

# Table of Contents

Section 1 - 6-inch LINCOLN BLOCK system components:.....	5
Section 1.1 - Assorted lengths of LINCOLN BLOCK from two to ten feet:.....	5
Section 1.2 - LINCOLN BLOCK system lumber: .....	6
Section 1.3 - LINCOLN BLOCK Hardware: .....	7
Section 1.4 - LINCOLN BLOCK Accessories: .....	8
Section 1.5 - Tools:.....	9
Section 2 - Build Area:.....	10
Section 2.1 - Foundation Type:.....	10
Section 2.2 - Compatibility:.....	10
Section 2.3 - Plan Requirements:.....	10
Section 2.4 - Perimeter:.....	10
Section 3 - Foundation:.....	11
Section 3.1 - Set Foundation:.....	11
Section 3.2 - Pier Supports: .....	11
Section 3.3 - Glu-lam beam installation: .....	12
Section 3.4 - Beam Set: .....	12
Section 3.5 - Pier Height:.....	12
Section 3.6 - Corner Brackets:.....	13
Section 3.7 - Bracket Location:.....	13
Section 3.8 - Screws for Glu-Lam Beams:.....	14
Section 3.9 - Beam X-Ray: .....	14
Section 3.10 - Beam Screws:.....	14
Section 3.11 - Beam To 4x4: .....	14
Section 4 - First Course Preparation: .....	15
Section 4.1 - Starter Foam Tape:.....	15
Section 4.2 - Z-Metal Flashing: .....	15



Section 5 - First Course: ..... 16

    Section 5.1 – Gable Ends: ..... 16

    Section 5.2 - Set LINCOLN BLOCKS: ..... 16

    Section 5.4 - Short Stem Blocks: ..... 17

    Section 5.5 - Short Stem Block Placement: ..... 17

    Section 5.6 - Block Washer: ..... 18

    Section 5.7 - Course Alignment: ..... 18

    Section 5.8 - Block Washers: ..... 18

Section 6 - Sealant Part 1: ..... 19

    Section 6.1 - Apply Sealant: ..... 19

    Section 6.2 - Apply More Sealant: ..... 19

Section 7 - Lag Screw: ..... 20

    Section 7.1 - Lag Screw: ..... 20

Section 8 - Sealant Part 2: ..... 21

    Section 8.1 – Precision End Trim: ..... 21

    Section 8.2 - Tongue & Groove: ..... 21

Section 9 - Double Course Stem Blocks: ..... 22

    Section 9.1 - Sleeving: ..... 22

    Section 9.2 - Nailing After Sleeving: ..... 22

    Section 9.3 - First Course Complete: ..... 23

    Section 9.4 - Blocks Around Perimeter: ..... 23

    Section 9.5 - Lag Screws Torqued: ..... 23

Section 10 - Corner Blocks: ..... 24

    Section 10.1 - High Tension Hold Downs: ..... 24

    Section 10.2 - Corner Braces: ..... 25

    Section 10.3 - Recommended Bracing Pattern: ..... 25

Section 11 - Interference: ..... 26

    Section 11.1 - X-Ray View: ..... 26



Section 12 - Sealant Part 3: ..... 27

    Section 12.1 - Stacking Courses: ..... 27

Section 13 - Permanent LINCOLN BLOCK Installation: ..... 28

    Section 13.1 - Nail Pattern: ..... 28

    Section 13.2 - Remember Sealant:..... 28

    Section 13.3 - Join LINCOLN BLOCK ends with Course Stem Blocks:..... 29

    Section 13.4 - Stem Orientation:..... 29

    Section 13.5 - Fasten Corner Blocks: ..... 30

    Section 13.6 - Check Measurements And Fasten:..... 30

Section 14 - Floor:..... 31

    Section 14.1 - Installation: ..... 31

    Section 14.2 - Attachment: ..... 31

Section 15 - Rough Openings: ..... 32

    Section 15.1 - Door: ..... 32

    Section 15.2 - Floor:..... 32

    Section 15.3 - Bridge Blocks: ..... 32

Section 16 - Spray Foam Insulation:..... 33

    Section 16.1 - Measure:..... 33

    Section 16.2 - Bracing:..... 33

    Section 16.3 - Spray Height:..... 33

Section 17 - Rough Openings Part 2:..... 34

    Section 17.1 - Under Cap: ..... 34

    Section 17.2 - Cap: ..... 34

    Section 17.3: Rough Opening Headers:..... 35

    Section 17.4 - Specialty Blocks: ..... 35

    Section 17.5 - Remove Bridges:..... 35

    Section 17.6 - Windowsill Foam: ..... 36

    Section 17.7 - Wrap: ..... 36



Section 17.8 - Rough Openings With Plywood: ..... 37

Section 17.9 - Wrapped Then Capped: ..... 37

Section 18 - Top Block:..... 38

Section 18.1 - Top Block Prep:..... 38

Section 18.2 - Top Block:..... 38

Section 19 - Gables:..... 39

Section 19.1 - Stack Gables:..... 39

Section 19.2 - Foam Gables: ..... 39

Section 20 - LINCOLN BLOCK Complete: ..... 40

Section 20.1 - Blueprint:..... 40

Section 21 - Credits: ..... 41

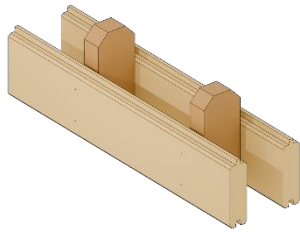
Section 21.1 - Customers: ..... 41

Section 21.2 - Engineers:..... 41

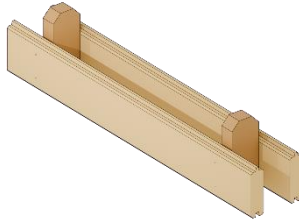
Section 21.3 - The Inventor: ..... 41

## Section 1 - 6-inch LINCOLN BLOCK system components:

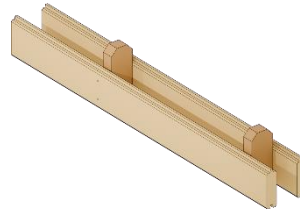
### Section 1.1 - Assorted lengths of LINCOLN BLOCK from two to ten feet:



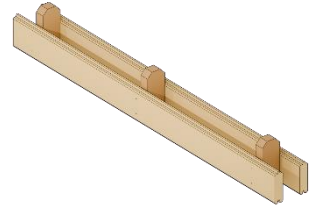
2-FOOT BLOCK



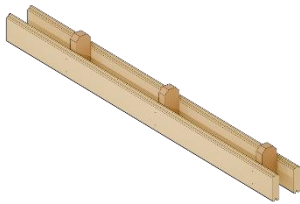
3-FOOT BLOCK



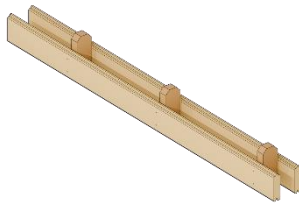
4-FOOT BLOCK



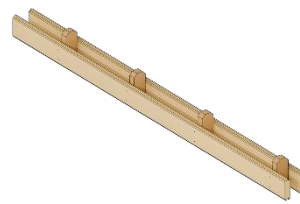
5-FOOT BLOCK



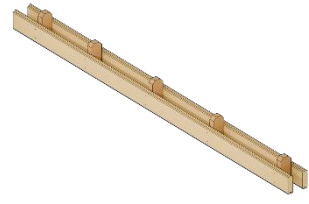
6-FOOT BLOCK



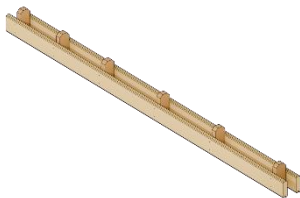
7-FOOT BLOCK



8-FOOT BLOCK



9-FOOT BLOCK



10-FOOT BLOCK

## Section 1.2 - LINCOLN BLOCK system lumber:



STEM BLOCK



COURSE STEM BLOCK



DOUBLE COURSE STEM BLOCK



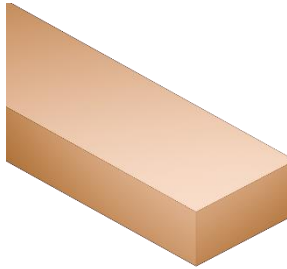
LONG STEM BLOCK



CORNER STEM BLOCK



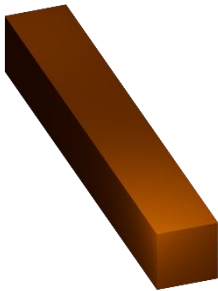
TOP BLOCK



GLU-LAM BEAM

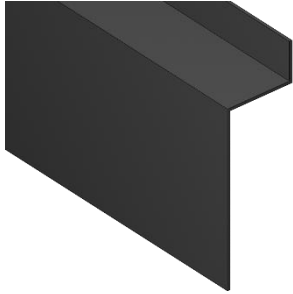


PLYWOOD

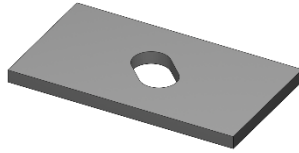


PRESSURE TREATED 4x4

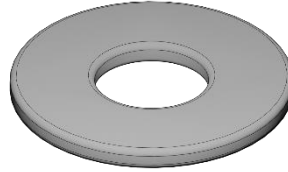
### Section 1.3 - LINCOLN BLOCK Hardware:



Z-METAL FLASHING



BLOCK WASHER



LAG SCREW WASHER



LAG SCREW



CONSTRUCTION SCREW



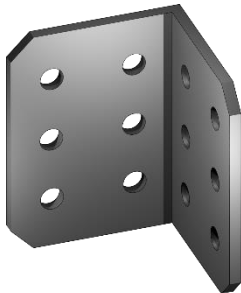
STAINLESS STEEL NAIL



FRAMING NAIL

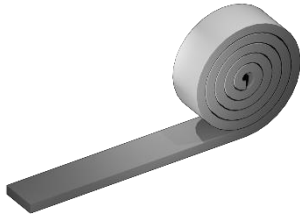


HIGH TENSION  
HOLDDOWN



CORNER BRACKET

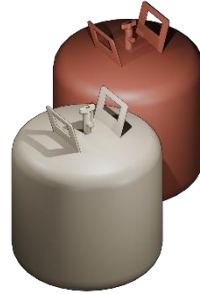
## Section 1.4 - LINCOLN BLOCK Accessories:



STARTER FOAM TAPE



WINDOWSILL FOAM



SPRAY FOAM TANKS



FOAM GUN



FOAM GUN HOSES



ACRYLIC LATEX  
ELASTOMERIC SEALANT



CONCRETE PIER BLOCK



ADJUSTABLE PIER  
SUPPORT

## Section 1.5 - Tools:

*Including but not limited to:*

CIRCULAR SAW

CHOP SAW (12 in. w/ minimum 13-¼ in. crosscut)

FINISH NAIL GUN (15 ga.)

FRAMING NAIL GUN (21-Degree 3-½ in.)

SCREW GUN

CAULKING GUN

ROUTER

BALL LEVEL

STEP LADDER

FRAMING HAMMER

FINISH HAMMER

TAPE MEASURE

CARPENTER'S PENCIL

STRING LINE

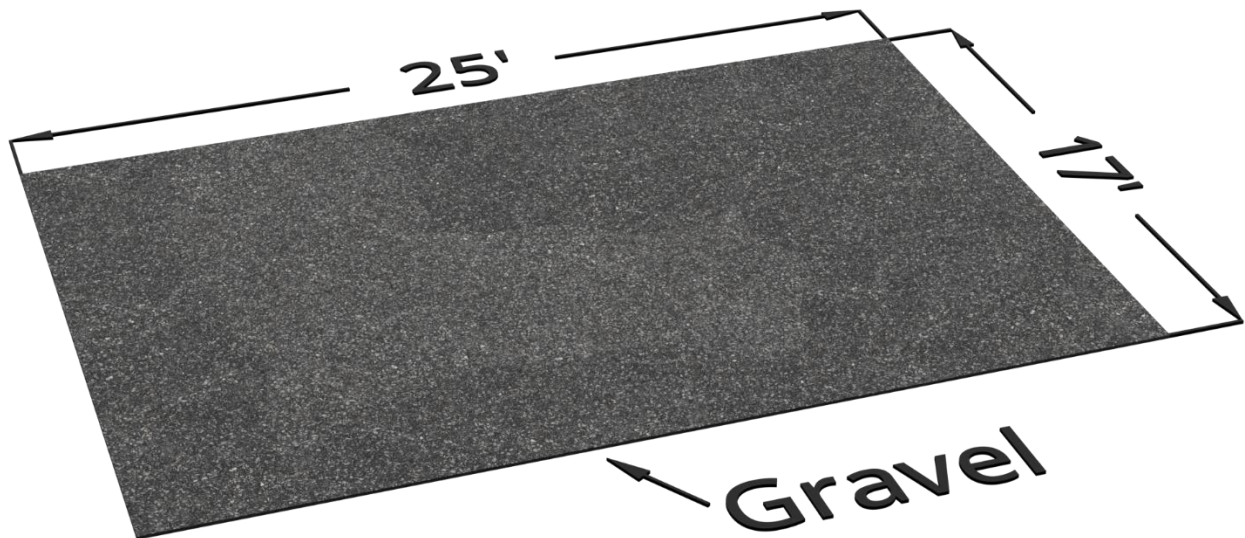
CHALK LINE

SPEED SQUARE

BEVEL SQUARE

SOCKET WRENCH w/ DEEP WELL SOCKETS

## Section 2 - Build Area:



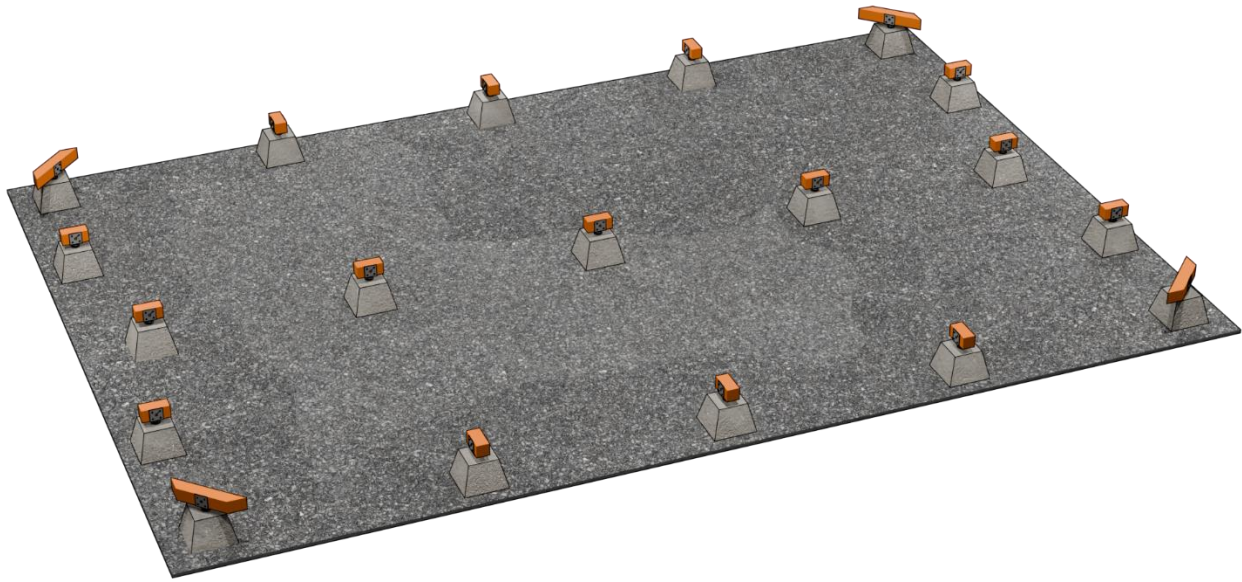
**Section 2.1 - Foundation Type:** Gravel foundations are level on grade.

