



Michael McClain
Verdante s.r.o.

A dynamic, colorful water splash graphic that flows from the left side of the page, curving downwards and then back up, creating a sense of movement and energy. The water is rendered with a rainbow-like iridescence.

PORT FOLIO

Mechanical Design Engineer

For more information
Verdante.eu



About Me



Who am I?

Welcome to my designer portfolio! I'm Michael McClain, an experienced mechanical design engineer with a passion for innovative solutions. I specialize in creating practical and efficient designs. I can help turn your ideas into reality!






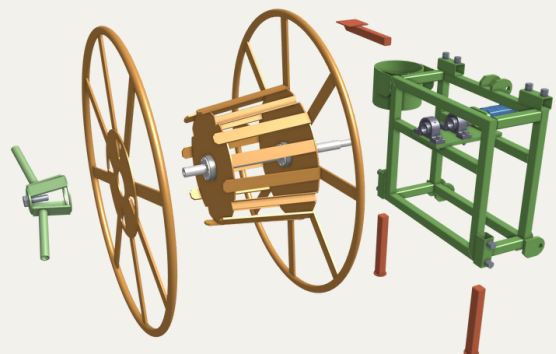
Experience

I bring 10+ years of expertise in utilizing modern design tools and techniques. From Product Design to Mechanical Design to Design for Manufacturing, I have the breadth of knowledge to take you through the processes to get the designs you need!

Collaboration

Explore my portfolio to see my projects and accomplishments. Let's connect and discuss potential collaborations! You can reach me at:

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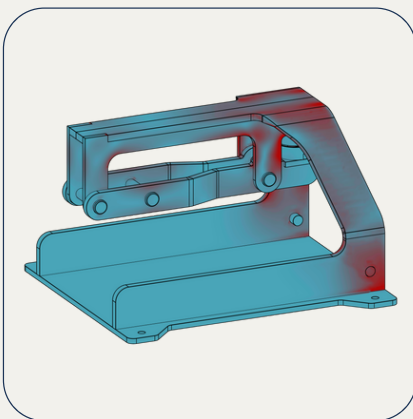
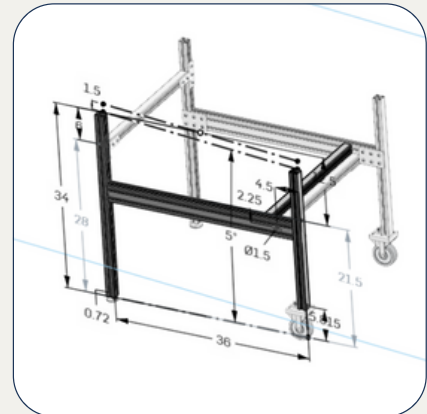


Services



• Product Design

- Research
- Concept Development
- Aesthetics & Styling
- CAD Design



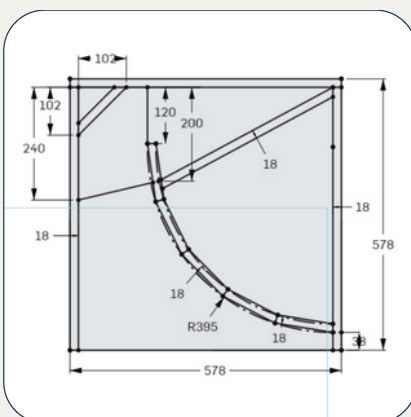
• Mechanical Engineering

- Mechanical Design
- Motion Study
- FEA Simulation



• Prototyping

- Virtual Prototyping
- 3D Printed Prototyping



• Production Preparation

- Product Requirement Document
- Rendering
- Technical Drawings

Underwater Camera Housings



Overview

A range of waterproof camera housings tailored to the needs of the Portuguese surfing industry.

From 3D scans of various camera models, we created custom housings for each common camera type found in the industry.

We tested and printed several prototypes on a Multi-Jet Fusion 3D printer to ensure design accuracy, print quality, and water-proofing.

Once the base design was settled, we created new models to suit each camera model. We also configured many custom models to meet customer-specific needs.



Highlight

We used new and innovative technologies to turn labor-heavy hand-made fiber-glass housings into modern, innovative products for all surf camera operators.



