



MAX ROLL BENCH ASSEMBLY INSTALLATION

Complete Instructional Guide



! Attention!

Before starting the assembly of your benching system, check floor surface to ensure a level starting point. If your floors are damaged, heavily sloped or contain obstacles, you may have issues with proper bench setup. These issues should have been noted during the Floor Layout/Quoting phase and may need custom designed components to correct these issues.

Innovative Growers Equipment, Inc. is not liable for the replacement of parts and components.

Before starting the assembly of your benching system, ensure that Bench Assembly Layout and Staal & Plast tray gluing instruction packets are available prior to starting installation.

If not, please contact Innovative Growers Equipment, Inc. contact information located at the end of this instruction packet.

TOOLS NEEDED FOR INSTALLATION



**2+ People Needed
for installation.**



**Estimated Time:
1-2 hours depending on
bench length.**



7/16" & 3/4" WRENCHS & SOCKETS



TAPE MEASURE



**POWER DRILL/IMPACT
W/BITS & NUT DRIVERS**



CAULK GUN



POP RIVET GUN

***Pneumatic Rivet Gun Suggested**



**HAMMER DRILL W/
5/32 MASONRY BIT**



UTILITY KNIFE



VACUUM/BLOWOUT BULB



MALLET

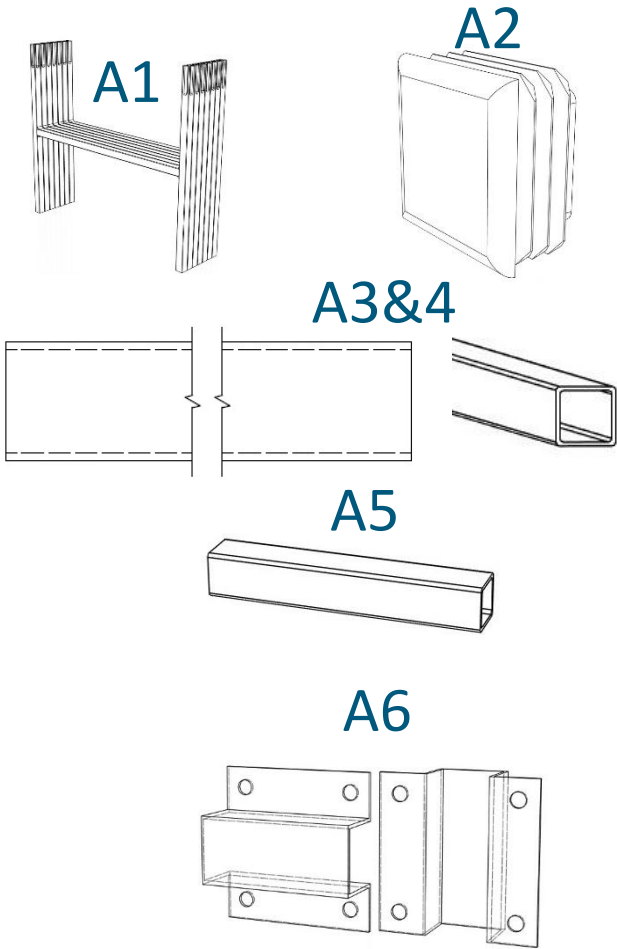


2' LEVEL

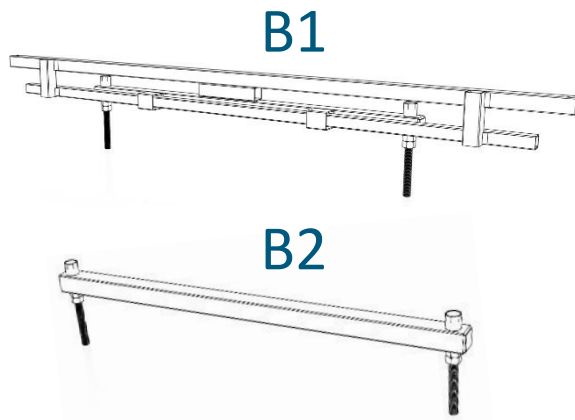
PARTS NEEDED FOR INSTALLATION

Confirm all parts are present before starting assembly. If parts are missing or damaged refer to contact information on last page.

* Parts are only applicable if Bench Assembly Layout calls for multiple parts.

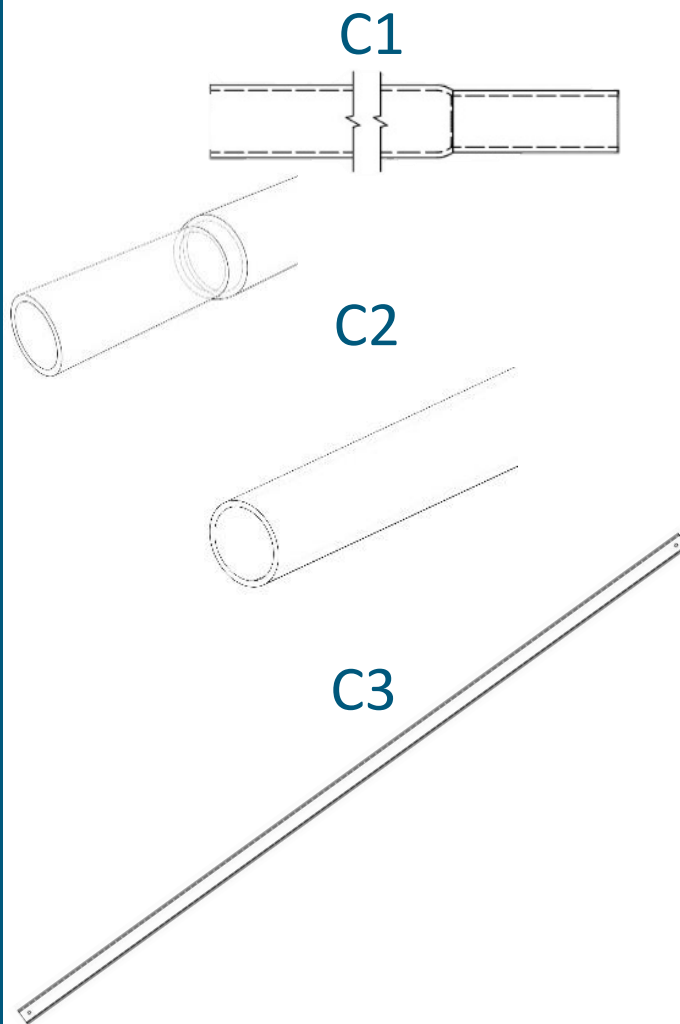
Group	Part	Description
		Refer to Bench Assembly Layout/ Parts List for Lengths, Dimensions and
A		<ul style="list-style-type: none"> ■ A1: Leg Units ■ A2: Load Bearing Plug ■ A3: Stringer Pipe 1" x 1" ■ *A4: Additional Stringer Pipe 1" x 1" ■ A5: Stringer Insert .813" x 5" Long ■ A6: Square to Square Clamp

B



- B1: Anti-Tip System
- B2: Plain Header Unit

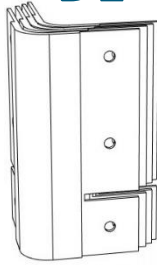
C



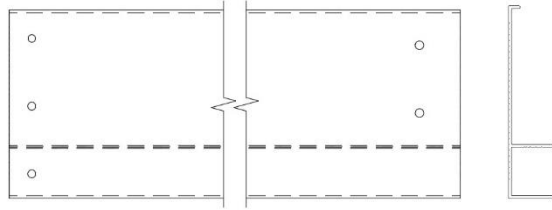
- C1: Rolling pipe Swedged/Crimped End
- C2: Rolling Pipe Plain End
- C3: Bench Cross Bar

D

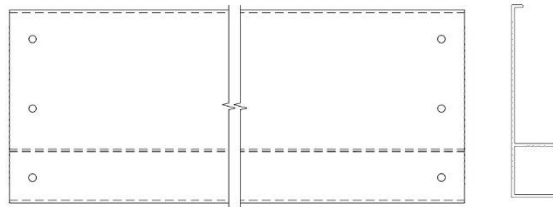
D1



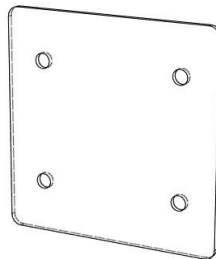
D2-D3



D4



D5



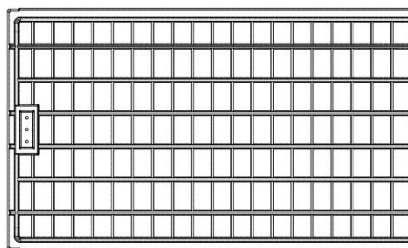
D6



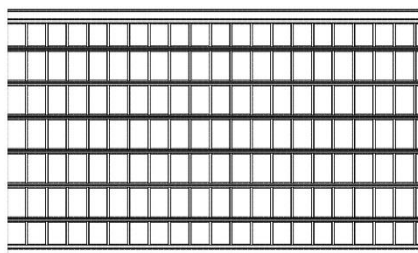
- D1: Bench Corner
- D2: Aluminum Side Rail – Longer with 3/2 hole combo on ends
- *D3: Additional Aluminum Side Rail
- D4: Aluminum End Rail – Shorter with 3/3 hole combo on ends
- D5: Joiner Plates
- D6: End Frame (For 5' wide or wider benches only)

E

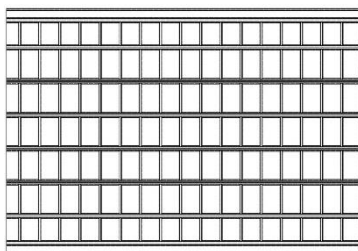
E1



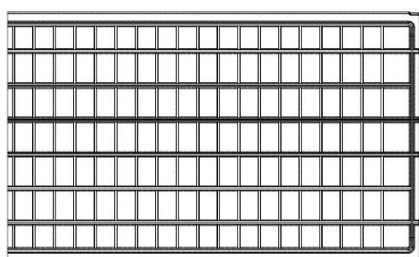
E2



E3

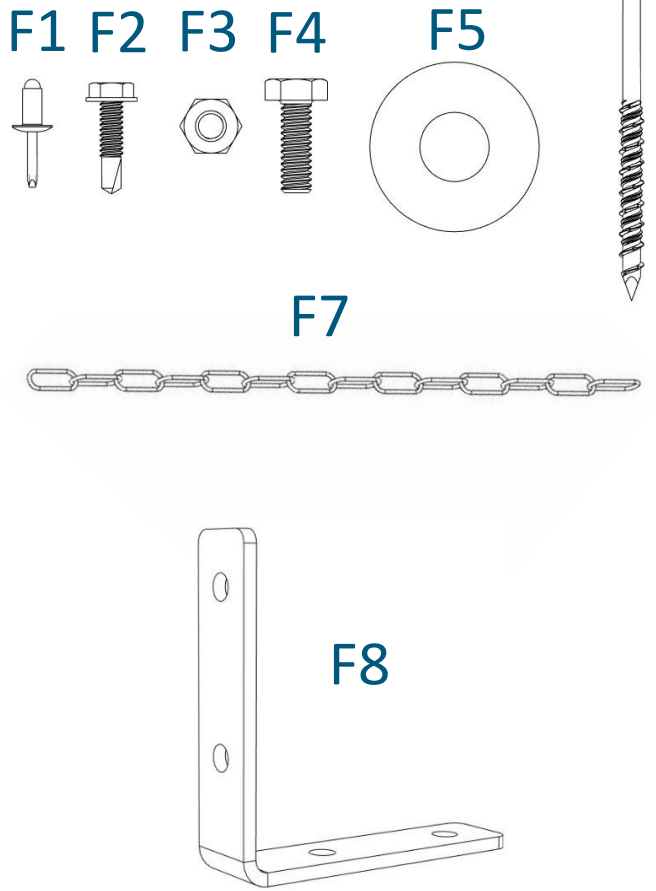


E4



- E1: End Tray
W/ Well
- E2: Middle
Tray
- E3: Filler Tray
- E4: End Tray
No Well

