Note:

#8 Wood Screws x 1.5" long approximately 1 lb
#8 Wood Screws x 2.5" long - Approximately 1/4 lbs
1/4-20 x 2.5" Long Hex Head Bolts - 56 pieces
1/4-20 Wing Nuts - 56 Pieces
1/4" flat Washer - 56 pieces

ITEM NO. PART NUMBER DESCRIPTION
1 TE-22417 Chute Assembly, Terminal 1
2 TE-22415 Base Frame, PF Terminal 1
3 TE-22416 Support Frame Long, PF Terminal 1
4 TE-22414 Support Frame, PF Terminal 1
5 TE-22406 Divider, PF Terminal 2
6 TE-22407 Short Leg, PF Terminal 2
7 TE-22408 Long Leg, PF Terminal 2
8 TE-22409 Gusset 1, PF Terminal 2
9 TE-22410 Gusset 2, PF Terminal 2
10 TE-22411 Gusset 3, PF Terminal 2
11 TE-22412 Ramp, PF Terminal 2
12 TE-22413 Pipe, PF Terminal 2

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

MATERIAL/FINISH:

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THIS DRAWING IS THE SOLE
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REPRODUCTION IN PART OR AS A
WHOLE WITHOUT THE WRITTEN
PERMISSION OF FIRST IS
PROHIBITED.

COMMENTS:
REMOVE ALL BURRS AND SHARP
EDGES.

DO NOT SCALE DRAWING
Place Item 2

Attach all items using bolts or screws.
Attach all items using bolts or screws.

Notes:
1. Place item 12 in the holes.
2. Attach item 5 using bolts.
3. Place items 1 and 11 using screws or cable ties.
5X 0.25 [\frac{1}{4}]

2X 2.35 [\frac{3}{8}]

3.18 [\frac{3}{16}]

2X 0.74 [\frac{3}{4}]

3.61 [\frac{9}{16}]

5.52 [\frac{7}{8}]

2X 7.66 [\frac{15}{16}]

9.80 [\frac{3}{4}]

11.71 [\frac{15}{16}]

15.32 [\frac{5}{8}]

\( \frac{47}{12} \)
REVISIONS

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<tr>
<th>ZONE</th>
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<th>DESCRIPTION</th>
<th>DATE</th>
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<td>A</td>
<td>Changed material</td>
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A1-1/4" Schedule 40 Black Iron Pipe

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED:

- TOLERANCES: FRACTIONAL ±1/16, ANGULAR,MACH ±1°, BEND ±1°
- TWO PLACE DECIMAL ±.13, THREE PLACE DECIMAL ±.125

MATERIAL/FINISH:
- 1-1/4" Schedule 40 Black Iron Pipe

DO NOT SCALE DRAWING

TITLE: Pipe, PF Terminal

TEAM   | NAME     | DATE
------|----------|------
DRAWN  | DF       | 11/8/2021

PROPRIETARY AND CONFIDENTIAL

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COMMENTS:
- REMOVE ALL BURRS AND SHARP EDGES.
<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
<th>QTY.</th>
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<tbody>
<tr>
<td>1</td>
<td>TE-22414-01</td>
<td>2 x 4 Pine Lumber</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>TE-22414-02</td>
<td>2 x 4 Pine Lumber</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>TE-22414-03</td>
<td>1/2&quot; Plywood</td>
<td>4</td>
</tr>
</tbody>
</table>

**Material/Finish:**

- **Dimensions are in inches**
- **Tolerances:**
  - Fractional: 1/16
  - Angular: Mach 1°
  - Bend: 1°
  - Two place decimal: 1/13
  - Three place decimal: 1/125

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**Comments:**

- Remove all burrs and sharp edges.

**Title:** Support Frame TE, Terminal

**Drawing Information:**

- **Team:**
- **Name:**
- **Date:** 1/3/2022
- **Drawn:** MS
- **Scale:** 1:12
- **Sheet:** 1 of 3

**Support Frame TE, Terminal**
Place Item 2 and 1 attach using wood screws

Attach Item 3 Using wood screws attach overall assembly using bolts and nuts

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES

TOLERANCES:
FRACTIONAL: \( \frac{1}{16} \)
ANGULAR, MACH: \( \pm 1° \) BEND: \( \frac{1}{16} \)
TWO PLACE DECIMAL: \( 0.13 \)
THREE PLACE DECIMAL: \( 0.125 \)

MATERIAL/FINISH:

DO NOT SCALE DRAWING

TEAM | NAME | DATE
--- | --- | ---
MS | | 1/3/2022

TITLE: Support Frame, PF Terminal

DRAWN | DRAWN | DRAWN
--- | --- | ---
MS | MS | MS

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COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.

