TILTON
COFFERED CEILINGS

Easy to Design | Simple to Install | Beautiful to Behold

BOX BEAM COFFERED CEILING SYSTEM
Installation Manual

800-396-6410

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CONTENTS

NECESSARY & SUGGESTED INSTALLATION TOOLS

WHAT YOU WILL NEED

HAND TOOLS & EQUIPMENT

- Tape Measure *(25' to 30' or Laser Measure suggested)*
- Pencil or Marking Device
- Chalk Line *(2 different colors are suggested)*
- 12" Speed Square and/or 24" Framing Square
- Step Ladders and/or Staging and Scaffolding *(depending on the ceiling height)*
- Pole Jack or Panel Lift *(optional)*

POWER TOOLS

- Miter/Chop Saw
- 18ga or 16ga Pneumatic or Cordless Finish Nail Gun
- Cordless Drill/Driver *(impact type recommended)*
- Table Saw *(typically not necessary)*

DIGITAL & ELECTRONIC TOOLS

- Horizontal Laser Level *(must be continuous beam type)*
- Laser Tape Measure *(optional)*
- Stud Finder *(optional)*

SYSTEM COMPONENTS & TERMINOLOGY

WHAT'S INCLUDED

COFFER MODULES - Pre-assembled custom sized coffers consisting of the following components:

- Ceiling Panel or Panel Frame *(depending on Panel option)*
- Integrated Fastening Flange
- Beam Side Wall
- Crown Molding
- Inset Beam Nailer *(on systems with Inset Beam option)*

INNER BEAM BOARD - 1x board stock used to complete the bottom horizontal sides of the Inner Beams.

PERIMETER BEAM BOARD - 1x board stock used to complete the bottom horizontal sides of the Perimeter Beams.

PERIMETER BEAM NAILER BOARD - 5/4 x 4 board stock used as a fastening point for the Perimeter Beam Board where it meets with the surrounding walls.

PERIMETER MOLDING - Molding used around the entire perimeter of the ceiling to create a neat finish to the surrounding walls.

TOP STAR SHIM SCREWS & DRIVER - Specialty fasteners used to secure the Coffer Modules to the ceiling structure and adjust them for level.

INSTALLATION PROCESS

MEASURE & MARK - Phase 1 (Ceiling)

STEP 1. Measure the length of each side of the ceiling and divide each dimension in half to determine the center points of each. Mark each center point on the ceiling with a straight line using a square and pencil
(see Figure 1)

STEP 2. Using a chalk reel, snap a single chalk line to connect the center point marks from both long sides of the ceiling and snap a second single chalk line to connect the center point marks from both short sides of the ceiling. The point at which these two lines intersect is the center axis of the ceiling.
(see Figure 2)

STEP 3. Determine the direction in which the framing joists span across the ceiling and using a stud finder and tape measure (or any other accurate method) locate the ends of each joist along opposite walls. Mark the center of the end of each joist with a straight line using a square and pencil
(see Figure 3)

Step 3 Notes:

- *It's the installer's responsibility to use whatever methods or procedures seen fit to determine the direction of the span and to ensure accurate location of the ceiling joists. The Coffer Modules MUST be fastened to the ceiling joists without exception.*

STEP 4. Using a chalk reel, snap single chalk lines across the ceiling to connect the corresponding center point marks for the ends of each joist. Be careful not to cross connect the marks from different joists as these lines will be your guide for where to pre-drill and fasten the Coffer Modules when installing them.
(see Figure 4)

Stept 4 Notes:

- *Using a different color chalk when marking for the ceiling joists than was used to mark the center axis lines for the ceiling (as shown in Figure 4) will make it easier to keep track of which lines are indicating the center of the ceiling and which lines are indicating the ceiling joist locations.*
- *It's the installer's responsibility to check and confirm that all chalk lines are accurately aligned with the ceiling joists to ensure proper and secure fastening of the Coffer Modules. The Coffer Modules must be secured to the ceiling joists.*

STEP 5. Using a stud finder and tape measure (or any other accurate method) locate the tops of all wall studs on all walls surrounding the ceiling. Mark the center of the top of each stud with a straight vertical line using a square and pencil.

Step 5 Notes:

- *Make sure the center lines for each wall stud extend down the wall a few inches lower than the finished depth of your ceiling system.*
- *It's important to perform this step at this point and not to wait until after the Coffer Modules have been installed because once the Modules have been installed this will become much more difficult to complete.*
- *These marks will be used when securing the Perimeter Beam Board Nailer and Perimeter Molding in later steps.*

INSTALL - Phase 1 (Coffer Modules)

Follow SEGMENT 'A' below if your ceiling layout has a coffer at the center of the ceiling
(see Figure 7A)

Follow SEGMENT 'B' below if your ceiling layout has an intersection of beams at center
(see Figure 7B)

Follow SEGMENT 'C' below if your ceiling layout has a single beam at center
(see Figure 7C)

IMPORTANT: Before completing any of these segments see important notes on page 5 pertaining to all Box-Beam Coffered Ceiling System installations.

SEGMENT 'A' (when there is a coffer at the center of the layout)

STEP A1. On the first coffer module to be installed make a center mark on all four (4) of the outside edges of the fastening flange.
(see Figure 6)

STEP A2. Position the first coffer module in the correct direction with relation to the length and width of your ceiling. Then hold the Module up to the ceiling and align the center marks you made on the four (4) edges of the Fastening Flange with the ceiling center axis lines you made previously in Step 2.
(see Figure 7A)

STEP A3. Pre-drill two (2) 5/16" diameter holes in each of the two Fastening Flanges that are perpendicular to the ceiling joist chalk lines you made in Step 4 for a total of four (4) holes. Locate the holes so that they are aligned with the ceiling joist chalk lines that are near the outer corners of the Coffer Module without being too close to the ends or edges of the Fastening Flange.
(see Figure 7A)

STEP A4. Fasten the Module to the ceiling by driving a single Top-Star Shim Screw through each of the four (4) pre-drilled holes and into the underlying ceiling joists (see Figure 7A). Tighten the Screws until the Coffer Module is SNUG to the ceiling surface and the head of each Screw sits flush with the surface of the Fastening Flange.
(see Figure 23)

Step A4 Notes:

- *Do Not over tighten or sink the Shim Screws deep into the Flange material.*
- *Do Not try to eliminate gaps between the back of the Fastening Flange and the ceiling surface by tightening the Screws. The Module need only be snug to the ceiling and any gaps are irrelevant.*

STEP A5. Once the first Coffer Module has been fastened to the ceiling, repeat the process of installing each of the remaining Modules by aligning the Fastening Flange of each Module with the one(s) installed before it. Fasten each Module in the same manner as described for the first Module until all of the Modules for your ceiling system have been installed securely to the ceiling.
(see Figure 8)

SEGMENT 'B' (when there is an intersection of beams at the center of the layout)

STEP B1. Position the first Coffer Module in the correct orientation with relation to the length and width of your ceiling. Then hold the Module up to the ceiling and align the corner of it up with any one of the four (4) corners where the two center axis chalk lines for the ceiling intersect.
(see Figure 7B)

STEP B2. Pre-drill two (2) 5/16" diameter holes in each of the two Fastening Flanges that are perpendicular to the ceiling joist chalk lines you made in Step 4 for a total of four (4) holes. Locate the holes so that they are aligned with the ceiling joist chalk lines that are near the outer corners of the Coffer Module without being too close to the ends or edges of the Fastening Flange.
(see Figure 7B)

STEP B3. Fasten the Module to the ceiling by driving a single Top-Star Shim Screw through each of the four (4) pre-drilled holes and into the underlying ceiling joists.
(see Figure 7B)
Tighten the Screws until the Coffer Module is SNUG to the ceiling surface and the head of each Screw sits flush with the surface of the Fastening Flange.
(see Figure 23)

Step B3 Notes:

- *Do Not over tighten or sink the Shim Screws deep into the Flange material.*
- *Do Not try to eliminate gaps between the back of the Fastening Flange and the ceiling surface by tightening the Screws. The Module need only be snug to the ceiling and any gaps are irrelevant.*

STEP B4. Once the first Coffer Module has been fastened to the ceiling, repeat the process of installing each of the remaining Modules by aligning the Fastening Flange of each Module with the one(s) installed before it. Fasten each Module in the same manner as described for the first Module until all of the Modules for your ceiling system have been installed securely to the ceiling.
(see Figure 8)

SEGMENT 'C' (when there is a single beam at the center of the layout)

STEP C1. On the first Coffer Module to be installed make a center mark on the two (2) opposite outside edges of the Fastening Flange that are perpendicular (at a 90 degree angle) to the center beam of your layout.
(see Figure 6)

STEP C2. Position the first Coffer Module in the correct direction with relation to the length and width of your ceiling. Then hold the Module up to the ceiling and align the center marks you made on the edges of the two (2) Fastening Flanges with the center axis chalk line you made in an earlier step and that is perpendicular to the center beam.
(see Figure 7C-1 or 7C-2 depending on your layout)

STEP C3. Pre-drill two (2) 5/16" holes in each of the two Fastening Flanges that are perpendicular to the ceiling joist chalk lines you made in a previous step for a total of four (4) holes. Locate the holes so that they are aligned with the ceiling joist chalk lines that are near the outer corners of the Coffer Module without being too close to the ends or edges of the flanges.
(see Figure 7C-1 or 7C-2 depending on your layout)

STEP C4. Fasten the Module to the ceiling by driving a single Top-Star Shim Screw through each of the four (4) pre-drilled holes and into the underlying ceiling joists.
(see Figure 7C-1 or 7C-2 depending on your layout)
Tighten the Screws until the Coffer Module is SNUG to the ceiling surface and the head of each Screw sits flush with the surface of the Fastening Flange.
(see Figure 23)

Step C4 Notes:

- *Do Not over tighten or sink the Shim Screws deep into the Flange material.*
- *Do Not try to eliminate gaps between the back of the Fastening Flange and the ceiling surface by tightening the Screws. The Module need only be snug to the ceiling and any gaps are irrelevant.*

STEP C5. Once the first Coffer Module has been fastened to the ceiling, repeat the process of installing each of the remaining Modules by aligning the Fastening Flange of each Module with the one(s) installed before it. Fasten each Module in the same manner as described for the first Module until all of the Modules for your ceiling system have been installed securely to the ceiling.
(see Figure 8)

Notes for Install Segments A, B and C

- *It's extremely important that you fasten the Modules to the ceiling joists using the included Top-Star Shim Screws to allow for the ceiling system to be adjusted for level in a later part of the installation process.*

- *If you do not catch a ceiling joist with any particular attempt to secure the Module with the Shim Screws DO NOT angle the Screw through the same hole in the Fastening Flange to try and catch the joist. The Shim Screws must be driven through the Fastening Flange at 90 degrees perpendicular to the Flange in order for them to seat properly and to allow for proper adjustment of the Modules for level in a later part of the installation process.*
- *DO NOT attempt to use hollow wall anchors or any type of fasteners/anchors which do not secure the Coffer Modules directly to the ceiling joists. It's strongly recommended to use the included Shim Screws to fasten each Module to the joists.*
- *Use only four (4) Shim Screws per Coffer Module regardless of the size of the Module. Use (2) Screws on each Fastening Flange that is perpendicular to the ceiling joists. If the Fastening Flange spans across more than two (2) joists, install the Shim Screws only at the outermost joist locations without being too close to the ends or edges of the Flanges and mark the other joist locations on the face of the Flange as you will need to install additional fasteners at these locations in a later part of the installation process.*
- *DO NOT use construction adhesive or any sort of glue on the back sides of the Coffer Modules where they meet with the ceiling surface. The Modules will need to be adjusted for level in a later part of the installation process and if the adhesive or glue sets up prior to making these adjustments you will not be able to complete this critical phase.*
- *The order in which the Coffer Modules are installed after the first Module has been set has no effect on the final finish of the Ceiling System. The Modules may be installed in any order that you prefer.*

LEVELING PHASE

STEP 1. After all of the Coffer Modules have been secured to the ceiling, mount a continuous beam type horizontal laser level to the wall and shoot a horizontal laser beam a few inches below the bottom edges of all the Modules.

(see Figure 9)

STEP 2. Measure up from the horizontal laser beam to the bottom edge of the Beam Wall Board in all four corners of every Coffer Module to determine which Module is closest in distance to (the shortest dimension up from) the horizontal laser beam.

(see Figure 10)

This will determine the lowest Coffer Module and the low point of the ceiling overall, and will be used as the starting point to adjust all of the Modules for level. Mark the Module that you determine to be at the lowest point of the ceiling so as not to lose track of it as your benchmark.

STEP 3. Starting with the single lowest corner of the lowest Coffer Modules (as determined in Step 2) adjust the Top-Star Shim Screws on the remaining three (3) corners of this module until all four (4) corners of the Module measure the same exact distance from the horizontal laser beam.
(see Figure 23)
Use the final adjusted dimension between this first leveled Module and the laser beam as the benchmark dimension for adjusting all of the remaining Coffer Modules.
(see Figure 11)

STEP 4. Repeat Step 3 until all four corners of all Coffer Modules measure the same exact dimension from the horizontal laser beam.
(see Figure 11)
The adjustment of your Box Beam Coffered Ceiling System is complete when all of the Modules measure the same exact dimension from the laser beam. This will result in a perfectly level plane across the bottom edge of all Modules across the entire ceiling.

