

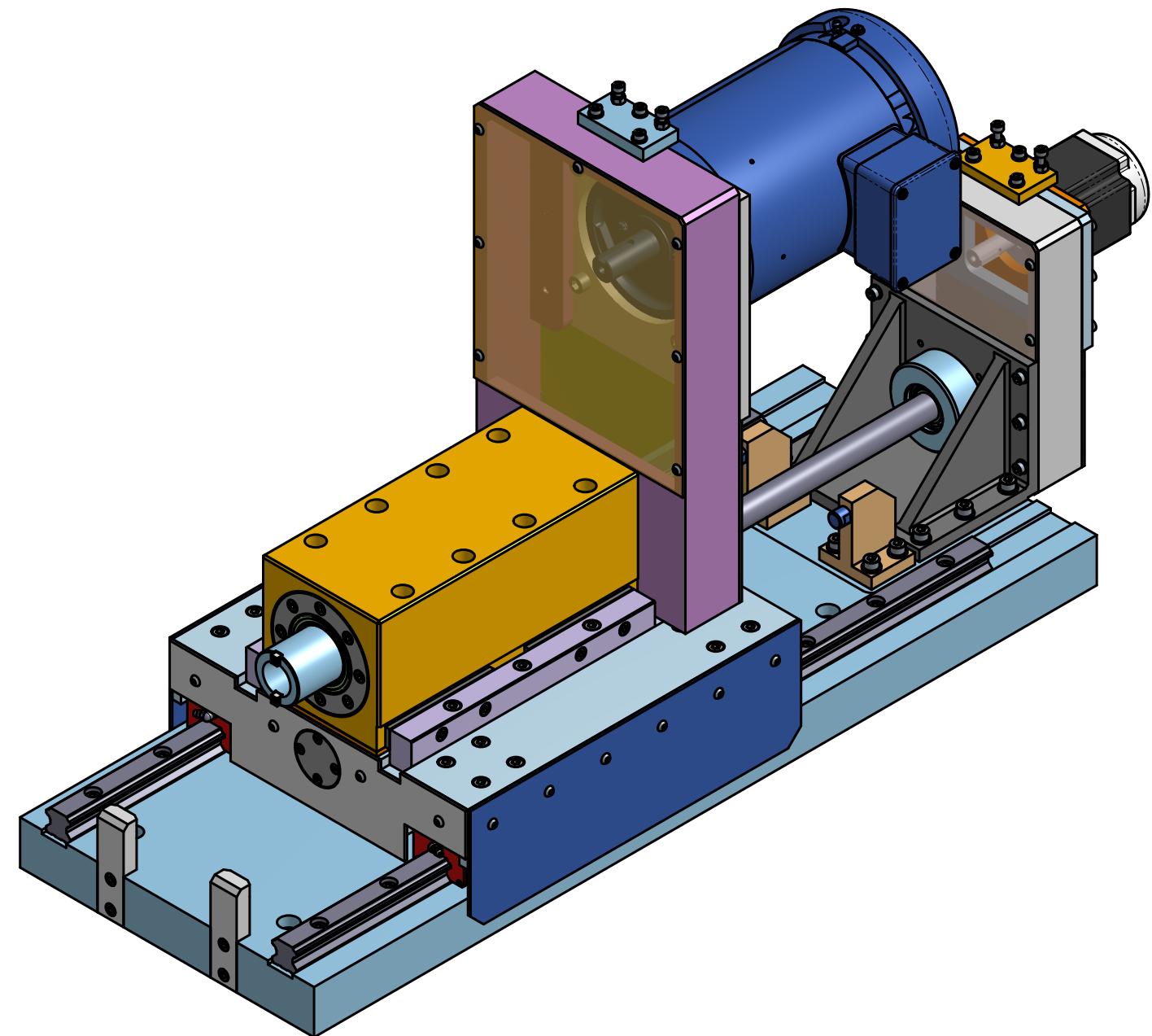
4

3

2

1

Item No.	Quantity	Description	Material	Part number
1	1	Base Plate	Steel 8620	BR-549-C-001
2	1	Ball Screw Support Bracket	Steel 1020	BR-549-C-002
3	1	Ball Screw Bearing Housing	Steel 4130	BR-549-C-003
4	1	Ball Screw Bearing Cap	Steel 4130	BR-549-C-004
5	1	Ball Screw Bearing Spacer	Steel 1020	BR-549-C-005
6	1	Ball Screw - HIWIN Altered	Steel 8620	BR-549-C-006
7	1	15 x 10 x 100 Key	Steel 4130	BR-549-C-007
8	1	Servo Belt Housing	Steel 1020	BR-549-C-008
9	1	Servo Adjuster Block	Steel 1020	BR-549-C-009
10	1	Servo Motor Adapter	Steel 8620	BR-549-C-010
11	1	Servo Mounting Plate	Steel 8620	BR-549-C-011
12	1	Upper Cover Plate - Servo	Polycarbonate	BR-549-C-012
13	1	Lower Cover Plate - Servo	Polycarbonate	BR-549-C-013
14	2	Small Slide Key	Steel 4130	BR-549-C-014
15	2	Stop Bracket - Rear	Steel 1020	BR-549-C-015
16	2	Stop Button	Steel 4130	BR-549-C-016
17	2	Stop Bar - Front	Steel 4130	BR-549-C-017
18	1	Slide Plate Assembly	N/A	BR-549-B
19	2	Hiwin Rail 800mm		
20	1	Locknut KVT GUK 20x1	Steel	
21	2	Bearing Asm 7304BTN1CN Timken	N/A	
