

Grid (Small) - 7'-6" x 7'-6"

NOT A REPLACEMENT FOR ARCHITECTURAL/ENGINEERING/ ELECTRICAL SPECIFICATIONS. (DEFER TO THEIR DRAWINGS)

CONTRACTOR IS RESPONSIBLE FOR:

- 1.- FOLLOWING busSTRUT CONFIGURATION MOUNTING POINT RULES.
- 2.- REFERRING TO ARCHITECTURAL PLANS FOR PLACEMENT OF LIGHTS.
- 3.- REFERRING TO ELECTRICAL PLANS FOR POWER DISTRIBUTION AND ELECTRICAL CONNECTION REQUIREMENTS.

ATTACHMENT FROM busSTRUT
SYSTEM TO STRUCTURE MUST BE
ENGINEERED AND INSTALLED TO
PROPERLY SUPPORT THE ENTIRE
SUSPENDED WEIGHT.

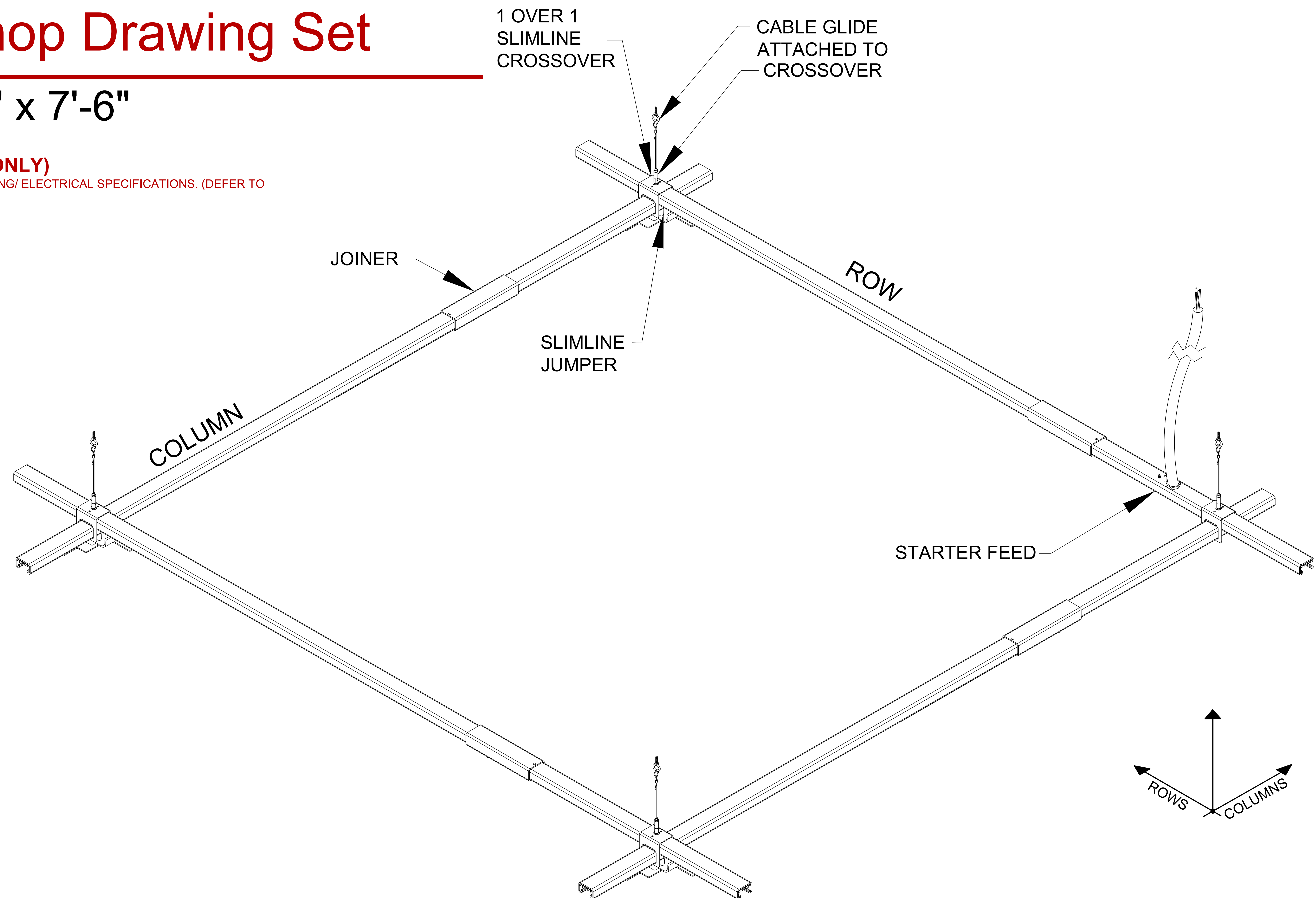
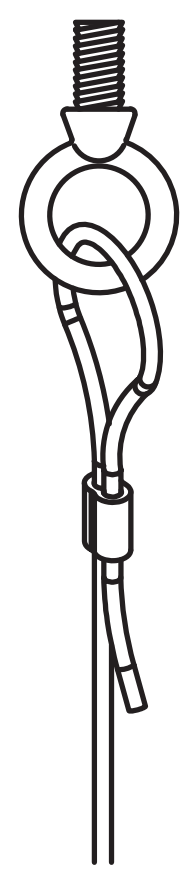


TABLE OF CONTENTS		KEY MOUNTING RULES		APPROVAL
E-b01 E-b02	Typical Installation Instructions		Rows are to be mounted on top of Columns. Crossover sleeve runs with Rows.	
E-b1 E-b2	Lighting Plan, BOM, & Labor Hours Assembly Plan			

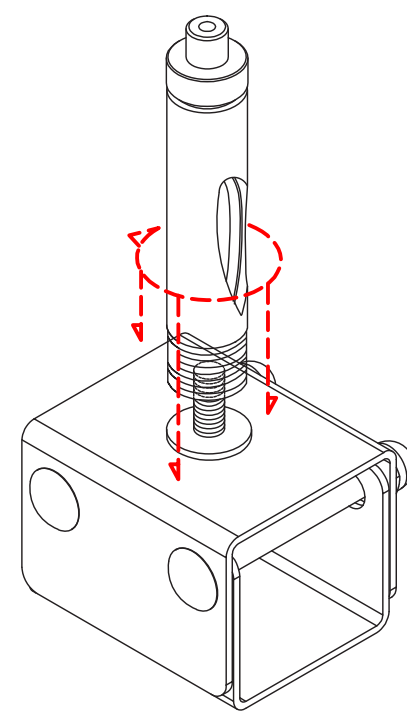
STEP 1

SUSPENDING busSTRUT



1 SUSPEND CABLES (CG-XX) ATTACH CABLE ASSEMBLY to STRUCTURE

*It is the contractor and/or engineer's responsibility
to determine correct connection to structure (beam
clamp, etc).

