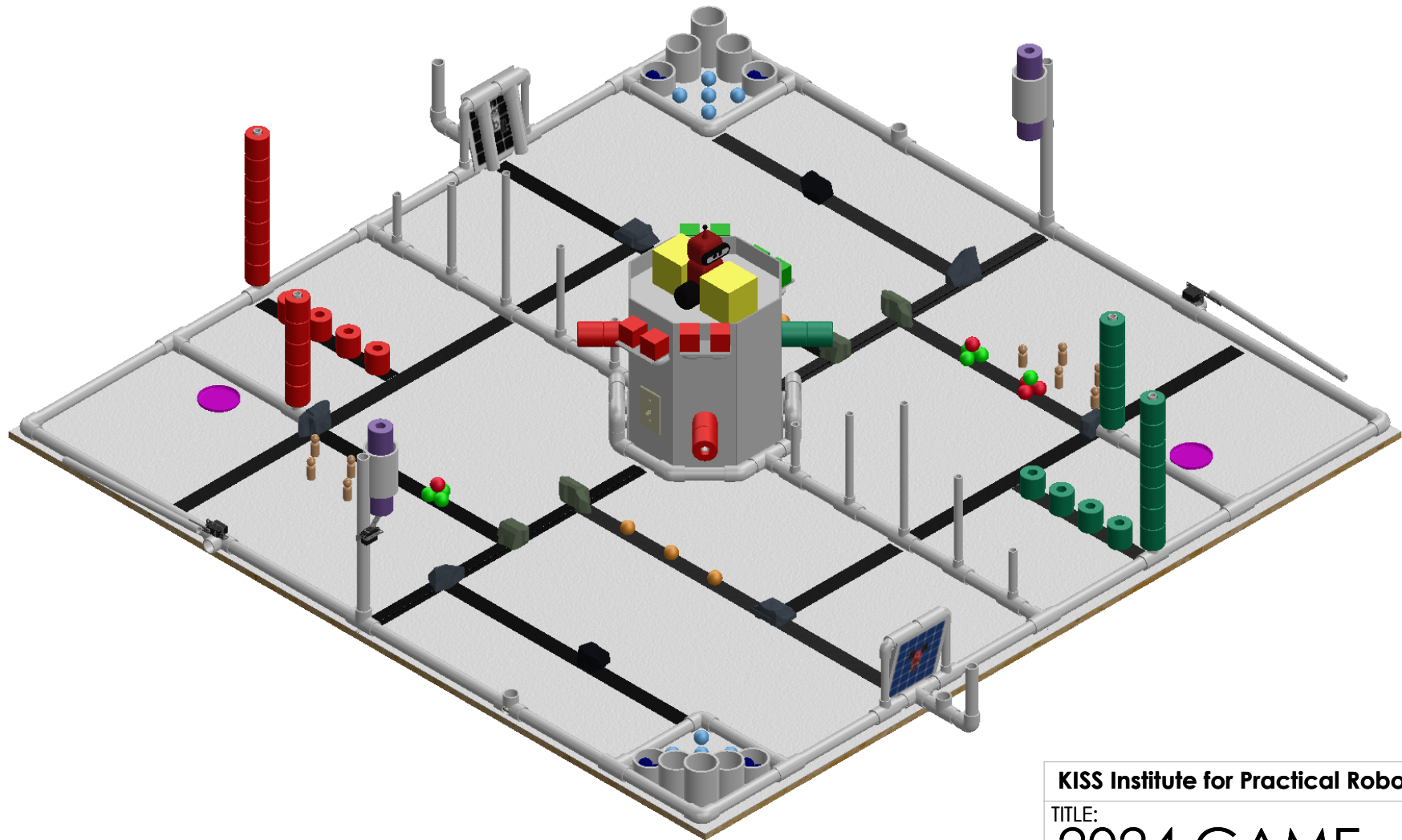


2

1

B

B



A

A

Note: Teams may not be able to find LASCO brand couplers in their local area. Use the Center Measurements and Additional Measurements pages to account for any difference between your couplers and LASCO brand couplers.

KISS Institute for Practical Robotics

TITLE:

2024 GAME
TABLE

SIZE

A

DWG. NO.
Cover

REV

SCALE: 1:15

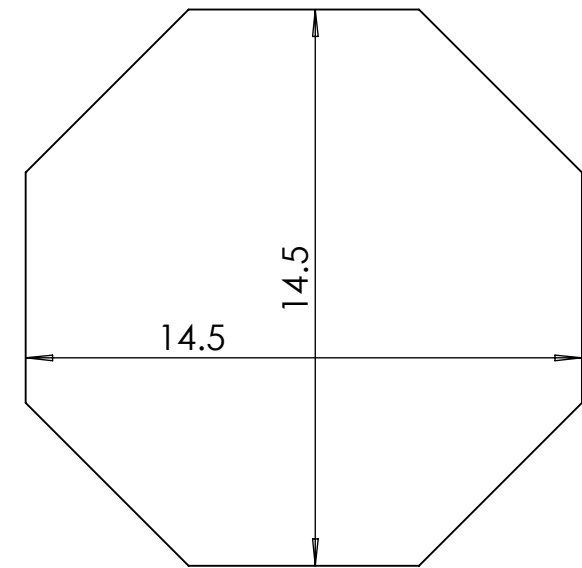
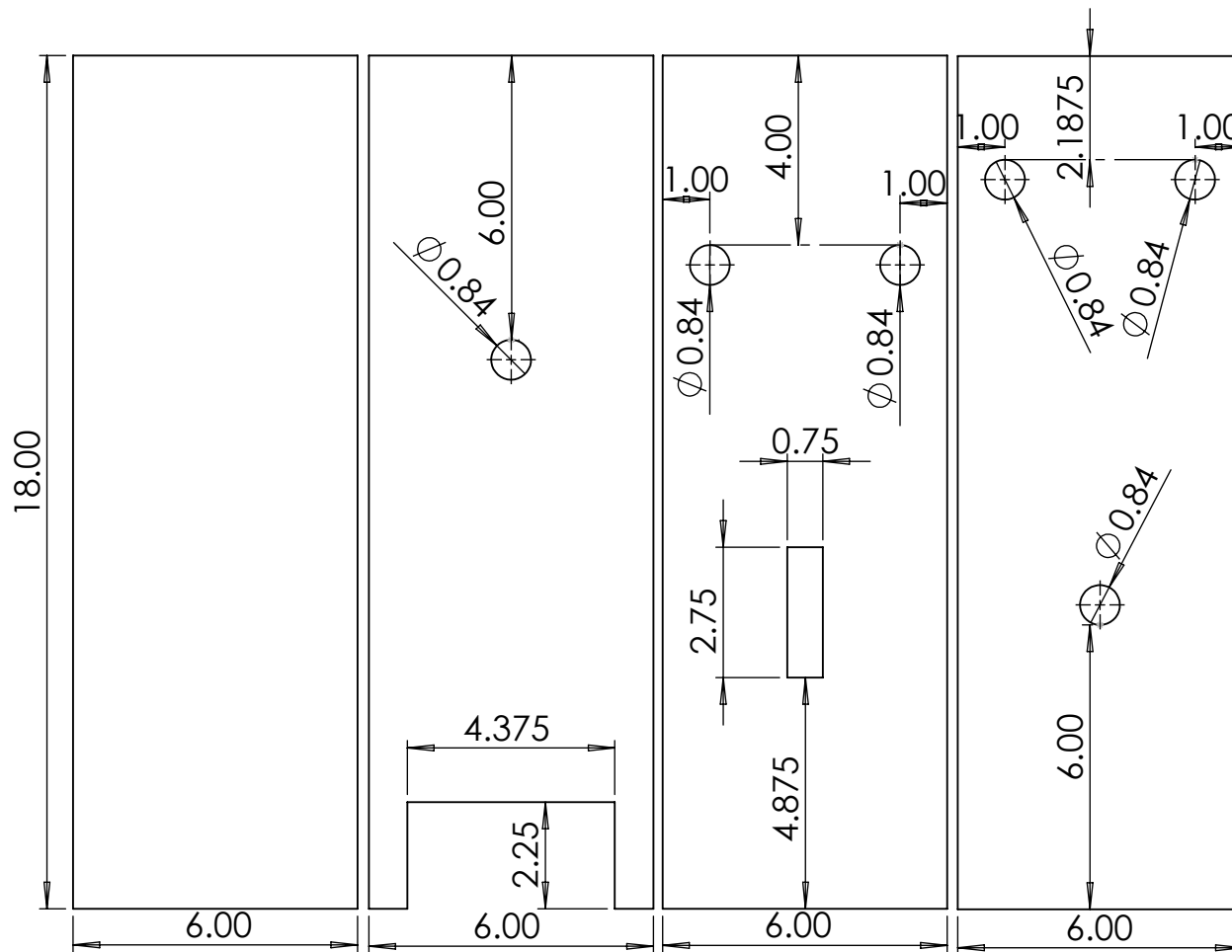
SHEET 1 OF 22

2

1

	4	3	2	1	
	ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	
F	1	3 inch - 1/2" PVC	0.5" ID SCH 40	4	F
	2	5.5 inch - 1/2" PVC	0.5" ID SCH 40	4	
	3	6.5 inch - 1/2" PVC	0.5" ID SCH 40	4	
	4	7.375 inch - 1/2" PVC	0.5" ID SCH 40	2	
	5	10.5 inch - 1/2" PVC	0.5" ID SCH 40	4	
E	6	13.5 inch - 1/2" PVC	0.5" ID SCH 40	2	E
	7	15.5 inch - 1/2" PVC	0.5" ID SCH 40	2	
	8	16.375 inch - 1/2" PVC	0.5" ID SCH 40	4	
	9	18.5 inch - 1/2" PVC	0.5" ID SCH 40	4	
	10	24 inch - 1/2" PVC	0.5" ID SCH 40	2	
D	11	1.75 inch pvc	1" ID SCH 40	4	D
	12	2.5 inch pvc	1" ID SCH 40	10	
	13	3.000 inch PVC	1" ID SCH 40	8	
	14	4.875 inch pvc	1" ID SCH 40	2	
	15	6.125 inch pvc	1" ID SCH 40	2	
C	16	6.25 inch pvc	1" ID SCH 40	2	C
	17	6.5 inch pvc	1" ID SCH 40	10	
	18	7.000 inch PVC	1" ID SCH 40	4	
	19	10.500 inch PVC	1" ID SCH 40	10	
	20	12.250 inch PVC	1" ID SCH 40	4	
B	21	13.000 inch PVC	1" ID SCH 40	2	B
	22	13.875 inch pvc	1" ID SCH 40	2	
	23	16.000 inch PVC	1" ID SCH 40	2	
	24	18.25 inch pvc	1" ID SCH 40	2	
	25	19.000 inch PVC	1" ID SCH 40	6	
A	26	25.625 inch pvc	1" ID SCH 40	2	A
	27	2.000 inch - 3" ID PVC	3" ID SCH 40 Cellular Core PVC-DWV Non-Pressure	4	
	28	3.500 inch - 3" ID PVC	3" ID SCH 40 Cellular Core PVC-DWV Non-Pressure	4	
	29	5.000 inch - 3" ID PVC	3" ID SCH 40 Cellular Core PVC-DWV Non-Pressure	4	
	31	5x4x2 Cardboard Box		2	
	38	Black duct tape	3M Black Duct Tape - Model #3920-BK	14	
	41	0.5" Elbow Connector	Connector SCH 40	12	
	42	1" Elbow Connector	Connector SCH 40	16	
	43	1" T Connector	Connector SCH 40	24	
	44	1" x 0.5" T Connector	Connector SCH 40	18	
	45	45 Degree Elbow Connector	Connector SCH 40	4	
	47	18"x24" Sheet	Corrugated Plastic	4	
	48	Light Switch Cover	Eaton 1-Gang Standard Wall Plate - Ivory	2	
	49	Light Switch	Eaton 15-Amp Single-Pole Toggle - Ivory	2	
	50	Particle Board 4' x 4' x 3/8" thick	or similar - can be cut from two 4' x 8' sheets	4	
	53	FRP Divider 48" long	White - cut from one 8' long part	2	A
	54	FRP 4' x 4'	White - cut from two 4' x 8' sheets	4	
	73	Conduit Clamp	CANTEX 3/4" Two hole Conduit Clamp	2	

