The members of Team 2 met with the client, the Stenglein Family, to finalize and confirm the ultimate design plans for the Standing Gardener and the Multi-Terrain Wheelchair. The client was very pleased with the finalized designs and drawings, however they had some minor questions and concerns.

The only modification they had to the design of the Standing Gardener was to have a small seat or a seating apparatus behind the support system so Sean could sit down for a moment if he gets tired. Other than that modification, they were very pleased with the design. We verified that the material for the Standing Gardener would be 304 Stainless Steel, and the completed device would probably weigh about 200 pounds. Even though it would be mobile because of the 6 wheels on the bottom of the device, it would be relatively hard to move on uneven ground. They verified that weight would not be much of an issue, because they would mostly be moving the Standing Gardener with the greenhouse once it was there.

The members of Team 2 also researched and finalized parts for ordering, such as the wheels for both devices, and the foam for the pads of the standing gardener.

The rest of the work for the week was done in the machine shop, discussing various ways of machining the parts for the devices. The first steps would be to drill the holes in the pipes so that the pipes in the Standing Gardener are telescopic. The purpose of the telescopic pipes is so that the device can grow as Sean grows. The machine shop
administrators gave the members of Team 2 very good ideas on how to go about accomplishing this task. Their idea was to take a block of material stock and mill out a “V” on the top at a 45 degree angle. The next step was to drill a hole through the stock opposite the “V” so that it would form a pilot for the drill to go through when we drilled holes through the pipes. The purpose of this machining tool is to aid in the drilling so that the drill bit doesn’t “walk” on the round edge of the stainless steel pipe and get destroyed. A basic drawing of the drilling tool can be found in Figure 1 below.

![Drilling tool](image)

Figure 1: Drilling tool (side view and top view, respectively).

The next idea that the machine stop administrators had was to make “feet” for all of the 8 legs of the Standing Gardener. The feet would allow for an easier assembly and welding of the pipes to the stainless steel sheets. The “ankle” of the foot would be a smaller piece of the tube stock that is a smaller diameter than the leg it will support. It will be welded to a small “foot”, which will be welded to the actual sheet. A basic drawing of the foot can be found in Figure 2 below.
Figure 2: Drawing of the foot for one of the legs of the Standing Gardener.

This will provide an intermediary material to give the leg strength and make the welding job quite a bit easier of the legs to the top and bottom sheet.

Hours worked: The hours worked, combined for both projects, was roughly six. We are waiting for the material to come in, and our project is put on hold until that point.

Future Work: Drilling holes of the legs of the Standing Gardener and welding them to the top and bottom sheets.