22	1	Servo Motor Asm Rockwell	N/A	
23	34	M8 x 30 Hex socket head cap screw	Steel	
24	3	M6 x 30 Hex socket head cap screw	Steel	
25	20	M6 x 25 Hex socket head cap screw	Steel	
26	6	M6 x 20 Hex socket head cap screw	Steel	
27	4	M6 x 16 Hex socket head cap screw	Steel	
28	2	M6 x 12 Hex socket head cap screw	Steel	
29	4	M5 x 10 Hex socket head cap screw	Steel	
30	8	M5 x 8 Socket button head screw	Steel	
31	2	M4 x 12 Hex socket head cap screw	Steel	
32	2	M6 Hex nut (chamfered) grade A & B ISO 4033	Steel	
33	14	M8 Plain washer normal grade A ISO 7089	Steel	
34	13	M6 Plain washer normal grade A ISO 7089	Steel	



UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.0- .XXX = ±.00- .XXXX = ±.000-		ANGULAR = ± ° FRACTIONAL = ±	DRAWN BRIAN BRADY 10/14/2019	CHECKED APPROVED	TITLE DRILL UNIT MAIN ASSEMBLY BOM AND SHADED ISOMETRIC
SURFACE FINISH ✓		DO NOT SCALE DRAWING BREAK ALL SHARP EDGES AND REMOVE BURRS			
DO NOT SCALE DRAWING BREAK ALL SHARP EDGES AND REMOVE BURRS		THIRD ANGLE PROJECTION	MATERIAL 	VOLUME XXXXX mm³	DWG NO. REV. BR-549-C
SCALE 1:5	WEIGHT X.XXX kg	SHEET 1 of 6			

