Fishing Pier Proposal
Lake Tomahawk Eagle Scout Project

(burkleyreece@gmail.com)

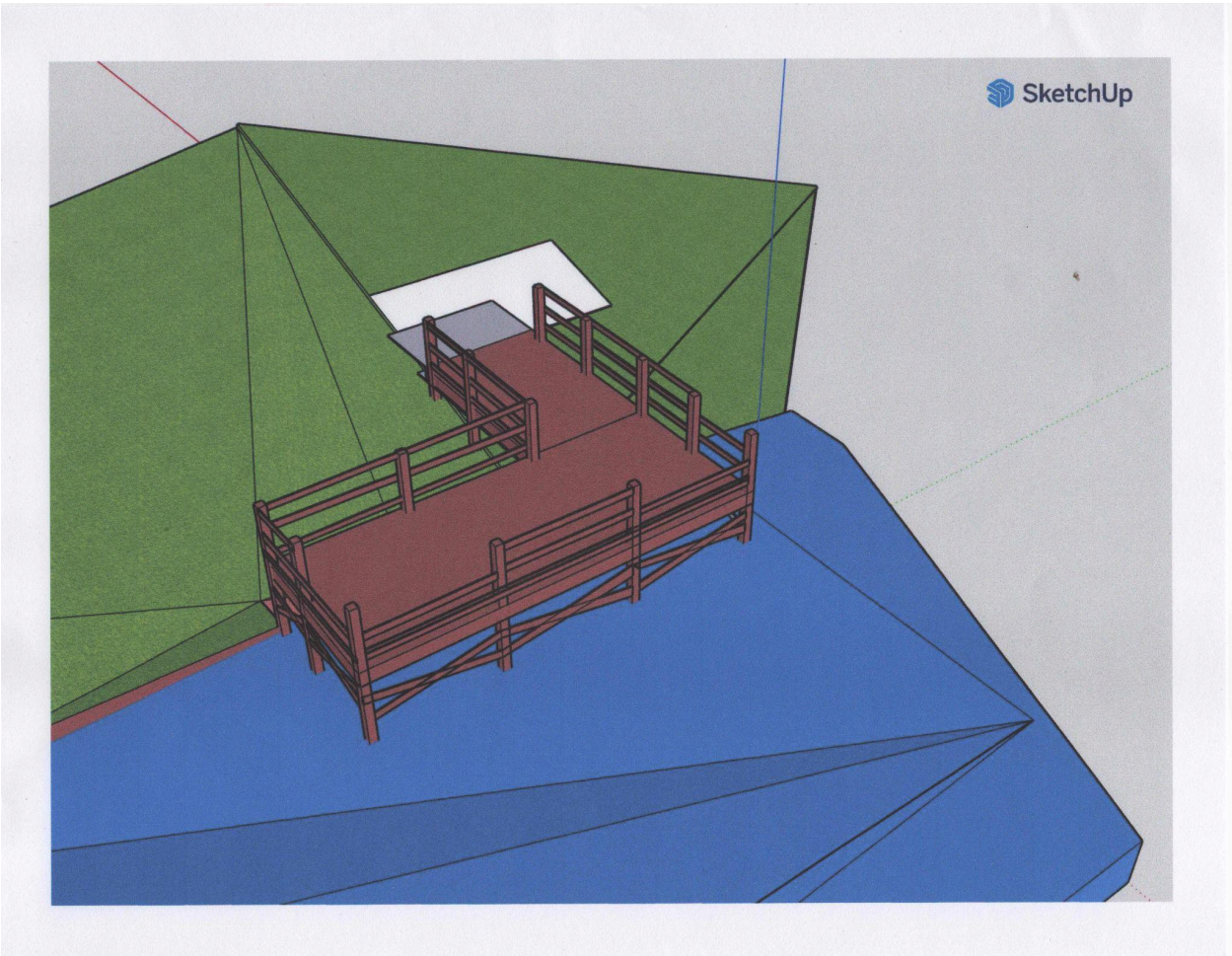
My name is Burkley Reece. I'm 15 years old and from Scout Troop 17. I am hoping to build a handicap-accessible fishing pier at Lake Tomahawk, near the tennis courts and the pavilion. I would like it to be able to hold 4 people in wheelchairs to comfortably fish with their families. It will be 24 feet by 10 feet. The railing will be 44 inches tall, and it will drop down by 10 inches to equal 34 inches, this is where the people in wheelchairs will fish. The deck of the dock will be level with the walking path so the people using it can get on it easily. The 12 pylons will be 6x6 posts. The piers will be installed at 5 feet per engineer guidelines. We will be using the existing paved walking path to make getting to the pier in a wheelchair easier. We will have to lower the lake level to give the team adequate room to work for this process. The total project cost is approximately $4,718.17. I'm hoping to get supplies like lumber and screws donated to save money because that part makes up most of the cost. I will be fundraising money and buying all of the things that are not donated. I will be taping off the area when we are away from the property so that no one gets hurt or messes up the work we have completed. We will prebuild some parts of the project at the shop because it saves time, and it will help us finish the project with less time on-site. I have worked on the design and plans for this project with the help of Steve Landess, a Professional Civil Engineer with a specialty in Ocean Engineering.

