

Express Rectangle (Small) - Lights & Power Drops

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.

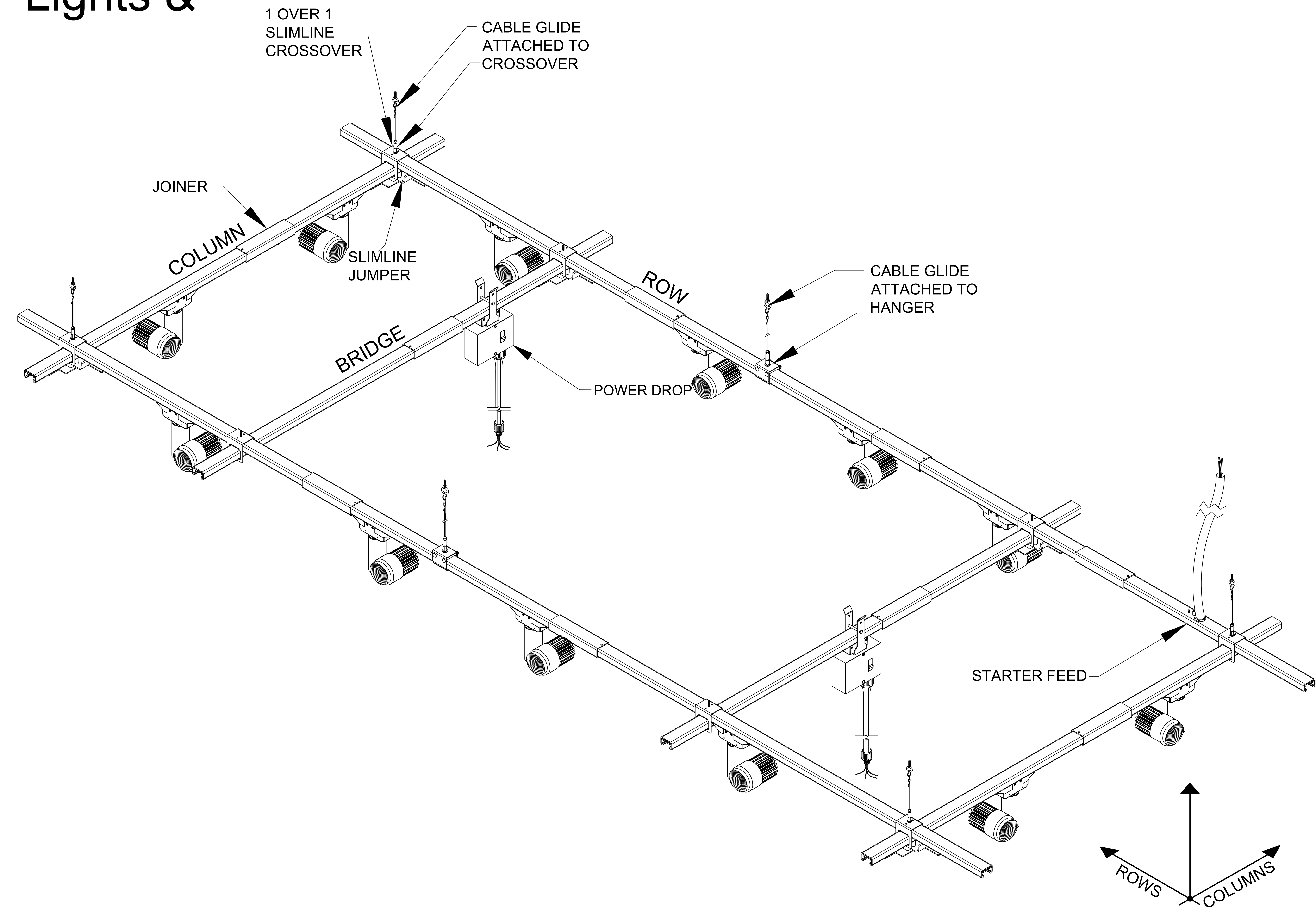
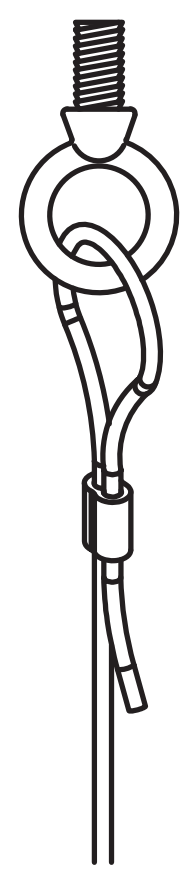


TABLE OF CONTENTS		KEY MOUNTING RULES		APPROVAL
E-b01 E-b02	Typical Installation Instructions		Legend busSTRUT 20 / Single Deck 30" Starter Feed Joiner 1/1 Slimline Crossover Slimline Jumper	
E-b1 E-b2	Lighting Plan, BOM, & Labor Hours Assembly Plan		Rows are to be mounted on top of Columns. Crossover sleeve runs with Rows.	

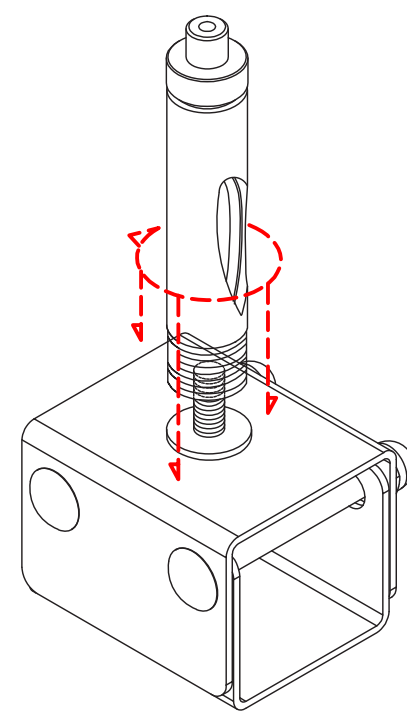
STEP 1

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).

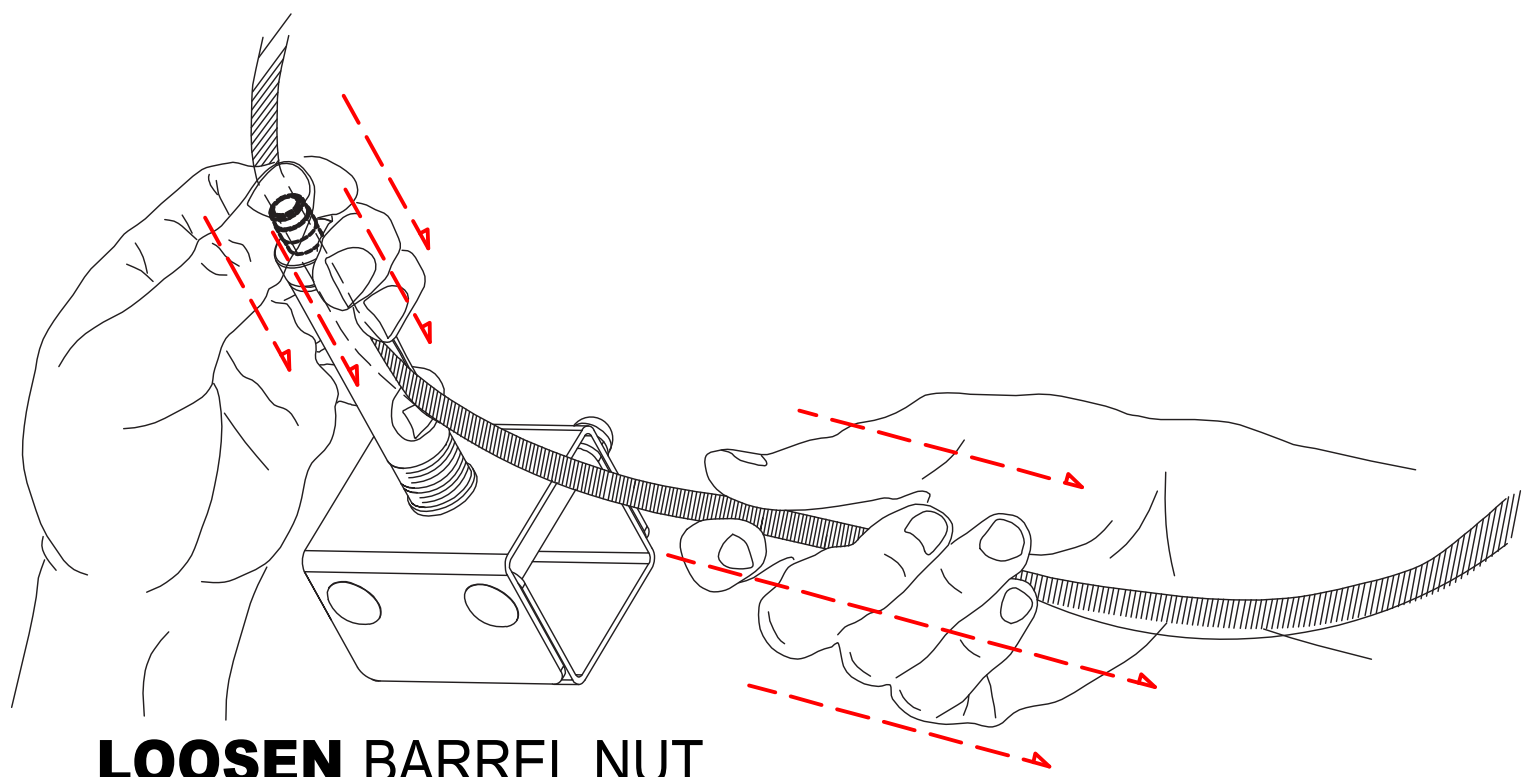
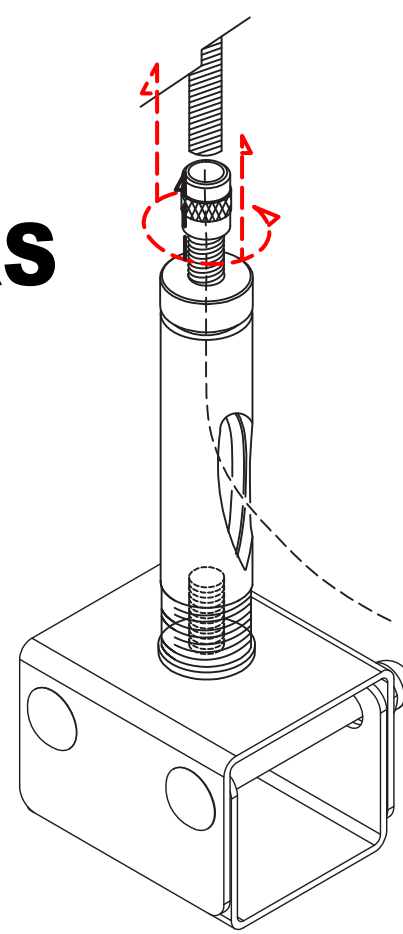


