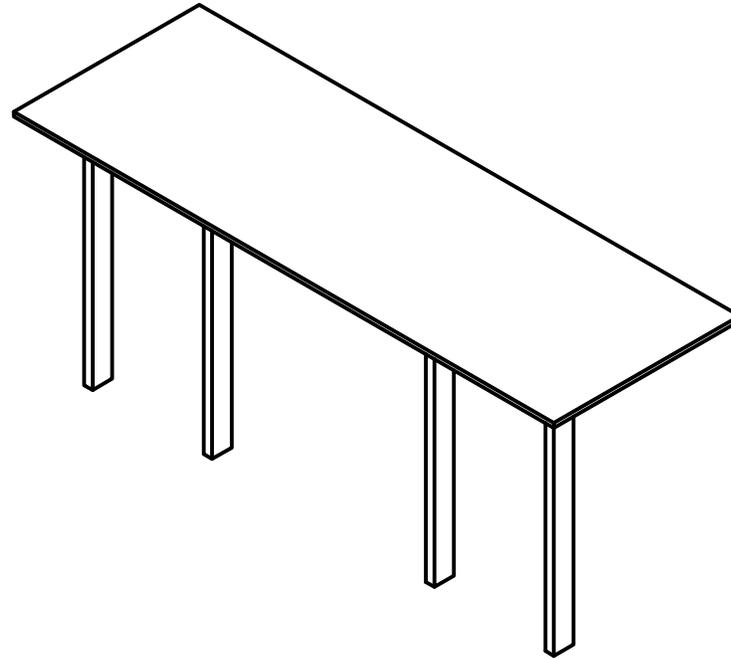


# DO-IT-YOURSELF LOW-COST WORKBENCH



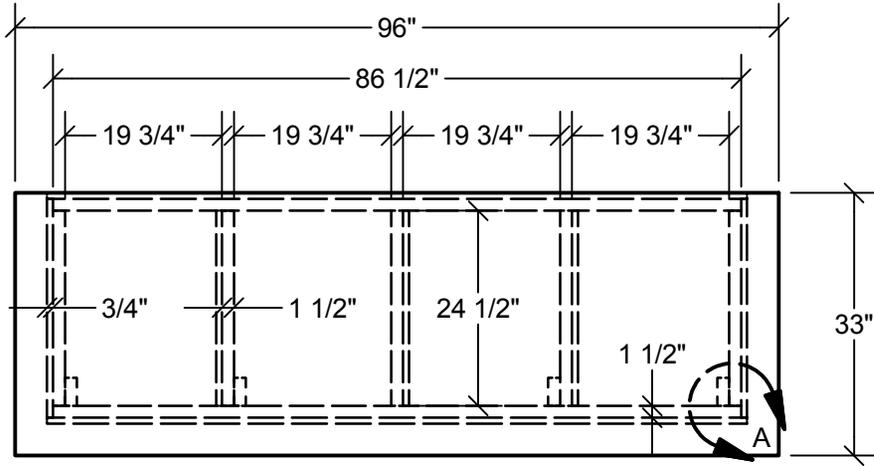
**Build Time: 4 Hours**

**Budget: \$50**

**Description: An inexpensive basic work bench.**

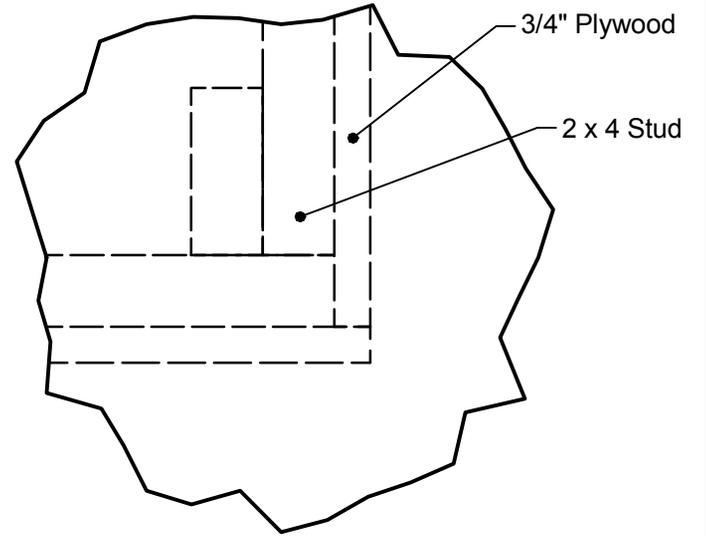
**Features: Flat and level work surface.**

2



TOP VIEW  
SCALE 1/2" = 1'

