

Eagle Project Final Report

Soccer Ball Kickboard At Larter Memorial Field Dunstable, Massachusetts

By Alec Gerhardt



Copyright ©Alec Gerhardt 2007

Alec Gerhardt has produced this report in partial fulfillment of the requirements for the rank of Eagle Scout.

ACKNOWLEDGEMENTS

I would like to thank all the people who supported me throughout this project on my path to Eagle. This project would not have been possible without the collective efforts of the following:

- GDYSC – Members (Mr. Jeff Ohringer, Mrs. Hackney, and the executive committee)
- Dunstable Recreation Committee – Members, especially Cathryn Worm, who came out the field on more than one occasion
- Dunstable Park Committee
- Dunstable Selectman Ted Gaudette, Chairman, Walter F. Alterisio, and Kevin Welch, who approved the project and to Mr. Gaudette who donated money to the project
- Moore’s for their generous discount on the materials and help they continue to supply to local Scout Troops.
- My fellow Scouts:
 - Mackey Garvey (Life Scout) and Max Irvine from Troop 1 Groton
 - Max Harrington (Eagle Scout) from Troop 159, Westford
 - Matt Rasmussen (Life Scout), Matt Pinque (Life Scout), Mark Nojeim (First Class), Nick Morgan, Mike Spaulding, Casey Smoka (Life Scout) from Troop 3 Groton
- Scout Adult Volunteers – Mr. Nojeim, Mr. Pinque, and Mr. Rasmussen. In addition, special recognition goes to Michael Hackney, my advisor who helped me reach out to the GDYSC with the initial idea and for helping me secure funding from GDSYSC. Without his help, this project would not have moved forward.
- Friends – Mr. Norm Silva for lending me the generator run the power tools.
- My family - Especially my dad, Keith Gerhardt, who as scoutmaster had to observe from the sidelines, but lent a hand during the construction, driving me around to the lumberyards, drove me to and from the fields, assisting me with my website and for obtaining my domain name www.alecgerhardt.com



TABLE OF CONTENTS

1 Introduction	1
2 Project Conception, Proposal Committee Meetings and Approvals	1
2.1 Project Proposal – November 2006 – May 2007	1
2.2 Project Planning & Meetings	1
2.3 Committee Approvals	5
2.4 Eagle Project Application Approval	5
3 Project Details	6
3.1 Project Goals & Benefits	6
3.2 About Larter Memorial Field and the site	6
3.2.1 Background	6
3.3 Safety	7
3.3.1 Before Construction Began	7
3.3.2 Construction Days	7
3.3.3 Site Work	8
3.3.4 During the days Work	8
3.3.5 Site Cleanup	8
3.4 Leadership	8
3.5 Fundraising	8
4 Project Construction Execution	9
4.1 Project Log	9
4.1.1 Site Preparation Work – September 16, 2007	9
4.1.2 Final Approval for Funding – October 13, 2007	9
4.1.3 Post Hole Digging – October 14 and 21, 2007	9
4.1.4 Post Erection and Cementing - November 3 and 4, 2007	10
4.1.5 Power for the Field – November 21, 2007	10
4.1.6 Construction Day – Decking – November 24, 2007	10
4.1.7 Construction Day – Decking and Caps – November 25, 2007	10
4.2 Park & Recreation Committee Approvals - December 10, 2007	11
4.3 Project Work Time	11
4.3.1 Planning, Meetings, Project Planning & Designs	11
4.3.2 Obtaining Materials and Equipment	12
4.3.3 Site Prep and Construction	12
4.4 Changes from Original Proposal	13
4.5 Project Budget	14
4.6 Actual Tools Used	14
5 Conclusions	14
6 Appendix	16
6.1 Project Timeline	16
6.2 Time Log	17
6.3 Tools & Equipment	18



6.4 Materials Estimates	19
6.4.1 Estimate from Moore Lumber	20
6.4.2 Estimate from Concord Lumber	21
6.5 Final Estimate from Moores	22
6.6 Receipts for Materials	23
6.6.1 Receipts	23
6.6.2 Moores Receipts	23
6.6.3 Moores Receipts	24
6.6.4 Moores Receipts	24
6.6.5 Ace Hardware Receipts	25
6.7 Kickboard Design	26
6.8 Specifications	27
6.9 Construction Sign	28
6.10 Application Composite Drawing	28
6.11 Photos	29
6.11.1 Cow Pond	29
6.11.2 Later Ariel Photo – Optional Sites for Soccer Ball Kickboard	30
6.11.3 Larter Ariel Photos- Optional Sites for Soccer Ball Kickboard	31
6.11.4 Construction Days	32



LIST OF FIGURES & DIAGRAMS

Figure 1 - Cow Pond Soccer ball kickboard Reference Structure	1
Figure 2 - Larter Memorial Field Ariel View with the proposed	2
Figure 3 - Preliminary Material Estimates	3
Figure 4 - Approved Location for the Soccer Kickboard	4
Figure 5 - Ball Kickboard Specifications	5
Figure 6 - Larter Memorial Field	7
Figure 7 - Location of Larter Memorial Field	7
Figure 8 - Total Time Spent on Construction	12
Figure 9 - Man Hours for Each Work Day	12
Figure 10 - Kickboard Budget Spreadsheet	14
Figure 11 - Proposed Project Timeline	16
Figure 12 - Time Log & Chart	17
Figure 13 - Construction Time Log Chart	17
Figure 14 - Original Tools & Supply Sheet	18
Figure 15 - Original Comparison of Lumber Yard Estimates	19
Figure 16 - Moores Lumber (Ayer) - 02/17/07	20
Figure 17 - Concord Lumber (Littleton) - 02/17/07	21



Figure 18 - Moore Second Estimate - 10/13/07	22
Figure 19 - Moores Lumber (Ayer) - Receipt 1	23
Figure 20 - Moores Lumber (Ayer) - Receipt 2	23
Figure 21 - Moores Lumber (Ayer) - Receipt 3	24
Figure 22 - Moores Lumber (Ayer) - Receipt 4	24
Figure 23 - ACE Receipt - Caution Tape Purchase	25
Figure 24 - Original Kickboard Specifications	26
Figure 25 - Original Specification Materials Sheet	27
Figure 26 - Construction Sign used after Post Holes were dug	28
Figure 27 - Composite for Application and Presentations	28
Figure 28 - Pictures at Cow Pond field - December 16, 2006	29
Figure 29 - Digging Days - October 14 & 21, 2007	32
Figure 30 - Digging Days - October 14 & 21, 2007	33
Figure 31 - Digging Days - October 14 & 21, 2007	34
Figure 32 - Post Erection November 3 & 4, 2007	35
Figure 33 - Post Erection November 3 & 4, 2007	36
Figure 34 - Decking Construction - November 23, 2007	36
Figure 35 - Decking Construction - November 23, 2007	38
Figure 36 - Decking Construction - November 23, 2007	39



Figure 37 - Decking Construction - November 23 & 24th, 2007 **40**

Figure 38 - Decking Construction - November 24, 2007 **41**



1 Introduction

My Eagle Project was for the Town of Dunstable Recreation Department. The project was to design and build a soccer practice wall also known as a soccer ball kickboard at Larter Memorial Field in Dunstable Massachusetts. As a resident of the town of Groton, I have been involved in both Scouting and Soccer for a number of years and this project was important to me as a scout and a soccer player. I played soccer with the [Groton Dunstable Youth Soccer Club](#) since I was old enough to play organized soccer. I currently play for the Groton Dunstable Regional High School Junior Varsity team.

This report summarises all the project plans, meetings as well as the actual steps I have taken along with the help of my fellow scouts and adult volunteers, to fulfil the service project part of the Eagle Scout Award.

2 Project Conception, Proposal Committee Meetings and Approvals

2.1 Project Proposal – November 2006 – May 2007

As soon as I completed my requirements for Life Scout, I began to investigate projects for the service requirement for the Eagle rank. In early November of 2006, I heard from Mr. Michael Hackney, one of the assistant scoutmasters in my troop, that the Groton-Dunstable Soccer Club (GDYSC) might want a practice soccer ball kickboard at Dunstable's Larter Memorial Field. The kickboard they wanted would be similar to the one at Groton's Cow Pond Field complex and shown in **Figure 1** below.

Figure 1 - Cow Pond Soccer ball kickboard Reference Structure



2.2 Project Planning & Meetings

I first met with the GDYSC club president, Mr. Jeff Ohringer and then met with members of the Dunstable Town Recreation Committee to determine if they were interested in the idea

back in December of 2006. Both the Recreation department and the soccer club were very excited about the project. That month, I met with Mr. Ohringer and Mrs. Carolyn Wurm to go to the field and determine the possible locations for the kickboard. The picture in **Figure 2** shows the locations Mr. Jeff Ohringer, Mrs. Wurm, and I thought were the best locations for the wall. These locations included 1) near baseball diamond 2) near parking lot and 3) near the entrance of the field.

Figure 2 – Larter Memorial Field Ariel View with the proposed locations for the soccer ball kickboard



On December 16th, my dad and I went to Cow Pond Field in Groton and shot some pictures of the kickboard. We took them from a couple of angles and took some measurements to determine the dimensions, which was 16 feet across and 8 feet high. The decking was attached to seven posts that were cemented into the ground and the wall had a 6-inch clearance from the ground. We then went to Home Depot to get an idea on the construction materials to be used, and a rough estimate of the costs shown in **Figure 3**. In January, I created my initial project plan and designs based on the reference structure at Cow Pond.

