



HASTINGS
air energy control, inc.

EMERGENCY RESPONSE VEHICLE EXHAUST REMOVAL SYSTEM

BID No. 146-2016



Hastings Air Energy Control, Inc.

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County Government
Emergency Response
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System

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SERVICE PREVENTATIVE MAINTENANCE
REFERENCES LETTER OF REFERENCE
MAKING YOUR DECISION



HASTINGS
air energy control, inc.

New Berlin, WI 53151-7900
P: 800.236.8450 / 262.364.0500
F: 800.260.9199 / 262.364.0550

F: 847.362.9001
Michigan Office
P: 248.888.9911
F: 248.478.9911
Minnesota Office
P: 651.405.8500
F: 800-260-9199
Ohio Office
P: 317-417-3629
F: 800-260-9199

Allow me to introduce the representatives in your area:

- Matthew Johnson** Sales and designer of Exhaust Systems
- Mary Comer** Sales and designer of Exhaust Systems
- Daniel Bohrer** Engineer
- Tom Karth** Technical Support
- Dennis Bohrer** Project Coordinator/Service



HASTINGS
air energy control, inc.
creating a cleaner workplace

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Sales Representative

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Our Success is based on the Customers We Keep

Hastings Air-Energy Control, Inc. was established in 1969 to provide quality air cleaning solutions to the people of Wisconsin. Since that time Hastings has grown dramatically, establishing offices in Illinois, Michigan and Minnesota and becoming an industry leader with the authority and resources to sell throughout the Upper Midwest and Great Lakes Regions.

Our many years of experience and success have enabled us to secure product lines of the highest quality, while always maintaining competitive rates. This allows us to provide you with the very best air cleaning equipment and services at reasonable prices.

We carry a full line of products, parts, and accessories from **PlymoVent, Airflow Systems, Filter-1, Amtech, Dustcontrol, Air-King**, and others. And because we care about saving energy and minimizing the cost of ownership we offer our own **iVEC™ Systems** controls that deliver energy savings and enhanced efficiency.

We take great pride in the work we do and we back it with a staff of factory-trained and certified technicians who are prepared to respond to your needs at a moment's notice. We are also happy to provide service contracts to meet your specific needs.

creating a cleaner workplace



Unlike any other manufacturer or system, Plymovent will give you 10 good reasons for selecting our product. With these **GUARANTEED.**

1. **Guaranteed** consistent performance backed by a 5-year manufacturer guarantee on parts and labor.
2. **User friendly** and unique, simple design. Firefighters use it with ease.
3. **Adaptable** and can be retrofitted onto existing hose systems and fire stations. Design, deliver and follow-up **TURN-KEY SERVICES**.
4. **Responsible** for installing over 57,500 systems worldwide making PlymoVent the #1 manufacturer of vehicle removal exhaust systems to the Fire Service.
5. **Allowances** can be achieved by reduced worker compensations claims as well as reduced insurance costs.
6. **National** codes and local standards are achieved when installing the PlymoVent system.
7. **Tested** and manufactured since 1987 with original systems still in service today. The Magnetic grabber is not a prototype, it is an ingenious conical shape device incorporating mild steel and strategic magnetic fields that has been tested tens of thousands of times.
8. **Established** professional support dedicated to educating your training officers and firefighters with on-site training, SOP's and educational on-line materials.
9. **Expandable** systems eliminate loss of investment by allowing for future expansion or relocation to a new facility.
10. **Dependable** with virtually 100% capture and removal of poisonous, carcinogenic and volatile gases and particles from your fire apparatus. This allows your department to justify the purchase of this system through health and safety risk management control.



**CONTRACT DOCUMENTS
AND
SPECIFICATIONS**

**DIVISION OF FIRE AND EMERGENCY
SERVICES**

FOR

**EMERGENCY RESPONSE VEHICLE
EXHAUST REMOVAL SYSTEM**

Bid No. 146-2016

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PART 1

ADVERTISEMENT FOR BIDS

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ADVERTISEMENT FOR BIDS

1. INVITATION

Sealed proposals for the following work will be received by the Lexington-Fayette Urban County Government (LFUCG) until 2:00 p.m., local time, **November 9, 2016**, for furnishing all labor and/or materials and performing all work as set forth by this advertisement, conditions (general and special), specifications, and/or the drawings prepared by Lexington-Fayette Urban County Government, Division of **Fire and Emergency Services**. Immediately following the scheduled closing time for reception of bids, all proposals which have been submitted in accordance with the above will be publicly opened and read aloud.

2. DESCRIPTION OF WORK

Consisting of the construction and/or furnishing of items as listed in the Bid Schedule beginning on page P-6, Part III, Form of Proposal, of this document, for the **Emergency Response Vehicle Exhaust Removal System**, Lexington-Fayette County, Kentucky.

3. OBTAINING PLANS, SPECIFICATIONS, AND BID DOCUMENTS

Specifications, Plans, and Bid Documents may be examined at the following places:
<https://lexingtonky.ionwave.net>

LFUCG
Division of Central Purchasing
200 East Main Street, Third Floor, Rm 338
Lexington, Kentucky 40507
(859) 258-3320

LFUCG
Division of Fire and Emergency Services
219 East Third Street
Lexington, Kentucky

4. METHOD OF RECEIVING BIDS

Bids will be received from Prime Contracting firms for total Project. The Bidder must include a price for all bid items to be considered. Bids shall be submitted in the manner and subject to the conditions as set forth and described in the Instruction to Bidders and Special Conditions.

Sealed bids shall be clearly marked on the outside of the container as follows: Company Name and Address, Bid Invitation Number, and the Project Name. Bids are to remain sealed until official Bid closure time.

Mailed bids/proposals should be sent to the Director, Division of Central Purchasing, 200 East Main Street, Lexington, KY 40507.

5. METHOD OF AWARD

The Contract, if awarded, will be to the lowest, qualified responsible bidder for the total project whose qualifications indicate the award will be in the best interest of the OWNER and whose bid/proposal complies with all the prescribed requirements. No Notice of Award will be given until the OWNER has concluded such investigation as deemed necessary to establish the responsibility, qualifications and financial ability of Bidders to do the work in accordance with the Contract Documents to the satisfaction of the OWNER within the time prescribed. The OWNER reserves the right to reject the Bid of any Bidder who does not pass such investigation to the OWNER's satisfaction. In analyzing Bids, the OWNER may take into consideration alternate and unit prices, if requested by the Bid forms.

6. BID WITHDRAWAL

No bidder may withdraw his bid for a period of sixty (60) calendar days after the closing date for receipt of bids. Errors and omissions will not be cause for withdrawal of bid without forfeit of bid bond. Bids may be withdrawn in person prior to the closing date of receipt of bids.

7. BID SECURITY

If the bid is \$50,000 or greater, bid shall be accompanied by a certified /cashier's check or bid bond payable to the Lexington-Fayette Urban County Government in an amount not less than Five Percent (5%) of the base bid. Bid bond shall be executed by a Surety Company authorized to do business in the Commonwealth of Kentucky and countersigned by a licensed Kentucky Resident Agent, representing the Surety Company. Bid Bonds are not required for bids under \$50,000. A certified check or cashier's check is also acceptable forms of bid security.

8. SUBMISSION OF BIDS

CONTRACTORS shall submit their bids to the Lexington-Fayette Urban County Government, Division of Purchasing, Third Floor, 200 East Main Street, Lexington, Kentucky 40507. Bids shall be submitted in a sealed envelope not later than 2:00 p.m. local

time, **November 9, 2016**. Sealed proposals shall be clearly marked on the outside of the container as follows: Company Name and Address, Bid Invitation Number, and Project Name to be opened at 2:00 p.m. local time **November 9, 2016**. Bids are to remain sealed until official Bid closure time. Bids received after the scheduled closing time for receipt of bids will not be considered and will be returned unopened.

9. RIGHT TO REJECT

The Lexington-Fayette Urban County Government reserves the right to reject any and all bids and to waive all informalities and/or technicalities where the best interest of the Lexington-Fayette Urban County Government may be served.

10. NOTIFICATION TO THE LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT FOR AFFIRMATIVE ACTION PLAN AND CURRENT WORKFORCE

The successful bidder must submit with their bid the following items to the Lexington-Fayette Urban County Government:

1. Affirmative Action Plan for his/her firm.
2. Current Workforce Analysis Form.

Failure to submit these items as required herein may result in disqualification of the Bidder from the award of the contract.

All submissions should be directed to:

Lexington-Fayette Urban County Government
Division of Purchasing
200 East Main Street, 3rd Floor, Room 338
Lexington, Kentucky 40507

11. NOTICE CONCERNING MWDBE GOAL

Notice of requirement for Affirmative Action to ensure Equal Employment Opportunities and Disadvantaged Business Enterprises (DBE) Contract participation. Disadvantaged Business Enterprises (DBE) consists of Minority-Owned Business Enterprises (MBE) and Woman-Owned Business Enterprises (WBE).

The Lexington-Fayette Urban County Government has set a goal that not less than ten percent (10%) of the total value of this Contract be subcontracted to Disadvantaged Business Enterprises, which is made up of MBEs and WBEs. The goal for the utilization of Disadvantaged Business Enterprises as subcontractors is a recommended goal. Contractor(s) who fail to meet such goal will be expected to provide written explanations to the Director of the Division of Purchasing of efforts they have made to accomplish the recommended goal, and the extent to which they are successful in accomplishing the

recommended goal will be a consideration in the procurement process. Depending on the funding source, other DBE goals may apply.

For assistance in locating Disadvantaged Business Enterprises Subcontractors contact:

Sherita Miller, Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, 3rd Floor, Room 338
Lexington, Kentucky 40507
859-258-3323
smiller@lexingtonky.gov

12. PRE-BID MEETING

A non-mandatory pre-bid meeting will be held at 1:00 PM local time on October 26, 2016 at 200 E Main St, 3rd Floor Purchasing Conference Room, Lexington, KY.

END OF SECTION

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PART II

INFORMATION FOR BIDDERS

1. RECEIPT AND OPENING OF BIDS

The Lexington-Fayette Urban County Government (herein called the OWNER) invites bids from firms on the project described in the Advertisement for Bids. The OWNER will receive bids at the Division of Purchasing, at the time and in the manner set forth in the Advertisement for Bids, and the Bids will then be publicly opened and read aloud. The OWNER may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within 60 days after the actual time and date of the bid opening, but OWNER may, in its sole discretion, release any bid and return the Bid Security prior to that date.

The Lexington-Fayette Urban County Government assumes no responsibility for bids that are not addressed and delivered as indicated above. Bids that are not delivered to the Division of Central Purchasing by the stated time and date will be rejected.

2. PREPARATION OF BID

Each bid must be submitted on the prescribed Form of Proposal. All blank spaces for the bid prices must be filled in, either in ink or typewritten, for both unit prices and extensions. Totals for each bid item must be added to show the total amount of the bid. Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, their address, the name of the project, the invitation number and time and date for which the bid is submitted. Bids must be addressed to the Director of Purchasing, Lexington-Fayette Urban County Government, Third Floor, 200 East Main Street, Lexington, Kentucky 40507. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified above.

3. SUBCONTRACTS

The bidder is specifically advised that any person, firm, or other party to whom it is proposed to award a subcontract under this Contract must be acceptable to the OWNER. All proposed subcontractors must be identified on the Form of Proposal. Prior to the award of Contract, the OWNER or the OWNER'S representative will advise the CONTRACTOR of the acceptance and approval thereof or of any action necessary to be taken. Should any Subcontractor be rejected by the OWNER, the CONTRACTOR shall present a new name and/or firm to the OWNER at no change in the Contract Price.

4. QUALIFICATION OF BIDDER

The OWNER may make such investigations as the OWNER deems necessary to determine the ability of the bidder to perform the Work, and the bidder shall furnish to the OWNER all such information and data for this purpose as the OWNER may request. The OWNER reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the OWNER that such bidder is properly qualified to carry out the obligations of the Contract and to complete the Work contemplated therein. Conditional bids will not be accepted.

In evaluating Bids, OWNER shall consider the qualifications of the BIDDERS, whether or not the Bids comply with the prescribed requirements, and alternatives and unit prices, as requested. OWNER may consider maintenance requirements, performance data, and disruption or damage to private property. It is OWNER'S intent to accept alternatives, if requested by the bid forms, in the order in which they are listed in the Bid Form but OWNER may accept or decline them in any order or combination. The contract, if awarded, will be awarded to the lowest, qualified, responsible BIDDER based upon OWNER'S evaluation which indicates that the award will be in the best interest of OWNER and the general public.

In the event there is any question as to the bidder's qualifications and ability to complete the work, a final determination will be made in accordance with a fair evaluation by the Urban County Government of the above listed elements.

- A. If the OWNER requires filling out a detailed financial statement, the bidder may provide its current certified financial statement(s) for the required time interval.
- B. Corporate firms are required to be registered and in good standing with the requirements and provisions of the Office of the Secretary of State, Commonwealth of Kentucky.
- C. Good standing with Public Works Act - any CONTRACTOR and/or subcontractors in violation of any wage or work act provisions (KRS 337.510 to KRS 337.550) are prohibited by Statutory Act (KRS 337.990) from bidding on or working on any and all public works contracts, either in their name or in the name of any other company, firm or other entity in which he might be interested. No bid from a prime contractor in violation of the Act can be considered, nor will any subcontractor in violation of the Act be approved and/or accepted. The responsibility for the qualifications of the subcontractor is solely that of the prime contractor.
- D. Documents Required of CONTRACTOR - (1) A sworn statement signed by the President or owner of the Company regarding all current work in progress anywhere; (2) A document showing the percent of completion of each project and the total worth of each project; and (3) Documentation showing the percentage of the DBE employment levels on each project of the Bidder's current work force, and DBE participation levels for Subcontractors.

- E. Optional OWNER Requirements - The OWNER, at its discretion, may require the BIDDER/CONTRACTOR to provide: (1) a current detailed financial statement for a period including up to 3 prior years; (2) financial security or insurance in amounts and kinds acceptable to the OWNER to meet the financial responsibility requirements for the CONTRACTOR to indemnify the OWNER. (3) Additional information and/or DBE work force data, as well as DBE participation data.

Each bidder agrees to waive any claim it has or may have against the Owner, the Consultant, and their respective employees, arising out of or in connection with the administration, evaluation, or recommendation of any bid.

5. BID SECURITY

- A. Each bid must be accompanied by a bid bond prepared on a Form of Bid Bond and attached hereto, duly executed by the bidder as principal and having as surety thereon a surety company approved by the OWNER, in the amount of 5% of the bid. Such bid bond will be returned to the unsuccessful bidder(s) only upon written request to the Director of Central Purchasing within seven (7) days of opening of bids. Bid bond shall be made payable to the Lexington-Fayette Urban County Government. Bid security is not required for projects under \$50,000.
- B. Bonds shall be placed with an agent licensed in Kentucky with surety authorized to do business within the state. When the premium is paid for such coverage, the full commission payable shall be paid to such local agent who shall not divide such commission with any person other than a duly licensed resident local agent.

6. LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT

The successful bidder, upon his failure or refusal to execute and deliver the Contract and bonds required within ten (10) days after he has received notice of the acceptance of his bid, shall forfeit to the OWNER, as liquidated damages for such failure or refusal, the security deposited with his bid.

7. TIME OF COMPLETION AND LIQUIDATED DAMAGES

Bidder must agree to commence work on or before a date to be specified in a written "Notice to Proceed" from the OWNER and to fully complete the Project within the time as specified in the Contract. See Part VI, Section 2 for specifics on timeline and Contractor responsibilities.

8. EXAMINATION OF CONTRACT DOCUMENTS AND SITE

- A. It is the responsibility of each Bidder before submitting a Bid, to (a) examine the Contract Documents thoroughly, (b) visit the site(s) to become familiar with local conditions that may affect cost, progress, performance or furnishing of the work, (c) consider Federal, State and Local laws and regulations that may affect cost, progress, performance or furnishing of the work, (d) study and carefully correlate Bidder's observations with the Contract Documents, and (e) notify Consultant of all conflicts, errors or discrepancies in the Contract Documents.

- B. Bidders should examine the requirements of section 4 of the General Conditions for information pertaining to subsurface conditions, underground structures, underground facilities, and availability of lands, easements, and rights-of-way. The completeness of data, presented in the Contract Documents, pertaining to subsurface conditions, underground structures, and underground facilities for the purposes of bidding or construction is not assured. The Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests and studies and obtain any additional information and data which pertain to the physical conditions (surface and subsurface) which may affect cost, progress, performance or furnishing of the Work and which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price, and other terms and conditions of the Contract Documents. On request in advance, OWNER will provide access to the site to conduct such explorations and tests as each Bidder deems necessary for submission of a bid. Bidder shall fill all holes, clean up and restore the site to its former condition upon completion of such explorations.

- C. The submission of a Bid will constitute an incontrovertible representation by the Bidder that Bidder has complied with every requirement of this paragraph 8; that without exception the Bid is premised upon furnishing and performing the Work required by the Contract Documents and such means, methods, techniques, sequences or procedures of construction as may be indicated in or required by the Contract Documents; and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

9. ADDENDA AND INTERPRETATIONS

No interpretation of the meaning of the Contract Documents will be made to any bidder orally. Every request for such interpretation should be in writing addressed to the Director of Central Purchasing, who in turn will have an Addendum issued for the Lexington-Fayette Urban County Government, and to be given consideration must be received prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications. Acknowledgement of the receipt of addenda must be included with all submitted bids. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the Contract Documents.

10. SECURITY FOR FAITHFUL PERFORMANCE

- A. Simultaneously with his delivery of the executed Contracts, the CONTRACTOR shall furnish a surety bond or bonds as security for the faithful performance of this Contract and for payment of all persons performing labor on the Project under this Contract and furnishing materials in connection with this Contract, as specified in the General Conditions. The surety on such bond or bonds shall be a duly authorized surety company satisfactory to the OWNER and authorized to do business in the Commonwealth of Kentucky.
- B. All bonds required by this Contract and laws of this State shall be placed with agents licensed in the State of Kentucky. When the premium is paid for such coverage's, the full commission shall be paid to such local agent who shall not divide such commission with any person other than a duly licensed resident local agent.
- C. **Contractor shall use standard Performance and Payment Bond forms such as documents provided with this contract book or AIA form A312-1984 (or later). Each document will be for 100% of the Contract Bid Amount.**

11. POWER OF ATTORNEY

Attorney-in-fact who signs bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

12. TAXES AND WORKMEN'S COMPENSATION

The CONTRACTOR and subcontractor will be required to accept liability for payment of all payroll taxes, sales and use tax, and all other taxes or deductions required by local, state or federal law, such as old age pension, social security, or annuities measured by wages. Each shall carry Workmen's Compensation Insurance to the full amounts as required by Statutes and shall include the cost of all foregoing items in the proposal. The CONTRACTOR will not otherwise be reimbursed or compensated for such tax payments. The CONTRACTOR is urged to ascertain at his own risk his actual tax liability in connection with the execution or performance of his Contract.

13. LAWS AND REGULATIONS

The bidder's attention is directed to the fact that all applicable state laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the Project shall apply to the Contract throughout, and they will be deemed to be included in the contract, the same as though herein written out in full.

14. EROSION AND SEDIMENT CONTROL AND PERMITS

The CONTRACTOR and Subcontractors performing work on projects on behalf of the OWNER shall also comply with all applicable federal, state, and local environmental

regulations and all requirements and conditions set forth in "special" permits including but not limited to Corp of Engineers 404 permits, 401 Water Quality Certifications, Stream Crossing and Floodplain Encroachment Permits as described in Part 4 General Conditions Paragraph 5.17.

15. PREVAILING WAGE LAW AND MINIMUM HOURLY RATES

Federal or state wage rates and regulations, if required for this Project, will be as described in the Special Conditions.

16. AFFIRMATIVE ACTION PLAN

The successful Bidder must submit with their bid, the following items to the Urban County Government:

1. Affirmative Action Plan of the firm
2. Current Work Force Analysis Form
3. Good Faith Effort Documentation
4. List of Disadvantaged Business Enterprise Subcontractors and the Dollar Value of each Subcontract

A Work Force Analysis Form shall be submitted for each Contract. Failure to submit these items as required herein may result in disqualification of the Bidder from award of the Contract.

All submissions should be directed to:

Director, Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, Third Floor
Lexington, KY 40507

17. CONTRACT TIME

The number of calendar days within which the Work is to be substantially completed and ready for final payment (the Contract Time) is set forth in the Form of Proposal and the Agreement.

18. SUBSTITUTE OR "OR-EQUAL" ITEMS

The Contract, if awarded, will be on the basis of materials and equipment described in the Drawings or specified in the Specifications without consideration of possible substitute or "or-equal" items. Whenever it is indicated in the Drawings or specified in the Specifications that a substitute or "or-equal" item of material or equipment may be furnished or used by the CONTRACTOR if acceptable to the CONSULTANT and

OWNER, application for such acceptance will not be considered by the CONSULTANT and OWNER until after the effective date of the Agreement. The procedure for submission of any such application by the CONTRACTOR and consideration by the CONSULTANT and OWNER is set forth in the General Conditions.

19. ALTERNATE BIDS

Bidders shall submit alternate bids/proposals only if and when such alternate bids/proposals have been specifically requested in an Invitation for Bids. If alternate bids/proposals are requested in an Invitation for Bids, the form of submission of such alternate bid and the conditions under which such alternate bids will be considered for award of a contract will be established in the Invitation.

Any Bidder who submits a bid incorporating an alternate proposal when alternate bids/proposals have not been requested in the Invitation for Bids shall have his/her bid rejected as non-responsive.

Any Bidder who submits a bid incorporating two (2) or more prices for an item or groups of items (unless such method of pricing is requested in the Invitation for Bids), or which imposes conditions for acceptance other than those established in the Invitation for Bids, shall have their bid rejected as non-responsive.

20. SIGNING OF AGREEMENT

When OWNER gives a Notice of Award to the successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement with all other written Contract Documents attached. Within ten days thereafter, CONTRACTOR shall sign and deliver the required number of counterparts of the Agreement and attached documents to OWNER with the required Bonds, Certificate of Insurance, and Power of Attorney. The OWNER will deliver one fully signed counterpart to CONTRACTOR at such time as it has been signed by the Mayor.

21. ASSISTANCE TO BE OFFERED TO DISADVANTAGED BUSINESS ENTERPRISE (MWDBE) CONTRACTORS

A. Outreach for MWDBE(s)

The Lexington-Fayette Urban County Government (LFUCG) maintains a database of MWDBE contractors and organizations. When a LFUCG construction project is advertised for bidding, notices are sent to companies registered at <https://lexingtonky.ionwave.net>. The notices describe the project and indicate the deadline for submitting bids.

If you wish to be added to the LFUCG MWDBE contractor database, please contact:

Sherita Miller, Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, Room 338
Lexington, Kentucky 40507
mclark@lexingtonky.gov

B. Bid Bond Assistance for MWDBE(s)

For those MWDBE contractors who wish to bid on LFUCG project, bid bond assistance is available. This bid bond assistance is in the form of a “Letter of Certification” which is accepted by the LFUCG’s Division of Purchasing, in lieu of a bid bond. The “Letter of Certification” must be included in the bid package when it is submitted to the Division of Purchasing. The “Letter of Certification” will reference the specific project for which the bid is being submitted, and the time and date on which the bid is due. Bid bond assistance must be requested from the Lexington-Fayette Urban County Government’s Division of Central Purchasing.

C. Eligibility for Bid Bond Assistance for MWDBE(s)

In order to be eligible for any Bid bonding assistance, a MWDBE construction company must be owned or controlled at the level of 51% or more by a member or members of a minority group or females. Prior to receiving assistance, a statement providing evidence of ownership and control of the company by a member or members of a minority group or females must be signed by the Owner or corporate officer and by an attorney or accountant submitted to:

Sherita Miller, Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, Room 338
Lexington, Kentucky 40507
mclark@lexingtonky.gov

D. MWDBE Subcontractors

The LFUCG will, upon request, assist prime contractors in the procurement of eligible DBE subcontractors in an effort to achieve 10% minimum MWDBE goal.

For a list of eligible subcontractors, please contact:

Sherita Miller, Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street, Room 338
Lexington, Kentucky 40507
smiller@lexingtonky.gov

22. LFUCG NON-APPROPRIATION CLAUSE

Contractor acknowledges that the LFUCG is a governmental entity, and the contract validity is based upon the availability of public funding under the authority of its statutory mandate.

In the event that public funds are unavailable and not appropriated for the performance of the LFUCG's obligations under this contract, then this contract shall automatically expire without penalty to the LFUCG thirty (30) days after written notice to Contractor of the unavailability and non-appropriation of public funds. It is expressly agreed that the LFUCG shall not activate this non-appropriation provision for its convenience or to circumvent the requirements of this contract, but only as an emergency fiscal measure during a substantial fiscal crisis, which affects generally its governmental operations.

In the event of a change in the LFUCG's statutory authority, mandate and mandated functions, by state and federal legislative or regulatory action, which adversely affects the LFUCG's authority to continue its obligations under this contract, then this contract shall automatically terminate without penalty to the LFUCG upon written notice to Contractor of such limitation or change in the LFUCG's legal authority.

PART III

FORM OF PROPOSAL

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PART III

Invitation to Bid No. 146-2016

Emergency Response Vehicle Exhaust Removal System

1. FORM OF PROPOSAL

Place: Lexington, Kentucky

Date: November 9, 2016

The following Form of Proposal shall be followed exactly in submitting a proposal for this Work.

This Proposal Submitted by HASTINGS AIR ENERGY CONTROL
5555 S. Westridge Drive
New Berlin, Wisconsin 53151
(Name and Address of Bidding Contractor)

(Hereinafter called "Bidder"), organized and existing under the laws of the State of Wisconsin, doing business as a corporation
"a corporation," "a partnership", or an "individual" as applicable.

To: Lexington-Fayette Urban County Government
(Hereinafter called "OWNER")
Office of the Director of Purchasing
200 East Main Street, 3rd Floor
Lexington, KY 40507

Gentlemen:

The Bidder, in compliance with your Invitation for Bids for **Emergency Response Vehicle Exhaust Removal System** having examined the Plans and Specifications with related documents, having examined the site for proposed Work, and being familiar with all of the conditions surrounding the construction of the proposed Project, including the availability of materials and labor, hereby proposes to furnish all labor, materials, and supplies, and to construct the Project in accordance with the Contract Documents, within the time set forth therein, and at the lump sum and/or unit prices stated hereinafter. These prices are to cover all expenses incurred in performing the Work required under the Contract Documents, of which this proposal is a part. The OWNER will issue work orders for work to be performed under this Contract.

The Bidder hereby acknowledges receipt of the following addenda:

Addendum No. 1 Date November 2, 2016

Addendum No. Date

Addendum No. Date

Addendum No. Date

Addendum No. Date

Addendum No. Date

Addendum No. Date

Addendum No. Date

Insert above the number and the date of any Addendum issued and received. If none has been issued and received, the word "NONE" should be inserted.

2. LEGAL STATUS OF BIDDER

Bidder HASTINGS AIR ENERGY CONTROL

Date NOVEMBER 9, 2016

* 1. A corporation duly organized and doing business under the laws of the State of WISCONSIN, for whom MICHAEL BOHRER, bearing the official title of VICE PRESIDENT, whose signature is affixed to this Bid/Proposal, is duly authorized to execute contracts.

* 2. A Partnership, all of the members of which, with addresses are: (Designate general partners as such)

David Bohrer, President 5555 South Westridge Drive New Berlin Wisconsin 53151 20%

Michael Bohrer, Vice President Finance 5555 South Westridge Drive New Berlin Wisconsin 53151 20%

Daniel Bohrer, Vice President Sales 5555 South Westridge Drive New Berlin Wisconsin 53151 20%

Dennis Bohrer, Vice President Operations 5555 South Westridge Drive New Berlin Wisconsin 53151 20%

DuWayne Bohrer Secretary 5555 South Westridge Drive New Berlin Wisconsin 53151 20%

~~* 3. An individual, whose signature is affixed to this Bid/Proposal (please print name)~~

*(The Bidder shall fill out the appropriate form and strike out the other two.)

3. **BIDDERS AFFIDAVIT**

Comes the Affiant, Michael Bohrer, and after being first duly sworn, states under penalty of perjury as follows:

1. His/her name is Michael Bohrer and he/she is the individual submitting the bid or is the authorized representative of HASTINGS AIR ENERGY CONTROL, the entity submitting the bid (hereinafter referred to as "Bidder").
2. Bidder will pay all taxes and fees, which are owed to the Lexington-Fayette Urban County Government at the time the bid is submitted, prior to award of the contract and will maintain a "current" status in regard to those taxes and fees during the life of the contract.
3. Bidder will obtain a Lexington-Fayette Urban County Government business license, if applicable, prior to award of the contract.
4. Bidder has authorized the Division of Central Purchasing to verify the above-mentioned information with the Division of Revenue and to disclose to the Urban County Council that taxes and/or fees are delinquent or that a business license has not been obtained.
5. Bidder has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky within the past five (5) years and the award of a contract to the Bidder will not violate any provision of the campaign finance laws of the Commonwealth.
6. Bidder has not knowingly violated any provision of Chapter 25 of the Lexington-Fayette Urban County Government Code of Ordinances, known as the "Ethics Act."
7. Bidder acknowledges that "knowingly" for purposes of this Affidavit means, with respect to conduct or to circumstances described by a statute or ordinance defining an offense, that a person is aware or should have been aware that his conduct is of that nature or that the circumstance exists.

Further, Affiant sayeth naught.

Michael Bohrer
(Affiant)

STATE OF Wisconsin

COUNTY OF Waukesha

The foregoing instrument was subscribed, sworn to and acknowledged before me by

Michael Bohrer on this the 7th day of November, 2016.

My Commission expires: September 29, 2017

Eileen H. Krueger
NOTARY PUBLIC, STATE AT LARGE

4. BID SCHEDULE – SCHEDULE OF VALUES

The Bidder agrees to perform all the Work described in the Specifications and shown on the Plans for the following proposed lump sum and/or unit prices, if applicable, which shall include the furnishing of all labor, materials, supplies, equipment and/or vehicle usage, services, all items of cost, overhead, taxes (federal, state, local), and profit for the Contractor and any Subcontractor involved, within the time set forth herein. If unit prices are applicable, Bidder must make the extensions and additions showing the total amount of bid.

Form of proposal must include unit bid prices written in words, unit price written in numbers and total amount bid (unit price x quantity) per line item OR bid may be considered non-responsive. In case of price discrepancy, unit bid price written in words will prevail followed by unit price written in numbers then total amount bid per line item.

If a discrepancy between the unit price and the item total exists, the unit price prevails except: If the unit price is illegible, omitted, or the same as the item total, item total prevails and the unit price is the quotient of the item total and the quantity.

If the unit price and the item total are illegible or are omitted, the bid may be determined nonresponsive. If a lump sum total price is illegible or is omitted, the bid may be determined nonresponsive.

For a lump sum based bid, the item total is the bid amount the Division uses for bid comparison.

For a unit price based bid, the sum of the item totals is the bid amount the Division uses for bid comparison.

The LFUCG reserves the right to accept any combination of stations. The LFUCG’s decision on the bid amount is final.

Item No.	Description w/Unit Bid Price Written in Words	Unit	Total Bid Amount
1.	Installation of Exhaust Removal System, Fire Station #2 as per specs for <u>3 Drops</u> Dollars <u>twenty six thousand nine hundred sixteen</u> Cents <u>sixty six</u>	LS	\$ <u>26,916.66</u>
2.	Installation of Exhaust Removal System, Fire Station #6 as per specs for <u>3 Drops</u> Dollars <u>twenty six thousand nine hundred sixteen</u> Cents <u>sixty six</u>	LS	\$ <u>26,916.66</u>
3.	Installation of Exhaust Removal System, Fire Station #7 as per specs for <u>2 Drops</u> Dollars <u>seventeen thousand nine hundred forty four</u> Cents <u>forty four</u>	LS	\$ <u>17,944.44</u>
4.	Installation of Exhaust Removal System, Fire Station #8 as per specs for <u>2 drops</u> Dollars <u>seventeen thousand nine hundred forty four</u> Cents <u>forty four</u>	LS	\$ <u>17,944.44</u>
5.	Installation of Exhaust Removal System, Fire Station #9 as per specs for <u>2 drops</u> Dollars <u>seventeen thousand nine hundred forty four</u> Cents <u>forty four</u>	LS	\$ <u>17,944.44</u>

Item No.	Description w/Unit Bid Price Written in Words	Unit	Total Bid Amount
6.	Installation of Exhaust Removal System, Fire Station #10 as per specs for <u>3 drops</u> Dollars <u>twenty six thousand nine hundred sixteen</u> Cents <u>sixty six</u>	LS	\$ <u>26,916.66</u>
7.	Installation of Exhaust Removal System, Fire Station #11 as per specs for <u>2 drops</u> Dollars <u>seventeen thousand nine hundred forty four</u> Cents <u>forty four</u>	LS	\$ <u>17,944.44</u>
8.	Installation of Exhaust Removal System, Fire Station #12 as per specs for <u>2 drops</u> Dollars <u>seventeen thousand nine hundred forty four</u> Cents <u>forty four</u>	LS	\$ <u>17,944.44</u>
9.	Installation of Exhaust Removal System, Fire Station #13 as per specs for <u>2 drops</u> Dollars <u>seventeen thousand nine hundred forty four</u> Cents <u>forty four</u>	LS	\$ <u>17,944.44</u>
10.	Installation of Exhaust Removal System, Fire Station #14 as per specs for <u>2 drops</u> Dollars <u>seventeen thousand nine hundred forty four</u> Cents <u>forty four</u>	LS	\$ <u>17,944.44</u>
11.	Installation of Exhaust Removal System, Fire Station #15 as per specs for <u>2 drops</u> Dollars <u>seventeen thousand nine hundred forty four</u> Cents <u>forty four</u>	LS	\$ <u>17,944.44</u>
12.	Installation of Exhaust Removal System, Fire Station #16 as per specs for <u>3 drops</u> Dollars <u>twenty six thousand nine hundred sixteen</u> Cents <u>sixty six</u>	LS	\$ <u>26,916.66</u>
13.	Installation of Exhaust Removal System, Fire Station #18 as per specs for <u>1 drop</u> Dollars <u>eight thousand nine hundred seventy two</u> Cents <u>twenty two</u>	LS	\$ <u>8972.22</u>
14.	Installation of Exhaust Removal System, Fire Station #19 as per specs for <u>1 drop</u> Dollars <u>eight thousand nine hundred seventy two</u> Cents <u>twenty two</u>	LS	\$ <u>8972.22</u>
15.	Installation of Exhaust Removal System, Fire Station #20 as per specs for <u>3 drops</u> Dollars <u>twenty six thousand nine hundred sixteen</u> Cents <u>sixty six</u>	LS	\$ <u>26,916.66</u>
16.	Installation of Exhaust Removal System, Fire Station #21 as per specs for <u>3 drops</u> Dollars <u>twenty six thousand nine hundred sixteen</u> Cents <u>sixty six</u>	LS	\$ <u>26,916.66</u>

TOTAL OF ALL BID PRICES FOR Emergency Response Vehicle Exhaust Removal System Project (Items 1 through 16) in words and figures. In case of discrepancy, the amount shown in words will govern.

three hundred twenty two thousand nine hundred ninty nine dollars and ninty two cents

(\$ 322,999.92)

Submitted by:

HASTINGS AIR ENERGY CONTROL

Firm

5555 SOUTH WESTRIDGE DRIVE

Address

NEW BERLIN, WISCONSIN 53151

City, State & Zip

***Bid must be signed:
(original signature)***

Michael Bohrer - VP

Signature of Authorized Company Representative – Title

Michael Bohrer, Vice President Finance

Representative/s Name (Typed or Printed)

262-364-0527

Area Code – Phone – Extension

262-364-0550

Fax #

mikebohrer@hastingsair.com

E-Mail Address

OFFICIAL ADDRESS:

Hastings Air Energy Control, Inc.

5555 South Westridge Drive

New Berlin, Wisconsin 53151

Michael Bohrer

(Seal if Bid is by Corporation)

By signing this form you agree to ALL terms, conditions, and associated forms in this bid package

5. STATEMENT OF BIDDER'S QUALIFICATIONS

The following statement of the Bidder's qualifications is required to be filled in, executed, and submitted with the Proposal:

- 1. Name of Bidder: HASTINGS AIR ENERGY CONTROL
- 2. Permanent Place of Business: 5555 SOUTH WESTRIDGE DRIVE NEW BERLIN WISCONSIN 53151
- 3. When Organized: 1969
- 4. Where Incorporated: WISCONSIN

5. **Construction Plant and Equipment Available for this Project:**

100 % of all of equipment available.

(Attach Separate Shcct If Necessary)

6. **Financial Condition:**

If specifically requested by the OWNER, the apparent low Bidder is required to submit its latest three (3) years audited financial statements to the OWNER'S Division of Central Purchasing within seven (7) calendar days following the bid opening.

7. **In the event the Contract is awarded to the undersigned, surety bonds will be furnished by:**

Employers Mutual Casualty Company (Surety)

Signed:  (Representative of Surety)

8. **The following is a list of similar projects performed by the Bidder. (Attach separate sheet if necessary).**

<u>NAME</u>	<u>LOCATION</u>	<u>CONTRACT SUM</u>
Toledo Fire Department	Toledo, Ohio	\$370,000.00
Gary Fire Department	Gary, Indiana	\$150,000.00
Chicago Fire Department	Chicago, Illinois	\$400,000.00
Detroit Fire Department	Detroit, Michigan	\$350,000.00
Madison Fire Department	Madison, Wisconsin	\$180,000.00
Milwaukee Fire Department	Milwaukee, Wisconsin	\$250,000.00

9. The Bidder has now under contract and bonded the following projects:

<u>NAME</u>	<u>LOCATION</u>	<u>CONTRACT SUM</u>
N/A		

10. List Key Bidder Personnel who will work on this Project.

<u>NAME</u>	<u>POSITION DESCRIPTION</u>	<u>NO. OF YEARS WITH BIDDER</u>
Daniel Bohrer	Engineer	35
Tom Karth	Technical Support	12
Dennis Bohrer	Project Coordinator	21
Matthew Johnson	Sales/System Designer	2
Mary Comer	Sales/System Designer	20

11. DBE Participation on current bonded projects under contract:

<u>SUBCONTRACTORS</u> <u>(LIST)</u>	<u>PROJECT</u> <u>(SPECIFIC TYPE)</u>	<u>DBE</u>	<u>% of WORK</u>
<u>F H Paschen</u>	<u>Chicago Fire Dept</u>	<u>Yes</u>	<u>50%</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>

(USE ADDITIONAL SHEETS IF NECESSARY)

12. We acknowledge that, if we are the apparent low Bidder, we may be required to submit to the OWNER within 7 calendar days following the Bid Opening, a sworn statement regarding all current work on hand and under contract, and a statement on the OWNER'S form of the experience of our officers, office management and field management personnel. Additionally, if requested by the OWNER, we will within 7 days following the request submit audited financial statements and loss history for insurance claims for the 3 most recent years (or a lesser period stipulated by the OWNER).

6. LIST OF PROPOSED SUBCONTRACTORS

The following list of proposed subcontractors is required by the OWNER to be executed, completed and submitted with the BIDDER'S FORM OF PROPOSAL. All subcontractors are subject to approval of the Lexington-Fayette Urban County Government. Failure to submit this list completely filled out may be cause for rejection of bid.

<u>BRANCH OF WORK - LIST EACH MAJOR ITEM</u> Such as: Grading, bituminous paving, concrete, seeding and protection, construction staking, etc.	<u>SUBCONTRACTOR</u>	<u>DBE</u> <u>Yes/No</u>	<u>% of Work</u>
1. <u>Electric Contractor</u>	Name: <u>Island Electric, LLC</u> Address: <u>2005 Dunkirk Drive</u> <u>Lexington, KY 40504</u>	<u>Yes</u>	<u>10%</u>
2. <u>Quality Mechanical Services, LLC</u>	Name: <u>12292 Hutton Drive</u> <u>Walton, KY 41094</u> Address: _____	<u>Yes</u>	<u>90%</u>
3. _____	Name: _____ Address: _____	_____	_____
4. _____	Name: _____ Address: _____	_____	_____
5. _____	Name: _____ Address: _____	_____	_____
6. _____	Name: _____ Address: _____	_____	_____
7. _____	Name: _____ Address: _____	_____	_____

(Attach additional sheet(s) if necessary.)

7. **LEXINGTON FAYETTE URBAN COUNTY GOVERNMENT MWDBE PARTICIPATION GOALS, FORMS, AND GOOD FAITH EFFORTS**

A. GENERAL

- 1) The LFUCG request all potential contractors to make a concerted effort to include Minority-Owned (MBE), Woman-Owned (WBE), Disadvantaged (DBE) and Veteran-Owned Small Business (VOSB) Enterprises as subcontractors or suppliers in their bids.
- 2) Toward that end, the LFUCG has established 10% of total procurement costs as a Goal for participation of Minority-Owned, Woman-Owned and Disadvantaged Businesses on this contract.
- 3) The LFUCG has also established a 3% of total procurement costs as a Goal for participation of Veteran-Owned Small Businesses.
- 4) **It is therefore a request of each Bidder to include in its bid, the same goal (10%) for MWDBE participation and other requirements as outlined in this section.**

B. PROCEDURES

- 1) The successful bidder will be required to report to the LFUCG, the dollar amounts of all payments submitted to Minority-Owned, Woman-Owned subcontractors or Veteran-Owned and suppliers for work done or materials purchased for this contract. (See Subcontractor Monthly Payment Report)
- 2) Replacement of a Minority-Owned, Woman-Owned or Veteran-Owned subcontractor or supplier listed in the original submittal must be requested in writing and must be accompanied by documentation of Good Faith Efforts to replace the subcontractor / supplier with another MWDBE Firm; this is subject to approval by the LFUCG. (See LFUCG MWDBE Substitution Form)
- 3) For assistance in identifying qualified, certified businesses to solicit for potential contracting opportunities, bidders may contact:
 - a) The Lexington-Fayette Urban County Government, Division of Central Purchasing (859-258-3320)
- 4) The LFUCG will make every effort to notify interested MWDBE subcontractors and suppliers of each Bid Package, including information on the scope of work, the pre-bid meeting time and location, the bid date, and all other pertinent information regarding the project.

C. DEFINITIONS

- 1) A Minority-Owned Business Enterprise (MBE) is defined as a business which is certified as being at least 51% owned and operated by persons of African American, Hispanic, Asian, Pacific Islander, American Indian or Alaskan Native Heritage.

- 2) A Woman-Owned Business Enterprise (WBE) is defined as a business which is certified as being at least 51% owned and operated by one or more Non-Minority Females.
- 3) A Disadvantaged Business (DBE) is defined as a business which is certified as being at least 51% owned and operated by a person(s) that are economically and socially disadvantaged.
- 4) A Veteran-Owned Small Business (VOSB) is defined as a business which is certified as being at least 51% owned and operated by a veteran and/or a service disabled veteran.
- 5) Good Faith Efforts are efforts that, given all relevant circumstances, a bidder or proposer actively and aggressively seeking to meet the goals, can reasonably be expected to make. In evaluating good faith efforts made toward achieving the goals, whether the bidder or proposer has performed the efforts outlined in the Obligations of Bidder for Good Faith Efforts outlined in this document will be considered, along with any other relevant factors.

D. OBLIGATION OF BIDDER FOR GOOD FAITH EFFORTS

- 1) **The bidder shall make a Good Faith Effort to achieve the Participation Goal for MWDBE and Veteran-Owned subcontractors/suppliers. The failure to meet the goal shall not necessarily be cause for disqualification of the bidder; however, bidders not meeting the goal are required to furnish with their bids written documentation of their Good Faith Efforts to do so.**
- 2) Award of Contract shall be conditioned upon satisfaction of the requirements set forth herein.
- 3) The Form of Proposal includes a section entitled "MWDBE Participation Form". The applicable information must be completed and submitted as outlined below.
- 4) **Failure to submit this information as requested may be cause for rejection of bid or delay in contract award.**

E. DOCUMENTATION REQUIRED FOR GOOD FAITH EFFORTS

- 1) Bidders reaching the Goal are required to submit only the MWDBE Participation Form." The form must be fully completed including names and telephone number of participating MWDBE firm(s); type of work to be performed; estimated value of the contract and value expressed as a percentage of the total Lump Sum Bid Price. The form must be signed and dated, and is to be submitted with the bid.
- 2) Bidders not reaching the Goal must submit the "MWDBE Participation Form", the "Quote Summary Form" and a written statement documenting their Good Faith Effort to do so. If bid includes no MWDBE and/or Veteran participation, bidder shall enter "None" on the subcontractor / supplier form). In addition, the bidder must submit written proof of their Good Faith Efforts to meet the Participation Goal:

- a. Advertised opportunities to participate in the contract in at least two (2) publications of general circulation media; trade and professional association publications; small and minority business or trade publications; and publications or trades targeting minority, women and disadvantaged businesses not less than fifteen (15) days prior to the deadline for submission of bids to allow MWDBE firms and Veteran-Owned businesses to participate.
- b. Included documentation of advertising in the above publications with the bidders good faith efforts package
- c. Attended LFUCG Central Purchasing Economic Inclusion Outreach event
- d. Attended pre-bid meetings that were scheduled by LFUCG to inform MWDBEs and/or Veteran-Owned Businesses of subcontracting opportunities
- e. Sponsored Economic Inclusion event to provide networking opportunities for prime contractors and MWDBE firms and Veteran-Owned businesses.
- f. Requested a list of MWDBE and/or Veteran subcontractors or suppliers from LFUCG Economic Engine and showed evidence of contacting the companies on the list(s).
- g. Contacted organizations that work with MWDBE companies for assistance in finding certified MWBDE firms and Veteran-Owned businesses to work on this project. Those contacted and their responses should be a part of the bidder's good faith efforts documentation.
- h. Sent written notices, by certified mail, email or facsimile, to qualified, certified MWDBEs soliciting their participation in the contract not less than seven (7) days prior to the deadline for submission of bids to allow them to participate effectively.
- i. Followed up initial solicitations by contacting MWDBEs and Veteran-Owned businesses to determine their level of interest.
- j. Provided the interested MWBDE firm and/or Veteran-Owned businesses with adequate and timely information about the plans, specifications, and requirements of the contract.
- k. Selected portions of the work to be performed by MWDBE firms and/or Veteran-Owned businesses in order to increase the likelihood of meeting the contract goals. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate MWDBE and Veteran participation, even when the prime contractor may otherwise perform these work items with its own workforce
- l. Negotiated in good faith with interested MWDBE firms and Veteran-Owned businesses not rejecting them as unqualified without sound reasons based on a thorough

investigation of their capabilities. Any rejection should be so noted in writing with a description as to why an agreement could not be reached.

m. Included documentation of quotations received from interested MWDBE firms and Veteran-Owned businesses which were not used due to uncompetitive pricing or were rejected as unacceptable and/or copies of responses from firms indicating that they would not be submitting a bid.

n. Bidder has to submit sound reasons why the quotations were considered unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a MWDBE and/or Veteran-Owned business's quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy MWDBE and Veteran goals.

o. Made an effort to offer assistance to or refer interested MWDBE firms and Veteran-Owned businesses to obtain the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal

p. Made efforts to expand the search for MWBE firms and Veteran-Owned businesses beyond the usual geographic boundaries.

q. Other--any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include MWDBE and Veteran participation.

NOTE: Failure to submit any of the documentation requested in this section may be cause for rejection of bid. Bidders may include any other documentation deemed relevant to this requirement which is subject to review by the MBE Liaison. Documentation of Good Faith Efforts must be submitted with the Bid, if the participation Goal is not met.



MINORITY BUSINESS ENTERPRISE PROGRAM

Sherita Miller
Minority Business Enterprise Liaison
Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street
Lexington, KY 40507
smiller@lexingtonky.gov
859-258-3323

OUR MISSION: The mission of the Minority Business Enterprise Program is to facilitate the full participation of minority and women owned businesses in the procurement process and to promote economic inclusion as a business imperative essential to the long term economic viability of Lexington-Fayette Urban County Government.

To that end the city council adopted and implemented resolution 167-91—Disadvantaged Business Enterprise (DBE) 10% Goal Plan in July of 1991. The resolution states in part (a full copy is available in Central Purchasing):

“A Resolution supporting adoption of the administrative plan for a ten percent (10%) Minimum goal for disadvantaged business enterprise participation in Lexington-Fayette Urban County Government construction and professional services contracts; Providing that as part of their bids on LFUCG construction contracts, general Contractors shall make a good faith effort to award at least ten percent (10%) of All subcontracts to disadvantaged business enterprises; providing that divisions of LFUCG shall make a good faith effort to award at least ten percent of their Professional services and other contracts to disadvantaged business enterprises...”

A Disadvantaged Business Enterprise is defined as a business that has been certified as being at least 51% owned, operated and managed by a U.S. Citizen of the following groups:

- African-American
- Hispanic-American
- Asian/Pacific Islander
- Native American/Native Alaskan
- Non-Minority Female
- Economically and Socially Disadvantaged

In addition, to that end the city council also adopted and implemented resolution 167-91—Veteran-owned Businesses, 3% Goal Plan in July of 2015. The resolution states in part (a full copy is available in Central Purchasing):

“A resolution adopting a three percent (3%) minimum goal for certified veteran-owned small businesses and service disabled veteran-owned businesses for certain of those Lexington-Fayette Urban County contracts related to construction for

professional services, and authorizing the Division of Purchasing to adopt and implement guidelines and/or policies consistent with the provisions and intent of this resolution by no later than July 1, 2015.”

We have compiled the list below to help you locate certified MBE, WBE and DBE certified businesses. Below is a listing of contacts for LFUCG Certified MWDBEs and Veteran-Owned Small Businesses in (<https://lexingtonky.ionwave.net>)

Business	Contact	Email Address	Phone
LFUCG	Sherita Miller	smiller@lexingtonky.gov	859-258-3323
Commerce Lexington – Minority Business Development	Tyrone Tyra	ttyra@commercelexington.com	859-226-1625
Tri-State Minority Supplier Diversity Council	Susan Marston	smarston@tsmsdc.com	502-365-9762
Small Business Development Council	Shirie Hawkins UK SBDC	smack@uky.edu	859-257-7666
Community Ventures Corporation	Phyllis Alcorn	palcorn@cvky.org	859-231-0054
KY Transportation Cabinet (KYTC)	Melvin Byne	Melvin.bynes2@ky.gov	502-564-3601
KYTC Pre-Qualification	Shella Eagle	Shella.Eagle@ky.gov	502-782-4815
Ohio River Valley Women’s Business Council (WBENC)	Sheila Mixon	smixon@orvwbc.org	513-487-6537
Kentucky MWBE Certification Program	Yvette Smith, Kentucky Finance Cabinet	Yvette.Smith@ky.gov	502-564-8099
National Women Business Owner’s Council (NWBOC)	Janet Harris-Lange	janet@nwbo.org	800-675-5066
Small Business Administration	Robert Coffey	robertcoffey@sba.gov	502-582-5971
LaVoz de Kentucky	Andres Cruz	lavozdeky@yahoo.com	859-621-2106
The Key News Journal	Patrice Muhammad	paaatricem@keynewsjournal.com	859-373-9428



LFUCG MWDBE PARTICIPATION FORM
 Bid/RFP/Quote Reference # Bid No. 146-2016

The MWDBE and/or veteran subcontractors listed have agreed to participate on this Bid/RFP/Quote. If any substitution is made or the total value of the work is changed prior to or after the job is in progress, it is understood that those substitutions must be submitted to Central Purchasing for approval immediately. Failure to submit a completed form may cause rejection of the bid.

MWDBE Company, Name, Address, Phone, Email	Work to be Performed	Total Dollar Value of the Work	% Value of Total Contract
1. Island Electric Dwayne Harris 2005 Dunkirk Dr Lexington KY 40504 859-230 7937	Electrical	23,200-	7.18%
2. Quality Mechanical Services Roy Reeves 12797 Walnut Walton KY 40394 859-380 3651	Mechanical	104,000-	32.19%
3.			
4.			

The undersigned company representative submits the above list of MWDBE firms to be used in accomplishing the work contained in this Bid/RFP/Quote. Any misrepresentation may result in the termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and false claims.

HASTINGS AIR ENERGY CONTROL
 Company
11-6-16

Date

Daniel J. Bohrer
 Company Representative
 DANIEL J. BOHRER
 Title VICE PRESIDENT, SALES



LFUCG MWDBE SUBSTITUTION FORM
 Bid/RFP/Quote Reference # Bid No 146-2016

The substituted MWDBE and/or Veteran subcontractors listed below have agreed to participate on this Bid/RFP/Quote. These substitutions were made prior to or after the job was in progress. These substitutions were made for reasons stated below and are now being submitted to Central Purchasing for approval. By the authorized signature of a representative of our company, we understand that this information will be entered into our file for this project. Failure to submit this form may cause rejection of the bid.

SUBSTITUTED MWDBE Company Name, Address, Phone, Email	MWDBE Formally Contracted/ Name, Address, Phone, Email	Work to Be Performed	Reason for the Substitution	Total Dollar Value of the Work	% Value of Total Contract
1.					
2.					
3.					
4.					

The undersigned acknowledges that any misrepresentation may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and false claims.

HASTINGS ARENERGY CONTROL

Company

11-6-16

Date

Daniel Bohrer

Company Representative

DANIEL J BOHRER
VICE PRESIDENT, SALES

Title



MWDBE QUOTE SUMMARY FORM

Bid/RFP/Quote Reference # Bid No. 146-2016

The undersigned acknowledges that the minority and/or veteran subcontractors listed on this form did submit a quote to participate on this project.

Company Name HASTINGS AIR ENERGY CONTROL	Contact Person Daniel Behrer, Matthew Johnson
Address/Phone/Email 5555 S. Westridge Dr New Berlin, WI 53151	Bid Package / Bid Date Bid no - 146-2016 11-9-16

MWDBE Company Address	Contact Person	Contact Information (work phone, Email, cell)	Date Contacted	Services to be performed	Method of Communication (email, phone meeting, ad, event etc)	Total dollars \$\$ Do Not Leave Blank (Attach Documentation)	MBE * AA HA AS NA Female
Island Electric	Dwayne Harris	889 -230-7437	11-3-16	electrical	email phone	23,200.00	AA
Quality Mechanical	Roy Reeves	859-380-3657	11-3-16	Mechanical	email phone	104,000.00	Female

(MBE designation / AA=African American / HA= Hispanic American/AS = Asian American/Pacific Islander/ NA= Native American)

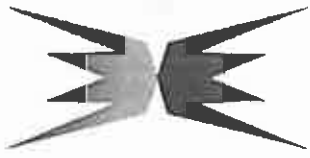
The undersigned acknowledges that all information is accurate. Any misrepresentation may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and claims.

Hastings Air Energy Control
Company

11-6-16
Date

Daniel Behrer
Company Representative

Daniel J Behrer
Vice President, Sales
Title



Island Electric, LLC.

November 3, 2016

Mr. Matthew Johnson
Hastings Air Energy Control, Inc.
5555 S. Westridge Drive
New Berlin, WI 53151
800-236-8450

**Re: LFCUG (Emergency Response Vehicle Exhaust Removal System)
Replace system control box (Revised)
Electrical Scope of Work**

Total Price for this Request \$ 23,200.00 (\$1450 each station)

The following item(s) are in the scope of work:

- Replace Exhaust fan OS-3 controller at each Fire Station (Total of 16)
- Demo old controller and replace with new controller (New controller provided by others)
- Old controller will be left on site for contractor to dispose of
- Disconnect and reconnect of new exhaust fan motor (New motor provided by others)
- Demo old exhaust fan disconnect and provide and install new disconnect (Total of 16)
- Replace conduit as needed per station
- Replace electrical wiring with new wire
- Provide and install a new disconnect for each OS-3 Controller
- Replace electrical breakers as needed for each controller
- Prevailing Wage Rates apply
- Permits and Inspections are **NOT** included

If you require us to modify the quantities or scope of work please call me at 859-230-7937.

Best regards,

Dwayne Harris
President/Owner

Accepted by: _____ Date: _____

2005 Dunkirk Dr., Lexington, KY 40504
Phone (859) 230-7937 E-Mail (dharris@islandelectricllc.com)

Equal Opportunity Employer

Quality Mechanical Services LLC

12292 Hutton Drive
Walton, KY 41094-9745
(859) 380-3651
qualitymechanical@twc.com

QUOTE

Date	Quote #
11/4/2016	90178

Customer

Hastings Air Energy Control
5555 South Westridge Drive
New Berlin, WI 53151-7900

P.O. No.	Due Date	Job Location
	12/4/2016	Lexington 2

Qty	Description	Unit Price	Total
	Removal of existing (4) tracks with associated hoses, and (5hp) exhaust fan and replace with new tracks with new hoses and magnetic grabbers.	5,210.40	5,210.40
	Option to Remove existing ducting and install new supplied by Quality Mechanical.	3,126.08	3,126.08
	Not responsible for removal of used materials left on site.	0.00	0.00
	This quote/invoice does not include any sales tax now or in the future.		0.00

"When quality counts, you can count on us"

Total \$8,336.48

Quality Mechanical Services LLC

12292 Hutton Drive
 Walton, KY 41094-9745
 (859) 380-3651
 qualitymechanical@twc.com

QUOTE

Date	Quote #
11/4/2016	90179

Customer

Hastings Air Energy Control
 5555 South Westridge Drive
 New Berlin, WI 53151-7900

P.O. No.	Due Date	Job Location
	12/4/2016	Lexington 6

Qty	Description	Unit Price	Total
1	Removal of (3) existing tracks with associated hoses, and exhaust fan and replace with (3) new tracks with new hoses and magnetic grabbers, and new exhaust fan.	4,310.40	4,310.40
	Option to Remove existing ducting and install new ducting supplied by Quality Mechanical.	2,776.27	2,776.27
	Not responsible for removal of used materials left on site.	0.00	0.00
	This quote/invoice does not include any sales tax now or in the future.		0.00

"When quality counts, you can count on us"

Total \$7,086.67

Quality Mechanical Services LLC

12292 Hutton Drive
Walton, KY 41094-9745
(859) 380-3651
qualitymechanical@twc.com

QUOTE

Date	Quote #
11/4/2016	90180

Customer

Hastings Air Energy Control
5555 South Westridge Drive
New Berlin, WI 53151-7900

P.O. No.	Due Date	Job Location
	12/4/2016	Lexington 7

Qty	Description	Unit Price	Total
1	Removal of (2) existing tracks with associated hoses, and exhaust fan and replace with, new exhaust fan, (2) new tracks, new hoses, and magnetic grabbers.	3,530.40	3,530.40
1	Option to Remove existing ducting and install new ducting supplied by Quality Mechanical.	2,299.85	2,299.85
	Not responsible for removal of used materials left on site.	0.00	0.00
	This quote/invoice does not include any sales tax now or in the future.		0.00

"When quality counts, you can count on us"

Total \$5,830.25

Quality Mechanical Services LLC

12292 Hutton Drive
 Walton, KY 41094-9745
 (859) 380-3651
 qualitymechanical@twc.com

QUOTE

Date	Quote #
11/4/2016	90181

Customer

Hastings Air Energy Control
 5555 South Westridge Drive
 New Berlin, WI 53151-7900

P.O. No.	Due Date	Job Location
	12/4/2016	Lexington 8

Qty	Description	Unit Price	Total
1	Removal of (2) existing tracks with associated hoses, and exhaust fan and replace with new fan,(2) tracks with new hoses and magnetic grabbers.	3,530.40	3,530.40
	Option to Remove existing ducting and install new ducting supplied by Quality Mechanical.	2,296.46	2,296.46
	Not responsible for removal of used materials left on site.	0.00	0.00
	This quote/invoice does not include any sales tax now or in the future.		0.00

"When quality counts, you can count on us"

Total \$5,826.86

Quality Mechanical Services LLC

12292 Hutton Drive
 Walton, KY 41094-9745
 (859) 380-3651
 qualitymechanical@twc.com

QUOTE

Date	Quote #
11/4/2016	90182

Customer

Hastings Air Energy Control
 5555 South Westridge Drive
 New Berlin, WI 53151-7900

P.O. No.	Due Date	Job Location
	12/4/2016	Lexington 9

Qty	Description	Unit Price	Total
1	Removal of (2) existing tracks and associated hoses, and exhaust fan and replace with new exhaust fan, (2) tracks with new hoses and magnetic grabbers.	3,530.40	3,530.40
1	Option to Remove existing ducting and install new ducting supplied by Quality Mechanical.	2,185.69	2,185.69
	Not responsible for removal of used materials left on site.	0.00	0.00
	This quote/invoice does not include any sales tax now or in the future.		0.00

Quality is remembered long after the price is forgotten!

Total \$5,716.09

Quality Mechanical Services LLC

12292 Hutton Drive
 Walton, KY 41094-9745
 (859) 380-3651
 qualitymechanical@twc.com

QUOTE

Date	Quote #
11/4/2016	90183

Customer

Hastings Air Energy Control
 5555 South Westridge Drive
 New Berlin, WI 53151-7900

P.O. No.	Due Date	Job Location
	12/4/2016	Lexington 10

Qty	Description	Unit Price	Total
1	Removal of (3) existing tracks and associated hoses, and exhaust fan and replace with new exhaust fan, (3) new tracks with new hoses and magnetic grabbers.	4,665.60	4,665.60
1	Option to Remove existing ducting and install new ducting supplied by Quality Mechanical.	2,881.58	2,881.58
	Not responsible for removal of used materials left on site.	0.00	0.00
	This quote/invoice does not include any sales tax now or in the future.		0.00

"When quality counts, you can count on us"

Total	\$7,547.18
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Quality Mechanical Services LLC

12292 Hutton Drive
 Walton, KY 41094-9745
 (859) 380-3651
 qualitymechanical@twc.com

QUOTE

Date	Quote #
11/4/2016	90184

Customer

Hastings Air Energy Control
 5555 South Westridge Drive
 New Berlin, WI 53151-7900

P.O. No.	Due Date	Job Location
	12/4/2016	Lexington 11

Qty	Description	Unit Price	Total
1	Removal of (2) existing tracks with associated hoses, and exhaust fan and replace with new exhaust fan,(2) new tracks with new hoses and magnetic grabbers.	3,686.40	3,686.40
1	Option to Remove existing ducting and install new ducting supplied by Quality Mechanical.	2,146.96	2,146.96
	Not responsible for removal of used materials left on site.	0.00	0.00
	This quote/invoice does not include any sales tax now or in the future.		0.00

"When quality counts, you can count on us"

Total \$5,833.36

Quality Mechanical Services LLC

12292 Hutton Drive
 Walton, KY 41094-9745
 (859) 380-3651
 qualitymechanical@twc.com

QUOTE

Date	Quote #
11/4/2016	90185

Customer

Hastings Air Energy Control
 5555 South Westridge Drive
 New Berlin, WI 53151-7900

P.O. No.	Due Date	Job Location
	12/4/2016	Lexington 12

Qty	Description	Unit Price	Total
1	Removal of (2) existing tracks with associated hoses, and exhaust fan and replace with new exhaust fan,(2) new tracks with new hoses and magnetic grabbers.	3,530.40	3,530.40
	Option to Remove existing ducting and install new ducting supplied by Quality Mechanical.	1,738.37	1,738.37
	Not responsible for removal of used materials left on site.	0.00	0.00
	This quote/invoice does not include any sales tax now or in the future.		0.00

"When quality counts, you can count on us"

Total \$5,268.77

Quality Mechanical Services LLC

12292 Hutton Drive
 Walton, KY 41094-9745
 (859) 380-3651
 qualitymechanical@twc.com

QUOTE

Date	Quote #
11/4/2016	90186

Customer

Hastings Air Energy Control
 5555 South Westridge Drive
 New Berlin, WI 53151-7900

P.O. No.	Due Date	Job Location
	12/4/2016	Lexington 13

Qty	Description	Unit Price	Total
1	Removal of (2) existing tracks with associated hoses, and exhaust fan and replace with new exhaust fan, (2) new tracks with new hoses and magnetic grabbers.	3,530.40	3,530.40
1	Option to Remove existing ducting and install new ducting supplied by Quality Mechanical.	1,733.40	1,733.40
	Not responsible for removal of used materials left on site.	0.00	0.00
	This quote/invoice does not include any sales tax now or in the future.		0.00

Quality is remembered long after the price is forgotten!

Total \$5,263.80

Quality Mechanical Services LLC

12292 Hutton Drive
Walton, KY 41094-9745
(859) 380-3651
qualitymechanical@twc.com

QUOTE

Date	Quote #
11/4/2016	90187

Customer

Hastings Air Energy Control
5555 South Westridge Drive
New Berlin, WI 53151-7900

P.O. No.	Due Date	Job Location
	12/4/2016	Lexington 14

Qty	Description	Unit Price	Total
1	Removal of (3) existing tracks with associated hoses, and exhaust fan and replace with new exhaust fan, (3) new tracks with new hoses and magnetic grabbers.	3,686.40	3,686.40
1	Option to Remove existing ducting and install new ducting supplied by Quality Mechanical.	1,906.71	1,906.71
	Not responsible for removal of used materials left on site.	0.00	0.00
	This quote/invoice does not include any sales tax now or in the future.		0.00

"When quality counts, you can count on us"

Total \$5,593.11

Quality Mechanical Services LLC

12292 Hutton Drive
Walton, KY 41094-9745
(859) 380-3651
qualitymechanical@twc.com

QUOTE

Date	Quote #
11/4/2016	90188

Customer

Hastings Air Energy Control
5555 South Westridge Drive
New Berlin, WI 53151-7900

P.O. No.	Due Date	Job Location
	12/4/2016	Lexington 15

Qty	Description	Unit Price	Total
1	Removal of (2) existing tracks and associated hoses, and exhaust fan and replace with new exhaust fan, (2) new tracks with new hoses and magnetic grabbers.	3,530.40	3,530.40
1	Option to Remove existing ducting and install new ducting supplied by Quality Mechanical.	1,882.23	1,882.23
	Not responsible for removal of used materials left on site.	0.00	0.00
	This quote/invoice does not include any sales tax now or in the future.		0.00

"When quality counts, you can count on us"

Total \$5,412.63

Quality Mechanical Services LLC

12292 Hutton Drive
 Walton, KY 41094-9745
 (859) 380-3651
 qualitymechanical@twc.com

QUOTE

Date	Quote #
11/4/2016	90189

Customer

Hastings Air Energy Control
 5555 South Westridge Drive
 New Berlin, WI 53151-7900

P.O. No.	Due Date	Job Location
	12/4/2016	Lexington 16

Qty	Description	Unit Price	Total
1	Removal of (2) existing tracks and (1) rail with associated hoses, and exhaust fan and replace with new exhaust fan, (2) new tracks and (1) rail with new hoses and magnetic grabbers.	5,998.80	5,998.80
1	Option to Remove existing ducting and install new ducting supplied by Quality Mechanical.	3,796.89	3,796.89
	This quote/invoice does not include any sales tax now or in the future.		0.00
	This quote/invoice does not include any sales tax now or in the future.		0.00

Quality is remembered long after the price is forgotten!

