Introduction

THE PLANS HERE ARE FOR A **TOTALLY "MODULAR" HALFPIPE**, WHICH MEANS THIS THING CAN BE TAKEN APART TO THE POINT OF STORING IT IN YOUR GARAGE OR BASEMENT. YOU MAY BE WONDERING "WHY WOULD I WANT TO DO THAT?" THREE REASONS:

1) Liability...the quickest way to put an end to backyard skating is for some one to sneak onto your property, get hurt on the ramp, and sue you..! it was a big problem in the 70's and 80's, and could be again this time around.

2) Weather...even pressure treated plywood will delaminate and warp if left in out the weather; painting extends ramp life but is not a cure all.

3) Neighbors..your dad, mom, whatever..halfpipes can be somewhat of an eyesore, even though they look cool to skaters. the permanence of typical halfpipes has a lot of fathers saying "no way, i'm not having that thing in my backyard" this is where it really shines..and neighbors will be less likely to call the police (halfpipes are very noisy!) if they know the thing will be in view only intermittently.

If you choose to stay with traditional design, you can do that, too..I point out areas in the plans which you can skip. You may not even want to deal with all the modular details, you can get some good ideas (for drawing the curve, for example) and build an entirely different pipe..the modular design is also more work to build, requires some extra skill, and as you might imagine, is not a lot of fun to put together or take apart on a daily (or whatever) basis...although it's not that bad...if you have friends to help, it actually goes together pretty quick.... **:)**

Tools And Materials List

TOOLS

..stuff ya gotta have:

table saw, and **circular saw** (small, battery operated, with a 5 1/4" blade is best for cutting the curves) or **jigsaw**

drill, with phillips head bit, and 1/4" , 3/8" , 1/2" , 3/4" drill bits

carpenter's **square, measuring tape, hammer, pen.**

MATERIALS

(based on a 9' high by 12' wide by 26' long modular halfpipe, not pressure treated)

plywood..and lots of it..4' by 8' sheets....

3/4" "CDX" sheets ("CDX" is cheaper, has knots, but is still strong)

12 sheets

1/2" "BC" sheets (no knots, cheaper than "AC")

15 sheets

**2 x 4's..lots of 'em... 8 feet long... 54 ..GET A FEW EXTRA....

**** 12' long if your'e making this permanent, and not as many..24..and 18 8' long... ..**GET A FEW EXTRA..

2 x 6's..lots of 'em ..8 feet and 12 feet long... 42 8 footers and 4 12 footers

(4) 24 foot "longboards" or (8) 16 foot "longboards" (if you have a 16 foot long platform) used to connect the whole thing together...2 by 8's or 2 by 10's would be best....and while you're at it..get about (20) 1/2" by 5" and (10) 1/2" by 4" threaded bolts with washers and nuts to match..these will bolt the whole thing together

2 x 4 joist hangers (what you say?) you'll see... 72..MODULAR pipes only

14; 2" (that's number 14, 2 inch long) philips head wood screws.. better buy stock in these ...approx 720 (!) ...ok so why do we need the philips head screw bit ?? **:p**

not done yet.....!

#12 2" philips head wood screws..don't even want to count these.., let's see..hmmm...your screwing the 1/2" plywood (riding surface) to the 2 x 4's with these...ok..8 per 2 x 4, times 18 2 x 4's per "section" times 6 sections...**844** !.

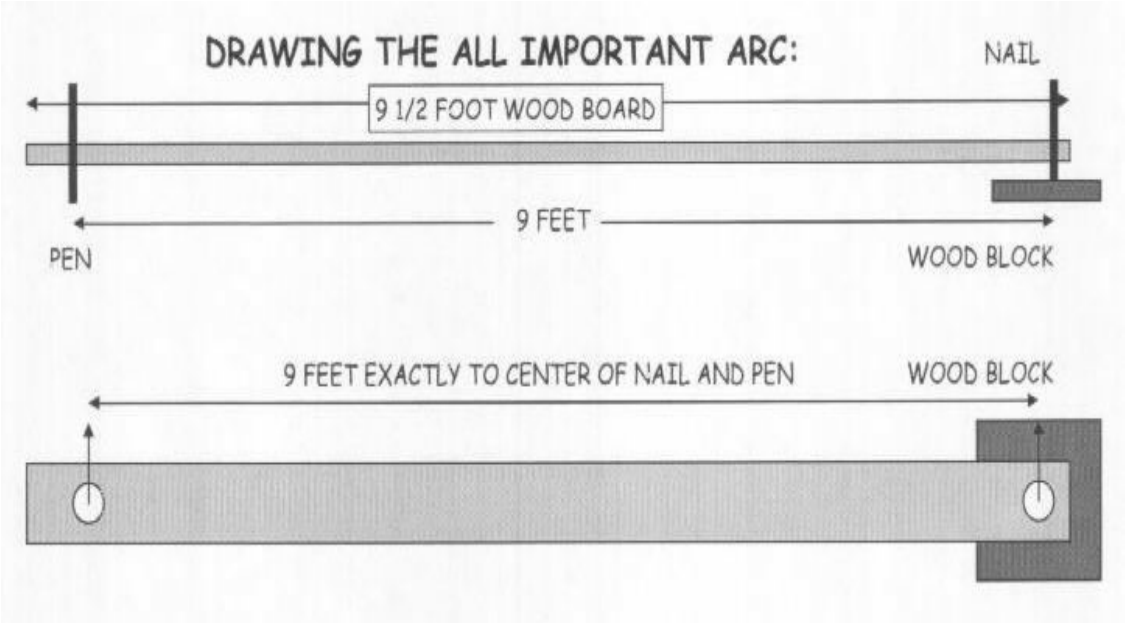
#12 2 1/2" philips head wood screws..3 boxes

last item....6" by 5/16" stove bolts, 1 washer and nut per bolt; 24 per section, 6 sections,..144 (bolts) + 144 (washers) + 144 (nuts)

OTHER STUFF TO AID IN THE CREATION

(2) 1/4" 3 feet long threaded steel rods, with oversized washers and nuts to match..for compressing plywood..you'll see.....

Drawing The All Important Arc:

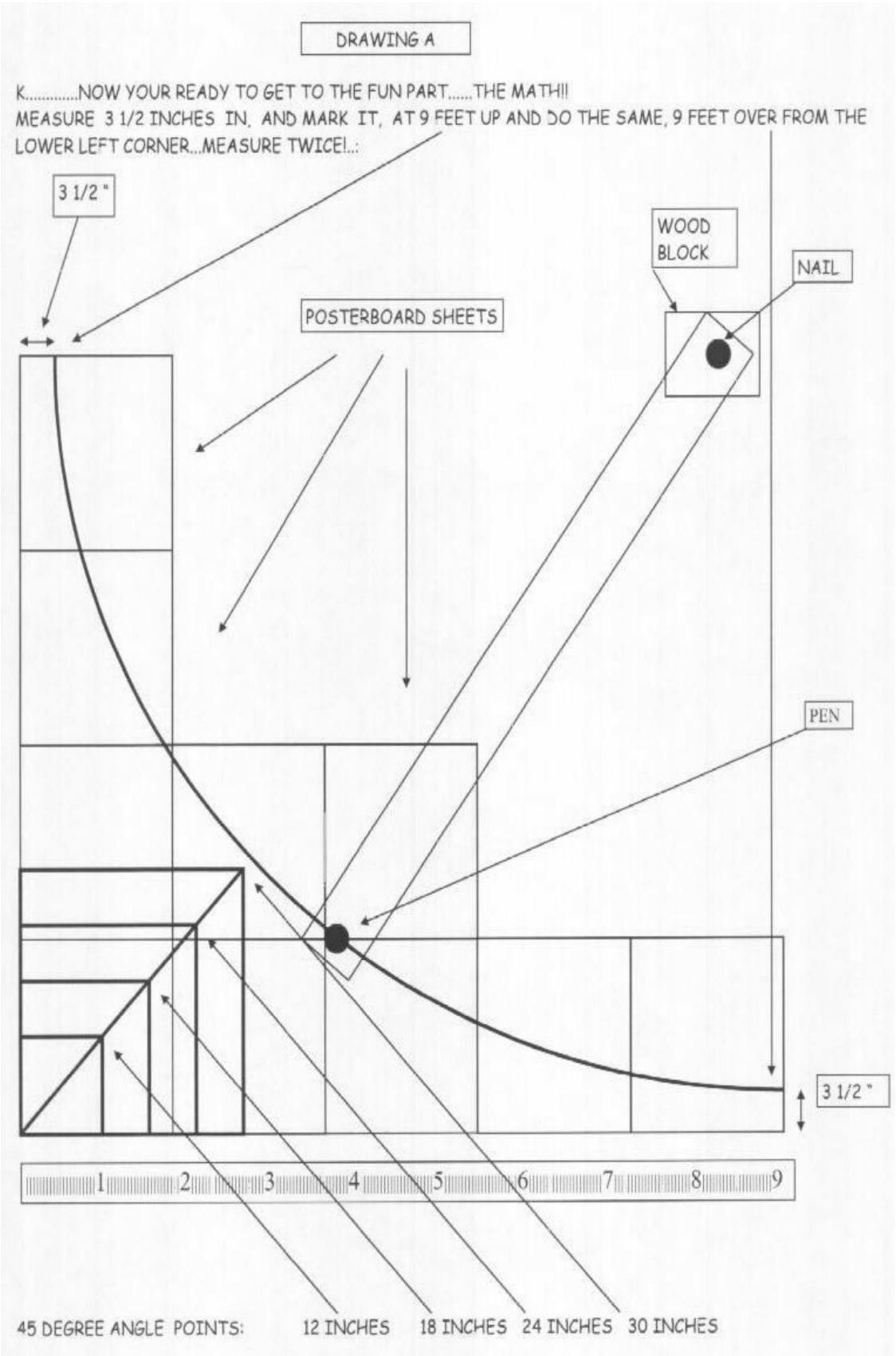


DO NOT USE STRING!! STRING CAN STRETCH AND DISTORT THE CURVE!! THE PEN AND NAIL MUST BE TIGHT SO THEY DONT MOVE WHEN YOU'R E DRAWING THE CURVE ..STRING WILL NOT ALLOW THIS. ..**THESE PLANS ARE FOR A 9 FOOT HIGH HALFPIPE**, BUT YOU CAN USE THE PLANS FOR ANY SIZE, FROM 5 FEET TO 9 FEET. **THERE'S A LITTLE KNOWN FORMULA IN RAMP BUILDING**, FOR PROPER TRANSITION, AND IT GOES LIKE THIS:

STARTING AT 5 FEET, USE AN 8 FOOT RADIUS AND ADD 3 INCHES FOR EVERY FOOT OF HEIGHT:

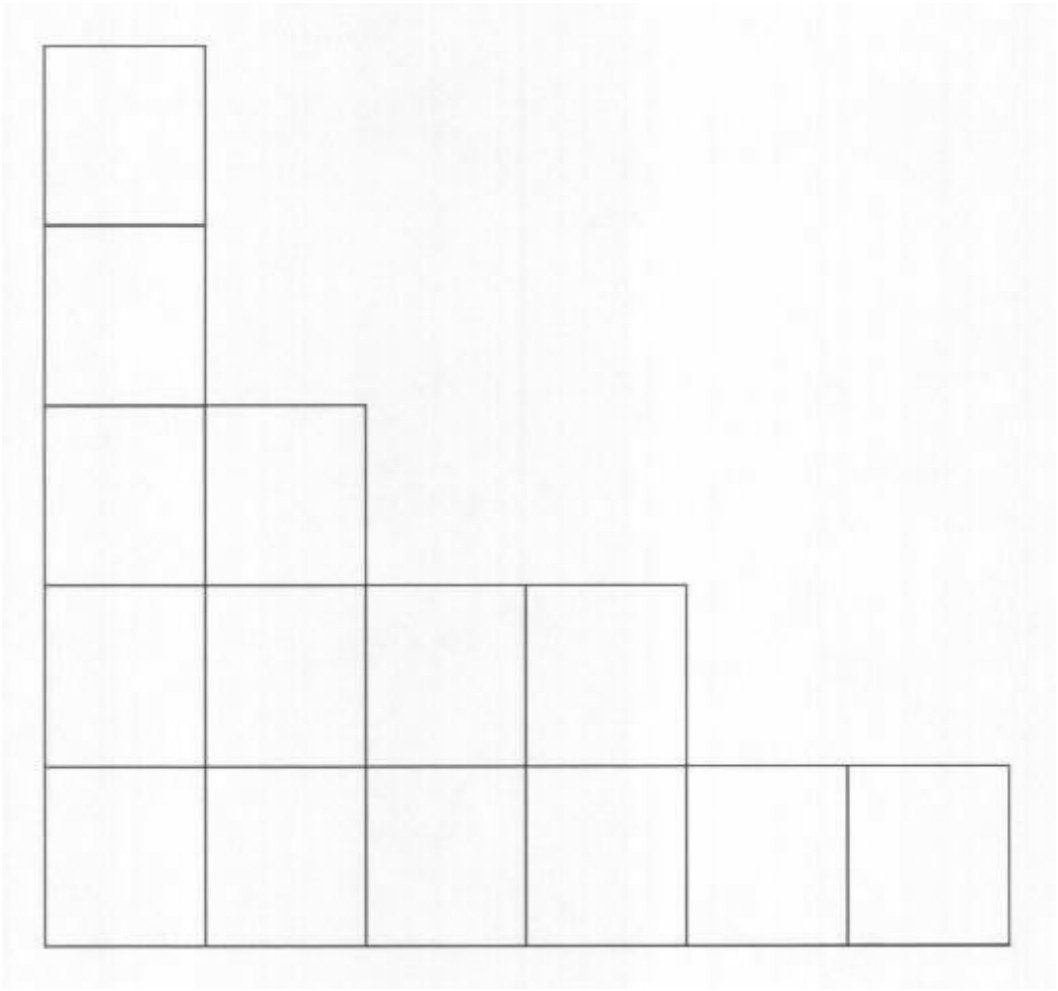
	RAMP HEIGHT	RADIUS
	6 FOOT →	8 FEET 3 INCHES
	7 FOOT →	8 FEET 6 INCHES
	8 FOOT →	8 FEET 9 INCHES
	9 FOOT →	9 FEET 0 INCHES
*	10 FOOT →	9 FEET 3 INCHES
*	11 FOOT →	9 FEET 6 INCHES
*	12 FOOT →	9 FEET 9 INCHES

*These size ramps cannot be built using this method, because 9 feet is the max TRANSITION you can get out of one sheet of plywood.....adding 3 feet of vert to make it twelve feet high, however, is no problem!

