

Express Rectangle (Large)

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

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.

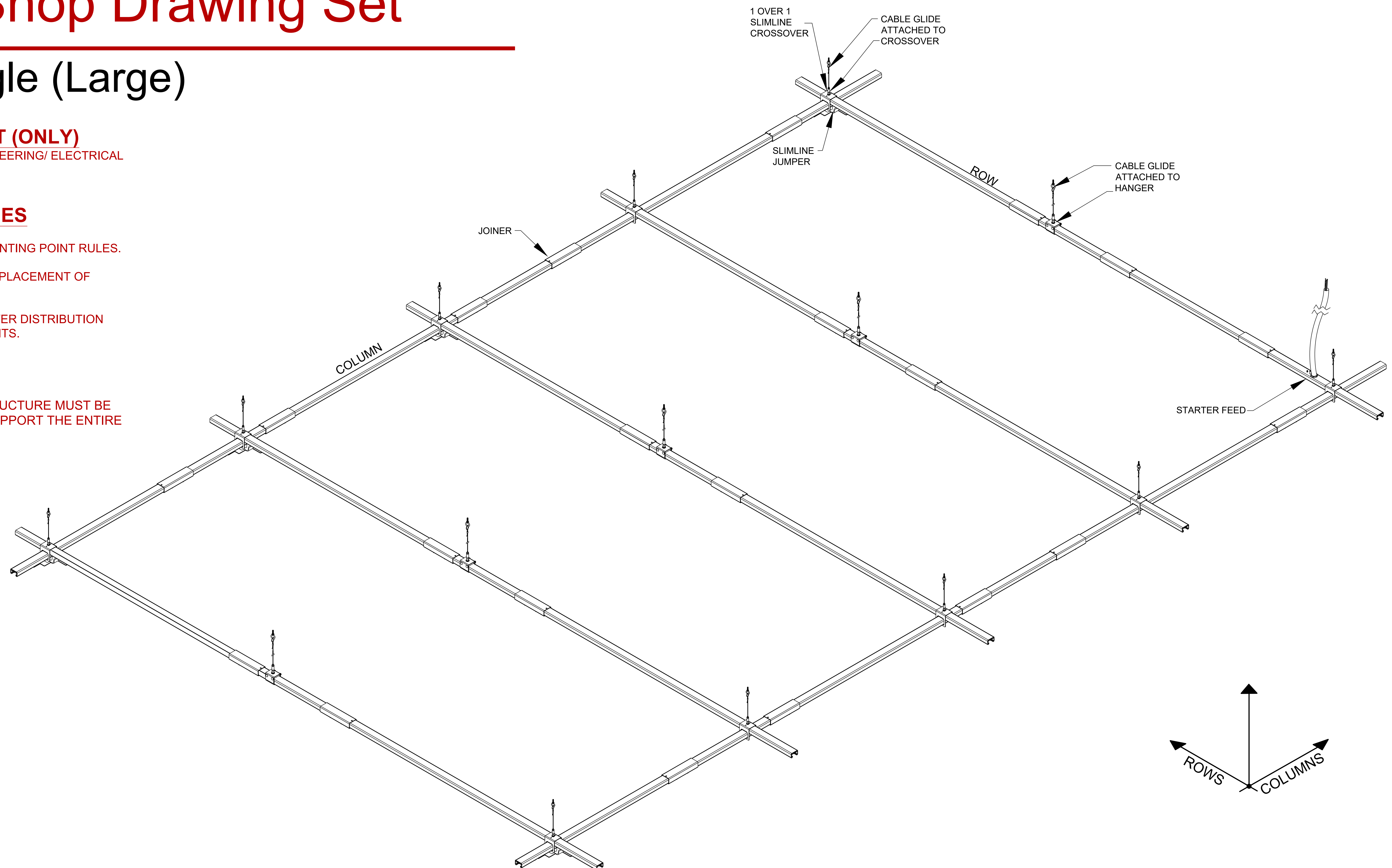
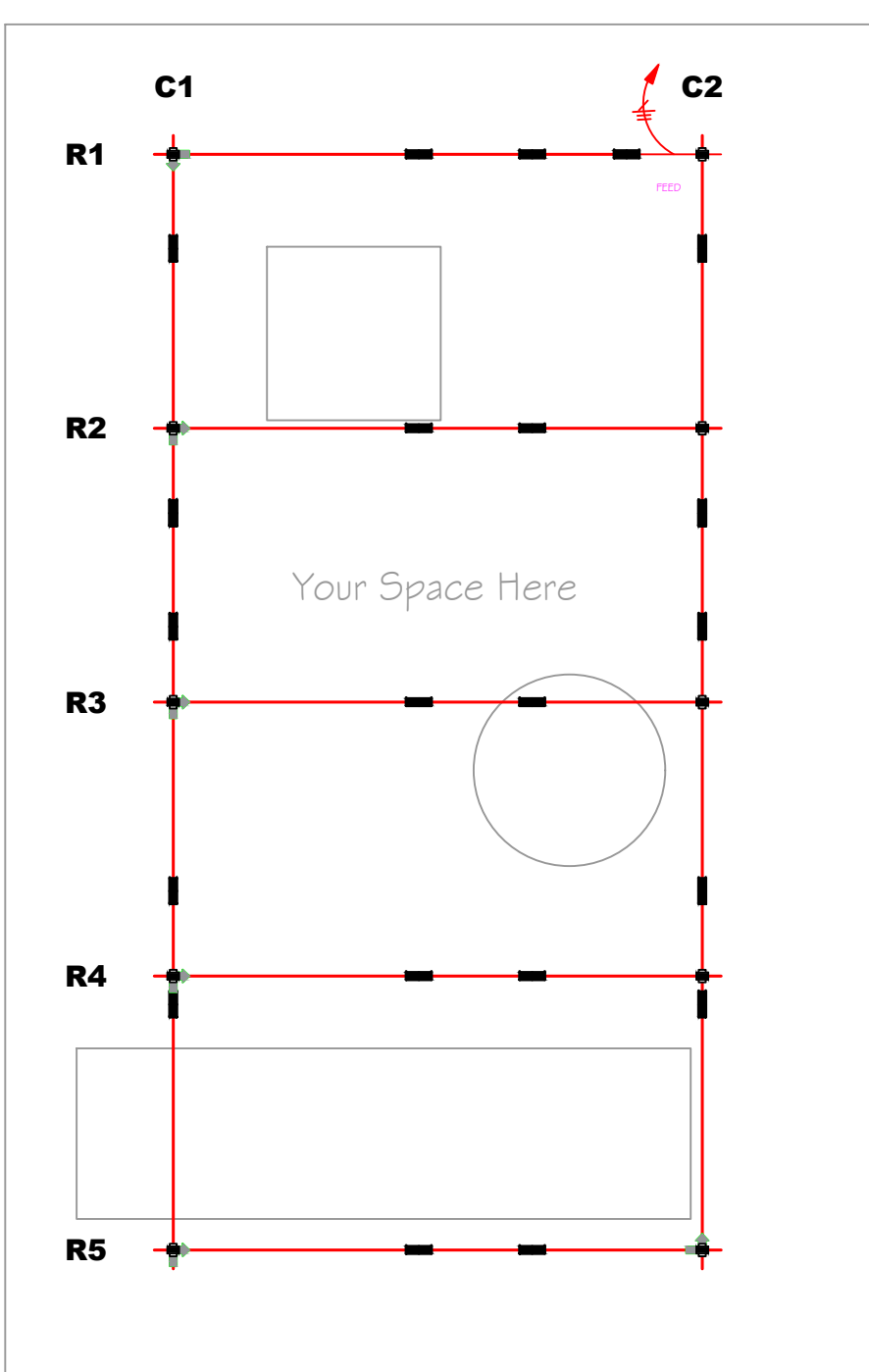
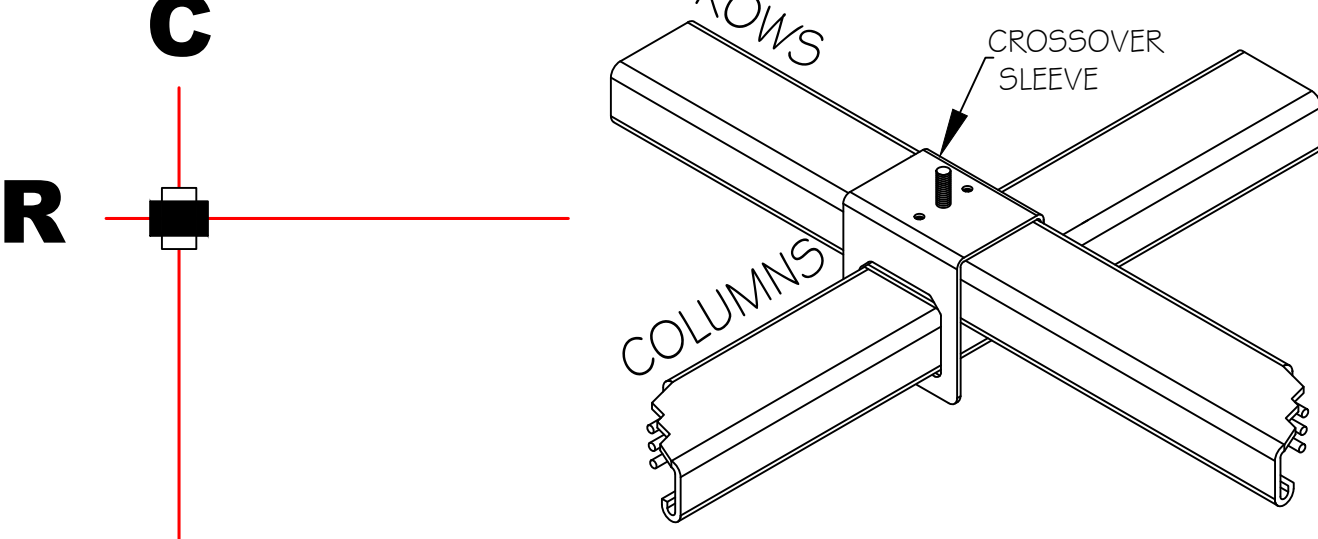
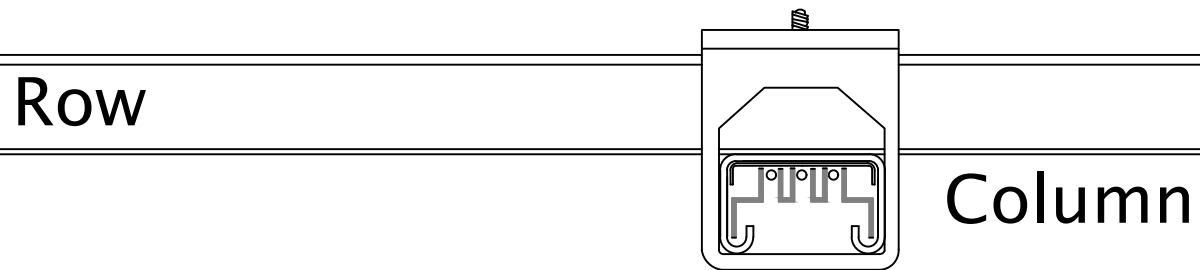
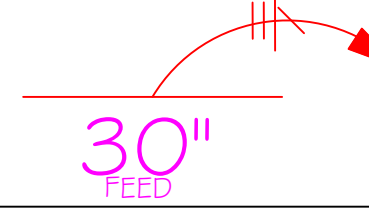
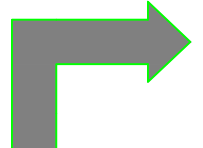
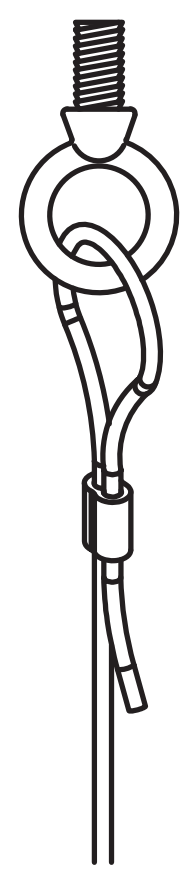