2 ASSEMBLE HANGERS (HM-S)

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

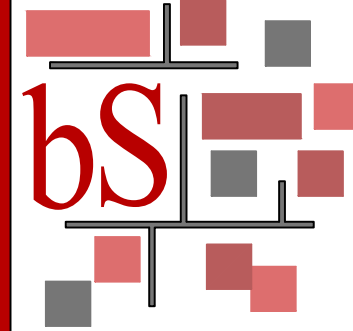
Turn the first knob

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

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DRAWN BY
JOHN LOCH

DATE
10/30/2024

ISSUED FOR
BID / REVIEW

TYPICAL
busSTRUT Installation Instructions

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

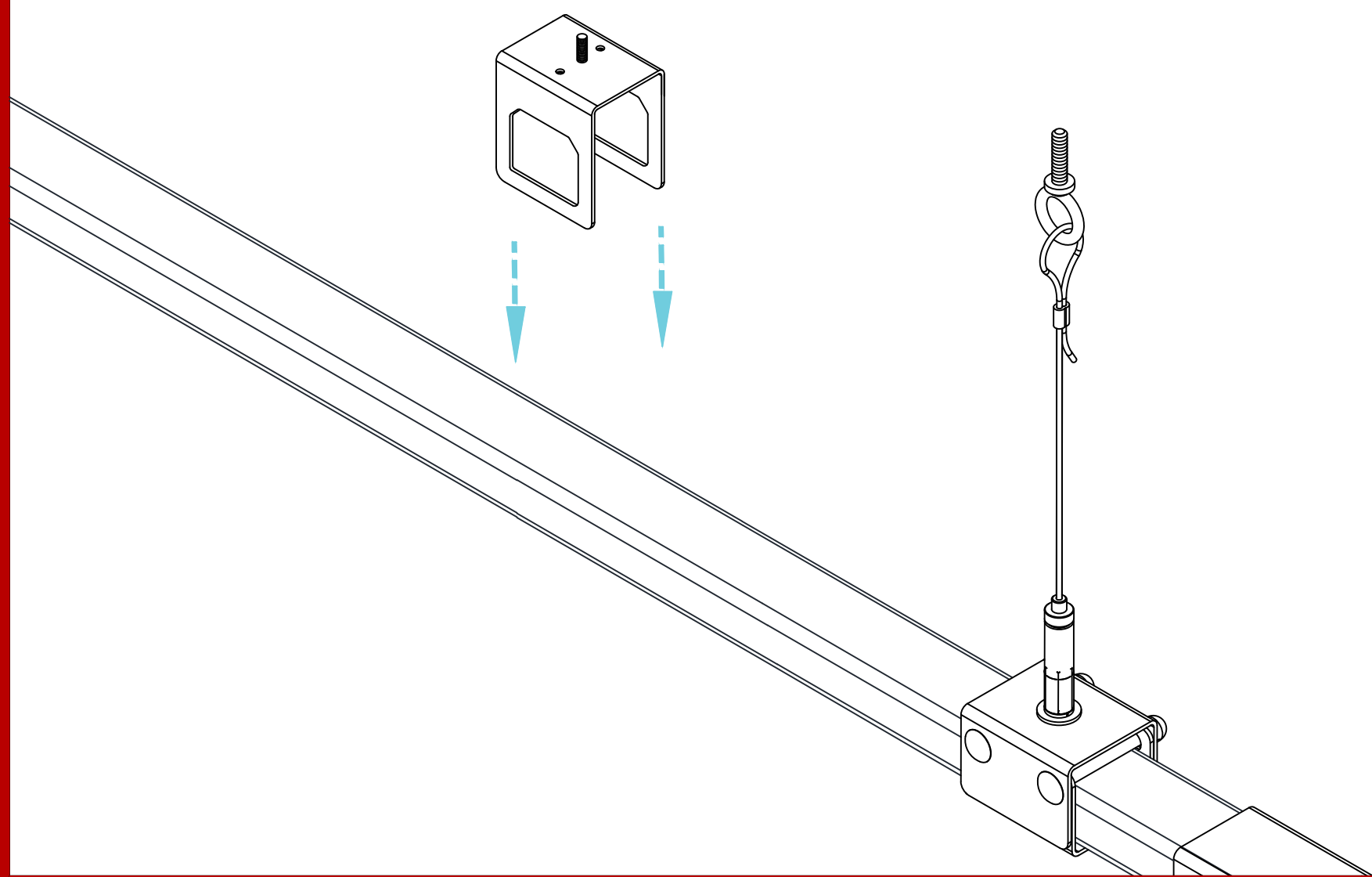
NO.	DATE	DESCRIPTION	BY
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PAPER SIZE:
ARCH E (48x36)
NOT TO SCALE
DRAWING NUMBER
E-b01

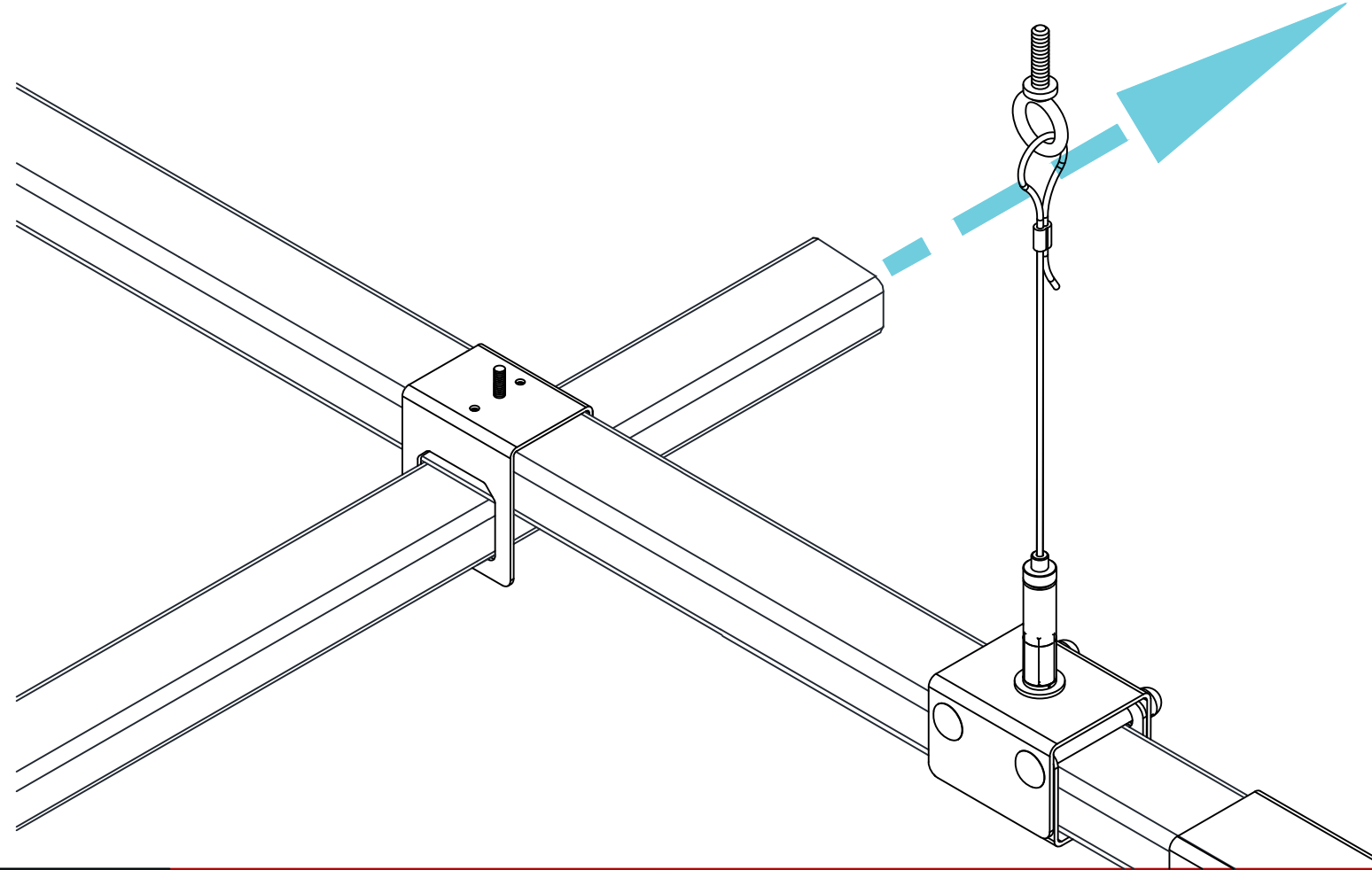
STEP 3

INSTALLING CROSSOVERS DROPPING ON

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



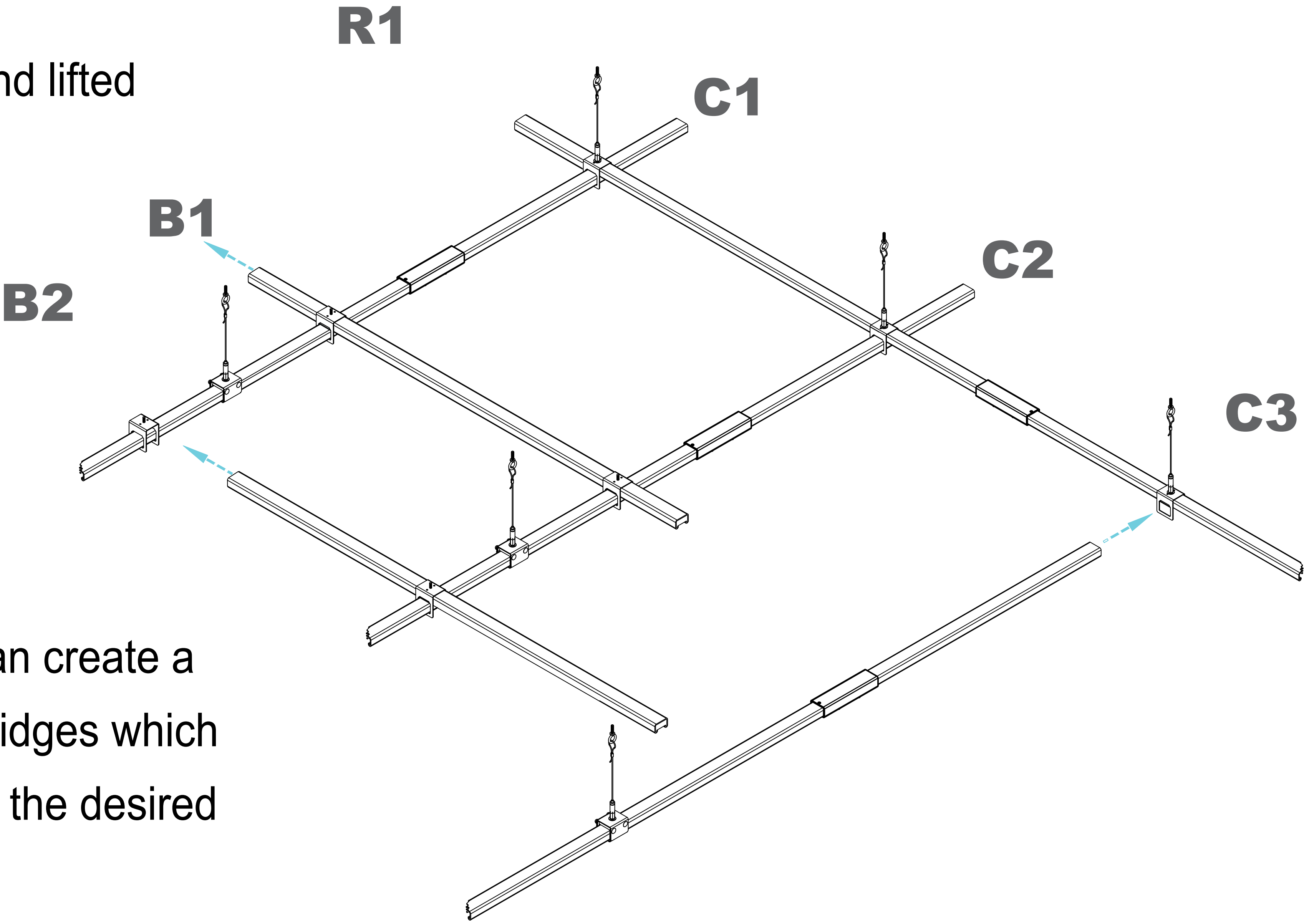
Slide perpendicular runs of busSTRUT through the crossover and tighten the set screws.