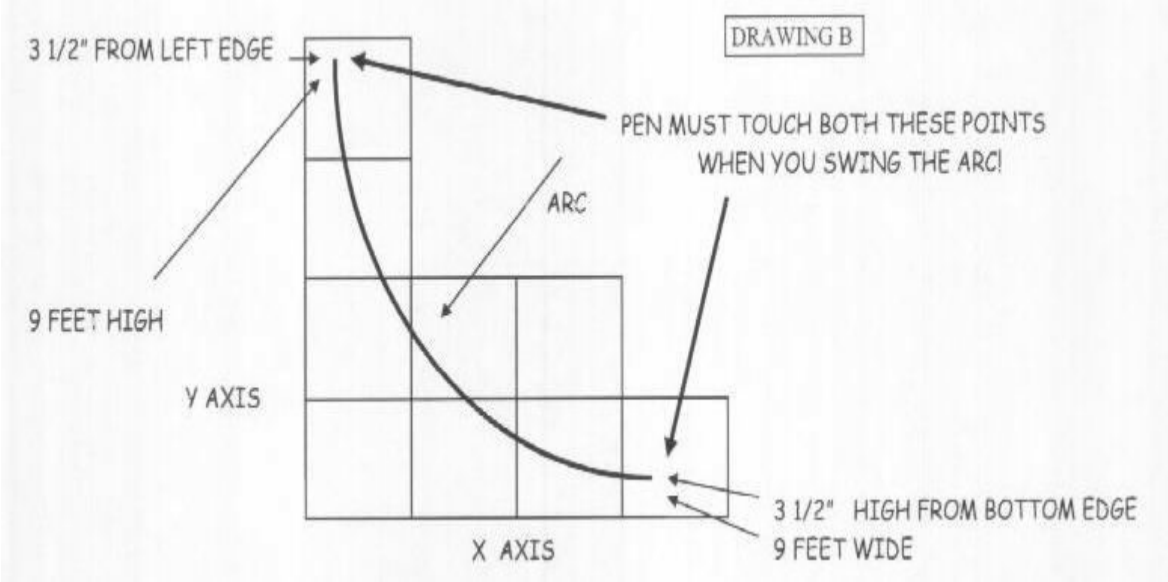


DRAW ON PAPER, NOT PLYWOOD.....THERE'S A REASON FOR THIS....LATER..

WHERE DO YOU GET PAPER THAT SIZE? YOU MAY ASK.....GO TO WALMART, KMART..WHATEVER AND BUY A BUNCH OF SHEETS OF POSTERBOARD, THEY'RE AROUND 2 FEET BY 2 1/2 FEET AND TAPE THEM TOGETHER, WITH 2 INCH CLEAR TAPE. TAPE EVENLY AND EQUALLY, SO THEY ARE SQUARE..IMPORTANT! FIND A HARD FLAT SURFACE, AND TAPE THEM TOGETHER IT LIKE THIS, ABOUT 10 FEET LONG AND 10 FEET WIDE ...

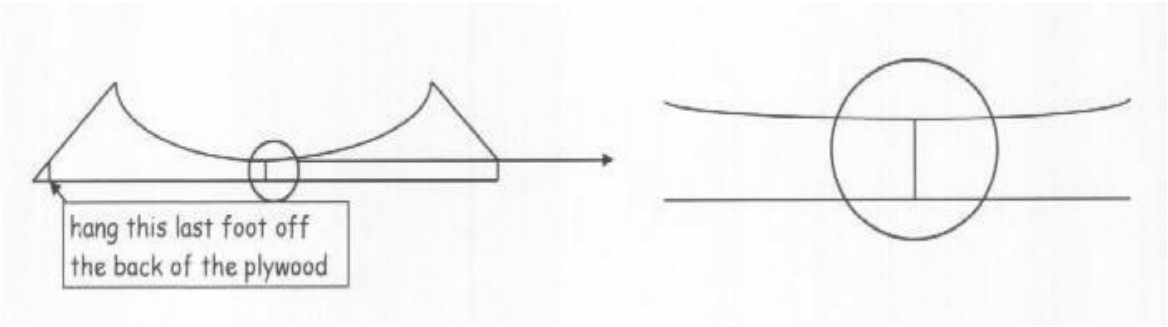


LOOKS A LOT MORE COMPLICATED THAN IT IS...HAVE SOMEONE HOLD THE WOOD BLOCK (WHERE THE BOARD IS NAILED) SO IT DOESN'T MOVE...RUN THE PEN OVER THE PAPER WITHOUT TOUCHING THE PAPER AND POSITION IT AROUND UNTIL THE PEN IS MEETING THE **9 FOOT AND 3 1/2" MARKS SIMULTANEOUSLY ...ON BOTH AXIS**..MAKE SURE THIS IS EXACT..ITS A LOT EASIER TO DO IT NOW THAN AFTER YOU HAVE CUT IT OUT OF PLYWOOD:



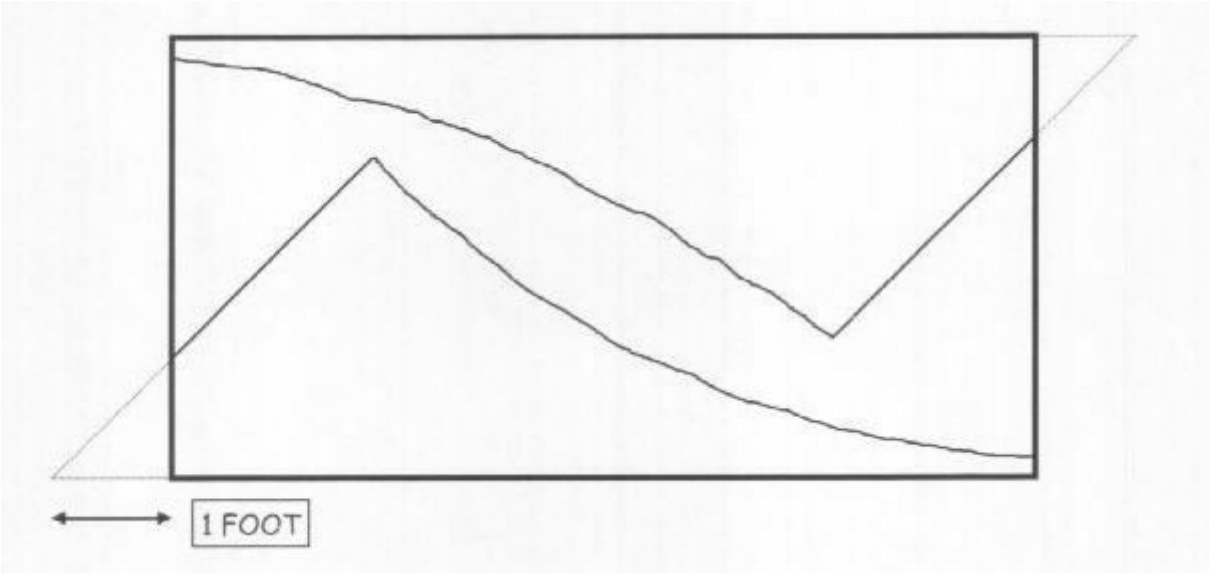
WHEN IT IS 3 1/2 " INCHES IN AT BOTH POINTS, YOU HAVE A CENTERED ARC. NOW DRAW THE ARC, AND GO OVER IT A FEW TIMES TO RULE OUT ANY MOVEMENT OF THE PEN. MEASURE A 45 DEGREE ANGLE FROM THE LOWER LEFT CORNER TO THE RADIUS EDGE..THIS IS DONE WITH SIMPLE MATH OR A (REAL!) LARGE PROTRACTOR..FOR THE MATH, MEASURE 12" HIGH, 12" LONG, FROM THE LEFT CORNER , 18" HIGH, 18 " LONG FROM THE LEFT CORNER AND SO ON TILL U GET CLOSE TO THE RADIUS EDGE; (SEE DRAWING A) USE A SQUARE.. DRAW A LINE, CONNECTING ALL THE POINTS..BE EXACT.. IF THEY DON'T CONNECT, YOU NEED TO DO IT OVER...IF THE ANGLE ISN'T RIGHT, IT WILL WRECK THE CURVE. NOW CAREFULLY CUT THE TEMPLATE OUT....FIRST CUT THE ARC AND THEN CUT ALONG THE 45 DEGREE ANGLE LINE... THE 2 HALVES ARE PLACED OPPOSING EACH OTHER ON YOUR 3/4" PLYWOOD (THIS IS WHY YOU CAN'T DRAW THE ARC ON THE PLYWOOD) SO YOU GET 2 PIECES PER 1 SHEET OF PLYWOOD...MINIMUM WASTE.

BEFORE YOU GET READY TO CUT THE TEMPLATES OUT OF PLYWOOD, YOU NEED TO MAKE ONE MORE CHECK: PLACE THE TWO PIECES TOGETHER, END TO END, LIKE THIS:



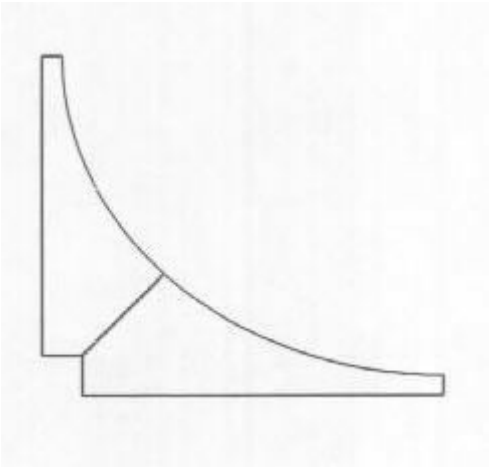
WHERE THE TWO ENDS MEET, THE BASE OF THE CURVE NEEDS TO BE HORIZONTAL, **JUST AT THE POINT WHERE THE 2 PIECES MEET** FOR A SMOOTH TRANSITION .SAME WITH THE VERTICAL..THIS RAMP ONLY ATTAINS 90 DEGREES AT THE VERY TOP, AND 0 DEGREES AT THE VERY BOTTOM..IF THE 2 PIECES ARE NOT YET AT HORIZONTAL, OR THEY ARE BEYOND AND START CURVING BACK UP, YOU'LL GET A DIP OR BUMP WHEN YOU RIDE IT..NOT COOL! IF THIS IS THE CASE,

REDRAW YOUR RADIUS TRACING STEPS. AFTER MAKING SURE YOUR PIECES MEET PROPERLY, PLACE YOUR TEMPLATES ON THE 3/4" PLYWOOD, AS SHOWN BELOW:



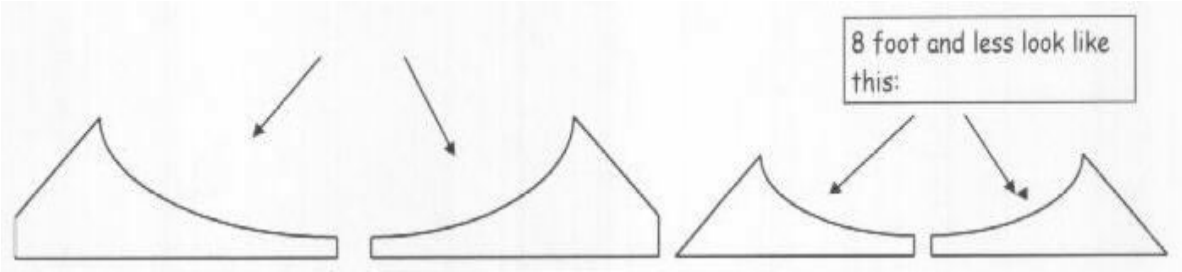
TACK THE TEMPLATES IN PLACE WITH SOME PUSH PINS, MAKE SURE THE TEMPLATES ARE SQUARE WITH THE PLYWOOD'S EDGES, AND AS A SECOND CHECK, THAT THE ENDS ARE 3 1/2" HIGH. TRACE THE TEMPLATES WITH A PEN; PENCIL IS TOUGH TO SEE ON PLYWOOD. REMOVE THE TEMPLATES, CHECK THE PEN LINES, AND CUT THE CURVES FIRST WITH THE SKILLSAW..IF THE BLADE IS BINDING AND DOESN'T WANT TO FOLLOW THE CURVE, BACK THE PRESSURE OFF, AND PROCEED SLOWLY..IF YOU ARE NOT USING A SMALL (5 1/4") BLADE, YOU WILL HAVE TOUGHER TIME FOLLOWING THE LINES. WHEN YOU ARE SATISFIED WITH THE CUTS, CUT THE45 DEGREE ANGLES...YOU WILL NOW HAVE 2 PIECES OF PLYWOOD, WHICH, QUITE FRANKLY, DON'T LOOK LIKE MUCH...KINDA SMALL..UNTIL YOU PUT THEM TOGETHER...ALL OF A SUDDEN, 8 FEET BECOMES 9 AND IT STARTS LOOKING A LITTLE MORE IMPRESSIVE..PRETTY COOL, EH?NUMBER THE FIRST 2 PIECES "1" AND "2" AND SUCCESSIVE PIECES "3", "4", ETC..MORE

LATER ON THIS.



