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BILL OF MATERIALS												
										QTY X UNIT COST		
		BRAND				SKU NO			DOLLARS	DOLLARS		
ITEM NO	DESCRIPTION	UNIT SIZE	MFGR	MFGR PART NO.	SOURCE VENDOR	PART NO	QTY	UM	UNIT COST	EXTENDED COST	SPEC SHEET	NOTES
1	C-BEAM LINEAR ACTUATOR BUNDLE, 250MM	EACH	NAN	NAN	OPENBUILDS PARTS STORE	995-BUNDLE	1	EACH	\$101.99	\$101.99	https://openbuildspartstore.com/c-beam-linear-actuator-bundle/	DO NOT INCLUDE MOTOR IN KIT
1A	LOW PROFILE SCREWS M5 X 25MM	10 PACK	NAN	NAN	OPENBUILDS PARTS STORE	20-PACK	1	EACH	\$1.39	\$1.39	https://openbuildspartstore.com/low-profile-screws-m5-10-pack/	NAN
1B	LOW PROFILE SCREWS M5 X 20MM	10 PACK	NAN	NAN	OPENBUILDS PARTS STORE	750-PACK	1	EACH	\$1.29	\$1.29	https://openbuildspartstore.com/low-profile-screws-m5-10-pack/	NAN
1C	LOW PROFILE SCREWS M5 X 55MM	10 PACK	NAN	NAN	OPENBUILDS PARTS STORE	760-PACK	1	EACH	\$1.99	\$1.99	https://openbuildspartstore.com/low-profile-screws-m5-10-pack/	NAN
1D	ALUMINUM SPACERS 6MM	10 PACK	NAN	NAN	OPENBUILDS PARTS STORE	90-PACK	1	EACH	\$3.39	\$3.39	https://openbuildspartstore.com/aluminum-spacers-10-pack/	NAN
1E	ALUMINUM SPACERS 40MM	10 PACK	NAN	NAN	OPENBUILDS PARTS STORE	95-PACK	1	EACH	\$7.89	\$7.89	https://openbuildspartstore.com/aluminum-spacers-10-pack/	NAN
1F	1/4" X 8MM FLEXIBLE SHAFT COUPLING	EACH	NAN	NAN	OPENBUILDS PARTS STORE	155	1	EACH	\$6.99	\$6.99	https://openbuildspartstore.com/1-4-x-8mm-flexible-coupling/	NAN
1G	ALUMINUM SPACERS 3MM	10 PACK	NAN	NAN	OPENBUILDS PARTS STORE	175-PACK	1	EACH	\$2.49	\$2.49	https://openbuildspartstore.com/aluminum-spacers-10-pack/	NAN
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BILL OF MATERIALS															
										QTY X UNIT COST					
		BRAND				SKU NO			DOLLARS	DOLLARS					
ITEM NO	DESCRIPTION	UNIT SIZE	MFGR	MFGR PART NO.	SOURCE VENDOR	PART NO	QTY	UM	UNIT COST	EXTENDED COST	SPEC SHEET	NOTES			
1H	ECCENTRIC SPACER 6MM	EACH	NAN	NAN	OPENBUILDS PARTS STORE	226	2	EACH	\$1.99	\$3.98	https://openbuildspartstore.com/eccentric-spacer/	NAN			
1I	BALL BEARING 688Z 8X16X5	EACH	NAN	NAN	OPENBUILDS PARTS STORE	780	2	EACH	\$0.99	\$1.98	https://openbuildspartstore.com/ball-bearing-688z-8x16x5/	NAN			
1J	8MM SHIM	EACH	NAN	NAN	OPENBUILDS PARTS STORE	835	2	EACH	\$0.29	\$0.58	https://openbuildspartstore.com/shim-12-x-8-x-1mm/	NAN			
1K	LOCK COLLAR 8MM	EACH	NAN	NAN	OPENBUILDS PARTS STORE	840	2	EACH	\$1.19	\$2.38	https://openbuildspartstore.com/lock-collar/	NAN			
1L	XTREME MINI V WHEEL KIT	EACH	NAN	NAN	OPENBUILDS PARTS STORE	876	4	EACH	\$5.99	\$23.96	https://openbuildspartstore.com/xtreme-mini-v-wheel-kit/	NAN			
1M	C-BEAM END MOUNT	EACH	NAN	NAN	OPENBUILDS PARTS STORE	965	2	EACH	\$8.99	\$17.98	https://openbuildspartstore.com/c-beam-end-mount/	NAN			
1N	C-BEAM GANTRY PLATE	EACH	NAN	NAN	OPENBUILDS PARTS STORE	970	1	EACH	\$9.99	\$9.99	https://openbuildspartstore.com/c-beam-gantry-plate/	NAN			
1O	ANTI-BACKLASH NUT BLOCK	EACH	NAN	NAN	OPENBUILDS PARTS STORE	1055-SET	1	EACH	\$9.99	\$9.99	https://openbuildspartstore.com/anti-backlash-nut-block-for-8mm-metric-acme-lead-screw/	NAN			
1OA	NYLON INSERT HEX LOCKNUT (BLACK) M5 X 5MM	10 PACK	NAN	NAN	OPENBUILDS PARTS STORE	2285-PACK	1	EACH	\$1.09	\$1.09	https://openbuildspartstore.com/nylon-insert-hex-locknut-m5-10-pack/	NAN			
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		UNLESS OTHERWISE SPECIFIED:	NAME	DATE
		DIMENSIONS ARE IN MILLIMETERS	DRAWN	Kieu Huynh06/05/20
		TOLERANCES:	CHECKED	
		FRACTIONAL: ±	ENG APPR.	
		ANGULAR: MAACH ± BEND ±	MFG APPR.	
		TWO PLACE DECIMAL ±	Q.A.	
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APPLICATION		DO NOT SCALE DRAWING		

TITLE:		
TRANSLATION ROBOT		
SIZE	DWG. NO.	REV
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SCALE: 1:10 WEIGHT:		SHEET 3 OF 36

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BILL OF MATERIALS															
		BRAND				SKU NO			DOLLARS	QTY X UNIT					
		UNIT SIZE				PART NO			UNIT COST	COST					
ITEM NO	DESCRIPTION		MFGR	MFGR PART NO.	SOURCE VENDOR		QTY	UM		DOLLARS EXTENDED COST	SPEC SHEET	NOTES			
1P	C-BEAM LINEAR RAIL 250MM	EACH	NAN	NAN	OPENBUILDS PARTS STORE	05-LP	1	EACH	\$8.99	\$8.99	https://openbuildspartstore.com/c-beam-linear-rail/	NAN			
1Q	8MM METRIC ACME LEAD SCREW 290MM	EACH	NAN	NAN	OPENBUILDS PARTS STORE	25-LP	1	EACH	\$10.99	\$10.99	https://openbuildspartstore.com/8mm-metric-acme-lead-screw/	NAN			
2	BELT AND PINION ACTUATOR BUNDLE, 500MM	EACH	NAN	NAN	OPENBUILDS PARTS STORE	2565-BUNDLE	1	EACH	\$84.99	\$84.99	https://openbuildspartstore.com/nema-23-belt-pinion-actuator-bundle/	DO NOT INCLUDE MOTOR IN KIT			
2A	LOW PROFILE SCREWS M5 12MM	10 PACK	NAN	NAN	OPENBUILDS PARTS STORE	2190-PACK	1	EACH	\$1.09	\$1.09	https://openbuildspartstore.com/low-profile-screws-m5-10-pack/	NAN			
2B	LOW PROFILE SCREWS M5 27MM	10 PACK	NAN	NAN	OPENBUILDS PARTS STORE	2260-PACK	1	EACH	\$1.39	\$1.39	https://openbuildspartstore.com/low-profile-screws-m5-10-pack/	NAN			
2C	LOW PROFILE SCREWS M5 8MM	10 PACK	NAN	NAN	OPENBUILDS PARTS STORE	946-PACK	1	EACH	\$0.99	\$0.99	https://openbuildspartstore.com/low-profile-screws-m5-10-pack/	NAN			
2D	TEE NUTS - M5	10 PACK	NAN	NAN	OPENBUILDS PARTS STORE	536-PACK	1	EACH	\$2.99	\$2.99	https://openbuildspartstore.com/tee-nuts-m5-10-pack/	NAN			
2E	GT3 (GT2-3M) TIMING PULLEY 20 TOOTH	EACH	NAN	NAN	OPENBUILDS PARTS STORE	712	1	EACH	\$7.99	\$7.99	https://openbuildspartstore.com/3gt-gt2-3m-timing-pulley-20-tooth-250-bore-9mm-belt/	NAN			
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6	M5 FLAT WASHERS	50 PACK	MONSTERBOLTS STORE	NAN	AMAZON	B0844MSWZ6	1	EACH	\$3.72	\$3.72	https://www.amazon.com/gp/product/B0844MSWZ6/ref=ppx_yo_dt_b_asin_title_o03_s00?ie=UTF8&th=1	NAN																																																																								
7	M5 10MM SCREW	PACK OF 50	TOPINSTOCK	FT16003-M510	AMAZON	B0727TKX8X	1	EACH	\$7.99	\$7.99	https://www.amazon.com/TOPIINSTOCK-Stainless-Steel-Button-Socket/dp/B0727TKX8X/ref=sr_1_1?dchild=1&keywords=B0727TKX8X&qid=1590389853&sr=8-1	NAN																																																																								
8	M5 NUT	PACK OF 25	PRIMELINE STORE	9120324	AMAZON	B07CDZMXYR	1	EACH	\$4.19	\$4.19	https://www.amazon.com/gp/product/B07CDZMXYR/ref=ppx_yo_dt_b_asin_title_o09_s00?ie=UTF8&psc=1	NAN																																																																								
9	V SLOT 20X80X400 LINEAR RAIL	EACH	NAN	NAN	OPENBUILDS PARTS STORE	165-LP	1	EACH	\$12.99	\$12.99	https://openbuildspartstore.com/v-slot-20x80-linear-rail/	NAN																																																																								
10	M5 T NUT ALUMINUM EXTRUSION	PACK OF 25	NAN	NAN	AMAZON	B018Y7NJ08	1	EACH	\$7.75	\$7.75	https://www.amazon.com/gp/product/B018Y7NJ08/ref=ppx_yo_dt_b_asin_title_o00_s00?ie=UTF8&th=1	NAN																																																																								
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22	20X60X500 LINEAR RAIL IN SLEEK SILVER	EACH	OPENBUILDS PARTS STORE	160-LP	OPENBUILDS PARTS STORE	160-LP	2	EACH	\$9.99	\$19.98	https://openbuildspartstore.com/v-slot-20x60-linear-rail/	MODIFIED PART SEE ITEM 32																																																																								
23	HAMMER HEAD FASTENER NUT	100 PACK	POWLANKOU	NAN	AMAZON	B07SDD7PN	1	EACH	\$7.99	\$7.99	https://www.amazon.com/gp/product/B07SDD7PNN/ref=ppx_yo_dt_b_asin_title_o07_s00?ie=UTF8&th=1	NAN																																																																								
24	GUSSET BRACKET	25 PACK	NAN	NAN	AMAZON	B0192F98HO	2	EACH	\$13.83	\$27.66	https://www.amazon.com/gp/product/B0192F98HO/ref=ppx_yo_dt_b_asin_title_o08_s02?ie=UTF8&th=1	NAN																																																																								
25	M5 T NUT ALUMINUM EXTRUSION	25 PACK	NAN	NAN	AMAZON	B018Y7NJ08	1	EACH	\$7.75	\$7.75	https://www.amazon.com/gp/product/B018Y7NJ08/ref=ppx_yo_dt_b_asin_title_o00_s00?ie=UTF8&th=1	NAN																																																																								
26	M5-0.8 X 8MM HEX SCREW	100 PACK	MEWUDECOR	NAN	AMAZON	B084MMND2L	1	EACH	\$9.49	\$9.49	https://www.amazon.com/M5-0-8-Button-Socket-Stainless-Quantity/dp/B084MMND2L/ref=sr_1_6?dchild=1&keywords=M5+X+8MM+HEX&qid=1590785136&sr=8-6	NAN																																																																								
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		BRAND				SKU NO				DOLLARS	DOLLARS				
ITEM NO	DESCRIPTION	UNIT SIZE	MFGR	MFGR PART NO.	SOURCE VENDOR	PART NO	QTY	UM	UNIT COST	EXTENDED COST	SPEC SHEET	NOTES			
27	20X60X1500 LINEAR RAIL IN SLEEK SILVER	EACH	OPENBUILDS PARTS STORE	220-LP	OPENBUILDS PARTS STORE	220-LP	1	EACH	\$29.49	\$29.49	https://openbuildspartstore.com/v-slot-20x60-linear-rail/	MODIFIED PART SEE ITEM 29			
28	6061 ALUMINUM 90 DEGREE ANGLE	4 FT LENGTH	MCMASTER CARR	8982K16	MCMASTER CARR	8982K16	1	EACH	\$21.25	\$21.25	https://www.mcmaster.com/catalog/126/3897	MODIFIED PART SEE ITEM 30			
29	20X60X1120 LINEAR RAIL IN SLEEK SILVER	EACH	OPENBUILDS PARTS STORE	220-LP	OPENBUILDS PARTS STORE	220-LP	1	EACH	\$29.49	\$29.49	https://openbuildspartstore.com/v-slot-20x60-linear-rail/	NAN			
30	6061 ALUMINUM 90 DEGREE ANGLE X 1120 MM	4 FT LENGTH	MCMASTER CARR	8982K16	MCMASTER CARR	8982K16	1	EACH	\$21.25	\$21.25	https://www.mcmaster.com/catalog/126/3897	NAN			
31	20X60X500 LINEAR RAIL IN SLEEK SILVER	EACH	NAN	NAN	OPENBUILDS PARTS STORE	160-LP	4	EACH	\$9.99	\$39.96	https://openbuildspartstore.com/v-slot-20x60-linear-rail/	MODIFIED PART SEE ITEM 32			
32	20X60X500 LINEAR RAIL IN SLEEK SILVER	EACH	NAN	NAN	OPENBUILDS PARTS STORE	160-LP	2	EACH	\$9.99	\$19.98	https://openbuildspartstore.com/v-slot-20x60-linear-rail/	NAN			
33	TSLOT FRAMING -- 90 DEG SURFACE BRACKET	EACH	NAN	NAN	MCMASTER CARR	5537T966	2	EACH	\$24.98	\$49.96	https://www.mcmaster.com/catalog/126/2054	NAN			
34	TALL GUSSETED INSIDE CORNER BRACKET	EACH	NAN	NAN	80/20	4136	2	EACH	\$5.65	\$11.30	https://8020.net/4136.html	NAN			
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DIMENSIONS ARE IN MILLIMETERS
TOLERANCES:
FRACTIONAL ±
ANGULAR: MAACH ± BEND ±
TWO PLACE DECIMAL ±
THREE PLACE DECIMAL ±
INTERPRET GEOMETRIC TOLERANCING PER:
MATERIAL
FINISH
NEXT ASSY USED ON APPLICATION DO NOT SCALE DRAWING

DRAWN
Kieu Huynh06/05/20

CHECKED
ENG APPR.
MFG APPR.
Q.A.
COMMENTS:

NAME
DATE

TITLE:
TRANSLATION ROBOT

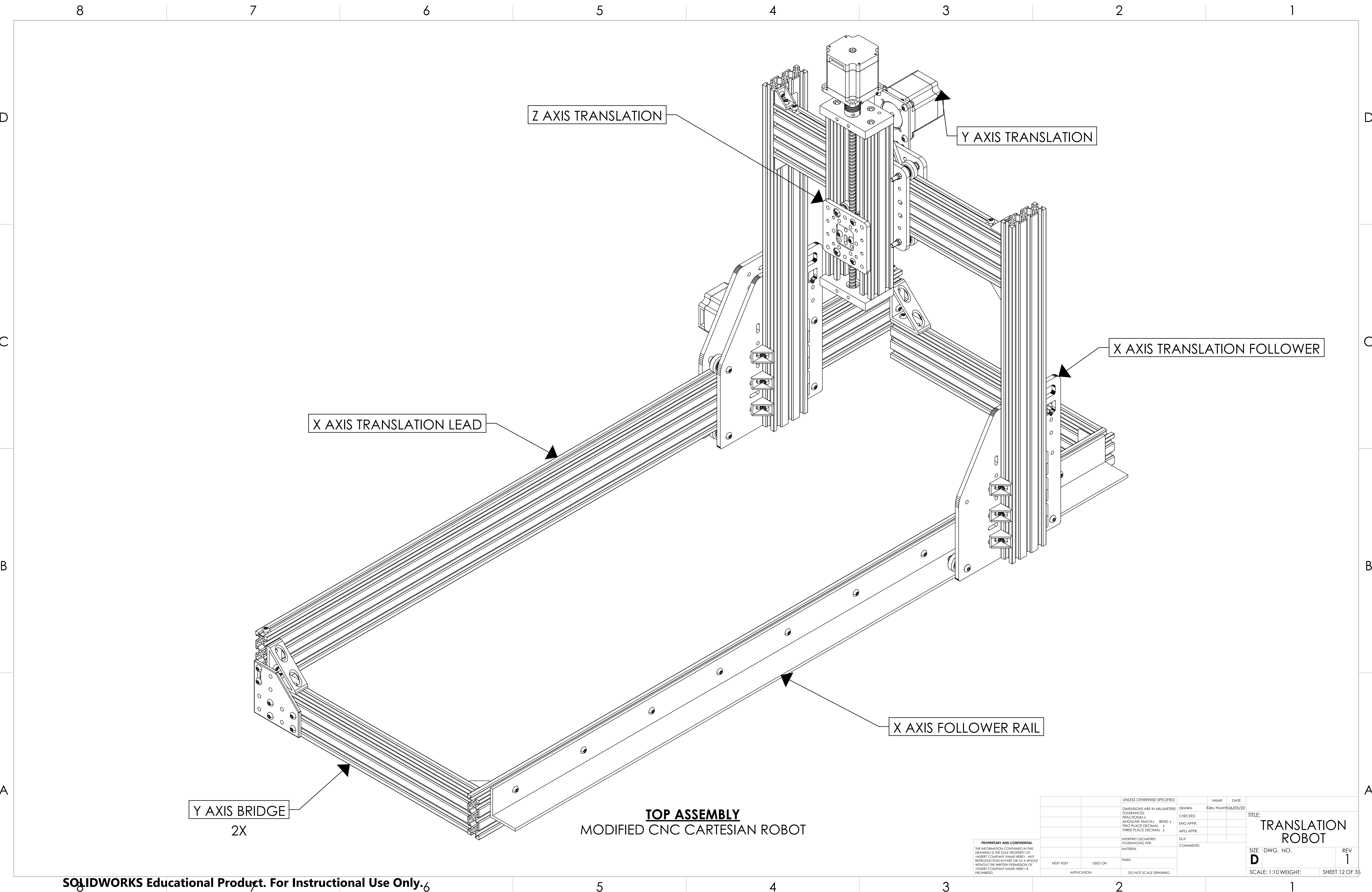
SIZE DWG. NO. REV
D 1

SCALE: 1:10 WEIGHT: SHEET 11 OF 36

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN MILLIMETERS	DRAWN	Kieu Huynh	06/05/20
		TOLERANCES:	CHECKED		
		FRACTIONAL: ±	ENG APPR.		
		ANGULAR: MAACH ± BEND ±	MFG APPR.		
		TWO PLACE DECIMAL ±			
		THREE PLACE DECIMAL ±			
		INTERPRET GEOMETRIC			
		TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			

