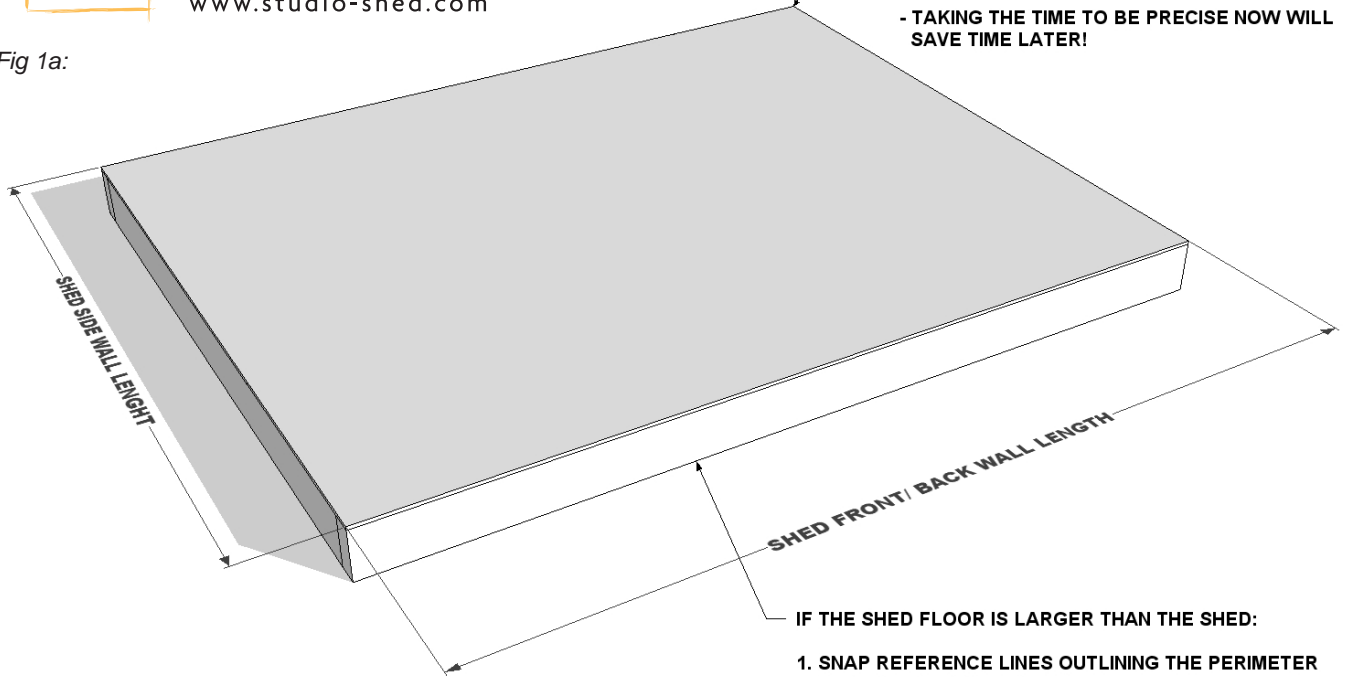


BUILDING SHELL INSTALLATION

PORTLAND SERIES SHEDS

v1 - AUGUST, 2016

Fig 1a:



IF THE SHED FLOOR IS LARGER THAN THE SHED:

1. SNAP REFERENCE LINES OUTLINING THE PERIMETER DIMENSIONS OF THE SHED.
2. ENSURE LINES ARE PARALLEL AND SQUARE.

Fig 1b:

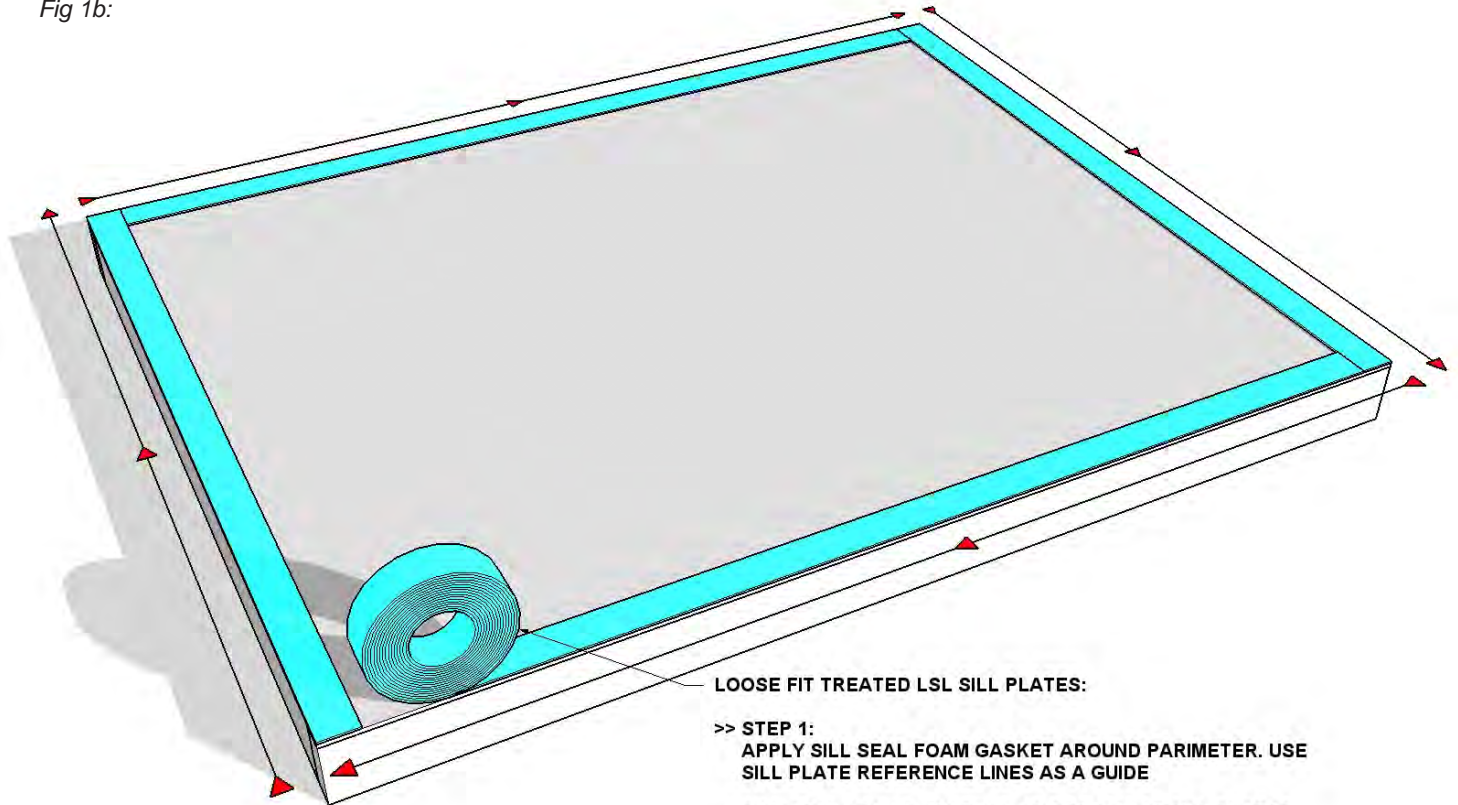
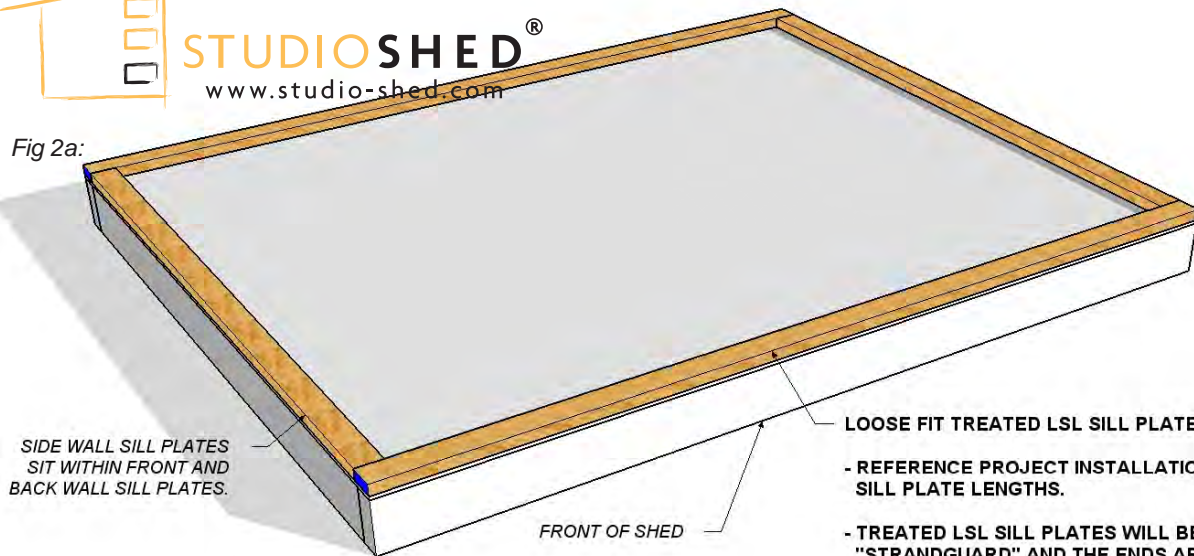


Fig 2a:



LOOSE FIT TREATED LSL SILL PLATES:

- REFERENCE PROJECT INSTALLATION DRAWINGS FOR SILL PLATE LENGTHS.
- TREATED LSL SILL PLATES WILL BE LABELED AS "STRANDGUARD" AND THE ENDS ARE PAINTED BLUE.
- DO NOT PERMANENTLY ANCHOR THE PLATES TO THE FLOOR. TEMPORARY FASTENERS CAN BE USED TO HELP FACILITATE PLACEMENT.

>> STEP 2:

LOOSE FIT PRESSURE TREATED SILL PLATES. ALIGN THE OUTSIDE FACE OF THE SILL PLATES WITH THE EDGE OF THE FLOOR (OR REFERENCE LINES IF FLOOR IS BIGGER THAN THE SHED).

FRONT AND BACK GABLE WALL SILL PLATES WILL RUN FULL LENGTH.

SIDE WALL SILL PLATES WILL SIT WITHIN FRONT AND BACK SILL PLATES.

Fig 2b:



PREP WALL PANELS FOR INSTALLATION:

- A T25 TORX AND PHILLIPS BIT WILL BE NEEDED TO REMOVE SCREWS.
- HANDLE PANELS WITH CARE! REMOVING SHIPPING BLOCKS WILL LEAVE 1 1/2" OF EXPOSED SHEATHING AT THE TOP AND BOTTOM OF THE WALL PANELS.

