OLIVER

Modular Shelving

Zane Owens *Furniture Design Capstone 2025*

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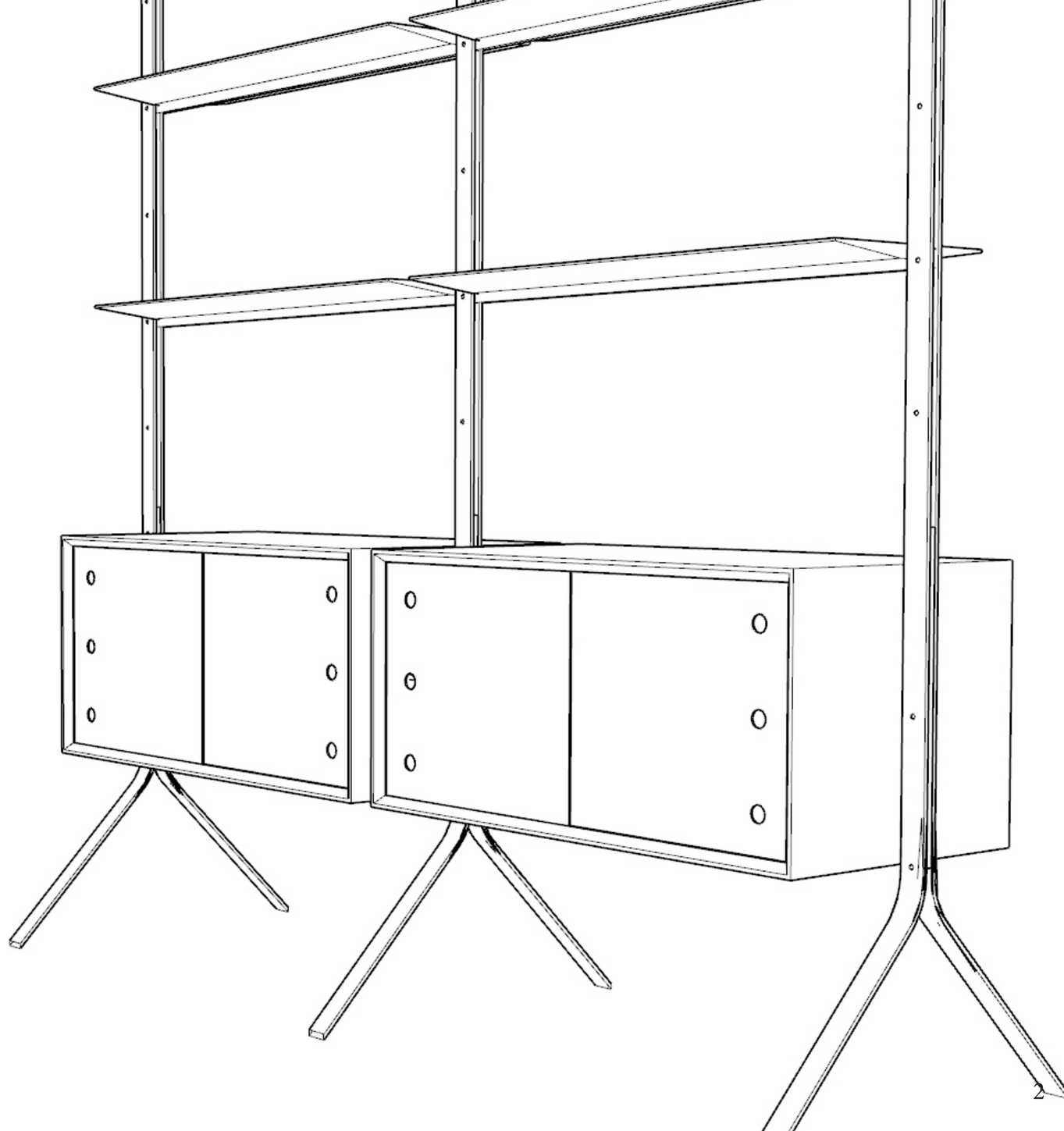
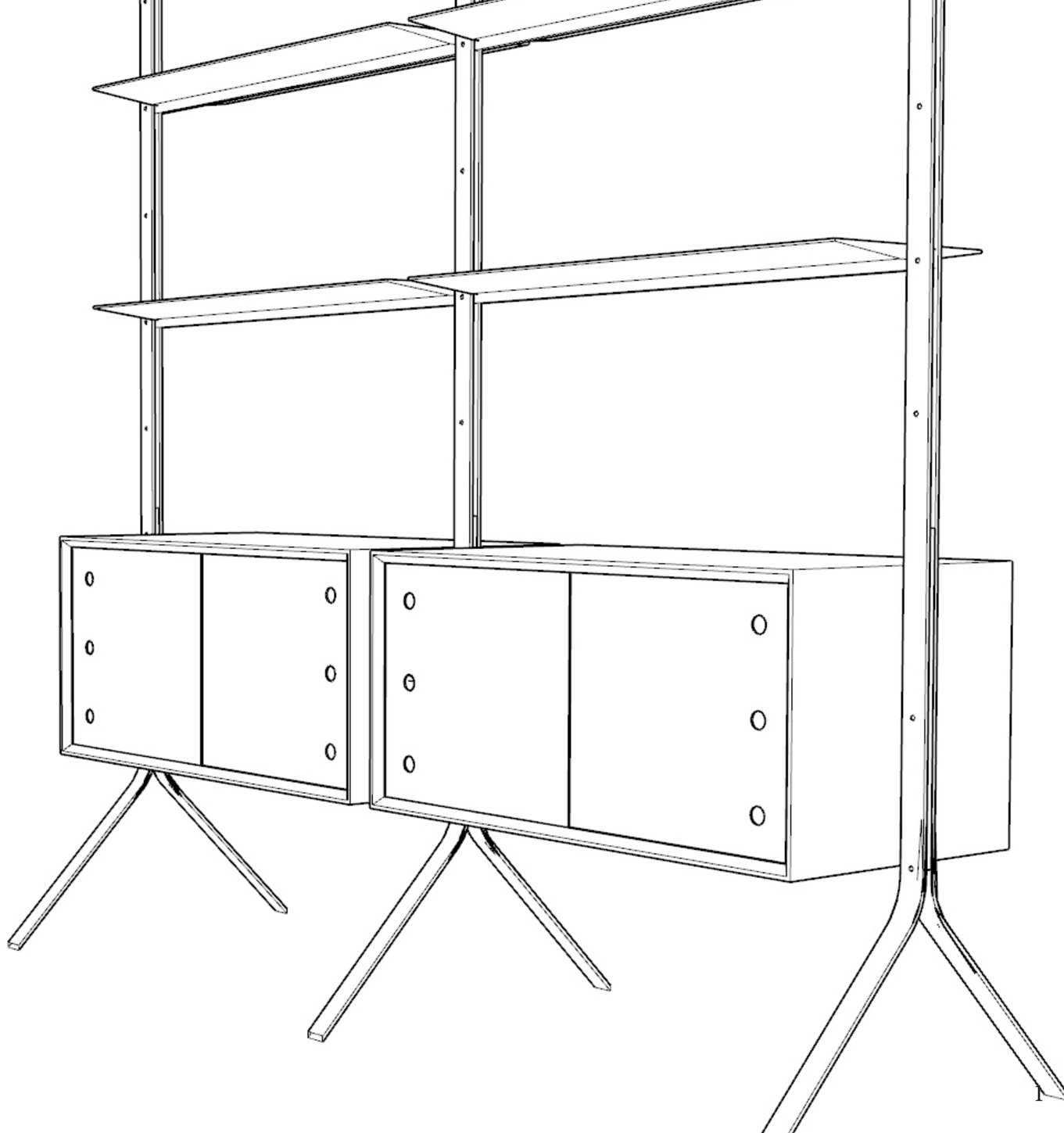


PROPOSAL

Innovating on an adjustable shelving unit my design is meant to create a robust and visually appealing modular system for general use. Loosely based on Brutalist architecture, the rail system takes from the overpowering forms found in soviet government buildings while innovating on materials to stray away from the stereotypical brutalist composition. The final design will be required to have storage, in the form of cabinets, and adjustable shelving for display.



