On 3/17/09 I called Karl with AYN Contractors to let him know that we had chosen them to do the work for the crane foundation. I got no answer so I left a message on his voicemail. I received a call back on 3/18/09 from Karl and I told him that we are definitely going with him for the work. I told him we would have to set dates once we got in touch with our client. He told me that the job will take about two days to complete. He said that excavation can be done on the weekend, but the rest of the work must be done on a weekday due to material availability. He also said his schedule is very flexible at this point in time. We will be meeting with Brenda this Wednesday to set final dates for the work. The cost of the foundation will be $922 and the excavation will be $159.

On 3/17/09 Kelly, Caitlin, and I went to Dr. Peterson’s lab at the health center in Farmington. We first discussed the best way to assemble the trolley onto Dr. P’s crane. We also took measurements of the cranes I-beam and determined the best setup of trolley components (i.e. washers, spacers, hanger, and vertical rail bracket) prior to installation. We then installed the trolley onto the crane in the lab. Once the installation was completed of the trolley we then put the harness system onto the vertical rail. We attempted to rig the apparatus with bungee cords but didn’t have enough time to do so.

Figure 1. Test setup prior to installation
On 3/20/09 we again went as a group to Dr. P’s lab, this time with a focus on testing our bungee cords. We first decided to test the bungee cords with different setups for stretch per weight. We decided to test them using various lengths of the cords and number of cords for their elongation with different amounts of weight. We tested with setups of six, eight, ten, and twelve. We record their elongations as a function of applied weight.
From the bungee testing experiment we determined that the best setup for our device would be with ten total bungee cords and that the length could be adjusted until we found the correct length. We then assembled the AJD with the seat and the bungee cords. Once they setup was completed we then attached weights to the harness (60lbs.) to simulate the weight of a person of Sean’s weight. From our tests we determined that we are going to need support for our vertical rail since it has a tendency to bend. We also are considering moving the seat bracket up the back of the seat to allow for more useful jumping room for the rigging on the rail.
Our major goals for the upcoming week are to make a support for the vertical rail and then go back to Dr. P’s lab to test the device further. We also have handed in the crane order as of 3/23/09. After the meeting with Brenda this Wednesday I will also finalize dates for the foundation. We will also be giving the computer mount to the on Wednesday if we get all of the paperwork done by then.