SLIDING ON

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

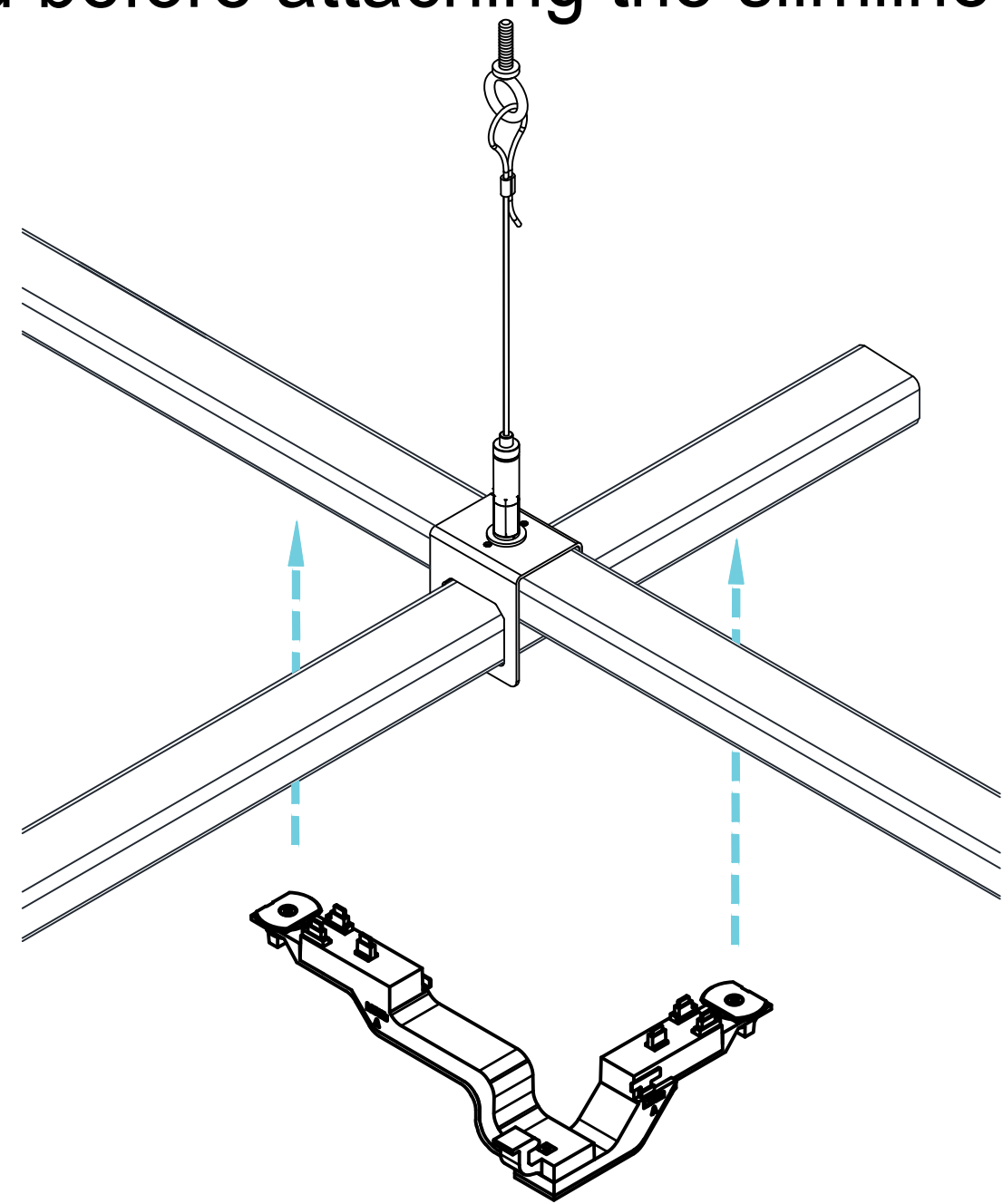
Perpendicular runs can create a full grid or be short bridges which are easily moved into the desired position.



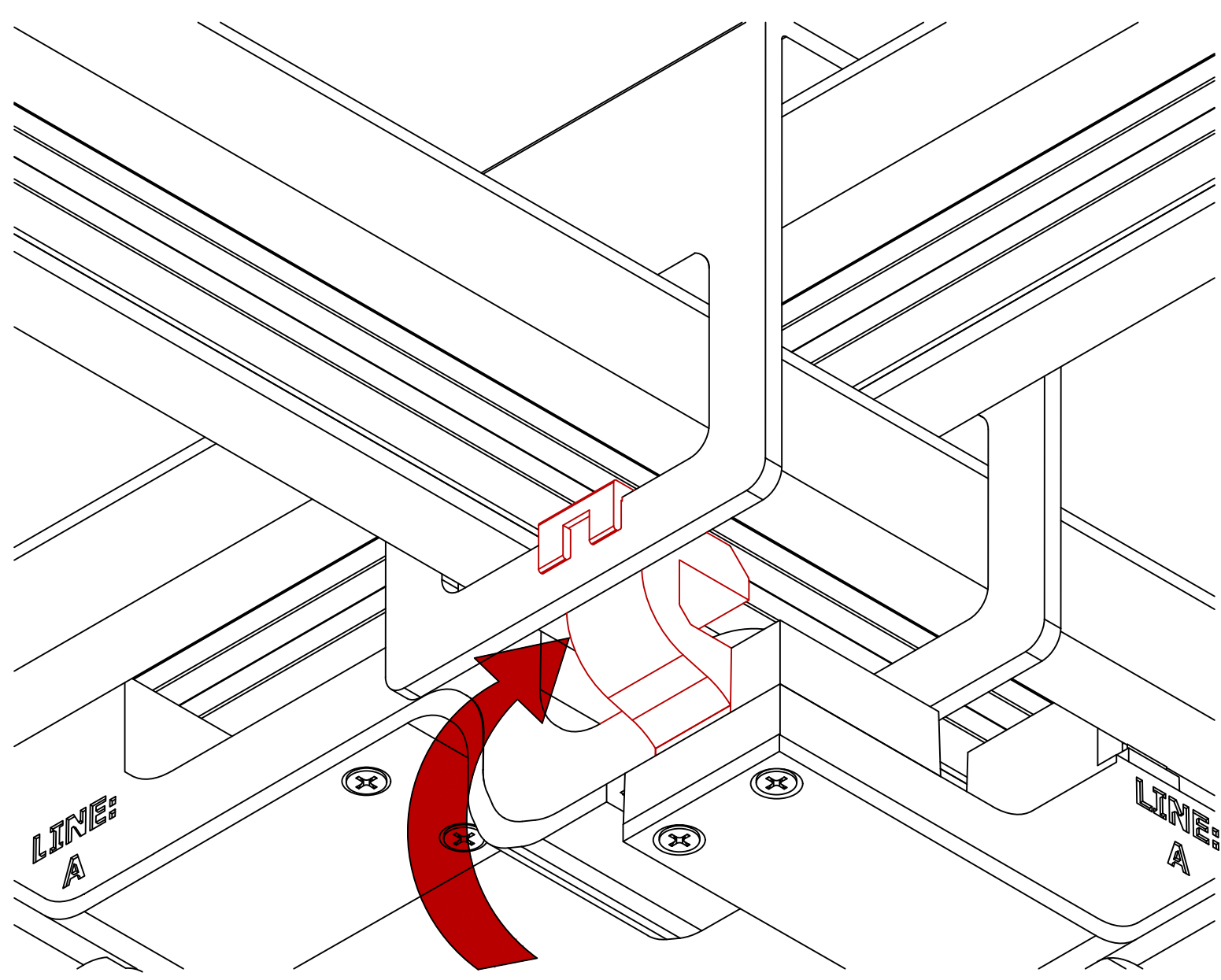
STEP 4A

SLIMLINE JUMPER

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

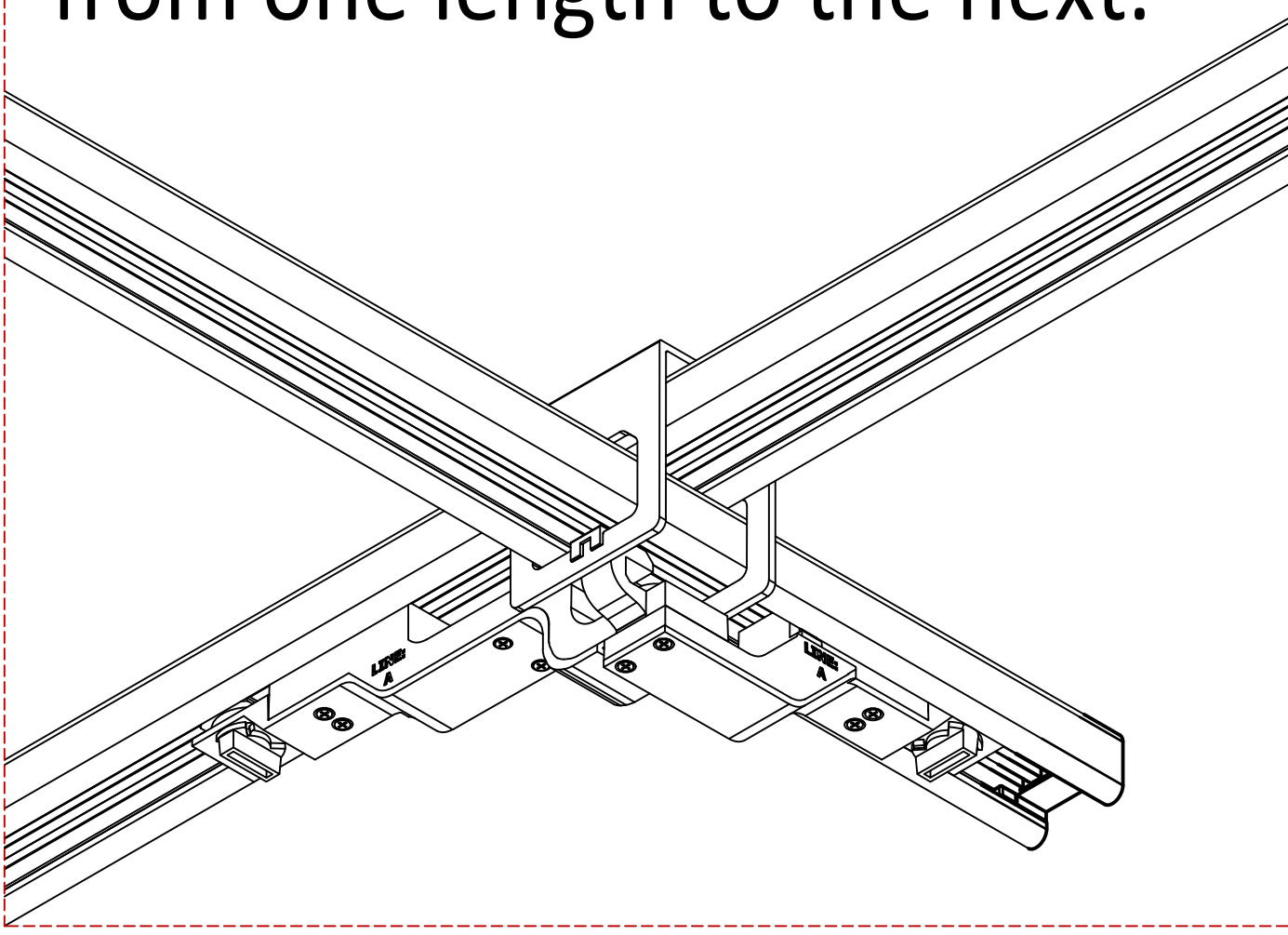


First, clip the jumper to the crossover.

