NOTE: All holes shown are for bolt/wing nut connections that are included to make it easier to store this assembly. If storage of this assembly is not a concern, wood screws could be used instead of bolts and wing nuts, and all drilled holes can be skipped except for the bolts that hold the poles and the holes in TE-23003.

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
<th>QTY.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TE-23005</td>
<td>Cube Shelf Divider Beam</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>TE-23006</td>
<td>Spacer Plywood</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>TE-23007</td>
<td>Shark Fin</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>TE-23008</td>
<td>Cone Ramp Horizontal</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>TE-23009</td>
<td>Wide Cone Ramp Crossbeams</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>TE-23011</td>
<td>Cone Ramp Vertical</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>TE-23012</td>
<td>Cone Ramp Gusset</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>TE-23013</td>
<td>Cone Ramp Diagonal Beam</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>TE-23014</td>
<td>Wide Cone Ramp Diagonal Panel</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>TE-23016</td>
<td>Lower Pole</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>TE-23017</td>
<td>Upper Pole</td>
<td>1</td>
</tr>
<tr>
<td>12</td>
<td>CCF-R1-13-1</td>
<td>Pole Cap</td>
<td>2</td>
</tr>
<tr>
<td>13</td>
<td>tape_VISIONTARGET</td>
<td>tape_VISIONTARGET</td>
<td>4</td>
</tr>
<tr>
<td>14</td>
<td>hex_.25_20_2.5_partial</td>
<td>Steel Hex Head Screw, 1/4&quot;-20 x 2-1/2&quot;, partially threaded</td>
<td>6</td>
</tr>
<tr>
<td>15</td>
<td>hex_.25_20_3.5_partial</td>
<td>Steel Hex Head Bolt, 1/4-20 x 3.5&quot;, partially threaded</td>
<td>2</td>
</tr>
<tr>
<td>16</td>
<td>hex_.25_20_4_partial</td>
<td>Steel Hex Head Bolt, 1/4-20 x 4&quot;, partially threaded</td>
<td>2</td>
</tr>
<tr>
<td>17</td>
<td>hex.25_20_5.5</td>
<td>Steel Hex Head Bolt, 1/4&quot;-20 x 5.5&quot;, partially threaded</td>
<td>4</td>
</tr>
<tr>
<td>18</td>
<td>wing_.25_20</td>
<td>Steel Wing Nut, 1/4&quot;-20, 3/16&quot; Base Diameter</td>
<td>14</td>
</tr>
<tr>
<td>19</td>
<td>washer_flat_.25</td>
<td>Flat Washer for 1/4&quot; Screw</td>
<td>28</td>
</tr>
</tbody>
</table>
Step 1: Assemble floor frame of Cone Ramp with #8 wood screws as shown.

Please note orientation of all holes in 4 while assembling. The holes in the two side beams should match up.
Step 2: Assemble 2x Cone Ramp Vertical assemblies using #8 wood screws as shown. Make a "left hand" and "right hand" version as shown.
Step 3: Assemble Cone Ramp Diagonal Assembly with #8 wood screws as shown. Note orientation of holes while assembling.
Step 4: If making the poles yourself, install the 12 caps to the end of the pipe with no holes with an arbor press or mallet. There is a CAD file of a similar but not exact version of the cap in the shared CAD files for this assembly that can be 3D Printed.

Apply 2 pieces of 13 vision tape per pole as shown.

These poles with caps installed can be purchased from AndyMark. These do not include the drilled holes or applied vision tape.
Step 5: Attach the Vertical Assemblies to the Floor Frame using 1/4-20 x 2.5" Long Hex Bolts 14 and 1/4-20 Wing Nuts 18. Washers are optional.

Note the orientation of the 7 panels being on the inside of the frame.

This step can be done with wood screws instead of bolts and wing nuts if storage space is not a concern.
Step 6: Install Poles into assembly using 1/4-20 x 5" Long Bolts (17) and Wing nuts (18). Washers are optional. Note that the tall pole is the one closer to the vertical assemblies.

This assembly is designed to be either a left or right end cone ramp, depending on what side both poles are bolted to. It will be relatively simple to adjust this later if you want to change which end you have built.
Step 7: Install Diagonal Assembly over the poles, and bolt into place with 1/4-20 x 3.5" Long Bolts (15) and wing nuts (18). Washers are optional.

