DESTIN FIRE CONTROL DISTRICT

Request for Bids:
Vehicle Exhaust Removal System

August 14, 2017

Vehicle Exhaust Removal System Specifications

1.0 INTENT

It is the intent of this specification to provide for the purchase of new equipment to be used by the Destin Fire Control District (DFCD).

The Destin Fire Control District will receive bids for the purchase of equipment for a Vehicle Exhaust Removal System until September 6, 2017, at 12 noon CST. All bids received must be marked on the outside of the envelope **2017 Vehicle Exhaust Removal System** and meet the specifications as described herein.

The Destin Fire Control District has evaluated different styles of vehicle exhaust removal systems and has determined that this published specification is best suited for the DFCDs needs in terms of quality and features. This specification shall not be interpreted as restrictive but rather as a measure of quality and performance against which all other systems will be compared.

In comparing bids, comparison will not be confined to price only. The successful proposer will be one whose product is judged as best serving the interest of the DFCD when price, product, quality and delivery are considered. The DFCD also reserves the right to reject any or all proposals or any part thereof, and to waive any minor technicalities.

The system shall be a vehicle exhaust removal system. The required vehicle exhaust removal system, as listed herein, shall be a single "free standing" complete unit. The system shall be factory assembled and tested to assure quality and reliability. Equipment, ancillary components, installation requirements, testing, and certifications required at the installation site shall be stated within this specification. The system and components identified herein shall be complete and integral part of the package.

The system shall be installed, piped, and electrically wired by the successful bidder at the following location:

Destin Fire Control District
848 Airport Road
Destin, Florida 32541

Questions regarding this RFP can be directed to the following individuals:

Battalion Chief Taylor
Battalion Chief Bronson Coleman
Battalion Chief Mark Hutchinson
Phone (850) 837-8413

2.0 EQUIVALENT PRODUCT

Bids will be accepted for consideration on any make or model that is equal or superior to the equipment specified. Decisions of equivalency will be at the sole interpretation of the DFCD. A blanket statement that equipment proposed will meet all requirements will not be sufficient to establish equivalence. An original manufacturer's brochure of the proposed product is to be submitted with proposal.

3.0 INTERPRETATIONS

In order to be fair to all proposers, no oral interpretations will be given to any proposer, as to the meaning of the specification documents or any part thereof. Every request for such a consideration shall be made in writing. Based on such inquiry, the DFCD may choose to issue an Addendum in accordance with local state laws.

4.0 GENERAL

The specification herein states the minimum requirements of the DFCD. All proposals must be regular in every respect. Unauthorized conditions, limitation, or provisions shall be cause for rejection. The DFCD will consider as irregular or non-responsive any and all proposals that are not prepared and submitted in accordance with the proposal document and specification, or any proposal lacking sufficient technical literature to enable the DFCD to make a reasonable determination of compliance to the specification. It shall be the proposer's responsibility to carefully examine each item of the specification. Failure to offer a completed proposal or failure to respond to each section of the technical specification will cause the proposal to be rejected without review as non-responsive. All variances, exceptions and/or deviations shall be fully described in the exceptions and deviation section of the proposal. Deceit in responding to the specification will be cause for rejection.

5.0 SPECIFICATIONS

1. **Vehicle Exhaust Removal System to include**
    a. Magnetic grabber 4"- lower 4" HT hose assembly STR Qty: 2
    b. STRA MG Upper hose pack 20' x 4" Qty: 2
    c. Straight rail system STRA 60 Qty: 2
    d. End stop w/hydraulic brake Qty: 2
    e. 24" square leg extrusion Qty: 4
    f. Side bracket kit medium 30" Qty: 6
    g. TEV 559-536 fan 5HP 3450 rpm 208-230.460V 3PH 60 hz TEFC motor grey Qty: 1
    h. Rectangular to round 12" dia male fitting transition for TEV 5 fan series Qty: 1
    i. Master fan controller 120 vac 1ph Qty: 1
    j. EMAIL Dialer Qty: 1
    k. Vehicle transmitter kit Qty: 2
    l. Fire alarm relay Qty: 1
    m. Exhaust fan relay switch for starting exhaust fans Qty: 1
    n. Fan contractor overload disconnect 5hp 3ph 460V-480V Qty: 1
    o. E3Point toxic gas monitor base unit Qty: 1
    p. E3Point sensor cartridge for carbon monoxide Qty: 1
    q. E3Point remote sensor for nitrogen dioxide Qty: 1
    r. Tail pipe modification Qty: 2
    s. All necessary mechanical installation and core drilling
    t. All necessary electrical connection
    u. All necessary ductwork and hardware
    v. All inbound freight

6.0 SCOPE OF SERVICES

1. The Contractor shall provide all labor, materials, and equipment necessary, to put in working operation a complete turnkey system to remove both diesel and automotive exhaust gases, and particulate of operating vehicles within the confines of specified Fire Stations. All necessary controls, motor, fittings, ductwork, blower, electrical disconnect, all permitting, architectural, engineering, labor and all other equipment and materials specified shall be part of the contractors work.

2. Price bid shall also include all debris removal from the jobsite in accordance with local regulations, to include any disposal fees that may be applicable.

3. All items of equipment and materials described in these specifications are to be furnished installed and placed into proper operating condition in accordance with good practice and manufacturer's written or published instructions.

4. Contractor shall install a complete turnkey automatic disconnect vehicle exhaust capture system, that addresses the problem of diesel fumes in the station house that will not interfere with the normal day-to-day operations.

5. The exhaust removal system must provide a complete evacuation of all diesel fumes at the source from start up to exit of the apparatus from the Fire Station.

6. The system must not affect personnel boarding the apparatus. The hose assembly shall not come into contact with the vehicle other than one connection point to the vehicles tailpipe. The hose assembly shall not touch or drag on the bay floor during system operation or after system releases from the tailpipe.

7. The exhaust system shall not block doorways, exits, and aisles in the apparatus bay, which could endanger the welfare of personnel or visitors.

8. Due to the harmful effects of diesel exhaust, the system must be designed and capable of capturing the exhaust gas and particulate even in the event of a complete power failure. The system shall not detach itself from the apparatus for any reason during a power failure other than normal exiting of the apparatus bay. System shall discharge exhaust outside the station even in the event of a power failure.

9. The bid shall provide a "ready to run" fully installed exhaust system. The bidder awarded the contract will be required to provide product manuals within five (5) business days of notification, and CAD Drawings within ten (10) business days of notice of intent to award.

10. **Standard Products:** Equipment and materials provided for the system installation(s) shall be a standard product of manufacturer's currently engaged in the manufacturing of automatic vehicle exhaust capture systems. This requirement calls for a packaged exhaust system to be provided. All items shall be the product of the 15 years of service in the fire service.

11. **Product Delivery, Storage, and Handling:** The bidder shall be solely responsible for the delivery, storage, and handling of all products. Any equipment placed in storage shall be protected from weather, humidity, temperature variations, dirt, dust, or other contaminants.