TITLE:		
TRANSLATION ROBOT		
SIZE	DWG. NO.	REV
D		1
SCALE: 1:10 WEIGHT:		SHEET 11 OF 36

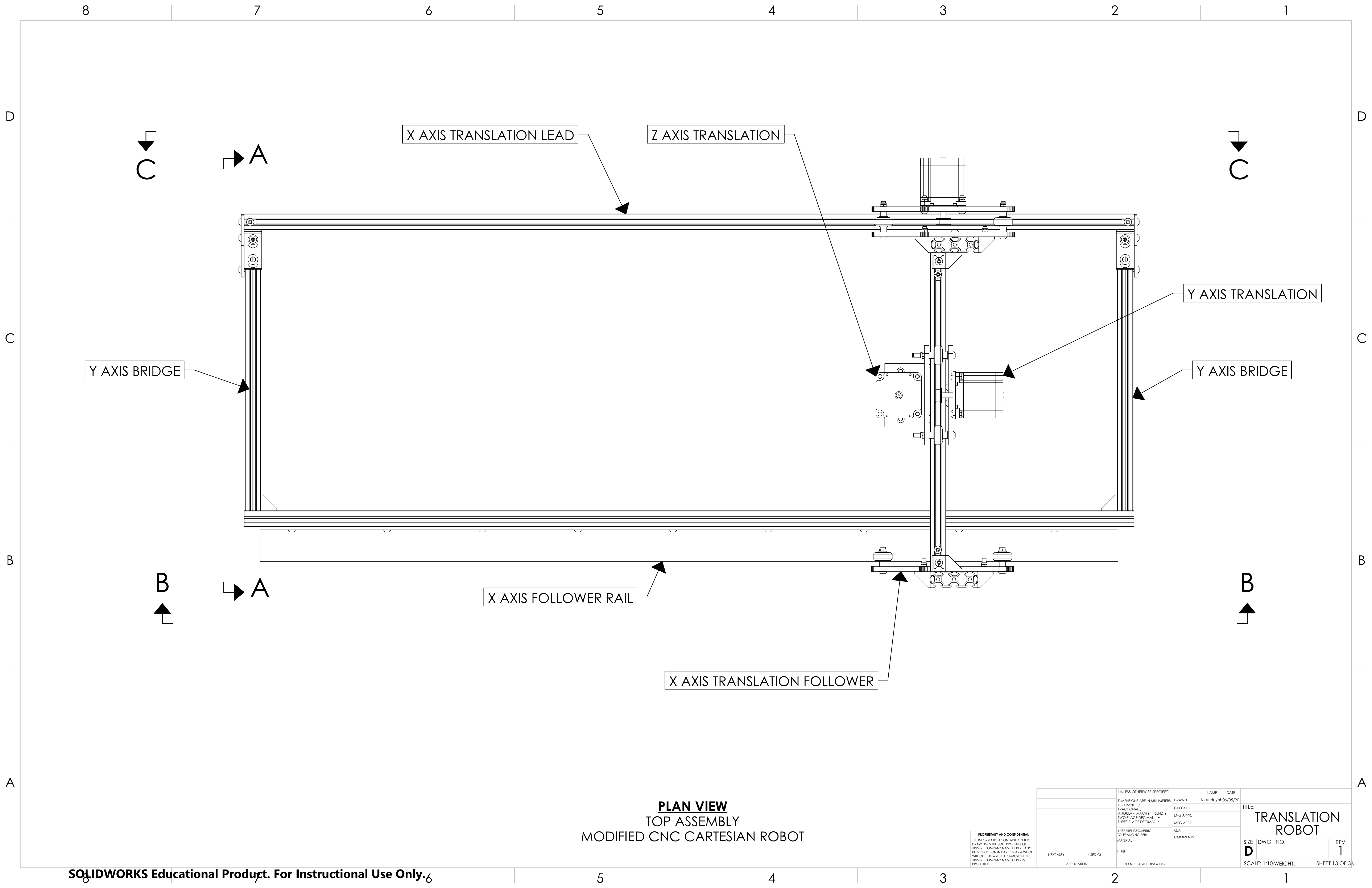


TOP ASSEMBLY
MODIFIED CNC CARTESIAN ROBOT

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UNLESS OTHERWISE SPECIFIED:		NAME	DATE
DIMENSIONS ARE IN MILLIMETERS		Drawn	Kieu Huynh06/05/20
TOLERANCES:		CHECKED	
FRACTIONAL ±		ENG APPR.	
ANGULAR: MAACH ± BEND ±		MFG APPR.	
TWO PLACE DECIMAL ±		Q.A.	
THREE PLACE DECIMAL ±		COMMENTS:	
INTERPRET GEOMETRIC TOLERANCING PER:			
MATERIAL			
FINISH			
NEXT ASSY	USED ON		
APPLICATION		DO NOT SCALE DRAWING	

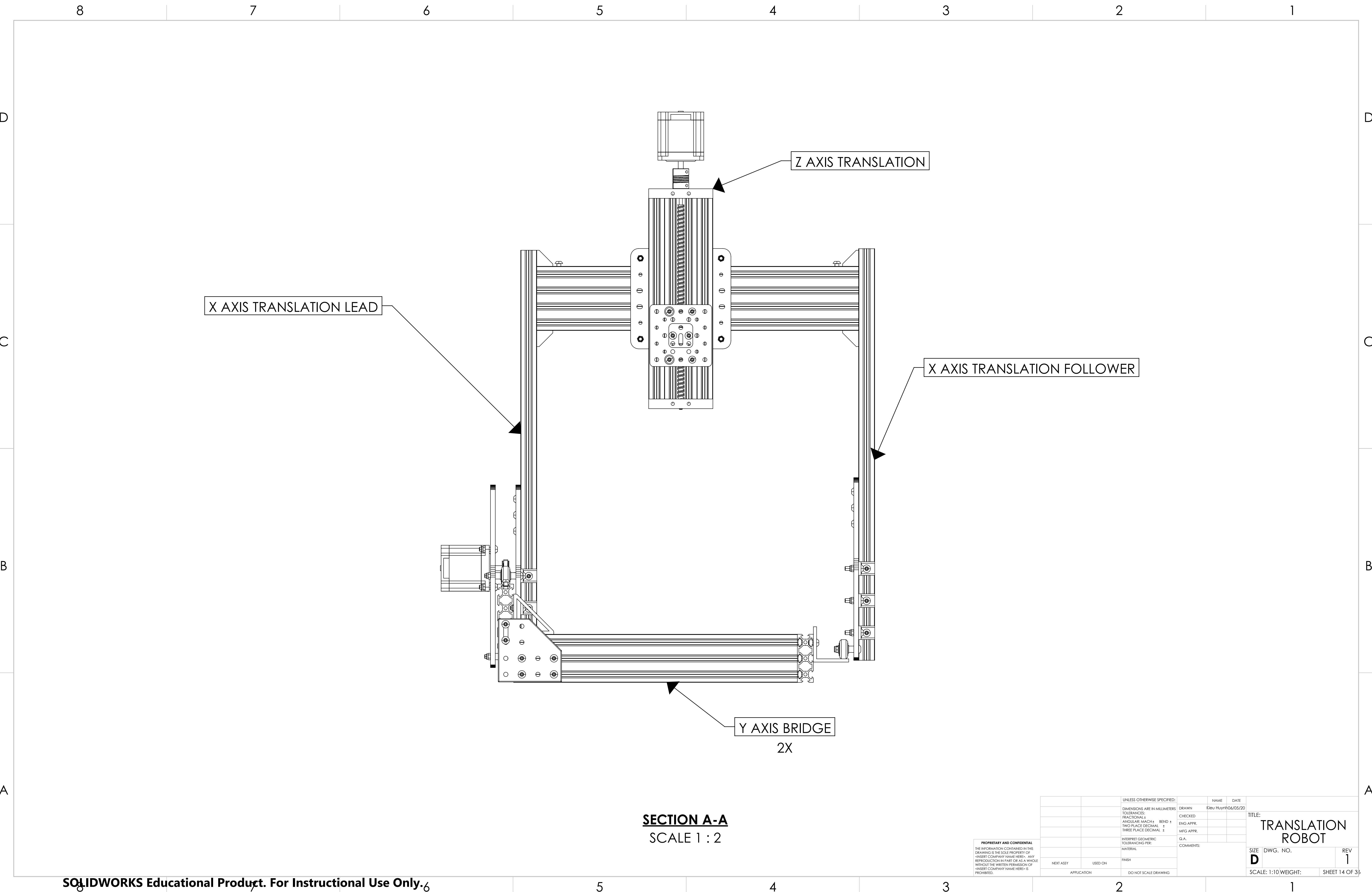
TITLE:		
TRANSLATION ROBOT		
SIZE	DWG. NO.	REV
D		1
SCALE: 1:10 WEIGHT:		SHEET 12 OF 35



PLAN VIEW
TOP ASSEMBLY
MODIFIED CNC CARTESIAN ROBOT

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		UNLESS OTHERWISE SPECIFIED:	DRAWN	NAME	DATE	TITLE: TRANSLATION ROBOT
		DIMENSIONS ARE IN MILLIMETERS TOLERANCES: FRACTIONAL: ± ANGULAR: MACH ± BEND ± TWO PLACE DECIMAL THREE PLACE DECIMAL ±	CHECKED	Kieu Huynh	06/05/20	
		INTERPRET GEOMETRIC TOLERANCING PER:	ENG APPR.			
		MATERIAL:	MFG APPR.			
		FINISH	Q.A.			
NEXT ASSY	USED ON	DO NOT SCALE DRAWING	COMMENTS:			SIZE D
APPLICATION						DWG. NO. D
						REV 1
				SCALE: 1:10 WEIGHT:		SHEET 13 OF 35



SECTION A-A
SCALE 1 : 2

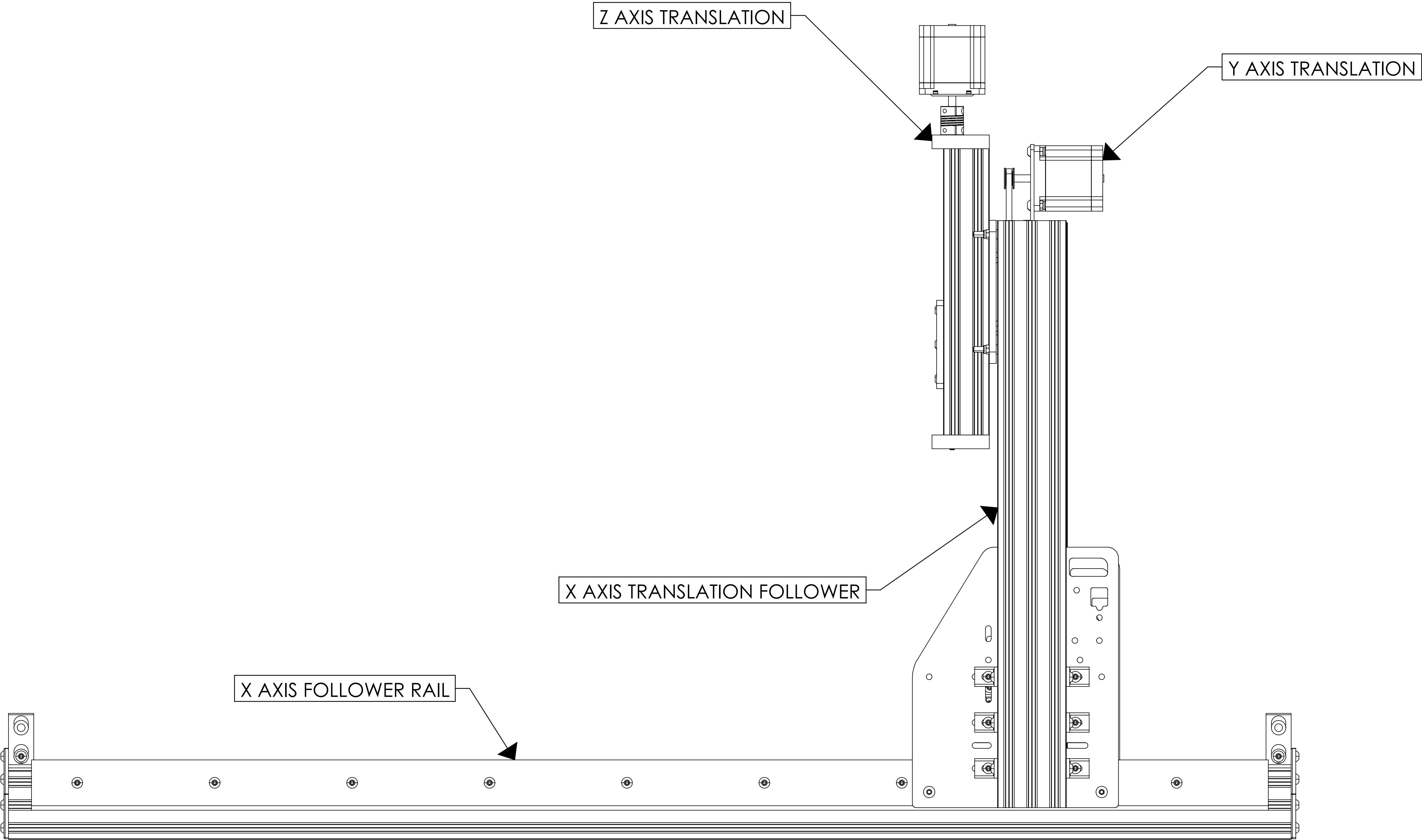
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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN MILLIMETERS	DRAWN	Kieu Huynh	06/05/20
		TOLERANCES:	CHECKED		
		FRACTIONAL: ±	ENG APPR.		
		ANGULAR: MAACH ± BEND ±	MFG APPR.		
		TWO PLACE DECIMAL ±	Q.A.		
		THREE PLACE DECIMAL ±	COMMENTS:		
		INTERPRET GEOMETRIC			
		TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			

TITLE:		
TRANSLATION ROBOT		
SIZE	DWG. NO.	REV
D		1
SCALE: 1:10 WEIGHT:		SHEET 14 OF 35

87654321

NOTES:
1. BACKGROUND OMITTED FOR CLARITY



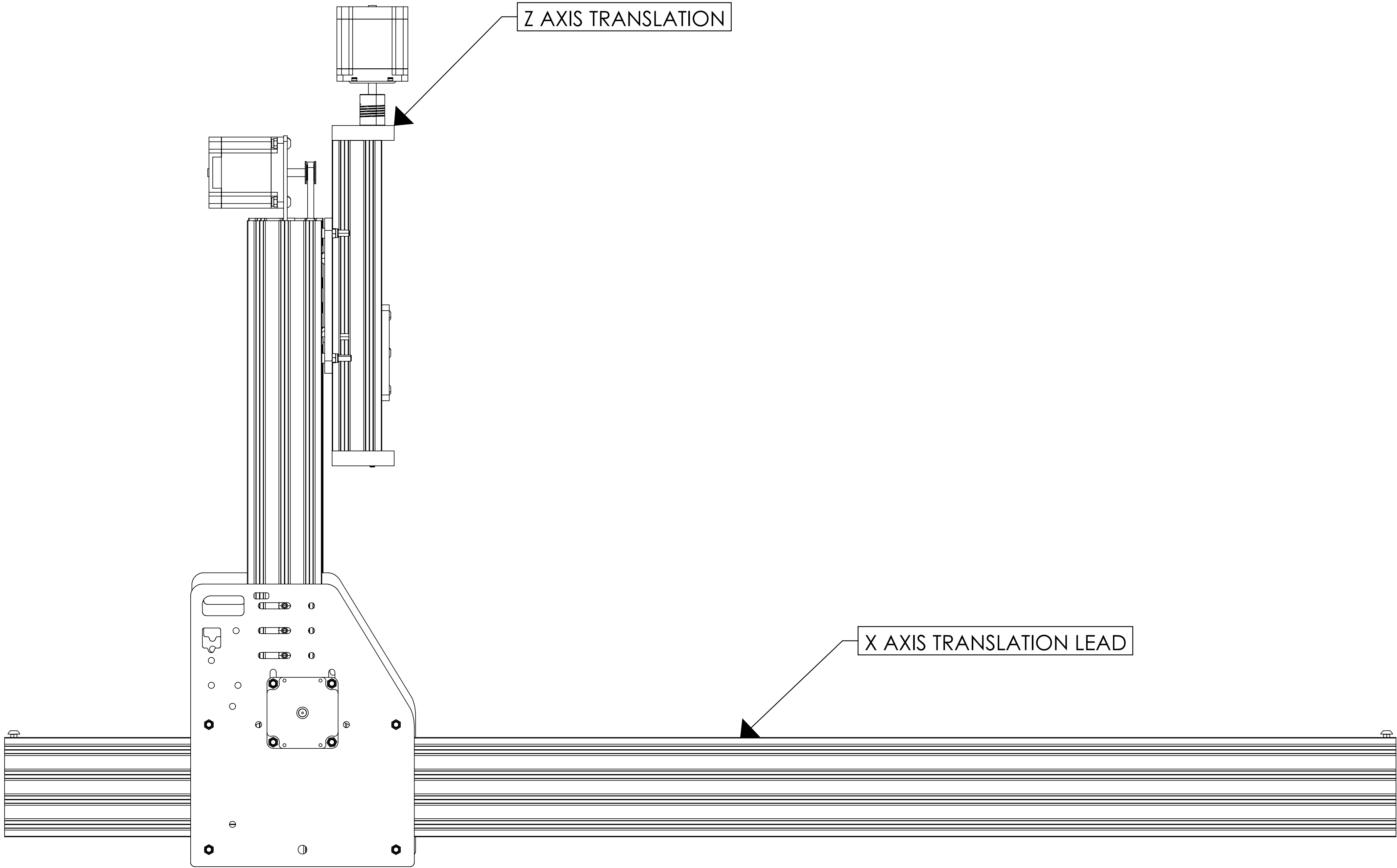
SECTION B-B
SCALE 1 : 2

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN MILLIMETERS	DRAWN	Kieu Huynh	06/05/20
		TOLERANCES:	CHECKED		
		FRACTIONAL: ±	ENG APPR.		
		ANGULAR: MAACH ± BEND ±	MFG APPR.		
		TWO PLACE DECIMAL ±	Q.A.		
		THREE PLACE DECIMAL ±	COMMENTS:		
		INTERPRET GEOMETRIC			
		TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION	DO NOT SCALE DRAWING				

