

# TRAMCON VR Experience



**TECH**

# Platforms

We wanted to make the VR experience as accessible as possible to students and faculty at each campus. So the VR experience runs on multiple platforms.

It runs on Windows and Mac OSX platforms, using the keyboard and mouse for navigation. This makes it possible for an entire group of students to access the experience at once in a computer lab.

Of course, the immersive VR platforms are optimal for a VR experience. And we made sure to develop across the two major VR platforms.

## PLATFORMS FOR THE VR EXPERIENCE

- Windows
- Mac OSX
- Oculus Rift with Touch controllers
- HTC Vive with controllers

# Hardware

## Windows & Mac

The VR experience runs as a standalone program on Windows and Mac machines. When you open the program to run, a dialogue box will give you options to select the resolution and graphics quality. You can dial in the experience for the speed of the hardware.

If your computers can run Revit, they can run the Windows/Mac VR experience just fine.

## VR Headsets

The Rift and Vive systems require a robust Graphical Processing Unit (GPU). They will not run on a standard lab workstation. They both run on Windows and require computers that have been optimized for VR headsets.

## Costs

Oculus Rift with Touch controllers: \$399\*

HTC Vive with controllers: \$499\*

VR-ready PC: \$800 and up (tower only)

\*\$100 less than reported at the October meeting

# RECOMMENDED COMPUTER SPECS

## VIVE

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### Processor

Intel™ Core™ i5-4590 or AMD FX™ 8350, equivalent or better

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### Graphics

NVIDIA GeForce™ GTX 1060 or AMD Radeon™ RX 480, equivalent or better. For additional graphics card options, [view the complete list](#).

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### Memory

4 GB RAM or more

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### Video output

1x HDMI 1.4 port, or DisplayPort 1.2 or newer

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### USB

1x USB 2.0 port or newer

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### Operating system

Windows™ 7 SP1, Windows™ 8.1 or later or Windows™ 10

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# The Oculus Ready Program

Everything you need in one place. We've partnered with leading manufacturers to bring you a suite of affordable machines designed to power Rift. Whether you're a tech enthusiast, hardcore gamer, or just excited to take your first steps in VR—our program makes it quick and easy to get started.

[Learn More](#)

[View all PCs](#)



# Support Documentation

## Read Me File

TRAMCON Virtual Reality Experience

Producers & Writing:

Mitch Ogden  
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Game Art, Design, & Development:

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Revit & Sketchup Asset Creation:

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Support

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How to Use:

1. Extract a folder to a location: PC, OSX, PC-OculusVR, or PC-SteamVR
2. PC: Run the .exe file  
MAC: Install & Open the .app file inside
3. Enjoy!

## Control Summary

PC & Mac OSX Controls:



Oculus VR Controls:



SteamVR Vive Controls:



# All-in-One ZIP file

## Contents:

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TRAMCONVRPackage.zip

ZIP archive - 336.9 MB

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**TOUR**

Main Menu

Factory Overview

Wall Detailed View

Roof Detailed View

Credits

Audio: ON

Close Menu

Quit

W

FORWARD

A

LEFT

S

BACK

D

RIGHT

SELECT

ROTATE  
CAMERA

Menu

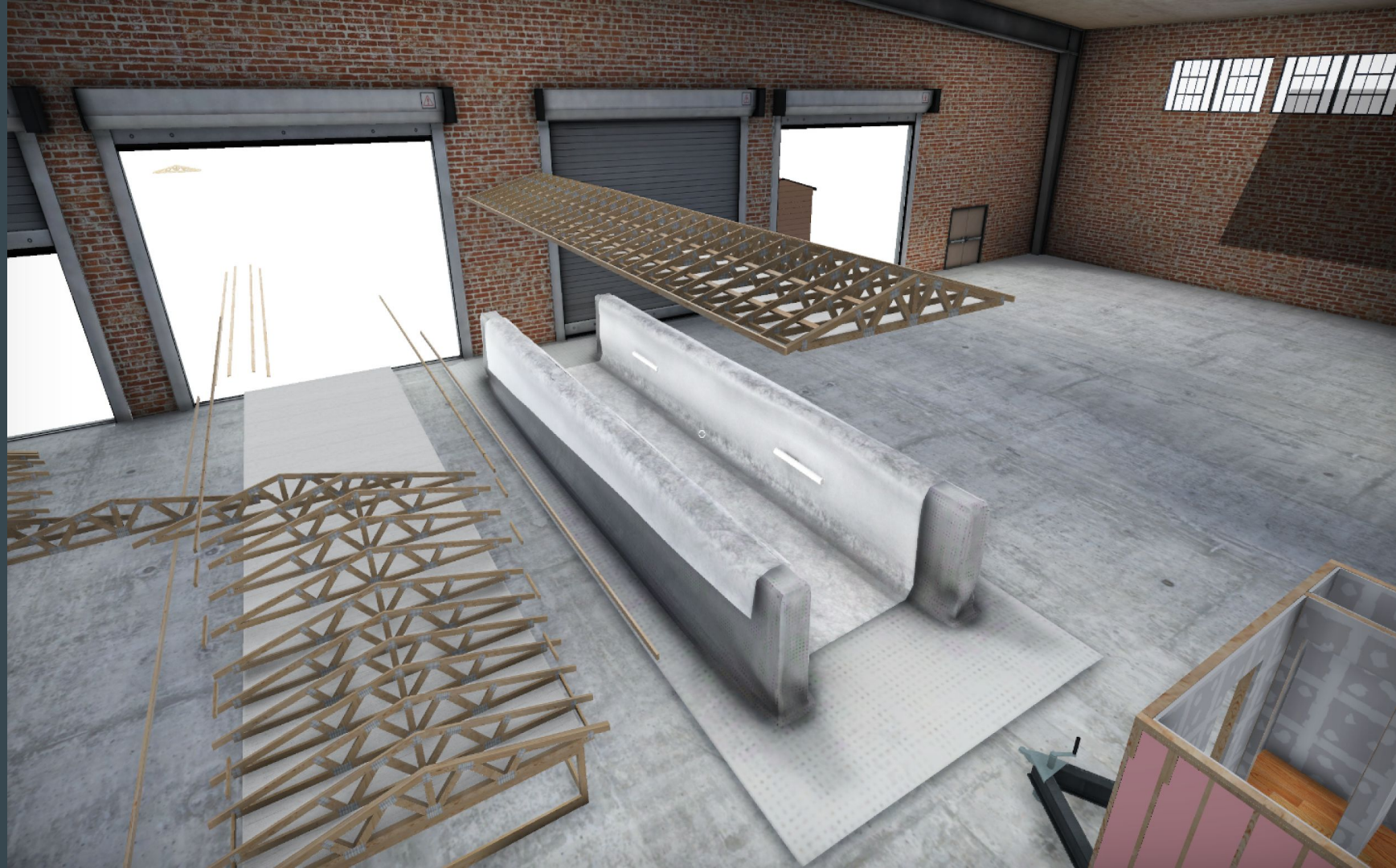
Exterior Finishing

Interior Finishing

Building Envelope

Floor Assembly





# Interior Finishing

Building Envelope

Floor Assembly





Menu

## Building Envelope

The building envelope is the process of waterproofing the building, sometimes called drying in.

It includes the placement of exterior sheathing and cutting out holes for windows and doors.

Next the moisture barrier is placed on the exterior walls.

Finally the windows and doors are installed and secured.

Depending on the manufacturer's process, exterior wall insulation may be placed during this stage before the exterior sheathing is attached.

