



BXB-000009 INSTALLATION MANUAL



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Chart of Revisions

REV	DATE	DESCRIPTION OF CHANGES	REQ. BY	PAGE	SEC.	ACCEPTED	BY
1.0	6/16/2024	INITIAL RELEASE	BOXABL	ALL	ALL	6/18/2024	KD
1.1	1/17/2025	UPDATED TABLE OF CONTENTS & PROCESS ORDER	BOXABL	ALL	ALL	1/17/2025	KD
1.2	5/19/2025	FORMATTING	BOXABL	ALL	ALL	5/19/2025	KD

Introduction

About

This manual outlines the installation procedure for a BXB-000009 Model Casita Home. This model design includes generic foundation design and several options of site-installed roof designs. Refer to the approved module plans for specific connection & design details of these generic systems. Custom foundation or roof designs are not accommodated for in this manual and are approved by the local authority having jurisdiction.

FOLLOW ALL OSHA COMPLIANT SAFETY GUIDELINES WHEN PREFORMING WORK.

WELCOME HOME!

Scope

The scope of this document is to compliment the Approved Plans of the Factory-Built Housing model BXB-000009 and provisions of Plan Requirements.

Plans submitted to the department or design approval agency shall indicate every pertinent item necessary for design, assembly, and installation. Plans shall include a resume of what installation work is to be done on-site. Local enforcement agencies shall enforce and inspect the installation of factory-built housing.

Plans approved by the department or design approval agency shall be accepted by the local enforcement agency as approved for the purpose of obtaining an installation permit when the design criteria are consistent with the requirements for the locality, as determined by the local enforcement.

Specifications

- Dimensions: 19'L x 19'W x 10'9"H (361 SQ. FT. Unfolded).
- Shipping Dimensions: 19" L x 8'6" W x 12'4" H.
- Weight: Approx 12,800 LBS.
- Snow and Wind Load: See Structural Plans for Allowable Loading of Each Type of Roof.
- R Value: R-23.47 Walls, R-28.3 Floor, and R-27.68 Roof (Flat Roof).

Support

For Technical support, questions, or parts, please email hello@BOXABL.com or call 1+(702)500-9000.

How to Use This Manual

This manual will show the steps required to set, unfold, and trim out the BOXABL Modular Casita. Please refer to this manual for general model specific information. For all site-specific information and details please refer to your site-specific plan set.

IN THE EVENT OF ANY DISCREPANCIES SHOWN, NOTED, OR IMPLIED BETWEEN THIS DOCUMENT AND THE APPROVED DRAWINGS, THE APPROVED DRAWINGS SHALL CONTROL IN ALL ASPECTS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF BOXABL IMMEDIATELY.

Testing / Compliance & Quality

Testing

BOXABL Inc. is committed to ensuring the efficacy of all requisite quality tests and inspections, and their robust ability to identify potential failures under specified conditions, in addition to confirming that these inspections are performed in a consistent manner, throughout all manufacturing processes, and on all units during and after production. Some of these tests and inspections include:

- Raw materials quality inspection.
- Manufacturing, fabrication, sub-assembly quality inspection.
- Lamination, paint, panel inspection, time studies, and calibration.
- Lamination adhesive testing and calibration.
- Assembly and panel alignment inspection.
- Folding/pivot component inspection and adjustment.
- Electrical components testing and die-electric validation.
- Pressurized plumbing testing of water and Drain-Waste-Vent system.
- Finished goods (unit) packaging inspection.

Compliance & Quality

The BOXABL, Inc. company, located in North Las Vegas, Nevada, designs and builds modular homes (Otherwise known as Factory Built Housing; Factory Built Buildings; ...) and other products for utilization in the United States and International markets. Products are designed and fabricated to the highest standards of quality, which meet or exceed all applicable federal, state, and municipal standards. Raw materials and all vendor-supplied components are sourced, procured, and inspected for compliance and quality before, during, and after fabrication, ensuring the integrity, quality, and sustainability of the units produced.

Every unit is supplied with a build data placard, each with a serialized BIN (BOXABL Identification Number), located on or near the electrical panel. Additional seals of compliance, such as AJH specific Data Plates, are found in this area as well.

REFERENCE APPROVED PLANSET FOR COMPLIANCE STANDARD RECOGNITION AND CONFORMITY, INCLUDING CODE.

On-Site Storage Requirements

Handling and Storage of Completed Structures

Complete units are packaged for shipping using custom designed bracketry and industrial grade polymer shrink wrap materials. These units are stored in a secure exterior storage lot. Units are protected from the elements, unauthorized alterations or modifications, until delivery to the end user is arranged.

All openings in the exterior envelope are closed and reinforced to prevent weather damage in the storage lot, or in transit. Special attention shall be given to:

- Water infiltration through roof, walls, or floor.
- Excessive humidity accumulation.
- Storage in a level and plumb position to prevent racking, sliding, or overturning.
- Abnormally high winds and flooding.

Transportation of Structure to Permanent Site

The structure is moved to the permanent site, using a house-mover transportation trailer, integral trailer, or single transportation trailer. All efforts must be made to obtain the destination site (final occupied location) of the structure. A post office box or “at the corner of” designation shall not be accepted. This end destination is important in determining the applicable codes, as well as providing the delivery destination and service destination, as necessary. The end destination becomes a permanent piece of information in the structure dedicated file. The installer of the structure is required to check for damage at the time of delivery, and to report any damage to BOXABL immediately.

Included Packout

10" SIP screw & SS washer



8" SIP screw & SS washer



#8 x 1.75" hillips SS screw x250



#10 x 2" T25 zinc torx screws



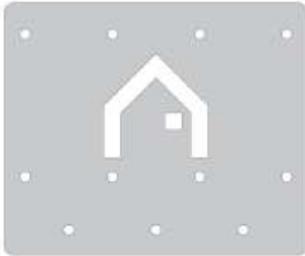
5" GRK RSS T30 torx



Roof membrane



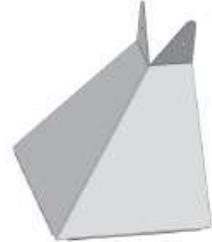
Connection plate



Foundation connection plate



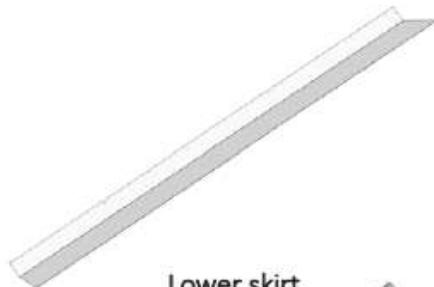
Edge filler flashing trim



Left flashing



Right flashing



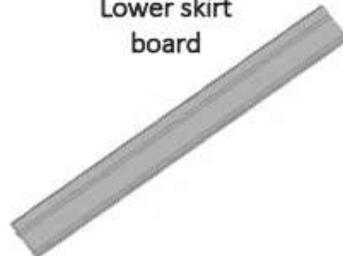
Transition filler flashing



Roof perimeter board



Lower skirt board



Screw cover cap for roof skirt board (with wings)



Screw cover cap for lower perimeter board (no wings)



Included Packout (Continued)

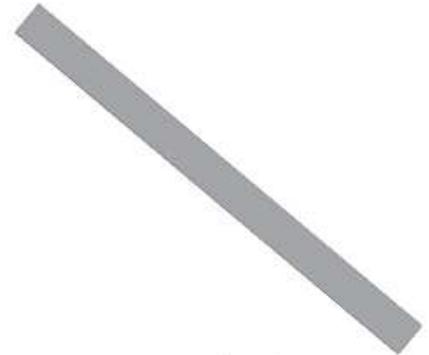
Corner trim A (with notch + miter)



Corner trim B (flat w miter)



Hinge wall seam trim



Hinge cover small



Hinge cover large



Lifting hoist



18ga x 1.25"
brad nails



Flashing tape

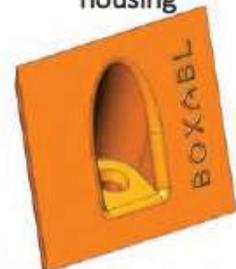
2"



4"



Interior toe screw
housing



Insulation spray foam



All weather caulking

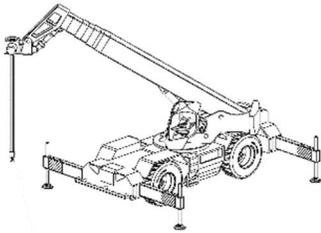


Geocell sealant



Tools & Equipment Required

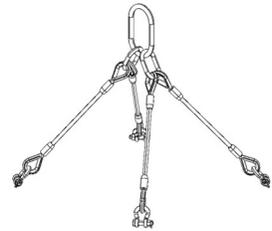
Telehandler



19' spreader bar or equivalent rigging



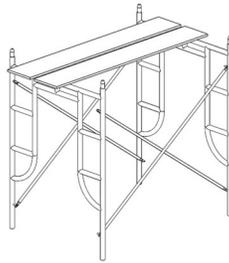
Safe and compliant rigging



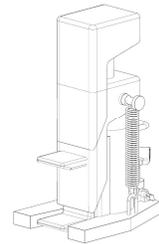
Scissor lift or equivalent



Scaffolding or A frame ladder



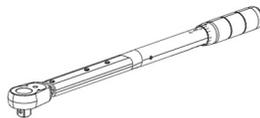
Dual height toe/pedestal hydraulic jack (recommended)



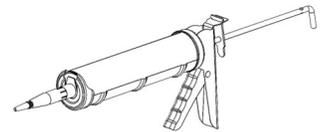
3/8" drive, 4" long socket wrench extension, & 1/2" to 3/8" adapter



1/2" drive torque wrench or impact gun



Caulk gun

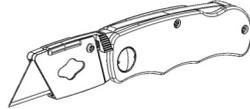


Tools & Equipment Required (Continued)

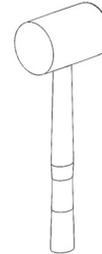
Tape Measure



Utility Knife



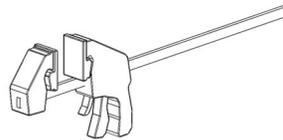
Dead Blow Mallet



Isopropyl Alcohol



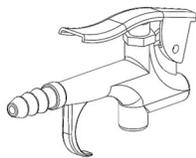
Squeeze Clamps or pipe clamps



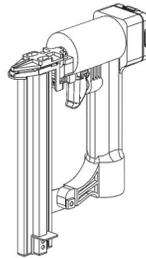
1/4" impact drill



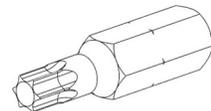
Air blower or broom



Brad Nailer



T-25, T-30 Torxs Bits



REFER TO THE APPROVED DRAWINGS FOR ALL CONNECTION DETAILS AND SPECIFIC INFORMATION. IN THE EVENT OF ANY DISCREPANCIES SHOWN, NOTED, OR IMPLIED BETWEEN THIS DOCUMENT AND THE APPROVED DRAWINGS SHALL CONTROL IN ALL ASPECTS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF BOXABL IMMEDIATELY.

Pre-delivery

Site Preparation

- Verify the site is accessible for the delivery.
- Verify that any forklift, telehandler, or crane will be able to safely operate without the risk of damage to the equipment or the unit. (EX: power lines, trees, ground is stable enough to handle the weight of equipment with the unit.
- Verify roadway and site access is appropriately sized for equipment including trucks and trailers to safely maneuver.

Foundation

Refer to approved plan set for approved generic foundation designs and connections to unit.

Foundation design: Approved set of drawings include a generic foundation design that will be accepted by the local enforcing agency if the building official determines that the aforementioned foundation design load limits are not exceeded and no geotechnical investigation report is required for the installation location.

In case a geotechnical investigation report is prepared, and shows foundation design recommendations that differ from the approved generic foundation design, a site specific foundation design shall be prepared, reviewed, and inspected by the local enforcing agency. The site specific foundation design is out of the scope of this manual. However, the connection details of the house to the foundation that are provided in the approved set can still be used if accepted by the professional engineer of records for the site specific foundation.

See approved plans set for design criteria and limits on site and soils condition.

Roof Design

Approved set of drawings include several roof configuration designs that will be accepted by the local enforcing agency. Other engineered roof designs must be approved by BOXABL first, before being presented for the local enforcing agency for review and permitting.

