



LEXINGTON

Lexington-Fayette Urban County Government

Lexington, Kentucky
Horse Capital of the World

Division of Central Purchasing

Date of Issue: April 16, 2018

INVITATION TO BID #59-2018 Rearloader

Bid Opening Date: April 30, 2018 **Bid Opening Time:** 2:00 PM
Address: 200 East Main Street, 3rd Floor, Room 338, Lexington, Kentucky 40507
Type of Bid: Price Contract

Pre Bid Meeting: N/A **Pre Bid Time:** N/A
Address: N/A

Sealed bids will be received in the office of the Division of Central Purchasing, 200 East Main Street, Lexington, Kentucky, until **2:00 PM**, prevailing local time on **04/30/2018**. Bids must be received by the above-mentioned date and time. Mailed bids should be sent to:

Division of Central Purchasing
200 East Main Street, Room 338
Lexington, KY 40507, (859) 258-3320

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.** All bids must be signed and have the company name and address, bid invitation number, and the name of the bid on the outside of the envelope.

Bids are to include all shipping costs to the point of delivery located at: 669 Byrd Thurman Drive, Lexington, KY

<p>Check One: <input type="checkbox"/> Bid Specifications Met <input checked="" type="checkbox"/> Exceptions to Bid Specifications. <i>Exceptions shall be itemized and attached to bid proposal submitted.</i></p>		<p>180-250 Days Proposed Delivery: <input type="checkbox"/> days after acceptance of bid.</p>
<p>Procurement Card Usage—The Lexington-Fayette Urban County Government may be using Procurement Cards to purchase goods and services and also to make payments. Will you accept Procurement Cards? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>		

Submitted by: World wide Equipment.
Firm Name

945 Nandino Blvd

Address
Lexington Ky 40511

City, State & Zip

Bid must be signed:
(original signature)

JDA G.M.
Signature of Authorized Company Representative – Title

Jim Dotson
Representative's Name (Typed or printed)

859-281-5152

Area Code - Phone – Extension Fax #
jim.dotson@thetruckpeople.com
E-Mail Address

14.0 Addendums

14.1 **Exceptions** to any parts of these specifications shall be listed on the attached "Exception Page" with reference to the applicable paragraph number from this document.

14.2 **Warranty** page must be completed in its entirety in order to have your bid evaluated.

14.3 **Other Information** page must be completed in its entirety in order to have your bid evaluated.

14.4 **Price:**

Price per completed unit as described herein: \$ 291,170.⁰⁰ each.

Price for 5 completed units as described herein: \$ 291,170.⁰⁰ each.

The Affidavit in this bid must be completed before your firm can be considered for award of this contract.

AFFIDAVIT

Comes the Affiant, Worldwide Export and after being first duly sworn under penalty of perjury as follows:

1. His/her name is Jim Dotson and he/she is the individual submitting the bid or is the authorized representative of Worldwide Export 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 "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. Worldwide Export

STATE OF Kentucky
COUNTY OF Fayette

The foregoing instrument was subscribed, sworn to and acknowledged before me by Jim Dotson on this the 30th day of April, 2015

My Commission expires: 4/26/21
Stephen Carlisle
NOTARY PUBLIC, STATE AT LARGE

Please refer to Section II. Bid Conditions, Item "U" prior to completing this form.

I. GREEN PROCUREMENT

A. ENERGY

The Lexington-Fayette Urban County Government is committed to protecting our environment and being fiscally responsible to our citizens.

The Lexington-Fayette Urban County Government mandates the use of Energy Star compliant products if they are available in the marketplace (go to www.Energystar.gov). If these products are available, but not submitted in your pricing, your bid will be rejected as non-compliant.

ENERGY STAR is a government program that offers businesses and consumers energy-efficient solutions, making it easy to save money while protecting the environment for future generations.

Key Benefits

These products use 25 to 50% less energy
Reduced energy costs without compromising quality or performance
Reduced air pollution because fewer fossil fuels are burned
Significant return on investment
Extended product life and decreased maintenance

B. GREEN SEAL CERTIFIED PRODUCTS

The Lexington-Fayette Urban County Government is also committed to using other environmentally friendly products that do not negatively impact our environment. Green Seal is a non-profit organization devoted to environmental standard setting, product certification, and public education.

Go to www.Greenseal.org to find available certified products. These products will have a reduced impact on the environment and on human health. The products to be used must be pre-approved by the LFUCG prior to commencement of any work in any LFUCG facility. If a Green Seal product is not available, the LFUCG must provide a signed waiver to use an alternate product. Please provide information on the Green Seal products being used with your bid response.

C. GREEN COMMUNITY

The Lexington-Fayette Urban County Government (LFUCG) serves as a principal, along with the University of Kentucky and Fayette County Public Schools, in the Bluegrass Partnership for a Green Community. The Purchasing Team component of the Partnership collaborates on economy of scale purchasing that promotes and enhances environmental initiatives. Specifically, when applicable, each principal is interested in obtaining best value products and/or services which promote environment initiatives via solicitations and awards from the other principals.

If your company is the successful bidder on this Invitation For Bid, do you agree to extend the same product/service pricing to the other principals of the Bluegrass Partnership for a Green Community (i.e. University of Kentucky and Fayette County Schools) if requested?

Yes No

II. Bid Conditions

- A. No bid may be withdrawn for a period of sixty (60) days after the date and time set for opening.
- B. No bid may be altered after the date and time set for opening. In the case of obvious errors, the Division of Central Purchasing may permit the withdrawal of a bid. The decision as to whether a bid may be withdrawn shall be that of the Division of Central Purchasing.
- C. Acceptance of this proposal shall be enactment of an Ordinance by the Urban County Council.
- D. The bidder agrees that the Urban County Government reserves the right to reject any and all bids for either fiscal or technical reasons, and to award each part of the bid separately or all parts to one vendor.
- E. Minor exceptions may not eliminate the bidder. The decision as to whether any exception is minor shall be entirely that of the head of the requisitioning Department or Division and the Director of the Division of Central Purchasing. The Urban County Government may waive technicalities and informalities where such waiver would best serve the interests of the Urban County Government.
- F. Manufacturer's catalogue numbers, trade names, etc., where shown herein are for descriptive purposes and are to guide the bidder in interpreting the standard of quality, design, and performance desired, and shall not be construed to exclude proposals based on furnishing other types of materials and/or services. However, any substitution or departure proposed by the bidder must be clearly noted and described; otherwise, it will be assumed that the bidder intends to supply items specifically mentioned in this Invitation for Bids.
- G. The Urban County Government may require demonstrations of the materials proposed herein prior to acceptance of this proposal.
- H. Bids must be submitted on this form and must be signed by the bidder or his authorized representative. Unsigned bids will not be considered.
- I. Bids must be submitted prior to the date and time indicated for opening. Bids submitted after this time will not be considered.
- J. All bids mailed must be marked on the face of the envelope:

 "Bid on #59-2018 Rearloader"

 and addressed to: Division of Central Purchasing
 200 East Main Street, Room 338
 Lexington, Kentucky 40507

 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.
- K. Bidder is requested to show both unit prices and lot prices. In the event of error, the unit price shall prevail.
- L. A certified check or Bid Bond in the amount of XX percent of the bid price must be attached hereto. This check must be made payable to the Lexington-Fayette Urban County Government, and will be returned when the material and/or services specified herein have been delivered in accordance with specifications. In the event of failure to perform within the time period set forth in this bid, it is agreed the certified check may be cashed and the funds retained by the Lexington-Fayette Urban County Government as liquidated damages. Checks of unsuccessful bidders will be returned when the bid has been awarded.
- M. The delivery dates specified by bidder may be a factor in the determination of the successful bidder.
- N. Tabulations of bids received may be mailed to bidders. Bidders requesting tabulations must enclose a stamped, self-addressed envelope with the bid.
- O. The Lexington-Fayette Urban County Government is exempt from Kentucky Sales Tax and Federal Excise Tax on materials purchased from this bid invitation. Materials purchased by the bidder for construction

projects are not tax exempt and are the sole responsibility of the bidder.

- P. All material furnished hereunder must be in full compliance with OSHA regulations.
- Q. If more than one bid is offered by one party, or by any person or persons representing a party, all such bids shall be rejected.
- R. Signature on the face of this bid by the Bidder or his authorized representative shall be construed as acceptance of and compliance with all terms and conditions contained herein.
- S. 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.
- T. The Kentucky Equal Employment Opportunity Act of 1978 (KRS 45.560-45.640) requires that any county, 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 contractor 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 to 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 above quoted 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.

- U. Any party, firm or individual submitting a proposal pursuant to this invitation must be in compliance with the requirements of the Lexington-Fayette Urban County Government regarding taxes and fees before they can be considered for award of this invitation and must maintain a "current" status with regard to those taxes and fees throughout the term of the contract. The contractor must be in compliance with Chapter 13 from the Code of Ordinances of the Lexington-Fayette Urban County Government. The contractor must be in compliance with Ordinance 35-2000 pursuant to contractor registration with the Division of Building Inspection. If applicable, said business must have a Fayette County business license.

Pursuant to KRS 45A.343 and KRS 45A.345, the contractor shall

- (1) *Reveal any final determination of a violation by the contractor within the previous five year period pursuant to KRS Chapters 136 (corporation and utility taxes), 139 (sales and use taxes), 141 (income taxes), 337 (wages and hours), 338 (occupational safety and health of employees), 341 (unemployment and compensation) and 342 (labor and human rights) that apply to the contractor; and*
- (2) *Be in continuous compliance with the above-mentioned KRS provisions that apply to the contractor for the duration of the contract.*

A contractor's failure to reveal the above or to comply with such provisions for the duration of the contract shall be grounds for cancellation of the contract and disqualification of the contractor from eligibility for future contracts for a period of two (2) years.

- V. Vendors who respond to this invitation have the right to file a notice of contention associated with the bid process or to file a notice of appeal of the recommendation made by the Director of Central Purchasing resulting from this invitation.

Notice of contention with the bid process must be filed within 3 business days of the bid/proposal opening by (1) sending a written notice, including sufficient documentation to support contention, to the Director of the Division of Central Purchasing or (2) submitting a written request for a meeting with the Director of Central Purchasing to explain his/her contention with the bid process. After consulting with the Commissioner of Finance the Chief Administrative Officer and reviewing the documentation and/or hearing the vendor, the Director of Central Purchasing shall promptly respond in writing findings as to the compliance with bid processes. If, based on this review, a bid process irregularity is deemed to have occurred the Director of Central Purchasing will consult with the Commissioner of Finance, the Chief Administrative Officer and the Department of Law as to the appropriate remedy.

Notice of appeal of a bid recommendation must be filed within 3 business days of the bid recommendation by (1) sending a written notice, including sufficient documentation to support appeal, to the Director, Division of Central Purchasing or (2) submitting a written request for a meeting with the Director of Central Purchasing to explain his appeal. After reviewing the documentation and/or hearing the vendor and consulting with the Commissioner of Finance and the Chief Administrative Officer, the Director of Central Purchasing shall in writing, affirm or withdraw the recommendation.

III. Procurement Contract Bid Conditions

- A. The terms of this agreement shall be for 1 year(s) from the date of acceptance of this contract by the Lexington-Fayette Urban County Government. This agreement may be automatically extended for an additional 1 year(s) renewal. 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.
- B. Price Changes **(Space Checked Applies)**
 - () 1. Prices quoted in response to the Invitation shall be firm prices for the first 90 days of the Procurement Contract. After 90 days, prices may be subject to revision and such changes shall be based on general industry changes. Revision may be either increases or decreases and may be requested by either party. There will be no more than one (1) price adjustment per quarter. Requests for price changes shall be received in writing at least twenty (20) days prior to the effective date and are subject to written acceptance before becoming effective. Proof of the validity of a request for revision shall be responsibility of the requesting party. The Lexington-Fayette Urban County Government shall receive the benefit of any decline that the seller shall offer his other accounts.
 - () 2. No provision for price change is made herein. Prices are to be firm for the term of this contract.
 - (XXX) 3. See bid specifications.
- C. If any contract item is not available from the vendor, the Lexington-Fayette Urban County Government, at its option, may permit the item to be back-ordered or may procure the item on the open market.
- D. All invoices must bear reference to the Lexington-Fayette Urban County Government Purchasing document numbers which are being billed.
- E. 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.
- F. No substitutions for articles specified herein may be made without prior approval of the Division of Central Purchasing.