INSPIRATION

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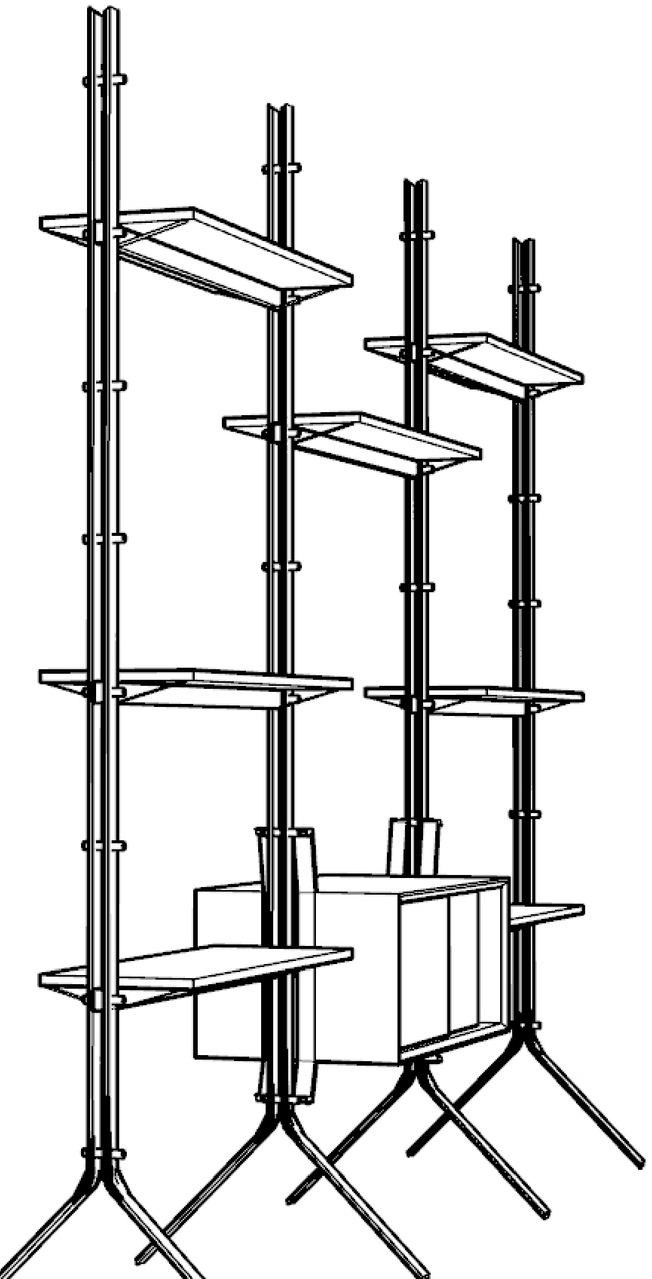
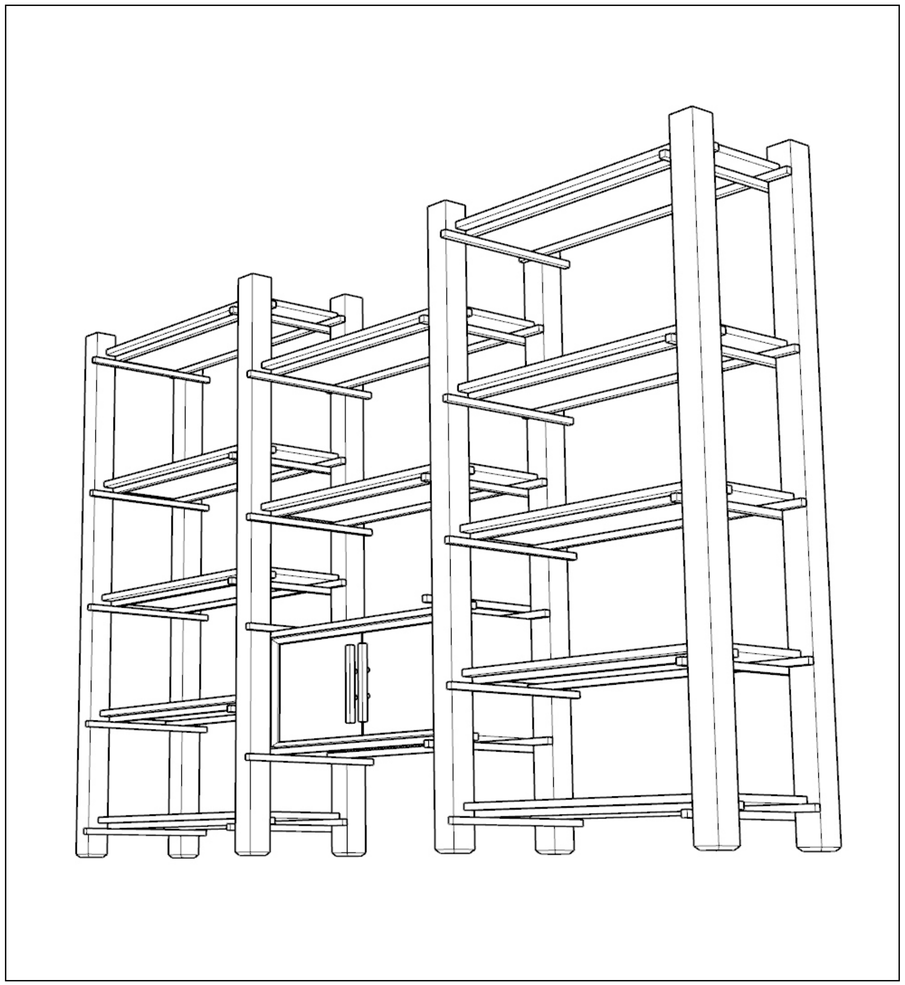
In terms of form and function I looked to mid-century modular shelving and room dividers. I was inspired by the versatility of modular wall units but wanted to create a free standing alternative.

IDEATION





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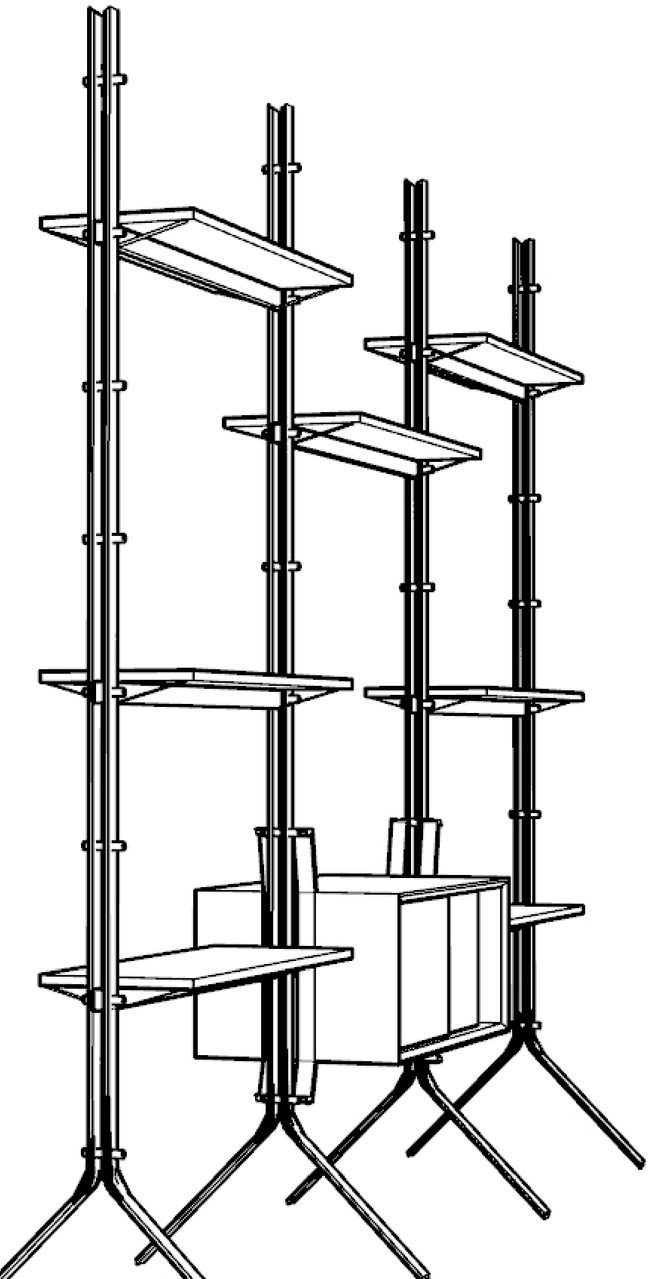

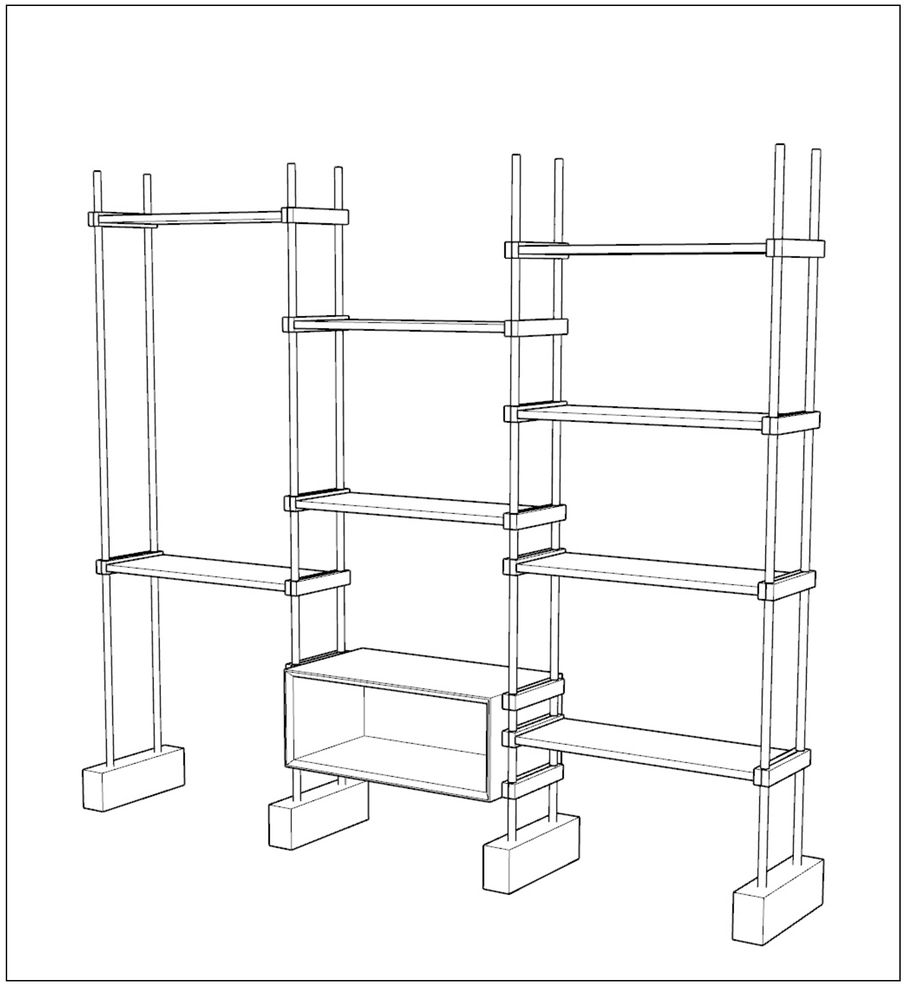

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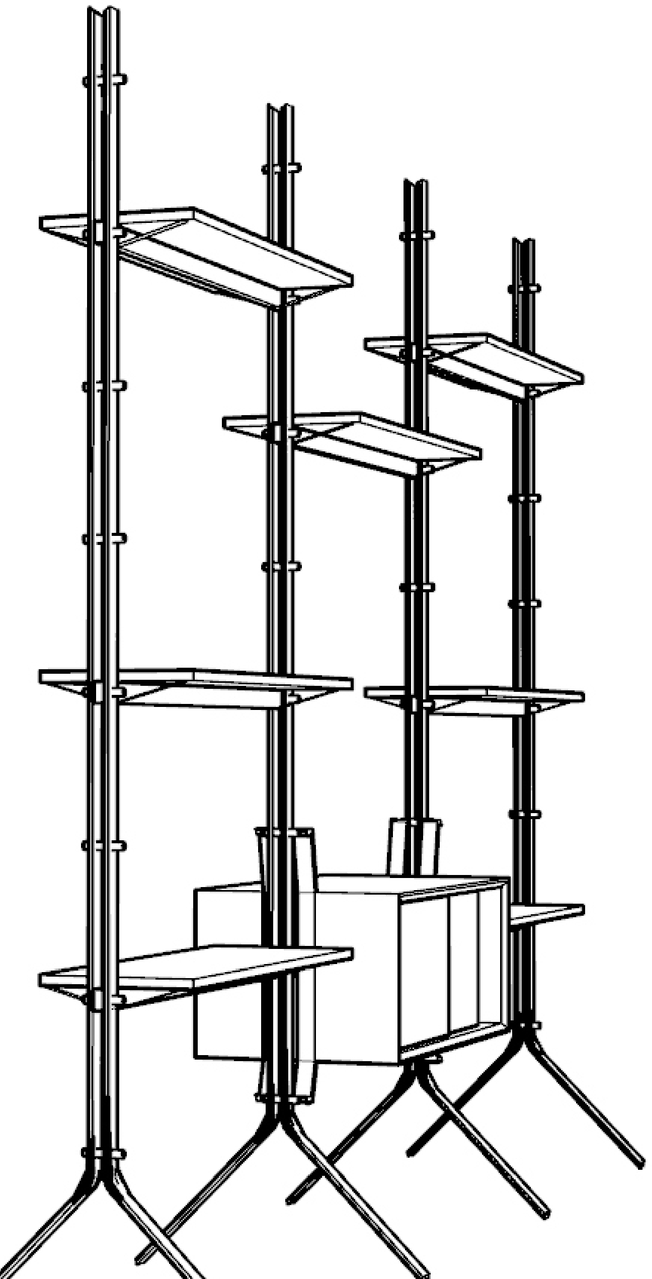

