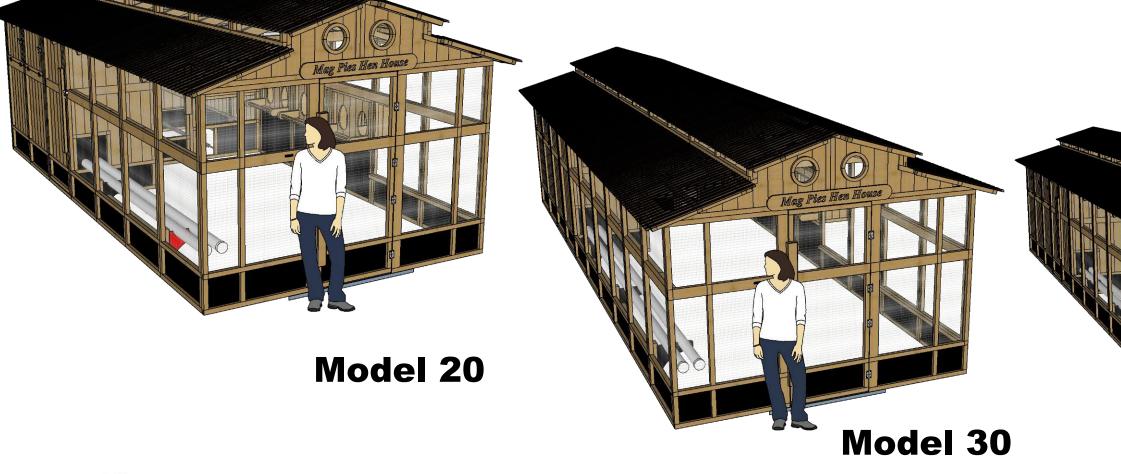
# roost&root Find your inner farmer.

# Heritage Series Chicken Coops™





Help Text-line: 512-596-5200 EMAIL: support@roostandroot.com

VOICE: 877-741-COOP Assembly Support ext 3







Copyright ® Endure Products, LLC dba Roost & Root... all rights reserved... This document is provided to you for your own personal limited use as a paying customer to assemble your coop. We consider these instructions company intellectual property and are granting you limited personal use only. Do not copy or distribute without written permission of Roost & Root. We claim all available Federal protection for the name Heritage Chicken Coop™, our protected designs and trade dress as is allowed by any and all Federal intellectual property protection laws. We invest heavily in your coop and work very hard to do a good job and it is only fair that our workers, vendors and future customers benefit from our hard work.

# **Assembly Instructions** for All Models



# **YouTube** Assembly Overview Video

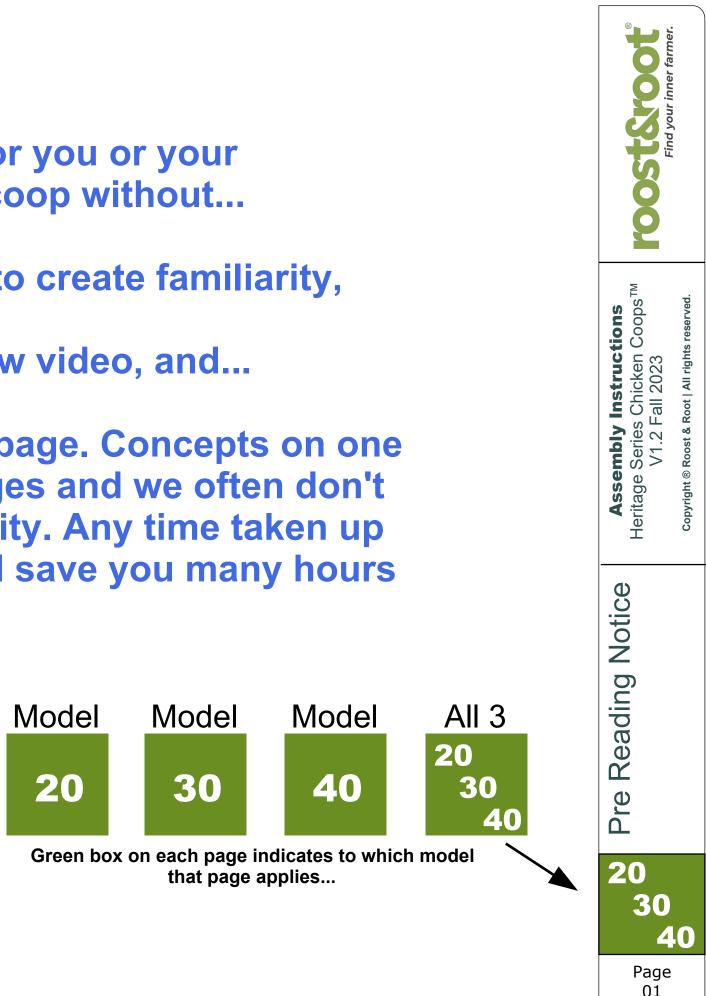
It will be pretty much impossible for you or your contractor to assemble your new coop without...

(1) pre-reading these instructions to create familiarity,

(2) watching our assembly overview video, and...

(3) following instructions on each page. Concepts on one page are built upon in the next pages and we often don't repeat in hopes of saving complexity. Any time taken up front going through everything will save you many hours (and grief) in the end.

> These Instructions Cover All 3 Models of the Heritage Coop...



# Take Note...

- Your new coop won't gain full strength until completed. It must be protected from high winds until completed and properly anchored.
- Having a very level very flat area is required for the coop to assemble properly. It's impossible to overstate how much easier and better assembly will go with things square and level. A properly prepared concrete footer is preferred.
- We estimate about 60, 75, and 90 man hours to asseble the model 20, 30 and 40 Heritage Coops, respectively. Two people are required for the build and three can be helpful.
- You will need a chuck type drill (preferably cordless, preferably two) and a hammer and a tape measure. Everything else is provided.
- We think we put extra screws and other fasteners in the kit. If you run out, one of us goofed up :-)
- Using the instructions is part reading, part illustrations, part photos and part watching videos. Please know that we value your input to an ongoing process. We try hard but writing good instructions on complex objects for a variety of learning styles is an imperfect science. We're genuinely sorry for any confusion our instructions cause.
- We indicate in the instructions where all screws go. All of the screws in the kit are aggressive enough to self drive. If concerned, we also include a pilot bit. Position, count and direction of screws are indicated by various colored arrows.
- When we build your coop the cedar wood has about 12% moisture. If you wait a long time to assemble your coop it may dry out and shrink by up to 1/8". When it get rained on, it will swell back. Human error, machine error and believe it or not computer error can cause parts to be off by as much as 1/8th inch. Most of the design can tolerate small errors. Where it cannot we give you a measurement that must be adhered to. Like doors, for instance.
- Panels are not marked and we omit a section in the instructions for parts ID to save complexity. All wire sides face inward and the 3D renderings will allow you to identify panels as you go. Spacing them out for easy ID is advised.



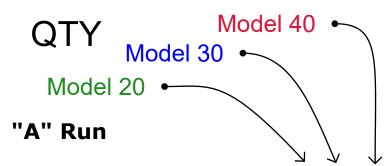
We include a gallon of Eco Sealer and a sprayer to treat the bottom rails of ground contact panels if you desire. Even panels that sit on concrete footer will benefit. Cedar is proven to last 10-15 years outdoors even when in ground contact. Sealing bottom rails will extend this time. This product allows re-sealing and even color staining after application. In our opinion it is a premium grade product. We do not recommend painting cedar but you can. Whatever you decide to do, a product that allows the wood to breathe is best. Keep toxicity in mind too. With modest care, we expect your coop to last 20 - 25 years.



Best practice would be to pour a concrete footer. Guidance is found in the following pages. You can most certainly build this coop directly on the ground. In either case, great care must be taken to make the surface both level and square. A concrete footer will simplify proper anchoring which is **required** to prevent high wind damage both during and after construction.



# Parts Listing All Models



- A1 36" Wired Side Panels 6|10|13
- A2 Left Front Panel
- A3 Right Front Panel
- A4 Door

### "B" Roost

- B1 36" Roost Side Panels 4|4|6
- B2 L&R Roost Back Panels
- B3 Back Middle Roost Panel
- B4 Roost Entry Door
- B5 Roost Side Door Panel
- B6 Model Roost Bunk Set 2|2|4
- B8 Bunk Ramp

### "C" Egg Box

- C1 36" Eqg Box Panels 3|4|5
- C2 Egg Box Assemblies 3|4|5
- C3 Egg Box Roof Panels 22" 6|8|10

D1 Left Front Gable

"D" Roof

- D2 Right Front Gable
- D3 Left Back Gable
- D4 Right Back Gable
- D5 Left Mid Gable
- D6 Right Mid Gable
- D7 Left Notched Rafter Assembly 3|5|5
- D8 Right Notched Rafter Assembly 3|5|5
- D9 Left No Notch Rafter Assembly 2|3|6
- D10Right No Notch Rafter Assembly 2|3|6 D11Collar Tie 5|8|11

D15Left Front Upper Purlin Panel D16 Right Front Upper Purlin Panel D17Left Back Upper Purlin Panel D18 Right Back Upper Purlin Panel D19L&R Mid Upper Purlin Panel 4|6|10 D20Left Front Lower Purlin Panel D21 Right Front Lower Purlin Panel D22Left Back Lower Purlin Panel D23 Right Back Lower Purlin Panel D24L&R Mid Lower Purlin Panel 4|6|10

D30Left Front Transom Panel D31Right Front Transom Panel D32Mid Transom Panels 4|6|10 D33Left Back Transom Panel D34Right Back Transom Panel

D40Upper Roof Panels 32" 26|36|44 D41Lower Roof Panels 40" 26|36|44 D42Ridge Cap 7|9|11

### "E" Trim

- E3 Optional Name Board

### "F" Storage Room

- F1 Left Exterior Door Panel
- F2 Right Exterior Door Panel 011
- F3 Ceiling Panel
- Roost Wall Panel F4
- Run Wall Panel F5
- Interior Door Panel F6
- F7 Interior Side Door Panel 011
- F8 Bottom Wall Stiffener 011

### "G" Misc

- G1 FeedWorx Feeders 1|2|2
- G2 Easy Fill Waterer Parts Set
- G3 Water Door Slide Set
- G4 Egg Box Liners 6|8|10

in illustrations are not labeled. provided for proper ID.

```
E1 Upper 2x4 Wall Stiffener Set 6 9 11
E2 Lower 2x2 Wall Stiffener Set 4|5|6
E4 Bird Stop Trim Package 14|20|26
```

```
Parts that are obvious to identify
Parts that could be confusing are
both labeled and dimensions are
```



# **Provided Supplies Listing** All Models

#### Model 20 Supply List

- (12) Standard **OR** Freeze Guard Drinkers
- (1) Eco Sealer 1Gal
- (1) Eco Sealer Sprayer
- Small Bottle of Gorilla Glue (1)
- Ratchet Strap (1)
- (1) 4' Level
- (1) Automatic Door Kit
- (1) Roll of String
- (1) Countersink Bit
- (1) 5/32 Drill Bit
- (3) 5lb Boxes 3" T-25 Screws
- (1) 1lb Box T-20 1 1/4" Screws
- (1) 1lb Box T-20 1 5/8" Screws
- (24) 4 1/2" T25 GRK Screws
- (2) 400 count 1<sup>1</sup>/<sub>2</sub> #9 Roof Screws
- (10) 3/4" Bolt Nut 2 Washer Sets
- (3) Bolt Style Gate Latches & Hardware
- (16) Stainless Steel Hinge Screws
- (1) 3" Hook & Eye Door Catch
- (7) Gravity Gate Latches & Screw Sets
- (12) D-Ring Anchors & Bolt Sets
- (1) Small SOCKiT Box & Screws
- (10) Spring Snap "Clips"
- (2) Bit Holders
- (2) T25 Bits
- (1) T20 Bit
- Phillips Bit (1)
- PVC Glue (1)

#### Model 30 Supply List

(15) Standard **OR** Freeze Guard Drinkers (1) Eco Sealer 1Gal Eco Sealer Sprayer (1)Small Bottle of Gorilla Glue (1)Ratchet Strap (1)(1) 4' Level (1) Automatic Door Kit Roll of String (1)Countersink Bit (1)5/32 Drill Bit (1)(4) 5lb Boxes 3" T-25 Screws (1) 1lb Box T-20 1 1/4" Screws (1) 1lb Box T-20 1 5/8" Screws (36) 4 1/2" T25 GRK Screws (3) 400 count  $1\frac{1}{2}$  #9 Roof Screws (16) 3/4" Bolt - Nut - 2 Washer Sets (2) Bolt Style Gate Latches & Hardware Dual Gate Style Latch & Hardware (1)(16) Stainless Steel Hinge Screws (1) 3" Hook & Eye Door Catch (7) Gravity Gate Latches & Screw Sets (16) D-Ring Anchors & Bolt Sets (1) Small SOCKiT Box & Screws (10) Spring Snap "Clips" (3) Bit Holders (3) T25 Bits (1) T20 Bit Phillips Bit (1)PVC Glue (1)

#### Model 40 Supply List

- (1) Eco Sealer 1Gal
- (1)Eco Sealer Sprayer
- (1)
- Ratchet Strap (1)
- (1) 4' Level
- (1) Automatic Door Kit
- (1) Roll of String
- (1) Countersink Bit
- (1) 5/32 Drill Bit
- (5) 5lb Boxes 3" T-25 Screws
- (1) 1lb Box T-20 1 1/4" Screws
- (1) 1lb Box T-20 1 5/8" Screws
- (48) 4 1/2" T25 GRK Screws
- (4) 400 count  $1\frac{1}{2}$  #9 Roof Screws
- (2)
- (1)
- (1) 3" Hook & Eye Door Catch
- (20) D-Ring Anchors & Bolt Sets
- (1) Small SOCKiT Box & Screws
- (12) Spring Snap "Clips"
- (3) Bit Holders
- (3) T25 Bits
- (1) T20 Bit
- Phillips Bit (1)
- (1)PVC Glue

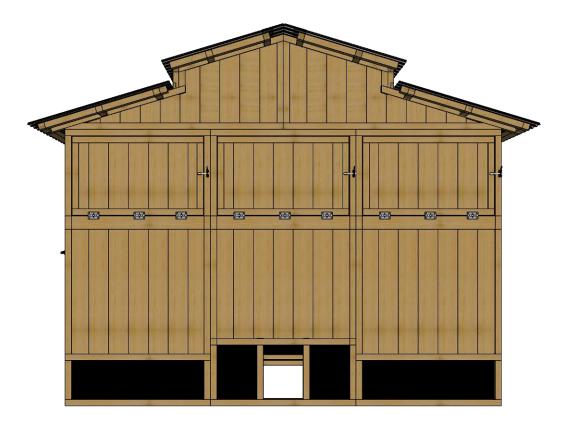
(21) Standard **OR** Freeze Guard Drinkers Small Bottle of Gorilla Glue

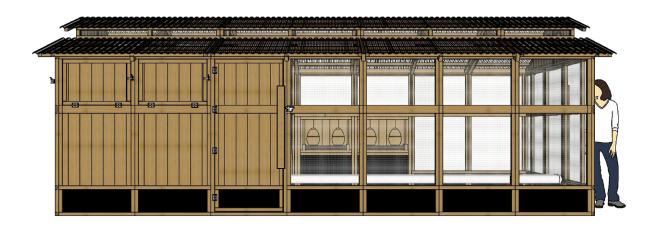
(22) 3/4" Bolt - Nut - 2 Washer Sets Bolt Style Gate Latches & Hardware Dual Gate Style Latch & Hardware (16) Stainless Steel Hinge Screws (9) Gravity Gate Latches & Screw Sets

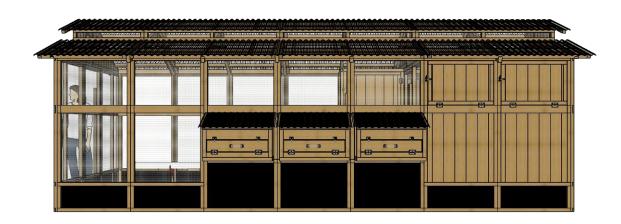


## Front











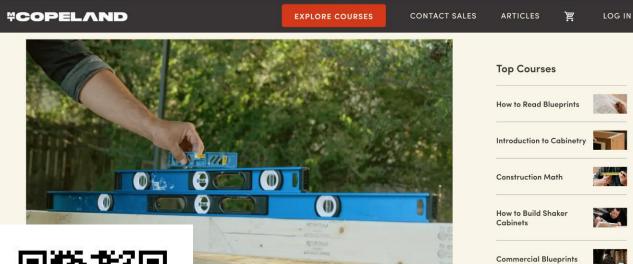


Model 20 coop used for illustration...

# Right



https://mtcopeland.com/blog/plumb-level-square-and-true-what-they-mean-and-how-to-measure/

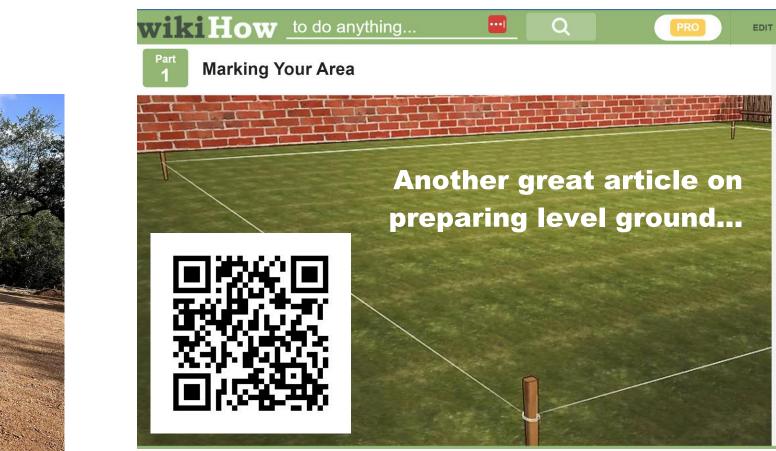






### **Good resource for squaring** and leveling...

https://www.wikihow.com/Level-Ground



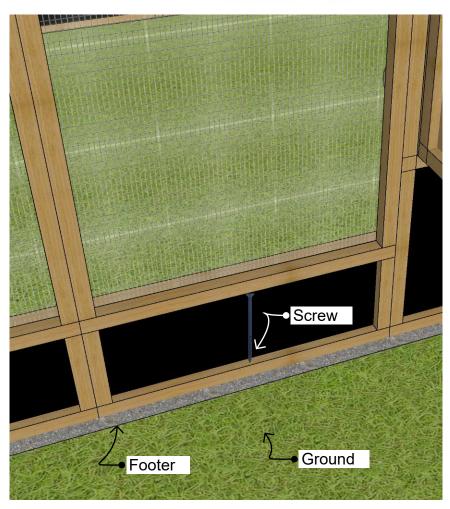




### YOU MUST ANCHOR YOUR COOP: 3 Possible ways to anchor your coop... there are more, here are three.

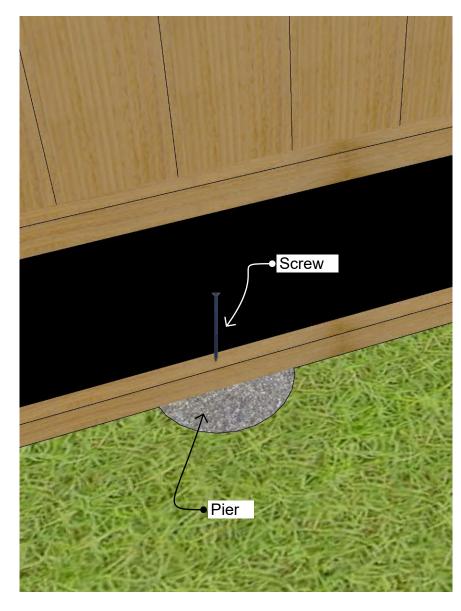
Screw in one or two Tapcon screws into the bottom rails of panels and into your concrete footer. This is done after you're absolutely sure walls are set and won't be moved. A percussion style drill is best. Let your footer dry for at least 2-3 weeks or you'll risk fracturing. Center screw in bottom rail.



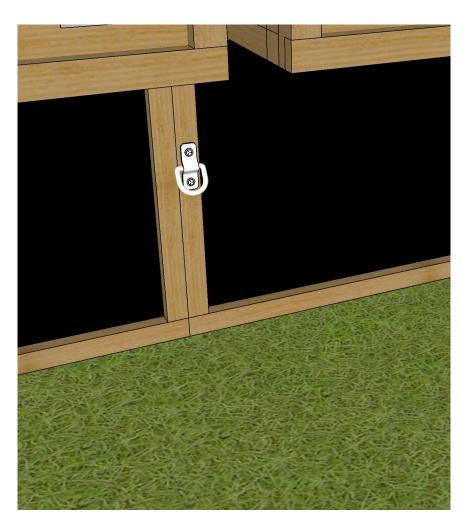


1. Concrete Screws To Concrete Footer

Instead of pouring a complete perimeter footer, concrete "piers" can be poured every 3 to 6 feet and near corners. The same 3/16 3-1/4 Tapcon screw can be used to screw down rails into piers. If you have bedrock near the surface, pour piers where they can reach into the bedrock. You can also drive 3/8 rebar down into the pier hole and leave rebar below grade but into pier hole... so that when concrete is poured the rebar "connects" the pier into the bedrock. Same wait time applies as to footer.



There's nothing wrong with building your coop directly on the ground and securing with the included D-Ring Anchoring Kit. D-Rings are comprised of the ring, the holder, 2 bolts and 2 t-nuts each. They are placed along the sides and near the corners. Different styles of anchors are then used to "anchor" to the ground. Our video we use for our greenhouse anchoring is a good primer. You will need to choose and purchase the proper types of anchors and tie devices for your area and your preference.



2. Concrete Screws To Concrete Pier

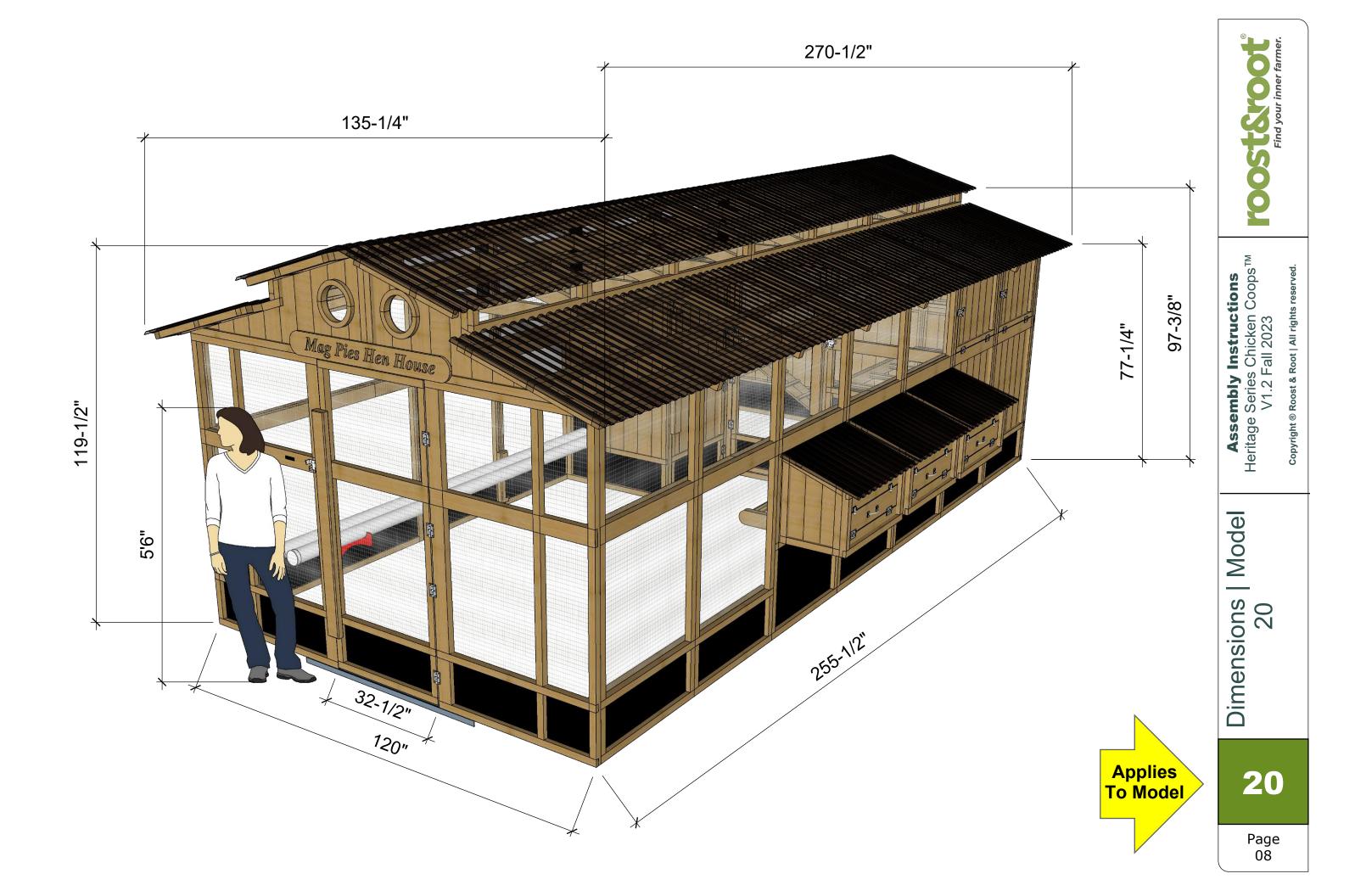


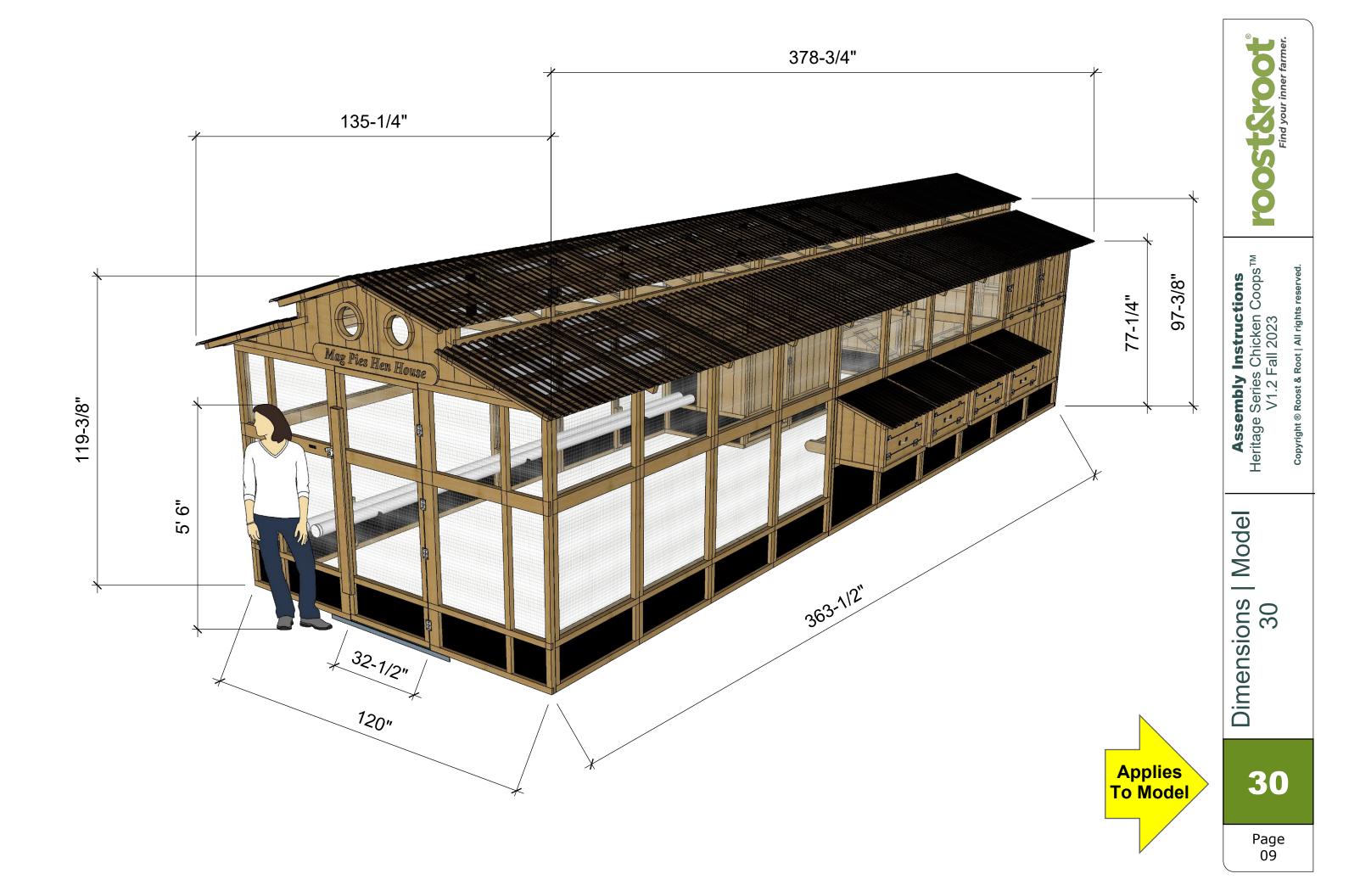
Be careful. Coop must be anchored to avoid damage from excessive winds during and after construction. We do not know your ground conditions or your locale and whether you live in an area subject to excessive winds. Please seek local guidance if you are unsure. Coop is heavy and very wind resistant. But for extreme conditions anchoring is necessary. Many of our products have survived hurricane force winds. Panel or roof strength isn't the main worry... securing prevents the coop from "toppling" or walls moving in high winds.