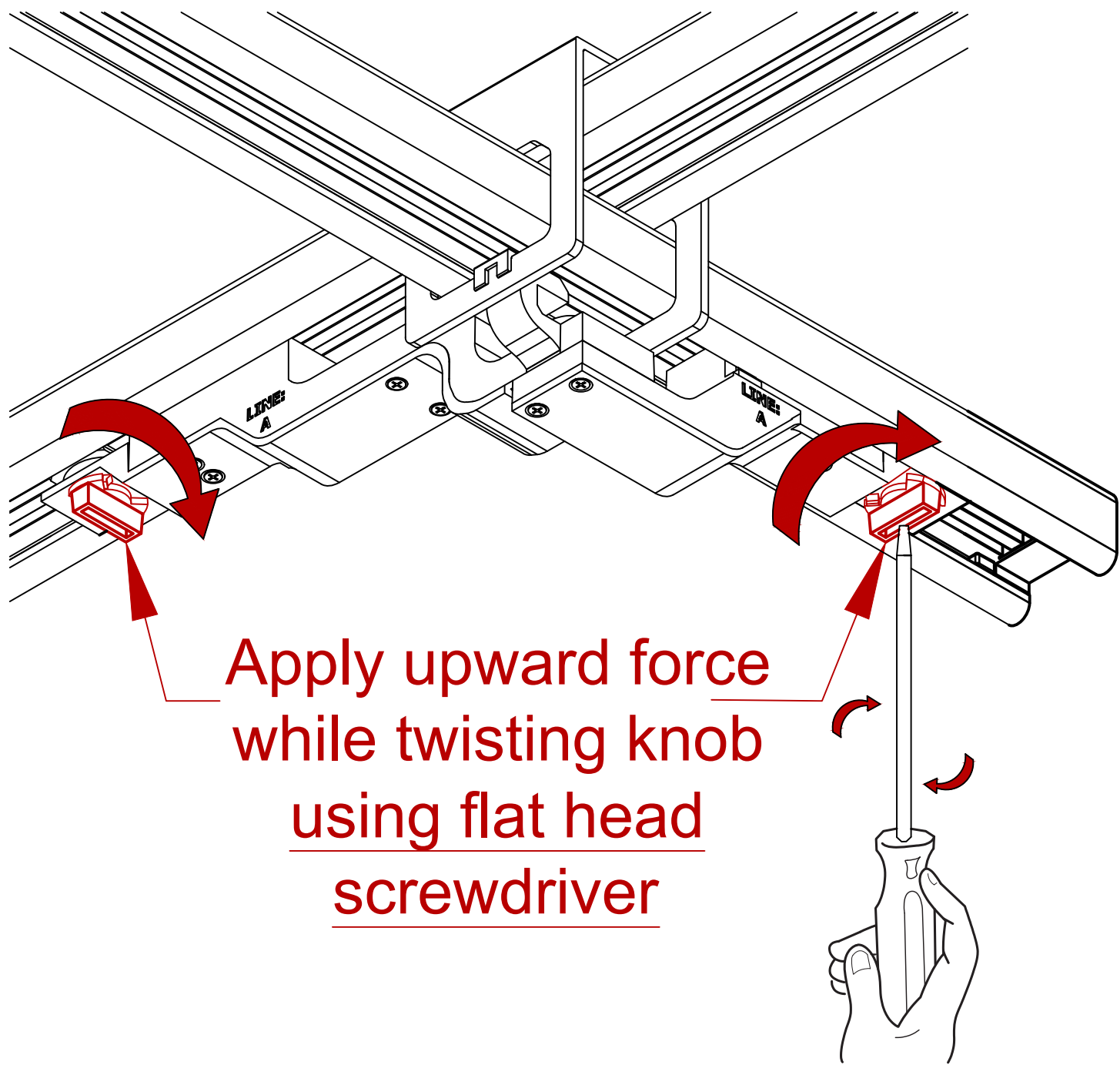


SLIMLINE JUMPER (MD2020-UNIV-IJ2-B-X)

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.

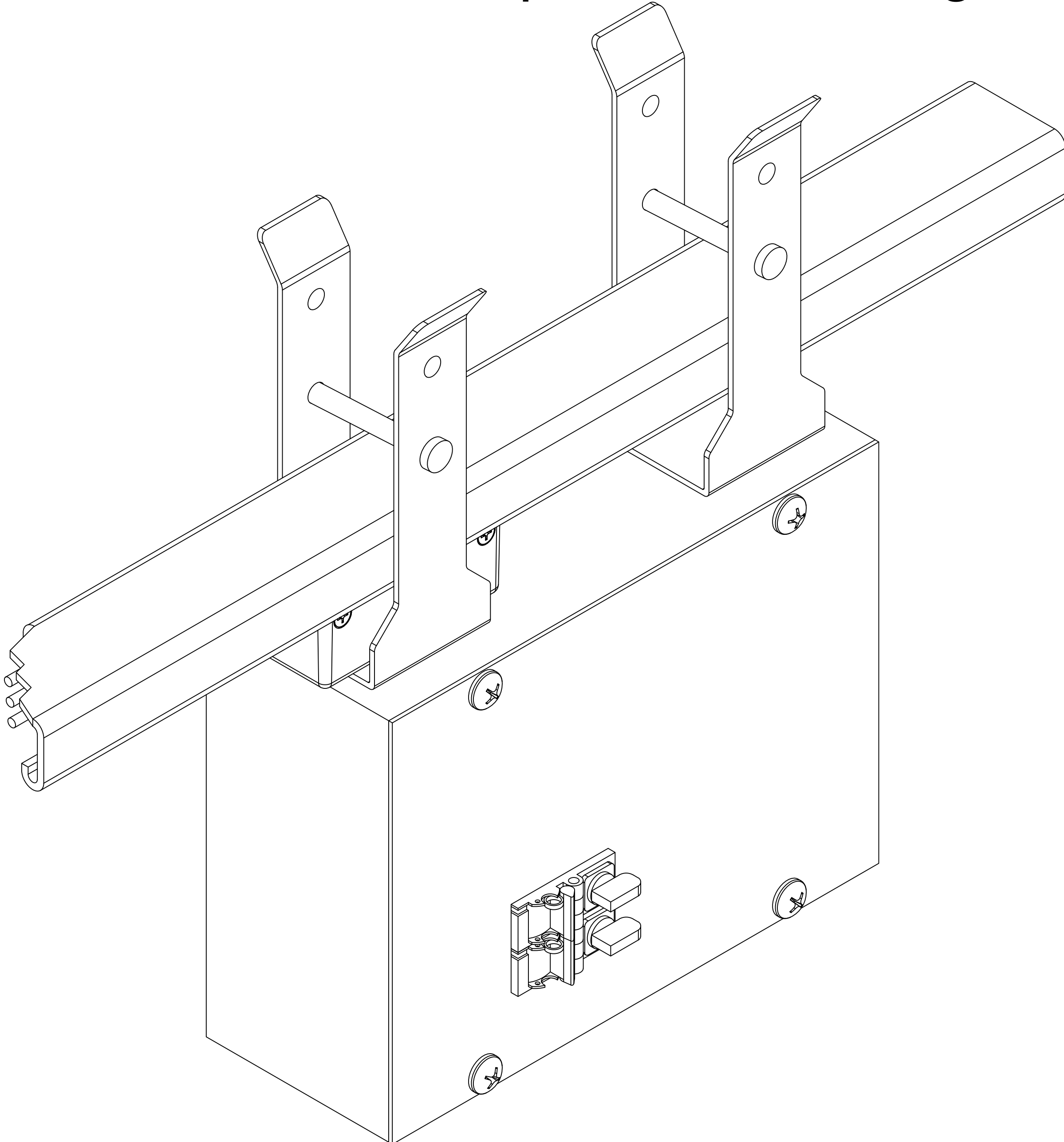


Apply upward force while twisting knob using flat head screwdriver

STEP 4B

LINE FEEDS

Install line feeds on busSTRUT to power the configuration.



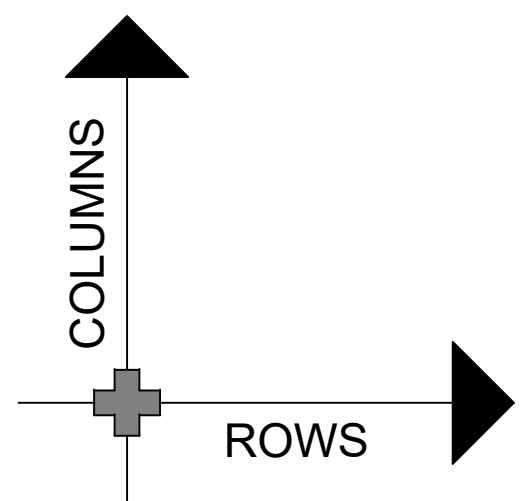
20A LINE FEED

Shown on single decked busSTRUT

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

SINGLE DECK	 GRAY 20 AMP'S M20-3-40-V-(L)	 CG-(LENGTH)	 HM-S	 M-JB	 ICM-S	 P20-3-40-UNIV-FDX-X-F	 P20-3-40-UNIV-30-CM-F 1-1
	 EMPTY-STRUT M00-(L)						
DOUBLE DECK	 DOUBLE-STRUT M00-(L) NOTE: CIRCUITS "A" AND "B" ON BOTTOM CIRCUITS "C" AND "D" ON TOP	 CG-(LENGTH)	 HD-S	 D-JB	 ICD-S	 MD4020-UNIV-JC-F-90-12 MD2020-UNIV-IJ2-B-X	

STEELTRU® 12 gauge 1" x 1-1/8" STEELTRU® features two Hot Wires and is specifically announcing a center Neutral Wire. It has 20 Amp circuits 40 Amps Maximum with busWTRU® 720, alternatively two 40 Amp circuits 80 Amps Maximum with busWTRU® 2.5, 5, 10, and 20 lengths. Rated for use up to 2747480V. Double coats with standard hardware for trunking.	BRAIDED CABLE with GLIDE®: For use with busWTRU® 200. Includes cable-glide and cable with factory assembled cable looped threaded 14-20" eye bolt.	HANDERS: Single and Double Hangers are for use with busWTRU®. Each is an assembled two-part unit. The upper piece has a threaded stud to use with busWTRU® cable-glide.	JONERS: Single and Double are for use with busWTRU®. Lengths are joined together mechanically with the 4000 Series Electrical Joints which include a Twist & Turn Plug-In electrical insert to bridge power. And continuous running through the bus itself by means of a permanently affixed corner joining bar.	CROSSOVERS: For use with intersecting busWTRU®. Each is a twist 4000 Series Cable can be used for configurations and bridges. The top piece includes a threaded stud for use with busWTRU® cable-glide.	JUMPERS: For use with both busWTRU® 720 and busWTRU® 140. The 4000 Series Jumper Cables can be used for electrically connecting the Trunks to busWTRU® 720 Branches and electrically connecting busWTRU® 720 to busWTRU® 140.	LINE FEEDS: For use with powerline single-line busWTRU®. Junction Box features energy code type "limiter" (breakover/holder) and 7 Pole Filters. Available in 100/17489V. Can be positioned anywhere along busWTRU® to reduce the lengths of members.
					STARTER FEEDS: For use with powerline single-line busWTRU®. Utilized when no current limiting is required on the busWTRU®. Must be positioned at the beginning of a run.	