12. **Bidder Qualifications:** Bids will only be accepted from companies that have 15 years established reputation in the field of installing fire department type Vehicle Exhaust Removal Systems. The installing contractor must be established in the business of hose based vehicle exhaust removal systems for a minimum of no less than 15 years.

The Bidder will also supply the last 15 fire department installs completed to include phone and contact name. DFCD reserves the right to reject any bid where the available proof or information does not satisfy DFCD of the bidder's qualification or ability to provide the materials and service.

To protect the DFCD from potential wage discrimination suits, any Bidder's having claims filed against them at any time in the State or any other state for not complying with prevailing wage or contractor registration criteria shall not be allowed to bid. **No Exceptions.**

The bidder awarded the contract shall schedule a pre-construction meeting with DFCD to discuss the installation of the ventilation equipment.

7.0 VEHICLE EXHAUST REMOVAL SYSTEM EQUIPMENT:

Please check "Comply" or "Exception" for all items below. For items checked "Exception", please define the exception in detail on a separate page. Where the system proposed deviates from the RFP specifications, clearly indicate the nature of the deviation. DFCD intends to award the bid based on a system that meets the performance specifications, however, the DFCD reserves the right to waive minor deviations from the specifications which in the DFCD's sole and absolute judgment does not materially affect the system's performance or maintenance.

1. **Scope of System Operation:**
   The vehicle exhaust removal system shall capture the exhaust emissions directly at the tailpipe of the vehicle and exhaust those emissions to a specified area safely outside the building. The operating controller shall be designed to complete this cycle. A magnetic collection nozzle shall be connected only to the motor vehicle's exhaust tailpipe, when the vehicle is started by the driver, the exhaust fan will automatically energize and exhaust the toxic gases directly to the outside of the building. This automatic feature shall activate when the vehicles ignition is turned on. Each vehicle shall have a transmitter in it which will activate the Source Capture Exhaust System upon starting of the vehicle. The automatic controller shall use an adjustable timer to keep the contactors energized for as long as the vehicle runs in the station. The magnetic connection device shall stay connected to the vehicle tailpipe as it travels to the exit door by means of a pre-engineered Sliding Balancer Track system (for single vehicle back-in applications), and a Suction Rail system (for the single vehicle drive-thru or two Vehicle in tandem applications), the Suction Rail shall be provided with an automatic crab & hose return system automatically returning to the rear of a drive through bay upon release of the nozzle from the vehicle's exhaust pipe at the front of the bay so that personal can connect the nozzle at re-entry to the station. Crab return system must accommodate more than one vehicle in the same bay. This is considered a health & safety issue. The systems shall be securely attached to the building structure and supports a flexible hose assembly that moves with vehicle inside the station. As the vehicle nears the exit door, the magnetic nozzle connection located at the tailpipe shall release smoothly from the tailpipe. After the system releases the vehicle tailpipe at the door, it shall retract passively and smoothly into a convenient storage position. When the vehicle returns to the station, the controller will sense the return of the Vehicles and start the exhaust Fan's and SCES no less than 100 feet from entry doors. This will make sure that the SCES is extracting air at the exhaust nozzle when personal is making the hook up. The personnel during hook up for a Balancer Track system will manually pull the flexible hose assembly to the entrance door, for Suction Rail with automatic crab & hoses return personnel not required to retrieve flexible hose assembly. The personnel operating the system without having to bend down and enter their breathing zone into the exhaust gas tailpipe zone shall attach the magnetic connection device without any force required to make the connection. The vehicle then proceeds to its designated parking position. Bending over or requiring force for connecting the nozzle to tailpipe is not acceptable due to increase of personnel's exposure time to toxic diesel exhaust fumes. At all times the personnel operating the system making the connection must have his or her breathing zone no

closer than 3 feet or 1 meter from the tailpipe discharge and the exhaust air must be extracting at the nozzle. This requirement is based on new data from findings that Diesel Exhaust is a known Cancer agent.

_____Comply _____Exception

2. American Cancer Society: (http://www.cancer.org/cancer/news/world-health-organization-says-diesel-exhaust-causes-cancer)

   _____Comply _____Exception

3. World Health Organization: http://monographs.iarc.fr/ENG/Monographs/vol105/index.php

   _____Comply _____Exception

4. US OSHA: (http://www.osha.gov/SLTC/dieselexhaust/chemical.html)

   _____Comply _____Exception

5. FEMA /AFG Standard: An SCES is a system where exhaust gases from a vehicle are captured directly, via a conduit that attaches to/over the end of the vehicle's exhaust system at the tailpipe. The captured exhaust gases are expelled through the attached conduit via mechanical/pneumatic means to the exterior of the building.

   _____Comply _____Exception

6. The vehicle exhaust removal system shall be in compliance with the following State, National, International Building Codes and Standards:

   a. ANSI – American National Standards Institute http://ansi.org/

   b. ASHRAE - American Society of Heating, Refrigeration and Air-Conditioning Engineers https://ashrae.iwrapper.com/ViewOnline/Standard_62.1-2013
      - Standard 62.1 - Ventilation for Acceptable Indoor Air Quality

   c. NEMA – National Electrical Manufacturers Association http://www.nema.org/pages/default.aspx

   d. NFPA - National Fire Protection Association http://www.nfpa.org/codes-and-standards/document-information-pages
      - Standard 70-11 NEC National Electrical Code
      - Standard 72-10 National Fire Alarm Code
      - Standard 91-10 Exhaust Systems for Air Conveying of Vapors, Gases, and Noncombustible Particulate Solids.

   e. SMACNA - Sheet Metal & Air Conditioning Contractors National Assoc., Inc. https://www.smacna.org/technical/
      - SMACNA/ANSI—2005 HVAC Duct Construction Standards – Metal and Flexible (2005)

   f. The Florida Administrative Code https://www.flrules.org/gateway/RuleNo.asp?id=69A-62.024
      - 69 Department of Financial Services
      - 69A-62 FIREFIGHTER EMPLOYMENT STANDARDS

- 69A-62.024 Standards for Construction, Repair, and Maintenance of Firefighter Employee Places of Employment and the Inspection, Testing and Maintenance of Fire Apparatus

g. The Florida Building Code https://www.floridabuilding.org/bc/bc_default.aspx

- Building Chapter-9 Fire Protection Systems

908 Emergency Alarm Systems

908.3 Highly toxic and toxic materials.

A gas detection system shall be provided to detect the presence of highly toxic or toxic gas at or below the permissible exposure limit (PEL) or ceiling limit of the gas for which detection is provided. The system shall be capable of monitoring the discharge from the treatment system at or below one-half the immediately dangerous to life and health (IDLH) limit.

908.3.1 Alarms.

The gas detection system shall initiate a local alarm and transmit a signal to a constantly attended control station when a short-term hazard condition is detected. The alarm shall be both visible and audible and shall provide warning both inside and outside the area where gas is detected. The audible alarm shall be distinct from all other alarms

908.7 Carbon monoxide protection.

Every separate building or an addition to an existing building for which a permit for new construction is issued and having a fossil-fuel burning heater or appliance, a fireplace, an attached garage, or other feature, fixture, or element that emits carbon monoxide as a byproduct of combustion shall have an operational carbon monoxide alarm installed within 10 feet of each room used for sleeping purposes in the new building or addition, or at such other locations as required by this code.