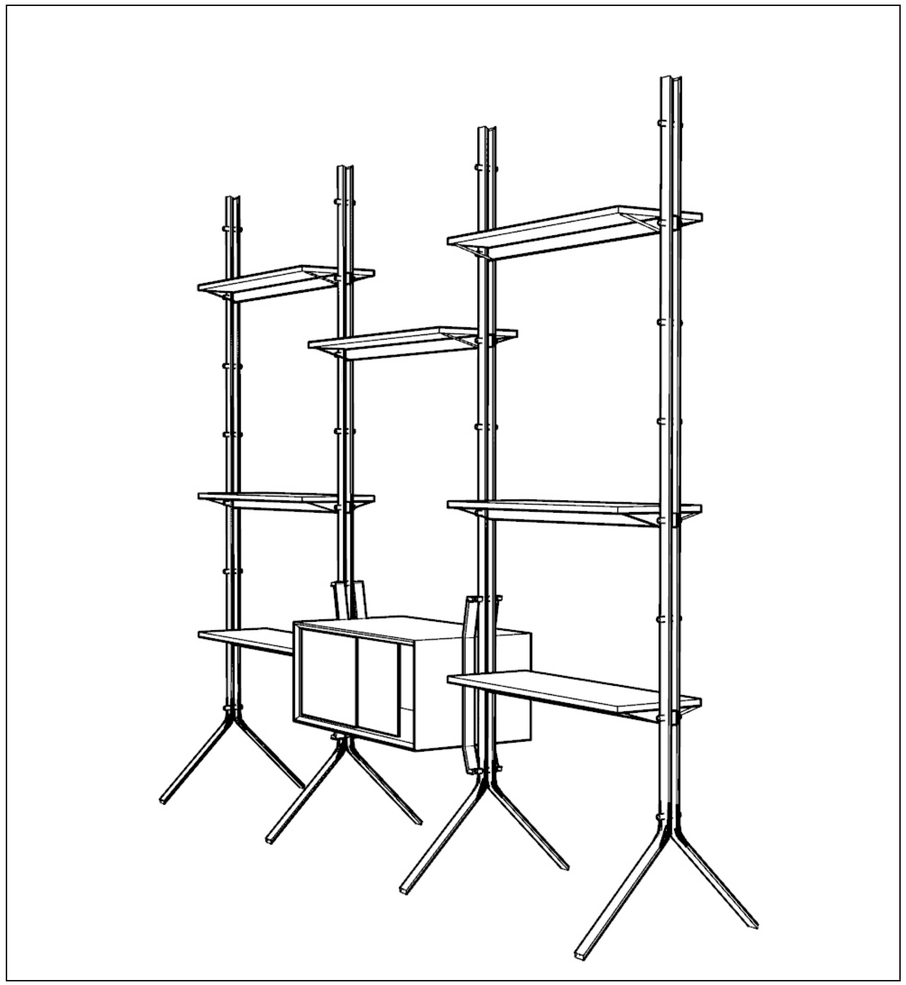

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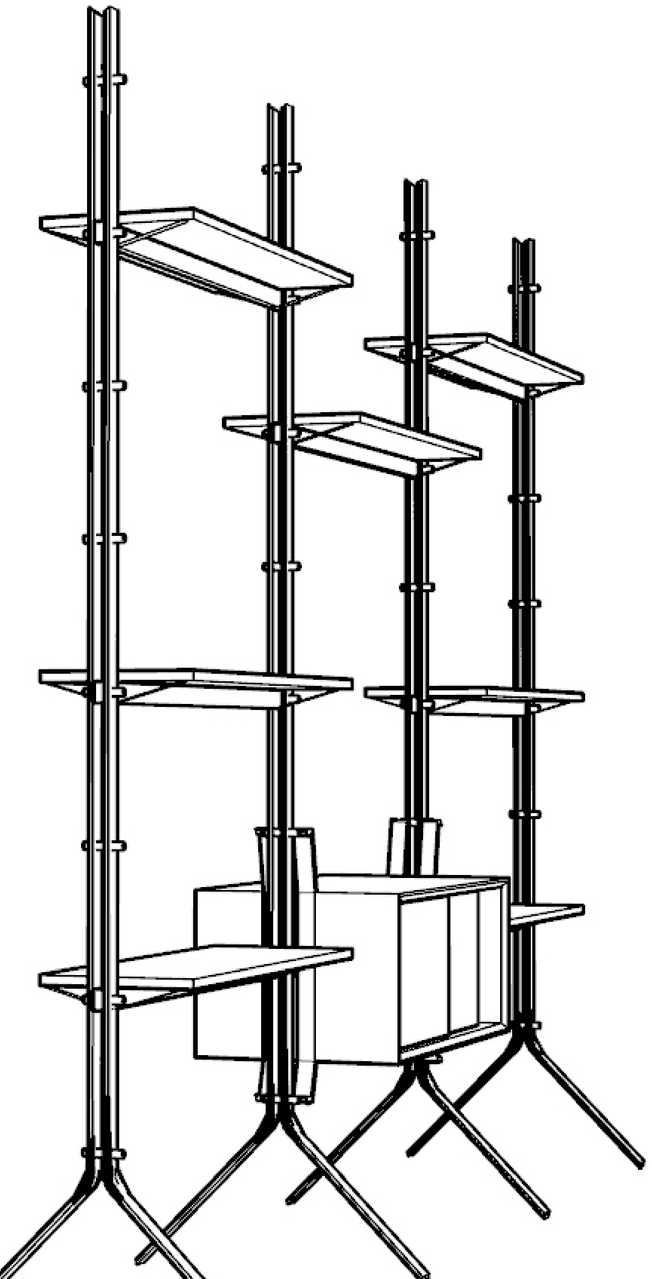

