

# Building a Vacuform on a Budget

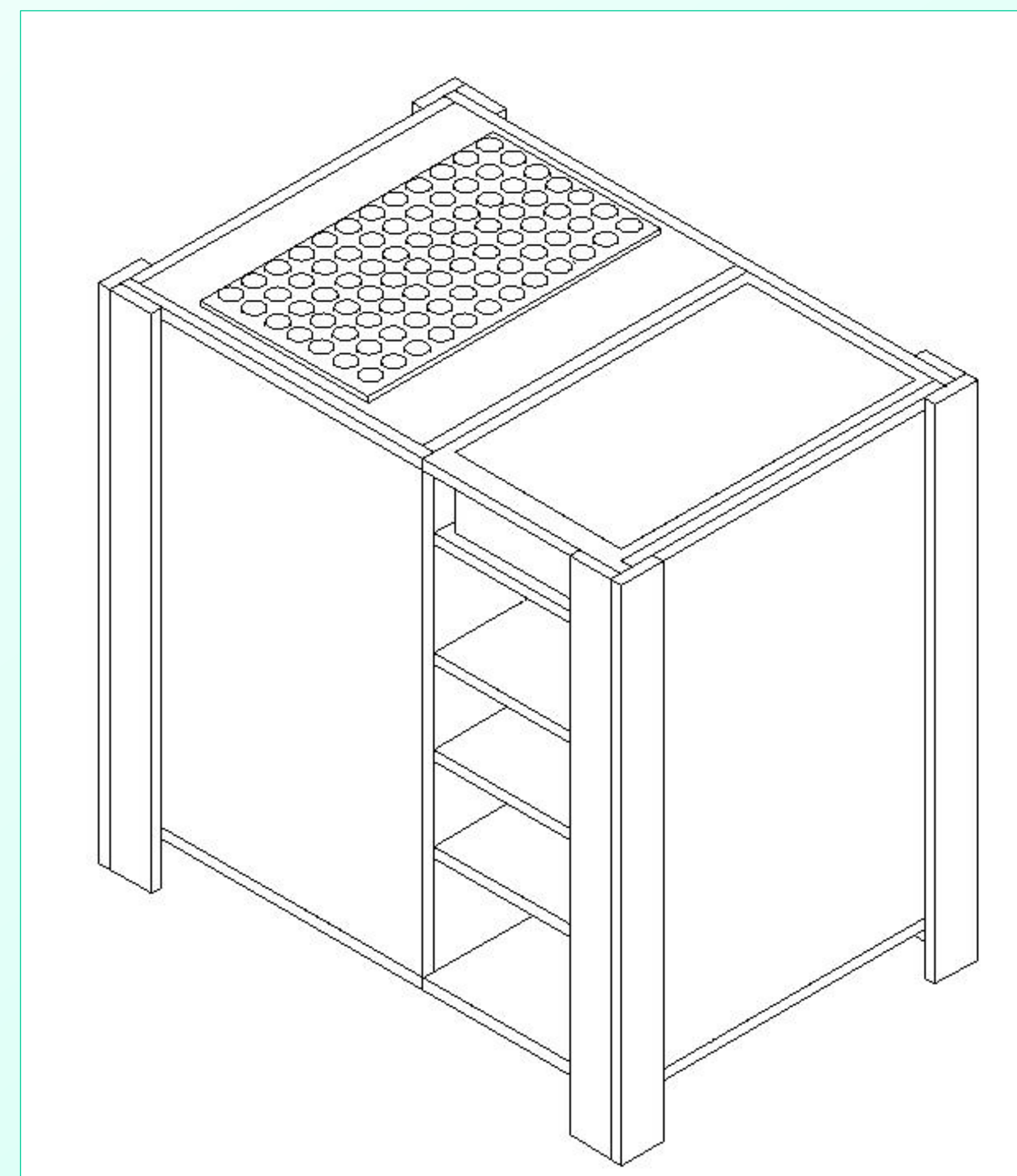
Julia McDaniel, Visual and Performing Arts Department<sup>1</sup>, Angelo State University<sup>2</sup>  
 Faculty Mentor, Mike Burnett, MFA<sup>1,2</sup>

## INTRODUCTION

Question: How do you make a vacuform without spending over \$1000? How do you make a vacuform using a toaster oven?

Hypothesis: If a toaster oven and other building supplies are utilized, a functional vacuform can be built at a low cost.

Objective: To build a vacuform for use in the ASU scene shop to quickly and easily create costume, scenic, and prop pieces.