Total \$9,795.69

Quality Mechanical Services LLC

12292 Hutton Drive
 Walton, KY 41094-9745
 (859) 380-3651
 qualitymechanical@twc.com

QUOTE

Date	Quote #
11/4/2016	90190

Customer

Hastings Air Energy Control
 5555 South Westridge Drive
 New Berlin, WI 53151-7900

P.O. No.	Due Date	Job Location
	12/4/2016	Lexington 18

Qty	Description	Unit Price	Total
1	Removal of (1) existing track with associated hoses, and exhaust fan and replace with new exhaust fan, (1) new track with new hose and magnetic grabber.	2,767.20	2,767.20
1	Option to Remove existing ducting and install new ducting supplied by Quality Mechanical.	801.50	801.50
	Not responsible for removal of used materials left on site.	0.00	0.00
	This quote/invoice does not include any sales tax now or in the future.		0.00

"When quality counts, you can count on us"

Total \$3,568.70

Quality Mechanical Services LLC

12292 Hutton Drive
 Walton, KY 41094-9745
 (859) 380-3651
 qualitymechanical@twc.com

QUOTE

Date	Quote #
11/4/2016	90191

Customer

Hastings Air Energy Control
 5555 South Westridge Drive
 New Berlin, WI 53151-7900

P.O. No.	Due Date	Job Location
	12/4/2016	Lexington 19

Qty	Description	Unit Price	Total
1	Removal of (1) existing track with associated hoses, and exhaust fan and replace with new exhaust fan, (1) new track and new hoses and magnetic grabber.	3,581.85	3,581.85
1	Option to Remove existing ducting and install new ducting supplied by Quality Mechanical.	758.91	758.91
	Not responsible for removal of used materials left on site.	0.00	0.00
	This quote/invoice does not include any sales tax now or in the future.		0.00

"When quality counts, you can count on us"

Total \$4,340.76

Quality Mechanical Services LLC

12292 Hutton Drive
 Walton, KY 41094-9745
 (859) 380-3651
 qualitymechanical@twc.com

QUOTE

Date	Quote #
11/4/2016	90192

Customer

Hastings Air Energy Control
 5555 South Westridge Drive
 New Berlin, WI 53151-7900

P.O. No.	Due Date	Job Location
	12/4/2016	Lexington 20

Qty	Description	Unit Price	Total
1	Removal of existing (1) track and (2) rails with associated hoses, and exhaust fan and replace with new exhaust fan,(1) new tracks and (2) rails with new hoses and magnetic grabbers.	5,445.60	5,445.60
1	Option to Remove existing ducting and install new ducting supplied by Quality Mechanical.	3,801.01	3,801.01
	Not responsible for removal of used materials left on site.	0.00	0.00
	This quote/invoice does not include any sales tax now or in the future.		0.00

Quality is remembered long after the price is forgotten!

Total

\$9,246.61

Quality Mechanical Services LLC

12292 Hutton Drive
 Walton, KY 41094-9745
 (859) 380-3651
 qualitymechanical@twc.com

QUOTE

Date	Quote #
11/4/2016	90193

Customer

Hastings Air Energy Control
 5555 South Westridge Drive
 New Berlin, WI 53151-7900

P.O. No.	Due Date	Job Location
	12/4/2016	Lexington 21

Qty	Description	Unit Price	Total
1	Removal of (1) existing track and (2) rails with associated hoses, and exhaust fan and replace with new exhaust fan,(1) new tracks and (2) new rails with new hoses and magnetic grabbers.	5,764.80	5,764.80
1	Option to Remove existing ducting and install new ducting supplied by Quality Mechanical.	4,391.14	4,391.14
	Not responsible for removal of used materials left on site.	0.00	0.00
	This quote/invoice does not include any sales tax now or in the future.		0.00

"When quality counts, you can count on us"

Total	\$10,155.94
--------------	--------------------



LFUCG SUBCONTRACTOR MONTHLY PAYMENT REPORT

The LFUCG has a 10% goal plan adopted by city council to increase the participation of minority and women owned businesses in the procurement process. The LFUCG also has a 3% goal plan adopted by cited council to increase the participation of veteran owned businesses in the procurement process. In order to measure that goal LFUCG will track spending with MWDBE and Veteran vendors on a monthly basis. By the signature below of an authorized company representative, you certify that the information is correct, and that each of the representations set forth below is true. Any misrepresentation may result in termination of the contract and/or prosecution under applicable Federal and State laws concerning false statements and false claims. Please submit this form monthly to the Division of Central Purchasing/ 200 East Main Street / Room 338 / Lexington, KY 40507.


Bid/RFP/Quote # Bid No. 146-2016
Total Contract Amount Awarded to Prime Contractor for this Project

Project Name/ Contract #	Work Period/ From: _____ To: _____
Company Name:	Address:
Federal Tax ID:	Contact Person:

Subcontractor Vendor ID (name, address, phone, email)	Description of Work	Total Subcontract Amount	% of Total Contract Awarded to Prime for this Project	Total Amount Paid for this Period	Purchase Order number for subcontractor work (please attach PO)	Scheduled Project Start Date	Scheduled Project End Date

By the signature below of an authorized company representative, you certify that the information is correct, and that each of the representations set forth below is true. Any misrepresentations may result in the termination of the contract and/or prosecution under applicable Federal and State laws concerning false statements and false claims.

HASTINGS AIR ENERGY CONTROL
Company
11-6-16
Date


Company Representative DANIEL J BOITNER
VICE PRESIDENT SALES
Title

LFUCG STATEMENT OF GOOD FAITH EFFORTS

Bid/RFP/Quote # Bid No. 146-2016

By the signature below of an authorized company representative, we certify that we have utilized the following Good Faith Efforts to obtain the maximum participation by MWDBE and Veteran-Owned business enterprises on the project and can supply the appropriate documentation.

Advertised opportunities to participate in the contract in at least two (2) publications of general circulation media; trade and professional association publications; small and minority business or trade publications; and publications or trades targeting minority, women and disadvantaged businesses not less than fifteen (15) days prior to the deadline for submission of bids to allow MWDBE firms and Veteran-Owned businesses to participate.

Included documentation of advertising in the above publications with the bidders good faith efforts package

Attended LFUCG Central Purchasing Economic Inclusion Outreach event

Attended pre-bid meetings that were scheduled by LFUCG to inform MWDBEs and/or Veteran-Owned Businesses of subcontracting opportunities

Sponsored Economic Inclusion event to provide networking opportunities for prime contractors and MWDBE firms and Veteran-Owned businesses

requested a list of MWDBE and/or Veteran subcontractors or suppliers from LFUCG Economic Engine and showed evidence of contacting the companies on the list(s).

Contacted organizations that work with MWDBE companies for assistance in finding certified MWDBE firms and Veteran-Owned businesses to work on this project. Those contacted and their responses should be a part of the bidder's good faith efforts documentation.

Sent written notices, by certified mail, email or facsimile, to qualified, certified MWDBEs soliciting their participation in the contract not less than seven (7) days prior to the deadline for submission of bids to allow them to participate effectively.

Followed up initial solicitations by contacting MWDBEs and Veteran-Owned businesses to determine their level of interest.

Provided the interested MWDBE firm and/or Veteran-Owned business with adequate and timely information about the plans, specifications, and requirements of the contract.

Selected portions of the work to be performed by MWDBE firms and/or Veteran-Owned businesses in order to increase the likelihood of meeting the contract goals. This includes, where appropriate, breaking out contract work

items into economically feasible units to facilitate MWDBE and Veteran participation, even when the prime contractor may otherwise perform these work items with its own workforce

____ Negotiated in good faith with interested MWDBE firms and Veteran-Owned businesses not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection should be so noted in writing with a description as to why an agreement could not be reached.

____ Included documentation of quotations received from interested MWDBE firms and Veteran-Owned businesses which were not used due to uncompetitive pricing or were rejected as unacceptable and/or copies of responses from firms indicating that they would not be submitting a bid.

____ Bidder has to submit sound reasons why the quotations were considered unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a MWDBE and/or Veteran-Owned business's quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy MWDBE and Veteran goals.

____ Made an effort to offer assistance to or refer interested MWDBE firms and Veteran-Owned businesses to obtain the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal

____ Made efforts to expand the search for MWBE firms and Veteran-Owned businesses beyond the usual geographic boundaries.

Other--any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include MWDBE and Veteran participation.

NOTE: Failure to submit any of the documentation requested in this section may be cause for rejection of bid. Bidders may include any other documentation deemed relevant to this requirement which is subject to approval by the MBE Liaison. Documentation of Good Faith Efforts must be submitted with the Bid, if the participation Goal is not met.

The undersigned acknowledges that all information is accurate. Any misrepresentations may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and claims.

HASTINGS AIR ENERGY CONTROL

Company

11-6-16

Date

Daniel J. Bohrer
DANIEL J BOHRER
Company Representative
VICE PRESIDENT SALES
Title

Best regards,
HASTINGS air energy control inc

Matthew Johnson
c: 317.417.3629
p: 800.236.8450

If you received this message in error, please notify the sender and delete this message and any attachments This electronic message is confidential and intended solely for the use of the addressee.

From: Matthew Johnson
Sent: Wednesday, November 02, 2016 3:16 PM
To: 'gwen@greenboxair.com'
Subject: Need Quote ASAP for List of Lexington Fire Stations

Gwen,

Thank you for providing the needed info

I need to replace all interior Duct at the list of Stations attached

Want a quote to tear out and reinstall and duct work with Lindab Duct

Please call me 3174173629

I need this info ASAP

Best regards,
HASTINGS air energy control inc

Matthew Johnson
c: 317.417.3629
p: 800.236.8450

If you received this message in error, please notify the sender and delete this message and any attachments This electronic message is confidential and intended solely for the use of the addressee.

From: Matthew Johnson [<mailto:matthewajohnson9@aol.com>]
Sent: Wednesday, November 02, 2016 3:12 PM
To: Matthew Johnson
Subject: Need Quote ASAP for List of Lexington Fire Stations

From: Matthew Johnson
Sent: Wednesday, November 02, 2016 4:11 PM
To: 'bgcc@windstream.net'
Subject: FW: Need Quote ASAP for List o Lexington Fire Stations

Mark,

I need to replace all interior Duct at the list o Stations attached

This duct is in the Apparatus Bay and is for a Diesel Exhaust Removal System

Want a quote to tear out and reinstall and duct work with (Lindab Duct)

Thank you for providing the needed info

Please call me 3174173629

I need this info ASAP

Best regards,
HASTINGS air energy control inc

Matthew Johnson
c: 317.417.3629
p: 800.236.8450

If you received this message in error, please notify the sender and delete this message and any attachments This electronic message is confidential and intended solely for the use of the addressee.

From: Matthew Johnson [<mailto:matthewajohnson9@aol.com>]
Sent: Wednesday, November 02, 2016 3:12 PM
To: Matthew Johnson
Subject: Need Quote ASAP for List o Lexington Fire Stations

From: Matthew Johnson
Sent: Wednesday, November 02, 2016 4:01 PM
To: 'bruce@lagco.com'
Subject: Need Quote ASAP for List of Lexington Fire Stations

Thank you for providing the needed info

I need to replace all interior Duct at the list of Stations attached

Want a quote to tear out and reinstall and duct work with Lindab Duct

Please call me 3174173629

I need this info ASAP

Best regards,
HASTINGS air energy control inc

Matthew Johnson
c: 317.417.3629
p: 800.236.8450

If you received this message in error, please notify the sender and delete this message and any attachments This electronic message is confidential and intended solely for the use of the addressee.

From: Matthew Johnson [<mailto:matthewajohnson9@aol.com>]
Sent: Wednesday, November 02, 2016 3:12 PM
To: Matthew Johnson
Subject: Need Quote ASAP for List of Lexington Fire Stations

From: Matthew Johnson
Sent: Wednesday, November 02, 2016 3:32 PM
To: 'bgcc@windstream.net'
Subject: Need Quote ASAP for List o Lexington Fire Stations

Thank you for providing the needed info

I need to replace all interior Duct at the list o Stations attached

Want a quote to tear out and reinstall and duct work with Lindab Duct

Please call me 3174173629

I need this info ASAP

Best regards,
HASTINGS air energy control inc

Matthew Johnson
c: 317.417.3629
p: 800.236.8450

If you received this message in error, please notify the sender and delete this message and any attachments. This electronic message is confidential and intended solely for the use of the addressee.

From: Matthew Johnson [<mailto:matthewajohnson9@aol.com>]
Sent: Wednesday, November 02, 2016 3:12 PM
To: Matthew Johnson
Subject: Need Quote ASAP for List o Lexington Fire Stations

From: Matthew Johnson
Sent: Wednesday, November 02, 2016 3:23 PM
To: 'cmgservicesllc@gmail.com'
Subject: Need Quote ASAP for List of Lexington Fire Stations

Thank you for providing the needed info

I need to replace all interior Duct at the list of Stations attached

Want a quote to tear out and reinstall and duct work with Lindab Duct

Please call me 3174173629

I need this info ASAP

Best regards,
HASTINGS air energy control inc

Matthew Johnson
c: 317.417.3629
p: 800.236.8450

If you received this message in error, please notify the sender and delete this message and any attachments This electronic message is confidential and intended solely for the use of the addressee.

From: Matthew Johnson [mailto:matthewajohnson9@aol.com]
Sent: Wednesday, November 02, 2016 3:12 PM
To: Matthew Johnson
Subject: Need Quote ASAP for List of Lexington Fire Stations

From: Matthew Johnson
Sent: Wednesday, November 02, 2016 4:21 PM
To: 'abednegoconstruction@yahoo.com'
Subject: Need Quote ASAP for List of Lexington Fire Stations

I need to replace all interior Duct at the list of Stations attached

This duct is in the Apparatus Bay and is for a Diesel Exhaust Removal System

Want a quote to tear out and reinstall and duct work with (Lindab Duct)

Thank you for providing the needed info

Please call me 3174173629

I need this info ASAP

Best regards,
HASTINGS air energy control inc

Matthew Johnson
c: 317.417.3629
p: 800.236.8450

If you received this message in error, please notify the sender and delete this message and any attachments This electronic message is confidential and intended solely for the use of the addressee.

From: Matthew Johnson [<mailto:matthewajohnson9@aol.com>]
Sent: Wednesday, November 02, 2016 3:12 PM
To: Matthew Johnson
Subject: Need Quote ASAP for List of Lexington Fire Stations

From: Matthew Johnson

Sent: Wednesday, November 02, 2016 3:18 PM

To: 'sam@armedforcesconstruction.com'

Subject: Need Quote ASAP for List o Lexington Fire Stations

Sam,

Thank you for providing the needed info

I need to replace all interior Duct at the list o Stations attached

Want a quote to tear out and reinstall and duct work with Lindab Duct

Please call me 3174173629

I need this info ASAP

Best regards,

HASTINGS air energy control inc

Matthew Johnson

c: 317.417.3629

p: 800.236.8450

If you received this message in error, please notify the sender and delete this message and any attachments. This electronic message is confidential and intended solely for the use of the addressee.

From: Matthew Johnson [<mailto:matthewajohnson9@aol.com>]

Sent: Wednesday, November 02, 2016 3:12 PM

To: Matthew Johnson

Subject: Need Quote ASAP for List o Lexington Fire Stations

8. **AUTHENTICATION OF BID AND STATEMENT OF NON-COLLUSION, NON-CONFLICT OF INTEREST**

I hereby swear (or affirm) under the penalty for false swearing:

1. That I am the Bidder (if the Bidder is an individual), a partner of the Bidder (if the Bidder is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the Bidder is a corporation);
2. That the attached bid has been arrived at by the Bidder independently, and has been submitted without collusion with, and without any agreement, understanding or planned common course of action, with any other contractor, vendor of materials, supplies, equipment or services described in the Invitation to Bid, designed to limit independent bidding or competition;
3. That the contents of the bid or bids have not been communicated by the Bidder or its employees or agents to any person not an employee or agent of the Bidder or its surety on any bond furnished, with the bid or bids, and will not be communicated to any such person, prior to the official opening of the bid or bids;
4. That the Bidder is legally entitled to enter into the contracts with the Lexington-Fayette Urban County Government, and is not in violation of any prohibited conflict of interest;
5. (Applicable to corporation only) That as a foreign corporation, we are registered with the Secretary of State, Commonwealth of Kentucky, and authorized to do business in the State ✓ or, that as a domestic corporation, we are in good standing with the Secretary of State, Commonwealth of Kentucky . Check the statement applicable.
6. This offer is for 60 calendar days from the date this bid is opened. In submitting the above, it is expressly agreed that, upon proper acceptance by the Lexington-Fayette Urban County Government of any or all items bid above, a contract shall thereby be created with respect to the items accepted.
7. That I have fully informed myself regarding the accuracy of the statements made in this statement.
8. That I certify that Subcontractors have not and will not be awarded to any firm(s) that have been debarred from noncompliance with the Federal Labor Standards, Title VI of the Civil Rights Act of 1964 As Amended, Executive Order 11246 As Amended or any other Federal Law.

9. STATEMENT OF EXPERIENCE

NAME OF INDIVIDUAL: David Bohrer

POSITION/TITLE: President

STATEMENT OF EXPERIENCE: Sales Representative, Installer, Service Person for
44 years. President for the last 25 years.

NAME OF INDIVIDUAL: Michael Bohrer

POSITION/TITLE: Vice President, Finance

STATEMENT OF EXPERIENCE: Bookkeeper and financial responsibilities for 38
years. V.P. of finance for 18 years.

NAME OF INDIVIDUAL: Daniel Bohrer

POSITION/TITLE: Vice President, Sales

STATEMENT OF EXPERIENCE: Sales representative, installer and service person
for 38 years. V.P. of sales for 18 years.

NAME OF INDIVIDUAL: Dennis Bohrer

POSITION/TITLE: Vice President, Operations

STATEMENT OF EXPERIENCE: Service and installation for 38 years Service

Manager for 27 years

NAME OF INDIVIDUAL: DuWayne Bohrer

POSITION/TITLE: Secretary

STATEMENT OF EXPERIENCE: Service and Installation person for 18 years. Sales
Representative of 15 years

NAME OF INDIVIDUAL: Mary Comer

POSITION/TITLE: Sales Representative

STATEMENT OF EXPERIENCE: In the Vehicle Exhaust Industry for 20 + years

* Include all officers, office management's, Affirmative Action officials, and field management personnel. (Attach separate sheets if necessary.)

9. STATEMENT OF EXPERIENCE

NAME OF INDIVIDUAL: Matthew Johnson

POSITION/TITLE: Sales Representative

STATEMENT OF EXPERIENCE: Sales and Distributing of building products for
15 years. Vehicle Exhaust Industry 2 years

NAME OF INDIVIDUAL: Leah Krueger

POSITION/TITLE: Payroll Manager

STATEMENT OF EXPERIENCE: CPA and HR experience. With Hastings
for 15 years

NAME OF INDIVIDUAL: Kevin Rohde

POSITION/TITLE: General Manager

STATEMENT OF EXPERIENCE: Leadership in industry throughout his career.
With Hastings for 8 years.

NAME OF INDIVIDUAL: Tom Karth

POSITION/TITLE: Service Manager

STATEMENT OF EXPERIENCE: Factory Trained Service Technition transferred
to Service Department Lead. 12 years experience

10. EQUAL OPPORTUNITY AGREEMENT

The Law

- * Title VII of the Civil Rights Act of 1964 (amended 1972) states that it is unlawful for an employer to discriminate in employment because of race, color, religion, sex, age (40-70 years) or national origin.
- * Executive Order No. 11246 on Nondiscrimination under Federal contract prohibits employment discrimination by contractor and subcontractor doing business with the Federal Government or recipients of Federal funds. This order was later amended by Executive Order No. 11375 to prohibit discrimination on the basis of sex.
- * Section 503 of the Rehabilitation Act of 1973 States:
The Contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap.
- * Section 2012 of the Vietnam Era Veterans Readjustment Act of 1973 requires Affirmative Action on behalf of disabled veterans and veterans of the Vietnam Era by contractors having Federal Contracts.
- * Section 206 (A) of Executive Order 12086, Consolidation of Contract Compliance Functions for Equal Employment Opportunity, states:
The Secretary of Labor may investigate the employment practices of any Government contractor or sub-contractor to determine whether or not the contractual provisions specified in Section 202 of this order have been violated.

The Lexington-Fayette Urban County Government practices Equal Opportunity in recruiting, hiring and promoting. It is the Government's intent to affirmatively provide employment opportunities for those individuals who have previously not been allowed to enter into the mainstream of society. Because of its importance to the local Government, this policy carries the full endorsement of the Mayor, Commissioners, Directors, and all supervisory personnel. In following this commitment to Equal Employment Opportunity and because the Government is the benefactor of the Federal funds, it is both against the Urban County Government policy and illegal for the Government to let contracts to companies which knowingly or unknowingly practice discrimination in their employment practices. Violation of the above mentioned ordinances may cause a contract to be canceled and the contractor may be declared ineligible for future consideration.

Please sign this statement in the appropriate space acknowledging that you have read and understand the provisions contained herein. Return this document as part of your application packet.

Bidders

I/We agree to comply with the Civil Rights Laws listed above that govern employment rights of minorities, women, Vietnam veterans, handicapped, and aged persons.



Hastings Air Energy Control

Signature

Name of Business

The Entity (regardless of whether construction contractor, non-construction contractor or supplier) agrees to provide equal opportunity in employment for all qualified persons, to prohibit discrimination in employment because of race, color, creed, national origin, sex or age, and to promote equal employment through a positive, continuing program from itself and each of its sub-contracting agents. This program of equal employment opportunity shall apply to every aspect of its employment policies and practices.

The Kentucky equal Employment Opportunity Act of 1978 (KRS 45.560-45.640) requires that any count, city, town, school district, water district, hospital district, or other political subdivision of the state shall include in directly or indirectly publicly funded contracts for supplies, materials, services, or equipment hereinafter entered into the following provisions:

During the performance of this contract, the contractor agrees as follows:

- (1) *The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, age or national origin;*
- (2) *The contractor will state in all solicitations or advertisements for employees placed by or on behalf of the contractors that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, age or national origin;*
- (3) *The contract will post notices in conspicuous places, available to employees and applicants for employment, setting forth the provisions of the non-discrimination clauses required by this section; and*
- (4) *The contractor will send a notice to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding advising the labor union or workers' representative of the contractor's commitments under the nondiscrimination clauses.*

The Act further provides:

KRS 45.610. Hiring minorities – Information required

- (1) *For the length of the contract, each contractor shall hire minorities from other sources within the drawing area, should the union with which he has collective bargaining agreements be unwilling to supply sufficient minorities to satisfy the agreed upon goals and timetable.*
- (2) *Each contractor shall, for the length of the contract, furnish such information as required by KRS 45.560 to KRS 45.640 and by such rules, regulations and orders issued pursuant thereto and will permit access to all books and records pertaining to his employment*

practices and work sites by the contracting agency and the department for purposes of investigation to ascertain compliance with KRS 45.560 to 45.640 and such rules, regulations and orders issued pursuant thereto.

KRS 45.620. Action against contractor – Hiring of minority contractor or subcontractor

- (1) If any contractor is found by the department to have engaged in an unlawful practice under this chapter during the course of performing under a contract or subcontract covered under KRS 45.560 to 45.640, the department shall so certify to the contracting agency and such certification shall be binding upon the contracting agency unless it is reversed in the course of judicial review.*
- (2) If the contractor is found to have committed an unlawful practice under KRS 45.560 to 45.640, the contracting agency may cancel or terminate the contract, conditioned upon a program for future compliance approved by the contracting agency and the department. The contracting agency may declare such a contractor ineligible to bid on further contracts with that agency until such time as the contractor complies in full with the requirements of KRS 45.560 – 45.640.*
- (3) The equal employment provisions of KRS 45.560 to 45.640 may be met in part by a contractor by subcontracting to a minority contractor or subcontractor. For the provisions of KRS 45.560 to 45.640, a minority contractor or subcontractor shall mean a business that is owned and controlled by one or more persons disadvantaged by racial or ethnic circumstances.*

KRS 45.630 Termination of existing employee not required, when

Any provision of KRS 45.560 to 45.640 notwithstanding, no contractor shall be required to terminate an existing employee upon proof that that employee was employed prior to the date of the contract.

KRS 45.640 Minimum skills

Nothing in KRS 45.560 to 45.640 shall require a contractor to hire anyone who fails to demonstrate the minimum skills required to perform a particular job.

It is recommended that all of the provisions quoted above to be included as special conditions in each contract. In the case of a contract exceeding \$250,000, the contractor is required to furnish evidence that his work-force in Kentucky is representative of the available work-force in the area from which he draws employees, or to supply an Affirmative Action plan which will achieve such representation during the life of the contract.

11. **EQUAL EMPLOYMENT OPPORTUNITY AFFIRMATIVE ACTION POLICY**

It is the policy of HASTINGS AIR ENERGY CONTROL, INC.

to assure that all applicants for employment and all employees are treated on a fair and equitable basis without regard to their race, religion, sex, color, handicap, natural origin or age.

Such action shall include employment, promotion, demotion, recruitment or recruitment advertising, layoff or termination, rates of pay and other forms of compensation, and selection for training, whether apprenticeship and/or on-the-job-training.

Furthermore, this company agrees to make special recruitment efforts to hire the protected class whenever feasible. This company also agrees to adhere to all applicable federal, state, and local laws relating to Equal Employment Opportunity for all individuals.

12. WORKFORCE ANALYSIS FORM

Name of Organization: HASTINGS AIR ENERGY CONTROL

Categories	Total		White (Not Hispanic or Latino)		Hispanic or Latino		Black or African-American (Not Hispanic or Latino)		Native Hawaiian and Other Pacific Islander (Not Hispanic or Latino)		Asian (Not Hispanic or Latino)		American Indian or Alaskan Native (not Hispanic or Latino)		Two or more races (Not Hispanic or Latino)		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Administrators	8	2	6	2											6	2		
Professionals	18	3	15	3	3										15	3		
Superintendents																		
Supervisors																		
Foremen																		
Technicians																		
Protective Service																		
Para-Professionals																		
Office/Clerical	8	6	2	6											2	6		
Skilled Craft																		
Service/Maintenance	8		8												8			
Total:	42	11	31	11											31	11		

Prepared by: Leah Krueger Accountant/Payroll Manager
(Name and Title)

Date: 11 / 5 / 2016

Revised 2015-Dec-15

13. EVIDENCE OF INSURABILITY

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT CONSTRUCTION PROJECT
(Use separate form for each Agency or Brokerage agreeing to provide coverage)

Name Insured: Hastings Air Energy Control Inc Employee ID: _____
 Address: 5555 S Westridge Dr, New Berlin WI 53151 Phone: _____

Project to be insured: Bid No. 146-2016 Lexington, KY

In lieu of obtaining certificates of insurance at this time, the undersigned agrees to provide the above Named Insured with the minimum coverage listed below. These are outlined in the Insurance and Risk Management of Part V (Special Conditions), including all requirements, and conditions.

Section Items	Coverage	Minimum Limits and Policy Requirements	Limits Provided To Insured	Name of Insurer	A.M. Best's Code	Rating
SC-3, Section 2, Part 4.1 - see provisions	CGI	\$1,000,000 per occ. And \$2,000,000 aggregate	\$ 1M occ / \$2M agg	The Cincinnati Insurance Company	10677	A+ . XV
SC-3, Section 2, Part 4.1 - see provisions	AUTO	\$2,000,000/per occ.	\$ 1M combined single limit & \$9M umbrella	The Cincinnati Insurance Company	10677	A+ . XV
SC-3, Section 2, Part 4.1 - see provisions	WC	Statutory w /endorsement as noted	\$ Statutory	The Cincinnati Casualty Company	28665	A+ . XV

Section 2 includes required provisions, statements regarding insurance requirements, and the undersigned agrees to abide by all provisions for the coverage's checked above unless stated otherwise when submitting.

Agency or Brokerage: Robertson Ryan & Associates Inc
 20975 Swenson Dr, Suite 175
 Street Address: Waukesha WI 53186
 City: _____ State: _____ Zip: _____
 Telephone Number: (414) 271-3575

Name of Authorized Representative: Paul Kihlsinger
 Agent/Producer: _____
 Title: Paul F. Kihlsinger
 Authorized Signature: _____
 Date: 11/3/16

NOTE: Authorized signatures may be the agent's if agent has placed insurance through an agency agreement with the insurer. If insurance is brokered, authorized signature must be that of authorized representative of insurer.

IMPORTANT: Contract may not be awarded if a completed and signed copy of this form for all coverage's listed above is not provided with the bid.

14. DEBARRED FIRMS

PROJECT NAME: EMERGENCY RESPONSE VEHICLE EXHAUST REMOVAL SYSTEM

BID NUMBER: BID 146-2016

**LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
LEXINGTON, KY**

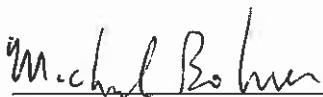
All prime Contractors shall certify that Subcontractors have not and will not be awarded to any firms that has been debarred for noncompliance with the Federal Labor Standards, Title VI of the Civil Rights Act of 1964 As Amended, Executive Order 11246 As Amended or any other Federal Law.

All bidders shall complete the attached certification in duplicate and submit both copies to the Owner with the bid proposal. The Owner (grantee) shall transmit one copy to the Lexington-Fayette Urban County Government, Division of Community Development, within fourteen (14) days after bid opening.

The undersigned hereby certifies that the firm of HASTINGS AIR ENERGY CONTROL has not and will not award a subcontract, in connection with any contract award to it as the result of this bid, to any firm that has been debarred for noncompliance with the Federal labor Standards, Title VI of the civil Rights Act of 1964, Executive Order 11246 as amended or any Federal Law.

HASTINGS AIR ENERGY CONTROL

Name of Firm Submitting Bid



Michel Bohrer

Signature of Authorized Official

VICE PRESIDENT, FINANCE

Title

11/7/16
Date

15. DEBARMENT CERTIFICATION

All contractors/subcontractors shall complete the following certification and submit it with the bid proposal.

The contractor/subcontractor certifies in accordance with Executive Order 12549 (Debarment and Suspension 2/18/86) that to the best of its knowledge and belief, that it and its principals:

- 1) Are not presently debarred, suspended, proposed for debarment, declared negligible, or voluntarily excluded from covered transactions or contract by any Federal department or agency for noncompliance with the Federal Labor Standards, Title VI of the Civil Rights Act of 1964 as amended, Executive Order 11246 as amended or any other Federal law;
 - a) Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - b) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(a) of this certification; and
 - c) Have not within a three year period preceding this bid has one or more public (Federal, State or local) transactions or contracts terminated for cause or default.
- 2) Where the contractor is unable to certify to any of the statements in this certification, such prospective contractors shall attach an explanation to this certification form.

Firm Name: Hastings Air Energy Control

Project: EMERGENCY RESPONSE VEHICLE EXHAUST REMOVAL SYSTEM

Printed Name and Title of Authorized Representative: Michael Bohrer, Vice President Finance

Signature: Michael Bohrer

Date: 11/7/16

END OF SECTION

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GENERAL CONDITIONS
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PART IV

GENERAL CONDITIONS

1. DEFINITIONS

Wherever used in these General Conditions or the other Contract Documents, the following terms have the meanings indicated which are applicable to both the singular and plural thereof.

1.1 Addenda

Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bid Documents or the Contract Documents.

1.2 Agreement

The written agreement between OWNER and CONTRACTOR covering the Work to be performed; other Contract Documents are attached to the Agreement and made a part thereof as provided therein.

1.3 Application for Payment

The form accepted by CONSULTANT which is to be used by CONTRACTOR in requesting progress or final payments and which is to include such supporting documentation as is required by the Contract Documents.

1.4 Bid

The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

1.5 Bidder

An individual, partnership, or corporation, who submit a Bid for a prime contract with the OWNER, for the Work described in the proposed Contract Documents.

1.6 Bonds

Bid, performance and payment bonds and other instruments of security.

1.7 Calendar Day

A calendar day of twenty-four hours measured from midnight to the next midnight shall constitute a day.

1.8 Change Order

A document recommended by CONSULTANT, which is signed by CONTRACTOR and OWNER and authorizes an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract Time, issued on or after the Effective Date of the Agreement.

1.9 Contract Documents

The Advertisement for Bidders, Information for Bidders, Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR'S Bid (including documentation accompanying the Bid and any post-bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Bonds, these General Conditions, the Special Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all amendments, modifications and supplements.

1.10 Contract Unit Price

The monies payable by OWNER to CONTRACTOR under the Contract Documents as stated in the Agreement. Unit Prices are to be firm for the term of this Contract.

1.11 Contract Time

The number of consecutive calendar days between the date of issuance of the Notice to Proceed and the contract completion date.

1.12 CONTRACTOR

The person, firm or corporation with whom OWNER has entered into the Agreement.

1.13 Defective

An adjective which when modifying the word Work refers to Work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or has been damaged prior to CONSULTANT'S recommendation of final payment (unless responsibility for the protection thereof has been assumed by OWNER).

1.14 Drawings

The drawings which show the character and scope of the Work to be performed and which have been prepared or approved by CONSULTANT and are referred to in the Contract Documents.

1.15 Effective Date of the Agreement

The date indicated in the Agreement on which it becomes effective.

1.16 CONSULTANT

The Lexington-Fayette Urban County Government or its authorized representative.

1.17 Field Order

A documented order issued by CONSULTANT which orders minor changes in the Work, but which does not involve a change in the Contract Price or the Contract Time.

1.18 Giving Notice

Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

1.19 Laws and Regulations

Laws, rules, regulations, ordinances, codes and/or orders.

1.20 Notice of Award

The written notice by OWNER to the apparent successful bidder stating that upon compliance by the apparent successful bidder with the conditions enumerated therein, within the time specified, OWNER will sign and deliver the Agreement.

1.21 Notice to Proceed

A written notice given by OWNER to CONTRACTOR fixing the date on which the Contract Time will commence to run and on which CONTRACTOR shall start to perform CONTRACTOR'S obligations under the Contract Documents.

1.22 OWNER

The Lexington-Fayette Urban County Government.

1.23 Partial Utilization

Placing a portion of the Work in service for the purpose for which it is intended (or related purpose) before reaching Completion for all the Work.

1.24 Project

The total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.

1.25 Inspector

The authorized representative who is assigned to the site or any part thereof.

1.26 Shop Drawings

All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for CONTRACTOR to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by CONTRACTOR to illustrate material or equipment for some portion of the Work.

1.27 Specifications

Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and

workmanship as applied to the Work and certain administrative details applicable thereto.

1.28 Standard Specifications

The "Standard Specifications for Road and Bridge Construction", Transportation Cabinet, Department of Highways, Commonwealth of Kentucky, current edition. MUTCD shall refer to the "Manual of Uniform Traffic Control Devices.

1.29 Subcontractor

An individual, firm or corporation having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the site.

1.30 Special Conditions

The part of the Contract Documents which amends or supplements these General Conditions.

1.31 Supplier

A manufacturer, fabricator, supplier, distributor, materialman or vendor.

1.32 Underground Facilities

All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

1.33 Unit Price Work

Not applicable

1.34 Work

The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work is the result of performing services, furnishing labor and furnishing and incorporating materials and equipment into the construction, all as required by the Contract Documents.

1.35 Time Period

When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

2. PRELIMINARY MATTERS

2.1 Delivery of Bonds

When the CONTRACTOR delivers the executed Agreements to OWNER, CONTRACTOR shall also deliver to OWNER, such Bonds, Insurance Certificate, and Power of Attorney as CONTRACTOR may be required to furnish.

2.2 Copies of Documents

Owner shall furnish to CONTRACTOR up to three copies (unless otherwise specified in the Special Conditions) of the Contract Documents as are reasonably necessary for the execution of the Work. Additional copies will be furnished, upon request, at the cost of reproduction.

2.3 Commencement of Contract Time; Notice to Proceed

The Contract Time will commence to run on the day specified in the Notice to Proceed.

2.4 Starting the Project

CONTRACTOR shall start to perform the Work on the date when the Contract Time commences to run, but no Work shall be done at the site prior to the date on which the Contract Time commences to run.

2.5 Before Starting Construction

Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. CONTRACTOR shall promptly report in writing to CONSULTANT any conflict, error or discrepancy which CONTRACTOR may discover and shall obtain a written interpretation or clarification from CONSULTANT before proceeding with any Work affected thereby; however, CONTRACTOR shall not be liable to OWNER or CONSULTANT for failure to report any conflict, error or discrepancy in the Contract Documents, unless CONTRACTOR had actual knowledge thereof or should reasonably have known thereof.

2.6 Submittal of Schedules

Within ten days after the effective date of the Agreement (unless otherwise specified) CONTRACTOR shall submit to CONSULTANT for review:

2.6.1 an estimated progress schedule indicating the starting and completion dates of the various stages of the Work;

2.6.2 a preliminary schedule of Shop Drawing submissions; and

2.6.3 a preliminary schedule of values for all of the Work which will include quantities and prices of items aggregating the Contract Price and will subdivide the Work into costs per labor and materials by specification

section to serve as the basis for progress payments during construction. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work which will be confirmed in writing by CONTRACTOR at the time of submission. Schedule of values shall be submitted on AIA G702/703 forms, or approved equal.

2.7 Preconstruction Conference

Before CONTRACTOR starts the Work at the proposed site, a conference attended by CONTRACTOR, CONSULTANT, EEO-Affirmative Action Officer, and other appropriate parties will be held to discuss the following issues: (1) The scheduling of the Work to be completed; (2) The procedures for handling shop drawings and other submittals; (3) The processing of applications for payment; (4) The establishment of an understanding among the involved parties in regard to the proposed project; and (5) The establishment of procedures for effectively implementing the LFUCG's 10% minimum DBE goals.

2.8 Finalizing Schedules

At least ten days before submission of the first Application for Payment a conference attended by CONTRACTOR, CONSULTANT and others as appropriate will be held to finalize the schedules submitted in accordance with paragraph 2.6. The finalized progress schedule will be acceptable to CONSULTANT as providing orderly progression of the Work to completion within the Contract Time, but such acceptance will neither impose on CONSULTANT responsibility for the progress or scheduling of the Work nor relieve CONTRACTOR from full responsibility thereof. The finalized schedule of Shop Drawing submissions will be acceptable to CONSULTANT as providing a workable arrangement for processing the submissions. The finalized schedule of values will be acceptable to CONSULTANT as to form and substance.

3. CONTRACT DOCUMENTS: INTENT, CONFLICTS, AMENDING AND REUSE

3.1 General

The Contract Documents comprise the entire agreement between OWNER and CONTRACTOR concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the law of the place of the Project.

3.2 Intent

It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any Work, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result will be supplied whether or not specifically called for. When words which have a well-known technical or trade meaning are used to describe Work, materials or equipment such words shall be

interpreted in accordance with that meaning. Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or laws or regulations in effect at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of OWNER, CONTRACTOR or CONSULTANT, or any of their consultants, agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign to CONSULTANT, or any of CONSULTANT'S consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 8.12.3 or 8.12.4. Clarifications and interpretations of the Contract Documents shall be issued by CONSULTANT as provided in paragraph 8.4.

3.3 Conflicts

If, during the performance of the Work, CONTRACTOR finds a conflict, error or discrepancy in the Contract Documents, CONTRACTOR shall so report to CONSULTANT in writing at once and before proceeding with the Work affected thereby shall obtain a written interpretation or clarification from CONSULTANT; however, CONTRACTOR shall not be liable to OWNER or CONSULTANT for failure to report any conflict, error or discrepancy in the Contract Documents unless CONTRACTOR had actual knowledge thereof or should reasonably have known thereof.

In resolving such conflicts, errors and discrepancies, the documents shall be given precedence in the following order:

1. Agreement
2. Field and Change Orders
3. Addenda
4. Special Conditions
5. Instruction to Bidders
6. General Conditions
7. Specifications and Drawings

Figure dimension on drawings shall govern over scale dimensions and detailed Drawings shall govern over general Drawings.

3.4 Amending and Supplementing Contract Documents

The Contract Documents may be amended to provide for additions, deletions and revisions in the Work or to modify the terms and conditions thereof by means of a Change Order or a Field Order. Contract Price and Contract Time may only be changed by a Change Order.

3.5 Reuse of Documents

Neither CONTRACTOR nor any Subcontractor or Supplier or other person or organization performing or furnishing any of the Work under a direct or indirect contract with OWNER shall have or acquire any title to or ownership rights in any of the Drawings, Specifications or other documents (or copies of any thereof) prepared by or bearing the seal of CONSULTANT; and they shall not reuse any of them on extensions of the Project or any other project without written consent of OWNER and CONSULTANT and specific written verification or adaptation by CONSULTANT.

4. AVAILABILITY OF LANDS; PHYSICAL CONDITIONS, REFERENCE POINTS

4.1 Availability of Lands

OWNER shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for the use of CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by OWNER, unless otherwise provided in the Contract Documents. If CONTRACTOR believes that any delay in OWNER'S furnishing these lands, rights-of-way or easements entitles CONTRACTOR to an extension of the Contract Time, CONTRACTOR may make a claim therefor as provided in Article 11. CONSULTANT shall determine if the claim is legitimate or not. CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.2 Physical Conditions

4.2.1 Explorations and Reports

Reference is made to the Special Conditions for identification of those reports of explorations and tests of subsurface conditions at the site that have been utilized by CONSULTANT in preparation of the Contract Documents. CONTRACTOR may rely upon the accuracy of the technical data contained in such reports, but not upon non-technical data, interpretations or opinions contained therein or for the completeness thereof for CONTRACTOR'S purposes. Except as indicated in the immediately preceding sentence and in paragraph 4.2.6, CONTRACTOR shall have full responsibility with respect to subsurface conditions at the site.

4.2.2 Existing Structures

Reference is made to the Special Conditions for identification of those drawings of physical conditions in or relating to existing surface and

subsurface structures (except Underground Facilities referred to in paragraph 4.3 which are at or contiguous to the site that have been utilized by CONSULTANT in preparation of the Contract Documents. CONTRACTOR may rely upon the accuracy of the technical data contained in such drawings, but not for the completeness thereof for CONTRACTOR'S purposes. Except as indicated in the immediately preceding sentence and in paragraph 4.2.6, CONTRACTOR shall have full responsibility with respect to physical conditions in or relating to such structures.

4.2.3 Report of Differing Conditions

If CONTRACTOR believes that:

4.2.3.1 any technical data on which CONTRACTOR is entitled to rely as provided in paragraphs 4.2.1 and 4.2.2 is inaccurate, or

4.2.3.2 any physical conditions uncovered or revealed at the site differ materially from that indicated, reflected or referred to in the Contract Documents,

CONTRACTOR shall, promptly after becoming aware thereof and before performing and WORK in connection therewith (except in an emergency) notify OWNER and CONSULTANT in writing about the inaccuracy or difference.

4.2.4 CONSULTANT'S Review

CONSULTANT will promptly review the pertinent conditions, determine the necessity of obtaining additional explorations or tests with respect thereto and advise CONTRACTOR of CONSULTANT'S findings and conclusions.

4.2.5 Possible Document Change

If CONSULTANT concludes that there is a material error in the Contract Documents or that because of newly discovered conditions a change I the Contract Documents is required, a Change Order will be issued as provided in Article 10 to reflect and document the consequences of the inaccuracy or difference.

4.2.6 Possible Price and Time Adjustments

In each such case, an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, or any combination thereof, will be allowable to the extent that they are attributable to any such inaccuracy or difference.

4.3 Physical Conditions-Underground Facilities

4.3.1 Shown or Indicated

The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is

based on information and data furnished to OWNER or CONSULTANT by the owners of such underground facilities or by others. Unless it is otherwise expressly provided in the Special Conditions:

4.3.1.1 OWNER and CONSULTANT shall not be responsible for the accuracy or completeness of any such information or data; and,

4.2.1.2 CONTRACTOR shall have full responsibility for reviewing and checking all such information and data; for locating all underground facilities shown or indicated in the Contract Documents; for coordination of the Work with the owners of such underground facilities during construction; and for the safety and protection thereof and repairing any damage thereto resulting from the Work, the cost of all of which will be considered as having been included in the Contract Price.

4.3.2 Not Shown or Indicated

If an underground facility is uncovered or revealed at or contiguous to the site which was not shown or indicated in the Contract Documents and which CONTRACTOR could not reasonably have been expected to be aware of, CONTRACTOR shall, promptly after becoming aware thereof and before performing any Work affected thereby (except in an emergency), identify the owner of such Underground Facility and give written notice thereof to that owner and to OWNER and CONSULTANT. CONSULTANT will promptly review the underground facility to determine the extent to which the Contract Documents should be modified to reflect and document the consequences of the existence of the Underground Facility, and the Contract Documents will be amended or supplemented to the extent necessary. During such time, CONTRACTOR shall be responsible for the safety and protection of such underground facility. CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, to the extent that they are attributable to the existence of any underground facility that was not shown or indicated in the Contract Documents and which CONTRACTOR could not reasonably have been expected to be aware of.

4.4 Reference Points

OWNER shall provide engineering surveys to establish reference points for construction which in CONSULTANT'S judgment are necessary to enable CONTRACTOR to proceed with the Work. CONTRACTOR shall be responsible for laying out the Work (unless otherwise specified), shall protect and preserve the established reference points and shall make no changes or relocations without the prior written approval of OWNER. CONTRACTOR shall report to CONSULTANT whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points by a Registered Land Surveyor.

5. CONTRACTOR'S RESPONSIBILITIES

5.1 Supervision

CONTRACTOR shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall assure that all CONTRACTOR personnel (including subcontractors, etc.) conduct themselves in a courteous and respectful manner toward the CONSULTANT and the general public. CONTRACTOR shall keep at the Project Site during the progress of the Work a competent project manager/superintendent and all necessary assistants, all of whom shall be satisfactory to OWNER. OWNER reserves the right to reject CONTRACTOR'S construction superintendent and project management personnel if they are unsatisfactory to OWNER and upon such rejection CONTRACTOR shall designate and provide competent successors. Failure to comply with this condition of the Contract will result in immediate suspension of the Work. Following a review by the Commissioner of Public Works, the Contract may be terminated (see GC section 14). CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences and procedures of construction, but CONTRACTOR shall not be responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract Documents. CONTRACTOR shall be responsible to see that the finished Work complies accurately with the Contract Documents.

5.2 Superintendence

CONTRACTOR shall keep on the Work at all times during its progress a competent resident superintendent, who shall not be replaced without written notice to OWNER and CONSULTANT except under extraordinary circumstances. The superintendent will be CONTRACTOR'S representative at the site and shall have authority to act on behalf of CONTRACTOR. All communications given to the superintendent shall be as binding as if given to CONTRACTOR.

5.3 Labor

CONTRACTOR shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the site. OWNER reserves the right to require CONTRACTOR to remove from the Project any of its personnel, or subcontractor's personnel for violating LFUCG Policies, Rules or Regulations. Except in connection with the safety or protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed during regular working hours, and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday or any legal holiday without OWNER'S written consent given after prior written notice to CONSULTANT.

5.4 Start-Up and Completion of Work

Unless otherwise specified, CONTRACTOR shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and completion of the Work.

5.5 Materials and Equipment

All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. If required by CONSULTANT, CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable supplier except as otherwise provided in the Contract Documents; but no provision of any such instructions will be effective to assign to CONSULTANT, or any of CONSULTANT'S consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 8.12.3 or 8.12.4.

5.5.1 Not Clearly Specified or Indicated

In all instances where materials specified are obtainable in different sizes, weights, trade grades, qualities or finishes, etc., whose weights, trade grades, qualities or finishes, etc., are not clearly specified or indicated on the Drawings, the CONTRACTOR shall notify the CONSULTANT of all such instances at least five (5) days in advance of receiving the proposals. The CONSULTANT will then determine which size, weight, trade grade, quality, finish, etc., is required.

5.5.2 Coordination of Work

The CONTRACTOR shall see that for his own Work and for the work of each subcontractor, proper templates and patterns necessary for the coordination of the various parts of the Work are prepared. The CONTRACTOR shall furnish or require the Subcontractor to furnish such duplicates as will enable the Subcontractors to fit together and execute fully their respective portions of the Work.

5.6 Adjusting Progress Schedule

CONTRACTOR shall submit to CONSULTANT for acceptance (to the extent indicated in paragraph 2.8) adjustments in the progress schedule to reflect the impact thereon of new developments; these will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the Contract Documents applicable thereto.

5.7 Substitutes or "Or-Equal" Items

5.7.1 General

Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular supplier, the naming of the item is intended to establish the type, function, and quality required. Unless the name is followed by words indicating that no substitution is permitted, materials or equipment of other Suppliers may be accepted by OWNER/CONSULTANT if sufficient information is submitted by CONTRACTOR to allow OWNER/CONSULTANT to determine that the material or equipment proposed is equivalent or equal to that named. The procedure for review by OWNER/CONSULTANT will include the following. Requests for review of substitute items of material and equipment will not be accepted by OWNER/CONSULTANT from anyone, other than CONTRACTOR. If CONTRACTOR wishes to furnish or use a substitute item of material or equipment, CONTRACTOR shall make written application to OWNER/CONSULTANT for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified. The application will state that the evaluation and acceptance of the proposed substitute will not prejudice CONTRACTOR'S achievement of completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) to adapt the design to the proposed substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which shall be considered by OWNER/CONSULTANT in evaluating the proposed substitute. OWNER/CONSULTANT may require CONTRACTOR to furnish at CONTRACTOR'S expense additional data about the proposed substitute.

5.7.2 Substitutes

If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, CONTRACTOR may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to OWNER/CONSULTANT, if CONTRACTOR submits sufficient information to allow OWNER/CONSULTANT to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents. The procedure for review by OWNER/CONSULTANT will be

similar to that provided in paragraph 5.7.1 as applied by OWNER/CONSULTANT.

5.7.3 OWNER/CONSULTANT'S Approval

OWNER/CONSULTANT will be allowed a reasonable time within which to evaluate each proposed substitute. OWNER/CONSULTANT will be the sole judge of acceptability, and no substitute will be ordered, installed or utilized without OWNER/CONSULTANT'S prior written acceptance which will be evidenced by either a Change Order or an approved Shop Drawing. OWNER may require CONTRACTOR to furnish at CONTRACTOR'S expense a special performance guarantee or other surety with respect to any substitute. OWNER/CONSULTANT will record time required by OWNER/CONSULTANT and OWNER/CONSULTANT'S consultants in evaluating substitutions proposed by CONTRACTOR and in making changes in the Contract Documents occasioned thereby. Whether or not OWNER/CONSULTANT accepts a proposed substitute, CONTRACTOR shall reimburse OWNER for the charges of OWNER/CONSULTANT and OWNER/CONSULTANT'S consultants for evaluating each proposed substitute.

5.8 Subcontractors, Suppliers, and Others

5.8.1 Acceptable to CONSULTANT

CONTRACTOR shall not employ any Subcontractor, Supplier or other person or organization (including those acceptable to OWNER and CONSULTANT as indicated in paragraph 5.8.2), whether initially or as a substitute, against whom OWNER or CONSULTANT may have reasonable objection. CONTRACTOR shall not be required to employ any Subcontractor, Supplier or other person or organization to furnish or perform any of the Work against whom CONTRACTOR has reasonable objection.

5.8.2 Objection After Due Investigation

If the Contract Documents require the identity of certain Subcontractors, Suppliers or other persons or organizations (including those who are to furnish the principal items of materials and equipment) to be submitted to OWNER in advance of the specified date prior to the Effective Date of the Agreement for acceptance by OWNER and CONSULTANT and if CONTRACTOR has submitted a list thereof, OWNER'S or CONSULTANT'S acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the bidding documents or the Contract Documents) of any such Subcontractor, Supplier or other person or organization so identified may be revoked on the basis of reasonable objection after due investigation, in which case CONTRACTOR shall submit an acceptable substitute. No acceptance by OWNER or CONSULTANT of any such Subcontractor, Supplier or other

person or organization shall constitute a waiver of any right of OWNER or CONSULTANT to reject defective Work.

5.8.3 Contractor Responsible for Acts of Subcontractors

The CONTRACTOR shall perform on the site, and with its own organization, work equivalent to at least fifty (50) percent of the total amount of Work to be performed under the Contract. This percentage may be reduced by a supplemental agreement to this Contract if, during performing the Work, the CONTRACTOR requests a reduction and the Urban County project manager determines that the reduction would be to the advantage of the Urban County Government.

The CONTRACTOR shall, at the time he submits his proposal for the Contract, notify the OWNER in writing of the names of Subcontractors proposed for the Work. He shall not employ any Subcontractor without the prior written approval of the OWNER.

CONTRACTOR shall be fully responsible to OWNER and CONSULTANT for all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR just as CONTRACTOR is responsible for CONTRACTOR'S own acts and omissions. Nothing in the Contract Documents shall create any contractual relationship between OWNER or CONSULTANT and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of OWNER or CONSULTANT to pay or to see to the payment of any moneys due any such Subcontractor, Supplier or other person or organization except as may otherwise be required by Laws and Regulations.

5.8.4 Division of Specifications

The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

5.8.5 Agreement Between Contractor and Subcontractors

All Work performed for CONTRACTOR by a Subcontractor will be pursuant to an appropriate agreement between CONTRACTOR and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of OWNER and CONSULTANT.

5.8.6 Statements and Comments by CONTRACTOR

Neither the CONTRACTOR, his employees, nor his subcontractors shall at any time make any statement or comment as to the project scope, nature, intention, design, or construction

method to any third party or parties without the explicit written consent of the OWNER.

Any third party requesting such information shall be referred to the OWNER or his representative.

Should there be any change from the original intent of the project as a result of any statement or comment by the contractor, his employees or subcontractors, contractor shall be held liable for any change in the scope, nature, design, or construction method and shall bear the full cost for the previously mentioned changes.

5.9 Patent Fees and Royalties

CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others.

5.10 Permits

Unless otherwise provided in the Special conditions, CONTRACTOR shall obtain and pay for all construction permits and licenses. OWNER shall assist CONTRACTOR, when necessary, in obtaining such permits and licenses. CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of opening of Bids, or if there are no Bids on the Effective Date of the Agreement. CONTRACTOR shall pay all charges of utility owners for connections to the Work, and OWNER shall pay all charges of such utility owners for capital costs related thereto such as plant investment fees.

5.11 Laws and Regulations

5.11.1 CONTRACTOR to Comply

CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to furnishing and performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither OWNER nor CONSULTANT shall be responsible for monitoring CONTRACTOR'S compliance with any Laws and Regulations.

5.11.2 Specifications and Drawings at Variance

If CONTRACTOR observes that the Specifications or Drawings are at variance with any Laws or Regulations, CONTRACTOR shall give CONSULTANT prompt written notice thereof, and any necessary changes will be authorized by one of the methods indicated in paragraph 3.4. If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to such Laws, or Regulations, and without such notice to CONSULTANT, CONTRACTOR shall bear all costs arising therefrom; however, it shall not be CONTRACTOR'S primary responsibility to make certain that the Specifications and Drawings are in accordance with such Laws and Regulations.

Any party, firm or individual submitting a proposal pursuant to invitation must have paid all taxes owed to the Lexington-Fayette Urban County Government at the time the proposal is submitted, and must maintain a "current" status in regard to those taxes throughout the Contract. If applicable, business must be licensed in Fayette County.

5.12 Taxes

CONTRACTOR shall pay all sales, consumer, use and other similar taxes required to be paid by CONTRACTOR in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work. Any party, firm or individual submitting a proposal pursuant to invitation must have paid all taxes owed to the Lexington-Fayette Urban County Government at the time the proposal is submitted, and must maintain a "current" status in regard to those taxes throughout the Contract. If applicable, business must be licensed in Fayette County.

5.13 Use of Premises

5.13.1 Project Site

CONTRACTOR shall confine construction equipment, the storage of materials and equipment and the operations of workers to the staging areas or work site areas identified in and permitted by the Contract Documents and other land and areas permitted by Laws and Regulations, rights-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such

land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the Work. Should any claim be made against OWNER or CONSULTANT by any such owner or occupant because of the performance of the Work, CONTRACTOR shall promptly attempt to settle with such other party by agreement or otherwise resolve the claim by arbitration or at law. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold OWNER and CONSULTANT harmless from and against all claims, damages, losses and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any such other party against OWNER or CONSULTANT to the extent based on a claim arising out of CONTRACTOR'S performance of the Work.

5.13.2 Clean UP

During the progress of the Work, CONTRACTOR shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work, CONTRACTOR shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the site clean and ready for occupancy by OWNER. CONTRACTOR shall restore to original condition all property not designated for alteration by the Contract Documents.

5.13.1 Loading of Structures

CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

5.14 **Record Drawings**

CONTRACTOR shall maintain in a safe place at the site one record copy of all Drawings, Specifications, Addenda, Change Orders, Field Orders and written interpretations and clarifications (issued pursuant to paragraph 9.4) in good order and annotated to show all changes made during construction. These record documents together with all approved samples and a counterpart of all approved Shop Drawings will be available to CONSULTANT for reference. Upon completion of the Work, these record documents, samples and Shop Drawings will be delivered to CONSULTANT for OWNER.

5.15 **Shop Drawings and Samples**

5.15.1 Shop Drawing Submittals

After checking and verifying all field measurements and after complying

with applicable procedures specified, CONTRACTOR shall submit to CONSULTANT for review and approval in accordance with the accepted schedule of Shop Drawing submissions (see paragraph 2.8), or for other appropriate action if so indicated in the Special Conditions, five copies (unless otherwise specified) of all Shop Drawings, which will bear a stamp or specific written indication that CONTRACTOR has satisfied CONTRACTOR'S responsibilities under the Contract Documents with respect to the review of the submission. All submissions will be identified as CONSULTANT may require. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to enable CONSULTANT to review the information as required.

5.15.2 Sample Submittals

CONTRACTOR shall also submit to CONSULTANT for review and approval with such promptness as to cause no delay in Work, all samples required by the Contract Documents. All samples will have been checked by and accompanied by a specific written indication that CONTRACTOR has satisfied CONTRACTOR'S responsibilities under the Contract Documents with respect to the review of the submission and will be identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended.

5.15.3 Review by CONTRACTOR

Before submission of each Shop Drawing or sample CONTRACTOR shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar data with respect thereto and reviewed or coordinated each Shop Drawing or sample with other Shop Drawings and samples and with the requirements of the Work and the Contract Documents.

5.15.4 Notice of Variation

At the time of each submission, CONTRACTOR shall give CONSULTANT specific written notice of each variation that the Shop Drawings or samples may have from the requirements of the Contract Documents, and, in addition, shall cause a specific notation to be made on each Shop Drawing submitted to CONSULTANT for review and approval of each such variation.

5.15.5 CONSULTANT'S Approval

CONSULTANT will review and approve with reasonable promptness Shop Drawings and samples, but CONSULTANT'S review and approval will be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequence or

procedure of construction is indicated in or required by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions. CONTRACTOR shall make corrections required by CONSULTANT, and shall return the required number of corrected copies of Shop Drawings and submit, as required, new samples for review and approval. CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by CONSULTANT on previous submittals.

5.15.6 Responsibility for Errors and Omissions

CONSULTANT'S review and approval of Shop Drawings or samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has in writing called CONSULTANT'S attention to each such variation at the time of submission as required by paragraph 5.15.4 and CONSULTANT has given written approval of each such variation by a specific written notation thereof incorporated in or accompanying the Shop Drawing or sample approval; nor will any approval by CONSULTANT relieve CONTRACTOR from responsibility for errors or omissions in the Shop Drawings or from responsibility for having complied with the provisions of paragraph 5.15.3.

5.15.7 Cost of Related Work

Where a Shop or sample is required by the Specifications, any related Work performed prior to CONSULTANT'S review and approval of the pertinent submission will be the sole expense and responsibility of CONTRACTOR.

5.16 Continuing the Work

CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with OWNER. No Work shall be delayed or postponed pending resolutions of any disputes or disagreements, except as permitted by paragraph 14.5 or as CONTRACTOR and OWNER may otherwise agree in writing.

5.17 Erosion and Sediment Control

5.17.1 General Environmental Requirements

The CONTRACTOR and Subcontractors performing work on projects on behalf of the OWNER shall comply with all applicable federal, state, and local environmental regulations and all requirements and conditions set forth in "special" permits including but not limited to Corp of Engineers 404 permits, 401 Water Quality Certifications, Stream Crossing and Floodplain Encroachment Permits.

Any fines or penalties resulting from the failure to comply with the terms of the federal, state or local permits or perform necessary corrective action are solely the obligation of the CONTRACTOR.

5.17.2 Stormwater Pollution Prevention

A. The CONTRACTOR shall exercise due care to prevent or minimize any damage to any stream or wetland from pollution by debris, sediment or other material. The operation of equipment and/or materials in a jurisdictional wetland is expressly prohibited. Water that has been used for washing or processing, or that contains oils, sediments or other pollutants shall not be discharged from the job site. Such waters shall be collected and properly disposed of by the CONTRACTOR in accordance with applicable local, state and federal law.

B. The CONTRACTOR is solely responsible for securing all required state and local permits associated with stormwater discharges from the project including, but not necessarily limited to the KY Notice of Intent to Disturb (NOI) for Coverage of Storm Water Discharges Associated with Construction Activities under the KPDES Storm Water General Permit KYR100000 and the LFUCG, Land Disturbance Permit. Permit application preparation and all required documentation are the responsibility of the CONTRACTOR. The CONTRACTOR is solely responsible for maintaining compliance with the stormwater pollution prevention plan or erosion and sediment control plan and ensuring the following:

- a. That the Stormwater Pollution Prevention Plan (SWPPP) or erosion control plan is current and available for review on site;
- b. That any and all stormwater inspection reports required by the permit are conducted by qualified personnel and are available for review onsite; and
- c. That all best management practices (BMPs) are adequately maintained and effective at controlling erosion and preventing sediment from leaving the site.

C. The CONTRACTOR shall provide the necessary equipment and personnel to perform any and all emergency measures that may be required to contain any spillage or leakage and to remove materials, soils or liquids that become contaminated. The collected spill material shall be properly disposed at the CONTRACTOR's expense.

D. Upon completion of the work and with the concurrence of the OWNER, the CONTRACTOR must file a Notice of Termination (NOT) of Coverage Under the KPDES General Permit for Storm Water Discharges Associated with Construction Activity with the appropriate local and state authorities.

E. Any fines or penalties resulting from the failure to comply with the terms of the state or local stormwater permits or perform necessary corrective action are solely the obligation of the CONTRACTOR.

6. OTHER WORK

6.1 Related Work at Site

OWNER may perform other work related to the Project at the site by OWNER'S own forces, have other work performed by utility owners or let other direct contracts therefor which shall contain General Conditions similar to these. If the fact that such other work is to be performed was not noted in the Contract Documents, written notice thereof will be given to CONTRACTOR prior to starting any such other work; and, if such performance will involve additional expense to CONTRACTOR or requires additional time, a Change Order to the Contract will be negotiated.

6.2 Other Contractors or Utility Owners

CONTRACTOR shall afford each utility owner and other contractor who is a party to such a direct contract (or OWNER, if OWNER is performing the additional work with OWNER'S employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work, and shall properly connect and coordinate the Work with theirs. CONTRACTOR shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of CONSULTANT and the others whose work will be affected. The duties and responsibilities of CONTRACTOR under this paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of CONTRACTOR in said direct contracts between OWNER and such utility owners and other contractors.

6.3 Delays Caused by Others

If any part of CONTRACTOR'S Work depends for proper execution or results upon the work of any such other contractor or utility owner (or OWNER), CONTRACTOR shall inspect and promptly report to CONSULTANT in writing any delays, defects or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. CONTRACTOR'S failure so to report will constitute an acceptance of the other work as fit and proper for integration with CONTRACTOR'S Work except for latent or non-apparent defects and deficiencies in the other work.

6.4 Coordination

If OWNER contracts with others for the performance of other work on the Project at the site, the person or organization who will have authority and responsibility for coordination of the activities among the various prime contractors will be identified in the Special Conditions, and the specific matters to be covered by such authority and

responsibility will be itemized, and the extent of such authority and responsibilities will be provided, in the Special Conditions.

7. OWNER'S RESPONSIBILITIES

7.1 Communications

OWNER shall issue all communications to CONTRACTOR through CONSULTANT.

7.2 Data and Payments

OWNER shall furnish the data required of OWNER under the Contract Documents promptly after they are due.

7.3 Lands, Easements, and Surveys

OWNER'S duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.1 and 4.4. Paragraph 4.2 refers to OWNER'S identifying and making available to CONTRACTOR copies of reports of explorations and tests of subsurface conditions at the site and in existing structures which have been utilized by CONSULTANT in preparing the Drawings and Specifications.

7.4 Change Orders

OWNER is obligated to execute Change Orders as indicated in paragraph 9.4.

7.5 Inspections, Tests and Approvals

OWNER'S responsibility in respect to certain inspections, tests and approvals is set forth in paragraph 13.3.

7.6 Stop or Suspend Work

In connection with OWNER'S right to stop Work or suspend Work, see paragraph 12.4 and 14.1 Paragraph 14.2 deals with OWNER'S rights to terminate services of CONTRACTOR under certain circumstances.

8. CONSULTANT'S STATUS DURING CONSTRUCTION

8.1 OWNER'S Representative

CONSULTANT will be OWNER'S representative during the construction period. The duties and responsibilities and the limitations of authority of CONSULTANT as OWNER'S representative during construction are set forth in the Contract Documents and shall not be extended without written consent of OWNER and CONSULTANT.

8.2 Visits to Site

CONSULTANT will make visits to the site at intervals appropriate to the various stages of construction to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. CONSULTANT will not be required to make exhaustive or

continuous on-site inspections to check the quality or quantity of the Work. CONSULTANT'S efforts will be directed toward providing for OWNER a greater degree of confidence that the completed Work will conform to the Contract Documents. On the basis of such visits and on-site observations, CONSULTANT will keep OWNER informed of the progress of the Work and will endeavor to guard OWNER against defects and deficiencies in the Work.