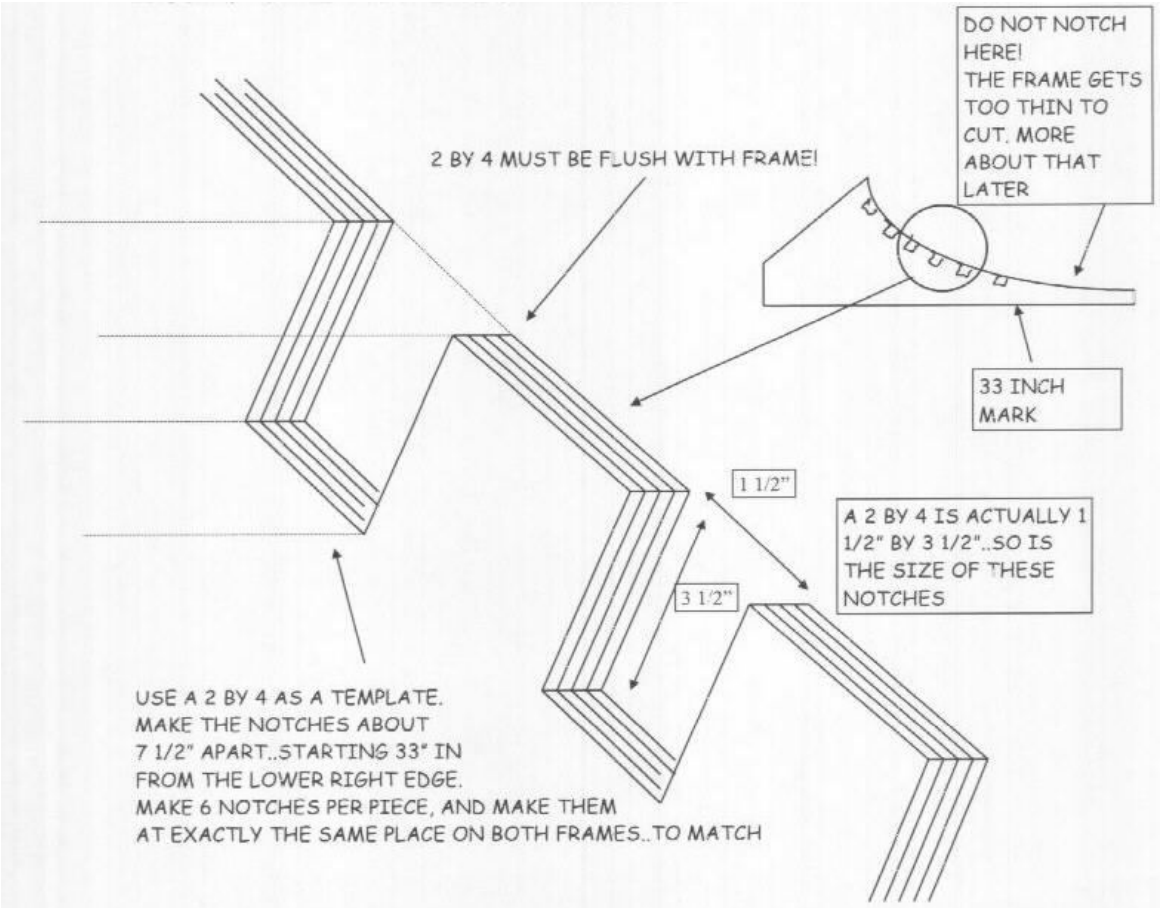
Notching The Ramp Frame

ONCE YOU HAVE CUT THE 2 PIECES FROM THE PLYWOOD, YOU'LL HAVE 2 SHEETS WHICH LOOK LIKE THIS (9 FOOT HIGH HALFPIPE):



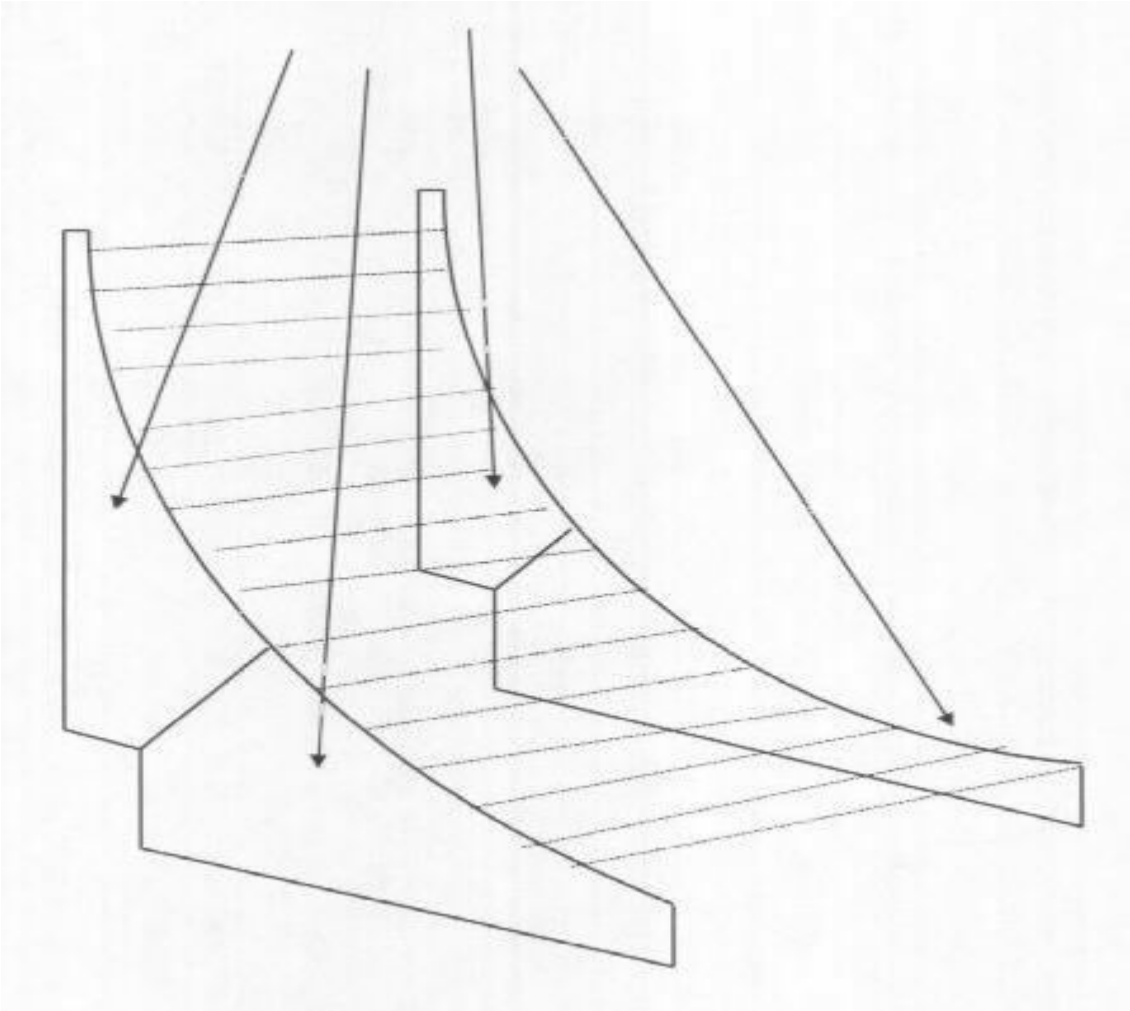
DID YOU LIKE CUTTING THOSE OUT? GOOD! ONLY 10 MORE PAIRS TO GO!

BUT FIRST, THE NEXT THING TO DO IS NOTCH IT OUT FOR THE RIBBED SUPPORTS (2 BY 4'S) TO FIT IN. THIS IS ONE OF THE WORST PARTS OF THE WHOLE PROJECT, AND KINDA DANGEROUS IF DONE ON A TABLE SAW.



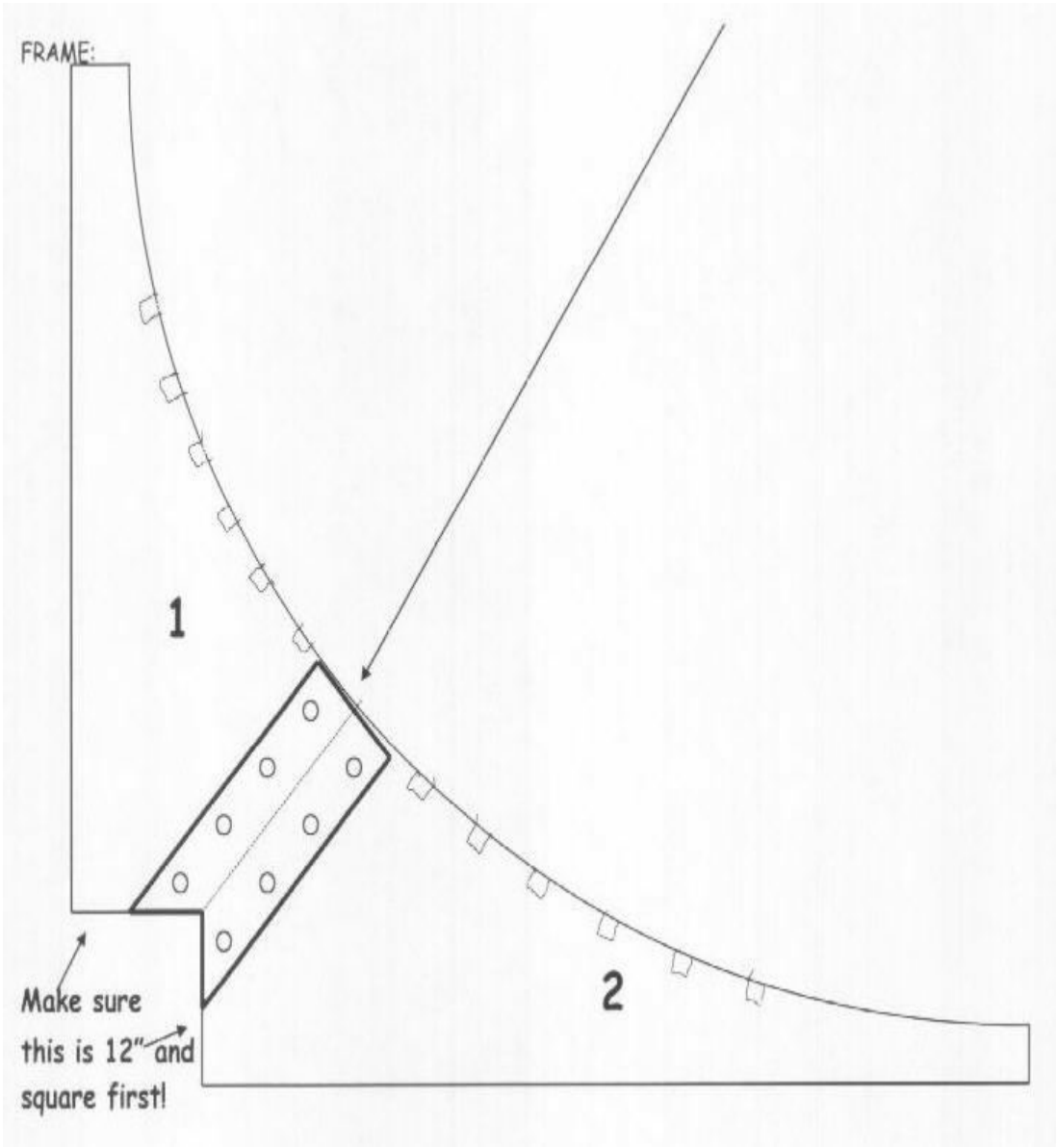
EACH OTHER . THE 1/2" PLYWOOD WILL BE SCREWED ONTO THE 2 BY 4 SUPPORTS, AND THOSE SUPPORTS WILL FIT IN THESE NOTCHES..GET IT? ....**DO NOT NOTCH ENTIRE FRAME,** AND DO NOT CUT OUT ALL THE FRAME TEMPLATES WITHOUT FULLY COMPLETING **THE FIRST SECTION** **..REASON? IF YOU MAKE A MISTAKE ON THE FIRST ONE, YOU ARE LIABLE TO REPEAT IT ON EVERY SUCCESSIVE SECTION, AND YOU MAY NOT KNOW IT UNTIL YOU START PUTTING IT TOGETHER..WHICH IS TOO LATE**...**

****A** "SECTION" CONSISTS OF 4 FRAME PIECES CONNECTED TOGETHER TO FORM ONE QUARTERPIPE, AND THERE ARE 6 SECTIONS IN A 12 FOOT WIDE HALFPIPE:



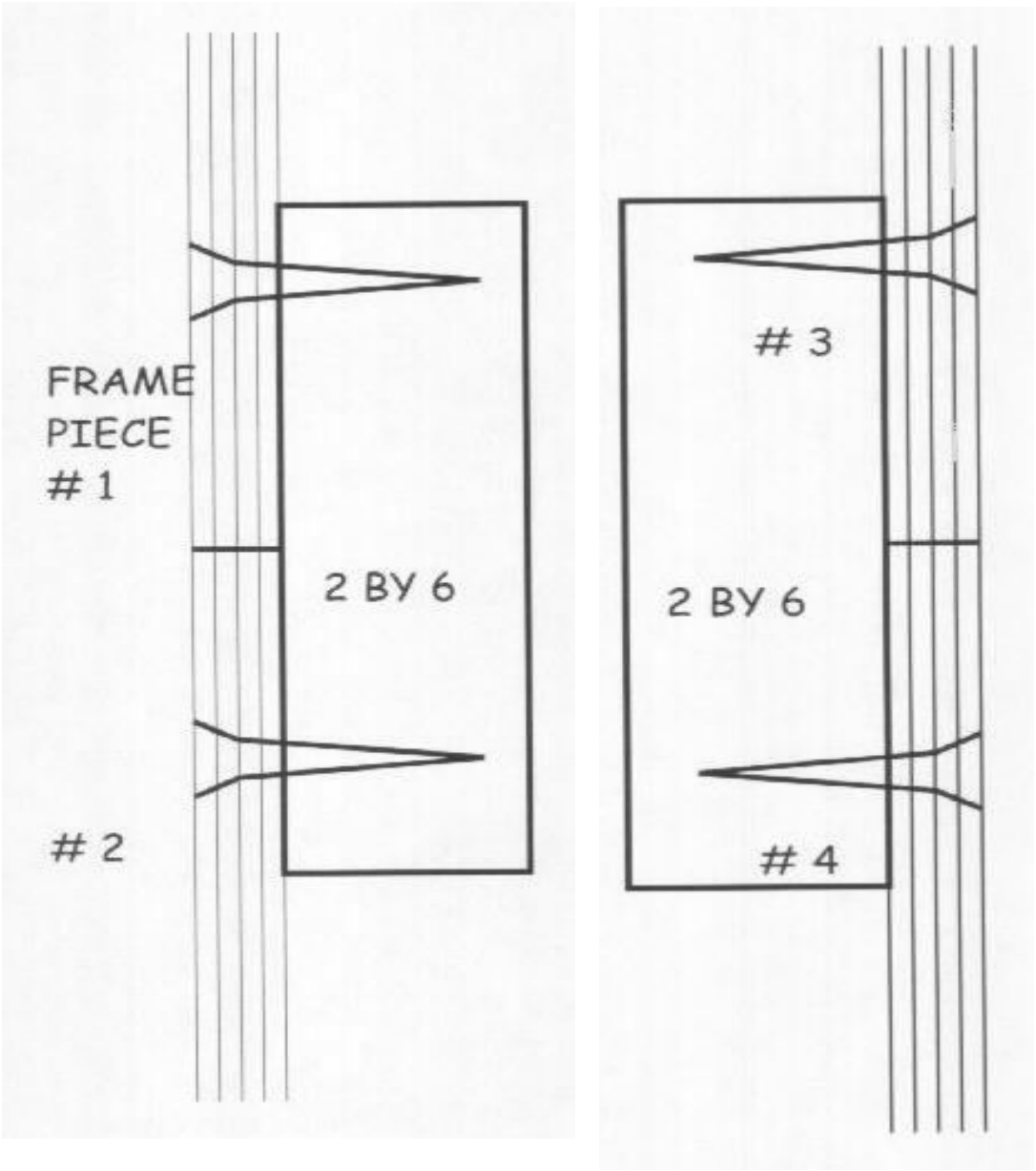
Connecting The Frame Pieces

ONCE THE FRAME PIECES HAVE BEEN NOTCHED, IT'S TIME TO CONNECT THEM TOGETHER. THIS IS WHERE THE 2 BY 6'S COME IN. WHAT YOU WILL DO IS ATTACH THE 2 PIECES TOGETHER USING A COMMON BRACE..A 2 BY 6..CUT THE 2 BY 6 TO FIT THE FRAME:



BEFORE YOU SCREW THESE TOGETHER, MAKE SURE YOU ARE USING THE 2 OPPOSING PIECES YOU CUT OUT FROM THE **SAME** SHEET OF PLYWOOD..DO NOT MIX THEM WITH OTHER CUT OUTS..YOU'D BE USING NUMBERS "1" AND "2" ON THIS FIRST ONE...WHY? BECAUSE WHEN YOU CUT THE 45 DEGREE ANGLE, YOU MAY BE OFF..IF ONLY SLIGHTLY..IF ONE SIDE IS 44 DEGREES AND THE OTHER IS 46, WHEN YOU PUT THEM TOGETHER, THE ERROR CANCELS ITSELF OUT (PRETTY MUCH!), BUT IF YOU TAKE A 46 DEGREE CUT FROM ONE SHEET AND ANOTHER 46 DEGREE CUT FROM ANOTHER, NOW YOU'VE DOUBLED THE ERROR, AND THAT WILL HAVE AN EFFECT ON THE CURVE..WHICH YOU OBVIOUSLY DON'T WANT. SO CONNECT "1"

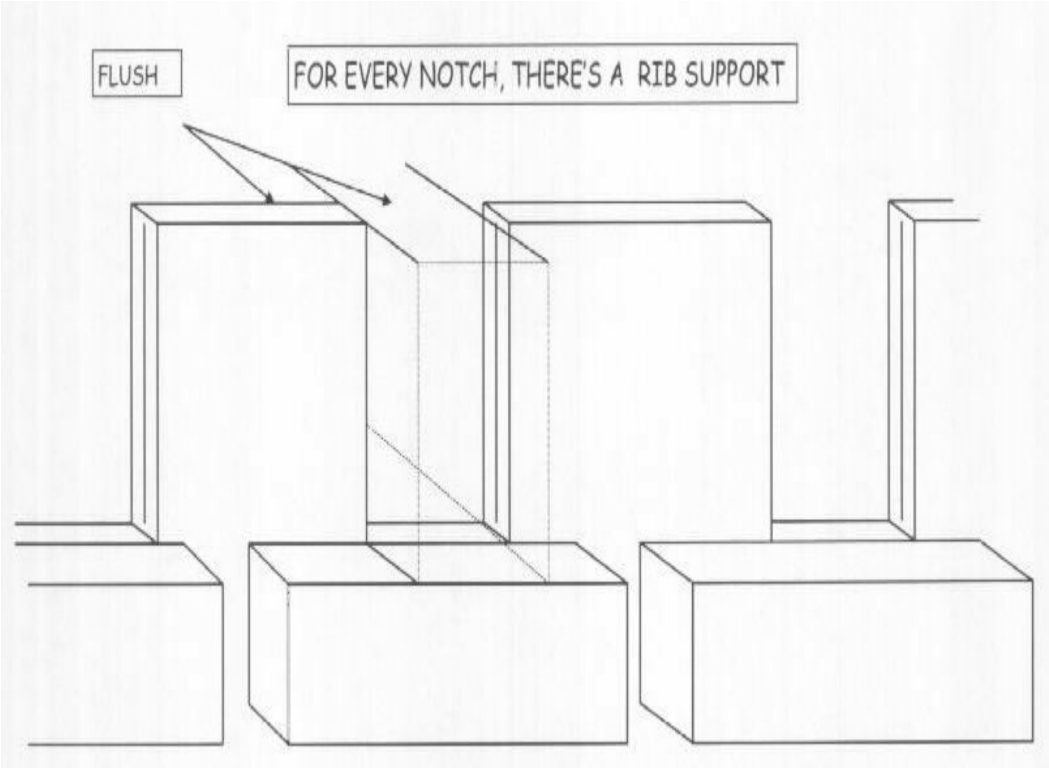
AND "2" TOGETHER FOR THE LEFT SIDE OF THE FIRST SECTION, AND "3" AND "4" FOR THE RIGHT SIDE. MAKE SURE YOU ATTACH THE 2 BY 6'S ON THE INSIDE OF THE FRAME PIECES, SO THEY FACE EACH OTHER, LIKE SO:



Drill through the plywood with the 1/4" bit first, then screw through the plywood, into the 2 by 6's.

ATTACHING THE RIB SUPPORTS

THE NEXT THING TO DO AFTER CONNECTING THE FRAME PIECES IS TO ADD THE RIB SUPPORTS...THIS IS ANOTHER PART OF THE PROJECT WHICH IS NOT A LOT OF FUN. THE RIB SUPPORTS ARE 2 BY 2'S WHICH ARE SCREWED TO THE PLYWOOD FRAME, TO GIVE SOMETHING FOR THE 2 BY 4 RIBS TO CONNECT TO:



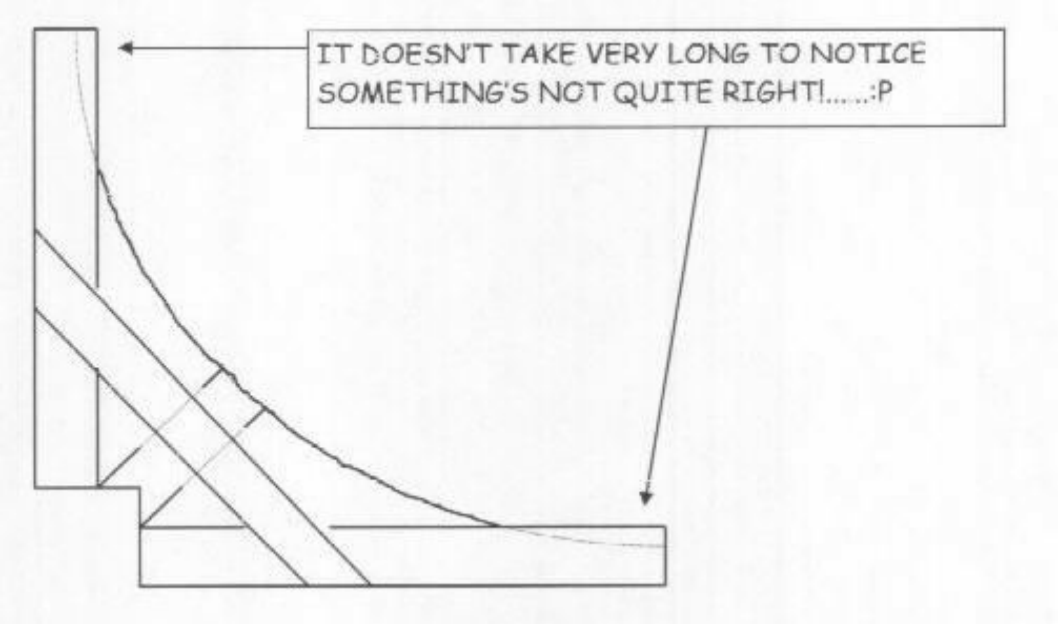
THESE ARE SCREWED IN ON THE SAME SIDE OF THE PIECE AS THE 2 BY 6 CONNECTORS, THROUGH THE PLYWOOD AND INTO THE 2 BY 2'S..DRILL PLYWOOD WITH 1/4" BIT FIRST, AND USE A 2 BY 4 FOR MEASUREMENT TO MAKE SURE THE 2 BY 4 RIBS WILL BE FLUSH WITH THE FRAME!

SO NOW YOU HAVE WHAT LOOKS LIKE THIS: *WELL, YOU'RE NOT QUITE THERE YET BUT YOU CAN GET AN IDEA OF WHAT THESE RIB SUPPORTS DO..*

Beef It Up!

YOU MAY HAVE NOTICED THAT WHAT YOU HAVE NOW IS KINDA WIMPY...PLYWOOD DOESN'T HOLD UP VERY WELL ON IT'S OWN..ESPECIALLY AT THE TIPS OF THE CURVE WHERE THE PLYWOOD IS THINNEST. SO AGAIN, THE 2 BY 6'S COME TO THE RESCUE.

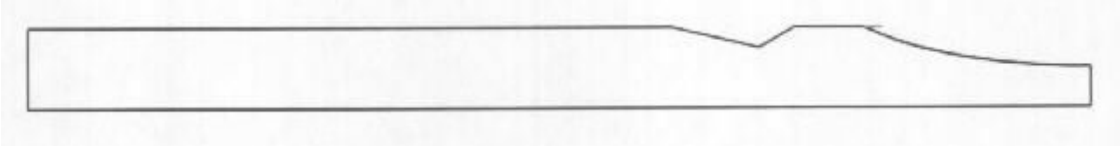
YOU NEED TO ATTACH 3 OF THEM TO THE FRAME LIKE THIS..THE FULL 8 FEET LONG, ...DON'T SCREW THEM IN YET!



YEAH, YOU GOTTA CUT THE 2 BY 6'S TO MATCH THE FRAME CURVE. OK. LAY THE FRAME ON A FLAT SURFACE WITH THE RIB SUPPORTS FACING UP, AND SLIDE THE 2 BY 6 UNDERNEATH THE FRAME, MAKE SURE THE 2 BY 6 IS ABOUT 3 INCHES (MAKE SURE IT'S SQUARE!)(MORE LATER) BELOW THE BOTTOM OF THE PLYWOOD,AND THE ENDS OF THE 2 BY 6 ARE MEETING THE PLYWOOD ENDS, AND TRACE THE CURVE ON TO THE 2 BY 6. CUT THE CURVE WITH THE SKILL SAW. FLIP THE FRAME OVER, AND MATCH YOUR CURVE TO THE FRAME'S...