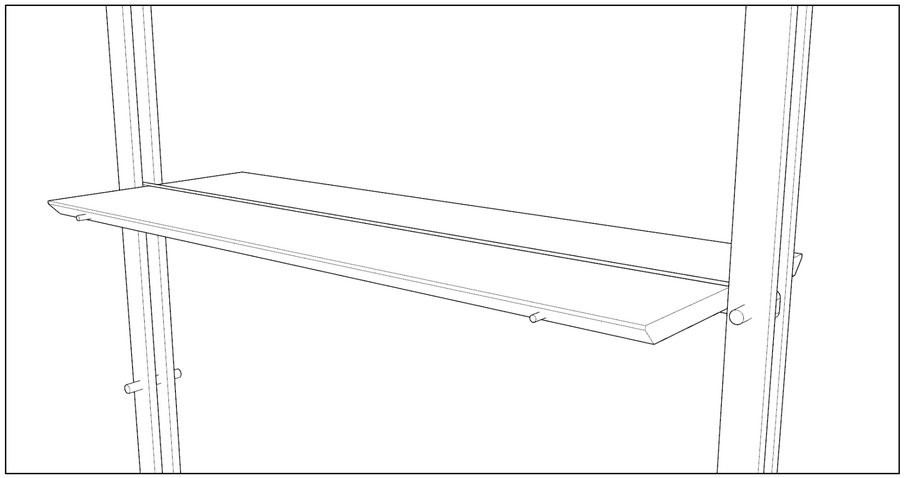

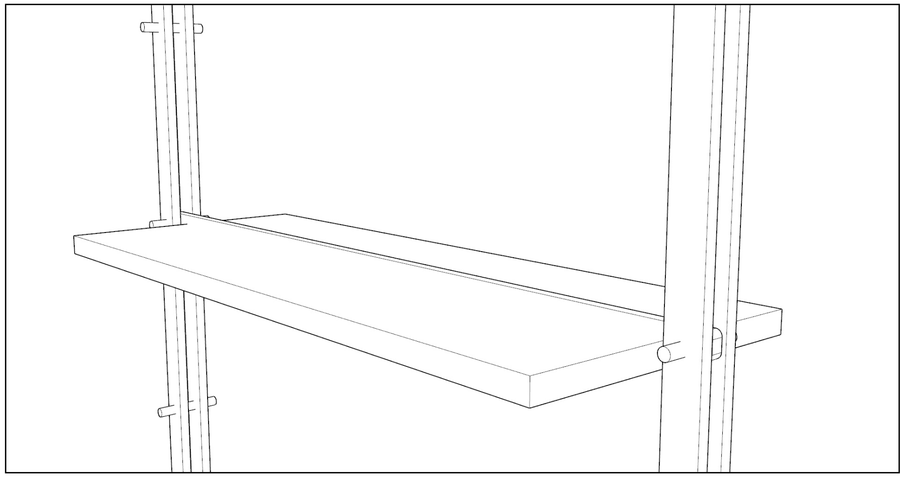

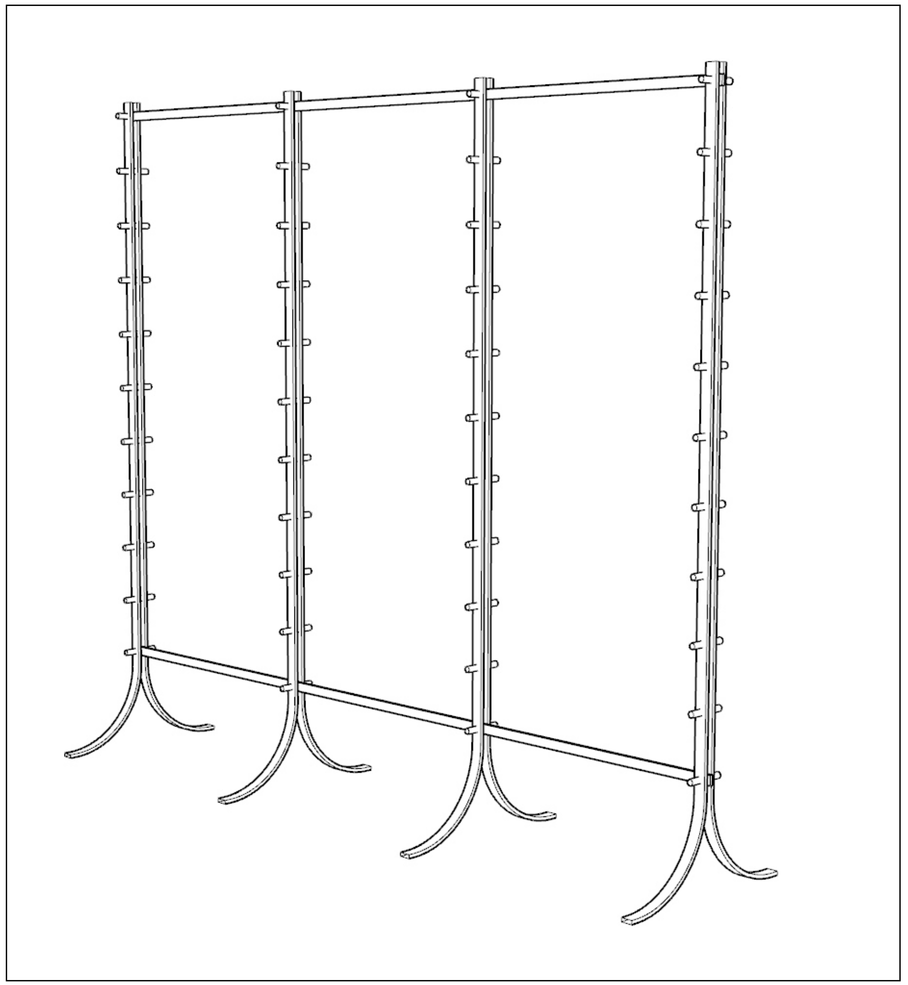

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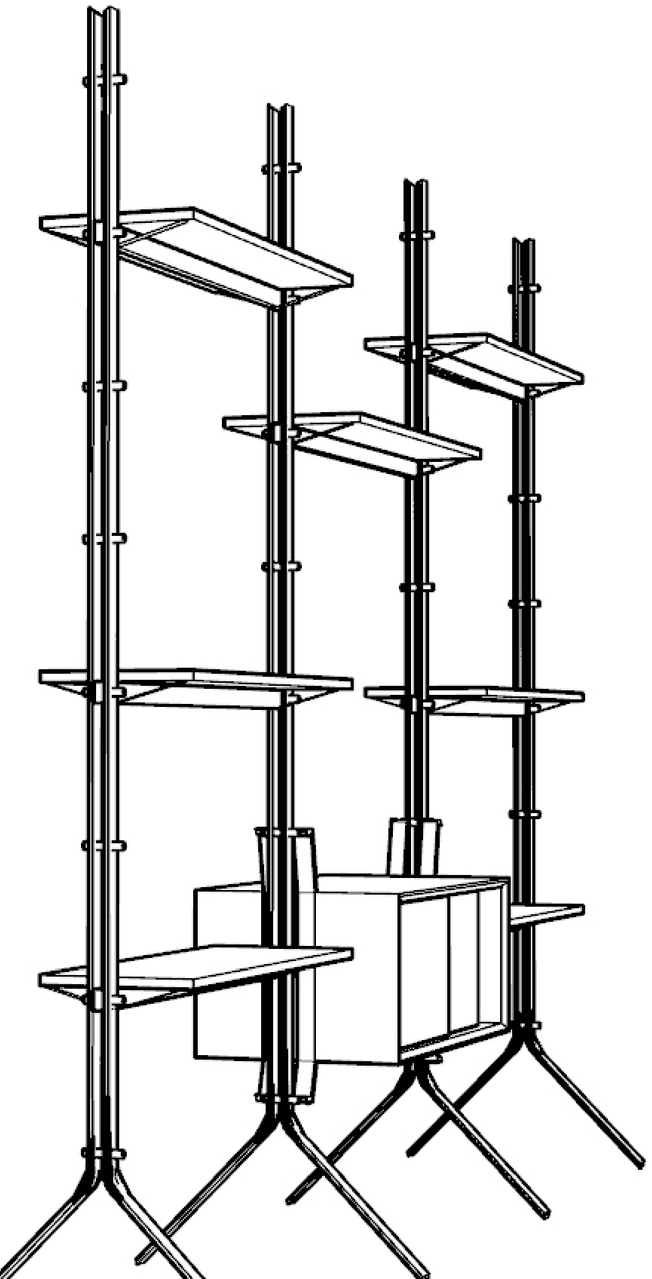
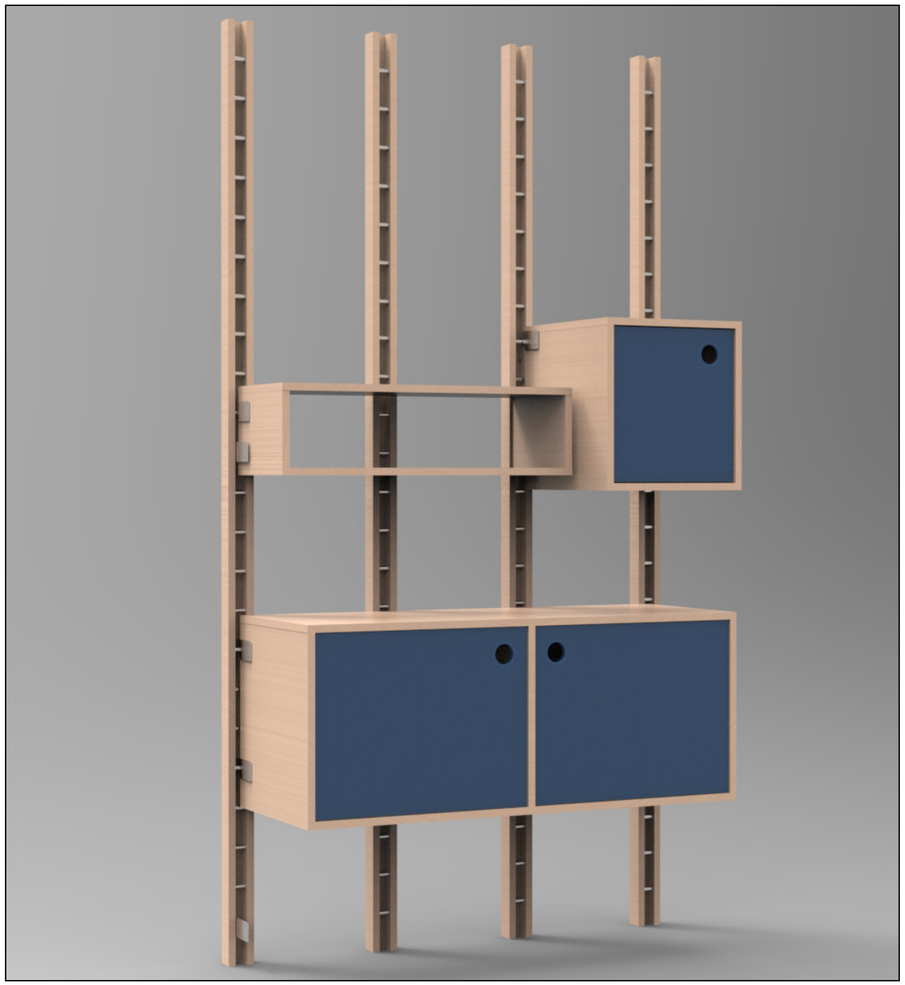
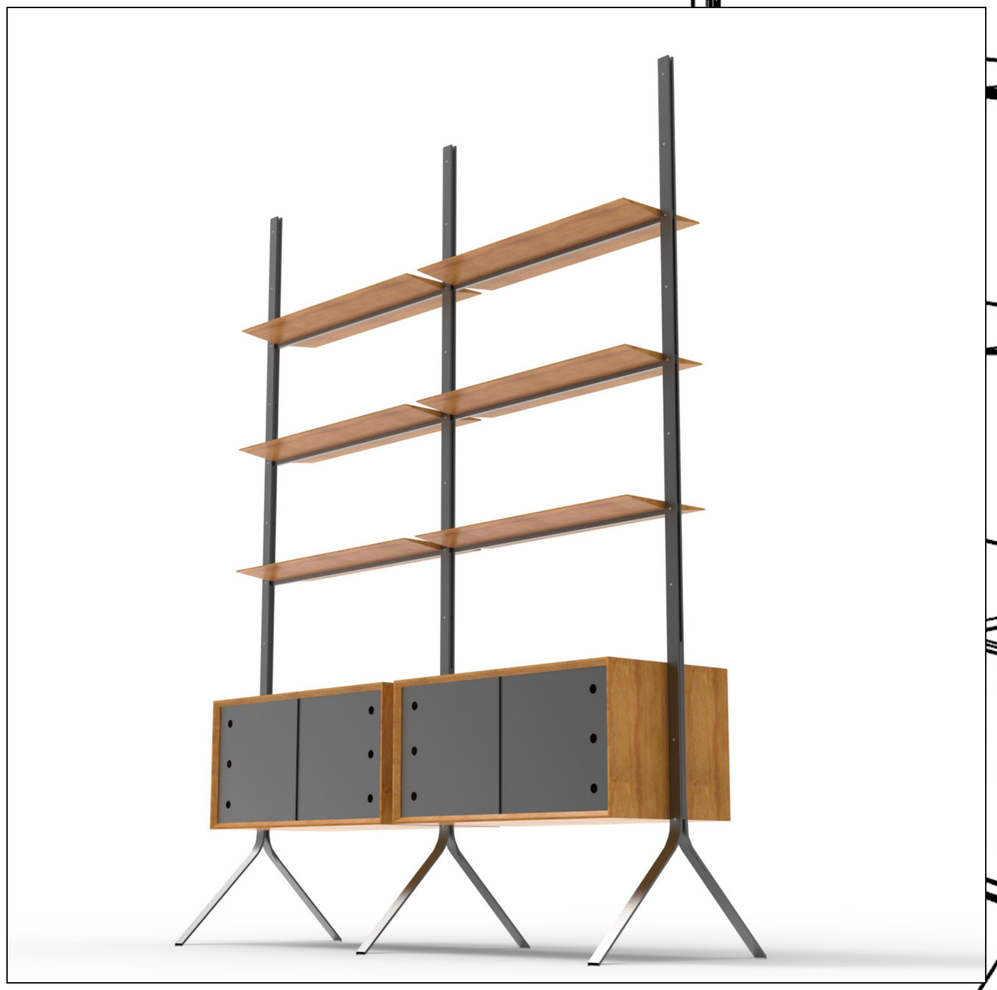
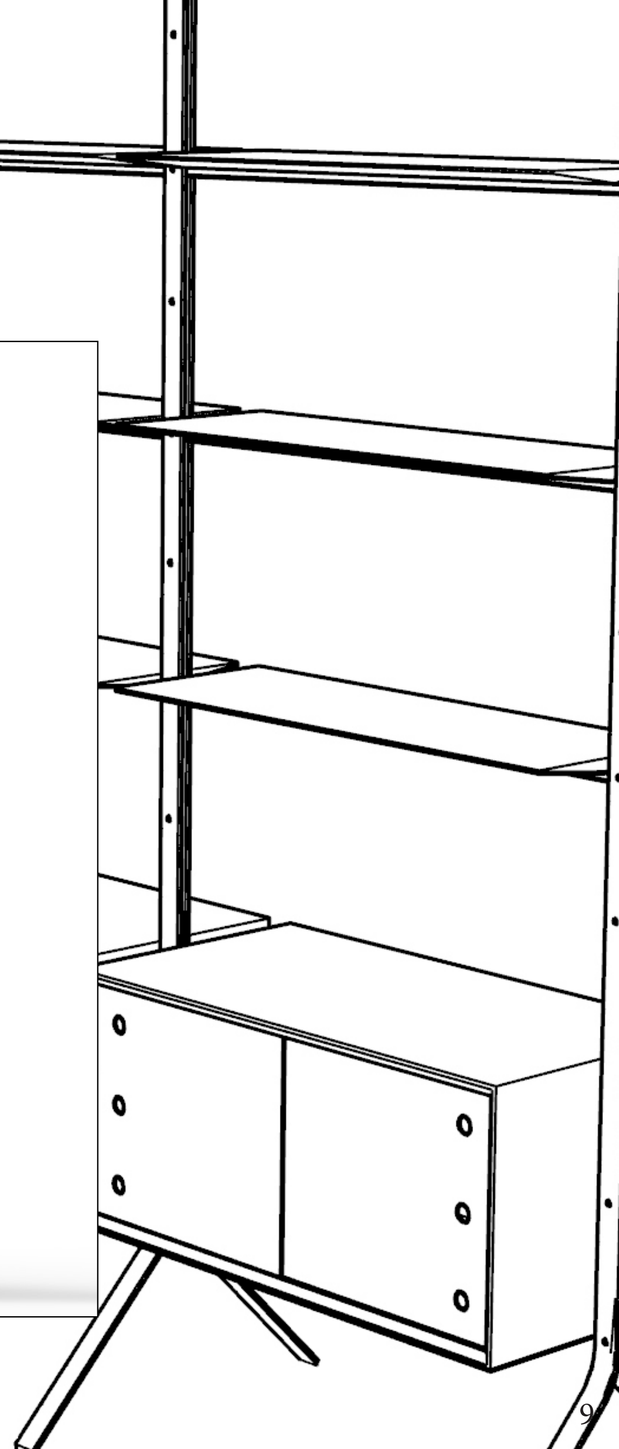