Delivery Handling and Crane Methods

Forklift / Telehandler

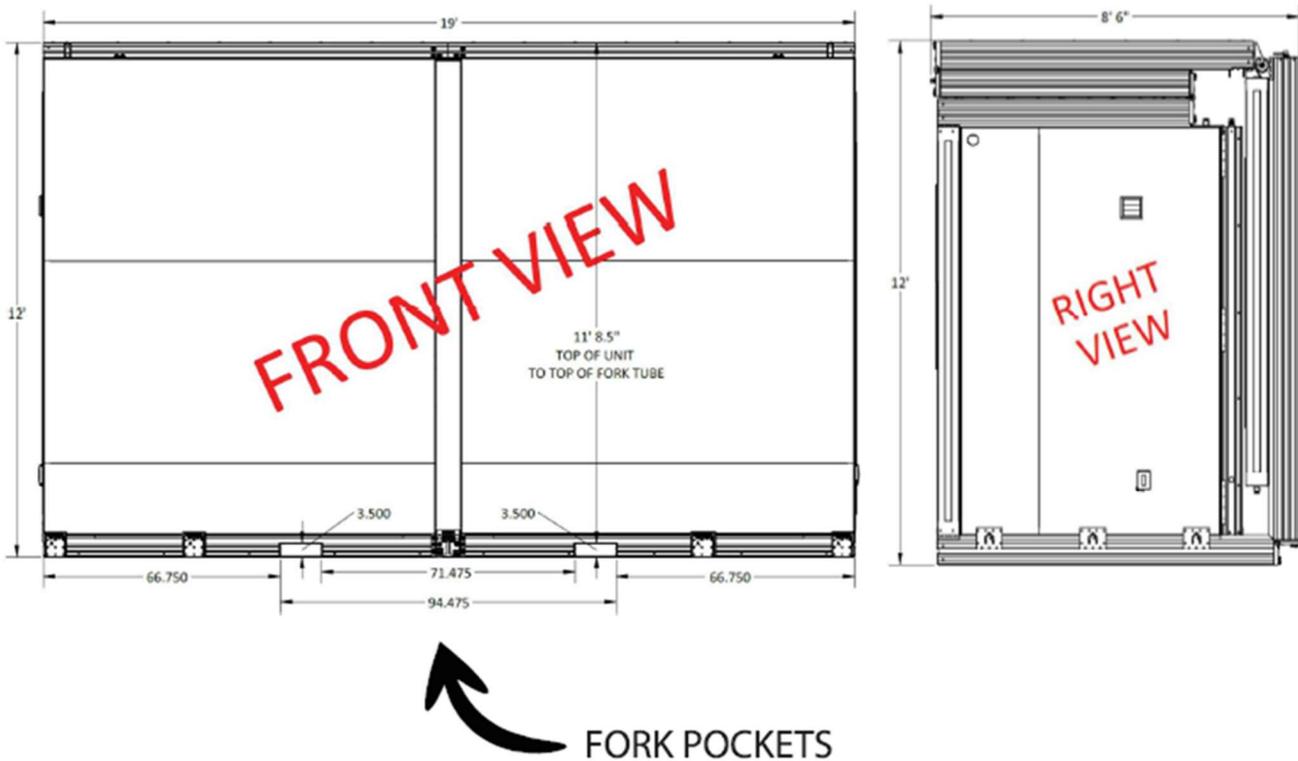
Each module weighs approximately 13,000 pounds. Units are equipped with fork tubes with a 4" x 12" pocket, to allow use of a large forklift or telehandler with the appropriate carriage attachment. Note that either machine **MUST** have a 15K lb. minimum load rating and minimum 96" Fork Length. Fork pockets have a 71.5" span, so a carriage or fork spread must reflect at least that distance at the inside face of the fork legs.

Telehandler or Crane

Using the fork pockets within the unit, a crane or telehandler with proper rigging and bridle may be used, in conjunction with appropriate rigging straps, to hoist the unit from above off the transport. It is suggested to employ the use of an adjustable spreader bar to attached rigging straps, but this is not required.

- Straps must be a minimum of 40ft in length, with the appropriate load capacity.

ALWAYS REFER TO EQUIPMENT LOAD CHARTS TO VERIFY EQUIPMENT CAPABILITES.



Exterior Build



REMOVE RIGGING TO LIFT FROM TRANSPORT TRAILER



REMOVE RIGGING TO LIFT FROM TRANSPORT TRAILER

Step 1: Unwrapping



1. Locate space between Core and Folding Floor. A visible drop at the top of the unit height will denote the front of the unit.

2. There is a gap on the left and right side of the unit where the wrap will be cut and removed.

3. Use a utility knife or blade to carefully cut wrap on both sides of the unit at the line denoted.

4. Carefully remove wrap using a scissor lift, scaffolding, or ladders.



5. It is recommended to use a team of 2-4 to safely and quickly remove wrap.

6. Remove trim boards from inside the unit located at the top of the Folding Wall.

FAILURE TO REMOVE THE BOARDS PRIOR TO UNFOLDING MAY RESULT IN DAMAGE TO TRIM BOARDS AND / OR FLOOR. COULD ALSO CAUSE PHYSICAL INJURY DUE TO FALLING BOARDS.

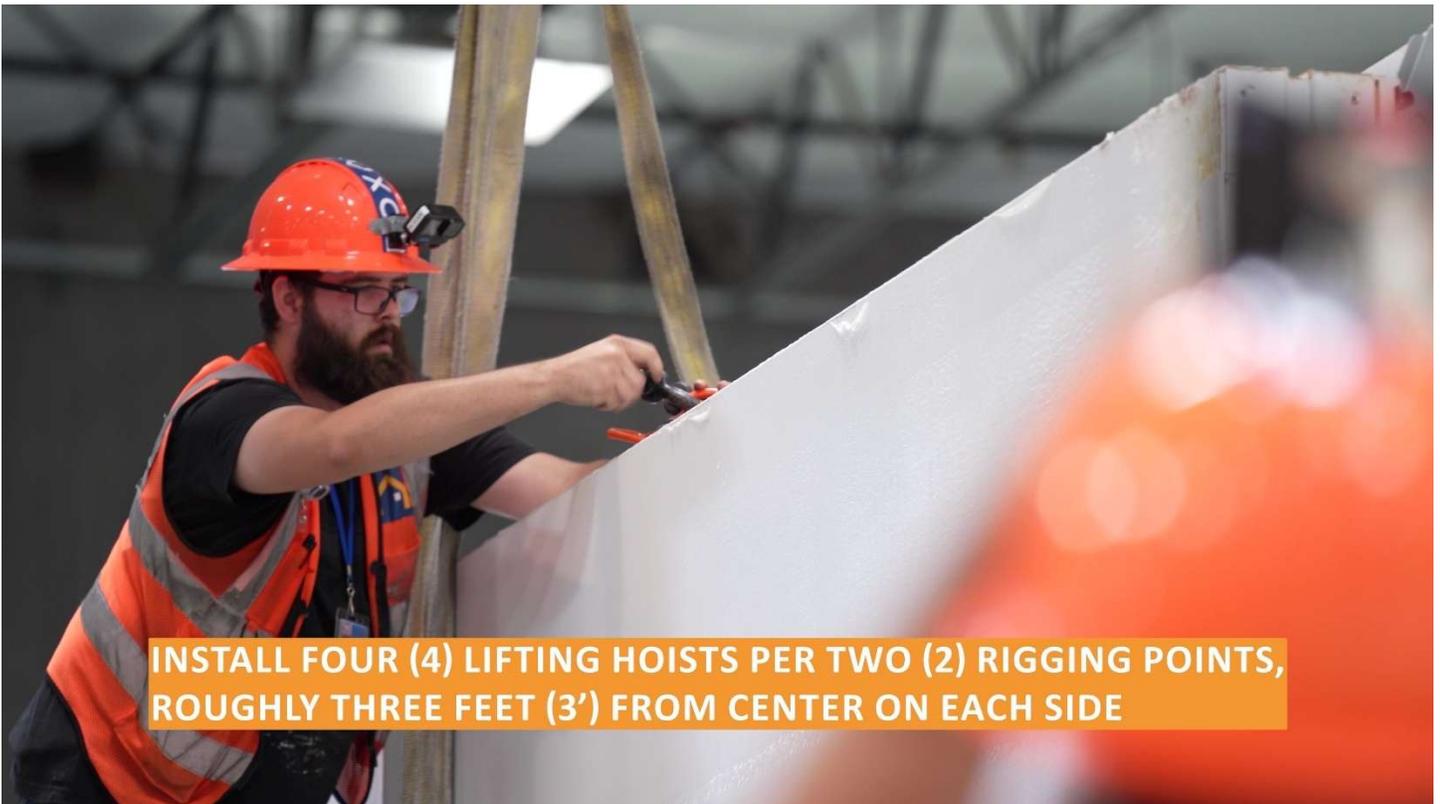


Step 2: Unit Unfolding

VERIFY THAT THE 4 LIFTING HOISTS ARE PRE-INSTALLED AS SHOWN BELOW.



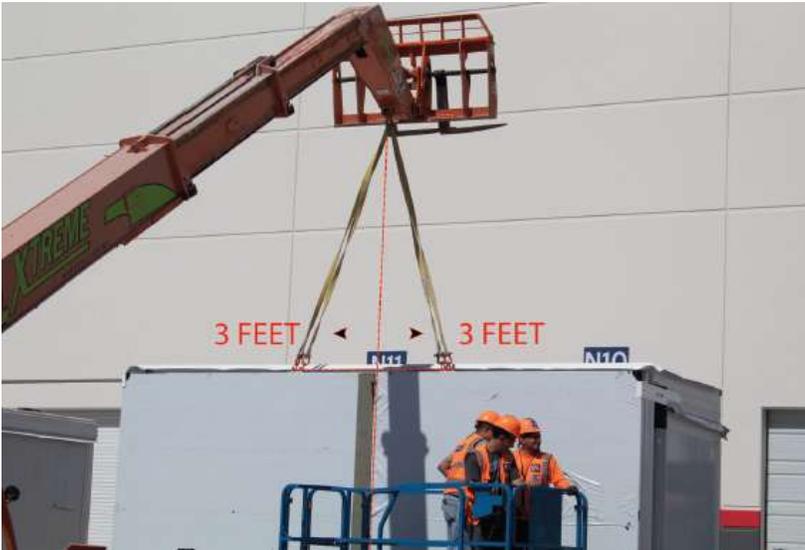
Or,



INSTALL FOUR (4) LIFTING HOISTS PER TWO (2) RIGGING POINTS, ROUGHLY THREE FEET (3') FROM CENTER ON EACH SIDE

2.1. Folding Floor

- Rig telehandler or crane to dual rig points using proper rigging and lifting techniques. Put rigging in slight tension, taking up any slack. DO NOT over tension the rigging.



THERE ARE FOUR (4) TRANSPORT CROSS-MEMBER BRACKETS TO BE REMOVED BEFORE LOWERING THE FOLDING FLOOR



THERE ARE FOUR (4) TRANSPORT CROSS-MEMBER BRACKETS TO BE REMOVED BEFORE LOWERING THE FOLDING FLOOR



- There are Four (4) transport cross-member brackets to be removed before lowering the folding floor:
 - Two (2) horizontal members at the top of the unit.
 - Two (2) diagonal members at the bottom of the unit.
 - Remove 4 lag bolts from each cross-member and pull off of the unit.

SET BOTH HARDWARE AND BRACKETS ASIDE FOR LATER USE. BRACKETS & HARDWARE VARIES DEPENDING ON MANUFACTURE DATE. IT MAY BE A T-30 TORX BIT OR A 5/16" HEX BIT TO REMOVE BOLTS. BRACKETS MAY BE DIFFERENT MATERIALS THAN SHOWN (WOOD/METAL).



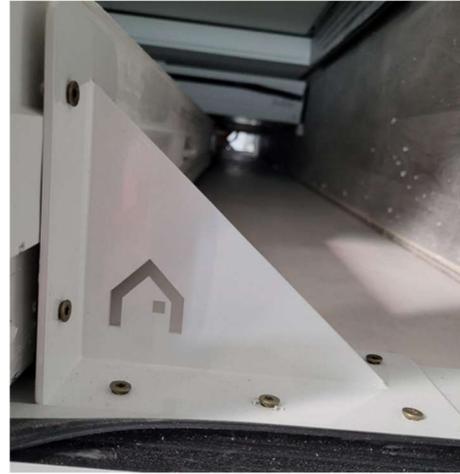
- Verify area is clear and slowly lower folding floor. Ensure pad or foundation setup is free of debris.



- Once the floor is flat, re-check primary core and folding floor are level across length and width. Shim as necessary.



- Remove two (2) wall-to-floor retaining blocks using T-25 Torx bit. There are four (4) screws per block. Blocks are located at the left and right side of the long folding wall.



RETAINING BLOCK MATERIAL VARIES DEPENDING ON MANUFACTURE DATE (WOOD/METAL).



- Remove lifting hoists from folding floor. (to be reused in the next step)

*NOTE - VERIFY CORE UNIT AND FLOOR ARE LEVEL

2.2. Long Folding Wall



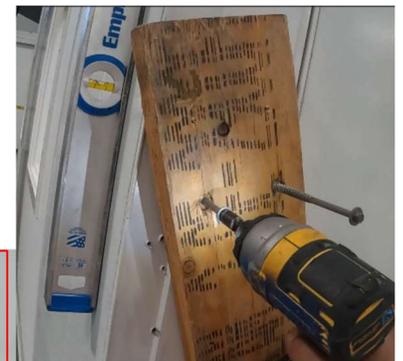
- Install ONE (1) Pair of lifting hoists on 'TOP' of the long folding wall. For reference, this is the same side the retaining brackets were removed from.
- Using pre-existing holes to help locate hoists and install roughly 3 feet from wall center using eight (8) #10x2.5" T25 Torx screws per hoist.

ORIENTATION OF LIFTING HOIST IS NOW HORIZONTAL.

- Carefully lift long folding wall. As the wall approaches 45 degrees, position two (2) workers one on each side, on the OUTSIDE of the wall, to support the wall as it approaches 90 degrees. DO NOT let the wall over-extend.
- Leave rigging in place, **verify wall is level**, and reinstall diagonal support and supplied hardware set aside earlier, on the left and right sides of the wall to floor using existing holes to locate supports. It may be necessary to use squeeze clamps, and/or a mallet to align the faces of the wall with the floor prior to installing diagonal supports.



BRACKET MATERIAL VARIES DEPENDING ON MANUFACTURE DATE (WOOD/METAL).



2.3. Left Hinged Wall & Right Hinged Wall



- With rigging still in place on long folding wall, fold out left and right hinged walls. Each wall has two wheels at the front underside of the wall. **If there is any tension when rolling the wall out, STOP! Forcing the wall will cause damage to the floor.**

- Use a **pedestal/bottle jack**, or leveraging pry-bar at the hinge location, under the unit to take tension off of the folding wall. This may be an indication that the unit is not level. Once tension is off wall, continue pushing wall outwards. Repeat for adjacent hinged wall.

- Verify walls are seated in the floor channel. There is a relief cut in the perimeter of the floor to accept the wheel attached to the folding wall. The wall will seat into the floor track once the wheels are sitting in their channels. Ensure hinged wall faces are plumb with floor and long folding wall.

- Install one 5" lag screw at the bottom corner from long folding wall to each folding hinge wall. Screw must be under red line shown in machined flat area and sunk flush with flat face.





- Verify walls are square and flush prior to seating lags.
- Use squeeze clamps to plumb wall and install two (2) lag screws at the top of the wall-to-wall connection at a 35–45-degree angle from the long folding wall into each hinge wall.
- Remove ONE (1) Pair of lifting hoists on ‘TOP’ of the long folding wall to be reused for Folding Roof Panels.