4

3

2

1

4

3

2

1

D

D

C

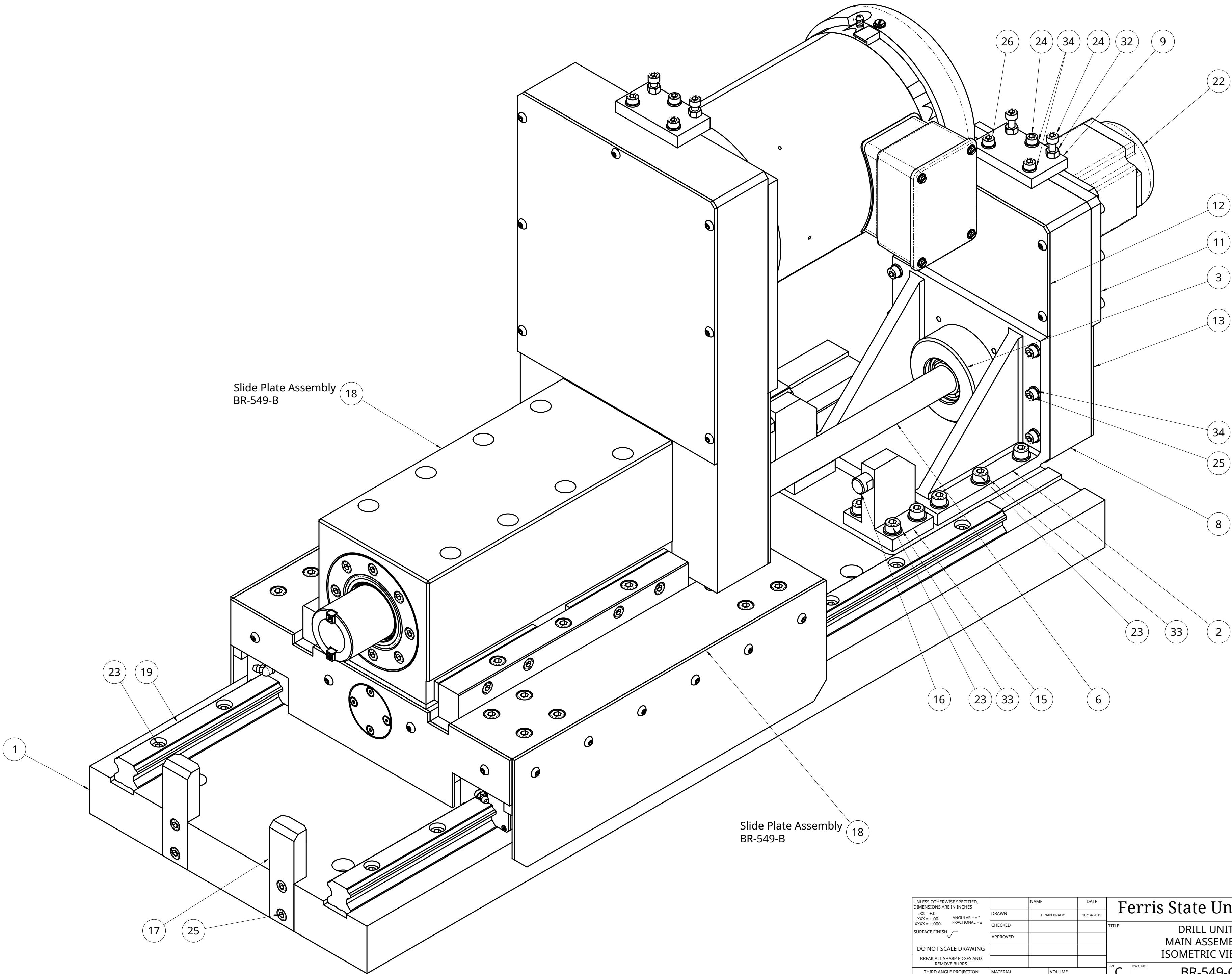
C

B

B

A

A



UNLESS OTHERWISE SPECIFIED, .XX ± .00 .XXX ± .00 .XXXX ± .0000		NAME DRAWN BRIAN BRADY	DATE 10/14/2019
ANGULAR ± ° SURFACE FINISH		CHECKED	
FRACTIONAL ± 1/8		APPROVED	
Ferris State University			
DRILL UNIT MAIN ASSEMBLY ISOMETRIC VIEW 1			
SIZE C	DWG NO.	BR-549-C	
SCALE 1:12	WEIGHT	X.XXX kg	REV. Sheet 2 of 6

