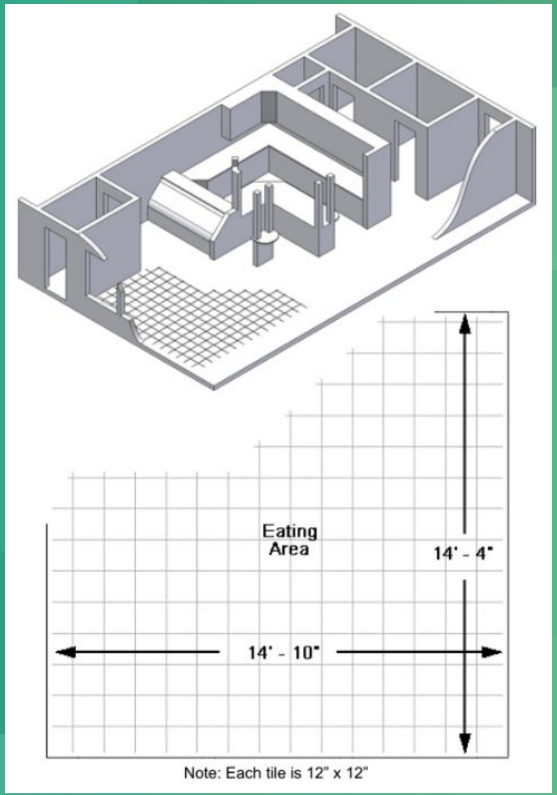
Modular Coffee Shop Table

By: Neel, Julian, and Mahdi

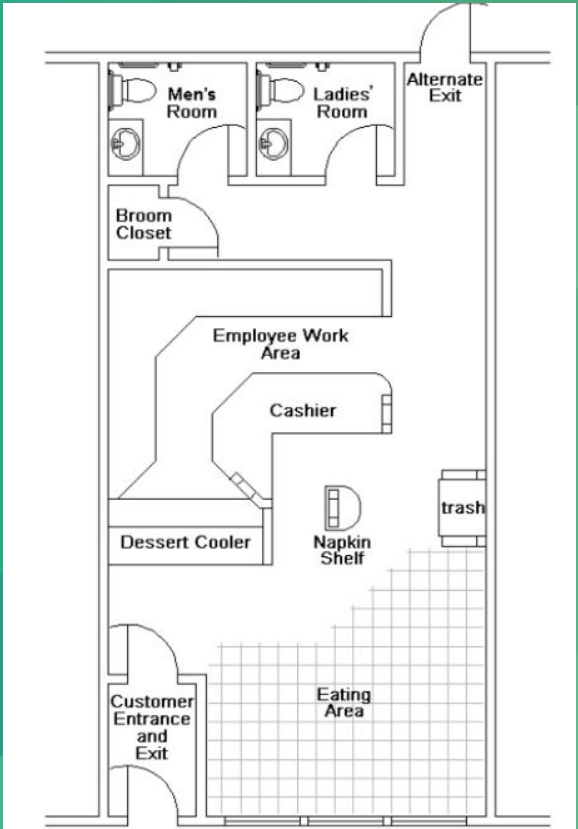
The Problem

- The current lounge chair and living room-style seating areas in Mr. Smith's Coffee Shop are too large and cannot accommodate the growing number of patrons.
- Design and model a modular table that will allow a greater number of patrons to be serviced at Mr. Smith's Coffee Shop.



Mr. Smith's Shop

- Minimum of 2 adults seating per table.
- Table design must interlock for stability.