Step 4 Notes:

- *For Systems with No Ceiling Panel, you can address any gaps between the inside edges of the Ceiling Panel Frame and the ceiling surface created during the leveling process with caulking (gaps of 3/8" or less) or with a small quarter round or other small molding with a vertical dimension of 5/8" or less.*

***FOR SYSTEMS WITH COFFER MODULES GREATER THAN 48"L X 48"W CONTINUE WITH STEP 5**
***FOR SYSTEMS WITH COFFER MODULES LESS THAN 48"L X 48"W PROCEED TO STEP 6**

STEP 5. Once all of the Modules have been set for level, secure each with additional fasteners in one or more of the following ways as deemed necessary:

A) At the remaining joist locations you marked on the Fastening Flanges when installing each Module, pre-drill for and drive additional screws through the Flange making sure to catch the ceiling joists. It is not necessary to use the Shim Screws for this step. Instead use #10 pan head or flat head wood screws for this step.
(see Figure 12)

Step 5-A Notes:

- *When installing additional fasteners be careful and conscious not to disturb the adjusted position of the Coffer Modules by over-tightening. It is essential that you pre-drill for the additional fasteners and simply snug them to the Fastening Flange without over-tightening.*
- *It's not necessary to install additional fasteners at every joist location, but it's certainly fine to do so if you desire. Use your best judgment with regards to how many additional fasteners need to be used according to the size of the Modules.*

B) In the center of each Coffer Module shoot some 2 1/2" long 15ga or 16ga finish nails through the face of the Ceiling Panel at the ceiling joist locations for additional support and to avoid the potential of sagging in the Panel over time.

(see Figure 12)

Use your best judgement for the quantity of nails required according to the size of the Ceiling Panel area.

Step 5-B Notes:

- *The finish nails must catch the ceiling joists to have any sufficient holding power. Shooting the nails into the ceiling substrate (i.e. drywall) alone will not be adequate.*
- *If due to adjustment of the Modules for level, 2 ½" long finish nails are not long enough to catch the joists through both the Ceiling Panel and the underlying ceiling substrate (i.e. drywall), then pre-drill and countersink flat head screws at the joist locations in the Ceiling Panel using your best judgement for the quantity needed.*

MEASURE & MARK - Phase 2 (Walls)

CEILING SYSTEMS WITH OVERLAY STYLE BEAMS

STEP 1. In all corners of the room, place one edge of a square vertically against the wall and slide it up the wall until the horizontal edge of the square touches the bottom edge of the Beam Wall Board on the Coffer Modules. Where the square meets with the wall when touching the Module, make a mark on the wall along the top horizontal edge of the square. Repeat this step for both the left and right sides of each corner of the room.

(see Figure 13A)

STEP 2. Using a chalk reel, snap a horizontal chalk line on each wall to connect the marks made in the previous step.

(see Figure 14)

CEILING SYSTEMS WITH INSET STYLE BEAMS

STEP 1. In all corners of the room, place one edge of a square vertically against the wall and slide it up the wall until the horizontal edge of the square touches the bottom edge of the Inset Beam Nailer on the back side of the Beam Wall Board on the Coffer Modules. Where the square meets with the wall when touching the Nailer, make a mark on the wall along the top horizontal edge of the square. Repeat this step for both the left and right sides of each corner of the room.

(see Figure 13B)

STEP 2. Using a chalk reel, snap a horizontal chalk line on each wall to connect the marks made in the previous step.

(see Figure 14)

INSTALL - Phase 2 (Beam Boards & Perimeter Molding)

STEP 1. Install the provided Perimeter Beam Board Nailer (D) horizontally on all walls around the perimeter of the room. Align the bottom edge of the Nailers with the chalk lines made on the walls in the previous step and fasten them to the walls with nails or screws at the wall stud locations marked in a previous step.

(see Figure 15)

CEILING SYSTEMS WITH OVERLAY STYLE BEAMS

STEP 2. Measure and cut to length the provided Perimeter Beam Boards (A). While holding a ¼" reveal from the inside edge of the vertical Beam Wall Boards of the Modules, fasten the Perimeter Beam Boards in place using finish nails driven through the face of the Boards and into the bottom edge of both the Beam Wall Boards and the Perimeter Beam Board Nailers.

(see Figure 16A)

Install all of the longest Perimeter Beam Boards first.

(see Figure 17)

And then continue by filling in all of the shorter Perimeter Beam Boards.

(see Figure 19)

Step 2 Notes:

- *The Perimeter Beam Boards (A) will be one nominal width larger than the Inner Beam Bottom Boards as standard.*
- *The Perimeter Beam Boards (A) may need to be trimmed down in width to fit in the remaining space between the Coffer Modules and the surrounding walls of the room.*
- *Make butt-joints to adjoin the Perimeter Beam Boards (A) in length where needed. The use of glue and biscuits or dowels on these joints is recommended.*
  (see Figure 17)

STEP 3. Measure and cut to length the provided Inner Beam Boards (B). While holding a ¼" reveal on the edges of the Beam Wall Boards, fasten the Inner Beam Boards in place using finish nails driven through the face of the Boards and into the edges of the Beam Wall Boards.

(see Figure 18A)

Install all of the longest Inner Beam Boards first

(see Figure 19)

And then continue by filling in all of the shorter Inner Beam Boards.

(see Figure 20)

STEP 4. Measure and cut the provided Perimeter Moldings (E) to length for each wall. Position the moldings under the Perimeter Beam Bottom Boards and against the wall. Using the wall stud marks made in a previous step as a guide, fasten the moldings to the studs using finish nails. *(see Figure 21A & 21B).*

Step 4 Notes:

- *Centering the Inner Beam Boards on the edges of the vertical Beam Wall Boards will result in a reveal of approximately ¼" on the edges of the Beam Wall Boards on both sides of the Inner Beam Boards. (see Figure 18A)*

CEILING SYSTEMS WITH INSET STYLE BEAMS

STEP 2. Measure, mark and cut to length the Perimeter Beam Boards (A). While holding the Boards snug to the back side of the Beam Wall Boards of the Coffer Modules, fasten them in place using finish nails driven into both the bottom edge of the Inset Beam Nailer and the Perimeter Beam Board Nailer.

(see Figure 16B)

Install all of the longest full length Perimeter Beam Boards first.

(see Figure 17)

And then continue by filling in all of the shorter Perimeter Beam Boards.

(see Figure 19)

Step 2 Notes:

- *The Perimeter Beam Boards (A) will be one nominal width larger than the Inner Beam Bottom Boards as standard.*

- *The Perimeter Beam Boards (A) may need to be trimmed down in width to fit in the remaining space between the Coffer Modules and the surrounding walls of the room.*

- *Make butt-joints to adjoin the Perimeter Beam Boards (A) in length where needed. The use of glue and biscuits or dowels on these joints is recommended. (see Figure 17)*

STEP 3. Measure, mark and cut to length each of the Inner Beam Bottom Boards (B). Fasten the boards the bottom edge of the pre-installed Inset Beam Nailers with finish nails.

(see Figure 18B)

Install all of the longest Inner Beam Boards first.

(see Figure 19)

And then continue by filling in all of the smaller pieces

(see Figure 20)

STEP 4. Measure and cut the provided Perimeter Moldings (E) to length for each wall. Position the moldings under the Perimeter Beam Bottom Boards and against the wall. Using the wall stud marks made in a previous step as a guide, fasten the moldings to the studs using finish nails. *(see Figures 21A & 21B)*

ONCE ALL OF THE PERIMETER MOLDINGS HAVE BEEN INSTALLED YOUR TILTON BOX BEAM COFFERED CEILING SYSTEM INSTALLATION IS COMPLETE!

(see Figure 22)

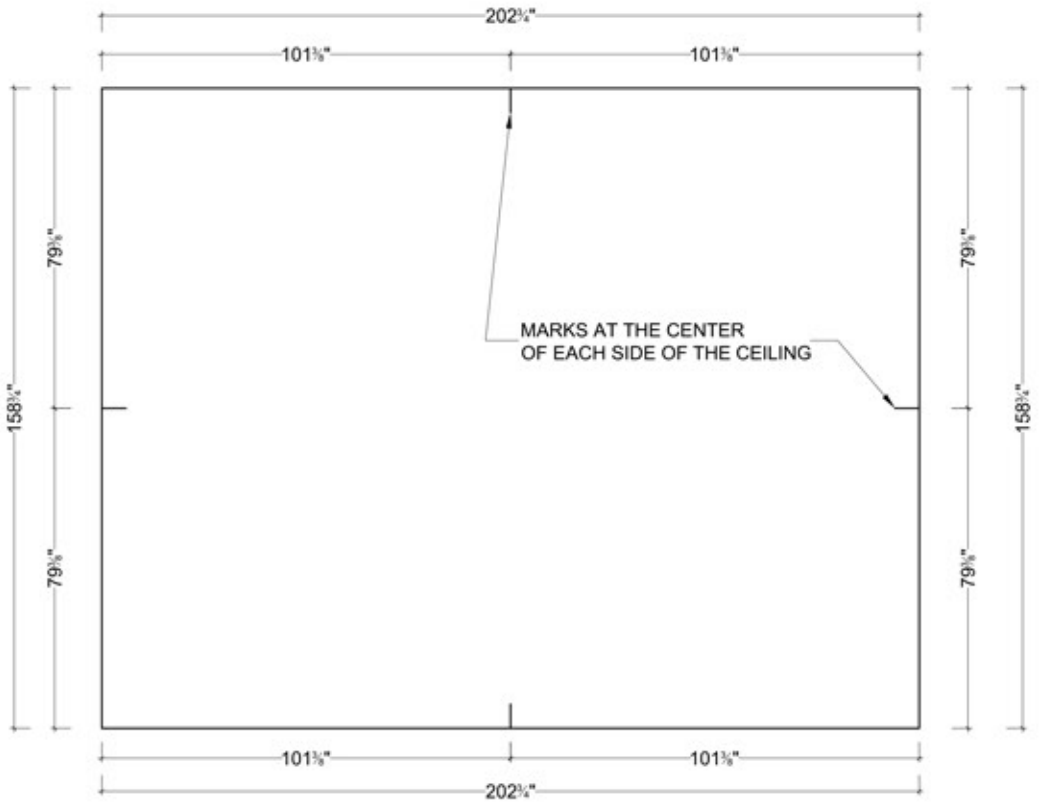

202¾"
101⅜"
101⅜"
79⅛"
79⅛"
158¼"
MARKS AT THE CENTER
OF EACH SIDE OF THE CEILING
79⅛"
79⅛"
158¼"
101⅜"
101⅜"
202¾"

Fig.1

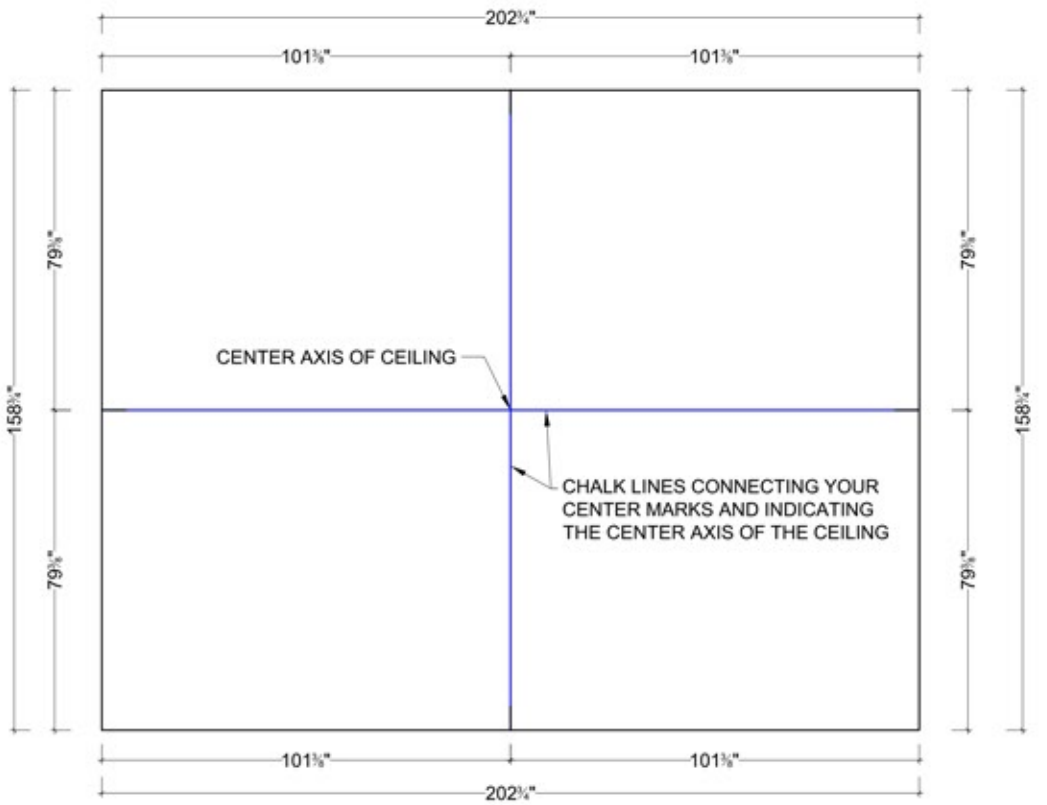

202¾"
101⅜"
101⅜"
79⅛"
79⅛"
158¼"
CENTER AXIS OF CEILING
CHALK LINES CONNECTING YOUR
CENTER MARKS AND INDICATING
THE CENTER AXIS OF THE CEILING
79⅛"
79⅛"
158¼"
101⅜"
101⅜"
202¾"