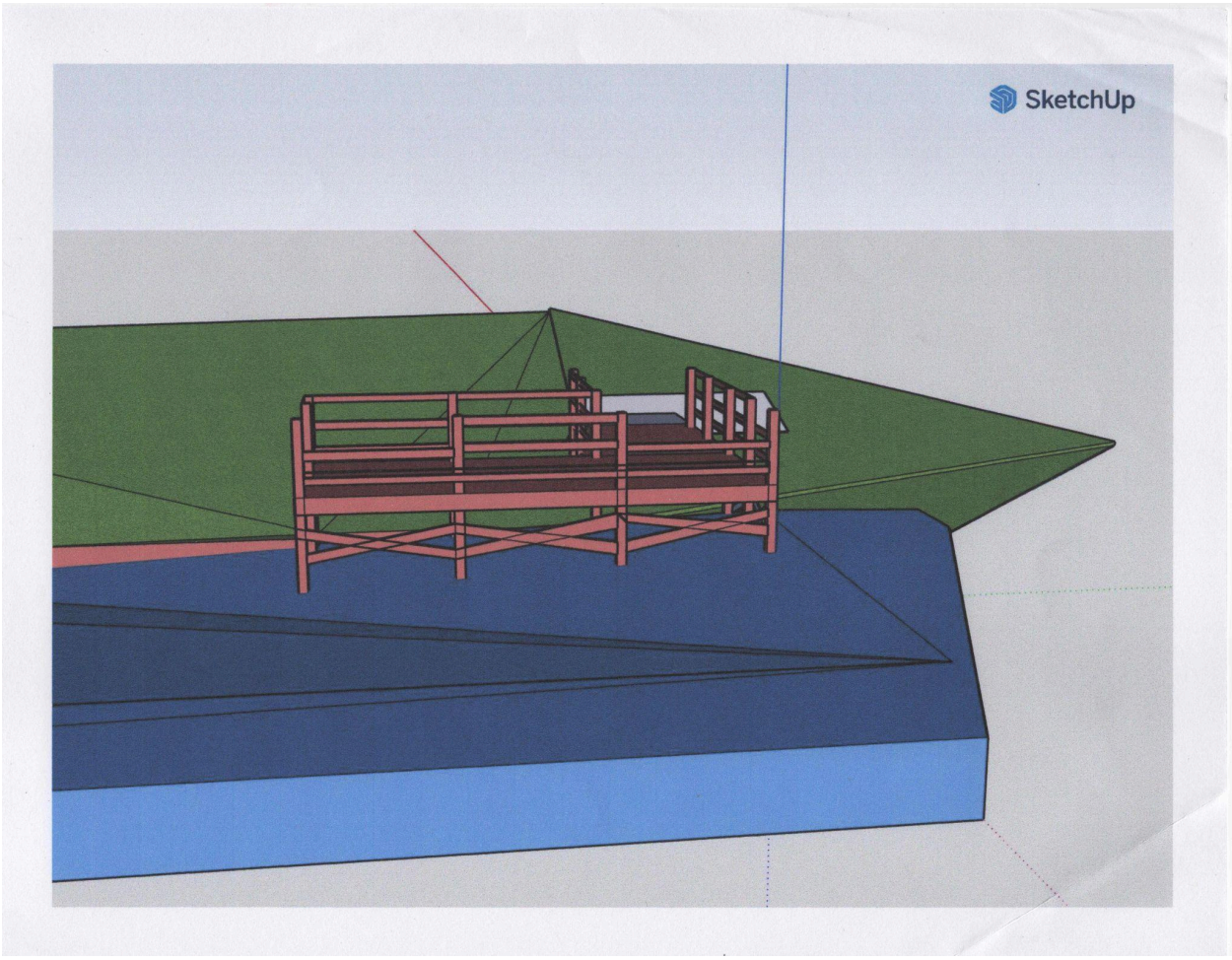
I want to build a fishing pier because I feel there is a need for it in Black Mountain. I feel that the town needs a pier at Lake Tomahawk because it will let Veterans, people in nursing homes and handicap

