Preliminary Steps to install InterSpace in a drywall version - to be moved into install template

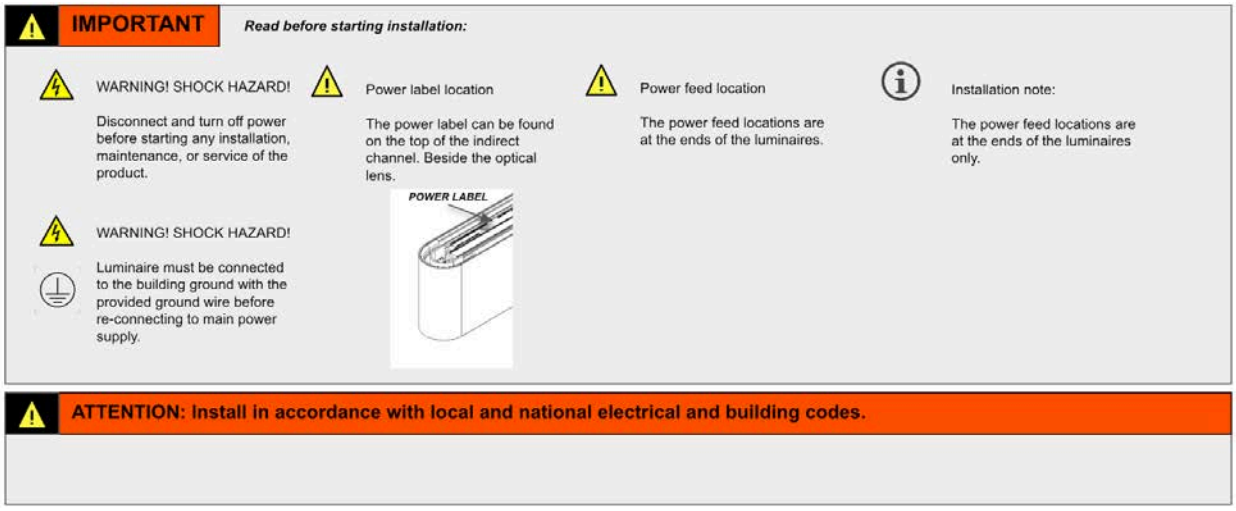
NON-ACCESABLE CEILING PREPARATION (DRYWALL)

Before installation of the fixture(s) the ceiling preparation steps must be used with the InterSpace discrete, and continuous run, and patterns installation instructions.
Important: Read all instructions including wiring and mechanical details before the start of the installation.
Important: Install in accordance with the local and national building and electrical codes.
Note: InterSpace fixtures are designed for installation post ceiling preparation completion
Important: Chicago plenum installations in non-accessable ceiling types, the driver box and jumper box are not to be adjusted. This will compromise the tape seams that are permanently sealed to comply with CCEA requirements.

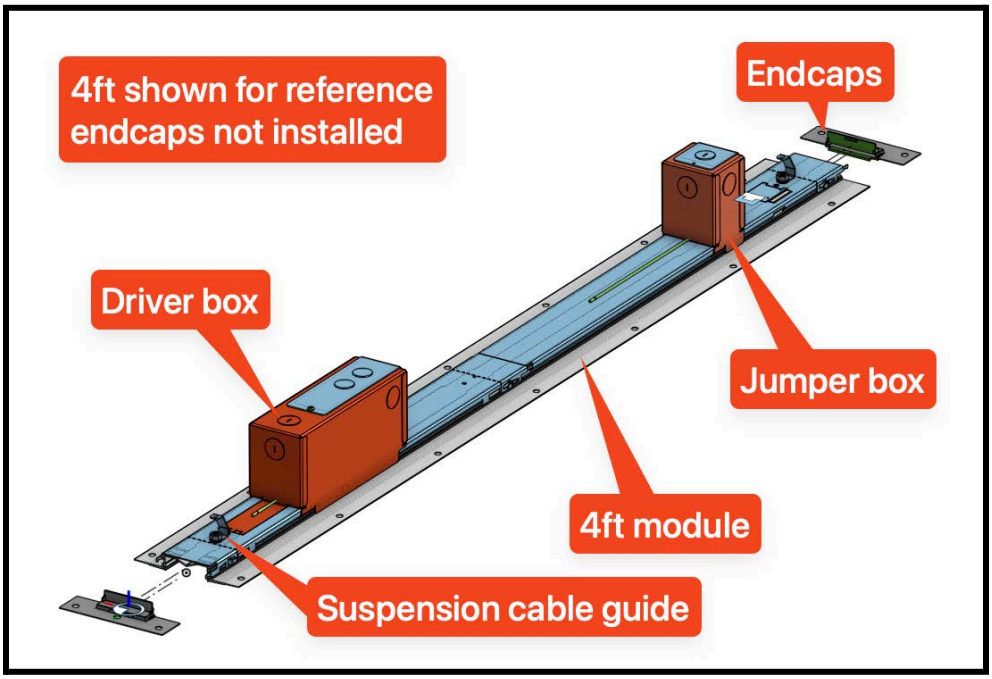
WARNINGS:

- **Shock hazard!** Fixtures must be connected to building ground via provided ground wire before connecting to main supply power.

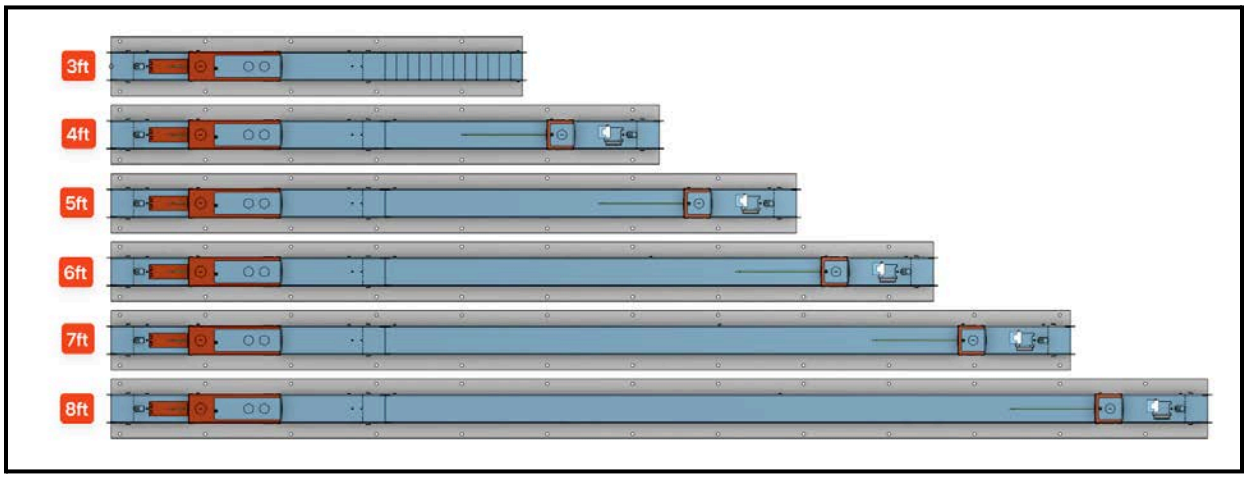
- Disconnect or turn off power supply before attempting any installation maintenance or servicing operations.(example of draft installation documentation warning section)



System Overview:
Each fixture is modular by design. There are no end or mid runs with exception to continuous run lengths outside of the nominal 4ft lengths e.g. 4ft-7in or 9ft-10in.

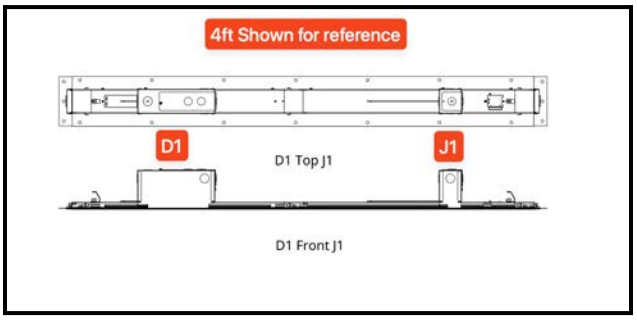


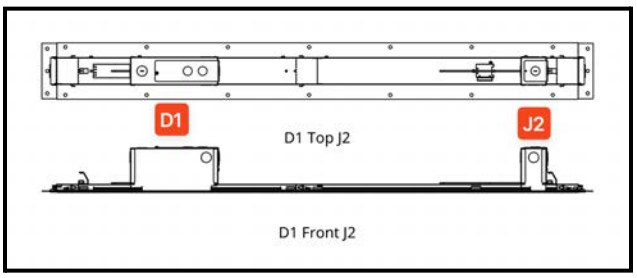
The fixture comes in the following nominal lengths: 3ft Variable, 4ft, 5ft, 6ft, 7ft, and 8ft Nominal without endcaps installed.



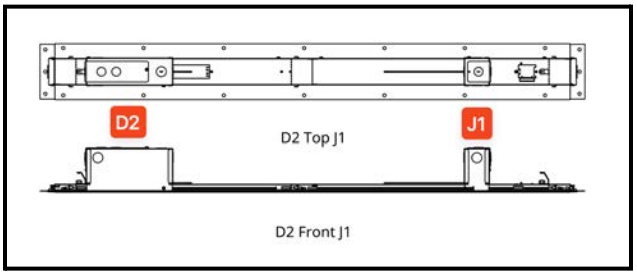
Driver box and jumper box positioning is adjustable. There are four adjustable positions for the driver and two adjustable positions for the jumper box. Allowing for 8 combinations for adjusting the positions of the driver and jumper to avoid a common 16” ceiling stud spacing.

POSITION 1: D1-J1 (DEFAULT POSITION)	POSITION 5: D1-J2

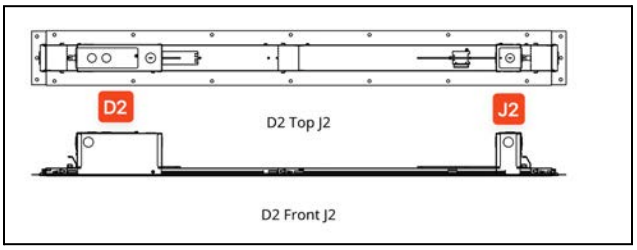




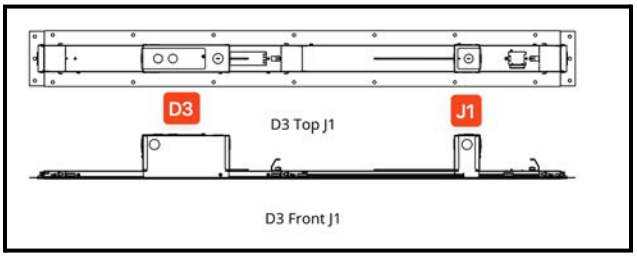
POSITION 2: D2-J1



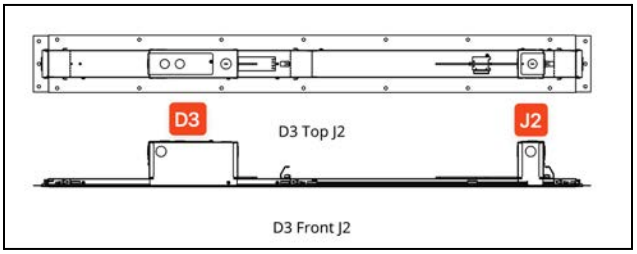
POSITION 6: D2-J2



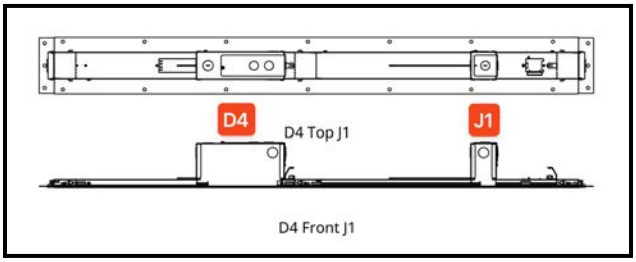
POSITION 3: D3-J1



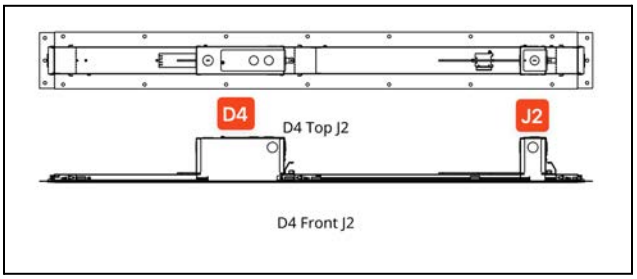
POSITION 7: D3-J2



POSITION 4: D4-J1

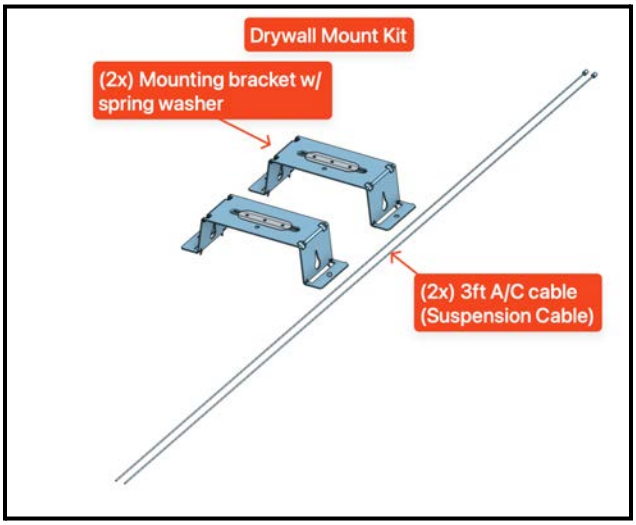


POSITION 8: D4-J2

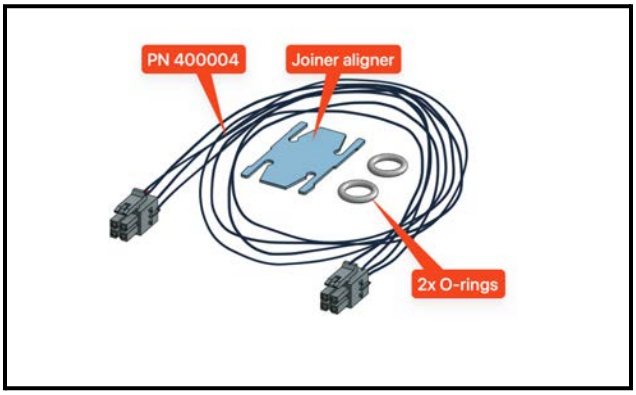


Mounting & Joining Hardware

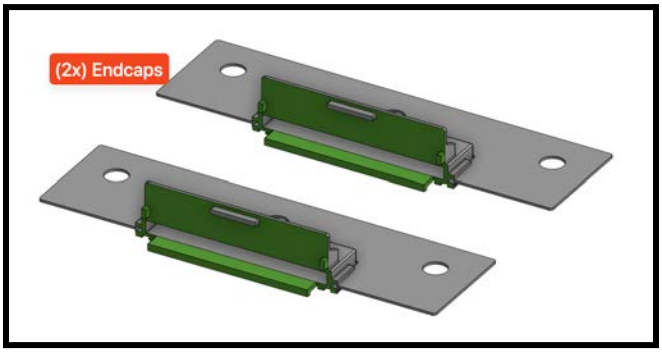
Drywall Mounting Kit



Joining Kit



Endcap Kit



Ceiling preparation for Standalone fixtures.