EQUAL OPPORTUNITY AGREEMENT

Standard Title VI Assurance

The Lexington Fayette-Urban County Government, (hereinafter referred to as the "Recipient") hereby agrees that as a condition to receiving any Federal financial assistance from the U.S. Department of Transportation, it will comply with Title VI of the Civil Rights Act of 1964, 78Stat.252, 42 U.S.C. 2000d-4 (hereinafter referred to as the "Act"), and all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, (49 CFR, Part 21) Nondiscrimination in Federally Assisted Program of the Department of Transportation – Effectuation of Title VI of the Civil Rights Act of 1964 (hereinafter referred to as the "Regulations") and other pertinent directives, no person in the United States shall, on the grounds of race, color, national origin, sex, age (over 40), religion, sexual orientation, gender identity, veteran status, or disability be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Recipient receives Federal financial assistance from the U.S. Department of Transportation, including the Federal Highway Administration, and hereby gives assurance that will promptly take any necessary measures to effectuate this agreement. This assurance is required by subsection 21.7(a) (1) of the Regulations.

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 sub-contractor 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 disability.*
- 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 contractors 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, veteran status, disability and age.

Signature

Worldwide Express

Name of Business

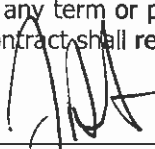
GENERAL PROVISIONS OF BID CONTRACT

By signing the below, bidder acknowledges that it understands and agrees with the following provisions related to its bid response and the provision of any goods or services to LFUCG upon selection by LFUCG pursuant to the bid request:

1. Bidder shall comply with all Federal, State & Local regulations concerning this type of service or good. All applicable state laws, ordinances and resolutions (including but not limited to Section 2-33 (Discrimination due to sexual orientation or gender identity) and Chapter 13 (Licenses and Regulations) of the Lexington-Fayette Urban County Government Code of Ordinances, and Resolution No. 484-17 (Minority, Women, and Veteran-Owned Businesses)) and the regulations of all authorities having jurisdiction over the project shall apply to the contract, and shall be deemed to be incorporated herein by reference.
2. Failure to submit ALL forms and information required by LFUCG may be grounds for disqualification.
3. Addenda: All addenda and IonWave Q&A, if any, must be considered by the bidder in making its response, and such addenda shall be made a part of the requirements of the bid contract. Before submitting a bid response, it is incumbent upon bidder to be informed as to whether any addenda have been issued, and the failure of the bidder to cover any such addenda may result in disqualification of that response.
4. Bid Reservations: LFUCG reserves the right to reject any or all bid responses, to award in whole or part, and to waive minor immaterial defects in proposals. LFUCG may consider any alternative proposal that meets its basic needs.
5. Liability: LFUCG is not responsible for any cost incurred by bidder in the preparation of its response.
6. Changes/Alterations: Bidder may change or withdraw a proposal at any time prior to the opening; however, no oral modifications will be allowed. Only letters, or other formal written requests for modifications or corrections of a previously submitted proposal which is addressed in the same manner as the bid response, and received by LFUCG prior to the scheduled closing time for receipt of bids, will be accepted. The bid response when opened, will then be corrected in accordance with such written request(s), provided that the written request is contained in a sealed envelope which is plainly marked "modifications of bid response".
7. Clarification of Submittal: LFUCG reserves the right to obtain clarification of any point in a bid or to obtain additional information from any bidder.
8. Bribery Clause: By his/her signature on its response, bidder certifies that no employee of his/hers, any affiliate or subcontractor, has bribed or attempted to bribe an officer or employee of the LFUCG.
9. Additional Information: While not necessary, the bidder may include any product brochures, software documentation, sample reports, or other documentation that may assist LFUCG in better understanding and evaluating the bid response. Additional documentation shall not serve as a substitute for other documentation which is required by the LFUCG to be submitted with the bid response.
10. Ambiguity, Conflict or other Errors: If a bidder discovers any ambiguity, conflict, discrepancy, omission or other error in the bid request of LFUCG, it shall immediately notify LFUCG of such error in writing and request modification or clarification of the document if allowable by the LFUCG.
11. Agreement to Bid Terms: In submitting its bid response, the bidder agrees that it has carefully examined the specifications and all provisions relating to LFUCG's bid request, including but not limited to the bid contract. By submission of its bid response, bidder states that it understands the meaning, intent and requirements of LFUCG's bid request and agrees to the same. The successful bidder shall warrant that it is familiar with and understands all provisions herein and shall warrant that it can comply with them. No additional compensation to bidder shall be authorized for services, expenses, or goods reasonably covered under these provisions that the bidder omits from its bid response.
12. Cancellation: LFUCG may unilaterally terminate the bid contract with the selected bidder(s) at any time, with or without cause, by providing at least thirty (30) days advance written notice unless a different advance

written notice period is negotiated prior to contract approval. Payment for services or goods received prior to termination shall be made by the LFUCG provided these goods or services were provided in a manner acceptable to the LFUCG. Payment for those goods and services shall not be unreasonably withheld.

13. **Assignment of Contract:** The selected bidder(s) shall not assign or subcontract any portion of the bid contract with LFUCG without the express written consent of LFUCG. Any purported assignment or subcontract in violation hereof shall be void. It is expressly acknowledged that LFUCG shall never be required or obligated to consent to any request for assignment or subcontract; and further that such refusal to consent can be for any or no reason, fully within the sole discretion of LFUCG.
14. **No Waiver:** No failure or delay by LFUCG in exercising any right, remedy, power or privilege hereunder, nor any single or partial exercise thereof, nor the exercise of any other right, remedy, power or privilege shall operate as a waiver hereof or thereof. No failure or delay by LFUCG in exercising any right, remedy, power or privilege under or in respect of this bid proposal or bid contract shall affect the rights, remedies, powers or privileges of LFUCG hereunder or shall operate as a waiver thereof.
15. **Authority to do Business:** Each bidder must be authorized to do business under the laws of the Commonwealth of Kentucky and must be in good standing and have full legal capacity to provide the goods or services specified in the bid proposal. Each bidder must have all necessary right and lawful authority to submit the bid response and enter into the bid contract for the full term hereof including any necessary corporate or other action authorizing the bidder to submit the bid response and enter into this bid contract. If requested, the bidder will provide LFUCG with a copy of a corporate resolution authorizing this action and/or a letter from an attorney confirming that the proposer is authorized to do business in the Commonwealth of Kentucky. All bid responses must be signed by a duly authorized officer, agent or employee of the bidder.
16. **Governing Law:** This bid request and bid contract shall be governed by and construed in accordance with the laws of the Commonwealth of Kentucky. In the event of any proceedings regarding this matter, the bidder agrees that the venue shall be the Fayette County Circuit Court or the U.S. District Court for the Eastern District of Kentucky, Lexington Division and that the bidder expressly consents to personal jurisdiction and venue in such Court for the limited and sole purpose of proceedings relating to these matters or any rights or obligations arising thereunder.
17. **Ability to Meet Obligations:** Bidder affirmatively states that there are no actions, suits or proceedings of any kind pending against bidder or, to the knowledge of the bidder, threatened against the bidder before or by any court, governmental body or agency or other tribunal or authority which would, if adversely determined, have a materially adverse effect on the authority or ability of bidder to perform its obligations under this bid response or bid contract, or which question the legality, validity or enforceability hereof or thereof.
18. **Price Discrepancy:** When applicable, 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.
19. Bidder understands and agrees that its employees, agents, or subcontractors are not employees of LFUCG for any purpose whatsoever. Bidder is an independent contractor at all times related to the bid response or bid contract.
20. Contractor [or Vendor or Vendor's Employees] will not appropriate or make use of the Lexington-Fayette Urban County Government (LFUCG) name or any of its trade or service marks or property (including but not limited to any logo or seal), in any promotion, endorsement, advertisement, testimonial or similar use without the prior written consent of the government. If such consent is granted LFUCG reserves the unilateral right, in its sole discretion, to immediately terminate and revoke such use for any reason whatsoever. Contractor agrees that it shall cease and desist from any unauthorized use immediately upon being notified by LFUCG.
21. If any term or provision of this bid contract shall be found to be illegal or unenforceable, the remainder of the contract shall remain in full force and such term or provision shall be deemed stricken.



Signature

4-30-18
Date

WORKFORCE ANALYSIS FORM

Name of Organization: Worldwide Egypt

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
Administrators		1														1	0
Professionals		7	1													7	1
Superintendents																0	0
Supervisors		2				1										3	0
Foremen		3														15	0
Technicians		15														15	0
Protective Service																2	0
Para-Professionals																0	0
Office/Clerical			4				1									1	5
Skilled Craft		7														7	0
Service/Maintenanc		2														2	0
Total:																35	6

Prepared by: *[Signature]* 6.m. Date: 4/30/18

(Name and Title)

Revised 2015-Dec-15

**DIRECTOR, DIVISION OF CENTRAL PURCHASING
LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
200 EAST MAIN STREET
LEXINGTON, KENTUCKY 40507**

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE
EQUAL EMPLOYMENT OPPORTUNITIES AND DBE CONTRACT PARTICIPATION**

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 MBE/WBE's, and set a goal that not less than three percent (3%) of the total value of this contract be subcontracted to Veteran-Owned Small Businesses. The goal for the utilization of Certified MBE/WBE's and Veteran-Owned Small Businesses as subcontractors are recommended goals. Contractors who fail to meet such goals will be expected to provide written explanations to the Director of the Division of Central Purchasing of efforts they have made to accomplish the recommended goals and the extent to which they are successful in accomplishing the recommended goals will be a consideration in the procurement process.

For assistance in locating MBE/WBE Subcontractors contact Sherita Miller at 859/258-3320 or by writing the address listed below:

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

Lexington-Fayette Urban County Government
MWDBE PARTICIPATION GOALS

A. GENERAL

- 1) The LFUCG request all potential contractors to make a concerted effort to include Minority-Owned (MBE), Woman-Owned (WBE), Disadvantaged (DBE) Business Enterprises and Veteran-Owned Small Businesses (VOSB) 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) **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.**
- 4) The LFUCG has also established a 3% of total procurement costs as a Goal for participation for of Veteran-Owned Businesses.
- 5) **It is therefore a request of each Bidder to include in its bid, the same goal (3%) for Veteran-Owned 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 or Veteran-Owned subcontractors 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 and Veteran-Owned 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, managed and controlled 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, managed and controlled by one or more women.
- 3) A Disadvantaged Business (DBE) is defined as a business which is certified as being at least 51% owned, managed and controlled 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, managed and controlled 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 and showed evidence of contacting the companies on the list(s).

g. 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.

h. Sent written notices, by certified mail, email or facsimile, to qualified, certified MWDBEs and/or Veteran-Owned businesses 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 MWDBE firm and/or Veteran-Owned business 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.



LEXINGTON

MINORITY BUSINESS ENTERPRISE PROGRAM

Sherita Miller, MPA
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 484-2017 – A Certified Minority, Women and Disadvantaged Business Enterprise ten percent (10%) minimum goal and a three (3%) minimum goal for Certified Veteran-Owned Small Businesses and Certified Service Disabled Veteran – Owned Businesses for government contracts.

The resolution states the following definitions shall be used for the purposes of reaching these goals (a full copy is available in Central Purchasing):

Certified Disadvantaged Business Enterprise (DBE) – a business in which at least fifty-one percent (51%) is owned, managed and controlled by a person(s) who is socially and economically disadvantaged as defined by 49 CFR subpart 26.

Certified Minority Business Enterprise (MBE) – a business in which at least fifty-one percent (51%) is owned, managed and controlled by an ethnic minority (i.e. African American, Asian American/Pacific Islander, Hispanic Islander, Native American/Native Alaskan Indian) as defined in federal law or regulation as it may be amended from time-to-time.

Certified Women Business Enterprise (WBE) – a business in which at least fifty-one percent (51%) is owned, managed and controlled by a woman.

Certified Veteran-Owned Small Business (VOSB) – a business in which at least fifty-one percent (51%) is owned, managed and controlled by a veteran who served on active duty with the U.S. Army, Air Force, Navy, Marines or Coast Guard.

Certified Service Disabled Veteran Owned Small Business (SDVOSB) – a business in which at least fifty-one percent (51%) is owned, managed and controlled by a disabled veteran who served on active duty with the U.S. Army, Air Force, Navy, Marines or Coast Guard.

The term “Certified” shall mean the business is appropriately certified, licensed, verified, or validated by an organization or entity recognized by the Division of Purchasing as having the appropriate credentials to make a determination as to the status of the business.

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	Shawn Rogers UK SBDC	shawn.rogers@uky.edu	859-257-7666
Community Ventures Corporation	Phyllis Alcorn	palcorn@cvky.org	859-231-0054
KY Transportation Cabinet (KYTC)	Melvin Bynes	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@nwbec.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	production@keynewsjournal.com	859-685-8488



LFUCG MWDBE PARTICIPATION FORM

Bid/RFP/Quote Reference # 59-2018

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	MBE WBE or DBE	Work to be Performed	Total Dollar Value of the Work	% Value of Total Contract
1.				
2.				
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.

