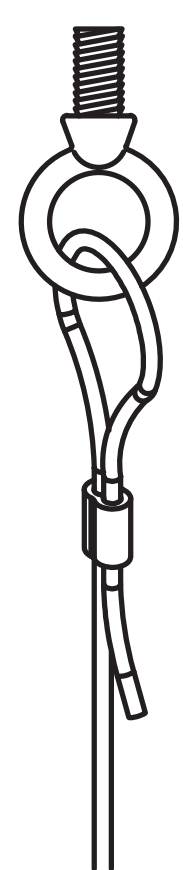


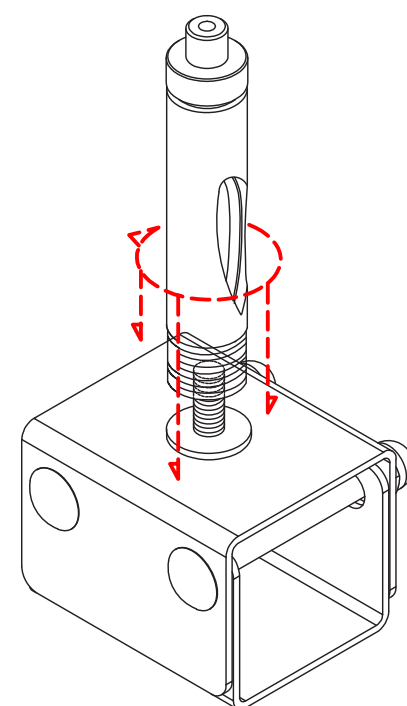
STEP 1

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).

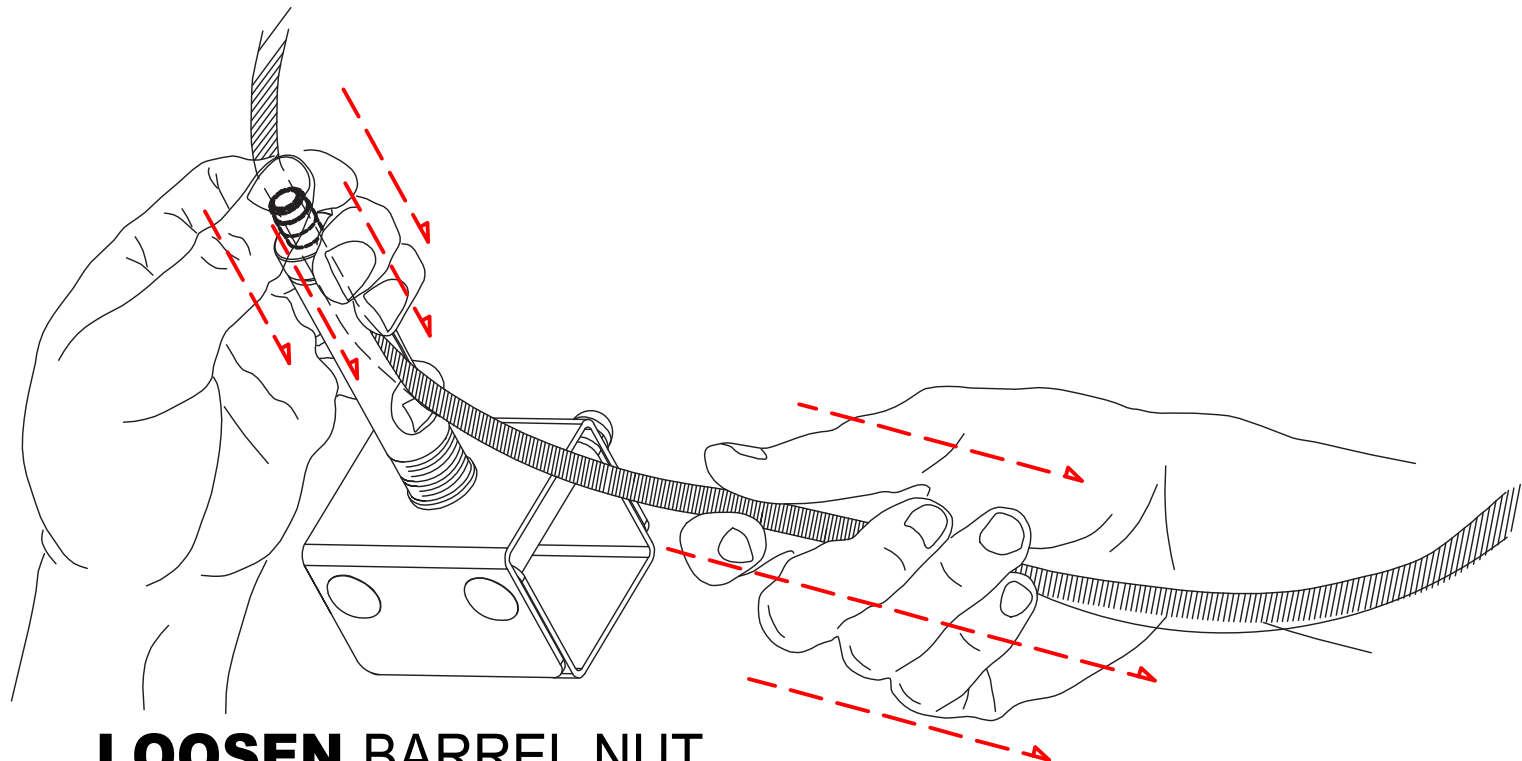
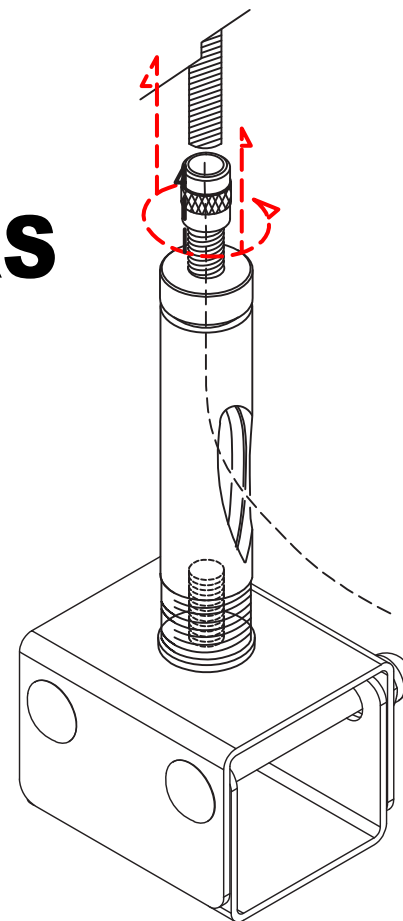