TABLE OF CONTENTS		KEY MOUNTING RULES		APPROVAL	
E-b01 E-b02	Typical Installation Instructions		Rows are to be mounted on top of Columns. Crossover sleeve runs with Rows.  	Legend  busSTRUT 20 / Single Deck  30" Starter Feed  Joiner  1/1 Slimline Crossover  Slimline Jumper	
E-b1 E-b2	Lighting Plan, BOM,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

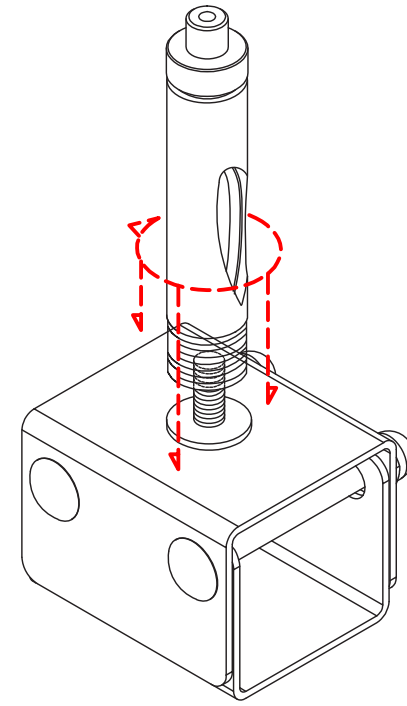
STEP 1

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).

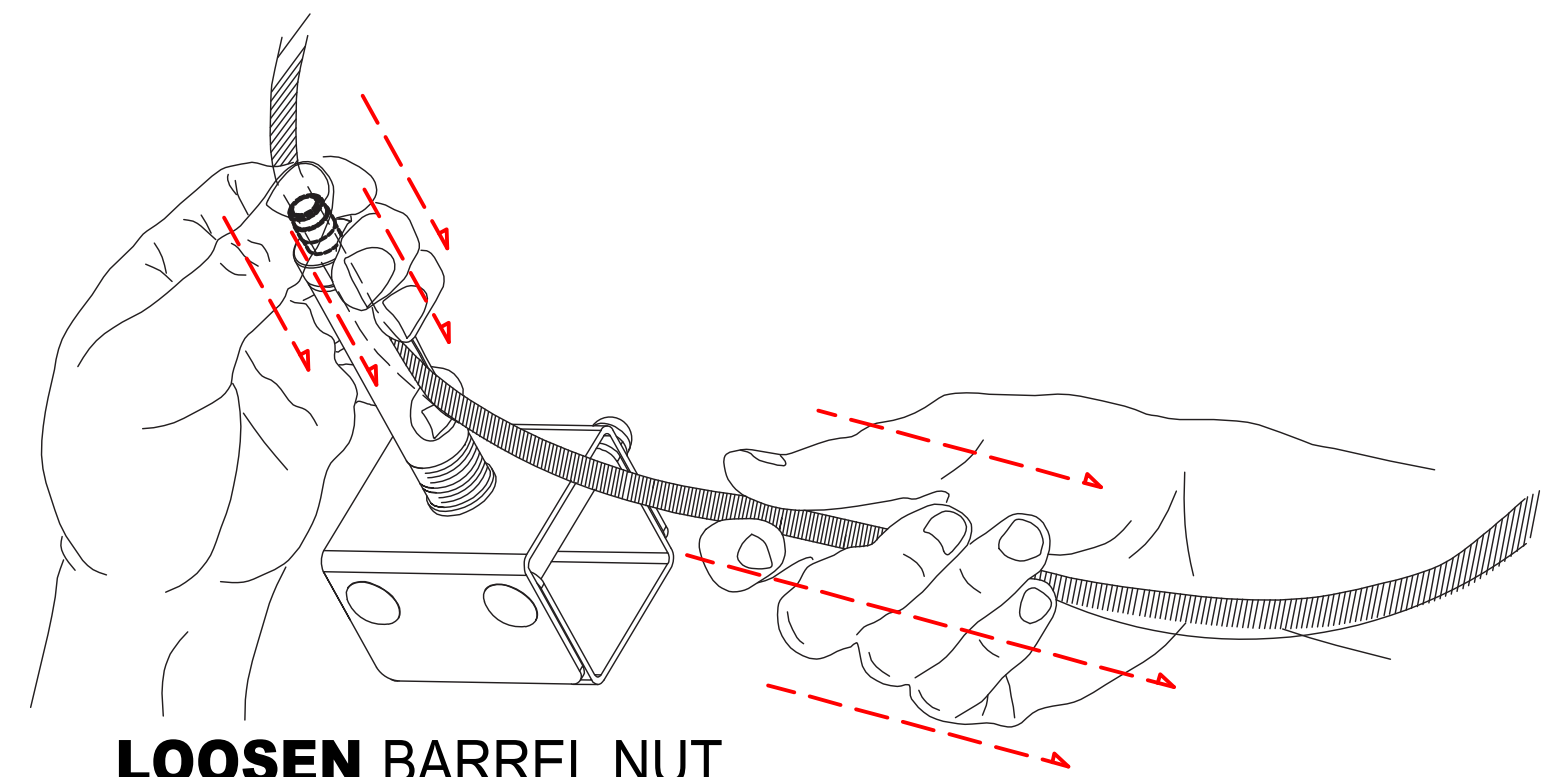
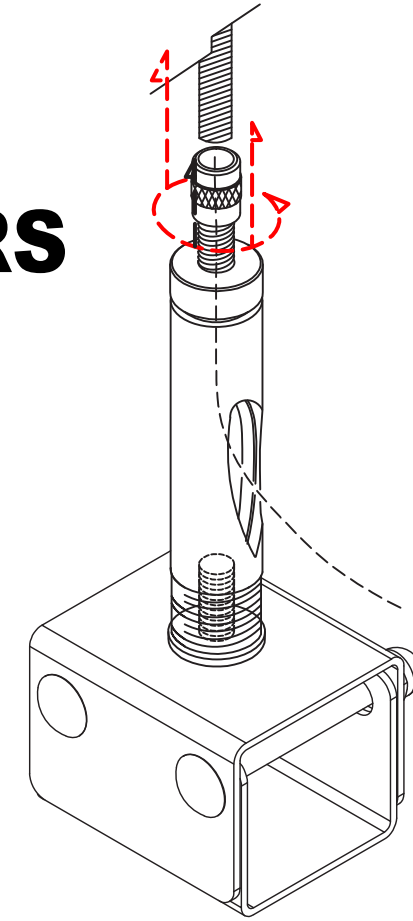


2 ASSEMBLE HANGERS (HM-S)

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

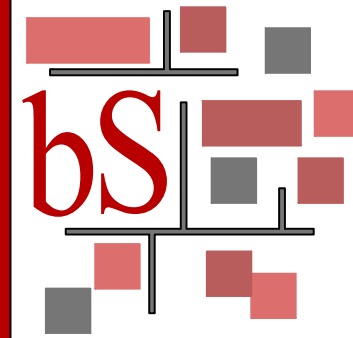
Turn the first knob

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.



