CONSTRUCTION OF LINDSAY'S MOTORCYCLE SHED

The task had it's challenges, attempting to build a small shed that Lindsay could ride into and out of, but keeping the height as low as possible. Few sketches were drawn up and only for the purpose of putting together a shopping list. Most of the construction was what I refer to as "engineering on the fly", not all of which was successful the first try. For anyone who is interested in duplicating, or improving upon what we built, here is some information about our work.

We started with the base which needed to support the weight of the bike and rider. This was built using only pressure treated lumber. I had a long length of 2X10 that would more than handle the task running front to back in the center of the floor.

Photo #1.

The remainder of the base consists of 2X4s. Two of these were attached to the sides of the center beam preventing it from sagging under load. This was topped off with a sheet of 1/2" treated plywood. The shed could have been built to a size of 4'X8' but since she wanted to keep the size to a minimum it ended up 4'X7'.

Following the base we built the side walls and back end with a 22.5 degree slope to the roof.

Photo #2.

The sides were built laying on the ground then attached to the base. The back end was built in place. To keep down the total weight and cost of the project a thin version of T1-11 was used for the exterior. Another option considered would have been 1/4" plywood covered with vinyl siding. The end result was primed and painted to match the color of the siding on her house.

Photo #3.

In the photo above you will see a 2X4 attached to the top of the walls maintaining the proper spacing. Then we constructed and added the front doors.

As seen in Photo #4, to help the walls support the weight of the swinging doors, we added heavy duty shelf brackets to the walls and floor. The door hinges are recessed into the framing so they barely protrude the surface of the exterior preventing the easy removal of the hinge pins. The roof posed a special challenge, trying to keep the weight down to a level that would be easy to open & close without using multiple gas struts on each side. The plywood was so thin we needed to add a length of 1X6 just above the hinges to reduce flex. Then a pair of 2X4s were added edgewise. These reduce flexing front to rear. Additional bracing was needed at the points where the gas struts are mounted keeping things fairly ridged. For this we used scrap pieces of 2X4s between the existing 2X4s.

Photo #4.

A few months prior to this project my son Kevin and I replaced the tailgate on his Subaru Outback Wagon. Based on the weight of the tailgate and the hardware that came with the new gas struts we installed, I deemed these struts appropriate to this task as well. They are mounted roughly 1/3 of the way from the back wall so they do most of the work with little effort needed at the front end to raise and lower the roof panels. Using scrap metal I found laying around I fabricated four brackets, like the one shown in photo #5, for attaching the struts to the 2X4s.