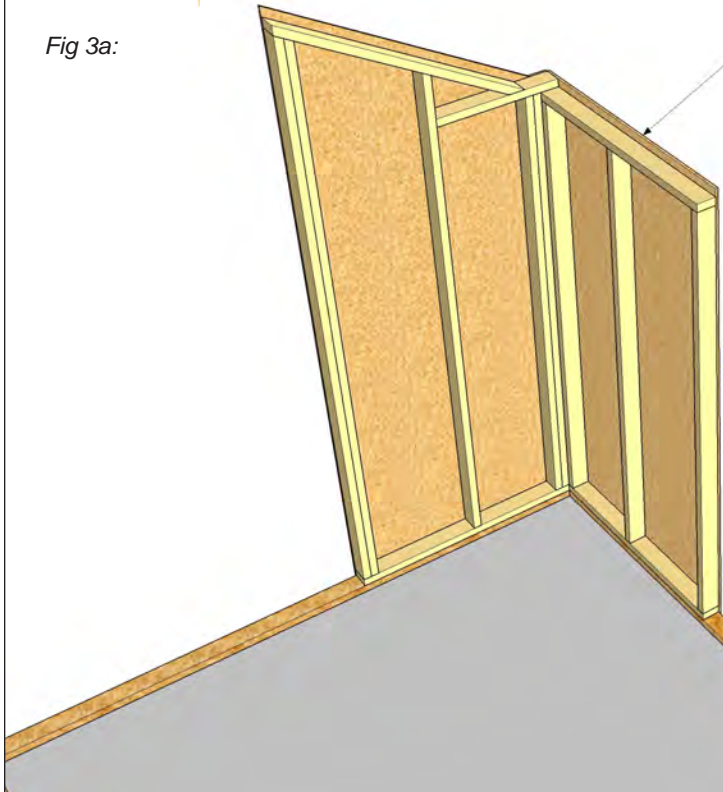
>> STEP 1:

REMOVE ALL SHIPPING BLOCKS AROUND WINDOWS.

>> STEP 2:

REMOVE ALL SHIPPING BLOCKS AT THE BASE AND TOP OF WALL PANELS.

Fig 3a:

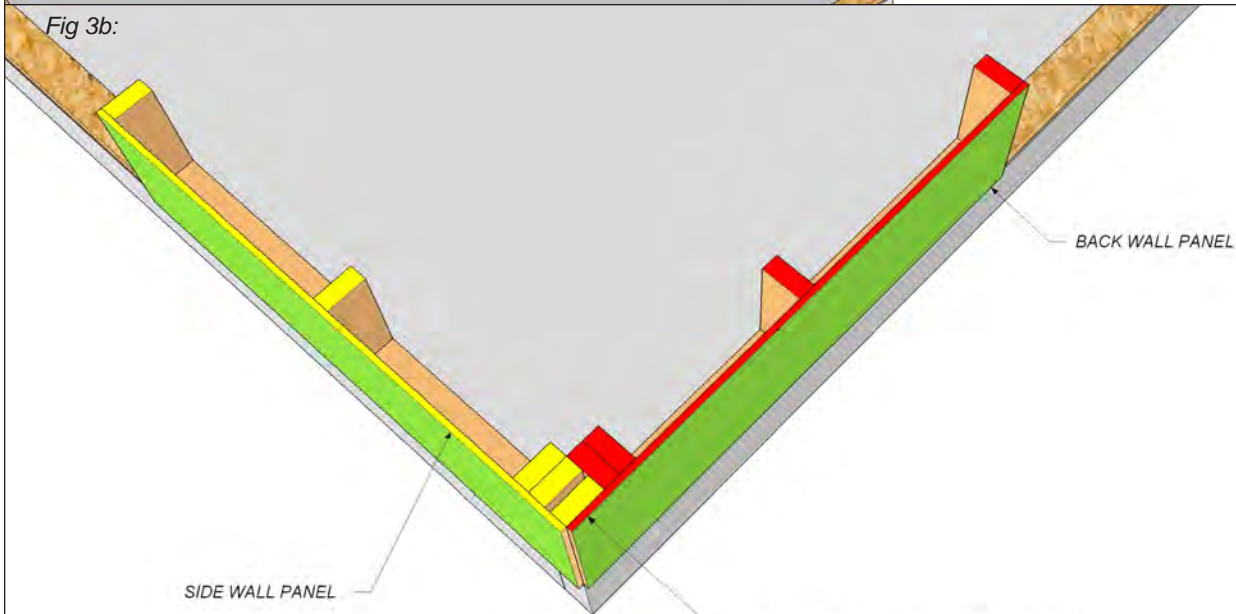


STAND AND LOOSE-FIT WALL PANELS:

- LOOSE FITTING THE PANELS WILL EASE ADJUSTMENTS THAT MAY NEED TO BE MADE LATER.
- REFERENCE PROJECT INSTALLATION DRAWINGS COVER SHEET FOR PANEL LAYOUT AND WALL PANEL CODE NUMBERS.
- WALL PANEL CODES WILL BE HAND WRITTEN ON THE WALL PANELS.

- >> **STEP 1:**
START AT A BACK WALL CORNER. STAND A BACK WALL PANEL AND AN ADJACENT SIDE WALL PANEL.
***START WITH THE HIGHER BACK CORNER IF THE FLOOR IS NOT LEVEL.**

Fig 3b:



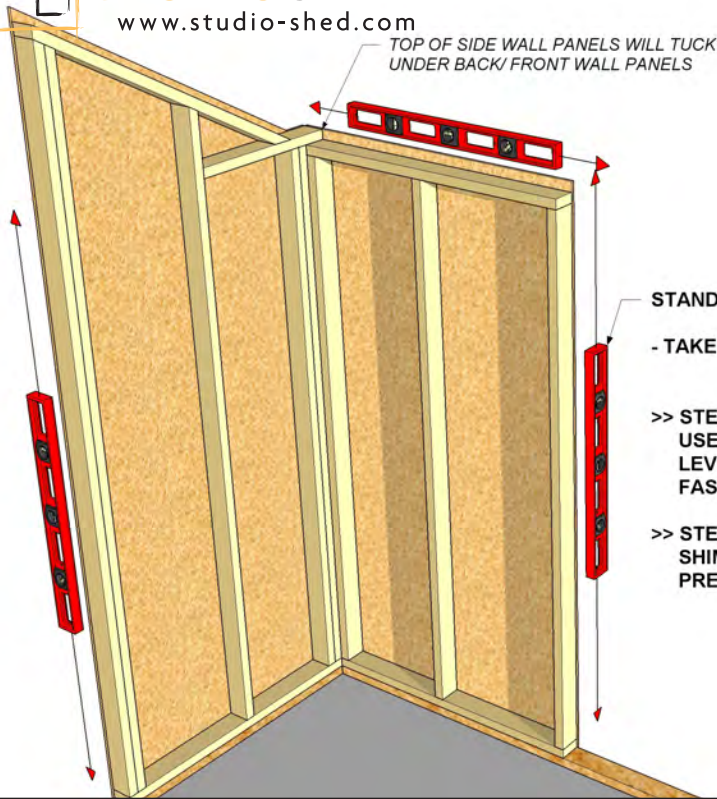
SIDE WALL PANEL

BACK WALL PANEL

PANEL ALIGNMENT AT CORNERS:

1. SIDE WALL PANELS WILL FIT WITHIN A POCKET ON BACK/ FRONT WALL PANELS.
2. FRONT/ BACK WALL PANEL SHEATHING WILL COVER FACE OF EXPOSED STUD ON SIDE WALL PANELS.
3. THE WALL SHEATHING WILL OVERHANG PAST THE FACE OF THE FLOOR.

Fig 4a:



STAND AND LOOSE-FIT WALL PANELS:

- TAKE YOUR TIME, ACCURACY IS IMPORTANT!

>> **STEP 2:**

USE A CARPENTER'S LEVEL TO ENSURE PANELS ARE LEVEL, PLUMB AND FLUSH PRIOR TO INSTALLING FASTENERS.

>> **STEP 3 (IF NECESSARY):**

SHIM PANELS, AS NEEDED, BY PLACING SHIM IN-BETWEEN PRESSURE TREATED SILL AND BOTTOM OF WALL PANEL.

Fig 4b:



STAND AND LOOSE-FIT WALL PANELS (FASTENING):

- DIFFERENT LENGTH WOOD SCREWS WILL BE USED DEPENDING ON THE NUMBER OF STUDS PRESENT AT THE CONNECTION:

- #10 x 3" WOOD SCREWS ARE TO BE USED WHEN FASTENING THROUGH ONE STUD INTO ONE STUD.

- #10 x 5" WOOD SCREWS ARE TO BE USED WHEN FASTENING THROUGH TWO STUDS INTO ONE OR MORE STUDS.

- *BE AWARE OF WHERE THE SCREWS ARE GOING TO AVOID DAMAGE TO THE SHED (ESPECIALLY AROUND GLASS!).

>> **STEP 4:**

INSTALL A WOOD SCREW ~6" FROM THE BOTTOM OF THE WALL PANEL INTO THE ADJACENT WALL PANEL.

>> **STEP 5 (IF NECESSARY):**

MAKE ADJUSTMENTS TO ENSURE PANELS ARE LEVEL, PLUMB AND FLUSH (FIG 5b).

>> **STEP 6:**

INSTALL ONE WOOD SCREW IN THE MIDDLE OF THE WALL PANEL INTO THE ADJACENT WALL PANEL.

>> **STEP 7 (IF NECESSARY):**

MAKE ADJUSTMENTS TO ENSURE PANELS ARE LEVEL, PLUMB AND FLUSH (FIG 5b).

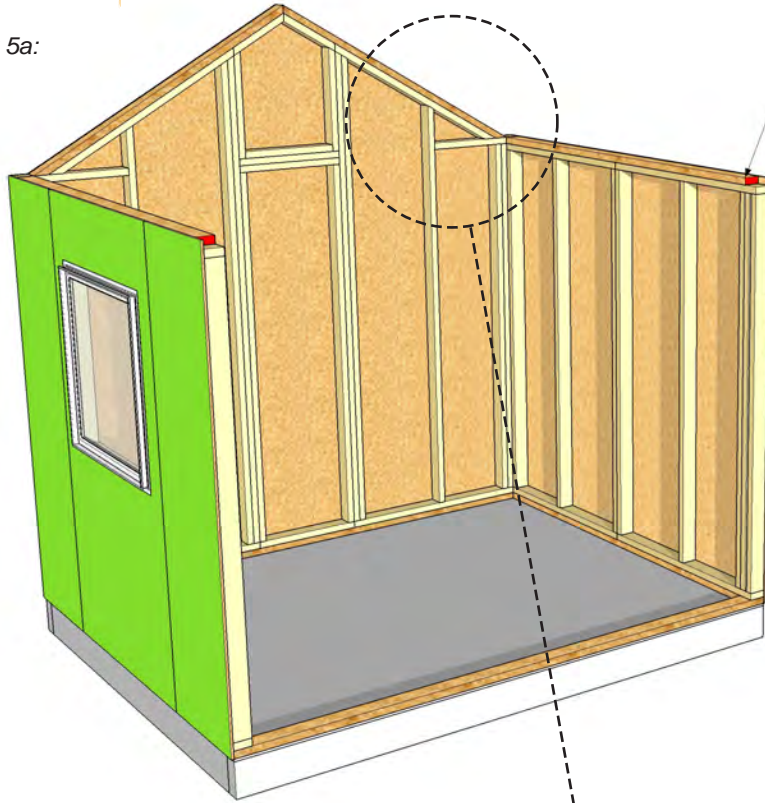
>> **STEP 8:**

INSTALL ONE WOOD SCREW ~6" FROM THE TOP OF THE WALL PANEL INTO THE ADJACENT WALL PANEL.

>> **STEP 9 (OPTIONAL):**

USE BRACING OR INSTALL A WOOD SCREW AT EACH END OF WALL PANEL INTO THE SILL PLATE TO KEEP WALLS FROM MOVING OR FALLING IN WINDY CONDITIONS.