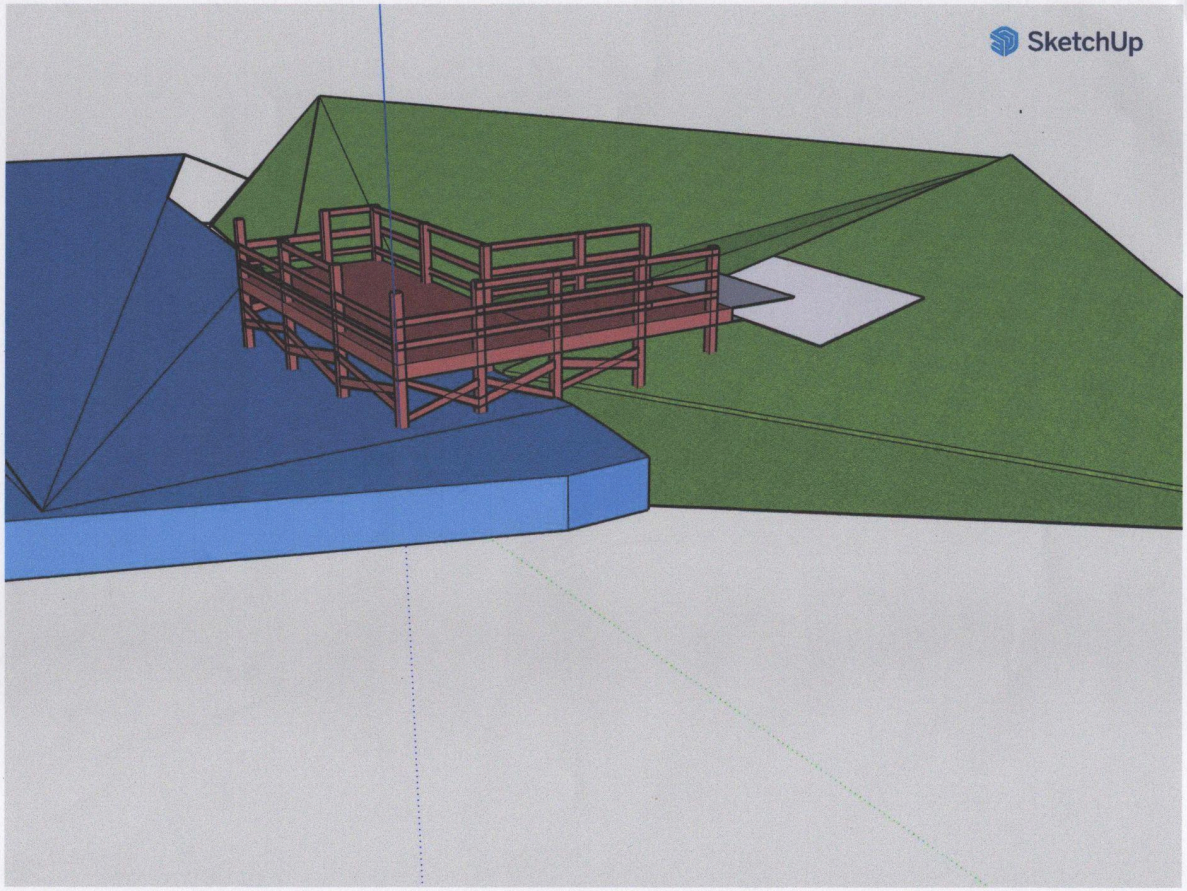
tourists and locals be able to fish and spend time with family and friends. According to www.census.gov approximately 34% of the population is 65 years of age or older, that makes approximately 1 in 3 residents in Black Mountain over the age of 65. Many people chose to come here during retirement. I believe this will help them be more comfortable during retirement. I'm building the pier because I want to be able to fish with my grandpa for longer. I also know that my other grandpa that died would love this idea and want to help me with it throughout the whole project. I understand that this will be a big project but I'm committed to seeing this through because I'm very excited about it.