Figure 3 - Preliminary Material Estimates

Alec Gerhardt Eagle Project			
Soccer ball wall at Larter Field Dunstable.			
Items	Quantity	Cost	Totals
4x4x12' posts	7	14	98
soma tubes	7	4	28
post caps	7	1.59	11.13
6x1x8 decking	51	8	408
bucket of screws	1	66	66
Cement bags	14	3.5	49
			660.13
Second Side			
6x1x8 decking	51	8	408
screws	1	66	66
Grand Total			1134.13

The Recreation committee of Dunstable meets the 2nd Monday of the month at 7:30pm in the Town Hall. I attended one of the first meetings with the Recreation committee at the Dunstable Town Hall on January 8th of this year. I gave a brief overview of my project including pictures of the kickboard at Cow Pond and my preliminary project estimates as well as the possible locations for the kickboard. I also reviewed the Soccer fields' layout that I had reviewed with Mr. Jeff Ohringer and Mrs. Wurm. Other items at the meeting we discussed were:

- Baseball Field layout and how far
- Irrigation lines from field maintenance
- Building designs
- Approvals from soccer club, town, and Nashua Valley Council
- Building permits
- Funding for materials
 - Soccer has said they would fund for some
 - Additional funds will come from scout fund raisers and other donations
- Go to lumber yards to get qualified estimates on materials
 - Littleton Lumber
 - Moore's Lumber in Ayer
 - Bingham Lumber in Brookline NH
- What other meetings should this project be presented
 - Selectman
 - Park
- Detailed Project Schedule/Plan

During that meeting, I found out that I did not need a building permit. However, the committee thought I should go the process and meet with the building inspector as part of the project to learn how similar projects are done in Dunstable or my hometown of Groton.

I also learned that Recreation Committee might be able assist with funding pending the



budget review meetings that the town was holding. At the next meeting, I needed to have the design structure specifications, find out where the kickboard would be placed on field with Soccer Club and email them to Rob Busser. Once I did that, I then had to meet with Parks Committee once the review of kickboard placement was approved.

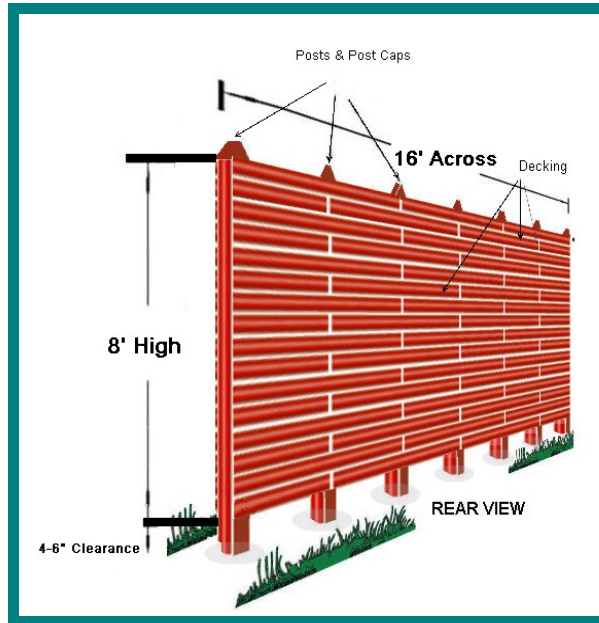
That weekend I met with Mr. Jeff Ohringer on Saturday Jan 13th at 7:30 to view field and placement of the kickboard. I reviewed this with Mrs. Wurm and we all agreed that the site closest to the baseball field in front of the flag was the best location for the wall as shown in **Figure 4** below.

Figure 4 - Approved Location for the Soccer Kickboard



I then asked Deirdre Gerhardt, my mom who is a software engineer to assist me with the CAD (Computer Aided Drawing) and graphics tools on the computer to create the drawing specifications. I had hoped to find some specifications for other kickboards on the Internet or in books at the library, but I was not able to locate any that came close to the design I had in mind, so I created my own as shown in **Figure 5**.

Figure 5 – Ball Kickboard Specifications



2.3 Committee Approvals

I came back to the next Recreation Committee meeting on February 5th with more information including some of the initial plans as well as my Eagle Scout application so I could start the process. The Committees signed my application when I met with them that day and I returned on February 12th to review the specifications. We discussed the optional locations and the other committees I would have to meet with before we got the final go ahead for the project.

I met with the Dunstable Building Inspector to determine his requirements for the structure. He made one alteration to the design, which was to increase the sono tubes from 8 inches in diameter to 12 inches to increase the stability of the posts. On March 19th, I met with the Dunstable Selectmen to ask permission on putting the wall on their towns' field and they unanimously approved the project

2.4 Eagle Project Application Approval

In the spring of 2007, I submitted my application to the [Nashua Valley Council](#) office. I had hoped to begin in April and complete it before the summer months based on my original timeline, however I had to provide a few extra details for the project reviewers.

After weeks of waiting, they approved the application and project in mid May. I realized I would not have enough time to work on the project in the spring. Therefore, I decided to work on the project in the fall since I was busy during June and then spent the whole summer at [Camp Wanocksett](#) working in Brown Sea as a member of the Wanocksett junior staff.

Once I got back to school in September, I met with the Recreation Committee again to get the placement of the wall approved. The location was approved on October 6th.

The week that followed, I met with the soccer club's executive board to ask for funding for the project. This meeting went well, however many of the board members at the meeting had not yet heard of the project. Once they heard of the details, they approved funding for the kickboard. I went to Moores to set up an account and they provided me with a check to cover the costs. I decided on Moore's, because the owner, an Eagle Scout in Ayer gives a lot of support to local scouts and the customer service was excellent.

3 Project Details

Construction of a Soccer Kickboard for GDYSC. The Dimensions based on the Cow Pond Reference were 24 feet long and 8 feet high. The actual wall is a permanent structure with 15 yards of clearance all the way around so the Soccer club can move the fields back and forth each spring.

3.1 Project Goals & Benefits

The main goals that I have for this project is to make the construction high quality and to make sure it looks like the kickboard at Cow Pond. Once the construction is complete my hope is that the kickboard that will provide to provide GDYC Club, the soccer players and coaches as well as others to practice their shooting skills.

3.2 About Larter Memorial Field and the site

3.2.1 Background

Larter Memorial Field was established in 1996 and is a relatively new site in Dunstable with fields that host sporting events for regional athletic clubs in both Groton and Dunstable. Baseball, Lacrosse and Soccer have been played on these fields. It is used primarily by the [**Groton Dunstable Youth Soccer Club**](#), which has two fields including a standard regulation size and medium size field, and [**Dunstable Youth Baseball \(DYAA\)**](#) that has two baseball diamonds. The Dunstable Parks department is responsible for its upkeep including the maintenance of the fields that includes the sprinkler system, annual seeding, fertilizing, and mowing. During the winter, it is used for sledding. The three biggest concerns of the Recreation Parks committees and GDYSC were the following:

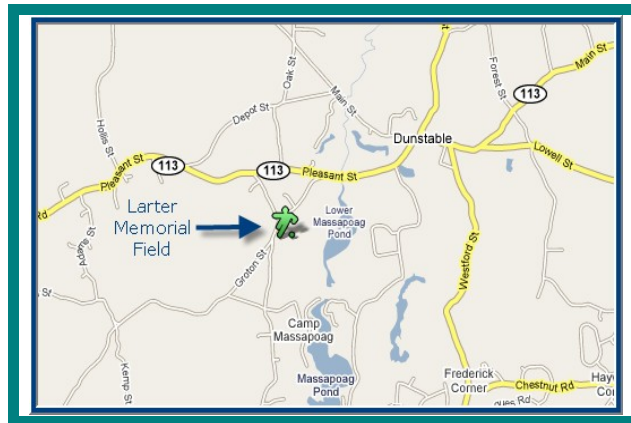
- 1) That the kickboard was not too close to the hill for winter sledding;
- 2) That it would be too close to the baseball fields so that balls would interfere with games
- 3) That it would be located far enough away from the soccer field to allow it to be moved back and forth between seasons.



Figure 6 - Larter Memorial Field



Figure 7 - Location of Larter Memorial Field



3.3 Safety

In this project, I acted as a general contractor. One of the jobs of a general contractor is providing a safe working environment for all scouts and adults who assisting me in the building the kickboard. The following plan outlined below helped to eliminate personal injury as well as equipment and property damage during construction.

3.3.1 Before Construction Began

Before each of the planned days, I had created sign-up lists at our weekly Tuesday Scout meetings. On the signup sheets, I made sure people included their the Names and phone numbers. All scouts who participated were responsible for providing their own transportation to and from Larter Field.

3.3.2 Construction Days

Each Construction Days required the following before we began the project.

- Charged cell phones to dial 911 in case of emergency
- Have at least one Adults with Safety certification
- Provide a med-kit including bandages, etc.
- Provide Safety Glasses for scouts who do not have or ware glasses
- Scouts were told to bring work gloves for working with wood other tools
- Dust Masks for working with cement mixing
- Provide Water and healthy snacks as well as lunch for long days



3.3.3 Site Work

We picked up materials and brought them to the site prior to the workday. All equipment was checked and cataloged, which I did the night before each construction day. Before work began I provided instructions on the safe use and handling of the following tools & equipment

- Shovels and Post Hole diggers for digging holes
- Mixers for mixing concrete
- Electric Drills
- Tape measures and Levels
- Electric Generator

3.3.4 During the days Work

During each workday I had breaks when needed. I supplied water as well as lunch. During the construction of the kickboard, I made sure the posts and sides were built well and stable. I also made sure of the following:

- The wood decking screws were checked to ensure that they were fully screwed into the wood and decking did not fall during construction or after we have left the site.
- I made sure that two scouts held the decking in place while other scouts screwed in the decking.
- I made there was no more than six or seven scouts working on the project at one time
- I had adult volunteers there to supervise and advise construction as well as assist if difficulties arise while using the tools and electric generator.