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DESIGNED BY
LARRY GELLERT

CHECKED BY
JOHN LOCH

DRAWN BY
JOHN LOCH

DATE
11/01/2024

ISSUED FOR
BID / REVIEW

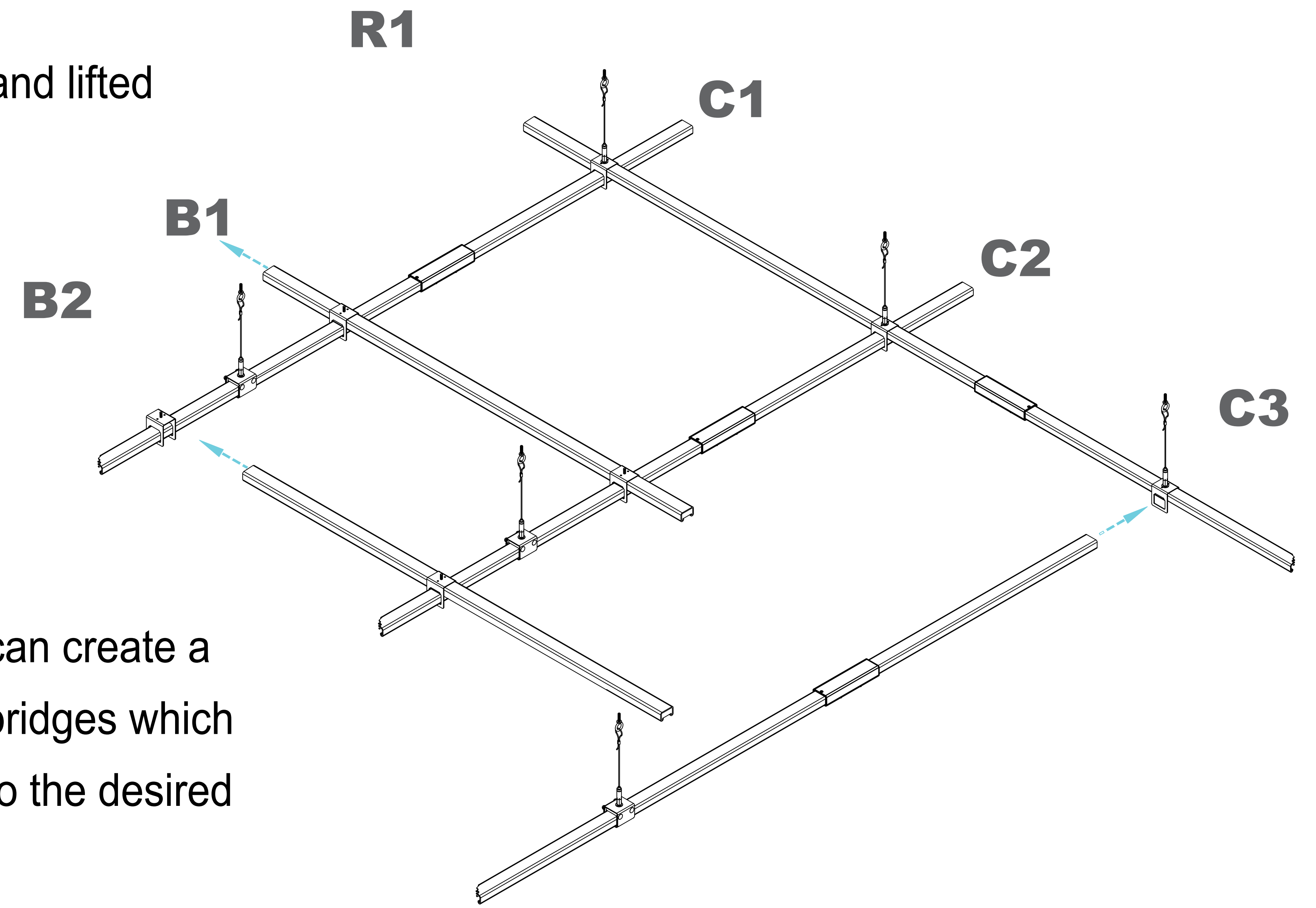
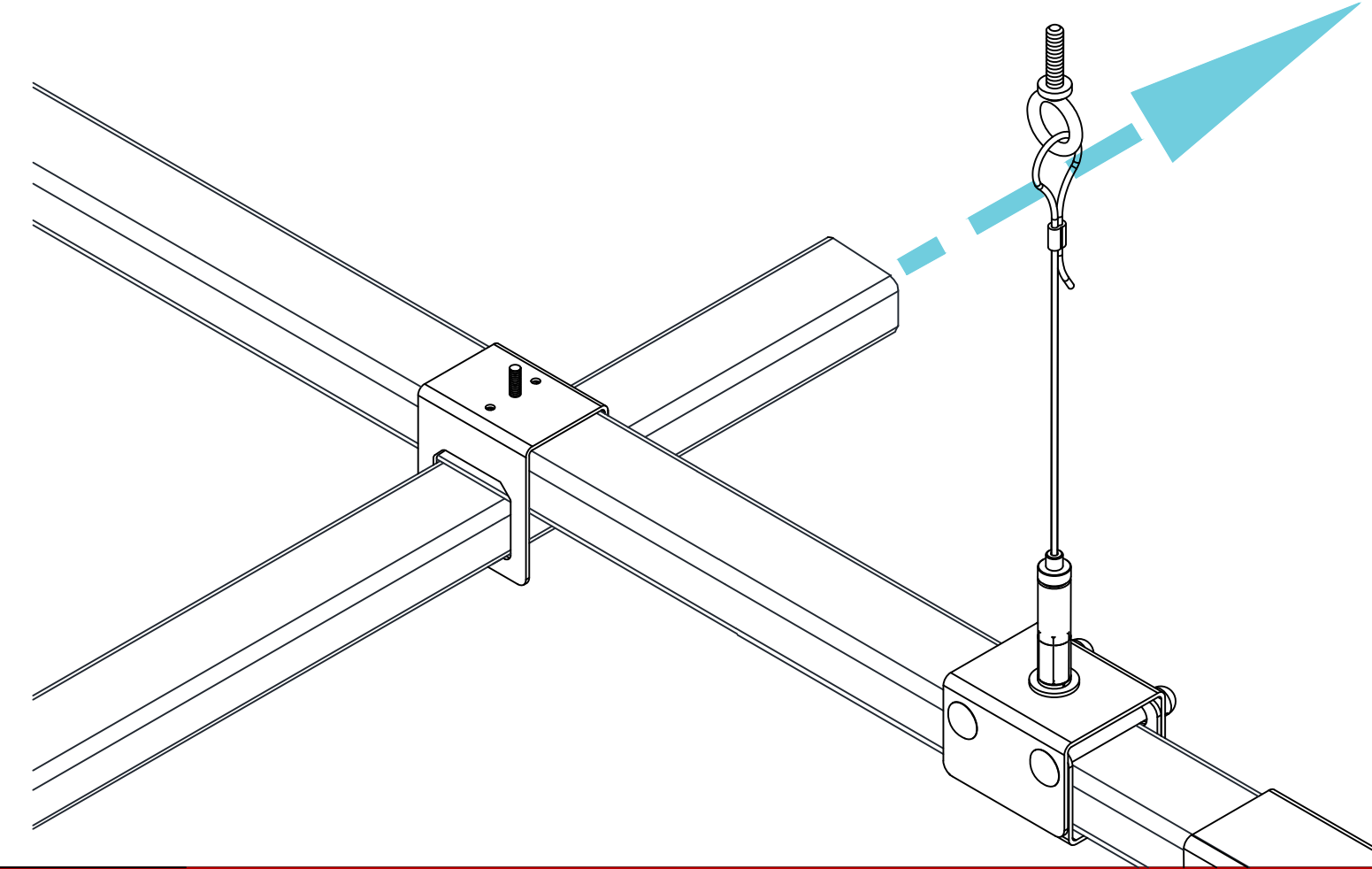
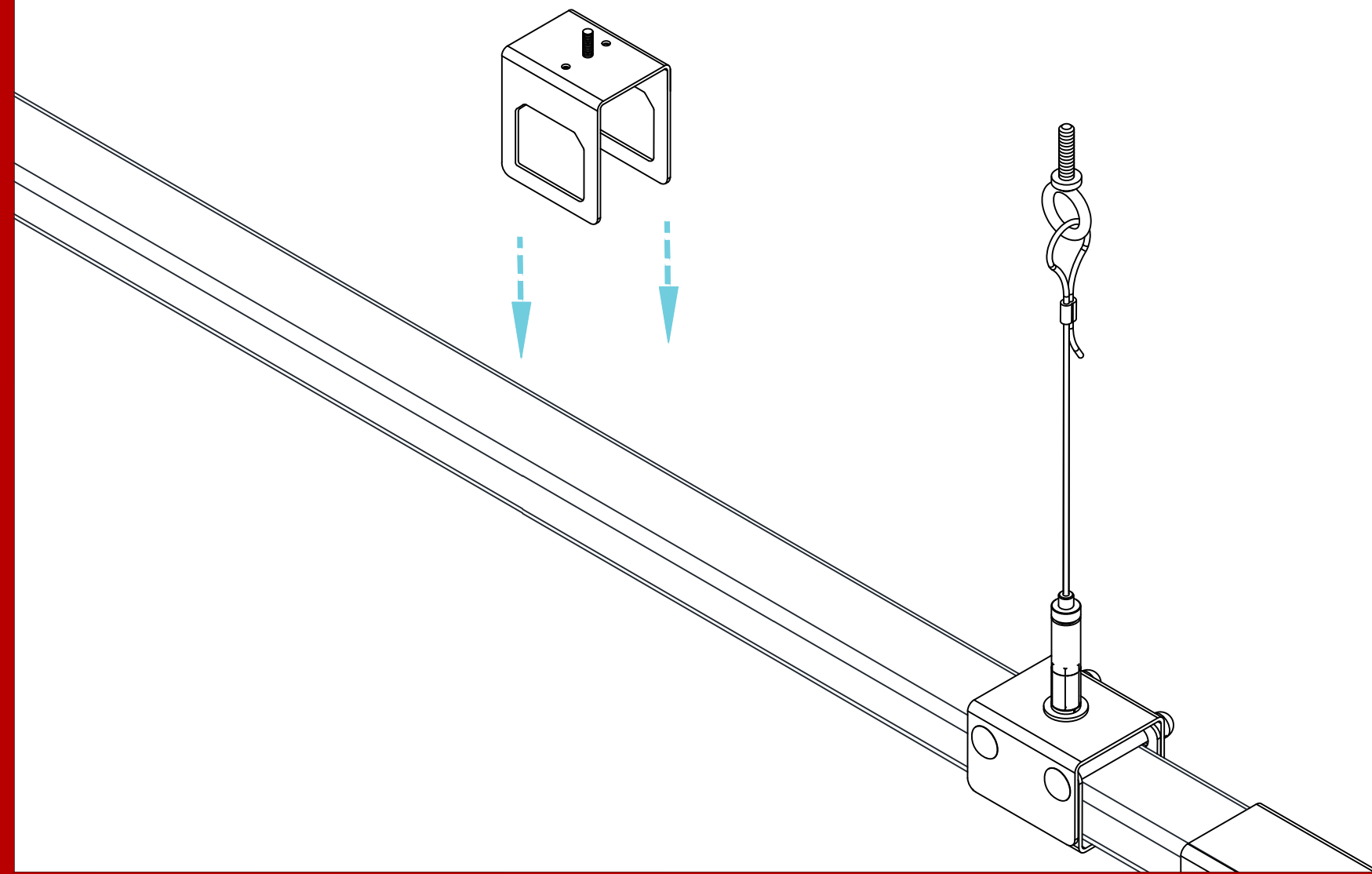
TYPICAL
busSTRUT Installation Instructions