8.3 Project Representation

CONSULTANT will provide an Inspector to assist CONSULTANT in observing the performance of the Work. If OWNER designates another agent to represent OWNER at the site who is not CONSULTANT'S agent or employee, the duties, responsibilities and limitations of authority of such other person will be as provided in the Special Conditions.

8.4 Clarifications and Interpretations

CONSULTANT will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as CONSULTANT may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents.

8.5 Authorized Variations in Work

CONSULTANT may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Time and are consistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order.

8.6 Rejecting Defective Work

CONSULTANT will have authority to disapprove or reject Work which CONSULTANT believes to be defective, and will also have authority to require special inspection or testing of the Work as provided in paragraph 12.3, whether or not the Work is fabricated, installed or completed.

8.7 Shop Drawings

In connection with CONSULTANT'S responsibility for Shop Drawings and samples, see paragraphs 5.15.1 through 5.16 inclusive.

8.8 Change Orders

In connection with CONSULTANT'S responsibilities as to Change Orders, see Articles 10, 11 and 12.

8.9 Payments

In connection with CONSULTANT'S responsibilities with respect to Applications for Payment, etc., see Article 13.

8.10 Determinations for Unit Prices

CONSULTANT will determine the actual quantities and classifications of Unit Price Work performed by CONTRACTOR.

CONSULTANT will review with CONTRACTOR CONSULTANT'S preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise).

8.11 Decision on Disputes

CONSULTANT will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes and other matters relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the performance and furnishing of the Work and claims under Articles 10 and 11 in respect of changes in the Contract Price or Contract Time will be referred initially to CONSULTANT in writing with a request for a formal decision in accordance with this paragraph, which CONSULTANT will render in writing within a reasonable time. Written notice of each such claim, dispute and other matter will be delivered to CONSULTANT promptly (but in no event later than thirty days) after the occurrence of the event giving rise thereto, and written supporting data will be submitted to CONSULTANT within sixty days after such occurrence unless CONSULTANT allows an additional period of time to ascertain more accurate data in support of the claim.

8.12 Limitations on CONSULTANT's Responsibilities

8.12.1 CONTRACTOR, Supplier, or Surety

Neither CONSULTANT'S authority to act under this Article 8 or elsewhere in the Contract Documents nor any decision made by CONSULTANT in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of CONSULTANT to CONTRACTOR, any Subcontractor, any Supplier, or any other person or organization performing any of the Work, or to any surety for any of them.

8.12.2 To Evaluate the Work

Whenever in the Contract Documents the terms "as ordered", "as directed", "as required", "as allowed", "as approved" or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper", or "satisfactory" or adjectives or like "effect" or "import" are used to describe a requirement, direction, review or judgment of CONSULTANT as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the Work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign CONSULTANT any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 8.12.3 or 8.12.4.

8.12.3 CONTRACTOR'S Means, Methods, Etc.

CONSULTANT will not be responsible for CONTRACTOR'S means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, and CONSULTANT will not be responsible for CONTRACTOR'S failure to perform or furnish the Work in accordance with the Contract Documents.

8.12.4 Acts of Omissions of CONTRACTOR

CONSULTANT will not be responsible for the acts or omissions of CONTRACTOR or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

9. CHANGES IN THE WORK

9.1 OWNER May Order Change

Without invalidating the Agreement and without notice to any surety, OWNER may, at any time or from time to time, order additions, deletions or revisions in the Work; these will be authorized by a Change Order. Upon receipt of such notice, CONTRACTOR shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

9.2 Claims

Claims for an increase or decrease in the Contract Price or an extension or shortening of the Contract Time that should be allowed as a result of a Change Order will be settled as provided for in Article 10 or Article 11.

9.3 Work Not in Contract Documents

CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Time with respect to any Work performed that is not required by the Contract Documents as amended, modified and supplemented as provided in paragraph 3.4, except in the case of an emergency and except in the case of uncovering Work as provided in paragraph 12.3.4.

9.4 Change Orders

OWNER and CONTRACTOR shall execute appropriate Change Orders covering:

9.4.1 changes in the Work which are ordered by OWNER pursuant to paragraph 9.1, are required because of acceptance of defective Work under paragraph 12.7 or corrective defective Work under paragraph 12.8, or are agreed to by the parties;

9.4.2 changes in the Contract Price or Contract Time which are agreed to by the parties; and

9.4.3 changes in the Contract Price or Contract Time which embody the substance of any written decision rendered by CONSULTANT pursuant to paragraph 8.11; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and REGULATIONS, but during any such appeal, CONTRACTOR shall carry on the Work and adhere to the progress schedule as provided in paragraph 5.16.

9.5 Notice of Change

If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Time) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be CONTRACTOR'S responsibility, and the amount of each applicable Bond will be adjusted accordingly.

10. CHANGE OF CONTRACT PRICE

10.1 Total Compensation

The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to CONTRACTOR for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by CONTRACTOR shall be at his expense without change in the Contract Price.

10.2 Claim for Increase or Decrease in Price

The Contract Price may only be changed by a Change Order. Any claim for an increase or decrease in the Contract Price shall be based on written notice delivered by the CONTRACTOR to the CONSULTANT promptly (but in no event later than thirty days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered within sixty days after such occurrence (unless CONSULTANT allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by CONTRACTOR'S written statement that the amount claimed covers all known amounts (direct, indirect, and consequential) to which the CONTRACTOR is entitled as a result of the occurrence of said event.

10.3 Value of Work

The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:

10.3.1 Unit Prices

Where the Work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved (subject to the provisions of paragraphs 10.9.1. through 10.9.3, inclusive).

10.3.2 Lump Sum

By mutual acceptance of a lump sum (which may include an allowance for overhead and profit not necessarily in accordance with paragraph 10.6.2.1).

10.3.3 Cost Plus Fee

On the basis of the Cost of the Work (determined as provided in paragraphs 10.4 and 10.5) plus a CONTRACTOR'S fee for overhead and profit (determined as provided in paragraphs 10.6 and 10.7).

10.4 Cost of the Work

The term Cost of the Work means the sum of all costs necessarily incurred and paid by CONTRACTOR in the proper performance of the Work. Except as otherwise may be agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project; shall include only the following items; and shall not include any of the costs itemized in paragraph 10.5:

10.4.1 Payroll Costs

Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the Work under schedules of job classifications agreed upon by OWNER and CONTRACTOR. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers' or workmen's compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. Such employees shall include superintendents and foremen at the site. The expenses of performing Work after regular working hours, on Saturday, Sunday or legal holidays, shall be included in the above to the extent authorized by OWNER.

10.4.2 Materials and Equipment Costs

Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates and refunds and all returns from sale of surplus materials and equipment shall accrue to OWNER, and CONTRACTOR shall make provisions so that they may be obtained.

10.4.3 Subcontractor Costs

Payments made by CONTRACTOR to the Subcontractors for Work performed by Subcontractors. If required by OWNER, CONTRACTOR shall obtain competitive bids from Subcontractors acceptable to CONTRACTOR and shall deliver such bids to OWNER who will then determine, with the advice of CONSULTANT, which bids will be accepted. If a subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work Plus a Fee, the Subcontractor's Cost of the Work shall be determined in the same manner as CONTRACTOR'S Cost of the Work. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.

10.4.4 Special Consultant Costs

Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys and accountants) employed for services specifically related to the Work.

10.4.5 Supplemental Costs

10.4.5.1 The proportion of necessary transportation, travel and subsistence expenses of CONTRACTOR'S employees incurred in discharge of duties connected with the Work.

10.4.5.2 Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost less market value of such items used but not consumed which remain the property of CONTRACTOR.

10.4.5.3 Rentals of all construction equipment and machinery and the parts thereof whether rented from CONTRACTOR or others in accordance with rental agreements approved by OWNER with the advice of CONSULTANT, and the costs of transportation, loading, unloading, installation, dismantling and removal shall be in accordance with terms of said rental agreements. The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the Work.

10.4.5.4 Sales, consumer, use or similar taxes related to the Work, and for which CONTRACTOR is liable, imposed by Laws and Regulations.

10.4.5.5 Deposits lost for causes other than negligence of CONTRACTOR, any Subcontractor or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

10.4.5.6 Losses and damages (and related expenses), not compensated by insurance or otherwise, to the Work or otherwise sustained by CONTRACTOR in connection with the performance and furnishing of the Work (except losses and damages within the deductible amounts of property insurance established by OWNER), provided they have resulted from causes other than the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages and expenses shall be included in the Cost of the Work for the purpose of determining CONTRACTOR'S fee. If, however, any such loss or damage requires reconstruction and CONTRACTOR is placed in charge thereof, CONTRACTOR shall be paid a fee proportionate to that stated in paragraph 10.6.2 for services.

10.4.5.7 The cost of utilities, fuel and sanitary facilities at the site.

10.4.5.8 Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the Work.

10.4.5.9 Cost of premiums for additional Bonds and insurance required because of changes in the Work and premiums for property insurance coverage within the limits of the deductible amounts established by OWNER.

10.5 Not to Be Included in Cost of the Work

The term Cost of the Work shall not include any of the following:

10.5.1 Costs of Officers and Executives

Payroll costs and other compensation of CONTRACTOR'S officers, executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by CONTRACTOR whether at the site or in CONTRACTOR'S principal or a branch office for general administration of

the Work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 10.4.1 or specifically covered by paragraph 10.4.4 - all of which are to be considered administrative costs covered by the CONTRACTOR'S fee.

10.5.2 Principal Office

Expenses of CONTRACTOR'S principal and branch offices other than CONTRACTOR'S office at the site.

10.5.3 Capital Expense

Any part of CONTRACTOR'S capital expenses, including interest on CONTRACTOR'S capital employed for the Work and charges against CONTRACTOR for delinquent payments.

10.5.4 Bonds and Insurance

Cost of premiums for all Bonds and for all insurance whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain the same (except for the cost of premiums covered by subparagraph 10.4.5.9 above).

10.5.5 Costs Due to Negligence

Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied and making good any damage to property.

10.5.6 Other Costs

Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 10.4.

10.6 Contractor's Fee

The CONTRACTOR'S Fee allowed to CONTRACTOR for overhead and profit shall be determined as follows:

10.6.1 a mutually acceptable fixed fee; or if none can be agreed upon,

10.6.2 a fee based on the following percentages of the various portions of the Cost of the Work:

10.6.2.1 for costs incurred under paragraphs 10.4.1 and 10.4.2, the CONTRACTOR'S fee shall be fifteen percent;

10.6.2.2 for costs incurred under paragraph 10.4.3, the CONTRACTOR'S fee shall be five percent; and if a subcontract is on the basis of Cost of the Work Plus a fee, the maximum allowable to CONTRACTOR on account of overhead and profit of all Subcontractors shall be fifteen percent;

10.6.2.3 no fee shall be payable on the basis of costs itemized under paragraphs 10.4.4, 10.4.5 and 10.5;

10.6.2.4 the amount of credit to be allowed by CONTRACTOR to OWNER for any such change which results in a net decrease in cost will be the amount of the actual net decrease plus a deduction in CONTRACTOR'S Fee by an amount equal to ten percent of the net decrease; and

10.6.2.5 when both additions and credits are involved in any one change, the adjustment in CONTRACTOR'S fee shall be computed on the basis of the net change in accordance with paragraphs 10.6.2.1 through 10.6.2.4, inclusive.

10.7 Itemized Cost Breakdown

Whenever the cost of any Work is to be determined pursuant to paragraph 10.4 or 10.5, CONTRACTOR will submit in form acceptable to CONSULTANT an itemized cost breakdown together with supporting data.

10.8 Cash Allowances

It is understood that CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be done by such Subcontractors or Suppliers and for such sums within the limit of the allowances as may be acceptable to CONSULTANT, CONTRACTOR agrees that:

10.8.1 Materials and Equipment

The allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the site, and all applicable taxes; and

10.8.2 Other Costs

CONTRACTOR'S costs for unloading and handling on the site, labor, installation costs, overhead, profit and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances. No demand for additional payment on account of any thereof will be valid.

10.8.3 Change Order

Prior to final payment, an appropriate Change Order will be issued as recommended by CONSULTANT to reflect actual amounts due CONTRACTOR on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

10.9 Unit Price Work

10.9.1 General

Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the established unit prices for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by CONSULTANT in accordance with Paragraph 8.10.

10.9.2 Overhead and Profit

Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR'S overhead and profit for each separately identified item.

10.9.3 Claim for Increase in Unit Price

Where the quantity of any item of Unit Price Work performed by CONTRACTOR differs materially and significantly from the estimated quantity of such item indicated in the Agreement and there is no corresponding adjustment with respect to any other item of Work and if CONTRACTOR believes that CONTRACTOR has incurred additional expense as a result thereof, CONTRACTOR may make a claim for an increase in the Contract Price in accordance with Article 10.

11. CHANGE OF CONTRACT TIME

11.1 Change Order

The Contract Time may only be changed by a Change Order. Any claim for an extension or shortening of the Contract Time shall be based on written notice delivered to CONSULTANT promptly (but in no event later than thirty days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the extent of the claim with supporting data shall be delivered within sixty days after such occurrence (unless CONSULTANT allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant has reason to believe it is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Time shall be determined by CONSULTANT in accordance with paragraph 8.11. No claim for an adjustment in the Contract Time will be valid if not submitted in accordance with the requirements of this paragraph 11.1.

11.2 Justification for Time Extensions

The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of CONTRACTOR if a claim is made therefore as provided in paragraph 11.1. Such delays shall include, but not be limited to, acts or neglect by OWNER or others performing additional work as contemplated by Article 6, or to fires, floods, labor disputes, epidemics, abnormal weather conditions or acts of God.

11.3 Time Limits

All time limits stated in the Contract Documents are of the essence of the Agreement. The provisions of this Article 11 shall not exclude recovery for damages (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court costs) for delay by either party.

12. WARRANTY AND GUARANTEE; TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

12.1 Warranty and Guarantee

CONTRACTOR warrants and guarantees to OWNER and CONSULTANT that all Work will be in accordance with the Contract Documents and will not be defective. All defective Work, whether or not in place, may be rejected, corrected or accepted as provided in this Article 12.

12.2 Access to Work

CONSULTANT and CONSULTANT'S representatives, other representatives of OWNER, testing agencies and governmental agencies with jurisdictional interests will have access to the Work at reasonable times for their observation, inspecting and testing. CONTRACTOR shall provide proper and safe conditions for such access.

12.3 Tests and Inspections

12.3.1 Timely Notice

CONTRACTOR shall give CONSULTANT timely notice of readiness of the Work for all required inspections, tests or approvals.

12.3.2 Requirements and Responsibilities

The CONSULTANT may require such inspection and testing during the course of the Work as he/she deems necessary to ascertain and assure the integrity and acceptable quality of the materials incorporated and the work performed. Inspection presence may be either full-time or intermittent, and neither the presence nor absence at any time of the CONSULTANT or the INSPECTOR shall relieve the CONTRACTOR of sole responsibility for the acceptability and integrity of the Work or any part thereof.

The costs of sampling, testing, and inspection on-site to ascertain acceptability of the Work and materials will be borne by the OWNER except as otherwise provided. The OWNER will select a testing laboratory to perform such sampling and testing. Sampling and/or testing required by the CONTRACTOR or necessitated by failure of Work or materials to meet the above acceptability test shall be at the expense of the CONTRACTOR.

Inspection services may be performed by the employees of the OWNER or by others selected or designated by the OWNER or the CONSULTANT.

Sampling and/or testing required for manufacturing quality and/or process control, for certification that raw mineral materials or manufactured products are the quality specified in the contract, or to assure the acceptability for incorporation into the Work shall be borne by the CONTRACTOR or the material supplier.

Cost for inspection, sampling, testing, and approvals required by the laws or regulations of any public body having competent jurisdiction shall be borne by the CONTRACTOR or the material supplier.

Sampling and testing will be in accord with pertinent codes and regulations and with appropriate standards of the American Society of Testing Materials or other specified standards.

12.3.3 On-Site Construction Test and Other Testing

All inspections, tests or approvals other than those required by Laws or Regulations of any public body having jurisdiction shall be performed by organizations acceptable to OWNER and CONTRACTOR (or by CONSULTANT if so specified).

12.3.4 Covered Work

If any Work (including the work of others) that is to be inspected, tested or approved is covered without written concurrence of CONSULTANT, it must, if requested by CONSULTANT, be uncovered for observation. Such uncovering shall be at CONTRACTOR'S expense unless CONTRACTOR has given CONSULTANT timely notice of CONTRACTOR'S intention to cover the same and CONSULTANT has not acted with reasonable promptness in response to such notice.

12.3.5 CONTRACTOR'S Obligation

Neither observations by CONSULTANT nor inspections, tests or approvals by others shall relieve CONTRACTOR from CONTRACTOR'S obligations to perform the Work in accordance with the Contract Documents.

12.4 **OWNER May Stop the Work**

If the Work is defective, or CONTRACTOR fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, OWNER may order CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of OWNER to stop the Work shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR or any other party.

12.5 **Correction or Removal of Defective Work**

If required by CONSULTANT, CONTRACTOR shall promptly, as directed, either correct all defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by CONSULTANT, remove it from the site and replace it with non-defective Work. CONTRACTOR shall bear all direct, indirect and consequential costs of such correction or removal (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) made necessary thereby.

12.6 **One Year Correction Period**

If within one year after the date of Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER'S written instructions, either correct such defective Work, or, if it has been rejected by OWNER, remove it from the site and replace it with non-defective Work. If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected or the rejected Work removed and replaced, and all direct, indirect and consequential costs of such removal and replacement

(including but not limited to fees and charges of engineers, architects, attorneys and other professionals) will be paid by CONTRACTOR. In special circumstances where a particular item of equipment is placed in continuous service before Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Change Order.

12.7 Acceptance of Defective Work

If, instead of requiring correction or removal and replacement of defective Work, OWNER prefers to accept it, OWNER may do so. CONTRACTOR shall bear all direct, indirect and consequential costs attributable to OWNER'S evaluation of and determination to accept such defective Work (such costs to be approved by CONSULTANT as to reasonableness and to include but not be limited to fees and charges of engineers, architects, attorneys and other professionals).

12.8 OWNER May Correct Defective Work

If CONTRACTOR fails within a reasonable time after written notice of CONSULTANT to proceed to correct and to correct defective Work or to remove and replace rejected Work as required by CONSULTANT in accordance with paragraph 12.5, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if CONTRACTOR fails to comply with any other provision of the Contract Documents, OWNER may, after seven days' written notice to CONTRACTOR, correct and remedy any such deficiency. In exercising the rights and remedies under this paragraph OWNER shall proceed expeditiously. To the extent necessary to complete corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the site, take possession of all or part of the Work, and suspend CONTRACTOR'S services related thereto, take possession of CONTRACTOR'S tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow OWNER, OWNER'S representatives, agents and employees such access to the site as may be necessary to enable OWNER to exercise the rights and remedies under this paragraph. All direct, indirect and consequential costs of OWNER in exercising such rights and remedies will be charged against CONTRACTOR in an amount approved as to reasonableness by CONSULTANT, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price. Such direct, indirect and consequential costs will include but not be limited to fees and charges of engineers, architects, attorneys and other professionals, all court costs and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of CONTRACTOR'S defective Work. CONTRACTOR shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by OWNER of OWNER'S rights and remedies hereunder.

13. PAYMENTS TO CONTRACTOR AND COMPLETION

13.1 Schedule of Values

The schedule of values established as provided in paragraph 2.8 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to CONSULTANT. Progress payments on account of Unit Price Work will be based on the number of units completed.

13.2 Application for Progress Payment

At least ten days before each progress payment is scheduled (but not more often than once a month), CONTRACTOR shall submit to CONSULTANT for review an Application for Payment filled out and signed by CONTRACTOR covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice or other documentation warranting that OWNER has received the materials and equipment free and clear of all liens, charges, security interests and encumbrances (which are hereinafter in these General Conditions referred to as "Liens") and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect OWNER'S interest therein, all of which will be satisfactory to OWNER. OWNER shall, within thirty (30) calendar days of presentation to him of an approved Application for Payment, pay CONTRACTOR the amount approved by CONSULTANT. Monthly progress payments shall be ninety (90) percent of the sum obtained by applying the respective bid unit prices to the approved estimated quantities of work completed by the Contractor during the preceding month. The remaining ten (10) percent will be held by the Owner, as retainage. At such time as the CONSULTANT deems appropriate - based on the quality of work performed, progress of cleanup, and other pertinent factors - the rate of retainage, or the total amount retained, may be reduced; although, any reduction in retainage, below the ten (10) percent level, is made solely at the CONSULTANT's discretion. All remaining retainage held will be included in the final payment to the Contractor.

13.3 CONTRACTOR'S Warranty of Title

CONTRACTOR warrants and guarantees that title to all Work, materials and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER no later than the time of payment free and clear of all Liens.

13.4 Review of Applications for Progress Payment

13.4.1 Submission of Application for Payment

CONSULTANT will, after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to OWNER, or return the Application to CONTRACTOR indicating in writing CONSULTANT'S reasons for refusing to recommend payment. In the latter case, CONTRACTOR may make the necessary corrections and resubmit the Application.

13.4.2 CONSULTANT'S Recommendation

CONSULTANT may refuse to recommend the whole or any part of any payment, if, in CONSULTANT'S opinion, it would be incorrect to make such representations to OWNER. CONSULTANT may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously recommended, to such extent as may be necessary in CONSULTANT'S opinion to protect OWNER from loss because:

13.4.2.1 the Work is defective, or completed Work has been damaged requiring correction or replacement;

13.4.2.2 the Contract Price has been reduced by Written Amendment or Change Order;

13.4.2.3 OWNER has been required to correct defective Work or complete Work in accordance with paragraph 12.8; or

13.4.2.4 of CONSULTANT's actual knowledge of the occurrence of any of the events enumerated in paragraphs 14.2.1 through 14.2.9 inclusive.

13.5 Partial Utilization

OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any such part of the Work which OWNER believes to be ready for its intended use and has been completed. If CONTRACTOR agrees, CONTRACTOR will certify to OWNER that said part of the Work is complete and request that a Certificate of Completion be issued for that part of the Work.

13.6 Final Inspection

Upon written notice from CONTRACTOR that the entire Work or an agreed portion thereof is complete, CONSULTANT will make a final inspection with CONTRACTOR and will notify CONTRACTOR in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. CONTRACTOR shall immediately take such measures as are necessary to remedy such deficiencies.

13.7 Final Application for Payment

After CONTRACTOR has completed all such corrections to the satisfaction of CONSULTANT and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked-up record documents (as provided in paragraph 5.14) and other documents - all as required by the Contract Documents, and after CONSULTANT has indicated that the Work is acceptable (subject to the provisions of paragraph 13.10), CONTRACTOR may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents, together with complete and legally effective releases or waivers (satisfactory to OWNER) of all Liens arising out of or filed in connection with the Work. In lieu thereof and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full; an affidavit of CONTRACTOR that the releases and receipts include all labor, services, material and equipment for which a Lien could be filed, and that all payrolls, material and equipment bills, and other indebtedness connected with the Work for which OWNER or OWNER'S property might in any way be responsible, have been paid or otherwise satisfied; and consent of the surety, if any, to final payment. If any Subcontractor or Supplier fails to furnish a release or receipt in full, CONTRACTOR may furnish a Bond or other collateral satisfactory to OWNER to indemnify OWNER against any Lien.

13.8 Final Payment and Acceptance

13.8.1 CONSULTANT'S Approval

If, on the basis of CONSULTANT'S observation of the Work during construction and final inspection, and CONSULTANT'S review of the final Application for Payment and accompanying documentation - all as required by the Contract Documents, CONSULTANT is satisfied that the Work has been completed and CONTRACTOR'S other obligations under the Contract Documents have been fulfilled, CONSULTANT will, after receipt of the final Application for Payment, indicate in writing CONSULTANT'S recommendation of payment and present the Application to OWNER for payment. Thereupon CONSULTANT will give written notice to OWNER and CONTRACTOR that the Work is acceptable, subject to the provisions of paragraph 13.10. Otherwise, CONSULTANT will return the Application to CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment, in which case CONTRACTOR shall make the necessary corrections and resubmit the Application.

13.8.2 Delay in Completion of Work

If, through no fault of CONTRACTOR, final completion of the Work is significantly delayed, OWNER shall, upon receipt of CONTRACTOR'S final Application for Payment and recommendation of CONSULTANT, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by OWNER for Work not fully completed or corrected is

less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 10 of Part II, Information for Bidders, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by CONTRACTOR to CONSULTANT with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

13.9 CONTRACTOR'S Continuing Obligation

CONTRACTOR'S obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by CONSULTANT, nor the issuance of a certificate of Completion, nor any payment by OWNER to CONTRACTOR under the Contract Documents, nor any use or occupancy of the Work or any part thereof by OWNER, nor any act of acceptance by OWNER nor any failure to do so, nor any review and approval of a Shop Drawing or sample submission, nor any correction of defective Work by OWNER will constitute an acceptance of Work not in accordance with the Contract Documents or a release of CONTRACTOR'S obligation to perform the Work in accordance with the Contract Documents (except as provided in paragraph 13.10).

13.10 Waiver of Claims

The making and acceptance of final payment will constitute:

13.10.1 a waiver of all claims by OWNER against CONTRACTOR, except claims arising from unsettled Liens, from defective Work appearing after final inspection or from failure to comply with the Contract Documents or the terms of any special guarantees specified therein; however, it will not constitute a waiver by OWNER of any rights in respect of CONTRACTOR'S continuing obligations under the Contract Documents; and

13.10.2 a waiver of all claims by CONTRACTOR against OWNER other than those previously made in writing and still unsettled.

14. SUSPENSION OF WORK AND TERMINATION

14.1 OWNER May Suspend Work

OWNER may, at any time and without cause, suspend the Work or any portion thereof for a period of not more than ninety days by notice in writing to CONTRACTOR and CONSULTANT which will fix the date on which Work will be resumed. CONTRACTOR shall resume the Work on the date so fixed. CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension if CONTRACTOR makes an approved claim therefor as provided in Articles 10 and 11.

14.2 OWNER May Terminate

The OWNER may terminate the Work upon the occurrence of any one or more of the following events:

14.2.1 if CONTRACTOR commences a voluntary case under any chapter of the Bankruptcy Code (Title 11, United States Code), as now or hereafter in effect, or if CONTRACTOR takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at such time relating to the bankruptcy or insolvency;

14.2.2 if a petition is filed against CONTRACTOR under any chapter of the Bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against CONTRACTOR under any other federal or state law in effect at the time relating to bankruptcy or insolvency;

14.2.3 if CONTRACTOR makes a general assignment for the benefit of creditors;

14.2.4 if a trustee, receiver, custodian or agent of CONTRACTOR is appointed under applicable law or under contract, whose appointment or authority to take charge of property of CONTRACTOR is for the purpose of enforcing a Lien against such property or for the purpose of general administration of such property for the benefit of CONTRACTOR'S creditors;

14.2.5 if CONTRACTOR admits in writing an inability to pay its debts generally as they become due;

14.2.6 if CONTRACTOR persistently fails to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.8 as revised from time to time);

14.2.7 if CONTRACTOR disregards Laws or Regulations of any public body having jurisdiction;

14.2.8 if CONTRACTOR disregards the authority of CONSULTANT, or

14.2.9 if CONTRACTOR otherwise violates in any substantial way any provisions of the Contract Documents;

OWNER may, after giving CONTRACTOR (and the surety) seven days' written notice and to the extent permitted by Laws and Regulations,

terminate the services of CONTRACTOR, exclude CONTRACTOR from the site and take possession of the Work and of all CONTRACTOR'S tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient. In such case CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct, indirect and consequential costs of completing the Work (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) such excess will be paid to CONTRACTOR. If such costs exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such costs incurred by OWNER will be approved as to reasonableness by CONSULTANT and incorporated in a Change Order, but when exercising any rights or remedies under this paragraph OWNER shall not be required to obtain the lowest price for the Work performed.

14.2.10 If safety violations are observed and brought to the Contractors attention and Contractor fails to take immediate corrective measures any repeat of similar safety violations, Owner will order an immediate termination of contract. Note: it is the Contractor's responsibility to know proper safety measures as they pertain to construction and OSHA.

14.2.11 This contract may be canceled by either party thirty (30) days after delivery by canceling party of written notice of intent to cancel to the other contracting party.

14.2.12 This contract may be canceled by the Lexington-Fayette Urban County Government if it is determined that the Bidder has failed to perform under the terms of this agreement, such cancellation to be effective upon receipt of written notice of cancellation by the Bidder.

14.3 CONTRACTOR'S Services Terminated

Where CONTRACTOR'S services have been so terminated by OWNER, the termination will not affect any rights or remedies of OWNER against CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due CONTRACTOR by OWNER will not release CONTRACTOR from liability.

14.4 Payment After Termination

Upon seven days' written notice to CONTRACTOR, OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the Work and terminate the Agreement. In such case, CONTRACTOR shall be paid for all Work executed and any expense sustained plus reasonable termination expenses, which

will include, but not be limited to, direct, indirect and consequential costs (including, but not limited to, fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs).

14.5 CONTRACTOR May Stop Work or Terminate

If, through no act or fault of CONTRACTOR, the Work is suspended for a period of more than ninety days by OWNER or under an order of court or other public authority, or CONSULTANT fails to act on any Application for Payment within sixty days after it is submitted, or OWNER fails for sixty days to pay CONTRACTOR any sum finally determined to be due, then CONTRACTOR may, upon seven days' written notice to OWNER and CONSULTANT, terminate the Agreement and recover from OWNER payment for all Work executed and any expense sustained plus reasonable termination expenses. In addition and in lieu of terminating the Agreement, if CONSULTANT has failed to act on an Application for Payment or OWNER has failed to make any payment as aforesaid, CONTRACTOR may upon seven days' written notice to OWNER and CONSULTANT stop the Work until payment of all amounts then due. The provisions of this paragraph shall not relieve CONTRACTOR of the obligations under paragraph 5.16 to carry on the Work in accordance with the progress schedule and without delay during disputes and disagreements with OWNER.

15. MISCELLANEOUS

15.1 Claims for Injury or Damage

Should OWNER or CONTRACTOR suffer injury or damage to person or property because of any error, omission or act of the other party or of any of the other party's employees or agents or others for whose acts the other party is legally liable, claim will be made in writing to the other party within a reasonable time of the first observance of such injury or damage. The provisions of this paragraph 15.1 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or repose.

15.2 Non-Discrimination in Employment

The CONTRACTOR shall comply with the following requirements prohibiting discrimination:

15.2.1 That no person (as defined in KRS 344.010) shall bid on Lexington-Fayette Urban County Government construction projects, or bid to furnish materials or supplies to the Lexington-Fayette Urban County Government, if, within six months prior to the time of opening of bids, said person shall have been found, by declaratory judgment action in Fayette Circuit Court, to be presently engaging in an unlawful practice, as hereinafter defined. Such declaratory judgment action may be brought by an aggrieved individual or upon an allegation that an effort at conciliation pursuant to KRS 344.200 has been attempted and failed, by the Lexington-Fayette County Human Rights Commission.

15.2.2 That it is an unlawful practice for an employer:

15.2.2.1 to fail or refuse to hire, or to discharge any individual or otherwise to discriminate against an individual, with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, sex, age, or national origin; or

15.2.2.2 to limit, segregate or classify his employees in any way which would deprive or tend to deprive an individual of employment opportunities or otherwise adversely affect his status as an employee because of such individual's sex, race, color, religion, age, or national origin.

15.2.3 That it is an unlawful practice for an employer, labor organization, or joint-labor management committee controlling apprenticeship or other training or retraining, including on-the-job training programs to discriminate against an individual because of his race, color, religion, sex, age, or national origin in admission to, or employment in, any program established to provide apprenticeship or other training.

15.2.4 That a copy of this Ordinance shall be furnished all suppliers and made a part of all bid specifications.

15.2.5 This Ordinance shall take effect after it is signed, published and recorded, as required by law.

15.3 Temporary Street Closing or Blockage

The CONTRACTOR will notify the CONSULTANT at least 72 hours prior to making any temporary street closing or blockage. This will permit orderly notification to all concerned public agencies. Specific details and restrictions on street closure or blockage are contained in the Special Conditions.

15.4 Percentage of Work Performed by prime CONTRACTOR

The CONTRACTOR shall perform on site, and with its own organization, Work equivalent to at least fifty (50%) percent of the total amount of Work to be performed under the Contract. This percentage may be reduced by a supplemental agreement to this Contract if, during performing the Work, the CONTRACTOR requests a reduction and the CONSULTANT determines that the reduction would be to the advantage of the OWNER.

15.5 Clean-up

Cleanup shall progress, to the greatest degree practicable, throughout the course of the Work. The Work will not be considered as completed, and final payment will not be made, until the right-of-way and all ground occupied or affected by the

Contractor in connection with the Work has been cleared of all rubbish, equipment, excess materials, temporary structures, and weeds. Rubbish and all waste materials of whatever nature shall be disposed of, off of the project site, in an acceptable manner. All property, both public and private, which has been damaged in the prosecution of the Work, shall be restored in an acceptable manner. All areas shall be draining, and all drainage ways shall be left unobstructed, and in such a condition that drift will not collect or scour be induced.

15.6 General

The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon CONTRACTOR by paragraphs 12.1, 12.3.5, 13.3, and 15.2 and all of the rights and remedies available to OWNER and CONSULTANT thereunder, are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply. All representations, warranties and guarantees made in the Contract Documents will survive final payment and termination or completion of the Agreement.

15.7 Debris Disposal

For all LFUCG projects any trash, construction demolition debris, yard waste, dirt or debris of any kind that is removed from the project site must be disposed of in accordance with local, state, and federal regulations. The disposal site or facility must be approved in advance by the LFUCG and disposal documentation is required. The Contractor will be responsible for payment of any fines associated with improper disposal of material removed from the project site.

END OF SECTION

PART V
SPECIAL CONDITIONS
INDEX

1 **BLASTING** SC-2

2 **RISK MANAGEMENT PROVISIONS –
INSURANCE AND INDEMNIFICATION** SC-3

3 **WAGE SCALE** SC-7

1. **BLASTING** – not applicable.

**2. RISK MANAGEMENT PROVISIONS
INSURANCE AND INDEMNIFICATION**

INDEMNIFICATION AND HOLD HARMLESS PROVISION

- (1) It is understood and agreed by the parties that Vendor hereby assumes the entire responsibility and liability for any and all damages to persons or property caused by or resulting from or arising out of any act or omission on the part of Vendor or its employees, agents, servants, owners, principals, licensees, assigns or subcontractors of any tier (hereinafter "Vendor") under or in connection with this agreement and/or the provision of goods or services and the performance or failure to perform any work required thereby.
- (2) Vendor shall indemnify, save, hold harmless and defend the Lexington-Fayette Urban County Government and its elected and appointed officials, employees, agents, volunteers, and successors in interest (hereinafter "LFUCG") from and against all liability, damages, and losses, including but not limited to, demands, claims, obligations, causes of action, judgments, penalties, fines, liens, costs, expenses, interest, defense costs and reasonable attorney's fees that are in any way incidental to or connected with, or that arise or are alleged to have arisen, directly or indirectly, from or by Vendor's performance or breach of the agreement and/or the provision of goods or services provided that: (a) it is attributable to personal injury, bodily injury, sickness, or death, or to injury to or destruction of property (including the loss of use resulting therefrom), or to or from the negligent acts, errors or omissions or willful misconduct of the Vendor; and (b) not caused solely by the active negligence or willful misconduct of LFUCG.
- (3) In the event LFUCG is alleged to be liable based upon the above, Vendor shall defend such allegations and shall bear all costs, fees and expenses of such defense, including but not limited to, all reasonable attorneys' fees and expenses, court costs, and expert witness fees and expenses, using attorneys approved in writing by LFUCG, which approval shall not be unreasonably withheld.
- (4) These provisions shall in no way be limited by any financial responsibility or insurance requirements, and shall survive the termination of this agreement.
- (5) LFUCG is a political subdivision of the Commonwealth of Kentucky. Vendor acknowledges and agrees that LFUCG is unable to provide indemnity or otherwise save, hold harmless, or defend the Vendor in any manner.

FINANCIAL RESPONSIBILITY

Vendor understands and agrees that it shall demonstrate the ability to assure compliance with these provisions prior to final acceptance of its bid and the commencement of any work or the provision of any goods.

INSURANCE REQUIREMENTS

YOUR ATTENTION IS DIRECTED TO THE INSURANCE REQUIREMENTS BELOW. YOU MAY NEED TO CONFER WITH YOUR INSURANCE AGENTS, BROKERS, OR CARRIERS TO DETERMINE IN ADVANCE OF SUBMISSION OF A RESPONSE THE AVAILABILITY OF THE INSURANCE COVERAGES AND ENDORSEMENTS REQUIRED HEREIN. IF YOU FAIL TO COMPLY WITH THE INSURANCE REQUIREMENTS BELOW OR THE INDEMNITY REQUIREMENTS, YOU MAY BE DISQUALIFIED FROM AWARD OF THE CONTRACT.

Required Insurance Coverage

Vendor shall procure and maintain for the duration of this contract the following or equivalent insurance policies at no less than the limits shown below and cause its subcontractors to maintain similar insurance with limits acceptable to LFUCG in order to protect LFUCG against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work or provision of goods hereunder by Vendor. The cost of such insurance shall be included in any bid:

<u>Coverage</u>	<u>Limits</u>
General Liability (Insurance Services Office Form CG 00 01)	\$1 million per occurrence, \$2 million aggregate or \$2 million combined single limit
Commercial Automobile Liability (Insurance Services Office Form CA 0001)	combined single limit, \$1 million per occurrence
Worker's Compensation	Statutory
Employer's Liability	\$500,000

The policies above shall contain the following conditions:

- a. All Certificates of Insurance forms used by the insurance carrier shall be properly filed and approved by the Department of Insurance for the Commonwealth of Kentucky. LFUCG shall be named as an additional insured in the General Liability Policy and Commercial Automobile Liability Policy using the Kentucky DOI approved forms.
- b. The General Liability Policy shall be primary to any insurance or self-insurance retained by LFUCG.
- c. The General Liability Policy shall include Products and Completed Operations coverage and Premises and Operations coverage unless it is deemed not to apply by LFUCG.
- d. The General Liability Policy shall include Products Liability coverage unless it is deemed not to apply by LFUCG.
- e. LFUCG shall be provided at least 30 days advance written notice via certified mail, return receipt requested, in the event any of the required policies are canceled or non-renewed.
- f. Said coverage shall be written by insurers acceptable to LFUCG and shall be in a form acceptable to LFUCG. Insurance placed with insurers with a rating classification of no less than Excellent (A or A-) and a financial size category of no less than VIII, as defined by the most current Best's Key Rating Guide shall be deemed automatically acceptable.

Renewals

After insurance has been approved by LFUCG, evidence of renewal of an expiring policy must be submitted to LFUCG, and may be submitted on a manually signed renewal endorsement form. If the policy or carrier has changed, however, new evidence of coverage must be submitted in accordance with these Insurance Requirements.

Deductibles and Self-Insured Programs

IF YOU INTEND TO SUBMIT A SELF-INSURANCE PLAN IT MUST BE FORWARDED TO LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT, DIVISION OF RISK MANAGEMENT, 200 EAST MAIN STREET, LEXINGTON, KENTUCKY 40507 NO LATER THAN A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO THE RESPONSE DATE. Self-insurance programs, deductibles, and self-insured retentions in insurance policies are subject to separate approval by Lexington-Fayette Urban County Government's Division of Risk Management, upon review of evidence of Vendor's financial capacity to respond to claims. Any such programs or retentions must provide LFUCG with at least the same protection from liability and defense of suits as would be afforded by first-dollar insurance coverage.

Safety and Loss Control

Vendor shall comply with all applicable federal, state, and local safety standards related to the performance of its works or services under this Agreement and take necessary action to protect the life, health and safety and property of all of its personnel on the job site, the public, and LFUCG.

Verification of Coverage

Vendor agrees to furnish LFUCG with all applicable Certificates of Insurance signed by a person authorized by the insurer to bind coverage on its behalf prior to final award, and if requested, shall provide LFUCG copies of all insurance policies, including all endorsements.

Right to Review, Audit and Inspect

Vendor understands and agrees that LFUCG may review, audit and inspect any and all of its records and operations to insure compliance with these Insurance Requirements.

DEFAULT

Vendor understands and agrees that the failure to comply with any of these risk management provisions shall constitute a default and that LFUCG may elect at its option any single remedy or penalty or any combination of remedies and penalties, as available, including but not limited to purchasing insurance and charging Vendor for any such insurance premiums purchased, or suspending or terminating the contract or work.

3. WAGE SCALES –

October 13, 2016

Sondra Stone
LFUCG
200 E. Main St.
Lexington KY 40507

Re: LFUCG, Emergency Response Vehicle Exhaust Removal System

Advertising Date as Shown on Notification: October 19, 2016

Dear Sondra Stone:

This office is in receipt of your written notification on the above project as required by KRS 337.510 (1).

I am enclosing a copy of the current prevailing wage determination number CR 2-012, dated December 22, 2015 for FAYETTE County. This schedule of wages shall be attached to and made a part of the specifications for the work, printed on the bidding blanks, and made a part of the contract for the construction of the public works between the public authority and the successful bidder or bidders.

The determination number assigned to this project is based upon the advertising date contained in your notification. There may be modifications to this wage determination prior to the advertising date indicated. In addition, if the contract is not awarded within 90 days of this advertising date or if the advertising date is modified, a different set of prevailing rates of wages may be applicable. It will be the responsibility of the public authority to contact this office and verify the correct schedule of the prevailing rates of wages for use on the project. Your project number is as follows: 034-B-01508-15-2, Building

Sincerely,



Michael C. Donta
Deputy Commissioner

**KENTUCKY LABOR CABINET
PREVAILING WAGE DETERMINATION
CURRENT REVISION
LOCALITY NO. 012**

FAYETTE COUNTY

Determination No. CR 2-012

Date of Determination: December 22, 2015

PROJECT NO. 034-B-01508-15-2

BLDG **HH**

This schedule of the prevailing rate of wages for Locality No. 012, which includes Fayette County, has been determined in accordance with the provisions of KRS 337.505 to 337.550. This determination shall be referred to as Prevailing Wage Determination No. CR 2-012.

Apprentices shall be permitted to work as such subject to Administrative Regulations 803 KAR 1:010. Copies of these regulations will be furnished upon request to any interested person.

Overtime is to be computed at not less than one and one-half (1 1/2) times the indicated BASE RATE for all hours worked in excess of eight (8) per day, and/or in excess of forty (40) per week. However, KRS 337.540 permits an employee and employer to agree, in writing, that the employee will be compensated at a straight time base rate for hours worked in excess of eight (8) hours in any one calendar day, but not more than ten (10) hours worked in any one calendar day, if such written agreement is prior to the over eight (8) hours in a calendar day actually being worked, or where provided for in a collective bargaining agreement. The fringe benefit rate is to be paid for each hour worked at a straight time rate for all hours worked. Fringe benefit amounts are applicable for all hours worked except when otherwise noted. Welders will receive rate for craft in which welding is incidental.

No laborer, workman or mechanic shall be paid at a rate less than that of the General Laborer except those classified as bona fide apprentices registered with the Kentucky State Apprenticeship Supervisor unless otherwise specified in this schedule of wage rates.

NOTE: The type of construction shall be determined by applying the following definitions.

BUILDING CONSTRUCTION

Building construction is the construction of sheltered enclosures with walk-in access for the purpose of housing persons, machinery, equipment, or supplies. It includes all construction of such structures, the installation of utilities and the installation of equipment, both above and below grade level, as well as incidental grading, utilities and paving.

HIGHWAY CONSTRUCTION

Highway construction includes the construction, alteration or repair of roads, streets, highways, runways, taxiways, alleys, trails, paths, parking areas, and other similar projects not incidental to building or heavy construction. It includes all incidental construction in conjunction with the highway construction project.

HEAVY CONSTRUCTION

Heavy projects are those projects that are not properly classified as either "building" or "highway". For example, dredging projects, water and sewer line projects, dams, flood control projects, sewage treatment plants and facilities, and water treatment plants and facilities are considered heavy.



Derrick K. Ramsey, Secretary
Kentucky Labor Cabinet

ASBESTOS/INSULATION WORKERS:		BASE RATE	\$25.11
		FRINGE BENEFITS	13.21

BOILERMAKERS:		BASE RATE	\$21.75
		FRINGE BENEFITS	11.76

BRICKLAYERS:		BASE RATE	\$24.31
Bricklayers:		FRINGE BENEFITS	11.40

Firebrick & Refractory:		BASE RATE	\$26.08
		FRINGE BENEFITS	11.42

Sawman & Layman:		BASE RATE	24.56
		FRINGE BENEFITS	11.40

CARPENTERS:		BASE RATE	\$22.96
Carpenters:	BUILDING	FRINGE BENEFITS	14.07
(Includes Drywall Finisher)			

Piledrivermen:	BUILDING	BASE RATE	\$23.46
		FRINGE BENEFITS	14.07

Carpenters:	HEAVY & HIGHWAY	BASE RATE	\$26.90
		FRINGE BENEFITS	14.50

Piledriver:	HEAVY & HIGHWAY	BASE RATE	\$27.15
		FRINGE BENEFITS	14.50

Divers:	HEAVY & HIGHWAY	BASE RATE	\$40.73
		FRINGE BENEFITS	14.50

CEMENT MASONS:		BASE RATE	\$22.00
		FRINGE	12.75

ELECTRICIANS:		BASE RATE	\$30.01
		FRINGE BENEFITS	15.65

When workmen are required to work from bosun chairs, trusses, stacks, tanks, scaffolds, catwalks, radio and T.V. towers, structural steel (open, unprotected, unfloored raw steel) and bridges or similar hazardous locations where workmen are subject to a direct fall: 50 feet to 75 feet – add 25% above the workman's hourly rate, over 75 feet add 50% above workman's hourly rate. No premium shall be paid on work performed using JLGs, bucket trucks or other similar elevated mechanized work platforms up to 75 feet above the surface upon which the platform sits.

LINEMAN:	HEAVY HIGHWAY	BASE RATE	\$34.13
		FRINGE BENEFITS	11.97

EQUIPMENT OPERATOR:	HEAVY HIGHWAY	BASE RATE	\$30.51
		FRINGE BENEFITS	11.26

GROUNDSMAN:	HEAVY HIGHWAY	BASE RATE	\$20.21
		FRINGE BENEFITS	9.19

ELEVATOR CONSTRUCTORS:		BASE RATE	\$30.46
		FRINGE BENEFITS	8.92

GLAZIERS:		BASE RATE	\$24.15
		FRINGE BENEFITS	11.45

IRONWORKERS:		BASE RATE	\$27.56
		FRINGE BENEFITS	20.57

LABORERS / BUILDING:

BUILDING GROUP 1: General laborers, asbestos abatement laborer, toxic waste removal laborer, water boys, tool room checker, carpenter tenders, (civil engineer helper, rodman, grade checker, excluding all field work performed by Engineering Firms), concrete pouring and curing, concrete forms stripping and wrecking, hand digging and backfilling of ditches, clearing of right of ways and building sites, wood sheeting and shoring, signalman for concrete bucket and general cleaning, and environmental laborer - nuclear, radiation, toxic and hazardous waste - Level D:

BUILDING	*BASE RATE	\$21.51
	FRINGE BENEFITS	11.59

BUILDING GROUP 2: All air tool operators, air track drills, asphalt rakers, tampers, batchers plant and scale man, chain saw, concrete saw, cutter/burner, electric hand grinder, all electric bush and chipping hammers, flagmen, forklift operators, form setter (street or highway), metal form setters, heaters, mesh handlers on walkways, streets and roadways outside building, gunnite laborers, hand spiker, introflax burning rod, joint makers, mason tender, multi-trade tender, pipe layers, plaster tender, powderman helpers, power driven Georgia buggies, power posthole diggers, railroad laborers, sandblaster laborers, scow man and deck hand, signal man, sweeper and cleaner machines, vibrator operators, vibrator/tamper operated by hand or remote control, walk behind trenching machines, mortar mixer machines, water pumpmen, and environmental laborers - nuclear, radiation, toxic and hazardous waste - Level C:

BUILDING	*BASE RATE	\$21.91
	FRINGE BENEFITS	11.59

BUILDING GROUP 3: Asphalt paver screwman, gunnite nozzleman and gunnite nozzle machine operator, sand blaster nozzleman, concrete or grout pumpman, plaster pumpman, Powderman and blaster, and environmental laborer - nuclear, radiation, toxic and hazardous waste - Level B: :

BUILDING	*BASE RATE	\$22.11
	FRINGE BENEFITS	11.59

BUILDING GROUP 4: Caisson holes (6 ft. and over) pressure and free air including tools, and environmental laborer-nuclear, radiation, toxic and hazardous waste - Level A, Tunnel man and tunnel sand miner, cofferdam (pressure and free air), sand hog or mucker (pressure or free air): :

BUILDING	*BASE RATE	\$22.71
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*Employees handling chemically treated materials which are harmful to the skin shall receive an additional \$.50 above base rate. Employees working on high work such as towers or smoke stacks, or any type of work fifty (50) feet above the ground or a solid floor shall receive \$1.00 above base rate. Employees working on boilers, kilns, melting tanks, furnaces, or when refractory is done using live fires, drying fires, heatups or any hot work shall receive \$2.00 above base rate.

LABORERS / HEAVY & HIGHWAY:

HEAVY HIGHWAY GROUP 1: Aging and curing of concrete (any mode or method), asbestos abatement worker, asphalt plant laborers, asphalt laborers, batch truck dumpers, carpenter tenders, cement mason tenders, cleaning of machines, concrete laborers, demolition laborers, dredging laborers, drill helper, environmental laborer - nuclear, radiation, toxic and hazardous waste - Level D, flagmen, grade checkers, all hand digging and hand back filling, highway marker placers, landscaping laborers, mesh handlers and placers, puddler, railroad laborers, rip-rap and grouters, right of way laborers, sign, guard rail and fence installers (all types), signal men, sound barrier installer, storm and sanitary sewer laborers, swamper, truck spotters and dumpers, and wrecking of concrete forms, general cleanup, tending & setting of precast products, applying sealers, epoxies, coating curing compounds, cure & seal products & prep on all services of concrete wall expansion materials:

HEAVY & HIGHWAY	BASE RATE	\$22.30
	FRINGE BENEFITS	12.86

HEAVY HIGHWAY GROUP 2: Batter board men (sanitary and storm sewer), brickmason tenders, mortar mixer operator, scaffold builders, burner and welder, bushhammers, chain saw operator, concrete saw operators, deckhand scow man, dry cement handlers, environmental laborers - nuclear, radiation, toxic and hazardous waste - Level C, forklift operators for masonry, form setters, green concrete cutting, hand operated grouter and grinder machine operator, jack hammers, lead paint abatement, pavement breakers, paving joint machine, pipe layers-laser operators (non-metallic), plastic pipe fusion, power driven Georgia buggy or wheelbarrow, power post hole diggers, precast manhole setters, walk-behind tampers, walk-behind trenchers, sand blasters, concrete chippers, surface grinders, vibrator operators, wagon drillers:

HEAVY & HIGHWAY	BASE RATE	\$22.55
	FRINGE BENEFITS	12.86

HEAVY HIGHWAY GROUP 3: Asphalt luteman and rakers, gunnite nozzleman, gunnite operators and mixers, grout pump operator, side rail setters, rail paved ditches, screw operators, tunnel laborers (free air), and water blasters, remote controlled compactors, air lifting, dewatering, water pumps & asphalt sealer applicator:

HEAVY & HIGHWAY	BASE RATE	\$22.60
	FRINGE BENEFITS	12.86

HEAVY HIGHWAY GROUP 4: Caisson workers (free air), cement finishers, environmental laborer - nuclear, radiation, toxic and hazardous waste - Levels A and B, miners and drillers (free air), tunnel blasters, and tunnel muckers (free air), directional and horizontal boring, air track driller (all types), powder man and blaster, troxler & concrete tester if Laborer utilized, GPS if performed by Laborer:

HEAVY & HIGHWAY	BASE RATE	\$23.20
	FRINGE BENEFITS	12.86

MARBLE, TILE & TERRAZZO:

Finishers:

	BASE RATE	\$16.17
	FRINGE BENEFITS	0.00

Setters:	BASE RATE	\$23.00
	FRINGE BENEFITS	0.00

MILLWRIGHTS:	BASE RATE	\$24.18
	FRINGE BENEFITS	15.67

**OPERATING ENGINEERS / BUILDING:
NCCCO OR OECP CERTIFIED or US COAST GUARD APPROVED BOAT PILOT LICENSE**

BUILDING CLASS A-1: Crane, dragline, hoist (1 drum when used for stack or chimney construction or repair); hoisting engineer (2 or more drums), orangepeel bucket, overhead crane, piledriver, truck crane, tower crane, hydraulic crane, T tug boat or push boat:

BUILDING	BASE RATE	\$29.80
	FRINGE BENEFITS	14.40

BUILDING CLASS A: Articulating dump, auto patrol, batcher plant, bituminous paver, cableway, central compressor plant, clamshell, concrete mixer (21 cu. ft. or over), concrete pump, crane, crusher plant, derrick, derrick boat, directional boring machine, ditching and trenching machine, dragline, dredge operator, dredge engineer, elevating grader and all types of loaders, forklift (regardless of lift height), GPS systems (on equipment within the classification), hoe type machine, hoist (1 drum when used for stack or chimney construction or repair), hoisting engineer (2 or more drums), laser or remote controlled equipment (within the classification), locomotive, motor scraper, carry-all scoop, bulldozer, heavy duty welder, mechanic, orangepeel bucket, piledriver, power blade, motor grader, roller (bituminous), scarifier, shovel, tractor shovel, truck crane, winch truck, push dozer, highlift, all types of boom cats, self contained core drill, hopto, tow or push boat, a-frame winch truck, concrete paver, gradeall, hoist, hyster, pumpcrete, Ross carrier, boom, tail boom, rotary drill, hydro hammer, mucking machine, rock spreader attached to equipment, scoopmobile, KeCal loader, tower cranes (French, German and other types), hydrocrane, backfiller, guries, sub-grader, tunnel mining machines including moles, shields, or similar types of tunnel mining equipment, hydro excavator, micro pile driving machine, remote control demolition equipment, self-propelled modular transporter, skid steer, transfer machine/shuttle buggy, vacuum truck:

BUILDING	*BASE RATE	\$28.71
	FRINGE BENEFITS	14.40

*Operators on cranes with boom one-hundred fifty feet (150') and over including jlb, shall receive seventy-five cents (\$.75) above base rate. All cranes with piling leads will receive \$.50 above base rate regardless of boom length. Operators on cranes with booms 200 ft and over including JIB shall receive one dollar (\$1.00) above Class A-1 or A, cranes with booms 300 ft and over including JIB shall receive two dollars (\$2.00) above Class a-1 or A.

BUILDING CLASS B: All air compressors (over 900 CFM), bituminous mixer, joint sealing machine, concrete mixer (under 21 cu. ft.), form grader, roller (rock), tractor (50 HP and over), bull float, finish machine, outboard motor boat, flexplane, fireman, boom type tamping machine, truck crane oiler, greaser on grease facilities servicing heavy equipment, switchman or brakeman, mechanic helper, whirley oiler, self-propelled compactor, tractair and road widening trencher and farm tractor with attachments (except backhoe, highlift and endloader), elevator (regardless of ownership when used for hoisting any building material), hoisting engineer (1-drum or buck hoist), firebrick (masonry excluded), well points, grout pump, throttle-valve man, tugger, electric vibrator compactor, and caisson drill helper, water pull/water truck

when used for compacting:

BUILDING	BASE RATE	\$25.73
	FRINGE BENEFITS	14.40

BUILDING CLASS C: Bituminous distributor, cement gun, conveyor, mud jack, paving joint machine, roller (earth), tamping machine, tractors (under 50 HP), vibrator, oiler, concrete saw, burlap and curing machine, hydro-seeder, power form handling equipment, deckhand steersman, hydraulic post driver, and drill helper:

BUILDING	BASE RATE	\$24.90
	FRINGE BENEFITS	14.40

**OPERATING ENGINEERS / HEAVY HIGHWAY:
NCCCO OR OECP CERTIFIED or US Coast Guard approved Boat Pilot License**

HEAVY HIGHWAY CLASS A-1: Cableway, carry deck crane, cherry picker, clamshell, crane, derrick, derrick boat, dragline, hoist engine (2 or more drums), hydraulic boom truck, hydrocrane, orangepeel bucket, overhead crane, piledriver, rough terrain crane, tower cranes (French, German & other types), truck crane:

HEAVY HIGHWAY	BASE RATE	\$31.08
	FRINGE BENEFITS	14.40

HEAVY HIGHWAY CLASS A: A-frame winch truck, auto patrol, backfiller, batcher plant, bituminous paver, bituminous transfer machine, all types of boom cats, bulldozer, cableway, carry-all scoop, carry deck crane, central compressor plant operator, clamshell, concrete mixer (21 cu. ft. or over), concrete paver, truck-mounted concrete pump, core drills, crane, crusher plant, derrick, derrick boat, ditching and trenching machine, dragline, dredge operator, dredge engineer, earth movers, elevating grader and all types of loaders, grade-all, guries, heavy equipment robotics operator/mechanic, high lift, hoe-type machine, hoist (two or more drums), hoisting engine (two or more drums), horizontal directional drill operator, hydraulic boom truck, hydrocrane, hyster, KeCal loader, Letourneau, Locomotive, mechanic, mechanically operated laser screed, mechanic welder, mucking machine, motor scraper, orangepeel bucket, piledriver, power blade, pumpcrete push doxer, rock spreader attached to equipment, all rotary drills, roller (bituminous), scarifier, scoopmobile, shovel, side boom, subgrader, tallboom, telescoping type forklift, tow or push boat, tower cranes (French, German and other types) tractor shovel and truck crane, tunnel mining machines including moles, shields, or similar types of tunnel mining equipment, self propelled modular transporter, hydro excavator, micro piling machine, remote controlled demolition equipment, milling machine, track hoe, rubber tire back hoe, reclaimer/stabilizer:

HEAVY & HIGHWAY	BASE RATE	\$29.95
	FRINGE BENEFITS	14.40

HEAVY HIGHWAY CLASS B: All air compressors (over 900 cu. ft. per min.), bituminous mixer, boom type tamping machine, bull float, concrete mixer (under 21 cu. ft.), dredge engineer, electric vibrator compactor/self-propelled compactor, elevator (one drum or buck hoist), elevator (regardless of ownership when used to hoist building material), finish machine, firemen, flexplane, forklift (regardless of lift height), form grader, hoist (one drum), joint sealing machine, mechanic helper, outboard motor boat, power sweeper (riding type), roller (rock), ross carrier, skid mounted or trailer mounted concrete pumps, skid steer machine with all attachments, switchman or brakeman, throttle valve man, Tract air and road widening trencher, tractor (50 HP and over), truck crane oiler, tugger, welding machine, well points, and

whirley oiler, water pull/water truck when used for compacting:

HEAVY & HIGHWAY	BASE RATE	\$27.26
	FRINGE BENEFITS	14.40

HEAVY HIGHWAY CLASS B2: Greaser on grease facilities servicing heavy equipment, all off road material handling equipment, including articulating dump trucks:

HEAVY & HIGHWAY	BASE RATE	\$27.68
	FRINGE BENEFITS	14.40

HEAVY HIGHWAY CLASS C: Bituminous distributor, burlap and curing machine, caisson drill and core drill helper (track or skid mounted), cement gun, concrete saw, conveyor, deckhand oiler, grout pump, hydraulic post driver, hydro seeder, mud jack, oiler, paving joint machine, power form handling equipment, pump, roller (earth), steermens, tamping machine, tractors (under 50 H.P.) and vibrator:

HEAVY & HIGHWAY	BASE RATE	\$26.96
	FRINGE BENEFITS	14.40

**Operators on cranes with booms one hundred fifty feet (150') and over including jib shall receive \$.50 above base rate.

PAINTERS:

Brush, roller & paperhanger:

BASE RATE	\$17.87
FRINGE BENEFITS	9.10

Spray, sandblast, waterblast (4000+ PSI), fireproofing & lead abatement:

BASE RATE	\$18.37
FRINGE BENEFITS	9.10

PLASTERERS:

BASE RATE	\$20.65
FRINGE BENEFITS	5.85

PLUMBERS & PIPEFITTERS:

BASE RATE	\$31.95
FRINGE BENEFITS	17.36

ROOFERS: (Excluding Metal Roofs)

BASE RATE	\$22.03
FRINGE BENEFITS	9.10

SHEETMETAL WORKERS: (Including Metal Roofs)

BASE RATE	\$28.00
FRINGE BENEFITS	13.59

SPRINKLER FITTERS:

BASE RATE	\$31.35
FRINGE BENEFITS	17.87

TRUCK DRIVERS / BUILDING:

Truck Helper and Warehouseman:

BUILDING	BASE RATE	\$19.05
	*FRINGE BENEFITS	11.08

Driver - 3 tons and under, Greaser, Tire Changer and Mechanic Helper:

BUILDING	BASE RATE	\$19.17
	*FRINGE BENEFITS	11.08

Driver - over 3 tons, Drivers, Semi-Trailer or Pole Trailer; Dump Trucks, Tandem Axle; Farm Tractor when used to pull building material or equipment:

BUILDING	BASE RATE	\$19.28
	*FRINGE BENEFITS	11.08

Drivers, Concrete Mixer Trucks (all types, hauling on job sites only); Truck Mechanics:

BUILDING	BASE RATE	\$19.35
	*FRINGE BENEFITS	11.08

Drivers, Euclid and other Heavy Earth Moving Equipment and Low Boy, Winch Truck and A-Frame Truck and Monorail Truck when used to transport building materials, Forklift Truck when used inside warehouse or storage area:

BUILDING	BASE RATE	\$19.45
	*FRINGE BENEFITS	11.08

BUILDING TRUCK DRIVERS: Drivers working or hauling to or from any hazardous or toxic site will add \$4.00 to base rate.

***TRUCK DRIVER FRINGE BENEFITS** apply to employees who have been employed a minimum of twenty (20) calendar days

within any ninety (90) consecutive day period of that employer.

TRUCK DRIVERS / HEAVY HIGHWAY:

Mobile batch truck helper:	HEAVY & HIGHWAY	BASE RATE	\$16.57
		FRINGE BENEFITS	7.34

Greaser, tire changer and mechanic helper:

HEAVY & HIGHWAY	BASE RATE	\$16.68
	FRINGE BENEFITS	7.34

Single axle dump, flatbed, semi-trailer or pole trailer when used to pull building materials and equipment, tandem axle dump, distributor and truck mechanic:

HEAVY & HIGHWAY	BASE RATE	\$16.86
	FRINGE BENEFITS	7.34

Euclid and other heavy earthmoving equipment and lowboy, articulator cat, 5-axle vehicle, winch and A-frame when used in transporting materials, ross carrier, forklift when used to transport building materials, and pavement breaker:

HEAVY & HIGHWAY	BASE RATE	\$16.96
	FRINGE BENEFITS	7.34

**END OF DOCUMENT
CR 2-012
DECEMBER 22, 2015**

END OF SECTION

PART VI
CONTRACT AGREEMENT

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PART VI

CONTRACT AGREEMENT

THIS AGREEMENT, made on the _____ day of _____, 20____, by and between **Lexington-Fayette Urban County Government**, acting herein called "OWNER" and _____ **(bidder's name)**, doing business as *(an individual) (a partnership) (a corporation) located in the City of _____, County of _____, and State of _____, hereinafter called "CONTRACTOR."

WITNESSETH: That the CONTRACTOR and the OWNER in consideration of _____ Dollars and _____ Cents (\$_____) quoted in the proposal by the CONTRACTOR, dated _____, hereby agree to commence and complete the construction described as follows:

1. SCOPE OF WORK

The CONTRACTOR shall furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in the Proposal, the General Conditions, and the Special Conditions of the Contract, the Specifications and Contract Documents therefore as prepared for Emergency Response Vehicle Exhaust Removal System project.

2. TIME OF COMPLETION

The time period estimated and authorized by the OWNER for the proper execution of the Work by the Contract, in full, is hereby fixed as completion no later than May 15, 2017. The work shall begin in accordance with the Notice to Proceed provided by OWNER. Project is being paid for with a federal grant that ends May 15, 2017. Any money left open on the grant after that date will be forfeited. Contractor will be responsible for finalization of any contracted work not completed by May 15, 2017 and will be financially responsible for any work completed after that date.

3. ISSUANCE OF WORK ORDERS

Notice to begin Work will be given in whole or for part of the Work as determined by the OWNER pending the availability of funds. The order of construction will be as determined by the Engineer after consultation with the CONTRACTOR and the OWNER.

4. THE CONTRACT SUM

The OWNER agrees to pay the CONTRACTOR in current funds for the performance of the Contract, as quoted in the proposal, subject to any additions and deductions, as provided therein.

5. PROGRESS PAYMENTS

The OWNER shall make payments on account of the Contract, as provided in accordance with the General Conditions, as estimated by the Engineer, less the aggregate of previous payments.

6. ACCEPTANCE AND FINAL PAYMENT

Final payment shall be due within ninety (90) days after completion of the Work, provided the Work be then fully completed and the Contract fully accepted.

Before issuance of final certificate, the CONTRACTOR shall submit evidence satisfactory to the Engineer that all payrolls, material bills, and other indebtedness connected with the Work has been paid.

If, after the Work has been substantially completed, full completion thereof is materially delayed through no fault of the CONTRACTOR, and the ENGINEER so certifies, the OWNER shall upon certificate of the ENGINEER, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

7. THE CONTRACT DOCUMENTS

The Advertisement for Bids, Information for Bidders, the General Conditions, Performance and Payment Bonds, Contract Agreement, Special Conditions, Technical Specifications, any and all Addenda, and Proposal, and Plan Drawings form the Contract, and they are fully a part of the Contract as if hereto attached or herein repeated.

8. EXTRA WORK

The OWNER, without invalidating the Contract, may order extra work or make changes by altering, adding to or deducting from the Work, the Contract Sum being adjusted accordingly. All such Work shall be executed and paid for in accordance with the General Conditions, which is a part of this Contract.

9. THE FOLLOWING IS AN ENUMERATION OF THE SPECIFICATIONS AND DRAWINGS (CONTRACT DOCUMENTS):

SPECIFICATIONS

SECTION NO.	TITLE	PAGES
I	Advertisement for Bids	AB 1 thru 5
II	Information for Bidders	IB 1 thru 10
III	Form of Proposal	P 1 thru 35
IV	General Conditions	GC 1 thru 51
V	Special Conditions	SC 1 thru 8
VI	Contract Agreement	CA 1 thru 5
VII	Performance and Payment Bonds	PB 1 thru 7
VIII	Addenda	AD 1 thru 1
IX	Technical Specifications	1 thru 30

IN WITNESSETH WHEREOF, the parties hereto have executed this Contract as of the date and year above written.