Fig 5a:



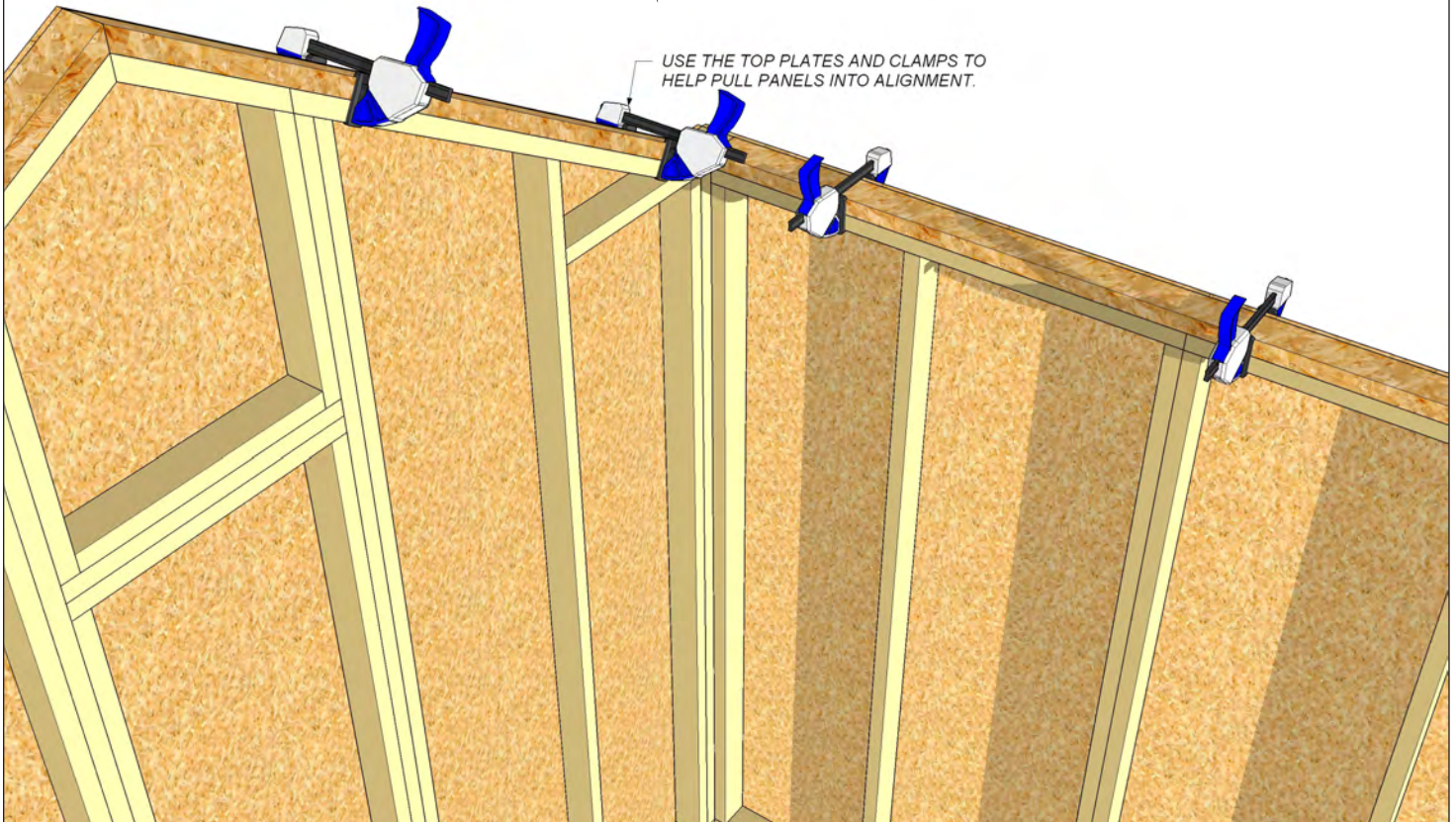
STAND AND LOOSE-FIT WALL PANELS:

- REFERENCE PROJECT INSTALLATION DRAWINGS FOR TOP PLATE LOCATIONS AND LENGTHS.
- TOP PLATE ENDS WILL BE PAINTED RED.

>> STEP 10:
INSTALL REMAINING BACK AND SIDE WALL PANELS USING METHODS DESCRIBED IN FIG 3b-4b.

CLAMP TOP PLATES TO THE TOP OF THE WALL PANELS TO AID PULLING PANELS INTO ALIGNMENT.

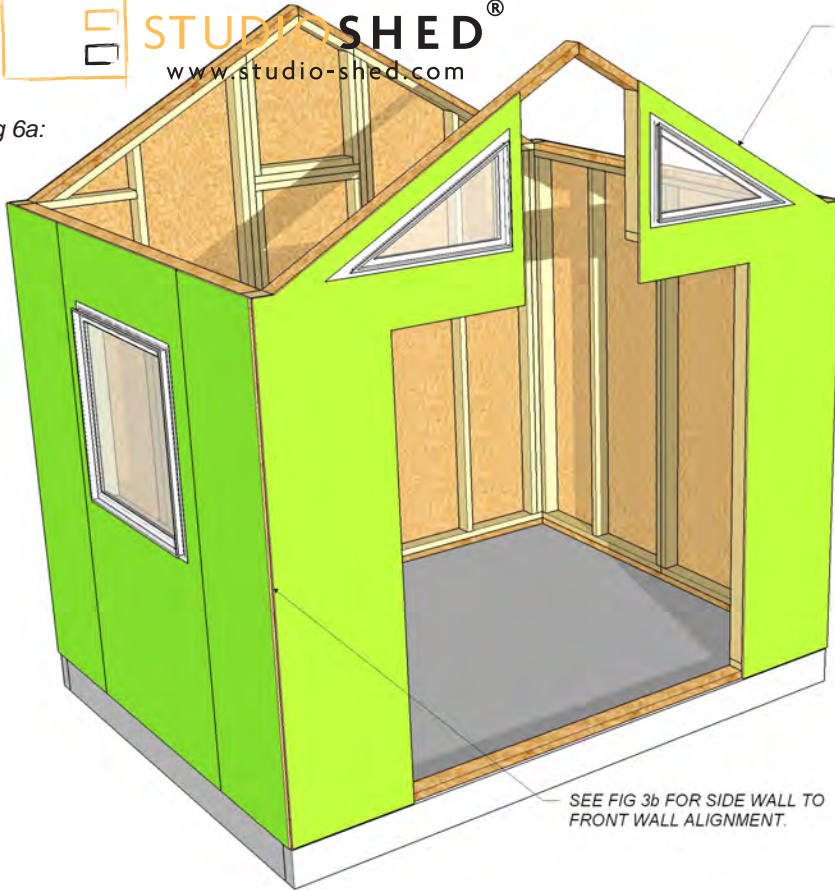
Fig 5b:



USE THE TOP PLATES AND CLAMPS TO HELP PULL PANELS INTO ALIGNMENT.



Fig 6a:



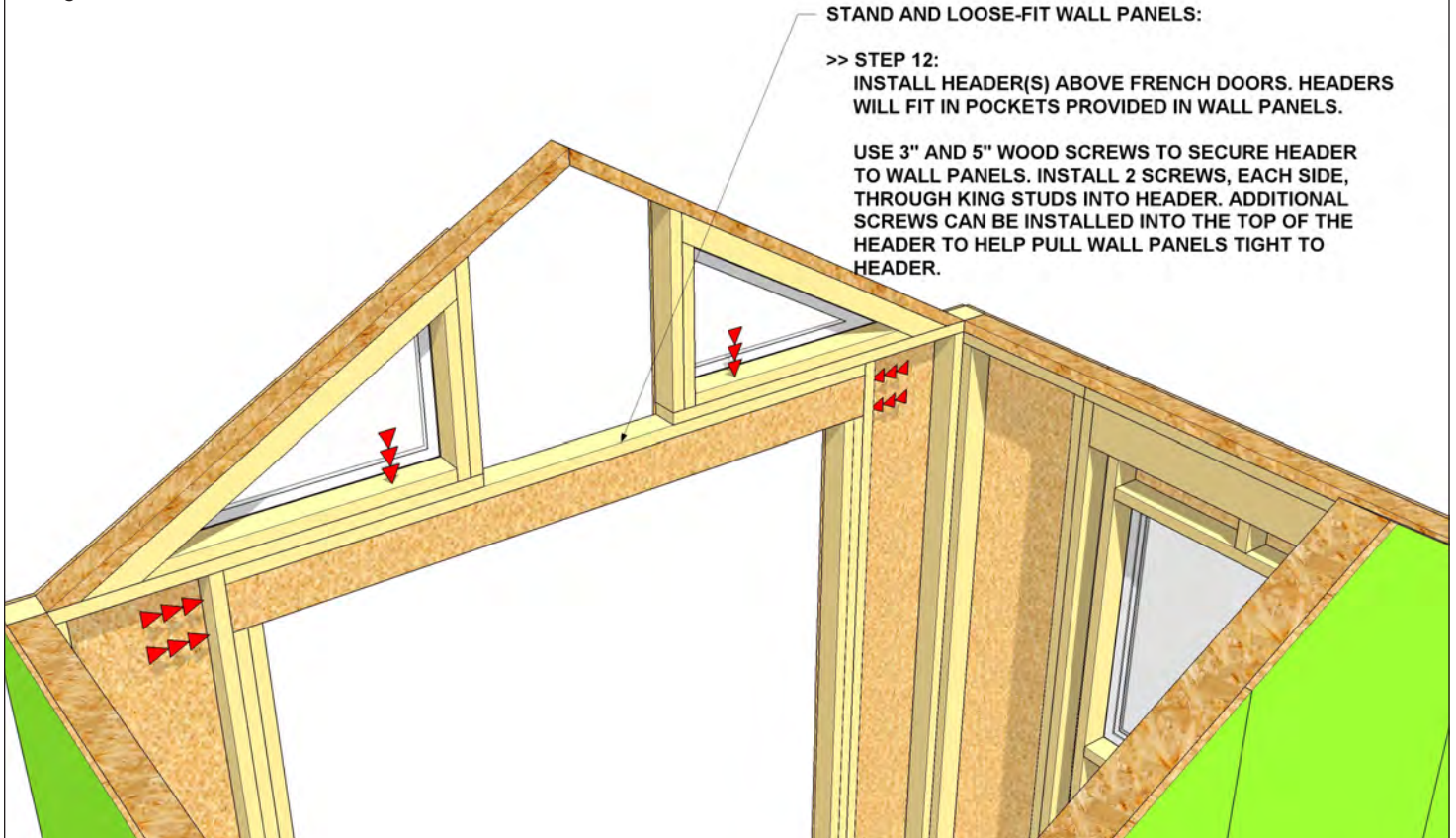
STAND AND LOOSE-FIT WALL PANELS:

>> STEP 11:
INSTALL FRONT WALL PANELS AT CORNERS
USING METHODS DESCRIBED IN FIG 3b-4b.

CLAMP TOP PLATES TO THE TOP OF THE WALL
PANELS TO AID PULLING PANELS INTO ALIGNMENT.

SEE FIG 3b FOR SIDE WALL TO
FRONT WALL ALIGNMENT.

