

The "LES-IS-MORE Horizontal Top-Bar Hive[©]" Plans

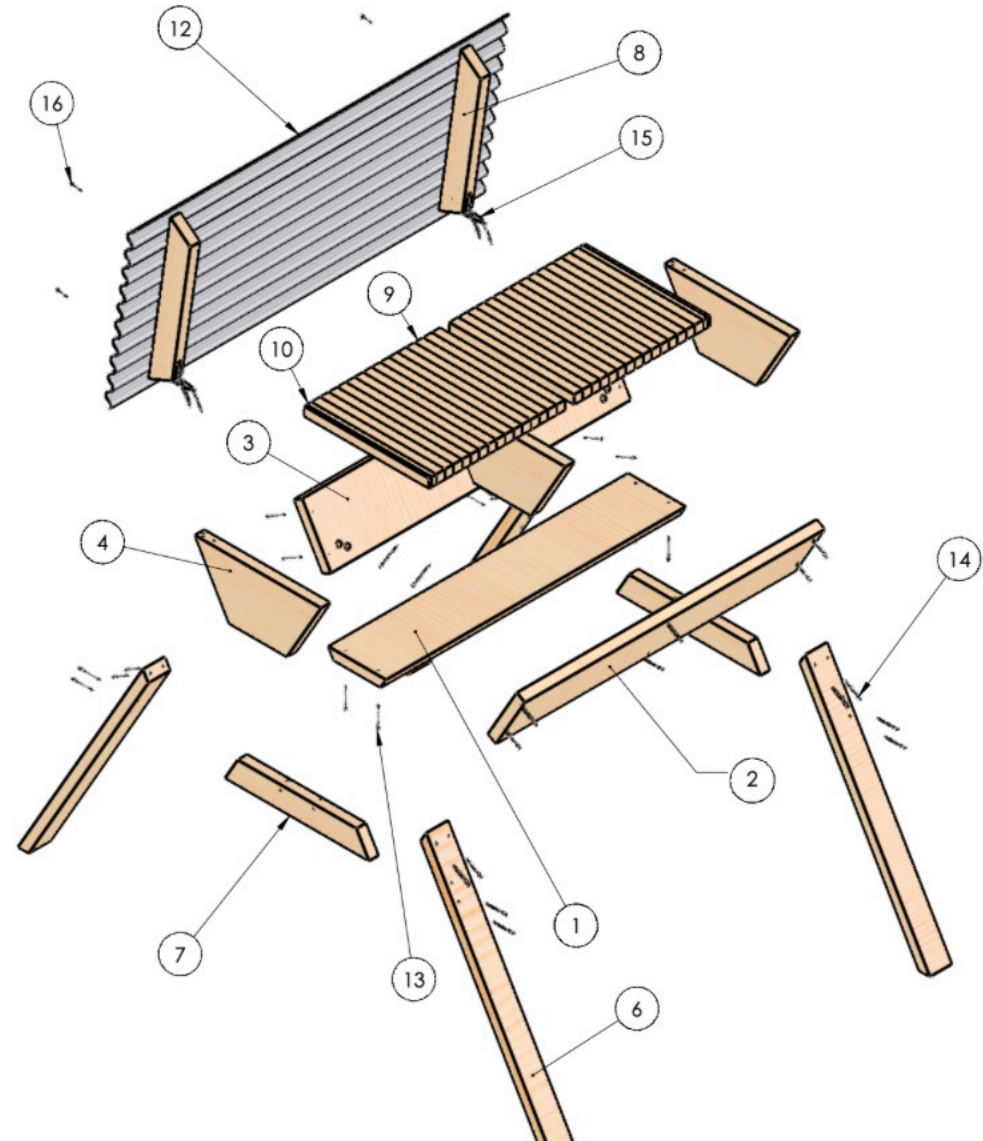
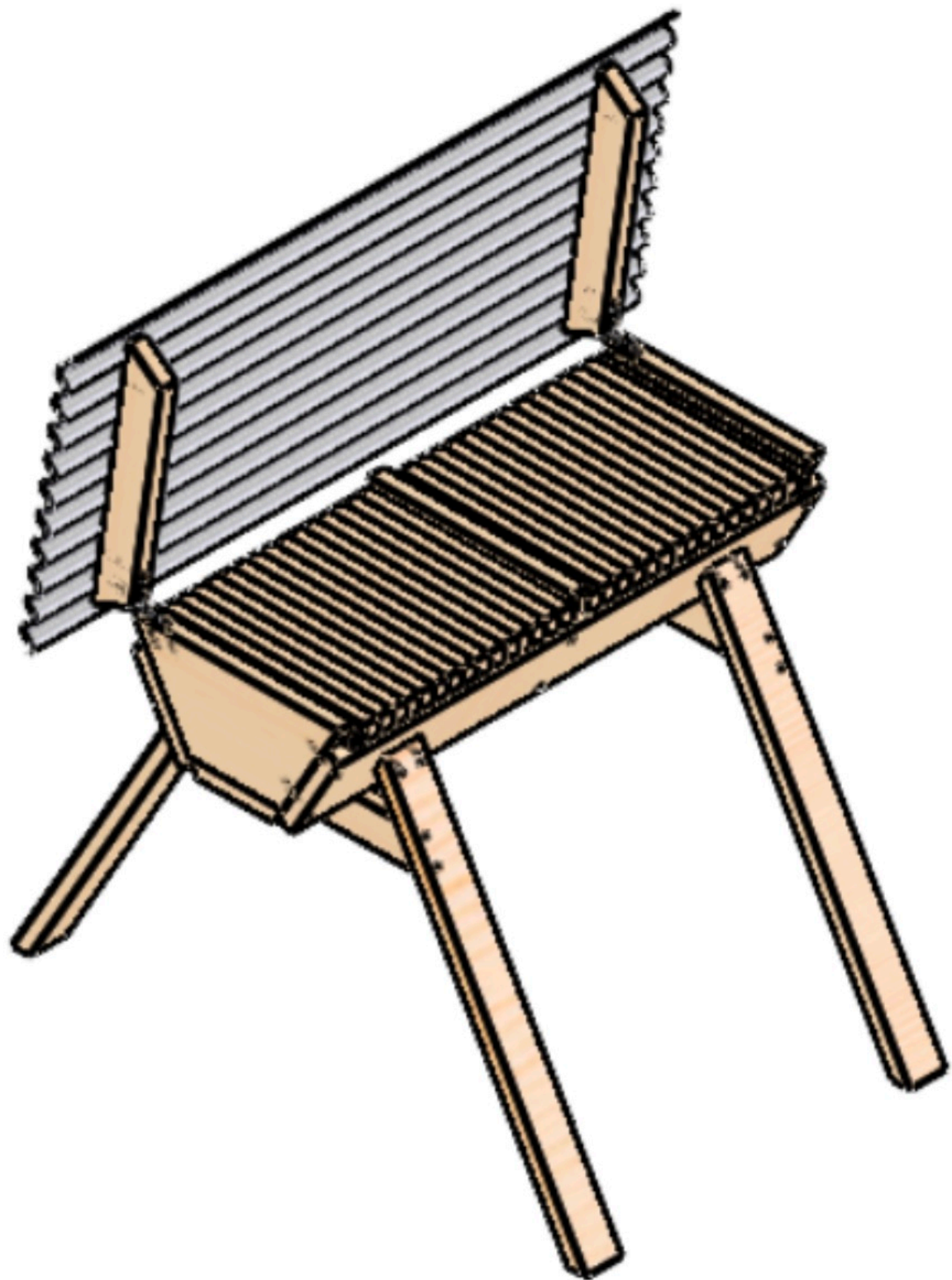


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The “LES-IS-MORE Horizontal Top-Bar Hive[©]” Plans



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This standardized horizontal top-bar hive was designed by Bee Mindful, LLC

(Les Crowder and Nathalie B.) under the name of “**The LES-IS-MORE Horizontal Top-Bar Hive[©]**”

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In addition, for all hives, NUC boxes or hive kits built to the basic dimensions as listed on the dimension pages of these specs (same angle/width/depth/bar dimensions and all variable lengths of long side walls or number of partitions), credit be given clearly and unequivocally to **Bee Mindful, LLC** as being a “**LES-IS-MORE Horizontal Top-Bar Hive[©]**” or “**LES-IS-MORE Horizontal Top-Bar NUC Box**” before being posted online, sold or distributed in any way.