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

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)

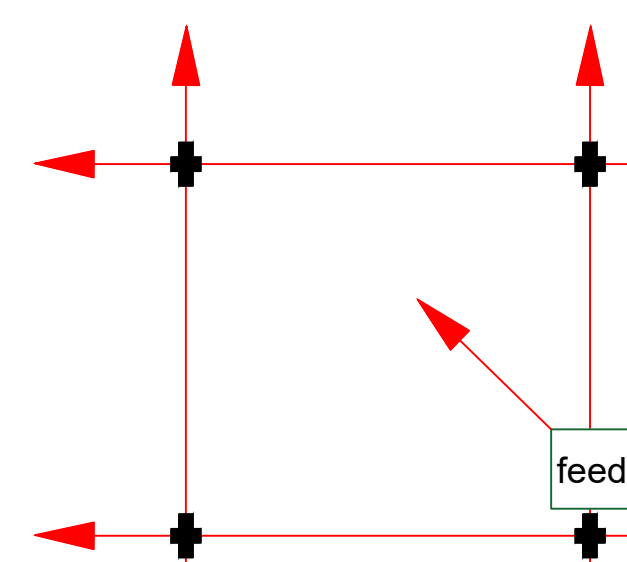
RECTANGLE Small LT PD						busSTRUT Bill of Materials										Finish TBD: Galvanized, White, or Black								Drawn By John Loch		Checked By John Loch		Date 10/30/2024	
						busSTRUT LENGTHS				busSTRUT Hardware							busSTRUT POWER												
						busSTRUT 20				Joiners			Hangers		C-GI	Xover	Jcord	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	SINGLE M-JB-F-X	JOINER INSERT M-JI-F-X	NON-ELECTRIC JOINER INSERT M-JI-F-NE	SINGLE HM-S-F-ST-LFX	DÉCOR BRACKET MKU-ST-A-F	C-GI CG-E-15-B-GL	Xover ICM-S-F-ST-X	Jcord JUMP CORD MD4020-UNIV-JCF-90-12-G02	INVS MD2020-UNIV-IJ2-F-X	JK P20-3-40-UNIV-JK-NB-F	30ST P20-3-40-UNIV-30-CM-F-1-1	PD MD40-2-120-CB20-DC-XX-LE-F	GEN BRL-4-40L-30K80-ST-WD-F	ACT BR-LUCY-U-309-30-F(OC)						
						R/C	Amps	LF	BF	2.5	3	5	7	M	INS	NE-INS	M	DB	C-GI	1/1	12"	INVS	JK	30ST	PD	GEN	ACT		
Rows						R1	20	15	15	1	1		1	3	3		1		3	2				1				4	
R2						20	15	15	1	1	1	1	2	2	2		1		3	2		1						4	
SUB TOTAL						30	30		1	2	1	2	5	5		2		6	4		1		1				8		
Columns						R/C	Amps	LF	BF	2.5	3	5	7	M	INS	NE-INS	M	DB	C-GI	1/1	12"	INVS	JK	30ST	PD	GEN	ACT		
C1						20	8	8			1	1		1	1								1					2	
C2						20	8	8			1	1		1	1							1						2	
SUB TOTAL						16	16			2	2		2	2								2						4	
Bridges						R/C	Amps	LF	BF	2.5	3	5	7	M	INS	NE-INS	M	DB	C-GI	1/1	12"	INVS	JK	30ST	PD	GEN	ACT		
B1						20	8	8			1	1		1	1						2		1			1			
B2						20	8	8			1	1		1	1					2		1			1				
SUB TOTAL						16	16				2	2		2	2					4		2				2			
STORE TOTAL						62.0	62.0		1	6	5	2	9	9			2		6	8			5		1	2		12	

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

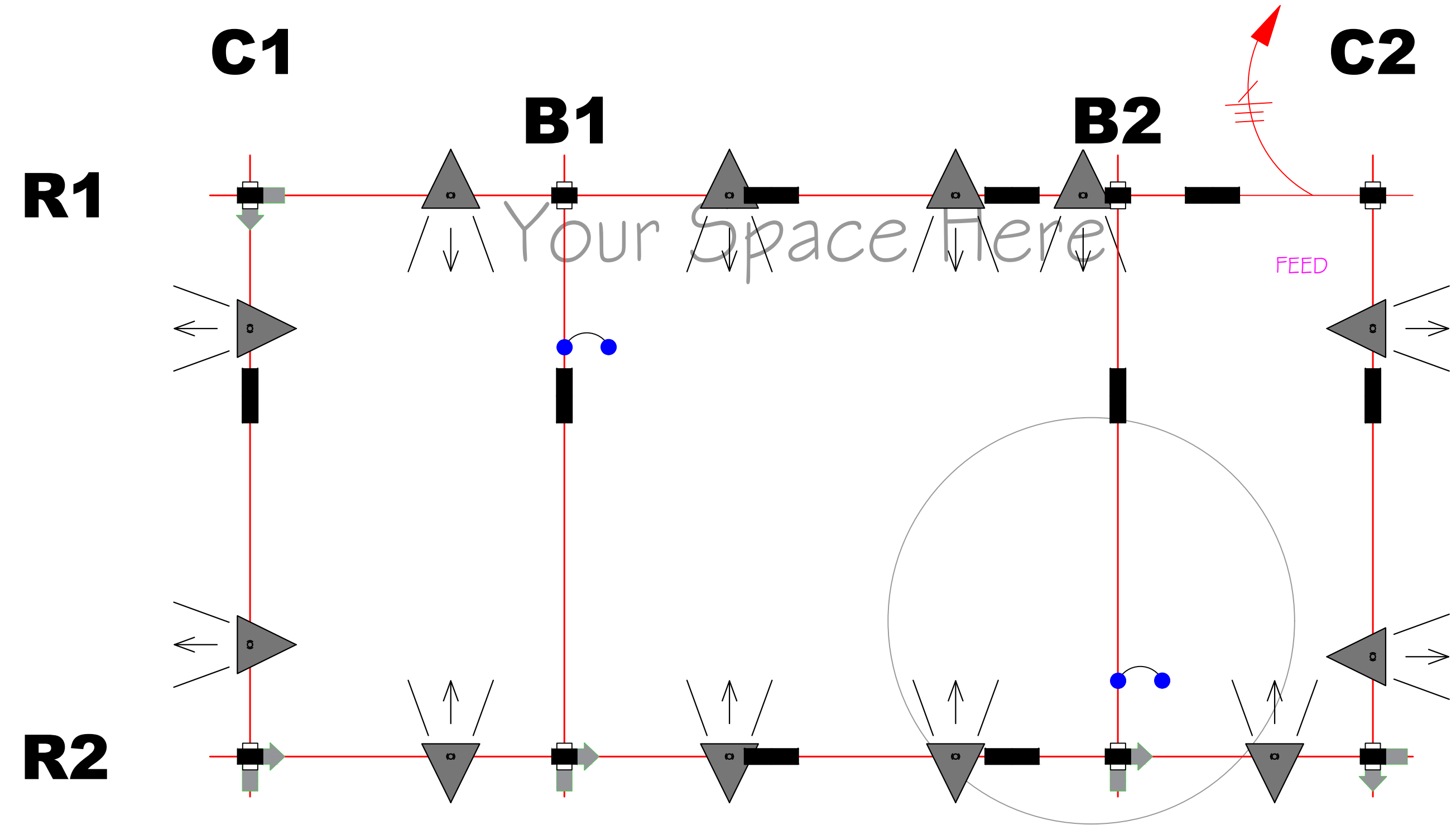
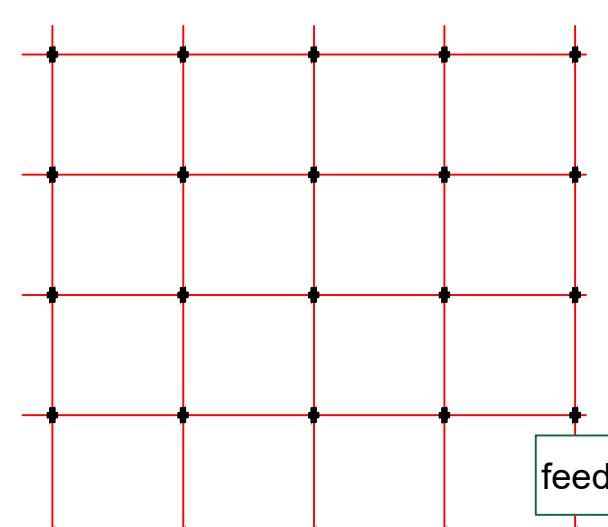
		bus.STRUCT		LABOR			
				STANDARDIZED		TOTAL HRS	
ITEMS		Qty.	U/M	min		hrs	60
LENGTHS		62	LF	x	2.75	0.05	= 3
JOINERS		9	EA	x	12	0.20	= 2
HANGERS		6	EA	x	25	0.42	= 3
CROSSOVERS		8	EA	x	10	0.17	= 1
ATTACHMENTS		2	EA	x	8	0.13	= 0
JUMBERS		5	EA	x	6	0.10	= 1
FEEDS		1	EA	x	15	0.25	= 0
		bus.STRUCT		SUB-TOTAL			= 9
ACCENT		12	EA	x	8	0.13	= 2
LINEARCS			EA	x	20	0.33	= 0
		bus.STRUCT READY		LIGHTS SUB-TOTAL			= 2
				TOTAL TIME			= 11

busSTRUT system is designed to be BID separately.

Bid from the **feeds-in**.



* Powered by a minimal amount of feed boxes.



Lighting Plan & Bill of Materials

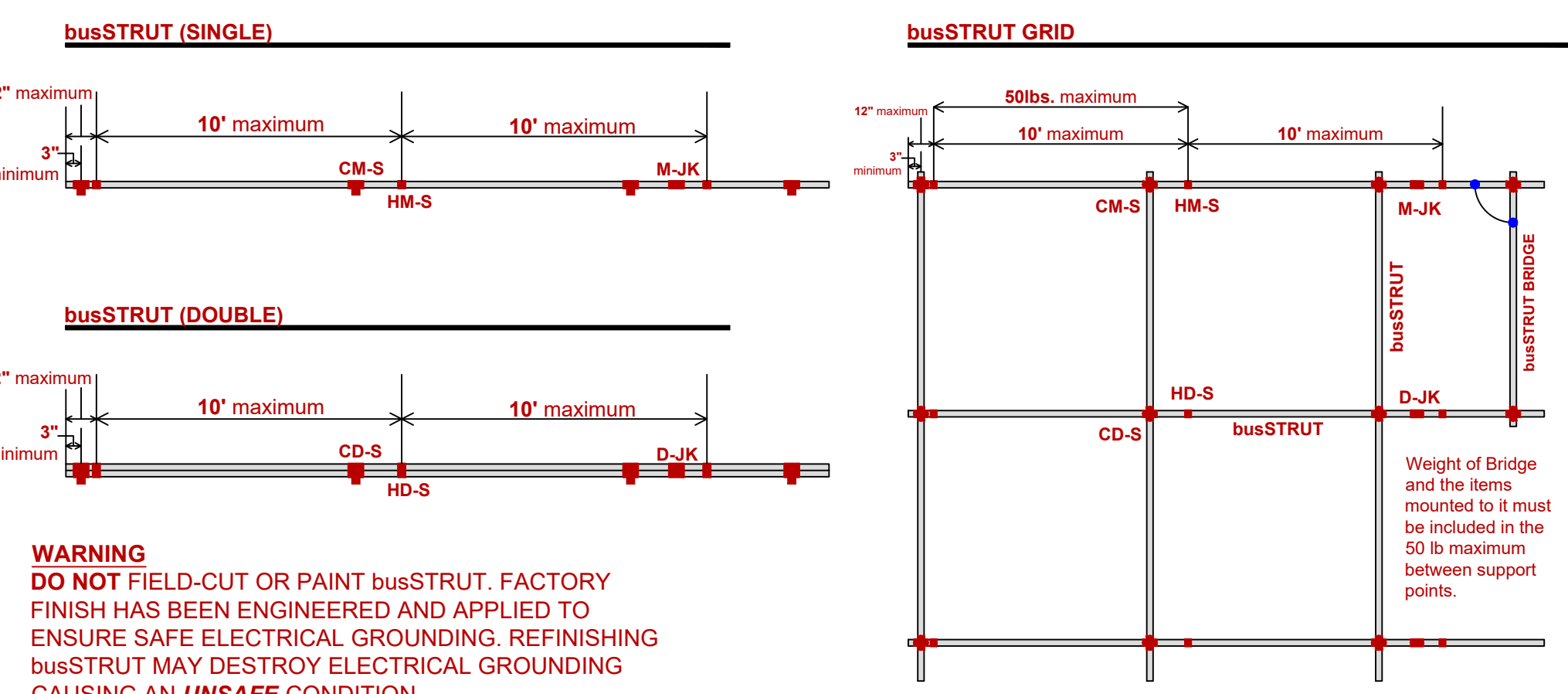
busSTRUT
SHOP DRAWING SET(ONLY)
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ENGINEERING OR ELECTRICAL
DRAWINGS