Identify fixture location(s) and match up the fixture tags as per layout drawings for appropriate length cut out.

a. Stud spacing is to be noted during locating fixtures and adjust accordingly for stud avoidance. (*Refer to adjustment matrix for locating the driver and jumper boxes)*

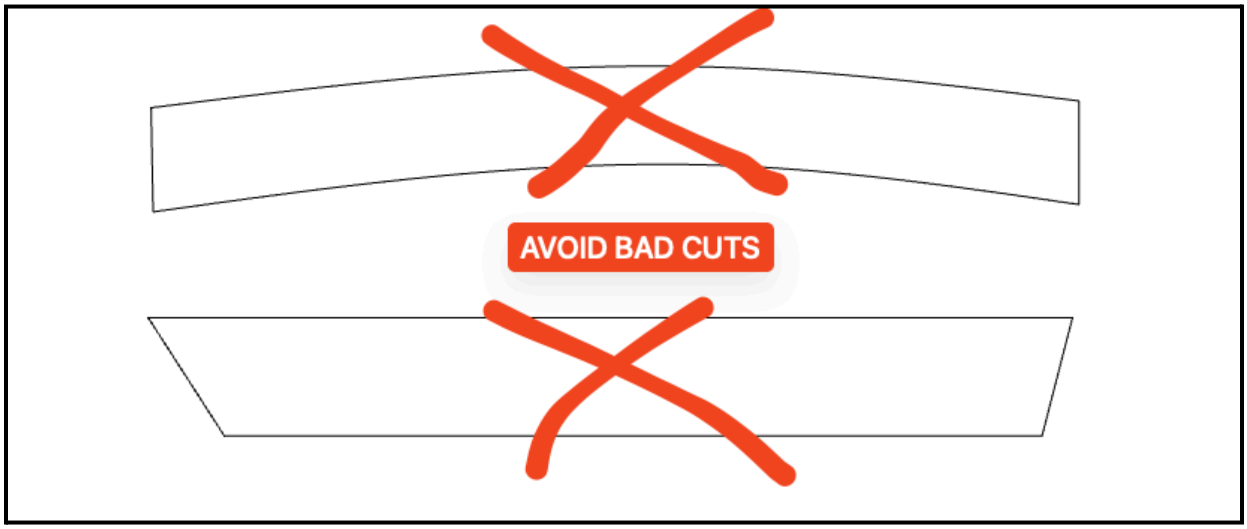
Determine locations for power connection as per layout drawings.

Install power feed connections and rest below ceiling for access during power connection steps to fixture(s).

Cut out information and details:

- Recommend using appropriate tools to outline specific ceiling cut out dimensions and locations to ensure straightness of the cuts)
- Avoid cutting un-even cuts and curves over the length.

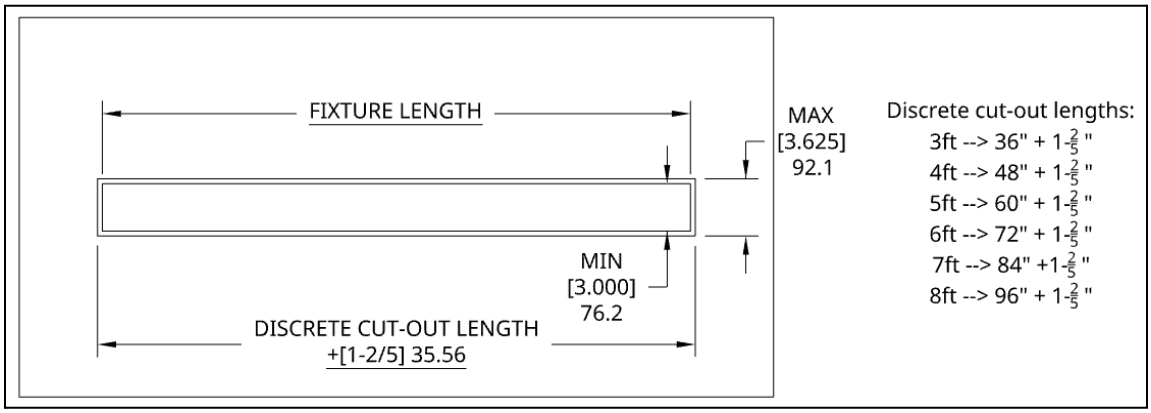
- Proper care to ensure straightness of cuts with accuracy is important in the drywall to avoid rework and for proper fit and function of the Mindset Lighting fixtures.



Cut Lengths for Standalone:

- 3 in **MIN** to a 3-⅛ in **MAX** width cut out for **Trim. (for trim version)**

- 3 in **MIN** to 3-⅝ in **MAX** width cut out for **Trimless**



Ceiling preparation for Continuous Runs

Identify fixture location(s) and match up the fixture tags as per layout drawings for appropriate length cut out.

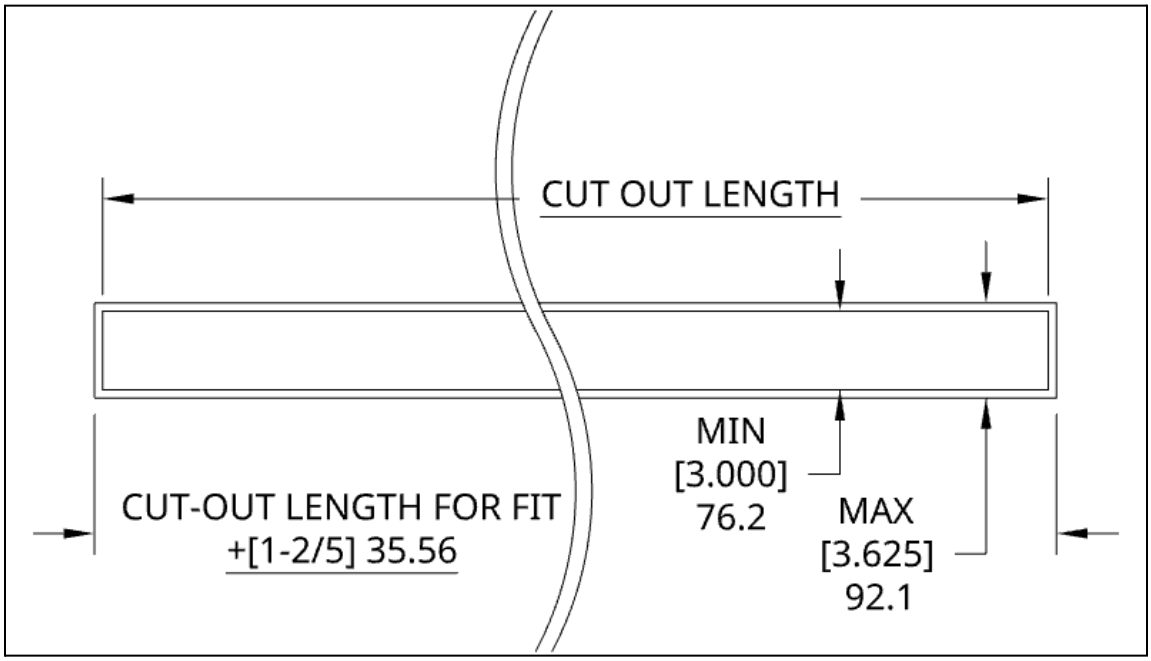
b. Stud spacing is a key step during locating fixtures to adjust drive box and jumper box accordingly for stud avoidance.

Determine locations for power connection as per layout drawings.

Install power feed connections and rest below ceiling for access during power connection steps.

Cut Lengths for Continuous Run:

- 3 in **MIN** to 3-⅝ in **MAX** width cut out for **Trimless**

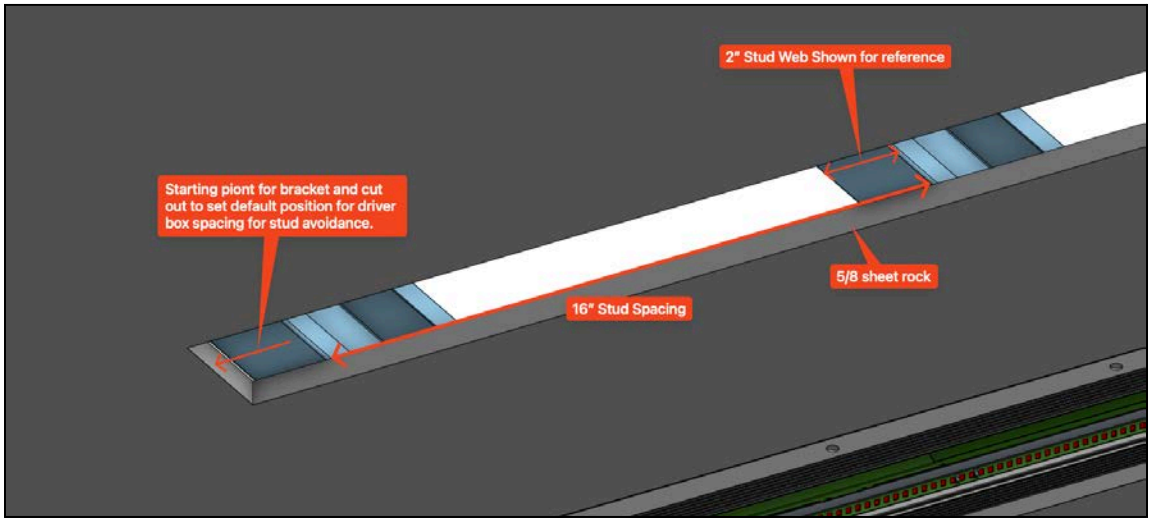


Perpendicular Stud Orientation Installation:

Starting locations are determined by using the cut out start position as the datum relative to the stud in the opening at the start. E.g. image below (Use 3D printed start tool to position the default start if desired or cardboard screen print or a measuring tape?)
Mindset Lighting InterSpace cut out starting positions are designed around =< 2 [inch] wide studs*.

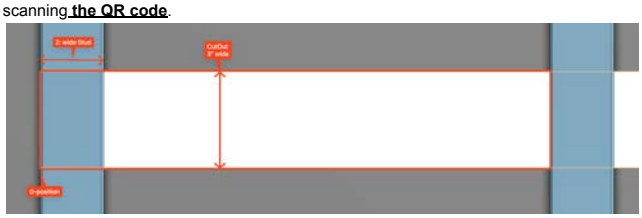
*In a situation where the steel studs are <2.5 inch wide or an obstruction due to a double stud application, plumbing interference, ducting, or other artifacts that obstruct the installation. The fixture can be turned around and/or adjust driver box or jumper box locations accordingly to fit the specific location in the ceiling.

Important: Read before installing the mounting brackets and fixture(s).

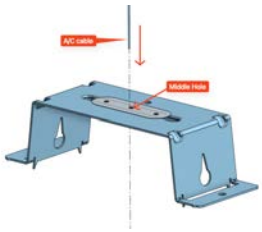


Orient the cut out to start relative to the back of the stud to determine the locations of driver box and jumper box placement as per layout drawing.

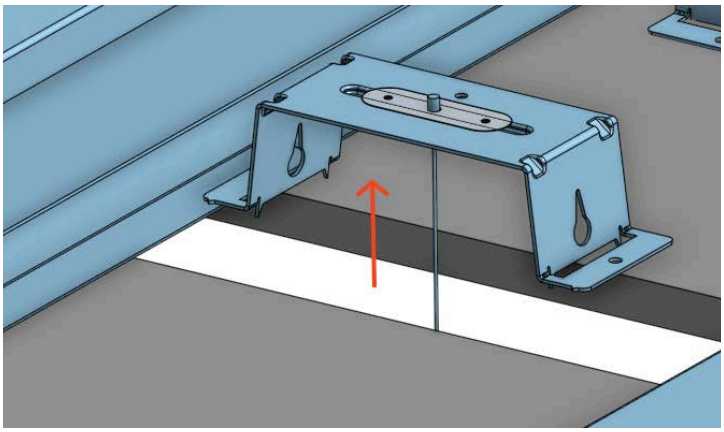
Important: Datum position to stud for spacing see below image for 0-position reference. Use the InterSpace Positioning Matrix table to determine recommended positioning or driver box and jumper box relative to cut out start location. The positioning matrix can be found by clicking **this link** or scanning **the QR code**.

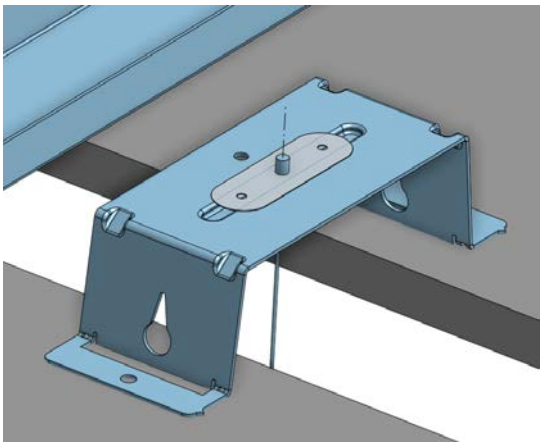


Once the cut out location or start end is determined the mounting bracket can be placed relative to a distance from the opening of the cut out. If at 0-position bracket may be inserted and rest against stud.

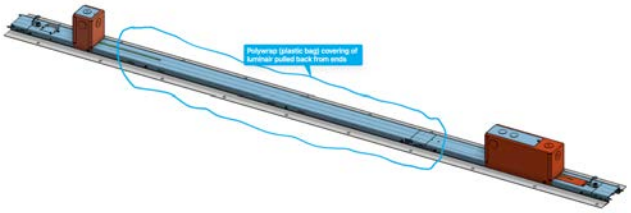
Install the A/C cable into the middle hole of the spring plate on the mounting bracket.	WARNING!: Puncture tabs are sharp on the bottom of the bracket
	

1. Raise the bracket with A/C into the cut out pocket as determined based on distance from cut out start. This bracket must be centered between the cut out to ensure the fixture is centered once suspended and raised into final position.	2. Rotate and place onto sheet rock. Mind the puncture tabs and ensure the bracket is placed in the middle of the cut out opening. Pull down on the bracket to ensure the puncture tabs bite into the sheet rock board.

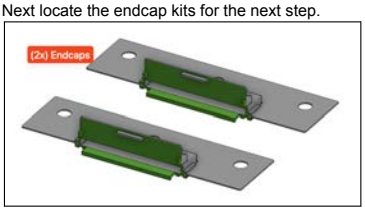




3. Prepare the starter fixture. Open packaging and remove fixtures from packaging and pull back the poly wrap. Lay fixture on ground optical cavity face down.

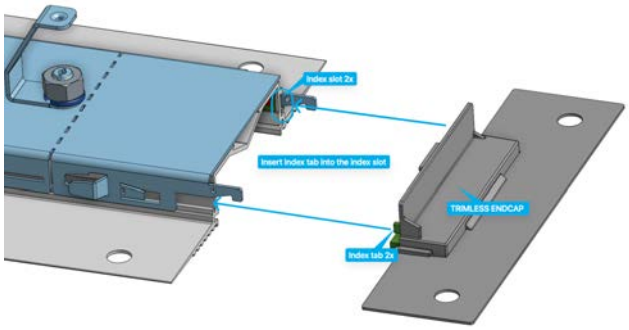
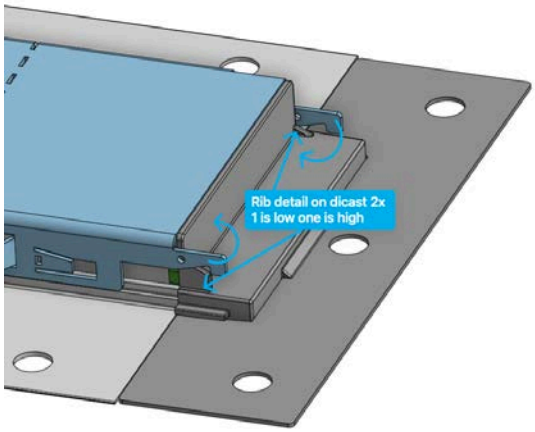


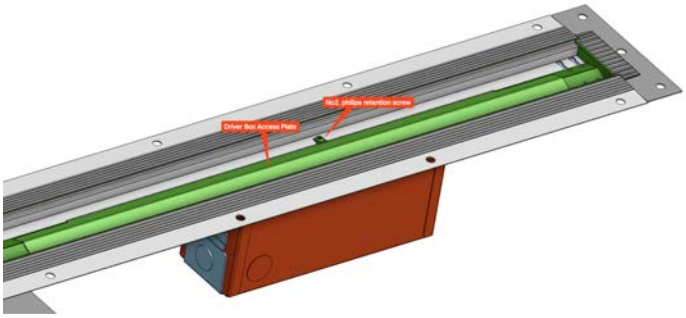
4. Next locate the endcap kits for the next step.



