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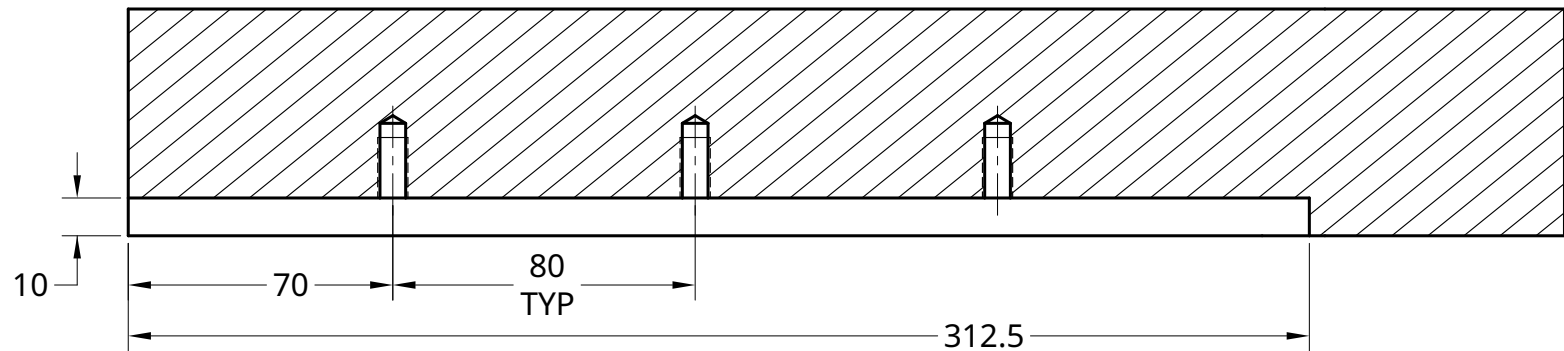
C

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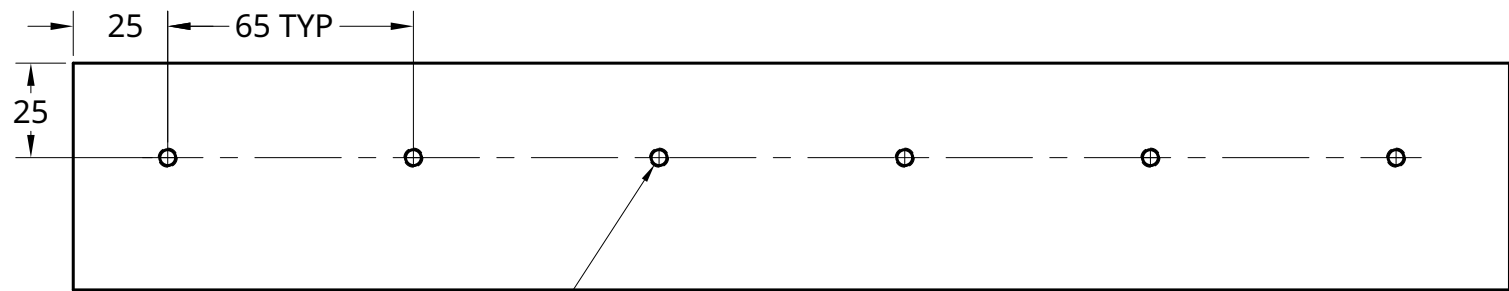
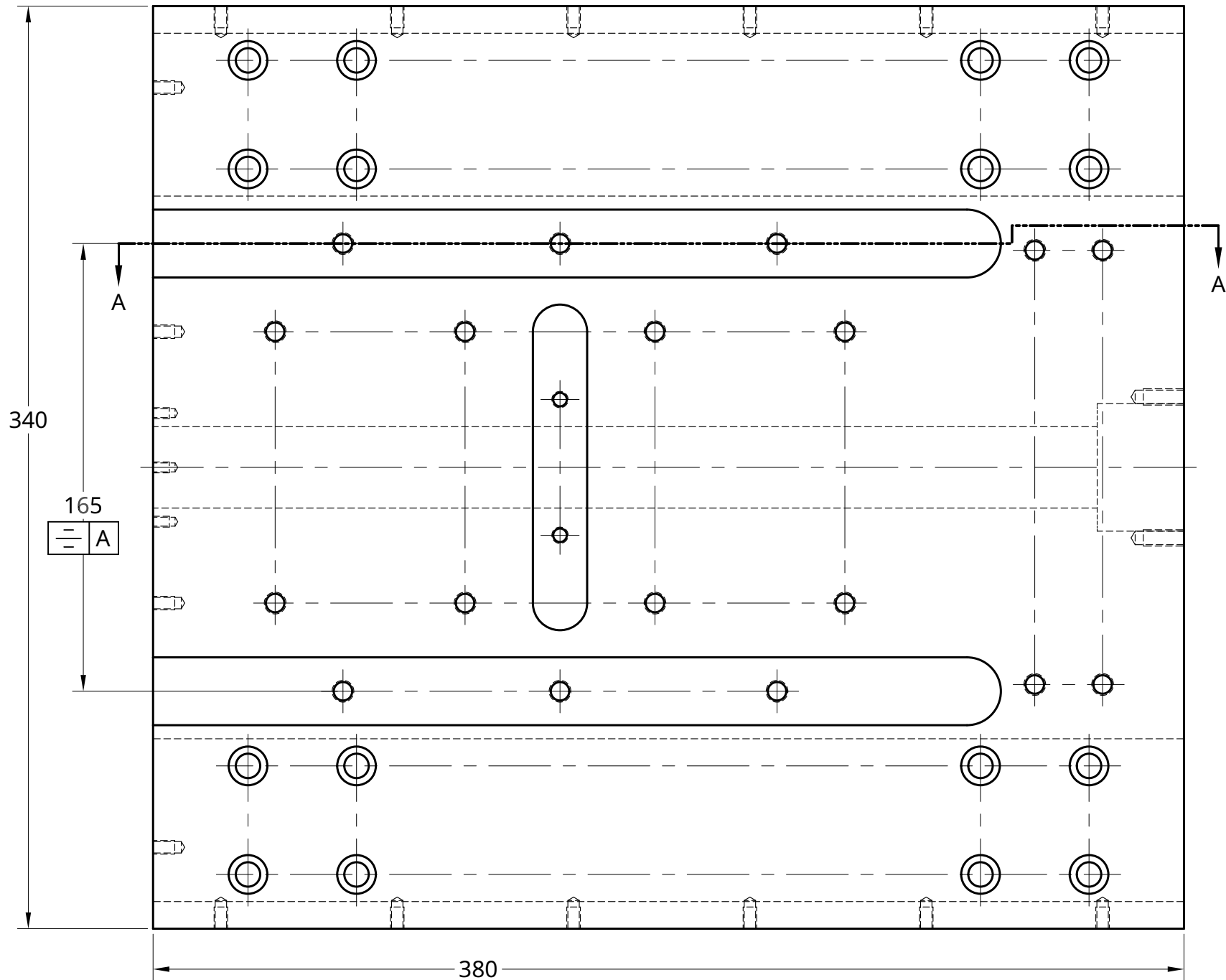
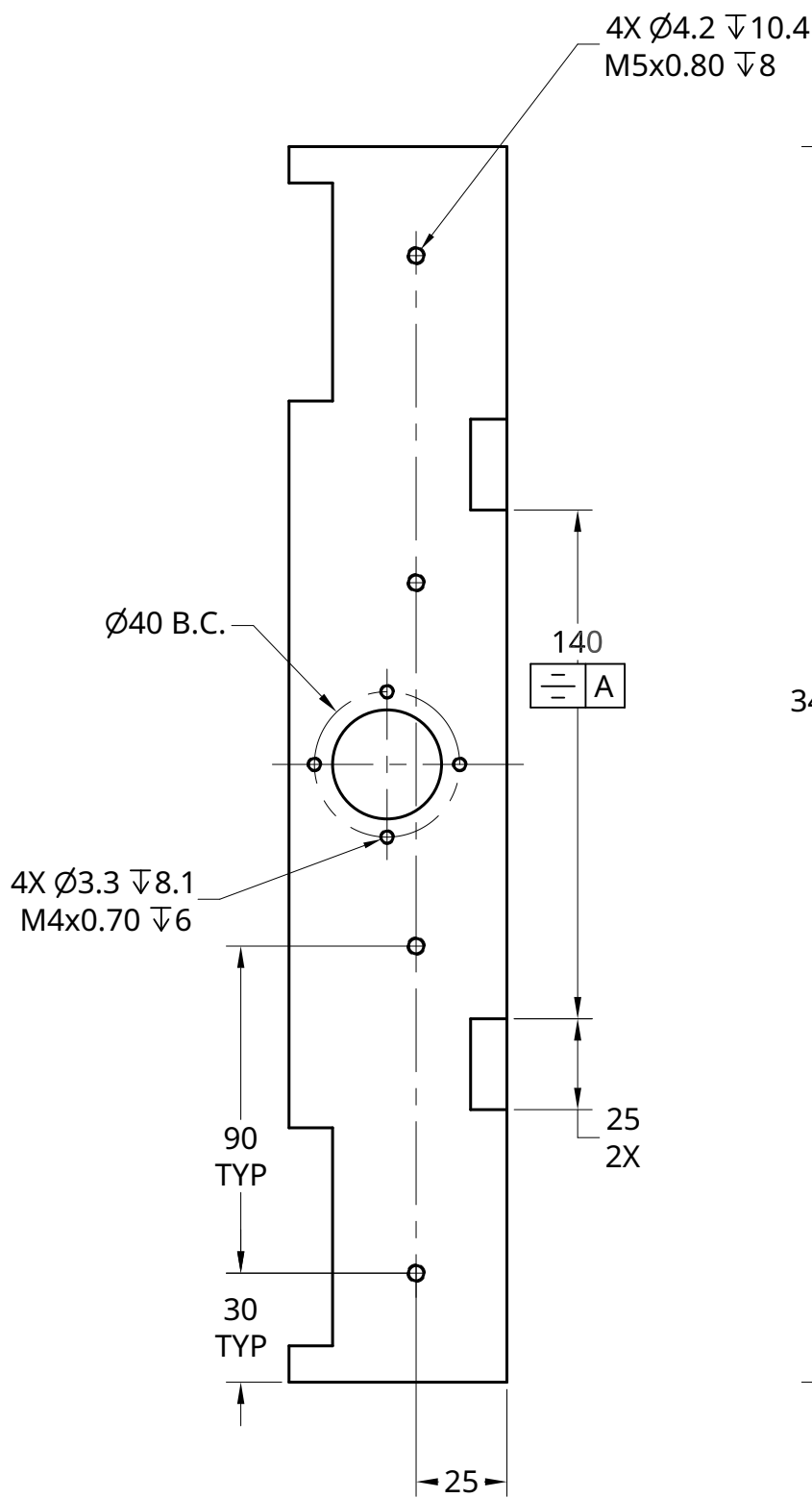
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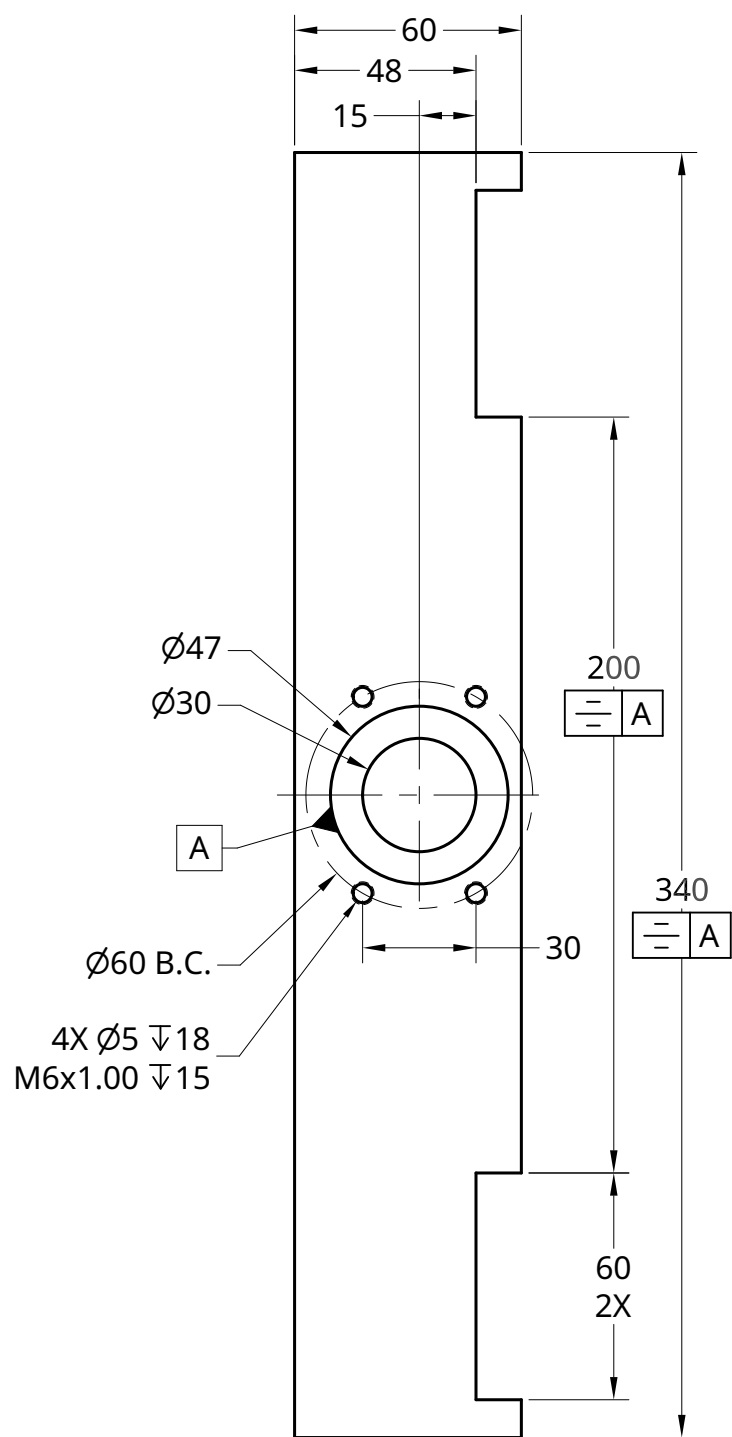
A