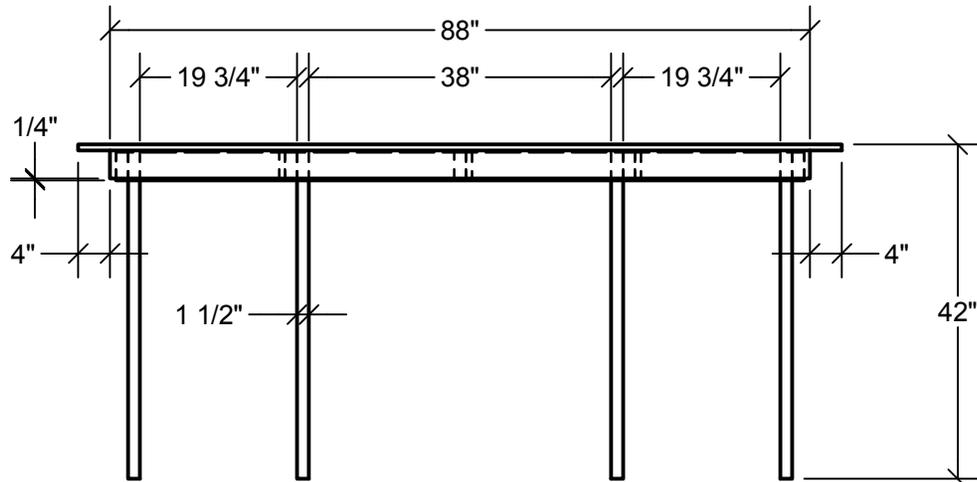
1



DETAIL A  
SCALE 3" = 1'

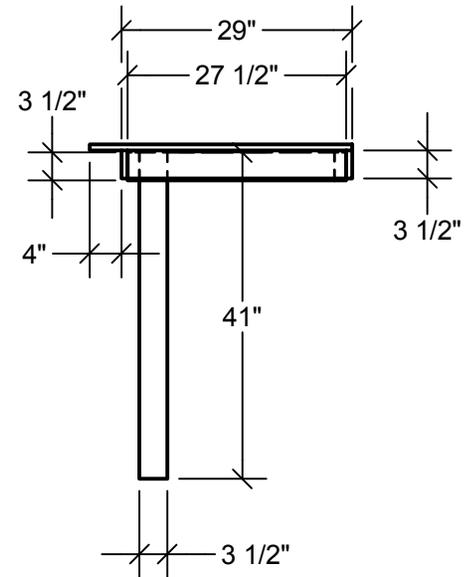
B

B



FRONT VIEW  
SCALE 1/2" = 1'

