



**Sim-Tech**  
SIMULATION TECHNOLOGY



*Designed Exclusively*  
*For*  
**Fire and Public Safety**  
**Academy Training System**  
Negotiated Bid # 385-23-72033



**FIRE & PUBLIC SAFETY**  
**ACADEMY**



A DIVISION OF  
**EXCEL**  
DRIVER SERVICES

Traci Davidson | Procurement Consultant  
Indiana Department of Administration Procurement Division  
402 W. Washington St., Room W468  
Indianapolis, Indiana 46204  
Email: [tdavidson@idoa.in.gov](mailto:tdavidson@idoa.in.gov)



August 22, 2022

RE: Mobile Driving Simulator Bid #385-23-72033

Dear Traci,

Sim-Tech / Excel Driver Services is very honored and excited to submit a response for the Mobile Driving Simulator Bid#385-23-72033. Our Sim-Tech team is providing the best simulation training tools for your critical training needs, within our follow-up response is a comprehensive offering that covers the need for training on the G-Series Spartan Fire vehicle cab. We have also priced out a 24' bumper pull trailer for your mobility classroom needs. Additionally, we are showing the optional VR Augmented reality goggles and extended warranty options, Why should the Indiana Department of Homeland Security purchase their training simulator from Sim-Tech: **Salient Characteristics Of Sim-Tech's Product Offering.**

- Sim-Tech has developed products specifically designed for the Indiana Department of Homeland Security's needs
- **225 pre-designed Fire/EMS training scenarios** (See details below)
- **Custom-designed 24' bumper pull aluminum trailer** (See details below)
- **Unity software-based virtual world called Uni-Trainer** is only available from Sim-Tech. (See details below)
- Sim-Tech provides OEM dash and other OEM parts (**G-Series Spartan Metrostar cab**)
- Sim-Tech's **5-screen design** provides the best ergonomically correct wide FOV (230° Horizontal Field of View).
- Highly tuned 3-DOF Motion System to minimize acclimation issues.
- Sim-Tech G-Series fire vehicle simulators **include head tracking technology.**
- Sim-Tech is the only simulation manufacturer to include OEM dash panels and other OEM parts. (Sim-Tech is asking for 120 days for delivery for this reason) Trailer delivery time may exceed 120 days based on current turnaround times. But we will deliver all equipment in August of 2022.
- Unity-based virtual worlds that provide game-like immersive realism for full trainee immersion and buy-in.
- **Two Year Warranty is included at no additional cost.**
- **Sim-Tech simulators include smart technology, "Drive Prodigy"** Sim-Tech provides customers with the best Behavior-based training platforms that deliver quantifiable results.
- **Single PC design** provides easier maintenance and future ease of upgradeability at a far lower cost.
- Sim-Tech has **VR augmented reality SR-Headset for additional training capabilities (Optional - Highly Recommended)**

Respectfully,

Clayne A. Woodbury  
VP of Sales  
801-654-4095

EDS has tremendous experience in all facets of driver training and simulation design. 3 of the top 6 management teams have been directly involved with the simulation industry for over 20 years - in software and hardware development, professional driver training, and sales. Having worked for multiple vendors which by revenue, are the top 2 simulation companies in this market, this team knows the challenges, weaknesses, and best practices of the industry. Additional information will be provided on request.

- **Jason Emery, EDS CEO**

As one of two original founders of Excel Driver Services, Jason's experience began in the commercial training world in 1996. After his education at Metro State College in 1996, he partnered with his Father and founded Premiere Custom Training (PCT). Development in custom training focused on industry-specific educational programs for large corporations, which later successfully merged with I-Sim 1998. Jason led the integration of training with simulation with I-Sim (Now L3 Harris) as the Vice President of Sales and Training. In 2001, Jason left I-Sim and together with his Father founded Excel Driver Services. He has led EDS since then which has trained thousands of drivers for CDL and Light-Duty training applications in a variety of industries. The Integration of simulation and live training led to discoveries in driver behavior and behavior modification methodologies. This in turn has led to tremendous discovery and development in adaptive learning, enabled the development of risk assessments based on individual driver's skills and human factors, and led to successful positive changes in individual skills and behavior, with lasting results. Jason has spent his career dedicated to finding solutions that meet the needs of industry, including the development of the "Solution-Based Driver System™," a foundation of educational concepts that enable drivers to go beyond basic skills, affording them the ability to understand how the human element can overcome bias in behavioral deficiencies that lead to incidents. By changing this dynamic, companies are able to focus on improving the dynamics of learning and reduce the risks associated with everyday driving. Today Jason continues his mission to push the threshold of technology and the integration of training for Results at Excel Driver Services.

- **Carey Kriger, Chief Technology Officer**

Carey is Sim-Tech's key engineer in all technology for software design and development for our virtual-reality simulators. After graduating University of Texas alumni in engineering, Carey was inspired to develop and build driving simulators for racing in the early '90s at the very beginning of the simulation industry. His development led to hundreds of simulators in the marketplace, from clients such as Disney (Epcot Center), numerous racing simulators in the US and Europe, and specialty systems for Kennicott mine, with multiple clients. He has worked with Excel Driver Services since 2006, where he engineered proprietary software and hardware development of simulator systems. Most recently, Carey pioneered the development of UniTrainer™ wherein changing the dynamics of high-resolution software to correlate and tune dynamics in the new proprietary software we use in our Sim-Tech products today.

- **Clayne A. Woodbury, VP of Sales Sim-Tech Division**

Clayne is a successful, ambitious international sales executive with extensive experience in simulation technology. As a top customer sales representative, he takes pride in understanding client needs and aiding in the delivery of systems. Clayne is energetic and highly motivated to take care of all customer needs. Has worked in the simulation industry for 22+ years throughout the U.S. and Canada. His work with educational institutions, research and development, transit, and law enforcement is well documented both nationally and internationally. He is a great solution provider for his clientele. Clayne originally worked with Jason Emery in 1999, the start of their working relationship, which has led to Clayne's current position at Sim-Tech. Now, as VP of Sales, his primary mission is to ensure Excel and Sim-Tech clients are well advised and deliver unparalleled customer service. At Sim-Tech, customer satisfaction is a top priority.

- **Steve Waymel, President, Chief Financial Officer of Excel Driver Services** over the last 40 years in the business sector, Steve has started, developed, and partnered in a number of businesses during his tenure. After starting his professional career at Motorola, Steve advanced his career starting companies in various industries including biotechnology, robotics, transportation, and document management, with the largest growing to 300 employees in 5 locations. His experience led him to develop a business consulting practice for 10 years, serving many business owners in the US. Seeing the potential of Jason's vision for innovation and growth in training and changing driver behavior, he joined Excel Driver Services in 2015, where he serves as President and partner. His focus is on general management, strategic planning, financial analysis, planning, and execution. His mission is to support Excel's growth maximizing the success of the team in building the best simulation and training company in the US. Steve and Excel both have an extensive history of achieving measurable results.

- **Drew Salter, General Manager Sim-Tech Division**

Drew began his journey as a fabrication expert with Sim-Tech in 2012 in the design and implementation of Sim-Tech products. He was trained and developed in the integration of the engineering of products, later moving into his position as General Manager of Sim-Tech, overseeing all development of hardware and software within the Sim-Tech branding in our Elburn, IL facility. With his experience in working with clients to develop simulation systems and integrate products to meet and exceed clients' needs, he is an expert in the critical functionality of all Sim-Tech systems and handles all aspects of development and solutions for simulation clientele for hardware. As an expert and oversight in product design, manufacturing, and customer support for Sim-Tech, Drew's innovation, and leadership are unparalleled in advancing our technology for functionality and improvement of the user experience.

- **Ian Emery, Project Manager of Technology and Innovation**

Ian has been involved in different aspects of Excel Driver Services from entry-level employment to his role as Technology and Creative Manager. After graduating from Colorado State University in 2017, Ian Emery solidified his position as a full-time associate in his professional career as the 3rd generation leader of Excel Driver Services. His focus was placed on the development of Drive Prodigy™, a learning management platform that integrates all aspects of the educational process. He is the leader in the integration of simulators and educational platforms. His input in adaptive learning and "gamification" in the pedagogical process has led to tremendous discovery and influence on our learning processes which result in the most robust, adaptive learning process. His work in Drive Prodigy™ allows our technology platforms to communicate and document findings, creating a seamless program that trains and documents all activities of our products and services. Ian has been instrumental in the vision of the integration of tracking, training, and driver behavior, all leading to results for our clients.