**Section 2.2 - Compatibility:** Lincoln block is compatible with any type of foundation. This tutorial has details for building footprints that use post & pier construction.

**Section 2.3 - Plan Requirements:** Determine your foundation requirements based on your building plan. All foundations are compatible with 6-Inch Lincoln Blocks.

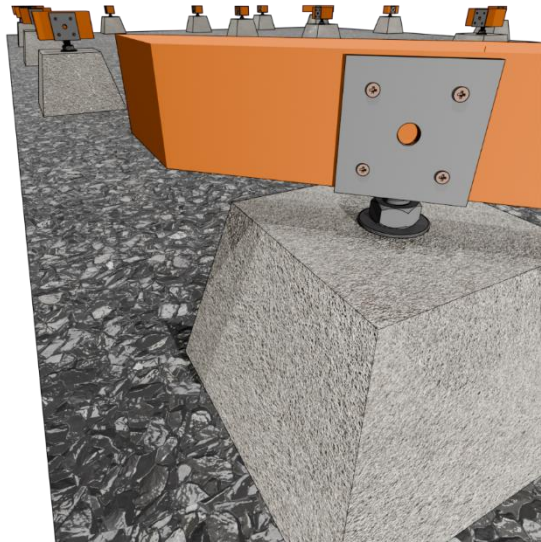
**Section 2.4 - Perimeter:** The perimeter must be squared within tolerance of your plans, usually within 1/8th inch diagonal measurement.

## Section 3 - Foundation:

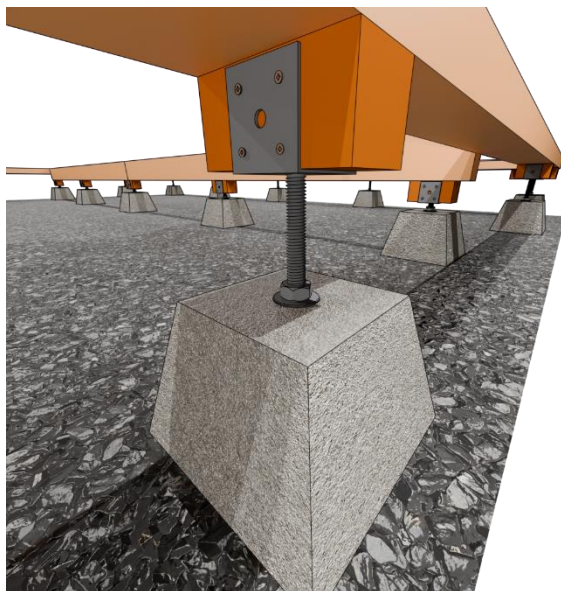
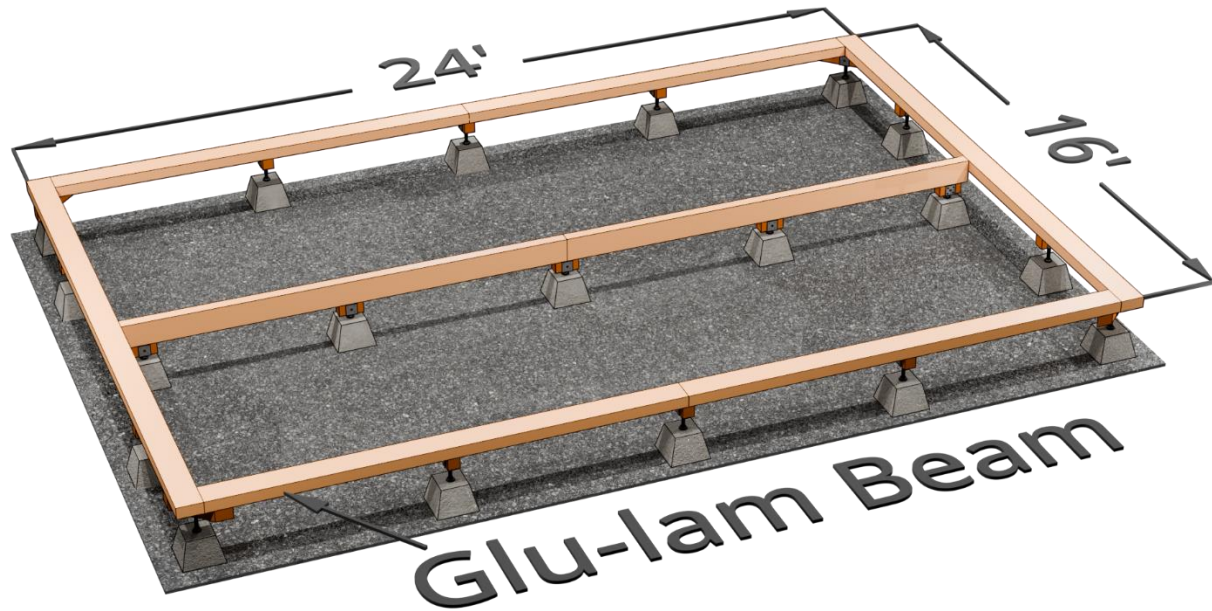


**Section 3.1 - Set Foundation:** Pier blocks are set according to the building plan and / or structural requirements.

**Section 3.2 - Pier Supports:** Adjustable pier block support brackets will be set at various heights to account for grade variance.



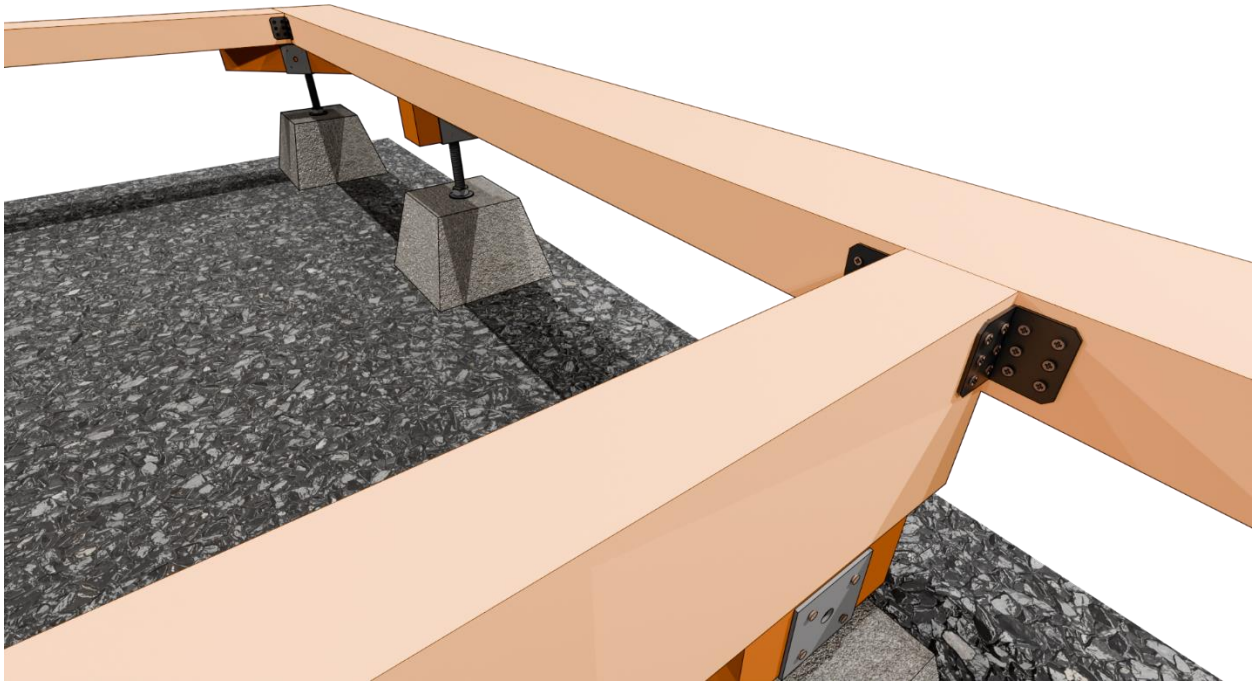
### Section 3.3 - Glu-lam beam installation:



**Section 3.4 - Beam Set:** Glu-Lam Beam is set according to the building plan and / or structural requirements.

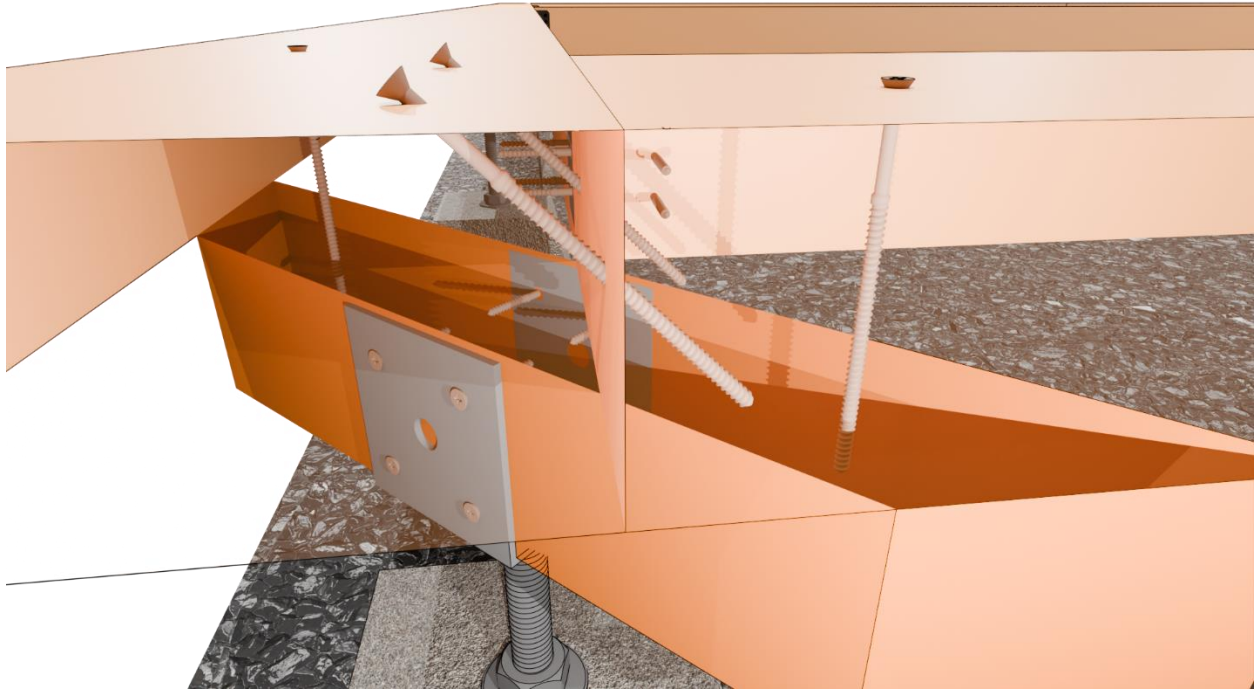
**Section 3.5 - Pier Height:** Adjustable Pier Support brackets will be set to account for building material locations.

