On Monday 1/26/09, I contacted a crane company called the Square M Company. I spoke with a representative named Mike. I asked him about shipping time and he told me it would take about two weeks from the time of order to receive the crane. I also asked if they had specs for the foundation and he told me they did. He sent me a quote with dimensions for the crane and specs for the foundation via email. The cranes cost will be $959 plus another $175 for anchoring bolts. I found out that the foundation needs to be a four foot square which is three feet deep. The foundation also needs ½ inch steel reinforcing rods both ways on eight inch centers. The foundation also needs at least 7 days to cure prior to installation, and 28 days of curing prior to the use of the cranes full capacity. I didn’t find out any shipping costs, so I will be contacting him this week to figure out that information. Contacting this company and took about 45 minutes over the phone.

After I contacted the crane company on Monday, Caitlin and I began brainstorming on the best way to begin modifying the tumble forms seat for the trampoline harness system. We decided where to cut off the bottom of the seat. From here we removed any of the plastic coating we could to try and save some for recovering the seat. Once we had removed the plastic we went ahead and chopped of the bottom of the seat using a hacksaw in the senior
design lab. This took a fair amount of time about 2.5 hours or so since we had to first figure out what was the best way to cut the seat, and then we had to saw through the seat itself which composed of cutting through two metal rods and a bunch of foam.

Figure 2. Picture of the tumble forms seat after initial modifications

At 3:45 on Monday Caitlin, Kelly, and I had a meeting with Brenda. We brought with us all the information for our projects and also the unfinished computer mount. We talked over the issues about working at their household, and the permanent nature of the crane and foundation. She was fine with these issues and was excited about them. She requested a short list of the designs we had so she could show them to Sean’s therapist in Florida, which they were going to see this week. We also took a look at the passenger seat in the Steinglein’s vehicle and we realized that some modifications needed to be made to the mounting plates for the computer mount as well as the L-bars for the mount and the horizontal bar. We took some measurements and I recorded
them so I could modify the project accordingly. The meeting and trip to the
clients house took about two hours total.

On Thursday 1/29/09 I spent about an hour in the lab figuring out the
dimensions for the mounting plate that needed to be revised. I also figured out
how much we needed to trim the horizontal bar and vertical L-bars for the
computer mount. For the plate I figured out a way to modify it so that I could
use some of the machining, which I had done last week. For the bars I
determined that the vertical bars needed six inches taken off from the bottom
of the bars and that the horizontal bar needed to be cut to a total length of 16
inches. I gave Kelly the new bar dimensions and she cut the bars in the
machine shop later in the afternoon. I also received the quote for the crane on
Thursday.

On Friday the 30th I went to the machine shop to revise the work I had
done last week on the mounting plates. I got the plate to the right dimensions
which took about an hour since I only had to cut the total length of the plate
and add in another circular pocket. Once I did this, I rounded the edges using
the miller in the machine shop by putting an arc on the plates using CNC. I did
this for both the front and back plates. I finished up in the machine shop at
about 3:45 PM. I then went back to the senior design lab to test fit all the parts
of the mount together. They all fit together so next week I will be able to weld

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{mounting_plate_dimensions.png}
\caption{Dimensions for mounting plate revisions}
\end{figure}
Blaine Ericson  
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the l-bars to the mounting plate to complete the computer mount project. I also attached the neoprene rubber to the backside of both mounting plates. I did this by first cutting out a strip of rubber big enough to cover the plates. Then I used super glue to adhere the rubber to the metal plates. I allowed them to dry and then trimmed the edges using an exacto knife. Once this was done I cut the holes through the rubber where the bolts will go through carefully using the exacto knife. I spent about four and a quarter hours working on the project in total on Friday.

Figure 4. Finished mounting plates with neoprene rubber attached

In the coming week I will first finish the computer mount assembly and test it. I will also be talking with a concrete company which is owned by my friend’s brother, as a consult to see if we could either do the foundation ourselves, or if they can give us a good price given our situation. I will also be consulting with a rigging guy to find out what we need to install the crane tool wise. The rigging guy is a friend of mine’s father and will be happy to come out and help us with
the crane installation for no cost. I would also like to order the crane soon possibly in the next week, but this will require coordinating delivery days with Brenda. I may also help with seat modifications as we have received our harness now.