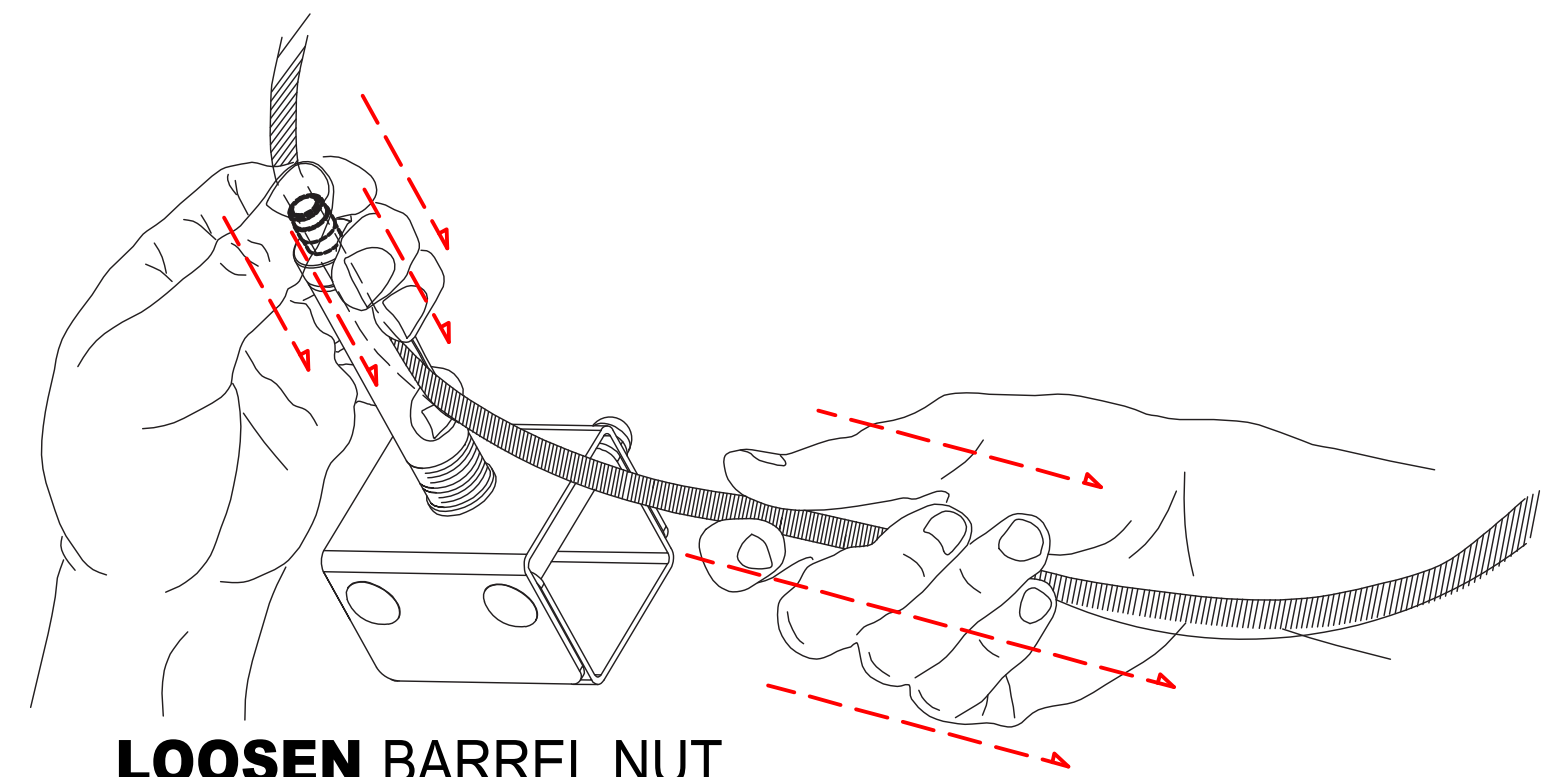
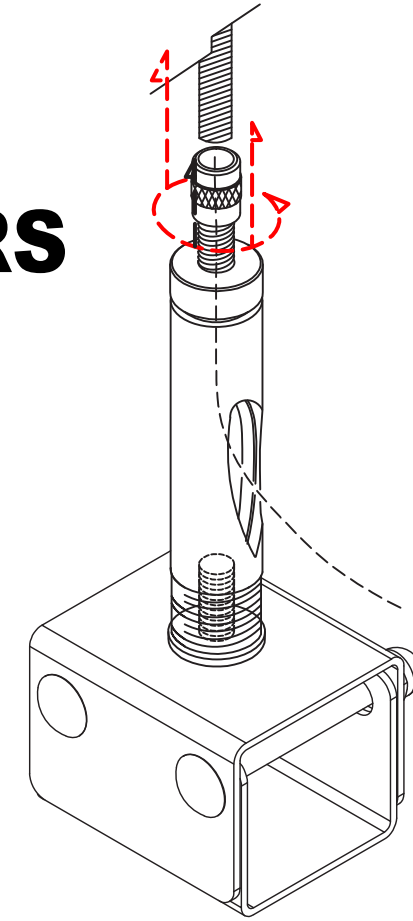


2 ASSEMBLE HANGERS (HM-S)

ASSEMBLE HANGERS AND
ATTACH CABLE GLIDE

3 ATTACH HANGERS TO CABLES (CG-XX)

FEED CABLES THROUGH
GLIDE TO ATTACH



LOOSEN BARREL NUT
PUSH CABLE THROUGH
PULL CABLE FOR SLACK

SLIDE busSTRUT THROUGH SUSPENDED HANGERS

Assemble
Create cable suspended runs of
busSTRUT. Usually, these are
running perpendicular to structural
joists. Insert busSTRUT lengths
through hangers/crossovers
working from FINISHED HEIGHT.

FINISHED HEIGHT

*It is the contractor and/or engineer's responsibility
to determine correct connection to structure (beam
clamp, etc).

LEVEL busSTRUT AND TRIM CABLE

FINISHED HEIGHT

BE SURE TO FOLLOW
busSTRUT MOUNTING
RULES (SEE busSTRUT
shop drawings)

CUT CABLE
Leave enough pass
through cable for
future leveling

STEP 2

INSERT JOINERS

ATTACH JOINERS TO EACH END OF
CONNECTING busSTRUT

JOINERS (M-JB)
Joiners are used to mechanically
and electrically connect individual
busSTRUT lengths.

TIGHTEN JOINERS

TIGHTEN SET SCREWS ON THE BOTTOM OF THE
JOINER

*Joiners require 3/32 Hex key
for tightening set screws*

ATTACH INSERT

ATTACH JOINERS TO EACH END OF
CONNECTING busSTRUT

Line up **center** of insert with
etched centerline on joiner
sleeve

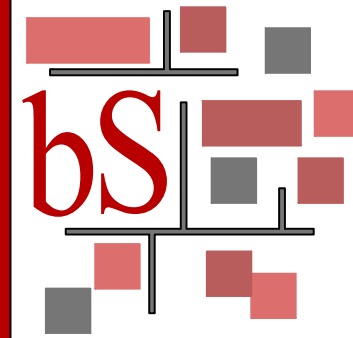
Turn the first knob

Squeeze tightly on the opposite
side, then turn the second knob
to secure the electrical
connection.

JOINER INSERT (M-JI-X)

A single piece unit that is installed
with two knobs, one must be fully
turned in each abutting length. As
a result, power can continue to
flow from one length to the next.

**Installation Instruction Guidelines are provided only as that, informative guidelines. Defer to architectural/engineering drawings tailored to the specific project.



busSTRUT
805 Hillside Road
Suite C
Westerville, OH
43081
TEL: 614.933.8695
E-MAIL:
INFO@busSTRUT.COM
WWW.BUSSTRUT.COM