F



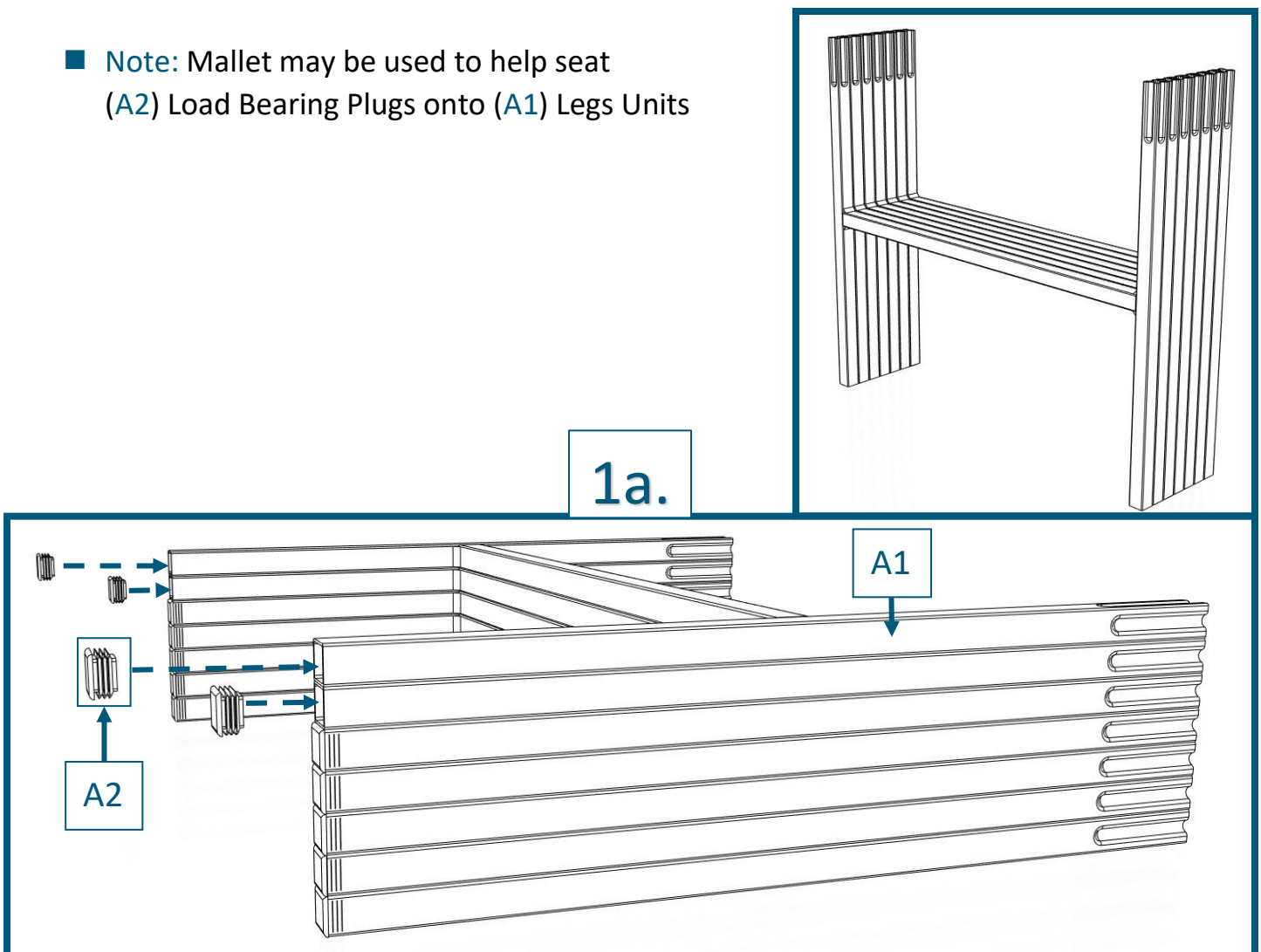
- F1: Pop-Rivet
- F2: Self-Tapping Screw
- F3: 1/4-20 Hex Nut
- F4: 1/4-20 x .75" Hex Screw
- F5: 1/2" Flat Washer
- F6: Tap Con 3/16 x 1-3/4"
- F7: Safety Chain
- F8: Angle Bracket

FOLLOW INSTRUCTIONS BELOW

STEP #1

Lay out Leg Units and Stringer Pipe.

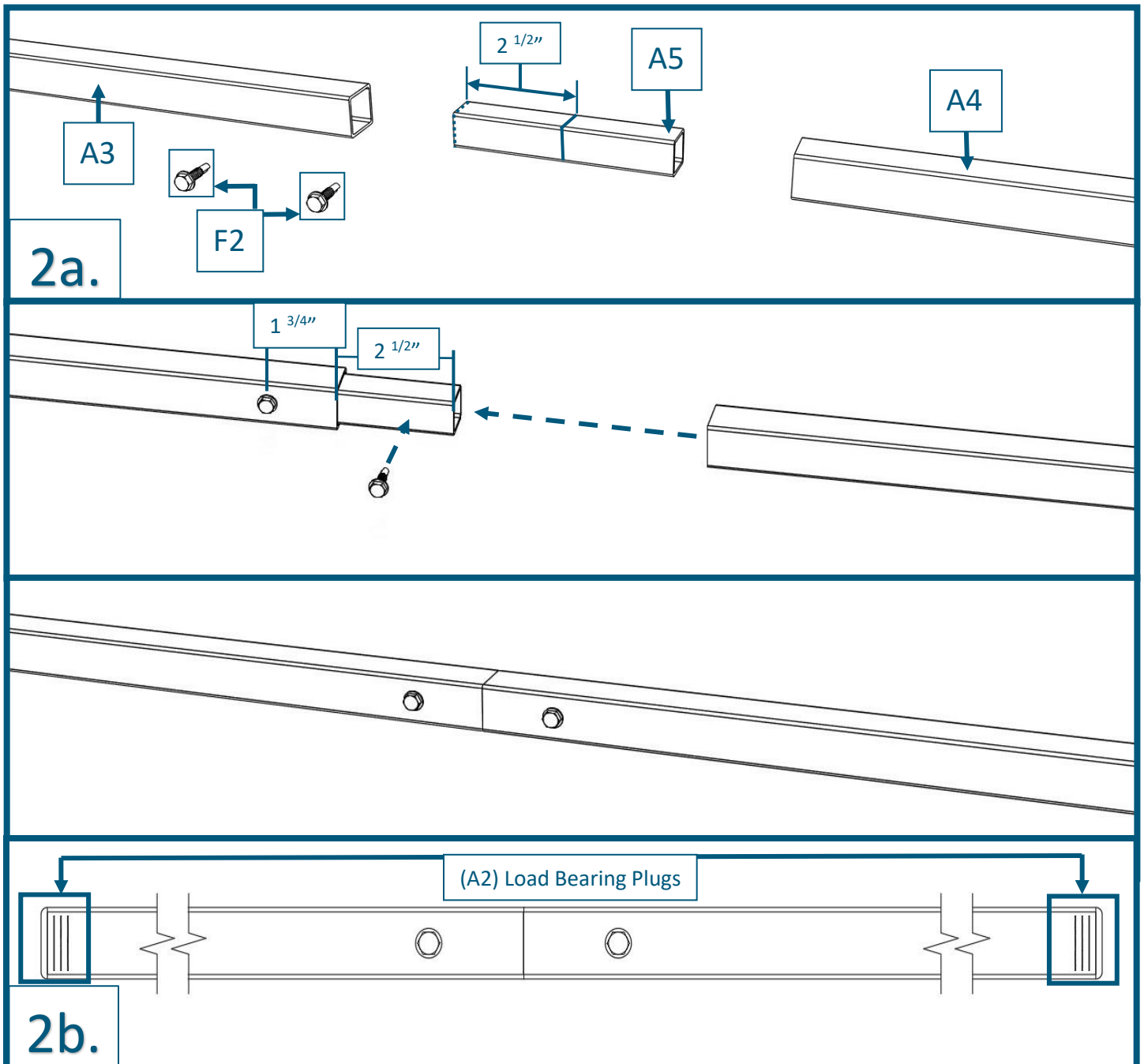
- Before (A1) Leg Units are removed from bundle, install (A2) Load Bearing Plugs into uncrimped ends.
- (A2) Load Bearing Plugs to be inserted in non-crimped bottom two openings. *Shown Fig. 1a.*
- **Note:** Mallet may be used to help seat (A2) Load Bearing Plugs onto (A1) Legs Units



STEP# 2

Assemble Stringer Pipe.

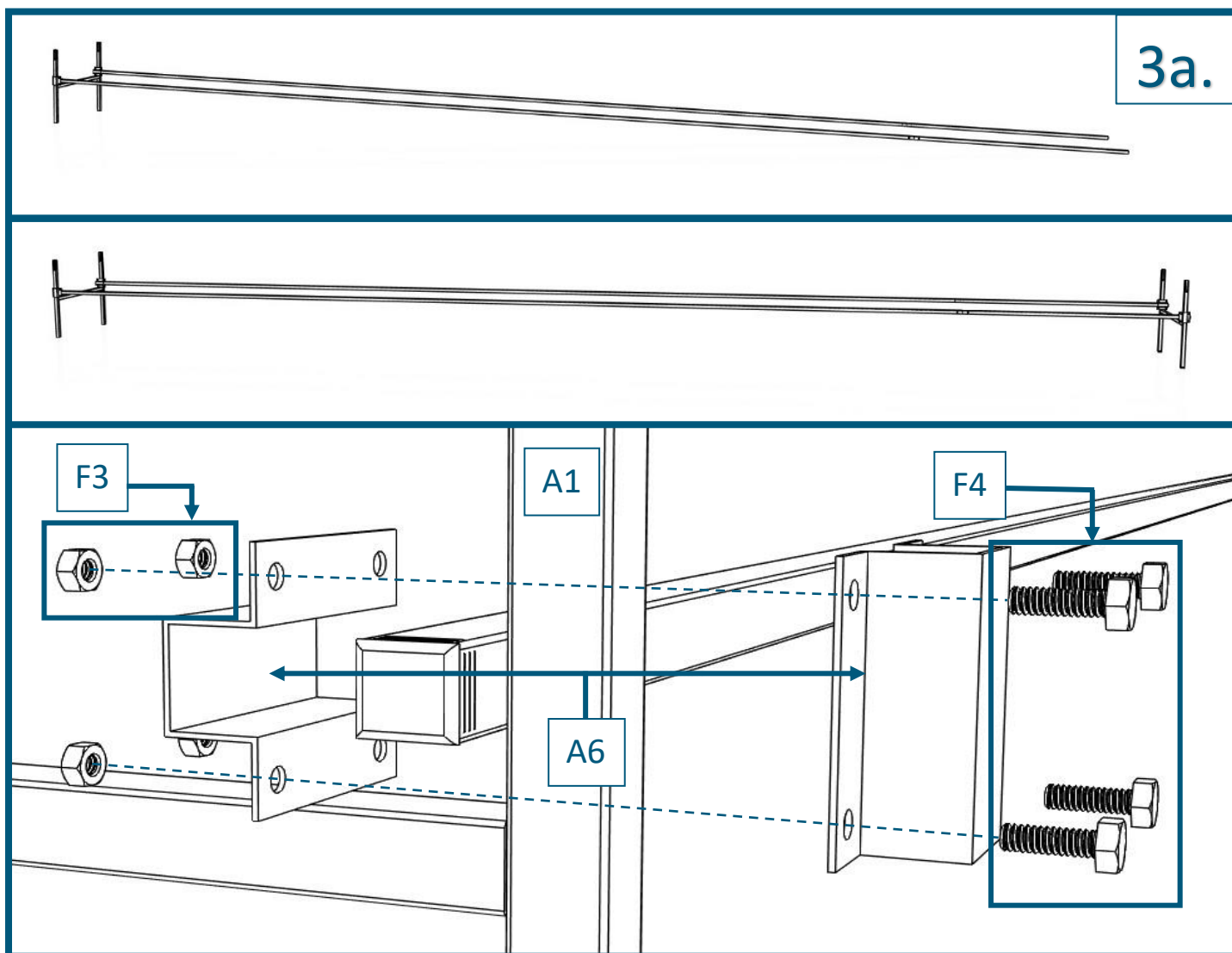
- *If applicable join (A3 & A4) Stringer Pipe & Stringer Extension together with (A5) Stringer Insert. Reference your customized Bench Assembly Layout for Stringer measurements. Mark (A5) Stringer Insert at $2\frac{1}{2}"$ from one end and install into (A3) stringer. Once the mark reaches the end of stringer install (F2) Self Tapping Screw $1\frac{3}{4}"$ from stringer end. Insert (A4) Additional Stringer Pipe over (A5) insert, install (F2) Self Tapping Screw at $1\frac{3}{4}"$ from center seam. *Shown Fig. 2a.*
- Insert (A2) Load Bearing Plug into either end of (A3 & A4) Stringer Pipe *Shown Fig. 2b.*



STEP# 3

Install Stringers onto Legs

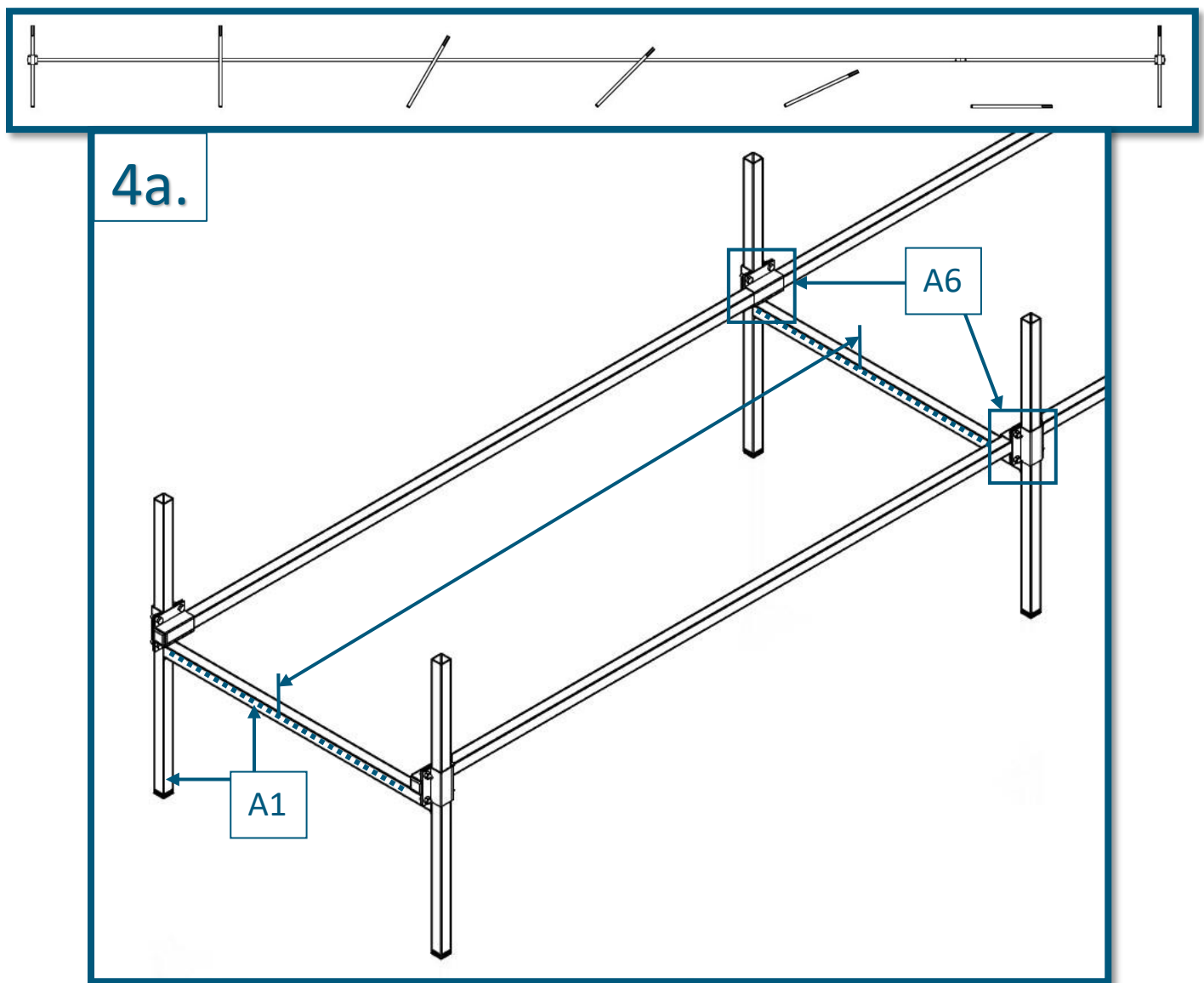
- Stand one end (A1) Leg Unit up (crimped side up) and attach (A3/A4) Stringers with (A6) Square-to-Square Clamp on inside of leg unit upright above cross bar with provided (F3) ¼-20 Hex Nut & (F4) ¼-20x.75" Hex Head Screw. Keep hardware finger tight in case adjustments are needed. (A3/A4) Stringer end should be flush with outside edge of (A6) Square to Square Clamp. *Shown Fig 3a.*
- Repeat step with (A1) leg unit on opposite end. Stringer pipe will sit flush to outside ends of Square-to-Square Clamp.