(Seal)

Lexington-Fayette Urban County Government.
Lexington, Kentucky

(Owner)

ATTEST:

Clerk of the Urban County Council

BY: _____
MAYOR

(Witness)

(Title)

(Seal)

(Contractor)

(Secretary)*

BY: _____

(Witness)

(Title)

(Address and Zip Code)

IMPORTANT: *Strike out any non-applicable terms.

Secretary of the Owner should attest. If the CONTRACTOR is corporation, Secretary should attest. Give proper title of each person-executing Contract.

PART VII

PERFORMANCE AND PAYMENT BONDS

1. PERFORMANCE BOND
2. PAYMENT BOND

PART VII

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that

(Name of CONTRACTOR)

(Address of CONTRACTOR)

a _____, hereinafter
(Corporation, Partnership, or Individual)

called Principal, and _____
(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
200 East Main Street, Third Floor
Lexington, Kentucky 40507

hereinafter called "OWNER" in the penal sum of: _____
Dollars, (\$ _____), for the payment of whereof Principal and Surety bind themselves, their heirs,
executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal by written agreement is entering into a Contract with OWNER for
_____ (project name) _____ in accordance with drawings and
specifications prepared by: _____ (the Engineer) _____ which Contract is by reference
made a part hereof, and is hereinafter referred to as the Contract.

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal shall
promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise it shall
remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the OWNER.

Whenever, Principal shall be, and declared by OWNER to be in default under the Contract, the OWNER
having performed OWNER'S obligations thereunder, the Surety may promptly remedy the default, or shall
promptly:

- (1) Complete the Contract in accordance with its terms and conditions or
- (2) Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, or if the OWNER elects, upon determination by the OWNER and Surety jointly of the lowest responsible bidder, arrange for a Contract between such bidder and OWNER, and make available as Work progresses (even though there may be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the Contract Price", as used in this paragraph shall mean the total amount payable by OWNER to Principal under the Contract and any amendments thereto, less the amount properly paid by OWNER to Principal.

Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the Contract falls due.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the OWNER named herein or the heirs, executors, administrators or successors of OWNER.

IN WITNESS WHEREOF, this instrument is executed in _____ each one of which shall be
(number)
deemed an original, this the _____ day of _____, 20_____.

ATTEST:

Principal

(Principal) Secretary

BY: _____(s)

(Address)

Witness as to Principal

(Address)

ATTEST:

Surety

BY: _____
Attorney-in-Fact

(Surety) Secretary

(Address)

(SEAL)

Witness as to Surety

(Address)

TITLE: _____
Surety

BY: _____

TITLE: _____

NOTE: The number of executed counterparts of the bond shall coincide with the number of executed counterparts of the Contract.

PART VII
PAYMENT BOND

KNOW ALL MEN BY THESE PRESENT: that

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter
(Corporation, Partnership or Individual)

called Principal, and _____
(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto:

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
200 East Main Street, Third Floor
Lexington, Kentucky 40507

Obligee, hereinafter called OWNER, for the use and benefit of claimants as hereinafter defined, in the amount of _____ Dollars (\$ _____) the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal by written agreement is entering into a Contract with OWNER for _____ **(project name)** _____ in accordance with drawings and specifications prepared by: _____ **(the Engineer)** _____ which Contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Principal shall promptly make payment to all claimants as hereinafter defined for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions.

1. A claimant is defined as one having a direct contract with the Principal or with a Subcontractor of the Principal for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.

2. The above named Principal and Surety hereby jointly and severally agree with the OWNER that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The OWNER shall not be liable for the payment of any costs or expenses of any such suit.
3. No suit or action shall be commenced hereunder by any claimant:
 - (a) Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to any two of the following: The Principal, the OWNER, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the Work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the Work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, OWNER, or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer.
 - (b) After the expiration of one (1) year following the date on which Principal ceased Work on said Contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.
 - (c) Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere.
4. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against aid improvement, whether or not claim for the amount of such lien be presented under and against this bond.

IN WITNESS WHEREOF, this instrument is executed in _____ counterparts, each one of
(number)

which shall be deemed an original, this the _____ day of _____, 20_____.

ATTEST:

(Principal)

(Principal) Secretary

(SEAL) BY: _____(s)

(Address)

(Witness to Principal)

(Address)

ATTEST: _____
(Surety)
BY: _____
(Attorney-in-Fact)

(Surety) Secretary
(SEAL) _____

Witness as to Surety

(Address)

(Address)

NOTE: The number of executed counterparts of the bond shall coincide with the number of executed counterparts of the Contract.

END OF SECTION

PART VIII

ADDENDA

All addenda issued during the bidding of the Project will be reproduced in the signed Contract Documents, on the pages following this heading sheet.

<u>Addendum Number</u>	<u>Title</u>	<u>Date</u>
1.	<u>Emergency Response Vehicle Exhaust System</u>	<u>November 2, 2016</u>
2.	<u>_____</u>	<u>_____</u>
3.	<u>_____</u>	<u>_____</u>
4.	<u>_____</u>	<u>_____</u>
5.	<u>_____</u>	<u>_____</u>



ADDENDUM #1

Bid Number: #146-2016

Date: November 2, 2016

Subject: Emergency Response Vehicle Exhaust Removal System

**Address Inquiries to:
Sondra Stone
(859) 258-3320**

TO ALL PROSPECTIVE SUBMITTERS:

Please be advised of the following clarifications to the above referenced Bid:

- 1. Permits Required? What are they and what are the costs? No permits required.**
- 2. VA requirement of Good Faith? Or Mandatory? Good faith effort is mandatory, 3% veteran participation is a goal.**
- 3. Pg. 20. of the Specs item K The(1) pressure sensor (STANDARD) is what is used in place of (# 2,3) – NOT NEEDED - requests Thermal Start or a Remote control – Transmitter and Receiver (to be in apparatus) – this is not necessary with the automatic sensor on/off system that you are requesting for Diesel Exhaust Removal system. There should not be any remote control other than a manual switch at the control box. The system should operate via a pressure switch from the exhaust.**
- 4. Pg. 21. of the specs item (O) requests Carbon Monoxide Monitor –it is listed as optional -correct ? The carbon monoxide monitor is an option.**
- 5. 2.01 N page 10- "The bidder shall provide a drawing for the precise modification procedure" Is this a complete turnkey project including all tailpipe modifications and electrical wiring to be done by the bidder or are the drawings for the tailpipe modifications by others? It is a complete turnkey project, new motors, duct, electric, tracks, hose, controllers, etc.**



- 6. We can offer enhancements and options to allow for the system to become a better working system for the Fire Department? Can we offer these options in our bid documents on a separate proposal or on the bid form itself? You may offer optional equipment but not alternates. Please include optional equipment on a separate paper and submit with bid documents.
- 7. Pre-bid sign-in sheet is attached.



Todd Slatin, Director
Division of Central Purchasing

All other terms and conditions of the Quote and specifications are unchanged.

This letter should be signed, attached to and become a part of your Quote.

COMPANY NAME: Hastings Air Energy Control

ADDRESS: 5555 S. Westridge Dr New Berlin WI 53151

SIGNATURE OF BIDDER: Michael Bohner



IX. TECHNICAL SPECIFICATIONS

Emergency Response Vehicle Exhaust Removal System

Specification enhancements

To whom it may concern-

In addition to meeting all the specified requirements to Lexington vehicle exhaust project we are pointing out additional improvements to the Plymovent system. Please note Plymovent is a continuous improvement company and has improved the product deliverable. We detailed improvements below under the specification sections as listed in Lexington Project.

1.01 SCOPE

E (1) – Hastings Air Energy Control meets all the specifications with the detailed scope. In addition we wanted to point out where we are to date with the upgrade of the existing Plymovent pneumatic system. Lexington Fire Department is presently using the Plymovent MG (Magnetic Grabber Nozzle) successfully. The Lexington Fire department has installed the MG system in 7 current stations and we are under contract to install the MG system at Station # 2. This is the new construction project with 6 Plymovent Magnetic Grabber drops.

In addition to the details found in this section please find our:

- Qualifications
- Project Schedule
- Project experience
- Project Approach

2.01A Vehicle Exhaust Removal System Equipment

A- Please see exhibit "A" for visual of the Plymovent system illustrating the effectiveness of the 100% capture of fume from the tail pipe utilizing inferred technology. This shows the temperature of air stream that is being cooled by our high velocity system as well as being cooled by air stream and bleed in technology. See temperature of air stream shown in bar graph on side within document.

H – Hose both upper and lower sections

Enclosed is exhibit – "B" – Gaines laboratory- testing on Plymovent high temperature hose. This improvement increases the threshold temperatures to allow the system to provide protection from discharge temperatures that have increased due to EPA requirements. Note that the temperature threshold has been improved from the Lexington specification. We will be providing the Plymovent High temperature hose. The highlight of this new hose is the lower section can accept 900 F continuous duty temperatures with spikes 1050F. By far the highest in the industry.

In addition to the temperature we also have designed a stiffer helix into the lower section to allow firefighter to connect hose in standing position.(Please see the Enclosed is exhibit "C" showing the stiffened lower hose section in a photo).

We also included in this specification within exhibit "D" the newly improved details to the new high temperature hose and written specification.

J

Safety Disconnect – Newly improved – system - see exhibits –"E"

Improved Functional design

The newly designed - SDCH- safety disconnect handle allows the upper & lower flex to work independently (swivel coupling rotates hose 360 degrees) as well as works with one another. The SDCH keeps the system from pulling down from the ceiling and doubles as a handle for ease of placing the nozzle onto the tailpipe while standing upright (See Exhibit "C"). The user does not have to bend over to connect the exhaust removal system, thus limiting the risk of exposure to harmful exhaust gases and back injuries while attaching nozzle to tail pipe. In addition the SDCH is ergonomically-designed with round handle with large grips so that it can be operated even while wearing gloves and can be installed from any angle.

L - Hose Saddle - Plymovent Product Improvement

Hose Saddle: A Plymovent Product Improvement to the hose saddle/elbow is designed and constructed utilizing steel tube with a 1200° F black paint finish. A fully welded mounting tab is included to ensure an easy and friendly method of hanging the hose and release. Also, two rolled beads have been added to either end of the hose saddle ensuring the hose clamps holding the hose to either end do not slide over time. The hose suspension saddle design controls the direction of the hose during its travel along the track/rail. In addition this style coupling separates the upper hose sections. See exhibit "F"

2.01B

J

Safety Disconnect – Newly improved – system - see exhibits –“E”

Improved Functional design

The newly designed - SDCH- safety disconnect handle allows the upper & lower flex to work independently (swivel coupling rotates hose 360 degrees) as well as work with one another. The SDCH keeps the system from pulling down from the ceiling and doubles as a handle for ease of placing the nozzle onto the tailpipe while standing upright (See Exhibit “C”). The user does not have to bend over to connect the exhaust removal system, thus limiting the risk of exposure to harmful exhaust gases and back injuries while attaching nozzle to tail pipe. In addition the SDCH is ergonomically-designed with round handle with large grips so that it can be operated even while wearing gloves and can be installed from any angle.

L - Hose Saddle - Plymovent Product Improvement

Hose Saddle: A Plymovent Product Improvement to the hose saddle/elbow is designed and constructed utilizing steel tube with a 1200° F black paint finish. A fully welded mounting tab is included to ensure an easy and friendly method of hanging the hose and release. Also, two rolled beads have been added to either end of the hose saddle ensuring the hose clamps holding the hose to either end do not slide over time. The hose suspension saddle design controls the direction of the hose during its travel along the track/rail. In addition this style elbow separates the upper and hose sections.

O

Tailpipe Modification Drawing – see exhibit “G”

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 modification shall vent the exhaust gases at a 90-degree angle on the passenger side of the vehicle. Tailpipe modifications requiring a 45-degree angle of exhaust venting shall not be acceptable, in order to prevent exhaust blowback into the station after the auto-release system disengages from the tailpipe. A flange shall be provided and installed by the bidder for the collection nozzle. The manufacturer’s supplied adapter shall securely attach to the vehicle tailpipe. The attachment to the tailpipe shall be made by a U bolt for ease of adjustment.

Note: the Plymovent system meets the NFPA1901 – (see “The Right Connection” in Bid Book section Making your Decision.) This specification calls out that the system must not extend outside of the body of apparatus. We meet this requirement. See NFPA 1901 exhibit “H”

QUALIFICATIONS:

- Representing Plymovent Product line for over 25 years
Number of years in Business: 47
Type of Operation: **Corporation**
Number of Employees: 45
Annual Sales Volume: 20-Million
Headquarters:
Hastings Air Energy Control, Inc
5555 South Westridge Drive
New Berlin, WI 53151
- Please see letter in this tab from Plymovent on Hastings being the certified, trained, and authorized as a dealership serving the Illinois territory.
- All mechanical installation crews have been factory trained and certified for the installation of the Plymovent product line. The installation crew is bonded, licensed and also union contractors located out of New Lenox, IL, so we are using local in state contractors.
- All in house service technicians have also been factory trained and certified to perform service of the Plymovent product line. Please note all of our service technicians are employees of Hastings Air Energy Control, Inc. with one of them located near Evergreen Park, IL.
- All service technicians are supplied with vehicles equipped with all the spare parts necessary for any service repair/ warranty work.
- Hastings does not contract with firefighters to perform service work of the systems we install.

PROJECT SCHEDULE

- Notice to proceed December 2016, if the notice to proceed is in January the project would be adjusted accordingly.
- Week 1 Equipment order placed to vendors
- Typical turnaround time for equipment delivery 6-12 weeks from issued PO.
- End of February/ First week March installation start
- Installation timeline is (1) week per station
 - Start on Monday – Crew orientation by sales rep with FD & City personnel to go over station scope of work and answer any questions.
 - Two person install crew working 8-10hrs per day
 - Electrical work to start by mid-week Wednesday after new fan and control panel is installed.
 - Tailpipe modifications for nozzle attachment to take place by end of the week.
 - Installation crew to complete each station by Friday
- System/ station commissioning performed the first part of following week for each station based on electrical wiring being executed. Commissioning is performed by Hastings certified technicians.
- Owner training to be completed for all three shifts and with City Maintenance Personnel upon completion and coordination of day & time with City contacts.
 - Includes proper use of the system
 - Items to take note of for system capabilities
 - Address maintenance items for product installed
- Owner supplied with all maintenance and owner's manuals for equipment installed.

PROJECT EXPERIENCE:

1. City of Bloomington Fire Department
Deputy Chief Eric Vaughn
310 N. Lee Street
Bloomington, IL
P. 309-434-2624
E. evaughn@cityblm.org

Scope: The project entailed providing and installing the Plymovent vehicle exhaust removal system for all (5) of the Cities fire stations. Project was executed in 2015 with an approximate cost of \$250,000.00. In each of the stations there was a combination of all three types of systems Plymovent has to offer: Tracks, Rails and vertical stack system all equipped with the magnetic nozzle connection. The project was turnkey to include equipment, mechanical and electrical along with tailpipe modifications for nozzle attachment. We fully executed the project within awarded budget and within the timeline requested by the City for execution.

2. Wilmette Fire Department
Chief Mike McGreal
1304 Lake Avenue
Wilmette, IL
P. 773-895-1784
E. mcgrealm@wilmette.com

Scope: The project entailed providing and installing the Plymovent vehicle exhaust removal system for both of the Cities fire stations. Project was executed in 2015 with an approximate cost of \$136,000.00. The project was funded by a FEMA grant which required to project to be competitively bid out. Hastings & Plymovent was awarded the project at a higher cost of our competitor due to our established reputation in the market place for longevity, reliability and our ability to provide local service. In each of the stations there was a combination of tracks and rails type systems equipped with the magnetic nozzle connection. The project was turnkey to include equipment, mechanical and electrical along with tailpipe modifications for nozzle attachment. We fully executed the project within awarded budget and within the timeline requested by the City for execution.

3. City of Peoria Fire Department
Jason Meeks – Facilities Engineer
3505 N. Dries Lane
Peoria, IL
P. 309-645-1999
E. jmeek@ci.peoria.il.us

Scope: The project entails providing and installing the Plymovent vehicle exhaust removal system for all (13) fire stations. Project has been ongoing for the past few years to facilitate the Cities budget and consists of removing a competitors system and replace with the Plymovent magnetic nozzle connection.

PROJECT EXPERIENCE:

Special attention should be looked into that before the City decided to go with Hastings and Plymovent, the city had performed a side-by-side comparison of the Plymovent & Magnegrip product line in station #4. The product installed was a track based system on the two fire apparatus housed in the station. This was done to evaluate the two products side-by-side to see which system was going to best suit the City based on reliability and response to service. The Magnegrip system had failed (4) times in the first few months with the average response to service being longer than a week each time. Based on the results of the test, Hastings & Plymovent had been awarded and continues today to replace the remaining systems in the City of Peoria fire stations.

4. Rutland Dundee FPD
Deputy Chief Jeff Meyer
11 East Higgins Road
Gilberts, IL
P. 847-875-8552
E. jmeyer@rdfpd.org

Scope: The project entailed providing and installing the Plymovent vehicle exhaust removal system for the (2) fire stations. Project was executed in 2013 with an approximate cost of \$125,000.00. In each of the stations there was a combination of both track & rail based systems equipped with the magnetic nozzle connection. The project was turnkey to include equipment, mechanical and electrical along with tailpipe modifications for nozzle attachment. We fully executed the project within awarded budget and within the timeline set for execution.

5. City of Madison Fire Department
Chief Clay Christenson
316 West Dayton Street
Madison, WI
P. 608-212-0482
E. cchristenson@cityofmadison.com

Scope: The project entailed providing and installing the Plymovent vehicle exhaust removal system for all (13) of the Cities fire stations. Hastings has worked on both retro fitting existing stations with the Plymovent systems along with working with the City on the past (4) new construction fire stations. In each of the stations we have installed both track and rail based systems equipped with the magnetic nozzle connection. The project was turnkey to include equipment, mechanical and electrical along with tailpipe modifications for nozzle attachment.

The new construction projects were all executed on time with no delay in construction progress. Hastings attended progress meetings on a regular bases to ensure coordination with the other trades for a seamless installation.

PROJECT APPROACH:

- Description of the firms thorough understanding of the scope of services required:

Hastings has been installing the Plymovent vehicle exhaust removal system for the past 25+ years to the fire service in and has 45+ experience in Industrial air cleaning throughout the Midwest region. Based on multiple meetings with the City of Lexington regarding this project, Hastings has clear understanding of the needs of the city and has proposed a solution to meet/ exceed the expectations of the specifications being called out in project. Hastings has a strong proactive and responsive service organization which is an important decision making criteria to the City of Lexington. We have a proven history of results in the solutions we have provided to our customers.

- Detailed outline of the tasks associated with the scope of services required:
 - Each station will receive the equipment based on provided drawings for either the straight rail system for drive through bays or sliding balancer track system for back-in bays.
 - All drops to have the magnetic nozzle connection.
 - New exhaust fans to be provided with silencers and back-draft damper.
 - New control panel with motor starter to be provided for each station.
 - All system support hardware and bracing to be provided.
 - All low voltage control sensors for system activation to be provided for each station.
 - Mechanical installation of the equipment to include all new exhaust ducting as need for equipment placement.
 - Provide final start-up of the system.
 - System warranty is 5 years PARTS and LABOR on all system components and 10 year on all aluminum extrusions.
- Description addressing how the services will be provided in logical sequence:
 - Hastings will place order of the equipment to our vendors and inform the City of expected ship dates.
 - Equipment will be delivered on-site to the respective stations on the days scheduled with City contacts.
 - Hastings factory trained installers will arrive on-site on a Monday to start the installations and to be executed by the end of the week.
 - Hastings will follow up the installation with system start-up/ commissioning upon line voltage wiring of new exhaust fans & control panels has been executed by the City of Lexington.
 - Owner training to be conducted by Matthew Johnson with owner representatives on scheduled date.

PROJECT APPROACH:

- Overall account of the company's philosophy regarding maintenance and support:

Hastings Mission Statement:

To provide high value, quality-engineered, energy efficient, environmentally responsible products and service solutions that protect workers from harmful airborne contaminants. We service customers using knowledge and experience gained over 40 years in the industry with support from carefully chosen manufacturers and contractor partners.

We will maintain our position as the provider of choice, the acknowledged leader and innovator in the air cleaning industry. This will be accomplished in a professional manner, consistent with the values of a family owned business – while providing a work environment where new ideas are encouraged, rewarded and ultimately help us serve our customers better.

Hastings success is based on the customers we keep. **Hastings Air-Energy Control, Inc.** was established in 1969 to provide quality air cleaning solutions to the people of Wisconsin. Since that time Hastings has grown dramatically, establishing offices in Ohio, Illinois, Indiana, Michigan and Minnesota and becoming an industry leader with the authority and resources to sell throughout the Upper Midwest and Great Lakes Regions.

Our many years of experience and success have enabled us to secure product lines of the highest quality, while always maintaining competitive rates. This allows us to provide you with the very best air cleaning equipment and services at reasonable prices.

We carry a full line of products, parts, and accessories from **PLYmovent, Airflow Systems, Filter-1, Amtech, Dustcontrol, Air-King**, and others. And because we care about saving energy and minimizing the cost of ownership we offer our own **IVEC™ Systems** controls that deliver energy savings and enhanced efficiency.

We take great pride in the work we do and we back it with a staff of factory-trained and certified technicians who are prepared to respond to your needs at a moment's notice. We are also happy to provide service contracts to meet your specific needs.

EXHIBIT A

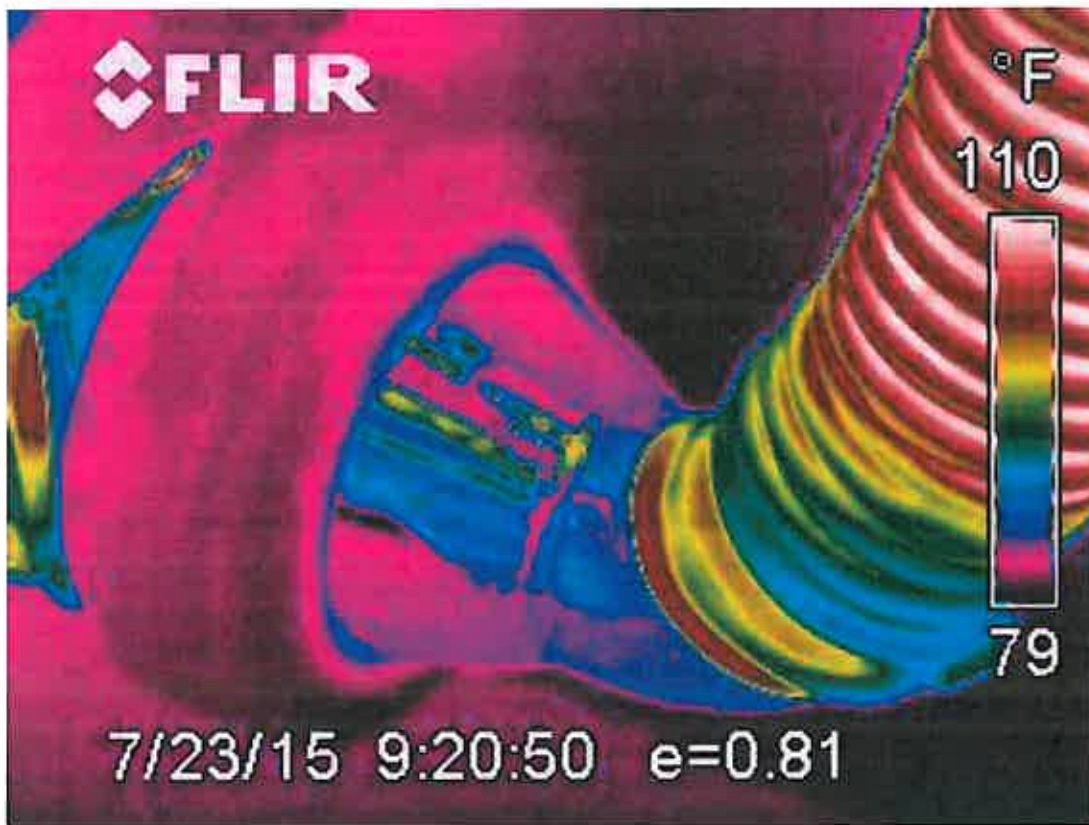


EXHIBIT A



GAYNES LABS, INCORPORATED

9708 Industrial Drive • Bridgeview, Illinois 60455

Member of "American Council of Independent Laboratories"

Phone: 708-233-6655
Fax: 708-233-6985

Email: gayneslab@aol.com
Website: www.gaynestesting.com

October 20, 2015

Plymovent Corp.
5 Corporate Drive
Cranbury, NJ 08512

Attention: Mr. Bryan Reeves

Regarding: Elevated Temperature Testing of Exhaust Gas Hoses
Our Job No. 15560
Your P. O. No. MN100815

Dear Mr. Reeves:

Please find below, the results of the tests that were conducted on the submitted products identified as follows:

One section, approximately 120" L., 4" I. D., of yellow flexible hose identified as: Plymovent HT Upper/Mid Hose. The sample appeared to be unused and was received in good condition.

One section, approx. 24" L., 4" I. D., of yellow flexible hose identified as: Plymovent HT Lower Hose. The sample appeared to be unused and was received in good condition.

TEST PROCEDURES:

The tests were conducted based upon the procedures developed in previous test programs on similar products and your verbal instructions. The samples to be tested were conditioned at approximately 73° F. for a minimum of 24 hours prior to testing. The tests were conducted at approximately 72° F.

EXHIBIT B

GAYNES LABS INCORPORATED

TEST PROCEDURES: (Continued)

Straight Section Tests

A duct system was fabricated that would attach to a 175,000 BTU, fan-forced, kerosene fired, torpedo type heater. The 10" diameter port was attached to the heater and opposite end was reduced to fit the 4" inside diameter of the test hoses.

Temperature sensing devices (thermocouples connected to a digital thermometer and data logger) were inserted into the path of the air flow at various points along the length of the hose. The first sensor was located at the point of hose attachment to the duct assembly. The remaining sensors were located at 36" intervals along the length of the hose (24" for Lower Hose). The sample was straight throughout the test and was supported level to the metal duct along its entire length.

The test was begun by regulating the heater output air to a predetermined temperature and holding that temperature for three minutes. The air temperature was regulated by moving the heater closer or further from the duct entry port and by adjusting the amount of ambient air through the intake of the heater. The temperature was increased in 100° F increments and held for 3 minutes minimum at each increment. The hose under test was inspected throughout the test for brittleness, cracking, burning, or other visual damage. One section of each type of hose was tested. See Photos No. 1 through 4 for overview of the test setup.

GAYNES LABS INCORPORATED

TEST RESULTS:

Complete temperature data is listed on the attached plots. The test results are as follows:

Straight Section Tests

Upper/Mid Hose

The temperature was increased by 100° F increments (3 min. each) from 550° F to 1150° F. Slight smoking was noted when the temperature reached 720° F, which lasted approximately 5 minutes and then stopped. Smoking was noted again at the temperature of 850° F and continued until completion of the test. The total duration of the test was 39 minutes. No cracking, brittleness, discoloration or other damage was noted to the hose during or after completion the test.

Lower Hose

The temperature was increased by 100° F increments (3 min. each) from 550° F to 1150° F. Slight smoking was noted when the temperature reached 750° F. Smoking became heavier at the temperature of 850° F and continued until completion of the test, becoming lighter after 950° F. The total duration of the test was 40 minutes. At the very end of the test, there was a momentary inlet temperature spike to 1221° F. No cracking, brittleness, discoloration or other damage was noted to the hose during or after completion the test.

Upon completion of testing, the test samples were returned to Plymovent Corp. for final inspection and evaluation.

Please contact me if you have any questions regarding this test program.

Very truly yours


Yury Beyderman

GAYNES LABS INCORPORATED



Photo 1 – Attachment of the Hose to the Duct Assembly



Photo No. 2 – View of the Heater

GAYNES LABS INCORPORATED



Photo 3 –Test Setup for Upper/Mid Hose



Photo No. 4 - Test Setup for Lower Hose

GAYNES LABS INCORPORATED

GENERAL STATEMENT COVERING THIS REPORT:

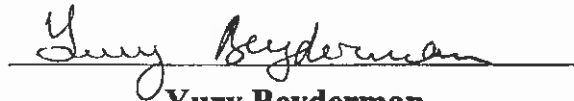
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- (b) Differences between those items actually tested and items previously or subsequently produced which are purported to be identical to the item tested;
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Gaynes Labs, Inc.



Yury Beyderman



EXHIBIT C

EXHIBIT "D" PLYMOVENT HOSE UPGRADE

HT UPPER HOSE (SBTA, STRA and VSRX Systems)

- A. High Temperature Mid Hose: Flexible 4 inch (101.6 mm) to 5 inch (127 mm) diameter by 10 ft (3.04 m) long section of yellow and black hose identical in appearance to the lower hose assembly. This construction of hose must be capable of transporting exhaust at continuous temperatures of 900° F (482° C) and intermittent temperatures of 1,050° F (566° C). **An independent third party test report shall be submitted with bid as proof of claim.** Wire Helix: Bound and protected in laminations of high temperature material. This shall be accomplished in a fashion, which eliminates any possibility of personnel coming in contact with an exposed hot metal wire helix. The hose shall further protect the internal wire helix from heat buildup and in turn add increased visibility to personnel. High Temperature Wear Strip: 9/16 inch (14.28 mm) wide and be provided in a safety yellow color. Hoses utilizing an exposed metal helix will not be acceptable due to potential personnel burn hazard.

HT LOWER HOSE ASSEMBLY (SBTA, STRA and VSRX Systems)

- A. High Temperature Lower Hose: Semi rigid 4" inch (101.6 mm) to 5" inch (127 mm) diameter by 2' foot (61 cm) long section of yellow and black hose identical in appearance to the upper hose. This construction of hose must be capable of transporting exhaust at continuous temperatures of 900° F (482° C) and intermittent temperatures of 1,050° F (566° C). **An independent third party test report shall be submitted with bid as proof of claim.** Wire Helix: Bound and protected in laminations of high temperature material. This shall be accomplished in a fashion, which eliminates any possibility of personnel coming in contact with an exposed hot metal wire helix. The hose shall further protect the internal wire helix from heat buildup and in turn add increased visibility to personnel. High Temperature Wear Strip: 9/16 inch (14.28 mm) wide and be provided in a safety yellow color. Shall support the magnetic or pneumatic connection nozzle and stainless steel reducing elbow in a semi rigid fashion to allow for the operator to place hose collection nozzle onto the tailpipe without bending over. The 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. Hoses utilizing an exposed metal helix will not be acceptable due to potential personnel burn hazard.

EXHIBIT D



SAFETY DISCONNECT HANDLE

EXHIBIT E

The ergonomic handle for safe operation
of your exhaust removal system

SAFETY DISCONNECT HANDLE

Plymovent offers a safe solution for operating an exhaust removal system in emergency stations. Designed for functionality and efficiency, the safety disconnect handle is easy to use and represents the next step in safety disconnects. With an uninterrupted airflow through the exhaust removal hose, the exhaust gases are carried out of the breathing zone with maximum efficiency.

FUNCTIONAL DESIGN

The safety disconnect handle is ergonomically-designed for ease of use. The round handle has large grips so that it can be operated even while wearing gloves and can be reached from any angle. The user does not have to bend over to connect the exhaust removal system, thus limiting the risk of exposure to exhaust gases.

The safety disconnect handle is patent pending and was designed with its function in mind. The inside is made of durable steel to withstand high-temperature exhaust gases, while the outside is made of engineered plastics. When operating a pneumatic system, the integrated pneumatic valve is shielded and positioned to allow its simple operation. The safety disconnect handle for a magnetic system does not include the valve, but it does offer benefits like easy operation of the system and the safety disconnect function.

Ergonomic in use and operation, with large grips and easy-to-operate functions

Made of 'scratch-safe' materials resistant to high temperatures

Uninterrupted airflow through the hose

Available for magnetic and pneumatic systems



PLYMOVENT SOURCE CAPTURE SYSTEMS: AN INDUSTRY STANDARD

The safety disconnect handle can be integrated with Plymovent's pneumatic and magnetic exhaust removal systems. A Plymovent system enables you to remove dangerous exhaust gases efficiently, saving you money and assuring clean air at the workplace.

Our philosophy is to provide quality systems that are safe, user-friendly and code-compliant and that will enhance quality of life for your fire fighters and personnel. That is why we have developed a line of source capture systems designed to meet your station's needs. Plymovent is ISO 9001:2000 certified.

Plymovent cares about the air you breathe. We offer products, systems and services which ensure clean air at work, anywhere in the world.

We respect the environment and we deliver high-quality products. Our expertise gained over many years and our genuine commitment to customer requirements enable us to provide precisely the solutions you need.



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clean air at work

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PLYMOVENT®

VEX / Fire Product News

Cranbury, NJ 2008-June 6

Ref #: PNR-VF-0608-008

Product Release

Introduction date: June 6, 2008



Dear PlymoVent Partner,

PlymoVent's Product Management is pleased to announce a product release to the VEX/Fire Hose Saddle.

This newly designed Hose Saddle is constructed utilizing steel tube with a 1200° F black paint finish. A fully welded mounting tab is included to ensure an easy and friendly method of hanging the hose. Also, two rolled beads have been added to either end of the hose saddle ensuring the hose clamps holding the hose to either end do not slide over time.

This saddle will be a selectable feature when ordering your standard PlymoVent STR and SBT systems. Also, available is an upgrade kit, including hose clamps, airline push fittings and protective sleeving, please contact PlymoVent for additional information.

Product availability – June 9, 2008

Product	Article Number
Steel Saddle 4"	805507

Shawn Smith
Engineered Solutions Manager, NA
PlymoVent Corp., NA

EXHIBIT F

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INSTALLATION TAILPIPE CONNECTOR

1. Distance exhaust pipe-truck body
2. Exhaust pipe end
3. Tailpipe adapter/connector
4. Tailpipe bracket

a) The distance between the middle point of the exhaust pipe and the body of the vehicle (1) must be at least 130mm / 5" in all directions. this is before the tailpipe connector is attached.

b) The exhaust pipe end (2) must be cut in a 90° angle and all sharp edges must be grinded off.

c) The Tailpipe adapter/connector (3) is positioned on the exhaust pipe. When attached the minimum space between the tailpipe connector and the body of the vehicle should now be at least 15 mm / 0.6" from the top and both sides of the tailpipe adaptor.

d) The exhaust pipe clamp (4) must be positioned within 500mm / 20" from the exhaust pipe end (2). If not, the optional tailpipe bracket must be installed. (see: option: installing the tailpipe brackets)

e) The exhaust pipe must be in a 90° angle to the truck body with a max inclination of 5°.

f) The distance between the exhaust pipe and the wheel (6) must be minimum 300mm / 12".

g) The tailpipe adapter shall be installed flush with the body of the vehicle in accordance to NFPA1500.



EXHAUST PIPE MODIFICATION PROCEDURE:

OPTION: INSTALLING THE TAILPIPE REDUCER.

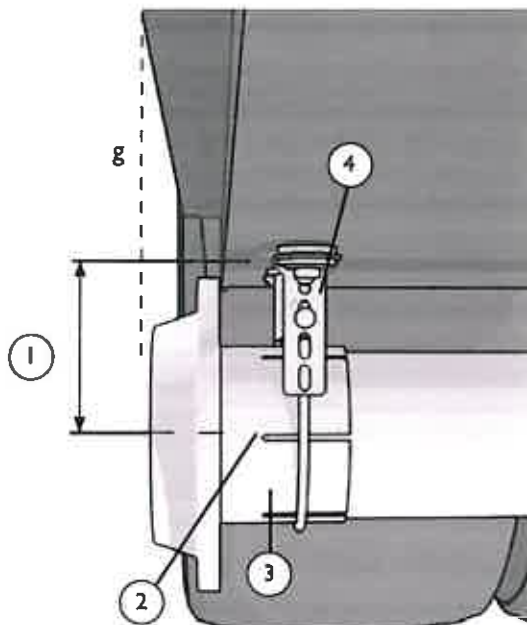
In case the vehicle uses a 4" (100mm) tailpipe you will have to install the tailpipe adaptor. the tailpipe adaptor is a part that adapts the 4" (100mm) tailpipe into a 5" (125mm) tailpipe to which the next part, the tailpipe connector can be installed. The tailpipe adaptor is positioned over the existing tailpipe and fixed using a 4" tailpipe clamp which is included with the part. Product number: Please see your FIRE Price list for the correct product number.

OPTION: INSTALLING THE TAILPIPE BRACKET

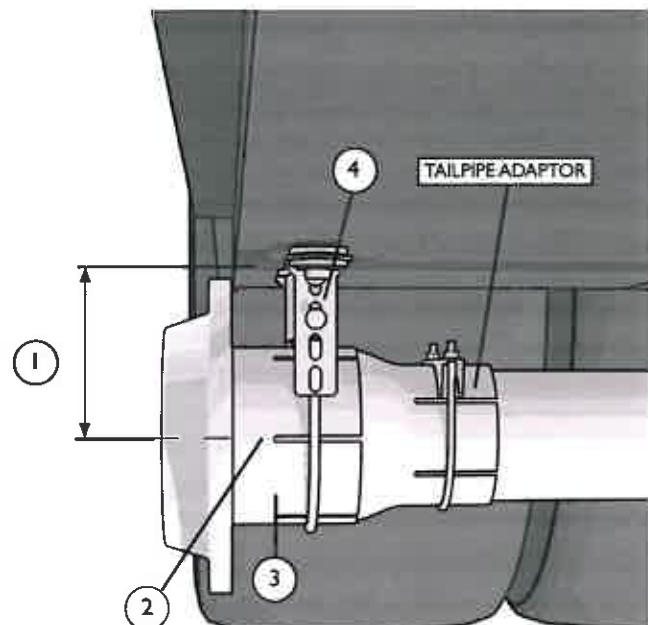
In order to ensure the tailpipe adaptor and/or tailpipe connector is mounted firmly to the vehicle chassis it's recommended to use the tailpipe bracket. It has to be judged per vehicle and installation if this bracket is not needed.

EXHIBIT G

TRUCK BODY



TRUCK BODY



12.2.5 Exhaust System.

12.2.5.1* The exhaust piping and discharge outlet shall be located or shielded so as not to expose any portion of the apparatus or equipment to excessive heating.

12.2.5.2 Exhaust pipe discharge shall be directed away from any operator's position.

12.2.5.3 If the apparatus is equipped with stabilizers, the exhaust piping discharge shall be directed away from the contact area between the stabilizer and the ground when the stabilizer is deployed.

12.2.5.4 Silencing devices shall be provided.

12.2.5.5 Exhaust back pressure shall not exceed the limits specified by the engine manufacturer.

12.2.5.6 Where parts of the exhaust system are exposed so that they are likely to cause injury to operating personnel, protective guards shall be provided.

12.3 Vehicle Components.**12.3.1 Braking System.**

12.3.1.1 The vehicle shall be equipped with an all-wheel antilock braking system if such a system is available from the chassis manufacturer.

12.3.1.2 All brakes shall be readily accessible for adjustment.

12.3.1.3 The service brakes and parking brakes shall be applied by independent means.

12.3.1.4 The service brake application valve, when applied, shall operate all the service brakes on the vehicle or combination vehicle.

12.3.1.5* Where air-actuated braking systems are provided, they shall include the following:

- (1) An automatic moisture ejector
- (2) An air dryer
- (3) A pressure protection valve to prevent the use of all air-operated accessories except air-operated windshield wipers and air-assist steering, if provided, when the system air pressure drops below 80 psi (550 kPa)
- (4) A quick buildup section in the air reservoir system arranged so that if the apparatus has a completely discharged air system, it is able to move within 60 seconds of startup.

12.3.1.5.1 The quick buildup system shall provide sufficient air pressure so that the apparatus has no brake drag and is able to stop under the intended operating conditions following the 60 second buildup time.

12.3.1.5.2* On a chassis that cannot be equipped with a quick buildup air brake system, an onboard automatic electric compressor or a fire station compressed air shoreline hookup shall be permitted in order to maintain full operating air pressure while the vehicle is not running.

12.3.1.6* Parking Brakes.

12.3.1.6.1 Parking brakes shall control the rear wheels, or all wheels, and shall be of the positive, mechanically actuated type.

12.3.1.6.2 When the fire apparatus is loaded to its maximum in-service weight, the parking brake system shall hold the apparatus on at least a 20 percent grade.

12.3.1.6.3 A lockup device to retain applied pressure on hydraulically actuated service brake systems or the use of the "park" position on an automatic transmission shall not be substituted for a separate parking brake system.

12.3.1.6.4 Parking brakes on steerable axles of tiller vehicles shall be provided where necessary to meet the requirements of this standard.

12.3.1.6.5 Air-applied brakes or mechanically actuated brakes shall be permitted on these axles.

12.3.1.7* All apparatus with a GVWR of 36,000 lb (16,000 kg) or greater shall be equipped with an auxiliary braking system.

12.3.2 Suspension and Wheels.

12.3.2.1* Each load-bearing tire and rim of the apparatus shall not carry a weight in excess of the recommended load for the operation of truck tires of the size used, as published in the *Tire and Rim Association — Year Book* and as recommended by the tire manufacturer, when the apparatus is loaded as indicated in Section 12.1.

12.3.2.1.1 Where the vehicle tires are utilized as part of an aerial device stability system, the maximum loads imposed on the tires shall not exceed the tire manufacturer's maximum static load rating.

12.3.2.2 Axle housings and any components other than wheels and tires shall clear the road surface by at least 8 in. (203 mm).

12.3.2.3* An angle of approach and an angle of departure of at least 8 degrees shall be maintained at the front and the rear of the vehicle when it is loaded as indicated in Section 12.1.

12.3.2.4 Clearance for tire chains shall be provided in accordance with SAE J683, *Tire Chain Clearances — Trucks, Buses (Except Suburban, Intercity, and Transit Buses), and Combinations of Vehicles*.

12.3.2.5 Steering.

12.3.2.5.1 The steering mechanism shall be capable of turning the front wheels to an angle of at least 30 degrees to either the right or the left for non-driving front axles and at least 28 degrees for driving front axles.

12.3.2.5.2 Power steering or power-assisted steering shall be provided.

12.3.2.6 Tractor-Drawn Aerial Fire Apparatus.

12.3.2.6.1 If a tractor-drawn vehicle is provided for an aerial fire apparatus, it shall consist of a tractor with a permanent, nonkingpinned "fifth wheel" mounted on the rear of the chassis to carry the forward end of the aerial ladder trailer unit.

12.3.2.6.2 The fifth wheel and body design shall be of a type that allows full 90-degree jackknifing of the tractor trailer combination with the stabilizers in the stored position.

12.3.2.6.3 A steering wheel shall be provided to steer the rear wheels of the trailer unit.

12.3.2.6.3.1 The steering shall be of the power or power-assisted type.

12.3.2.6.3.2 A minimum wheel cramp angle of 20 degrees right and left shall be provided.

12.3.2.6.4 An audible and visual warning system shall be provided to warn both drivers when the jackknife position approaches the manufacturer's maximum allowable position.

Emergency Response Vehicle Exhaust Removal System

Performance and Technical Specifications

1. GENERAL:

Bid Bond

Each Bid shall be accompanied by a bid security in the form of a Bond provided by a Surety Company authorized to do business in the Commonwealth of Kentucky, or in the form of a certified check, and in an amount equal to at least 5% of the Bid amount, pledging that the Bidder will enter into a contract with the Owner on the terms stated in the Bid and will furnish bonds covering the faithful performance of the contract and payments of all obligations arising thereunder

1.01 SCOPE:

- A. The bidder shall submit drawings detailing ductwork diameter, length and termination point for each station listed in the bid package. To facilitate this requirement, the LFUCG Division of Fire shall provide personnel to escort all bidders to view each station listed in the bid specification immediately following pre-bid, October 26, 2016. ALL questions should be sent to Sondra Stone, sstone@lexingtonky.gov. NO answers shall be provided during walk-thru.
- B. The bidder shall provide all labor, materials, and equipment necessary to put in working operation a complete system to remove both diesel and automotive exhaust gases and particulate of operating vehicles within the confines of specified fire station(s). All necessary controls, motors, fittings, ductwork, blower(s), labor and all other equipment and materials specified shall be part of the bidder's work.
- C. 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.
- D. All workmanship and materials shall be in accordance with applicable codes and regulations. The following codes and regulations are to be considered part of these specifications;
 - Underwriters Laboratory (UL) (CUL)
 - National Fire Protection Agency (NFPA)
 - 1999 National Electric Code (NEC)
 - NFPA 1500 2013 Edition
 - Air Movement and Control Association (AMCA)
 - International Mechanical Code (IMC)
 - Building Officials and Code Administrators (BOCA)
 - Uniform Mechanical Code (UMC)
 - Southern Building Code Congress International (SBCCI)

- American National Standards Institute (ANSI)
- American Society of Mechanical Engineers (ASME)
- State and Local City Codes

E. Bidder shall install a complete automatic disconnect Emergency Response Vehicle Exhaust Capture System that addresses the problem of diesel fumes in the fire department station house. The system shall not interfere with normal day-to-day operations. The system shall meet the following performance criteria:

- (1) The exhaust removal system must provide 100% evacuation of all diesel fumes at the source from start-up to exit of the apparatus from the fire station. The diesel exhaust removal system shall be capable of delivering complete coverage for bays up to 110 feet in length. The system must be able to accommodate drive through and back-in bays to meet all other needs of the fire department.
- (2) The system must not affect personnel boarding the apparatus. Hose loops shall not hang any lower than six feet from the bay floor. The hose assembly shall not come into contact with the vehicle other than one connection point to the vehicle's tailpipe. The hose assembly shall not touch or drag on the bay floor.
- (3) The exhaust system shall not block doorways, exits, and aisles in the apparatus bay, which could endanger the welfare of fire personnel or visitors.
- (4) To protect the apparatus electrical system from possible damage, the system bid shall not incorporate any type of electromagnetic device that requires the apparatus to be utilized as an electrical ground for systems operation.
- (5) Due to the harmful effects of diesel exhaust, the system must be designed and capable of capturing 100% of 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.
- (6) The system shall under no circumstance allow exhaust leakage to bypass the nozzle.
- (7) **No exception to these requirements will be allowed.**

Bidder's Proposal Meets This Specification. Yes No **SEE ATTACHMENT**

1.02 **STANDARD PRODUCTS:** Equipment and materials provided for the system installation(s) shall be a standard product of manufacturer currently engaged in the manufacture of Automatic Emergency Response Vehicle Exhaust Capture Systems. Where the requirement calls for a packaged exhaust system to be provided, all items shall be the product of the manufacturer. **No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

1.03 **QUALITY ASSURANCE**: The manufacturer must be ISO 9001 Certified, UL and CUL Certified www.ul.com/database/ and certified by the Air Movement and Control Association (AMCA) www.amca.org/search.htm to ensure quality, consistency and reliability of products. Certification documents shall be provided and attached to the bid proposal. All workmanship, manufacturing procedures, airflow design and materials shall be performance guaranteed. If any findings or test studies reveal improper materials, defective components or inadequate performance as outlined in the performance/technical specifications, the bidder shall remove and replace at his expense the materials in question. **No exceptions to this requirement will be allowed**

Bidder's Proposal Meets This Specification. Yes No

1.04 **EQUIPMENT WARRANTY/WARRANTY SERVICE**: The bidder shall guarantee all materials, equipment and workmanship. 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 or that have been repaired, altered or modified by anyone other than the bidder. If any failure should occur, bidder shall repair or replace (with new or remanufactured parts), at his option, the product without cost to LFUCG. All repairs shall 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 complete system shall be fully warranted commencing on the date of final acceptance and complete system warranty shall be valid for not less than sixty full months. The bidder shall provide scheduled maintenance visits every six months for a period of five years at no further expense to the customer. Maintenance visit will cover all aspects of the system and be performed on all vehicle drops. Warranty service will be performed by bidder's qualified contractor/employees after on site inspection within 24 hours of being called, and repairs complete within 48 hours of technician diagnosis of system malfunction.

Bidder's Proposal Meets This Specification. Yes No

1.05 **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.

Bidder's Proposal Meets This Specification. Yes No

1.06 BIDDER QUALIFICATIONS: Bids will only be accepted from companies that have an established reputation in the business of designing, servicing and installing turnkey installations of Automatic Emergency Response Vehicle Exhaust Capture Systems for a minimum of no less than one (1) year. **Bidder shall show proof that the system bid has been field tested and proven by supplying a list of no less than 10 fire department references within 300 miles of Lexington, Kentucky, references to include a phone number and contact name and shall be submitted with the bid document. No exceptions to these requirements will be allowed**

Bidder's Proposal Meets This Specification. Yes No

1.07 MANUFACTURER QUALIFICATIONS: Bids shall only be accepted from bidders supplying equipment from manufacturers that have an established reputation in the business of manufacturing Automatic Emergency Response Vehicle Exhaust Capture Systems for a minimum of no less than ten (10) years. System bid shall have a life of service of no less than 10 years to establish proof of quality, longevity and service. Equipment life of service shall meet the department's expectations for similar types of equipment **No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

2.01A VEHICLE EXHAUST REMOVAL SYSTEM EQUIPMENT:

- A. **Scope of System Operation:** The vehicle exhaust removal system shall capture 100% of 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 magnetically operated collection nozzle shall be connected to the motor vehicle's exhaust tailpipe. When the vehicle is started by the driver, the exhaust fan will automatically energize and vent the toxic gases directly to the outside of the building. This automatic feature shall be achieved by means of a pressure sensor located inside the exhaust ducting. This pressure sensor shall sense the engine's output pressure upon the first stroke of the engine piston and energize the fan starter. The automatic controller shall use an adjustable timer to keep the contactors energized for a designated period of time. Should the operating vehicle not exit the station within the designated preset time period, a temperature override switch shall be incorporated to override the timer relay. This override shall be achieved by means of an adjustable temperature sensor located inside the exhaust ductwork. The adjustable temperature (heat) sensor shall have a range of 90° to 130° F. If the vehicle were still running inside the station longer than anticipated, the heat sensor would override the timer relay. 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 track system. The sliding track shall be securely attached to the building structure and support a flexible hose assembly that moves with the vehicle inside the station. As the vehicle nears the exit door, the magnetic nozzle connection located at the tailpipe shall release the nozzle 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, a system operator manually pulls the

flexible hose assembly to the entrance door. The system operator holds the magnetic connection device approximately 18" from the floor and at the door threshold. The system operator, without bending over, attaches the magnetic connection device just inside the door threshold as the vehicle enters the station, at which time the exhaust fan motor energizes. The vehicle driver momentarily stops the vehicle when the tailpipe is just at the door threshold (a backup person will notify the driver when it is time to stop the vehicle). The system operator, standing straight up shall slide the connection device up against a flanged adapter attached to the vehicle tailpipe. The cycle is completed as the exhaust fan starts and vents the toxic gases with the magnetic connection nozzle firmly attached to the vehicle exhaust pipe. The vehicle then proceeds to its designated resting position. **Regardless of system manufacturer, all components and their performance must be equal to or better than this standard scope of operation. No exceptions to this requirement will be allowed.**

SEE ATTACHMENT

Bidder's Proposal Meets This Specification. Yes No

- B. **Sliding Track:** The sliding track shall be a one-piece continuous extruded aluminum track in a minimum length of 19 feet. The construction profile shall be of a Boxloc type profile, which shall adhere to the following dimensions: Track height 3-1/8"; width 1-1/2"; thickness 1/8". The track material shall be aircraft aluminum alloy type AA-6063. The aluminum track shall be an extruded design that shall incorporate three separate and functioning channels. The three channels shall be as follows: the mounting channel, the trolley channel, and the Boxloc channel. Each of these sections performs a specific function to make the system work effectively. The mounting compartment shall be designed to accept the slider bars (which shall be provided with factory supplied vertical support legs and riser clamp duct connection) and to allow positioning along the full length of the slotted track-mounting channel. The trolley channel shall allow the trolley/balancer/hose assembly to glide to the door threshold in a safe and effective manner. The Boxloc 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 for splicing additional tracks together for systems over 19 feet long. The overall extruded track lengths shall be 19 foot standard and shall weigh no more than 35 lbs. The track system shall be equipped with end stops that limit travel of flex hose as the vehicle exits the building. The end stop shall be fabricated of zinc-plated steel in a U-shape form with a rubber end stop on the impact end. It shall be attached by using a 1/4" molded locking bolt. The end stop shall be secured to the track with no less than two 1/4" bolts and locking nuts located on the underside of the track. For security, a 1/4" bolt shall be drilled through the ends of each track system to ensure that the trolley/balancer assembly(s) roll no further than the end of the track system. **Regardless of system manufacturer, this component must be equal to or better than this standard specification. No exceptions to this requirement will be allowed**

Bidder's Proposal Meets This Specification. Yes No

- C. **Support Legs:** 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 aircraft aluminum alloy type AA-6063. Supports shall come standard in 19 feet lengths. A minimum of one support with appropriate bracing shall be provided for every 10 linear feet of track profile. The support legs shall consist of a square tubular profile with dimensions no less than 2" OD X 0.1" with 10mm fastening hardware provided. The vertical adjustable mounting foot shall be capable of attaching the leg assembly to a ceiling with a 30° pitch, complete with a slider bar and 3/8" hardware necessary for mounting the horizontal track to the mounting channel system. The horizontal adjustable mounting foot shall be capable of attaching the leg assembly to a wall, complete with a slider bar and 3/8" hardware necessary for mounting the horizontal track to the mounting channel system. The support leg shall be equipped with round tubular zinc-plated steel knee brace with pressed ends in standard lengths of 20", 30" and 72" inches. The angle shall be completely adjustable to the leg support and mounted perpendicular and parallel to the direction of the track. The typical support angle shall be 45° from the centerline of the factory provided support leg. The standard leg shall be capable of meeting a Seismic 4 requirement. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- D. **Double Track Joiner Plate:** Should the exhaust removal system require a double-track type system due to the length of the apparatus bays, the tracks shall be attached in the following manner: The joiner plate shall be constructed from a minimum of ¼ " thick zinc-plated material and be designed to connect two parallel tracks to make a double-track system to accommodate an apparatus bay over 40 feet in length. The joiner plate shall be 10" x 8" flat zinc-plated steel and designed to attach the two tracks to a single factory supplied support leg. The steel plate shall have six 3/8" holes drilled 6-7/8" apart to accommodate the slider bar provided with factory support legs. The joiner plate shall have two slider bars attached to the plate and shall be located on the outside edges of the plate. These slider bars shall fit into the Boxloc track-mounting channel for a simple and secure attachment of the plate to the Boxloc track. The center portion of the joiner plate shall provide attachment for the factory supplied support leg. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- E. **Track Splicing Assembly:** The track splicing assembly shall be fabricated for the sole function of connecting two extruded aluminum Boxloc sliding tracks end-to-end. Track splice shall be manufactured of galvanized steel in two parts and utilized as a clamping device. This clamp shall accurately secure both tracks together in a fashion, which shall eliminate any possibility of obstructing the trolley assembly as it passes through this connection point of track system. Connecting length of splice shall be a minimum of 15-3/4" long and fabricated of 14-gauge material. Four (4) 1/4" bolts with lock nuts shall pass directly through

the internal partition of the Boxloc track. The splicing sleeve shall fit externally around the outside dimension of extruded aluminum track profile. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- F. **Riser Clamp Assembly:** The riser clamp shall be fabricated as a one-piece welded assembly and manufactured to create the transfer of the hard spiral pipe joined at the top and flexible duct connection at the bottom. A slider bar and associated hardware shall be provided with riser clamp assembly. Sizes of the riser clamp will range from 3" - 5" diameter to match the output velocity of the vehicles that will park in that station **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- G. **Accutrack Trolley/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 the track trolley channel. Two additional permanently lubricated trolley wheels shall be provided on the 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 with a lifting capacity of no less than 31 lb. 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. Only a stainless steel balancer cable will be accepted. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- H. **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 range from 3" - 5" diameters with varying lengths depending on the system length required, ranging from 20 - 43 feet without joining or splicing connections. Hose material shall be high-temperature synthetic rubber impregnated into a high-temperature laminated fabric with a minimum overlapping thickness of 2-7/16". This construction of hose must be capable of

operating at continuous temperatures of 400°F and intermittent temperatures of 700°F, such as are experienced when pump checks are performed inside the station. **Independent testing by a recognized UL laboratory must accompany this bid as proof of performance claim.** Wire Helix shall be bound 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. Wear strip shall be 9/16" wide and be provided as a highly visible color. 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. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No SEE ATTACHMENT

- I. **Lower Hose Assembly:** The Lower Hose Assembly shall be a rigid 3"-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 chrome-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. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- J. **Safety Disconnect Coupling:** A four-part segmented coupling with removable wear strips, to protect the vehicle and disconnect from wear, shall be incorporated in the design of the 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 unlikely event the exhaust connection nozzle assembly may become entangled in the undercarriage of the vehicle. This device shall consist of two spun aluminum collars connected by a reusable, segmented coupling band. The release tension of this device shall be preset at 130 lb. and adjustable from 20 lb. to 206 lb. of separating force to accommodate varying exit speeds of vehicles. This coupling shall be reusable. **This is considered a safety requirement, and any system bid must incorporate a safety disconnect. Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No SEE ATTACHMENT

- K. **Collection Nozzle Assembly:** The nozzle shall provide a substantially airtight seal around exhaust tailpipe when connected, thus allowing for 100% source

capture. The seal shall not allow for escape of life-threatening exhaust gases, which may be present during the following conditions:

- In the event vehicle's engine is accelerated above normal idle resulting in an exhaust velocity greater than 5,000 feet per minute.
- In the event that the output velocity or CFM of the exhaust exceeds the manufacturer's normal capture velocity or CFM of exhaust system.
- Nozzle and adapter design must create a metal to metal seal. No gasket, silicone or synthetic materials shall be inserted in Nozzle design.

The chrome-reducing elbow that connects to the connection nozzle shall be fabricated using continuous welded construction. This important feature eliminates the escape of any potentially lethal exhaust gases and must provide for a smooth airflow transition from connection nozzle into the high-temperature flexible hose. The angle of transition shall be no less than or greater than 67°F from the centerline of the reducer. The chrome-reducer shall incorporate a primary expanded metal debris screen, which is permanently affixed by welded seams to the inside opening of the exhaust fitting. Since this item is a point of safety for both personnel and the system itself, no exception will be allowed. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- L. **Hose Saddle:** A hose suspension saddle shall be fabricated of a rubber-molded cushion specifically manufactured for the sole purpose of suspending high-temperature exhaust ventilation hose in a rapid response and auto-release application. The design of the saddle shall smoothly transition the direction of the hose during its travel along the track. Securing clamps shall be provided, including a link fastener, for the purpose of mounting it to the balancer safety link. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

SEE ATTACHMENT

Bidder's Proposal Meets This Specification. Yes No

- M. **Special Features:** The system must be designed to expand for future apparatus to a tandem vehicle arrangement (one vehicle behind the other) by adding to the proposed system. **Systems that require replacement of the existing system or major components to meet a tandem vehicle arrangement shall not be accepted.** A special emergency disconnect feature shall be optional to enable the vehicle to back off the system through a rear exit door. Unique occasions may require the emergency vehicle to depart from the back door in a drive through station. Also, a malfunction of the front overhead door may force the vehicle to exit from the station outside the confines of normal operation. Overall system

design and performance shall be for both back-in and drive-through configurations when applicable. This feature assures door-to-door coverage and collection of dangerous exhaust gases from the point of connection at the doorway. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes X No

- N. **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 modification shall vent the exhaust gases at a 90° angle on the passenger side of the vehicle. Tailpipe modifications requiring a 45° angle of exhaust venting shall not be acceptable in order to prevent exhaust blowback into the station after the auto-release system disengages from the tailpipe. A flange shall be provided and installed by the bidder for the collection nozzle. The manufacturer's supplied adapter shall securely attach to the vehicle tailpipe. The attachment to the tailpipe shall be made by a U-bolt for ease of adjustment. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes X No

2.01B **VEHICLE EXHAUST REMOVAL SYSTEM EQUIPMENT:**

- A. **Scope of System Operation:** The vehicle exhaust removal system shall capture 100 % of 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 magnetically operated collection nozzle shall be connected to the motor vehicle's exhaust tailpipe. When the driver starts the vehicle, the exhaust fan will automatically energize and vent the toxic gases directly to the outside of the building. This automatic feature shall be achieved by means of a pressure sensor located inside the exhaust ducting; this pressure sensor shall sense the engines output pressure upon the first stroke of the engine piston and energize the fan starter. The automatic controller shall use an adjustable timer to keep the contactors energized for a designated period of time. Should the operating vehicle not exit the station within the designated preset time period, a temperature override switch shall be incorporated to override the timer relay. This override shall be achieved by means of an adjustable temperature sensor located inside the exhaust ductwork. The adjustable temperature (heat) sensor shall have a range of 90-130 degrees. If the vehicle is still running inside the station longer than anticipated, the heat sensor will override the timer relay. The magnetic connection device shall stay connected to the vehicle tailpipe as it travels to the exit door by means of a pre-engineered Aluminum Rail and Trolley System. The suction trolley is designed to part rubber sealing lips with minimal friction and allow suction only at the point where the trolley is positioned. The vacuum pressure created by the fan (negative pressure) seals the rubber lips. The rail 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 the nozzle from the tailpipe. After the system releases from the vehicle tailpipe at the door, it shall retract passively and remain near the door in a convenient storage position for ease of attachment when returning to the station. When the vehicle returns to the station, a system operator manually pulls the flexible hose assembly to the threshold of the entrance door. The system operator holds the magnetic connection device approximately 18" from the floor and at the door threshold. Without bending over, the system operator, in order to avoid facial exposure to the exhaust gas stream, attaches the magnetic connection device to the tailpipe at the door threshold. As the vehicle approaches the station, the driver momentarily stops. The exhaust fan motor energizes at the same time the connection is made. The cycle is completed as the exhaust fan starts and vents the toxic gases with the magnetic connection nozzle firmly attached to the vehicle exhaust pipe. The vehicle then proceeds to its designated resting position. System must be applicable to be upgraded to a motor drive return at a future date with no replacement of equipment. **Regardless of system manufacturer, all components and their performance must be equal to or better than this scope of operation. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No SEE ATTACHMENT

- B. **Rail Material:** The rail shall be a one-piece continuous extruded aluminum rail in a minimum length of 19 feet in an effort to reduce the points of leakage due to seams of connections. The construction profile shall be of a round profile type, which shall adhere to the following dimensions. Rail diameter of 6.5" with a rail thickness of 0.175. The bottom portion of the rail shall have a continuous slot to accept a rubber seal. The rail material shall be aircraft aluminum alloy type AA-6063. The aluminum track shall be extruded as a one piece design unit to maximize the structural integrity of the rail and to minimize joints which may add to possible leakage of dangerous exhaust gases. Extruded into the rail profile shall be all necessary mounting guides, which will allow for support of the rail mounting hardware and airline support cable. Mounting channels shall be provided continuously along both sides of the rail extrusion in order the proper positioning of all required mounting supports in accordance with codes. The rail shall allow the trolley / hose assembly to glide to the door threshold in a safe and effective manner. The extruded rail channel shall allow the whole rail to remain rigid and shall provide an area to attach bolts for splicing additional rails together for systems over 19 feet long. The overall extruded rail lengths shall be 19 foot standard. The rail system shall be equipped with a hydraulic braking system that limits travel of flex hose as the vehicle exits the building. The hydraulic brake shall be incorporated into the end cap of the suction rail. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- C. **Top Mounting Suspension:** The top mounting suspension shall be specifically designed to attach with 2 mounting cleats to the mounting slots that were extruded into the rail profile. The top suspension mount support shall be zinc plated bright finish and provided with 2 mounting cleats with (4)- 5/16" X 3/4" hex head bolts to attach the mounting support to the rail. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- D. **Support Legs:** 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 aircraft aluminum alloy type AA-6063. Supports shall be standard in 19 feet lengths. A minimum of one support with appropriate bracing shall be provided for every 10 linear feet of rail profile. The support legs shall consist of a square outer profile with dimensions no less than 2" OD X 0.1" with 10mm fastening hardware provided. The vertical adjustable mounting foot shall be capable of attaching the leg assembly to a ceiling with a 30 degree pitch, complete with 3/8" hardware necessary for mounting the leg assembly to the top suspension mount. The horizontal adjustable mounting foot shall be capable of attaching the leg assembly to the wall, complete with hardware necessary for mounting the horizontal track to the mounting channel system. The support leg shall be equipped with round tubular zinc-plated steel knee brace with pressed ends in standard lengths of 20", 30" and 72" inches. The angle shall be completely adjustable to the leg support and mounted perpendicular and parallel to direction of the rail. The typical support angle shall be 45 degrees from the centerline of the factory provided support leg. The standard leg shall be capable of meeting a Seismic 4 requirement.