B



Note: Top of Lander will end up sitting on top of highest set of PVC pipes inside lander and can be screwed to them for stability.

Note: While these may be separated in the drawings above, these should not be separated when building. The best way to build each half of the lander is to score a 18"x24" sheets of corrugated plastic three times every six inches so that the corrugated plastic can be folded into four sides of the octagon.

Note: Templates for all these cuts can be found on the team homepage. Make sure to do a test print of them and measure to make sure your printer has not changed the size.

KISS Institute for Practical Robotics

TITLE:

2024 GAME TABLE

SIZE

A

DWG. NO.

Lander Pieces

REV

SCALE: 1:4

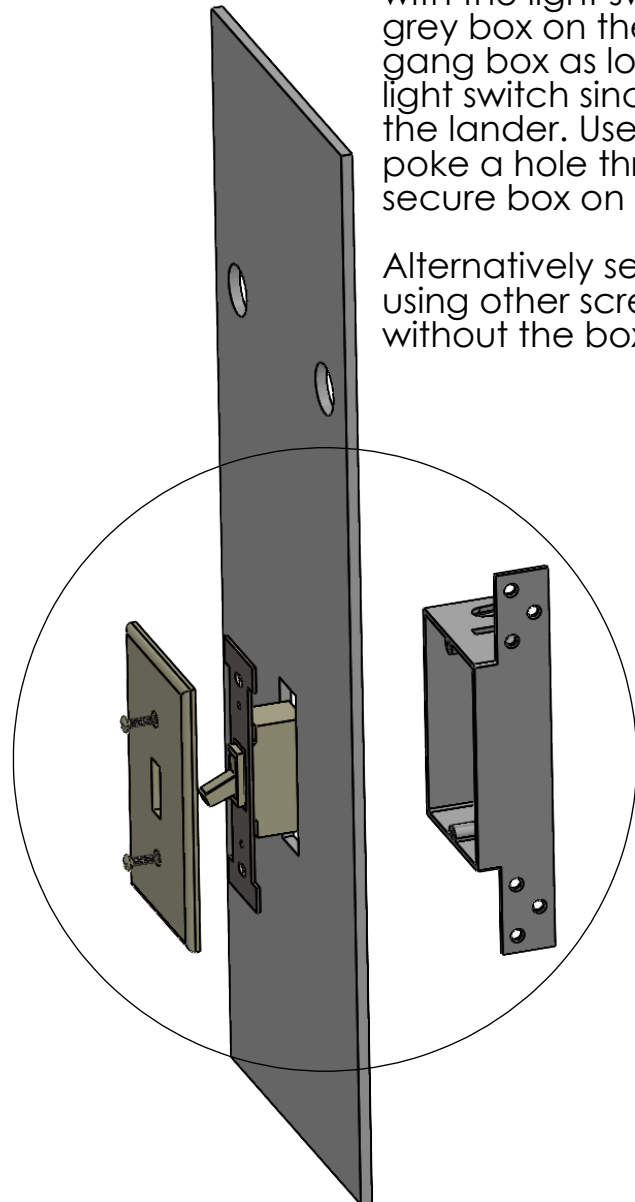
SHEET 3 OF 22

2

1

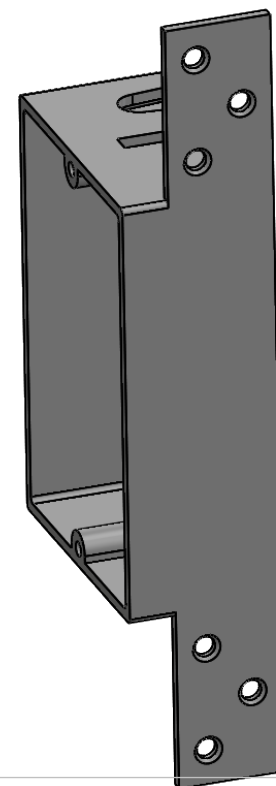
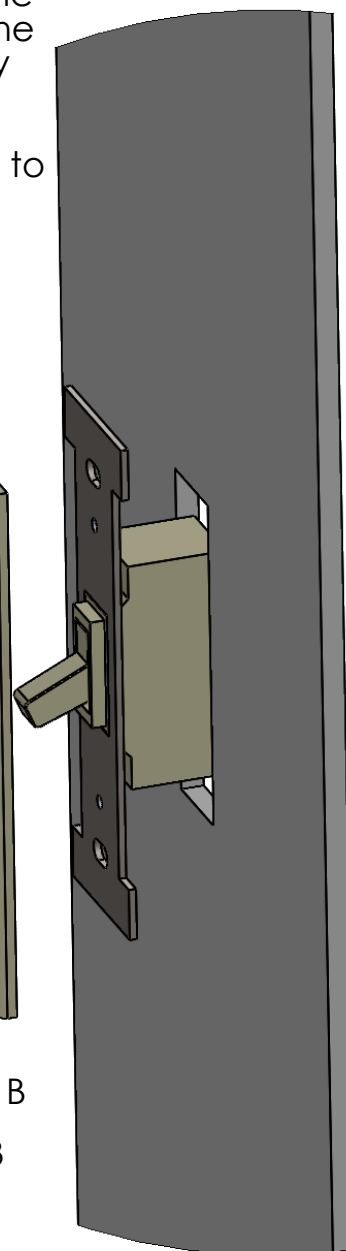
Note: Assemble the middle section of your corrugated plastic with the light switch as shown. The grey box on the box can be any gang box as long as it fits your light switch since it will be inside the lander. Use provided screws to poke a hole through plastic to secure box on back.

Alternatively secure the switch using other screws you have without the box.



B

DETAIL B
SCALE 2 : 3



KISS Institute for Practical Robotics

TITLE:

2024 GAME
TABLE

SIZE

A

DWG. NO.