STEP #4

Install Remaining Leg Units.

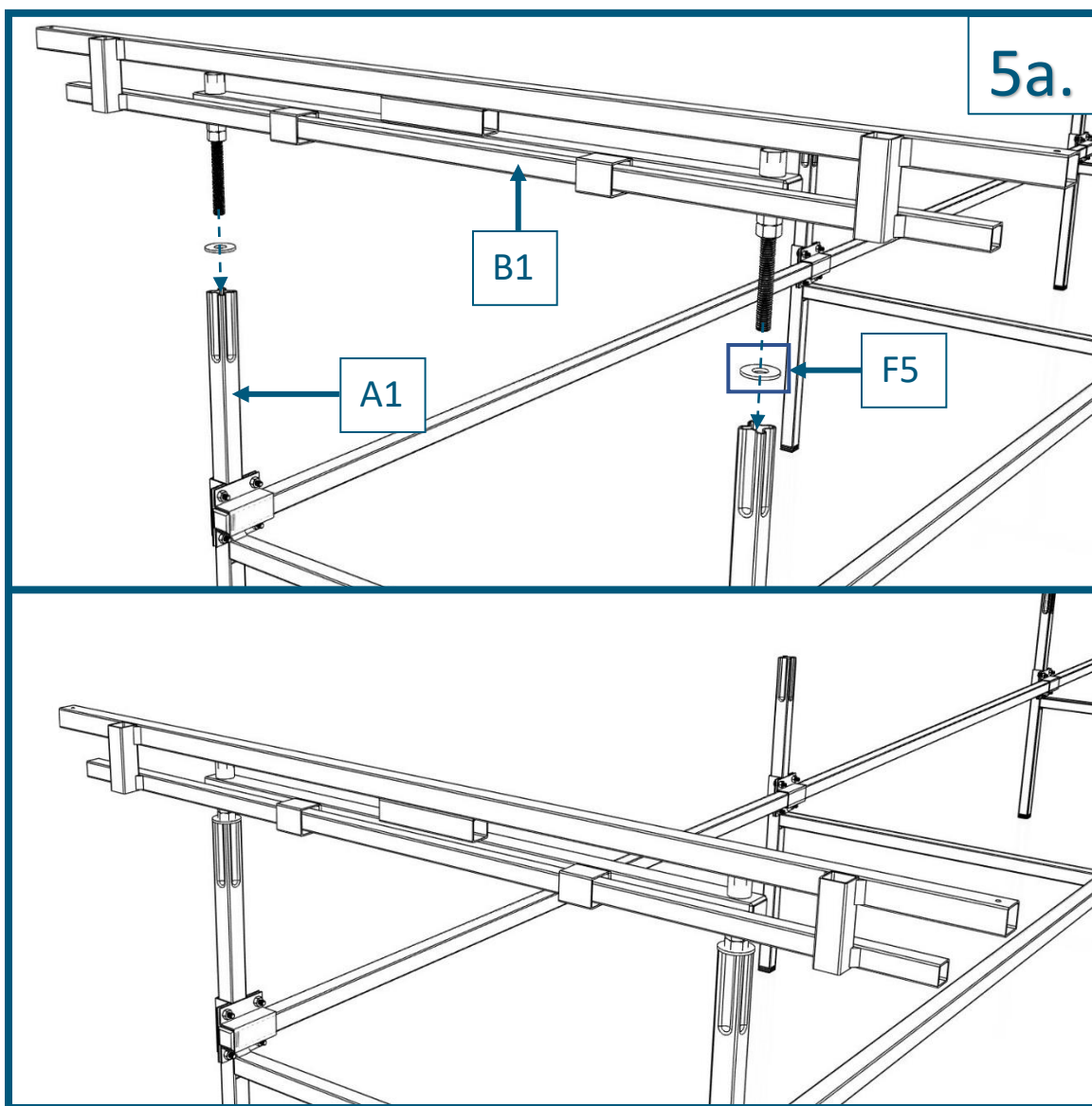
- Refer to your customized Bench Assembly Layout for correct leg counts & spacing. Install all remaining (A1) Leg Units one at a time. Lock them in place with (A6) Square-to-Square clamps in same fashion as [Step 3](#). Leave hardware hand tight to allow for adjustment.
- Measurements are to be measured from outside edge of first (A1) Leg Units to outside leading edge of following leg. Once second Leg is set at correct distance, measure in same fashion to third. Repeat as needed for all remaining legs. *Shown Fig. 4a.*
- Once measurements are confirmed, Tighten down all (A6) Square to Square clamps.



STEP #5

Install Anti-Tip System.

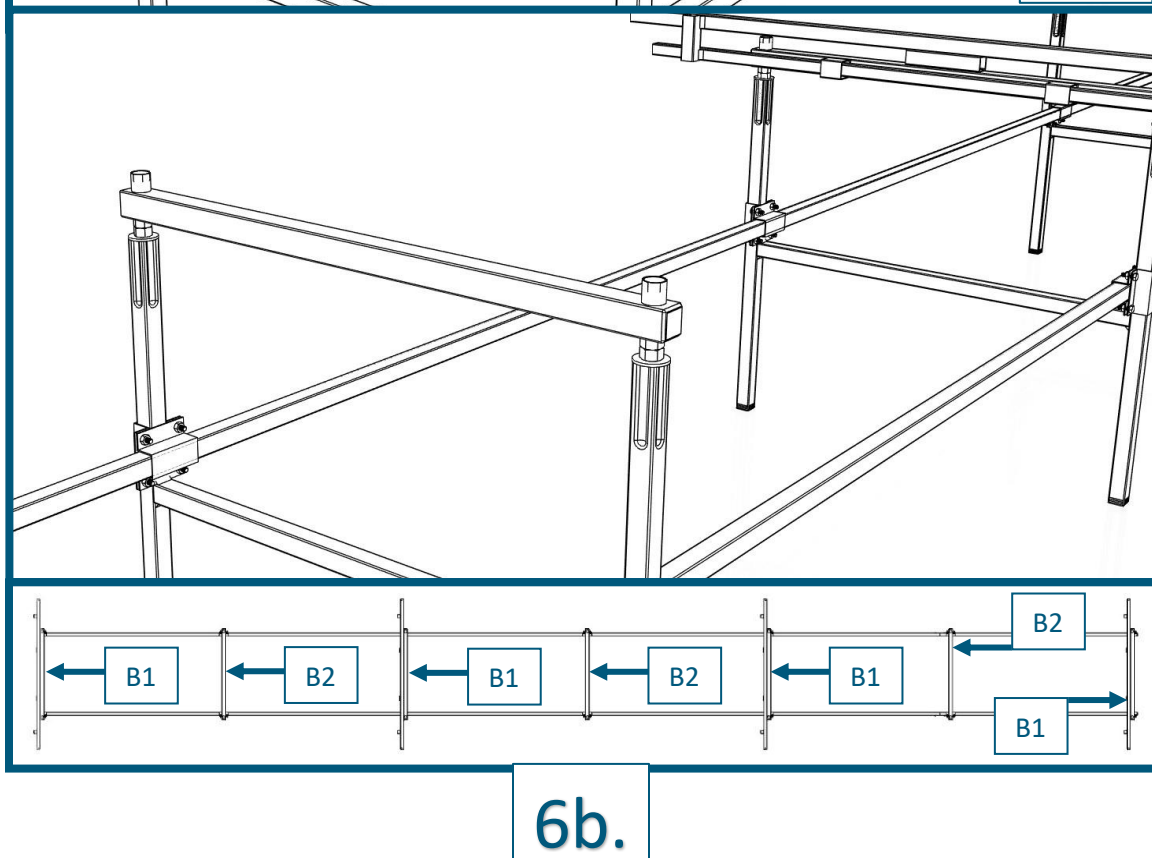
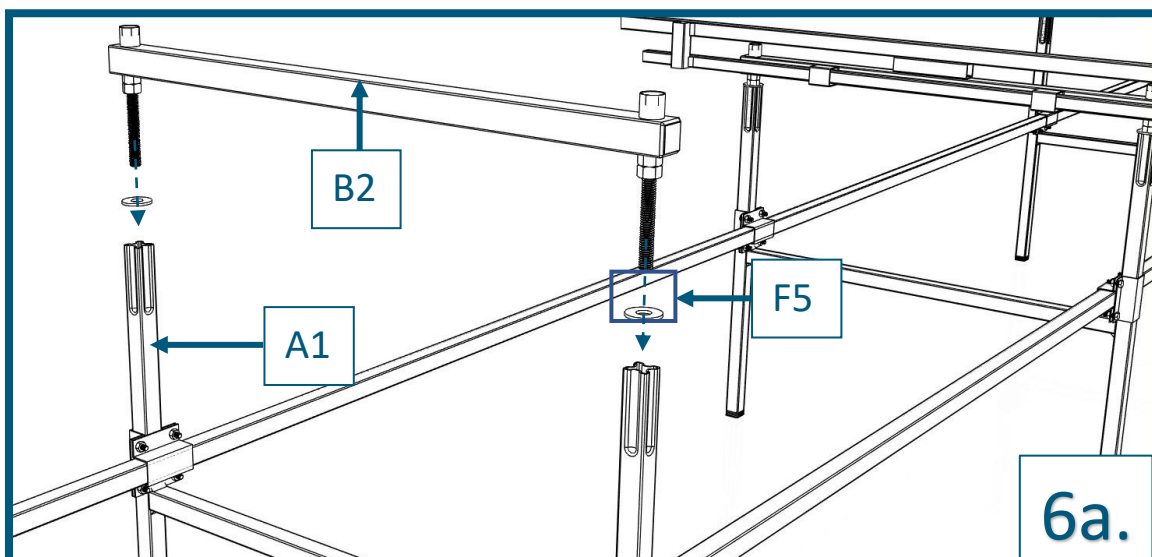
- Install (F5) Washer onto threaded adjustment bolt on either side (B1) Anti-Tip system. Install (B1) Anti-Tip System threaded adjustment bolts with washer into crimped end of (A1) Leg Unit. *Shown Fig 5a.*
- Repeat this step on all (A1) Leg Units specified in your customized Bench Assembly Layout.



STEP #6

Install Plain Header Units.