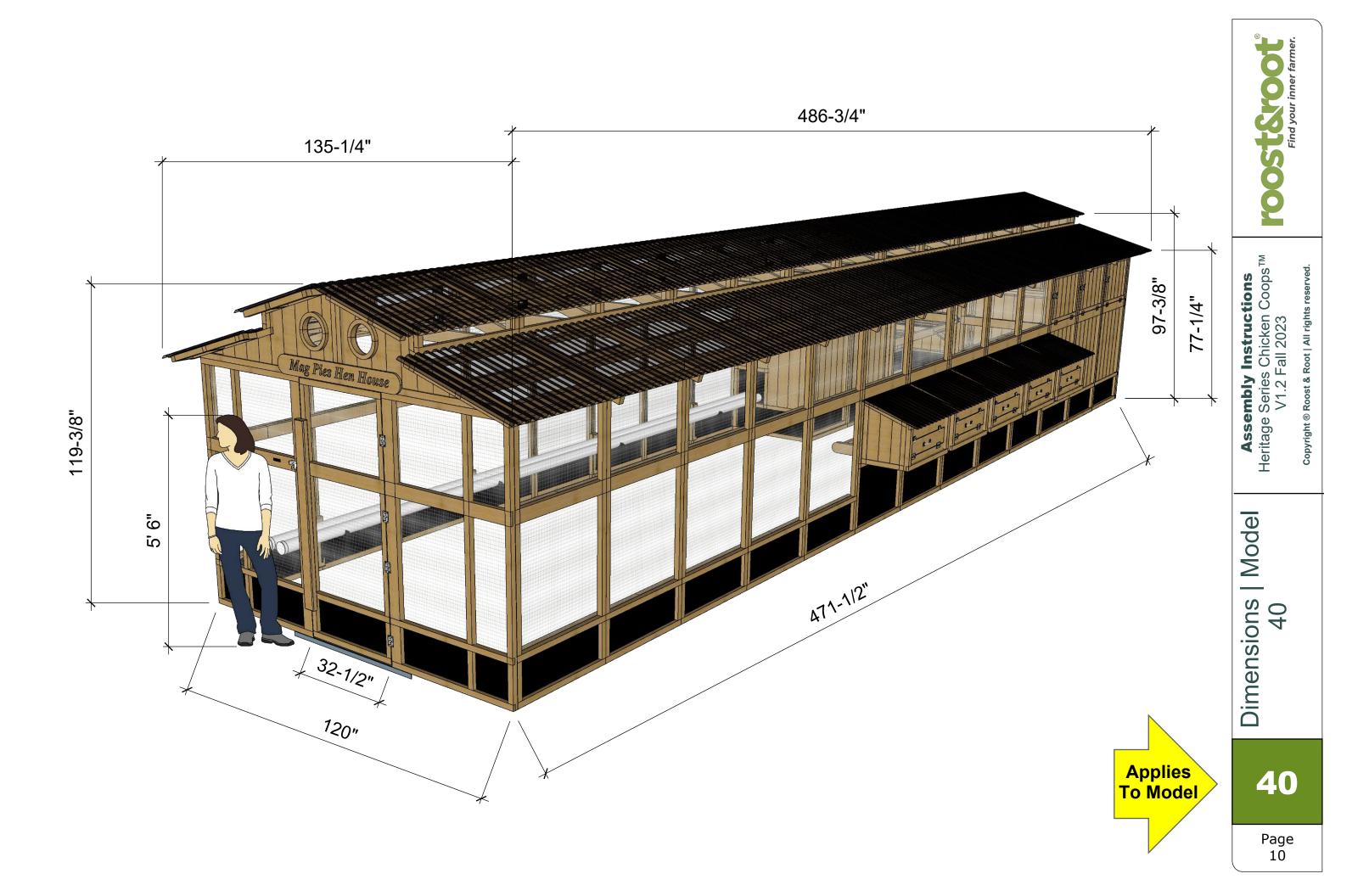


#### 3. D-Rings & Stakes



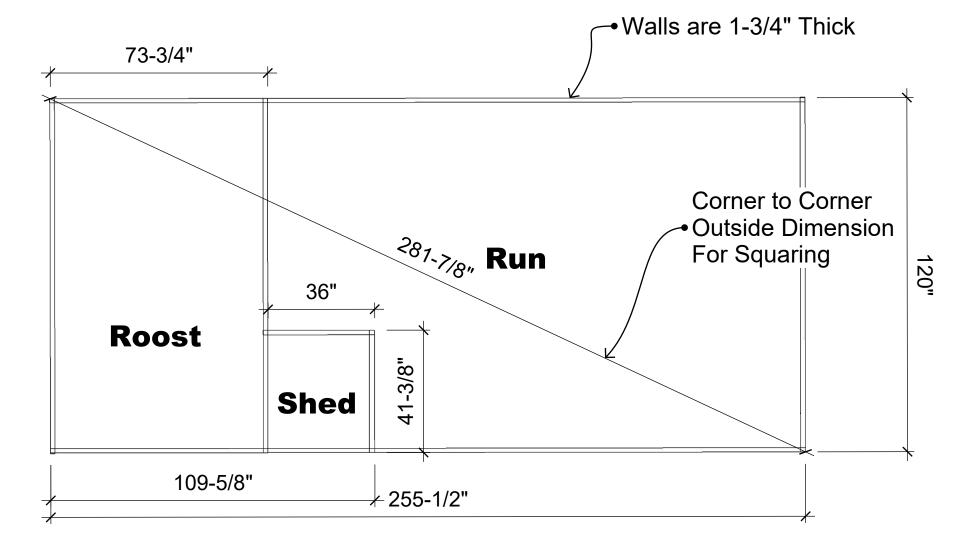






**Note:** If a concrete footer is poured and it is flush with ground level, you can omit pouring footer for interior roost and shed walls. If it is elevated any above ground level, you should pour footer under interior walls too for support. Pouring a concrete footer will simplify leveling and squaring and provide the best way to anchor.

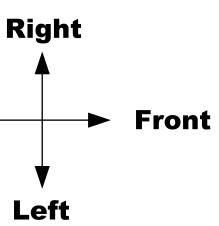
Back -



\* Measurements can vary by up to 1/8" and rough cedar and shop variations can add up to an inch over long distances. A 6" wide or greater footer with walls centered will provide margin for error. If your footer is on slope, backfill inside of coop to the level of the footer with sandy loam dirt. Footer depth is a matter of preference and ground conditions. Set footer into rocky soil or at least 12" deep for anchoring purposes. Use of 1 or 2 Tapcon 3/16 (3-1/4") concrete screws in the bottom rail of each wall panel will provide good anchoring from wind. Make sure coop is level and square before anchoring.

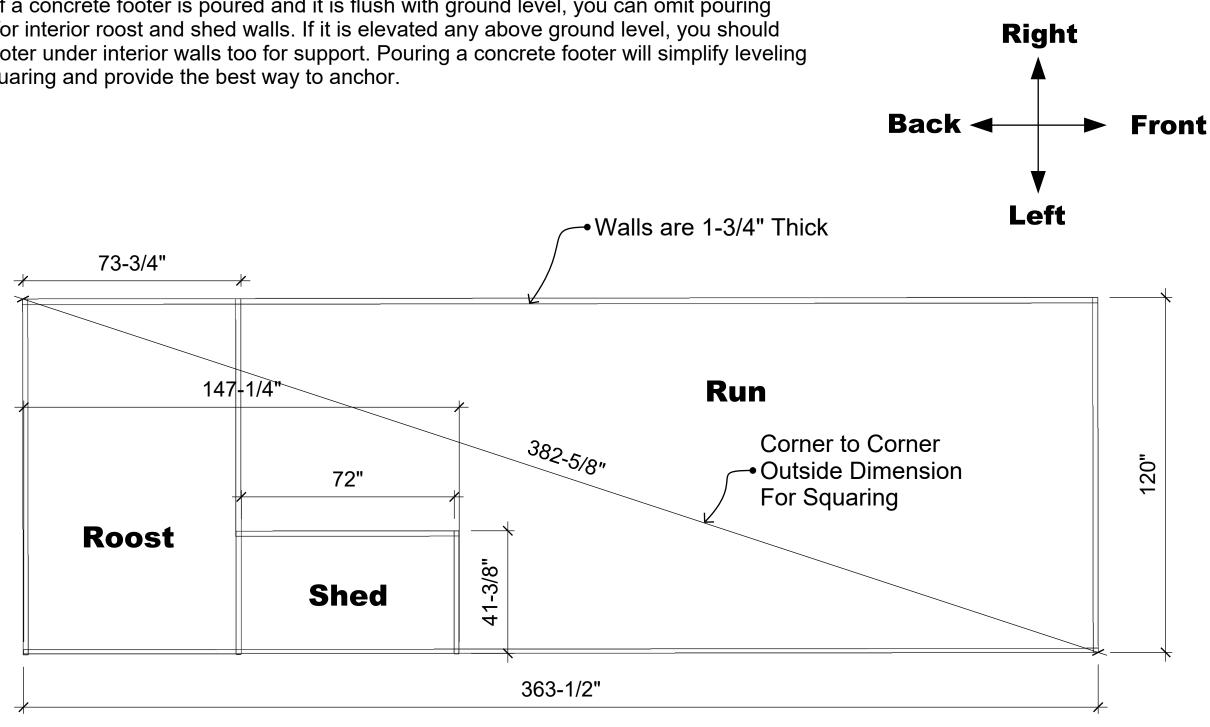


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**Note:** If a concrete footer is poured and it is flush with ground level, you can omit pouring footer for interior roost and shed walls. If it is elevated any above ground level, you should pour footer under interior walls too for support. Pouring a concrete footer will simplify leveling and squaring and provide the best way to anchor.



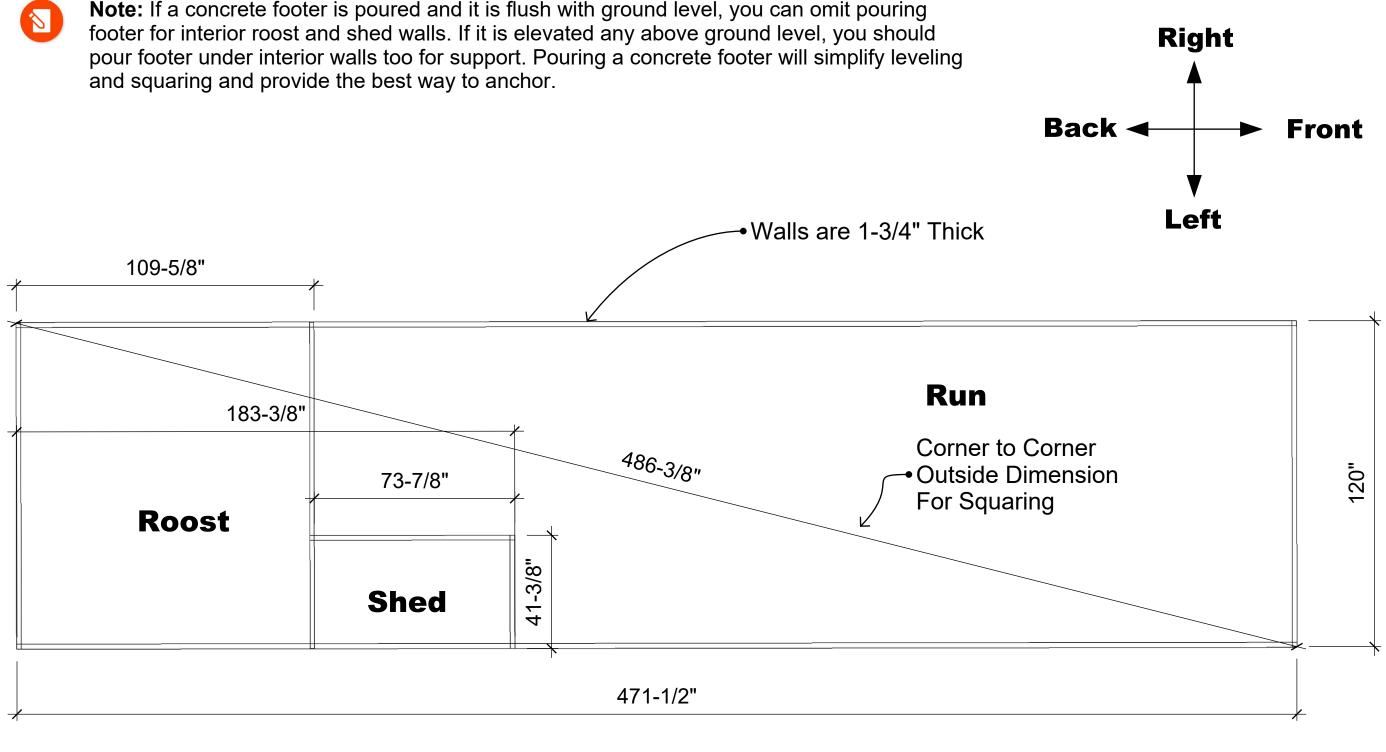
\* Measurements can vary by up to 1/8" and rough cedar and shop variations can add up to an inch over long distances. A 6" wide or greater footer with walls centered will provide margin for error. If your footer is on slope, backfill inside of coop to the level of the footer with sandy loam dirt. Footer depth is a matter of preference and ground conditions. Set footer into rocky soil or at least 12" deep for anchoring purposes. Use of 1 or 2 Tapcon 3/16 (3-1/4") concrete screws in the bottom rail of each wall panel will provide good anchoring from wind. Make sure coop is level and square before anchoring.



Be careful. Coop must be anchored to avoid damage from excessive winds during and after construction. We do not know your ground conditions or your locale and whether you live in an area subject to excessive winds. Please seek local guidance if you are unsure. Coop is heavy and very wind resistant. But for extreme conditions anchoring is necessary. Many of our products have survived hurricane force winds. Panel or roof strength isn't the main worry... securing prevents the coop from "toppling" or walls moving in high winds.



**Note:** If a concrete footer is poured and it is flush with ground level, you can omit pouring



\* Measurements can vary by up to 1/8" and rough cedar and shop variations can add up to an inch over long distances. A 6" wide or greater footer with walls centered will provide margin for error. If your footer is on slope, backfill inside of coop to the level of the footer with sandy loam dirt. Footer depth is a matter of preference and ground conditions. Set footer into rocky soil or at least 12" deep for anchoring purposes. Use of 1 or 2 Tapcon 3/16 (3-1/4") concrete screws in the bottom rail of each wall panel will provide good anchoring from wind. Make sure coop is level and square before anchoring.



Be careful. Coop must be anchored to avoid damage from excessive winds during and after construction. We do not know your ground conditions or your locale and whether you live in an area subject to excessive winds. Please seek local guidance if you are unsure. Coop is heavy and very wind resistant. But for extreme conditions anchoring is necessary. Many of our products have survived hurricane force winds. Panel or roof strength isn't the main worry... securing prevents the coop from "toppling" or walls moving in high winds.



The next three pages will guide you through building a set of trusses that look like these...

### **Notched Truss Assemblies**

Model 20 (3) Model 30 (5) Model 40 (5)

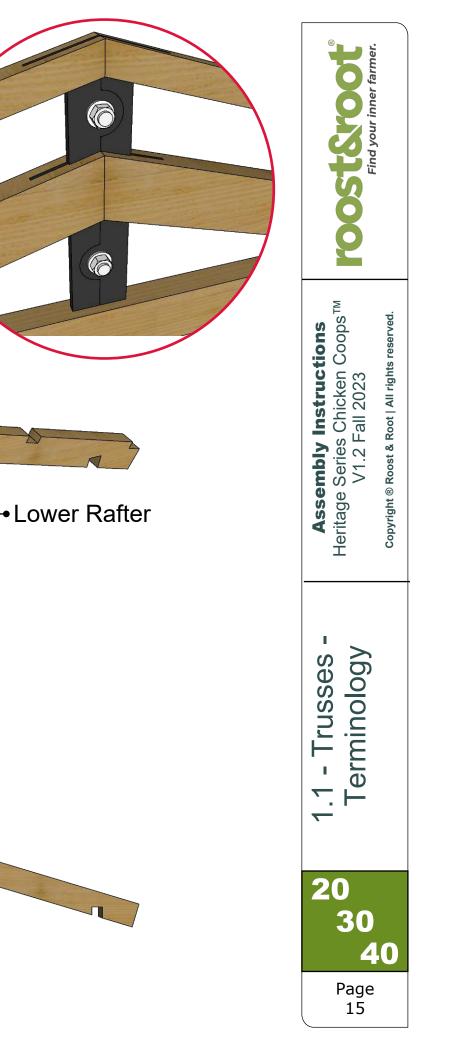
### **Truss Assemblies With** Left Side Wedge

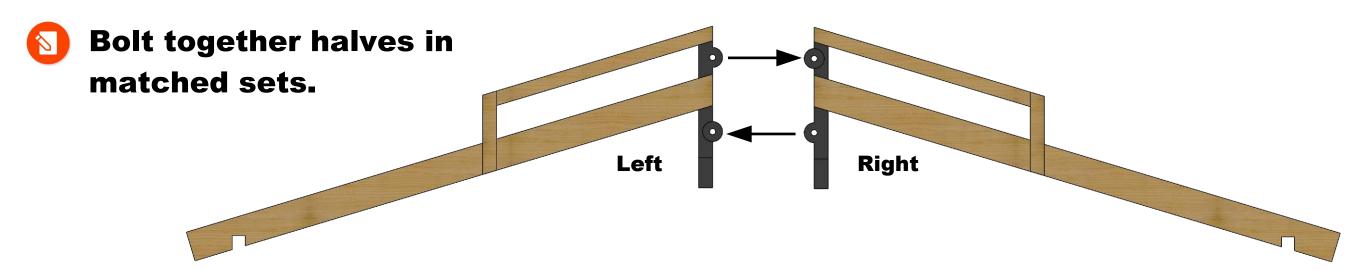
\* 1 notched 1 no notches



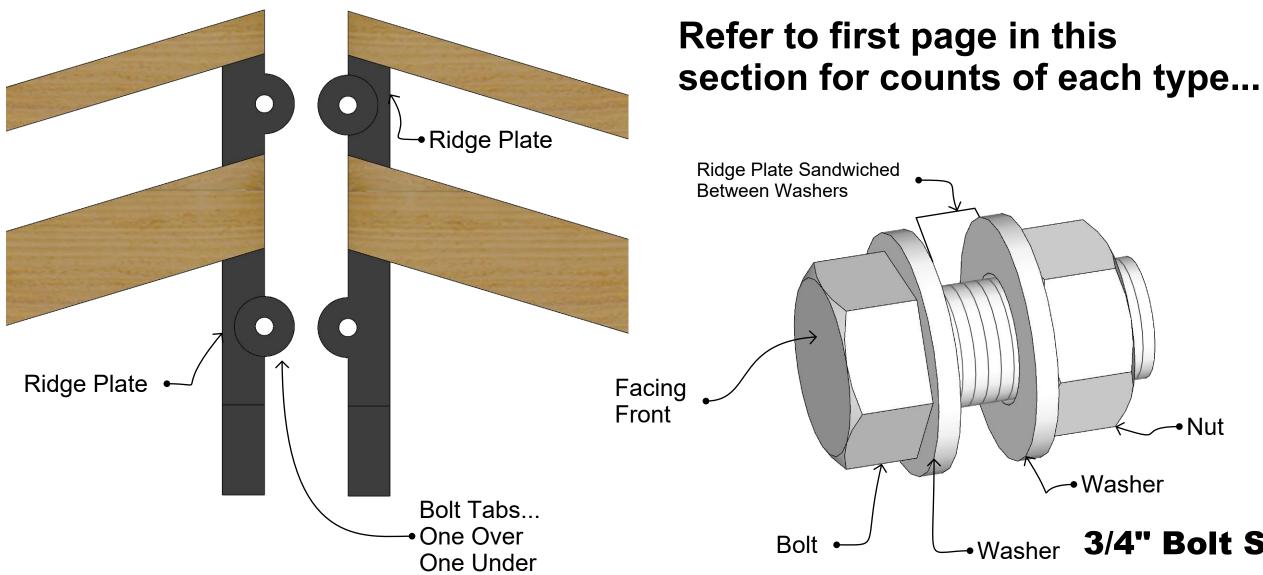


## Familiarize yourself with these illustrations and terminology. **Looking At Back Side** Nuts On Back Side **Upper Rafter Some Trusses Have** 0 **No Notches** No Purlin Notches **Some Trusses** (A) **Have Notches** •Collar Tie Purlin Ridge Plate Notches Seams Are On Back Side **Opposing Overlapping** Bolt Tabs Wall Notch They're too big to ship assembled so we engineered pre-assembled halves that you bolt together using giant 3/4" bolts that are both strong and beautiful. When they're halves, they're called "rafter" halves. Once assembled, we call them "trusses".



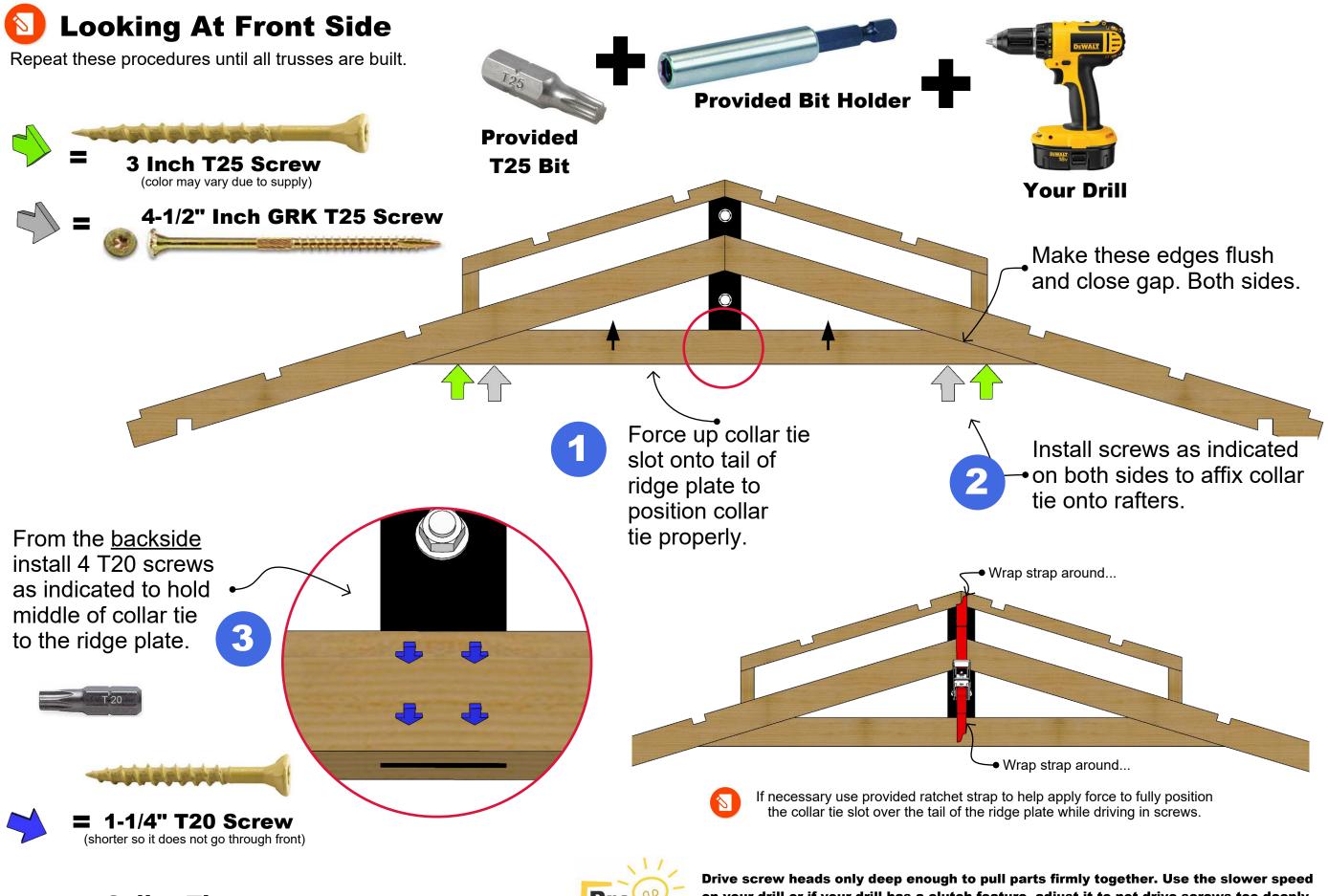


Select a left and a right half of either a notched or not notched truss half and slide the ridge plate halves together so that the bolt holes line up. Insert the bolt with a washer on it through both bolt tabs from the front side, insert another washer on the back side, and hand tighten a nut onto the bolt to hold the assembly together. Flex the ridge plate halves a little if needed to make sure bolt hand tightens down on halves. Repeat for all truss halves until all the trusses in your kit are assembled.