Fig.2

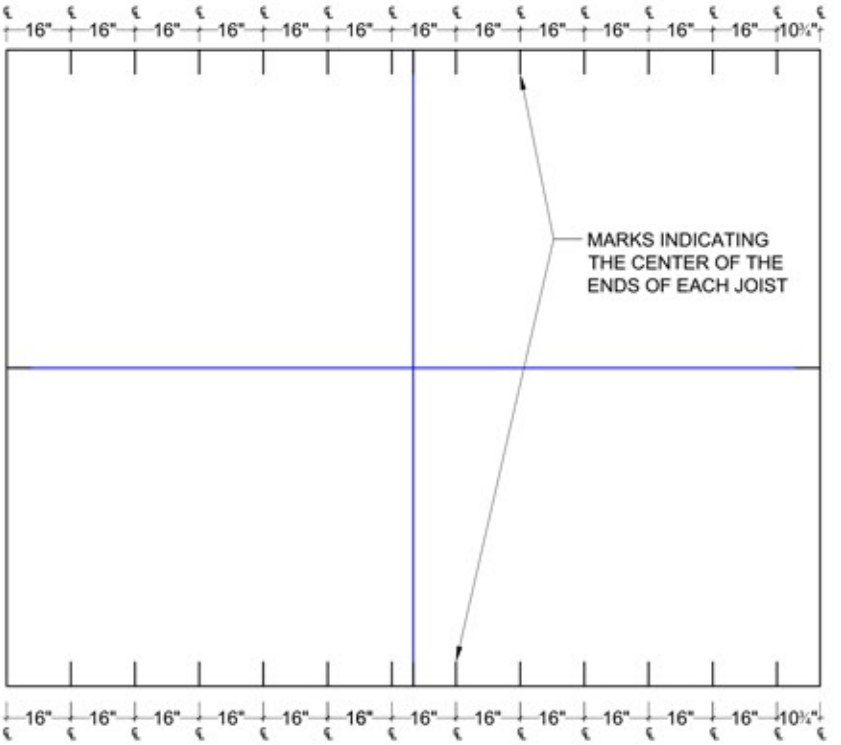
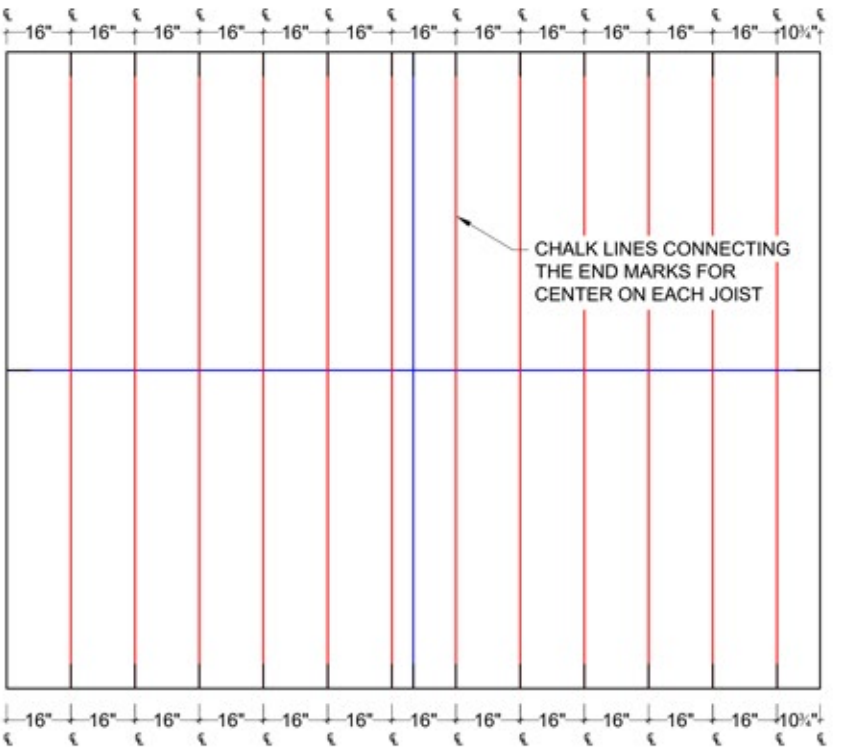

16"
16"
16"
16"
16"
16"
16"
16"
16"
16"
16"
16"
16"
10¾"
MARKS INDICATING
THE CENTER OF THE
ENDS OF EACH JOIST

Fig.3


16"
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16"
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16"
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16"
16"
10¾"
CHALK LINES CONNECTING
THE END MARKS FOR
CENTER ON EACH JOIST

Fig.4

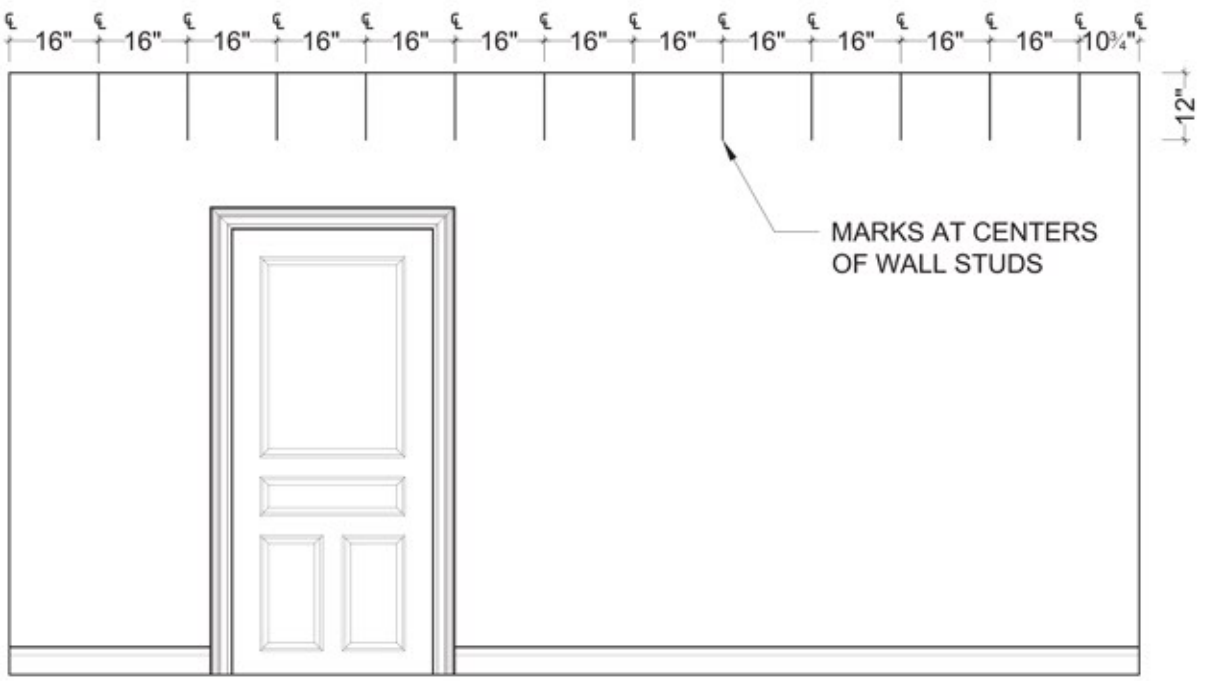

16"
16"
16"
16"
16"
16"
16"
16"
16"
16"
16"
16"
10¾"
12"
MARKS AT CENTERS
OF WALL STUDS

Fig.5

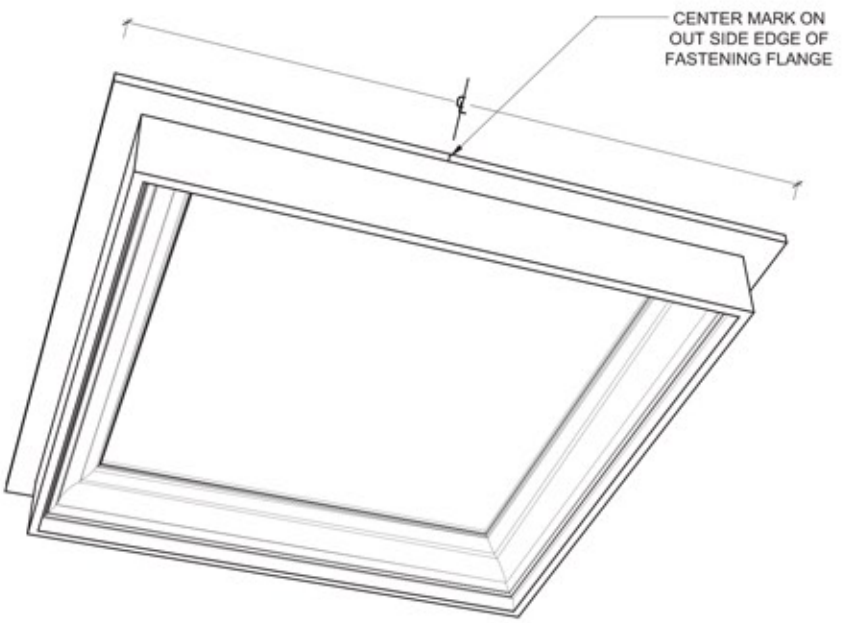

CENTER MARK ON
OUT SIDE EDGE OF
FASTENING FLANGE

Fig.6

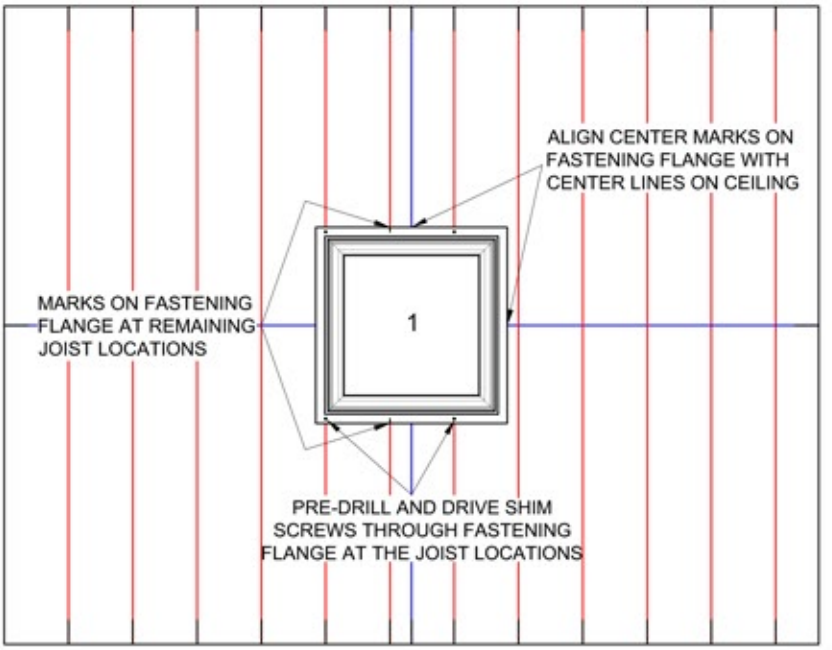

ALIGN CENTER MARKS ON
FASTENING FLANGE WITH
CENTER LINES ON CEILING
MARKS ON FASTENING
FLANGE AT REMAINING
JOIST LOCATIONS
1
PRE-DRILL AND DRIVE SHIM
SCREWS THROUGH FASTENING
FLANGE AT THE JOIST LOCATIONS

Fig.7A

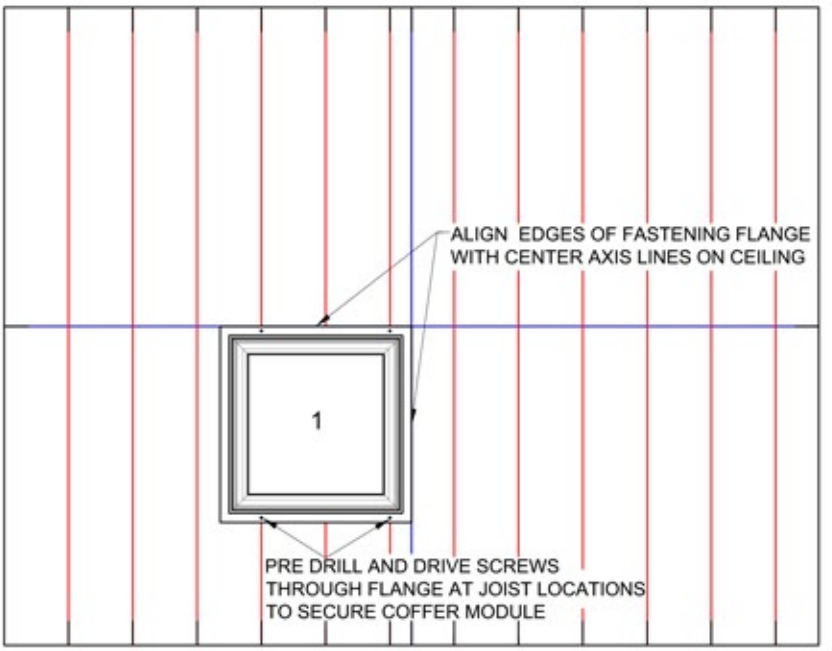

ALIGN EDGES OF FASTENING FLANGE
WITH CENTER AXIS LINES ON CEILING
1
PRE DRILL AND DRIVE SCREWS
THROUGH FLANGE AT JOIST LOCATIONS
TO SECURE COFFER MODULE