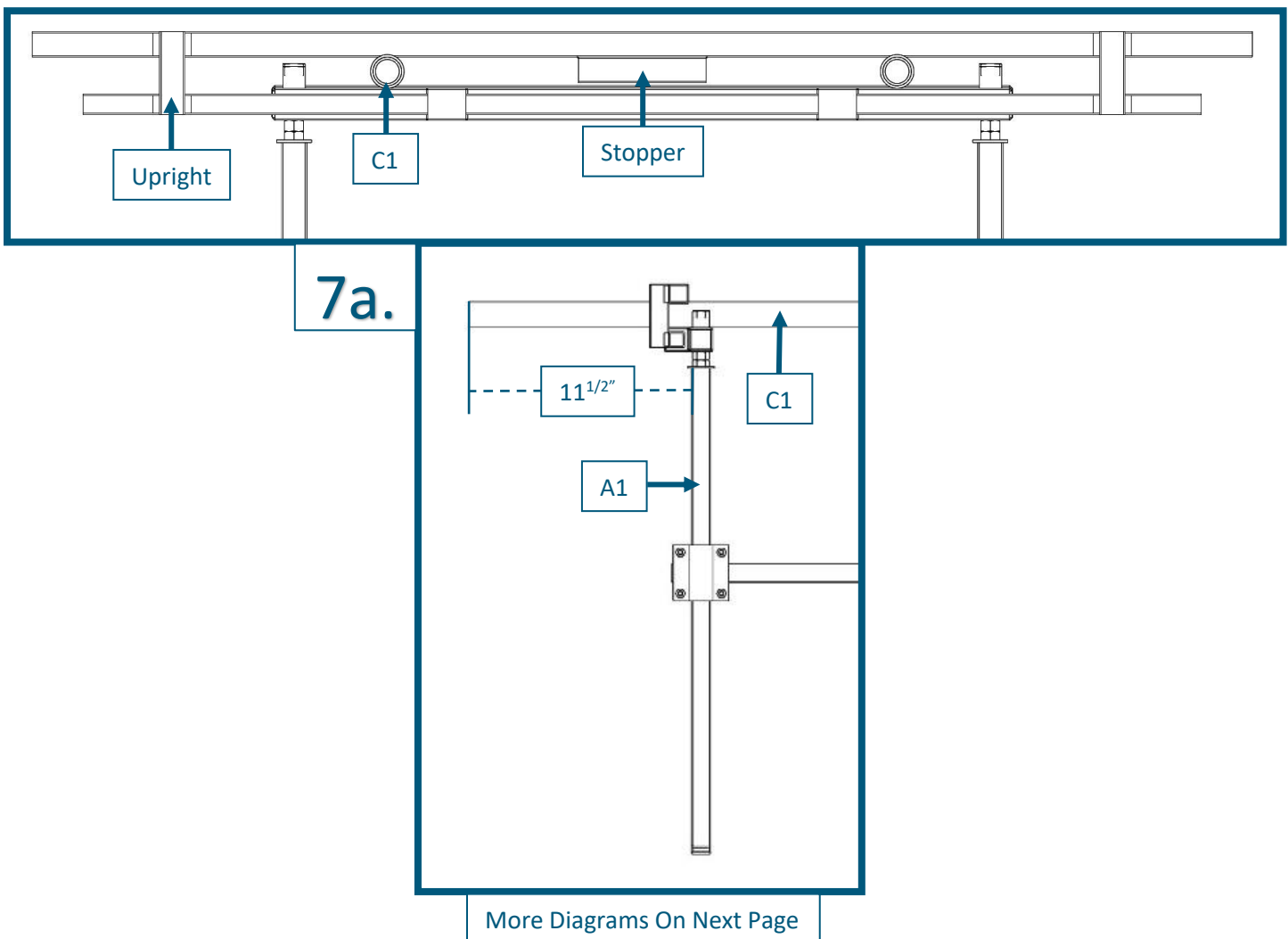
- Install (F5) Washer onto threaded adjustment bolt on either side. Install (B2) Plain Header Unit threaded adjustment bolts with washer into crimped end of (A1) Leg Unit. *Shown Fig 6a.*
- Repeat this step on all (A1) Leg Units specified in your customized Bench Assembly Layout.




STEP #7.

Install Rolling Pipe

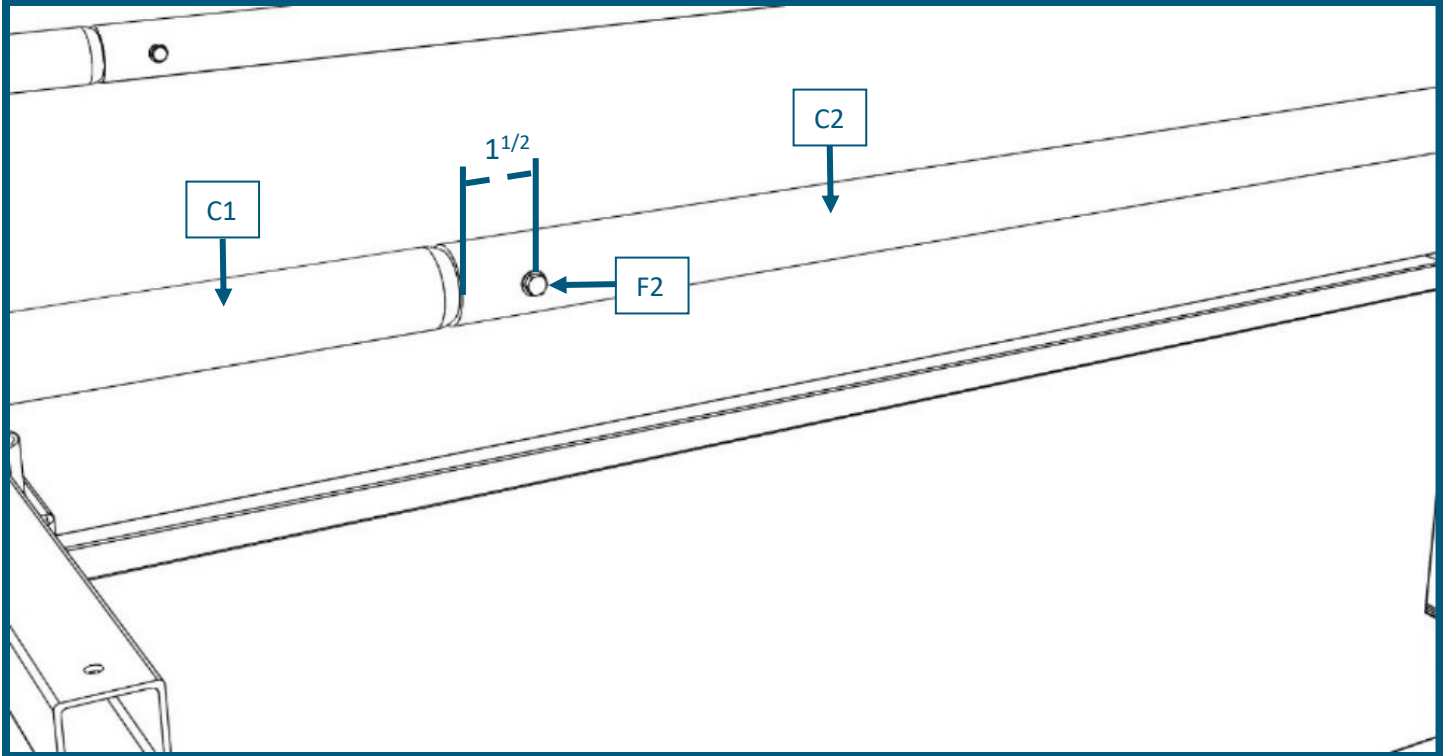
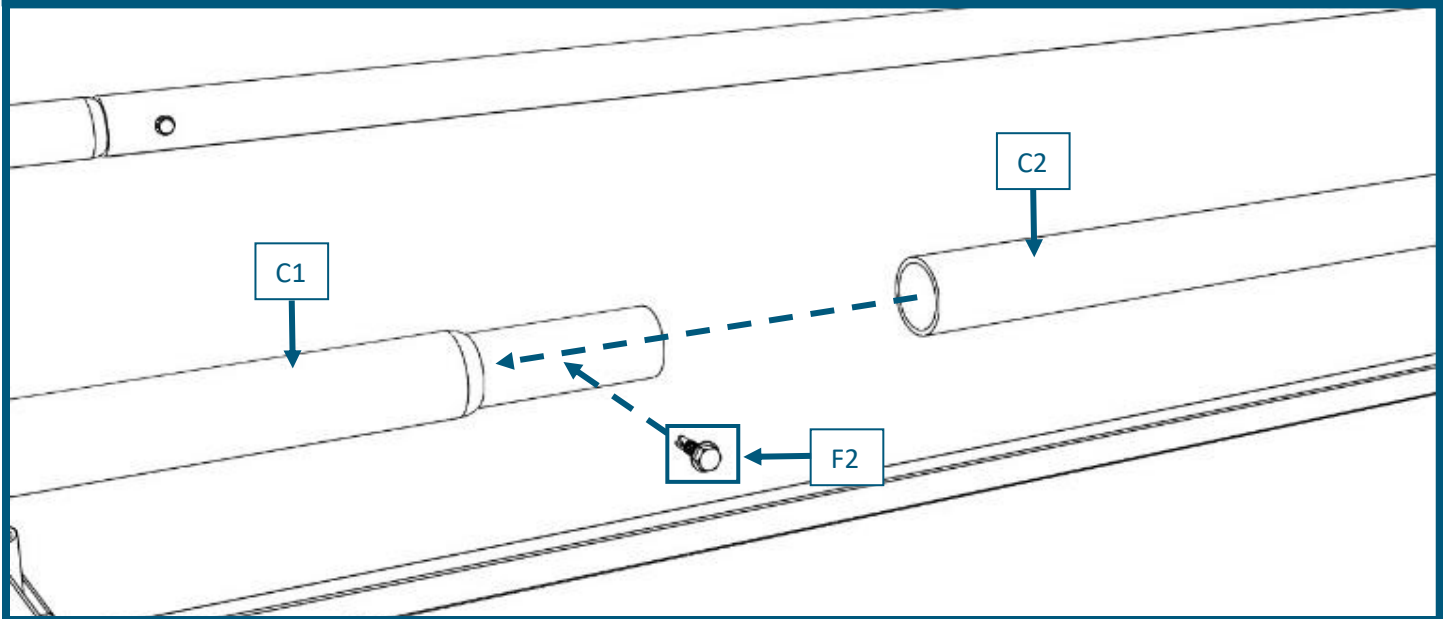
- Slide (C1) Rolling Pipe from one end through (B1) Anti-Tip System between upright and center stopper. (C1) Rolling Pipe will measure $11\frac{1}{2}"$ from end of pipe to outside of both end (A1) Leg Units when installed correctly *Shown Fig. 7a.*
- Refer to your customized Bench Assembly Layout, if bench requires a multi-piece Rolling Pipe, the longer of the two pieces with Swedged/Crimped end will be C1, shorter piece with plain ends will be C2.
- Insert (C1) Rolling Pipe with Swedged/Crimped end through (B1) Anti-Tip System between upright and center stopper. *Shown Fig. 7a.* (C1) Rolling Pipe will measure $11\frac{1}{2}"$ from end of pipe to outside of first (A1) leg when installed correctly. *Shown Fig. 7a.*
Insert (C2) Rolling Pipe with plain ends through the opposite end of (B1) Anti-Tip System. Slide the end of (C2) over the top of Swedged/Crimped end of (C1) and fasten with (F2) Self Tapping screw $1\frac{1}{2}"$ from joint seam. *Shown Fig. 7b.*



7b.



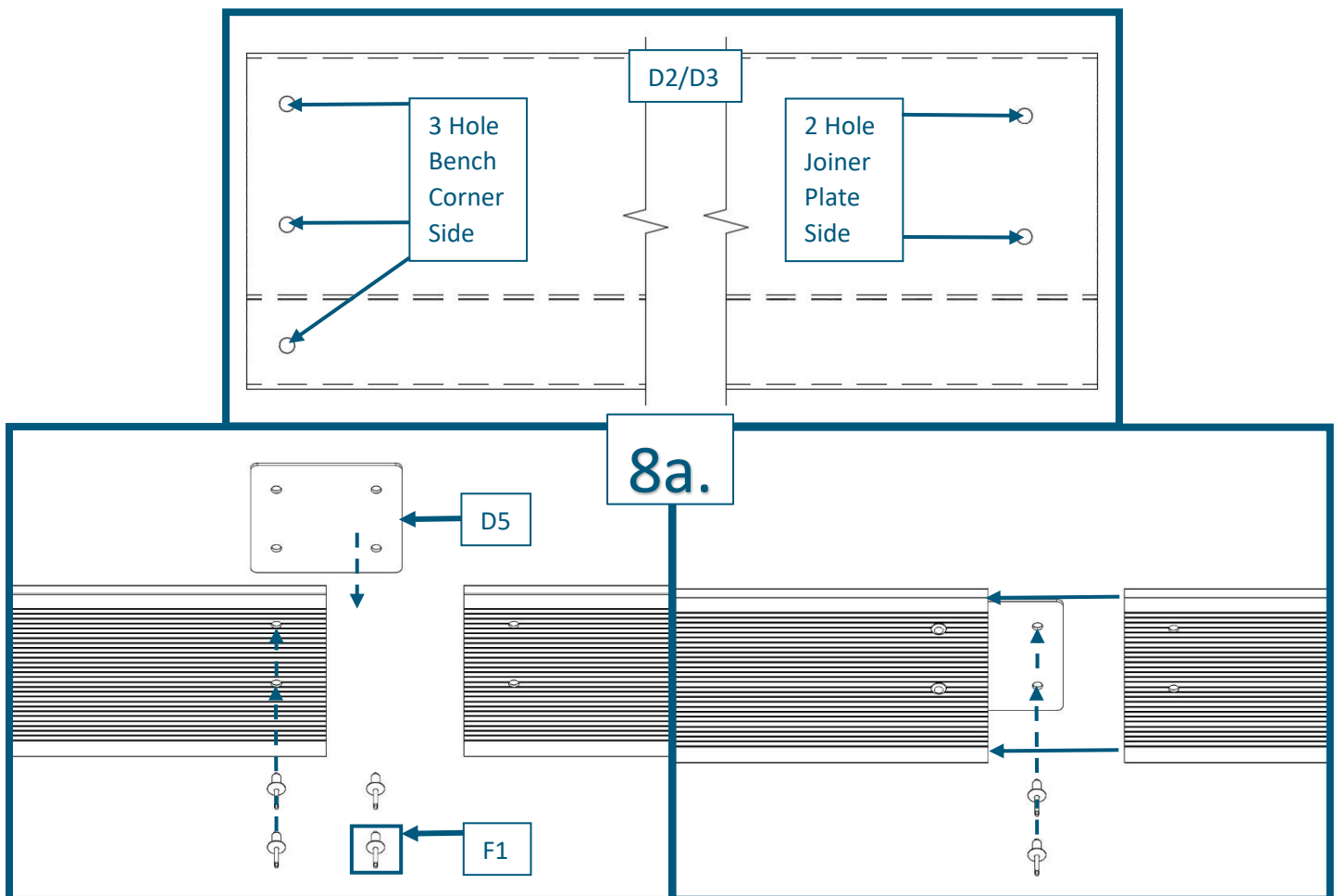
The diagram shows a long, low-profile structure, possibly a bridge or a long building, with a dashed blue line running along its length. The structure is supported by a series of vertical posts. On the left, a blue arrow points down to the structure, labeled 'C1'. On the right, a blue arrow points up from the structure, labeled 'C2'. The structure is shown in a perspective view, extending into the distance.