Vertical support and bracing shall be provided to safely secure the rail profile in accordance with building code and seismic standards which may apply. A minimum of one support with appropriate bracing shall be provided for every ten linear feet of rail profile. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- E. **Hydraulic Brake System:** The brake shall be incorporated into the end cap of the suction rail profile. The hydraulic brake system must incorporate a hydraulic shock capable of reducing the forward impact of 1 to 4 suction trolleys which may be installed now or in the future to the exhaust rail system. This hydraulic shock shall be secured to a steel end cap fabricated of 6.25 diameter steel tubing with a wall thickness of 0.156" welded to a 0.156" steel plate with formed 90 degree side rails for rigidity. The end cap shall have a removable circular end plate to facilitate an end feed duct connection and shall be a black powder coated finish. The hydraulic shock shall be capable of reducing to a full stop the trolleys in less than 4", without physical damage to either the rail profile or trolley that it

is stopping. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- F. **Rail Splicing Joint:** The splice joint shall be formed aluminum extrusion equal to the internal diameter of the suction rail profile. The splice shall have a wall thickness of no less than .190" in thickness and a length of no less than 8" from end to end. The rail splicing shall be safely secured by no less than 16- 3/8" x 1 1/2" bolts, nuts and lock washers. Each bolt shall pass through the exterior of the rail profile and splicing joint and be secured on the inside by a lock washer and nut. Self tapping bolts or screws are not acceptable. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- G. **Middle Rail Duct Connection:** The rail duct connection shall be rectangular to an 8" diameter round transition fitting fabricated from 20 gauge galvanized steel with a double rubber U style lip seal. The rectangular slot shall be 19" long by 1 3/4" high with a 3/8" external flange to slide into the rail profile. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- H. **Trolley Assembly:** Trolley Assembly shall be a gantry type trolley with sealed bearing loaded wheels designed to roll inside the internal rail profile flange. The trolley chassis shall be galvanized steel epoxy coated with a black finish. The chassis shall be fitted with a tapered cone. The rubber sealing lips shall have a vulcanized Teflon strip covering 1 1/2" of the bottom edge of the sealing lip which shall minimize resistance between the cone and the rubber sealing lips. The exhaust cone transition shall be a tapered slot design which shall fit inside the suction rail profile. The tapered slot shall be equal or exceed in area the diameter of exhaust ventilation hose to which it is attached. The trolley assembly shall be equipped with rubber impact bumpers at both the front and rear of the trolley chassis to eliminate metal to metal contact which could damage the trolley assembly. There shall be a system balancer assembly provided to aid in the delivery of the hose to the exit door. The balancer assembly shall be a self adjusting weight spring tension balancer with a lifting capacity of no less than 31 lbs. The balancer shall have a minimum diameter steel cable of .080 and have a safety link connection. The system supplier shall manufacture both the balancer and the trolley assemblies for the purpose of conveying the flexible hose to the door exit for automatic release of the magnetic collection nozzle. Only a stainless steel balancer cable will be accepted. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- I. **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 range from 3" – 5" diameters with varying lengths depending on the system length required ranging from 20 - 43 feet without joining or splicing connections. Hose material shall be high temperature synthetic rubber impregnated into a high temperature laminated fabric with a minimum overlapping thickness of 2 7/16". This construction of hose must be capable of operating at continuous temperatures of 400 degrees F and intermittent temperatures of 500 degrees F such as are experienced when pump checks are performed inside the station. **Independent testing by a recognized UL laboratory must accompany the bid document as proof of performance claim.** The wire helix shall be bound 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. Wear strip shall be 9/16" wide and shall be provided as a highly visible color. 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. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- J. **Lower Hose Assembly:** Shall be a rigid 3"-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 chrome 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 shall act as a safety disconnect in the unlikely event the nozzle gets entangled. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- K. **Safety Disconnect Coupling:** A (4) part segmented coupling with removable wear strips to protect the vehicle and disconnect from wear. The coupling shall be incorporated in the design of the system enabling 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 unlikely event the exhaust connection nozzle assembly may become entangled in the undercarriage of the vehicle. This device shall consist of two spun aluminum collars connected by a

reusable-segmented coupling band. The release tension of this device shall be preset at 130 Lb. and adjustable from 20 Lb. to 206 Lb. of separating force to accommodate varying exit speeds of vehicles. Shall be reusable. **This is considered a safety requirement and any system bid must incorporate a safety disconnect. Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes X No SEE ATTACHMENT

L. **Collection Nozzle Assembly:** The nozzle shall provide a substantially air tight seal around exhaust tail pipe when connected thus allowing for 100% source capture. The seal shall not allow for escape of life threatening exhaust gases, which may be present during the following conditions:

- In the event vehicle's engine is accelerated above normal idle resulting in an exhaust velocity greater than 5000 feet per minute.
- In the event that the output velocity or CFM of the exhaust exceeds the manufacturers normal capture velocity or CFM of exhaust system.

The chrome-reducing elbow that connects to the connection nozzle shall be fabricated using continuous welded construction. This important feature eliminates the escape of any potentially lethal exhaust gases and must provide for a smooth air flow transition from connection nozzle into the high temperature flexible hose. The angle of transition shall be no less than or greater than 67 degrees from the centerline of the reducer. The chrome-reducer shall incorporate a primary expanded metal debris screen, which is permanently affixed by welded seams to the inside opening of exhaust fitting. Since this item is a point of safety for both personnel and the system itself, no exception will be allowed. This construction of nozzle must be capable of operating at continuous temperatures of 400°F and intermittent temperatures of 700°F, such as are experienced when pump checks are performed inside the station. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes X No SEE ATTACHMENT

M. **Hose Saddle:** A hose suspension saddle shall be fabricated of a rubber molded cushion specifically manufactured for the sole purpose of suspending high temperature exhaust ventilation hose in a rapid response and auto-release application. The design of the saddle shall smoothly transition the direction of the hose during its travel along the track. Securing clamps shall be provided including a link fastener, for the purpose of mounting it to the balancer safety link. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes X No SEE ATTACHMENT

- N. **Special Features:** The system must be designed to expand for future apparatus to a tandem vehicle arrangement (one vehicle behind the other) by adding to the proposed system. **Systems that require replacement of the existing system or major components to meet a tandem vehicle arrangement shall not be accepted.** A special emergency disconnect feature shall be optional to enable the vehicle to back off the system through a rear exit door. Unique occasions may require the emergency vehicle to depart from the back door in a drive through station. Also a malfunction of the front over-head door may force the vehicle to exit from the station outside the confines of normal operation. Overall system design and performance shall be for both back in and drive-through configurations when applicable. This feature assures door to door coverage and collection of dangerous exhaust gases from the point of connection at the doorway. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- O. **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 modification shall vent the exhaust gases at a 90-degree angle on the passenger side of the vehicle. Tailpipe modifications requiring a 45-degree angle of exhaust venting shall not be acceptable, in order to prevent exhaust blowback into the station after the auto-release system disengages from the tailpipe. A flange shall be provided and installed by the bidder for the collection nozzle. The manufacturer's supplied adapter shall securely attach to the vehicle tailpipe. The attachment to the tailpipe shall be made by a U bolt for ease of adjustment. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

SEE ATTACHMENT

2.02 **ELECTRICAL CONTROLLERS**

- A. **Controller type:** The controller shall be built and supplied by a UL recognized and listed exhaust system manufacturer. Controller shall carry the UL - CUL listing label as an "Enclosed Industrial Control Panel." Individual components listed by UL - CUL shall not satisfy the above requirement. Manufacturer shall undergo monthly inspections by UL to verify all requirements and standards are met as outlined by UL. The controller shall be delivered as an Operating System Three series controller or an approved controller equal to the specifications to follow. **This requirement ensures quality, reliability, performance and safety. Therefore outsourcing or third party manufacturers will not be accepted.**

Bidder's Proposal Meets This Specification. Yes No

- B. **Electrical controllers:** The electrical controller offered shall bear a visible UL listing label as proof of subscribership and shall be validated by UL www.ul.com/database/ as an "Enclosed Industrial Control Panel". Certification documents shall accompany bid documents. **No exceptions.**

Manufacturer Name PLYMOVENT CORPORATION

UL File No. E212640

- (1) Electrical controller and manufacturer shall be recognized and listed 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 12 rated and UL listed as Type 12. The electrical control components shall be provided and mounted in an electrical enclosure to restrict access to internal components of the controller by authorized personnel only. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- C. **Controller Performance:** It shall be designed to sense the output pressure and temperature change inside the ductwork system, which is normally generated by any internal combustion engine designed to propel a motor vehicle. The operating logic shall be designed to complete this cycle. At any point in time when a collection device is connected to a motor vehicle's exhaust tailpipe, as the operator starts the vehicle, the controller shall automatically sense the engine's output pressure or temperature of the exhaust and in turn energize the electrical contactor which will supply power to the AMCA certified spark resistant fan motor. Through the use of an adjustable timer the controller shall keep the contactors energized for up to six minutes in accordance with the stations response requirement. If the responding vehicle does not disconnect from the exhaust ventilation system in less than the designated setting, the temperature override switch shall override the time delay to ensure continuous system operation. This automated function will work for as long as the exhaust gas temperature is in excess of the setting on the heat sensor located in the ductwork system. This cycle shall not allow the electrical contactor, which energizes the exhaust fan, to short cycle or stop the fan while the system is connected to an operating vehicle. **Components in the controller shall be kept to a maximum of five or less, to prevent down time due to lead times for replacement parts. Systems utilizing sound activated controllers will not be acceptable due to inconsistent starting and nuisance starting of the exhaust fan motor by everyday noises such as buses, large trucks and other noises present around a fire station on a daily basis. Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- D. **Motor Control Contactor:** Contactors shall be Allen Bradley Industrial Electrical Contactor 100C series. The contactor shall be UL - CUL listed as an approved component. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- E. **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. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- F. **Soft Touch Controls:** Shall be incorporated on the face or the access door of the controller. It shall be accomplished by the use of an adhesive backed Lexan membrane type label to prevent water infiltration, which would void the NEMA 12R rating. The label shall be provided and secured permanently to the exterior of the electrical controller. The label shall include the name of the manufacturer, address, telephone number, user instructions and any warnings or cautions required by Underwriters Laboratories. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

- (1) **Auto Start:** This mode of operation shall be strictly for normal day to day use, as it would apply to receiving an emergency call and leaving the station. Any one or combination of the three devices listed below in Paragraph H shall activate the system. The system shall maintain itself in the Auto Start mode and always return there after the Stop sequence has been initiated. The controller shall not have a permanent off position due to the potential health hazards of diesel exhaust components. **No exceptions.**
- (2) **Stop:** This mode of operation shall be a system override to shut down the system manually. Upon activating this mode of operation the exhaust system blower shall shut down. After a period not to exceed three seconds the controller shall automatically return to the Auto Start ready mode. This shall be a safety feature to prevent a potential health hazard from carcinogenic diesel exhaust leakage from systems having an undesirable open nozzle. **No Exceptions.**
- (3) **Manual Run:** This mode of operation shall be a system override to run the exhaust system blower continuously for the purpose of running the vehicles indoors for equipment checks during inclement weather. Upon activating this mode of operation the exhaust system blower shall start and run continuously until the Stop mode is activated at which point the system will

automatically return to the Auto Start ready mode within a maximum three second time period.

Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.

Bidder's Proposal Meets This Specification. Yes No

G. **System Indicator LED's:** The soft touch control shall incorporate indicator LED lights to show system status at all times the LED indicator light shall be favored over filament type pilot lights, due to their longevity and durability.

- (1) **Auto Start Indicator:** This LED shall indicate the system is in the fully automatic mode of operation and that power is on to the controller.
- (2) **Fan On Indicator:** This LED shall indicate that power is being applied to the system blower and the controller is operating normally.
- (3) **Filter Status Indicator:** If flashing continuously, this shall indicate excessive pressure loss across the filter bank media. Consequently the filter must be serviced to maintain optimum efficiency of the system.
- (4) **Stop Indicator:** This LED shall indicate the fan has been manually de-energized and will return to the Auto Start ready sequence in less than three seconds to prevent the system blower from being left in the Off mode.
- (5) **Manual Run Indicator:** This LED shall indicate the fan is operating in a continuous run mode until interrupted by the stop mode activation.

Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.

Bidder's Proposal Meets This Specification. Yes No

H. **Controller Transformer:** Shall be UL listed industrial control circuit transformer sized to properly supply all components so that only one transformer shall be required. Transformer shall be provided with multi-tap primary for 115, 208, 240, 277, 400, 480, and 600VAC, and 24, 120, 230VAC secondary operating on 50 or 60 hertz with a capacity of 90 volt amperes. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

I. **Control Circuit Protection:** The control transformer and control circuit shall be protected against overcurrent 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 FLQ 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. **Regardless of system manufacturer, this**

component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.

Bidder's Proposal Meets This Specification. Yes No

- J. **Electronic Control Circuit Card:** Shall be a solid state printed circuit board. The soft controls shall be an integral part of the control circuit card. The control circuit card shall utilize a potentiometer to adjust the length of the timing cycle from 7 to 360 seconds. It shall incorporate several different modes of operation and optional features. **The replacement of a control circuit card shall be the favorable method of component replacement. Controllers using pushbuttons and multiple components to make up the logic circuit shall be unacceptable due to higher maintenance and troubleshooting costs if a failure should occur. Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- K. **Activation Devices:** The controller shall be compatible with several different types of activation devices and upgradable without the cost of replacing the whole controller.

- (1) **Engine Start Switch:** Shall be of an engine pressure sensing type, capable of recognizing the output pressure of any type of motor vehicle exhaust. The electrical contact shall be dry type or not to exceed 24V. There shall be one sensor per vehicle.
- (2) **Thermal Start Switch:** Shall be a temperature sensing switch of the snap disc type and adjustable from 90 degrees F to 130 degrees F to configure the system based on different exhaust temperatures. There shall be one sensor per vehicle.
- (3) **Remote Control Transmitter and Receiver:** Shall be an optional feature with three independent channels of control. The receiver shall operate on 12V to 24 V AC or DC. The handheld transmitter shall be molded out of a highly visible orange composite with a visor clip on the back making it rugged and easy to locate. It shall be powered by a 9 volt battery for ease of replacement and cost savings. Utilizing three sets of normally open and normally closed contacts allows the device to be used to control three separate functions from up to one quarter of a mile away.
 - **Channel A:** Shall be capable of starting and stopping the exhaust system blower.
 - **Channel B:** Shall be capable of operating the apparatus bay door upon entering or leaving the fire station, if desired.
 - **Channel C:** Shall be capable of remotely controlling the traffic signal in front of the fire station, if so equipped.

Systems connected to the apparatus electrical system and transmitting a signal while the vehicle is running will not be acceptable. Systems operating

on the popular 390MHz for residential garage door operators will not be acceptable due to potential liabilities. Regardless of system manufacturer, these components and their performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.

Bidder's Proposal Meets This Specification. Yes No

- L. Clean Filter Indicator Alarm: This standard feature shall be used in conjunction with the optional Unifilter for filtering diesel exhaust particulate before release to the atmosphere. The clean filter indicator shall monitor the pressure loss across the filter bank media. Once the useful life of the filter has been depleted the pressure differential switch will signal a high-pressure loss and flash the "Fan On" indicator while the exhaust blower is running. Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.

Bidder's Proposal Meets This Specification. Yes No

- M. Remote Alarm: Shall be an optional feature to monitor the system and advise when a preset number of emergency runs on the system have accrued. Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.

Bidder's Proposal Meets This Specification. Yes No

- N. No Airflow Alarm: Shall be an optional feature to monitor the system and advise when the exhaust fan is not functioning properly. Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.

Bidder's Proposal Meets This Specification. Yes No

- O. Carbon Monoxide Alarm: Shall be an optional feature to monitor the carbon monoxide levels inside the apparatus bay area. Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.

Bidder's Proposal Meets This Specification. Yes No SEE ADDENDUM 1

- P. 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. Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.

Bidder's Proposal Meets This Specification. Yes No

- Q. **Electrical Terminal Block:** Shall be 600 V, UL rated and recognized. It shall provide individual connection points for remote controls, clean filter indicator and power connections. The primary and secondary control wiring fuses shall be incorporated into the terminal block as one unit. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- R. **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. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- S. **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. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

2.03 **System Electrical Installation Specifications**

- A. **Codes and Practices:** The "Emergency Response Vehicle Exhaust Removal System" electrical equipment shall be installed by a qualified licensed electrician, in a neat and workmanlike manner. The electrical installation shall adhere to all applicable codes including but not limited to:

- NFPA-National Electrical Code 1999
- State Electrical Codes
- City imposed Electrical Codes

Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.

Bidder's Proposal Meets This Specification. Yes No

- B. **Station Electric Supply Panel:** The power circuit for the "Emergency Response Vehicle Exhaust Removal System" shall originate in a circuit breaker panelboard

of the appropriate size to handle the load. Fan circuit shall be supplied by a UL listed, HACR rated circuit breaker (HACR rating is specifically for motor type loads) of the same type as indicated by the manufacturer of the circuit breaker panel or a dual element time delay fuse for fuse style panels. The circuit shall be clearly marked an engraved ledger plate or in ink on the panel schedule as "Emergency Response Vehicle Exhaust Removal System". **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- C. **Automatic Controller:** The controller shall be built and supplied by a UL recognized and listed exhaust system manufacturer. Controller shall carry the UL - CUL 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 an Operating System Three series controller or an approved equal to the specifications in 2.02 Electrical Controllers. **Due to incompatibility of components outsourcing or third party manufacturers will be unacceptable.** The controller shall be mounted 6' feet to the top of the cabinet AFF (above finished floor). A safety disconnecting means must be within sight of the controller for servicing and for safety reasons. If the supply panel is not within sight, a separate disconnecting means is required beside the controller (NEC code ref. 430-102 (a). Safety disconnect shall be capable of being locked in the off and on position to follow lockout, tag out procedures. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- D. **Power Wiring Conduit:** Conduit shall be a minimum of EMT utilizing compression type fittings for damp locations such as apparatus wash down areas (NEC code ref. 348-10). Conduit shall be supported with a conduit strap every 10 feet and within 3 feet of each box or termination, (NEC code ref.348-13). **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- E. **Power Wiring from Supply Panel to OS-3:** Shall be THHN stranded copper wire consisting of a flame retardant, heat-resistant thermoplastic insulation with a nylon jacket for abrasion, gas, and oil resistance and rated up to 600 volts. This shall be used for all supply voltages from 120V through 480V, single or three phase applications. Voltage drop shall be taken into consideration when sizing conductors and shall not exceed 3 percent, see attached table 1-1 for proper wire gauge (AWG) based on length of run from terminal to terminal. **Regardless of**

system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.

Bidder's Proposal Meets This Specification. Yes No

- F. **Low Voltage Control Wiring:** Shall be a minimum of a 14/2 multi-conductor shielded cable (Anixter part number #2AS-1401POS or equivalent) to meet UL standards for the controllers low voltage field wiring. Termination procedure shall be as follows; the shielded cable shall be stripped back inside the control cabinet, the mylar foil shield and silver drain wire are to be twisted together and secured under the screw in the grounding lug inside the control cabinet. Terminations at each sensor must leave foil shielding and drain wire intact and at no point shall it come into contact with ground. There shall be only one connection to ground. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- G. **Low Voltage Control:** Shall be encased in a minimum of ½" EMT from the OS-3 Controller to the attic or building steel where it shall terminate with a EMT connector with a threaded plastic bushing. Conduit shall be supported with a conduit strap every 10 feet and within 3 feet of each box or termination (NEC code ref.348-13). The 14/2 multi-conductor shielded cable (Anixter part number #2AS-1401POS or equivalent) shall be supported by the building structure and ran in a manner that the cable will not be damaged by normal building use (NEC code ref.725-7), securely fastening it with nylon tie wraps every 24" to 36" inches. Draping of the cable perpendicular to building steel or support members will be unacceptable. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- H. **Power Wiring from OS-3 to Fan Motor:** Shall be a minimum of EMT utilizing compression type fittings for damp locations such as apparatus wash down areas (NEC code ref.348-10). Conduit shall be supported with a conduit strap every 10 feet and within 3 feet of each box or termination (NEC code ref. 348-13). Conduit shall extend through the outside wall through a hole of the proper size and terminate directly into the back of the safety disconnect with the appropriate connector and sealed with a silicon sealer or cement mortar. (Using fan model number select appropriate wire and conduit size from Table 1-1). **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- I. **Fan Safety Disconnect:** A safety disconnecting means must be within sight of the blower for servicing and safety reasons (NEC code ref. 430-102 (b)). Safety disconnect shall be a Square D, non-fusible, NEMA 3R rated for wet locations and shall be mounted adjacent to the AMCA Certified blower. Safety disconnect shall be capable of being locked in the off and on position to follow lockout, tagout procedures. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- J. **Liquid tight Flexible Metal Conduit:** Shall be UL listed liquidtight flexible metallic conduit (Sealtite). Conduit will encase the load wires and ground wire from the safety disconnect switch to the blower motor. Conduit length not to exceed (4) feet from disconnect to blower motor. The appropriate listed terminal fittings shall be used. (NEC code ref.351-7). **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- K. **Spark Resistant Blower:** Shall be AMCA certified, designed and installed as a direct drive spark resistant blower (IMC code ref. 503.2) The motor shall meet current EPACT standards for energy savings. Fans utilizing steel housings and impellers will not be accepted. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- L. **Pressure switch:** There shall be one pressure switch for each apparatus connected to the system. The pressure switch shall operate at a maximum of 24VAC, pre-calibrated at .18 in. of water column. Mounting shall be accomplished by drilling a 3/8" hole 3 inches above the riser bracket and to the left of the regulator and threading the switch into the duct. The electrical connections shall be made with a .020 x .187 female quick disconnect terminals, such as Thomas & Betts part no. 14RBD-18277. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- M. **Temperature switch:** There shall be one temperature switch for each apparatus connected to the system. The temperature switch shall be of the snap disc type and adjustable from 90 degrees F to 130 degrees F. It shall be mounted on the ductwork 2 inches above the pressure switch by drilling a 1" hole, sealing the switch with silicon sealant and securing with 2 tek screws. Electrical connection shall be made with terminals provided or solderless type such as Thomas & Betts

part no. 14RB-2577. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes _____ No _____ SEE ADDENDUM 1

2.04 **AIR MOVING DEVICES:**

- A. **Centrifugal Fans:** The fan shall be a direct drive centrifugal type, high pressure, single width, single inlet as required or indicated. Impeller wheels shall be of a radial design for high static pressure performance. Impeller wheels shall be spark resistance and made of Almag material 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 fan housing shall be manufactured from a nonferrous material - Almag (or) approved equivalent. The outlet configuration shall be top horizontal, bottom horizontal, or upblast. The housing shall be capable of field reconfiguration in the event the mounting position needs to be changed for unforeseen reasons. For aesthetic reasons the fan motor and assembly shall be mounted on a welded 304 stainless steel mounting base to prevent rust stains on the exterior of the building. The fan housing and motor mounting hardware shall be 304 stainless steel for serviceability reasons. The base shall have four (4) pre punched openings at bottom of fan base for field attachment to either an exterior wall or roof mounting structure. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes X No _____

- B. **Fan motor and bearing:** All 1 to 15 horsepower motors shall be totally enclosed fan cooled (TEFC) continuous duty rated. The motors shall be dual voltage where applicable. Motors built after October 27th, 1997 shall comply with the government mandated "Energy Policy and Conservation Act" (EPACT) as outlined by the Department of Energy. The bearings shall be self-aligned, ball bearing type permanently sealed and lubricated. The exhaust discharge outlet shall be in compliance with UMC code ref.505.9(2) and ACGIH recommendations (min. of 36" above roofline). Air intakes, windows, cascade systems, prevailing currents, communication equipment and building aesthetics shall be considered in the final location of the fan.
- (1) **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.
 - (2) **Variable Speed Drive:** The motor shall be compatible with a variable speed drive unit.

All fans used in this Vehicle Exhaust Extraction System shall be manufactured by the manufacturer of the Vehicle Exhaust Extraction System. Outsourced fans are not permitted in this installation.

Bidder's Proposal Meets This Specification. Yes X No _____

C. **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(s) shall be performance guaranteed.

(1) **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 to.

- The 4 inch hose system shall be designed to deliver a minimum of 500 CFM at a velocity of 5800 FPM at the hose and nozzle connection.
- The 5 inch hose system shall be designed to deliver a minimum of 750 CFM at a velocity of 5800 FPM at the hose and nozzle connection.
- The 6 inch hose system shall be designed to deliver a minimum of 1100 CFM at a velocity of 5800 FPM at the hose and nozzle connection.

Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.

Bidder's Proposal Meets This Specification. Yes No

D. **Location:** The preferable fan location shall be on the outside of the fire station as far away from any living quarters as possible so that firefighters would not be disturbed by the system activation. No blower fans shall be mounted inside the fire station. Silencers shall be provided when fan sound pressure level exceeds 64 dB. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

2.05 **DUCTWORK SYSTEM:**

A. **Ductwork type and materials:** Shall be UMC Class 2 or SMACNA Class II product conveying duct (UMC code ref.506.1). It must meet or exceed criteria for construction and performance as outlined in **Round Industrial Duct Construction Standards**, SMACNA. Materials of construction unless otherwise specified for all ductwork and fittings shall be a minimum G-90 galvanized sheet metal in accordance with ASTM-A525 and A527. Only when specified, type 304 stainless steel in accordance with ASTM A240 shall be provided. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- B. **Ductwork sizing and gauges:** All ductwork subject to positive or negative pressure shall be of round spiral pipe construction, with the range of available sizes not to exceed 10 inches in diameter. Duct gauge shall depend on diameter and a minimum operating pressure of 8 inches water gauge. Acceptable gauge and reinforcement requirements shall be in accordance to the following. Inner duct diameter 4" - 11" dia. shall be minimum 20 - 22 gauge standard galvanized sheet metal round spiral pipe (UMC Table 5-C). **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- C. **Ductwork Fittings:** All exhaust fittings shall be round and have a wall thickness 2 gauges (one even gauge number) heavier than the lightest allowable gauge of the downstream section of duct to which they are connected (UMC code ref. 609.3). 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 45 degree (UMC code ref. 609.3). All seams shall be continuous stitch welded and if necessary internally sealed to insure airtightness. Turning elbows shall be stitch-welded and used for all diameters and pressures. They shall be fabricated of 24 gauge galvanized steel and constructed as two piece with continuous welded seam construction fittings similar to those provided by Lindab Inc. Tapered Body Fittings shall be used wherever particular fallout is anticipated and where air flow is introduced to the transport duct manifold. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- D. **Ductwork Design Velocities:** Shall be a minimum of 3500 - 4000 feet / minute transport velocity. Capture velocity shall be 5500 - 6000 FPM to extract 100 % of the exhaust gases. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes No

- E. **External Ductwork:** Shall be sized for the exact inlet and outlet of the exhaust fan blower. If the fire station is exposed to unusual inclement weather, unusual levels of acid rain or is within 3 miles of salt water, stainless steel shall be considered for all exterior duct work components. An exhaust rain cap shall be supplied and manufactured in accordance with EPA standard for free draft rain cap requirements. Included as an integral part of this rain cap shall be a back draft damper to provide protection from rain and other inclement weather. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes X No

- F. **Exhaust Penetrations:** To protect the fire department's best interest ductwork shall only penetrate exterior walls rather than a roof penetration. In all cases when making a wall penetration through masonry or concrete walls it shall be done by the use of a professional core-drilling machine. The core drilling shall be properly sized to reduce the diameter of the opening to the smallest possible size. Only after all possible avenues for wall penetration are exhausted shall the roof penetration be accepted. The original roofing contractor shall perform the work if possible to ensure any warranties on the existing roof are not voided. If the original roofing contractor can not be notified a licensed roofing contractor shall be used. **Regardless of system manufacturer, this component and its performance must be equal to or better than this standard specification. No exceptions to this requirement will be allowed.**

Bidder's Proposal Meets This Specification. Yes X No

- 3.01 **TRAINING:** The bidder or authorized approved personnel shall provide training to fire department personnel in the daily use and maintenance of the vehicle exhaust removal system that has been installed and specified herein. The fire department shall be notified at least 7 days prior to the date scheduled for the training course. Training shall be for all personnel involved with the operation of the exhaust removal system to include all shifts required to man the particular facility. The Training session shall be performed in person by a recognized representative of the manufacturer of the exhaust removal system, in addition a training video shall be provided to the fire department.

Bidder's Proposal Meets This Specification. Yes X No

Station	address	# of Drops	Equipment
2	415 E. New Circle Rd	3	Tracks/Rails
6	501 S. Lime St	3	Tracks
7	3315 Tates Creek Rd	2	Tracks
8	1725 N. Broadway	2	Tracks
9	2234 Richmond Rd	2	Tracks
10	1128 Finney Dr	3	Tracks
11	1626 Harrodsburg Rd	2	Tracks
12	399 Southland Ave	2	Tracks
13	1301 Leestown Rd	2	Tracks
14	1530 Roanoke	2	Tracks
15	3308 Shillito Park Rd	2	Tracks
16	3700 Man O War	3	2 Tracks / 1 Rail
18	1098 South Cleveland	1	Track
19	3450 Huffman mill	1	Rail
20	3001 Arrowhead	3	1 Track / 2 Rails
21	3191 Maple Leaf Dr	3	1 Track / 2 Rails

PLYMOVENT®

clean air at work

WARRANTY

Statement of Limited Warranty

Seller warrants to the Buyer of all new products that it will be free of manufactured defects in workmanship and material.

This warranty is void if Seller finds that the product has been subjected to improper installation, improper care, service and maintenance or abnormal operations.

Warranty Period

All standard warranty periods start from the date of shipping to the original Buyer or third party in which invoice and/or sales order number must be provided. Standard warranty period applies unless otherwise stated in a written agreement between Buyer and Seller at time of sale. Warranty periods are as follows:

Standard Product

10 Year Conditional Warranty: Aluminum Rail Extrusions Only

10 Year Conditional Warranty will be granted on standard Aluminum Extrusion(s) only by Seller in accordance with following: Seller receives completed Warranty Card from Buyer, that material received is in good condition, within 30 business days of material receipt. Warranty applies to Aluminum Rail Extrusion product only.

If completed Warranty Card is not received by Plymovent within 30 business days of material receipt, Plymovent's 5 Year Warranty on Standard Product will apply.

For Warranty Card, please contact Plymovent's Customer Service and/or Sales or go online to www.plymovent.com under "contact us".

5 Year Conditional Warranty: Standard Fire Systems Only

5 Year Conditional Warranty will be granted by Seller in accordance with the following: Seller receives a completed Warranty Card from the Buyer, that material received is in good condition, within 30 business days of material receipt. Warranty applies to Fire product only and includes Exhaust Hoses used within Fire Systems only.

If completed Warranty Card is not received by Plymovent within 30 business days of material receipt, Plymovent's 3 Year Warranty on Standard Product will apply.

For Warranty Card, please contact Plymovent's Customer Service and/or Sales or go online to www.plymovent.com under "contact us".



EQUIPMENT LIMITED WARRANTY

Hastings Air-Energy Control, Inc. shall warranty all materials and equipment for a period of **(Five 5-Years Part and Labor)** from final acceptance and start-up. Defects shall be made good at the dealer's expense with no cost or obligation to the owner. **Hastings Air-Energy Control, Inc.** shall not be responsible for system misuse, abuse, improper or insufficient maintenance, natural disasters, components not operated properly under normal industry use, components that have been repaired, altered or modified. If any failure should occur, **Hastings Air-Energy Control, Inc.** shall repair or replace (with new or remanufactured parts), at their option, the product without cost. All repairs shall be completed at the original installation site of the product however **Hastings Air-Energy Control, Inc.** 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. Dealer shall be responsible for all labor costs and transportation costs, including, freight and insurance, in connection with completing a warranty work call.

No warranty is made regarding the suitability or compatibility of any **Hastings Air-Energy Control, Inc** product for a particular application or purpose. The customer and dealer are responsible for the final selection and or proper application as it applies to the intended use.

The enforceability of this warranty is limited to the original purchaser and is not transferable to, or enforceable by, any subsequent owner.

There are no other express warranties covering the system other than those set forth in this warranty. All implied warranties are limited to the **(Five 5-Years Parts and Labor)** period of this warranty and no warranties expressed or implied extend beyond this **(Five 5-Years Parts and Labor)** period.

Hastings Air-Energy Control, Inc will in no event be liable for any consequential, incidental, indirect or special damages (including but not limited to, lost profits, individual traveling costs, labor or other charges for adjustment) arising out of or in connection with the use, misuse, or function of the system.

5555 South Westridge Drive
New Berlin, WI 53151 7900
p: 800.236.8450
f: 800.260.9199

Illinois Office
m: 847.362.9660
f: 847.362.9661

Michigan Office
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f: 248.478.9911

Minnesota Office
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Commonwealth of Kentucky
Alison Lundergan Grimes, Secretary of State

Alison Lundergan Grimes
Secretary of State
P. O. Box 718
Frankfort, KY 40602-0718
(502) 564-3490
<http://www.sos.ky.gov>

Certificate of Authorization

Authentication number: 182303
Visit <https://app.sos.ky.gov/ftshow/certvalldate.aspx> to authenticate this certificate.

I, Alison Lundergan Grimes, Secretary of State of the Commonwealth of Kentucky, do hereby certify that according to the records in the Office of the Secretary of State,

HASTINGS AIR ENERGY CONTROL Inc.
adopting, in Kentucky, the fictitious name of
Hastings Air Energy Control Inc.

, a corporation organized under the laws of the state of Wisconsin, is authorized to transact business in the Commonwealth of Kentucky, and received the authority to transact business in Kentucky on October 26, 2016.

I further certify that all fees and penalties owed to the Secretary of State have been paid; that an application for certificate of withdrawal has not been filed; and that the most recent annual report required by KRS 14A.6-010 has been delivered to the Secretary of State.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Official Seal at Frankfort, Kentucky, this 27th day of October, 2016, in the 225th year of the Commonwealth.



Alison Lundergan Grimes
Alison Lundergan Grimes
Secretary of State
Commonwealth of Kentucky
182303/0966494



HASTINGS
air energy control, inc.
creating a cleaner workplace

5555 South Westridge Drive
New Berlin, WI 53151-7900
P: 800.236.8450 / 262.364.0500
F: 800.260.9199 / 262.364.0550

Illinois Office
P: 847.362.9660
F: 847.362.9661
Michigan Office
P: 248.888.9911
F: 248.478.9911
Minnesota Office
P: 651.405.8500
F: 800.260.9199
Ohio Office
P: 317.417.3629
F: 800.260.9199

***PlymoVent* Certifications**

Manufacturer Name: ***PlymoVent***

UL File No. ***E212640***

CUL File No. ***NITW7.E212640***
AMCA ***Website: www.amca.org/search.htm***

SS-EN ISO 9001-2008

Certificate #39388-2008-AQ-USA-ANAB

MANAGEMENT SYSTEM CERTIFICATE

Certificate No.:
39388-2008-AQ-USA-ANAB

Initial date:
September 25, 2008

Valid until:
September 25, 2017

This is to certify that the management system of

Plymovent Corporation

115 Melrich Road, Suite 2, Cranbury, NJ 08512 USA
and the sites as mentioned in the Appendix accompanying this Certificate

has been found to conform to the management system standard:
ISO 9001:2008

This certificate is valid for the following Scope:

**The Design, Assembly, Marketing and Sales of Extraction and Filtration
Systems and Equipment**

Place and date:
September 25, 2014



For the issuing office:
DNV GL - Business Assurance USA, Inc.
1400 Ravello Drive
Katy, TX 77449

A handwritten signature in black ink, appearing to read 'John Stefan'.

John Stefan
Management Representative

Certificate No.: 39388-2008-AQ-USA-ANAB
Place and date: September 25, 2014

Appendix I to Certificate

Locations included in the certification are as follows:

Site Name	Site Address	Site Scope
Plymovent Corporation (HQ)	115 Melrich Road, Suite 2, Cranbury, NJ 08512 USA	Design, Sales, Purchasing, HR, Management
Plymovent Corporation	174 Ridge Road Suite D, South Brunswick, NJ 08810 USA	Assembly, Warehousing, Shipping, Receiving



NITW.E212640
Industrial Control Panels

[Page Bottom](#)

Industrial Control Panels

[See General Information for Industrial Control Panels](#)

PLYMOVENT CORP
115 MELRICH RD
CRANBURY, NJ 08512 USA

E212640

Industrial control panels.

Last Updated on 2001-04-19

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Association International, Inc.

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Certified Product Search

[By Company Name](#) >> [Plymovent Corporation](#) >> Centrifugal Fans - Residential, Commercial,

Please select a product type:



1300 Series Centrifugal Fans, Direct Drive

Models:

1300-1-AM, 1301-1-AM

Catalogs:

[PLY-FAN0800.1300 \(Print\) August 2000](#)

Certification date:

October 9, 2000



1800 Series Centrifugal Fans, Direct Drive

Models:

1800-1-AM, 1801-1-AM

Catalogs:

[PLY-FAN0800.1800 \(Print\) August 2000](#)

Certification date:

October 9, 2000



2100 Series Centrifugal Fans, Direct Drive

Models:

2100-1-AM, 2100-2-AM, 2101-AM

Catalogs:

[PLY-FAN0800.2100 \(Print\) August 2000](#)

Certification date:

October 9, 2000



3000 Series Centrifugal Fans, Direct Drive

Models:

3000-1-AM, 3000-2-AM, 3101-AM

Catalogs:

[PLY-FAN0800.3000 \(Print\) August 2000](#)

Certification date:

October 9, 2000



4700 Series Centrifugal Fans, Direct Drive

Models:

4700-1-AM, 4700-2-AM, 4701-AM

Catalogs:

[PLY-FAN0800.4700 \(Print\) August 2000](#)

Certification date:

October 9, 2000



TEV Series Centrifugal Fans, Direct Drive

Models:

TEV-3110-60, TEV-359-60, TEV-559-60, TEV-585-60, TEV-745-60, TEV-768-60, TEV-798-60

Catalogs:

[TIN TEV-3110-60 \(Print\) September 2004](#)

[TIN TEV-359-60 \(Print\) September 2004](#)

[TIN TEV-559-60 \(Print\) September 2004](#)

[TIN TEV-585-60 \(Print\) September 2004](#)

[TIN TEV-745-60 \(Print\) September 2004](#)

[TIN TEV-798-60 \(Print\) September 2004](#)

[TIN-TEV-768-60 \(Print\) September 2004](#)

Certification date:

October 1, 2004

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THE AMERICAN INSTITUTE OF ARCHITECTS



AIA Document A310

Bid Bond

KNOW ALL MEN BY THESE PRESENTS, that we
(Hastings Air Energy Control, Inc., 5555 S. Westridge Drive, New Berlin, WI 53151)
as Principal, hereinafter called the Principal, and
(Employers Mutual Casualty Company, P.O. Box 712, Des Moines, IA 50306-0712)
a corporation duly organized under the laws of the State of Iowa
as Surety, hereinafter called the Surety, are held and firmly bound unto
(Lexington-Fayette Urban County Government, Third Floor, 200 East Main Street, Lexington, KY40507)
as Obligee, hereinafter called the Obligee, in the sum of

—Five Percent of the Attached Bid— Dollars (\$ _____),
for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind
ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by
these presents.

WHEREAS, the Principal has submitted a bid for
(Furnish and Install Vehicle Diesel Exhaust Removal System - Bid Invitation No. 146-2016)
Furnish and Install Vehicle Diesel Exhaust Removal System - Bid Invitation No. 146-2016

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract
with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding
or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt
payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter
such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty
hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract
with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain
in full force and effect.

Signed and sealed this 9th day of November 2016

Hastings Air Energy Control, Inc.
(Principal) (Seal)
Michael Bohner (VP) (Title)
Employers Mutual Casualty Company
(Surety) (Seal)
Todd P. Loehner, Attorney-in-Fact (Title)

CERTIFICATE OF AUTHORITY INDIVIDUAL ATTORNEY-IN-FACT

KNOW ALL MEN BY THESE PRESENTS, that:

- 1. Employers Mutual Casualty Company, an Iowa Corporation
- 2. EMCASCO Insurance Company, an Iowa Corporation
- 3. Union Insurance Company of Providence, an Iowa Corporation
- 4. Illinois EMCASCO Insurance Company, an Iowa Corporation
- 5. Dakota Fire Insurance Company, a North Dakota Corporation
- 6. EMC Property & Casualty Company, an Iowa Corporation
- 7. Hamilton Mutual Insurance Company, an Iowa Corporation

hereinafter referred to severally as "Company" and collectively as "Companies", each does, by these presents, make, constitute and appoint: TODD P. LOEHNERT, JOHN B. AYRES, MONICA A. KAISER, PAULA J. TEAGUE

its true and lawful attorney-in-fact, with full power and authority conferred to sign, seal, and execute its lawful bonds, undertakings, and other obligatory instruments of a similar nature as follows:

ANY AND ALL BONDS

and to bind each Company thereby as fully and to the same extent as if such instruments were signed by the duly authorized officers of each such Company, and all of the acts of said attorney pursuant to the authority hereby given are hereby ratified and confirmed.

The authority hereby granted shall expire APRIL 1, 2017 unless sooner revoked.

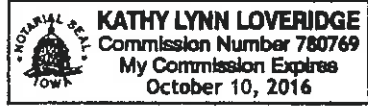
AUTHORITY FOR POWER OF ATTORNEY

This Power-of-Attorney is made and executed pursuant to and by the authority of the following resolution of the Boards of Directors of each of the Companies at a regularly scheduled meeting of each company duly called and held in 1999:

RESOLVED: The President and Chief Executive Officer, any Vice President, the Treasurer and the Secretary of Employers Mutual Casualty Company shall have power and authority to (1) appoint attorneys-in-fact and authorize them to execute on behalf of each Company and attach the seal of the Company thereto, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof; and (2) to remove any such attorney-in-fact at any time and revoke the power and authority given to him or her. Attorneys-in-fact shall have power and authority, subject to the terms and limitations of the power-of-attorney issued to them, to execute and deliver on behalf of the Company, and to attach the seal of the Company thereto, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof, and any such instrument executed by any such attorney-in-fact shall be fully and in all respects binding upon the Company. Certification as to the validity of any power-of-attorney authorized herein made by an officer of Employers Mutual Casualty Company shall be fully and in all respects binding upon this Company. The facsimile or mechanically reproduced signature of such officer, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power-of-attorney of the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN WITNESS THEREOF, the Companies have caused these presents to be signed for each by their officers as shown, and the Corporate seals to be hereto affixed this 8th day of JULY, 2014.

Seals



Bruce G. Kelley
Bruce G. Kelley, Chairman
of Companies 2, 3, 4, 5 & 6; President
of Company 1; Vice Chairman and
CEO of Company 7

Michael Freel
Michael Freel
Assistant Vice President

On this 8th day of JULY AD 2014 before me a Notary Public in and for the State of Iowa, personally appeared Bruce G. Kelley and Michael Freel, who, being by me duly sworn, did say that they are, and are known to me to be the Chairman, President, Vice Chairman and CEO, and/or Assistant Vice President/Assistant Secretary, respectively, of each of The Companies above; that the seals affixed to this instrument are the seals of said corporations; that said instrument was signed and sealed on behalf of each of the Companies by authority of their respective Boards of Directors; and that the said Bruce G. Kelley and Michael Freel, as such officers, acknowledged the execution of said instrument to be the voluntary act and deed of each of the Companies. My Commission Expires October 10, 2016.

Kathy Lynn Loveridge
Notary Public in and for the State of Iowa

CERTIFICATE

I, James D. Clough, Vice President of the Companies, do hereby certify that the foregoing resolution of the Boards of Directors by each of the Companies, and this Power of Attorney issued pursuant thereto on JULY 8, 2014 on behalf of: TODD P. LOEHNERT, JOHN B. AYRES, MONICA A. KAISER, PAULA J. TEAGUE

are true and correct and are still in full force and effect. In Testimony Whereof I have subscribed my name and affixed the facsimile seal of each Company this 9th day of November, 2016 *J D Clough* Vice President



HASTINGS
air energy control, inc.

5555 South Westridge Drive
New Berlin, WI 53151-7900

P: 800.236.8450 /
262.364.0500
F: 800.260.9199 /
262.364.0550

AFFIRMATIVE ACTION POLICY AND PLAN HASTINGS AIR-ENERGY CONTROL, INC.

Hastings Air-Energy Control Inc. assures equal employment opportunity in all its policies regarding recruiting, compensation, hiring, other benefits, transfers, training, promotions, and layoff and recall practices.

These will be administered without regard to race, color, creed, religion, ancestry, national origin, age, sex, marital status, arrest and/or conviction where sex is bona fide occupational qualification. Hastings Air-Energy Control Inc. will give full consideration to the employment of qualified disabled persons, and will not discriminate against those who use lawful products.

Our Company believes that special measures and extraordinary effort are required to prevent discrimination and eliminate it within the organization. We pledge ourselves to a determined and sustained effort in support of this belief and the policies outlined in this affirmative action program.

Hastings Air-Energy Control Inc. encourages initiative and personal leadership by individuals as the best means to ensure success of the program. We want to meet this challenge in a positive and constructive spirit. Violations of this affirmative action program will be met with appropriate action.

Hastings Air-Energy Control Inc. will work cooperatively with, and seek the assistance of, appropriate minority groups and agencies, government agencies, educational institutions, civic organizations, study groups, and its suppliers.

It is the responsibility of each member of management, from the president to a first-line supervisor, to give this nondiscrimination policy full support through inspirational leadership and personal example. In addition, it is the duty of every employee of this Company to create a job-environment atmosphere which is conducive to our nondiscrimination policies.

Overall Company responsibility for the direction of equal opportunity policy, programs, and practices have been assigned to Michael Bohrer, VP-Treasurer, who will serve as Hastings Air-Energy Control's director of EEO.

The following constitute the basic concepts of the affirmative action plans as regards employment policies and practices at Hastings Air-Energy Control Inc.

Illinois Office
P: 847.362.9660
F: 847.362.9661

Michigan Office
P: 248.888.9911
F: 248.478.9911

Minnesota Office
P: 651.405.8500
F: 800-260-9199

Ohio Office
P: 317.417.3629
F: 800.260.9199

Recruitment

Hastings Air-Energy Control will consider all qualified minority group applicants for all job categories.

All schools, colleges, employment offices, and other recruiting sources used by Hastings Air-Energy Control Inc. will be advised in writing of this policy and will be urged to refer qualified minority group applicants and women. All unions representing employees in Hastings Air-Energy Control Inc. will be asked to refer qualified minority group personnel and women. All solicitation advertisements will state that Hastings Air-Energy Control Inc. is an equal employment opportunity and affirmative action employer.

Appropriate employment advertisements, as needs arise, will be placed in newspapers which are read by minority group and women's organizations to assist in making known Hastings Air-Energy Control's policy and will advise such groups of available employment opportunities. When the need for skilled applicants arises and Hastings Air-Energy Control Inc. decides to recruit at schools and educational institutions, schools having large minority and female enrollments will be included in the recruiting schedule.

Hastings Air-Energy Control Inc. will not discriminate on the basis of sex in any job category, except where sex is a bona fide occupational qualification. Efforts will be made to recruit qualified female personnel from institutions such as all-women colleges. In addition, special advertising will be designed to recruit women.

Placement and Promotion

Hastings Air-Energy Control Inc. will review job classifications where few minority persons or women are presently employed and seek to determine the cause for such deficiency. Affirmative commitments will be undertaken to remedy the underutilization of minority or female employees in any of these job classifications. Placement, promotion, and transfer activities at all levels will be monitored to assure that full consideration, as required by Company policy, has been given to all qualified minority group and female employees.

Training

On-the-job training programs, as well as other training and educational programs to which Hastings Air-Energy Control Inc. gives support or sponsorship, will be regularly reviewed to assure that minority group and female candidates, as well as other employees, are given equal opportunity to participate. Hastings Air-Energy Control Inc. will take affirmative steps to ensure that all training programs are accessible to qualified female employees.

Appropriate steps will be taken to give active encouragement to minority group employees to increase their skills and job potential through participation in available training and educational programs. Hastings Air-Energy Control Inc. will seek the inclusion of qualified minority group members in any apprenticeship program in which Hastings Air-Energy Control Inc. participates.

Layoffs, Terminations, and Downgradings

Layoffs, terminations, downgradings, and recalls from layoffs will be made without regard to race, color, creed, religion, ancestry, national origin, age, disability, sex, marital status, arrest and/or conviction record, and membership in National Guard and Reserve forces, except where sex is a bona fide occupational qualification.

Benefits and Compensation

There will be no disparity in the compensation received by minority group employees and other employees for performing equivalent duties, and opportunities for performing overtime work or otherwise earning increased compensation will be afforded without discrimination to all employees. No disparity as to compensation received by male or female employees will be tolerated.

Goals and Timetables

Hastings Air-Energy Control Inc. will establish goals designed to alleviate any underutilization of minorities and women. Timetables will be established prescribing when these goals should be met. Hastings Air-Energy Control Inc. will employ in good faith and make a reasonable effort to fulfill its goals and meet its timetables.

Progress Reporting

Hastings Air-Energy Control's books, reflecting its progress under this Plan, and records will be available for inspection at any time to appropriate government representatives. Hastings Air-Energy Control will establish a formal report and auditing system to measure the attainment of its goals under this program. Hastings Air-Energy Control will furnish information as may be required to comply with the applicable orders and regulations.

Assuring Against Segregated Facilities

Hastings Air-Energy Control Inc. shall not maintain or tolerate facilities which are segregated on the basis of status in a protected minority group, and shall give due and reasonable consideration to providing facilities for the employment of disabled persons on work they are qualified to do.

Respectfully Submitted,

David Bohrer
President
Hastings Air-Energy Control, Inc.

12. WORKFORCE ANALYSIS FORM

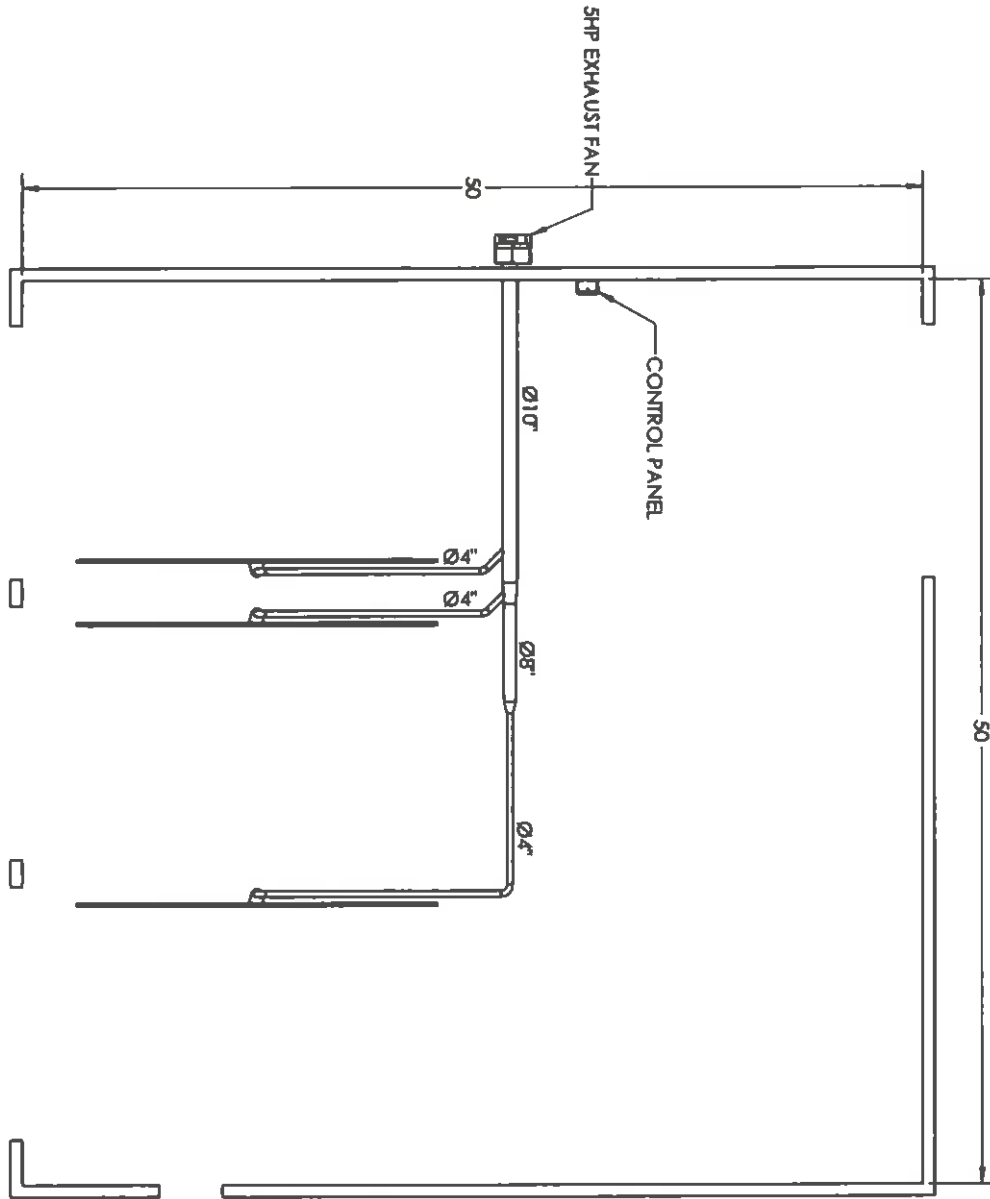
Name of Organization: HASTINGS AIR ENERGY CONTROL

Categories	Total	White (Not Hispanic or Latino)		Hispanic or Latino		Black or African-American (Not Hispanic or Latino)		Native Hawaiian and Other Pacific Islander (Not Hispanic or Latino)		Asian (Not Hispanic or Latino)		American Indian or Alaskan Native (not Hispanic or Latino)		Two or more races (Not Hispanic or Latino)		Total
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Administrators	8	6	2											6	2	
Professionals	18	15	3	3										15	3	
Superintendents																
Supervisors																
Foremen																
Technicians																
Protective Service																
Para-Professionals																
Office/Clerical	8	2	6											2	6	
Skilled Craft																
Service/Maintenance	8	8												8		
Total:	42	31	11											31	11	

Prepared by: Leah Krueger Accountant/Payroll Manager
(Name and Title)

Date: 11 / 5 / 2016

Revised 2015-Dec-15



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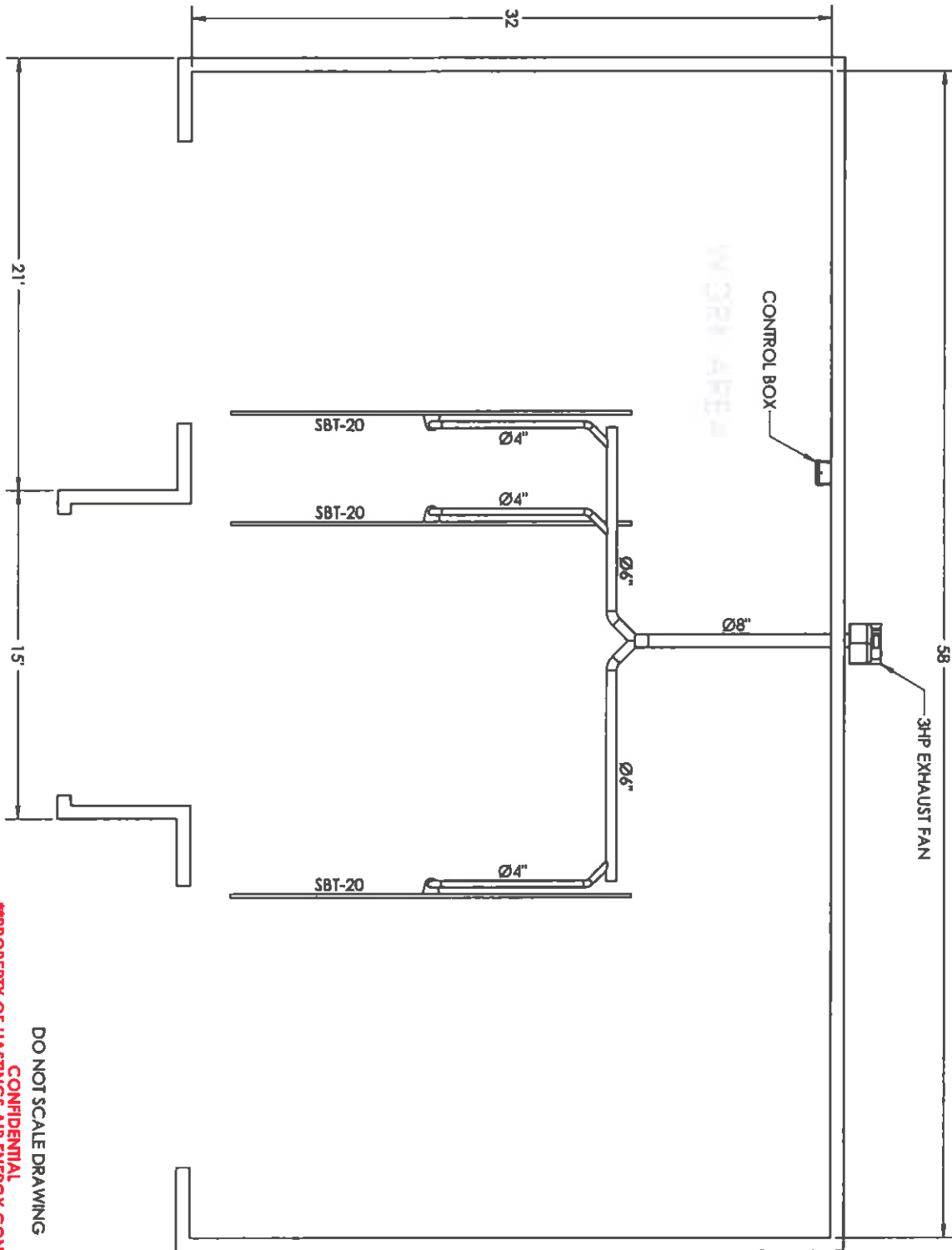
NO	REVISIONS	DESCR

**LEXINGTON
 FIRE DEPT.
 STATION 2**



HASTINGS AIR ENERGY CONTROL INC
 5555 South Westridge Drive
 New Berlin, WI 53151-7900
 P: 800.236.8450
 F: 800.260.9199

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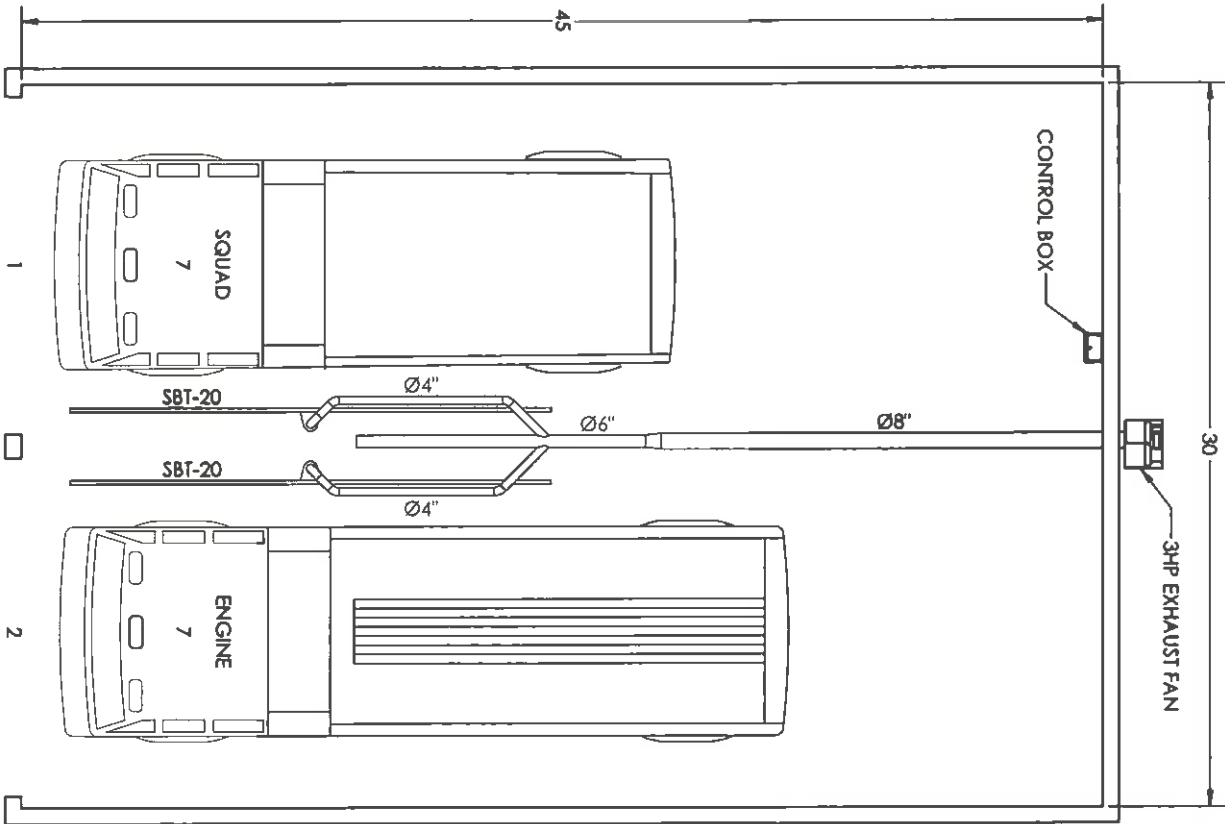
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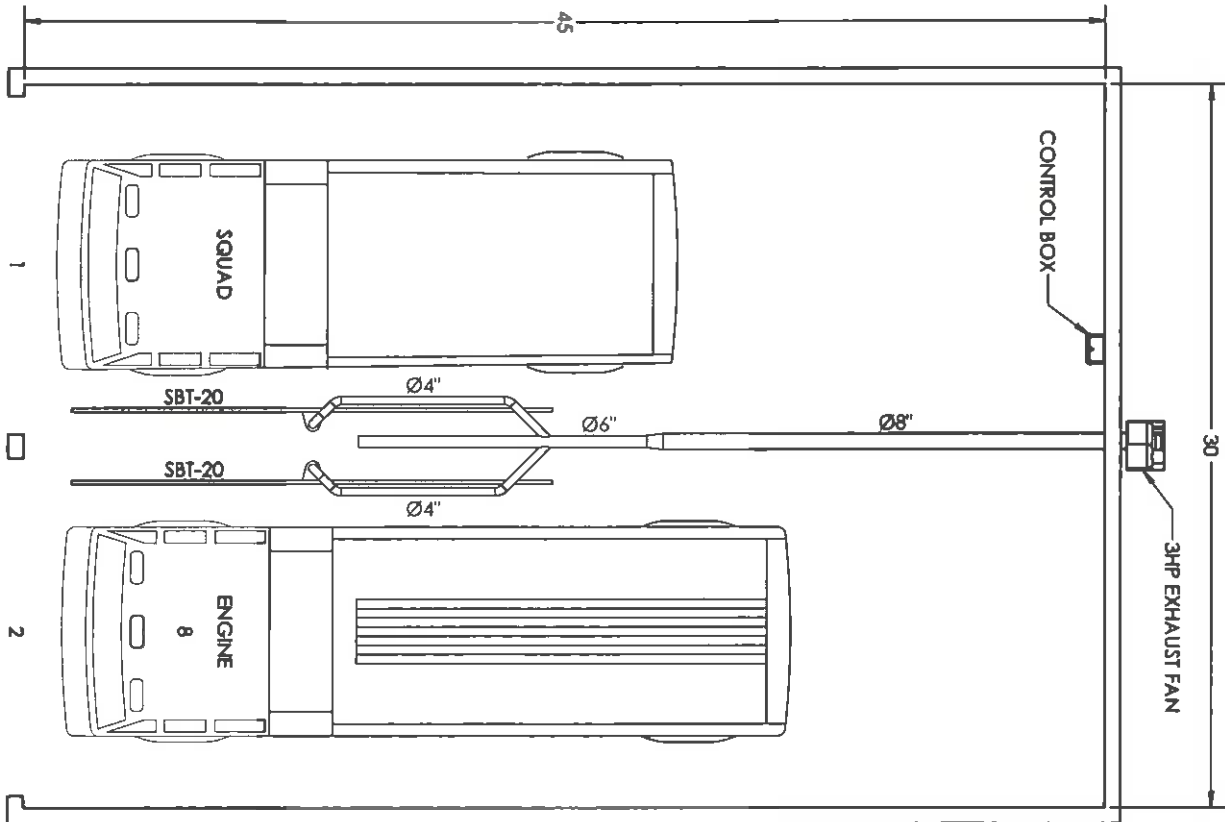
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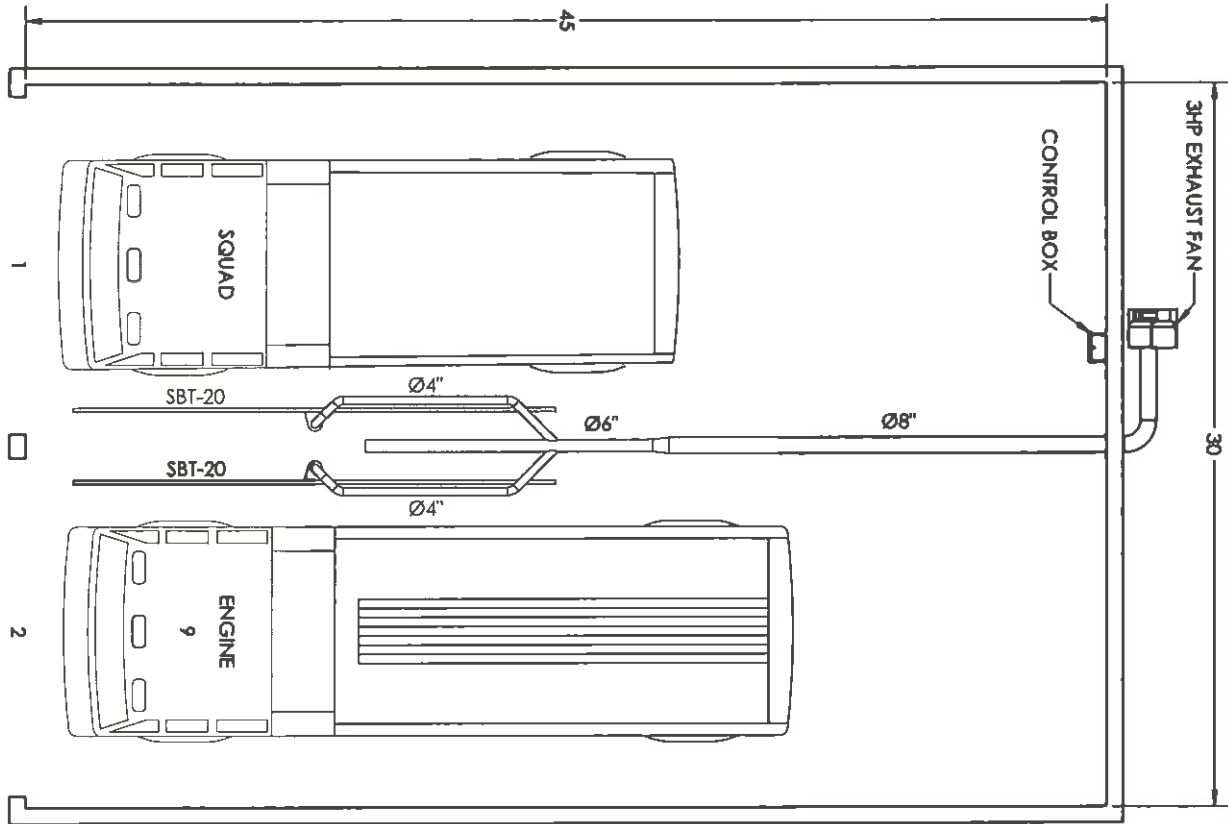
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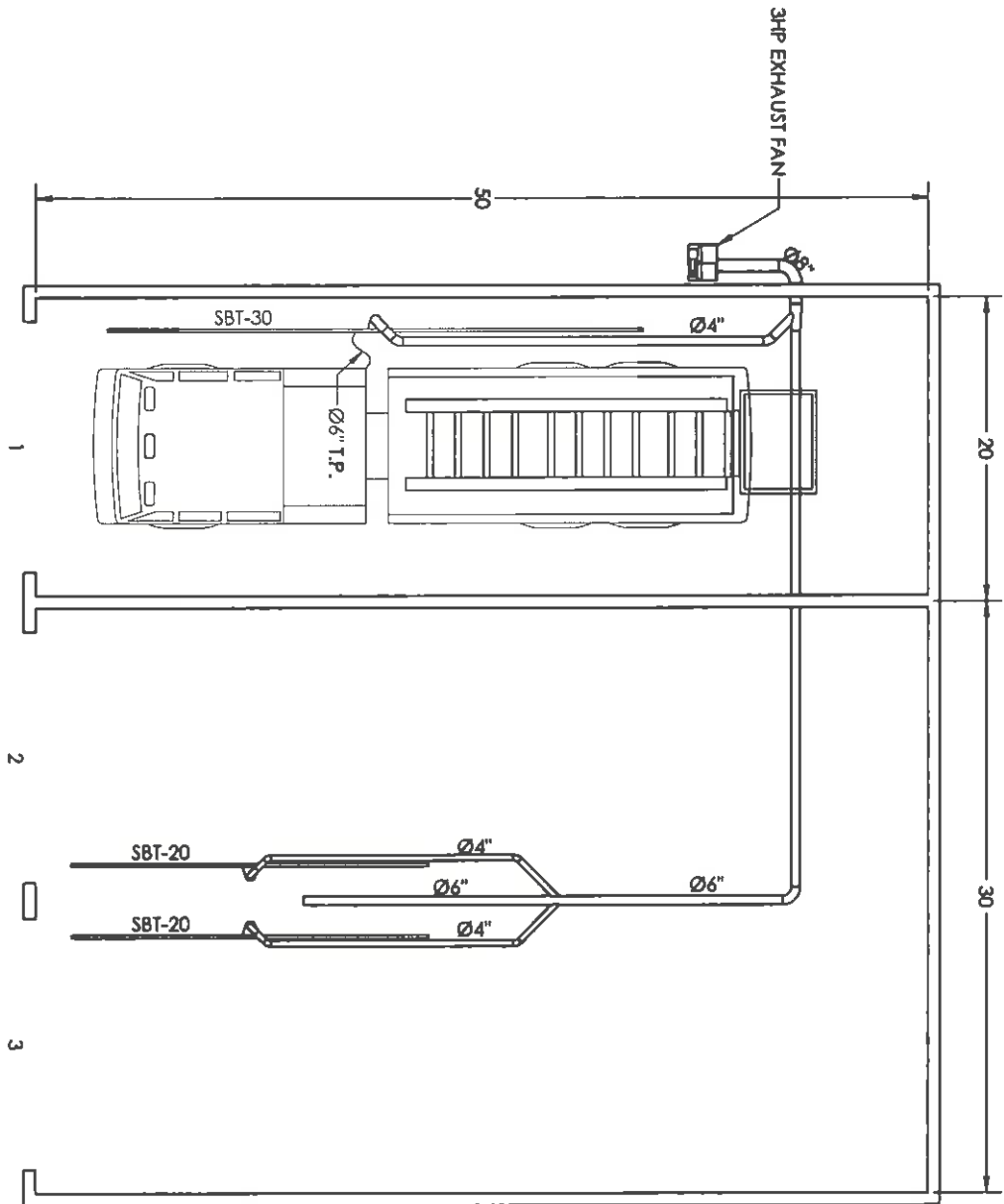
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STATION 9