Fig.7B

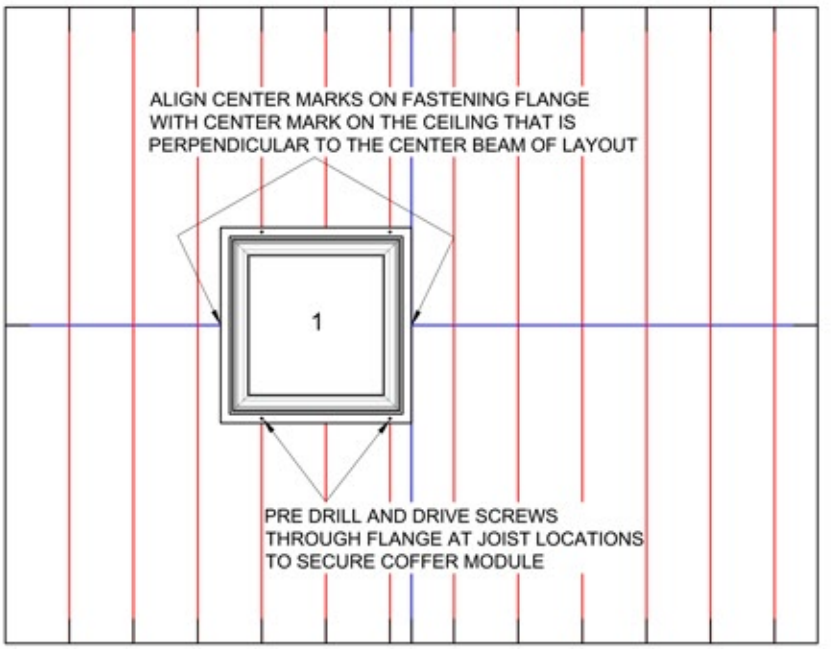


Fig.7C-1

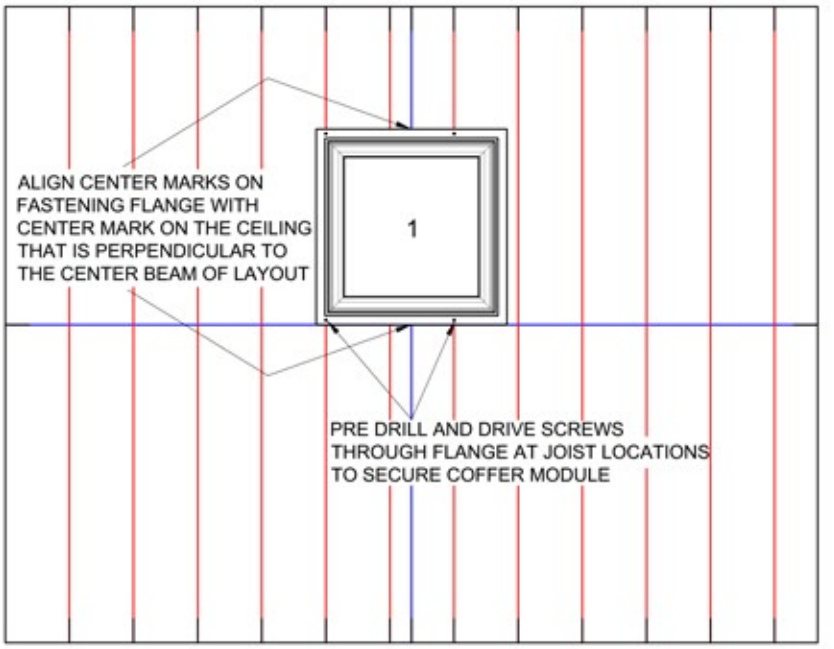


Fig.7C-2

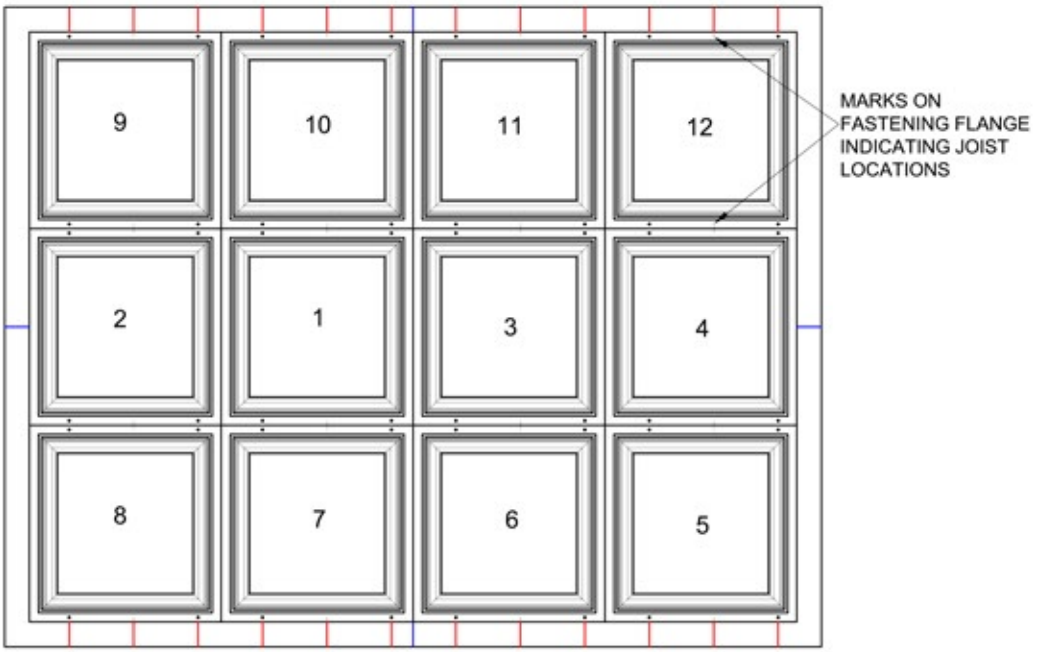

9
10
11
12
2
1
3
4
8
7
6
5
MARKS ON
FASTENING FLANGE
INDICATING JOIST
LOCATIONS

Fig.8

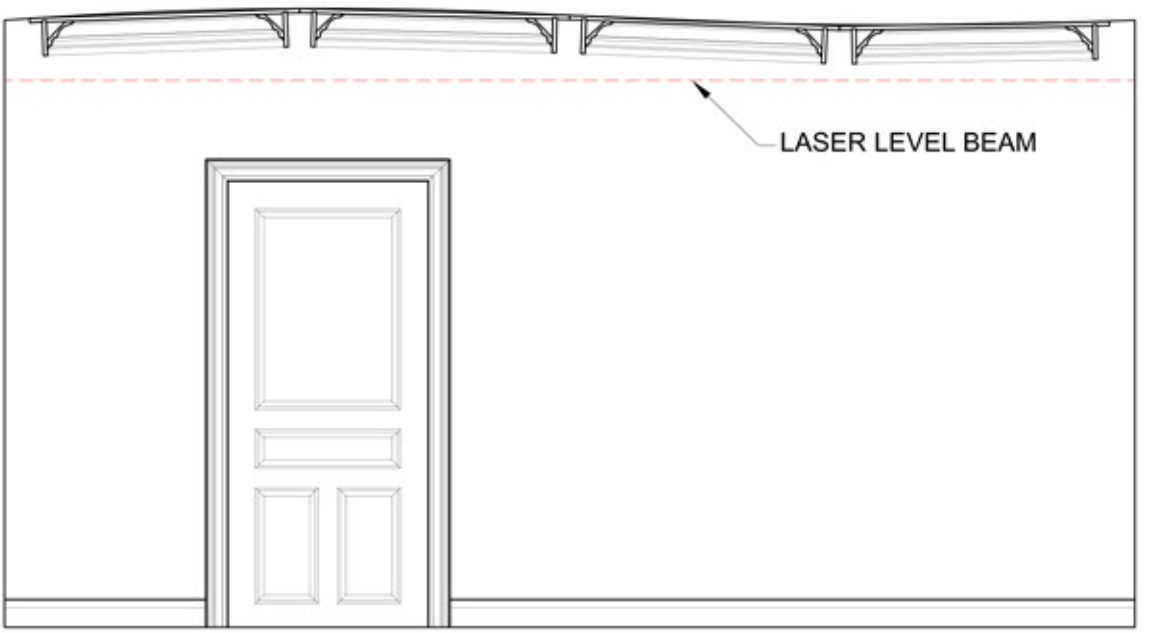

LASER LEVEL BEAM

Fig.9

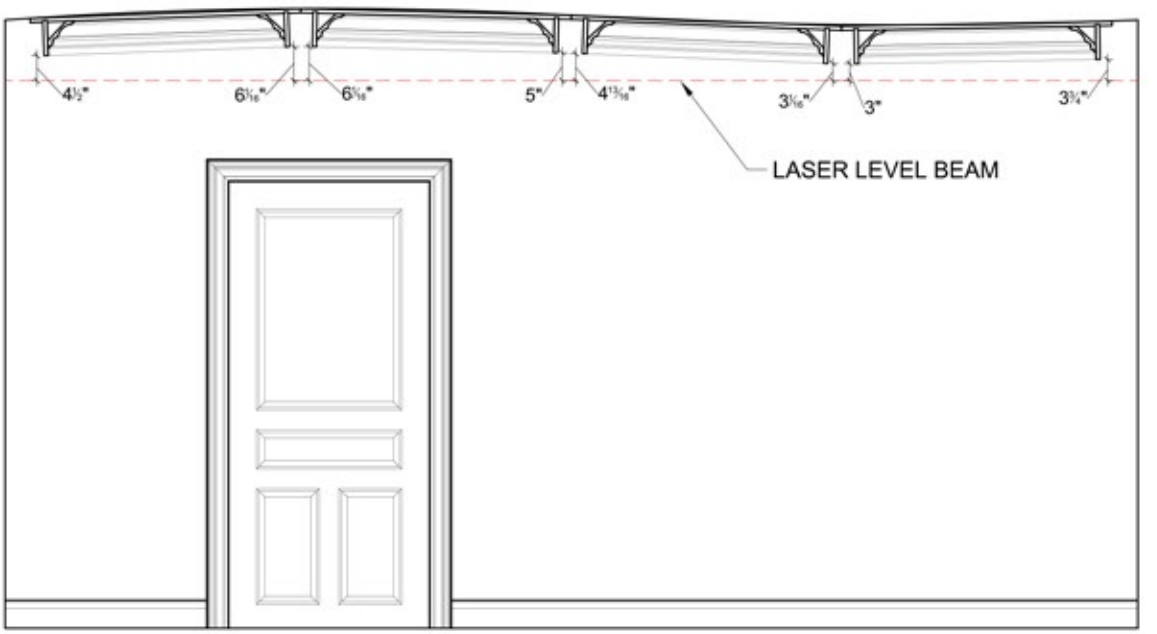

4½"
6⅛"
6⅛"
5"
4⅜"
3⅛"
3"
3¾"
LASER LEVEL BEAM

Fig.10

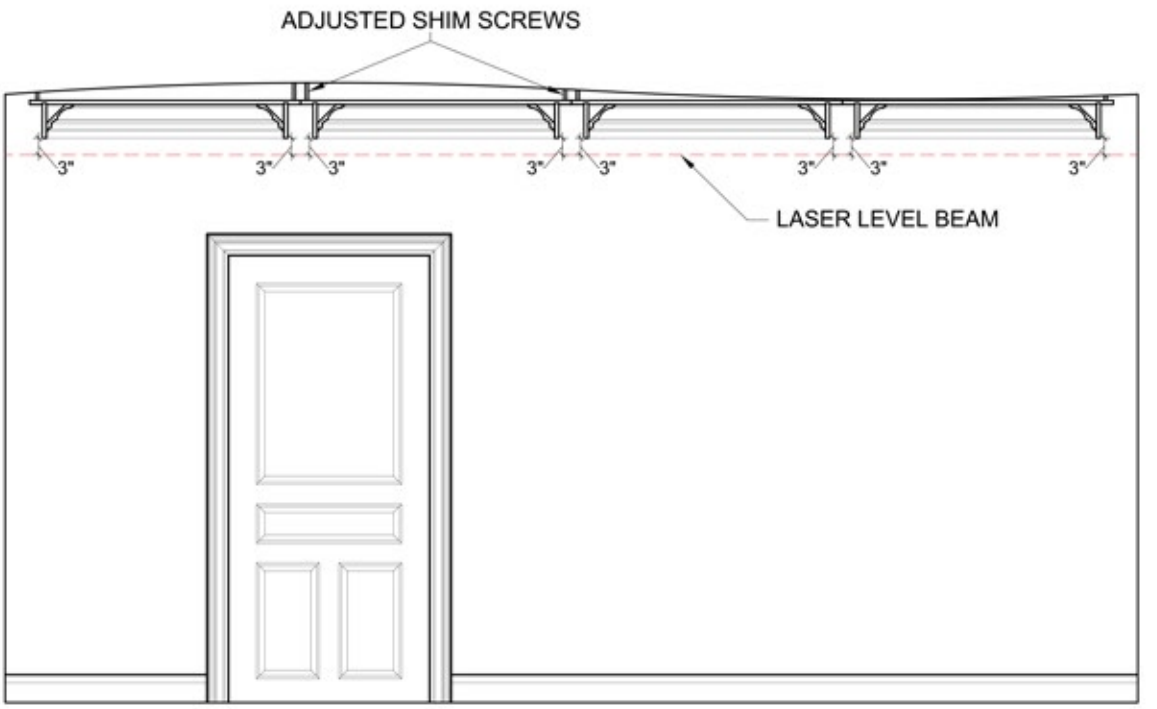

ADJUSTED SHIM SCREWS
3"
3"
3"
3"
3"
3"
3"
3"
LASER LEVEL BEAM

Fig.11

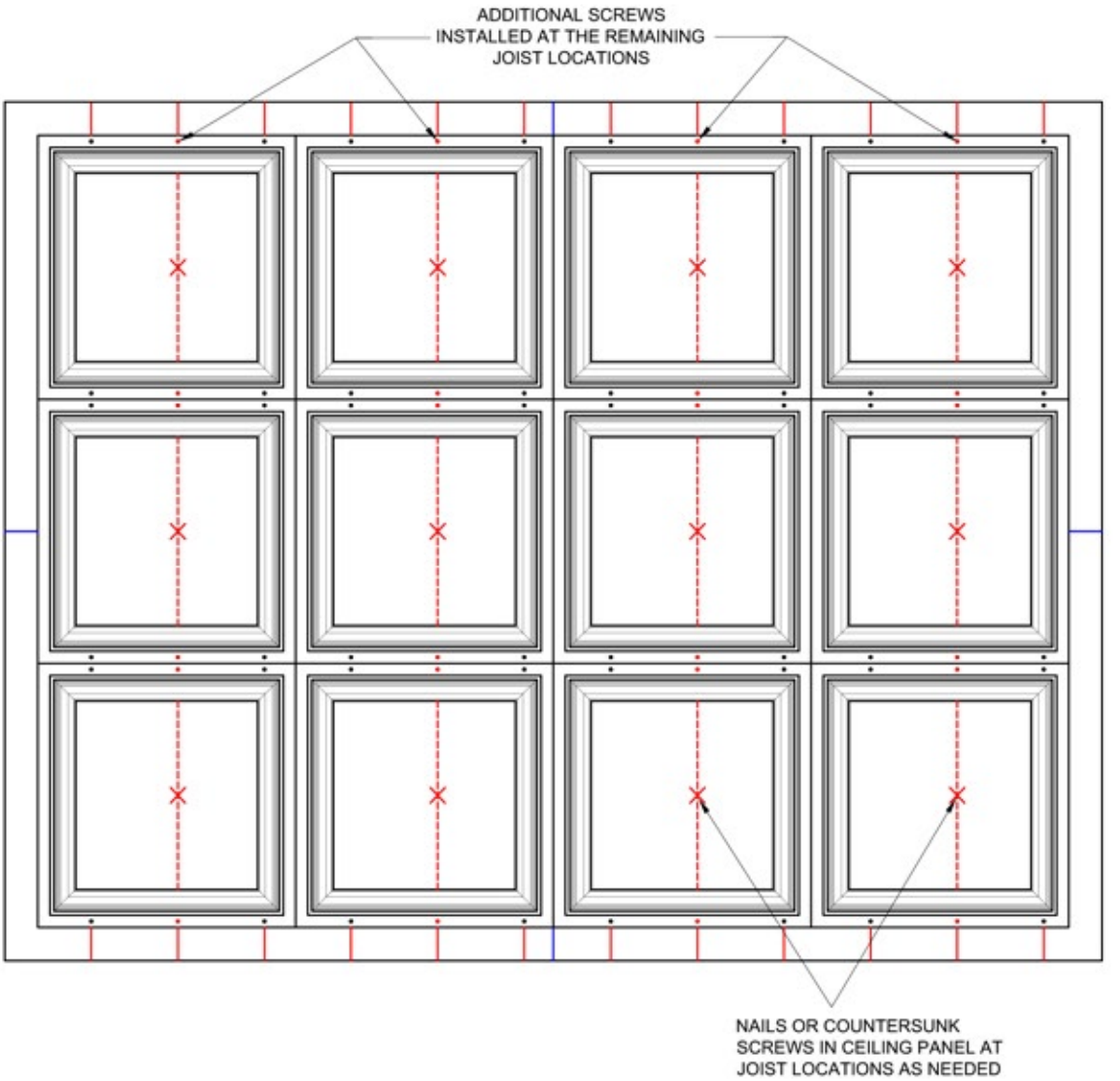