Worldwide Export
Company

Joni Dotson
Company Representative

4-30-18
Date

G.M.
Title



LEXINGTON

LFUCG MWDBE PARTICIPATION FORM

Bid/RFP/Quote Reference # 59-2018

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	MBE WBE or DBE	Work to be Performed	Total Dollar Value of the Work	% Value of Total Contract
1.				
2.				
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.

Worldwide Export
Company

4-30-18
Date

J. Hester
Company Representative

CM
Title



LEXINGTON

LFUCG MWDBE SUBSTITUTION FORM

Bid/RFP/Quote Reference # 59-2018

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.

Worldwide Egypt
Company

4-30-18
Date

J. W. S.
Company Representative

C.M.
Title



LEXINGTON

MWDBE QUOTE SUMMARY FORM

Bid/RFP/Quote Reference # 59-2018

The undersigned acknowledges that the minority and/or veteran subcontractors listed on this form did submit a quote to participate on this project. Failure to submit this form may cause rejection of the bid.

Company Name <u>Worldwide Transport</u>	Contact Person <u>Jim Detsun</u>
Address/Phone/Email <u>945 Nashville Blvd Lexing Ky 40511</u>	Bid Package / Bid Date <u>592018 4-30-18</u>

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	Veteran

(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.

Worldwide Transport
 Company
4-30-18
 Date

[Signature]
 Company Representative
G.M.
 Title



LEXINGTON

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 contractors 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 # 59-2018

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.

Workwell Transport
Company

[Signature]
Company Representative

4-30-18
Date

G.M.
Title

LFUCG STATEMENT OF GOOD FAITH EFFORTS

Bid/RFP/Quote # 59-2018

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 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.

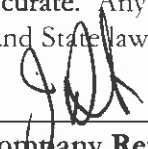
_____ Other--any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include MWDBE and Veteran participation.

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.

Worldwide Equit
Company

4-30-18
Date


Company Representative

C.M.
Title

EXCEPTION PAGE

Paragraph Number	Description of Exception
2.5.	Block Heater in grill 1000 watt
	max allowed by Cummins.
3.1	Center Tow Pin
3.8.	Michelin XFE Tires Steer
3.3.	Front Suspension 20,000 lb
	same as 100 plus LFUGG Trucks
	currently driving.

Warranty Description

Basic Vehicle Warranty (cab & chassis)	Length of Warranty Period (time, mileage, etc.)	Warranty Provided By:	Vendor agrees to warranty terms stated in paragraph 13.4?
	1 yr, 100,000 <i>3/2-0</i>	WE	<input checked="" type="radio"/> Yes / No
Basic Warranty (body)	Length of Warranty Period (time, mileage, etc.)	Warranty Provided By:	Vendor agrees to warranty terms stated in paragraph 13.4?
	SEE ATTACH	EL Pack	<input checked="" type="radio"/> Yes / No
Engine Warranty (paragraph 2.2)	Length of Warranty Period (time, mileage, etc.)	Warranty Provided By:	Vendor agrees to warranty terms stated in paragraph 13.4?
	5 yr, 150	WE	<input checked="" type="radio"/> Yes / No
Transmission Warranty (paragraph 2.11)	Length of Warranty Period (time, mileage, etc.)	Warranty Provided By:	Vendor agrees to warranty terms stated in paragraph 13.4?
	5 yr, 150	WE	<input checked="" type="radio"/> Yes / No
Exterior Finish Warranty (body)	Length of Warranty Period (time, mileage, etc.)	Warranty Provided By:	Vendor agrees to warranty terms stated in paragraph 13.4?
	SEE ATTACH		<input checked="" type="radio"/> Yes / No
Hydraulic Pump Warranty (paragraph 9.2)	Length of Warranty Period (time, mileage, etc.)	Warranty Provided By:	Vendor agrees to warranty terms stated in paragraph 13.4?
	SEE ATTACH		<input checked="" type="radio"/> Yes / No
Hydraulic Cylinder Warranty (body)	Length of Warranty Period (time, mileage, etc.)	Warranty Provided By:	Vendor agrees to warranty terms stated in paragraph 13.4?
	SEE ATTACH		<input checked="" type="radio"/> Yes / No
Back-Up Vision System Warranty (paragraph 10.8)	Length of Warranty Period (time, mileage, etc.)	Warranty Provided By:	Vendor agrees to warranty terms stated in paragraph 13.4?
	SEE ATTACH		<input checked="" type="radio"/> Yes / No

Other Information

	Clear Hopper Cycle Time (paragraph 7.3)	Load Sequence Cycle Time (paragraph 8.7)	Compaction (paragraph 7.4)
Packer Performance	SEE Attach		

	Describe painting or coating system for the exterior surfaces of the body.
Exterior Finish (paragraph 10.6)	SEE Attached

	Measured height from the ground to the highest point of finished unit.	
Finished Overall Height (paragraph 10.9)	SEE Attached	<p>The LFUCG Division of Waste Management will have final approval of finished vehicle height. Stated heights in excess of thirteen feet (13') may be cause for rejection. Any unit whose measured height upon delivery exceeds that stated herein will not be accepted.</p>

Prepared For:
LEXINGTON DIV OF FLEET SERVICE

Prepared By:
WORLDWIDE EQUIPMENT, INC.



LR64E

PROPOSAL





Vehicle Summary

CUSTOMER/VEHICLE INFO		Description	Front Weight (LB)	Rear Weight (LB)
S	0029W2	CHASSIS (BASE MODEL)	9542	5080
	MP2002	CUSTOMER FLEET SIZE	0	0
	APPAA4	VEHICLE APPLICATION CLASS	0	0
	0050S5	VEHICLE USE & BODY/TRAILER TYPE	0	0

ENGINE/TRANSMISSIONS		Description	Front Weight (LB)	Rear Weight (LB)
S	136AS6	TRANSMISSION	732	245

EXHAUST/EMISSIONS		Description	Front Weight (LB)	Rear Weight (LB)
CA	15AB1X	EXHAUST HEAT SHIELD, ADD'L (CA)	0	0

ENGINE EQUIPMENT		Description	Front Weight (LB)	Rear Weight (LB)
	132AD4	ALTERNATOR	0	0
CA	316AA9	BATTERIES	25	0
CA	LLXAEX	EMERGENCY START CONNECTIONS	7	0
S	110AA1	ENGINE BRAKE	-37	-2
	508AA1	COOLING PERFORMANCE	80	-15
	124003	HOSES - RADIATOR/HEATER	3	0

CLUTCH/TRANS EQUIPMENT		Description	Front Weight (LB)	Rear Weight (LB)
	195AB2	DRIVELINE - MAIN	-2	-2
	204AA7	DRIVELINE - INTERAXLE	0	0

FRONT AXLE EQUIPMENT			Front Weight (LB)	Rear Weight (LB)
		Description		
	244AC3	SPRINGS - FRONT	120	0
	2410L1	FRONT AXLE BRAKES	25	0
		<i>Merritor 16.5 x 7 Q Plus, 4-30-18 TD</i>	0	0
	U0AF1X	FRONT BRAKE ADJ. MANUFACTURE	0	0
	V7AF1X	FRONT BRAKE CHAMBER MFG.	0	0
	O5BD1X	FRONT BRAKE CHAMBER SIZE	0	0
	0KXG1X	HUB MATERIAL, FRONT	0	0
S	1KAA1X	SHOCK ABSORBER, FRONT	20	0
S	245AA6	STEERING	142	0

REAR AXLE EQUIPMENT			Front Weight (LB)	Rear Weight (LB)
		Description		
	268AA9	REAR AXLES - TANDEM	0	1614
	TAXAXX	REAR AXLE RATIO	0	0
	186AC7	REAR SUSPENSION - TANDEM	0	1674
		<i>55462 Mack Multileaf 46,000 lb 4-30-18</i>		
	GWXDGX	BOGIE SPREAD, REAR	0	-2
	YVXA1X	REAR SHOCK ABSORBER	0	20
	XYXZ1X	TRANSVERSE TORQUE RODS, R SUSP	0	-66
	253AB3	BRAKES - REAR	0	-61
		<i>Merritor 16.5 x 8.5 Q Plus 4-30-18 JD</i>	0	0
	U1AG1X	REAR BRAKE ADJ MANUFACTURE	0	0
		<i>1 Bendix 4-30-18 TD</i>		
	V1AE3X	REAR BRAKE CHAMBER SIZE	0	0
		<i>MGM TR-T 4-30-18 TD</i>		
	300AF0	REAR BRAKE CHAMBER MFG.	0	0
	0LXE1X	HUB MATERIAL, DRIVE	0	0
	N2AD1X	SPINDLE NUTS, MAIN AXLE	0	0
S	3LAC1X	POWER DIVIDER LOCKOUT	0	40

FRAME EQUIPMENT/FUEL TANKS			Front Weight (LB)	Rear Weight (LB)
		Description		
S	271197	WHEELBASE	208	208
S	374080	AF (OVERHANG)	-37	206
	Z9XB3X	FRAME INNER LINER	0	0

S	A0XABX	FRONT FRAME LENGTH	FRONT FRAME LENGTH 1525MM	146	-19
S	5EXF1X	GUARD, UNDER ENGINE BAYT	SKID PLATE UNDER BUMPER AND RADIATOR	128	-8

AIR/BRAKE				Front Weight (LB)	Rear Weight (LB)
		Description			
	VHXBWX	AIR DRYER - MANUFACTURER	BENDIX AD-IPEP, W/ TURBO CUT OFF VALVE & COALESCING OIL FILTER	0	0
	UWXE1X	AIRTANK DRAIN VALVE	AUTO DRAIN VALVE, HEATED, ON SUPPLY TANK, W/LANYARDS ON ALL OTHER TANKS	3	0
	U2XA1X	AIRTANK MATERIAL	ALUMINUM, STANDARD FINISH	-24	0
	3KAZ1X	AUXILIARY BRAKE CONTROL	W/O WORK BRAKE	0	0

ELECTRICAL				Front Weight (LB)	Rear Weight (LB)
		Description			
S	3BCB1X	FRONT & SIDE INDICATOR LMP TYP	FRONT AND SIDE DIRECTION IND & MARKER, LED TYPE	3	0

PTO				Front Weight (LB)	Rear Weight (LB)
		Description			
	183AA2	CRANKSHAFT ADAPTER	1350 SERIES FLANGE (DOES NOT INCLUDE FRONT FRAME EXTENSION)	18	-2
	T4XZ1X	PTO TRANSM. MOUNTED	W/O TRANSMISSION MOUNTED PTO	0	0

CAB (A THRU G)				Front Weight (LB)	Rear Weight (LB)
		Description			
S	4AXB1X	CLIMATE UNIT	MACK INTEGRAL W/HEATER (COMBO HEATER/AIR CONDITIONER UNIT) W/R134a REFRIGERANT	93	0

CAB (S THRU Z)				Front Weight (LB)	Rear Weight (LB)
		Description			
	1970C7	SEAT - PASSENGER'S	OMIT RIDER SEAT	0	0
	4850F0	SEAT COVERING	FABRIFORM CLOTH, BLACK, DRIVER SEATS	0	0
	5920D2	SEAT BELT(S)	LAP & SHOULDER BELTS FOR (2) DRIVER SEATS, TO BE ORANGE IN COLOR	0	0
	XRXB1X	STEERING WHEEL ADJUSTMENT	STEERING COLUMN, ADJUSTABLE TILT TELESCOPE	0	0
S	T2AA1X	WINDSHIELD PROTECTOR	FURNISH WINDSHIELD PROTECTOR	16	0

CAB EXTERIOR				Front Weight (LB)	Rear Weight (LB)
		Description			
	14400R	CAB	R.H. & L.H. SIT DOWN DRIVING POSITION, EXTENDED CAB VERSION	0	0
	424007	CAB DOOR OPTIONS	LH & RH FRONT HINGED DOORS W/POWER WINDOWS BOTH SIDES	0	0

			Front Weight (LB)	Rear Weight (LB)
WHEELS & TIRES		Description		
	900AX5	TIRES BRAND/TYPE - FRONT 425/65R22.5 L MICHELIN XFE (STEER ONLY) (Total for QTY = 2)	397	0
	531AE1	WHEELS - FRONT 22.5x12.25 ACCURIDE STEEL DISC 10-HOLE HUB PILOTED (11 1/4"/286mm BC) 4.63" OFFSET (Total for QTY = 2)	239	0
S	901AX1	TIRES BRAND/TYPE - REAR 11R22.5 G BRIDGESTONE R268 ECOPIA (ALL POSITIONS) (Total for QTY = 8)	0	971
	346AE0	WHEELS - REAR 22.5x8.25 ACCURIDE STEEL DISC 10-HOLE HUB PILOTED, TWO HAND HOLES - HEAVY DUTY (Total for QTY = 8)	0	635
	235085	REAR DISC WHEEL:POLISH W/O REAR DISC WHEEL BRIGHT FINISH (Total for QTY = 8)	0	0