# Executive Summary

Simulation Technology (Sim-Tech) was established in 2009 with a mission to develop top-quality simulation systems for the Firefighting and Emergency Medical Services (EMS) and industries. Tremendous development went into Sim-Tech's initial systems, which then expanded into simulation for Law Enforcement, Transportation, School Transit, and various Light-Duty vehicle configurations. A tremendous effort went into designing simulation platforms that were ergonomically correct, accurate, and durable to meet or exceed client expectations to the industries served. Sim-Tech systems are made to withstand daily training and function with minimal downtime.

In 2018, Simulation Technology was acquired by Excel Driver Services (EDS), a leader in driver training, simulation training, and workplace safety. EDS was formed in 2001, building a new generation of training programs to include simulation platforms for Military and private industry training. EDS has trained in excess of 130,000 trainees from the corporate, military, municipal, and public clientele. Training and curriculum are developed to address relevant and changing environments in the marketplace. The entire concept of EDS was to develop strategic programs through a core training platform called "Solution-Based Driver System" (SBDS) which continues to deliver results today. This progressive, behavior-based learning platform is incorporated into all training processes for clients across the United States. EDS has vast experience with simulation, training tens of thousands of drivers across multiple industries including military, law enforcement, and various transportation industries. EDS was engaged with other simulation manufacturers for many years, however, after experiencing multiple product shortfalls and failures, EDS began building custom simulators to meet the requirements for daily training and instruction. As EDS expanded its focus on advanced learning, it purchased Sim-Tech to develop more innovative systems, capitalizing on current technologies such as VR, AI, and Avatars, surpassing the capabilities of traditional simulation providers. This software development has allowed us to deliver next-generation systems, offering continuous upgrades to address today's challenges in driver safety, and deliver measurable results. We have developed revolutionary products that are trainer-friendly, adaptable, and deliver accountability to the clients we serve.

Our experience and advanced knowledge of education are incorporated into all products we create and deliver. We truly focus on "delivering results, not hardware." This means our products are made to expand, advance, and adapt to new challenges in training environments, and clients can receive the value of a model that is not bound by the limitations of old software platforms and technology. Sim-Tech/EDS is using State-of-the-Art technology to address today's problems while focusing on tomorrow's opportunities. EDS has developed fully integrated, trainer-friendly simulation systems for educators, that advantageously combines technology with behavior-based training. EDS/Sim-Tech is also focused on delivering a turn-key process through Drive Prodigy™, an Integrated Learning Management System (LMS) which includes:

- Customizable computer-based training (CBT) learning modules
- Tablet-based documentation for hands-on training,

- Integration of pre-designed driving simulation scenarios tracking skill-based driver performance, focusing on specific desired measurement criteria,
- Use of Artificial Intelligence to determine driver risk factors, generating associated training recommendations, based on measured performance and program goals.

Excel's goal is to improve safety, reduce incidents, streamline training operations, and produce desired results for our clients. We are confident that clients purchasing simulation when incorporating Drive Prodigy™, will experience cost reductions through increased productivity and improved safety (reduced incidents). We focus on client RESULTS, helping them achieve their goals, not just selling them HARDWARE. The integration of education and technology leads to shorter training times and increased cognitive functioning of trainees. We provide customers with the best behavior-based training platforms that deliver quantifiable results. Sim-Tech currently sells and services systems in strategic markets including Commercial Transportation, School Bus, education institutions, Military, Fire/EMS, and strategic light-duty fleet vehicles. All simulation systems can tether to the learning programs of Drive Prodigy™, which manages advanced training, tracks program performance, recommends supplemental courses, generates student transcripts, and offers many other training options. Excel is dedicated to working within individual client requirements focusing on client goals. Our goal with this document is to highlight concepts, options, and different training models for your review. Our mission is to provide information in enough detail to enable MTA leadership to make the best-educated decision, should a decision to move forward result in a working relationship. Excel/Sim-Tech has proven its capability of delivering our simulation models, training concepts, and programs, which lead to successful client results.

To provide the best overall “training system” for our clients, SimTech provides our Drive Prodigy™ Learning Management Software (LMS). With Drive Prodigy™, the simulator is smarter and works for MTA's trainers to maximize the overall benefits of owning a simulator. EDS uses Drive Prodigy™ for our own commercial training that we provide at our training facility in Denver, Colorado. EDS offers an adaptive online learning platform that can design and implement complete curriculums, specific to each driving environment. Expanded options provide a blend of expedited student-specific learning programs to increase the efficiency of training time. Drive Prodigy™ can integrate a full array of hands-on, computer-based, classroom, and simulation training. Examples: forward/reverse movement of the vehicle, Driving Simulations, simulated learning materials, top skills training, and Areas of Improvement (AOI) are some of the primary tools utilized by the Drive Prodigy Application. Customers can implement best practices exclusive to their own culture within this platform for the purposes of training and documentation. Drive Prodigy™ is a computer-based learning system accessible from anywhere, via computer, smartphone, or tablet with a fully secure login. This allows the trainees, instructors, and management to access personnel performance records anywhere, anytime. Results can be analyzed and reviewed by the MTA's training staff, and comments can be input as desired up to the point of the official training transcript. Drive Prodigy™ allows for safe and effective distance learning to take place. Trainees can access supplemental computerized learning programs, and learning materials, review AOIs (areas of improvement), and provide unlimited learning modules to improve their overall agency training and learning experience. Drive Prodigy™ sets Sim-Tech apart. No other company offers an adaptive online learning platform (LMS) that can be used by the transit agency to design and implement training programs for all types of drivers and/or vehicles. This tool allows for measured and professional performance guidance. This system will allow the trainer to see the trainee's top skills and areas of improvement (AOI) for overall best practices in learning. This gives our customers the control to implement best practices that are exclusive to their needs, for overall purposes of training and documentation.

To provide the best overall “training system” for our clients, SimTech provides our Drive Prodigy™ Learning Management Software (LMS). With Drive Prodigy™, the simulator is smarter and works for MTA's trainers to maximize the overall benefits of owning a simulator. EDS uses Drive Prodigy™ for our own commercial training that we provide at our training facility in Denver, Colorado. EDS offers an adaptive online learning platform that can design and implement complete curriculums, specific to each driving environment. Expanded options provide a blend of expedited student-specific learning programs to increase the efficiency of training time. Drive Prodigy™ can integrate a full array of hands-on, computer-based, classroom, and simulation training. Examples: forward/reverse movement of the vehicle, Driving Simulations, simulated learning materials, top skills training, and Areas of Improvement (AOI) are some of the primary tools utilized by the Drive Prodigy Application. Customers can implement best practices exclusive to their own culture within this platform for the purposes of training and documentation. Drive Prodigy™ is a computer-based learning system accessible from anywhere, via computer, smartphone, or tablet with a fully secure login. This allows the trainees, instructors, and management to access personnel performance records anywhere, anytime. Results can be analyzed and reviewed by the MTA's training staff, and comments can be input as desired up to the point of the official training transcript. Drive Prodigy™ allows for safe and effective distance learning to take place. Trainees can access supplemental computerized learning programs, and learning materials, review AOIs (areas of improvement) and provide unlimited learning modules to improve their overall agency training and learning experience. Drive Prodigy™ sets Sim-Tech apart. No other company offers an adaptive online learning platform (LMS) that can be used by the transit agency to design and implement training programs for all types of drivers and/or vehicles. This tool allows for measured and professional performance guidance. This system will allow the trainer to see the trainee's top skills and areas of improvement (AOI) for overall best practices in learning. This gives our customers the control to implement best practices that are exclusive to their needs, for overall purposes of training and documentation.



**Mobile Driving Simulator Proposal Cost**  
**(Quote valid for 180 Days)**  
**Please note: Sim-Tech is bidding all or none.**

Description	Price	Qty	Subtotal
<input checked="" type="checkbox"/> <b>ST - Genesis Series™ Fire Apparatus Driving Simulator (Spartan MetroStar Cab)</b> 5-Screen Fire Apparatus Driving Simulator - INCLUDES 2-YEAR WARRANTY - SIMULATOR DELIVERY - 3 DAY TRAINING	\$109,750	1	<del>\$109,750</del> <b>\$93,287.50</b> Discount(-15%)
<input checked="" type="checkbox"/> <b>ST - 24' Bumper Pull Mobile Classroom</b> 24' Aluminum Bumper Pull Trailer -Curbside Entry & Awning (Includes external LCD panel setup) - R-13 Insulation - Instructor Operators Desk Area - 12kw Onboard Diesel Generator - 18k BTU Single Zone Wall Mounted Air Conditioning and Heat - Tandem Dexter Axles - Electric Landing Gears - Durable Coin Mat Flooring - Carpeted Walls for Acoustics - All LED Lighting - WiFi Antenna For Remote Dignostics	\$90,000	1	\$90,000
<input checked="" type="checkbox"/> <b>ST - Genesis Series™ Driving Simulator Motion Package</b> Genesis Series™ Driving Simulator Motion Package 3 Degree of Freedom (3DOF) Quad Electronic Screw Actuators 1.5" Total Travel	\$16,500	1	<del>\$16,500</del> <b>\$14,850</b> Discount(-10%)
<input checked="" type="checkbox"/> <b>ST - Train-the-Trainer Program</b> 3 - Day Course covering trailer and simulator operations. Operators manuals included.			Included
<b>Total</b>			<b>\$198,137.50</b>

\*Taxes are not included and are the responsibility of the customer.