908.7.1 Carbon monoxide alarm.

The requirements of Section 908.7 shall be satisfied by providing for one of the following alarm installations:

1. A hard-wired carbon monoxide alarm.
2. A battery-powered carbon monoxide alarm.
3. A hard-wired combination carbon monoxide and smoke alarm.
4. A battery-powered combination carbon monoxide and smoke alarm.

908.7.2 Combination alarms.

Combination smoke/carbon monoxide alarms shall be listed and labeled by a nationally recognized testing laboratory.

- Mechanical Chapter-4 Ventilation

401.2 Ventilation required.

Every occupied space shall be ventilated by natural means in accordance with Section 402 or by mechanical means in accordance with Section 403. Where the air infiltration rate in a dwelling unit is less than 5 air changes per hour when tested with a blower door at a pressure of 0.2-inch water column (50 Pa) in accordance with Section 402.4.1.2 of the Florida Building Code, Energy Conservation, the dwelling unit shall be ventilated by mechanical means in accordance with Section 403.

401.4 Intake opening location.

401.6 Contaminant sources.

Stationary local sources producing airborne particulates, heat, odors, fumes, spray, vapors, smoke or gases in such quantities as to be irritating or injurious to health shall be provided with an **exhaust** system in accordance with Chapter 5 or a means of collection and removal of the contaminants. Such exhaust shall discharge directly to an approved location at the exterior of the building.

403.0 Mechanical Ventilation

403.1 Ventilation system.

Mechanical ventilation shall be provided by a method of supply air and return or **exhaust** air. The amount of supply air shall be approximately equal to the amount of return and exhaust air. The system shall not be prohibited from producing negative or positive pressure. The system to convey ventilation air shall be designed and installed in accordance with Chapter 6.

403.2 Outdoor air required.

The minimum outdoor airflow rate shall be determined in accordance with Section 403.3. Ventilation supply systems shall be designed to deliver the required rate of outdoor airflow to the breathing zone within each occupiable space.

403.3 Outdoor airflow rate.

Table 403.3 Minimum Ventilation Rates

404 Enclosed Parking Garages

404.1 Enclosed parking garages.

Mechanical ventilation systems for enclosed parking garages shall be permitted to operate intermittently in accordance with Item 1, Item 2 or both.

- The system shall be arranged to operate automatically upon detection of vehicle operation or the presence of occupants by approved automatic detection devices.
- The system shall be arranged to operate automatically by means of carbon monoxide detectors applied in conjunction with nitrogen dioxide detectors. Such detectors shall be installed in accordance with their manufacturers' recommendations.

405 Systems Control

405.1 General.

Mechanical ventilation systems shall be provided with manual or automatic controls that will operate such systems whenever the spaces are occupied. Air-conditioning systems that supply required ventilation air shall be provided with controls designed to automatically maintain the required outdoor air supply rate during occupancy.

- Mechanical Chapter-5 Exhaust Systems

501.3 Exhaust discharge.

The air removed by every mechanical exhaust system shall be discharged outdoors at a point where it will not cause a nuisance and not less than the distances specified in Section 501.3.1. The air shall be discharged to a location from which it cannot again be readily drawn in by a ventilating system. Air shall not be exhausted into an attic or crawl space.

502.14 Motor vehicle operation.

In areas where motor vehicles operate, mechanical ventilation shall be provided in accordance with Section 403. Additionally, areas in which stationary motor vehicles are operated shall be provided with a ***source capture system*** that connects directly to the motor vehicle exhaust systems.

516 Carbon Monoxide Control Systems

516.1 Carbon monoxide control systems.

See Section 908.7 of the Florida Building Code, Building.

- Mechanical Chapter-6 Duct Systems

606 Smoke Detection Systems Control

606.2.2 Common supply and return air systems.

Where multiple air-handling systems share common supply or return air ducts or plenums with a combined design capacity greater than 2,000 cfm (0.9 m3/s), the return air system shall be provided with smoke detectors in accordance with Section 606.2.1.

606.3 Installation.

Smoke detectors required by this section shall be installed in accordance with NFPA 72. The required smoke detectors shall be installed to monitor the entire airflow conveyed by the system including return air and **exhaust** or relief air. Access shall be provided to smoke detectors for inspection and maintenance.

606.4 Controls operation.

Upon activation, the smoke detectors shall shut down all operational capabilities of the air distribution system in accordance with the listing and labeling of appliances used in the system. Air distribution systems that are part of a smoke control system shall switch to the smoke control mode upon activation of a detector.

606.4.1 Supervision.

The duct smoke detectors shall be connected to a fire alarm system where a fire alarm system is required by the Florida Fire Prevention Code. The actuation of a duct smoke detector shall activate a visible and audible supervisory signal at a constantly attended location.

h. The International Building Code (http://www.iccsafe.org/codes-tech-support/codes/2015-i-codes/ibc/)

i. UL Underwriters Laboratories, Inc. http://ul.com/

_____Comply _____Exception

7. **Sliding Track:** The sliding track shall be a one-piece continuous extruded aluminum track with a minimum length of 19 long. The suction rail shall be installed is all areas where one vehicle sit in the Bay or a drive–thru bay is less than 35 feet in length. The construction profile shall be of a aluminum alloy Box-lock type profile. The trolley channel shall allow the trolley/balancer/ hose assembly to glide to the door threshold in a safe and effective manner. The Box-lock channel shall allow the whole track to remain rigid as it hangs from factory supplied leg supports and also shall provide an area to attach bolts. The track system shall be equipped with end stops that limit the

travel of the flex hose as the vehicle exits the building. The end stop shall be fabricated in a U shape form with a rubber end stop on the impact end.

_____Comply _____Exception

8. **Suction Rail:** The suction rail shall be a one–piece extruded aluminum profile with a minimum length of 19' long. The suction rail shall be installed in all areas where two vehicles sit in tandem or a drive–thru bay is longer than 30 feet in length. The suction rail shall have rubber sealing lips along the bottom side of rail that will form around the hose trolley as it moves though the fire station. The suction rail shall be no less the 6" in diameter and have shock adsorbing end shocks to reduce end of rail impact of trolley assembly.

   _____Comply _____Exception

9. **Automatic Crab & Hose Return System:** The Suction Rail shall be provided with an automatic crab & hose return system automatically returning to the rear of a drive through bay upon release of the nozzle from the vehicle's exhaust pipe at the front of the bay so that personnel can connect the nozzle at re-entry to the station. Crab return system must accommodate more than one vehicle in the same bay and capable of returning two sets of crabs and hoses per rail.