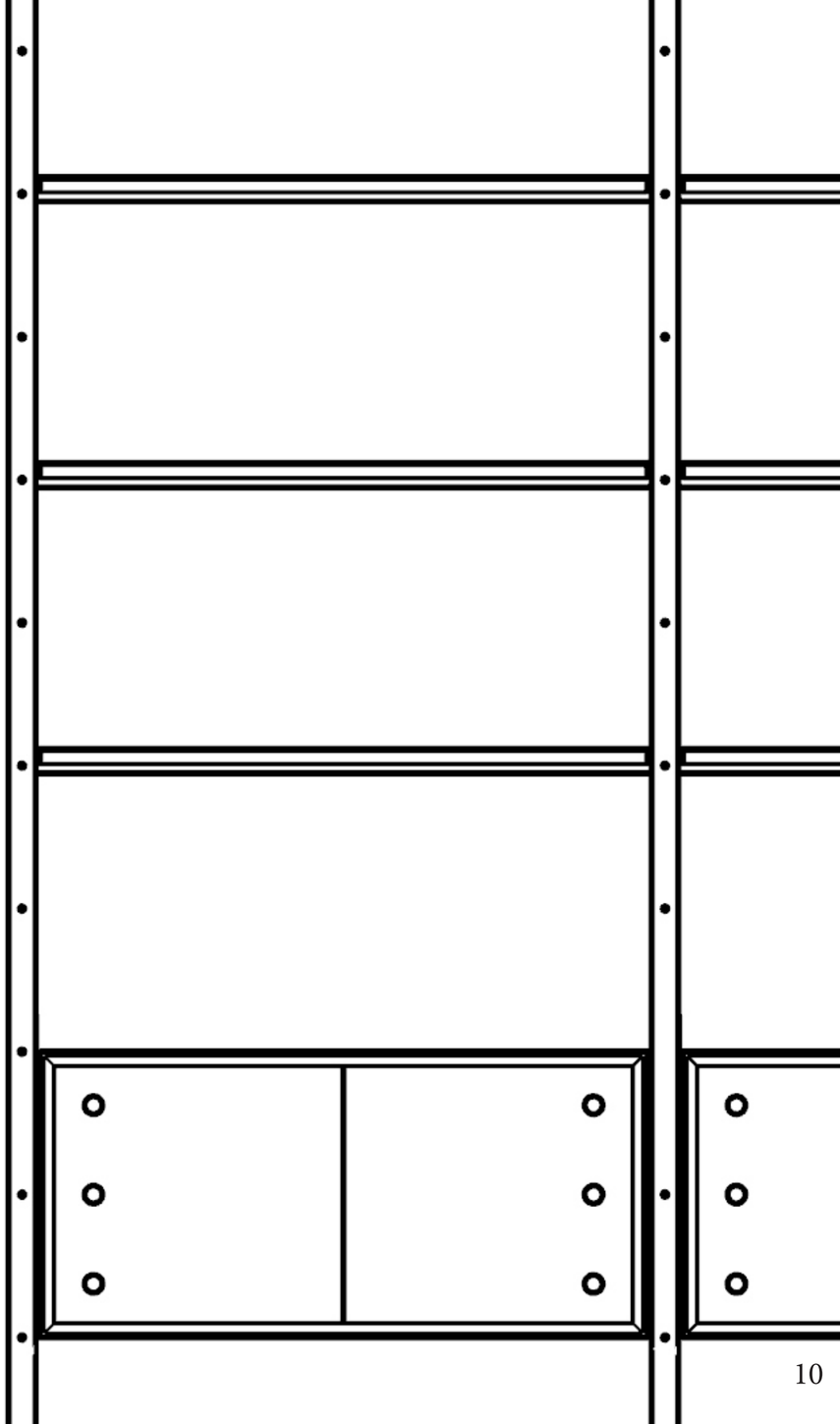
FINAL DESIGN



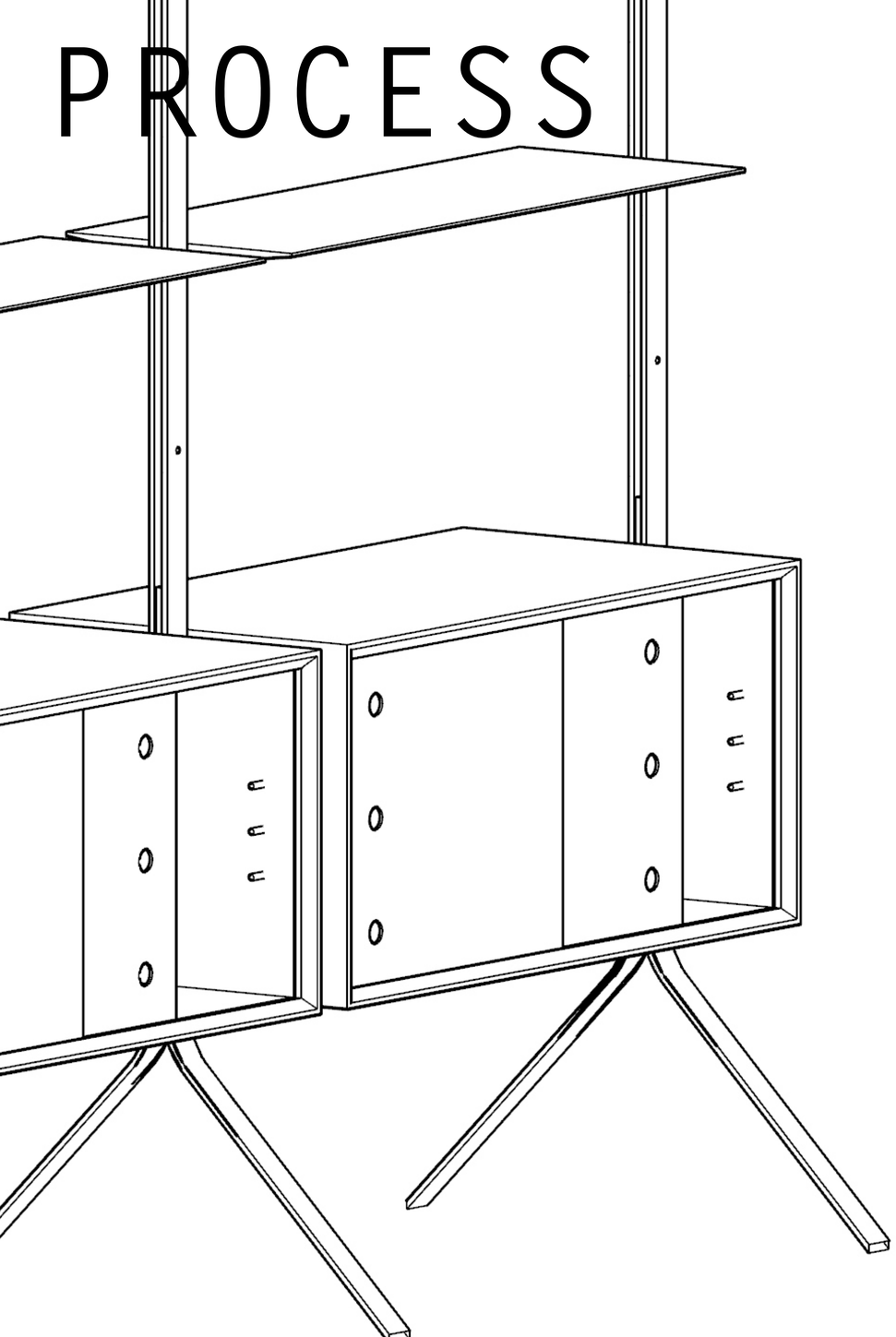


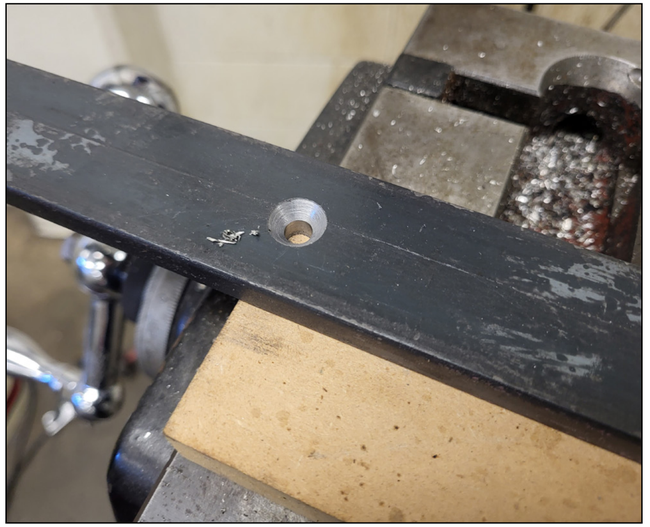
PROCESS

-3/8” STEEL HEATED USING AN OXY ACETYLENE TORCH AND BENT TO SHAPE ON A JIG



PROCESS

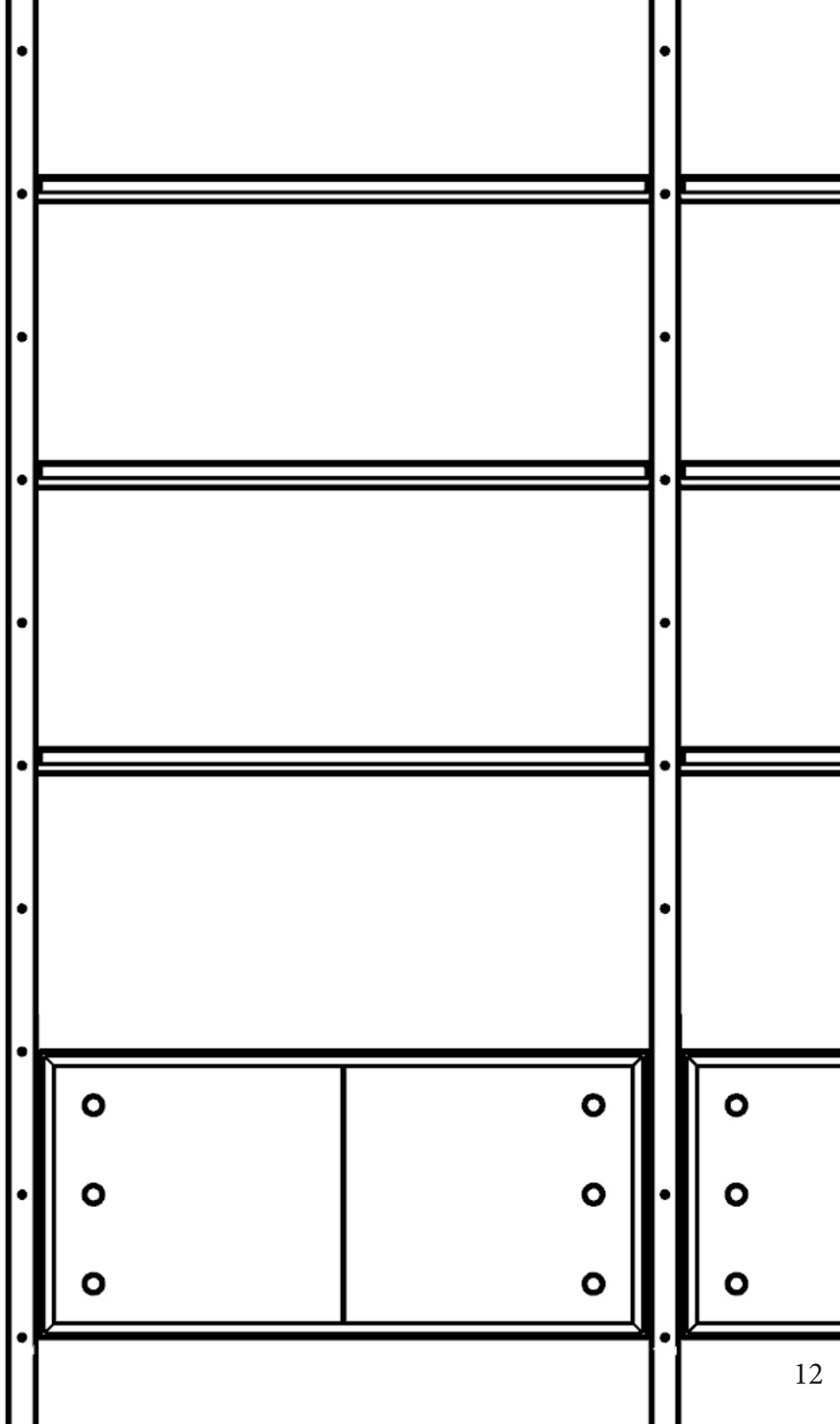




-LEGS ARE DRILLED AND COUNTER SUNK OR (FRONT) AND TAPPED (BACK) EVERY 8”

