



Senior Assignment Part 5: Little Free Library

BY: SCOTT MARTIN AND ALEC WISNESKI

Background/Introduction

Project – Little Free Library

- ▶ Allows children access to books 24/7
- ▶ Creates connections within the community
- ▶ Only 2 minutes from nearest elementary school
- ▶ Improves the environment for a low-income community

Reasons for choosing this project

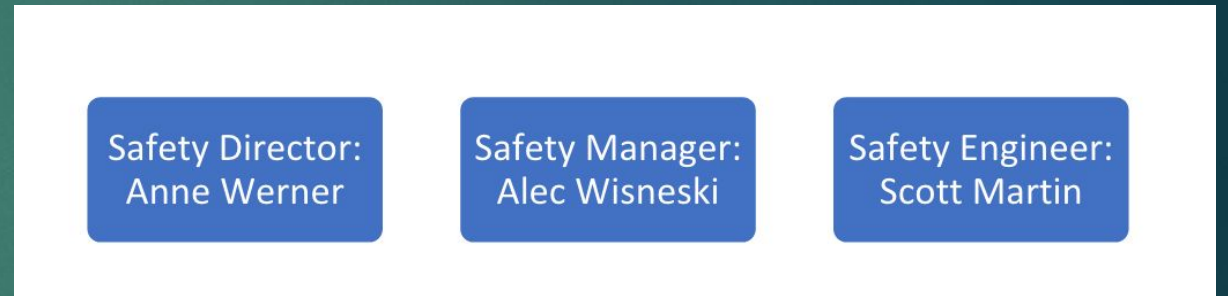
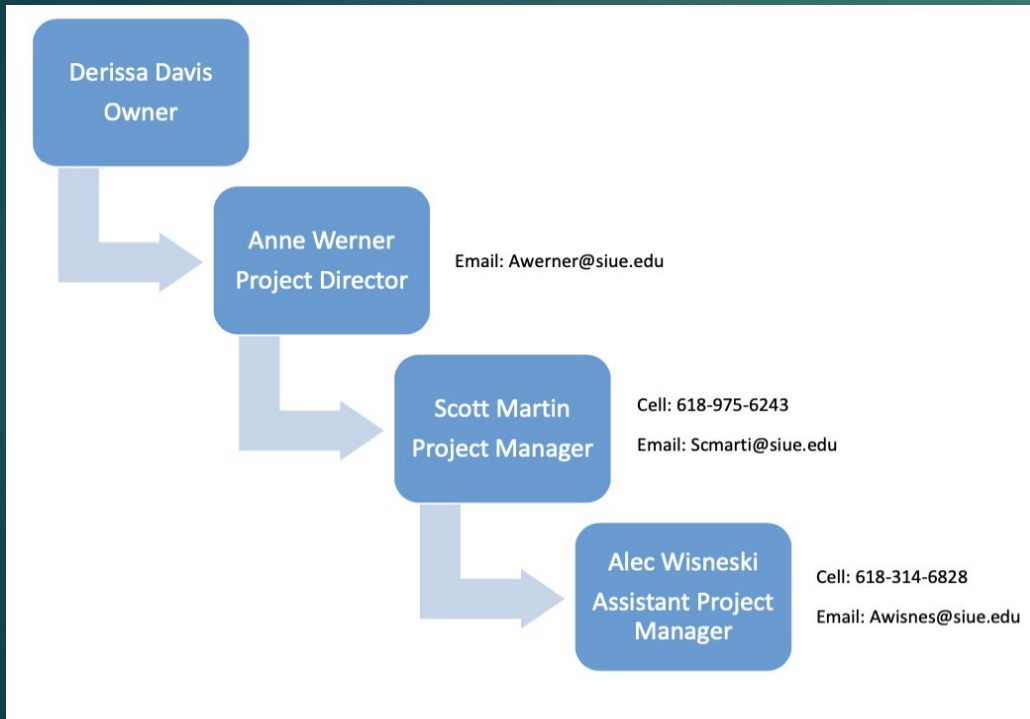
- ▶ Could be done at a reasonable price
- ▶ Beneficial to the community
- ▶ Simple and hands-on



