

**State Fire Academy
1 Fire Academy USA
Jackson MS 39208-9600
Phone: 601-932-2444
Fax: 601-932-2819**

**INVITATION FOR BIDS
RFX 3160001162**

The State Fire Academy will accept sealed bids until **Tuesday, August 9, 2016 at 2:00P.M.**, and opened immediately thereafter, for two Mobile Driving Simulators for Fire Apparatus Driving, installed in a custom enclosed trailer. Questions regarding the specifications should be directed to Mike Word at 601-932-2444. For a copy of the bid package, please contact Beverly Massey at 601-932-2444 or bmassey@msfa.state.ms.us.

Bids must be submitted on the Bid Cover Sheet (Attachment A), and Bid Form, signed and delivered in a sealed envelope addressed as follows:

State Fire Academy
Attn: Beverly Massey
#1 Fire Academy USA
Jackson, MS 39208-9600

Indicate in the lower left-hand corner of the sealed envelope:

Bid#: RFX 3160001162

Bid Opening: **Tuesday, August 9, 2016 at 2:00P.M.**

Newspaper Run Dates: July 20, 2016; July 27, 2016

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Questions regarding the specifications, please contact Mike Word at 601-932-2444 or mword@msfa.state.ms.us.

GENERAL TERMS AND CONDITIONS

ALL BIDS SUBMITTED SHALL BE IN COMPLIANCE WITH ALL CONDITIONS SET FORTH HEREIN. THE BID PROCEDURES FOLLOWED BY THIS OFFICE WILL BE IN ACCORDANCE WITH THESE CONDITIONS. THEREFORE, ALL BIDDERS ARE URGED TO READ AND UNDERSTAND THESE CONDITIONS PRIOR TO SUBMITTING A BID.

1. PREPARATION OF BIDS

- 1.1 Bids shall be sealed to the State Fire Academy, #1 Fire Academy U.S.A., Jackson, MS 39208.
- 1.2 Failure to examine any drawings, specifications, and instructions will be at bidder's risk.
- 1.3 Price each item separately. Unit prices shall be shown. Bid prices must be net.
- 1.4 Specification. It is understood that reference to available specifications shall be sufficient to make the terms of such specifications binding on the bidder.
- 1.5 Information and Descriptive Literature. Bidders must furnish all information requested in the bid specifications. Further, when required, each bidder must submit for bid evaluation cuts, sketches, descriptive literature and technical specifications covering the product offered. Reference to literature submitted with a previous bid or on file with the State Fire Academy will not satisfy this provision.
- 1.6 Time of performance. The number of calendar days in which delivery will be made after receipt of order shall be indicated in the bid specifications.

2. SUBMISSION OF BIDS

- 2.1 Bids must be signed and sealed with bidder's name and address on outside of envelope, and the time and date of the bid opening and the bid file number shown in the lower-left hand corner of the envelope.
- 2.2 Bids and modifications or corrections received after the closing time specified will not be considered.

3. ACCEPTANCE OF BIDS

- 3.1 The State Fire Academy reserves the right to reject any and all bids, to waive any informality in bids and unless otherwise specified by the bidders, to accept any items on the bid. The State Fire Academy reserves the right to modify or cancel in whole or in part its Invitation for Bids. If a bidder fails to state the time within which a bid must be accepted, it is understood and agreed that the State Fire Academy Management shall have 60 days to accept.
- 3.2 Only sealed bids will be accepted. Facsimile or electronic mail bids will not be accepted.

4. ERROR IN BID

- 4.1 In case of error in the extension of prices in the bid, the unit price will govern. No bid shall be altered or amended after the specified time for opening bids.

5. DISCOUNT PERIOD

- 5.1 Time in connection with a discount offered will be computed from date of delivery at destination or from the date correct invoices are received, if the latter date is later than the date of delivery. Cash discounts will not be considered in the award process.

6. AWARD

- 6.1 Purchases/Awards will be made or entered into with the lowest responsible bidder meeting specifications, except as otherwise specified in the bid specifications.
- 6.2 A written purchase order will be furnished to the successful bidder within the time of acceptance specified in the Invitation for Bid results in a binding contract without further action by either party. The contract shall consist solely of these General Conditions, the Instructions and Special Conditions, the successful bidder's bid, and the written purchase order.

7. INSPECTION

- 7.1 Final inspection and acceptance or rejection may be made at delivery destination, but all materials and workmanship shall be subject to inspection and test at all times and places, and when practicable. During manufacture, the right is reserved to reject articles which contain defective material and workmanship. Rejected material shall be removed by and at the expense of the contractor promptly after notification or rejection. Final inspection and acceptance or rejection of the materials or supplies shall be made as promptly as practicable, but failure to inspect and accept or reject materials or supplies shall not impose liability on the State of Mississippi or any subdivision thereof for such materials or supplies as are not in accordance with the specification. In the event necessity requires the use of materials or supplies not conforming to the specification, payment therefore may be made at a proper reduction in price.

8. TAXES

- 8.1 The State Fire Academy is exempt from federal excise taxes and state and local sales or use taxes and bidders must quote prices which do not include such taxes. Exemption certificates will be furnished upon request. Contractors making improvements to, additions to or repair work on real property on behalf of the State are liable for any applicable sales or use tax on purchase of tangible personal property for use in connection with the contracts. Contractors are likewise liable for any applicable use tax on tangible personal property furnished to them by the State for use in connection with their contracts.