ADDITIONAL SCREWS
INSTALLED AT THE REMAINING
JOIST LOCATIONS
NAILS OR COUNTERSUNK
SCREWS IN CEILING PANEL AT
JOIST LOCATIONS AS NEEDED

Fig.12

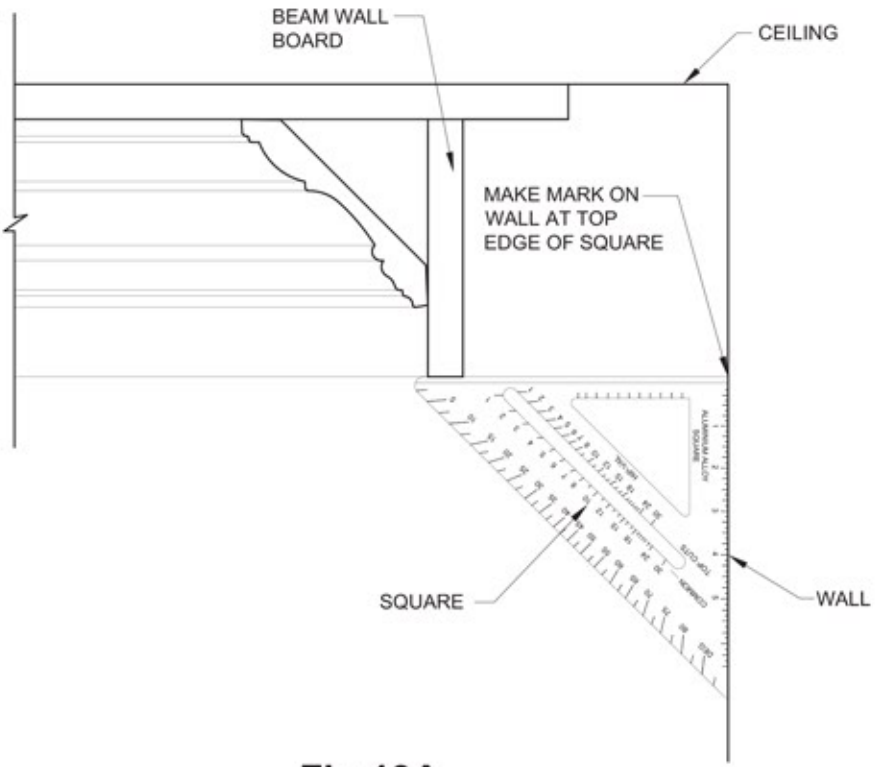


Fig.13A
OVERLAY STYLE BEAM

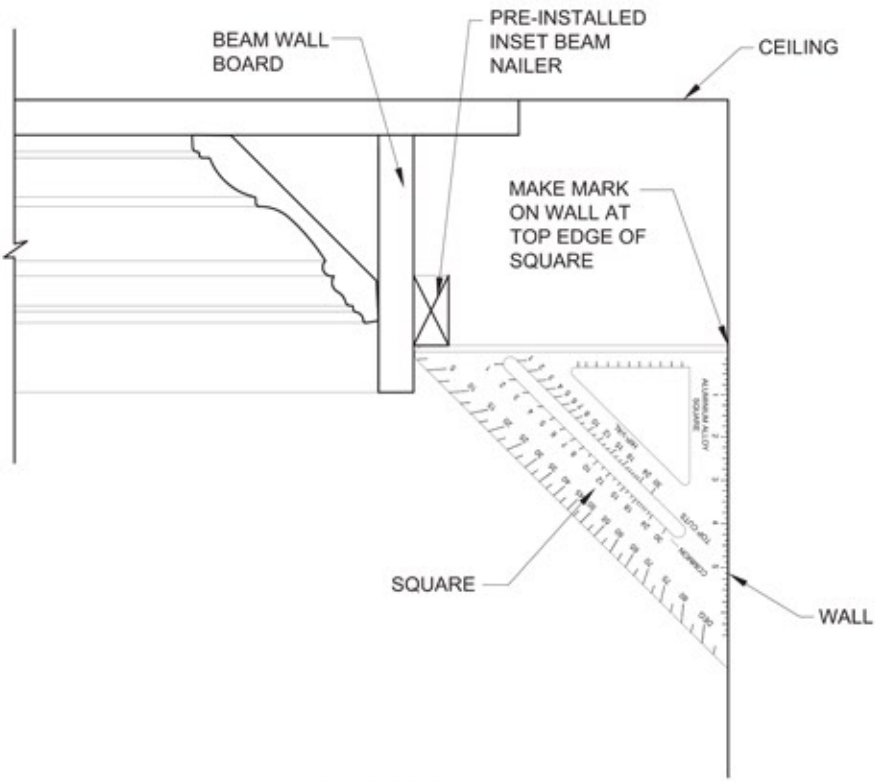


Fig.13B
INSET STYLE BEAM

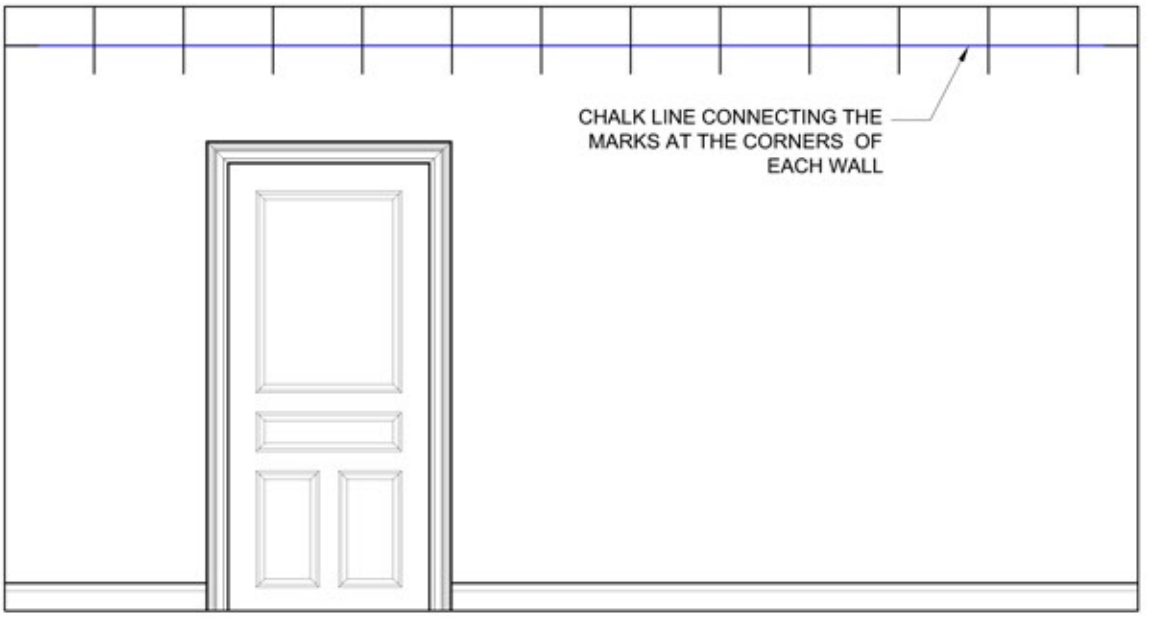

CHALK LINE CONNECTING THE
MARKS AT THE CORNERS OF
EACH WALL

Fig.14

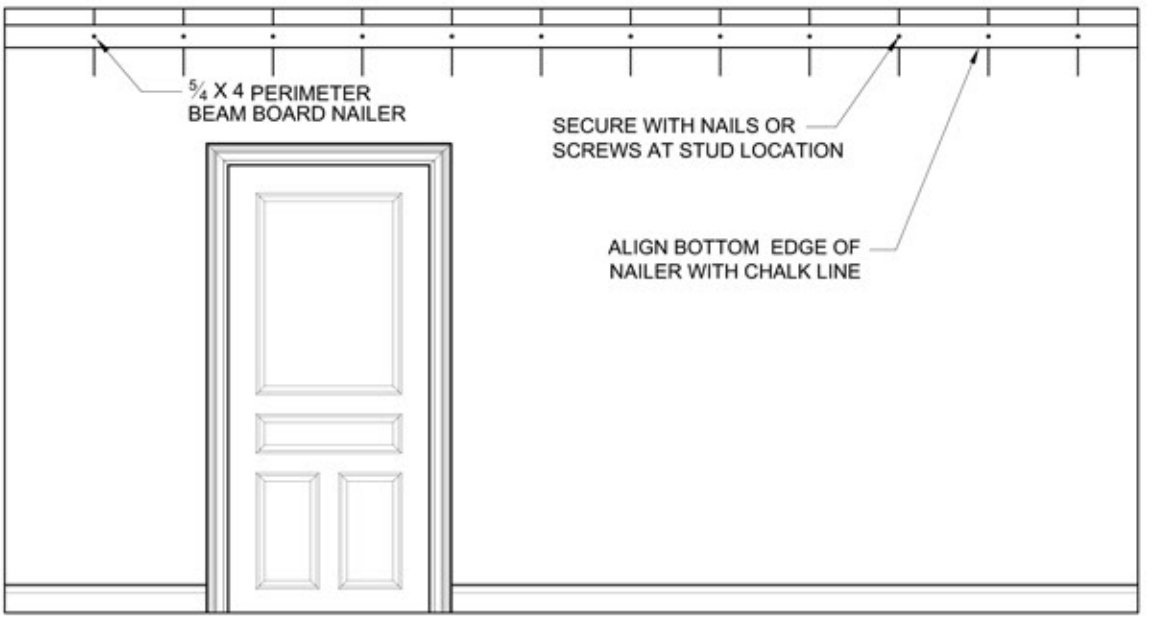

¾ X 4 PERIMETER
BEAM BOARD NAILER
SECURE WITH NAILS OR
SCREWS AT STUD LOCATION
ALIGN BOTTOM EDGE OF
NAILER WITH CHALK LINE

