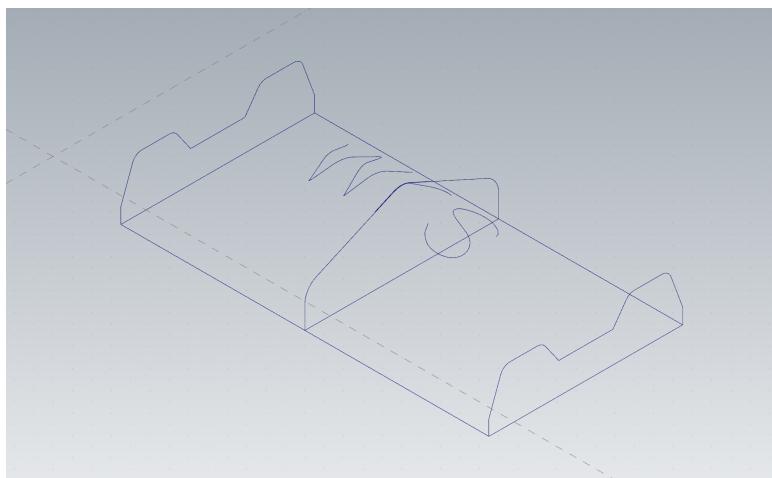
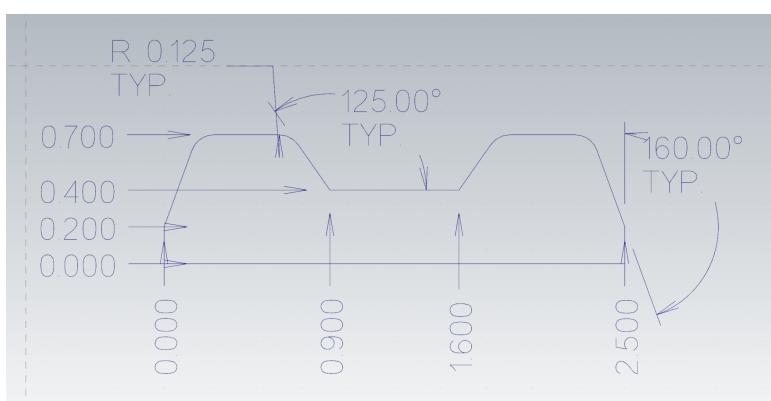
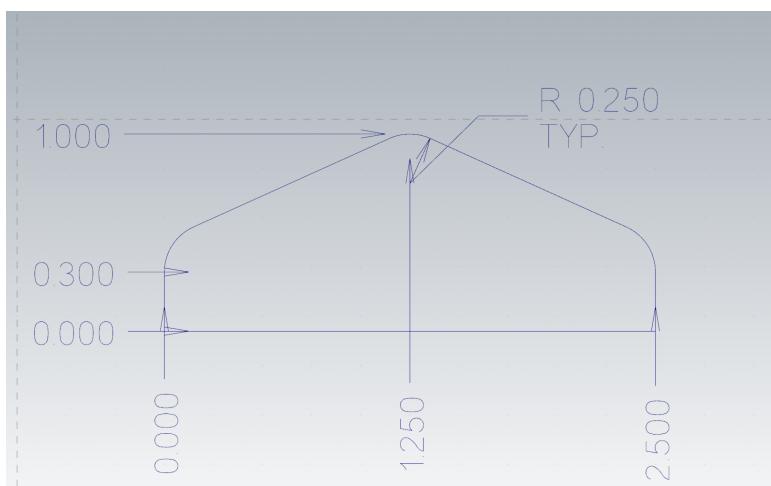


CCET 3680
Mill Lesson 10 Second Exercise

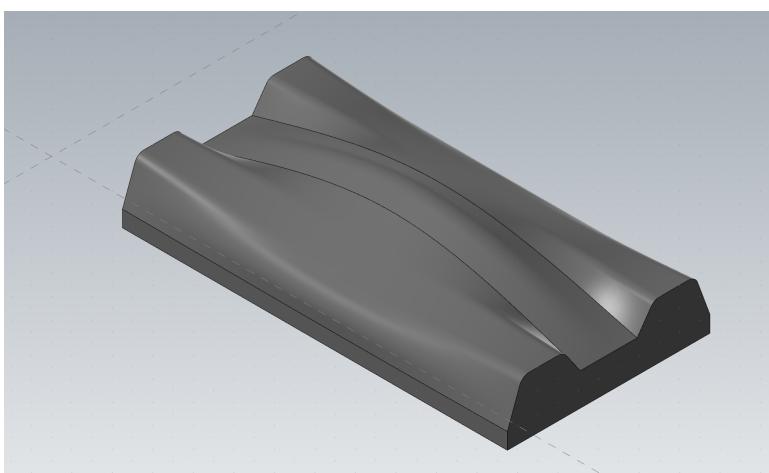
I. Wireframe:



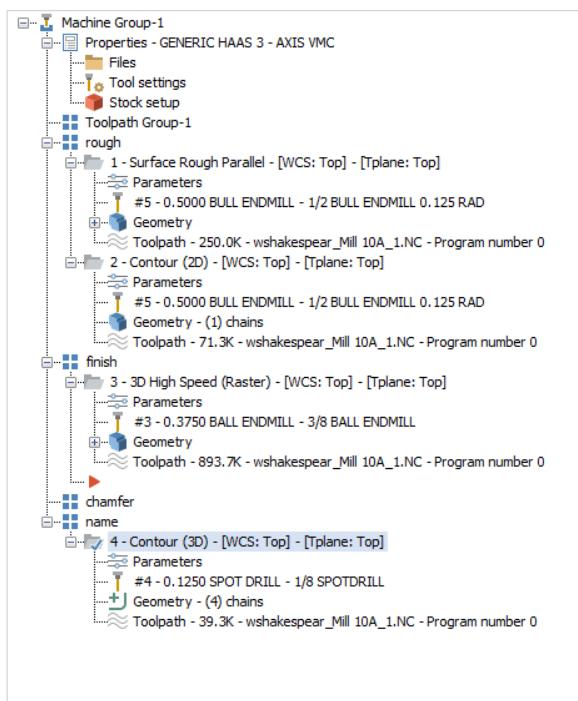
II. Dimensions:



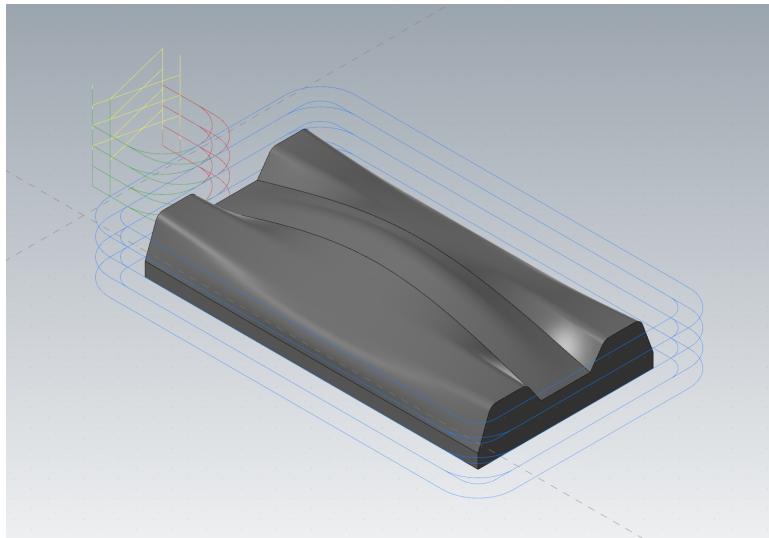
III. Solid:



IV. Toolpaths:

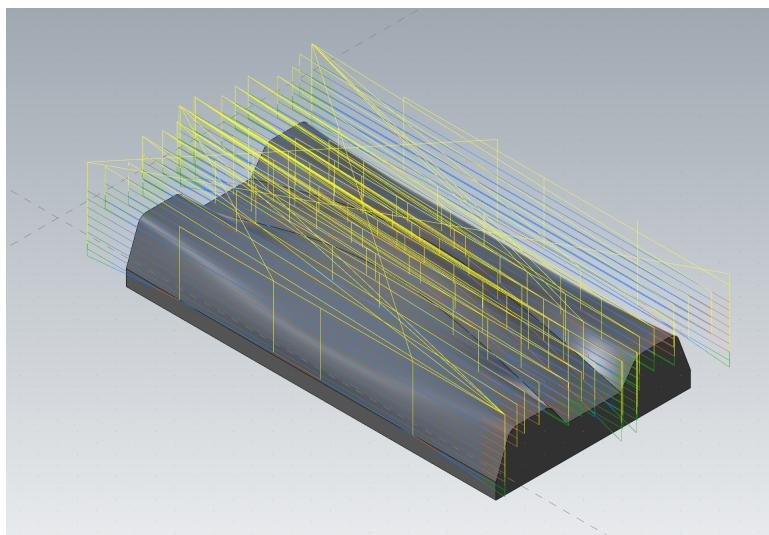


V. 1/2" Endmill:



Tool diameter:	0.5
Corner radius:	0.125
Tool name:	1/2 BULL ENDMILL 0.125 RAD
Tool #:	5
Length offset:	5
Head #:	0
Diameter offset:	5
Feed rate:	50.0
Spindle direction:	CW
Spindle speed:	4966
FPT:	0.0025
SFM:	650.0
Plunge rate:	30.0
Retract rate:	8.5568
<input type="checkbox"/> Force tool change	<input checked="" type="checkbox"/> Rapid Retract