Light Switch
Assembly

REV

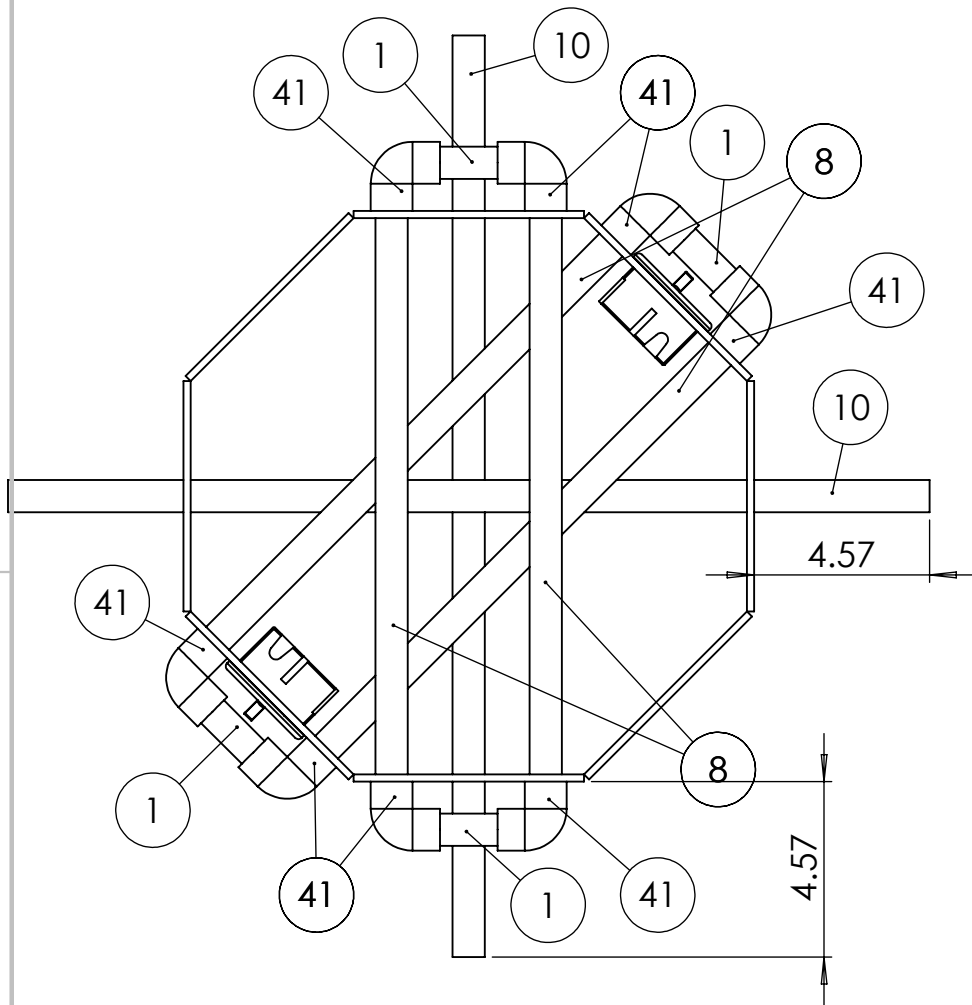
SCALE: 1:3

SHEET 4 OF 22

2

1

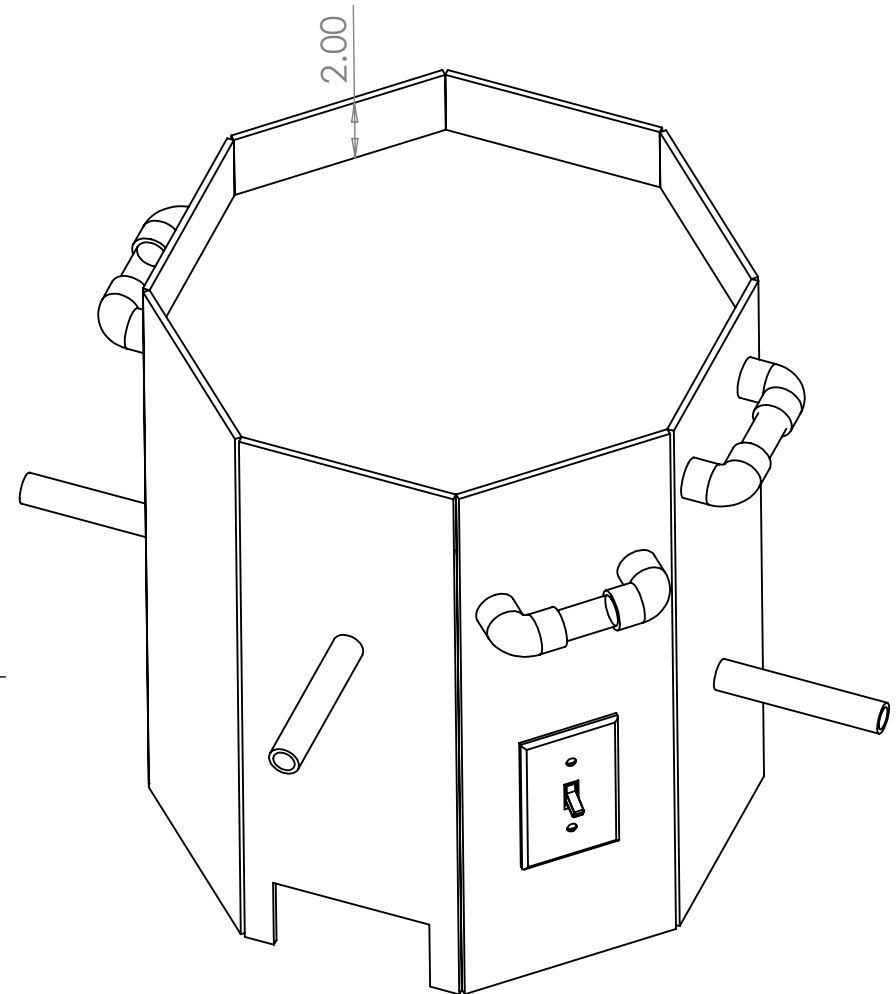
B



A

Note; Assemble each half of the octagon using white tape to secure the edges. Once the octagon is complete, insert all PVC pipes. Once all pipes are in place top on and screw to highest level of PVC which will put a 2" gap between the top of the octagon walls and it's roof.

1



B

A

KISS Institute for Practical Robotics

TITLE:

2024 GAME
TABLE

SIZE

A

DWG. NO.

Lander Assembly

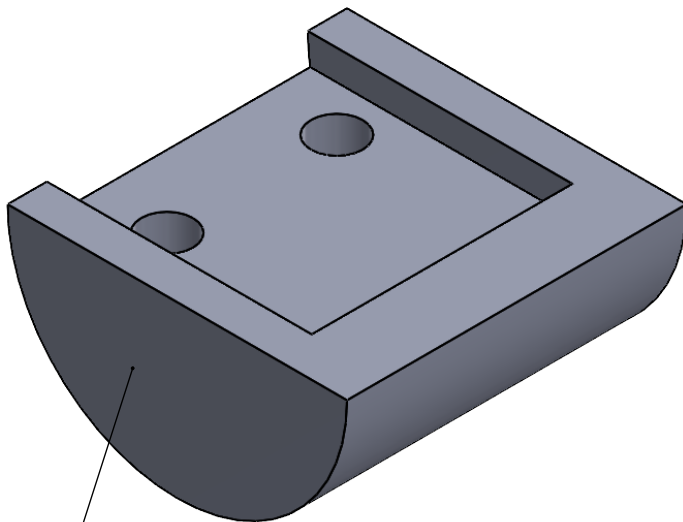
REV

SCALE: 1:5

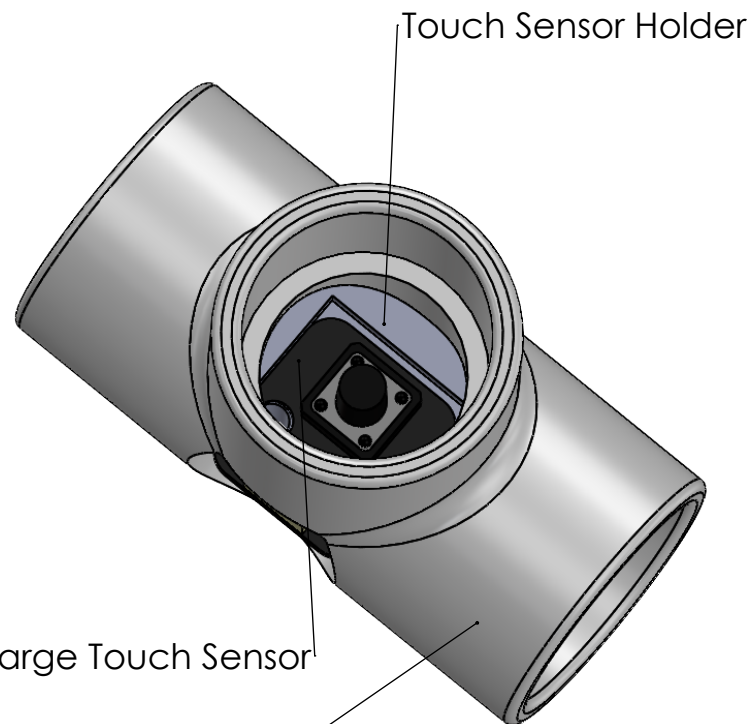
SHEET 5 OF 22

2

1



Touch sensor holder STL for 3D printing can be found on the team homepage.



Touch Sensor Holder

Large Touch Sensor

PVC Tee

The touch sensor inside the PVC tee will trigger the flag to raise.

KISS Institute for Practical Robotics

TITLE:

**2024 GAME
TABLE**

SIZE

A

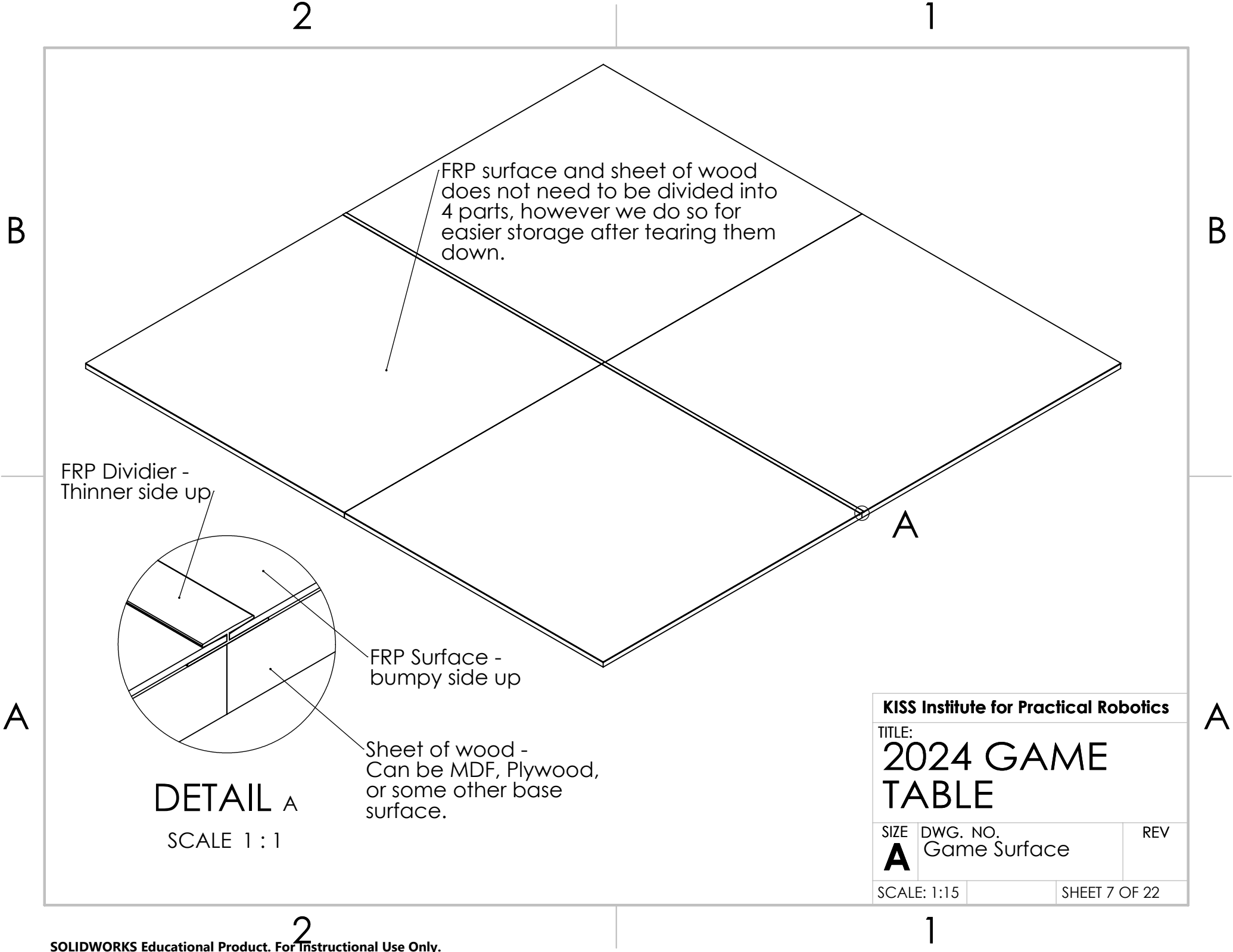
DWG. NO.

