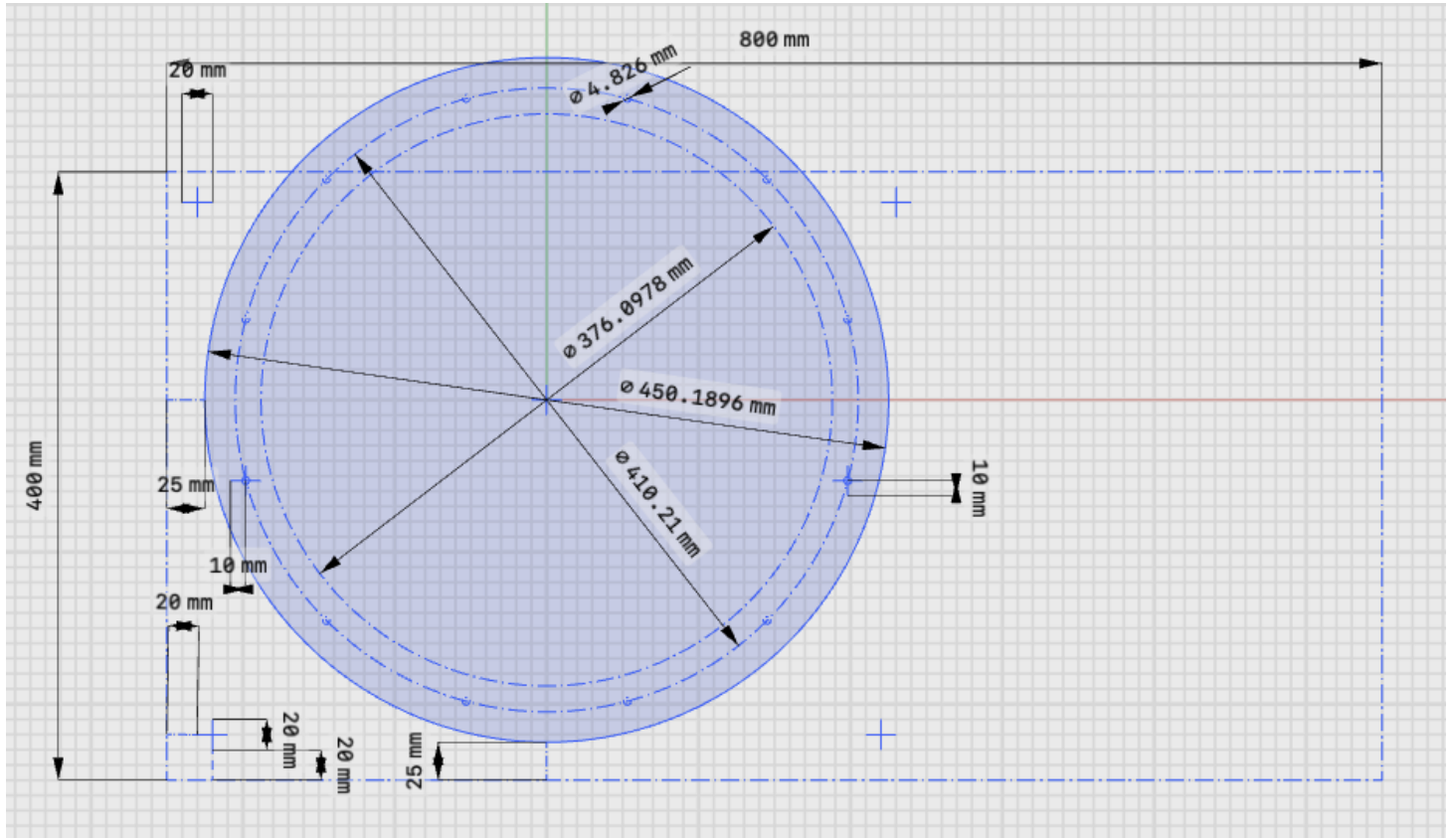
Laser Template Generator

CAD DXF to Template G code generator

APPLIED MASKING INC.