# 3/4" Bolt Set

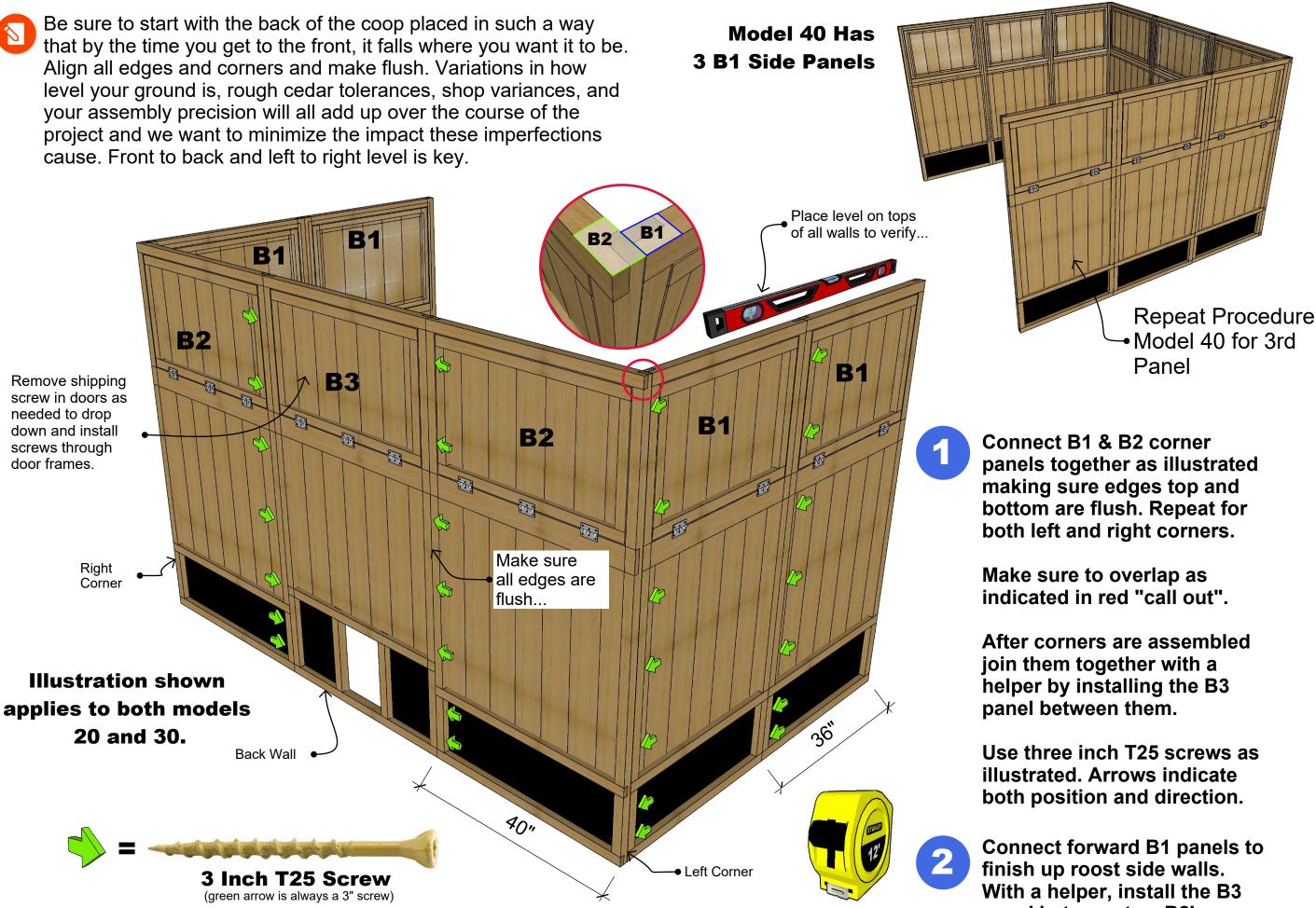




**Collar Ties** Model 20 (5) Model 30 (8) Model 40 (11) Pro Tips

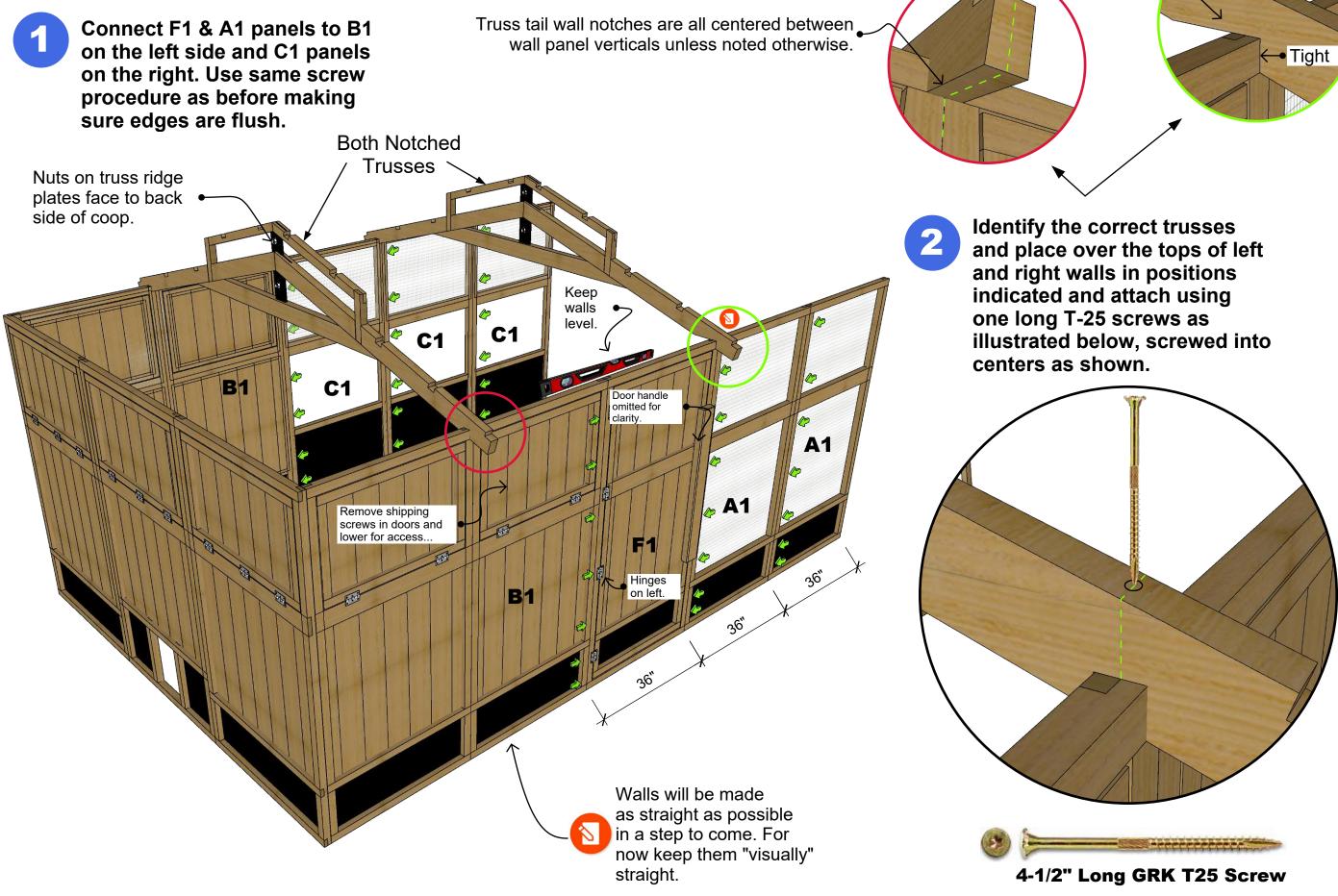
on your drill or if your drill has a clutch feature, adjust it to not drive screws too deeply. We try to "hide" heads of screws from facing up whenever possible so that the heads of the screws don't hold water. Driven too deeply, the divot they make can hold moisture.

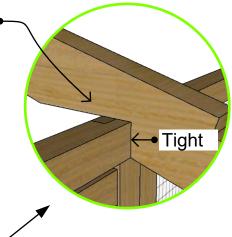




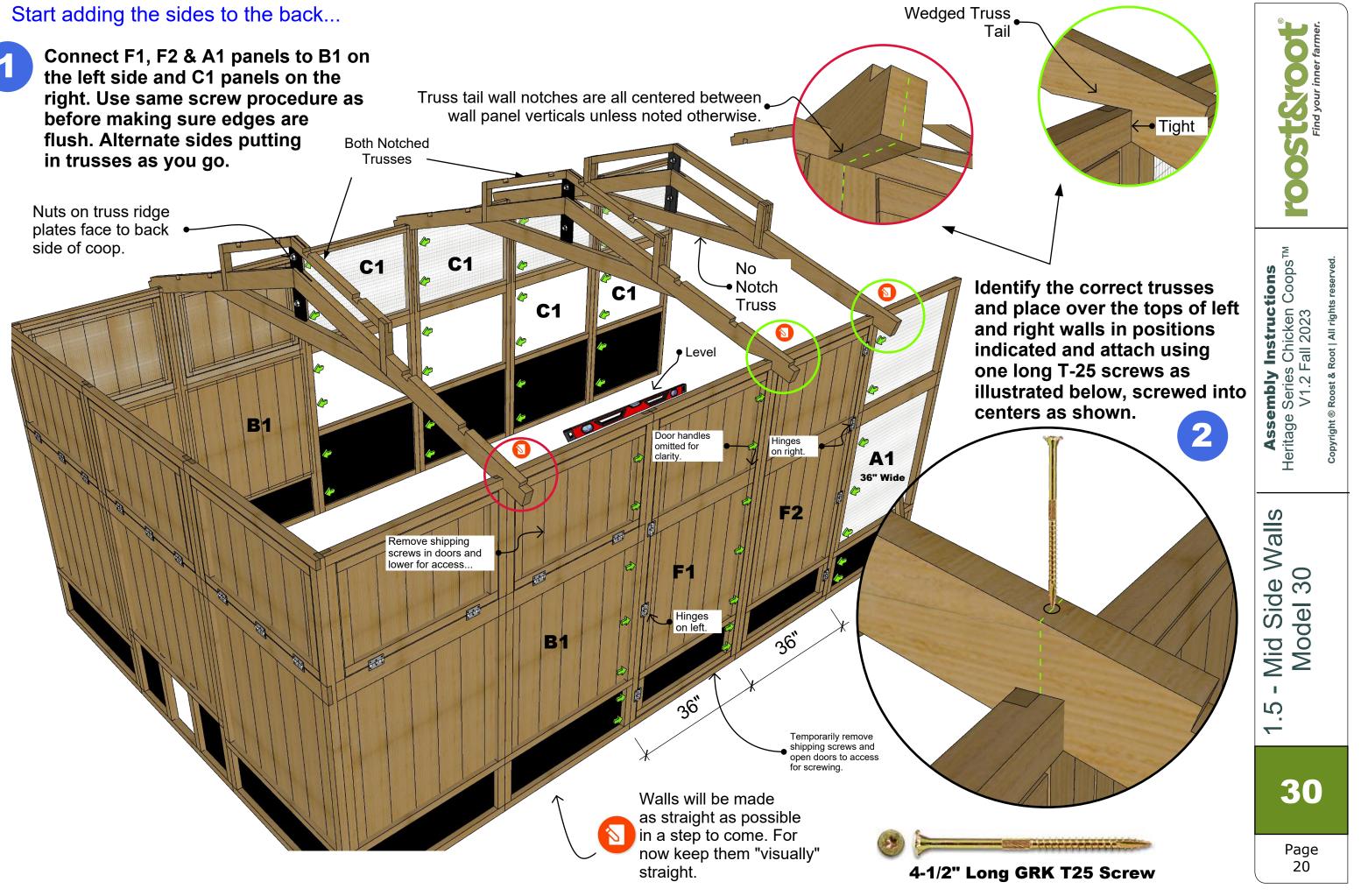
panel between two B2's.

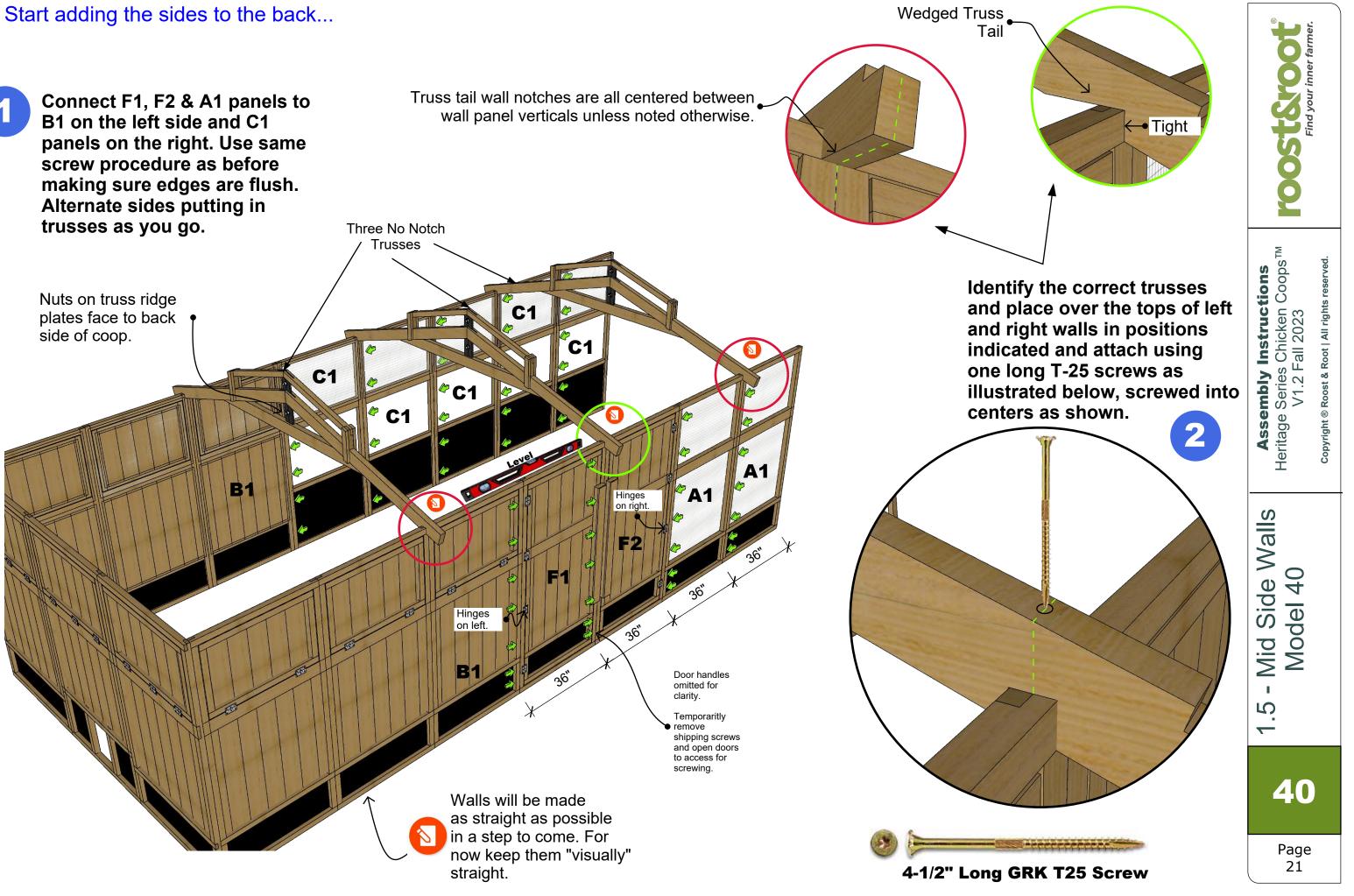


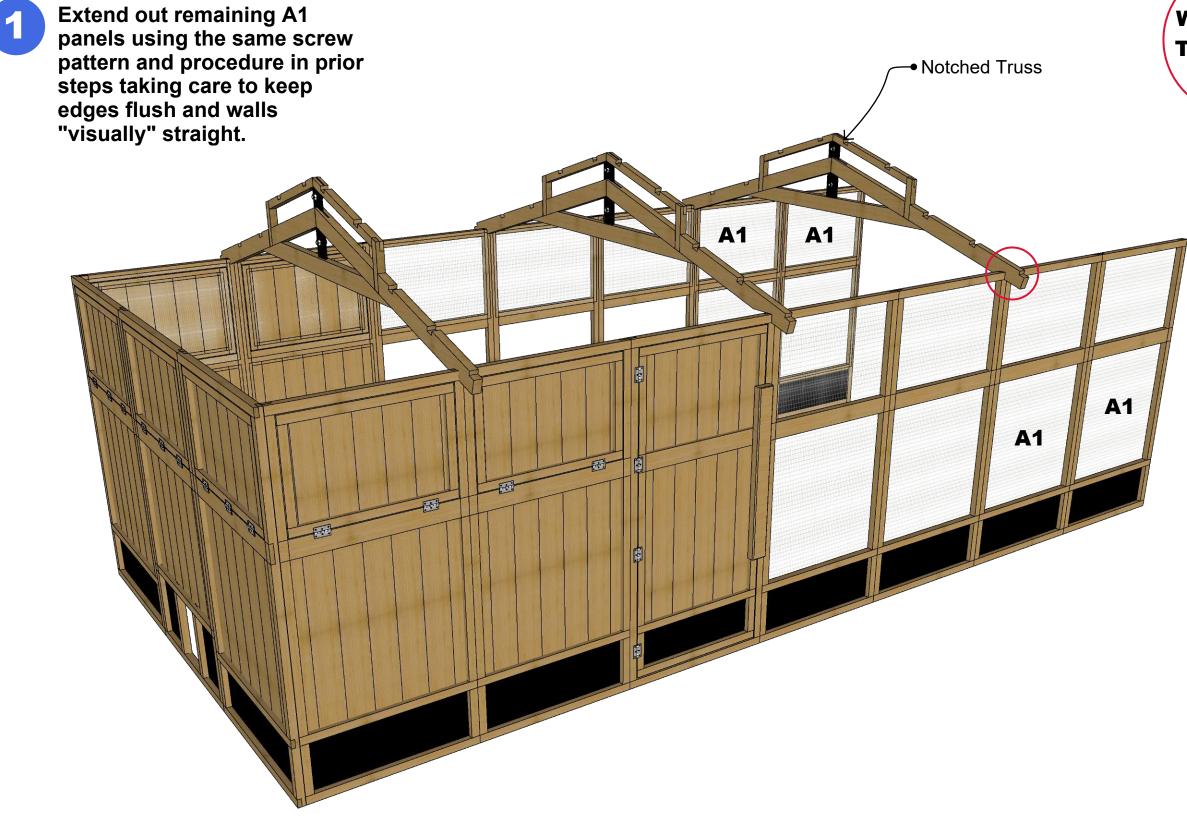




<b>20</b> Page	1.5 - Mid Side Walls Model 20	<b>Assembly Instructions</b> Heritage Series Chicken Coops™ V1.2 Fall 2023	
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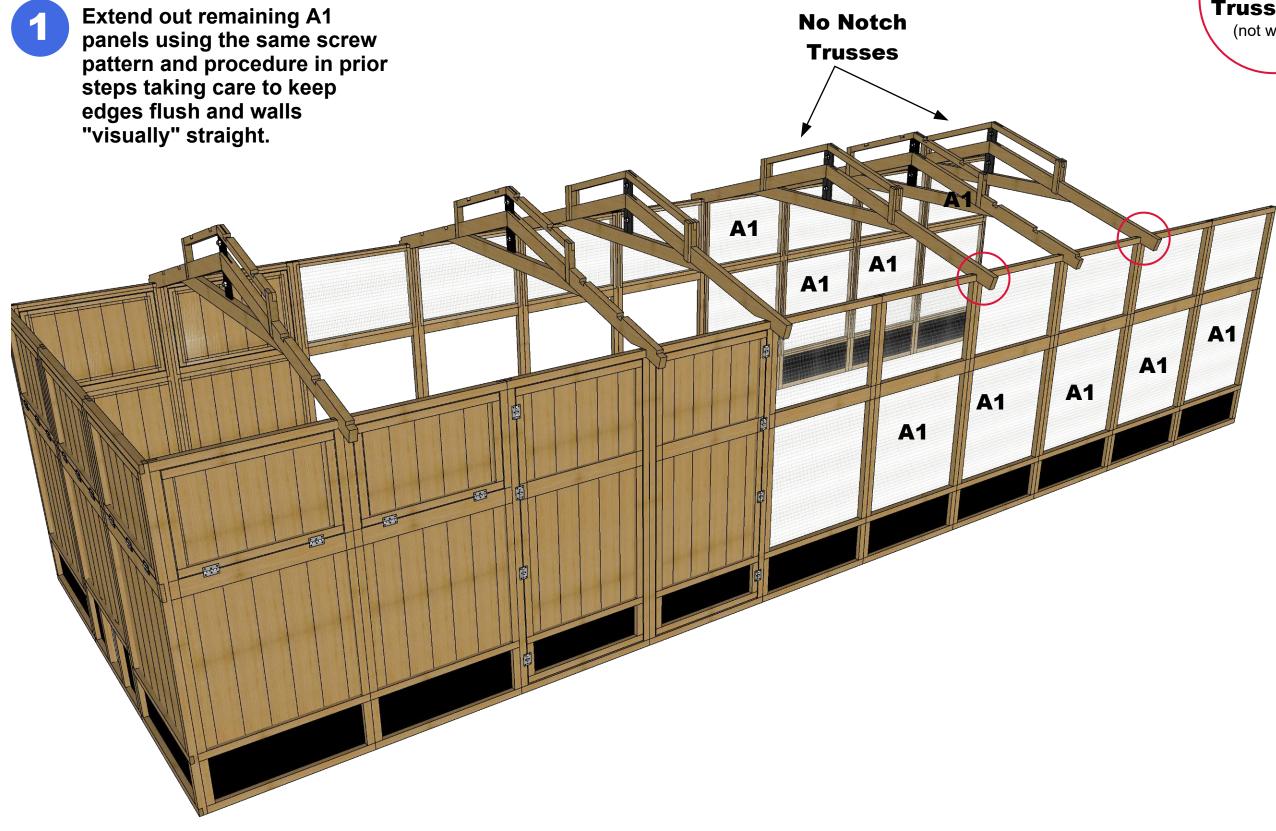


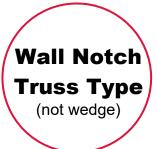






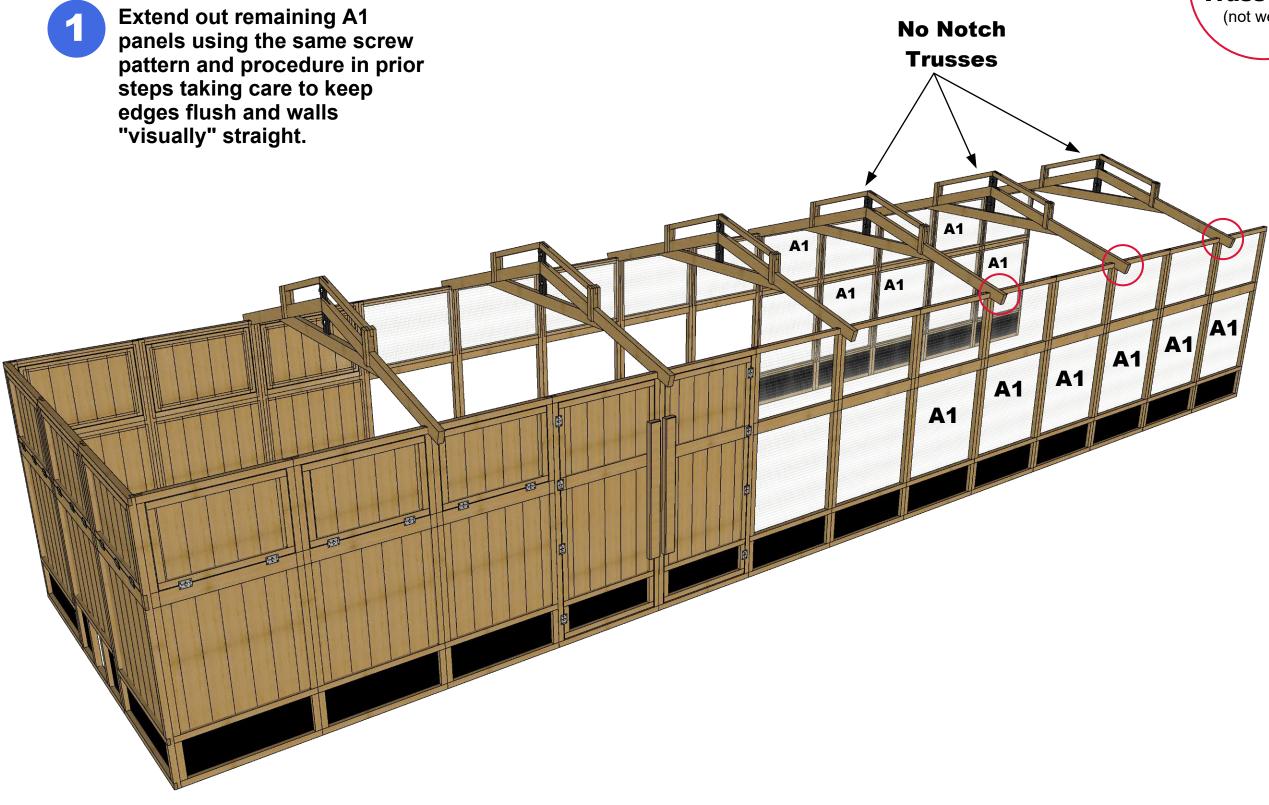
Build out the remainder of the side walls.

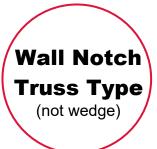






Build out the remainder of the side walls.







The front wall of the coop is the same for all three models.

Screw the A2 and A3 panels onto fronts of the A1 panels screwing through the A1 panels back into the A2 and A3 panels as indicated by the green arrows using 3" T25 screws.

If you're building your coop directly onto the ground an optional H7 door spreader can be installed to maintain the 32 -1/2" gap in the door bottom. omit if you are using a concrete footer.

A3

2

32-112"

A2

 $\checkmark$ 

 $\checkmark$ 

5

Panel Lap Detail

Front over Side Same for A2 **A3** over A1

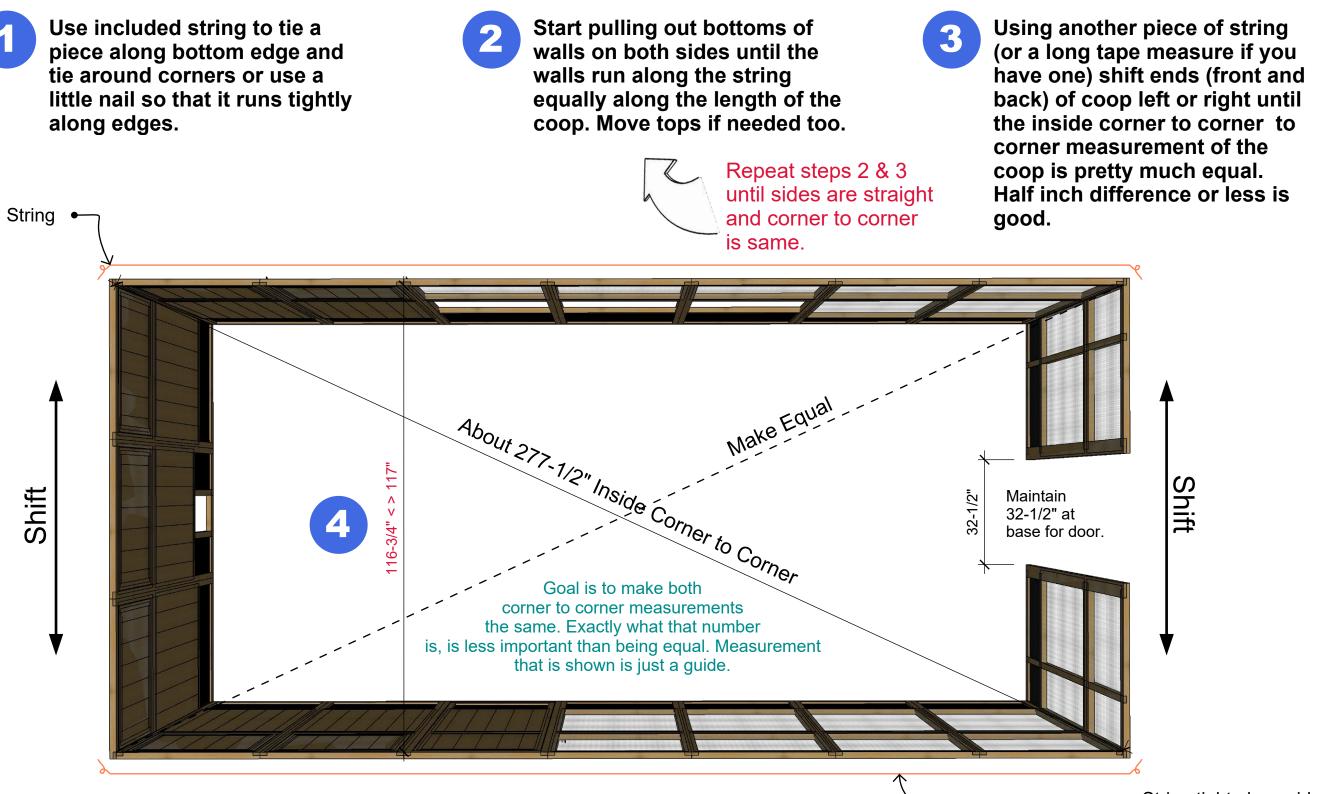
• G5 Aluminum Door Spreader

Pre-drill 1/8" holes through bottom rail into aluminum before driving screws through bottom rail into aluminum bar.

(omit if on concrete footer)



### Straightening and squaring the coop is a 3 part repetitive procedure...



1. Trusses omitted for illustration purposes.

- 2. Even if you poured a concrete footer, verify using this step.
- 3. Any "waves" in the wall are taken out by stiffeners in next steps.
- 4. Try to make it to where it feels structure is straight and relaxed. Not under tension.

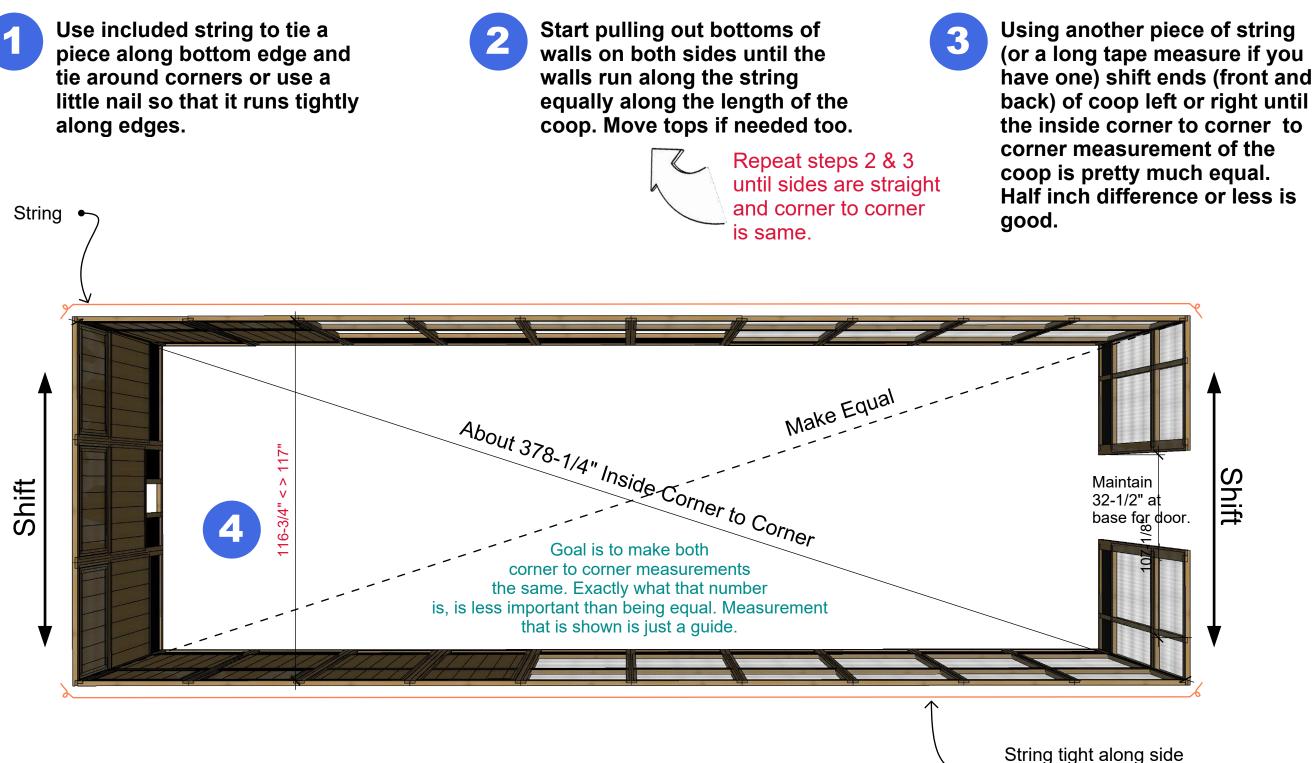


Using whatever anchoring method you choose (see anchoring page) put in at least enough of your anchors in the bottom rails to keep from shifting during the balance of construction. Take note at position (4) in the diagram to not let distance between base of walls be less than 116-3/4" or greater than 117".