Click the link to see a 3D model of my project.
Sketch Up Drawing of Lake Tomahawk Fishing Pier

The following are pictures of what my project would look like completed.



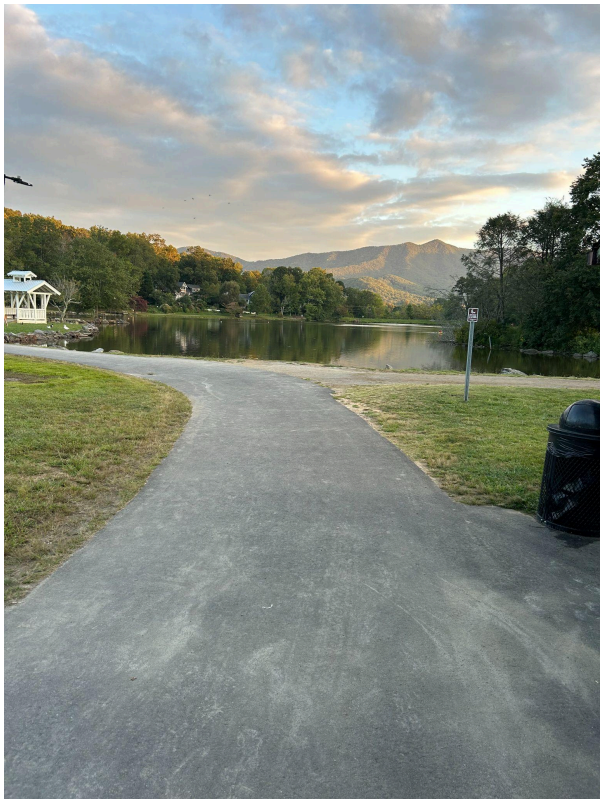

SketchUp


SketchUp

These pictures show where the dock will be located.