			Front Weight (LB)	Rear Weight (LB)
TRANSMISSION ELECTRONICS		Description		
	U7AA1X	TRANSMISSION PROTECTION TRANS. PROTECTION, ENGINE SHUT DOWN (HIGH TEMP.)	0	0
	RSXUCX	TRANSMISSION ELECTRONICS ALLISON VOC PKG# 183 RDS REFUSE WITH AUTO-NEUTRAL, RDCI	0	0

			Front Weight (LB)	Rear Weight (LB)
PAINT		Description		
	6JAAAX	CAB/BODY INTERIOR COLOUR PAINT - CAB INTERIOR, SAME COLOR AS CAB EXTERIOR COLOR	0	0
	07XE1X	FRONT WHEEL PAINT FRONT WHEEL POWDER COAT, BLACK	0	0
	08XE1X	DRIVE WHEEL PAINT DRIVE WHEEL POWDER COAT, BLACK	0	0

			Front Weight (LB)	Rear Weight (LB)
CALCULATED CODES - KAX		Description		
	4CAACX	NUMBER OF OPTIONAL SWITCHES NUMBER OF OPTIONAL SWITCHES, 3	0	0
CA	9JXZ1X	PROPCALC SELECTION (CA) NO, THE ORDER MUST NOT BE CALCULATED (Requires CA Quote)	0	0
	TFXK2X	PROP.SHAFT LENGTH, MAIN AXLE MAIN PROP.SHAFT LENGTH 975	0	0
	TJXA2X	NUMBER OF PROP.SHAFTS TWO PIECE PROP.SHAFTS	0	0
	TDXR2X	PROP.SHAFT LENGTH, FIRST AXLE FIRST PROP.SHAFT LENGTH 1375	0	0
	TNXC SX	PROP.SHAFT FIRST BRKT VERTICAL PROP.SHAFT FIRST BRKT, POS 15	0	0
	XMXA1X	PROP SHAFT BRKT, FIRST, ANGLE PROP. SHAFT BRACKET FIRST POSITION ANGLE BASIC (90 DEGREES)	0	0

			Front Weight (LB)	Rear Weight (LB)
Z - DO NOT USE - OBSOLETE		Description		
	C0Z01Z	IDLE SHUTDOWN CONTROL NO IDLE S/D SLPR MODE OVERRIDE	0	0

Totals

Total Weight (LB)

11835 10508

Total Weight (LB)

22342

From: Charles Edinger
Sent: Wednesday, April 25, 2018 11:45 AM
To: raereese dad; Danny Lyons - Lexington Truck Sales; Hite, Bill
Subject: Fwd: Forward warranty statement and literature

----- Forwarded message -----

From: <shawn@collisionavoidancesystems.net>
Date: Wed, Apr 25, 2018 at 10:15 AM
Subject: RE: Forward warranty statement and literature
To: Charles Edinger <charlesedinger.3@gmail.com>

Charlie,

Here is our standard warranty clause. I did mention that we cover labor but that was an inaccurate statement. We only cover labor when we complete the actual install.

This will be a manufacturers warranty only for parts not to include labor.

1.1.1. CAS will provide a manufacturers warranty for equipment only as listed on the original sales agreement for a period of one 1 year from the date of base bid final completion. CAS will maintain all listed equipment at no charge (during the warranty period) in good working order. This includes all electrical and electronic system devices and all provided components. Service calls required by another contractor's equipment failure are not covered under warranty. Warranty does not include: vandalism, abuse, acts of God or other damage caused by guests, employees, contractors or vendors. Routine warranty service response shall be 8am to 5pm Monday through Friday excluding Holidays PST. After-hour service calls shall be billed at current after-hour rates. Warranty does not cover labor rates provided by others.

Respectfully,

Shawn O'Connell

President

Toll Free - (877) 590-8968

Cell - (602) 799-6091

www.collisionavoidancesystems.net



"We see what you Can't"

----- Original Message -----

Subject: Forward warranty statement and literature
From: "Charles Edinger" <charlesedinger.3@gmail.com>



Owner's Manual

Installation & Operating Guide

MODEL CAS-4HW

Heavy Duty Reversing Sensor System
for Commercial Vehicles

One Wire with Hi-Lo Install Switch

Version 17-1.2
Revision Date: 7/27/17

INSTALLATION INSTRUCTIONS & OPERATING MANUAL MODEL CAS-4HW

Your CAS Sonar Parking Aid system utilizes the latest technology and quality components to provide you and your business with years of reliable service. A great amount of care went into building your Sonar Parking Aid system. Please take the time to read the manual carefully before installing, as we want you to be as proud of your installation, as we are of the product. Thank You, for your purchase and safe motoring, from all of us at Collision Avoidance Systems.

SYSTEM OVERVIEW

FUNCTIONAL SPECIFICATIONS:

The sensors operate both as transmitters and as receivers, which send an ultra high frequency sound wave (sonar) that is reflected off an object and received. The distance from the obstacle is evaluated through the transit time of the signals and is indicated by a sequence of pulse tones, the closer the obstacle, the faster the sequence of pulse tones as well as the Voice Distance Indicator (VDI) that verbally indicates the distance to an obstacle to the driver.

WARNING: This reversing aid system is designed to supplement other safety practices by enhancing driver awareness of difficult to see areas. Failure to operate the system in the in the manner specified in this manual could result in personal injury property damage or possibly death. Always inspect behind and below your vehicle prior to backing up to eliminate the possibility of property damage and/or bodily injury. Always use caution whem backing up. The responsibility for safe vehicle operation will always remain with the driver.



INSTALLATION INSTRUCTIONS & OPERATING MANUAL MODEL CAS-4HW

DETECTION ZONES:

When the vehicle is put into reverse, the system will sound one quick “BEEP” to alert the driver the system has been activated. The system will alert the driver to the presence of an obstacle when it is within one of the nine (9) detections zones. The following describes each zone:

Zone	Distance from Bumper	Audible Tone	Voice Alert
1	12 to 9 Feet	1 beep per second	Twelve (12) Feet
2	9 to 6 Feet	1 Beep per second	Nine (9) Feet
3	6 to 5 Feet	2 Beep per second	Six (6) Feet
4	5 to 4 Feet	2 Beep per second	Five (5) Feet
5	4 to 3 Feet	2 Beep per second	Four (4) Feet
6	3 to 2 Feet	3 Beep per second	Three (3) Feet
7	2 Feet to 18 in	3 Beep per second	Two (2) Feet
8	18 in to 12 in	4 Beeps per second	Eighteen (18) Inches
9	12 Inches	4 Beeps per second	Twelve (12) Inches
10	less than 12 inches	Continuous Beep	“CRASH”

NOTE: All measurements are approximate. Due to an objects’s composition, position, shape, size or angle, the reflected signal may be affected.

When a target moves entirely out of the detection area, the system will stop alarming. This reversing aid system will alert the driver to moving or stationary objects. The system is deactivated when an object movers out of the detection area.

Object in Blind Area: When an object moves across the path or away from the path of the sonar sensors, it will announce “Object in Blind Area” repeatedly. This is a built in safety function that means the sensors have picked up a moving object or perhaps a person in possible range. Drivers should take the vehicle out of reverse, place it in park and visually check out the area. Taking the transmission out of reverse disengages the system. This will clear the “Object in Blind Area” voice warning & reset the system.



INSTALLATION INSTRUCTIONS & OPERATING MANUAL MODEL CAS-4HW

Important Notice!

1. Do not reverse at HIGH speed. Reversing at high speed does not allow time for the sensors to transmit and receive sonar signals and then calculate distances between your vehicle and impact objects. Safe reversing that allows the system to work effectively should occur at speeds under 8 miles per hour.
2. Execute regular checks on your sensors for any dirt or snow; always keep your sensors clean.
3. In case of water drops on the surface of the sensor (e.g., washing, raining ...etc.) the sensitivity may be decreased by about 20% until water evaporates.
4. Keep all the cables and sensors away from the vicinity of high temperature objects such as engine or exhaust pipes which could cause system failure.
5. The system engages when the vehicle is placed in reverse. A confirmation Beep” sounds each time the vehicle is placed in reverse. This informs you that the system is activated.
6. The system will start detecting larger objects at 12 feet. Objects like another vehicle or a fence. The most effective detecting area is 5 feet. The system will count down 12ft, 9ft, 8ft, 5ft, 3ft, 2ft, 18 inches and 12 inches. Under 12 inches it will announce “CRASH”. This system is accurate to within +/- 2 inches.
7. All four sensors have the full 12-foot maximum detection range.
8. When backing at an angle, the system will sometimes announce 2 different distances. A low object, like a curb, could cause this. This will also happen when two sensors pick up the same object on an angle. Always go by the shorter announced distance.
9. System components are complex, opening by user may damage its completeness. Collision Avoidance Systems LLC shall NOT take any responsibility for equipment that has been tampered with by the end user.



INSTALLATION INSTRUCTIONS & OPERATING MANUAL

MODEL CAS-4HW

WHEN OBSTACLES MAY NOT BE DETECTED:

Due to the obstacle's position, angle or size, the reflected signal may not reach the receiving sensor. Complex reflections may also occur in a complex environment causing inaccurate detection. See examples.

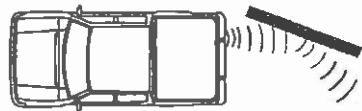
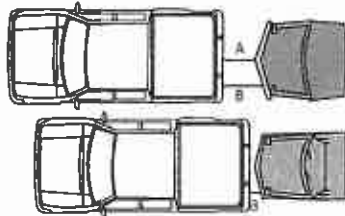


Low lying obstacle

The system will detect areas B and C but not area A



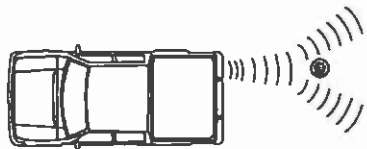
Complex environment: B will be detected but A cannot be detected. Distance A will be detected first, then distance B, as the car reverses. However, as the car nears, A will fall into the sensor's blind zone. In such cases, the system will misjudge B as the closest distance.



When the car approaches a glass wall (or any other smooth surface) almost paralleled to the body of the car, the wall may not be detected as most of the signal is reflected away.



When the car approaches a smooth slope, the slope may not be detected.



The system may not detect a small, round, smooth pole.

INSTALLATION INSTRUCTIONS & OPERATING MANUAL MODEL CAS-4HW

PARTS IDENTIFICATION:



1. Speaker – 1
2. Processor – 1
3. Hardware Package – 1
4. Heavy Duty Sensors – 4

Before Beginning Installation, familiarize yourself with the installation instructions and system components. To ensure your safety:

- A. make sure the vehicle is in “PARK”.
- B. Apply the emergency brake.
- C. Place wheel blocks behind the rear wheels.
- D. If you lift the vehicle, be sure to use jack stands and follow the vehicle manufacturer’s instructions.

Caution: It is advisable to disconnect the negative battery cable for 3 minutes before beginning installation to avoid unintended air bag deployment. Note and record any anti-theft radio codes prior to disconnecting.

INSTALLATION INSTRUCTIONS & OPERATING MANUAL MODEL CAS-4HW

INSTALLATION OF SENSORS:

WARNING! THE MOUNTING POSITION OF THE SENSORS IS VERY CRITICAL. IMPROPER INSTALLATION DIRECTLY AFFECTS THE PERFORMANCE OF THE SYSTEM. PLEASE READ AND FOLLOW THE INSTALLATION PROCEDURES CAREFULLY.

FINDING THE BEST POSITIONS FOR THE SENSORS AND DRILLING THE HOLES:

The sensors should be placed on the bumper at a height of between 16 and 30 inches from the ground to be most effective. You have some leeway with regards to height to place them on the bumper or in the back of the truck, it must be noted that the sensors operate best when the flat part of the sensor is perpendicular to the ground. Meaning that you **MUST** install the sensors on a vertical surface or the sensors will not point straight out. Try to find the best part of the bumper or truck that will allow this. If you are installing 3 sensors on the bottom and 1 on the top right corner for low overhangs, put both end sensors 10-12 inches in from the side and locate the center sensor evenly spaced between the two end sensors.

If placing all 4 on the bottom, put the two end sensors 10-12 inches in from the end of the bumper or truck and space the center sensors approximately 36 inches from the end of the bumper on each side. The two center sensors should be approximately 24 inches apart from each other.

DRILLING THE HOLES:

Once you have determined the sensor positions mark the drilling points with the stick-on markers provided being sure the end marked downward is positioned correctly. Use a center punch to start the hole prior to drilling. This will keep the drill bit from drifting. Use a 7/8" inch drill bit.