TITLE:		
TRANSLATION ROBOT		
SIZE	DWG. NO.	REV
D		1
SCALE: 1:10 WEIGHT:		SHEET 15 OF 35

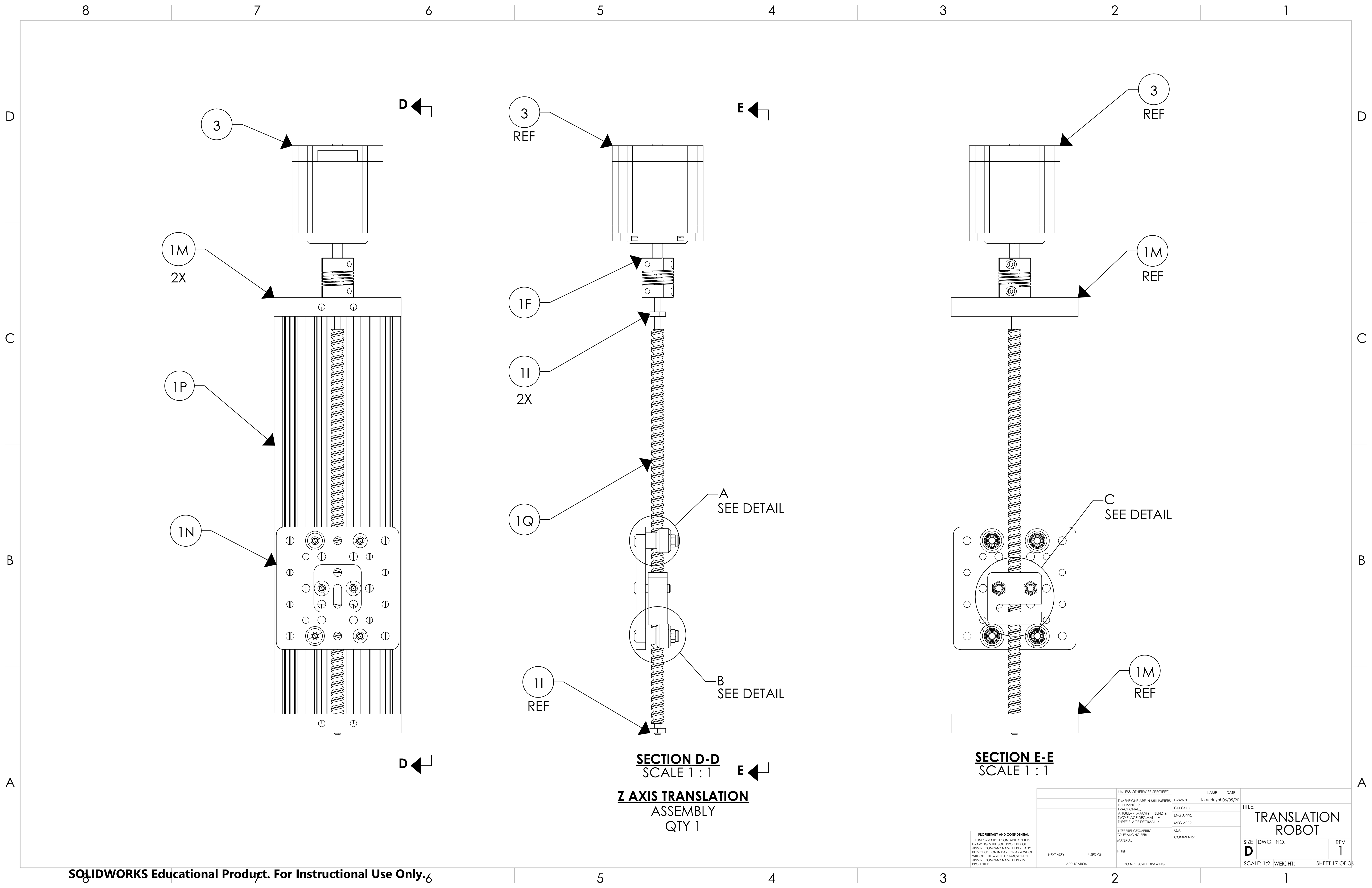
NOTES:
1. BACKGROUND VIEW OMMITTED FOR CLARITY

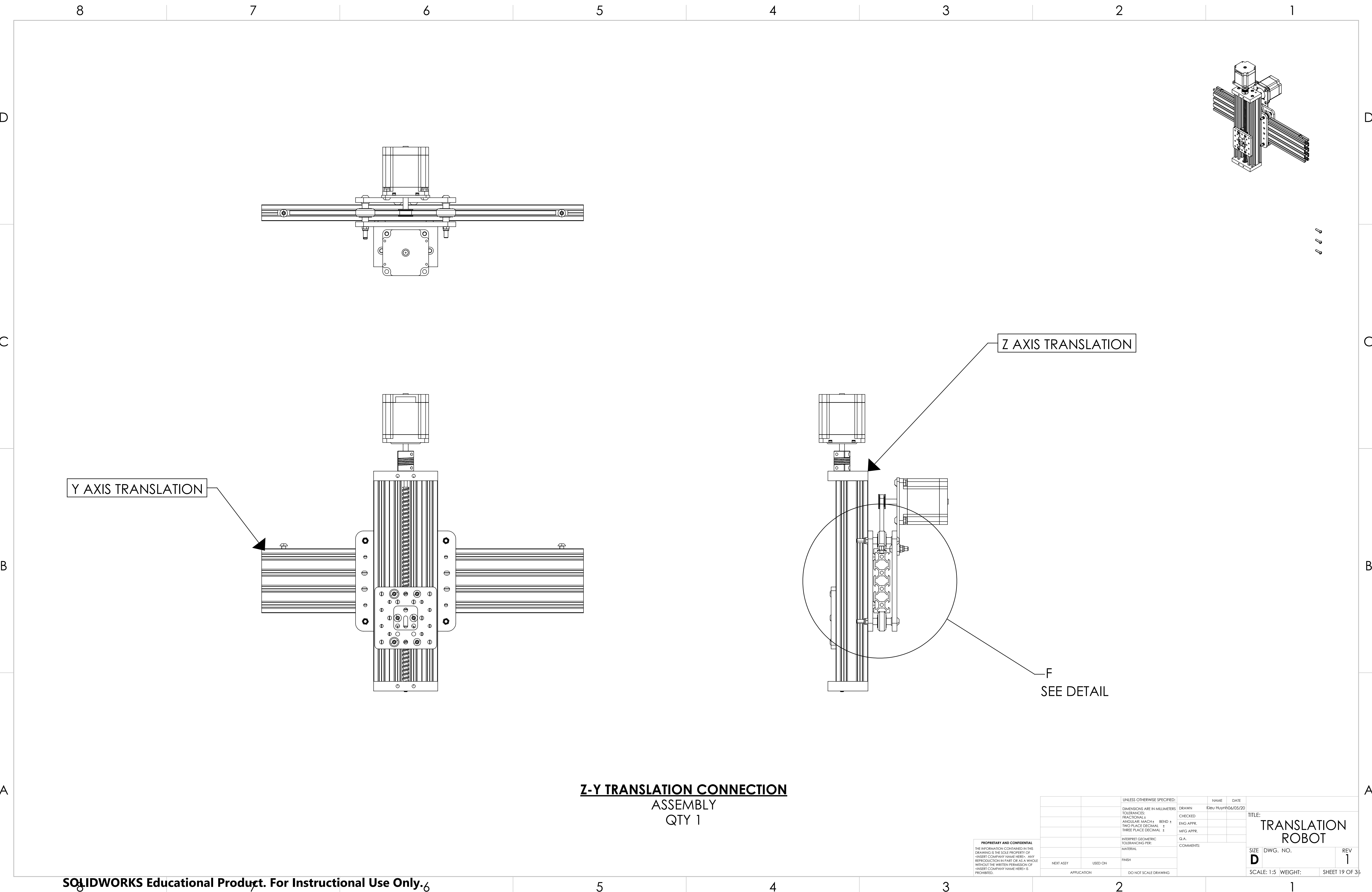


SECTION C-C
SCALE 1 : 2

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		UNLESS OTHERWISE SPECIFIED:	DRAWN	NAME	DATE	TITLE: <div>TRANSLATION ROBOT</div>
		DIMENSIONS ARE IN MILLIMETERS	CHECKED	Kieu Huynh06/05/20		
		TOLERANCES:	ENG APPR.			
		FRACTIONAL: ±	MFG APPR.			
		ANGULAR: MACH ± BEND ±				
		TWO PLACE DECIMAL ±				
		THREE PLACE DECIMAL ±				
		INTERPRET GEOMETRIC TOLERANCING PER:				
		MATERIAL		Q.A.		
		FINISH		COMMENTS:		
NEXT ASSY	USED ON					SIZE D
	APPLICATION	DO NOT SCALE DRAWING				DWG. NO.
						REV 1
						SCALE: 1:10 WEIGHT:
						SHEET 16 OF 36





8 7 6 5 4 3 2 1

D

C

B

A

Z-Y TRANSLATION CONNECTION
ASSEMBLY
QTY 1

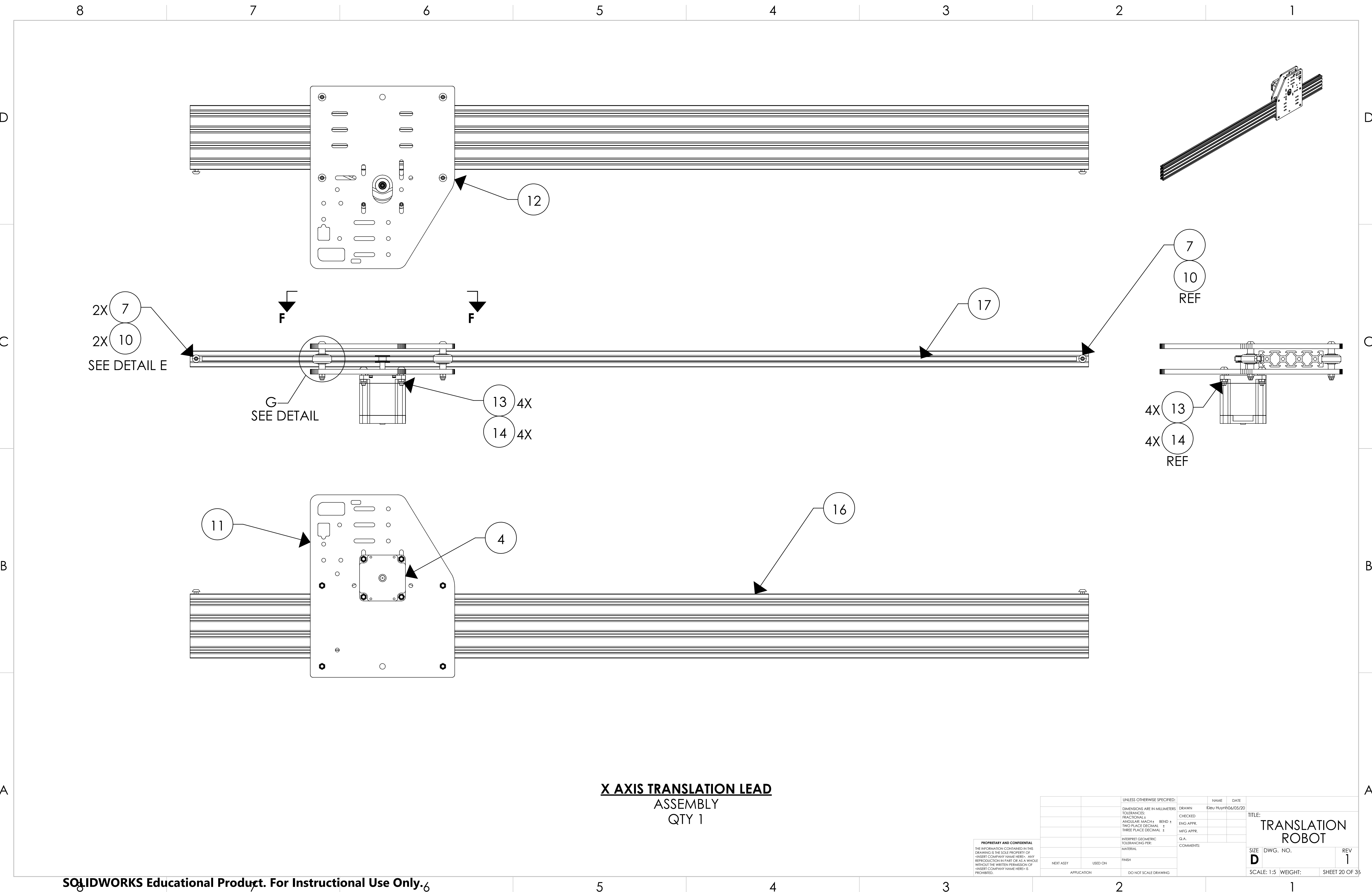
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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN MILLIMETERS	DRAWN	Kieu Huynh	06/05/20
		TOLERANCES:	CHECKED		
		FRACTIONAL: ±	ENG APPR.		
		ANGULAR: MAACH ± BEND ±	MFG APPR.		
		TWO PLACE DECIMAL ±	Q.A.		
		THREE PLACE DECIMAL ±	COMMENTS:		
		INTERPRET GEOMETRIC			
		TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION	DO NOT SCALE DRAWING				