List of Deliverables

- ▶ Preliminary plan and scope of work
 - ▶ Resources and contacts
 - ▶ Draft of schedule
 - ▶ Preliminary cost estimate
- ▶ Finalized scope of work
- ▶ Feasibility and constructability study
- ▶ Finalized cost estimate
- ▶ Finished schedule
- ▶ Safety plan
- ▶ Risk management
- ▶ Construction of Little Library

Organizational Charts: Project Team and Safety Team



Executive Summary/Scope of Work

- ▶ As seniors in the Construction Management program at Southern Illinois University Edwardsville this was our senior project. The purpose of our project was to design, estimate, schedule, and build a Free Little Library for the Washington Park Community. The client and owner is/was Derissa Davis. Between her and Dr. Spurlock is where the idea for this library came to life.
- ▶ The construction will include:
 - ▶ Designing of the book box and supports
 - ▶ Constructing the main cabinet with 1 shelf to allow for 2 rows of books
 - ▶ Constructing 2 doors that will close on the cross brace down the middle
 - ▶ Constructing a roof for rain runoff
 - ▶ Staining the exterior
 - ▶ Supporting the structure with 2 concreted posts in the ground
 - ▶ Constructing a rock bed around the library for a future site for Senior Projects.

Feasibility and Constructability

- ▶ Site address – 4701 Forest Blvd. East Saint Louis, IL
- ▶ Easy access from Forest Blvd.
- ▶ Difficult site conditions
 - ▶ Trash
 - ▶ Overgrown vegetation
 - ▶ Damaged fencing
- ▶ Soil on the property is very clayey resulting in poor drainage
- ▶ The high amount of precipitation during the spring could result in many weather days

Feasibility and Constructability

- ▶ Zoning – Commercial Business District, B-1
- ▶ Utility impacts
 - ▶ Overhead powerlines are present, but we wouldn't have used high reaching equipment
 - ▶ We would not be digging deep enough to interfere with underground utility lines
- ▶ Based on our feasibility and constructability study we determined the project would have been worth doing prior to the global pandemic