You will also need to drill the holes for the stainless-steel mounting screws which are included in the kit. Disconnect the sensor head from the cable by holding the sensor head and unscrew the plastic coupling on the back side. **“Do not turn the sensor head itself”**. Using a small flathead screw driver, remove the plastic cover from the sensor to reveal the holes for the screws. Place the sensor in the hole to mark the placement of the holes for the mounting screws. Be sure the word PORON is at the bottom in a horizontal position. Mark the two holes on the bumper and drill a starter hole for the screw.

INSTALLATION INSTRUCTIONS & OPERATING MANUAL MODEL CAS-4HW

SETTING THE SENSORS INTO THE BUMPER:

Once you have completed the drilling, reattach the sensor head to the cable being sure to set the sensor into the rubber seat provided. Align the holes in the sensor with the holes in the rubber seat. Pull the entire sensor cable through the hole and then place the sensor on the bumper with the word PORON on the bottom of the sensor. The neck of the sensor head should be in the middle of the drilled hole and not touching any metal part of the bumper. Once attached to the bumper pop the plastic cover back on the sensor head. Make sure when the cap is snapped in that the rubber flange around the gray sensor is not compressed.

Labels are included to mark the ends of the sensor cables. Starting from left go to the right, label the sensors 1 through 4. This is to be able to identify the cables when they are plugged into the processor as it is critical they are plugged into the correct ports on the processor. Holding the processor with the ports facing you, the left port should have the sensor on the left side of the bumper.

IMPORTANT NOTE:

THE SENSORS MUST BE POSITIONED TO POINT STRAIGHT OUT DIRECTLY BEHIND THE VEHICLE. IF THEY ARE INADVERTENTLY POINTED TO SOME DEGREE IN A DOWNWARD POSITION FACING THE GROUND, YOU WILL EXPERIENCE FALSE READINGS.

SYSTEM WIRING:

Check to see where the reverse lamp is at the rear of the vehicle and locate the wiring to the bulb. You may need to remove the reverse lamp assembly to get access to the wiring. Make a note of the connecting color of the positive wire. It is usually green or black with a red or purple stripe. (This color coding varies with makes and models. If you are unsure, contact your local OEM dealer and they can advise). Connect into the reversing lamp's positive wire with the processors "RED" wire. Ground the processors "BLACK" wire to the body or chassis or into the reversing lamp's ground wire. **Processor needs to be connected to reverse power only.**

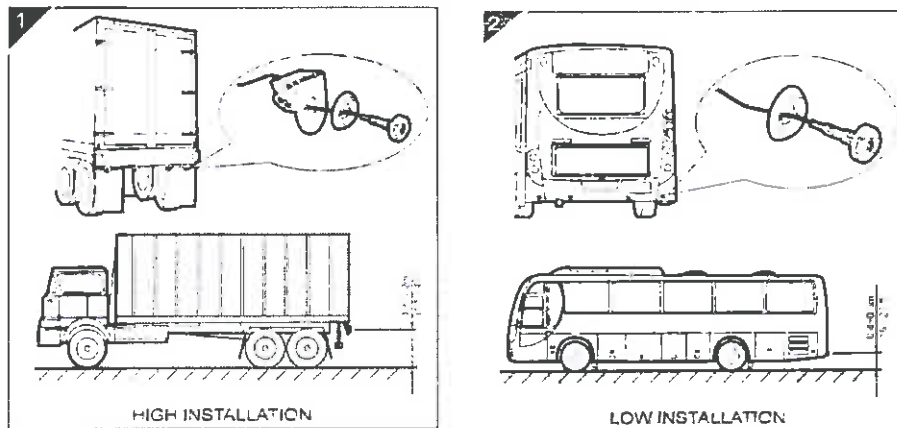
MOUNTING OF THE PROCESSOR:

The processor can be mounted inside or outside of the truck. Processor is completely weather proof. Bolts & screws are provided to secure the processor to the truck. Keep enough room in front of the processor ports to install the sensors. Check the position of the sensors to confirm all sensor cables will reach the processor.

INSTALLATION INSTRUCTIONS & OPERATING MANUAL MODEL CAS-4HW

HI-LO INSTALLATION:

Sensors can be installed in a High or Low configuration. A low install would be a distance from the ground of 20 to 30 inches. A high install would be greater than 30 inches. If placing one sensor at the top of the truck, do not consider this sensor when determining High or Low.



On the processor, there is a white wire. This is the Hi-Lo switch. For a High sensor installation, connect this wire to ground. For a low installation, do not connect. Secure the wire so it is out of the way.

WIRING SENSORS TO THE PROCESSOR:

You have already mounted the sensors and labeled the wires. Now run the wires to the processor. Ensure that your wires are in a loom and are protected... **DO NOT** wrap the sensor wires "around" any existing wiring loom or harness. Connect the 4 sensor ends to the processor paying close attention to the labels you previously applied. The ports are also labeled accordingly on the processor. You should hear a "double click" when the sensor is properly snapped into the port. **Be sure to connect the sensor ends from left to right in the same position they are placed on the bumper.**

MOUNTING OF THE SPEAKER:

The speaker can be placed anywhere in the interior of the cab, ideally within 2 to 3 feet of the driver. Connect the black wire to Ground. Connect the red wire to the 50-foot red wire. Then loom (loom not provided) the speaker wire to the back and connect to the yellow wire on the processor.

INSTALLATION INSTRUCTIONS & OPERATING MANUAL MODEL CAS-4HW

BLIND AREA ALERTING:

As with all sensing systems there are blind areas in the sensing patterns due to the cone or triangular nature in the way the sonar pulse is emitted. Whenever an object moves from a covered area and into one of these blind areas a special warning alert message and a very loud tone "*OBJECT IN BLIND AREA*" will be transmitted twice or until the operator takes the vehicle out of reverse.

OPERATION AND TESTING:

1. Back your vehicle at least 15ft away from a wall or flat surface.
2. Shift the vehicle into reverse gear. The system will emit a tone indicating it has been activated. Slowly begin moving in reverse.
3. As the vehicle reaches the effective distance of 12ft or less the system will begin emitting a warning sound.
4. As you continue backing, the system will count down from 12 ft. down to 12 inches.

TROUBLE SHOOTING:

- **No Power** - Check power input wire and ground wire. Make sure power wire is connected to a reverse trigger. Ground to a proper ground source. Red Light on the processor should be on when vehicle is in reverse.
- **Sensor(s) not responding or giving erratic distance** - unplug all sensors and replace one at a time to determine if there is a defective sensor. A loose or improperly connected ground can give cause the same response. Check to make sure the plastic screw cap on the sensor is seated properly and not compressing the rubber flange.
- **False Reading** – Be sure the sensors are all pointed straight back and not Tilted to the ground or off to the side. Make sure the notch in the sensor bezel is in the 6 o'clock position. (PORON is horizontal).
- **No Sound** – Make sure the speaker is plugged into the processor. If you are using an extension, check the connection between the speaker and the extension. It is probably a good idea to use electrical tape on the connection to be sure vibration doesn't pull the connection apart.

INSTALLATION INSTRUCTIONS & OPERATING MANUAL MODEL CAS-4HW

LIMITATION OF LIABILITY:

Collision Avoidance Systems LLC (Hereinafter called "CAS") will not be liable for any claims, actions, suits, proceedings, costs, expenses, damages or liabilities arising out of the use of this product. The sole undertaking of CAS is limited to providing the product and services outlined herein in accordance with the terms of this agreement. The provision of products sold and services provided to the customer shall not be interpreted, construed or regarded either expressly or implied, as being for the benefit of or creating any obligation toward any third party or legal entity outside of CAS and the customer. CAS's liability for damages hereunder, regardless of the form or action, shall not exceed the fees or other charges paid to CAS by the customer or customer's dealer. CAS shall not, in any event, be liable for special, indirect, incidental or consequential damages including but not limited to: lost income, lost revenue or lost profit, whether such damages were foreseeable or not at the time of the purchase and whether such damages arise out of a breach of warranty, a breach of agreement, negligence, strict liability or any other theory of liability.

WARRANTY:

This product is guaranteed to be free from manufacturing defects in material and workmanship under normal use for a period of one (1) year. This warranty applies to the original retail purchaser only. If a defect covered by this warranty occurs during this one-year period, CAS will repair or replace the defective system or component part, free of charge upon proof of original purchase excluding any labor costs associated with installing or reinstalling the product. This warranty does not apply to defects caused by negligence, accident, unreasonable use, modification, abuse or tampering, or any other causes not related to defective materials or workmanship. The liability of CAS is limited solely to the repair or replacement of this product. All liability for consequential damages, breach of any express or implied warranties including merchantability or fitness for purpose, is expressly disclaimed. This warranty gives you specific rights. You may have other rights that vary from state to state.

IMPORTANT SAFETY NOTICE:

Vehicle Reversing Systems sold by Collision Avoidance Systems LLC are intended strictly as a driver assistance device. It is not intended as a safety device or for any other purpose. Due to the nature of the technology, some obstacles may not be detected or may be identified inaccurately due to physical reflection properties of the obstacle. This product is not a substitute for driver responsibility or common sense when operating a vehicle. Please follow all local and federal laws as well as your company's safety policies while backing up your vehicle. CAS does not guarantee or assume liability for collisions or damages occurring while using this product while backing up your vehicle





E-Z Pack Manufacturing, 200 Ladish Road, Cynthiana, KY 41031

Manufacturer's Warranty

TO ESTABLISH YOUR WARRANTY, PLEASE FILL OUT THE ATTACHED WARRANTY REGISTRATION CARD AND MAIL WITHIN 2 WEEKS OF DATE UNIT IS PLACED INTO SERVICE TO: E-Z PACK MANUFACTURING, 200 Ladish Road, CYNTHIANA, KY 41031

E-Z Pack Manufacturing, referred to herein as the Manufacturer, warrants each new product of it's own manufacture to be free from defects in material and workmanship, under normal use and service, to the original user only, for a period of 12 months body and 36 months packing cylinders and hydraulic pump from date of purchase, subject to conditions outlined below. Manufacturer's obligation under this warranty is limited to repair, or replacement with a similar part, any part of the product of our manufacture which is returned to us within 30 days after discovery of the defect, properly identified and transportation charges prepaid, and not more than 12 months after purchase by the original user, provided that in Manufacturer's judgment the part is defective in material or workmanship.

Manufacturer will furnish without charge FOB it's plant a similar part to replace any part of a product of it's manufacture which proves to be defective in material or workmanship while in normal use and service during this period.

The Manufacturer's warranty or obligation in connection with the sale of the product:

1. Shall be expressly limited to the repair or replacement of defective parts, as stated above, all other damage and claims, statutory or otherwise, being hereby expressly waived by the purchaser and covers only those labor charges specifically authorized by Manufacturer.
2. Shall not apply if the product has been operated beyond the Manufacturer's recommended capacity.
3. Shall not apply to any failure or damage incurred through neglect, lack of maintenance, misuse, accident, improper installation, reconstructing or modifying of assemblies or through any other cause beyond the control of the Manufacturer.
4. Does not cover products of other manufacturer beyond such warranty as is made by such manufacturer.

No claim under this warranty shall be valid unless such claim is submitted within twelve (12) months after date of sale or within thirty (30) days after discovery of the defect which is the basis for such claim, whichever event shall occur first.

THE FOREGOING IS MANUFACTURER'S SOLE WARRANTY AND MANUFACTURER MAKES NO OTHER WARRANTIES OF ANY KIND WHATSOEVER, EXPRESS, IMPLIED OR STATUTORY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WRITTEN OR ORAL ARE HEREBY DISCLAIMED BY THE MANUFACTURER.

IN NO EVENT SHALL E-Z PACK MANUFACTURING BE LIABLE FOR CONSEQUENTIAL DAMAGES, NOR SHALL E-Z PACK MANUFACTURING'S LIABILITY ON ANY CLAIM FOR ANY DIRECT INCIDENTAL OR SPECIAL DAMAGES ARISING OUT OF OR CONNECTED WITH THE SALES CONTRACT OR MANUFACTURE, SALE, DELIVERY, OR USE OF THE PRODUCTS EXCEED THE PURCHASE PRICE OF THE GOODS.

**DISTRIBUTOR MUST OBTAIN FACTORY AUTHORIZATION
BEFORE MAKING WARRANTY REPAIRS OR REPLACEMENT**

Lexington-Fayette Urban County Government

INVITATION TO BID #59-2018 Rear Loader



2018 Goliath Rear Loader Product and Order Code Information

Model Year	2017	Order Code	E422
Description	2017 Goliath G400 Rear Loader		



Dear LFUCG:

We are pleased to offer you detailed information for standard and optional equipment for the E-Z Pack rear loader model G400 as per specification ##59-2018 Rear Loader .

If you are in need of a special option not listed, please give us a call at (800) 331-0136.

Thank you,

E-Z Pack Refuse Hauling Solutions, LLC



G400 History

Since its introduction nearly three decades ago, E-Z Pack's Goliath rear loader has become an industry standard for durability, solid performance, ultra-high compaction and easy operation.