TITLE:
**TRANSLATION
ROBOT**

SIZE DWG. NO. REV
D 1

SCALE: 1:5 WEIGHT: SHEET 19 OF 35

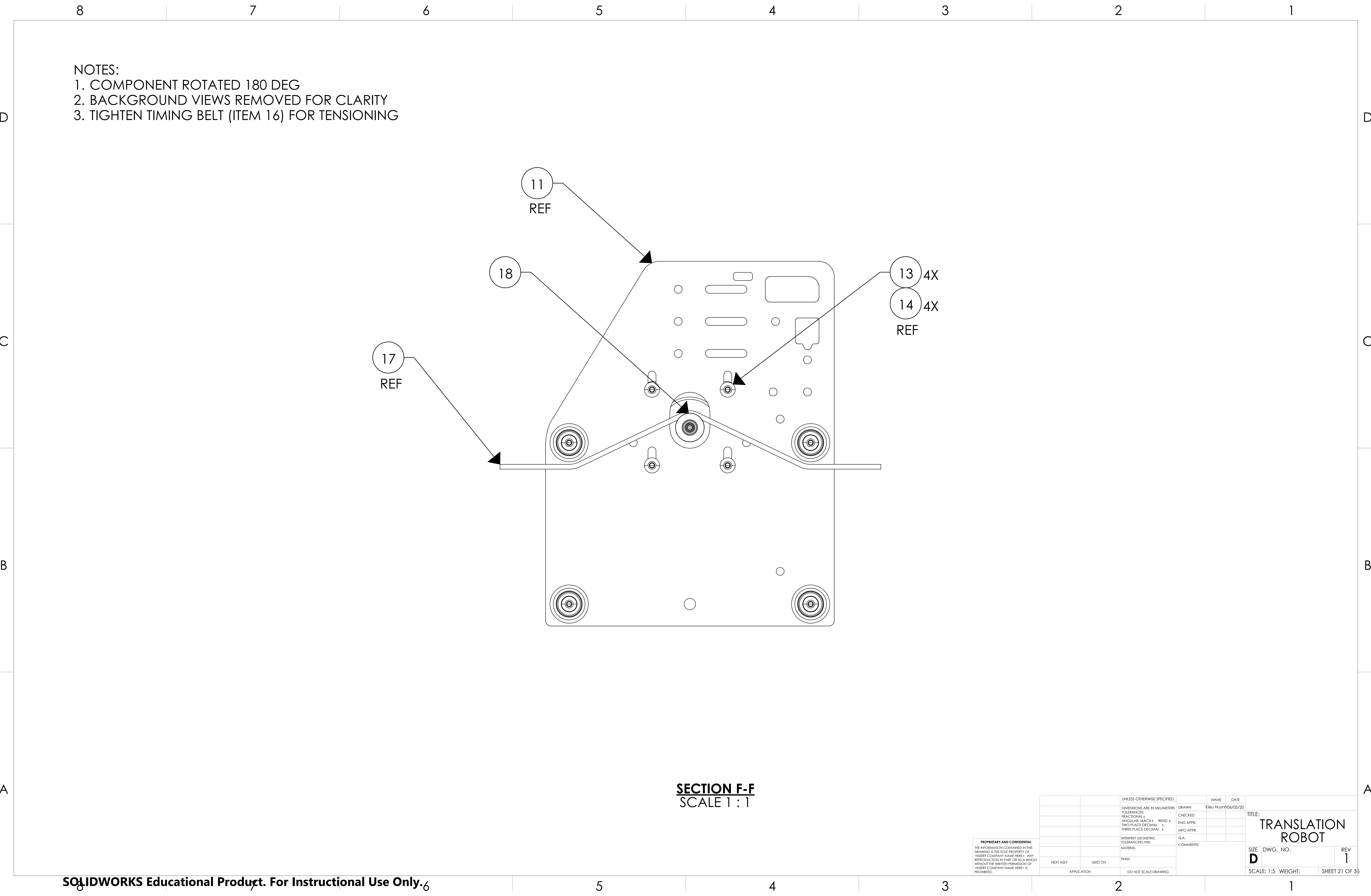


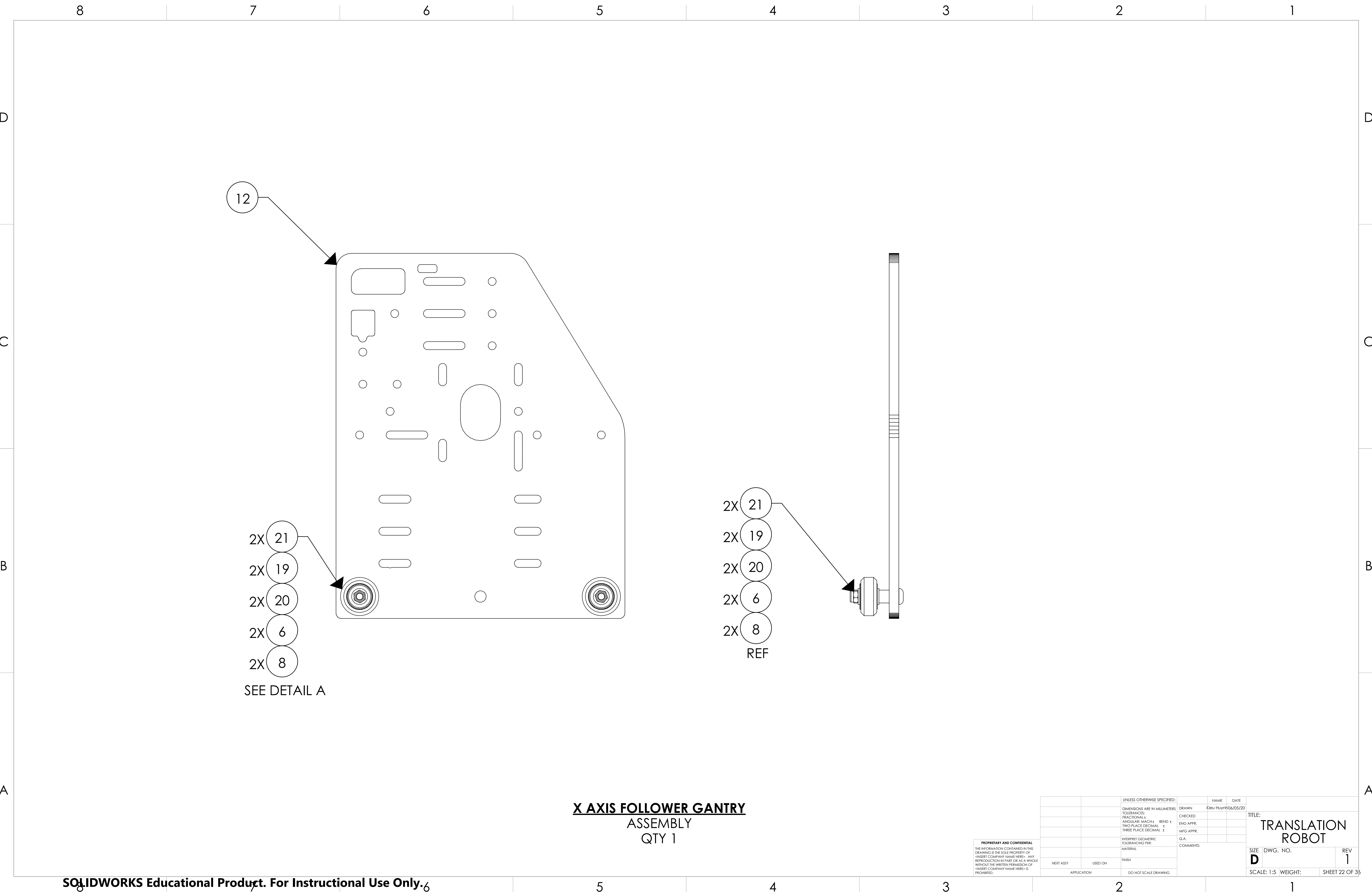
X AXIS TRANSLATION LEAD
ASSEMBLY
QTY 1

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN MILLIMETERS	DRAWN	Kieu Huynh	06/05/20
		TOLERANCES:	CHECKED		
		FRACTIONAL: ±	ENG APPR.		
		ANGULAR: MAACH ± BEND ±	MFG APPR.		
		TWO PLACE DECIMAL ±	Q.A.		
		THREE PLACE DECIMAL ±	COMMENTS:		
		INTERPRET GEOMETRIC			
		TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION	DO NOT SCALE DRAWING				

TITLE:		
TRANSLATION ROBOT		
SIZE	DWG. NO.	REV
D		1
SCALE: 1:5 WEIGHT:		SHEET 20 OF 35



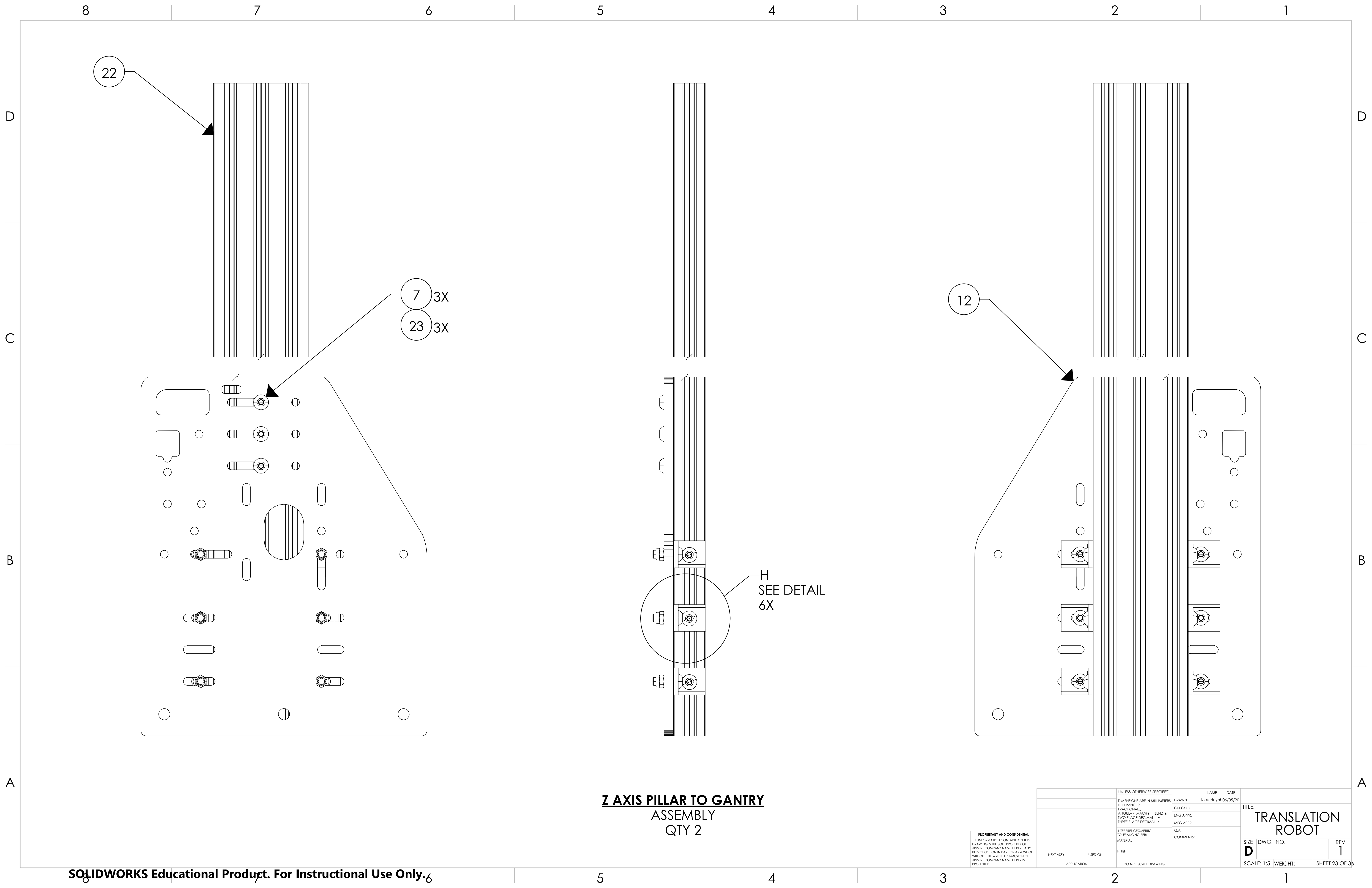


X AXIS FOLLOWER GANTRY
ASSEMBLY
QTY 1

SEE DETAIL A

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		UNLESS OTHERWISE SPECIFIED:	NAME	DATE	TITLE: TRANSLATION ROBOT SIZE DWG. NO. REV D 1 SCALE: 1:5 WEIGHT: SHEET 22 OF 35
		DIMENSIONS ARE IN MILLIMETERS	DRAWN	Kieu Huynh06/05/20	
		TOLERANCES:	CHECKED		
		FRACTIONAL: ±	ENG APPR.		
		ANGULAR: MACH ± BEND ±	MFG APPR.		
		TWO PLACE DECIMAL ±	Q.A.		
		THREE PLACE DECIMAL ±	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			

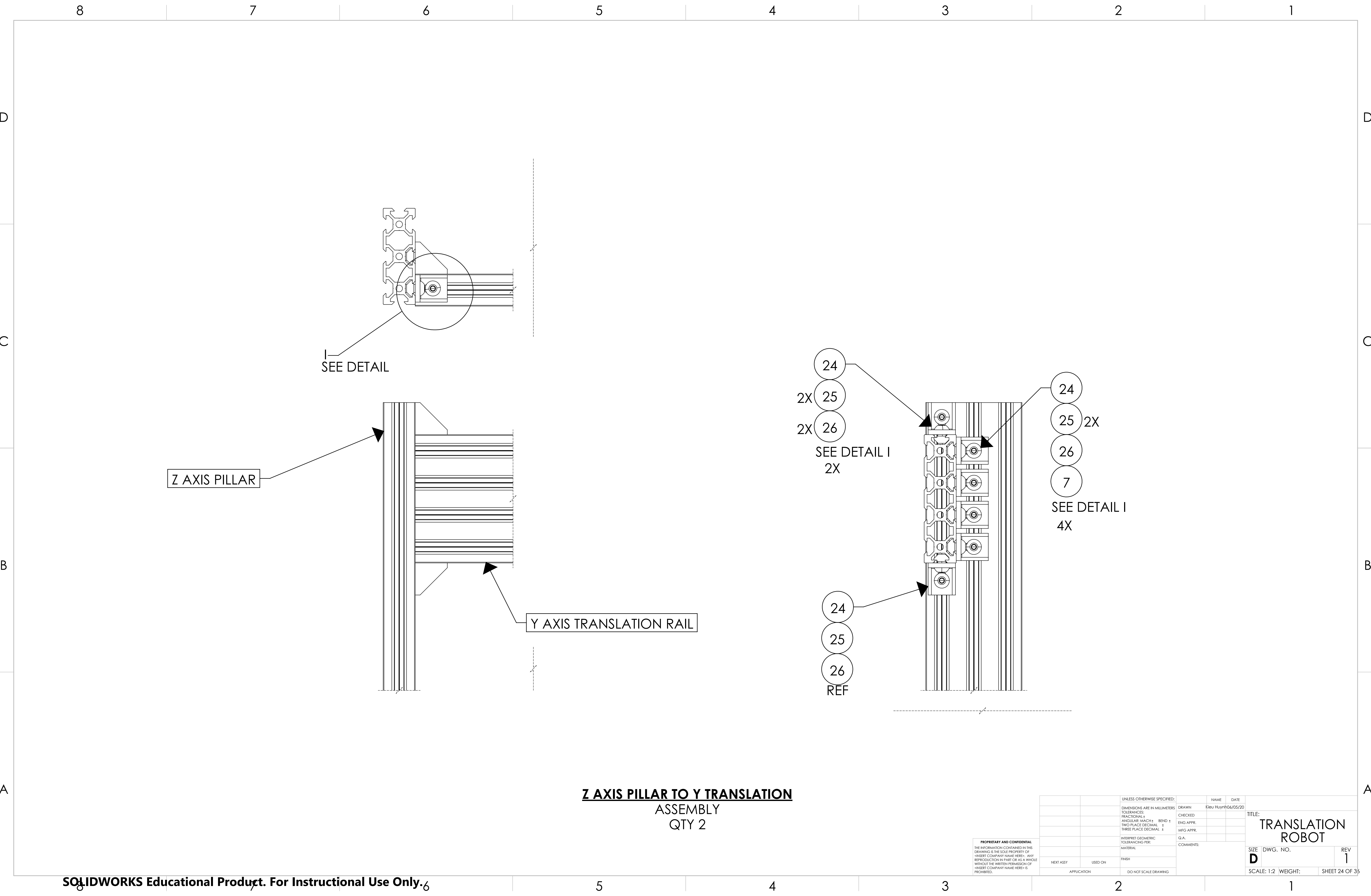


Z AXIS PILLAR TO GANTRY
ASSEMBLY
QTY 2

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN MILLIMETERS	DRAWN	Kieu Huynh06/05/20	
		TOLERANCES:	CHECKED		
		FRACTIONAL: ±	ENG APPR.		
		ANGULAR: MAACH ± BEND ±	MFG APPR.		
		TWO PLACE DECIMAL ±			
		THREE PLACE DECIMAL ±			
		INTERPRET GEOMETRIC			
		TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION	DO NOT SCALE DRAWING				

TITLE:		
TRANSLATION ROBOT		
SIZE	DWG. NO.	REV
D		1
SCALE: 1:5 WEIGHT:		SHEET 23 OF 35

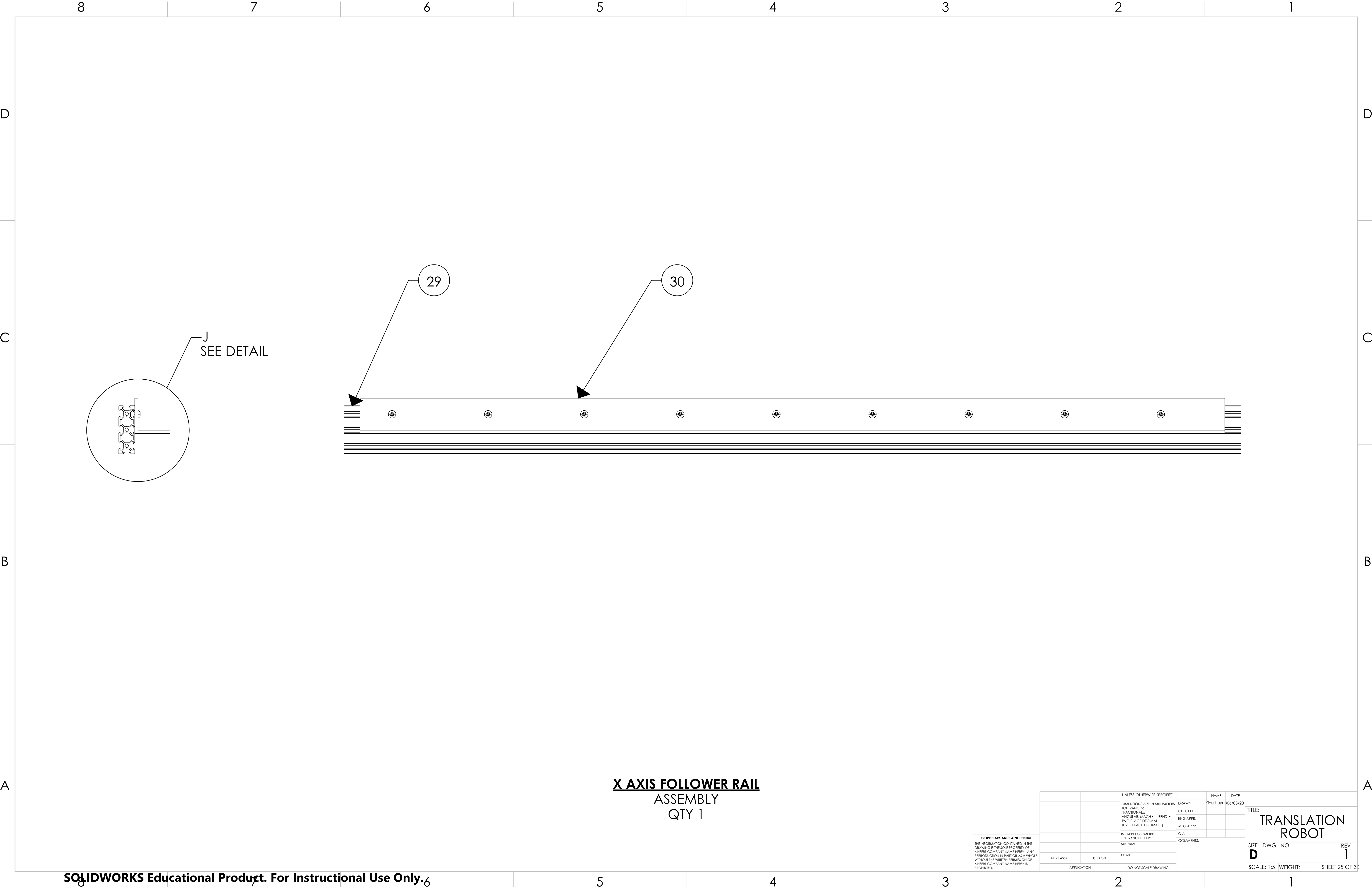


Z AXIS PILLAR TO Y TRANSLATION
ASSEMBLY
QTY 2

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		UNLESS OTHERWISE SPECIFIED:	NAME	DATE
		DIMENSIONS ARE IN MILLIMETERS		
		TOLERANCES:	DRAWN	Kieu Huynh06/05/20
		FRACTIONAL: ±	CHECKED	
		ANGULAR: MAACH ± BEND ±	ENG APPR.	
		TWO PLACE DECIMAL ±	MFG APPR.	
		THREE PLACE DECIMAL ±	Q.A.	
		INTERPRET GEOMETRIC	COMMENTS:	
		TOLERANCING PER:		
		MATERIAL		
		FINISH		
NEXT ASSY	USED ON			
APPLICATION	DO NOT SCALE DRAWING			