2 ASSEMBLE HANGERS (HM-S)

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

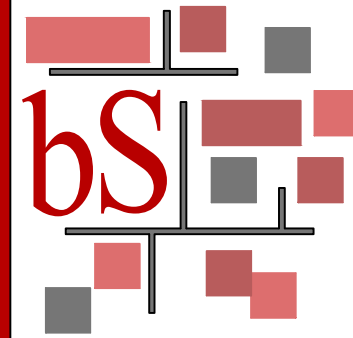
Turn the first knob

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
FOR: BID / REVIEW

TYPICAL
busSTRUT Installation Instructions

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

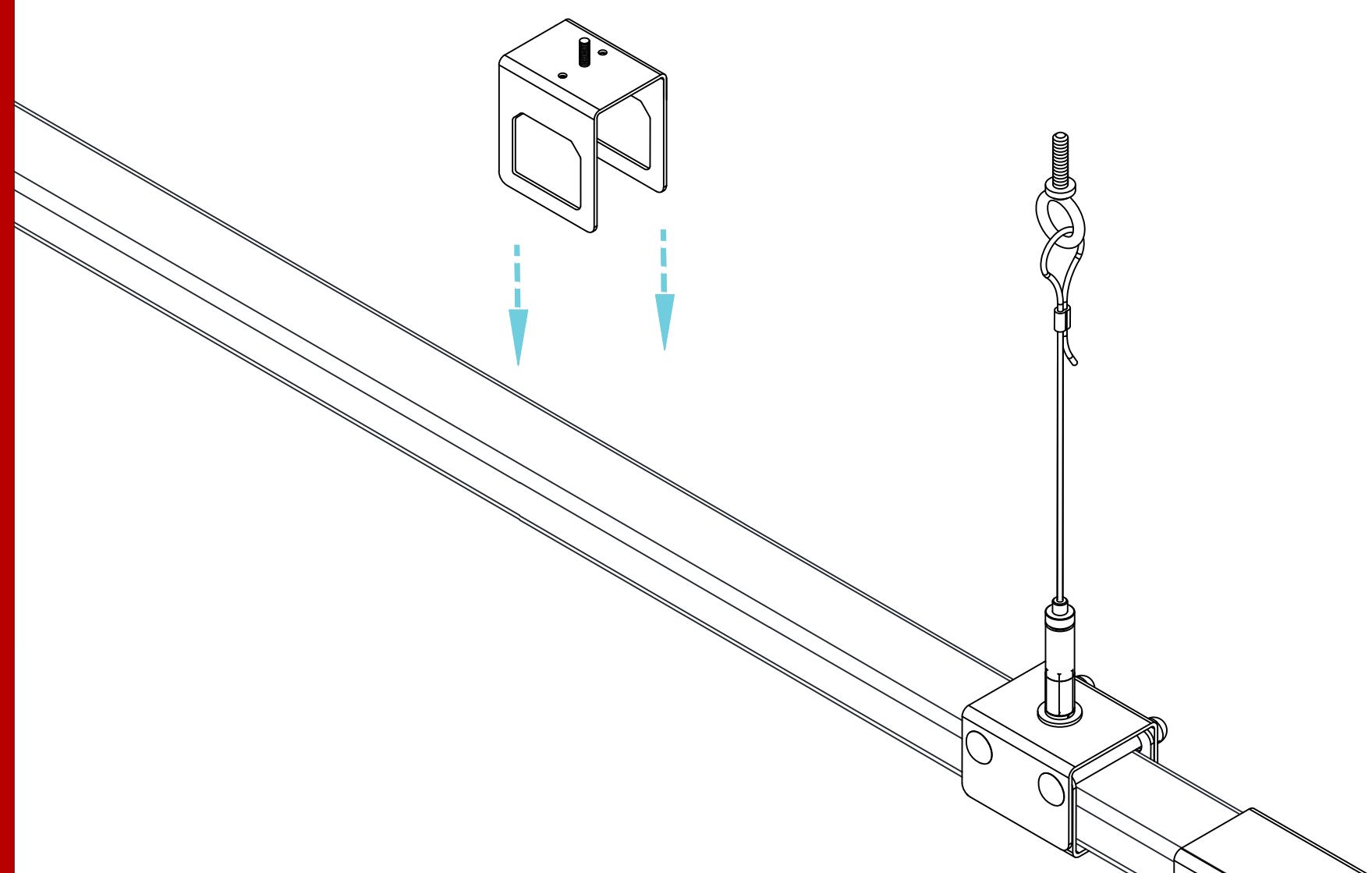
NO.	DATE	PERSON DESCRIPTION
1		

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

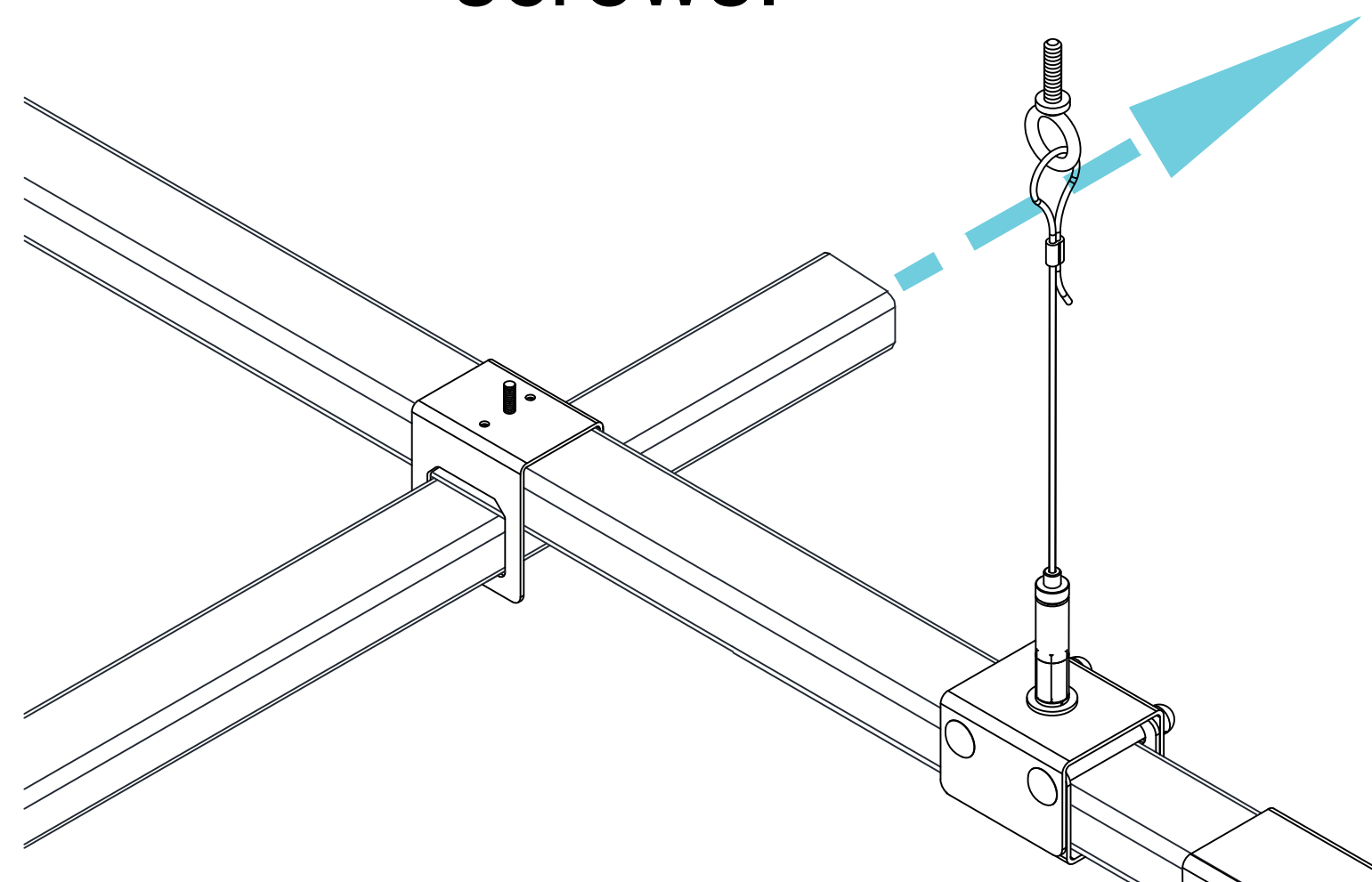
STEP 3

INSTALLING CROSSOVERS DROPPING ON

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

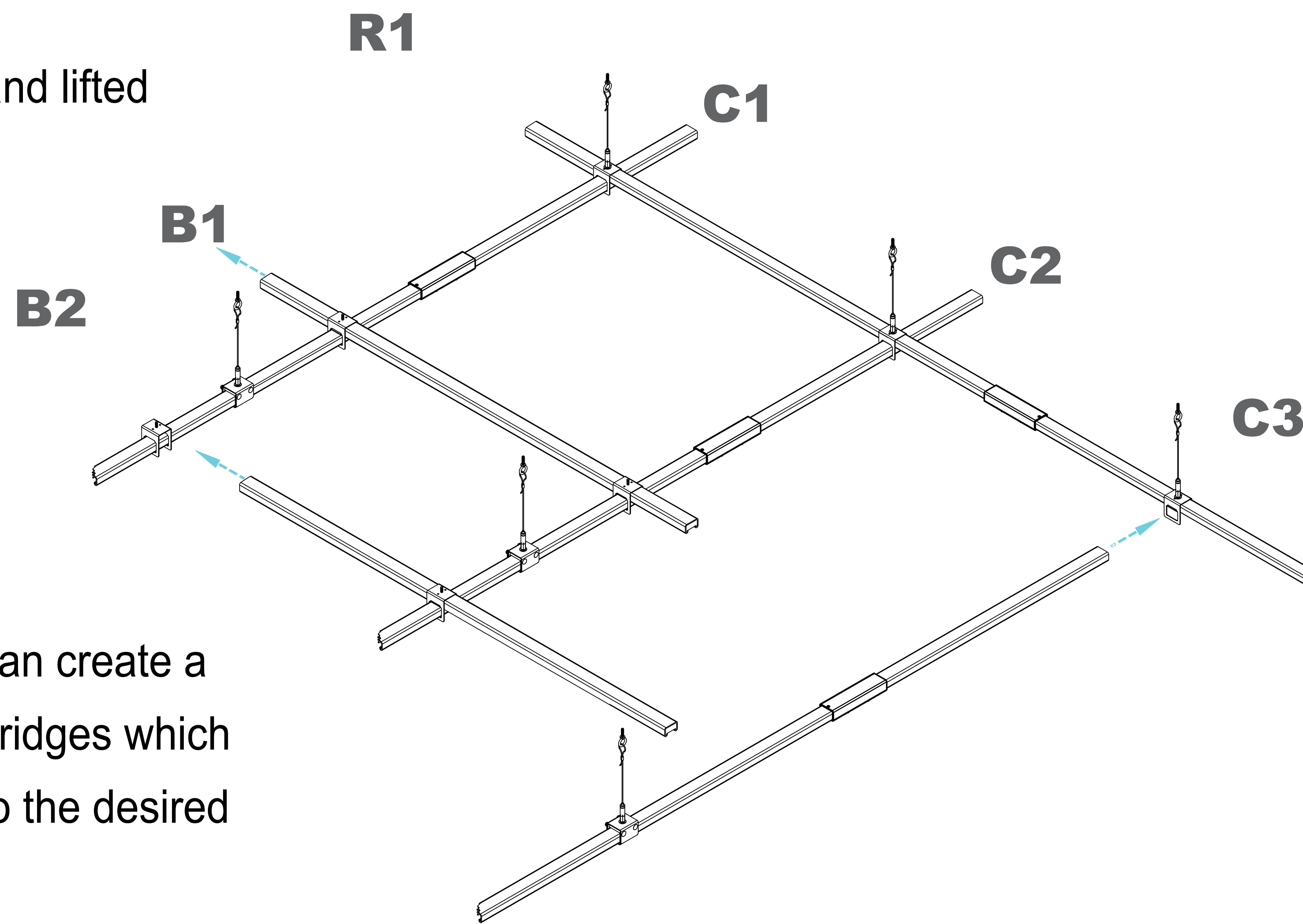


Slide perpendicular runs of busSTRUT through the crossover and tighten the set screws.



SLIDING ON

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

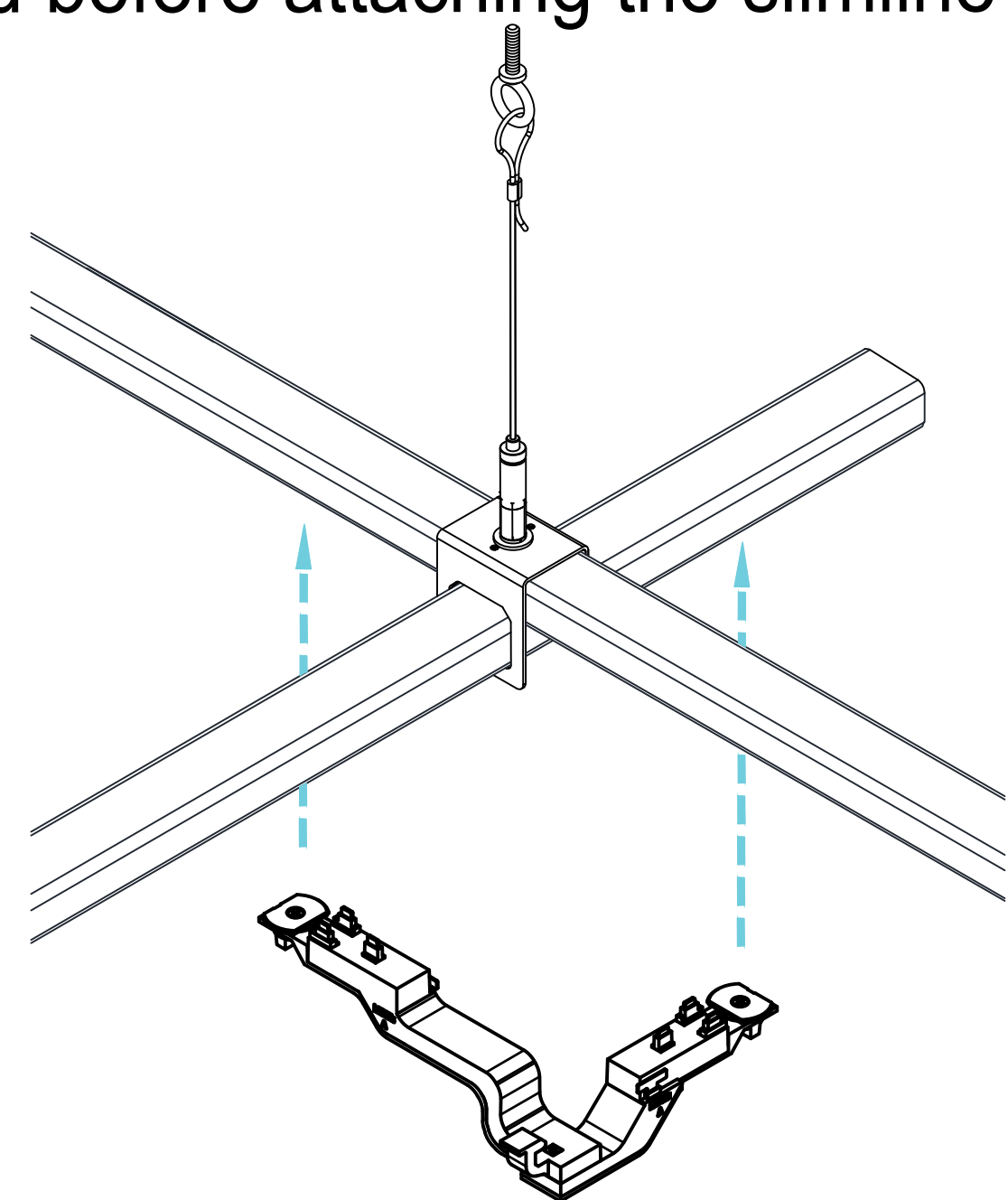


Perpendicular runs can create a full grid or be short bridges which are easily moved into the desired position.