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

NO.	REV.	DESCRIPTION	DATE
1	1	ISSUED FOR BID / REVIEW	11/01/2024

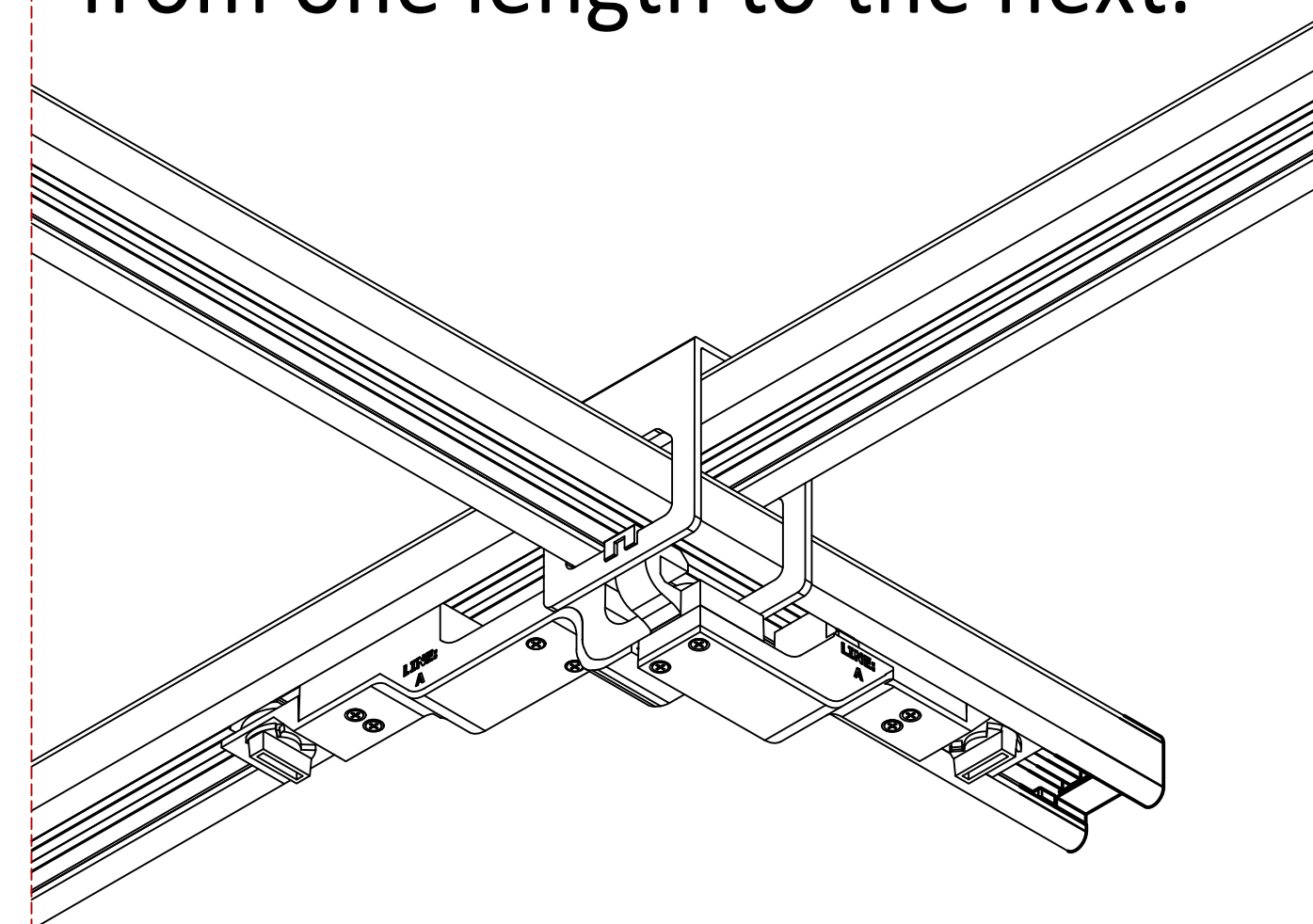
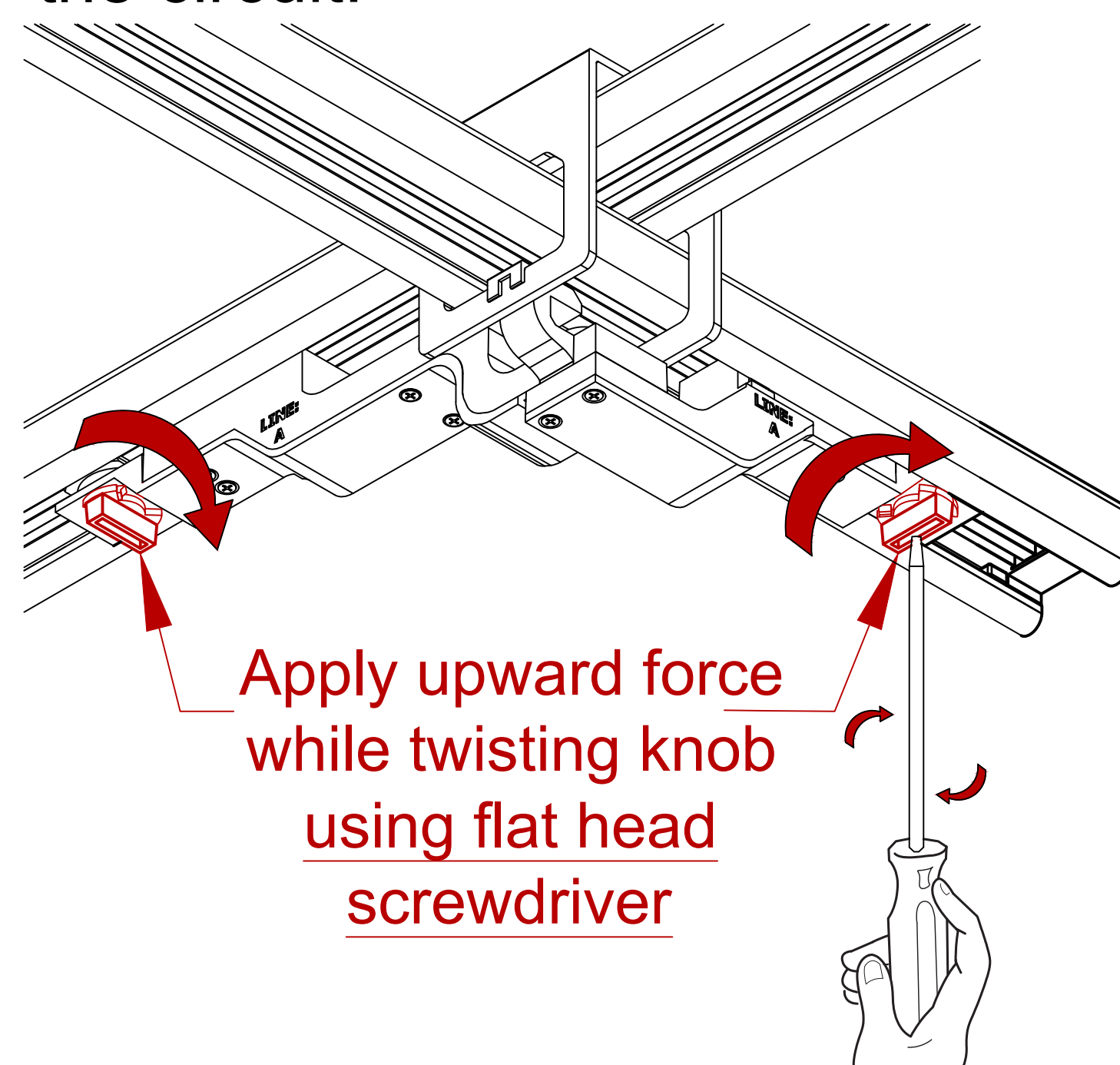
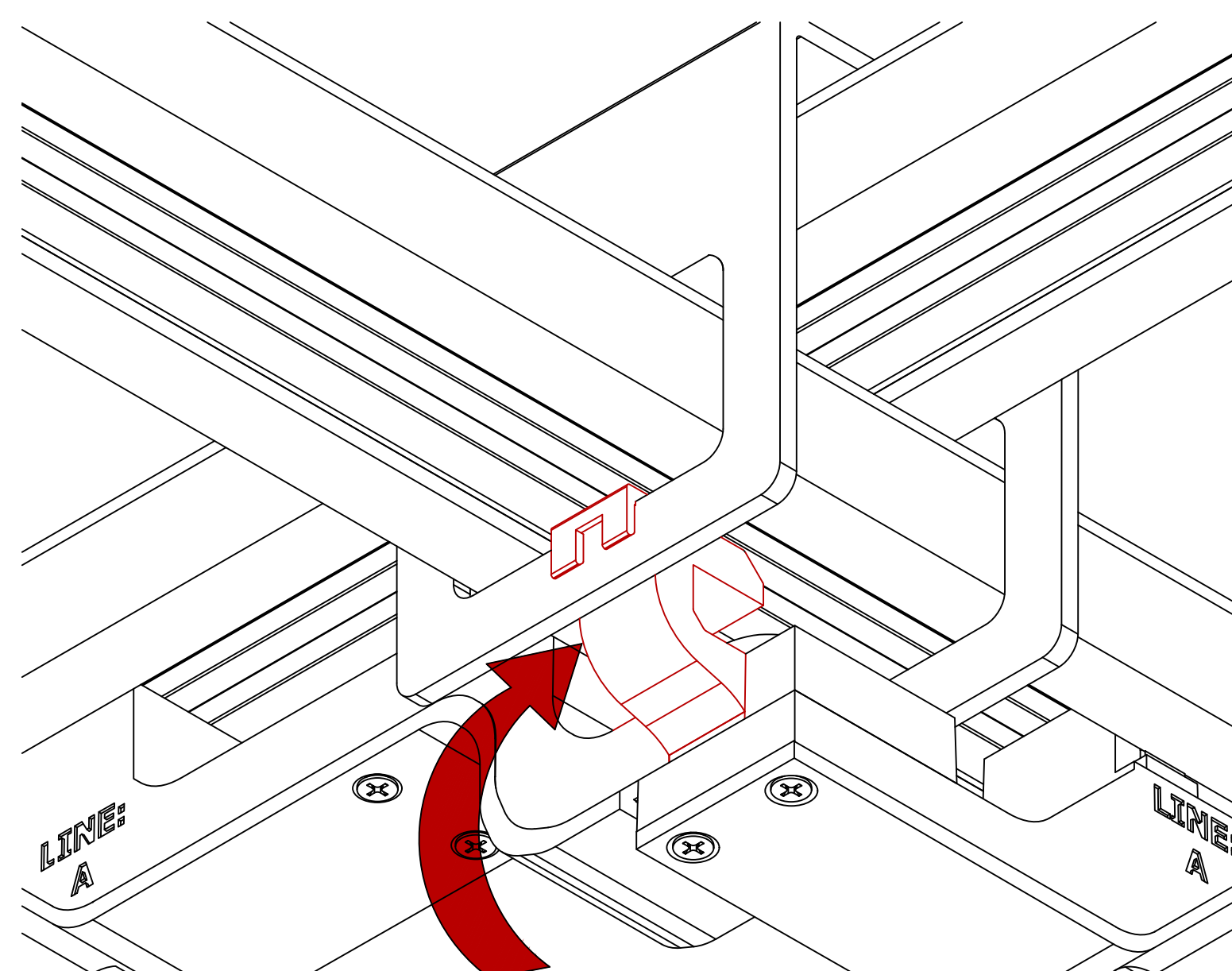
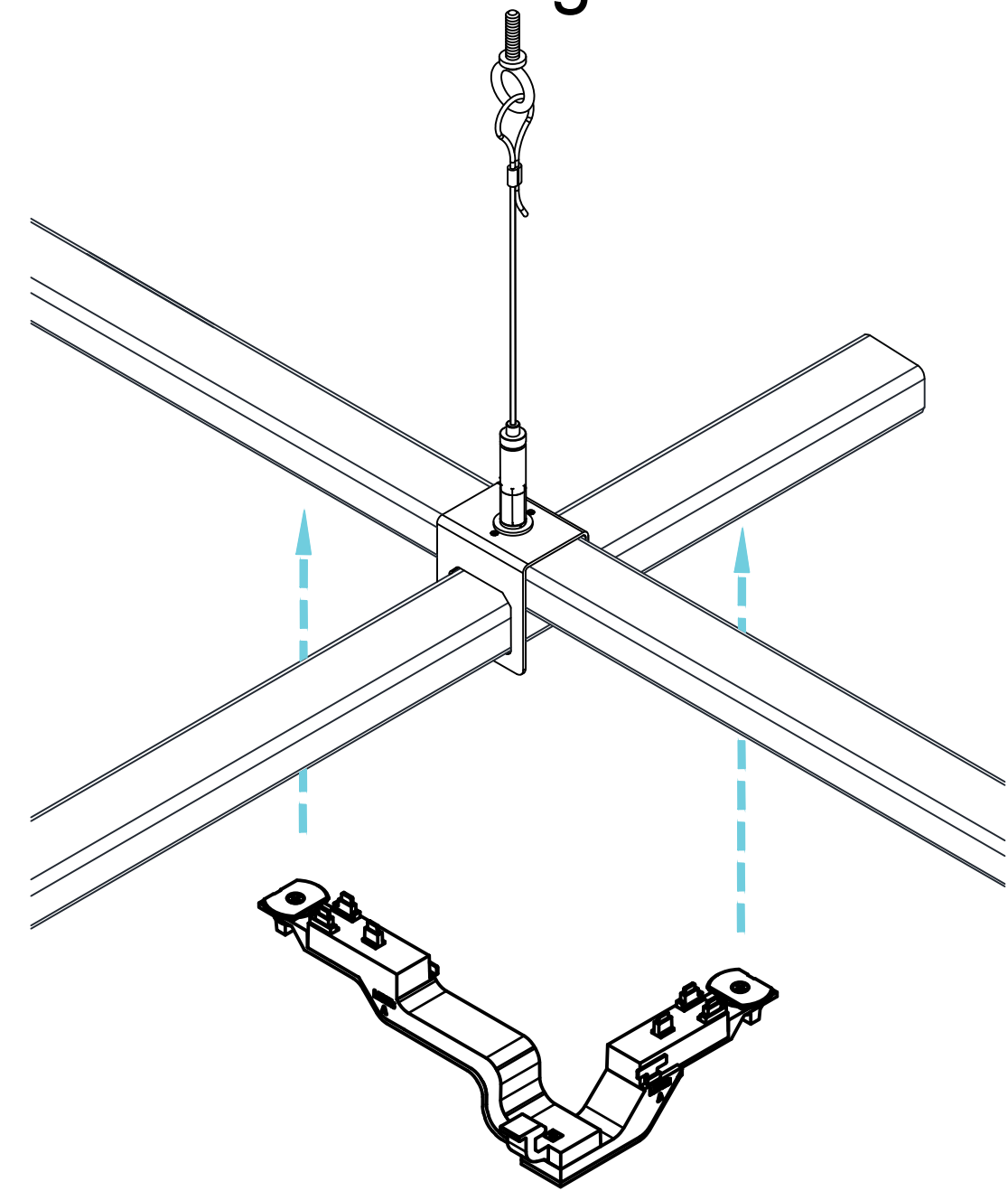
PAPER SIZE:
ARCH E (48x36)
NOT TO SCALE
DRAWING NUMBER
E-b01