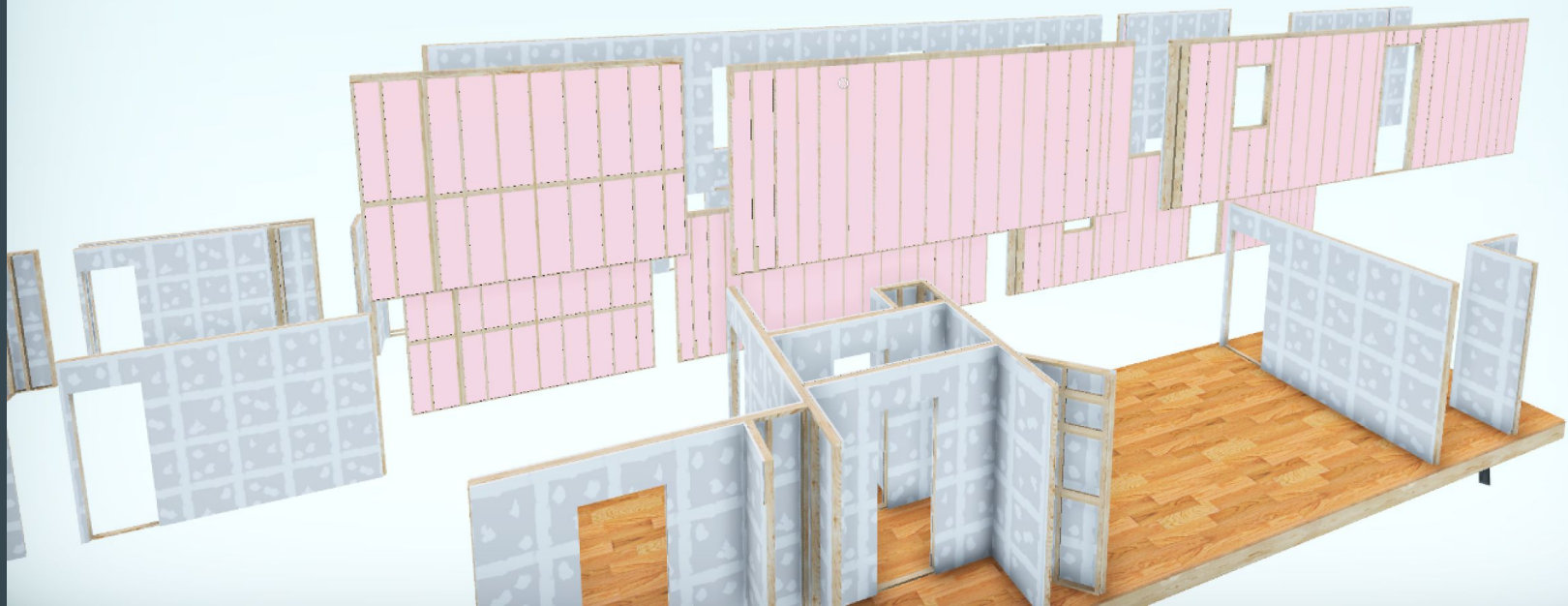
Close

Floor Assembly

Menu

Wall Assembly  
Overview

Wall Placement



Menu

## Framing Table

A framing table includes jigs that guide and control the placement of each framing member of the wall.

For example, the framer will place each stud precisely where indicated by the jig, eliminating the need for measuring and calculations, thus reducing the chance for mistakes.

Working on an elevated surface is another advantage of a framing table, offering a less fatiguing and more efficient process as compared to framing on the floor.

Advanced framing tables feature a rig of multiple computer-controller nail guns that drive precisely-spaced nails all at once.

Wall S





## Wall Storage

After framing is complete, walls are clearly coded and labeled and then placed into racks where they can be stored awaiting placement.

The ability to store complete walls allows a crew to further increase their operational efficiency and quality control by framing multiple copies of the same wall on a single jig and staging them to be placed as necessary.

To maximize efficiency, walls can be stored strategically to enable easy access for placement.