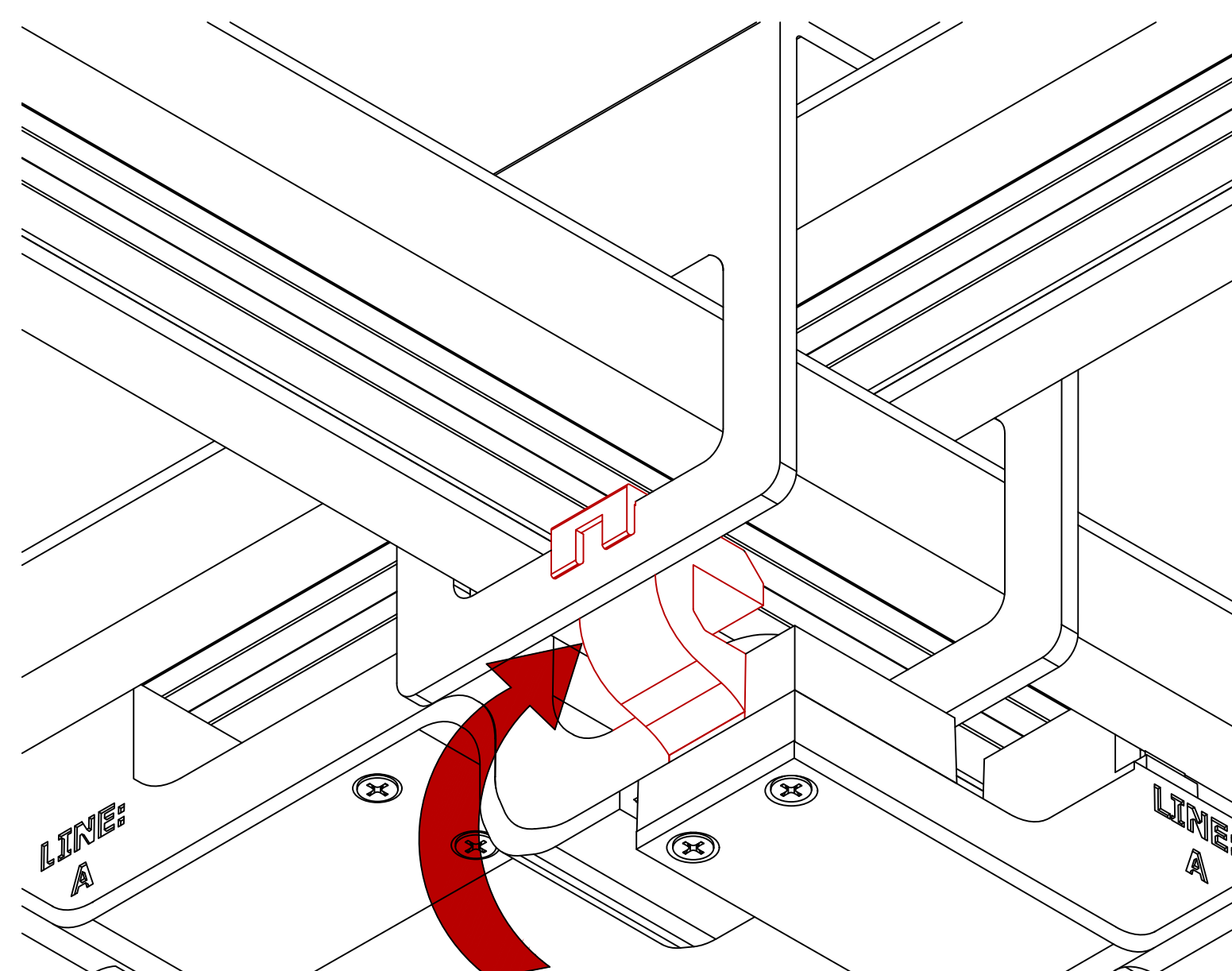
STEP 4A

SLIMLINE JUMPER

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

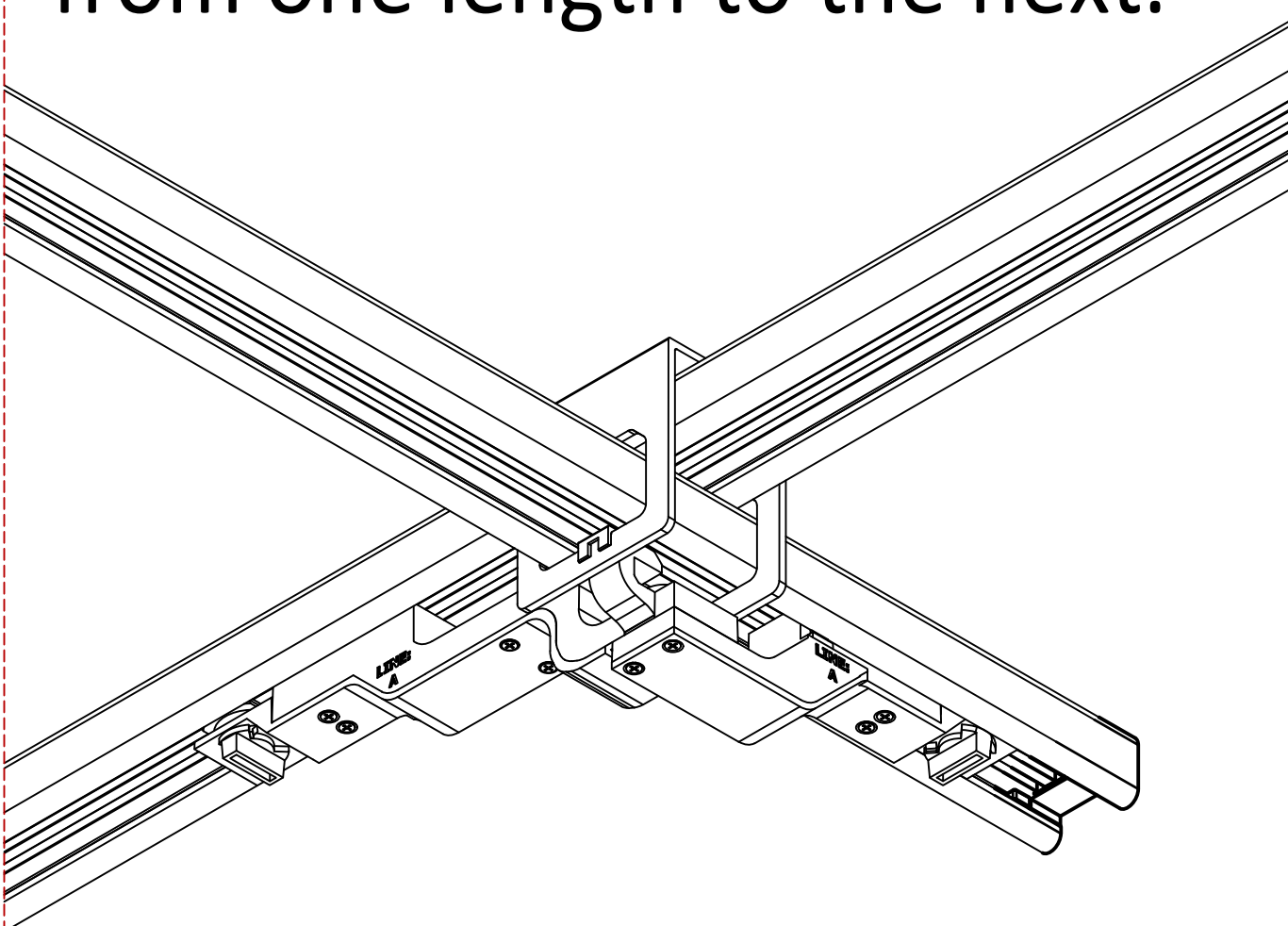


First, clip the jumper to the crossover.

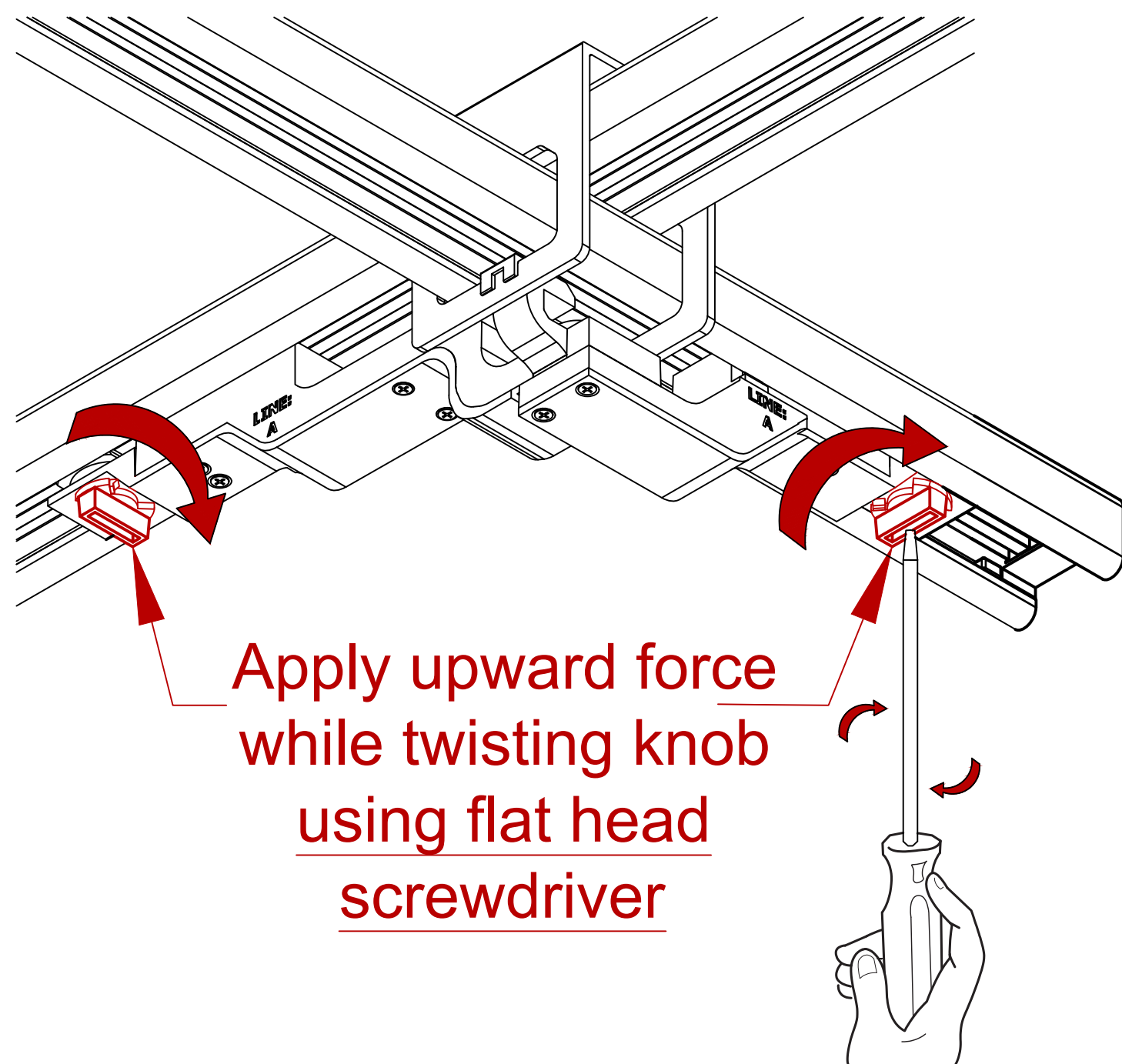


SLIMLINE JUMPER (MD2020-UNIV-IJ2-B-X)

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.