   _____Comply _____Exception

10. **Support Legs for the Track and Rail:** Support leg and mounting feet shall be manufactured and provided by the supplier of primary exhaust removal system (Equipment Manufacturer). This is to ensure that the unit is installed as a complete system including the mounting hardware. The support leg material shall be aluminum. A minimum of one support with appropriate bracing shall be provided for every 10 linear feet of track or rail profile. The support legs shall consist of a square tubular profile of 2" x 2" x 1/8" wall. The vertical adjustable mounting foot shall be capable of attaching the leg assembly to a ceiling. The horizontal adjustable mounting foot shall be capable of attaching the leg assembly to a wall. The support leg shall be equipped with round tubular steel knee brace with pressed ends in standard lengths of 20", 30", 48" and 72" inches. The angle shall be completely adjustable to the leg support and mounted perpendicular and parallel to direction of the track. The typical support angle shall be 45 degrees from the centerline of the factory provided support leg.

    _____Comply _____Exception

11. **Riser Clamp Assembly:** The riser clamp shall be fabricated as a one piece welded steel assembly and manufactured to create the transfer of the hard duct pipe joined at the top and flexible duct connection at the bottom. The Riser shall be plated to avoid corrosion from wet or humid areas. A slider bar and associated hardware shall be provided with riser clamp assembly. Sizes of the riser clamp will range from 4" - 5" diameter to match the output velocity of the vehicles that will park in that station.

    _____Comply _____Exception

12. **Track Trolley *I* Balancer Assembly:** The trolley assembly shall be manufactured as a two-piece galvanized steel assembly including bumper stops at each end. Fixed to the side of the trolley are solid steel pins, which shall be for load carrying bearings that are sealed and permanently lubricated. The load carrying bearings shall travel internally in track trolley channel. Two

additional permanently lubricated trolley wheels shall be provided on bottom side of the track to reduce wobble of trolley as it conveys the hose assembly to the door threshold. A release plate shall be attached to the chassis of the trolley to smoothly energize the uncoupling release valve when the trolley-balancer assembly approaches the door threshold. The system balancer assembly shall be a self-adjusting weight spring tension balancer. The balancer shall have a minimum diameter stainless steel cable of .080 and a safety link connection. The system supplier shall manufacture the balancer and trolley for the sole purpose of conveying the flexible hose to the door threshold for automatic release of the system.

_____Comply _____Exception

13. **Upper Flexible Hose:** Hose shall be flexible exhaust hose manufactured for the sole purpose of venting high temperature exhaust gases, which are produced by internal combustion engines. The flexible hose shall be designed strictly for the harsh environment of rapid response and auto-release of a vehicle exhaust tailpipe. Hose shall be 4" or 5"in diameter with varying lengths depending on the system length required ranging from 16-30 feet. Hose material shall be high temperature synthetic impregnated into a high temperature laminated fabric and be 2.5 ply laminations or more thick. This construction of hose must be capable of operating at continuous temperatures of 600 degrees F and intermittent temperatures of 850 degrees F such as are experienced when pump checks are performed inside the station. Wire Helix shall be bound and run the full length of hose to provide support to the hose system and protected in laminations of hose winding. This shall be accomplished in a fashion, which eliminates any possibility of personnel coming in contact with an exposed hot metal helix. The hose shall further protect the internal wire helix from heat buildup and in turn add increased visibility to personnel. The bend radius of the high temperature hose shall be no less than 1.5 times the diameter of hose to ensure that hot gases are not restricted as they pass through the system. (Sample Required)

    _____Comply _____Exception

14. **Lower Hose Assembly:** Shall be a rigid 4" or 5" diameter by 2-foot long section of hose identical in appearance to the upper hose assembly. Lower hose shall support the magnetic connection nozzle and reducing elbow in a rigid fashion to allow for the operator to place hose collection nozzle onto the tailpipe without bending over. Lower hose is the only section of hose, which shall disconnect from the upper hose assembly and act as a safety disconnect in the unlikely event the nozzle gets entangled. Hose material shall be high temperature synthetic impregnated into a high temperature laminated fabric and be 3 ply laminations or more thick. This construction of hose must be capable of operating at continuous temperatures of 700 degrees F and intermittent temperatures of 850 degrees F such as are experienced when vehicle checks are performed inside the station. (Sample Required)

    _____Comply _____Exception

15. **Metal Hose Saddle Assembly:** Shall be a rigid exhaust type elbow with a 1.5 diameter radius bent, which has a welded attachment eye to allow for the lifting balance to attach the elbow to the balance and trolley assembly. Metal saddle elbow shall be made of 14 gauge plated steel.

    _____Comply _____Exception

16. **Safety Disconnect Coupling:** A three part segmented coupling to protect the vehicle and system. This coupling enables the lower two foot hose assembly to physically separate from the upper hose assembly thus reducing the possible chance of damage to system in the event the exhaust connection nozzle assembly may become entangled in the undercarriage of the vehicle. The release

tension of this device shall be preset at 130 Lb. and adjustable from 40 Lb. to 206 Lb. of separating force to accommodate varying exit speeds of vehicles. This coupling shall be made of metal parts that are in contact with exhaust gases and reusable. The metal coupling shall be designed to allow the lower hose to swivel from the upper hose up to 360 degrees. This Disconnect is considered a safety requirement and any system bid must incorporate a safety disconnect. (Sample Required) **This is a mandatory requirement.**

_____Comply _____Exception

17. **Magnetic Collection Nozzle Assembly:** The nozzle shall provide a substantially air tight seal around exhaust tail pipe adapter when connected thus allowing for as close to 100% source capture. The Magnetic Nozzle shall be engineered and designed with magnets that are strategically positioned on the face of the collection nozzle and must be out of the Hi Heat Airstream to protect them from soot buildup, exhaust corrosion and hi temperatures that would affect their holding power of the magnets. The magnets shall be adjustable for a range of holding powers in the field after installation and fit all vehicles with tailpipe sizes from 2"-6" in diameter. The hose side nozzle shall have a conical taper to center the nozzle onto the tailpipe adapter. The collection nozzle must attach to the tailpipe adapter by no greater forward/push force more the 2 foot pounds and release at a pull force no greater the 10 foot pound. The tailpipe adapter shall be a reverse conical taper for quick and proper attachment by the firefighter in its connection. The design must be snag proof so that the collection nozzle will not get lock on the tailpipe and not release from the fire apparatus. The magnets and conical tailpipe plate shall guarantee proper alignment by untrained personnel and limit the chance of nozzle being locked onto the tailpipe that could cause a life safety condition or collateral damage to system, vehicle or personnel. The collection nozzle shall also incorporate a protective rubber safety cover to avoid damage to vehicle and surroundings. The reducing elbow that connects to the connection nozzle shall be fabricated using continuous leak proof welded stainless steel construction. The reducer shall incorporate a primary expanded metal debris screen, which is permanently affixed to the inside opening of exhaust nozzle and prevents a tailpipe that is not fitted with a snag proof tailpipe adapter from allowing to connect to the system. (Sample Required)