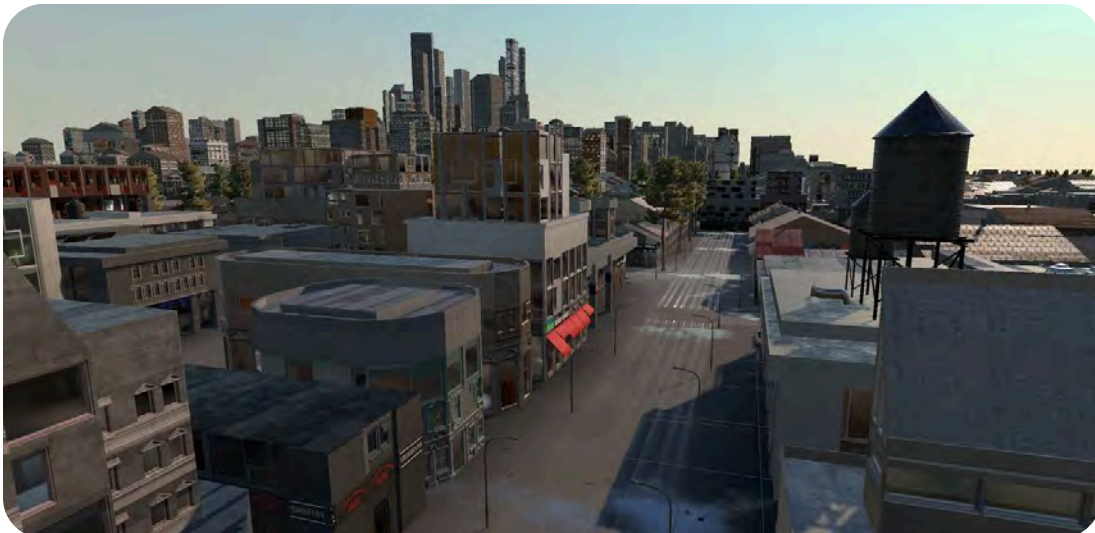
\* All items above are U.S. manufactured, except for the 3-DOF motion system. which is manufactured in Canada.

## GEO-WORLD / SIMULATED TOPOGRAPHY

Sim-Tech's training environments are comprised of widely varying terrain and man-made structures including but not limited to 4 city/towns, countryside, corporate parks, highways/freeways, off-road areas, a complete surfacing mining/quarrying area, desert & dunes, mountains, bus safety and trucking course, a comprehensive driving track that includes: wet & dry skidpad, reaction course, braking course, airport terminal and *Volunteer Firemen Insurance Services* (VFIS) cone courses for both long wheelbase & short wheelbase vehicles.

With features like railroad crossings, schools, overpasses, tunnels, trucking terminals, parking lots & parking garages, farms with 3-dimensional outbuildings, gas station plazas, and many other features, clients will find an abundance of features to make your training effective and efficient. Sim-Tech is continuously in the development of vehicles and scenarios for our development partners that will be available at no additional charge throughout your warranty or maintenance period.

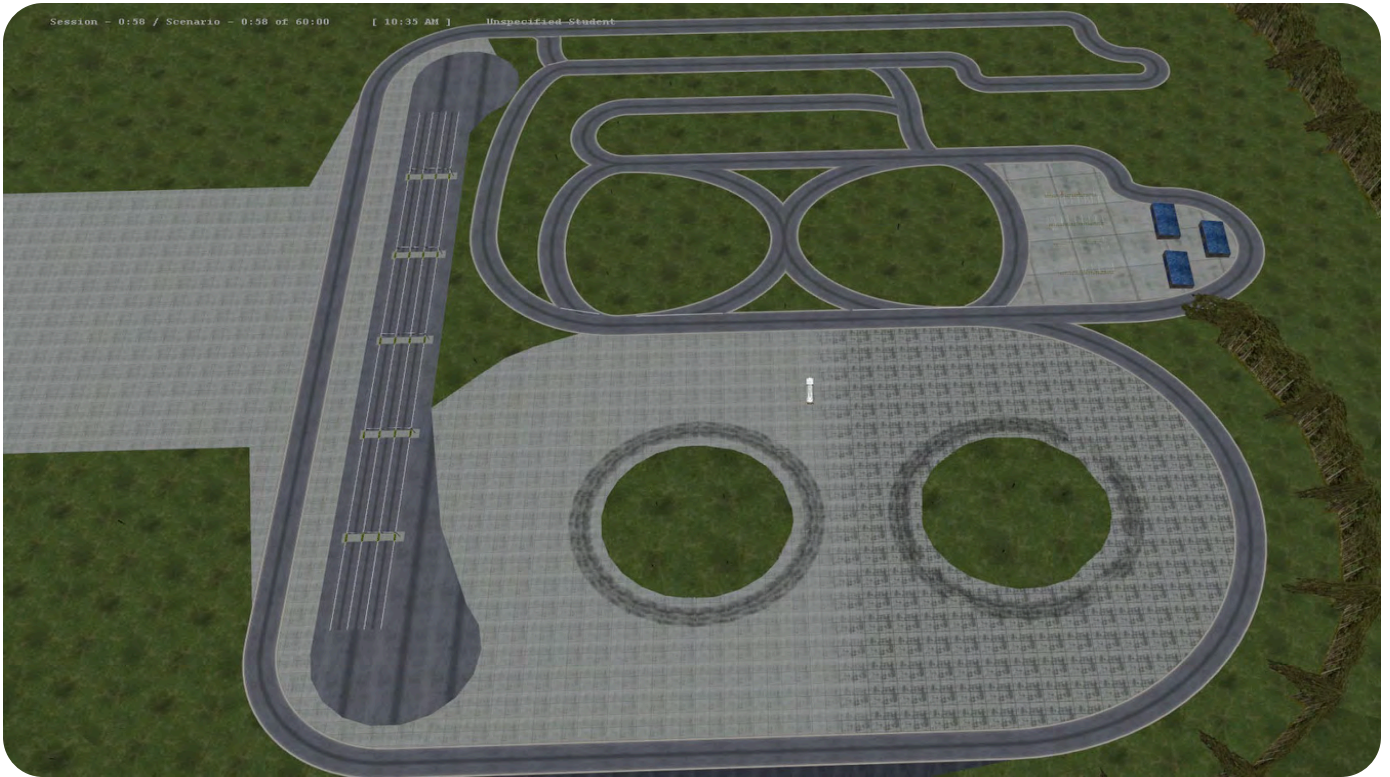
We have a lot of real estate to work within our geo-world and we welcome suggestions from our development partners to enhance our world for more effective training.





Urban and Dense Downtown environment





Vehicle Handling Course provides training for vehicle control, complete with wet/dry skid pad for skid control, reactionary course, road course.



Residential and Rural Town

## FIRST RESPONDER STANDARD CURRICULUM

Our current curriculum is set up with individual Code 3 / Priority 1 scenarios built for Law Enforcement and Fire/Rescue/EMS. There are also common scenarios for each discipline in the Standard Lessons, Precision Driving, and Assessment Scenarios. Our ongoing development includes more tailored response scenarios (many built from Post Incident Reviews) as well as accreditations.

**Drive Prodigy™ Training Models** For Release as an option on all new systems:

**Level One: Core Driving Skills-** Curriculum to train all drivers to American Association of Motor Vehicle Administrators (AAMVA) CDL Standards. The program includes information critical to training essentials to the Fire/EMS industry

**Level Two: Entry-Level Job Performance Requirements for Emergency Response-** Full training for drivers that meet level one skills, the program provides situation-awareness for backing and confined areas, operational conditioning under NFPA response codes, and critical judgment conditions

**Level Three: Experienced Driver-** Advanced and recurrent training process for experienced drivers in recertification, specialty training, and hazards associated with at-risk behavior.