Flag Raising Sensor

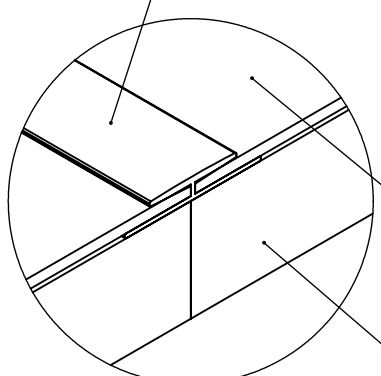
REV

SCALE: 2:1

SHEET 6 OF 22



FRP Dividier -
Thinner side up



DETAIL A

SCALE 1 : 1

FRP Surface -
bumpy side up

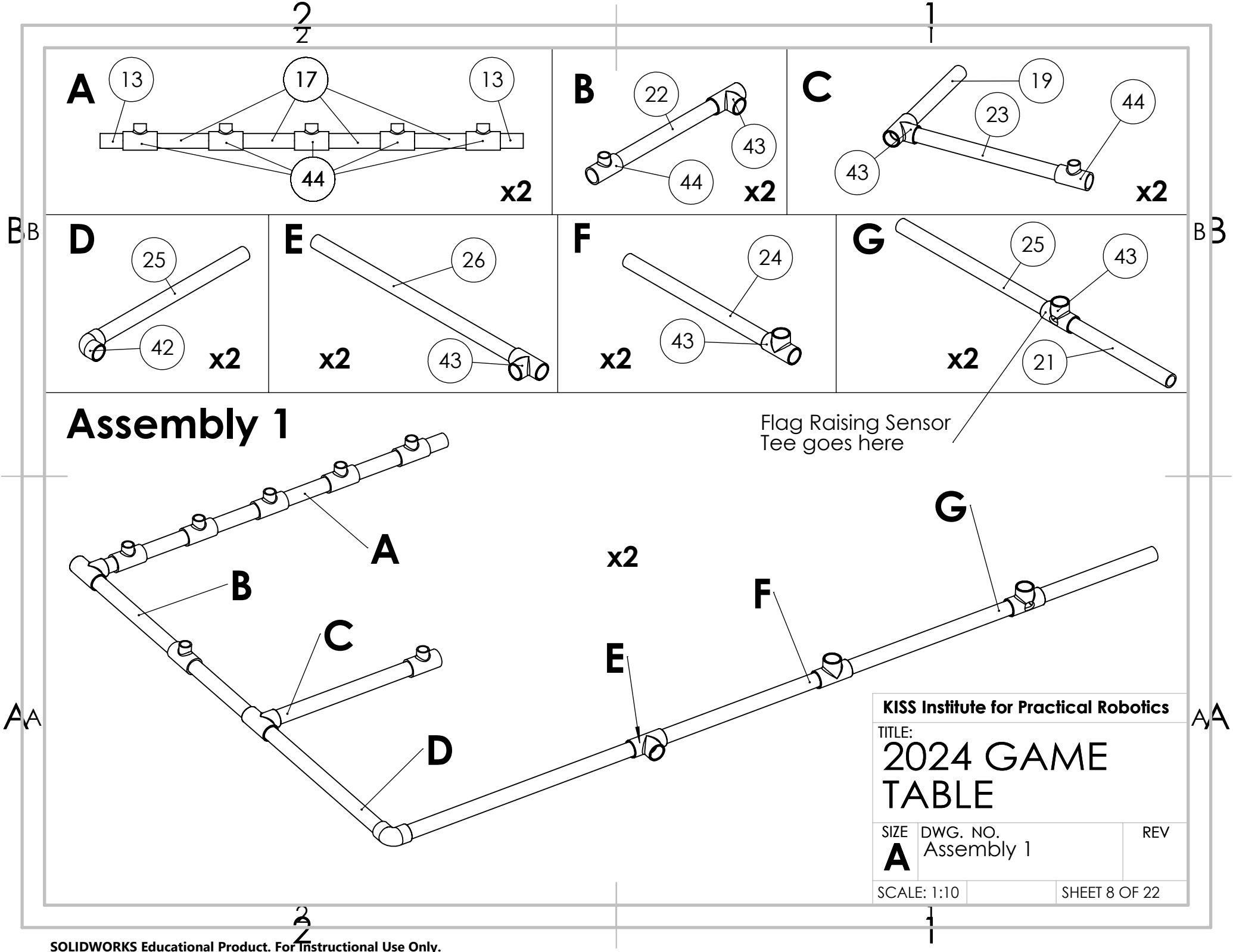
Sheet of wood -
Can be MDF, Plywood,
or some other base
surface.

KISS Institute for Practical Robotics

TITLE:
**2024 GAME
TABLE**

SIZE A	DWG. NO. Game Surface	REV
------------------	--------------------------	-----

SCALE: 1:15	SHEET 7 OF 22
-------------	---------------

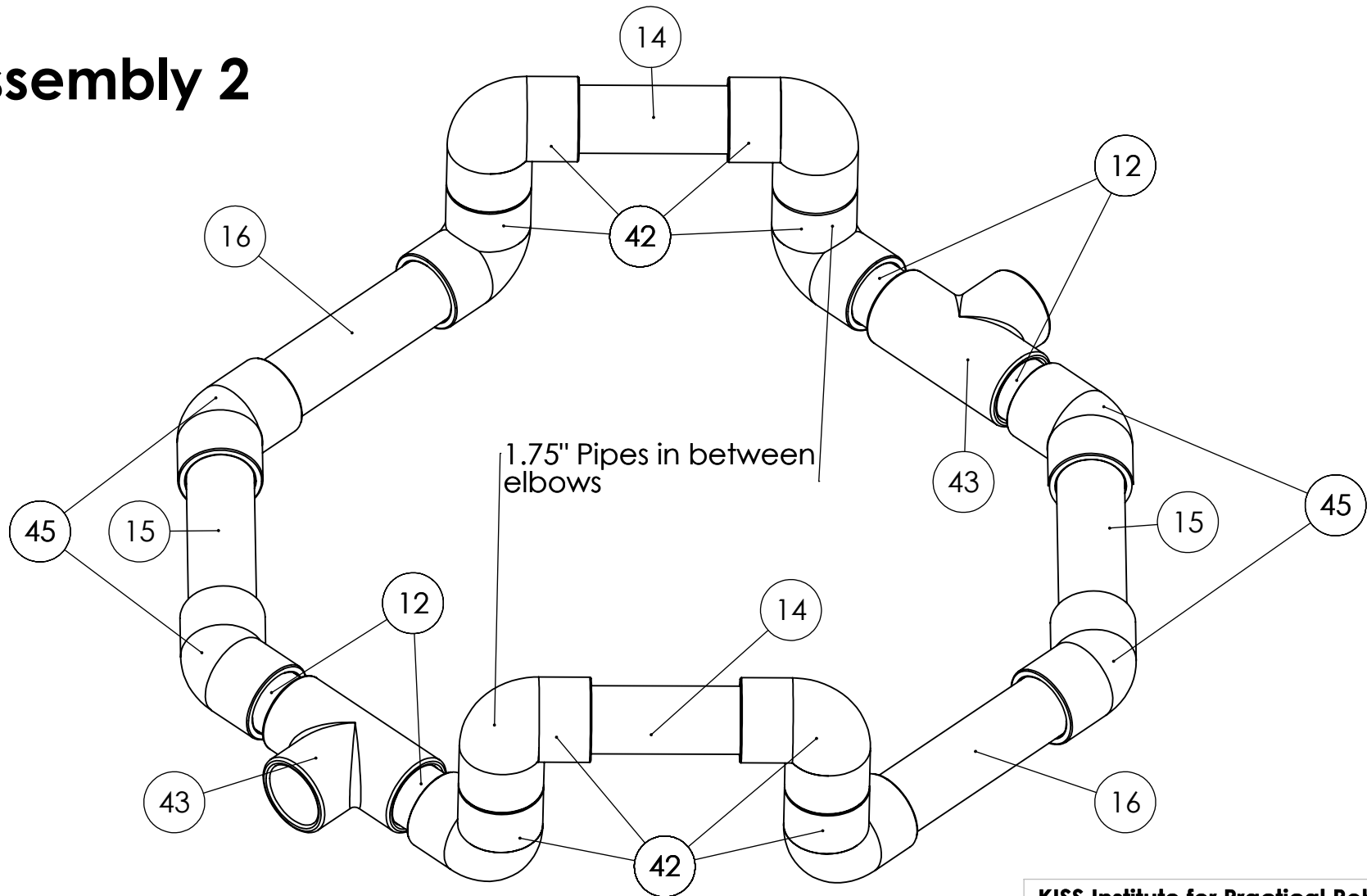


Assembly 1

Flag Raising Sensor
Tee goes here

KISS Institute for Practical Robotics		
TITLE: 2024 GAME TABLE		
SIZE A	DWG. NO. Assembly 1	REV
SCALE: 1:10	SHEET 8 OF 22	

Assembly 2



Note: Use the lander base or just the cut out octagon that you've already built as a template for what your octagon should look like. Every side, excluding the two containing piece 14 should be touching a side of the lander.

KISS Institute for Practical Robotics

TITLE:

2024 GAME
TABLE

SIZE

A

DWG. NO.

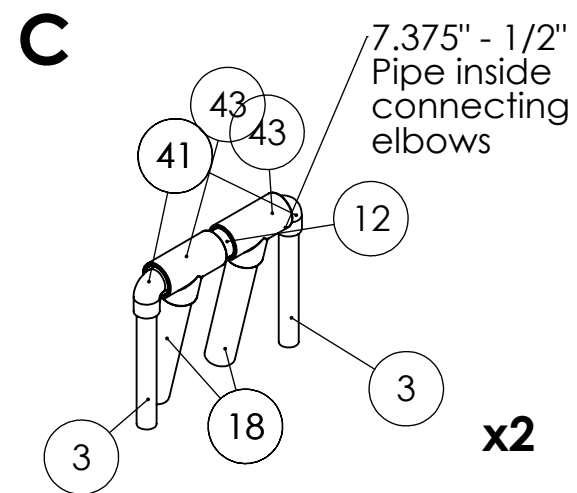
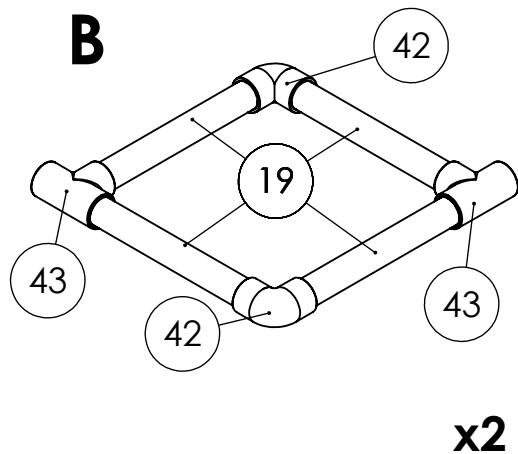
Assembly 2