INSTALLING CROSSOVERS DROPPING ON



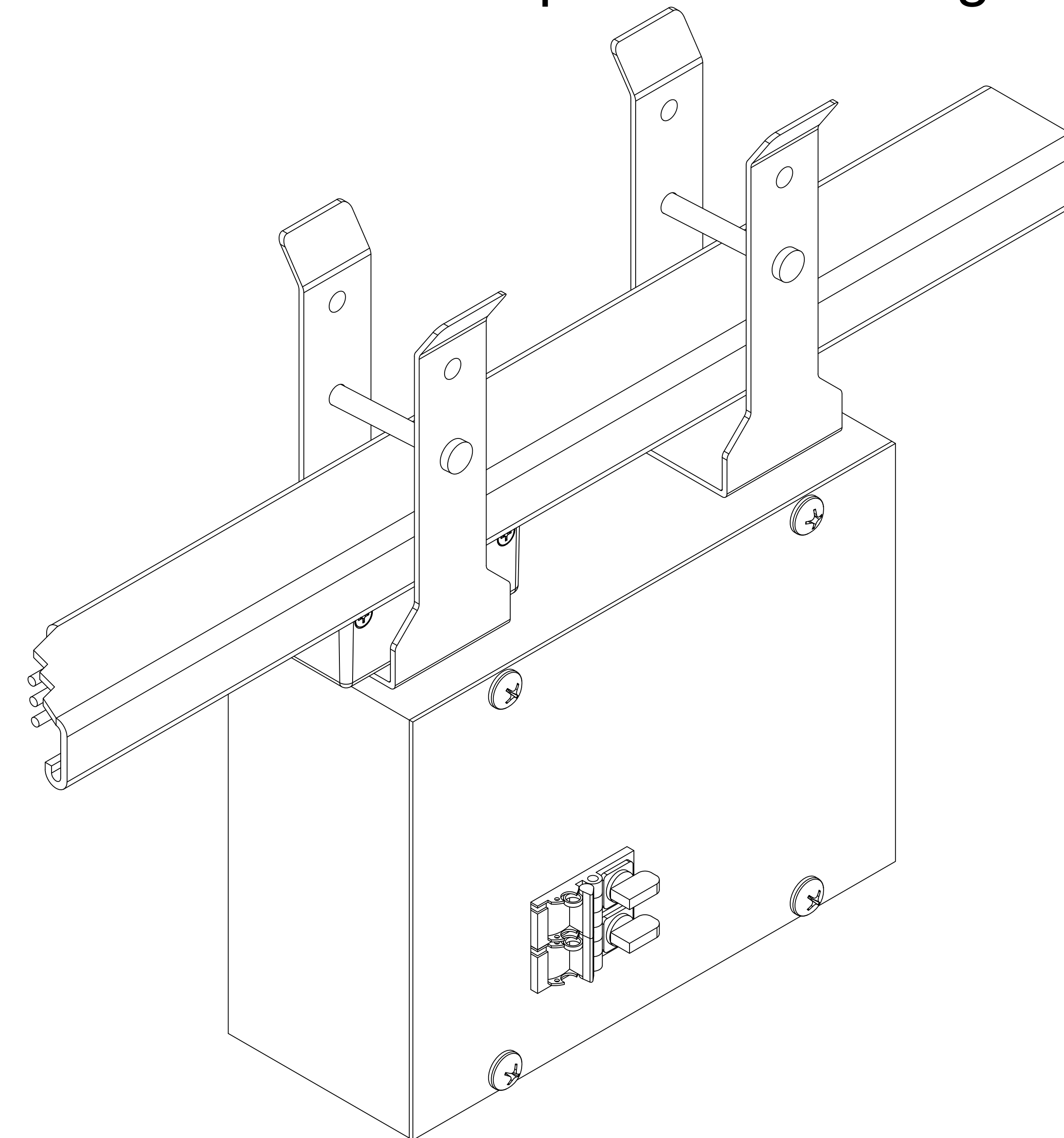
STEP 4A

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



STEP 4B

Install line feeds on busSTRUT to power the configuration.



	busSTRUT® END	CABLE GLIDES	HANGERS	JOINERS	CROSSOVERS	LINE	FEEDS STARTER
SINGLE DECK	GRAY 20 AMPs M20-3-40-V-(L)		HM-S	M-JB	ICM-S	P20-3-40- UNIV-FDXX-F	P20-3-40-UNIV-30- CM-F 1-1
	BLACK 40 AMPs M40-3-60-V-(L)		EMPTY-STRUT M00-(L)				
DOUBLE DECK	DOUBLE-STRUT M00-(L) NOTE: CIRCUITS 1" AND 2" ON TOP CIRCUITS 3" AND 4" ON TOP	CG-(LENGTH)	HD-S	D-JB	ICD-S	JUMPER CABLE MD4020-UNIV-JC-F-90-12 MD2020-UNIV-IJ2-B-X	

STEEL: hvsTRUST 12 gauge 1/2" x 1/8" STEEL. hvsTRUST features two 40 Amp wires symmetrically surrounding a central ground wire. The hvsTRUST 40 Amp circuits 40 Amp Maximum with hvsTRUST 720; alternatively two 40 Amp circuits 40 Amp Maximum with hvsTRUST 140; 5, 10, and 20' lengths. Rated for use to 277/480V. Double decks with standard hardware.	BRADED CABLE with GLIDE: For use with hvsTRUST 720 and Double Hangers are for use with hvsTRUST. Each is an assembled two-part unit. The upper piece includes a threaded stud to use with hvsTRUST cable-clide.	HANGERS: Single and Double Hangers are for use with hvsTRUST. Each is an assembled two-piece unit. The upper piece includes a threaded stud to use with hvsTRUST cable-clide.	JONERS: Single and Double are for use with hvsTRUST. Lengths are joined together mechanically with the assembled two-piece unit. The upper piece includes a Thread & Turn Plug in electrical inlet through the power. And corrosion grounding studs are made of the bus itself by means of a permanently affixed copper grounding bar.	CROSSOVERS: For use with intersecting hvsTRUST. Each is an assembled two-part unit building grid for use with hvsTRUST. The upper piece includes a threaded stud to use with hvsTRUST cable-clide. JUMPERS: For use with both hvsTRUST 720 and hvsTRUST 140. The fused 4000 Amp Cables can be used to electrically connect hvsTRUST Trunks to hvsTRUST 720 Branches and electrically connecting hvsTRUST 720 to hvsTRUST 140. LINE FEEDS: For use with powering single hvsTRUST Junction Box features energy code type "Interters" (breakout/hollow) and 3 Pole Fuses. For use to 277/480V. Can be positioned anywhere along hvsTRUST to reduce the lengths of hommers. STARTER FEEDS: For use with powering single hvsTRUST. Utilized when no current limit is required on the hvsTRUST. Must be positioned at the beginning of a run.
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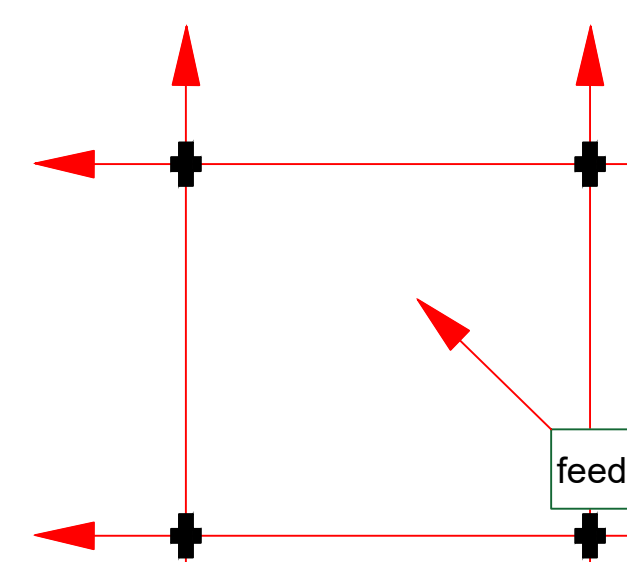
busSTRUT Bill of Materials																					
ROWS Large										Finish TBD: Galvanized, White, or Black										Drawn By John Loch	
																				Checked By John Loch	
																				Date 10/4/2024	
				busSTRUT LENGTHS				busSTRUT Hardware						busSTRUT POWER							
				busSTRUT 20				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	M-JB-F-X	M-JI-F-X	M-JI-F-NE	HM-S-F-ST-LFX	MKU-ST-A-F	CG-E-15-B-GL	ICM-S-F-ST-X	MD4020-UNIV-JCF-90-12-GO2	MD2020-UNIV-LJ2-F-X	P20-3-40-UNIV-JK-NB-F	P20-3-40-UNIV-30-CM-F 1-1	MD40-2-120-CB20-DC-XX-LF-F	BRL-4-40L-30K80-ST-WD-F	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			
R2	20	15	15		1	1	1	2	2		1		3	2		1					
R3	20	15	15		1	1	1	2	2		1		3	2		1					
R4	20	15	15		1	1	1	2	2		1		3	2		1					
R5	20	15	15		1	1	1	2	2		1		3	2		1					
SUB TOTAL		75	75	1	5	4	5	11	11		5		15	10		4		1			
R/C	Amps	LF	BF	2.5	3	5	7	M	INS	NE-INS	M	D	C-GI	1/1	12"	INVS	JK	30ST		WW	LUCY
Columns																					
C1	20	30	30		3		3	5	5							1					
C2	20	30	30		3		3	5	5							1					
SUB TOTAL		60	60		6		6	10	10							2					
STORE TOTAL		135.0	135.0	1	11	4	11	21	21		5		15	10		6		1			