## SCENARIO LIST

## NUMBER OF SCENARIOS

### STANDARD LESSON EXERCISE'S

- |                                |     |
|--------------------------------|-----|
| • Core Skills Exercise's       | • 7 |
| • Defensive Driving Exercise's | • 7 |

### PRECISION DRIVING EXERCISE'S

- 11

### ASSESSMENT EXERCISE'S

- 10

### FIRE APPARATUS EXERCISE'S



- |                                     |      |
|-------------------------------------|------|
| • Code 3 Exercise's                 | • 34 |
| • Post Emergency Exercise's         | • 25 |
| • Normal Operation Exercise's       | • 8  |
| • Cone Course Exercise's            | • 18 |
| • Apparatus Placement Exercise's    | • 8  |
| • Misc. Exercise's                  | • 10 |
| • Tiller Exercise's                 | • 16 |
| • Instructor Interaction Exercise's | • 6  |

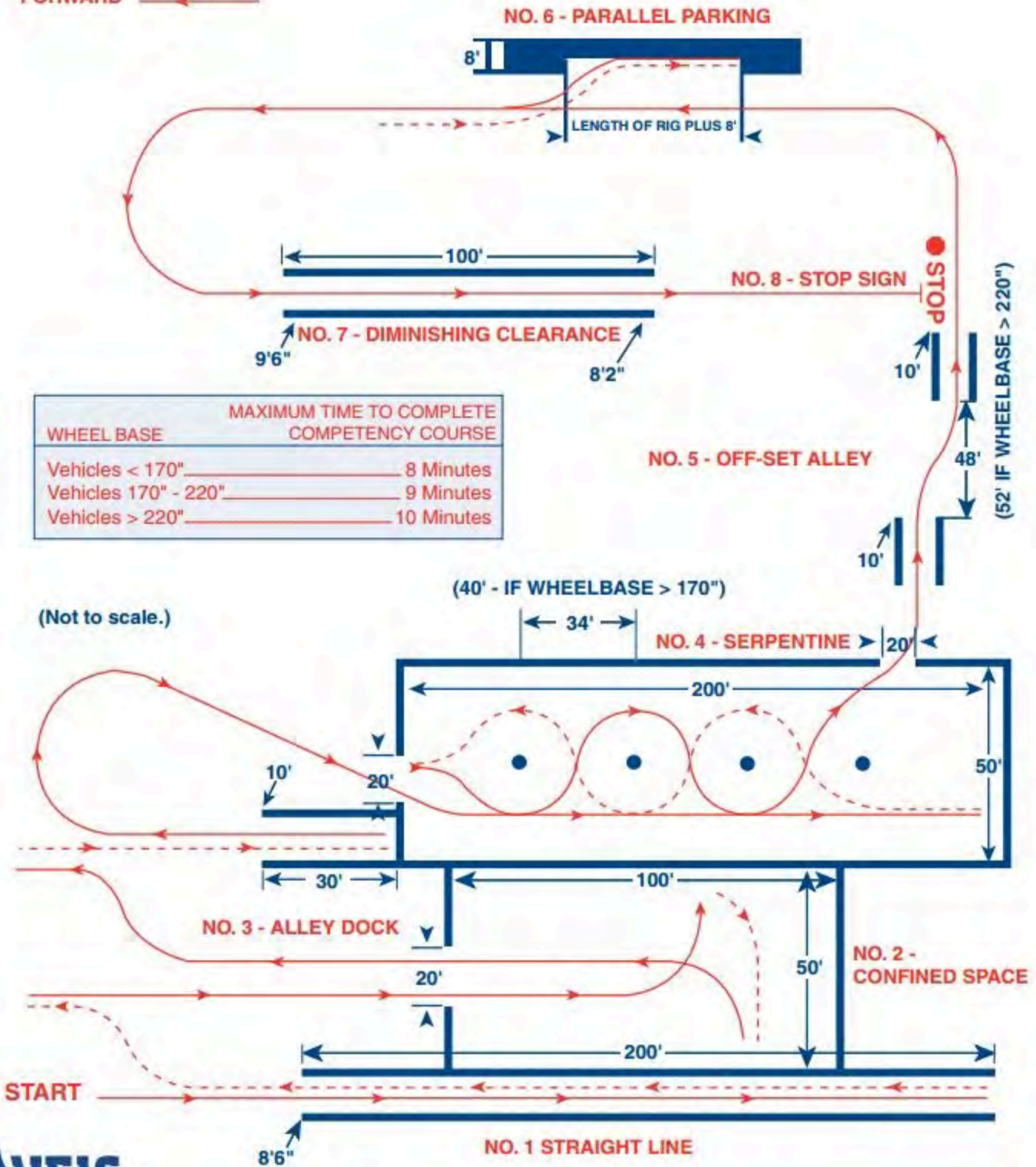
### EMS APPARATUS EXERCISE'S

- |                                |      |
|--------------------------------|------|
| • Code 3 Exercise's            | • 18 |
| • Post Emergency Exercise's    | • 18 |
| • Scene to Hospital Exercise's | • 19 |
| • Cone Course Exercise's       | • 10 |
-



## COMPETENCY COURSE

REVERSE   
FORWARD 



## SIMULATOR CONSTRUCTION



All simulators are designed with quality in mind. The following represent key factors in our systems.

### CAB CONSTRUCTION

Sim-Tech's cabs are constructed with high-strength industrial, lightweight, aluminum. Sim-Tech uses the actual OEM vehicle instrument panel and dash, steering assembly, seat, and pedals to take advantage of the manufacturer's ergonomic design and provide durability for years of continuous use. This use of the actual vehicle OEM design provides familiarity for the student/driver and shortens the time required in adapting to the simulated environment.



### FRAME

The frame is constructed of high-strength aluminum providing a lightweight and durable base. Once the frame has passed all weld tests, it is skinned. The cab skin is constructed of .080" aluminum. It is cut, and formed for a seamless fit. Units are all powder coated for longevity and appearance.



*Inquire with the Sim-Tech team on the availability of wrapping your driver sims in your department or company colors and graphic layouts (striping, crests, logos, etc.)*

All Sim-Tech units go through thorough quality control and inspection process throughout the entire fabrication. We ensure each unit is built to the highest standard and will last for years to come.

### HARDWARE

All hardware is designed and fitted for longevity. Components are built in to withstand mobile training and withstand the harsh environmental conditions that exist in mobile applications. Systems also are built with the ability to be set up on location. Hardware is engineered to take modifications to advancements as technology advances, reducing the issue of replacing a system and performing much lower cost of operation by improving technology on systems instead of complete replacement.



## DISPLAY SYSTEMS

The views from the seats of our driving sims are unique in the industry. Sim-Tech integrates five (5) 46-inch, 1920x1080, HD LED monitors, with ultrathin bezels (5.5mm) for a near-seamless 230° horizontal field-of-view. Sim-Tech's unique arrangement of the monitors provides a B-Pillar to B-Pillar field-of-view that is geometrically accurate to the real vehicle relative to the driver's eye-point. This geometrically correct cab rendering allows—and requires—the student to turn his or her head as far to the right and left as would be required in the real vehicle when clearing complex intersections. This is especially important when entering intersections at an oblique angle. This design eliminates the negative training associated with compressed images, slewing, or other manipulation of the virtual environment.



The 2010 Dodge Charger LE Driving Simulation System from Simulation Technology: 230+ degree FOV, real vehicle cockpits, real OEM parts for IP and siren/flasher controls, run on the authentic J1939 CAN-bus communications....all run on one computer.

The vertical orientation of the left / right angular screens provides a continuation of the vehicle's interior for better orientation of the virtual edges of the vehicle, rendering of the A-Pillars, and location of the mirrors and look-down into and across intersections. This feature significantly helps the student to quickly adapt to the rendered vehicle within the GEO world.

## THE TRUTH ABOUT FIELD OF VIEW

Sim-Tech's cab & monitor configurations hold a true 230-degree Field-of-View (FOV) designed with accurate spatial geometry from the driver's viewpoint. No slewing, compression, extension, or video-software morphing enhancement is used to obtain the true FOV. What you see is what you experience when driving every day.

Sim-Tech uses the Ultra-thin bezel commercial 46-inch HD LED monitors, with a refresh rate of at least 60 Hz, and a native resolution of 1920x1080. The ultra-thin bezel—the thinnest available in the industry today—provides less than 1/2-inch separation (only 11mm) between graphic scenes. This feature provides a near-seamless field-of-view and makes it easier to identify the A-Pillars and locate the mirrors.