REV

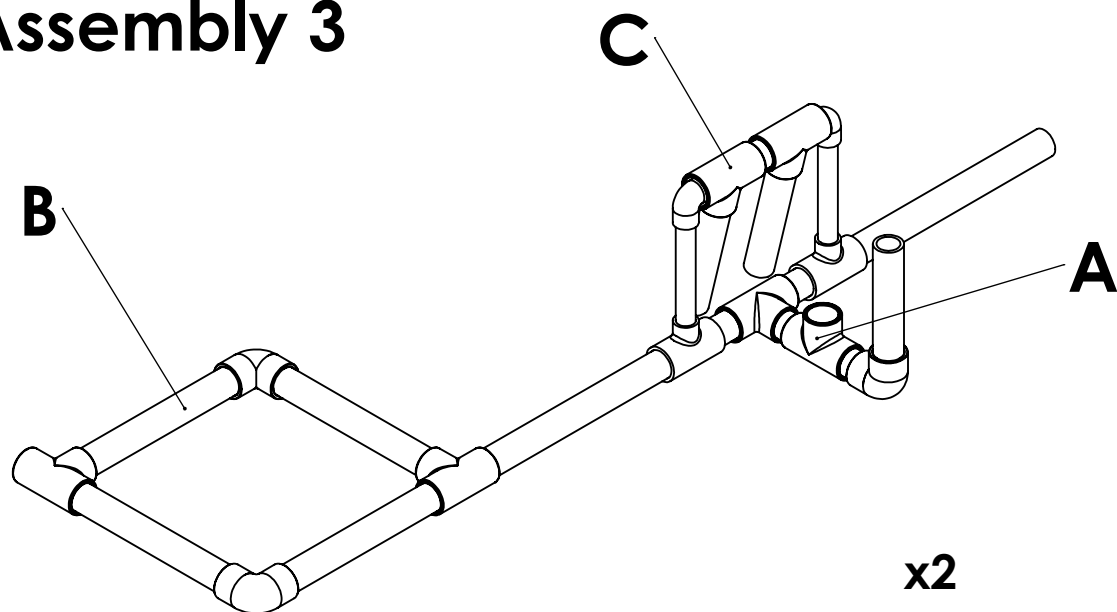
SCALE: 1:3

SHEET 9 OF 22

1



Assembly 3



KISS Institute for Practical Robotics			
TITLE: 2024 GAME TABLE			
SIZE A	DWG. NO. Assembly 3		REV
SCALE: 1:8		SHEET 10 OF 22	

SOLIDWORKS Educational Product. For Instructional Use Only.

2

1

Assembly 1+2+3**Assembly 3****Assembly 1****Assembly 1****Assembly 2****Assembly 3****KISS Institute for Practical Robotics**

TITLE:

**2024 GAME
TABLE**

SIZE

A

DWG. NO.

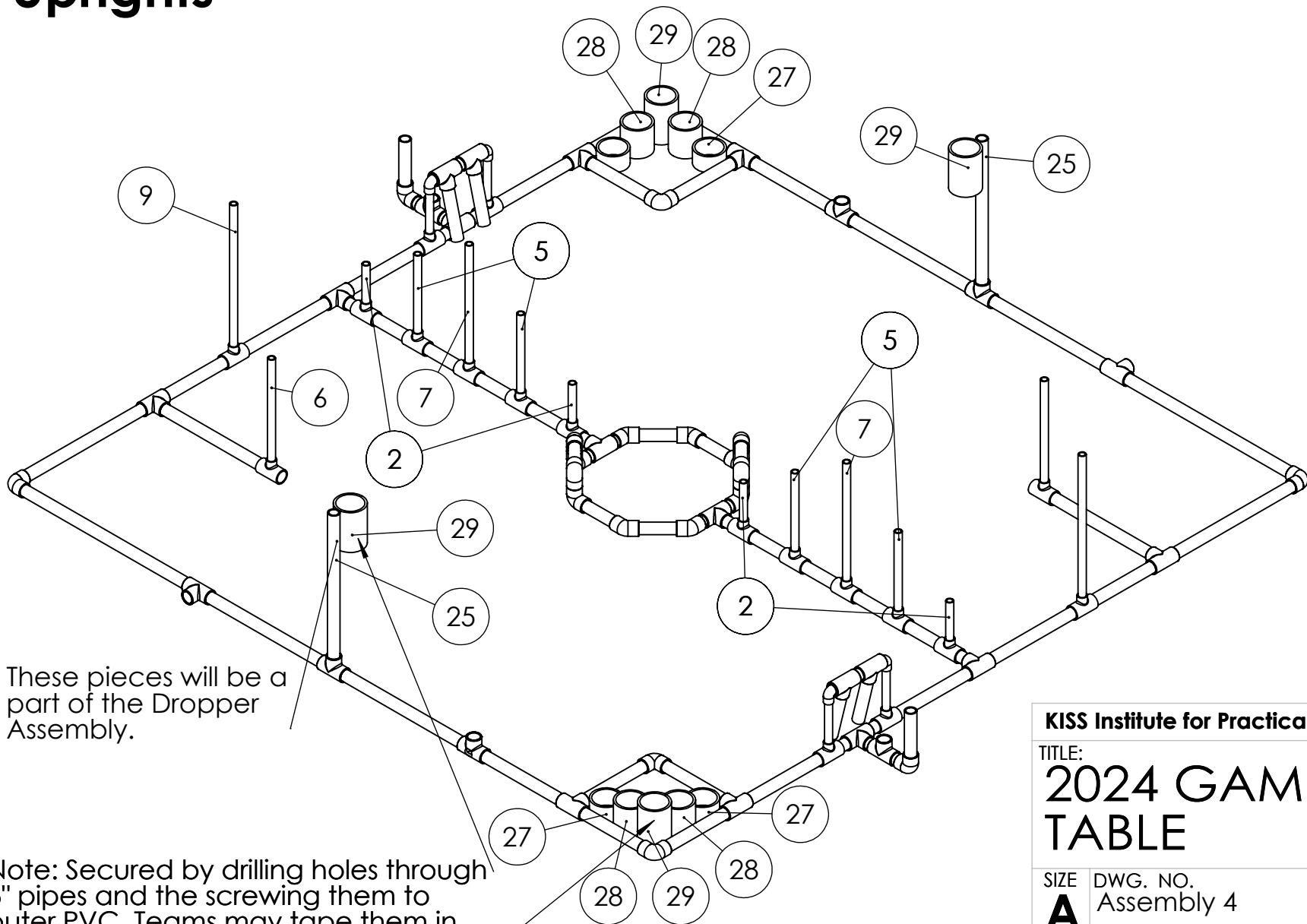
Assembly 1+2+3

REV

SCALE: 1:15

SHEET 11 OF 22

Assembly 4 - Uprights



These pieces will be a part of the Dropper Assembly.

Note: Secured by drilling holes through 3" pipes and the screwing them to outer PVC. Teams may tape them in place instead.

KISS Institute for Practical Robotics

TITLE:

2024 GAME
TABLE

SIZE

A

DWG. NO.

Assembly 4

REV

SCALE: 1:15

SHEET 12 OF 22

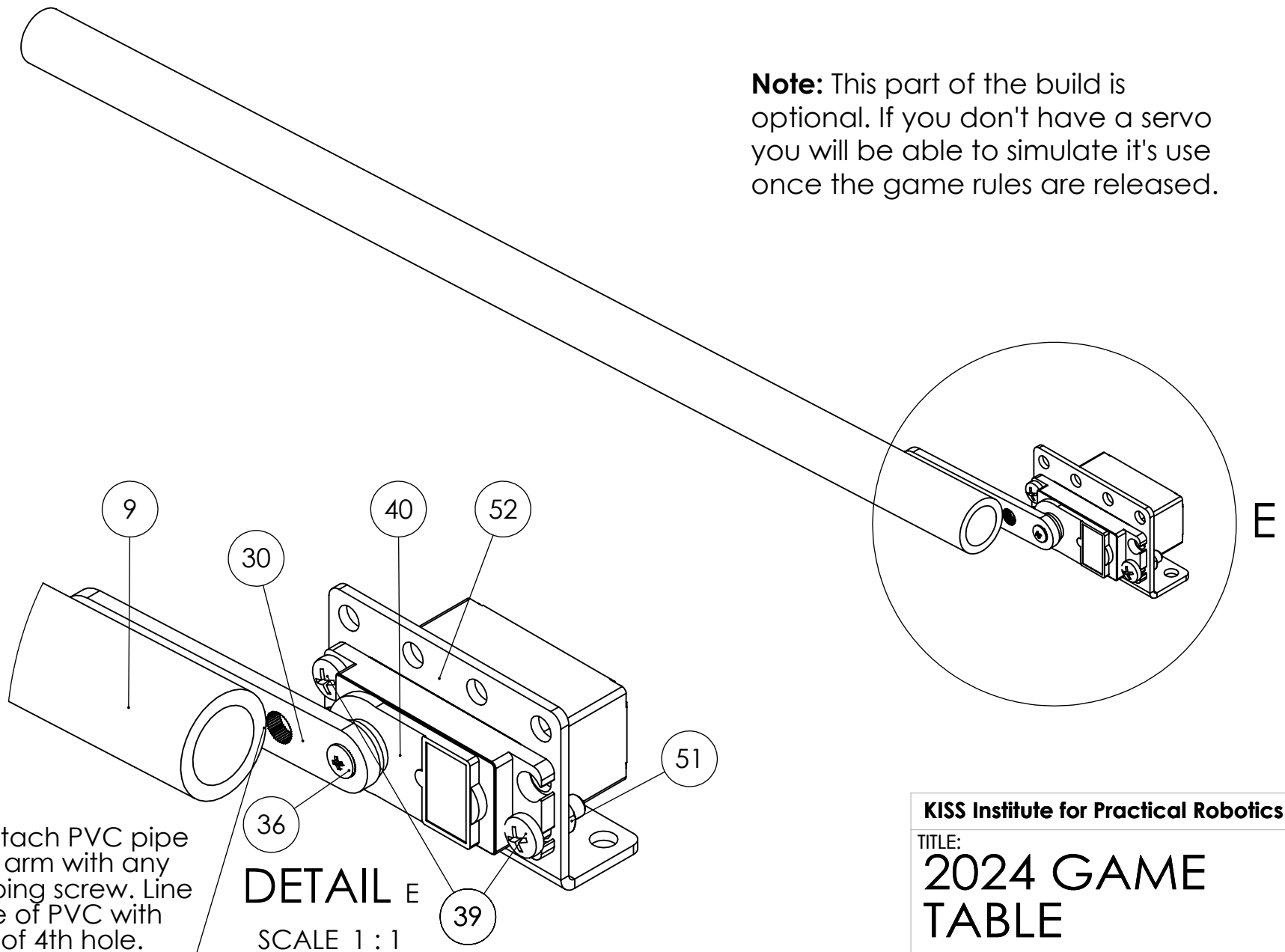
B

A

B

A

Note: This part of the build is optional. If you don't have a servo you will be able to simulate it's use once the game rules are released.