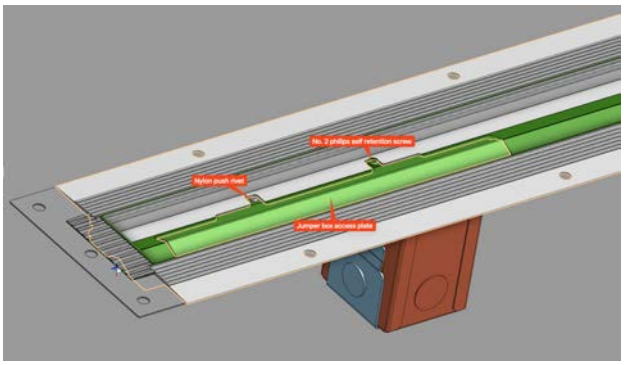
5. Unpackage the endcaps and install both if standalone. For continuous run install the end you are to start with. Recommend to start on the driver box end.

6. Fold over securing tabs on sheet metal top over ribs on diecast endcap.

	
7. Turn the fixture over and slide mud guard out of the way to gain access to the driver access plate found in the optical cavity.	8. On the opposite end you will find the access cover plate for the jumper box cavity. Again slide mud guard of the way if covering the access plate.



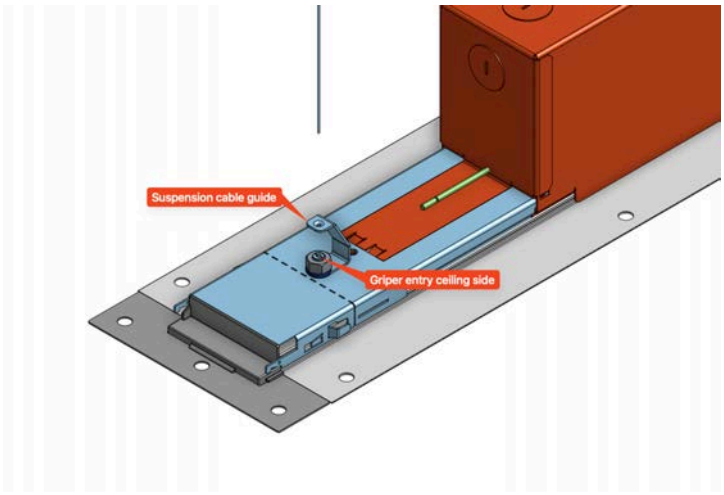
Driver Box access plate:
Standalone: Only remove this cover plate if power is to be connected at the driver connection end. Use NO 2. philips screw driver to remove retention screw
(**Note:** the retention screw is a captive screw no need to remove fully it will stay with the cover plate).
Continuous run:
Each fixture will require this access plate to be removed to make power connection to the connecting fixture in the run.
Note: with the exception of the end conditions this plate may not need to be removed.

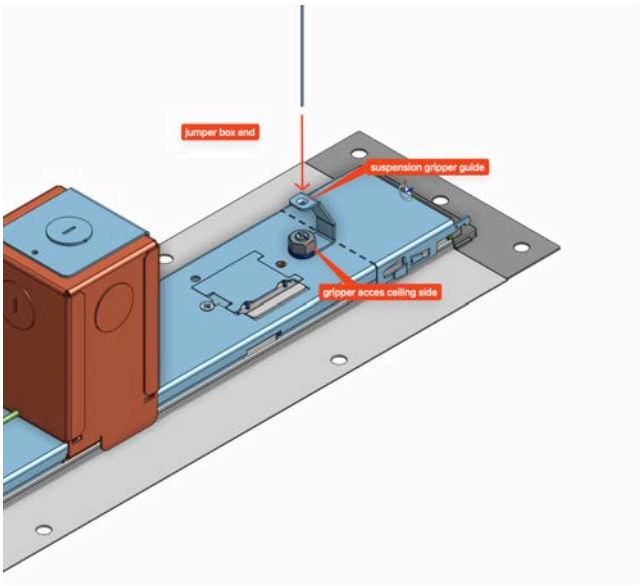


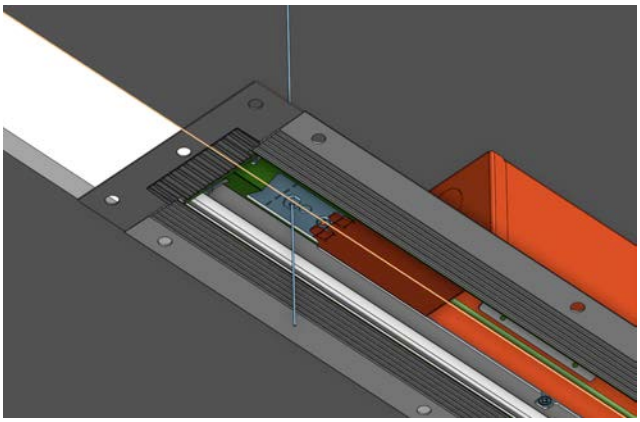
Jumper Box access plate.
Standalone: Only remove this cover plate if power is to be connected at jumper connection end. Use NO 2. philips screw driver to remove retention screw.(**Note:** the retention screw is a captive screw no need to remove fully it will stay with the cover plate).
Nylon push rivet can be disengaged by pushing from the other side. Push rivets do not need to be removed from the access plate.
Continuous run: Each fixture will require this access plate to be removed to make power connection to the connecting fixture in the run.
Note: with the exception of the end conditions this plate may not need to be removed.

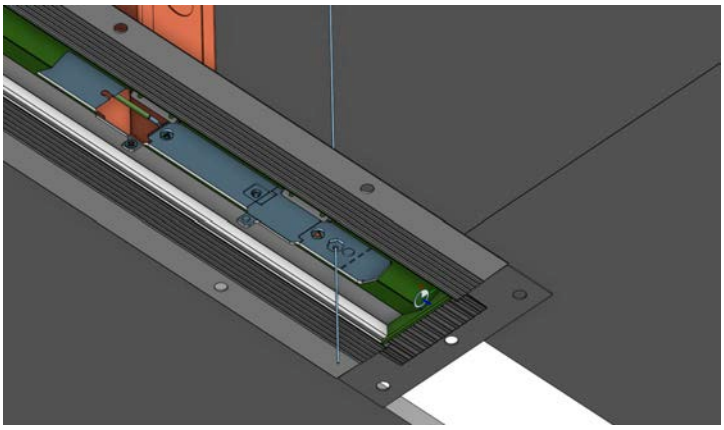
9 . Once the appropriate access plates are removed, the gripper(s) will become accessible from the room side of the fixture to feed the suspension cable through.

10. Jumper box gripper end. Standalone shown for reference


Suspension cable guide
Griper entry ceiling side


jumper box end
suspension gripper guide
gripper acces ceiling side



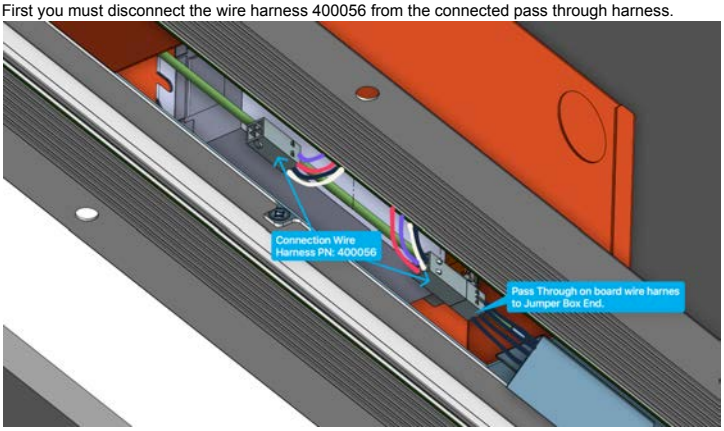


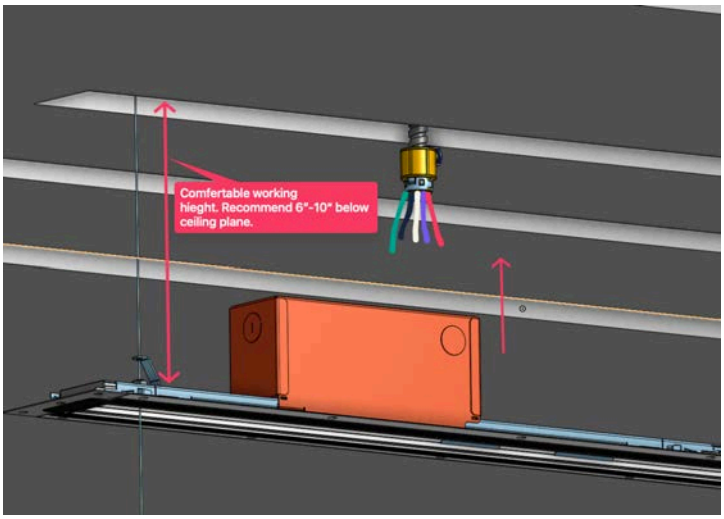
11. Raise the fixture up to the power connection point to prepare to make the electrical connections at power drop location.

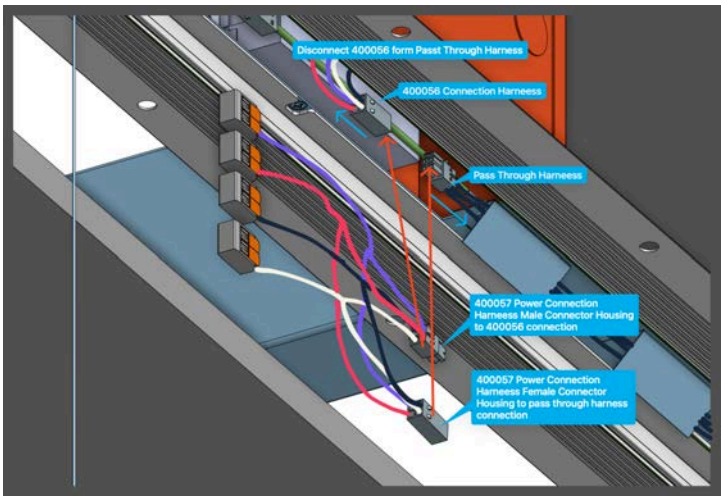
12. Next steps are to prepare a starter fixture or for a fixture in a run to make the electrical power connection.

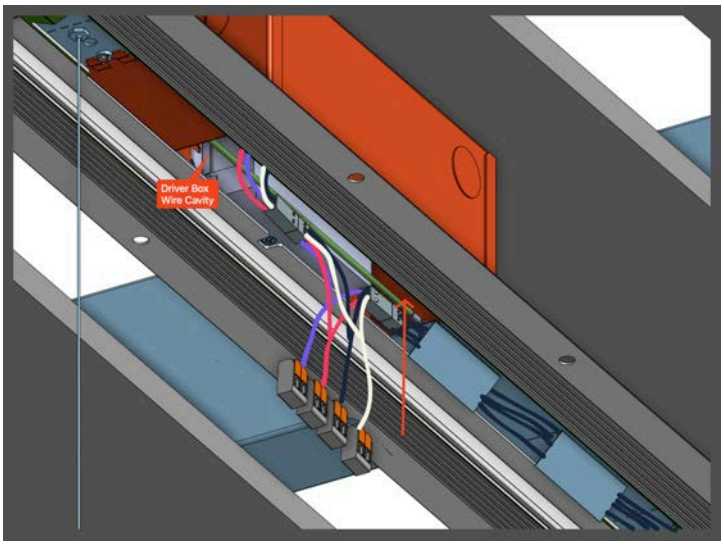
To prepare fixture for power connection in the (Driver Box End)

First you must disconnect the wire harness 400056 from the connected pass through harness.



	
13. Next connect the power connection harness 400057 between 400056 and the pass through wire harness connector within the driver box.	14. Once 400057 is connected between 400056 and the pass through you must feed the power connection harness into the driver cavity.





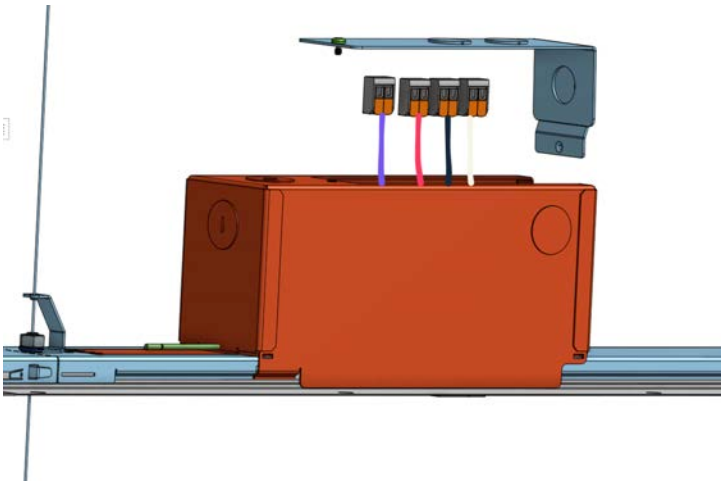
15. Remove the WAC from the top of the driver box to access the leads from 400057 withs the 2-way lever WAGOs attached.

WARNING: SHOCK HAZARD! Ensure supply power is off.

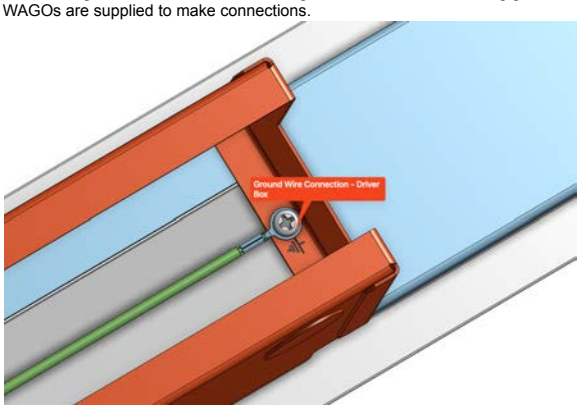
Make Ground Connection First (Driver Box End)

Wiring connections:
Green: Ground Wire (Ground Wire on terminal ring connected to to driver box)
Power Connection Harness - PN: 400057

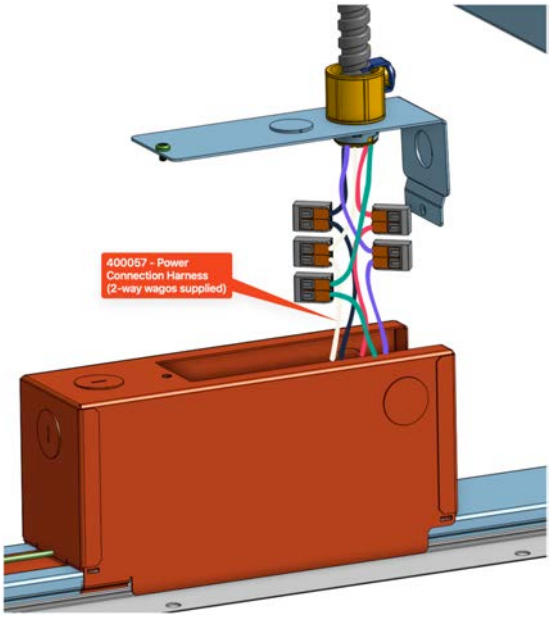
- Black: Hot
- White: Neutral
- Purple (Violet): Dimming
- Pink: Dimming



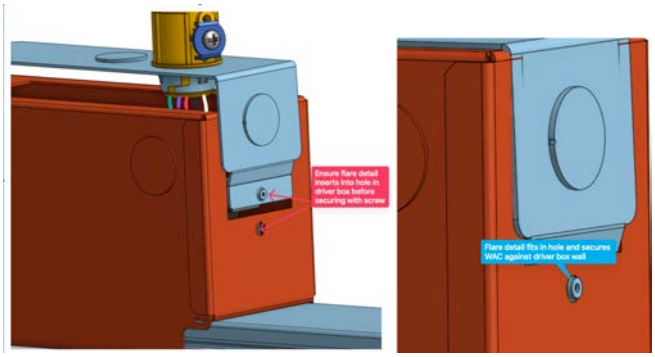
16. Locate ground wire first to connect to ground wire from the building ground. 2-way lever WAGOs are supplied to make connections.