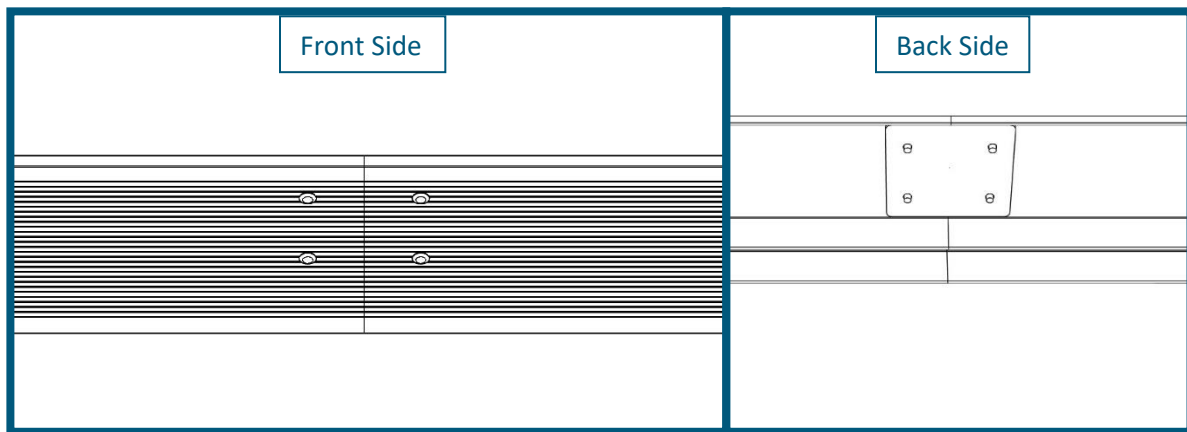
STEP #8

Install Side Rail

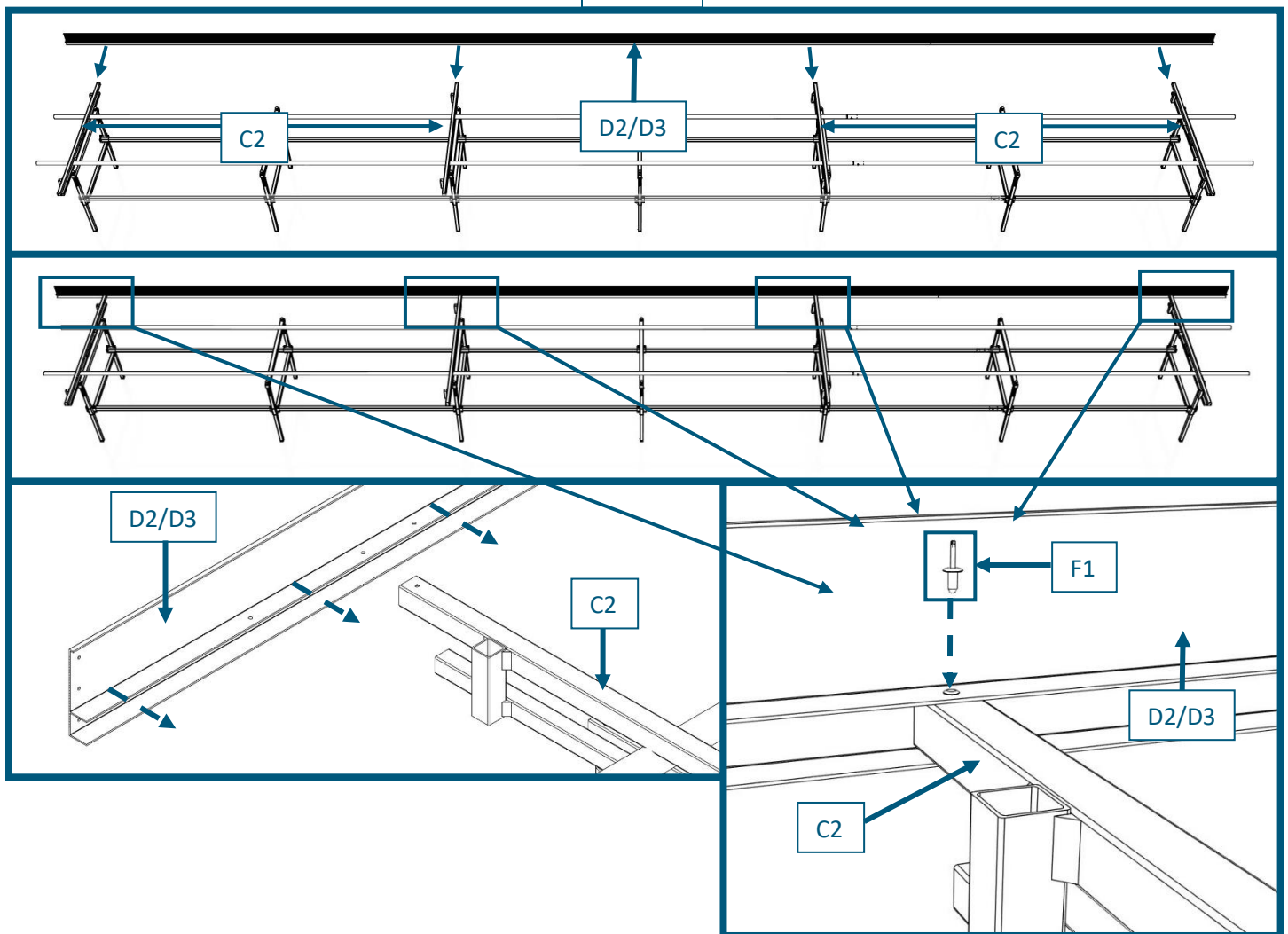
- Refer to your customized Bench Assembly Layout for side rail layout and dimensions. (D2/D3) Side Rails will be labeled side A and side B as well as component locations.
- *If Applicable. Join (D2) Side Rail to (D3) Additional Side Rail together with (D5) Joiner Plate and (F1) Pop Rivets. Join Side A and Side B at the same time. Side B will be installed at a later point. *Shown Fig. 8a* **Note:** Joiner Plate always gets installed at end of first Side Rail and start of following Side Rail. There will be a set of 2 pre-drilled holes in a vertical pattern. If Side Rail has a pattern of 3 pre-punched holes that align with a set of 2 pre-punched holes the side rails are not in correct order, Refer to your customized Bench Assembly Layout for correct layout.
- Install (D2/D3) Side Rail – Side A onto ends of (B1) Anti-Tip System. Align first Anti-Tip marked hole in channel of (D2/D3) Side Rail with pre-punched hole on First (B1) Anti-Tip System. Lock together with (F1) Pop-Rivet. Continue down (D2/D3) Side Rail installing a (F1) Pop-Rivet at each Anti-Tip System labeled pre-punched hole location. *Shown Fig. 8b.*



More Diagrams On Next Page



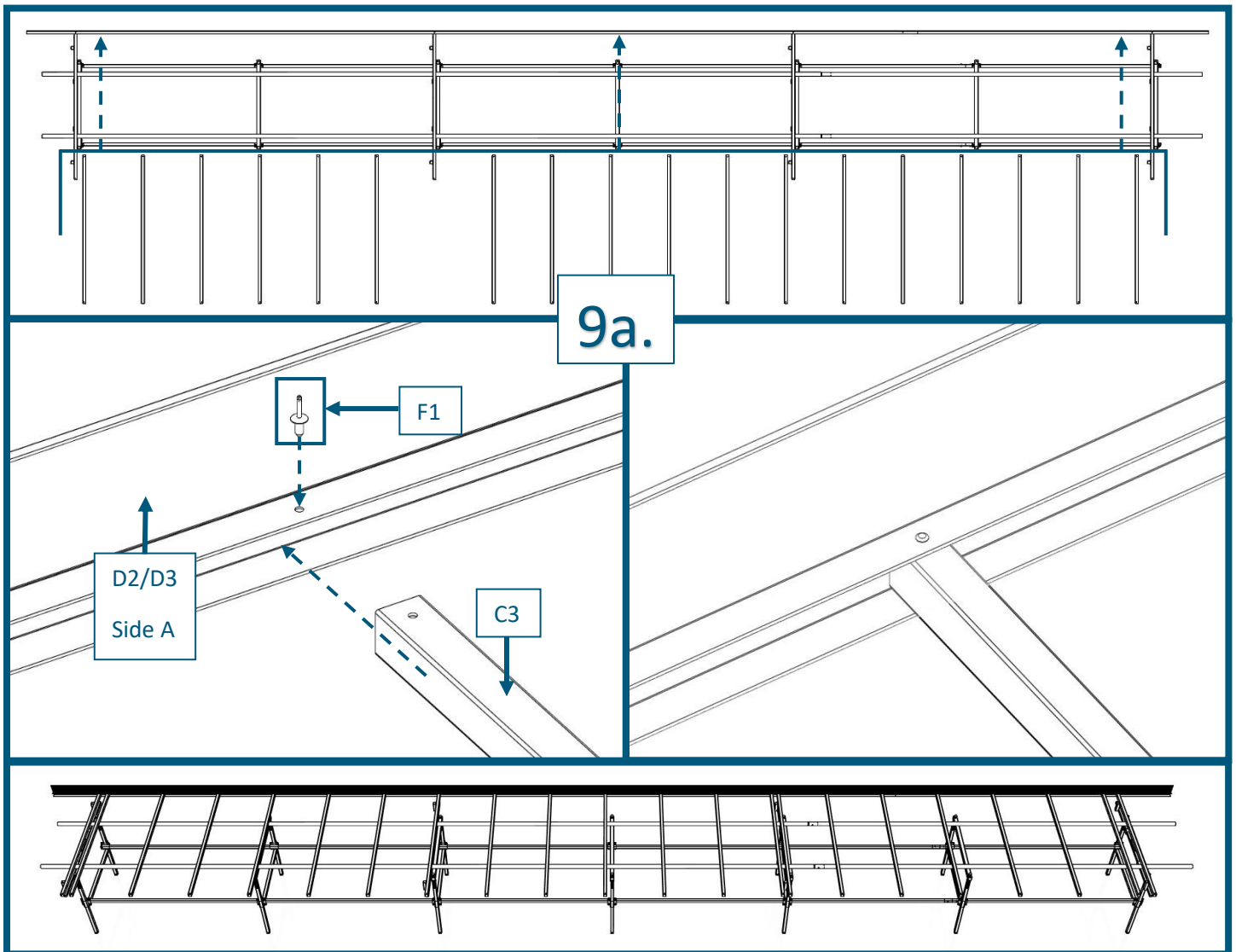
8b.



STEP #9

Install Bench Cross Bars

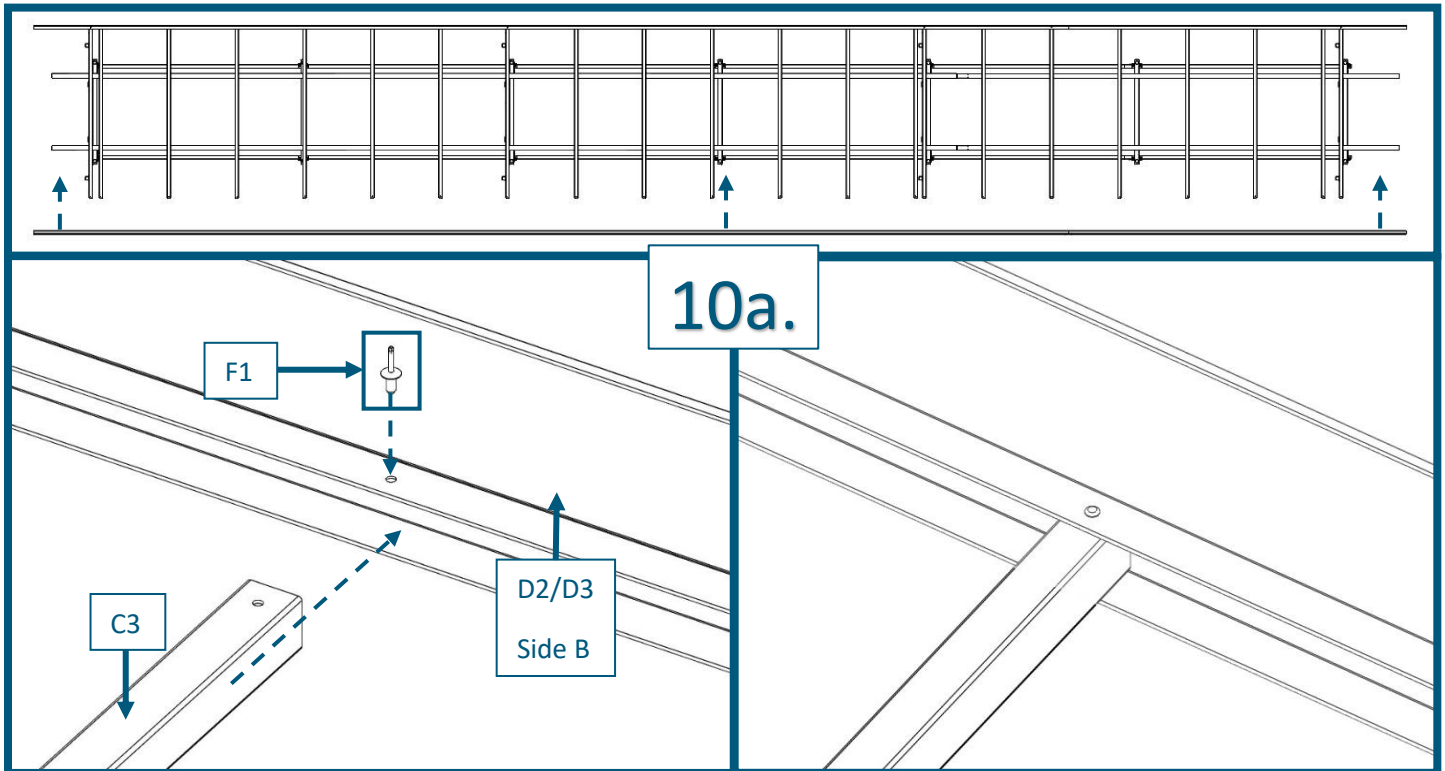
- Install (C3) Bench Cross Bars to channel of (D2/D3) Side Rail-side A in same fashion as (C2) Anti-Tip System in Step 8b. (D2/D3) Side Rails will be labeled with Cross Bar locations. Side Rails will sit 90° across the top of (C1/C2) Rolling Pipe. Lock (C3) Bench Cross Bars into place with provided (F1) Pop-Rivets *Shown Fig. 9a* **Note:** When installing Bench Cross Bars make sure the pre-punched holes on ends up tubes are facing up.