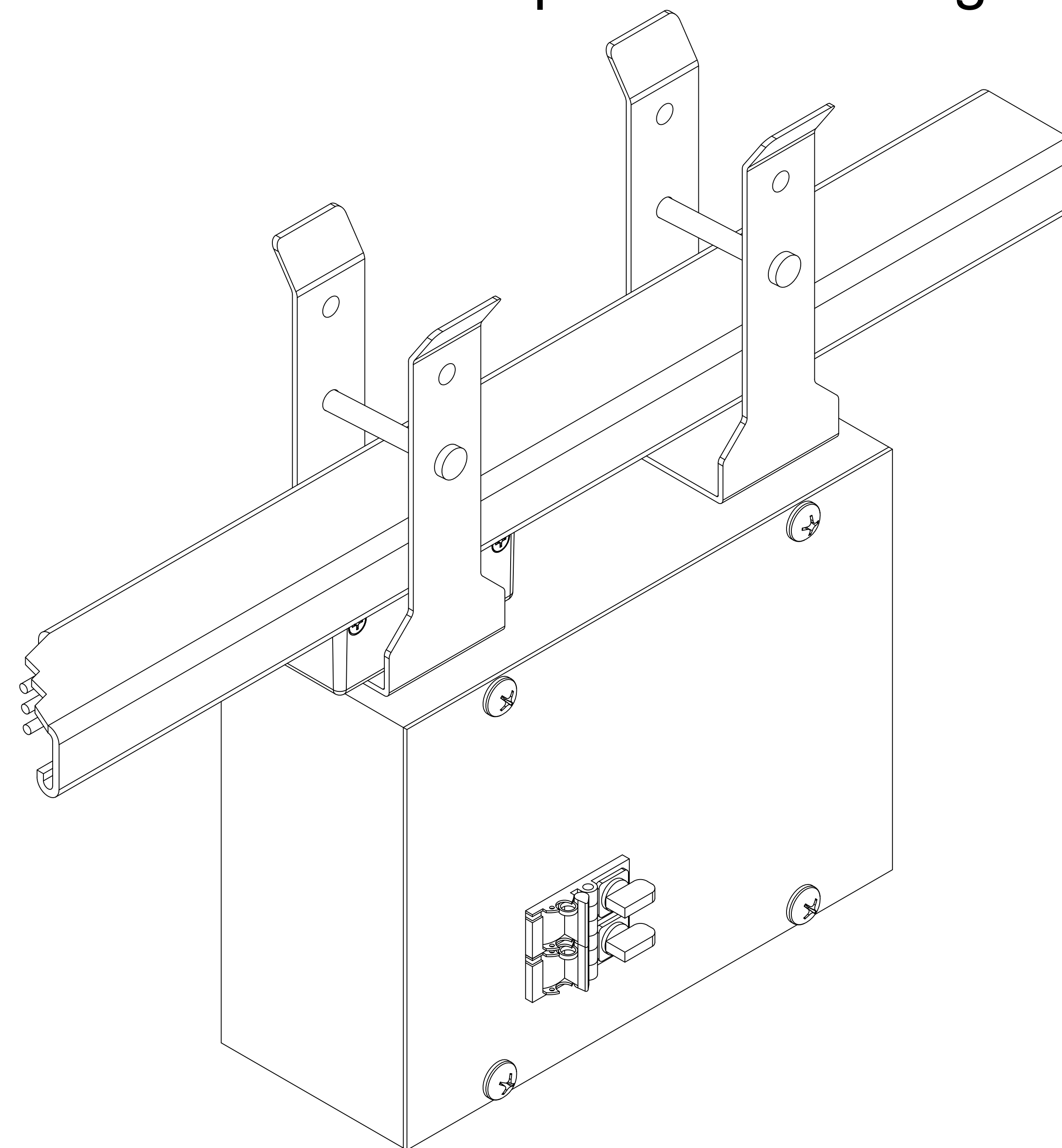


Apply upward force while twisting knob using flat head screwdriver

STEP 4B

LINE FEEDS

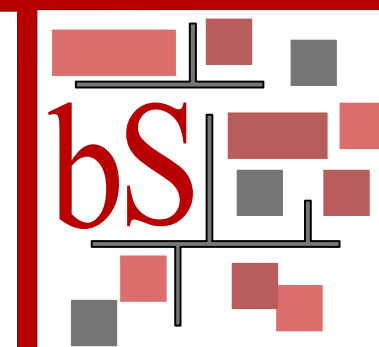
Install line feeds on busSTRUT to power the configuration.



20A LINE FEED

Shown on single decked busSTRUT

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TYPICAL
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DRAWINGS

REV	DATE	DESCRIPTION
1	11/01/2024	ISSUED FOR BID

PAPER SIZE:
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NOT TO SCALE
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E-b02

SINGLE DECK	 GRAY 20 AMPS M20-3-40-V-(L)	 CG-(LENGTH)	 HM-S	 M-JB	 ICM-S	 P20-3-40-UNIV-FDXX-F P20-3-40-UNIV-30-CM-F 1-1
	 EMPTY-STRUT MOO-(L)					 MD4020-UNIV-JC-F-90-12 MD2020-UNIV-IJ2-B-X
DOUBLE DECK	 DOUBLE-STRUT NOTE: GROUNDS 'N' AND 'W' ON BOTTOM GROUNDS 'C' AND 'D' ON TOP	 CG-(LENGTH)	 HD-S	 D-JB	 ICD-S	

STEEL bUSbTRUCK 12 gauge 1" x 1" x 15.8" features two 1/2" Amps wire symmetrically surrounding a center 1/2" Amp wire. 20 Amp Circuits 40 Amps Maximum with bUSbTRUCK 20; alternatively two 10 Amp Circuits 20 Amps Maximum with bUSbTRUCK 10. 2.5", 1" and .20" lengths. Rated for up to 277480V. Double ducts with standard hardware for trunings.	BRAIDED Cable with GLIDE: For use with bUSbTRUCK Hangers/Crossovers, include cable-guide and cable factory assembled cable with looped breasted 14-20 eye bolt.	HANGERS: Single and Double Hangers are for use with bUSbTRUCK. Each is assembled one per unit. The upper piece includes a threaded stud for use with bUSbTRUCK cable-guide.	JONERS: Single and Double for use with bUSbTRUCK. Lengths are joined together mechanically with a 3/8" pin. Electrical Jones Kit includes both a T-wit T-Plug Plug-in and a T-wit T-Plug Plug-in. And continuous grounding studs through the bus itself by means of a permanently affixed copper grounding bar.	CROSSOVERS: For use with intersecting bUSbTRUCK. Each is an assembled two piece unit for building and connecting busses. The piece includes a threaded stud for use with bUSbTRUCK cable-guide. JUMPERS: For use with both bUSbTRUCK and bUSbTRUCK 10. Each is a fixed 4000 Joules Energy Cable can be used to electrically connect the busses. TRUNKS: bUSbTRUCK Branches and electrically connecting bUSbTRUCK 20 to bUSbTRUCK 10. LINE FEEDS: For use with powerline single-ended bUSbTRUCK. Junction boxes feature energy code type bUSbTRUCK (breakers/switches) and 3 Poles. Available to 277480V. Can be positioned anywhere along bUSbTRUCK to reduce the lengths of homeruns. STARTER FEEDS: For use with powerline single-ended bUSbTRUCK. Utilized when no current limiting is required on the bUSbTRUCK. Must be positioned at the beginning of a run.
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busSTRUT														Bill of Materials										Finish TBD: Galvanized, White, or Black										Drawn By Checked By Date		John Loch John Loch 10/4/2024																					
ROWS Large LT PD																																																									
														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-ST-LFX		MKUST-A-F		CG-E-15B-GL		ICM-S-F-ST-X		MD4020-UNIV-JCF-90-12-G02		MD2020-UNIV-J2-F-X		P20-3-40-UNIV-JK-NB-F		P20-3-40-UNIV-30-CM-F-1-1		MD40-2-120-CB20-DC-XX-LE-F		BRL-4-40L-30K80-ST-WD-F		BRLUCY-U-30S-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		2		2						1		3		2				1										4															
R3		20		15		15				1		1		1		2		2						1		3		2				1										4															
R4		20		15		15				1		1		1		2		2						1		3		2				1										4															
R5		20		15		15				1		1		1		2		2						1		3		2				1										4															
SUB TOTAL				75		75		1		5		4		5		11		11				5		15		10				4				1								20															
R/C		Amps		LF		BF		2.5		3		5		7		M		INS		NE-INS		M		D		C-GI		1/1		12"		INVS		JK		30ST		PD		WW		LUCY															
Columns																																																									
C1		20		30		30				3				3		5		5														1										8															
C2		20		30		30				3				3		5		5														1										6															
SUB TOTAL				60		60				6				6		10		10												2												14															
R/C		Amps		LF		BF		2.5		3		5		7		M		INS		NE-INS		M		D		C-GI		1/1		12"		INVS		JK		30ST		PD		WW		LUCY															
Bridges																																																									
B1		20		8		8				1		1				1		1										2				1						1																			
B2		20		8		8				1		1				1		1										2				1						1																			
B3		20		8		8																																																			