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Our goal is to make these simple Les-Is-More hives available to as many people as possible, and to create a standard in Horizontal Top-Bar Beekeeping, so everyone may produce or find NUCs of bees that easily fit these hives. We encourage everyone to make them for themselves, or to sell them as a source of income. They cost only about \$60 in new materials, and less than 2hrs of time, and can easily host a medium size colony. Les-Is-More Top-Bar NUCs of bees are in high demand and the supply/competition is low, so these hives are a great way to start on a budget AND to make good income selling Les-Is-More Top-Bar NUCs of bees if desired. They are also simple and easy to use and manage. In exchange for these free plans, all we ask for is the credit for their design and your support to spread the word to others about horizontal top-bar hive beekeeping and the Les-Is-More Hives!

Questions and suggestions for improvements may be submitted to Bee Mindful, LLC at Bee-Mindful.com or BeeMindfulHoneyFarms@gmail.com

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Les Crowder + Nathalie B. = Bee Mindful!



Les Crowder, co-author of the world-renowned book “Top-Bar Beekeeping”, is a veteran of the beekeeping world, and a widely recognized expert in Natural and Horizontal Beekeeping. He began keeping bees (he often states they began keeping him) in 1971! Early in his career, he worked for a business with 4,000 hives in New Mexico, then started looking for ways to eliminate toxic inputs in the hive, starting with antibiotics and now miticides.

As a successful Treatment-Free beekeeper over the last 30 years, he promotes increasing colony vitality by using natural comb, and decreasing the pressure of pathogenic fungi and bacteria that stress the bees’ resistance to disease by cycling out old comb.

This led him to experiment with the ancient concept of Horizontal Top-Bar hives, and eventually using them exclusively for a small 100-200 hive honey and beeswax business in New Mexico.

Through large scale experiments, he discovered the key to comb structural integrity (and a low rate of comb collapse or wall attachments) is to use a 30 degree slant of the long walls of the hive, longer attachments to the top-bars, and a shallower depth of comb than in most other Top-Bar Hive designs.

It turns out that the 30 degree angle is the angle that repeats in hexagons, the structurally efficient shape bees use for their cells, so Les’s plans naturally follow bee wisdom, and his hive even features a half hexagon for end pieces!

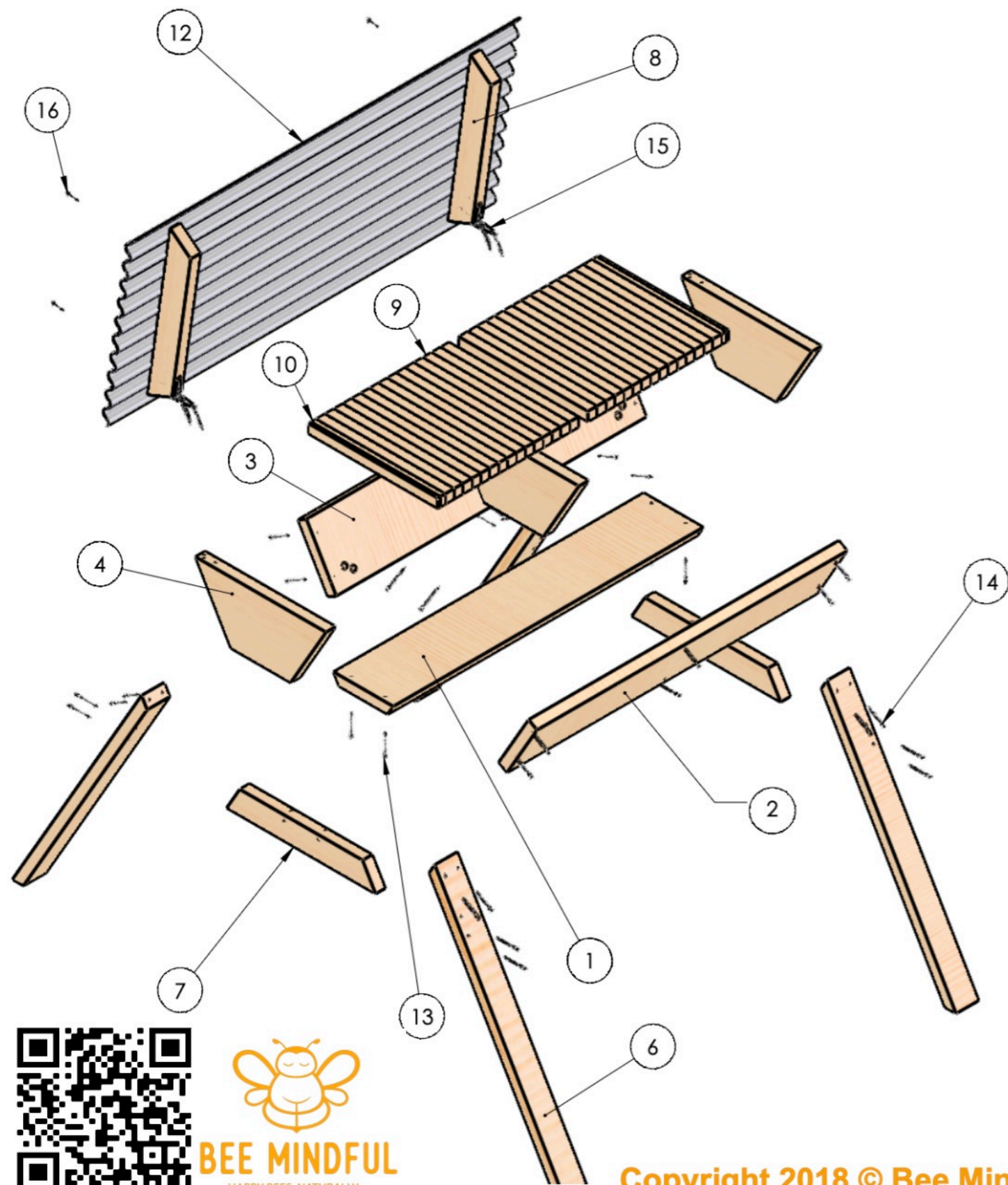
Les has a degree in biology from the University of New Mexico, and has served as the President of the New Mexico Beekeepers Association, as well as New Mexico Apiary Inspector. He’s also a philosophe in his spare time.

Nathalie B. is a disciple (groupie, really) and friend of Les Crowder’s, and has always kept her bees Treatment-Free since she started beekeeping in 2010. Now she has the immense privilege and pleasure of working with Les every day at Bee Mindful, managing close to 400 colonies in 45 different yards, and offering popular Natural Beekeeping Apprenticeships, Workshop & classes, as well as professional AG exemption services and affordable horizontal hives. She recently used her engineering/math skills to redesign and optimize Les’s hive plans, simplify the assembly process, and allow for easy Langstroth to Horizontal Top-Bar Hive conversion, rebranding the new 3-in-1 the “**Les-Is-More® Hive**” (pun intended).

Nathalie holds an MBA from Ohio State and a Master Beekeeper degree from Texas A&M. She is also a contributor to Bee Culture magazine, the founder of the first Treatment-Free beekeeping club in Texas, and of the World Bee Day Natural Beekeeping Webinar. She hosts the "Natural Beekeeping Corner" on the popular “Hive Jive” beekeeping podcast. She has served as President of the Hays County Beekeepers Association, VP of the Travis County Beekeepers Association, a Director at the Texas Beekeepers Association, and Chairman of the Real Texas Honey non-profit.

Passionate about community outreach, inclusivity in beekeeping and volunteering that matters, she has set up free training programs and teaching apiaries for refugees in the Congo, Nigeria, and Texas, donating and leveraging many of the simple, cost conscious, easy to manage and sustainable horizontal frameless **Les-Is-More®** hives in the process.