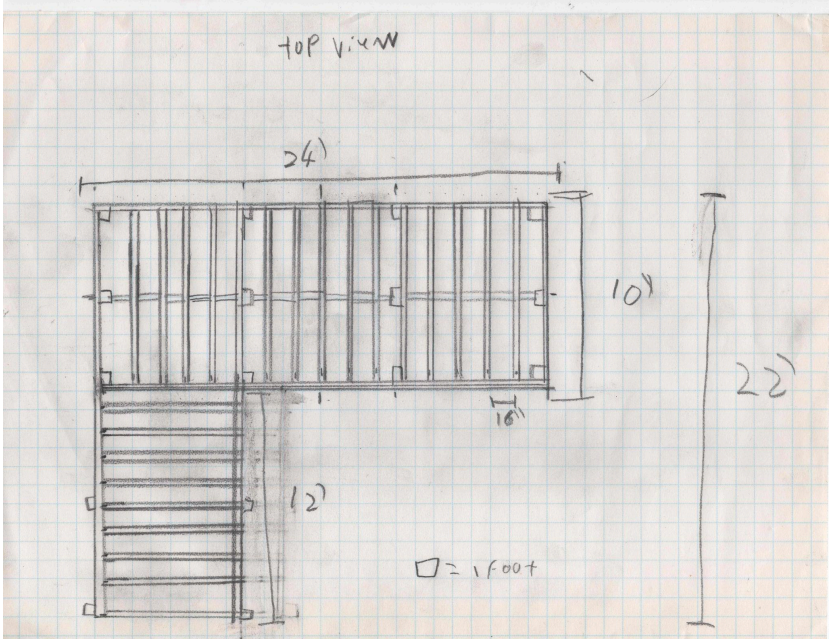




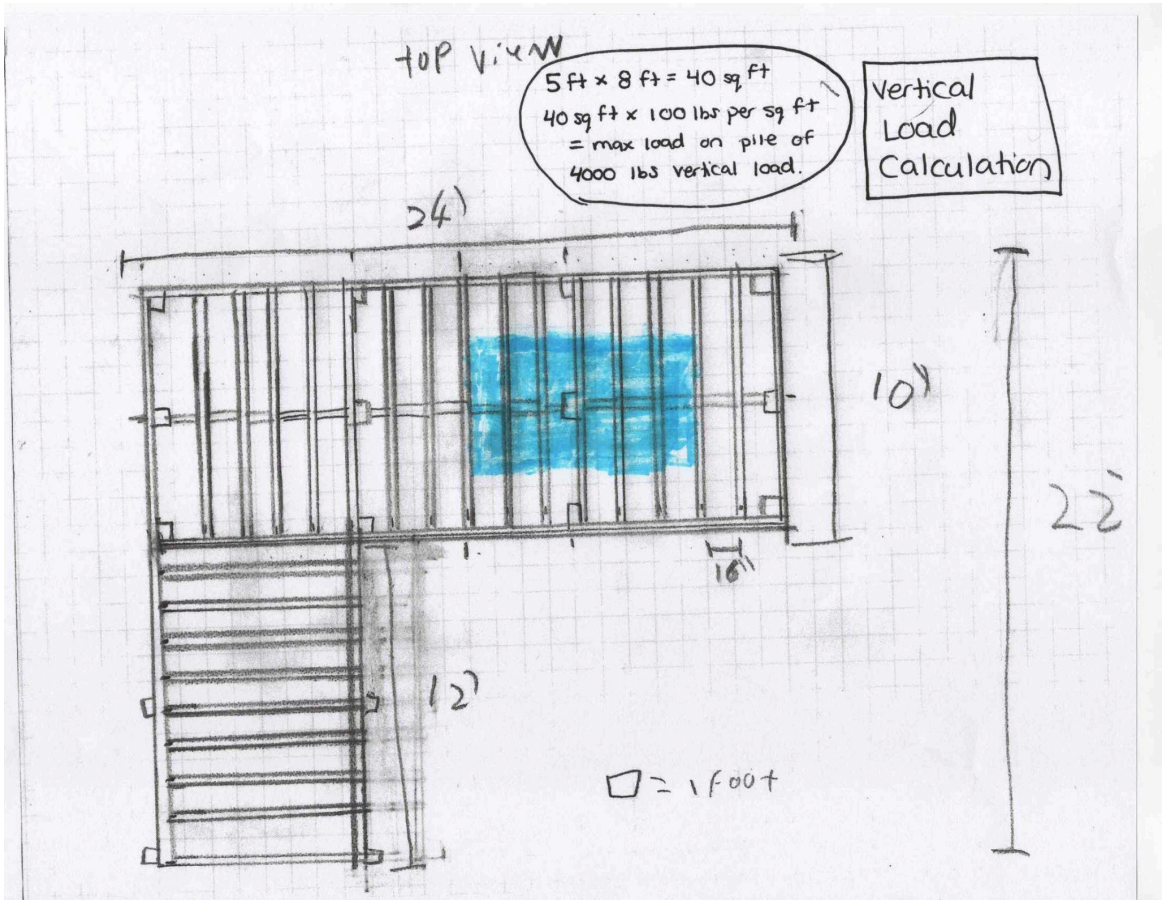
The following picture is a drone view of the location and size to scale of the fishing pier.



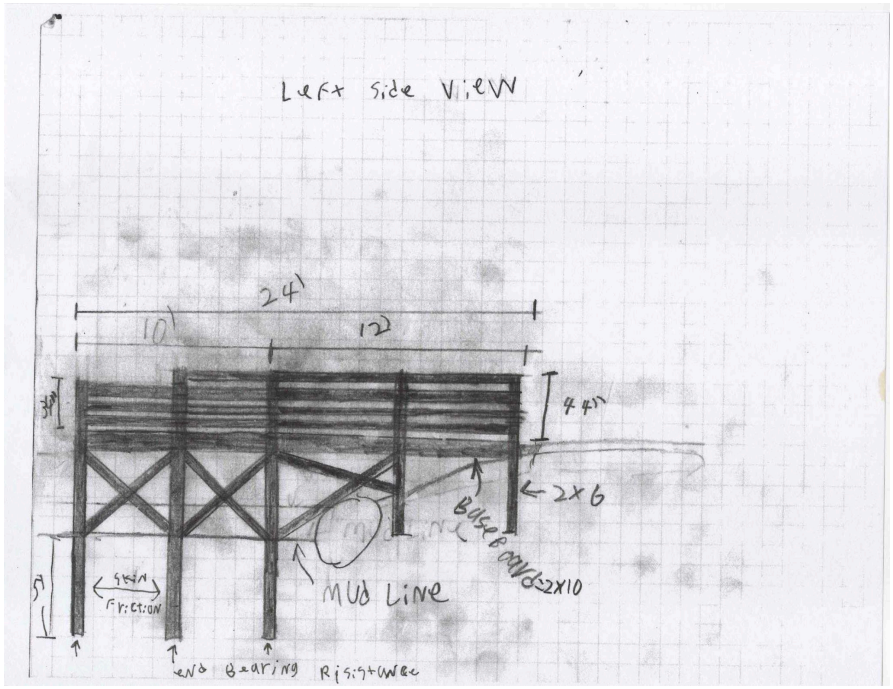
This is the top view technical drawing.