SECTION A - A
2 PLACES



12X Ø4.2 ∇ 10.4
M5x0.80 ∇ 8
6X THIS SIDE,
6X OTHER SIDE



UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES XX = ±.01 XXX = ±.005 XXXX = ±.0005 SURFACE FINISH  DO NOT SCALE DRAWING BREAK ALL SHARP EDGES AND REMOVE BURRS THIRD ANGLE PROJECTION 		NAME		DATE		Ferris State University									
		DRAWN		10/16/2019											
		CHECKED													
		APPROVED													
						TITLE									
						DRILL UNIT SLIDE PLATE ASSEMBLY DETAILS SLIDE PLATE									
						SIZE		C		COWG NO.		BR-549-B-001		REV.	
						SCALE		1:2		WEIGHT		52.246 kg		SHEET 1 of 16	
		MATERIAL		VOLUME											
		STEEL 8620		6655558 mm³											

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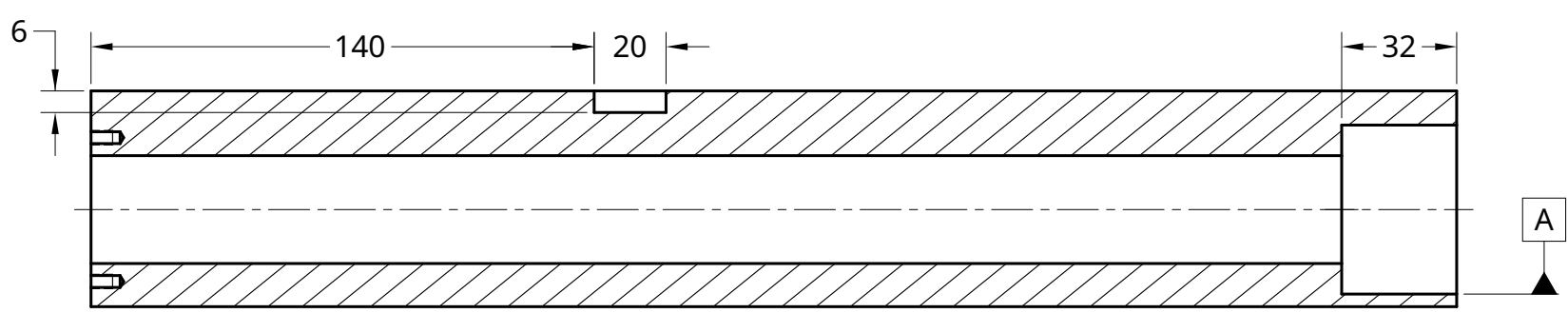
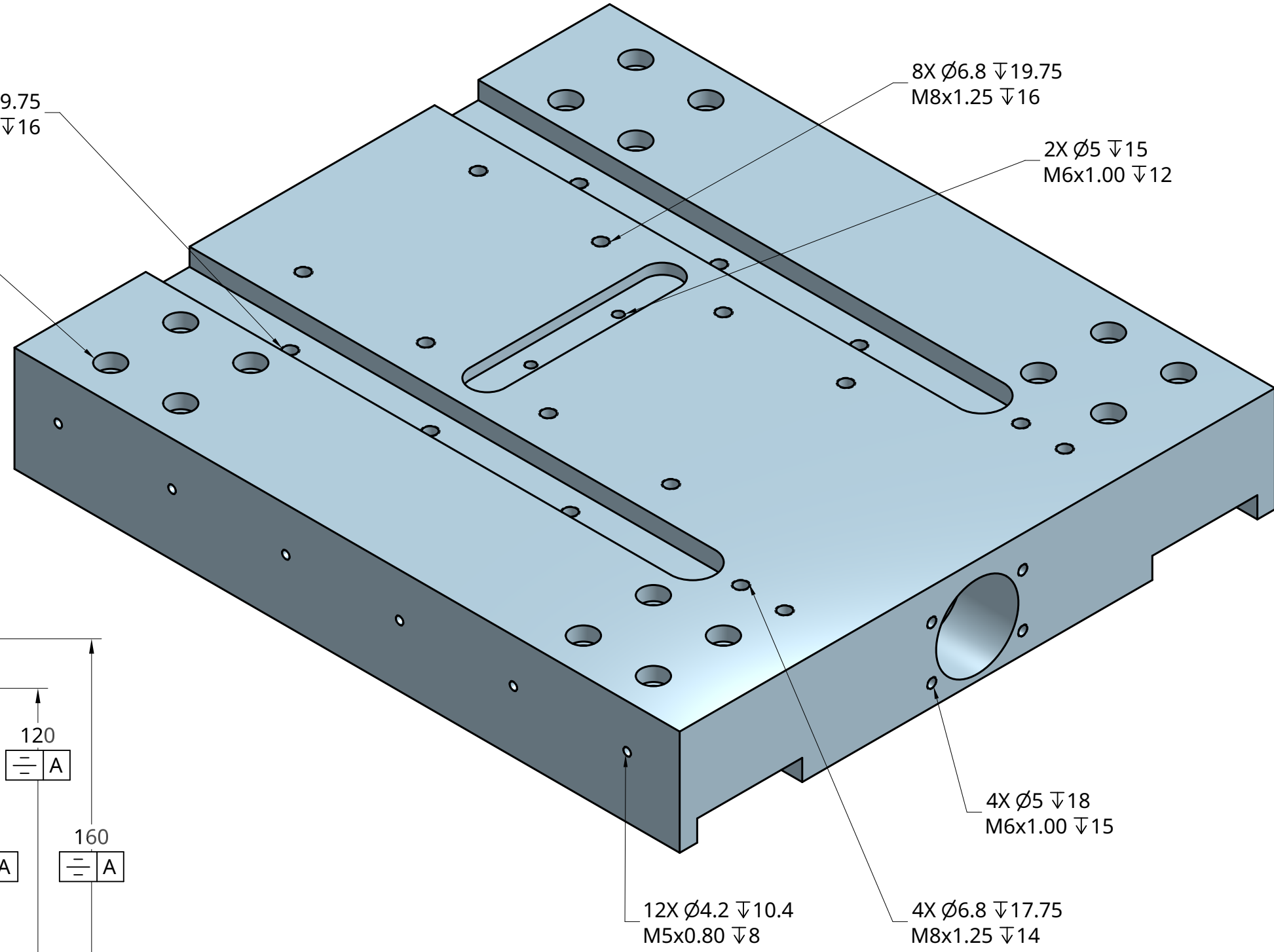
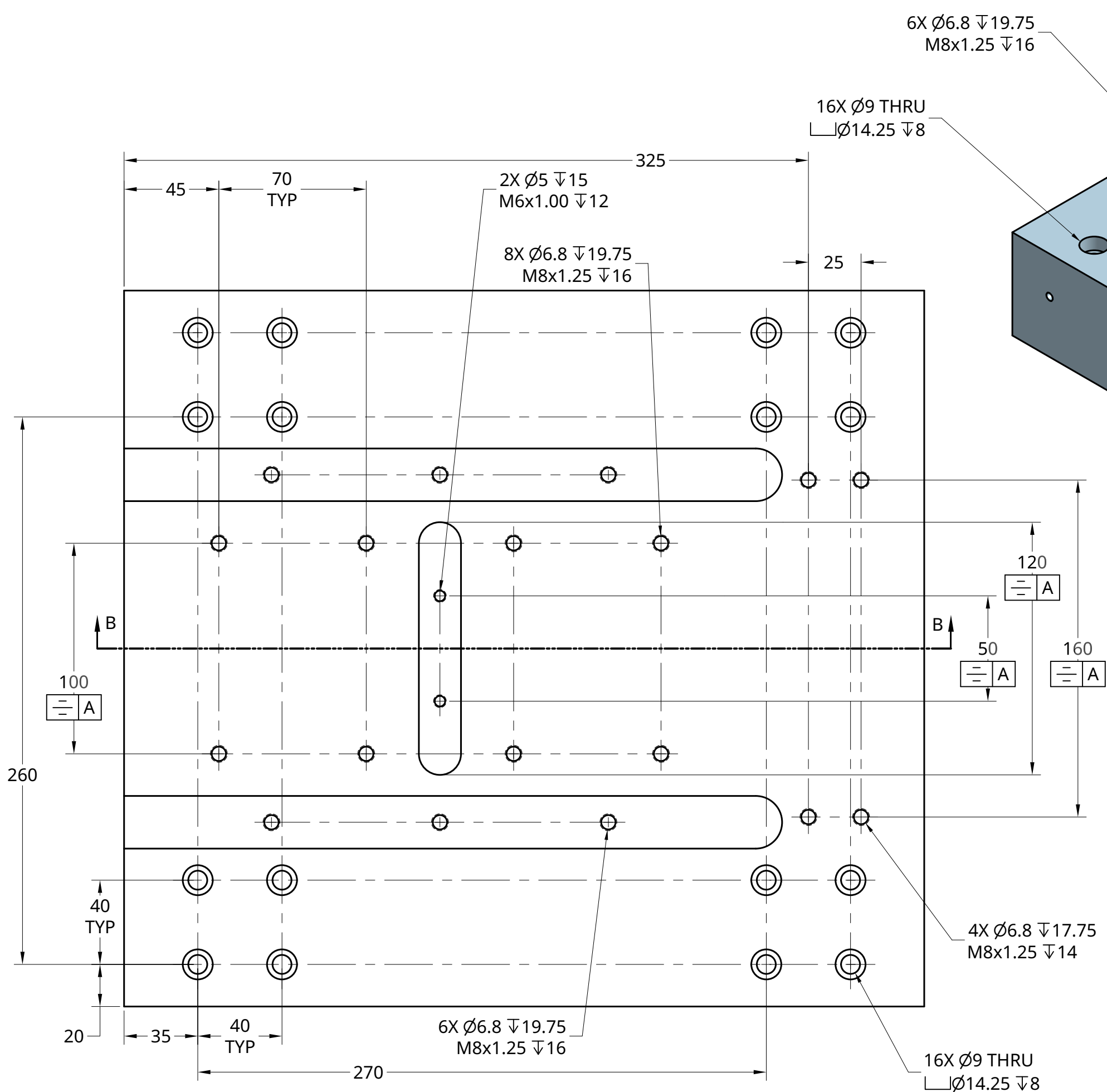
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
C

