Personal CAD Project 2014

Catamaran Model

My personal CAD project to end the semester was based off the Evergreen 6.0 Catamaran Model. This model, especially designed for speed and agility, still contains all the amenities and luxuries of bigger, slower dual-hull sailboats. Below is the design I used as inspiration to create a replica 3D model.

Figure 1: Above is the reference photo used for the Personal CAD Project.

Source: http://proafile.com/archive/article/evergreen_a_fast_expedition_sailboat

I originally picked the catamaran design for my CAD project because I have always been intrigued and interested in the engineering behind the dual hull approach. The amazing stability of a catamaran creates a sea vessel that will not heel underway and allows those who get seasick a break from there motion sickness medication. As well as stability, the double mounted motors and sails encourages tight turns in the middle of the seas or close to the dock. Although I have yet to step foot onto a catamaran, yet alone any sailboat, I figured I would turn my curiosity into a 3D model.

The hardest part of this assignment was mating the objects. For me, it was challenging all semester to mate various parts with one another, especially if the faces of the objects in question weren't necessarily flush with one another. However, while working with the contours of the hulls, I overcome this challenge and am pleased with my ability to use SolidWorks.

After countless hours in SolidWorks and many designs later, I am confident in my ability to use CAD, even if only on the rudimentary level. For society, so much of a concepts understanding and depiction comes from the visual aspects. This skill set I have gained will no doubt follow me through life, allowing me to properly depict any designs I might need to convey. I will indeed be changing from the college of engineering into the college of agricultural science, but still believe this new found ability will prove to be an essential asset moving forward. Below are individual views of my final CAD project as well as a fully dimensioned drawing.

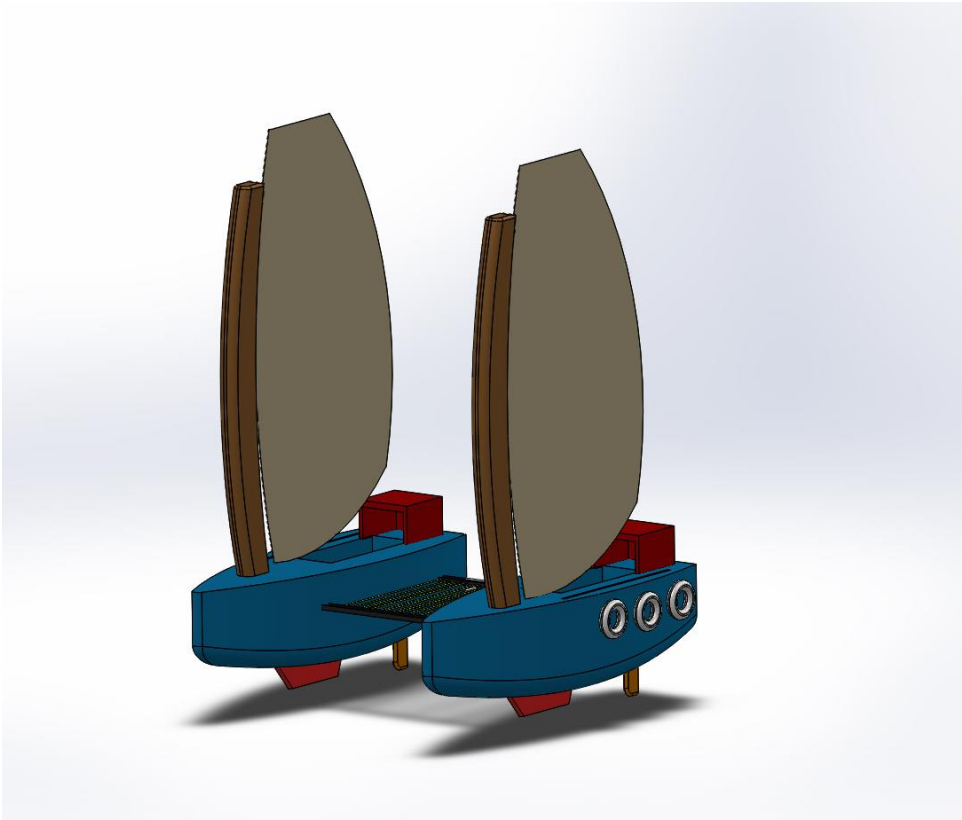

Figure 2: This aerial view of the catamaran captures the front, right, and side views of the sailboat in the same image.