4

3

2

1

D

D

C

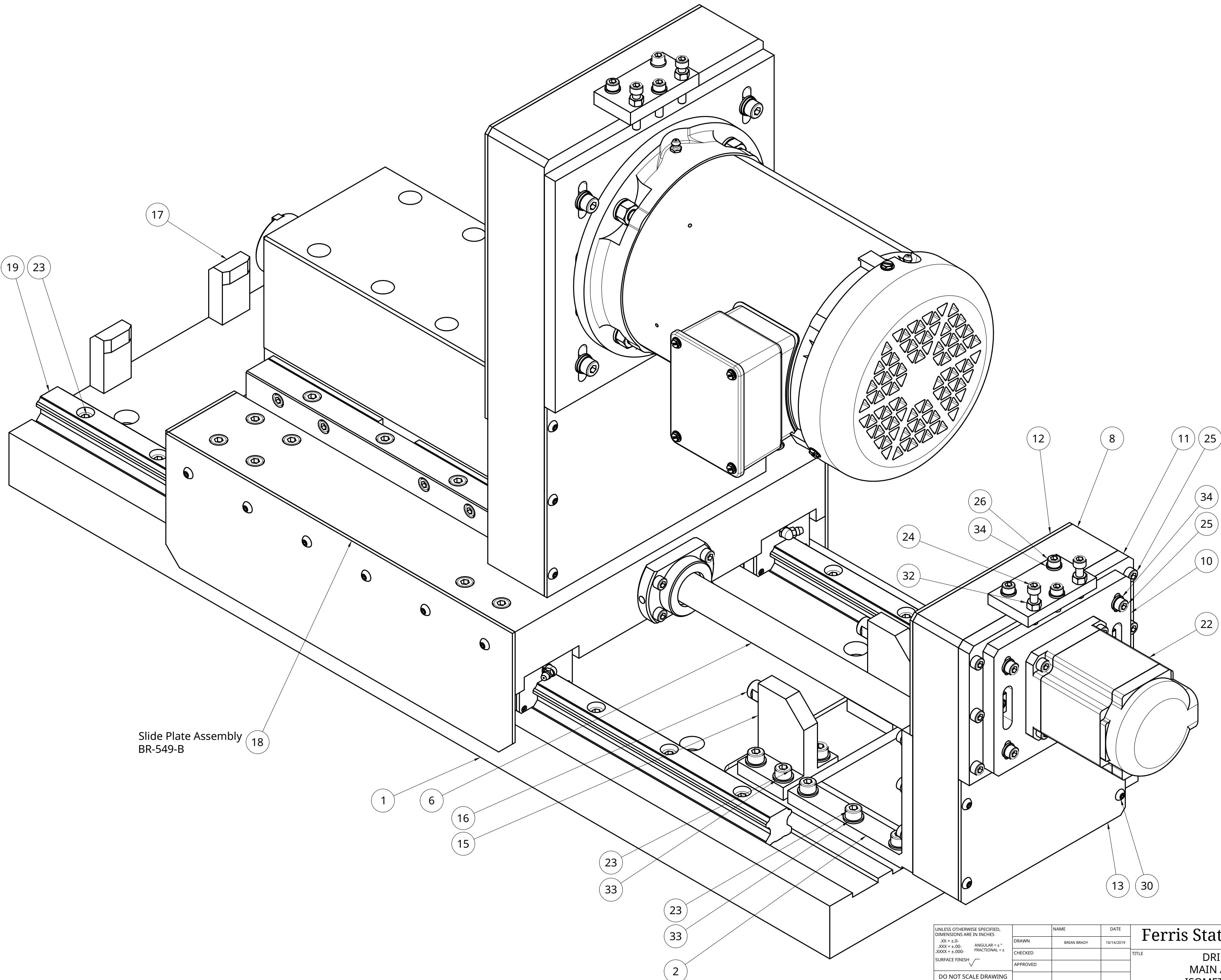
C

B

B

A

A



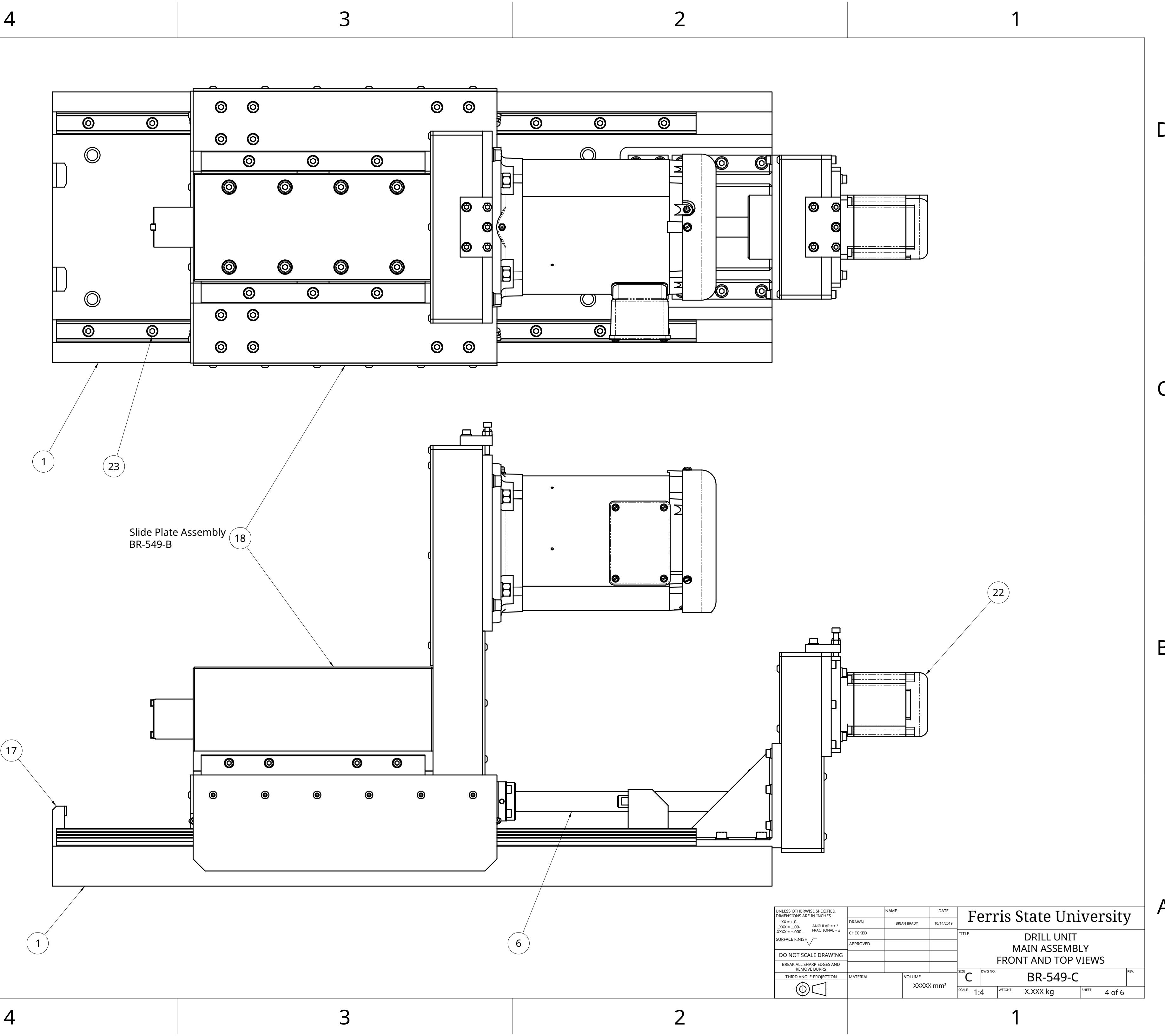
UNLESS OTHERWISE SPECIFIED, .XX ± .0-. .XXX ± .00-. .XXXX ± .000-. SURFACE FINISH	NAME DRAWN CHECKED APPROVED	DATE 10/14/2019
DO NOT SCALE DRAWING		
BREAK ALL SHARP EDGES AND REMOVE BURRS		
THIRD ANGLE PROJECTION	MATERIAL	VOLUME XXXXXX mm ³
SCALE 1:2	WEIGHT X.XXX kg	SHEET 3 of 6
C DWG NO.	BR-549-C	REV.
Ferris State University		
DRILL UNIT		
MAIN ASSEMBLY		
ISOMETRIC VIEW 2		