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

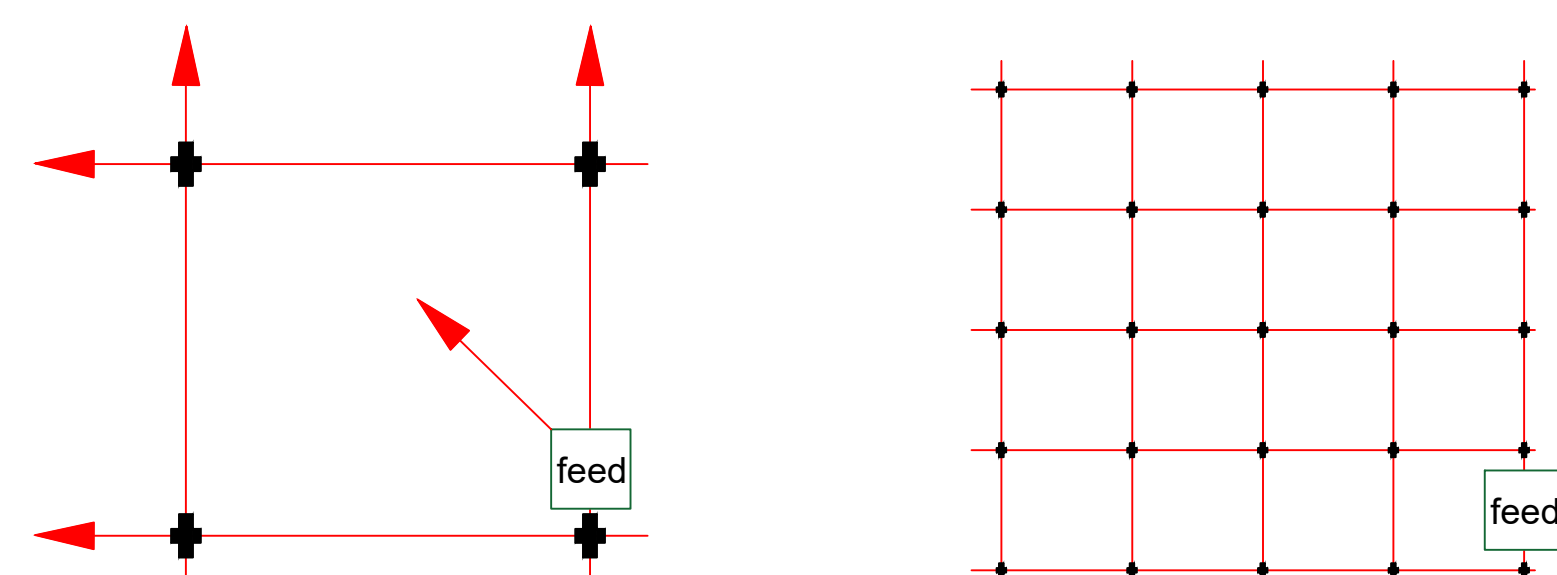
bus:STRUt SYSTEM

		bus:STRUt LABOR					
	ITEMS	Qty.	U/M	STANDARD		TOTAL HRS	
				LABOR HOURS			
				min	hrs @0		
bus:STRUt SYSTEM	LENGTHS	<u>159</u>	LF	x	2.75	0.05	= 7
	JOINERS	<u>24</u>	EA	x	12	0.20	= 5
	HANGERS	<u>15</u>	EA	x	25	0.42	= 6
	CROSSOVERS	<u>16</u>	EA	x	10	0.17	= 3
	ATTACHMENTS	<u>3</u>	EA	x	8	0.13	= 0
	JUMPERS	<u>9</u>	EA	x	6	0.10	= 1
	FEEDS	<u>1</u>	EA	x	15	0.25	= 0
					bus:STRUt SUB-TOTAL		= 23
FIXTURES	ACCENT	<u>34</u>	EA	x	8	0.13	= 5
	LINEARS	<u> </u>	EA	x	20	0.33	= 0
					bus:STRUt READY LIGHTS SUB-TOTAL		= 5
					TOTAL TIME		= 27

busSTRUT system is designed to be BID separately.

Bid from the **feeds-in**.

* Powered by a minimal amount of feed boxes.

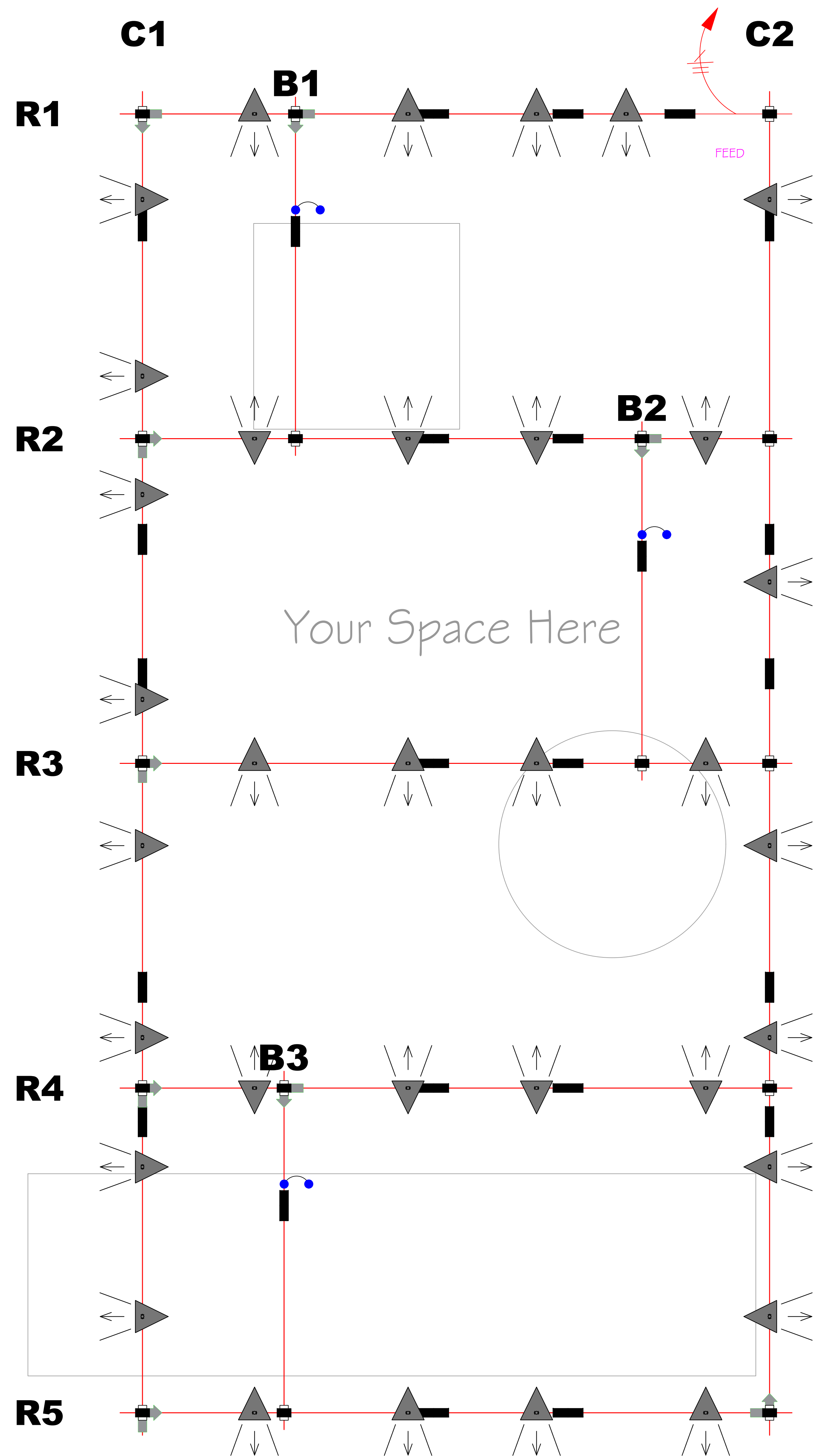


ACCENT LIGHT
BR-LUCY-U-309-30-F-(OC)

N.T.S.

	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)



Your Space Here



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PRINCIPAL IN CHARGE:	LARRY GELLERT
CHECKED BY:	JOHN LOCH
DRAWN BY:	JOHN LOCH
ISSUE DATE:	11/01/2024
ISSUED FOR:	BID/REVIEW

Lighting Plan & Bill of Materials

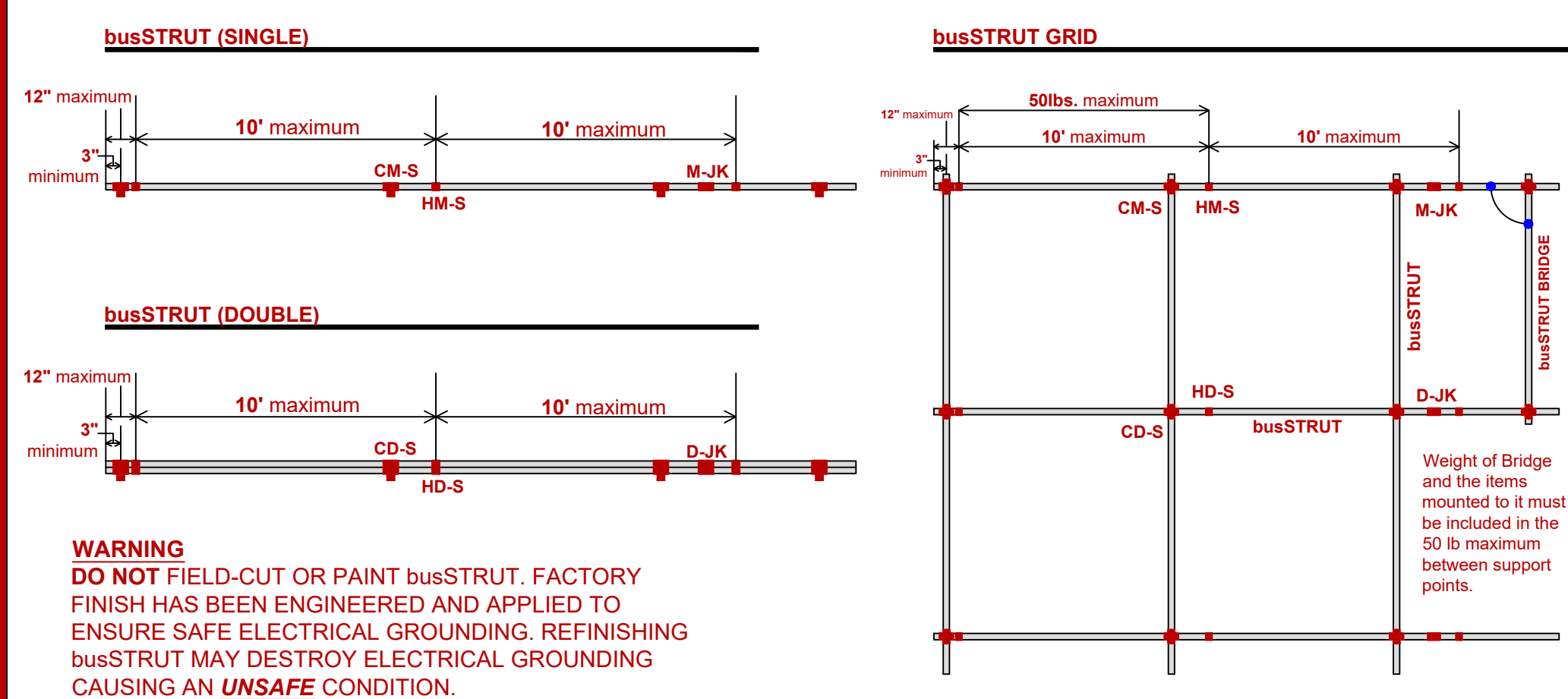
busSTRUT
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 DRAWINGS

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

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

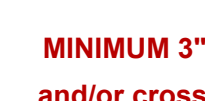
WEIGHT:

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.