With the industry's largest hopper, unique trackless swing design and low cost of ownership are just a few reasons why owners continue to buy time after time.



E-Z Pack Refuse Handling Solutions, LLC reserves the right under its Product Improvement Program to modify construction and/or design and furnish equipment without reference to illustrations and specifications shown herein. All specifications are subject to change without notice.



2018 GOLIATH G400-31



Standard Equipment includes the following:

- ✓ Smart Steel Construction – 100,000 PSI Minimum
- ✓ Radius Body Side Walls and Roof
- ✓ 4.0 cu. yd. hopper – NETA Rated
- ✓ Lowest Loading Height - 5.5" Below Chassis Frame
- ✓ Trackless Hopper Design – Lowest Cost of Ownership
- ✓ Street Side Body Access Door with E-Kill Safety Switch
- ✓ Automatic Latch / Unlatch Tailgate Locks with Safety Pins
- ✓ Tailgate Service Maintenance Props
- ✓ Automatic Throttle Advance
- ✓ Streetside & curbside driver signaling buzzers
- ✓ Dual LED Amber Flashing Lights on Tailgate
- ✓ L.E.D. Body Lights – MVSS108 Compliant
- ✓ Powder Coat Paint and Industrial Grade Undercoating
- ✓ Certified Full Factory Mount
- ✓ 12 Mo. Body (Structural) & Cylinder Warranty

Model Year	2017	Order Code	G400-25
Description	Goliath G400 25 Cubic Yard REL		

E-Z Pack Refuse Hauling Solutions, LLC, reserves the right under its Product Improvement Program to modify construction and/or design and furnish equipment without reference to illustrations and specifications shown herein. All specifications are subject to change without notice.



Goliath G400 Steel Specifications

E-Z Pack was one of the first manufactures to develop an engineered grade steel for the refuse application. We call this **SMART STEEL**.

E-Z Pack's **SMART STEEL** metal goes through a slightly different quenching and tempering process than standard AR steel, which gives it a tough and wear-resistant exterior while eliminating all brittleness within the core of the steel.



Description	Gauge	Grade
Body Roof	10 Ga.	100,000 PSI - Radius
Body Sides	7 Ga.	100,000 PSI - Radius
Floor	1/4"	100,000 PSI - Flat
Floor Support	7 Ga.	50,000 PSI - "V" Flange
Body Top Rail	10 Ga.	50,000 PSI - 5" x 3" Steel Tube
Body Rub Rail	10 Ga.	50,000 PSI - 5" x 3" Steel Tube
Body Rear Corner Post	3/16"	50,000 PSI - 4 3/4" X 6" Form Channel
Front Body Corner Post	12 Ga.	50,000 PSI - Formed Channel
Tailgate Lower Side Walls	1/4"	100,000 PSI - Plate
Tailgate Upper Side Walls	7 Ga.	50,000 PSI - Flat
Tailgate Side Reinforcements	3/16"	50,000 PSI - Formed Channel
Tailgate Hopper Floor	1/4"	155,000 PSI - AR Steel Plate
Tailgate Hopper Liner	1/4"	100,000 PSI - 10" x 80"
Tailgate Hopper Load Sill	1/4"	50,000 PSI - Formed Channel
Upper Pack Panel Reinforcement	3/16"	50,000 PSI - Formed Channel
Upper Pack Panel Face Plate	3/16"	100,000 PSI - Flat
Upper Pack Panel Side Plates	1/4"	100,000 PSI - Plate
Lower Packer Panel Face Plate	1/4"	100,000 PSI - Flat
Lower Packer Panel Packing Edge	1/4"	100,000 PSI - 8" x 3" Steel Tube
Ejector Panel Upper Face Plate	7 Ga.	100,000 PSI - Flat
Ejector Superstructure	10 Ga.	50,000 PSI - 4" x 3" Steel Tube
Ejector Panel Lower Face Plate	3/8"	50,000 PSI - Angle
Ejector Wear Shoes	1/4"	180,000 PSI - AR Steel

E-Z Pack Refuse Hauling Solutions, LLC, reserves the right under its Product Improvement Program to modify construction and/or design and furnish equipment without reference to illustrations and specifications shown herein. All specifications are subject to change without notice.



Body include minimum of 75 DGE fuel system integrated into the front body bulkhead. The system shall be designed to meet FMVSS 304 and NGV2 specifications for use with heavy-duty class 8 vocational vehicles suitable for refuse application.



For protection purposes, fuel cylinders shall not protrude above normal roof line of the body. Body shall be no taller than body of comparable diesel fueled model in order to prevent mishaps from obstructions, such as overhead wires, tree limbs, or overhanging canopies.

Model Year	2017	Order Code	RG4
Description	Integrated 75 DGE CNG Fuel System		

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Option includes the following:

- Auxiliary CNG fueling Port
- Front Bumper Street Side



Model Year	2017	Order Code	FG7
Description	Additional CNG Fill Port		

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Option includes the following:

- (1) Telescoping Side Door Ladder for easy access to body.



Model Year	2017	Order Code	RB10
Description	Underbody Body Ladder		

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Refuse Hauling Solutions, LLC

Option includes the following:

- (1) 20 lb Fire Extinguisher with a bracket mounted on the body.
- Fire Extinguishers are a DOT required item.

10.6 Safety Equipment: A 20 lb. fully rechargeable, A-B-C fire extinguisher shall be mounted on the outside of the driver's side of packer body in a convenient location. A set of reflecting safety triangles shall be provided.



Model Year:	2017	Order Code:	RB20
Description:	20# Fire Extinguisher with Bracket		

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5.1 Cab & chassis shall be designed to accept front mounting of a crankshaft driven hydraulic pump. Design shall allow PTO operation when cab is in a tilted position. Power take off controls shall be inside cab mounted, within drivers reach.

Option includes the following:

- Factory Installed Front Mount Pump
- Hydraulic Pump Bracket
- Hydraulic Lines and Brackets



**Muncie[®]
Power
Products**



The MLSM Series Live Pak pump system provides protection against hydraulic overspeed damage while allowing the driver to maintain full use of the hydraulic system on refuse vehicles. The built-in flow limiter automatically redirects excess pump flow to reservoir when the pump is on. In the off mode full pump flow is directed to the reservoir at an extremely low return pressure to conserve fuel by minimizing horsepower draw. The Live Pak system works without hydraulic or electronic overspeed controls, governors, or dry valves.

Model Year	2017	Order Code	RP3
Description	Front Mount Pump - Muncie MLS		

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Option includes the following:

- (2) Amber LED Flashers on Tailgate of Body



Model Year	2017	Order Code	RE7
Description	Petersen Smart Strobes (4)		

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Option includes the following:

- (2) Flood Lights mounted inside the tailgate and pointed down into the hopper area.
- Illuminates inside the hopper area



Model Year	2017	Order Code	RE8
Description	Dual Hopper Flood Lights		

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- Option includes the following:
- 6" Oval Amber LED Flashers on Front of Body



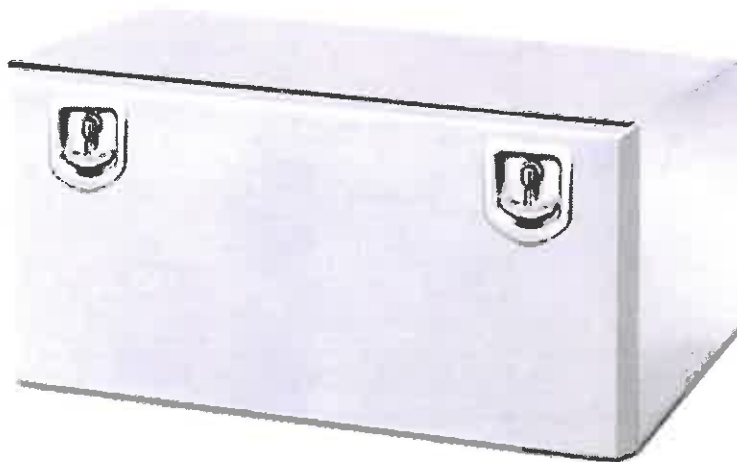
Model Year	2017	Order Code	RE10
Description	Front Oval LED Strobes - Amber		

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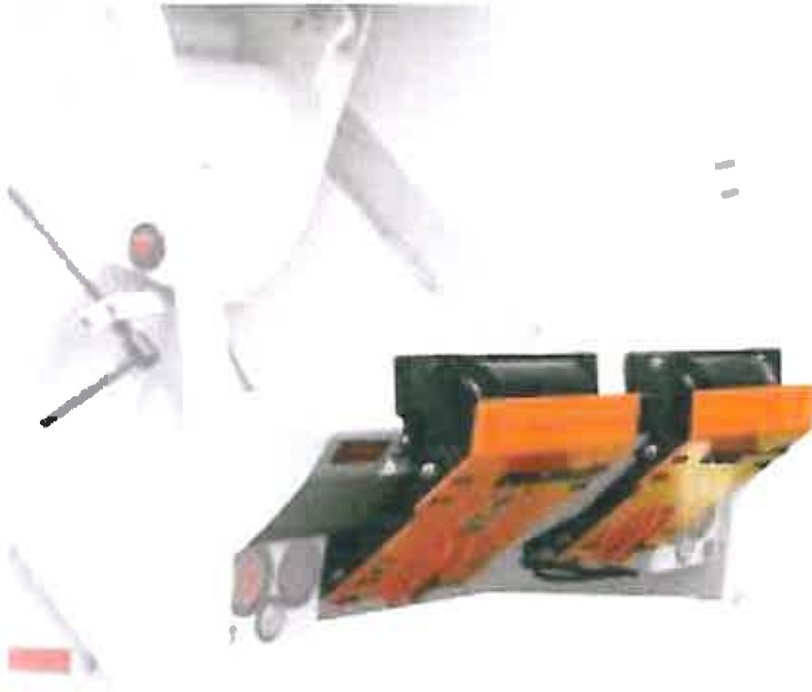


Refuse Hauling Solutions, LLC

10.11 Tool box: A weatherproof stainless steel tool box (Bawer TU826500) shall be installed under the right side of truck, mounted on truck frame.



E-Z Pack Refuse Hauling Solutions, LLC, reserves the right under its Product Improvement Program to modify construction and/or design and furnish equipment without reference to illustrations and specifications shown herein. All specifications are subject to change without notice.



- ✓ **Compatible with standard 60-95 gallon domestic style two bar carts.**
- ✓ **Counterbalance-spring latching system for the bottom bar requires no direct linkage.**
- ✓ **Sweeping action of top bar allows for easier cart engagement on uneven ground.**
- ✓ **Steep 45 degree dump angle speeds emptying of carts.**
- ✓ **Two year limited warranty.**

Dual Cart Tipper Hydraulic Priority Valve



Heavy Dumper Hydraulic Tipper Valve





10.11 Tool box: A weatherproof stainless steel tool box (Bawer TU826500) shall be installed under the right side of truck, mounted on truck frame.



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TV-905A : VLI Series Night Vision Camera System with 9.0" Quad View Touch Screen LCD Monitor

10.7 Back-Up Vision System: A closed circuit rear vision system (Pro Vision) utilizing one (1) color camera and a color multi-view LCD monitor positioned for convenient viewing by driver shall be installed. System shall automatically activate when truck is in reverse gear or may be manually activated. Camera shall be protected by a stainless steel cage. Camera shall provide a view of the area immediately behind the center of the truck. Vision system components shall be provided with a five (5) year warranty. **Pro-Vision is the only system accepted.**



All Systems Include: REAR-LOAD TRUCKS

- Heavy Duty Monitor
- Wide Angle Camera
- Windshield Mount Base
- DoublePivot™ Monitor Bracket & Thread Locker
- Dielectric Connector Protector
- 12ft Power Harness w/ In-line Fuse Holder
- Two 33' AV Cables w/ Metal Twist-Lock Connectors
- Mounting Brackets / Hardware

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Component	Paint Color	Type
Body	Dupont 44400U	Powder Coat
Tailgate	Dupont 44400U	Powder Coat
Packer Panels	Dupont 44400U	Powder Coat
Body Access Ladder	Safety Yellow	Powder Coat
Tailgate Lift Cylinders	Standard Black	Wet Paint
Packer Cylinders	Standard Black	Wet Paint
Packer Blades	Dupont 44400U	Powder Coat
Body Undercoating	Black	Coating
Hopper Undercoating	Black	Coating

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Tuff Coat Powder Coat Paint



E-Z Pack Powder Coat includes the following:

E-Z Pack knows that their products live a hard life and that is one of the reasons that E-Z Pack powder coats their products. Powder coat paint is 5 times more durable than the traditional wet paint process giving you more value.

As a standard benefit from E-Z Pack, a protective undercoating is applied to the body for a long service life in all types of extreme weather conditions.