Site Pictures

- Library between road and Building
- Bus stop on corner



Site Pictures

- Site Location
- Location of Library North of Layout area



Site Pictures

- Laydown area
- Parking Area



Site Pictures

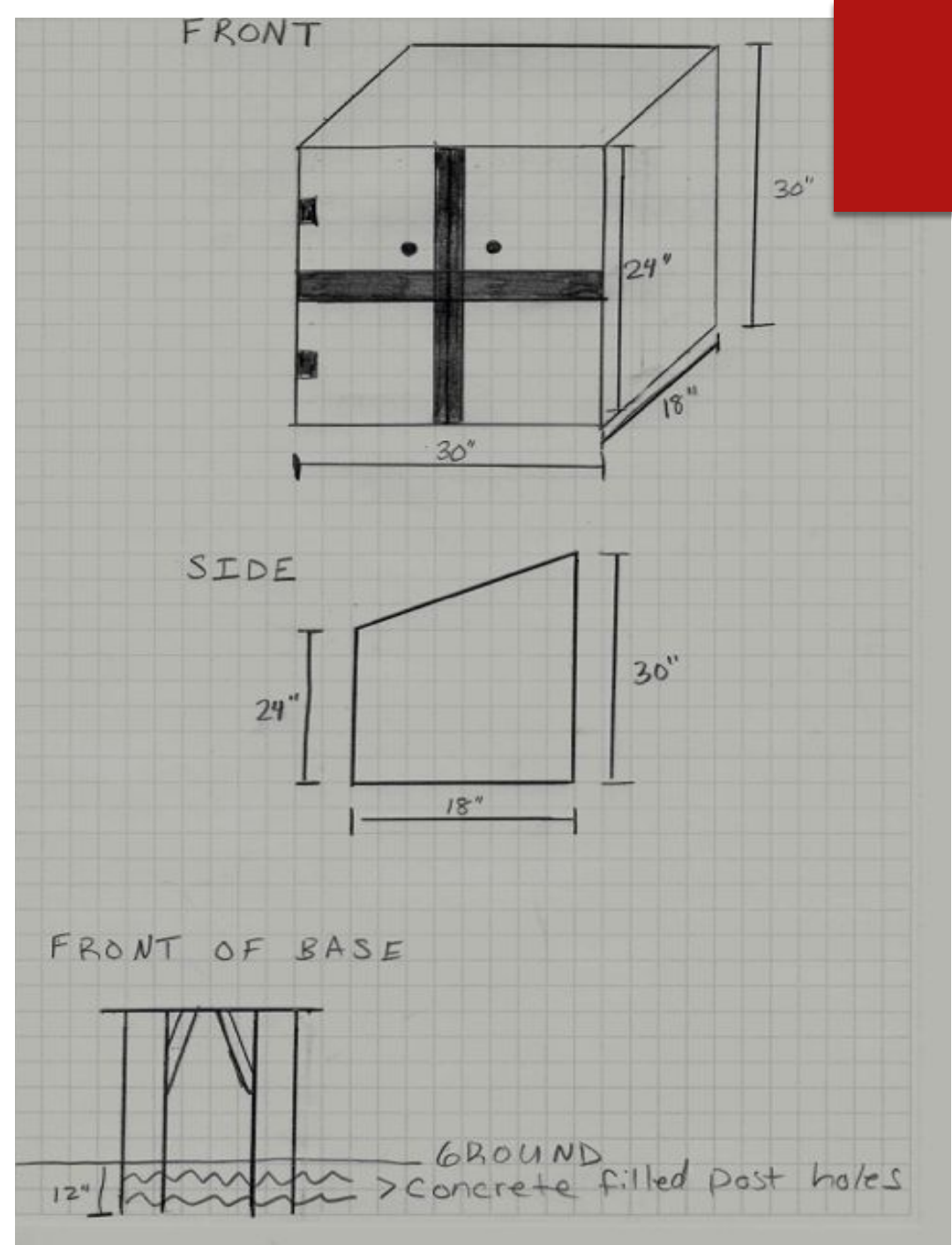


Site Pictures



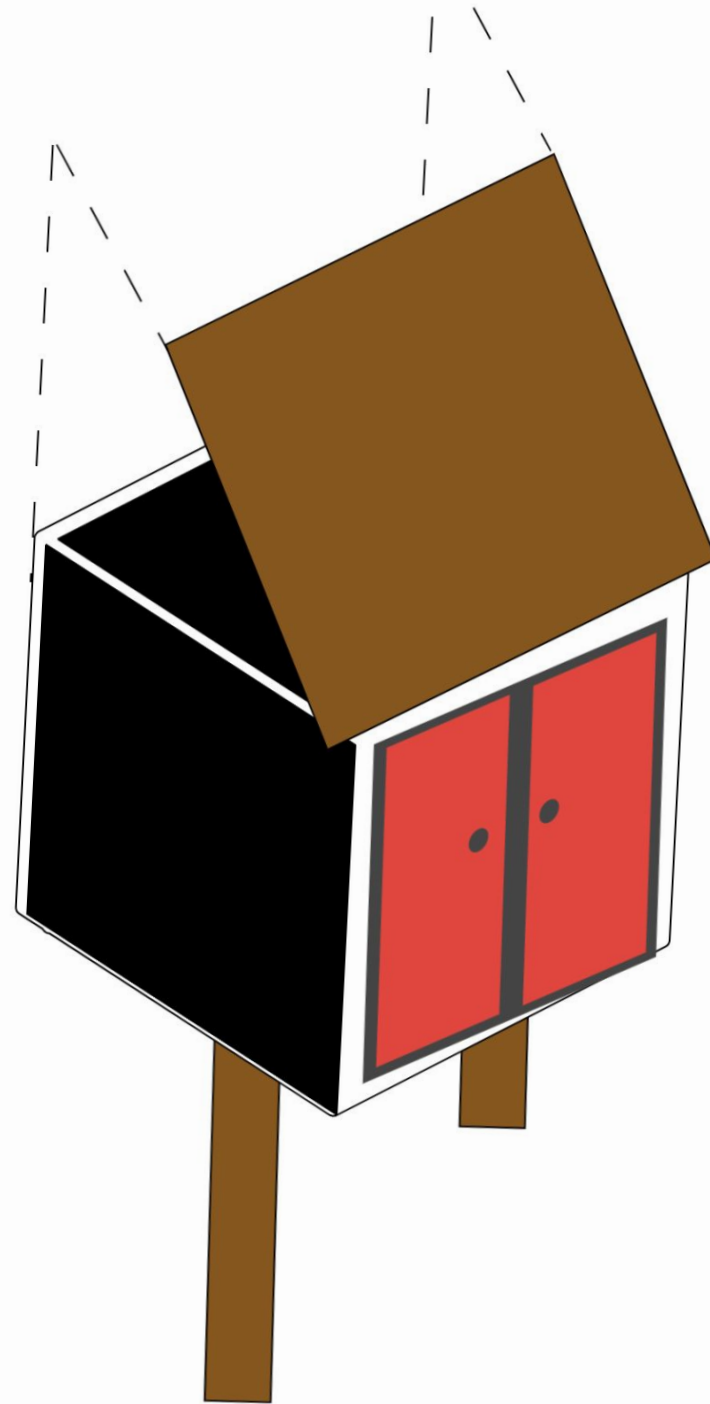
Our Plans

- ▶ Slanted roof
- ▶ 2 posts 12" into the ground
- ▶ 30 x 24 front
- ▶ 30 x 30 back
- ▶ Side 18 x 24 x30
- ▶ Stain outside
- ▶ Caulked inside to keep water out
- ▶ Shelf non treated so does not bleed onto books
- ▶ 2 Doors and 2 handles
- ▶ Plastic drainage roof in "W" shape
- ▶ Owner requested change items



Our Plans

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Project	Little Free Library	ESTIMATE SUMMARY SHEET				Estimate No.	20001		
Location	Washington Park					Sheet No.	1	of	1
						Date	2/13/20		
						By	SMM	Checked	AW
ESTIMATE TYPE		ESTIMATE							
ITEM	DESCRIPTION				Quantity	UNIT	PER ITEM PRICE	TOTAL	
POST HOLE SUPPORT					2	EA	\$7.43	\$14.86	
QUIKRETE	HIGH STRENGTH 50LB BAG				4	EA	\$3.18	\$12.72	
POST CONNECTOR	USP 4" X 4" TRIPLE SINZ WOOD TO WOOD BASE				2	EA	\$4.85	\$9.70	