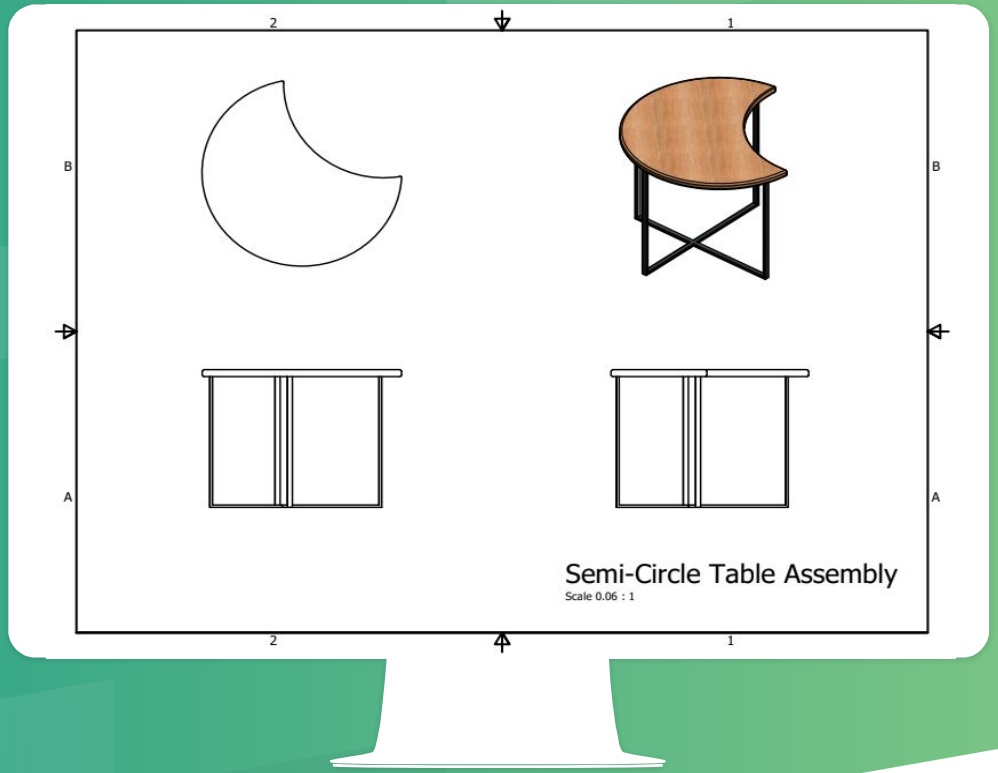
Mr. Smith's Floor Plan

- Maximum material costs are $200 per table
- Maximum weight limit of 50 lb per table