WAIT A MINUTE...THOSE RIB SUPPORTS ARE IN THE WAY! WELL ONE IS ANYWAY!

YOU NEED TO CUT A NOTCH INTO THE 2 BY 6 TO CLEAR THOSE, SO WHEN YOU'RE DONE CUTTING, THE 2 BY 6 WILL LOOK LIKE THIS:



ONCE THE 2 BY 6 IS ABLE TO FIT, LINE IT UP SAME LENGTH AS THE PLYWOOD AND 3" BELOW THE BOTTOM OF THE FRAME..YOU'RE SCREWING THROUGH THE PLYWOOD INTO THE 2 BY 6, USING THE #14, 2" SCREWS.. DO IT FOR BOTH AXIS, THE HORIZONTAL AND VERTICAL. YOU'LL THEN TAKE THE 3RD 2 BY 6, THE CROSS PIECE, AND SCREW IT INTO THE 2 BY 6'S AS SHOWN.., USING THE # 12 3" SCREWS. DO NOT ATTACH IT TOO CLOSE TO THE RIB SUPPORTS, BECAUSE THERE'LL BE THOSE 6" BOLTS COMING THROUGH THOSE, AND YOU GOTTA BE ABLE TO GET YOUR HAND IN THERE TO TWIST THE NUTS ON..YOU'LL SEE. CUT THE CROSS PIECE AT AN ANGLE. SO IT GOES WITH THE FRAME..IF YOU LEAVE IT LONG, IT WILL GET IN THE WAY.

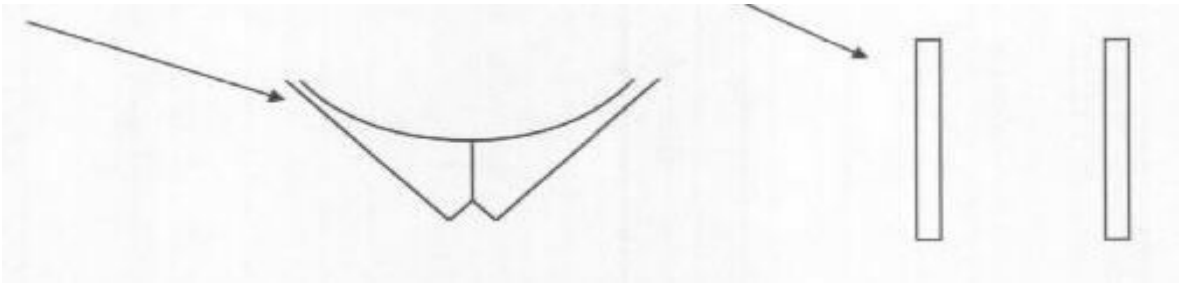
THE RIBS

OK. THIS GETS A LITTLE TRICKY..DEPENDS WHAT YOU WANT TO DO.. THE "RIBS" ARE THE CROSS MEMBERS (2 BY 4'S) WHICH CONNECT ONE FRAME PIECE TO ANOTHER, CREATING THE "SECTION" .HERE'S WHERE I CUT YOU SOME SLACK..IF YOU'RE GONNA MAKE THIS THING MODULAR, STAY TUNED, HOWEVER, IF YOU'RE MAKING IT PERMANENT YOU CAN USE THE 12 FOOT 2 BY 4'S AND, WHEN YOU'RE DONE WITH ALL SIX SECTIONS, JUST SCREW, NAIL OR WHATEVER **(**HIGHLY RECOMMEND BOLTS!) THEM RIGHT TO THE RIB SUPPORTS. IF YOU'RE MAKING IT MODULAR, HOWEVER...HE HE..OK...WHAT YOU NEED TO DO NOW IS CUT 6 OF THOSE 8 FOOT 2 BY 4'S IN HALF MAKE THEM **EXACTLY (!!)** 4 FEET LONG, AND CUT 3 OFTHOSE 8 FOOTERS TO MAKE 6 EXACTLY 43 1/2" LONG...**(MORE LATER)**

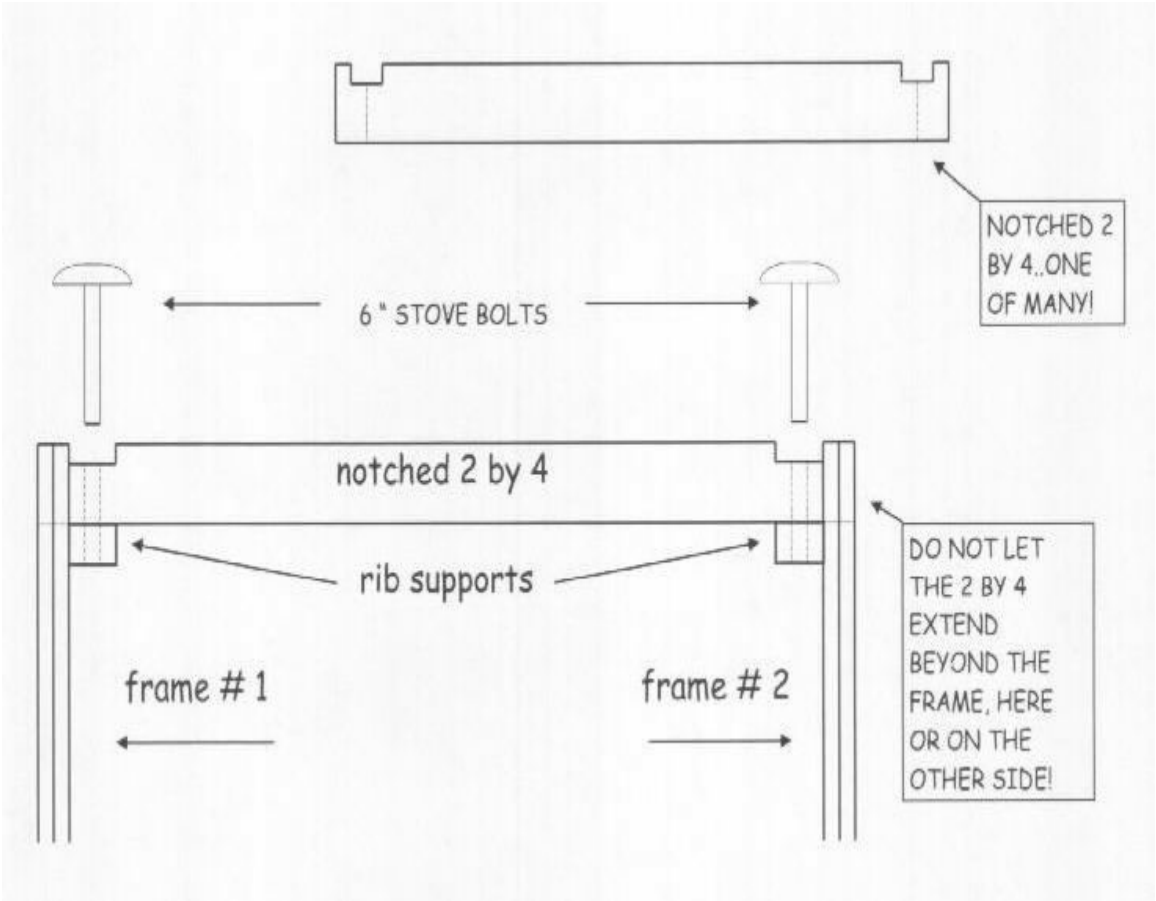
HOWEVER...IF YOU HAVE ROOM TO STORE AN 8 FOOT BY 8 FOOT SECTION OF PLYWOOD..DO NOT CUT THOSE 2 BY 4'S! YOU CAN USE THEM TO CROSS AND CONNECT 2 SECTIONS, INCREASING STRENGTH AND CUTTING DOWN ON WORK..REMEMBER, HOWEVER, YOU MUST STILL NOTCH AND DRILL THE 8 FOOTERS WHEREVER THEY MEET THE RIB SUPPORTS...4 PLACES... **THINK THOUGH**...IF YOU STORE THIS IN YOUR BASEMENT AND THE ONLY WAY DOWN THERE IS A BULKHEAD...NOT GONNA HAPPEN..EVEN IN SOME GARAGES..NOT GONNA HAPPEN..8 BY 8 IS PRETTY BIG, AND HEAVY TOO! SO IF YOUR GONNA CUT THESE 2 BY 4'S, THE REASON THEY HAVE TO BE SO PERFECT IS THAT THEY DETERMINE THE WIDTH OF THE SECTION..... ONE SECTION IS CONNECTED TO ANOTHER, AND THAT ONE STILL TO ANOTHER; TO MAKE IT 12 FEET WIDE. THERE ARE 18 OF THESE 4 FOOT 2 BY 4'S PER SECTION, AND IF THEY WERE DIFFERENT LENGTHS, THE SECTION WOULD NOT BE SQUARE..NOT ONLY THAT, BUT THESE SECTIONS BUTT UP AGAINST EACH OTHER..THE RIDING SURFACE OF EACH SECTION HAS TO MEET THE NEXT SECTION VERY TIGHT.OR ELSE YOU'LL GET A SPACE. OK. ONCE YOU'VE DECIDED ON THE LENGTH OF THE 2 BY 4'S, IT'S TIME TO NOTCH THEM, DRILL HOLES IN THEM, (AND THE RIB SUPPORTS), AND START ASSEMBLING THIS THING....FINALLY HEY?

NOTCH THE 2 BY 4'S ON THE TABLE SAW 3/4" IN FROM THE ENDS..MAKE THE NOTCH ABOUT 1 INCH LONG AND 1/2" OR SO DEEP.SET UP THE TWO FRAMES ON THEIR BACKS, 4 FEET APART, FACING EACH OTHER, LIKE SO:

FRAME ON IT'S BACK



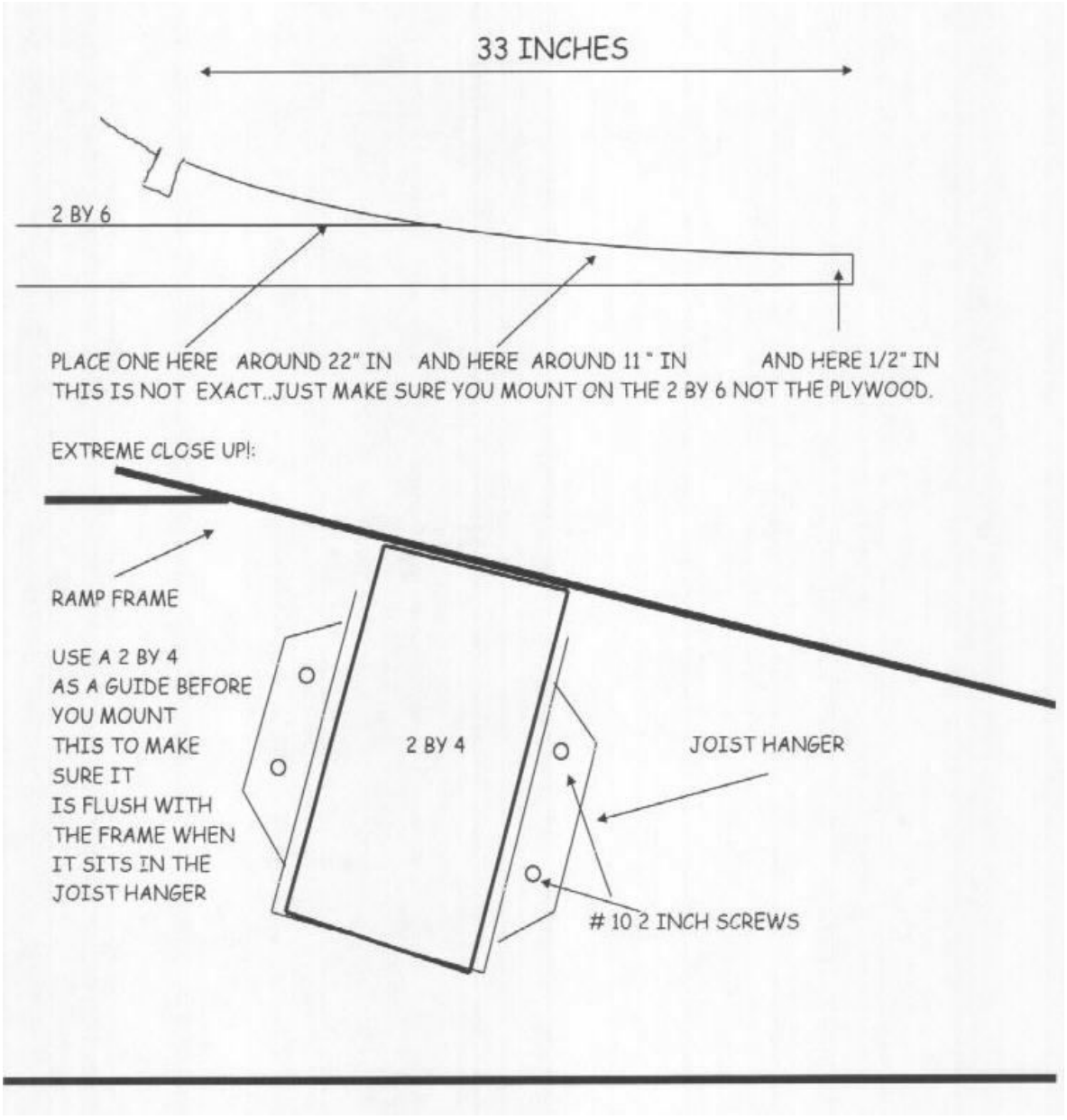
PUT ONE OF THE 2 BY 4'S THROUGH A FRAME NOTCH AND RIGHT TO THE EDGE OF THE FRAME, **BUT NOT BEYOND...**WHAT YOU HAVE IS THE 2 RAMP FRAMES SET UP WITH A 2 BY 4 CONNECTING THE TWO..DRILL THE HOLE THROUGH THE 2 BY 4 SO AS TO MEET THE RIB SUPPORT AROUND IT'S CENTER..THE DRILL BIT WILL GO THROUGH THE 2 BY 4 AND JUST MAKE A MARK IN THE RIB SUPPORT..YOU WANT THIS..REMOVE THE 2 BY 4 AND DRILL (AT A RIGHT ANGLE TO THE RIB SUPPORT) (WITH A 3/8" BIT) THROUGH THE RIB SUPPORT, AND REPEAT THIS FOR THE OTHER FRAME. NOW YOU CAN TAKE THE 6" STOVE BOLTS, AND POUND THEM THROUGH THE 2 BY 4'S ON BOTH SIDES..THEY'LL BE TIGHT IN THE 2 BY 4'S, (NOT THE RIB SUPPORTS) AND THEY SHOULD BE..YOU DON'T WANT THEM TO TURN WHEN YOU'RE CRANKING DOWN THE NUTS.