## ACCLIMATE DRIVERS WITH EASE

The exact graphic replication of the mirrors is also a Sim-Tech exclusive. Sim-Tech's mirrors are drawn with the shape and exact position of each vehicle's actual mirrors, as opposed to rectangles hanging in space. This is just one more feature that assists students' physiological engagement within the simulation system. These extra features are important to the success of every training program. Students must become comfortable with driving the simulated vehicle in the simulated world before they can be exposed to complex scenarios involving multi-tasking, decision making, and actual skills training. Reducing the time required for the student to develop this comfort level, increases the time available for effective training.

### REAL COCKPITS AND VEHICLE DYNAMICS

Five screen format allows geometrically correct 230+ degrees HFOV, and provides an enhanced spatial relationship for the simulated vehicle and the environment (shown without spatial geometry angles of cockpit configuration)

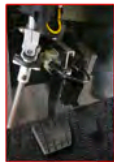


Real OEM IP, gauge clusters, lever controls, and driving components

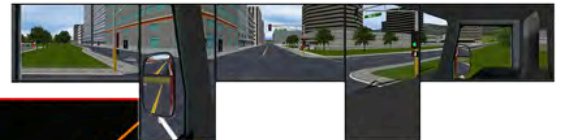
Ultra thin bezels for minimum interruption between visual scenes



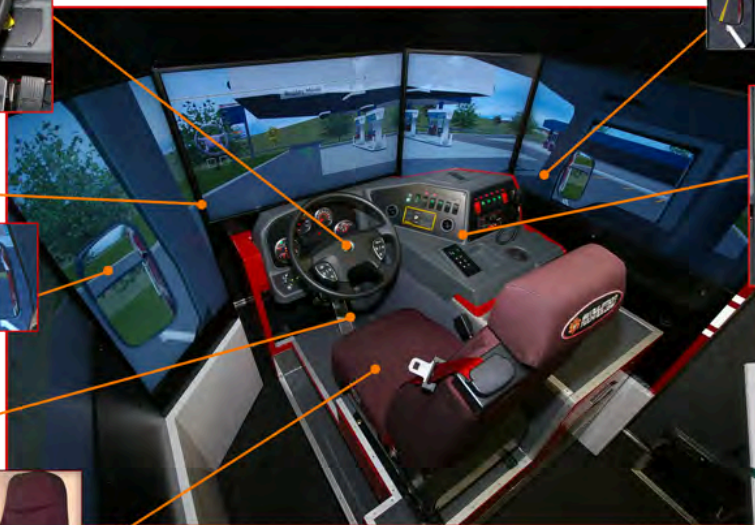
Realistic shaped and correctly located mirrors



Fully adjustable electric seat and pedal assembly.



Authentic working pump control valve, rocker switch panels, communication hardware, and gear shift panel

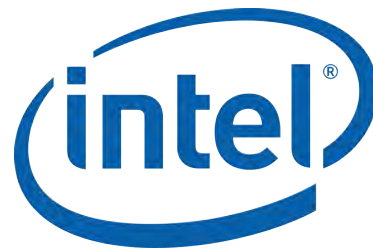
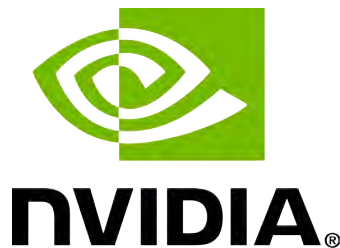


Scottsdale Community College's  
2011 Fire Apparatus  
Driving Simulation System



## COMPUTER DYNAMICS: HIGH PERFORMANCE AND HIGH RELIABILITY

The entire driving simulation system (5 screens & complete cab) and instructor operating station run on One (1) PC. Sim-Tech's single computer uses an Intel i9 processor running a Windows 10 platform. The computer is equipped with dual mirrored hard drives for zero downtime in the unlikely event of hard drive failure. Providing all graphic channels with a single PC eliminates networking issues and significant downtime inherent in all other systems and provides a much faster initial system startup and shutdown at the end of the day. It is estimated that a single PC system is between 6 to 12 times as reliable as a system relying on 5 to 9 networked computers. Software upgrades are simple, taking less time to integrate updates (depending on internet connection). The potential cost of future hardware upgrades is greatly diminished in comparison to systems using five or more computers. All computers are constructed of readily available "off-the-shelf" components.





## INSTRUCTOR OPERATOR STATION

The Operator's Station includes a wireless keyboard, mouse, and 23-inch LCD monitor. Our simplified operator's console is designed for ease of use. It allows the instructor to monitor and control both the student's drive and environmental conditions that have important training value. Familiar graphic controls such as sliders, and combo-boxes are easy-to-use alternatives to having to remember keyboard commands in controlling the simulation. Keyboard commands are still available for experienced instructors who wish to work with the student using a remote keyboard or pad.

As a trainer, you can stop and replay the students' scenarios to highlight teaching points at any time during the driving scenario. You can also look at and or share different views of the scenario as well. While the student is driving the scenario, the instructor can, in addition to whatever is already scripted, change the weather, time of day, and volume/loads of the vehicles where pertinent.

- *Steer Wheel Position*
- *Throttle usage*
- *Brake Usage*
- *Emergency Code Level*
- *Fog Density*
- *Dust and Smog*
- *Cloud Cover*
- *Day / Night*
- *Chatter*
- *Wind*
- *Vehicle Load to include liquid surge*
- *Traffic Amount*
- *Traffic Variant*
- *Tire Blow out on all corners*
- *Engine Failure*
- *Brake Failure*
- *Compartment Door ajar*
- *Seat Belt*
- *Scenario Editor*
- *Vehicle Selection*
- *Instructor View*
- *Replay Buttons for Scenarios*
- *Weather:*
  - *percipitation, rain, snow, and Ice*





## MOBILE SIMULATOR LAB

Switching to a mobile unit with Driving Simulator Systems has tremendous advantages in providing training to smaller and more remote agencies as well as simply making it a regional service that the whole community can benefit from regarding increasing the overall safety.

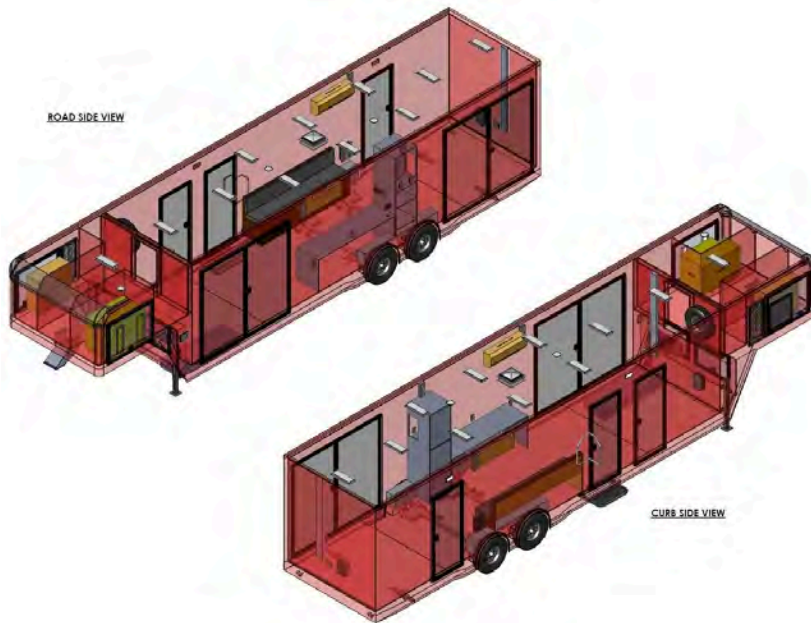
Our Driving Simulator Systems are ideally suited for mobile training. To pull trailers with less weight restriction concerns, Sim-Tech builds in all-aluminum trailers to lessen the burden on tow units. Using steel framed trailers limits options for customers is much heavier, less reliable, and creates other situations that cannot compete with aluminum builds.

Sim-Tech designed aluminum trailers installed with simulators also built-in aluminum result in much lower weight. Insulation is R-13 in walls and ceilings and R-14 in floor insulation, which results in roughly half the weight, and one-third the power requirement of the competition. Simulators are built with travel in mind, are incredibly light, and result in easier pulling requirements, better fuel economy, and much easier and safer use compared to other trailers. This also equates to a smaller diesel generation load, meaning our customers can do more with less. Sim-Tech utilizes multi-zone mini-split HVAC, resulting in much less electrical use, quick heat and cooling, and is much more durable. Aesthetically, there is much less wind drag as there are no rooftop units; these systems are easy to operate, reduce the threat of rooftop penetration and leaking, are incredibly quiet, and are efficient. The end result is less expense, lower operating costs, and longer life. Lighter trailers, with two axles instead of three, are easier to pull with smaller vehicles, and much easier to turn in tight situations. These factors are realized in savings of as much as 20% over competitive systems.