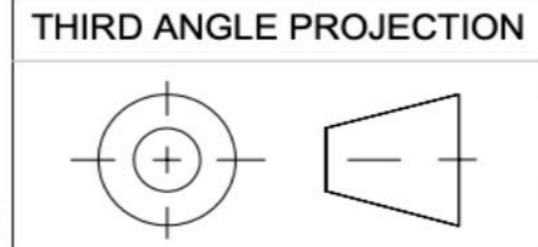
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PARTS LIST				
ITEM NO.	DESCRIPTION	QTY.	Dimensions	Material
1	BOTTOM BOARD	1	1-1/2" X 9-1/4" X 48"	2 X 10
2	WALL BOARD - FRONT	1	1-1/2" X 9-1/4" X 48"	2 X 10
3	WALL BOARD - BACK	1	1-1/2" X 9-1/4" X 48"	2 X 10
4	END CAP & PARTITION BOARD	3	1-1/2" X 9-1/4" X 20ish"	2 X 10
5	UNDER LEG - RIGHT	2	1-1/2" X 3-1/2" X 40"	2 X 4
6	UNDER LEG - LEFT	2	1-1/2" X 3-1/2" X 40"	2 X 4
7	LEG SUPPORT	2	1-1/2" X 3-1/2" X 23-1/16"	2 X 4
8	ROOF BOARD	2	1-1/2" X 24-1/4"	2 X 4
9	BAR	30	1-3/8" X 1-1/2" X 20"	2 X 10
10	SHIM	2	3/4" X 1-1/2" X 20"	2 X 10
11	SHIM	2	1/4" X 1-1/2" X 20"	2 X 10
12	ROOF	1	27" X 60"	CORRUGATED SIDING
13	T25 X 3" DECK SCREW	28	3 INCH	--
14	T25 X 2.5" DECK SCREW	20	2.5 INCH	--
15	STRAP HINGE	2	--	--
16	ROOFING SCREW	4	1-1/2" LONG	--

UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN METRIC [],
 & INCHES
 TOLERANCES ARE:
 FRACTIONS DECIMALS ANGLES
 ± 1/16" .X±1/16" ± 3°
 .XX±1/32"

TITLE:
**The Les-Is-More
 Horizontal DOUBLE
 Top-Bar Hive[©]**



SIZE B	LIM-HDTBH	REV 0.01
SCALE: 1:14	Double LES-IS-MORE Horizontal Hive - With Under Legs - Hinged	SHEET 1 OF 13



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Materials & Tools List



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TOOLS NEEDED

- Table saw (*for bars and bevels*)
- Sliding miter saw (*if unavailable*: circular saw, or hand saw with a guide)
- Cordless drill; small bit for pilot holes, driver bits for screws (*if unavailable, hammer and nails*)
- 3/4" paddle bit
- Tape measure

MATERIALS FOR 1 DOUBLE TOP-BAR HIVE

- **3 board of 2" x 10" x 8'**, untreated lumber (actual size 1-1/2" x 9-1/4" x 8') - about \$8 each - HD item 852481 - for walls, end caps & bars
- **3 of 2" x 4" x 8'**, pressure treated lumber (actual size 1-1/2" x 3-1/2" x 8') - about \$4 each - HD item 1001753849 - for legs & hinged roof boards
- **28 of 3" deck/wood screws (T25)**
- **20 of 2.5" deck/wood screws (T25)**
- **4 of 1-1/2" roofing screws** for the hinged roof
- **2 strap hinges** for the hinged roof

OPTIONAL

- *2 disc entrance reducers*
- *Bamboo skewers for comb guide*
- *Wood glue like Titebond III*
- *Clear Acrylic Latex Caulk - HD item 284330*



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ITEM # 1 - BOTTOM BOARD

- 1. QTY: 1.
- 2. MATL: 1-1/2" X 9-1/4" X 48"
- 3. NOTE: 3/32" (M3) PILOT DRILL OPTIONAL.

Unless otherwise specified, all angled cuts are at 30°

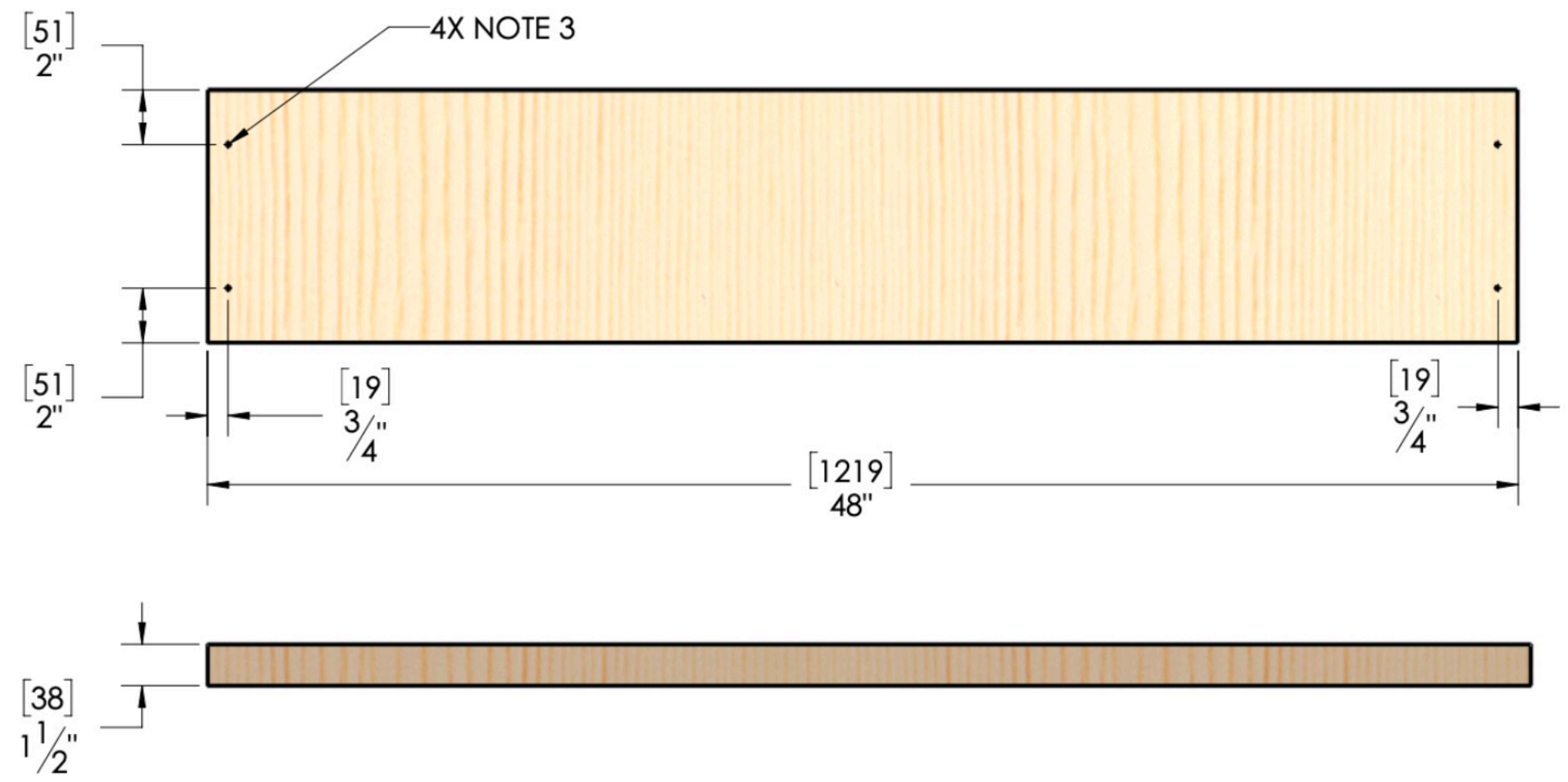


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Step 1. Cut **three** 48" long sections of the "two-by-ten" boards - 1 of those 3 pieces will be the bottom board (item #1), the other 2 will be the side walls (items #2 and #3). Each will be 9-1/4in wide