PAPER SIZE:
ARCH E (48x36)

SCALE 3/4" = 1'-0"

DRAWING NUMBER
E-b1

Mounting Rules



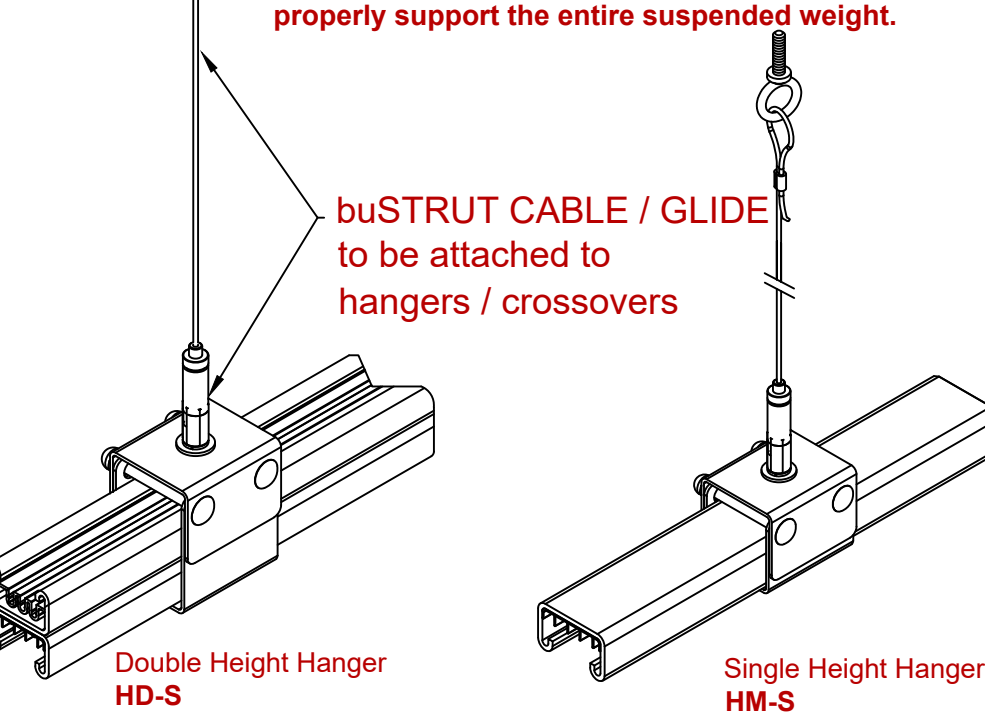
Do NOT remove the factory installed end caps from the busSTRUT

CAUTION: TIGHTEN ALL JOINER SET SCREWS TO 10 in/lbs

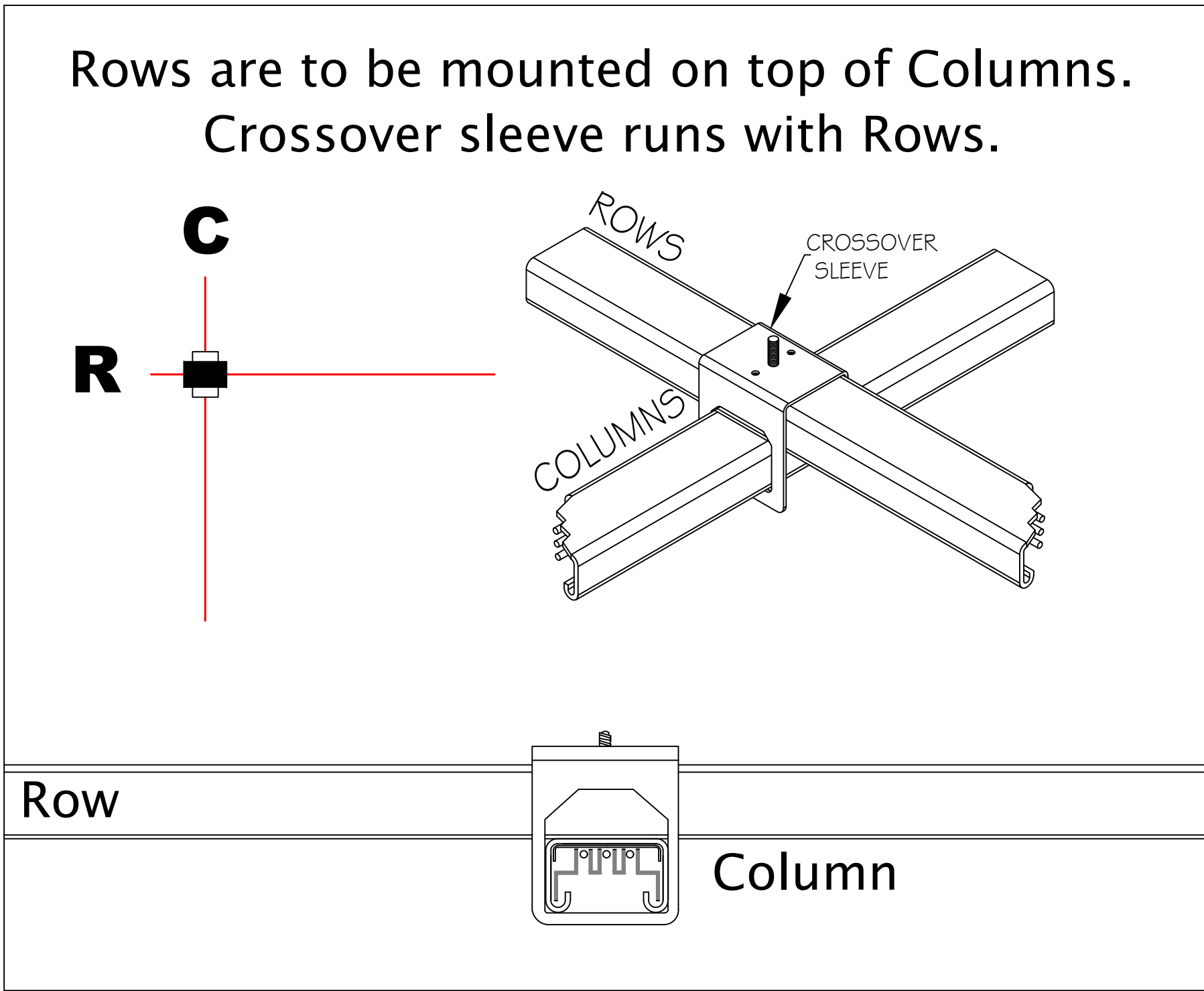
Removal voids ETL listing, warranty, and could create a dangerous electrical condition

Required to ensure grounding

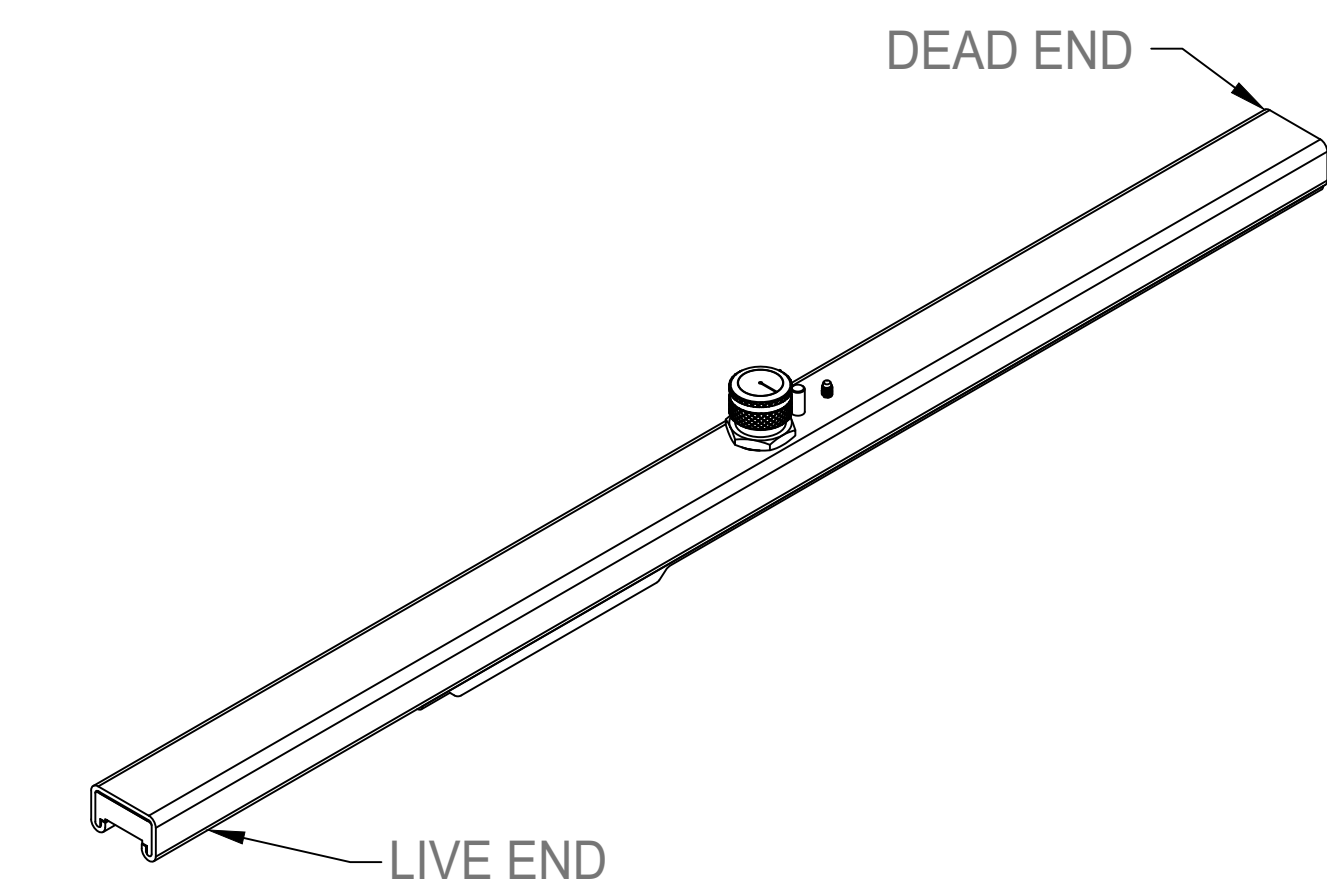
- DISTANCE:**
 - 10'** MAXIMUM 10' spacing between support points
 - 12"** Support point must be within 12" from every end or corner
 - 3"** MINIMUM 3" of busSTRUT to be exposed beyond end of mounting hangers and/or crossovers
- WEIGHT:**
 - 50 lbs** Maximum 50 pounds between support points (Include weight of busSTRUT System)
 - Weight of 1 foot of busSTRUT:
 - Single (MIN) - 1.5 lb per Linear Foot (not including connected weight)
 - Double (MAX) - 3 lb per Linear Foot (not including connected weight)
- FITTERS**
 - 40 lbs** The busSTRUT Flip-Fitters (with metal bracket) are rated for 40 lbs maximum static, vertical load.
 - Flip-Fitters without metal bracket are for use with standard track light fixtures only. Consult for maximum weight restrictions.
- CONNECTION TO STRUCTURE BY OTHERS**
 - Attachment from busSTRUT System to structure must be engineered and installed to properly support the entire suspended weight.