### Section 3.6 - Corner Brackets:



**Section 3.7 - Bracket Location:** Corner brackets are installed at right angles where Glu-Lam Beams meet.

### Section 3.8 - Screws for Glu-Lam Beams:

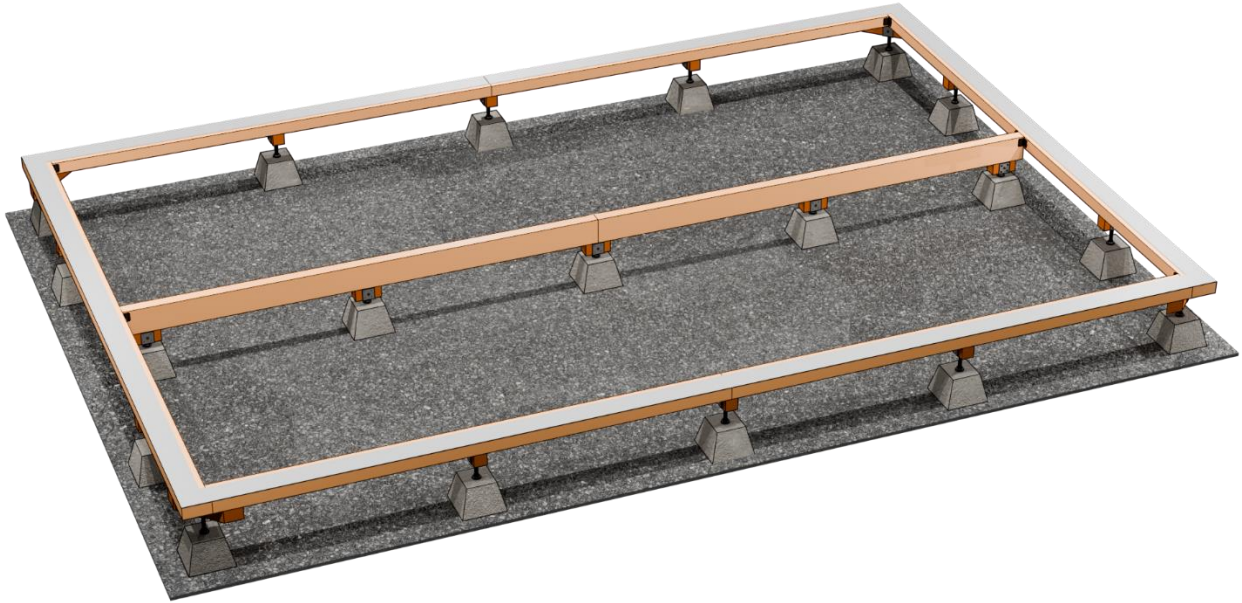


**Section 3.9 - Beam X-Ray:** The picture in section 3.8 depicts a view of a corner, inside of the Glu-Lam Beam and Pressure Treated 4x4.

**Section 3.10 - Beam Screws:** Faces where beams meet require five-inch construction screws driven at a 45-degree angle.

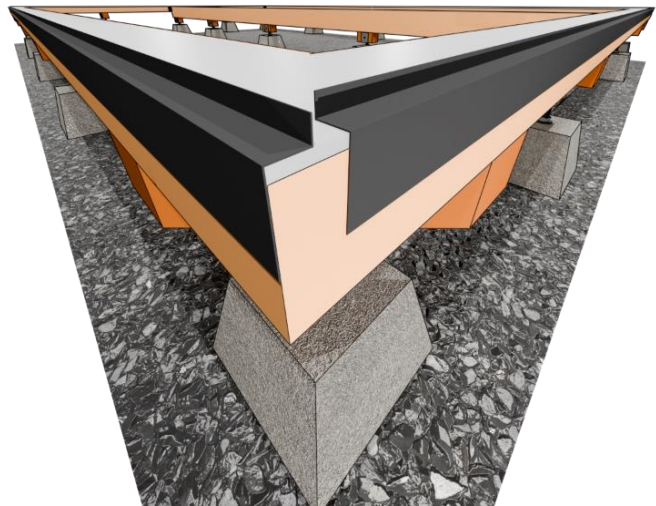
**Section 3.11 - Beam To 4x4:** Glu-Lam Beams are fasted to the Pressure Treated 4x4 using either five-inch construction screws or the appropriate size for the location of attachment.

## Section 4 - First Course Preparation:

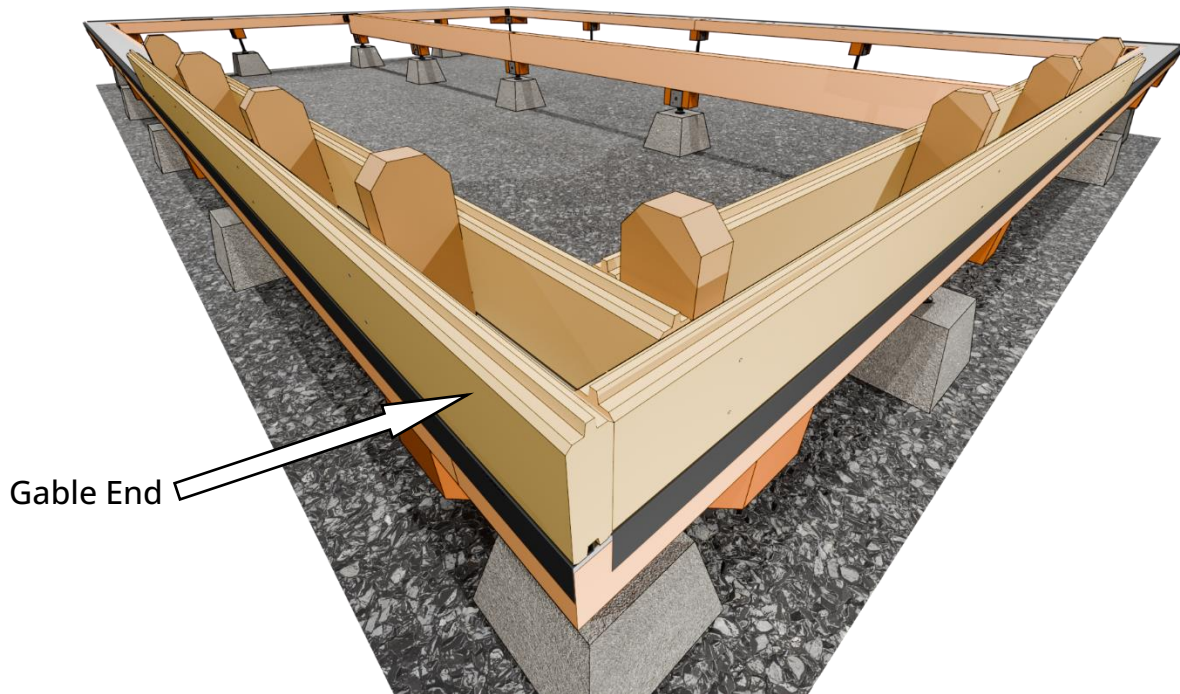


**Section 4.1 - Starter Foam Tape:** The Starter Foam Tape is applied to the Glu-Lam Beam, flush and / or plumb with the exterior edge.

**Section 4.2 - Z-Metal Flashing:** Z-Metal Flashing is installed flush and / or plumb with the exterior edge, on top of the Starter Foam Tape.

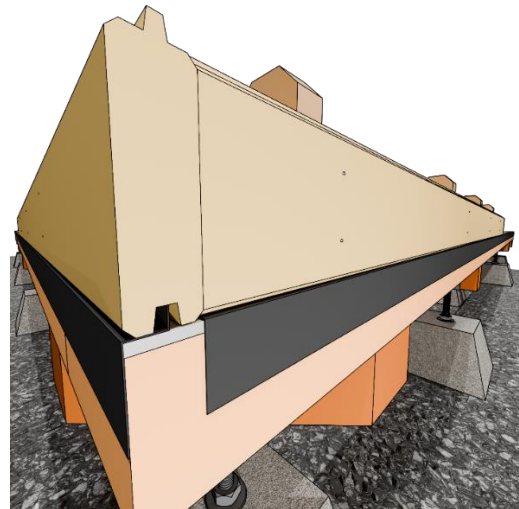


## Section 5 - First Course:

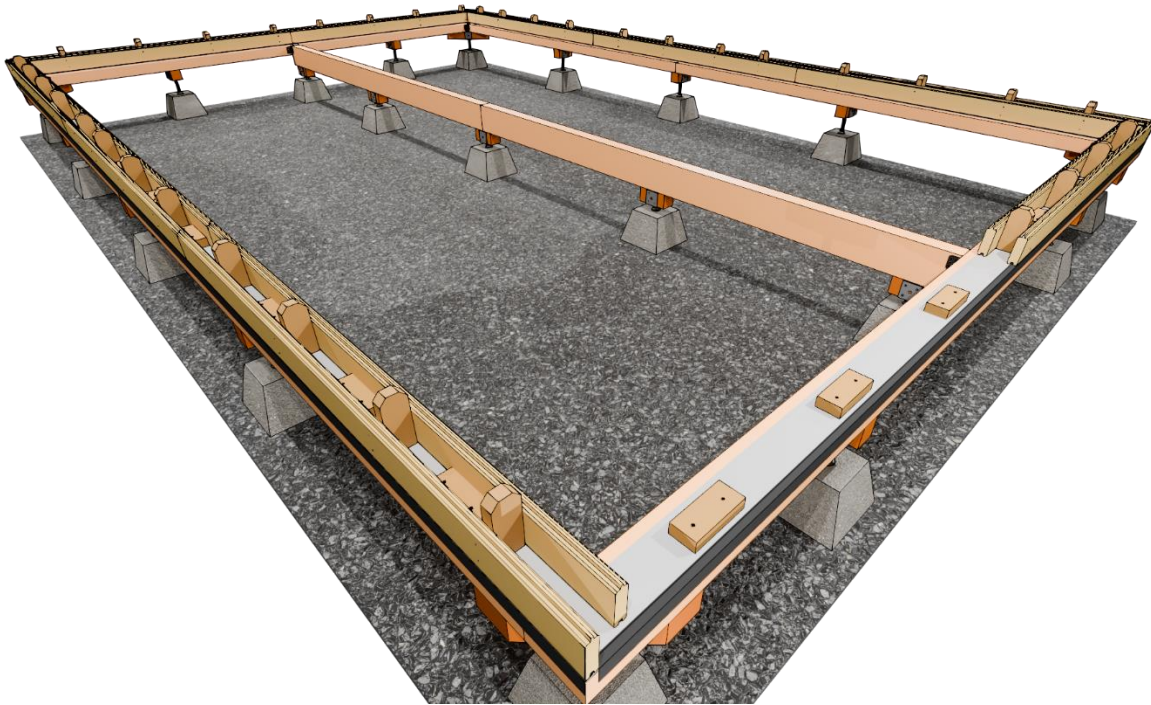


**Section 5.1 – Gable Ends:** Plan your gable walls to be positioned on the outside of your perimeter, plate walls are cut back 4-9/16" and gable walls cut back 1-7/16".

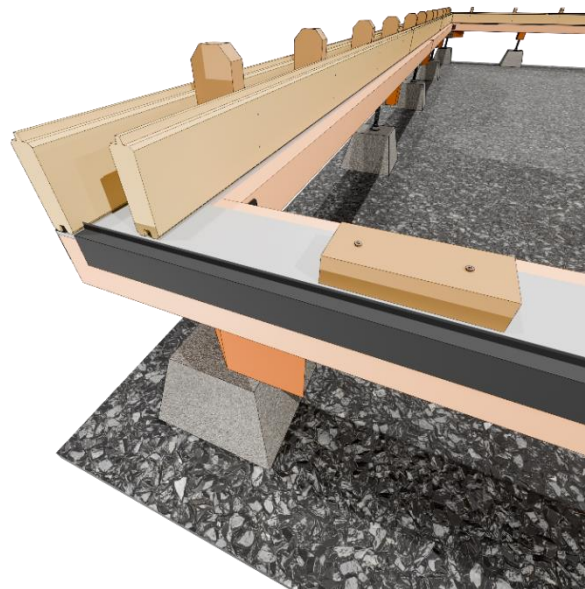
**Section 5.2 - Set LINCOLN BLOCKS:** LINCOLN BLOCKS are set flush and / or plumb to the outer portion of the perimeter, directly on top of the Starter Foam Tape and Z-Metal Flashing.



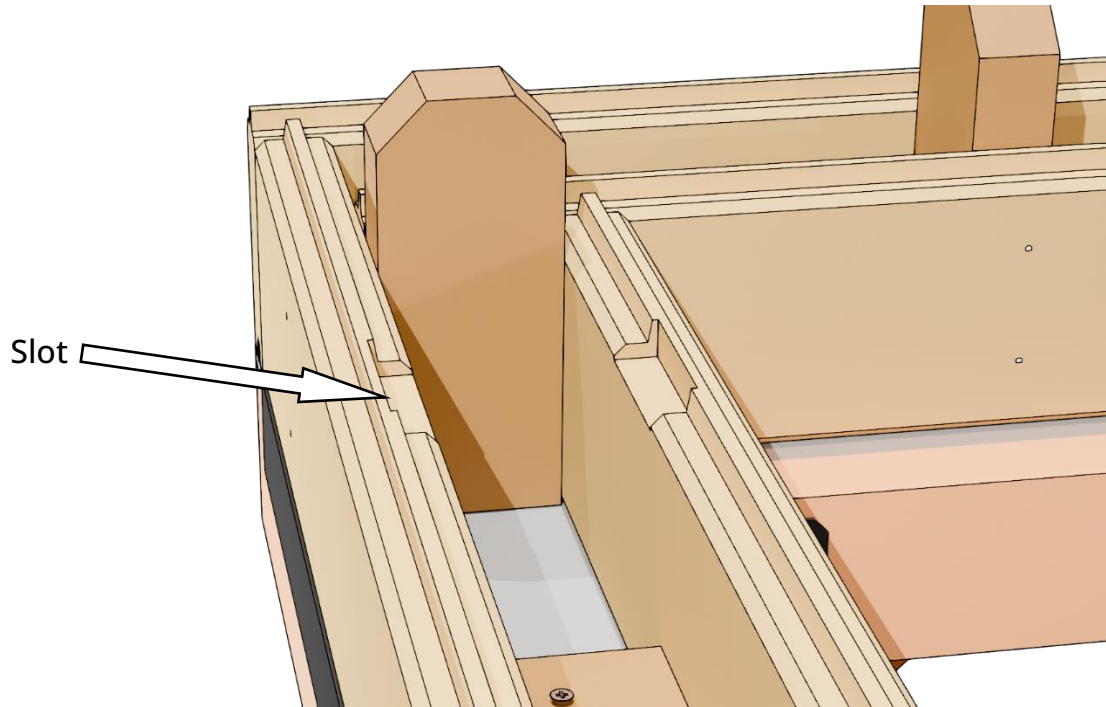
## Section 5.4 - Short Stem Blocks:



**Section 5.5 - Short Stem Block Placement:** Short Stem Blocks are placed inside the cavity to align the first course of LINCOLN BLOCK. Fasten at least two short blocks to the Glu-Lam Beam using construction screws for each LINCOLN BLOCK.