SIZE | DWG. NO. | REV
--- | --- | ---
C | TE-22414 | C

SCALE: 1:12 SHEET 2 OF 3
Note: 2 x 4 Pine Lumber

Note: 1/2" Plywood
Notes:
Hardware Required:
#8 Wood Screws x 1.5" long - approximately 1 lb
#8 Wood Screws X 2.5" Long - Approximately 1/4 lbs
1/4-20 x 2.5" Long Hex Head Bolts - 56 pieces
1/4-20 Wing Nuts - 56 Pieces
1/4" Flat Washer - 56 pieces

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<tr>
<td>2</td>
<td>TE-22415-03</td>
<td>1/2&quot; Plywood</td>
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<tr>
<td>3</td>
<td>TE-22415-04</td>
<td>2x4 Pine Lumber</td>
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<td>4</td>
<td>TE-22415-05</td>
<td>2x4 Pine Lumber</td>
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</tr>
<tr>
<td>5</td>
<td>TE-22415-06</td>
<td>3/4&quot; Plywood</td>
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</tbody>
</table>
Note:
2x4 Pine Lumber

Notes:
3/4" Plywood

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL: ±1/16
ANGULAR: ±1° BEND: ±1°
TWO PLACE DECIMAL: ±0.13
THREE PLACE DECIMAL: ±0.025

MATERIAL/FINISH:
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COMMENTS:
DO NOT SCALE DRAWING
REMOVE ALL BURRS AND SHARP EDGES.

UNITED STATES

TEAM NAME DATE
DRAWN MS 1/3/2022

PROPERTY OF FIRST 

FIRST ROBOTICS COMPETITION

SCALE: 1:12 SHEET 3 OF 4
Place Item 1 and all 4 attach with Woodscrews.

finish with 3 and 4 using wood screws
Item 3 flush/tangent to Item 2

DETAIL C
SCALE 1:4

Attach items using 2.5" screws

<table>
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<tbody>
<tr>
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<td>TE-22416-01</td>
<td>2 x 4 Pine Lumber</td>
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<td>TE-22416-02</td>
<td>2 x 4 Pine Lumber</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>TE-22416-03</td>
<td>2 x 4 Pine Lumber</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>TE-22416-04</td>
<td>2 x 4 Pine Lumber</td>
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</table>

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL: 1/16
ANGULAR: MACH 1° BEND 1°
TWO PLACE DECIMAL: .001
THREE PLACE DECIMAL: .000

MATERIAL/FINISH:

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REMARKS:
REMOVES ALL BURRS AND SHARP EDGES.
Notes:
2 x 4 Pine Lumber
Notes:
Hardware Required
Staples and/or Glue
Optional: #10 bolts (~3/4" long, depending on thickness of material used for 2) and nuts, QTY 28.

If teams do not want to use bolts to secure 2 to 1, a number of holes in these parts may be omitted.

ITEM NO. | PART NUMBER | DESCRIPTION                  | QTY.
---       |-------------|------------------------------|------
1         | TE-22418    | Bed, Chute Assembly          | 1    
2         | TE-22419    | Angle, Chute Assembly        | 7    

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL: ±1/16
ANGULAR: MACH ±1° BEND ±1°
TWO PLACE DECIMAL: ±0.01
THREE PLACE DECIMAL: ±0.005

MATERIAL/FINISH:

DO NOT SCALE DRAWING

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COMMENTS:
REMOVE ALL BURRS AND SHARP EDGES.

TEAM | NAME | DATE
--- |------|-----
MS |      | 1/4/2022

SIZE | DWG. NO. | REV
--- |---------|----
C | TE-22417 | 

SCALE: 1:5 SHEET 1 OF 2
Note orientation of Item 2 relative to holes on Item 1.

Place Item 1

Glue and/or staple Item 2

Optional: attach using nuts and bolts
Notes:
1. 0.20" diameter holes are optional - see TE-22417 for details.
Notes:
1. 0.19" diameter holes are optional, see TE-22417 for details.