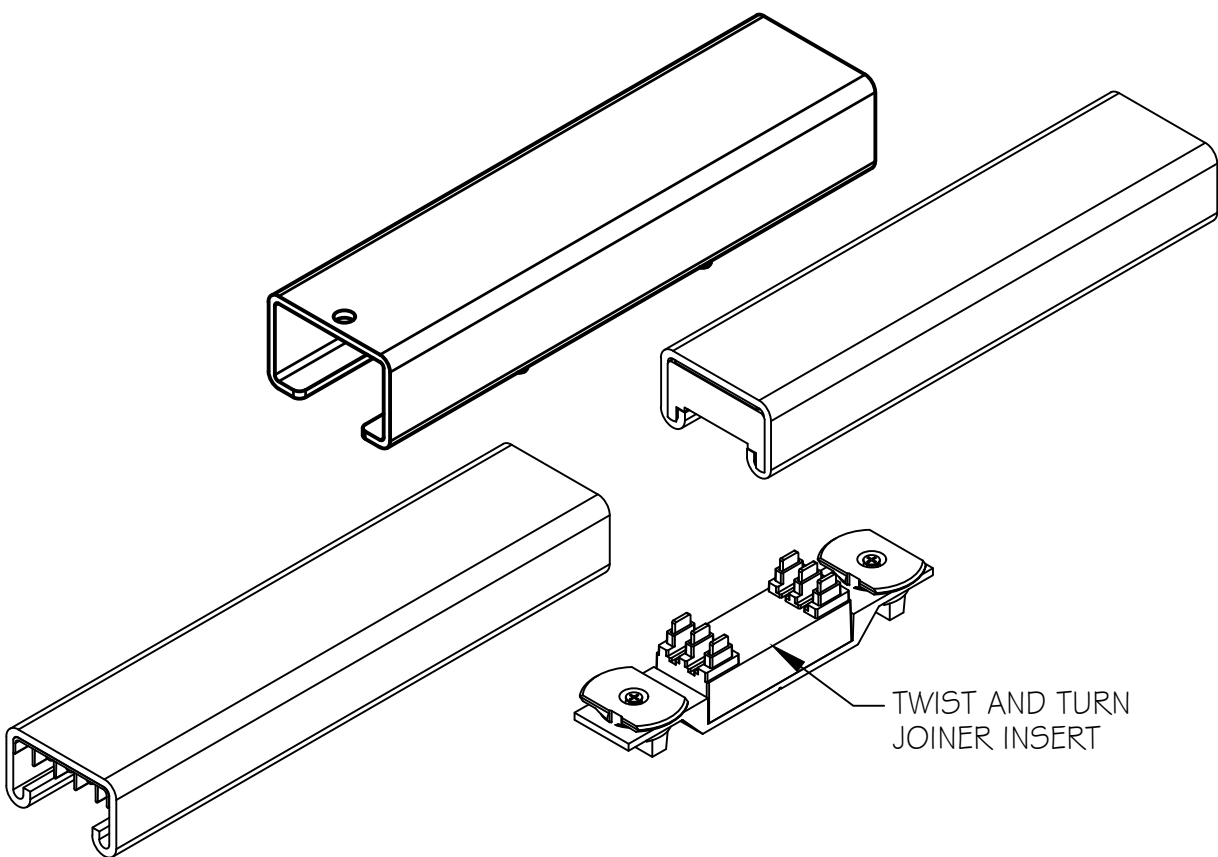
Project Specific Rules



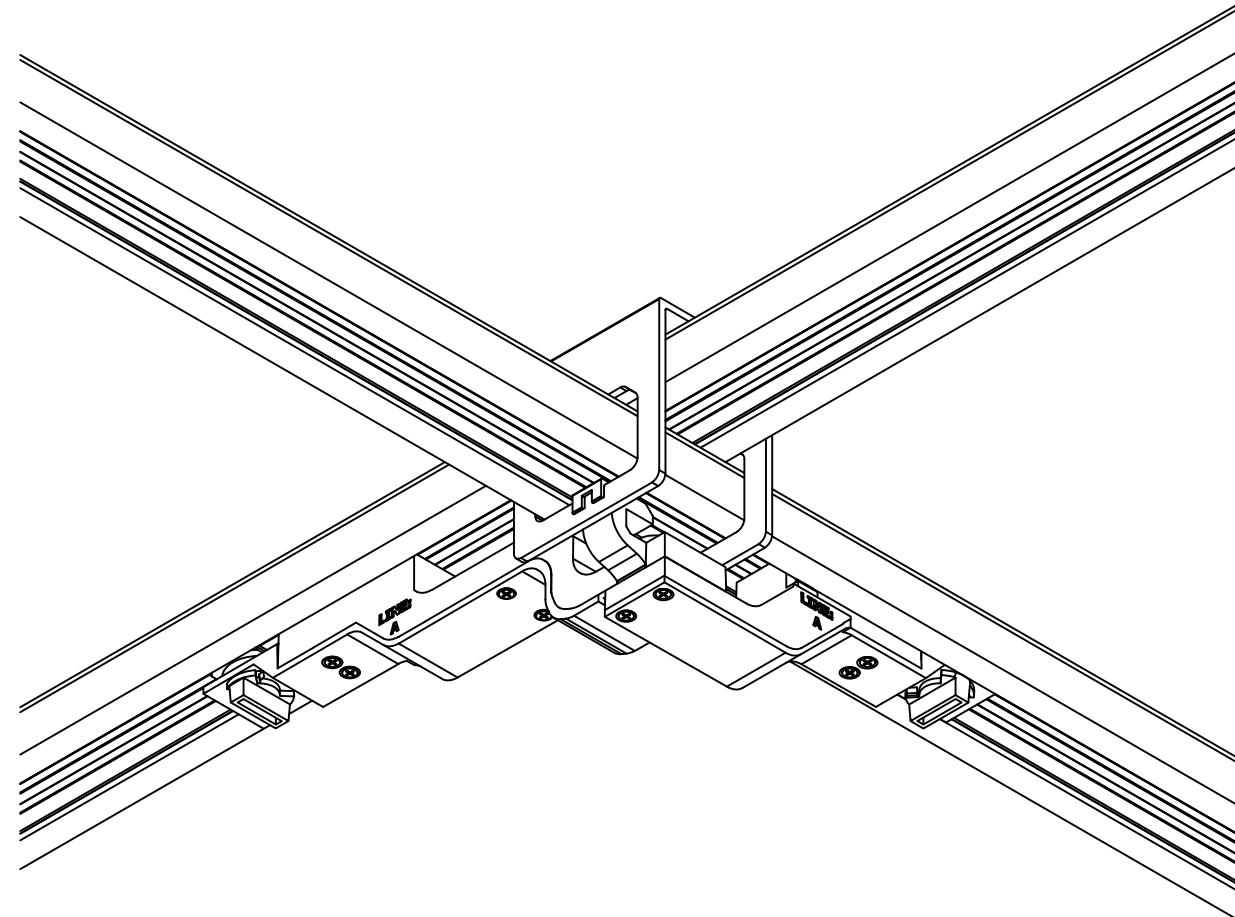
ISO Details



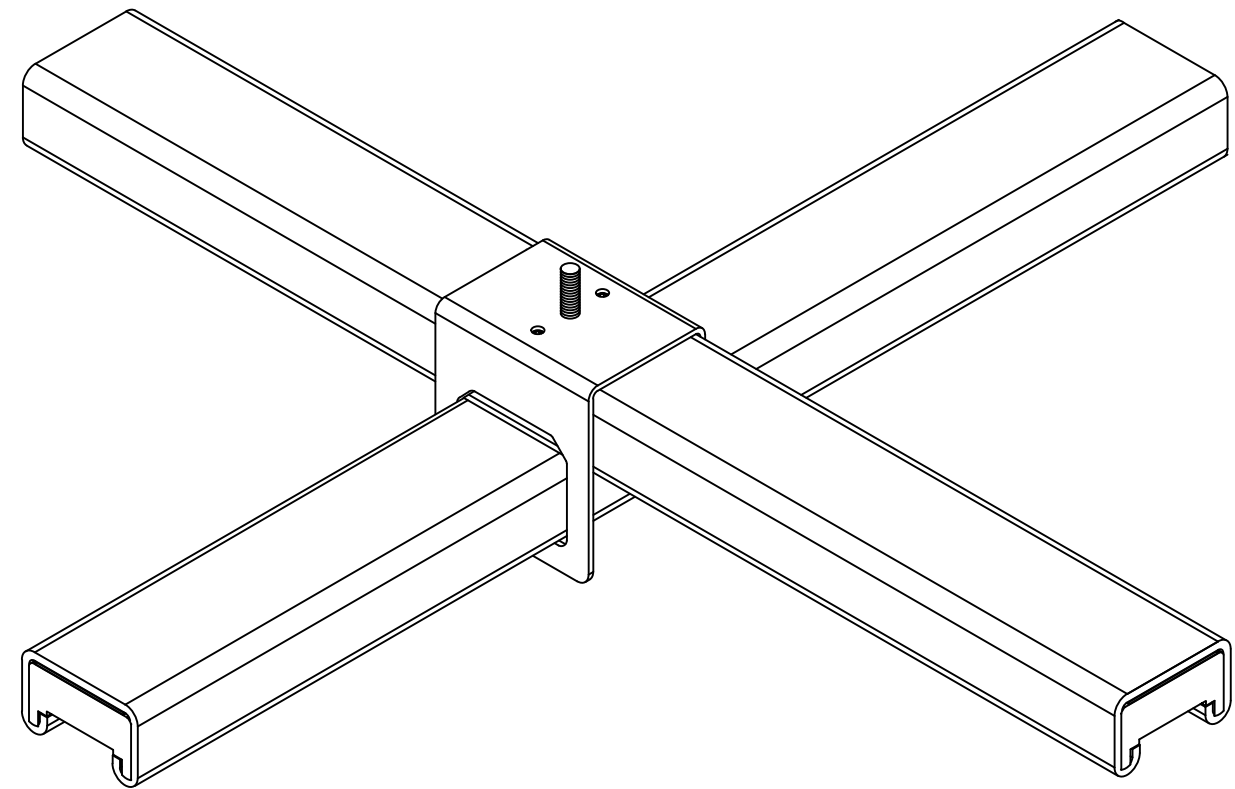
A 30" STARTER FEED
N.T.S.



