



Test Rig and Safety Area Specifications

Table Of Contents

- 01 Test Rig Plan View
- 02 Test Rig Elevation View
- 03 Raised Build Area CAD Details
- 04 Test Rig Safety Area Plan View
- 05 Test Rig Home Built Sample

Final Design • October 29, 2022

Mandatory fill cell with can placement

Raised Build Area; 3" x 36" x 36" 4" x 4" box grid under 1/16" smooth acrylic

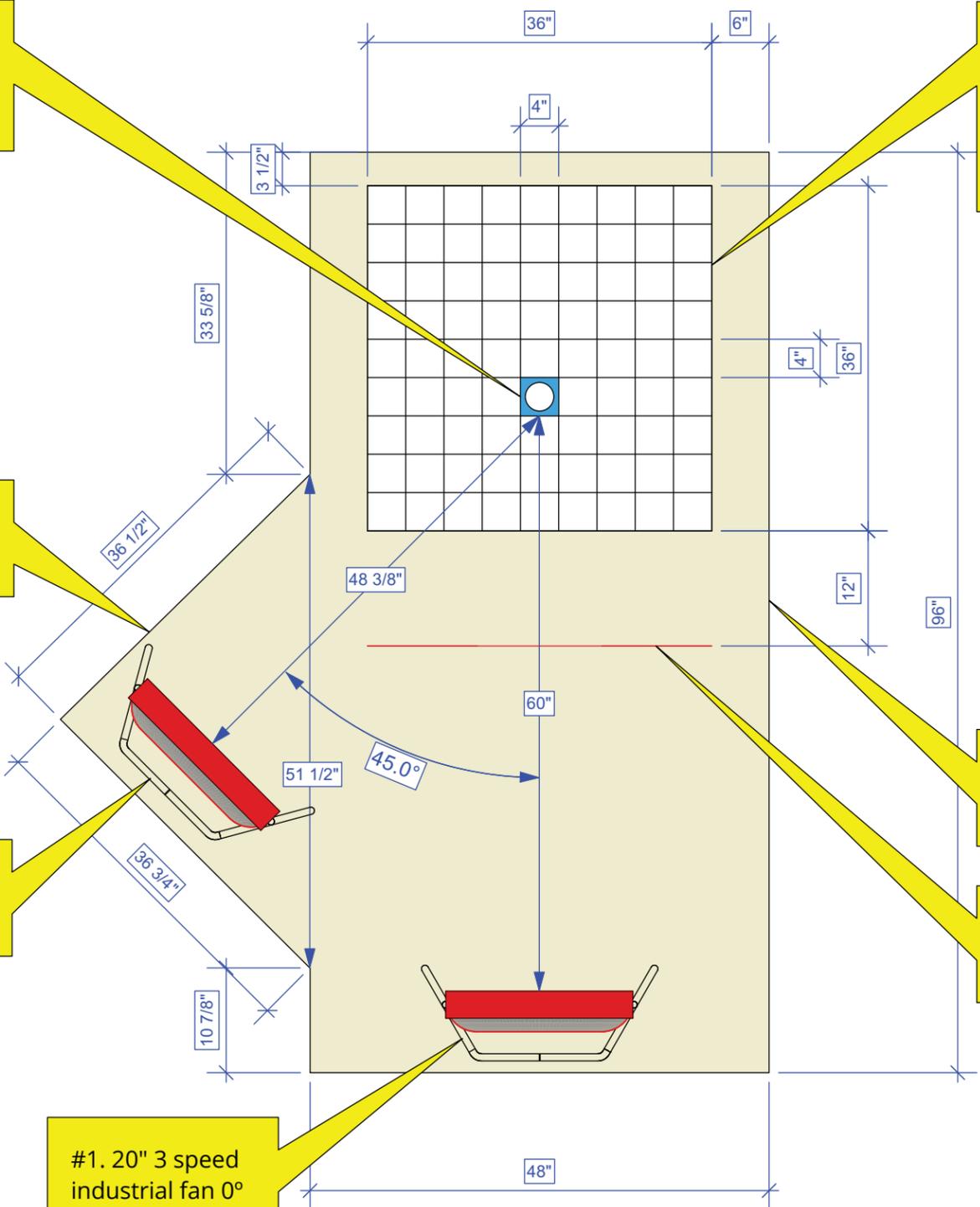
Triangle fan support

#2. 20" 3 speed industrial fan 45°

#1. 20" 3 speed industrial fan 0°

Test table 48" x 96"

12" line for grades 9 thru 12



- Wear eye protection at all times
- Read all warnings on label before use
- Critical dimensions are in blue
- Tolerance of all parts and dimensions need to be plus or minus 1/4"

NOTES:

Test table:
3/4" x 48" x 96" plywood with a extended 36-1/2" x 36-1/2" x 51-1/2" triangle to support fan #2 at 45°. (see page .02 for elevation details) Table surface is 30" inches off the floor.