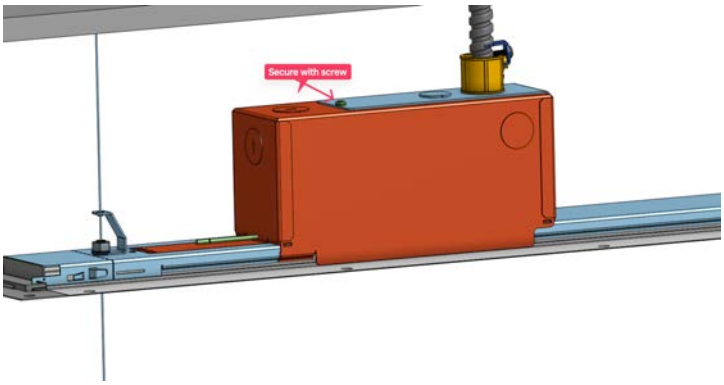


17. Connect wire harness 400057 to the building supply connection wires.

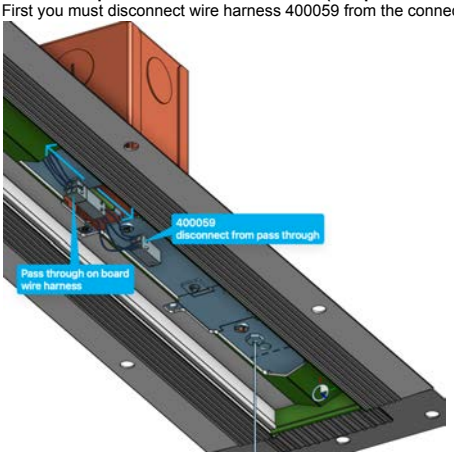
	 400057 - Power Connection Harness (2-way wagos supplied)

18. Insert the connected wires into the driver box or jumper box and secure the WAC with the self retaining screw.

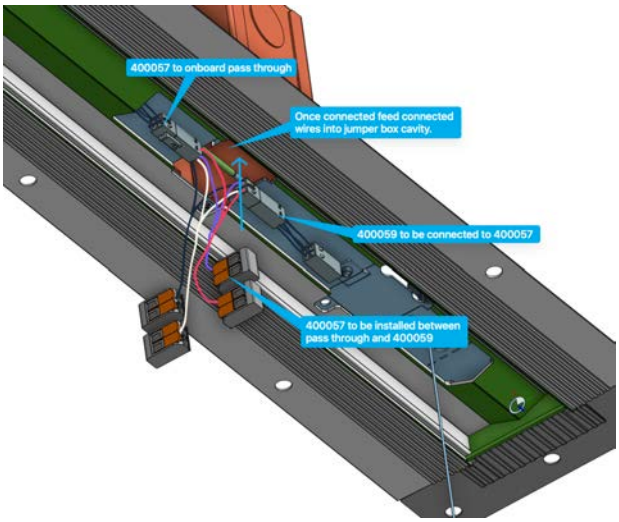




19. To make power connection harness in (Jumper Box End)
First you must disconnect wire harness 400059 from the connected pass through harness.



20. Next connect the power connection harness 400057 between 400059 and the pass through harness connector. Once complete feed connected wires into the jumper box cavity.



WARNING: SHOCK HAZARD! Ensure supply power is off.

Make Ground Connection First (Jumper Box End)

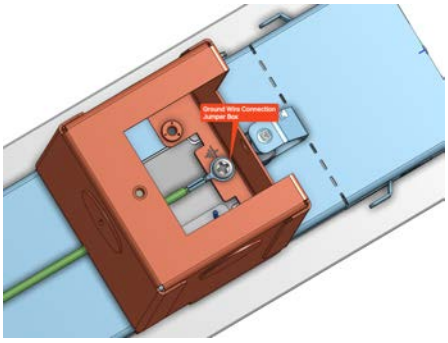
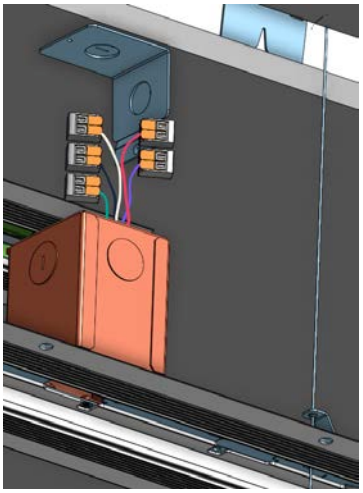
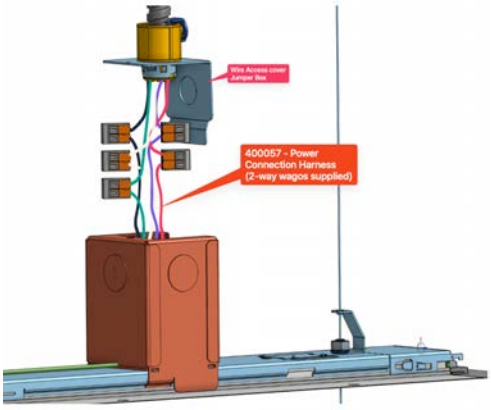
Wiring connections:

Green: Ground (Ground Wire not connected to harness 400057 on 9” lead inside jumper box)

Power Connection Harness - PN: 400057

- Black: Hot
- White: Neutral
- Purple (Violet): Dimming
- Pink: Dimming

21. Remove jumper box WAC to locate ground wire first to connect to ground wire from the building ground. 2-way lever WAGOs are supplied to make connections.

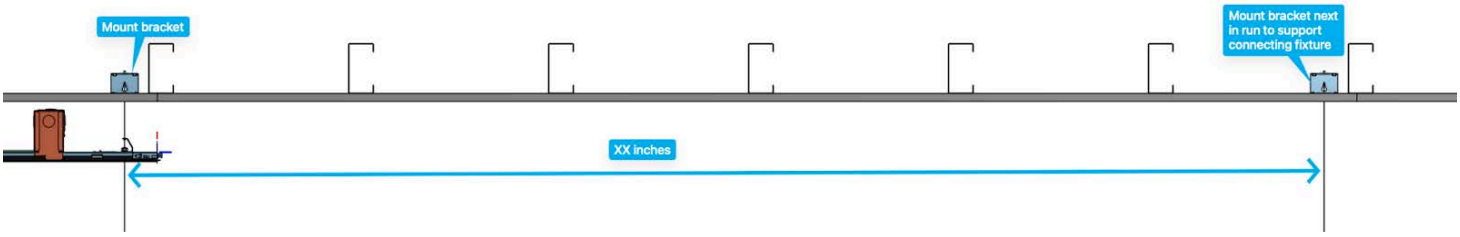
	
22. Remove the WAC from the Jumper Box to access the leads from 400057 with the 2-way lever WAGOs attached. 	23. Connect wire harness 400057 to the building supply connection wires. 

24. For Standalone fixtures move to step 40, for continuous run installation move to the next step.

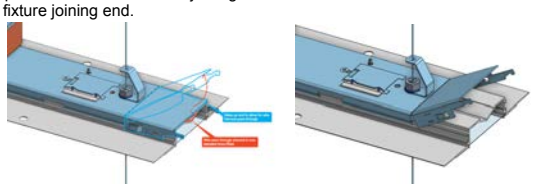
Continuous Row Installation Steps

25. Install the next mounting bracket and suspension cable in the correct location based on the length of the next fixture.

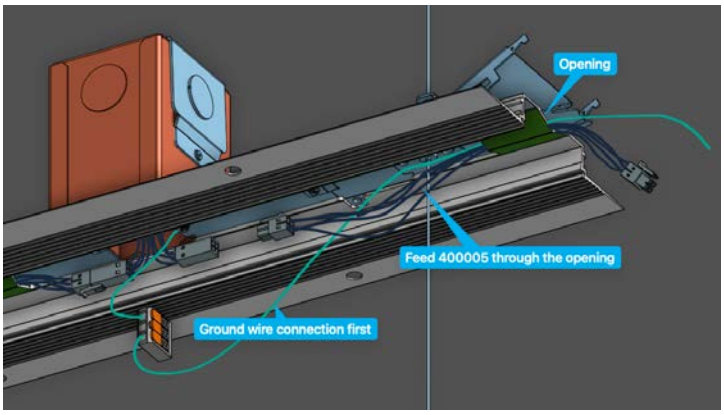
Distance XX inches from mount bracket to next mount bracket center to center (note if on second mount hole due to movement of gripper and bracket add/subtract 0.186 inches (4.7 mm) between holes of adjustment).
If the mounting hole lands under a stud, then secure with a #10 drywall screw, self taping sheet metal screw, or hardware appropriate to secure to structure.
8ft = 96 inch from center to center of suspension cable(s)
7ft = 84 inch from center to center of suspension cable(s)
6ft = 72 inch from center to center of suspension cable(s)
5ft = 60 inch from center to center of suspension cable(s)
4ft = 48 inch from center to center of suspension cable(s)
3ft = 36 inch from center to center of suspension cable(s)
Variable = defined by cut length measure from joiner bracket (Refer to layout drawing and fixture run tag)



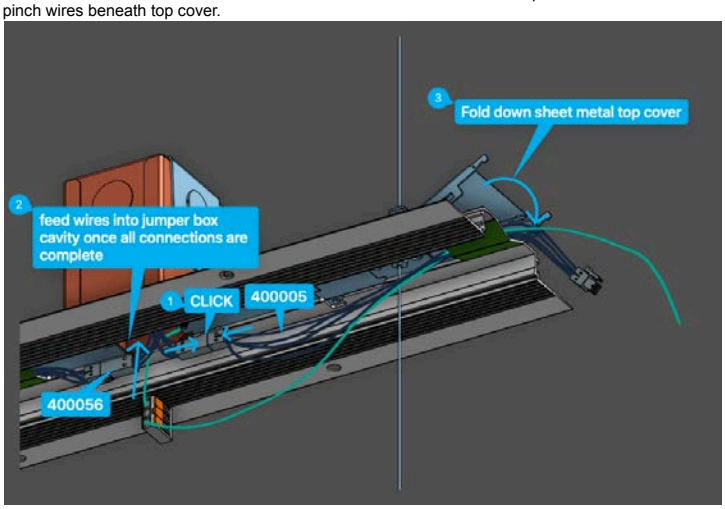
26. Prepare the starter fixture for joining the next fixture. Raise the end of the sheet metal on the starter fixture joining end.



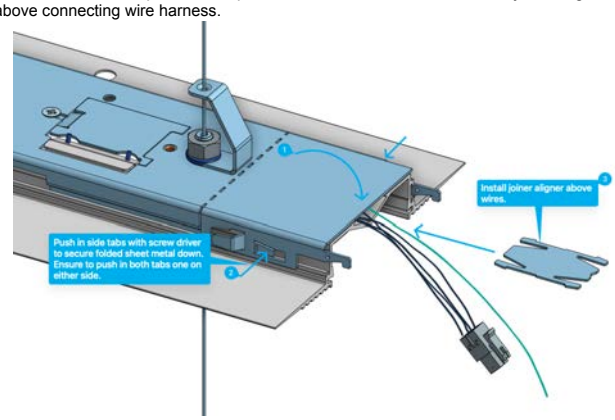
27. Feed jumper ground wire through opening and connect to the 2-way or 3-way lever WAGO. If location is at power connection, use three wire lever. Feed through pass through 400005 through opening next.

	 Opening Feed 400005 through the opening Ground wire connection first

28. Connect 400005 to 400056 from within the jumper box. Access from below to make the connection. Ensure the connectors are secure. Close down sheet metal top cover be mindful not to pinch wires beneath top cover.

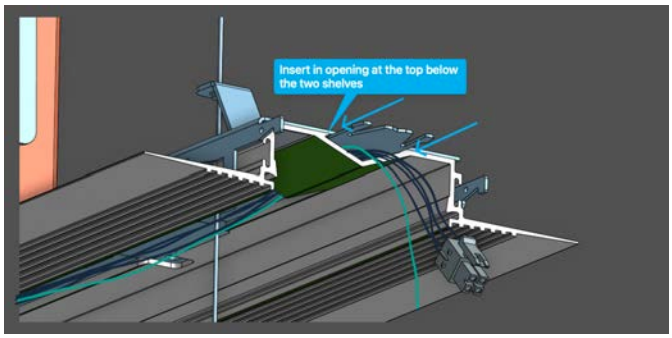


29. Secure folded down top cover with push in side tabs on both sides. Install joiner aligner biscuit next above connecting wire harness.

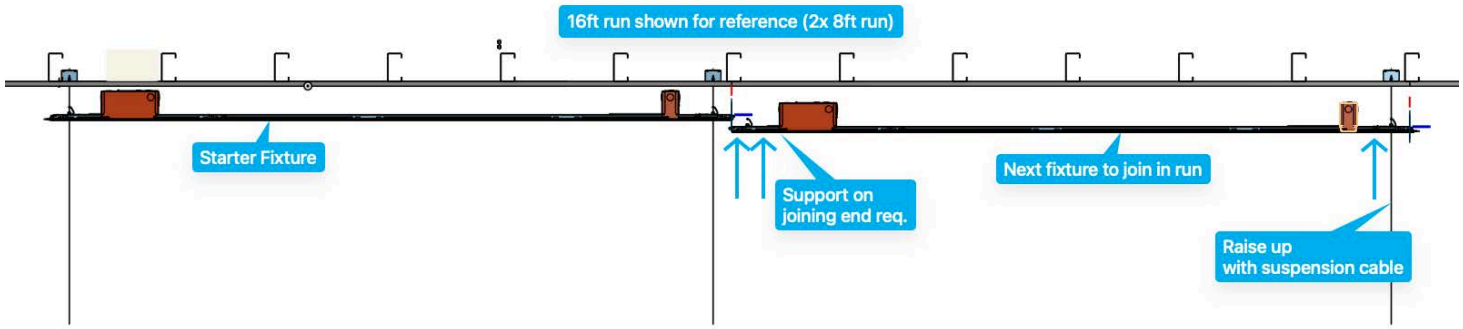


30. Install joiner aligner in-center of opening above the wire harness and ground wire.

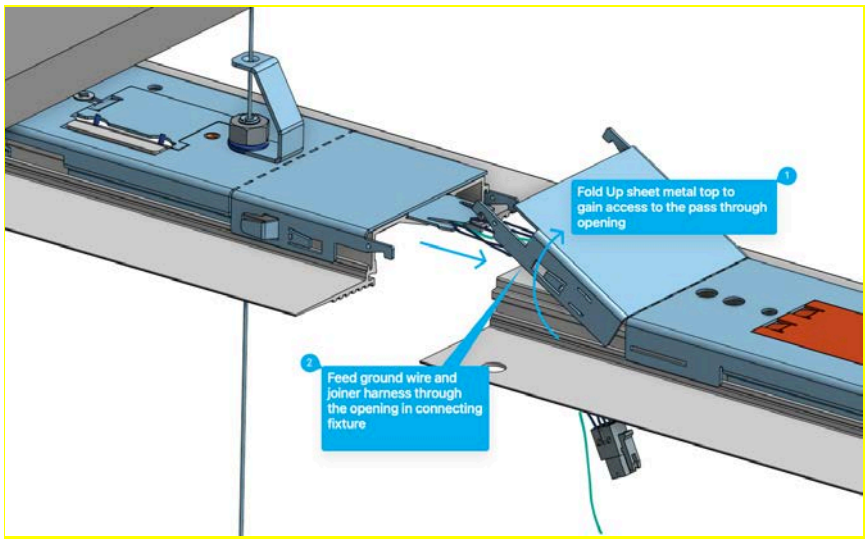
31. Prepare the next fixture to raise up to join the starter fixture in the run. Remove the driver access plate and the jumper access plate. See steps 7 & 8 for reference.