STEP #10

Remaining Side Rail & End Rails.

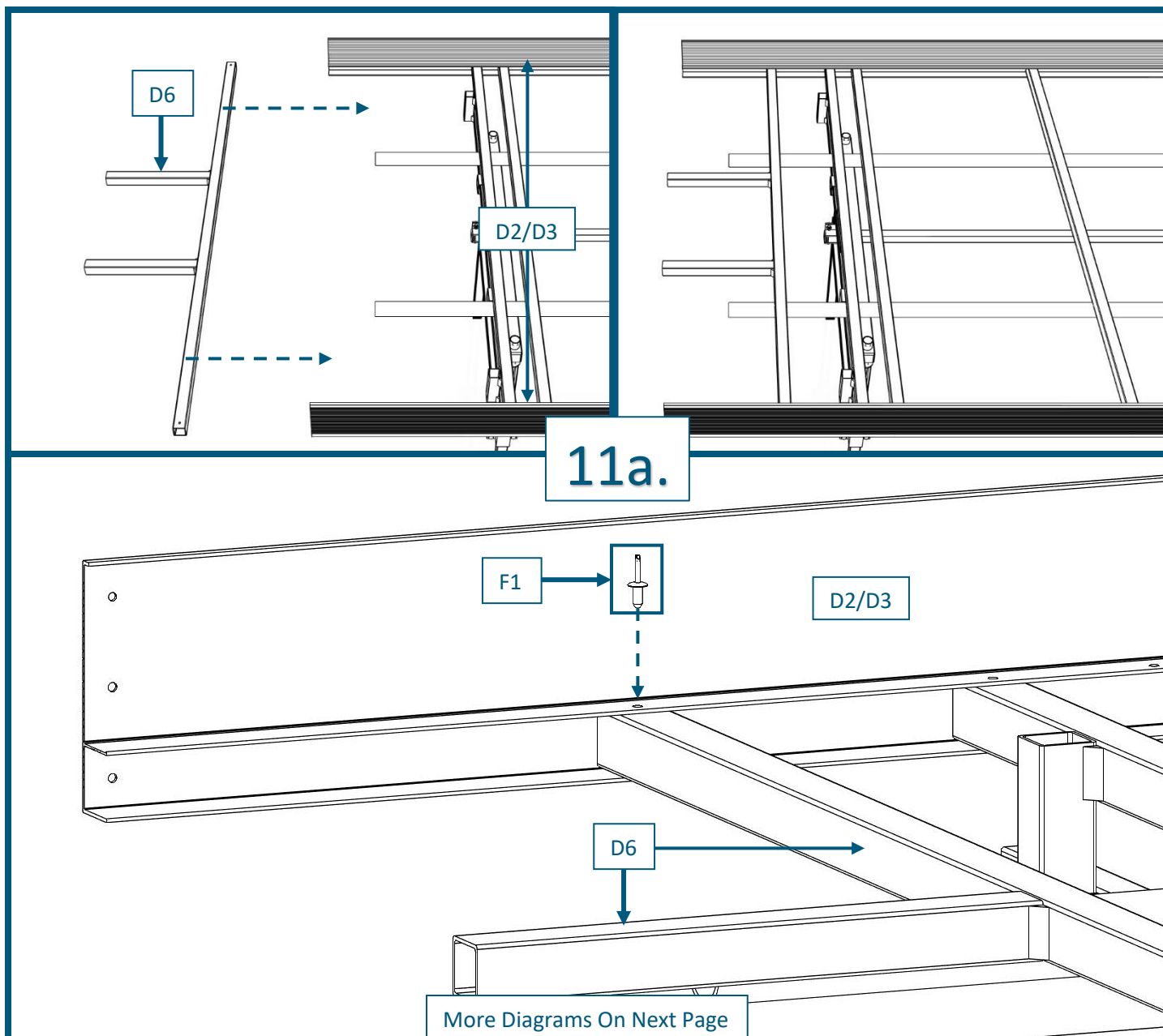
- Install (D2/D3) Side Rail-side B by sliding channel over previously installed bench top components, Side Rail will be labeled with (C2) Anti-Tip System, (C3) Bench Cross Bar locations. Lock (D2/D3) Side Rail in place with (F1) Pop-Rivets through labeled pre-punched hole locations. *Shown Fig. 10a.*



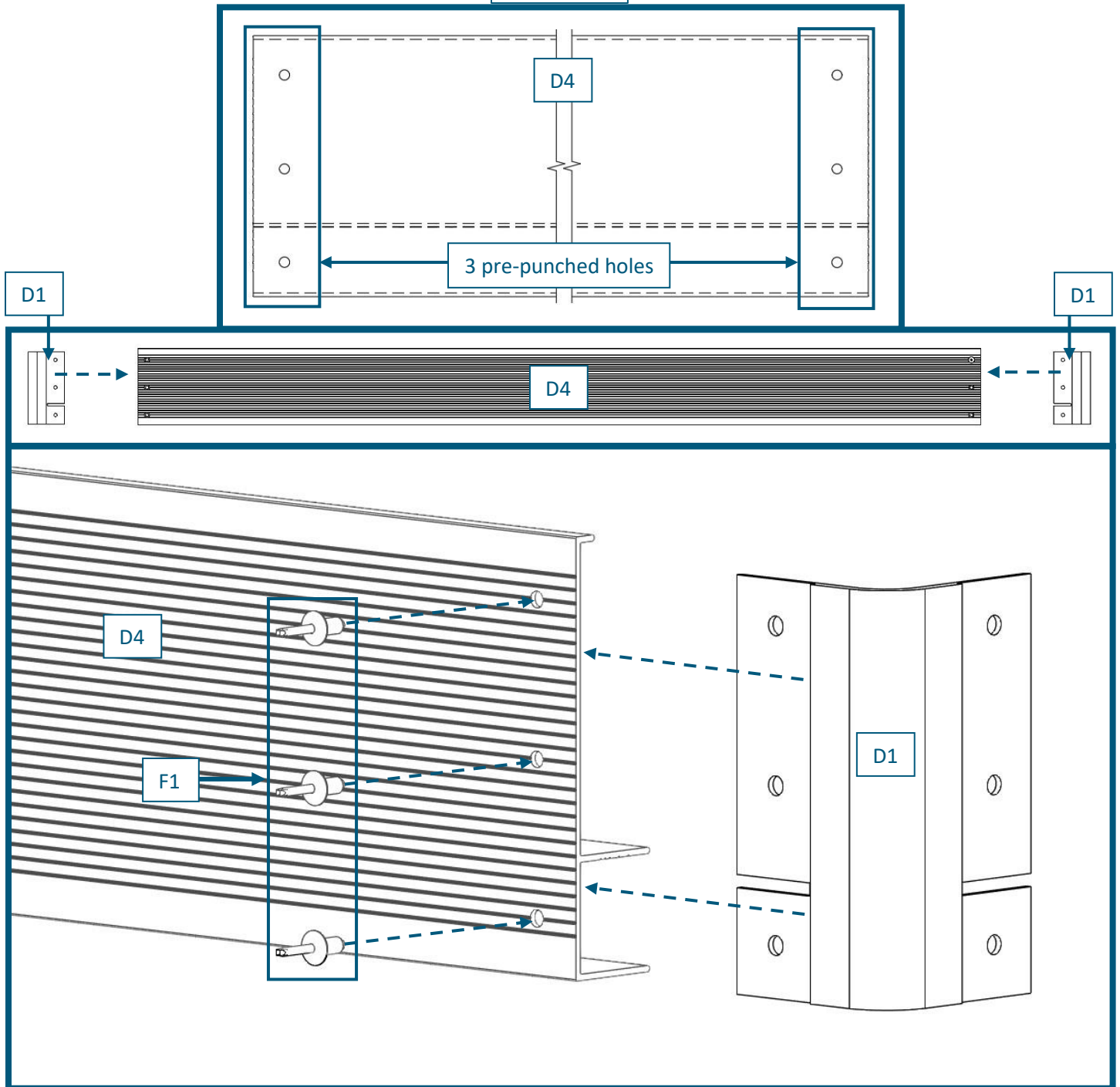
STEP #11

Install End Rail.

- *If Applicable, If bench is 5 foot or wider in width, install (D6) Bench End Frame by sliding component into end of bench in extruded channels of (D2/D3) Side Rail and locking into place with (F1) Pop-Rivet at labeled pre-punched hole location. **Note:** Orientation of (D6) End Frame *Shown Fig. 11a.*
- Install (D1) Bench Corner onto both ends of (D4) Bench End Rail with provided (F1) Pop-Rivets. **Note:** End Rails will have two sets of 3 pre-punched holes on either ends. *Shown Fig. 11b.*
- Install (D4) Bench End Rail w/ (D1) Bench Corners onto end of (D2/D3) Side Rail-side A&B with provided (F1) Pop-Rivets. Repeat for opposite end. *Shown Fig. 11c.*



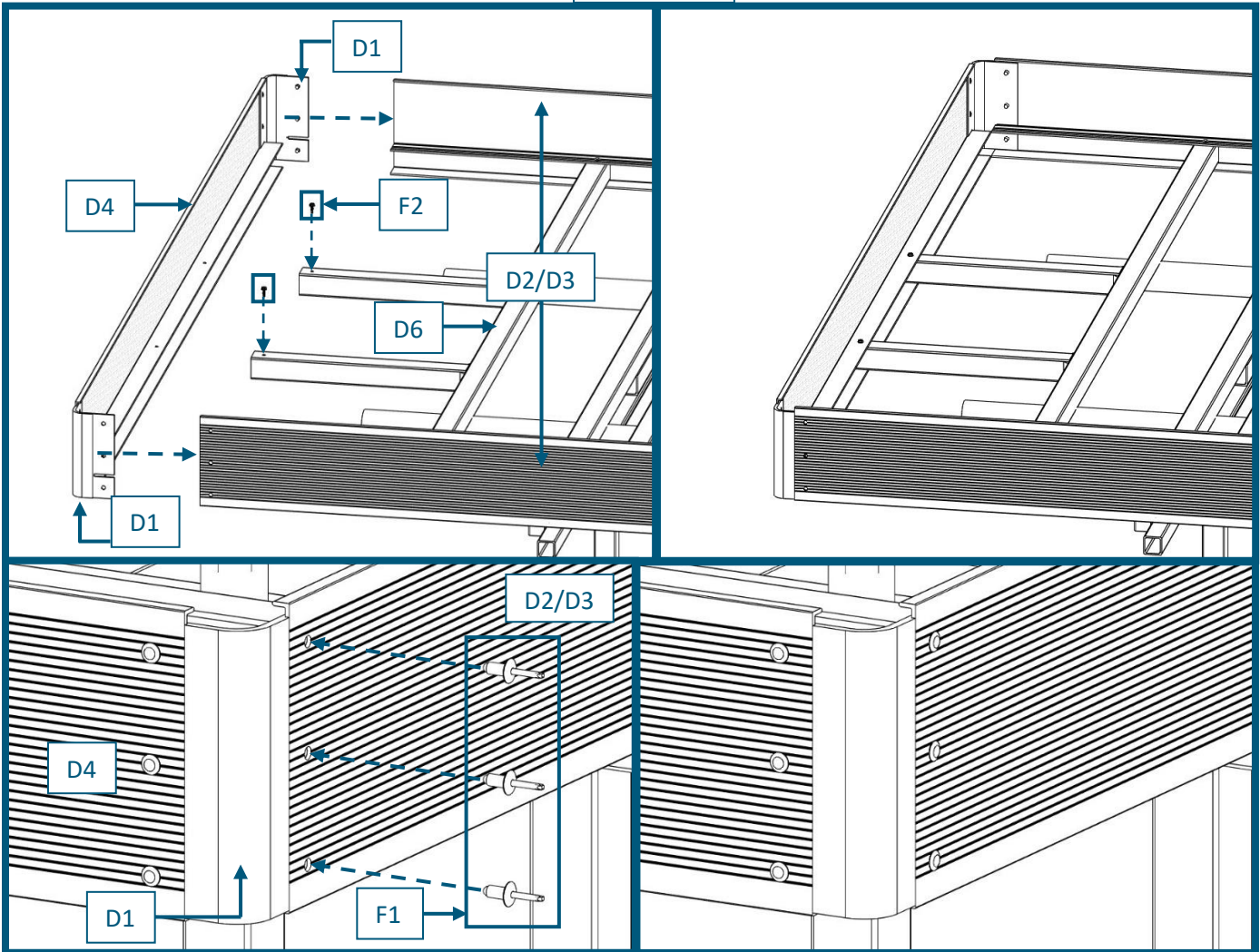
11b.