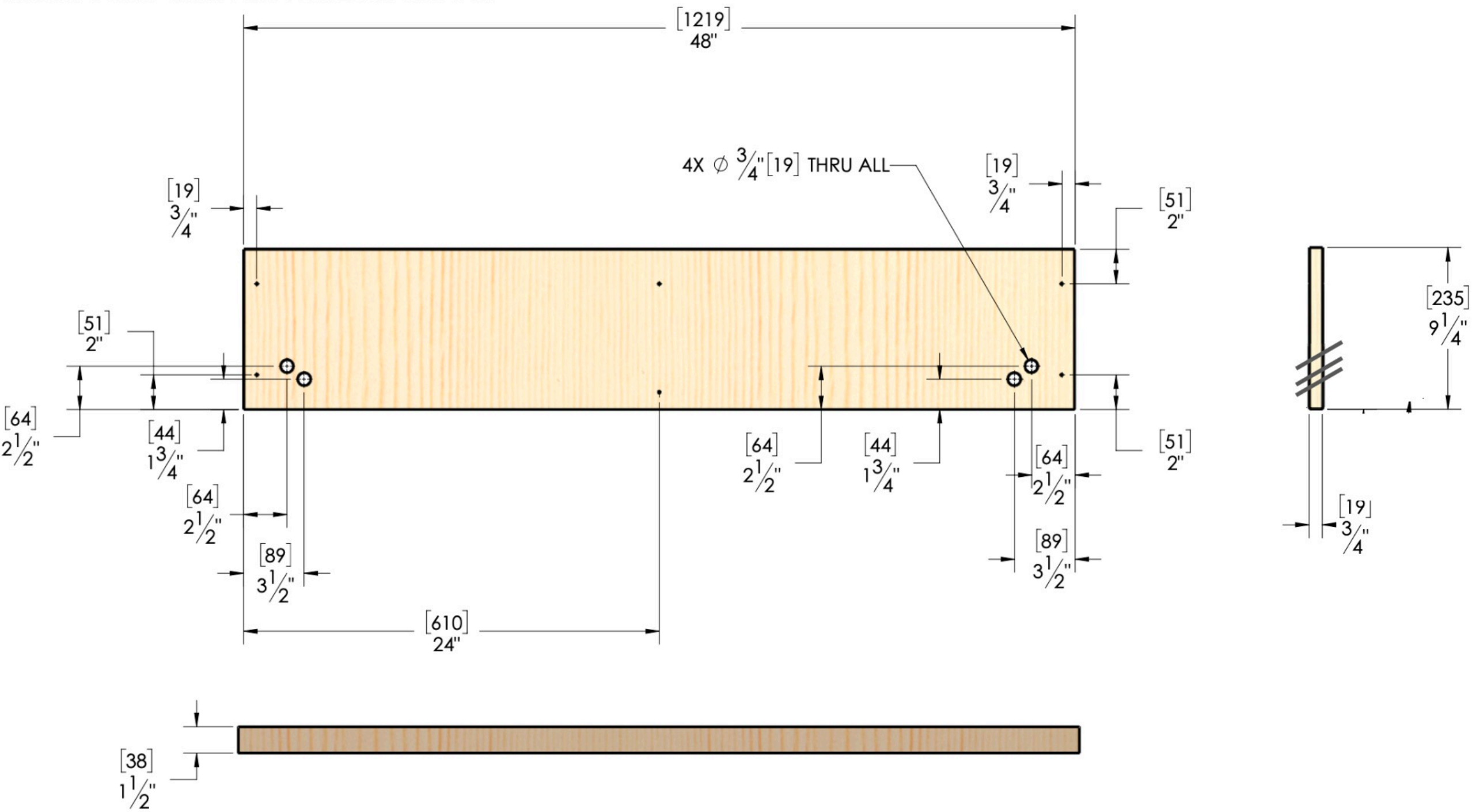
Step 2. Rip one of the 48" long pieces of "two-by-ten" boards at opposite 30 degree angles lengthwise to make a tapered board with 9-1/4" wide at the top and that much less at the bottom. This will be the bottom board (**item #1**)

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ITEM # 2 - WALL BOARD - FRONT

- 1. QTY: 1.
- 2. MATL: 2 X 10.
- 3. NOTE: 3/32" (M3) PILOT DRILL OPTIONAL.



Step 3. use one of the three 48" in long sections of the "two-by-ten" board as the front wall board (items #2)

Step 4. mark a point at 1-3/4 in from the short edge and 1-1/2 in from the corresponding long edge, and use the paddle bit centered on that point to drill a 3/4 in hole at a 30 degree angle through the front wall board. Repeat on the other short edge side, and add a second entrance on each side as needed (per the drawing)

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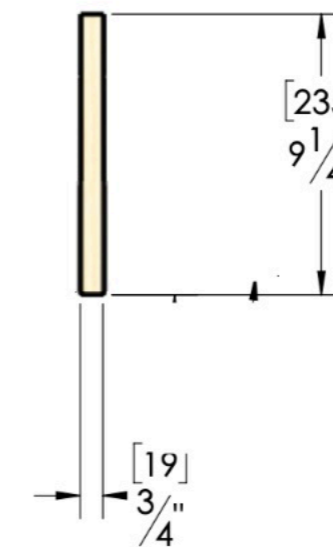
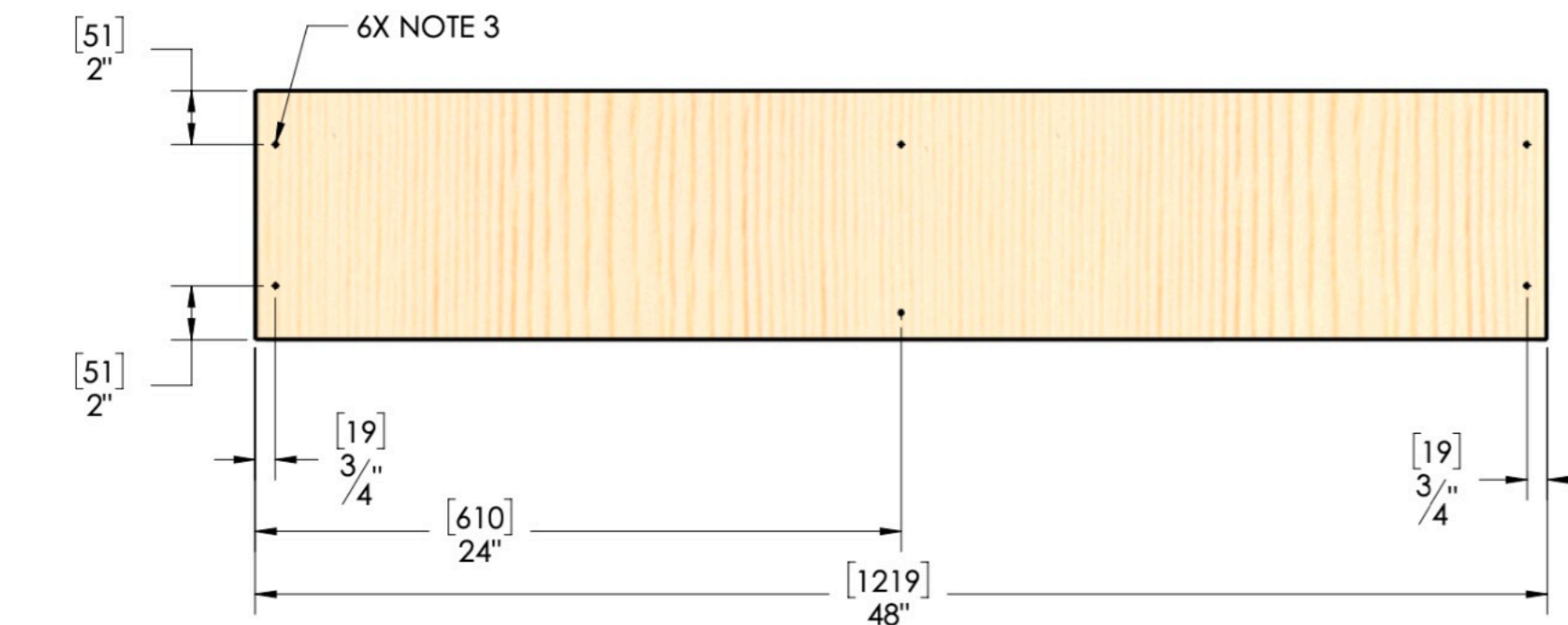


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ITEM # 3 - WALL BOARD - BACK

1. QTY: 1
2. MATL: 2 X 10.
3. NOTE: 3/32" (M3) PILOT DRILL OPTIONAL.



Step 5. use one of the three 48in long sections of the "two-by-ten" board as the back wall board (items #3)

Step 6. Predrill a pilot hole for the screw in the center bottom of one of the long edge at a 30 degree angle downward, about 1.5in from the long edge of the board and 24in or so from the short edge of the board. The goal is to aim for the center of edge of the horizontal bottom board once assembled