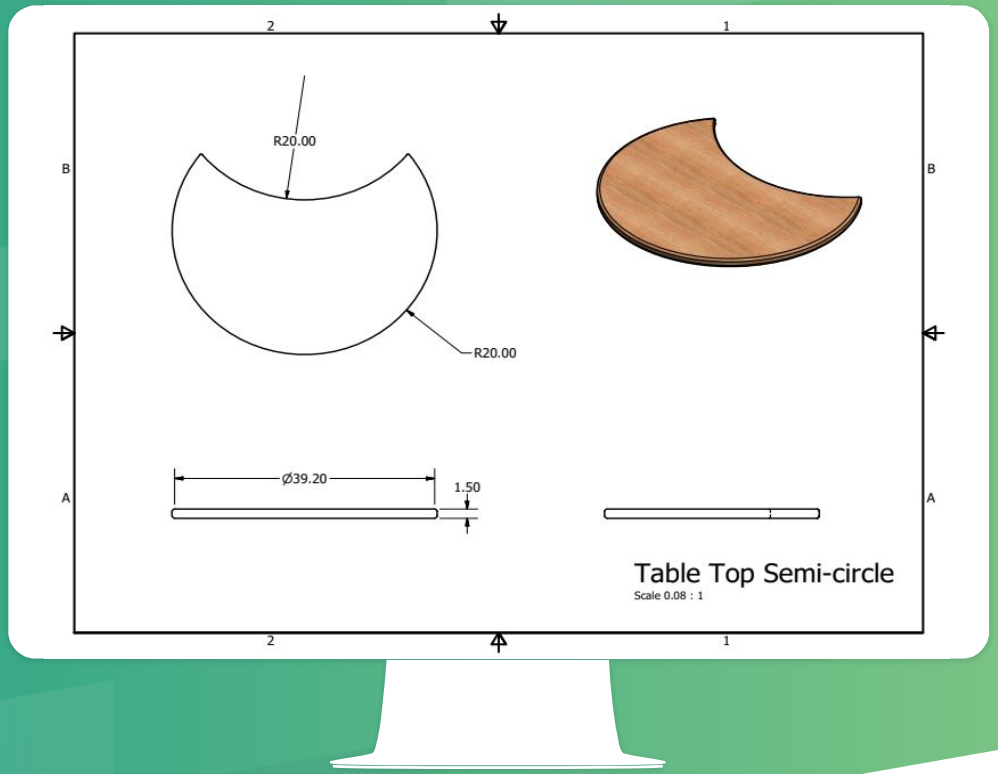
The Design

The Drawings + Materials*

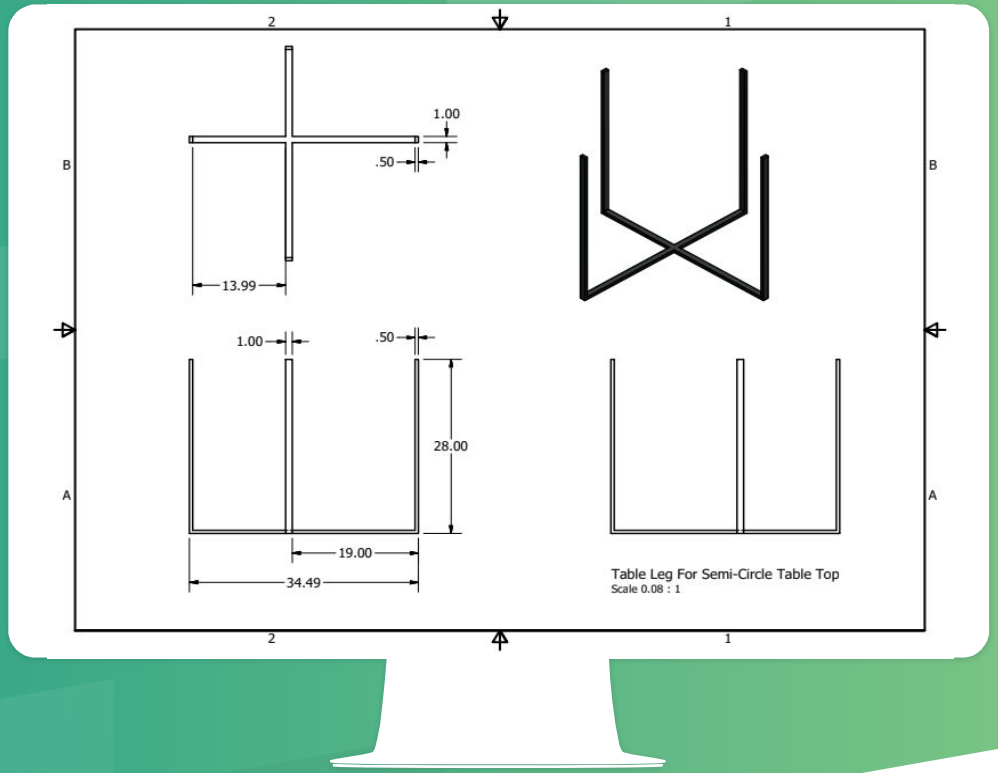
*(All materials from The Home Depot)



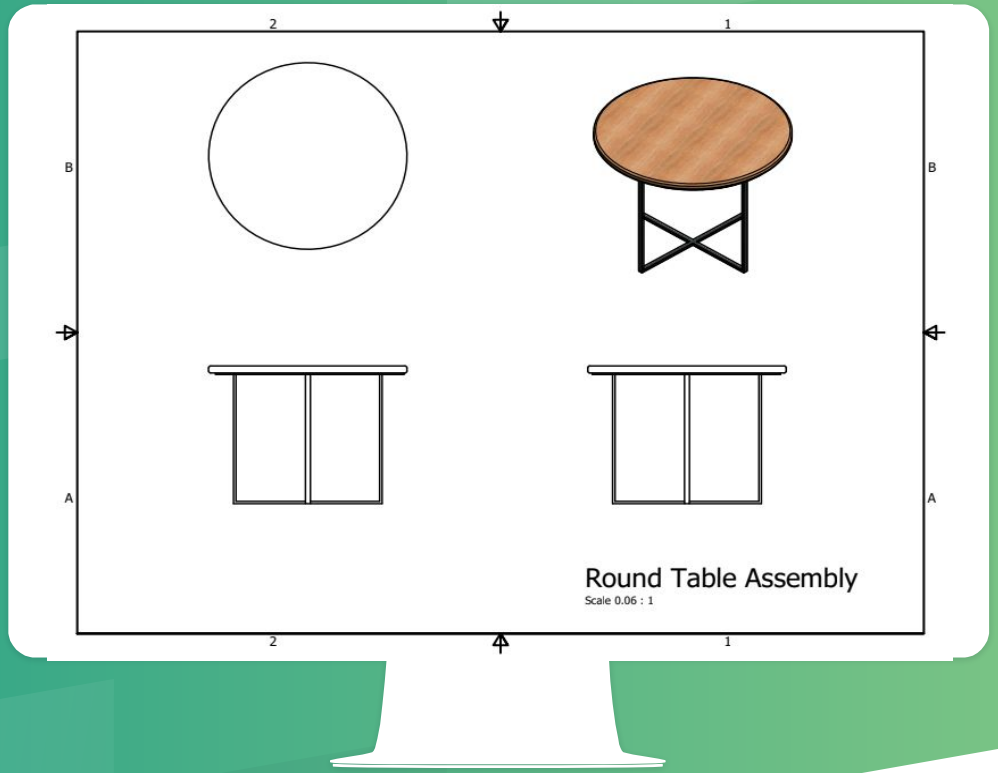
- Cost
  - $80 Table Top
  - $40 Table Stand
  - $5 Hitch
  - $15 Latch
- Final Cost including cutting is around $163
- Final weight is around 39 lbs