3.3.5 Site Cleanup

After each workday all equipment was checked, cleaned, and put away. I made sure that the Site was cleaned up before we left the site each day. One of the days the weather conditions were not ideal so we brought the materials to my garage. We covered over the holes with a tarp so they did not get filled in with dirt or water from the rain.

3.4 Leadership

The main reason for any Eagle Scout project is to demonstrate a scout's leadership ability. I learned more about organizing, instruction, and delegating as part of leadership during this project.

During the early stage of this project, I found the most difficult was making the initial phone calls and just getting the project started. Once I felt comfortable calling folks and attending meetings, the project execution seemed to go much quicker.

3.5 Fundraising

The following provided the funding to construct the kickboard:



- I raised sixty dollars from my can drives which went towards the caution tape, water, snacks and a lunches that were served during the construction days. I had originally planned on holding a car wash and putting out a donation can at the soccer fields snack shacks. During the course of the year, however there were Car washes held by other scouts for their eagle projects and the after consulting Mr. Ohringer we determined that while it was a good idea it....
- I received a generous donation from my grandmother in the amount of two hundred dollars, which I did not need and returned.
- GDYSC committed most the funding for this project in the amout of 750 dollars in the form of a check.
- I held an Aluminium beverage can drive to raise some of the funds for this project.
- I also got a tremendous discount from Moores Lumber Yards. This lumberyard has been providing support to scouting troops for a number of years.
- I received a donation from Dunstable Selectman Ted Gaudette

4 Project Construction Execution

4.1 Project Log

This section of the report details the events that took place during the construction phase of my project.

4.1.1 Site Preparation Work – September 16, 2007

On September 16, accompanied by my parents we went out to Larter memorial field to mark the agreed upon location for the kickboard. I measured the length of kickboard with my dad and painted the line. I also made “X”s for the posts where going to be located. Mr. Rob Busser and Mr. Ireardi from the Recreation committee went out and approved the location.

4.1.2 Final Approval for Funding – October 13, 2007

I made several calls to GDYSC and to Mrs. Hackney to finalize the account situation. I went to Mrs Hackneys to pick the check and then deposited into the account at Moores the day before we started installing the posts.

4.1.3 Post Hole Digging – October 14 and 21, 2007

I started to dig the holes in October, I held two on Saturdays in October. At these work parties, we dug the holes. On the first Saturday, we fully dug four holes 48" in the ground. We found the digging to go fast since the field had been filled with loam and sand and only had a few small stones.



On the second Saturday, during the second work party we finished all seven holes in just under an hour.

4.1.4 Post Erection and Cementing - November 3 and 4, 2007

Saturday November 3rd we made three trips to Moore Lumber in Ayer, MA and picked up the material for the posts. We got seven 12-foot 4x4 pressure treated posts, 35 bags of concrete, sono tubes to hold the concrete and posts and some bracing material. After each trip, we unloaded my dad's jeep and stored the materials in the garage.

That evening I prepared for the next day. I made a list of all the tools needed for that day and I cut all sono tubes with a saws all tool into 4-foot sections.

The next on November 4th we all met at my house at (what time) Mr. Pinque, Casey Smoka, and Mr Rasmussen all brought their trucks. We loaded all of them and my dad's jeep and then drove to Larter Memorial Field. We arrived at the site at (what time) and brought out the all the materials to the site location.

4.1.5 Power for the Field – November 21, 2007

Wednesday, November 21st my dad and I went to Mr. Norm Silva's house to pick up the generator that we would use to power the drills and circular saw. Mr Silva is a friend who we met at the Westford Sportsman club. He was happy to help, since his son is also an Eagle Scout. We arrived at his house and put the generator in to our jeep wrangler. I was surprised, but it fit in the back with no problems!

4.1.6 Construction Day – Decking – November 24, 2007

On Friday morning the day after Thanksgiving, we met Mr. Pinque at Moore Lumber in Ayer, MA to pick up the decking materiel at 10:00. We picked up and loaded 84 pieces of pressure treated decking material into his truck. We all met at Larter where we met five other scouts. My mom arrived with the generator and we all took it to the field. We then unloaded Mr. Pinques truck and lined up the decking. At 11:00, I went over some safety tips and general instructions and then we began the construction of the decking. Mike Spaulding and I put the first board in place and then Matt Pinque and I laid down the first row. We made sure that this course was level so that we could stack the rest of the boards on top and then we all took turns measuring, cutting, placing and drilling the rows. We took most of the day and decided to finish at 3:30 since the weather had turned cold. At the end of the day, we have completed most of the project with only a few rows to complete the entire project. We determined that I would have to trade some of the 8' boards for a few 12' boards to finish the second side.

4.1.7 Construction Day – Decking and Caps – November 25, 2007

On the next day, November 25th we went back to Moores Lumber yard and exchanged some of the smaller 8' boards for some larger 12' size boards. We then met the crew at Larter field at 11:00 to complete putting on the remaining boards. Once, we had finished the boards, I put the adhesive on the caps with a caulk gun and placed the caps on all 7



posts. The final day of construction, we spent an hour at the field to complete the project.

4.2 Park & Recreation Committee Approvals - December 10 2007

For the final sign-off for my project, I went to the Recreation Committee on December 10 at 7:30. I spoke about the project with the Rob Busser and Mr. Ireardi were the only committee members who were there. At the meeting, we discussed painting the kickboard and putting bark mulch down to cover the ground where the posts had been cemented. Early this year we had agreed that the kickboard would be painted next year by the GDYSC organization and was not in the scope of this Eagle project. We also agreed at the meeting that we would not put bark mulch down as it may be kicked around and would detract from the kickboard. At the end of the meeting, I got congratulations on finishing the kickboard and Mr. Ireardi signed off on the project.

4.3 Project Work Time

4.3.1 Planning, Meetings, Project Planning & Designs

Project Work Time Description	Number of Times	Total in Hours
Meetings with Soccer Club	4	2
Meeting with Recreation Committee	7	4
Meetings with Parks Committee	2	0.5
Meetings with Building Inspector	1	0.5
Meetings with Dunstable Selectman	1	0.5
Calls to Clubs, Committees, Council, etc.	50	10
Trips to Cow Pond & Larter Fields	6	10
Trips to Lumber Yards	5	5
Project Planning & Design Work	6	6
Car Drive	5	5
Totals	87	43.5

4.3.2 Obtaining Materials and Equipment

Work Days	Description	Elapsed Time (in hours)	Number of People	Total Person-Hours
Day 1	Measuring Tape and Spray Paint	0.5	2	1
Day 2&3	Measuring Tape, Wheel Barrel, Shovels, Caution Tape, Tarp, Rakes & Garbage bags	2	3	6
Day 4	Posts, Cement, Water, Buckets, Wheelbarrow, Shovels, String, Rakes, Level, Face Masks, & Garbage Bags	3	2	6
Day 5&6	Decking, Post CAPs, Generator, Screws, Screw Guns, Saw, Levels, String, Wheelbarrow, Safety Glasses & Garbage Bags	3	3	9
Totals		8.5	10	22

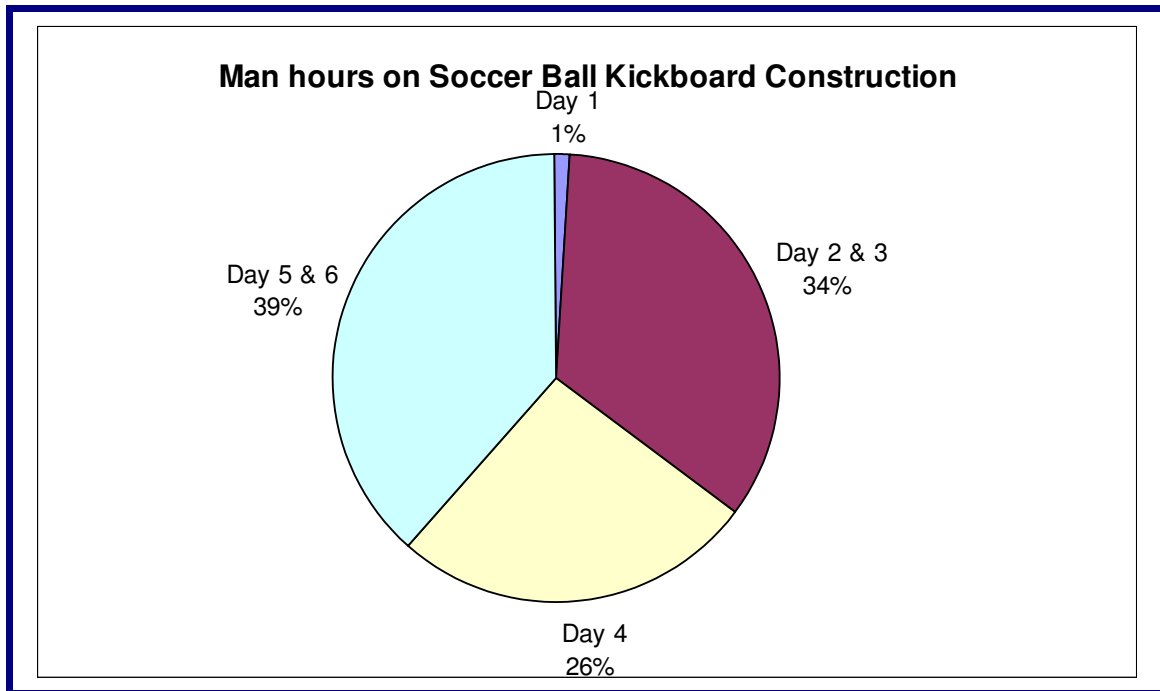
4.3.3 Site Prep and Construction

Actual time spent working on the construction of the soccer ball kickboard. I had six actual workdays, with a total of 24 hours elapsed time on site preparation, post digging, construction, and site cleanup. In total 26 people worked over the 6 days and in 189 person-hours for this project.