This assembly is designed so that it can be a left or right end cone ramp because of the two sets of holes in the diagonal assembly. If you have only one drilled one set of holes, it will only work that way.
Step 8: Attach 3 to each of the poles with cable ties that go around the poles and through the holes in 3.
Step 9: Bolt the 16 beam onto the side of the frame opposite of the installed poles using 1/4-20 x 4" long bolts 16 and wing nuts 18. Washers are optional.

2 spacers can be used to accurately represent the size of the real GRID frame and locate the End Cone Ramp off of a wall correctly.
Cube Shelf
Divider Beam

DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL: 1/16
ANGULAR: 1° BEND: 1°
TWO PLACE DECIMAL: 0.13
THREE PLACE DECIMAL: 0.125

MATERIAL/FINISH:
2" x 4" Lumber

UNLESS OTHERWISE SPECIFIED:
SCALE: 1:3

DO NOT SCALE DRAWING

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST®. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP EDGES.

TEAM NAME DATE
JO 11/7/2022

MATERIAL/FINISH:
2" x 4" Lumber

UNLESS OTHERWISE SPECIFIED:
SCALE: 1:3

DO NOT SCALE DRAWING

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST®. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP EDGES.

TEAM NAME DATE
JO 11/7/2022

MATERIAL/FINISH:
2" x 4" Lumber

UNLESS OTHERWISE SPECIFIED:
SCALE: 1:3

DO NOT SCALE DRAWING

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST®. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP EDGES.

TEAM NAME DATE
JO 11/7/2022

MATERIAL/FINISH:
2" x 4" Lumber

UNLESS OTHERWISE SPECIFIED:
SCALE: 1:3

DO NOT SCALE DRAWING

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST®. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP EDGES.

TEAM NAME DATE
JO 11/7/2022

MATERIAL/FINISH:
2" x 4" Lumber

UNLESS OTHERWISE SPECIFIED:
SCALE: 1:3

DO NOT SCALE DRAWING

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST®. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP EDGES.

TEAM NAME DATE
JO 11/7/2022

MATERIAL/FINISH:
2" x 4" Lumber

UNLESS OTHERWISE SPECIFIED:
SCALE: 1:3

DO NOT SCALE DRAWING

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST®. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP EDGES.

TEAM NAME DATE
JO 11/7/2022

MATERIAL/FINISH:
2" x 4" Lumber

UNLESS OTHERWISE SPECIFIED:
SCALE: 1:3

DO NOT SCALE DRAWING

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST®. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP EDGES.

TEAM NAME DATE
JO 11/7/2022

MATERIAL/FINISH:
2" x 4" Lumber

UNLESS OTHERWISE SPECIFIED:
SCALE: 1:3

DO NOT SCALE DRAWING

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST®. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP EDGES.

TEAM NAME DATE
JO 11/7/2022

MATERIAL/FINISH:
2" x 4" Lumber

UNLESS OTHERWISE SPECIFIED:
SCALE: 1:3

DO NOT SCALE DRAWING

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST®. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP EDGES.

TEAM NAME DATE
JO 11/7/2022

MATERIAL/FINISH:
2" x 4" Lumber

UNLESS OTHERWISE SPECIFIED:
SCALE: 1:3

DO NOT SCALE DRAWING

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST®. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP EDGES.

TEAM NAME DATE
JO 11/7/2022

MATERIAL/FINISH:
2" x 4" Lumber

UNLESS OTHERWISE SPECIFIED:
SCALE: 1:3

DO NOT SCALE DRAWING

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST®. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP EDGES.

TEAM NAME DATE
JO 11/7/2022

MATERIAL/FINISH:
2" x 4" Lumber

UNLESS OTHERWISE SPECIFIED:
SCALE: 1:3

DO NOT SCALE DRAWING

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST®. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP EDGES.

TEAM NAME DATE
JO 11/7/2022

MATERIAL/FINISH:
2" x 4" Lumber

UNLESS OTHERWISE SPECIFIED:
SCALE: 1:3

DO NOT SCALE DRAWING

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST®. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP EDGES.

TEAM NAME DATE
JO 11/7/2022

MATERIAL/FINISH:
2" x 4" Lumber

UNLESS OTHERWISE SPECIFIED:
SCALE: 1:3

DO NOT SCALE DRAWING

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST®. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP EDGES.