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

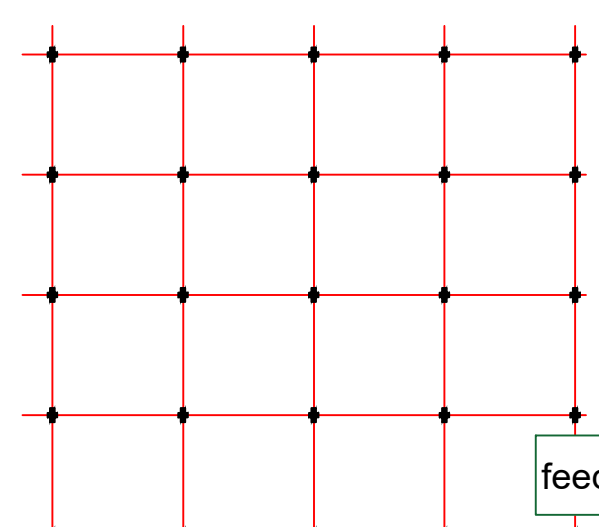
bus.STRUt LABOR									
	ITEMS	Qty.	U/M	STANDARDIZED		LABOR HOURS		TOTAL HRS	
				min	hrs	60			
bus.STRUt SYSTEM	LENGTHS	<u>135</u>	LF	x	2.75	0.05	=	<u>6</u>	
	JOINERS	<u>21</u>	EA	x	12	0.20	=	<u>4</u>	
	HANGERS	<u>15</u>	EA	x	25	0.42	=	<u>6</u>	
	CROSSOVERS	<u>10</u>	EA	x	10	0.17	=	<u>2</u>	
	ATTACHMENTS		EA	x	8	0.13	=	<u>0</u>	
	JUMPERS	<u>6</u>	EA	x	6	0.10	=	<u>1</u>	
	FEEDS	<u>1</u>	EA	x	15	0.25	=	<u>0</u>	
bus.STRUt SUB-TOTAL							=	<u>19</u>	
FIXTURES	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>19</u>	

busSTRUT system is designed to be BID separately.

Bid from the **feeds-in**.

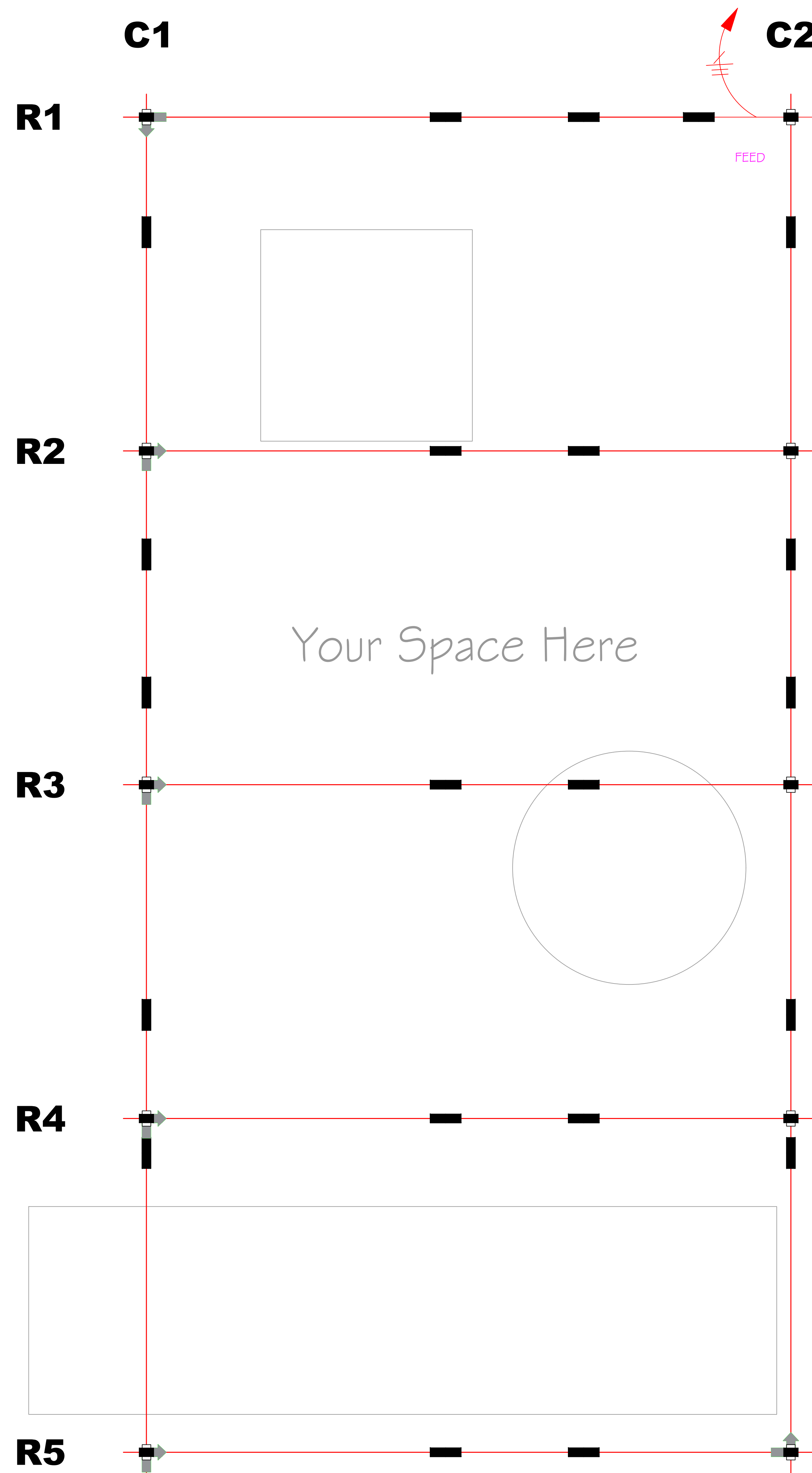


* Powered by a minimal amount of feed boxes.

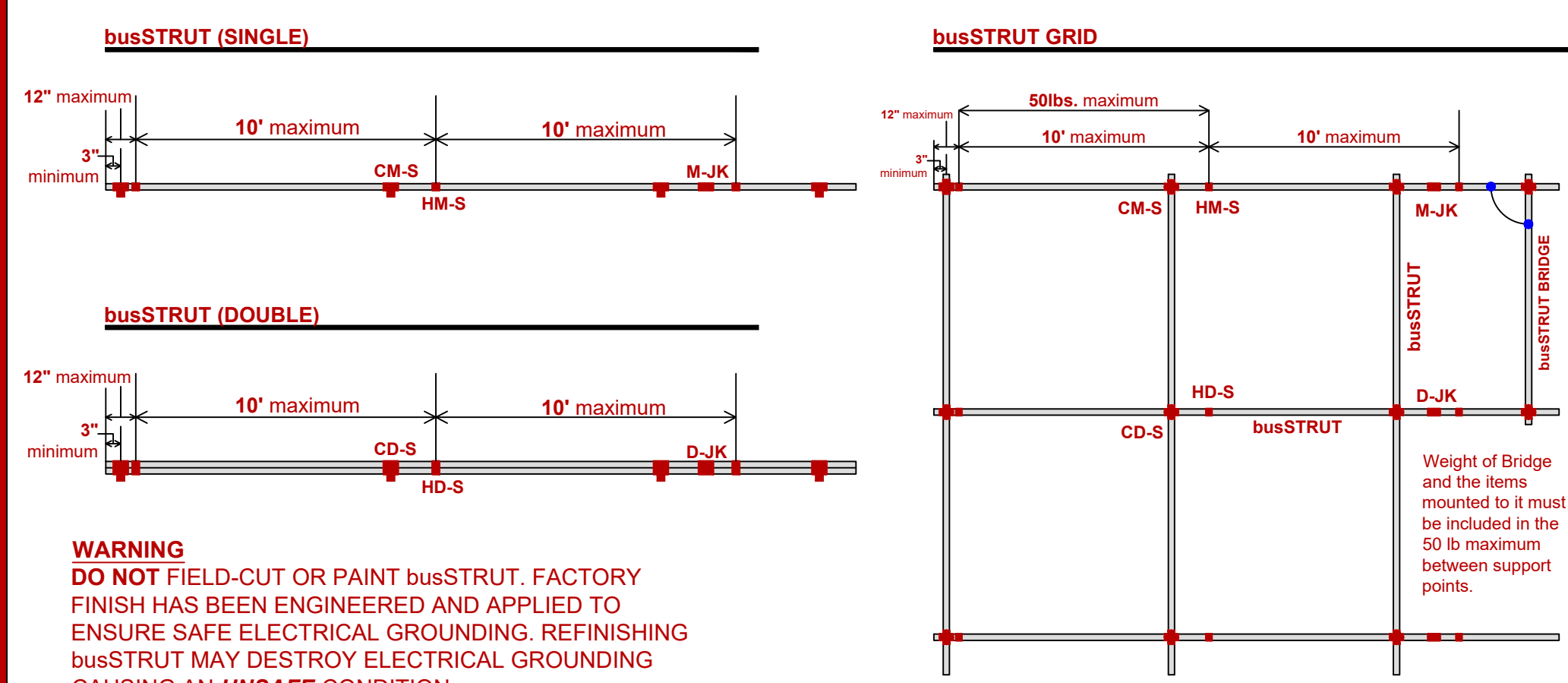


	busSTRUT 20 / Single Deck
	30" Starter Feed
	Joiner
	1/1 Slimline Crossover
	Slimline Jumper

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)



Mounting Rules



Do NOT remove the factory installed end caps from the busSTRUT

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

CAUTION:

TIGHTEN ALL JOINER SET SCREWS TO 10 in/lbs

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 bus/STRUT to be exposed beyond end of mounting hangers and/or crossovers

WEIGHT:

50 lbs Maximum 50 pounds between support points
(Include weight of bus/STRUT System)
Weight of 1 foot of bus/STRUT:
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 bus/STRUT Flip-Fitters (with metal bracket) are rated for 40 lbs maximum static, vertical load.