TITLE:		
TRANSLATION ROBOT		
SIZE	DWG. NO.	REV
D		1
SCALE: 1:2	WEIGHT:	SHEET 24 OF 35

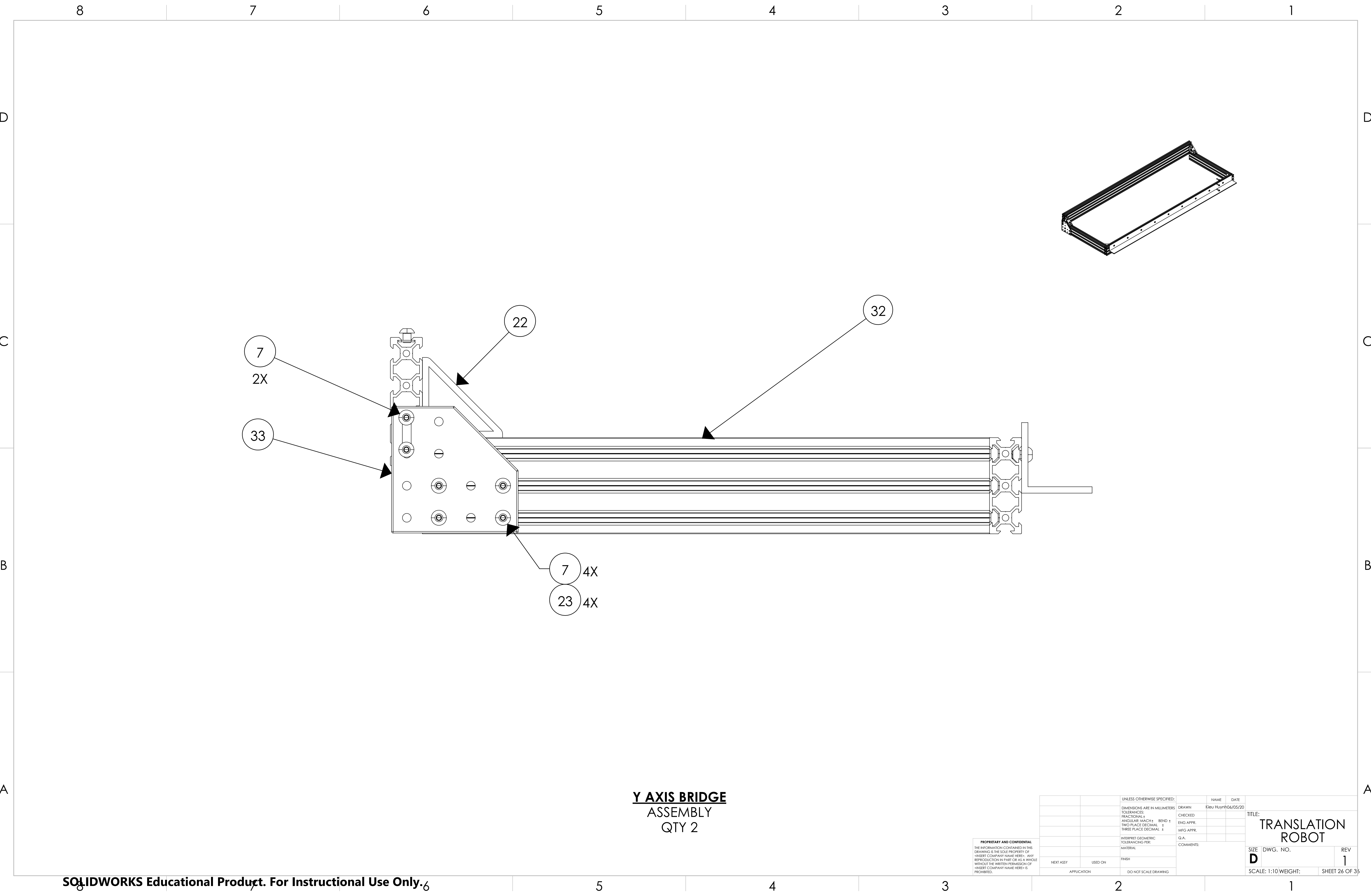


X AXIS FOLLOWER RAIL
ASSEMBLY
QTY 1

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN MILLIMETERS	DRAWN	Kieu Huynh	06/05/20
		TOLERANCES:	CHECKED		
		FRACTIONAL: ±	ENG APPR.		
		ANGULAR: MAACH ± BEND ±	MFG APPR.		
		TWO PLACE DECIMAL ±	Q.A.		
		THREE PLACE DECIMAL ±	COMMENTS:		
		INTERPRET GEOMETRIC			
		TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			

TITLE:		
TRANSLATION ROBOT		
SIZE	DWG. NO.	REV
D		1
SCALE: 1:5 WEIGHT:		SHEET 25 OF 35



Y AXIS BRIDGE
ASSEMBLY
QTY 2

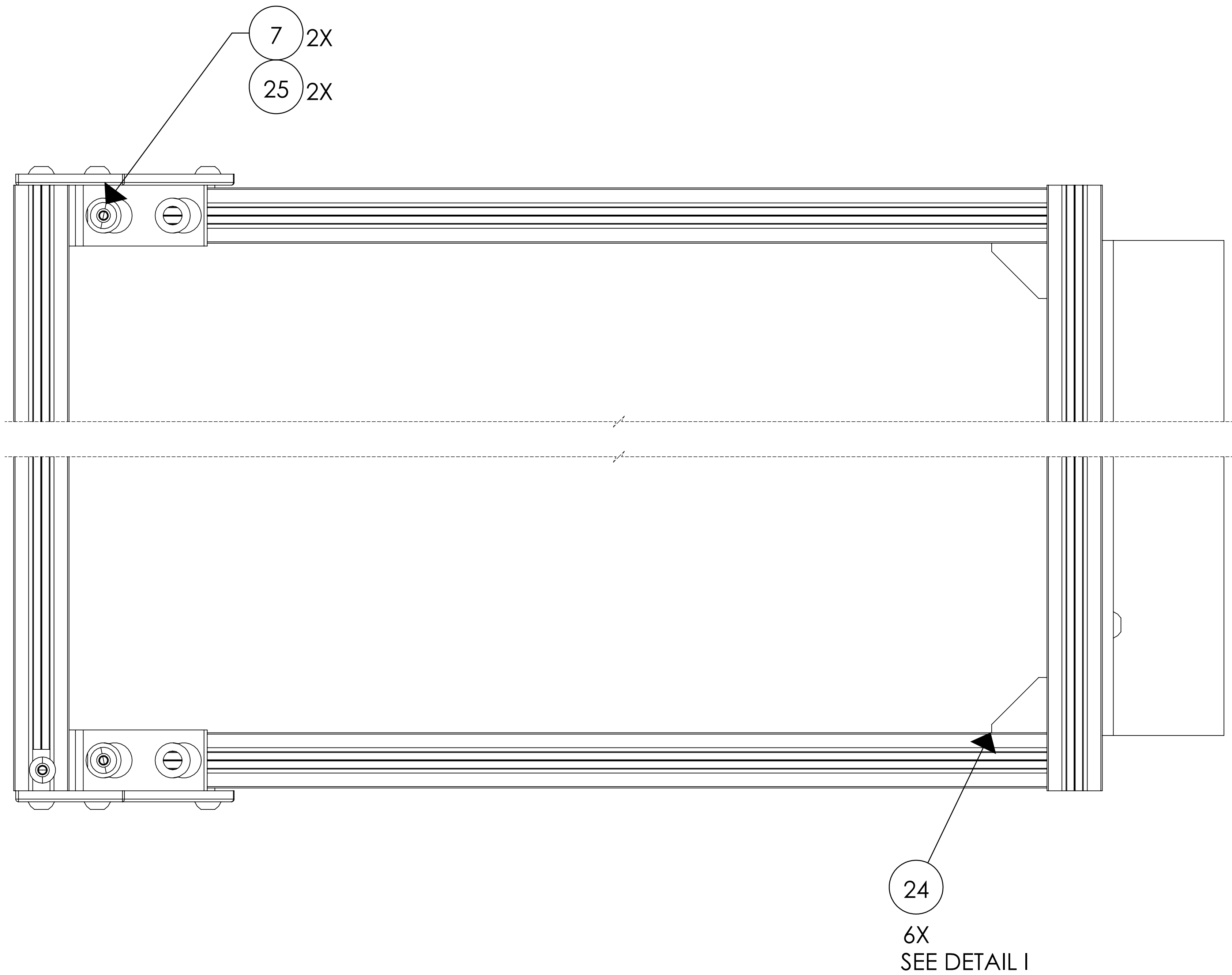
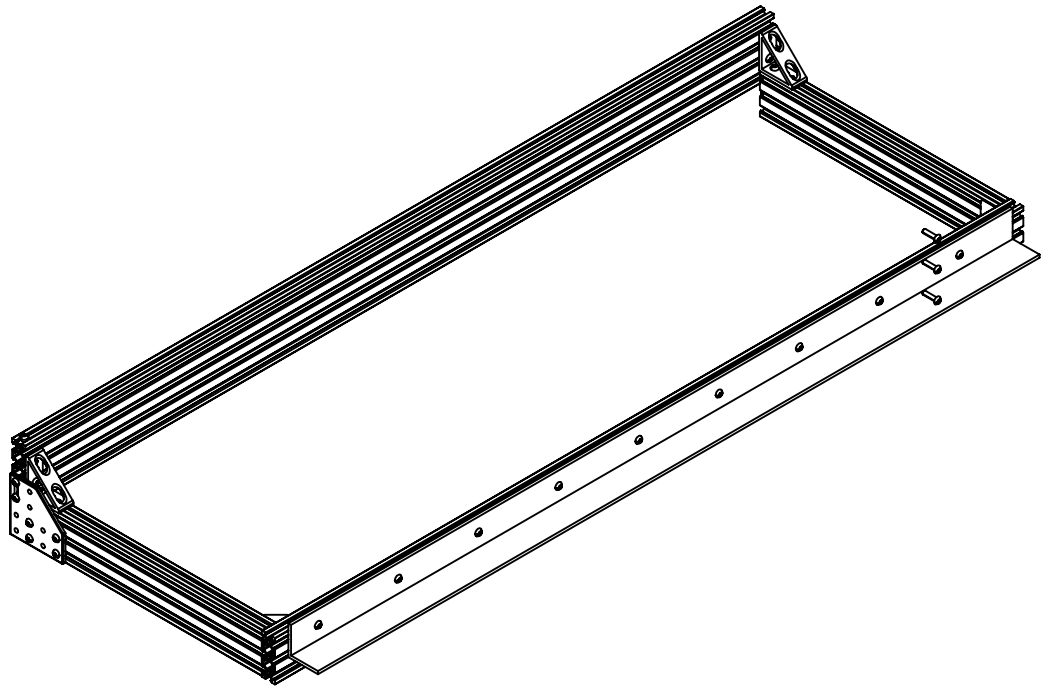
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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN MILLIMETERS	DRAWN	Kieu Huynh06/05/20	
		TOLERANCES:	CHECKED		
		FRACTIONAL: ±	ENG APPR.		
		ANGULAR: MAACH ± BEND ±	MFG APPR.		
		TWO PLACE DECIMAL ±			
		THREE PLACE DECIMAL ±			
		INTERPRET GEOMETRIC			
		TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			

TITLE:		
TRANSLATION ROBOT		
SIZE	DWG. NO.	REV
D		1
SCALE: 1:10 WEIGHT:		SHEET 26 OF 35

87654321

NOTES:
1. ROTATED 90 DEG FOR CLARITY



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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN MILLIMETERS	DRAWN	Kieu Huynh	06/05/20
		TOLERANCES:	CHECKED		
		FRACTIONAL: ±	ENG APPR.		
		ANGULAR: MAACH ± BEND ±	MFG APPR.		
		TWO PLACE DECIMAL ±	Q.A.		
		THREE PLACE DECIMAL ±	COMMENTS:		
		INTERPRET GEOMETRIC			
		TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			

TITLE:
**TRANSLATION
ROBOT**

SIZE DWG. NO. REV
D 1

SCALE: 1:5 WEIGHT: SHEET 27 OF 35

D

D

C

C

B

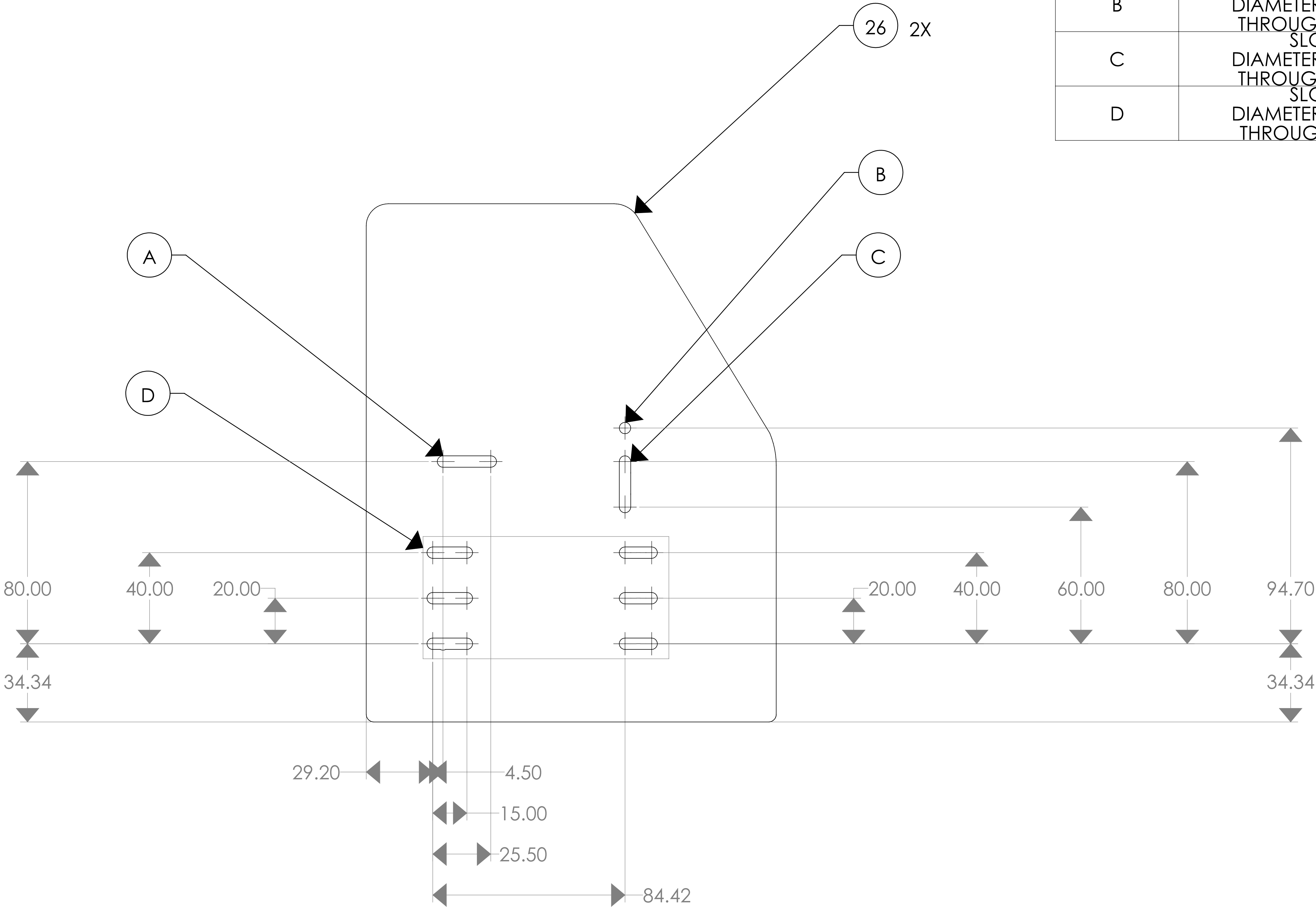
B

A

A

NOTES:
1. DETAILS FROM ORIGINAL PART OMITTED FOR CLARITY

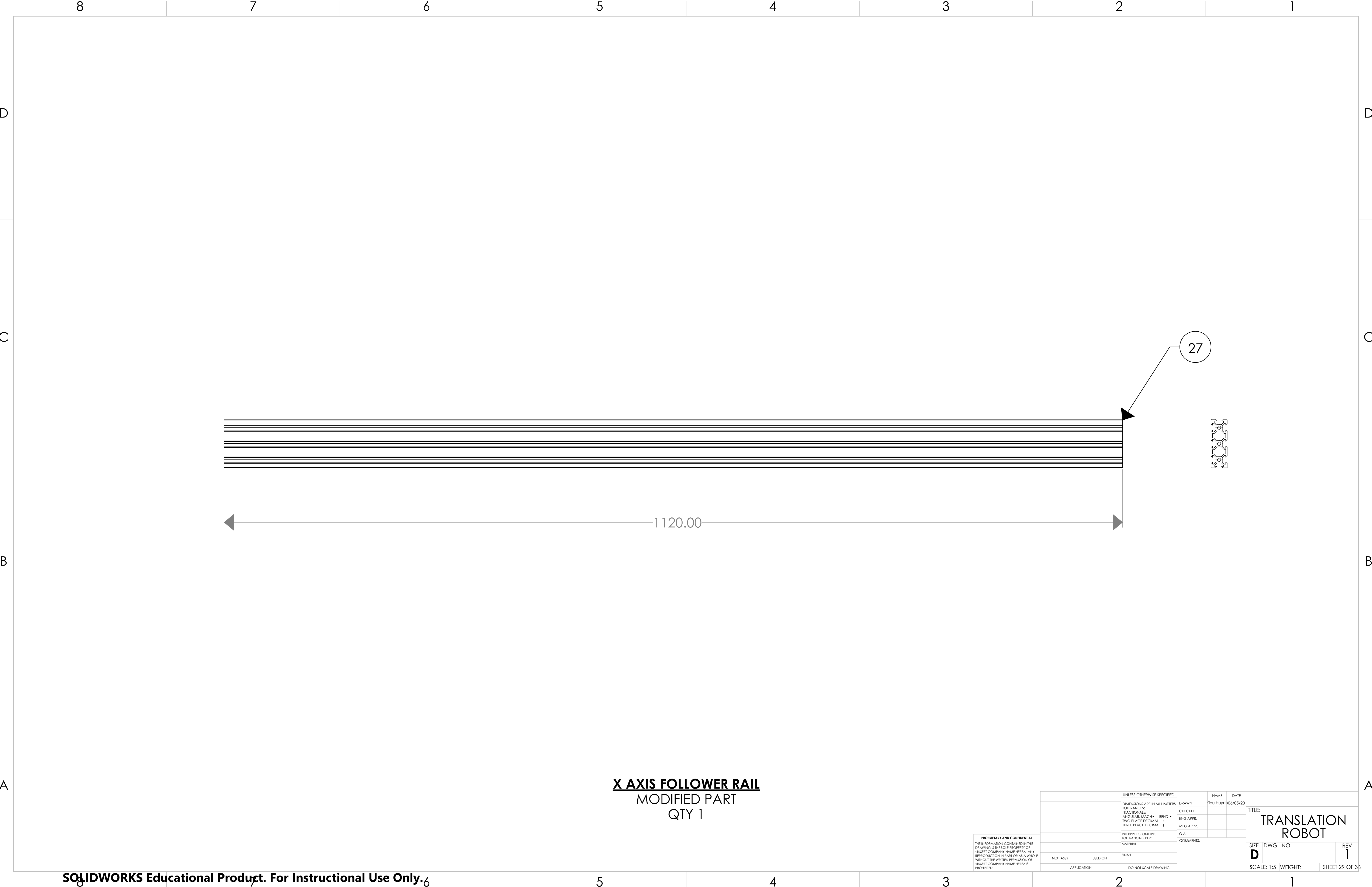
DRILL TABLE		
DESCRIPTION	SIZE	TOLERANCE
A	SLOT DIAMETER = 5MM THROUGH HOLE	+/- 0.01
B	HOLE DIAMETER = 5MM THROUGH HOLE	+/- 0.01
C	SLOT DIAMETER = 5MM THROUGH HOLE	+/- 0.01
D	SLOT DIAMETER = 5MM THROUGH PART	+/- 0.01