9. GIFTS, REBATE, GRATUITIES

- 9.1 Acceptance of gifts from bidders is prohibited. No officer or employee of the State Fire Academy, nor any head of any state department, institution or agency, nor any employee of any state department, institution or agency charged with responsibility of initiating requisitions, shall accept or receive, directly or indirectly, from any person, firm or corporation to whom any contract for the purchase of materials, supplies, or equipment for the State Fire Academy may be awarded, by rebate, gifts, or otherwise, any money or anything of value whatsoever, or any promise, obligation or contract for future rewards or compensation.
- 9.2 Bidding by state employees is prohibited. It is unlawful for any state official or employee to bid on, or sell, or offer for sale, any merchandise equipment or material, or similar commodity to the State Fire Academy during the tenure of his or her office or employment, or for the period prescribed by law thereafter, or to have any interest in the selling of the same to the State Fire Academy.

10. BID INFORMATION

- 10.1 Bid information and documents may be examined pursuant to the Mississippi Public Records Act of 1983, MS Code 25-61-1 et seq.

11. DEFINITIONS

- 11.1 The use of the word agency in any Bid Invitation solicitation or specification shall be intended to mean state agencies only. The words "governing authority" when used in any of the above documents shall be intended as meaning county or local entities.

12. PRECEDENCE

- 12.1 Bids shall be made and the contract shall be entered into in accordance with the General Conditions as hereinafter amended and modified. Should a conflict exist between the General Conditions and the Instructions and Special Conditions, the Instructions and Special Conditions shall take precedence.

13. COMPETITION

- 13.1 There are no federal or state laws that prohibit bidders from submitting a bid lower than a price or bid given to the U.S. Government. Bidders may bid lower than U.S. Government contract price without any liability as the State is exempt from the provisions of the Robinson-Patman Act and other related laws. In addition, the U.S.

Government has no provisions in any of its purchasing arrangements with bidders whereby a lower price to the State must automatically be given to the U.S. Government.

14. WAIVER

- 14.1 The State Fire Academy reserves the right to waive any General Condition, Special Condition, or minor specification deviation when considered to be in the best interest of the State.

15. CANCELLATION

- 15.1 Any contract or item award may be canceled with or without cause by the State Fire Academy with the giving of 30 days written notice of intent to cancel. Cause for the State Fire Academy to cancel may include, but is not limited to, cost exceeding current market prices for comparable purchases; request for increase in prices during the period of the contract; or failure to perform to contract conditions. The Contractor will be required to honor all purchase orders that were prepared and dated prior to the date of expiration or cancellation if received by the Contractor within a period of 30 days following the date of expiration or cancellation. Cancellation by the State Fire Academy does not relieve the Contractor of any liability arising out of a default or nonperformance. If a contract is canceled by the State Fire Academy due to a Contractor's request for increase in prices or failure to perform, that Contractor will be disqualified from bidding for a period of 24 months. The Contractor may cancel a contract for cause with the giving of 30 days written notice of intent to cancel. Cause for the Contractor to cancel may include, but is not limited to the item(s) being discontinued and/or unavailable from the manufacturer.

16. SUBSTITUTIONS DURING CONTRACT

- 16.1 During the term of a contract, if adequate documentation is provided that supports the claim that the contract item(s) are not available, items which meet the minimum specifications may be substituted if approved by the State Fire Academy and the substitutions are deemed to be in the best interest of the State.

17. APPLICATION

- 17.1 It is understood and agreed by the Bidder that any contract entered into as a result of this Invitation for Bids is solely for the convenience of the state agencies and all purchases made by these agencies for products included under the provisions of the contract shall be purchased from the bidder receiving the award unless exempt by special authorization from the State Fire Academy.
- Employees of the State Fire Academy have acted exclusively as agents of the State Fire Academy for the award, consummation, and administration of the contract and are not liable for any performance or nonperformance by the state agencies that utilize the contract.

18. ADDENDA

- 18.1 Addenda modifying plans and/or specifications may be issued if time permits. No addendum will be issued within a period of two (2) working days prior to the time and date set for the bid opening. Should it become necessary to issue an addendum within the two (2) day period prior to the bid opening, the bid date will be reset to a date not less than five (5) working days after the date of the addendum, giving bidders ample time to comply with the addendum. When replying to a bid request on which an addendum has been issued, and the specifications require acknowledgement, the bid shall indicate that provisions of the addendum have been noted and that the bid is being offered in compliance therewith. Failure to make this statement may result in the bid being rejected as not being in accordance with the revised specifications or plans.

19. NONRESPONSIVE BIDS

- 19.1 Nonresponsive bids will not be considered. A non-responsive bid is considered to be a bid that does not comply with the minimum provisions of the specification. Any bidder found to repeatedly offer alternate products that are not compliant with specifications in an attempt to obtain a contract on the basis of pricing only will be disqualified from bidding for a period of 24 months.

20. SPECIFICATION CLARIFICATION

- 20.1 It shall be incumbent upon all bidders to understand the provisions of the specifications and to obtain clarification prior to the time and date set for the bid opening. Such clarification will be answered only in response to a written request.

21. BID OPENINGS

- 21.1 Bid openings will be open to the public. The bid opening will serve only to open and read the bid price on each bid. No discussion will be entered into with any bidder as to the quality or provisions of the specifications and no award will be made either stated or implied at the bid opening.
- 21.2 If the agency is closed for any reason, including but not limited to: acts of God, strikes, lockouts, riots, acts of war, epidemics, governmental regulations superimposed after the fact, fire, earthquakes, floods, or other natural disasters (the "Force Majeure Events"), which closure prevents the opening of bids at the advertised date and time, all bids received shall be publicly opened and read aloud on the next business day that the agency shall be open and at the previously advertised time. The new date and time of the bid opening, as determined in accordance with this paragraph, shall not be advertised, and all bidders, upon submission of a bid proposal, shall be deemed to have knowledge of and shall have agreed to the provisions of this paragraph. Bids shall be received by the agency until the new date and time of the bid opening as set forth herein. The agency shall not be held responsible for the receipt of any bids for which the delivery was attempted and failed due to the closure of the agency as a result of a Force Majeure Event. Each bidder shall be required to ensure the delivery and receipt of its bid by the agency prior to the new date and time of the bid opening.

