How to make a stencil:

One of the "students" in my laser class wanted to spray-paint "NO TRESPASSING".
Simple: laser cut a stencil, but first you need a stencil font. Where do you find a stencil font?

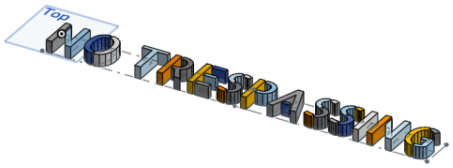
go into OnShape
start a sketch
choose the letter tool
drag a rectangle starting at the origin
choose the stencil font (top of the list)
type the verbiage
use the dimension tool to specify the letter height
green check mark the sketch
* Note, astericks steps following are wrong, are logical but result in OOPS

*right mouse on the word "sketch 1" in the feature tree
*choose export
*choose dxf and voila a dxf file lands in your downloads
*put the dxf on a thumb
*hike to the computer beside the laser
*start a new session of RabbitLaser
*Import the dxf and . . .

OOPS, it looks like this: All the curved edges are missing

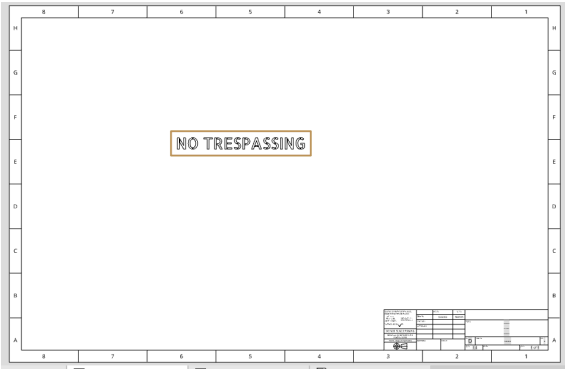
Here is how to fix this problem

go back to OnShape
choose the extrude tool
choose "sketch 1" and everything in it
extrude an inch, blind

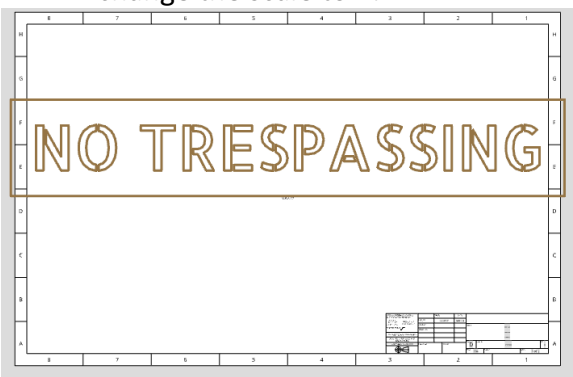


right mouse on the tab at the bottom that says "Part Studio 1"
choose "Create Drawing of Part Studio 1..."
click on the blue words Show Onshape Drawing Templates
choose ANSI_D_MM.dwt (this sign is going to be huge)
choose No Views
The template comes up and Onshape tries to insert a front view.

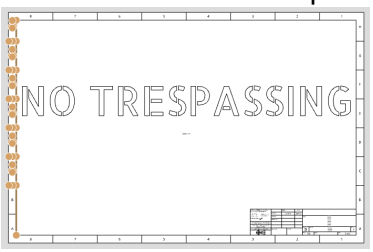
Hit ESC and instead insert the view that you want, top view in this case.



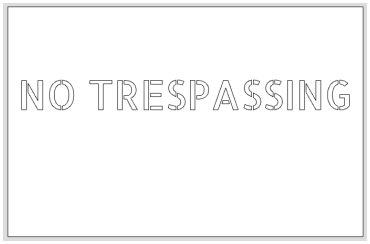
Right mouse on the view, it turns brown as above.
choose "View properties"
change the scale to 1:1



The border and template need to be deleted
window around portions of the border and hit the delete key



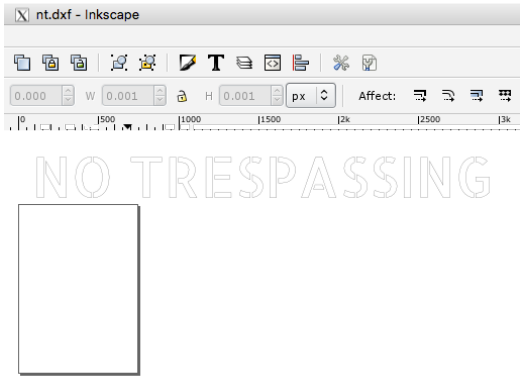
. . .