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SECTION B - B

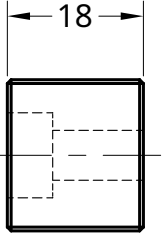
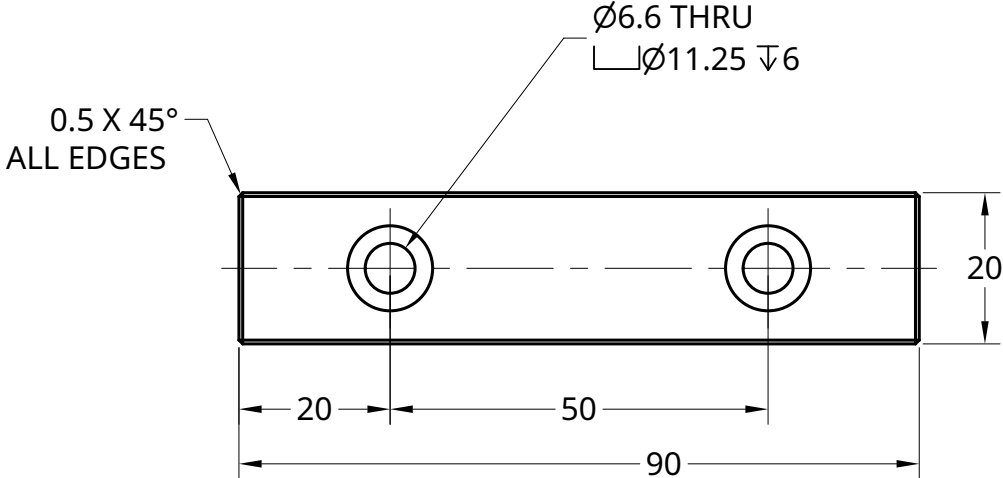
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .00X = ±.00- ANGULAR = ± ° .000X = ±.000- FRACTIONAL = ± SURFACE FINISH 		NAME BRIAN BRADY		DATE 10/16/2019		Ferris State University											
DRAWN		CHECKED		APPROVED		TITLE DRILL UNIT SLIDE PLATE ASSEMBLY DETAILS SLIDE PLATE											
DO NOT SCALE DRAWING		MATERIAL		VOLUME								SIZE		DWG NO.		REV.	
BREAK ALL SHARP EDGES AND REMOVE BURRS		THIRD ANGLE PROJECTION		SCALE								WEIGHT		SHEET		2 of 16	
		STEEL 8620		665558 mm³		1:2		52.246 kg		2 of 16							



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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.0- .XXX = ±.00- .XXXX = ±.000- ANGULAR = ± ° FRACTIONAL = ± SURFACE FINISH 		NAME		DATE		Ferris State University DRILL UNIT SLIDE PLATE ASSEMBLY DETAILS 20 X 18 X 90 KEY					
DO NOT SCALE DRAWING		DRAWN		BRIAN BRADY						10/16/2019	
BREAK ALL SHARP EDGES AND REMOVE BURRS		CHECKED									
THIRD ANGLE PROJECTION 		APPROVED									
		MATERIAL		VOLUME		SIZE		DWG NO.		REV.	
		STEEL 4130		30323 mm³		A		BR-549-B-002			
						SCALE		1:1		WEIGHT	
								0.238 kg		SHEET	
										3 of 16	

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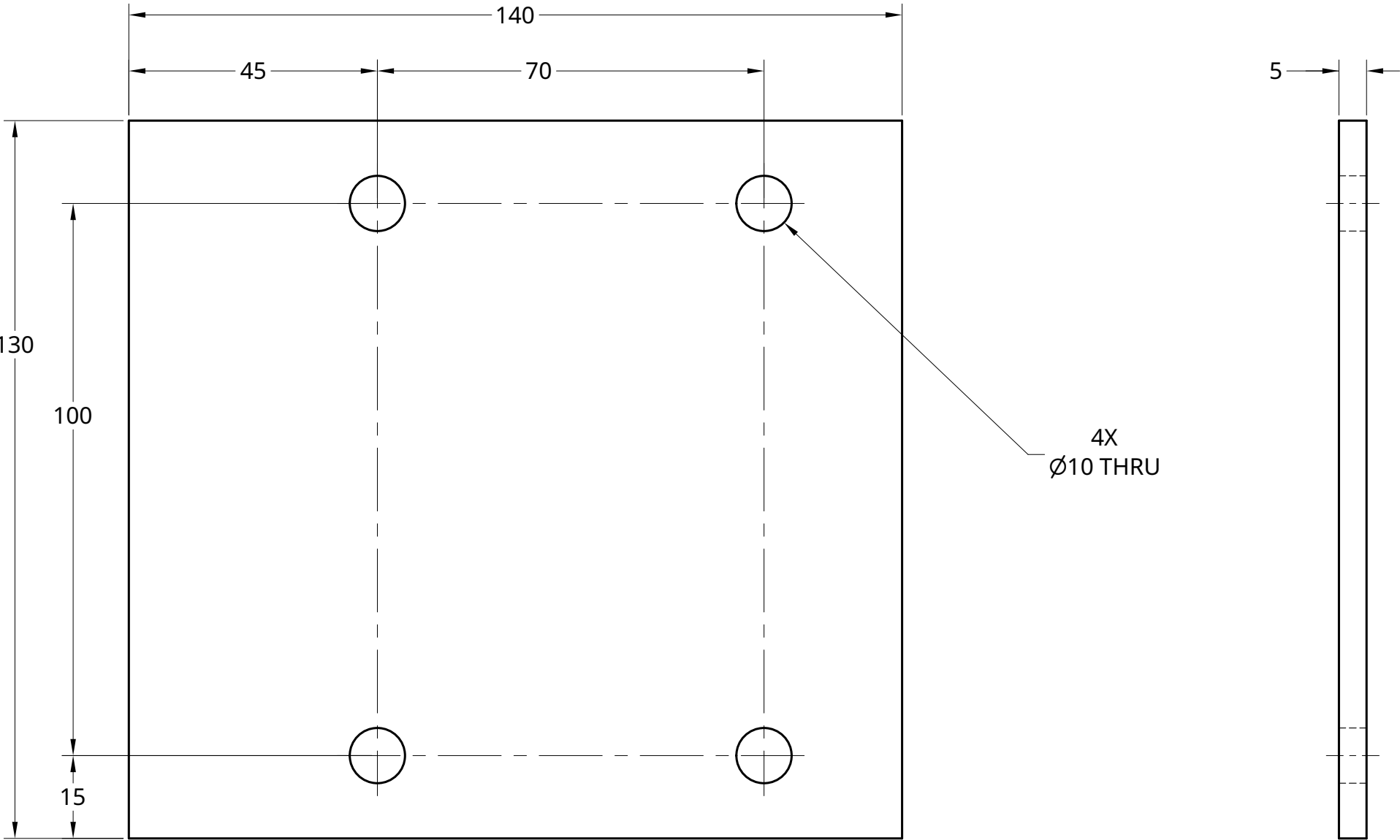
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
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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.0- .XXX = ±.00- .XXXX = ±.000- SURFACE FINISH  DO NOT SCALE DRAWING BREAK ALL SHARP EDGES AND REMOVE BURRS	NAME		DATE	Ferris State University		
	DRAWN	BRIAN BRADY	10/16/2019			
	CHECKED					
	APPROVED					
	THIRD ANGLE PROJECTION 		MATERIAL	VOLUME	SIZE	REV.
		STEEL 1020	89429 mm³	B	DWG NO. BR-549-B-003	
		SCALE 1:1	WEIGHT 0.704 kg	SHEET 4 of 16		

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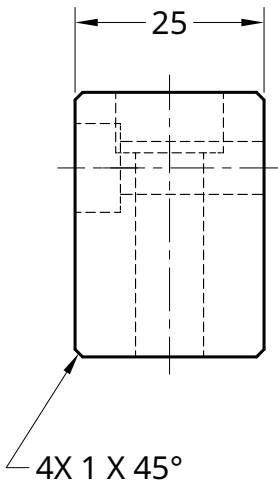
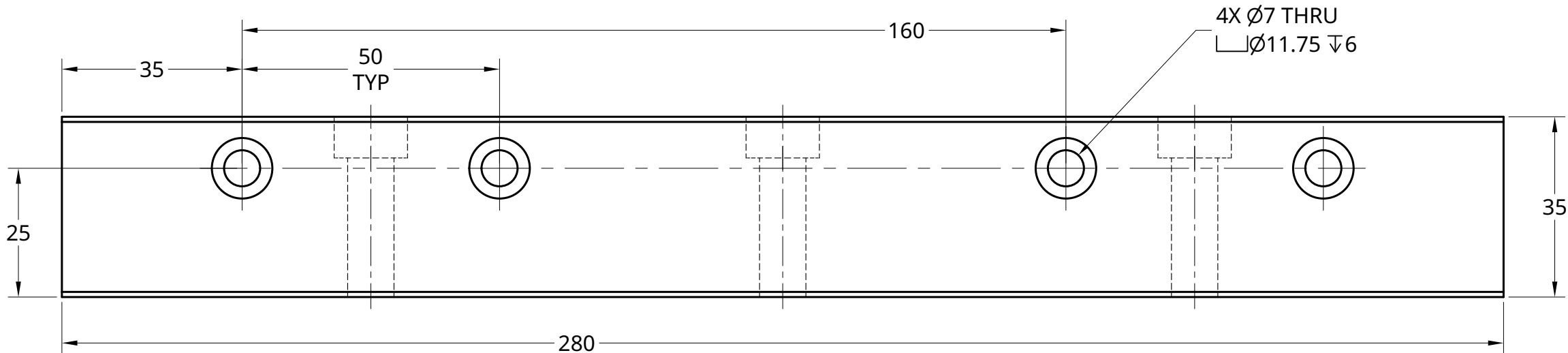
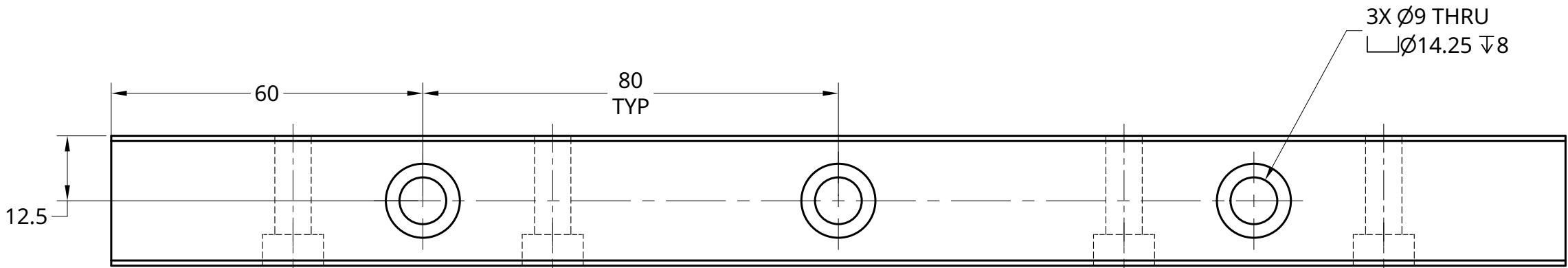
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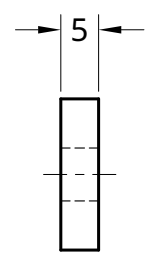
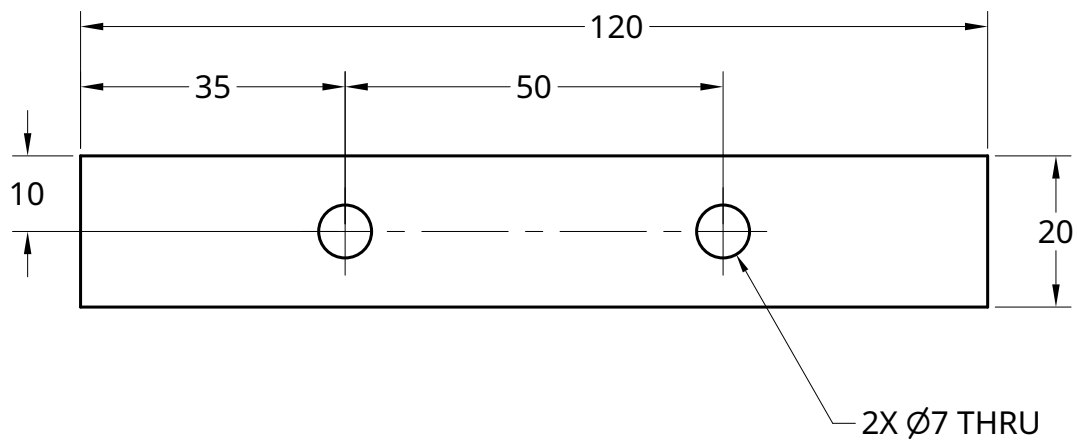
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.0- .XXX = ±.00- .XXXX = ±.000- SURFACE FINISH ✓ DO NOT SCALE DRAWING BREAK ALL SHARP EDGES AND REMOVE BURRS THIRD ANGLE PROJECTION 	NAME		DATE	Ferris State University DRILL UNIT SLIDE PLATE ASSEMBLY DETAILS PUSH-PULL BLOCK		
	DRAWN	BRIAN BRADY	10/16/2019			
	CHECKED					
	APPROVED					
MATERIAL		VOLUME		SIZE	DWG NO.	REV.
STEEL 1020		229932 mm³		B	BR-549-B-004	
SCALE		1:1		WEIGHT	1.810 kg	SHEET 5 of 16