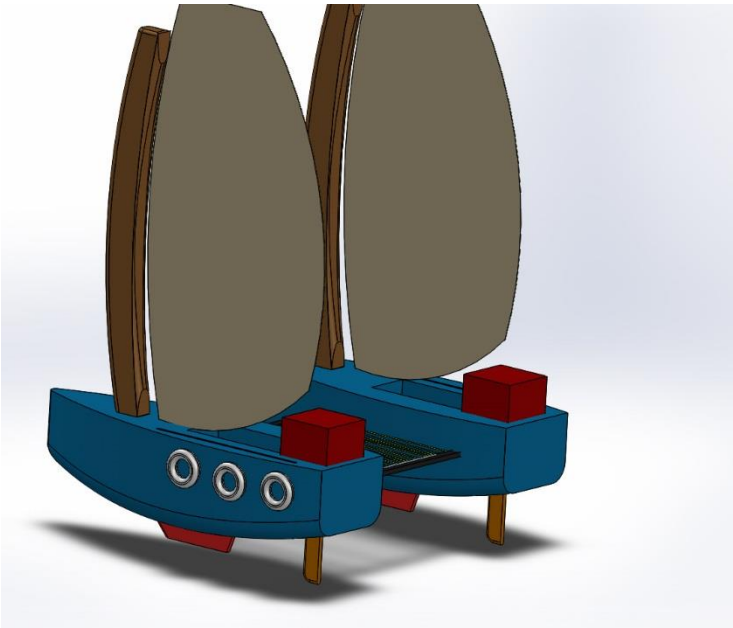

Figure 3: This views allows for a more detailed look at the stern as well as an overall different perspective.

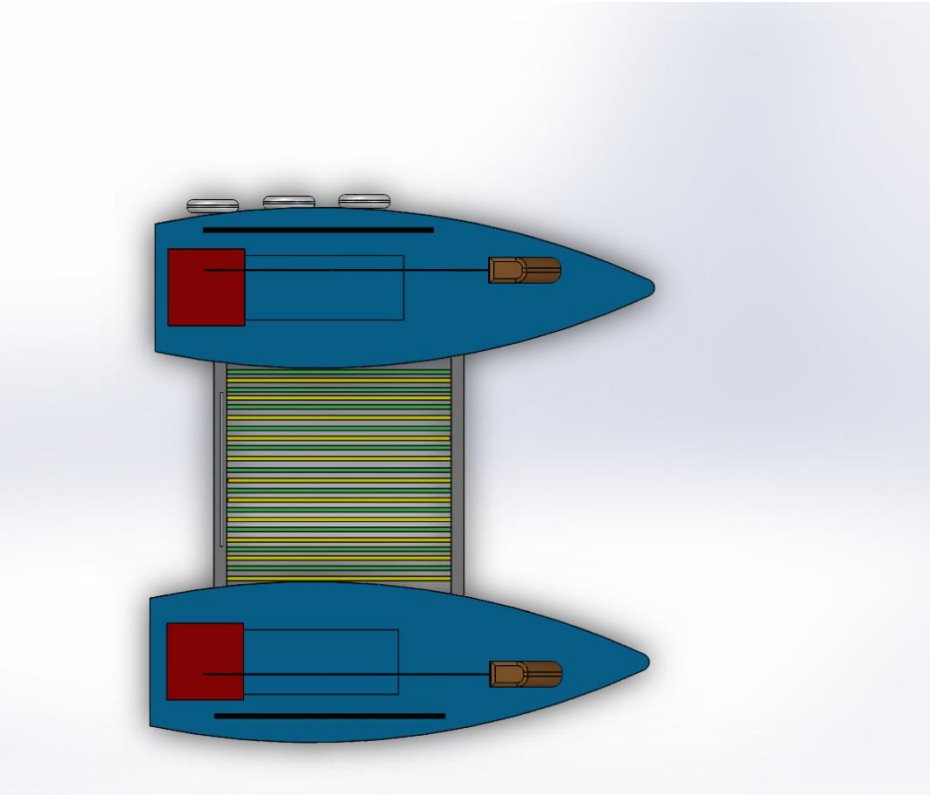

Figure 4: Looking from directly overhead, this views focuses on the bracing that connects the two hulls. The symmetry of a catamaran is essential.