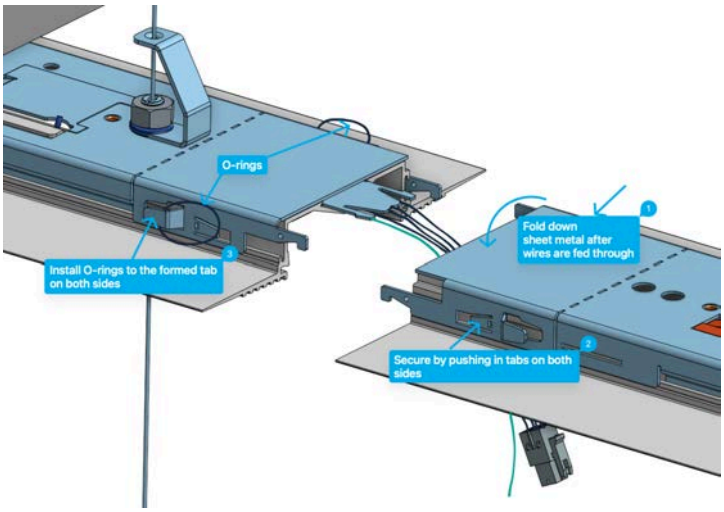
32. Go to the opposite end of the fixture that is to be joined to the next fixture in the run. Raise up the fixture to the suspension cable on the far end and insert the suspension cable into the gripper. You will have to support the fixture on the connecting end during the connection steps. Recommend two people for these steps.

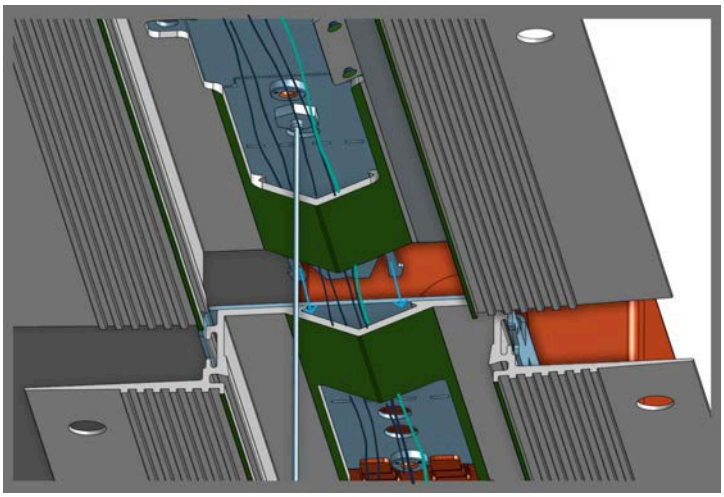


33. Raise the fixture just below the ceiling plane (approx. 3 inches) to prepare for the joining of the next fixture. Fold up sheet metal tab to gain access to the pass through opening. Feed the ground wire and joining harness through the opening. Let wires rest below the fixture before final joining of the fixtures. If a standalone fixture move to step ##.

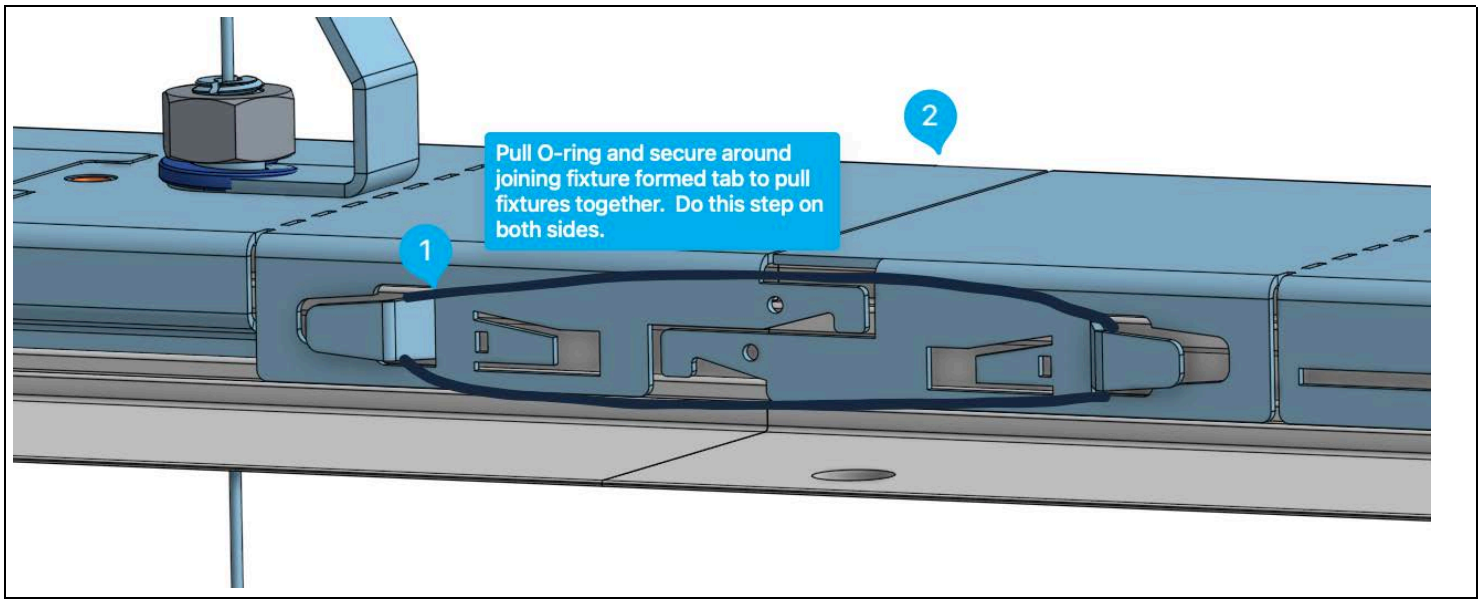


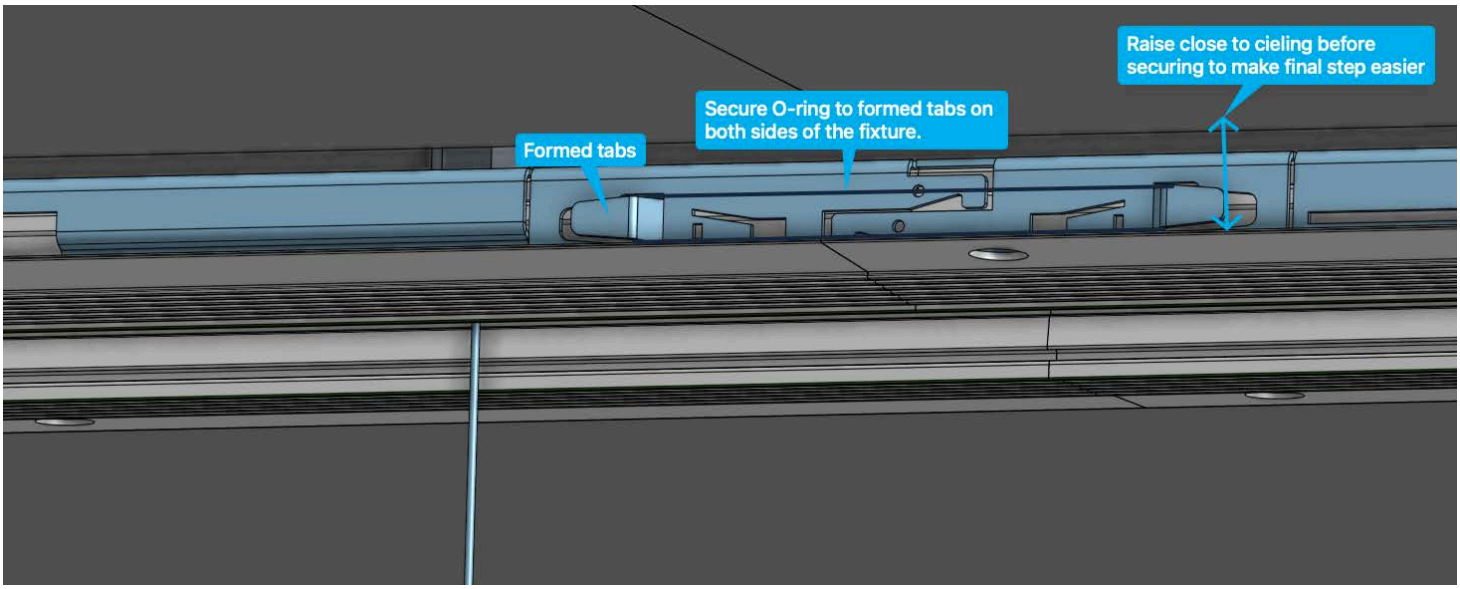
34. Fold down the sheet metal top on the fixture to be joined and secure by pressing in the side tabs. Install the o-rings to the form tabs on the suspended fixture on both sides.	35. It is now time to raise all the starter fixtures closer to the ceiling. Leave enough room to complete the final connection step with the O-rings. Raise the joining fixture to match the height. Proceed to join the fixtures together by guiding the joiner aligner biscuit into the opening above the wires in the connecting fixture.



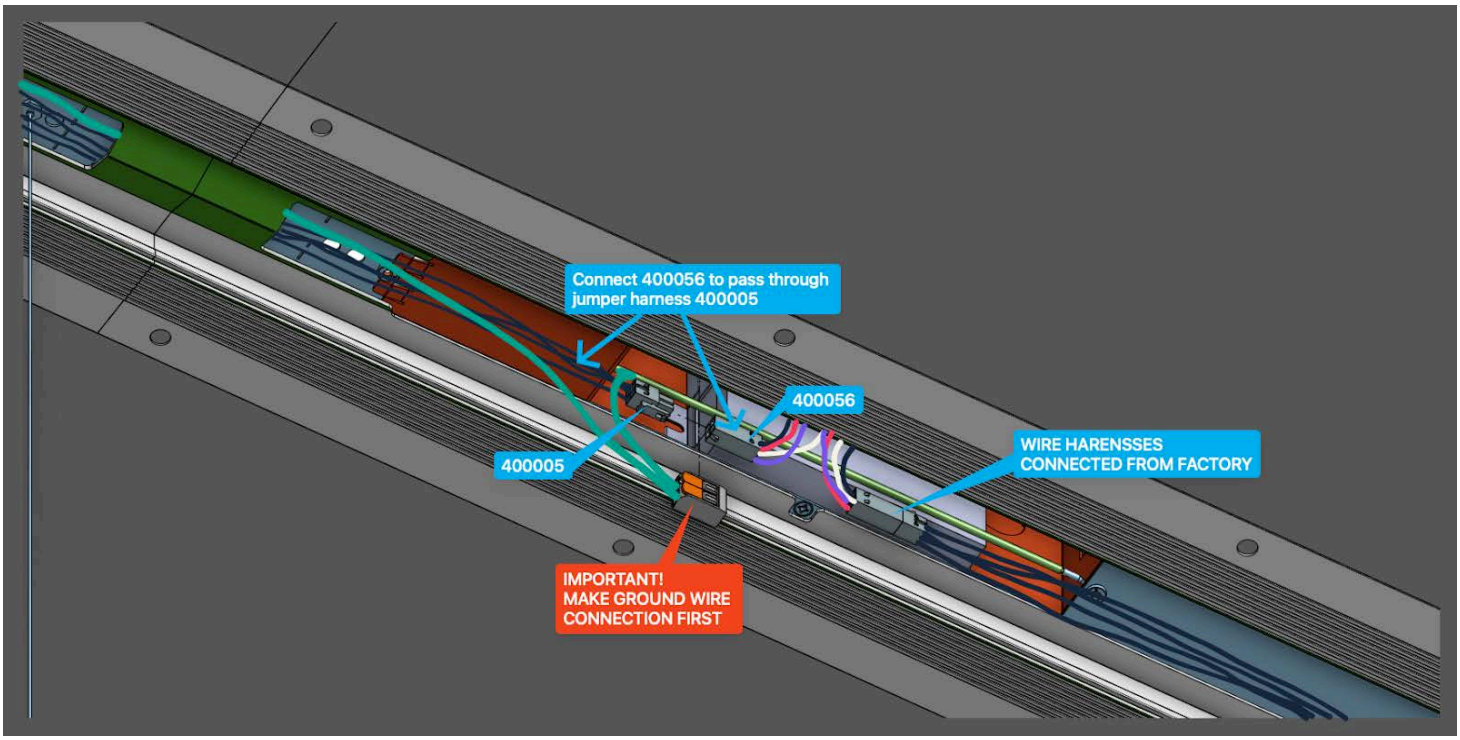


36. Attach the o-ring to the joining tab on the connecting fixture(s).

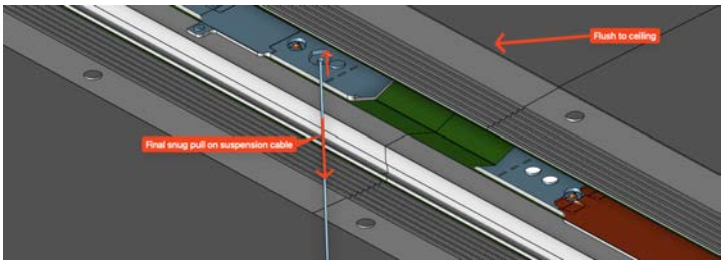

Pull O-ring and secure around joining fixture formed tab to pull fixtures together. Do this step on both sides.
1
2



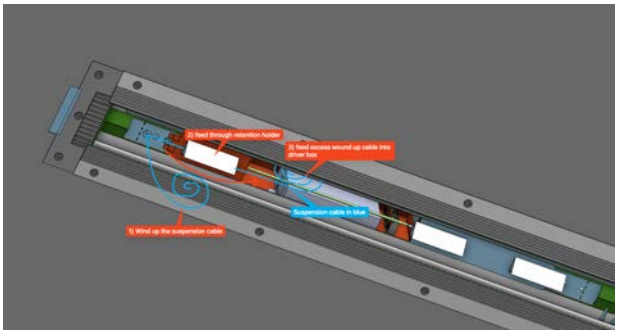
37. Go to the joined fixture and make the power connection to the driver box connector.



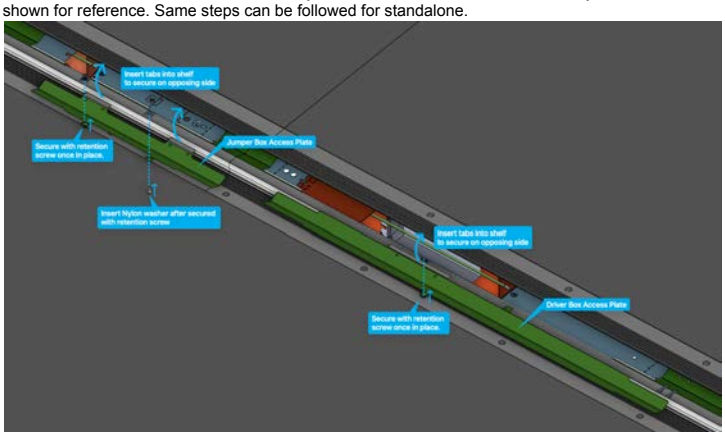
38. Pause: If joining more fixtures in the run, repeat the steps starting from step 25 to prepare the next fixture(s) in the run. If complete, move to the next step.	39. Once all fixtures are securely fastened together with the O-ring step. Raise the fixtures in the run in the ceiling until flush. **IMPORTANT**: **Raise each section by little increments not to miss align the fixtures to ensure they are level before the final pull on the suspension cable to snug the fixtures tight to the ceiling.**

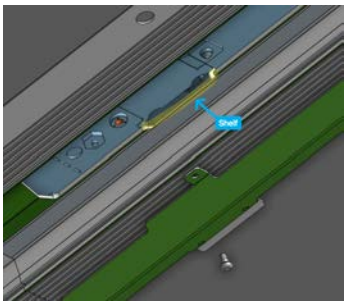


40) Ensure all suspension cables have been pulled snug for the final pull. Next wind up the remaining cable and feed into the driver box or jumper box cavity. Do not trim the suspension cable.