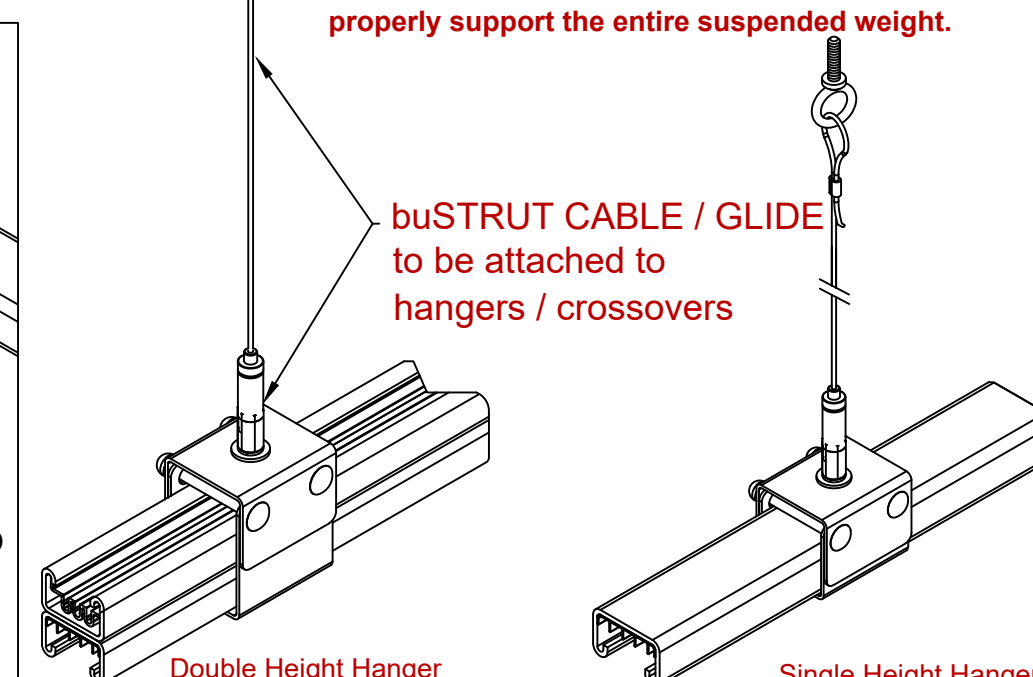
Flip-Fitters without metal bracket are for use with standard track light fixtures only. Consult for maximum weight restrictions.



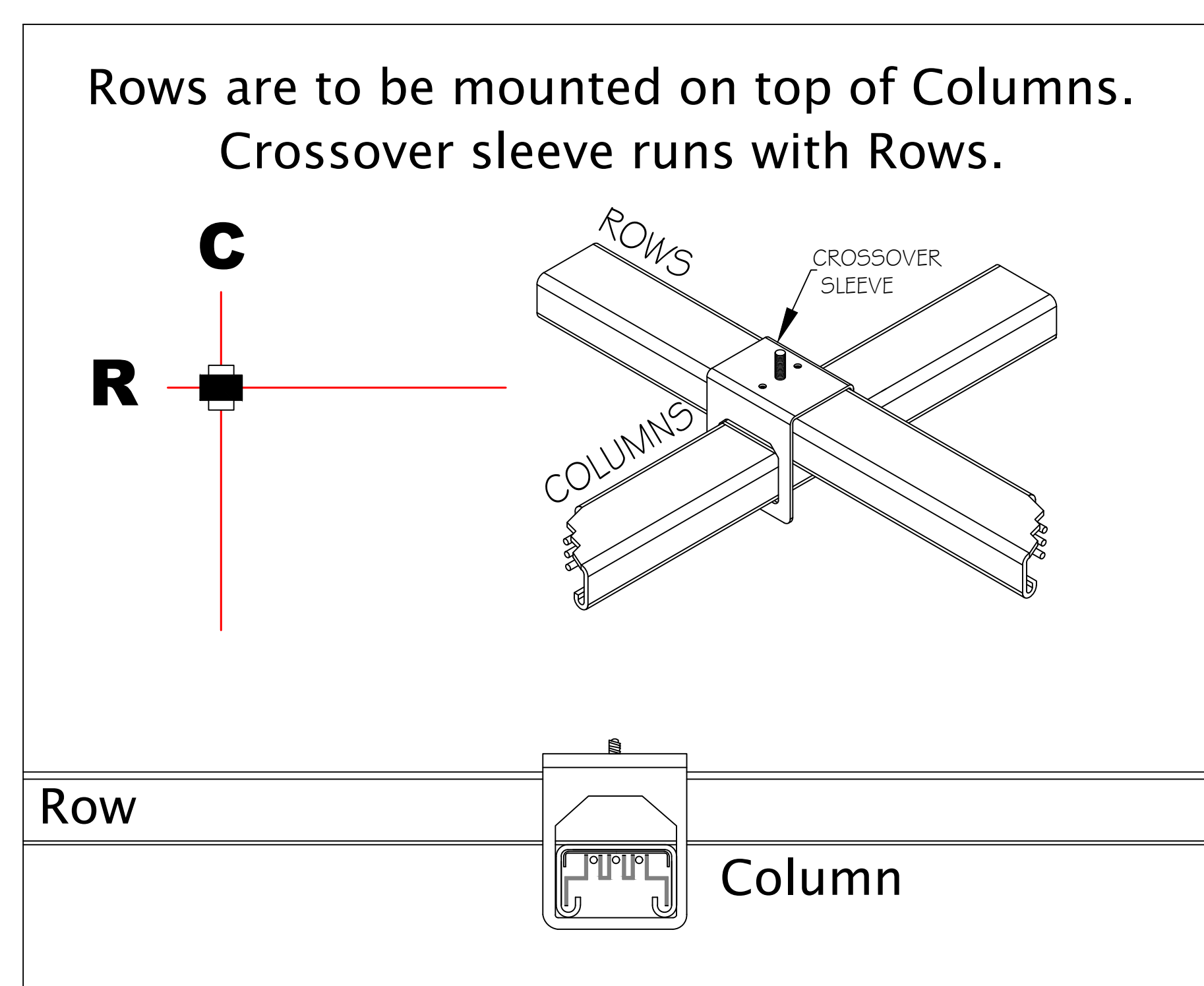
Only busSTRUT fittings and hardware may be mounted directly to busSTRUT.