22. FIRM BID PRICE

- 22.1 Prices quoted shall be firm for the term of the contract except that the State shall receive the benefit of any price decrease in excess of five (5) percent. The contractor must provide written price reduction information within ten (10) days of its effective date.

23. SUSPENSION AND DEBARMENT

- 23.1 By submitting a bid, the bidder is certifying that neither the bidder nor any potential subcontractors are debarred or suspended or are otherwise excluded from or ineligible for participation in federal assistance programs.

24. ASSIGNMENT

- 24.1 The Contractor shall not assign or subcontract in whole or in part, its right or obligations under this agreement without prior written consent of the State Fire Academy.

25. Vendor Registration

- 25.1 All vendors must be registered with the State of Mississippi. If not registered, please go to <http://www.dfa.ms.gov/dfa-offices/mmrs/mississippi-suppliers-vendors/> register your company and to receive a supplier number. Suppliers who have completed the registration process must attach a W-9 to their account in the MAGIC. Alternatively, suppliers may submit a valid W-9 to email ofmmagic@dfa.ms.gov or fax 601-359-5525.

Fire Apparatus Simulation System Specifications

Section I. Scope of Work-Specifications:

The State Fire Academy is developing a driver training simulator program, which will primarily be (2) two mobile fire driver training simulators in an enclosed trailer. The Fire Apparatus Simulation System should include a custom built Enclosed Gooseneck Trailer with climate control. The trailer will house (2) two Fire Apparatus Simulators, a generator, and an instructor control station. The system shall be utilized in the delivery of Fire Apparatus Driver Training throughout the State of Mississippi.

1. A.

General Conditions

The complete system shall include two driving simulators, an interfaced instructor console, a self-contained trailer for the simulators/trainer unit, and all required hardware, software, cables and connecting devices, shipping/handling, delivery, installation, comprehensive warranty, scheduled maintenance, service and repair, technical support, on-site operational training, and continued instructor support. The system will be safety-certified to meet or exceed UL standards, and compliant with federal electronic emissions guidelines so as to prevent interference of safe simulator operation with or by other electronic devices. The system will be of quality construction with a record of reliability as verified through accelerated life, vibration, and ambient environment test results.

1. B.

System Manufacturer and References

The Manufacturer of the proposed systems must currently produce and service complete interactive driving simulator systems designed for the advanced training of fire fighter/emergency response personnel operating fire engines, ladder trucks, other emergency vehicles, automobiles, light trucks and full sized, special duty trucks.

1. C.

Vendors shall provide a minimum of three references that are current users of the proposed system. These references should be municipal fire department users, with the referenced organizations having a system delivered, installed, and accepted.

1. D.

Complete System Requirements

The complete simulator systems shall have mutually-compatible hardware and software inclusive of all system software; all audiovisual software related to the simulator curriculum, proprietary scenario-based training, and scenario-generating capabilities; and all installation materials necessary to ensure two (2) fully-functional simulator systems that supports the training goals and facilitates interactive driver training as specified. All system components should be modular for ease of access, maintenance and repair. All hardware, conduit, etc. for the simulators must be concealed from view.

2. Trailer Specifications and Requirements:

A fully self-contained trailer for the simulator must be provided as part of the simulator system. The vendor shall provide the design of the trailer, including the layout of the simulators inside the trailer, for approval **prior to** beginning construction or fit-out of the trailer. The trailer must meet the following requirements:

- Custom Built Enclosed Gooseneck Trailer
- Gooseneck Hitch with a 2 5/16 inch coupler
- Trailer Width: standard width
- Insulation: all walls, flooring and ceiling shall be insulated
- Trailer shall have high quality graphic wrap. Graphics will be provided by MSFA
- Accommodate 2 simulator units and an instructor's station
- Configuration of the simulator units in the trailer must permit easy access to all areas of the unit for maintenance
- Unit should include a student briefing/debriefing/waiting area
- Unit should be able to maintain complete functionality of simulator units and trailer through a self contained power unit (e.g. a generator), with the availability to utilize shore power.
- Unit shall include interior storage area to include system documentation, accessories, etc.
- Unit shall come complete with two wheel chocks

The trailer must include the following components:

- On-board generator, able to fully power the simulators and all components of the trailer, with power conditioning and uninterrupted power supply (UPS) unit. Provide one 25' shore power cord and one 25' shore power extension cord.
- Appropriate air conditioning/heating equipment to maintain a constant temperature (between 65 to 73 degrees) during all seasons, while simulator unit is running. HVAC system must include appropriate "heat evacuation" for running simulators, electronics, instructor station, etc.
- All wiring, conduit, etc. needed for operation of the simulators and all trailer systems are to be provided, installed, and connected/integrated by the vendor.
- Interior lighting to be used while the trailer is occupied and being used; however, interior lighting must not interfere with visibility of simulator screens, including preventing glare on the screens from lighting.
- Shall have a minimum of two axles with electronic brakes

The trailer should not be any larger than needed to meet the above requirements.

System Frame: The frame should be balanced with air-ride suspension, and should include blackout panels or other shrouding devices to control the degree to which ambient light bleeds into the simulator environment. The system must be trailer-mounted (with the vendor meeting the requirements of the trailer). The trailer shall be equipped with automatic stabilizing jacks on each corner.