Figure 8 - Total Time Spent on Construction

Work Days	Description	Elapsed Time (in hours)	Number of People	Total Person-Hours
Day 1	Site Prep	1	2	2
Day 2&3	Digging Days	8	8	64
Day 4	Post Erection and Cementing	7	7	49
Day 5&6	Decking	8	9	72
Totals		24	26	187

Figure 9 - Man Hours for Each Work Day



4.4 Changes from Original Proposal

- Time of Year – I had originally planned to begin in early spring, I had to wait for the approvals from the Nashua Valley Committee which did not happen until late spring and during the summer I was on staff at Wanocsett, Therefore I decided to construct the kickboard in the fall.
- Project Execution Steps. I had originally planned two teams, but I actually had a smaller number of scouts assist me on the project and enough senior scouts who had worked on other projects that had experience in construction.
- Original wood lengths. During the construction, we found we had to mix and match wood lengths for proper completion of the wall. We started off with 8 and 12 foot lengths and found we had to cut wood some of the pieces so it would fit and then had to exchange some of the 8 foot boards for 12 foot lengths.
- Sono tube sizes – During the initial design, the Building inspector wanted me to change the size of the sono tubes from 8 to 12 inches.

4.5 Project Budget

Figure 10 - Kickboard Budget Spreadsheet

Alec Gerhardt Eagle Project Soccer Ball Kickboard Budget					
Project Budget		Expenses		Totals	
GDYSC	\$750.00	Ace Hardware (10/14/07)	\$12.14	Project Budget	\$1,050.00
Donations (Family & Friends)	\$200.00	Moore's Lumber (11/3/07)	\$226.65	Fixed Expenses	\$793.66
Can Drive (from returns)	\$60.00	Moore's Lumber (11/23/07)*1	\$549.25		
Can Drive (remaining estimate)	\$40.00	Moore's Lumber (11/24/07)*2	(\$9.38)	Total Expenses	\$793.66
Total Budget	\$1,050.00	Shaw's Supermarket (Lunches & Snacks)	\$15.00	Unused Budget Amount	\$256.34
		Total Expenses	\$793.66		
<p>Notes: *1 Includes the return of the unused Concrete Mix - \$10.67 *2 Pressure Treated Decking Exchange - Got back \$9.38 from Moore's</p>					
				Unused Budget Amount	\$256.34
				Donations Returned	(\$200.00)
				Budget Left	\$56.34

4.6 Actual Tools Used

1. Level
2. Drill
3. Post Hole Diggers
4. Safety Glasses
5. Circular Saw
6. First Aid Kit
7. Various Screw Drivers (Flat, Philips, Power)
8. Shovels
9. Wheelbarrow
10. Saw Horses
11. T-square
12. Tape Measure
13. Power generator
14. Caulk Gun

For this project, my father and other members of the troop provided all tools needed for all phases of construction.

5 Conclusions

Overall, I felt the project went very well during all phases from planning to the actual construction. One of the benefits of this project was learning about the importance of careful project planning, communication and working with a town's government and committees. I also learned more about leadership while working with my fellow scouts and friends to accomplish all the tasks during this project.

While planning went smoothly, I did run into some unexpected issues during the building process. After we erected the posts, we found a few of them to be a bit off due to slight



warping. We addressed this when we put on sides of the kickboard by we cutting decking down a bit. Nevertheless, it worked out in the end.

I also found that during the early phases of my project that it can be a long and arduous process to get approvals for a project such as this one. However, but there were not too many stops along the way, it just took longer than I had expected. These delays and the small problem with the posts did not affect the project delivery, which was completed before the first snowfall this December. I can go back to Larter Field during the spring and feel a sense of accomplishment knowing that both the town of Dunstable and the GDYSC now have a brand new kickboards, which will be enjoyed by the town and soccer players in the years to come.

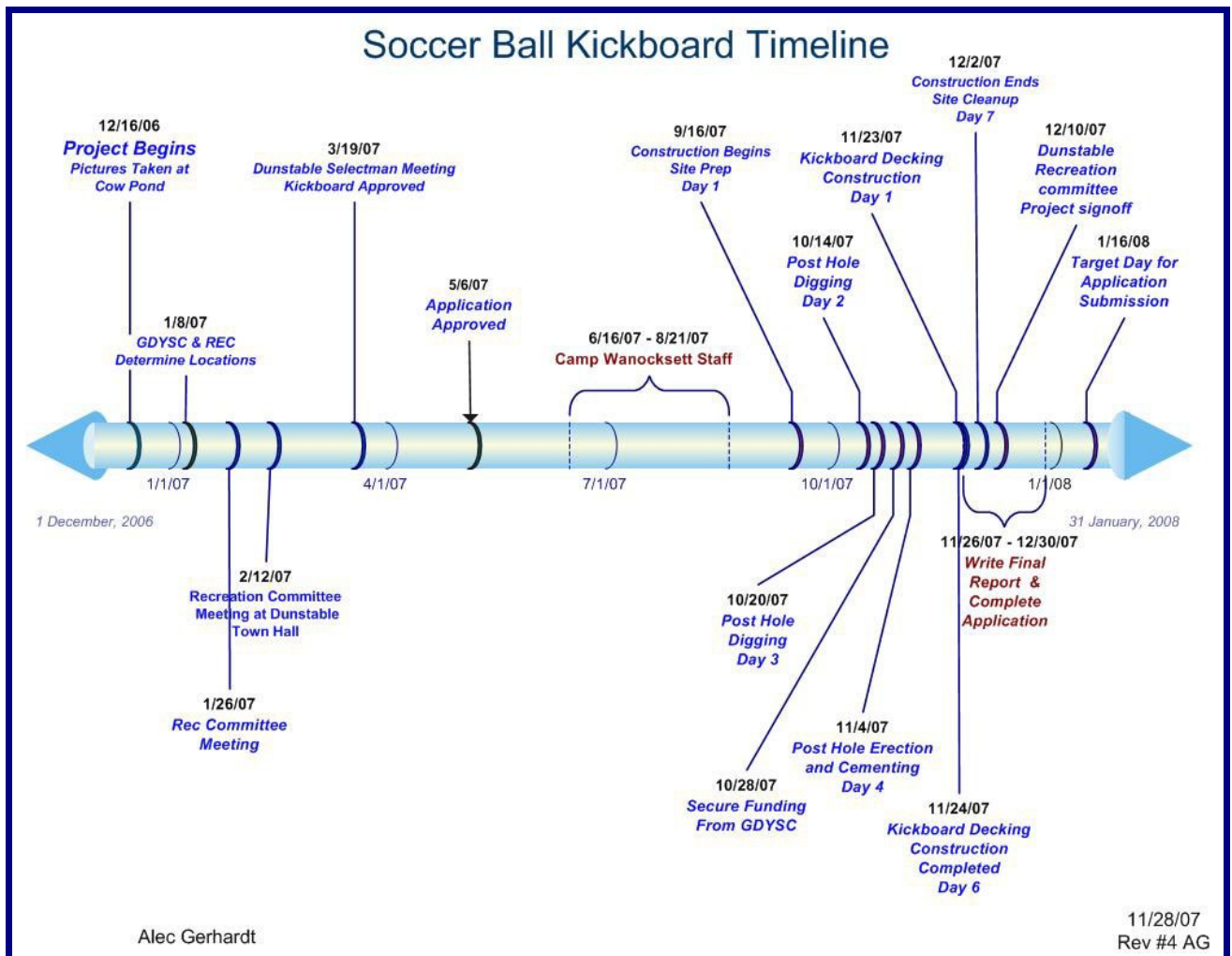


6 Appendix

This appendix includes a number of exhibits that I used for my initial application as well as some additional pictures, diagrams and signs I used during the project.