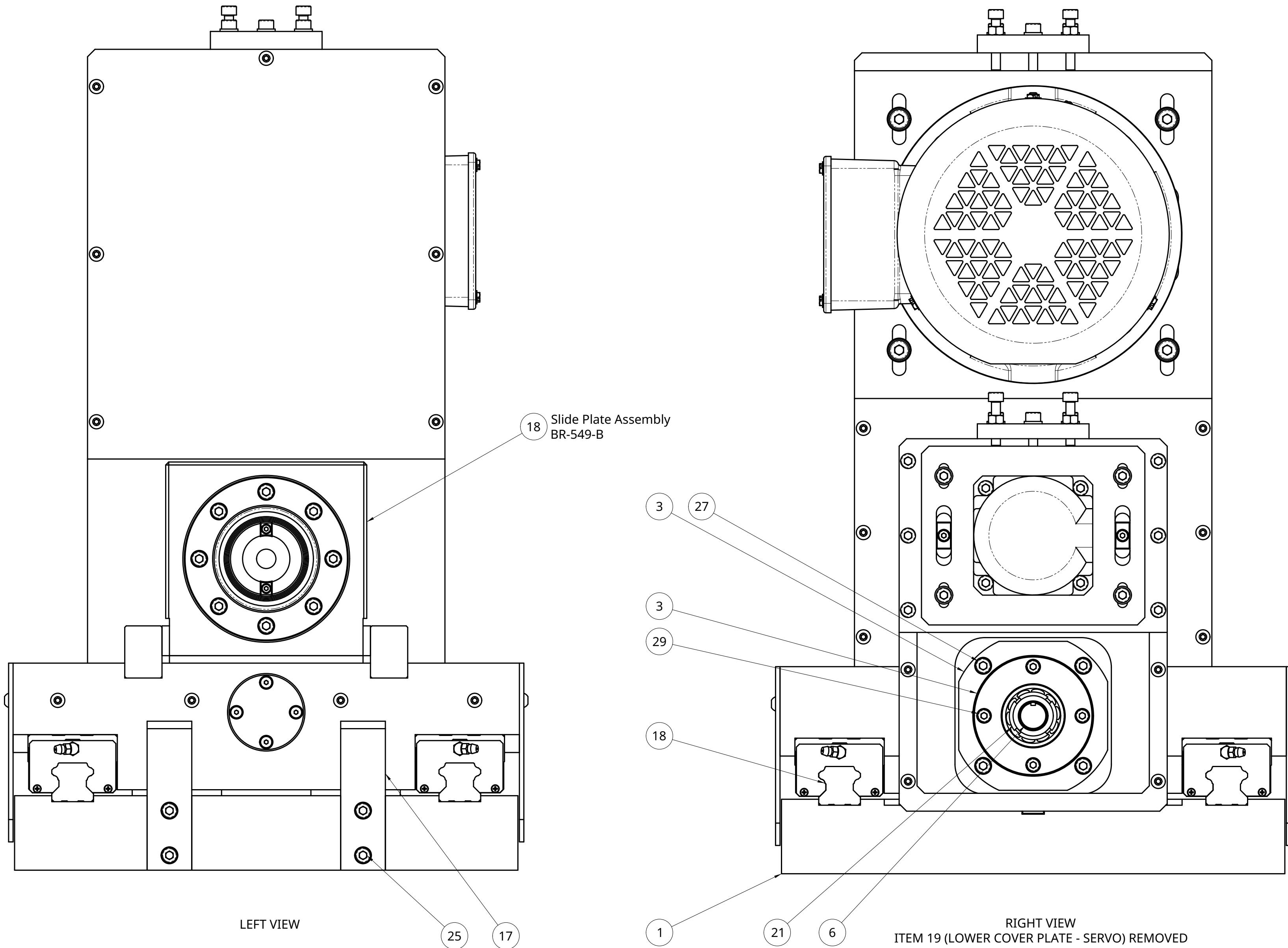
4

3

2

1





UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES		NAME	DATE
.XX ± .XX	.XXX ± .XXX	BRIAN BRADY	10/14/2019
XXXX ± .XXX	ANGULAR ± *	FRACTIONAL ± *	
XXXX ± .000	SURFACE FINISH	CHECKED	
		APPROVED	
DO NOT SCALE DRAWING			
BREAK ALL SHARP EDGES AND REMOVE BURRS			
THIRD ANGLE PROJECTION		MATERIAL	VOLUME
			XXXXXX mm ³
SCALE 1:2	WEIGHT X.XXX kg	SHEET 5 of 6	REV.

Ferris State University

DRILL UNIT
MAIN ASSEMBLY
RIGHT AND LEFT VIEWS

SIZE C DWG NO. BR-549-C REV.