Raised Build Area:
3" x 36" x 36" raised platform. Plywood construction. (see page .03 for details)

Raised Build Area Grid:
4" x 4" box grid squares are located under 1/16" smooth acrylic. Mandatory fill cell in blue. (see page .03 for details) (see page .03 for details)

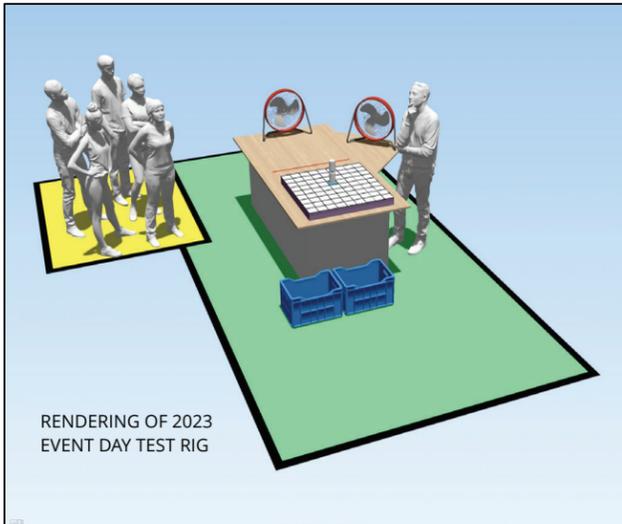
(2) 20" 3 Speed Industrial Fans:
Maxx Air 20" 3 speed floor shroud fan. Fans are permanently affixed to the table surface and the fan shroud is permanently fixed at 90° to the table surface.

LINK:
<https://www.homedepot.com/p/Maxx-Air-20-in-Floor-Shroud-Fan-H-VFF-20S-REDUPS/204409872>

NOTE:
Anemometer wind speed measurements were taken at the front of the blue square. (see plan view page .01)

4-8 grade build-area position:
low speed: 548 ft/min
medium speed: 634 ft/min
high speed: 759 ft/min

High school build-area position:
low speed: 650 ft/min
medium speed: 700 ft/min
high speed: 788 ft/min



(see Survive the Storm Rule Package for additional information)

The Tech Challenge 2023 Test Rig (ONLY) Plan View

SCALE: 3/4"=1'-0"



Title The Tech Interactive			Copyright 2023 The Tech Interactive™		
Drawing Number 00.01	Drawn By jvieira	Date 4/6/23	All of the concepts, designs, and plans represented by this document are the property of TTI and are for use on the project specified in this document. No concepts, designs, or plans shall be used by any person, firm, or corporation for any purpose without the prior written permission of TTI.		
CAD File Name DETAIL CAD					

- Wear eye protection at all times
- Read all warnings on label before use
- Critical dimensions are in blue
- Tolerance of all parts and dimensions need to be plus or minus 1/4"

NOTES:

Test table:

3/4" x 48" x 96" plywood with a extended 36-1/2" x 36-1/2" x 51-1/2" triangle to support fan #2 at 45°. (see page .02 for elevation details) Table surface is 30" inches off the floor.

Raised Build Area:

3" x 36" x 36" raised platform. Plywood construction. (see page .03 for details)

Raised Build Area Grid:

4" x 4" box grid squares are located under 1/16" smooth acrylic. Mandatory fill cell in blue. (see page .03 for details)

(2) 20" 3 Speed Industrial Fans:

Maxx Air 20" 3 speed floor shroud fan. Fans are permanently affixed to the table surface and the fan shroud is permanently fixed at 90° to the table surface.

LINK:

<https://www.homedepot.com/p/Maxx-Air-20-in-Floor-Shroud-Fan-HVFF-20S-REDUPS/204409872>

NOTE:

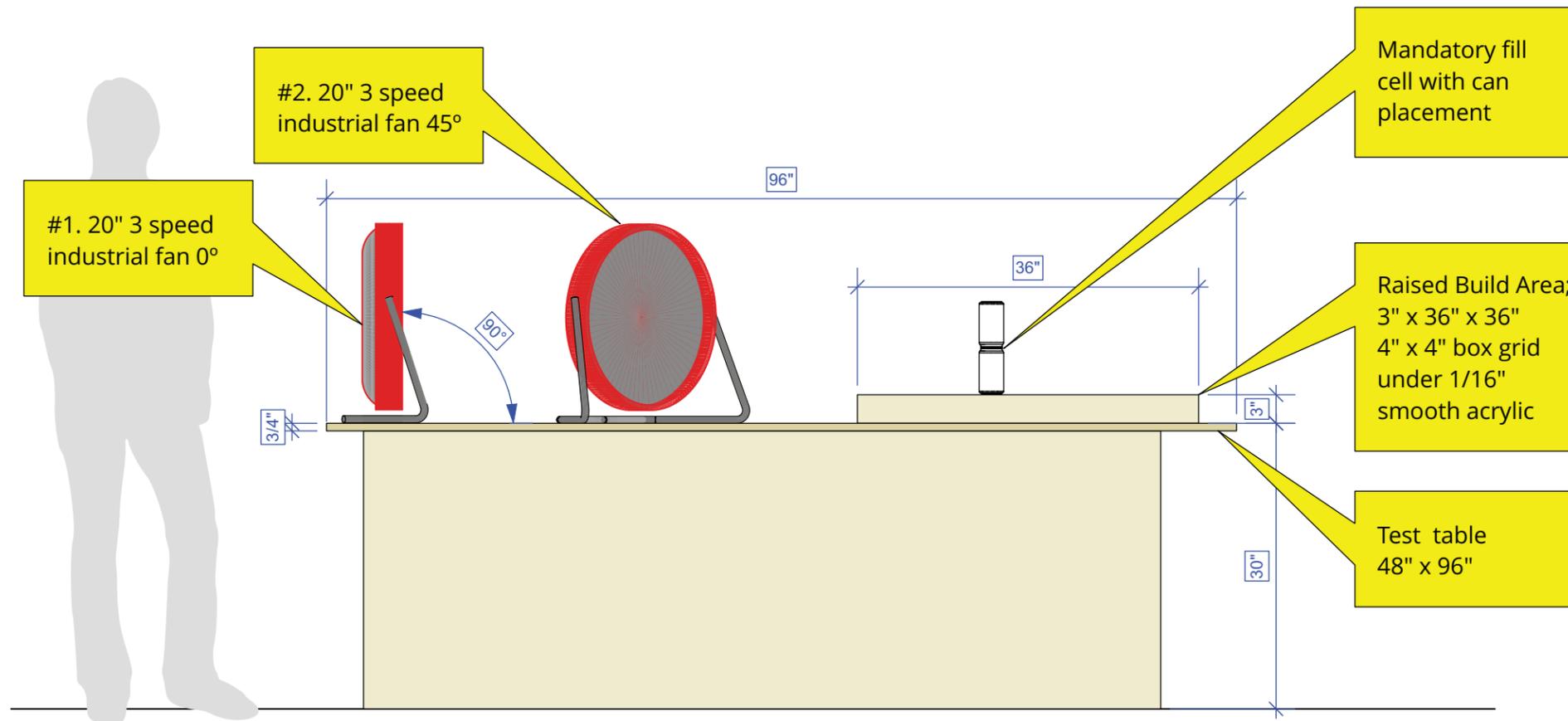
Anemometer wind speed measurements were taken at the front of the blue square. (see plan view page .01)

4-8 grade build-area position:

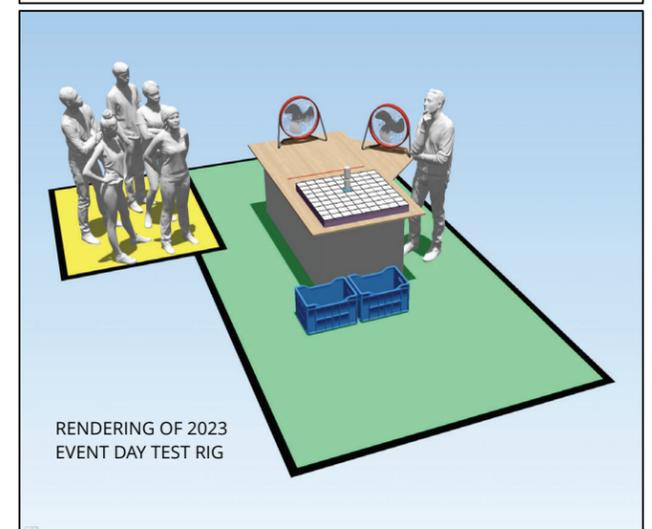
low speed: 548 ft/min
medium speed: 634 ft/min
high speed: 759 ft/min

High school build-area position:

low speed: 650 ft/min
medium speed: 700 ft/min
high speed: 788 ft/min



(see Survive the Storm Rule Package for additional information)