NOTE: Older units may use a 5/16” lag screw with a 5/16” hex head socket.



2.4. Fixed Floor to Folding Floor Hinge Pins



- Install two (2) tapered hinge pins into the hinge located between the core and the folding floor inside of the unit.
 - Anti seize should be used.
 - It may be necessary to use an aligning tool with a tapered end such as a spud wrench to align holes prior to starting threaded pins.
 - Start threads by hand and tighten using 3/8" square drive and ratchet. Torque to approx. 127 ft/lbs.



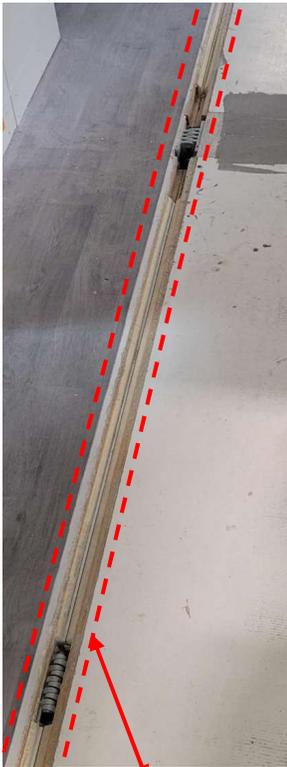
Tapered hinge pins are structurally critical. Do not continue without tapered hinge pins installed.

Use pedestal or bottle jacks as previously indicated to ensure floor is level prior to foaming.

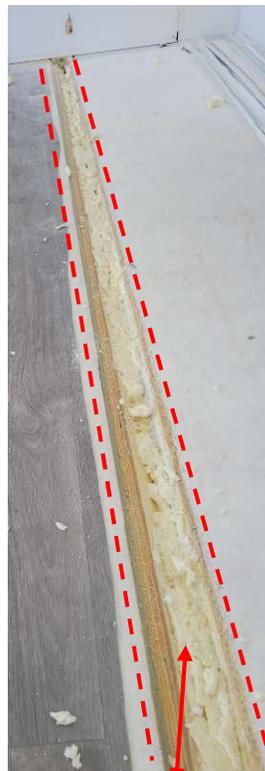
2.4.1. Floor Hinge Foaming

Using foam supplied, seal floor hinge seam. Instructions for how to use foam are located on the can itself. Be sure not to over fill the gaps. Should the foam expand past the wall cavity carefully use a blade to scrape excess foam. Foam should not be past the wall surface. This is important for the flashing and trim installation to be level and plumb. This process will help to enhance insulation, improve energy efficiency, and ensure proper sealing.

Note: The current preferred method of installation by our team is to pin-nail the MGO Seam Cover supplied over the seam with pre-drilled holes for spraying the seam seal foam through to ensure maximum sealing.



Before Hinge
Seam Seal



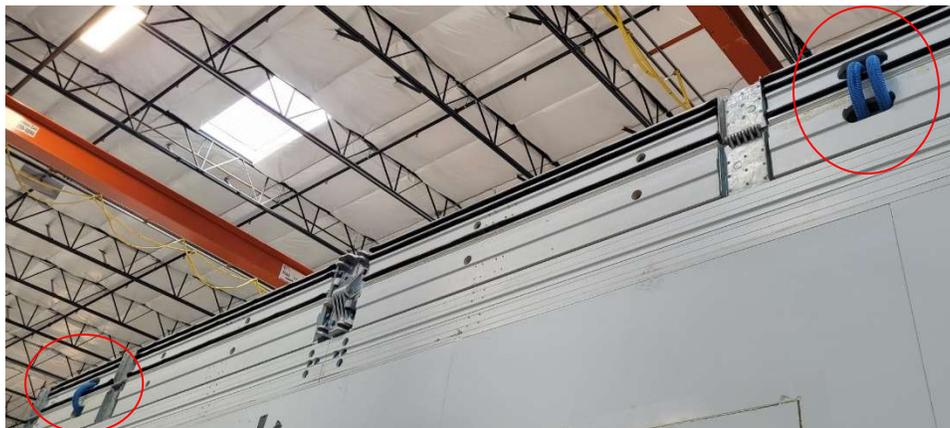
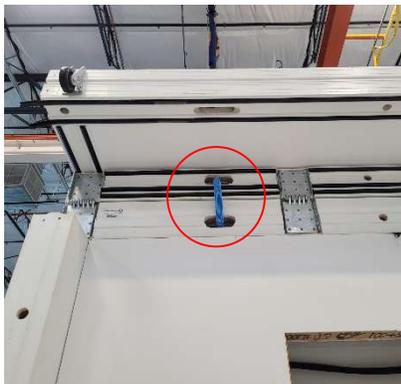
After Hinge
Seam Seal

2.5. Mid Roof and End Roof Unfold

- Install lifting hoist to mid roof using pre-defined holes. The hoist should be approx. 3” in-board from end of the roof panel.



- Connect rigging to mid roof. Carefully raise roof panel to its apex point.
 - Watch blue Smurf tube as roof is raised. STOP and re-adjust Smurf tubes if there is any pinching or kinking.
 - As the roof reaches its apex, watch for pinch points with the Smurf tubes on the inside of the unit, from fixed roof to mid roof.
 - And the Smurf tubes from the mid roof to end roof.



*Note: Once panel has reached apex, stop lifting and begin to pull towards the long folding wall and lower at the same time.



- As the end roof approaches the long folding wall, a prybar or leveraging tool may be needed to smoothly transition the end roof onto the long folding wall and assist the casters to ensure proper seating of the roof panel.



- Finish lowering roof onto wall panels.



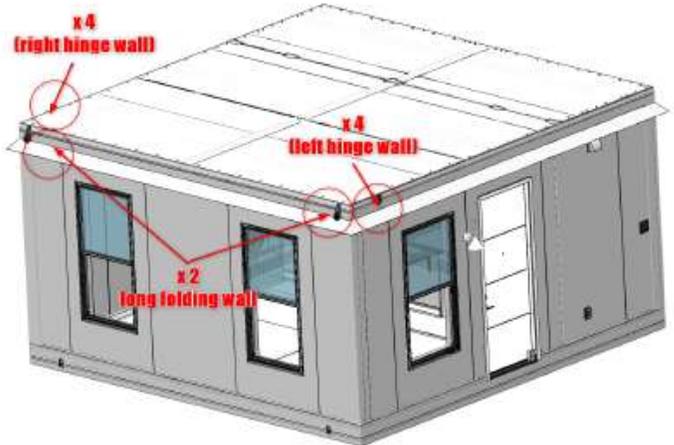
- Attach lifting hoist to end roof using pre-existing holes, roughly 6” from the end of the roof panel.
 - Attach rigging to lift hoist.



RAISE END ROOF PANEL 12” AND USE SAFETY BLOCKS ON EACH CORNER OF LONG FOLDING WALL

- Raise end roof panel 12” and use some scrap wood or equivalent as safety blocks on each corner and in the center of long folding wall.
 - Lower roof onto blocks and remove any transition tools used. (Blue plastic referenced).

KEEP HANDS OUT OF PINCH POINT AREAS UNTIL THE BLOCKS ARE INSTALLED AND THE ROOF IS LOWERED.



2.5.1. Roof to Wall Electrical Connections

Ensure safety blocks are in place prior to making electrical connections

- There are ten (10) electrical connection points: (Quantity may vary based on Model)
 - Four (4) on the left hinge wall.
 - Two (2) on the long folding wall (one on each side).
 - Four (4) on the right hinge wall.
 - CONNECTORS ARE PRE-INSTALLED FROM THE FACORY – PLUG AND PLAY.

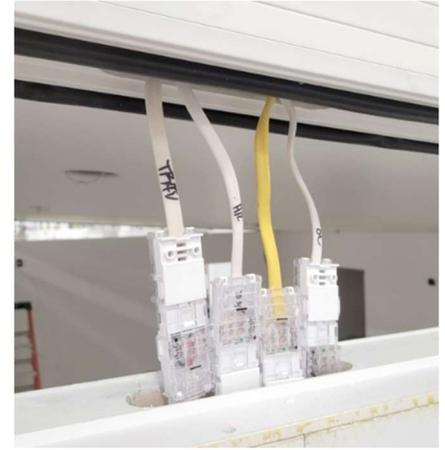


ONLY APPROVED ELECTRICAL CONNECTORS DESIGNED FOR CONCEALED INSTALLATION, INSTALLED PER THE MANUFACTURER’S RECOMMENDATIONS MAY BE UTILIZED.

- Connections are labeled, indexed, and can only be connected one way correctly.
 - Make connections and wrap with electrical tape.

WATCH ELECTRICAL CONNECTION FOR PINCHPOINTS AND GUIDE CONNECTIONS INTO CHASEWAYS WITH A SCREWDRIVER, PAINT SCRAPER, ETC. DO NOT USE HANDS TO GUIDE CONNECTIONS OR PLUGS INTO WALLS OR CHASE AS ROOF IS LOWERED.





WATCH ELECTRICAL CONNECTION FOR PINCHPOINTS AND GUIDE CONNECTIONS INTO CHASEWAYS WITH A SCREWDRIVER, PAINT SCRAPER, ETC. DO NOT USE HANDS TO GUIDE CONNECTIONS OR PLUGS INTO WALLS OR CHASE AS ROOF IS LOWERED.

- Remove safety blocks and carefully lower roof onto walls.



Step 3: Securing / Fastening Unfolded Walls & Roof

3.1. Roof Hinge Pins

- Verify hinge pins (part # HRD-000013) are installed in between folding floor and fixed floor. Next, install the remaining roof hinge pins in the following locations:
 - Inside of unit, between mid-roof and end roof. (SEE FIGURE 2)
 - Exterior of unit on roof, between fixed roof and mid roof. (SEE FIGURE 3)

VERIFY PINS ARE FULLY SEATED AND SECURE. DO NOT CUT, MODIFY, OR TAMPER WITH THE PINS IN ANY WAY OTHER THAN INTENDED BY THE MANUFACTURER AND SPECIFIED IN THE APPROVED DRAWINGS.

HINGE PIN TORQUE IS APPROX. 127 FT/LBS.

ENSURE UNIT IS COMPLETELY LEVEL AND SQUARE DURING HINGE PIN AND SIP SCREW FASTENING.



FIGURE 3

FIGURE 2

- Install the remainder of tapered hinge pins using a 3/8” square drive and ratchet.
 - Anti-Seize is recommended for proper fitment.
 - It may be necessary to use an aligning tool with a tapered end such as a spud wrench to align holes prior to starting threaded pins.
 - Start threads by hand and tighten using 3/8” square drive and ratchet. Torque to approx. 127 ft/lbs.
- Install the mid-roof pins from the top of the roof.



- Install the mid-to-end roof pins from the inside.



ALWAYS WEAR A SAFETY HARNESS TETHERED TO A YO-YO / BRIDLE WHEN WORKING ON THE ROOF.

3.2. Roof SIP Screws

REFER TO THE APPROVED DRAWINGS FOR ALL CONNECTION DETAILS AND SPECIFIC INFORMATION. IN THE EVENT OF ANY DISCREPANCIES SHOWN, NOTED, OR IMPLIED BETWEEN THIS DOCUMENT AND THE APPROVED DRAWINGS SHALL CONTROL IN ALL ASPECTS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF BOXABL IMMEDIATELY.

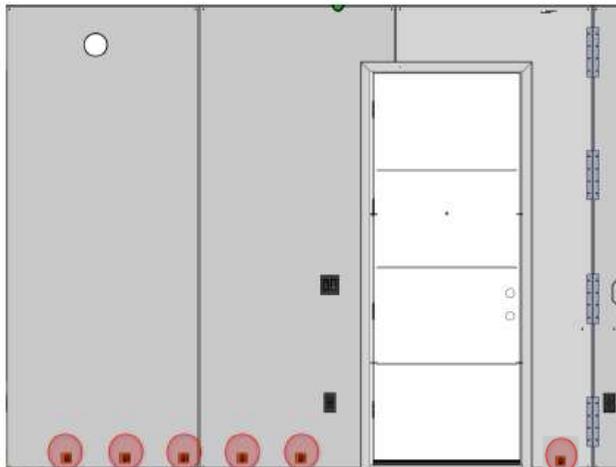
- Verify all SIP screws (part # HRD-000040) with washer (HRD-000055) are fastened along the perimeter of the roof. There are pre-defined hole locations along the perimeter of all roof panels.



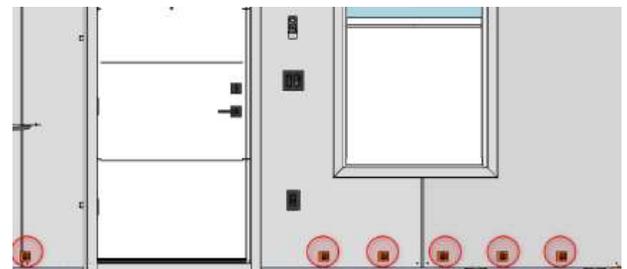
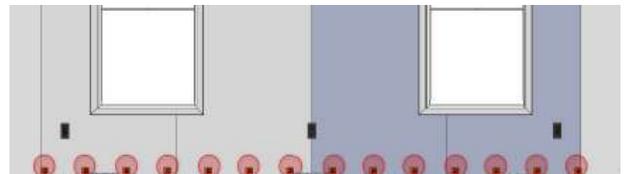
- Install roof SIP screws.
- There are 66 SIP screws and washers that will need to be installed on the mid and end roof.
- The core of the unit comes with the SIP screws pre-installed (FIXED ROOF)
 - Start from the fixed roof panel and work outwards.
- Tighten until fully seated. DO NOT OVERTIGHTEN.(9 to 10 ft lbs of torque)
- Once all screws are installed remove protective film from roof.

3.3. Folding Wall SIP Screws

SPACING AND QUANTITY MAY VARY DEPENDING ON MANUFACTURE DATE AND SKU. REFER TO APPROVED PLAN SET FOR SITE SPECIFIC DETAILS.