Close



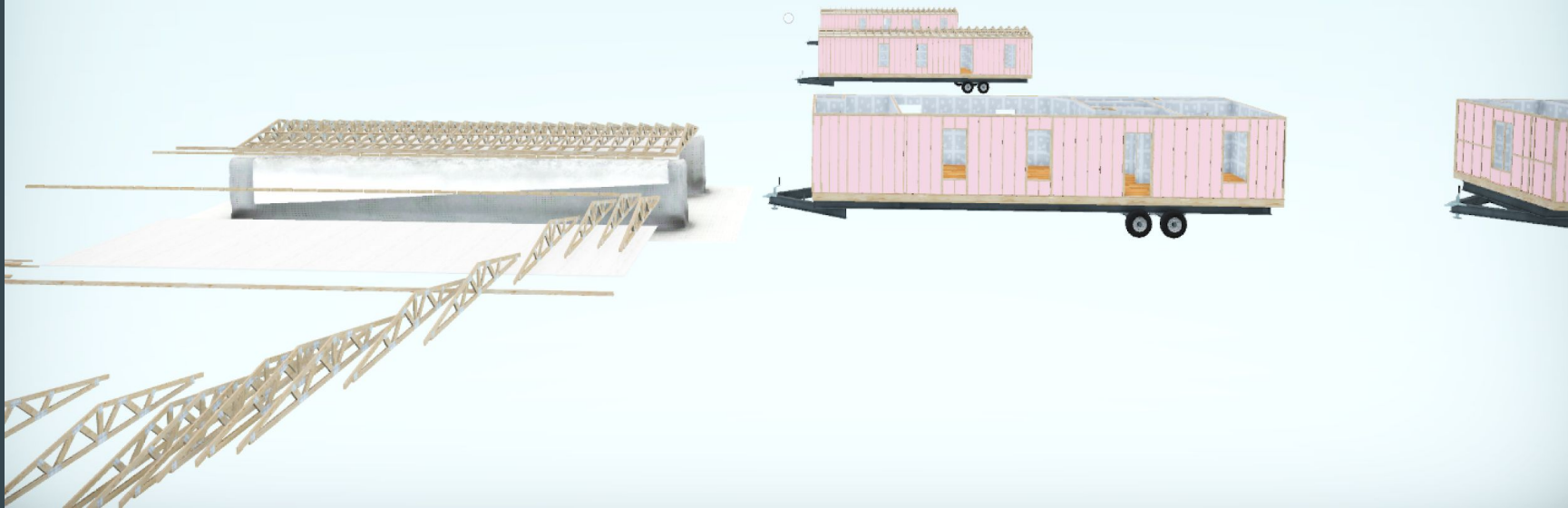
# Menu

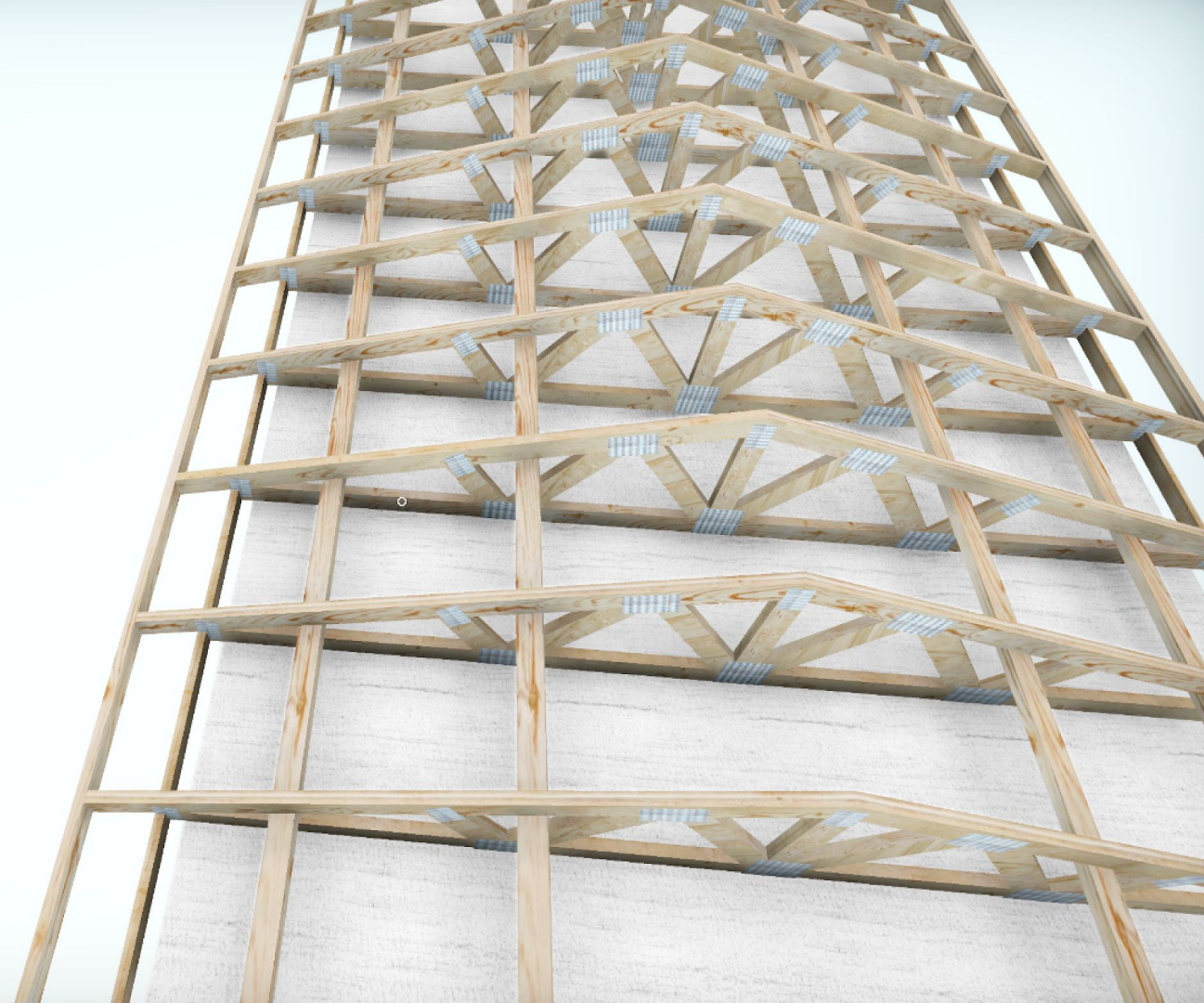
Roof Assembly Table

Texture Booth

Roof Assembly  
Overview

Roof Placement





**TEACHING**

# Curriculum

## Foundation Level

The factory overview pairs easily with Foundation level curriculum:

### 2.3 The Logistical Requirements

Figure 32: Factory Work Flow

### 3.1 Plant Layout and Responsibilities

Figure 43: Overview of the Main Line

## Supervisory Level

The factory overview can provide big-picture perspective in support of Foundation level curriculum:

### Sustainable Manufacturing

Operations, logistics, and processes are obviously essential to sustainable building. The factory overview can immerse students in the process, simulating walking on the factory floor, which can lead to conversations about innovations.

### Future Topics in MC

#### 2.5 Virtual Reality and Simulation.

The VR Experience is an obvious demonstration of the role of VR in the industry, opening conversations about employee training (production), engineering visualization (design), and customer visualization (sales).

# Student Engagement

## Recruitment

Without question, VR is sexy and attractive across many demographics. The promise and potential for VR continues to draw attention. As students consider the TRAMCON program, the VR Experience—with a VR headset—has the potential to recruit students.

## Engagement

However the VR Experience is used in the curriculum, it can provide an enrichment for students that expose them to a cutting edge technology while engaging different modes of learning as well. This gives students a novel place of focus, but also plants an early seed of innovation, to contemplate how VR technology can be used in the industry.

# Questions?

Please send your questions. We are eager to make sure that you feel comfortable with the VR content.

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