X AXIS TRANSLATION
MOUNTING PLATE
MODIFIED PART
QTY 2

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		UNLESS OTHERWISE SPECIFIED:	NAME	DATE		
		DIMENSIONS ARE IN MILLIMETERS	DRAWN	Kieu Huynh06/05/20		
		TOLERANCES:	CHECKED		TITLE:	
		FRACTIONAL: ±	ENG APPR.		TRANSLATION	
		ANGULAR: MAACH ± BEND ±	MFG APPR.		ROBOT	
		TWO PLACE DECIMAL ±	Q.A.		SIZE DWG. NO.	
		THREE PLACE DECIMAL ±	COMMENTS:		REV	
		INTERPRET GEOMETRIC			1	
		TOLERANCING PER:			SCALE: 1:2 WEIGHT:	
		MATERIAL			SHEET 28 OF 35	
		FINISH				
NEXT ASSY	USED ON	DO NOT SCALE DRAWING				

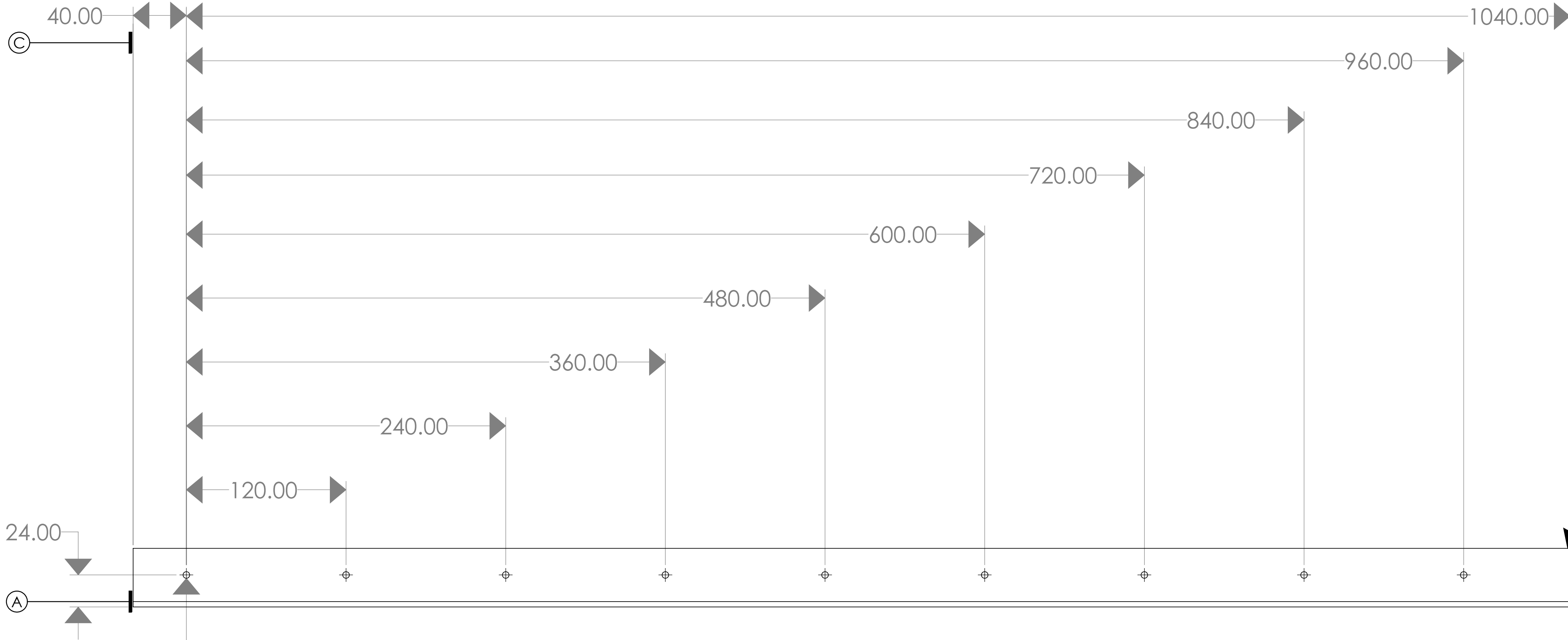


X AXIS FOLLOWER RAIL
MODIFIED PART
QTY 1

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		UNLESS OTHERWISE SPECIFIED:	NAME	DATE
		DIMENSIONS ARE IN MILLIMETERS	DRAWN	Kieu Huynh06/05/20
		TOLERANCES:	CHECKED	
		FRACTIONAL: ±	ENG APPR.	
		ANGULAR: MAACH ± BEND ±	MFG APPR.	
		TWO PLACE DECIMAL ±	Q.A.	
		THREE PLACE DECIMAL ±	COMMENTS:	
		INTERPRET GEOMETRIC		
		TOLERANCING PER:		
		MATERIAL		
		FINISH		
NEXT ASSY	USED ON			
APPLICATION		DO NOT SCALE DRAWING		

TITLE:		
TRANSLATION ROBOT		
SIZE	DWG. NO.	REV
D		1
SCALE: 1:5 WEIGHT:		SHEET 29 OF 35



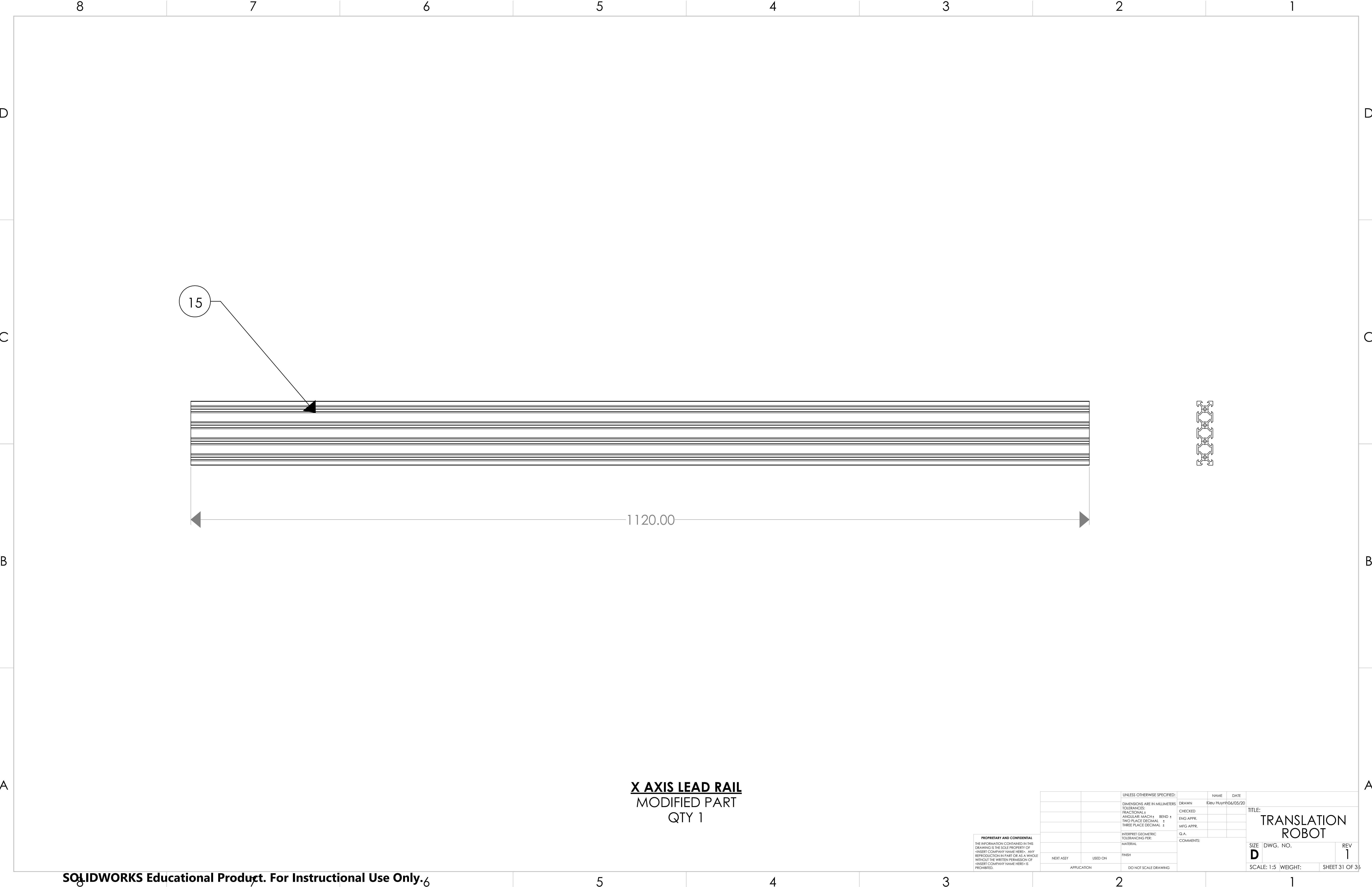
Ø 5MM THROUGH HOLE 9X

X AXIS FOLLOWER RAIL
MODIFIED PART
QTY 1

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		UNLESS OTHERWISE SPECIFIED:	DRAWN	NAME	DATE
		DIMENSIONS ARE IN MILLIMETERS	Kieu Huynh06/05/20		
		TOLERANCES:	CHECKED		
		FRACTIONAL: ±	ENG APPR.		
		ANGULAR: MAACH ± BEND ±	MFG APPR.		
		TWO PLACE DECIMAL ±			
		THREE PLACE DECIMAL ±			
		INTERPRET GEOMETRIC			
		TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			

TITLE:		
TRANSLATION ROBOT		
SIZE	DWG. NO.	REV
D		1
SCALE: 1:5 WEIGHT:		SHEET 30 OF 35

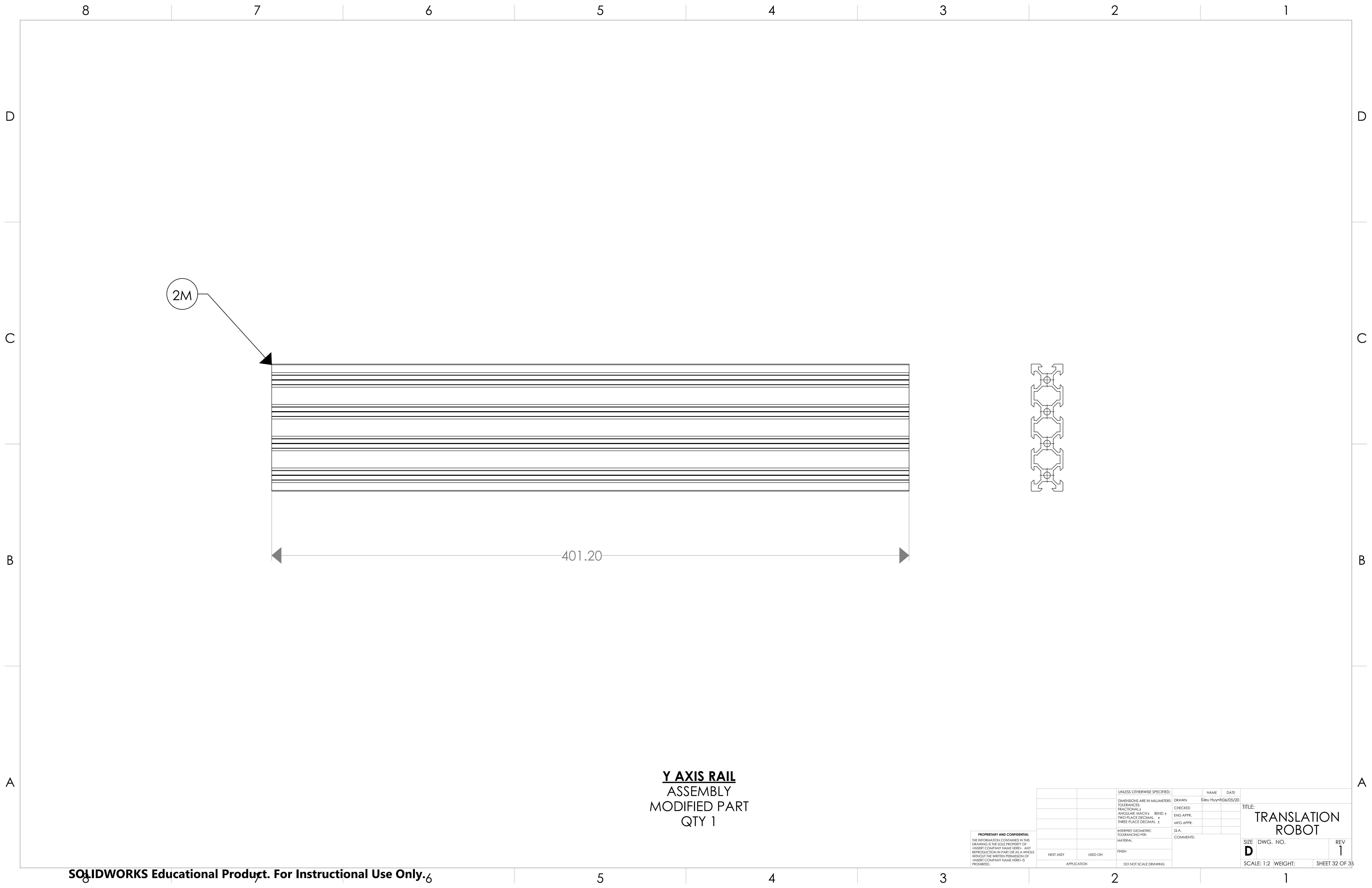


X AXIS LEAD RAIL
MODIFIED PART
QTY 1

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN MILLIMETERS	DRAWN	Kieu Huynh06/05/20	
		TOLERANCES:	CHECKED		
		FRACTIONAL: ±	ENG APPR.		
		ANGULAR: MAACH ± BEND ±	MFG APPR.		
		TWO PLACE DECIMAL ±			
		THREE PLACE DECIMAL ±			
		INTERPRET GEOMETRIC			
		TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			

TITLE:		
TRANSLATION ROBOT		
SIZE	DWG. NO.	REV
D		1
SCALE: 1:5	WEIGHT:	SHEET 31 OF 35



2M

401.20

Y AXIS RAIL
ASSEMBLY
MODIFIED PART
QTY 1

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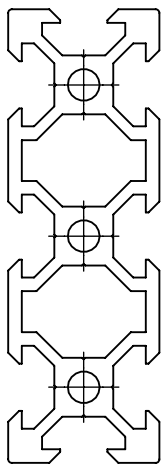
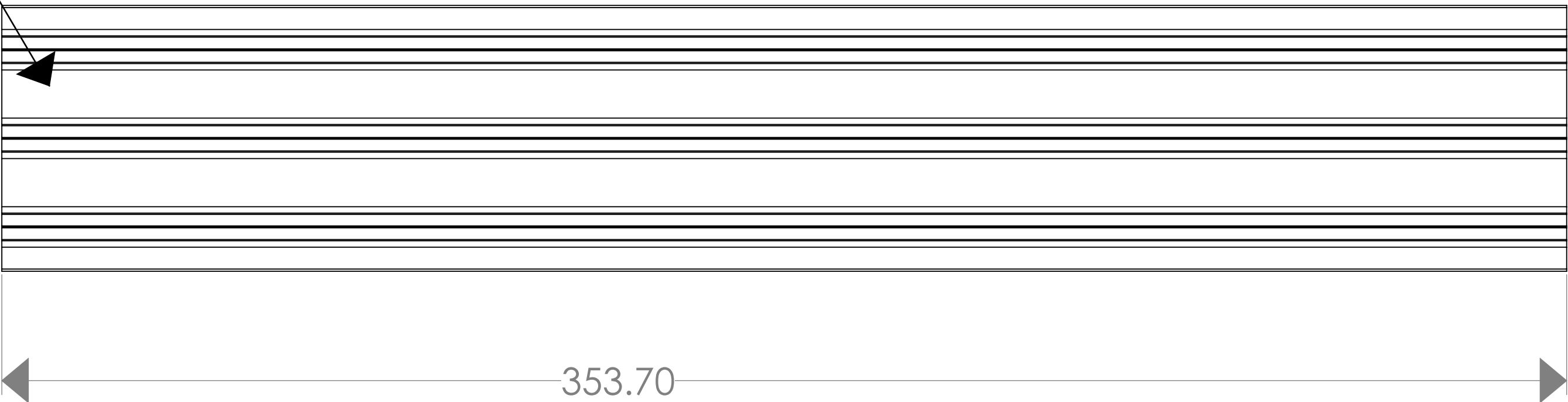
		UNLESS OTHERWISE SPECIFIED:	DRAWN	NAME	DATE
		DIMENSIONS ARE IN MILLIMETERS		Kieu Huynh	06/05/20
		TOLERANCES:	CHECKED		
		FRACTIONAL: ±	ENG APPR.		
		ANGULAR: MAACH ± BEND ±	MFG APPR.		
		TWO PLACE DECIMAL ±	Q.A.		
		THREE PLACE DECIMAL ±	COMMENTS:		
		INTERPRET GEOMETRIC			
		TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION	DO NOT SCALE DRAWING				