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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.0- .XXX = ±.00- .XXXX = ±.000- ANGULAR = ±° FRACTIONAL = ± SURFACE FINISH  DO NOT SCALE DRAWING BREAK ALL SHARP EDGES AND REMOVE BURRS THIRD ANGLE PROJECTION 		NAME		DATE		Ferris State University										
		DRAWN		BRIAN BRADY							10/16/2019					
		CHECKED						TITLE DRILL UNIT SLIDE PLATE ASSEMBLY DETAILS PUSH-PULL FITTING SPACER								
		APPROVED														
MATERIAL		STEEL 1020		VOLUME		11615 mm³		SIZE	DWG NO.		BR-549-B-005		REV.			
								A								
								SCALE	1:1		WEIGHT		0.091 kg	SHEET	6 of 16	

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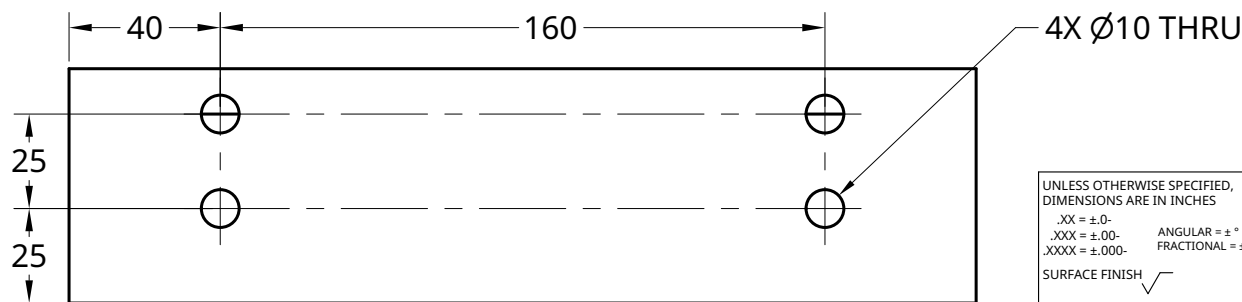
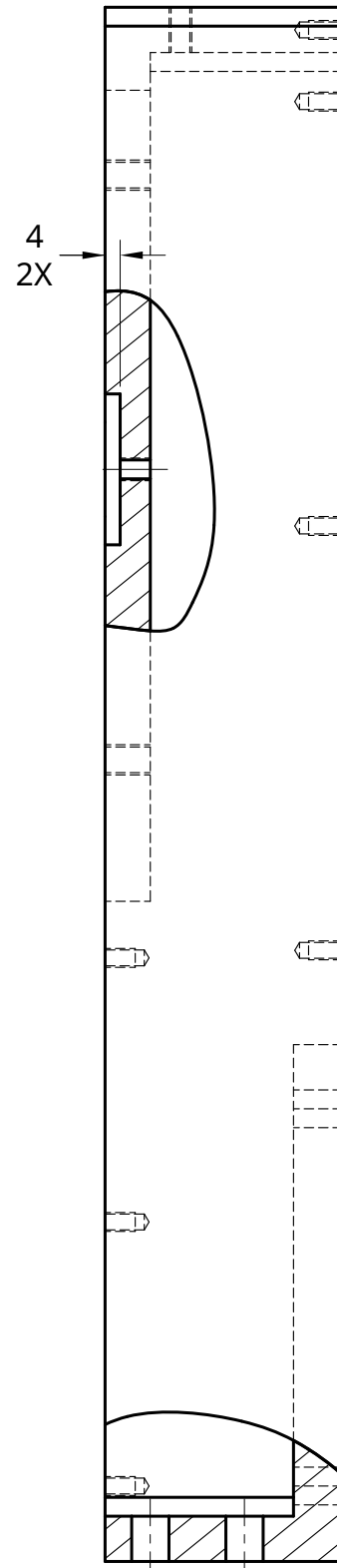
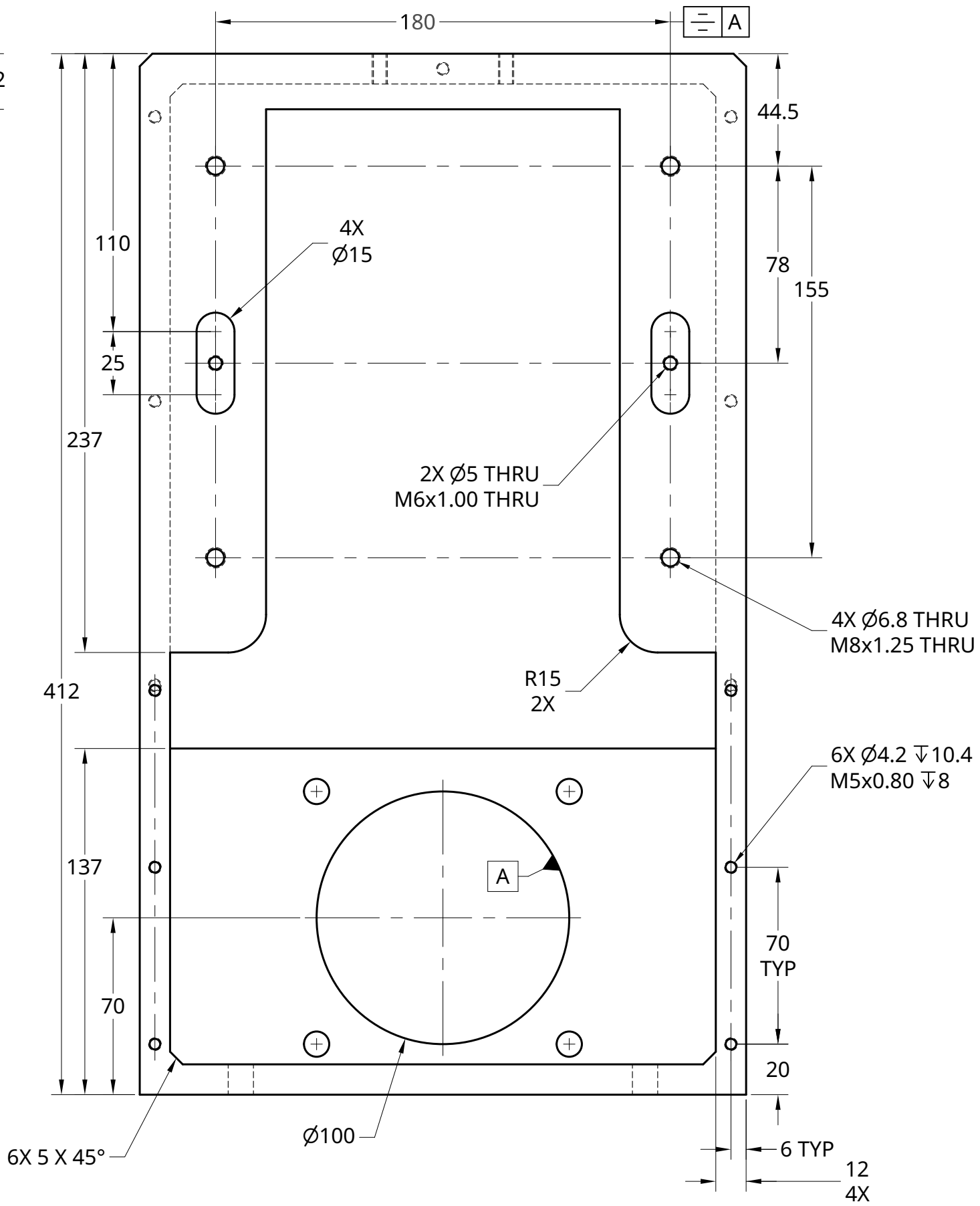
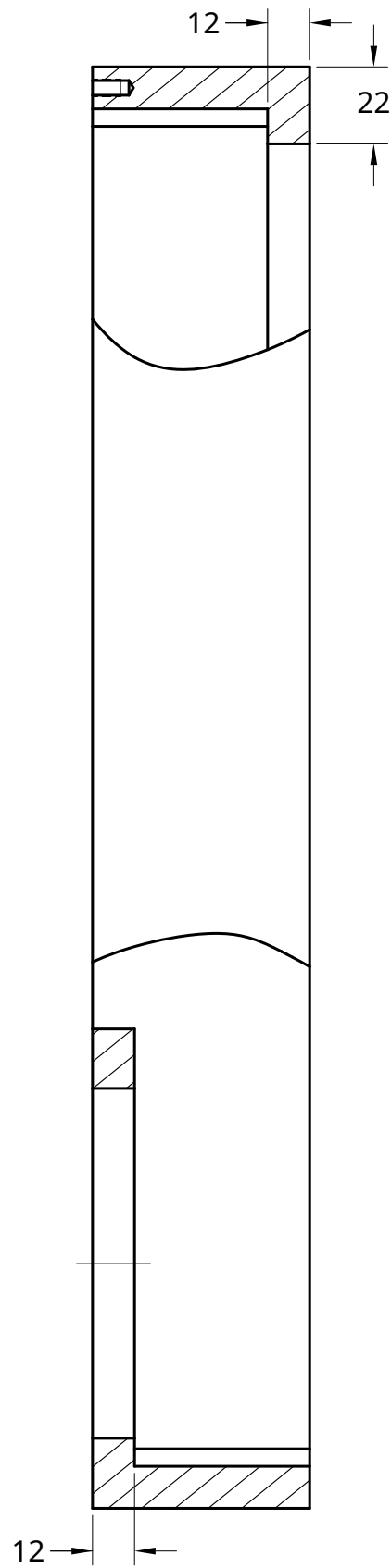
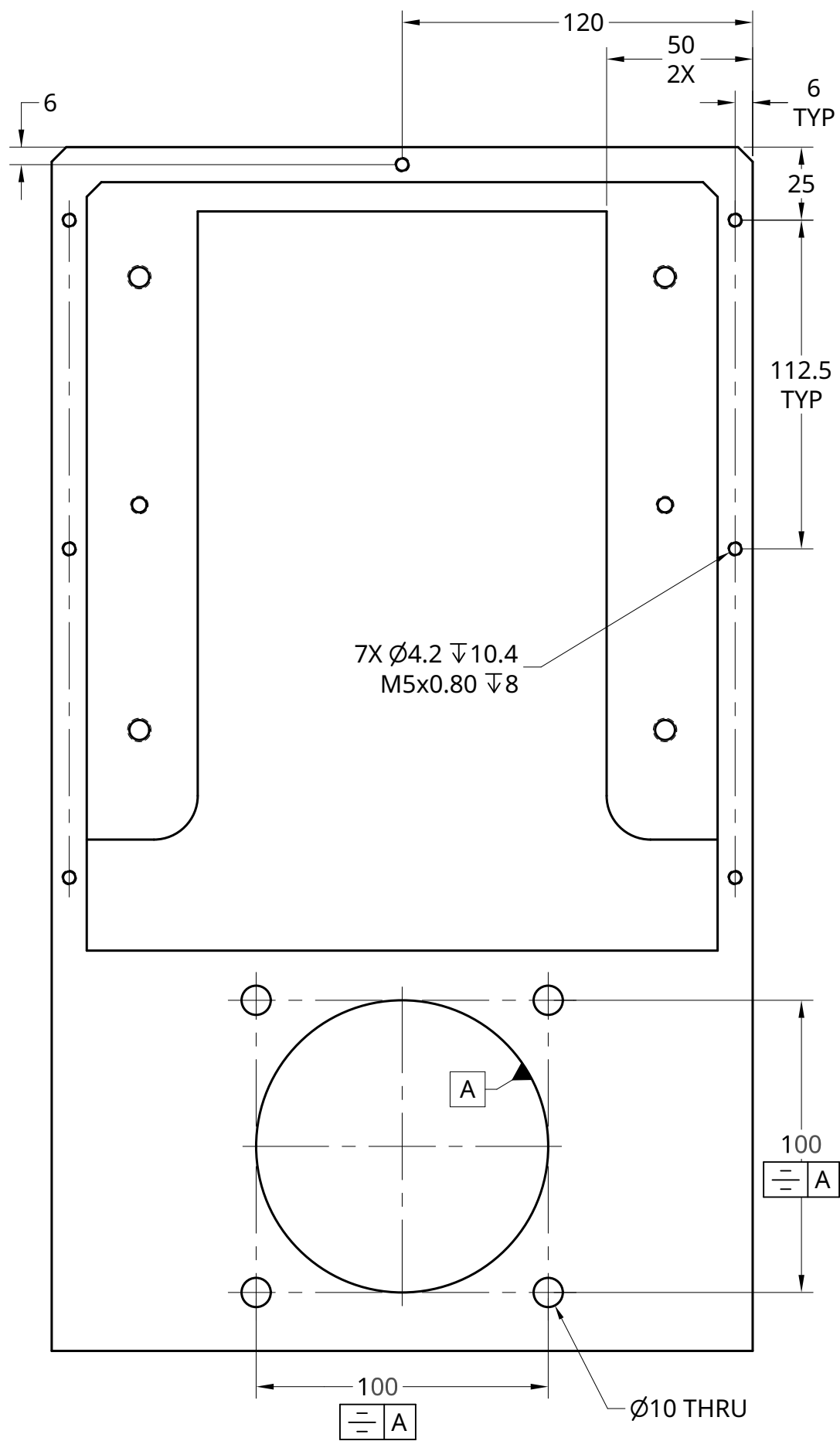
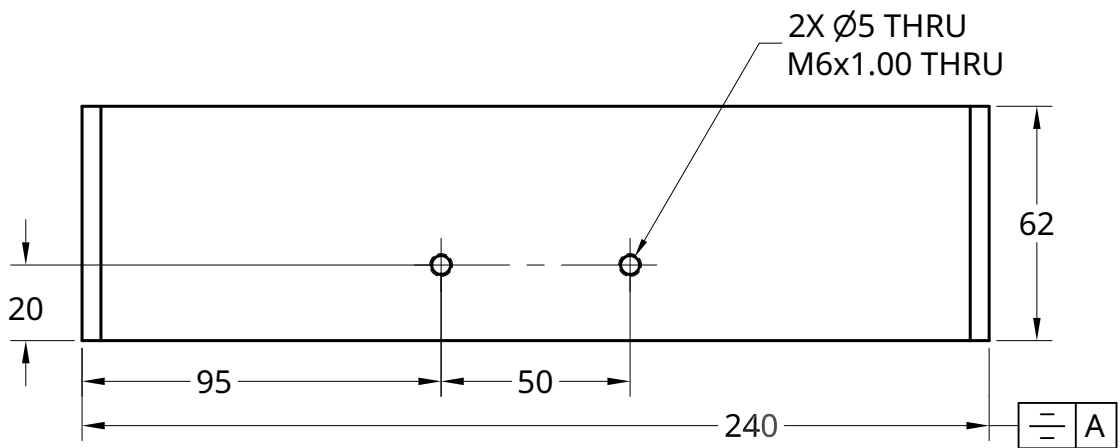
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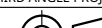
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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XXX = ±.01 .000X = ±.000 SURFACE FINISH  DO NOT SCALE DRAWING BREAK ALL SHARP EDGES AND REMOVE BURRS THIRD ANGLE PROJECTION 		NAME		DATE		Ferris State University TITLE DRILL UNIT SLIDE PLATE ASSEMBLY DETAILS SPINDLE MOTOR MOUNTING FRAME SIZE C DWG NO. BR-549-B-006 REV. 					
		DRAWN		BRIAN BRADY						10/16/2019	
		CHECKED									
		APPROVED									