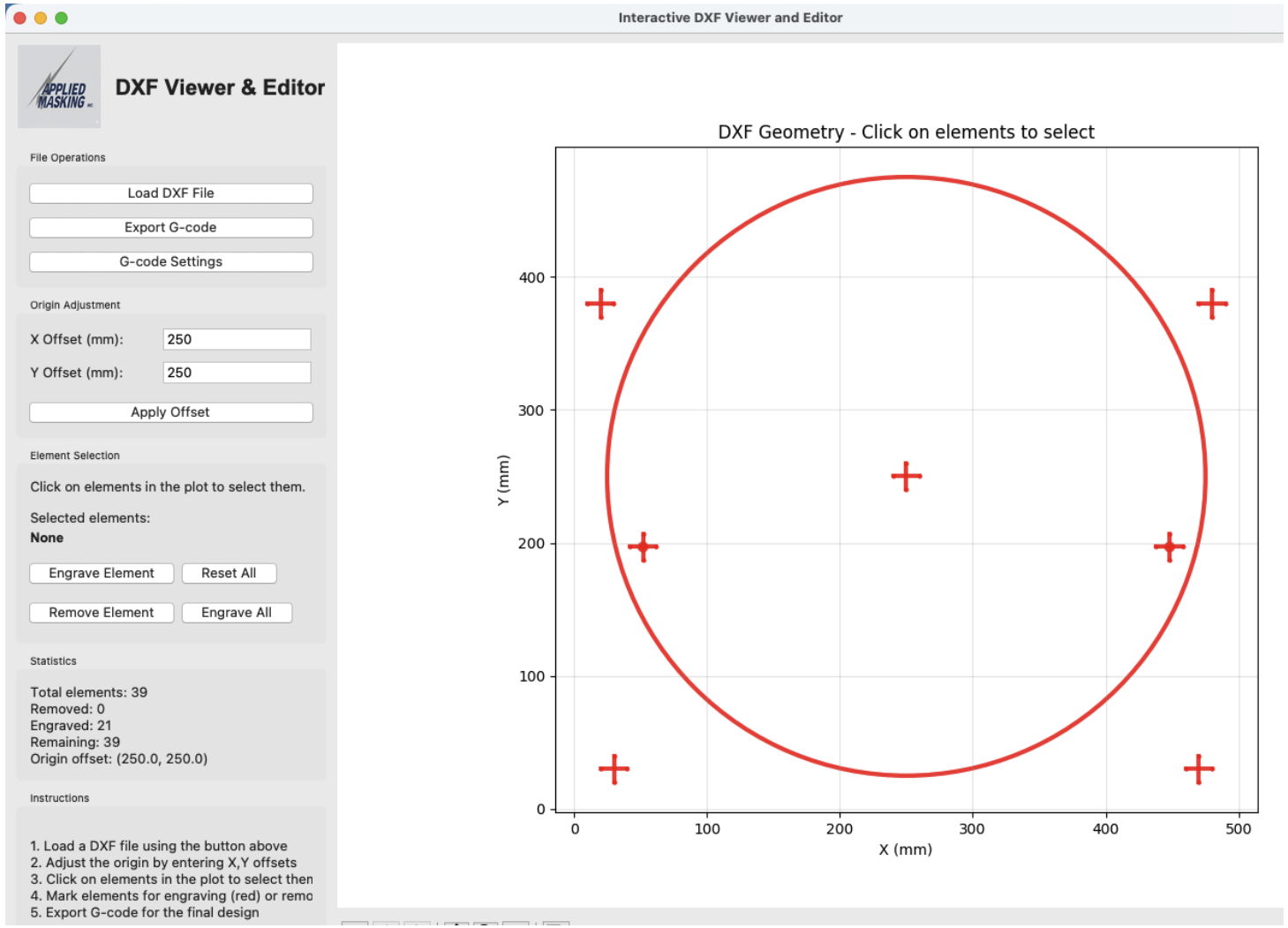
Generate a CAD sketch

- Shapr3d example
- Lines and circles to be engraved are drawn
- Construction lines and circles are used to aid visuals but will not show up in the DXF file
- Save the sketch in DXF format