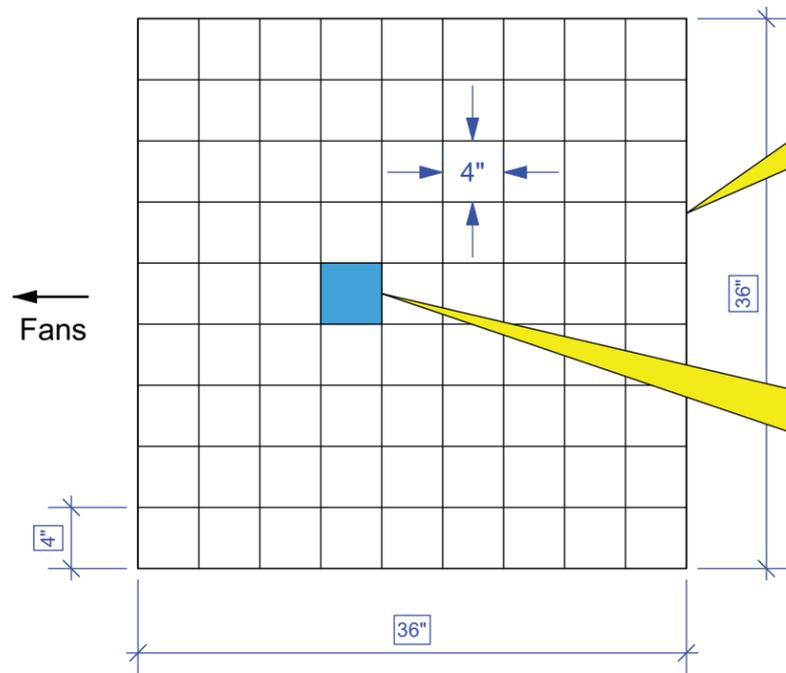


The Tech Challenge 2023 Test Rig (ONLY) Elevation View

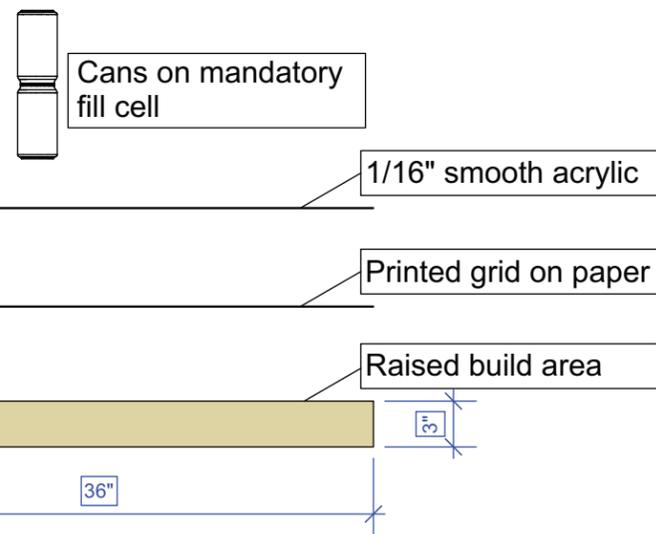
SCALE: 3/4"=1'-0"



Title The Tech Interactive			Copyright 2023 The Tech Interactive™
Drawing Number 00.02	Drawn By jvieira	Date 4/6/23	All of the concepts, designs, and plans represented by this document are the property of TTI and are for use on the project specified in this document. No concepts, designs, or plans shall be used by any person, firm, or corporation for any purpose without the prior written permission of TTI.
CAD File Name DETAIL CAD			



