Farm Stand Build and Service Days for The Ranch

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This paper outlines the building of a farm stand and service days done for The Ranch which works with the United Cerebral Palsy of Central California. The construction of a farm stand was requested by the client because they did not have one and would like to start selling the vegetables and fruits that they grow on their property. Additionally, there was an opportunity to do other improvements around the farm and simultaneously help brothers in the fraternity get service hours. To do this set up service days were set up where miscellaneous tasks around the farm such as spreading mulch, weeding, planting vegetables, picking up and disposing of trash, and other repairs to equipment and structures. This paper will cover the phases of building the farm stand which include, planning, material procurement, and the building phase, as well as the service days. This paper will also cover some the challenges that were come across during the process, as well as lessons learned, and how this project relates to the curriculum of Construction Management. The purpose of this project was to give back to an organization that holds a lot of significance and meaning to the builder.

Key Words: Farm Stand, Build, Service, Cerebral Palsy, Aesthetics

Introduction

This project is located at The Ranch located at 880 Laureate Lane, in San Luis Obispo, California. The farm stand will be built off site and the service days will occur on site. This location is used to serve not only those with cerebral palsy but those with any mental or physical disabilities. The Ranch is a place for them to have a smoother transition into the working world. As many of those who use the Ranch’s services have never dealt with a boss or worked at a job before The Ranch allows them to have a smoother transition and prepare them for the working world. The ranch is on a 10.17-acre property and shares the property with Christ Catholic School. The school is about 16,500 square feet, so The Ranch is quite a large property. Most of their greenhouses, and equipment are donated so there is plenty of renovation and improvements to be done on site. After reaching out to Lynn Hendry who works at The Ranch, it was initially decided that the project would be working on their chicken run by putting up a new fence and a subfloor for the chicken coop. After getting initial plans for the chicken run renovation, it was discovered that the project was already given away to someone else prior without the knowledge of Lynn. Shortly thereafter, the idea for the farm stand came to light. Wanting
to help them out as much as possible, two service days were also coordinated where people from the fraternity would come out and perform whatever tasks they needed around the property.

After the project was set in stone, Lynn gave the contact information of Heather O’Meagher who recently became the new Ranch Manager. She then became the primary contact for the project, and discussions started on her vision for the farm stand and the service days. It was then coordinated with Phil Barlow to make sure that this project was deserving to be a senior project. The proposal was approved Prof. Barlow and initial plans were started for the farm stand and the coordination of the service days. With the price of wood skyrocketing the funding for the project was a potential issue. Heather shared the contact information of Carl Gallon from Hayward Lumber to help potentially alleviate the cost of the project.

Planning

Because the project was now approved to be a Senior Project, it was time to get into the more serious phases of planning. The most important thing in planning is communication and it was a struggle to get texts back from the contacts at The Ranch. The plan was to get any ideas or requests they had for the farm stand before plans were created so that the design could be with their interests considered. Initially they were more concerned about the service days and kept ignoring the requests for their input on the farm stand. Eventually, the first service day was worked to be on Saturday, April 30th. This gave the opportunity to speak to them in person and finally get their input on what they wanted the farm stand to be. When asking about their input on the farm stand, they essentially said, do whatever, anything is better than nothing at this point. Having this free reign on a farm stand was not what was hoped for because of the lack of knowledge on farm stands. It was hoped that they would be able to point in a general direction of where to go. To deal with this issue it was time to look at a ton of farm stands online and start to take bits and pieces of ones that were seen and put together something that would look like it belonged on The Ranch and would be something that they could use for years to come. A design that included 4 4x4 posts, with three levels of 2x6 bracing, and 2 levels of 1x6 planks that would act as the platforms as they sat on the bracing was drafted. After speaking to my dad who has done a lot of woodwork in his life, it was determined that screws would be sufficient to hold everything together if they were evenly distributed throughout the structure. He then also instructed to make sure to predrill all the holes to prevent the wood splitting. This was mainly for the planks that would be used for the platforms. Due to the nature of a farm stand being transportable, it was decided that the construction would take place off site at home. Tools were already present at home and the project could be worked on whenever with very little restrictions. Living with 14 other people moving the farm stand would not be an issue, and one of the residents has a truck with a very large bed. The design was shared with Heather as well as the plan to construct off site and to deliver the structure. She said it sounded “perfect”, so it was time to move on the procurement of materials.

Procurement of Materials

The procurement of materials initially seemed like it would be difficult due to the nature of how the market for lumber is. The initial estimate for materials was $290.95 via Home Depot’s website, which did not include taxes and fees. Heather shared the contact of Carl Gallon who works at Hayward Lumber and said that he would donate materials or heavily discount them. An email was then sent to Carl, and he said that he was not able to donate materials but was able to give a discount. A follow up email was sent with the materials that were needed and a request for an estimate. He never responded to and after emailing him back a week later the estimate that was $242.02. While this was cheaper than the initial estimate it was still expensive and saving as much money as possible was a top
The idea of reaching out to people in fraternity to see if they had any spare lumber that could be donated or purchased for cheap came about. 4 4x6x10s were donated by a friend named Ryan. This would save about 90 dollars off the cost of lumber but was different than the original plan of 4x4s. Heather was then contacted to make sure this was okay to change, and she said it was okay. It was then time to go to Hayward Lumber to get the rest of the materials, but after looking at their stock, the quality of lumber that they had present was not satisfiable. It was then decided to get the lumber at Home Depot and after browsing their selection of boards I saw they had 21/32x5-5/8 redwood boards that was thought would look better due to the color variance within them. Heather okayed this as well and then the materials were purchased. The materials were then taken home and the construction of the farm stand was then ready to be initiated.