ROOFING SUPPORT	72" WOODEN CLOSURE STRIP				1	EA	\$4.98	\$4.98	
ROOFING MATERIAL					1	EA	\$14.48	\$14.48	
ROOF FASTENERS	BOX OF ONDURA W/RUBBER WASHER				1	EA	\$12.48	\$12.48	
POSTS	4 X 4 X 6				2	EA	\$6.18	\$12.36	
LANDSCAPE BORDER	2 X 6 X 16				2	EA	\$12.04	\$24.08	
PEA GRAVEL					1	TON	\$40.00	\$40.00	
2 X 4 X 8					6	EA	\$2.36	\$14.16	
PLYWOOD	4 X 8 X 15/32				2	EA	\$15.49	\$30.98	
STAIN	VALSPAR				1	EA	\$50.00	\$50.00	
CAULK	ANY BRAND				3	EA	\$2.48	\$7.44	
HINGES					4	EA	\$3.00	\$12.00	
LAMINATE ALLOWANCE					1		\$20.00	\$20.00	
SCREWS					1	BOX	\$20.00	\$20.00	
MISC HAND TOOLS					1		\$50.00	\$50.00	
BRACKET FOR SHELVES					4		\$8.00	\$32.00	
					Total Material Cost			\$382.24	
Labor Costs					Hours Req.	Rate			
Preconstruction					2	\$ 35.00	\$70.00		
Administration					12	\$ 14.00	\$168.00		
Construction (Carpenter Rate)	1 day x 2 guys x 8 hours				16	\$ 42.00	\$672.00		
Post Construction (Presentation)	Intern Rate				4	\$ 14.00	\$56.00		
					Total Labor Hours	34	Total Labor Cost	\$966.00	
							TAX	\$27.14	
TOTALS							\$1,375.38		