_____Comply _____Exception

18. **Vehicle Tailpipe Modification:** The bidder shall supply a drawing for the precise modification procedure for the vehicles to attach to the exhaust removal system. The installing contractor shall be responsible for all undercarriage or vertical tailpipe modifications and be EVT certified. All vehicles that are in the station must be able to connect to the exhaust system regardless if they are top or bottom exhaust discharge with the track mounted to the passenger side of vehicle. If vehicles are top exhaust, it must be fitted with an Exhaust Switch that will automatically switch the exhaust flow from top to bottom or from drive side to passenger side of vehicle. The exhaust must go back to the original exhaust side after vehicle leaves station. The modification shall vent the exhaust gases at a 90-degree angle on the passenger side of the vehicle. Tailpipe modifications must be constructed in a manner that prevents exhaust blowback into the station after the auto release system disengages from the tailpipe. A flange shall be provided and installed by the bidder as a precisely located stopping point for the collection nozzle. The manufacturer's supplied adapter shall securely attach to the vehicle tailpipe. The exhaust system tailpipe or tailpipe adapter shall not be exposed or extend past the body of the vehicle. This is considered a safety requirement and any system bid must comply. **See Appendix A for complete list of vehicle modifications.**

_____Comply _____Exception

19. **Central Ventilation Controller- CVC:** The controller shall be built and supplied by a UL recognized and listed exhaust system manufacturer. Controller shall carry the UL listing label as an "Enclosed Industrial Control Panel". Individual components listed by UL shall not satisfy the above requirement. Manufacturer must undergo monthly inspections by UL to verify all requirements and standards are met as outlined by UL. The controller shall be delivered as a **CVC** control card and shall be hard coded and not a programed PLC operating system controller. The controller must have a UPC that is part of the main control box and will back up power to the CVC card and email alarm system. Electrical Control System furnished under this specification shall be in compliance with 2015 Building Code-Mechanical Chapter 4 Ventilation. (Sample Required)

    _____Comply _____Exception

20. **Electrical Controllers:** The purpose of the Central Ventilation controller is to control up to three different sets of blowers for the purpose of maintaining the highest air quality standards in the firehouses. The controller shall also monitor external gas sensors CO/NO2 and will alarm should a high threshold level of gasses be detected. Gas monitoring protection equipment furnished under this specification shall be in compliance with 2013 Building Code-Building Electrical controller and manufacturer shall be recognized by UL. Controller shall be manufactured in accordance with Underwriters Laboratories standard UL-508 for "Enclosed Industrial Control Panels". The electrical controller shall include a Class 1 limited energy control circuit. Enclosures shall be NEMA 4 rated and UL listed as Type 12. The electrical control components shall be provided and mounted in an electrical enclosure to restrict access (Locked) to internal components of the controller by authorized personnel only.

    _____Comply _____Exception

21. **Components:** The Central unit shall consist of a key-lockable NEMA4X fiberglass control enclosure with lockout and Tag-out service disconnect switch as part of the Controller. On the outside of the enclosure shall be a self-adhesive membrane overlay with all LED indicator buttons, a stack light/alarm with yellow and red strobe indicators and a 94db alarm horn. The inside of the Control box shall house a 24VAC control transformer, microprocessor based circuit board, receiver, a backup battery and miscellaneous fuses, terminals, relays, etc.

    _____Comply _____Exception

22. **Source Capture Fan Control (EF-1):**
    The purpose of EF-1 is to ventilate vehicle exhaust gasses to atmosphere, drawn directly from the vehicle exhaust pipe, via a direct source capture exhaust hose. Each vehicle shall have a transmitter in it which will activate when the vehicle is started. Upon sensing the vehicle being started, this blower will activate. The blower will operate continuously while the vehicle is running and for an adjustable number of minutes after the vehicle is turned off or leaves the vicinity of the control box (500' radius). The adjustment will be via a potentiometer on the circuit board and shall be 1 to 5 minutes. There shall also be an elapsed time meter, located on the circuit board, which will log the runtime (in hours) of the EF-1 blower unit. This meter shall be 4 digits (up to 9999 hours) and resettable via a pushbutton located next to the meter/display.

    _____Comply _____Exception

    a. A 4 Channel receiver located inside the control enclosure shall be powered by 24VAC and have a pickup range of no less than 500 ft. The receiver shall have the ability to

detect unlimited signals for vehicle transmitters. Vehicle transmitters shall be powered by 12 volt and plug into accessory lighter type adapter for power. Wiring into vehicles main harness or switching is not allowed. Vehicle transmitter shall have a momentary stop button that disarms transmitter when outdoor service checks are being performed. Transmitters shall be programed to one channel to allow all vehicles to run system at any of the stations.

_____Comply _____Exception

b. There shall be a set of "Remote Start" terminal blocks on the circuit board which allows EF-1 to be started by a remote dry contact from any outside source. This functionality shall only be active while EF-1 in is in AUTO mode and will start when the remote signal is received and will stop immediately upon losing this signal. There shall also be an LED light on the circuit board indicating when the blower is running.

_____Comply _____Exception

c. There shall be one temperature sensor located inside the source capture work system, which will be hardwired back to the control box. The intent of this sensor is to monitor the temperature of the exhaust gasses passing through the hose/ductwork. The maximum gas temperature will be recorded on a meter located on the circuit board and is resettable via a small pushbutton located next to the display.

_____Comply _____Exception

d. Operators on the control for EF-1 shall include a button which toggles through OFF/AUTO/ON and an indicator which indicates the blower is running. The selector button/light shall be LED type for low energy consumption and longer service.

_____Comply _____Exception

23. **General ventilation Fan Control (EF-2):**
A second "through the wall" exhaust fan shall exhaust air from within the bay area of the facility to the outside atmosphere. The system must be tied to the station exhaust fan or one added to meet mechanical code - 403.3 and 404.1 for garage exhaust and supply a minimum of 1.5 CFM per Square foot (length x width) of garage area. The purpose of this fan/blower is threefold.

_____Comply _____Exception

a. First it will run whenever a signal from a vehicle transmitter, located in any vehicle, is started. The adjustable time-out period, however, will be independent of EF-1 and EF-3 and will be via potentiometer on the circuit board. The range of this time-out is 1 to 30 minutes. The setting shall be no less than 3 air changes of total space (cubic feet - Lx W x H).

_____Comply _____Exception

b. Second this fan/blower shall also be started by a dry contact input which will be provided by a temperature thermostat. The intent is if it gets too hot in the building, the thermostat will activate EF-2 to draw the hot/humid air out of the building to meet Code and reduce mold. This fan/blower will stop immediately upon seeing the signal from the thermostat open.

_____Comply _____Exception

c. Third function is to draw heat and exhaust gasses out of the building, as detected by CO/NO2 sensors (see below). When a "low level" (25ppm) or "danger level" (200ppm) of exhaust gasses are detected, this fan/blower will activate and continue to run for an adjustable number of minutes after the high gases signal is removed. This range shall be the same 1 to 30 minutes described above.

_____Comply _____Exception

d. There shall also be an elapsed time meter, located on the circuit board, which will log the runtime (in hours) of the EF-2 blower unit only. This meter will be 4 digits (up to 9999 hours) and resettable via a pushbutton located next to the meter/display.