DETAIL E
SCALE 1 : 1

KISS Institute for Practical Robotics

TITLE:

**2024 GAME
TABLE**

SIZE

A

DWG. NO.
Flag

REV

SCALE: 1:2

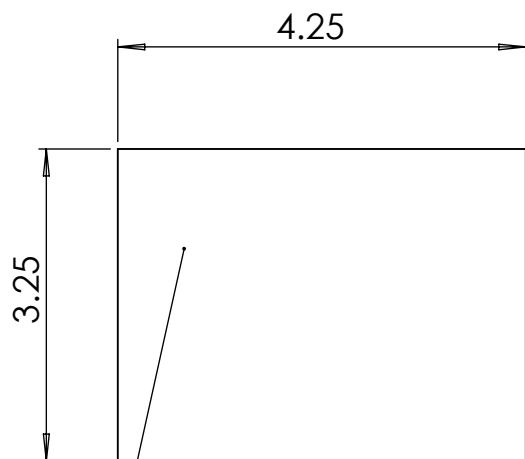
SHEET 13 OF 22

2

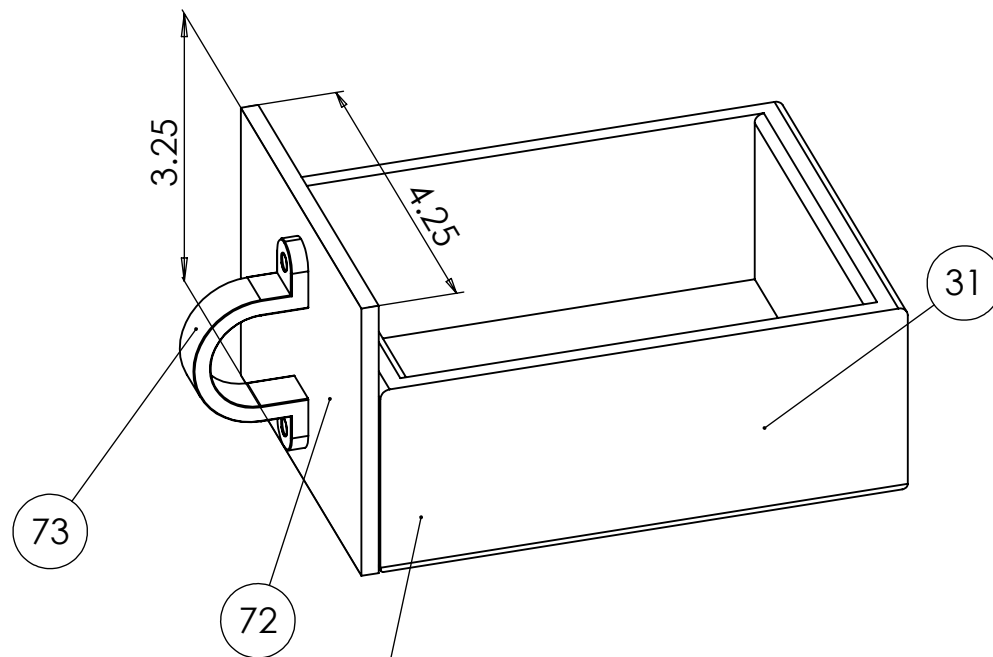
1

B

B



Cut this piece out of your
corrugated plastic.



Secure 3.25x4.25 corrugated plastic and
Conduit Clamp using screws or glue.

A

A

KISS Institute for Practical Robotics

TITLE:

**2024 GAME
TABLE**

SIZE

A

DWG. NO.

Drawer Assembly

REV

SCALE: 1:2

SHEET 14 OF 22

2

1

2

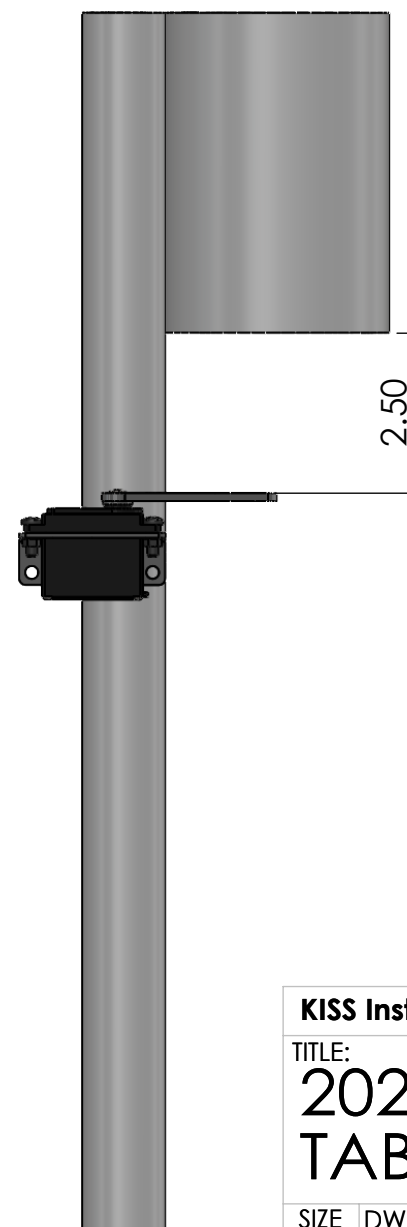
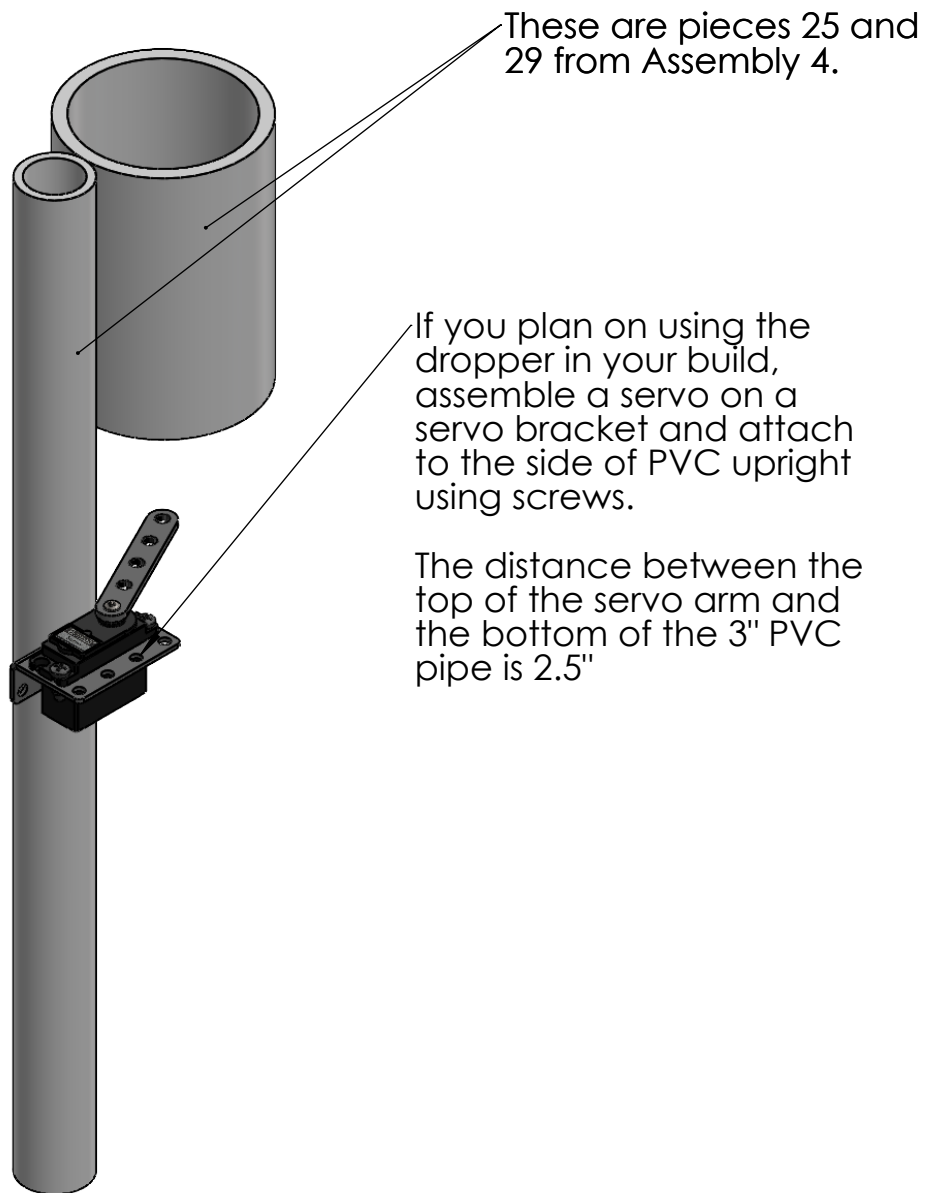
1

B

B

A

A



KISS Institute for Practical Robotics

TITLE:

2024 GAME
TABLE

SIZE

A

DWG. NO.

Dropper Assembly

REV

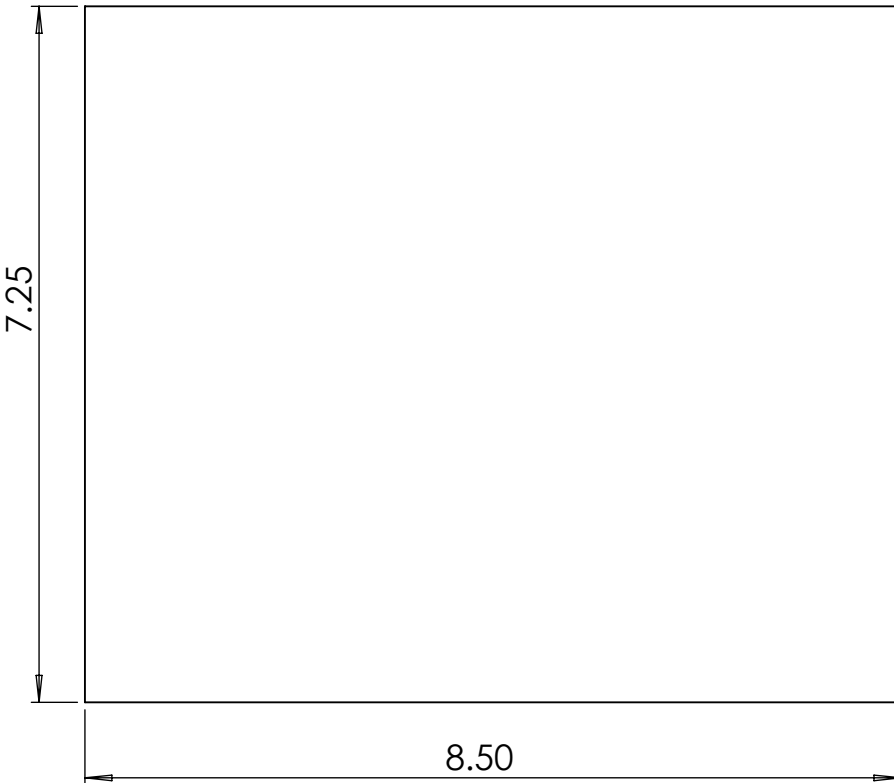
SCALE: 1:3

SHEET 15 OF 22

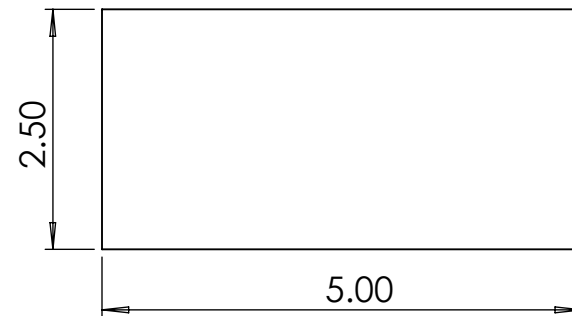
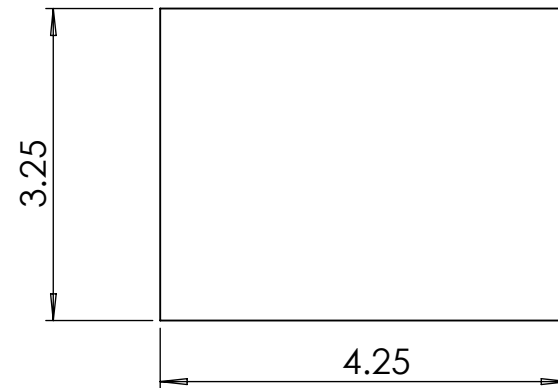
2

1

B

**x2**

Note: You can find cut outs for these on the team homepage. Do a test print of any prints you do and measure them to make sure your printer has not changed the dimensions.