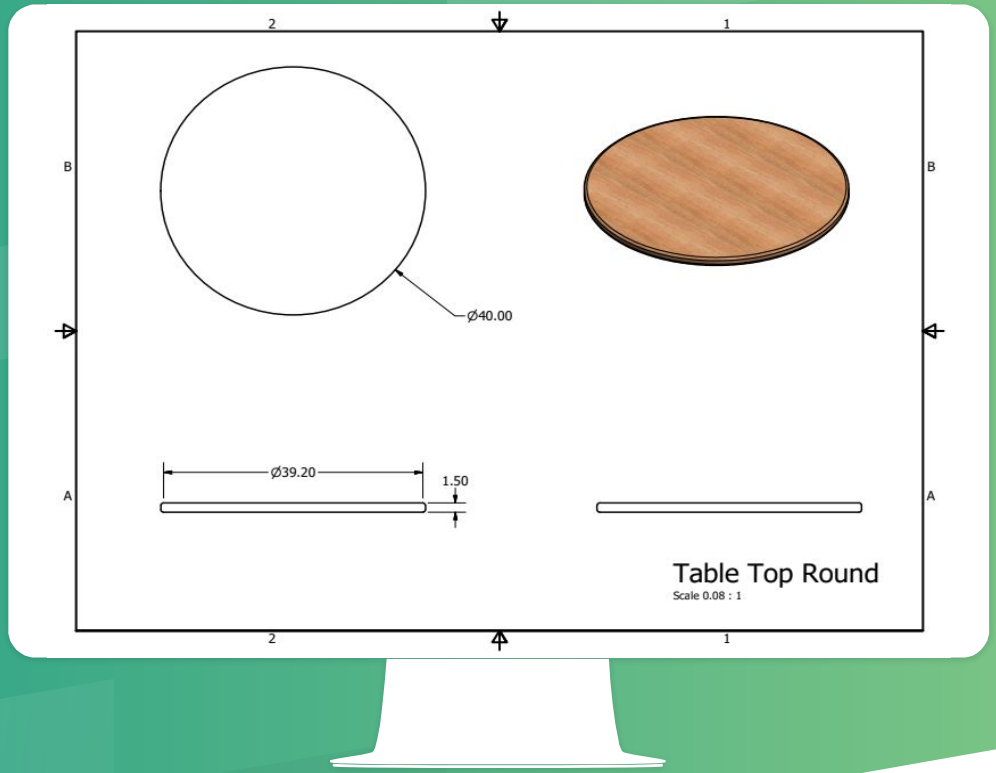
- 2 pieces of ¾" x 4' x 4' Molded Red Oak Plywood
- Free custom cut
- Cost $80
- Weight 35 lbs