Fig 6b:



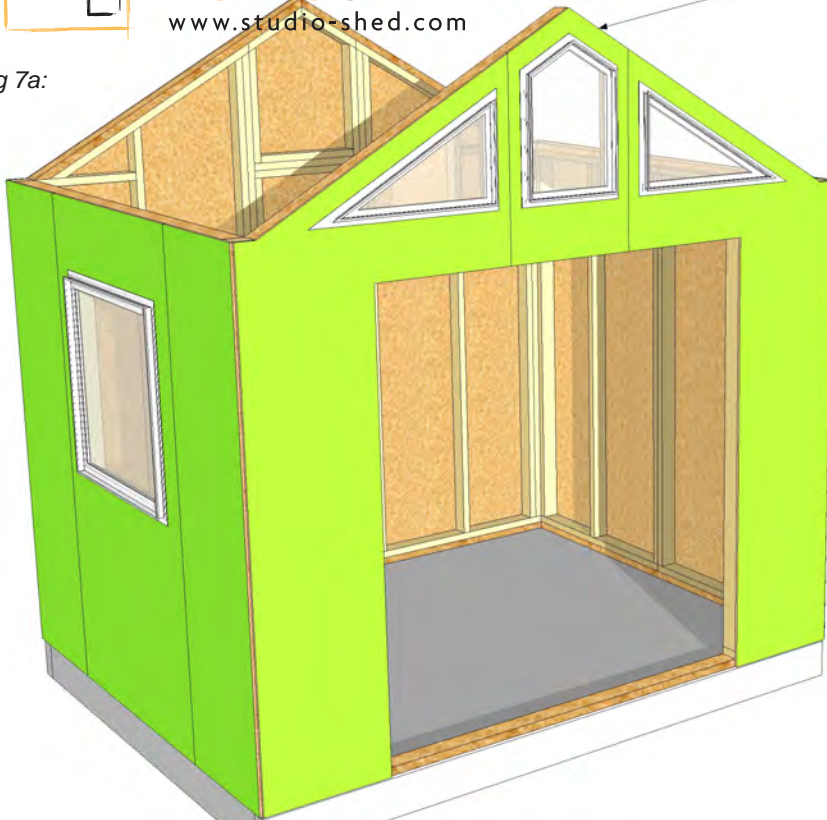
STAND AND LOOSE-FIT WALL PANELS:

>> STEP 12:
INSTALL HEADER(S) ABOVE FRENCH DOORS. HEADERS
WILL FIT IN POCKETS PROVIDED IN WALL PANELS.

USE 3" AND 5" WOOD SCREWS TO SECURE HEADER
TO WALL PANELS. INSTALL 2 SCREWS, EACH SIDE,
THROUGH KING STUDS INTO HEADER. ADDITIONAL
SCREWS CAN BE INSTALLED INTO THE TOP OF THE
HEADER TO HELP PULL WALL PANELS TIGHT TO
HEADER.

**PORTLAND SERIES SHED INSTALLATION
WALL PANEL INSTALLATION**

Fig 7a:



STAND AND LOOSE-FIT WALL PANELS:

>> STEP 13:
INSTALL ANY REMAINING FRONT WALL
PANELS USING METHODS DESCRIBED IN
FIG 3b-4b.

Fig 7b:

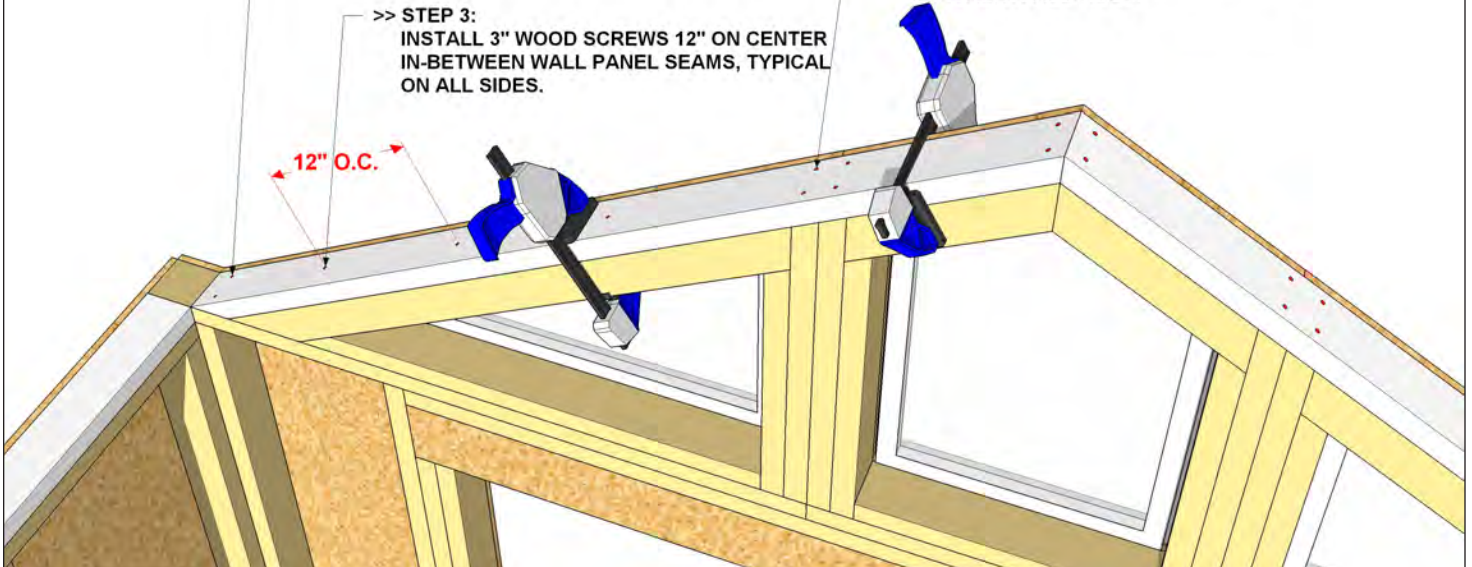
FASTEN TOP PLATES TO WALL PANELS:

- USE CLAMPS TO HELP FACILITATE CONNECTIONS.
- TOP PLATES SHOWN IN WHITE FOR CLARITY.

>> STEP 1:
INSTALL TWO (2) 3" WOOD SCREWS AT THE ENDS
OF THE TOP PLATES INTO THE TOP OF THE WALL
PANELS, TYPICAL ON ALL SIDES.

>> STEP 3:
INSTALL 3" WOOD SCREWS 12" ON CENTER
IN-BETWEEN WALL PANEL SEAMS, TYPICAL
ON ALL SIDES.

>> STEP 2:
INSTALL TWO (2) 3" WOOD SCREWS EACH
SIDE AT WALL PANEL INTERSECTIONS,
TYPICAL ON ALL SIDES.



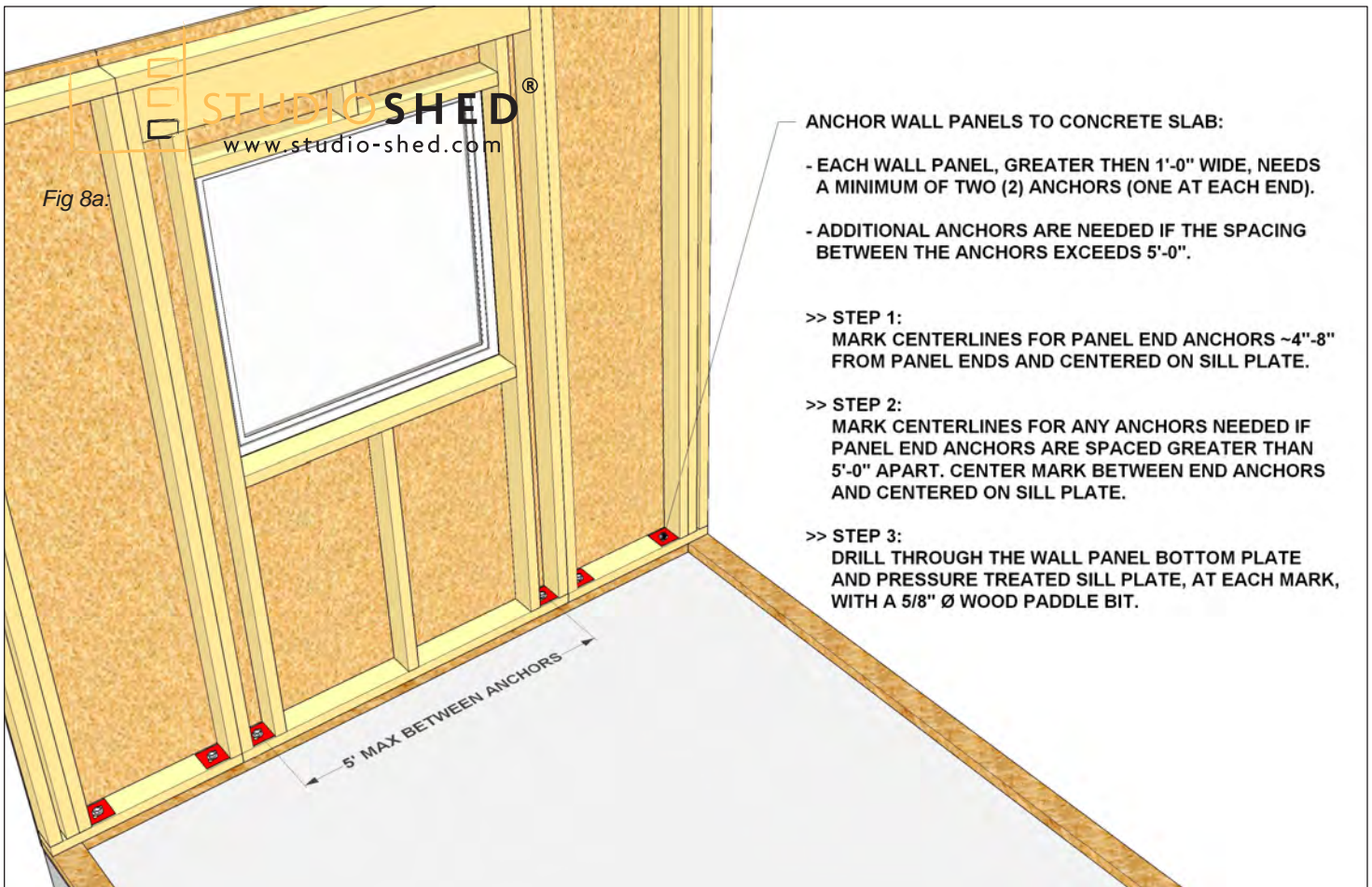


Fig 8a:

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ANCHOR WALL PANELS TO CONCRETE SLAB:

- EACH WALL PANEL, GREATER THEN 1'-0" WIDE, NEEDS A MINIMUM OF TWO (2) ANCHORS (ONE AT EACH END).
- ADDITIONAL ANCHORS ARE NEEDED IF THE SPACING BETWEEN THE ANCHORS EXCEEDS 5'-0".

- >> STEP 1:
MARK CENTERLINES FOR PANEL END ANCHORS ~4"-8" FROM PANEL ENDS AND CENTERED ON SILL PLATE.
- >> STEP 2:
MARK CENTERLINES FOR ANY ANCHORS NEEDED IF PANEL END ANCHORS ARE SPACED GREATER THAN 5'-0" APART. CENTER MARK BETWEEN END ANCHORS AND CENTERED ON SILL PLATE.
- >> STEP 3:
DRILL THROUGH THE WALL PANEL BOTTOM PLATE AND PRESSURE TREATED SILL PLATE, AT EACH MARK, WITH A 5/8" Ø WOOD PADDLE BIT.