_____Comply _____Exception

e. There will be a set of "Remote Start" terminal blocks on the circuit board which allows EF-2 to be started by a remote dry contact from any outside source. This functionality will only be active while EF-2 in is in AUTO mode and will start when the remote signal is received and will stop immediately upon losing this signal.

_____Comply _____Exception

f. There shall also be an LED indicator on the circuit board to signal when the blower is running. Operators on the control for EF-2 shall include a button which toggles through /AUTO/Manual and an indicator which indicates the blower is running. The selector button/light shall be LED type for low energy consumption and longer service.

_____Comply _____Exception

24. **Air Cleaning Device Fan Control (EF-3)** *for future:*
The third blower(s) will be Air Cleaning Devices or filter units, mounted in living area or bays, which will circulate and filter/condition the air within the facility. There can be as many ACD units as the desires, but all will be controlled by one signal from the circuit board.

The purpose of this unit is to filter and/or cool the air within the facility. This blower shall run whenever a signal from a vehicle transmitter, located in any vehicle, is started. The adjustable time-out period, however, shall be independent of EF-1 and EF-2 and will be yet another potentiometer on the circuit board (for a total of 3). The range of this time-out is also 1 to 30 minutes.

There shall also be an elapsed time meter, located on the circuit board, which will log the runtime (in hours) of the EF-3 filter units only. This meter will be 4 digits (up to 9999 hours) and resettable via a pushbutton located next to the meter/display.

_____Comply _____Exception

a. Control wiring for the blower(s) shall require four conductors (600v THHN) which are 24VAC "RUN" signal coming from the circuit board and two wires for a "Filter Dirty" signal going back to the circuit board. Both these signals shall be wired in parallel with like signals from filter unit to power wiring for the filter will come into the ACD Unit, through the contactor/relay and then to the blower motor. The purpose of the dirty filter signal is to illuminate an indicator light on the control panel. It will not affect the functionality of the filter unit and all pressure switches will be wired in parallel. The purpose of this indicator is to alert the operator to inspect each filter unit for a dirty filter condition.

   _____Comply _____Exception

b. There shall be a set of "Remote Start" terminal blocks on the circuit board which allows EF-3 to be started by a remote switch or dry contact from any outside source. This functionality will only be active while EF-3 in is in AUTO mode and will start when the remote signal is received and will stop immediately upon losing this signal.

   _____Comply _____Exception

c. There shall also be an LED indicator on the circuit board to signal when the blower(s) should be running. Operators on the control for EF-3 shall include a button which toggles through /AUTO/Manual and an indicator which indicates the blower is running. The selector button/light shall be LED type for low energy consumption and longer service.

   _____Comply _____Exception

d. In addition, there shall be a Filter Start button that will start the filter units and it will run for the time period set with the potentiometer. The Filter Start button will only be functional when the /AUTO/Manual button is in the AUTO mode.

   _____Comply _____Exception

25. **Gas Monitoring Carbon Monoxide (CO / NO2):**
Gas monitoring devices shall be hardwired into the circuit board for the purpose of activating only EF-2 (as described above) and to activate the yellow or red beacons and the alarm horn. The signals for the beacons and alarm horn will be a relay closure from the gas sensors, therefore a constant input, but the indicator lights and alarm horn on the stack light will flash/sound. The circuit card shall have a real time display of gas levels in garage at all times.

_____Comply _____Exception

a. Transmitter will be powered by 24 V AC/DC (E3SA). The gas transmitter will incorporate a catalytic bead sensor for combustible gases and electrochemical for toxic gases. Unit sensing cell must compensate for variations in relative humidity and temperature to maintain high levels of accuracy.

_____Comply _____Exception

b. For local activation of fans or louvers (or other equipment), two on-board DPDT relays 5 A, 30 VDC or 250 VAC (resistive load) will be activated at programmable set points (and programmable time delays). An LCD display will provide local gas concentration readings.

_____Comply _____Exception

c. Unit will be certified to ANSI/UL 61010-1 label and CAN/CSA-C22.2 No. 61010-1. Transmitter must be manufactured in an ISO 9001-2000 production environment.

_____Comply _____Exception

d. The Toxic Gas transmitter should have a plug-in capability for a gas cartridge with a smart sensor capable of self-testing.

_____Comply _____Exception

e. For local activation of audible alarms, the transmitter shall have an on-board device able to generate an audible output of 85 dBA @ 10 ft. (3m).

_____Comply _____Exception

f. The Sensors shall be set and provide the area of coverage as set forth in Table below:

Carbon Monoxide (CO)	25 ppm	200 ppm	5 ft. above finished floor	50 ft.
Nitrogen Dioxide	.72 ppm	2 ppm	12" -24" below ceiling	50 ft.

_____Comply _____Exception

26. **Operation of the beacon (Stack Light):**
A yellow strobe light shall flash if a low level (25 ppm) CO or (.72 ppm) NO2 of toxic gas is detected. A red strobe light shall flash and alarm horn will sound if a high level (200ppm) CO or (2 ppm) NO2 toxic gas is detected.

_____Comply _____Exception

27. **Power Loss Indication:**
A battery backup system shall be incorporated into the control box which shall cause an alarm horn to activate. This will happen whenever a power loss is detected. The power loss alarm shall operate for a minimum of 20 minutes after losing power.

_____Comply _____Exception

28. **Push button service call feature (PBS):**
The system controller shall have a push button service call button mounted to the control box which will allow the firefighter or staff to press the button and email/text the fire department logistics or service tech of company that a question or service is needed at the station.

_____Comply _____Exception

29. **Smoke & Fire Alarm feature:**
The system controller shall have a smoke & fire alarm function that will monitor the vehicle bays for a smoke or fire and send an alarm and email to the fire department and company that there may be a life safety event. The smoke & fire alarm must shut down the EF-2 Fans as per fire code as to not fan the fire and flame. The system must also be able to tie into a central fire panel now or in the future. This feature shall broadcast to the email alert system.

_____Comply _____Exception

30. **High hose temperature Alarm Feature:**
The control system shall have a high hose temperature alarm feature, that will read the ductwork air temperature and send an alarm if the vehicle goes over the rated hose temperature of the system. This feature shall broadcast to the email alert system.

_____Comply _____Exception

31. **Email/ Text alert notification system (ETAS):**
The Controller shall have a ETAS system built into the controller as to monitor and send email alerts on up to 6 critical functions of the system and must be able to email or text up to 8 persons of the problem of request. The ETAS shall send the following info in the call alert, name of department, address of station, phone number of station, date and time, type of alarm.

_____Comply _____Exception

The **ETAS** shall have the following alarm triggers:

- ***Push button service call alarm***
- ***Loss of electrical power alarm***
- ***Toxic Gas (CO or NO2) alarm***
- ***Smoke / Fire alarm call alarm***
- ***High hose temperature alarm***
- ***One Spare for custom alarm***

_____Comply _____Exception

32. **Auxiliary Function:** The controller shall be shipped with a key-fob transmitter with 4 function buttons. Button 1 will be used to active blowers EF-1 through EF-3. The 2-4 buttons maybe used as an auxiliary function and will activate dry contact relay's located inside the control box. These relays can be used for many auxiliary functions, such as overhead door operation or traffic light activation, for example.