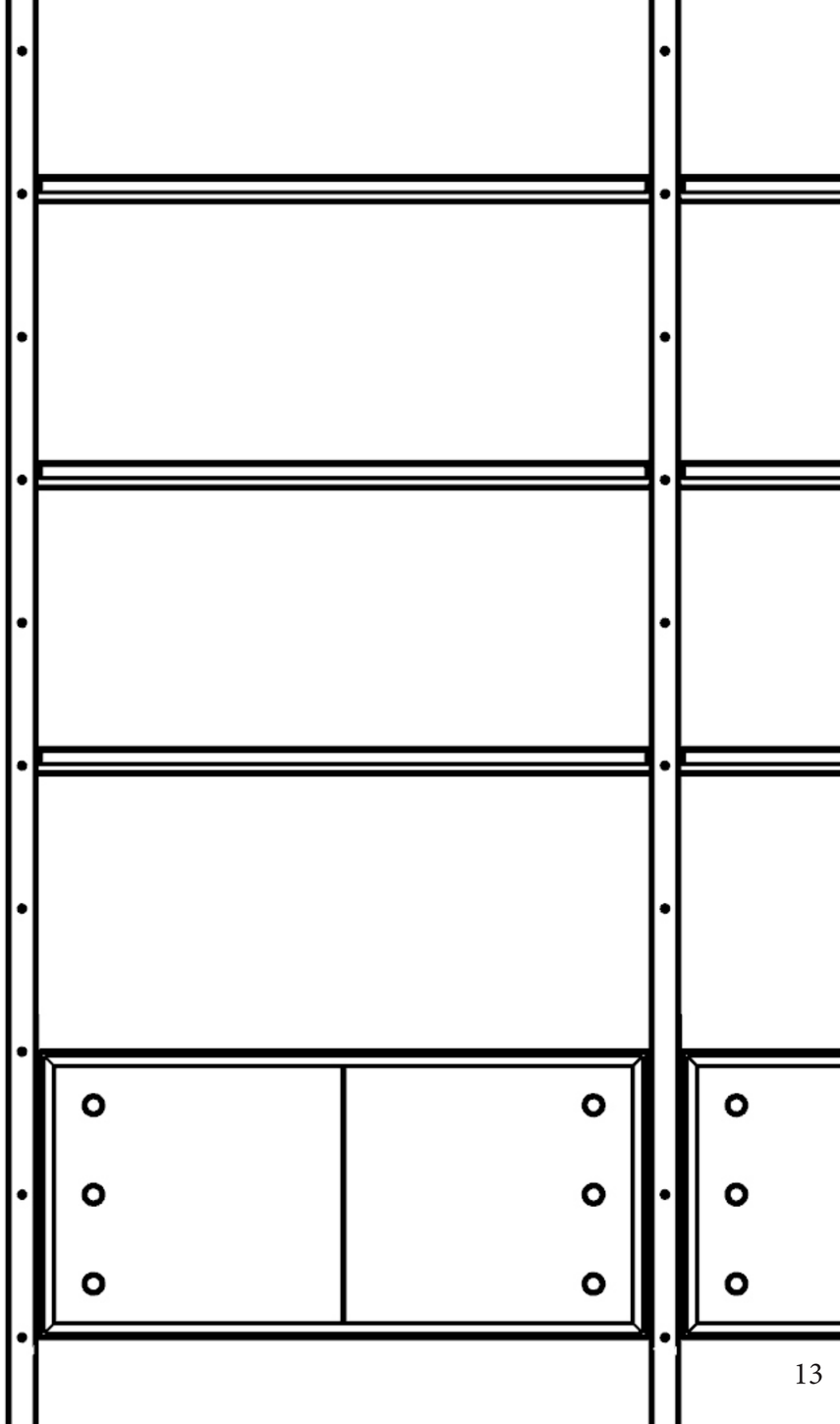
PROCESS

-SOLID WHITE OAK IS MILLED AND CUT INTO 18” WIDE PANELS FOR THE CARCASS
-PANELS ARE MITERED AND JOINED USING DOMINOS

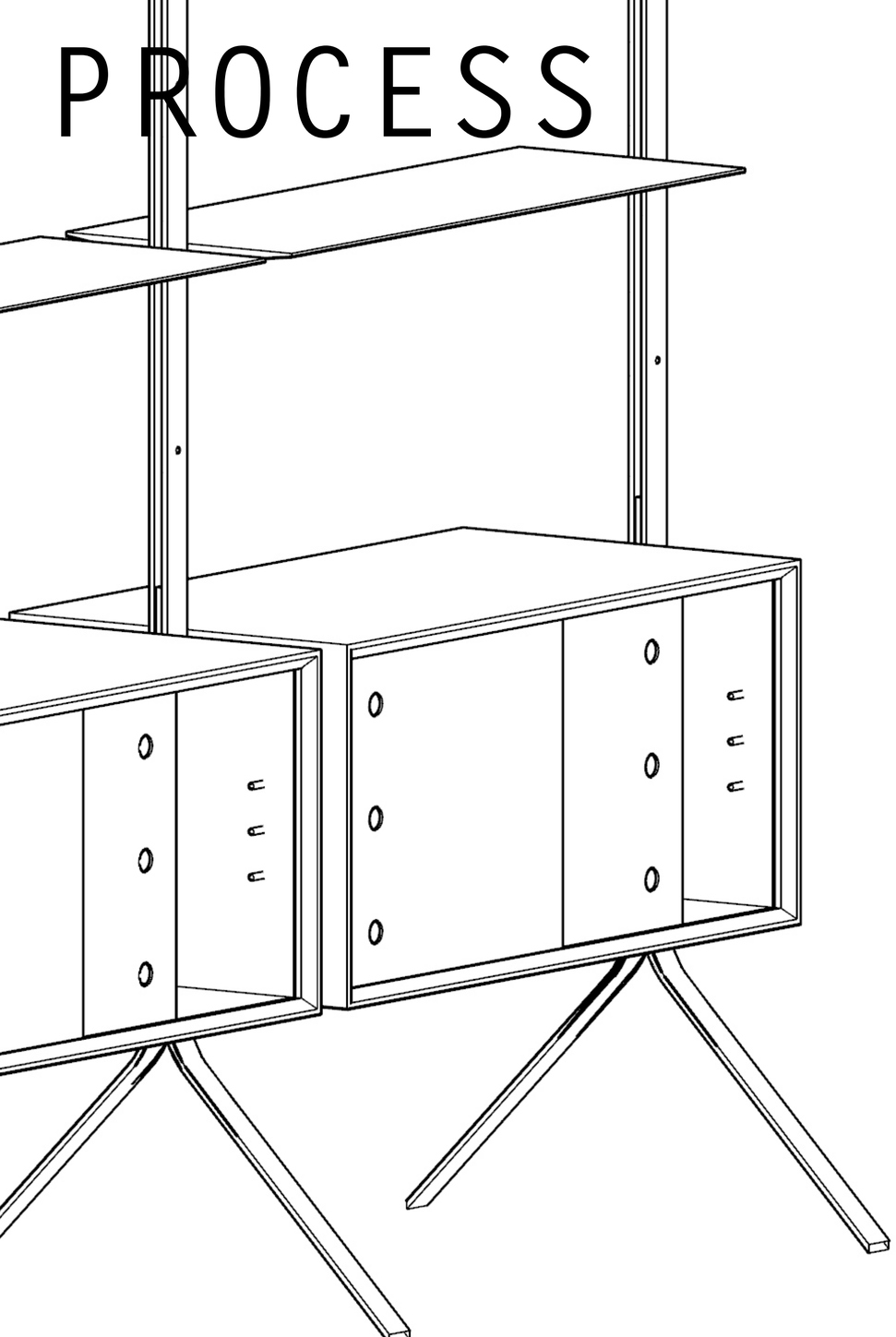


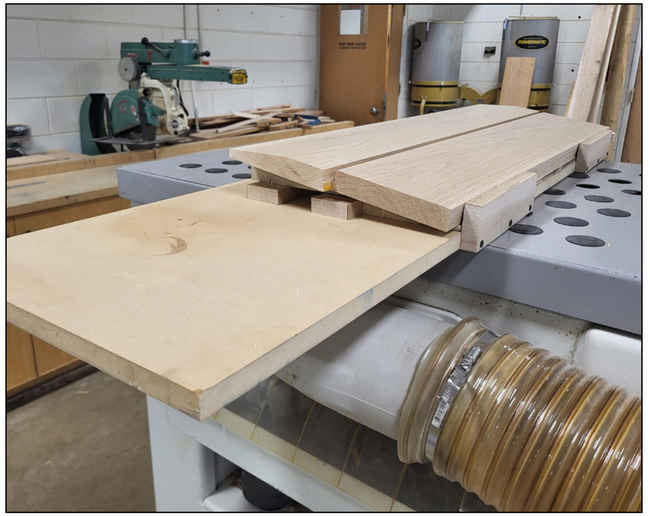
PROCESS

-A WHITE OAK PLYWOOD PANEL IS INSERTED INTO THE BACK OF THE CARCASS
-BAND CLAMPS ARE USED TO PROVIDE EVEN PRESSURE WHILE GLUING