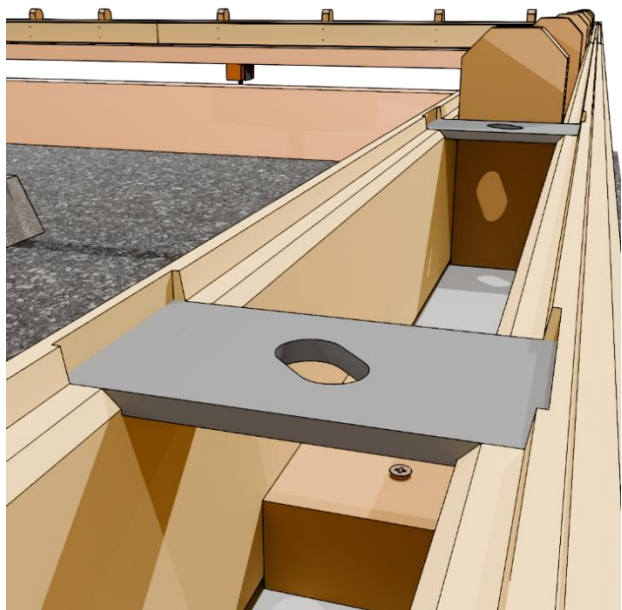


## Section 5.6 - Block Washer:

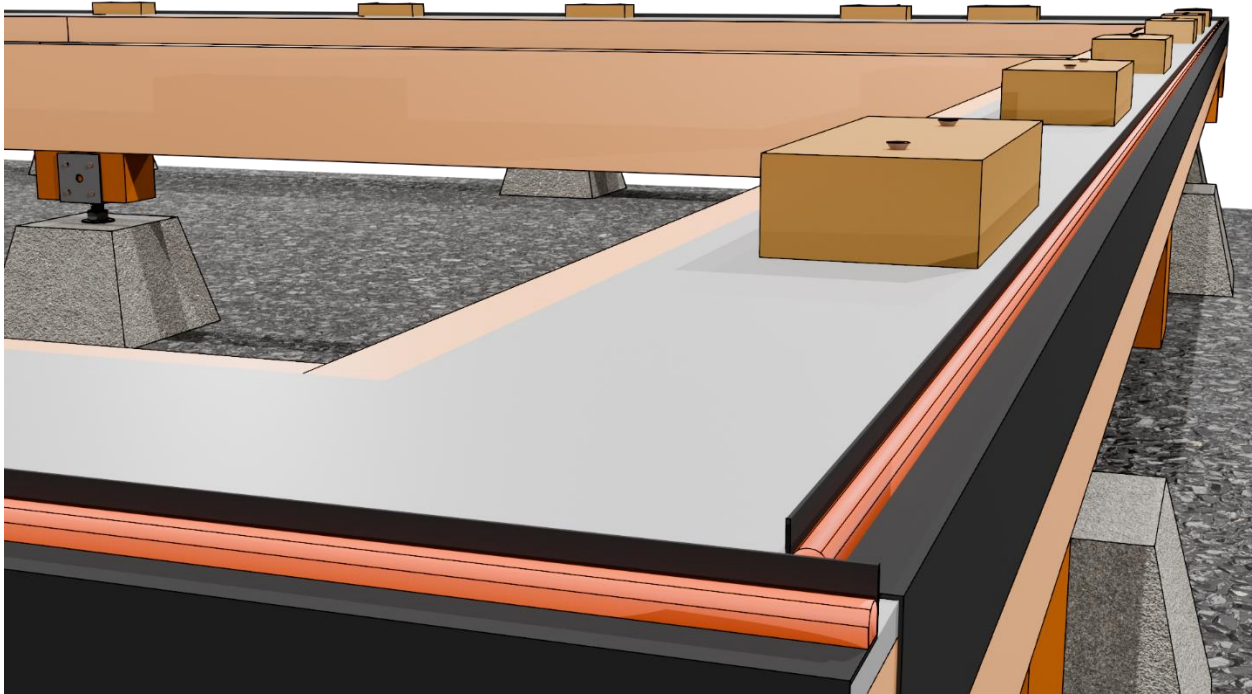


**Section 5.7 - Course Alignment:** Short Stem Blocks are placed inside the cavity to align the first course of LINCOLN BLOCK. Fasten at least two short blocks to the Glu-Lam Beam using construction screws for each LINCOLN BLOCK.

**Section 5.8 - Block Washers:** Each LINCOLN BLOCK in the first course requires at least three slots and respective Block Washers. The first course of LINCOLN BLOCK is the only one that requires slots and Block Washers.

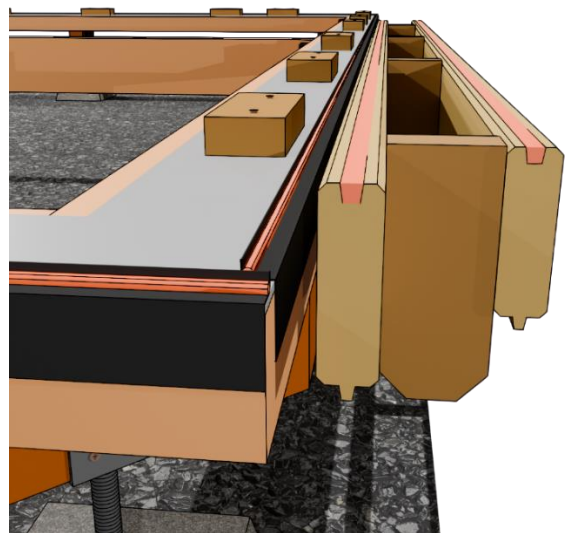


## Section 6 - Sealant Part 1:

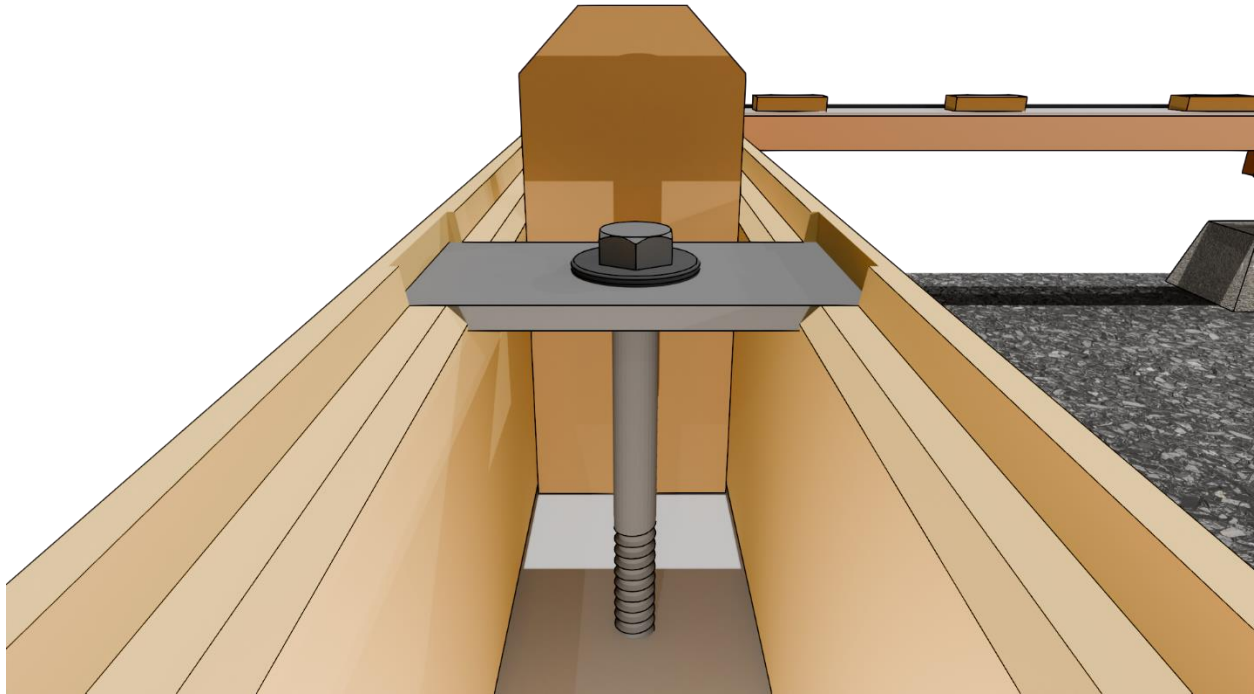


**Section 6.1 - Apply Sealant:** After the Short Stem Blocks are set for alignment of the LINCOLN BLOCKS and the Block Washer slots, the LINCOLN BLOCKS are removed, and Acrylic Latex Elastomeric Sealant is applied to the Z-Metal where the LINCOLN BLOCK is placed.

**Section 6.2 - Apply More Sealant:** Sealant is also applied to the grooves on the bottom of the LINCOLN BLOCK. Use enough sealant to completely fill the grooves. There's no such thing as too much in this case!

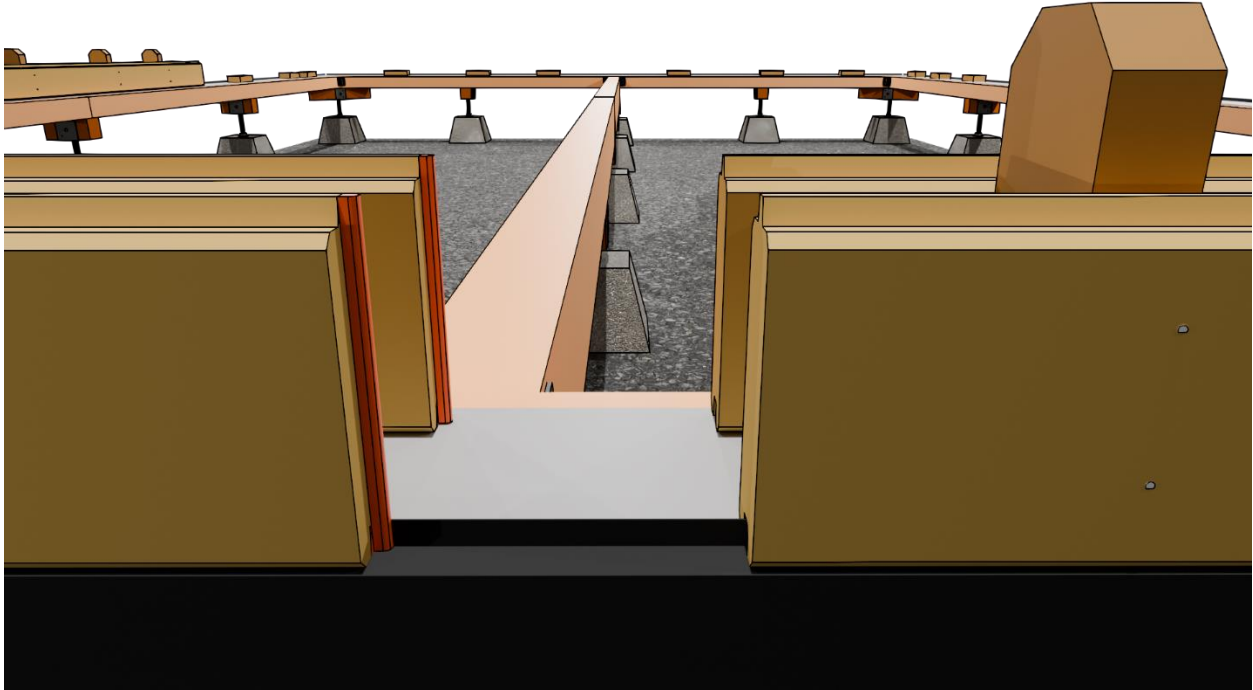


## Section 7 - Lag Screw:



**Section 7.1 - Lag Screw:** Ensuring sealant has been applied properly to the Z-Metal and the grooves, the very first LINCOLN BLOCK can be fastened to the Glu-Lam Beam using Lag Screws and Lag Screw Washers through the Lincoln Block Washer.

## Section 8 - Sealant Part 2:

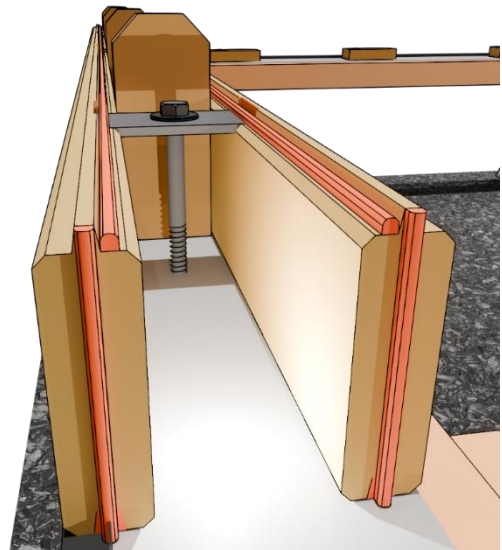


### Section 8.1 - Precision End Trim:

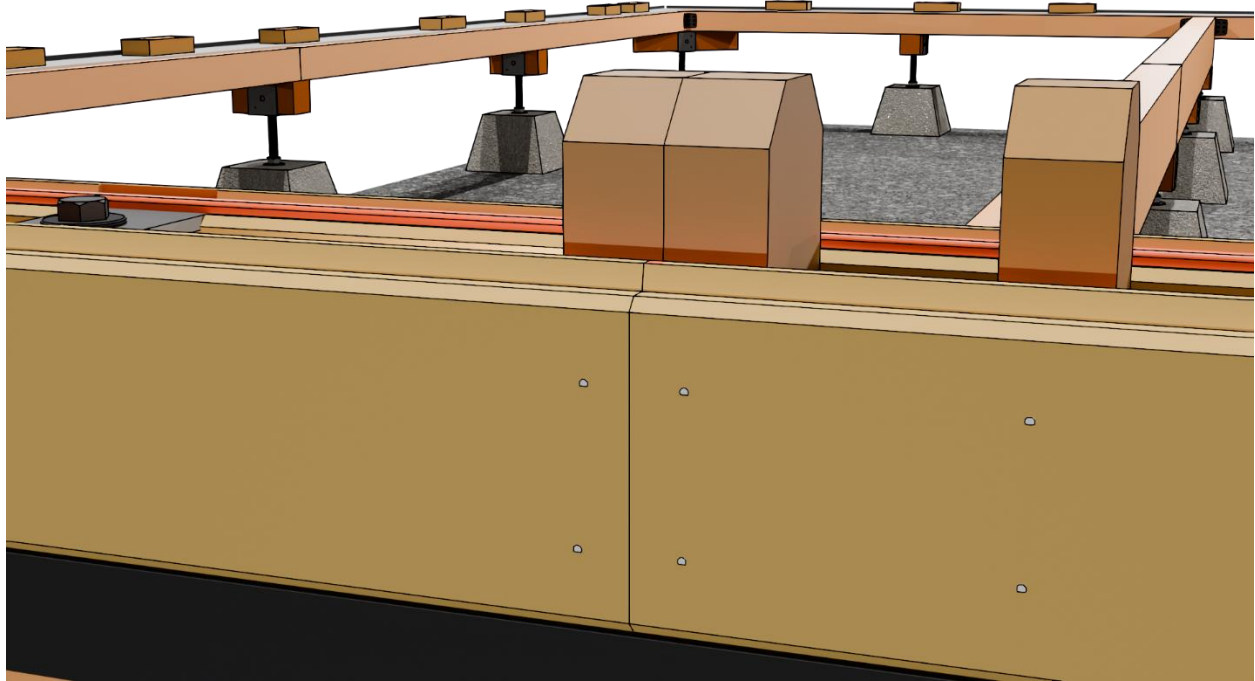
Sealant is applied to LINCOLN BLOCK ends where faces meet. Faces that meet should always be precision end trimmed to be flush.