NSW Maritime Sign Structure

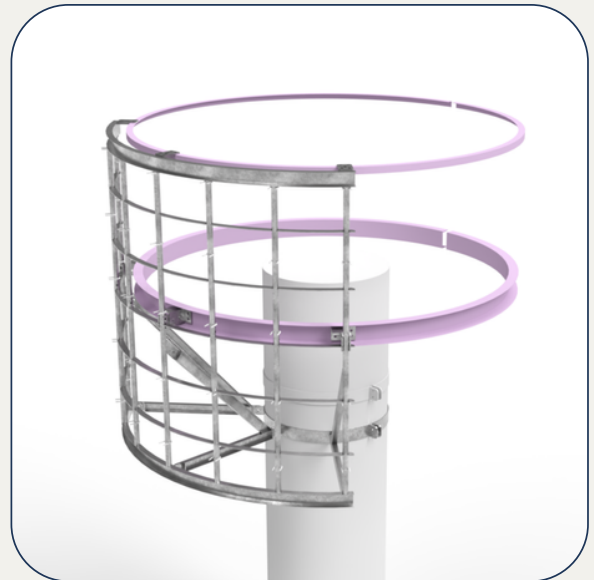


Overview

I designed and modeled a retrofit structure to hold a maritime speed sign in Sydney Harbour, adjacent to the Sydney Opera House. The project was a retrofit structure added onto an existing pole in the harbor.

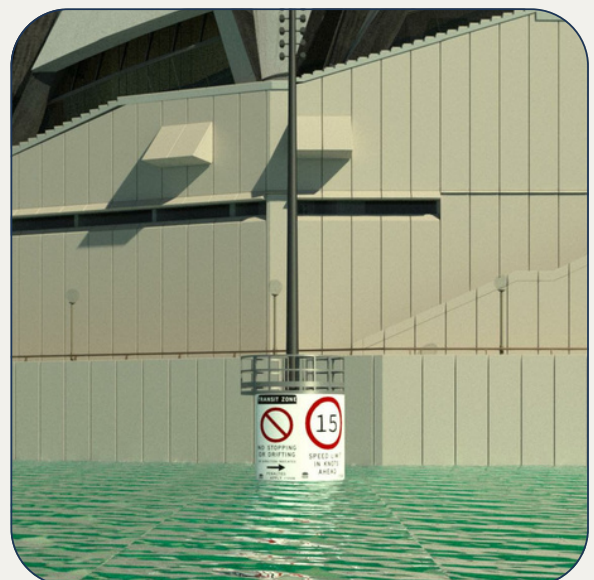
The client provided documents detailing overall sign dimensions and durability requirements.

Using Onshape, I created 3D models and detailed fabrication & assembly drawings of the structure.



Highlight

The initial plan documents excluded any steel design details. The client and I collaborated to design a structure strong enough to withstand the load conditions



Irata Training Structure

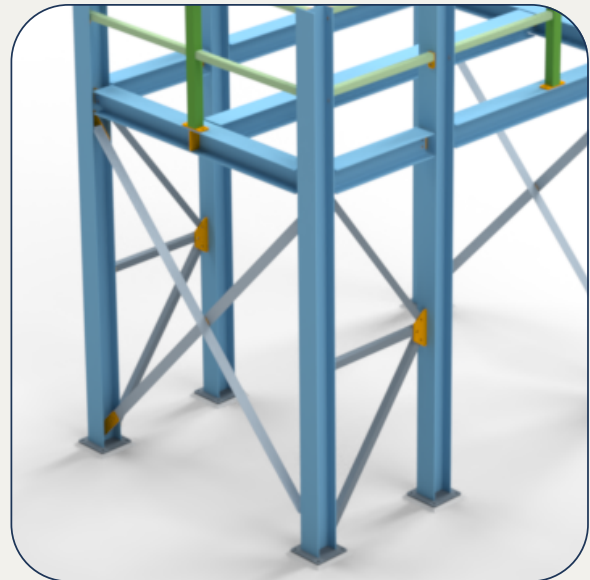


Overview

A structural steel frame for rope-access crew training. I was supplied with sketches and field dimensions to design from.