3. Simulator Specifications and Requirements:

The two simulator systems must be able to replicate the driver's compartment and vehicle performance of various classes of fire service with each class operating within its appropriate virtual world. To better replicate a real-world environment, One of the simulator units shall have a cab module/driver's compartment including realistic controls, gauges, indicators, dashboard displays, instrument panels, auxiliary warning and communications devices, driver's seat, safety restraint, steering wheel assembly, and pedal placement. Controls, gauges, and instruments that normally provide critical vehicle-status feedback to the driver and are crucial to measuring driver activity and reaction to road conditions should appropriately mimic actual operation and function. One simulator unit does not have to have a cab module incorporated.

The complete simulator systems shall have mutually-compatible hardware and software inclusive of all system software; all audiovisual software related to the simulator curriculum, proprietary scenario-based training, and scenario-generating capabilities; and all installation materials necessary to ensure fully-functional simulator systems that supports the training goals and facilitates interactive driver training. All system components should be modular for ease of access, maintenance and repair. All hardware, conduit, etc. for the simulator must be concealed from view.

4. Scenarios and Basic Driving Skills:

No less than 100 scenarios shall be preloaded in the simulator computer systems. These scenarios shall be life like recreations of actual emergency driving conditions, routes and events. During the scenarios, the Instructor shall be able to monitor all ongoing activities and conditions and shall be able to initiate instructor commands including:

- Time of Day
- Weather Events
- Traffic
- Wind
- Road Conditions
- Traffic Accidents
- Vehicle faults and failures

Driving course simulations must meet the requirements set forth in National Fire Protection Association (NFPA) 1002 'driving course'. Simulations shall include evolutions that re-enforce proper driving skills including;

- Maneuvering in typical city streets
- Operation inside building and underground structures
- Reacting to forward moving vehicles that are stalled or stop suddenly
- Responding to oncoming vehicle that drift across the center divide
- Reacting to crossing pedestrians
- Backing correction/over-correction
- Distance judgment while braking
- Making left and right turns
- Reading and reacting to road directional signs
- Parking both at curbsides and in parking lots
- Back-up control and speed
- Maneuvering on multi-lane suburban boulevards
- Maintaining posted speeds
- Maintaining proper following distance
- Reacting to traffic signals, stop signs, and yield signs
- Passing and being passed
- Making lane changes
- Proper signaling
- Entry into moving traffic - merging with traffic
- Ability to evaluate students total stopping distance which includes:
 - Reaction Time
 - Breaking Distance
 - Total stopping Distance

5. Cab module/vehicle classes:

The proposed complete simulator system with cab must include the components necessary to simulate the listed vehicle classes, as well as the appropriate compliment of virtual-world and scenario software required to effectively train operators of the following vehicle types:

- Engine/Pumper
- Ladder Truck
- Ambulance
- SUV's
- Vans, Light and Medium Duty Trucks
- Sedan/Passenger Vehicle
- ARFF Vehicle

6. Visual Display System

The driving images shall be displayed on high definition LED displays located so as to give the driver an unobstructed view of the road and driving conditions. Scenes shall be displayed as if the driver was looking out the windshield and windows. Simulated rear view mirror images shall be inset in the displays. The size and relative position of the mirror images shall automatically change to correctly replicate the vehicle being simulated. Simulated flat and convex mirror images shall be displayed. All mirror images shall be remotely adjustable by the driver in real time during any training scenario.

The field of vision for the Visual Display System shall not be less than 210 degrees. Display resolution shall not be less than 1920 x 1080. Simulation update rate shall be not less than 60 Hz. Ultra-flat displays shall be utilized that provide clear mirror, front, side and rear-view. Displays shall be mounted within the simulator cab mockup and shall not be mounted on the interior walls and shall be easily replaceable should the need arise.

7. Simulator Sound System

The simulator shall include a high quality sound system that simulates sounds typically heard from the driver 's seat of the vehicle type being simulated. High quality speakers shall be strategically placed so as to provide depth and reality to the scenario presentation. Sounds shall include engine starting and running that shall vary with RPM, road noise, tire skidding, sirens, horn, brake application, passing vehicles, and collisions with vehicles and other objects such as signs, road markers, curbs, trees, and buildings. Sounds that must be provided include:

- a) Engine cranking and Starting
- b) Engine running
- c) Brake Application
- d) Road Surface sounds
- e) Turn Signals
- f) Siren
- g) Horn
- h) Curb Impact
- i) Tire Blow Out
- j) Tire Skidding
- k) Minor collision
- l) Major Collision
- m) Motion Vibration Sounds

8. Operational Controls:

The following controls must be included within the driving compartment and should be operational. All controls must be “hard” (i.e., not simulated on screen), and should be fully functional:

- Ignition switch
- Turn signals, and turn signal indicators
- 4-way “hazard” signals
- Windshield wiper switch (multi-speed)
- Automatic transmission gear selector (“push-button” style)
- Oil pressure gauge
- Speedometer
- Odometer
- Engine temperature gauge
- Fuel level gauge
- Parking brake and parking brake indicator
- Mirror controls
- Accelerator pedal
- Brake pedal. The simulator should emulate brake performance appropriate to the scenario being conducted and the vehicle class being simulated. Fire engine and CDL-class vehicles should simulate an air-brake system, and other vehicle model simulations require an Automatic Braking Systems (ABS). Horn on steering wheel (with audio feedback through simulator)
- Headlight switch. Headlights must be fully functional in the virtual world. The headlights must have both low and high beam capability. The headlight switch must be placed within the cab in a location consistent with factory installation for a fire engine.
- Adjustable driver’s seat (horizontally and vertically adjustable). Must include shoulder-lap seatbelt and a dashboard seatbelt indicator.
- Emergency light switch(es). Light switches should be to the driver’s right side, and should be back-lit when the driving lights are switched “on”. Emergency lights must be fully functional in the “virtual world”.
- Emergency siren switch (with audio feedback through simulator); include “wail”, “yelp” and “hilo” siren modes.
- Steering wheel with steering column. Steering wheel must have “tilt” feature, and be approximately the same size as a fire engine steering wheel. Steering wheel/system must include a “force feedback” system, including realistic “resistance”, “kickback” and “centering” forces while driving, and when hitting objects on road within driving scenarios. The steering wheel should return to the center position when released, and have its torque set so that it simulates the actual force required to turn a steering wheel of a vehicle’s class under driving and environmental conditions consistent with the active simulator system scenario.