Our design for mobile and stationary classroom capability gives the customer greater flexibility to fit the needs of different training situations. The driving sims are put on aluminum, urethane textured surfaced platforms which can be removed from the trailer via forklift if necessary. We design barn door access points into the trailer to make this possible.

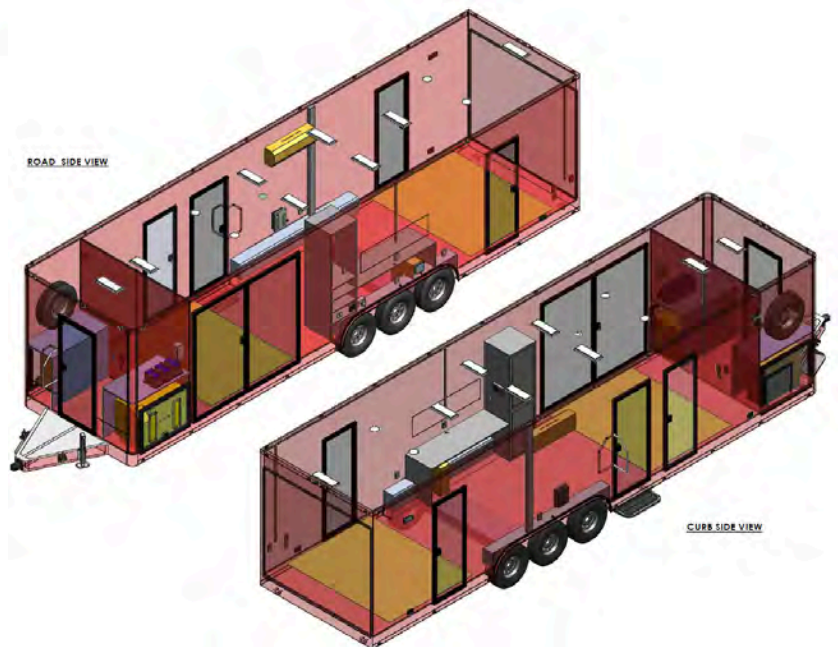
Tow vehicles needed for our trailers are normally much smaller than with most driving sim companies. Our recommended tow vehicle is a 1-ton dually for more stability, which in most states and countries, may not require a CDL or special driving permit. Please contact Sim-Tech for inquiries on classifications.





Generator packages range from 8k to 40k quiet series depending on the components installed in the trailer. Our 24' model has a single zone 18k BTU HVAC and our 34' & 40' model have a dual-zone 36k BTU HVAC. Additional wall heaters and A/C units are added per the customer's environmental needs. Weekend heating packages consist of an extra 15A - 20A shore power to power wall heaters to keep the trailer at an operating temperature to reduce start-up times.

Insulation consists of R-13 walls and ceiling and R-14 floor. Trailers are 100% aluminum unless otherwise requested from the customer. Double barn doors are installed for simulator loading and service. Additional service doors are added to access all sides of the simulator without having to remove it from the trailer. All trailer lighting, interior, and exterior consist of LED technology. This reduces the electrical load on the generator as well as shore power needs.



Air-ride axle options are available as well as multiple wheels options, steel or aluminum. Deck-over trailers with full basements are available per the customer's needs. Multiple options are available, so please contact your sales representative to discuss your exact needs.

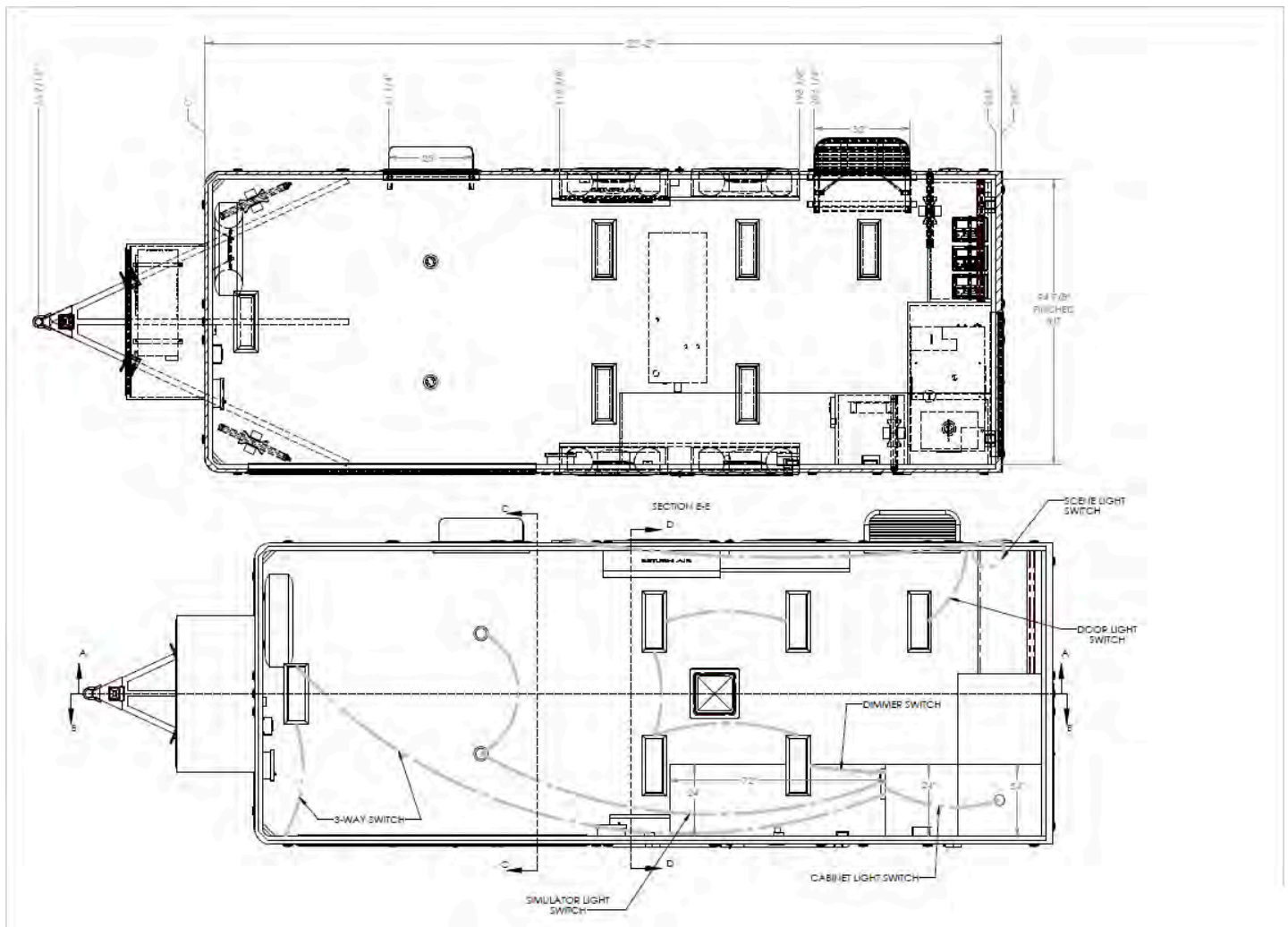
## 24' Base Mobile Simulator Lab

- All Aluminum Construction
  - Interior Trailer Dimensions
    - Height = 8'
    - Width = 8'
    - Length = 21.6'
  - Exterior Trailer Dimensions
    - Height ≈ 11.5' (From ground)
    - Width = 8.5'
    - Length = 24'
  - Maximum GVWR
    - 12,000 LBS
  - Trailer insulation
    - Floor is insulated to a R-14 value
    - Walls and ceiling are insulated to a R-13 value
  - HVAC Single Zone System
    - One (1) Exterior-Vented Single-zone 18,000 BTU Split A/C System w/ heat pump
    - One(1) 18,000 BTU wall units to distribute air in the trailer
    - Remote controlled thermostat
  - One(1) 1500W Wall Heater
  - 50A Shore power feed
    - Automatic transfer switch
  - TPO coin mat flooring
  - Carpeted walls
  - LED interior lights
  - Four (4) separate zones
    - Zone 1 OpCon lighting
    - Zone 2 Simulator lighting
    - Zone 3 Service lighting
  - Electric - Hydraulic landing gear on front of trailer
  - Rear and Front Stabilizer Jacks
  - One-piece aluminum roof
  - Slide out aluminum step at entrance door
  - Aluminum grab handle at entrance door
- White aluminum ceiling
  - Electric Generator
    - 12kw Diesel generator
    - Full load dBa
      - 68 dBa 10' away
      - Typical installation will further reduce sound level.
    - Insulated generator compartment with galvanized liner
  - 24 Gallon Diesel fuel tank
    - Installed in frame rails in front of trailer
  - Fuel neck ran to road side of trailer
  - Locking cast aluminum fuel door
  - Equipment Room/Doors
  - Generator Compartment
    - Self-contained, whisper mat acoustic foam insulated with an aluminum liner
    - Exterior compartment door w/ louvers
  - HVAC Compartment
    - Self-contained, insulated
    - Floor of compartment removed for adequate air circulation over compressor coils
    - Exterior compartment door w/ louvers
  - Interior Cat6 outlets
  - Exterior Cat6 outlet
    - Used for remote service
  - Exterior and interior convenience outlets
  - Dual 6,000# Dexter Torsion Axles
  - Aluminum Wheels
  - 235/85/R16 Tires
  - Formica Top Instructor Desk
  - Floor to ceiling cabinet
  - Adjustable Instructor chair
  - Includes Curbside Awning
  - Includes External LCD Panel For Outside of the Trailer Viewing