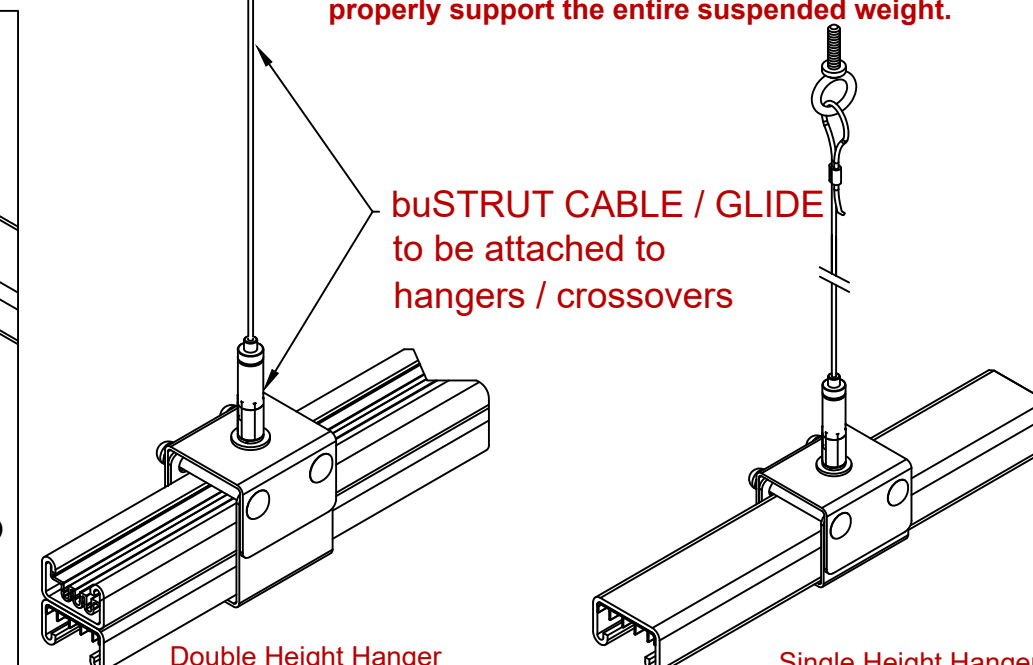
Flip-Fitters without metal bracket are for use with standard track light fixtures only. Consult for maximum weight restrictions.



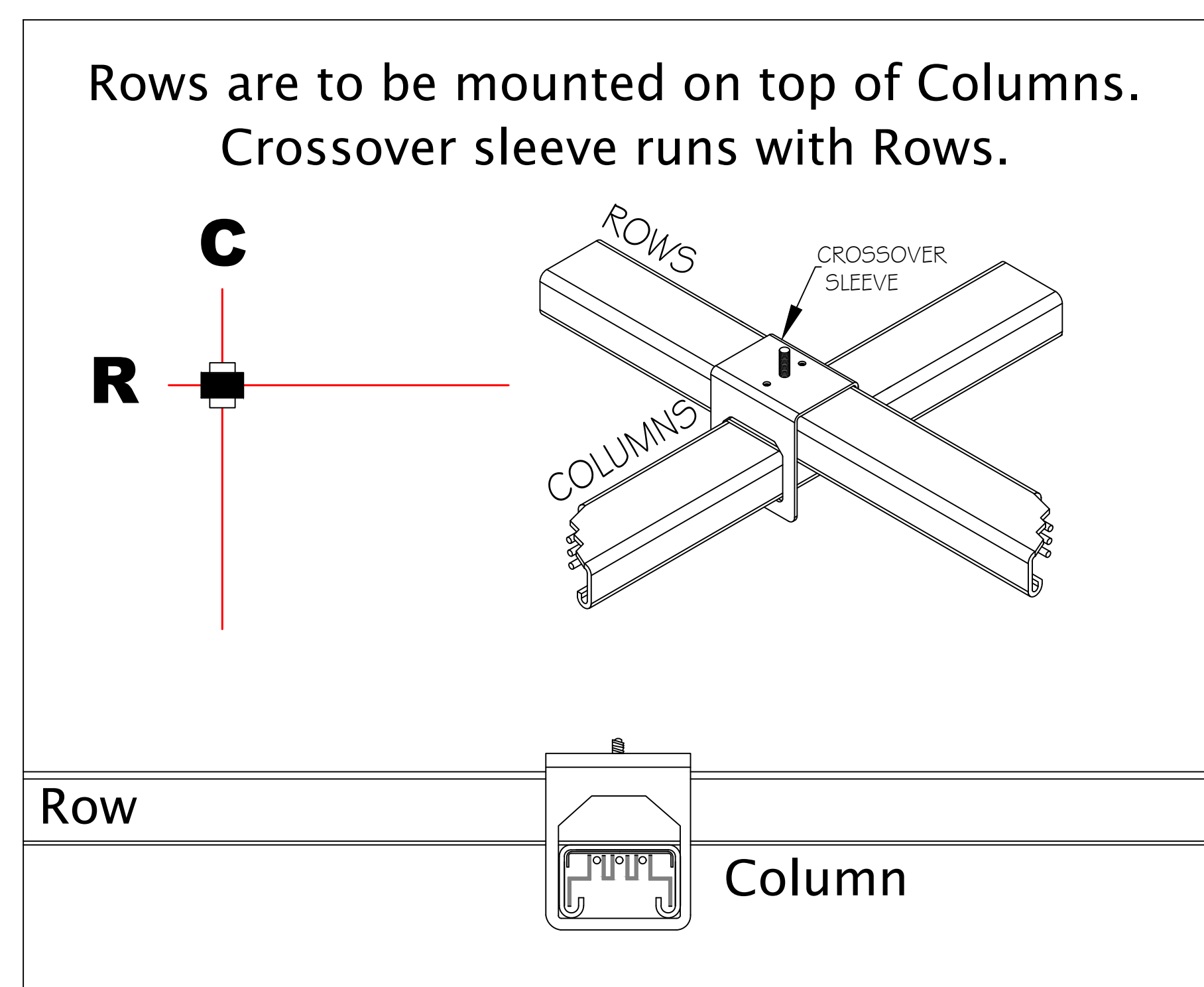
Only busSTRUT fittings and hardware may be mounted directly to busSTRUT.