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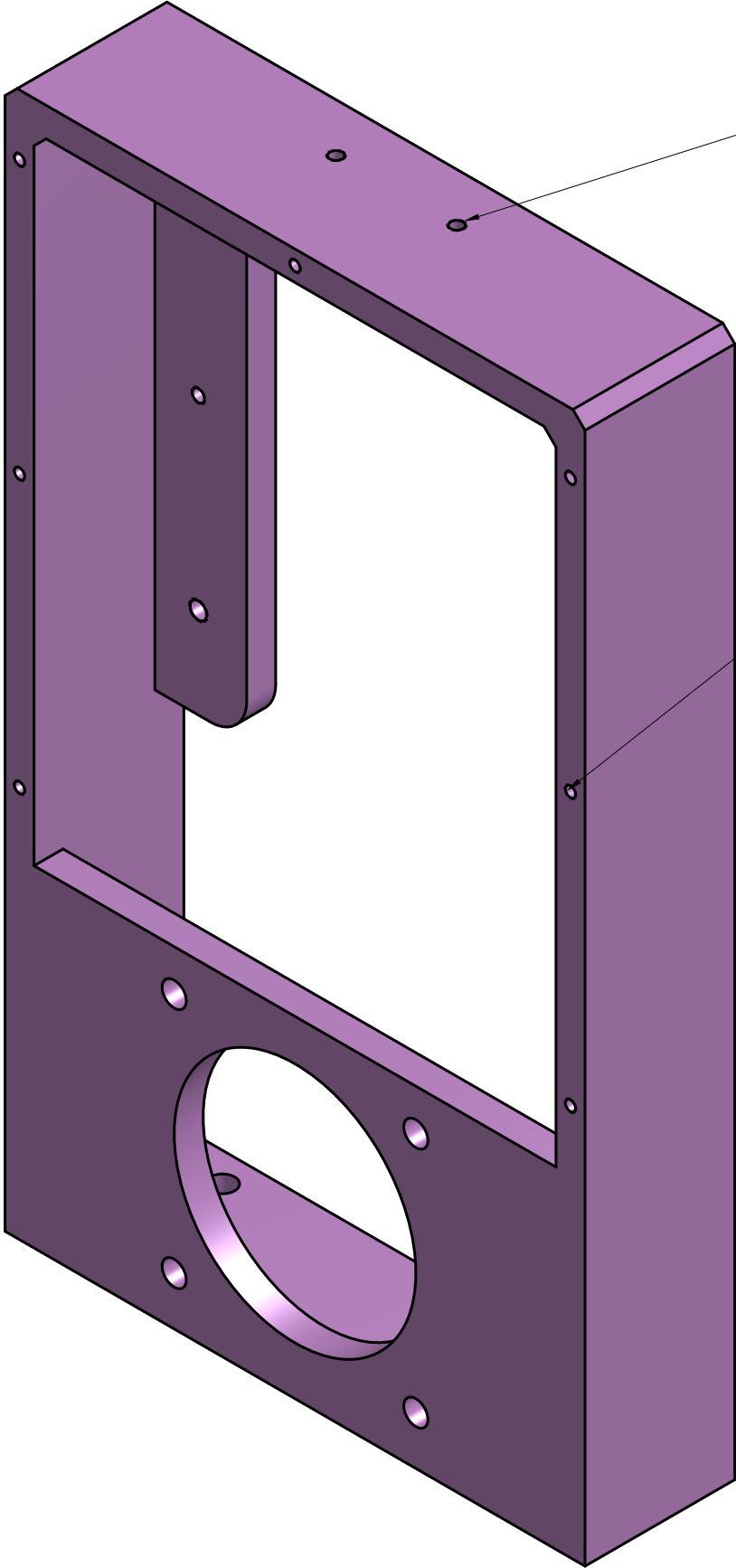
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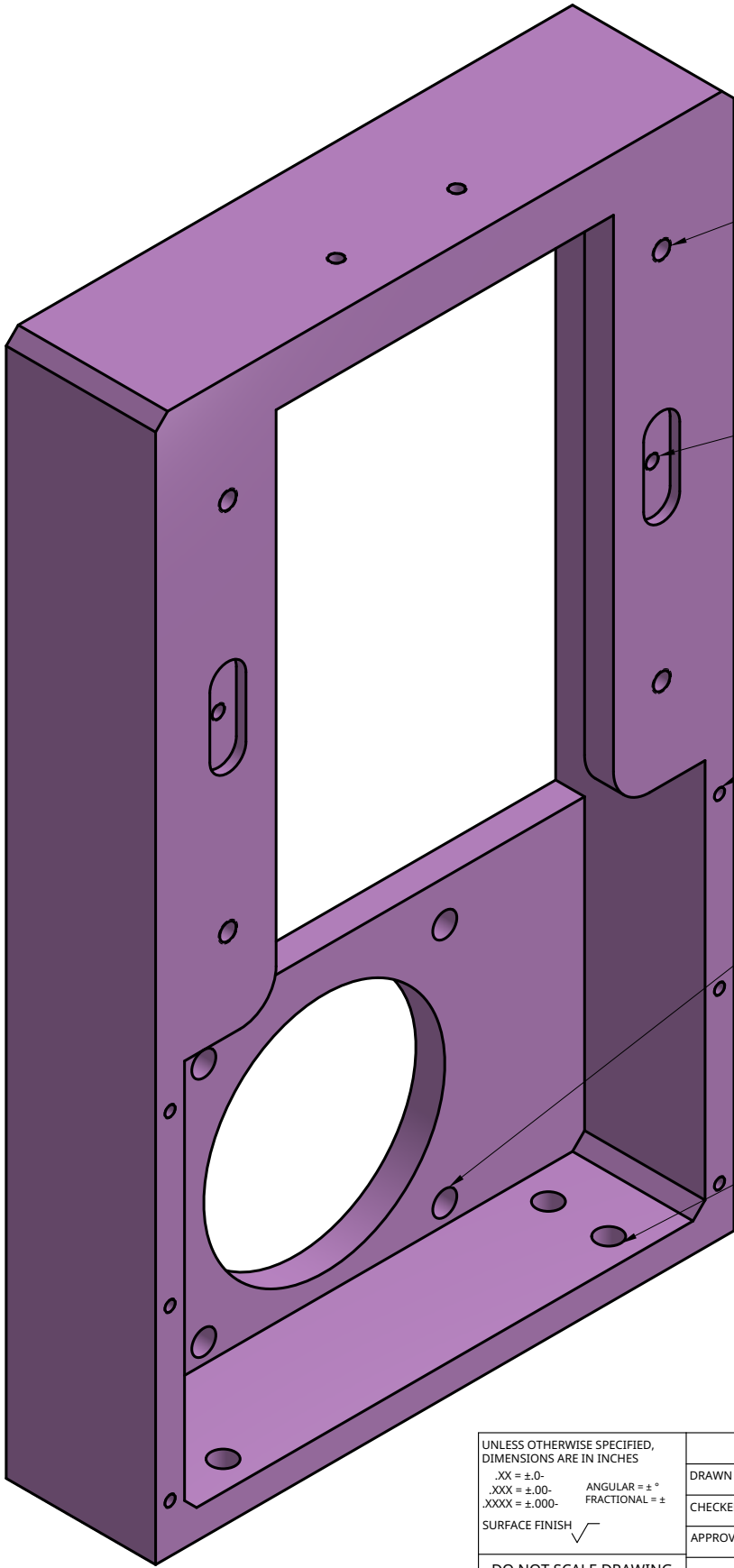
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2X Ø5 THRU
M6x1.00 THRU