### Section 8.2 - Tongue & Groove:

Sealant is applied to the interior portion of the LINCOLN BLOCK tongues where the grooves of the next course will marry.

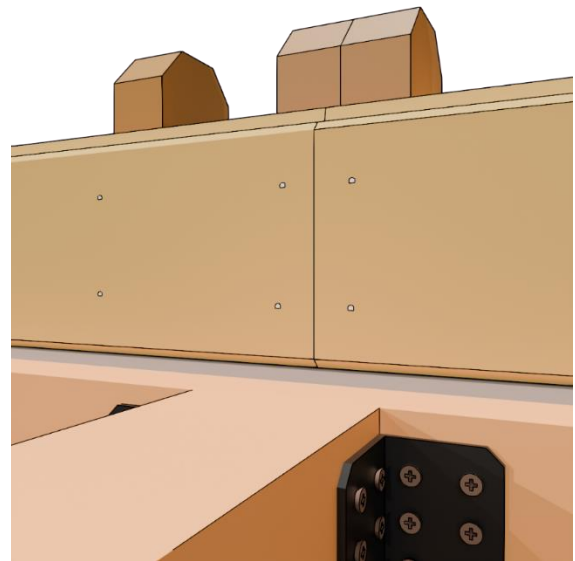


## Section 9 - Double Course Stem Blocks:



**Section 9.1 - Sleeving:** Double Course Stem Blocks are sleeved by the LINCOLN BLOCK. Each block is joined to the next at the seams. Stem blocks are not square (they have a 3 in. length and 3 1/8 in. width), so make sure the wider side is perpendicular to the interior and exterior walls, just like the factory Stem Blocks in the Lincoln Blocks.

**Section 9.2 - Nailing After Sleeving:** Use two Stainless Nails for each side of each LINCOLN BLOCK.



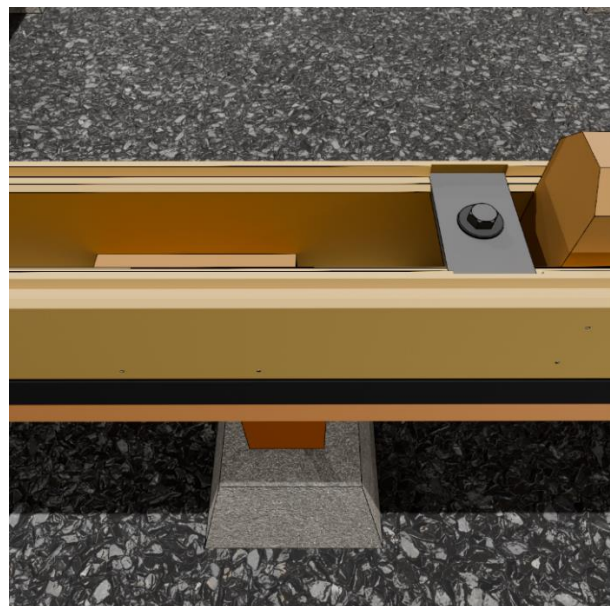
### Section 9.3 - First Course Complete:



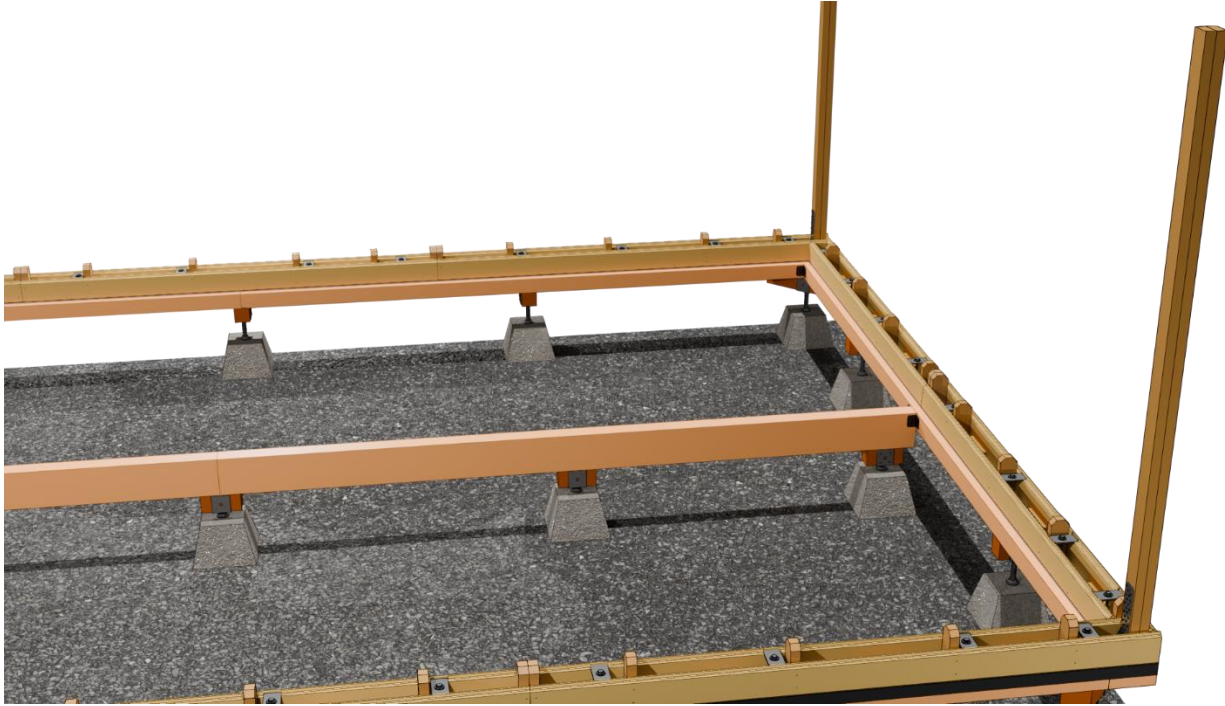
### Section 9.4 - Blocks Around Perimeter:

The first course of LINCOLN BLOCK is installed around the perimeter of the build area. Remember to use sealant on the Z-Metal, tongues, grooves, and ends.

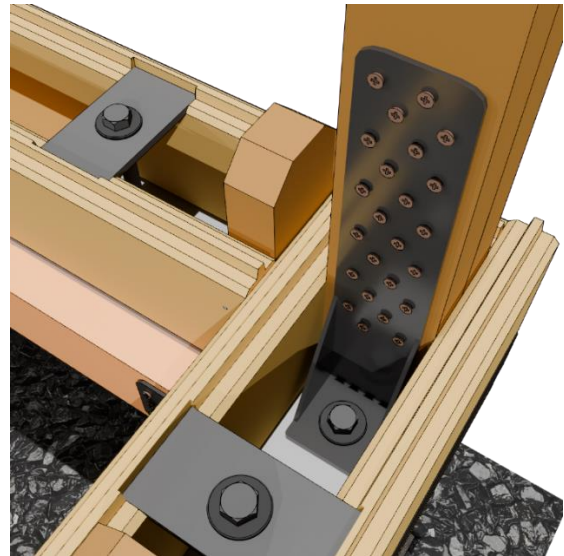
**Section 9.5 - Lag Screws Torqued:** After the Lag Screws are tightened to their maximum specified torque, fasten the LINCOLN BLOCK to the Short Stem Blocks using Stainless Steel Nails.



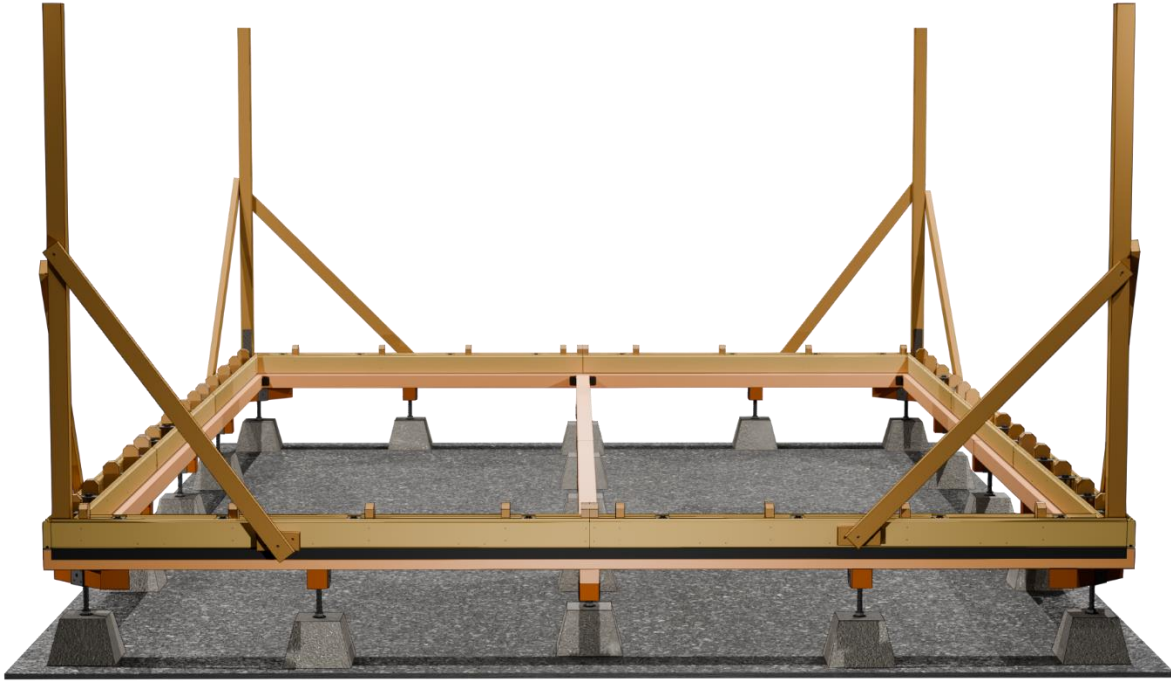
## Section 10 - Corner Blocks:



**Section 10.1 - High Tension Hold Downs:** Corner Stem Blocks are installed at all four corners of the building. All stem blocks including the Corner Stem Blocks are installed with the wider side perpendicular to the interior or exterior of the Lincoln Block it resides in. Use High Tension Hold Downs, Lag Screws, Washers, and Construction Screws to fasten them to the Glu-Lam Beam.



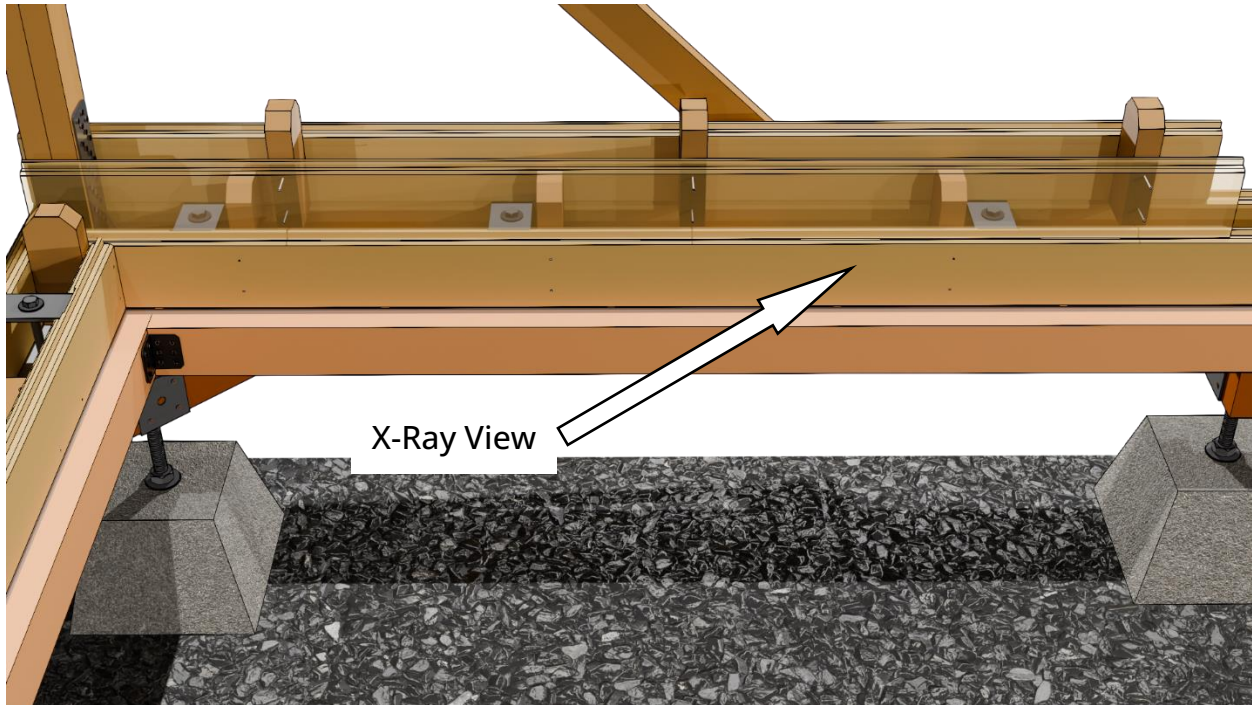
## Section 10.2 - Corner Braces:



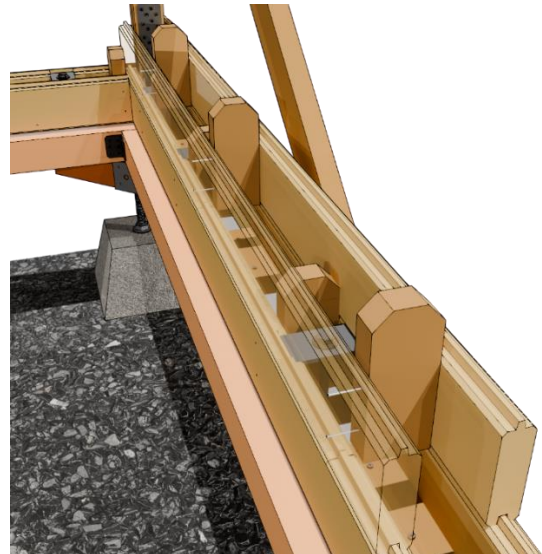
**Section 10.3 - Recommended Bracing Pattern:** Use Long Stem Blocks and Short Stem Blocks to square, plumb, and level the Corner Stem Blocks. Fasten the Short Stem Blocks to the first course of LINCOLN BLOCK using Construction Screws or Stainless Steel Nails to offset the brace and allow it to attach diagonally to the Long Stem Blocks.