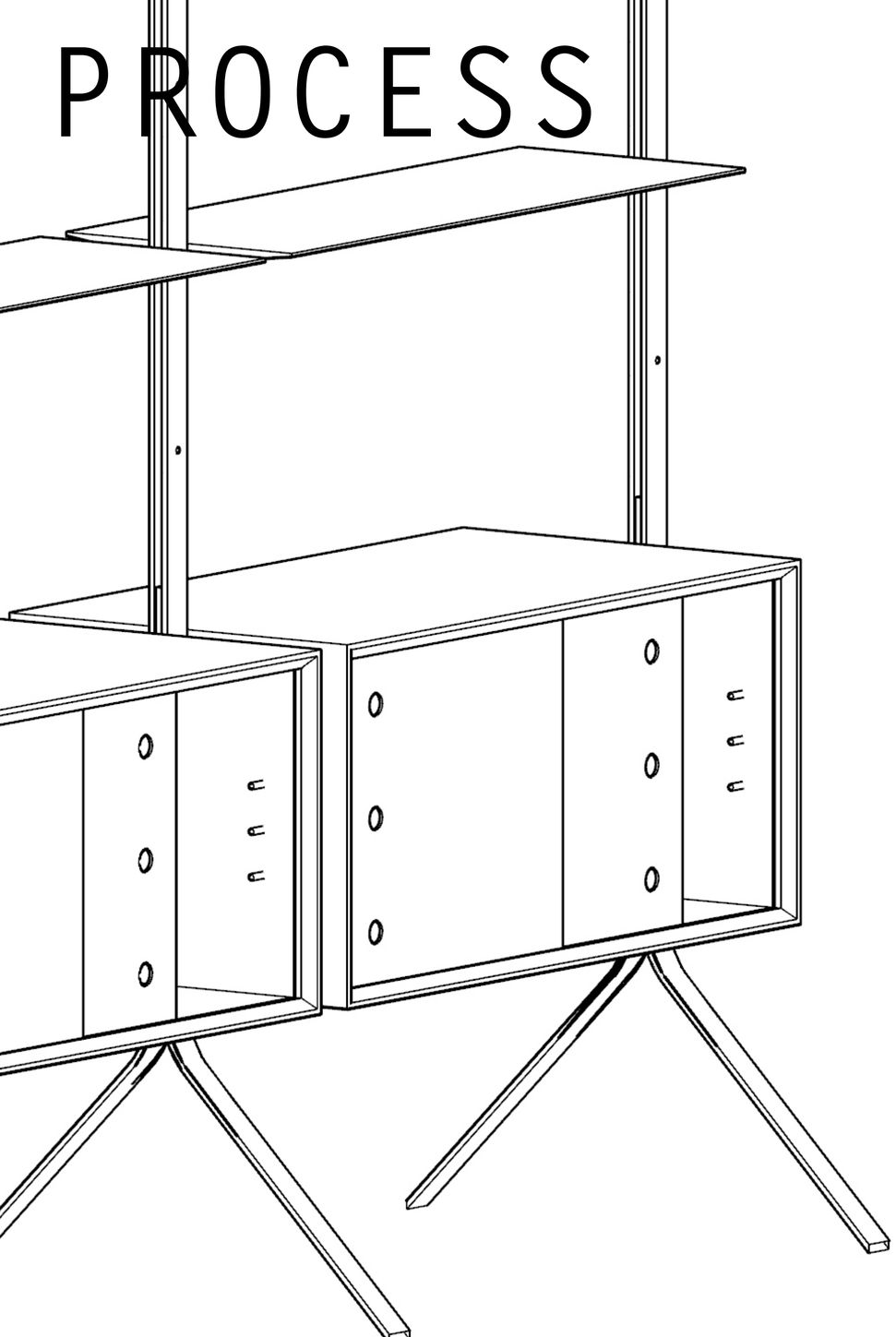
PROCESS

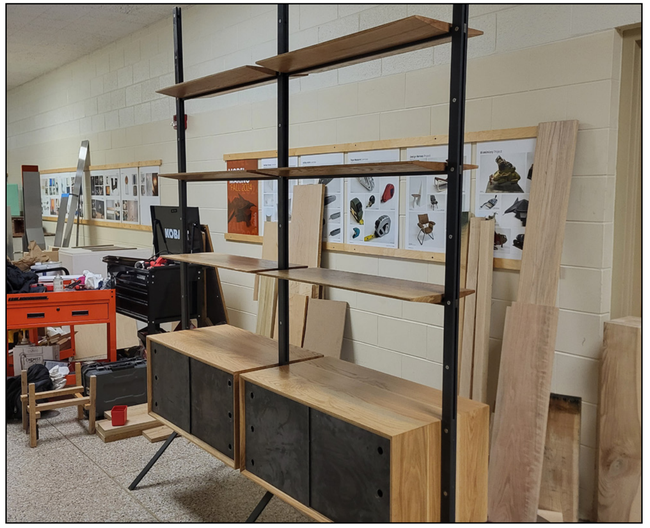




-THE SHELVES ARE CUT USING A PLANER SLED TO CREATE THE DRAMATIC ANGLE
-SHELVES ARE THEN EPOXIED ONTO 1” STEEL BARS

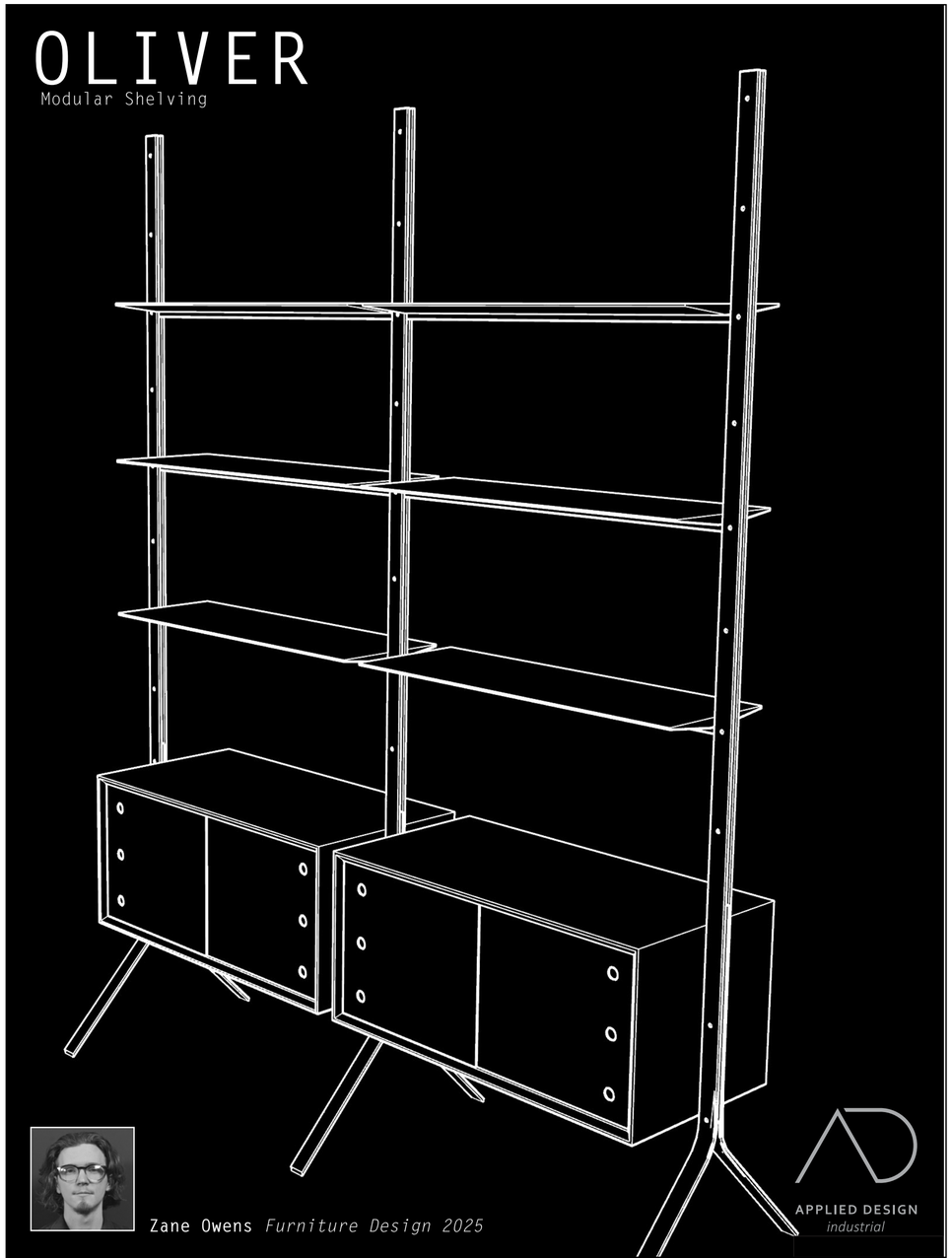
PROCESS

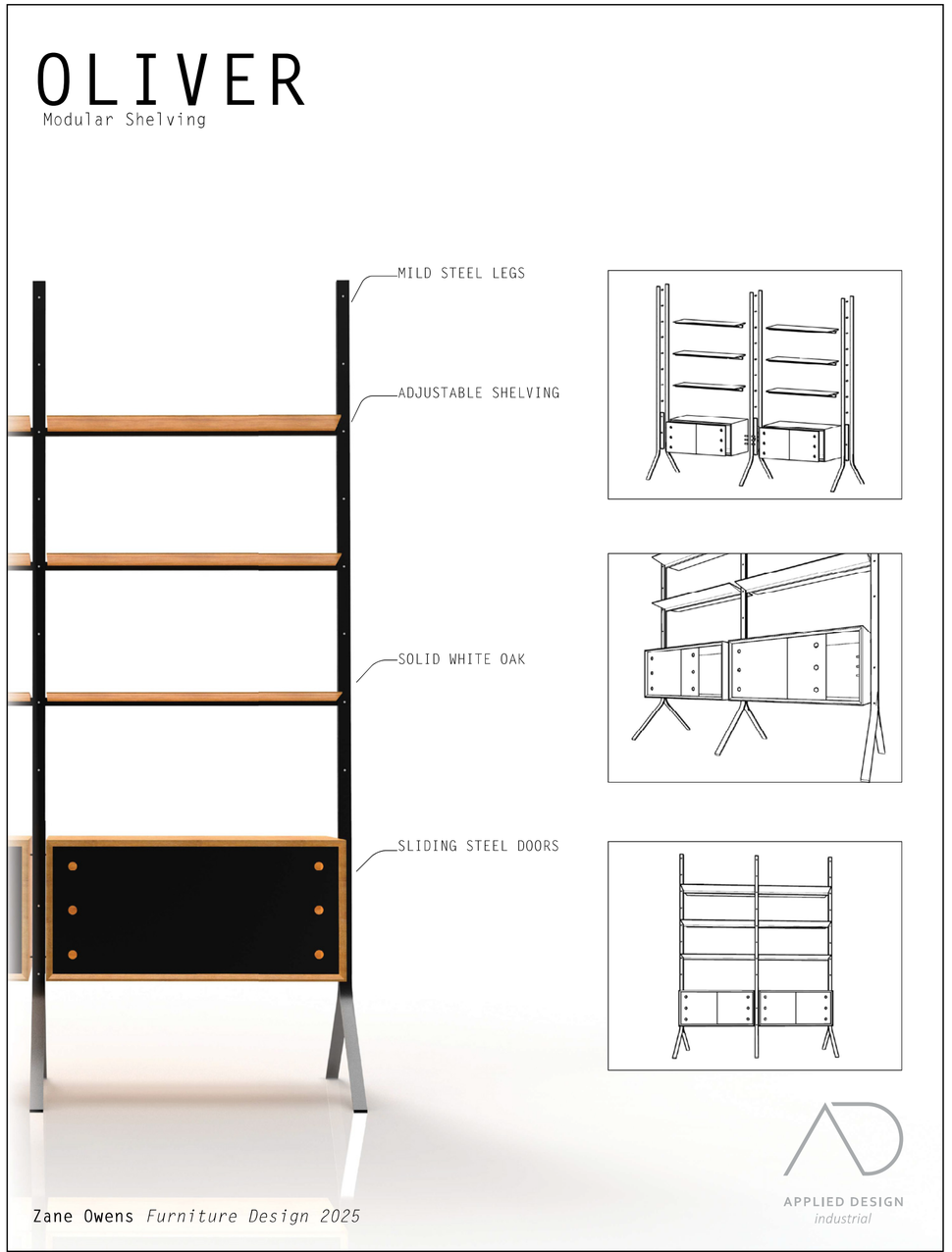




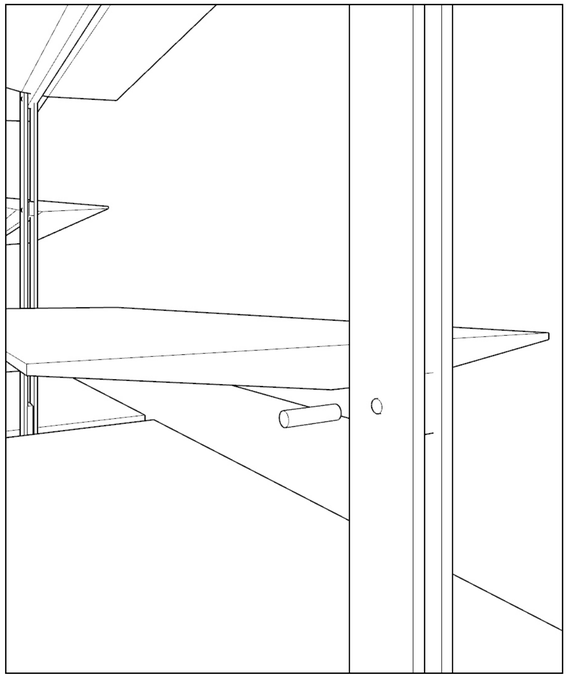
-STEEL SLIDING DOORS ARE FITTED TO THE CABINETS
-AFTER FINISH IS APPLIED TO ALL SURFACES IT IS FULLY ASSEMBLED

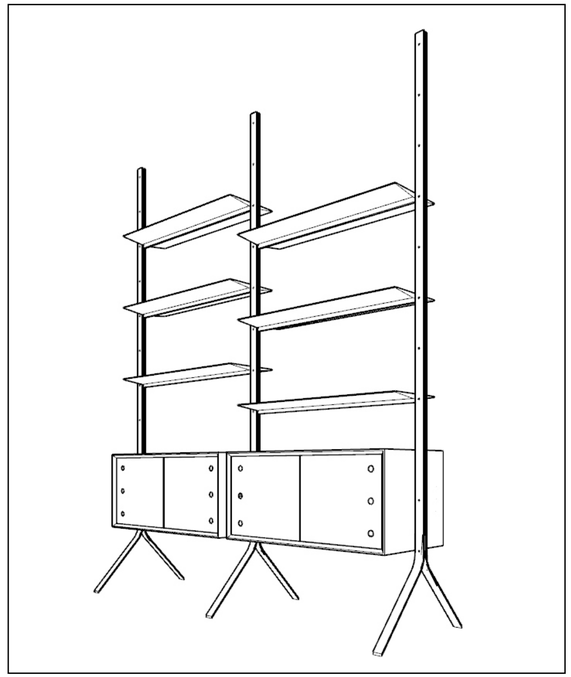
POSTERS


OLIVER
Modular Shelving
Zane Owens Furniture Design 2025
APPLIED DESIGN
industrial


OLIVER
Modular Shelving
MILD STEEL LEGS
ADJUSTABLE SHELVING
SOLID WHITE OAK
SLIDING STEEL DOORS
Zane Owens Furniture Design 2025
APPLIED DESIGN
industrial

FUNCTION





The entire system is concstructed using stainless steel bolts which can be removed using an alan key. Rather than a clip on system using bolts allows for a more secure mount while still being adjustable. To assemble the unit it only requires two standard alan key sizes which come standard in most home tool kits.