**x4****x2****KISS Institute for Practical Robotics**

TITLE:

**2024 GAME
TABLE**

SIZE

A

DWG. NO.

More Corrugated
Plastic Cuts

REV

SCALE: 1:2

SHEET 16 OF 22

B

A

2

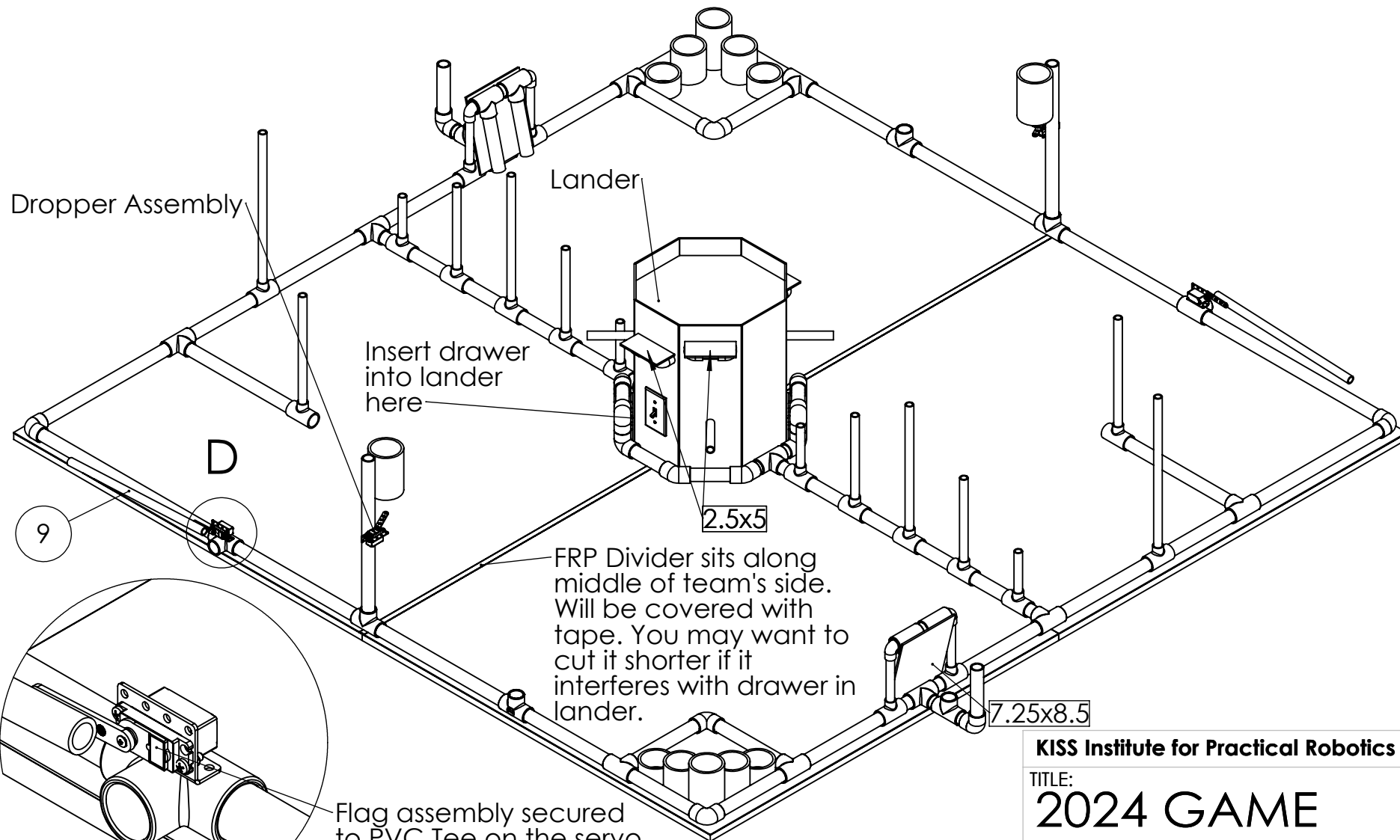
1

2

1

B

B



KISS Institute for Practical Robotics

TITLE:

2024 GAME
TABLE

SIZE

A

DWG. NO.