TITLE:
**TRANSLATION
ROBOT**

SIZE DWG. NO. REV
D **1**

SCALE: 1:2 WEIGHT: SHEET 32 OF 35

23



Y AXIS BRIDGE
MODIFIED PART
QTY 2

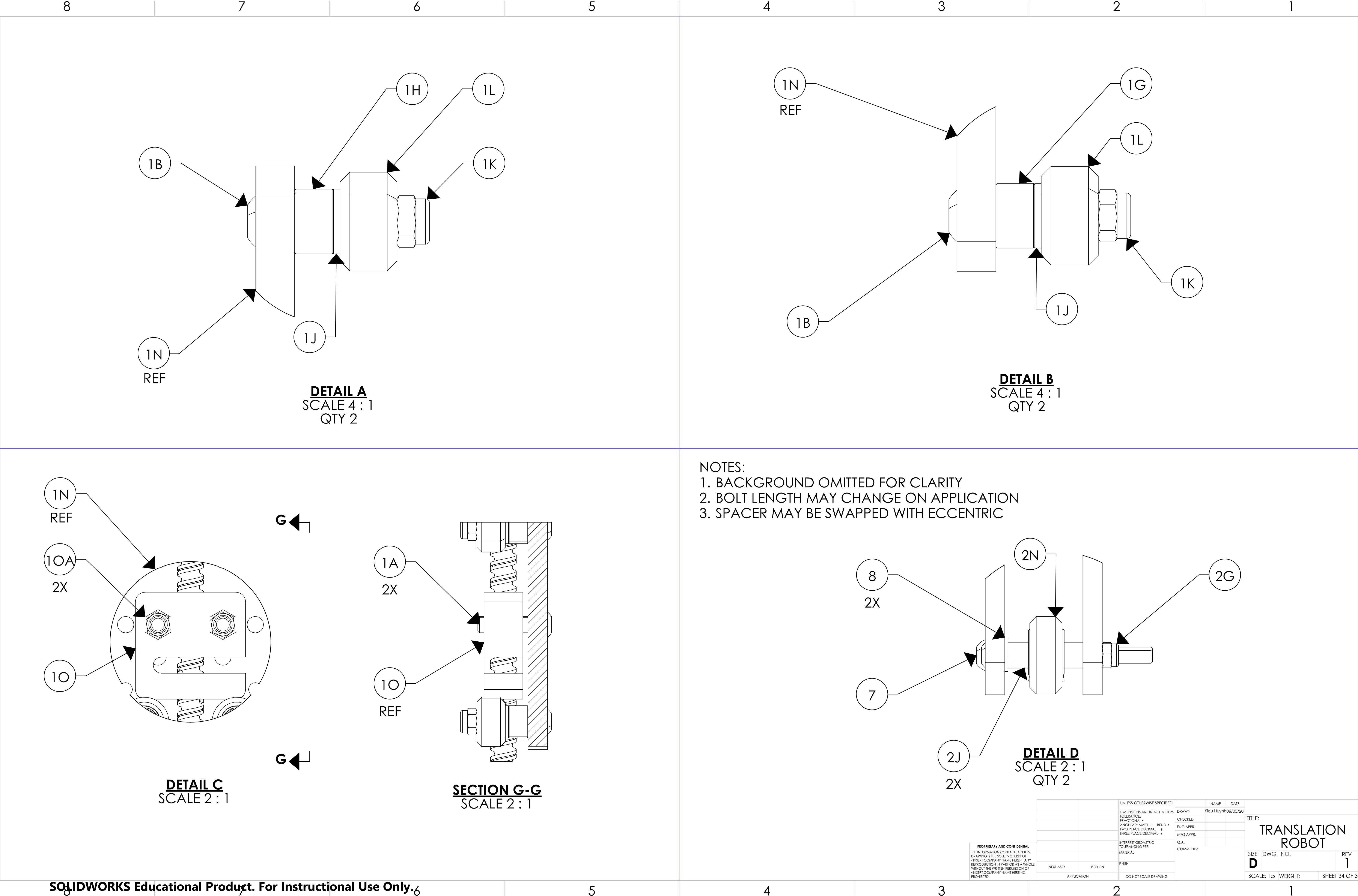
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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN MILLIMETERS	DRAWN	Kieu Huynh06/05/20	
		TOLERANCES:	CHECKED		
		FRACTIONAL: ±	ENG APPR.		
		ANGULAR: MAACH ± BEND ±	MFG APPR.		
		TWO PLACE DECIMAL ±	Q.A.		
		THREE PLACE DECIMAL ±	COMMENTS:		
		INTERPRET GEOMETRIC			
		TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			

TITLE:
**TRANSLATION
ROBOT**

SIZE DWG. NO. REV
D **1**

SCALE: 1:2 WEIGHT: SHEET 33 OF 35



DETAIL A
SCALE 4 : 1
QTY 2

DETAIL B
SCALE 4 : 1
QTY 2

DETAIL C
SCALE 2 : 1

SECTION G-G
SCALE 2 : 1

DETAIL D
SCALE 2 : 1
QTY 2

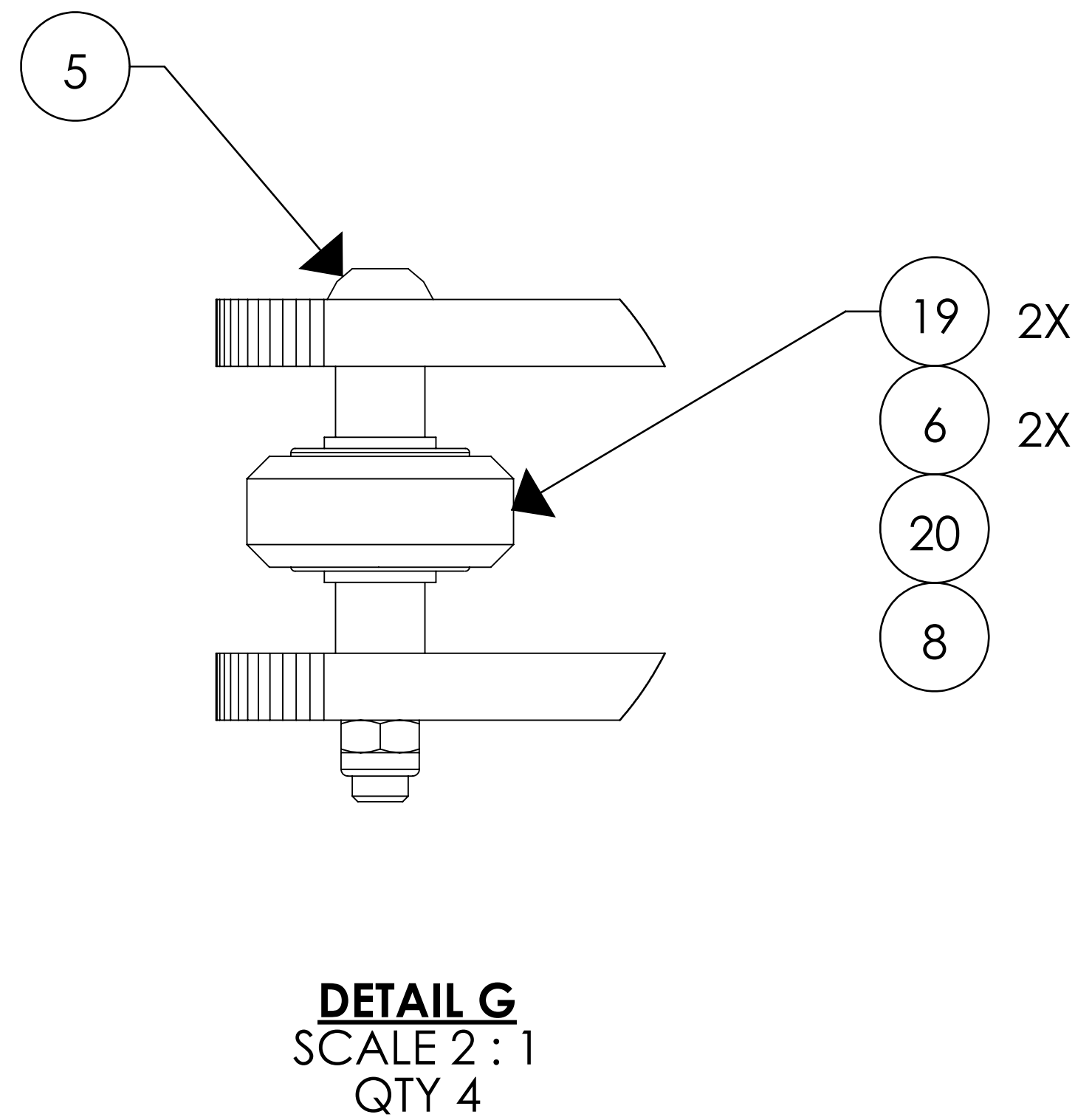
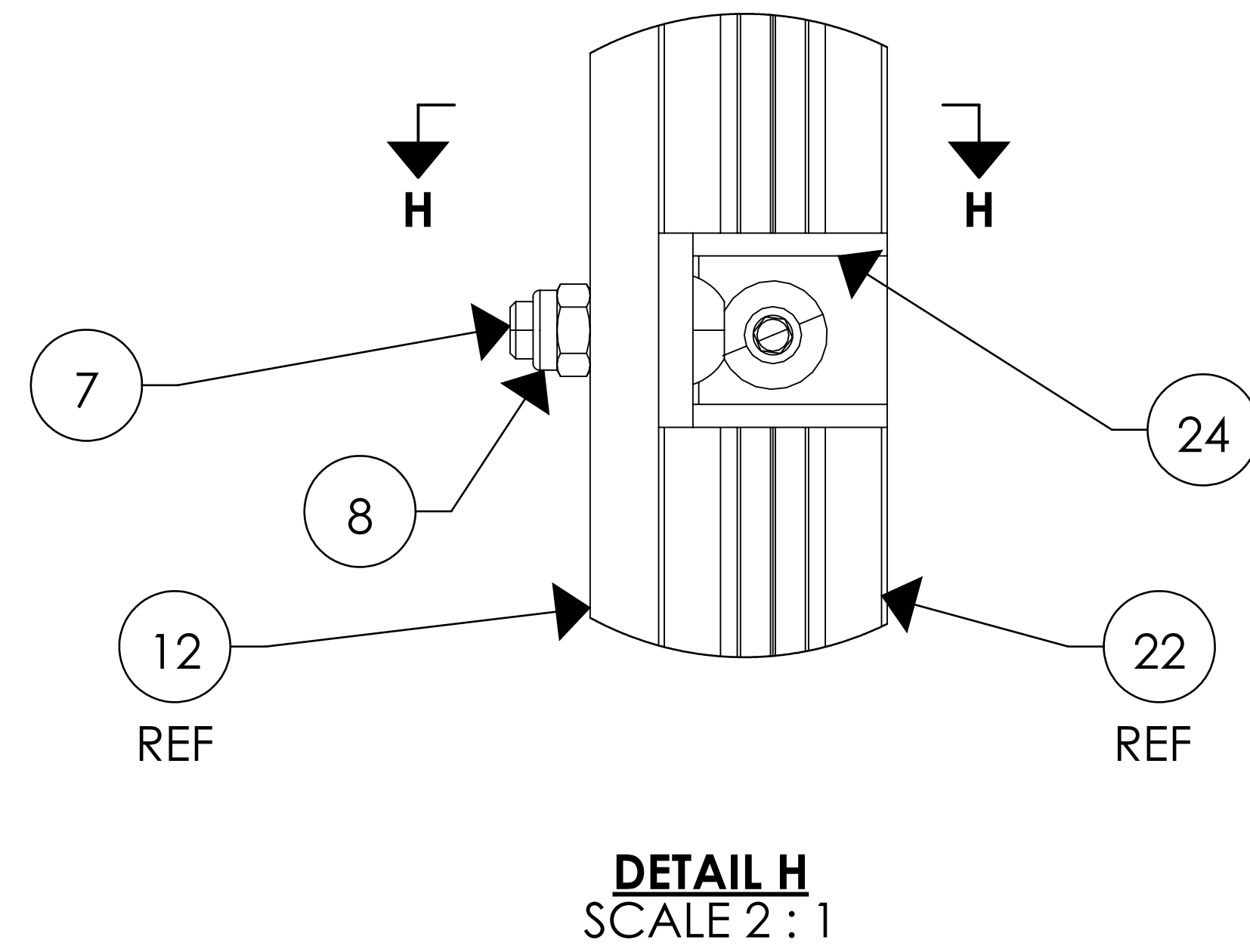
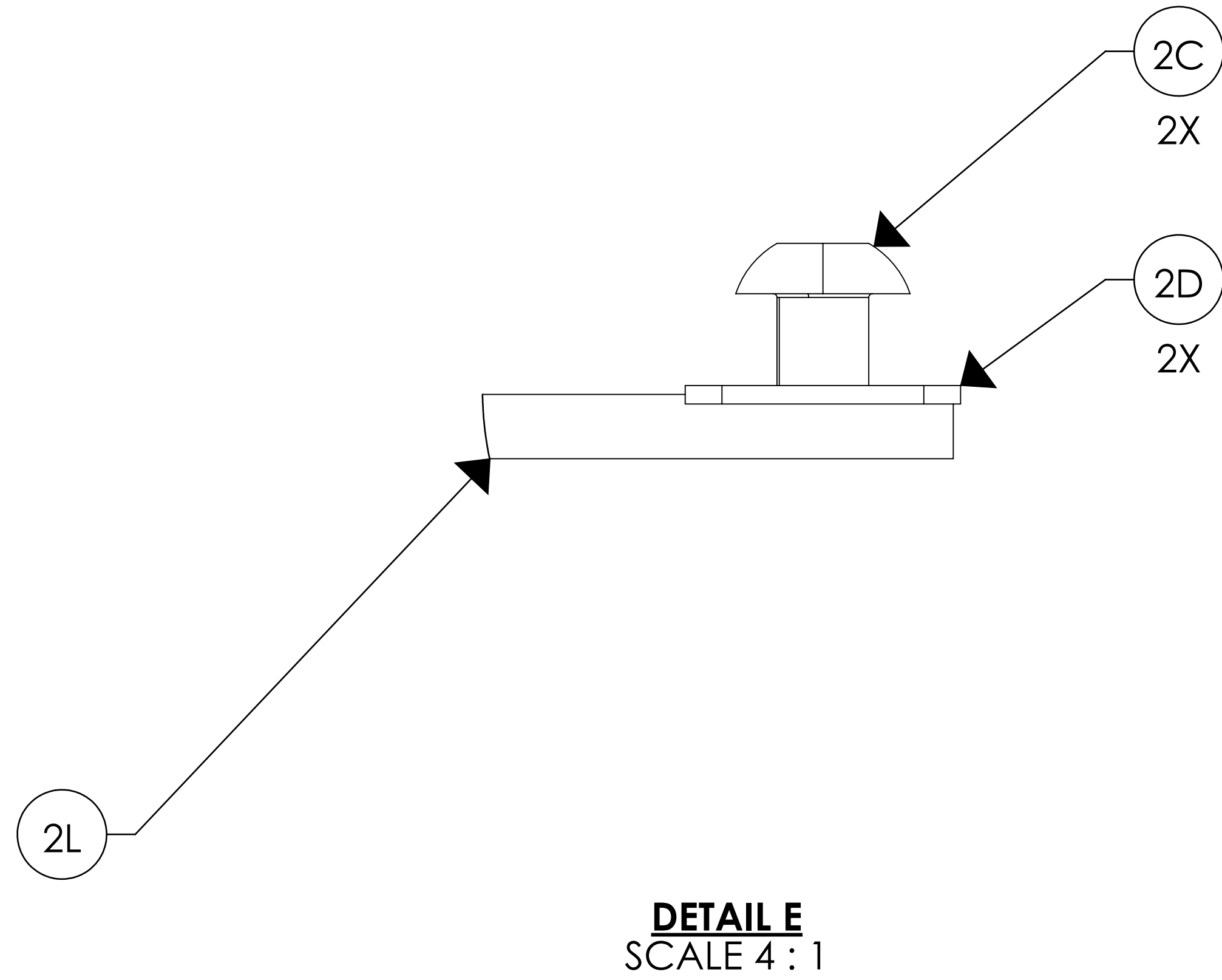
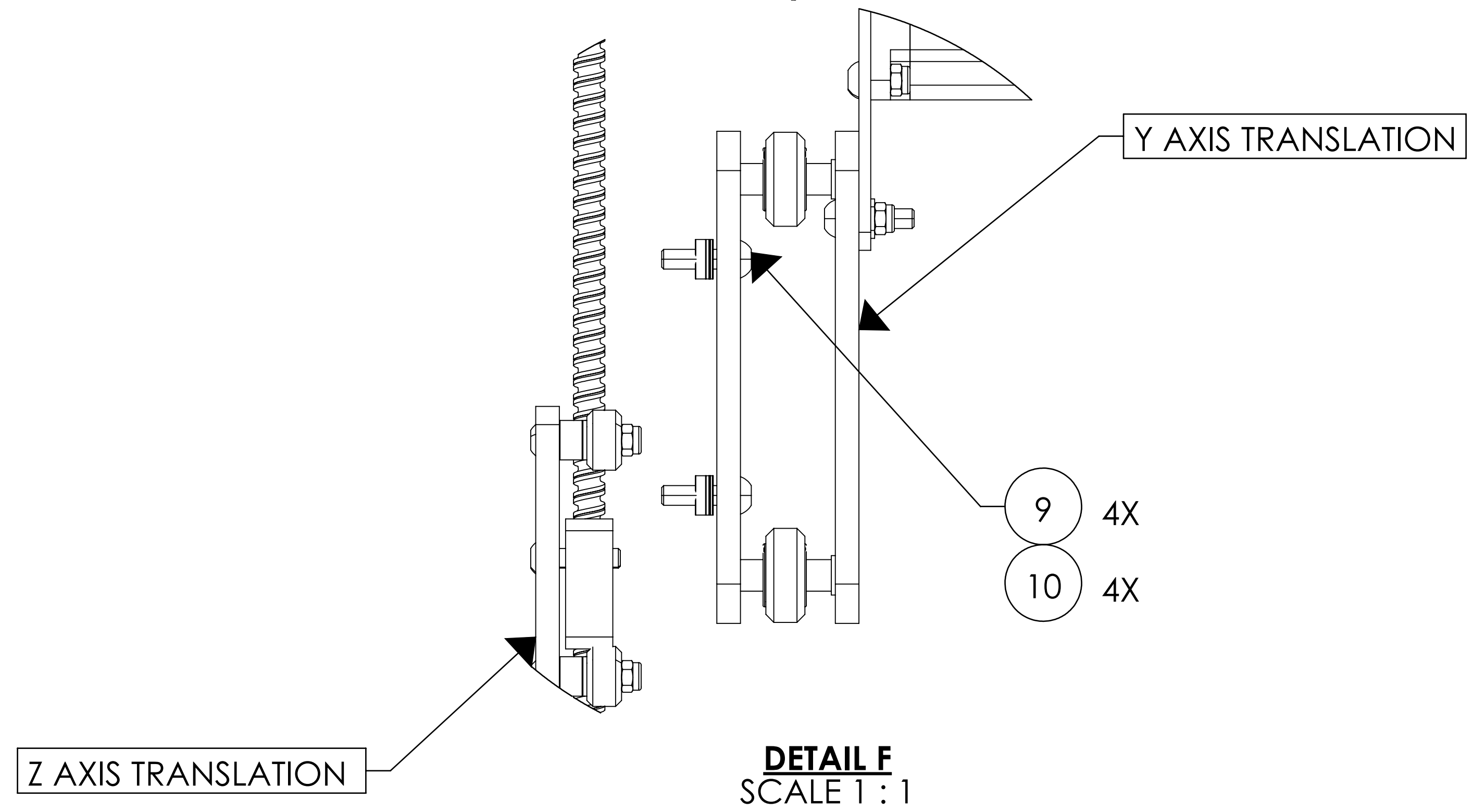
- NOTES:
1. BACKGROUND OMITTED FOR CLARITY
 2. BOLT LENGTH MAY CHANGE ON APPLICATION
 3. SPACER MAY BE SWAPPED WITH ECCENTRIC