9. Mirrors

Side-view and rear-view mirrors (appropriate for vehicle model simulated) should be computer-generated, and scenario-appropriate images should appear in the rear-view (if applicable), left-side, and right-side mirrors as the driver would normally view them. The mirror images must be continuous and appear in real-time, with a level of detail that matches the “regular” or forward-facing view. The size and placement of mirrors must be appropriate to the vehicle-class being simulated. A remote mirror control should be located within the driver’s compartment, allowing the driver to make real-time adjustments to the side-view and rear-view mirrors.

10. The Virtual Environment The virtual world should realistically simulate a range of driving conditions and environments including, but not limited to:

- “Naturally” displayed horizon
- Paved, unpaved, and damaged (pot-holed) roadways
- Single, double, and multi-lane roads
- Multi-lane freeways, with on- and off-ramps.
- Static and dynamic traffic control devices (signs and simulated traffic signals), road markings, caution devices, and barricades. All traffic control devices and highway markings must meet federal guidelines. Bridges, grades (ascending and descending), hills, valleys, shoulders, on/off ramps, etc. All roads and highways in the virtual world must be designed in accordance with federal highway specifications. Crosswalks, fly-overs, railroad and school crossings
- Urban, rural, suburban, commercial, residential, and industrial, freeway, and “off-road” landscapes and layouts.
- Road construction work zones.
- Static distractions and visual obstructions (signs, buildings, billboards, etc.)
- Dynamic elements (pedestrians, animals, other vehicles, etc.)
- Ambient traffic with variable density. Except in “scripted” scenarios, all vehicular and pedestrian traffic models should follow “unpredictable” and random logic (e.g., “autonomous” traffic, following real-world logic.). The simulator system must be able to simulate the entry into moving traffic and intersection decisions.
- Weather and lighting influences (wind, rain, sleet, snow, ice, fog, darkness, daylight, dawn/dusk, glare, haze, etc.). System must also be able to simulate activated emergency vehicle lights in all of the included weather and lighting conditions, and must accurately simulate the effects of vehicle headlights in each of the included weather and lighting conditions.
- Vehicle malfunction (blown tire, failed brakes/ABS, overheating, low fuel, etc.)
- All crash and collision conditions must be accurately detected and simulated.
- All subsystems, such as vehicle dynamics, sound effects, visual effects, and vehicle mechanical effects, must be synchronized together in real time.
- Emergency scenes, such as fires, vehicle accidents, etc. must be able to be simulated. The emergency scenes must include the ability of the driver to accurately place and park an emergency vehicle at the emergency scene. In addition, the simulator software, steering system, scenario-driven road conditions, vehicle class, simulated rate of travel, and vehicle maneuver should appropriately replicate vehicle responses as dictated by scientifically-accepted physical relationships between Normal Force, Vertical Displacement, Tire Pressure, and Slip.
- Off Road Capability driving course for ARFF vehicles as stated in NFPA (different from the pumper).

11. Instructor / Command Console and Control Station

The system shall include a separate instructor’s console from which he/she can load vendor-built scenarios, create and load Windows-based scenarios, load vehicle type, control the action of dedicated objects, hazards, and traffic warning devices within scenarios, initiate vehicle malfunction effects for the simulator, and operate all simulator control tools. The instructor must be able to select scenarios, alter scenario vehicle behavior, assume control of scenario vehicles from the Instructor Console at any time during the simulation, replay the scenario at variable speeds, pause a scenario, and jump to any point in any given scenario. The instructor console must include the ability to provide a CGI map of the driving area on the instructor console screen. The instructor console must include a scenario development software tool for the simulator system. The instructor’s console shall be on a PC separate from the simulator, and include the computer, keyboard, minimum 21” LCD Monitor and a color printer. The system should be equipped with an optical mouse, an on-board high-speed disk burner, and be able to read and write to CD/DVD’s, USB memory sticks, and memory cards. The system must have modem,

Ethernet and “Wi-Fi” connectivity. To aid in performance review and critique, the system should be able to save to the hard drive (or any compatible storage media) any scenario driven in the simulator for later playback. From the console, the instructor should be able to select and load a scenario based on specific training goals, develop new scenarios, and modify existing scenarios. Additionally, the instructor should be able to control the behavior (velocity, placement, direction of travel, etc.) of any scenario’s dynamic elements (pedestrians, animals, etc.), weather conditions, or obstructions from the instructor’s console.

Communications headset with controller and microphone. Radio/intercom system to be used by the instructor to simulate dispatch and provide verbal scenario instructions and shall automatically route radio/intercom traffic to simulator in the same scenario.

12. Video Camera Control System

High definition video color video cameras shall be provided and placed in the Simulators to provide the instructor with an unobstructed view of the simulator, Driver, and essential controls. These cameras shall display on the Instructor monitor and shall have the ability to view and record all scenario related activity.

Section 2. Record Keeping Capabilities

1. Student Evaluation:

Data records shall be stored in a database that will remain accessible from the Instructor Work Station. Data can be sorted by categories such as date, student name, job class, instructor name, class type, or other criteria. Selected data shall be displayed at the Instructor Work Station for review.

2. Saving to CD/DVD, Memory Stick, Memory Card:

The system shall be capable of saving the student’s performance for future review.