WHY NOTCH? BECAUSE THE PLYWOOD (RIDING SURFACE) WILL BE SCREWED TO THESE 2 BY 4'S, AND YOU DON'T NOTCH THEM, THE BOLT HEADS WILL STICK UP AND INTERFERE WITH IT; PLUS, UNLESS YOU HAVE A REALLY LONG DRILL BIT, THE BIT WON'T BE LONG ENOUGH TO GO THROUGH THE 2 BY 4.

ONLY NOTCH **12 2 BY 4'S** PER SECTION..THE OTHER 6 ARE SUPPORTED DIFFERENTLY...**AND NUMBER THEM ALL!!** YOU WILL GO NUTS TRYING TO GET THE CORRECT 2 BY 4 IN THE CORRECT NOTCH IF YOU DON'T..YOU NUMBER THESE BECAUSE WHEN YOU DRILL THROUGH THE 2 BY 4 AND MAKE THE MARK IN THE RIB SUPPORT, YOU ARE CREATING AN UNIQUE MOUNT FOR EACH 2 BY 4..EVERY HOLE YOU DRILL WILL NOT BE AT THE EXACT SAME ANGLE, AND "#4" WILL NOT WANT TO GO IN THE NOTCH DRILLED FOR " #1"..TRUST ME ON THIS!SO NOW YOU HAVE THIS THING PUT TOGETHER WITH THE 12 2 BY 4'S..CHECK FOR THE 2 BY 4'S PROTRUDING BEYOND THE FRAME..CAN'T HAVE IT!

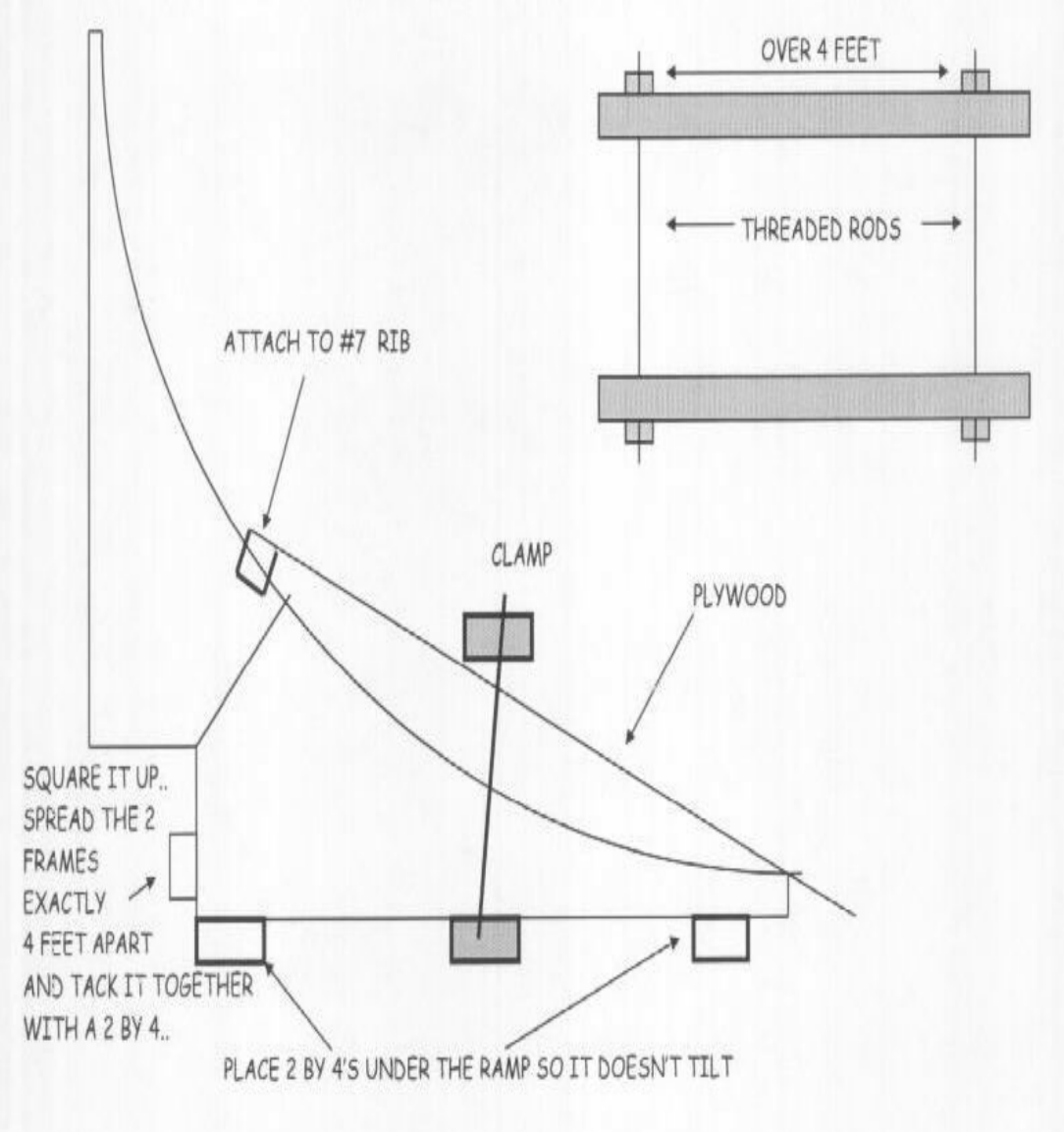
TAKE A MEASURING TAPE AND MEASURE ACROSS THE SECTION AT DIFFERENT POINTS. AS STATED EARLIER, THIS THING HAS TO BE SQUARE..IT SHOULD MEASURE 4 FEET WIDE EXACTLY..IF NOT, NOTCH CUT AND DRILL NEW 2 BY 4'S TO REPLACE THE BAD ONES..OK ASSUMING EVERYTHING'S COOL MOVE ON TO THE LAST PART OF THIS SECTION (YEAH!) ..THE JOIST HANGERS..THESE ARE MOUNTED AT THE SKINNY ENDS OF THE RAMP FRAMES, WHERE IT'S TOO THIN TO NOTCH .THIS ISN'T THAT HARD..JUST KINDA TEDIOUS...YOU' LL MOUNT THEM LIKE SO:



**How Do You Bend That Plywood?

OK. YOU'VE GOT A SECTION COMPLETED..SMALL PROBLEM HERE..THE SECTION IS CURVED, BUT THE 1/2" PLYWOOD RIDING SURFACE IS NOT..MAYBE YOU'VE TRIED BENDING IT TO MATCH THE CURVE..NOT EASY IS IT? IT'S TOUGHER BECAUSE YOU HAVE TO PLACE THE PLYWOOD ON THE COMPLETED FRAME LENGTHWISE, WITH THE GRAIN GOING UP THE RAMP.

THIS IS SO BECAUSE YOU WANT TO RIDE WITH THE GRAIN, RIDING AGAINST IT WILL RIP UP THE PLYWOOD FASTER, UNLESS OF COURSE,YOU CHOOSE TO COVER IT WITH MASONITE (VERY DRY AREAS ONLY!!) OR SKATELITE , THEN IT DOESN'T MATTER, BUT ASSUMING YOU DON'T... TRY THIS: FIRST..SECURE ALL THE RIBS TO THE RIB SUPPORTS WITH THE NUTS,,CRANK 'EM DOWN GOOD..GET A COUPLE 1/4" THREADED RODS, ABOUT 3 FEET LONG..GET LARGE WASHERS AND NUTS TO MATCH. CUT 2 PIECES OF 2 BY 4, AT LEAST 4 1/2 FEET LONG, AND DRILL HOLES AT THE ENDS FOR THE RODS TO GO THROUGH..MAKE SURE YOU HAVE AT LEAST 4 FEET BETWEEN THE HOLES....



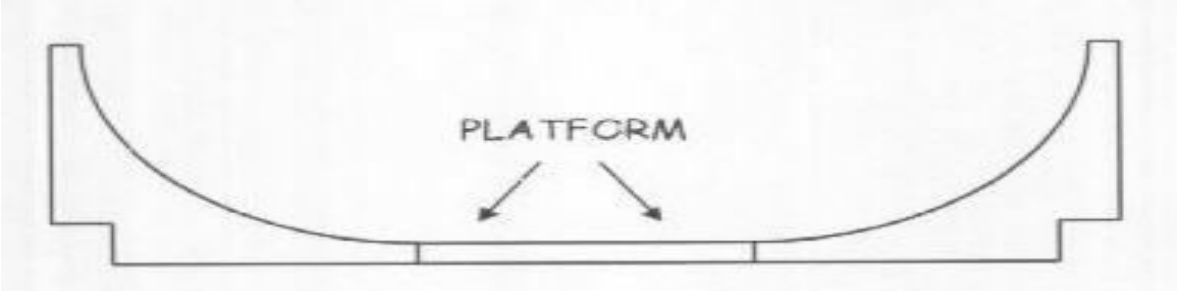
DISREGARD THE NOTE ON THE ABOVE DRAWING "ATTACH TO #7 RIB" LET SOME PLYWOOD OVERHANG OFF THE FRONT OF THE RAMP TO ALLOW FOR THE AMOUNT OF WOOD THE CURVE WILL SUCK IN.

PUT THE CONTRAPTION TOGETHER ON THE RAMP AS SHOWN..WHAT YOU'VE CREATED IS A GIANT CLAMP..YOU TURN THE NUTS WITH A WRENCH, AND IT PULLS THE PLYWOOD DOWN TOWARD THE FRAME..IT'S ACTUALLY EASIER TO DO IT WITH THE RAMP ON IT'S BACK, BUT ANYHOW, MAKE SURE THE RAMP DOESN'T TWIST AS YOUR DOING THIS..THERE'S A LOT OF FORCE BEING EXERTED ON THE FRAME, AND IT NEEDS TO BE ON A HARD, LEVEL SURFACE YOU MAY NEED 2 OF THESE TO GET THE WHOLE PIECE OF PLYWOOD THE MATCH THE CURVE..YOU GET THE 1/4" THREADED RODS AS APPOSED TO 1/2" BECAUSE THE 1/4" WILL BEND WITH THE FORCE, INSTEAD OF THE CLAMP CREEPING DOWN THE CURVE..IT STILL HAPPENS, BUT NOT AS MUCH. WHEN YOU GET THE PLYWOOD TO MATCH THE CURVE TIGHT, SCREW IT INTO THE 2 BY 4 RIBS WITH THE # 10 2 INCH SCREWS .. ADJUST THE BLADE ON YOUR SKILL SAW SO IT DOESN'T CUT INTO THE FRAME AND CUT THE PLYWOOD AT THE BOTTOM OF THE RAMP AS STRAIGHT AS POSSIBLE, IT HAS TO MATCH THE PLYWOOD OF THE FLAT PLATFORM , WHICH IS THE 8 FOOT CONNECTOR TO EACH QUARTER PIPE. THE SECOND PIECE UP THE RAMP HAS TO BE CUT TOO..IT WILL BE TOO LONG.. SO...BEND THE PLYWOOD, SQUARE IT,SCREW IT IN, AND CUT IT, AND YOU'VE GOT YOUR FIRST 1/4 PIPE.