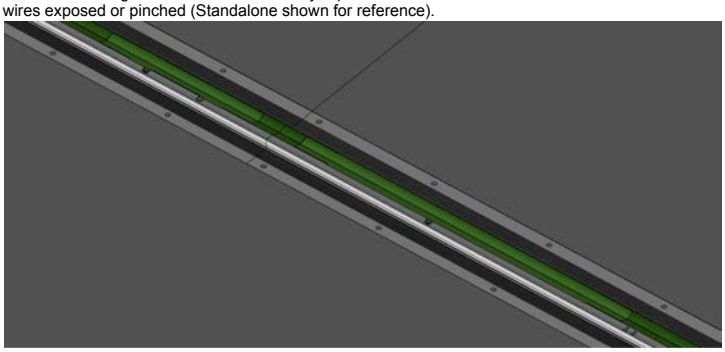


41. Reinstall the driver box access covers and the jumper box access covers once suspension cables and electrical connections are safely fed into the cavities and out of the way. Continuous run shown for reference. Same steps can be followed for standalone.

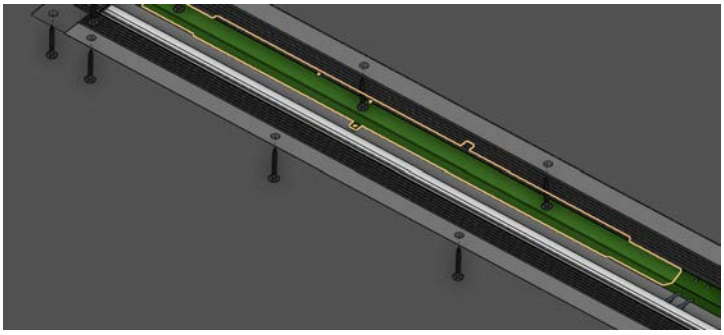




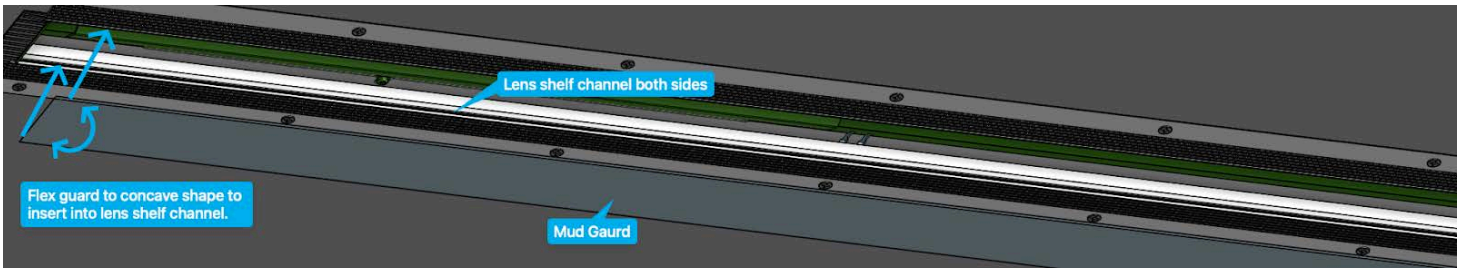
42. After securing the WAC to the driver or jumper box. Do a final check to make sure there are no wires exposed or pinched (Standalone shown for reference).



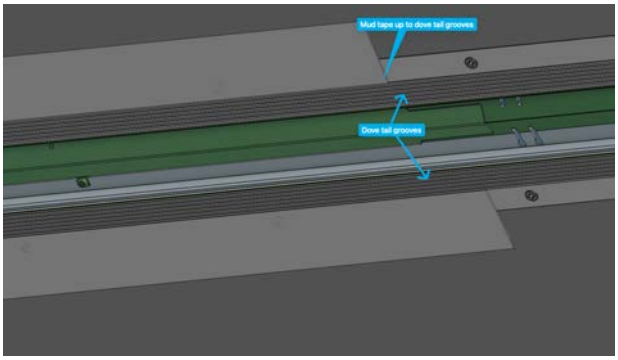
43. Secure the fixture to the sheetrock and structure with No. 10 drywall screws (supplied by others) to the holes in the flanges.



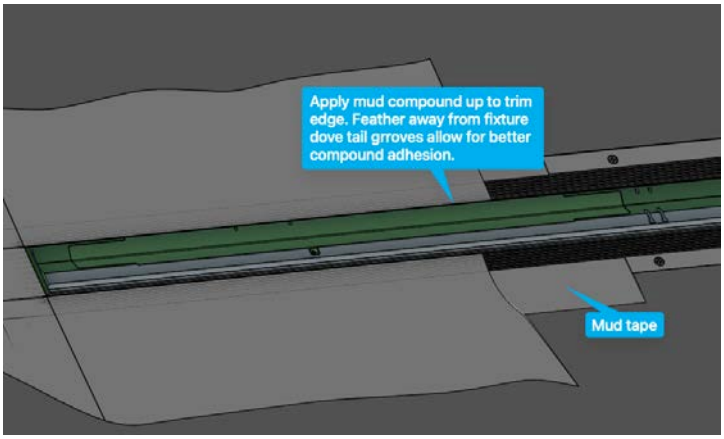
44. Slide mud guard back into place or re-insert mud guard strip into the lens pocket groove to prepare for taping and mud work.



45. Once mud guard is installed in the lens shelf channel. Tape over the drywall screws to add mud compound over the trim edge. Don't tape over the dovetail grooves.

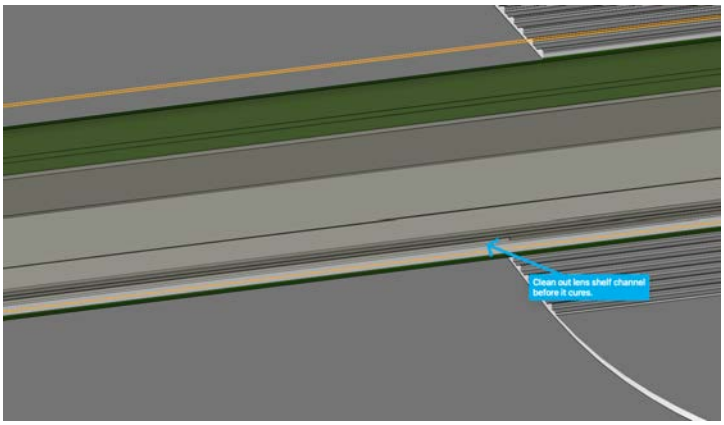


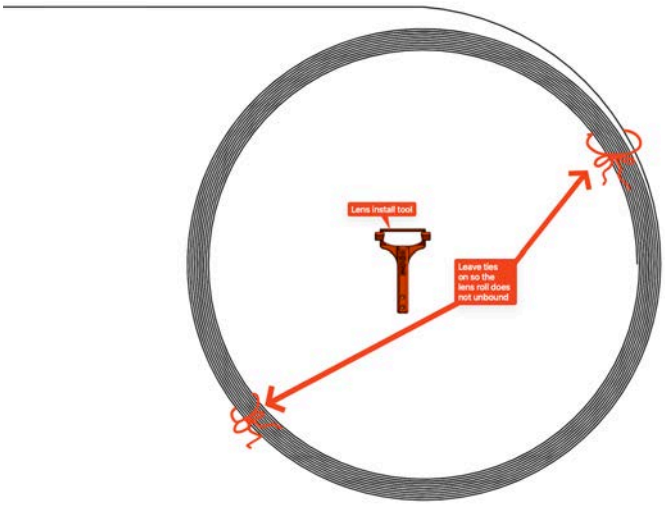
47. If near the edge of a wall install levee minimum 6 inches from wall to allow for feathering of compound to make a flush finish for paint.



48. Clean out any excess mud that may have been pushed into the optical cavity beyond the mud guard. Clean out lens shelf channel before mud compound has curred.

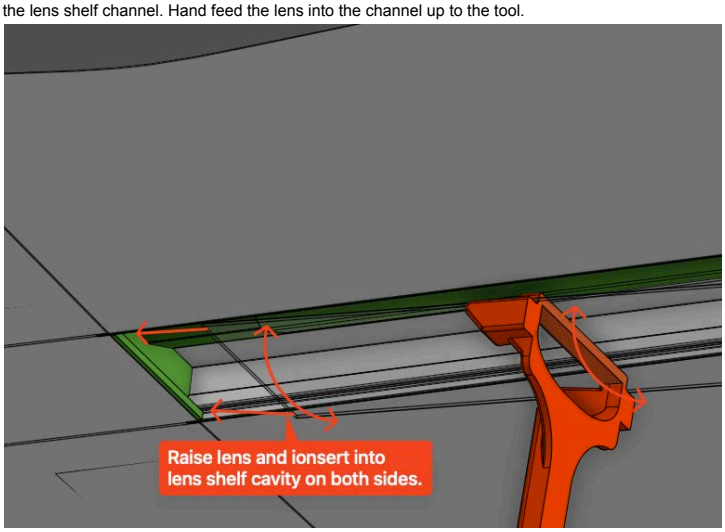
49. Install the continuous roll lens after finishing work is complete. Remove mud guard(s) from the fixtures. Prepare the lens roll. Identify the correct lens for the run based on the layout drawings, unpackage the lens roll.
IMPORTANT: Do not untie the bound roll.


Clean out lens shelf channel before it cures.


Lens install tool
Leave ties on so the lens roll does not unbound

50. Take the part of the lens and insert it approximately 4” beyond the back of the tool.

51. Place the roll over your dominant hand shoulder to install the lens. Start by feeding the lens into the lens shelf channel. Hand feed the lens into the channel up to the tool.

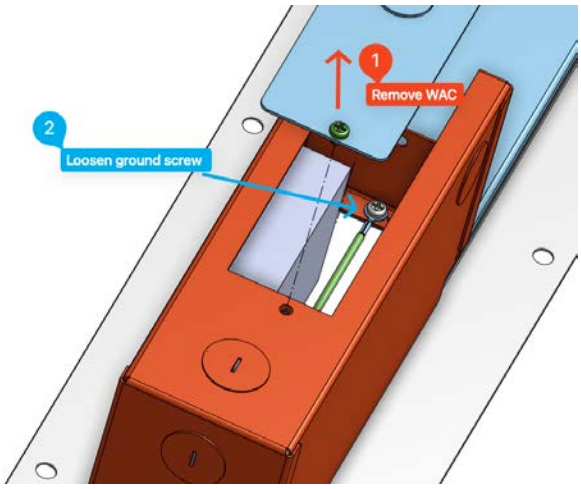


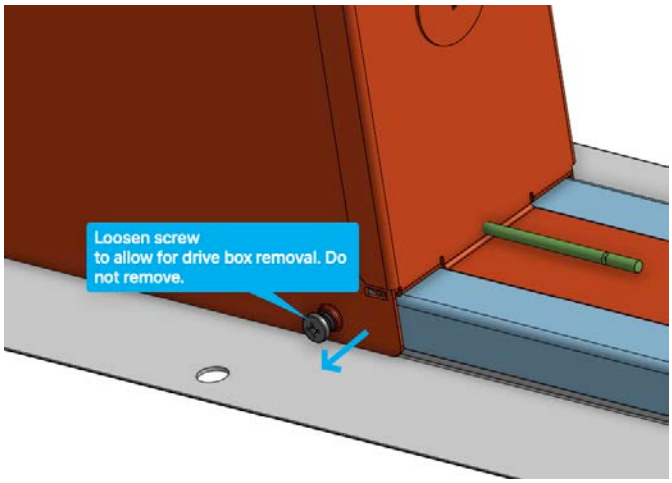
52. Raise tool into the optical cavity opening and the lens will snap into place. Hold the lens at the end, then proceed to run the tool along the run install. This is to get the lens installation started. seat into the shelf as you move along the run.

53. Lens is installed

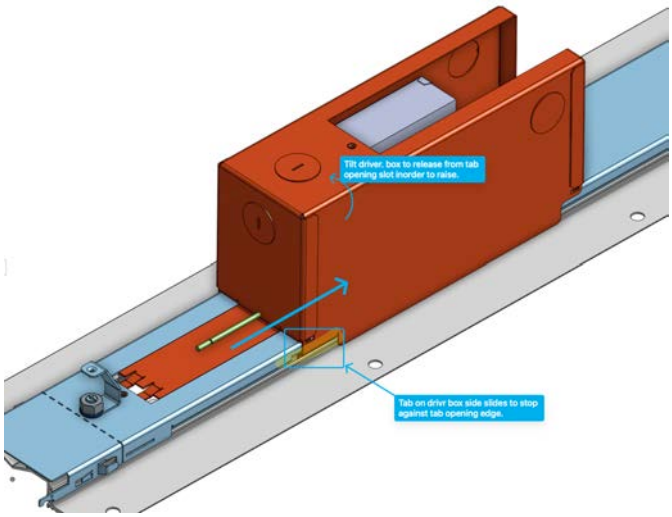
STEPS TO MOVE DRIVER BOX AND JUMPER BOX AND STEP TO MOVE GRIPPER TO AVOID STUDS

1. To move Driver Box positions D1 & D2 and from D3 to D4. First remove the WAC cover to loosen the ground screw.
2. Loosen the screw on the side of the driver box securing to the fixture. Be sure not to fully remove the screw to avoid miosplacement.

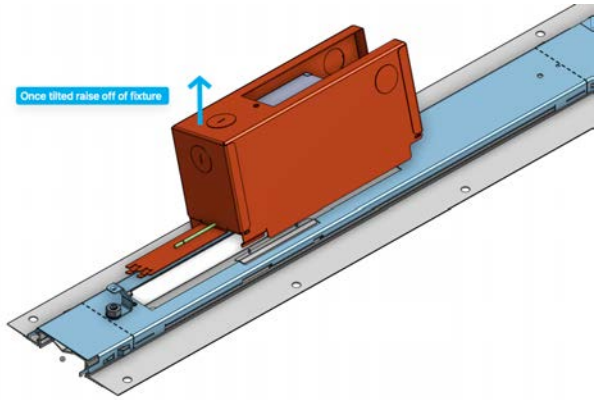

1
Remove WAC
2
Loosen ground screw

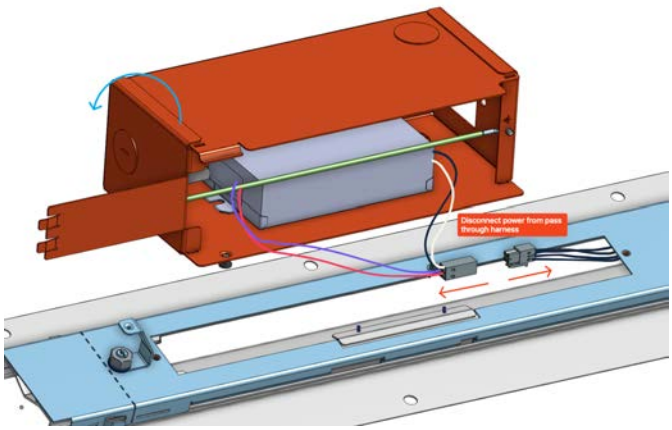
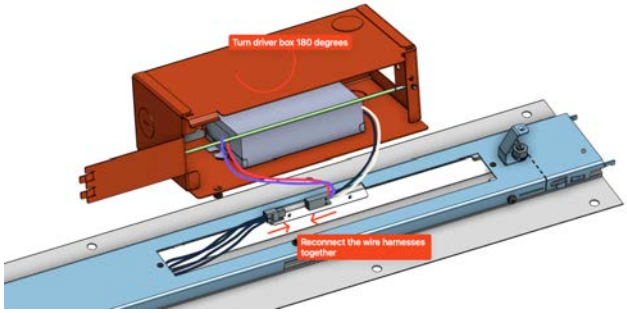

Loosen screw
to allow for drive box removal. Do
not remove.

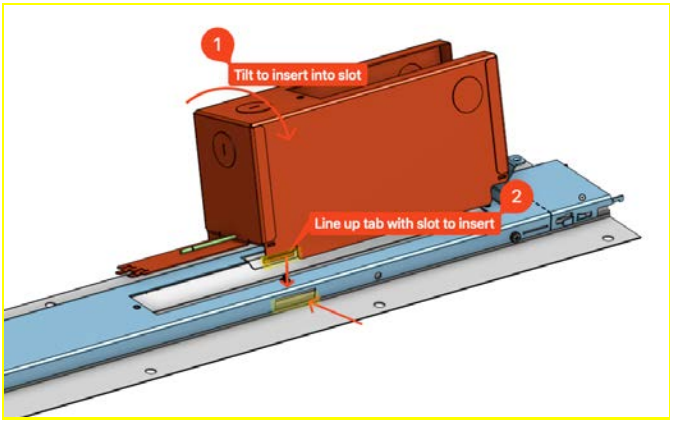
3. Slide the driver box to the edge of the tab opening on the other side until it stops. Next tilt away from the tab opening.