4

3

2

1

D

D

C

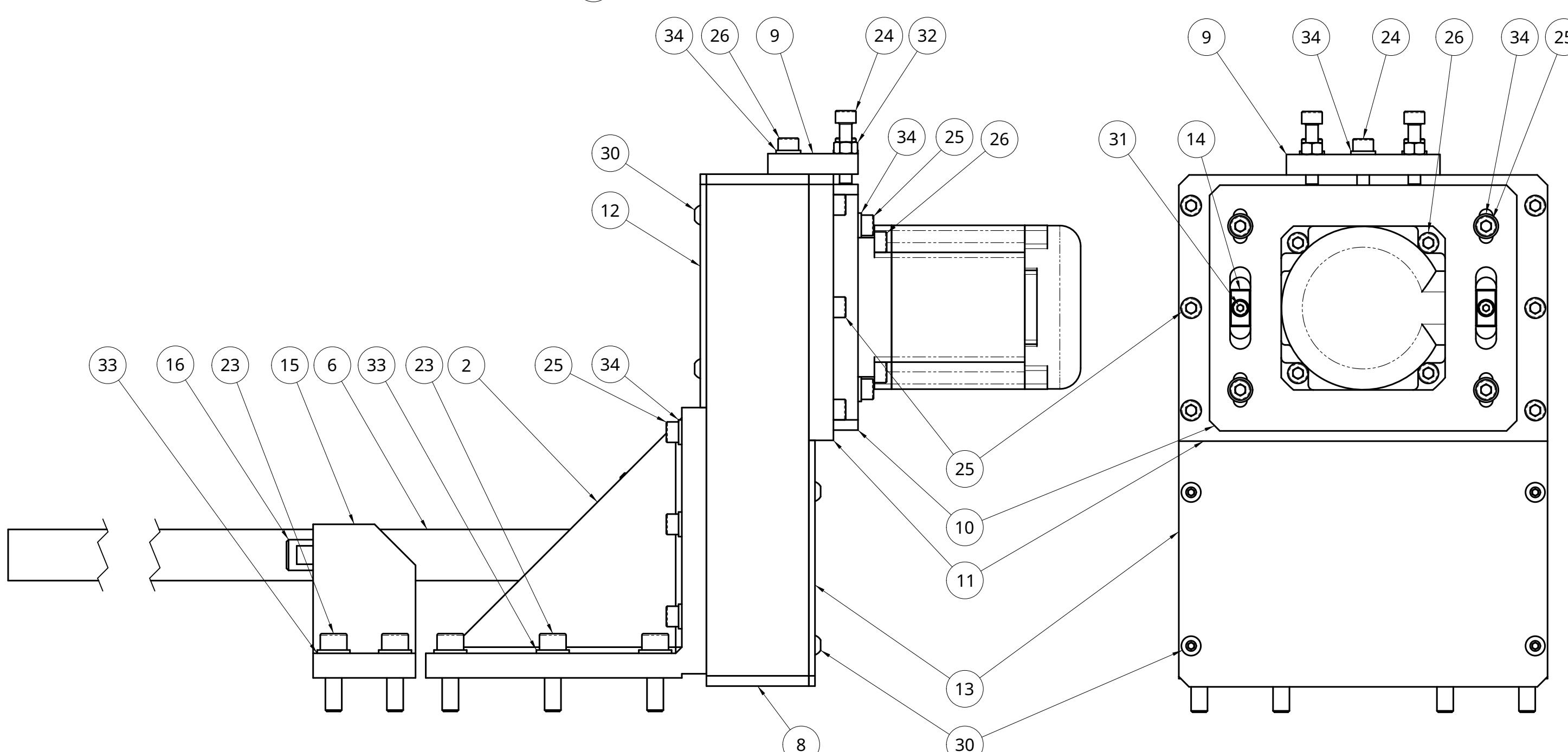
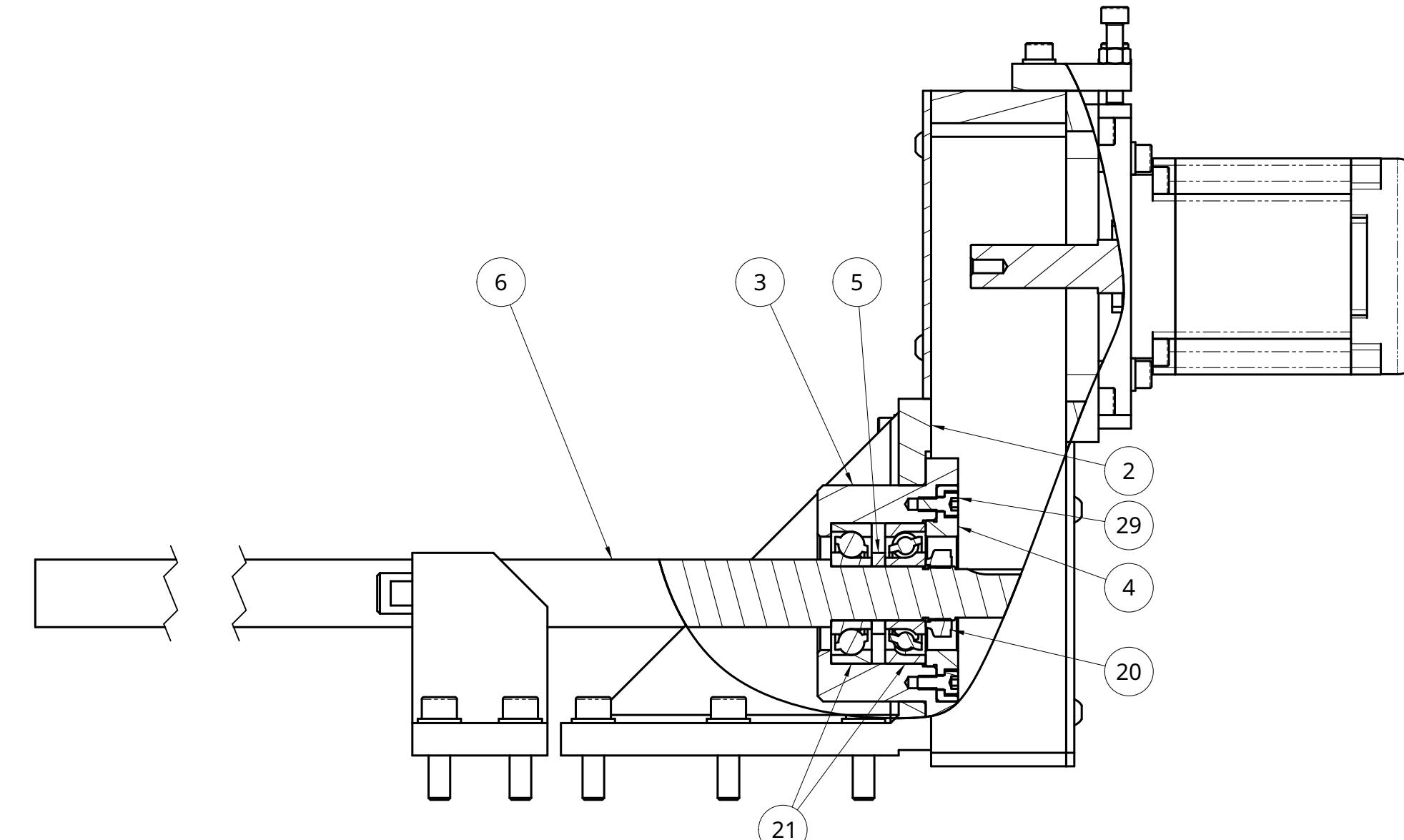
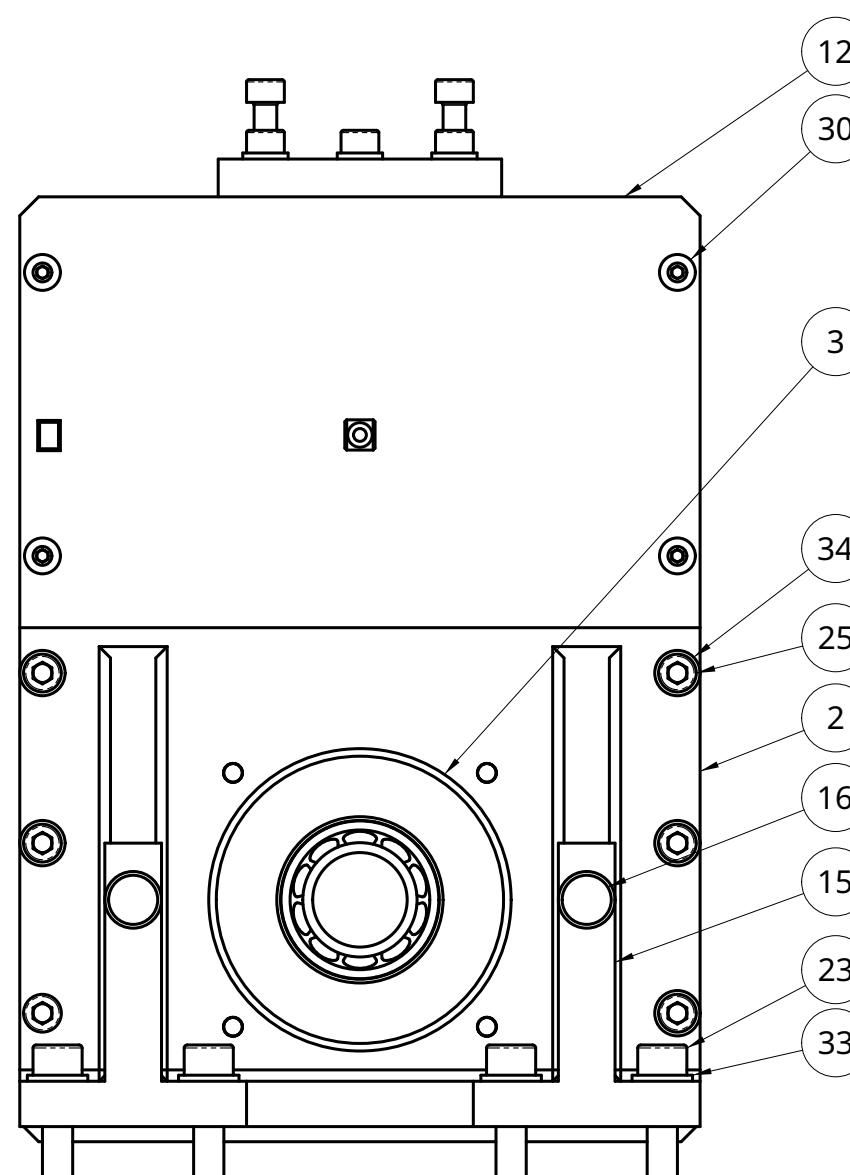
C

B

B

A

A



UNLESS OTHERWISE SPECIFIED, .XX ± .D. .XXX ± .00. .XXXX ± .000. SURFACE FINISH	NAME DRAWN CHECKED APPROVED	DATE 10/14/2019
Ferris State University		
DRILL UNIT MAIN ASSEMBLY BALL SCREW AND SERVO DETAILS		
SIZE C DWG NO. BR-549-C REV.		
SCALE 1:2	WEIGHT X.XXX kg	Sheet 6 of 6