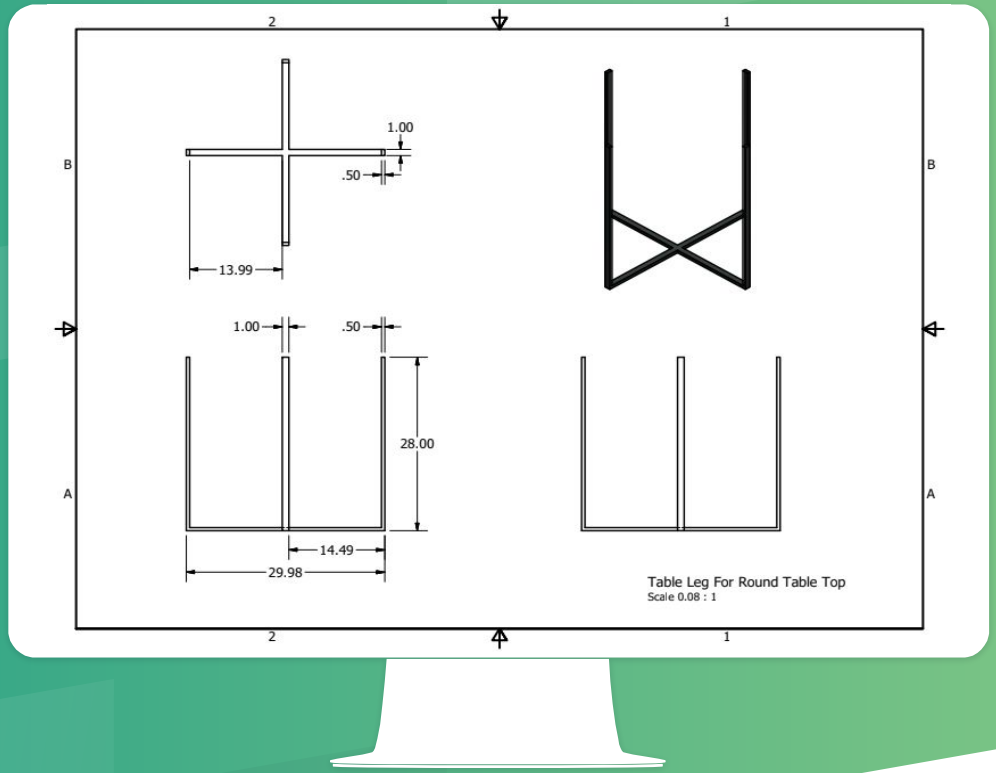
- 6 pieces of 1" x 36" Steel Square Tube
- $10 custom metal cut
- Cost $48
- Weight 5 lbs



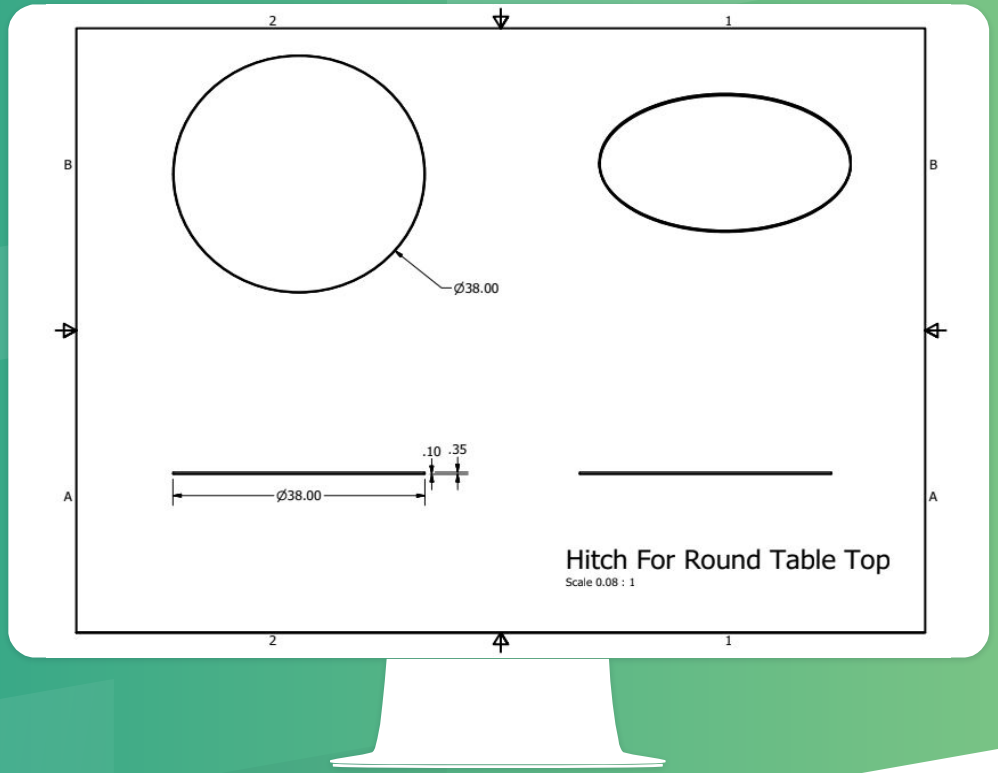
- Cost
  - $80 Table Top
  - $40 Table Stand
  - $5 Hitch
  - $15 Latch
- Final Cost including cutting is around $155
- Final weight is around 45 lbs