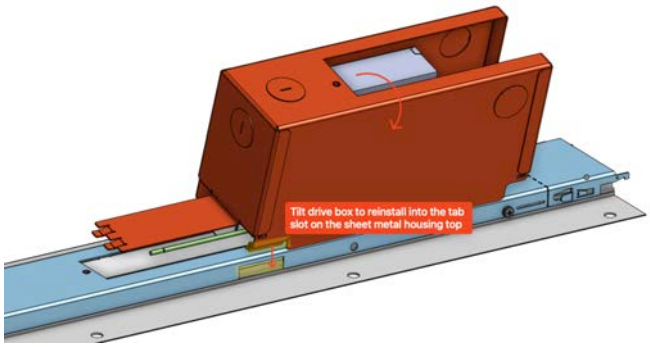


4. Tilt Driver box towards the screw side to free it from the tab opening. Raise up to remove.

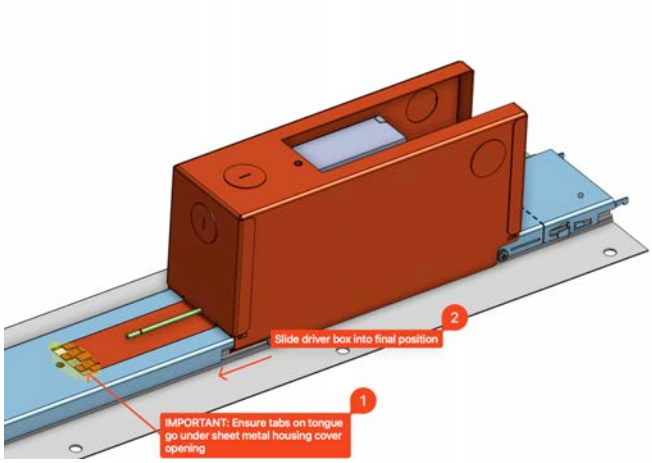


5. Lay driver box on side and disconnect driver harness from connector harness. 	6. Turn the driver box around and reconnect the wire harnesses back together. 
7. Place the driver box back on to the fixture in the reverse steps.	8. Tilt driver box and seat tab into slot and tilt back flush to housing.

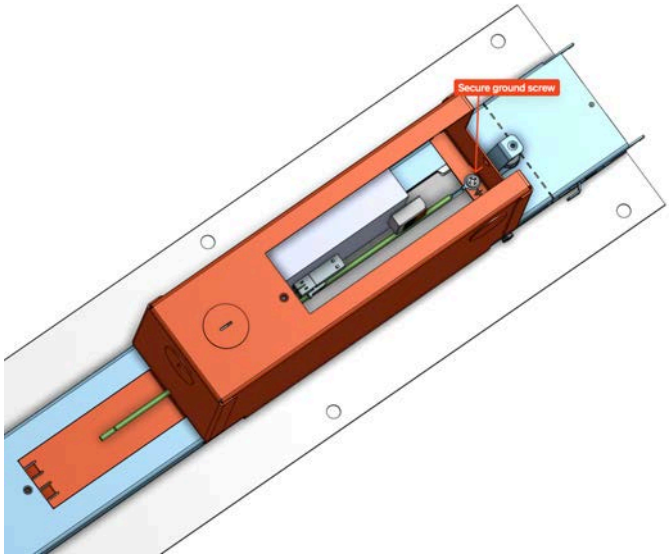

1
Tilt to insert into slot
2
Line up tab with slot to insert


Tilt drive box to reinstall into the tab slot on the sheet metal housing top

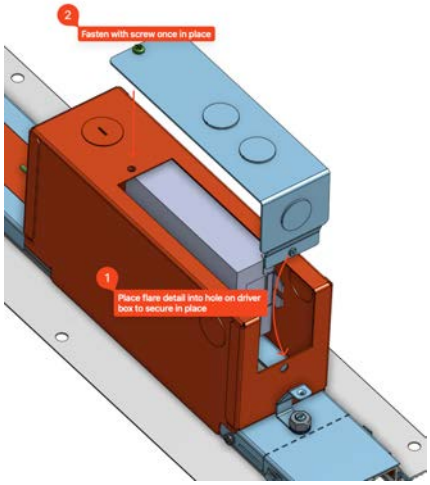
9. **IMPORTANT**! Ensure tabs on the tongue go under the sheet metal top into the channel. Next slide the driver box into the final position.



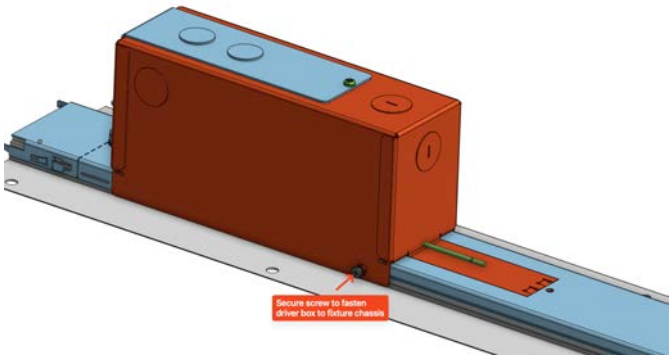
10. Fasten the ground screw to the sheet metal top cover inside.



11. Replace the driver box WAC and secure it with the provided screw.

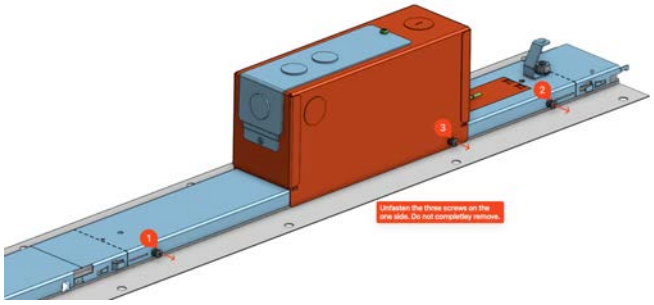


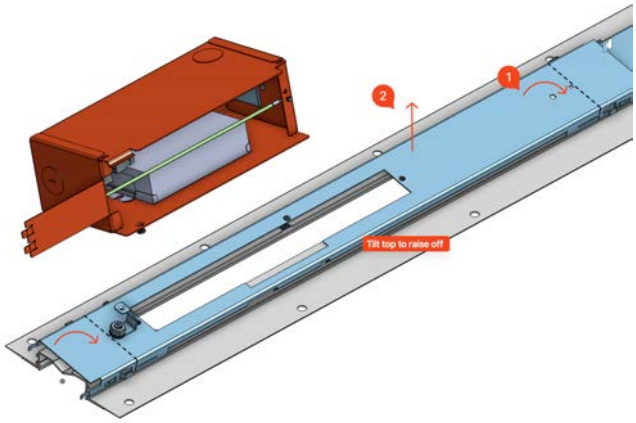
12. Final step to secure screw to fasten driver box to fixture chassis. You are ready to move to the installation steps.



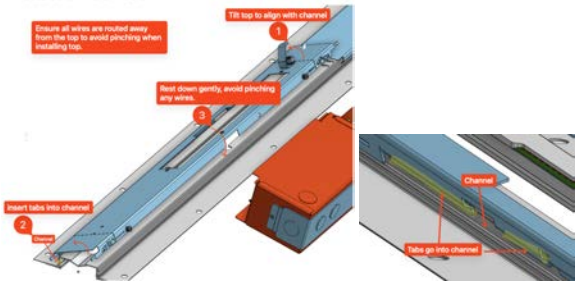
13. **Moving driver box to position 3 & 4.** To move the driver box to position 3 & 4 you must turn the sheet metal top cover around. First loosen the screws on the side of the sheet metal top and loosen the driver box fastening screw. The screws do not need to be fully removed.

14. Remove the driver box first see steps 1-6. Once the driver box is removed, ensure access plate is removed, see step 7 for steps. Next proceed to remove the sheet metal top cover. Tilt the sheet metal top cover towards the bend tab and raise up.

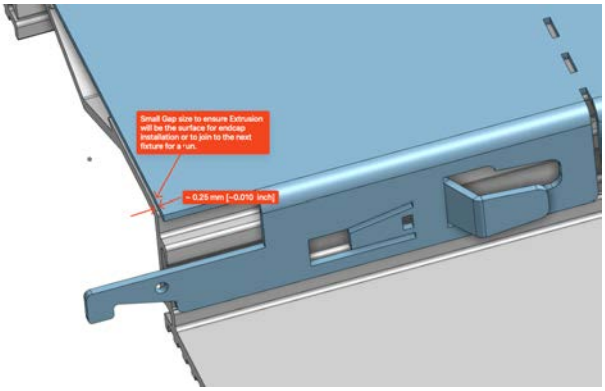




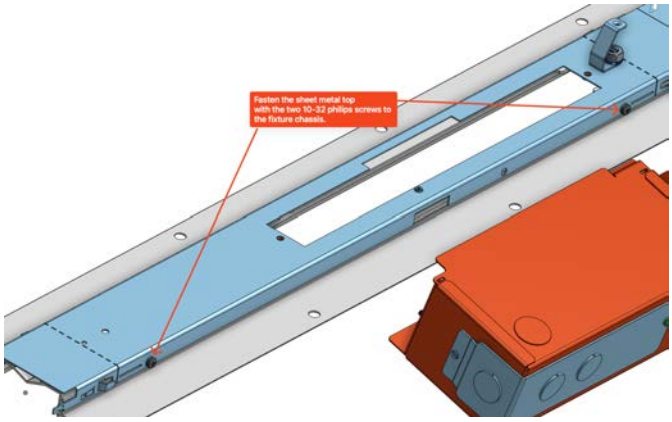
15. Turn top around and re-install by tilting and inserting the tabs into the fixture channel on the outside of the extrusion. Once the tab is in the channel, gently lay down into position. Ensure you do not pinch the wires beneath the top.



16. Once the top is at rest leave a small gap 0.25 mm [0.01 inch] from the end of the extrusion to the edge of the sheet metal cover.

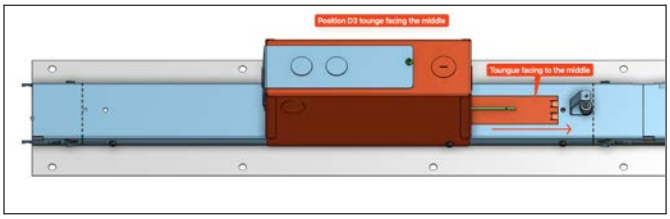


17. Secure the top sheet metal to the fixture extrusion chassis with the two 10-32 philips screws provided.

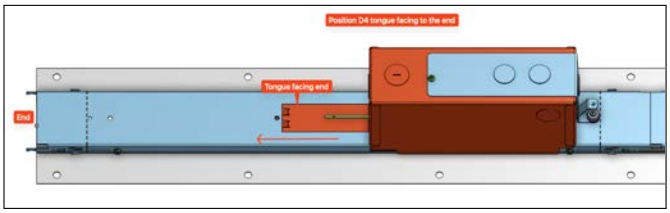


18. Proceed to reinstall the driver box to the top. **Refer to steps 5-13.** *Positions:* Driver box is in position **D3** when the tongue faces the middle; driver box is in position **D4** when driver box tongue is facing the end.

D3

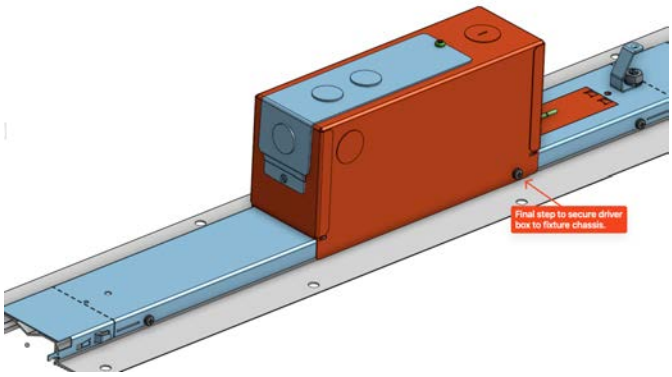


D4

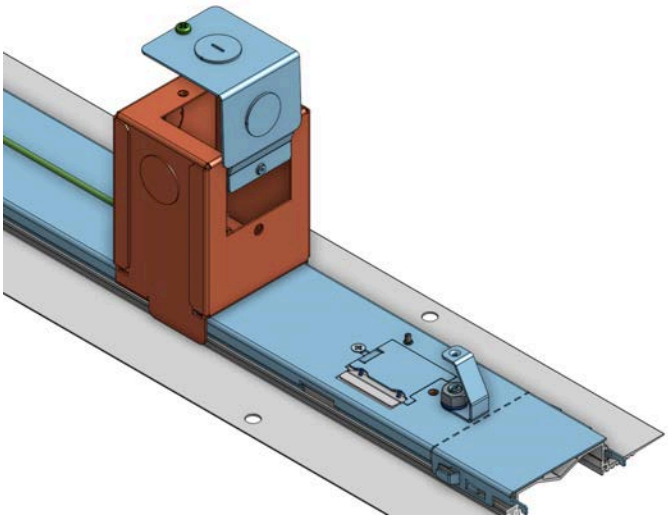


19. Fix the driver box into position once the final position is determined. Fasten screw on side of driver box to secure into place.

20. **Pause:** If you do not need to adjust the jumper box proceed to step 9 to begin installation. Else, continue to the next step. To remove the jumper box to adjust from J1 to J2 go to the jumper box end of the fixture and remove the WAC.*

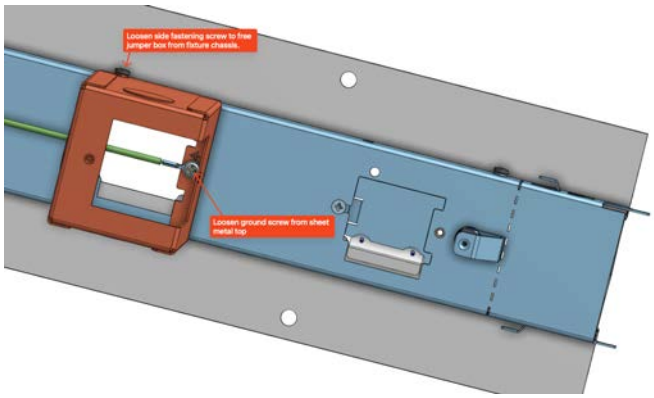


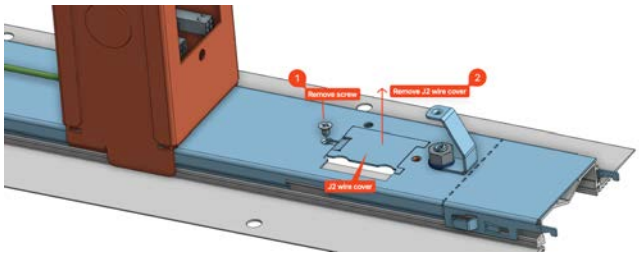
21. Next unfasten the ground screw and screw on the side holding the jumper box in place. Do not fully remove the screws; they are self retaining screws.



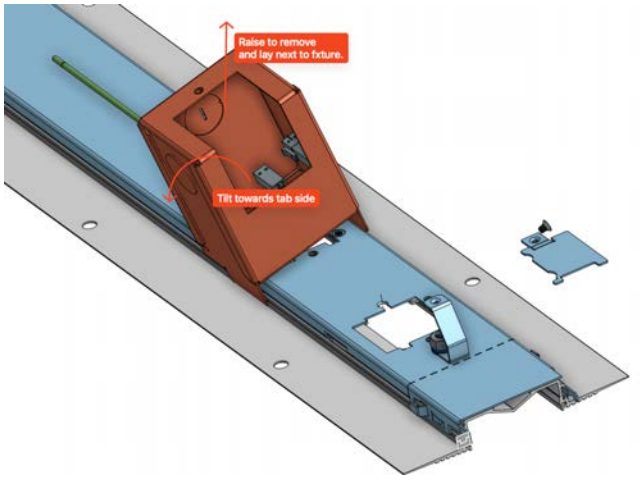
*Note: The jumper box wire access cover would have been removed in step 8 when preparing the fixture for installation steps. If it has not been removed refer to step 8 at the start of instructions.