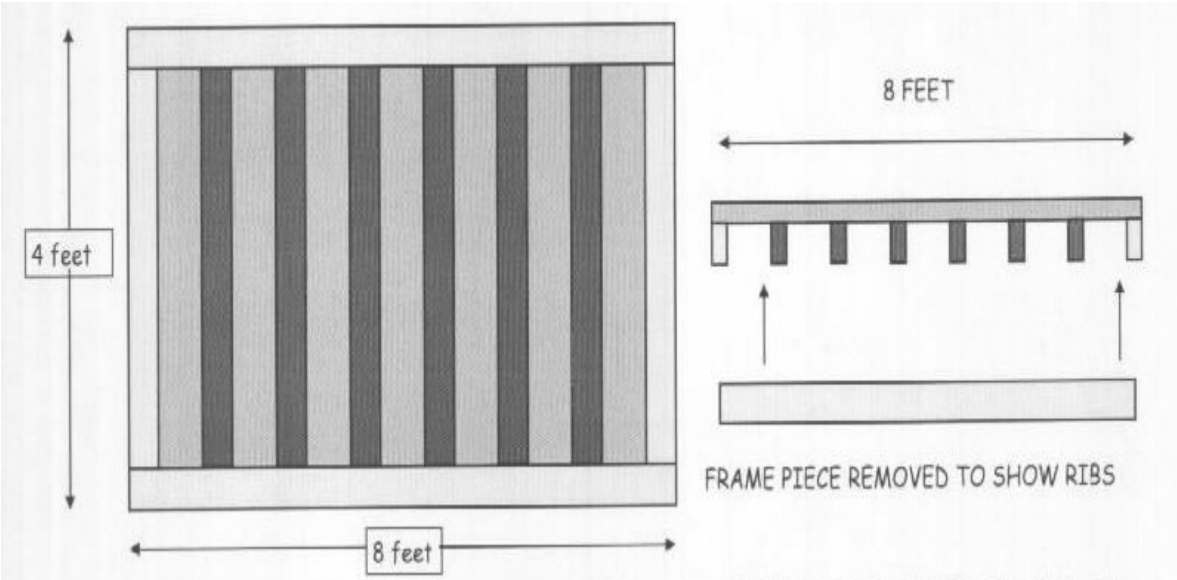
**IV'E HEARD A WAY TO BEND THE PLYWOOD IS TO WET IT DOWN FOR ABOUT AN HOUR AND IT FLEXES EASIER.. NEVER TRIED IT MYSELF..BUT I KNOW PLYWOOD LIKES TO DELAMINATE, AND ALTHOUGH WETTING IT FOR A HOUR WON'T DO IT, IT MAY SHORTEN IT'S LIFE.....

Create The Platform

THE PLATFORM IS THE PIECE THAT DISTINGUISHES TODAYS RAMPS FROM THE 70'S AND 80'S..THE PLATFORM PROVIDES A FEW SECONDS FOR YOU TO GET YOUR BEARINGS BEFORE YOU CRUISE UP THE OPPOSITE SIDE OF THE HALFPIPE:

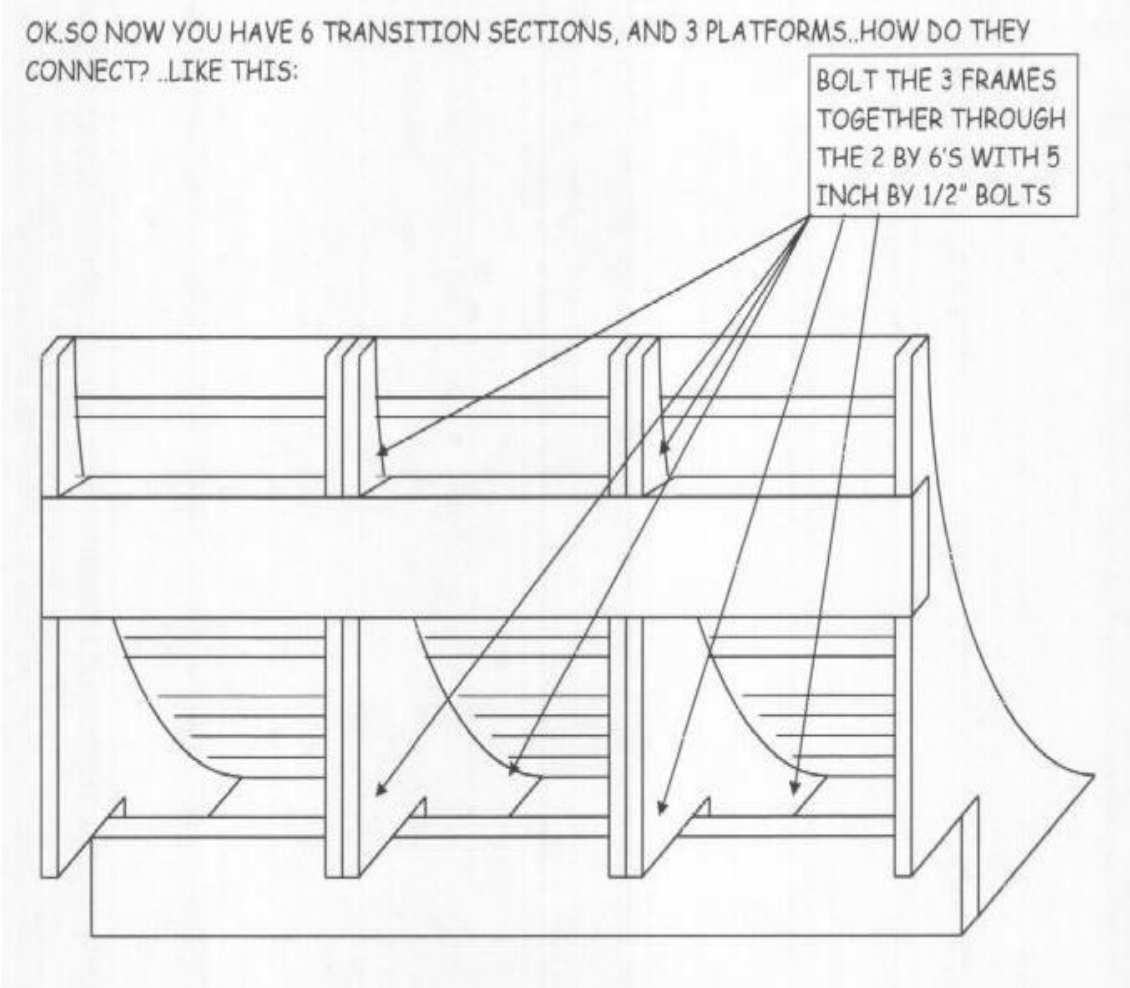


OK..THE PLATFORM FOLLOWS THE GRAIN OF THE REST OF THE RAMP, AND THE 2 BY 4'S ARE SCREWED TO IT AGAINST THE GRAIN..LIGHT GREY IS PLYWOOD, DARK GREY IS 2 BY 4'S WHITE (KINDA) IS 2 BY 4 FRAMEWORK:

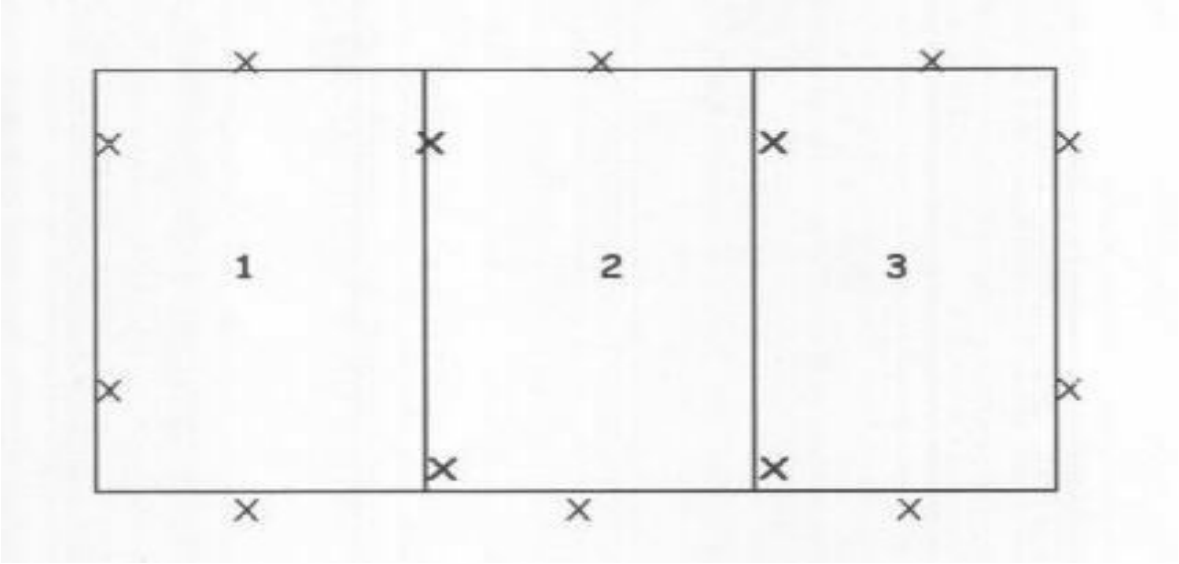


DISREGARD ABOVE MEASUREMENT..THE PLATFORM IS 46 1/2" WIDE..NOT 4 FEET..NOTICE THAT THE RIBS ARE LESS THAN 4 FEET LONG, **THEY'RE 43 1/2 INCHES** ..YOU NEED A 2 BY 4 FRAME WORK WITHIN THE PLYWOOD FOR EASE OF CONNECTION TO THE TRANSITION SECTIONS . CONNECT THE PLATFORM TO THE LONGBOARDS, THEN SCREW THE PLYWOOD WITH THE #10 2 INCH SCREWS INTO THE PLATFORM FRAME
..THIS NEEDS TO BE 46 1/2" BY 8 FEET WHEN DONE.THE PLYWOOD WILL OVER HANG THE PLATFORM BY 3/4" ON EACH SIDE..THIS WORKS OUT GREAT, AS THE NEXT PLATFORM SECTION HAS A 3/4" INCH OVERHANG, AND THEY BOTH MAKE UP FOR THE 1 1/2" WIDTH OF THE LONGBOARD....YOU MAKE 3 OF THESE..

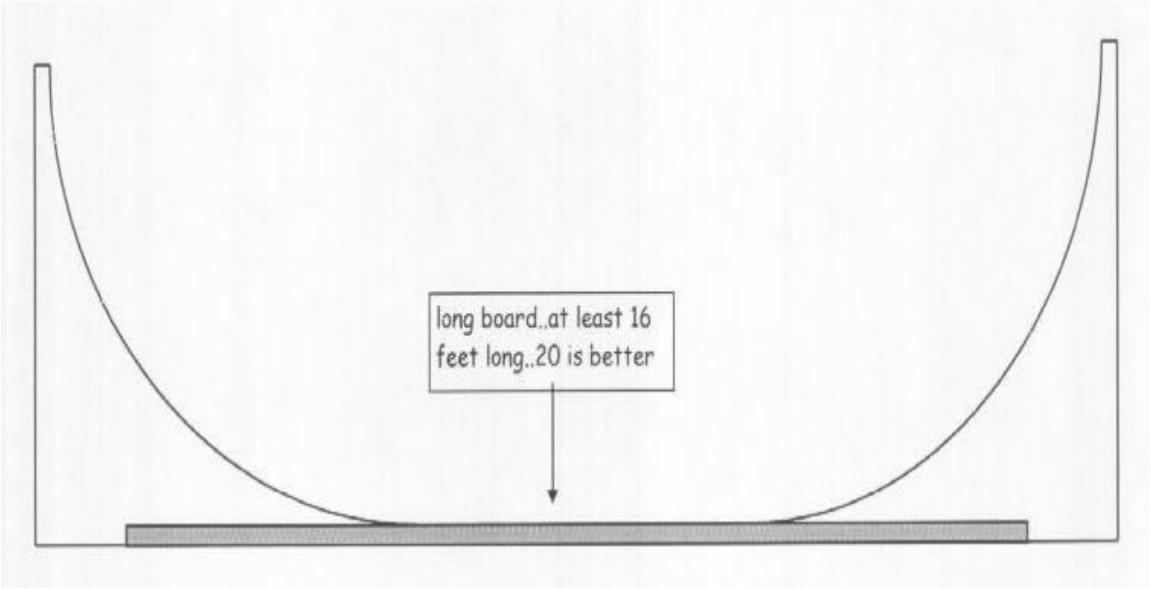
PUTTING IT ALL TOGETHER



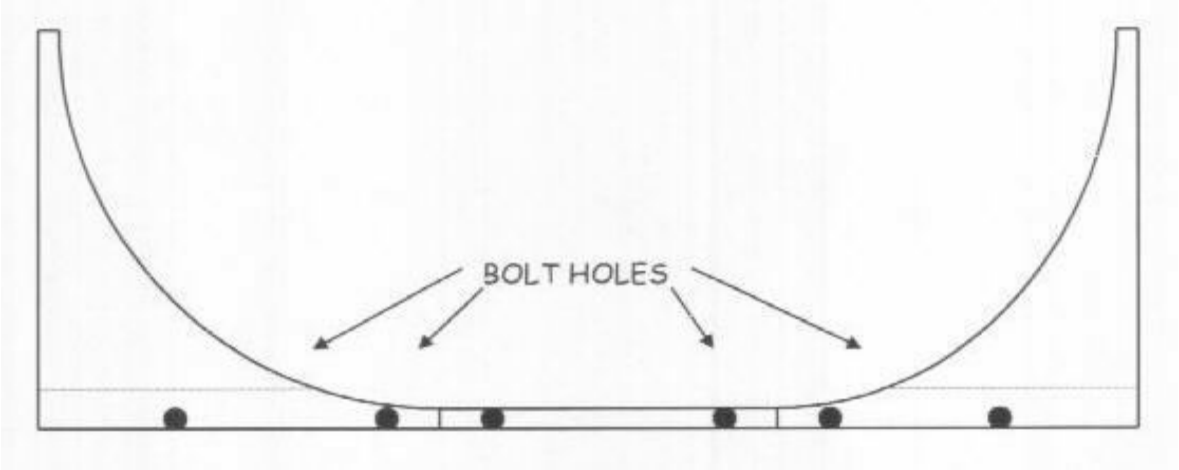
THOSE 12 FOOT 2 BY 6'S ARE USED TO CONNECT THE FRAMES TOGETHER..MAKE SURE THE FRAMES ARE EXACTLY 4 FEET WIDE (SQUARE) BEFORE ATTACHING THE 2 BY 6'S... IF YOUR'E MAKING THIS PERMANENT, JUST USE LAG BOLTS AND SCREW THE 2 BY 6'S TO THE FRAMES..NOTICE THE NOTCH FOR THE UPPER 2 BY 6. THIS IS NOT NECESSARY, BUT DOES ADD STRENGTH, AND LOOKS MORE PROFESSIONAL. IF YOR'E MAKING THIS MODULAR, YOU
WOULD PLACE THE 2 BY 6'S THE SAME, BUT INSTEAD OF USING LAG BOLTS, USE BRACKETS , BOLTS, AND NUTS.