- There are 29 toe screw locations inside the unit:
 - Six (6) on the right hinge wall.
 - Fourteen (14) on the long folding wall.
 - Six (6) on the left hinge wall.
 - Each location uses one (1) orange toe screw housing and one (1) 10” SIP screw and washer.
- Install toe screw housing and SIPS screws. Start with the left and right hinge walls.
- Start from the core side of unit and work outwards. Tighten until fully seated, DO NOT OVER TORQUE (8 to 9 ft lbs.)



SECURE 29 TOE HOUSINGS AND SIPS SCREWS INSIDE THE UNIT

Step 4: Exterior Sealing / Foaming

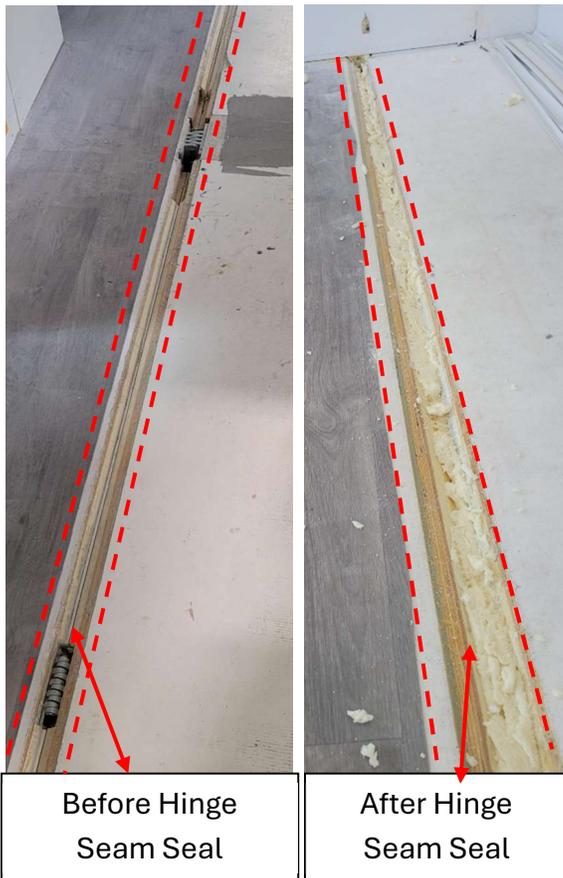
Ensure the following steps are completed prior to continuing.

- Peel all protective plastic sheets off panels.
- Clean and dry all seams and tape points prior to taping to ensure appropriate adhesion.
- Install all MGO/Drywall Pin Nails

4.1. Foaming

Using foam supplied, seal seams as listed below. Instructions for how to use foam are located on the can itself. Be sure not to over fill the gaps. Should the foam expand past the wall cavity carefully use a blade to scrape excess foam. Foam should not be past the wall surface. This is important for the flashing and trim installation to be level and plumb. This process will help to enhance insulation, improve energy efficiency, and ensure proper sealing.

Example Only



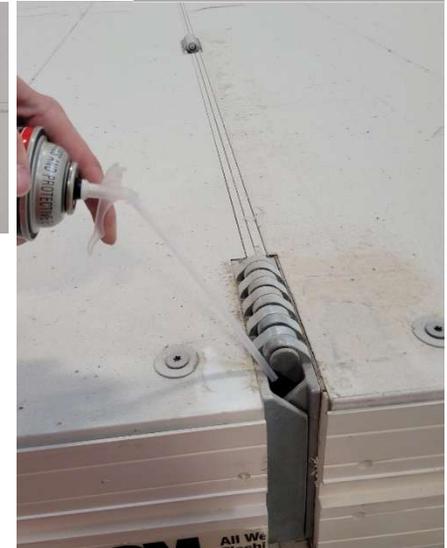
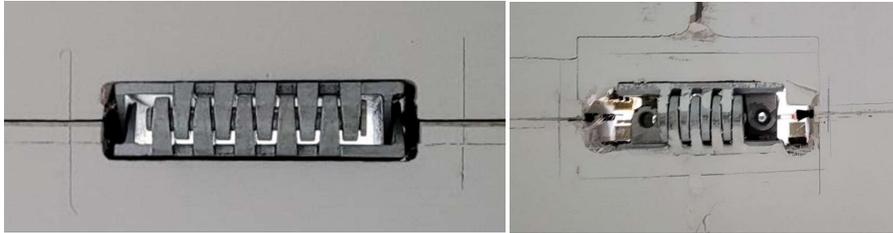
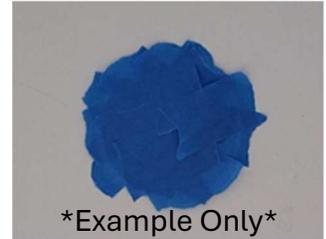
- **Roof Hinges:** There are ten (10) locations along the roof seams that require the application of expanding foam: five (5) from the fixed roof panel to the mid-roof panel, five (5) from the mid-roof panel to the end roof panel. It is essential that foam be applied both from the exterior (top of the unit) and the interior to ensure a complete and effective seal.
- **Hinge Wall Gaps:** At the bottom of both the left and right hinge walls, two (2) gaps will require the application of expanding foam. It is important to ensure these gaps are properly sealed from both the exterior and interior.
- **Wheel Pockets on Hinge Walls:** At the bottom of both the left and right hinged walls, there are a total of four (4) wheel pockets (two (2) on each wall) that will require expanding foam. Ensure that foam is applied to these pockets from both the exterior and interior to achieve a complete seal.

Expanding Foam Installation Sequence

Apply expanding spray foam and flashing tape to the designated locations within the unit by following this structured step-by-step process:

1. Tape Roof Hinge Pockets (Interior Side)

- a. Apply masking tape over the inside of all roof hinge pockets. This will block foam from spilling into the interior during external application.



2. Apply Foam to Roof Hinge Pockets (Exterior – Top of Roof)

- a. Spray foam into the hinge pockets from the top of the roof into the unit. Target 10 key seams:
 - i. 5 between fixed roof panel and mid roof panel.
 - ii. 5 between mid roof panel and end roof panel.
- b. Ensure thorough fill to seal the hinge pockets and seams.

3. Allow Foam to Cure & Trim Excess (Exterior)

- a. Wait for foam to fully cure.
- b. Trim any excess to create a flush surface for tape application.

4. Foam Remaining Exterior Locations:

- a. Wheel Pockets on Hinge Walls: 2 on the left wall and 2 on the right wall (4 total).
- b. Hinge Wall Gaps: 1 at the bottom of each hinge wall (2 total).
- c. Floor Hinge Seam: Only foam the left and right ends of the floor hinge seam from the exterior side.

5. Allow Foam to Cure & Trim Excess (Exterior)

- a. Once cured, trim back any excess foam for a clean surface.

6. Install Flashing Tape (Exterior)

- a. Apply flashing tape in accordance with the provided diagrams and order of operations. Ensure a secure, watertight seal on all exterior foam locations.

7. Repeat Foaming on All Locations from Interior Side

- a. From inside the unit, apply expanding foam to all previously foamed locations again, ensuring a complete and sealed interior barrier. Foam the following areas from the interior side:
 - i. Wheel Pockets on Hinge Walls: 2 on the left wall and 2 on the right wall (4 total).
 - ii. Hinge Wall Gaps: 1 at the bottom of each hinge wall (2 total).
 - iii. Floor Hinge Seam: Foam the left and right ends of the floor hinge seam.

1. Additionally, foam all 4 "V" groove locations along the seam.
 2. Fill the 2 additional hinges located at the quarter points of the floor gap.
 3. Fully seal the central structural hinge.
- iv. Roof hinge seams and pockets:
1. 5 seams between fixed roof panel and mid roof panel.
 2. 5 seams between mid roof panel and end roof panel.
 3. Ensure full fill of hinge seams and pockets from the interior side.

4.2. Flashing Tape



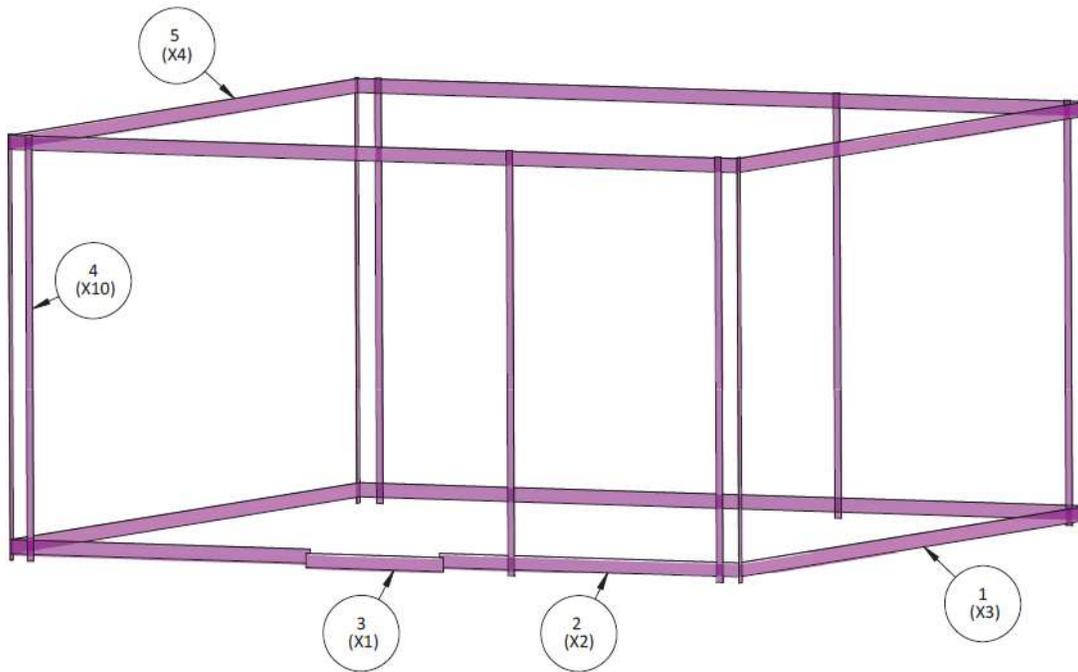
- Horizontal wall to floor seams uses 4" tape.
- Roof seams parallel to steel roof beams use 2" tape.
- Roof seams perpendicular to steel roof beam use 4" tape.
- Lower 4" Horizontal tape is centered along wall to floor seam.
- Upper 4" Horizontal tape is placed 1/4" below the lower shoulder of PVC Extrusion.
- Some units may have flashing tape pre-installed. If not, tape should also be placed over the pre-installed core connection plates.
- Remove all protective film from walls prior to installing tape.
- Wipe down all seams tape will be applied to with isopropyl alcohol or equivalent. DO NOT USE ACETONE.
- Start from the bottom and work your way up, flashing tape should overlap from bottom to top.

TAPE SHOULD BE APPLIED AS A POSITIVE LAP OR A SHINGLED FASHION, SO THE HIGHER TAPE ALWAYS COVERS THE TAPE BELOW IT.

ALL CORNERS SHOULD HAVE A 6" TAPE OVERLAP

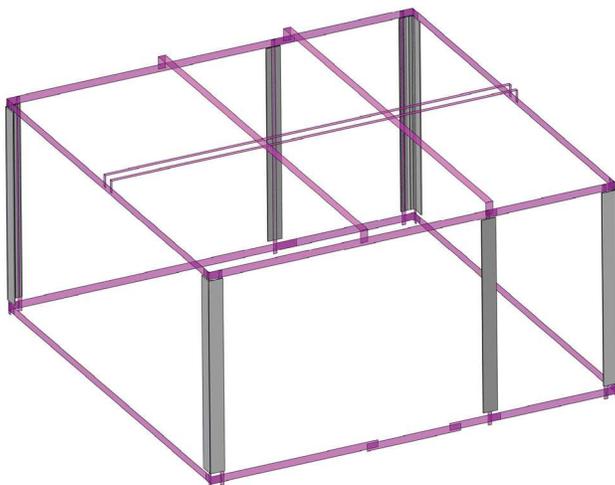
Flashing Tape Sequence Chart

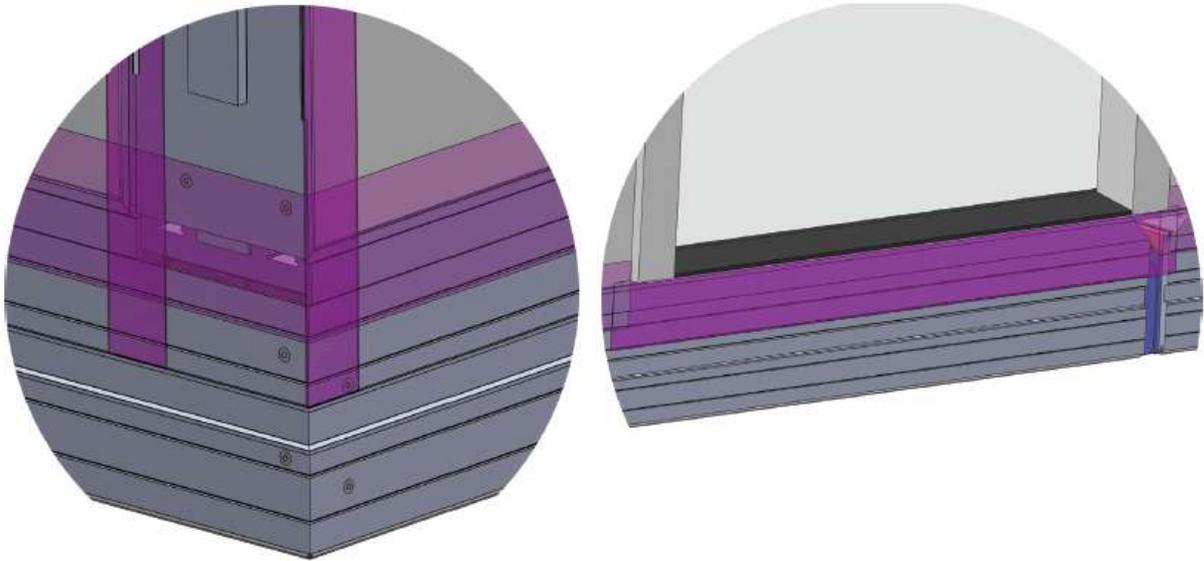
SEQUENCE	MATERIAL	NOTES	QUANTITY	LENGTH
1	4" 3M 8067 TAPE	OVER LAP CORNERS 6" - APPLY TO BACK, RIGHT, AND FRONT LOWER WALL TO FLOOR HORIZONTAL SEAMS - CENTER TAPE ON SEAM	3	240" EA
2	4" 3M 8067 TAPE	OVERLAP CORNERS 6" - APPLY TO FRONT DOOR WALL (LEFT WALL) - TAPE STOPS AT DOOR TRIM	2	100" EA
3	4" 3M 8067 TAPE	OVERLAP TAPE FROM SEQUENCE 2 - APPLY UNDER DOOR THRESHOLD	1	43" EA
4	2" 3M 8067 TAPE	APPLY TO VERTICAL CORNER SEAMS, AND LEFT AND RIGHT HINGE WALL SEAMS - SEE PICTURES FOR DETAIL	2	117.5" EA
5	4" 3M 8067 TAPE	OVERLAP CORNERS 6" - APPLY TO ROOF TO WALL HORIZONTAL SEAMS - TAPE IS PLACE APPROX 1/4" BELOW LOWER RIDGE OF PVC EXTRUSION	4	240" EA