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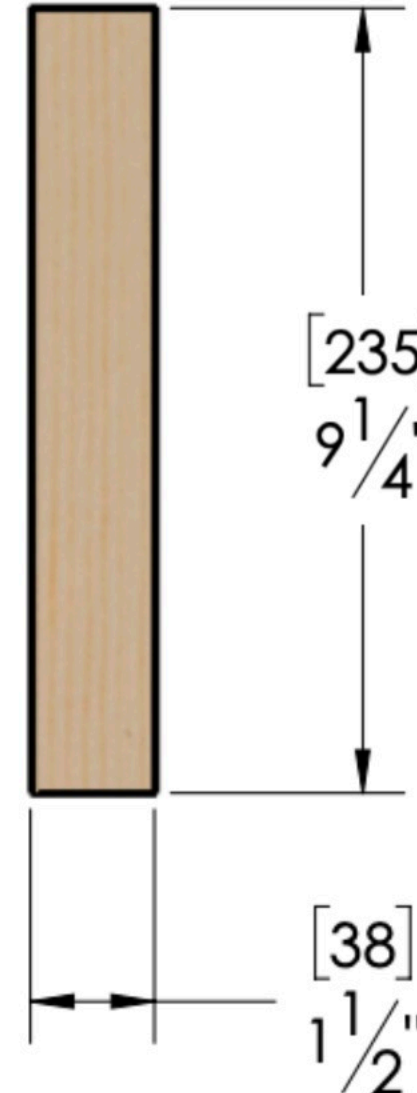
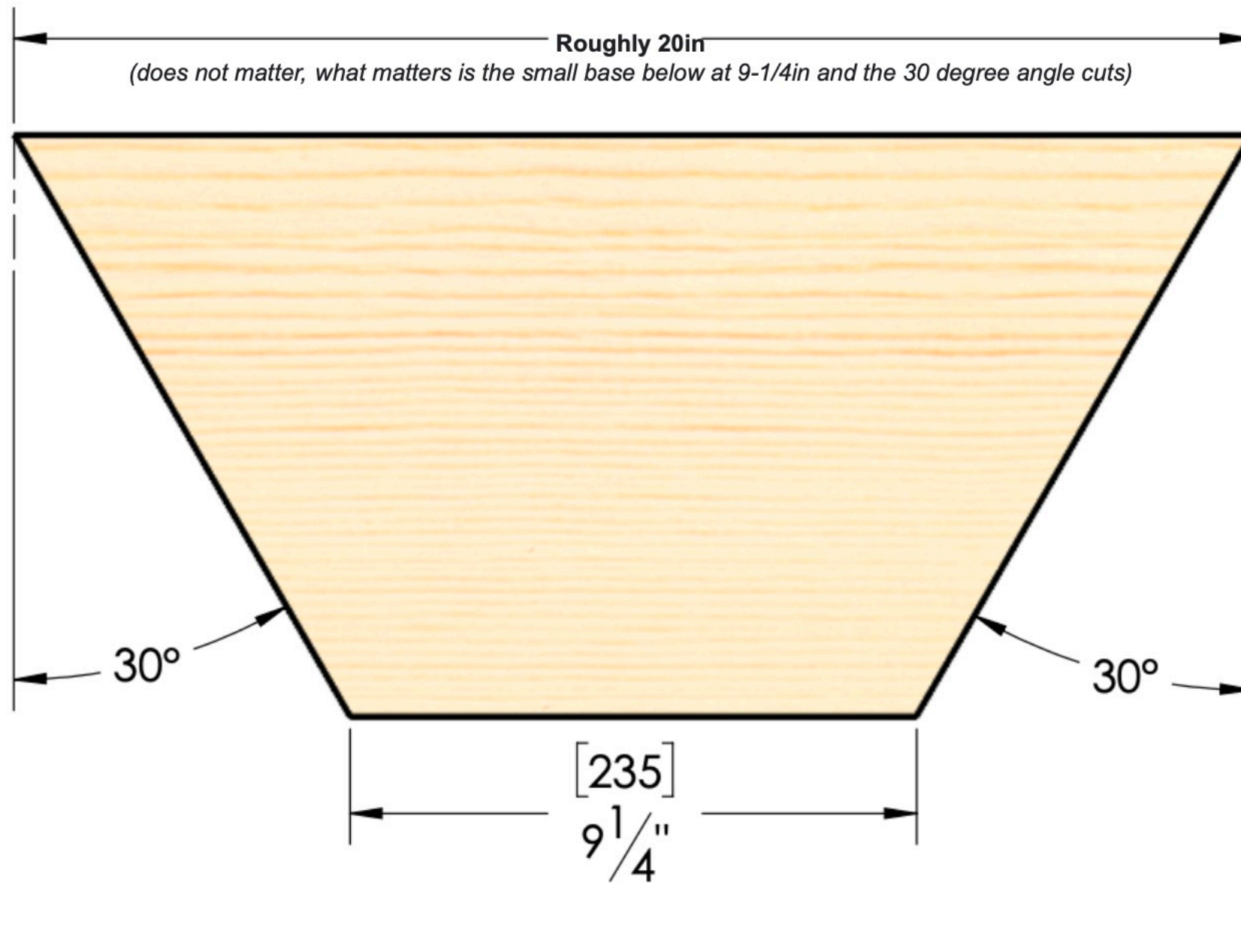


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ITEM # 4 - END CAPS

1. QTY: 2
2. MATL: 1-1/2" x 9-1/4" x 20ish"



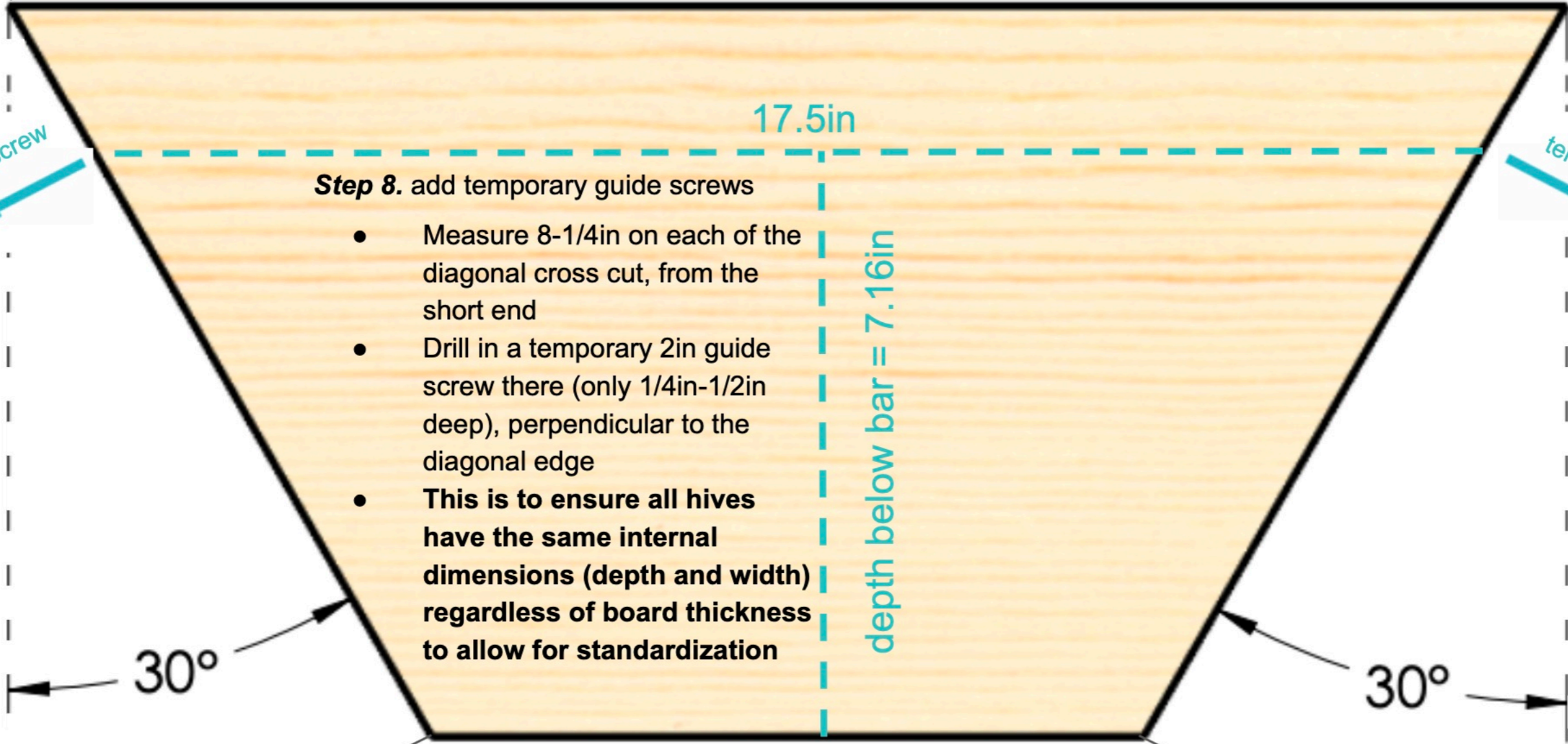
Step 7. Cut the end caps out of the leftover "two-by-ten" board