DESIGNED BY
LARRY GELLERT
CHECKED BY
JOHN LOCH
DRAWN BY
Corey Sprouse
DATE
01/12/2024
REVISIONS
BID / REVIEW

TYPICAL
busSTRUT Installation Instructions

busSTRUT
SHOP DRAWING SET(ONLY)
NOT A REPLACEMENT FOR
ARCHITECTURAL /
ENGINEERING OR ELECTRICAL
DRAWINGS

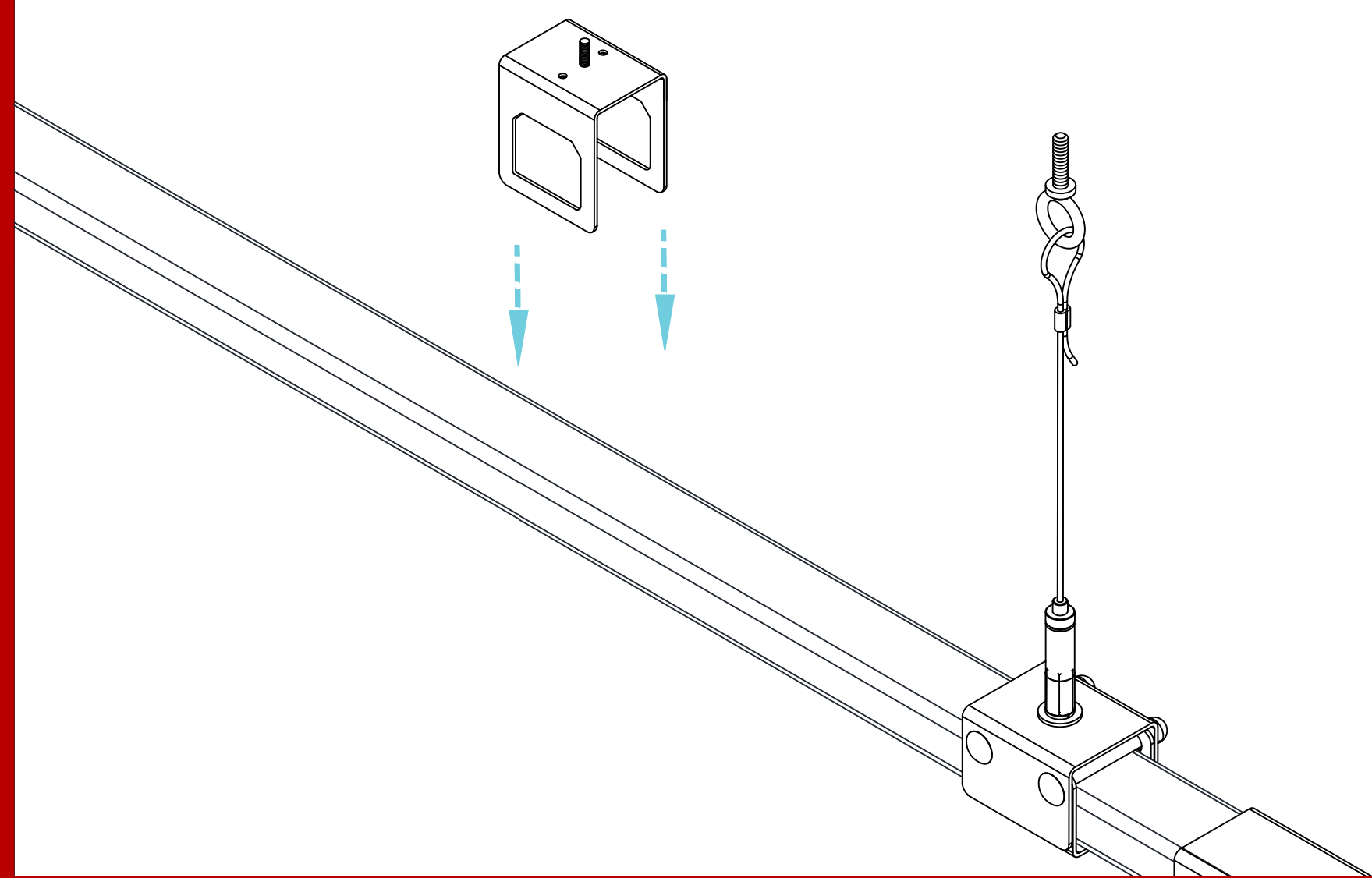
NO.	DATE	DESCRIPTION	BY
1			

PAPER SIZE:
ARCH E (48x36)
NOT TO SCALE
DRAWING NUMBER
E-b01

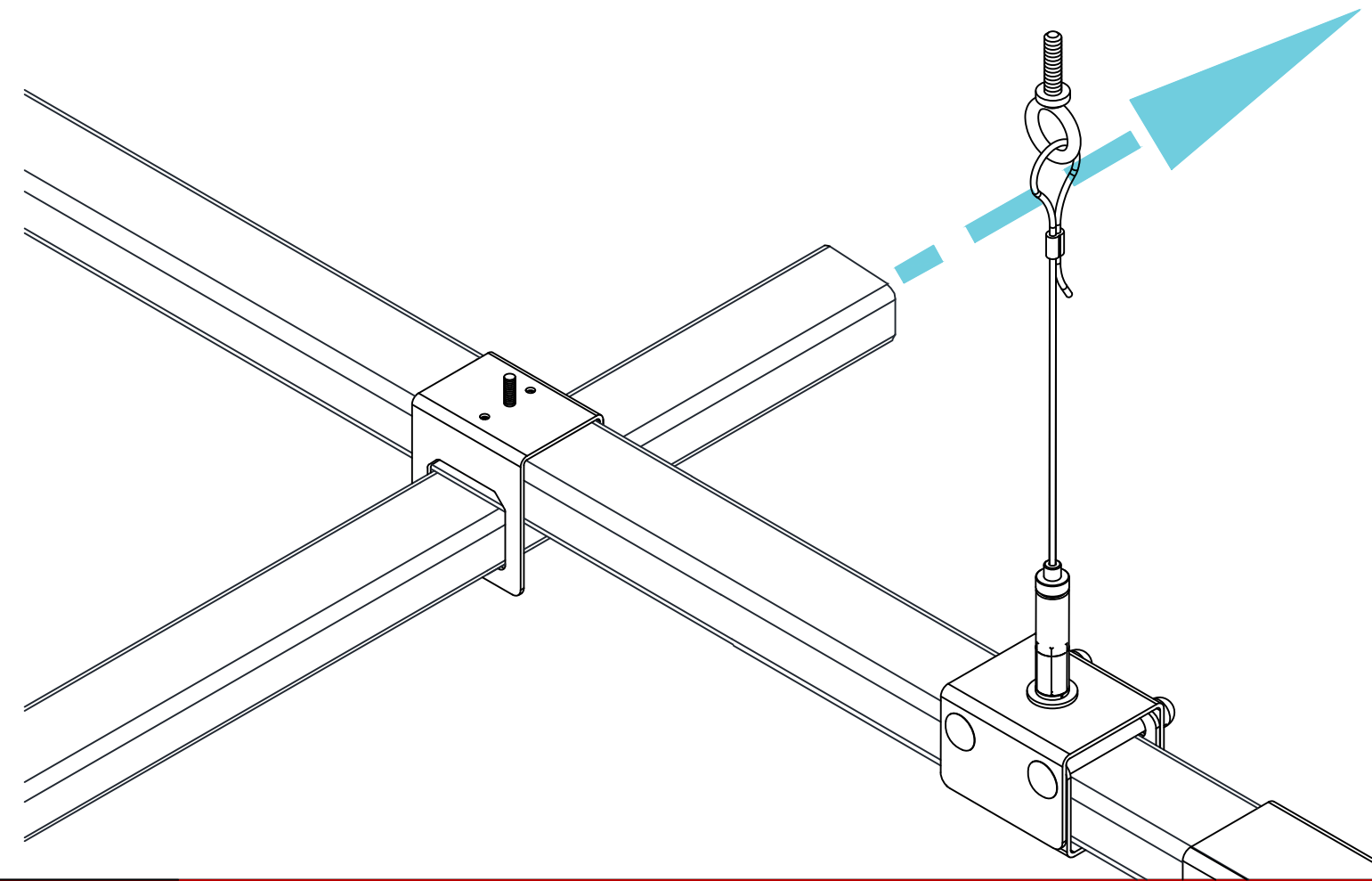
STEP 3

INSTALLING CROSSOVERS DROPPING ON

Crossovers can be dropped onto suspended busSTRUT to create an intersection with a perpendicular run of busSTRUT.