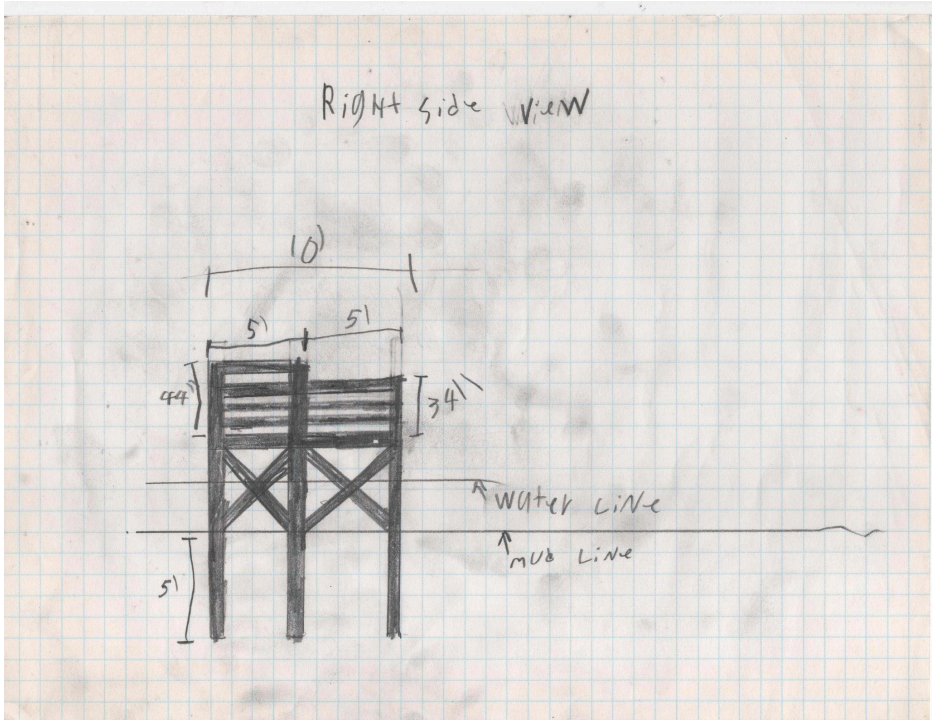


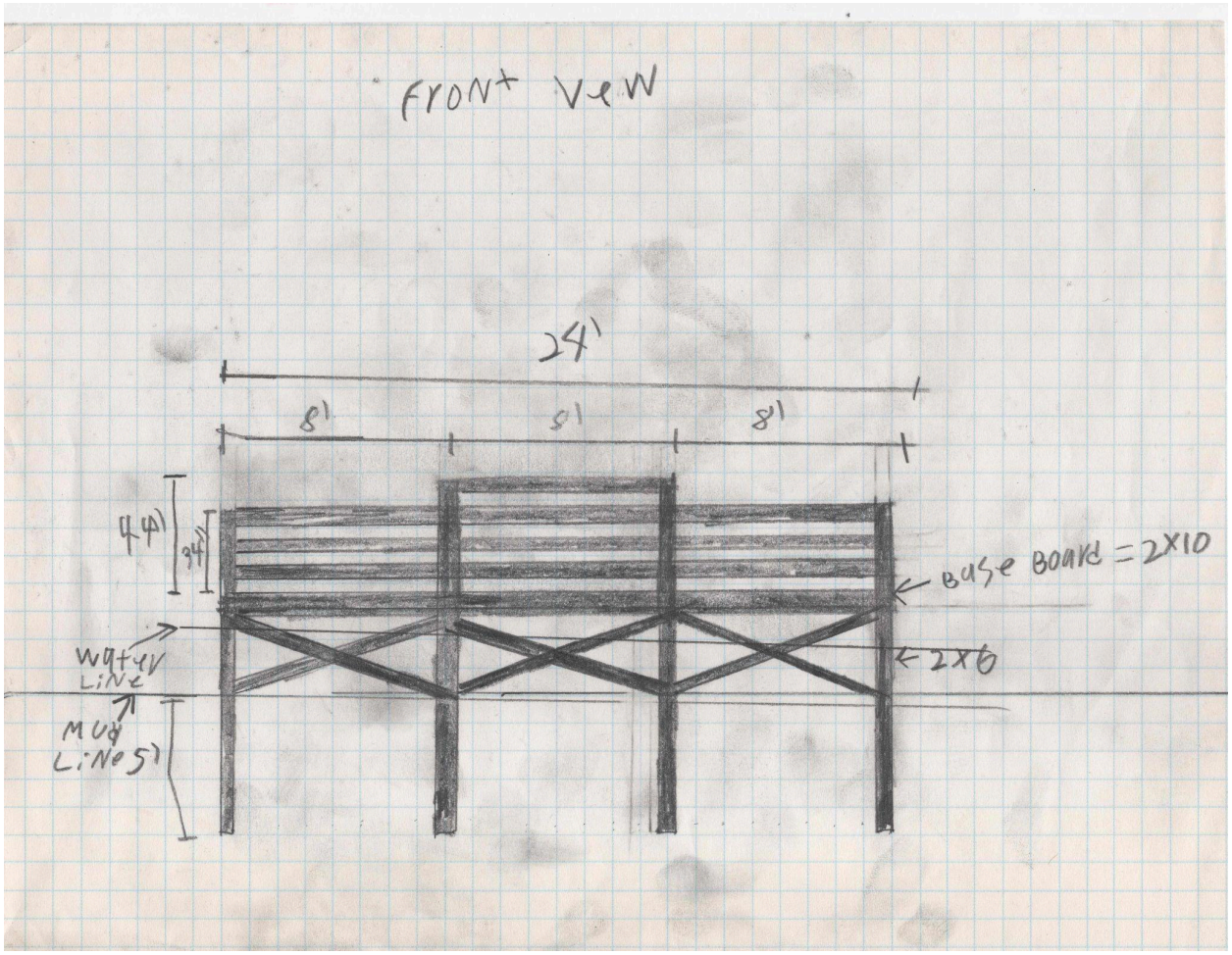
This image shows the vertical load calculation.



The remaining images are more views of technical drawings.







Pylons will be evaluated based on engineering and soil conditions. If the soil is soft, there will be 6 inches of gravel that will be packed on the bottom of each post hole, and we will pour and pack clay around the post.

Cost Estimate and Material List

How Many	Description	Dimension	Length	Cost per item	Total
8	framing	2x10	16	$30	$240
8	framing	2x10	8	$12.00	$96
24	framing	2x10	10	$15	$360
170	decking	2x6	8	$8	$1,360
35	temporary bracing	2x4	8	$4	$140
4	post for ramp	4x4	6	$9	$36
45		joist hanger		$3	$135
26	hardware	1x8 bolts		$14	$364
12	piling	6x6	16	$35	$420
29	hardware	nut		$1.08	$31.32
29	hardware	washer		$1.08	$31.32
1	hardware	box or deck screws	25 pound box	$115	$115
3	hardware	joist hanger screws	3 pound box	$15	$45
1 box	supplies	contractor bags		$30	$30
4	supplies	rubber boots		$25	$100
20	supplies	safety glasses		$2	$40
24	supplies	1 pk 12 gloves		$10	$20
3	Equipment Rental for 3 days	auger rental for one day		$100	$300
1	supplies	5 galon of mixed gasoline		$25	$25
8	Plywood for walking on mud lake bed	8 ft	4 ft	$15	$120
	estimated total price for materials				$4,008.64
	adding 10 percent to account for fluctuations in building cost prices				$400.86
				Subtotal	**$4,409.50**
				Tax	$308.67
				TOTAL ESTIMATED COST	**$4,718.17**

I hope that you will consider this project for the benefit of the town.