6.1 Project Timeline

Figure 11 - Proposed Project Timeline



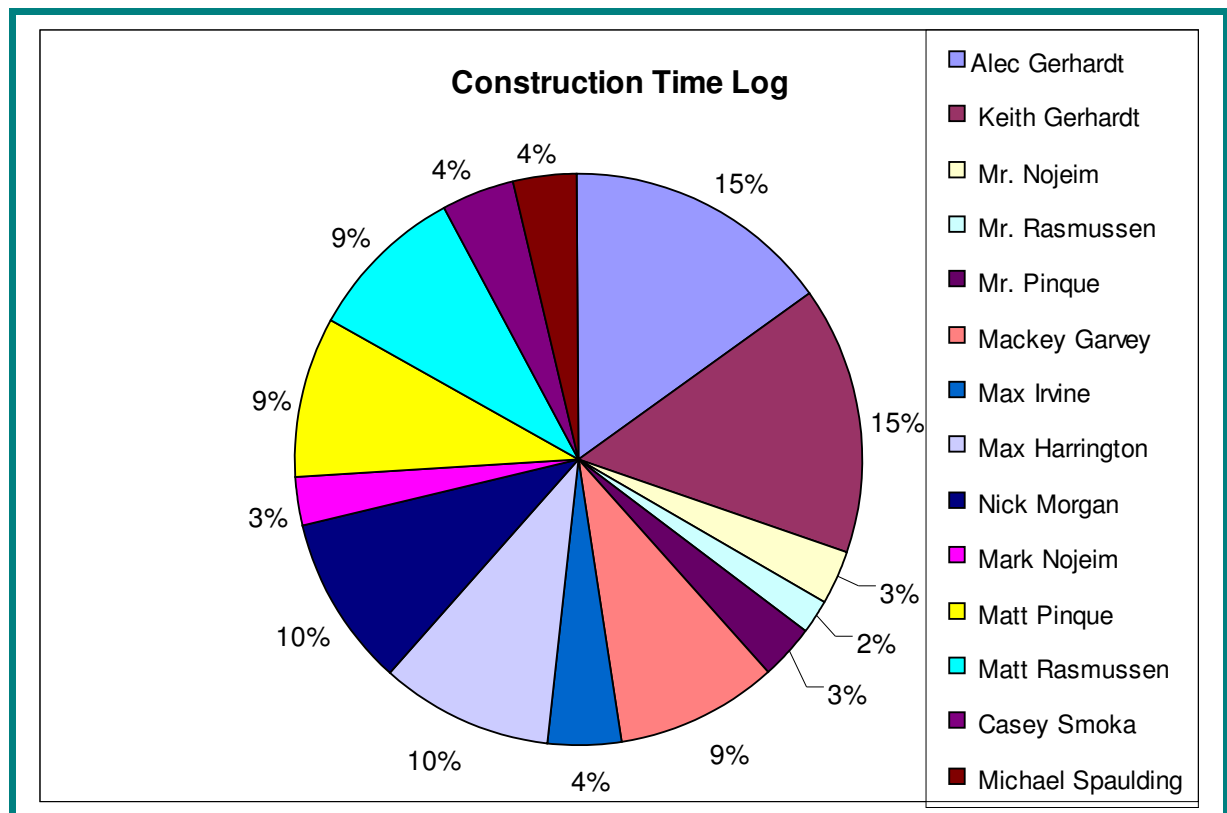
6.2 Time Log

The following table lists all the people that helped during the construction of the soccer ball kickboard, how long each of them worked and on what day. The chart below in **Figure 12** has an 'x' in under the columns of the days each person worked and a total for the hours they worked on the project. **(Note: The hours include transportation time to and from site)**

Figure 12 - Time Log & Chart


People	9/16 Day 1	10/14 & 10/21 Day 2 & 3	11/4 Day 4	11/23 & 11/24 Day 5 & 6 Day	12/2 Day 7	Time (in Hours)
Alec Gerhardt	x	x	x	x	x	25
Keith Gerhardt	x	x	x	x	x	25
Mr. Nojeim				x		5
Mr. Rasmussean			x			3
Mr. Pinque			x	x		5
Mackey Garvey			x	x		15
Max Irvine			x			7
Max Harrington		x		x		16
Nick Morgan		x		x		16
Mark Nojeim				x		4.5
Matt Pinque			x	x		15
Matt Rasmussen		x	x			15
Casey Smoka			x			7
Micheal Spaulding				x		6

Figure 13 - Construction Time Log Chart



6.3 Tools & Equipment

Figure 14 - Original Tools & Supply Sheet



Alec Gerhardt Eagle Project
GDYSC Larter Field

Site, Tools & Supply Sheet

Rev #1: 01/09/07

Site Requirements

- Site Survey - Location, placement & Irrigation Specifications
- Surface Requirements - Level and Clear
- Weed Barrier (1x24' section)
- Mulch or Pebbles to reduce weeds

<u>Tools</u>	<u>Quantity</u>	<u>Borrow/Buy</u>
• GPS System	1	Borrow
• Spray Paint	1	Buy
• Stakes	8	Borrow
• Spool of String	1	Buy
• Levels	2	Borrow
• Sledge Hammers	2	Borrow
• Cordless Drill/Screwdriver	4	Borrow
• Spade Shovels	3	Borrow
• Post Hole Digger	2	Borrow/Rent
• Tape Measures	4	Borrow
• Cement Mixer	1	Borrow/Rent
• Wheel Barrel	2	Borrow
• Rake	2	Borrow
• Trowel	3	Borrow
• Saw	3	Borrow

<u>Supplies</u>	<u>Quantity</u>	<u>Borrow/Buy</u>
• Trash Barrel	3	Borrow
• Box of Trash Bags	1	Buy
• Gallon of Water	12	Buy
• Package of Sandpaper	1	Buy
• Pencils	10	Buy
• Paper Pad	2	Buy

6.4 Materials Estimates

Figure 15 - Original Comparison of Lumber Yard Estimates

Alec Gerhardt Eagle Project - March 19, 2007 - Rev #3

Soccer ball wall at Larter Field Dunstable MA . The materials estimates were from the following building suppl:

Home Depot in Nashua, New Hampshire - December 2006 Estimates
 Moores Lumber in Ayer, Massachusetts - February 12, 2007 Estimates - good to March 19, 2007
 Littleton Lumber in Littleton, Massachusetts - February 17, 2007

Lumber Yards	Item	QTY	Home Depot		Moores		Littleton			
			Unit Cost	Side 1	QTY	Unit Cost	Side 1	QTY	Unit Cost	Side 1
	4x4x12' posts	7	14	98	7	10.827	75.789	7	15.232	106.624
	soma tubes	7	4	28	2	10.225	20.45	7	7.14	49.98
	soma tubes	0	0	0	1	3.775	3.775	0	0	0
	post caps	7	1.59	11.13	7	3.397	23.779	7	4.21	29.47
	6x1x8 decking	51	8	408	51	5.397	275.247	51	6.378	325.278
	bucket of screws	1	66	66	1	60.258	60.258	2	13.79	27.58
	Cement bags	14	3.5	49	14	3.398	47.572	14	4.48	62.72
			660.13			506.87			601.652	
			Side 2			Side 2			Side 2	
	6x1x8 decking	51	8	408	51	5.397	275.247	51	6.378	325.278
	Sub Totals		1068			782.12			928.93	
	Mass Sales Tax		0			39.1			46.35	
	TOTALS		1068			821.22			973.28	

Notes:

- 1) Soma Tubes - 12 " - Original size was 8", but changed size to 12" after review by the Dunstable Building Inspector.
- 2) Moore’s suggested two (12"x 12') and one (12" x 48") construction sono tubes. Moore's also indicated they would provide a discount for Eagle Projects and the estimates were based on a builders discount.
- 3) Littleton Lumber provided a preliminary estimate and said they would provide a donation and a better discount as well as free delivery when it was time to come back to order. Littleton also had different size bags of screws, so we need to include two boxes of 1000 each instead of 1.



6.4.1 Estimate from Moore Lumber

Figure 16 - Moores Lumber (Ayer) - 02/17/07

STORE HOURS FOR G.V. MOORE LUMBER						
MON-FRI 6:30-5:00 SAT 7:00-1:00						
**** CASH ****		CRST#: *1	DOC #: 121506	PAGE NO		
		TERMS: NET 30M	DATE : 2/17/07	TIME : 10:24		
		P.O.#: TROOP 3	CLERK: 13	TERM#630		
			SLSPR: 13 CHRIS H.	TAX : 001 TAX MOORE'S OF AYER		
		EXP. DATE: 3/19/07	EST.#: 121506			
***** * ESTIMATE * *****						
7	EA 4412FP	4X4-12' #1 ACQ ARSENIC FREE	7	10.827/EA	75.79	
2	EA 1280N	12" X 12' CONSTRUCTION TUBES	2	10.225/EA	20.45	
1	EA 12480N	12" X 48' CONSTRUCTION TUBES	1	3.775/EA	3.78	
7	EA 44CFP	4X4 COPPER POST POINT	7	3.397/EA	23.78	
51	EA 5468PT	5/4X6-8' PREM ACQ ARSENIC FREE PRESSURE TREATED "PRESERVE PLUS"	51	5.397/EA	275.25	
14	EG 80CM	80# CONCRETE MIX QUIKRETT	14	3.389/EG	47.45	
1	EA 7272E1	2-1/2" GARD DOG F/ACQ-1750pk.	1	60.258/EA	60.26	
		FIRST SIDE			506.76	
51	EA 5468PT	5/4X6-8' PREM ACQ ARSENIC FREE PRESSURE TREATED "PRESERVE PLUS"	51	5.397/EA	275.25	
		SECOND SIDE			275.25	
					TAXABLE	782.01
					NON-TAXABLE	0.00
					SUBTOTAL	782.01
** ESTIMATE ** ESTIMATE ** ESTIMATE ** ESTIMATE **						
					TAX AMOUNT	39.10
					TOTAL AMOUNT	821.11
X						
Received By _____						