CONNECTION TO STRUCTURE BY OTHERS

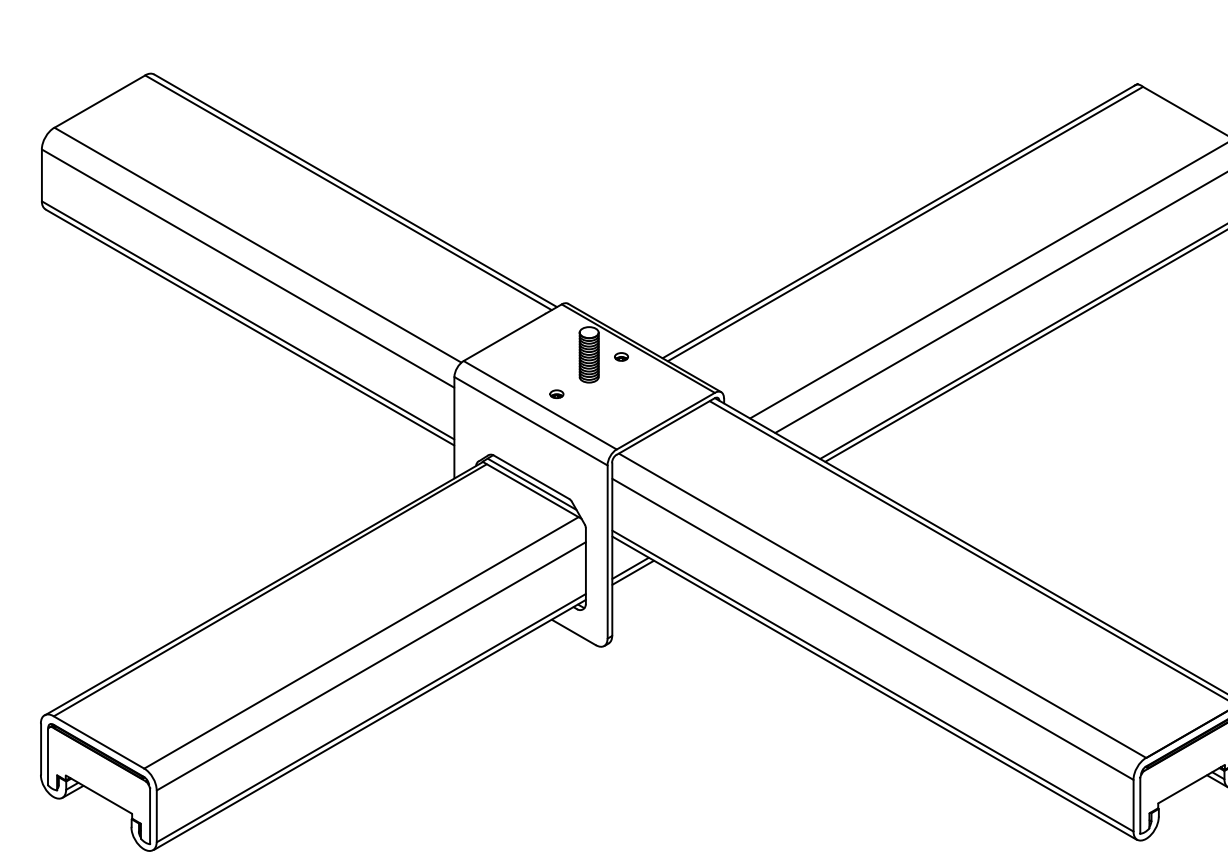
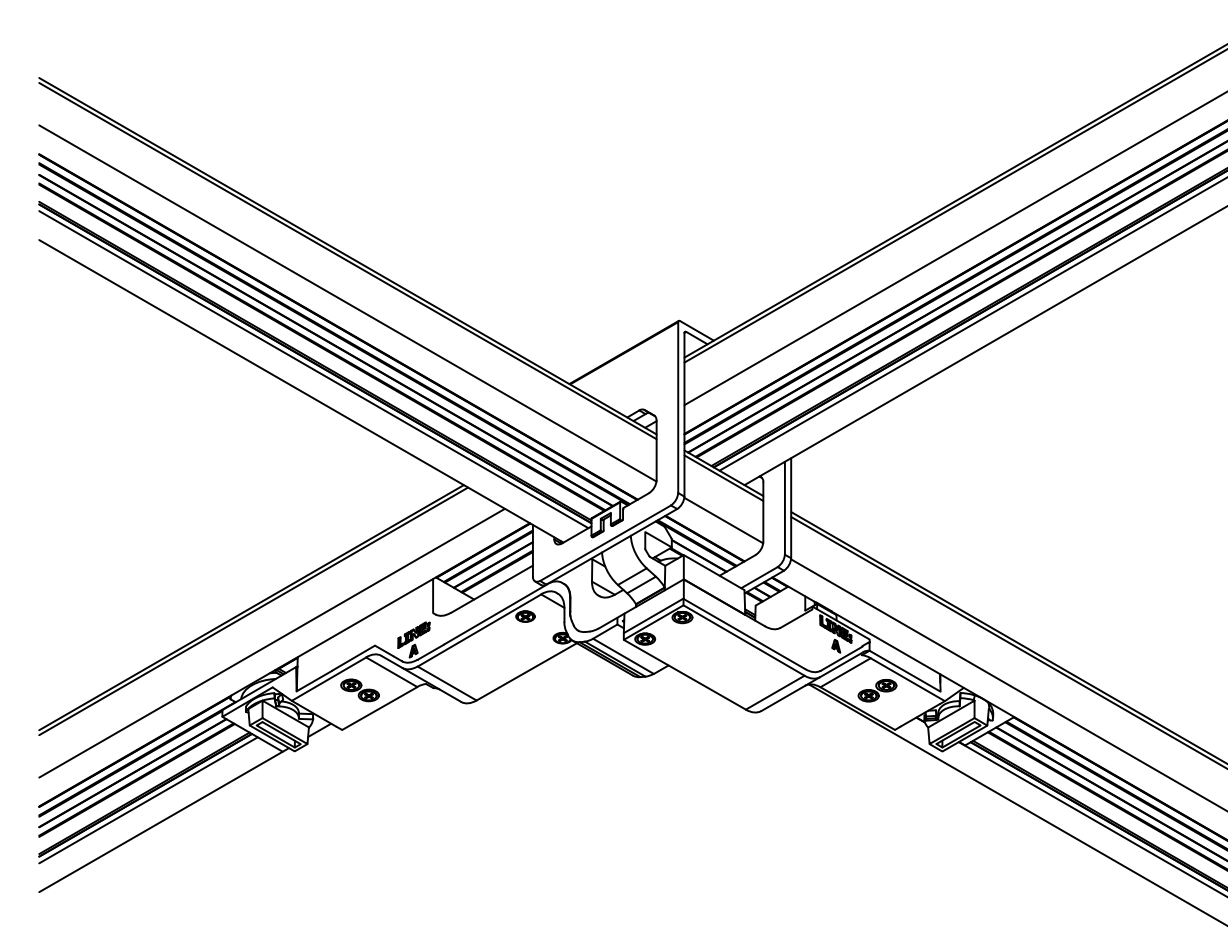
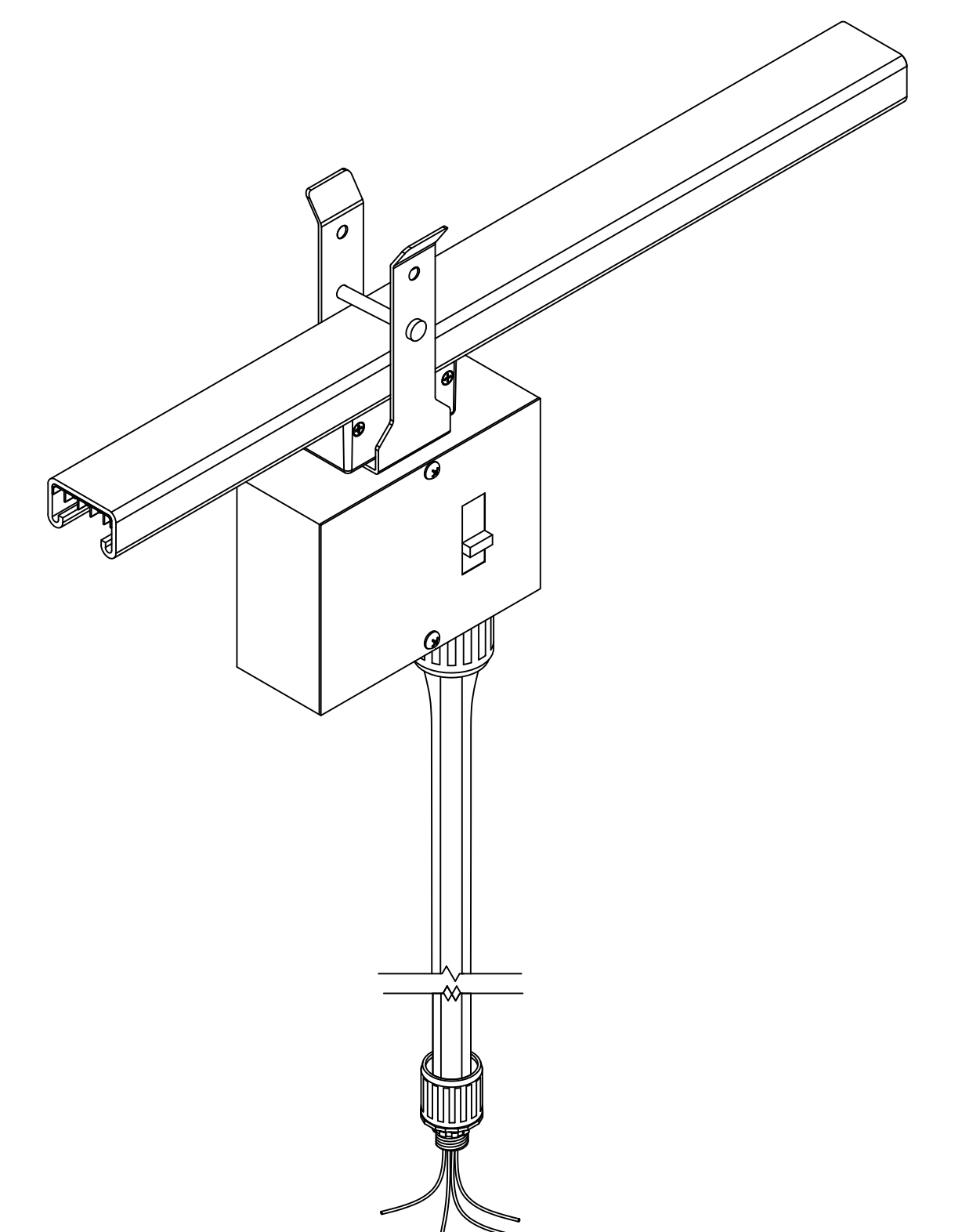
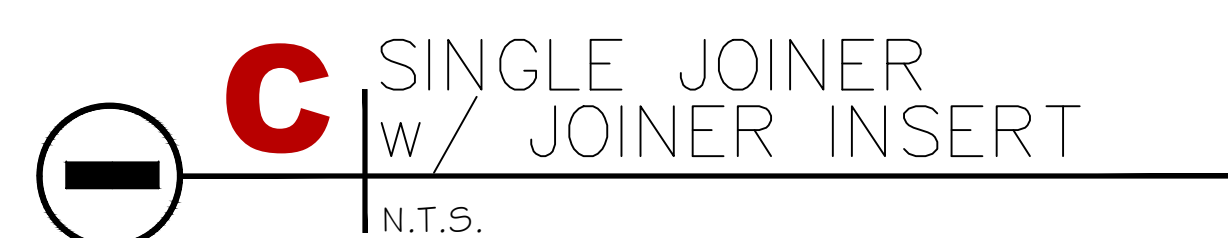
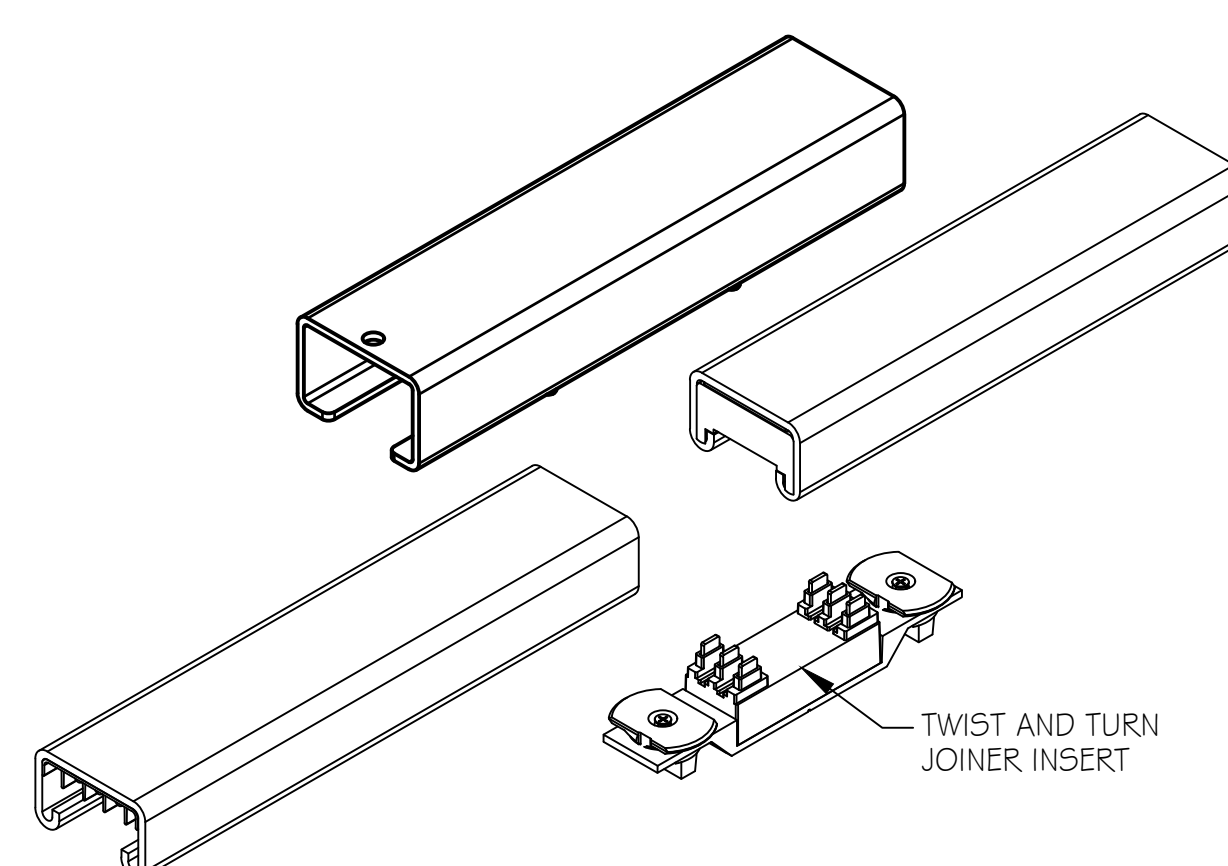
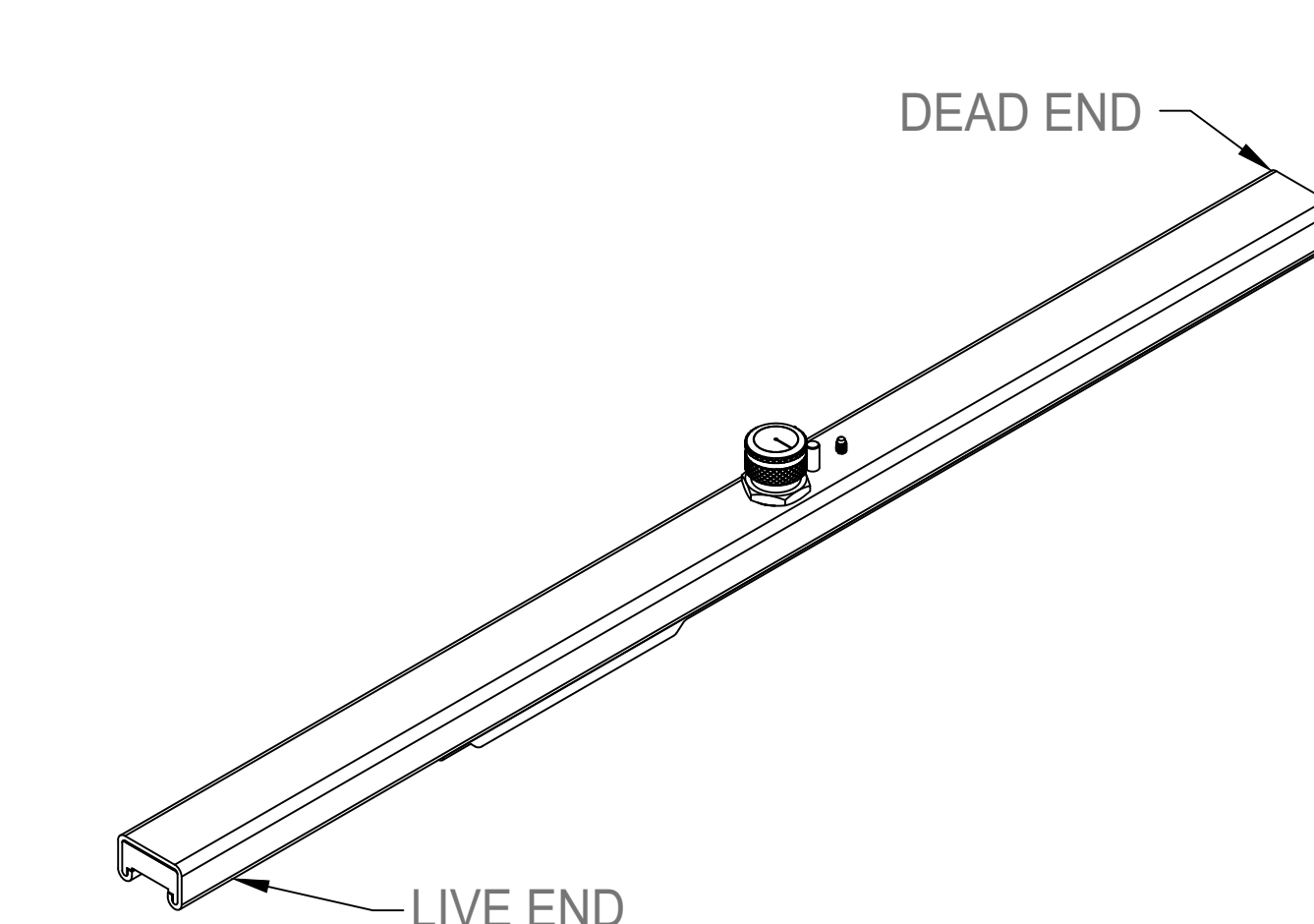
Attachment from busSTRUT System to structure must be engineered and installed to properly support the entire suspended weight.