String tight along side placed at bottom. Secure at corners of coop.



Straightening and squaring the coop is a 3 part repetitive procedure...



1. Trusses omitted for illustration purposes.

2. Even if you poured a concrete footer, verify using this step.

3. Any "waves" in the wall are taken out by stiffeners in next steps.

4. Try to make it to where it feels structure is straight and relaxed. Not under tension.

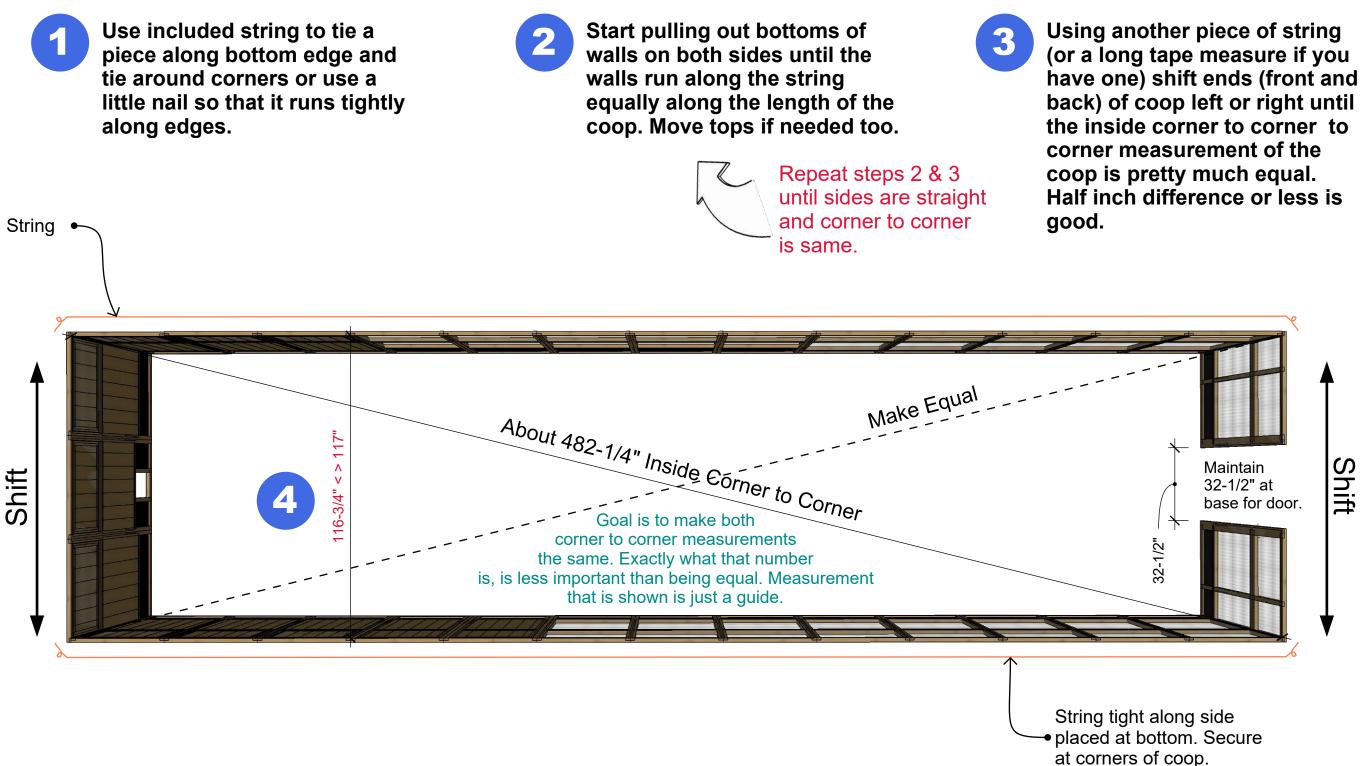


Using whatever anchoring method you choose (see anchoring page) put in at least enough of your anchors in the bottom rails to keep from shifting during the balance of construction. Take note at position (4) in the diagram to not let distance between base of walls be less than 116-3/4" or greater than 117".

placed at bottom. Secure at corners of coop.

roost&root	Find your inner larmer.	
Assembly Instructions Heritage Series Chicken Coops <sup>TM</sup> V1.2 Fall 2023	Copyright ® Roost & Root   All rights reserved.	
1.8 Square - Straighten - Anchor	Model 30	
30		
Page 27		

Straightening and squaring the coop is a 3 part repetitive procedure...



1. Trusses omitted for illustration purposes.

2. Even if you poured a concrete footer, verify using this step.

3. Any "waves" in the wall are taken out by stiffeners in next steps.

4. Try to make it to where it feels structure is straight and relaxed. Not under tension.

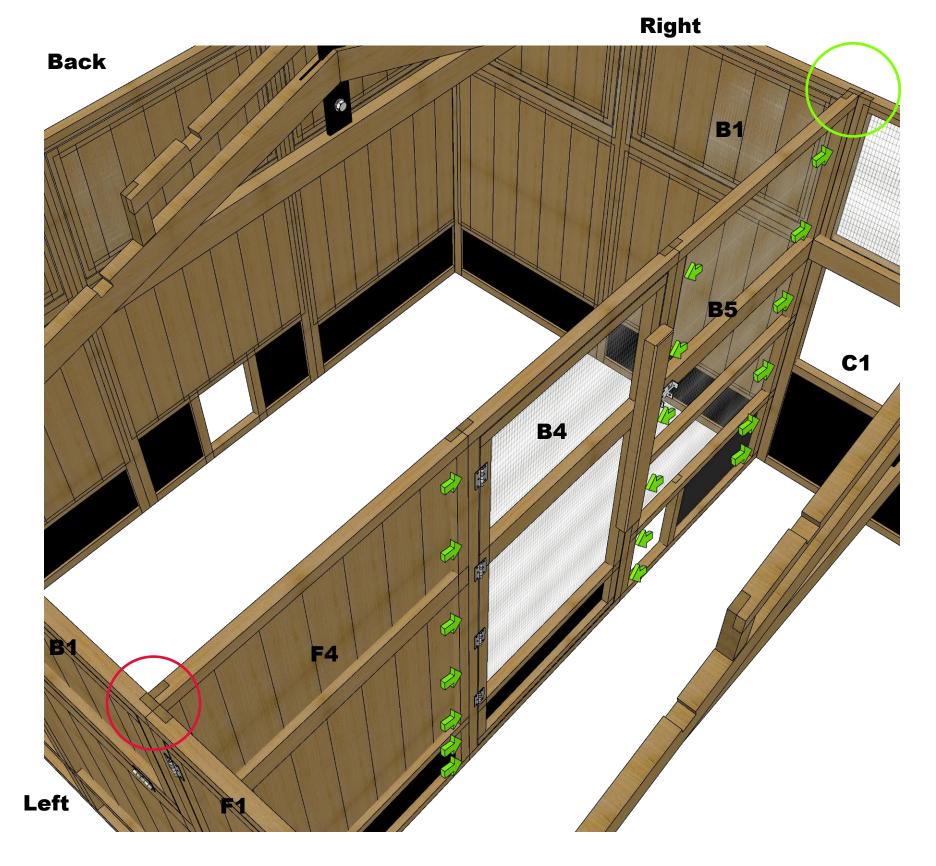


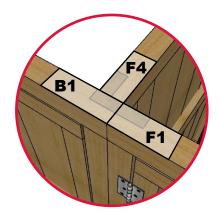
Using whatever anchoring method you choose (see anchoring page) put in at least enough of your anchors in the bottom rails to keep from shifting during the balance of construction. Take note at position (4) in the diagram to not let distance between base of walls be less than 116-3/4" or greater than 117".

<b>Assembly Instructions</b> Heritage Series Chicken Coops <sup>TM</sup> V1.2 Fall 2023	Copyright ® Roost & Root   All rights reserved.
1.8 Square - Straighten - Anchor	Model 40
40	
Page 28	

#### In this step we'll start adding some stability to the structure.

Screw B5 panel into vertical side rail of right B1 panel as illustrated. See blow up diagrams for placement. Make sure top edges are flush. Next screw the F4 panel into vertical side rail of left B1 panel making sure top edges are flush. Use a similar screw pattern as indicated on B5 panel.

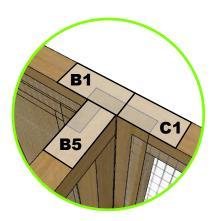




2 Ins

At this point, do not remove shipping screw(s) from door.

Screw from B5 and F4 into B4 as indicated pulling panels together to close any gaps as needed.

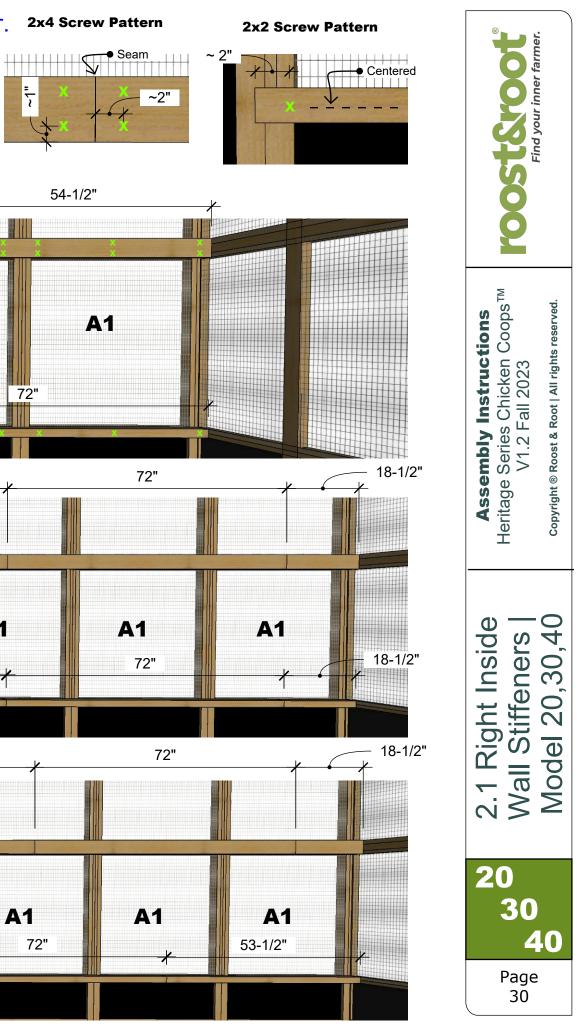


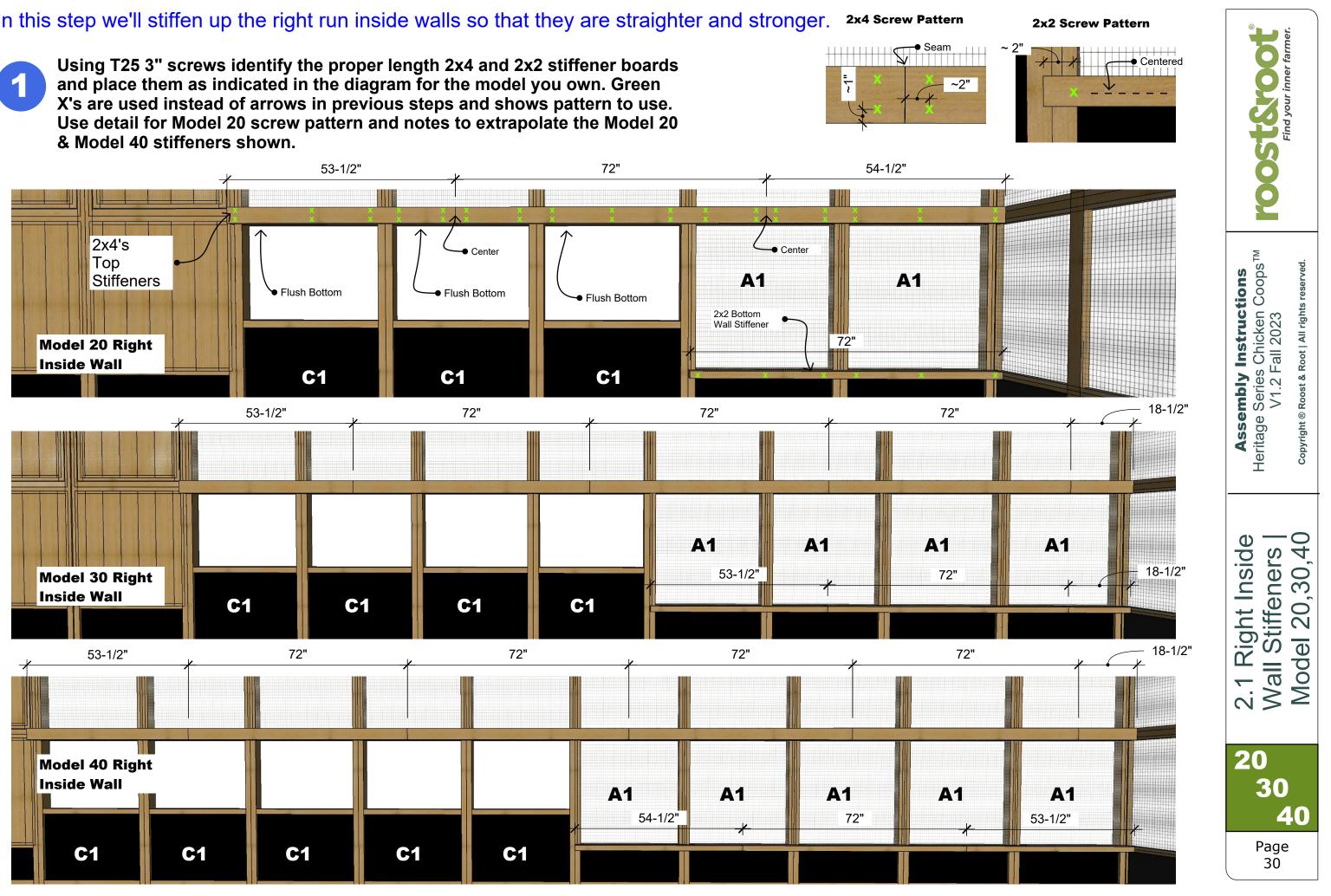
Insert the B4 panel between the B5 and F4 panels. Spread B5 and F4 if needed to squeeze the B4 panel in.



#### In this step we'll stiffen up the right run inside walls so that they are straighter and stronger.

1

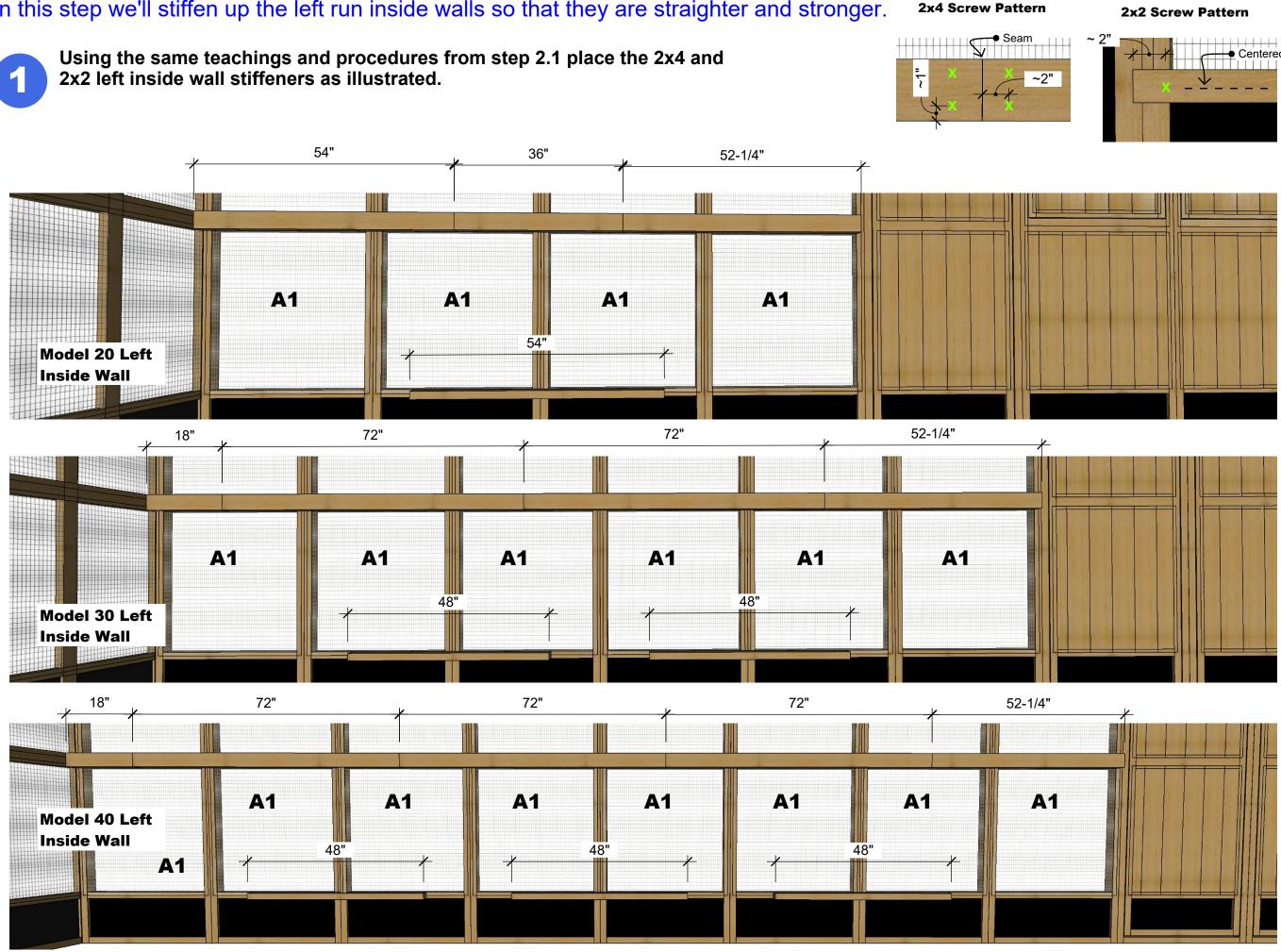




In this step we'll stiffen up the left run inside walls so that they are straighter and stronger.