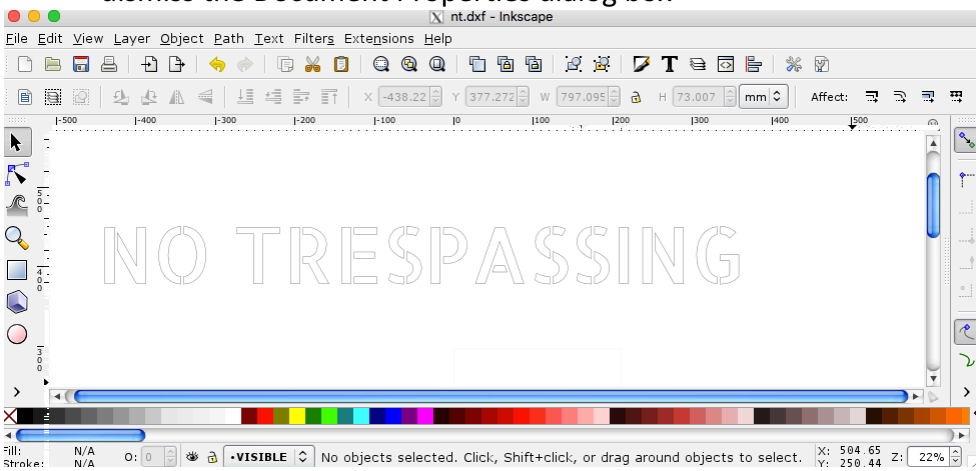
window/delete/window/delete . . . repeat until clean. Get rid of "Scale 1:1" as well.
right mouse on the tab at the bottom "Part Studio 1 Drawing 1"
choose "export"
choose "dxf"
give it a short simple name: "nt" (max char=8, no spaces) RabbitLaser chokes otherwise
choose "explode into polylines"
download

Check the file with Inkscape

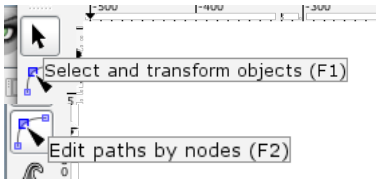
Start a session of Inscape
file>open>change the scale factor to 25.4



After confirming that it the right scale,
I prefer not to look at the image of the A-size piece of paper
In Inkscape click File>Document Properties
change the units to mm in 2 places
uncheck the boxes for "border" and "shadow"
dismiss the Document Properties dialog box

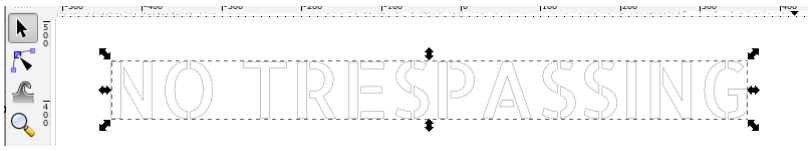


There are two kinds of selection tool arrows: involving objects, involving nodes

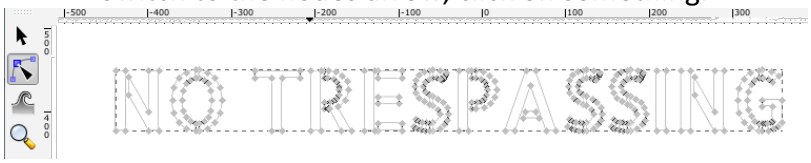


Using the objects arrow, window around everything

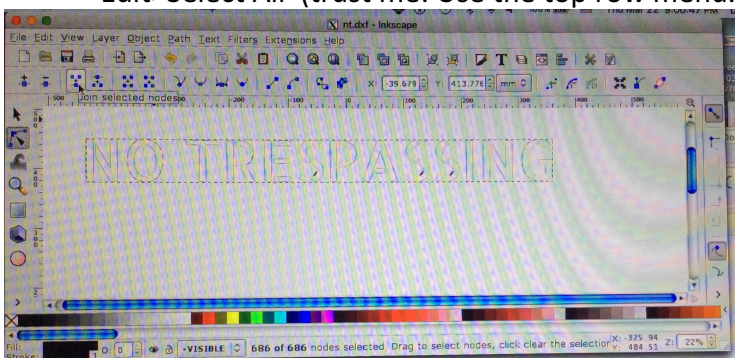
Object>Ungroup
Path>Combine



Switch to the nodes arrow, click on something.

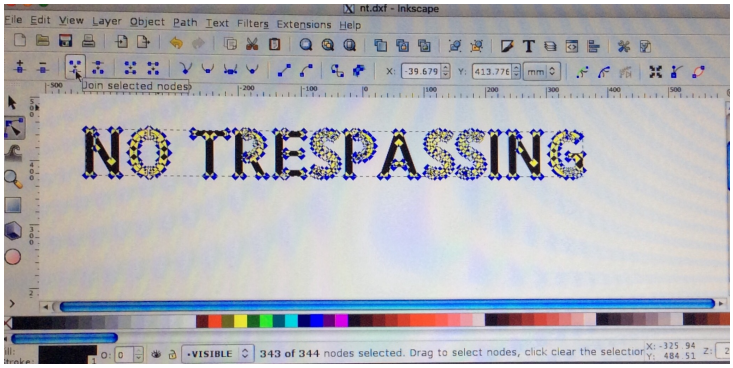


Edit>Select All (trust me: Use the top row menu. DO NOT use control-A speed key.)



this is the "before" picture. Notice at bottom screen center 686 nodes selected.

click on the icon "Join selected nodes"



this is the "after" picture. Notice that there are now half as many nodes.

Click off. The highlighted selections (yellow and blue) disappear, and you get:

Notice now that "Fill" works. "Fill" only works if the regions are closed, i.e. joined.

Save As > dxf (save over the top of the simply-named file exported from Onshape)

If you open the dxf in Inkscape again, use a scale factor of 1

Save on a thumb drive. Above can be done at home. Sneaker-net file into 10BitWorks.

RabbitLaser: File>New, File>Import dxf. Voila, clean edges, CUT