5' MAX BETWEEN ANCHORS

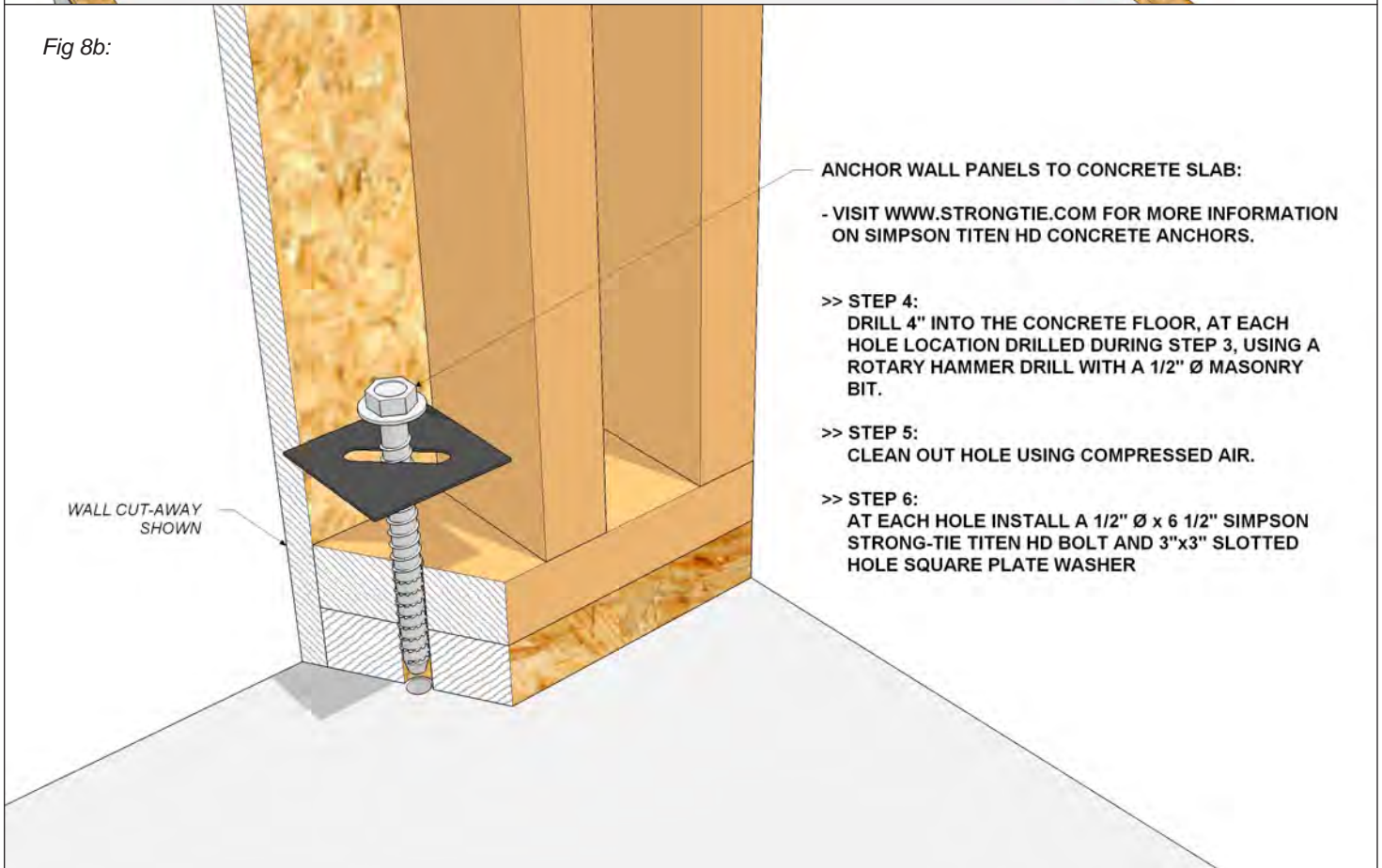


Fig 8b:

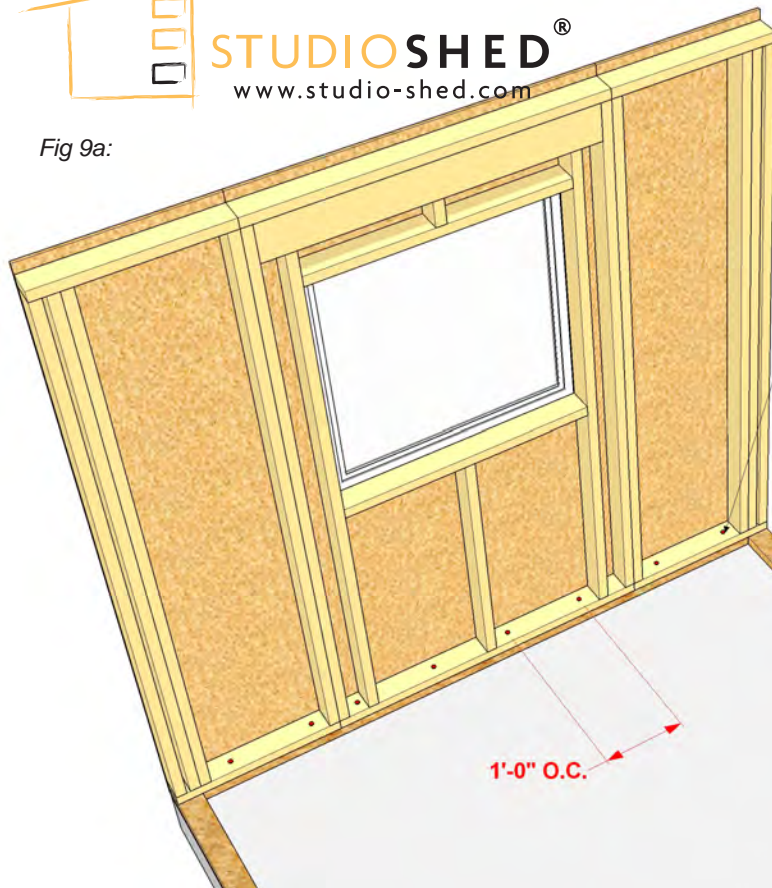
WALL CUT-AWAY SHOWN

ANCHOR WALL PANELS TO CONCRETE SLAB:

- VISIT WWW.STRONGTIE.COM FOR MORE INFORMATION ON SIMPSON TITEN HD CONCRETE ANCHORS.

- >> STEP 4:
DRILL 4" INTO THE CONCRETE FLOOR, AT EACH HOLE LOCATION DRILLED DURING STEP 3, USING A ROTARY HAMMER DRILL WITH A 1/2" Ø MASONRY BIT.
- >> STEP 5:
CLEAN OUT HOLE USING COMPRESSED AIR.
- >> STEP 6:
AT EACH HOLE INSTALL A 1/2" Ø x 6 1/2" SIMPSON STRONG-TIE TITEN HD BOLT AND 3"x3" SLOTTED HOLE SQUARE PLATE WASHER

Fig 9a:

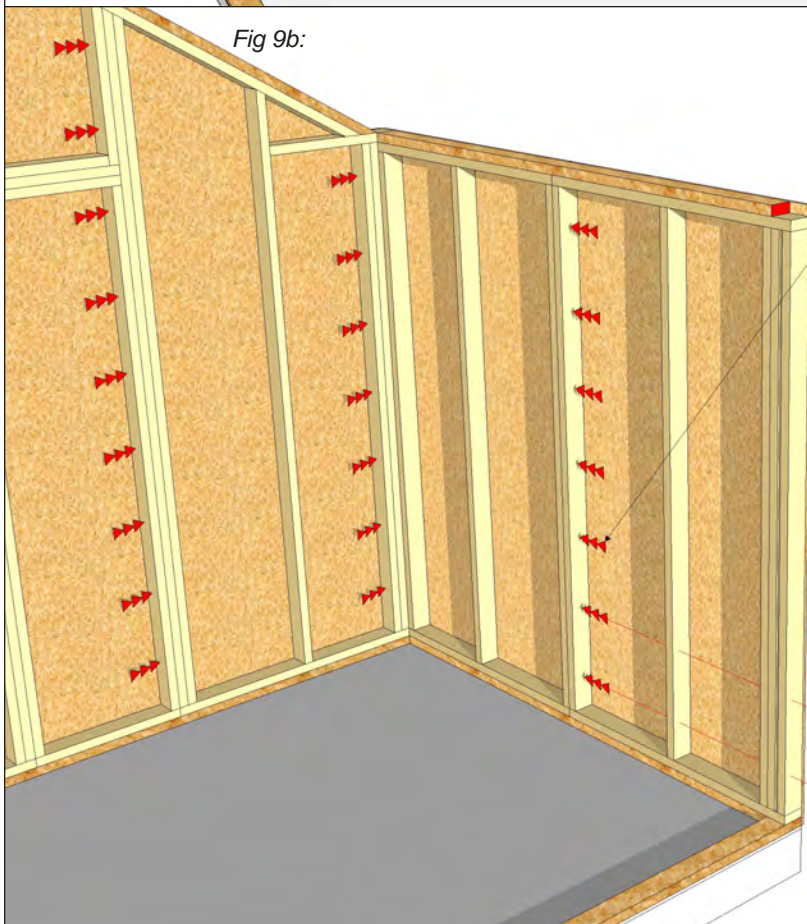


ANCHOR WALL PANELS TO WOOD FLOOR:

- >> **STEP 1:**
AT EACH END OF EACH WALL PANEL INSTALL ONE (1) 1/2" Ø x 6" FASTENMASTER HEADLOK SCREW INTO FLOOR STRUCTURE.
- >> **STEP 2:**
IN-BETWEEN SCREWS INSTALLED DURING STEP 1, INSTALL 1/2" Ø x 6" FASTENMASTER HEADLOK SCREWS 12" ON CENTER INTO FLOOR STRUCTURE.

1'-0" O.C.

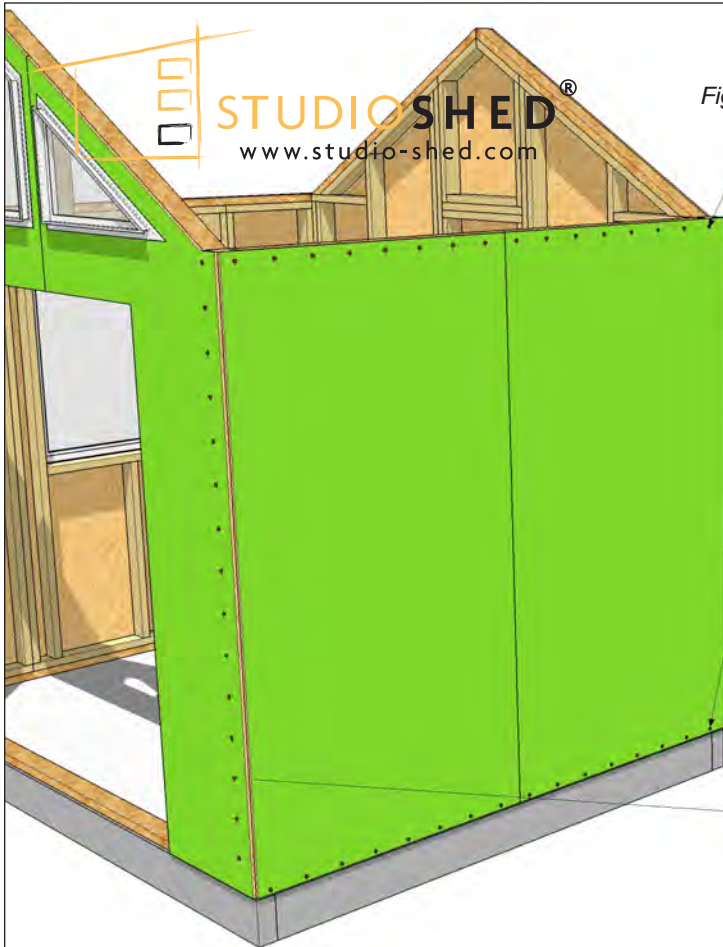
Fig 9b:



INSTALL FINAL WOOD SCREWS AT ALL WALL PANEL INTERSECTIONS:

- SCREWS USED DURING LOOSE FITTING OF WALL PANELS CAN BE INCLUDED.
- START FROM THE BOTTOM AND WORK TOWARD THE TOP.
- >> **STEP 1:**
INSTALL WOOD SCREWS 12" ON CENTER VERTICALLY AT EACH WALL PANEL TO WALL PANEL INTERSECTION.
- >> **STEP 2:**
AT CORNERS, INSTALL WOOD SCREWS 12" ON CENTER VERTICALLY. INSTALL SCREWS THROUGH FRONT/ BACK WALLS INTO SIDE WALLS.