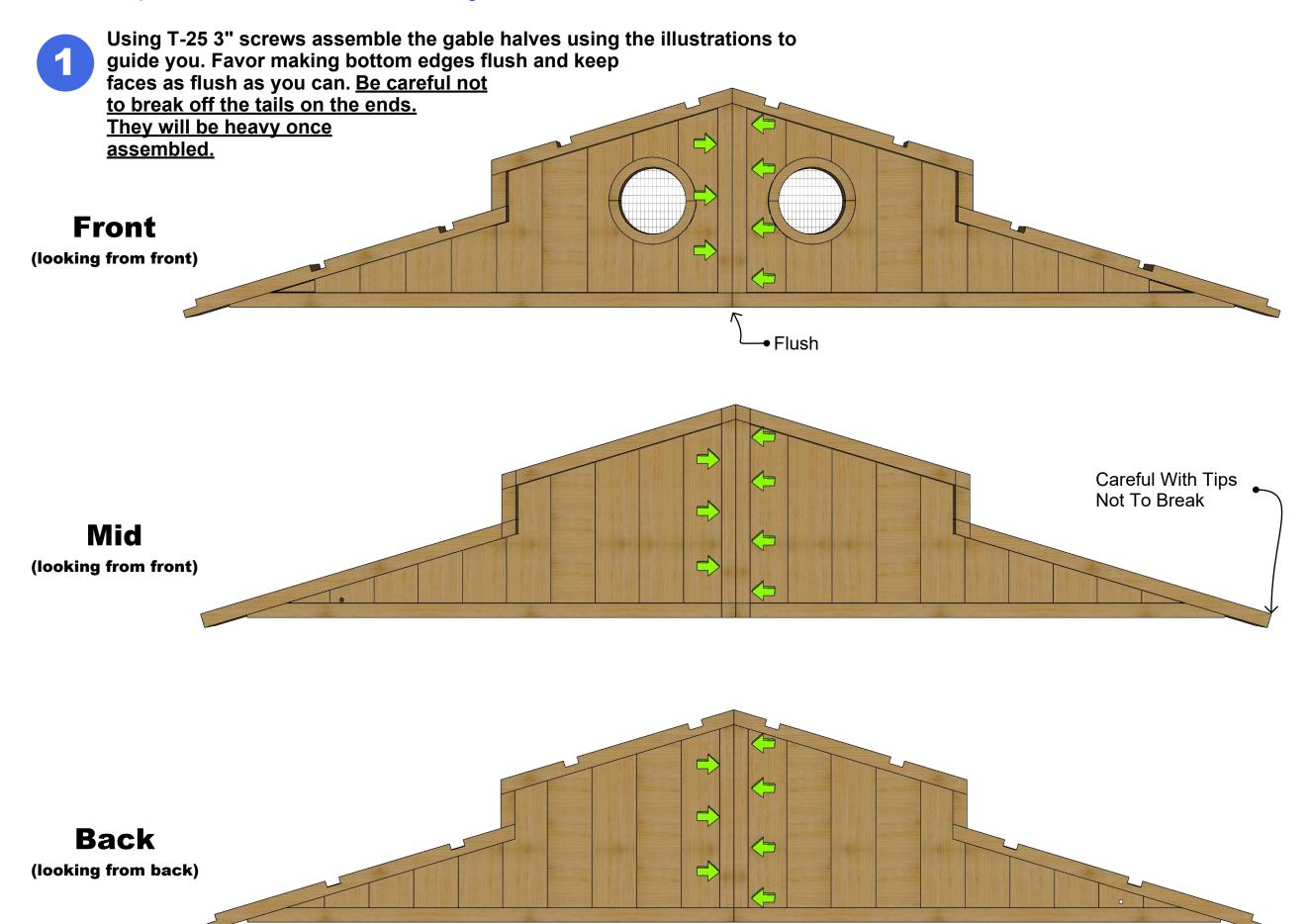




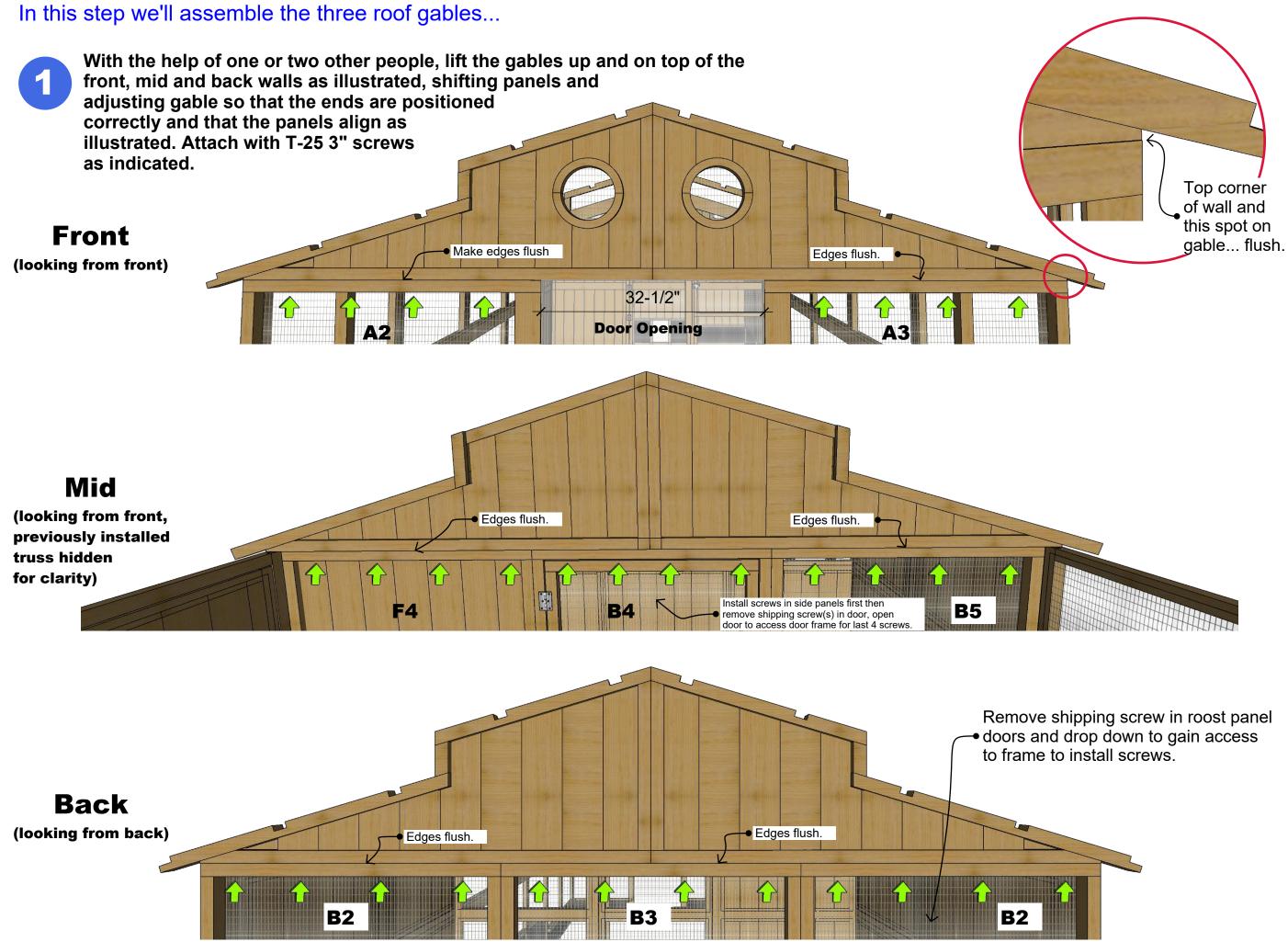




#### In this step we'll assemble the three roof gables...

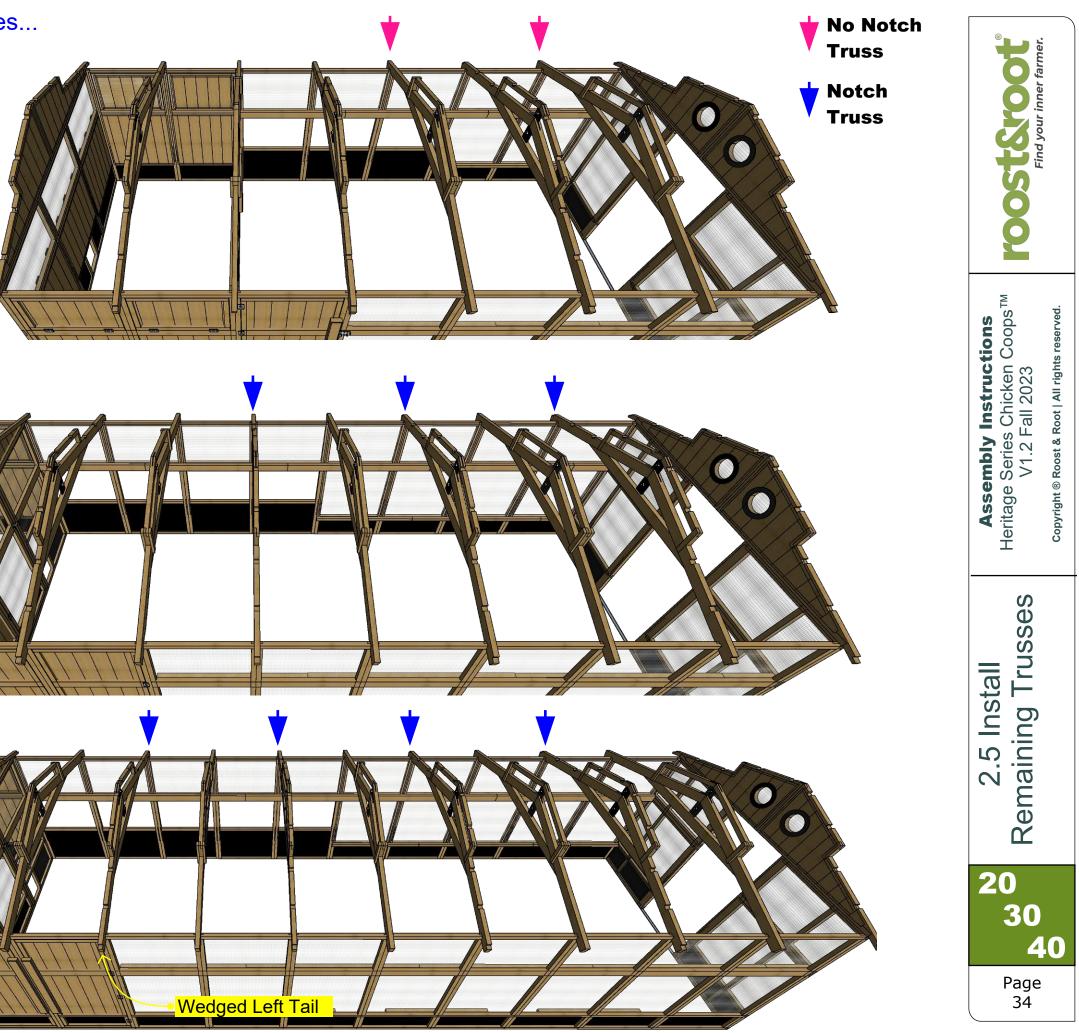


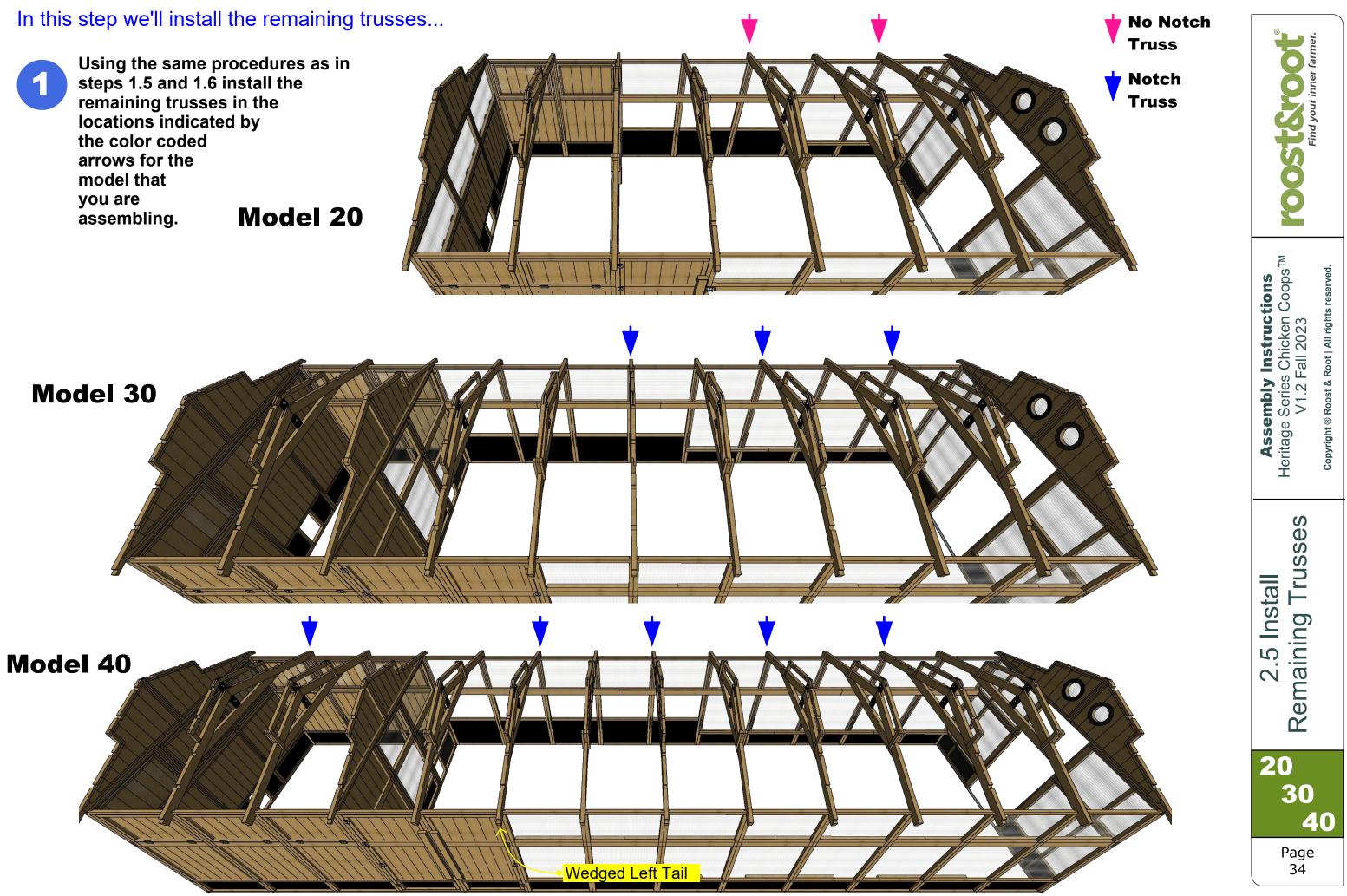












#### Before going to next steps we want to release some tension from wall tops and align the truss ends...

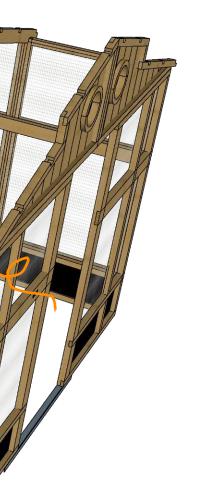


Using a piece of string pulled between both ends of the front and rear gable tails... tug and push on wall tops to get truss ends to run evenly along string. The straighter you can get this the easier the Purlin Panels in the next steps will install and the straighter your roof panels and ridge cap will look. In theory :-) you only have to do this for one side or the other...



Inevitably, our errors, your errors in ground level, truss angle errors... all these things combining to not be perfect, can cause one side to be straight and the other side to not be straight. Place a string on both sides and shift wall tops to split the difference between sides making both sides as straight as possible.

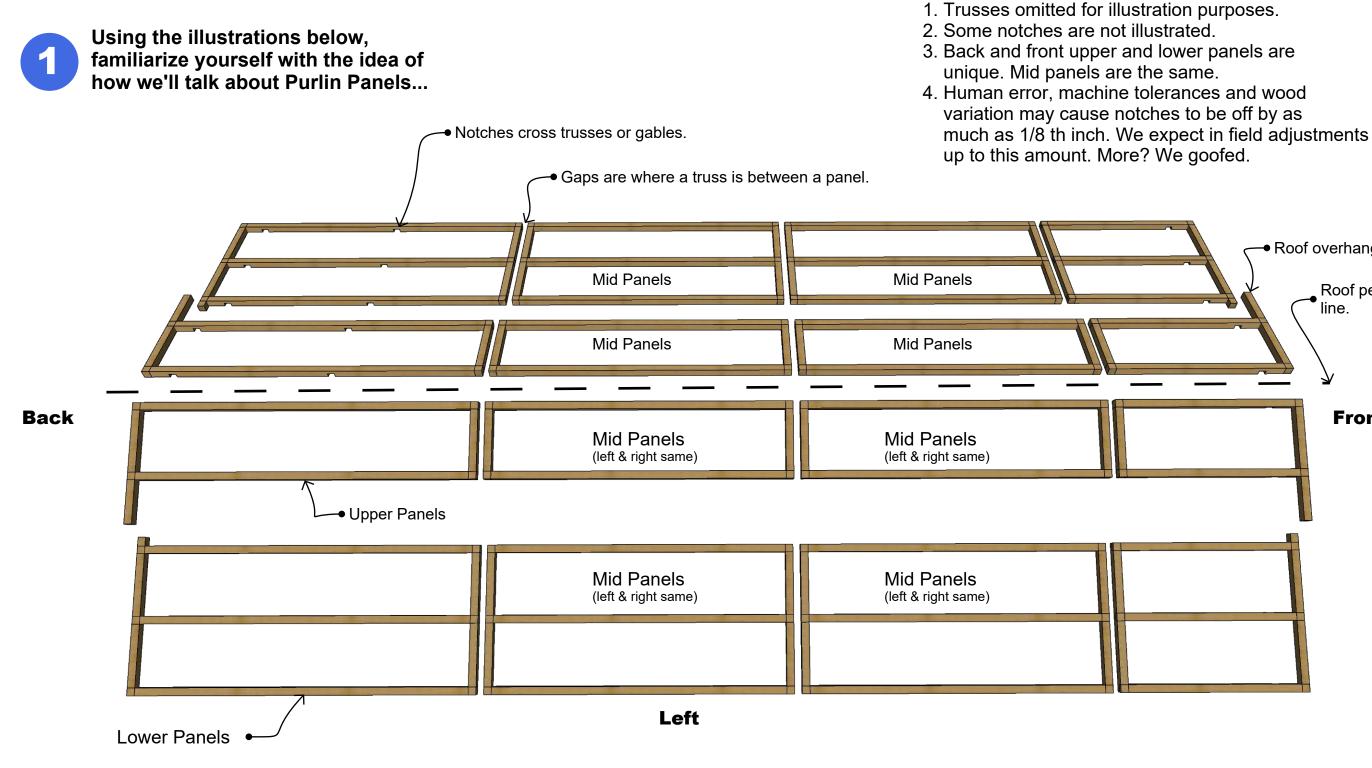
**Model 30 Illustrated** (same concept for models 20 and 40)





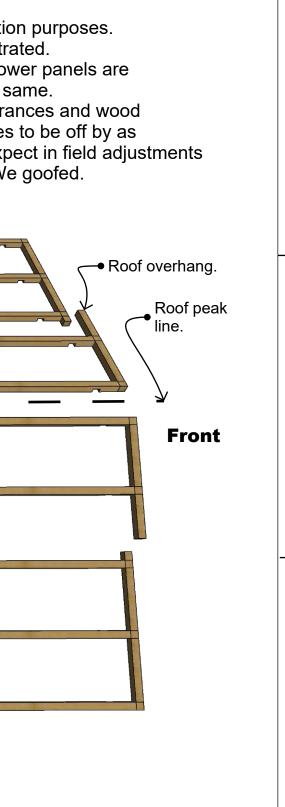


### Purlin Panels lock into and between roof trusses to form the roof structure...



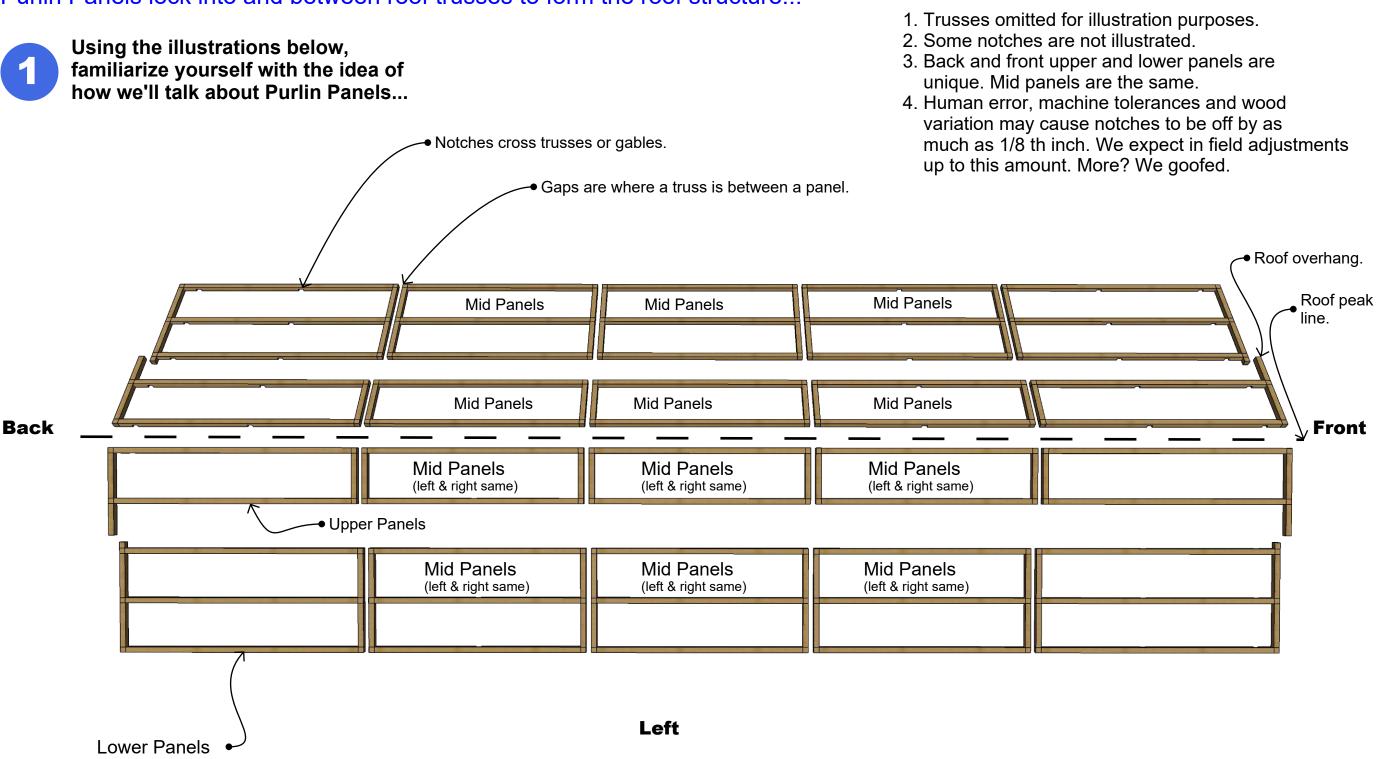


We supply a small bottle of very strong polyurethane glue that can be used to make roof structure "stiffer". Best practice would be placing a dime to nickel sized dollop of glue on the notched to notch overlaps before putting a T-20 screw in. Gluing and screwing is stronger. Too much glue would drip, too little would still be stronger than just a screw. Use judgement in the field. Wait for any drips to dry completely before cutting them off. Allow some dry time before wiggling structure too much.





### Purlin Panels lock into and between roof trusses to form the roof structure...

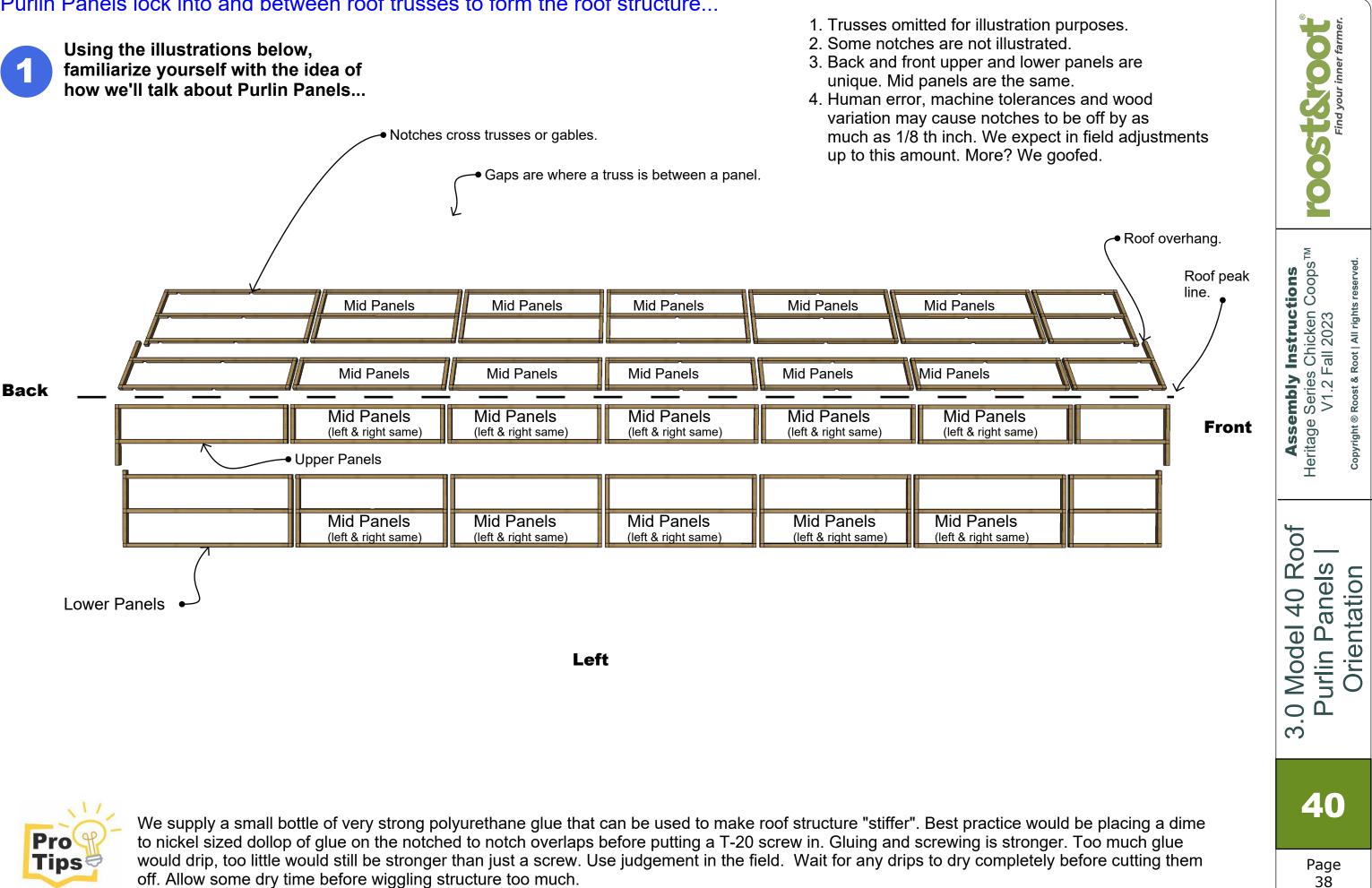




We supply a small bottle of very strong polyurethane glue that can be used to make roof structure "stiffer". Best practice would be placing a dime to nickel sized dollop of glue on the notched to notch overlaps before putting a T-20 screw in. Gluing and screwing is stronger. Too much glue would drip, too little would still be stronger than just a screw. Use judgement in the field. Wait for any drips to dry completely before cutting them off. Allow some dry time before wiggling structure too much.



### Purlin Panels lock into and between roof trusses to form the roof structure...



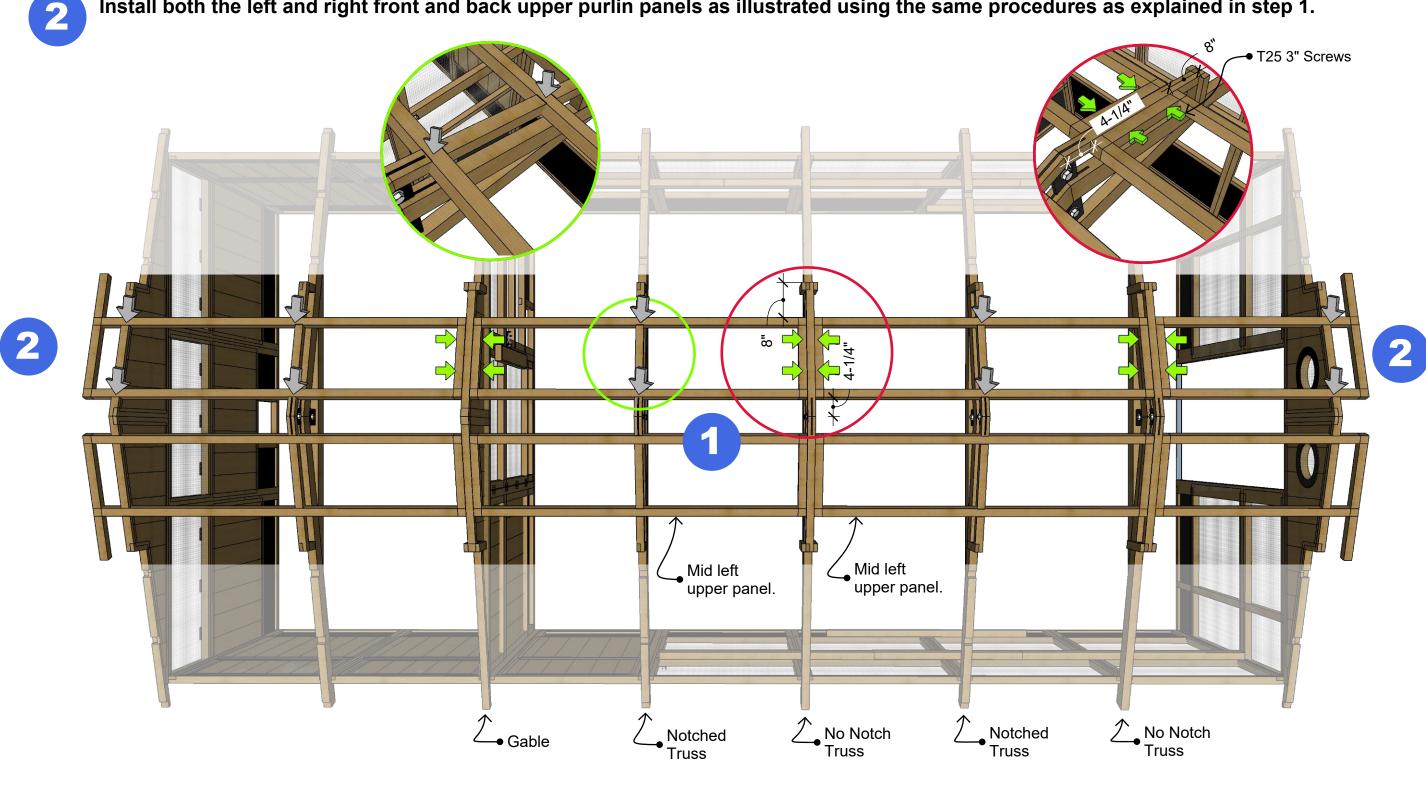


off. Allow some dry time before wiggling structure too much.

### Installing the upper purlin panels will set the trusses in place.

Begin by identifying and installing two mid left upper panels. Place the notch in the panels over the notch in the notched trusses and then ends of the panels butting up against the no notch trusses. See diagram(s) for screwing instructions. Repeat for right.

Install both the left and right front and back upper purlin panels as illustrated using the same procedures as explained in step 1.





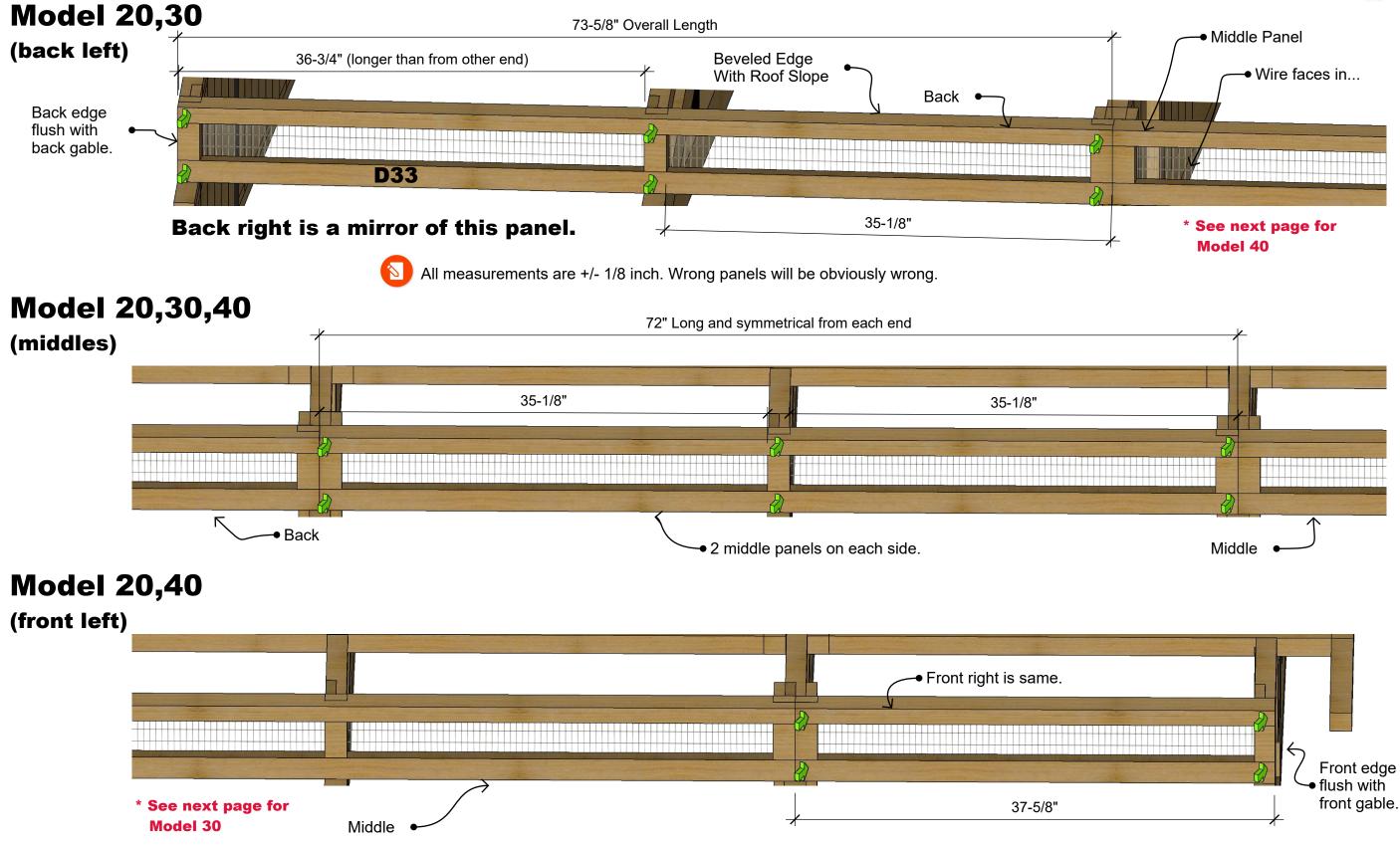
(same concept for models 30 and 40)





## The next step before installing the upper roof, is to install the left and right transom panels... part 1 of 2

Transom panels are the skinny wired panels that mount between trusses and gables on the step up from the lower to the upper roof. The two left and right back panels are each unique mirrors of each other. Use a tape measure to choose correct panels. The two shorter front panels are the same and are interchangeable. Four middle panels are the same and interchangeable too. Attach each panel with T25 3" screws as indicated. Identify your model on this and the following pages and install panels as illustrated.



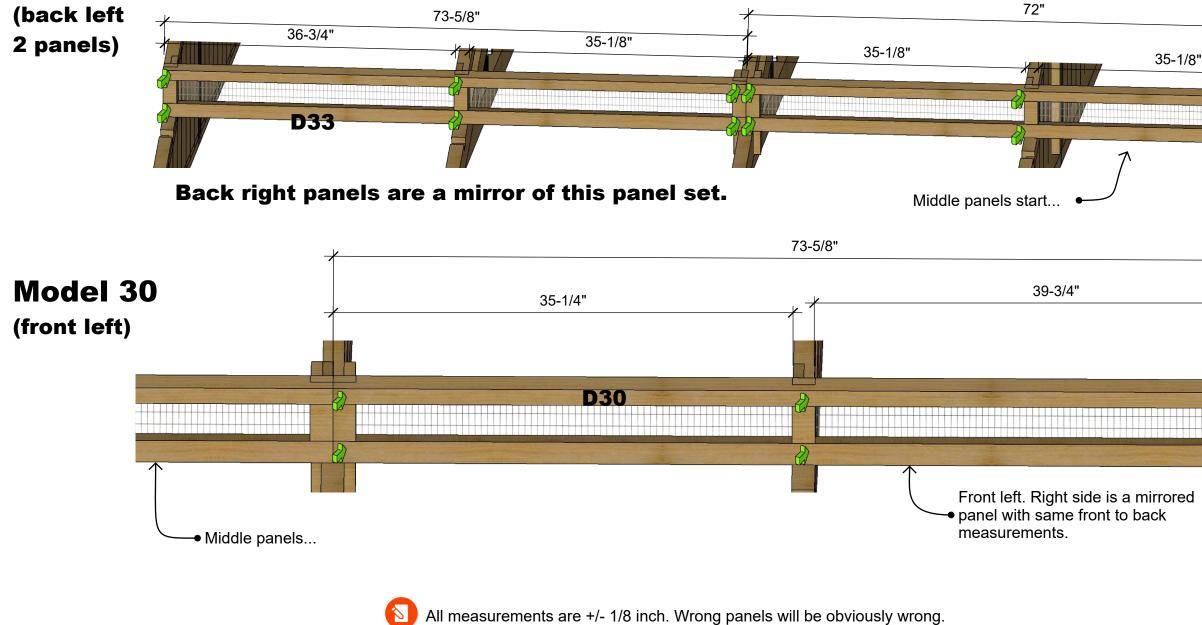


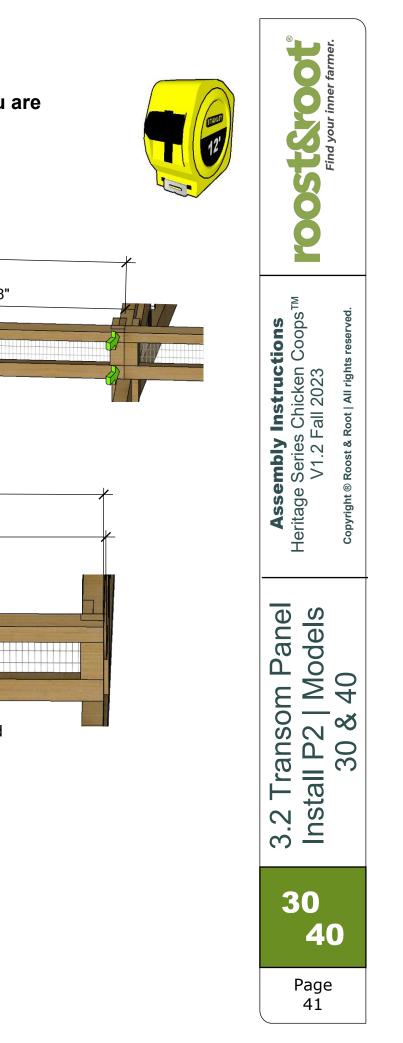




Disregard this page if you're assembling a Model 20. Apply concepts on previous page to this step for the coop you are assembling. Attach each panel with T25 3" screws as indicated.