- Ability to evaluate students total stopping distance which includes:
 - Reaction Time
 - Breaking Distance
 - Total stopping Distance

3. Operating System

The system’s computing platform must be PC-based. All software tools for the Command (Instructor) console and the Operator (Simulator) consoles must be compatible with the Microsoft Windows operating system. The Command Console monitor should be a flat screen of at least 21” on the diagonal, and have a high resolution, glare-free display.

Driver simulator system

- “Plain language,” user-friendly scenario-building software, accessible from the Instructor/Command console.
- A diverse library of pre-built scenarios, environments, driving conditions, vehicle types, driving hazards, pedestrians, animals, road signs, buildings, etc.
- A driving skills course scenario
- Driver-reaction measure, analysis, and evaluation
- Ability to score students on independent factors within each scenario, including speed, following distances, collisions and near-collisions, curb strikes, and adherence to traffic control devices.

A description of pre-loaded scenarios for each vehicle class included in the simulator system must be included in the vendor Bid. The simulator system must also allow a "Free-play" or "Drive-anywhere" mode of operation, where a driver can operate in the system's virtual world independent of a pre-defined scenario. The instructor's station and scenario development tool should allow the department to reconstruct and recreate actual accident scenarios.

The system should be able to record a student's driving performance for storage to disk or hard drive. Playback of stored sessions should include, at a minimum, student's speed, road position, use of safety/warning devices, reaction time to hazards, and braking force applied. Playback should be possible from both the driver's vantage point and a bird's-eye view of the scenario's progress.

Section 3. Instructor Training

The vendor shall provide on-site training ("train-the-trainer") for up to 4 designated instructors. The training must be provided on-site. Training must be conducted by an experienced driver educator, with a minimum of 5 years experience in simulator instruction. The training must include the set-up and operation of the simulator, and the use of all provided software systems, including the scenario development tool. All fees for the training session(s) shall be included in the bid response.

Section 4. Delivery and Installation

The vendor will deliver, install, and set up the simulators and trailer for proper operation and to the satisfaction of the State Fire Academy. The State Fire Academy will issue a written notice of acceptance of the system and trailer, which will indicate that the installation is complete. The cost of shipping, delivery and installation of the simulator systems must be included in the bid. All system documentation needed to operate the system must be included with the simulator system delivery. Delivery and installation must be completed within 160 days of contract award.

Section 5. Warranty and Service, Preventative Maintenance, and Software Support

1. Warranty and Service

The manufacturer should provide at a minimum a one (1) year warranty including parts (hardware and software), labor costs and on-site technical support from the date of State Fire Academy acceptance. There should be no hidden or additional costs for service and all parts and labor must be covered. Any repairs requiring on-site service should be completed by vendor-trained service technicians within 5 business days of the initial trouble detection.

2. Preventive Maintenance and Software Support

All preventative maintenance for one (1) year after system acceptance must be included in the one-year warranty described above. The Manufacturer must provide a complete maintenance schedule and plan for the simulator systems that the State Fire Academy can follow after this initial one-year period.

This plan must include:

All components of the simulator system, including software, hardware, electrical and network components and connections, etc. A preventative maintenance plan must also be provided for the trailer and trailer system. Vendor shall supply two (2) hard copies and two (2) CD copies of the machine maintenance and parts manuals.

Section 6.

OPTION 1: Upon expiration of the initial preventative maintenance period, the vendor should offer extended preventative maintenance, renewable annually at a fixed fee, for a minimum of five (5) years following the expiration of the initial preventative maintenance agreement. The vendor should also make available to the State Fire Academy at no additional cost access to any manufacturer “user forums”, that include the ability to correspond with other customers of the manufacturer, and to download other user-developed scenario material.

**ATTACHMENT A
BID COVER SHEET**

Bids are to be submitted to Beverly Massey, Purchasing Chief, State Fire Academy, 1 Fire Academy USA, Jackson, MS 39208-9600 on or before Tuesday, August 9, 2016 at 2:00P.M.

PLEASE MARK YOUR ENVELOPE:

Fire Apparatus Driving Simulator
Tuesday, August 9, 2016 at 2:00P.M

NO BID SHALL BE RECEIVED AFTER TIME AND DATE SHOWN ABOVE.
ANY BID NOT SIGNED WILL BE SUBJECT TO BEING CLASSIFIED AS VOID.
FAXED BIDS ARE NOT ACCEPTABLE.

NAME OF COMPANY: _____

QUOTED BY: _____

ADDRESS: _____

CITY/STATE/ZIP: _____

PHONE NUMBER: _____

FAX NUMBER: _____

EMAIL ADDRESS: _____

NAME AND PHONE NUMBER OF COMPANY REPRESENTATIVE TO BE CONTACTED REGARDING THIS IFB

What year was your company started? _____

Please provide the physical location and mailing address of your company's office.

By signing below, the company representative certifies that he/she has authority to bind the company, and further acknowledges and certifies on behalf of the company:

1. That he/she has thoroughly read and understands the Invitation for Bids and Attachments thereto;
 2. That the company meets all requirements and acknowledges all certifications contained in the Invitation for Bids and Attachments thereto;
- (Continued on Next Page)

3. That the company agrees to all provisions of the Invitation for Bids and Attachments there including, but not limited to, the Required and Optional Clauses to be included in any contract resulting from this IFB (**Attachments B**);

4. That the company will perform the services or delivery of the products as required at the price quoted; and,

5. **PROSPECTIVE VENDOR's REPRESENTATION REGARDING CONTINGENT FEES** – The prospective contractor represents as a part of such contractor's bid or proposal that such contractor (**please circle applicable word or words**)

Has
Has not

retained any person or agency on a percentage, commission, or other contingent arrangement to secure this contract.