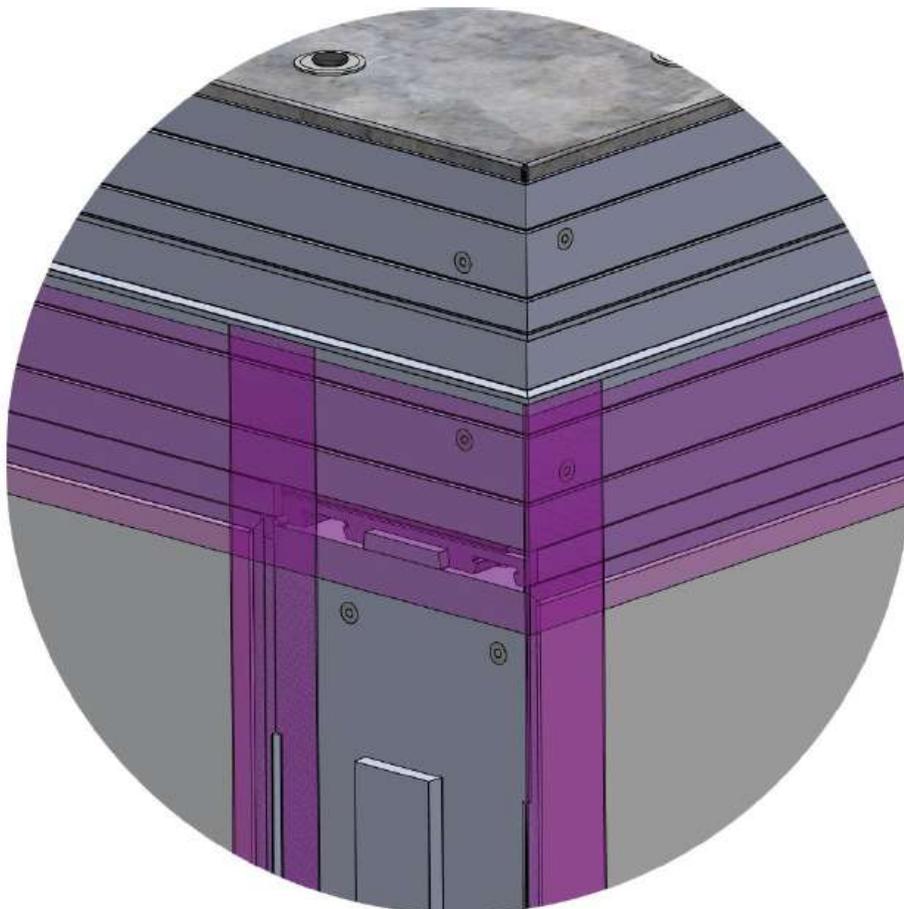
Sequence 6: Roof Seam Details

- I-Beam Seams:
 - 2" tape running parallel to the I-Beams on both sides
- Roof Hinge Seams:
 - 4" tape runs perpendicular to steel I-Beams





- Walls to Floor Horizontal and Vertical Tape Detail / Horizontal Tape Door Detail.
- Walls to Roof Horizontal Seam and Vertical Seam Detail.
 - Horizontal tape overlaps vertical tape. (Per Sequence Chart)

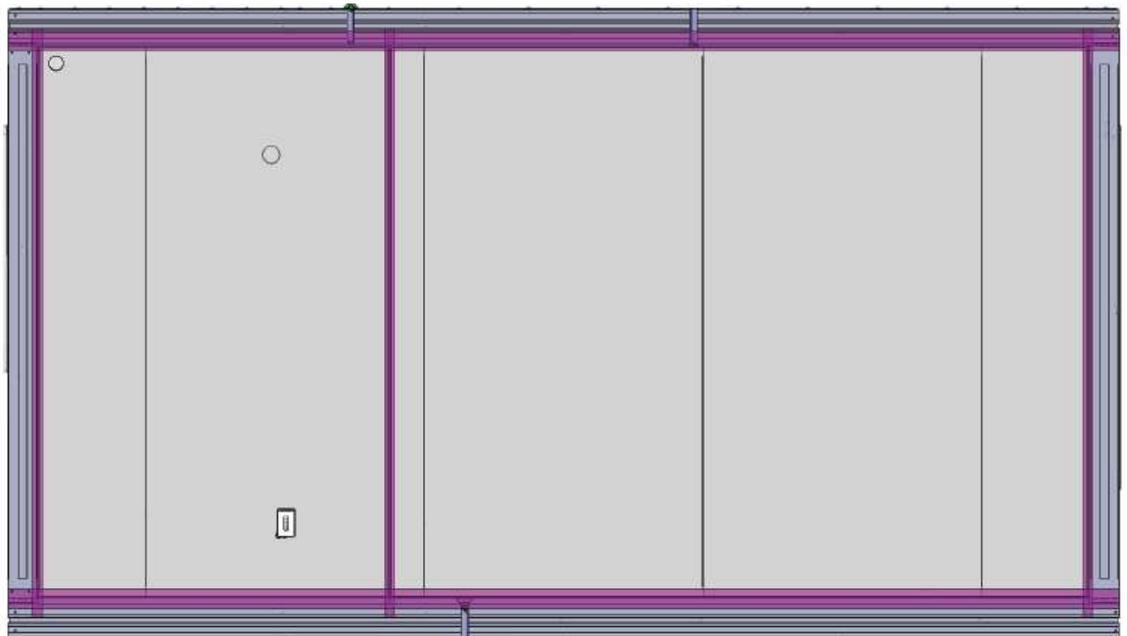


- Place one 2" x 117.5" strip centered on the wall to wall seam.

Left Hinge Wall:



Right Hinge Wall:



MODEL SHOWN IN EXAMPLE VARIES DEPENDING ON MANUFACTURE MODEL

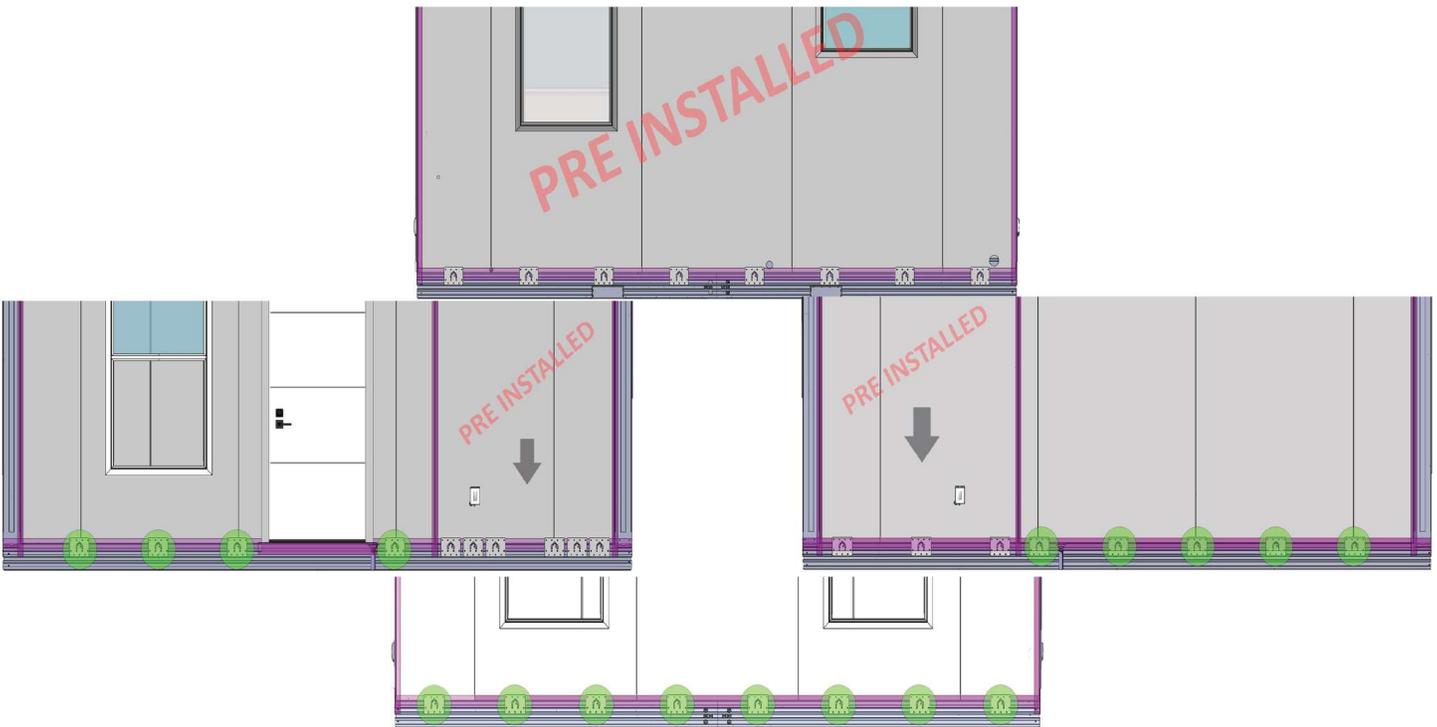
Step 5: Connection Plates

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- Verify connection plates (PLT-000042) are installed around lower perimeter of unit
- The core of the unit will have connection plates pre-installed:
 - Right fixed wall plates, Left fixed wall plates, long fixed wall plates. Refer to approved plans for quantity and spacing on each wall.
 - The bottom of the connection plates ride along raised shoulder of the floor PVC extrusion





MODEL SHOWN IN EXAMPLE VARIES DEPENDING ON MANUFACTURE MODEL. REFER TO APPROVED PLAN-SET

Step 6: Door Caulking and Lower Skirt Board

CHECK ROOF OPTION DESIGN FOR REQUIRED PROCESSES PRIOR TO CONTINUING



ADD LOWER SKIRT BOARD

- Verify door jamb threshold kickplate is caulked.
- Verify lower skirt board is installed and caulked at top seams, corner miters, and joining miters.



CAULK TOP SEAMS, CORNER MITERS, JOINING MITERS, AND FEATURE CUTOUTS ONCE PERIMETER BOARD IS INSTALLED.

- Install lower perimeter skirt board screw cover caps. Extrusion may be trimmed to fit with shears or a miter saw. Covers snap into upper and lower reliefs in skirt board extrusion.



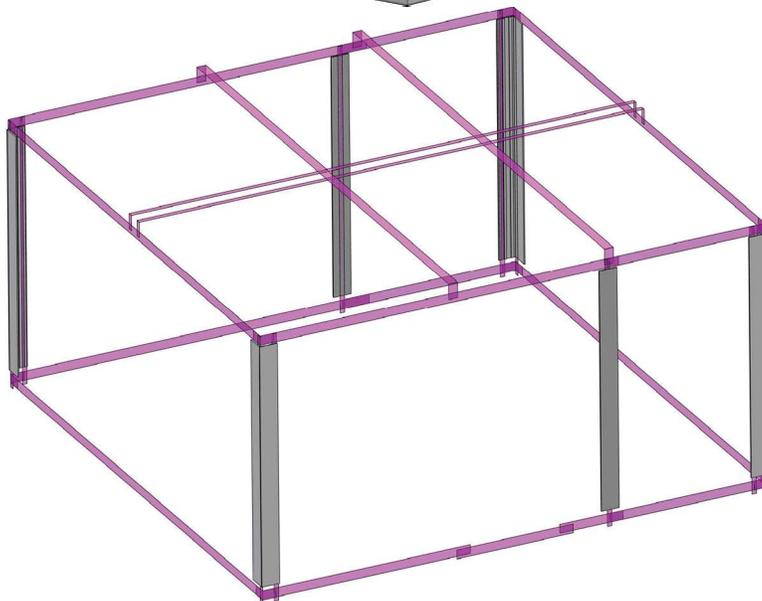
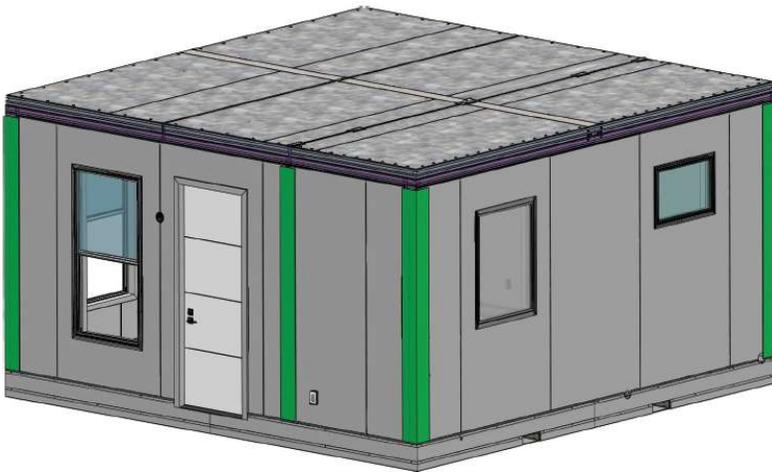
Step 7: Flashing Tape Cover Trim

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Exterior Trim Installation Instructions

Trim will be installed on all four exterior corners of the unit, as well as over the hinge wall seams. The trim will sit on top of the bottom perimeter board and extend beneath the roof drip edge for a clean, weather-resistant finish.