## RESULTS

A functioning vacuform was successfully built for under \$1000. A total of \$553.12 was spent, not including supplies that were available in the scene shop: wood glue and screws.

A toaster oven was not used to complete this build. After researching further, it was discovered that the issues with a conventional oven: size, how to hold the plastic, and cost, also applied to a toaster oven. Instead, an indoor grill was utilized. The machine took many trials and errors to get it to function properly and easily.

## FINAL BUDGET

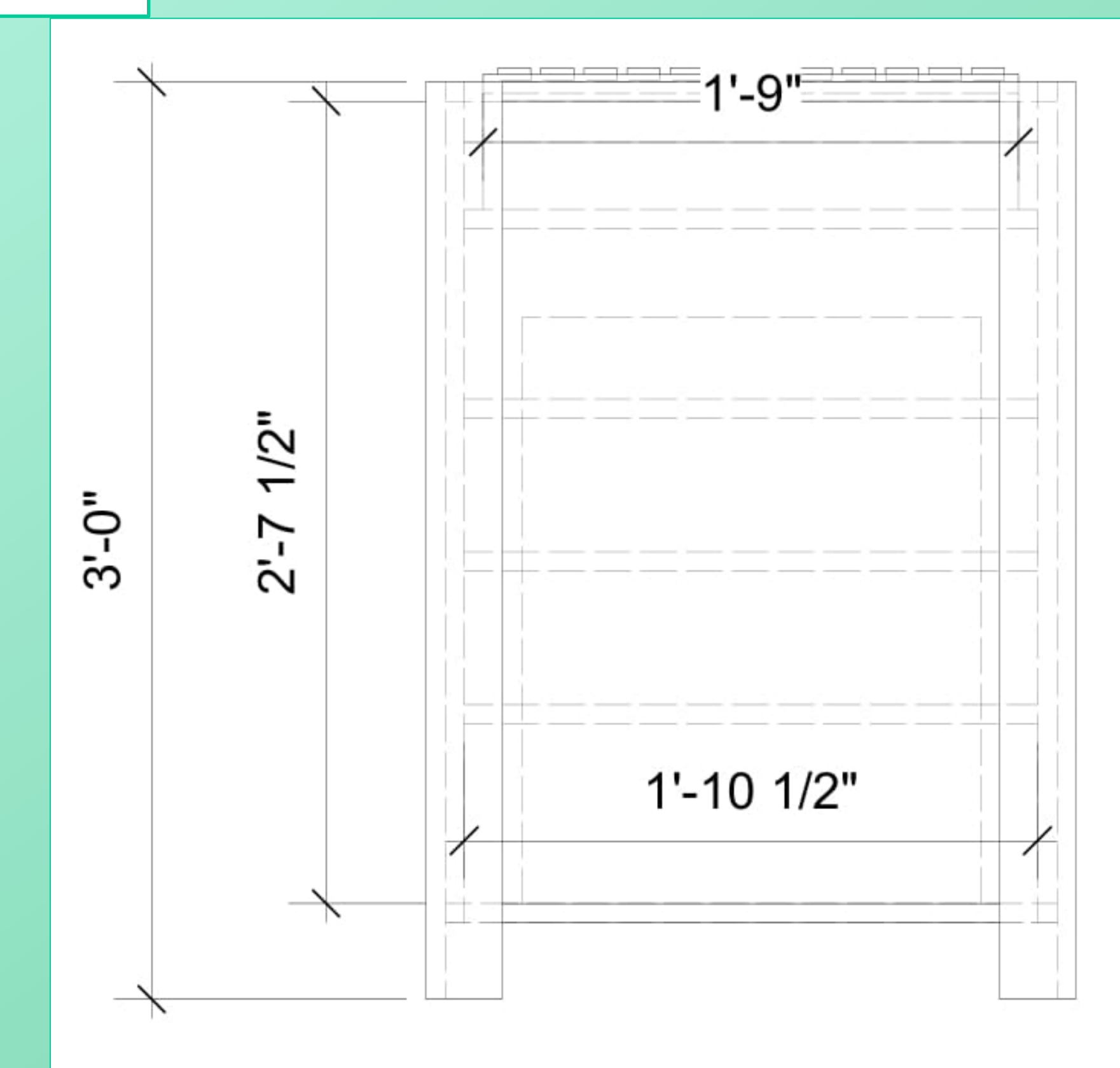