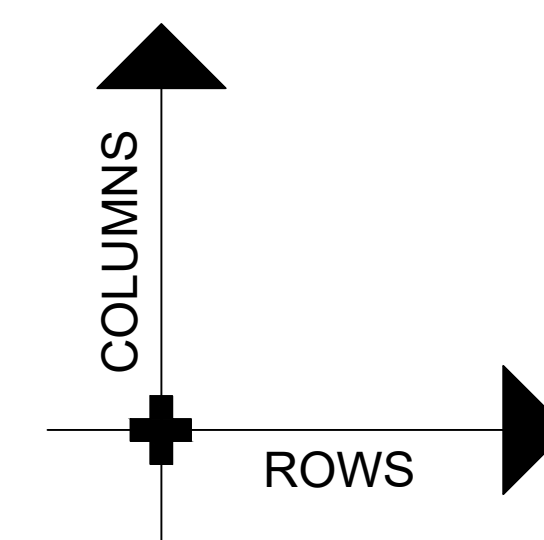
Project Specific Rules



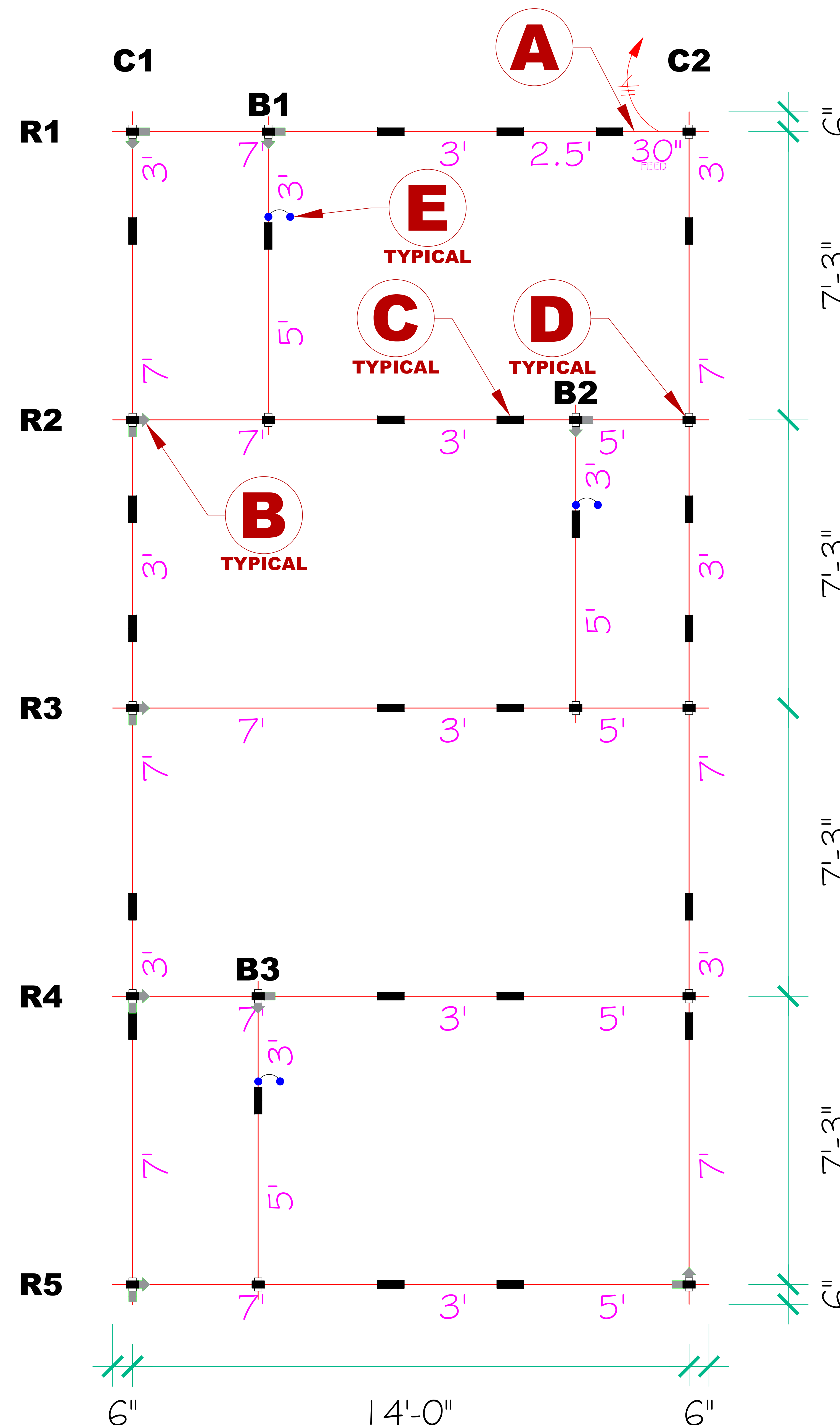
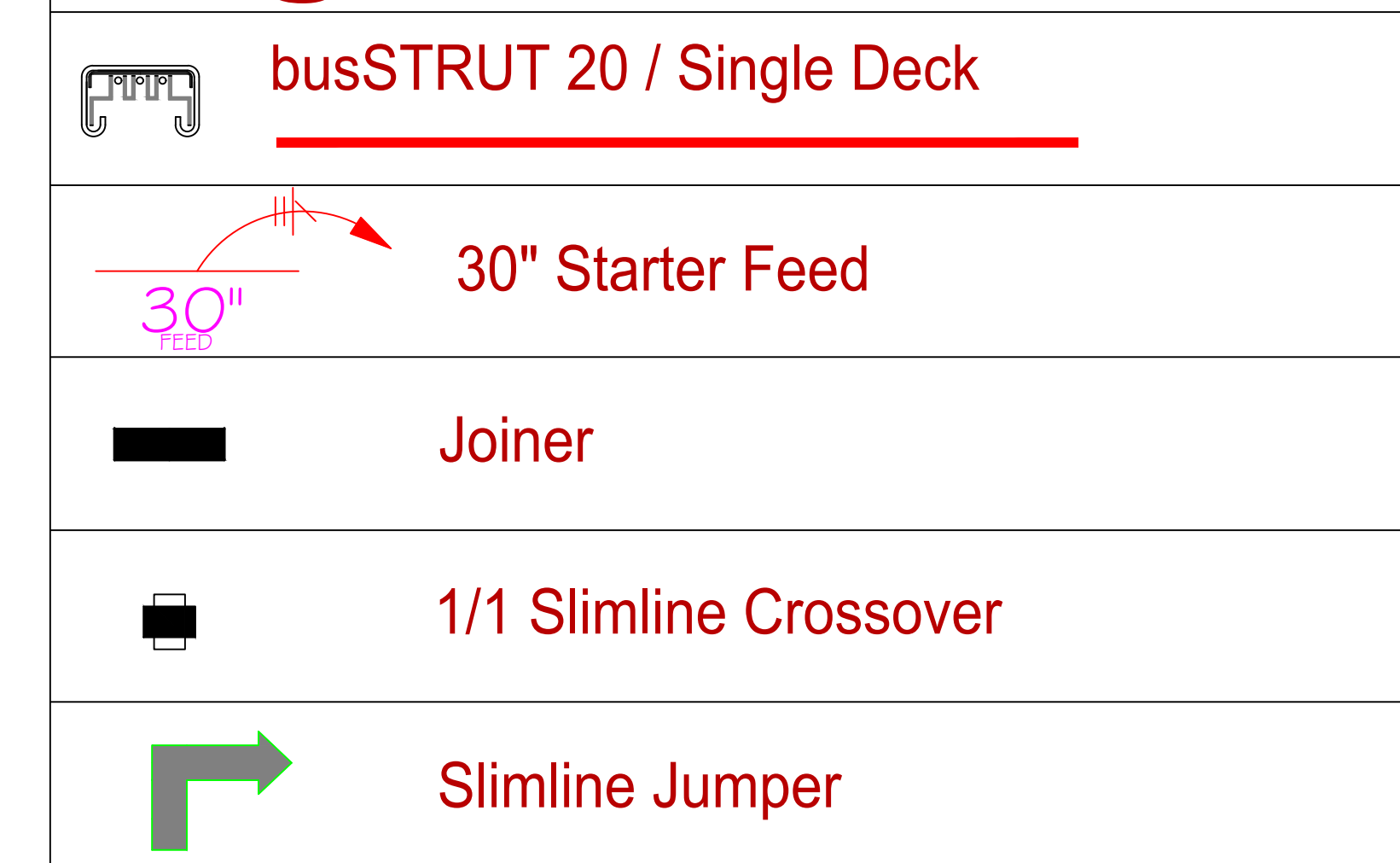
ISO Details



Dimensions



Legend



busSTRUT Lengths Used in this Project