1. Corner Trim Installation

- Corner trim will be installed in two mitered pieces per corner.
- One piece will feature a machined groove designed to interlock with the wall's PVC profile.
- Apply a continuous bead of Geocel sealant along the outer edge of the grooved section.
- Secure the grooved piece to the wall panel using a nail gun into the end profile of the panel.
- Apply a bead of Geocel sealant along the outer edge of the flat section. This piece may be secured to adjacent sheet metal using small trim head screws if needed.
- Join the two mitered pieces at the corner and secure the joint using 23-gauge pin nails.

2. Hinge Wall Seam Trim Installation

- Apply a bead of Geocel sealant along the outer edges of the flat hinge wall seam trim.
- Center the trim over the hinge wall seam and secure using pin nails into the edges of both adjoining wall panels.
- If additional fastening is required, use small trim head screws to secure the trim to the underlying sheet metal.

3. Final Sealing

- After all trim pieces are installed, apply Geocel sealant to all seams and miter joints to ensure a weather-tight, finished appearance.

Add-on Roof Requirements

BOXABL modules are fabricated with a FLAT BASE. It is always required to install a compliant roof system on-site. Multiple designs are in the BXB-000009 approved plan set, including trussed roof systems, a low-pitched foam roof system, and a parapet roof design. Refer to the approved plan set for allowable wind, snow, and seismic factors for the desired roof design. Connection details and truss plans may also be found on the approved plan set. Architectural elevations of the pre-approved roof systems are included in the approved plan set.

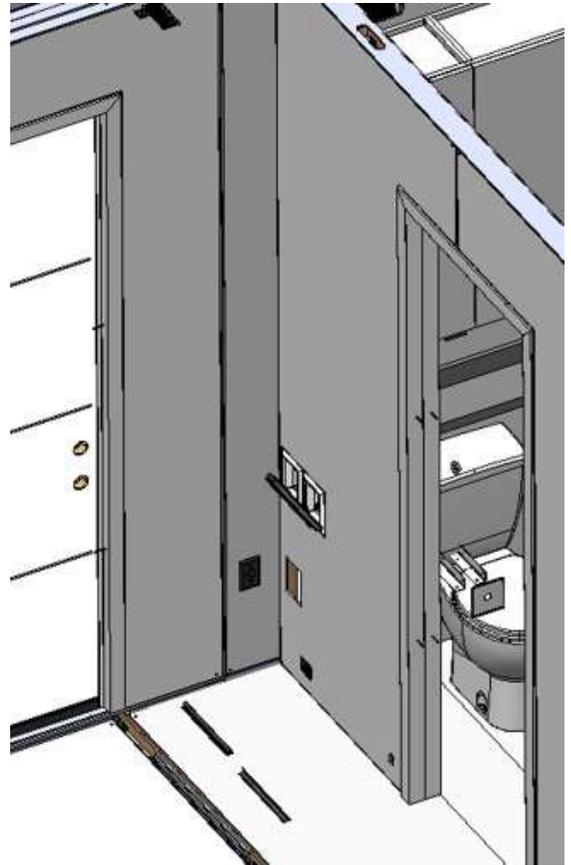
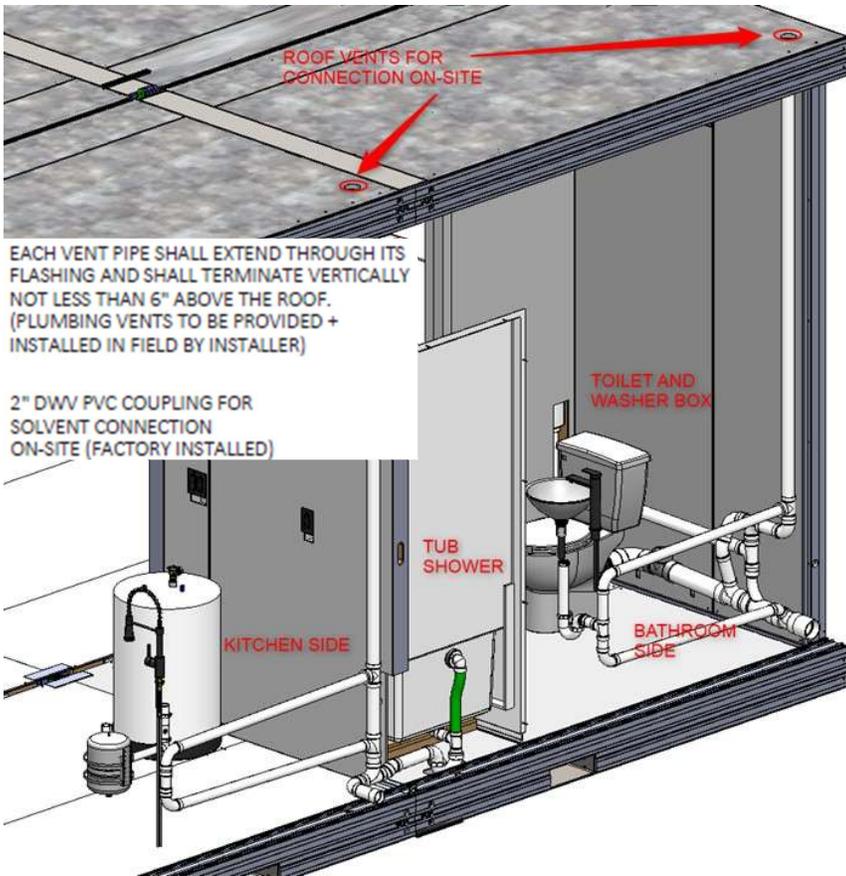
Step 8: Connections to Power

At this time your Casita is ready to have the source of power connected to the panel box. Using a licensed and insured electrical contractor is recommended.

Step 9: Plumbing Access

Below are accessible components pertaining to the plumbing system. These include:

- Water heater plumbing and drain.
- Vent stacks (roof access).
- Washer/dryer hookup and drain.
- Kitchen sink plumbing (supply lines, expansion tank, hammer arrestor, main water line shut-off).
- Bathroom sink plumbing (supply lines).
- Bathroom toilet (supply line).



Step 10: Connections to Water Supply and Drainage System

At this time your Casita is ready to have the water supply (EX: Well or Central water system) connected to the potable water connection and the drains tied into your drainage system (EX: Septic or Centralized Sewer)



NOTE: A splash block is required per code to discharge the condensation line away from the foundation. It is recommended to have installation completed by a licensed and insured plumbing contractor.



Step 11: Installation of Exterior HVAC Condenser

The BOXABL casita comes equipped with a mini split HVAC system. The interior (evaporator) component is pre-installed in the casita and the line sets are run to the exterior of the unit. Below are the steps to install the exterior (condenser) component, connect the line set, and charge the unit. BOXABL recommends the use of a licensed, insured & bonded HVAC contractor.

1. Unpack & Mount Condenser:

- a. Move your condenser from the inside of casita to the exterior of the unit and unpack it carefully.



- b. Select a flat and level location and ensure that the line set, including communication wire, and power whip from the breaker panel will reach the condenser unit.

- c. Mount the condenser unit to a pad or platform in accordance with the manufacturer's recommendations.

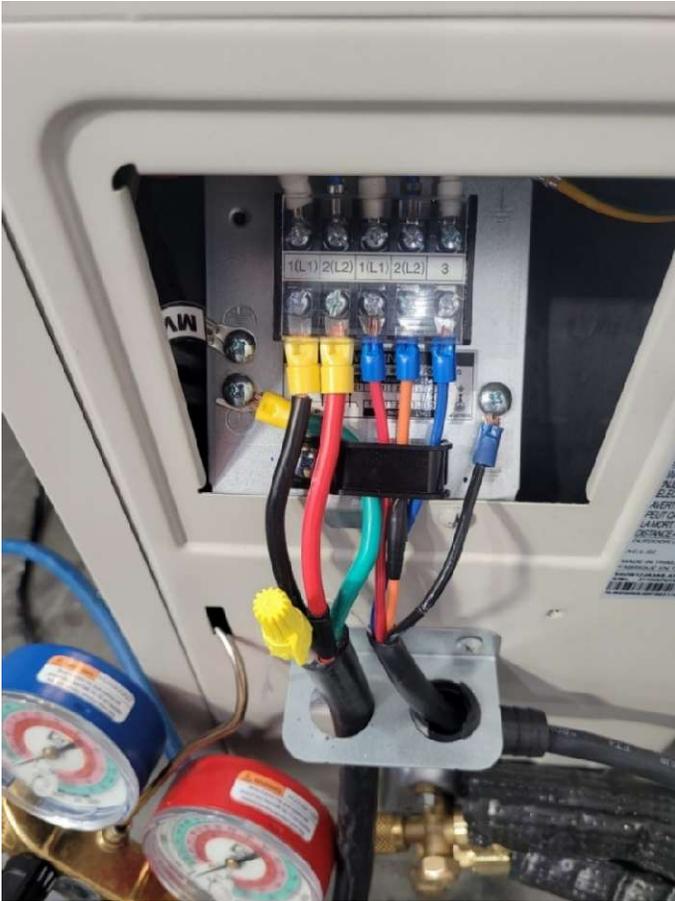
2. Wiring the Condenser:

- a. Ensure the HVAC breaker is turned off and properly locked out before wiring.

- b. Install the provided whip, this will be a piece of rain tight conduit with a preinstalled connector containing 1 – black, 1 – red & 1 – green #10AWG stranded wires for the 220V 30A power supply. Install this whip utilizing the preinstalled connector and lock ring.

- c. Wire to the panel box.

- d. Install the provided 14/4 wiring from the HVAC line set through the provided rubber seal.



e. Install spade terminals on the #10 and #14 wiring and land the black and red #10 wires on the terminals marked 1(L1) & 2(L2) on the left side, install the green #10 wire on the screw marked with the ground symbol (\perp)

f. Ensure that the #14 wiring is landed in the same terminal position on the interior (evaporator) unit as the exterior (condenser) unit. There will be a second set of terminals marked 1(L1) & 2(L2), these are for the power going into the interior unit, there is a terminal marked 3, this is for communication between the exterior and interior units. And finally, there will be a screw marked with the ground symbol (\perp) for the ground between units.

3. Installing the Lines

a. Depending on the model of your BOXABL casita unit, you may have traditional copper line sets with provided brass flare fittings or Python™ brand composite PERT/Aluminum line sets, which require the use of special Python™ compression fittings

which are included. As well as a Python™ chamfering tool (purchased separately).

b. Copper Line Set:

- i. If using a copper line set, install the provided brass fittings on the ¼" Liquid Line and 3/8" Suction Line.
- ii. Flare the lines ensuring the flare is correct to create a proper seal.
- iii. Use brass nuts to connect the flares & torque to manufacture specifications.
- iv. Python Line Set (Below is a summary of the required steps for installing Python™ fittings, for detailed instructions, specifications, FAQs, and tool information please visit <https://pythonls.com/resources/>):
- v. Uncoil and straighten Python line; cut end for a clean square cut.
- vi. Use size-specific Python Chamfering tool: insert and rotate 3 times (or 2 seconds in drill) to chamfer pipe edges.
- vii. Keep the tool aligned, avoid rocking or bending.
- viii. Mark pipe at chamfer reference and remove debris.
- ix. Thread fitting adaptor onto king valve male connection, tighten to specified torque (check for copper gasket).
- x. Slide compression nut and ring onto pipe.
- xi. Insert fitting nipple, ensuring full seating and proper alignment.
- xii. Ensure plastic washer and O-rings are present; do not use them if missing.

- xiii. Slide compression nut over ring, tightening by hand.
- xiv. Use two wrenches to tighten further without over-tightening.

4. Checking for Leaks and Charging System



- a. Connect vacuum pump to mini split service port.
- b. Open low and high-pressure valves.
- c. Turn on vacuum pump, run for 15-30 minutes.
- d. Use micron gauge to reach 500 microns or lower.
- e. Close valves, hold vacuum for 5-10 minutes.
- f. Disconnect vacuum pump, check for stable pressure.
- g. Open refrigerant valves to charge system.
- h. Test mini split operation after vacuum process.

Step 12: Installation of Interior Hinge Covers

12.1. Ceiling Hinge Cover Installation

There are three (3) ceiling hinges located along the seam between the mid-roof panel and the end roof panel that require the installation of the provided hinge covers.



- Hinge Cover Parts
 - One (1) large center hinge cover – AUX (Part # PML-000002)
 - Two (2) smaller outer hinge covers (Part # PML-000001)
- Each hinge cover includes pre-applied double-sided adhesive tape. For added strength, it is strongly recommended to apply a bead of construction adhesive during installation.

- Adhesive Application Notes
 - Apply a thin, continuous bead of construction adhesive to avoid excessive squeeze-out.
 - If adhesive does squeeze out beyond the edges, immediately clean it per the manufacturer's instructions.
- Installation Guidelines
 - Use a laser level to ensure proper alignment of each hinge cover before securing.
 - Press firmly to activate the adhesive and ensure full contact with the ceiling surface.

Step 13: Finishing Interior Seams

13.1. Hinge Removal

At this stage, the hinges used to unfold the long folding wall, as well as the left and right hinge walls, may be removed. These hinges may be kept for future use.