Plan View

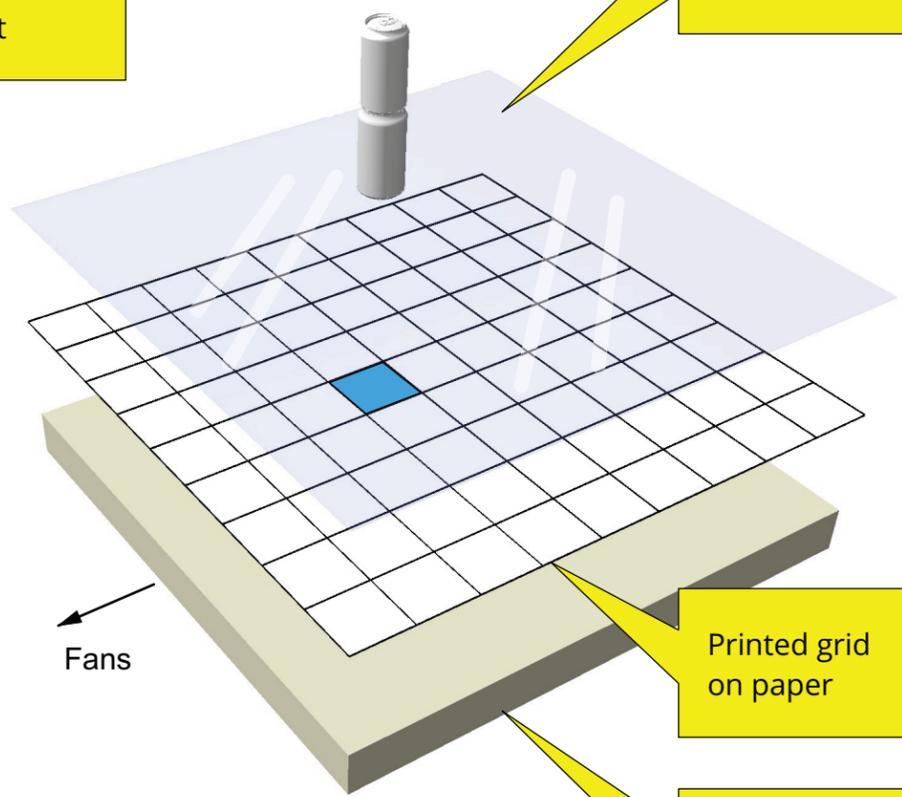


Side View

Raised Build Area;
3" x 36" x 36"
4" x 4" box grid
under 1/16"
smooth acrylic

Mandatory fill
cell with can
placement

Smooth Acrylic
1/16" x 36" x 36"



Perspective View

Printed grid
on paper

Raised Build Are
3" x 36" x 36"

(see Survive the Storm Rule Package
for additional information)

- Wear eye protection at all times
- Read all warnings on label before use
- Critical dimensions are in blue
- Tolerance of all parts and dimensions need to be plus or minus 1/4"

NOTES:
Test table:
3/4" x 48" x 96" plywood with a extended 36-1/2" x 36-1/2" x 51-1/2" triangle to support fan #2 at 45°. (see page .02 for elevation details) Table surface is 30" inches off the floor.

Raised Build Area:
3" x 36" x 36" raised platform. Plywood construction. (see page .03 for details)

Raised Build Area Grid:
4" x 4" box grid squares are located under 1/16" smooth acrylic. Mandatory fill cell in blue. (see page .03 for details)

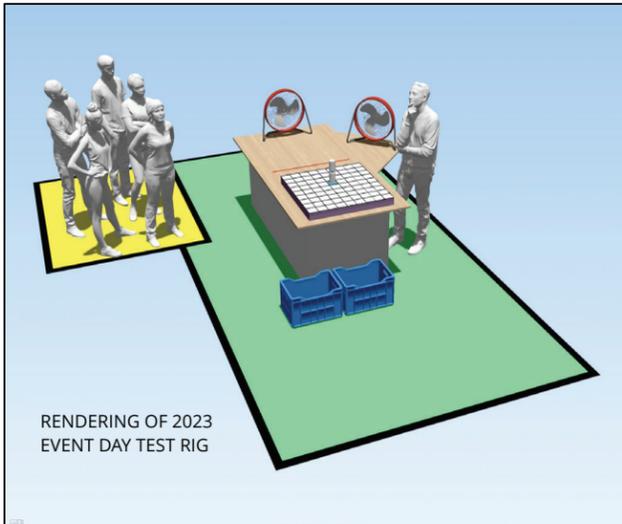
(2) 20" 3 Speed Industrial Fans:
Maxx Air 20" 3 speed floor shroud fan. Fans are permanently affixed to the table surface and the fan shroud is permanently fixed at 90° to the table surface.

LINK:
<https://www.homedepot.com/p/Maxx-Air-20-in-Floor-Shroud-Fan-H-VFF-20S-REDUPS/204409872>

NOTE:
Anemometer wind speed measurements were taken at the front of the blue square. (see plan view page .01)

4-8 grade build-area position:
low speed: 548 ft/min
medium speed: 634 ft/min
high speed: 759 ft/min

High school build-area position:
low speed: 650 ft/min
medium speed: 700 ft/min
high speed: 788 ft/min



RENDERING OF 2023
EVENT DAY TEST RIG

The Tech Challenge 2023 Raised Build Area Assorted Views

SCALE: 1"=1'-0"

Title The Tech Interactive			Copyright 2023 The Tech Interactive™
Drawing Number 00.03	Drawn By jvieira	Date 4/6/23	All of the concepts, designs, and plans represented by this document are the property of TTI and are for use on the project specified in this document. No concepts, designs, or plans shall be used by any person, firm, or corporation for any purpose without the prior written permission of TTI.
CAD File Name DETAIL CAD			

- Wear eye protection at all times
- Read all warnings on label before use
- Critical dimensions are in blue
- Tolerance of all parts and dimensions need to be plus or minus 1/4"

NOTES:

Test table:
3/4" x 48" x 96" plywood with a extended 36-1/2" x 36-1/2" x 51-1/2" triangle to support fan #2 at 45°. (see page .02 for elevation details) Table surface is 30" inches off the floor.