6.4.2 Estimate from Concord Lumber

Figure 17 - Concord Lumber (Littleton) - 02/17/07

CONCORD LUMBER CORPORATION

P.O. Box 1526 55 White Street, Littleton, MA 01460 (978) 486-9877

CONCORD LUMBER
ESTIMATE
LITTLETON LUMBER

SOLD TO: CONTRACTOR SALES ACCT-PRJ: C2-000
 INVOICE #: 070214075414

SHIP TO: GERHARDT, ALEC DATE: 02/17/07
 SALES ID: SCOTT O TIME: 10:53:01
 DELIVERY: ROUTE: ESTIMATE # *
 LITT-47 PAGE 1

ESTIMATE***ESTIMATE*****ESTIMATE**

ITEM	QTY	U/M	DESCRIPTION	U-PRC PER	NET AMT
4412PT	7	EA	4X4-12' #1 S PINE D4S PRS TRTD	15.232 EA	106.62
124FT	7	EACH	12" X 48" FORM TUBE	7.140 EACH	49.98
44CPP	7	EA	4X4 COPPER POSTPOINT	4.210 EA	29.47
5468PT	51	EA	5/4X6-8' PREM SYP ULTRAWOOD P/	6.378 EA	325.28
156ESS	1	BOX	1000 6X1 5/8 GALV EXT SCREWS	13.790 BOX	13.79
80CM	14	BAG	80# CONCRETE MIX	4.480 BAG	62.72
5468PT	51	EA	5/4X6-8' PREM SYP ULTRAWOOD P/	6.378 EA	325.28
156ESS	1	BOX	1000 6X1 5/8 GALV EXT SCREWS	13.790 BOX	13.79

SUB TOTAL 926.93
 MAS 5.0000 SALES TAX 46.35
TOTAL 973.28

This offer must be signed and accepted by buyer prior to the expiration date specified above. Quoted prices will be held for deliveries made within _____ days of acceptance. Subsequent deliveries will be at current market prices, at seller's option. All sales will be made under terms and conditions as set forth in the credit agreement between Buyer and Seller and as stated on the reverse side of this estimate, which is a part of this agreement. Seller assumes no liability for errors and/or omissions in calculations of quantities, sizes or lengths. Clerical errors are subject to correction.

ACCEPTED: CONCORD LUMBER CORP. Date: _____ BUYER: _____ Date: _____
 by _____ (Print Name)



6.5 Final Estimate from Moores

Figure 18 - Moore Second Estimate - 10/13/07

PAGE NO

STORE HOURS FOR G.V. MOORE LUMBER
MON-FRI 6:30-5:00 SAT 7:00-1:00

EMPLOYEE CASH CUSTOMER	CUST#: *15	DOC #: 121506
EMPLOYEE CASH CUSTOMER	TERMS: NET EOM	DATE : 10/13/07 TIME : 11:19
	P.O.#: TROOP 3	CLERK: 13 TERM#631
		SLSPR: 13 CHRIS H.
		TAX : NON NON-TAXABLE STATUS
	EXP. DATE: 6/ 1/07	EST.#: 121506

* ESTIMATE *

1	7	EA	4412PT	4X4-12' #1 ACQ ARSENIC FREE	7	9.838/EA	68.87
2	2	EA	12SON	12" X 12' CONSTRUCTION TUBES	2	10.593/EA	21.19
3	1	EA	124SON	12" X 48" CONSTRUCTION TUBES	1	3.907/EA	3.91
4	7	EA	44CPP	4X4 COPPER POST POINT	7	3.397/EA	23.78
5	51	EA	5468PT	5/4X6-8' PREM ACQ ARSENIC FREE	51	5.396/EA	275.20
6				PRESSURE TREATED "PRESERVE PLUS"			
7	14	BG	80CM	80# CONCRETE MIX QUIKRETE	14	3.555/BG	49.77
8	1	EA	7277261	2-1/2" GUARD DOG F/ACQ-1750pk.	1	50.082/EA	50.08
9							
10				FIRST SIDE			492.80
11							
12							
13	51	EA	5468PT	5/4X6-8' PREM ACQ ARSENIC FREE	51	5.396/EA	275.20
14				PRESSURE TREATED "PRESERVE PLUS"			
15							
16				SECOND SIDE			275.20
17							

\$668.00

	TAXABLE	0.00
** ESTIMATE ** ESTIMATE ** ESTIMATE ** ESTIMATE **	NON-TAXABLE	768.00
	SUBTOTAL	768.00
	TAX AMOUNT	0.00
	TOTAL AMOUNT	768.00

X _____
Received By




6.6 Receipts for Materials

6.6.1 Receipts

Figure 19 – Moores Lumber (Ayer) – Receipt 1

PAGE NO 1



G.V. Moore Lumber Co., Inc.

Ayer, MA 22 W. Main St., 01432
 Webster, MA 4 Town Forest Rd., 01570
 Chelmsford, MA 203 Boston Rd., 01824
 Nashua, NH 145 Temple St., 03060

MOH-FRI 6:30-5:00 SAT 7:00-1:00

Telephone Facs

(978) 772-0900 (978) 7
 (508) 943-3848 (508) 9
 (978) 256-8109 (978) 2
 (603) 883-7776 (603) 8

MOORE'S HOURS: MON-FRI 6:30-5:00 SAT 7:00-1:00

PICKER: _____ CHECKER: _____ DRIVER: _____

EMPLOYEE CASH CUSTOMER: GEHARDT
 EAGLE SCOUT PROJECT

CUST#: #15
 TERMS: NET EOM
 P.O.#: TROOP 3

INV #: C48947
 DATE: 11/23/07 TIME: 10:14
 CLERK: 16 TERM#635
 SLSPR: 13 CHRIS H.
 TAX: NON NON-TAXABLE STATUS
 ORDER#: 121586

DEL. DATE: 11/23/07
 PO # TROOP 3 ORDER # 12158
 20-6688693

 * INVOICE *

QUANTITY	UM	ITEM	DESCRIPTION	UNITS	PRICE/PER	EXTENSION		
7	EA	44CPD	4X4 COPPER POST POINT	7	3.397/EA	23.78 DN		
48	EA	5468PT	5/4X6-8"PREM ACQ ARSENIC FREE PRESSURE TREATED "PRESERVE PLUS"	48	5.396/EA	259.01 DN		
36	EA	54612PT	5/4X6-12"PREM ACQ ARSENIC FREE PRESSURE TREATED "PRESERVE PLUS"	36	7.698/EA	277.13 DN		
-3	BG	88CM	88# CONCRETE MIX QUIKRETE CREDIT RETURN Original: C32534/1 11/03/07	3	3.555/BG	-10.670DN		
** PAYMENT RECEIVED **						40.00	TAXABLE	0.00
S23.35 ** PRIOR DEPOSIT **						14.10	NON-TAXABLE	549.25
FINANCE GIVEN **						14.10	SUBTOTAL	549.25
CASH PAYMENT						40.00	TAX AMOUNT	0.00
RECEIVED IN GOOD CONDITION BY _____							TOTAL AMOUNT	549.25

DISCOUNT WHICH RESULTS IN AN ANNUAL PERCENTAGE RATE OF 10%. MINIMUM MONTHLY FINANCE CHARGE OF \$0.00.


RETURN POLICY: GOODS MUST BE RETURNED WITHIN 90 DAYS. BE FULLY SALEABLE AND IN ORIGINAL PACKAGING. AND BE ACCOMPANIED BY A RECEIPT. A 15% RESTOCKING CHARGE MAY BE DEDUCTED FROM ANY REFUND.

REFUNDS ON SPECIAL ORDERS: BY SIGNING THIS ORDER, I AGREE THAT I CANNOT CANCEL OR RETURN ANY SPECIAL ORDERED ITEMS UPON PENALTY OF FORFEITING THE DEPOSIT AND/OR ANY PAYMENT(S).

6.6.2 Moores Receipts

Figure 20 - Moores Lumber (Ayer) – Receipt 2

PAGE NO 1



G.V. Moore Lumber Co., Inc.

Ayer, MA 22 W. Main St., 01432
 Webster, MA 4 Town Forest Rd., 01570
 Chelmsford, MA 203 Boston Rd., 01824
 Nashua, NH 145 Temple St., 03060

MOH-FRI 6:30-5:00 SAT 7:00-1:00

Telephone Facs

(978) 772-0900 (978) 77
 (508) 943-3848 (508) 94
 (978) 256-8109 (978) 25
 (603) 883-7776 (603) 88

MOORE'S HOURS: MON-FRI 6:30-5:00 SAT 7:00-1:00

PICKER: _____ CHECKER: _____ DRIVER: _____

EMPLOYEE CASH CUSTOMER: GEHARDT
 EAGLE SCOUT PROJECT

CUST#: #15
 TERMS: NET EOM
 P.O.#: TROOP 3

INV #: C32534
 DATE: 11/ 3/07 TIME: 9:47
 CLERK: 13 TERM#631
 SLSPR: 13 CHRIS H.
 TAX: NON NON-TAXABLE STATUS
 ORDER#: 121586

DEL. DATE: 11/23/07
 PO # TROOP 3 ORDER # 12158
 20-6688693

 * INVOICE *

QUANTITY	UM	ITEM	DESCRIPTION	UNITS	PRICE/PER	EXTENSION		
7	EA	4412PT	4X4-12" #1 ACQ ARSENIC FREE	7	9.836/EA	68.85 DN		
2	EA	12SDN	12" X 12" CONSTRUCTION TUBES	2	10.593/EA	21.19 DN		
1	EA	12ASDN	12" X 48" CONSTRUCTION TUBES	1	3.907/EA	3.91 DN		
35	BG	88CM	88# CONCRETE MIX QUIKRETE	35	3.555/BG	124.43 DN		
7	EA	138S	1X3- 8" PREMIUM KD STRAPPING	7	1.084/EA	7.59 DN		
1	EA	1663665	10028549 NON TOXIC DUST MASK	1	1.221/EA	1.22 DN		
** PRIOR DEPOSIT **						226.65	TAXABLE	0.00
FINANCE GIVEN **						226.65	NON-TAXABLE	226.65
CASH PAYMENT						226.65	SUBTOTAL	226.65
RECEIVED IN GOOD CONDITION BY _____							TAX AMOUNT	0.00
RECEIVED IN GOOD CONDITION BY _____							TOTAL AMOUNT	226.65

DISCOUNT WHICH RESULTS IN AN ANNUAL PERCENTAGE RATE OF 10%. MINIMUM MONTHLY FINANCE CHARGE OF \$0.00.