# Model 40





This is what we will be aiming for in the following steps...



Please study this illustration so you'll know what we're aiming for in the following steps and we can get a few instructional items out of the way.

# **Model 30 Illustrated**

(same concept for models 20 and 40)

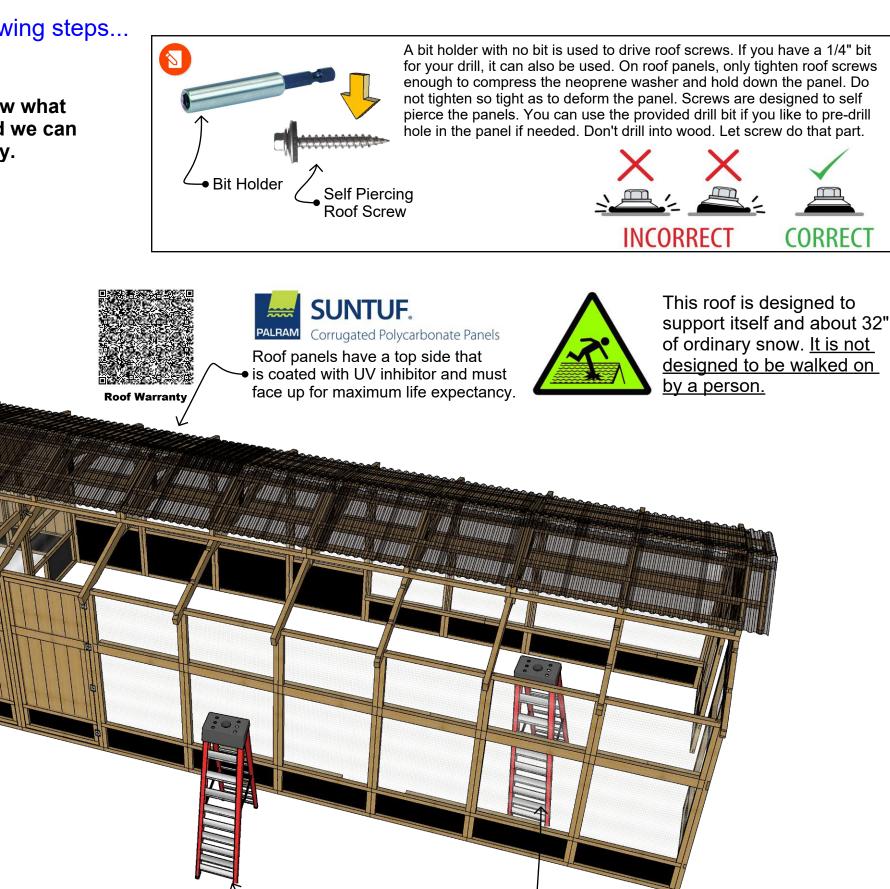
Ridge Cap is in 4' Sections •

Upper roof panels are 32"

long and shorter than

40" lower panels.

Rib Тор



Where to put a screw on a corrugated panel is a topic of debate. Technically, screws can either be installed on the rib tops or in the flats. Where panels overlap it might make the most sense to place on the rib top. Palram, the manufacturer of the panels suggests they be placed on the rib top in all circumstances.

← Flat

We leave this to a field decision or to your roofer. There is no "wrong" answer.

When working on the lower roof panels, your ladder will be outside the coop.

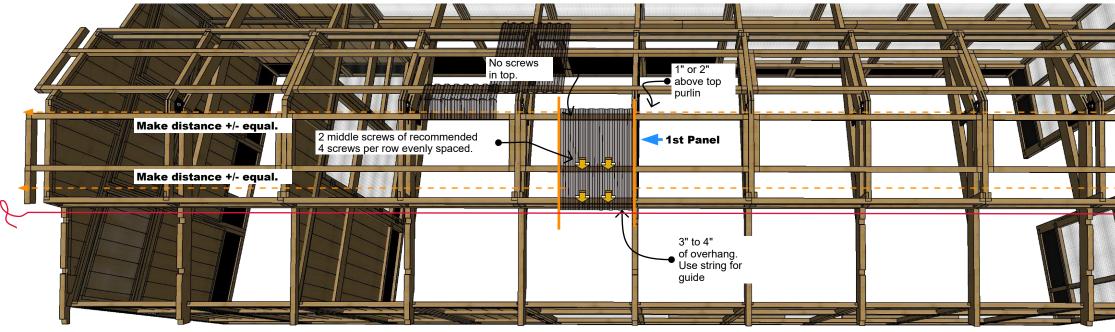
You'll stand on a ladder in the lower roof openings to work on upper roof. A 6' ladder should be sufficiently tall to provide adequate reach for an averaged height person.

20 30 4 Page 42	3.3 Upper Roof Panel Overview	<b>Assembly Instructions</b> Heritage Series Chicken Coops™ V1.2 Fall 2023	<b>Find Vour inner farmer.</b>
0		Copyright ® Roost & Root   All rights reserved.	

## Using concepts discussed on previous page, install the upper roof panels on both left and right sides of coop as illustrated.

Note: An experienced roofer can roof the coop any way they want. We're writing instructions assuming a DIY homeowner might be performing the work and needs a method to perform the task. We realize that the method we illustrate is only one way of many to roof the coop and yield to the experience of the installer.

Place an upper panel (UV protected side up) as illustrated with edge of panel at roughly the center of the coop towards the back and adjust the panel to where the end to end measurements of the panel are as equal as you can make them. For a variety of reasons, it won't likely be perfect. This method will split errors in the squareness of the coop and make the sightline of the roof look the most straight and make the best edges when you get there. Place four roofing screws in the panel approximately where indicated, angled like roof, where washer hits roof panel flat.

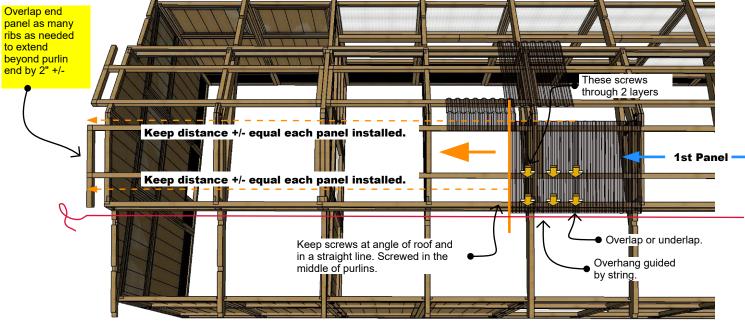


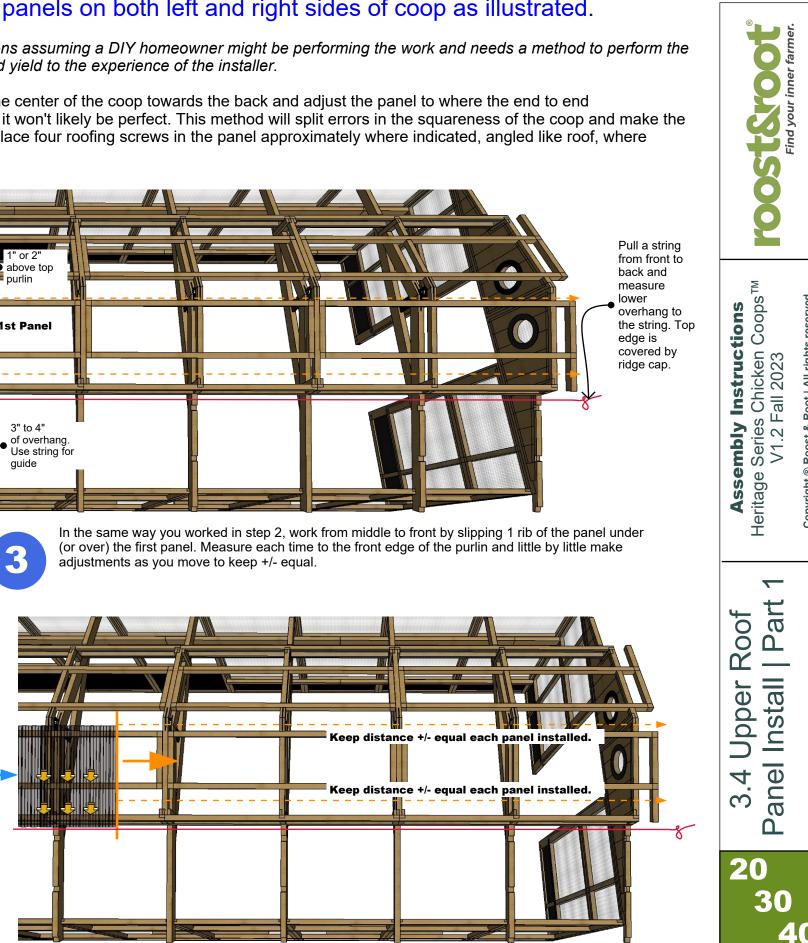


Work from middle to back by slipping 1 rib of the panel under (or over) the first panel. Measure each time to the back edge of the purlin and little by little make adjustments as you move to keep +/- equal. Keep bottom edge overhang +/- equal running along your string. As long as the top overhangs the top purlin rail it will be covered by the ridge cap. Repeat this until you're at the back and then slip last panel under as many ribs as needed to overhang purlin end by about 2". If you know how to cut a panel, you can do that instead of overlapping more than 1 rib.

3

adjustments as you move to keep +/- equal.





# Model 30 Illustrated

(same concept for models 20 and 40)

Root | All rights reserved Copyright ® Roost & 40 Page 43

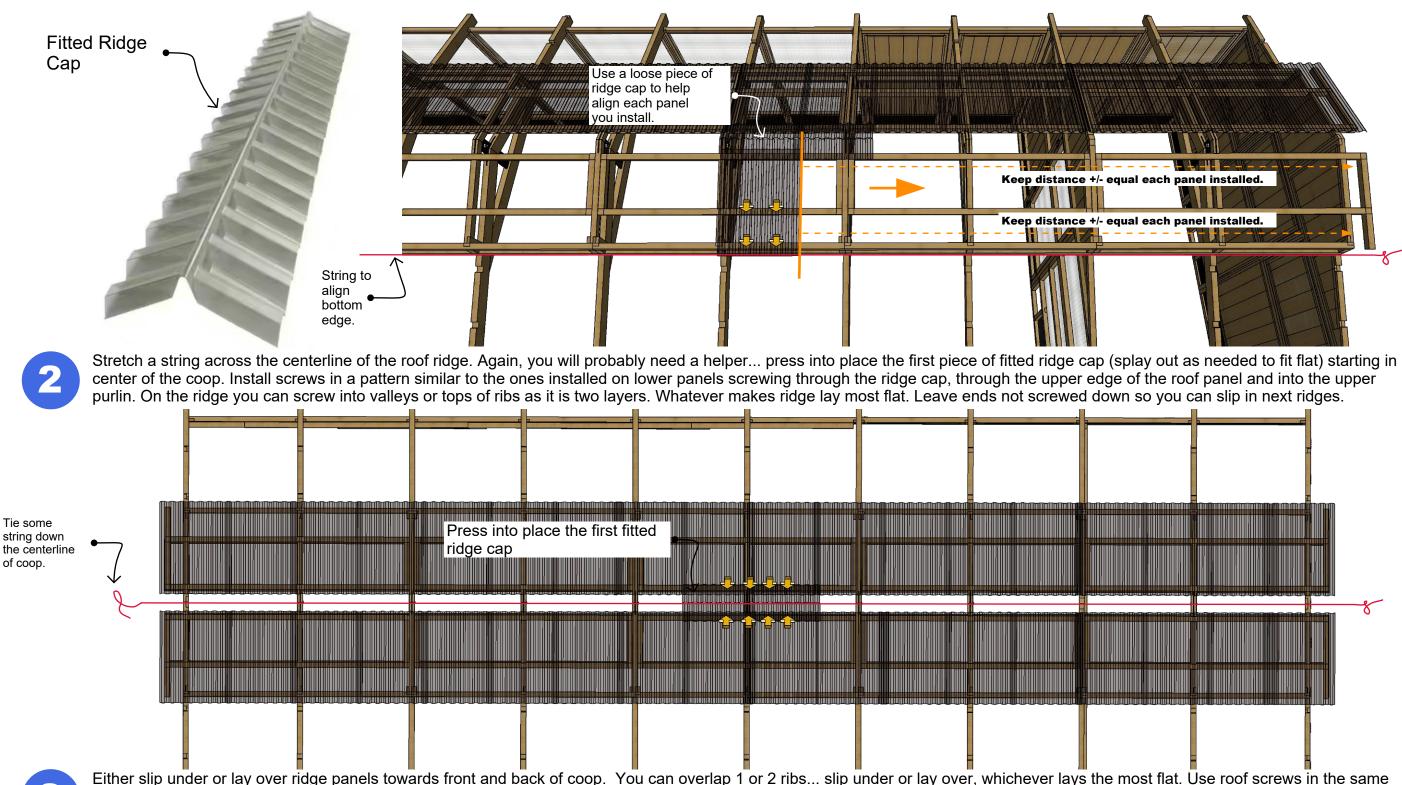
# Using work methods performed on left side upper roof, install right side upper roof making sure panels align with ridge cap too...



Place an upper panel (UV protected side up) as illustrated with top edge of panel opposite a panel you installed on the other side. Have a helper hold in place and press down a piece of fitted ridge cap over the ribs of the panel already installed and the panel that you're installing making sure ribs on both panels and valleys on fitted ridge cap all align nicely. Slide your roof panel as needed for bottom edge to overhang the 3" to 4" (same as you chose on other side) and once everything is aligned properly up and down and left to right set the panel in place by installing 4 roofing screws.

Repeat this procedure for the remaining panels to the back and then install all the panels towards the front.





pattern as the roof panels below to attach ridge cap. Extra screws can be used to pin more flat if needed. Extend out even with roof panels on each end or 1 rib extended. Remove centerline string from under ridge when done.

# **Model 30 Illustrated**

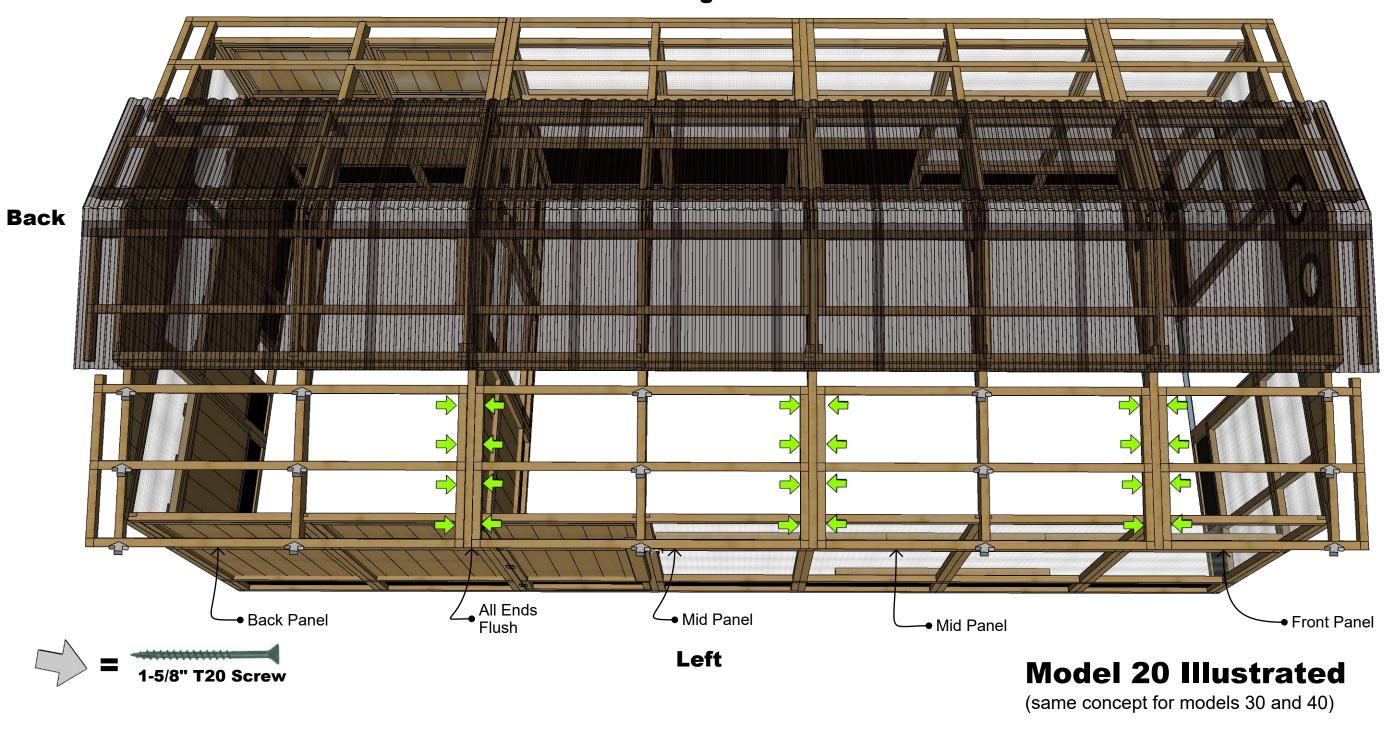
(same concept for models 20 and 40)

IN TOOSTARAOOT
Assembly Instructions Heritage Series Chicken Coops <sup>TM</sup> V1.2 Fall 2023 copyright ® Roost & Root   All rights reserved.
3.5 Upper Roof Panel Install   Part 2
20 30 40
Page 44

### Time to install the lower purlin panels so you can install the lower roof panels.

Using the illustration on the Section 3.0 page for your particular coop... identify the left back and left front panels and install as illustrated. Place the notch in the panels over the notch in the notched trusses and gables. Make sure to make bottom edges flush with tails of gables and trusses. End of panel that butts up to a no notch truss is held in place by T25 3" screws as indicated. See diagram(s) for screwing instructions. Insert mid purlin panels between trusses as illustrated affixing them with the same screw pattern as ends.

Install the right side end and mid purlin panels as illustrated using the same procedures as explained in step 1.



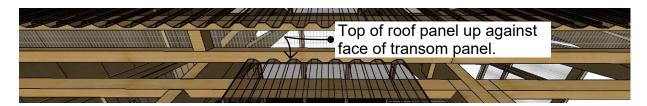
Right

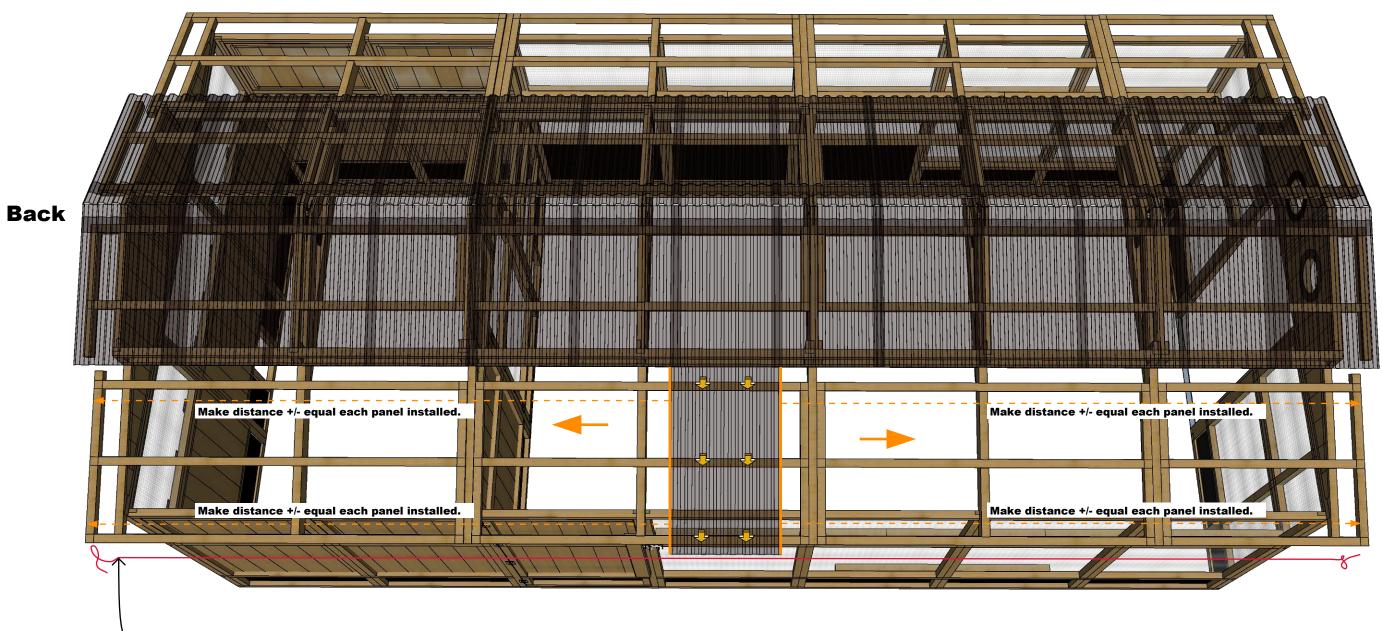


Install the lower roof panels using same techniques explained on upper roof panels.

Lower roof panels jam up against the face of the transom panels on the top edge and overhang the bottom purlin rail on the eave edge. There are three rows of screws per panel. Using the same aligning methods in section 3.4 and 3.5, position first panel left to right and set the center screws. After that repeat procedure as before and install all panels to the front and to the back.

After completing one side, repeat the procedure on the other. 2





Right

String to aid bottom edge being straight.

# **Model 20 Illustrated** (same concept for models 30 and 40)



### Install interior storage room walls and ceiling.



Install the F5 panel as illustrated. Take care to position panel as illustrated.





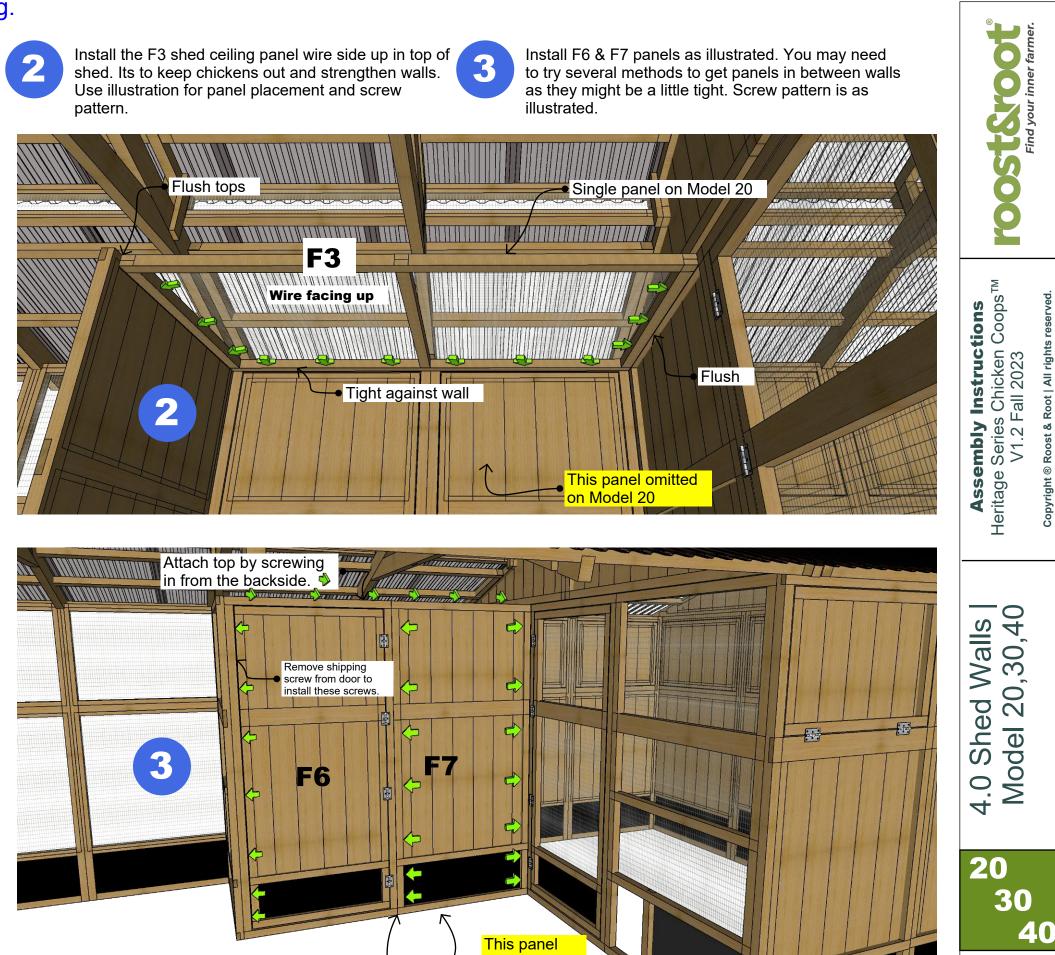
(same concept for models 20 and 40)

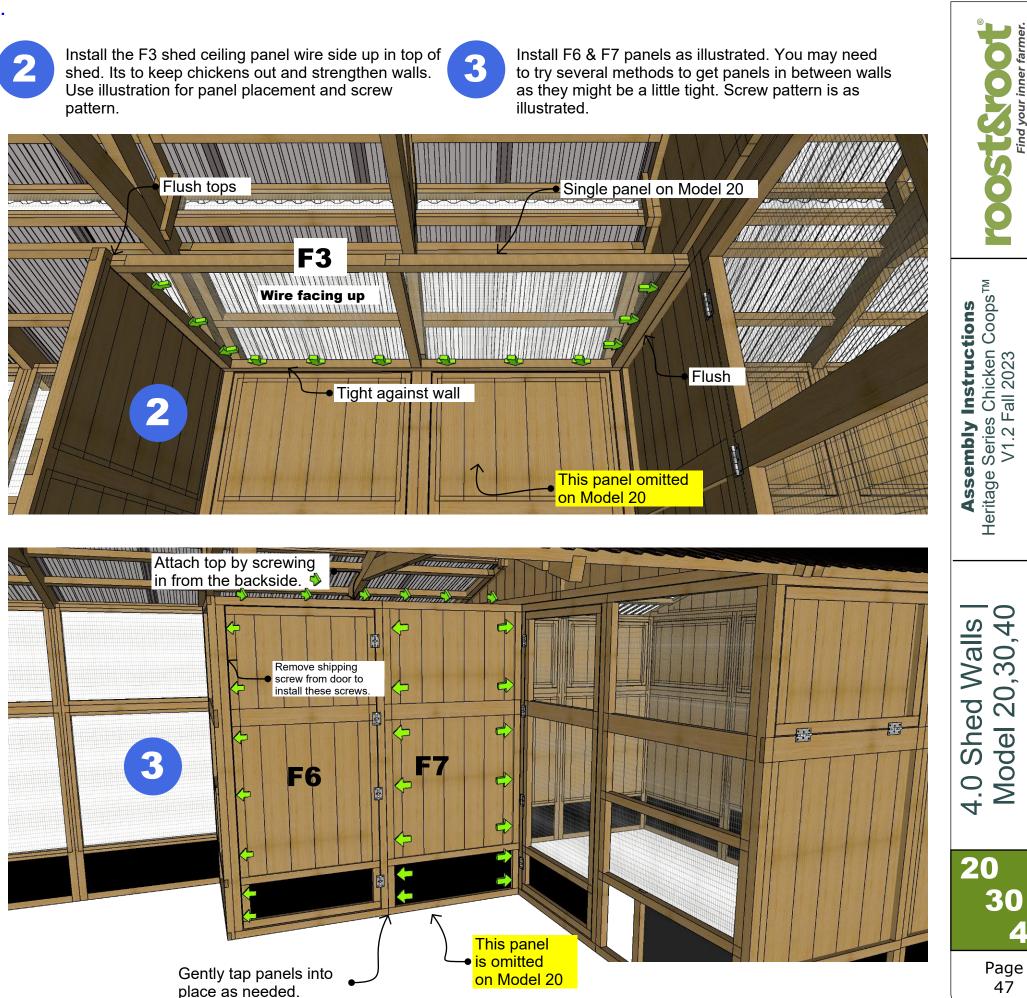


shed. Its to keep chickens out and strengthen walls. Use illustration for panel placement and screw pattern.