6. List a minimum of three reference contacts that have purchased the same or similar products from your company. Company Name, Contact Name, Phone Number

- 1. _____
- 2. _____
- 3. _____

Your Company Name: _____

Printed name of representative: _____

Vendor Authorized Signature: _____

Date: _____

All vendors must be registered with the State of Mississippi. If not registered, please go to <http://www.dfa.ms.gov/dfa-offices/mmrs/mississippi-suppliers-vendors/> register your company and to receive a supplier number. Suppliers who have completed the registration process must attach a W-9 to their account in the MAGIC. Alternatively, suppliers may submit a valid W-9 to email ofmmagic@dfa.ms.gov or fax 601-359-5525.

If you have questions regarding the specifications, please contact Mike Word at 601-932-2444 or mword@msfa.state.ms.us.

**Attachment A
BID FORM**

Per the following bid specifications, I (the vendor), _____
Propose the following:

Description/Make/Model/Etc for the enclosed gooseneck trailer with two mobile fire driver training simulators as specification sheets attached to this bid.

Vendors should address each item in the specifications in the description to ensure compliance with meeting the specifications.

Please notate the Brand/Model here and attach all other documentation.

Price includes the above unit (or attachment of your specifications), delivery/transportation cost, Instructor training, and one year of maintenance/service per the specifications:

Gooseneck Trailer/Accessories: \$ _____

Cab Module Mobile Simulator: \$ _____

Module Mobile Simulator (non cab) \$ _____

One Year Maintenance/Warranty: \$ _____

Other (describe): \$ _____

Training: \$ _____

These figures should equal your total bid of \$ _____

Estimate of Time for Equipment Delivery after Issuance of a Purchase Order: _____ days

Option 1:

Identify the yearly cost of maintenance/warranty for the above described unit after the initial year of coverage:

\$ _____

This yearly cost for Option 1 will be good for a minimum period of five (5) years.

Attachment B
Required Clauses in IFBs, RFPs, and RFQs

APPLICABLE LAW

The contract shall be governed by and construed in accordance with the laws of the State of Mississippi, excluding its conflicts of laws, provisions, and any litigation with respect thereto shall be brought in the courts of the State. Contractor shall comply with applicable federal, state, and local laws and regulations.

AVAILABILITY OF FUNDS

It is expressly understood and agreed that the obligation of the Mississippi State Fire Academy to proceed under this agreement is conditioned upon the appropriation of funds by the Mississippi State Legislature and the receipt of state and/or federal funds. If the funds anticipated for the continuing fulfillment of the agreement are, at any time, not forthcoming or insufficient, either through the failure of the federal government to provide funds or of the State of Mississippi to appropriate funds or the discontinuance or material alteration of the program under which funds were provided or if funds are not otherwise available to the Mississippi State Fire Academy, the Mississippi State Fire Academy shall have the right upon ten (10) working days written notice to Contractor, to terminate this agreement without damage, penalty, cost or expenses to the Mississippi State Fire Academy of any kind whatsoever. The effective date of termination shall be as specified in the notice of termination.

PROCUREMENT REGULATIONS

The contract shall be governed by the applicable provisions of the *Mississippi Personal Service Contract Review Board Rules and Regulations*, a copy of which is available at 210 East Capitol, Suite 800, Jackson, Mississippi 39201 for inspection, or downloadable at <http://www.mspb.ms.gov>, or for commodities, the Office of Purchasing & Travel, 701 Woolfolk Bldg, Suite A, 501 N West Street, Jackson, MS 39201 or downloadable at <http://www.dfa.state.ms.us/purchasing/home/html>.

COMPLIANCE WITH LAWS

Contractor understands that the Mississippi State Fire Academy is an equal opportunity employer and therefore, maintains a policy which prohibits unlawful discrimination based on race, color, creed, sex, age, national origin, physical handicap, disability, genetic information, or any other consideration made unlawful by federal, state, or local laws. All such discrimination is unlawful and Contractor agrees during the term of the agreement that Contractor will strictly adhere to this policy in its employment practices and provision of services. Contractor shall comply with, and all activities under this agreement shall be subject to, all applicable federal, State of Mississippi, and local laws and regulations, as now existing and as may be amended or modified.

STOP WORK ORDER

(1) **Order to Stop Work:** The Procurement Officer, may, by written order to Contractor at any time, and without notice to any surety, require Contractor to stop all or any part of the work called for by this contract. This order shall be for a specified period not exceeding 90 days after the order is delivered to Contractor, unless the parties agree to any further period. Any such order shall be identified specifically as a stop work order issued pursuant to this clause. Upon receipt of such an order, Contractor shall forthwith comply with its terms and take all reasonable steps to minimize the occurrence of costs allocable to the work covered by the order during the period of work stoppage. Before the stop work order expires, or within any further period to which the parties shall have agreed, the Procurement Officer shall either:

- (a) cancel the stop work order; or,
- (b) terminate the work covered by such order as provided in the Termination for Default clause or the Termination for Convenience clause of this contract.

(2) **Cancellation or Expiration of the Order:** If a stop work order issued under this clause is canceled at any time during the period specified in the order, or if the period of the order or any extension thereof expires; Contractor shall have the right to resume work. An appropriate adjustment shall be made in the delivery schedule or Contractor price, or both, and the contract shall be modified in writing accordingly, if:

(a) the stop work order results in an increase in the time required for, or in Contractor's properly allocable to, the performance of any part of this contract; and,

(b) Contractor asserts a claim for such an adjustment within 30 days after the end of the period of work stoppage; provided that, if the Procurement Officer decides that the facts justify such action, any such claim asserted may be received and acted upon at any time prior to final payment under this contract.

(3) **Termination of Stopped Work:** If a stop work order is not canceled and the work covered by such order is terminated for default or convenience, the reasonable costs resulting from the stop work order shall be allowed by adjustment or otherwise.