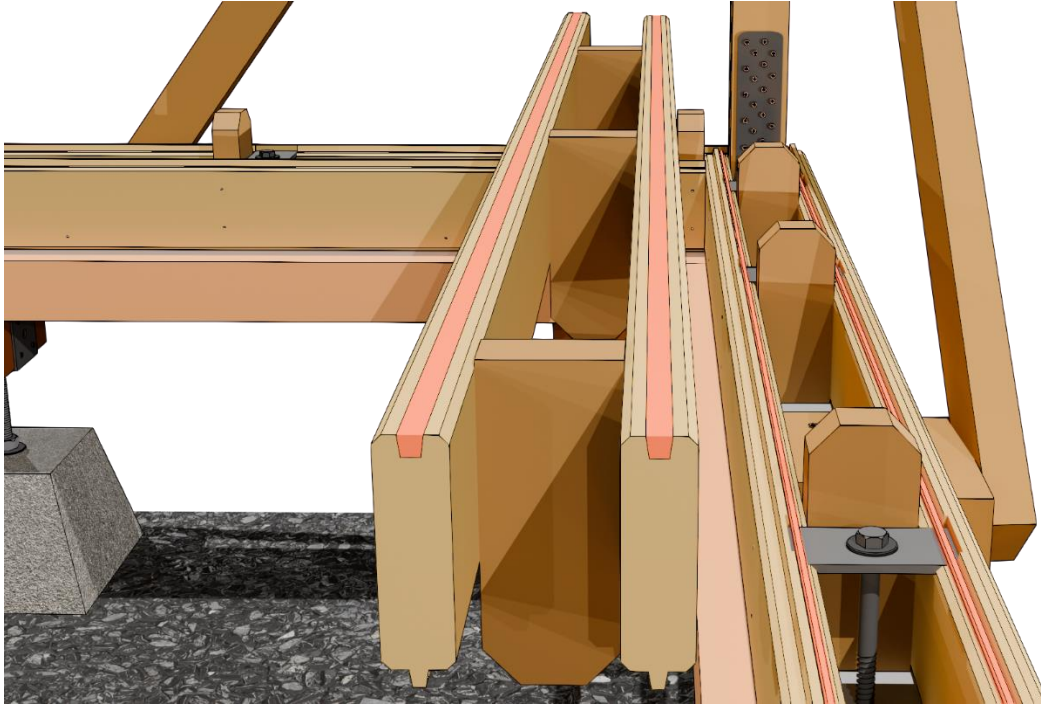
## Section 11 - Interference:



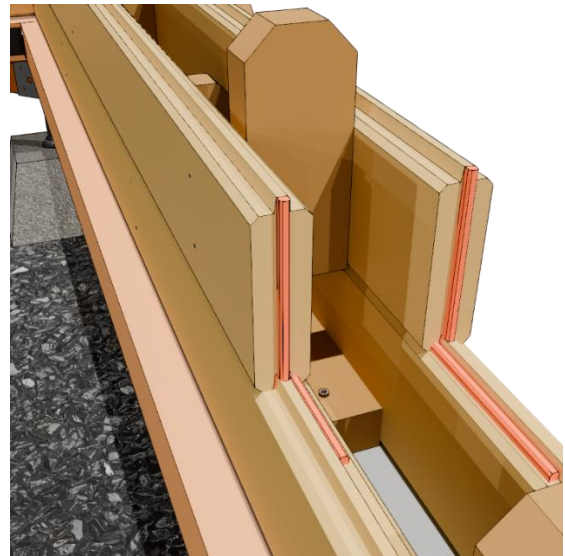
**Section 11.1 - X-Ray View:** Watch for interference between courses and temporarily install block to verify clearances. The factory integrated Course Stem Block in the LINCOLN BLOCK, the Lag Screw, or High Tension Hold Down may prevent you from stacking. Try rotating the block 180 degrees or trim the necessary amount of wood from the end of the LINCOLN BLOCK to offset it. *Do not modify or remove the factory integrated Course Stem Block in the LINCOLN BLOCK to satisfy clearances.*



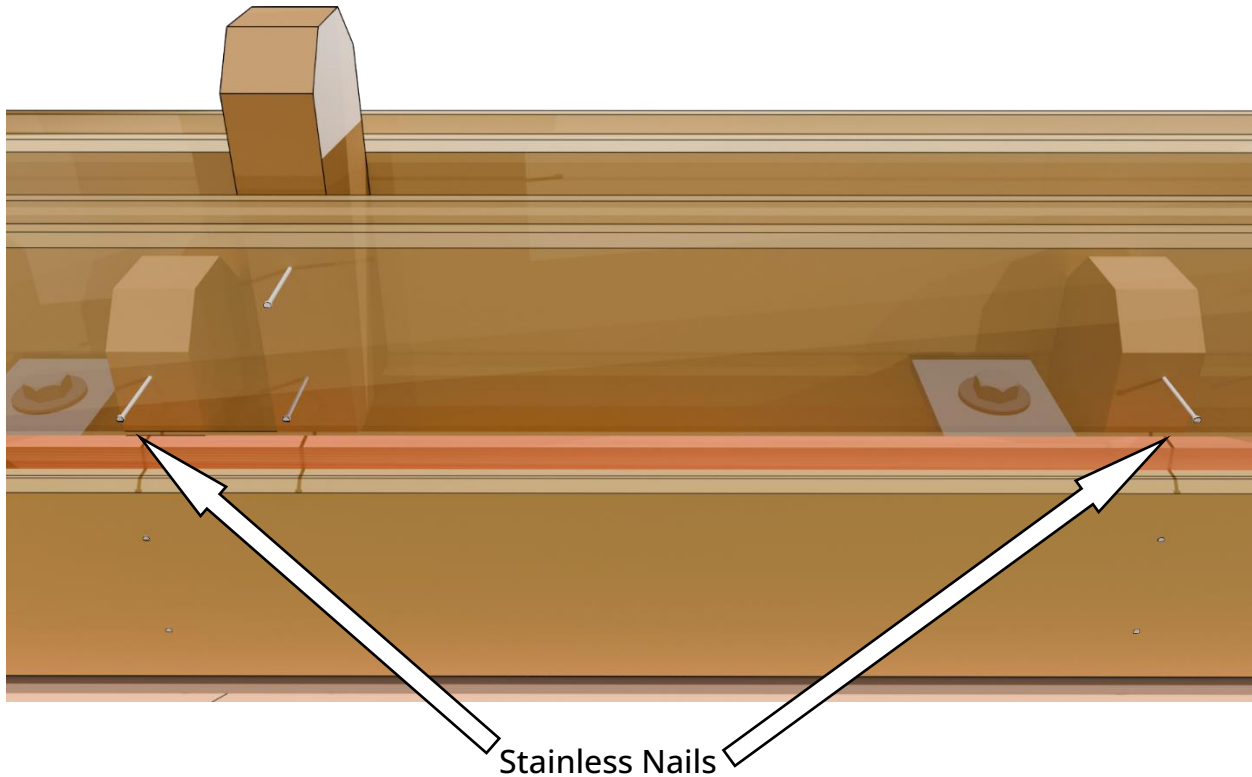
## Section 12 - Sealant Part 3:



**Section 12.1 - Stacking Courses:** Apply Sealant to the inside of the tongue on the previous course of LINCOLN BLOCK, and to the groove of the LINCOLN BLOCK you intend to set, just like you did for the first course of LINCOLN BLOCK. This detail has been restated here to accentuate the importance of applying Sealant to every LINCOLN BLOCK Tongue, Groove, and End when you're ready to permanently install the LINCOLN BLOCK.

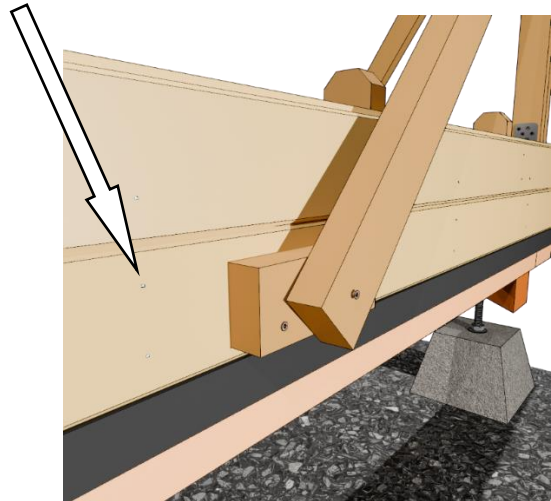


## Section 13 - Permanent LINCOLN BLOCK Installation:

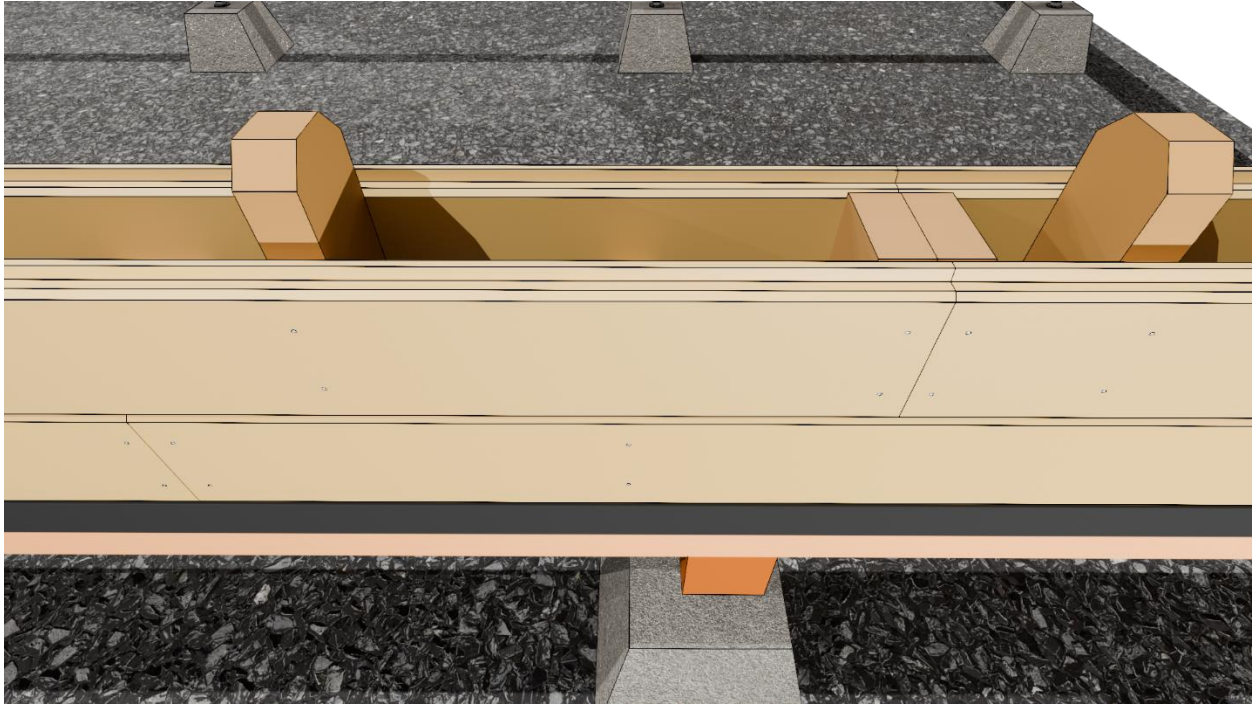


**Section 13.1 - Nail Pattern:** Nail through the second course of LINCOLN BLOCK into the factory integrated Course Stem Block of the previous course. Use one Stainless Nail per side of the second course for each factory integrated Course Stem Block that protrudes into the second course of LINCOLN BLOCK.

**Section 13.2 - Remember Sealant:** There's no going back and fixing it after the LINCOLN BLOCK has been set using Stainless Nails. Use a lot of sealant!