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F: 800.260.9199

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 1 of 1

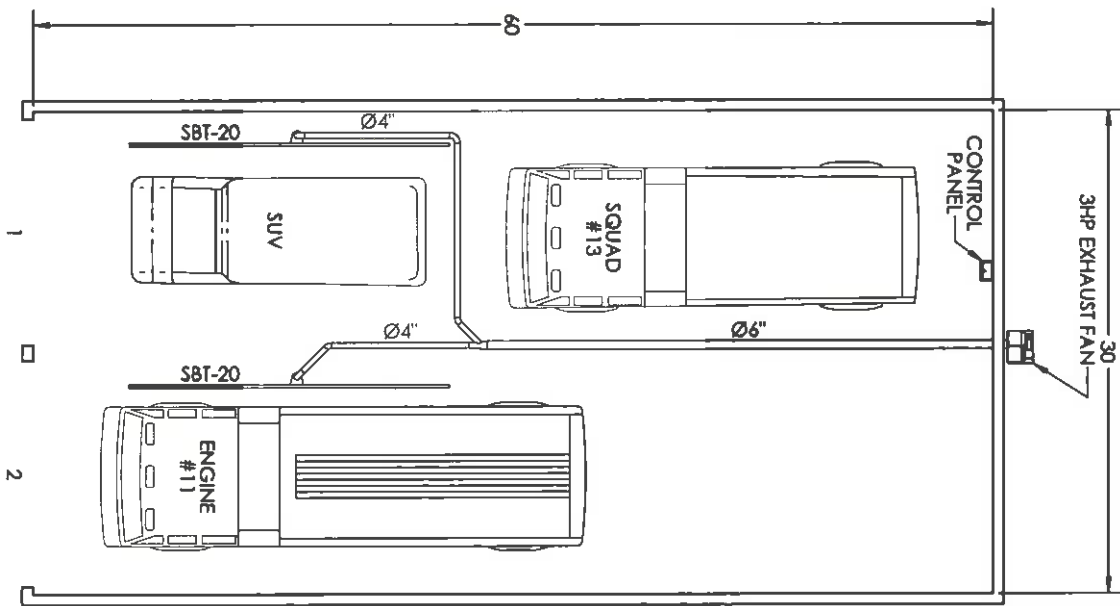
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 F: 800.260.9199

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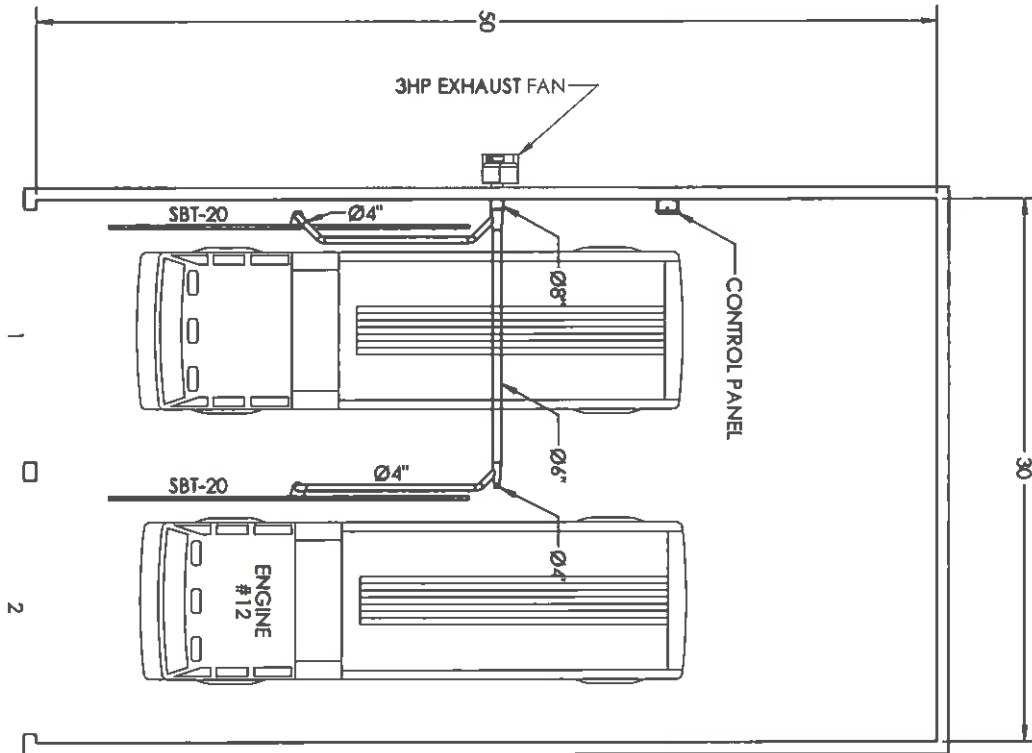
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LEXINGTON
 FIRE DEPT.
 STATION 11



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 F: 800.260.9199

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 Checked by: 1:SD Scale: 1:80
 Job #: Sheet #: 1 of 1

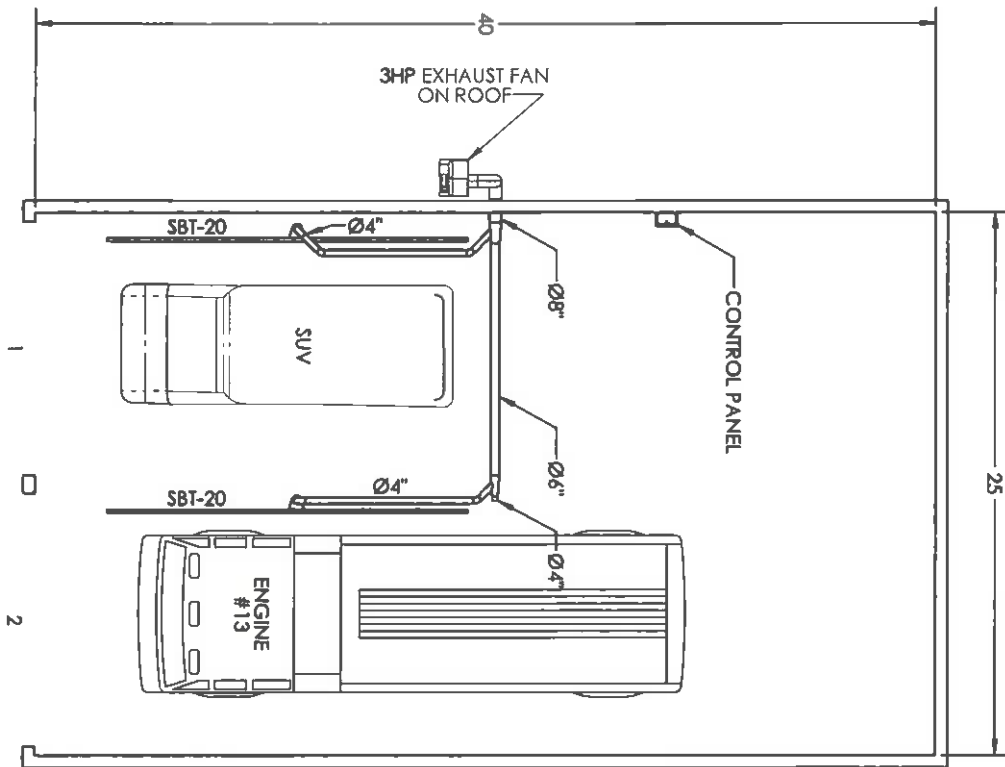
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 FIRE DEPT.
 STATION 12**



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 New Berlin, WI 53151-7900
 P: 800.236.8450
 F: 800.260.9199

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Job #: Sheet #: 1 of 1

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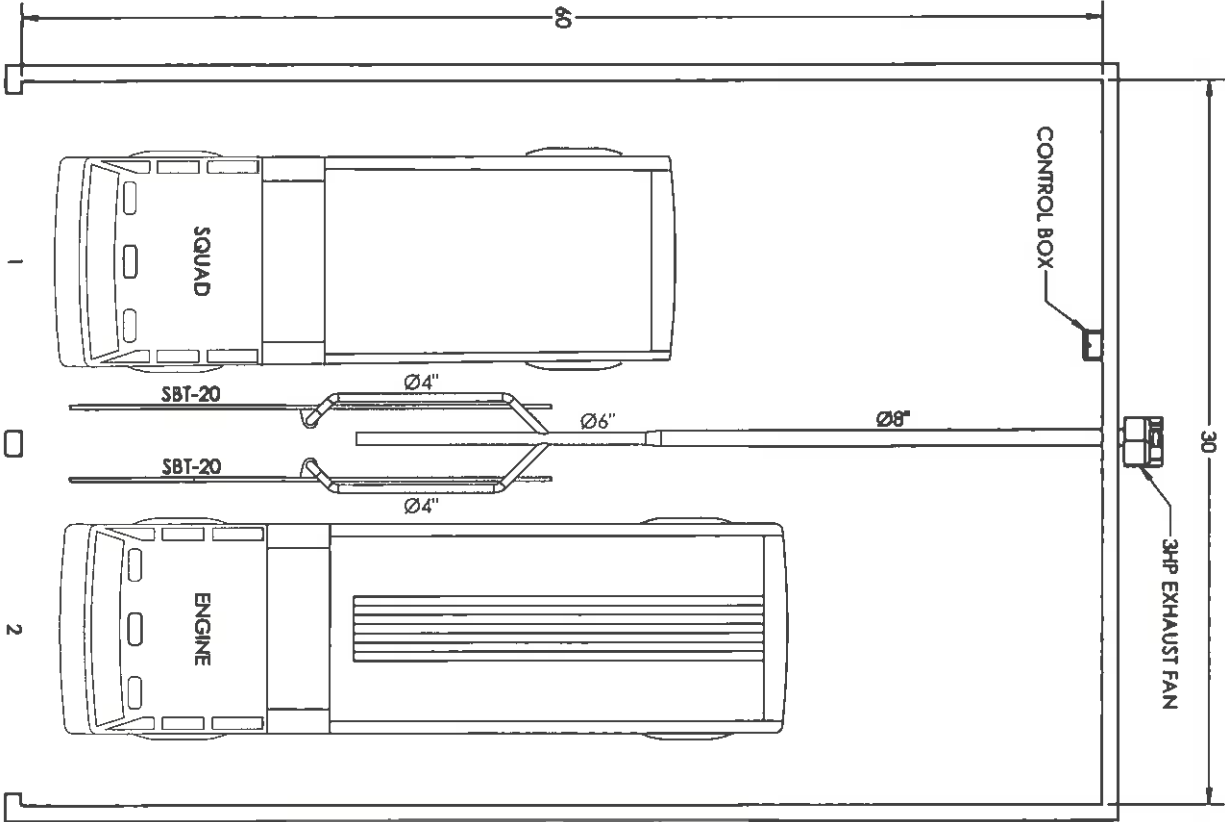
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LEXINGTON
FIRE DEPT.
STATION 13



HASTINGS AIR ENERGY CONTROL, INC
5555 South Westridge Drive
New Berlin, WI 53151-7900
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F: 800.260.9199

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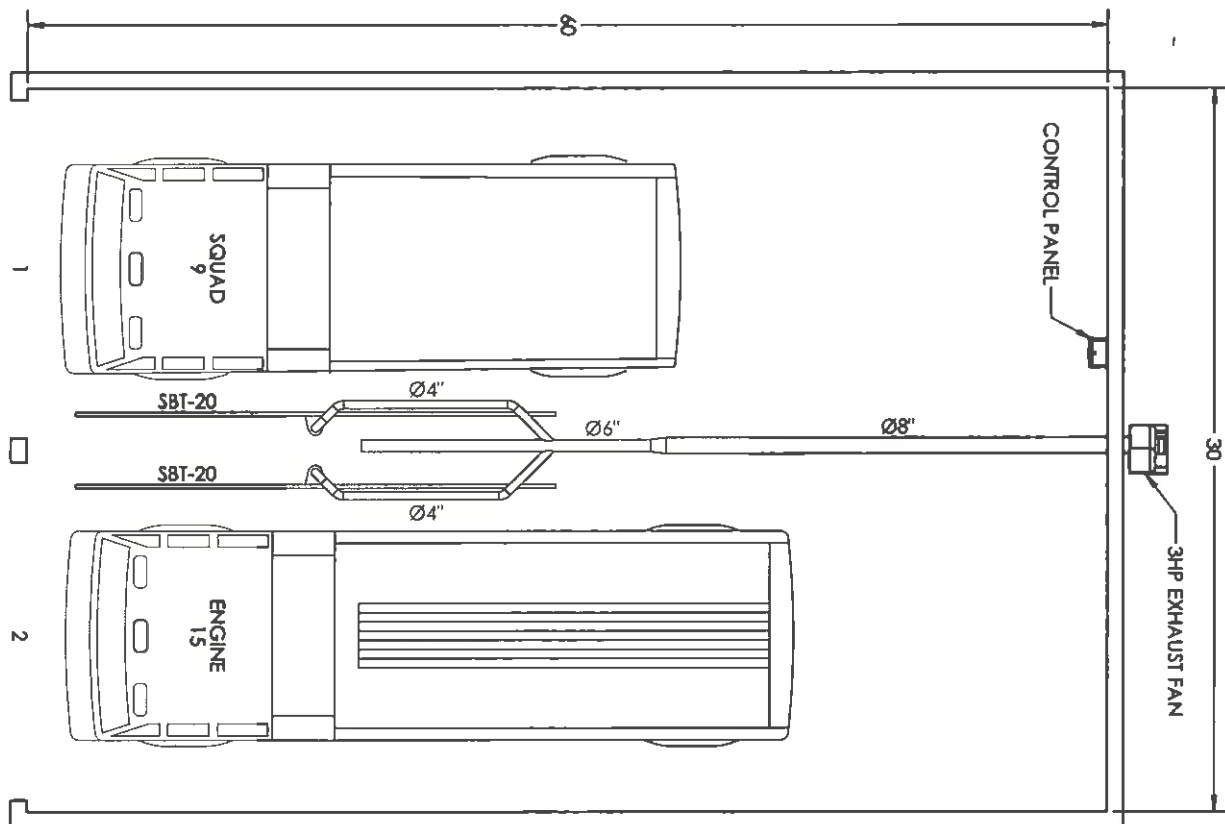
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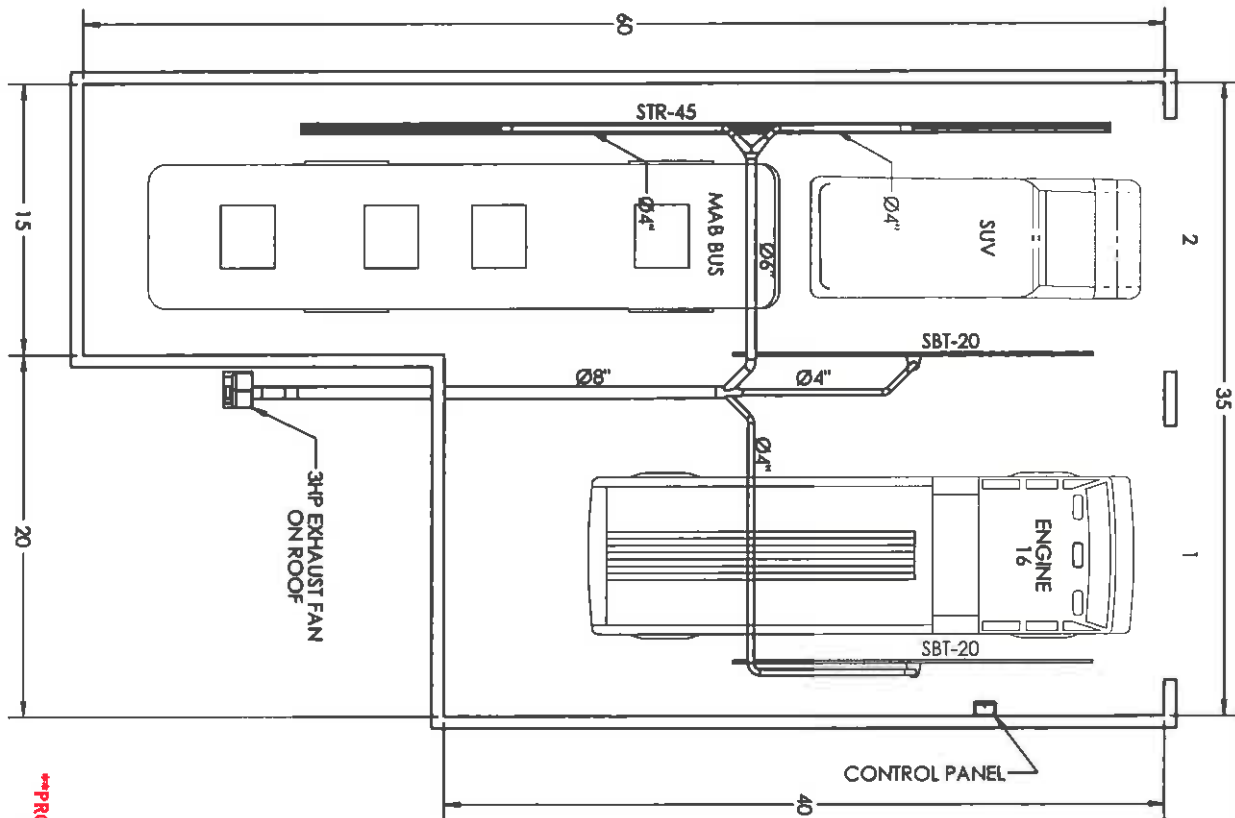
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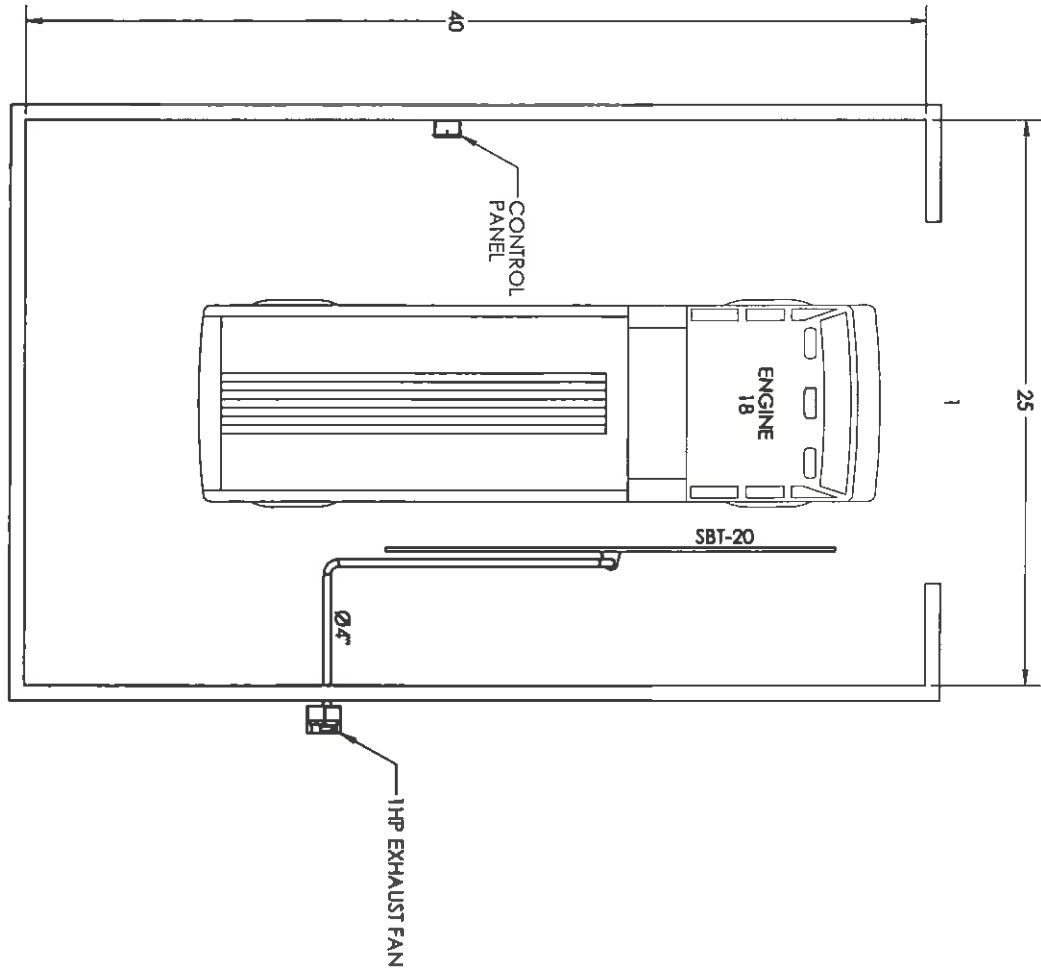
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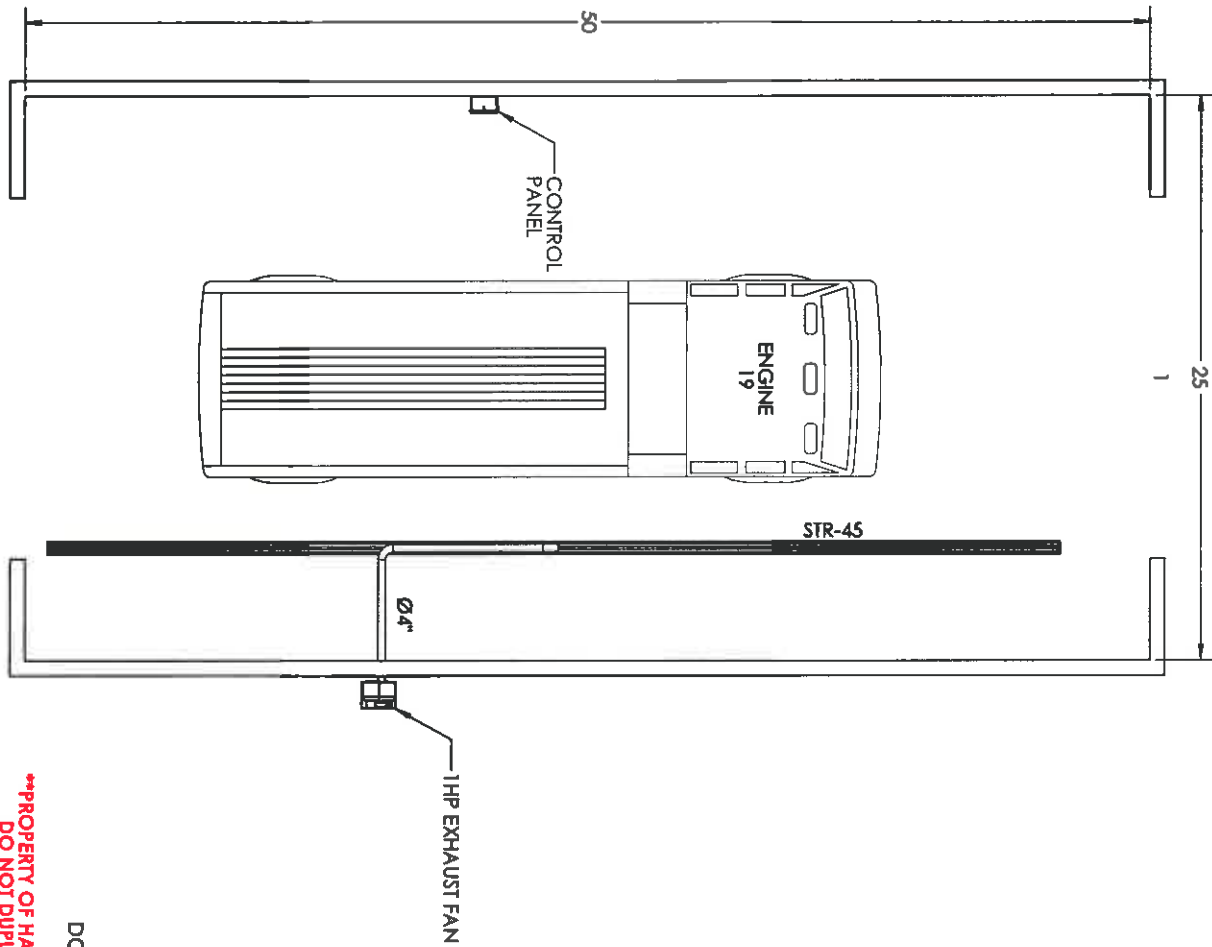
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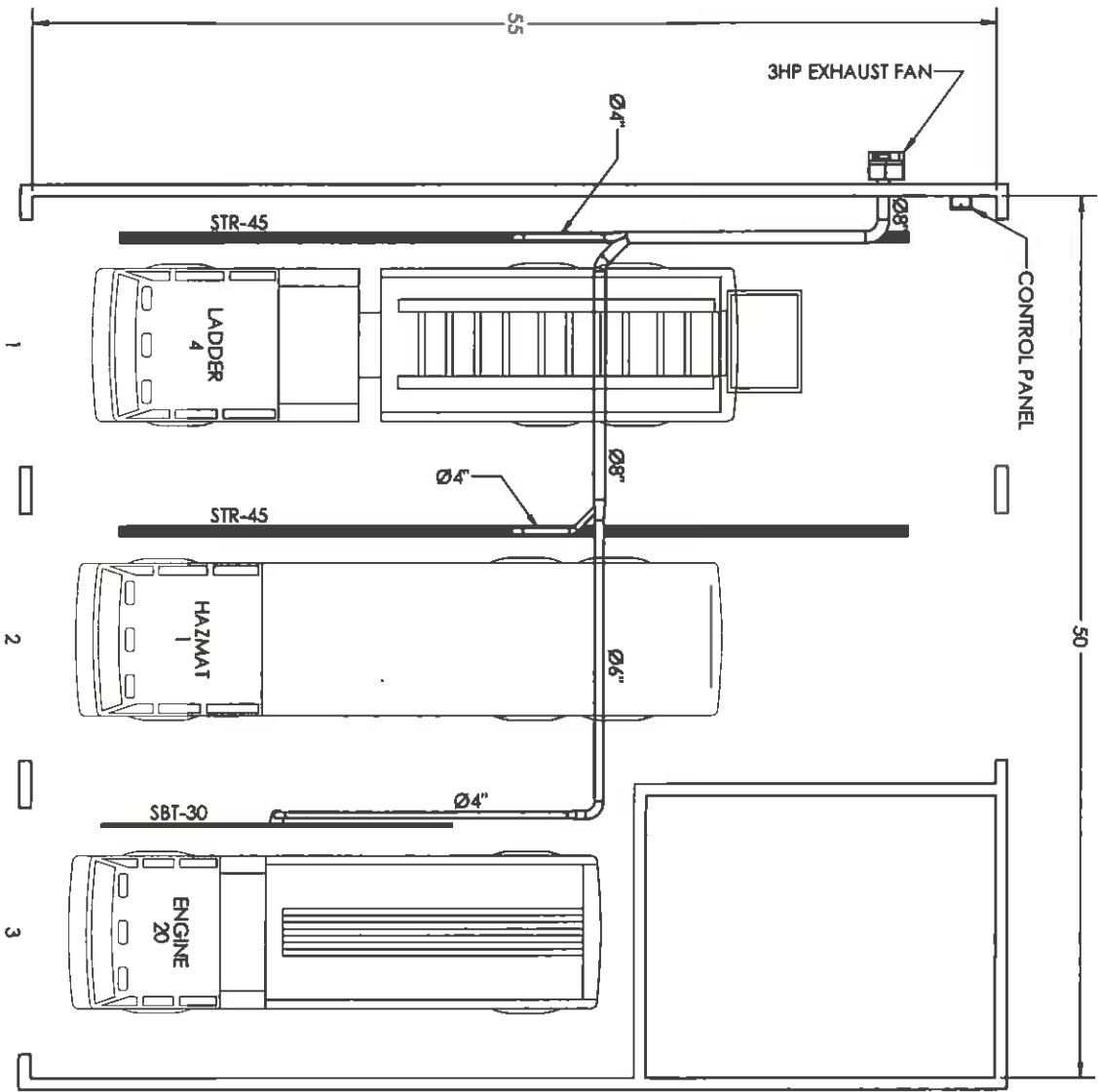
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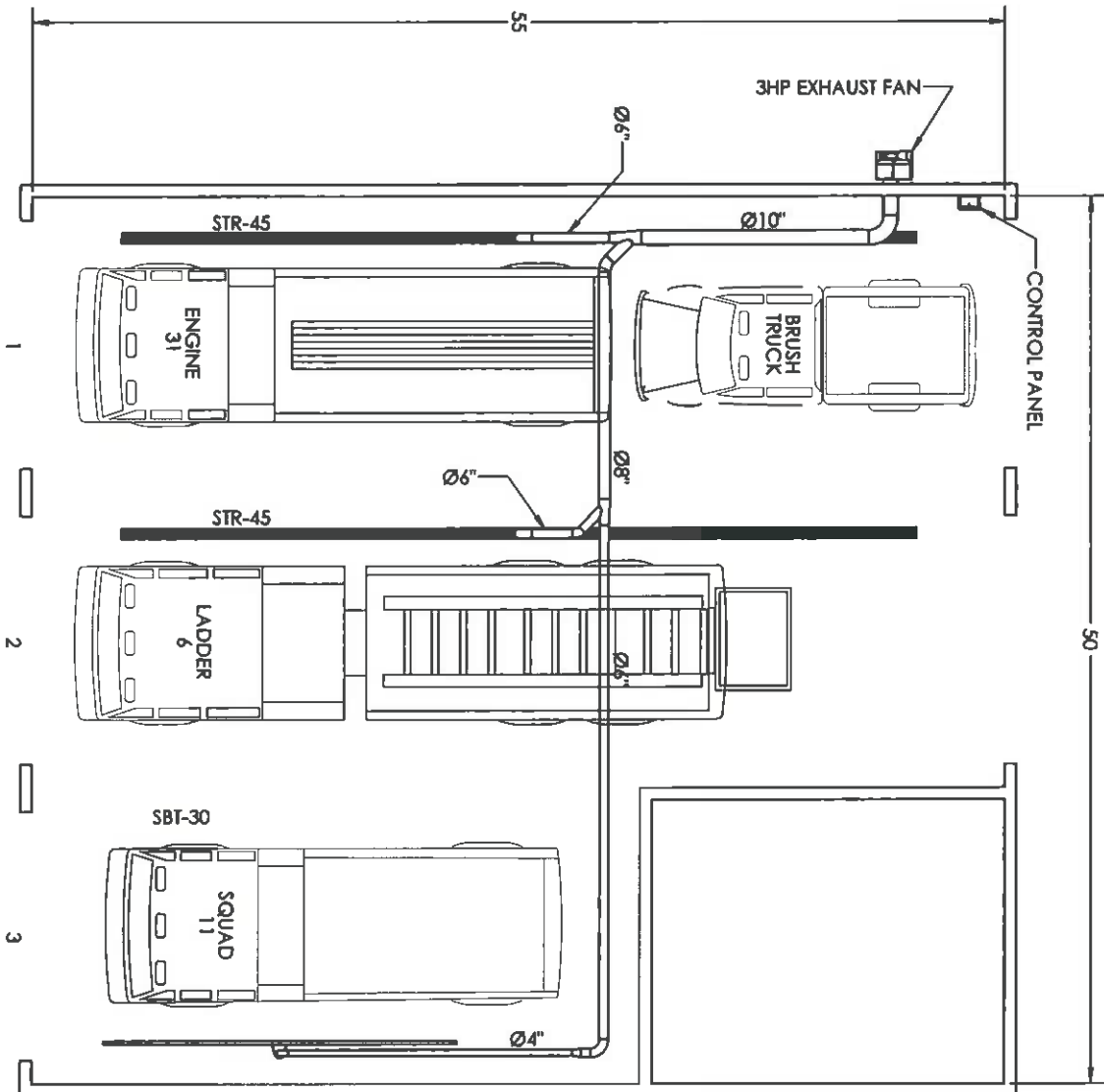
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 Sheet #: 1 of 1

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■ **DRIVE THRU**
SYSTEMS



PLYMVENT®
Exhaust Removal Systems

DRIVE THRU SYSTEMS

The Straight Rail System (STR) is the preferred system for drive through apparatus bays.

The PlymoVent® STR system is designed to connect to any motor vehicle tailpipe and captures virtually 100% of the exhaust emissions. This system is ideal for drive through bays or bays with up to four vehicles parked in tandem. There is a one-step connection to the system as the vehicle enters the station. Everything within the system is fully automatic, from the fan activation to the automatic release from the exiting vehicle. Also, it has solid one-piece extruded aluminum rail profiles offering strength and durability.

KEY STR SYSTEM ADVANTAGES:

- Models to handle up to 150 feet
- Exhaust hose sizes for all vehicle types
- Auto-disconnect at exit door
- Door-to-door removal of harmful emissions
- Speed absorbing shock system
- Front and optional back-out release
- Expandable design
- Allows for up to four vehicle connections in tandem
- Adjustable release points for various exiting speeds
- Automatic start-stop of fan by an exhaust sensor
- Virtually 100% source capture through a unique pneumatic Grabber, to suit different sizes of exhaust pipes
- Pre-fitted yellow/black extraction hose
- Safety disconnect coupling; fail safe system, easily re-connectable
- Suitable for existing fire stations and new design-built stations.

PLYMOVENT®
Exhaust Removal Systems

PlymoVent North America:

USA: 115 Melnich Road, Cranbury, NJ 08512
(P) 800.644.0911 ■ (P) 609.395.3500 ■ (F) 609.655.0569

Canada: 24-1200 Aerowood Drive, Mississauga, ON L4W 2S7
(P) 800.465.0327 ■ (P) 905.564.4748 ■ (F) 905.564.4609

www.plymoventfire.com

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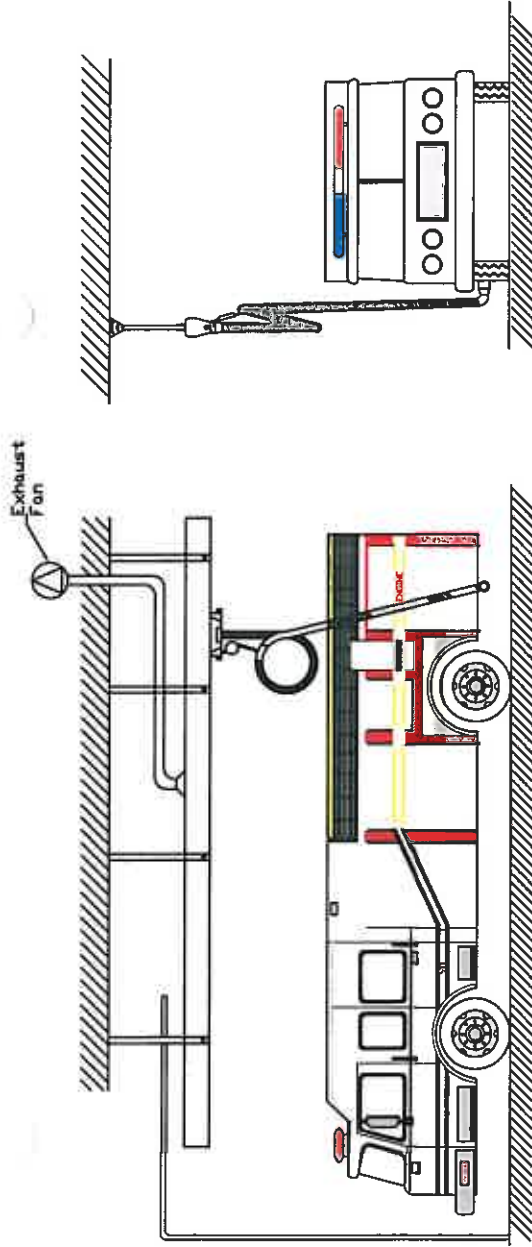


Table 1

Type	System Specifications			Maximum Reach Based On Track Height Back in Systems			Qty.
	Length (x)	# of legs	Weight (lbs)x	12' High 4' from Door	13' High 5' from Door	14' High 6' from Door	
STRA 20	19'	2	235	23'	24'	25'	
STRA 30	28.5'	3	305	32.5'	33.5'	34.5'	
STRA 35	33.25'	3	345	37.25'	38.25'	39.25'	
STRA 40	38'	4	380	42'	43'	44'	
STRA 45	42.75'	4	450	46.75'	47.75'	48.75'	
STRA 50	47.5'	5	515	51.5'	52.5'	53.5'	
STRA 55	52.25'	5	560	56.25'	57.25'	58.25'	
STRA 60	57'	6	595	61'	62'	63'	
STRA 65	61.75'	6	630	65.75'	66.75'	67.75'	
STRA 70	66.5'	6	685	70.5'	71.5'	72.5'	
STRA 75	71.25'	7	720	75.25'	76.25'	77.25'	
STRA 80	76'	7	775	80'	81'	82'	
STRA 85	80.75'	8	810	84.75'	85.75'	86.75'	
STRA 90	85.5'	8	853	89.5'	90.5'	91.5'	

xWeights reflect single drop systems
 Add 50lbs for each additional hose drop
 For Drive-Thru Door to Door Distance add 4'
 For Drive-Thru Door to Door Distance add 5'
 For Drive-Thru Door to Door Distance add 6'

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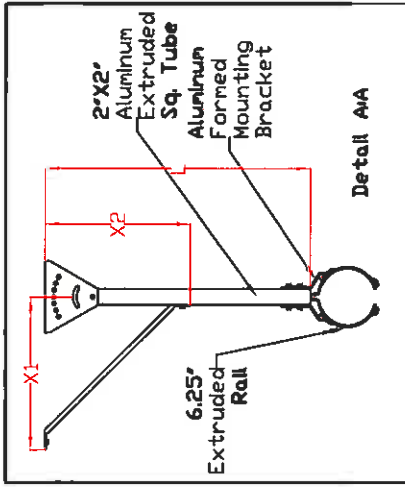


Table 2

Support Details			
L	Brace Length	X1	X2
0-15'	N/A	0'	0'
15'-3'	20'	14'	14'
3'-6'	30'	21'	21'
6'-10'	72'	51'	51'

Notes:

1. System support method: See Detail AIA and Table 2
2. System location: See Table 1
3. System temperature resistance: 400°F continuous/ 500°F intermittent

Job name:	DWG BY: JP	Revision: 3	Rev. date: 02/08/10
Engineer:	PLYMORV NORTH AMERICA 115 MELRICH ROAD CRANFURY N.J. TEL: (800)395-3500 FAX:(800)656-0919 WWW.PLYMOVMENT.COM		
Customer:	STRA		

■ **BACK IN**
SYSTEMS



PLYMVENT®
Exhaust Removal Systems



BACK IN SYSTEMS

The Sliding Balancer Track System (SBT) has set the standard in vehicle emissions control for fire and emergency response vehicles around the world.

The PlymoVent® SBT system is the preferred system for back-in and drive through apparatus bays, and is designed to connect to any motor vehicle tailpipe while capturing virtually 100% of the exhaust emissions. Plus, it's a fully automatic system, including fan activation and system disconnect from the exiting vehicle. All that is required is a one-step connection to the vehicle's tailpipe as it enters the station. If you are looking for an exhaust removal system that you can connect at the door and have it automatically disconnect when you leave, the SBT is right for your application.

KEY SBT SYSTEM ADVANTAGES:

- Models handle up to 60-foot deep back-in bays
- Auto-disconnect at the exit door
- Attach the Grabber™ from the vertical position
- No minimum or maximum exit speed
- Aluminum track: light-weight and strong
- End stops with rubber shock absorbers take up kinetic energy from trolleys
- Adjustable release points depending on the exit speed of the vehicle
- Pre-fitted yellow/black extraction hose
- Virtually 100% source capture through a unique automatic Grabber nozzle; available to fit all emergency response vehicle tailpipe sizes
- Automatic start/stop of fan by an exhaust sensor
- Safety disconnect coupling: fail safe system, easily re-connectable
- Suitable for existing fire stations and new design-built stations

PLYMOVENT®
Exhaust Removal Systems

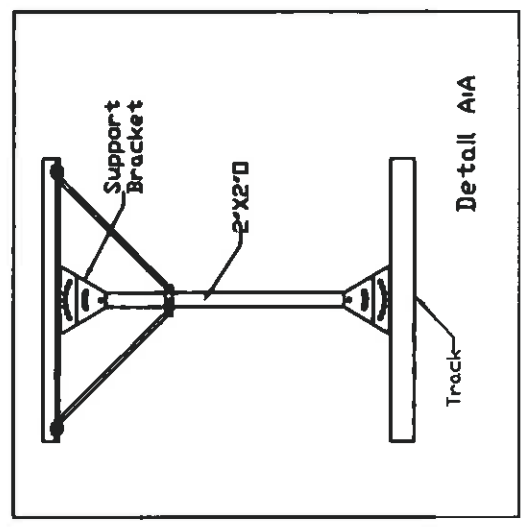
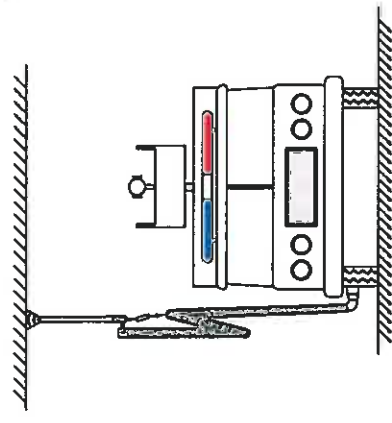
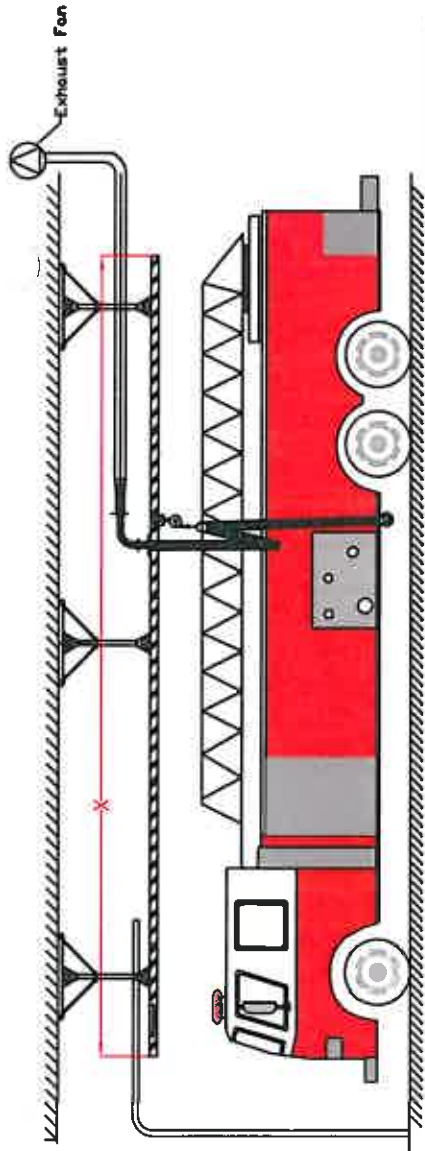
PlymoVent North America:

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Canada: 24-1200 Aerowood Drive, Mississauga, ON L4W 2S7
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- Notes:
1. System support methods: See Detail A/A
 2. System location: See Table
 3. System Temperature resistance: 400°F continuous/500°F intermittent
 4. Roll material: Aluminum

System Specifications

Type	Length (x)	Number of legs	Weight (lbs)	Maximum Reach Based On Track Mounting Height Df:			Qty.
				12' High 5' From Door	13' High 6' From Door	14' High 7' From Door	
SBTA 21 B	19'	2	70	25'	26'	27'	
SBTA 31 B	28.5'	3	100	34.5'	35.5'	36.5'	
SBTA 42 B	38'	4	158	44'	45'	46'	
SBTA 52 B	47.5'	5	177	53.5'	54.5'	55.5'	
SBTA 62 B	57'	6	191	63'	64'	65'	
Type	Length (x)	Number of legs	Weight (lbs)	Apparatus Bay Maximum Length Based On Track Mounting Height Df:			Qty.
				12' High 5' From Door	13' High 6' From Door	14' High 7' From Door	
SBTA 41 D	38'	4	120	46'	48'	50'	
SBTA 42 D	38'	4	158	46'	48'	50'	
SBTA 51 D	47.5'	5	139	55.5'	57.5'	59.5'	
SBTA 52 D	47.5'	5	177	55.5'	57.5'	59.5'	
SBTA 61 D	57'	6	153	65'	67'	69'	
SBTA 62 D	57'	6	191	65'	67'	69'	

#B=Back In system
 D=Drive Thru system
 *Approximately one leg is needed for every 10' of length (x)

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Engineer:	PLYMOVENT NORTH AMERICA 115 MELROCH ROAD CRANFORD, NJ TEL: (800)586-5600 FAX: (800)565-0819 WWW.PLYMOVENT.COM		
Customer:	SBTA		

PLYMVENT®

clean air at work



MAGNETIC GRABBER®



The “click and seal” nozzle for effective exhaust removal





WHY DIESEL EXHAUST EXTRACTION IS IMPORTANT

Diesel engines, used in fire trucks, produce a mixture of toxic gases and particulates from the combustion process. These hazardous vehicle exhaust emissions in a fire station are one of a firefighter's most significant cancer health risk and a serious legal liability for the fire department. It is essential to create healthy and safe working conditions by reducing these risks.

Protective measures are an important aspect of this.

Eliminate this hazard from your fire station with our vehicle exhaust capture and removal systems. From existing stations to new design-built, our totally automatic start-up and disconnect source capture systems are the recommended method for controlling exhaust emissions in your station, facility, town, city or municipality.

THE MAGNETIC GRABBER®

Now there is an exhaust removal system for every station. Combining the various benefits of Plymovent's patent pending Magnetic Grabber® and the opportunity to have an easy to use professional Plymovent system in your station makes the decision an easy one.

EASY TO OPERATE - "CLICK AND SEAL"

The conical design makes attaching the Magnetic Grabber® to the vehicle extremely user friendly. At the sound of a clear "click" you know you have a correctly "sealed" connection of the system to the vehicle, minimizing the danger of diesel exhaust emissions in the station. The strategically positioned magnets ensure a good connection to the vehicle, as well as a controlled automatic disconnect when the vehicle exits the station.

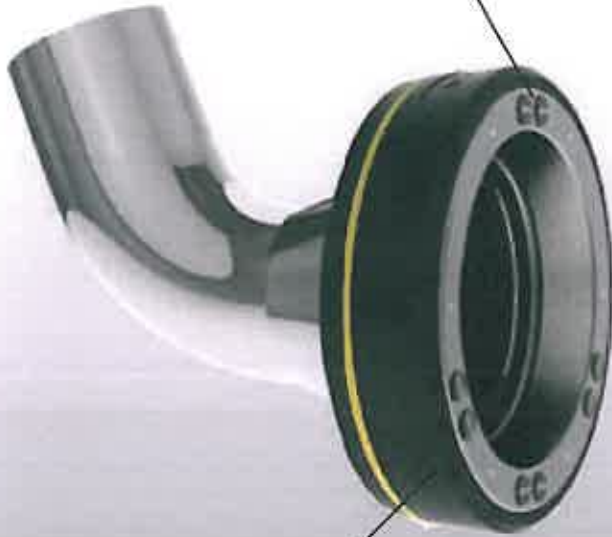
PROFESSIONAL LOOK AND PERFORMANCE

With its stainless polished look the Magnetic Grabber® is easy to recognize, but also the functionality is what you can expect of a Plymovent system. With no obstructions in the hose, the system can remove dangerous diesel exhaust at its maximum capacity. The new Magnetic Grabber® system can be quickly attached to any vehicle equipped with the innovative Plymovent tailpipe connector. The tailpipe connector's ambient air intake also ensures the vehicle's exhaust temperatures are reduced thereby making the system safer to use.

SAFETY OF THE SYSTEM

In order to protect your investment and provide protection against damages, Plymovent has integrated a rubber cover on the Magnetic Grabber®. With the Magnetic Grabber's® rubber cover, along with your systems Safety Disconnect, you and your system are well protected.

Strategically positioned integrated magnet for easy connection



Protective rubber safety cover to avoid damage to vehicle and surroundings

Unique conical design for soft release



Ambient-air intake protects the system and surroundings from high-temperature exhaust gasses

BENEFITS

- Easy to operate “click and seal”
- Virtually 100% source capture
- Ambient air intake
- Unique conical design for easy use
- Functions without electrical power input



Plymvent has over 30 years of experience and leads a thousand of source capture vehicle and fleet pilot installations worldwide. With city, states and distributors in over 45 countries, Plymvent is your knowledge-based partner for source capture technology. Over 50,000 Plymvent source capture systems across the world have been installed to reduce hazardous vehicle exhaust emissions in a variety of sectors including:

- Voluntary and port (air-sea terminals)
- Federal and state police stations
- EMS departments
- Training facilities
- Private and corporate fleets
- Airport ANTI programs
- Military Fleets, Automotive, Municipalities and DOT's





PLYMOVENT®
clean air at work

USA
115 Melrich Road
Cranbury, NJ 08512

T 800 644 0911
T 609 395 3500
F 609 655 0569
E info.usa@plymovent.com

Your authorized Plymovent distributor:



PLYMOVENT SOURCE CAPTURE SYSTEMS:

- AN INDUSTRY STANDARD

The Magnetic Grabber® can be connected to the product range of fans and control equipment of Plymovent. A Plymovent system enables you to get fully automatic control of your products in the most efficient way, saving you money and bringing you clean air at work.

Our philosophy is to provide quality systems that are safe, user-friendly, code compliant and that will enhance the quality of life for your firefighters and personnel. That is why we have developed a line of source capture systems designed to meet your station's needs. Plymovent is ISO 9001:2000 and UL certified and meets the NFPA 1500 and 1901 guidelines.

Plymovent cares about the air you breathe. We deliver products, systems and services which ensure clean air at your work environment, anywhere in the world.

Our expertise gained over many years, high quality products and genuine commitment to customer requirements enable us to provide precisely the solutions you need.

Plymovent is ISO 9001:2000 Certified



MAGNETIC GRABBER®

VEHICLE EXHAUST REMOVAL SYSTEM

The Magnetic Grabber is a patent pending vehicle exhaust removal device that through a conical design, integrated magnets and centre self-alignment, provides very quick, easy and controlled connection and disconnection to a vehicle's exhaust system. This nozzle is used mainly in areas where the vehicle is moving through an enclosed space, like fire stations.



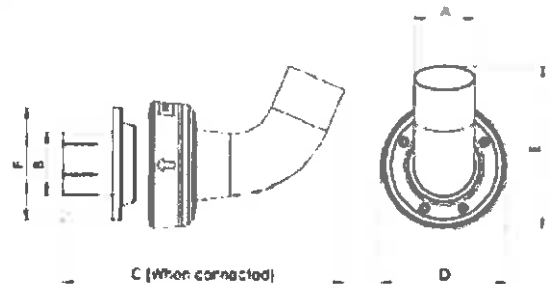
SPECIFICATIONS

Physical dimensions and properties	
Material	<ul style="list-style-type: none"> zinc plated steel stainless steel
Colour	polished stainless steel and matt steel cladding
Scope of supply	
Tailpipe connector - Nozzle - Balancer locking cable	
Order information	
Article number	see remaining specifications
Number/package	1
Shipping date	
Packaging	Bubble wrap
Gross weight	see remaining specifications
Packaging dimensions	see remaining specifications
Harmonized Tariff Code	8421 99 00 99
Country of origin	Sweden

REMAINING SPECIFICATIONS

Article number	Description	Gross weight
90390-1011	75 mm/3" SBT	3.0 kg - 6.6 lbs / 1.35 kg - 3.0 lbs
90392-1011	75 mm/3" STR	3.2 kg - 7.0 lbs / 1.05 kg - 2.3 lbs
90380-1011	100 mm/4" SBT	3.5 kg - 7.7 lbs / 1.05 kg - 2.3 lbs
90382-1011	100 mm/4" STR	3.6 kg - 7.9 lbs / 1.05 kg - 2.3 lbs
90360-1011	125 mm/5" SBT	4.0 kg - 8.8 lbs / 1.4 kg - 3.1 lbs
90362-1011	125 mm/5" STR	4.1 kg - 9.0 lbs / 1.4 kg - 3.1 lbs

DIMENSIONS



A	100 mm/4"	
B	90390-1011/90392-1011	75 mm/4" Connector
	90380-1011/90382-1011	100 mm/4" Connector
	90360-1011/90362-1011	125 mm/5" Connector
C	75 mm/3" version	381 mm/15"
	100 mm/4" version	426 mm/16.8"
	125 mm/5" version	440 mm/17.3"
D	75 mm/3" version	190 mm/7.5"
	100 mm/4" version	212 mm/8.3"
	125 mm/5" version	253 mm/9.9"
E	75 mm/3" version	260 mm/10.2"
	100 mm/4" version	271 mm/10.6"
	125 mm/5" version	293 mm/11.5"
F	75 mm/3" version	164 mm/6.5"
	100 mm/4" version	184 mm/7.2"
	125 mm/5" version	228 mm/9"

Product type	MAGNETIC GRABBER®
Article no.	see remaining specifications
Product category	Nozzles
Version	220311/A

Always check the latest version on www.plymovent.com

PLYMVENT®

clean air at work

SAFETY DISCONNECT HANDLE



The ergonomic handle for safe operation
of your exhaust removal system

SAFETY DISCONNECT HANDLE

Plymovent offers a safe solution for operating an exhaust removal system in emergency stations. Designed for functionality and efficiency, the safety disconnect handle is easy to use and represents the next step in safety disconnects. With an uninterrupted airflow through the exhaust removal hose, the exhaust gases are carried out of the breathing zone with maximum efficiency.

FUNCTIONAL DESIGN

The safety disconnect handle is ergonomically-designed for ease of use. The round handle has large grips so that it can be operated even while wearing gloves and can be reached from any angle. The user does not have to bend over to connect the exhaust removal system, thus limiting the risk of exposure to exhaust gases.

The safety disconnect handle is patent pending and was designed with its function in mind. The inside is made of durable steel to withstand high-temperature exhaust gases, while the outside is made of engineered plastics. When operating a pneumatic system, the integrated pneumatic valve is shielded and positioned to allow its simple operation. The safety disconnect handle for a magnetic system does not include the valve, but it does offer benefits like easy operation of the system and the safety disconnect function.

Ergonomic in use and operation, with large grips and easy-to-operate functions

Made of 'scratch-safe' materials resistant to high temperatures

Uninterrupted airflow through the hose

Available for magnetic and pneumatic systems



PLYMOVENT SOURCE CAPTURE SYSTEMS: AN INDUSTRY STANDARD

The safety disconnect handle can be integrated with Plymovent's pneumatic and magnetic exhaust removal systems. A Plymovent system enables you to remove dangerous exhaust gases efficiently, saving you money and assuring clean air at the workplace.

Our philosophy is to provide quality systems that are safe, user-friendly and code-compliant and that will enhance quality of life for your fire fighters and personnel. That is why we have developed a line of source capture systems designed to meet your station's needs. Plymovent is ISO 9001:2000 certified.

Plymovent cares about the air you breathe. We offer products, systems and services which ensure clean air at work, anywhere in the world.

We respect the environment and we deliver high-quality products. Our expertise gained over many years and our genuine commitment to customer requirements enable us to provide precisely the solutions you need.



PLYMOVENT®
clean air at work

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Plymovent reserves the right to make design changes.

0506191020/B

www.plymovent.com

TEV-series

The Energy saving Ventilator



www.plymovent.com

PLYMOVENT®

High Performance Ventilators for Intelligent Process Ventilation

Energy saving ventilators make a perfect match to any intelligent process ventilation system. An advanced, patented manufacturing process and new design, together with new impellers, provide an even air flow, higher capacity and lower sound level.



HIGH EFFICIENCY

Plymovent's mission is to design energy efficient products. Plymovent utilises, as standard equipment, high efficiency motors. The motor, along with our new design, produces the lowest operating package offered in the industry today. If you have an existing fan, you can replace it with a Plymovent. It will reduce your operating costs and you will benefit with a return on your investment. Not many other products can stand behind that claim.

It is like hitting the jackpot!

SAFETY FIRST

Plymovent fans are equipped with safety screens on both the inlet and outlet of the fan housing. Plymovent not only protects your investment but also your personnel from moving parts of the fan.

NOISE LEVEL

Today, it is essential to control noise pollution in the workplace. Recognizing this problem, Plymovent has produced a fan that will operate at a lower sound power level (db) and a lower sound pressure level (dba) than other competitive models. All Plymovent fans have been tested by AMCA in accordance with the AMCA 301 standard.



LOW POWER CONSUMPTION

Plymovent fans require less kW versus air volume delivered. This not only equates to less electrical usage but it also lowers the installation cost. It allows the electrician to reduce the cost of installation by reducing the associated components required to run the motor.

SELF-BALANCING FAN IMPELLER

Unlike any other fan, Plymovent's new technology incorporates self-balancing aluminium impellers. These high tech machine stamped impellers guarantee perfect balance and alignment every time. This eliminates the need for dynamic balancing that requires the adding of weight by welding that can distort the fans balance and performance.



EASY ACCESS IMPELLER

All Plymovent fan housings are designed for easy access to the impeller. Our design allows an installer or service technician to remove the motor and impeller wheel without removing inlet or outlet ductwork or disassembling the fan housing. It also provides the installer the option of separating the fan into two pieces when mounting in confined locations such as above drop ceilings or narrow access ways.



AIRFOIL IMPELLER

Plymovent, in cooperation with an internationally recognised university, has designed the ultimate airfoil fan impeller. Through the use of aerospace design techniques, Plymovent has been successful in designing a fan impeller that maximises air delivery at higher static pressures and reduces energy consumption at the same time. Plymovent fans deliver the air volume you need at 30% less energy required over any competitive fan.



VIBRATION CONTROL

Plymovent fans are designed with pre-engineered anti-vibration control to reduce the harmful effects of vibration.

PROTECTIVE COATING

Plymovent fans are protected for long life by an epoxy powder coat finish which is perfect for most harsh environments. The T Series fans can also be manufactured in other materials. Call us for more information.

NO-WELD FAN HOUSING

Plymovent's patented No-Weld Housings are produced with a state of the art fastening technique and eliminates the need for metal welding which distorts metal components and destroys critical tolerances. This results in less vibration, a better fit and superior finish.

EASY MOUNT HOUSING

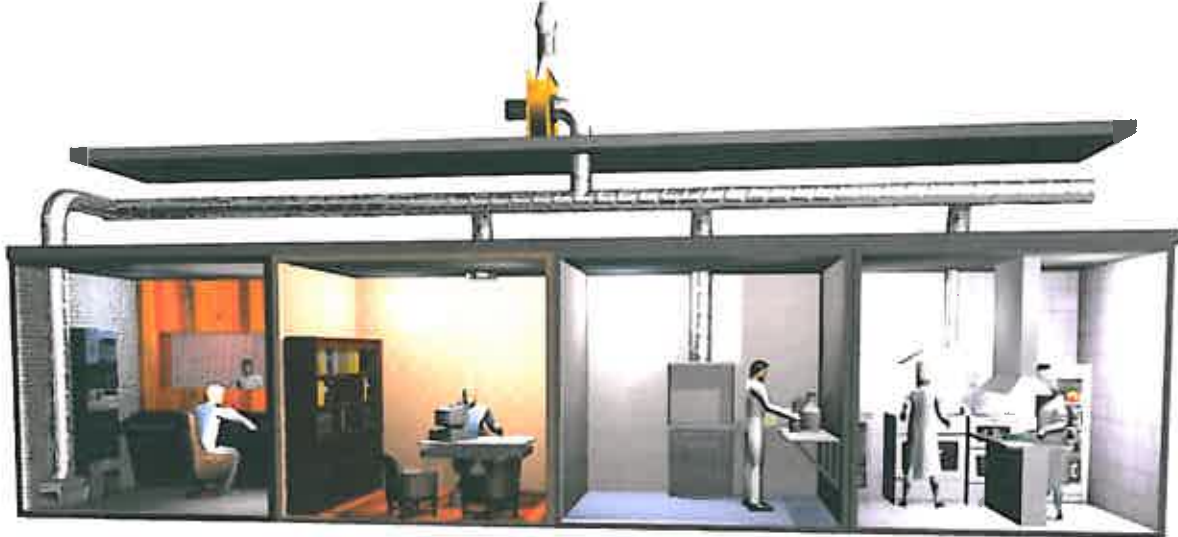
The new T Series has been designed with slotted mounting channels on all four sides to allow for a wide variety of mounting techniques or options. This eliminates the expense of custom mounting suspensions or platforms.



- + High Efficiency
 - + Low Power Consumption
 - + Low Noise Levels
 - + Quality Design
 - + Easy Installation
-
- = Return on Investment

PLYMVENT®

Application options



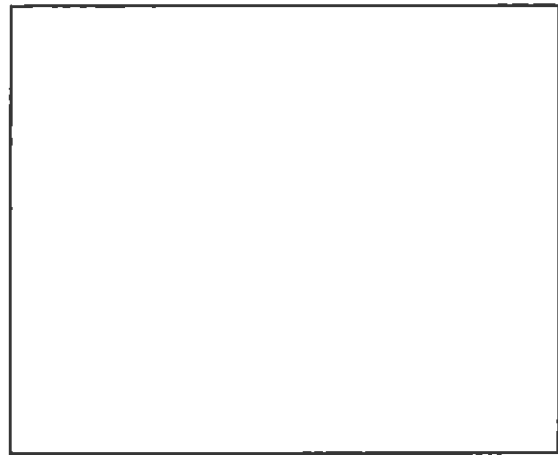
Exhaust Ventilation



Displacement Ventilation



Fumes/Dust/Odors Ventilation



Process Ventilation

PLYMOVENT®

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Plymovent representative



TEV-3110-60

The Energy saving Ventilator



ENERGY CONSERVATION

Plymovent's mission is to design energy efficient products. Plymovent utilizes as standard equipment Energy Efficient Motors. This standard in conjunction with our new design produces the lowest operating cost fan package offered in the world today. If you have an existing fan, you can replace it with a Plymovent and reduce your operating costs and in turn receive a return on your investment. Not many other products can stand behind that claim.

POWER CONSUMPTION

Plymovent fans require less kW versus air volume delivered. This does not only equate to less power consumption but also less installation cost. This allows the electrical installer to reduce the cost of installation by reducing the associated components required to run the motor.

EASY ACCESS IMPELLER

All Plymovent fan housings are designed for easy access to the impeller. Our design allows an installer or service technician to remove the motor and impeller wheel without removing inlet or outlet duct-work or disassembling the fan housing. It also provides the installer the option of separating the fan into two pieces when mounting in confined locations above drop ceilings or tight access ways.