More Diagrams On Next Page

- If your bench is 5' or wider, install (D4) Bench End Rail w/ (D1) Bench Corners onto end of (D2/D3) Side Rail-side A&B with provided (F1) Pop-Rivets. End Frame will slide into extruded channel of (D4) End Rail, install (F2) Self-tapping screws through top extruded lip into 1" x 1" tubing. Repeat for opposite end. *Shown Fig. 11c.*

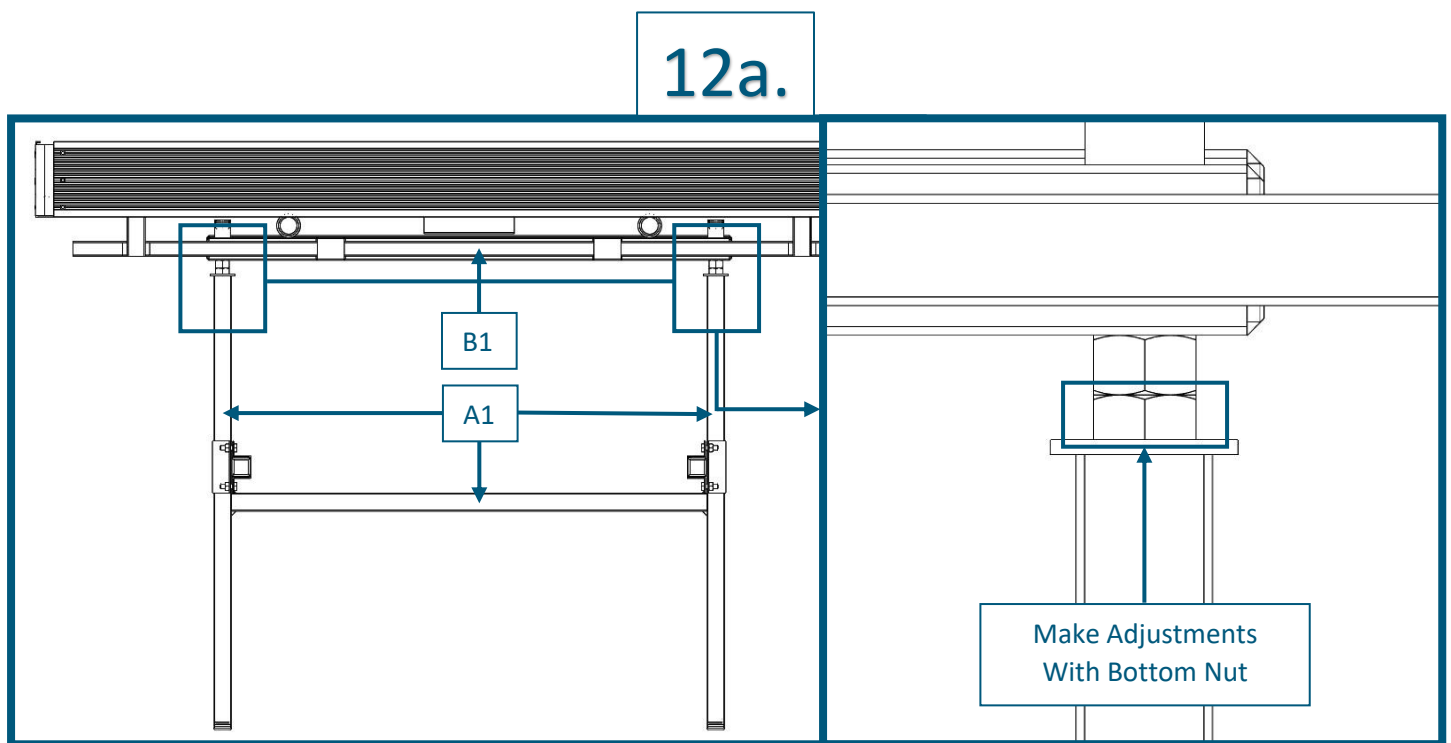
11c.



STEP #12.

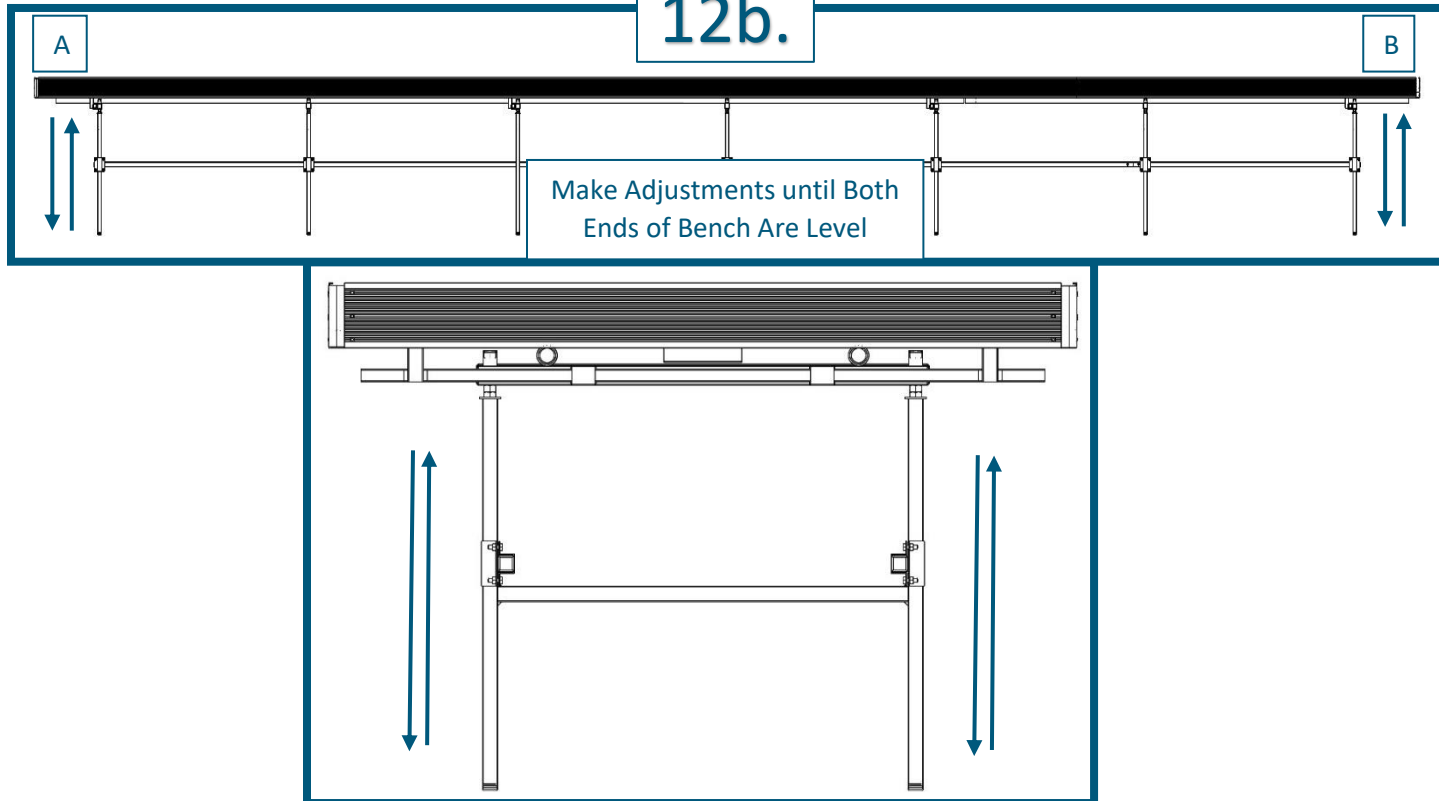
Level Bench Top.

- Level bench top by adjusting the bottom hex head leveling nuts located on bottom of (B1) Anti-Tip System. *Shown Fig. 12a.*
- Start at lowest point (A) of bench and adjust leveling nut until level with highest point (B). Place wrench on top nut to hold in place, use an additional wrench to rotate bottom nut clockwise. In addition check for level from side to side, using same method. *Shown Fig. 12b.*
- All leveling nuts between point A and point B should be turned clockwise until nut touches the washer on (A1) Leg *Shown Fig. 12c.*

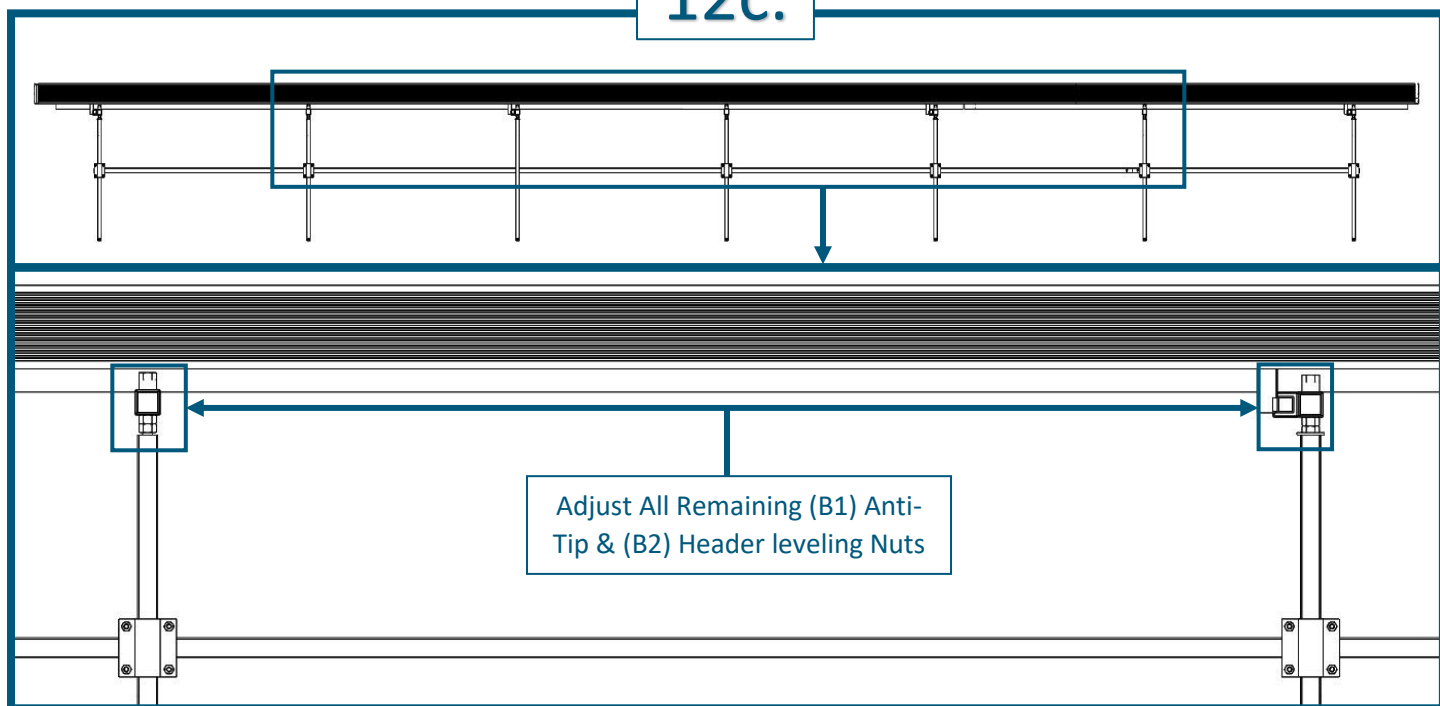


More Diagrams On Next Page

12b.



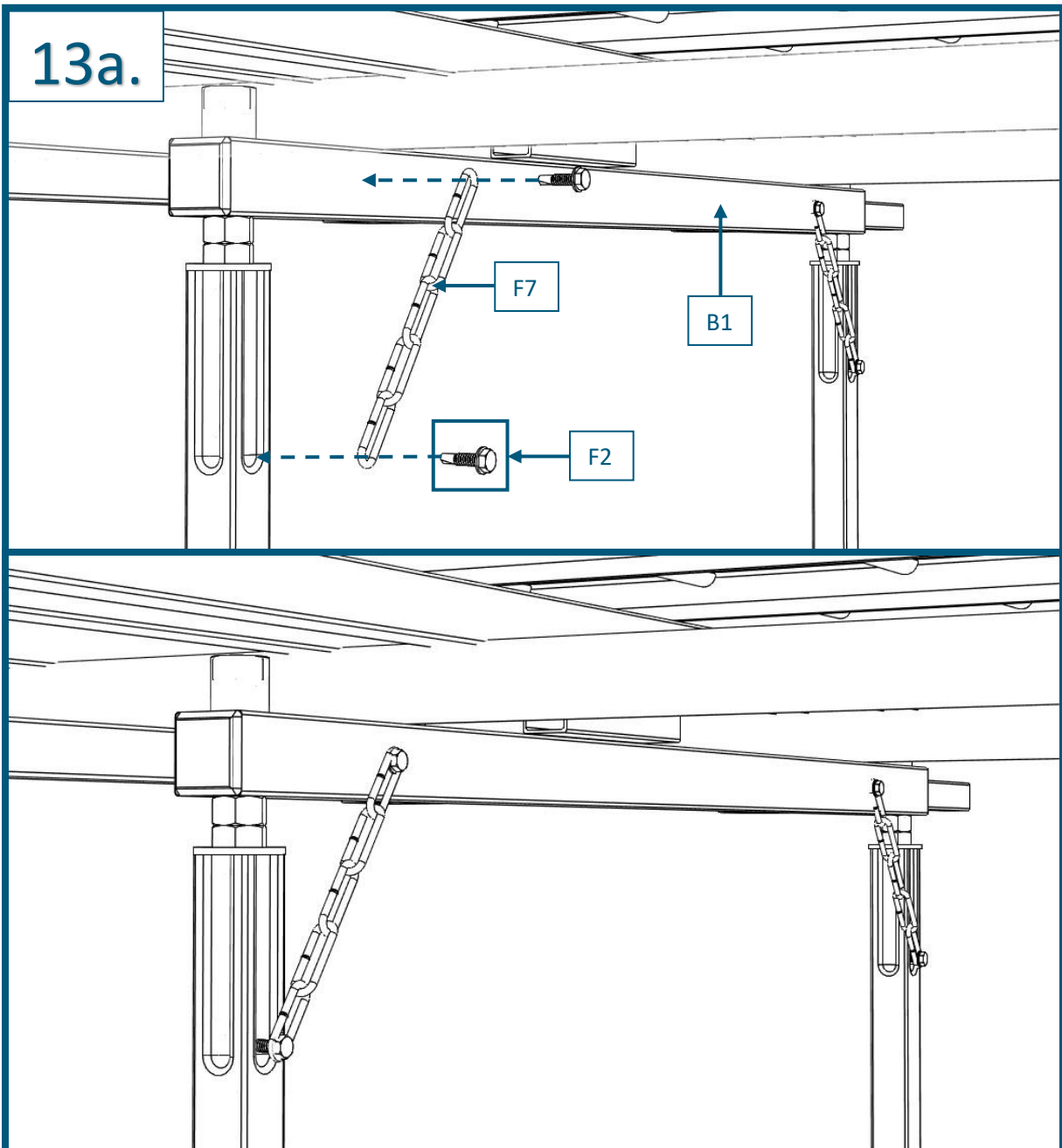
12c.