DRILL 1/2" HOLES IN ALL THE "X" MARKS. THE BOLDED X'S ARE WHERE YOU CONNECT THE PLATFORMS WITH EACH OTHER...KEEP THEM ALLIGNED WITH EACH OTHER, AND BOLT THEM TOGETHER WITH 4 INCH BY 1/2" BOLTS.



THE WHOLE THING IS CONNECTED TOGETHER BY A LONG BOARD ON EACH SIDE OF THE HALFPIPE, AND TWO INSIDE BETWEEN SECTIONS.I WAS ABLE TO FIND 3 24 FOOTERS (12 FOOT WIDE NEEDS 4), SO YOU CAN BOLT IT RIGHT TO THE ENDS OK THIS IS HOW THIS IS DONE:

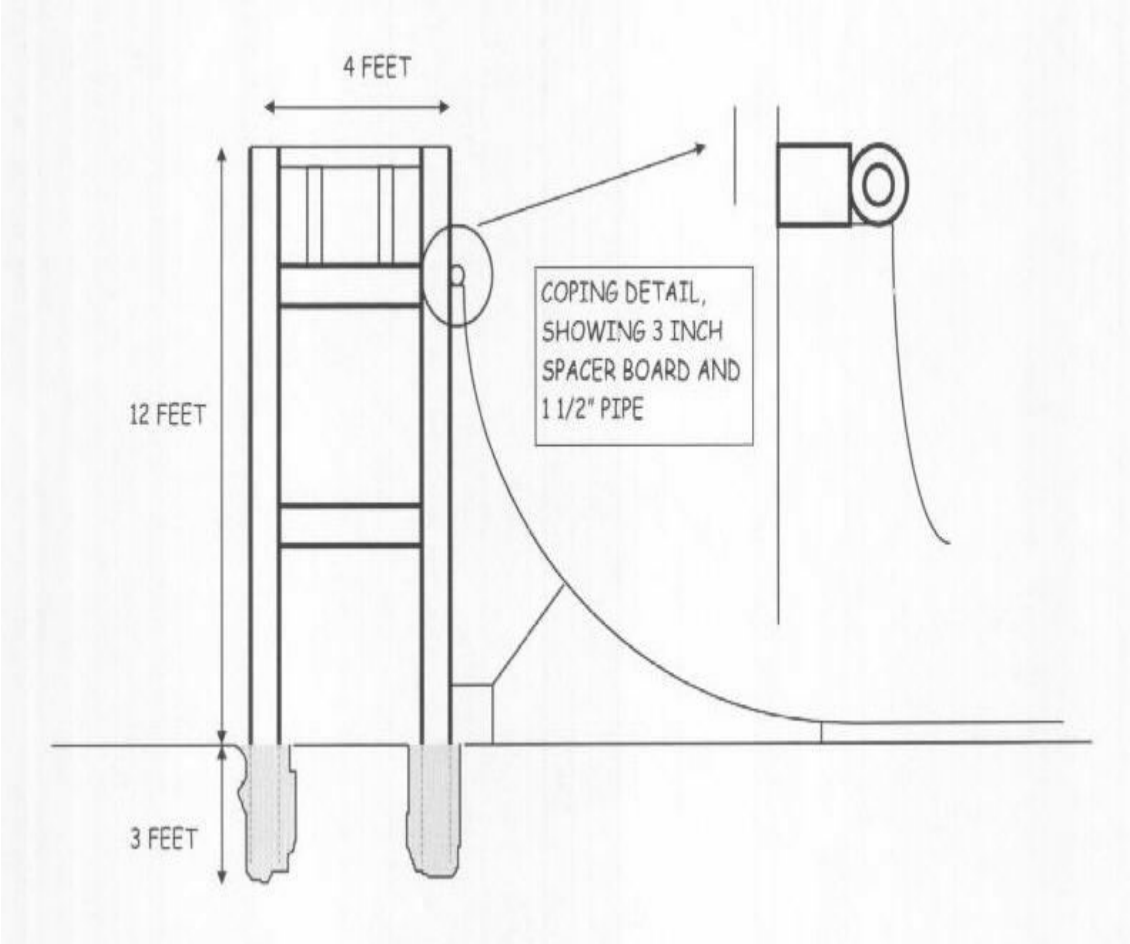


REMEMBER, YOU HAVE A 2 BY 6 ATTACHED TO THE FRAME..THIS IS WHAT WE CONNECT THE PLATFORM TO, FOR BOTH SECTIONS. CHECK IT IT OUT:

About Dropping In....

IF YOU'RE GOING TO MAKE THIS MODULAR, DROP IN TOWERS ARE ONE MORE THING TO SET UP...THIS .COULD BE A REAL PAIN .. A WAY AROUND THIS WOULD BE TO PERMANENTLY INSTALL **JUST THEM** (DIG HOLES, PUT THEM IN THE GROUND, WITH CONCRETE), AND ATTACH THE HALFPIPE TO THEM, OR IF YOU'RE MAKING THIS PERMANENT..THEN IT DOESN'T MATTER..BOLT THE WHOLE THING TOGETHER..

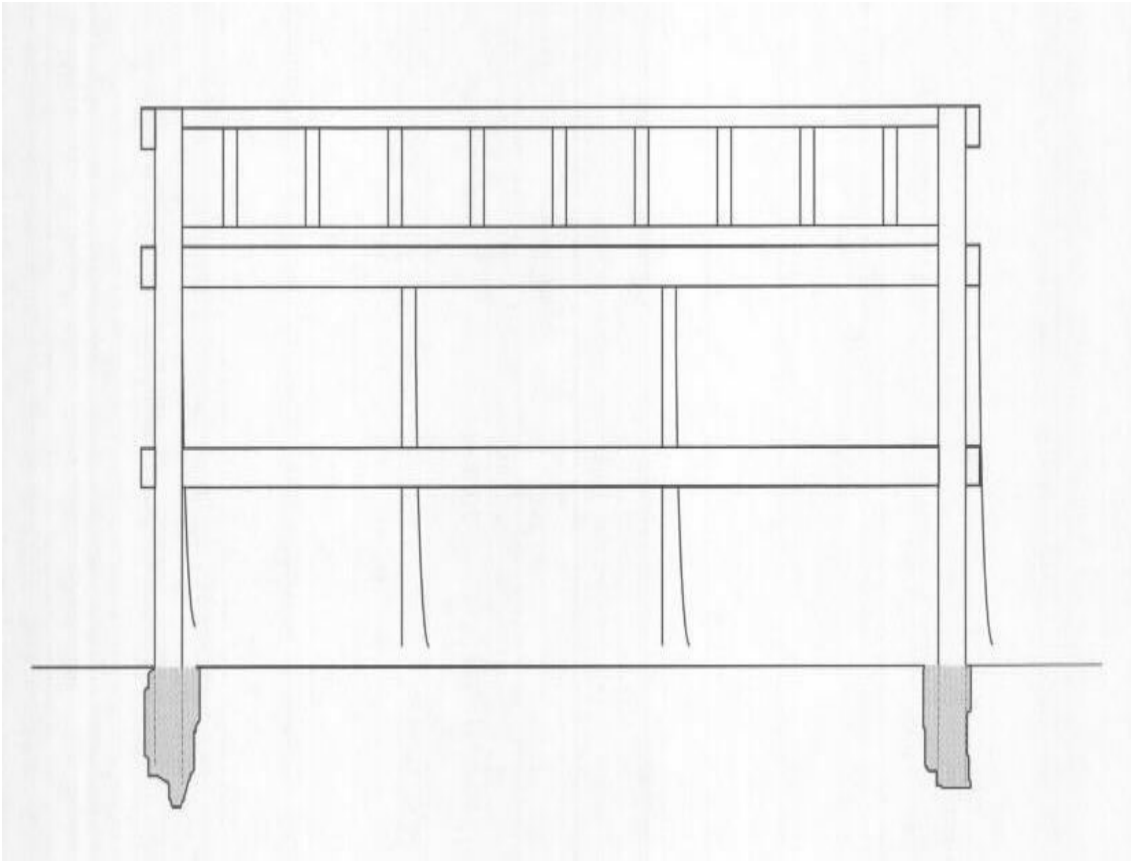
I HAVEN'T DONE THIS..BUT HERE ARE MY SUGGESTIONS:..USE PRESSURE TREATED 4 X 4 LUMBER FOR THE FRAME..THIS PROBABLY COULD SIT ON CONCRETE AS WELL:

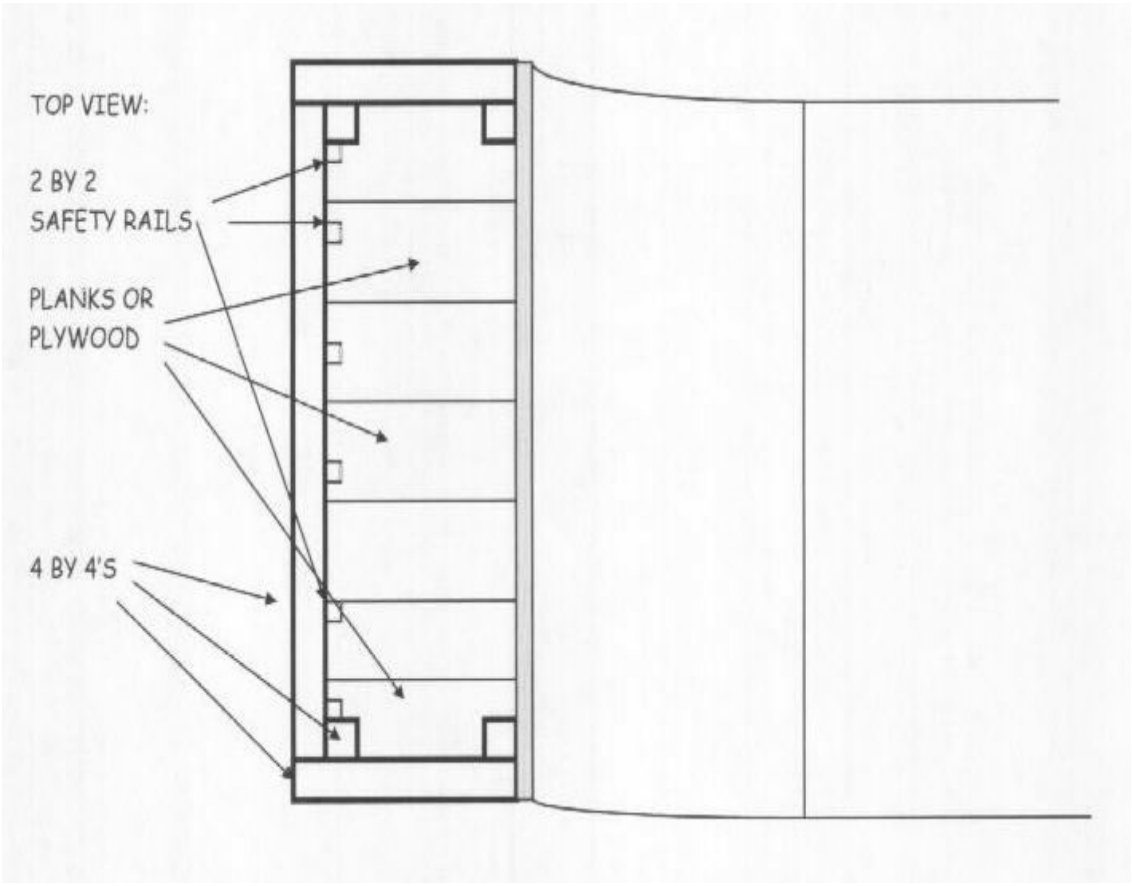


SINCE I DID NOT CREATE THIS MYSELF, I'M NOT GOING TO PRETEND THAT I KNOW WHAT I'M DOING..IT WOULD BE VERY EASY TO ADD VERT TO THIS PIPE..JUST MAKE THE DROP IN TOWERS HIGHER AND ADD 2 OR 3 FEET OF PLYWOOD TO THE RAMP.

REAR VIEW:

**IF YOU KNOW HOW TO "PUMP" A HALFPIPE, YOU DON'T NEED STAIRS!!




TOP VIEW:
2 BY 2
SAFETY RAILS
PLANKS OR
PLYWOOD
4 BY 4'S