22. Remove screw securing the jumper box J2 wire cover. Remove J2 wire cover place to the side with screw.

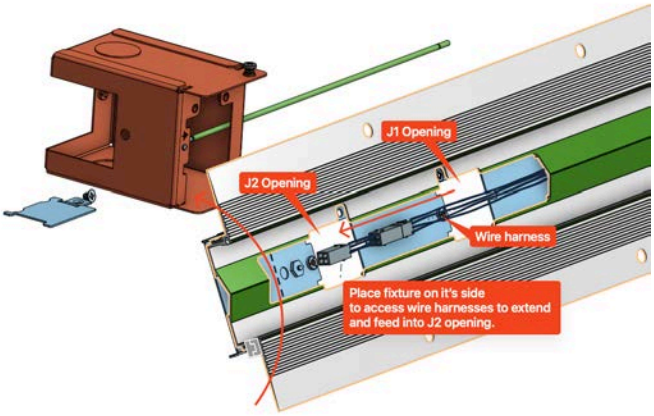




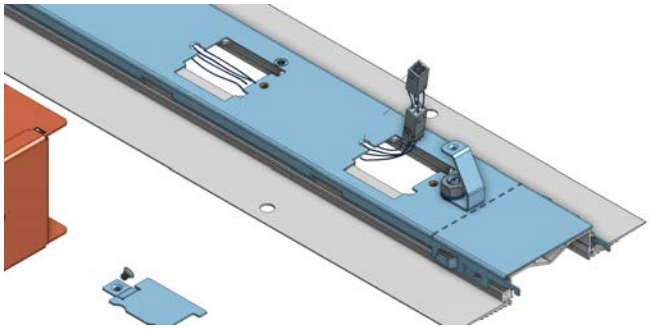
23. Tilt jumper box towards the tab side then raise out and lay next to fixture.



24. Tilt fixture over to feed wire harness and connector to J2 opening.

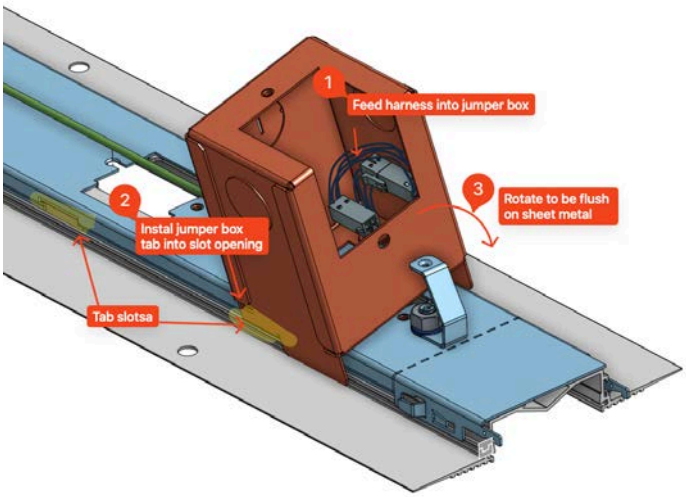


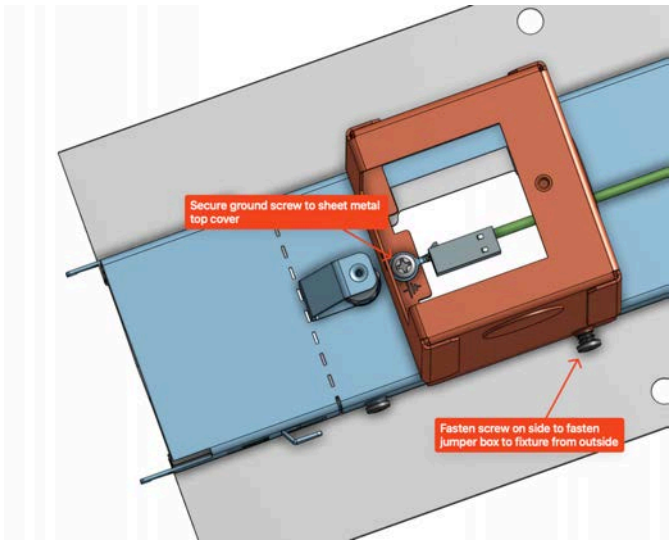
25. Lay the fixture face down after the harness is placed through J2.



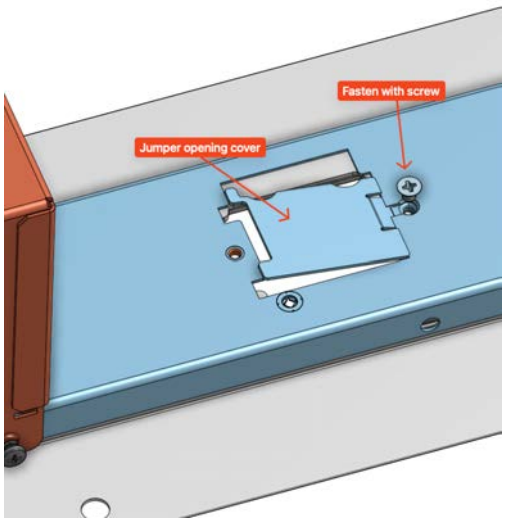
26.

27. Raise jumper box and feed harness into jumper box. Install jumper box over J2 position insert tab into side slot and tilt into position.

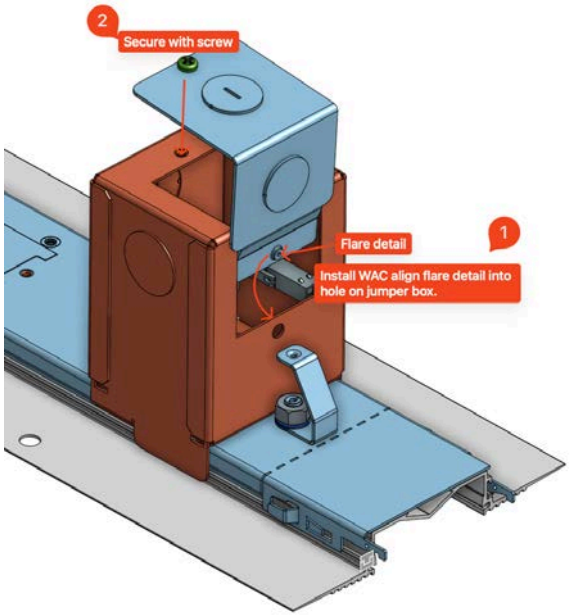
	
28. Fasten the jumper box by securing ground screw and side screw to the sheet metal top.	29. Reinstall the Jumper Cover Plate and secure in place with the provided screw.

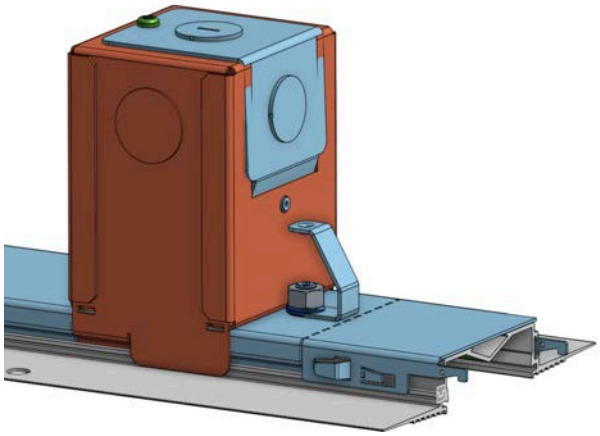


30. Reinstall jumper box WAC.

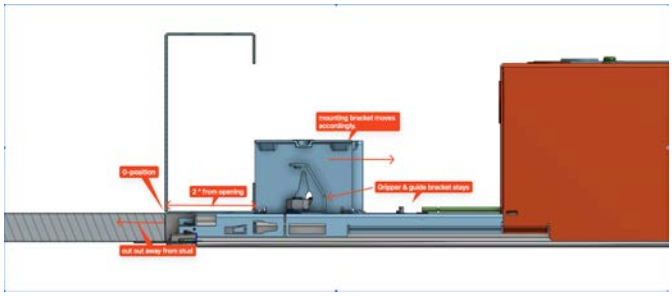


31. All steps complete and you are ready to move to the installation steps into the ceiling.

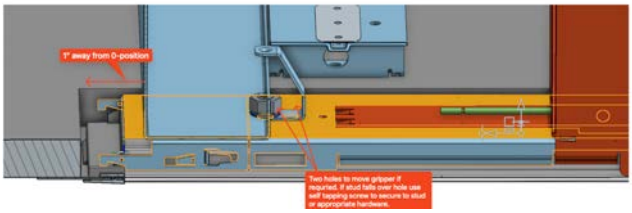

2
Secure with screw
Flare detail
1
Install WAC align flare detail into hole on jumper box.



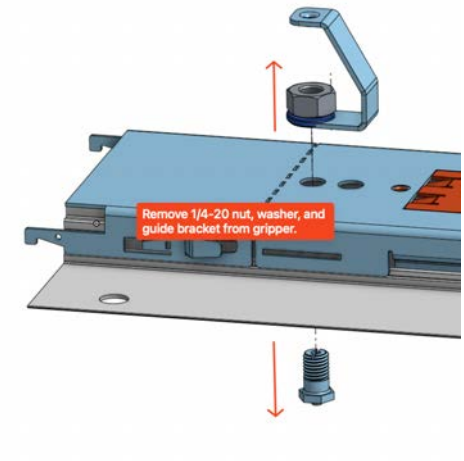
32. Steps to follow to remove gripper or move to new position if under a stud.



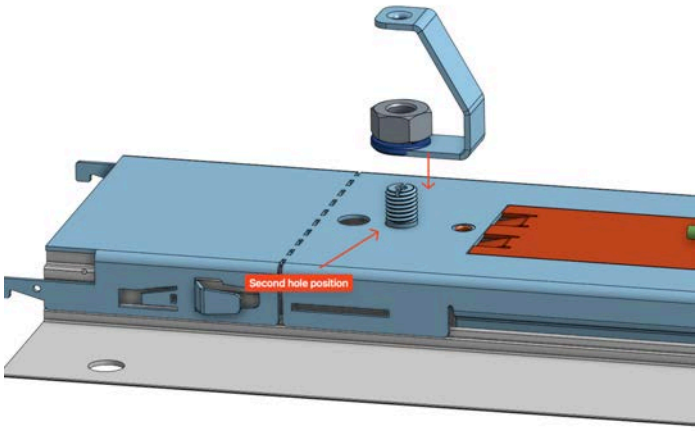
33. If gripper falls under stud in default position. There are two holes to move the gripper over to the next position.



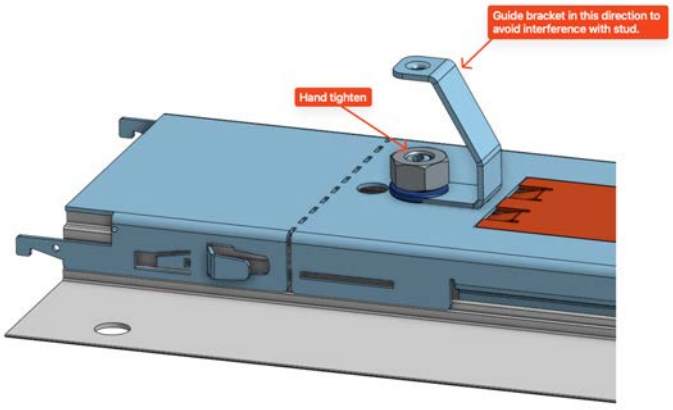
34. Remove ¼-20 nut, lock washer, and guide bracket.



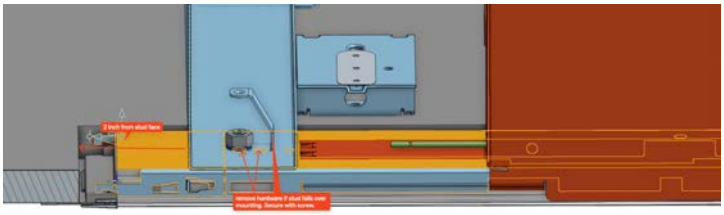
35. Reinstall in second hole position in same orientation. Gripper from below, ¼-20 nut, lock washer and guide bracket on top.

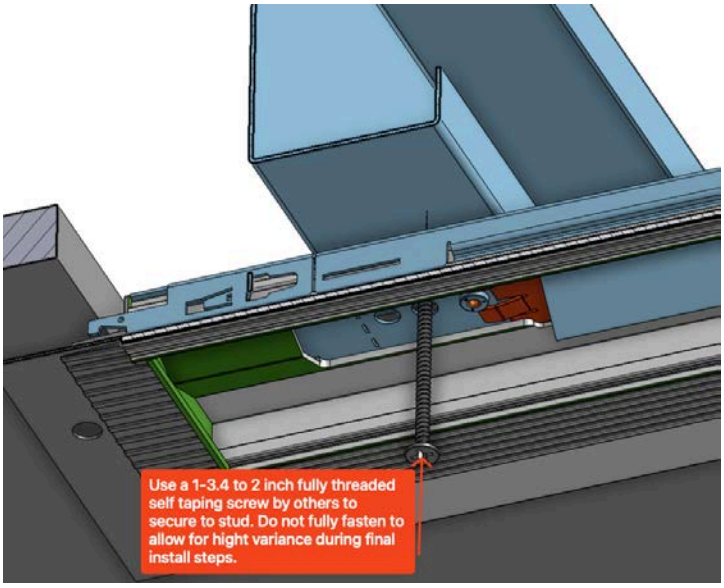


36. The first hole will be covered by stud, hand tighten in place.



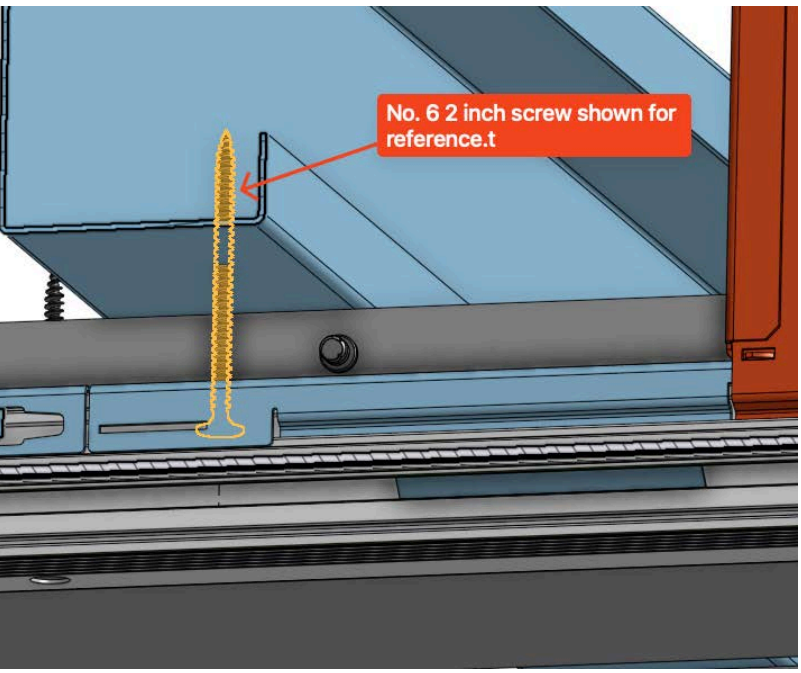
37. Remove gripper and hardware if stud falls over mounting poistion.





38. Install longer screws to leave enough space between the ceiling and the top of the fixture to do final installation steps or joining steps. Fully fasten when snugging up the suspension cable to the ceiling.

39. Go to installation steps at beginning to complete the installation of the product.


No. 6 2 inch screw shown for reference.t