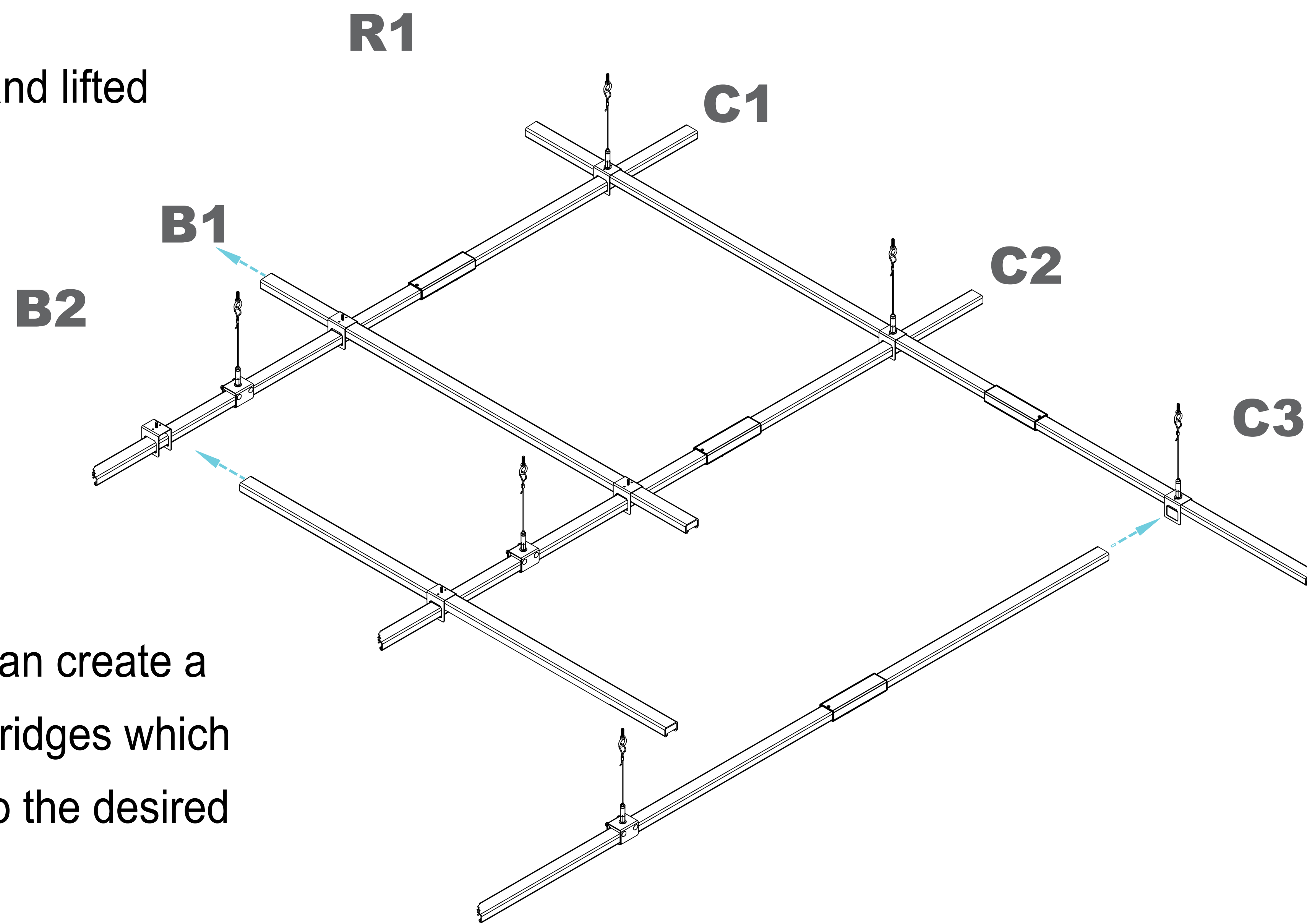
Slide perpendicular runs of busSTRUT through the crossover and tighten the set screws.



SLIDING ON

Crossovers can be slid into position and lifted to create perpendicular bridges.

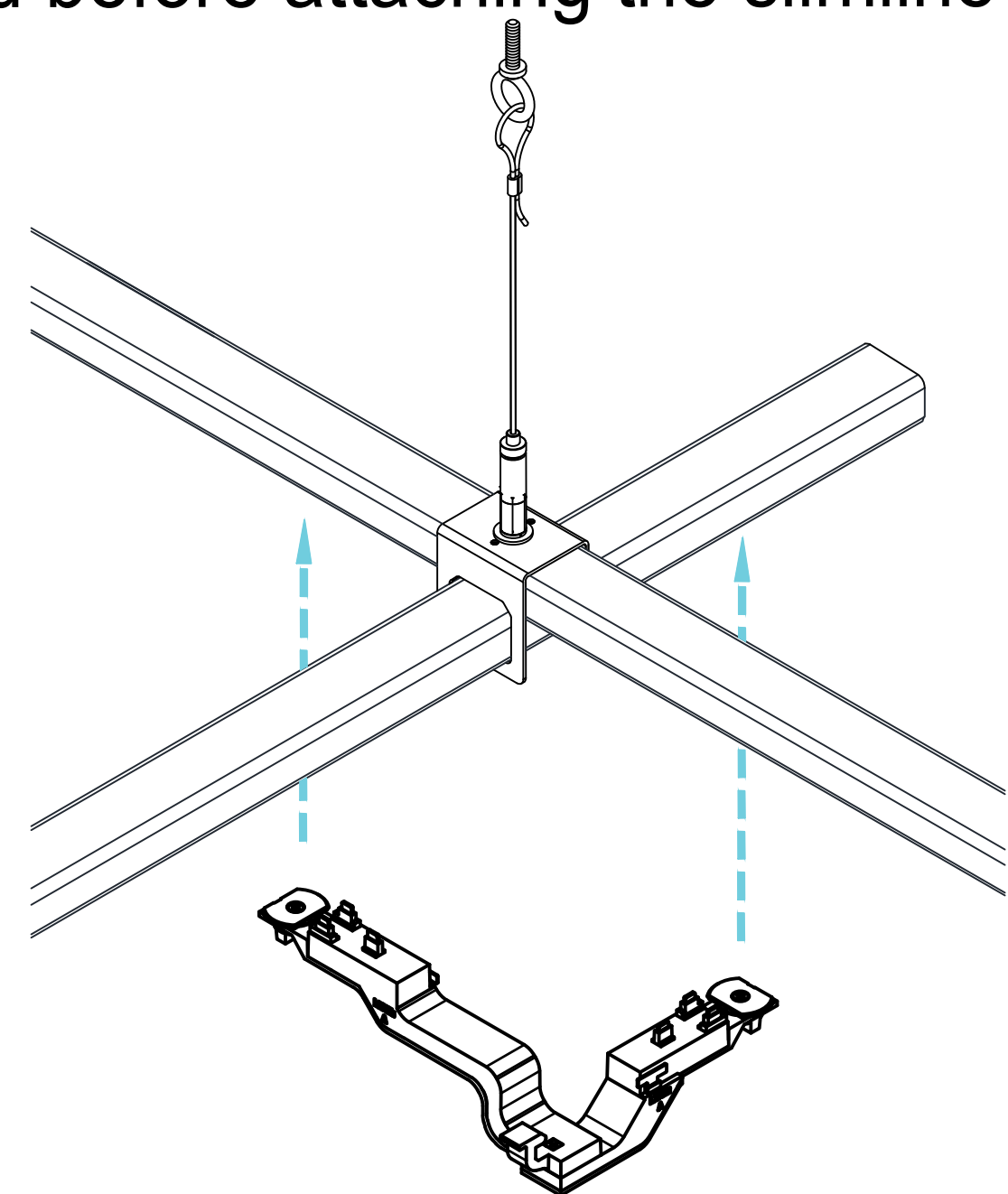
Perpendicular runs can create a full grid or be short bridges which are easily moved into the desired position.