7X Ø4.2 ±10.4
M5x0.80 ±8



4X Ø6.8 THRU
M8x1.25 THRU

2X Ø5 THRU
M6x1.00 THRU

6X Ø4.2 ±10.4
M5x0.80 ±8

4X Ø10 THRU

4X Ø10 THRU

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.0- .XXX = ±.00- .XXXX = ±.000- SURFACE FINISH ✓ DO NOT SCALE DRAWING BREAK ALL SHARP EDGES AND REMOVE BURRS THIRD ANGLE PROJECTION		NAME	DATE	Ferris State University		
		DRAWN	BRIAN BRADY	10/16/2019	TITLE	
		CHECKED			DRILL UNIT	
		APPROVED			SLIDE PLATE ASSEMBLY DETAILS	
					SPINDLE MOTOR MOUNTING FRAME	
		MATERIAL	VOLUME	SIZE	DWG NO.	REV.
		STEEL 1020	1369576 mm³	B	BR-549-B-006	
		SCALE	1:2	WEIGHT	10.784 kg	SHEET 8 of 16

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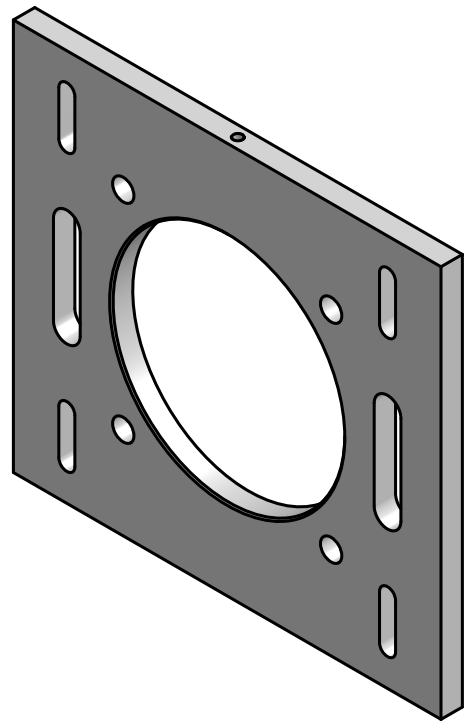
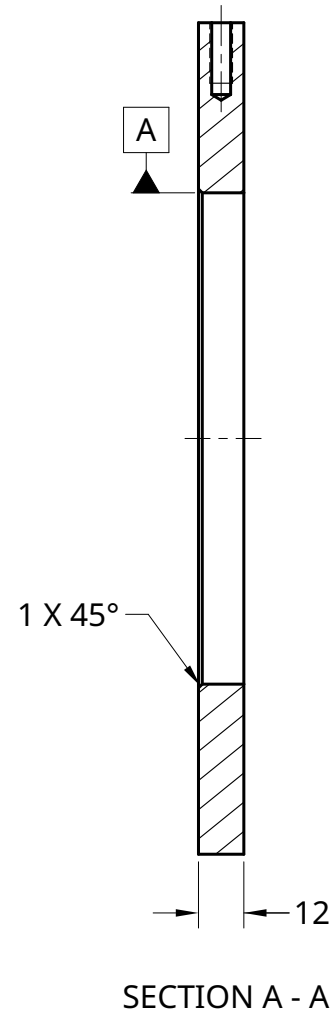
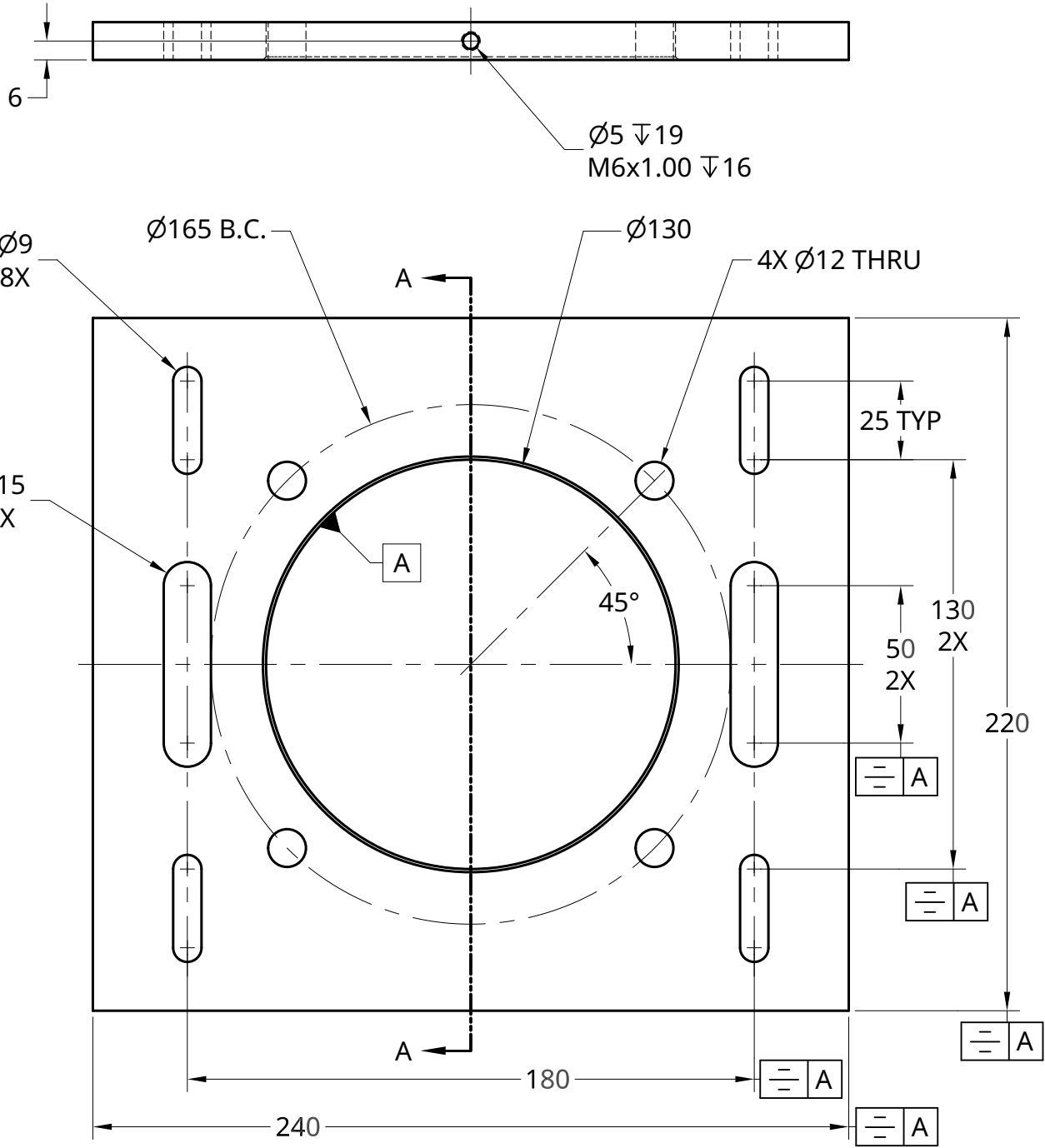
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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.0- .XXX = ±.00- .XXXX = ±.000- SURFACE FINISH ✓ DO NOT SCALE DRAWING BREAK ALL SHARP EDGES AND REMOVE BURRS THIRD ANGLE PROJECTION	NAME		DATE	Ferris State University		
	DRAWN		BRIAN BRADY	10/16/2019	TITLE	
	CHECKED				DRILL UNIT SLIDE PLATE ASSEMBLY DETAILS MOTOR MOUNTING PLATE	
	APPROVED					
					SIZE	REV.
MATERIAL		VOLUME		B	DWG NO.	
STEEL 8620		432210 mm ³			BR-549-B-007	
SCALE		WEIGHT		SHEET		
1:2		3.393 kg		9 of 16		