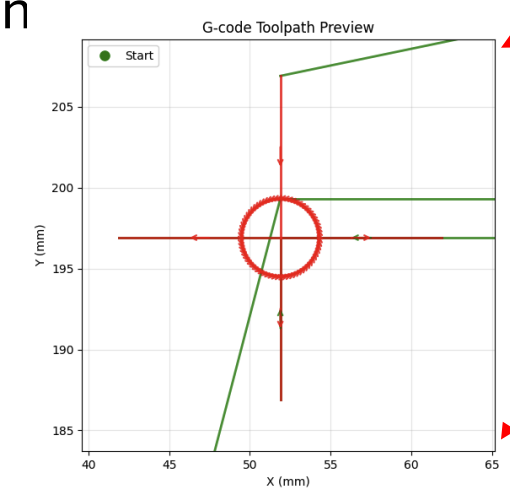
dxf2template.py GUI

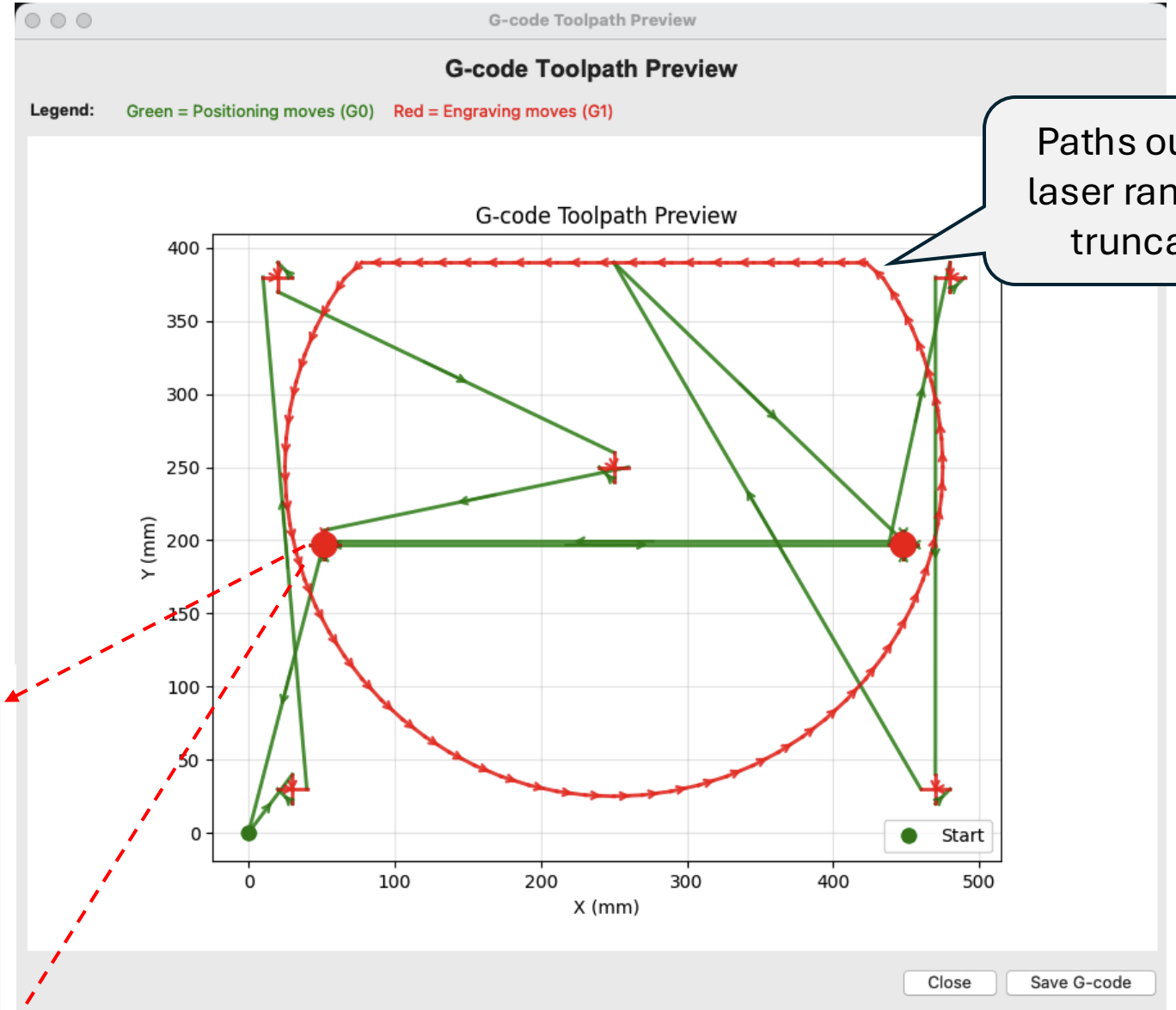
- Load the dxf file
- Set the x and y offsets to align with laser work table
- Update g-code settings as needed; laser height, power, federate
- Select engrave all
- Export the g-code



G-code preview

- dxf2template.py gives a preview of the g-code
- Green are moves, red is engraving. Arrows show path direction
- Zoom in to see details





Paths outside laser range are truncated

Next Steps

- G-Code is saved as a *.nc file. It should be possible to load this into the laserGRBL code and create a template however:
  - We need to get the origin set
    - Likely use the laserGRBL to home the system and have the user jog to zero, zero in the lower left hand corner and set that as ”work origin”
  - The laser power, height and federate needs to be adjusted
    - Need to determine how Z works for the laser. When work origin is set, is that the right height for cutting.
    - Need to update the preamble and postscript code.