- Full Tube framing
- 2" x 2" - 16" O.C. wall studs
- 1" x 3" - 16" O.C. ceiling joists
- 8" Frame
- Frame Protection - bogey wheels
- Frame Protection - skid plates
- Full perimeter framing
- 3" Lower rub rail
- 3" Upper rub rail
- DOT tape
- Screwless exterior
- 3/4" Flooring sheeting
- 3/8" wall sheeting

- LED Clearance lighting
- LED side mount turn signals
- LED Taillights
- LED Backup lights
- 2 - Exterior LED Scene lights
- 1- 96" x 86" side hinge simulator loading and access doors
  - with gas assist shocks
  - cambar lock
- 1- 32" x 78" simulator access doors
  - with gas assist shocks
- 1 - 32" x 78" entrance door
  - with gas assist shock

\*Prints are for design use only and are subject to change without notice.



\* Design is conceptual and subject to change





Example Trailer Configurations



## Genesis Series 3-DOF Motion Package (Included)

Model # 4A-3DOF

Enhance your students driving experience with a full-motion cab. Sim-Tech incorporates D-Box 3 Degrees of Freedom (3-DOF) motion systems as an additional option to our simulators. According to customer feedback, this is the preferred (recommended) addition to any of our full-size simulators. This system will replace the standard seat "shaker" or motion seat. With the motion on the cab frame, we can give the driver better environment cues, like curb strikes, changes in terrain, the severity of accidents, and changes in road friction. It will also give you a better feel of braking, throttle, and cornering. You will feel the actual cab tilt when turning tight corners. Instead of just a seat moving, unlike in the real world, the entire cab including dash assembly move. This way all the driver controls move with you like they would in the actual vehicle.

This system adapts to all our full-size simulators and can be put in a trailer or classroom environment. This is a 4-actuator system and will give the apparatus cab up to 3 degrees of freedom.

## Specifications

- 4 Electric Screw Actuators
- Captive or Non-Captive Actuator Endings
- 3 Degree of Freedom Travel
- 1.5" total travel
  - 3/4" up & 3/4" down from centered position
- Simulates curb strikes, engine vibration, major and minor accidents, liquid movement, terrain feel.





## AUGMENTED REALITY HEADSET PACKAGE UPGRADE (AR) - OPTIONAL

Model # GSVRV1

1. High resolution, rugged, and ergonomic VR Headset
2. 200° diagonal Field of View (FOV) is almost twice as wide as typical VR systems, to realistically render side roads and surrounding vehicles in the student's peripheral vision
3. Additional stereoscopic headset-mounted camera unit captures the "See-Thru" image
4. Real-time automatic depth-sensing (no green screen required)
5. Integrated audio headgear
6. Two infrared base stations for precise tracking of head position and rotation
7. Replaceable comfort face pad

Going well beyond conventional Virtual Reality (VR), our Augmented Reality (AR) technology adds a stereoscopic camera system with lenses aligned with the student's own eyes. The camera system captures images of the student's own body sitting in the physical simulator cab.

Our unique UniTrainer™ software then blends the real-life camera images with photo-realistic 3D graphics of the virtual world and vehicles, to create a seamless training environment.

The primary benefit of this system is the student can see their own hands and legs in relation to the physical cab's driving controls, including the steering wheel, shifter, and pedals which results in full control of "tactile" functionality. It also greatly enhances the general sense of immersion to see yourself superimposed into the virtual world.



## AUGMENTED REALITY HEADSET PACKAGE UPGRADE OPTION (AR)

Description	Price	Qty	Subtotal
<input type="checkbox"/> <b>ST - Genesis Series™ Augmented Reality Upgrade</b> Model # GSVRV1 VR Headset with stereoscopic camera Dual inferred transmitters	\$10,000	1	\$10,000
<input type="checkbox"/> <b>ST - Standard Warranty</b> 2-Year Limited Warranty	Included	1	Included
Total			\$0

\* Prices do not include Federal, State, Local or Use taxes, VAT or foreign duties, if any, which are the responsibility of the purchaser.

## System Project Plan and Schedule

\*Project processes begin once a purchase order has been received.

\*Process time frames described are for the G-Series simulators

\* Trailer delivery times are based on manufacturer timelines, Sim-Tech will strive to turnaround in 160-days

Process	Time Frame
OEM & Sim Component Parts Orders	3 Days
Parts Shipping	10-20 Days
Simulator & Screen Base Fabrication	45 Days
Project Powder & Urethane Spray Coating	7-14 Days
Simulator & Screen Base Assembly	10 Days
Simulator Quality Control Testing	10 Days
Installation in Customer Facility	3-6 Days
Instructor Training	5 Days per 3 trainees





## STANDARD & EXTENDED LIMITED WARRANTY

### Simulation Technology Driving Simulation Systems

Simulation Technology, a dba of Excel Driver Services, LLC, Henderson, CO 80640 (Warrantor) warrants to the original purchaser (Purchaser), for a period of one year from the date of product acceptance by Purchaser (Warranty Period), that its driving simulation systems (the Product) shall be free of defects in materials and workmanship attributable to Warrantor and will work as designed during the Warranty Period (Limited Warranty or Warranty). This includes hardware, software, and workmanship of the simulator and generator without exception or exclusion unless otherwise identified herein under exclusions. The Warranty for the trailer shall be limited to the warranty of the original trailer manufacturer (OTM) and is subject to their warranty, terms, and conditions. This warranty includes all parts, labor, and replacement of any non-functioning item.

**ALL SOFTWARE UPDATES ARE PROVIDED AT NO ADDITIONAL CHARGE IF THE SYSTEM IS COVERED UNDER A WARRANTY**

#### Standard Warranty covers:

- Software Upgrades are included if the system is covered under Warranty, including new scenarios, world, vehicles, and features development.
- The trailer components are installed by Warrantor and for anything covered by OTM's warranty.
- HVAC system
- Generator system
- 12v and 110v electrical wiring and components
- Travel Cases

Warrantor will be the warrantor of the driving simulators. The OTM will be the warrantor of the trailer and trailer components. However, all Warranty claims will go through Warrantor.

#### For simulator Warranty claims:

- Warrantor will decide whether an on-site visit is necessary or if a part can be shipped and installed by the customer.
- All parts and shipping will be covered by Warrantor if the system is covered under Warranty.
- If an on-site visit is necessary, a Warrantor technician will make an appointment with Purchaser's designated contact.

#### For trailer and trailer related Warranty claims:

- All correspondence will begin with Warrantor
- Warrantor will open a claim with the OTM for service
- The OTM will contact the customer for further information and/or schedule an appointment for service.

## Excluded from Warranty:

- Acts of vandalism or abuse are not covered.
- Consumables such as ink cartridges are not covered.
- LCD video screen burn-in will not be covered. Purchasers should attempt to minimize the effect by placing monitors in standby mode if left idle for extended periods. Proper attention to this procedure should provide extended service from the monitors. The system includes automatic stand-by and sleep mode.
- Normal wear to equipment such as, but not limited to, steering wheel, seat, flooring, tires, sun bleaching of trailer graphics, and damage caused by severe winds, rain, hail, and snow are not covered.
- Acts of God are not covered.
- 7 or fewer Dead Pixels on a LED Monitor
- Parts or components not installed by OTM or Warrantor.
- Systems stored in an environment that do not meet the Purchaser's Environmental Maintenance obligations

## Warrantor's Obligation:

Warrantor shall respond to the Purchaser complaint within forty-eight (48) hours, Monday through Friday, excluding holidays. Warrantor may elect to remedy all defects in materials and workmanship by repair, or replacement, at its sole discretion. These are the only remedies available to Purchaser. Warrantor may, at its sole discretion, select any qualified location for the repair to be completed. Warrantor will not be obligated, in any way, to pay for any repairs made without its specific prior, written, approval.