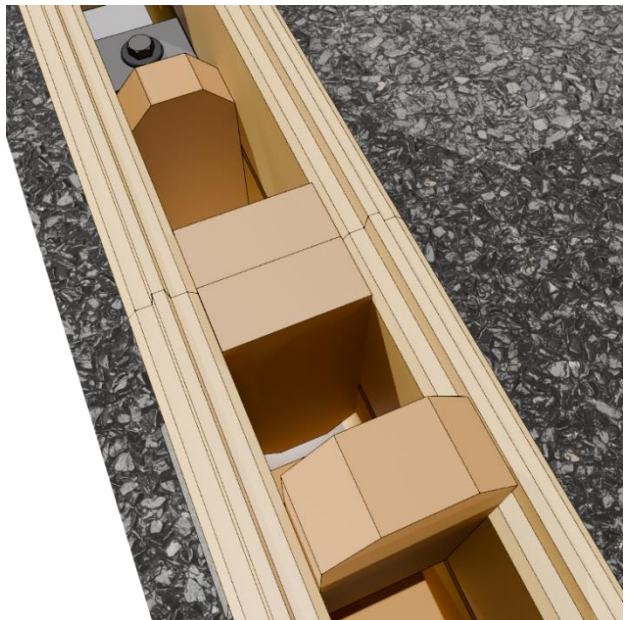


### Section 13.3 - Join LINCOLN BLOCK ends with Course Stem Blocks:

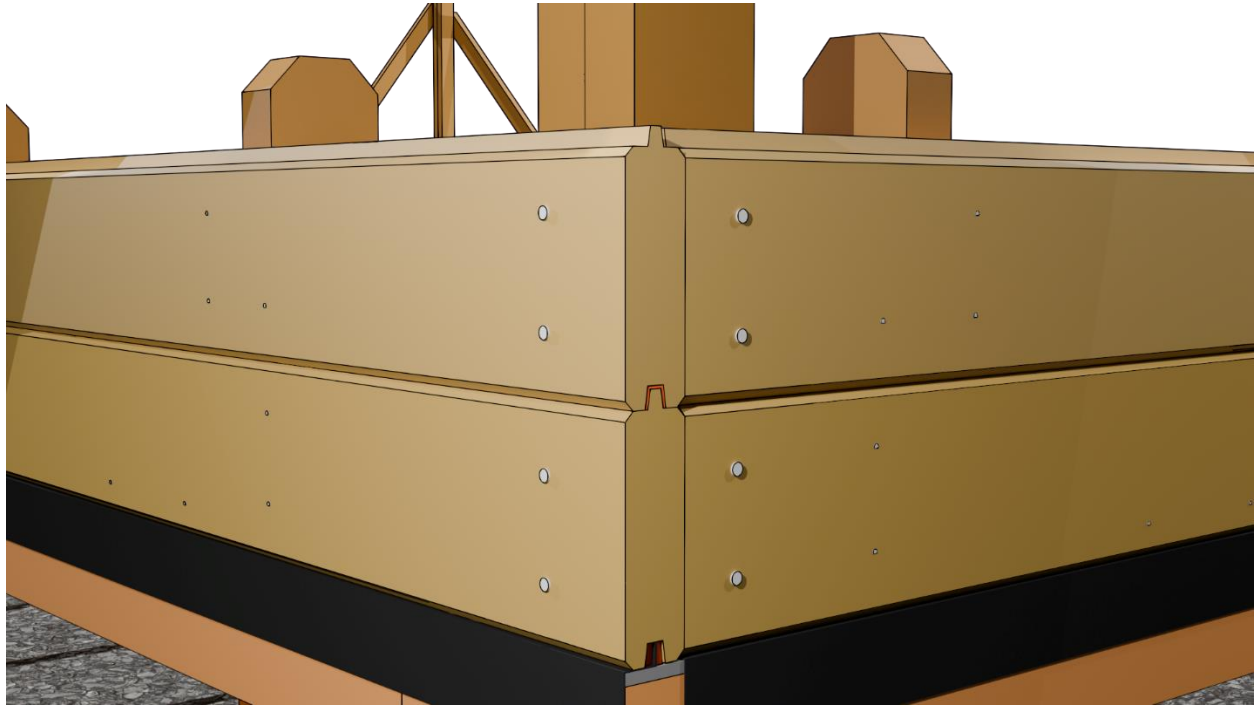


### Section 13.4 - Stem Orientation:

Double Course Stem Blocks can be set bevel side up protruding from the current course of LINCOLN BLOCK, or bevel side down and flush with the top of the reveal where the LINCOLN BLOCK acts as a sleeve at faces that meet end-to-end. You can also use a Course Stem Block oriented horizontally if clearances do not allow for any other configuration. The goal is to join the two LINCOLN BLOCKS end to end with continuous wood overlapping at least 1.5 inches into each LINCOLN BLOCK.



### Section 13.5 - Fasten Corner Blocks:



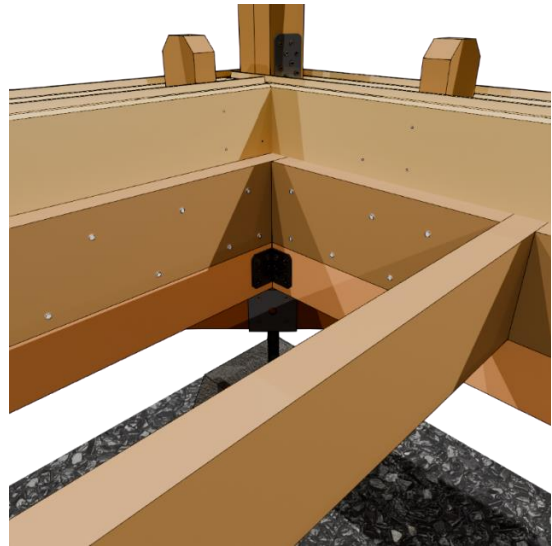
**Section 13.6 - Check Measurements And Fasten:** As soon as the second course is completely set, check the square, plumb, and level of the Corner Stem Blocks, and when satisfied with the results, fasten the LINCOLN BLOCKS to the Corner Stem Blocks using two 3-inch Framing Nails per LINCOLN BLOCK.

## Section 14 - Floor:

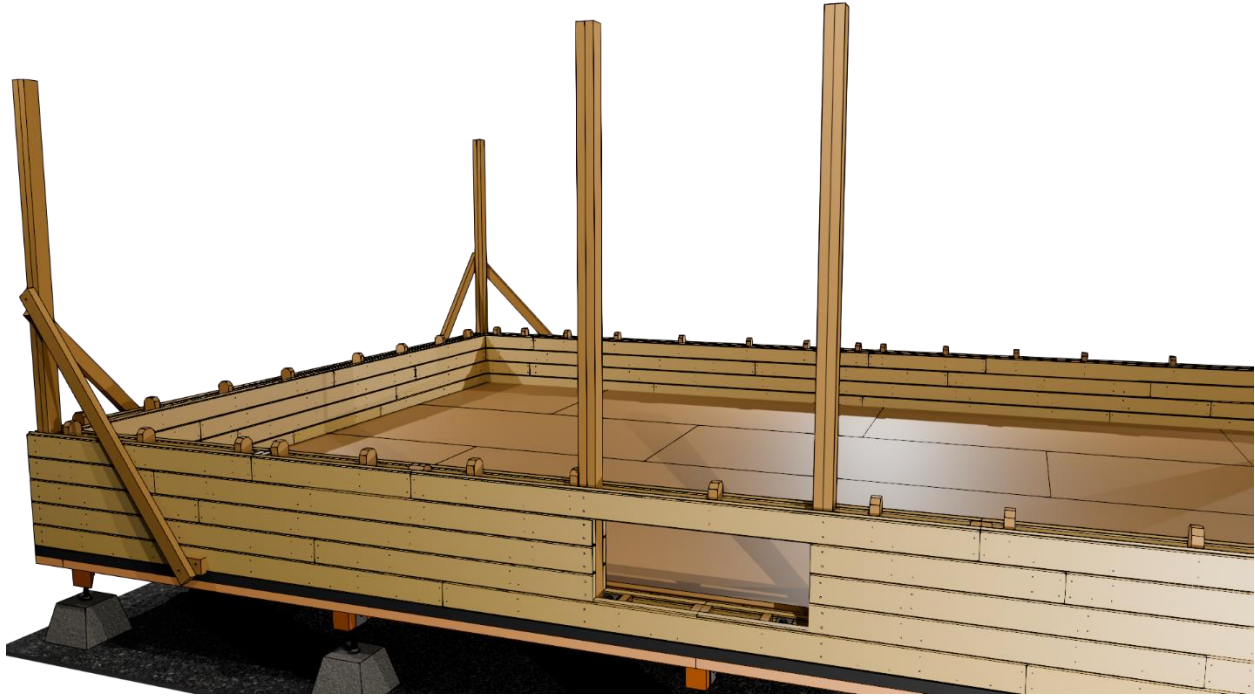


**Section 14.1 - Installation:** Floor joists are installed with the bottom of the joist resting on top of the 1.5-inch lip of the Glu-Lam Beam that remains after installing LINCOLN BLOCKS. This means the floor attaches horizontally to the first several courses of LINCOLN BLOCKS. For example, in the case of two-by-six common framing lumber used as joists, course one and two of LINCOLN BLOCK must be installed prior to installing the joists.

**Section 14.2 - Attachment:** The floor system is attached directly to the LINCOLN BLOCKS.



## Section 15 - Rough Openings:



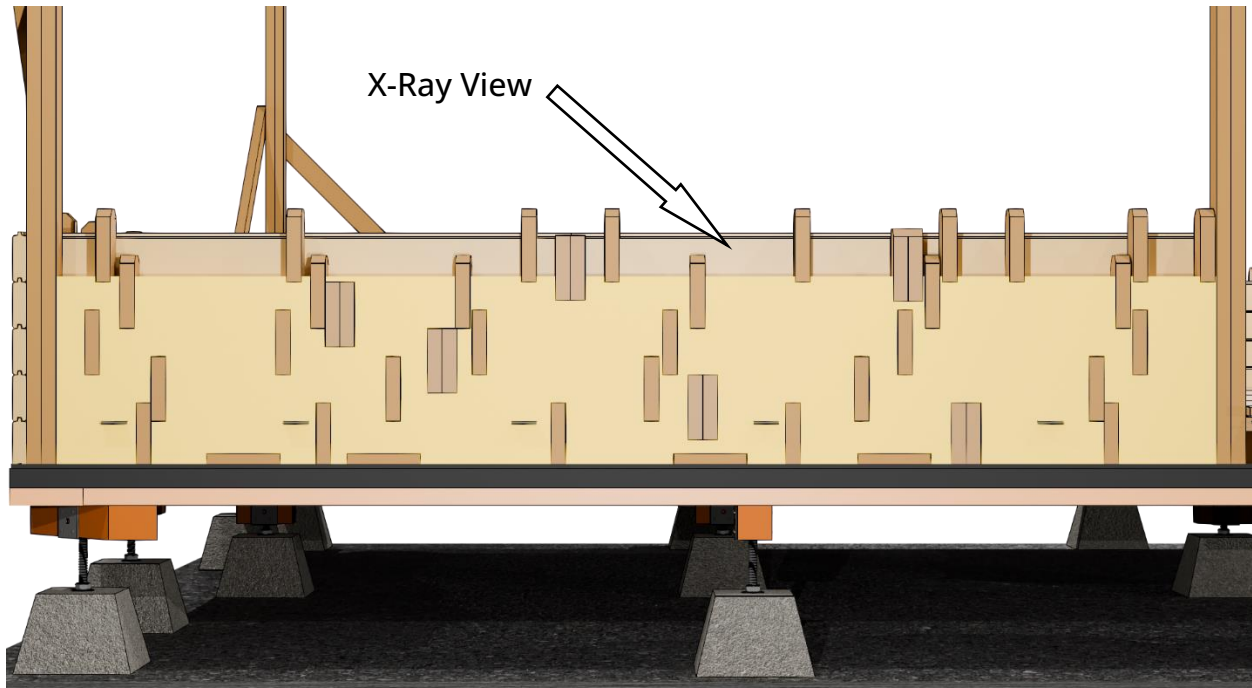
**Section 15.1 - Door:** Corner Stem Blocks with High Tension Hold Downs are used to create rough openings for doors. Nail them with framing nails after they are square, plumb, level, and flush with the opening

**Section 15.2 - Floor:** Trim the LINCOLN BLOCK in the rough opening for doors to be level with your floor joists

**Section 15.3 - Bridge Blocks:** Bridge rough openings every five courses with a longer block that overlaps both sides by at least 1 foot.



## Section 16 - Spray Foam Insulation:



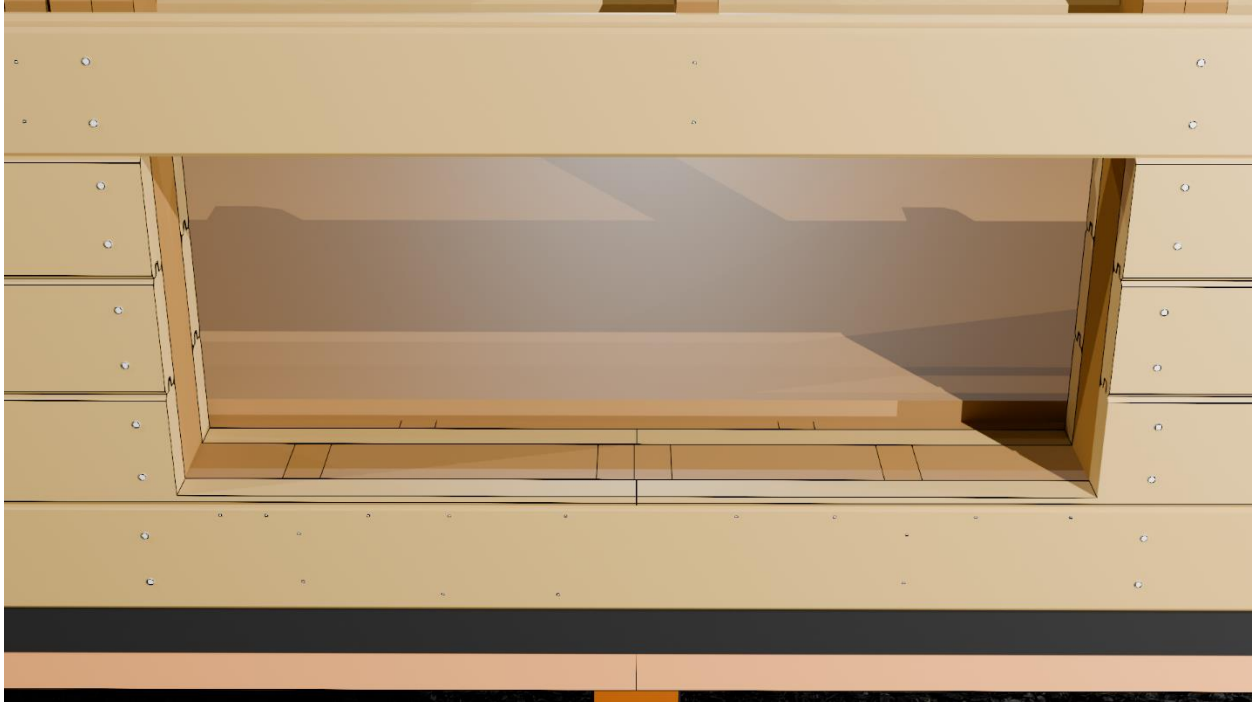
**Section 16.1 - Measure:** Square and level your walls within tolerance of your building plan. You won't be able to move the walls at all after spraying foam.