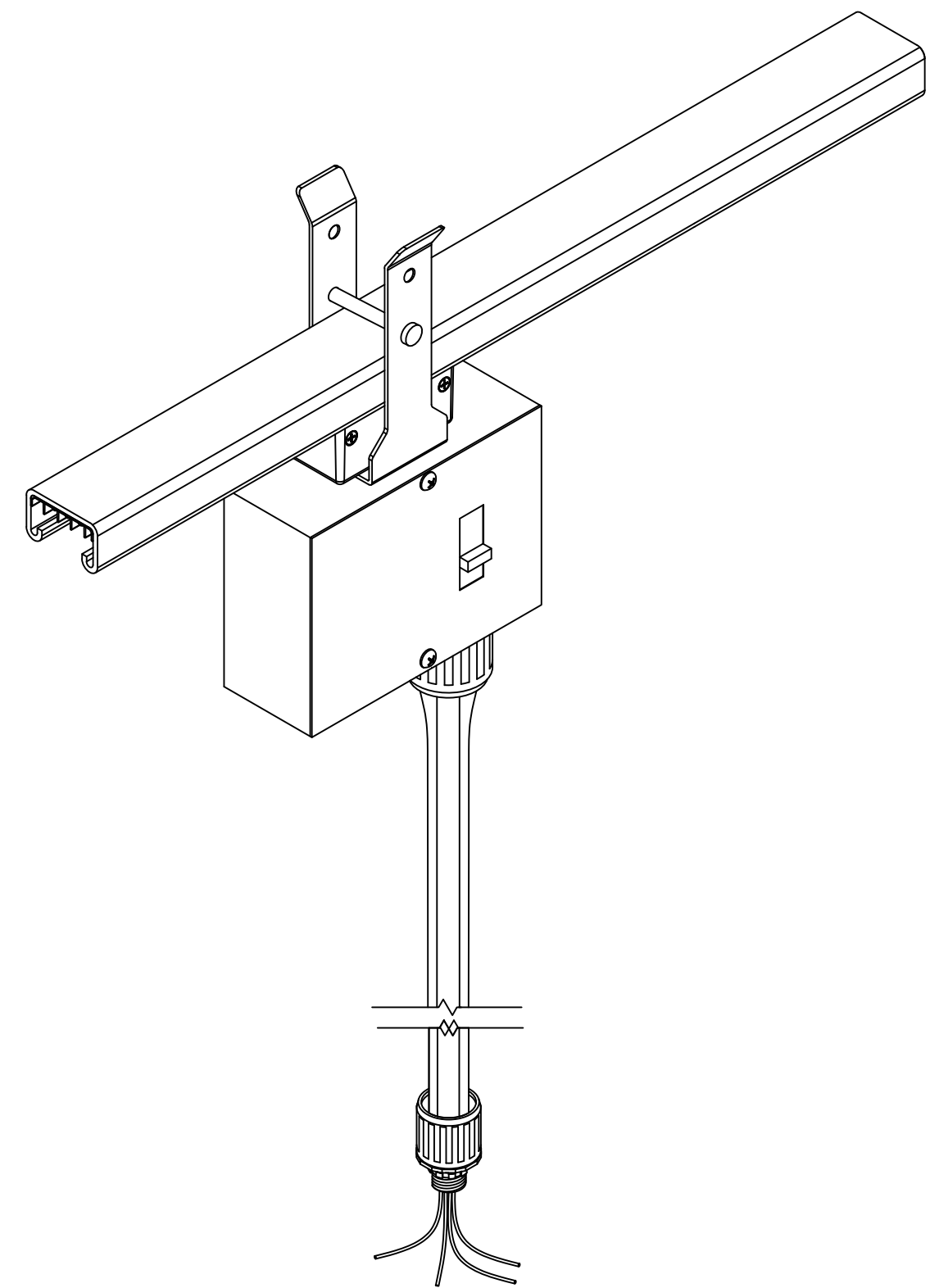
C SINGLE JOINER w/ JOINER INSERT
N.T.S.



B SLIMLINE JUMPER at 1/1 CROSSOVER
N.T.S.

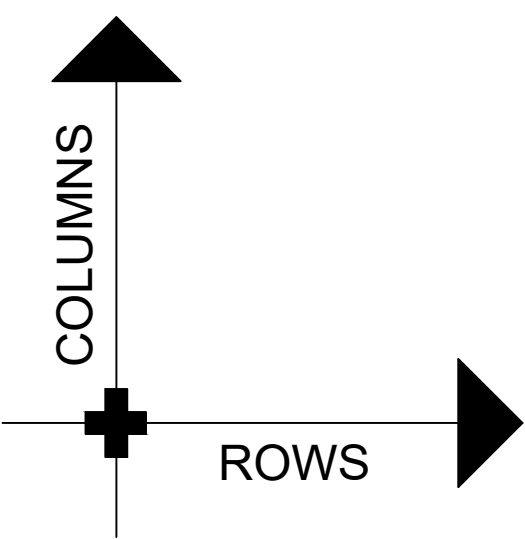


D SLIMLINE 1/1 CROSSOVER
N.T.S.



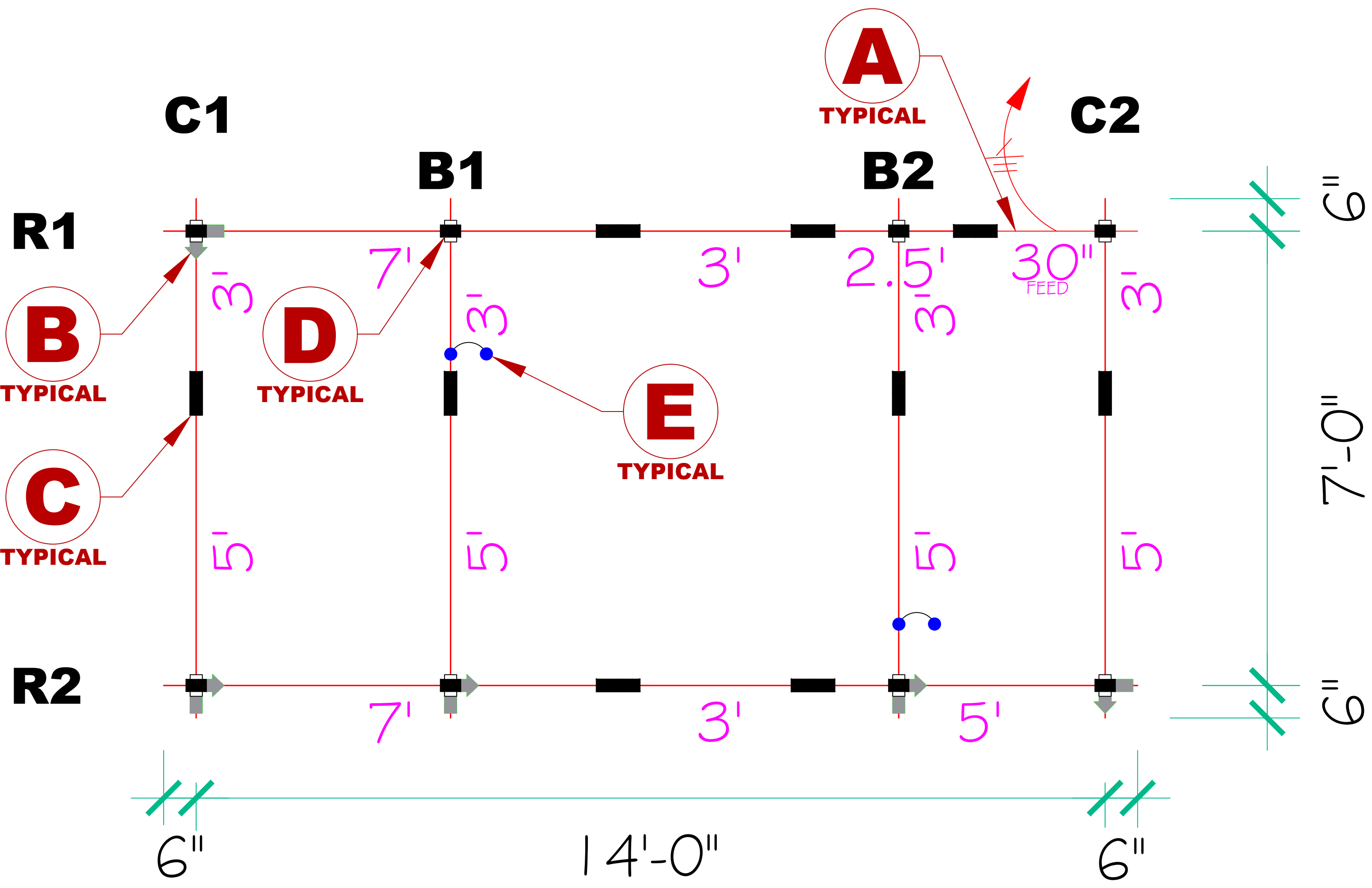
E POWER DROP
N.T.S.

Dimensions

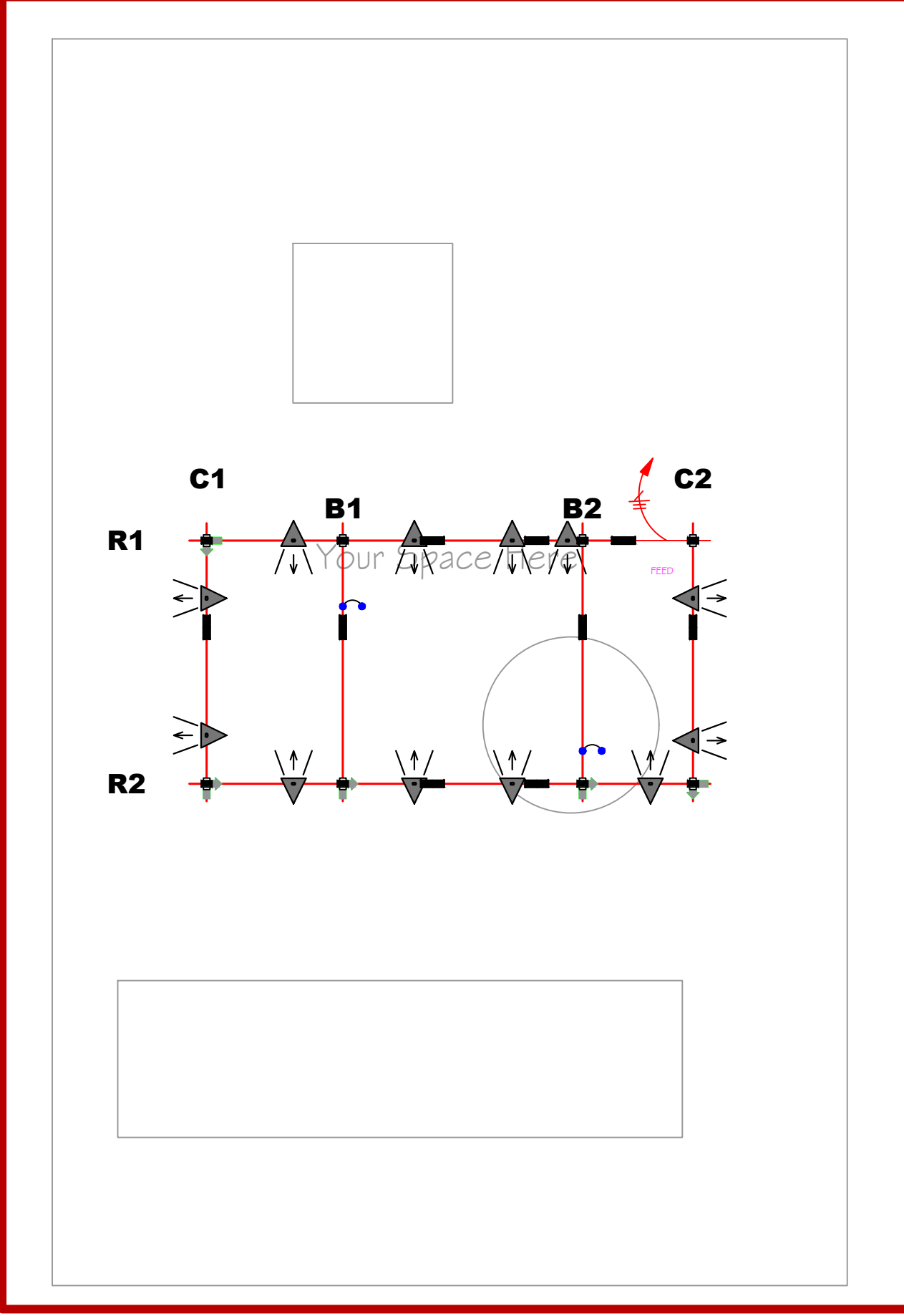


Legend

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



- busSTRUT Lengths Used in this Project
- 2.5'
 - 3'
 - 5'
 - 7'



bsi

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PRINCIPAL IN CHARGE: LARRY GELLERT
CHECKED BY: JOHN LOCH
DRAWN BY: JOHN LOCH
DATE: 10/30/2024
REVISION: BID/REVIEW

Assembly Plan

Rectangle Small - Lights & Power Drops

busSTRUT SPEC DRAWING SET(ONLY) NOT A REPLACEMENT FOR ARCHITECTURAL ENGINEERING OR ELECTRICAL DRAWINGS			
		XX	BY
		XXXX	
		XX-XX-XX	DATE
		NO.	REVISION DESCRIPTION
PAPER SIZE: ARCH E (48x36)			
SCALE 3/4" = 1'-0"			
DRAWING NUMBER E-b2			