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### The dual redundant waterers are delivered in sections because they are too long to ship assembled...

Waterers are delivered in 2,3 or 4 sections depending on what coop you purchased. They are sized with the chicken capacity in mind and redundancy in the event a poultry nipple were to malfunction. The idea is the same... you'll be using the included PVC glue to connect mid sections between front and end sections. Best practice would be to pay attention to the poultry nipple pattern and choose the correct middles for the correct end / front combos. See video or photos for gluing procedure. Primer is omitted because waterers are not under pressure.

Pre-Installed Caps 🔎	End Section					Mid Section				Front Section		
			Side view									
	Ţ	T	Ţ	T	Ţ	т	Ŧ	T	Ţ	т	, ∕• Po	oultry Nipples
			₽€		٠		•		•		•	•
		•	<b>Bottom View</b>	٠				•		٠		•
							0	0 Model 20				

3

Apply a thin even layer of PVC glue to about 3" of the Male portion of the pipe you'll be inserting and thin even layer to the first 1" of the female pipe section you'll be inserting into.



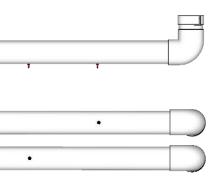
# **Model 30 Illustrated**

(same concept for models 20 and 40 just with fewer or more sections)

0 Model 20 1 Model 30 2 Model 40

Within about 30 seconds, insert the male portion of the pipe into the female portion, pushing all the way in, and rotating back and forth about 1/4 turn, ending up with the poultry nipple holes all aligned. We typically drill holes along the wording on the pipe.



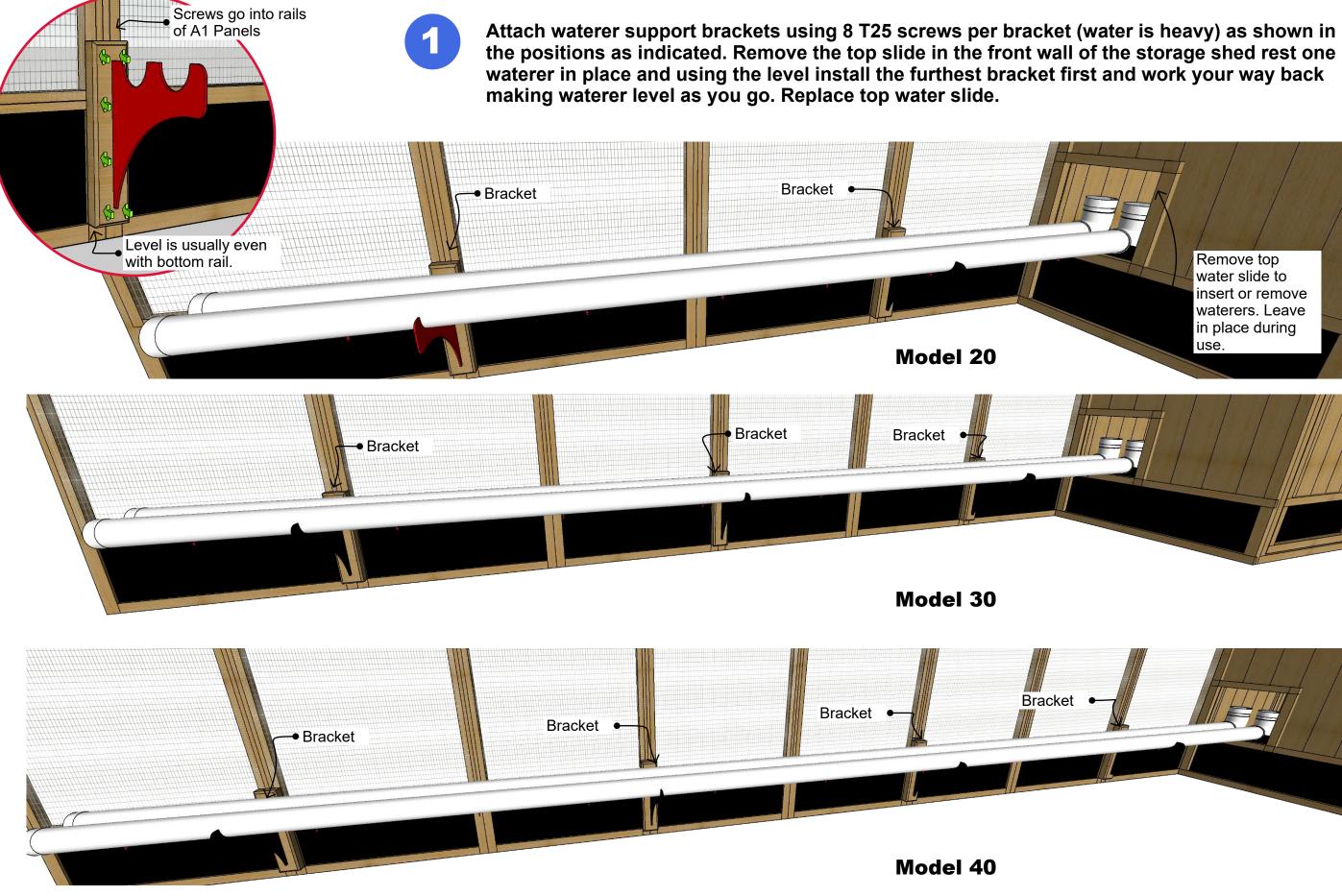




# YouTube Gluing Video



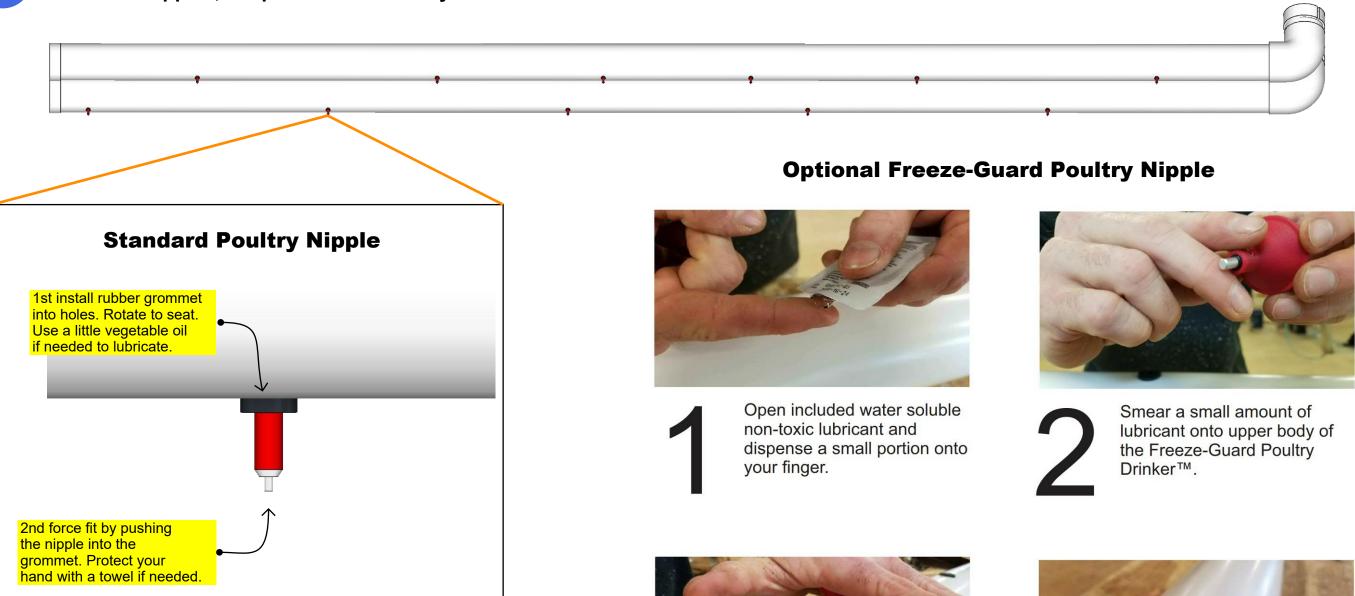
Install the waterer support brackets in the positions indicated for your coop... making sure waterer sits level when empty.



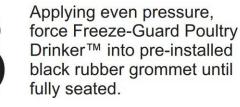


## Install the poultry nipples you ordered with your kit. There are a lot :-)

Roll waterers over in their brackets and install all poultry nipples as per the illustrations below. Whether you ordered freeze guard or standard nipples, the process is basically the same.









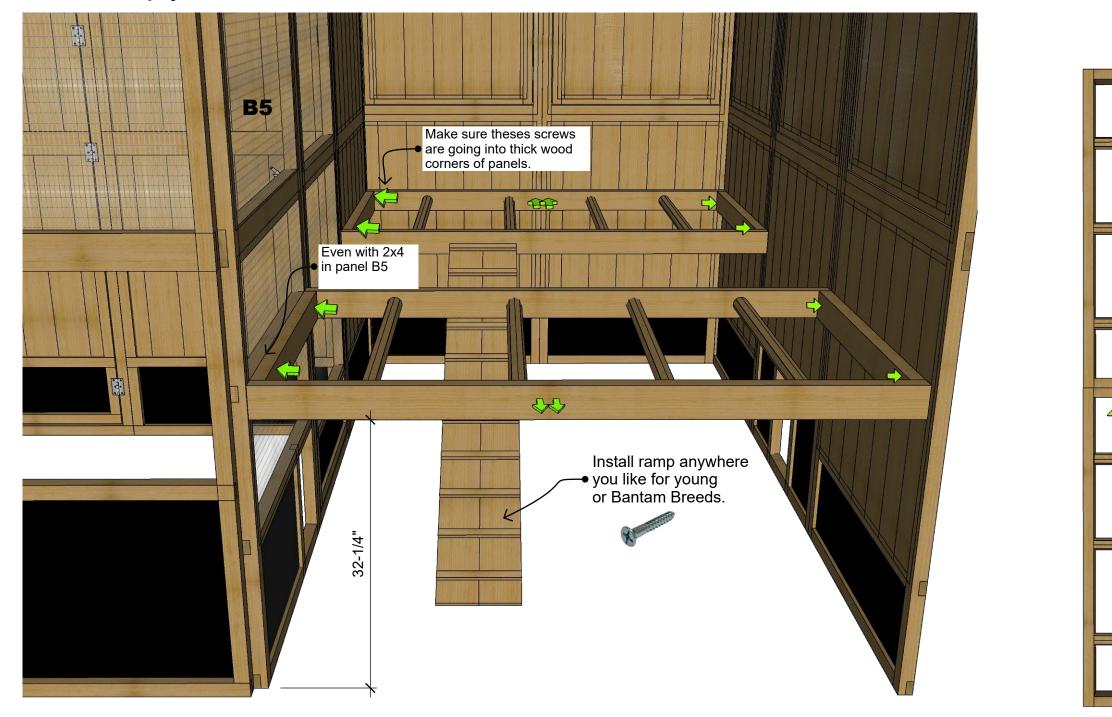
Showing properly installed Freeze-Guard Poultry Drinker™. Remove and reinstall using same method if you are taking your waterer out of coop.

<b>Find your inner farmer.</b>	
Assembly Instructions Heritage Series Chicken Coops <sup>TM</sup> V1.2 Fall 2023 copyright ® Roost & Root   All rights reserved.	
4.3 Install Poultry Nipples	
20 30 40 Page 50	)

### Lets set up the Roost Bunks for your chickens...

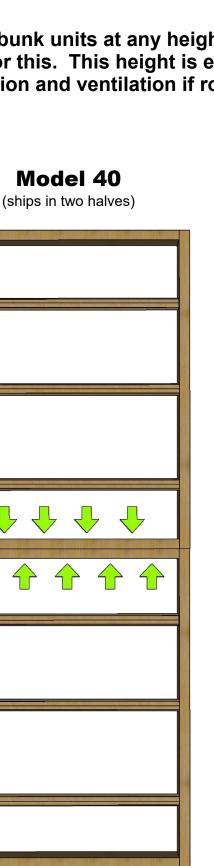
Model 20 and 30 bunks are one piece units. First assemble Model 40 units (shipped in halves). You can install bunk units at any height you want but we tested the coop with them set at 32-1/4 inches from ground and the ramp length is designed for this. This height is easy for an adult non bantam breed chicken to just jump to with no ramp and is a happy medium for weather protection and ventilation if roost wall doors are dropped down. Whatever height you decide, we suggest they be equally high.

Please pay notice that all screws drive into 2x2 or 2x4 wood. Make level.



# Model 20&30 Illustrated

(same concept for model 40 after assembling roost bunk halves)



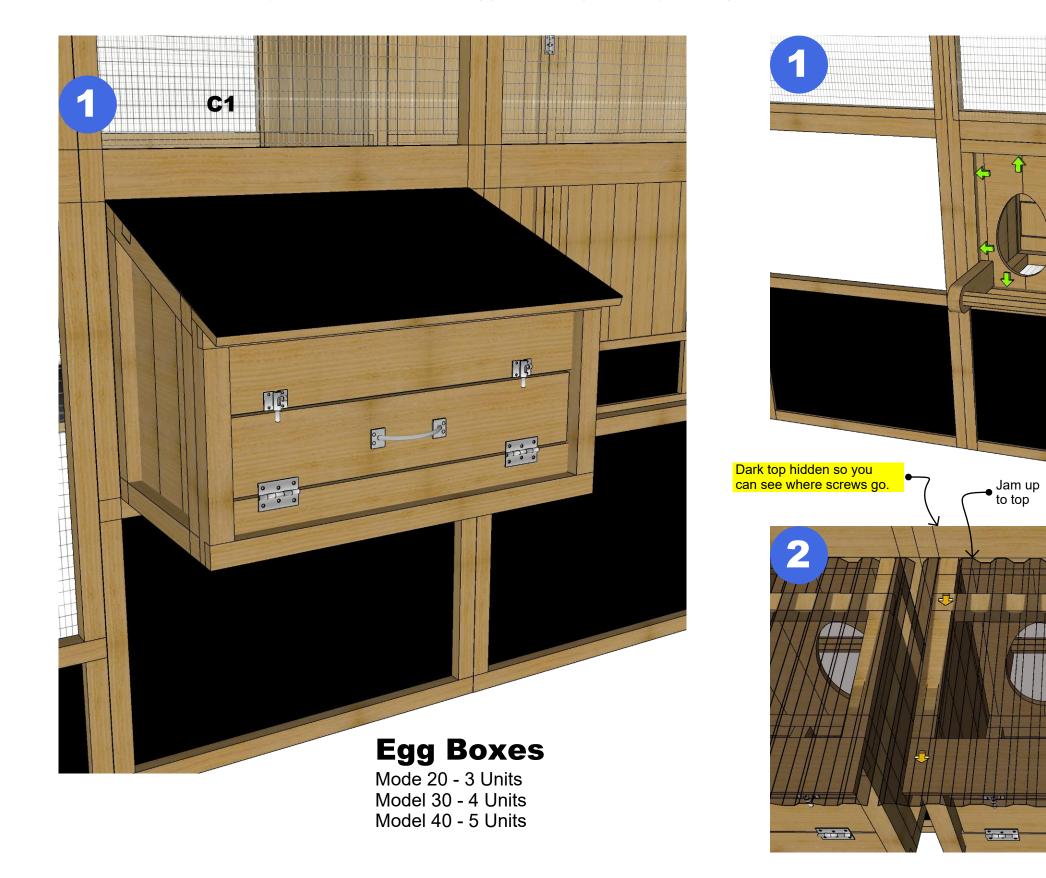


## Egg boxes install as pre-fab assemblies into the openings in the C1 panels...

Insert egg box units into openings in C1 panels mounting them with 6 T25 3" screws as illustrated.

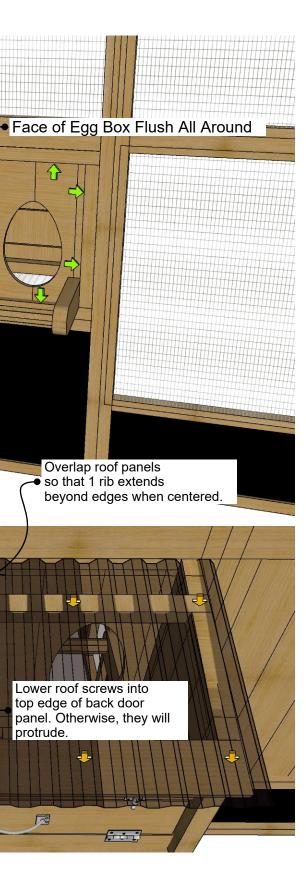


Install roof panels using roof screws and driving them through dark tops of egg boxes into wood as shown. Dark tops are required so that no light comes in. Chickens will in part instinctively lay eggs in a dark spot. Cozy counts too. Insert provided egg box liners. Liners are designed to be able to clean, and not be so comfy that chickens sleep in egg boxes or get broody. They go in, do their business and make room for the next hen.



C1

protrude.

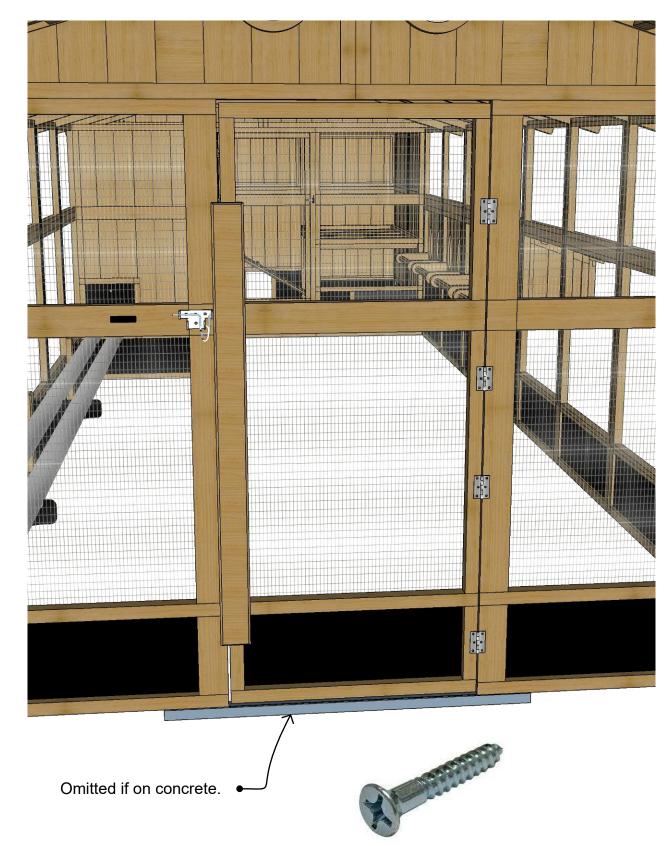


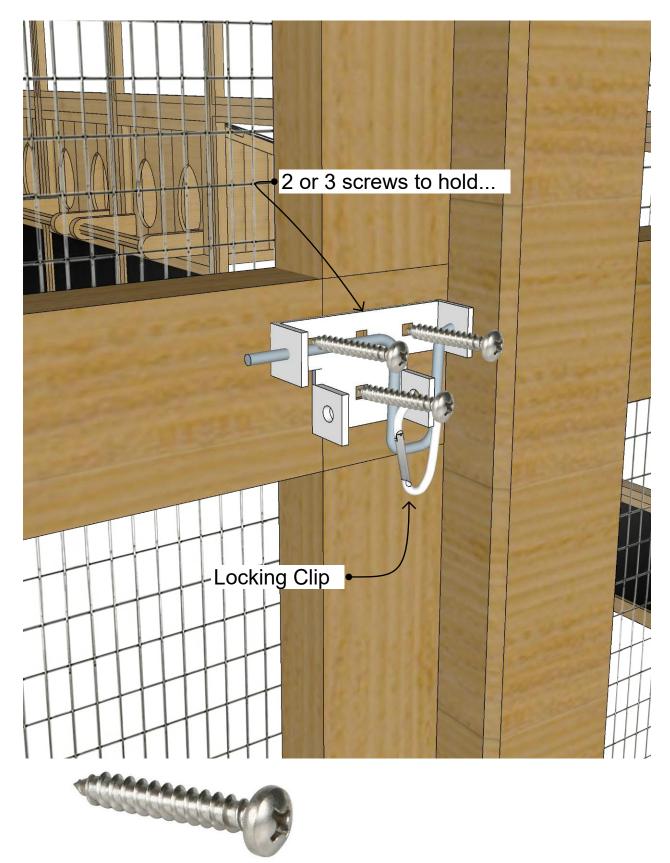


# Time to install the front door...

Front door hinges are pre-attached to the door and the screw holes for other half of the hinge are pre-drilled in the right door frame. Starting off with the very top hinge and top screw, use provided Phillips head screw and install. Install snug. Switch the bottom screw on the bottom hinge and install and make snug. Switch back and forth from top to bottom installing all screws snugly making sure door stays straight. When confirmed aligned straight, tighten all screws tight, but don't strip out wood by over tightening. Door handle serves as handle, door stop, door stiffener, and catch for gate lock.

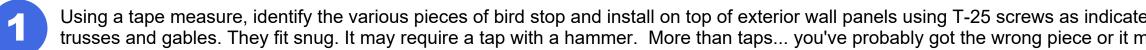
Install gate lock with larger pan head Phillips screws as indicated such that it freely goes in and out of hole provided in door handle.

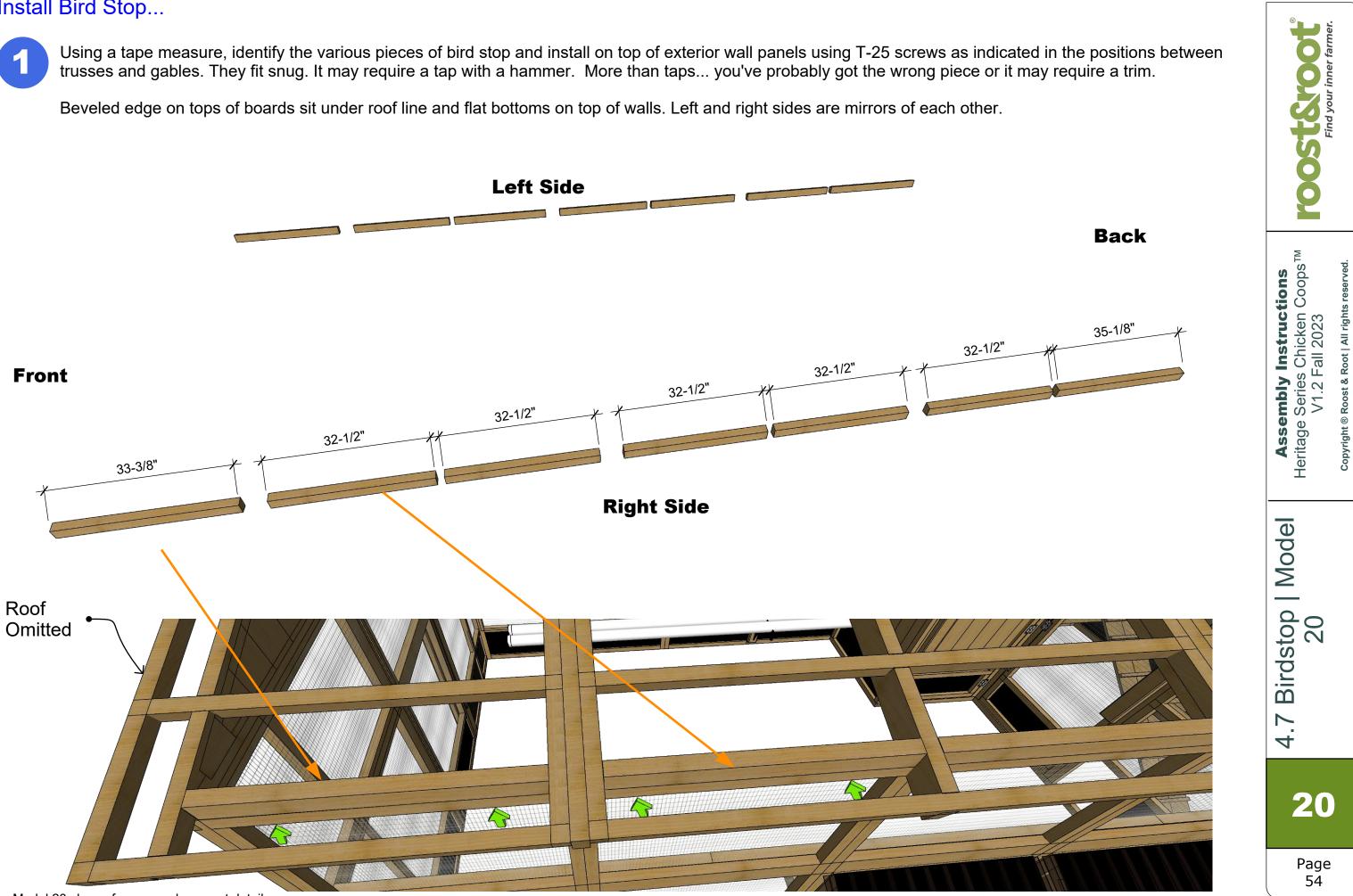






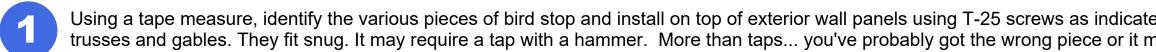
# Install Bird Stop...

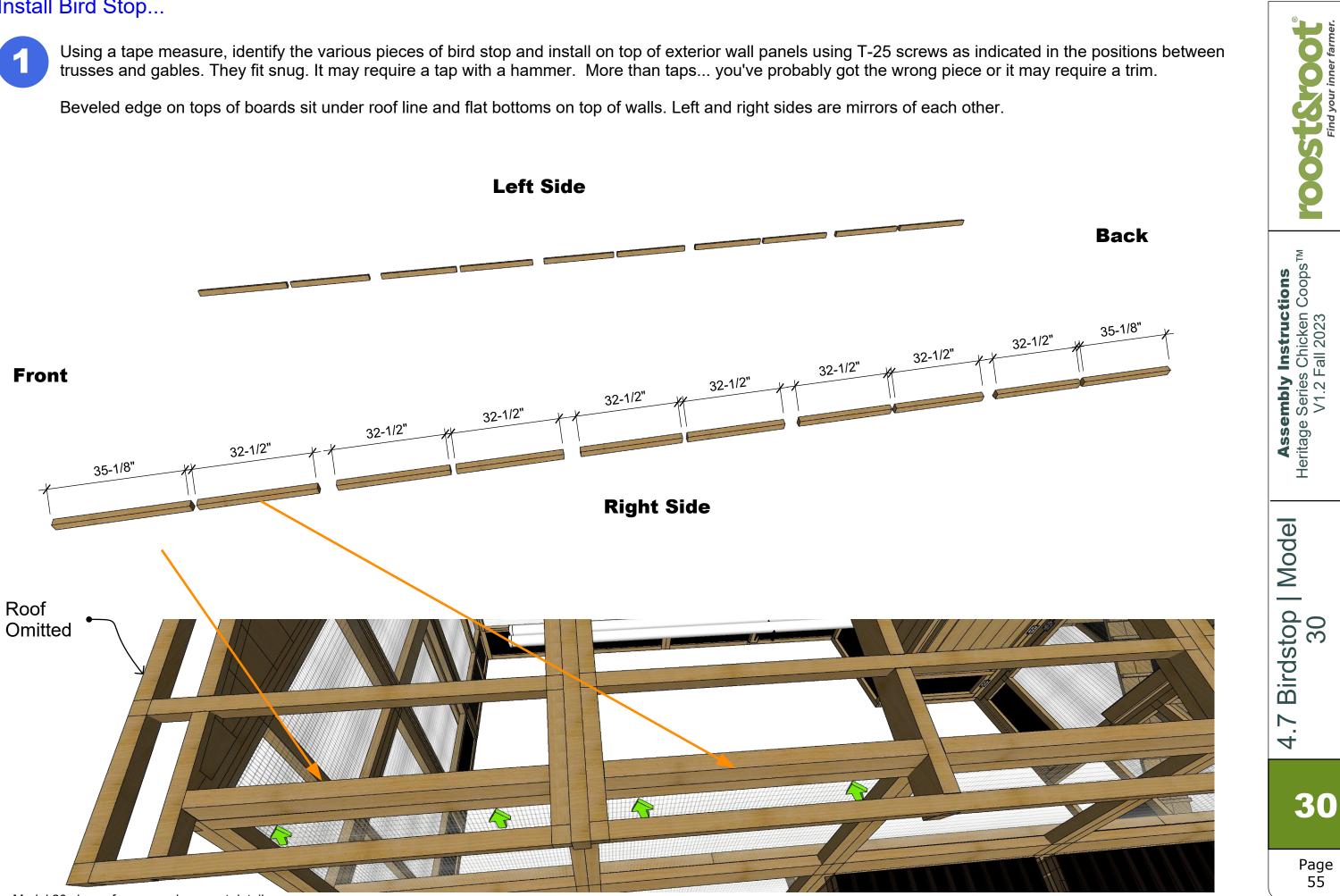




Model 20 shown for screw placement detail...