RETURN POLICY: GOODS MUST BE RETURNED WITHIN 90 DAYS. BE FULLY SALEABLE AND IN ORIGINAL PACKAGING. AND BE ACCOMPANIED BY A RECEIPT. A 15% RESTOCKING CHARGE MAY BE DEDUCTED FROM ANY REFUND.


REFUNDS ON SPECIAL ORDERS: BY SIGNING THIS ORDER, I AGREE THAT I CANNOT CANCEL OR RETURN ANY SPECIAL ORDERED ITEMS UPON PENALTY OF FORFEITING THE DEPOSIT AND/OR ANY PAYMENT(S).



6.6.3 Moores Receipts

Figure 21 - Moores Lumber (Ayer) – Receipt 3

PAGE NO 1



G.V. Moore Lumber Co., Inc.
 Ayer, MA 22 W. Main St., 01432
 Webster, MA 4 Town Forest Rd., 01570
 Chelmsford, MA 203 Boston Rd., 01824
 Nashua, NH 145 Temple St., 03060

Telephone (978) 772-0900 (978) 77
 (508) 943-3848 (508) 94
 (978) 256-8109 (978) 25
 (603) 883-7776 (603) 88

MON-FRI 6:30-5:00 SAT 7:00-1:00

PICKER: _____ CHECKER: _____ DRIVER: _____

EMPLOYEE CASH CUSTOMER: _____ CUST# : #15 INV #: C32534
 TERMS: NET EOM DATE : 11/ 3/07 TIME : 9:47
 P.O.#: TROOP 3 CLERK: 13 TERM#631
 SLSPR: 13 CHRIS H.
 TAX : NON-TAXABLE STATUS
 ORDER# : 121586

GERHARDT
 EAGLE SCOUT PROJECT
 PO # TROOP 3 ORDER # 12158

 * INVOICE *

QUANTITY	UM	ITEM	DESCRIPTION	UNITS	PRICE/PER	EXTENSION
0	EA	4419PT	4X4-12" B1 ACO ARSENIC FREE	7	9.83\$/EA	68.87 CH
2	EA	1250N	12" X 12" CONSTRUCTION TUBES	2	18.593/EA	25.19 CH
1	EA	12450N	12" X 48" CONSTRUCTION TUBES	1	3.987/EA	3.91 CH
35	BG	88CM	80# CONCRETE MIX OUTKRETE	35	3.855/BG	124.43 CH
7	EA	1385	1X3- 8' PREMIUM KD STRAPPING	7	1.084/EA	7.83 CH
1	EA	1663665	10028549 NON TOXIC DUST MASK	1	1.221/EA	1.22 CH

226.65 ** PRIOR DEPOSIT **

TAXABLE 0.00
 NON-TAXABLE 226.65
 SUBTOTAL 226.65

TAX AMOUNT 0.00
 TOTAL AMOUNT 226.65


RETURN POLICY: GOODS MUST BE RETURNED WITHIN 10 DAYS, BE FULLY SALEABLE AND IN ORIGINAL PACKAGING, AND BE ACCOMPANIED BY A RECEIPT. A 15% RESTOCKING CHARGE MAY BE DEDUCTED FROM ANY REFUND.
 NO REFUNDS ON SPECIAL ORDERS: BY SIGNING THIS ORDER, I AGREE THAT I CANNOT CANCEL OR RETURN ANY SPECIAL ORDERED ITEMS UPON PENALTY OF FORFEITING THE DEPOSIT AND/OR ANY PAYMENT(S).

RECEIVED IN GOOD CONDITION BY _____

6.6.4 Moores Receipts

Figure 22 - Moores Lumber (Ayer) – Receipt 4

PAGE NO 1



G.V. Moore Lumber Co., Inc.
 Ayer, MA 22 W. Main St., 01432
 Webster, MA 4 Town Forest Rd., 01570
 Chelmsford, MA 203 Boston Rd., 01824
 Nashua, NH 145 Temple St., 03060

Telephone (978) 772-0900 (978) 77
 (508) 943-3848 (508) 94
 (978) 256-8109 (978) 25
 (603) 883-7776 (603) 88

MON-FRI 6:30-5:00 SAT 7:00-1:00

PICKER: _____ CHECKER: _____ DRIVER: _____

EMPLOYEE CASH CUSTOMER: _____ CUST# : #15 INV #: C41252
 TERMS: NET EOM DATE : 11/24/07 TIME : 9:35
 APPLY TO #: _____ CLERK: 27 TERM#634
 SLSPR: 13 CHRIS H.
 TAX : 881 TAX MOORE'S OF AYER
 ORDER# : 241258

DEL. DATE: 11/24/07
 ORDER # 241258

 * CASH REFUND *

QUANTITY	UM	ITEM	DESCRIPTION	UNITS	PRICE/PER	EXTENSION
-6	EA	5465PT	5/4X6-8' PREH ACO ARSENIC FREE CREDIT RETURN	6	5.39\$/EA	-32.38 CH
2	EA	54618PT	Original: C40947/1 11/23/07 PRESSURE TREATED "PRESERVE PLUS" 5/4X6-18' PREH ACO ARSENIC FREE	2	6.291/EA	12.58 C
1	EA	54612PT	PRESSURE TREATED "PRESERVE PLUS" 5/4X6-12' PREH ACO ARSENIC FREE	1	7.698/EA	7.70 C
1	EA	11270	PRESSURE TREATED "PRESERVE PLUS" 6E71101 18, 10Z, SUB FLOOR DIMES.	1	1.616/EA	1.62 C

** AMOUNT RETURNED TO CUSTOMER ** 9.38

TAXABLE 21.98
 NON-TAXABLE -32.38
 SUBTOTAL -10.40

CASH RETURNED 9.38
 TAX AMOUNT 1.18
 TOTAL AMOUNT -9.38

RETURN POLICY: GOODS MUST BE RETURNED WITHIN 10 DAYS, BE FULLY SALEABLE AND IN ORIGINAL PACKAGING, AND BE ACCOMPANIED BY A RECEIPT. A 15% RESTOCKING CHARGE MAY BE DEDUCTED FROM ANY REFUND.
 NO REFUNDS ON SPECIAL ORDERS: BY SIGNING THIS ORDER, I AGREE THAT I CANNOT CANCEL OR RETURN ANY SPECIAL ORDERED ITEMS UPON PENALTY OF FORFEITING THE DEPOSIT AND/OR ANY PAYMENT(S).