Full Assembly

REV

SCALE: 1:14

SHEET 17 OF 22

A

2

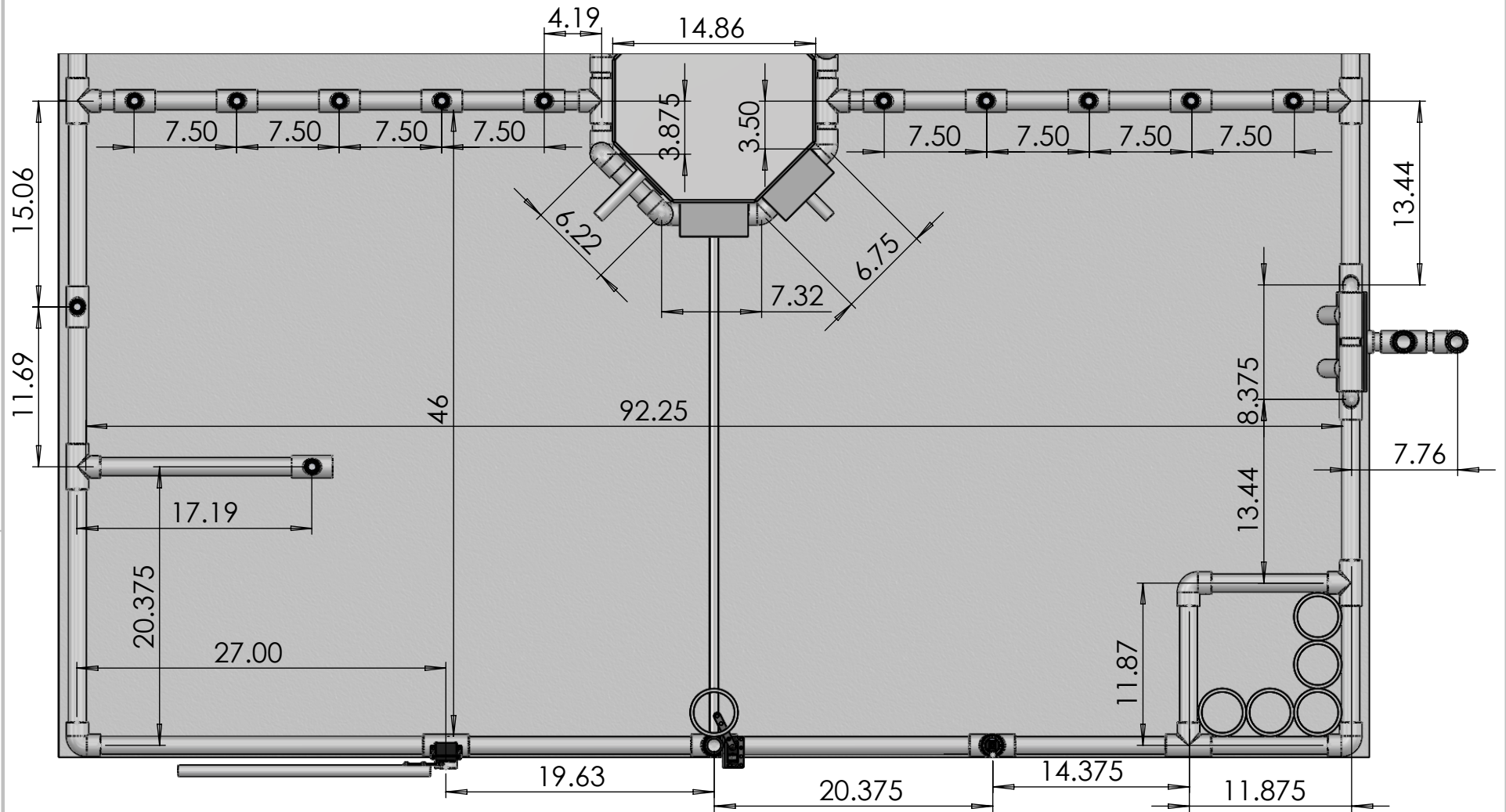
1

B

B

A

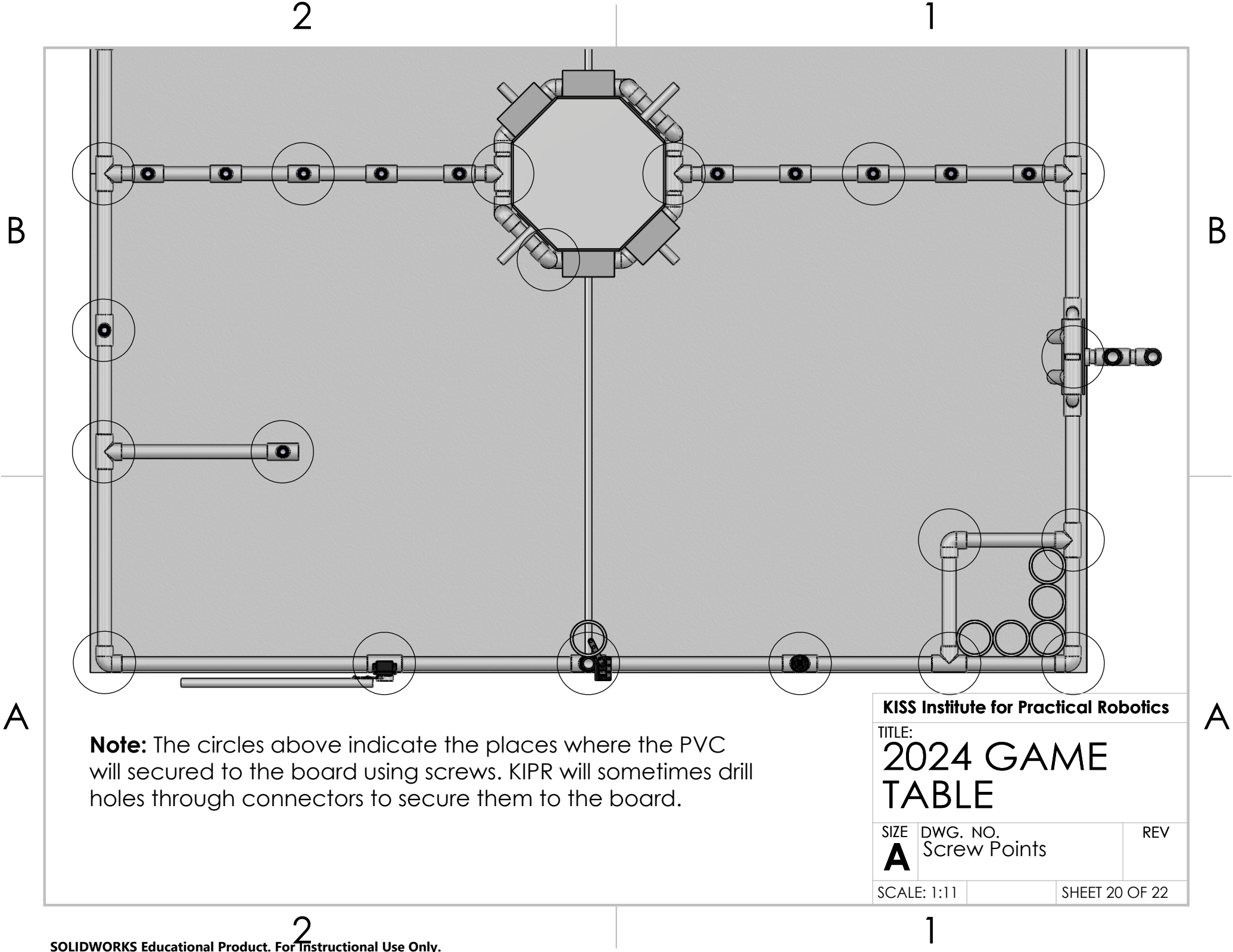
A

**KISS Institute for Practical Robotics**

TITLE:

**2024 GAME
TABLE**

SIZE	DWG. NO.	REV
A	Center Measurements	
SCALE: 1:11	SHEET 18 OF 22	

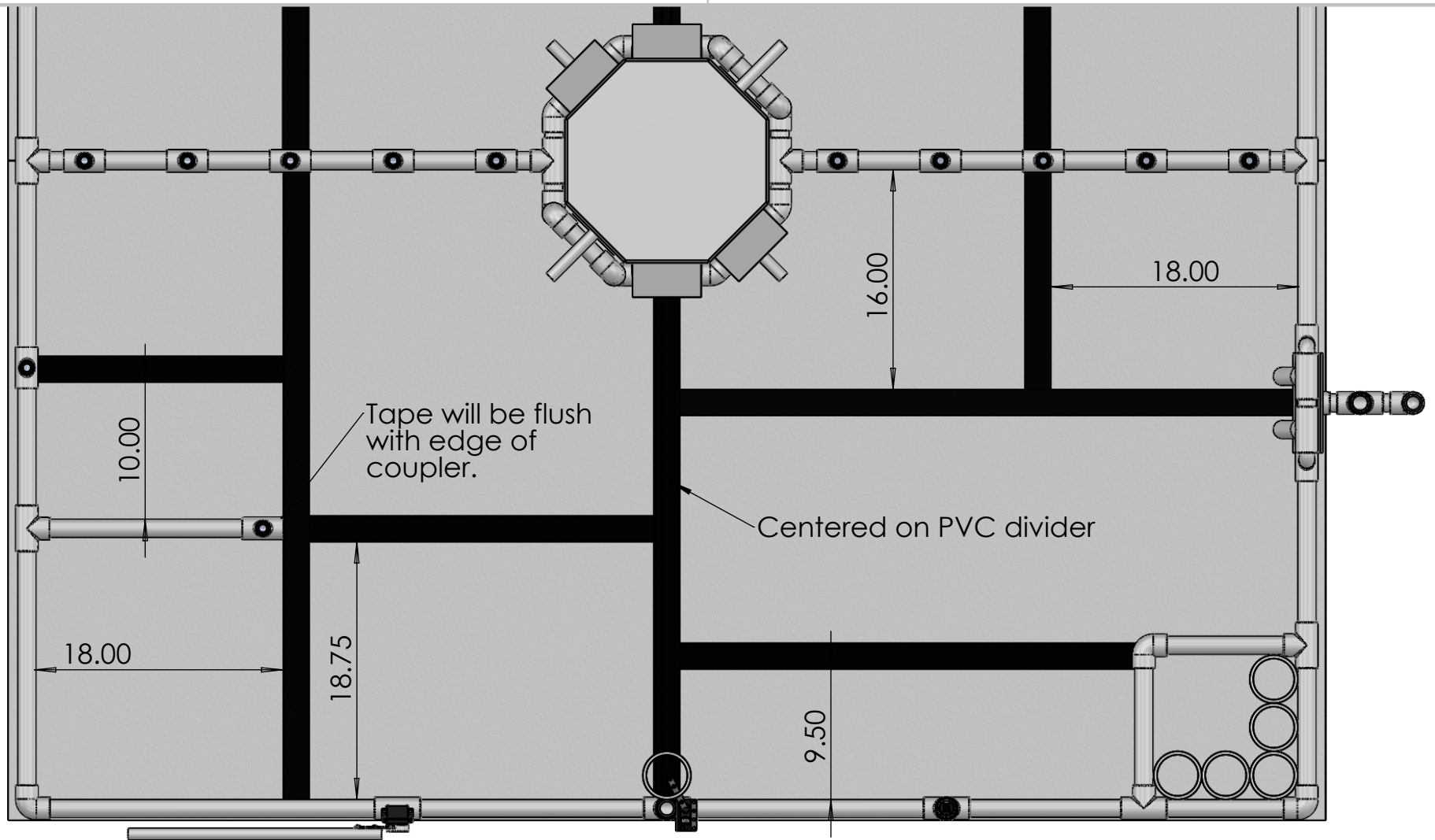


B

B

A

A



KISS Institute for Practical Robotics

TITLE:

2024 GAME
TABLE

SIZE

A

DWG. NO.

Tape Lines

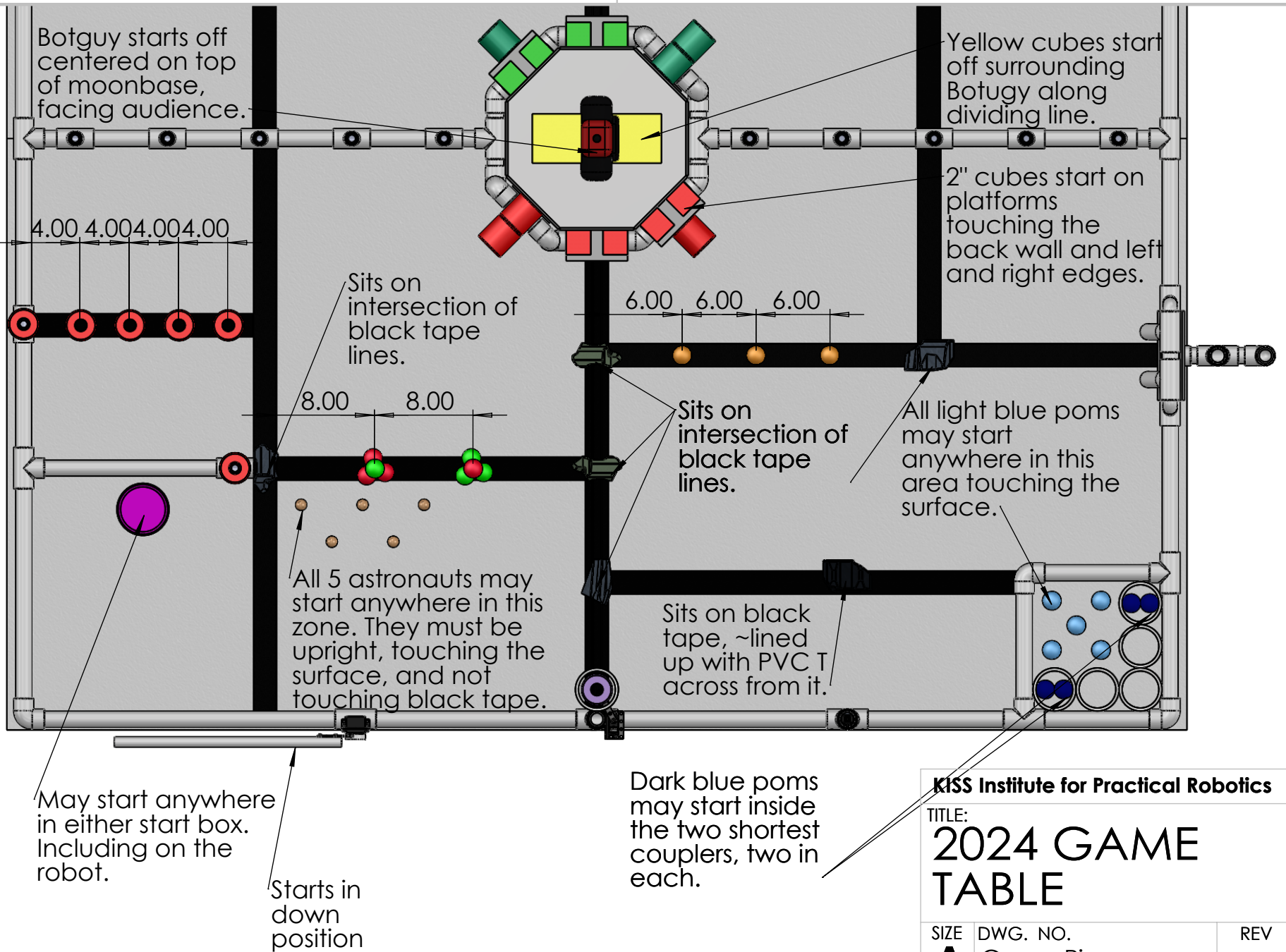
REV

SCALE: 1:11

SHEET 21 OF 22

B

B



KISS Institute for Practical Robotics

TITLE:

2024 GAME TABLE

SIZE

A

DWG. NO.

Game Piece Positions

REV

SCALE: 1:11

SHEET 22 OF 22

A