12" ON CENTER



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Fig 10a:

NAIL EXTERIOR SHEATHING TO TOP PLATES, SILL PLATES AND CORNERS:

- A PNEUMATIC FRAMING NAILER IS RECOMMENDED.

>> STEP 1:
NAIL GALVANIZED 8d OR 10d NAILS 6" ON CENTER AND 3/4" DOWN FROM THE TOP OF THE TOP PLATE ON ALL SIDES.

>> STEP 2:
NAIL GALVANIZED 8d OR 10d NAILS 6" ON CENTER AND 3/4" UP FROM THE BOTTOM OF THE EXTERIOR WALL SHEATHING, INTO THE SILL PLATES, ON ALL SIDES.

>> STEP 3:
NAIL GALVANIZED 8d OR 10d NAILS THROUGH THE FRONT/ BACK WALL SHEATHING, VERTICALLY, 6" ON CENTER AND 2" IN FROM THE SIDE WALLS AT ALL CORNERS.

Fig 10b:



WEATHERSEAL THE WALL PANELS:

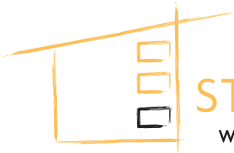
- USE THE SUPPLIED ZIP SYSTEM™ SHEATHING TAPE.

>> STEP 1:
TAPE THE SEAM BETWEEN THE BOTTOM OF THE WALL PANELS AND FOUNDATION. BRING TAPE DOWN ~1" BELOW BOTTOM OF FLOOR SHEATHING.

>> STEP 2:
TAPE ALL VERTICAL WALL PANEL INTERSECTION SEAMS (OVERLAP THE TAPE EQUALLY).

>> STEP 3:
TAPE ALL CORNERS (OVERLAP THE TAPE EQUALLY).

>> STEP 4:
TAPE THE SEAM BETWEEN THE TOP OF THE WALL PANELS AND THE TOP PLATES BY WRAPPING THE TAPE OVER THE TOP OF THE WALLS (OVERLAP THE TAPE EQUALLY).

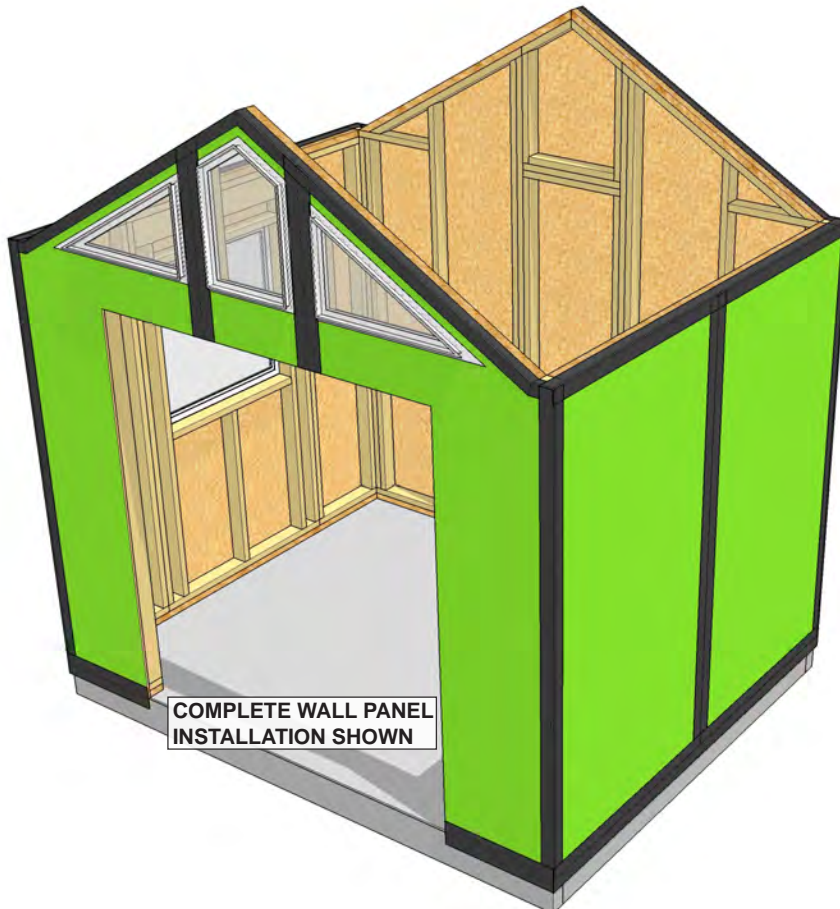


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Fig 11a:



Fig 11b:



PORTLAND SERIES SHED INSTALLATION WALL PANEL INSTALLATION

Fig 12a:

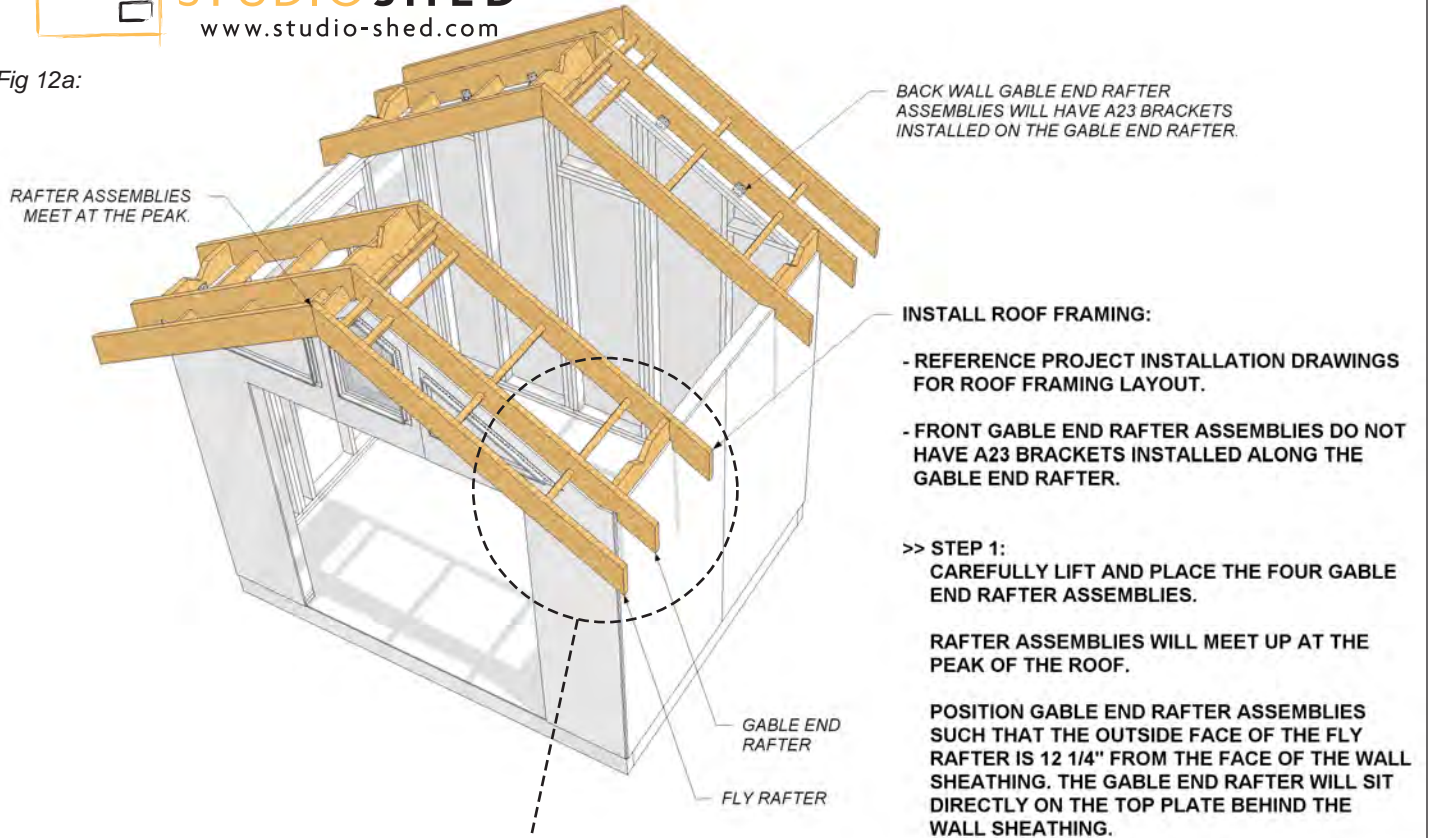


Fig 12b:

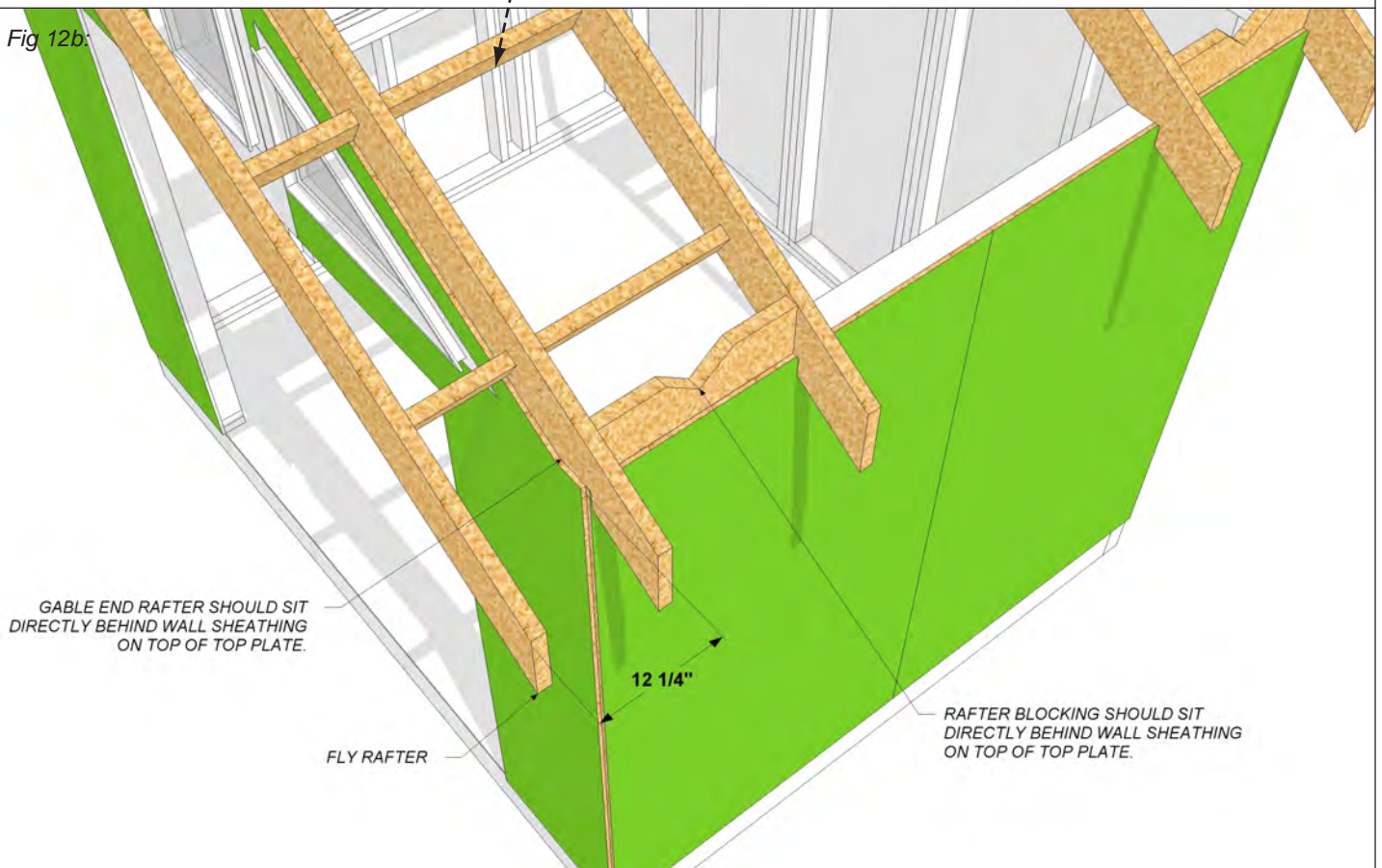
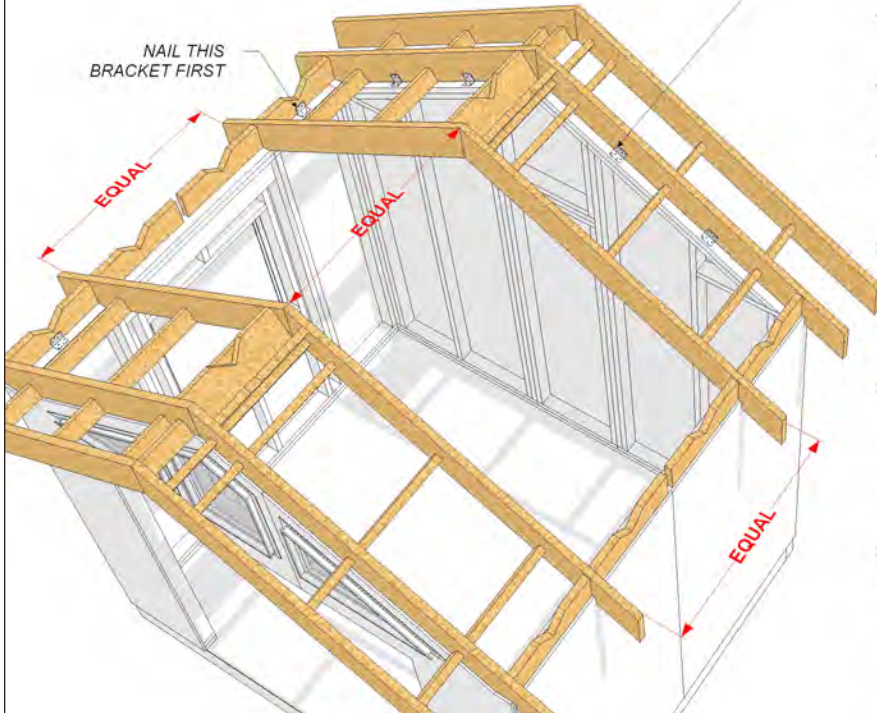


Fig 13a:



INSTALL ROOF FRAMING:

- PRIOR TO NAILING RAFTER ASSEMBLIES TO THE SHED ENSURE THAT THE RAFTER ASSMBLIES ARE SQUARE TO THE SHED AND TO EACHOTHER.
- *A23 BRACKETS ARE NOT NECESSARY ALONG FRONT WALL GABLE END RAFTERS.
- DO NOT USE A PNEUMATIC NAILER TO INSTALL A23 BRACKETS.
- VISIT WWW.STRONGTIE.COM FOR MORE INFORMATION ON SIMPSON A23 BRACKETS.

>> **STEP 2:**

NAIL THE A23 BRACKETS, LOCATED AT THE CENTER OF THE BLOCKING, TO THE TOP OF WALL PANEL TOP PLATES WITH (8) 10d x 1 1/2" NAILS (TYPICAL ALL SIDES).

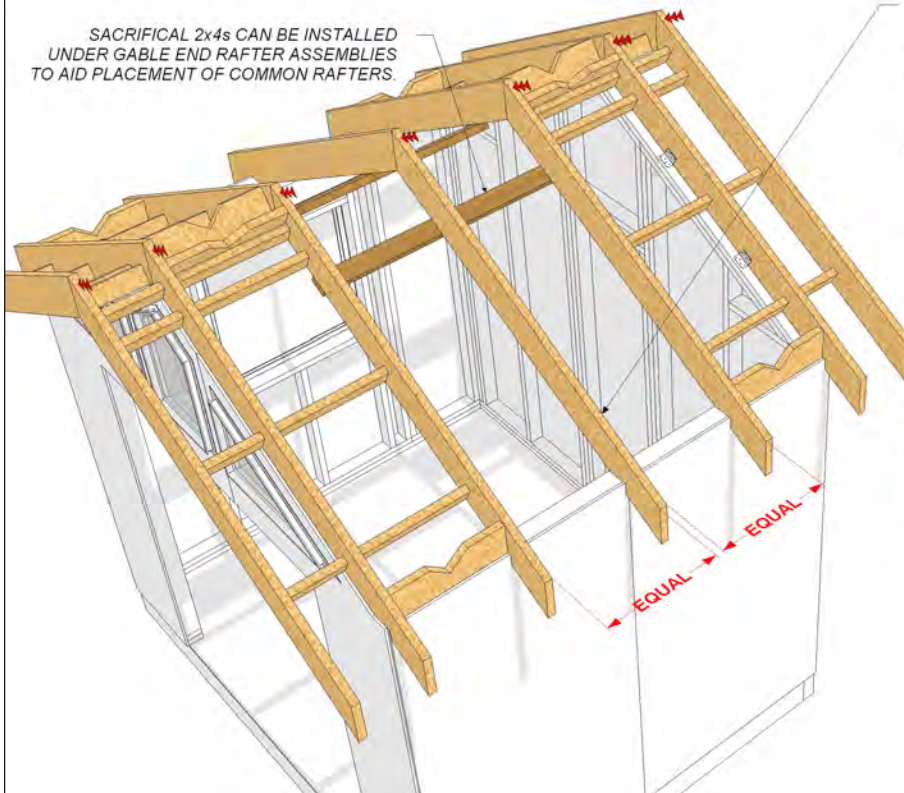
>> **STEP 3:**

DOUBLE CHECK THAT THE RAFTER ASSEMBLIES ARE ALIGNED PROPERLY. TAKE MEASUREMENTS BETWEEN THE RAFTER ASSEMBLIES AT THE BOTTOM AND PEAK. THESE MEASUREMENTS SHOULD BE EQUAL.

>> **STEP 4:**

SECURE THE A23 BRACKETS, LOCATED ALONG THE BACK GABLE END RAFTER, TO THE TOP OF GABLE END WALL PANEL TOP PLATES WITH (8) 10d x 1 1/2" NAILS (TYPICAL ALL SIDES).

Fig 13b:



INSTALL ROOF FRAMING:

- REFERENCE PROJECT INSTALLATION DRAWINGS FOR ROOF FRAMING LAYOUT.

>> **STEP 5:**

PLACE COMMON RAFTERS BETWEEN GABLE END RAFTER ASSEMBLIES. COMMON RAFTERS MAY BE SINGLE RAFTERS, DOUBLE OR TRIPLE PRE-ASSEMBLED SECTIONS.

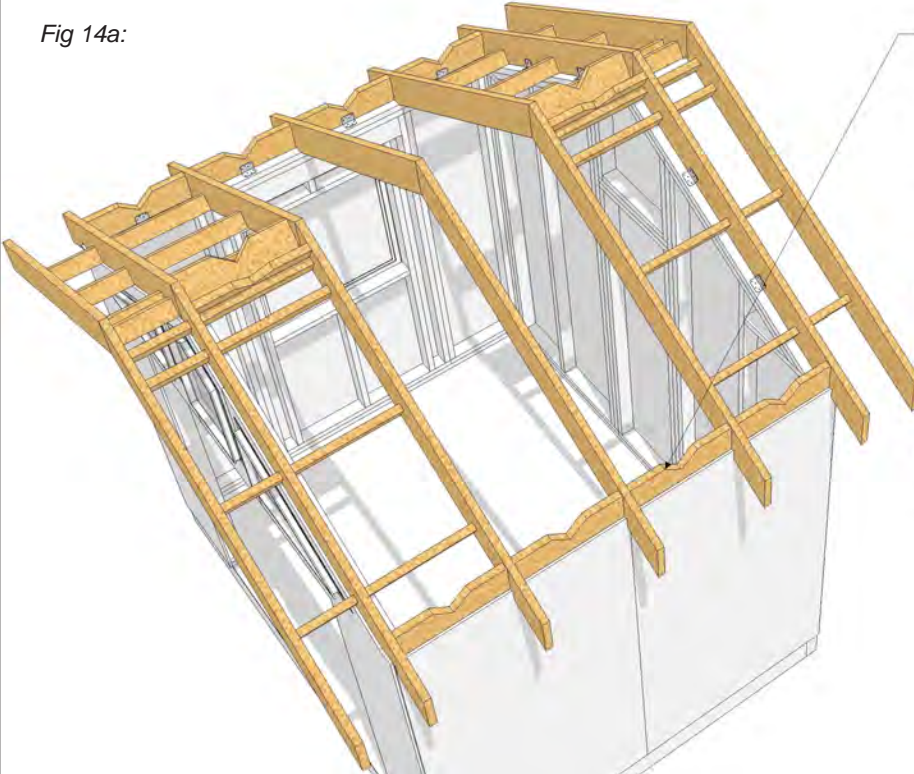
PLACE COMMON RAFTERS EQUALLY SPACED BETWEEN ADJACENT RAFTER ASSEMBLIES. THE SPACING SHOULD EQUAL:

- 1 1/2" WIDE RAFTERS = 1'-10 1/2"
- 1 3/4" WIDE RAFTERS = 1'-10"

>> **STEP 6 (OPTIONAL):**

A #10 x 5" WOOD SCREW CAN BE INSTALLED AT THE PEAKS WHERE RAFTERS MEET TO HELP HOLD THEM IN PLACE UNTIL THE ROOF BLOCKING IS INSTALLED.

Fig 14a:



INSTALL ROOF FRAMING:

- REFERENCE PROJECT INSTALLATION DRAWINGS FOR ROOF FRAMING LAYOUT.