**Farm Stand Construction**

It was initially thought help was going to be needed with the construction of the farm stand but many of the potential helpers were busy, so it was decided to start the process solo and most of it ended up being a solo process other than having a roommate hold a piece lumber twice while a screw was driven into in. The first phase of the construction was to figure out what was going to be the order of operations so that it would be easiest to do solo. The first 2x6s were cut into 6 foot and 2-foot pieces and the boards into 2-foot pieces which would lay on the bracing. After running through all the steps mentally, it was then decided to lay two of the 4x6s down and start with bracing them together in the long direction. The entire thing was then flipped over and the other ends of the 4x6s were supported with a 2x6 so that it would be level and both short sides of the bracing could be attached. This is shown below in Figure 1.

![Figure 1: Attaching Short Braces to Base](image-url)
It was then flipped it back over and two spare 4x6s were cut and used to support the other end of the structure so that the final piece of the bottom bracing could be attached. The final two 4x6s were then fit into the bracing and secured them so that the structure could stand. Once this was done, the boards were then secured into the bracing to create the first level. Two 2x4s were then cut to equal length to rest on the bottom bracing so that they could be used as a guide to make the second level. The bracing pieces would be screwed into the 4x6 to keep them in place than the next level of bracing would be set on top of them and screwed in. This process was repeated with all 4 sides. Then like on the first level the same method of securing boards was done to create the second level. It was then decided that the gaps in between the 4x6s didn’t look right, and they were filled in with the extra boards that were laying around. The entire structure was then laid back down and the 4x6s were cut to be 7.5 feet long which would be the height of the stand. Once this was done, “The Ranch” was painted on the top bracing and the top bracing was secured to the posts in the same fashion in which the second level was done.

**Service Days**

During the duration of the project, two service days were set up on site where the fraternity brothers and the builder would take care of miscellaneous tasks that Heather would like completed. The first service day was on Saturday, April 30th, and the second one was on Sunday, May 29th. On the first one there were about 15 people that showed up and tasks such as weed whacking, pulling up large plants that were unwanted, spreading mulch around the property, and cleaning up trash were completed. On the second service day, a smaller turnout of six people was present. The tasks that day were to spread mulch around the property, water and plant vegetables and fruits, and to fix the screen on their strawberry garden box. Both days were extremely productive, and Heather said that they helped her out tremendously. It is planned on making these Service Days a regular thing for the fraternity even after graduation so that my senior project can have a lasting effect with The Ranch.

**Challenges**

There were many challenges throughout this project starting with the communication issues with the client. It was hard to get direct answers from them regarding the farm stand, but this issue was resolved once there was a meeting in person. The next challenge was the issue of coming up with a design due to lack of knowledge of farm stand construction. This was resolved through research of farm stands on the internet. The next challenge was during the procurement of materials as the cost of the project was going to be expensive and the quality of materials at the initial supplier were not up to standard. This was resolved by getting donations of materials from friends and switching suppliers of the lumber. There were then issues with the tools during the building phase as the cordless tools died and the charger was nowhere to be found. This was resolved by switching to a corded tool that was borrowed from a different person and switching the bit between a boring bit and drill bit as needed. Another challenge that was faced was transporting the materials as the vehicle of transportation is a sedan, and all those with trucks and vans that could be contacted were busy. All the material was able to be fit into the car as show below in Figure 2.
Lessons Learned

As with everything in life there were many lessons learned during the duration of this project. The most important lesson learned that will serve the most use in the field, is that if the client is not communicating and answering the questions needed, one must be persistent. Persistency is key to get the client to reach back out. Sometimes it takes more than a text or a call to get an answer back. Picking up the phone and calling the client or showing up to their office may be required to get the communication needed. Additionally, not having the correct tools does not always mean that the project cannot be completed. Having a chop saw and multiple drills would have sped up the project immensely but did not affect the quality of the farm stand. Learning how to adapt to situations is vital to being successful in all aspects of life and this was learned during this project.

Relation to Curriculum

One of the main things that helped with the construction of the farm stand was the wood working skills that were refined in CM 214. In that class, all the students work together to construct a small shed that is made of wood. During that class many tips and tricks were given by Professor Brinkman that were used during the construction of the farm stand. One example of a tip that was used is that once a piece of lumber is cut, that piece can be used to measure out all the other ones of the same size. Additionally, in the curriculum is learning how to maintain good communication with clients. Because there was an issue with communication with the clients in this project these lessons helped immensely. Some other things that were taught in class that were used in this project were making a schedule and a budget.
Conclusion

The final cost of the project was $182.34 and was a successful endeavor that resulted in a happy and satisfied client. It allowed for the learning of being persistent with communication and how to adapt to situations that are not ideal. Being able to relate this project to the curriculum was refreshing because it allows one to see that the curriculum in the Construction Management department is relevant to the field of construction and is not just busy work. All the lessons learned, and the aspects of the curriculum used in this project will be used in the future in the industry.

Photos

![Image: Materials and Tools](image-url)

Figure 3: Materials and Tools
Figure 4: Bottom Bracing Finished

Figure 5: First Level Completed
Figure 6: Second Level Complete with Gap Shown (Red Arrow) and support bracing (Blue Arrow)

Figure 7: Posts Cut to 7.5 Feet
Figure 8: Final Product Front View

Figure 9: Final Product Side View
Figure 10: Fixed Garden Box Screen (Service Day)

Figure 11: 2nd Service Day Group Photo