    _____Comply _____Exception

33. **Motor Control Contactor:** Contactors for EF-1 thru EF3 shall be Allen Bradley Industrial Electrical Contactor 1OOC series. The contactor shall be UL-CUL listed as an approved component.

    _____Comply _____Exception

34. **Motor Control Overload Relay:** Overload relay shall be an Allen Bradley 193 ES series. Overload relay shall have an adjustable trip range to meet the proper full load amperage of the blower motor. On three phase applications the overload relay shall prevent single phasing of the blower motor. The overload relay shall be UL listed as an approved component.

    _____Comply _____Exception

35. **Control Circuit Protection:** The control transformer and control circuit card shall be protected against over current and short circuit by the use of primary and secondary fuses (NEC code ref. 430-72) to meet UL requirements. The primary shall be protected by a pair of FLO style fuses rated at 1.6 amps for voltages under 400V and a pair of .75 amp fuses for voltages over 400V. The primary fuse holder shall have a standard indicator light feature to aid in troubleshooting blown fuses. A single glass fuse rated at 3 amps at 250V shall protect the secondary side of the control circuit.

    _____Comply _____Exception

36. **Electrical Wiring:** Shall be run in wire channel to allow for easier identification of the wiring circuits and for a neat appearance. All wiring circuitry shall meet National Electric Code and UL standards for proper size, bending radiuses (NEC code ref. 300-34) and terminations.

    _____Comply _____Exception

37. **Electrical Terminal Block:** Shall be 600 V, UL rated and recognized. It shall provide individual connection points for power connections. The primary and secondary control wiring fuses shall be incorporated into the terminal block as one unit.

    _____Comply _____Exception

38. **Product Manual:** Shall be provided with each electrical control box supplied. The product manual shall include a description of components with part numbers inclusive to the controller. It shall include a wiring schematic showing all internal circuitry as well as all field installed wiring connections to the controller.

    _____Comply _____Exception

39. **Electrical Interference:** To protect the apparatus and communications, designs that allow any possibility of electrical back-feed or induced current, which may interfere with a central services communication or onboard vehicle computer, logic or navigational equipment, will not be accepted.

    _____Comply _____Exception

40. **High Voltage and Control Wiring:** The bidder shall be responsible for all high voltage and all control wiring for the vehicle exhaust system. The wiring must be done as per NFPA/NEC code and standards.

    _____Comply _____Exception

41. **Centrifugal Fan for Source capture System:** The fans shall be a direct drive, high pressure, single width, made of steel construction, and painted with epoxy powder coating. The Impeller wheel shall be of a radial or BI design for high static pressure performance. Impeller wheels shall be spark resistance aluminum (AMCA Class B) and made in a manner to prevent static electricity build up. The impeller shall be dynamically and statically balanced and of the non-overloading type to provide maximum efficiency while achieving quiet, vibration-free operation. The outlet configuration shall be top horizontal, bottom horizontal, or up-blast. The housing shall be capable of field reconfiguration in the event the mounting position needs to be changed for unforeseen reasons.

    _____Comply _____Exception

42. **Fan Motor and Bearing:** All 1-10 horsepower motors shall be totally enclosed fan cooled (TEFC) continuous duty rated. The motors shall be dual voltage where applicable. Motors comply with "Energy Policy and Conservation Act" (EPACT) as outlined by the US Dept. of Energy and LEED. The fan / motor shall be direct drive type and have ball bearing that are permanently seal and lubricated. The exhaust discharge outlet shall be in up- blast and 36" above the gutter line on building. The Discharge shall be no closer than 15' from any air intake, windows, cascade system or prevailing current that lead to adjacent building.

    _____Comply _____Exception

    a. **Teflon Shaft Seal:** The fan shaft shall be steel and rotate in a non-sparking ***TEFLON*** seal to prevent leakage and to prevent hot exhaust gases from coming into contact with the motor bearings.
    b. **Variable Speed Drive:** The motor shall be designed to run with a variable speed drive unit.

43. **Performance:** The delivered volume shall take into account all the static regain of vehicle engine exhaust (based on an airtight connection at the tailpipe), lengths of ductwork, elbows, branches, shut off, wyes, etc. which accumulate the static pressure at the field inlet. The manufacturer's provided fan shall be performance guaranteed.

_____Comply _____Exception

a. **Fan Capacity:** The Fan Capacity shall be sized as such as to deliver the required CFM at each hose drop to which the vehicle is attached.
b. The 4-inch hose system shall be designed to deliver a minimum of 500 CFM at a velocity of 4500-5800 FPM at the hose and nozzle connection.
c. The 5-inch hose system shall be designed to deliver a minimum of 600 CFM at a velocity of 4500-5800 FPM at the hose and nozzle connection.

44. **Ductwork type and materials:** Shall be SMACNA Class 3 product conveying duct system. It must meet or exceed criteria for construction and performance as outlined in Round Industrial Duct Construction Standards, SMACNA. Ductwork systems furnished under this specification shall be in compliance with 2014 Building Code-Mechanical Chapter 6 Duct Systems. Materials of construction unless otherwise specified for all ductwork and fittings shall be a minimum G-90 galvanized sheet metal for inside, in accordance with ASTM-A525 and A527. Type 304 stainless steel shall be used in accordance with ASTM A240 shall be provided when within 2 miles of the coast for exhaust stacks that are outside of station. The ductwork shall be airtight laser welded type ductwork with clamp together design using a die-formed, rolled edge in which it is joined by a single lever barrel clamp with airtight seal. The seal that join the duct fitting shall be rated to a service temp of 600 DEG-F. Spiral ductwork or low pressure HVAC ductwork will be grounds for rejection. (Sample Required)

_____Comply _____Exception

45. **Ductwork sizing and gauges:** All ductwork subject to positive or negative pressure shall be of round Duct pipe construction, with the range of available sizes not to exceed 12 inches in diameter. Duct gauge shall depend on diameter and a minimum operating pressure of 8-30 inches water gauge. Acceptable gauge and reinforcement requirements shall be in accordance to the following. Inner duct diameter 4" - 12" dia. shall be 22-gauge laser weld duct pipe.

_____Comply _____Exception

46. **Ductwork Fittings:** All exhaust fittings shall be round and have a wall thickness one gauge (one even gauge number) heavier than the lightest allowable gauge of the downstream section of duct to which they are connected. Air duct branch entrances shall be factory fabricated fittings or factory fabricated duct /tap assemblies. Fittings shall be constructed so that air streams converge at angles no greater than 30 degrees. All seams shall be continuous stitch or laser welded and if necessary internally sealed to insure air tightness. Turning elbows shall be stitch - welded and used for all diameters and pressures from 30-90 degrees. They shall be fabricated of 20 gauge galvanized steel and constructed as two-piece with continuous welded seam construction fittings. Tapered body fittings shall be used wherever particular fallout is anticipated and where airflow is introduced to the transport duct manifold.