- Hinge Walls: There are three (3) piano hinges on each of the left and right hinge walls, for a total of 6 (six) hinges.
- Long Folding Wall: There are three (3) hinges on the long folding wall. These hinges are secured to the floor with a plywood block for reinforcement and are also fastened to the base of the long folding wall. Please ensure that the plywood block is kept with the hinges for future use, should the unit need to be folded back up.

13.2. Walls and Ceilings

There are two (2) recommended methods to choose from for finishing these seams.

- Joint Compound: Using Drywall fiber seam tape and joint compound skim coat, sand, and finish the seam as you would a normal drywall seam. Note as the units settles small cracks may develop and require touchups.
- Trim Finish: An alternative is to cover the hinge seams with trim. Our preferred option is a 1/16" by 1-3/4" flat PVC piece. We recommend a self-adhesive trim with a small bead of construction adhesive. Using painters' tape (or Similar) to hold it in place as the adhesive / glue dries.

Once the adhesive has cured, remove the tape. Use a small bead of caulk on the edges where the trim and wall meet. The trim may be painted to blend with the wall finish.

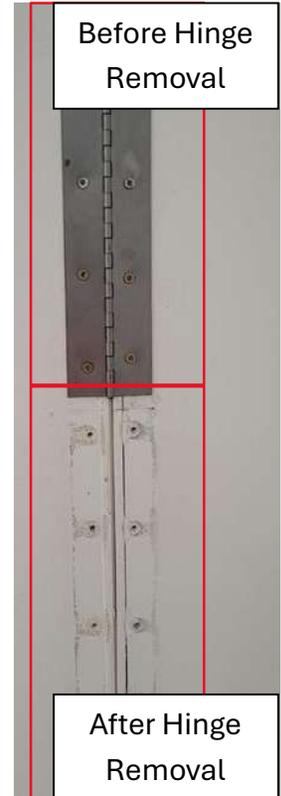
13.3. Walls to Ceiling Corner Joints

These seams can be finished the same way as the walls. If using the trim option, we recommend putting the longer profile of the trim edge flat along the wall surface.

13.4. Inside Wall Corners

For the interior wall corners, there are two options. If the gap is less than 1/4". A bead of white caulk can be used to seal the gap. If the gap is larger than 1/4" The trim method previously described can be applied to cover the gaps.

NOTE There are other trim profiles and wall finishes that may be applied however these two (2) methods have been tested.



Before Hinge
Removal

After Hinge
Removal

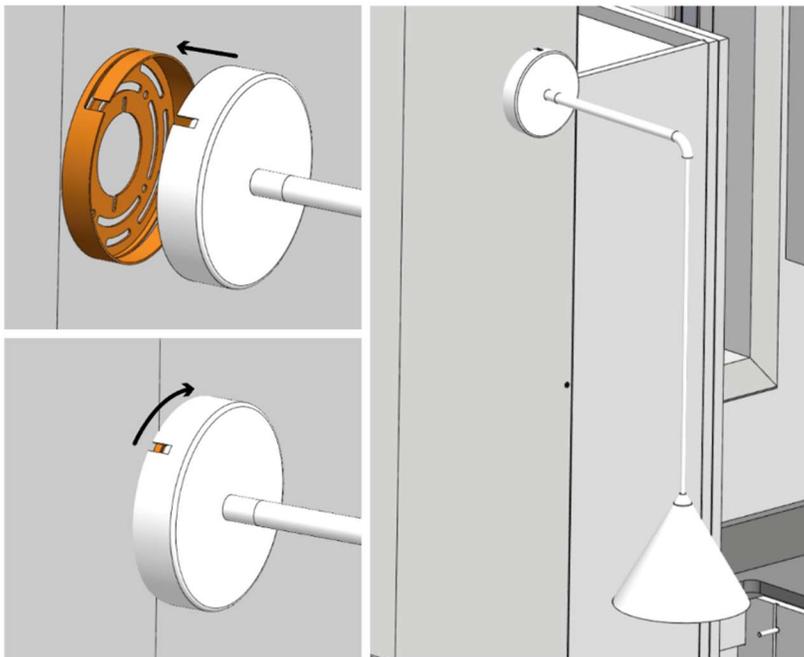
Step 14: Optional Painting of Interior

The interior walls were painted during the manufacturing process. Depending on the method chosen for finishing the interior of the seams and joints it may be necessary to touch up the paint. A gallon of paint is included in the pack out kit for these potential touch-ups. If you chose to customize the interior of your casita with a custom color paint this is the time we recommend painting the walls.

Step 15: Installation of Lighting

15.1. Interior Wall Pendant

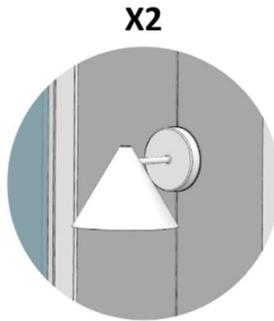
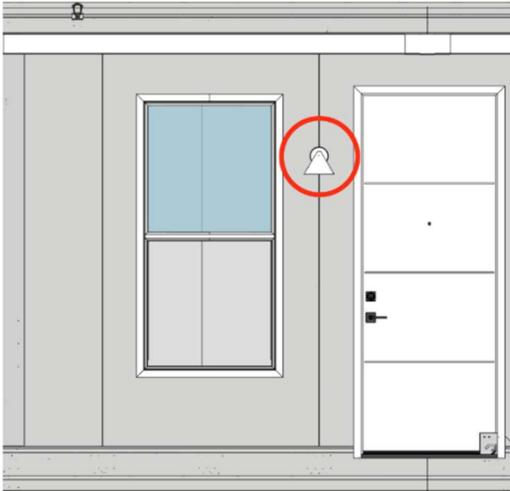
In your Field Installed Fixtures Kit, you will locate the wall mounted pendant light (part # ELE-000047).



- Make sure the breaker for the lights is in the off position.
- Carefully open box.
- Remove fixture from packaging.
 - Be sure not to lose the bag with installation hardware.
- Remove the pendant canopy from the wall mounting bracket by gently turning.
- Remove the wire nuts that are installed on the wiring coming out of the wall. Strip about a ¼” of the wire insulation off the end.
- Using the hardware included in the box install the wall mounting bracket to the electrical box in the wall.
 - Be sure to pull the wires through the mounting bracket.
 - Verify that the bracket is placed so that the canopy clip shown in these diagrams is at the top of the fixture.
- Using the included wire nuts twist the hot (live) wire from the wall to the hot (live) wire from the light and securely install wire nut.
- Using the included wire nuts twist the neutral wire from the wall to the positive neutral wire from the light and securely install wire nut.
- Secure the ground wire to the wall mount using the preinstalled screw.
- Tuck wires in between the wall mount and the canopy.
- Place canopy on wall mount and gently twist until secured.
- Turn the breaker on and test the light.

15.2. Exterior Sconce (front and rear)

In your Field Installed Fixtures Kit, you will locate two wall mounted exterior sconces (part # ELE-000062).



- Make sure the breaker for the lights is in the off position.
- Carefully open box.
- Remove fixture from packaging.
 - Be sure not to lose the bag with installation hardware.
- Remove wall sconce canopy from wall mounting bracket. USE CARE not to damage or lose the non-conductive protective edge from the sconce canopy. SAVE to be re-installed in future steps.

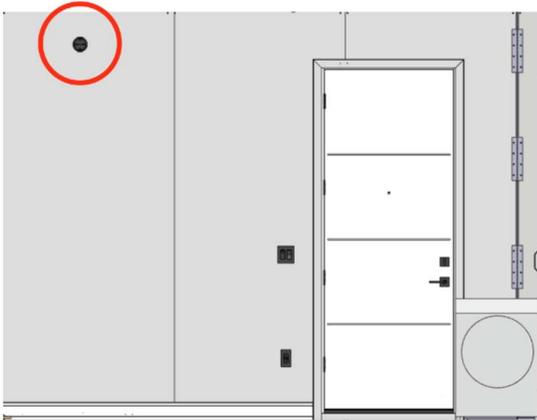


- Loosen two (2) set screws on the side of the sconce enough to separate the wall mounting bracket from the canopy. Be sure to not lose or damage the synthetic washers on the screws. *NOTE* Screws do NOT need to be fully removed.
- Remove the wire nuts that are installed on the wiring coming out of the wall. Strip about a ¼” of the wire insulation off the end.
- Using the supplied screws install the wall canopy to the electrical box on the side of the house.

- Be sure to pull the wires through the mounting bracket.
- Verify that the bracket is placed so the light will be level when the canopy is reinstalled (the screw holes level left to right).
- Using the included wire nuts twist the hot (live) wire from the wall to the hot (live) wire from the light and securely install wire nut.
- Using the included wire nuts twist the neutral wire from the wall to the positive neutral wire from the light and securely install wire nut.
- Secure the ground wire to the wall mount using the preinstalled screw.
- Tuck wires in between the wall mount and the canopy.
- Put the non-conductive protective cover back on the canopy. Verify the opening is at the bottom of the canopy.
- Push the canopy onto the wall bracket aligning the screws on the canopy with the screw holes on the mounting bracket. Tighten the screws until the sconce is secure to the wall.
- Install light bulb. (NOT SUPPLIED) 40W Max
- Repeat these steps for the other exterior sconce.
- Turn the breaker back on and test both the lights.

Step 16: Smoke Detector

In your Field Installed Fixtures Kit, you will locate the smoke detector (part # ELE-000063).



- The pig-tail wiring and wall mounting bracket are pre-installed during manufacturing. See location in drawing below on interior of right hinge wall.
- Remove smoke detector from box.
- Verify that the batteries are installed properly.
- Using the pre-installed pig-tail connector securely push the connector into the smoke detector.
- Place the detector on the wall bracket (pre-installed) gently twist until the detector is secured to the wall bracket.

Step 17: LED Backlit Mirror

In your Field Installed Fixtures Kit, you will locate the LED mirror (part # FIN-000014) needed for the below steps.

- Turn the breaker off in the panel box
- Verify that the mounting brackets have been pre-installed on the bathroom wall of the Casita during manufacturing.
- Remove the cover from the electrical box in the wall.
- Unpackage the mirror using care not to scratch, chip, or damage the mirror.
- Pull the wires from the mirror through the hole in the cover.
- Remove the wire nut from the load (live) wire of the electrical stub out. Twist the load wire from the mirror with the stubbed out live wire. Twist the wire nut on to the two wires. Verify it is secure.
- Repeat the above step for the negative wires
- Repeat the above step for the ground wires
- Re-attach the wire cover.
- Mount the mirror using the wall mounts pre-installed on the wall.
- Turn the breaker back on.
- Test mirror lights.

Step 18: Flooring – Vinyl Sheet

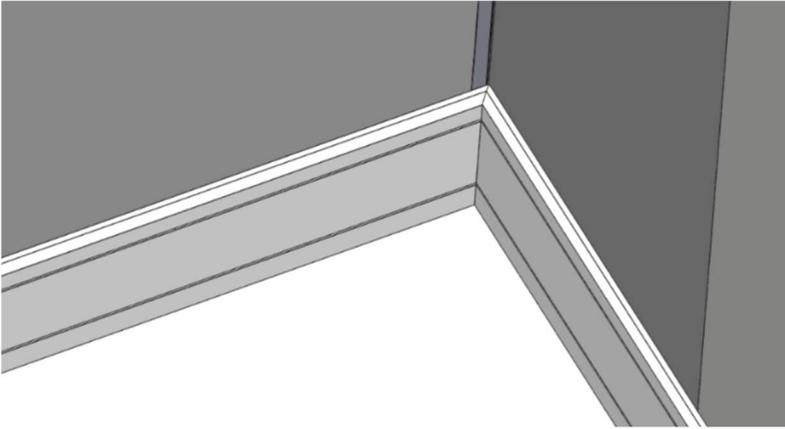
****NOTE** THE FLOORING SHOULD BE INSTALLED PRIOR TO THE BASEBOARD TRIM.**

The flooring the folding floor section comes as a pre-cut sheet. Once the casita has been unfolded. Be sure to sweep or vacuum the unfinished floor to ensure a clean surface for proper adhesion and smooth finish of the vinyl flooring.

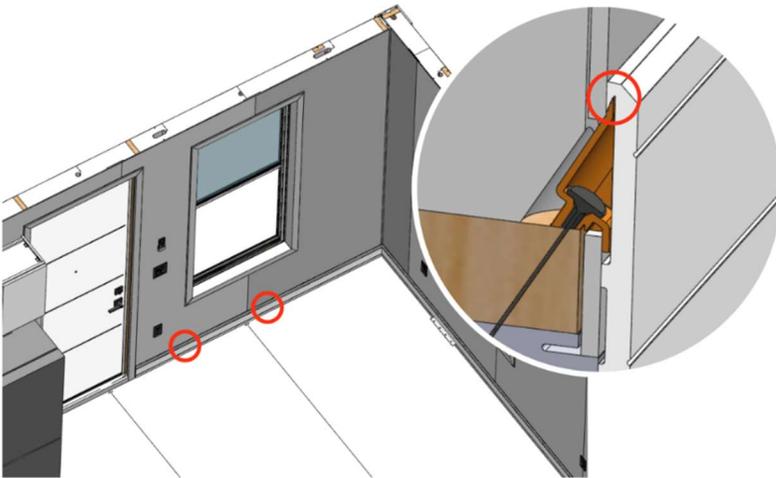
- **Clean Sub Floor:** Using a broom, blower, or shop vacuum thoroughly clean the floor surface. Ensure that the subfloor is clean of dust or debris. It is also important to make sure the floor is dry.
- **Install MgO Strip (part# MGO-000021):**
 - Trim any excess foam from there may be from the earlier step of foam sealing the floor hinge cavity.
 - Dry fit the MgO strip in the gap to ensure that it sits flush with the MgO on both floor panels.
 - Use a small amount of construction adhesive to hold the MgO in place.
- **Float Floor Seam:** Using a compound such as feather finish or self-leveling floor compound. Float the transition between the two flooring sections to ensure a smooth surface.
 - Be sure to carefully follow the instructions for the compound chosen.
- **Lay the vinyl sheet:** Carefully the sheet of vinyl down flat. USE CARE to not crease and lay it smoothly with the finished side up.
- **Align the seam:** Slide the vinyl as needed to align the sheet with the flooring pre-installed on the fixed floor for the best visual appearance.
- **Pull back:** half of the vinyl to expose subfloor. Use care not to crease or damage the vinyl.
- **Apply Adhesive:** Using an appropriate adhesive for vinyl sheet flooring installation (NOT PROVIDED) spread adhesive as instructed by adhesive manufacturer. Ensure an even, consistent layer is spread across the subfloor to promote proper adhesion.
- **Place the vinyl:** Carefully lay vinyl sheet back down over adhesive. Using a 100lb flooring roller (or similar tool) press and smooth the vinyl. Ensure all air bubbles are out and the vinyl is fully bonded to the subfloor.
- **Repeat the previous steps** for the other half of the sheet.
- **Finish Seam:** Trim the overlapping vinyl between the fixed floor and folding floor to create a smooth, flat transition. Use a straight edge and a sharp knife, such as a razor blade to trim the vinyl evenly. Ensure that both floor sections meet flush without any overlap to prevent cosmetic issues or tripping hazards.