Another advantage is that no electrical or hydraulic lines are painted over for easy trouble shooting and cleaner appearance.

Plus E-Z Pack's powder coat paint is environmentally friendly vs conventional spray paint methods.

- Stage 1 Body cleaned, deburred, weld spatter and slag removed
- Stage 2 Multi-stage chemical treatment and high pressure wash.
- Stage 3 Apply Powder coat primer and finish coat
- Stage 4 Bake Booth – 325 Degrees until fully cured.
- Stage 5 Apply Industrial Grade Undercoating to Body
- Stage 6 Quality Control Inspection

Specification and Performance:

- 1) Dry film thickness is to be minimum 4 to 6 mills coverage.
- 2) Paint must pass minimum 1250 hours salt spray test for corrosion resistance.
- 3) Paint must pass UV test of 2000 hours for minimum loss of gloss and color shift.
- 4) Hydraulic cylinders and valves to be painted black semi-gloss.
- 5) Hose ends and hydraulic fittings to be anodized and remain unpainted.
- 6) Hydraulic tubing to be zinc dichromate plated and unpainted. Electrical harnesses, connections, switches, pneumatic tubing and fittings to be weatherproof and remain unpainted.

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350,000 SQ. FT of Sparks, Steel, and Hard Work!



Refuse Hauling Solutions, LLC

E-Z Pack Refuse Hauling Solutions, LLC
200 Ladish Road, Cynthiana, KY 41031
Toll Free (800) 331-0136 or (859) 234-1100
www.EZPackTrucks.com

They say a house is only as good as it's foundation. If the foundation of a manufacturing company is it's factory, then we have a great base to build on. With over 350,000 square feet under roof, our plant provides us the opportunity to stabilize, modernize and improve the EZ-Pack Product line.

We are making investments in new technologies, new fixtures, and new methods of production to ensure that we stay competitive and deliver a high quality product that lives up to the EZ-Pack name.

We invite you to come see what we're about. Factory tours are always available, and we're excited to show our new home. Come meet the hard working men and women that actually build your next body. We'll even let you drive your completed unit off the line, just let us know and we'll be happy to arrange it. 21



Owner's Manual

Installation & Operating Guide

MODEL CAS-4HW

Heavy Duty Reversing Sensor System
for Commercial Vehicles
One Wire with Hi-Lo Install Switch

Version 17-1.2
Revision Date: 7/27/17

INSTALLATION INSTRUCTIONS & OPERATING MANUAL MODEL CAS-4HW

Your CAS Sonar Parking Aid system utilizes the latest technology and quality components to provide you and your business with years of reliable service. A great amount of care went into building your Sonar Parking Aid system. Please take the time to read the manual carefully before installing, as we want you to be as proud of your installation, as we are of the product. Thank You, for your purchase and safe motoring, from all of us at Collision Avoidance Systems.

SYSTEM OVERVIEW

FUNCTIONAL SPECIFICATIONS:

The sensors operate both as transmitters and as receivers, which send an ultra high frequency sound wave (sonar) that is reflected off an object and received. The distance from the obstacle is evaluated through the transit time of the signals and is indicated by a sequence of pulse tones, the closer the obstacle, the faster the sequence of pulse tones as well as the Voice Distance Indicator (VDI) that verbally indicates the distance to an obstacle to the driver.

WARNING: This reversing aid system is designed to supplement other safety practices by enhancing driver awareness of difficult to see areas. Failure to operate the system in the in the manner specified in this manual could result in personal injury property damage or possibly death. Always inspect behind and below your vehicle prior to backing up to eliminate the possibility of property damage and/or bodily injury. Always use caution when backing up. The responsibility for safe vehicle operation will always remain with the driver.



INSTALLATION INSTRUCTIONS & OPERATING MANUAL MODEL CAS-4HW

DETECTION ZONES:

When the vehicle is put into reverse, the system will sound one quick “BEEP” to alert the driver the system has been activated. The system will alert the driver to the presence of an obstacle when it is within one of the nine (9) detections zones. The following describes each zone:

Zone	Distance from Bumper	Audible Tone	Voice Alert
1	12 to 9 Feet	1 beep per second	Twelve (12 Feet
2	9 to 6 Feet	1 Beep per second	Nine (9) Feet
3	6 to 5 Feet	2 Beep per second	Six (6) Feet
4	5 to 4 Feet	2 Beep per second	Five (5) Feet
5	4 to 3 Feet	2 Beep per second	Four (4) Feet
6	3 to 2 Feet	3 Beep per second	Three (3) Feet
7	2 Feet to 18 in	3 Beep per second	Two (2) Feet
8	18 in to 12 in	4 Beeps per second	Eighteen (18) Inches
9	12 Inches	4 Beeps per second	Twelve (12) Inches
10	less than 12 inches	Continuous Beep	“CRASH”

NOTE: All measurements are approximate. Due to an objects’s composition, position, shape, size or angle, the reflected signal may be affected.

When a target moves entirely out of the detection area, the system will stop alarming. This reversing aid system will alert the driver to moving or stationary objects. The system is deactivated when an object movers out of the detection area.

Object in Blind Area: When an object moves across the path or away from the path of the sonar sensors, it will announce “Object in Blind Area” repeatedly. This is a built in safety function that means the sensors have picked up a moving object or perhaps a person in possible range. Drivers should take the vehicle out of reverse, place it in park and visually check out the area. Taking the transmission out of reverse disengages the system. This will clear the “Object in Blind Area” voice warning & reset the system.



INSTALLATION INSTRUCTIONS & OPERATING MANUAL MODEL CAS-4HW

Important Notice!

1. Do not reverse at HIGH speed. Reversing at high speed does not allow time for the sensors to transmit and receive sonar signals and then calculate distances between your vehicle and impact objects. Safe reversing that allows the system to work effectively should occur at speeds under 8 miles per hour.
2. Execute regular checks on your sensors for any dirt or snow; always keep your sensors clean.
3. In case of water drops on the surface of the sensor (e.g., washing, raining ...etc.) the sensitivity may be decreased by about 20% until water evaporates.
4. Keep all the cables and sensors away from the vicinity of high temperature objects such as engine or exhaust pipes which could cause system failure.
5. The system engages when the vehicle is placed in reverse. A confirmation Beep” sounds each time the vehicle is placed in reverse. This informs you that the system is activated.
6. The system will start detecting larger objects at 12 feet. Objects like another vehicle or a fence. The most effective detecting area is 5 feet. The system will count down 12ft, 9ft, 8ft, 5ft, 3ft, 2ft, 18 inches and 12 inches. Under 12 inches it will announce “CRASH”. This system is accurate to within +/- 2 inches.
7. All four sensors have the full 12-foot maximum detection range.
8. When backing at an angle, the system will sometimes announce 2 different distances. A low object, like a curb, could cause this. This will also happen when two sensors pick up the same object on an angle. Always go by the shorter announced distance.
9. System components are complex, opening by user may damage its completeness. Collision Avoidance Systems LLC shall NOT take any responsibility for equipment that has been tampered with by the end user.



INSTALLATION INSTRUCTIONS & OPERATING MANUAL MODEL CAS-4HW

WHEN OBSTACLES MAY NOT BE DETECTED:

Due to the obstacle's position, angle or size, the reflected signal may not reach the receiving sensor. Complex reflections may also occur in a complex environment causing inaccurate detection. See examples.

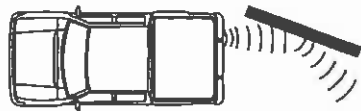
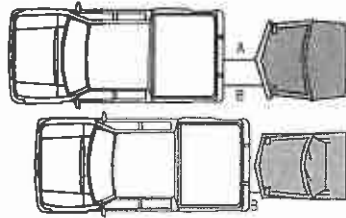


Low lying obstacle

The system will detect areas B and C but not area A



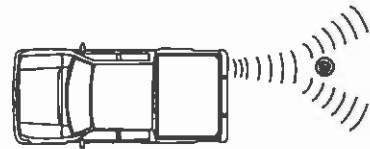
Complex environment: B will be detected but A cannot be detected. Distance A will be detected first, then distance B, as the car reverses. However, as the car nears, A will fall into the sensor's blind zone. In such cases, the system will misjudge B as the closest distance.



When the car approaches a glass wall (or any other smooth surface) almost paralleled to the body of the car, the wall may not be detected as most of the signal is reflected away.



When the car approaches a smooth slope, the slope may not be detected.



The system may not detect a small, round, smooth pole.

INSTALLATION INSTRUCTIONS & OPERATING MANUAL MODEL CAS-4HW

PARTS IDENTIFICATION:



1. Speaker – 1
2. Processor – 1
3. Hardware Package – 1
4. Heavy Duty Sensors – 4

Before Beginning Installation, familiarize yourself with the installation instructions and system components. To ensure your safety:

- A. make sure the vehicle is in “PARK”.
- B. Apply the emergency brake.
- C. Place wheel blocks behind the rear wheels.
- D. If you lift the vehicle, be sure to use jack stands and follow the vehicle manufacturer’s instructions.

Caution: It is advisable to disconnect the negative battery cable for 3 minutes before beginning installation to avoid unintended air bag deployment. Note and record any anti-theft radio codes prior to disconnecting.

INSTALLATION INSTRUCTIONS & OPERATING MANUAL MODEL CAS-4HW

INSTALLATION OF SENSORS:

WARNING! THE MOUNTING POSITION OF THE SENSORS IS VERY CRITICAL. IMPROPER INSTALLATION DIRECTLY AFFECTS THE PERFORMANCE OF THE SYSTEM. PLEASE READ AND FOLLOW THE INSTALLATION PROCEDURES CAREFULLY.

FINDING THE BEST POSITIONS FOR THE SENSORS AND DRILLING THE HOLES:

The sensors should be placed on the bumper at a height of between 16 and 30 inches from the ground to be most effective. You have some leeway with regards to height to place them on the bumper or in the back of the truck, it must be noted that the sensors operate best when the flat part of the sensor is perpendicular to the ground. Meaning that you **MUST** install the sensors on a vertical surface or the sensors will not point straight out. Try to find the best part of the bumper or truck that will allow this. If you are installing 3 sensors on the bottom and 1 on the top right corner for low overhangs, put both end sensors 10-12 inches in from the side and locate the center sensor evenly spaced between the two end sensors.

If placing all 4 on the bottom, put the two end sensors 10-12 inches in from the end of the bumper or truck and space the center sensors approximately 36 inches from the end of the bumper on each side. The two center sensors should be approximately 24 inches apart from each other.

DRILLING THE HOLES:

Once you have determined the sensor positions mark the drilling points with the stick-on markers provided being sure the end marked downward is positioned correctly. Use a center punch to start the hole prior to drilling. This will keep the drill bit from drifting. Use a 7/8" inch drill bit.

You will also need to drill the holes for the stainless-steel mounting screws which are included in the kit. Disconnect the sensor head from the cable by holding the sensor head and unscrew the plastic coupling on the back side. "Do not turn the sensor head itself". Using a small flathead screw driver, remove the plastic cover from the sensor to reveal the holes for the screws. Place the sensor in the hole to mark the placement of the holes for the mounting screws. Be sure the word PORON is at the bottom in a horizontal position. Mark the two holes on the bumper and drill a starter hole for the screw.

INSTALLATION INSTRUCTIONS & OPERATING MANUAL MODEL CAS-4HW

SETTING THE SENSORS INTO THE BUMPER:

Once you have completed the drilling, reattach the sensor head to the cable being sure to set the sensor into the rubber seat provided. Align the holes in the sensor with the holes in the rubber seat. Pull the entire sensor cable through the hole and then place the sensor on the bumper with the word PORON on the bottom of the sensor. The neck of the sensor head should be in the middle of the drilled hole and not touching any metal part of the bumper. Once attached to the bumper pop the plastic cover back on the sensor head. Make sure when the cap is snapped in that the rubber flange around the gray sensor is not compressed.

Labels are included to mark the ends of the sensor cables. Starting from left go to the right, label the sensors 1 through 4. This is to be able to identify the cables when they are plugged into the processor as it is critical they are plugged into the correct ports on the processor. Holding the processor with the ports facing you, the left port should have the sensor on the left side of the bumper.

IMPORTANT NOTE:

THE SENSORS MUST BE POSITIONED TO POINT STRAIGHT OUT DIRECTLY BEHIND THE VEHICLE. IF THEY ARE INADVERTENTLY POINTED TO SOME DEGREE IN A DOWNWARD POSITION FACING THE GROUND, YOU WILL EXPERIENCE FALSE READINGS.