Raised Build Area:
3" x 36" x 36" raised platform. Plywood construction. (see page .03 for details)

Raised Build Area Grid:
4" x 4" box grid squares are located under 1/16" smooth acrylic. Mandatory fill cell in blue. (see page .03 for details)

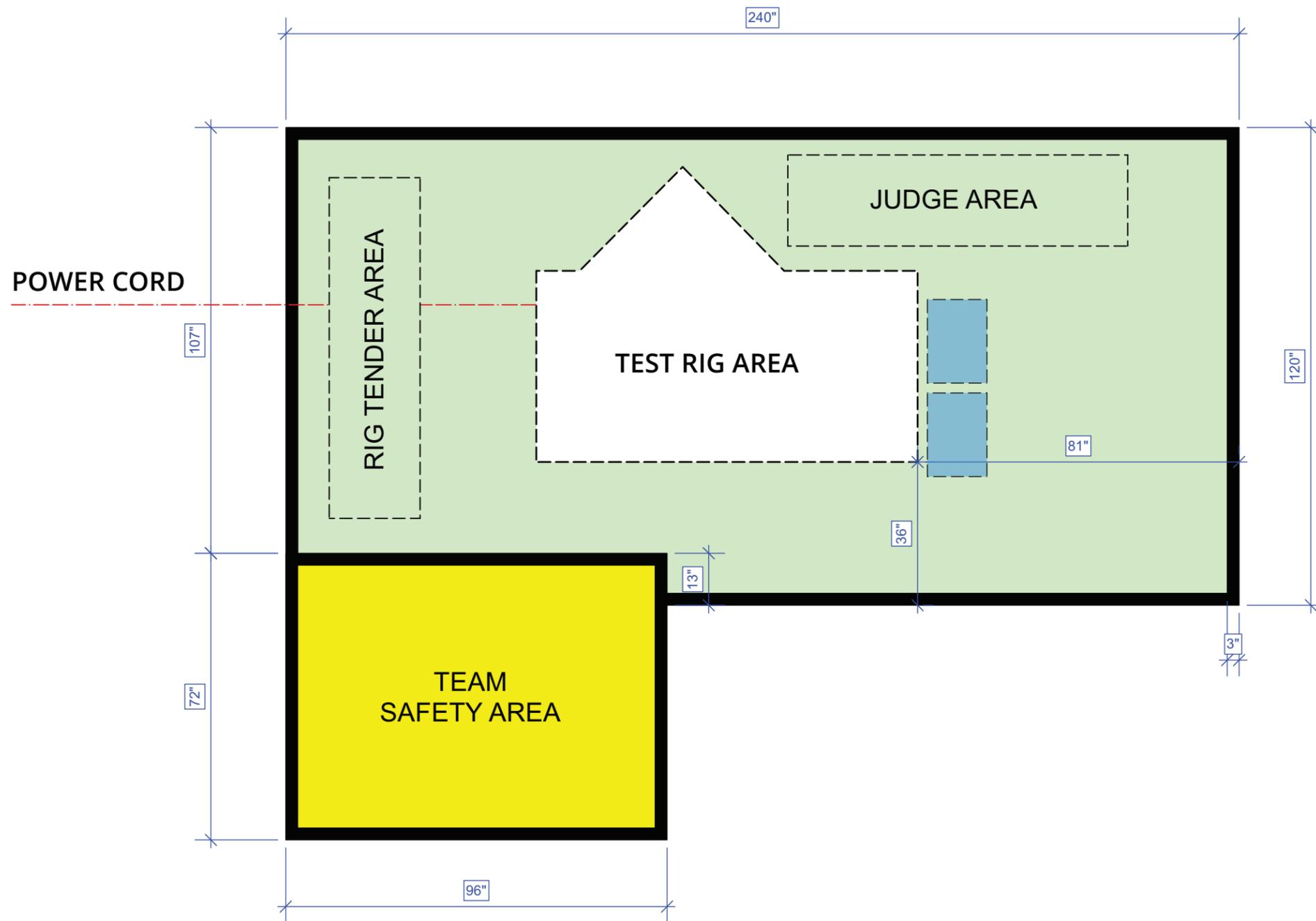
(2) 20" 3 Speed Industrial Fans:
Maxx Air 20" 3 speed floor shroud fan. Fans are permanently affixed to the table surface and the fan shroud is permanently fixed at 90° to the table surface.