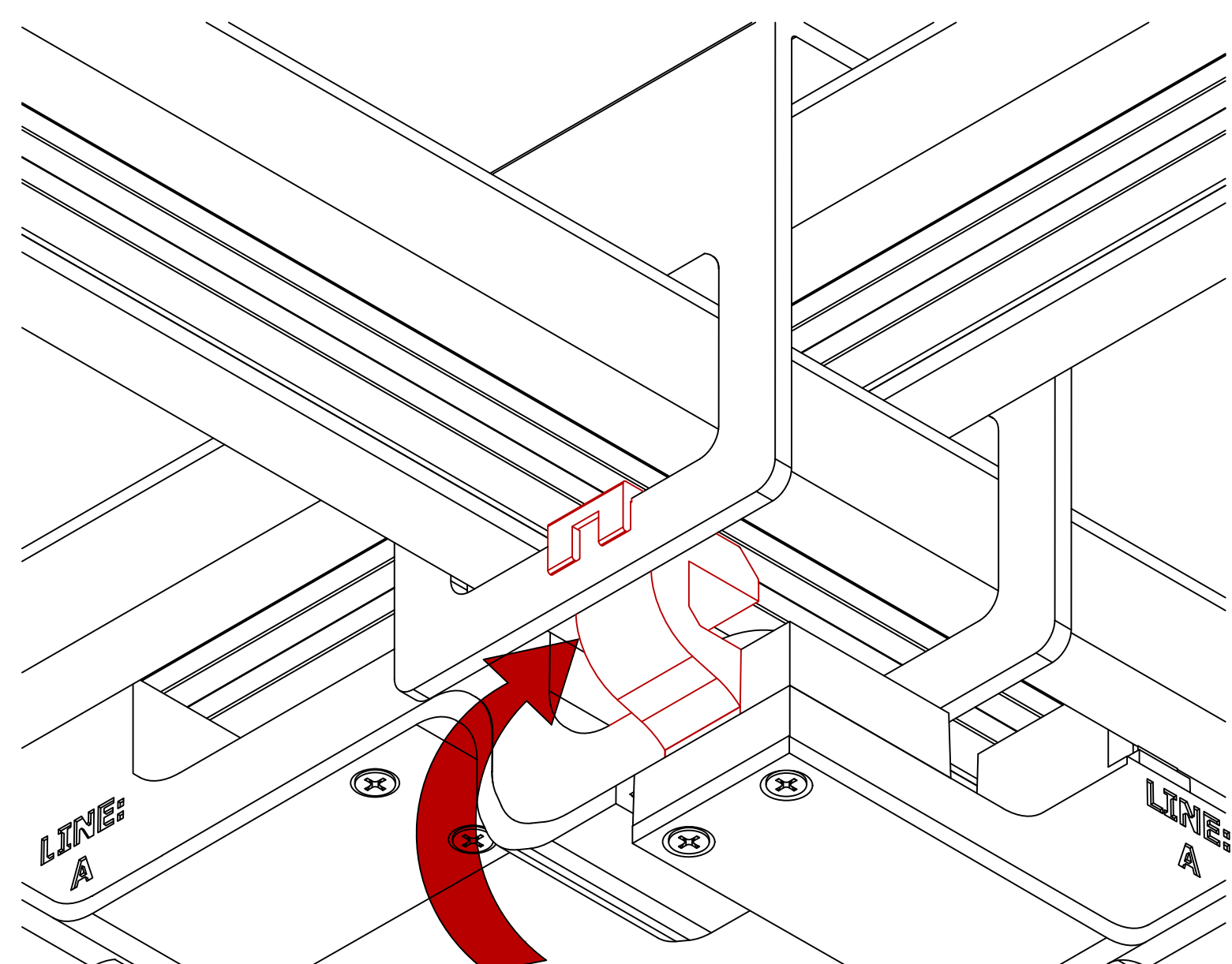
STEP 4A

SLIMLINE JUMPER

Make sure that the slimline crossover is tightened before attaching the slimline jumper.

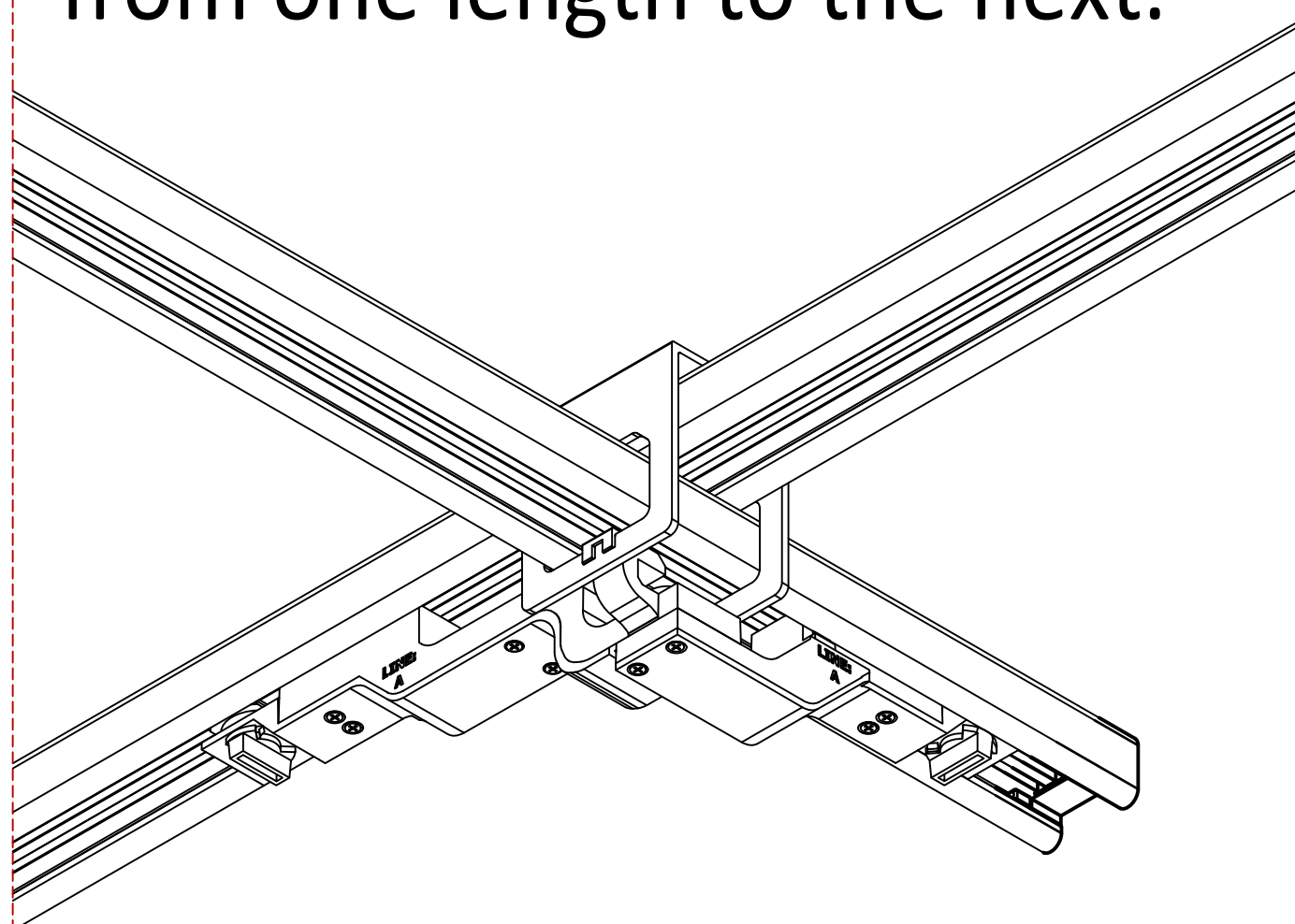


First, clip the jumper to the crossover.

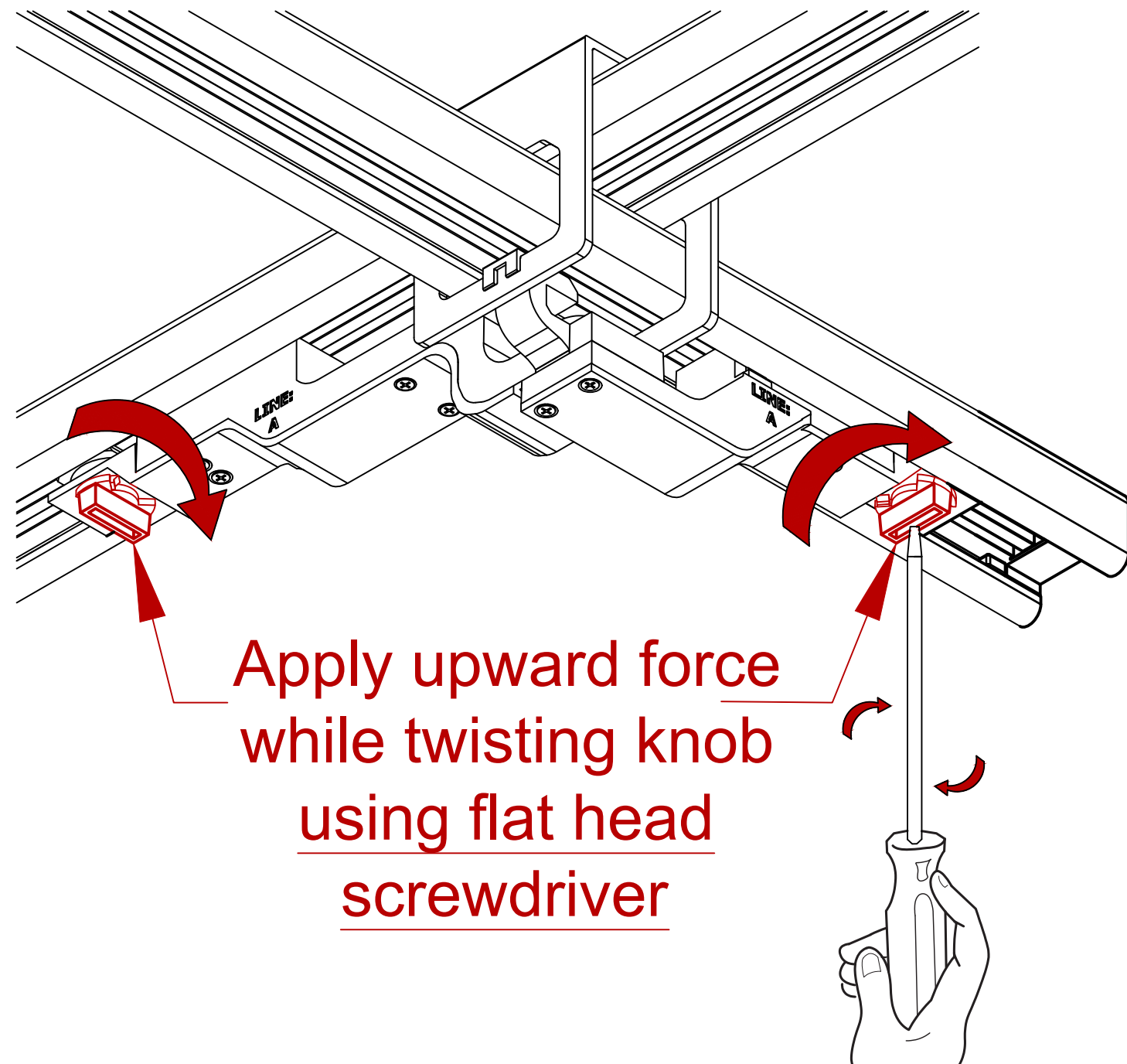


SLIMLINE JUMPER (MD2020-UNIV-IJ2-B-X)