SYSTEM WIRING:

Check to see where the reverse lamp is at the rear of the vehicle and locate the wiring to the bulb. You may need to remove the reverse lamp assembly to get access to the wiring. Make a note of the connecting color of the positive wire. It is usually green or black with a red or purple stripe. (This color coding varies with makes and models. If you are unsure, contact your local OEM dealer and they can advise). Connect into the reversing lamp's positive wire with the processors "RED" wire. Ground the processors "BLACK" wire to the body or chassis or into the reversing lamp's ground wire. **Processor needs to be connected to reverse power only.**

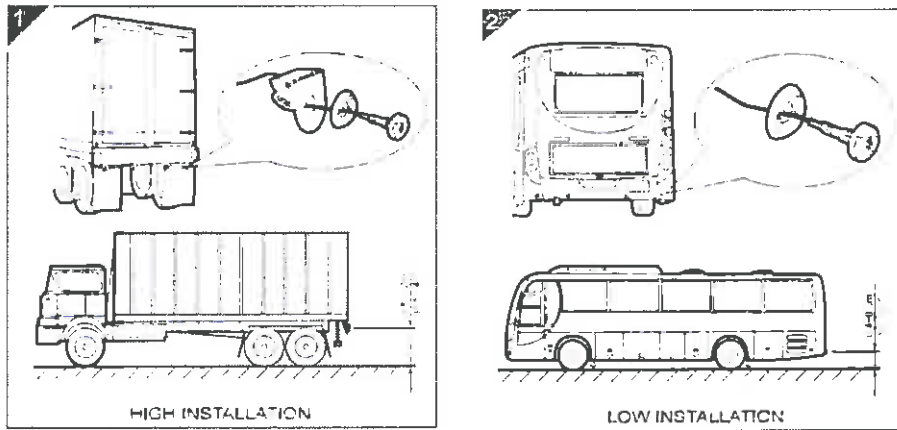
MOUNTING OF THE PROCESSOR:

The processor can be mounted inside or outside of the truck. Processor is completely weather proof. Bolts & screws are provided to secure the processor to the truck. Keep enough room in front of the processor ports to install the sensors. Check the position of the sensors to confirm all sensor cables will reach the processor.

INSTALLATION INSTRUCTIONS & OPERATING MANUAL MODEL CAS-4HW

HI-LO INSTALLATION:

Sensors can be installed in a High or Low configuration. A low install would be a distance from the ground of 20 to 30 inches. A high install would be greater than 30 inches. If placing one sensor at the top of the truck, do not consider this sensor when determining High or Low.



On the processor, there is a white wire. This is the Hi-Lo switch. For a High sensor installation, connect this wire to ground. For a low installation, do not connect. Secure the wire so it is out of the way.

WIRING SENSORS TO THE PROCESSOR:

You have already mounted the sensors and labeled the wires. Now run the wires to the processor. Ensure that your wires are in a loom and are protected... **DO NOT** wrap the sensor wires "around" any existing wiring loom or harness. Connect the 4 sensor ends to the processor paying close attention to the labels you previously applied. The ports are also labeled accordingly on the processor. You should hear a "double click" when the sensor is properly snapped into the port. Be sure to connect the sensor ends from left to right in the same position they are placed on the bumper.

MOUNTING OF THE SPEAKER:

The speaker can be placed anywhere in the interior of the cab, ideally within 2 to 3 feet of the driver. Connect the black wire to Ground. Connect the red wire to the 50-foot red wire. Then loom (loom not provided) the speaker wire to the back and connect to the yellow wire on the processor.

INSTALLATION INSTRUCTIONS & OPERATING MANUAL MODEL CAS-4HW

BLIND AREA ALERTING:

As with all sensing systems there are blind areas in the sensing patterns due to the cone or triangular nature in the way the sonar pulse is emitted. Whenever an object moves from a covered area and into one of these blind areas a special warning alert message and a very loud tone "***OBJECT IN BLIND AREA***" will be transmitted twice or until the operator takes the vehicle out of reverse.

OPERATION AND TESTING:

1. Back your vehicle at least 15ft away from a wall or flat surface.
2. Shift the vehicle into reverse gear. The system will emit a tone indicating it has been activated. Slowly begin moving in reverse.
3. As the vehicle reaches the effective distance of 12ft or less the system will begin emitting a warning sound.
4. As you continue backing, the system will count down from 12 ft. down to 12 inches.

TROUBLE SHOOTING:

- **No Power** - Check power input wire and ground wire. Make sure power wire is connected to a reverse trigger. Ground to a proper ground source. Red Light on the processor should be on when vehicle is in reverse.
- **Sensor(s) not responding or giving erratic distance** - unplug all sensors and replace one at a time to determine if there is a defective sensor. A loose or improperly connected ground can give cause the same response. Check to make sure the plastic screw cap on the sensor is seated properly and not compressing the rubber flange.
- **False Reading** – Be sure the sensors are all pointed straight back and not Tilted to the ground or off to the side. Make sure the notch in the sensor bezel is in the 6 o'clock position. (PORON is horizontal).
- **No Sound** – Make sure the speaker is plugged into the processor. If you are using an extension, check the connection between the speaker and the extension. It is probably a good idea to use electrical tape on the connection to be sure vibration doesn't pull the connection apart.



INSTALLATION INSTRUCTIONS & OPERATING MANUAL MODEL CAS-4HW

LIMITATION OF LIABILITY:

Collision Avoidance Systems LLC (Hereinafter called "CAS") will not be liable for any claims, actions, suits, proceedings, costs, expenses, damages or liabilities arising out of the use of this product. The sole undertaking of CAS is limited to providing the product and services outlined herein in accordance with the terms of this agreement. The provision of products sold and services provided to the customer shall not be interpreted, construed or regarded either expressly or implied, as being for the benefit of or creating any obligation toward any third party or legal entity outside of CAS and the customer. CAS's liability for damages hereunder, regardless of the form or action, shall not exceed the fees or other charges paid to CAS by the customer or customer's dealer. CAS shall not, in any event, be liable for special, indirect, incidental or consequential damages including but not limited to: lost income, lost revenue or lost profit, whether such damages were foreseeable or not at the time of the purchase and whether such damages arise out of a breach of warranty, a breach of agreement, negligence, strict liability or any other theory of liability.

WARRANTY:

This product is guaranteed to be free from manufacturing defects in material and workmanship under normal use for a period of one (1) year. This warranty applies to the original retail purchaser only. If a defect covered by this warranty occurs during this one-year period, CAS will repair or replace the defective system or component part, free of charge upon proof of original purchase excluding any labor costs associated with installing or reinstalling the product. This warranty does not apply to defects caused by negligence, accident, unreasonable use, modification, abuse or tampering, or any other causes not related to defective materials or workmanship. The liability of CAS is limited solely to the repair or replacement of this product. All liability for consequential damages, breach of any express or implied warranties including merchantability or fitness for purpose, is expressly disclaimed. This warranty gives you specific rights. You may have other rights that vary from state to state.

IMPORTANT SAFETY NOTICE:

Vehicle Reversing Systems sold by Collision Avoidance Systems LLC are intended strictly as a driver assistance device. It is not intended as a safety device or for any other purpose. Due to the nature of the technology, some obstacles may not be detected or may be identified inaccurately due to physical reflection properties of the obstacle. This product is not a substitute for driver responsibility or common sense when operating a vehicle. Please follow all local and federal laws as well as your company's safety policies while backing up your vehicle. CAS does not guarantee or assume liability for collisions or damages occurring while using this product while backing up your vehicle



INTEGRATED BLIND SPOT PEDESTRIAN DETECTION SYSTEMS



**COLLISION
AVOIDANCE SYSTEMS** 

www.CollisionAvoidanceSystems.net
(877)-590-8968

VIRTUAL SPOTTER SYSTEM

Sonar Sensors with Voice Distance Indication (VDI) Technology - Rear / Side View Cameras

CAS has released our new "Virtual Spotter" Series of integrated blind spot / pedestrian detection warning systems. This powerful new solution combines two impressive technologies into a single operating platform for maximum protection against accidents due to blind spots. Strategically placed cameras are utilized to provide a full view of both the rear and each side of the vehicle which are displayed from a video monitor mounted to the dash or windshield. To further enhance this solution *sonar sensors with Voice Distance Indication are installed in the rear. Now not only will we show you what is behind the vehicle, we will also tell you how far way it is. Finally you can accurately gauge how far you can continue in reverse before having a backup accident.*



Backup & Side View Camera's

- IP68 Rating
- Auto Iris Sensor
- 480 TVL Resolution Rating
- 9 Infra-Red Lights for Night Vision
- 18 Infra-Red Lights for Night Vision
- 20G Shock & 100G Vibration Rating
- Aircraft Grade Cable & Connections
- 1/4" 120 Degree Sharp CCD Color Camera
- 1/4" 130 Degree Sharp CCD Color Camera



Monitor

- 7" TFT LCD Monitor
- 800 x 480 Resolution Rating
- 16:9 Display Format
- 4CH Video Inputs
- Built in Speaker
- Back Lit Buttons



"Free Fleet Risk Assessment"



Sensor Unit

- Blind Area Alerting
- Voice Distance Indication
- Long Range Detection of 12 feet
- Accuracy read range of + or - 2"
- Proven Sonar Sensor Technology
- Close Range Detection of 12 inches
- Heavy Duty Stainless Steel Sensors
- Works accurately In all weather conditions



Company - Collision Avoidance Systems • Coverage - United States and Canada • Contact - Shawn O'Connell
Toll Free - (877)-590-8968 • Website - www.CollisionAvoidanceSystems.net



**COLLISION
AVOIDANCE SYSTEMS**

COMMERCIAL GRADE CAS-4HW VDI SONAR REVERSING SYSTEM

CAS-4HW

VOICE DISTANCE INDICATION SONAR VEHICLE REVERSING SYSTEMS



Obstacle Detection Vehicle Reversing Aid Solution with Voice Distance Indication (VDI) Technology

CAS-4RF Sonar Obstacle Detection Solution

The CAS-4HW is a heavy duty vehicle reversing system specifically designed for commercial vehicles. It is equipped with stainless steel sensors and a heavy duty weatherproof control box which can withstand harsh weather conditions without any problems. The system "WARNS" the driver or operator with a "beeping" sound indicating potential obstacles are at the rear of the vehicle and then a clear voice "TELLS" the operator the countdown of the remaining distance to the obstacle.

reverses. The device is activated when the driver puts the vehicle into reverse. Acoustic sensors installed at the rear of the vehicle will transmit a modulated beam signal that is capable of seeing through fog, rain, smoke and snow in any kind of weather, day or night. When the signal strikes a solid object, it bounces back to the sensor and instantaneously sends a detecting signal to the microprocessor.



CAS-4RF - Key Features

- Voice Distance Indication
- Blind Area Alerting
- Sonar Sensor Technology
- Wireless Speaker Makes for Easy Installation on All Vehicles
- Long Range Detection of 12 feet
- Close Range Detection of 12 inches
- Heavy Duty Stainless Sensors
- Designed for Extreme Weather Conditions

BLIND AREA ALERTING:

As with all sensing systems there are blind areas in the sensing patterns due to the cone or triangular nature in the way the sonar pulse is emitted. Whenever an object moves from a covered area and into one of these blind areas a special warning alert message and a very loud tone "OBJECT IN BLIND AREA" will be transmitted twice or until the operator takes the vehicle out of reverse. This is especially helpful for detecting moving objects such as a pedestrian, an animal, a forklift or other moving vehicles that may be behind your vehicle and in harm's way.

DETECTING PATTERNS:

The typical performance detecting pattern for the follow object types are:

<u>OBJECT</u>	<u>EFFECTIVE DISTANCE</u>
Concrete Wall	9 to 12 feet
Vehicles	8 to 9 feet
Pedestrian	5 to 6 feet
Post - 3 ft tall, 3 in diameter	3 to 5 feet

AUDIO SPACING DIAGRAM



CAS-4RF - Specifications

General Specifications

Sensors

4 Acoustic, Stainless Steel, Weatherproof

Dimension 8mm diameter
 Frequency Transmits at 36.5 kHz

Detecting Angles

Horizontal Approximately 30 Degrees
 Vertical Approximately 50 Degrees
 Detection Range 12 Inches to 12 Feet

Speaker

Type Wireless
 Max Sound Output 40mm Diameter Magnetic
 100 db at 10 cm

Power Specifications

Input 12 – 28 Volts DC
 Operating Voltage 3.0 W

Environmental Specifications

Operating Temperature 140F to -22F

Physical Specifications

Dimensions

Processor 8.82in X 4.64in X 1.54in
 Sensor 44.5mm X 13mm
 Speaker 4.49in Diameter X 1.8in

Cable Length

Sensor Cables 9 ft 10 in
 Power Wires 78 in

Ordering Information

Part Number	Description
CAS-4RF70	CAS-4RF70 4 Sensor Reversing System
CAS-71	CAS-71 4 input Processor Unit
CAS-72	CAS-72 Wireless Speaker
CAS-73	CAS-73 Stainless Steel Sensor Kit

Order Desk (312) 265-3828



www collisionavoidancesystems.net

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