- cut one end at 30 degrees angle from the tip of the board.
- Flip the board over from you toward the saw.
- On the shorter of the lengths, measure 9-1/4"
- Cut from that point at 30 degree angle (it will be opposite angles, like on the image), shaping the piece as a half hexagon, trapezoidal end piece
- This is your first end cap.
- Repeat, as you will need end caps for the box and one for the center partition

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Roughly 20in
(does not matter, what matters is the small base below at 9-1/4in and the 30 degree angle cuts)



- Step 8.** add temporary guide screws
- Measure 8-1/4in on each of the diagonal cross cut, from the short end
 - Drill in a temporary 2in guide screw there (only 1/4in-1/2in deep), perpendicular to the diagonal edge
 - **This is to ensure all hives have the same internal dimensions (depth and width) regardless of board thickness to allow for standardization**

17.5in

depth below bar = 7.16in

[210]
8 1/4"

30°

30°

[210]
8 1/4"

[235]
9 1/4"



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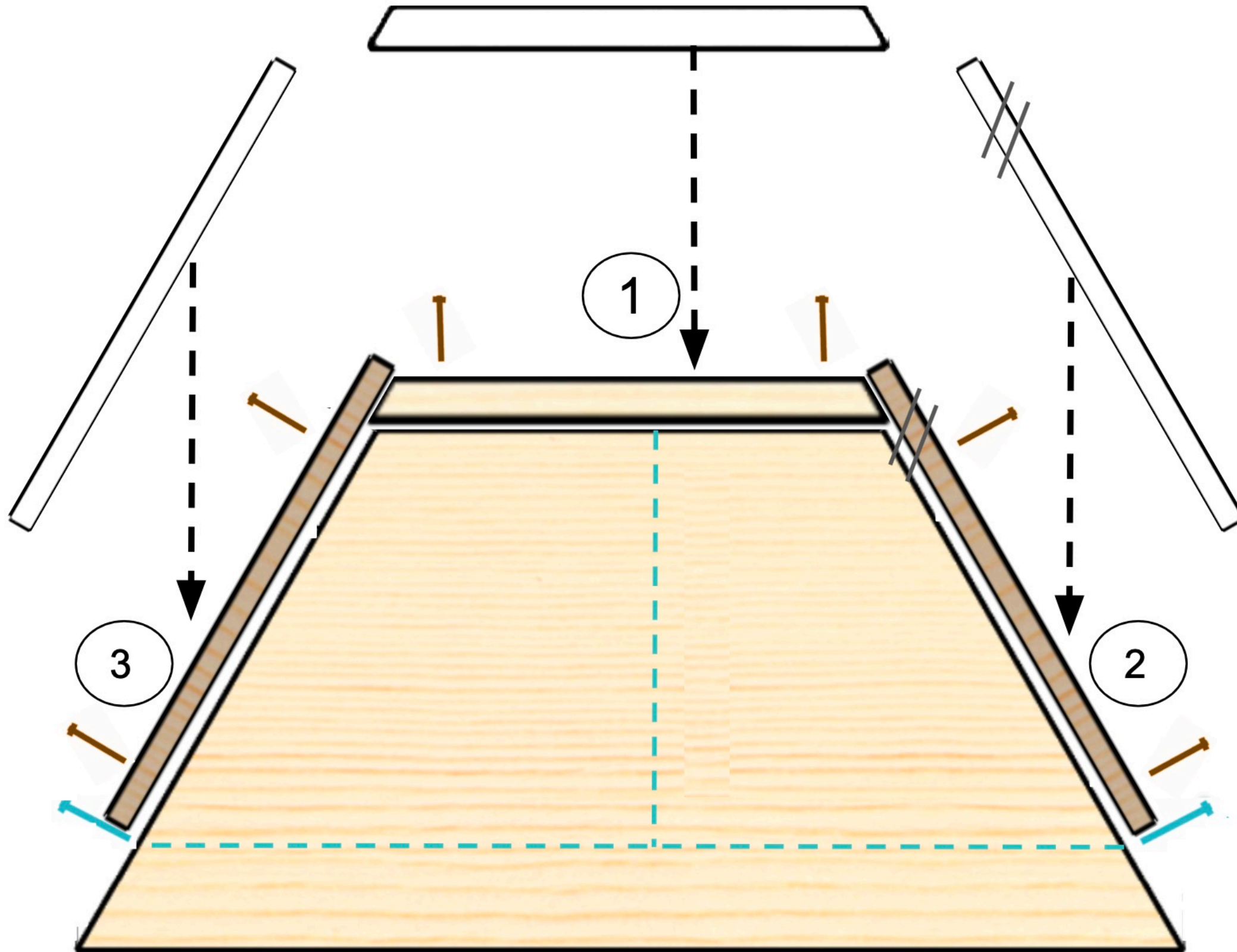


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Step 9. assemble the box **UPSIDE DOWN** using the temporary guide screws as support

- 1. Attach the end caps to the bottom board**
 - Predrill and attach 4 screws at each corner of the narrower/beveled side of the bottom board (item #1)
 - Attach to bottom board to the matching width of the short end of each trapezoidal end cap (item #4), making sure the wider 9-1/4in side of the bottom board contacts with the short end of the end cap.
- 2. Attach the front wall board**
 - Slide down and rest the front wall board onto the temporary guide screw, matching its edges to the outer edge of the end caps and ensuring the entrance hole is near the short end of one of the end cap
 - Secure the front wall board to the end caps using 2 screws for each end cap
- 3. Attach the back wall board**
 - repeat the steps followed for the front wall board

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ITEM # 9 - BAR

1. QTY: 10
2. MATL: 1-3/8" x 1-1/2" x 20"

Step 10. Cut the bars

- Cut the "two-by-ten-by-8" board into four **20in** sections lengthwise
- Rip each 20in section into 1-3/8 wide bars of 20in long (they will be 1.5in deep, the depth of the 2x10)
- Keep any leftover strips for shims.

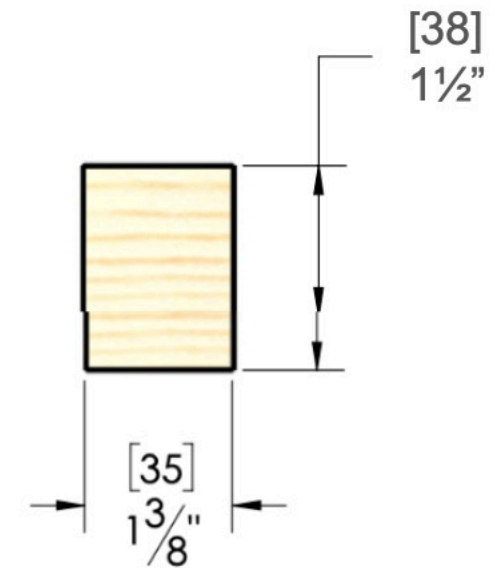
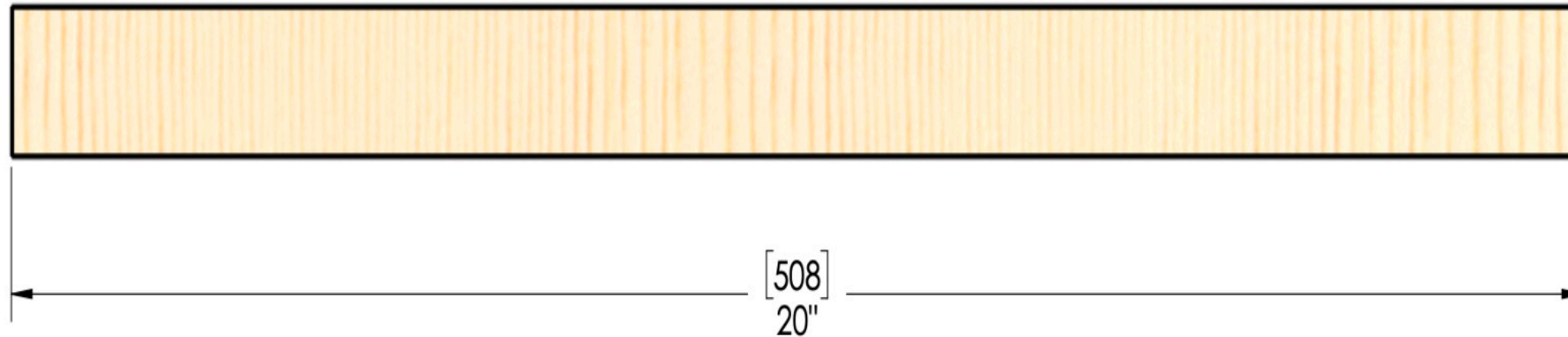
Each 20in section should make for 6 bars and possibly a shim