STEP #13.

Install Safety Chain.

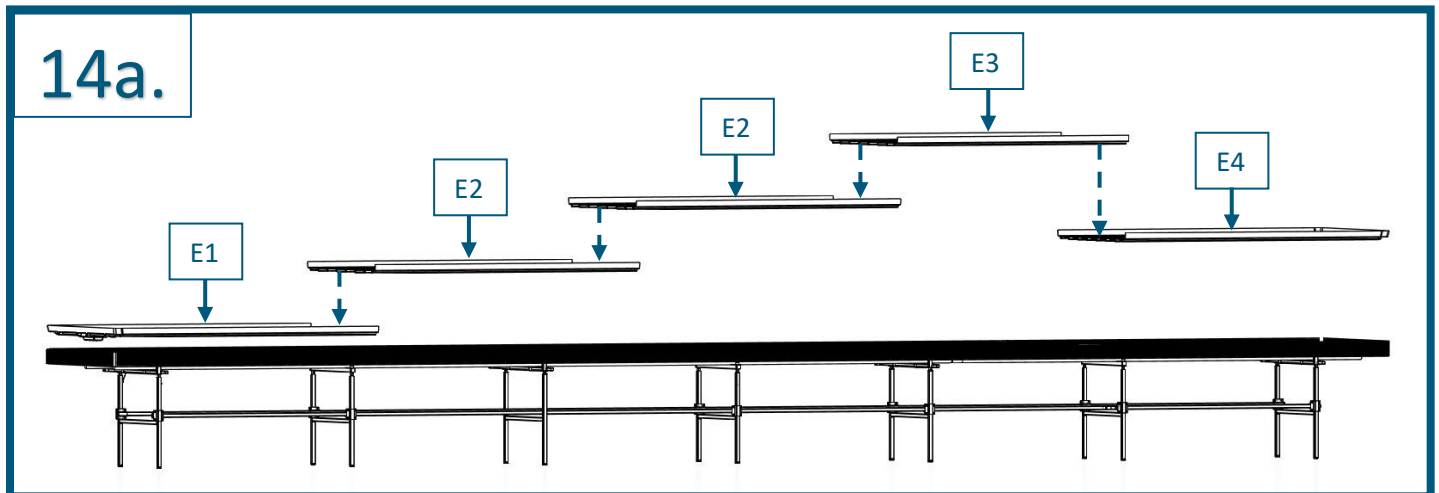
- (F7) Safety Chains need to be installed on either side of each (B1) Anti-Tip System with (F2) Self-Tapping Screws after bench has been leveled. **Note:** Chains to be installed on fixed Header portion of (B1) Anti-Tip System, locations may be varied based on leveling height of (B1) Anti-Tip System, Chains do not need to be tight, but extended as much as reasonably possible with minimal slack. *Shown Fig. 13a.*
- Repeat for all (B1) Anti-Tip Systems installed on bench.



STEP #14.

Install Trays.

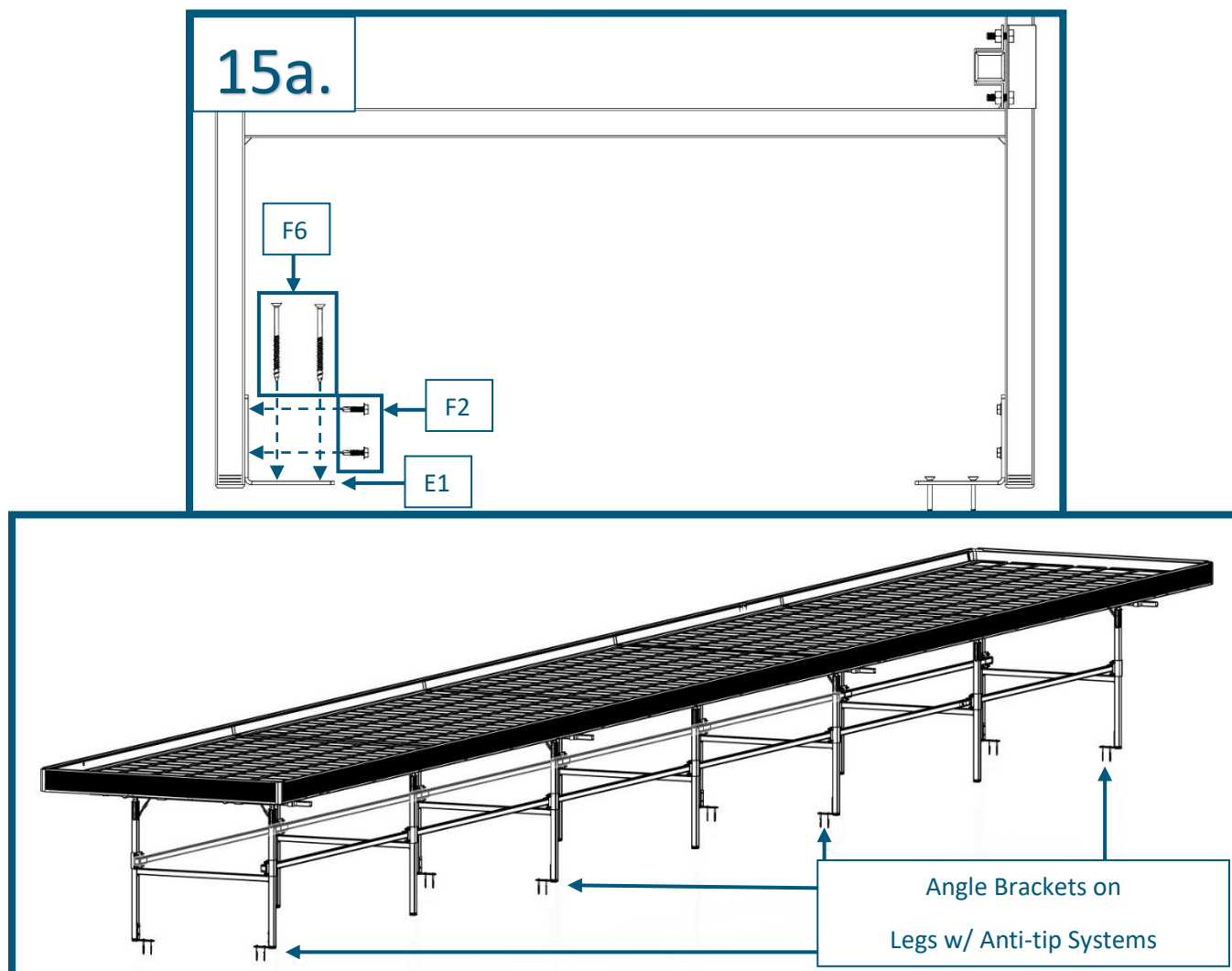
- Refer to your customized Bench Assembly Layout for tray locations. Start with setting both (E1) End Tray w/ Well & (E4) End Tray no Well on either end of bench. (E1) End Tray w/ will need to be set on end where drainage will run too. Overlap first (E2) Middle Tray off the recessed lip on (E1) End Tray w/ Well. Continue this overlap for remaining (E2) Middle Tray(s) & (E3) Filler Tray. (E3) Filler Tray will overlap on both sides on top of (E2) & (E4). *Shown Fig. 14a*
- (E3) Filler Tray lengths will be shown on your customized Bench Assembly Layout.
- **Refer to provided Staal & Plast Expandable Trays Instruction packet for proper overlap distances & gluing.



STEP #15.

Anchor legs to floor.

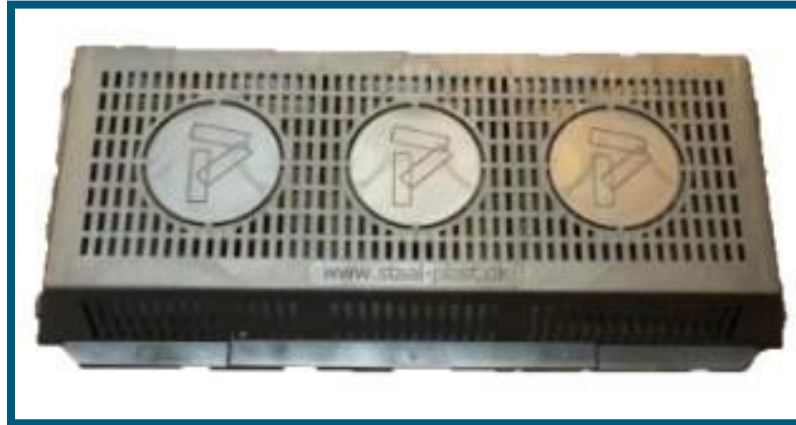
- Confirm bench is in correct location before performing this step!
- Locate (F8) Angle Bracket onto the inside of (A1) Leg. Use supplied (F2) Self-Tapping Screws in top two holes on (F8) Angle Bracket. Make sure bracket is flush with bottom of leg and sitting flat on the ground. *Shown Fig. 15a.*
- Install (F6) Tap-cons in bottom two holes of bracket. Pre-drill a 2" deep hole with 5/32 concrete bit floor through bottom two holes on bracket. Clean out holes with Vacuum or Blowout Bulb to ensure (F6) Tap-Cons will be fully seated. *Shown Fig. 15b.*
- Repeat this step on Legs with (B1) Anti-Tip System installed.



STEP #16.

Install Filter & Fittings.

- For this step, please refer to provided Filter & Fittings Instruction Guide.





For Questions or Concerns please contact us by:

- **Email: support@innovativegrowersequipment.com**
- **Phone: 815-991-5010 ext. 803**



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Innovative Growers Equipment, Inc. warrants that all Benching Equipment sold and supplied by Innovative Growers Equipment, Inc. to the Original Buyer will be free from defects in workmanship and materials under normal use and service for five (5) years year from the date of shipment by Innovative Growers Equipment, Inc., except that shelving components shall have a warranty of one (1) year. If the Benching Equipment does not operate as warranted during the applicable warranty period, and provided that Buyer promptly notifies Innovative Growers Equipment, Inc., Innovative Growers Equipment, Inc. shall, in its sole discretion (a) deliver to Buyer equivalent Benching Equipment to replace such defective Benching Equipment at its expense or (b) refund or issue a credit to Buyer (at Innovative Growers Equipment, Inc.'s sole discretion) in the amount of the purchase price paid for the defective Benching Equipment. Innovative Growers Equipment Inc.'s warranty shall not apply if goods are damaged as a result of normal wear and tear, misuse, abuse, improper Installation, modification or repair by persons not Authorized by Innovative Growers Equipment, Inc.

If Benching Equipment has been installed by an Authorized Innovative Installer and an improper installation has been performed, Innovative will replace or refund the Benching Equipment consistent with the terms above for a period of one (1) year after installation.

No goods shall be accepted for return without prior approval.

BUYER'S SOLE REMEDY FOR BREACH OF THE EXPRESS WARRANTY ABOVE SHALL BE REPLACEMENT OR REFUND OR CREDIT AT INNOVATIVE GROWERS EQUIPMENT, INC.'S OPTION. TO THE FULLEST EXTENT ALLOWED BY LAW, THE WARRANTY AND REMEDIES SET FORTH IN THIS AGREEMENT ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, EITHER IN FACT OR BY OPERATION OF LAW, STATUTORY OR OTHERWISE, INCLUDING BUT NOT LIMITED TO WARRANTIES, TERMS OR CONDITIONS OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, SATISFACTORY QUALITY, CORRESPONDENCE WITH DESCRIPTION, NON-INFRINGEMENT, AND ACCURACY OF INFORMATION GENERATED, ALL OF WHICH ARE EXPRESSLY DISCLAIMED. THE WARRANTIES HEREIN RUN ONLY TO BUYER AND ARE NOT EXTENDED TO ANY THIRD PARTIES, WHICH FOR THE AVOIDANCE OF DOUBT, INCLUDES ANY AGENTS OR RESELLERS OF LICENSEE PRODUCTS OR END USERS. INNOVATIVE GROWERS EQUIPMENT, INC. NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR IT ANY OTHER LIABILITY IN CONNECTION WITH THE SALE, INSTALLATION, MAINTENANCE OR USE OF THE COMPONENTS.