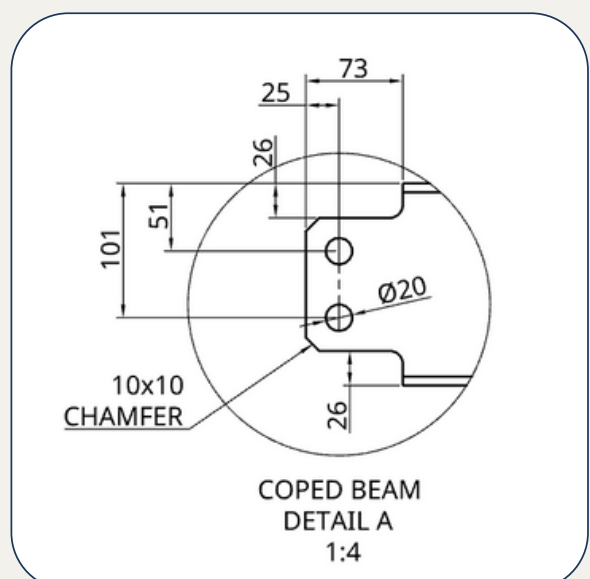
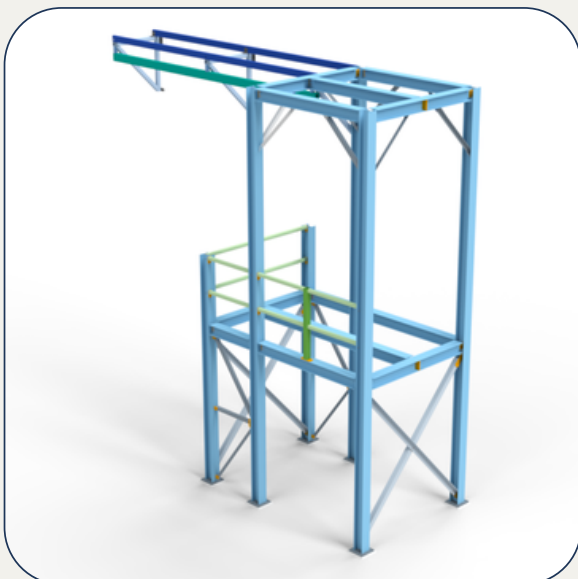
I began with a column and beam layout, including connection types, which I detailed and submitted for review.

After the review process, I created a series of fabrication and assembly drawings that detailed BOM, weld notes, saw notes, and machining notes to make fabrication as smooth as possible.



Highlight

Using my experience designing steel structures, I created a structure that bolted together in-field and was installed quickly and easily.



Drip Line Hose Reel

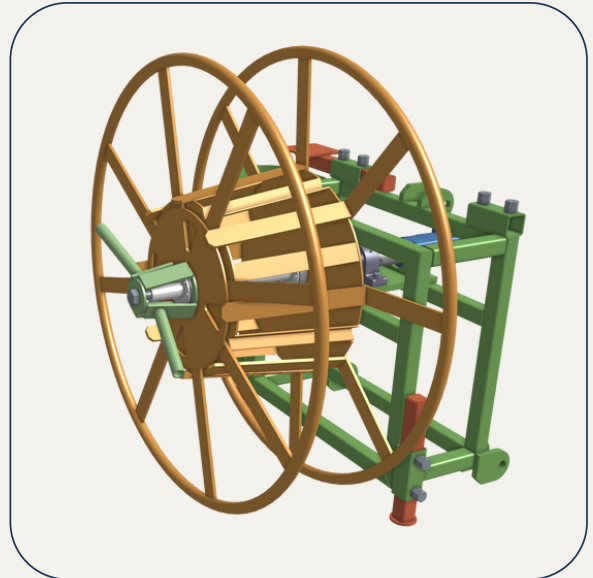


Overview

A collaboration with a client to design a drip line puller for use on farms in Yakima Valley, WA. The machine attaches to the three-point hitch on the rear of a tractor and is powered by the tractor's hydraulics.

We incorporated examples of existing machines in use to develop a design that met the farmer's specific needs.

The drum design was challenging to lay out because of the tapered shape. After several design consultations, we settled on a weldment that used laser-cut slot and tab features.



Highlight

I used my experience with steel fabrication and the agriculture industry to propose several design additions, such as a removable drum face and a wire spool holder