LINK:
<https://www.homedepot.com/p/Maxx-Air-20-in-Floor-Shroud-Fan-H-VFF-20S-REDUPS/204409872>

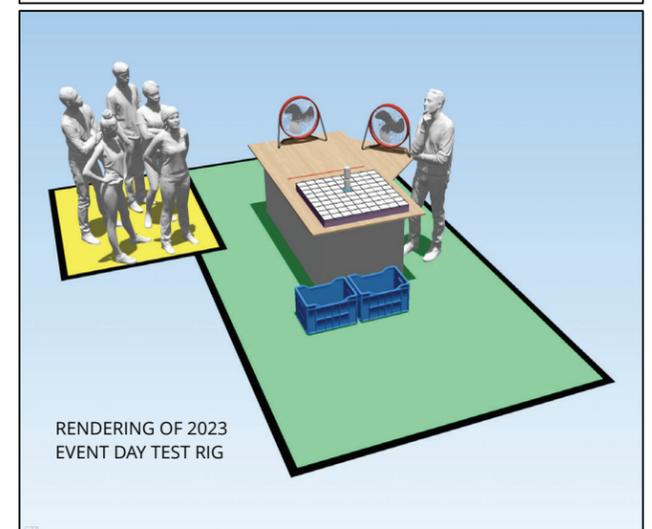
NOTE:
Anemometer wind speed measurements were taken at the front of the blue square. (see plan view page .01)

4-8 grade build-area position:
low speed: 548 ft/min
medium speed: 634 ft/min
high speed: 759 ft/min

High school build-area position:
low speed: 650 ft/min
medium speed: 700 ft/min
high speed: 788 ft/min



(see Survive the Storm Rule Package for additional information)

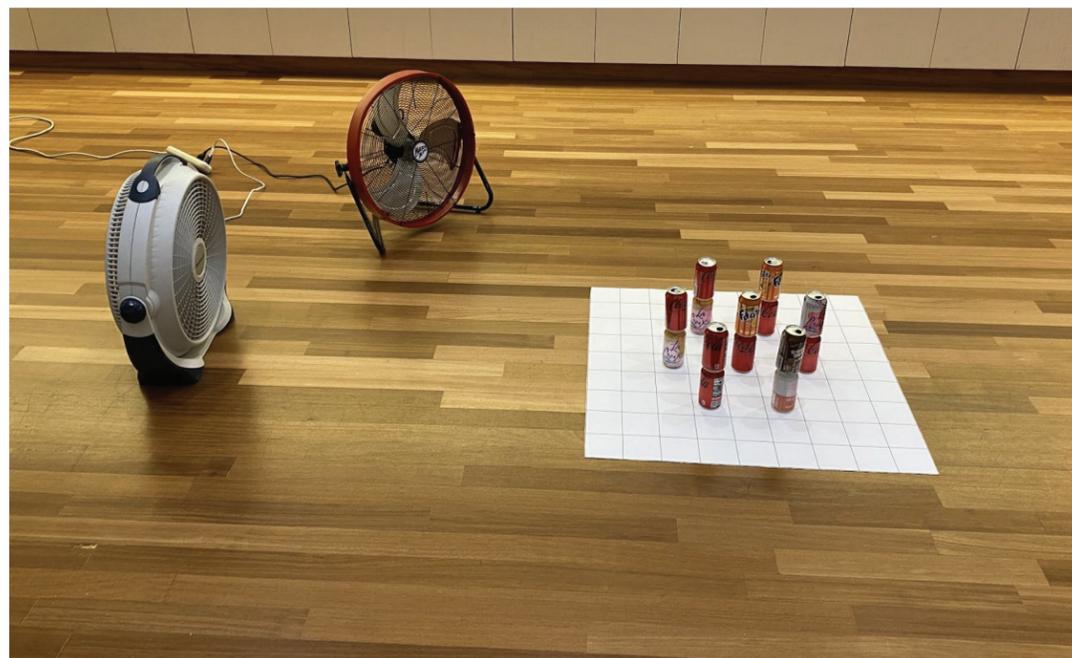
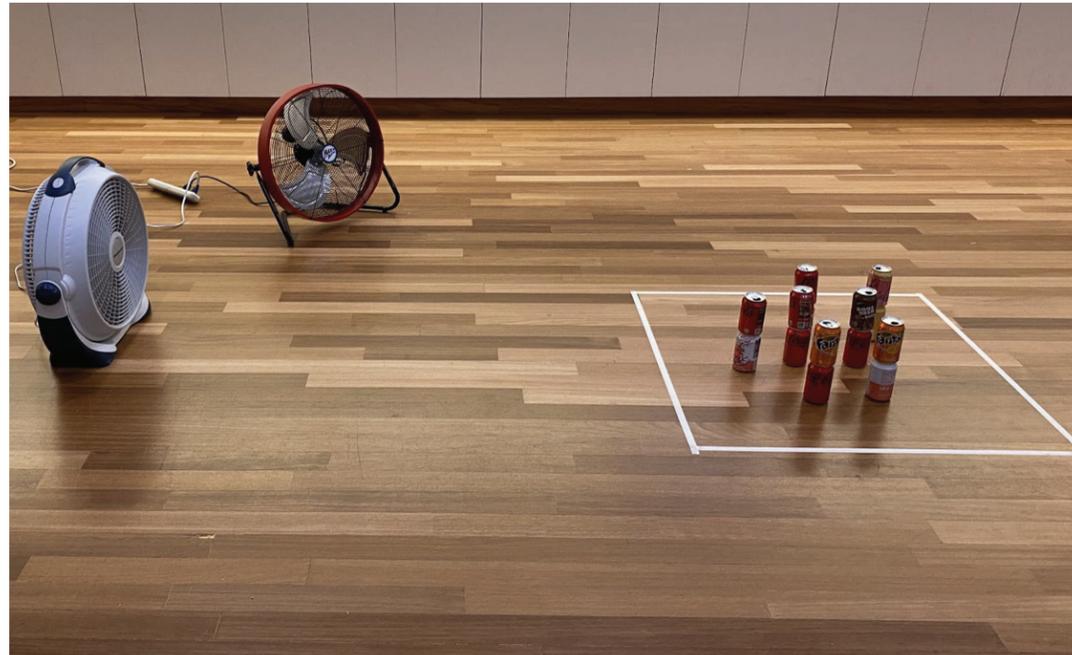