VI. $\frac{3}{8}$ " Bull Endmill (0.0625" corner):



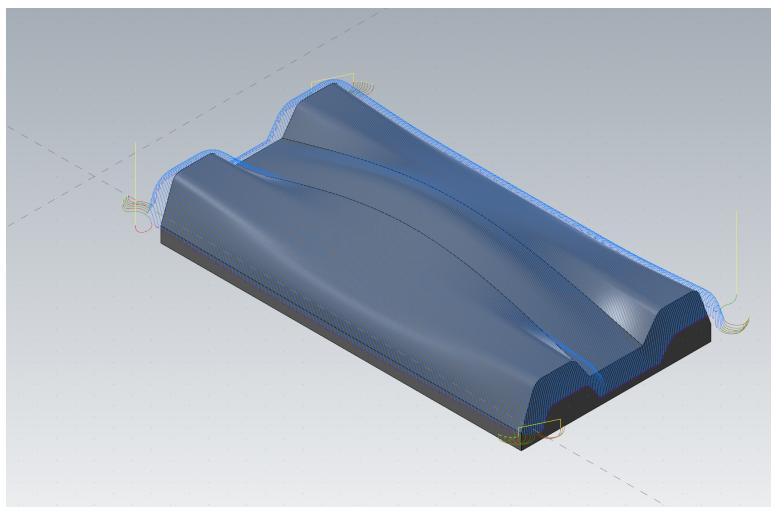
Tool name:	1/2 BULL ENDMILL 0.125 RAD		
Tool #:	5	Length offset:	5
Head #:	0	Diameter offset:	5
Tool diameter:	0.5	Corner radius:	0.125

RCTF

Coolant...	Spindle direction: CW
Feed rate: 39.750298	Spindle speed: 4966
FPT: 0.002	SFM: 650.0
Plunge rate: 30.0	Retract rate: 8.5568

Force tool change Rapid retract

VII. $\frac{3}{8}$ " Ball Endmill:



Tool diameter:	0.375
Corner radius:	0.1975

Tool name: 3/8 BALL ENDMILL

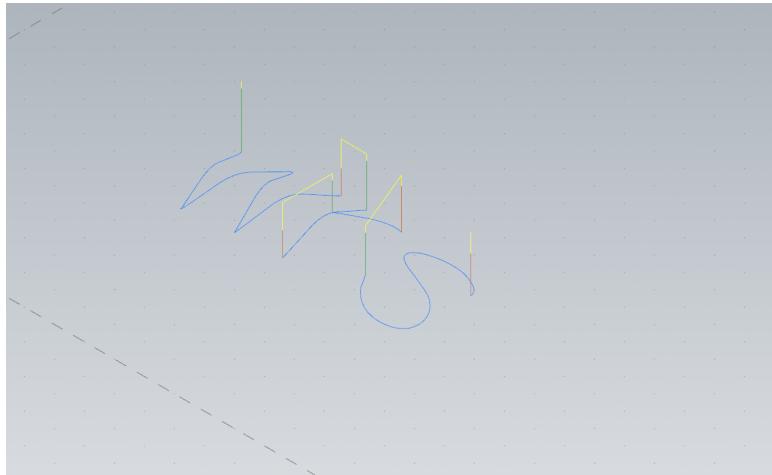
Tool #: 3	Length offset: 3
Head #: 0	Diameter offset: 3

Spindle direction: CW

Feed rate: 80.0	Spindle speed: 4966
FPT: 0.004	SFM: 487.5
Plunge rate: 30.0	Retract rate: 6.4176

Force tool change Rapid Retract

VIII. $\frac{1}{8}$ " Spot Drill:



Tool diameter:	0.125
Corner radius:	0.0
Tool name: 1/8 SPOTDRILL	
Tool #:	4
Length offset:	4
Head #:	0
Diameter offset:	4
Spindle direction: CW	
Feed rate:	50.0
FPT:	0.005
Plunge rate:	8.5568
<input type="checkbox"/> Force tool change	<input type="checkbox"/> Rapid Retract
Spindle speed:	4966
SFM:	162.5
Retract rate:	8.5568

X. Method:

I drew this one pretty much the same as the last one. I drew each plane of geometry and translated it to the proper place. Then I used a loft to create the body from the features.

XI. GCode Changes

To modify my gcode to be compatible with the machine I first made sure the HAAS 3 axis post processor was selected when exporting the gcode. Then I removed the long lines at the beginning and edited the last G28 home command to not zero the x axis.

XII. Finished Part

Report by Weston Shakespear
Spring 2023