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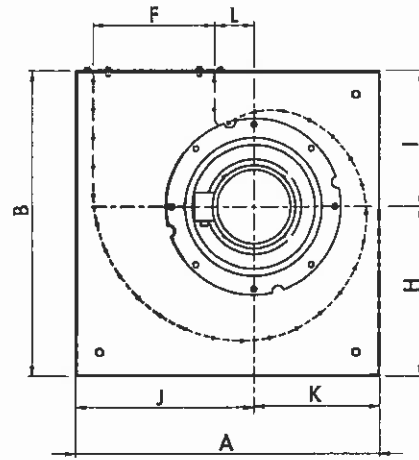
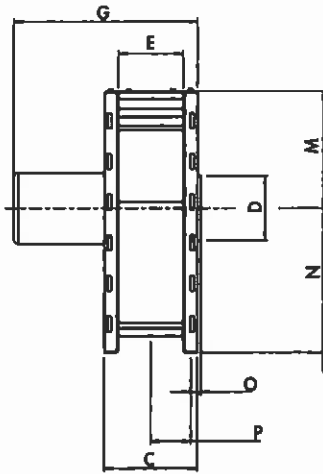


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Plymovent Corporation certifies that the product shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

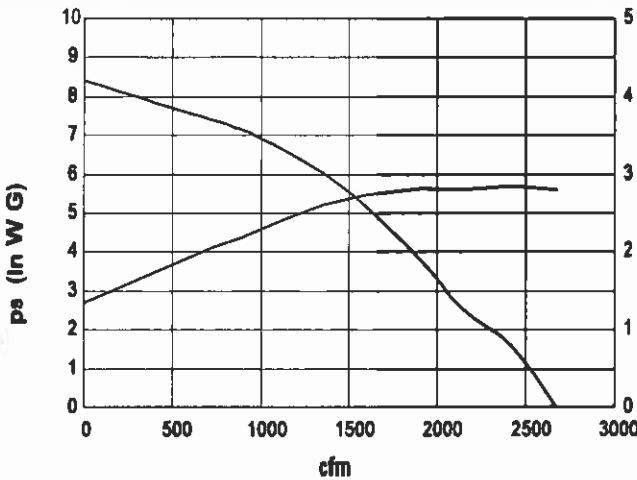
Plymovent reserves the right to make design and technical changes.

	mm	inches
A	640	25 3/16
B	640	25 3/16
C	230	9 1/16
D	200	7 7/8
E	160	6 5/16
F	254	10
G	472	18 9/16
H	355	13 31/32



	mm	inches
I	288	11 11/32
J	373	14 11/16
K	267	10 1/2
L	83	3 9/32
M	288	11 11/32
N	355	13 31/32
O	25	1
P	99	3 15/16

TECHNICAL DATA



Performance shown is for installation type D: Ducted inlet, Ducted outlet. Performance ratings do not include the effects of appurtenance in the airstream. Performance measured at a speed of 3500 RPM and the efficiency of the motor.

Fan specifications

- Construction: AMCA Type - B
- Drive type: Direct drive
- Impeller type: Backward incline
- Impeller material: Aluminum
- Impeller diameter: 12.4 inch
- Impeller width: 4.33 inch
- Hub size: 5/8 inch
- Discharge style: Rotational 90°
- Shaft seal: Rubber
- Housing material: Galvanized steel
- Housing finish: Epoxy powder coat
- Total fan weight: 85 lbs

Motor specifications

- Frame size: NEMA 56C 3-ph
- Motor type: TEFC (IP 55)
- Rated output: 3.0 HP
- Thermal protection: No
- CSA: Yes
- CE-listed: Yes
- Continuous duty: 104°F/40°C
- 3 phase motor**
- Voltage: 208-230/460/575
- Full load current: 8.4-7.6/3.8A
- Motor RPM: 3450
- Service factor: 1.15
- 1 phase motor**
- Voltage: 208-230/460 V
- Full load current: 13.5/6.75 A
- Motor RPM: 3500
- Service factor: 1.15

Electrical power is available for all international electrical power sources.

SOUND POWER DATA

Octave Band (Hz)

Speed	Pressure in WG	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	4000 Hz	LwA	Sones
3500	0	99	103	99	97	91	86	83	78	98	51
3500	1	100	103	99	96	90	85	82	77	97	50
3500	2	100	104	99	96	89	85	81	76	97	49
3500	3	100	104	99	96	89	84	79	74	97	49
3500	4	101	105	99	96	89	83	79	74	97	50

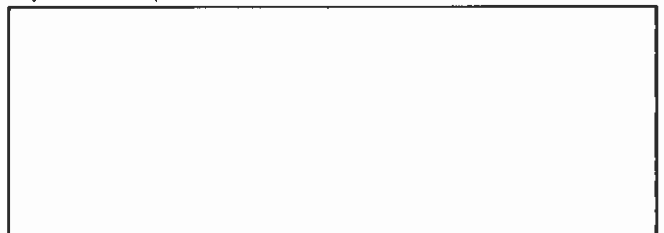
Performance shown is for installation type D: Ducted inlet, Ducted outlet. The sound power level ratings shown are in decibels, referred to 10-12 watts calculated per AMCA standard 301. Values are shown for inlet LwA sound power levels for installation Type D: ducted inlet, ducted outlet. Ratings include the effects of duct end correction.

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Plymovent representative



TEV-559-60

The Energy saving Ventilator



ENERGY CONSERVATION

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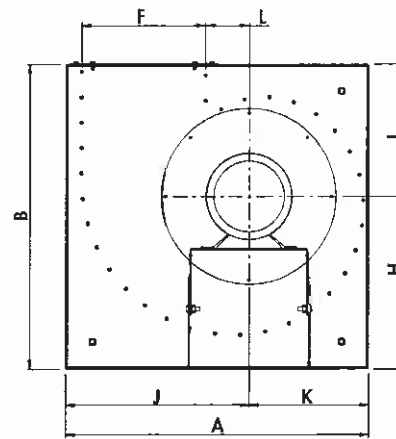
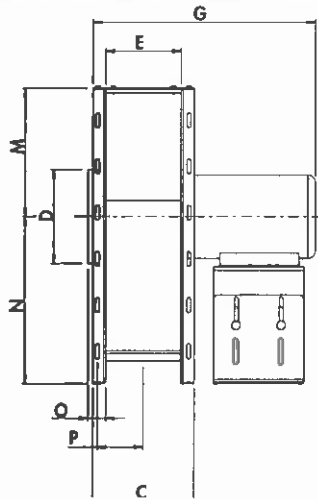
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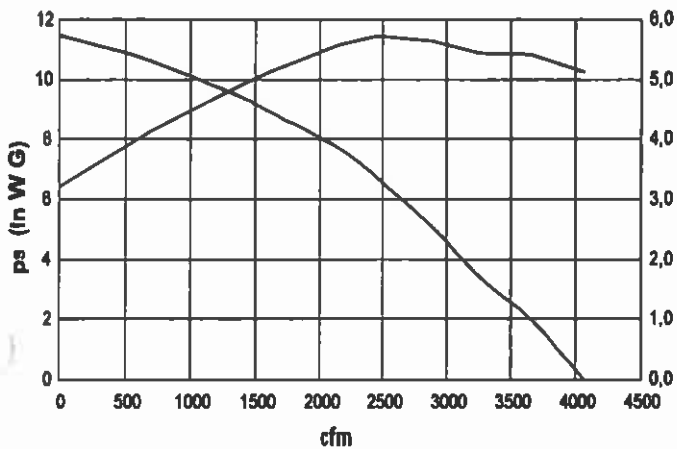
	mm	inches
A	785	30 7/8
B	785	30 7/8
C	270	10 5/8
D	250	9 13/16
E	200	7 7/8
F	322	12 11/16
G	542	21 11/32
H	444	17 15/32
I	341	13 7/16



Plymovent reserves the right to make design and technical changes.

	mm	inches
J	475	18 11/16
K	310	12 7/32
L	112	4 13/32
M	341	13 7/16
N	444	17 15/32
O	25	1
P	119	4 11/16

TECHNICAL DATA



Performance shown is for installation type D: Ducted inlet, Ducted outlet. Performance ratings do not include the effects of appurtenance in the airstream. Performance measured at a speed of 3500 RPM and the efficiency of the motor.

Fan specifications

- Construction: AMCA Type - B
- Drive type: Direct drive
- Impeller type: Backward incline
- Impeller material: Aluminum
- Impeller diameter: 16.3 inch
- Impeller width: 2.32 inch
- Hub size: 1 1/8 inch
- Discharge style: Rotational 90°
- Shaft seal: Rubber
- Housing material: Galvanized steel
- Housing finish: Epoxy powder coat
- Total fan weight: 175 lbs

Motor specifications

- Frame size: NEMA 1B4TC
- Motor type: TEFC (IP 55)
- Rated output: 5.0 HP
- Thermal protection: No
- CSA: Yes
- CE-listed: Yes
- Continuous duty: 104°F/40°C
- 3 phase motor**
- Voltage: 208-230/460/575 V
- Full load current: 13.0-11.8/5.90A
- Motor RPM: 3480
- Service factor: 1.25
- 1 phase motor**
- Voltage: 208-230/460 V
- Full load current: 21.0/10.5A
- Motor RPM: 3490
- Service factor: 1.15

Electrical power is available for all international electrical power sources.

SOUND POWER DATA

Speed	Pressure in wg	Octave Band (Hz)								LwA
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
3500	0	105	104	99	96	92	92	88	83	99
3500	1	106	105	101	97	92	91	87	81	100
3500	2	107	106	102	98	93	90	86	80	100
3500	3	107	106	102	97	92	89	85	79	100
3500	4	107	106	101	97	91	89	84	78	99
3500	5	106	106	101	96	91	88	83	78	99

Performance shown is for installation type D: Ducted inlet, Ducted outlet. The sound power level ratings shown are in decibels, referred to 10-12 watts calculated per AMCA standard 301. Values are shown for inlet LwA sound power levels for installation Type D: ducted inlet, ducted outlet. Ratings include the effects of duct end correction.

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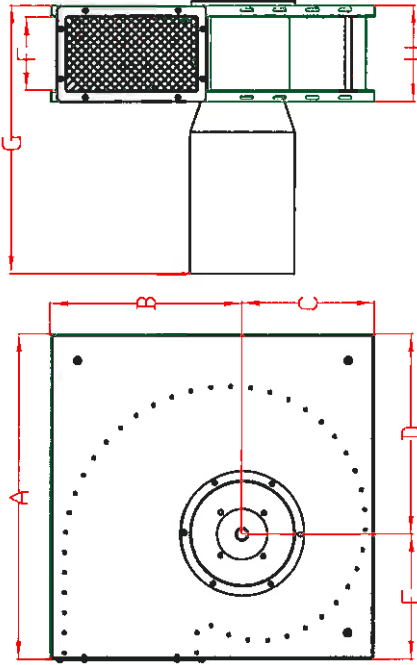
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www.plymovent.com

Plymovent representative



TEV-3110/359/559

Dimensional Data			
	TEV-3110	TEV-359	TEV-559
A	25-3/16"/640mm	25-3/16"/640mm	30-29/32"/765mm
B	14-11/16"/373mm	14-11/16"/373mm	18-11/16"/475mm
C	10-1/2"/267mm	10-1/2"/267mm	12-7/32"/310mm
D	13-31/32"/355mm	13-31/32"/355mm	17-15/32"/444mm
E	11-11/32"/288mm	11-11/32"/288mm	13-7/16"/341mm
F	6-5/16"/160mm	6-5/16"/160mm	7-7/8"/200mm
G	18-9/16"/472mm	18-9/16"/472mm	21-11/32"/542mm
H	9-1/16"/230mm	9-1/16"/230mm	10-5/8"/270mm
Qty.			



Fan Specifications
 Construction: AHCA Type-B
 Drive type: Direct Drive
 Impeller type: Backward Incline
 Impeller material: Aluminum
 Discharge material: Galvanized steel
 Housing finish: Epoxy powder coat
 Housing gauge: 0.137"
 Installation: Suitable for indoors or outdoors

Motor Specifications
 Thermal protection: External
 CSA: Yes
 UL: Recognized
 CE-Listed: Yes
 Continuous duty: 176°F/80°C
 Motor Type: TEFC

Fan and Motor Specifications

Fan	Voltage (V)	Current (A)	Weight	Rated output	RPM	Inlet size	Outlet size
1 phase							
TEV-359	115/208-230	20.4/10.2	80lbs/36kg	2 HP	3490	7-7/8"/200mm OD	6-5/16" X 10" sq. to rd. 10" OD/ 160mm X 254mm sq. to rd. 254mm OD
TEV-3110	208-230	13.5/6.75	85lbs/39kg	3 HP	3500	7-7/8"/200mm OD	6-5/16" X 10" sq. to rd. 10" OD/ 160mm X 254mm sq. to rd. 254mm OD
TEV-559	208-230	21/10.5	175lbs/80kg	5 HP	3490	7-7/8"/200mm OD	7-7/8" X 11-11/16" sq. to rd. 12" OD/ 200mm X 297mm sq. to rd. 305mm OD
3 phase							
TEV-359	208-230/460/575	6.25-5.65/2.83/2.06	80lbs/36kg	2 HP	3415	7-7/8"/200mm OD	6-5/16" X 10" sq. to rd. 10" OD/ 160mm X 254mm sq. to rd. 254mm OD
TEV-3110	208-230/460/575	8.4-7.6/3.8	85lbs/39kg	3 HP	3450	7-7/8"/200mm OD	6-5/16" X 10" sq. to rd. 10" OD/ 160mm X 254mm sq. to rd. 254mm OD
TEV-559	208-230/460/575	13-11.8/5.9	175lbs/80kg	5 HP	3480	9-13/16"/250mm OD	7-7/8" X 12-11/16" sq. to rd. 12" OD/ 200mm X 297mm sq. to rd. 305mm OD

Job name:	DWG BY: JP	Revisors: 2	Rev. date: 7/14/09
Engineer:	PLYMOVENT NORTH AMERICA 115 MELROCH ROAD CRAWFORD NJ TEL: (609)395-3500 FAX: (609)455-0919 WWW.PLYMOVENT.COM		
Customer:	TEV		

Disclaimer: The intended use of this drawing is to provide general equipment dimensions. The information provided is confidential and proprietary to Plymvent NA and is not to be recreated, modified and/or otherwise distributed without written consent of Plymvent NA. There are no expressed or implied warranties concerning the accuracy, completeness, reliability, or usability of this information. Use of this or any Plymvent NA drawing, for purposes other than its intended use is unlawful and actions may be taken against the violating party(s).

FUA

FUA-1300/1800/2100/3000/4700

The FUA is an extraction fan that is specially designed to remove welding and other harmful fumes as dust, oil mist and exhaust gases.

The fan is intended and designed for mounting to extraction arms and filter units.



APPLICATIONS

The FUA is intended to be used for the following applications:

- MIG-MAG/GMAW welding
- TIG welding
- FCAW welding
- stick/MMAW welding
- vehicle exhaust extraction systems



Do **not** use the FUA for the following applications or in the following circumstances:

- aluminium laser cutting
- extraction of aggressive fumes and gases (e.g. from acids, alkaline or soldering paste containing lithium)
- extraction of hot gases (more than 80°C/176°F continuously)
- grinding aluminium and magnesium
- flame spraying
- extraction of cement, saw dust, wood dust, etc.
- explosive environments or explosive substances/gases



SPECIFICATIONS

Physical dimensions and properties

Material:	aluminium sheet metal
• fan	
• housing	
Colour:	
• motor	black (RAL 9005)
• housing	grey (RAL 7035)
Motor design	IEC 60072
Fan type	radial
Design conditions	20°C (68°F) at sea level
Max. airflow temperature	80°C/176°F

Performance

Speed	2800 rpm
-------	----------

Electrical data

Max. start/stops per hour	30
Insulation class	F

Protection class	IP 55
Ambient conditions	
Operating temperature:	
• min.	5°C (41°F)
• nom.	20°C (68°F)
• max.	40°C (104°F)
Max. relative humidity	80%
Outdoor use allowed	no
Storage conditions	5-40°C (41-104°F) relative humidity max. 80%
Product combinations	
Exhaust extraction systems	all hose reel/drop systems
Filter units	all systems
Fume extraction systems	all systems
Control equipment	all systems
Scope of supply	
Fan	
Order information	
Number/package	1
Shipping data	
Harmonized Tariff Code	8414.5940.90
Country of origin	the Netherlands

See table 1: for dimensions.

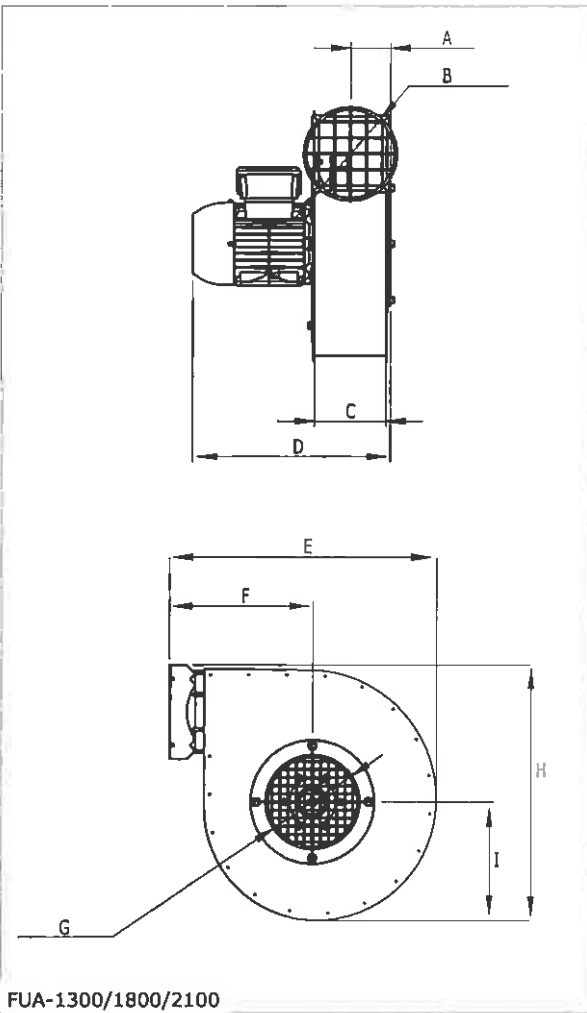
See table 2: for remaining specifications, options and accessories.

See page 2: for outlet and motor positions.

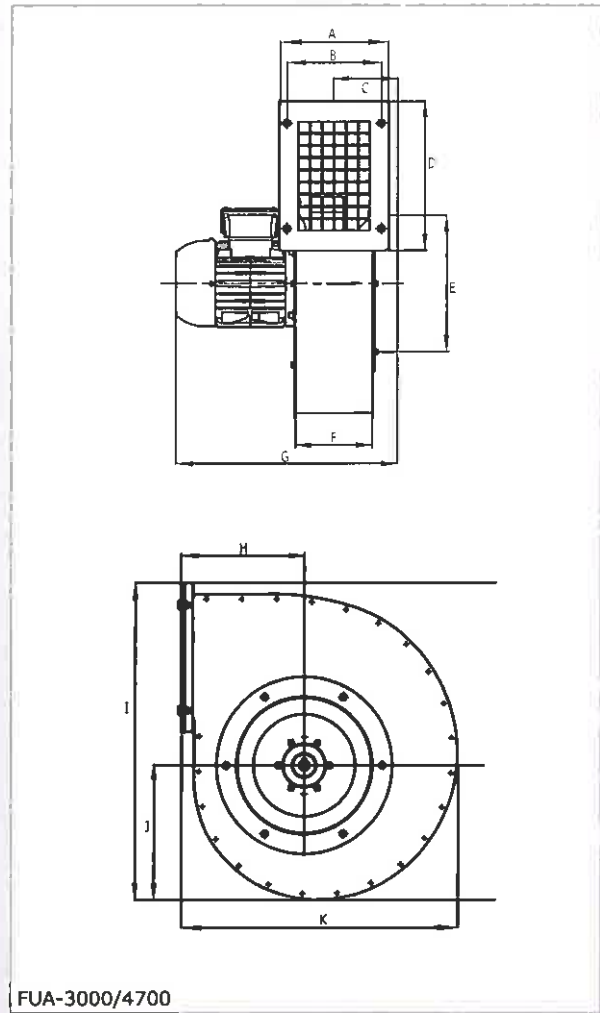
See page 4: for fan curves.

APPROVALS/CERTIFICATES

CE	FUA-1800/4700
RoHS	Directive 2011/65/EC (RoHS) valid as of 8 June 2011



FUA-1300/1800/2100

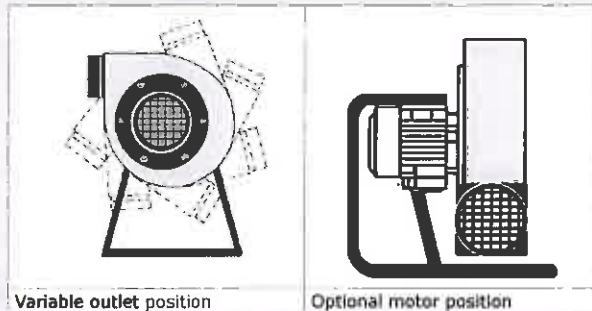


FUA-3000/4700

Table 1: Dimensions

	FUA-1300/1800	FUA-2100
A	68 mm (2.7 in.)	68 mm (2.7 in.)
B	Ø 159 mm (6.3 in.)	Ø 159 mm (6.3 in.)
C	122 mm (4.8 in.)	122 mm (4.8 in.)
D	330 mm (12.9 in.)	353 mm (13.1 in.)
E	455 mm (17.9 in.)	455 mm (17.9 in.)
F	244 mm (9.6 in.)	244 mm (9.6 in.)
G	Ø 160 mm (6.3 in.)	Ø 160 mm (6.3 in.)
H	433 mm (17 in.)	433 mm (17 in.)
I	201 mm (7.9 in.)	201 mm (7.9 in.)
Fan wheel (not shown)		
- diameter	300 mm (Ø 11.8 in.)	Ø 300 mm Ø 11.8 in.)
- width	20 mm (0.8 in.)/ 25 mm (1.0 in.)	60 mm (2.4 in.)

DISCHARGE AND MOTOR POSITIONS



Variable outlet position

Optional motor position

	FUA-3000	FUA-4700
A	201 mm (7.9 in.)	205 mm (8.1 in.)
B	175 mm (6.9 in.)	175 mm (6.9 in.)
C	118 mm (4.6 in.)	117 mm (4.6 in.)
D	274 mm (10.8 in.)	348 mm (13.7 in.)
E	Ø 250 mm (9.8 in.)	Ø 245 mm (9.6 in.)
F	142 mm (5.6 in.)	142 mm (5.6 in.)
G	410 mm (16.1 in.)	480 mm (18.9 in.)
H	228 mm (9 in.)	258 mm (10.6 in.)
I	583 mm (23 in.)	733 mm (28.9 in.)
J	247 mm (9.7 in.)	297 mm (11.7 in.)
K	512 mm (20.2 in.)	591 mm (23.3 in.)
Fan wheel (not shown)		
- diameter	Ø 320 mm (12.6 in.)	Ø 380 mm (15 in.)
- width	60 mm (2.4 in.)	45 mm (1.8 in.)

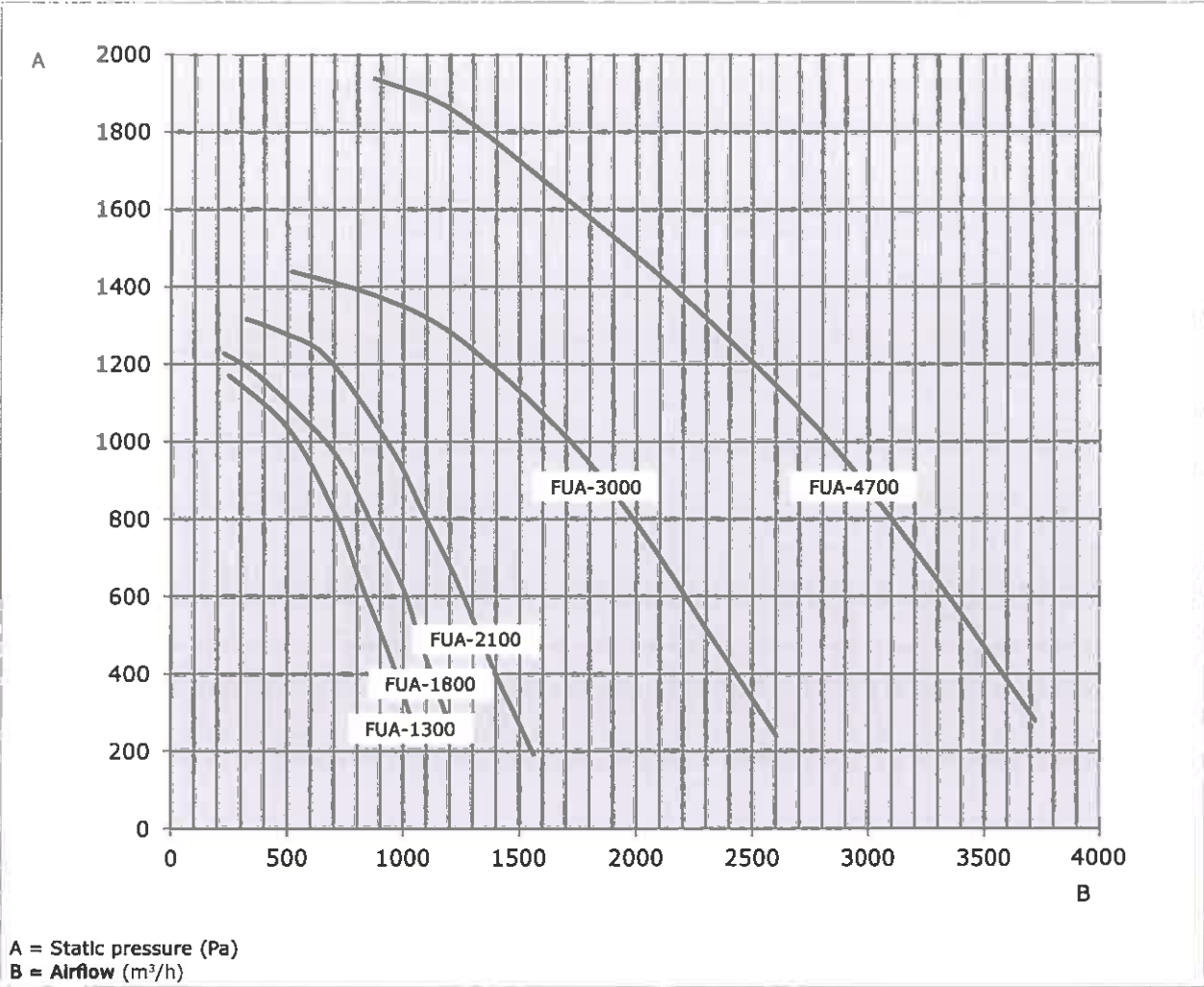
Product type: **FUA**
 Article no: see order information
 Product category: extraction fan
 Version: 290113/B

Always check the latest version on www.plymovent.com

Table 2: Remaining specifications and available options and accessories

Features	FUA-1300		FUA-1800	FUA-2100		FUA-3000	FUA-4700
	230V	230-400V	230-400V	230V	230-400V	230-400V	230-400V
Article number	0000100300	0000100302	0000100303	0000100301	0000100304	0000100306	0000100308
■ Weight							
Net weight	12,8 kg (28.2 lbs)	11,9 kg (26.2 lbs)	12,3 kg (27.1 lbs)	16,5 kg (36.4 lbs)	16,4 kg (36.2 lbs)	21,9 kg (48.3 lbs)	34,5 kg (76.1 lbs)
■ Electrical data							
Connection voltages	230V/ 1~/50Hz	230-400V/ 3~/50Hz	230-400V/ 3~/50Hz	230V/ 1~/50Hz	230-400V/ 3~/50Hz	230-400V/ 3~/50Hz	230-400V/ 3~/50Hz
Power consumption	0,37 kW (0.5 HP)	0,37 kW (0.5 HP)	0,55 kW (0.75 HP)	0,75 kW (1 HP)	0,75 kW (1 HP)	1,1 kW (1.5 HP)	2,2 kW (3 HP)
Nominal current							
- 230V	2,75 A	-	-	5 A	-	-	-
- 400V	-	1,1/1,02 A	1,5/1,4 A	-	2/1,9 A	2,7/2,5 A	4,9/4,8 A
■ Performance							
Noise level dB(A) (pressure and suction side duct connected)	63	63	63,8	65,9	65,9	68,1	75,9
■ Options and accessories							
<i>Fan on/off manually (wall)</i>							
Motor starter:							
- motor protection switch 230V/1~/50Hz	MPS-2,5-4,0 A	-	-	MPS-4,0-6,3 A	-	-	-
- motor protection switch 400V/3~/50Hz	-	MPS-1-1,6 A	MPS-1-1,6 A	-	MPS-1,6-2,5 A	MPS-2,5-4,0 A	MPS-4-6,3 A
<i>Fan on/off manually (on hood of extraction arm)</i>							
- starter for fan and working light	SA-24-75	SA-24-75	SA-24-75	SA-24-75	SA-24-75	SA-24-75	SA-24-75
- thermal relay 230V/3~/50Hz	MS-2.3/3.2	MS-1.4/2.0	MS-2.3/3.2	MS-4.5/6.3	MS-2.3/3.2	MS-4.5/6.3	MS-7.2/10
- thermal relay 400V/3~/50Hz	-	MS-0.9/1.3	MS-0.9/1.3	-	MS-1.4/2.0	MS-2.3/3.2	MS-4.5/6.3
<i>Fan on/off automatically (inductive sensor)</i>							
- starter for fan and working light	ES-90-005	ES-90-005	ES-90-005	ES-90-005	ES-90-005	ES-90-005	ES-90-005
- thermal relay 230V/3~/50Hz	MS-2.3/3.2	MS-1.4/2.0	MS-2.3/3.2	MS-4.5/6.3	MS-2.3/3.2	MS-4.5/6.3	MS-7.2/10
- thermal relay 400V/3~/50Hz	-	MS-0.9/1.3	MS-0.9/1.3	-	MS-1.4/2.0	MS-2.3/3.2	MS-4.5/6.3
<i>Fan on/off automatically (light sensor)</i>							
- starter for fan and working light	ES-90-005	ES-90-005	ES-90-005	ES-90-005	ES-90-005	ES-90-005	ES-90-005
- light sensor	LS-12	LS-12	LS-12	LS-12	LS-12	LS-12	LS-12
- thermal relay 230V/3~/50Hz	MS-2.3/3.2	MS-1.4/2.0	MS-2.3/3.2	MS-4.5/6.3	MS-2.3/3.2	MS-4.5/6.3	MS-7.2/10
- thermal relay 400V/3~/50Hz	-	MS-0.9/1.3	MS-0.9/1.3	-	MS-1.4/2.0	MS-2.3/3.2	MS-4.5/6.3
Mounting bracket stand (for free standing or mounting on wall, ceiling or platform)	MB-FUA/S1	MB-FUA/S1	MB-FUA/S1	MB-FUA/S1	MB-FUA/S1	MB-FUA/S2	MB-FUA/S2
Mounting bracket crane (for mounting on UK or FlexMax)	-	-	MB-FUA/C1	MB-FUA/C1	MB-FUA/C1	MB-FUA/C2	-
Outlet transition from rectangular to round							
- Ø 250 mm	-	-	-	-	-	OL-250	OL-250
- Ø 315 mm	-	-	-	-	-	-	OL-315
Soft connection for noise and vibration free connection to duct							
- inlet	SC-160	SC-160	SC-160	SC-160	SC-160	SC-250	SC-250
- outlet	SC-160	SC-160	SC-160	SC-160	SC-160	SC-250	SC-250/315
■ Shipping data							
Gross weight	14,9 kg (32.9 lbs)	13,9 kg (30.4 lbs)	14,4 kg (31.8 lbs)	18,5 kg (40.8 lbs)	18,5 kg (40.8 lbs)	26 kg (57.3 lbs)	43,5 kg (95.9 lbs)
Packing dimensions	470 x 470 x 515 mm (18.5 x 18.5 x 20.3 in.)	470 x 470 x 515 mm (18.5 x 18.5 x 20.3 in.)	470 x 470 x 515 mm (18.5 x 18.5 x 20.3 in.)	470 x 470 x 515 mm (18.5 x 18.5 x 20.3 in.)	470 x 470 x 515 mm (18.5 x 18.5 x 20.3 in.)	590 x 590 x 480 mm (23.3 x 23.3 x 18.9 in.)	860 x 750 x 630 mm (33.9 x 29.5 x 24.8 in.)

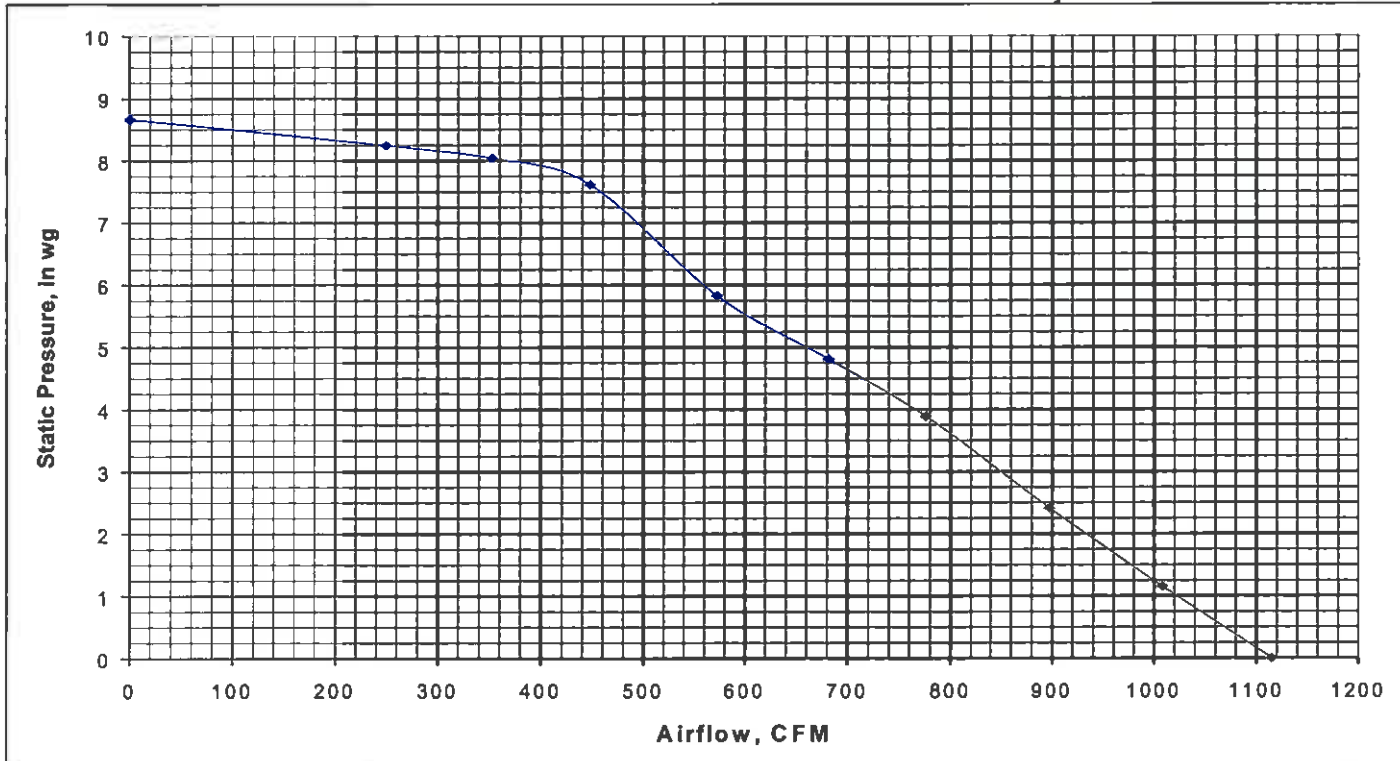
FAN CURVES



PLYMOVENT® 2100 Series Fans

clean air at work

USA: 115 Melrich Road
Cranbury, NJ 08512 800-644-0911
Canada: 24-1200 Aerowood Drive
Mississauga, ON L4W 2S7 800.465.0327
www.Plymovent.com



Performance shown is for installation type D – Ducted inlet, Ducted outlet.
Performance ratings include the effects of inlet and outlet grilles in the airstream.
Speed (RPM) shown is nominal. Performance is based on actual speed of test.

Maximum input horsepower: 1.30 Hp

FAN SPECIFICATIONS

Type	Centrifugal Direct-Drive
Construction	AMCA Type B
Inlet Size Diameter	6.3" (160mm)
Outlet Size Diameter	6.3" (160mm)
Impeller Diameter	11.9" (300mm)
Impeller/Housing	Aluminum/Steel
Fan and Motor Wt	48 lbs (22 kg)

MOTOR SPECIFICATIONS

Motor HP	Frequency	Frame	RPM
1.0	60 Hz	56C	3450
Model	Phase	Volts	FL Amps
2100-1-AM	3	208-230/460	3.0-2.9/1.45
2100-2-AM	3	575	1.2
2101-AM	1	115/230	12.8/6.4

Sound Power Levels

Static Pressure (in wg)	Airflow CFM	Octave Band Number & Center Frequency Number							
		1 63	2 125	3 250	4 500	5 1K	6 2K	7 4K	8 8K
0	1115	97	98	91	93	88	88	83	80
2.5	890	90	95	91	93	86	84	79	75
5	660	95	96	89	90	84	81	75	71
7.62	447	88	94	89	89	83	79	72	70

The sound power level ratings shown are in decibels, referred to as 10^{-12} watts calculated per AMCA Standard 301. Values shown are for outlet L_{w0} sound power levels for installation Type D, ducted inlet, ducted outlet. Ratings include the effects of duct end correction for outlet ducts.

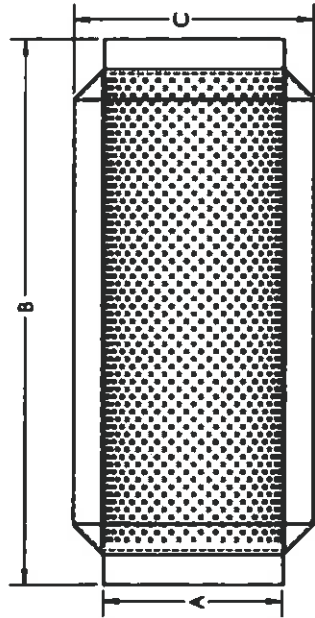


PlymoVent certifies that the 2100 Series Fans shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

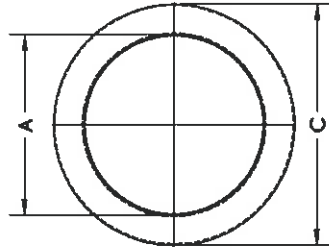
Catalog Edition: PLY-FAN0800.2100

Date of Issue: August 2000

SILENCER



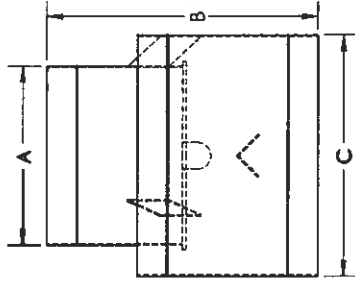
SIDE VIEW



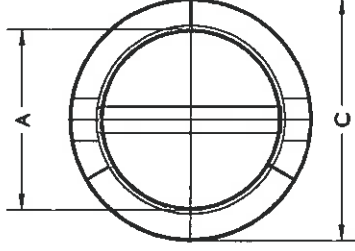
TOP VIEW

SILENCER DIMENSIONAL DATA			
ϕ 12"	ϕ 8"	ϕ 6"	
A	12"	8"	6"
B	36.25"	30.25"	30.25"
C	16"	12"	10"
SILENCER WEIGHT			
WEIGHT	32 LBS	18 LBS	16 LBS

RAIN CAP



SIDE VIEW



TOP VIEW

RAIN CAP DIMENSIONAL DATA			
ϕ 12"	ϕ 8"	ϕ 6"	
A	11.875"	7.875"	5.875"
B	18"	14"	12"
C	17"	11"	8"
RAIN CAP WEIGHT			
WEIGHT	15 LBS	8 LBS	5 LBS

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REVISIONS

Job #:
 Sheet #:
 Checked By:
 Date:
 Drawn By:

SILENCER
 RAIN CAP
 DIMENSIONAL
 DATA



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COMMERCIAL NEWSLETTER 2016-01-13

NEW GENERATION HIGH TEMPERATURE (HT) HOSES

Plymovent is proud to announce the newest generation of its high temperature (HT) lower, mid and upper hose sections. The new generation HT hoses are a proprietary construction and incorporate an internal spring steel helix and an external yellow wear strip to meet the Plymovent yellow and black trademark and brand identity, which makes our products so recognizable in the market. However, the wear strip is not only for recognizing the Plymovent brand, it also protects the hose from abrasions, impacts, wear and discoloration during normal handling and daily use of the product.

TESTING

After extensive rigorous internal and external testing, the temperature performance of the new HT hoses meet and or exceed any comparable hose currently in the market place. Third party temperature testing was completed by Gaynes Laboratories and the results are impressive when compared to competitive products in the market.

Testing involved increasing the transported air temperature by 100° F (38° C) increments at 3 minute intervals. The total duration of the Gaynes test was 39 minutes for the mid hose and 40 minutes for the lower hose. Our mid and lower hoses have a temperature rating of 900° F (482° C) continuous and 1,050° F (566° C) intermittent. Overall the newest generation of hoses offered by Plymovent are built with the best materials and practices available to the market today. As a result of this commitment to quality, we are certain this product will protect our end users for years to come.

LOWER, MID, AND UPPER HOSE

The new HT lower hose section was released and available for purchase as of July 20, 2015 (doc reference: CNL_2015-07-20_2ft_Lower_Hose). The lower hose section is to be used between Plymovent's Pneumatic or Magnetic Grabber Nozzles and Safety Disconnect Handle (SDCH).

The new HT mid hose section is to be used between Plymovent's SDCH and Metal Saddle. Plymovent's HT mid hose will be offered as a replacement or upgrade part for ST hose systems with the Metal Saddle or for systems with the Rubber Saddle, by purchasing a Metal Saddle separately.

The HT mid hose is available in 4 in (102 mm) or 5 in (127 mm) diameters and a length of 10 ft (3.1 m), which will accommodate systems with a maximum height of 17 ft (5.2 m) above finished floor (AFF) for STRA and VSRX Systems and 16 ft (4.9 m) AFF for SBTA Systems. The new HT mid hose can be ordered immediately using the new article numbers listed below. The projected shipment of the first batch of new HT mid hose is February 15, 2016.

In early 2016, you will receive a new announcement from Plymovent with the release of the new HT upper hose section including article #s, pricing and specifications. The new HT upper hose section is to be used between Plymovent's Metal Saddle and Crab or Riser Bracket. Plymovent will be releasing the new upper hose packs, that include the new HT upper hose section, for all systems. This will replace the current one piece HT upper hose packages for SBTA, STRA and VSRX Systems.

SUPPORTING DOCUMENTATION

Illustration of lower, mid, and upper hose sections with SBTA, STRA and VSRX systems can be seen on pages 3 & 4.

Enclosed with this New Generation High Temperature (HT) Hoses Commercial Newsletter you will find the Gaynes Test Report.

Shortly you will be receiving separate correspondence with all updated Plymovent Fire Equipment System specifications in CSI format.



COMMERCIAL NEWSLETTER 07-20-2015

NEW GENERATION LOWER HOSES

HIGH TEMPERATURE (HT) 2 FOOT LOWER HOSE SECTION

Plymovent is proud to announce the newest generation of the High Temperature (HT) 2-foot lower hose section.

The new generation HT lower hose has had the rigid stainless steel liner removed and now incorporates an internal spring steel helix. It also incorporates an external yellow wear strip to meet the Plymovent yellow and black trademark and brand identity, giving our products a professional, clean, very recognizable appearance and competitive advantage in the marketplace. However, the wear strip is not only for recognizing the Plymovent brand, it also protects the hose from abrasions, impacts, wear and discoloration during normal handling and daily use of the product.

After rigorous internal testing including temperature testing, the results have been very impressive. We performed a Gaynes style test where the hose was exposed to 550°F (280°C) and then ramped up every 3 minutes until we attained 900°F (482°C) at 9 minutes, and then continued for an additional 3 minutes, for a total test of 12 minutes. Based on these test results, the temperature performance of the new Plymovent HT lower hose meets and or exceeds any comparable hose currently in the market place. Further third party temperature testing is being conducted to confirm the continuous and intermittent temperature rating. This test will be released to the dealer network as soon as it is completed.

In addition to the new HT lower hose, Plymovent has also redesigned the standard temperature (ST) lower hose. As of April 1, 2015 all ST 2 foot lower hoses shipped, feature an improved higher bond material, which offers better strength, rigidity and most of all longevity.

Overall the newest generation of hoses offered by Plymovent are built with the best materials and practices available to the market today. As a result of this commitment to quality, we are certain this product will protect our end users for years to come.

Plymovent's new HT lower hose is immediately available for purchase. In addition, all Plymovent high temperature Magnetic and Pneumatic Grabber® assembly packages will be immediately upgraded with new HT 2 foot lower hose; and current HT 2 foot lower hose with stainless liner will be discontinued.

When ordering the upper and lower hose packs, keep in mind you can mix and match, by ordering the standard temperature upper hose pack and the new HT lower hose pack.

All affected articles and pricing can be seen below. What you will also find new are ST and HT hose-only packages with varying quantities of 1, 6, 12, or 24 pending hose diameter and type with different price points. Example: 2' x 4" dia. HT hose can be purchased in a 1, 12 or 24 pack; while the 2' x 5" dia. HT hose can be purchased in a 1 or 6 pack.





GAYNES LABS, INCORPORATED

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Member of "American Council of Independent Laboratories"

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Website: www.gaynestesting.com

October 20, 2015

Plymovent Corp.
5 Corporate Drive
Cranbury, NJ 08512

Attention: Mr. Bryan Reeves

Regarding: Elevated Temperature Testing of Exhaust Gas Hoses
Our Job No. 15560
Your P. O. No. MN100815

Dear Mr. Reeves:

Please find below, the results of the tests that were conducted on the submitted products identified as follows:

One section, approximately 120" L., 4" I. D., of yellow flexible hose identified as: Plymovent HT Upper/Mid Hose. The sample appeared to be unused and was received in good condition.

One section, approx. 24" L., 4" I. D., of yellow flexible hose identified as: Plymovent HT Lower Hose. The sample appeared to be unused and was received in good condition.

TEST PROCEDURES:

The tests were conducted based upon the procedures developed in previous test programs on similar products and your verbal instructions. The samples to be tested were conditioned at approximately 73° F. for a minimum of 24 hours prior to testing. The tests were conducted at approximately 72° F.

GAYNES LABS INCORPORATED

TEST PROCEDURES: (Continued)

Straight Section Tests

A duct system was fabricated that would attach to a 175,000 BTU, fan-forced, kerosene fired, torpedo type heater. The 10" diameter port was attached to the heater and opposite end was reduced to fit the 4" inside diameter of the test hoses.

Temperature sensing devices (thermocouples connected to a digital thermometer and data logger) were inserted into the path of the air flow at various points along the length of the hose. The first sensor was located at the point of hose attachment to the duct assembly. The remaining sensors were located at 36" intervals along the length of the hose (24" for Lower Hose). The sample was straight throughout the test and was supported level to the metal duct along its entire length.

The test was begun by regulating the heater output air to a predetermined temperature and holding that temperature for three minutes. The air temperature was regulated by moving the heater closer or further from the duct entry port and by adjusting the amount of ambient air through the intake of the heater. The temperature was increased in 100° F increments and held for 3 minutes minimum at each increment. The hose under test was inspected throughout the test for brittleness, cracking, burning, or other visual damage. One section of each type of hose was tested. See Photos No. 1 through 4 for overview of the test setup.

GAYNES LABS INCORPORATED

TEST RESULTS:

Complete temperature data is listed on the attached plots. The test results are as follows:

Straight Section Tests

Upper/Mid Hose

The temperature was increased by 100° F increments (3 min. each) from 550° F to 1150° F. Slight smoking was noted when the temperature reached 720° F, which lasted approximately 5 minutes and then stopped. Smoking was noted again at the temperature of 850° F and continued until completion of the test. The total duration of the test was 39 minutes. No cracking, brittleness, discoloration or other damage was noted to the hose during or after completion the test.

Lower Hose

The temperature was increased by 100° F increments (3 min. each) from 550° F to 1150° F. Slight smoking was noted when the temperature reached 750° F. Smoking became heavier at the temperature of 850° F and continued until completion of the test, becoming lighter after 950° F. The total duration of the test was 40 minutes. At the very end of the test, there was a momentary inlet temperature spike to 1221° F. No cracking, brittleness, discoloration or other damage was noted to the hose during or after completion the test.

Upon completion of testing, the test samples were returned to Plymovent Corp. for final inspection and evaluation.

Please contact me if you have any questions regarding this test program.

Very truly yours


Yury Beyderman

GAYNES LABS INCORPORATED



Photo 1 – Attachment of the Hose to the Duct Assembly



Photo No. 2 – View of the Heater

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Photo 3 –Test Setup for Upper/Mid Hose



Photo No. 4 - Test Setup for Lower Hose

GAYNES LABS INCORPORATED

GENERAL STATEMENT COVERING THIS REPORT:

This report is submitted for the exclusive use of Plymovent Corp. Its significance is subject to the representative nature of the samples submitted and the tests and examinations made. No quotations from this report or use of the Gaynes Labs Incorporated name is permitted except as expressly authorized by Gaynes Labs Incorporated in writing.

Gaynes Labs Incorporated assumes no responsibility for the result of the observance or non-observance by Plymovent Corp. of the product standard contained in this report or upon the relations between Plymovent Corp. and any party or parties arising out of the sale or use of the product or otherwise.

Plymovent Corp. shall indemnify and hold harmless Gaynes Labs Incorporated its employees and agents from any and all claims, demands, actions, and costs that may arise out of:

- (a) Any dangerous defect or content in the item being tested, whether apparent or not, which dangerous defect or content was not disclosed in writing to Gaynes Labs Incorporated by the Plymovent Corp. at the time the item was submitted for testing;
- (b) Differences between those items actually tested and items previously or subsequently produced which are purported to be identical to the item tested;
- (c) Any use of the tested item, whether by Plymovent Corp. or a third party, following its return to Plymovent Corp. from Gaynes Labs Incorporated.

Gaynes Labs, Inc.


Yury Beyderman

PLYMOVENT®

VEX / Fire Product News

Cranbury, NJ 2008-June 6

Ref #: PNR-VF-0608-008

Product Release

Introduction date: June 6, 2008



Dear PlymoVent Partner,

PlymoVent's Product Management is pleased to announce a product release to the VEX/Fire Hose Saddle.

This newly designed Hose Saddle is constructed utilizing steel tube with a 1200° F black paint finish. A fully welded mounting tab is included to ensure an easy and friendly method of hanging the hose. Also, two rolled beads have been added to either end of the hose saddle ensuring the hose clamps holding the hose to either end do not slide over time.

This saddle will be a selectable feature when ordering your standard PlymoVent STR and SBT systems. Also, available is an upgrade kit, including hose clamps, airline push fittings and protective sleeving, please contact PlymoVent for additional information.

Product availability – June 9, 2008

Product	Article Number
Steel Saddle 4"	805507

Shawn Smith
Engineered Solutions Manager, NA
PlymoVent Corp., NA

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SWEDEN
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Fax: +46 40 303140

PlymoVent GmbH
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PlymoVent Inc.
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CANADA
Tel +1 (905) 564 4748
Fax +1 (905) 564 4609

PLYMOVENT®

TECHNICAL DESCRIPTION

BSAB no: T0.7
Ser.no: OS-3 II
Date: Oct-11
Replace: Jan-11

BLOWER OPERATING SYSTEM: OS-3 II

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Area of use:

OS-3 is an energy saving control unit, which together with pressure sensor and temperature sensor makes a fully automatic system for the control of Plymvent's vehicle exhaust fans.

Delivery:

The control unit, OS-3, is delivered complete with functions for manual and automatic start/stop of the exhaust fan.

NOTE! The control unit, OS-3, is delivered without cable for field wiring. Cables for field wiring must apply to UL and NEC.

General information:

OS-3 controller is designed to be used for control of exhaust fans in vehicle exhaust systems, with or without particle filtration system. The controller can be set for both manual and automatic control of the fan. Depending on the system, different sensors for start/stop function can be used. Mainly two types of sensors will be used; pressure sensor to detect pressure difference in systems and temperature sensors to detect temperature level in the system. The OS-3 control box also includes an alarm device, which can be used for status control of the airflow in the exhaust system. A built in "after running time" function will secure that toxic gases in the duct system will be exhausted out of the ducting before the fan stops. The after running time can easily be adjusted between 7 sec. to 6 minutes.

Method of operation:

When the control unit is set into "automatic" mode, the exhaust fan is started by a signal from an externally mounted pressure or/and temperature sensor. Normally the system is activated by the pressure sensor and kept running by the temperature sensor.

Pressure sensor:

The pressure sensor reacts on increasing pressure (positive pressure) which occurs in the system when a vehicle is starting up. The pressure sensor is adjustable to fit all engine sizes.

Temperature sensor:

The temperature sensor will detect the increasing temperature which occurs in the system when a vehicle is running. The temperature sensor is adjustable to fit all engine sizes.

Automatic mode:

When the engine is turned on, the pressure sensor reacts and forwards a signal to the control unit. The control unit is then starting the exhaust fan. The fan stops after the pre-adjusted after run time is out.

Manual mode:

When the control unit is set in manual mode the exhaust fan is running continuously.

Stop mode:

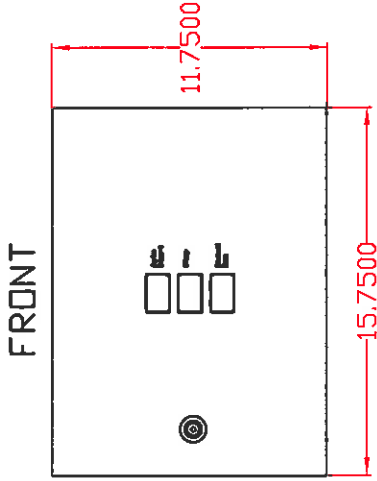
When pressing the stop button, the fan will stop immediately and after a short period of time, 2-3 seconds, the controller will move into automatic mode. This built in function will prevent the risk of having exhaust gas leakage in the system due to operator error.

Alarm mode:

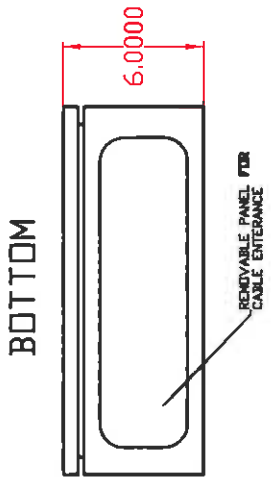
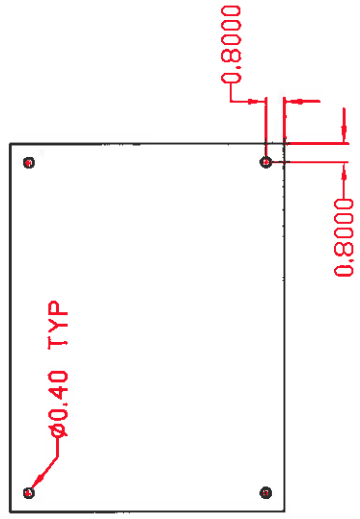
The alarm device will detect high pressure loss over the filter unit; when the "Fan on LED Light" flashes the pressure over the filter is too high. Filter needs to be replaced.

OS-3 Control Box

SCOPE OF PRODUCTS AVAILABLE			
HORSE POWER	VOLTAGE	PHASE	AMPERAGE
1	115 V	1 PH	12.8 A
1	208-230 V	1 PH	6.4 A
1	208 V	3 PH	3.2 A
1	460 V	3 PH	1.5 A
1.5	115 V	1 PH	17 A
1.5	208-230 V	1 PH	8.8 A
1.5	208 V	3 PH	4.3 A
1.5	460 V	3 PH	2 A
3	115 V	1 PH	N/A
3	208-230 V	1 PH	14.6 A
3	208 V	3 PH	8 A
3	460 V	3 PH	4 A
5	208-230 V	1 PH	22 A
5	208 V	3 PH	13 A
5	460 V	3 PH	6 A
7.5	208-230 V	1 PH	32 A
7.5	208 V	3 PH	19 A
7.5	460 V	3 PH	9 A
10	208-230 V	1 PH	40 A
10	208 V	3 PH	26 A
10	460 V	3 PH	12 A
15	208 V	3 PH	37.5 A
15	208-230 V	1 PH	36 A



MOUNTING DETAIL



Notes:

1. UL CUL (cULus) 508A listed
2. Enclosure Material: Carbon Steel
3. Enclosure Color: RAL-9002 (Grey-White)
4. Enclosure Rating: NEMA 1
5. OS-3 Control Box can be set for both manual and automatic control of fan.
6. Wireless Receiver Input Contact: 24V
7. Filter Status Indicator Light on Front Panel
8. Fan Run-Time Counter Adjustable from 7 sec up to 7 min
9. Automatic mode will start the central fan via pressure or temperature sensor.

Job name	DWG BY: JP	Revision 3	Rev. date 3/29/11
Engineer	PLYMOVENT NORTH AMERICA 116 MELRICH ROAD CRANFORD NJ, TEL: (609)395-5500 FAX: (609)355-0810		
Customer	WWW.PLYMOVENT.COM		



HASTINGS
air energy control, inc.
creating a cleaner workplace

Lexington Fire department Project
Emergency vehicle exhaust removal system

SCOPE:

To whom it may concern:

We would like to offer an option to city of Lexington to piggy back off our offerings to install an upgrade to station # 1, 3, 4, 5, 17. This upgrade would be control panel, upper hose drop, new fan and duct work all installed.

#1- 4 drops

#3 - 2 drops

#4 - 1 drop

#5 - 2 drops

17 - 1 drop

Total adder to install the equipment above would be – 79,500.00.

Included in package:

1. Warranty- 5 year extended.
2. Service checkup bi annual
3. Upgraded to latest technology in all stations.

WIRELESS IR SYSTEM SEQUENCE OF OPERATION

The wireless system includes the following components:

- (1) Wireless Receiver that gets tied into the OS-3 control panel
- Wireless transmitters (one per vehicle connection/ drop)
- Standard pressure sensors (one per vehicle connection/drop)

The wireless system works just like the wired system as such it works off the pressure sensor for system activation:

- Each vehicle has a pressure sensor tied into a wireless transmitter
- The transmitter is either mounted on the internal crab assembly on the STRA system or mounted on the riser bracket on the SBTA system
- The pressure sensor wire taps are tied into the transmitter.
- Anytime the vehicle is started or reattached when backing into the station, the pressure sensor is pulled in (contacts closes) by the exhaust pressure being emitted by the vehicle.
- The pressure sensor then closes and a signal is generated by the wireless transmitter that is sent to the receiver mounted by the OS-3 control panel that activates the exhaust fan

That is the run down on the wireless & it is that simple.

The advantage for the wireless:

- More responsive system activation
- Eliminates electrical shorts in the wires
- Each transmitter is numbered & the receiver can inform the service tech on a faulty pressure sensor/ trouble code



WIRELESS CONTROL UNIT

Exhaust Gas Filtration

Specially engineered filtration system filters the exhaust fume before returning it to the outside atmosphere.



HASTINGS

air energy control, inc.

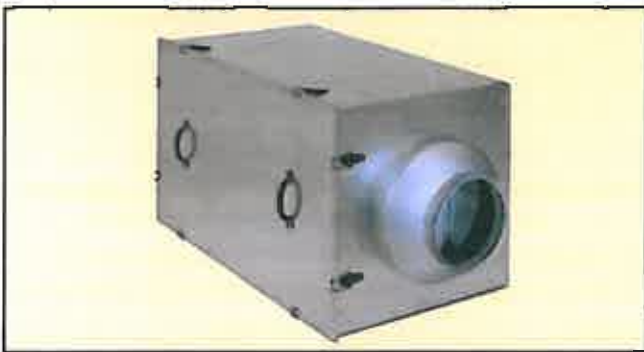
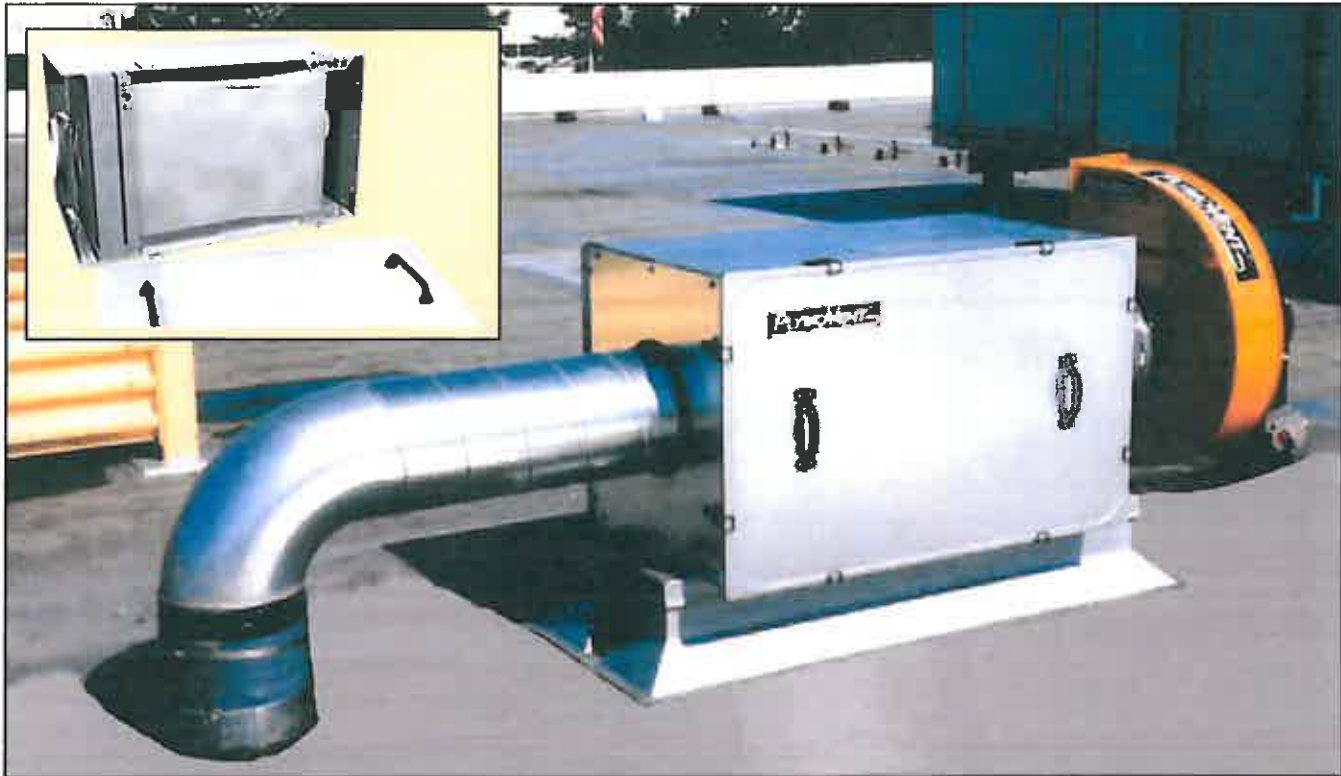
creating a cleaner workplace

Uni-filter Emissions Control

PLYMOVENT
INTELLIGENT PROCESS VENTILATION™

Meet Environmental Clean Air Standards

The uni-filter is the answer to protecting the environment from vehicle exhaust emissions that pollute the surrounding neighbourhood. With a uni-filter you protect your neighbourhood from the same hazardous pollutants as you protect your employees and work place.

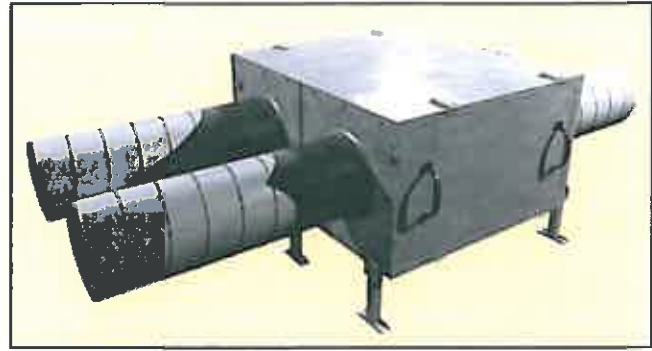
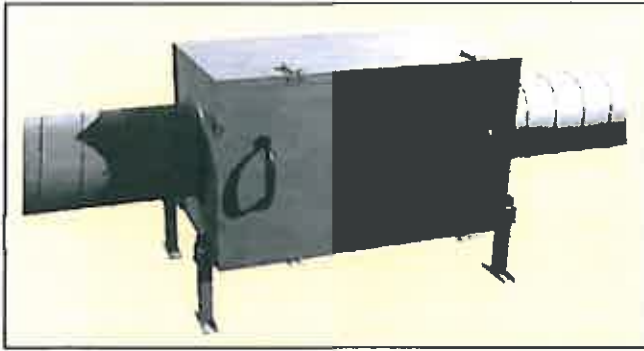


Many countries have adopted clean air standards in an effort to reduce emissions that contribute to the greenhouse effect.

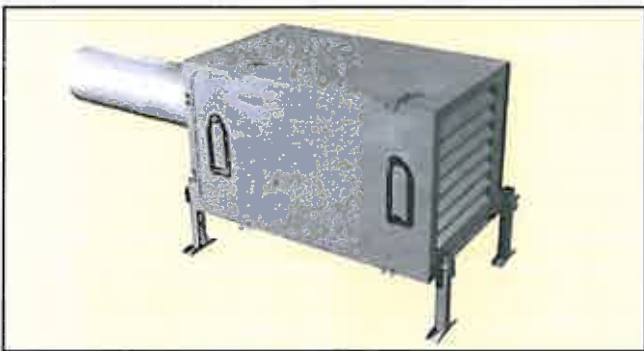
The uni-filter can be installed in indoor and outdoor locations and mounted to the ceiling, wall or on the roof, whatever your requirements demand. Manufactured of all weather, corrosion resistant galvanized steel, that will provide you with years of trouble free service.

Filter elements are easily accessed through the removable filter door. The uni-filter incorporates an exclusive sure lock filter seal system which guarantees that filters are sealed and in the right position all the time. This new sealing system eliminates the possibility for contaminants bypassing the filter elements. Filter elements are available in efficiencies from 97% through 99.97% and remove emissions as small as 0.3 microns in size.