Fig.15

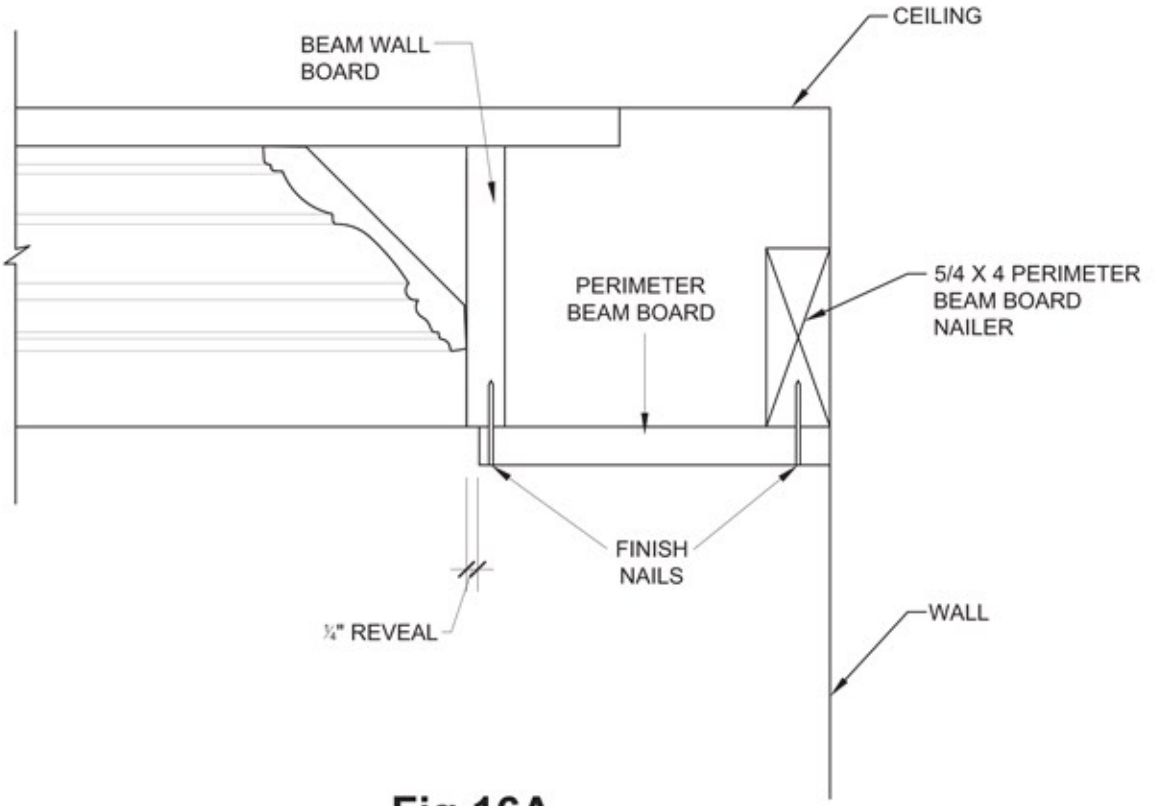


Fig.16A
OVERLAY STYLE BEAM

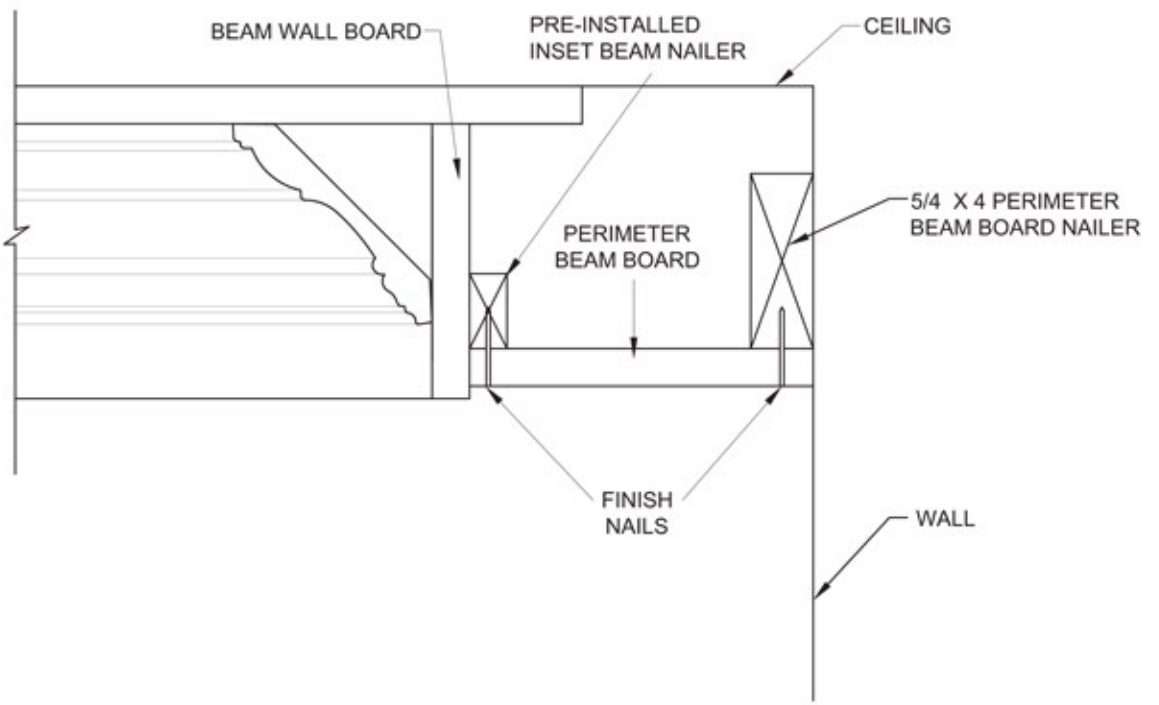


Fig.16B
INSET STYLE BEAM

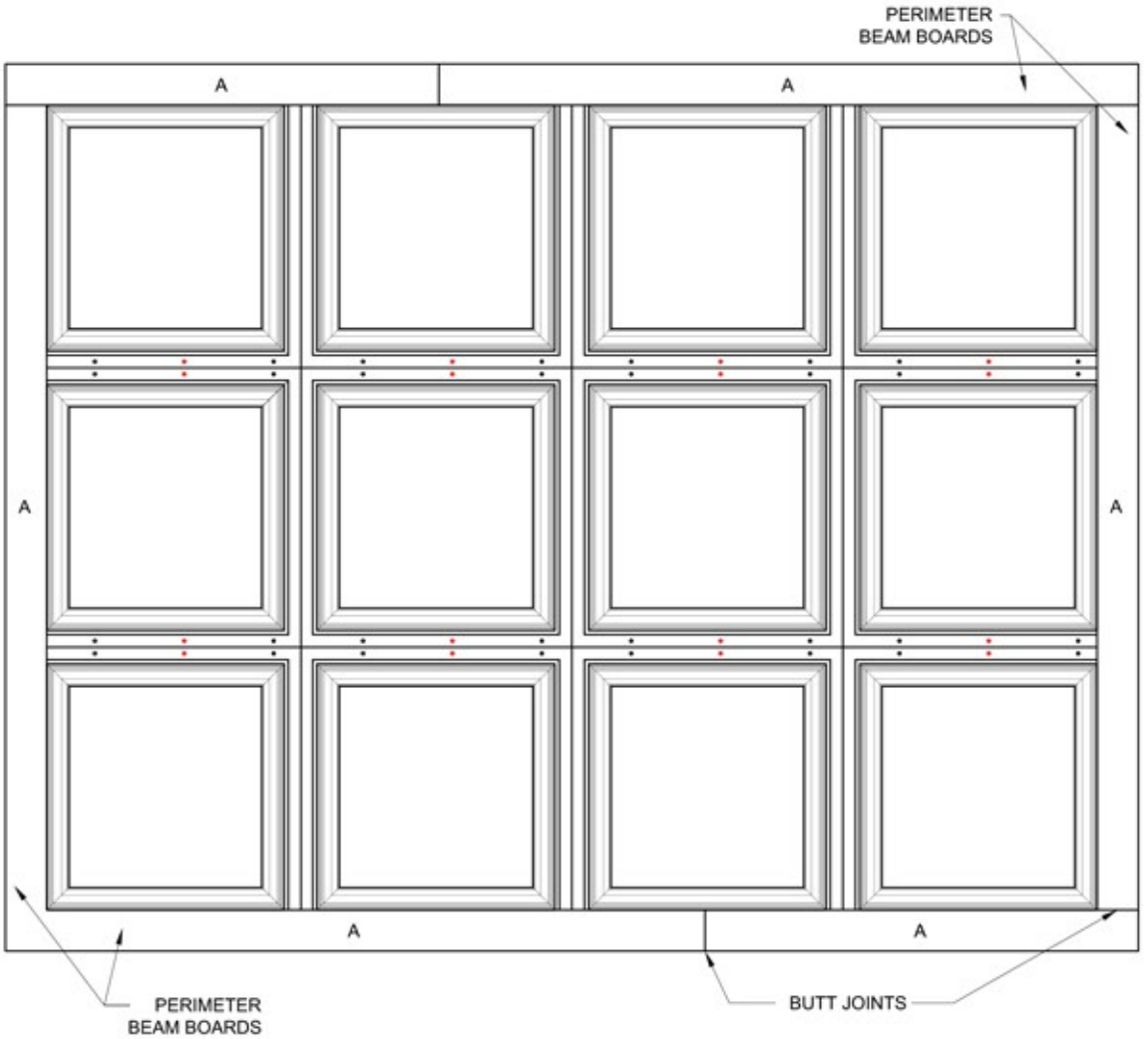

PERIMETER
BEAM BOARDS
A
A
A
A
A
A
A
PERIMETER
BEAM BOARDS
BUTT JOINTS

Fig.17

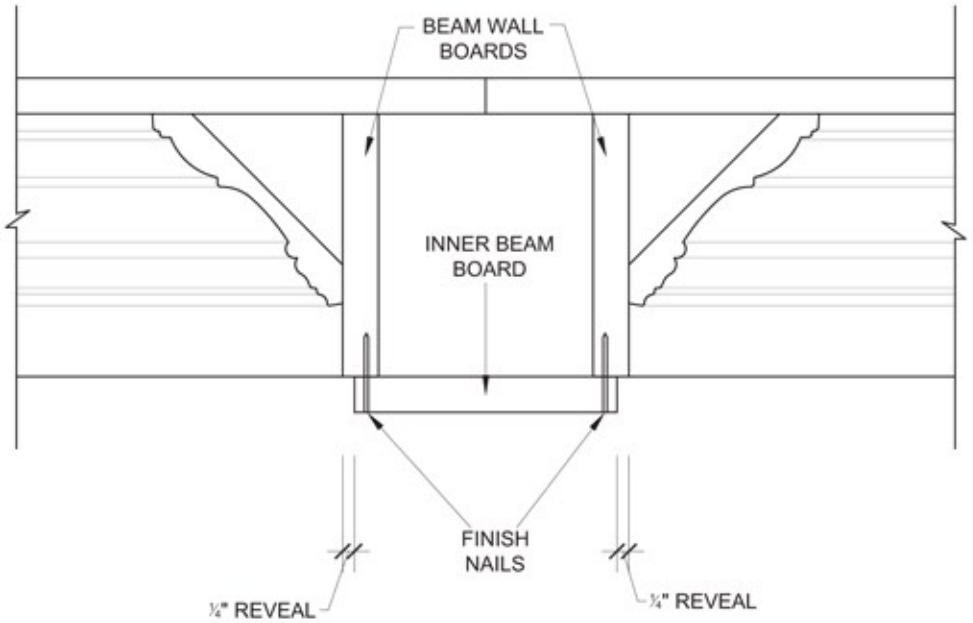


Fig.18A
OVERLAY STYLE BEAM

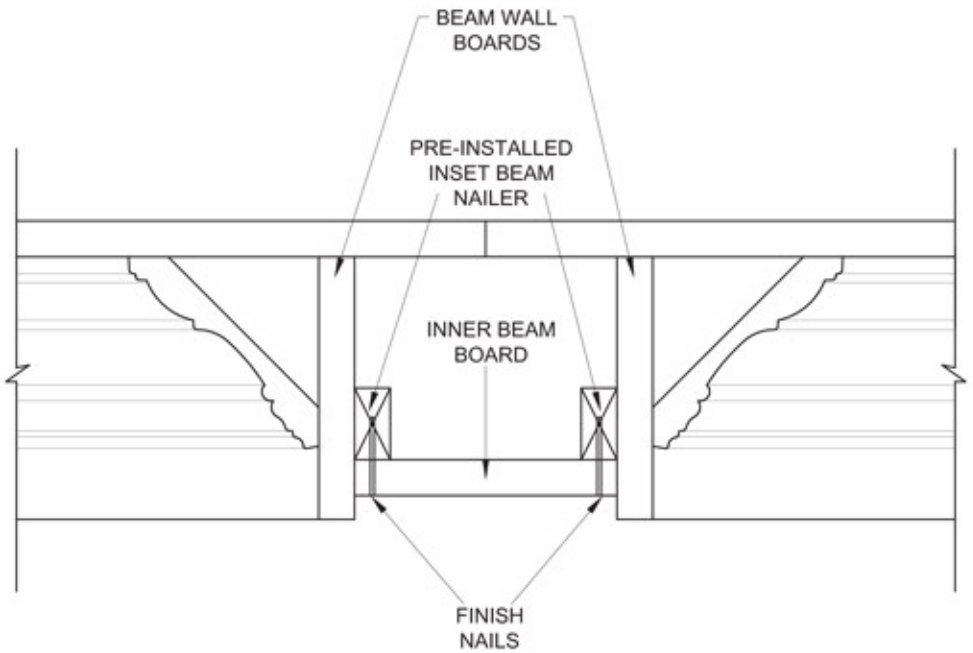


Fig.18B
INSET STYLE BEAM

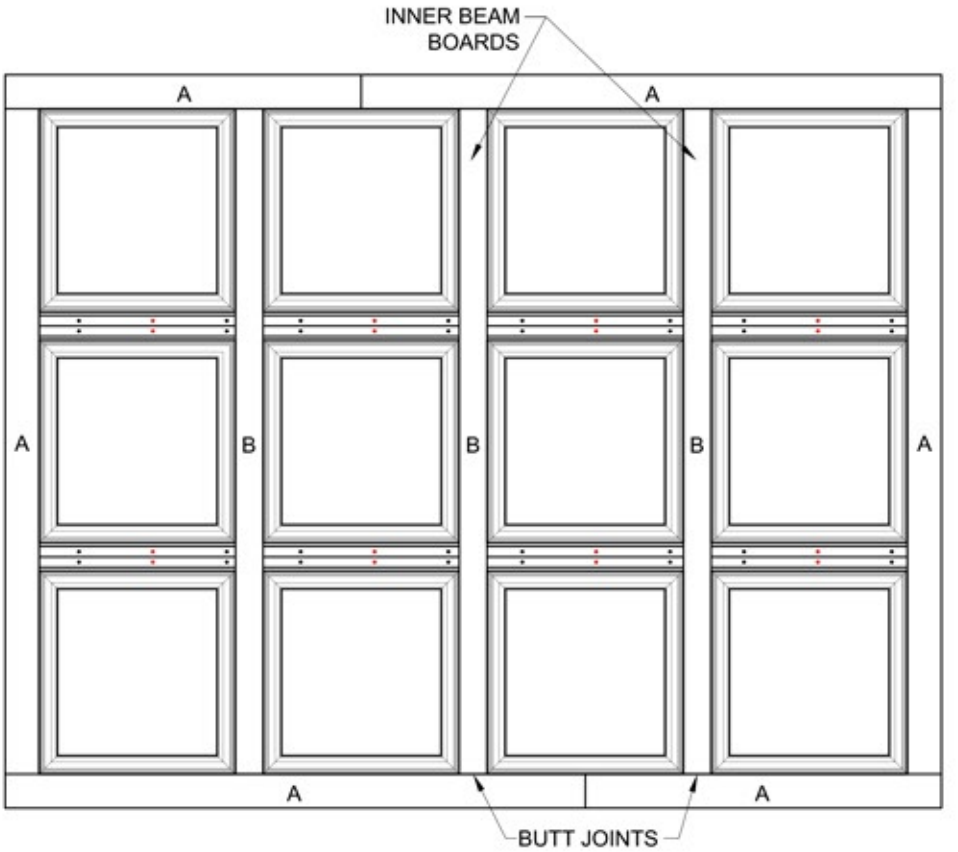

INNER BEAM
BOARDS
A
A
A
B
B
B
A
A
A
BUTT JOINTS

Fig.19

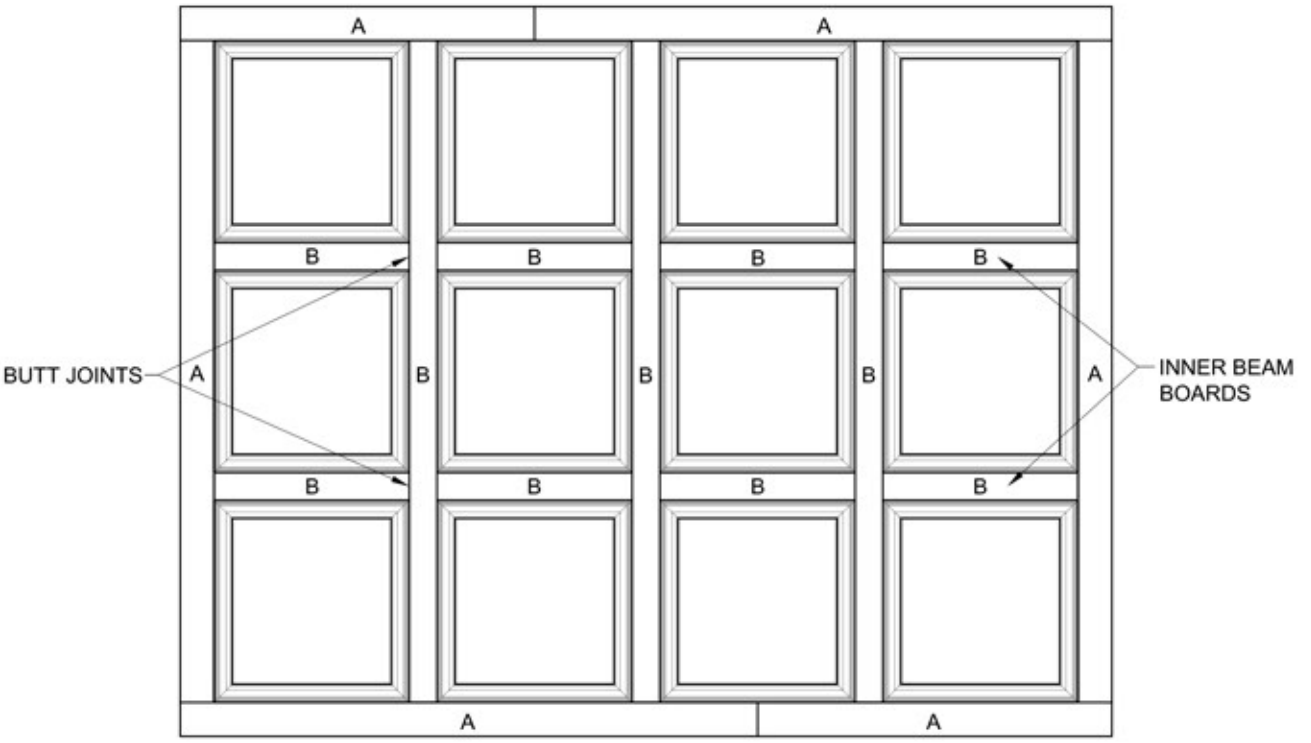

A
A
B
B
B
B
BUTT JOINTS
A
B
B
B
A
INNER BEAM
BOARDS
B
B
B
B
A
A

Fig. 20

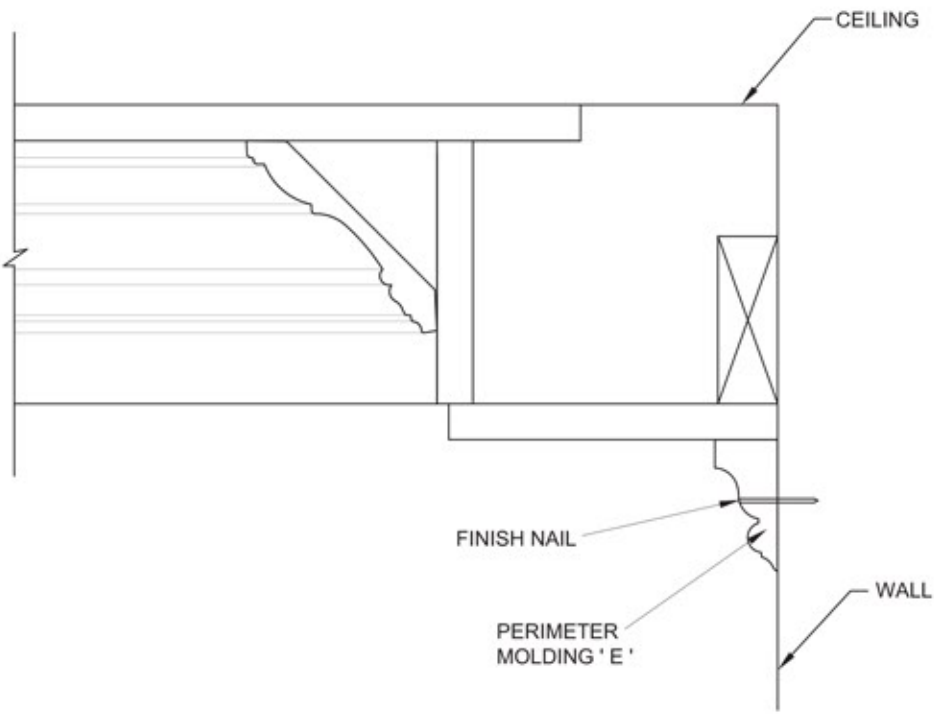


Fig.21A
OVERLAY STYLE BEAM

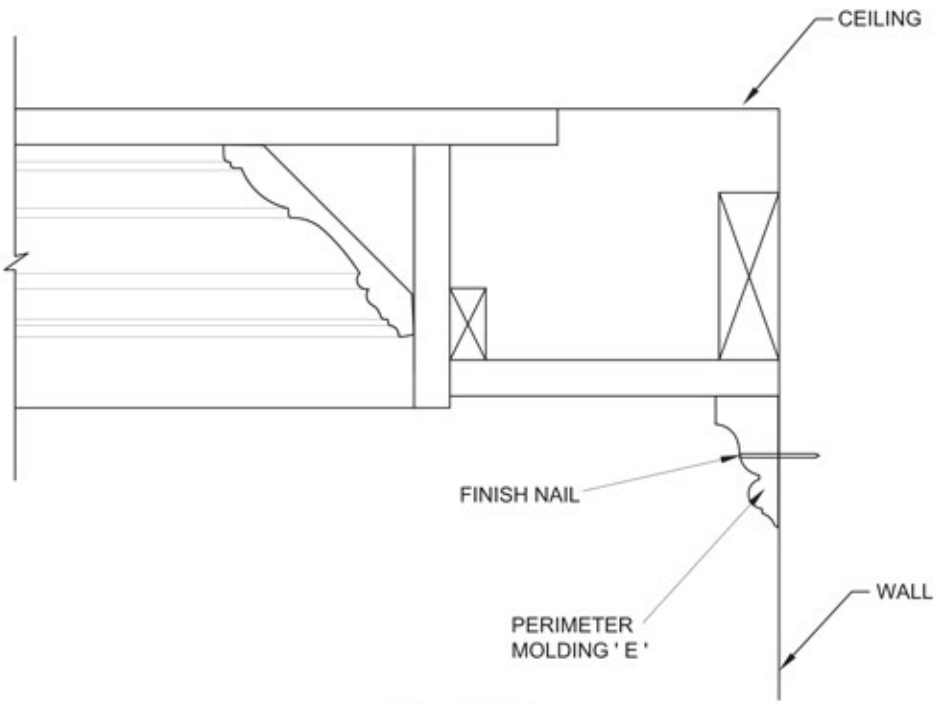


Fig.21B
INSET STYLE BEAM