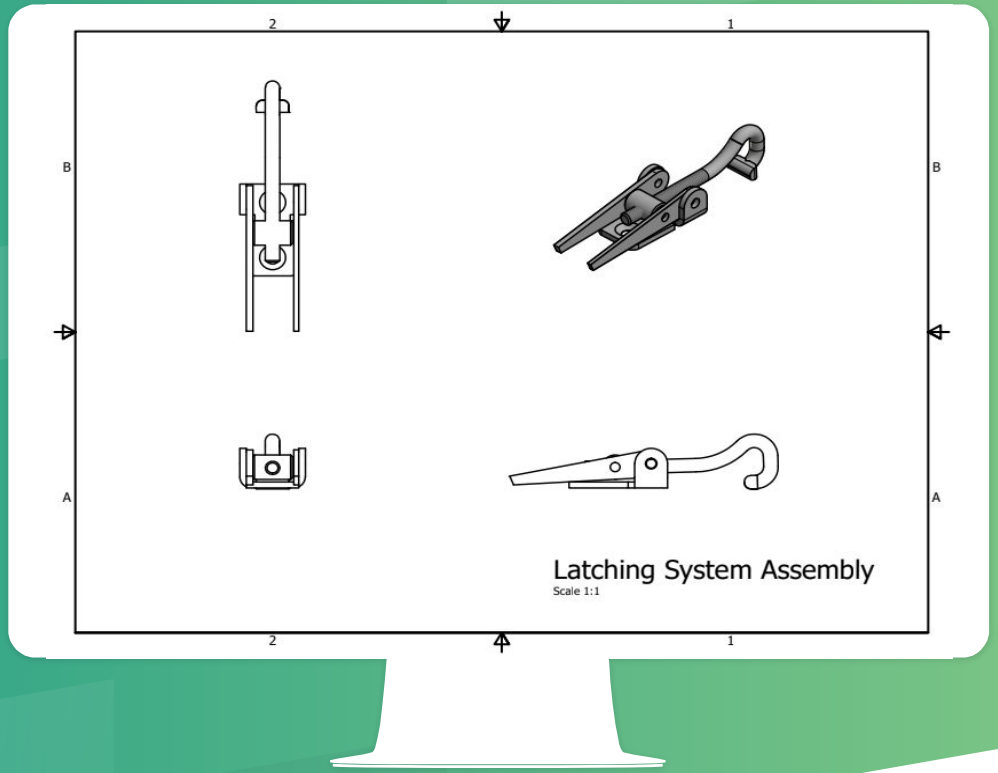
- 2 pieces of ¾" x 4' x 4' Molded Red Oak Plywood
- Free custom cut
- Cost $80
- Weight 40 lbs



- 5 pieces of 1" x 36" Steel Square Tube
- $5 custom metal cut
- Cost $40
- Weight 4 lbs



- 1 piece of ¾" x 58' Zinc Plated Sheet Metal
- $5 custom metal cut
- Cost $5
- Weight 1 lbs



- 1 piece of ¾" x 58' Zinc Plated Sheet Metal
- $5 custom metal cut
- Cost $15
- Weight 1 lbs

Reflection

- Overall our group worked in collaboration and with dedication throughout the completion of this project.
  - Mahdi created the semi-circle table and stand
  - Julian created the round table and stand
  - Neel created the interlocking system and assembly
- The main challenge we faced was creating the latching system but after some research we succeeded in making it function
- Our modular table system works well in which the latches keep the tables interlocked so they stay together when being used.