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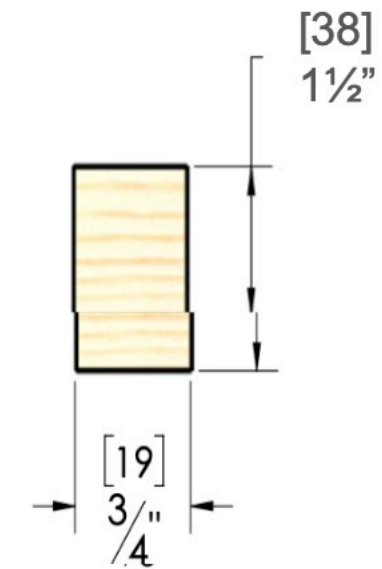
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ITEM # 10. SHIM

1. QTY: 1
2. MATL: 3/4 " x 1-1/2" x 20" and other widths

Step 11. Cut additional shims as needed, of various widths (3/4", 1/2", 1/4", etc)



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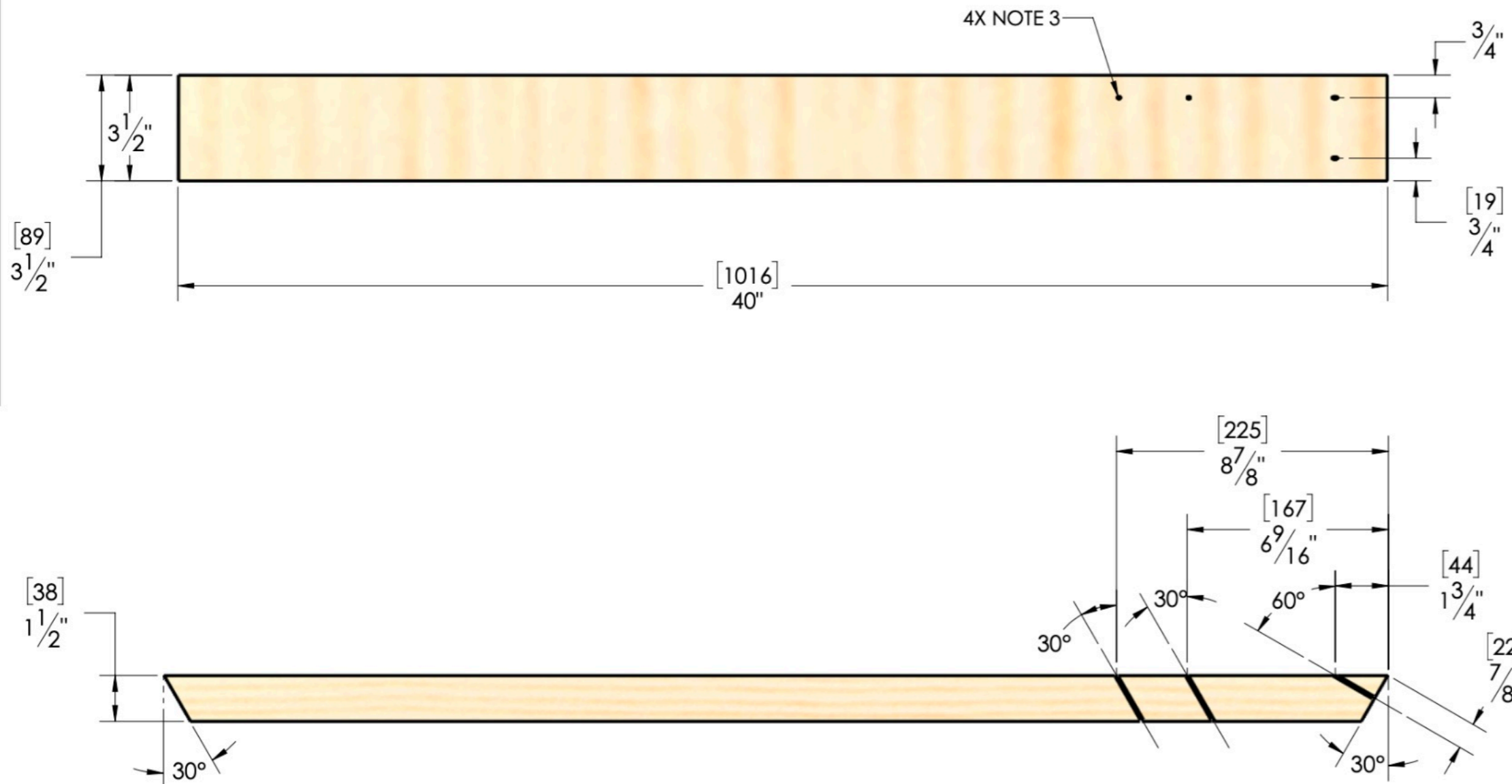


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ITEM # 6 - LEG BOARD - LEFT

1. QTY: 2
2. MATL: 2 X 4.
3. NOTE: 3/32" (M3) PILOT DRILL OPTIONAL.



Step 11. Cut a LEFT leg as follows:

- Trim a 2 by 4 vertically on one end at a 30 degree angle, per the drawing
- Measure 40in at the top (longest side) or whatever the length you prefer to adjust the hive's height
- Cut the board through the width of the board at the 40in mark at the opposite angle, per the angle.
- Repeat for a second LEFT leg
- Drill the top of both LEFT legs with the pilot screws as described on the drawing

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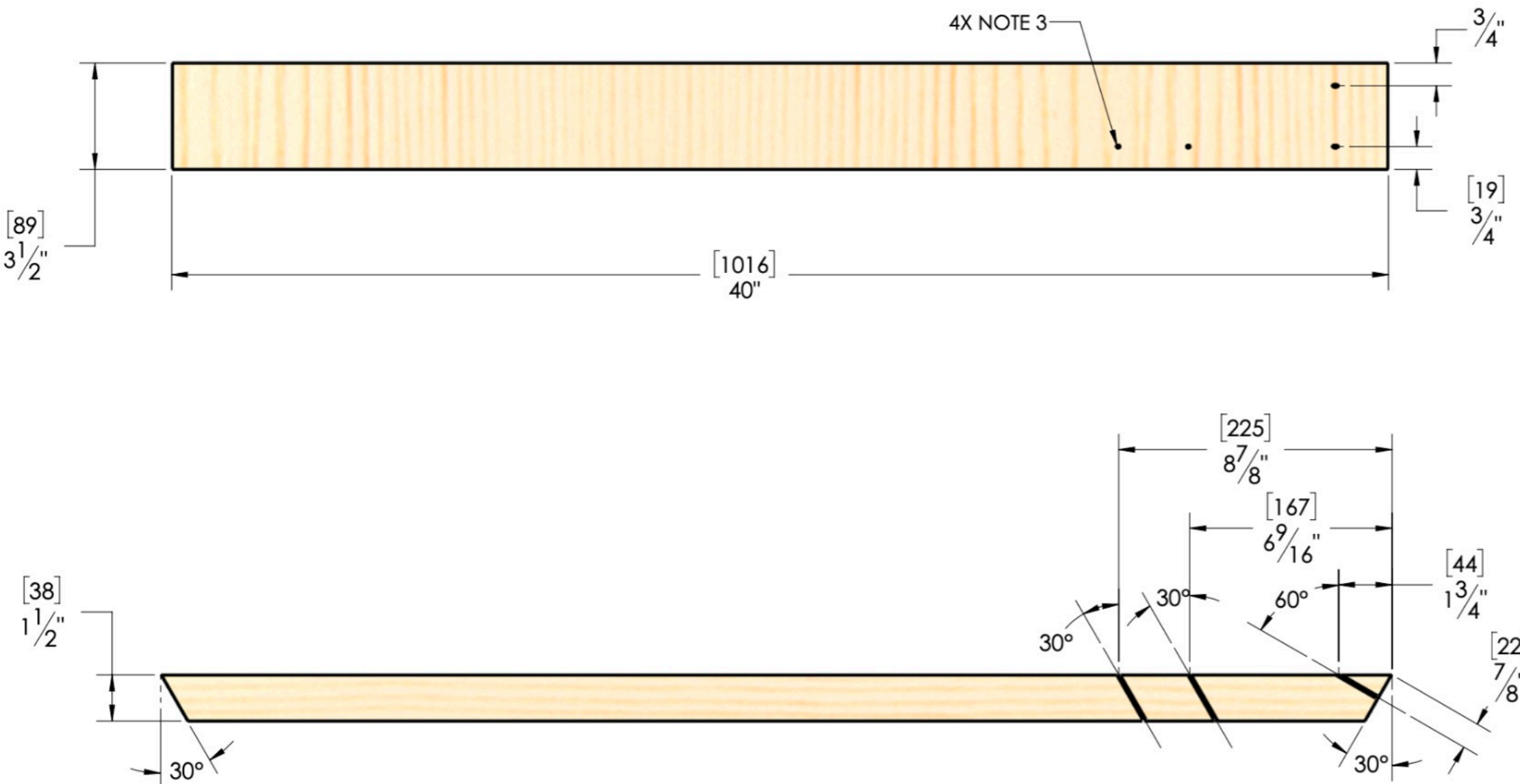