Visit us on internet at: www.plymovent.com



The negative pressure design uni-filters are equipped with 400 mm/16" diameter inlet and outlet that can be reduced for smaller duct work diameters and lower air volumes. The uni-filter can be placed before the fan and anywhere after the last point of extraction or hose drop.



The positive pressure design uni-filters are equipped with a 400 mm/16" inlet and a flat louver outlet grille. The inlet can be reduced for smaller duct diameters or air volumes and the outlet grille can be rotated in four directions of discharge.

TECHNICAL DATA

Uni Filter Emissions Control System

incl. pre-filter, bag filter, pressure switch and leg mounting kit.

Prod. no.	Description	Max airvolume
UFS-1-NPD	Complete filter, 400 mm/16" duct connection in and out	5100 m ³ /h / 3000 CFM
UFS-2-NPD	Complete filter, 400 mm/16" duct connection in and out	10200 m ³ /h / 6000 CFM
UFS-1-PPD	Complete filter, 400 mm/16" duct connection, louver outlet	5100 m ³ /h / 3000 CFM
UFS-2-PPD	Complete filter, 400 mm/16" duct connection, louver outlet	10200 m ³ /h / 6000 CFM

Accessory

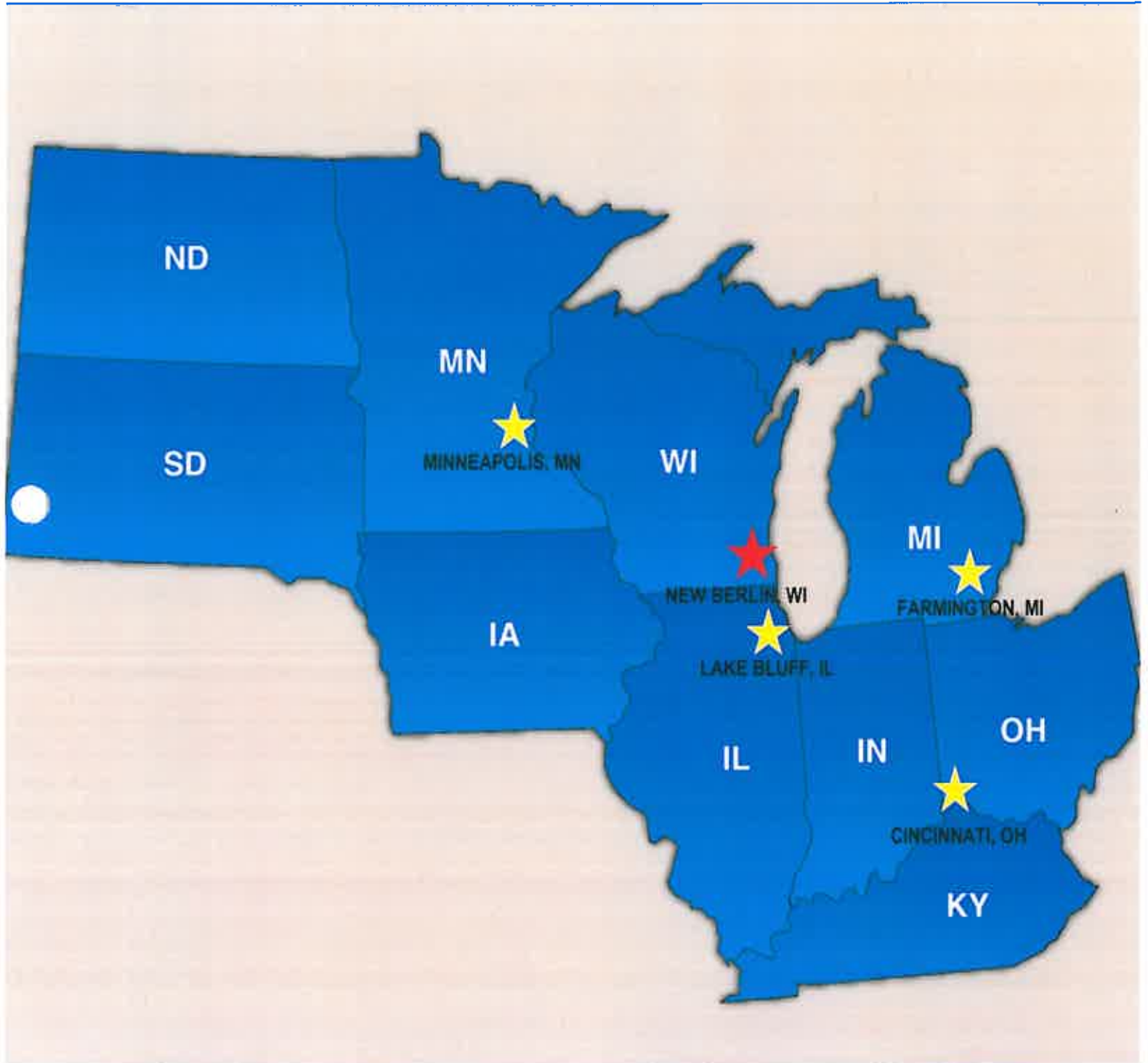
Prod. no.	Description
HFU-99.97	HEPA-filter for Uni-filter systems

PlymoVent reserves the right to make design and technical changes.



HASTINGS
air energy control, inc.

Wisconsin Office
Corporate Headquarters
5555 S. Westridge Drive
New Berlin, WI 53151
P: 262-364-0500
F: 262-364-0550



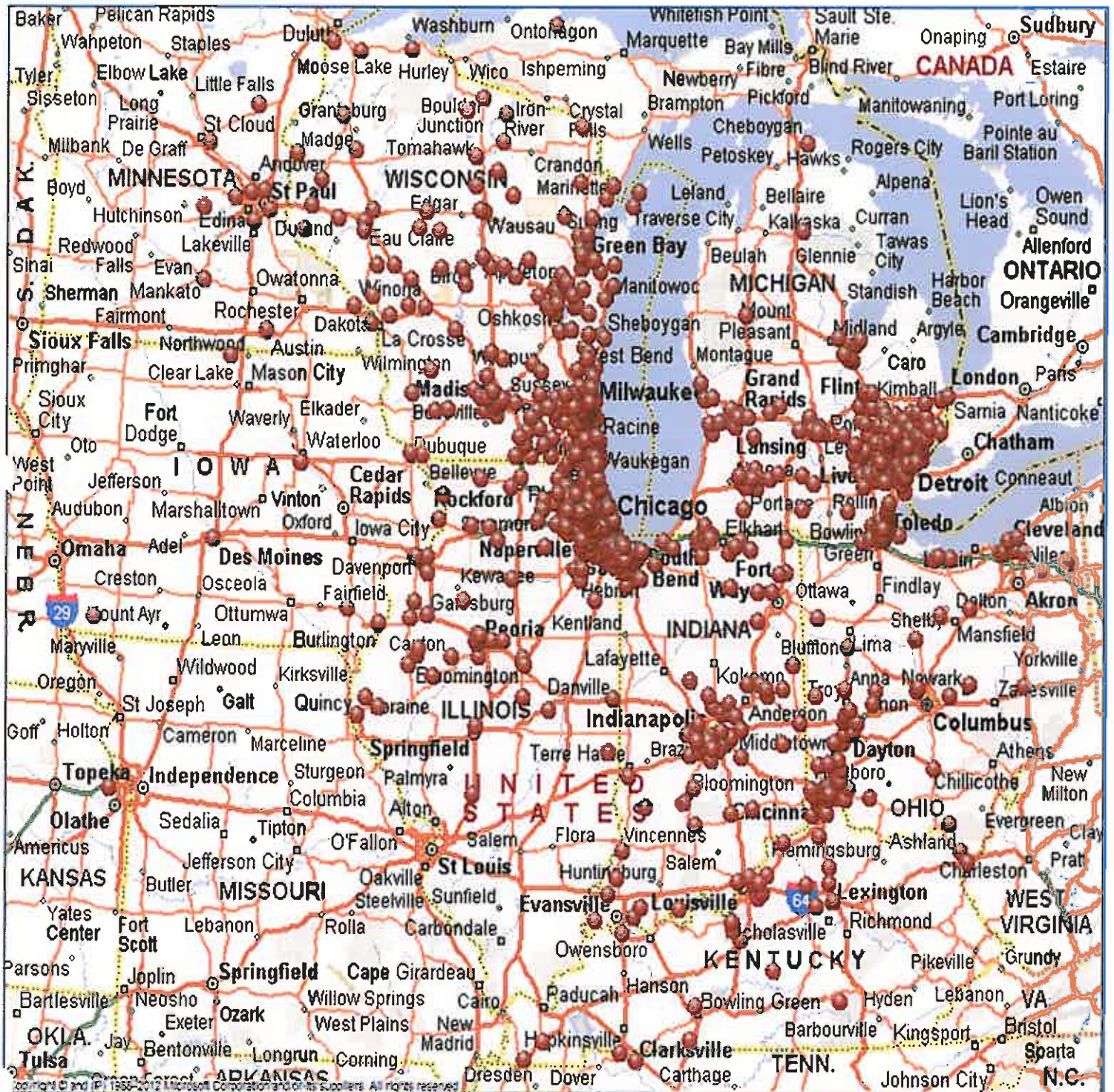
Minnesota Office
3809 Chandler Drive
Minneapolis, MN 55418
P: 651.405.8500
F: 800-260-9199

Illinois Office
28835 Herkey Drive
Lake Bluff, IL 60044
P: 847.362.9660
F: 847.362.9661

Michigan Office
32728 8 Mile Road
Farmington, MI 48336
P: 248-888-9911
F: 248-478-9911

Ohio Office
PO Box 214
West Chester, OH 45071
P: 317-417-3629
F: 800-260-9199

HASTINGS AIR ENERGY CONTROL FIRE CUSTOMERS





HASTINGS
air energy control, inc.

5555 South Westridge Drive
New Berlin, WI 53151-7900

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F: 847.362.9661

Michigan Office

P: 248.888.9911

F: 248.478.9911

Minnesota Office

P: 651.405.8500

F: 800-260-9199

Ohio Office

P: 317-417-3629

F: 800-260-9199

Sales and Service Centers

Full inventory of parts, service, and an in-house technician at each location.

(24 Hour Emergency Service Available)

Contact: **Tom Karth @ 800-236-8450 x1535**
tomkarth@hastingsairenergy.com

Illinois

28835 Herky Drive Unit 115
Lake Bluff, Illinois 60044

P: 1-847-362-9660

F: 1-847-362-9661

P: 1-800-236-8450

F: 1-800-260-9199

Michigan

32728 W. 8 Mile Road Suite B
Farmington, Michigan 48336

P: 1-248-888-9911

F: 1-248-478-9911

P: 1-800-236-8450

F: 1-800-260-9199

Minnesota

3809 Chandler Drive NE
Minneapolis, MN 55421

P: 1-800-236-8450

F: 1-800-260-9199

Wisconsin/Iowa North Dakota/South Dakota

5555 S. Westridge Drive
New Berlin, Wisconsin 53151

P: 1-262-364-0500

F: 1-262-364-0550

P: 1-800-236-8450

F: 1-800-260-9199

Ohio/Indiana/Kentucky

PO Box 214
West Chester, OH 45071

P: 1-800-236-8450

F: 1-800-260-9199

Service & Maintenance

Certified Local Dealer

- Within Close Geographical Proximity
- Offer 24/7 Service
- 10 Certified Technicians
- Offer Service and Maintenance Contracts



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P: 651.405.8500
F: 800-260-9199

24/7 SERVICE DEPARTMENT

ONLINE REPAIR SAMPLE WORKORDER

COMPANY: **SWAMPGRASS FIRE DEPARTMENT**

STATION: **#56**

ADDRESS **1234 WEST NORTHWEST BLVD**

CITY: **SWAMPGRASS**

STATE: **INDIANA**

ZIP **56555**

CALL BACK NUMBER **323-999-4565**

FAX NUMBER **323-989-6767**

FILTER REPLACEMENT DATE **6-9-2014**

ORIGINATOR OF EMAIL **MR FIREFIGHTER**

ORIGINATOR EMAIL ADDRESS **FFIRE@SWAMPGRASSFIRE.COM**

TIME AVAILABLE **RED SHIFT**

SYSPTOM: WHAT IS THE PROBLEM **FAN IS RUNNING AND NOT TURNING OFF**

RESPONSE FOR HASTINGS SERVICE MANAGER (USUALLY WITHIN 20 MINUTES- THIS E-MAIL GOES DIRECTLY TO HIS CELL PHONE)

OK, GOT IT, OUR SERVICE TECH JOE GREENSLEEVE WILL BE OUT TOMORROW

6-17-2014 BEFORE LUNCH.

Hastings Preventative Maintenance Program

Plymovent Diesel Exhaust Removal System Annual Inspection



PLYMOVENT®
Exhaust Removal Systems



HASTINGS
air energy control, inc.
creating a cleaner world

Hastings Preventative Maintenance Program

Your air quality is important to you; your investment in your clean-air system is, too. Hastings Preventative Maintenance Program will ensure that your equipment is properly and routinely maintained so it can operate at peak performance. Hastings' program includes inspection of the complete system, cleaning, adjustments, filter replacement (if necessary), and repairs of components on a periodic schedule.

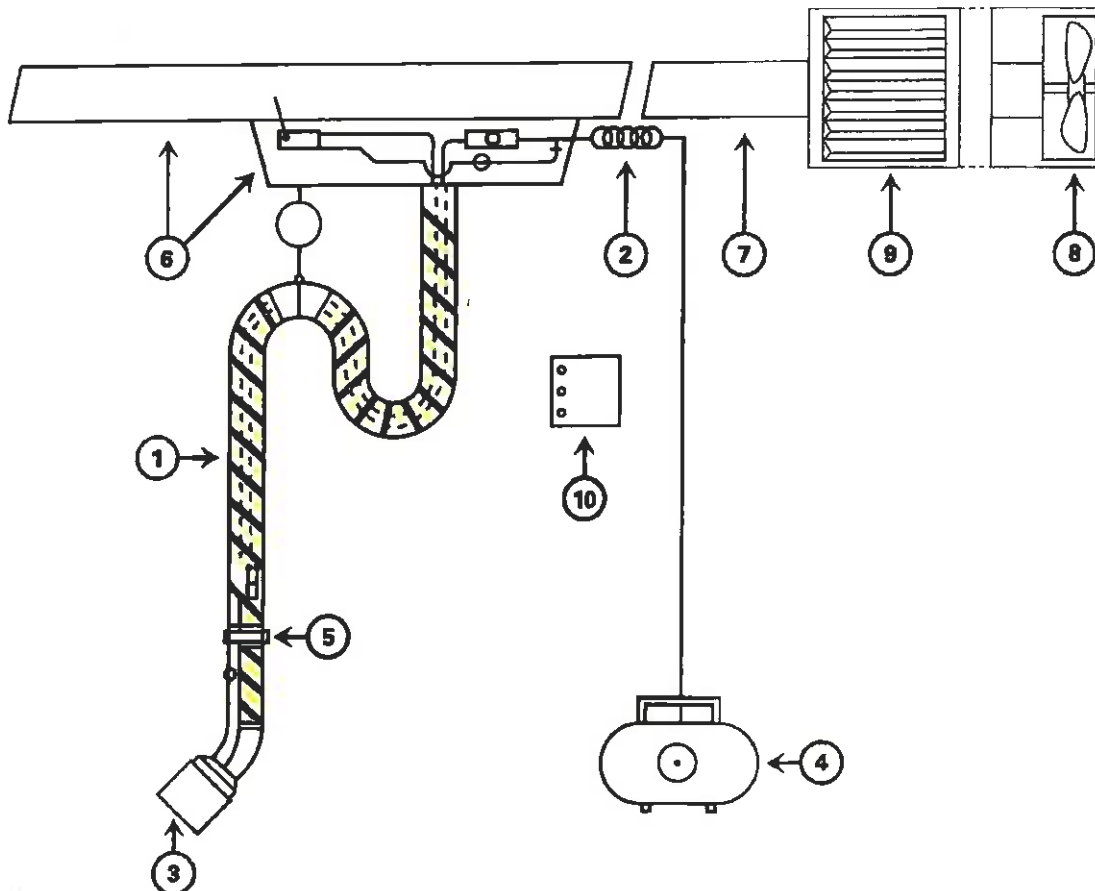
Program participants receive out-of-warranty parts discounts of as much as 10%.

Platinum Maintenance Program customers receive top-priority service and scheduling.

Preventative Maintenance Agreements also cover emergency service calls for mechanical problems at no extra charge.*

Ten-Point Service and Inspections - Performed by Certified Technicians

- | | | | |
|--|--|---|---|
| <p>① Hose Inspection</p> <ul style="list-style-type: none"> • Hose Clearance From Ground • Hose Alignment • Hose Condition | <p>③ Nozzle Inspection</p> <ul style="list-style-type: none"> • Attachment On Tailpipe • Air Line Attachment to MFD Valve • Nozzle Condition | <p>⑤ Safety Disconnect Inspection</p> <ul style="list-style-type: none"> • Rubber Seal • Aluminum Fittings • Coupler • Debris Screen | <p>⑧ Blower Inspection</p> <ul style="list-style-type: none"> • Check impeller/impeller rotation • Disconnect Switch At Fan • Check fan drain hole |
| <p>② Compressed Air Supply Inspection</p> <ul style="list-style-type: none"> • Regulator Condition & Adjustment • Air Line and Fittings • Uncoupling Valve • Manual Fill Valve • Dryer | <p>④ Air Compressor Inspection</p> <ul style="list-style-type: none"> • Drain Tank • Check Oil • Belt • Regulator • Check Pressure | <p>⑥ Track & Hardware Inspection</p> <ul style="list-style-type: none"> • Supports And Hardware • Track Cleaning • End Stops • Trolley Condition & Adjustments • Balancer Tension & Adjustments | <p>⑨ UniFilter Inspection</p> <ul style="list-style-type: none"> • Inspect Inlet/Outlet • Inspect - Prefilter Section • Inspect - Replace Main Filter |
| | | <p>⑦ Ductwork System Inspection</p> <ul style="list-style-type: none"> • Joints And Supports • Stack and Discharge Cap | <p>⑩ Control Panel Inspection</p> <ul style="list-style-type: none"> • Timer • Sensor Condition & Adjustments • Control Relays • Fuses |





VEHICLE EXHAUST REFERENCES/REFERRALS

ERLANGER FIRE DEPARTMENT KENTUCKY

**Captain Dave McQuerry
859-727-7942**

DELHI TWP FIRE DEPARTMENT OHIO

**Chief Douglas Campbell
513-922-2011**

CINCINNATI FIRE DEPARTMENT OHIO

**Dist. Chief Dave Greeves
513-352-3455**

WEST CHESTER FIRE DEPARTMENT OHIO

**Chief Rick Printz
513-777-1133**

AUBURN FIRE DEPARTMENT INDIANA

**Doug Cox
280-925-8555**

POINT PLEASANT FIRE DEPARTMENT KENTUCKY

**Capt. Jason Matthews
Capt. Chuck Rice
859-283-2798**

CINCINNATI NORTHERN KENTUCKY INTERNATIONAL AIRPORT

**Chief Steve Listerman
859-767-3111**

SOUTH OLDHAM FIRE DEPARTMENT KENTUCKY

**Chief Edward Turner
502-241-8992**

DRY RIDGE FIRE DEPARTMENT KENTUCKY

**FF Greg Hearn
859-824-9158**

FLORENCE FIRE DEPARTMENT KENTUCKY

**Chief Kelly Joe Aylor
859-647-5660**

LOGAN FIRE DEPARTMENT WEST VIRGINIA

**Chief Scott Beckett FF Chris Hatfield
304-752-2777**

KENOVA FIRE DEPARTMENT WEST VIRGINIA

**Chief Tim Blas AC Joe Acord
304-453-4153**

CHARLESTON FIRE DEPARTMENT WEST VIRGINIA

**Chief Scott Shatter
304-348-8137**



Feature: Standing Tailpipe Attachment

PlymoVent's "Click and Seal" Magnet Grabber Nozzle allows the operator to attach the exhaust extraction hose to the vehicle's tailpipe in a standing position.

Benefit:

- Protects operator's breathing zone from coming in contact with harmful exhaust emissions.
- Easy 1 point attachment to the exhaust tailpipe. There is no need for secondary attachments on vehicle.
- Standing attachment eliminates the need to bend over which may put operator in an awkward or unsafe position when attaching the nozzle.



Feature: Compact Hose Design

PlymoVent's user friendly compact hose design allows the operator easy handling of the exhaust hose system.

Benefit:

- Compact 4" or 5" diameter hose is easy to grab and is similar in diameter and feel to the standard hoses used in the fire service.
- High temp heat resistant construction allows for continuous engine operation at idle engine speed or pump checks for periods up to 15 minutes in duration.
- High visibility yellow and black color assures clear visibility under all light conditions. This is important during night time calls when night blindness can occur.



Feature: Magnetic Grabber Nozzle

PlymoVent's state of the art "Click and Seal" Magnet Grabber Nozzle technology **captures the total emission; both gases and particulates.**

Benefit:

- Simple to attach
- Cools hose without check valves.
- No pins or pucks to align



Feature: Nozzle Debris Screen

PlymoVent incorporates a safety debris screen which guards against foreign objects being drawn in to the exhaust system which would interfere with the systems performance.

Benefit:

- Protects the exhaust fan impeller from damage due to foreign debris.
- Eliminates clothing, leaves, or other foreign objects from plugging the exhaust hose which would affect the systems performance
- Allows visible access and inspection for removal of foreign objects.



Feature: Tailpipe Adapter and Retrofit

We can easily retrofit any make or model of Fire or EMS vehicle to interface with PlymoVent.

Benefit:

- The tailpipe adapter eliminates the possibility of operator placing the grabber nozzle too far on to the tail pipe.
- Assures virtual 100% seal to eliminate the possibility of exhaust emissions escaping.
- Most new apparatus all ready come equipped to accept the PlymoVent system.



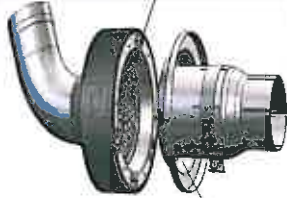
Feature: Adapter

Benefit:

- Intake Air
- Click and Seal

Magnetic Grabber® : Patent Pending Design

Integrated & strategically positioned Magnets for easy connection and release



Ambient air intake protects system and surroundings from hi-temp exhaust gasses

Conical design for soft release



Rubber cover to avoid damage to vehicle and surroundings

Feature: Controlled grabber release

The grabber exhaust nozzle is designed to 1" to 6" in connect to any vehicles exhaust tailpipe from diameter.

Benefits:

- Regardless of the vehicle you place in the apparatus bay, the grabber will be able to conform to the vehicle's tailpipe size. This allows you to not have to limit the placement of your vehicles in a specific apparatus bay.
- Controlled release of the grabber nozzle guarantees that the exhaust system will separate from your vehicle in a controlled and safe manner.
- Controlled deflation assures that toxic exhaust emissions are captured even during high acceleration exits or vehicle pump checks. Only when you reach the threshold of your door will the PlymoVent system release smoothly and safely from your vehicles tailpipe.



Feature: Sliding Balancer track system

PlymoVent's sliding balancer track was first developed over two decades ago and is still the standard for durability and performance.

Benefits:

- Compact design allows easy access to vehicles storage compartments even with the exhaust system connected to the vehicle.
- Balancer travels with the vehicle to the exit door which maintains the control of the exhaust hose and nozzle when releasing from vehicle at controlled exit speeds.
- The vertical hose design of the sliding balancer track allows the grabber nozzle to be attached to exhaust tailpipes on vehicles that have tight clearance to the rear wheels or vehicles undercarriage.
- The sliding balancer track is made from aircraft grade aluminum alloy for long life and durability. Our first system installed In 1987 has proven the durability of our product.



Feature: Safety Disconnect Coupling

PlymoVent's safety disconnect coupling eliminates any possibility of damage to the system in the event that the grabber nozzle may be attached to an unmodified vehicle such as move up or reserve apparatus from a neighboring department.

Benefits:

- The safety disconnect coupling allows for the lower hose which consists of the grabber nozzle, the reducing elbow and rigid lower 2ft hose section to separate from the upper hose of the PlymoVent exhaust system thus protecting your investment.
- The adjustable safety disconnect allows for easy field adjustment which can be set for a release force of 80 – 180 lb.
- Simple reattachment which requires no tools or replacement parts for the operator to put the system back into service and it only takes minutes.
- In the event of malfunction, the lower hose and grabber will drop off your vehicle tailpipe at the exit door or station apron safely.



Feature: Clean & Neat Appearance

The design of all PlymoVent systems is to compliment your station.

Benefits:

- The overhead design of our system provides essential clearance required by all Fire Depts. when personnel are responding to an emergency call.
- Our system has been tested by third party organizations such as Under Writers Laboratories (UL) and International Standards Organization (ISO 9001) and many others for safety and reliability.



Features: Balancer Trolley

PlymoVent's internal balancer trolley provides smooth transport of the exhaust extraction hose, the full length of your apparatus bay.

Benefits:

- Durable all steel housing incorporates sealed ball bearing transport wheels for continuous operation.
- Balancer stop plate, with redundant safety stops allows smooth release.
- Minimum moving parts require no maintenance.
- Redundant steel cable design.



Feature: Boxloc Track & End Stop

PlymoVent's boxloc track was designed to meet the critical forces which are developed by fire apparatus when exiting your station.

Benefits:

- Durable aircraft aluminum alloy prevents distortion of track when used in high volume stations.
- Boxloc construction is made specifically to assure that the balancer system glides smoothly.
- Cushioned end stops eliminate damage to the exhaust balancer and trolley system.
- Safety bolts are provided for redundancy at all critical stress points.



Feature: Modular Track Design

PlymoVent's modular track system is designed to accommodate apparatus bays up to lengths 50 ft. stored in a back-in configuration.

Benefits:

- Modular track design allows for future expansion of system to provide for longer apparatus bays with little additional costs.
- Track splices are designed to align balancer trolley and provide a smooth transition between track splice points.



Feature: Mounting Supports

PlymoVent's mounting supports are manufactured by PlymoVent to meet or exceed Underwriter Laboratories Standards and National Building Codes.

Benefits:

- Mounting support assures a stable hanging support for the system which has been tested under seismic load to out perform threaded rod or angle steel mounting systems.
- Mounting supports give you a clean professional look to your final installation.



Feature: Adjustable Support Clamp

PlymoVent's adjustable support clamp guarantees that your system can be easily secured to your building's super structure and easily relocated if required.

Benefits:

- Reduced installation time
- Savings on labor cost during initial installation or relocation.
- Preset angled adjustment allows for easy installations on sloped ceilings.
- No hazardous in-station welding required.



Feature: Airtight Duct System

PlymoVent's Airtight Duct System is far superior in performance and appearance to all others. It assures that toxic products of combustion will not escape your duct system even when the exhaust fan is not energized.

Benefits:

- Eliminates the possibility of lethal fumes leaking into the station which would affect station personnel.



Feature: Welded Fittings

PlymoVent's airtight duct system incorporates only all welded ductwork fittings.

Benefits:

- Welded fittings are not subject to heat stress which is commonly the case with snap together adjustable elbows and branches.
- Dual mechanical seals are installed at all slip joints to guarantee leak free operation.



Features: Safety Seal Duct Joints

PlymoVent's safety seal duct system integrates dual mechanical rubber seals which eliminate the possibility of exhaust gas leakage between duct fittings and spiral ductwork.

Benefits:

- Internal safety seal eliminates leakage and the use of silicon or unsightly duct tape or mastics.
- Duct system meets SMACNA Class II Standard and is manufactured under the Union Label for quality.



Feature: Spark Resistant Blower

PlymoVent's spark resistant blower is specifically designed to transport the explosive products of combustion generated by your vehicles.

Benefits:

- Almag construction eliminates the chance of sparking and meets AMCA Class A construction.
- Stainless steel base and hardware resist corrosion even in salt air environments.
- Sealed motor bearings require little or no service for the life of the motor.



Optional: Diesel Exhaust Emissions Uni-Filter

The Uni-Filter protects the surrounding environment from the hazard of the exhaust emissions which are discharged.

Benefits:

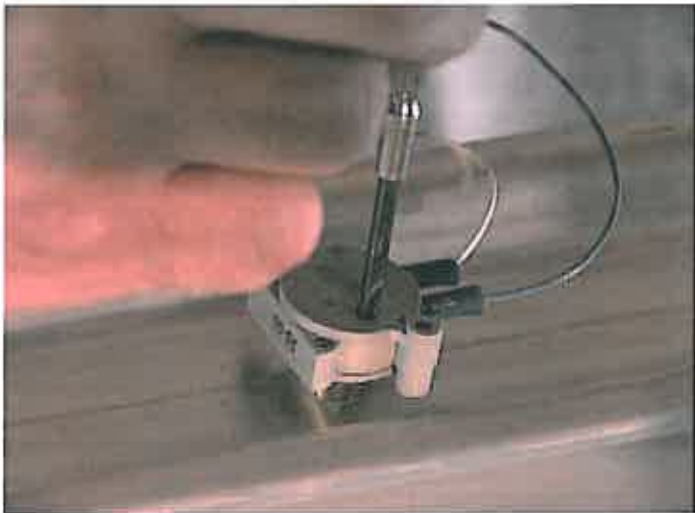
- Capturing exhaust emissions eliminates the possibility of entrainment of exhaust emissions back into your building through heating and air conditioning vents.
- Protects surrounding neighbors from exhaust emission fallout.
- Meets EPA's Clean Air Act for reducing environmental emissions

**Feature: UL Listed OS-3 Controller**

PlymoVent is the only recognized UL –Certified manufacturer of vehicle exhaust removal systems which build their own electrical control systems.

Benefits:

- Meets National Electrical Code (NEC) for Federal, State and Municipal codes.
- Manufactured under UL standard 508.
- Waterproof soft touch control panel face protects against water infiltration.
- Allen Bradley motor starters and overloads.
- Multi-tap electrical transformer allows power input from 110 – 600 VAC.

**Feature: Auto –Start Engine Sensor Pressure and Temperature Switch**

PlymoVent incorporates an auto-start engine sensor which senses the output of your vehicle's exhaust pressure and automatically starts your system.

Benefits:

- System remains running for as long as your vehicle is in use and attached to the system.
- No manual intervention is required by department members to energize the system.

**Feature: Manufacturer Start-Up**

HASTINGS utilizes a team of certified National installers who are supervised by PlymoVent training officers who will provide final start-up of your system.

Benefits:

- Two-tier start-up team assures quality of installation and performance of system. Your final installation is reviewed by a **PlymoVent** training officer who will start up and sign off on your project
- On-site training provides firefighters with a comprehensive understanding of the system's operation.



HASTINGS
air energy control, inc
creating a cleaner workplace

- ☒ Established 1932
- ☒ Over 40 Employees
- ☒ 4 Service Centers
Milwaukee, Detroit, Chicago,
Minneapolis
- ☒ Service Technicians On Staff
- ☒ Preventive Maintenance Programs
Available



Feature: PlymoVent Online

PlymoVent has developed for use only in the Fire Service a 24-7 internet online service which provides Dept personnel with access to Email Communications, Frequently Asked Questions, Recipes and Fire Service Chat Room.

Benefits:

- Allows firefighters to communicate with PlymoVent and provides a rapid response system to answer questions related to the system and its performance.



Features: Tune-Up Service

HASTINGS provides a turnkey installation which is covered by a five-year parts and labor warranty. After the five years, all that may be required to keep your system in peak performance is a low cost, once a year tune-up service.

Benefits:

- Allows your Department members to be updated and trained on upgrades available to your Dept at no cost.
- Allows your Dept to budget for unforeseen expenses that may occur as well as provide preventive maintenance to your system based on activity of vehicles.



MAILING ADDRESS · 505 COMMONWEALTH AVENUE · ERLANGER, KY 41018

STATION ADDRESS · 515 GRAVES AVENUE · ERLANGER, KY 41018
859-727-2488 · FAX 859-727-7956 · WWW.CI.ERLANGER.KY.US

Hastings Air Energy Control
5555 S Westridge Drive
New Berlin, WI 53151

To whom it may concern:

This letter is to notify your company of our satisfaction with the Plymovent vehicle exhaust extraction system installed in our fire stations. We received a grant through the Assistance to Firefighters Grant (AFG) program for the purpose of installing this system in our station. Throughout the process, your sales team and engineering team were available and extremely helpful with the selection and operation of the Plymovent system. They went out of their way to attend city council meetings and to answer questions about the system. The customer service from your company was top notch.

Further, your team was able to retrofit a system we had previously installed in a satellite station to a newer, more efficient and much better Plymovent system. We had several problems and issues with the competitor's system, all of which have been eliminated with the retrofit. Besides great customer service and prompt communications from your sales team, we have experienced excellent work quality from the installer as well. Your product is great and nearly sells itself, but combined with the other attributes mentioned, your company is a real winner.

I am available to speak with other fire departments who may be looking to install similar systems in their stations if requested. Feel free to use us as a reference.

Respectfully submitted,

Dave McQuerry
Operations Captain
Erlanger Fire/EMS
505 Commonwealth Avenue
Erlanger, KY 41018
dave.mcquerry@erlangersfd.com

PLYMOVENT®

clean air at work



CASE STUDY

MAGNETIC GRABBER ENSURES EFFECTIVE EXHAUST REMOVAL

The City of
MARSHFIELD

THE CHALLENGE

The Marshfield Fire & Rescue Department has been using a number of SBT-Pneumatic systems of Plymovent since 2004. The SBT-Pneumatic systems have been removing vehicle exhaust gasses from the emergency vehicles - such as fire trucks and ambulances - inside the service station.

The Magnetic Grabber® was installed to an existing SBT-Pneumatic system in order to avoid unnecessary additional costs. The Magnetic Grabber® functioned as a field test for Plymovent, until the final product was launched.

Air Cleaning Specialists of Massachusetts, an authorised distributor of Plymovent North America, installed the new equipment of Plymovent in 2009.

Marshfield Fire & Rescue Department; station #3.

At the Fire & Rescue Department of Marshfield the emergency vehicles are parked in tandem - 8 bays in total - all connected to a SBT-Pneumatic system of Plymovent. Since 2004, the station uses equipment of Plymovent to full satisfaction.



» It has improved the air quality which is the driving force. «

QUOTE BY Mr. K.C. Robinson, Fire Chief.

<http://ci.marshfield.wi.us/fd/>

TESTIMONIAL

"We are very happy with the Magnetic Grabber® application of Plymovent. The Grabber® is easy to operate/attach to a tailpipe and maintenance is limited. There are just a few parts that need maintenance".

"Using an exhaust removal system of Plymovent has improved the air quality. Indoor air quality is the driving force for both Labour and Management to obtain funds for this system and implementing the installation in two of our three stations".

THE SOLUTION

In order to provide clean air at Marshfield's workplace, Plymovent utilized the SBT system (sliding balancer track). The SBT system has been developed for vehicles that back-in to a service bay and leave by the same door. Marshfield was looking for an exhaust removal system that was able to connect at the door before backing-in and having it automatically disconnect when leaving the service station. Therefore, the SBT system was the right application for Marshfield.

The entire SBT system removes the poisonous petrol and diesel gas fumes directly from the emission source, the tailpipe.

The Magnetic Grabber® makes life easy. It automatically "clicks and seals" to the tailpipe if you hold it near. It has been designed in such a way that it withstands the intense demand from the emergency service market.

As the SBT-Magnetic system is easier in usage than the SBT-Pneumatic, Marshfield is very satisfied with the fact that they were appointed for the Magnetic Grabber® field test. They are still using the Magnetic Grabber® to full satisfaction.

Plymovent is an ISO 9001 certified company.



MAIN BENEFITS

- Magnetic Grabber® connects to any vehicle with the tailpipe connector.
- It automatically disconnects when vehicles exit the station.
- Easy to operate and maintain.
- Virtually 100% source capture.
- Ambient air intake for exhaust temperature reduction.
- Requires no air or electrical wiring.
- Complies with NFPA 1500 & 1901.
- Complies with the Buy American Act.



SYSTEM FACTS



Year of installation

- 2004
- 2009 Magnetic Grabber®

No. of bays

- 8 bays with 2 emergency vehicles each

Applications

- 8 SBT-Pneumatic rail systems
- 5" Magnetic Grabber®
- 5" Magnetic Grabber® tailpipe connector

US-01

PLYMOVENT®
clean air at work

Plymovent cares about the air you breathe. We offer products, systems and services which ensure clean air at work, anywhere in the world. We respect the environment and we deliver high-quality products. Our expertise gained over many years and our genuine commitment to customer requirements enable us to provide precisely the solutions you need.

PLYMOVENT

clean air at work



CASE STUDY

NY FIRE DEPT. ADDS VEHICLE EXHAUST REMOVAL SYSTEM FOR FIREFIGHTER & EMT HEALTH



THE CHALLENGE

Before installing a Plymovent vehicle exhaust removal system, the North Tonawanda Fire Department in New York had an exhaust extraction system from a different manufacturer. According to Chief John Lapham, the previous system had design flaws, and would not release, causing the product to be damaged and unusable. With this ineffective system in place, it was causing more damage than good to both the firefighters and the station. "You could see soot on the electronic equipment during station clean-up," says Chief Lapham. "It was a red flag, and we needed to do something about it."

This was an imperative action particularly since the World Health Organization recently published a press release stating that diesel engine exhaust is classified as carcinogenic to humans, with an increased risk for lung cancer.

The North Tonawanda Fire Department is a combination department for 101 years. With 38 career and 60 volunteer firefighters, The North Tonawanda Fire Dept. covers 10 square miles bordered by the Niagra River and Erie Canal.

- Population served: 32,000 with 10,000 homes
- Stations: 1 aerial, 3 pumpers, 1 light rescue, 1 command car, inflatable zodiac
- Specialty Teams: fire investigation, hazardous materials, technical rescue, dive rescue and swiftwater



» We can tell in the daily cleaning duties as there is no soot build up. It has made for a healthier work environment for all our personnel. «

QUOTE BY Chief John Lapham of North Tonawanda Fire Department
www.northtonawanda.org

TESTIMONIAL

"Our experience, the product, and the installer Air Cleaning Systems, Inc., have been nothing less than exemplary. Installation was quick and efficient. Service has always met our expectations and there is always someone available to resolve the very few issues that may have arose. Durability of the product, especially with the harsh weather of Western New York, has stood over both time and conditions."

THE SOLUTION

Advanced technology from Plymovent has proven its worth to the North Tonawanda Fire Department. All stations have since installed the code-compliant, Plymovent Magnetic Grabber® system to improve fire station air quality and reduce cancer-causing airborne toxins, creating a healthier work environment for all.

Stations now have a minimum of two hose drops to allow for reserve apparatus storage and the fire headquarters has been set up with four drops. Additionally, the mechanic's shop was fitted with the Magnetic Grabber® system for service on all fire equipment. The combination of track and rails in the stations reduces exposure to hazardous exhaust fumes. Plymovent at-source exhaust removal systems are installed with an ergonomic Safety Disconnect Handle, ensuring a safe disconnect from the system should it be necessary.

Also equipped in the stations are fully automatic, Plymovent manufactured, UL & AMCA certified fans and control boxes which operate the exhaust system in the most efficient way.

Full warranty and service is provided by Air Cleaning Systems, Inc., the local Plymovent dealer for the North Tonawanda Fire Department.



MAIN BENEFITS

- **Health** Minimizes exposure to the dangers of diesel exhaust.
- **Cleaner Work Environment** Greatly reduced soot deposits throughout firefighter gear and the stations.
- **Saves Money** Reducing investment in air handling equipment and total energy consumption.
- **Ease of Use** System connection from a full standing position and automatic controlled release.
- **Code Compliant** UL and AMCA certified products.
- **Safety** Built-in features consistent with other fire equipment.



Plymovent Corp. is ISO 9001:2008 Certified

SYSTEM FACTS

Plymovent products (total between 5 stations)

- 9 x Sliding Balancer Tracks with Magnetic Grabber®
- 2 x Straight Rails with Magnetic Grabber®
- 4 x TEV Fans
- 1 x FUA Fan
- 4 x OS3 Control Boxes
- 1 x SER Fire Maintenance Hose Reel

Year of installation

- 2010



PLYMOVENT®
clean air at work

www.plymovent.com

Plymovent cares about the air you breathe. We offer products, systems and services which ensure clean air at work, anywhere in the world. We respect the environment and we deliver high-quality products. Our expertise gained over many years and our genuine commitment to customer requirements enable us to provide precisely the solutions you need.

US-02



HASTINGS
air energy control, inc

PLYMOVENT[®]
Exhaust Removal Systems

REASONS FOR SELECTING THE *PlymoVent* DIESEL EXHAUST CAPTURE SYSTEM

When a City, State or Governmental agency embarks on an evaluation process to choose a product or service, there are many levels of the evaluation, and rarely do they begin and end with price.

1. **EXPERIENCE:** PlymoVent and Hastings Air Energy Control Inc. are the largest and most experienced companies in the Industry providing Emergency Vehicle Exhaust Capture Systems in Wisconsin, Illinois, Michigan, and Indiana. Our systems are third party tested and have been manufactured since 1988. The PlymoVent system is not a prototype or a new concept. All of the competitors combined do **NOT** equal 25% of the PlymoVent systems in operation nation wide. ***No other company offers this.***
2. **REFERENCES:** With over 1056 fire stations in Wisconsin, Illinois, Michigan, and Indiana currently using the PlymoVent Diesel Exhaust Capture System, no other company comes close to our experience and system satisfaction. ***No other company offers this.***
3. **MUTUAL AID:** When responding to major fires or participating in homeland security situations, it is important that your Diesel Exhaust Capture System be compatible with other departments or agencies that may be called up into your stations. This will also apply to your vehicles that may be parking in other agencies stations. Many fire stations in your area already have PlymoVent systems installed. This allows the compatibility between your Departments or other agencies. Standardization between departments would eliminate the risk of carcinogenic exhaust fumes putting your personnel at risk. ***No other company offers this.***
4. **LOCAL DISTRIBUTION:** Hastings Air Energy Control Inc. stocks over \$100,000 in both equipment and parts at our main facility in New Berlin, Wisconsin. We also employ five trained and certified service technicians who are experienced in installation and service tune-ups of the PlymoVent systems. This assures a uniform installation and consistent, timely, quality service. ***No other company offers this.***
5. **UL LISTED MANUFACTURER:** PlymoVent is the only manufacturer in the Industry that is a UL listed and certified manufacturer. Their facilities and products are inspected once every 30 days by a UL inspector that comes to the facility to review their procedures. Many cities require the purchase of a UL listed product over a generic one since the UL listing reduces the liability exposure to the Municipality and its associated agencies. Both risk management and building code officials recognize the importance of a UL listed product over other products that have not been third party tested. ***No other company offers this.***
6. **UL LISTED ELECTRONIC CONTROL PANEL:** PlymoVent is the only manufacturer in this industry that manufactures its own electrical control operating system in its own **UL LISTED AND CERTIFIED** facility in Edison, New Jersey. This means that quality control is completely in house and production lead times are shorter as the result of no outsourcing, which can result in incompatibility. ***No other company offers this.***

7. **ISO-9001 CERTIFIED MANUFACTURER:** PlymoVent is one of only two manufacturers in the industry to have the ISO-9001 certification. Most cities are rated under ISO standards. This certification is used to set insurance liability ratings for your city and its residents. Whether your Department has a Class I – Class VI rating, the purchase of a system that meets ISO-9001 quality standards helps your Department achieve a more favorable ISO rating. Why would any city want to compromise and do business with any manufacturer that does not hold to the same quality and safety standards that your city must uphold? Insist that any supplier provide their ISO-9001 certificate with their bid.

8. **CUSTOMER CALL SYSTEM:** PlymoVent and Hastings Air Energy Control, Inc offer, at no cost to the user, a web based or intranet-based customer call software system. This **electronic accountability system** allows that in the event of a service request, the station or agency can do the request on line using the “PlymoVent Online” customer call system, or via you own department intranet system. When we receive the request, we respond with the time of arrival of our service technician, and after the service is performed, we respond once again to let the agency know the work has been completed and what was done. With over 1056 fire stations in operation, we want to be responsive and accountable...and we are. *No other company offers this.*

9. **PIONEER CLUB:** PlymoVent is the only company in the industry to offer this “Pioneer Club Program for Future Upgrades”. This program entitles eligible departments to receive a charitable contribution consisting of PlymoVent equipment and parts in the event your system is out of date and worthy of upgrade. The equipment would be installed at an existing fire station, which at that time would be using an earlier generation of a PlymoVent system. The upgrade would be given free of charge and be treated as a charitable donation. *No other company offers this.*

10. **FIVE-YEAR WARRANTY:** PlymoVent offers a FULL five-year warranty on all systems provided by PlymoVent and installed by certified installation contractors. *No other company offers this.*

11. **Virtually 100% CAPTURE VERIFIED BY THIRD PARTY TESTING:** PlymoVent is the only company in the Industry that has third party testing verification and can say that its system captures virtually 100% of the vehicle exhaust emissions, both particulates and gases, at idle and high RPM. Other manufacturers do make these claims, but none of them can substantiate their performance through independent third party verification. This exposes your Department to unnecessary liability and will not allow you to comply with Federal, State and Local codes such as NFPA 1500-2000-A.9.1.6 which calls for “no less than 100% effective capture” or proposed standards by the American Association of Industrial Hygienist which are calling for an intended change to 0.02 mg/m³. *No other company offers this.*

PlymoVent and Hastings Air Energy Control, Inc are full service companies providing not only the product, but also a long list of additional benefits that enhance the overall value of the PlymoVent system. Features, advantages, and benefits are all ingredients in the evaluation of any product or service.

The PlymoVent Diesel Exhaust Capture System offers more of these features, advantages and benefits than any other company in the Industry. There is a reason why major Metro Departments such as the City of Milwaukee, City of Detroit and City of Chicago chose to invest millions of dollars to install the PlymoVent system over all the other competitors, and it was *not* because the PlymoVent system was the lowest price. In fact PlymoVent was not the lowest price, but chosen because of system reliability over a long period of evaluation, as well as all of the reasons listed above.



**“IT’S THE CONNECTION”
THAT MAKES THE DIFFERENCE!**



Attachment Procedure.

- "It's the connection that makes the difference"

MAGNAGRIP CONNECTION



PLYMOVENT CONNECTION



NEDERMAN CONNECTION



Connect to receiver magnet

Clip to tail pipe



MAGNAGRIP PRODUCT

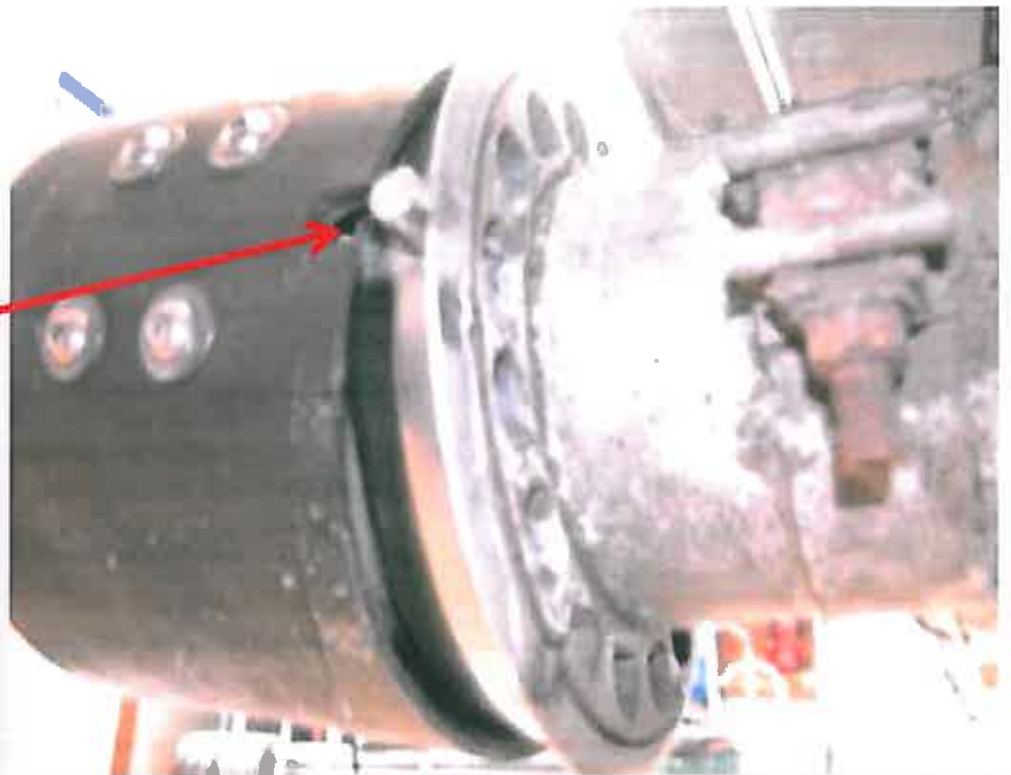
MAGNAGRIP NOZZLE



RUST



**BOOT NOT FITTING
THE EXHAUST
ADAPTER/ EXHAUST
LEAKAGE**



MAGNAGRIP NOZZLE



**DOES NOT MEET
NFPA 1901-
EXTENDS
OUTSIDE THE
BODY**

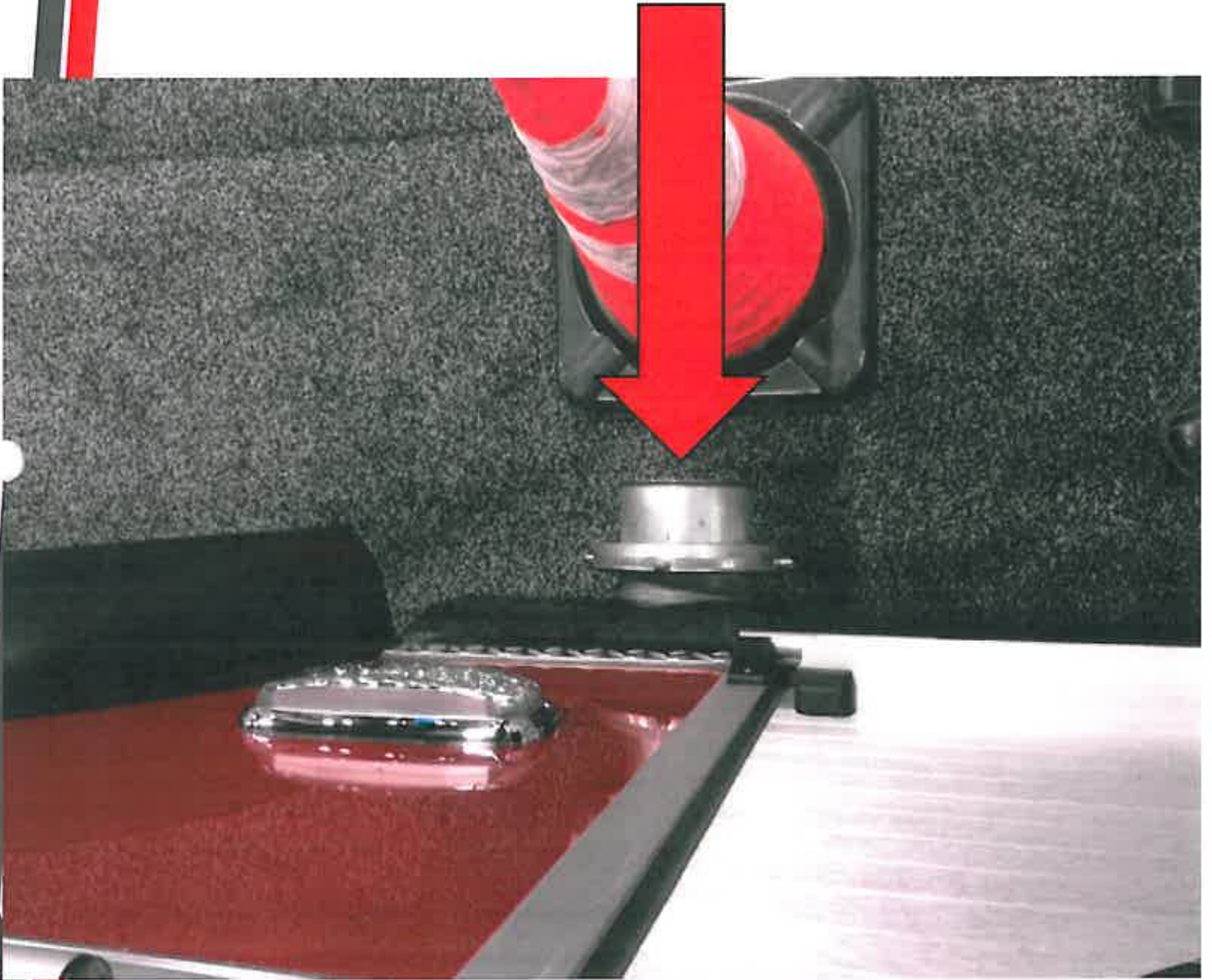
**NOZZLE WITH
CRACKS**



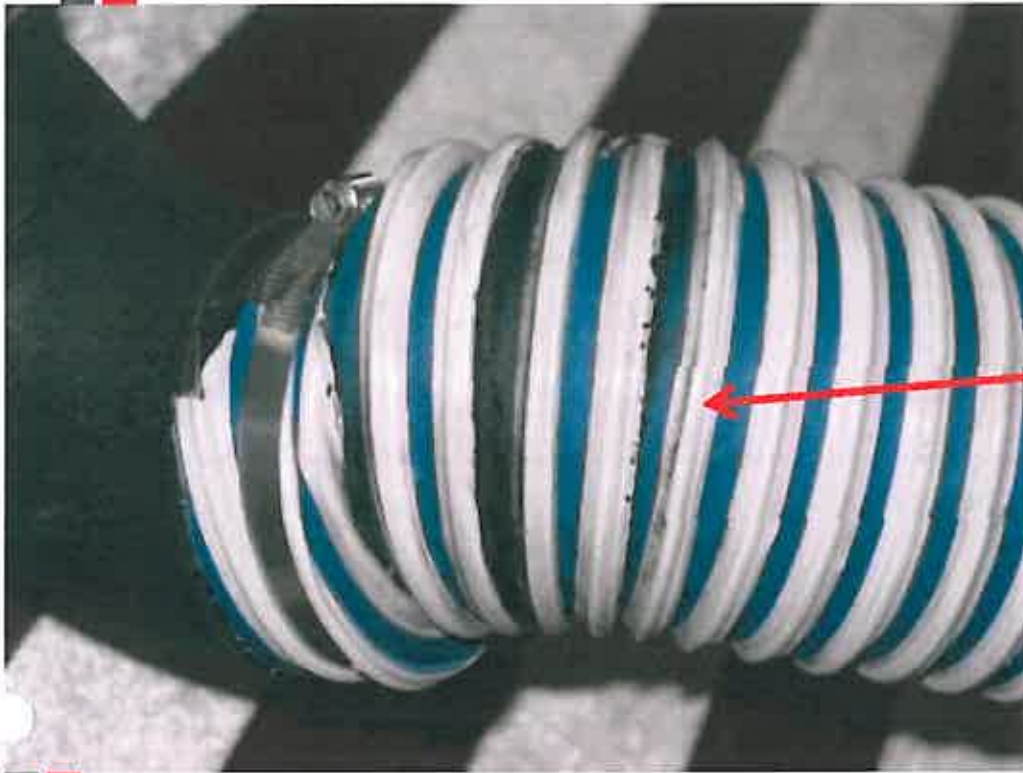
**- DOES NOT MEET NFPA 1901 -
ENGINE TAILPIPES MAY NOT EXTEND PAST
THE BODY OF THE VEHICLE**



Top View



MAGNEGRIP HOSE

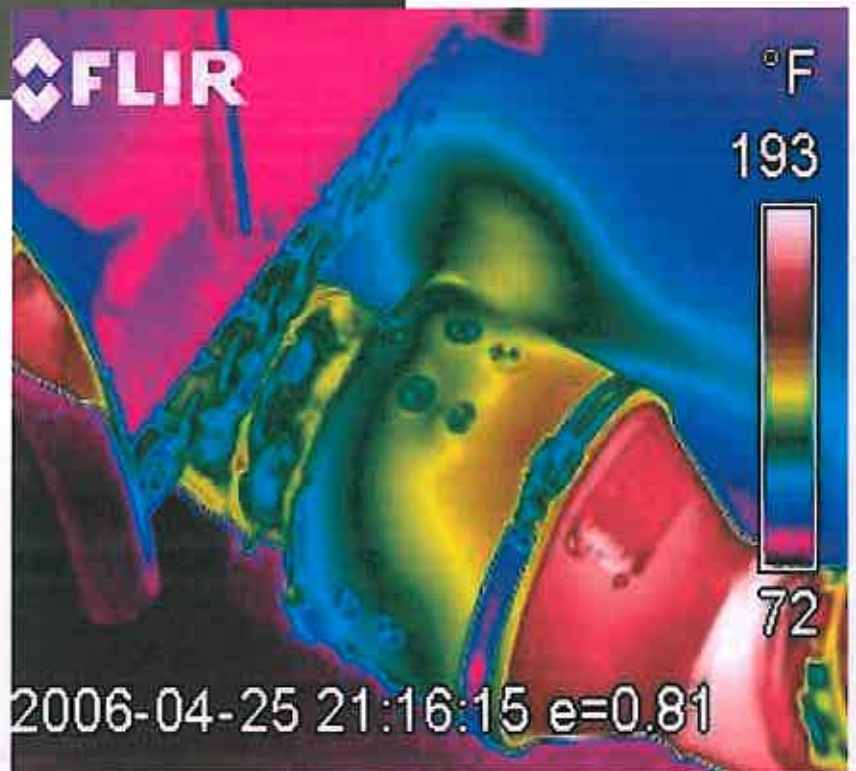


DETERIORATING
HOSE

DAMAGE TO
CABINETS FROM
SWINGING HOSE
& NOZZLE



FLIR Temperature Test



Nozzle leakage-temperature



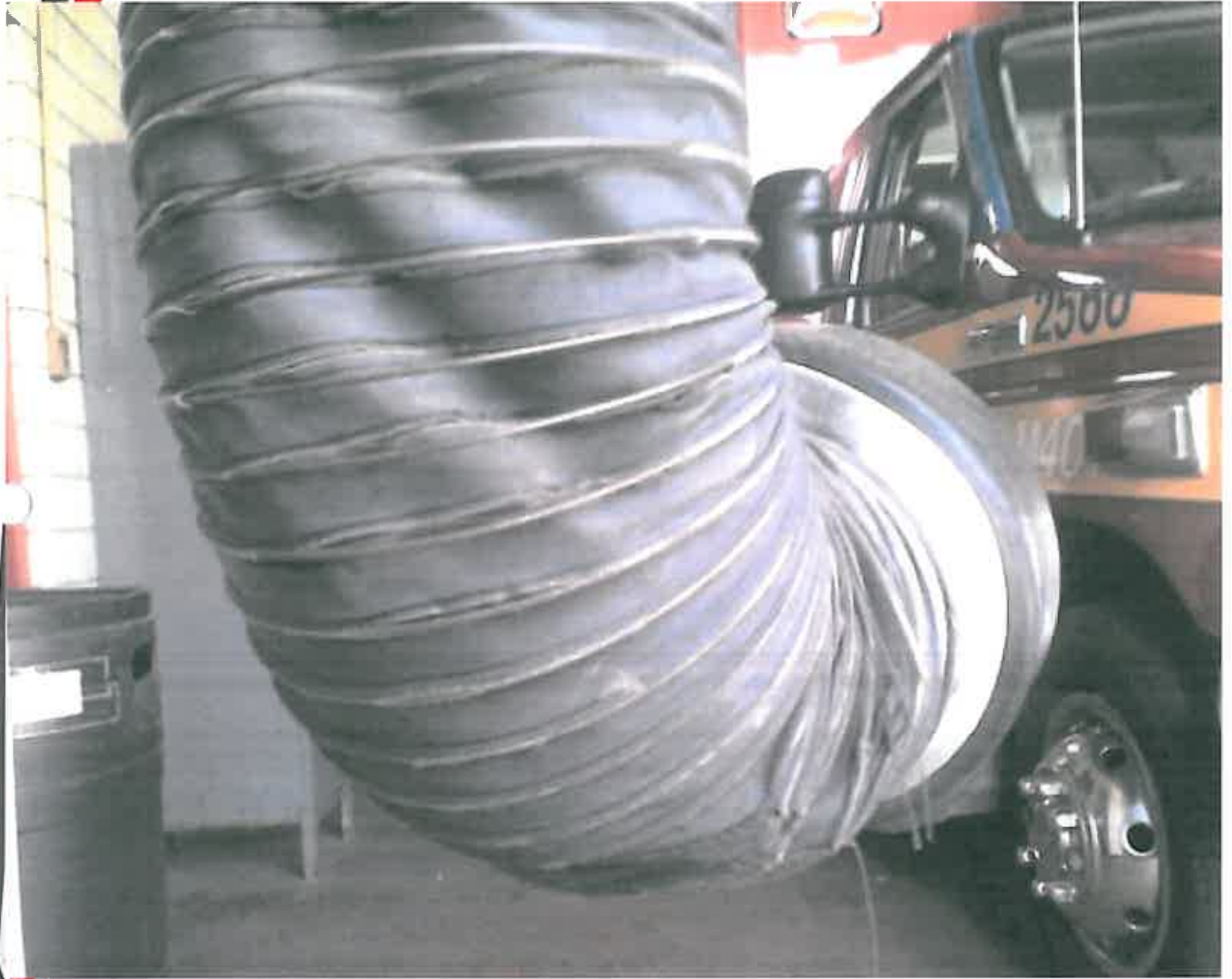
NEDERMAN PRODUCT

NOZZLE UNDER CARRIAGE



DETERIORATING HOSE









FLIR Temperature Test



Nozzle leakage- temperature



PLYMOVENT PRODUCT

Magnetic Grabber® : Features



- **Easy to Operate**
- **Click & Seal**
- **Balancer allowing for adjustable release**
- **100% Recyclable Materials**
- **Over 20 years of Market Experience**
- **Safety Disconnect**

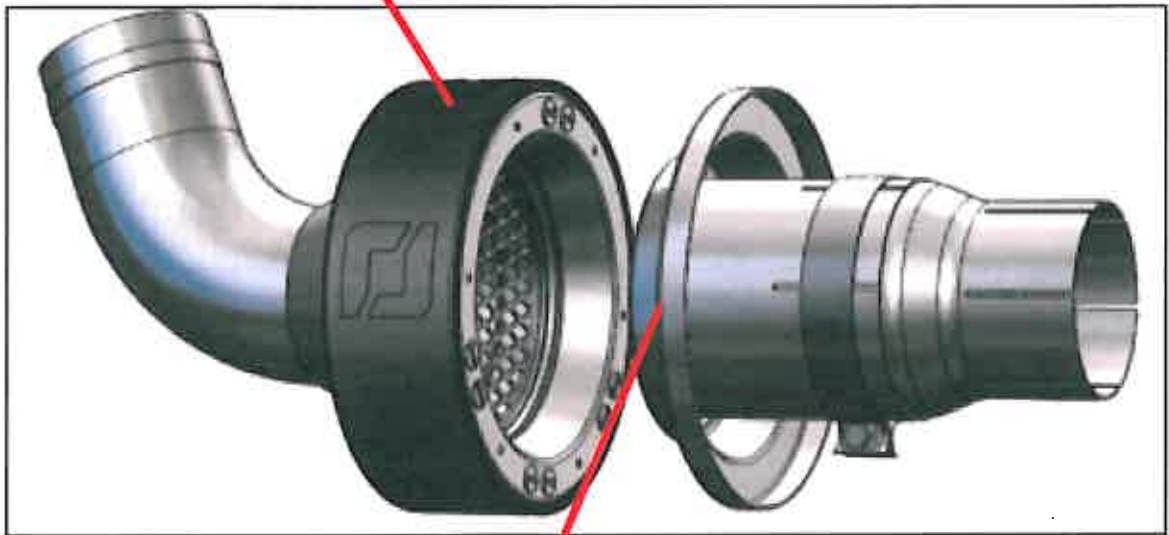
PLYMOVENT



Click n Seal

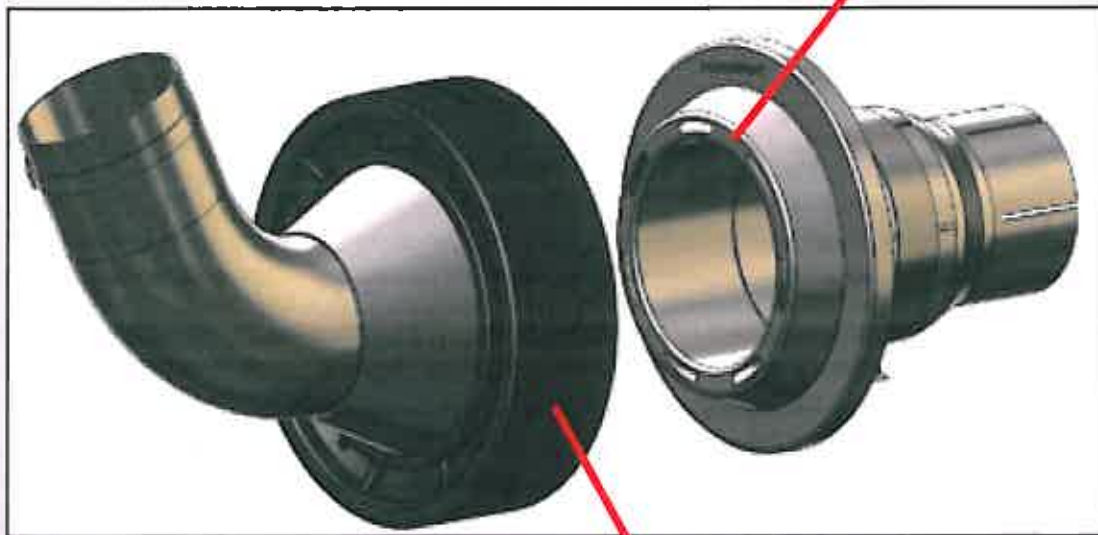
Magnetic Grabber®: Patent Pending Design

Integrated & strategically positioned
Magnets for easy connection and release



Optional Ambient air intake protects
system and surroundings from hi-temp
exhaust gasses/ backer plate to ensure
no leakage

Conical design for soft release



Rubber cover to avoid damage to
vehicle and surroundings

PLYMOVENT EXHAUST



PLYMOVENT CONNECTION



PLYMOVENT EXHAUST







“IT’S THE CONNECTION”

PLYMOVENT THE RIGHT CHOICE

IT’S CLEAR TO SEE HOW EASY PLYMOVENT HAS MADE IT!