A single piece unit that is installed with two knobs, one must be fully turned in each abutting length. As a result, power can continue to flow from one length to the next.



Seat the jumper into the busSTRUT by squeezing tightly on one side and turning the knob. Then, turn the other knob to complete the circuit.



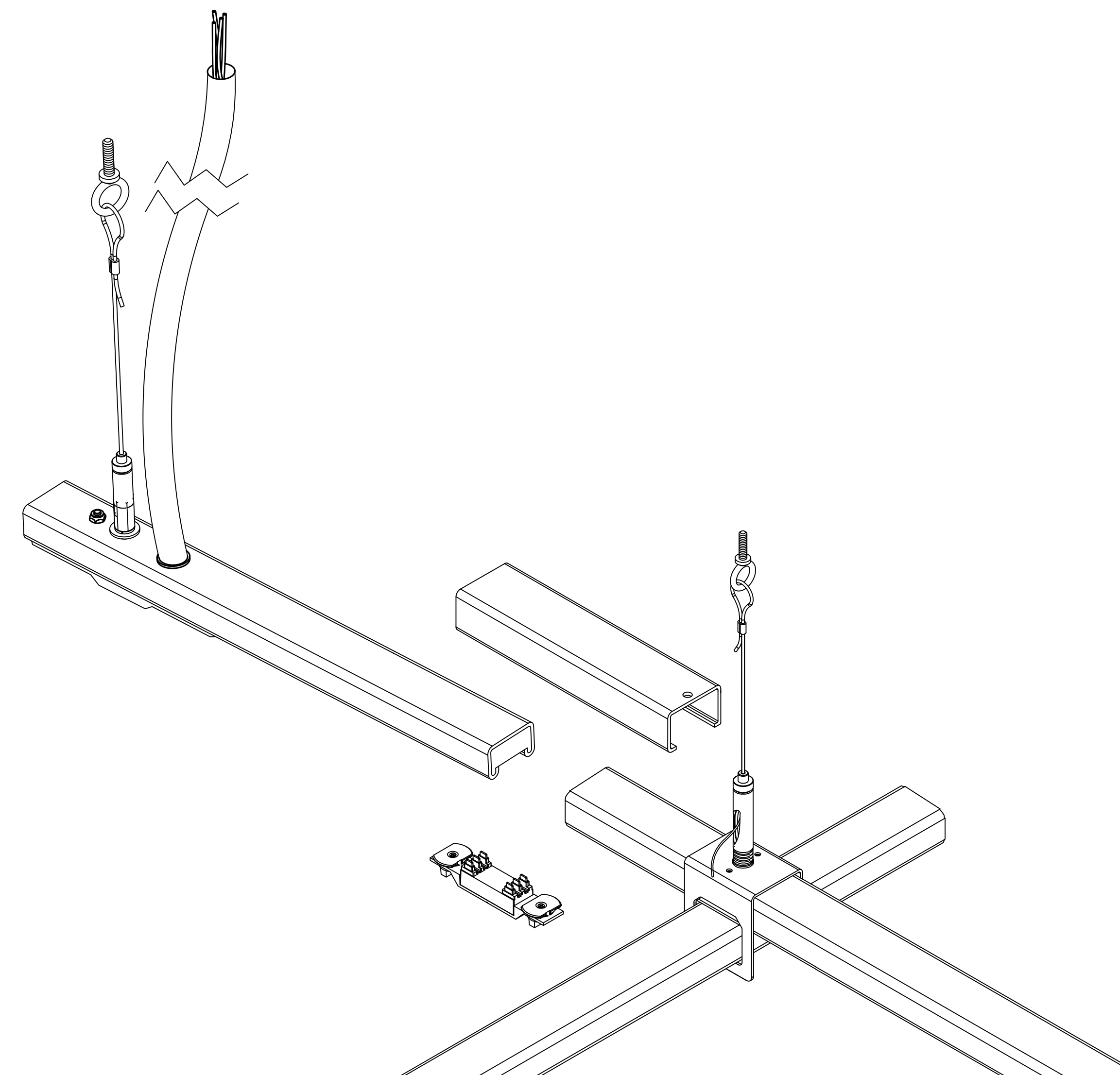
Apply upward force while twisting knob using flat head screwdriver

STEP 4B

STARTER FEED

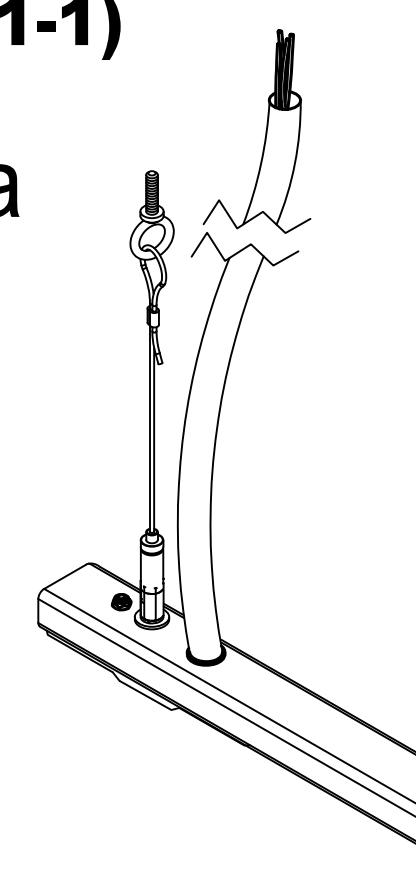
The Starter Feed comes with a 1/4-20 Stud to create an additional hang point and a 15' 12/4 SOOW Cord to connect power to the system.

Attach the cable glide to the stud and tighten. Connect the aircraft cable as shown in Step 1.