# Install Bird Stop...

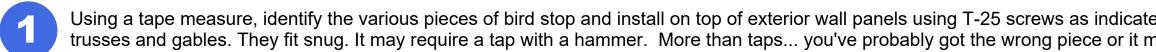


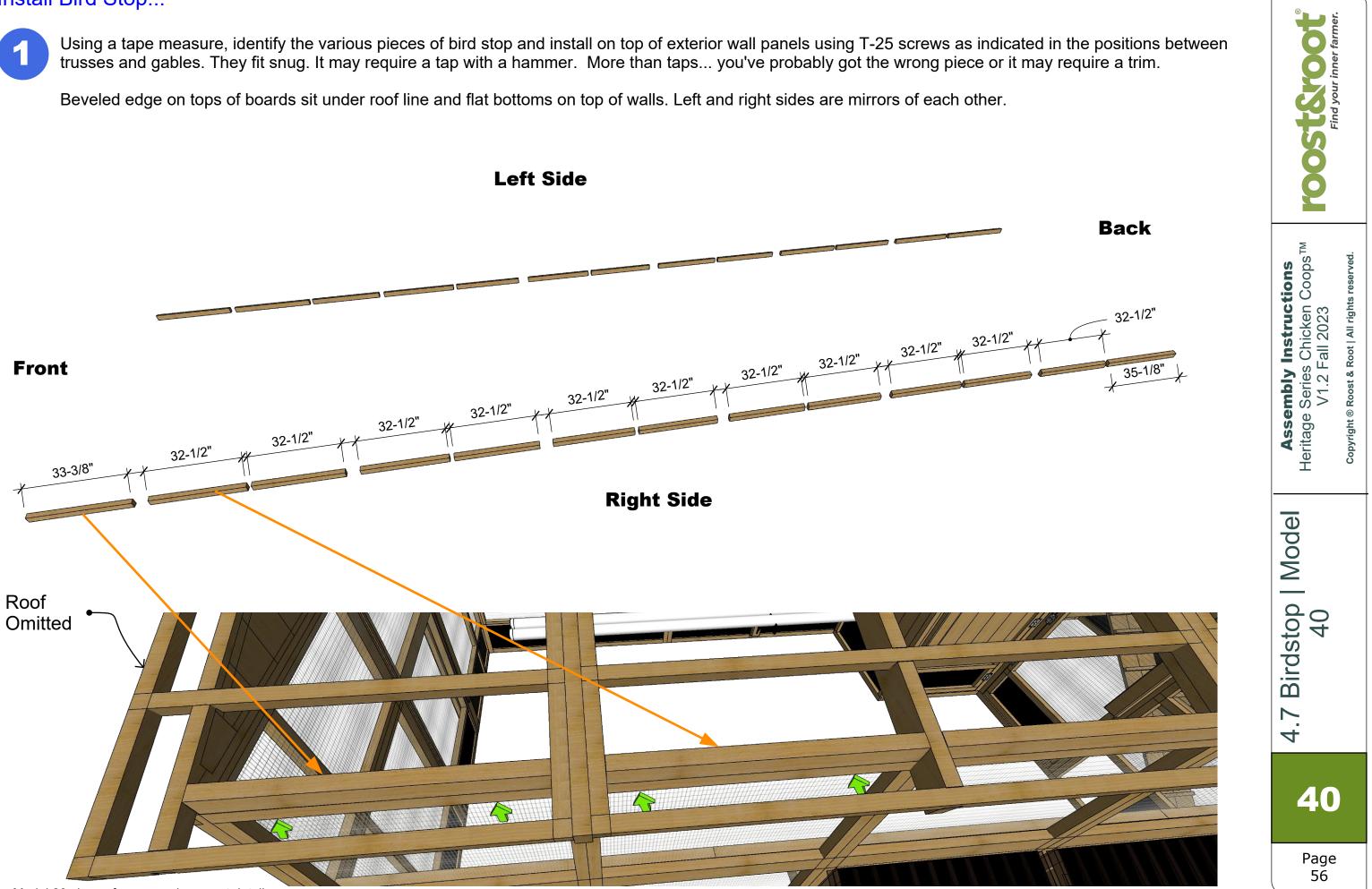


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Model 20 shown for screw placement detail...

# Install Bird Stop...





Model 20 shown for screw placement detail...

# Your coop comes standard with two high quality automatic doors...

**Operating Concept -** See provided manufacturers instructions for details, but here is an overview. Two doors are provided, one for the roost back and one for the roost entry. Both doors are outfitted with photo sensor eyes. If the program to the doors are not modified, they will each open automatically at sunrise, and then perform a close at sunset with their "second chance" function. Idea of back door is a turnout door, and front door as a second line of dense to a predator. This arrangement could also allow you to grow out one set of younger birds in the coop, and turn out older birds during the day. Both doors are operated by one battery and a solar panel to keep the battery topped off.

### **Kit Contents:**

- (1) 5W Solar Panel attached wire in loom | bracket | two rare earth magnets
- (2) Right Hand Swing Doors attached wire loom (model 40 back door 3' longer)
- (1) SLA Battery included battery box
- (25) Wire Clamps includes clamps and screws
- (2) Factory Hardware Envelopes programming magnet | instructions | screws | fuse

You cannot let the rare earth magnets used to hold the solar panel in place to touch each other. They're powerful and often shatter if allowed to hit each other and can pinch your finger to the point of bleeding. They attach to the solar panel bracket through the roof and allow it to be held in place without drilling any holes in the roof.

Install each door in the indicated positions using the included manufacturers provided mounting hardware and for the moment carefully lay the wire on the ground next to each door.

Do not overtighten screws such that a bind would be placed on the doors but make them only tight enough to be firmly held in place.



Door Outside Coop On Back Wall



Door Inside Coop On Mid Wall





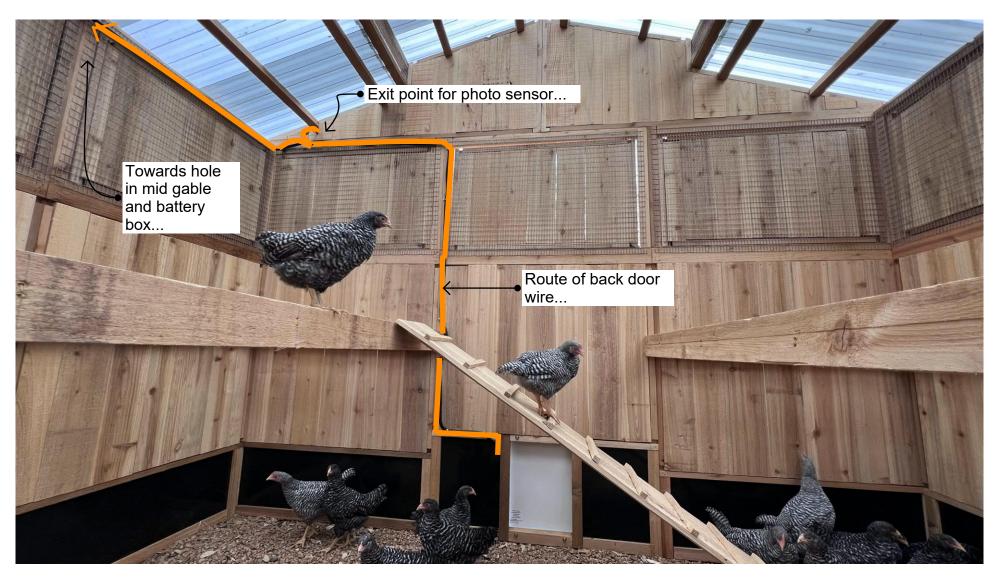
Route the wire on the back door first through the hole in the right black panel (illustrated) and then up and along the wall towards the location that the battery box is situated.

At about the 7' mark the photo sensor eye exits the main wire loom. Place it through the hole in the Back Gable as illustrated so that it can get outdoor light.

Use a clamp every 24" or so and in corners to hold the wire in its loom firmly.

See collection of illustrations and photos.

Be a little bit gentle pulling the wire so as not to break it.



### Back door photo sensor exit point...

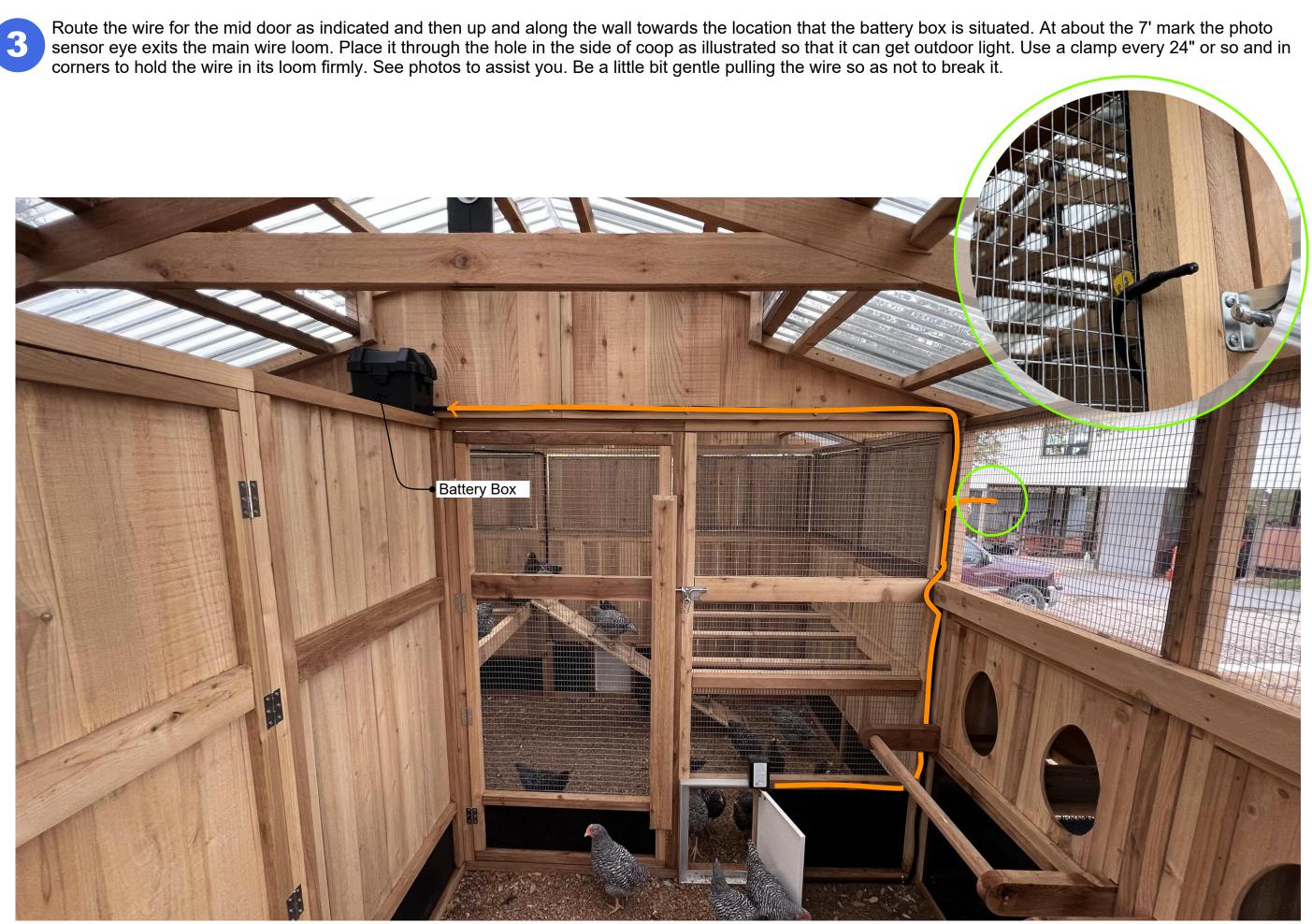




### Battery box sits on top of shed ceiling...









The solar panel is held in place by magnets. Route the wire of the solar panel under a roof rib near the battery box and lay on roof where it faces the sun. From the underside, attach two of the rare earth magnets under the roof where they magnetically hold the solar panel bracket in place. Make sure the bracket is a little bit loose so that it lays down flat on roof ribs and allows the magnets to get a full "grab" on the bracket.



Attach Negative Wires - (1) attach the black wire piggy back terminal connector of the solar panel to the negative terminal of the battery. (2) connect the piggy 5 back black wire of one of the doors to negative side of solar panel piggy back. (3) connect remaining negative (black) wire from second door to negative side of battery too.

Attach Positive Wires - (1) Attach the red fused lead provided to the positive terminal of the battery. (2) attach the red wire piggy back terminal connector of the solar panel to the fused lead terminal. (3) connect the piggy back red wire of one of the doors to positive solar panel piggy back. (3) connect remaining positive (red) wire from second door to positive side of battery too. Don't let wires of solar panel touch each other once it is placed in the sun as it is producing electricity. Excess wire can be rolled up and carefully stored inside of battery box.

6

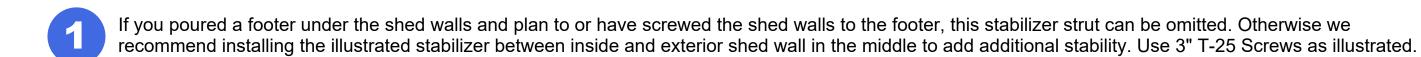
To operate doors follow the instructions as provided by the manufacturer. You can also go to www.chickendoors.com

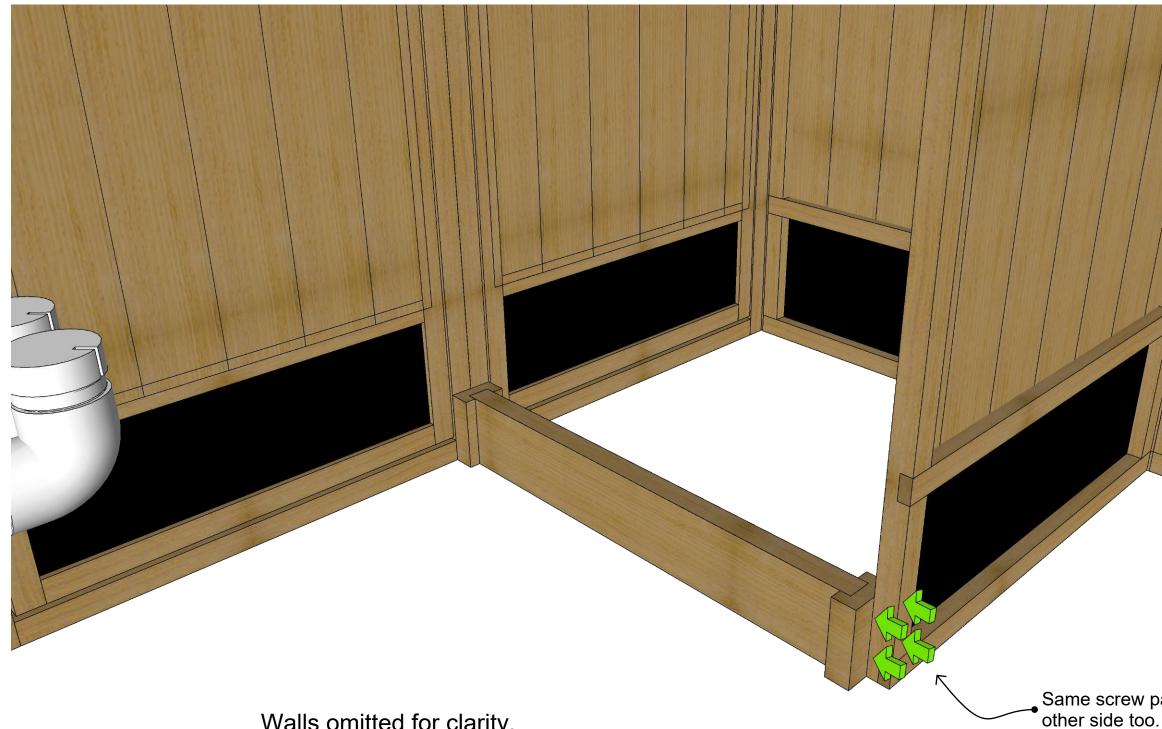


**Piggy Back Connector** 

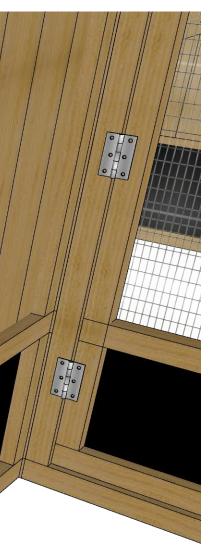


## Install optional shed wall stabilizer...





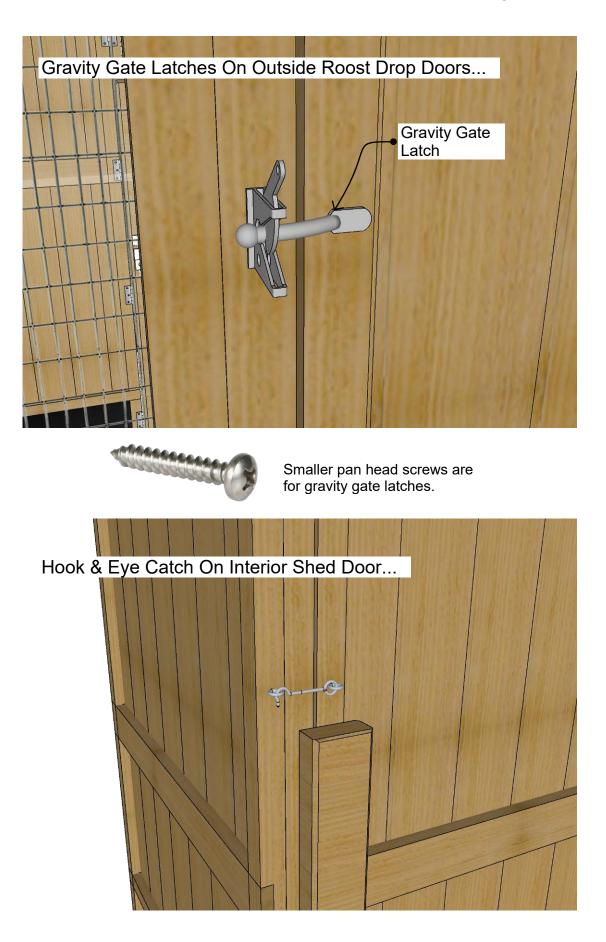
Walls omitted for clarity.

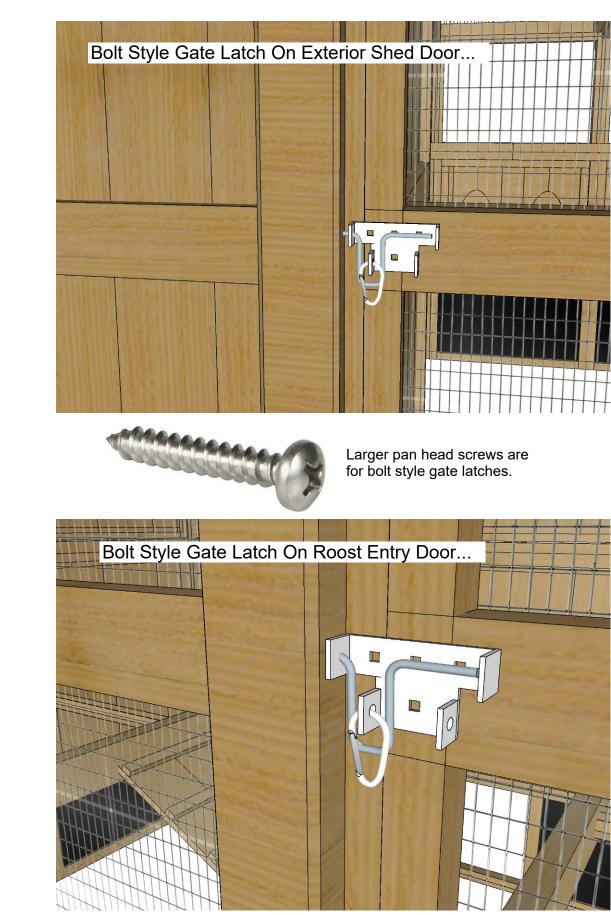


Same screw pattern from



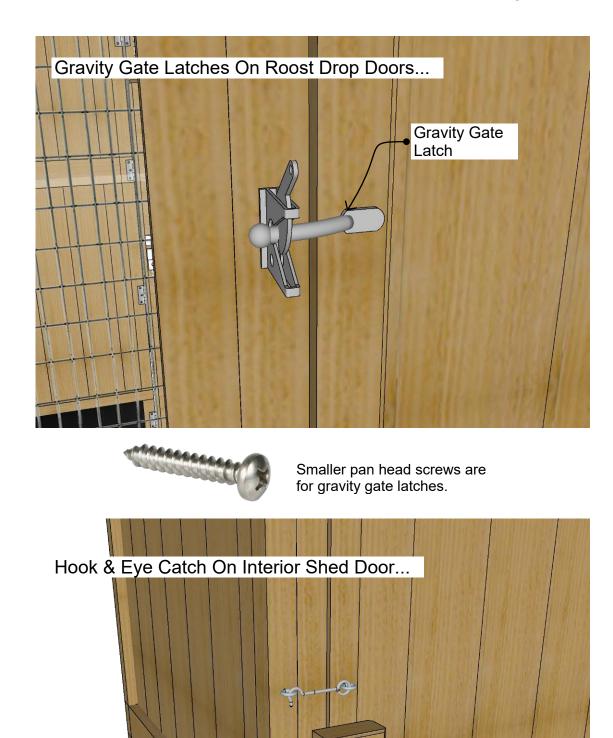
Install the various door latches as required. Align for smooth operation...

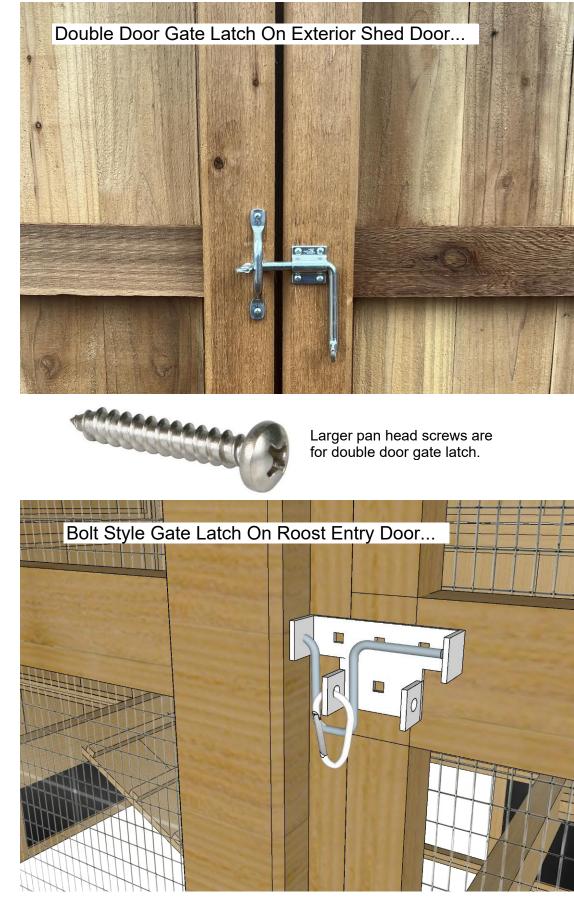




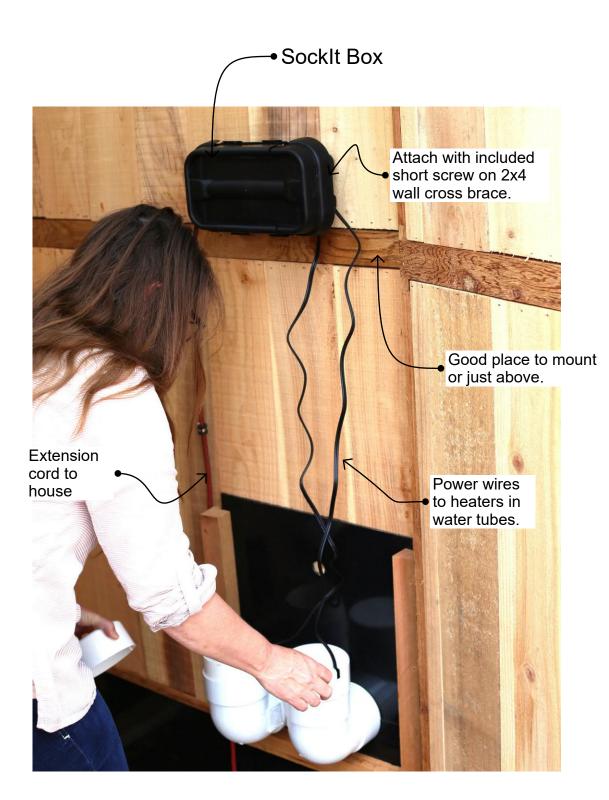


Install the various door latches as required. Align for smooth operation...









The included SockIt Box is attached the shed wall above the waterers. It is designed to give a safe out of the way place to connect an extension cord to two NOT PROVIDED immersible water heaters that your waterers will accept. See our website or call to learn about what heaters will be good for your model and your area. If you do not live somewhere where you expect to want to heat the water, you may omit.



Your coop comes with either one or two Coop Worx bulk feeders. Instructions for assembly, adjusting the height of the legs, and usage are included in the manufacturers box.

It is normal for some feed to spill onto the ground and it gives the chickens some pecking to do. But this feeder is dry, holds a lot, has sufficient feed ports, and is very rodent resistant.



## **Optional Storm Panels Concept Overview**

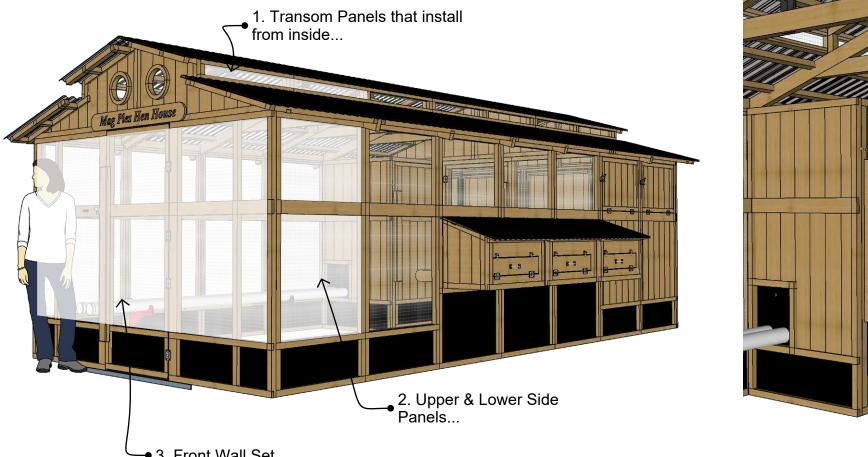
The primary purpose of storm panels is sub zero wind protection and helping to keep snow accumulation inside your coop to a minimum. They can also be used in regions that recieve monsoon wind driven rains to limit wind driven rain as well. We focus on "cold" in these instructions, but for whatever reason you decide to use the panels, the procedure is the same.



It's key to remember... regional appropriate adult chickens are very cold hardy. Your first move when nights begin to dip below about 20°F in the fall is to control the weather in the roosting compartment at nighttime with the flip up doors on roost panels. Each year your chickens will go through a process to add winter feathers. If you interfere too much with protecting them from the cold they will not add as much protection as they naturally would. Wet Sub-Zero conditions is mostly what you're trying to protect from... and undesirable accumulations of too much snow that creates too much of a mess. Chickens that are mostly dry and who can seek wind protection can easily deal with even sub zero temperatures. Sub -20°F temperatures for fully feathered adult chickens is where the needs begin to protect from frostbite. Every year we talk to customers whose chickens make it through even several nights of -30°F without dying. If you expect weeks of sub -20°F temperatures that don't warm up during the days you would want to take some measures to provide supplemental heat. ONLY USE HEATERS AS A LAST RESORT AND ONLY HEATERS THAT ARE DESIGNED FOR CHICKEN COOPS.

\* If you live somewhere with a long cold season you may also want to research the deep litter method of creating warmth in the winter.

Your coop requires a large number of panels to be applied to enclose it. The goal is to put them on once per year, and take them off in Spring. They fit loosely so that there is still adequate air flow but knock out the vast majority of wind and snow. There are 4 types of panels provided.





3. Front Wall Set...

Depending on your model, the front and mid walls are the same but the number of transom, upper and lower panels will vary.

4. Mid-Wall Set...



### Install twist lock clips onto storm panels.





are the same and that are unique.

Install Video

All 5 panels on the mid wall are unique. \* Note that panels allow for about 3/16 gap all around for manufacturing tolerances and ventilation.

