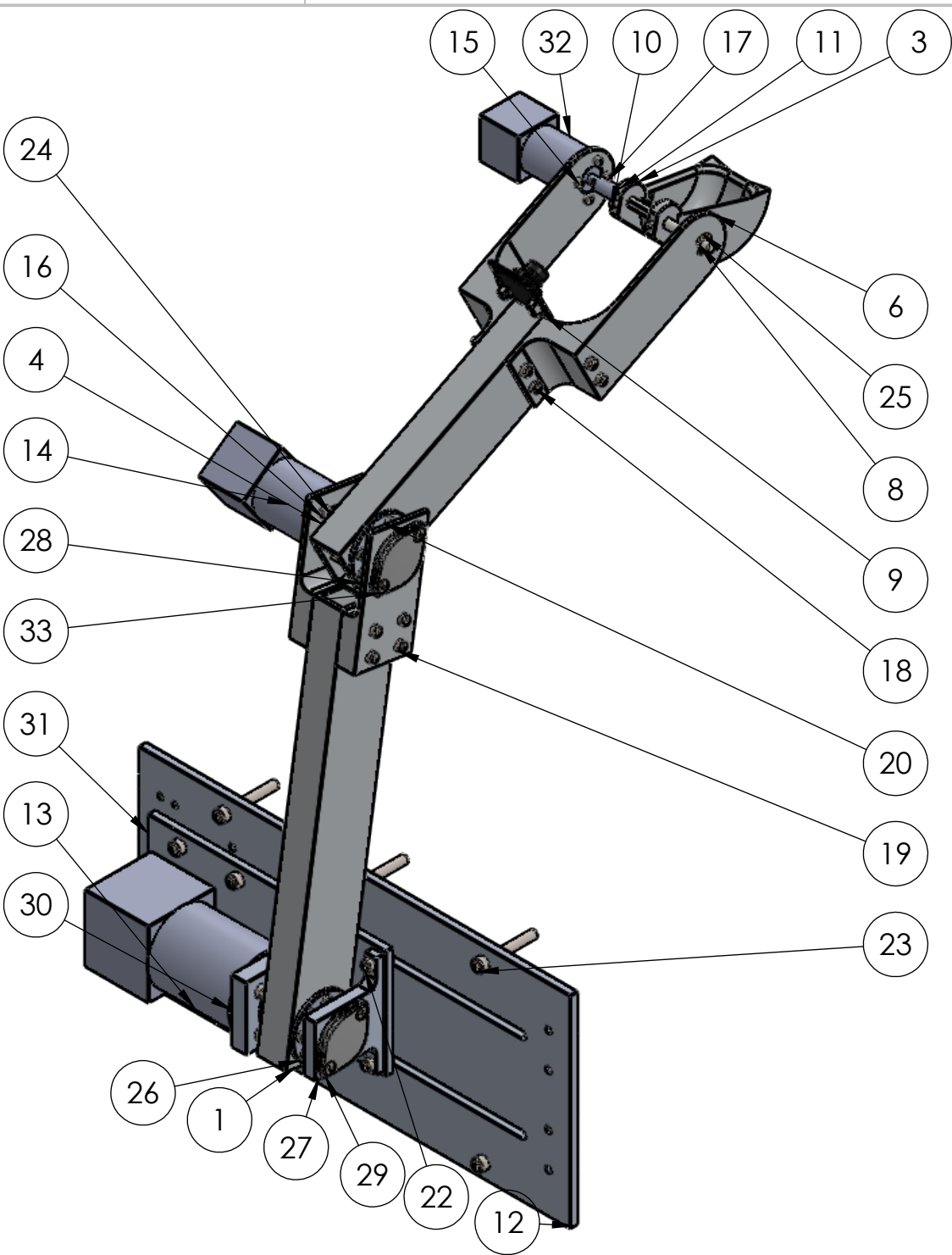
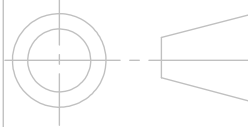


B

A

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	PreliminaryLink1	Link 1	1
2	PreliminaryLink1	Link 2	1
3	TaperedExcavatorMachinable		1
4	L1L2Bracket	Motor Side	1
5	L1L2Bracket	Bearing Side	1
6	ExcavationUnitBracket	Shaft Side	1
7	ExcavationUnitBracket	Motor Side	1
8	QuarterInchDiameterPinThreeAndAHalfInches	Ended up 6"	1
9	elp-usb500w05g-fd100	USB Camera	1
10	SSFLATSKT 0.138-32x0.5-HX-N	Set Screws For Shaft	2
11	SSFLATSKT 0.19-32x0.1875-HX-N	Set Screws For Coupler	2
12	ScienceArmMountingPlateWaterRJetAdjusted		1
13	J1ActualModelMockUp	Nema 23	1
14	J2ActualModelMockUp	Nema 17	1
15	B18.3.1M - 3 x 0.5 x 5 Hex SHCS -- 5NHX	J4 Mounting Screws	4
16	B18.3.1M - 4 x 0.7 x 10 Hex SHCS -- 10NHX	J2 Mounting Screws	4
17	6mmtoQuarterInchShaftCoupler		1
18	HX-SHCS 0.164-32x1.75x0.875-N		6
19	HX-SHCS 0.164-32x2.5x1.125-N		4
20	HX-SHCS 0.164-32x1.375x1.375-N		16
21	HX-SHCS 0.19-32x0.75x0.75-N		4
22	HX-SHCS 0.19-32x0.5x0.5-N		2
23	HX-SHCS 0.25-28x1.75x1.25-N		5
24	MSHXNUT 0.164-32-S-N		26
25	B27.1 - NA3-25	E-clip	1
26	J1Spindle		1
27	Link1BallBearingOuterHousing		1
28	j2spindleedited		1
29	4575N35	Ball Bearing	2
30	J1MotorMountface		1
31	ExcavatingArmPositioningPlateSinglePartWater JetAdjusted		1
32	J3ActualModelMockUp	Nema 14	1
33	SCHCSCREW 0.164-32x0.5x0.5-HX-N		4
34	B18.3.1M - 5 x 0.8 x 20 Hex SHCS -- 20NHX		4
35	HX-SHCS 0.25-20x1.75x1.25-N		6



UNLESS OTHERWISE SPECIFIED:		NAME	DATE	TITAN ROVER	
DIMENSIONS ARE IN INCHES		DRAWN	Ryan G.	3/15/20	
TOLERANCES: ± 0.005		CHECKED	Checked by	SYSTEM:	
INTERPRET GEOMETRIC TOLERANCING PER: MATERIAL: Various		ENG APPR.		Science	
		MFG APPR.			
		Q.A.			
 DO NOT SCALE DRAWING		COMMENTS:		SIZE	ASSEMBLY NO.
		Some of the hardware may have been swapped for a different length based on price. Just look at the physical assembly and google sheet BOM.		B	Excavator Assembly
				SCALE: 1:4	DO NOT SCALE DRAWING
				SHEET 1 OF 2	

B

A