## Purchaser's Obligation - Environmental Maintenance:

Purchaser must maintain storage and operating environment as follows:

- Simulation systems must be stored and operated in a fixed or mobile classroom free from corrosive chemicals, and high volumes of particulate matter, including but not limited to dust and sand.
- No water may encounter the simulation systems, including but not limited to dripping condensate.
- The storage environment must remain within a range of -30 degrees and 120 degrees Fahrenheit.
- The operating environment must remain in a range from +60 degrees to +85 degrees Fahrenheit for at least 2 (two) hours prior to system startup. After system startup, that same temperature range must be maintained throughout the use of the system. Failure to maintain the simulation system's environment within these parameters voids this Warranty.

## Purchaser's Obligation - How to get Warranty service:

Purchaser must notify Warrantor, in writing, of any defects in material or workmanship within the Warranty Period. Purchaser is responsible for properly packing any items to be returned to Warrantor for repair. Warrantor will provide a shipping label, and arrange for pick up.

## Limitation of Liability

Warrantor excludes liability, whether based on contract or tort (including negligence), for any damages to Purchaser or any other party other than as described in this Warranty or any punitive, special, indirect, incidental, or consequential damages of any kind or for loss of revenue, profits, loss of business or other financial loss arising out of or in connection with the sale, maintenance, use or failure of the Product, even if Warrantor has been advised of the possibility of such damages. this disclaimer of liability shall not be affected even if any remedy provided for herein fails its essential purpose.

## Disclaimer of Implied Warranties

Warrantor makes no express or implied warranties other than as specifically set out in this Warranty. Except for the express Limited Warranty set forth herein, the product is sold “as is” and there are no implied warranties of merchantability, fitness for a particular purpose, compliance with description, and non-infringement in connection with any sale. This Limited Warranty does not cover failure of the product resulting from causes other than product defects, including but not limited to improper maintenance or use or any other such cause. If any provision of this Warranty is held to be illegal or unenforceable by any court of competent jurisdiction, the remaining provisions shall remain effective. Some states do not allow the exclusion or limitation of implied warranties or the limitation of incidental or consequential damages for certain products supplied to consumers or the limitation of liability for personal injury, so the limitations and exclusions above may be limited in their application. When the implied warranties cannot be excluded in their entirety, they will be limited to the duration of the written express Warranty.

## Design Changes

Warrantor reserves the right to change the design of its Products from time to time without notice and with no obligation to make corresponding changes in its Products previously manufactured.

## Legal Remedies of Purchaser

This Warranty gives you specific legal rights, and you may have other rights which may vary from state to state. No action to enforce this warranty shall be commenced later than one (1) month after the discovery of any defect or after the expiration of the Warranty Period.

## Governing Law

This Limited Warranty shall be governed by and construed in accordance with the internal laws of the State of Colorado, without regard to its conflicts of laws and provisions. The parties submit to the exclusive jurisdiction of Colorado courts, including the U.S. District Court for Colorado.

The Warrantor guarantees the Purchaser that its simulation systems will run properly at startup at least 98% of the time, if and only if the Purchaser maintains the simulation systems’ environment as described within this Limited Warranty. Failure of the simulation systems to operate at this level of reliability will be addressed at the sole expense of the Warrantor and may include repair or replacement, at the sole discretion of the Warrantor.

## STANDARD & EXTENDED LIMITED WARRANTY

Description	Price	Qty	Subtotal
ST - Genesis Series™ Driving Simulator Standard Warranty 2-Year Limited Warranty	Included	1	Included
<input checked="" type="checkbox"/> ST - Genesis Series™ Driving Simulator 1-Year Extended Warranty 1 year extended warranty Add up to qty. 4	\$5,500	1	\$5,500
Total			\$5,500

\* Prices do not include Federal, State, Local or Use taxes, VAT or foreign duties, if any, which are the responsibility of the purchaser.



## Several Past Sim-Tech References

- **Tal Prendergast** Driver/Operator Program Director **Illinois Fire Service Institute** | University of Illinois  
11 Gerty Drive | Champaign IL 61820 Office: 217-244-0031 | Cell: 217-202-1906 |  
[tprender@illinois.edu](mailto:tprender@illinois.edu)<http://www.fsi.illinois.edu>  
40' trailer (2) G-Series Fire Truck Simulators (Delivery date: December 2017)  
Additional 40' trailer (2) G-Series Fire Truck Simulators (Delivery date: June 2022)  
2 Qty. Trailers & 4 Qty. Fire Truck Pump Panels (Delivery 2023)
- **College of Eastern Idaho**  
Boise, ID.  
Karine Johnson  
1.208.429.5520  
[Karine.johnson@cte.idaho.gov](mailto:Karine.johnson@cte.idaho.gov)  
40' Trailer (2) G-Series Fire Truck Simulators (Delivery date: September 2018)
- **Colorado Department of Public Safety**  
Don Distefano  
1-303-239-4600  
[don.distefano@state.co.us](mailto:don.distefano@state.co.us)  
40' Trailer (2) G-Series Fire Truck Simulators (Delivery date: May 2016)
- **Whiteman Air Force Base**  
TSgt. Brian Bentley  
Cell: 618.381.4917  
Office: 660-687-3011  
G-Series T-680 truck simulator (Delivery date: June 2021)
- **Laramie County Community College**  
Michael Geissler - CDL Coordinator  
Cell: 1-303-994-1989  
Office: 1-307-432-1637  
[mgeissle@lccc.wy.edu](mailto:mgeissle@lccc.wy.edu)  
G-Series T-680 truck simulator (Delivery date: December 2020)
- **FE Warren-AFB AETC**  
Mr. Rick Holt  
Office: 307-773-2125  
Cell: 760-910-1059  
[ricky.holt@us.af.mil](mailto:ricky.holt@us.af.mil)  
G-Series T-680 truck simulator (Delivery date: February 2021)  
Add-on Crane simulator (Delivered December 2021)

- **Tennessee Highway Patrol**

Lt. Allen England

Office: 615.743.4973

Allen.England@tn.gov

Raptor Series Simulators / Youthful Driver Program 53' Mobile Trailer (Delivery date: 2016)

- **Georgia State Police**

Captain Daniel Carroll

Office: 404.374.7693

dcarroll@gsp.net

Raptor Series Simulators / Youthful Driver Program 53' Mobile Trailer (Delivery date: 2022)

- **Dyess Air Force Base (LRS)**

MSgt. Marshall Calvin

Office: 325-696-5160

Cell: 312-461-5160

G-Series T-680 truck simulator (Delivery date: Late 2022 )

- **FE Warren Air Force Base (90th LRS)**

MSgt. Ronald Barnett

Office: 307-773-2864

Cell: 208-741-1238

G-Series T-680 truck simulator (Delivery date: Summer 2022 )

- **Ellsworth Air Force Base (LRS)**

MSgt. Jose Rios

Office: 605-385-2084

Cell: 209-620-1304

G-Series T-680 truck simulator (Delivery date: Summer 2022)

Fire Truck Pump Panel Simulator (Delivery date: Late 2022)

- **Minot Air Force Base (AETC)**

SSgt. Jacob Romig

Cell: 406-468-5721

G-Series T-680 & crane simulator truck simulator (Delivery date: Summer 2022)

- **Barksdale Air Force Base (LRS)**

SSgt. Casey Moore

Office: 318-456-5094

Cell: 312-781-5094

G-Series T-680 & crane simulator truck simulator (Delivery date: late 2022)

- **Minot Air Force Base (LRS)**

MSgt. Gany Gamboa

Office: 312-453-4796

Cell: 701-723-4796

G-Series T-680 & crane simulator truck simulator (Delivery date: late 2022)

## TERMS AND CONDITIONS

1. All simulators are covered by a 2-year limited warranty.
  1. Extended warranties are available beyond the 2-Year standard warranty included.
2. Prices do not include Federal, State, Local, or Use taxes, VAT, or foreign duties, if any, which are the responsibility of the purchaser.
3. Proposal pricing is good for 90 days.
4. Delivery is FOB Destination.
5. Delivery within 90-120 days ARO, depending on options and qty.
6. Payment Terms
  1. 50% Downpayment
  2. 50% Net 30 after delivery
7. All pricing is in US Dollars.
8. The product is fabricated and assembled in Sycamore, IL., USA.