**Section 16.2 - Bracing:** Leave the Long Stem Block bracing attached while applying foam and add more bracing along the wall if necessary.

**Section 16.3 - Spray Height:** Spray the foam after every five courses, but until the next foaming, leave the topmost course empty for the next Course Stem Blocks.

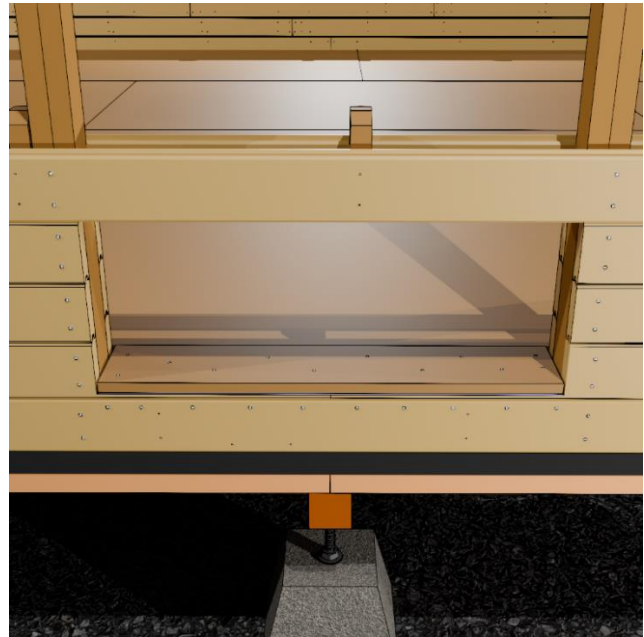


## Section 17 - Rough Openings Part 2:

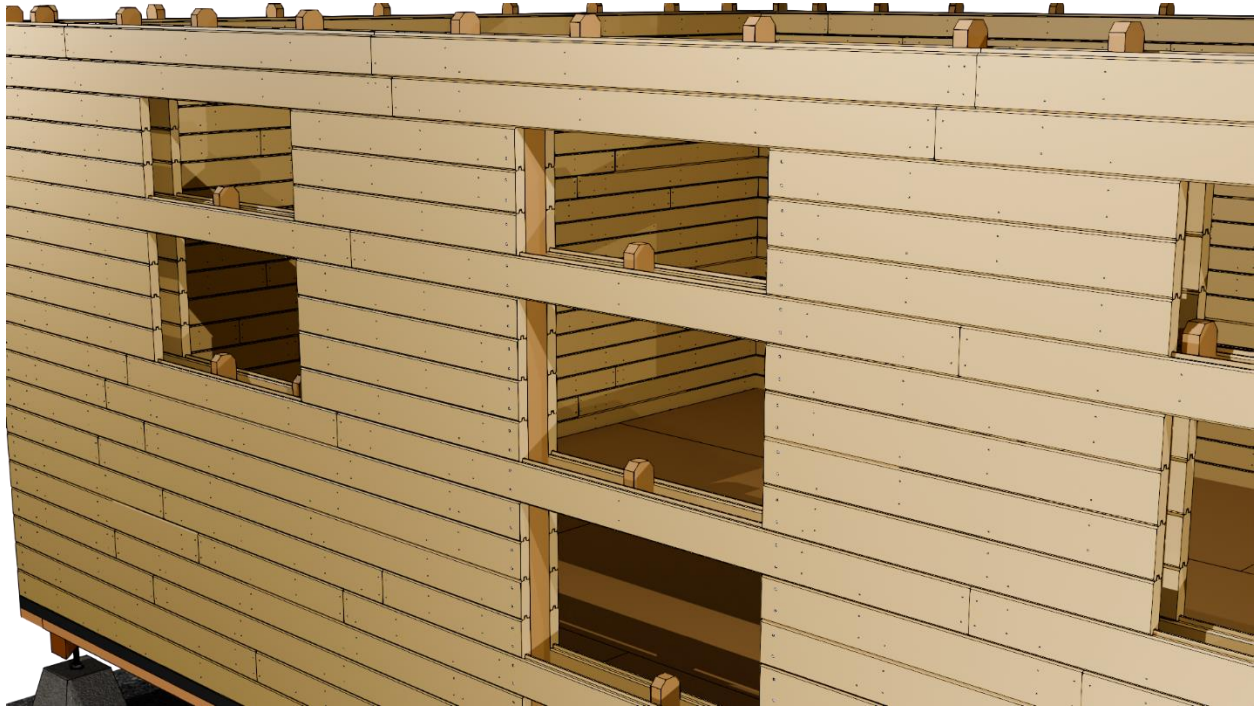


**Section 17.1 - Under Cap:** After Spray Foam, fasten Short Stem Blocks with Stainless Nails inside the bottom of the rough openings.

**Section 17.2 - Cap:** The rough opening is finished with plywood level with the floor plywood. Place Window Foam between the plywood and the LINCOLN BLOCK. Use framing nails to fasten the plywood.

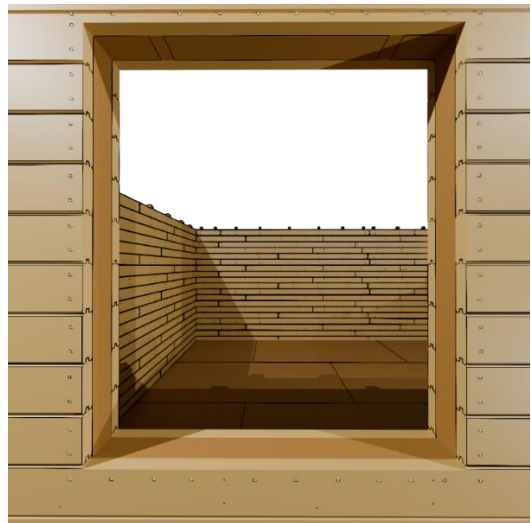


### Section 17.3: Rough Opening Headers:



**Section 17.4 - Specialty Blocks:** Rough openings five feet and longer use a “header block”, which is a combination of a Double Corner Stem Block and LINCOLN BLOCK Styles without the Course Stem Blocks. For anything smaller, fill the gaps with Long Stem Blocks and fasten them with Stainless Nails. LINCOLN BLOCKS above rough openings must overlap by at least 1 foot on both sides.

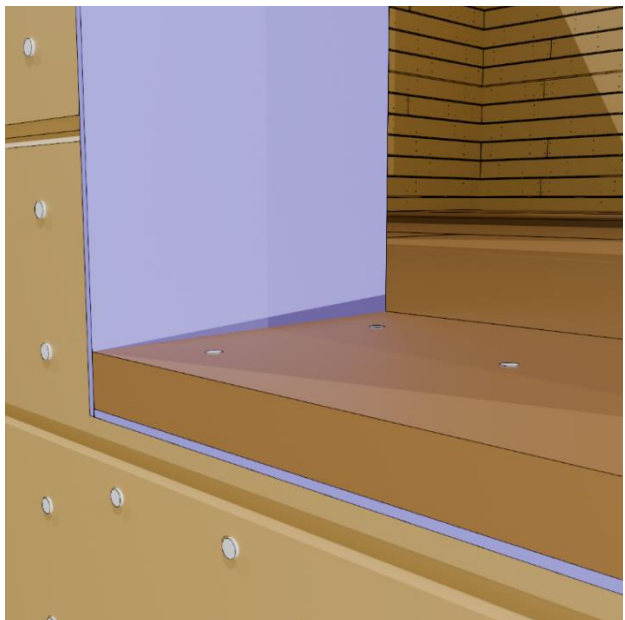
**Section 17.5 - Remove Bridges:** If necessary, cut out and remove bridge blocks to access the interior of the building, but only after applying spray foam to the courses in question.



## Section 17.6 - Windowsill Foam:



**Section 17.7 - Wrap:** Wrap all rough openings with Windowsill Foam between the LINCOLN BLOCK and Plywood. Fasten with Framing Nails.



## Section 17.8 - Rough Openings With Plywood:

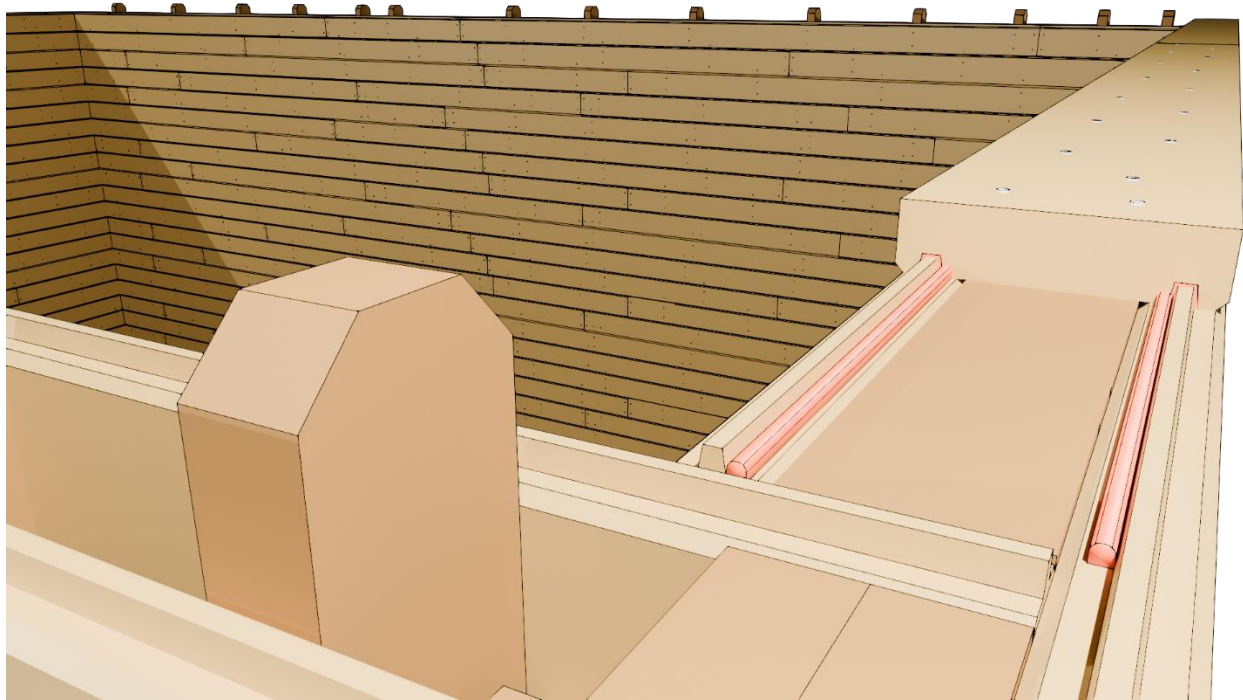


## Section 17.9 - Wrapped Then Capped:

Finish the rough opening with Plywood and Framing Nails, ensuring the pieces on the side are supporting the pieces on the top, and the Windowsill Foam is applied between the LINCOLN BLOCK and the Plywood.



## Section 18 - Top Block:



**Section 18.1 - Top Block Prep:** Short Stem Blocks are required to cap the wall cavity on the non-gable walls that Top Blocks are installed on.

**Section 18.2 - Top Block:** Install Top Block when you've reached the course level of your wall height as indicated by your building plan. Apply Sealant to the tongue of the final course of LINCOLN BLOCK, and to the groove of the Top Block. Fasten with framing nails.

## Section 19 - Gables:



**Section 19.1 - Stack Gables:** Roughly stack LINCOLN BLOCKS to match the profile of your gable ends according to your building plan. Use your Chalk Line to mark and cut the actual gable pitch.

**Section 19.2 - Foam Gables:** Spray Foam will be flush with the gable after cutting. Short Stem Blocks that cap the cavity on Gable Walls are optional.



## Section 20 - LINCOLN BLOCK Complete:



**Section 20.1 - Blueprint:** The roof system, trim, and other features of your building project will vary depending on your blueprint.

## Section 21 - Credits:

**Section 21.1 - Customers:** This tutorial was made possible by the early adopters of the LINCOLN BLOCK product. Thank you for choosing Lincoln Block Inc. to facilitate the construction of your home. Through your help we have been able to unveil the Lincoln Block system to the public so that everyone can build their home with their own two hands.

**Section 21.2 - Engineers:** Thank you to the volunteer mathematicians and certified structural engineers who have evaluated the 6-Inch LINCOLN BLOCK system and produced reports that verify our findings that LINCOLN BLOCK is a viable alternative construction method for residential and commercial structures.

**Section 21.3 - The Inventor:** John Venturo, the inventor of Lincoln Block would like to extend his personal thanks to his late father Joseph J Venturo for inspiring him to create a way to build with affordable wood blocks. John's father was a brick mason in New Jersey who taught him that building with block is the best way to have everybody in a house that will last a lifetime. That led John to a moment of eureka that a wood block could be the best of both worlds. Joseph is not here to witness how far we have come but it is this editor's opinion that he would be proud to see how many lives we have changed for the better.