CONNECTION TO STRUCTURE BY OTHERS

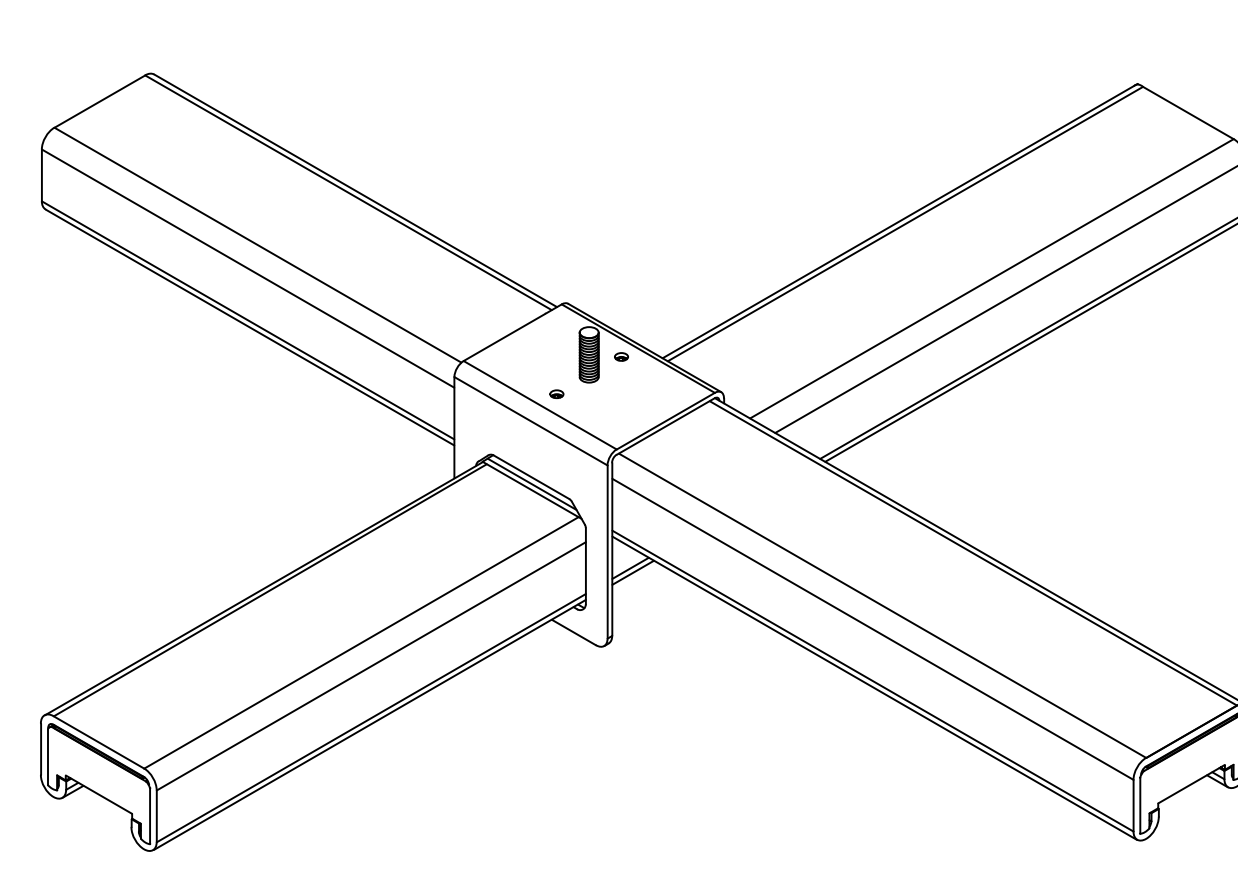
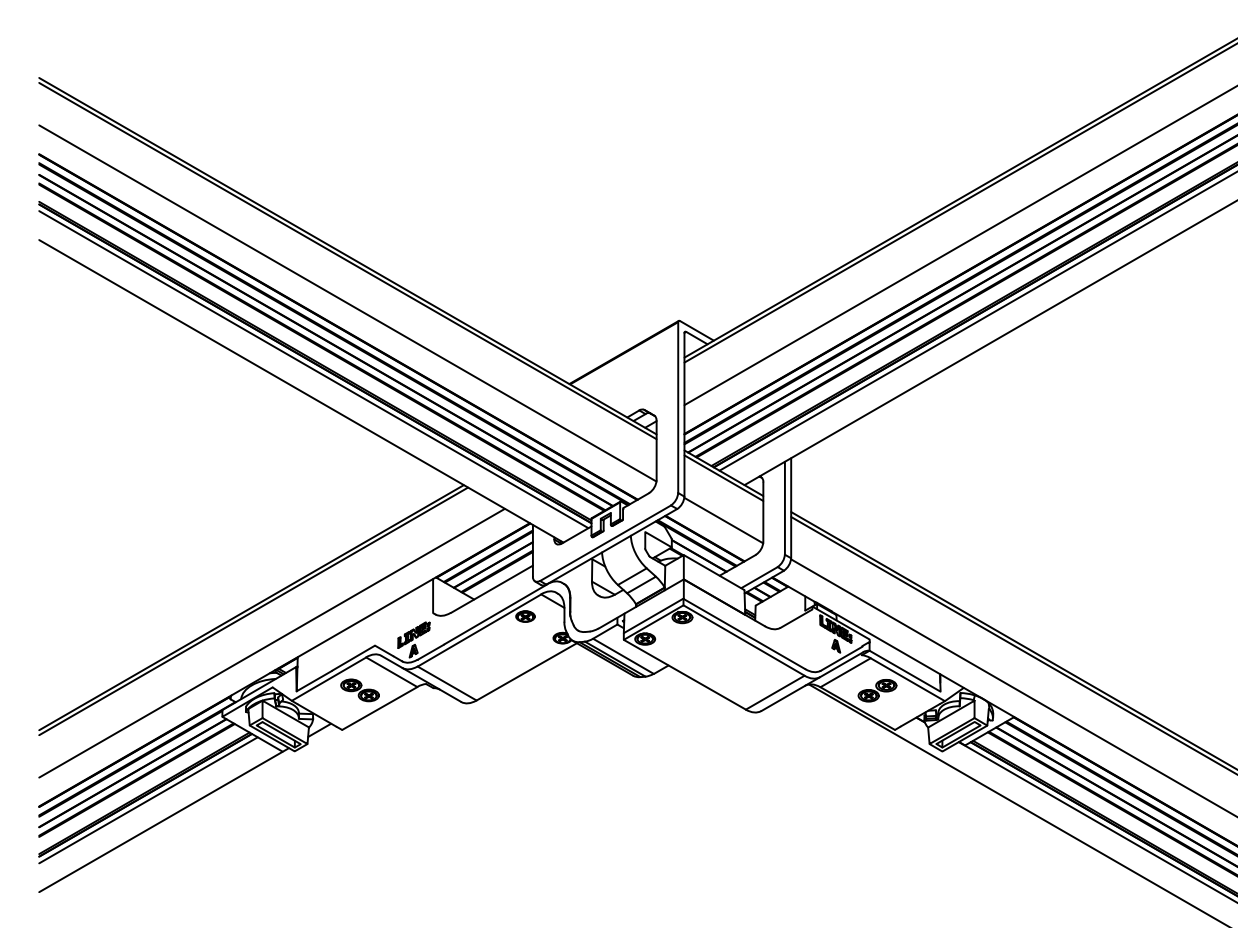
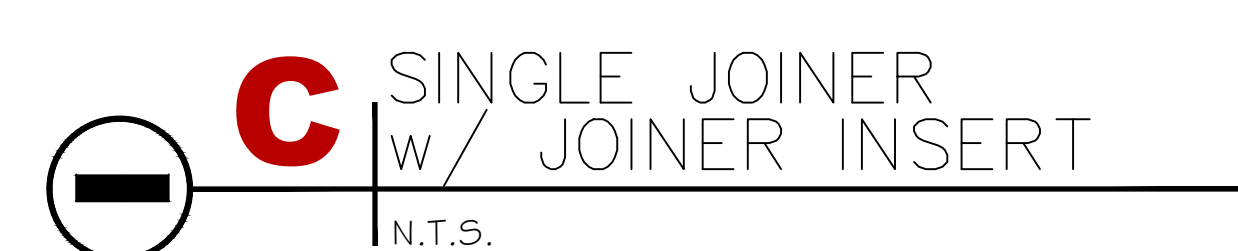
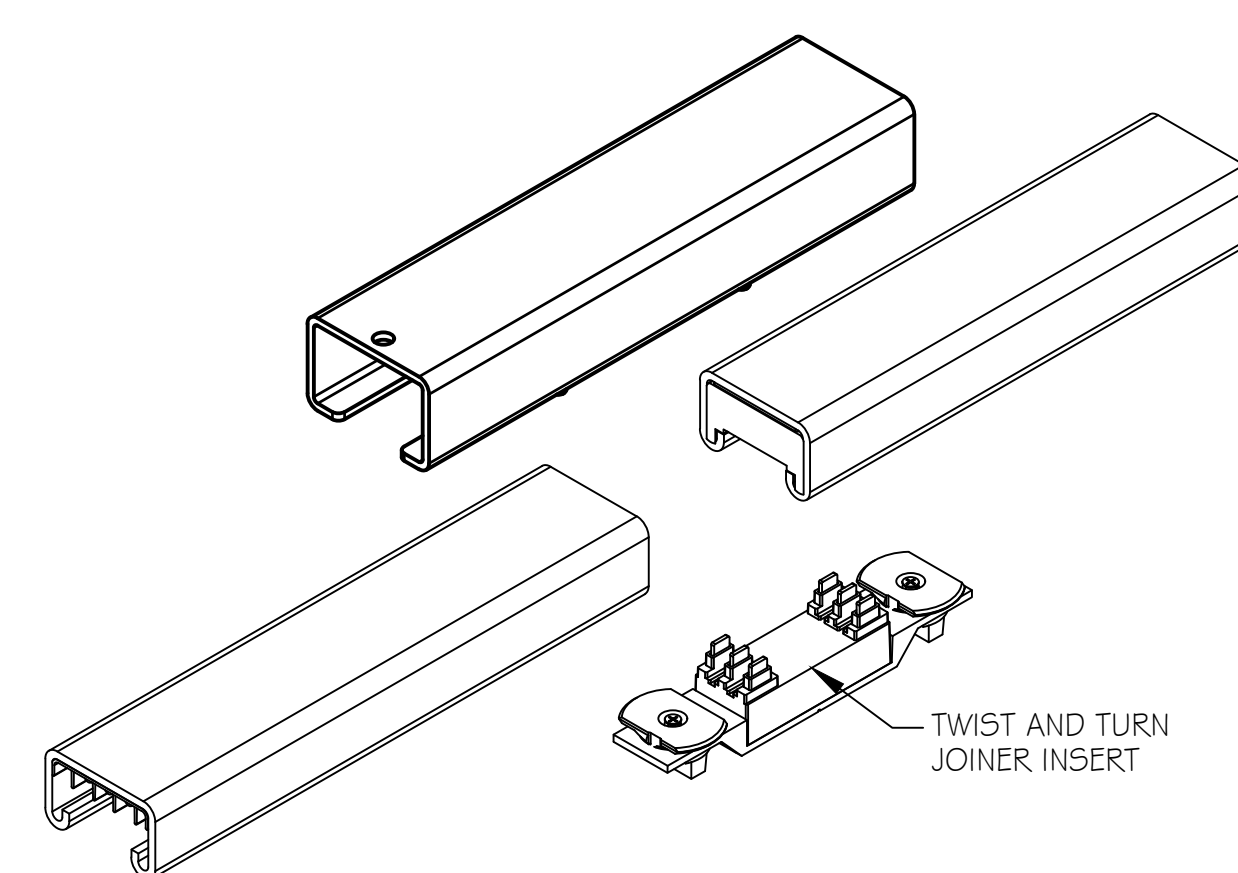
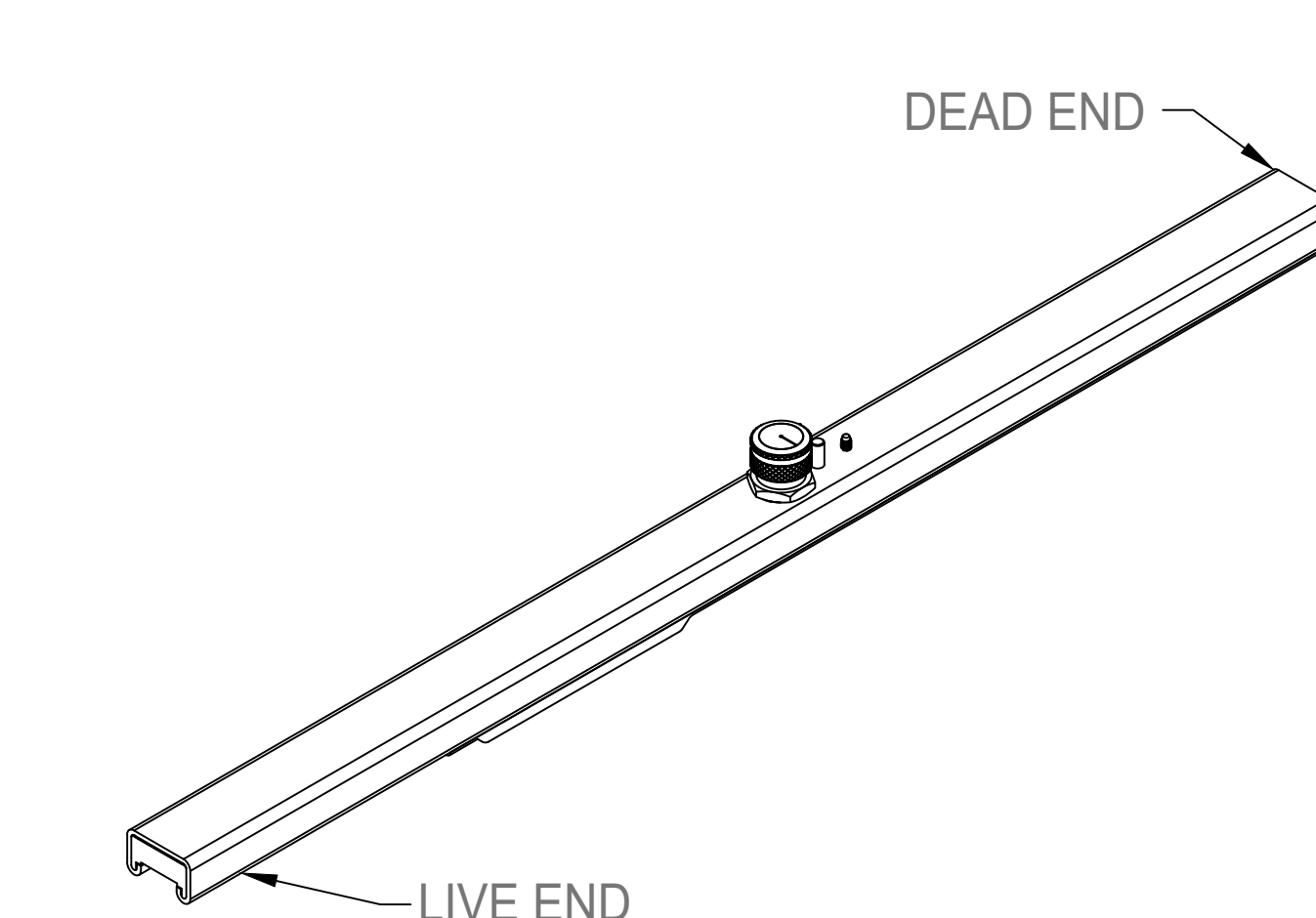
Attachment from busSTRUT System to structure must be engineered and installed to properly support the entire suspended weight.



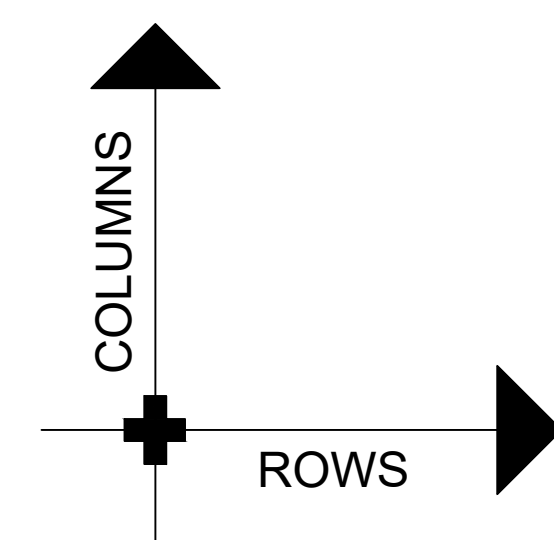
Project Specific Rules



ISO Details



Dimensions



Legend