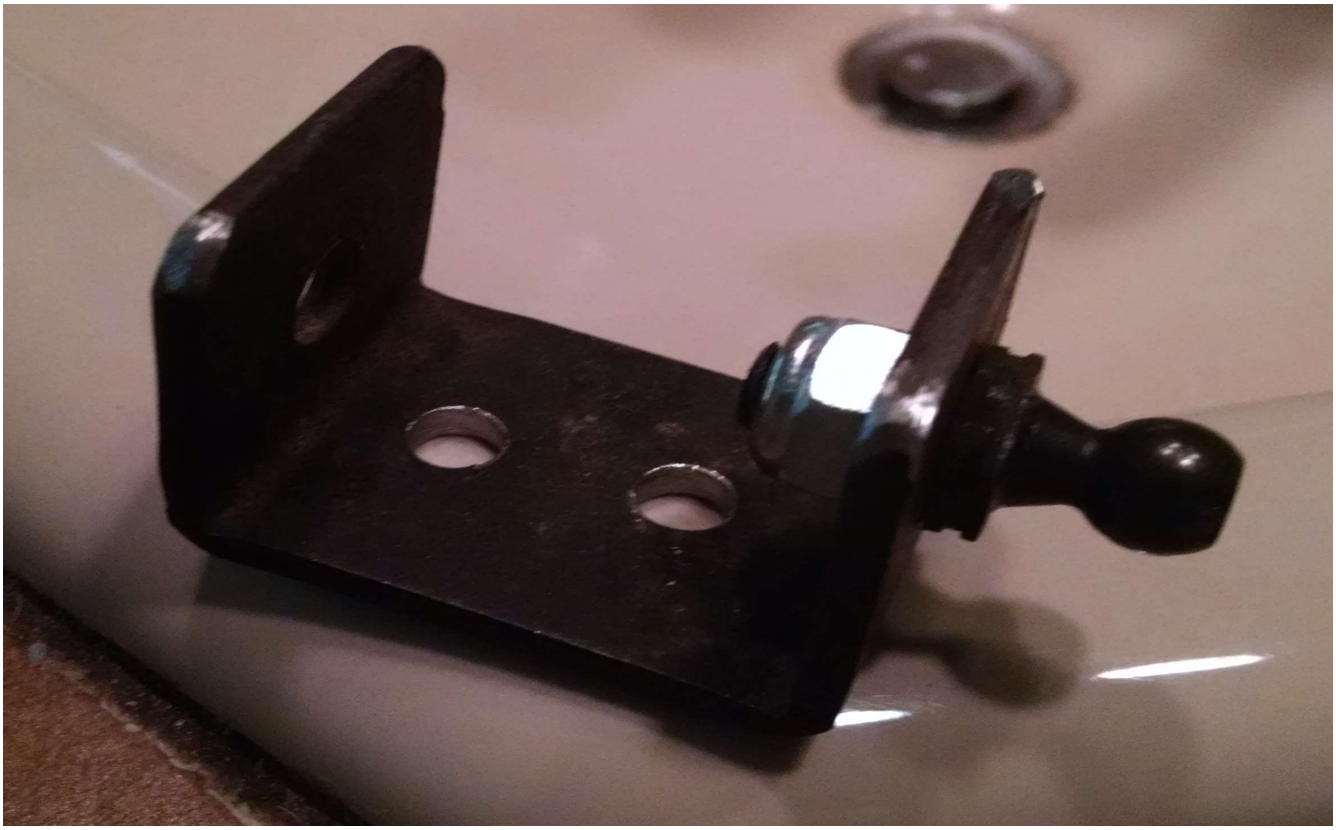

Photo #5.

Three hinges were used on each side to attach the roof panels. In photo #6 you can see that the top of the siding is cut at an angle and the hinges recessed into the wall. This was done so the roof will lay flat on the outer edge of the wall when closed yet allow it to stand almost straight up when opened.

Photo #6.

Photo #7.

We then built and added the doors. (Photo #7). Once this was done we started waterproofing the roof. First we put heavyweight, rubber backed, self-stick asphalt roll roofing on the right side roof panel. Then a piece of 8" wide metal flashing was bent to a 45 degree angle and laid on the peak of the roof running the whole length of the roof. This was followed by roll roofing on the left panel that sealed up and over the flashing, holding it in place. This requires the left panel to be opened first and closed last. (When the photo was taken the roll roofing had yet to fully adhere to the plywood).

Photo #8.

Referring to photo #8, there are three pieces of 2X4 attached to the back wall. They are there to support the weight of the roof panels. Along the center of the roof are brackets with a steel rod running through them. The rod is inserted into a hole in the top 2X4 on the back wall. This rod prevents the roof from being lifted up from the outside without first opening the doors and pulling the rod out of the hole. One unexpected problem was the doors rubbing against the roof and raising it slightly when opening and closing. We added some flashing to the top of the doors to

reduce friction when this was being done.

Photo #9.

Along the top inside edge of the left door in photo #9 you can see two short pieces of 1/2" diameter steel rod. With the roof closed, when the left door is closed these rods go into holes in the 2X4s on the roof locking

that side of the roof closed at the front end. Although the design of the roof prevents the right side from opening with the left side closed I intend to add the steel rods in the right side door as well for added security.

We have yet to paint and install the skirt around the outside of the base to make it look more finished. I'm also planing on the addition of an electrical outlet and LED interior light. The outlet will be for a battery maintainer when needed.

Fort Knox it isn't but it keeps the bike dry and hidden from prying eyes.