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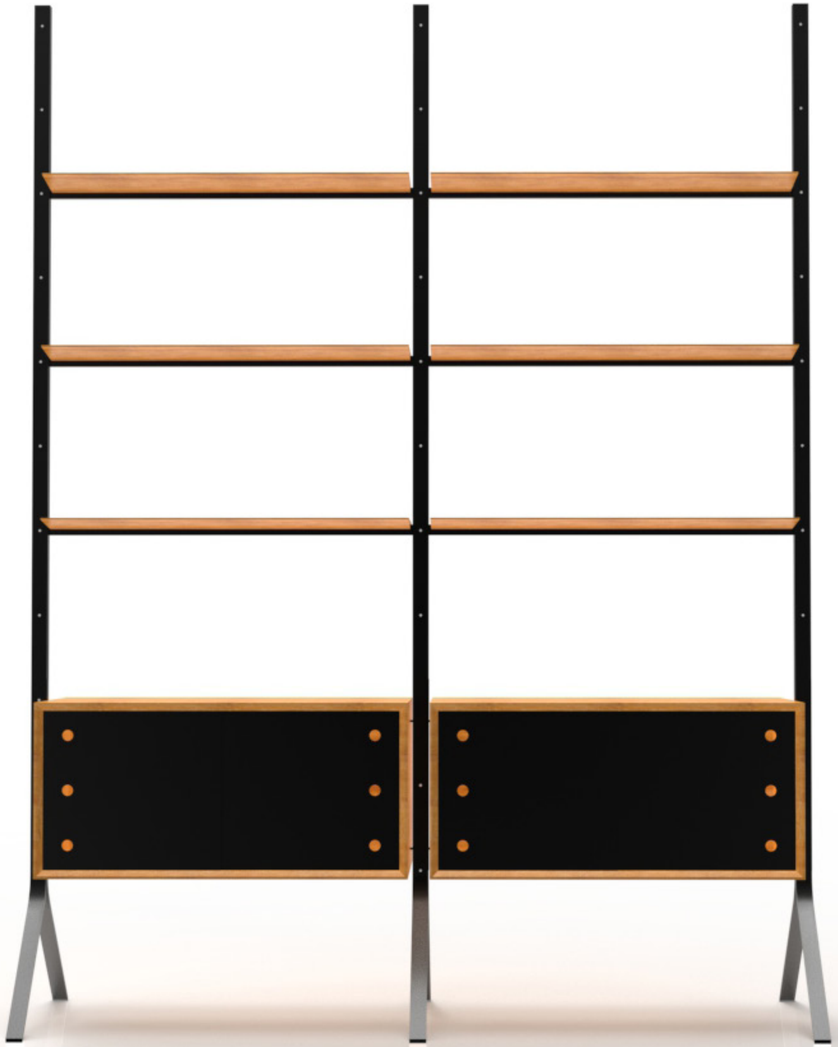

OLIVER

CONCLUSION

During the design and fabrication of Oliver I was faced with many new challenges. As this was my introduction to using steel I was unfamiliar with the properties of the material. The highlight of the design is the legs which were, for the most part, a success. Being able to create such a predominant detail at such a scale is only capable in steel. The solid white oak construction was familiar and straight forward which allowed me to focus more on metal fabrication. Some of the issues with the design are primarily with the stability. When it is fully assembled the legs can still flex when pushed. To resolve the issue I would need to triangulate the flared part of the legs but it would ruin the aesthetic. Other issues lie more with craftsmanship problems which could easily be solved in a production setting. Overall I would say that the design was a success in form and function but could be improved by further development.