_____Comply _____Exception

47. **Ductwork Design Velocities:** Shall be a minimum of 3000-4000 feet/minute transport velocity. Capture velocity shall be 4500-6000 FPM to extract virtually 100 % of the exhaust gases.

_____Comply _____Exception

48. **External Ductwork:** Shall be sized for the exact inlet and outlet of the exhaust fan blower. The external ductwork shall be G-90 duct pipe. An exhaust rain cap shall be supplied and manufactured in accordance with EPA standard for free draft rain cap requirements, as an integral part of this rain cap shall be a back draft damper to provide protection from rain and other inclement weather. The bidder shall also incorporate a G90 galvanized sound attenuator on each fan being installed to reduce sound output to city/county code.

_____Comply _____Exception

49. **Training:** The contractor shall provide training to department personnel in the daily use and maintenance of the vehicle exhaust removal system that has been installed and specified herein. Training shall be for all personnel involved with the operation of the exhaust removal system to include one training session per station, in addition a training video (DVD) shall be provided to each station.

_____Comply _____Exception

50. **Service/Repair Parts:** The contractor shall provide to the department a competent service plan outlining the periodic adjustments, and frequency. The bidder must be a full stocking distributor engaging in the day-to-day operations of emergency vehicle exhaust removal systems. All service parts must be stocked in the State and be available within 24 hour of request for service or repair.

_____Comply _____Exception

51. **Equipment Warranty:** The bidder shall guarantee all materials, equipment and workmanship for a minimum period of five (5) years from the date of installation. Defects shall be made good at the bidder's expense with no cost or obligation to the owner. Bidder shall not be responsible for system misuse, abuse, natural disasters, components not operated under normal industry use, has been repaired altered or modified. All repairs will be completed at the original installation site of the product; however bidder reserves the right, at his cost, to remove and return the product to the plant where the product can be inspected, repaired or replaced and then returned and reinstalled. Bidder shall be responsible for all labor costs and transportation costs, including, freight and insurance, in connection with completing a warranty work call. The warranty shall commence on the date of final completion, and shall be valid for a period of five year.

_____Comply _____Exception

Appendix A

VEHICLE EXHAUST SCHEDULE

FIRE RESCUE VEHICLE TAIL PIPE MODIFICATION LIST

VIN Number	Assets Model	Assets Model Name	Assets Location	Assets Sub Category ID
4P1BAAFXGA016497	Pumper	Engine 9	Station 9	Front line
11187	Aerial Ladder	Ladder 9	Station 9	Front line

SCHEDULE PER STATION (TOTAL 1 FIRE STATION)

Station	Address	Exhaust Type	Number of Drops
9	848 Airport Rd. Destin,FL 32541	Bay #1 (drive-thru) Bay #2 (drive-thru)	2

REFERENCE FORM
VEHICLE EXHAUST EXTRACTION SYSTEM

REFERENCES-PROJECTS
List a minimum of fifteen (15) fire stations for which you have performed the services specified in the solicitation in the spaces provided below giving the city, fire department, name, contact person, address, telephone number, and date services were performed as described.

1. _____.

2. _____.

3. _____.

4. _____.

5. _____.

6. _____.

7. _____.

8. _____.

9. _____.

10. _____.

11. _____.

12. _____.

13. _____.

14. _____.

15. _____.

Destin Fire Control District -
Expenditure Proposal Form

Vehicle Exhaust Removal System - Closing Date: September 6, 2017 12pm CST

****

NOTE TO ALL BIDDERS NO BIDS RECEIVED AFTER CLOSING WILL BE ACCEPTED.

All request for bids must be marked on the outside of the envelope **2017 Vehicle Exhaust Removal System** and received by September 6, 2017, at 12 noon CST. Any failure to mark such on the outside of the sealed envelope as set forth herein may result in the request for bid not to be considered.

In compliance with the requirement of this specification (if applicable), vendor must submit with bid two (2) sets of descriptive literature or your bid may not be considered. Further, prices shall be held fixed for one year from date of award. Quantities listed are estimates, actual orders may vary more or less than indicated.

The undersigned, as Agency, declares that he has examined the specifications for work and contractual documents relative thereto; and that he has satisfied himself relative to the work to be performed.

The Agency proposes and agrees, if this bid is accepted to contract with the Destin Fire Control District in the form of the work in full and complete accordance with the show, described, and reasonable intended requirements of the specifications and contract documents to the full and entire satisfaction of the Destin Fire Control District, with a definite understanding that no money will be allowed for extra work except as set forth in the ITB documents.

***	Equipment	Qty	Unit Price	Total
1.	Vehicle Exhaust Removal System	1		
2.	Tailpipe Modifications	2		
3.	System Warranty	1		
	SUBTOTAL		$_____.	
	TOTAL FOR ALL ITEMS		**$_____.**	

Exceptions & Deviations

Proposers shall fully describe every variance exception and/or deviation. List the item number here and fully explain any items in non-compliance with specification.

Additional sheets may be used if required.

_____

_____

_____

****

EXTENSIONS, TOTALS AND GRAND TOTAL, IF APPLICABLE, SHALL BE ENTERED IN SPACES PROVIDED. FAILURE TO COMPLY MAY RENDER YOUR BID INVALID.

DELIVERY MAY BE A FACTOR IN AWARD. PLEASE STATE DELIVERY SCHEDULE IN SPACE PROVIDED BELOW. FALILURE TO COMPLY MAY RENDER YOUR BID INVALID.

TERMS: BIDDERS ARE REQUESTED TO QUOTE NET PRICES. NET PRICES ARE LIST PRICES LESS TRADE OR OTHER DISCOUNTS OFFERED, EXCEPT CASH DISCOUNTS. IF A CASH DISCOUNT IS OFFERED, IT MUST BE CLEARLY SHOWN IN THE SPACE PROVIDED BELOW. IN ORDER FOR YOUR CASH DISCOUNT TO BE CONSIDERED IN THE BID EVALUATION PROCESS, THE DISCOUNT PERIOD SHALL BE A MINIMUM OF THRITY DAYS. ANY DISCOUNT PERIOD OFFERED OF LESS THAN THRITY DAYS WILL NOT BE CONSIDERED IN THE BID EVALUATION PROCESS. ALL DISCOUNTS OFFERED WILL BE TAKEN IF EARNED. TIME WILL BE COMPUTED FROM THE DATE OF ACCEPTANCE AT DESTINATION OR FROM DATE A CORRECT INVOICE IS RECEIVED IF THE LATTER DATE IS LATER THAN THE DATE OF ACCEPTANCE.

****

TERMS _____% ___30 Days

DELIVERY: Time Required for Delivery After Receipt of Order _____ Days

The undersigned, declares that they have read the provisions and specifications covering the request for bid of a vehicle exhaust removal system. With full knowledge and understanding of the requirements, we do hereby agree to furnish and install equipment in full accordance with the specifications attached hereto and made a part hereof.

FIRM NAME: _____

SIGNATURE: _____

TITLE: _____ DATE: _____

ADDRESS: _____

_____

PHONE NUMBER: _____