RECEIVED IN GOOD CONDITION BY _____



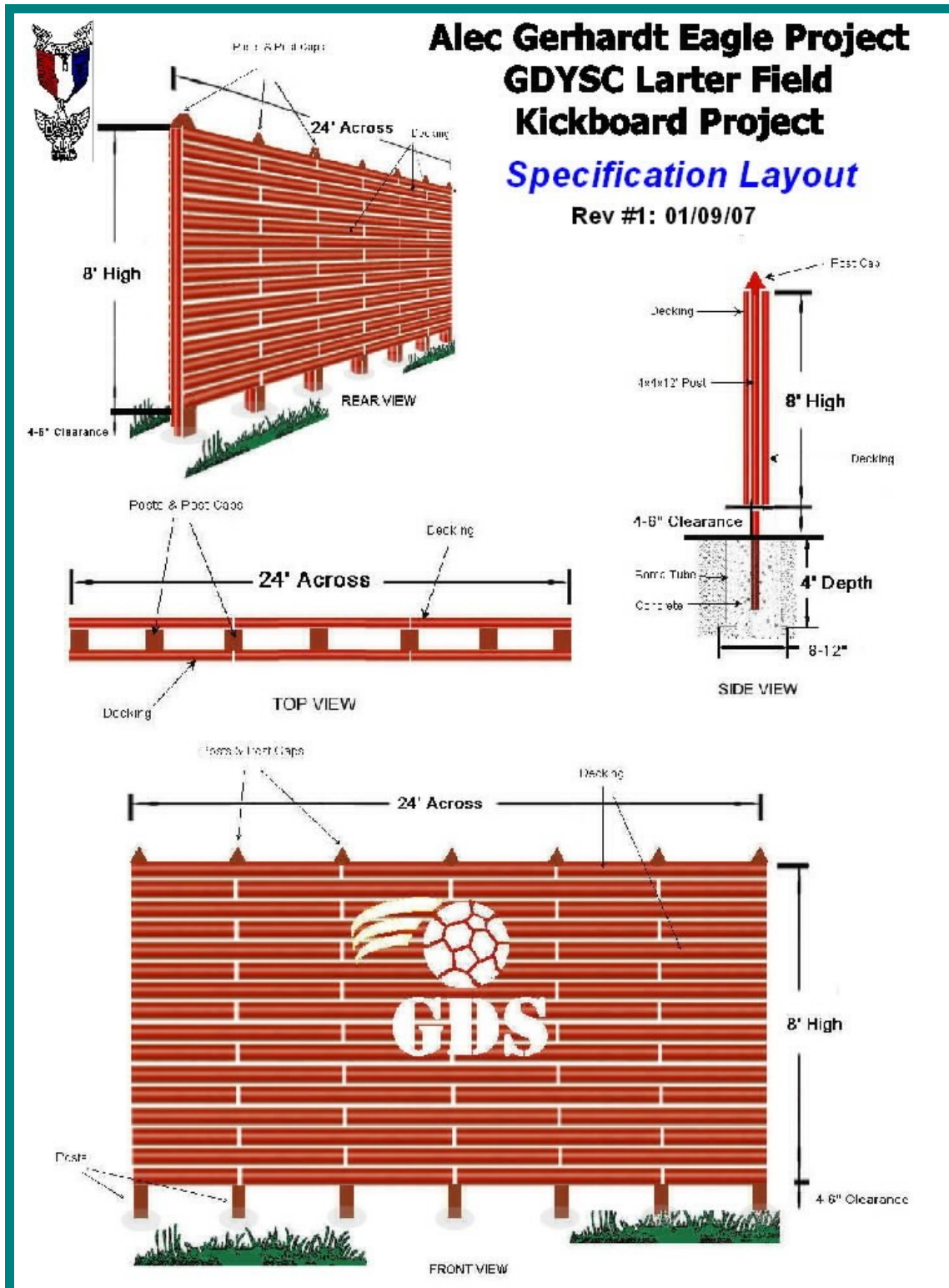
6.6.5 Ace Hardware Receipts

Figure 23 - ACE Receipt – Caution Tape Purchase




6.7 Kickboard Design

Figure 24 - Original Kickboard Specifications



6.8 Specifications

Figure 25 - Original Specification Materials Sheet

 Alec Gerhardt Eagle Project GDYSC Larter Field Kickboard Project <i>Specification Sheet</i> Rev #1: 01/09/07			
<u>SPECIFICATIONS</u>	<u>Quantity</u>	<u>Cost</u>	<u>Totals</u>
• Support Posts (4x4/12' Lumber)	7	14	98
• Post Caps	7	1.59	11.13
• Decking Two Sides (6 x1 x8' Lumber)	102	16	816
• Soma Tubes	7	4	28
• Cement Bags	14	3.50	49
• Bucket of Screws	2	66	132
• Stain (Gallon)	2	21	42
			1186.13
 <u>SITE REQUIREMENTS</u>			
<ul style="list-style-type: none"> • Site Survey - Location, placement & Irrigation Specifications • Surface Requirements - Level and Clear • Weed Barrier (1x16' section) • Mulch or Pebbles to reduce weeds 			
 <u>TOOLS</u>			
<ul style="list-style-type: none"> • GPS System, Stakes and string (for site work) • Levels • Hammers • Cordless Drill/Screwdriver • Shovels • Tape Measure 			

6.9 Construction Sign

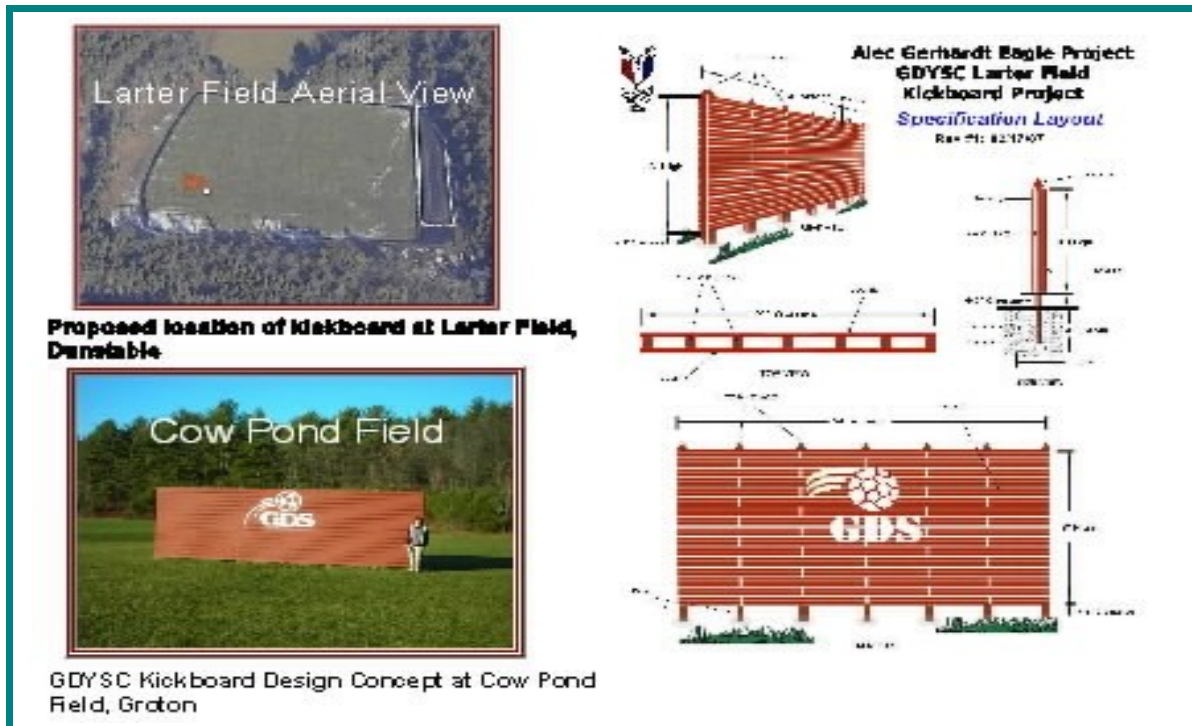
Figure 26 - Construction Sign used after Post Holes were dug



6.10 Application Composite Drawing

The figure below was the composite drawing I included in my original application and I used to illustrate what where the kickboard would be located, the actual design plans and what the final project would look like when presenting to committees and my advisor.

Figure 27 - Composite for Application and Presentations



6.11 Photos

6.11.1 Cow Pond

Figure 28 - Pictures at Cow Pond field - December 16, 2006

Reference Soccer Ball Kickboard Structure at Cow Pond Field in Groton



Side Views of Soccer Ball Kickboard



6.11.2 Later Ariel Photo – Optional Sites for Soccer Ball Kickboard



**Alec Gerhardt Eagle Project
GDYSC Larter Field
Kickboard Project**

Location Sites

Rev #1: 0211//07

Site locations for Kickboard - 02/12/07



6.11.3 Larter Ariel Photos- Optional Sites for Soccer Ball Kickboard



6.11.4 Construction Days

6.11.4.1 Dig Days

Figure 29 - Digging Days - October 14 & 21, 2007



Alec giving instructions to Matt, Max and Nick on where to dig the post holes

View of the work party from the sledding hill



Alec, Matt, Max and Nick making progress on the post holes

6.11.4.2 Dig Days continued

Figure 30 - Digging Days - October 14 & 21, 2007



More photos of post hole digging with Matt, Alec, Max and Nick



During the dig we found a Northern Water Snake. It was over 3 feet!



Max checking the depth on one of the post holes



6.11.4.3 Dig days continued

Figure 31 - Digging Days - October 14 & 21, 2007



Alec measuring the post hole. Matt, Nick and Max digging the holes.

Nick, Max & Alec measuring the distance between the holes



Post Hole Digging Completed!

6.11.4.4 Posts Erection

Figure 32 - Post Erection November 3 & 4, 2007

Alec giving instructions to clean out the post holes which were filled due to the rain from the left over hurricane that had come through a week earlier



The crew - Nick, Matt, Mackey, Matt & Alec putting in the the first post.



6.11.4.5 Posts Erection continued

Figure 33 - Post Erection November 3 & 4, 2007



The later poles took a lot less time than the first one. We put the end ones in first and used a string to make sure that the poles were in a line. We also used a 34" level to make sure the posts were plumb.



Three hours later the 7 posts were installed.

6.11.4.6 Decking Construction

Figure 34 – Decking Construction – November 23, 2007





The crew unload the decking from Mr. Pinque truck.

The crew unload the generator that will be used to power the drills and saw. truck.



Mike Spaulding and I put the first board in place.

6.11.4.7 Decking Construction continued

Figure 35 - Decking Construction - November 23, 2007



Alec and Matt measure to make sure the row of decking is level!

A crew of 3 line up to drill in the first rows of decking. Everyone takes a turn!



The crew splits up to measure, cut and drill.

6.11.4.8 Decking Construction continued

Figure 36 - Decking Construction - November 23, 2007



The crew finishing up the first side of the wall. The project was starting to look like a kickboard!

We all take a much needed Break. The Hot Cocoa really warmed us up.



Mackey and Max take a rest after moving a lot of dirt from left over from the post hole digging.

6.11.4.9 Decking Construction continued

Figure 37 - Decking Construction - November 23 & 24th, 2007



*Almost DONE!
At the end of the day
we stopped here
with just a few more
rows to finish the
second side.*

*Day 1 build crew
Mark, Alec, Nick
Mackey, Max,
Matt, & Mike*



*Day 2 of construction,
Alec put the adhesive
on the caps with a
chalk gun.*

6.11.4.10 Decking Construction continued

Figure 38 - Decking Construction - November 24, 2007



Alec putting in caps on the posts.

Day Two build crew Max, Matt, Mackey & Alec pose for another photo!



Construction complete!