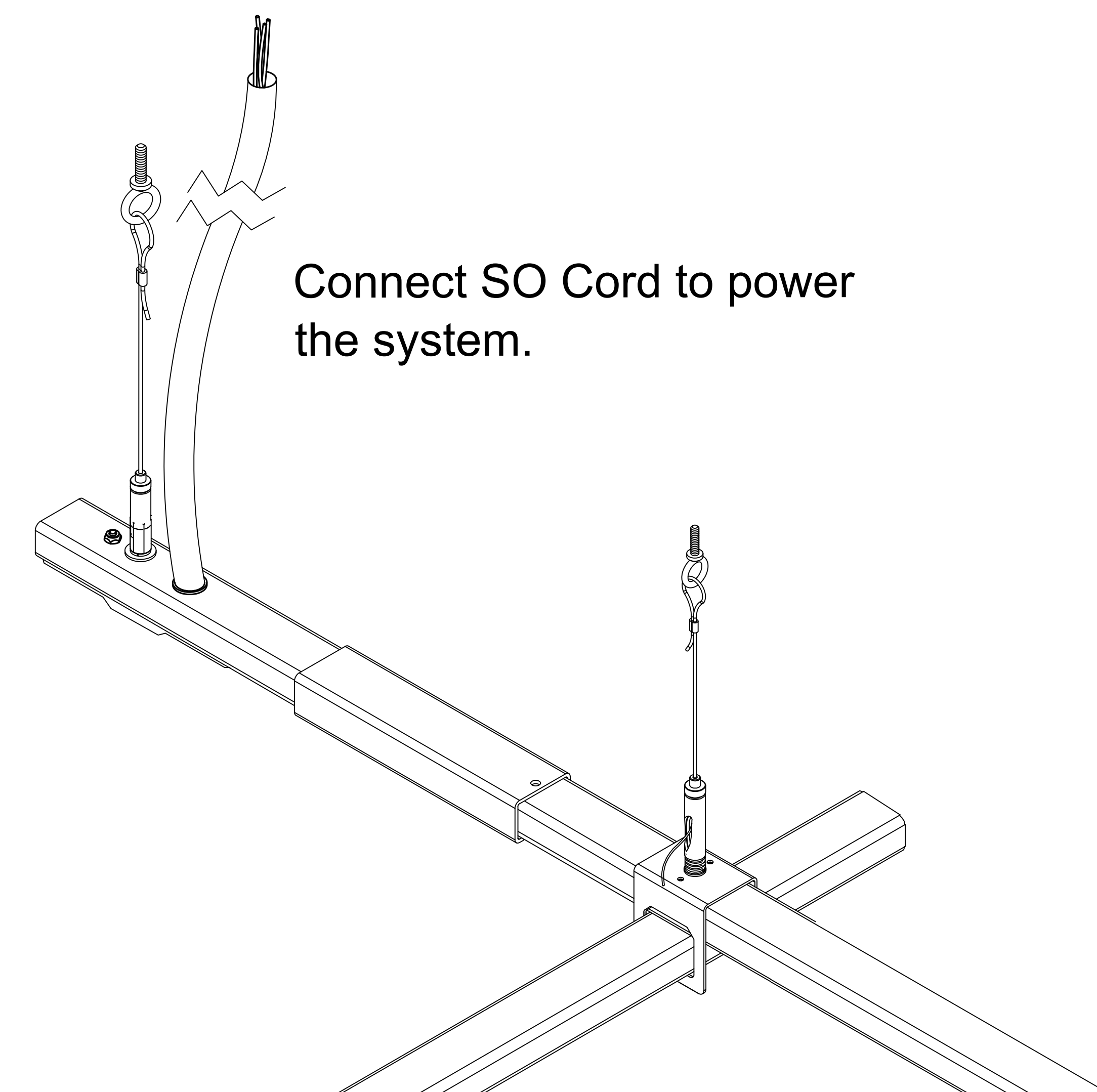
STARTER FEED (P20-3-40-UNIV-30-CM-F 1-1)

This 30" length supplies power to a configuration from the preassembled cord and to the abutting length via a joiner insert that must be installed.



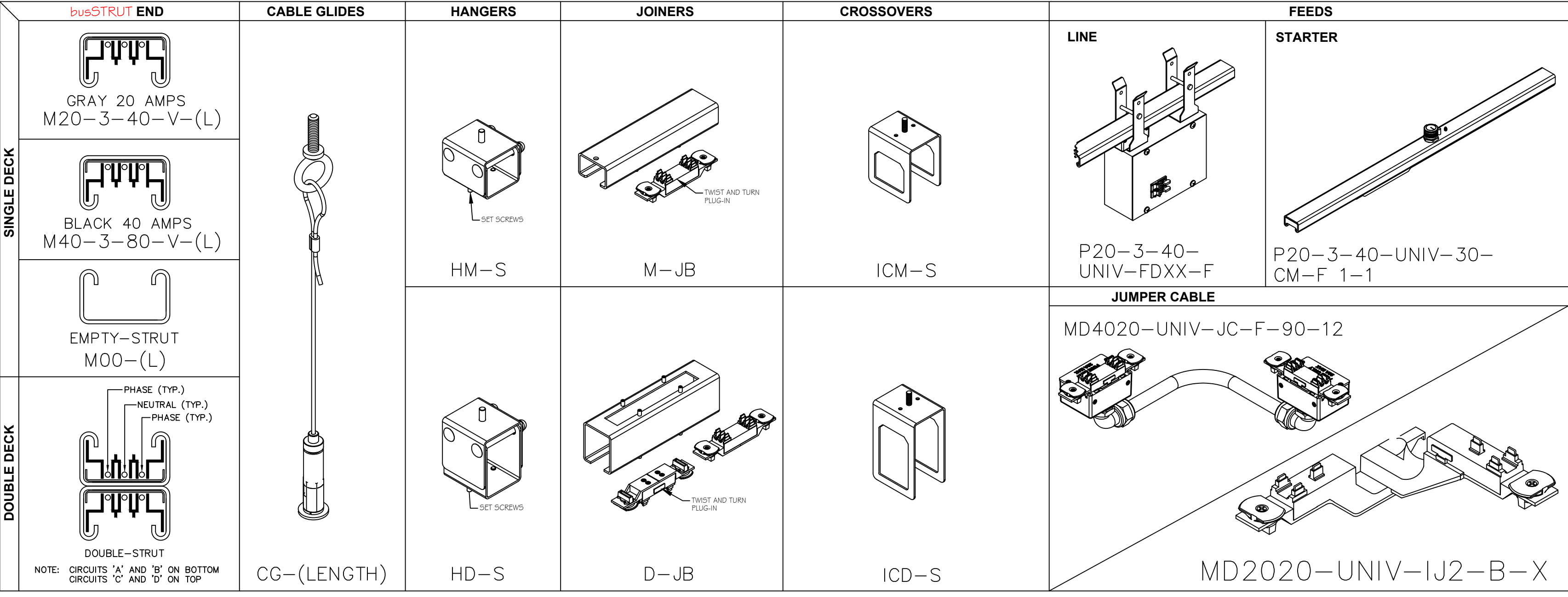
Once the starter is properly suspended, connect the starter to the suspended grid using a Joiner and Insert as shown in Step 2.

Connect SO Cord to power the system.



**Installation Instruction Guidelines are provided only as that, informative guidelines. Defer to architectural/engineering drawings tailored to the specific project.

busSTRUT Parts



busSTRUT 12 gauge 1" x 1" x 1-5/8" STEEL. **busSTRUT** features two Hot wires symmetrically surrounding a center Neutral. The result, two 20 Amp circuits 40 Amps Maximum with **busSTRUT**120, alternatively two 40 Amp circuits 80 Amps Maximum with **busSTRUT**140, 2, 5, 5', 10', and 20' lengths. Rated for up to 277/480V. Double decks with standard hardware for trunking.

BRAIDED CABLE with **GUIDE**: For use with **busSTRUT** Hangers/Crossovers. Includes cable-guide and cable with threaded stud for use with **busSTRUT** cable-guide.

HANGERS: Single and Double Hangers are for use with **busSTRUT**. Each is an assembled two-part unit. The upper piece includes a threaded stud for use with **busSTRUT** cable-guide.

JOINERS: Single and Double are for use with **busSTRUT**. Lengths are joined together mechanically with the 8" steel sleeve. Electrical Joiner-Kits include both a Twist & Turn Plug in electrical insert to bridge power. And continuous grounding studs through the bus itself by means of a permanently affixed copper grounding bar.

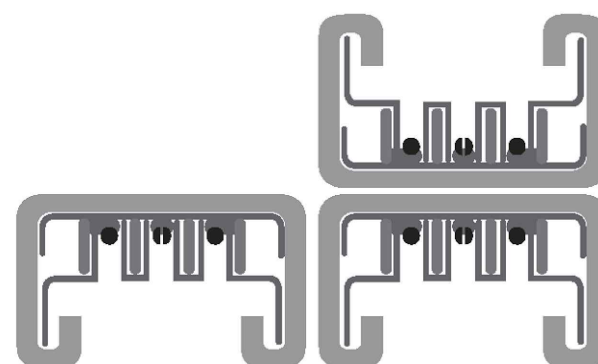
CROSSOVERS: For use with intersecting **busSTRUT**. Each is an assembled two-part unit for building grid configurations and bridges. The upper piece includes a threaded stud for use with **busSTRUT** cable-guide.

JUMPERS: For use with both **busSTRUT**120 and **busSTRUT**140. The fused 4020 Jumper Cables can be used to electrically connect **busSTRUT**140. Trunks to **busSTRUT**120 Branches and/or electrically connecting **busSTRUT**120 to **busSTRUT**140.