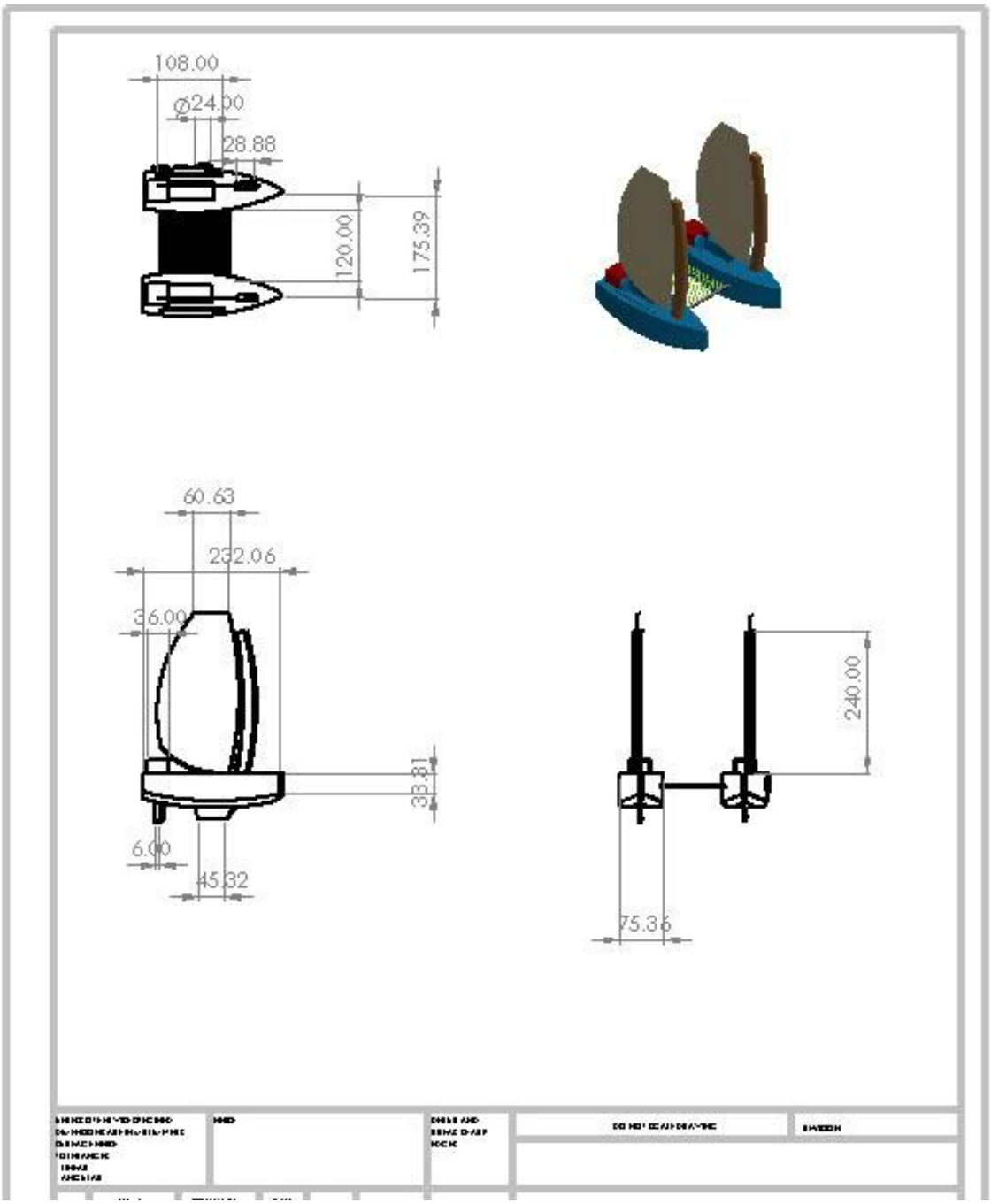

Figure 5: A drawing of the catamaran shows a detailed drawing of the front, right, and top views as well as specific measurements. The dimensions above are in inches. 1 inch: 1/12 of a foot. Although the drawing is a scale version, the original design was full scale.