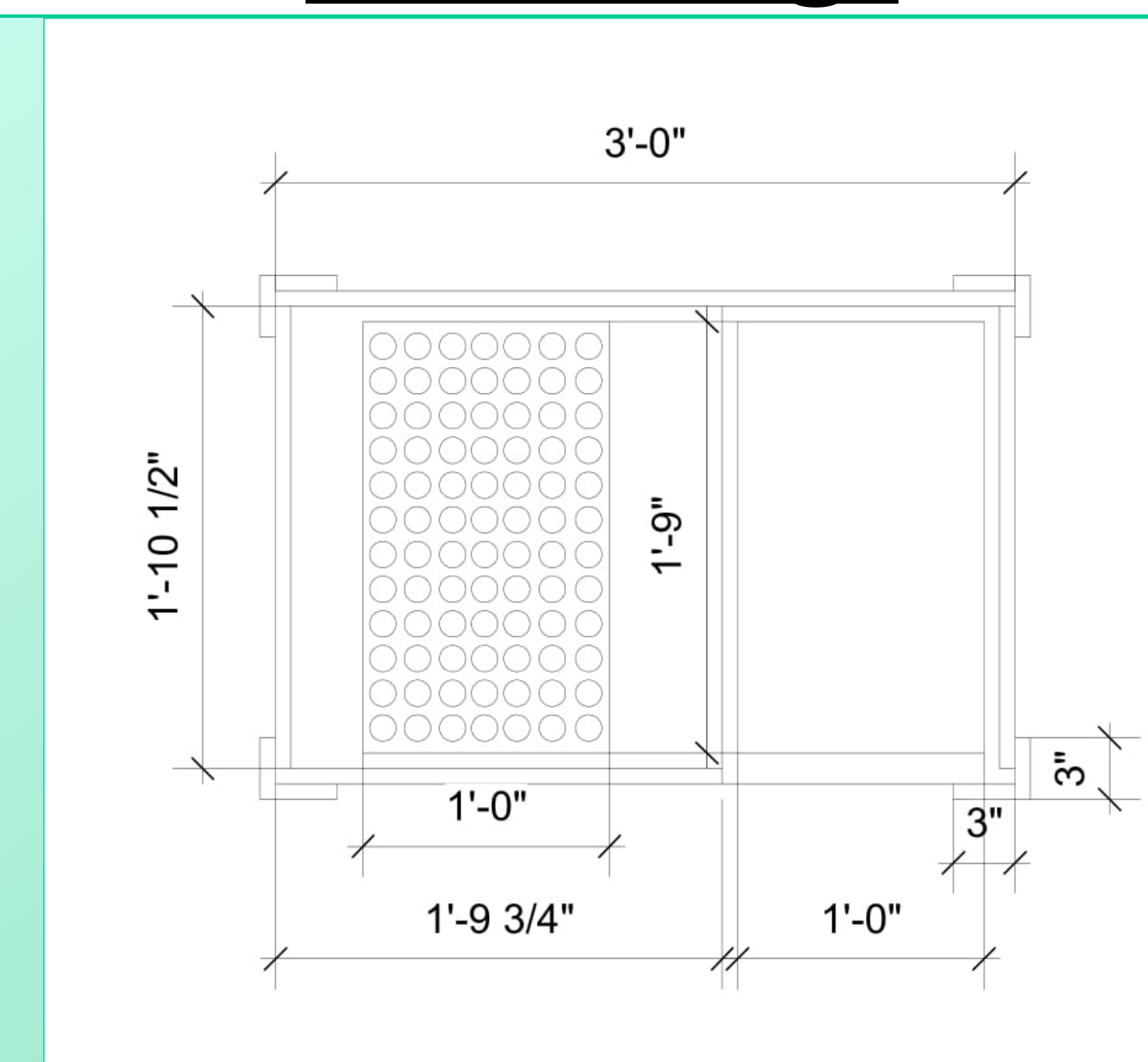
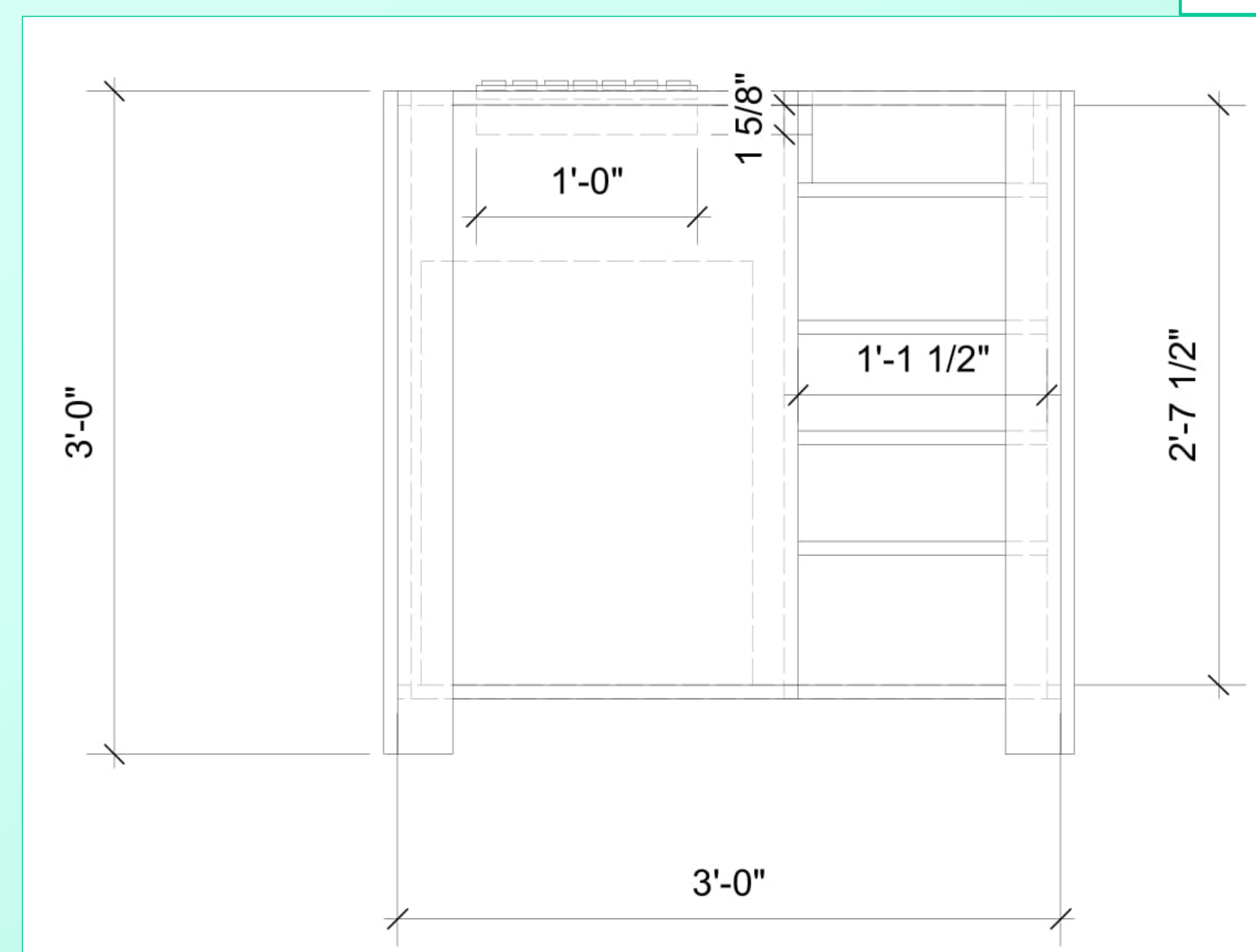
Item	Vendor	Size	Cost per 1 Item	Quantity	Total Cost
Tayama TG-868 Non-Stick Electric Indoor Grill	Amazon	20" x 10" x 4"	\$ 25.99	1	\$ 25.99
High Impact Polystyrene Sheet + Shipping and Cutting	Curbell Plastics	0.040" X 48" X 96"	\$ 19.12	6	\$ 195.23
Shop-Vac 6.5-Peak HP Shop Vacuum	Lowe's	8-Gallon	\$ 146.29	1	\$ 146.29
Peg Board	Lowe's	4' x 8'	\$ 15.73	1	\$ 15.73
Luan	Lowe's	4' x 8' x 3/8"	\$ 22.48	1	\$ 22.48
3/4" Plywood	Lowe's	4' x 8' x 3/4"	\$ 29.48	5	\$ 147.40
<b>TOTAL</b>					<b>\$ 553.12</b>

## MATERIALS & METHODS

Materials:  
 4x8 Sheets of 3/4" Plywood  
 4x8 Sheet of Peg Board  
 4x8 Sheet of Luan  
 Screws  
 Wood Glue  
 Shop Vac  
 Indoor Grill  
 Mold  
 Methods:

1. Cut wood to indicated sizes
2. Assemble foundation
3. Assemble heating area
4. Assemble vacuum area
5. Place grill and vacuum
6. Heat plastic for 8 minutes
7. Turn on vacuum
8. Flip plastic onto peg board and mold

## Renderings



## ACKNOWLEDGEMENTS

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## WORKS CITED

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