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ITEM # 5 - LEG BOARD - RIGHT

1. QTY: 2
2. MATL: 2 X 4.
3. NOTE: 3/32" (M3) PILOT DRILL OPTIONAL.



Step 10. Cut a RIGHT leg as follows:

- Trim a 2 by 4 vertically on one end at a 30 degree angle, per the drawing
- Measure 40in at the top (longest side) or whatever the length you prefer to adjust the hive's height
- Cut the board through the width of the board at the 40in mark at the opposite angle, per the angle.
- Repeat for a second RIGHT leg
- Drill the top of both RIGHT legs with the pilot screws as described on the drawing

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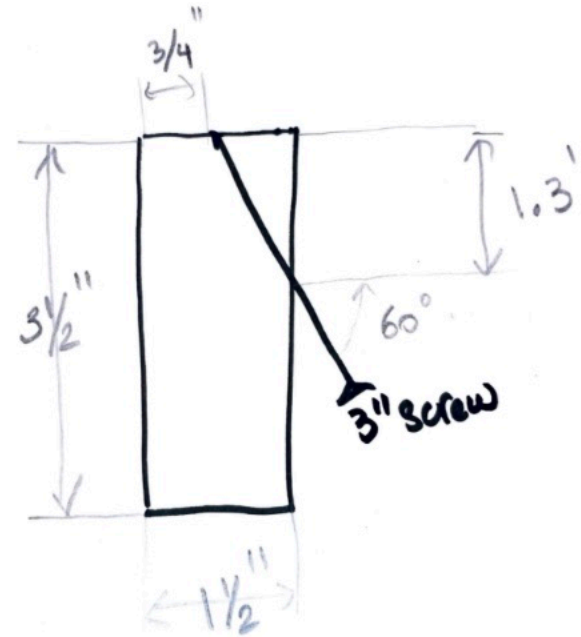
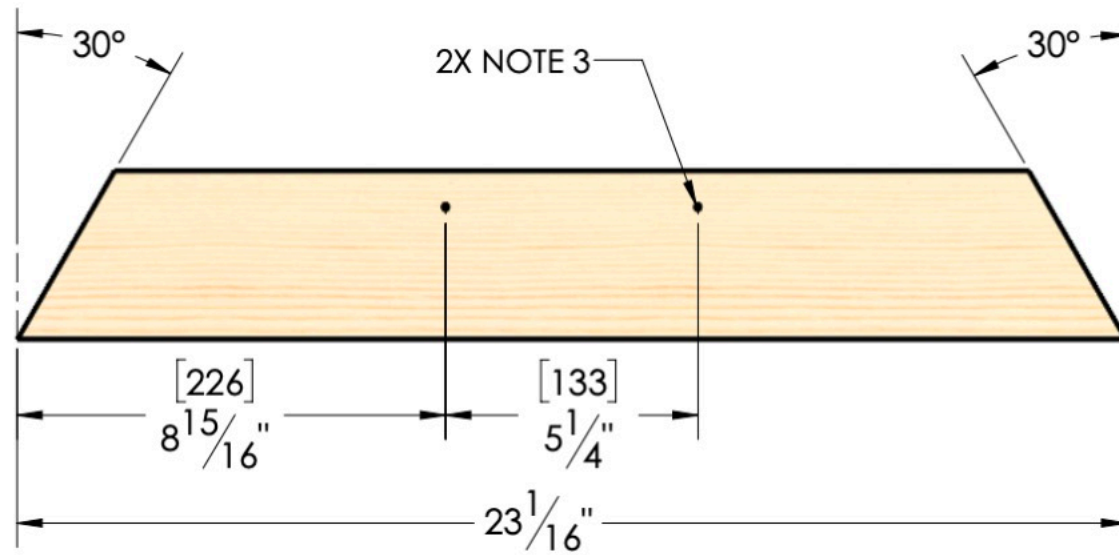


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ITEM # 7. LEG SUPPORT

1. QTY: 2
2. MATL: 2 X 4.
3. NOTE: 3/32" (M3) PILOT DRILL OPTIONAL.



Step 12. Cut leg supports as follows:

- Trim a 2 by 4 vertically on one end at a 30 degree angle, per the drawing
- Measure $23\frac{1}{16}$ in at the bottom of the trapezoid (longest side)
- Cut the board at the 40in mark at the opposite angle, per the angle.
- Drill the top of the trapezoid (short end) with the pilot screws as described on the drawing
- Repeat for a second leg support

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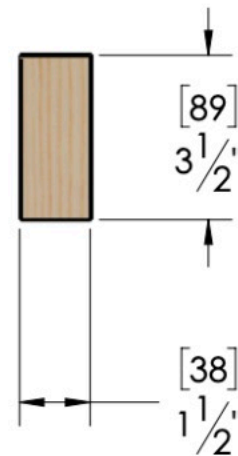
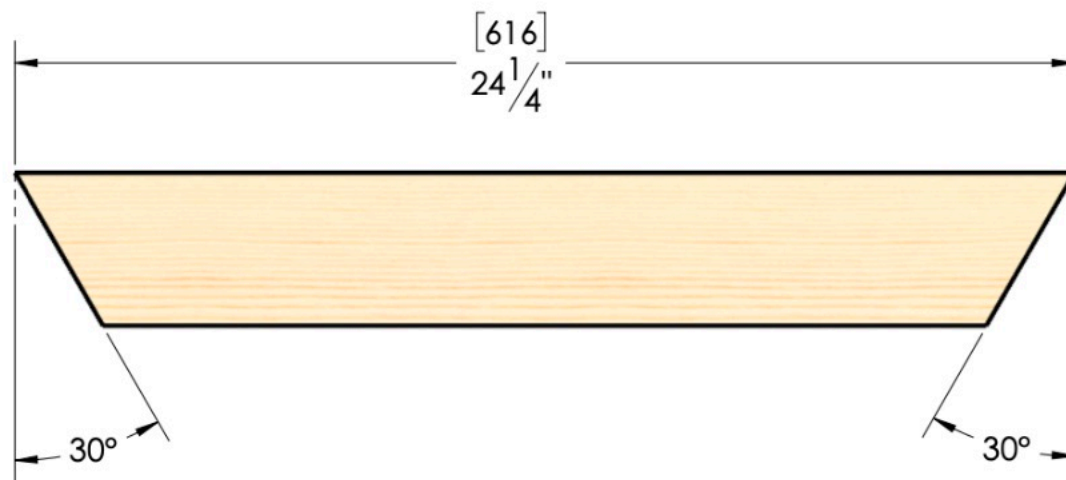


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ITEM # 8- ROOF BOARD

1. QTY: 2
2. MATL: 2 X 4.



Step 13. If you would like a simple hinged top, cut 2 roof boards as follows:

- Trim a 2 by 4 vertically on one end at a 30 degree angle, per the drawing
- Measure $24\frac{1}{4}$ in at the top of the trapezoid (longest side)
- Cut the board at the $24\frac{1}{4}$ in mark at the opposite angle, per the angle.
- Repeat for a second roof board