(4) **Adjustments of Price:** Any adjustment in contract price made pursuant to this clause shall be determined in accordance with the Price Adjustment clause of this contract.

REPRESENTATION REGARDING CONTINGENT FEES

Contractor represents that it has not retained a person to solicit or secure a state contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except as disclosed in Contractor's bid or proposal.

REPRESENTATION REGARDING GRATUITIES

The bidder, offeror, or Contractor represents that it has not violated, is not violating, and promises that it will not violate the prohibition against gratuities set forth in Section 6-204 (Gratuities) of the *Mississippi Personal Service Contract Review Board Rules and Regulations*.

ACKNOWLEDGMENT OF AMENDMENTS

Bidders shall acknowledge receipt of any amendment to the solicitation by signing and returning the amendment with the bid, by identifying the amendment number and date in the space provided for this purpose on the bid form, or by letter. The acknowledgment must be received by the Mississippi State Fire Academy by the time and at the place specified for receipt of bids.

CERTIFICATION OF INDEPENDENT PRICE DETERMINATION

The bidder certifies that the prices submitted in response to the solicitation have been arrived at independently and without, for the purpose of restricting competition, any consultation, communication, or agreement with any other bidder or competitor relating to those prices, the intention to submit a bid, or the methods or factors used to calculate the prices bid.

PROSPECTIVE CONTRACTOR'S REPRESENTATION REGARDING CONTINGENT FEES

The prospective Contractor represents as a part of such Contractor's bid or proposal that such Contractor has/has not retained any person or agency on a percentage, commission, or other contingent arrangement to secure this contract.

E-PAYMENT

Contractor agrees to accept all payments in United States currency via the State of Mississippi's electronic payment and remittance vehicle. The agency agrees to make payment in accordance with Mississippi law on "Timely Payments for Purchases by Public Bodies," which generally provides for payment of undisputed amounts by the agency within forty-five (45) days of receipt

of invoice. Mississippi Code Annotated § 31-7-305.

E-VERIFICATION

If applicable, Contractor represents and warrants that it will ensure its compliance with the Mississippi Employment Protection Act of 2008, and will register and participate in the status verification system for all newly hired employees. Mississippi Code Annotated §§ 71-11-1 *et seq.* The term “employee” as used herein means any person that is hired to perform work within the State of Mississippi. As used herein, “status verification system” means the Illegal Immigration Reform and Immigration Responsibility Act of 1996 that is operated by the United States Department of Homeland Security, also known as the E-Verify Program, or any other successor electronic verification system replacing the E-Verify Program. Contractor agrees to maintain records of such compliance. Upon request of the State and after approval of the Social Security Administration or Department of Homeland Security when required, Contractor agrees to provide a copy of each such verification. Contractor further represents and warrants that any person assigned to perform services hereafter meets the employment eligibility requirements of all immigration laws. The breach of this agreement may subject Contractor to the following:

- (1) termination of this contract for services and ineligibility for any state or public contract in Mississippi for up to three (3) years with notice of such cancellation/termination being made public;
- (2) the loss of any license, permit, certification or other document granted to Contractor by an agency, department or governmental entity for the right to do business in Mississippi for up to one (1) year; or,
- (3) both. In the event of such cancellations/termination, Contractor would also be liable for any additional costs incurred by the State due to Contract cancellation or loss of license or permit to do business in the State.

TRANSPARENCY

This contract, including any accompanying exhibits, attachments, and appendices, is subject to the “Mississippi Public Records Act of 1983,” and its exceptions. See Mississippi Code Annotated §§ 25-61-1 *et seq.*, and Mississippi Code Annotated § 79-23-1. In addition, this contract is subject to the provisions of the Mississippi Accountability and Transparency Act of 2008. Mississippi Code Annotated §§ 27-104-151 *et seq.* Unless exempted from disclosure due to a court-issued protective order, a copy of this executed contract is required to be posted to the Department of Finance and Administration’s independent agency contract website for public access at <http://www.transparency.mississippi.gov>. Information identified by Contractor as trade secrets, or other proprietary information, including confidential vendor information or any other information which is required confidential by state or federal law or outside the applicable freedom of information statutes, will be redacted.

TRADE SECRETS, COMMERCIAL AND FINANCIAL INFORMATION

It is expressly understood that Mississippi law requires that the provisions of this contract which contain the commodities purchased or the personal or professional services provided, the price to be paid, and the term of the contract shall not be deemed to be a trade secret or confidential commercial or financial information and shall be available for examination, copying, or reproduction.

PAYMODE

Payments by state agencies using the State’s accounting system shall be made and remittance information provided electronically as directed by the State. These payments shall be deposited

into the bank account of Contractor's choice. The State may, at its sole discretion, require Contractor to electronically submit invoices and supporting documentation at any time during the term of this Agreement. Contractor understands and agrees that the State is exempt from the payment of taxes. All payments shall be in United States currency.

INDEMNIFICATION

To the fullest extent allowed by law, Contractor shall indemnify, defend, save and hold harmless, protect, and exonerate the agency, its commissioners, board members, officers, employees, agents, and representatives, and the State of Mississippi from and against all claims, demands, liabilities, suits, actions, damages, losses, and costs of every kind and nature whatsoever including, without limitation, court costs, investigative fees and expenses, and attorney's fees, arising out of or caused by Contractor and/or its partners, principals, agents, employees and/or subcontractors in the performance of or failure to perform this agreement. In the State's sole discretion, Contractor may be allowed to control the defense of any such claim, suit, etc. In the event Contractor defends said claim, suit, etc., Contractor shall use legal counsel acceptable to the State. Contractor shall be solely responsible for all costs and/or expenses associated with such defense, and the State shall be entitled to participate in said defense. Contractor shall not settle any claim, suit, etc. without the State's concurrence, which the State shall not unreasonably withhold.