Step 19: Installation of Baseboard Trim

PVC baseboard (part # EXT-000043) is provided with the casita and is designed to interface with the beveled edges of the orange toe screw housings installed in an earlier step. The baseboard pieces are ten feet long and must be cut to size on-site. The back side of the baseboard features an angled groove that aligns with the beveled edge of the toe screw housing. If there is a protective film on the baseboard, be sure to remove it prior to installation.



- Miter cut baseboards to length per drawing: EXT-000275, EXT-000276, EXT-000277, EXT-000278



- Clip in baseboard to SIP screw housing (previously installed). Using the 18GA x 1.25 brad nails (part # HRD-000032) secure baseboard to wall using a standard interior trim nail pattern every 16”

Step 20: Installation of Cabinetry and Breakfast bar

In your Field Installed Cabinetry Kit, you will locate the materials needed for the below steps.

20.1. Install Cabinet above Fridge

Wall has pre-installed Z clip for the cabinet to be hung on. The Cabinet has the other half of the Z Clip pre-installed.



- Carefully lift the cabinet (PART # CAS-000055) level and place the cabinet on the Z-clips that are installed on the wall using the clips that are preinstalled on the cabinet.
- Using a level verify that the cabinet is level with the adjacent cabinet.
- Once the cabinet is level use appropriate screws (NOT supplied) to secure the cabinet to the wall.

20.2. Installation of End Panel

In your Field Installed Cabinetry Kit, locate the end panel (part #CAB-0001128), one (1) 6" x 1.375" heavy strap tie (part #PLT-000045), four (4) L brackets (part #PLT-000046), fourteen (14) #8 x 0.5" truss head screws (part # HRD-000091), and eight (8) #10 x 2" flat head wood screws needed for the below steps.

- Lay the panel flat on a clean surface (to not scratch the finish).
- Bracket Installation:
 - a. Place the 6" x 1.375" strap at the center of the short edge of the panel. Center the bracket height wise on the panel. This should give you two (2) screw holes on the panel. (And four (4) exposed to attach to the upper cabinet later in this step).
 - b. Mark the screw hole locations. Sit the strap aside.
 - c. Place two (2) L brackets on the opposite short side edge approximately 6" from the left and right side ensuring they are flush with the edge.
 - d. Mark the screw hole locations. Sit the brackets aside.

- e. Place two (2) L brackets on the left side long edge 16” from the top and 16” from the bottom ensuring it is flush.
 - f. Mark the screw hole locations. Sit the brackets aside.
 - g. Using a 1/8” drill bit pre-drill a 1/4” deep pilot hole in the screw locations just marked. Be sure to use care to NOT drill through the panel.
- Using ten (10) of the #8 x 0.5” truss head screws install the strap and L brackets using the pre-drilled holes. Be sure to not over tighten in case the brackets need adjusted. USE CARE to not split or pierce the panel by over tightening.
 - Place the end panel under the right side of the cabinet installed in the previous step. USE CARE to not scratch or tear the flooring.
 - a. Verify the panel is flush with the wall and level and plumb under the cabinet.
 - Pre-drill the bottom of the cabinet where the screw holes in the strap are.
 - Screw the panel to the bottom of the cabinet. Using four (4) of the #8 x 0.5” truss head screws. Be sure not to overtighten in case the panel needs to be adjusted.
 - Verify that the panel is still flush, level, and plumb.
 - Screw the panel to the wall. Using four (four) #10 x 2” flat head screws.
 - Again, verify the panel is flush, level and plumb.
 - Screw the panel to the floor. Using four (four) #10 x 2” flat head screws.
 - Finish tightening all screws.

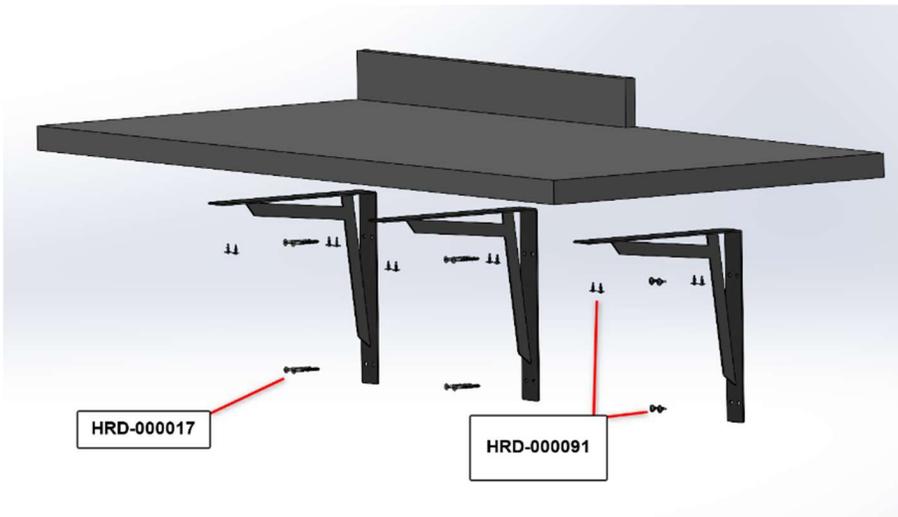
****NOTE****

At this time, we recommend installing a door stop (NOT INCLUDED). Either a base bump or hinge stop can be used. We have seen better success with the base bump style installed on the end panel with preventing the entry door hardware from hitting the refrigerator when opened. If you choose to use a base bump, be sure to pre-drill to reduce the risk of splitting the panel. Use care not to overtighten or pierce the panel.

20.3. Breakfast Bar Top

In your Field Installed Cabinetry Kit, locate the countertop (part # CTT-000012), counter brackets (part # HRD-000078), backsplash (part # CTT-000037), sixteen (16) #8 x 0.5” truss head screws (part # HRD-000091), and eight (8) #10 x 2” flat head wood screws needed for the below steps. The breakfast bar is a countertop section installed on the bathroom partition wall to extend counter space and create a dining area.

- Lay the countertop (part # CTT-000012) on a flat clean surface (to not scratch the finish).
- Install counter brackets
 - Use twelve (16) #8 x 0.5” truss head screws (part #HRD-000091) for this step.
 - Align the 3 brackets equally spaced apart on the underside of the countertop. Flush with the back edge of the countertop.



- Secure with twelve (12) #8 x 0.5” truss head screws (part # HRD-000091). Do not overtighten in case the bracket needs to be adjusted slightly.
- Carefully turn the countertop over and place it against the bathroom partition wall.
- Verify that the right side is aligned with the edge of the factory installed kitchen countertop
- Verify that the top surfaces of both

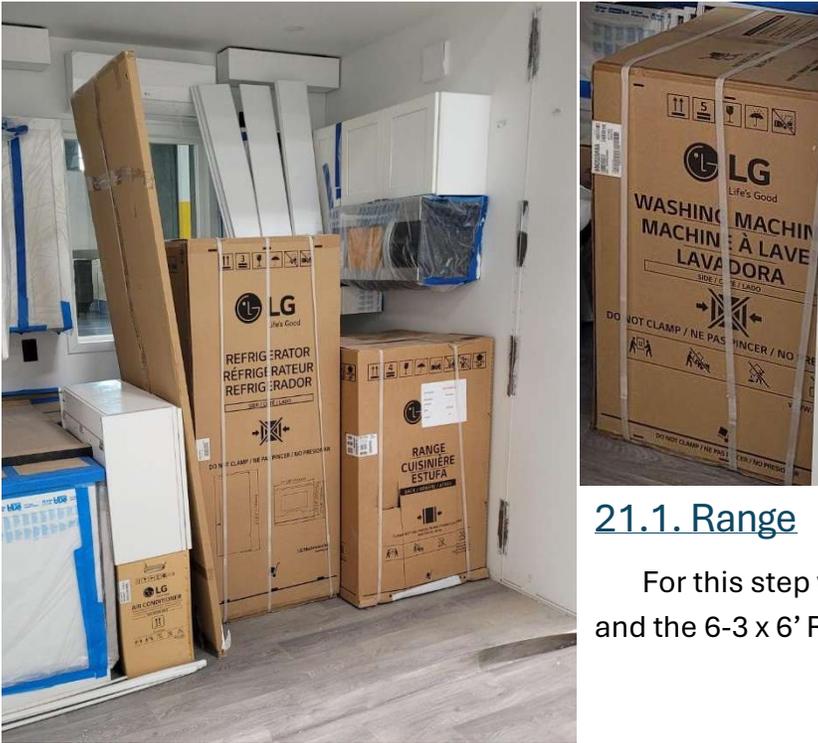
countertops are flush with each other.

- Ensure the breakfast bar is level.
- Using eight (8) #10 x 2” flat head wood screws (part #HRD-000017) the other two brackets will fasten to the bathroom partition wall.
- The right-side bracket is screwed into the cabinet panel. Using four (4) #8 x 0.5” truss head screws (part #HRD-000091). We recommend pre-drilling the panel as you did in the previous end panel installation.
- Tighten the bracket screws under the countertop using care to not overtighten and damage the finished side of the countertop.

20.4. Backsplash

- Lay the backsplash on a clean flat surface. (to not scratch the finish)
- Apply a generous bead of construction adhesive on the back of the backsplash. Ensuring to not get too close to the edges.
- Place the backsplash over the countertop. **MAKE SURE** the finished side is facing up.
- Align the right edge with the factory installed backsplash.
- Make sure the backsplash is level
- Firmly press against the wall. Applying even pressure across the backsplash for best adhesion
- Should any adhesive seep to the wall or countertop clean immediately using the cleaning instructions on the adhesive.
- Use masking tape (or similar) to hold it in place until the adhesive cures fully.

Step 21: Appliances



In your Field Installed Appliance Kit, you will locate the materials needed for the steps below.

NOTE: Occasionally the Appliance models change. Please verify that the appliance in your pack out are the ones as shown below prior to following these instructions. For specific diagrams please refer to the appliance manufacturers manuals.

21.1. Range

For this step you will need the range (part # APP-000011) and the 6-3 x 6' Range Whip (part # ELE-000133).

****WARNING****

TO REDUCE THE RISK OF TIPPING, THE APPLIANCE MUST BE SECURED BY A PROPERLY INSTALLED ANTI-TIP DEVICE. TO CHECK IF THE DEVICE IS INSTALLED PROPERLY, REMOVE THE DRAWER BODY AND VERIFY THAT THE ANTI-TIP DEVICE IS ENGAGED, OR GRASP THE TOP REAR EDGE OF THE RANGE BACK GUARD AND CAREFULLY ATTEMPT TO TILT FORWARD.

READ ALL THE WARNINGS AND INSTRUCTIONS IN THE MANUFACTURERS MANUAL.

- Carefully unpackage the range using care not to damage the floors or the Range
- Install using the manufacturers installation instructions.

[LG LREL6321S.FSTLLGA: Support, Manuals, Warranty & More | LG USA Support](https://www.lg.com/us/support/product/lg-LREL6321S.FSTLLGA)

(<https://www.lg.com/us/support/product/lg-LREL6321S.FSTLLGA>)

21.2. Refrigerator

For this step you will need the refrigerator (part # APP-000008).

- Carefully unpackage the refrigerator using care not to damage the floors or the refrigerator.
- Install using the manufacturers installation instructions.

[LG LBNC15231V.APZCNA0: Support, Manuals, Warranty & More | LG USA Support](https://www.lg.com/us/support/product/lg-LBNC15231V.APZCNA0)

(<https://www.lg.com/us/support/product/lg-LBNC15231V.APZCNA0>)

21.3. Washer/Dryer

For this step you will need the washer / dryer combo unit (part # APP-000013).

- Carefully unpackage the washer / dryer using care not to damage the floors or the washer / dryer.
- Install using the manufacturers installation instructions.

[LG WM3555HWA.ABWEPLUS: Support, Manuals, Warranty & More | LG USA Support](https://www.lg.com/us/support/product/lg-WM3555HWA.ABWEPLUS)
 (https://www.lg.com/us/support/product/lg-WM3555HWA.ABWEPLUS)

Step 22: Shower Surround/ Enclosure

Surround: Verify that the shower surround has been sealed with tub surround sealant.

Enclosure: It is necessary to have a shower enclosure (NOT SUPPLIED). You can choose from a standard shower rod to a full glass enclosure. Anchor per enclosure manufacturer directions.



Step 23: Window Screen Installation

In your Field Installed Interior Trim Kit, locate the three (3) window screens (part # WIN-000016).

- Install the window screens into the window frames according to manufacturer's specifications.

Final Touches

- Silicone all plumbing fixtures, countertops, and backsplashes where they meet other surfaces.
- Verify all doors and windows are properly functioning. Adjust if needed.
- Caulk the interior window and door trim to wall surface.
- Verify that all cabinet doors and drawers are aligned and properly functioning. Adjust if needed.
- Clean unit for homeowner walk-through.
- Complete installation checklist.