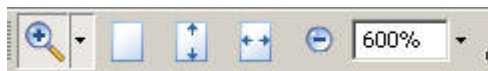
Knowing that will help you determine where you need to do a v2v conversion or an r2v conversion.

How to identify the differences between a vector & raster PDF file

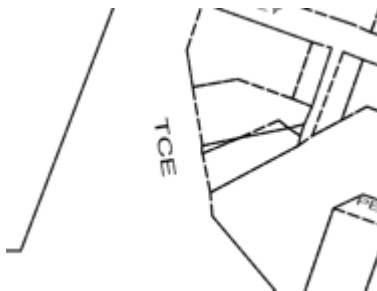
1. Open your PDF file with Acrobat or Acrobat Reader
2. Select the Magnifying Glass



3. Click to select a part of the drawing and drag to outline a small section. The section of the picture should be redrawn and magnified on your screen. In the example below, the section is enlarged 600%. To see the differences clearly, you should magnify the file a minimum of 400%. Sometimes, it's necessary to magnify the file more than 1000% to determine the file type.



Original Drawing opened in Acrobat



Scalable, Vector PDF

Section magnified to 600%
You can conclude from the sharp lines and clear text that this is a scalable (vector) PDF file.

pdf2cad, pdf2picture, pdf2image and PDF FLY can all convert this file into editable text and objects.



Raster/Bitmap PDF

Section magnified to 600%
You can see from the jagged lines and unreadable text that this is a raster (bitmap) PDF file.

You may want to still convert the file to an image format and use it as a tracing layer to save time when redrawing it. Another alternative is to evaluate raster-to-vector programs like Scan2CAD or Trix Systems.