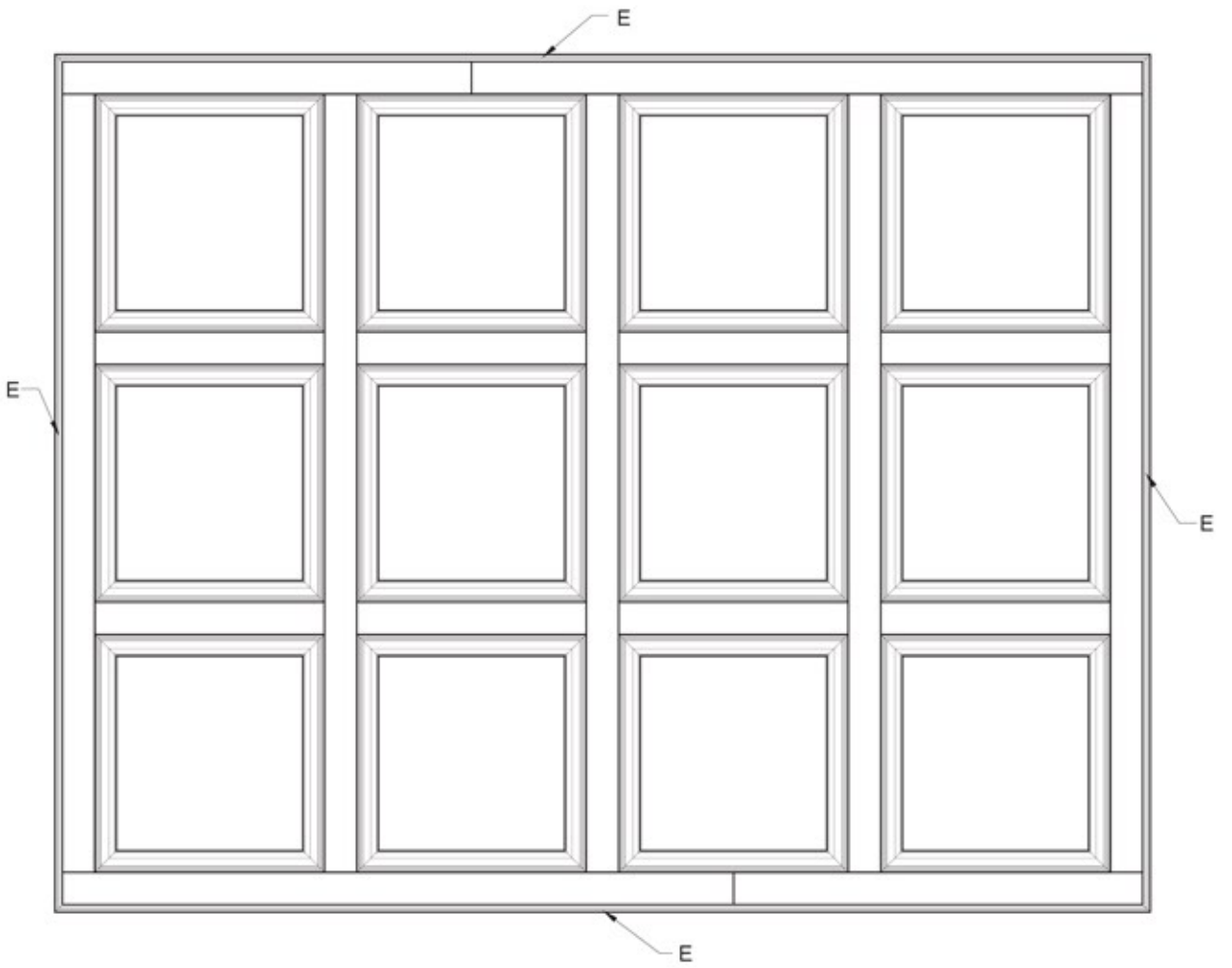


Fig.22

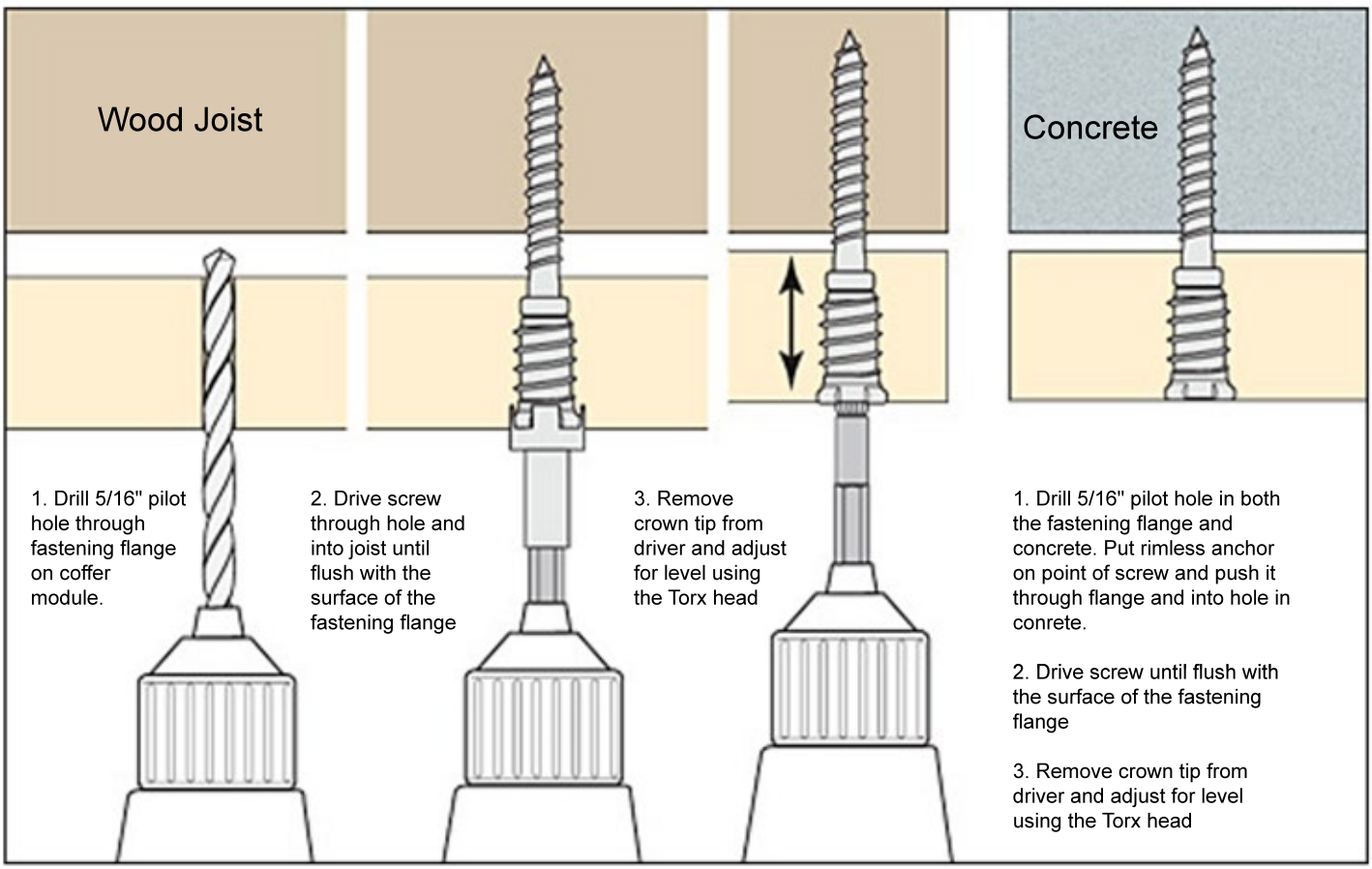
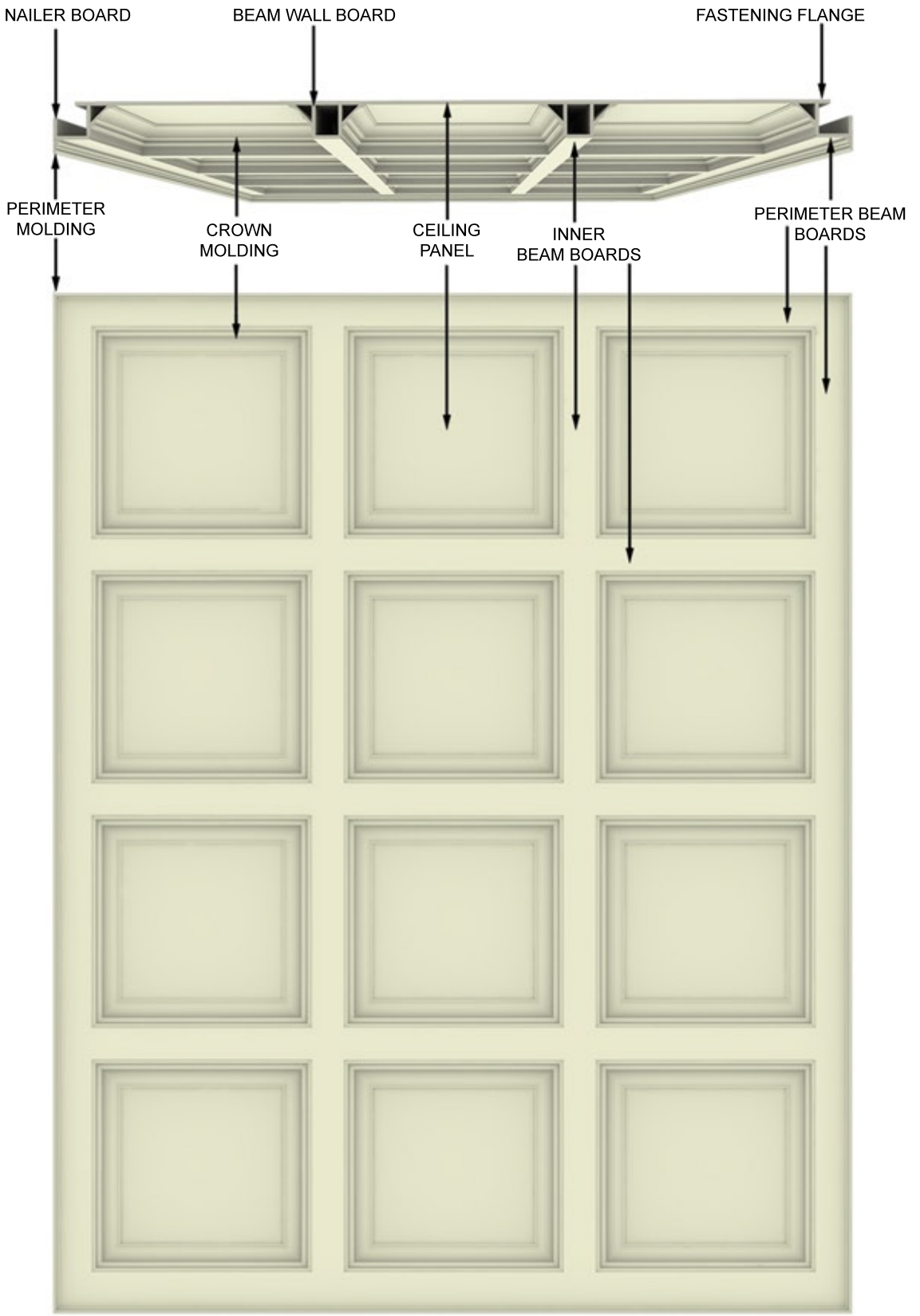
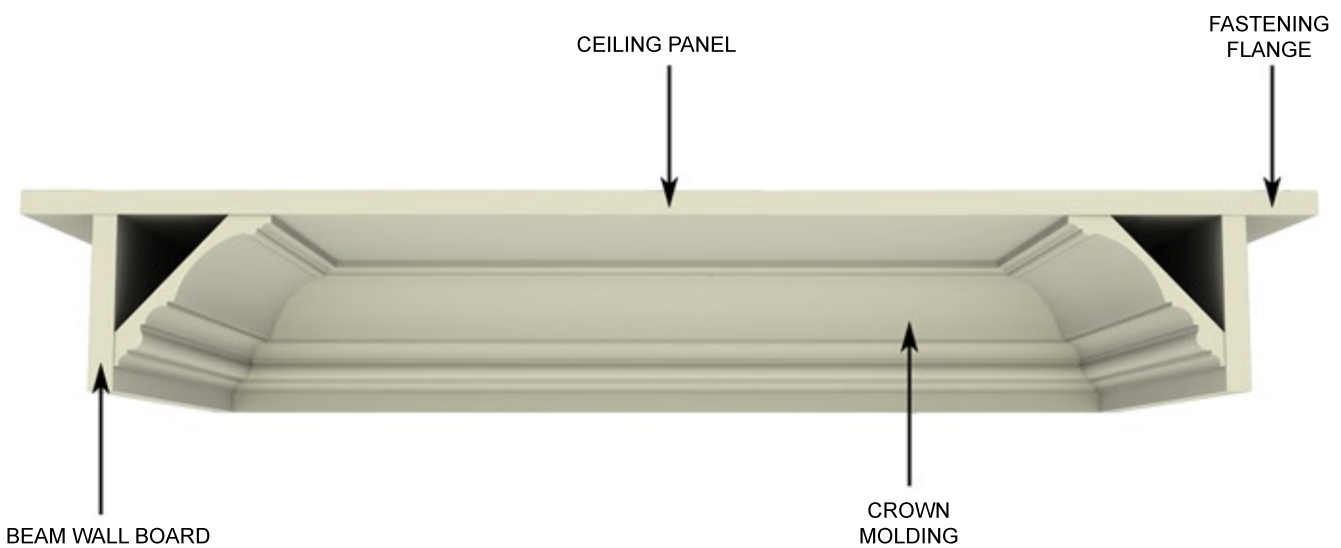

Wood Joist
Concrete
1. Drill 5/16" pilot hole through fastening flange on coffer module.
2. Drive screw through hole and into joist until flush with the surface of the fastening flange
3. Remove crown tip from driver and adjust for level using the Torx head
1. Drill 5/16" pilot hole in both the fastening flange and concrete. Put rimless anchor on point of screw and push it through flange and into hole in conrete.
2. Drive screw until flush with the surface of the fastening flange
3. Remove crown tip from driver and adjust for level using the Torx head

Fig.23

ANATOMY OF THE TILTON BOX BEAM CEILING SYSTEM



ANATOMY OF THE TILTON BOX BEAM COFFER MODULE



ANATOMY OF THE TOP STAR SHIM SCREW

MAIN SHANK

The Main Shank is driven into the surface structure (i.e. framing joists) to secure the Coffer Modules to the ceiling.

THREADED SLEEVE

The Threaded Sleeve moves independently from the main shank of the screw unless locked by the Crown. When locked, the Top Star gets driven into the Fastening Flange material. Unlocked, the installed Top Star is ready for levelling of the Coffer Modules.

CROWN

Drives both the Threaded Sleeve and the Main Shank of the Top Star simultaneously when combined with the Torx Bit.

TORX BIT

Drives the Top Star into the Fastening Flange material when combined with the Crown. Using the Bit without the Crown allows for adjustment of level.