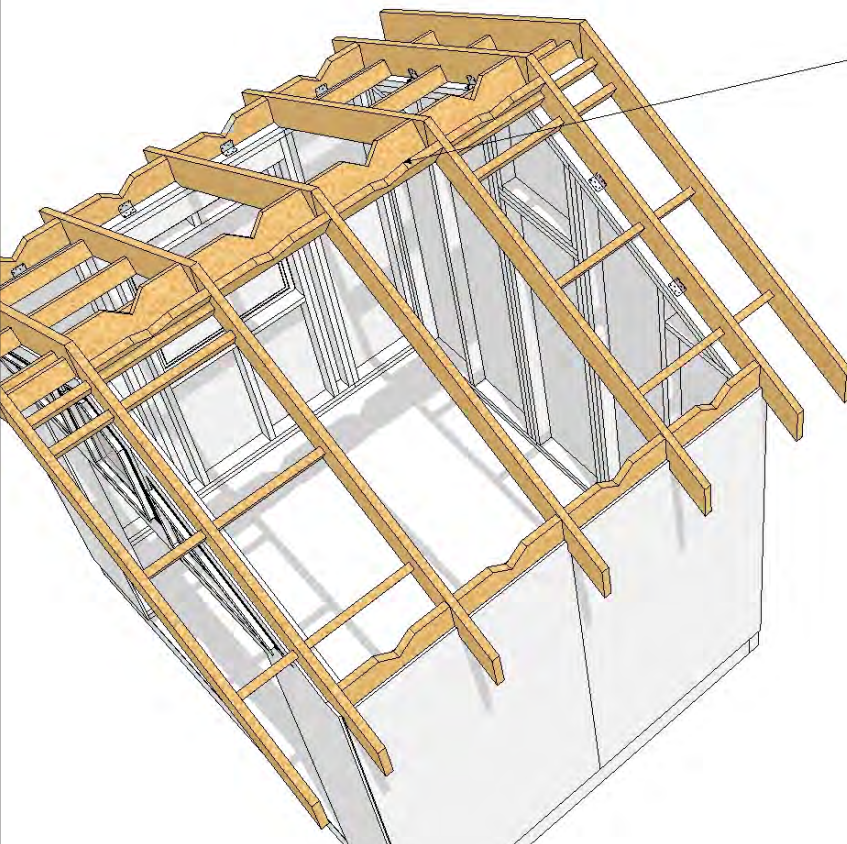
>> **STEP 7:**
PLACE LOWER PRE-CUT RAFTER BLOCKING IN SPACES BETWEEN RAFTER SECTIONS. BLOCKING SHOULD SIT DIRECTLY BEHIND WALL SHEATHING DIRECTLY ON THE WALL PANEL TOP PLATES.

>> **STEP 8:**
TOE NAIL BLOCKING TO THE RAFTERS USING 16d FRAMING NAILS. A PNEUMATIC FRAMING NAILER IS RECOMMENDED. BE AWARE OF WHERE NAILS ARE GOING TO ENSURE NAILS DO NOT POKE THROUGH FRAMING

>> **STEP 9:**
INSTALL ONE (1) A23 BRACKET AT EACH PIECE OF LOWER BLOCKING. CENTER THE A23 ON THE BLOCKING.

NAIL THE A23 BRACKET TO THE BLOCKING AND TOP PLATES WITH (8) 10d x 1 1/2" NAILS.

Fig 14b:

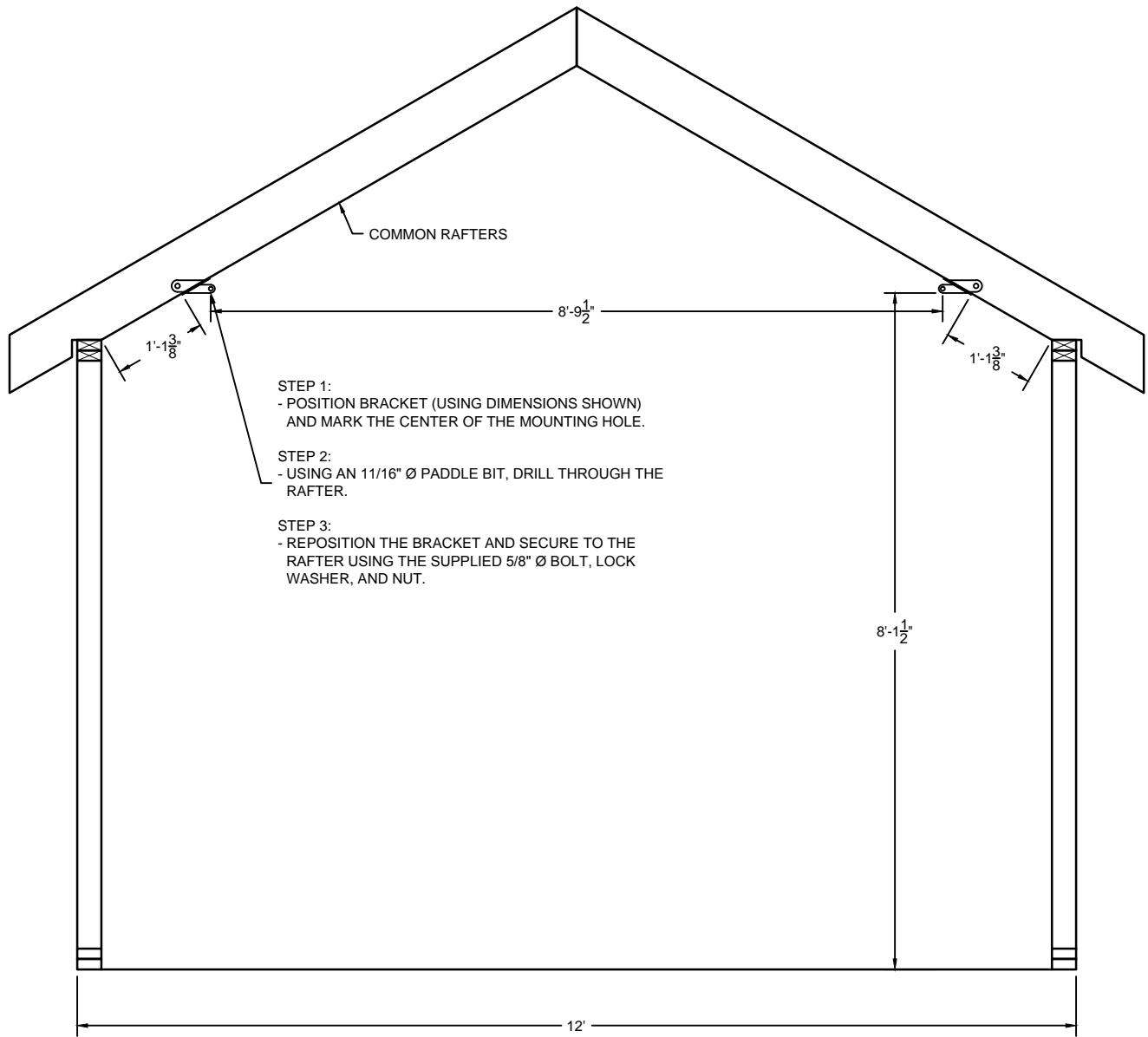


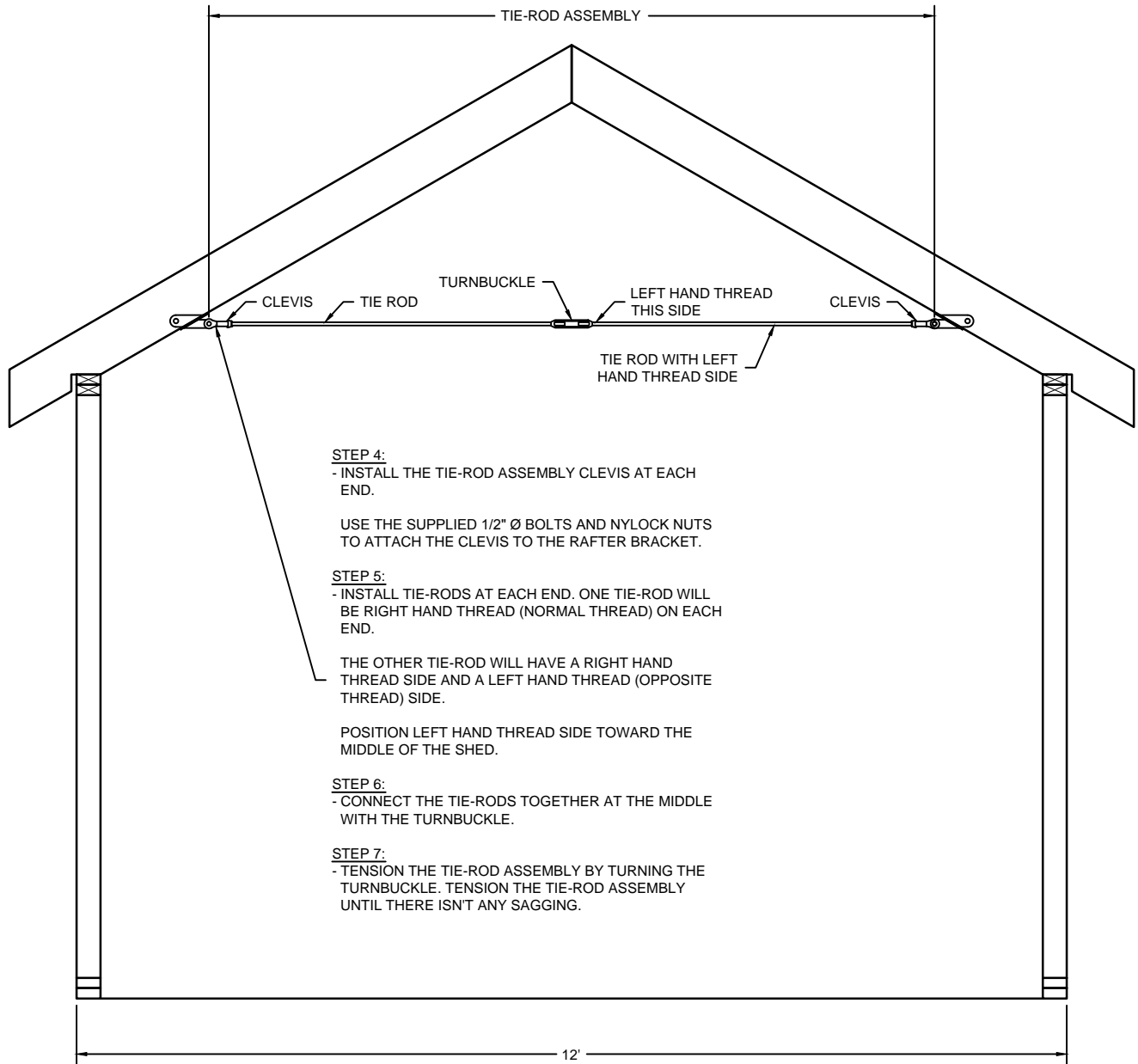
INSTALL ROOF FRAMING:

- REFERENCE PROJECT INSTALLATION DRAWINGS FOR ROOF FRAMING LAYOUT.

>> **STEP 10:**
PLACE PRE-CUT RAFTER BLOCKING IN SPACES BETWEEN RAFTER SECTIONS AT THE ROOF PEAK. BLOCKING SHOULD BE PERPENDICULAR TO RAFTERS.

>> **STEP 11:**
TOE NAIL BLOCKING TO THE RAFTERS USING 16d FRAMING NAILS. A PNEUMATIC FRAMING NAILER IS RECOMMENDED. BE AWARE OF WHERE NAILS ARE GOING TO ENSURE NAILS DO NOT POKE THROUGH FRAMING.





STEP 4:

- INSTALL THE TIE-ROD ASSEMBLY CLEVIS AT EACH END.

USE THE SUPPLIED 1/2" Ø BOLTS AND NYLOCK NUTS TO ATTACH THE CLEVIS TO THE RAFTER BRACKET.

STEP 5:

- INSTALL TIE-RODS AT EACH END. ONE TIE-ROD WILL BE RIGHT HAND THREAD (NORMAL THREAD) ON EACH END.

THE OTHER TIE-ROD WILL HAVE A RIGHT HAND THREAD SIDE AND A LEFT HAND THREAD (OPPOSITE THREAD) SIDE.

POSITION LEFT HAND THREAD SIDE TOWARD THE MIDDLE OF THE SHED.

STEP 6:

- CONNECT THE TIE-RODS TOGETHER AT THE MIDDLE WITH THE TURNBUCKLE.

STEP 7:

- TENSION THE TIE-ROD ASSEMBLY BY TURNING THE TURNBUCKLE. TENSION THE TIE-ROD ASSEMBLY UNTIL THERE ISN'T ANY SAGGING.