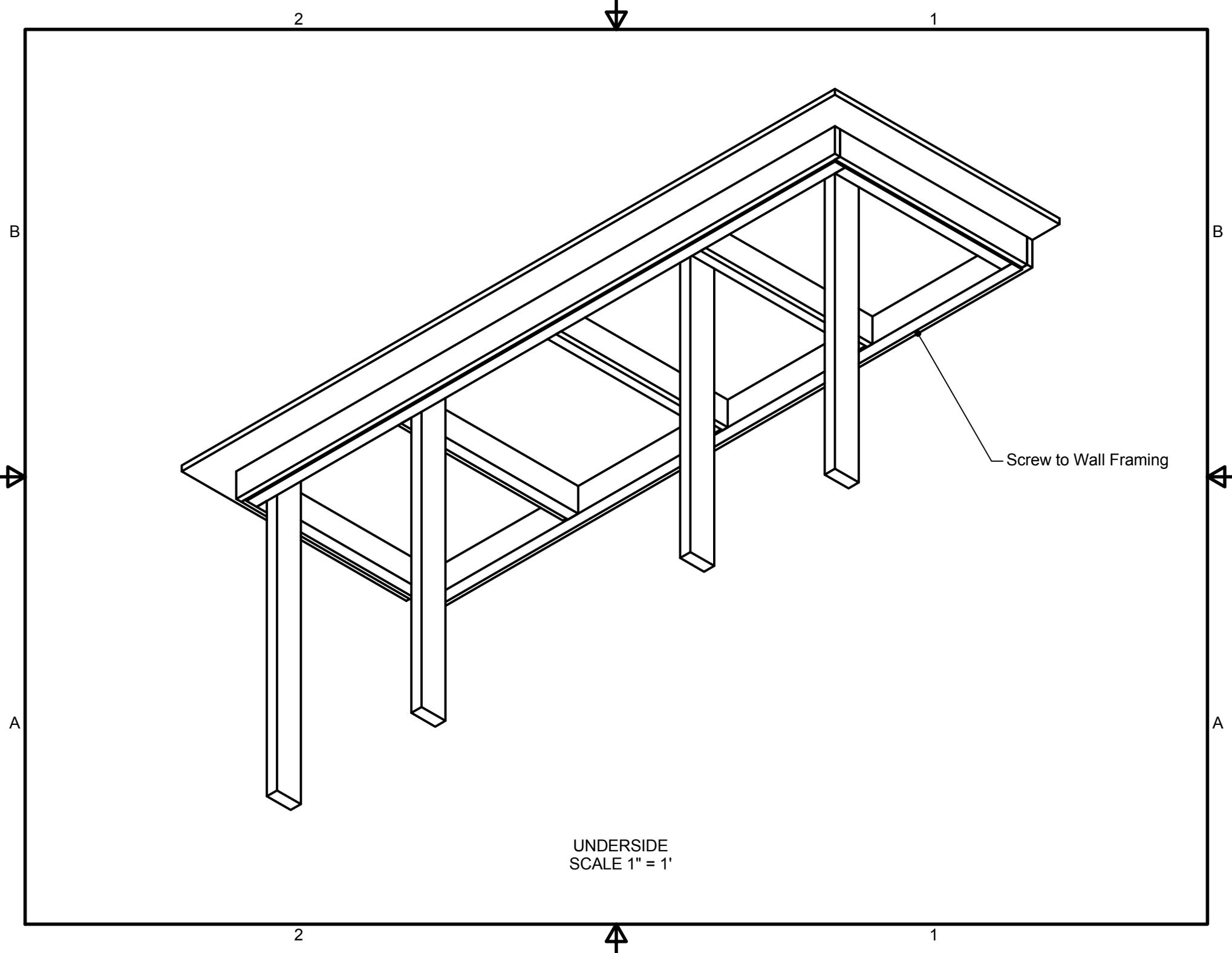
2



SIDE VIEW  
SCALE 1/2" = 1'

1

A



**BILL OF MATERIALS:**

1 each: 3/4" Shop Plywood (sanded, no knots)  
 5 each: 2 x 4 x 10 Kiln-Dried Studs (select straight boards)  
 1 box: 16d Nails (or pneumatic nailer w/ clip of 16 shorts)  
 1 box.: 1 3/4" Finish Nails  
 1 box: 3" screws

**TOOLS REQUIRED:**

Hammer & Nailset or Pneumatic Nailers  
 Tape Measure  
 Assorted levels (and laser if available)  
 Clamps  
 Pencil  
 Table Saw (or Skilsaw w/ rip fence)  
 Chop Saw (or Skilsaw and speedsquare)  
 Cordless Drill/Driver (and Impact Driver if available)  
 #2 Phillips driver bit  
 Countersink drill bit  
 Stud finder (electronic type, magnet, knuckle etc.)

**INSTRUCTIONS:**

1. Preparation: clear work area, set up tools and charge batteries, stack materials, equip protection (goggles, mask, earplugs etc).
2. Reduce Plywood: rip 4 pieces of 3/4" plywood 3 1/2" x 96". Remaining piece is the top of the workbench.
3. Ledger: The ledger board is 1 piece of 3/4" plywood 3 1/2" x 88". Using your longest level (or horizontal laser), mark level line on the wall where your bench is to be mounted. Line should be 41 1/4" from the *low point* of the floor. Line should be 96" long and centered where the workbench will be centered. This line indicates the top of the ledger board. Locate stud centers along ledger line. Nail ledger to wall with 2" finish nails, keeping top of ledger both level and straight.
4. Sub Frame: Cut the 2 straightest studs to 86 1/2" long and lay on floor. Cut the remaining studs into 5 pieces 24 1/2" long. Assemble the bench frame per the drawing, driving 2 16d nails into the end of each cross rail. Make sure the sub frame is assembled flat and square.
5. Pre-cut Legs: Cut the remaining studs into 4 legs (5th is optional). Each leg is 41 1/4" long. Set aside for now.

**INSTRUCTIONS CONTINUED**

6. Install Sub Frame: After completing the sub frame, dry-fit it to the ledger board. Transfer stud locations to the sub frame and use a countersink drill bit to drill holes for mounting screws. Make sure to countersink 3/4". Temporarily support the sub frame by clamping pre-cut legs at the corners to hold it approximately level. The top of the subframe is located 1/4" below the top of the ledger. This allows the straight ledger to support the work top rather than the twisty studs. Screw the subframe to the wall at the stud locations you found earlier using 3" screws.

7. Install Legs: Attach legs to subframe at locations indicated on the plans. Use 16d nails (pneumatic works best). Before attaching each leg, check the subframe for level and mark each leg if it is too long and needs to be cut. It is important to use a level to ensure the subframe is level in the X and Y direction in relation to the side attached to the wall.

8. Install Plywood Rips: Cut one of the plywood rips to 88" long. Using 1 3/4" finish nails, attach the plywood board to the front of the subframe as shown on the plans. The plywood should be 1/4" above the subframe and level with the ledger board. Use a long level to ensure it is installed straight and use a short level to ensure it aligns with the top of the ledger board. Next, cut the remaining plywood rips into 5 pieces 24 1/2" long. Install these at each cross rail on the subframe using a level to ensure the rips are true to the ledger and front plywood board. Pound in a few 16d nails to lock the plywood rips into place.

9. Install the Work Top: Lay the plywood work top in position on top of the subframe assembly. It should automatically be flat and level and resting only on the plywood rips. Center the worktop and nail it every 8" with 1 3/4" finish nails to the plywood rips and plywood ledger. Ease any sharp edges with sandpaper.

10. Clean Up: Throw away debris and sweep up any chips and sawdust. Keep any leftover scraps that look useful. Store all tools. Look for any nails that may be on the ground and could cause a flat tire. This completes the project.