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		UNLESS OTHERWISE SPECIFIED:	NAME	DATE
		DIMENSIONS ARE IN MILLIMETERS	Kieu Huynh	06/05/20
		TOLERANCES:	DRAWN	
		FRACTIONAL: ±	CHECKED	
		ANGULAR: MAACH ±	ENG APPR.	
		TWO PLACE DECIMAL ±	MFG APPR.	
		THREE PLACE DECIMAL ±	Q.A.	
		INTERPRET GEOMETRIC	COMMENTS:	
		TOLERANCING PER:		
		MATERIAL		
		FINISH		
		DO NOT SCALE DRAWING		

TITLE:		
TRANSLATION ROBOT		
SIZE	DWG. NO.	REV
D		1
SCALE: 1:5 WEIGHT:		SHEET 34 OF 35

NOTES:
1. BACKGROUND VIEWS OMITTED FOR CLARITY



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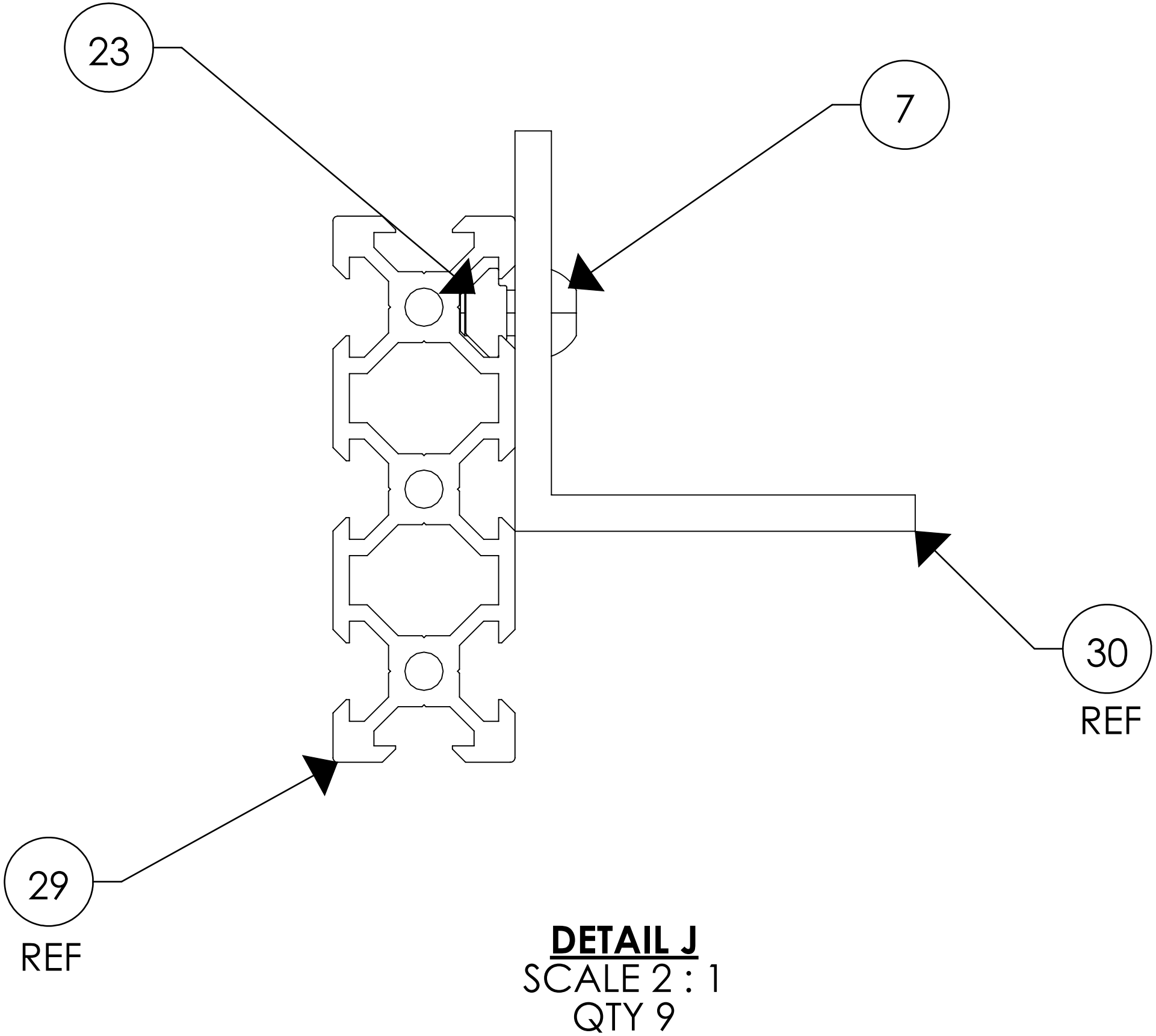
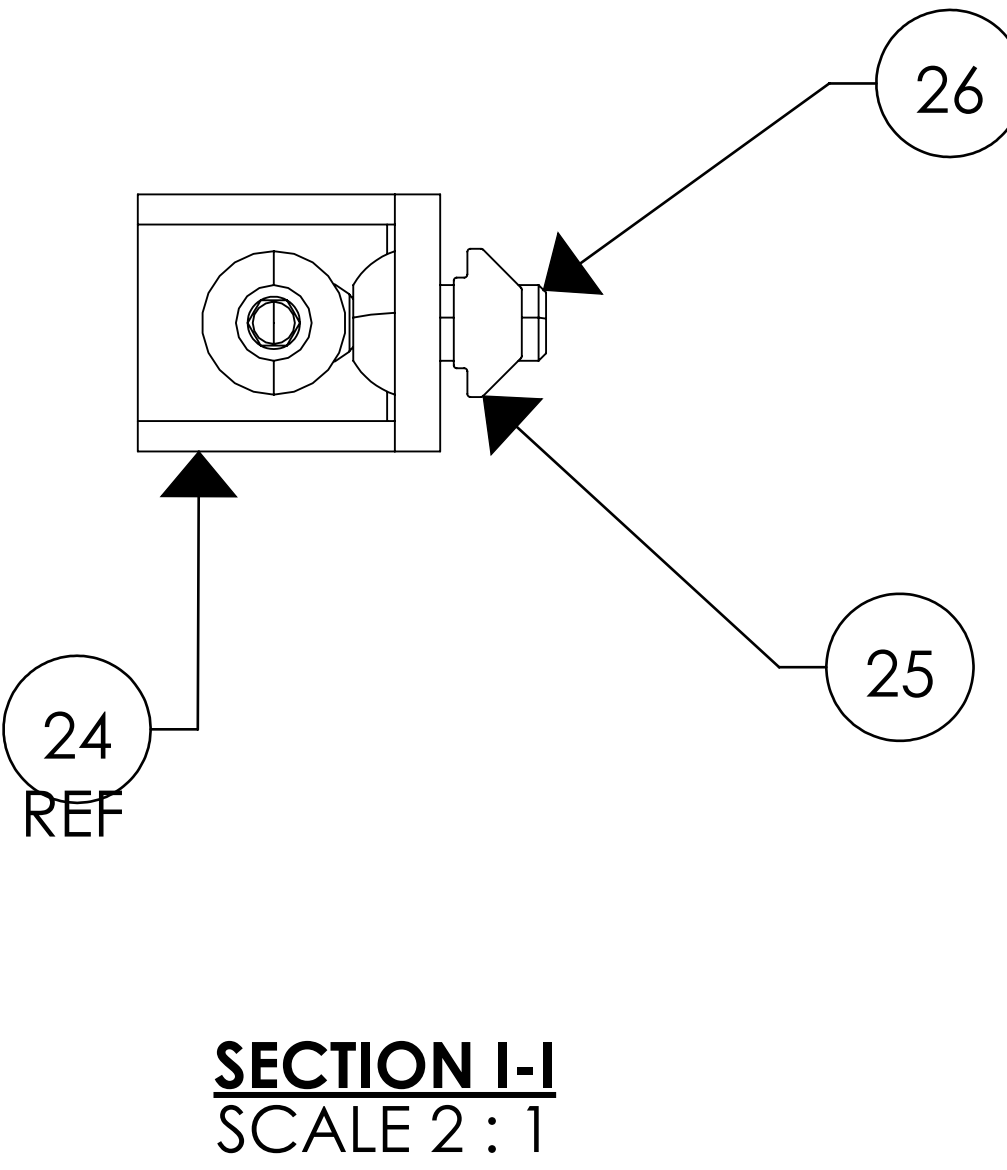
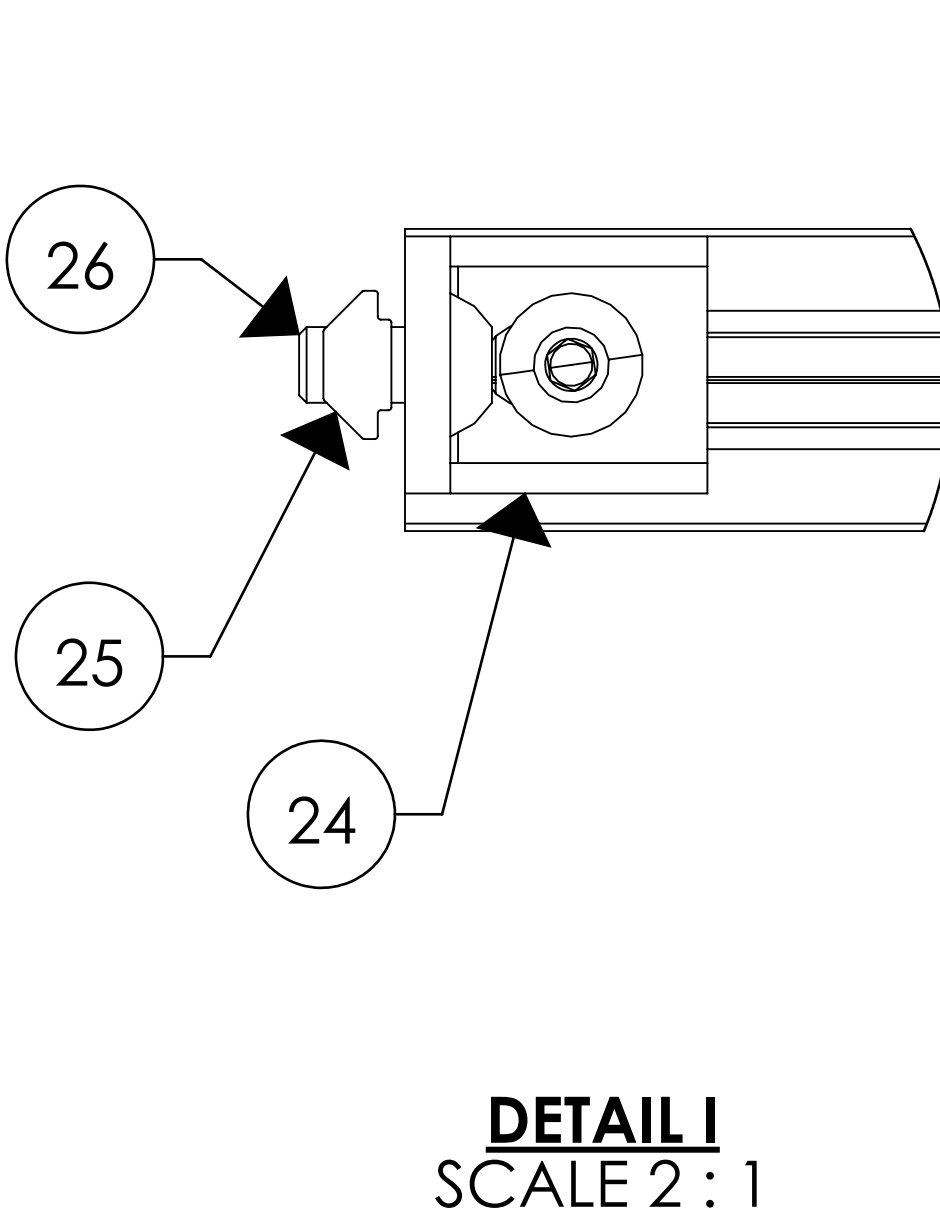
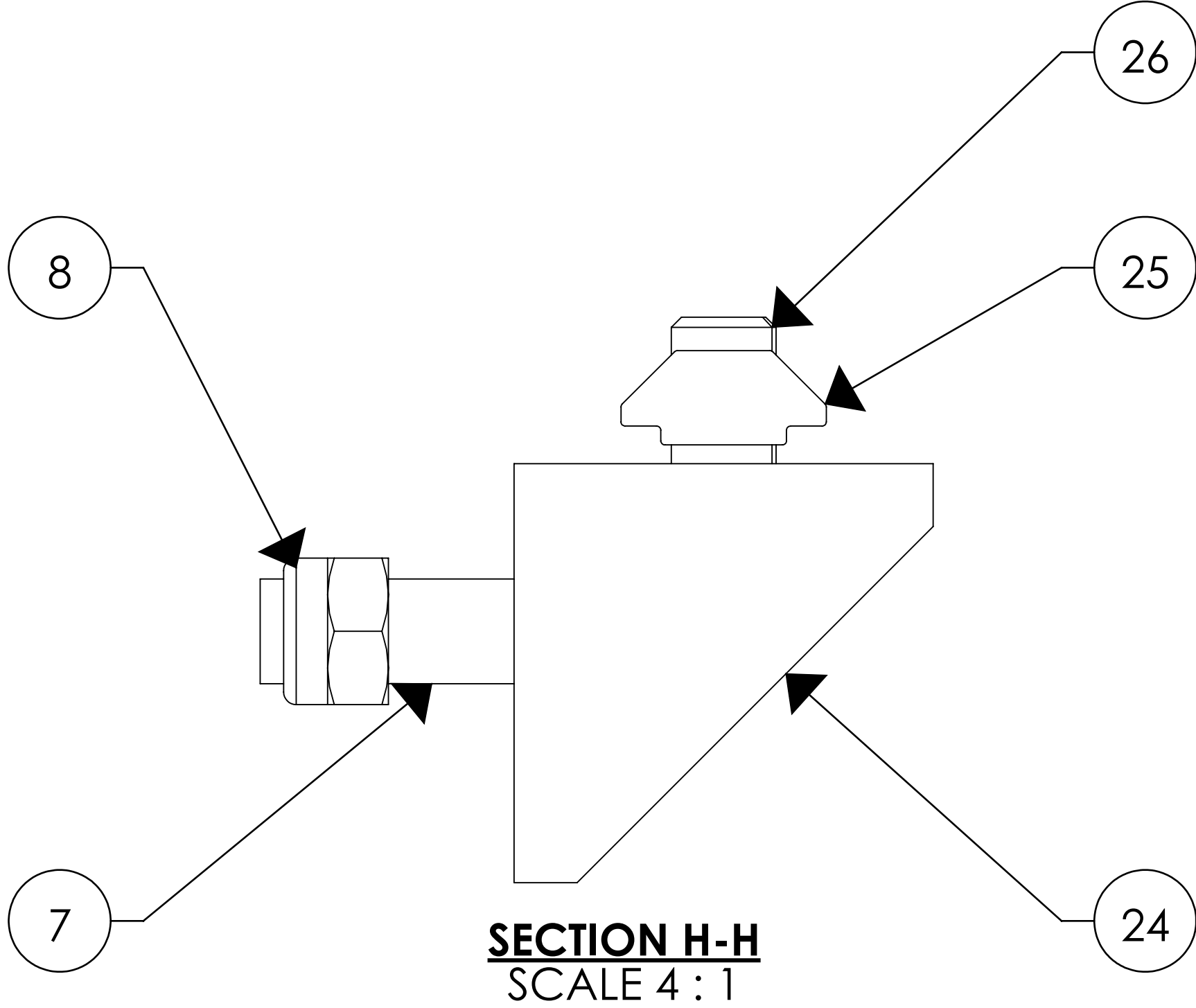
		UNLESS OTHERWISE SPECIFIED:	NAME	DATE	
		DIMENSIONS ARE IN MILLIMETERS.	DRAWN	Kieu Huynh06/05/20	
		TOLERANCES:	CHECKED		
		FRACTIONAL: ANGULAR: MACH ± BEND ±	ENG APPR.		
		TWO PLACE DECIMAL THREE PLACE DECIMAL ±	MFG APPR.		
		INTERPRET GEOMETRIC TOLERANCING PER MATERIAL FINISH	Q.A.		
			COMMENTS:		
	NEXT ASSY	USED ON			
	APPLICATION	DO NOT SCALE DRAWING			

TITLE: TRANSLATION ROBOT

SIZE: DWG. NO. REV 1

D SCALE: 1:5 WEIGHT: SHEET 35 OF 39

- NOTES:
- 1. BACKGROUND VIEWS OMMITTED FOR CLARITY
 - 2. SCREW LENGTHS MAY CHANGE ON APPLICATION
 - 3. USE DEFAULT IF NOT SPECIFIED



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		DIMENSIONS ARE IN MILLIMETERS		Kieu Huynh	06/05/20
		TOLERANCES:	CHECKED		
		FRACTIONAL: ±	ENG APPR.		
		ANGULAR: MAACH ± BEND ±	MFG APPR.		
		TWO PLACE DECIMAL ±			
		THREE PLACE DECIMAL ±			
		INTERPRET GEOMETRIC			
		TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION	DO NOT SCALE DRAWING				

TITLE:		
TRANSLATION ROBOT		
SIZE	DWG. NO.	REV
D		1
SCALE: 1:2 WEIGHT:		SHEET 36 OF 36