List of Resources and Contacts

- ▶ Dr. Werner – Project Executive
- ▶ Scott Martin – Project Manager
- ▶ Alec Wisneski – Assistant Project Manager
- ▶ Derissa Davis – Owner of the land
- ▶ Dr. Spurlock – SIUE Successful Communities Collaborative
- ▶ Scott Zola – Lawrence Group Projects Construction Director
 - ▶ Donor of Project Funds
- ▶ Keith Fuller – Lawrence Group Projects Superintendent
 - ▶ Assistance with Construction of Post holes and carpenter techniques
- ▶ SIUE School of Engineering
- ▶ SIUE Construction Department
- ▶ Lawrence Group Projects

Meeting with Owner

- ▶ Signed agreement with owner
- ▶ Allowed us to meet with Derissa and Dr. Spurlock at the same time
- ▶ Owner requested change items

PROJECT CHARTER

Date: February 26, 2020

Project Title: Little Free Library

Project Sponsor: SIUE Construction Management Department

Project Manager: Scott Martin

Project Team Members: Scott Martin and Alec Wisneski

Project Customer: Derissa Davis

Project Purpose:

The purpose of this project is to provide a senior construction project/experience for students in the Southern Illinois University Edwardsville Construction Management Program as required by the University for successful completion of a Bachelor of Science degree. The students on the project team shall strive to accomplish the scope of work described below to the best of their abilities.

Project Description/Scope of Work: Design and construct a Little Free Library for Washington Park.

- Prepare the site by doing minimal site clearing prior to construction.
- Construction will include
 - Main cabinet with 1 shelf allowing for 2 rows of books
 - 2 doors
 - Roof for rainwater run off
 - Exterior stained finish
 - Supported by 2 posts set in the ground
 - Rock bed with gravel surrounding structure to allow for additions by future groups.
- In addition to this we will leave room for extra exterior improvements such as benches or flower beds.

Requirements: Final location needs to be determined

Risks:

- A. Other construction and demolition on site that we must be cautious of
- B. Weather delays
- C. Unforeseeable conditions under ground
- D. Vandalism causing damage requiring rework
- E. Undefined project location could cause schedule delays
- F. Impromptu design changes could increase cost

Charter Given to Owner  Date 2-26-2020

Copy of Project Charter Received  Date 2-26-2020

Risks

Other construction on site

Weather delays on limited working days

Unforeseeable conditions underground

Owner Change orders

Global pandemic/Natural Disasters

Losing funding

Poorly defined scope

Unforeseeable material price increases

Lack of communication between upper management

Unsecure Site

Safety/Risk Management Overview

Safety/Risk Management Overview

MITIGATION OF RISK:

- CLEARLY COMMUNICATE RISKS TO THE TEAM
- DISCUSS WRITTEN PLAN TO TREAT RISK
- COMMUNICATE TO BYSTANDERS OUR RISKS
- TAKE NECESSARY STEPS TO REDUCE THE RISKS BY FOLLOWING OUR RISK TREATMENT PLAN
- IF NECESSARY, TRANSFER THE RISK TO PROPER AUTHORITIES SUCH AS POLICE, EMS, OR FIRE DEPARTMENT

MONITORING PLAN:

1. MONITOR PROGRESS OF PROJECT THROUGH DAILY LOGS
2. ASSESS RISKS THROUGH WEEKLY LOOK AHEAD SCHEDULES
3. CONTINUOUS COMMUNICATION
4. MONITOR LOCAL NEWS AND WEATHER
5. OBSERVE THE SITE AND MAKE CHANGES TO PLAN EACH DAY

Sources

- ▶ https://www.payscale.com/research/US/Job=Journeyman_Carpenter/Hourly_Rate/4c2351b3/St.-Louis-MO
- ▶ <https://www.indeed.com/career/carpenter-apprentice/salaries/St.-Louis--MO>
- ▶ <https://websoilsurvey.nrcs.usda.gov/app/>
- ▶ <https://littlefreelibrary.org/>



Questions?