TEAM NAME DATE
JO 11/7/2022

MATERIAL/FINISH:
2" x 4" Lumber

UNLESS OTHERWISE SPECIFIED:
SCALE: 1:3

DO NOT SCALE DRAWING

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST®. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP EDGES.
3.50 3 1
2 "

.28 9
THRU ALL

1.75 1 3
4 "

.47 15
32 "

Φ 28 [\frac{5}{32}] THRU ALL

1/2" Plywood Spacer

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL: ±1/16
ANGULAR: ±1° BEND ±1°
TWO PLACE DECIMAL: ±0.13
THREE PLACE DECIMAL: ±0.125

MATERIAL/FINISH:
1/2" Plywood

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN
THIS DRAWING IS THE SOLE
PROPERTY OF FIRST®. ANY
REPRODUCTION IN PART OR AS A
WHOLE WITHOUT THE WRITTEN
PERMISSION OF FIRST® IS
PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP
EDGES.

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL: ±1/16
ANGULAR: ±1° BEND ±1°
TWO PLACE DECIMAL: ±0.13
THREE PLACE DECIMAL: ±0.125

MATERIAL/FINISH:
1/2" Plywood

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN
THIS DRAWING IS THE SOLE
PROPERTY OF FIRST®. ANY
REPRODUCTION IN PART OR AS A
WHOLE WITHOUT THE WRITTEN
PERMISSION OF FIRST® IS
PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP
EDGES.

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL: ±1/16
ANGULAR: ±1° BEND ±1°
TWO PLACE DECIMAL: ±0.13
THREE PLACE DECIMAL: ±0.125

MATERIAL/FINISH:
1/2" Plywood

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN
THIS DRAWING IS THE SOLE
PROPERTY OF FIRST®. ANY
REPRODUCTION IN PART OR AS A
WHOLE WITHOUT THE WRITTEN
PERMISSION OF FIRST® IS
PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP
EDGES.

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL: ±1/16
ANGULAR: ±1° BEND ±1°
TWO PLACE DECIMAL: ±0.13
THREE PLACE DECIMAL: ±0.125

MATERIAL/FINISH:
1/2" Plywood

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN
THIS DRAWING IS THE SOLE
PROPERTY OF FIRST®. ANY
REPRODUCTION IN PART OR AS A
WHOLE WITHOUT THE WRITTEN
PERMISSION OF FIRST® IS
PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP
EDGES.

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL: ±1/16
ANGULAR: ±1° BEND ±1°
TWO PLACE DECIMAL: ±0.13
THREE PLACE DECIMAL: ±0.125

MATERIAL/FINISH:
1/2" Plywood

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN
THIS DRAWING IS THE SOLE
PROPERTY OF FIRST®. ANY
REPRODUCTION IN PART OR AS A
WHOLE WITHOUT THE WRITTEN
PERMISSION OF FIRST® IS
PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP
EDGES.

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL: ±1/16
ANGULAR: ±1° BEND ±1°
TWO PLACE DECIMAL: ±0.13
THREE PLACE DECIMAL: ±0.125

MATERIAL/FINISH:
1/2" Plywood

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN
THIS DRAWING IS THE SOLE
PROPERTY OF FIRST®. ANY
REPRODUCTION IN PART OR AS A
WHOLE WITHOUT THE WRITTEN
PERMISSION OF FIRST® IS
PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP
EDGES.

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL: ±1/16
ANGULAR: ±1° BEND ±1°
TWO PLACE DECIMAL: ±0.13
THREE PLACE DECIMAL: ±0.125

MATERIAL/FINISH:
1/2" Plywood

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN
THIS DRAWING IS THE SOLE
PROPERTY OF FIRST®. ANY
REPRODUCTION IN PART OR AS A
WHOLE WITHOUT THE WRITTEN
PERMISSION OF FIRST® IS
PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP
EDGES.

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL: ±1/16
ANGULAR: ±1° BEND ±1°
TWO PLACE DECIMAL: ±0.13
THREE PLACE DECIMAL: ±0.125

MATERIAL/FINISH:
1/2" Plywood

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN
THIS DRAWING IS THE SOLE
PROPERTY OF FIRST®. ANY
REPRODUCTION IN PART OR AS A
WHOLE WITHOUT THE WRITTEN
PERMISSION OF FIRST® IS
PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP
EDGES.

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL: ±1/16
ANGULAR: ±1° BEND ±1°
TWO PLACE DECIMAL: ±0.13
THREE PLACE DECIMAL: ±0.125

MATERIAL/FINISH:
1/2" Plywood

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN
THIS DRAWING IS THE SOLE
PROPERTY OF FIRST®. ANY
REPRODUCTION IN PART OR AS A
WHOLE WITHOUT THE WRITTEN
PERMISSION OF FIRST® IS
PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP
EDGES.