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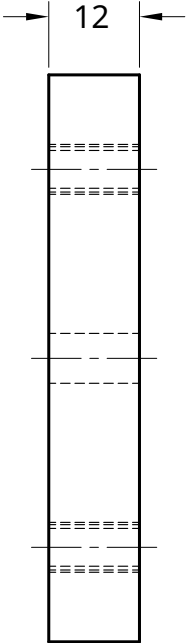
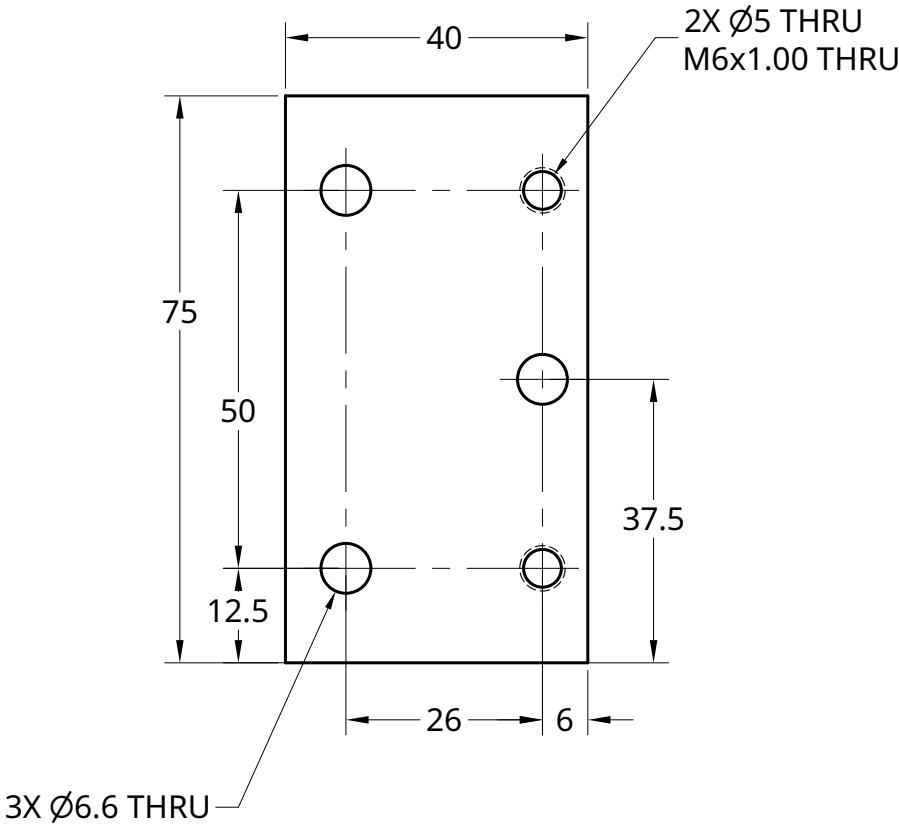
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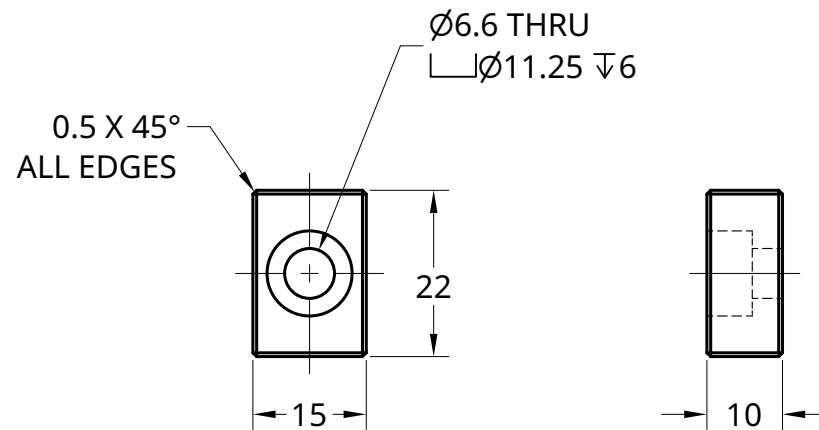
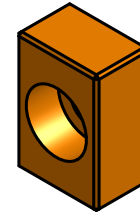
A



UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.0- .XXX = ±.00- .XXXX = ±.000- SURFACE FINISH ✓ DO NOT SCALE DRAWING BREAK ALL SHARP EDGES AND REMOVE BURRS THIRD ANGLE PROJECTION 		NAME	DATE	Ferris State University		
	DRAWN	BRIAN BRADY	10/16/2019	TITLE DRILL UNIT SLIDE PLATE ASSEMBLY DETAILS MOTOR ADJUSTER BLOCK		
	CHECKED					
	APPROVED					
				SIZE B	DWG NO. BR-549-B-008	REV.
	MATERIAL STEEL 1020	VOLUME 34297 mm³		SCALE 1:1	WEIGHT 0.270 kg	SHEET 10 of 16


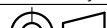
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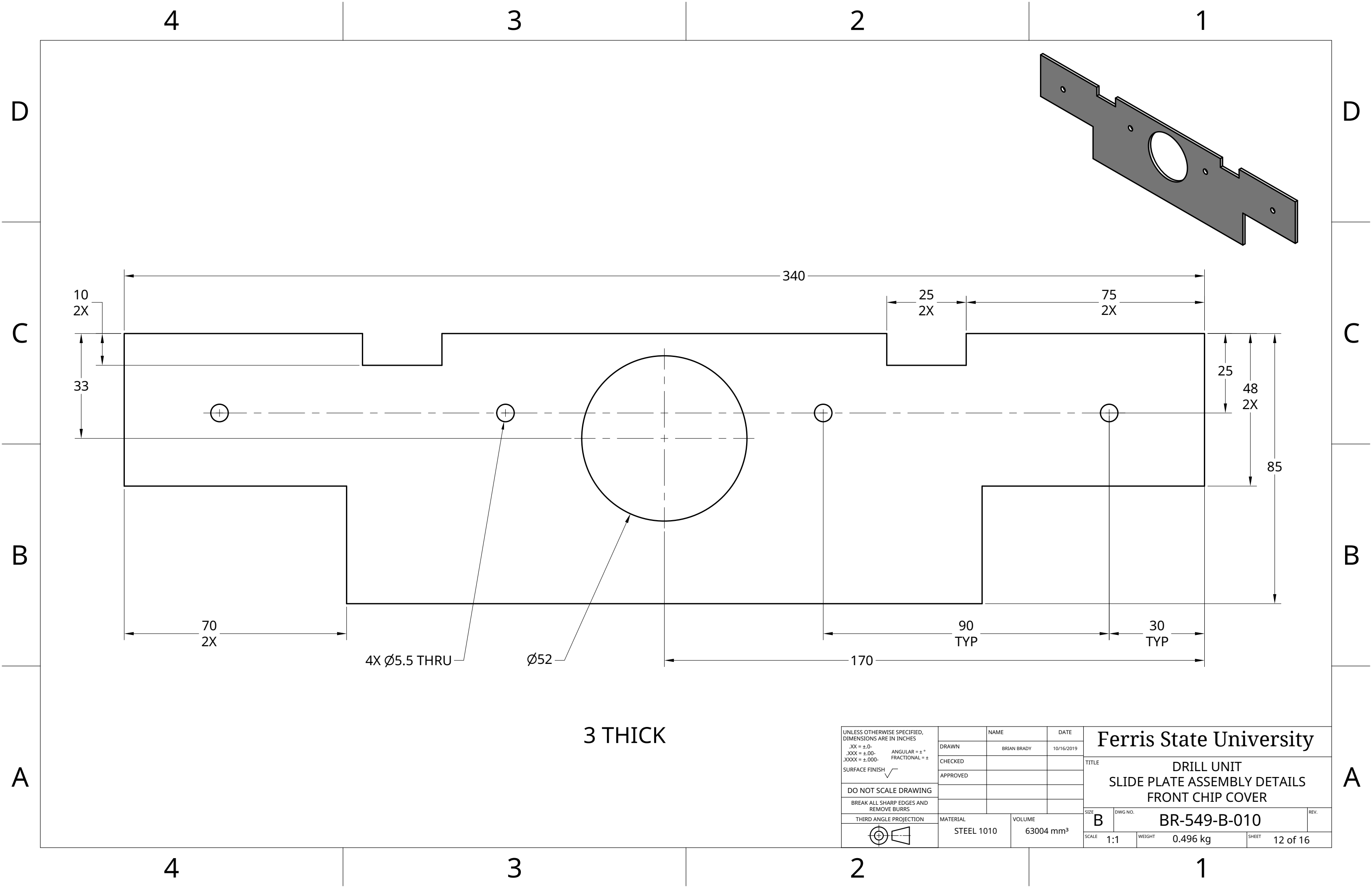
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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.0- .XXX = ±.00- .XXXX = ±.000- ANGULAR = ± ° FRACTIONAL = ± SURFACE FINISH 	NAME		DATE		<div>Ferris State University</div> <div>DRILL UNIT</div> <div>SLIDE PLATE ASSEMBLY DETAILS</div> <div>MEDIUM SLIDE KEY</div>					
	DRAWN		BRIAN BRADY						10/16/2019	
	CHECKED									
	APPROVED									
DO NOT SCALE DRAWING										
BREAK ALL SHARP EDGES AND REMOVE BURRS										
THIRD ANGLE PROJECTION	MATERIAL		VOLUME		SIZE	DWG NO.	REV.			
	STEEL 4130		2544 mm ³		A	BR-549-B-009				
					SCALE	1:1	WEIGHT	0.020 kg		
					SHEET	11 of 16				

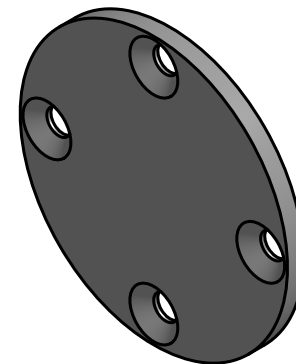
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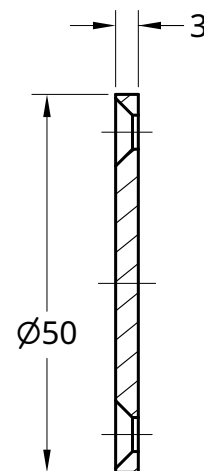
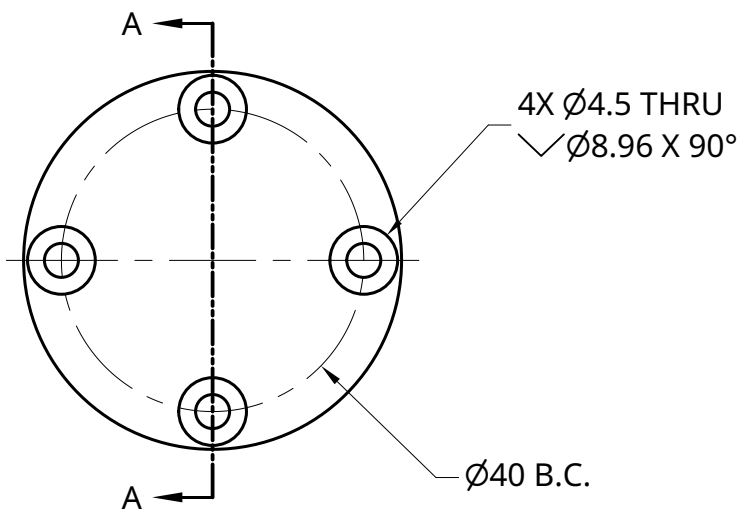
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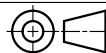
SECTION A - A

UNLESS OTHERWISE SPECIFIED,
DIMENSIONS ARE IN INCHES
.XX = ±.0-
.XXX = ±.00-
.XXXX = ±.000-
SURFACE FINISH

DO NOT SCALE DRAWING

BREAK ALL SHARP EDGES AND
REMOVE BURRS

THIRD ANGLE PROJECTION



NAME

DATE

DRAWN

BRIAN BRADY

10/16/2019

CHECKED

APPROVED

Ferris State University

TITLE
DRILL UNIT
SLIDE PLATE ASSEMBLY DETAILS
BALL SCREW HOLE COVER

SIZE
A

DWG NO.

BR-549-B-011

REV.