LINE FEEDS: For use with powering single-decked **busSTRUT**. Junction Box features energy code type "Tentless" (breakers/fuse holders) and 3 Pole Fuses. Available up to 277/480V. Can be positioned anywhere along **busSTRUT** to reduce the lengths of homeruns.

STARTER FEEDS: For use with powering single-decked **busSTRUT**. Utilized when no current limiting is required on the **busSTRUT**. Must be positioned at the beginning of a run.

Bill of Materials

busSTRUT Bill of Materials																		Finish TBD: Galvanized, White, or Black				Drawn By Checked By Date		John Loch John Loch 10/23/2024	
Small Grid																									
		busSTRUT LENGTHS					busSTRUT Hardware					busSTRUT POWER													
		busSTRUT 20					Joiners		Hangers	C-GI	Xover	Jcord	Line		GEN	ACT									
		M20-3-40-277-2.5-F-2B	M20-3-40-277-3-F-2B	M20-3-40-277-5-F-2B	M20-3-40-277-7-F-2B	M20-3-40-277-10-F-2B	M-JB-F-X	M-JJ-F-X	M-JJ-F-NE	HM-S-F-STLFX	CG-E-15-B-GL	ICM-S-F-ST-X	MD4020-UNIV-JC-F-90-12-G02	MD2020-UNIV-1J2-F-X	P20-3-40-UNIV-JK-NB-F	P20-3-40-UNIV-30-CM-F-1-1	P40-3-60-UNIV-FD-F								
R/C	Amps	LF	BF	2.5	3	5	7	10	M	INS	NE-INS	M	C-GI	1/1	12"	INVS	JK	30ST	40	GEN	ACT				
Rows																									
R1	20	7.5	7.5				1			1	1			2	2			1							
R2	20	7.5	7.5	1			1			1	1			2	2		1								
SUB TOTAL		15	15	1		2			2	2			4	4			1		1						
R/C	Amps	LF	BF	2.5	3	5	7	10	M	INS	NE-INS	M	C-GI	1/1	12"	INVS	JK	30ST	40	GEN	ACT				
Columns																									
C1	20	7.5	7.5	1		1				1	1						1								
C2	20	7.5	7.5	1		1				1	1						1								
SUB TOTAL		15	15	2		2			2	2							2								
STORE TOTAL		30.0	30.0	3		4			4	4			4	4			3		1						

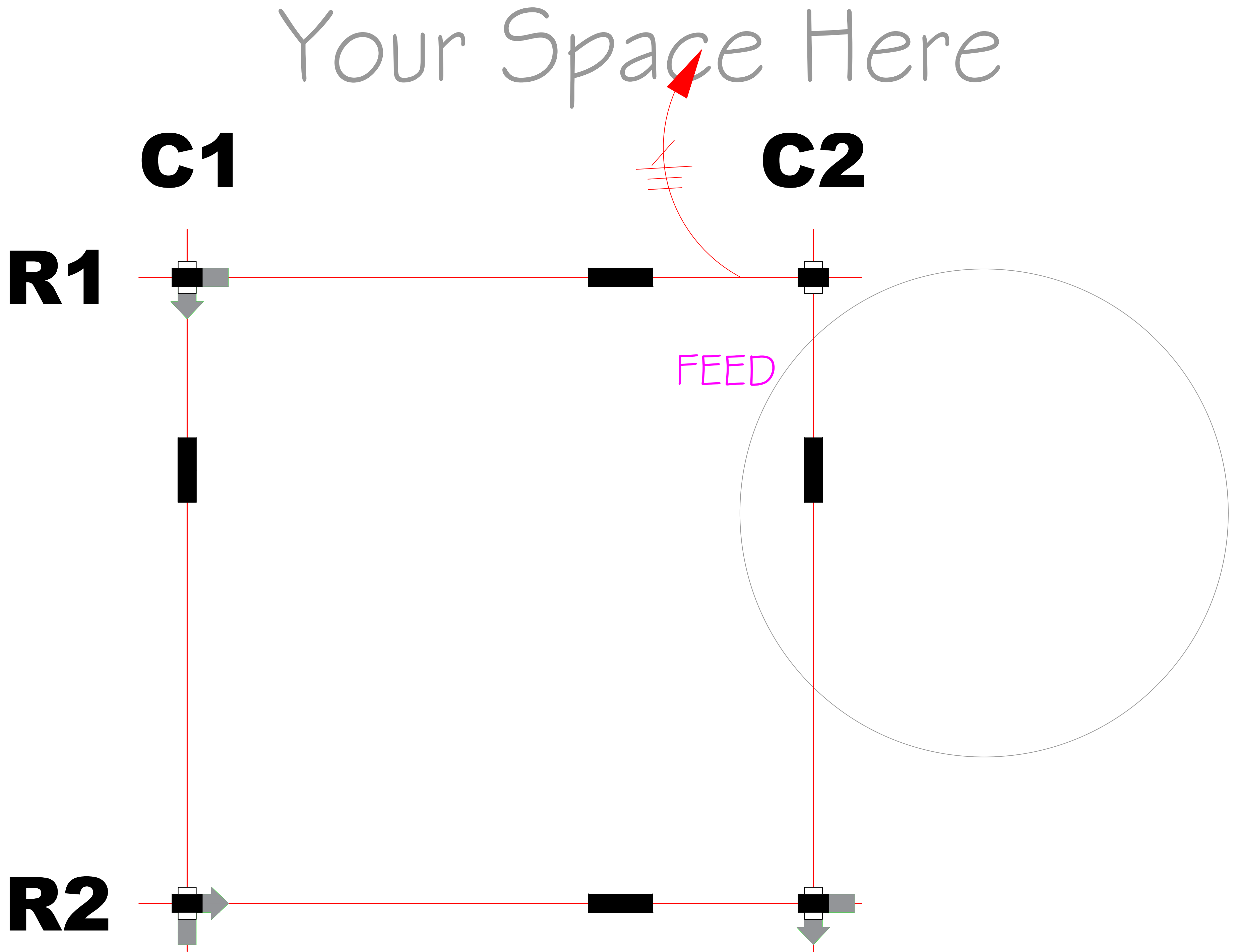
Labor Hours

busSTRUT provides time-tested standard labor hours per part, which are then multiplied by the project's Bill of Materials.

bus.STRUT LABOR									
	ITEMS	Qty.	U/M	STANDARDIZED LABOR HOURS				TOTAL HRS	
						min	hrs .60		
bus.STRUT SYSTEM	LENGTHS	<u>30</u>	LF	x	2.75	0.05	=	<u>1</u>	
	JOINERS	<u>4</u>	EA	x	12	0.20	=	<u>1</u>	
	HANGERS	<u>4</u>	EA	x	25	0.42	=	<u>2</u>	
	CROSSOVERS	<u>4</u>	EA	x	10	0.17	=	<u>1</u>	
	ATTACHMENTS		EA	x	8	0.13	=	<u>0</u>	
FIXTURES	JUMPERS	<u>3</u>	EA	x	6	0.10	=	<u>0</u>	
	FEEDS	<u>1</u>	EA	x	15	0.25	=	<u>0</u>	
	bus.STRUT SUB-TOTAL							=	<u>5</u>
	ACCENT		EA	x	8	0.13	=	<u>0</u>	
	LINEARS		EA	x	20	0.33	=	<u>0</u>	
bus.STRUT READY LIGHTS SUB-TOTAL							=	<u>0</u>	
TOTAL TIME							=	<u>5</u>	

Lighting Plan

busSTRUT
LIGHTING PLAN ONLY
THIS DRAWING IS MEANT TO SHOW THE LOCATION OF busSTRUT
LIGHTS ONLY. IT IS NOT A REPLACEMENT FOR: ARCHITECTURAL /
ENGINEERING / ELECTRICAL SPECIFICATIONS. (SEE THEIR DRAWINGS)



Legend

	busSTRUT 20 / Single Deck
	30" Starter Feed
	Joiner
	1/1 Slimline Crossover
	Slimline Jumper

Lighting Plan & Bill of Materials
SMALL GRID

busSTRUT SHOP DRAWING SET(ONLY)
NOT A REPLACEMENT FOR
ARCHITECTURAL /
ENGINEERING OR ELECTRICAL
DRAWINGS

XX
BT

XXXX
REGION DESCRIPTION

XX-XX-XX
DATE

NO.

PAPER SIZE:
ARCH E (48x36)
SCALE 1/4" = 1'-0"
DRAWING NUMBER
E-b1