The Tech Challenge 2023 Safety Area Plan View

SCALE: 3/4"=1'-0"



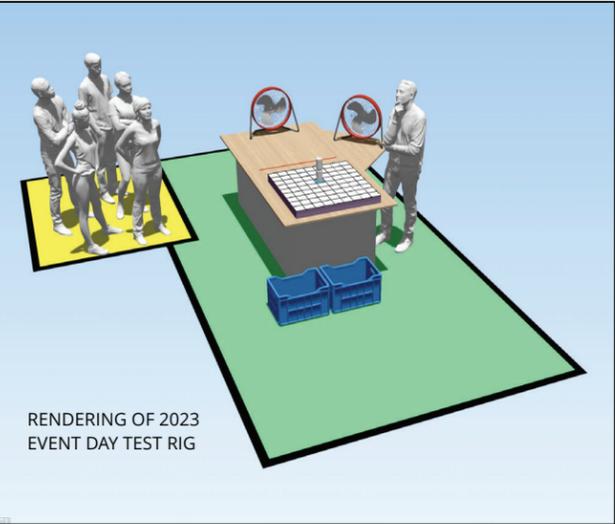
Title The Tech Interactive			Copyright 2023 The Tech Interactive™
Drawing Number 00.04	Drawn By jvieira	Date 4/6/23	All of the concepts, designs, and plans represented by this document are the property of TTI and are for use on the project specified in this document. No concepts, designs, or plans shall be used by any person, firm, or corporation for any purpose without the prior written permission of TTI.
CAD File Name DETAIL CAD			



- Wear eye protection at all times
- Read all warnings on label before use
- Critical dimensions are in blue
- Tolerance of all parts and dimensions need to be plus or minus 1/4"

NOTES:
Test table:
 3/4" x 48" x 96" plywood with a extended 36-1/2" x 36-1/2" x 51-1/2" triangle to support fan #2 at 45°. (see page .02 for elevation details) Table surface is 30" inches off the floor.
Raised Build Area:
 3" x 36" x 36" raised platform. Plywood construction. (see page .03 for details)
Raised Build Area Grid:
 4" x 4" box grid squares are located under 1/16" smooth acrylic. Mandatory fill cell in blue. (see page .03 for details) (see page .03 for details)
(2) 20" 3 Speed Industrial Fans:
 Maxx Air 20" 3 speed floor shroud fan. Fans are permanently affixed to the table surface and the fan shroud is permanently fixed at 90° to the table surface.
LINK:
<https://www.homedepot.com/p/Maxx-Air-20-in-Floor-Shroud-Fan-H-VFF-20S-REDUPS/204409872>

NOTE:
 Anemometer wind speed measurements were taken at the front of the blue square. (see plan view page .01)
4-8 grade build-area position:
 low speed: 548 ft/min
 medium speed: 634 ft/min
 high speed: 759 ft/min
High school build-area position:
 low speed: 650 ft/min
 medium speed: 700 ft/min
 high speed: 788 ft/min



RENDERING OF 2023
 EVENT DAY TEST RIG

Sample of home built test area

(see Survive the Storm Rule Package for additional information)



Title The Tech Interactive			Copyright 2023 The Tech Interactive™
Drawing Number 00.05	Drawn By jvieira	Date 4/6/23	All of the concepts, designs, and plans represented by this document are the property of TTI and are for use on the project specified in this document. No concepts, designs, or plans shall be used by any person, firm, or corporation for any purpose without the prior written permission of TTI.
CAD File Name DETAIL CAD			