SCALE 1:1

WEIGHT

0.043 kg

SHEET

13 of 16

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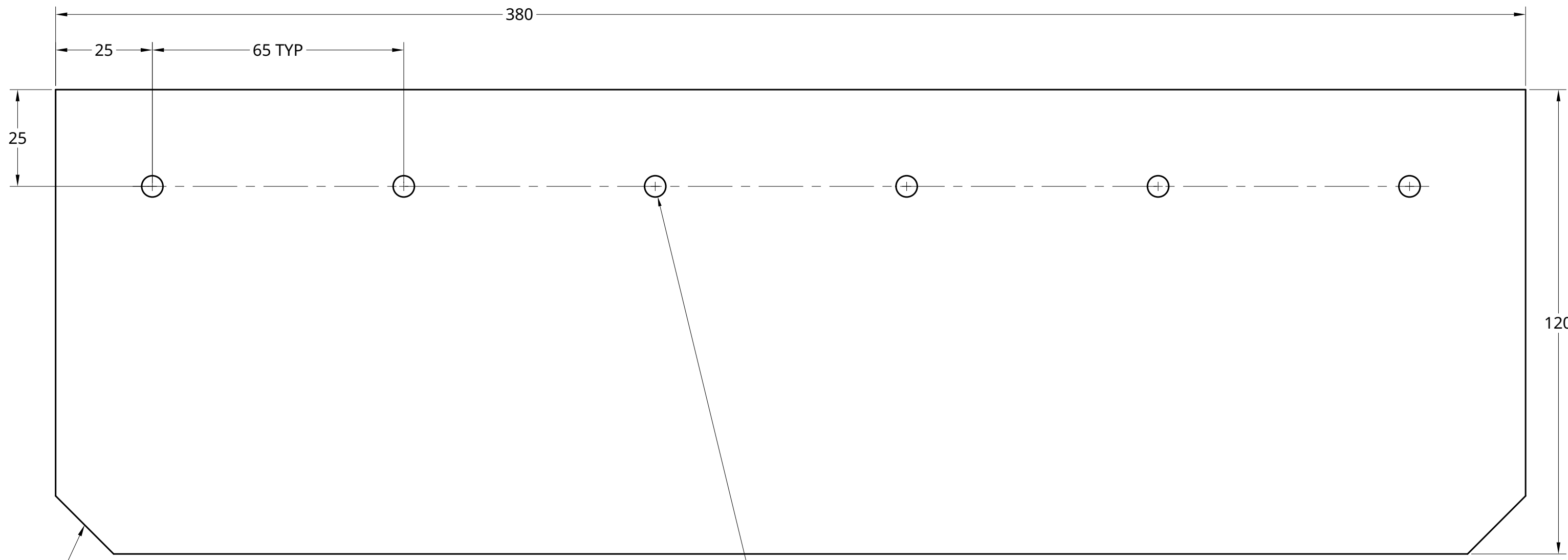
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
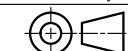
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2X 15 X 45°

6X Ø5.5 THRU

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.01- .XXX = ±.001- .XXXX = ±.0001- SURFACE FINISH 	NAME		DATE	Ferris State University		
	DRAWN	BRIAN BRADY	10/16/2019			
	CHECKED			TITLE DRILL UNIT SLIDE PLATE ASSEMBLY DETAILS SIDE CHIP COVER		
	APPROVED					
DO NOT SCALE DRAWING				SIZE C		
BREAK ALL SHARP EDGES AND REMOVE BURRS						
THIRD ANGLE PROJECTION 	MATERIAL STEEL 1010	VOLUME 135697 mm³		SCALE 1:1	WEIGHT 1.068 kg	SHEET 14 of 16

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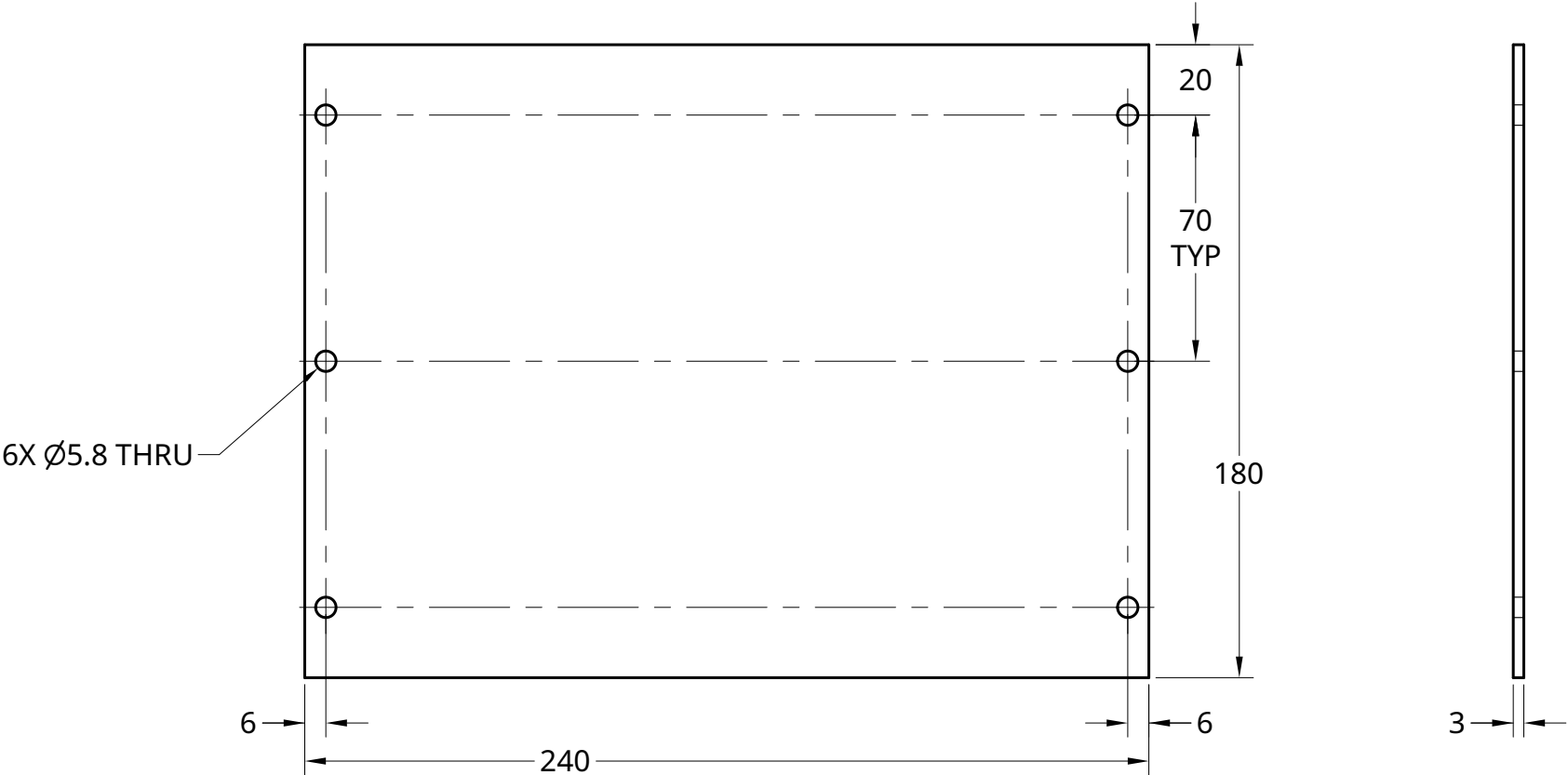
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
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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.0- .XXX = ±.00- .XXXX = ±.000- SURFACE FINISH 		NAME	DATE	Ferris State University		
	DRAWN	BRIAN BRADY	10/16/2019			
	CHECKED			TITLE DRILL UNIT SLIDE PLATE ASSEMBLY DETAILS LOWER COVER PLATE - MOTOR		
	APPROVED					
DO NOT SCALE DRAWING				SIZE B		
BREAK ALL SHARP EDGES AND REMOVE BURRS						
THIRD ANGLE PROJECTION 	MATERIAL POLYCARBONATE	VOLUME 129124 mm³		SCALE 1:2	DWG NO. BR-549-B-013	REV.
				WEIGHT 0.154 kg	SHEET 15 of 16	

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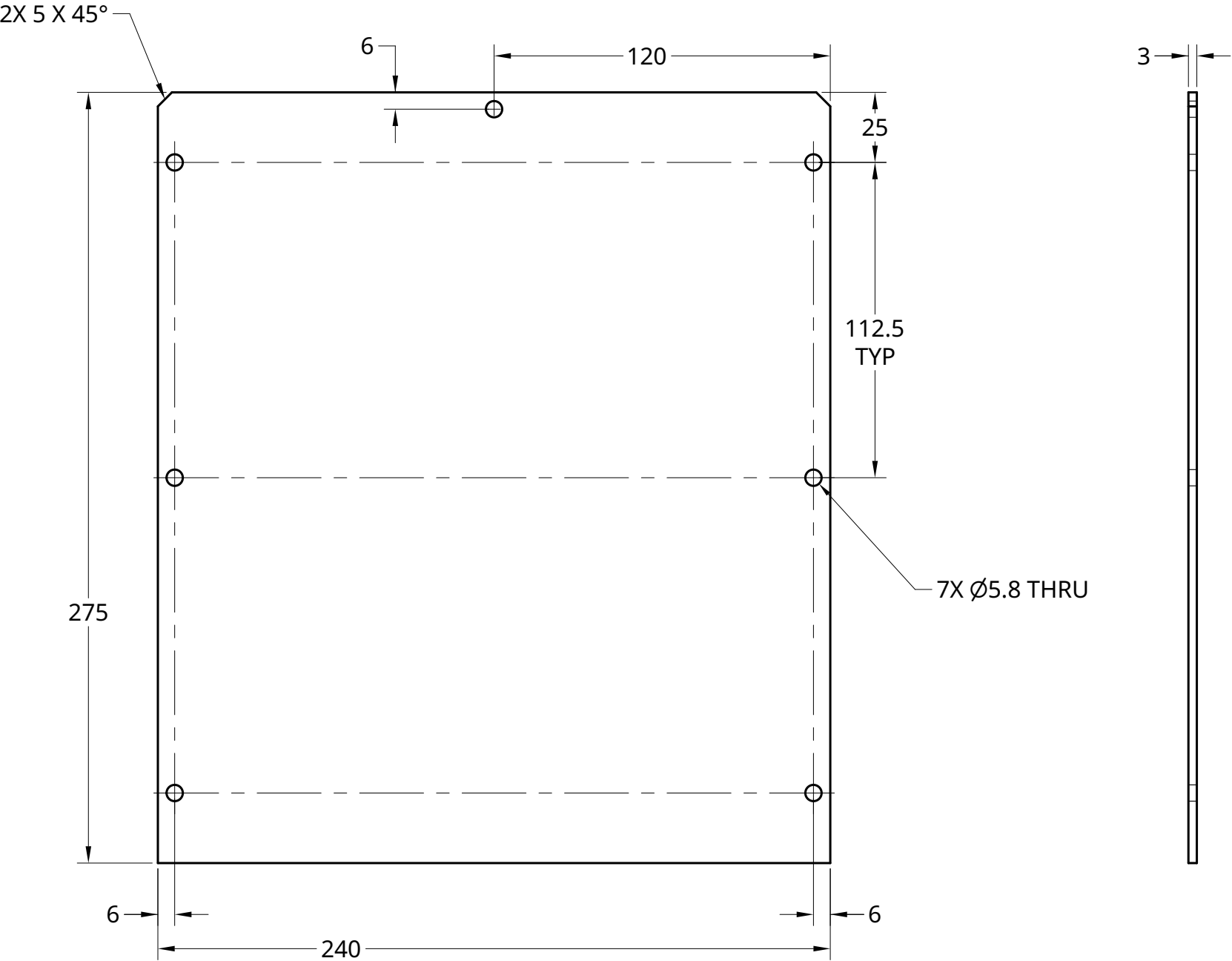
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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.0- .XXX = ±.00- .XXXX = ±.000- SURFACE FINISH ✓ DO NOT SCALE DRAWING BREAK ALL SHARP EDGES AND REMOVE BURRS THIRD ANGLE PROJECTION ⊕		NAME	DATE	Ferris State University		
	DRAWN	BRIAN BRADY	10/16/2019	TITLE DRILL UNIT SLIDE PLATE ASSEMBLY DETAILS UPPER COVER PLATE - MOTOR		
	CHECKED					
	APPROVED					
				SIZE B	DWG NO. BR-549-B-014	REV.
	MATERIAL POLYCARBONATE	VOLUME 197370 mm³		SCALE 1:2	WEIGHT 0.235 kg	SHEET 16 of 16